SAINT LOUIS COUNTY
Transportation and Public Works

January 16, 2024

A D D E N D U M N O. 1

Notice to All Persons and Firms Proposing
to Submit a Bid or Furnish Materials for
Bayless Avenue Bridge No. 419
Federal Project No. STP-4900(637)

The following questions were posed for this project:

No. 1

Are there existing bridge plans available?

Yes, they are attached.

No. 2

What is the schedule for Spire and Missouri American Water to abandon their facilities? Also, what is the schedule for AT&T's relocation?

Utility information including timelines for any outstanding relocations are noted in JSP 100.70.3 Utility Coordination.

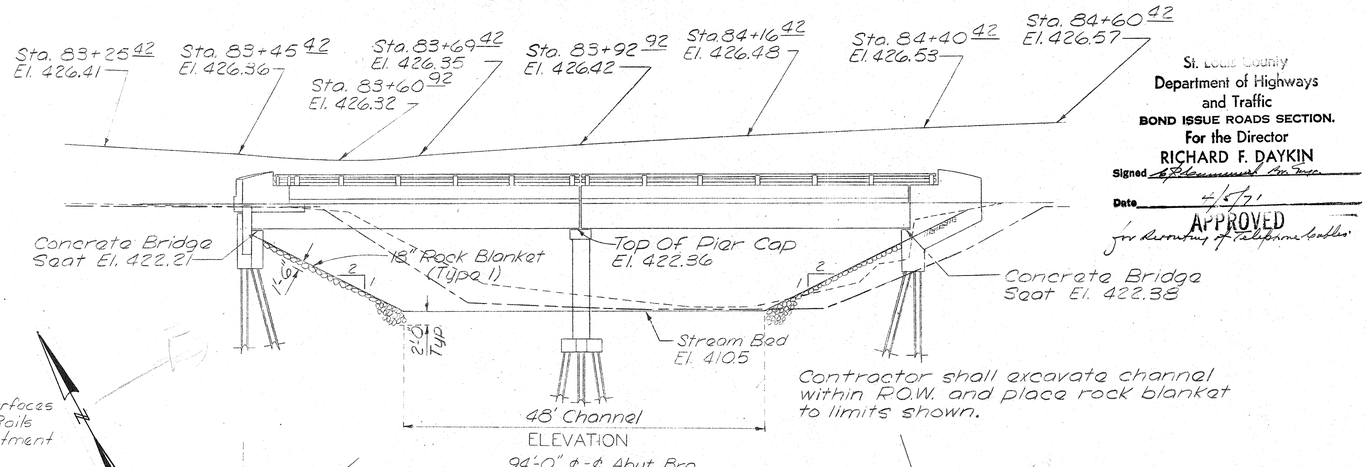
ATTENTION BIDDERS: THE ADDENDUM ACKNOWLEDGEMENT IN THE BID DOCUMENTS MUST BE COMPLETED AND SUBMITTED WITH ALL BID PROPOSALS.

Daniel Howell, Ph.D., P.E.
Supervisor of Project Managers - Bridge

JWK/DAH/dah
Attachment: Existing bridge plans

1050 N Lindbergh, Saint Louis, MO 63132
(314) 615-8504
stlouiscountymo.gov

BENCH MARK Top of Wing Wall "U" on S.W. Corner of Bridge of Gravois Creek @ Bayless Rd. Elev. 426.74
Note: (Contractor to establish new bench mark prior to starting construction)



Legend
Location of Boring ⊕ (See Sheet 2 for Boring Logs)
Profile 30' South ℄ – – – – –
Profile 30' North ℄ ——— – ———

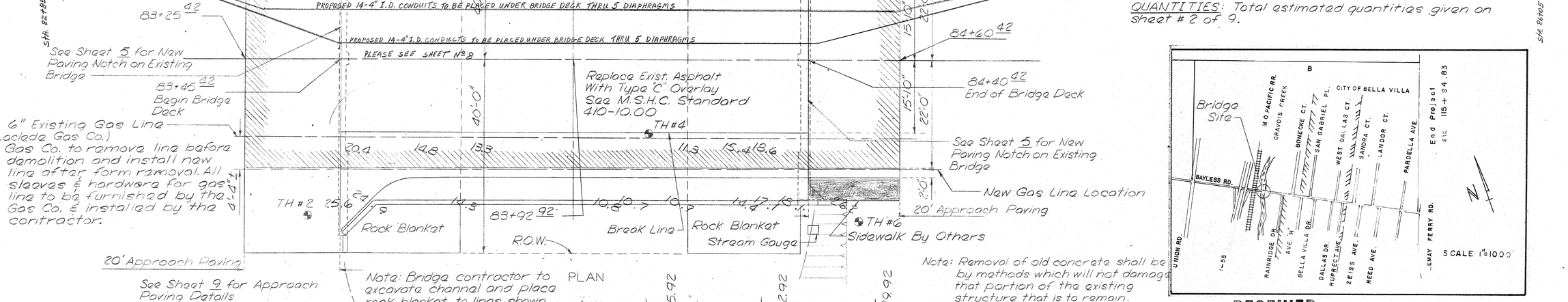
Note: Exposed concrete surfaces on Roadway and Concrete Rails are to receive Surface Treatment M.S.H.D. 703.3.18

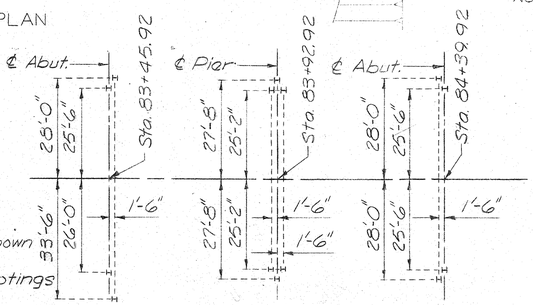
Contractor shall excavate channel within R.O.W. and place rock blanket to limits shown.

St. Louis County
Department of Highways and Traffic
BOND ISSUE ROADS SECTION.
For the Director
RICHARD F. DAYKIN
Signed _____
Date 4/5/71
APPROVED
for Recording & Telephone Cables

SPECIFICATIONS:
Design Specifications: A.A.S.H.O.
Design Loadings: HS 20
15#/sq. ft. Future Wearing Surface
Earth 120; Equivalent Fluid Pressure 30#
Design Unit Stresses:
Concrete:
Superstructure fc = 4,000 p.s.i.
Substructure fc = 3,000 p.s.i.
Reinforcing Steel fs = 20,500 p.s.i.
Steel Pile (ASTM A-36T) fb = 9,000 p.s.i.
Construction & Materials shall be in accordance with current Missouri State Highway Commission Standard Specifications unless noted otherwise.
CONSTRUCTION: Bridge contractor shall maintain 2-way traffic during construction with no less than a 24 ft travelway (one 12' lane each way). Contractor shall place and maintain all signs and barricades necessary in accordance with these plans and the Saint Louis County Traffic Dept.'s Safety Regulations. All signs & barricades shall be in place prior to starting work on the existing roadway.

Unless approved otherwise by the Engineer, the driving of all piling shall be completed prior to any removal of concrete from the roadway or railing.
Construction on one side of the roadway shall be completed prior to starting work on the other side. Prior to opening the widened portion of roadway to traffic all concrete shall be a minimum of 28 days age and in addition all structual concrete shall have attained design strength as indicated by test. False work shall not be removed until concrete has met all the requirements for opening to traffic.
Deviations from the above procedure shall be permitted only upon written approval of the Engineer.
Dimensions shown on the plans which are based on existing structures shall be verified by the bridge contractor by field measurement prior to starting work.
QUANTITIES: Total estimated quantities given on sheet # 2 of 9.





PILING LAY-OUT

Note: Dimensions shown are to bottom of abutments or footings

Drainage Area Approx. 25 Sq. Mi.

Note: Removal of old concrete shall be by methods which will not damage that portion of the existing structure that is to remain. (Demolition by blasting or wrecking ball will not be permitted.) Broken concrete maybe utilized as rock blanket if all reinforcing is cut flush with the surface of the concrete.

Note: Contractor shall notify U.S. Geological Survey one week prior to starting construction, in regard to moving stream gauge.

RECEIVED LOCATION
MAR 9 1971
BOND ISSUE ROADS SECTION OF THE DEPARTMENT OF HIGHWAYS AND TRAFFIC

PRELIMINARY
3/5/71

BOPP & ASSOCIATES, INC.
DESIGNED 1970 BY
DETAILED 1970 BY
CHECKED 1970 BY

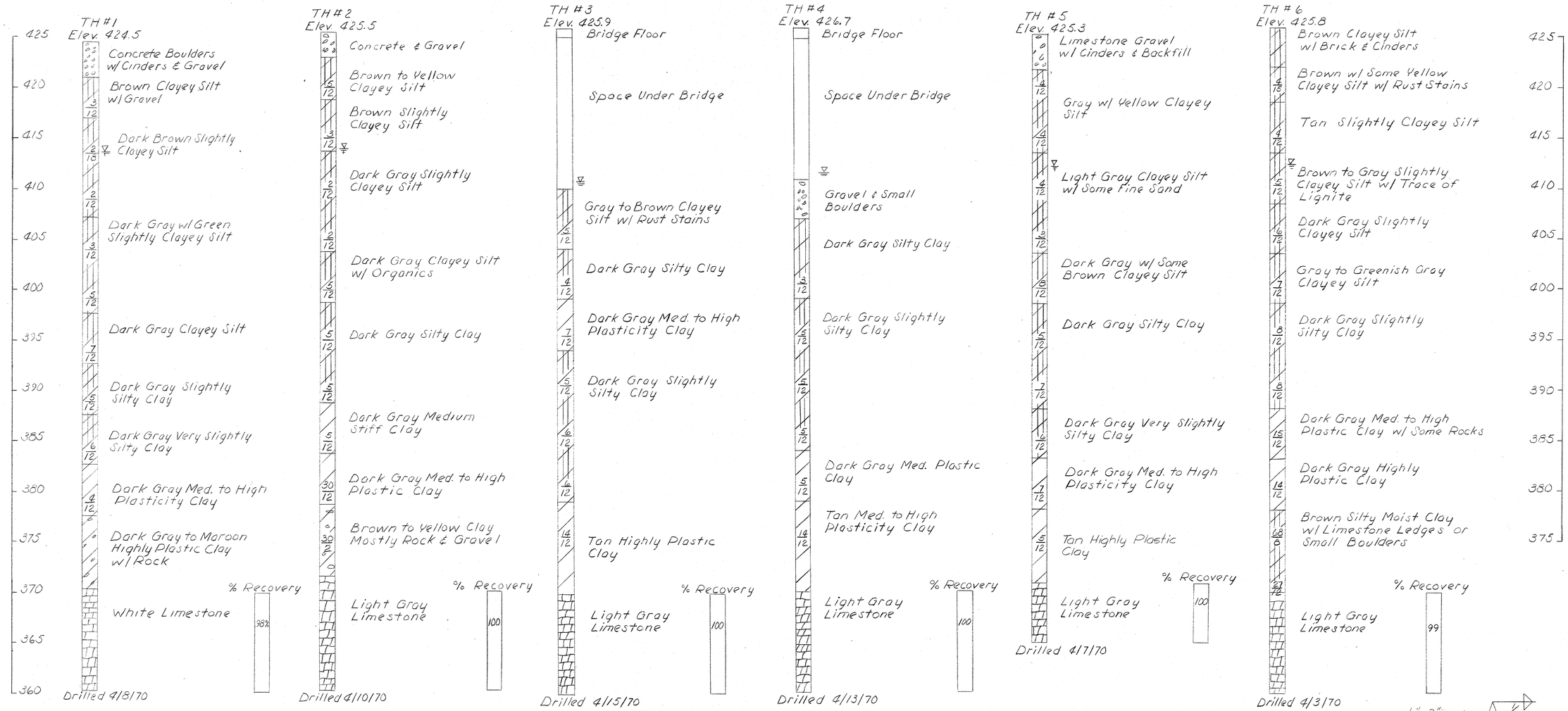
BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY

SHEET 1 OF 9

Bayless Ave.
Br. # 419

RED & GREEN ADDITIONS ARE TAKEN FROM S.W.B. TELEPHONE'S PLANS C. KOVAC 961-9873

BRIDGE Nº 419
1-71



LEGEND
- 10 Standard Penetration Test
- 12 Number of Blows Over Penetration
- ▽ Groundwater

TOTAL ESTIMATED QUANTITIES

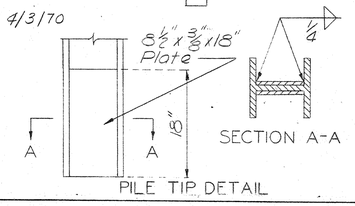
Item	Substructure	Superstructure	Total
Class 1 Excavation for Structures	134.5 c.y.		134.5 c.y.
Class 2 Excavation for Structures	33.5 c.y.		33.5 c.y.
Class A Excavation (Channel)			374 c.y.
Rock Blanket			223 c.y.
Steel Piles (in place)	654 Lin. Ft.		654 Lin.Ft.
Concrete B1	66.7 c.y.	188.7 c.y.	255.4 c.y.
Reinforcing Steel	4732 lbs.	35,280 lbs.	40,012 lbs.
Aluminum Rail (Double Tube Type)		192.4 Lin.Ft.	192.4 Lin.Ft.
Removal of Asphalt Surface			Lump Sum
Removal of Old Concrete			Lump Sum
Removal of Approach Paving			Lump Sum
Concrete Approach Paving			256 sq. yds.
Tack (Liquid Asphalt)			30 gals.
Asphalt Surfacing			102 tons
Flume Concrete B1			3.9 c.y.
Flume Reinforcing			214 lbs.

PILE DATA

Location	West Abut.	Pier	East Abut.
Pile Type & Size	HP 10x42	HP 10x42	HP 10x42
Number	4**	6**	4**
Approx. Length (Per Pile)	54 Ft.	37 Ft.	54 Ft.
Design Bearing	50 Tons	50 Tons	50 Tons
Hammer Energy Reqd *	12,250 Ft.#	12,250 Ft.#	12,250 Ft.#

Notes: * Minimum energy requirement of hammer based on plan length and design bearing value of piles. All pile shall be driven to practical refusal at 1.9 times the design bearing value.

** Pile tips to be reinforced - See Detail Cost of pile tip reinforcement to be included in price of pile.



SHEET 2 OF 9

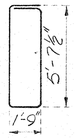
BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY

NO.	SIZE	LENGTH	MARK	LENGTH	SHAPE
End Bent No. 1 (West)					
14	4	8'-0"	a1	Hor. Lt. Abut	
14	4	14'-8"	a2	Hor. Rt. Abut.	
11	4	15'-7"	a3	Vert. Abut.	
28	4	2'-3"	d1	Dowels	
14	4	12'-10"	a4	Batter Pile	
4	4	8'-0"	a5	Corners	
7	4	11'-6"	a6	FF & B Vert. Wing	
4	5	9'-9"	a7	BF Hor. Wing	
2	5	9'-10"	a8	BF Hor. Wing	
4	4	9'-9"	a9	FF Hor. Wing	
2	4	11'-10"	a10	FF Hor. Wing	
2	5	10'-6"	a11	FF & BF Wing (Bottom)	
4	4	9'-1"	a12	Hor. Backwall	
4	5	8'-6	a16	Under Bearing	
10	4	5'-6"	a13	Hor. Wing	
6	4	3'-7"	a14	FF & BF Hor Wing	
6	4	7'-3"	a15	Vert. Wing	
6	5	9'-9"	e1	Hor. End Post	
2	5	10'-7"	e2	Hor. End Post	
4	5	7'-6"	e3	Vert. End Post	
7	5	11'-4"	e4	Vert. End Post	
End Bent No. 2 (East)					
28	4	8'-0"	a1	Hor. Abut.	
8	4	15'-7"	a3	Vert. Abut.	
28	4	2'-3"	d1	Dowels	
14	4	12'-10"	a4	Batter Pile	
8	4	8'-0"	a5	Corners	
14	4	11'-6"	a6	FF & BF Vert. Wing	
8	5	9'-9"	a7	BF Hor. Wing	
4	5	9'-10"	a8	BF Hor. Wing	
8	4	9'-9"	a9	FF Hor. Wing	
4	4	11'-10"	a10	FF Hor. Wing	
4	5	10'-6"	a11	FF & BF Wing Bott.	
8	4	9'-1	a12	Hor. Backwall	
12	5	9'-9"	e1	Hor. End Post	
4	5	10'-7"	e2	Hor. End Post	
8	5	7'-6"	e3	Vert. End Post	
14	5	11'-4"	e4	Vert. End Post	
4	5	8'-6	a16	Under Bearing	
Pier (½ of bars to ea. addition)					
60	5	5'-9"	p1	Hor. Pier	
60	5	3'-0"	d2	Pier Stem Dowel	
26	6	8'-10"	p2	Vert. Stem	
8	5	6'-3"	p3	Vert. Stem	
26	6	11'-10"	p4	Vert. Stem	
8	5	11'-10"	p5	Vert. Stem	
6	7	22'-5"	p6	Hor. Cap	
12	6	8'-6"	p7	Hor. Cap	
4	7	7'-1"	p8	Vert. Cap	
10	5	8'-6"	p9	Vert. Cap	
8	6	5'-6"	f1	Footing	
4	6	5'-0"	f2	Footing	
8	5	2'-6"	f3	Footing	
2	5	3'-3"	f4	Footing	
15	5	14'-11"	p10	Hor. Stem Rounding	

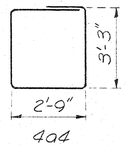
NO.	SIZE	LENGTH	MARK	LOCATION	SHAPE
Superstructure (North Side Widening)					
162	5	10'-10"	s1	Transv. Slab Top & Bott.	
32	4	24'-3"	s3	Longit. Slab	
12	6	10'-10"	s5	Hor. Diaphragms	
22	4	10'-10"	s6	Hor. Diaphragms	
8	4	8'-10"	s7	Vert. Abut. Diaph.	
8	4	3'-5"	s8	Vert Abut. Diaph.	
8	4	8'-4"	s9	Vert. Int. Diaph.	
8	4	8'-1"	s10	Vert. Pier Diaph.	
20	4	24'-3"	w1	Longit. Sidewalk	
162	5	2'-2"	w2	Slab Sidewalk Dowel	
96	6	6'-11"	w3	Sidewalk Transv.	
64	5	4'-6"	r1	Vert. Rail	
16	5	23'-5"	r2	Hor. Rail	
16	11	30'-3"	g1	Top Longit. Girder	
16	11	42'-5"	g2	Mid. Longit Girder	
16	11	50'-0"	g3	Bott. Longit. Girder	
8	8	46'-10"	g4	Top Girder	
52	4	10'-0"	g5	Bott. Stirrup	
40	4	9'-5"	g6	Mid. Stirrup	
24	4	8'-10"	g7	Top Stirrup	
Superstructure (South Side Widening)					
162	5	10'-10"	s1	Slab Trans	
12	5	See Dia.	s2	Turn On	
32	4	24'-3"	s3	Longit. Slab	
4	5	See Dia.	s4	Top & Bott. Turn On	
14	6	10'-10"	s5	Hor. Diaphragms	
28	4	10'-10"	s6	Hor. Diaphragms	
~~12~~ 10	4	8'-10"	s7	Vert. Abut. Diaph.	
~~12~~ 10	4	3'-5"	s8	Vert. Abut Diaph.	
8	4	8'-4"	s9	Vert. Int. Diaph.	
8	4	8'-1"	s10	Vert. Pier Diaph.	
15	4	24'-3"	w1	Longit. Sidewalk	
150	5	2'-2"	w2	Slab Sidewalk Dowel	
89	6	6'-11"	w3	Sidewalk Transv.	
61	5	4'-6"	r1	Vert. Rail	
12	5	23'-5"	r2	Hor. Rail	
16	11	30'-3"	g1	Top Longit. Girder	
16	11	42'-5"	g2	Mid. Longit. Girder	
16	11	50'-0"	g3	Bott. Longit. Girder	
8	8	46'-10"	g4	Top Girder	
52	4	10'-0"	g5	Bott. Stirrup	
40	4	9'-5"	g6	Mid. Stirrup	
24	4	8'-10"	g7	Top Stirrup	
Flume					
34	4	3'-8"	u1	Flume Transv.	
3	4	33'-0"	u2	Flume Longit	
4	4	3'-5"	u3	Flume Outlet Base	
5	4	2'-9"	u4	Flume Base Hor.	
4	4	3'-3"	u5	Flume Inlet Base	
5	4	5'-7"	u6	Inlet Longit.	
3	4	9'-7"	u7	Flume Transv.	

Note: Radii of all bends are 2½ Diameters unless noted otherwise. Radii are to ℄ of bars. Laps are 24 dia.'s unless noted otherwise.

Dimensions shown are out to out.



4a3



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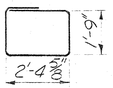

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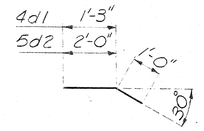

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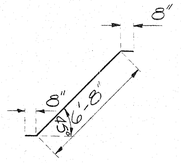

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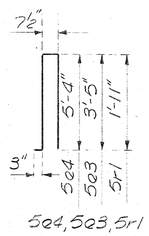

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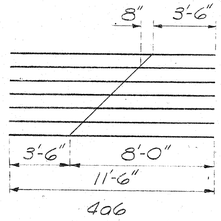

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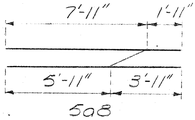

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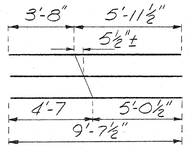

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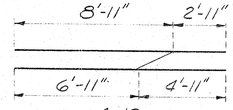

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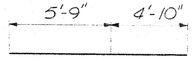
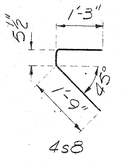


5e2
Cut 8 as shown



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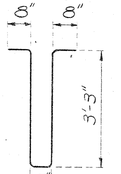

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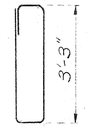

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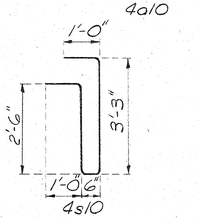

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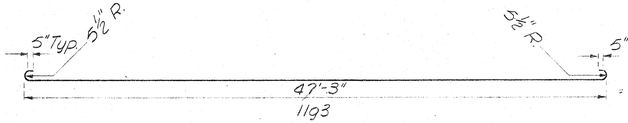

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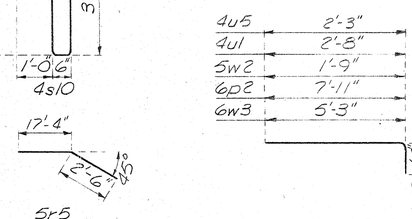
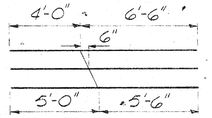
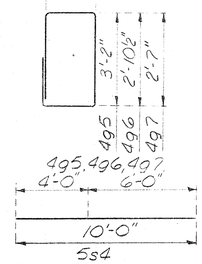


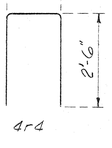
4u5, 4u1, 5w2, 6p2, 6w3



5s2
5s2 Cut 3 as shown Plus 9 Bars at 7'-0" Length



495, 496, 497
5s4
5s4 Cut 1 as shown Plus 3 Bars @ 8'-0"



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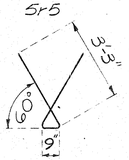

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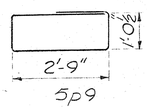
7p8



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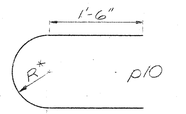
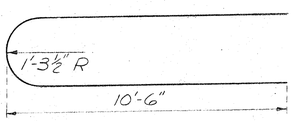
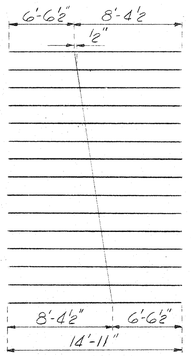


p10

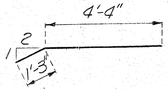
*Radii varies from 1'-1½" to 1'-6½" for different placements.



7p6



p10
Cut & Bend to Radius Shown. (15 Bars)



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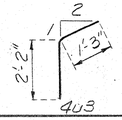
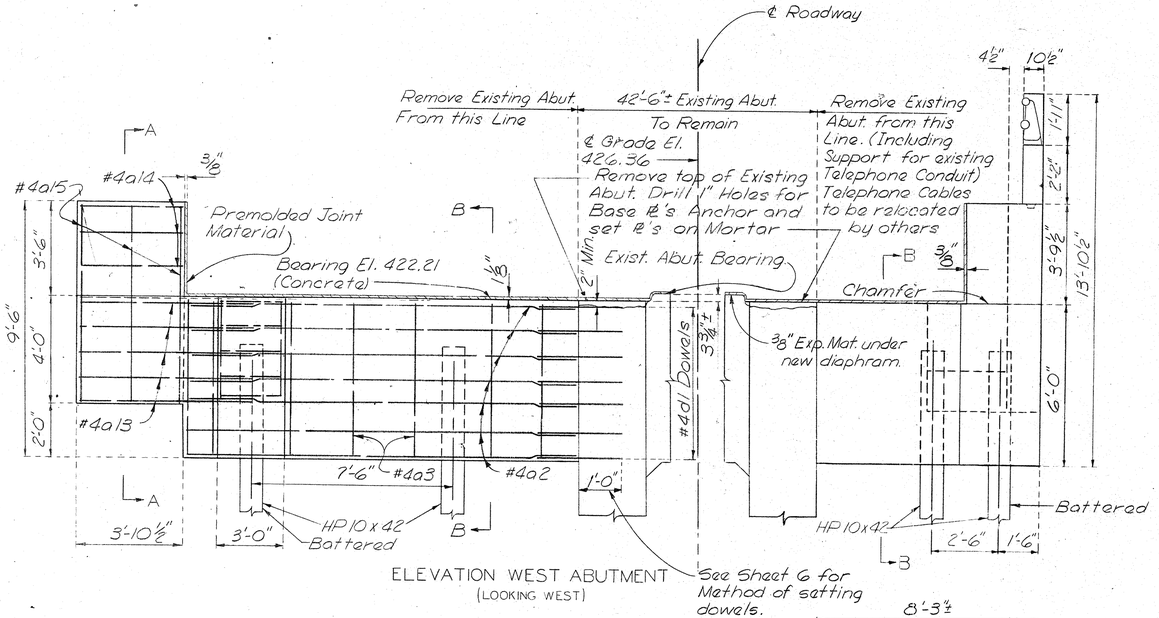
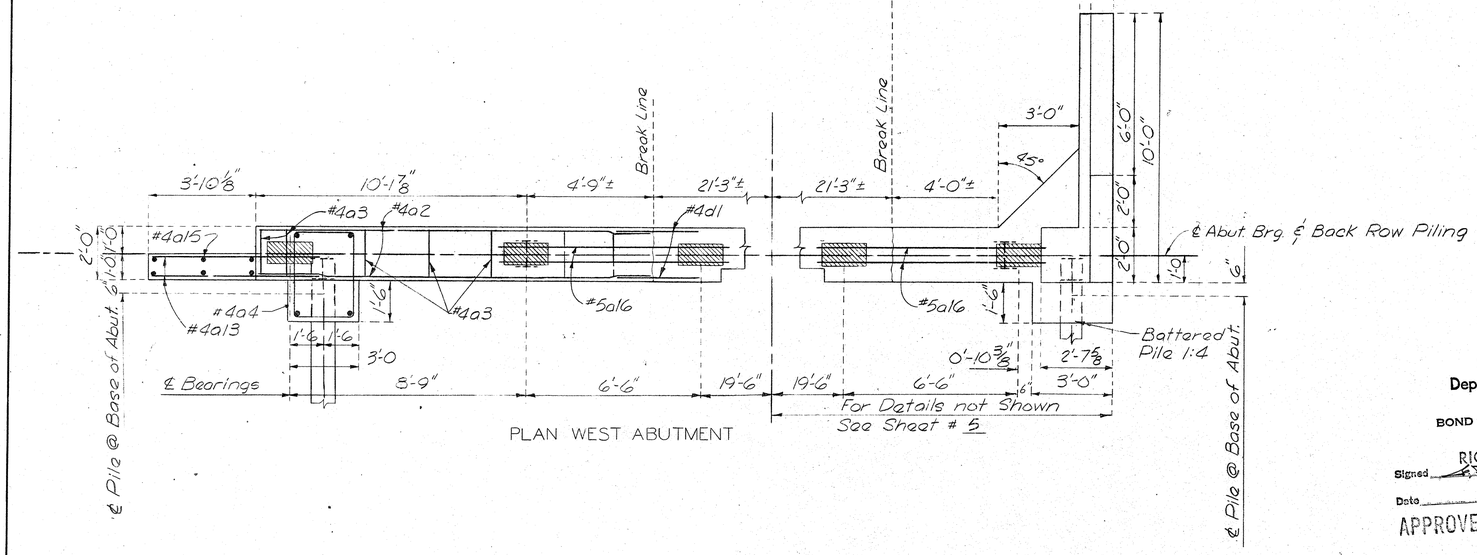


4u3

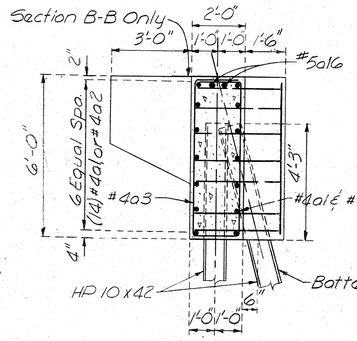
BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY



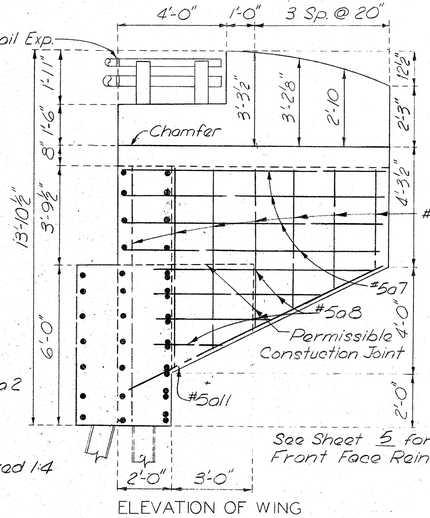
ELEVATION WEST ABUTMENT
(LOOKING WEST)



PLAN WEST ABUTMENT

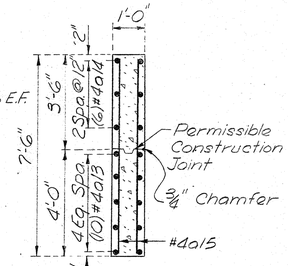


SECTION B-B
SECTION C-C (OPPOSITE HAND)

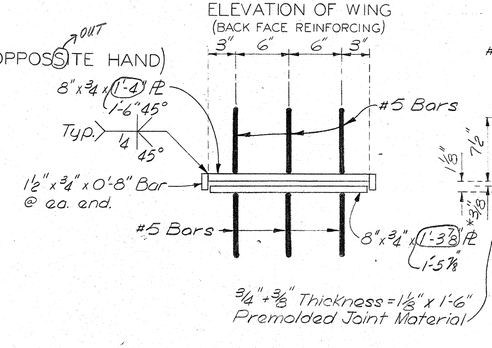


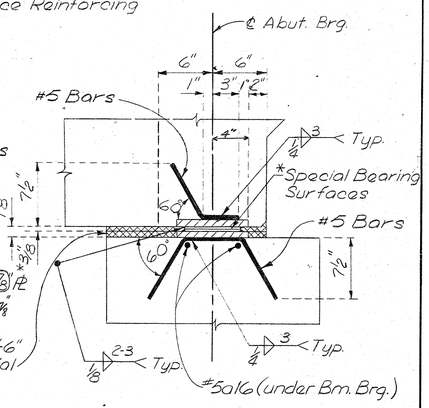
ELEVATION OF WING
(BACK FACE REINFORCING)

See Sheet 5 for Front Face Reinforcing



SECTION A-A





BEARING PLATE DETAILS
(ABUTMENTS ONLY)

*Special bearing surfaces shall be self-lubricating having a composition of 100% virgin tetrafluoroethylene polymer and reinforcing aggregates and prebonded to 10 gauge ASTM 588 steel plates. The principle constituent of the aggregate shall be ground glass fibers. The coefficient of static friction of the material to itself shall be .06" from initial installation and shall not deform more than .002" under 1000 p.s.i. static load. The bond between the material and the steel plates shall be heat cured, using high temperature epoxy capable of temperatures of -320° F to 500° F.

St. Louis County
Department of Highways
and Traffic
BOND ISSUE ROADS SECTION.
For the Director
RICHARD F. DAYKIN
Signed
Date 3/23/71
APPROVED WITH CORRECTIONS

WEST ABUTMENT QUANTITIES	
Concrete (3,000psi)	17.8 Cu.Yds.
Reinforcing Steel	1024 Lbs.
Piling (HP.10x42)	216 Lin.Ft.

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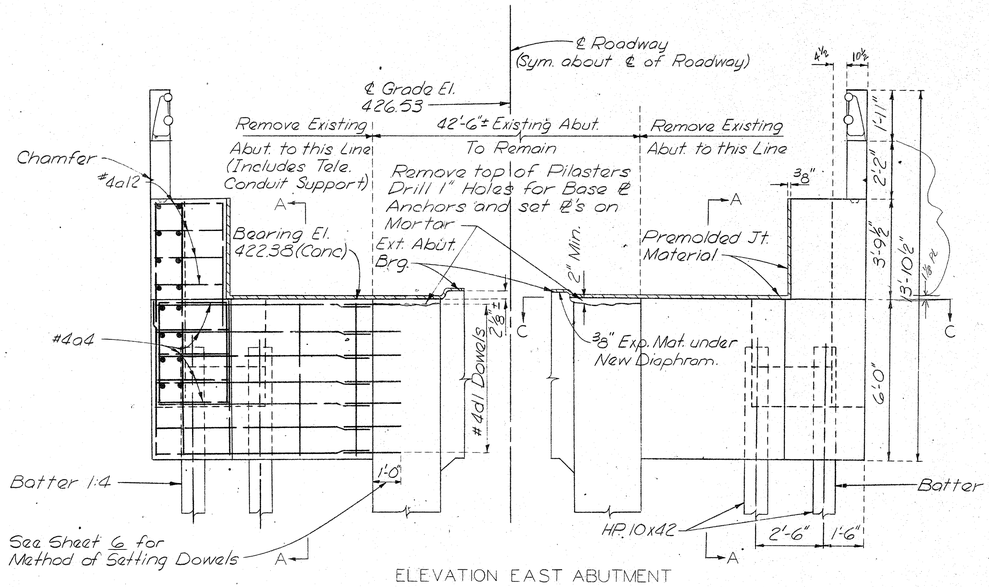
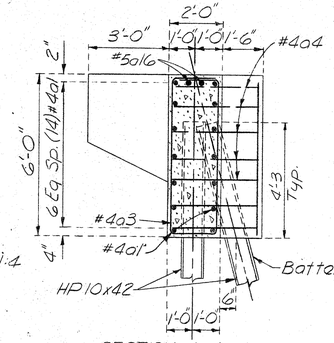
BOND ISSUE ROADS SECTION OF THE DEPARTMENT OF HIGHWAYS AND TRAFFIC

BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92.92
SAINT LOUIS COUNTY

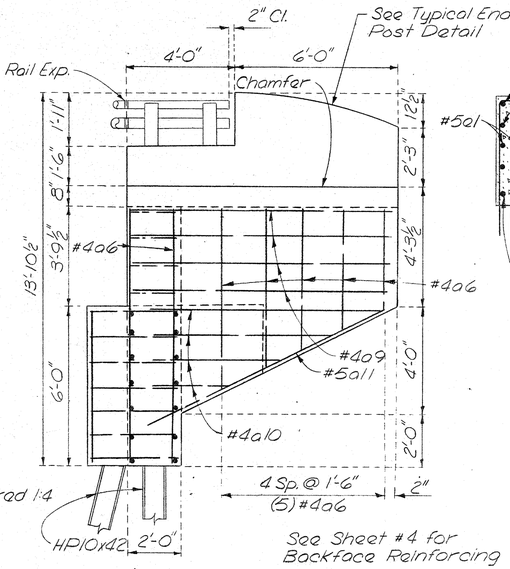
422.21 .03 422.30 422.37 422.38 .09 422.47



ELEVATION EAST ABUTMENT

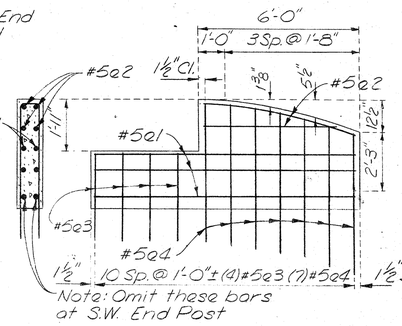


SECTION A-A

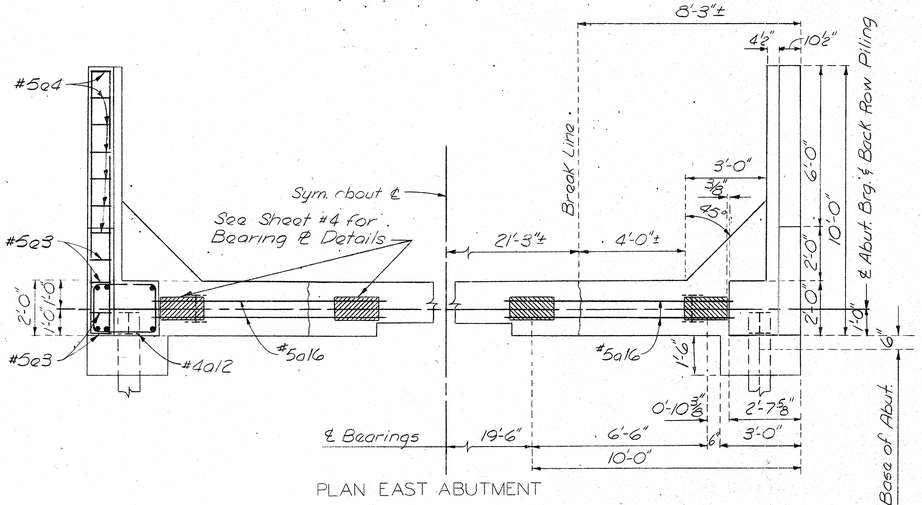


ELEVATION OF WING
(FRONT FACE REINFORCING)

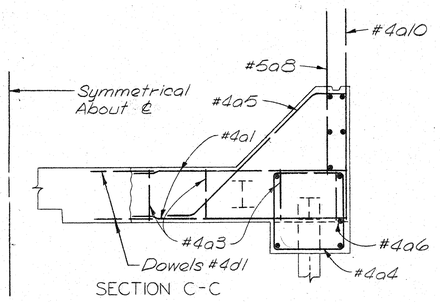
See Sheet #4 for
Backface Reinforcing



TYPICAL END POST DETAILS



PLAN EAST ABUTMENT

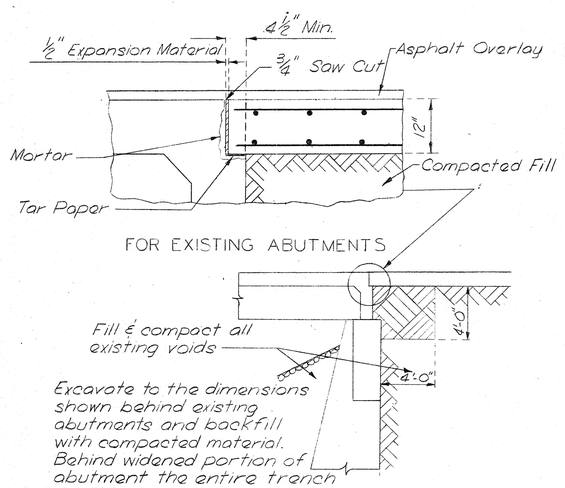


SECTION C-C

St. Louis County
Department of Highways
and Traffic
BOND ISSUE ROADS SECTION.
For the Director
RICHARD F. DAYKIN
Signed ____
Date 3/23/71

APPROVED WITH CORRECTIONS

EAST ABUTMENT QUANTITIES	
Concrete (3,000psi)	18.3 Cu. Yds.
Reinforcing Steel	1271 Lbs.
Piling (HP 10x42)	216 Lin. Ft.



BACKFILL BEHIND ABUTMENTS

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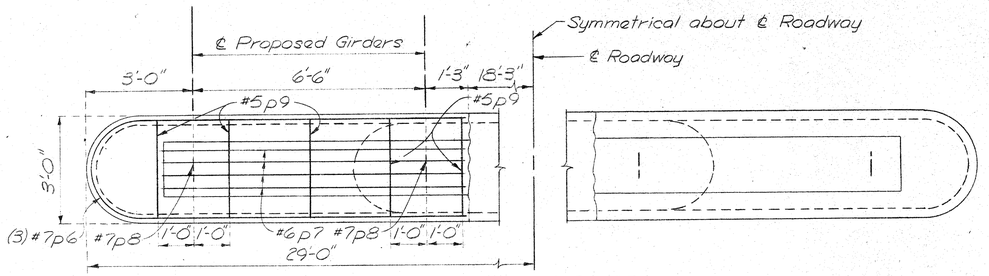
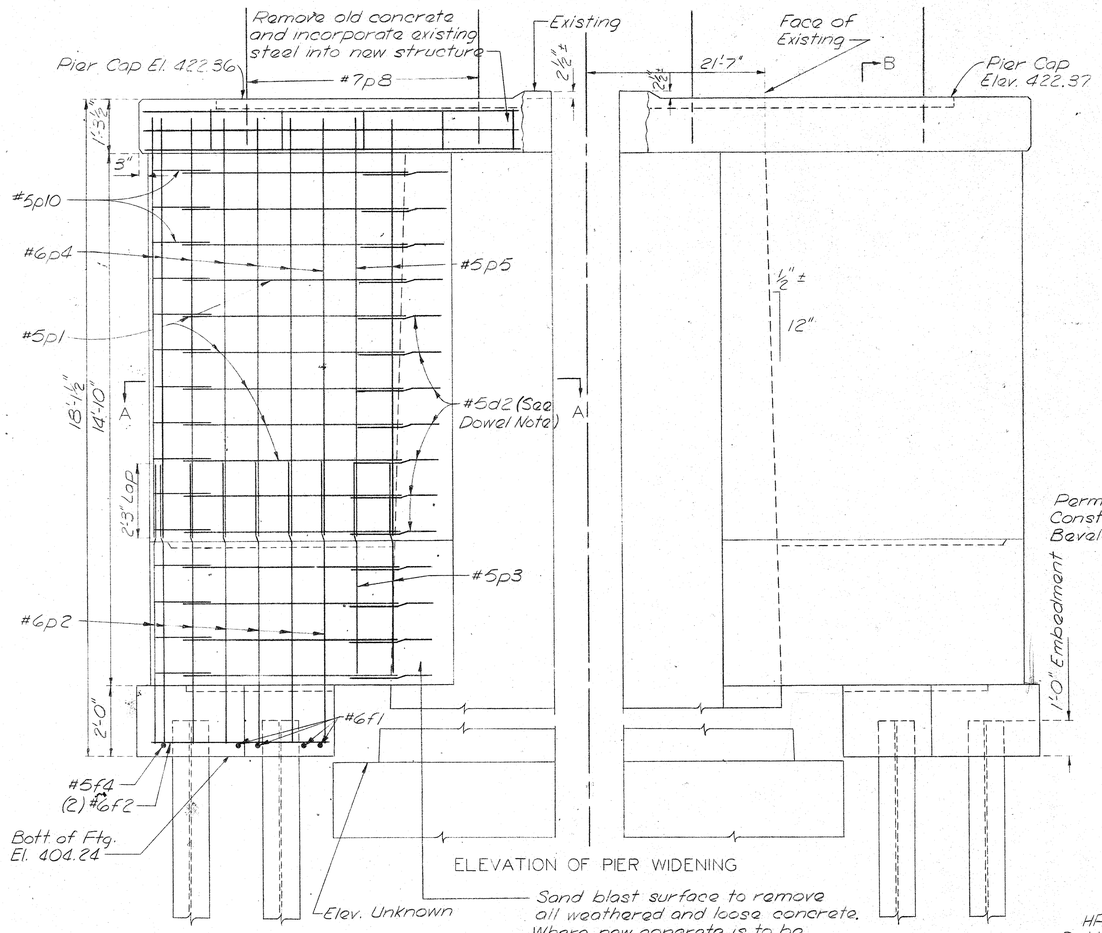
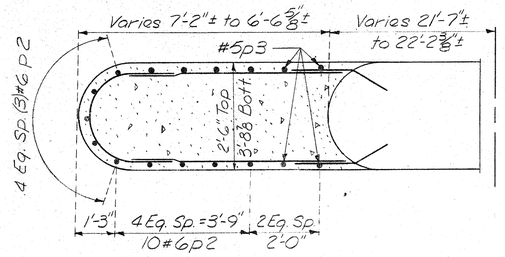
BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY

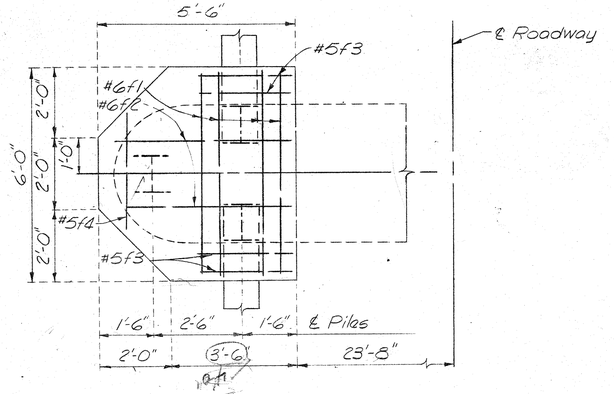


PLAN OF PIER CAP WIDENING

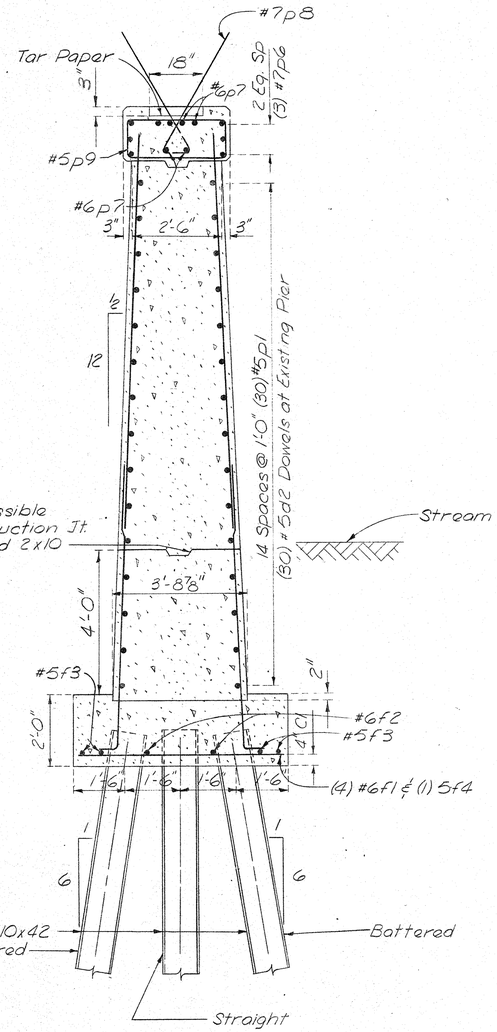


ELEVATION OF PIER WIDENING





FOOTING PLAN



SECTION B-B

Note: Dowels are to be set into a surface so they are on a slope of not flatter than 2½ horizontal to 1 vertical. In all cases, the dowels shall be installed by the following procedure.

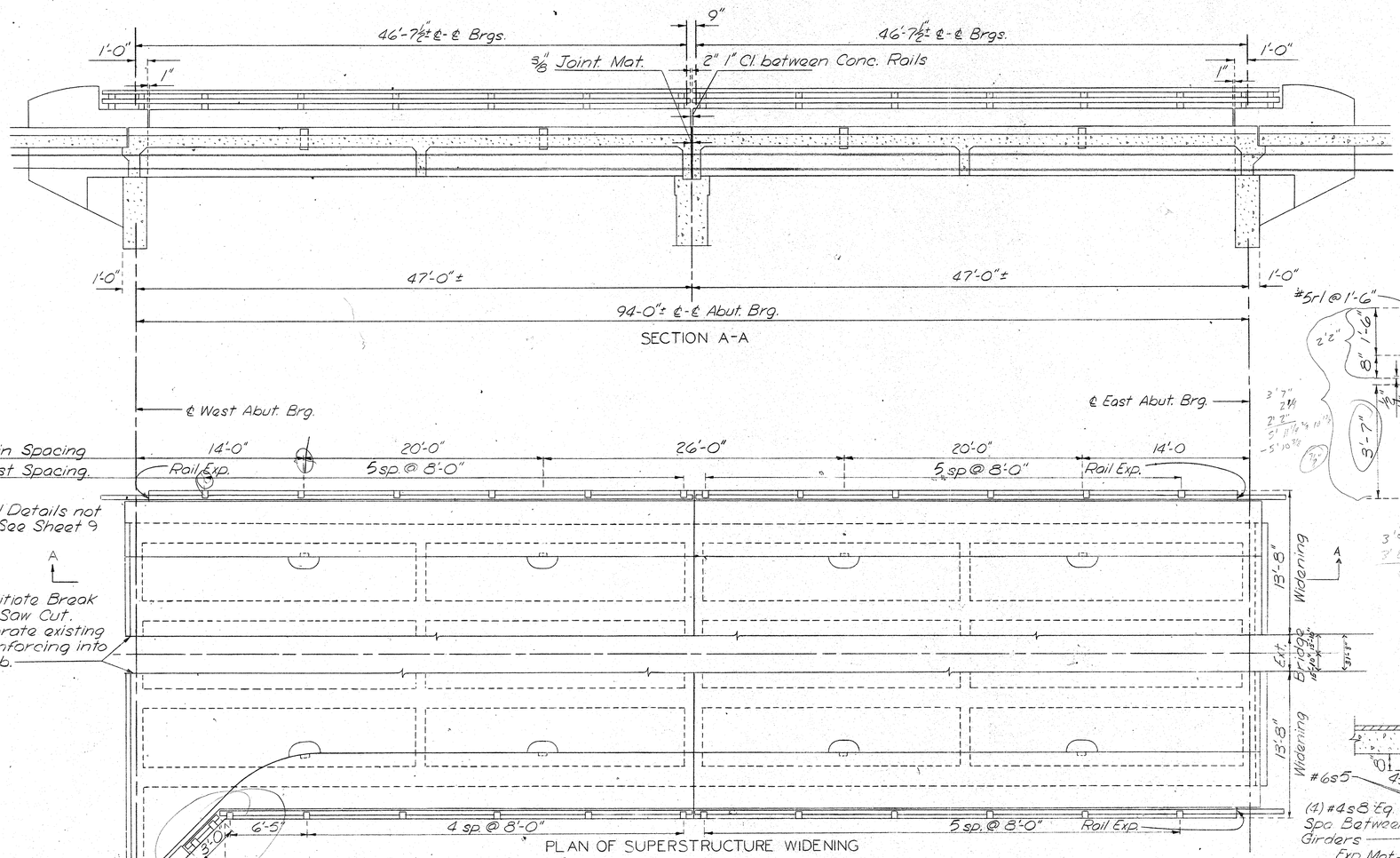
A.) Drill hole approximately twice the diameter of the dowel bar and to depth indicated.
B.) Fill hole with water and allow to stand long enough to throughly saturate the surrounding concrete (about four hours)
C.) Blow out all free water and fill hole ⅔ full of mortar.
D.) Insert dowel by driving, if necessary, and manipulate or tap with hammer to consolidate mortar and secure complete embedment.
E.) Add more mortar, if necessary to fill hole.
F.) Mortar shall consist of equal parts portland cement and sand with just enough water to make a workable mix. Cost of setting dowels shall be included in price bid for reinforcing steel.

PIER QUANTITIES	
Concrete (3,000 psi)	
Footing (2)	4.3 Cu. Yds.
Stem (2)	23.3
Cap (2)	3.0
Total Pier Widening Conc.	30.6 Cu. Yds.
Reinforcing	2437 Lbs.
Piling (HP10x42)	222 Lin. Ft.

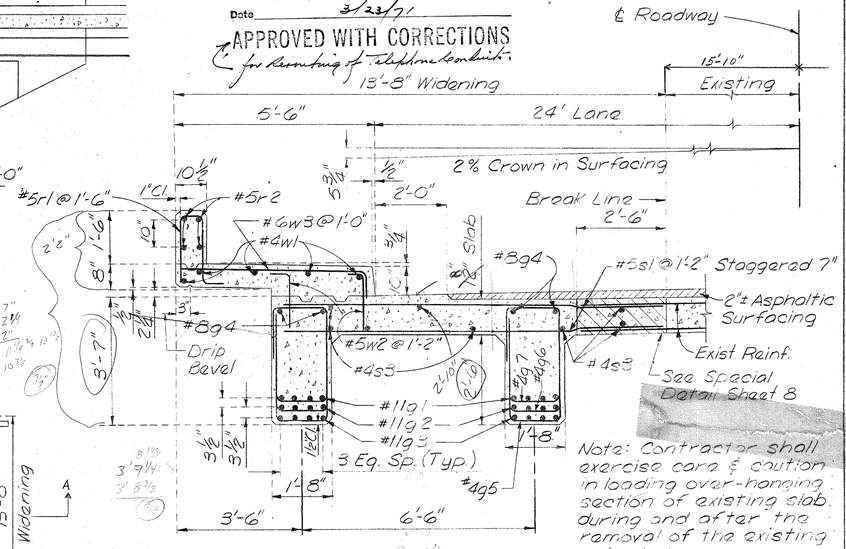
BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY

St. Louis County
Department of Highways
and Traffic
BOND ISSUE ROADS SECTION.
For the Director
RICHARD F. DAYKIN
Signed _____
Date 3/23/71

APPROVED WITH CORRECTIONS
for Rerouting of Telephone Conduits

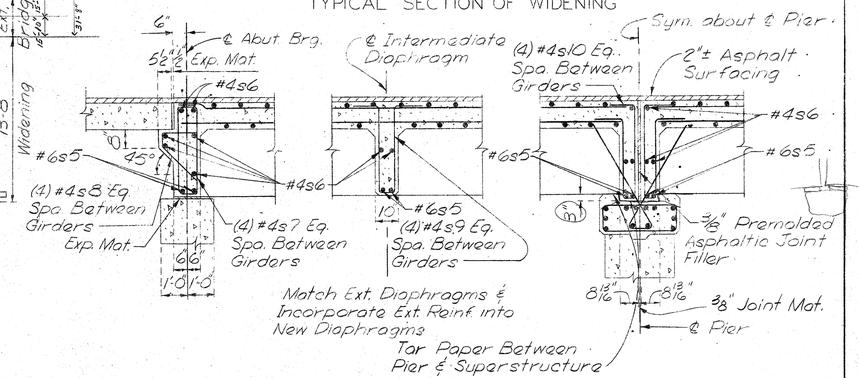


PLAN OF SUPERSTRUCTURE WIDENING

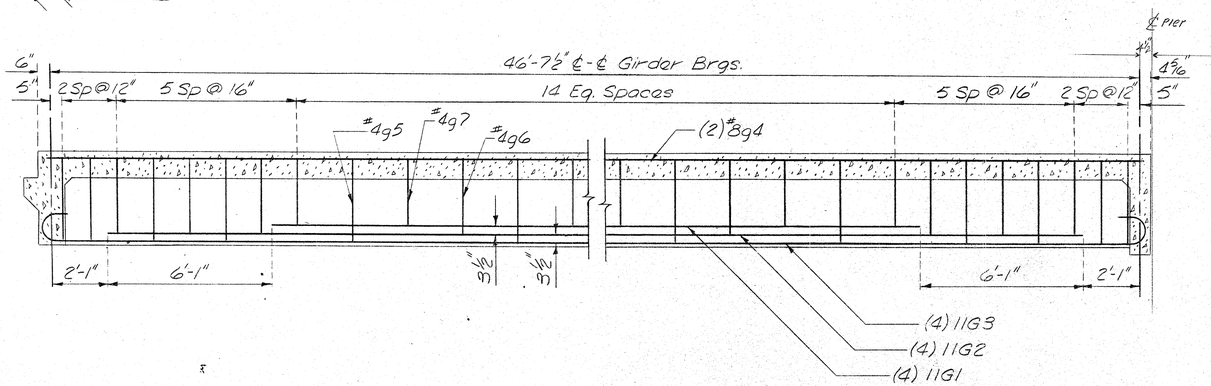


Note: Contractor shall exercise care & caution in loading over-hanging section of existing slab. during and after the removal of the existing ext. girders.

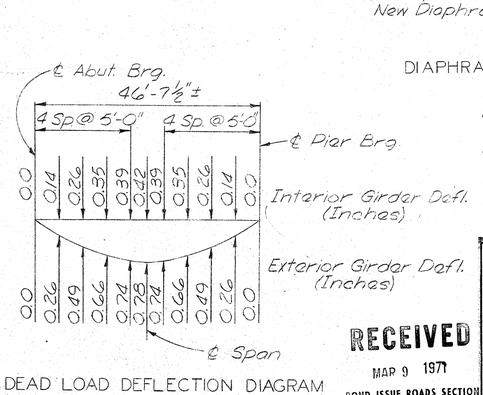
TYPICAL SECTION OF WIDENING



DIAPHRAGM DETAILS



TYPICAL GIRDER REINFORCING



DEAD LOAD DEFLECTION DIAGRAM

Note: Dead load deflection diagram is due to the deflection of the structure under its own weight. The contractor shall submit his plan for shoring or falsework support to the engineer, prior to starting work, for approval and the calculation of support deflection due to forms & concrete.

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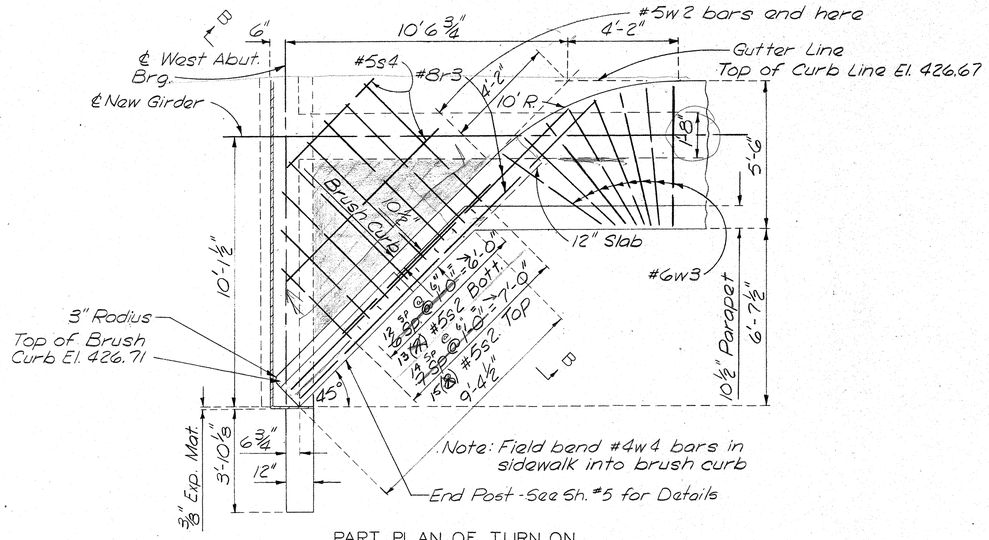
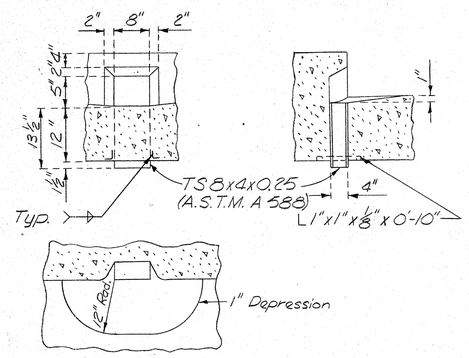
AND TRAFFIC

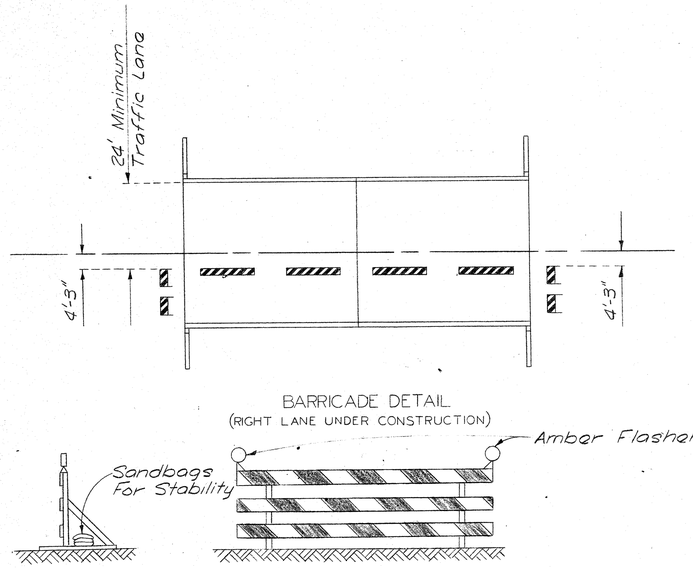
BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY



PART PLAN OF TURN ON
(TOP REINFORCING ONLY)



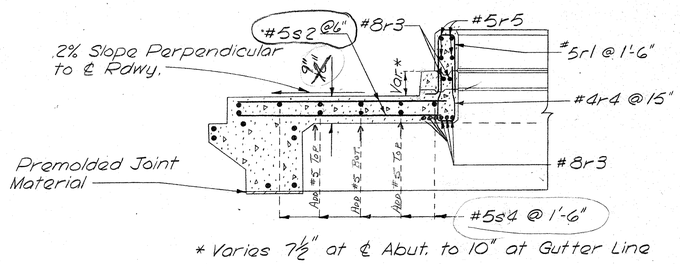
DRAIN DETAILS



BARRICADE DETAIL
(RIGHT LANE UNDER CONSTRUCTION)

TYPICAL TRAFFIC BARRICADE

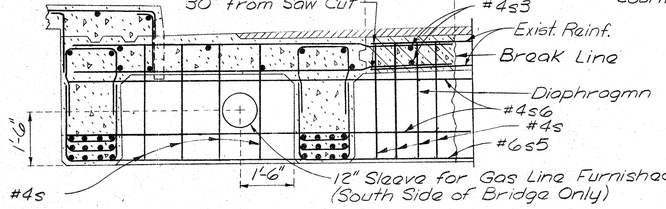
During periods of no construction the traffic barricades shall be backed with snow fence or other approved fencing to prevent pedestrian access to construction area. All traffic and pedestrian barricades, signs, lights, are subject to the approval of the St. Louis County Traffic Dept.



* Varies 7½" at ℄ Abut. to 10" at Gutter Line

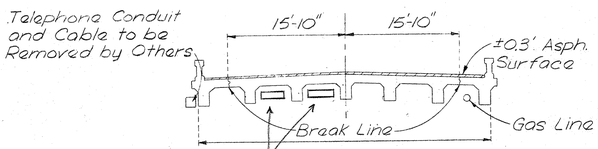
SECTION B-B

CHANGES ABOVE IN RED
AS PER C.P.C. 3-27-72



Note: Pour 2'-6" Section of slab and diophragms after supports for new construction have been removed. Lap new and existing reinf., top and bottom a minimum of 30 dia. In all diophragms 12" Sleeves to be supplied by Gas Co.

SPECIAL DETAIL



CROSS SECTION EXISTING BRIDGE

2 Proposed sets of 14 each of 4" I.D conduits under bridge deck.
Please see sheet No 1

SUPERSTRUCTURE QUANTITIES			
Concrete	South Side	North Side	Total
Slab & Girders	66.4 Cu.Yds.	63.6 Cu.Yds.	130.0 Cu.Yds.
Curb	13.8	14.8	28.6
Rail & E. Post (S. Side Only)	5.0	4.5	9.5
2'-6" Final Slab Closure	10.3	10.3	20.6
Total	95.5 Cu.Yds.	93.2 Cu.Yds.	188.7 Cu.Yds.
Reinforcing	17,876 Lbs.	17,404 Lbs.	35,280 Lbs.

St. Louis County
Department of Highways
and Traffic
BOND ISSUE ROADS SECTION.
For the Director
RICHARD F. DAYKIN
Signed [signature]
Date 3-9-71
APPROVED
for Rerouting of Telephone Cable

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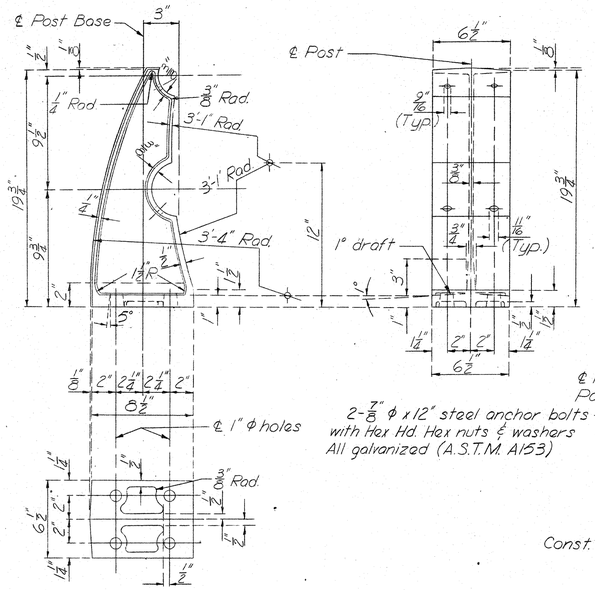
SHEET 8 OF 9

BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY

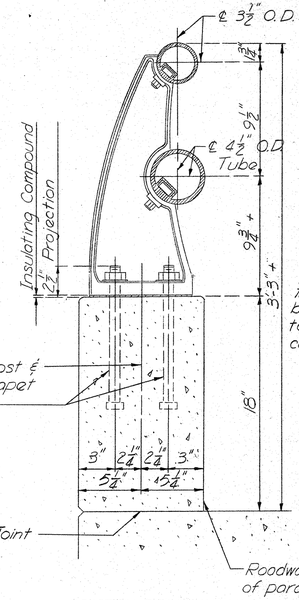
C. KOVAC 961-9873

Note: Tube bearing surfaces of post to be cast flat & true or machined.

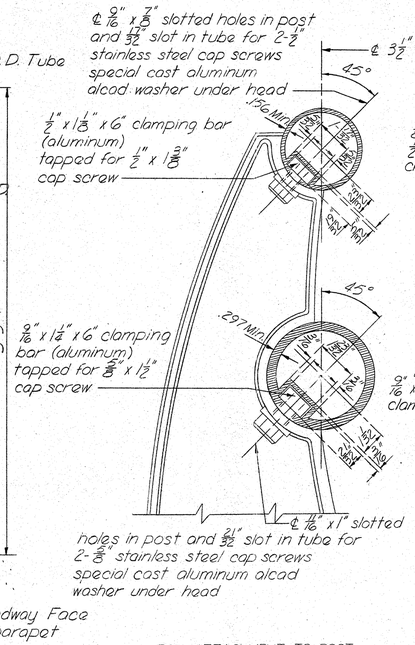


HANDRAIL POST

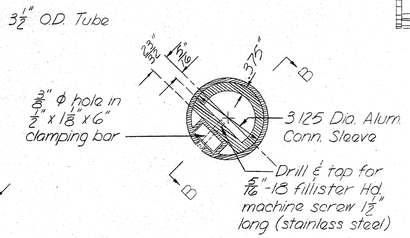
2-⅞" ϕ x 12" steel anchor bolts with Hex Hd. Hex nuts & washers All galvanized (A.S.T.M. A153)



SECTION THRU HANDRAIL



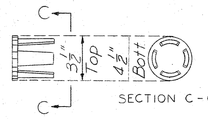
RAIL ATTACHMENT TO POST



RAIL SPLICE OR EXPANSION DETAILS

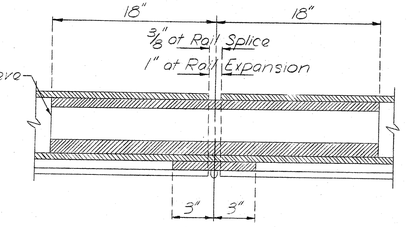
RAIL QUANTITIES
Double Aluminum Rail 192.4 L.F.
Aluminum Posts *

* Price of Posts to be Incl. in Price of Rail

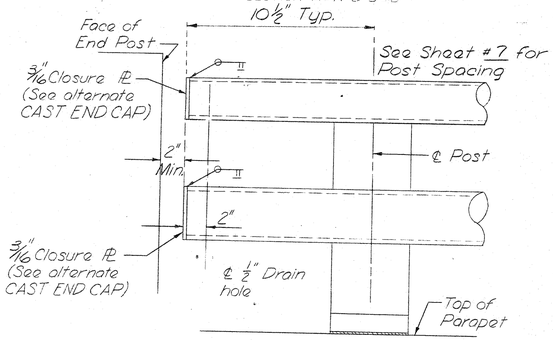


SECTION C-C

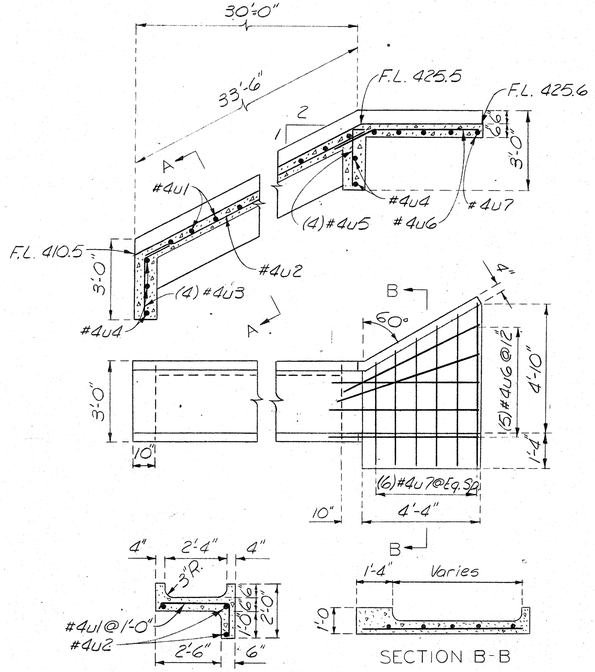
CAST END CAP (Drive Fit Type)



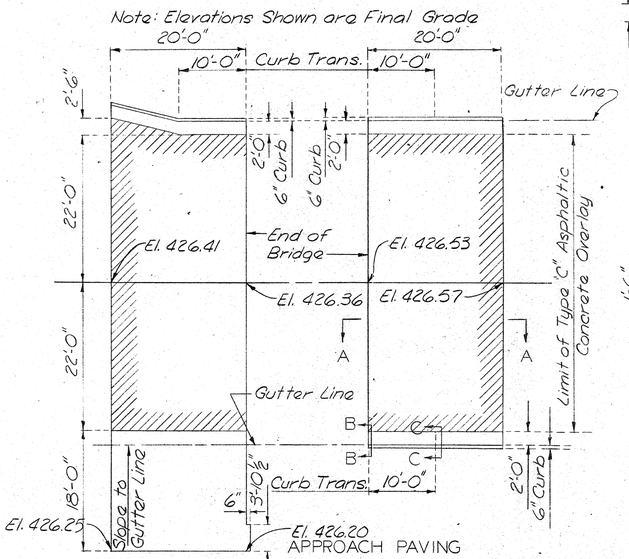
SECTION A-A & B-B

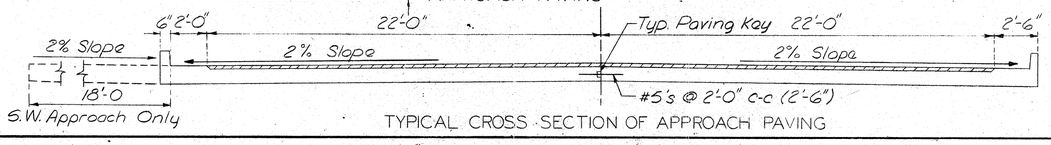


ELEVATION AT END RAIL POST



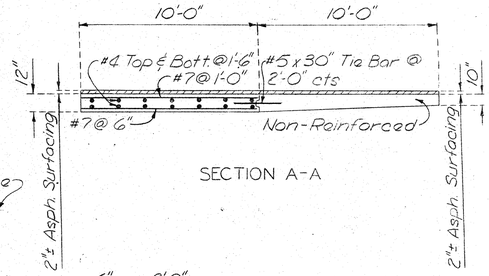
FLUME DETAILS



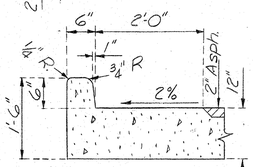


S.W. Approach Only

TYPICAL CROSS SECTION OF APPROACH PAVING



SECTION A-A



TYPICAL CURB DETAIL (10' FROM BRIDGE) SECTION C-C

GENERAL NOTES:

Top of curbs and parapets to be built parallel to grade with curb and parapet joints (except at end posts) normal to grade.

All exposed edges of end posts shall have ½" bevel. All exposed edges of curbs and parapets shall have ½" radius or ⅜" bevel.

All handrail posts shall be set normal to grade

Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.

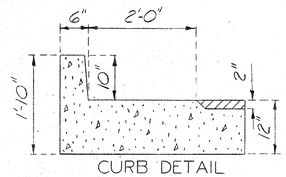
All fillets ¼" except as noted.

All drafts 3° except as noted.

All rail splices shall be located near a ¼ point between rail posts.

All outside corners of aluminum posts to have ⅛" radius except as noted.

Concrete end posts to be vertical.



CURB DETAIL AT END OF BRIDGE SLAB SECTION B-B

SHEET 9 OF 9

BRIDGE OVER GRAVOIS CREEK
BAYLESS ROAD
465' SOUTH EAST I-55
1969 BOND ISSUE PROPOSITION NO. 1
PROJECT NO. 20 SECTION B
STA. 83+92 92
SAINT LOUIS COUNTY