(1)

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT		B.P.R. REGION DIVISION	SHEET NUMBER	TOTAL SHEETS
		STATE	FEDERAL			
40.9	3.1		12.73	4 WIS.	1	65

INDEX OF SHEETS

SHEET NO. 1 TITLE
SHEET NO. 2-2.7 TYPICAL CROSS SECTIONS
SHEET NO. 3 ESTIMATE OF QUANTITIES
SHEET NO. 3A MISCELLANEOUS QUANTITIES
SHEET NO. 4-4.1 RIGHT OF WAY PLAT
SHEET NO. 5-15 PLAN AND PROFILE STA. TO STA.
SHEET NO. 16-19 STANDARD DETAILS
SHEET NO. 20-60 DRAINAGE STRUCTURES
SHEET NO. 61-65 CROSS SECTIONS



NOTE:
ALL ELEVATIONS SHOWN ON THESE PLANS MAY BE CONVERTED TO U.S.C. & G.S. SEA LEVEL DATUM OF 1929 BY THE ADDITION OF A FACTOR OF 581.21

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

STATE OF WISCONSIN

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

STATE STREET STRUCTURES

STRUCTURES: B-40-63
B-40-64

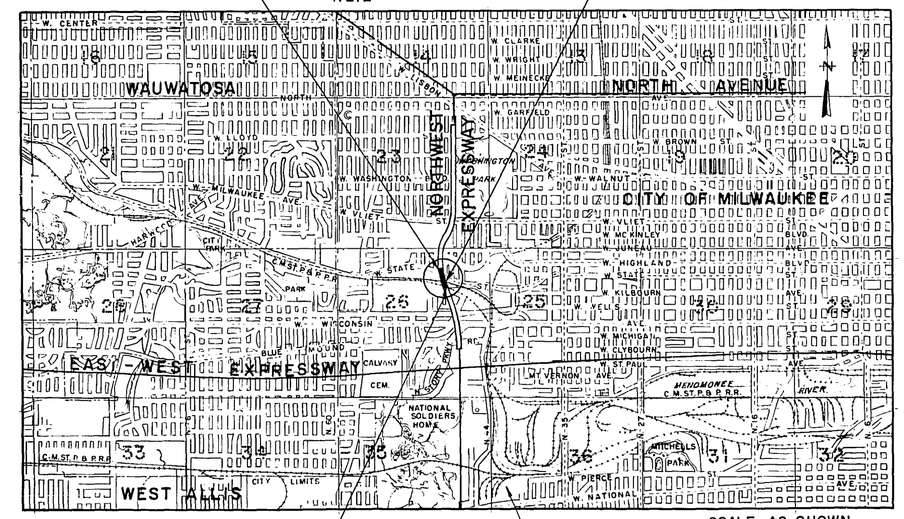
PROJECT: U03-1 (73)

CITY OF MILWAUKEE- MILWAUKEE COUNTY

BEGINNING AT A POINT APPROXIMATELY 1690 FEET SOUTH AND 1460 FEET WEST OF THE N.E. CORNER OF SEC. 26, T7N., R 21E., THENCE NORTHWESTERLY TO A POINT APPROXIMATELY 800 FEET SOUTH AND 1590 FEET WEST OF SAID CORNER.

END OF PROJECT U03-1(73)
STA. 88+58.36 (S)

STRUCTURE B - 40 -63 (SOUTHBOUND)
STRUCTURE B - 40 -64 (NORTHBOUND)



SCALE AS SHOWN

WEST MILWAUKEE

BEGINNING OF PROJECT U03-1(73)
STA. 79+62.13 (S)

CONVENTIONAL SIGNS

	EXISTING	PROPOSED
STATE LINE		
COUNTY LINE		
TOWNSHIP OR RANGE LINE		
SECTION LINE		
NEW RIGHT OF WAY LINE		
PRESENT RIGHT OF WAY LINE		
FENCE		
GUARD RAIL		
LOT LINE		
WATER	W	
GAS	G	
ELECTRIC	E	
TELEPHONE	T	
FIRE & POLICE ALARM	FP	
EXISTING SEWER		
PROPOSED SEWER		
SEWER MANHOLE		
INLET		
CATCH BASIN	CB	
POWER POLE		
TELEPHONE OR TELEGRAPH POLE		
RIGHT OF WAY MARKERS		
WATER VALVE	W	
FIRE HYDRANT		
HEDGE		
TREES		
LIGHT POLE		
TRAFFIC LIGHT		
WARNING LIGHT		
ELECTRIC OR TELEPHONE MANHOLE		
GAS VALVE	G	

LAYOUT

SCALE 0 2500' 5000'

TOTAL NET LENGTH OF CENTERLINE = 0.170 MI.

DE LEUW, CATHER & COMPANY
CONSULTING ENGINEERS
CHICAGO

CORRECT:

DATE 10-27-58

MILWAUKEE COUNTY
EXPRESSWAY COMMISSION

RECOMMENDED FOR APPROVAL:

DATE 1/16/59 EXPRESSWAY ENGINEER

APPROVED:

DATE 1/20/59 COUNTY HIGHWAY COMMISSIONER & DIRECTOR OF PUBLIC WORKS

STATE HIGHWAY
COMMISSION OF WISCONSIN
MADISON, WISCONSIN

SURVEYOR X-WAY NOTE BOOK
DISTRICT COMPUTER M. O. CHECKER
DISTRICT CHECKER E.R.R.R.D. CORRECT

CORRECT:
DATE 2/13/59 DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL:
DATE 2/20/59 ENGINEER OF DESIGN

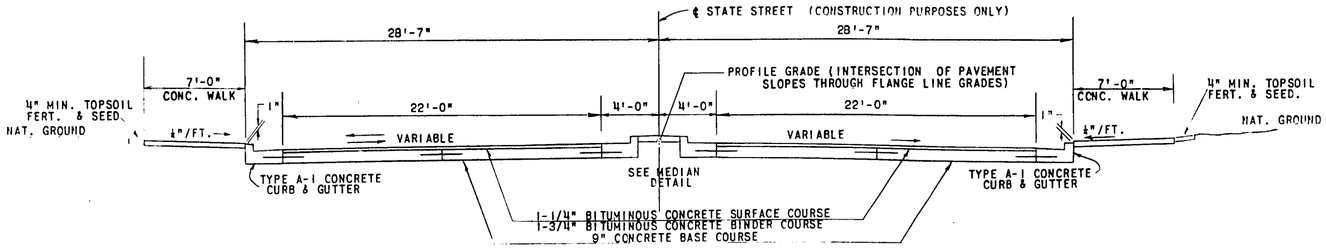
APPROVED:
DATE 2/20/59 STATE HIGHWAY ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

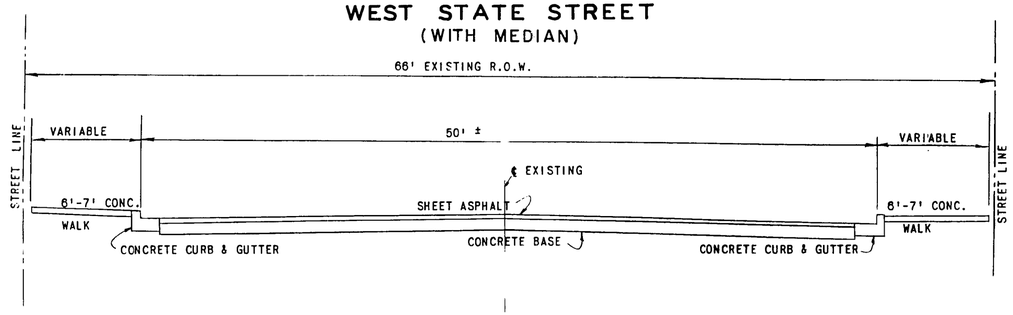
APPROVED: [redacted] DATE
[redacted] DIVISION ENGINEER

U03-1(73)

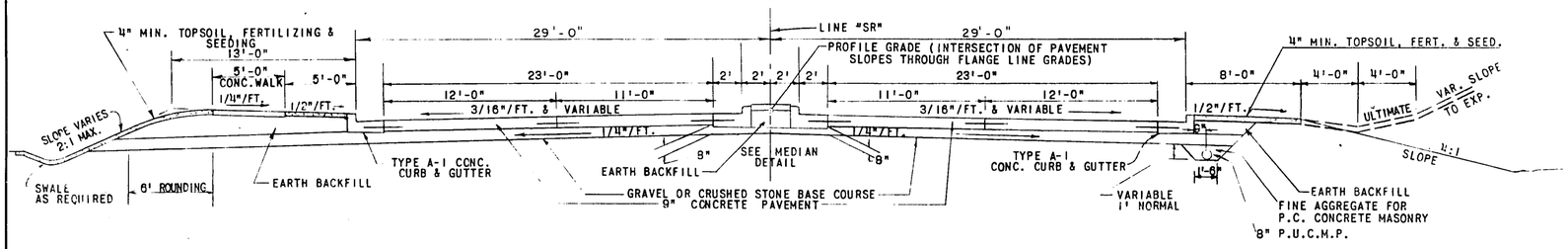
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U03-1 (73)	2	65



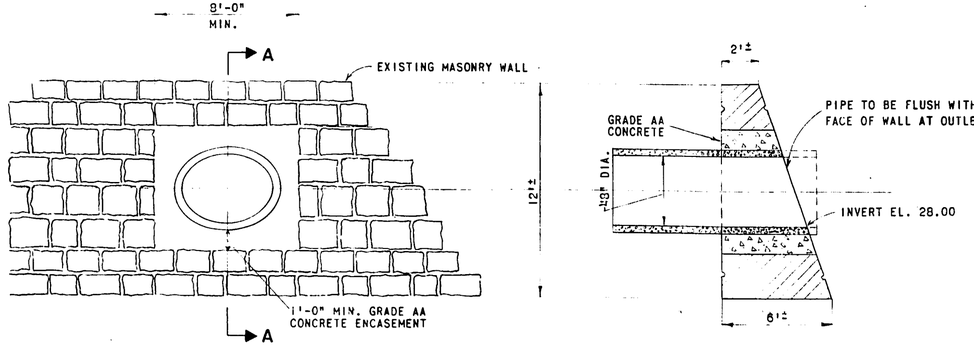
TYPICAL SECTION NEW PAVEMENT
WEST STATE STREET
(WITH MEDIAN)



TYPICAL SECTION PRESENT PAVEMENT
WEST STATE STREET



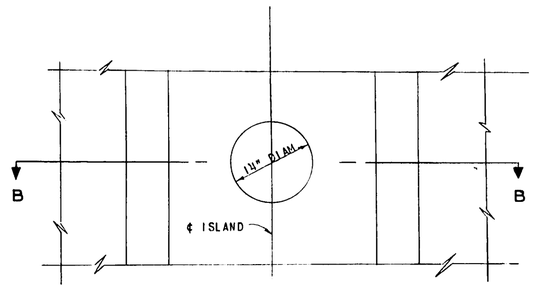
TYPICAL SECTION NEW PAVEMENT
FRONTAGE ROAD



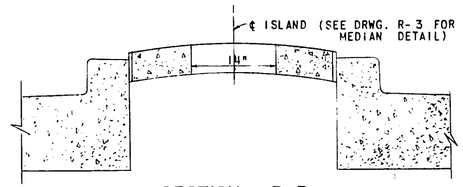
FRONT ELEVATION

SECTION A-A

STORM SEWER ENDWALL AT MENOMONEE RIVER
STA. 12+07 (ST) ± 4' RT. ±

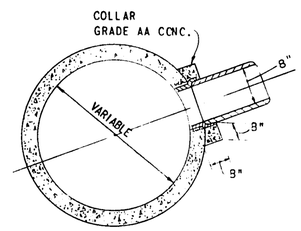


PLAN



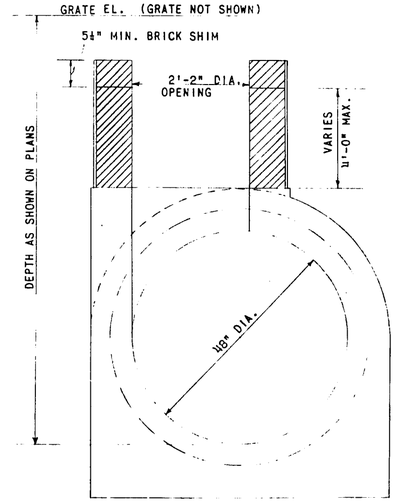
SECTION B-B

TRAFFIC MARKER LIGHT
* [BOX-OUT DETAIL]



DETAIL OF CONNECTION TO EXISTING SEWERS

2+20 (ST) #	-	2' RT
3+32 (ST.)	-	2' RT.
3+30 (ST.)	-	6' RT.
8+79 (ST.)	-	9' RT.
4+56 (ST.)	-	2' RT.
8+35 (ST.)	-	20' LT.



MANHOLE TYPE 2
(MODIFIED)

STA. 7+90 (ST) 35' LT.
9+42 (ST) 25 LT.

NOTE:
CONSTRUCTION DETAILS NOT SHOWN TO BE AS FOR STANDARD MANHOLE TYPE '2'

APPROVED DETAIL DRAWINGS

CONCRETE PAVEMENT REINFORCEMENT	2-1.1.7
LONGITUDINAL JOINTS - CONCRETE PAVEMENT..	4-4.4.1
TRANSVERSE JOINTS - CONCRETE PAVEMENT ..	4-4.5.2
SLOPE PAVING	8-3.3.2

* NOTE:
CITY OF MILWAUKEE WILL INSTALL CONDUIT AND FORMS FOR MARKERS AND REGULATOR PITS WHERE REQUIRED AT TIME OF CONSTRUCTION

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
TYPICAL SECTIONS AND CONSTRUCTION DETAILS
WEST STATE STREET

NO.	DATE	REVISION	BY

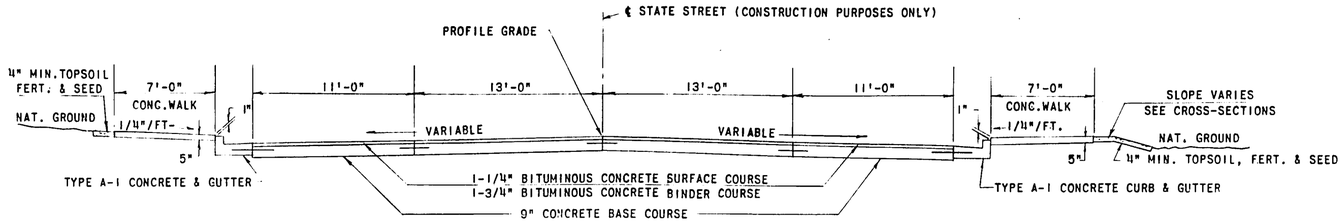
DESIGNED
DRAWN M.F.D.
CHECKED P.W.
APPROVED H.O.J.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

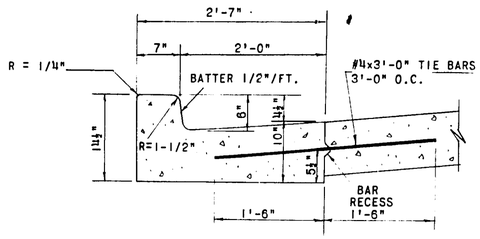
SCALE: AS SHOWN
SHEET NO. R-1

(3)

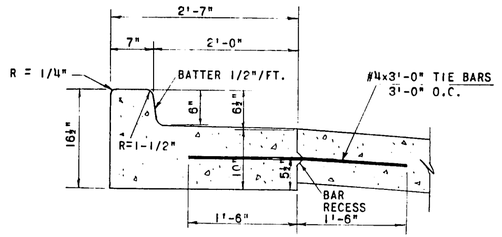
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U03-1(73)	21	65



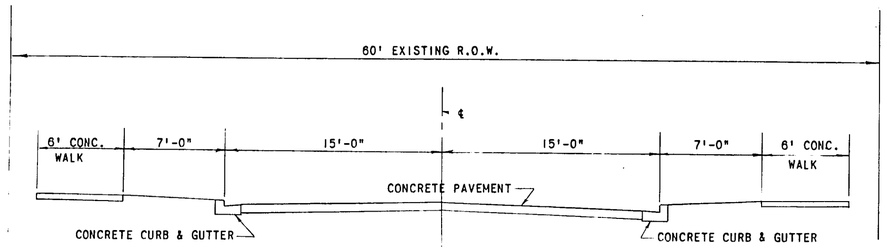
TYPICAL SECTION NEW PAVEMENT
WEST STATE STREET
(WITHOUT MEDIAN)



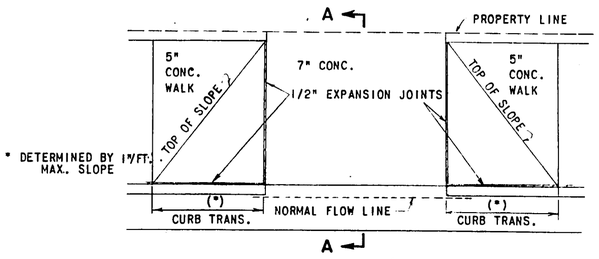
TYPE A-1
(31")



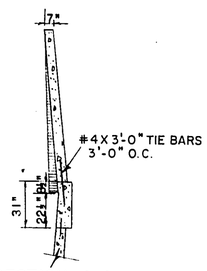
TYPE A-2
(31")



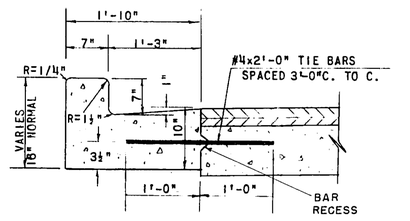
TYPICAL SECTION PRESENT PAVEMENT
NORTH 49TH STREET



DEPRESSED DRIVEWAY

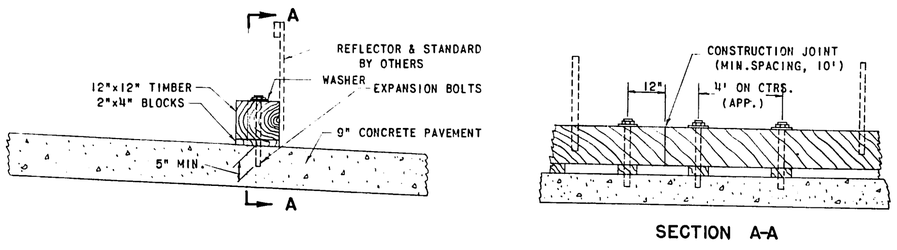


SECTION A-A



TYPE D-1
(22")

CONCRETE CURB AND GUTTER



SECTION A-A

TIMBER BARRICADE

NO.	DATE	REVISION	BY

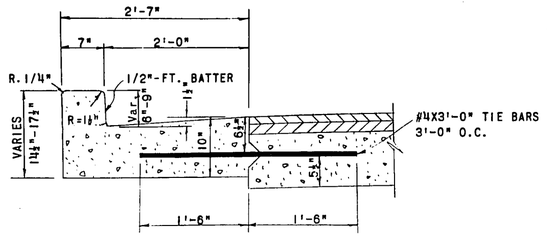
MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
TYPICAL SECTIONS AND CONSTRUCTION DETAILS
WEST STATE STREET

DESIGNED DRAWN A.P. CHECKED P.W. APPROVED H.O.J.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: AS SHOWN SHEET NO. R-2

④

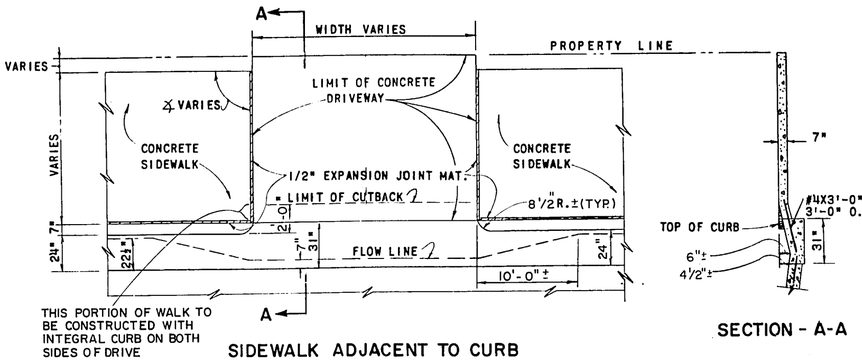
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS. 4	WIS.	U03-1 (73)	22	65



TYPE A-1

CONCRETE CURB AND GUTTER (31")

LOW SIDE SECTION

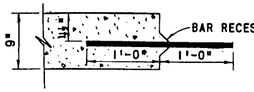


THIS PORTION OF WALK TO BE CONSTRUCTED WITH INTEGRAL CURB ON BOTH SIDES OF DRIVE

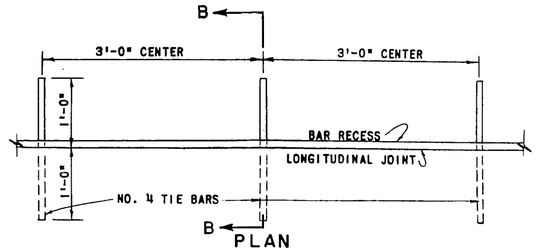
SIDEWALK ADJACENT TO CURB

TYPICAL DRIVEWAY ENTRANCE

SECTION - A-A



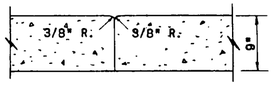
SECTION B-B



PLAN

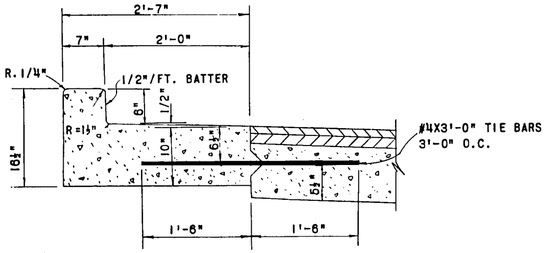
LONGITUDINAL CONSTRUCTION JOINT

CONCRETE BASE COURSE



TRANSVERSE CONSTRUCTION JOINT

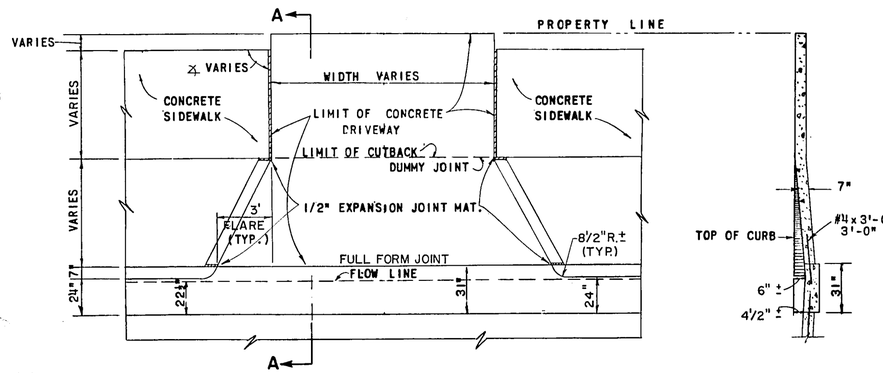
CONCRETE BASE COURSE



TYPE A-2

CONCRETE CURB AND GUTTER (31")

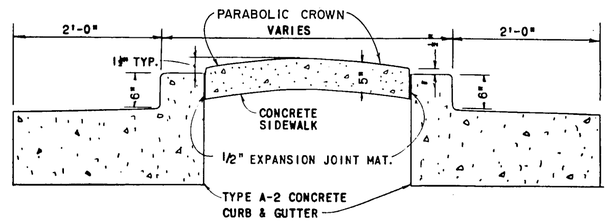
HIGH SIDE SECTION



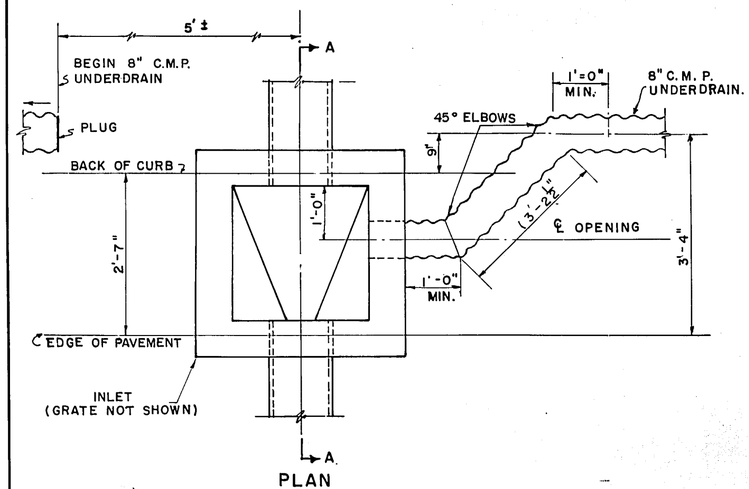
SIDEWALK DISTANT FROM CURB

TYPICAL DRIVEWAY ENTRANCE

SECTION - A-A

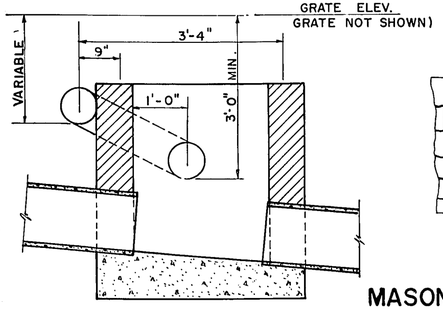


MEDIAN DETAIL

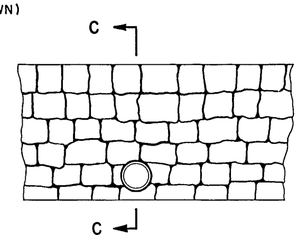


PLAN

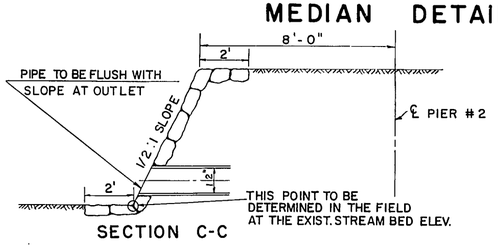
DETAIL OF UNDERDRAINS



SECTION A-A



DETAIL OF MORTAR RUBBLE MASONRY SLOPE AT PIER # 2



SECTION C-C

NOTE:
SEE SHEET R-7
FOR LOCATION & WIDTH.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

CONSTRUCTION DETAILS
WEST STATE STREET

NO.	DATE	REVISION	BY

DESIGNED
DRAWN A. P.
CHECKED P. W.
APPROVED H.O.J.

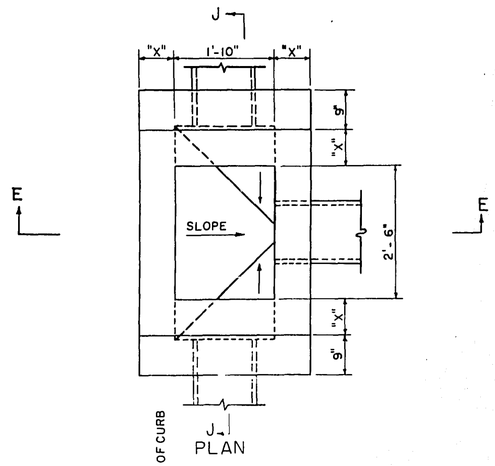
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: AS SHOWN

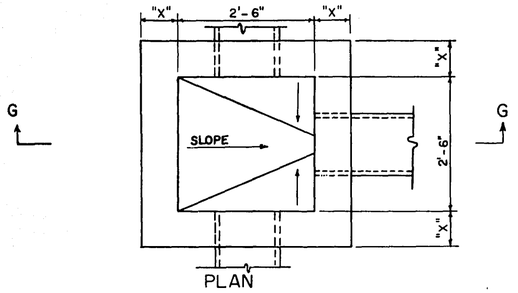
SHEET NO. R-3

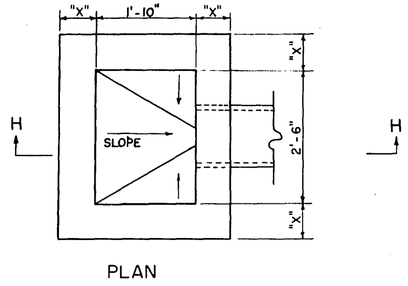
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS 4	WIS	U03-1(73)	23	65

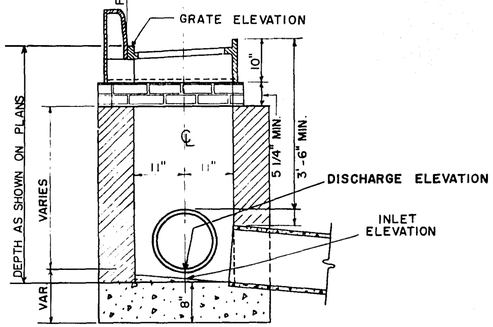
NOTE: FRAME AND GRATE NOT SHOWN IN PLAN VIEW



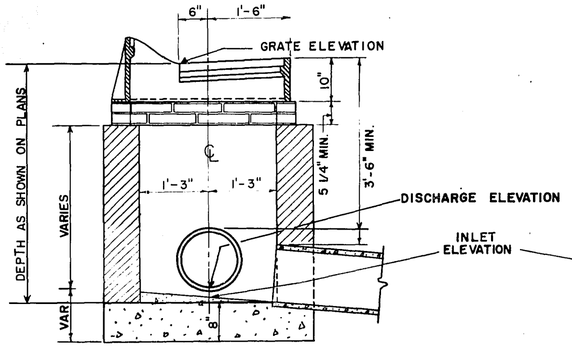
FOR INLET WALL THICKNESS "X" SEE NOTE BELOW.



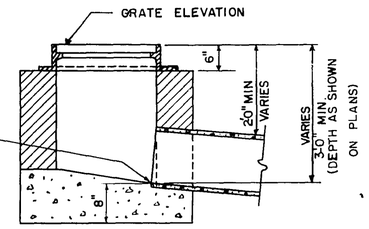




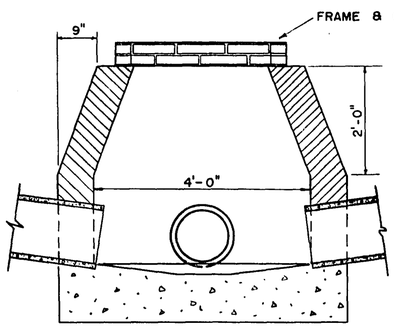
SECTION E-E
TYPE "A"
INLET WITH CURB BOX



SECTION G-G
TYPE "C"
INLET – MOUNTABLE CURB



SECTION H-H
TYPE "D"
FIELD INLET



SECTION J-J

NOTE: FOR FRAME & GRATE DETAILS SEE OTHER SHEETS.

NOTE: INLET WALLS TO BE 8" BRICK, OR 6" CONCRETE BLOCK, OR 6" GRADE "AA" CONCRETE.

INLET BASES TO BE GRADE "AA" CONCRETE.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

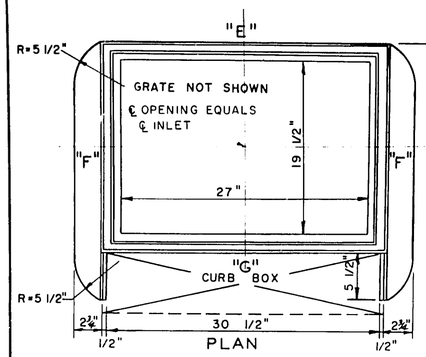
CONSTRUCTION DETAILS

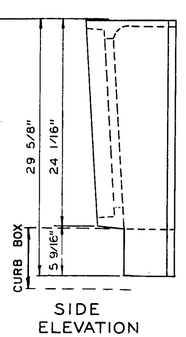
DRAINAGE DETAILS

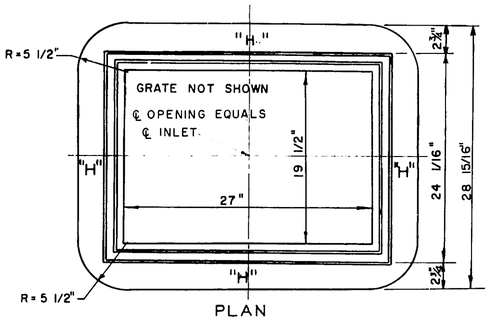
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CHECKED:	DWG. NO. EX-E7-03
APPROVED:	SHEET NO. 1 OF 2

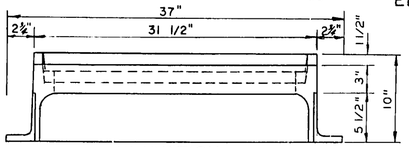
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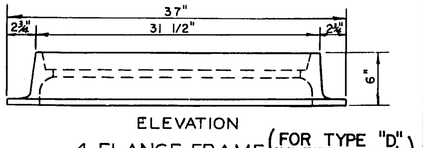
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS. 4	WIS.	U 03-1(73)	24	65

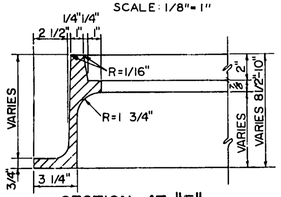


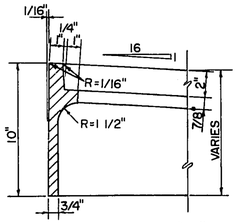


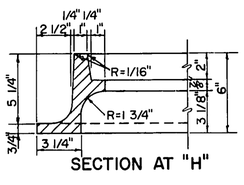


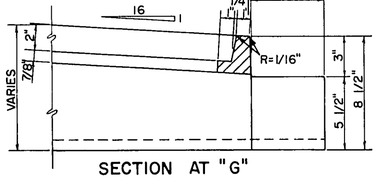




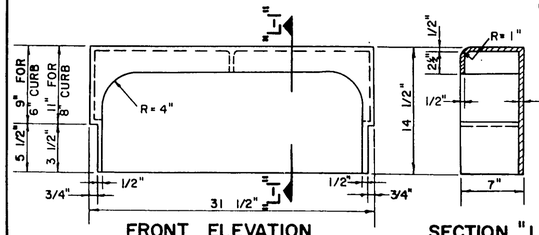


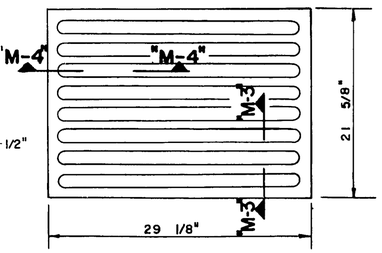


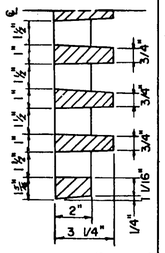


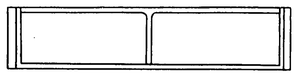


TYPICAL FRAME DETAILS
SCALE: 3/16"=1"

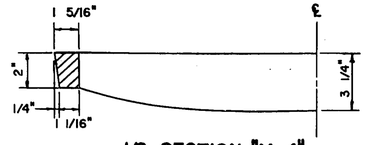




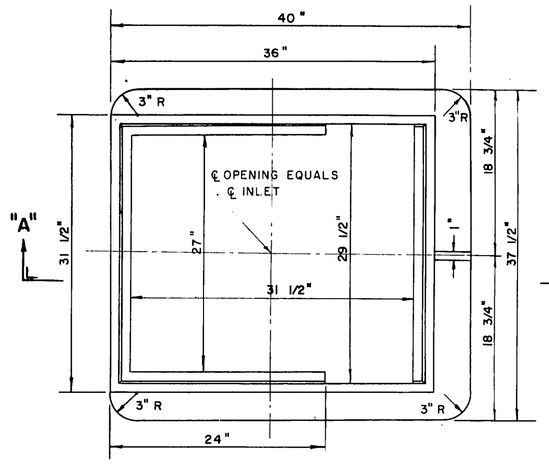


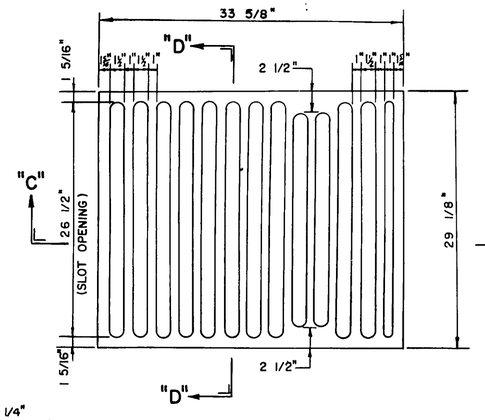


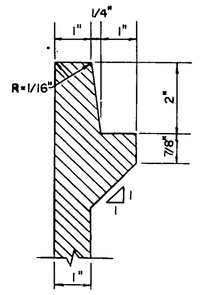
CURB BOX DETAILS
(FOR TYPE "A" INLETS & M.H.'S)

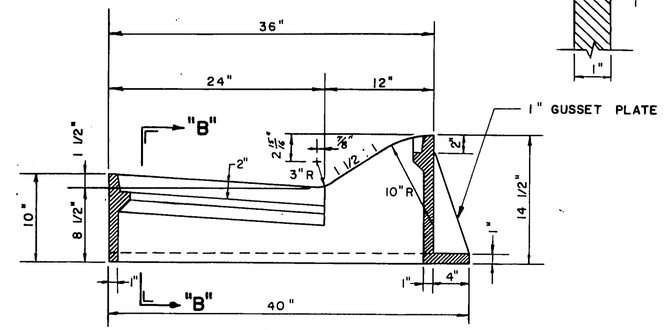


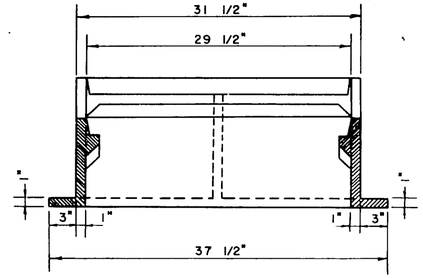
GRATE DETAILS
(FOR TYPES "A" & "D" INLETS & M.H.'S)

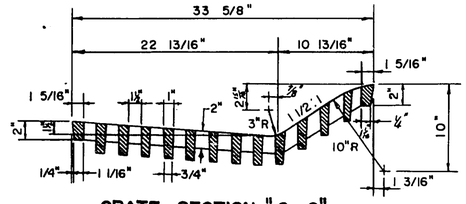


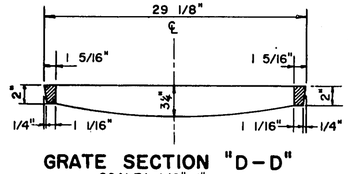












— INLET FRAME & GRATE FOR TYPE "C" INLETS & M.H.'S —

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

CONSTRUCTION DETAILS

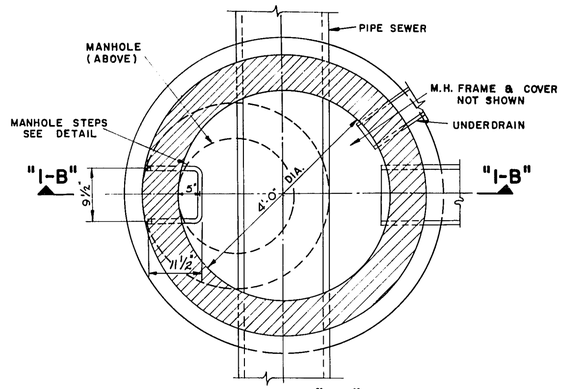
DRAINAGE DETAILS

DRAWN :	SCALE: AS SHOWN
CHECKED :	DWG. NO. FX-E7-03
APPROVED :	SHEET NO. 2 OF 2

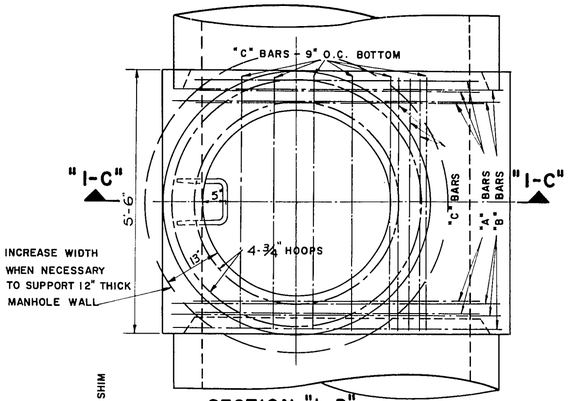
EXPRESSWAY STANDARDS

MC

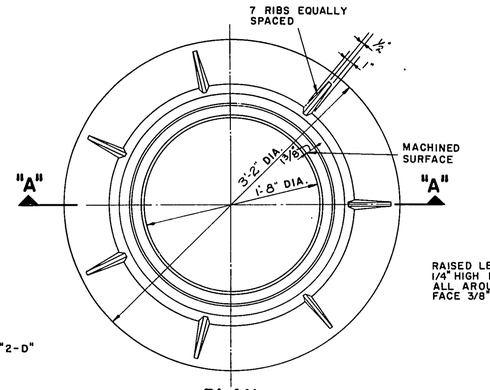
B.P.R. DIVISION	STATE	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	WIS.	U03-1(73)	2.565	



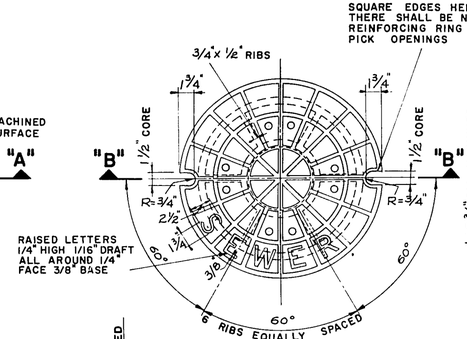
SECTION "I-A"



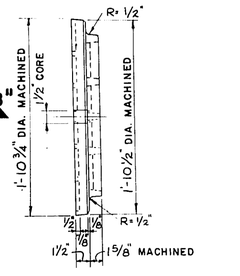
SECTION "I-D"



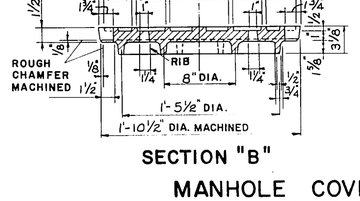
PLAN



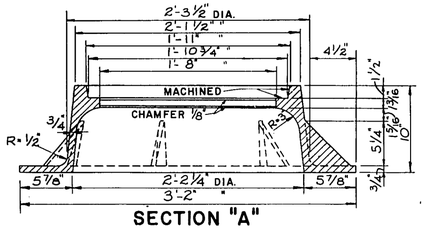
PLAN



EDGE VIEW



SECTION "B"



SECTION "A"

MANHOLE COVER
M.S. 12-WEIGHT 147 LBS±
SCALE 1/8" = 1"
NEENAH FOUNDRY M.S. 12
OR EQUIVALENT

MANHOLE FRAME
M.S. 21-WEIGHT 381 LBS±
SCALE 1/8" = 1"
NEENAH FOUNDRY M.S. 21
OR EQUIVALENT

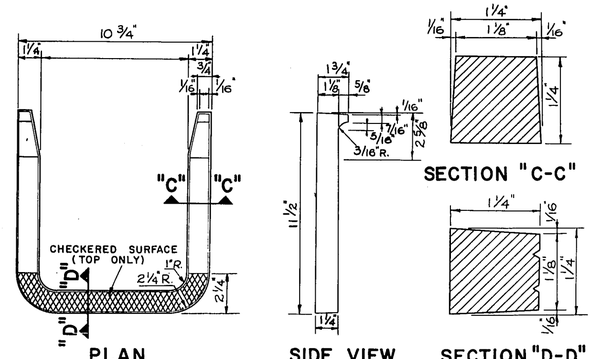
SECTION "I-B"

SECTION "I-B"

MANHOLE TYPE "1"

SECTION "I-C"

MANHOLE TYPE "2"



PLAN SIDE VIEW SECTION "C-C" SECTION "D-D"
SCALE 1"= 1"

MANHOLE STEP
M.S. 41-WEIGHT 10.7 LBS±
NEENAH FOUNDRY M.S. 41
OR EQUIVALENT

NOTES
1. LIMIT OF PAY ITEM FOR STORM SEWERS & SUBDRAINS: OUTSIDE FACE OF MANHOLE.
2. NO MANHOLE STEPS TO BE USED IN A MANHOLE 5'-0" OR LESS IN DEPTH.
3. WHEN MANHOLES ARE USED AS AN INLET CORBEL TOP TO FIT INLET FRAME, GRATE, & CURB BOX. THIS TYPE MANHOLE WITH FRAME, GRATE, & CURB BOX TO BE DESIGNATED AS TYPE I-A OR 2-A
   WHEN USED AS A FIELD INLET WITH FRAME & GRATE TO BE DESIGNATED AS TYPE I-D, 2-D, I-D MOD, OR 2-D MOD.
   WHEN USED AS AN INLET WITH INLET FRAME & GRATE FOR MOUNTABLE CURB & GUTTER, TO BE DESIGNATED AS TYPE I-C OR 2-C.
4. TYPE 1&2 MANHOLES TO BE USED WITH EITHER CORRUGATED METAL OR CONCRETE PIPE.

ALL "A", "B", AND "C" REINFORCING BARS ARE OF THE SAME DIAMETER, WHICH VARIES WITH "H"
FOR "H" 8'-0" TO 20'-0" USE 5/8" ø BAR.
FOR "H" 20'-0" TO 30'-0" USE 3/4" ø BAR.
FOR "H" 30'-0" TO 40'-0" USE 7/8" ø BAR.
THE "A" BARS MAY BE PLACED IN TWO SEGMENTS LAPPING 12" AT SPRING LINES OR IN ONE HOOP WITH ONE 12" LAP AT SPRING LINE.
THE BARS MAY LAP 40 DIAMETERS AT SPRING LINES OR BE PLACED IN ONE HOOP WITH ONE 12" LAP AT TOP OR BOTTOM.
ALL "C" BARS SHALL HAVE STANDARD HOOKED ENDS
FACE OF STEEL TO CONCRETE FACE SHALL BE A MINIMUM OF 1-1/2"

CONSTRUCTION NOTES
DETAIL OF CONSTRUCTION NOT SHOWN SHALL CONFORM TO THE PERTINENT REQUIREMENT OF THE STANDARD SPECIFICATION AND THE APPLICABLE SPECIAL PROVISIONS.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

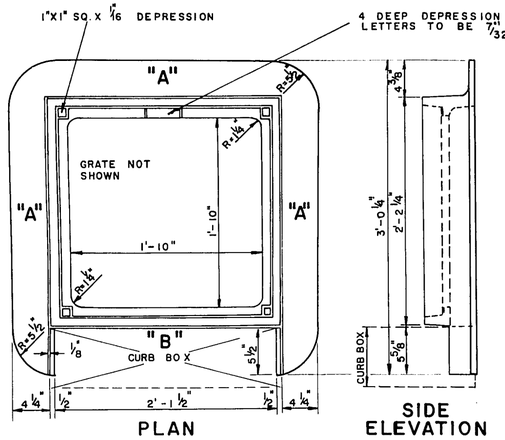
CONSTRUCTION DETAILS

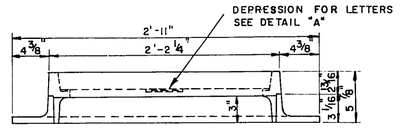
MANHOLE DETAILS

DRAWN:	SCALE: AS SHOWN
CHECKED:	DWG. NO EX-E7-04
DATE:	SHEET 1 OF 1

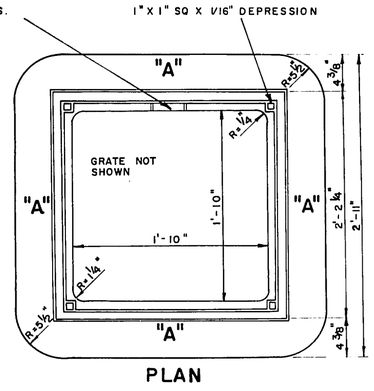
DESIGN PRODUCTS CO 100 57

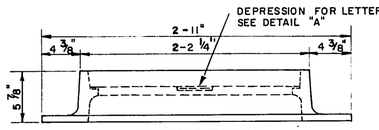
B.P.R. DIVISION	STATE	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	WIS.	U03-1(73)	2.6	65



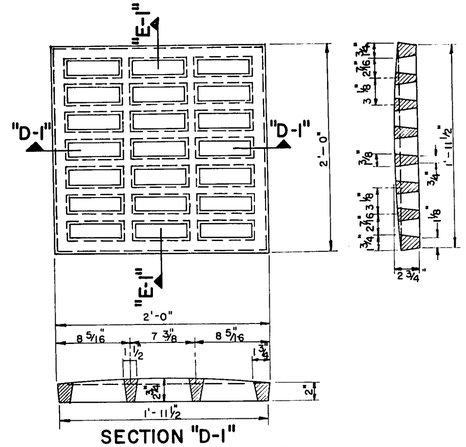


3 FLANGE FRAME
M.S. 26-CAST IRON-WEIGHT 270 LBS ±
SCALE 1/8"=1"

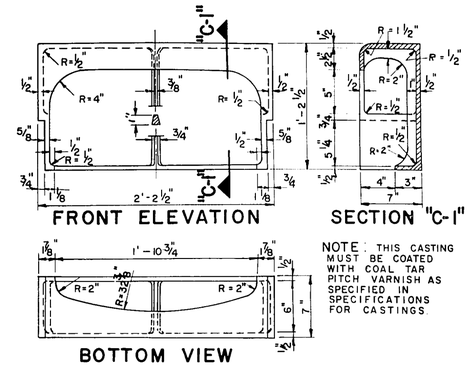




4 FLANGE FRAME
M.S. 8-CAST IRON-WEIGHT 315 LBS ±
SCALE 1/8"=1"

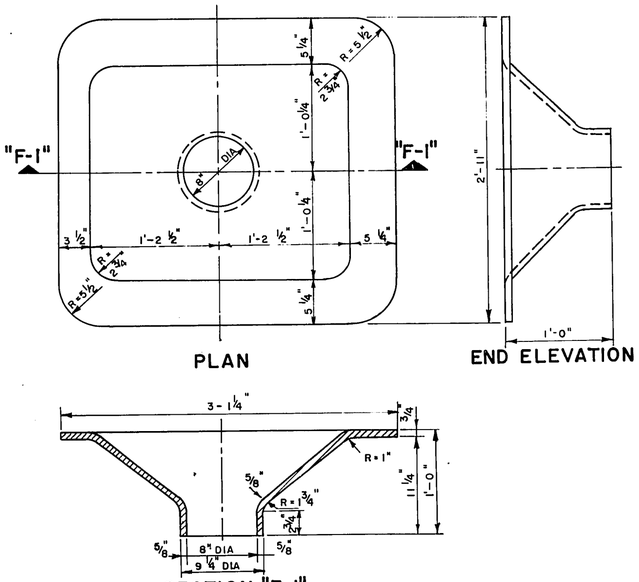


CATCH BASIN GRATE
M.S. 3 - CAST IRON WEIGHT 174 LBS ±
SCALE 1/8"=1"

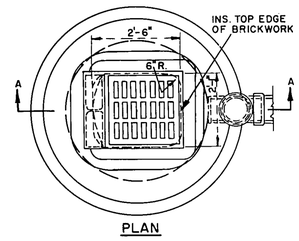


NOTE: THIS CASTING MUST BE COATED WITH COAL TAR PITCH VARNISH AS SPECIFIED IN SPECIFICATIONS FOR CASTINGS.

CURB BOX DETAILS
M.S. 27-CAST IRON-WEIGHT 127 LB'S ±
SCALE 1/8" = 1"

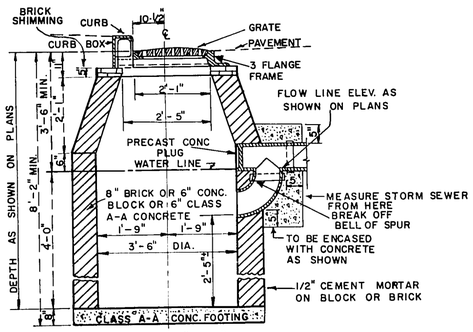


STORM WATER INLET BOWL
M.S. 25-CAST IRON WEIGHT 270 LBS ±
SCALE 1/8"=1"

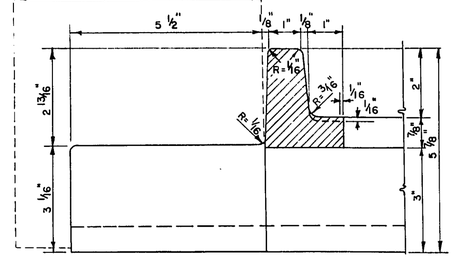


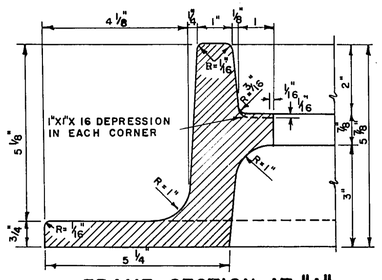
NOTES:

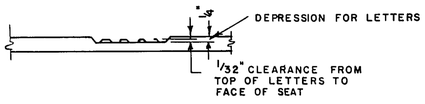
1. SPECIAL 8" AND 10" TEE BRANCHES HAVING A SPIGOT END SPUR SHALL BE USED FOR THE OVERFLOW TO THE STORM DRAIN. STANDARD 8" AND 10" SHORT RADIUS ELBOWS SHALL BE USED WITH THE TEE BRANCH AS SHOWN.
2. A CEMENT MORTAR DISC SHALL BE CEMENTED INTO THE OPENING AT THE INNER FACE OF THE TEE BRANCH.



CATCH BASIN
TYPE I-S
SCALE: 1/2" = 1'-0"





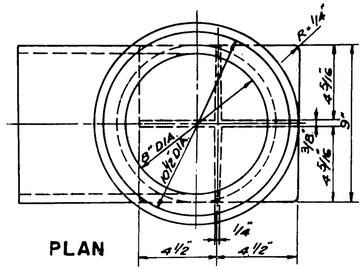


TYPICAL FRAME DETAILS
SCALE 1/2"=1"

MILWAUKEE COUNTY EXPRESSWAY COMMISSION	
CONSTRUCTION DETAILS	
DRAINAGE DETAILS	
DRAWN:	SCALE: AS SHOWN
CHECKED:	DWG NO EX-E7-05
DATE:	SHEET 1 OF 2

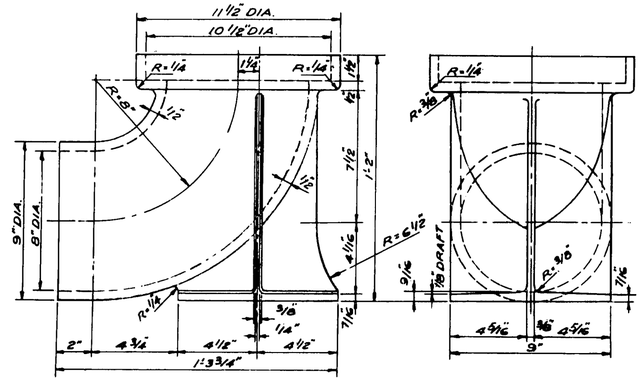
DESIGN PRODUCTS CO 10C-7-57

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
WIS. 4	WIS.	U03-1 (73)	27	65



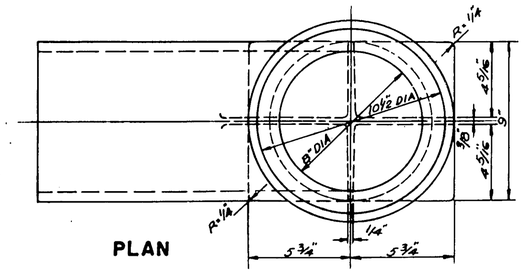
PLAN

M.S. 28
WEIGHT 83 LBS.



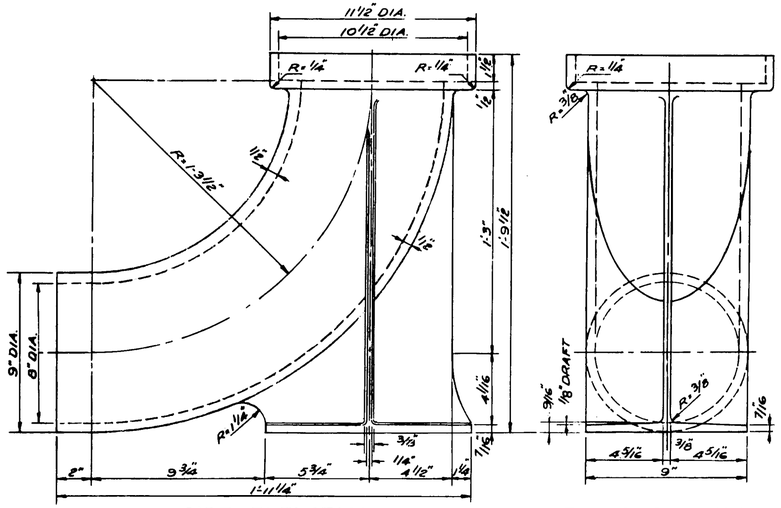
SIDE ELEVATION FRONT ELEVATION

8" RADIUS



PLAN

M.S. 29
WEIGHT 138 LBS.

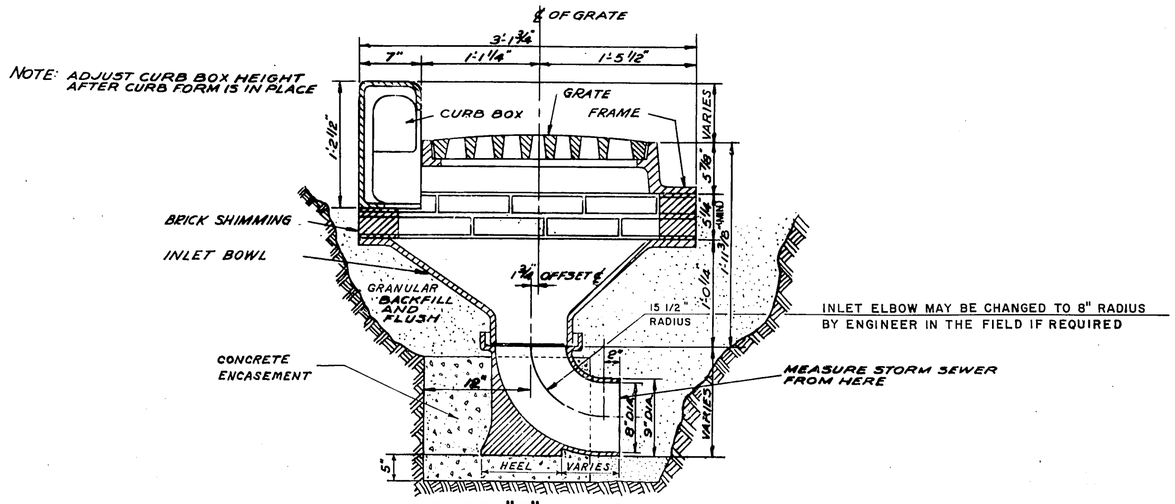


SIDE ELEVATION FRONT ELEVATION

15½" RADIUS

STORM WATER INLET ELBOW

SCALE 1/4"=1'



TYPE "S" INLET

SCALE 1/8"=1"

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

CONSTRUCTION DETAILS

DRAINAGE DETAILS

DRAWN:	SCALE: AS SHOWN
CHECKED:	DWG. NO. EX-E7-05
APPROVED:	SHEET NO. 2 OF 2

ESTIMATE OF QUANTITIES

CONTRACT NO. 1

B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	U03-1(73)	3	65

THIS PROJECT IS TO BE EXECUTED UNDER THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF WISCONSIN — EDITION OF 1957, APPROVED AUGUST 9, 1957
FEDERAL AID REQUIRED CONTRACT PROVISIONS APPROVED DEC. 4, 1957 AND SPECIAL PROVISIONS AS ATTACHED TO PROPOSALS.

SEC. NO.	STATION TO STATION	NET LENGTH OF CENTER LINE	CLEARING		GRUBBING		REMOVING						ABANDONING			EXCAVATION		GRANULAR BACK FILL	FINISHING ROADWAY	OBLITERATING OLD ROAD	CONCRETE		GRAVEL OR CRUSHED STONE BASE COURSE		CONCRETE		CONCRETE HEADERS	CONCRETE SURFACE DRAINS	CONCRETE PAVEMENT REINF.	PREP. ROADBED FOR BITUM. SURF.	BITUM. MAT. FOR PRIME COAT	BITUM. CONC. PAV'T		BITUM. MAT. FOR SURFACE COURSE		MORTAR RUBBLE MASONRY	CORRUGATED METAL CULVERT PIPE 48"
	ITEM NO.		2101-2	2101-3	2101-5	2101-6	2105-1		2105-5	2105-6		2105-12	2105-15	2105-16	2105-17	2106-5	2109-1	2110-1	2114-1	2116-1	2202-1		2203-1	2203	2301-1	2301-7	2301-9	2301-10	2301-11	2310-1	2311-1	2317-1		2317-2		2409-2	2411-21
	UNIT	LIN. FT.	IN. DIA.	ACRE	IN. DIA.	ACRE	SQ.YD.		LIN.FT.	SQ.YD.		EACH	EACH	EACH	EACH	C.Y.	C.Y.	C.Y.	L.S.	STA.	SQ.YD.		TON		SQ.YD.	SQ.YD.	SQ.YD.	C.Y.	SQ.YD.	STA.		TON		TON		C.Y.	LIN. FT.
1	WEST STATE STREET																																			
	STA. 2+00 - 9+00		120		12		1520		25	1800		2	3	-	12	180	3190	95	1		3840		1080		1410				1410			653		36			300
	NON - PARTICIPATING																									100										
2	NORTHWEST EXPRESSWAY																																			
	STA.79+62.13(S)-88+58.36(S) (B-40-63, B-40-64)	897	312		312					1300			2		2	810	2290	11,355																30		
TOT.			432		324		1520		25	3100		2	5	-	14	1120	5480	11,450	1		3840		1080		1410	100			1410			653		36		30	300

BRIDGES (STRUCTURES OVER 20FT. SPAN)

SEC. NO.	REMOVING MASONRY	EXCAVATION FOR STRUCTURES	GRANULAR BACK FILL	CONCRETE MASONRY BRIDGES	BAR STEEL REINF. BRIDGES	STRUCTURAL CARBON STEEL		STEEL TEST PILING		STEEL PILING DELIVERED	STEEL PILING DRIVEN	FLOOR DRAINS	SLOPE PAVING GROUTED RUBBLE	CONCRETE MASONRY CAISSONS	ELECTRICAL WORK (B-40-63)	ELECTRICAL WORK (B-40-64)	LUBRICATED BRONZE PLATES	ORNAMENTAL ALUMINUM RAILING	WROUGHT IRON DRAIN PIPE 6"	PRESTRESSED GIRDERS (B-40-63)	PRESTRESSED GIRDERS (B-40-64)	BEARING PADS
	2105-7	2107-1	2110-1	2401-1	2406-1	2407-1		2503-1A	2503-1B	2503-2	2503-3	2508-1	2515-2	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.
	C.Y.	C.Y.	C.Y.	C.Y.	LB.	LB.		L.S.	L.S.	LIN. FT.	LIN.FT.	EACH	SQ.YD.	CU. FT.	L.S.	L.S.	LB.	LIN. FT.	LIN.FT.	L.S.	L.S.	SQ.FT.
								B-40-63	B-40-64													
1								60' @	60' @													
2	254	2280	1500	5391	944,230	136,160		1	1	5615	5615	17	1888	20,616	1	1	2850	3594	521	1	1	490
TOT.	254	2280	1500	5391	944,230	136,160		1	1	5615	5615	17	1888	20,616	1	1	2850	3594	521	1	1	490

CULVERTS (STRUCTURES 20FT. SPAN & UNDER)

SEC. NO.	REMOVE OLD CULV'T STA.	COMMON EXC.	EXCAVATION FOR STRUCTURES	SAND GRAVEL FILL	CONCRETE MASONRY	BAR STEEL REINF.	STRUCTURAL STEEL	STEEL CASTINGS	CARBON STEEL FORGINGS	SHEET LEAD	SHEET ZINC	TR'T'D LUMBER AND TIMBER	UNTR'D TIMBER TEST PILING	TREATED TIMBER PILING DELIVERED	TREATED TIMBER PILING DRIVEN	FLOOR DRAINS	RIP-RAP
	2104-1	2106-1	2107-2	2110-1	2404-1	2406-3	2407-	2407-3	2407-4	2407-9	2407-11	2408-2	2501-1	2501-4	2501-5	2507-1	2512-1
	L.S.	C.Y.	C.Y.	C.Y.	C.Y.	LB.	LB.	LB.	LB.	LB.	LB.	M.B.M.	L.S.	LIN.FT.	LIN.FT.	EACH	C.Y.
1																	
2																	
TOT.																	

STORM SEWER

SEC. NO.	PIPE UNDER DRAIN CORR. METAL PIPE 8"	NON-REINFORCED CONCRETE SEWER PIPE 8"	12"	18"				REINFORCED CONCRETE SEWER PIPE 12"	48"					CATCH BASIN TYPE I-S	MANHOLES TYPE I	TYPE I-D	TYPE 2	TYPE 2D (MOD.)	INLETS TYPE "A"	TYPE "D"	TYPE "S"
	2517-1	2519-1	2519-2	2519-3					2519-21					2520-1	2520-11	2520-12	2520-13	2520-14	2520-21	2520-22	2520-23
	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1	232	321	58	70					1121						3	1	1	2	2	3	7
NP																					
2		465	552												2						
TOT.	232	786	610	70					1121						5	1	1	2	2	3	7

SEC. NO.	ADJUSTING CATCH BASIN COVERS	ADJUSTING MAN-HOLE COVERS	ADJUSTING INLET COVERS	CONCRETE CURB AND GUTTER 22"	CONCRETE CURB AND GUTTER 31"	CONCRETE SIDE WALK 5"	GUARD FENCE CABLE	GUARD FENCE ANCHORAGES FOR CABLE	MARKER POSTS	MARKER POSTS FOR R-O-W	CALCIUM CHLORIDE SURFACE TREATMENT	TOP-SOIL	SALVAGED TOP-SOIL	STRAW MULCH	FERTILIZER	SEEDING	STORM SEWER END-WALL	TIMBER BARRICADE
	2520-61	2520-66	2520-71	2521-11	2521-12	2522-1	2523-1	2523-	2523-5	2523-3	2523-4	2525-1	2528-1	2528-2	2530-1	2531-1	2532-1	S.P.	S.P.
	EACH	EACH	EACH	LIN. FT.	LIN. FT.	SQ. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	TON	SQ.YD.	SQ.YD.	SQ.YD.	C.W.T.	SQ.YD.	L.S.	LIN. FT.
1	-	18	-	50	2730	2452							1030			1	1030	1	160
NP						8718													
2													12400			11	12400		
TOT.	-	18	-	50	2730	11200							13,430			12	13430	1	160

(10)

ESTIMATE OF QUANTITIES (FINAL)

CONTRACT NO. 1

B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	U03-1(73)	3	65

THIS PROJECT IS TO BE EXECUTED UNDER THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF WISCONSIN — EDITION OF 1957, APPROVED AUGUST 9, 1957
FEDERAL AID REQUIRED CONTRACT PROVISIONS APPROVED DEC. 4, 1957 AND SPECIAL PROVISIONS AS ATTACHED TO PROPOSALS.

SEC. NO.	STATION TO STATION	NET LENGTH OF CENTER LINE	CLEARING		GRUBBING		REMOVING: PAVEMENT		REMOVING: CURB & GUTTER	REMOVING: CONC. SIDE WALK		REMOVING: MANHOLES	ABANDONING: MANHOLES	ABANDONING: CATCH BASINS	ABANDONING: INLETS		EXCAVATION: UNCLASSIFIED	EXCAVATION: BORROW	GRANULAR BACK FILL	FINISHING ROADWAY	OBLITERATING OLD ROAD	CONCRETE: BASE COURSE		GRAVEL OR CRUSHED STONE BASE COURSE		CONCRETE: PAVEMENT 9"	CONCRETE: DRIVE WAYS	CONCRETE HEADERS	CONCRETE SURFACE DRAINS	CONCRETE PAVEMENT REINF.	PREP. ROADBED FOR BITUM. SURF.	BITUM. MAT. FOR PRIME COAT	BITUM. CONC. PAV'T		BITUM. MAT. FOR SURFACE COURSE	CORRUGATED METAL CULVERT PIPE 12"	MORTAR RUBBLE MASONRY	CORRUGATED METAL CULVERT PIPE 48"
	ITEM NO.		2101-2	2101-3	2101-5	2101-6	2105-1		2105-5	2105-6		2105-12	2105-15	2105-16	2105-17		2106-5	2109-1	2110-1	2114-1	2116-1	2202-1		2203-1	2203	2301-1	2301-7	2301-9	2301-10	2301-11	2310-1	2311-1	2317-1		2317-2	CORRUGATED METAL CULVERT PIPE 12"	2409-2	2411-21
	UNIT	LIN. FT.	IN. DIA.	ACRE	IN. DIA.	ACRE	SQ. YD.		LIN. FT.	SQ. YD.		EACH	EACH	EACH	EACH		C.Y.	C.Y.	C.Y.	L.S.	STA.	SQ. YD.		TON		SQ. YD.	SQ. YD.	SQ. YD.	C.Y.	SQ. YD.	STA.		TON		TON	LIN. FT.	C.Y.	LIN. FT.
1	WEST STATE STREET		361		109		4449		144	1761			0	-	10		436					3845		1185		1414				1414			625		84			
	STA. 2+00 - 9+00		120		12		4520		25	1800		2 ✓	3	-	12		480	3190	95	1 ✓		3840		1090		1410				1410			625		84			300 ✓
	NON - PARTICIPATING																										121 100											
2	NORTHWEST EXPRESSWAY		818		818					858			0		10		926		11,956																			
	STA. 79+62.13(S)-88+58.36(S)	897	312		312					1800			2		2		610	2290	11,355																	22	30	
	(B-40-63, B-40-64)																																					
TOT.			1179		925		4449		144	2119			0		10		1422	3763	11,956			3845		1185		1414	121			1414			625		84		74	
			432		324		4520		25	3100		2 ✓	5	-	14		1120	5480	11,450	1 ✓		3840		1090		1410	100 ✓			1410			650		90	22	30	300 ✓

BRIDGES (STRUCTURES OVER 20FT. SPAN)

SEC. NO.	REMOVING MASONRY	EXCAVATION FOR STRUCTURES	GRANULAR BACK FILL	CONCRETE MASONRY BRIDGES	BAR STEEL REINF. BRIDGES	STRUCTURAL CARBON STEEL		STEEL TEST PILING		STEEL PILING: DELIVERED	STEEL PILING: DRIVEN	FLOOR DRAINS	SLOPE PAVING GROUTED RUBBLE	CONCRETE MASONRY CAISSONS	ELECTRICAL WORK (B-40-63)	ELECTRICAL WORK (B-40-64)	LUBRICATED BRONZE PLATES	ORNAMENTAL ALUMINUM RAILING	WROUGHT IRON DRAIN PIPE 6"	PRESTRESSED GIRDERS (B-40-63)	PRESTRESSED GIRDERS (B-40-64)	BEARING PADS
	2105-7	2107-1	2110-1	2401-1	2406-1	2407-1		2503-1A	2503-1B	2503-2	2503-3	2508-1	2515-2	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.	S.P.
	C.Y.	C.Y.	C.Y.	C.Y.	LB.	LB.		L.S.	L.S.	LIN. FT.	LIN. FT.	EACH	SQ. YD.	CU. FT.	L.S.	L.S.	LB.	LIN. FT.	LIN. FT.	L.S.	L.S.	SQ. FT.
								B-40-63	B-40-64													
1								60' @ 40'	60' @ 40'													
	319	2085	1772	5036	867,563	134,139				6768	6521		1865	15,203					492			
2	254	2280	1500	5391	944,230	136,160		1 ✓	1 ✓	5645	5645	17 ✓	1888	20,616	1 ✓	1 ✓	2850	3594	521	1 ✓	1 ✓	490
	219	2085	1772	5036	867,563	134,139				6768	6521		1865	15,203					492			
TOT.	254	2280	1500	5391	944,230	136,160		1 ✓	1 ✓	5645	5645	17 ✓	1888	20,616	1 ✓	1 ✓	2850	3594	521	1 ✓	1 ✓	490

CULVERTS (STRUCTURES 20FT. SPAN & UNDER)

REMOVE OLD CULV'T STA.	COMMON EXC.	EXCAVATION FOR STRUCTURES	SAND GRAVEL FILL	CONCRETE MASONRY	BAR STEEL REINF.	STRUCTURAL STEEL	STEEL CASTINGS	CARBON STEEL FORGINGS	SHEET LEAD	SHEET ZINC	TR'T'D LUMBER AND TIMBER	UNTR'D TIMBER TEST PILING	TREATED TIMBER PILING: DELIVERED	TREATED TIMBER PILING: DRIVEN	FLOOR DRAINS	RIP-RAP
2104-1	2106-1	2107-2	2110-1	2404-1	2406-3	2407-	2407-3	2407-4	2407-9	2407-11	2408-2	2501-1	2501-4	2501-5	2507-1	2512-1
L.S.	C.Y.	C.Y.	C.Y.	C.Y.	LB.	LB.	LB.	LB.	LB.	LB.	M.B.M.	L.S.	LIN. FT.	LIN. FT.	EACH	C.Y.

STORM SEWER

SEC. NO.	PIPE UNDER DRAIN CORR. METAL PIPE 8"	NON-REINFORCED CONCRETE SEWER PIPE: 8"	12"	18"				REINFORCED CONCRETE SEWER PIPE: 12"	48"					CATCH BASIN TYPE I-S	MANHOLES: TYPE I	TYPE I-D	TYPE 2	TYPE 2D (MOD)	INLETS: TYPE "A"	TYPE "D"	TYPE "S"		ADJUSTING: CATCH BASIN COVERS	MANHOLE COVERS	INLET COVERS			CONCRETE: CURB AND GUTTER 22"	CURB AND GUTTER 31"	SIDE WALK 5"	GUARD FENCE: CABLE		ANCHORAGES FOR CABLE	MARKER POSTS	MARKER POSTS FOR R-O-W	CALCIUM CHLORIDE SURFACE TREATMENT	TOPSOIL	SALVAGED TOPSOIL	STRAW MULCH		FERTILIZER	SEEDING	STORM SEWER END-WALL	TIMBER BARRICADE
	2517-1	2519-1	2519-2	2519-3					2519-21					2520-1	2520-11	2520-12	2520-13	2520-14	2520-21	2520-22	252023		2520-61	2520-66	2520-71			2521-11	2521-12	2522-1	2523-1	2523-	2523-5	2523-3	2523-4	2525-1	2526-1	2528-2	2530-1		2531-1	2532-1	S.P.	S.P.
	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH			LIN.FT.	LIN.FT.	SQ.FT.	LIN.FT.	LIN.FT.	EACH	EACH	EACH	TON	SQ.YD.	SQ.YD.	SQ.YD.		C.W.T.	SQ.YD.	L.S.	LIN.FT.
	230	282	57	69					412						2				4	2	6							180	2652	2296							430				2.4	430		
1	232	321	58	70					424						3	1 ✓	1 ✓	2 ✓	2	3	7			-	18	-			50	2720	2482							1030				1	1030	1 ✓	160 ✓
NP																														8363 8748														
2		486	497												1																						0					0		
		465	552												2	1			2																	12400				11	12400		
	230	768	654	69					412						3	2			6	2	6				13			180	2652	10,643							430				2.4	430		
TOT.	232	786	810	70					424						5	1 ✓	1 ✓	2 ✓	2	3	7			-	18	-			50	2720	11,200							13,430				12	13430	1 ✓	160 ✓

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DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

B.P.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	U03-1(73)	3A	65

CLEARING & GRUBBING

STA. TO STA.	NO. OF TREES	CLEAR I.D.	GRUB I.D.
STATE STREET			
2+00(ST)-9+00(ST)	1	24	-
0+00(SR)-2+50(SR)	6	96	12
EXPRESSWAY			
81+00(S)-85+00 (S)	24	312	312

REMOVING PAVEMENT

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00 (ST)	-	3893
0+40(SR) - 1+50(SR)		371
48th STREET	-	136
9+05(ST) - 9+48(ST)	LT.	35
11+00(ST) -11+95(ST)	LT.	85

REMOVING CURB AND GUTTER

STATION TO STATION	LOC'N.	LIN.FT
STATE STREET		
9+00(ST) - 9+05(ST)	LT.	25

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00(ST)	RT.	599
2+00(ST) - 3+50(ST)	LT.	117
3+95(ST) - 6+90(ST)	LT.	584
7+25(ST) - 9+00(ST)	LT.	214
9+48(ST) -11+00(ST)	LT.	120
0+40(SR) - 1+80(SR)	LT.& RT.	176
EXPRESSWAY		
85+00(S) - 87+50(S)	-	1300

REMOVING MANHOLES

STATION	LOC'N.	EACH
STATE STREET		
1+77(SR)	28'LT	1
1+62 (SR)	30'LT	1

ABANDONING MANHOLES

LOCATION	EACH
STATE STREET	
3+69(ST) - 39' LT.	1
6+68(ST) - 110' LT.	1
6+98(ST) - 57' LT.	1
EXPRESSWAY	
89+90(N) - 30' RT	1
89+95(N) - 20' RT	1

ABANDONING INLETS

LOCATION	EACH
STATE STREET	
3+08(ST) - 24' RT.	1
3+30(ST) - 25' LT.	1
4+90(ST) - 26' LT.	1
1+75(SR) - 9' LT.	1
1+78(SR) - 38' LT.	1
6+24(ST) - 12' RT.	1
6+65 (ST) 106' LT.	1
6+74(ST) - 39' LT.	1
7+13 (ST) - 64' LT.	1
7+67(ST) - 36' LT.	1
7+98(ST) - 20' RT.	1
4+48(ST) - 24' RT.	1
EXPRESSWAY	
89+65(N) - 40' RT	1
89+75(N) - 13' RT	1

CONCRETE BASE COURSE

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00(ST)	-	3728
9+05(ST) - 9+48(ST)	LT.	32
11+00(ST) -11+95(ST)	LT.	80

GRAVEL OR CRUSHED STONE BASE COURSE

STATION TO STATION	LOC'N.	TON
STATE STREET		
0+30(SR) - 2+25(SR)	-	1080

CONCRETE PAVEMENT - 9" & CONCRETE PAV'T. REINFORCEMENT

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
0+30(SR) - 2+25(SR)	-	1410

CONCRETE DRIVEWAY

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+24(ST) - 2+36(ST)	LT.	8
2+28(ST) - 2+40(ST)	RT.	9
2+72(ST) - 2+82(ST)	LT.	8
3+15(ST) - 3+27(ST)	LT.	9
4+15.5(ST)- 4+37.5(ST)	RT.	17
5+57(ST) - 5+87(ST)	RT.	23
8+38(ST) - 8+54(ST)	RT.	12
1+31(SR) - 1+46(SR)	LT.	14

BITUMINOUS CONCRETE PAVEMENT

STATION TO STATION	LOC'N.	TON
STATE STREET		
2+00(ST) - 9+00(ST)	-	634
9+08(ST) - 9+47(ST) &		
11+02(ST) -11+95(ST)	LT.	19

CORRUGATED METAL CULVERT PIPE

LOCATION	SIZE	LIN.FT.
(SEE DRAINAGE TABLE)		

NON-REINFORCED CONCRETE SEWER PIPE (STORM SEWER)

LOCATION	SIZE	LIN.FT.
(SEE DRAINAGE TABLES)		

REINFORCED CONCRETE SEWER PIPE (STORM SEWER)

LOCATION	SIZE	LIN.FT.
(SEE DRAINAGE TABLE)		

CATCH BASINS

LOCATION	TYPE	EACH

MANHOLES

LOCATION	TYPE	EACH
STATE STREET		
2+00(SR) - 41' RT.	I-D	1
7+03(ST) - 48' RT.	I	1
7+90(ST) - 35' LT.	2(MOD)	1
9+42(ST) - 25' LT.	2(MOD)	1
11+20(ST) - 40' LT.	2	1
1+77(SR) - 28' LT.	I	1
2+15(ST) - 25' LT.	I	1
EXPRESSWAY		
84+05(S) - 20' RT.	I	1
84+95(S) - 20' RT.	I	1

INLETS

LOCATION	TYPE	EACH
STATE STREET		
1+00(SR) - 57' LT.	D	1
2+00(SR) - 29' RT.	S	1
3+60(ER-1) - 1' LT.	A	1
4+25(ER-2) - 14' LT.	D	1
4+25(ER-2) - 1' LT.	A	1
3+25(ST) - 27' RT.	S	1
4+10(ST) - 27' RT.	S	1
4+54(ST) - 3' LT.	S	1
8+25(ST) - 25' RT.	S	1
8+35(ST) - 25' LT.	S	1
8+75(ST) - 25' RT.	S	1
2+77(ST) - 41.6' LT	D	1

ADJUSTING MANHOLE COVERS

LOCATION	EACH
STATE STREET	
3+30(ST) - 15' LT.	1
3+62(ST) - 36' LT.	1
3+77(ST) - 3' LT.	1
3+95(ST) - 6' LT.	1
4+08(ST) - 2' RT.	1
4+25(ST) - 4' LT.	1
4+28(ST) - 18' RT.	1
5+27(ST) - 13' LT.	1
5+34(ST) - 14' LT.	1
5+39(ST) - 14' LT.	1
6+15(ST) - 23' LT.	1
6+18(ST) - 20' LT.	1
6+21(ST) - 17' LT.	1
6+81(ST) - 30' LT.	1
7+23(ST) - 11' LT.	1
7+26(ST) - 15' LT.	1
7+36(ST) - 18' LT.	1
8+78(ST) - 1' RT.	1

CONCRETE CURB & GUTTER

STATION TO STATION	LOC'N.	LIN.FT.
STATE STREET		
TYPE A-1		
2+00(ST) - 9+00(ST)	RT.	692
2+00(ST) - 2+25(SR)	LT.	315
2+25(SR) - 4+26(ER-2)	LT.	168
4+53(ST) - 4+75(ST)	LT.	22
6+25(ST) - 9+00(ST)	LT.	294
TYPE A-2		
2+63(ST) - 3+75(ST)	℄	230
3+73(ST) - 3+87(ST)	LT.	73
4+39(ST) - 4+72(ST)	LT.	187
4+53(ST) - 5+50(ST)	℄	179
4+26(ER-2) - 6+25(ST)	LT.	199
0+41(SR) - 2+25(SR)	℄	371
TYPE D-1 *		
9+46(ST) - 9+50(ST)	LT.	10
10+72(ST) -11+00(ST)	LT.	30
11+95(ST) -11+95(ST)	LT.	10

*REPLACMENT OF CURB & GUTTER REMOVED FOR STORM SEWER CONSTRUCTION

MORTAR RUBBLE MASONRY

STATION TO STATION	LOC'N.	CU.YD.
EXPRESSWAY		
81+02 (S) - 81+33 (S)	LT& RT	30

CONCRETE SIDEWALK- 5"

STATION TO STATION	LOC'N.	SQ.FT.
STATE STREET		
PARTICIPATING		
2+63(ST) - 3+75(ST)	℄	237
3+72(ST) - 3+88(ST)	LT.	210
4+39(ST) - 4+72(ST)	LT.	258
4+53(ST) - 5+50(ST)	℄	195
9+48(ST) -11+00(ST)	LT.	1071
0+41(SR) - 2+25(SR)	℄	481
NON-PARTICIPATING		
2+00(ST) - 9+00(ST)	RT.	4290
2+00(ST) - 1+80(SR)	LT.	1318
4+65(ER-2) - 9+00(ST)	LT.	3140

GRANULAR BACKFILL

STATION TO STATION	LOC'N.	CU. YD.
STATE STREET		
STA. 2+00(ST)-9+00(ST)	-	95
EXPRESSWAY		
88+00(S) - 90+00(S)	-	11,355
(NORTH ABUTMENT)		
STRUCT. B-40-63	-	780
STRUCT. B-40-64		720

TOPSOIL, & SEEDING

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00(ST)	RT	135
2+00(ST) - 3+50(ST)	LT	30
4+50(ST) - 9+00(ST)	LT	300
0+75(SR) - 2+25(SR)	RT	125
0+75(SR) - 2+25(SR)	LT	440
EXPRESSWAY		
81+10(S) - 84+50(S)	LT.& RT.	6900
84+50(S) - 87+60(S)	LT.& RT.	5500

TIMBER BARRICADE

STATION TO STATION	LOC'N.	LIN. FT.
STATE STREET		
3+35(ST) - 3+70(ST)	LT	35
4+12(ST) - 4+36(ST)	LT	24
4+75(ST) - 5+50(ST)	LT	78
1+75(SR)	LT	23

(11)

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

B.P.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	U03-1(73)	3A	65

CLEARING & GRUBBING

STA. TO STA.	NO. OF TREES	CLEAR I.D.	GRUB I.D.
STATE STREET			
2+00(ST)-9+00(ST)	10 +	~~166~~ 24	~~26~~ 27
0+00(SR)-2+50(SR)	~~6~~	~~86~~	~~12~~
EXPRESSWAY	106	818	818
81+00(S)-85+00 (S)	~~24~~	~~312~~	~~312~~

REMOVING PAVEMENT

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
~~2+00(ST) - 9+00 (ST)~~	-	~~3834~~
0+40(SR) - 1+50(SR)		~~371~~
48th STREET	-	~~136~~
9+05(ST) - 9+48(ST)	LT.	~~95~~
11+00(ST) -11+95(ST)	LT.	~~95~~

REMOVING CURB AND GUTTER

STATION TO STATION	LOC'N.	LIN.FT
STATE STREET		
~~9+00(ST) - 9+05(ST)~~	~~LT.~~	~~25~~
9+48(ST)-10+93(ST)	LT.	1444

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00(ST)	RT.	~~599~~
2+00(ST) - 3+50(ST)	LT.	117 ~~594~~
3+05(ST) - 6+90(ST)	LT.	~~594~~
7+25(ST) - 9+00(ST)	LT.	~~214~~
9+48(ST) -11+00(ST)	LT.	~~120~~
0+40(SR) - 1+80(SR)	LT.& RT.	~~176~~
EXPRESSWAY		
85+00(S) - 87+50(S)	-	~~1300~~

REMOVING MANHOLES

STATION	LOC'N.	EACH
STATE STREET		
1+77(SR)	28'LT.	1
1+62 (SR)	30'LT	1

ABANDONING MANHOLES

LOCATION	EACH
STATE STREET	
3+60(ST) - 28' LT. By City of Minn.	+
6+68(ST) - 110' LT. By City of Minn	+
6+98(ST) - 57' LT. By City of Minn	+
EXPRESSWAY	
89+90(N) - 30' RT By City of Minn	+
89+95(N) - 20' RT Proj. No. U03-1(73)	+

ABANDONING INLETS

LOCATION	EACH
STATE STREET	
3+08(ST) - 24' RT.	1
3+30(ST) - 25' LT.	1
4+90(ST) - 26' LT.	1
1+75(SR) - 9' LT. City of Minn.	+
1+78(SR) - 38' LT. City of Minn.	+
6+24(ST) - 12' RT.	1
6+65 (ST) 106' LT. City of Minn.	+
6+74(ST) - 39' LT. City of Minn.	+
7+13 (ST) - 64' LT. City of Minn.	+
7+67(ST) - 36' LT.	1
7+98(ST) - 20' RT.	1
4+48(ST) - 24' RT.	1
EXPRESSWAY	
89+65(N) - 40' RT Proj. No. U03-1(73)	+
89+75(N) - 13' RT Proj. No. U03-1(73)	+
STATE STREET	
2+70(ST) - 28' Rt.	1
3+52(ST) - Lt.	1
8+80(ST) - Lt.	1

(Found under exist. paint and sidewalk)

CONCRETE BASE COURSE

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00(ST)	-	~~3763~~ 3728
9+05(ST) - 9+48(ST)	LT.	32
11+00(ST) -11+95(ST)	LT.	~~86~~ 80

GRAVEL OR CRUSHED STONE BASE COURSE

STATION TO STATION	LOC'N.	TON
STATE STREET		~~1135~~
0+30(SR) - 2+25(SR)	-	~~1080~~

CONCRETE PAVEMENT - 9" & CONCRETE PAV'T. REINFORCEMENT

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		~~1414~~
0+30(SR) - 2+25(SR)	-	~~1410~~

CONCRETE DRIVEWAY

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+24(ST) - 2+36(ST)	LT.	8
2+28(ST) - 2+40(ST)	RT.	9
2+72(ST) - 2+82(ST)	LT.	~~8~~ 7
3+15(ST) - 3+27(ST)	LT.	~~9~~ 8
4+15.5(ST)- 4+37.5(ST)	RT.	17
5+57(ST) - 5+87(ST)	RT.	23
8+28(ST) - 8+54(ST)	RT.	~~12~~ 13
1+24(SR) - 1+46(SR)	LT.	14
2+45(ST) - 2+75(ST)	RT.	23
8+65(ST) - 8+95(ST)	LT.	8

BITUMINOUS CONCRETE PAVEMENT

STATION TO STATION	LOC'N.	TON
STATE STREET		~~659~~
2+00(ST) - 9+00(ST)	-	~~684~~
9+08(ST) - 9+47(ST) & 11+02(ST) -11+95(ST)	LT.	~~14~~ ~~19~~

CORRUGATED METAL CULVERT PIPE

LOCATION	SIZE	LIN.FT.
(SEE DRAINAGE TABLE)		

NON-REINFORCED CONCRETE SEWER PIPE (STORM SEWER)

LOCATION	SIZE	LIN.FT.
(SEE DRAINAGE TABLES)		

REINFORCED CONCRETE SEWER PIPE (STORM SEWER)

LOCATION	SIZE	LIN.FT.
(SEE DRAINAGE TABLE)		

CATCH BASINS

LOCATION	TYPE	EACH

MANHOLES

LOCATION	TYPE	EACH
STATE STREET		
2+00(SR) - 41' RT.	I-D	1
7+03(ST) - 48' RT.	1	1
7+90(ST) - 35' LT.	2(MOD)	1
9+42(ST) - 25' LT.	2(MOD)	1
11+20(ST) - 40' LT.	2	1
1+77(SR) - 28' LT.	1	1
2+15(ST) - 25' LT.	1	1
EXPRESSWAY		
84+05(S) - 20' RT.	1	1
84+05(S) - 20' RT.	I-D	1

INLETS

LOCATION	TYPE	EACH
STATE STREET		
1+00(SR) - 57' LT.	D	1
2+00(SR) - 28' RT.	SA	1
3+60(ER-1) - 1' LT.	A	1
4+25(ER-2) - 14' LT.	D	1
4+25(ER-2) - 1' LT.	A	1
3+25(ST) - 27' RT.	S	1
4+10(ST) - 27' RT.	S	1
4+54(ST) - 3' LT.	S	1
9+25(ST) - 25' RT.	S	1
8+35(ST) - 25' LT.	S	1
9+75(ST) - 25' RT.	S	1
2+77(ST) - 41.6' LT.	D	1
2+50(ST) - Lt.	A	1
79+50 (D)	A	1
79+50 (S)	A	1

ADJUSTING MANHOLE COVERS

LOCATION	EACH
STATE STREET	
3+30(ST) - 15' LT. By MTS	+
3+62(ST) - 36' LT.	1
3+77(ST) - 3' LT.	1
3+05(ST) - 6' LT.	1
4+08(ST) - 2' RT.	1
4+25(ST) - 4' LT.	1
4+28(ST) - 18' RT.	1
5+27(ST) - 13' LT. By Telephone Co.	+
5+34(ST) - 14' LT. By Telephone Co.	+
5+39(ST) - 14' LT. By Telephone Co.	+
6+15(ST) - 23' LT.	1
6+18(ST) - 20' LT.	1
6+21(ST) - 17' LT.	1
6+81(ST) - 30' LT. By MTS	+
7+23(ST) - 11' LT.	1
7+26(ST) - 15' LT.	1
7+36(ST) - 18' LT. By Tel. Co.	+
9+79(ST) - 1' RT.	1
6+99(ST) - 1' Lt.	1

CONCRETE CURB & GUTTER

STATION TO STATION	LOC'N.	LIN.FT.
STATE STREET		
~~TYPE A-1 31"~~		
2+00(ST) - 9+00(ST)	RT.	~~691~~ ~~682~~
2+00(ST) - 2+25(SR)	LT.	~~305~~ ~~315~~
2+25(SR) - 4+26(ER-2)	LT.	~~168~~
4+53(ST) - 4+75(ST)	LT.	22
~~6+25(ST) - 9+00(ST)~~	LT.	~~294~~
~~TYPE A-2 31"~~		~~180~~
2+93(ST) - 3+75(ST)	℄	~~230~~
3+73(ST) - 3+87(ST)	LT.	~~75~~
4+20(ST) - 4+72(ST)	LT.	~~187~~
4+53(ST) - 5+50(ST)	℄	~~178~~
4+26(ER-2) - 6+25(ST)	LT.	199
0+40(SR) - 2+25(SR)	℄	371
~~TYPE D-1* 22"~~		~~1448(ST)~~
9+48(ST) - ~~2+50(ST)~~ *	LT.	~~1776~~ ~~10~~
~~10+72(ST) - 11+00(ST)~~	LT.	~~30~~
~~11+95(ST) - 11+95(ST)~~	LT.	~~10~~
1+96(ST) - 2+00(ST)	Rt	4

*REPLACMENT OF CURB & GUTTER REMOVED FOR STORM SEWER CONSTRUCTION

MORTAR RUBBLE MASONRY

STATION TO STATION	LOC'N.	CU.YD.
EXPRESSWAY		
81+02 (S) - 81+33 (S)	LT & RT	~~44~~ ~~30~~

CONCRETE SIDEWALK- 5"

STATION TO STATION	LOC'N.	SQ.FT.
STATE STREET		
PARTICIPATING		
~~2+63~~(ST) - 3+75(ST)	℄	~~153~~ ~~237~~
3+72(ST) - 3+88(ST)	LT.	~~210~~
4+39(ST) - 4+72(ST)	LT.	~~258~~ ~~251~~
4+53(ST) - 5+50(ST)	℄	~~195~~
9+48(ST) -11+00(ST)	LT.	~~1112~~ ~~1071~~
0+41(SR) - 2+25(SR)	℄	~~475~~ ~~481~~
NON-PARTICIPATING		~~4052~~
2+00(ST) - 9+00(ST)	RT.	~~4280~~
2+00(ST) - 1+80(SR)	LT.	~~1264~~ ~~1319~~
4+65(ER-2) - 9+00(ST)	LT.	~~3147~~ ~~3140~~

GRANULAR BACKFILL

STATION TO STATION	LOC'N.	CU. YD.
STATE STREET		
STA. 2+00(ST)-9+00(ST)	-	~~97~~ 95
EXPRESSWAY		~~11,254~~
88+00(S) - 90+00(S)	-	~~11,355~~
(NORTH ABUTMENT)		
STRUCT. B-40-63	-	~~780~~
STRUCT. B-40-64		~~720~~

TOPSOIL, & SEEDING

STATION TO STATION	LOC'N.	SQ.YD.
STATE STREET		
2+00(ST) - 9+00(ST)	RT	~~135~~
2+00(ST) - 3+50(ST)	LT	~~30~~
4+50(ST) - 9+00(ST)	LT	~~600~~
0+75(SR) - 2+25(SR)	RT	~~125~~
0+75(SR) - 2+25(SR)	LT	~~440~~
EXPRESSWAY		
81+10(S) - 84+50(S)	LT.& RT.	~~6000~~
84+50(S) - 87+50(S)	LT.& RT.	~~5500~~

TIMBER BARRICADE

STATION TO STATION	LOC'N.	LIN. FT.
STATE STREET		
3+35(ST) - 3+70(ST)	LT	35
4+12(ST) - 4+36(ST)	LT	24
4+75(ST) - 5+50(ST)	LT	79
1+75(SR)	LT	23

The most current Right of Way information should be viewed in DOTView using the Real Estate project ID. The plat information contained in this as-built plan may not be the final record.

U03-1(81) 4.3-41 U03-1(73) 4-65 U03-1(56) 42-49

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS & AGREEMENT STATE	FEDERAL	P.R.A. DIVISION OFFICE	SHEET NO.	TOTAL SHEETS
40.9	3.1		12.52	WIS 4	4.3	8

SCHEDULE OF LANDS AND INTERESTS REQUIRED			
PARCEL	OWNER	SQ.FT.	INTEREST REQUIRED
23	THE FALK CORP.	254,983	FEE
153	C.M. ST. P. & P. RY.	12,210±	LICENSE

NON-PARTICIPATING	
PARCEL	SQ. FT.
23	13,545

INT. ℄ JAMES ST. WITH WEST LINE MONARK PARK SUBD.

INT. WEST LINE MONARK PARK SUB. WITH SOUTHERLY LINE C.M. ST. P. R.O.W.

N. 48 TH ST.

N. 47 TH ST.

N. 46 TH ST.

W. WISCONSIN AVE.

W. WELLS ST.

W. KILBOURN AVE.

W. WOODLAWN COURT

N. STORY PARKWAY

S. LINE N.E. 1/4 SEC. 26, T.7N., R.21E.

MENOMONEE RIVER

C.M. ST. P. & P. RY.

VACATED BY CITY OF MILWAUKEE RESOLUTION FILE NO. 57-1321-C

VACATED BY CITY OF MILWAUKEE RESOLUTION FILE NO. 57-1321-C

13,545 SQ. FT. NON-FEDERAL PARTICIPATION

PLAT OF ASSESSOR'S PLAT NO. 125

PLAT OF A. OETTELMANN'S SUBD.

PLAT OF CALUMET PARK

JAMES ST.

RIVER

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN
NORTHWEST EXPRESSWAY
PROJECT U03-1 (52)
PLAT OF RIGHT OF WAY REQUIRED
W. WISCONSIN AVE. TO W. GARFIELD AVE.

SCALE 0 50 100 200

DRAWN - G.L.M. 7-16-56 CHECKED- G.L.M. 7-16-56

REVISED

G.L.M. 10-25-56	J.E.S. 5-5-58	C.J.B. 5-15-59
G.R.B. 7-22-57	J.E.S. 7-23-58	C.J.B. 8-4-59
G.R.B. 9-3-57	J.E.S. 9-30-58	C.J.B. 3-11-60
J.E.S. 10-15-57	J.E.S. 12-29-58	
J.E.S. 11-20-57	C.J.B. 1-29-59	J.E.S. 9-30-60
J.E.S. 1-23-58	C.J.B. 3-27-59	

DRWG. NO. NW-F2 FILE NO. NW 1-1

U03-1(73) 4.1-65

COUNTY & HIGHWAY	ROUTE & SECTION	CLASS & AGREEMENT STATE	CLASS & AGREEMENT FEDERAL	P.R.A. DIVISION OFFICE	SHEET NUMBER	TOTAL SHEETS
40.9	3.1		12.52	WIS 4	4.4	8

U03-1(78) 4-127
U03-1(80) 4-57

NON-FEDERAL PARTICIPATION

NON-PARTICIPATING	
PARCEL	SQ. FT.
28	3418
31	1342
32	2332
33	3136
34	937
35	562
36	187
63	2025
95	150
96	450
97	750
98	1050
99	3450
102	21,381
212	7231

SCHEDULE OF LANDS AND INTERESTS REQUIRED			
PARCEL	OWNER	SQ. FT.	INT. REQ'D.
75	NATHANIEL EV. LUTH. CONGREGATION	20,417	FEE
76	ALBERT O. KRAUSE & FRANCES A., HW.	3,658	FEE
78	WM. A. ROESLER JR. & KATHERYN, HW.	3,676	FEE
79	OTTO G. RUEDIGER & STELLA M., HW.	3,685	FEE
80	MARY DAAS	7,398	FEE
81	WM. F. THEODOZIO & ANNA D., HW.	5,570	FEE
82	FRED P. HAHN	5,591	FEE
83	ELEANOR, MYRTLE, & GORDON KAHN	6,860	FEE
84	CAROLINE WILFERT	3,081	FEE
85	EDWIN C. WINKEL & FLORENCE C., HW.	3,698	FEE
86	ALFRED MEISTER & DORA, HW. & MARGARET ORGEL MEISTER	7,395	FEE
88	LOUISE PIEL (WIDOW)	7,395	FEE
89	EMILY O. VONDERHEID	3,698	FEE
90	FRANCIS J. TORREANO & GLORIA, HW.	5,546	FEE
91	WILLIAM J. WITT	5,546	FEE
93	HARRY HENKE & JOSEPHINE, HW.	7,395	FEE
94	FRIEDRICH MIELKE & PAULA, HW.	7,395	FEE
95	ERWIN F. KLUMB & GLADYS, HW.	3,548	FEE
96	HENRY HEINEMAN & ELIZABETH, HW.	3,248	FEE
97	HENRY KAUL	2,948	FEE
98	HUBERT OSTRANDER & CLARA, HW.	2,648	FEE
99	EDWARD NABKE & EMMA, HW.	4,395	FEE
100	FRANK, JOHN, CHARLES ZAMPACH & HELEN (ZAMPACH) BELES	3,214	FEE
101	ADELINE BEITZINGER	3,647	FEE
102	CITY OF MILWAUKEE	REFER TO SHEET 4.5	
103	PHILIP T. WILCZYNSKI & MARY JO, HW.	18,435±	FEE
104	EDWIN A. BERLIN & VIOLA, HW.	7,200	FEE
208	NATIONAL LEAD CO.	501	FEE
211	J. D. WILSON CO. INC.	38±	FEE
212	CITY OF MILWAUKEE	4330±	FEE & ACCESS RGTS.
210	PHILIP T. WILCZYNSKI & MARY JO, HW.	588	L.H.E.
214	WALTER W. MILLARD & CATHERINE, HW		ACCESS RIGHTS

SCHEDULE OF LANDS AND INTERESTS REQUIRED							
PARCEL	OWNER	SQ. FT.	INTEREST REQUIRED	PARCEL	OWNER	SQ. FT.	INTEREST REQUIRED
27	HANS M BODE & HELEN, H.W.	551	FEE	51	ALBERT G. HELS	47	FEE
28	ACME BLOCK INC.	17,480	FEE	52	ELIZABETH SCHARKAG	4,095	FEE
29	ALFRED MEISTER & DORA F., HW.	14,730	FEE	53	ADOLPH SHEBESTA & PHYLLIS, HW.	4,095	FEE
30	J. D. WILSON CO., INC.	5,574	FEE	54	JOHN KAURICH	8,191	FEE
31	JOHN A. & LORRAINE M. MILANOWSKI	1,388	FEE	55	ELNORE M. LEE	8,191	FEE
32	WALTER DRIEBEL	1,763	FEE	56	IDA D. GETTELMAN	88	FEE
33	MARY F. PUST	4,650	FEE	57	MAX KLUBERTANZ & ROSE, HW.	8,191	FEE
34	JOHN MUELLER & MARGARET, HW.	2,888	FEE	58	HARVEY L. GETTELMAN	188	FEE
35	RALPH C. BEHRS & EVELYN, HW.	3,263	FEE	59	MINNE HAMMERSCHMIDT	4,095	FEE
36	WILLIAM G. DUCHOW & IDA, HW.	3,638	FEE	60	ADAM J. KREBS & DOROTHY L., HW.	8,191	FEE
37	ALMA BATES	7,650	FEE	61	JOHN BLAZEI & LUCILLE, HW.	13	FEE
38	HENRY SCHUFFLER	3,825	FEE	62	NORMAN L. HOLLANDER & BERNICE	8,191	FEE
39	GERTRUDE SANDUSKY	7,650	FEE	63	ROLAND C. HARRISON	705	FEE
40	OTTO R. DRAEGER	3,825	FEE	64	JOHN DOUBECK & LILLIAN, HW.	4,095	FEE
41	IRVIN F. BEHM & CATHERINE, HW.	3,825	FEE	65	ADOLPH SHEBESTA & PHYLLIS, HW.	3,219	FEE
42	JOHN SCHLIDT & EVA, HW.	3,825	FEE	66	MAX WEISS & MARIE A., HW.	2,325	FEE
43	WILLIAM DEISCHEL	3,825	FEE	67	ALLEN GRINYER	5,670	FEE
44	JOSEPH J. ZILGER & VERA J., HW.	3,825	FEE	68	MAX WEISS JR. & MARIE A., HW.	5,548	FEE
45	A.G.H. SPIECKERMANN & SOPHIE, HW.	3,825	FEE	69	MARTHA MUSFELDT	13,470	FEE
46	EUGENE RUBENZEH & ALICE, HW.	3,188	FEE	70	JOSEPH KREBS, JR. & TERESA, HW.	7,935	FEE
47	PAUL A. KOVACIK & MARY J., HW.	7,508	FEE	71	RONALD EYRICH & FLORENCE, HW.	5,730	FEE
48	CYRIL P. SPINDLER & JEANETTE, HW.	4,095	FEE	72	JULIUS E. HUDY & LUCILLE T., HW.	6,392	FEE
49	ALBERT BERG & ANNA, HW.	4,095	FEE	73	ALBERT J. TSCHUDY & MANDA, HW.	4,055	FEE
50	MARY DROBAC	4,095	FEE	74	EARL P. DORAN & ELEANOR, HW.	4,062	FEE
				217	HARVEY L. GETTELMAN	298	L.H.E.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN
NORTHWEST EXPRESSWAY
PROJECT U03-1(52)
PLAT OF RIGHT OF WAY REQUIRED
W. WISCONSIN AVE. TO W. GARFIELD AVE.
SCALE 0 50 100 200

DRAWN BY G.L.M. 7-16-56 CHECKED BY G.L.M. 7-16-56

REVISIONS

G.L.M. 10-25-56	J.E.S. 5-5-58	C.J.B. 5-15-59	
G.R.B. 7-22-57	J.E.S. 7-23-58	C.J.B. 8-4-59	
G.R.B. 9-3-57	J.E.S. 9-30-58	C.J.B. 3-11-60	
J.E.S. 10-15-57	J.J.S. 12-29-58	J.E.S. 9-30-60	
J.E.S. 11-20-57	C.J.B. 1-29-59		
J.E.S. 1-23-58	C.J.B. 3-27-59		

DRWG. NO. NW-F3 | FILE NO. NW 1-1

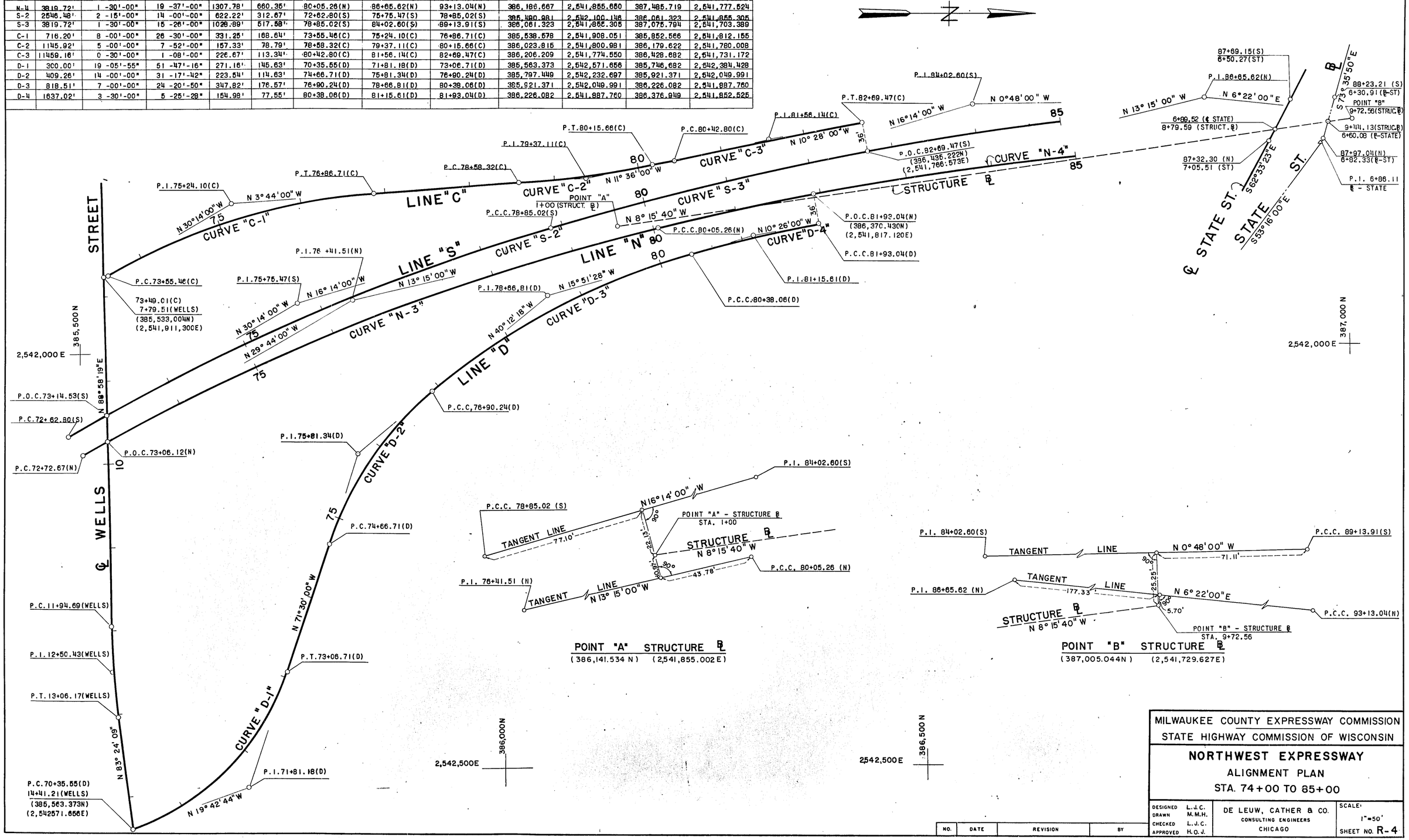
12

(12)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
WIS. 4	WIS.	U03-1(73)	5	65

CURVE DATA TABLE

CURVE NO.	RADIUS	DEGREE	Δ	LENGTH	TANGENT	STATIONS P.C.	STATIONS P.I.	STATIONS P.T.	COORDINATES P.C.		COORDINATES P.T.	
N-3	2546.48'	2 -15'-00"	16 -29'-00"	732.59'	368.84'	72+72.67(N)	76+41.51(N)	80+05.26(N)	385,507.359	2,542,123.122	386,186.667	2,541,855.650
N-4	3819.72'	1 -30'-00"	19 -37'-00"	1307.78'	660.35'	80+05.26(N)	86+65.62(N)	93+13.04(N)	386,186.667	2,541,855.650	387,485.719	2,541,777.624
S-2	2546.48'	2 -15'-00"	14 -00'-00"	622.22'	312.67'	72+62.80(S)	75+75.47(S)	78+85.02(S)	385,490.981	2,542,100.146	386,061.323	2,541,855.305
S-3	3819.72'	1 -30'-00"	15 -26'-00"	1026.89'	517.58'	78+85.02(S)	84+02.60(S)	89+13.91(S)	386,061.323	2,541,866.305	387,075.794	2,541,703.389
C-1	716.20'	8 -00'-00"	26 -30'-00"	331.25'	168.64'	73+55.46(C)	75+24.10(C)	76+86.71(C)	385,538.578	2,541,908.051	385,852.566	2,541,812.155
C-2	1145.92'	5 -00'-00"	7 -52'-00"	157.33'	78.79'	78+58.32(C)	79+37.11(C)	80+15.66(C)	386,023.815	2,541,800.981	386,179.622	2,541,780.008
C-3	11459.16'	0 -30'-00"	1 -08'-00"	226.67'	113.34'	80+42.80(C)	81+56.14(C)	82+69.47(C)	386,206.209	2,541,774.550	386,428.682	2,541,731.172
D-1	300.00'	19 -05'-55"	51 -47'-16"	271.16'	145.63'	70+35.55(D)	71+81.18(D)	73+06.71(D)	385,563.373	2,542,571.656	385,746.682	2,542,384.428
D-2	409.26'	14 -00'-00"	31 -17'-42"	223.54'	114.63'	74+66.71(D)	75+81.34(D)	76+90.24(D)	385,797.449	2,542,232.697	385,921.371	2,542,049.991
D-3	818.51'	7 -00'-00"	24 -20'-50"	347.82'	176.57'	76+90.24(D)	78+66.81(D)	80+38.06(D)	385,921.371	2,542,049.991	386,226.082	2,541,887.760
D-4	1637.02'	3 -30'-00"	5 -25'-28"	154.98'	77.55'	80+38.06(D)	81+15.61(D)	81+93.04(D)	386,226.082	2,541,887.760	386,376.949	2,541,852.525



POINT "A" STRUCTURE ℄

(386,141.534 N) (2,541,855.002 E)

POINT "B" STRUCTURE ℄

(387,005.044N) (2,541,729.627E)

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

ALIGNMENT PLAN

STA. 74+00 TO 85+00

NO.	DATE	REVISION	BY

DESIGNED	L.J.C.
DRAWN	M.M.H.
CHECKED	L.J.C.
APPROVED	H.O.J.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1"=50'

SHEET NO. R-4

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U03-1(73)	6	65

CURVE DATA TABLE

CURVE NO.	RADIUS	DEGREE	Δ	LENGTH	TANGENT	STATIONS P.C.	STATIONS P.I.	STATIONS P.T.	COORDINATES P.C.		COORDINATES P.T.	
N-4	3819.72'	1 -30'-00"	19 -37'-00"	1307.73'	660.35'	80+05.26(N)	86+65.62(N)	93+13.04(N)	386,186.667	2,541,855.650	387,485.719	2,541,777.524
N-5	4583.66'	1 -15'-00"	9 -34'-00"	765.33'	383.56'	93+13.04(N)	96+96.60(N)	100+78.37(N)	387,485.719	2,541,777.524	388,235.734	2,541,926.351
S-3	3819.72'	1 -30'-00"	15 -26'-00"	1028.89'	517.58'	79+95.02(S)	84+02.60(S)	89+13.91(S)	386,061.323	2,541,855.305	387,075.794	2,541,703.389
S-4	3274.04'	1 -45'-00"	17 -15'-00"	995.71'	496.61'	89+13.91(S)	94+10.52(S)	99+99.62(S)	387,075.794	2,541,703.389	388,048.646	2,541,837.095
SR-1	818.51'	7 -00'-00"	29 -19'-00"	418.81'	214.10'	6+95.23(SR)	9+09.32(SR)	11+14.04(SR)	387,703.896	2,541,392.495	388,116.061	2,541,434.048

CURVE DATA TABLE

CURVE NO.	RADIUS	DEGREE	Δ	LENGTH	TANGENT	STATIONS P.C.	STATIONS P.I.	STATIONS P.T.	COORDINATES P.C.		COORDINATES P.T.	
E-2	954.93	6 -00'-00"	8 -24'-38"	140.18'	70.21'	92+96.15(E)	93+66.38(E)	94+36.32(E)	387,456.268	2,541,671.978	387,596.254	2,541,675.835
E-3	477.46'	12 -00'-00"	32 -27'-20"	270.46'	138.97'	94+36.32(E)	95+75.29(E)	97+06.79(E)	387,596.254	2,541,675.835	387,848.795	2,541,689.593
E-4	238.73'	24 -00'-00"	41 -45'-02"	173.96'	91.05'	97+06.79(E)	97+97.83(E)	98+80.75(E)	387,848.795	2,541,689.593	387,944.038	2,541,448.612
F-1	1432.39'	4 -00'-00"	9 -36'-00"	240.00'	120.28'	86+00.00(F)	87+20.23(F)	88+40.00(F)	386,776.547	2,541,800.760	387,016.259	2,541,802.731
F-2	716.20'	8 -00'-00"	18 -24'-00"	230.00'	116.00'	88+40.00(F)	89+56.00(F)	90+70.00(F)	387,016.259	2,541,802.731	387,238.006	2,541,859.960
F-3	358.10'	16 -00'-00"	18 -15'-39"	114.13'	57.53'	90+70.00(F)	91+27.53(F)	91+84.13(F)	387,238.006	2,541,859.960	387,333.533	2,541,921.527
F-4	179.05'	32 -00'-00"	99 -34'-26"	279.92'	177.72'	91+94.13(F)	93+61.85(F)	94+64.05(F)	387,333.533	2,541,921.527	387,347.972	2,542,173.384
H-1	358.10'	16 -00'-00"	40 -48'-00"	255.00'	133.18'	93+59.25(H)	94+92.43(H)	96+14.25(H)	387,547.227	2,542,025.171	387,767.459	2,541,907.607
H-2	716.20'	8 -00'-00"	14 -24'-00"	180.00'	90.48'	96+14.25(H)	97+04.73(H)	97+94.25(H)	387,767.459	2,541,907.607	387,946.979	2,541,906.059
ST-1	848.83'	6 -45'-00"	11 -17'-37"	167.31'	83.93'	4+41.07(ST)	5+25.00(ST)	6+08.38(ST)	387,012.452	2,541,515.881	386,950.427	2,541,670.980
ST-2	674.07'	8 -30'-00"	9 -38'-23"	113.41'	56.84'	7+77.25(ST)	8+34.09(ST)	8+90.66(ST)	386,872.599	2,541,820.844	386,812.132	2,541,916.629
E-1	1432.39'	4 -00'-00"	6 -25'-46"	160.74'	80.45'	90+58.11(E)	91+38.56(E)	92+98.15(E)	387,218.648	2,541,661.621	387,379.260	2,541,665.084

NOTE:
R.O.W. CORNER STATIONING ON TANGENT OF CURVE S-3, P.I. 84+02.6 BACK = 0+00.0 AHEAD.

NOTE:
CENTER LINES SHOWN ON THIS CONTRACT ARE INTENDED TO BE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

P.I. 6+86.11 STATE ST. ℄
(386,969.55) (2,541,758.69)

P.O.T. 1+00-46TH ST. / ℄ "A"
(387,242.00N) (2,542,240.97 E)

P.O.T. 10+79.41 STATE STREET ℄
(386,734.322N) (2,542,073.890E)

P.O.T. 7+31.90 - 49TH STREET ℄
(387,798.51N)(2,541,409.06 E)

℄ MARTIN DR.

LINE 'F'

P.O.T. 1+00(℄ 46 A)
0+53.02 (F)
1+47.02 (℄ 46A)
(387,289.010N)
(2,542,240.014E)

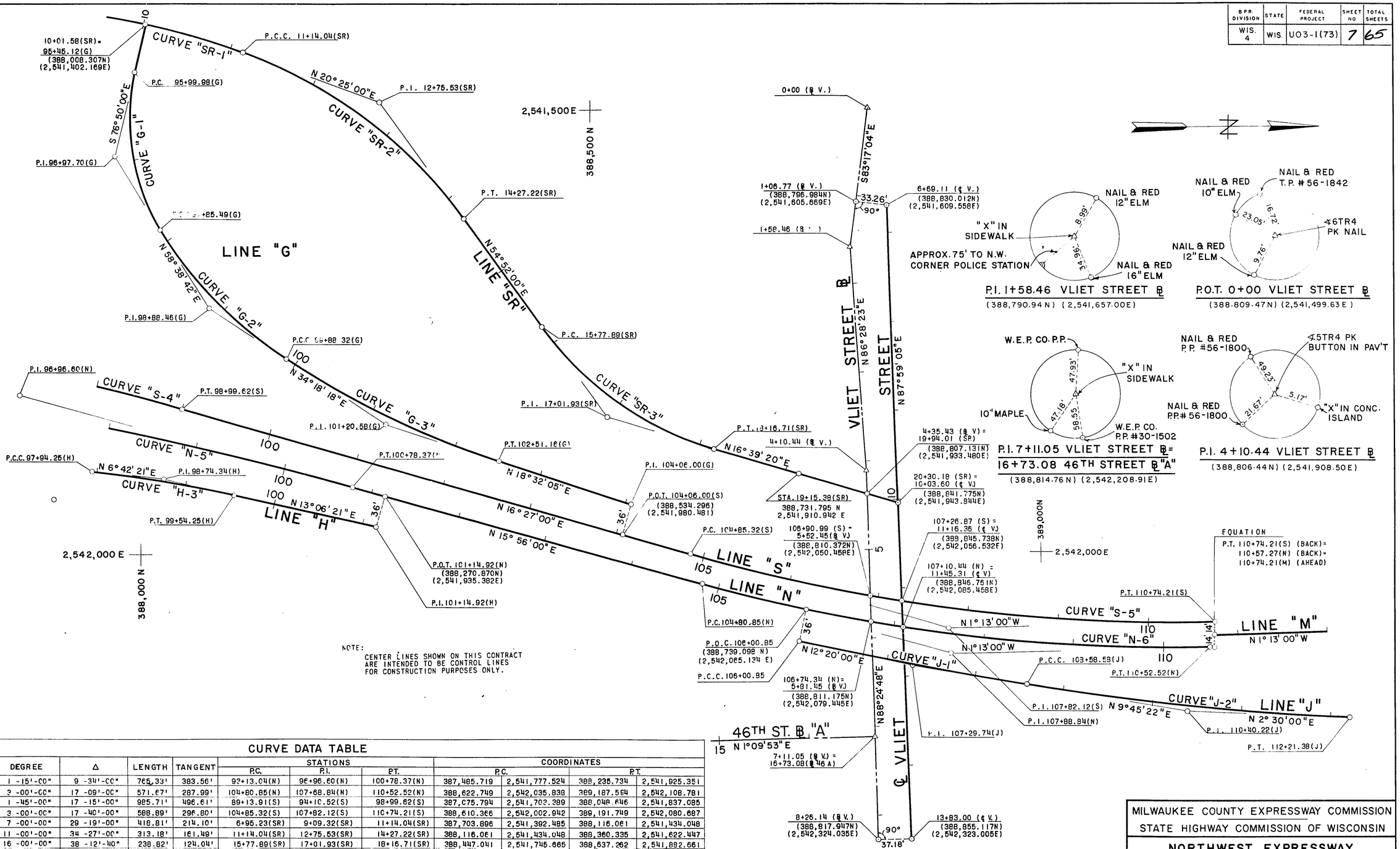
P.O.T. 2+16.39(℄ 46A)
90+74.25(H)
(387,358.350N)
(2,542,239.604E)

46TH STREET ℄ "A"
N.01°09'53"W
N01°09'53"W
90+54.89 (℄ MD)
1+87.82 (℄ 46A)
90+20.89 (℄ MD)
1+64.77 (℄ N46)
90+34.89 (H)

49TH ST. ℄
0+00 (49TH ST ℄)
3+41.62 (℄ STATE)
N 1° 30' 00" W
MATCH LINE 3+30(℄ STATE)
1+81.3(SR) 52.8' Lt.
1+92.7(SR) 142.8' Lt.
2+89.1(SR) 175.9' Lt.
2+58.9(SR) 180.4' Lt.
3+17.0(SR) 162.9' Lt.
2+52.2(SR) 135.3' Lt.

℄ STATE STREET
S 73°35'50"E
S 73°51'00"E
N 73°51'00"W
N 73°35'50"W
MATCH LINE 10+00
MATCH LINE 3+30(℄ STATE)
3+32.8(℄ STATE) 12.5' Lt.
1+92.3(℄ STATE) 5.1' Lt.
2+00 (℄ STATE) (387,106.822N) (2,541,292,364E)
4+47.0(℄ STATE) 62.2' Rt.
2+39.0(℄ STATE) 7.0' Lt.
4+47.3 (℄ STATE) 62.9' Rt.
3+01.6(℄ STATE) 7.0' Lt.
4+76.1 (℄ STATE) 63.7' Rt.
3+99.0(TAN. S-3) 136.0' Lt.
P.C. 4+41.07(STATE)
P.T. 6+08.38(STATE)
3+65.9 (TAN. S-3) 59.8' Lt.
87+89.15(S) 6+50.27(ST) (386,931.123N) (2,541,709.151E)
1+21.8(TAN. S-3) 32.3' Lt.
3+32.6 (TAN. S-3) 49.4' Lt.
87+32.30(N) 7+05.51(ST) (386,905.664N) (2,541,757.173E)
P.I. 1+84+02.60(S)
P.I. 1+86+65.62(N)
N 0°48'00" W
N 13°15'00W
N 6°22'00" E
N 4°19'44"W
N 5°16'16" E
N 23°40'16"E
N 1°58'46"W
N 0°48'00" W
N 16°27'00"E
N 2°37'38"W
N 15°56'00"E
N 20°25'00"E
N 8°54'00" W
N 76°50'00"W
N 35°04'58"W
N 41°55'55"E
N 48°29'39"W
N 7°41'39" W
N 6°22'00" E
N 6°42'21"E
N 0°48'00" W
N 16°27'00"E
N 04°27'00"E
N 5°47'00"E
N 2°37'38"W
S 48°29'39"E
N 48°29'39"W
S 52°55'00"E
S 62°33'00"E
S 55°16'00"E
S 48°29'39"E
N 48°29'39"W
N 46°29'39"W
N 46°29'39"W
N 48°29'39"W
N 48°29'39"W
N 48

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
WIS. 4	WIS.	U03-1(73)	7	65



NOTE:
CENTER LINES SHOWN ON THIS CONTRACT ARE INTENDED TO BE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

CURVE DATA TABLE

CURVE NO.	RADIUS	DEGREE	Δ	LENGTH	TANGENT	STATIONS P.C.	STATIONS P.I.	STATIONS P.T.	COORDINATES P.C.		COORDINATES P.T.	
N-5	4583.66'	1 -15'-00"	9 -34'-00"	765.33'	383.56'	93+13.04(N)	96+96.60(N)	100+78.37(N)	387,485.719	2,541,777.524	388,235.734	2,541,925.351
N-6	1909.86'	3 -00'-00"	17 -09'-00"	571.67'	287.99'	104+80.85(N)	107+68.84(N)	110+52.52(N)	388,622.749	2,542,035.838	389,187.564	2,542,108.781
S-4	3274.04'	1 -45'-00"	17 -15'-00"	985.71'	496.61'	89+13.91(S)	94+10.52(S)	98+99.62(S)	387,075.794	2,541,703.389	388,048.646	2,541,837.085
S-5	1909.86'	3 -00'-00"	17 -40'-00"	588.89'	296.80'	104+85.32(S)	107+82.12(S)	110+74.21(S)	388,610.366	2,542,002.942	389,191.749	2,542,080.687
SR-1	819.51'	7 -00'-00"	29 -19'-00"	418.81'	214.10'	6+95.23(SR)	9+09.32(SR)	11+14.04(SR)	387,703.896	2,541,392.485	388,116.061	2,541,434.048
SR-2	520.87'	11 -00'-00"	34 -27'-00"	313.18'	161.49'	11+14.04(SR)	12+75.53(SR)	14+27.22(SR)	388,116.061	2,541,434.048	388,360.335	2,541,622.447
SR-3	358.10'	16 -00'-00"	38 -12'-40"	238.82'	124.04'	15+77.89(SR)	17+01.93(SR)	18+16.71(SR)	388,447.041	2,541,745.665	388,637.262	2,541,892.661
G-1	238.73'	24 -00'-00"	44 -31'-18"	185.51'	97.72'	95+99.98(G)	96+97.70(G)	97+85.49(G)	387,995.810	2,541,455.587	388,024.399	2,541,634.189
G-2	477.46'	12 -00'-00"	24 -20'-24"	202.83'	102.97'	97+85.49(G)	98+88.46(G)	99+88.32(G)	388,024.399	2,541,634.189	388,163.036	2,541,780.155
G-3	954.93'	6 -00'-00"	15 -46'-13"	262.84'	132.26'	99+88.32(G)	101+20.58(G)	102+51.16(G)	388,163.036	2,541,780.155	388,397.680	2,541,896.734
H-3	1432.39'	4 -00'-00"	6 -24'-00"	160.00'	80.08'	97+94.25(H)	98+74.34(H)	99+54.25(H)	387,946.979	2,541,906.059	388,104.511	2,541,933.569
J-1	5729.58'	1 -00'-00"	2 -34'-38"	257.72'	128.88'	106+00.85(J)	107+29.74(J)	108+58.58(J)	388,731.408	2,542,100.303	388,984.336	2,542,149.672
J-2	2864.79'	2 -00'-00"	7 -15'-22"	362.81'	181.65'	108+58.58(J)	110+40.22(J)	112+21.38(J)	388,984.336	2,542,149.672	389,344.828	2,542,188.376

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
ALIGNMENT PLAN
STA. 98+00 TO 112+00

DESIGNED	L. J. C.
DRAWN	M. M. H.
CHECKED	L. J. C.
APPROVED	H. O. J.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1" = 50'
SHEET NO. R-6

12/11/58

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1(73)	8	65

MANHOLES				STORM SEWER N.R.C.S.P.S.S.				
LOCATION	TYPE	GR.ELEV.	DEPTH	LOCATION	SIZE	LENGTH	INL.EL.	DIS.EL.
84+05(S) 20' RT.	1	39.5 ±	5.5 ±	M.H. 84+05 (S) 20' RT. to OUTFALL 81+05(S) 20' RT.	12"	300	34.00	31.10
84+95(S) 20' RT.	1	42.0 ±	4.9 ±	M.H. 84+95(S) 20' RT. to NEW M.H.7+03(ST) 18' RT.	12"	201	37.10	34.08
				EXIST.S.S.90+65(N)15' RT TO.NEW 48"S.S.90+25(N)52' RT	12"	51	-	-

STORM SEWER 8" DIA. N.R.C.S.P.S.S.			
LOCATION	LENGTH	LOCATION	LENGTH
PIER #3 (SB) TO 12" DIA. SEWER	19	PIER #11 (SB) TO NEW M.H. 7+03 (ST) 18' RT.	28
PIER #4 (SB) TO 12" DIA. SEWER	20	PIER #4 (NB) TO 12" DIA. SEWER	54
PIER #5 (SB) TO 12" DIA. SEWER	20	PIER #6 (NB) TO 12" DIA. SEWER	58
PIER #7 (SB) TO NEW M.H. 84+05(S) 20' RT.	22	PIER #8 (NB) TO 12" DIA. SEWER	60
PIER #8 (SB) TO NEW M.H. 84+95(S) 20' RT.	17	PIER #9 (NB) TO 12" DIA. SEWER	63
PIER #9 (SB) TO 12" DIA. SEWER	19	PIER #10 (NB) TO 12" DIA. SEWER	66
PIER #10 (SB) TO 12" DIA. SEWER	19		

EARTHWORK SUMMARY

STATE STREET
C = 480 C.Y.
F = 2936 C.Y.
SHG. = 25% ±
BORROW = 3190 C.Y.

N.W. EXPRESSWAY
C = 640 C.Y.
F = 2344 C.Y. (EARTH)
SHG. = 25%±
BORROW = 2290 C.Y. (EARTH)
F = 11,355 C.Y. (GRANULAR BACKFILL)

NOTE: ELEVATIONS FOR CONNECTIONS FROM PIERS TO 12" DIA. SEWER TO BE DETERMINED BY THE ENGINEER IN THE FIELD. INVERT ELEVATIONS AT S.B. PIERS TO BE NOT LESS THAN 3 FEET BELOW GROUND LEVEL. AT N.B. PIERS MINIMUM COVER TO BE 1 FOOT.

ABANDONING MANHOLES

89+90 (N) - 30' RT
89+95 (N) - 20' RT

ABANDONING INLETS

89+65 (N) - 40' RT
89+75 (N) - 13' RT

GRADE TO ONE FOOT ABOVE TOP OF TIE BEAMS AND CONSTRUCT MORTAR RUBBLE MASONRY SLOPE (SEE DETAIL SHEET R-3)

FOR GRADING BETWEEN MENOMONEE RIVER AND W. STATE STREET SEE CROSS SECTIONS

BEG. OF PROJECT U03-1(73)
STA. 79+62.13(S)

PROVIDE "Y" BRANCH CONNECTIONS WITH CLEANOUT PLUG (TYP.)

SOUTHBOUND

NORTHBOUND

B-40-63

B-40-64

8' R.

8'

80

85

20' ROUNDING

12" DIA.

MENOMONEE RIVER

C.M.ST.P. & P.R.R.

C.W. STATE ST.

48" DIA.

10

6+30 & 0+80 STATE BASELINE ST.

90°

1+00 BASELINE NORTH ABUTMENT FILL

2:1 SLOPE

90

LINE "S"

LINE "N"

LINE "SR"

90+25(N)

52'

12" DIA.

15" STORM SEWER
8" SAN. SEWER
(TO BE ABANDONED BY CITY)

N. 48TH. ST.

N. 47TH ST.

END OF PROJECT U03-1(73)
STA. 88+58.36(S)

INTERIM CONNECTION TO DRAIN N. 48th ST.
(PROVIDE 45° ELBOW & REDUCER)

PLACE GRANULAR BACKFILL TO A MINIMUM HEIGHT OF 2 FEET ABOVE TOP OF PIPE

PLACE TEMPORARY WOODEN PLUG AT EXPOSED END OF 48" DIA. C.M.C.P (PROVIDE OPENING IN PLUG FOR 12" INTERIM CONNECTIONS)

CONSTRUCT OUTLET FOR 48" DIA. PIPE THROUGH EXISTING RIVER WALL (SEE DETAIL)

RIVER WALLS

CURVE DATA - 48" S.S.

△ = 40°
R = 80' (℄ of 48" S.S.)
T = 21.84'
L = 41.89'
P.C. = CENTER OF MANHOLE - 11+20 (40' LT.)

NOTES:

1. ALL HOUSES INTERFERING WITH WORK WILL BE REMOVED BY OTHERS.
2. FILL FOR NORTH ABUTMENT SHALL BE GRANULAR BACKFILL.
3. FOR OTHER REMOVALS SEE SHEETS R-11 &-12

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

GRADING & DRAINAGE PLAN
WEST STATE STREET

DESIGNED	P.W.
DRAWN	A.P.
CHECKED	G.H.
APPROVED	H.O.J.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1" = 50'

SHEET NO. R-7

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1(73)	8	65

MANHOLES				STORM SEWER N.R.C.S.P.S.S.				
LOCATION	TYPE	GR.ELEV.	DEPTH	LOCATION	SIZE	LENGTH	INL.EL.	DIS.EL.
84+05(S) 20' RT.	1	39.5 ±	5.5 ±	M.H. 84+05 (S) 20' RT. to OUTFALL 81+05(S) 20' RT.	12"	~~200~~ 224	34.00	31.10
84+95(S) 20' RT.	ID	42.0 ±	4.9 ±	M.H. 84+95(S) 20' RT. to NEW M.H.7+03(ST) 48' RT.	12"	~~201~~ 209	37.10	34.08
				~~EXIST. S.S. 83+65(N) 15' RT~~ TO NEW 48"S.S. 90+25(N) 52' RT	12"	~~81~~ 47	-	-
	INLETS							
79+50(D)	A *	~~7.00~~		INL. 79+50 (D) to INL. 79+50(S)	12"	47 *		
79+50(S)	A *	73.54		INL. 79+50 (S) to EXIST. 72"x53" 79+50(S) BY 1.5 (MOD)		3.0 *		

* FROM PROJ. No. U03-1(55)

STORM SEWER 8" DIA. N.R.C.S.P.S.S.					
LOCATION		LENGTH	LOCATION		LENGTH
PIER #3 (SB)	TO 12" DIA. SEWER	19	PIER #11 (SB)	TO NEW M.H. 7+03 (ST) 48' RT.	~~22~~ 25
PIER #4 (SB)	TO 12" DIA. SEWER	20	PIER #4 (NB)	TO 12" DIA. SEWER	~~57~~ 54
PIER #5 (SB)	TO 12" DIA. SEWER	~~21~~ 20	PIER #6 (NB)	TO 12" DIA. SEWER	~~42~~ 58
PIER #7 (SB)	TO NEW M.H. 84+05(S) 20' RT.	~~25~~ 22	PIER #8 (NB)	TO 12" DIA. SEWER	~~63~~ 60
PIER #8 (SB)	TO NEW M.H. 84+95(S) 20' RT.	~~21~~ 17	PIER #9 (NB)	TO 12" DIA. SEWER	63
PIER #9 (SB)	TO 12" DIA. SEWER	~~23~~ 19	PIER #10 (NB)	TO 12" DIA. SEWER	~~45~~ 66
PIER #10 (SB)	TO 12" DIA. SEWER	~~23~~ 19			

EARTHWORK SUMMARY

STATE STREET ~~496~~ 486
C = ~~480~~ C.Y.
F = ~~2936~~ C.Y.
SHG. = ~~25%~~ ±
BORROW = ~~3190~~ C.Y.

N.W. EXPRESSWAY ~~2344~~ 2344
C = ~~840~~ C.Y.
F = ~~2344~~ C.Y. (EARTH)
SHG. = ~~25%~~ ±
BORROW = ~~2290~~ C.Y. (EARTH)
F = 11,355 C.Y. (GRANULAR BACKFILL)

NOTE: ELEVATIONS FOR CONNECTIONS FROM PIERS TO 12" DIA. SEWER TO BE DETERMINED BY THE ENGINEER IN THE FIELD. INVERT ELEVATIONS AT S.B. PIERS TO BE NOT LESS THAN 3 FEET BELOW GROUND LEVEL. AT N.B. PIERS MINIMUM COVER TO BE 1 FOOT.

ABANDONING MANHOLES

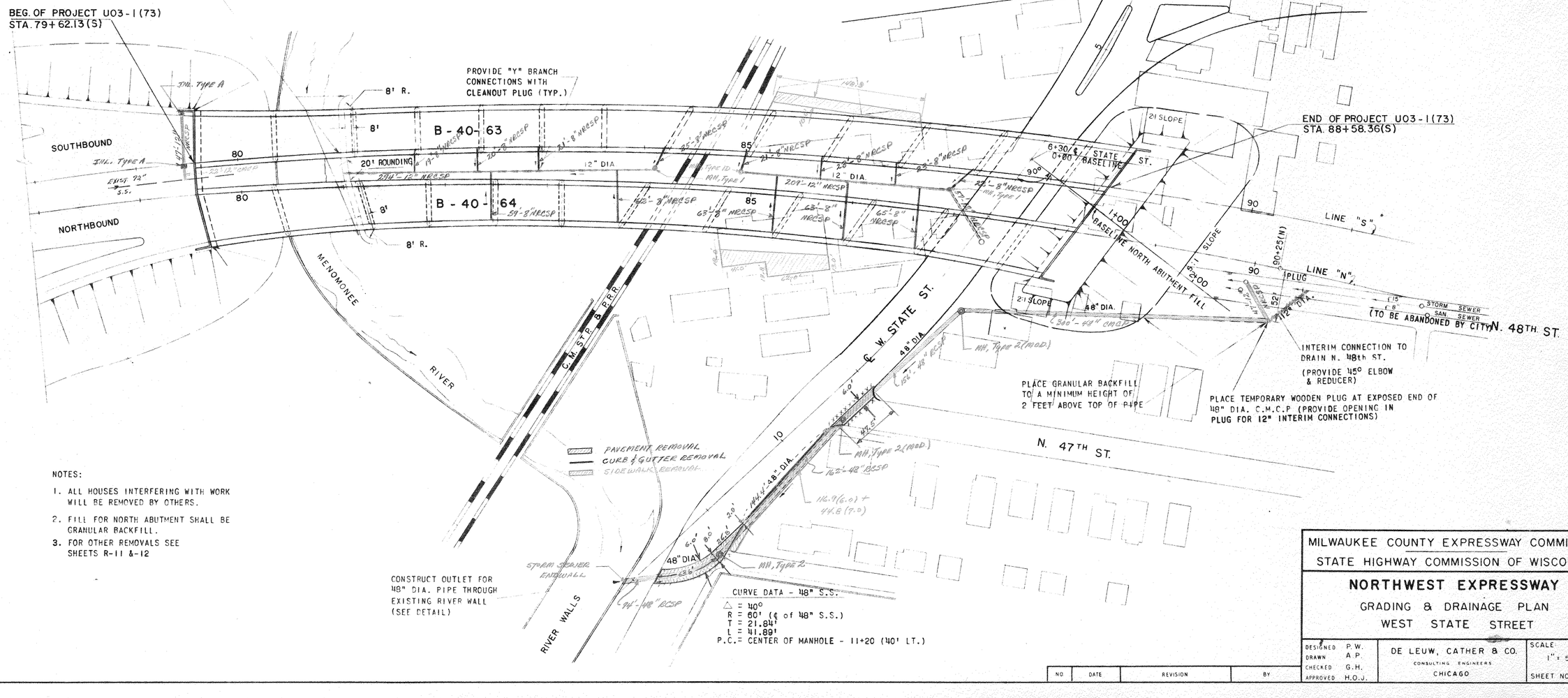
89+90 (N) - 30' RT } City of Mil. Proj. No. U03-1(68)
89+95 (N) - 20' RT }

ABANDONING INLETS

89+65 (N) - 40' RT } Proj. No. U03-1(73)
89+75 (N) - 13' RT }

GRADE TO ONE FOOT ABOVE TOP OF TIE BEAMS AND CONSTRUCT MORTAR RUBBLE MASONRY SLOPE (SEE DETAIL SHEET R-3)

FOR GRADING BETWEEN MENOMONEE RIVER AND W. STATE STREET SEE CROSS SECTIONS



NOTES:

1. ALL HOUSES INTERFERING WITH WORK WILL BE REMOVED BY OTHERS.
2. FILL FOR NORTH ABUTMENT SHALL BE GRANULAR BACKFILL.
3. FOR OTHER REMOVALS SEE SHEETS R-11 &-12

NO	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

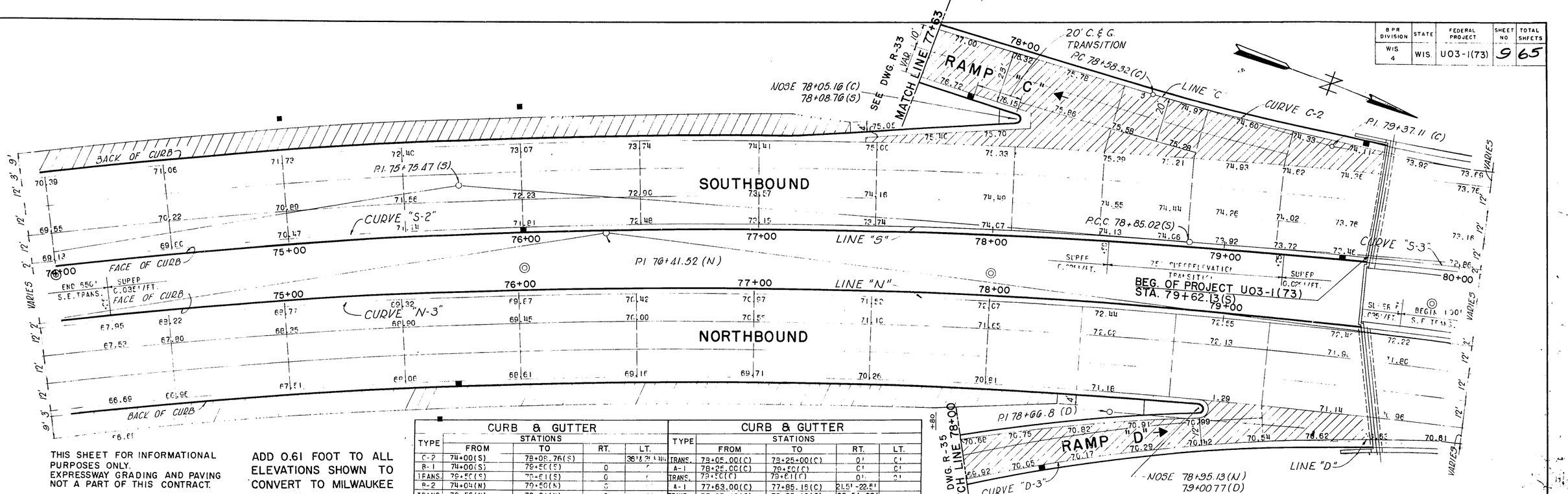
GRADING & DRAINAGE PLAN
WEST STATE STREET

DESIGNED	P.W.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: 1" = 50'
DRAWN	A.P.		
CHECKED	G.H.		SHEET NO. R-7
APPROVED	H.O.J.		

(16)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
WIS. 4	WIS.	U03-1(73)	9	65

PLAN — SURVEYED, PLOTTED, NOTE BOOK, NO. — DATE, BY, RT. OF WAY CHECKED, GRADES CHECKED, 8 1/4" NOTED, STRUCTURE NOTES CHKD.



THIS SHEET FOR INFORMATIONAL PURPOSES ONLY.
EXPRESSWAY GRADING AND PAVING NOT A PART OF THIS CONTRACT.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

CURB & GUTTER					CURB & GUTTER				
TYPE	STATIONS FROM	TO	RT.	LT.	TYPE	STATIONS FROM	TO	RT.	LT.
C-2	74+00(S)	78+08.76(S)		36'	TRANS.	79+05.00(C)	79+25+00(C)	0'	0'
B-1	74+00(S)	79+50(S)	0	0	A-1	78+25.00(C)	79+50(C)	0'	0'
TRANS.	79+50(S)	79+61(S)	0	0	TRANS.	79+50(C)	79+61(C)	0'	0'
B-2	74+04(N)	79+50(N)	0	0	A-1	77+63.00(C)	77+85.15(C)	21.5'-22.5'	
TRANS.	79+50(N)	79+61(N)	0	0	TRANS.	77+85.16(C)	78+05.16(C)	22.5'-23'	
C-1	74+04(N)	78+30(N)	36'		A-2	79+00 (D)	79+00.77(D)	16.25'-17'	
TRANS.	78+30(N)	79+50(N)	36'		A-1	78+00 (D)	79+60(D)	0'	0'
B-1	79+50(N)	78+95.13(N)	36'		TRANS.	79+50(D)	79+73(D)	0'	0'
A-2	77+63(C)	79+05(C)	0'	0'					

NET LENGTH STA. 79+62(S) TO 80+00(S) = 38 LIN. FT.

PROFILE — SURVEYED, PLOTTED, NOTE BOOK, NO. — DATE, BY, GRADES CHECKED, 8 1/4" NOTED, STRUCTURE NOTES CHKD.

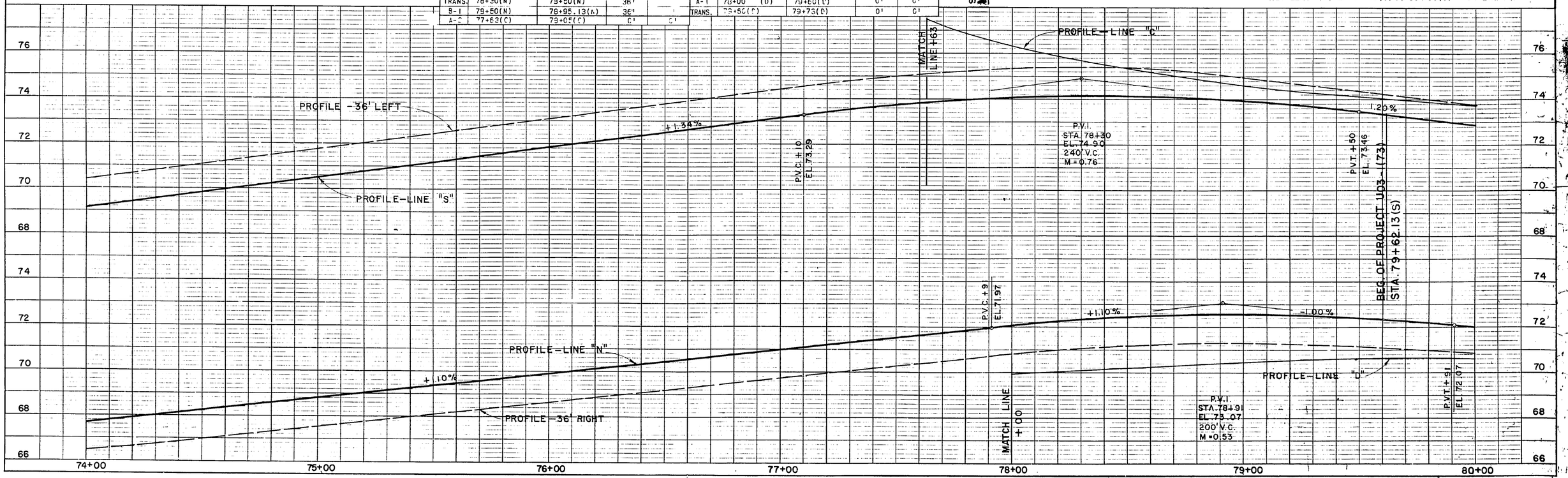


PLATE 1 - PLAN - PROFILE & P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

K & E Co. No. 348-IC "IMPERIAL" TRACING CLOTH

PLAN & PROFILE - NORTHWEST EXPRESSWAY
DE LEUW, CATHER & COMPANY

R-80

(17)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
WIS 4	WIS	U03-1(73)	10	65

P.C. 80+42.80(C)
P.T. 80+15.66(C)
RIVER
EXISTING WALL
CURVE "C-3"
P.I. 81+56.14(C)
P.T. 82+69.47(C)
P.I. 84+02.60(S)
SOUTHBOUND
LINE "S"
CURVE "S-3"
RAILROAD
ST. PAUL & PACIFIC
5'-6"
36'-0"
4'-6"
VARIES
80+00
81+00
82+00
83+00
84+00
85+00
86+00
100' SUPERELEVATION TRANSITION
+7.5%
SUPER 0.025'/FT.
P.C. 80+05.20(N)
NORTHBOUND
CURVE "N-4"
LINE "N"
4'-6"
36'-0"
5'-6"
P.I. 81+15.61(D)
P.O.C. 81+93.04
CURVE "D-4"
P.C.C. 80+38.06(D)
MENOMONEE
MILWAUKEE
CHICAGO

THIS SHEET FOR INFORMATIONAL PURPOSES ONLY

NET LENGTH STA. 80+00(S) - 86+00(S) = 600 LIN. FT.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

PLAN
SURVEYED
PLOTTED
NOTE BOOK ALIGNMENT CHECKED
NO. ET. OF MAT CHECKED
BY
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK PROFILE CHECKED
NO. STRUCTURE NOTATIONS CHECKED
BY
DATE

72
70
68
66
64

P.O.V.T. EL. 72.86
P.O.V.T. EL. 71.98
P.O.V.T. EL. 65.86
P.O.V.T. EL. 65.96
PROFILE - 36' LEFT
PROFILE - LINE "S"
PROFILE - LINE "N"
PROFILE - 36' RIGHT
-1.20%
-1.00%

STA. 79+62.13(S) TO STA. 88+58.36(S)
B-40-63 & B-40-64 REQ'D.
13 SPAN & 12 SPAN PRESTRESSED CONCRETE GIRDER
1-4' (MIN.) ROADWAY (EACH BRIDGE)
SEE DRWGS X-18709 TO X-18749 (INCL.)

80+00 81+00 82+00 83+00 84+00 85+00 86+00

PLATE 1 - PLAN - PROFILE O.P.R. & R.C. STANDARD
KEUFFEL & ESSER CO., NEW YORK

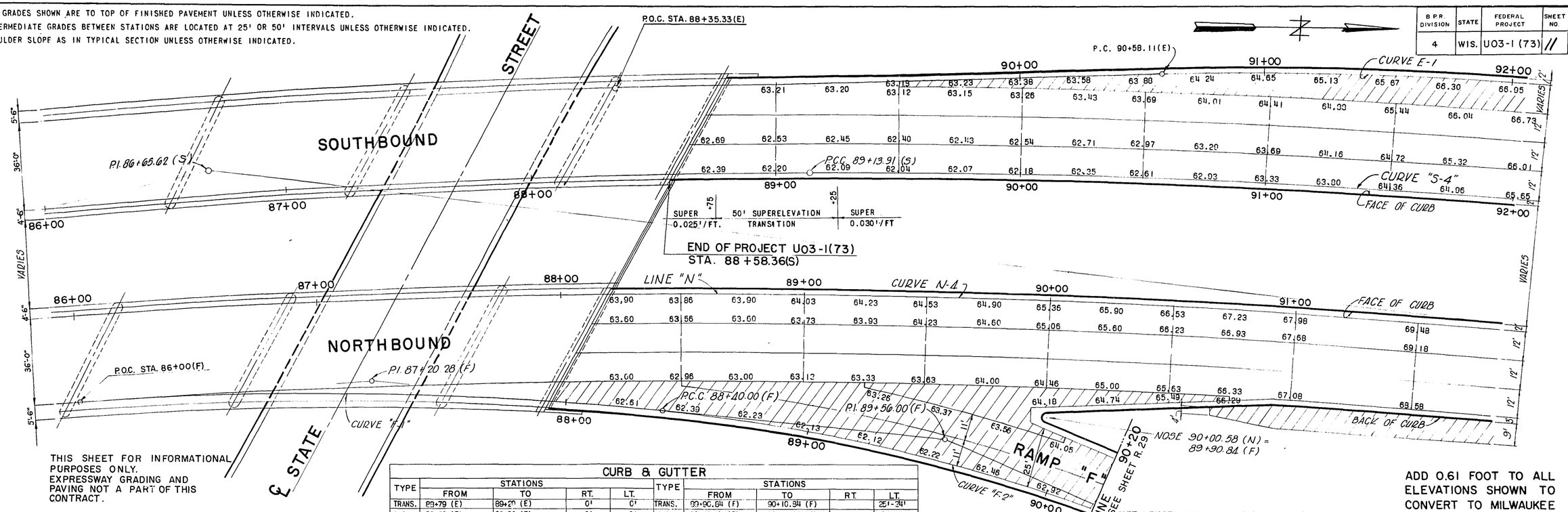
K & E Co. No. 348-IC

PLAN & PROFILE - NORTHWEST EXPRESSWAY
DE LEUW, CATHER & COMPANY R-9

(18)

1. ALL GRADES SHOWN ARE TO TOP OF FINISHED PAVEMENT UNLESS OTHERWISE INDICATED.
2. INTERMEDIATE GRADES BETWEEN STATIONS ARE LOCATED AT 25' OR 50' INTERVALS UNLESS OTHERWISE INDICATED.
3. SHOULDER SLOPE AS IN TYPICAL SECTION UNLESS OTHERWISE INDICATED.

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1 (73)	11	65

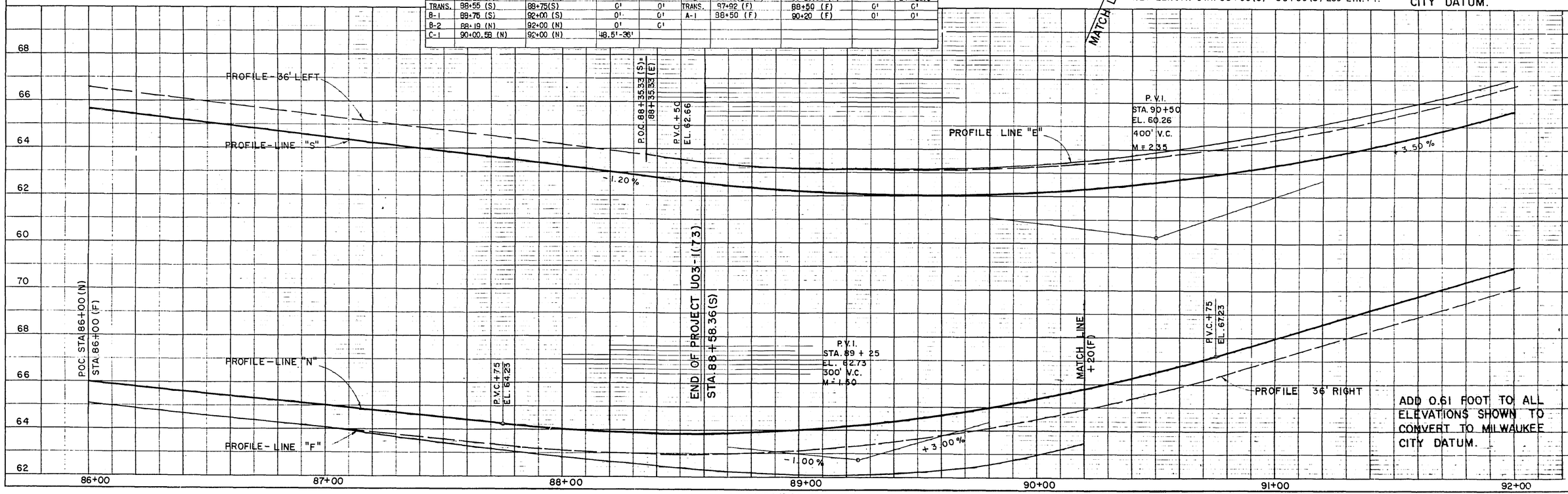


THIS SHEET FOR INFORMATIONAL PURPOSES ONLY. EXPRESSWAY GRADING AND PAVING NOT A PART OF THIS CONTRACT.

CURB & GUTTER

TYPE	STATIONS FROM	STATIONS TO	RT.	LT.	TYPE	STATIONS FROM	STATIONS TO	RT.	LT.
TRANS.	89+79 (E)	89+20 (E)	0'	0'	TRANS.	90+90.84 (F)	90+10.84 (F)		25'-24'
A-2	89+20 (E)	92+00 (E)	0'	0'	A-2	90+10.84 (F)	90+20.00 (F)		24'-23.5'
TRANS.	88+55 (S)	88+75(S)	0'	0'	TRANS.	97+92 (F)	88+50 (F)	0'	0'
B-1	88+75 (S)	92+00 (S)	0'	0'	A-1	88+50 (F)	90+20 (F)	0'	0'
B-2	88+19 (N)	92+00 (N)	0'	0'					
C-1	90+00.58 (N)	92+00 (N)	48.5'-36'						

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.



ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

PLATE 1 - PLAN-PROFILE O.P.R.&R.C. STANDARD
REUFFEL & ESSER CO., NEW YORK

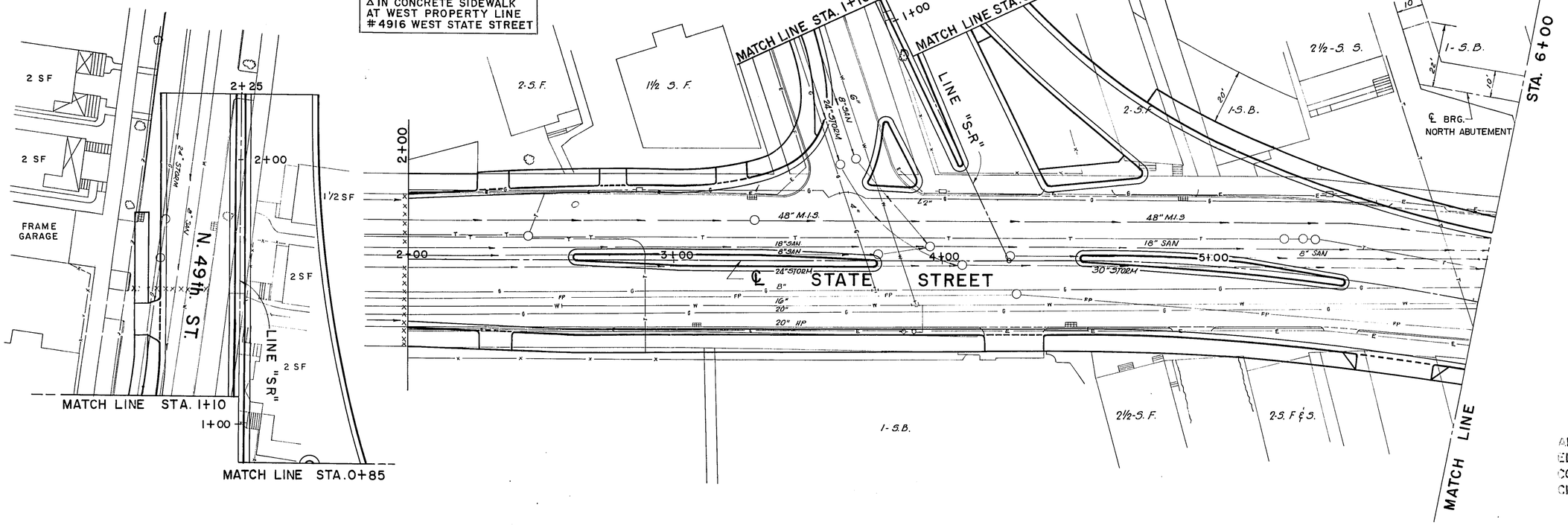
K & E Co No 348-IC
IMPERIAL TRACING CLOTH
20341

PLAN & PROFILE - NORTHWEST EXPRESSWAY
DE LEUW, CATHER & COMPANY R.10

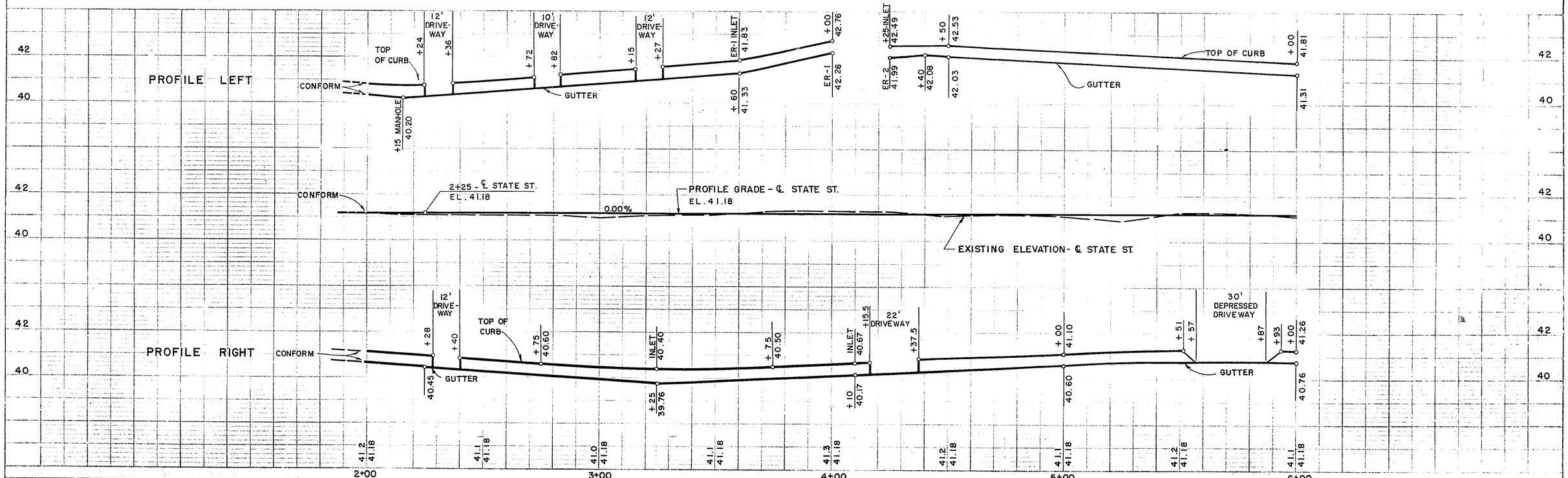
(19)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS. 4	WIS.	U03-1(73)	12	65

BM #44 - EL. 40.94
△ IN CONCRETE SIDEWALK
AT WEST PROPERTY LINE
#4916 WEST STATE STREET



ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

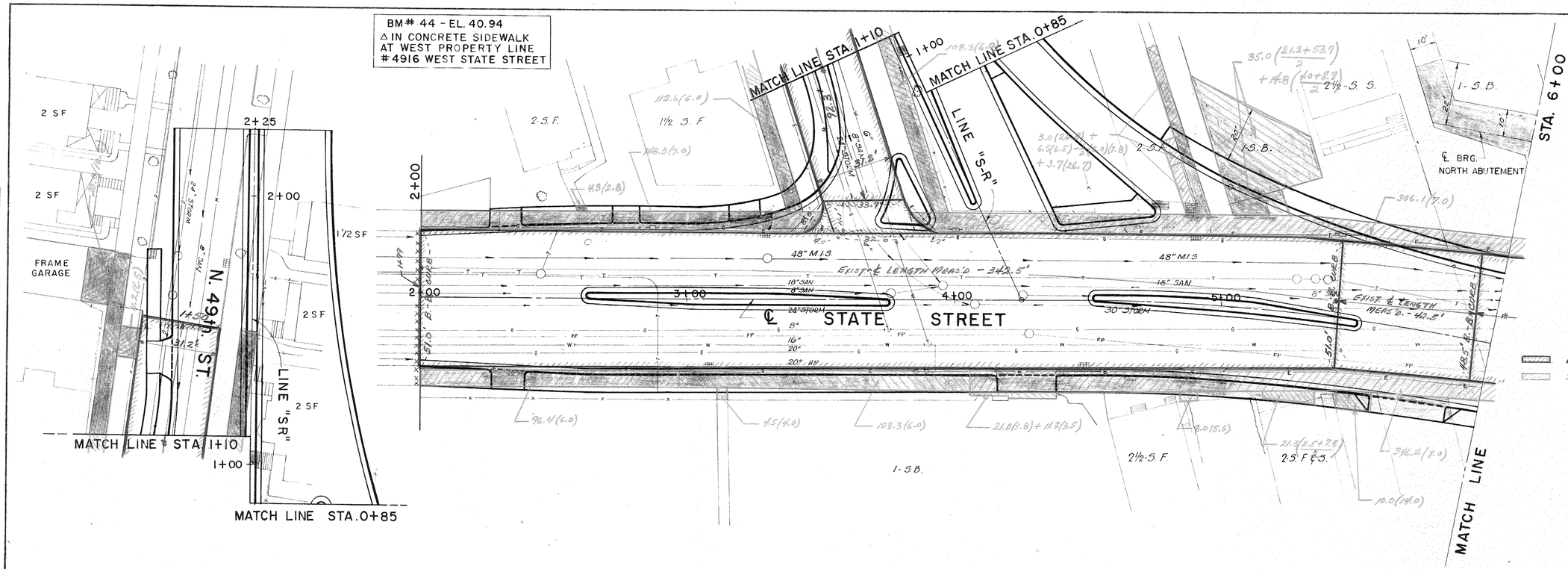


PLAN & PROFILE - STATE STREET
DE LEUW, CATHER & COMPANY R-11

(19)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS. 4	WIS.	U03-1(73)	12	65

BM # 44 - EL. 40.94
△ IN CONCRETE SIDEWALK
AT WEST PROPERTY LINE
#4916 WEST STATE STREET



ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

PLAN: SURVEYED, PLOTTED, CORRECTED, NOTE BOOK, NO., BY, DATE, ALIGNMENT CHECKED, R/W CHECKED

PROFILE: SURVEYED, PLOTTED, CORRECTED, B.M.'S NOTED, STRUCTURE NOTATIONS CHKD.

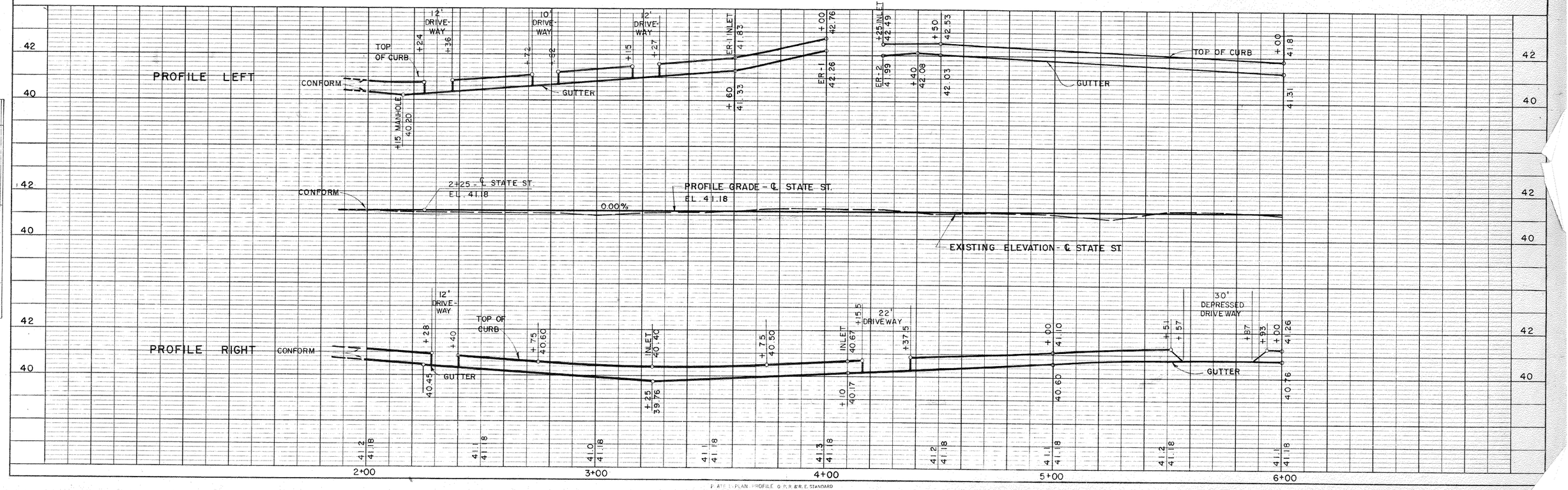


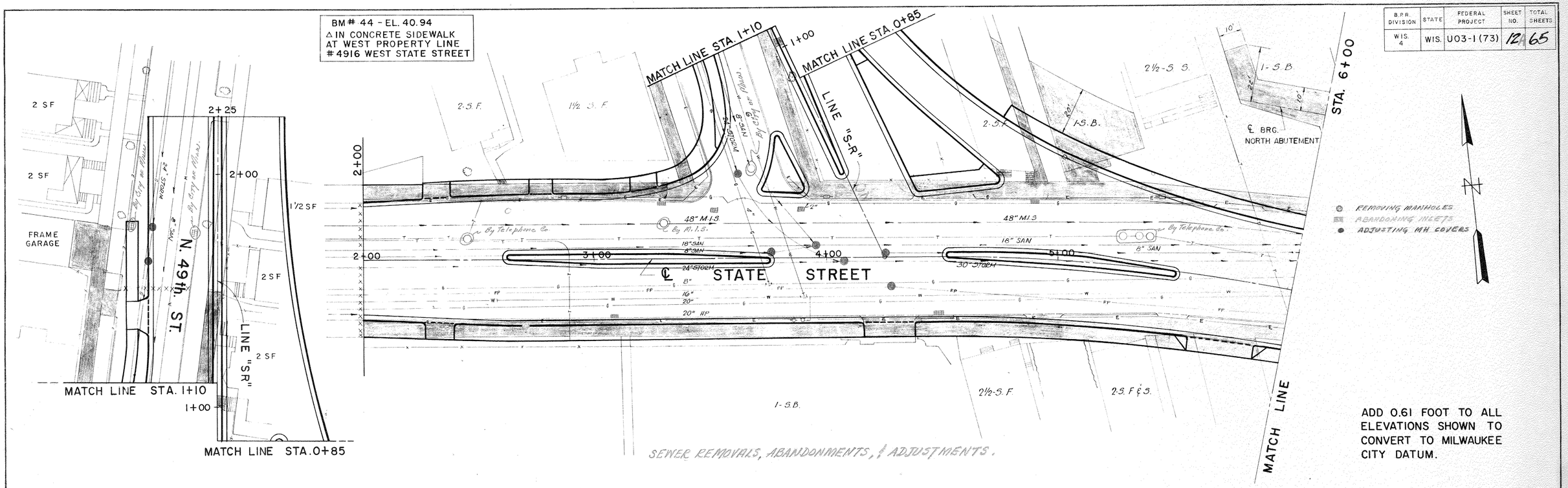
PLATE I - PLAN - PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

PLAN & PROFILE - STATE STREET
DE LEUW, CATHER & COMPANY

(19)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS. 4	WIS.	U03-1(73)	12A	65

BM # 44 - EL. 40.94
△ IN CONCRETE SIDEWALK
AT WEST PROPERTY LINE
#4916 WEST STATE STREET

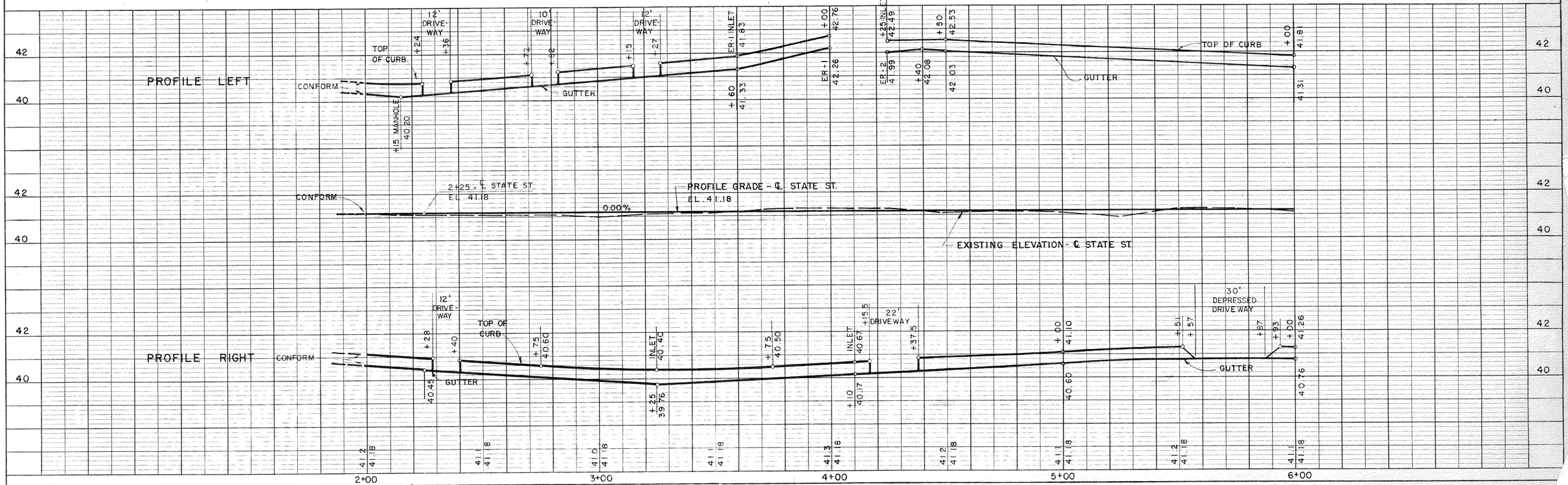


SEWER REMOVALS, ABANDONMENTS, & ADJUSTMENTS.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

PLAN | SURVEYED | DATE | BY
PLOTTED
NOTE BOOK ALIGNMENT CHECKED
NO. PT. OF VAR. CHECKED

PROFILE | SURVEYED | DATE | BY
PLOTTED
NOTE BOOK GRADES CHECKED
NO. BASIS OF ELEV.
STRUCTURE NOTATNS CHKD.



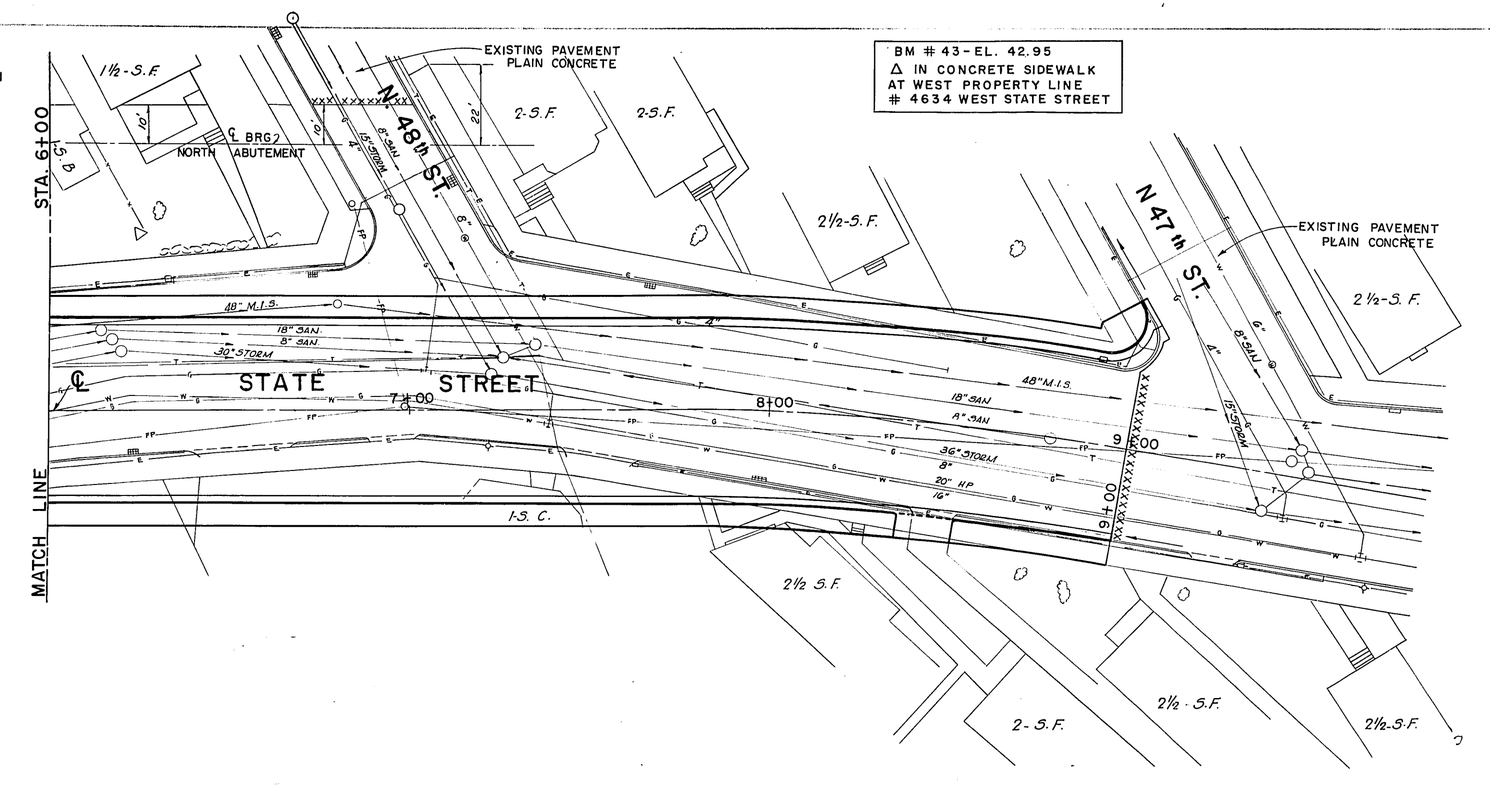
PLAN & PROFILE - STATE STREET
DE LEUW, CATHER & COMPANY

PLATE 1 - PLAN-PROFILE O.P.R.&R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
K & E Co. No. 346-10

NOTE:
REMOVE ALL CONCRETE IN AREA OF ABUTMENT PILING.

BM # 43 - EL. 42.95
△ IN CONCRETE SIDEWALK
AT WEST PROPERTY LINE
4634 WEST STATE STREET

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1 (73)	13	65



NOTE:
REMOVALS FOR 48" STORM SEWER CONSTRUCTION SHOWN ON SHEET R-7

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

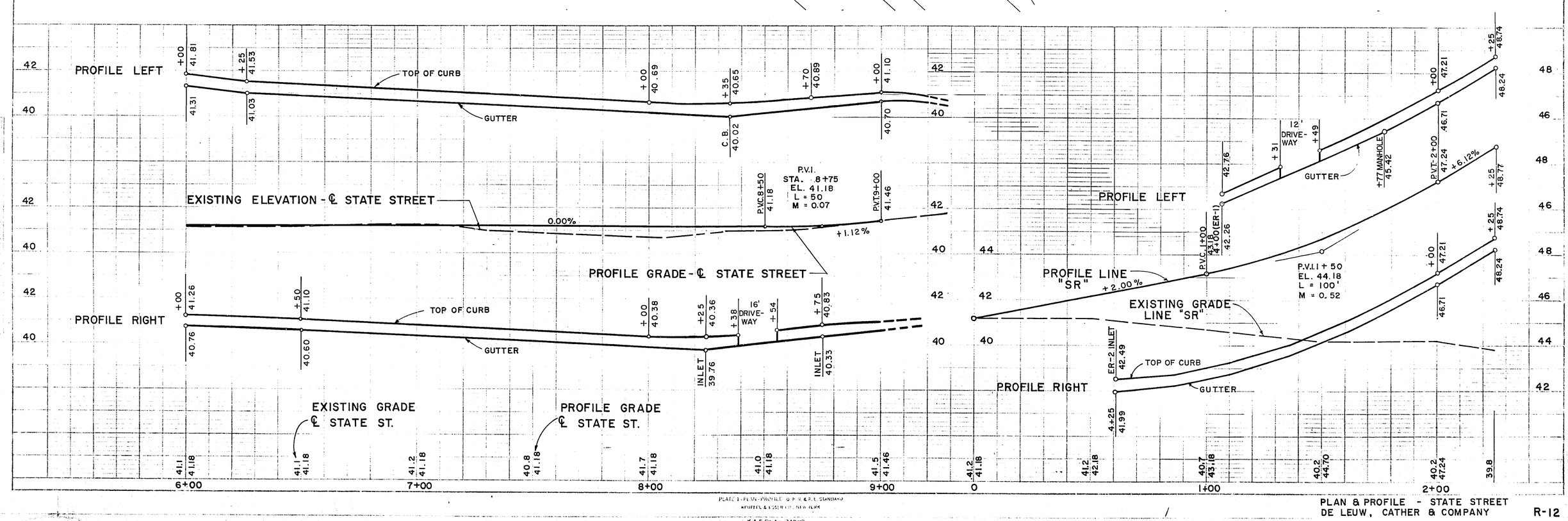


PLATE 1-PLAN-PROFILE OF P.N.&P.L. STANDARD
KEUFFEL & ESSER CO. NEW YORK

K & E CO. No. 348HC

PLAN & PROFILE - STATE STREET
DE LEUW, CATHER & COMPANY

R-12

(20)

NOTE:
REMOVE ALL CONCRETE IN AREA OF ABUTMENT PILING.

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1 (73)	13	65

BM # 43 - EL. 42.95
△ IN CONCRETE SIDEWALK AT WEST PROPERTY LINE # 4634 WEST STATE STREET

PAVEMENT REMOVAL
CURB & GUTTER REMOVAL
SIDEWALK REMOVAL

NOTE:
REMOVALS FOR 48" STORM SEWER CONSTRUCTION SHOWN ON SHEET R-7

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

PLAN: SURVEYED, PLOTTED, NOTE BOOK, ALIGNMENT CHECKED, NO., BY, DATE, RT. OF WAY CHECKED

PROFILE: SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, B. M.'S NOTED, NO., STRUCTURE NOTATIONS CHKD., BY, DATE

PLATE 1 - PLAN-PROFILE O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E Co. No. 348-RC

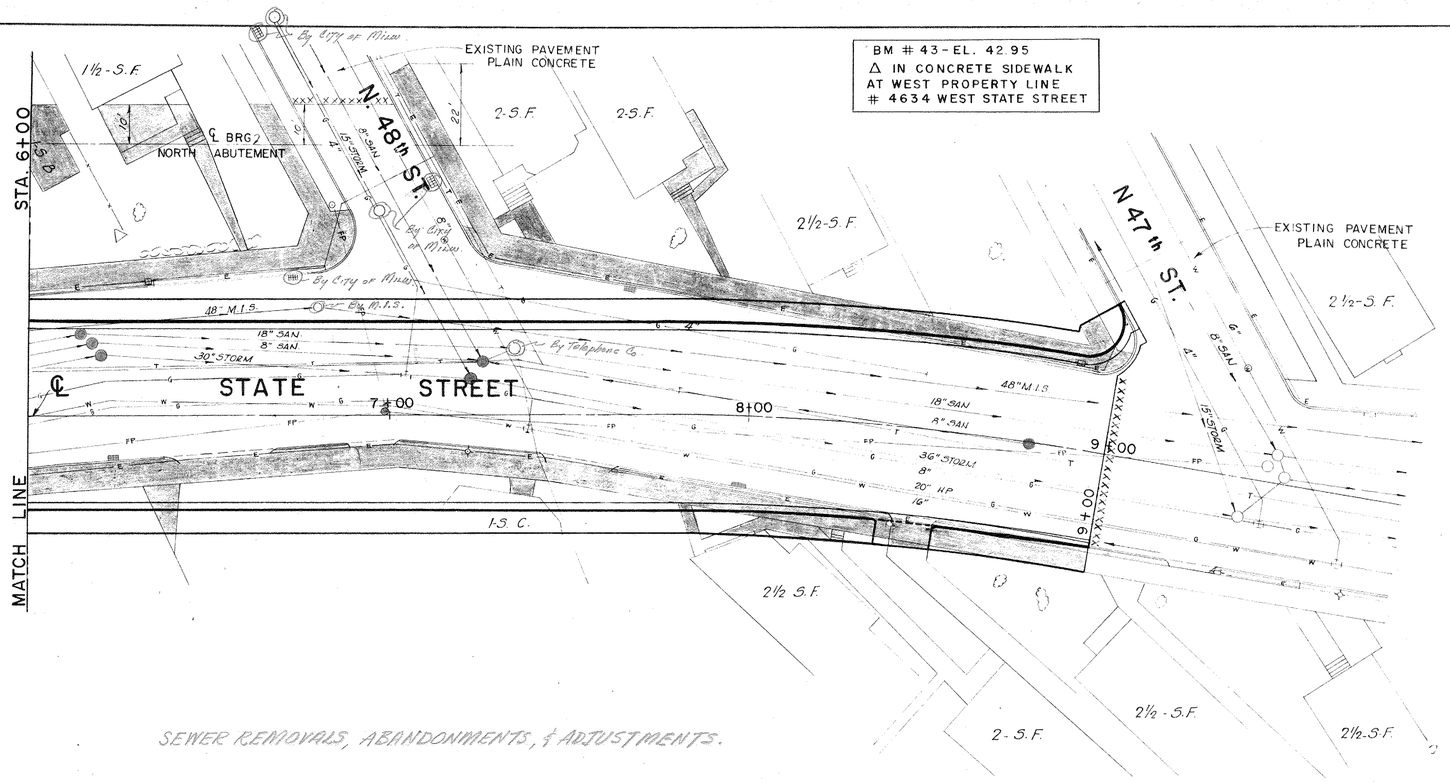
PLAN & PROFILE - STATE STREET
DE LEUW, CATHER & COMPANY R-12

(20)

NOTE:
REMOVE ALL CONCRETE IN AREA OF ABUTMENT PILING.

BM # 43 - EL. 42.95
Δ IN CONCRETE SIDEWALK
AT WEST PROPERTY LINE
4634 WEST STATE STREET

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1 (73)	13	65



SEWER REMOVALS, ABANDONMENTS, & ADJUSTMENTS.

ABANDONING INLETS
ADJUSTING MH COVERS

NOTE:
REMOVALS FOR 48" STORM SEWER CONSTRUCTION SHOWN ON SHEET R-7

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, PT. OF WAY CHECKED, NOTE BOOK, NO. — BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, BY, DATE, NOTE BOOK, NO., STRUCTURE NOTATIONS CH'KD.

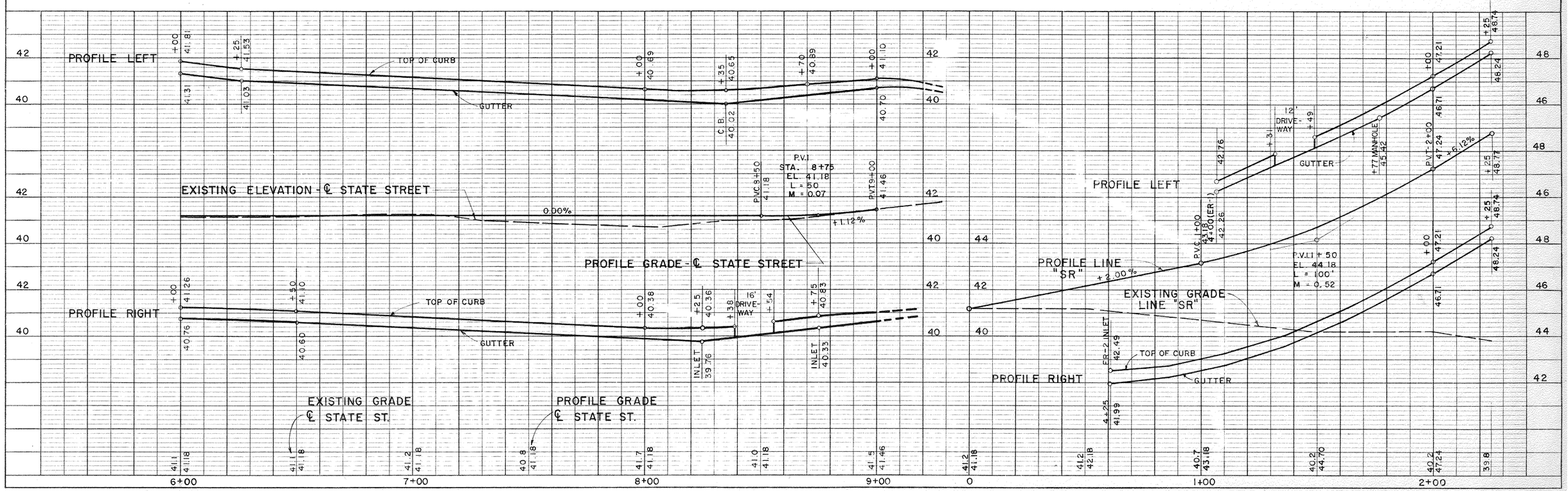
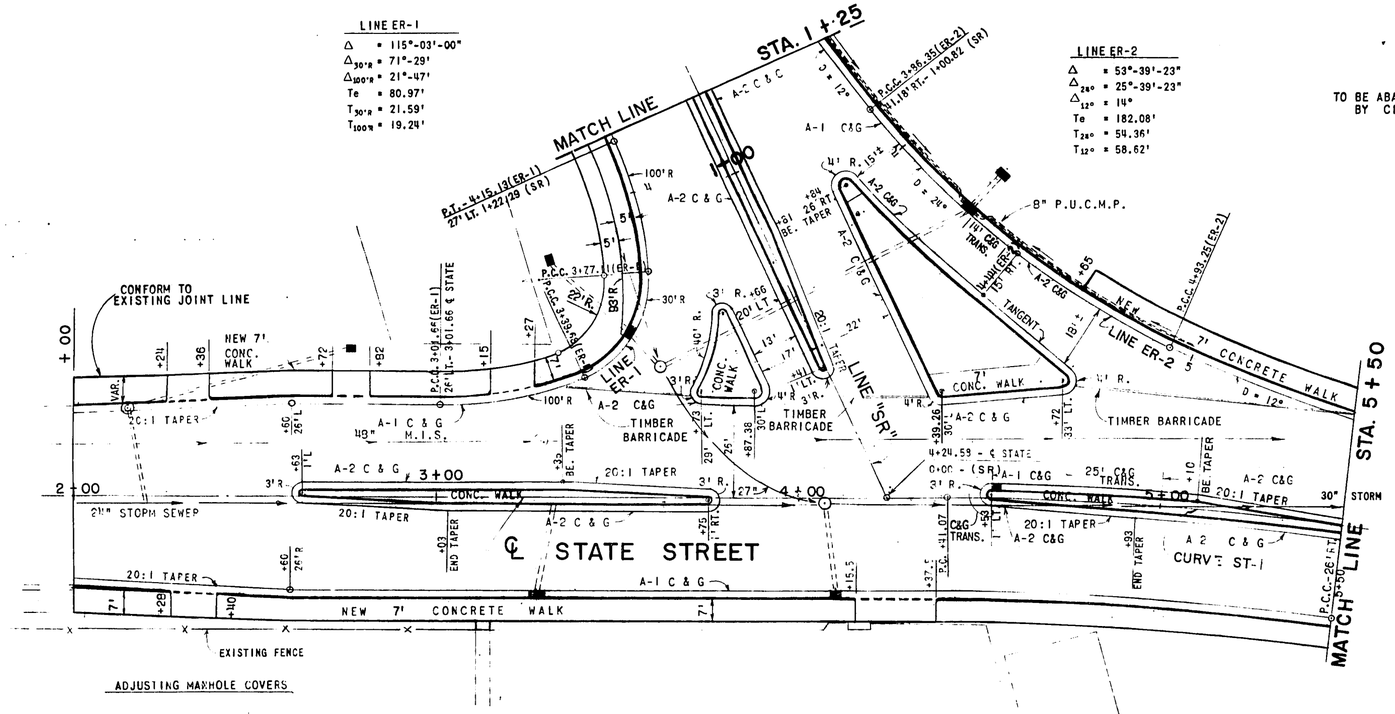


PLATE I PLAN-PROFILE C.P.R.& B.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E Co. No. 346-IC

PLAN & PROFILE - STATE STREET
DE LEUW, CATHER & COMPANY R-12

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U03-1(73)	14	65



ABANDONING INLETS

3+08 (ST)	24' RT
3+30 (ST)	25' LT
4+90 (ST)	26' LT
1+75 (SR)	9' LT
1+78 (SR)	38' LT
4+48 (ST)	24' RT

ABANDONING MANHOLES

3+69 (ST)	38' LT

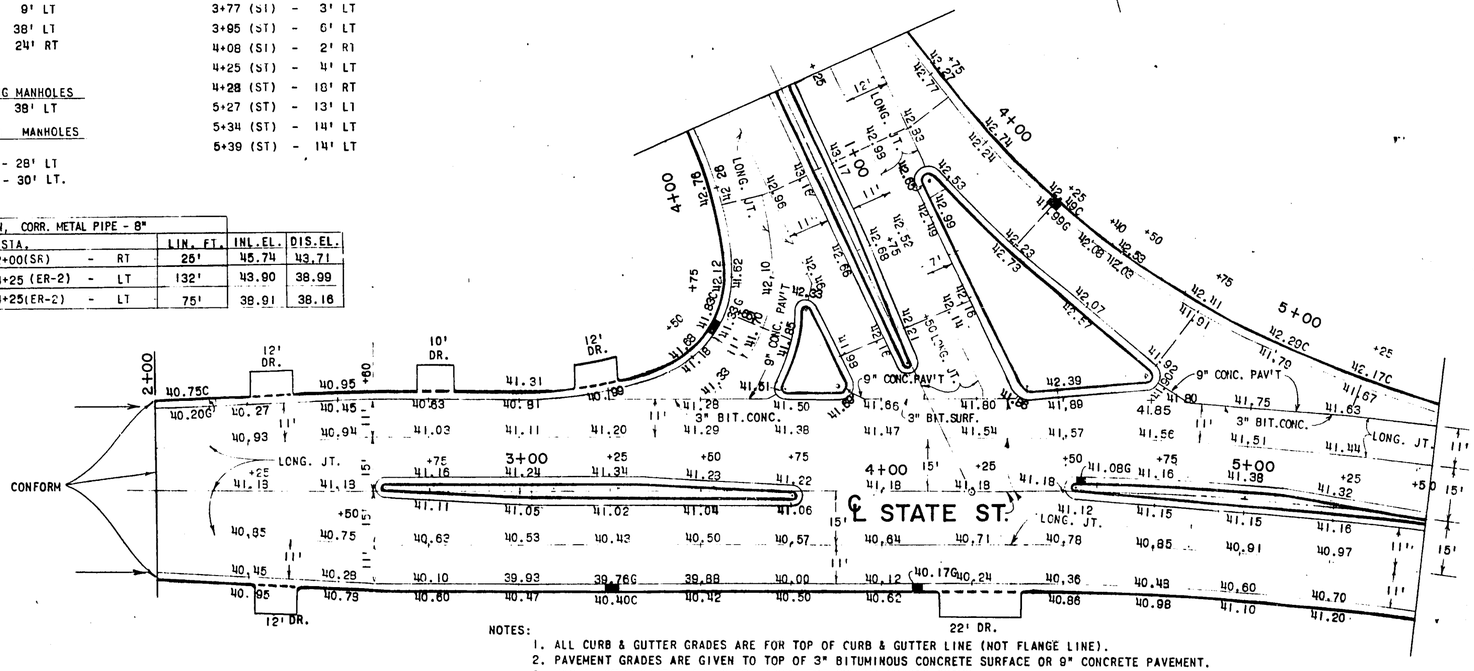
REMOVING MANHOLES

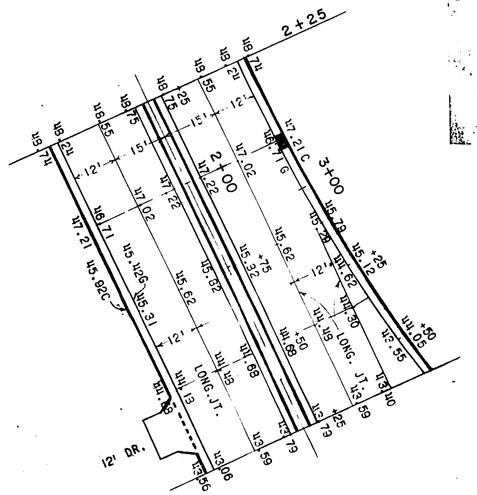
1+77 (SR)	28' LT
1+82 (SR)	30' LT.

ADJUSTING MANHOLE COVERS

3+62 (ST)	-	36' LT
3+30 (ST)	-	15' LT
3+77 (ST)	-	3' LT
3+95 (ST)	-	6' LT
4+08 (ST)	-	2' RT
4+25 (ST)	-	4' LT
4+28 (ST)	-	18' RT
5+27 (ST)	-	13' LT
5+34 (ST)	-	14' LT
5+39 (ST)	-	14' LT

PIPE UNDERDRAIN, CORR. METAL PIPE - 8"				
STA. TO STA.			LIN. FT.	INL.EL.	DIS.EL.
2+25(SR) - 2+00(SR)	-	RT	25'	45.74	43.71
1+95(SR) -4+25 (ER-2)	-	LT	132'	43.90	38.99
5+00(ER-2)-4+25(ER-2)	-	LT	75'	38.91	38.16





ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NOTES:
1. ALL CURB & GUTTER GRADES ARE FOR TOP OF CURB & GUTTER LINE (NOT FLANGE LINE).
2. PAVEMENT GRADES ARE GIVEN TO TOP OF 3" BITUMINOUS CONCRETE SURFACE OR 9" CONCRETE PAVEMENT.
3. MEDIAN CURB GRADES ARE 0.50' ABOVE THE GUTTER GRADES SHOWN.
4. ALL ℄'s SHOWN ARE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

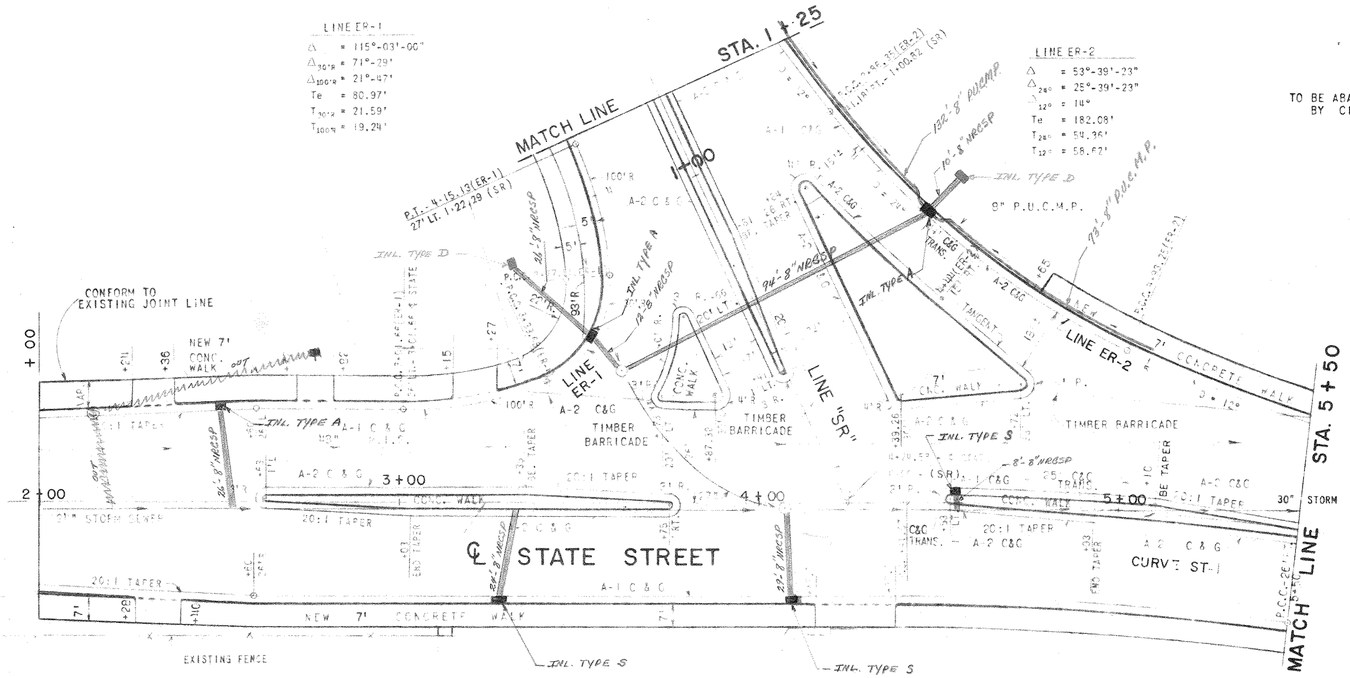
CONSTRUCTION & PAVING PLAN
WEST STATE STREET
STA. 2+00 TO STA. 5+50

DESIGNED G.A.H.
DRAWN C.J.S.
CHECKED P.W.
APPROVED H.O.J.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1" = 20'
SHEET NO. R-13

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1(73)	14	65



ABANDONING INLETS

3+08 (ST) 24' RT
3+30 (ST) 25' LT
4+90 (ST) 26' LT
~~1+75 (SR) 9' LT~~ } CITY OF MILW.
~~1+78 (SR) 38' LT~~ }
4+48 (ST) 24' RT
~~2+70 (ST) 28' Rt.~~
~~3+52 (ST) 47'~~
~~3+90 (ST) 28'~~

ABANDONING MANHOLES

~~3+60 (ST) 38' LT~~ CITY OF MILW.

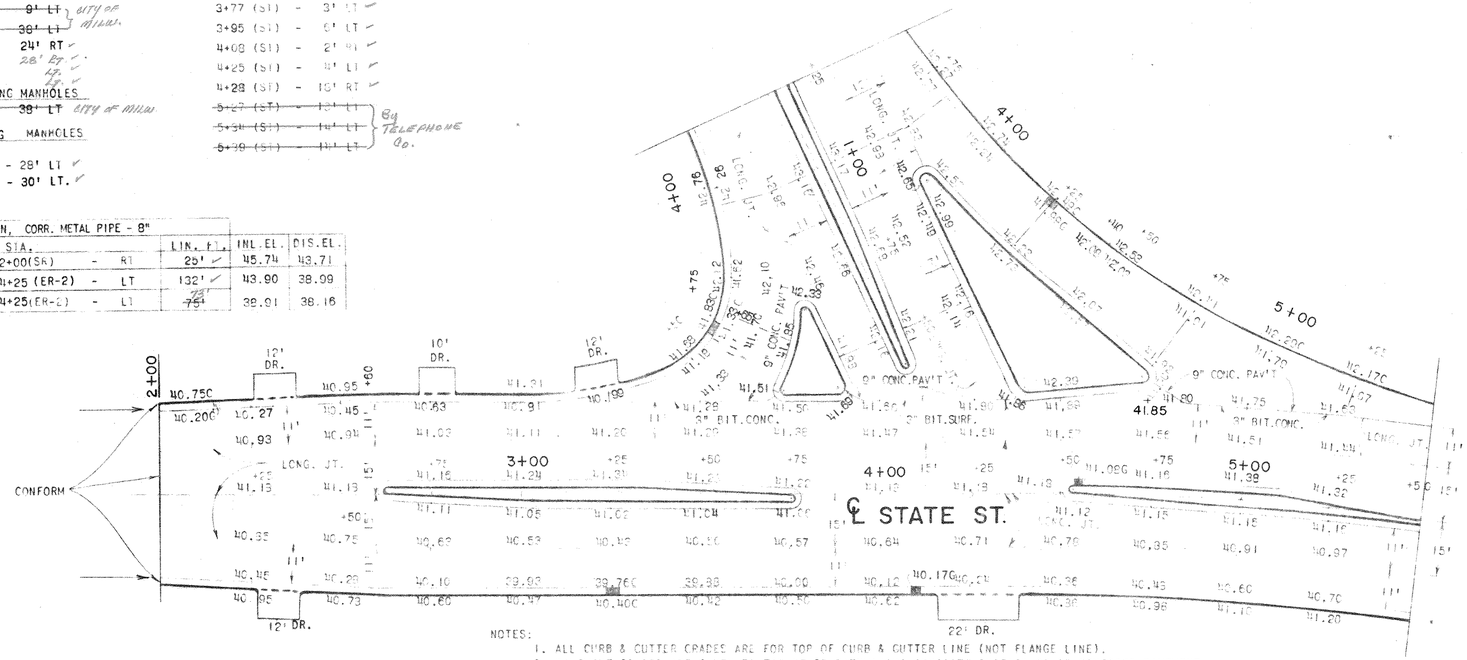
REMOVING MANHOLES

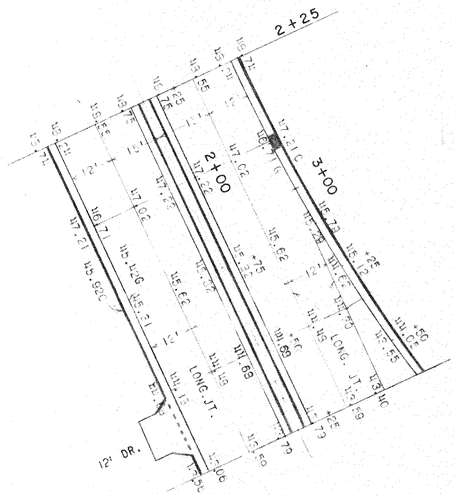
1+77 (SR) - 28' LT
1+62 (SR) - 30' LT.

ADJUSTING MANHOLE COVERS

3+62 (ST) - 36' LT
~~3+30 (ST) - 15' LT~~ By MIS
3+77 (ST) - 3' LT
3+95 (ST) - 6' LT
4+08 (ST) - 2' Rt
4+25 (ST) - 11' LT
4+28 (SR) - 15' RT
~~5+27 (ST) - 13' LT~~ } By TELEPHONE Co.
~~5+34 (ST) - 14' LT~~ }
~~5+39 (ST) - 11' LT~~ }

PIPE UNDERDRAIN, CORR. METAL PIPE - 8"				
STA. TO STA.		LIN. FT.	INL. EL.	DIS. EL.
2+25(SR) - 2+00(SR)	- RT	25'	45.74	43.71
1+95(SR) -4+25 (ER-2)	- LT	132'	43.90	38.99
5+00(ER-2)-4+25(ER-2)	- LT	~~75'~~ 73'	39.91	38.16





ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NOTES:
1. ALL CURB & GUTTER GRADES ARE FOR TOP OF CURB & GUTTER LINE (NOT FLANGE LINE).
2. PAVEMENT GRADES ARE GIVEN TO TOP OF 3" BITUMINOUS CONCRETE SURFACE OR 9" CONCRETE PAVEMENT.
3. MEDIAN CURB GRADES ARE 0.50' ABOVE THE GUTTER GRADES SHOWN.
4. ALL ℄'s SHOWN ARE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

CONSTRUCTION & PAVING PLAN
WEST STATE STREET
STA. 2+00 TO STA. 5+50

DESIGNED	G.A.H.
DRAWN	C.J.S.
CHECKED	P.W.
APPROVED	H.O.J.

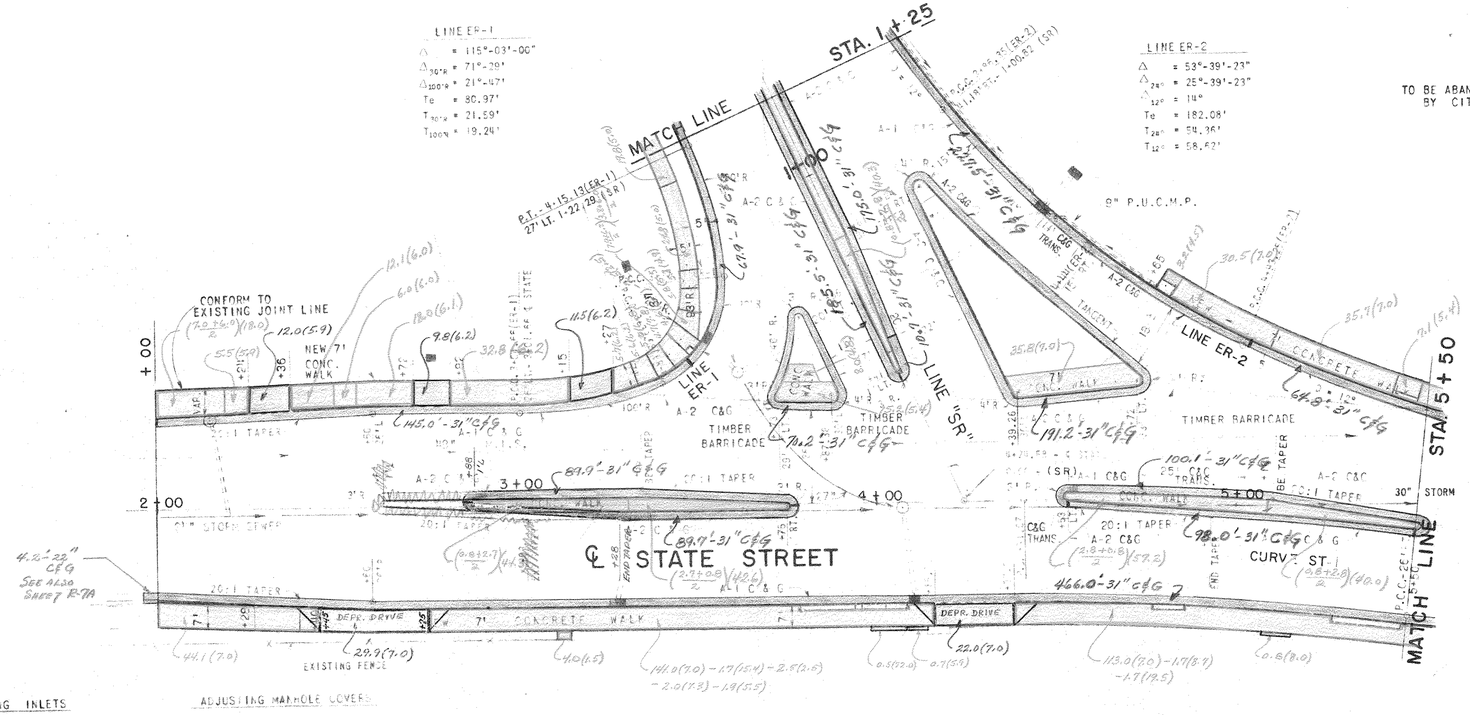
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

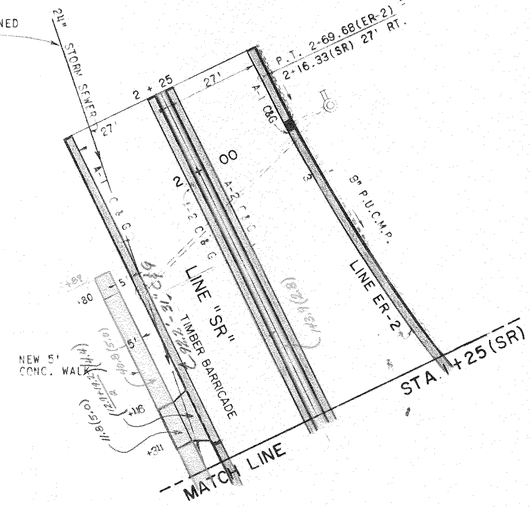
SCALE: 1" = 20'

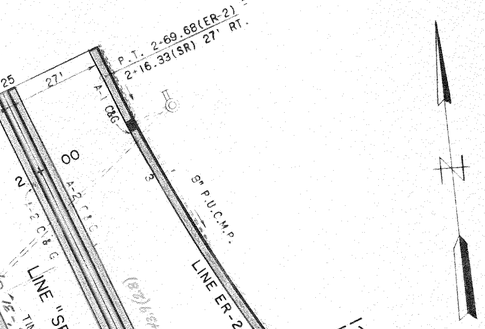
SHEET NO. R-13

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U03-1(73)	14	65

(21)







31" CONC. C&G
22" CONC. C&G
7" CONC. DRWYS.
5" CONC. SIDEWALK

ABANDONING INLETS

3+08	(ST)	24' RT
3+36	(ST)	25' LT
4+90	(ST)	26' LT
1+75	(SR)	9' LT
1+78	(SR)	38' LT
4+48	(ST)	24' RT

ABANDONING MANHOLES

3+69	(ST)	38' LT

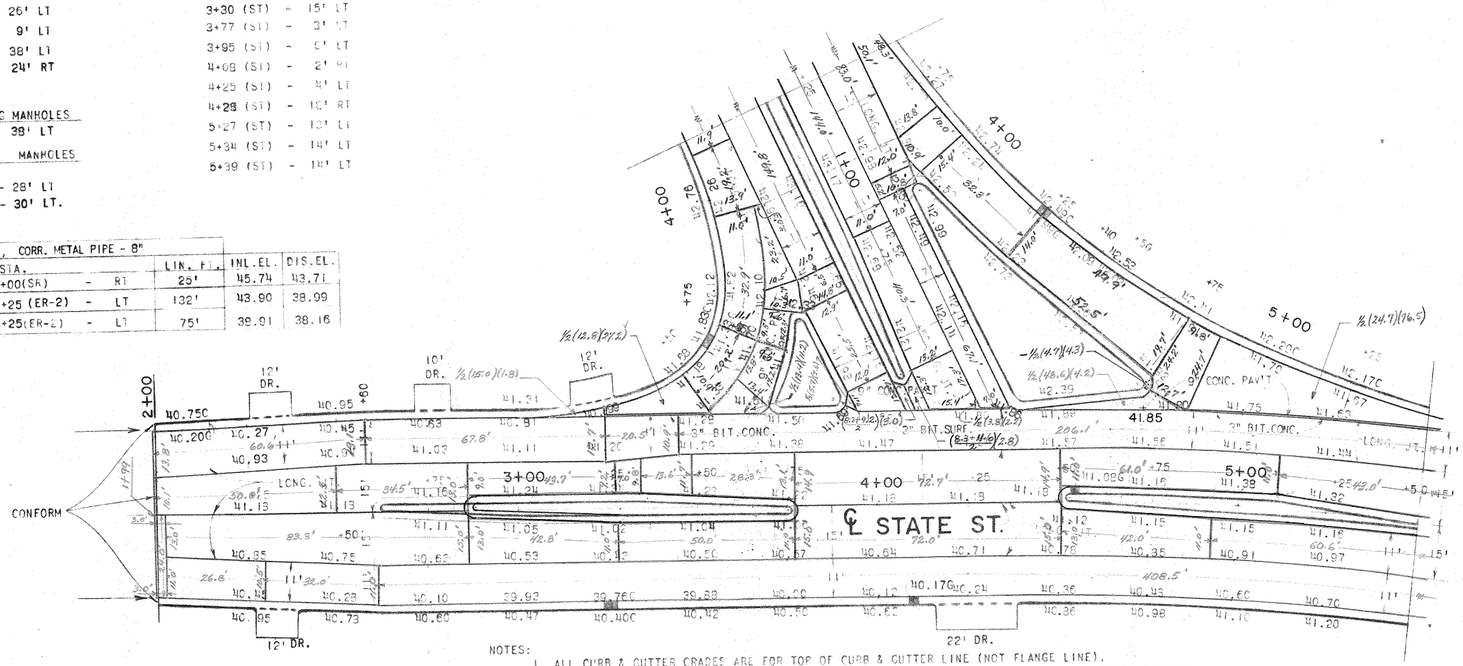
REMOVING MANHOLES

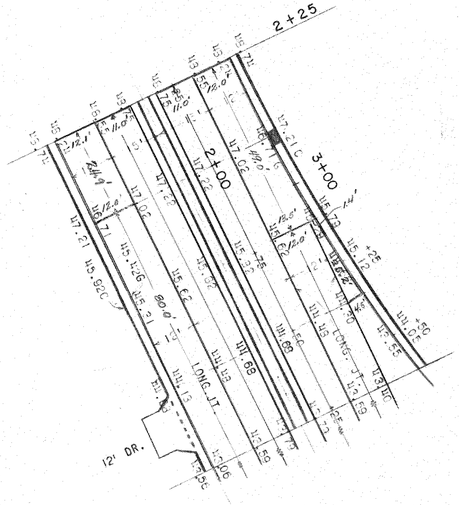
1+77 (SR) - 28' LT
1+62 (SR) - 30' LT.

ADJUSTING MANHOLE COVERS

3+62	(ST)	- 36' LT
3+30	(ST)	- 15' LT
3+77	(ST)	- 3' LT
3+95	(ST)	- 5' LT
4+08	(ST)	- 2' RT
4+25	(ST)	- 4' LT
4+28	(ST)	- 10' RT
5+27	(ST)	- 12' LT
5+34	(ST)	- 14' LT
5+39	(ST)	- 18' LT

PIPE UNDERDRAIN, CORR. METAL PIPE - 8" STA. TO STA.		LIN. FT.	INL. EL.	DIS. EL.
2+25(SR) - 2+00(SR)	- RT	25'	45.74	43.71
1+95(SR) -4+25 (ER-2)	- LT	132'	43.90	38.09
5+00(ER-2)-4+25(ER-2)	- LT	75'	39.91	38.16





ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

CONCRETE PAVEMENT, 9"
CONCRETE BASE COURSE

NOTES:
1. ALL CURB & GUTTER GRADES ARE FOR TOP OF CURB & GUTTER LINE (NOT FLANGE LINE).
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4. ALL ℄'s SHOWN ARE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

CONSTRUCTION & PAVING PLAN WEST STATE STREET STA. 2+00 TO STA. 5+50

DESIGNED G.A.H.
DRAWN C.J.S.
CHECKED P.W.
APPROVED H.O.J.

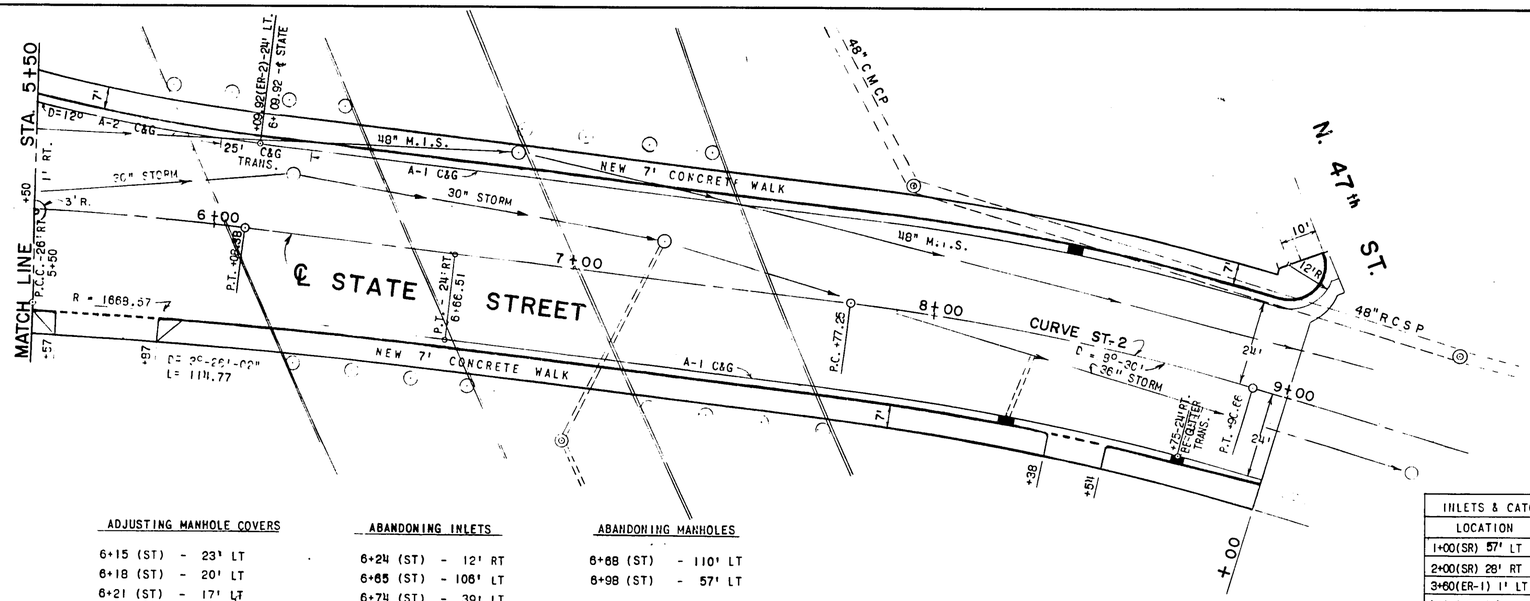
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1" = 20'

SHEET NO. R-13

(22)

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
WIS 4	WIS.	U03-1 (73)	15	65



ADJUSTING MANHOLE COVERS

6+15 (ST)	-	23' LT
6+18 (ST)	-	20' LT
6+21 (ST)	-	17' LT
6+81 (ST)	-	30' LT
7+23 (ST)	-	11' LT
7+26 (ST)	-	15' LT
7+38 (ST)	-	18' LT
8+78 (ST)	-	1' RT

ABANDONING INLETS

6+24 (ST)	-	12' RT
6+65 (ST)	-	106' LT
6+74 (ST)	-	39' LT
7+13 (ST)	-	64' LT
7+67 (ST)	-	36' LT
7+98 (ST)	-	20' RT

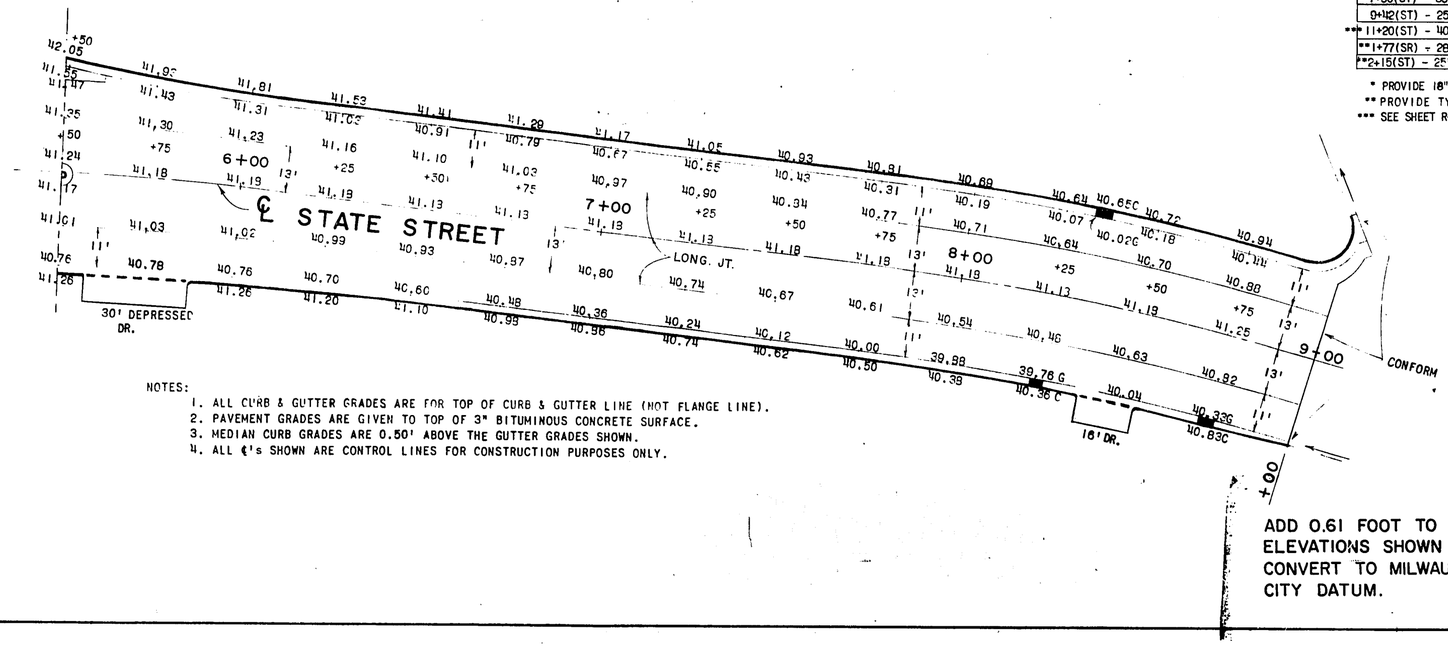
ABANDONING MANHOLES

6+68 (ST)	-	110' LT
8+98 (ST)	-	57' LT

INLETS & CATCH BASINS			STORM SEWER				
LOCATION	TYPE	GR. EL.	FROM - TO	TYPE	SIZE	LENGTH	INL.EL.	DIS.EL.
1+00(SR) 57' LT	D	39.6	INLET - 1+00(SR) 57' LT TO INLET - 3+60(ER-1) 1' LT	NRCSPSS	8"	26'	36.6	36.00
2+00(SR) 28' RT	S	46.71	INLET - 2+00(SR) 28' RT TO NEW M.H. 2+00(SR) 41' RT	NRCSPSS	8"	10'	43.76	43.35
3+60(ER-1) 1' LT	A	41.33	INLET - 3+60(ER-1) 1' LT TO EXIST. M.H. 0+60(SR)42'LT	NRCSPSS	8"	10'	35.75	35.25
4+25(ER-2)14' LT	D	41.68	INLET - 4+25(ER-2) 14' LT TO INLET - 4+25(ER-2) 1'LT	NRCSPSS	8"	12'	38.55	38.05
4+25(ER-2) 1' LT	A	41.99	INLET - 4+25(ER-2) 1' LT TO EXIST. M.H. 0+60(SR)42'LT	NRCSPSS	8"	94'	37.80	34.00
2+77(ST)41.6'LT	D	40.90	INLET - 2+77(ST) 41.6' LT TO NEW M.H. 2+15(ST)25' LT	NRCSPSS	8"	60'	37.90	35.50
3+25(ST) 27' RT	S	39.76	INLET - 3+25(ST) 27' RT. TO EXIST. 24" S.S.3+32(ST)2'RT	NRCSPSS	8"	23'	36.19	-
4+10(ST) 27' RT	S	40.17	INLET - 4+10(ST) 27' RT. TO EXIST.M.H.. 4+08(ST) 2' RT	NRCSPSS	8"	22'	36.80	-
4+51(ST) 3' LT	S	41.08	INLET - 4+51(ST) 3' LT TO EXIST. 30" S.S.4+56(ST) 2'RT	NRCSPSS	8"	4'	38.13	-
8+25(ST) 25' RT	S	39.76	INLET - 8+25(ST) 25' RT TO EXIST. 36" S.S.8+30(ST)6' RT	NRCSPSS	8"	18'	38.19	-
8+35(ST) 25' LT	S	40.02	INLET - 9+35(ST) 25' LT TO NEW 48" S.S. 9+35(ST) 20' LT	NRCSPSS	8"	3'	37.07	-
8+75(ST) 25' RT	S	40.33	INLET - 8+75(ST) 25' RT TO EXIST. 36" S.S. 9+78(ST)9'RT	NRCSPSS	8"	14'	36.76	-

MANHOLES				STORM SEWER					
LOCATION	TYPE	GR.EL.	DEPTH	FROM - TO	TYPE	SIZE	LENGTH	INL.EL.	DIS.EL.
*2+00(SR) - 41' RT	I-D	46.40	5.1'	M.H. - 2+00(SR) 41' RT TO NEW M.H.1+77(SR) 29' LT	NRCSPSS	18"	70'	41.25	38.55
7+03(ST) - 18' RT	1	41.00	7.0'	M.H. - 7+03(ST) 18' RT TO EXIST. M.H. 7+24(ST) 11' LT	NRCSPSS	12"	58'	34.00	32.80
				90+25(N) 52' RT TO NEW M.H. 7+90 (ST) 35' LT	CMCP	48"	300'	37.55	33.95
7+90(ST) - 35' LT	2(MOD)	41.0	7.1'	M.H. - 7+90(ST) 35' LT TO NEW M.H. 9+42(ST) 25' LT	RCSP	48"	152'	33.91	33.00
9+42(ST) - 25' LT	2(MOD)	41.1±	11.5'±	M.H. - 9+42(ST) 25' LT TO NEW M.H. 11+20(ST) 40' LT	RCSP	48"	175'	29.66	28.61
***11+20(ST) - 40' LT	2	-	16'±	M.H. -11+20(ST) 40' LT TO OUTFALL 12+07(ST) 41'± RT	RCSP	48"	97'	28.56	28.00
**1+77(SR) - 28' LT	1	45.42	11.5'±						
**2+15(ST) - 25' LT	1	40.20	7.2'±	M.H. -2+15(ST) 25' LT TO EXIST. 24" S.S. 2+20(ST)2'RT	NRCSPSS	8"	25'	33.0	-

* PROVIDE 18" NRCSPSS STUB(DISCH.EL.41.35)
** PROVIDE TYPE "A" INLET FRAME & GRATE.
*** SEE SHEET R-7



NOTES:
1. ALL CURB & GUTTER GRADES ARE FOR TOP OF CURB & GUTTER LINE (NOT FLANGE LINE).
2. PAVEMENT GRADES ARE GIVEN TO TOP OF 3" BITUMINOUS CONCRETE SURFACE.
3. MEDIAN CURB GRADES ARE 0.50' ABOVE THE GUTTER GRADES SHOWN.
4. ALL ℄'s SHOWN ARE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
CONSTRUCTION & PAVING PLAN
WEST STATE STREET
STA. 5+50 TO STA. 9+00

DESIGNED	G.A.H.
DRAWN	A.P.
CHECKED	P.W.
APPROVED	H.O.J.

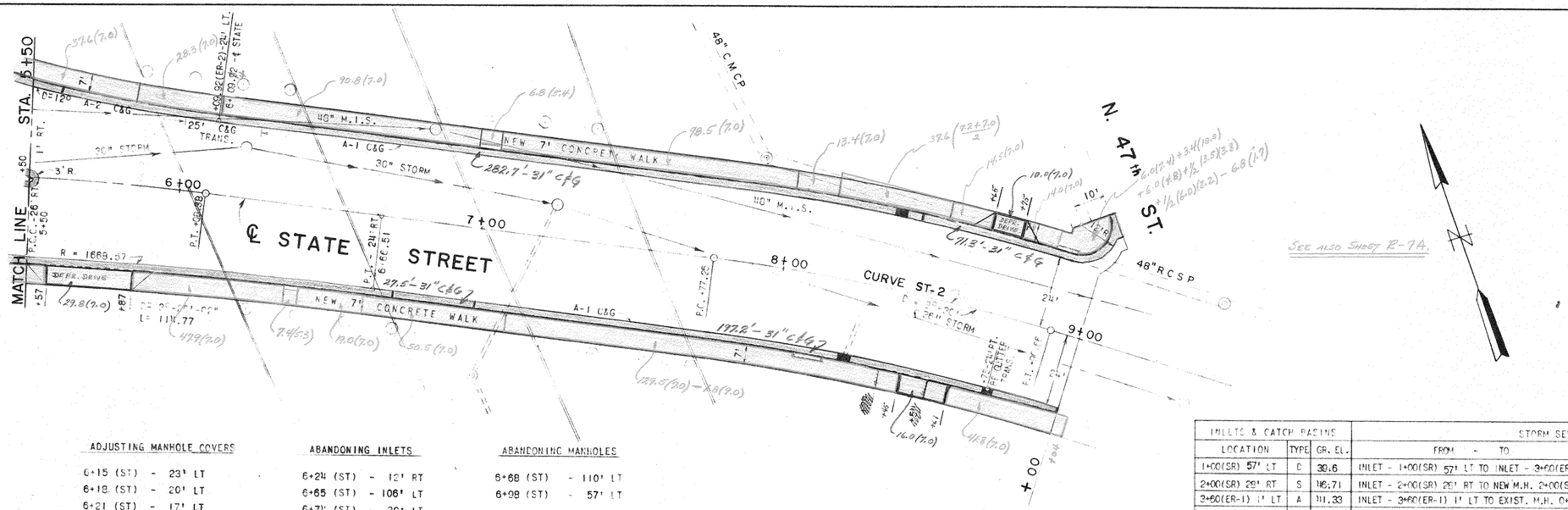
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1" = 20'

SHEET NO. R-14

(22)

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
WIS 4	WIS.	U03-1 (73)	15	65



ADJUSTING MANHOLE COVERS

6+15 (ST)	-	23' LT
6+18 (ST)	-	20' LT
6+21 (ST)	-	17' LT
6+81 (ST)	-	30' LT
7+20 (ST)	-	11' LT
7+29 (ST)	-	15' LT
7+36 (ST)	-	18' LT
8+78 (ST)	-	1' RT

ABANDONING INLETS

6+24 (ST)	-	12' RT
6+65 (ST)	-	106' LT
6+74 (ST)	-	39' LT
7+13 (ST)	-	64' LT
7+67 (ST)	-	36' LT
7+90 (ST)	-	20' RT

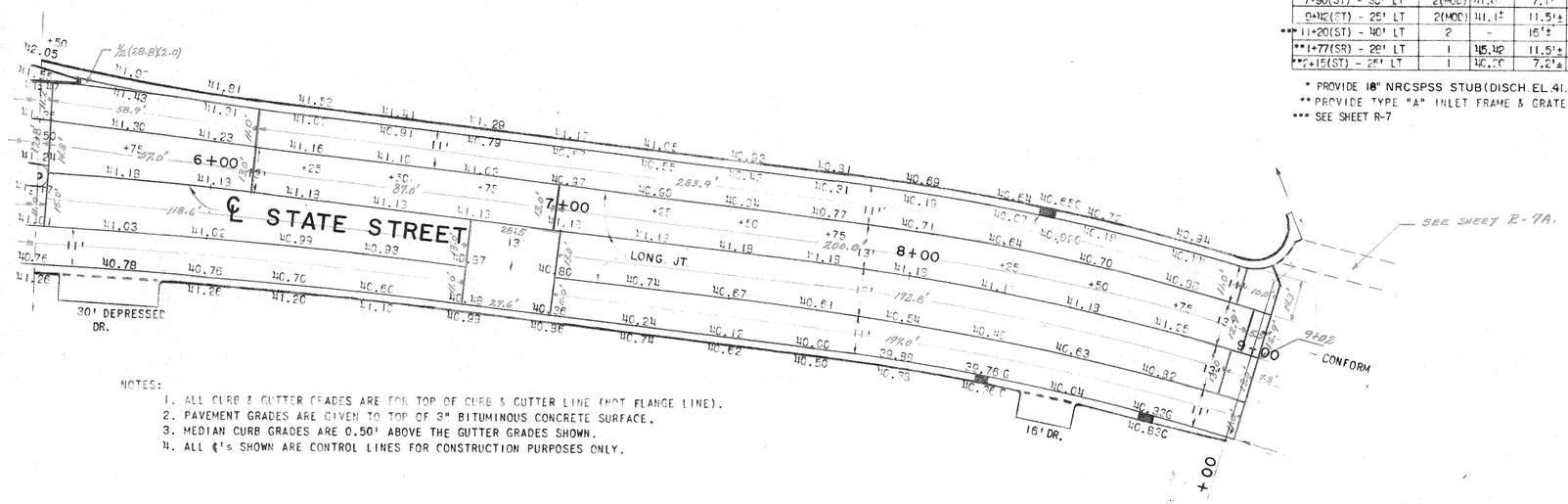
ABANDONING MANHOLES

6+68 (ST)	-	110' LT
6+98 (ST)	-	57' LT

INLETS & CATCH BASINS			STORM SEWER					
LOCATION	TYPE	GR. EL.	FROM - TO	TYPE	SIZE	LENGTH	INL.EL.	DIS.EL.
1+00(SR) 57' LT	D	39.6	INLET - 1+00(SR) 57' LT TO INLET - 3+60(ER-1) 1' LT	NRCSPSS	8"	26'	36.6	36.00
2+00(SR) 28' RT	S	46.71	INLET - 2+00(SR) 28' RT TO NEW M.H. 2+00(SR) 41' RT	NRCSPSS	8"	10'	42.76	42.35
3+60(ER-1) 1' LT	A	41.33	INLET - 3+60(ER-1) 1' LT TO EXIST. M.H. 0+60(SR)42' LT	NRCSPSS	8"	10'	35.75	35.25
4+25(ER-2) 14' LT	D	41.68	INLET - 4+25(ER-2) 14' LT TO INLET - 4+25(ER-2) 1' LT	NRCSPSS	8"	12'	38.55	38.05
4+25(ER-2) 1' LT	A	41.99	INLET - 4+25(ER-2) 1' LT TO EXIST. M.H. 0+60(SR)42' LT	NRCSPSS	8"	94'	37.80	34.00
2+77(ST)41.6' LT	D	40.90	INLET - 2+77(ST) 41.6' LT TO NEW M.H. 2+15(ST)25' LT	NRCSPSS	8"	60'	37.90	35.50
3+25(ST) 27' RT	S	39.76	INLET - 3+25(ST) 27' RT. TO EXIST. 24" S.S.3+32(ST)2'RT	NRCSPSS	-	23'	36.19	-
4+10(ST) 27' RT	S	40.17	INLET - 4+10(ST) 27' RT. TO EXIST.M.H. 4+09(ST) 2' RT	NRCSPSS	8"	22'	36.60	-
4+54(ST) 3' LT	S	41.08	INLET - 4+54(ST) 3' LT TO EXIST. 30" S.S.4+56(ST) 2'RT	NRCSPSS	8"	14'	38.13	-
8+25(ST) 25' RT	S	39.76	INLET - 8+25(ST) 25' RT TO EXIST. 36" S.S.8+30(ST)6' RT	NRCSPSS	8"	18'	36.19	-
8+35(ST) 25' LT	S	40.02	INLET - 8+35(ST) 25' LT TO NEW 48" S.S. 8+35(ST) 25' LT	NRCSPSS	8"	3'	37.07	-
8+75(ST) 25' RT	S	40.33	INLET - 8+75(ST) 25' RT TO EXIST. 36" S.S. 8+79(ST)19'RT	NRCSPSS	8"	14'	36.76	-

MANHOLES				STORM SEWER					
LOCATION	TYPE	GR.EL.	DEPTH	FROM - TO	TYPE	SIZE	LENGTH	INL.EL.	DIS.EL.
*2+00(SR) - 41' RT	1-D	45.40	5.1'	M.H. - 2+00(SR) 41' RT TO NEW M.H.1+77(SR) 29' LT	NRCSPSS	18"	70'	41.25	38.55
7+03(ST) - 48' RT	1	41.00	7.0'	M.H. - 7+03(ST) 48' RT TO EXIST. M.H. 7+24(ST) 11' LT	NRCSPSS	12"	52'	34.00	32.80
				00+25(N) 52' RT TO NEW M.H. 7+90 (ST) 35' LT	CMCP	48"	300'	37.55	33.95
7+90(ST) - 35' LT	2(MOD)	41.0	7.1'	M.H. - 7+90(ST) 35' LT TO NEW M.H. 9+42(ST)25' LT	RCSP	42"	152'	33.91	33.00
9+42(ST) - 25' LT	2(MOD)	41.1±	11.5'±	M.H. - 9+42(ST) 25' LT TO NEW M.H. 11+20(ST) 40' LT	RCSP	18"	175'	29.66	28.61
***11+20(ST) - 40' LT	2	-	16'±	M.H. -11+20(ST) 40' LT TO OUTFALL 12+07(ST) 41'± RT	RCSP	18"	97'	28.56	28.00
**1+77(SR) - 29' LT	1	45.42	11.5'±						
**2+15(ST) - 25' LT	1	40.20	7.2'±	M.H. -2+15(ST) 25' LT TO EXIST. 24" S.S. 2+20(ST)2'RT	NRCSPSS	8"	25'	33.0	-

* PROVIDE 18" NRCSPSS STUB (DISCH. EL. 41.35)
** PROVIDE TYPE "A" INLET FRAME & GRATE.
*** SEE SHEET R-7



NOTES:
1. ALL CURB & GUTTER GRADES ARE FOR TOP OF CURB & GUTTER LINE (NOT FLANGE LINE).
2. PAVEMENT GRADES ARE GIVEN TO TOP OF 3" BITUMINOUS CONCRETE SURFACE.
3. MEDIAN CURB GRADES ARE 0.50' ABOVE THE GUTTER GRADES SHOWN.
4. ALL ℄'s SHOWN ARE CONTROL LINES FOR CONSTRUCTION PURPOSES ONLY.

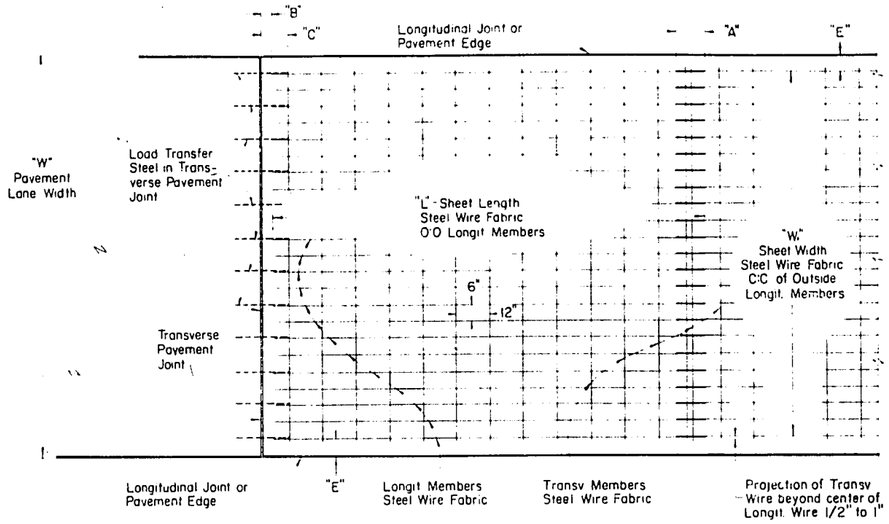
ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
CONSTRUCTION & PAVING PLAN
WEST STATE STREET
STA. 5+50 TO STA. 9+00

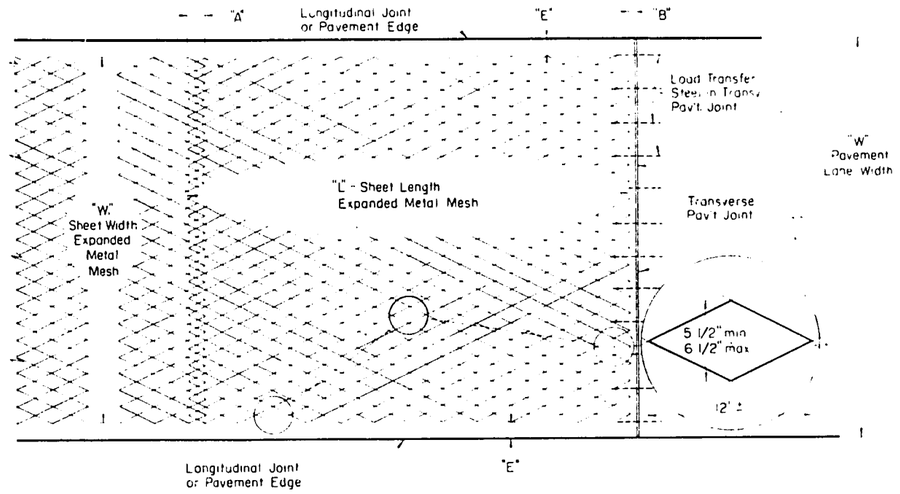
DESIGNED	G.A.H.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: 1" = 20'
DRAWN	A.P.		
CHECKED	P.W.		
APPROVED	H.O.J.		SHEET NO. R-14



WELDED STEEL WIRE FABRIC

FOR CONCRETE PAVEMENT REINFORCEMENT

(Alternate)



EXPANDED METAL MESH

FOR CONCRETE PAVEMENT REINFORCEMENT

(Alternate)

TABLE OF DIMENSIONS, QUANTITIES & INFORMATION

		100 FT SPACING TRANSVERSE PAVEMENT JOINTS		50 FT SPACING TRANSVERSE PAVEMENT JOINTS	
"W"	Pavement Lane Widths	12'	11'	12'	11'
"L"	Sheet Length of Reinforcement Steel	7 at 15'-0" 8 at 13'-0"		3 1/2 at 15'-0" 4 at 13'-0"	
"W"	Sheet Width of Reinforcement Steel	11'	10'	11'	10'
"A"	Length of Lap (Longitudinal) Reinforcement Steel Sheets	15' Sheets – 11" * 13' Sheets – 8" *		12" * 10" *	
"B"	Distance From Transverse Joint to end of Reinforcement Steel	3 1/2"		3 1/2"	
"C"	Distance from Transverse Joint to end Transv Member (Steel Wire Fabric)	Approx 9 1/2"		Approx 9 1/2"	
"D"	Distance (Depth) Pavement Surface to center of Reinforcement	"T" = 8" – 2" ; 9" – 2 1/2" ; 10" – 2 1/2"		2" ; 2 1/2" ; 2 1/2"	
"E"	Distance-Pavement edge to Reinforcement Steel edge	6"		6"	
	Minimum Transverse Lap Reinf Steel Sheets	6"		6"	
Approximate Sheet Weights	Steel Wire Fabric ——	15' X 11' = 115 #, 15'X10'=105 #, 13'X 11' = 100 #, 13'X10'=91 #			
	Expanded Metal Mesh ——	" =126 #, " =115 #, " = 110 #, " =100 #			

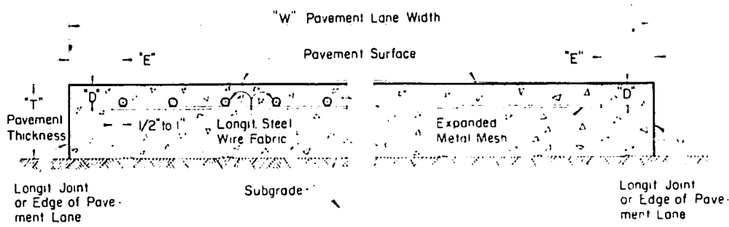
* Approximate Dimensions

WELDED STEEL WIRE FABRIC DATA

Manufacturer's No 612-04
Approx Weight per 100 Sq Ft = 69.0 lbs.
Longitudinal Steel - Gage No 0 = 0.3065" D at 6" C:C
Transverse Steel-Gage No 4 = 0.2253" D at 12" C:C.
Min lap of longitudinal steel 24 diam unless otherwise specifically shown
Max distance from end of longit steel to end transverse member 7"
Welded Steel Wire Fabric shall conform to the requirements of the "Standard Specifications for Welded Steel Wire Fabric for Concrete Reinforcement" A.A.S.H.O Designation M55

EXPANDED METAL MESH DATA

Weight per 100 Sq Ft = 76.0 lbs min
Expanded Metal Mesh shall be manufactured from open hearth steel, having a phosphorus content of not more than 0.05 percent, and a yield point of not less than 55,000 p.s.i. The steel shall be sufficiently ductile to permit any strand to be bent through an angle of 180 degrees over one diam without fracture
The diamond shaped mesh shall be fabricated by a cold drawn process which will cut and draw the steel forming uniform dimensioned strands conforming to shape and weight as shown elsewhere hereon



CROSS SECTION SHOWING POSITION OF REINF STEEL IN CONCRETE PAVEMENT

GENERAL NOTES -

Details of Construction and Materials not shown hereon shall conform to the pertinent requirements of the Standard Specifications, Section 2301 and the applicable Special Provisions.

SHIPPING REQUIREMENTS -

All Reinforcement Steel for Concrete Pavements shall be shipped from supply source and delivered to site of project in flat sheets

PAVEMENT JOINT SPACING VARIATIONS -

If longitudinal or transverse pavement joint spacings other than shown hereon become necessary where concrete pavement reinforcement is required, the reinforcement steel sheets shall be cut and placed so as to maintain all pertinent horizontal and vertical dimensions as shown in TABLE OF DIMENSIONS, QUANTITIES & INFORMATION

MEASUREMENT & PAYMENT -

All reinforcement steel shall be measured and paid for at the contract unit price per Square Yard for "Concrete Pavement Reinforcement" and in accordance with the Standard Specifications Sections 2301.07(c) and 2301.08 (c).

BID ITEM
NO. 2301-11 Concrete Pavement Reinforcement Sq Yds

CONCRETE PAVEMENT REINFORCEMENT

STATE HIGHWAY COMMISSION OF WISCONSIN

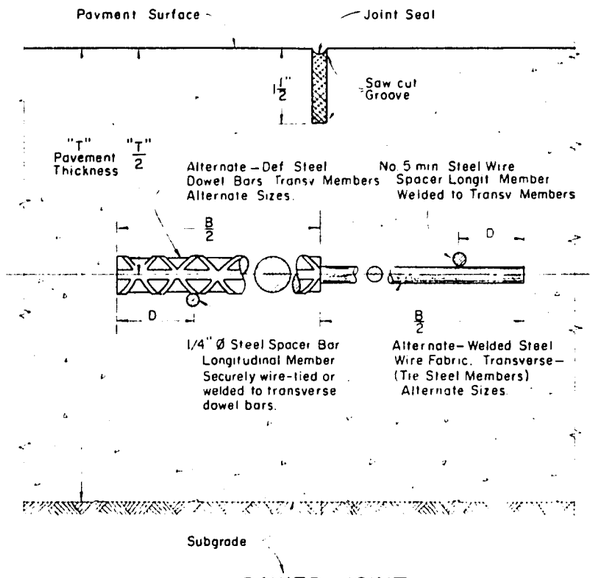
RECOMMENDED FOR APPROVAL

5/16/57 DATE — J. J. Pfaff ENGINEER OF DESIGN

APPROVED:

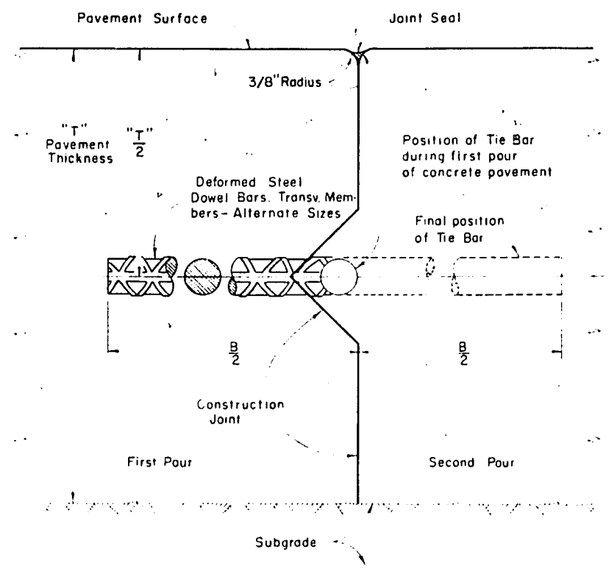
5/16/57 DATE — E. L. Roettiger STATE HIGHWAY ENGINEER

PLATE NO. 2-11.7



SAWED JOINT

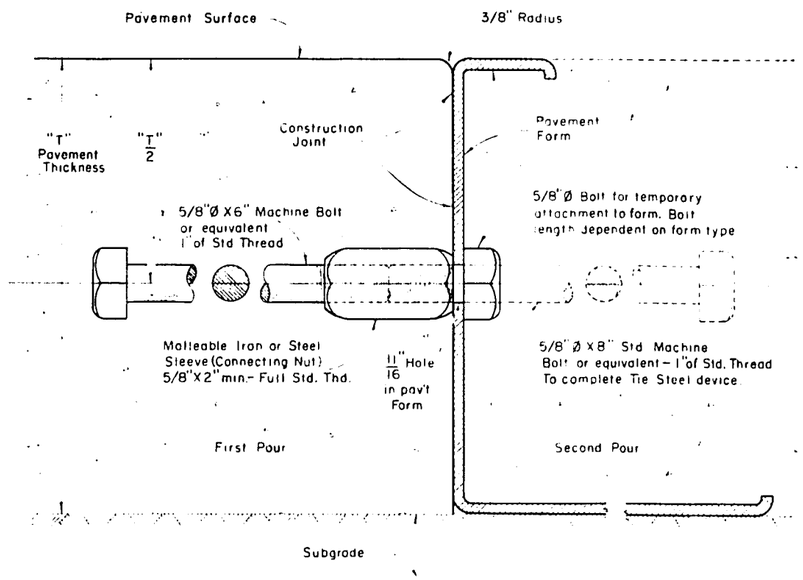
SHOWING BAR STEEL DOWELS AND WELDED STEEL WIRE FABRIC – ALTERNATES FOR SAWED JOINT TIE STEEL



CONSTRUCTION JOINT (ALTERNATE)

SHOWING BAR STEEL FOR CONSTRUCTION JOINT TIE STEEL

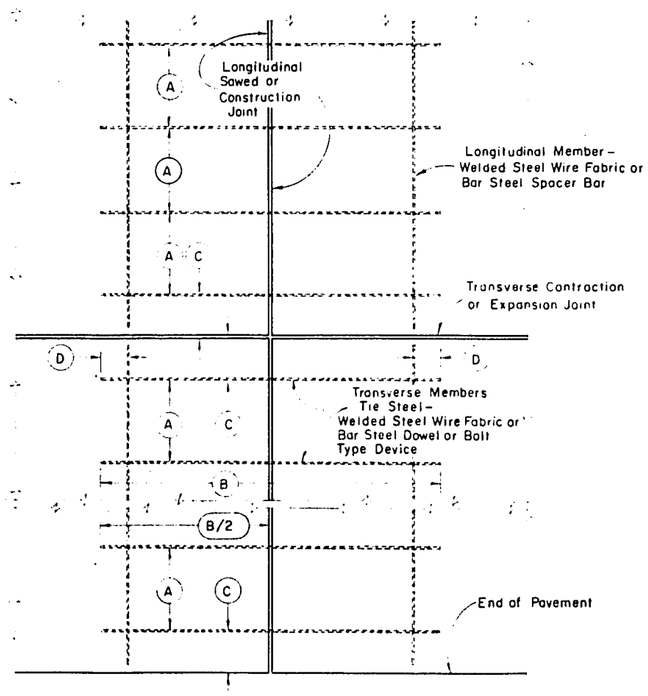
(TIE BAR TYPE)



CONSTRUCTION JOINT (ALTERNATE)

SHOWING BOLT TYPE DEVICE FOR CONSTRUCTION JOINT TIE STEEL.

(BOLT TYPE)



LOCATION & IDENTIFICATION DIAGRAM FOR LONGITUDINAL JOINTS

TIE STEEL

SKETCH & DIAGRAM SYMBOL	SAWED JOINTS					CONSTRUCTION JOINTS			
	WELDED STEEL WIRE FABRIC		BAR STEEL TIE BARS			BAR STEEL TIE BARS			BOLT TYPE DEVICE
	Steel Wire Gage		Manufacturer's Number			Manufacturer's Number			Bolt Size
	2 .2625" Ø	4 .2253" Ø	3 3/8" Ø	4 1/2" Ø	5 5/8" Ø	3 3/8" Ø	4 1/2" Ø	5 5/8" Ø	5/8" Ø
(A)	10"	6"	20"	36"	48"	20"	36"	48"	48"
(B)	24"	24"	24"	24"	24"	24"	24"	30"	See Above Drawing
(C)	12"	12"	12"	12"	12"	12"	12"	12"	12"
(D)	2"±	2"±	3"±	3"±	3"±	3"±	3"±	3"±	3"±

TABLE SHOWING SIZES & DIMENSIONS FOR LONGITUDINAL JOINTS

TIE STEEL — ALTERNATES

GENERAL NOTES

Details of Construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications Section 2301 and the applicable Special Provisions.

SAWED JOINTS

Sawed Joints shall be constructed not later than Seven (7) days after the concrete has been placed. Water shall be continuously sprayed on the saw blades during sawing operations.

CONSTRUCTION JOINTS

Tie Bar Type joint installations, parting strip of deformed metal plate, fiber board or other device shall be used to form tie bar recess, subject to the Engineers approval. Alternate designs of Bolt Type joint installations other than shown hereon may be used upon written approval of the Engineer.

LONGITUDINAL STEEL

In no case shall Longitudinal Tie Steel extend through Transverse Expansion or Contraction Joints. Ends of Longitudinal members of contiguous sections or mats need not be lapped.

SEALING JOINTS

Sawed and Construction Joints shall be sealed. Sealing of joints shall be done in a manner to preclude over filling and flow of sealing material onto the pavement surface.

LONGITUDINAL JOINTS CONCRETE PAVEMENT

STATE HIGHWAY COMMISSION OF WISCONSIN

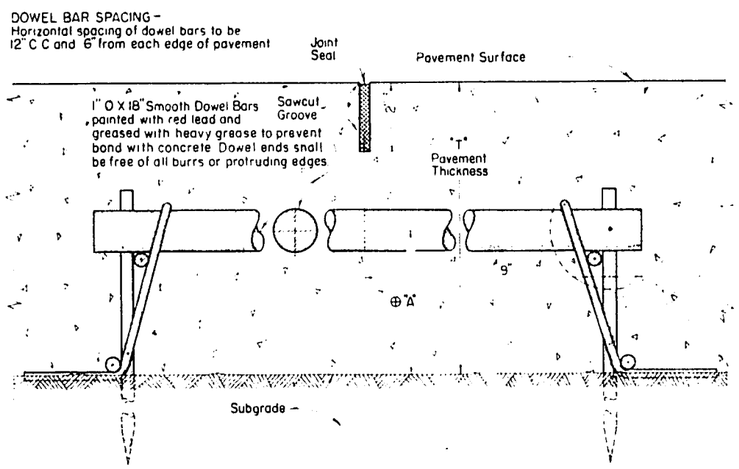
RECOMMENDED FOR APPROVAL

DATE 1/19/56 — G. J. Pelt, ENGINEER OF DESIGN

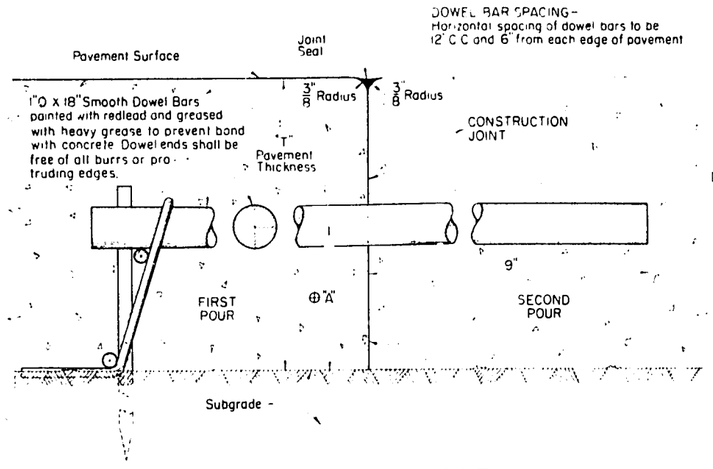
APPROVED

DATE 1/19/56 — E. C. Rucktaeschel, STATE HIGHWAY ENGINEER

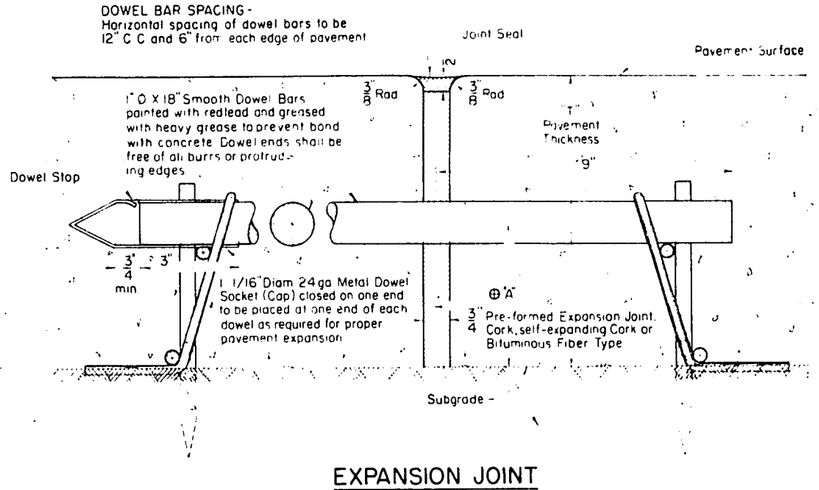
PLATE NO. 4-4.4.1



CONTRACTION JOINT



CONSTRUCTION JOINT



EXPANSION JOINT

⊕ NOTE -

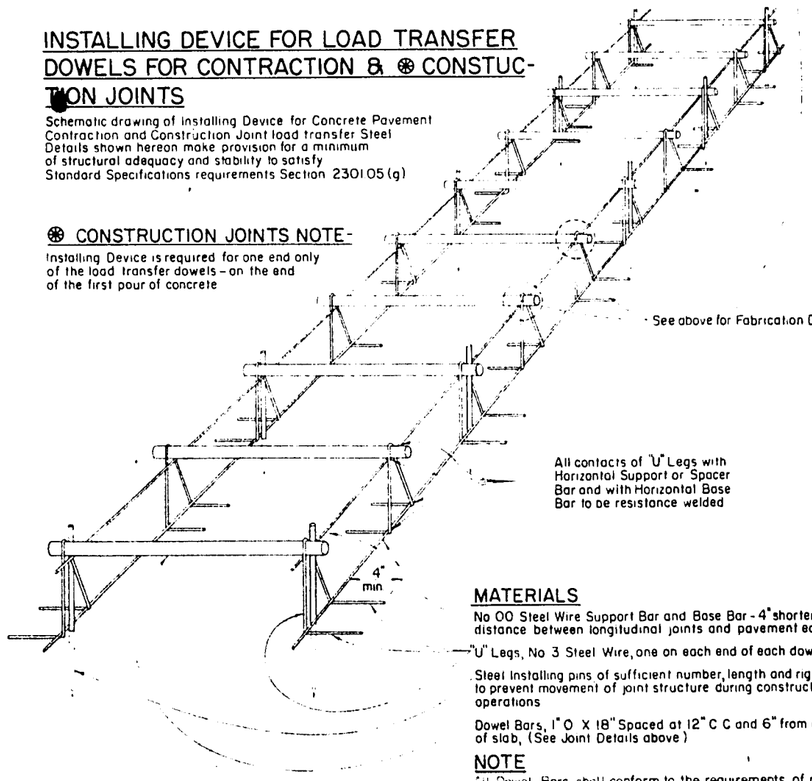
Dimension "A" may vary to permit use of same dowel bar supports for 8" and 9" thick pavements, and for 9" and 10" thick pavements as follows:
When "T" = 8", "A" = T/2 = 4" normal, permissible alternate 4 1/4"
When "T" = 9", "A" = T/2 = 4 1/2" normal, permissible alternate 4 1/4" or 4 3/4"
When "T" = 10", "A" = T/2 = 5" normal, permissible alternate 4 3/4"

INSTALLING DEVICE FOR LOAD TRANSFER DOWELS FOR CONTRACTION & ⊛ CONSTUCTION JOINTS

Schematic drawing of installing Device for Concrete Pavement Contraction and Construction Joint load transfer Steel Details shown hereon make provision for a minimum of structural adequacy and stability to satisfy Standard Specifications requirements Section 2301.05 (g)

⊛ CONSTRUCTION JOINTS NOTE -

Installing Device is required for one end only of the load transfer dowels - on the end of the first pour of concrete



MATERIALS

No 00 Steel Wire Support Bar and Base Bar - 4" shorter than distance between longitudinal joints and pavement edge

"U" Legs, No 3 Steel Wire, one on each end of each dowel bar.

Steel installing pins of sufficient number, length and rigidity to prevent movement of joint structure during construction operations

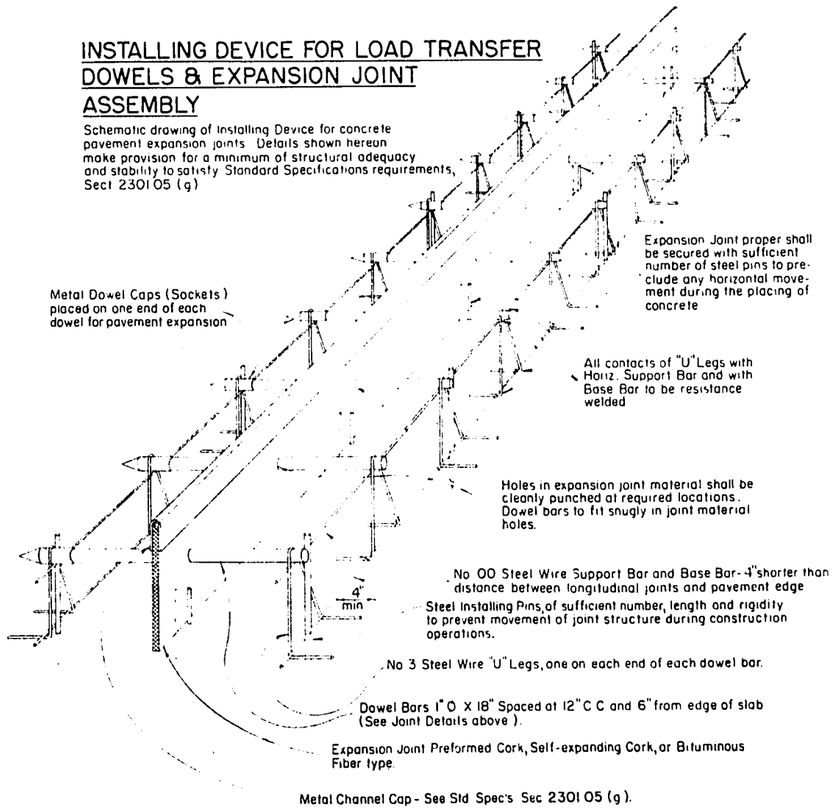
Dowel Bars, 1" O X 18" Spaced at 12" C C and 6" from edge of slab, (See Joint Details above)

NOTE

All Dowel Bars shall conform to the requirements of reinforcement steel Standard Specifications Sec. 3121

INSTALLING DEVICE FOR LOAD TRANSFER DOWELS & EXPANSION JOINT ASSEMBLY

Schematic drawing of installing Device for concrete pavement expansion joints. Details shown hereon make provision for a minimum of structural adequacy and stability to satisfy Standard Specifications requirements, Sect 2301.05 (g)



GENERAL NOTES -

Details of construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications Section 2301 and the applicable Special Provisions

ALTERNATE DESIGNS -

Alternate designs or methods for installing load transfer dowels for Contraction, Construction and Expansion Joints and appurtenances other than shown hereon may be used upon written approval of the Engineer

CONTRACTION JOINTS -

Contraction Joints, rural type pavements maximum joint spacing 100 feet, minimum joint spacing 40 feet * Urban type pavements maximum joint spacing 50 feet, minimum joint spacing 40 feet Maximum joint spacing shall be normally used except as lesser joint spacing will be required as necessary to construct joints as follows

1. To coincide with the locations of contraction joints, construction joints and transverse cracks in adjoining pavement lanes or curb and/or gutter
2. At the location of manholes or other fixtures imbedded in the pavement or curb and/or gutter
3. At a location not less than 40 feet nor more than 50 feet from the previously constructed transverse expansion or construction joint

CONSTRUCTION JOINTS -

Construction joints shall be installed where shown on the plans and as necessary

EXPANSION JOINTS -

Expansion joints are required only at bridge approaches and/or where shown on the plans

SAWING OF JOINTS -

Under normal or rapid concrete setting conditions, sawing of contraction joints for each day's pour shall be completed by midnight of the same day When cool weather results in retarded setting of concrete, the sawing of joints will be deferred, as directed by the Engineer, only for a time sufficient to preclude tearing of the concrete adjacent to the joint Where sawing of transverse contraction joints at minor special locations, in the opinion of the Engineer, is impractical a cleft joint approved by the Engineer may be substituted Adequate artificial light shall be provided when joint sawing is performed after daylight hours

SEALING JOINTS -

All joints shall be sealed Sealing of joints shall be done in a manner to preclude overfilling and flow of sealing material onto pavement surface

* Urban type pavement with adjoining curb and/or gutter on one or both sides of pavement

TRANSVERSE JOINTS CONCRETE PAVEMENT

STATE HIGHWAY COMMISSION OF WISCONSIN

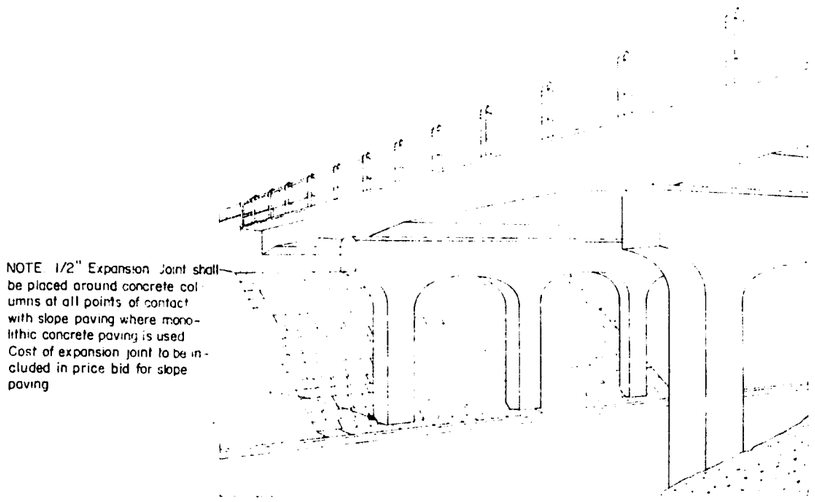
RECOMMENDED FOR APPROVAL:

DATE 9/10/58 — J. S. Pilt, ENGINEER OF DESIGN

APPROVED:

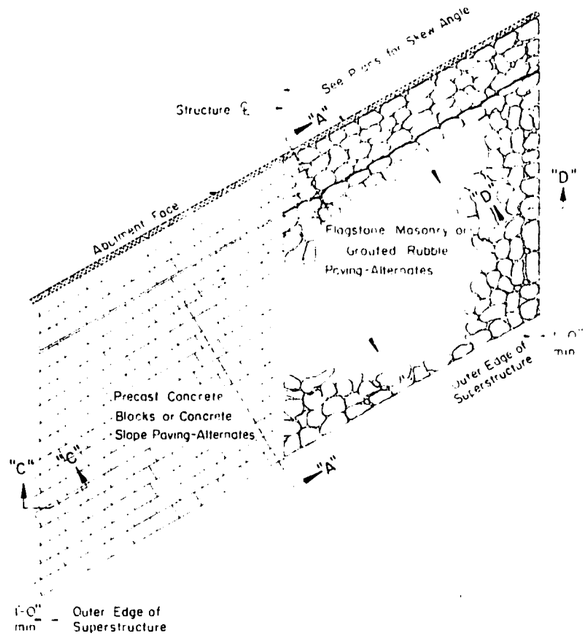
DATE 9/10/58 — E. L. Rettiger, STATE HIGHWAY ENGINEER

PLATE NO. 4-4.5.2

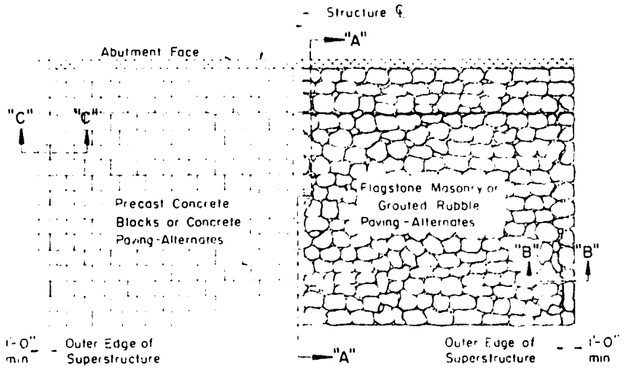


NOTE 1/2" Expansion Joint shall be placed around concrete columns at all points of contact with slope paving where monolithic concrete paving is used Cost of expansion joint to be included in price bid for slope paving

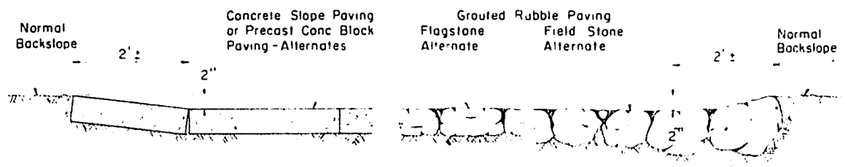
TYPICAL LOCATION DIAGRAM FOR
SLOPE PROTECTION UNDER STRUCTURES



PLAN VIEW FOR SKEWED DESIGN

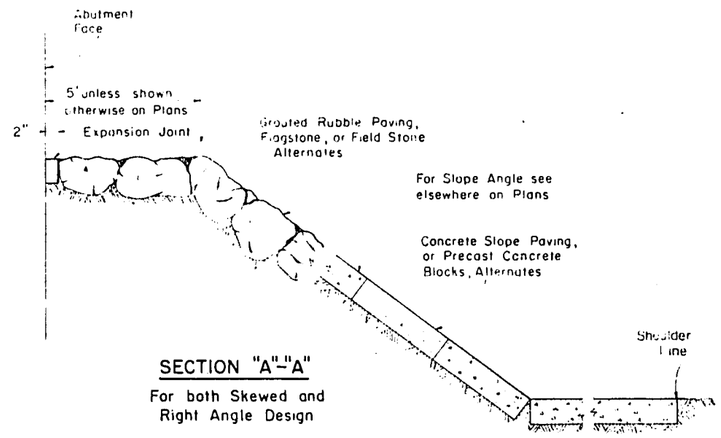


PLAN VIEW FOR RIGHT ANGLE DESIGN



SECTION "C"–"C"
For both Skewed and Right Angle Design

SECTION "B"–"B"
For Right Angle Design Only



SECTION "A"–"A"
For both Skewed and Right Angle Design

GENERAL NOTES

Details of construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications, Section 2515 and the applicable Special Provisions.

DESCRIPTION OF WORK

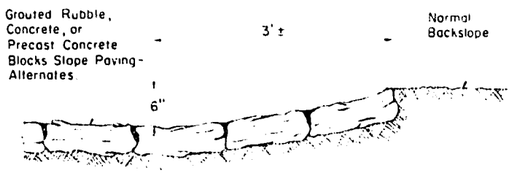
The work under this item shall consist of the construction of slope or embankment protection using either Grouted Rubble Paving, Concrete Slope Paving, or Precast Concrete Blocks Paving alternates as shown hereon and/or described in the Standard Specifications.

JOINTS

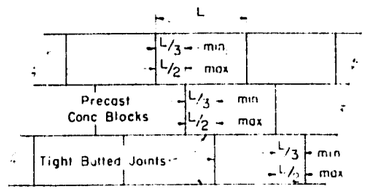
When concrete slope paving alternate is used in connection with skewed designs, the planes of weakness or false joints shall be formed in planes perpendicular to the backslope and horizontal, so that right angle joints will result

MEASUREMENT & PAYMENT

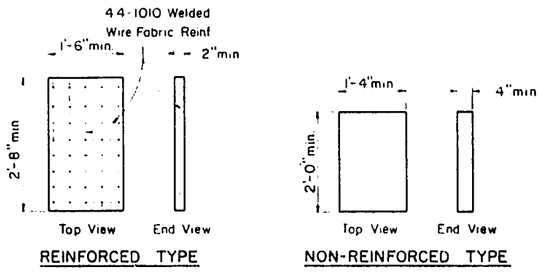
The work under this item shall be measured and paid for in accordance with Sections 2515.04 and 2515.05 of the Standard Specifications.



SECTION "D"–"D"
For Skewed Design Only



PLACEMENT DIAGRAM FOR
PRECAST CONCRETE BLOCKS



PRECAST CONCRETE
BLOCKS—ALTERNATES

SLOPE PAVING
(GRADE SEPARATION STRUCTURES)

STATE HIGHWAY COMMISSION OF WISCONSIN

RECOMMENDED FOR APPROVAL

9/30/58
DATE

J. S. Pelt
ENGINEER OF DESIGN

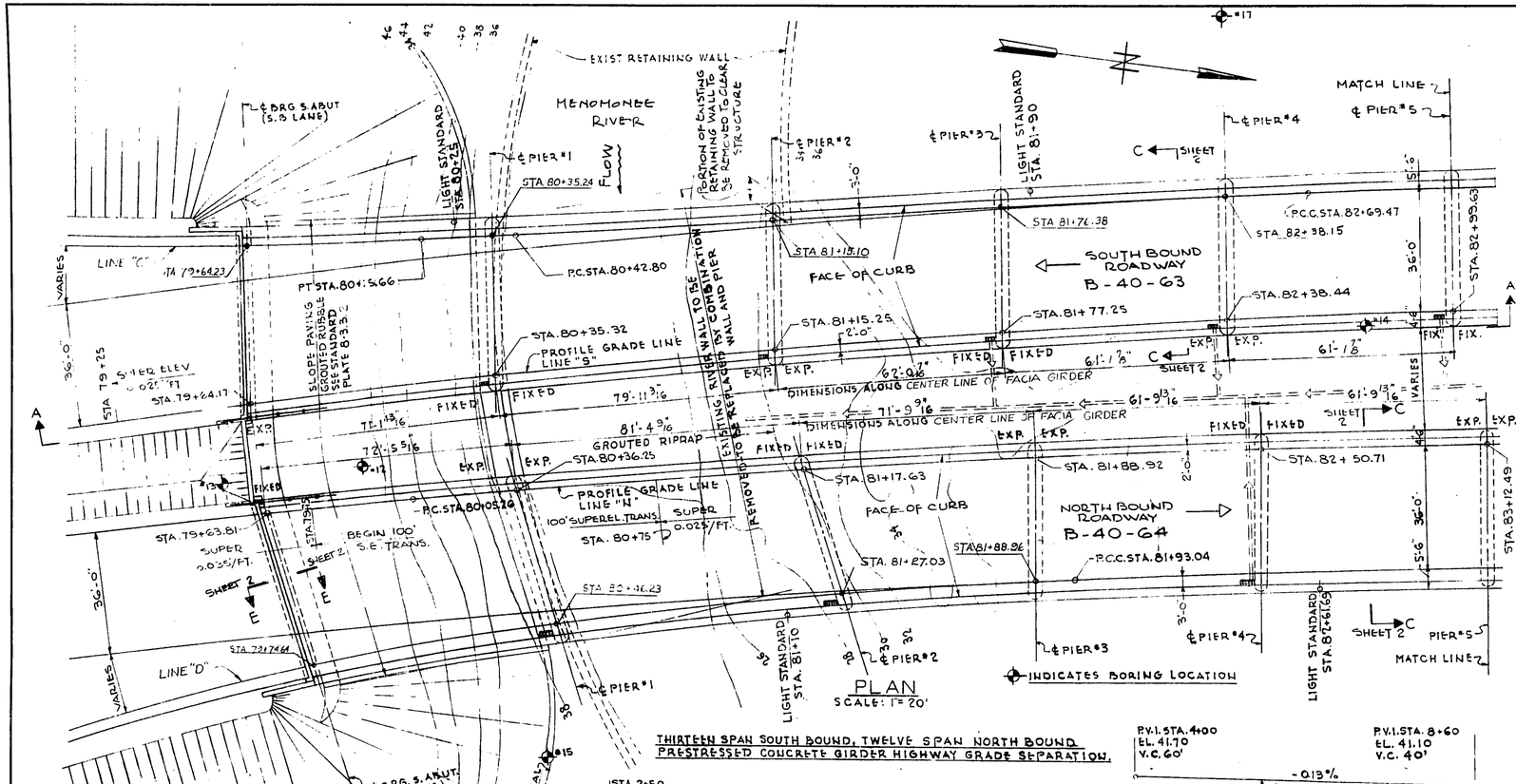
APPROVED

9/30/58
DATE

E. C. Rettiger
STATE HIGHWAY ENGINEER

PLATE NO. 8-3.3.2

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	20	65



ESTIMATE OF QUANTITIES

ITEM NO	BID ITEM	UNIT	BRIDGE B-40-63 ABUT. & RET. WALLS	BRIDGE B-40-63 PIERS	BRIDGE B-40-63 SUPER-STRUCT.	BRIDGE B-40-63 TOTAL	BRIDGE B-40-64 ABUT. & RET. WALLS	BRIDGE B-40-64 PIERS	BRIDGE B-40-64 SUPER-STRUCT.	BRIDGE B-40-64 TOTAL
2105-7	REMOVING MASONRY	CU. YD.		137		137		117		117
2107-1	EXCAVATION FOR STRUCTURES, BRIDGE	CU. YD.	175	1,095		1250	172	858		1,030
2110-1	GRANULAR BACKFILL	CU. YD.	110	670		780	85	635		720
2401-1	CONCRETE MASONRY, BRIDGES	CU. YD.	239	1415.	1121	2775	226	1343	1047.	2,616
2406-1	BAR STEEL REINFORCEMENT, BRIDGES	LB.	10,372	213,312	259,846	483,530	10,129	202,640	247,931	460,700
2407-1	STRUCTURAL CARBON STEEL	LB.			68,630	68,630			67,530	67,530
2503-1(A)	STEEL TEST PILING (1 @ 60 FT., 1 @ 40 FT.)*	LUMP SUM			1					
2503-1(B)	STEEL TEST PILING (1 @ 60 FT., 1 @ 40 FT.)*	LUMP SUM								1
2503-2	STEEL PILING, DELIVERED	LIN. FT.	2825		2825	2825	2820			2820
2503-3	STEEL PILING, DRIVEN	LIN. FT.	2825		2825	2825	2820			2820
2508-1	FLOOR DRAINS	EACH			10	10			7	7
2515-2	SLOPE PAVING (GROUTED RUBBLE)	SQ. YD.	944			944	944			944
S.P.	1/8" BEARING PADS	SQ. FT.			250	250			240	240
S.P.	CONCRETE MASONRY, CAISSONS	CU. FT.		10,421		10,421		10,195		10,195
S.P.	WROUGHT IRON DRAIN PIPE, 6" ϕ	LIN. FT.			309	309			212	212
S.P.	LUBRICATED BRONZE PLATES	LB.			1460	1460			1390	1390
S.P.	ORNAMENTAL ALUM. RAILING	LIN. FT.			1871	1871			1723	1723
S.P.	PRESTRESSED GIRDERS (B-40-63)	LUMP SUM			1					
S.P.	PRESTRESSED GIRDERS (B-40-64)	LUMP SUM								1
**S.P.	ELECTRICAL WORK (B-40-63)	LUMP SUM			1					
** S.P.	ELECTRICAL WORK (B-40-64)	LUMP SUM								1
	NON-BID ITEMS:									
	HOT POURED ELASTYPE JT. FILLER									
	4" PREFORMED JOINT FILLER									
	1" PREFORMED JOINT FILLER									
	2 PLY MEMB. WATERPROOFING									

* DRIVE 60' TEST PILE AT SOUTH ABUT. AND 40' TEST PILE AT NORTH ABUT. (EACH BRIDGE)
** FOR ESTIMATE OF ELECTRICAL WORK, SEE SHEET X-18740

GENERAL NOTES

DESIGN LIVE LOAD: H20-S16 MODIFIED.
CONSTRUCTION SPECIFICATION: WISCONSIN STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 1957.
ABUTMENT TO BE SUPPORTED ON 8 B.P. 36 PILES TO BED ROCK, CAPACITY 90 TONS PER PILE. PIERS TO BE SUPPORTED ON CAISSONS TO MIN. 6' INTO BED ROCK.
FOR BENCH MARKS AND REFERENCE POINTS SEE ALIGNMENT SHEETS R4 & R5.
MILWAUKEE CITY DATUM -
FORM LINING WILL BE REQUIRED FOR ALL EXPOSED SUPERSTRUCTURE CONCRETE.

ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" UNLESS OTHERWISE SPECIFIED.
PROPOSED TYPE OF SUPERSTRUCTURE: SIMPLE SPANS.
PRECAST PRESTRESSED CONCRETE GIRDERS, COMPOSITE WITH FLOOR SLAB.
THE USE OF STRUCTURAL GRADE REINFORCING STEEL IS PROHIBITED.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

LIST OF DRAWINGS

1-GENERAL PLAN X-18709
2-GENERAL PLAN X-18710
3-FOUNDATION PLAN BORINGS & CAISSON SCHEDULE X-18711
4-FOUNDATION PLAN & BORINGS X-18712
5-SOUTH ABUTMENT X-18713
6-NORTH ABUTMENT X-18714
7-PIER 1 N.B. & S.B. X-18715
8-PIER 2 N.B. & S.B. X-18716
9-PIER 3 N.B. & S.B. X-18717
10-PIERS 4 & 5 S.B. - PIER 4 N.B. X-18718
11-PIER 6 S.B. - PIER 5 N.B. X-18719
12-PIERS 6 & 7 N.B. - PIERS 7 & 8 S.B. X-18720
13-PIERS 8 & 9 N.B. - PIERS 9 & 10 S.B. X-18721
14-PIER 10 N.B. - PIER 11 S.B. X-18722
15-PIER 11 N.B. - PIER 12 S.B. X-18723
16-FRAMING PLAN - SPANS 1, 2, 3 & 4 N.B. & S.B. X-18724
17-FRAMING PLAN - SPANS 5, 6 & 7 N.B. & S.B. & 8 S.B. X-18725
18-FRAMING PLAN - SPANS 8, 9 & 10 N.B. & 9, 10 & 11 S.B. X-18726
19-FRAMING PLAN - SPANS 11 & 12 N.B. - SPANS 12 & 13 S.B. X-18727
20-PRESTRESSED GIRDER DETAILS X-18728
21-PRESTRESSED GIRDER SCHEDULE NORTH BOUND SPANS 1 TO 8 ..... X-18729
22-PRESTRESSED GIRDER SCHEDULE N.B. SPANS 9 TO 12 - S.B. SPANS 1 TO 4 ..... X-18730
23-PRESTRESSED GIRDER SCHEDULES - S.B. SPANS 5 TO 13 ..... X-18731
24-DECK SLABS - PLAN & SECTIONS - N.B. SPANS 1, 2, 3 & 4 ..... X-18732
25-DECK SLABS - PLAN & SECTIONS - N.B. SPANS 5, 6, 7 & 8 ..... X-18733
26-DECK SLABS - PLAN & SECTIONS - N.B. SPANS 9, 10, 11 & 12 ..... X-18734
27-DECK SLABS - PLAN & SECTIONS - S.B. SPANS 1, 2, 3, 4 & 5 ..... X-18735
28-DECK SLABS - PLAN & SEC'S - S.B. SPANS 6, 7, 8 & 9 ..... X-18736
29-DECK SLABS - PLAN & SEC'S - S.B. SPANS 10, 11, 12 & 13 ..... X-18737
30-EXPANSION JOINTS - N.B. SPANS X-18738
31-EXPANSION JOINTS - S.B. SPANS X-18739
32-BEARINGS, RAILING & MISCELLANEOUS DETAILS X-18740
33-BRIDGE DRAINAGE DETAILS X-18741
34-REINFORCING BAR DETAILS - ABUTMENTS X-18742
35-REINFORCING BAR DETAILS - PIERS X-18743
36-REINFORCING BAR DETAILS - PIERS X-18744
37-REINFORCING BAR DETAILS - PIERS X-18745
38-REINFORCING BAR DETAILS - PIERS X-18746
39-REINFORCING BAR DETAILS - DECK SLABS X-18747
40-REINFORCING BAR DETAILS - DECK SLABS X-18748
41-REINFORCING BAR DETAILS - DECK SLABS X-18749

NO.	DATE	REVISION	BY

STATE HIGHWAY COMMISSION OF WISCONSIN

GENERAL PLAN

CO.	CITY	STA.
MILWAUKEE	MILWAUKEE	6 + 89.52

SECTION	TOWN.	RANGE	CONST. SPEC.
26	7N	21E	1957

DESIGN SPEC. SEE GEN. NOTES | LOADING H-20 S-16 MOD.
DATE 8/13/58 | DRAWN | CKD.

CORRECT — J. B. Schultz — ENGINEER OF BRIDGES
APPROVED — E. L. Ruettgen — STATE HIGHWAY ENGINEER

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

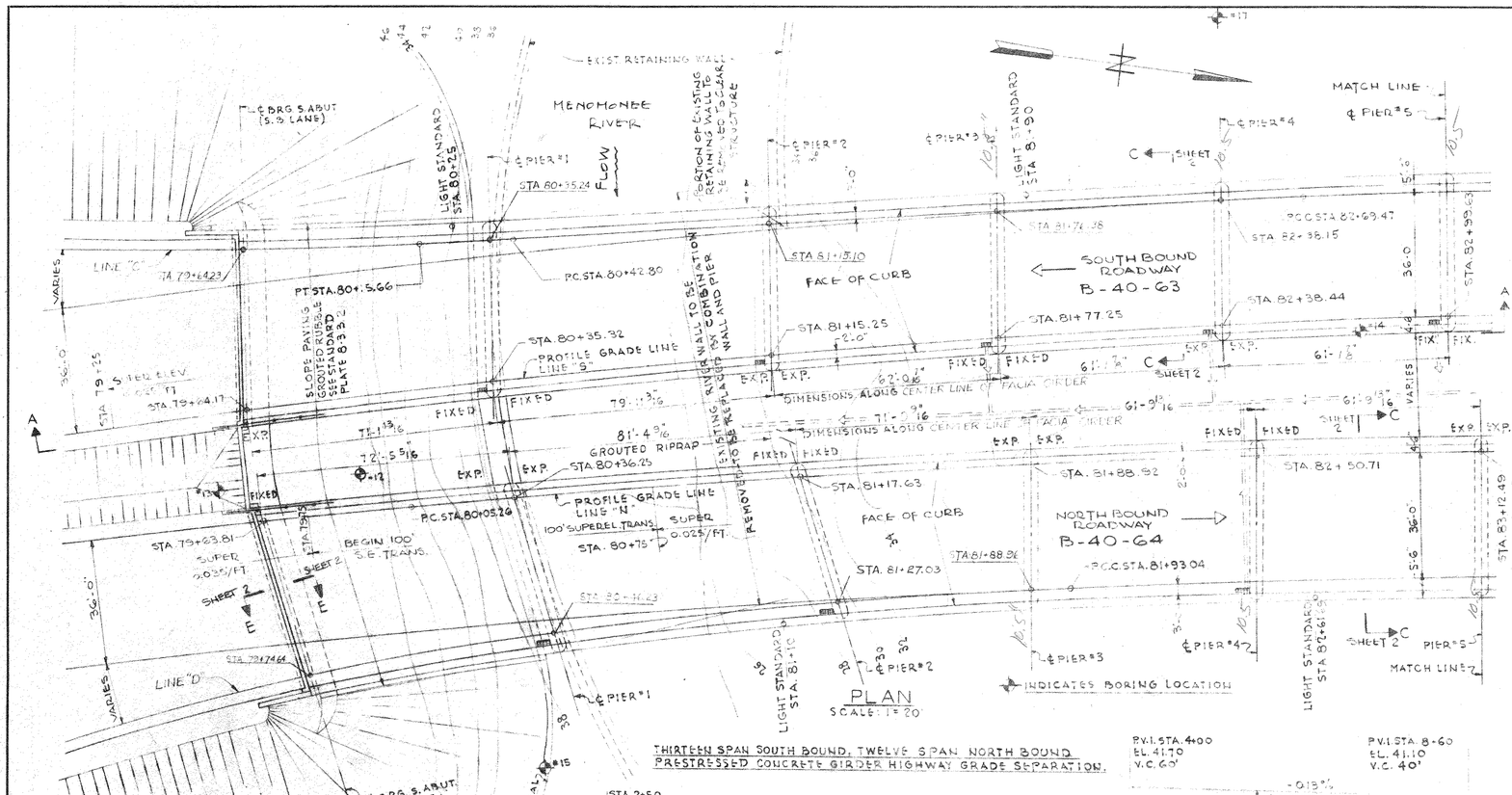
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

GENERAL PLAN

DESIGNED	W. G. H.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE AS NOTED
DRAWN	AL. B		
CHECKED	S. G.		1 OF 41
APPROVED	L. N. R		SHEET

X18709

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	20	65



ESTIMATE OF QUANTITIES

ITEM	BID ITEM	UNIT	BRIDGE B-40-63 ABUT & WET WALLS	BRIDGE B-40-63 PIERS	BRIDGE B-40-63 SUPER STRUCT.	BRIDGE B-40-63 TOTAL	BRIDGE B-40-64 ABUT & WET WALLS	BRIDGE B-40-64 PIERS	BRIDGE B-40-64 SUPER STRUCT.	BRIDGE B-40-64 TOTAL	PROJ. TOTAL FINAL
210S-7	REMOVING MASONRY	CU. YD.		137		137		117		117	219
210T-1	EXCAVATION FOR STRUCTURES										
	FOR ABUT.	CU. YD.	175	1,095		1250	172	858		1,030	2085
210U-1	GRANULAR BACKFILL	CU. YD.	110	670		720	25	635		720	1778
2401-1	CONCRETE MASONRY,										
	BRIDGES	CU. YD.	239	1415.	1121	2775	226	1343	1047.	2,616	5036
2404-1	BAR STEEL REINFORCEMENT,										
	BRIDGES	LB.	10,376	213,312	259,854	483,730	10,128	202,240	247,931	460,700	961,558
2407-1	STRUCTURAL SHAPE STEEL	LB.			68,630	68,630			67,530	67,530	134,130
2502-1	STEEL TEST PILING										
	(1 @ 60 FT., 1 @ 40 FT.)*	LUMP SUM			1						1
2502-2	STEEL TEST PILING										
	(1 @ 60 FT., 1 @ 40 FT.)*	LUMP SUM								1	1
2503-2	STEEL PILING, DELIVERED	LIN. FT.	2825			2825	2820			2820	6763
2503-3	STEEL PILING, DRIVEN	LIN. FT.	2825			2825	2820			2820	6521
2508-1	FLOOR DRAINS	EACH			10	10			7	7	17
2515-2	SLOPE PAVING GROUTED RUBBLE	SQ. YD.	944			944	944			944	1865
S.P.	8" BEARING PADS	SQ. FT.			250	250			240	240	490
S.P.	CONCRETE MASONRY, CAISSONS	CU. FT.		10,421		10,421		10,195		10,195	15203
S.P.	WROUGHT IRON DRAIN PIPE, 6" ϕ	LIN. FT.			309	309			212	212	472
S.P.	LUBRICATED BRONZE PLATES	LB.			1460	1460			1390	1390	2850
S.P.	ORNAMENTAL ALUM. RAILING	LIN. FT.			1871	1871			1723	1723	3594
S.P.	PRESTRESSED GIRDERS (B-40-63)	LUMP SUM			1						1
S.P.	PRESTRESSED GIRDERS (B-40-64)	LUMP SUM								1	1
**S.P.	ELECTRICAL WORK (B-40-63)	LUMP SUM			1						1
**S.P.	ELECTRICAL WORK (B-40-64)	LUMP SUM								1	1
	NON-BID ITEMS:										
	HOT POURED ELASTYPE JT. FILLER										PILE SPLICES 14
	4" PREFORMED JOINT FILLER										C.C.C. "I" STL. TEST PILING, PIERS 1
	1" PREFORMED JOINT FILLER										C.C.C. "I" STL. PILING, DRIVEN, 10" 372
	2 PLY MEMB. WATERPROOFING										

* DRIVE 60' TEST PILE AT SOUTH ABUT. AND 40' TEST PILE AT NORTH ABUT. (EACH BRIDGE)
** FOR ESTIMATE OF ELECTRICAL WORK, SEE SHEET X-18740

LIST OF DRAWINGS

1. GENERAL PLAN — X-18709
2. GENERAL PLAN — X-18710
3. FOUNDATION PLAN BORINGS & CAISSON SCHEDULE — X-18711
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5. SOUTH ABUTMENT — X-18713
6. NORTH ABUTMENT — X-18714
7. ABUT. & PIER 1 N.B. & S.B. — X-18715
8. ABUT. & PIER 2 N.B. & S.B. — X-18716
9. ABUT. & PIER 3 N.B. & S.B. — X-18717
10. ABUT. & PIER 4 S.B. - PIER 4 N.B. — X-18718
11. ABUT. & PIER 5 S.B. - PIER 5 N.B. — X-18719
12. FRAMING PLAN - PIERS 7 & 8 S.B. — X-18720
13. FRAMING PLAN - PIERS 9 & 10 S.B. — X-18721
14. FRAMING PLAN - PIER 11 S.B. — X-18722
15. FRAMING PLAN - PIER 12 S.B. — X-18723
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19. FRAMING PLAN - SPAN 13 N.B. & SPAN 12 & 13 S.B. — X-18727
20. PRESTRESSED GIRDER DETAILS — X-18728
21. PRESTRESSED GIRDER DETAILS — X-18729
22. CUTTING GIRDER ENDS — X-18730
23. PRESTRESSED GIRDERS, CAMBER & DEFLECTIONS — X-18731
24. REINFORCING PLAN & DETAILS - SPANS 1, 2, 3 & 4 — X-18732
25. DECK SLAB PLAN & DETAILS - SPANS 5, 6, 7 & 8 — X-18733
26. REINFORCING PLAN & DETAILS - SPANS 9, 10, 11 & 12 — X-18734
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40. REINFORCING BAR DETAILS - DECK SLABS — X-18748
41. REINFORCING BAR DETAILS - DECK SLABS — X-18749

GENERAL NOTES

DESIGN LIVE LOAD: H20-S16 MODIFIED.
CONSTRUCTION SPECIFICATION: WISCONSIN STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 1957.
ABUTMENT TO BE SUPPORTED ON 8 IPP 32 PILES TO BED ROCK, CAPACITY 30 TONS PER PILE. PIERS TO BE SUPPORTED ON CAISSONS TO MIN. 2' INTO BED ROCK.
FOR BENCH MARKS AND REFERENCE POINTS SEE ALIGNMENT SHEETS R-4 & R-5.
MILWAUKEE CITY DATUM -
FORM LINING WILL BE REQUIRED FOR ALL EXPOSED SUPERSTRUCTURE CONCRETE.

ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" UNLESS OTHERWISE SPECIFIED.
PROPOSED TYPE OF SUPERSTRUCTURE: SIMPLE SPANS PRECAST PRESTRESSED CONCRETE GIRDERS, CONCRETE WITH FLOOR SLAB.
THE USE OF STRUCTURAL GRADE REINFORCING STEEL IS PROHIBITED.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

STATE HIGHWAY COMMISSION OF WISCONSIN

GENERAL PLAN

CO.	CITY	STA.
MILWAUKEE	MILWAUKEE	6 + 89.52

SECTION	TOWN.	RANGE	CONST. SPEC.
26	7N	21E	1957

DESIGN SPEC. SEE GEN. NOTES | LOADING H-20 S-16 MOD.
DATE 8/13/58 | DRAWN | CKD.

CORRECT — W. B. Schultz — ENGINEER OF BRIDGES
APPROVED — E. L. Ruettiger — STATE HIGHWAY ENGINEER

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
GENERAL PLAN

NO.	DATE	REVISION	BY

DESIGNED W. G. H.
DRAWN AL. B
CHECKED S. G.
APPROVED L. N. R

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: AS NOTED
1 OF 41 SHEET

X18709

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	21	65

MATCH LINE ℄ PIER *5 — ℄ PIER *6 — ℄ PIER *7 — ℄ PIER *8 — ℄ PIER *9 — ℄ PIER *10 — ℄ PIER *11 — ℄ PIER *12

℄ E.B. MAIN — ℄ W.B.M. — ℄ STATE ST. — ℄ BRG. N. ABUT. (S.B. LANE) — ℄ BRG. N. ABUT. (N.B. LANE)

LIGHT STANDARD STA. 83+58 — LIGHT STANDARD STA. 85+11 — LIGHT STANDARD STA. 86+67 — LIGHT STANDARD STA. 88+44

LIGHT STD. STA. 84+28 — LIGHT STD. STA. 85+81 — LIGHT STD. STA. 87+35

B-40-63 — B-40-64

FACE OF CURB — P.O.T. STA. 88+35.28 — P.T. STA. 88+56.13 — PT. MIN. CL. — PCC. STA. 86+00.00

STA. 82+99.63 — STA. 83+12.49 — STA. 83+60.81 — STA. 83+95.30 — STA. 84+23.10 — STA. 84+30.12 — STA. 84+60.28 — STA. 84+75.75 — STA. 85+04.12 — STA. 85+47.31 — STA. 85+78.50 — STA. 86+18.87 — STA. 86+52.89 — STA. 86+90.46 — STA. 87+07.14 — STA. 87+27.27 — STA. 87+32.30 — STA. 87+50.09 — STA. 87+74.56 — STA. 88+18.53

STA. 83+11.92 — STA. 87+69.15 — STA. 88+56.13 — STA. 88+75.64

M.H. TYPE 1 STA. 84+05(S) 20' RT. GRATE EL. 39.51 INL. EL. 34.0

M.H. TYPE 1 STA. 84+95(S) 20' RT. GRATE EL. 42.01 INL. EL. 36.0

M.H. & CONNECTION TO BE CONSTRUCTED UNDER THIS CONTRACT 12" DIA. STUB ON SOUTH SIDE

PROFILE GRADE LINE "S" — PROFILE GRADE LINE "N"

DIMENSIONS ALONG FASCIA GIRDER — DIMENSIONS ALONG ℄ FASCIA

SEE ROADWAY PLANS FOR DETAILS OF STORM SEWER

SURVEY BASE LINE (R.R.) — ℄ C.M.ST.P.&P.R.R. R/W. — ℄ C.R. CL.

INDICATES BORING LOCATION

PLAN
SCALE: 1" = 20'

SLOPE PAVING GROUTED RUBBLE 8" STD. PLATE 33.32 — 0.025/FT. SUPER

HOT POURED ELASTIC TYPE JOINT SEALER — ¼" PREFORMED JOINT FILLER — ¼" FILLED JT.

LIMITS OF PAYMENT FOR GRANULAR BACKFILL AT SO. ABUTMENT ONLY

LIMITS OF PAYMENT FOR EXCAVATION FOR STRUCTURE

BERM ELEV.

8 BP 36 PILES TO ROCK @ 7 T. CAPACITY

SECTION E E
SCALE: 1" = 1'-0"

TYP PIER SECTION
FIXED BRGS

TYP PIER SECTION
EXP. BRG'S

¼" FILLED JT. — METAL EXP. JT. — METAL EXP. JOINT

EXISTING GROUND LINE — EXISTING ROCK LINE — ℄ STATE ST. — BERM EL. 55.40

ELEVATION A-A
SCALE: 1" = 20'

SLOPE VARIES — GIRDER SPACING AS SHOWN ON FRAMING PLAN — GROUND LINE (TYP.) — LIMITS OF PAYMENT FOR GRANULAR BACK FILL AT PIERS — ROCK

SECTION C - C
SCALE: 3/32" = 1'-0"

℄ STATE STREET — BERM EL. 55.40 — EXISTING GROUND LINE — 6" ROUNDING

SECTION B-B
SCALE: 1" = 10'

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

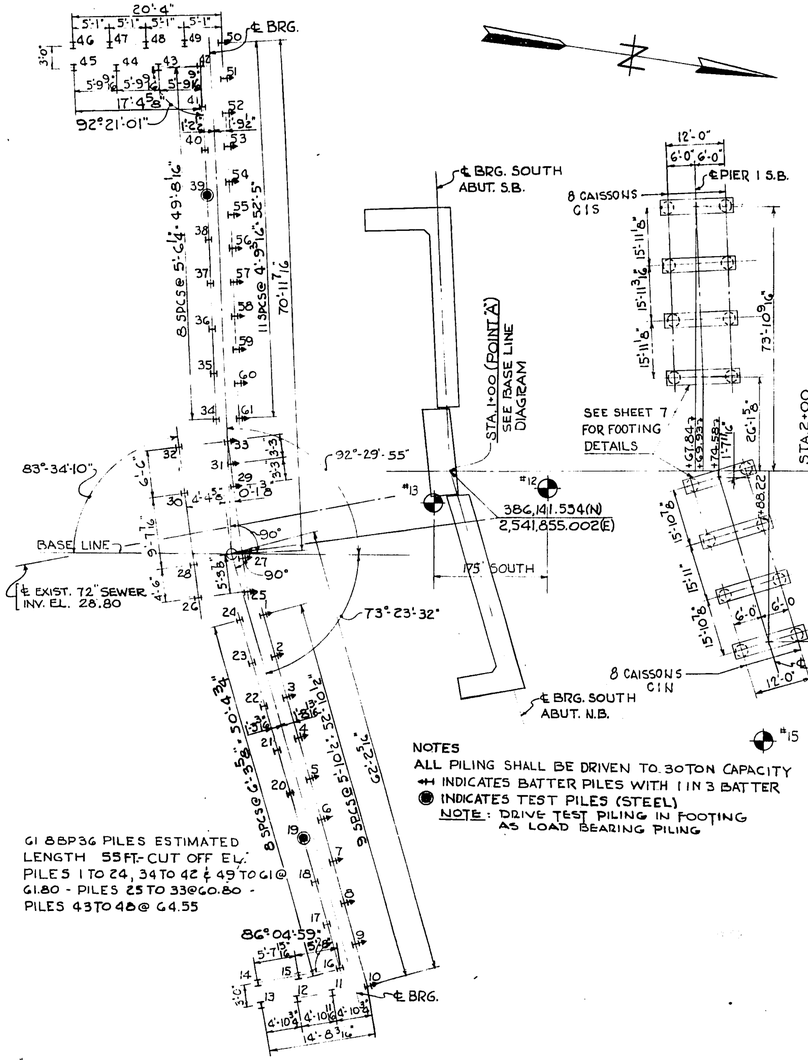
GENERAL PLAN

NO.	DATE	REVISION	BY

DESIGNED W. G. H.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: AS NOTED	
DRAWN AL. B.		2 OF 41	
CHECKED S. G.		SHEET	
APPROVED L. N. R.			

X18710

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	22	65



CAISSON LOCATION PLAN
SCALE 1"=20'-0"

NOTE: RAILROAD BASE LINE SHALL NOT BE USED TO ESTABLISH CONTROL POINTS OR TO ESTABLISH THE STRUCTURE BASE LINE

NOTES
ALL PILING SHALL BE DRIVEN TO 30 TON CAPACITY
+ INDICATES BATTER PILES WITH 1 IN 3 BATTER
● INDICATES TEST PILES (STEEL)
NOTE: DRIVE TEST PILING IN FOOTING AS LOAD BEARING PILING

61 BBP36 PILES ESTIMATED LENGTH 55FT.- CUT OFF EL.
PILES 1 TO 24, 34 TO 42 & 49 TO G1@ G1.80 - PILES 25 TO 33@G0.80 - PILES 43 TO 48@ G4.55

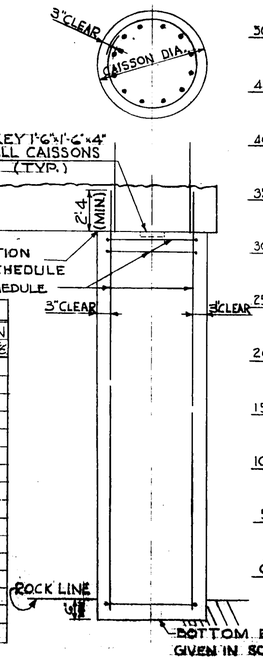
PILE PLAN SOUTH ABUTMENT
SCALE 1"=10'-0"

CAISSON SCHEDULE

MARK	NO. REQ'D.	TOP ELEV.	BOTTOM ELEV.	CAISSON DIA.	REIN. PER CAISSON VERTICALS	REIN. PER CAISSON TIES @12"c
C1N	8	20.0	11.5	4'-0"	12-#8 x 10'-6"	9 #3
C2N	8	26.5	12.5	3'-6"	12-#8 x 16'-3"	15 #3
C3N	8	28.0	13.5	3'-6"	12-#8 x 16'-9"	15 #3
C4N	4	34.5	14.5	3'-6"	12-#8 x 22'-3"	21 #3
C5N	4	34.5	14.0	3'-6"	12-#8 x 22'-9"	24 #3
C6N	4	36.0	13.5	3'-8"	18-#8 x 24'-9"	23 #3
C7N	4	36.0	12.0	3'-8"	18-#8 x 26'-3"	24 #3
C8NA	2	37.5	13.0	3'-8"	16-#8 x 26'-9"	25 #3
C8NB	2	37.5	13.0	3'-8"	16-#8 x 26'-9"	25 #3
C9NA	2	37.5	15.0	3'-8"	16-#8 x 24'-9"	23 #3
C9NB	2	37.5	15.0	3'-8"	16-#8 x 24'-9"	23 #3
C10NA	2	36.5	16.0	3'-8"	18-#8 x 22'-9"	22 #3
C10NB	2	36.5	16.0	3'-8"	16-#8 x 22'-9"	22 #3
C11NA	2	36.5	17.0	3'-8"	18-#8 x 21'-9"	21 #3
C11NB	2	36.5	17.0	3'-8"	16-#8 x 21'-9"	21 #3

CAISSON SCHEDULE

MARK	NO. REQ'D.	TOP ELEV.	BOTTOM ELEV.	CAISSON DIA.	REIN. PER CAISSON VERTICALS	REIN. PER CAISSON TIES @12"c
C1S	8	20.0	11.5	4'-0"	12-#8 x 10'-6"	9 #3
C2S	8	26.5	12.5	3'-6"	12-#8 x 16'-3"	15 #3
C3S	8	28.0	14.5	3'-6"	12-#8 x 15'-9"	14 #3
C4S	4	34.5	14.5	3'-6"	12-#8 x 22'-3"	21 #3
C5S	4	34.5	14.5	3'-6"	12-#8 x 22'-3"	21 #3
C6S	4	35.5	14.5	3'-6"	12-#8 x 23'-3"	24 #3
C7S	4	36.0	15.0	3'-8"	18-#8 x 23'-3"	20 #3
C8S	4	36.0	15.0	3'-8"	18-#8 x 23'-3"	20 #3
C9SA	2	37.5	16.0	3'-8"	16-#8 x 23'-9"	22 #3
C9SB	2	37.5	16.0	3'-8"	12-#8 x 23'-9"	22 #3
C10SA	2	37.5	17.0	3'-8"	16-#8 x 22'-9"	21 #3
C10SB	2	37.5	17.0	3'-8"	12-#8 x 22'-9"	21 #3
C11SA	2	36.5	18.0	3'-8"	18-#8 x 20'-9"	19 #3
C11SB	2	36.5	18.0	3'-8"	16-#8 x 20'-9"	19 #3
C12SA	2	36.5	17.0	3'-8"	18-#8 x 21'-9"	20 #3
C12SB	2	36.5	17.0	3'-8"	16-#8 x 21'-9"	20 #3



BORING # 12

		GROUND SURFACE ELEVATION 47.6	0'-0"
SAND & CINDER FILL	19		
	4		
	8		14'-0"
SAND, CINDERS & LARGE GRAVEL FILL	24	CAVED IN NO WL	16'-6"
BROWN SILTY SAND, GRAY CLAY, SMALL TO LARGE GRAVEL	8		24'-0"
HARD GRAY SANDY CLAY WITH SHALE & ROCK FRAGMENTS	40		28'-6"
FILL - COARSE GRAY SAND & SMALL - MEDIUM GRAVEL	95		34'-0"
SEE NOTE L	100/5		37'-0"
		60/6	
LIMESTONE		50	42'-0"

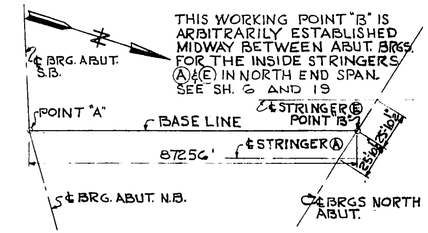
NOTE L: VERY COMPACT BROWN SAND & CLAY WITH SHALE & ROCK FRAGMENTS

BORING # 13

	GROUND SURFACE ELEVATION 52'-0"±	0'-0"
SAND & CINDER FILL	22	
	22	24 WL
	10	
	8	
	10	23'-0"
GRAY SILTY SAND WITH MEDIUM GRAVEL	8	28'-6"
VERY HARD GRAY CLAY, TRACE SMALL GRAVEL	108	32'-0"
HARD GRAY SILT & CLAY	35	39'-6"

NOTE: FIGURES IN MIDDLE COLUMN INDICATES NUMBER OF BLOWS REQUIRED TO DRIVE 2" O.D. SAMPLING SPOON ONE FOOT, USING 140 LB. WEIGHT FALLING 30 INCHES.

BORING LOGS



BASE LINE DIAGRAM
FOR TIES TO LINES "N" AND "S" SEE SHEET R-4

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FOUNDATION PLAN BORINGS AND CAISSON SCHEDULE

DESIGNED J.R.G.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: AS SHOWN
DRAWN J.R.G.		3 OF 41 SHEET
CHECKED R.E.P. W.G.H.		
APPROVED L.N.R.		

NO.	DATE	REVISION	BY

X18711

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	23	65

BORING 23

GROUND SURFACE ELEVATION 41.0'± 0'-0"

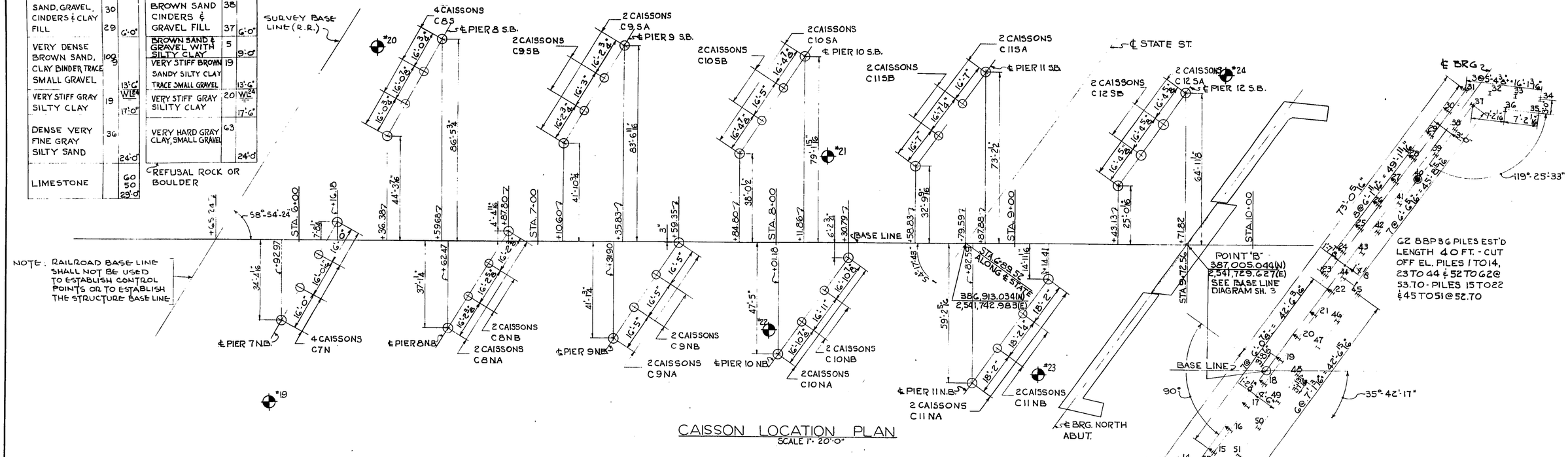
SAND, GRAVEL, CINDERS & CLAY FILL	30 29	6'-0"
VERY DENSE BROWN SAND, CLAY BINDER, TRACE SMALL GRAVEL	100/9	13'-6"
VERY STIFF GRAY SILTY CLAY	19	WL 24 17'-0"
DENSE VERY FINE GRAY SILTY SAND	36	24'-0"
LIMESTONE		60 50 29'-0"

BORING 24

GROUND SURFACE ELEVATION 41.0'± 0'-0"

BROWN SAND CINDERS & GRAVEL FILL	38 37	6'-0"
BROWN SAND & GRAVEL WITH SILTY CLAY	5	9'-0"
VERY STIFF BROWN SANDY SILTY CLAY TRACE SMALL GRAVEL	19	13'-6"
VERY STIFF GRAY SILITY CLAY	20	WL 24 17'-6"
VERY HARD GRAY CLAY, SMALL GRAVEL	63	24'-0"

REFUSAL ROCK OR BOULDER



NOTE: RAILROAD BASE LINE SHALL NOT BE USED TO ESTABLISH CONTROL POINTS OR TO ESTABLISH THE STRUCTURE BASE LINE.

CAISSON LOCATION PLAN

SCALE 1" = 20'-0"

ELEV 50

BORING 14

GROUND SURFACE ELEVATION 40.0'± 0'-0"

BLACK FOUNDRY SAND FILL	19 7 10	13'-0"
BROWN & GRAY SAND	26	WL 24 19'-0"
VERY HARD GRAY SILTY SANDY CLAY WITH SHALE, TRACE SMALL GRAVEL	100/7 100/8	25'-6"
LIMESTONE		120 64 35'-6"

BORING 15

GROUND SURFACE ELEVATION 38.0'± 0'-0"

FINE - COARSE GRAY SAND & SMALL - LARGE GRAVEL	20 18	CAVED IN NO WL 9'-0"
FINE-COARSE DARK BROWN SAND & SMALL GRAVEL	19	13'-6"
DENSE FINE TO COARSE GRAY SAND & SMALL GRAVEL	43 48	LOST SAMPLE
(VERY DENSE)	91	26'-0"
LIMESTONE		31'-0"

BORING 17

GROUND SURFACE ELEVATION 42'-0" 0'-0"

CINDERS, SAND, GRAVEL, FILL	21	3'-0"
BLACK FOUNDRY SAND FILL	10 7 9	WL 24 18'-6"
FINE-COARSE BROWN & GRAY SAND & SMALL GRAVEL	15	25'-0"
LIMESTONE		60 43 30'-0"

BORING 18

GROUND SURFACE ELEVATION 37.7' 0'-0"

SAND & CINDER FILL	30	3'-0"
LOOSE BLACK FOUNDRY SAND FILL	3	9'-0"
FINE-COARSE BROWN SAND & SMALL GRAVEL	27	CAVED IN NO WL 13'-6"
DENSE FINE-COARSE BROWN & GRAY SAND, SMALL-LARGE GRAVEL WITH SHALE	36 44	LOST SAMPLE 24'-0"
LIMESTONE		60 26 29'-0"

BORING 19

GROUND SURFACE ELEVATION 39.0' ± 0'-0"

TAR PAPER, CINDERS & SAND FILL	16	3'-0"
CINDERS, SAND, GRAVEL & COAL FILL	12 7	14'-0"
(DENSE) FINE TO COARSE GRAY, SILTY SAND, SMALL TO MEDIUM GRAVEL	48 26 26	WL 24 28'-0"
LIMESTONE		60 36 33'-0"

BORING 20

GROUND SURFACE ELEVATION 39.0'± 0'-0"

CINDERS, SAND & GRAVEL FILL	47 8	9'-0"
FINE - MEDIUM BROWN SILTY SAND	6	13'-0"
FINE-COARSE GRAY SAND & SMALL - MEDIUM GRAVEL	15	WL 24 17'-0"
FINE-COARSE BROWN SILTY SAND & SMALL-MEDIUM GRAVEL WITH SHALE, TRACE CLAY	12	24'-0"
LIMESTONE		60 36 29'-0"

BORING 21

GROUND SURFACE ELEVATION 40.0'± 0'-0"

GRAY SAND & SMALL GRAVEL	71	4'-0"
SEE NOTE M	30	6'-0"
BROWN SILTY SAND TRACE SMALL GRAVEL	4	9'-0"
FINE-COARSE, BROWN SAND & GRAVEL WITH INORGANIC BLACK SILT	9	13'-0"
FINE-COARSE GRAY SILTY SAND & SMALL MEDIUM GRAVEL	36	WL 24 17'-0"
FINE MEDIUM BROWN SAND	23	22'-0"
LIMESTONE		60 51 27'-0"

NOTE M: BROWN & GRAY SANDY SILTY CLAY, TRACE SMALL GRAVEL & SEAMS OF SAND

BORING 22

GROUND SURFACE ELEVATION 40.0' 0'-0"

COAL, SAND, CINDERS & GRAVEL FILL	9	3'-0"
SEE NOTE N	4	6'-6"
FINE BROWN SILTY SAND	6	CAVED IN NO WL 14'-0"
FINE GRAY SILTY SAND	20	16'-6"
VERY COMPACT INORGANIC GRAY SILT WITH SHALE	73	24'-0"

REFUSAL ROCK OR BOULDER

NOTE N: BROWN SANDY SILTY CLAY, TRACE SMALL GRAVEL & SEAMS OF SAND

BORING LOGS

PILE PLAN NORTH ABUTMENT

SCALE 1" = 10'-0"

NOTES

ALL PILING SHALL BE DRIVEN TO 30 TON CAPACITY

H INDICATES BATTER PILES WITH 1 IN 3 BATTER

◉ INDICATES TEST PILES

NOTE: UTILIZE TEST PILING AS LOAD BEARING PILING IN FOOTING.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN

FOR THE DESIGN OF THE STRUCTURE FOUNDATION, TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING WITH THE LOG OF SUCH EXPLORATION DATA AS INTERPRETED FOR SUCH DESIGN PURPOSE AS SHOWN. THE EXPLORATIONS WERE MADE BY ORDINARY AND CONVENTIONAL METHODS AND CARE DEEMED ADEQUATE FOR SUCH PURPOSE. HOWEVER, SINCE IT IS A MATTER OF COMMON KNOWLEDGE THAT THE EXACT CHARACTER OF ANY MATERIAL AND ITS REACTION IS DIFFICULT TO DETERMINE FROM SUCH SUBSURFACE EXPLORATION AND THAT THE KIND AND CHARACTER OF MATERIAL AT THE SITE WHERE THE FOUNDATIONS ARE BUILT MAY VARY SUBSTANTIALLY FROM THAT INDICATED BY THE LOG, THEY ARE MADE AVAILABLE TO THE BIDDERS SIMPLY FOR WHAT THEY ARE WORTH WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, THAT THE MATERIAL TO BE ENCOUNTERED IN BUILDING THE FOUNDATION WILL CONFORM THEREWITH. IF THE LOG IS USED BY THE CONTRACTOR IN MAKING HIS BID, IT IS HEREBY EXPRESSLY STIPULATED THAT THE COMMISSION ACCEPTS NO RESPONSIBILITY FOR SAID USE.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FOUNDATION PLAN AND BORINGS

DESIGNED J.R.G.	DE LEUW, CATHER & CO.	SCALE AS NOTED	
DRAWN J.R.G.	CONSULTING ENGINEERS	4 OF 41	
CHECKED R.E.P. W.G.H.	CHICAGO	SHEET	
APPROVED L.N.R.			

X18712

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	24	65

SECTION G-G

SECTION T-T

SECTION K-K (SHOWN)

SECTION L-L OPPOSITE HAND

SECTION H-H

SECTION B-B

TOP PLAN

DETAIL A (SHOWN)

DETAIL B OPPOSITE HAND

DEVELOPED ELEVATION

SECTIONAL PLAN A-A

SECTION C-C

SECTION D-D

ELEVATION E-E

ELEVATION F-F

SECTION J-J

NOTES

‡ INDICATES A BATTERED PILE.
ALL PILES ARE 50-TON CAPACITY 8 BP 36.
FOR PILE PLAN SEE SHEET 3
REINFORCEMENT ABBREVIATIONS:
N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
5½" x ½" KEY TO BE USED IN ALL CONSTRUCTION JOINTS.
FOR REINFORCING BAR DETAILS SEE SHEET 34

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

SOUTH ABUTMENT

DESIGNED S.G DRAWN E.H.L CHECKED H.R.V W.G.H APPROVED L.N.R	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/16" = 1'-0" 5 OF 41 SHEET	

X18713

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	24	65

SECTION G-G

SECTION T-T

SECTION K-K (SHOWN)

SECTION L-L OPPOSITE HAND

SECTION H-H

SECTION B-B

DETAIL A (SHOWN)

DETAIL B OPPOSITE HAND

TOP PLAN

DEVELOPED ELEVATION

SECTIONAL PLAN A-A

ELEVATION E-E

ELEVATION F-F

SECTION J-J

SECTION C-C

SECTION D-D

Conc. = 235.7 C.Y.

NOTES

$\frac{1}{2}$ INDICATES A BATTERED PILE.
ALL PILES ARE 30-TON CAPACITY 8 BP 36.
FOR PILE PLAN SEE SHEET 3
REINFORCEMENT ABBREVIATIONS:
N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
$5\frac{1}{2}$" x $1\frac{1}{2}$" KEY TO BE USED IN ALL CONSTRUCTION JOINTS.
FOR REINFORCING BAR DETAILS SEE SHEET 34

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

SOUTH ABUTMENT

DESIGNED	S.G
DRAWN	E.H.L
CHECKED	H.R.V W.G.H
APPROVED	L.N.R

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE 3/16" = 1'-0"

5 OF 41 SHEET

X18713

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	25	65

MANDATORY CONSTR. JOINT. CONCRETE ABOVE THIS JOINT MUST BE PLACED AFTER BRIDGE DECK IS IN PLACE.

FOR SECT. R-R 3-A435 @ 12" N.F.
3-A439 @ 12" F.F.
FOR SECT. S-S 3-A436 @ 12" N.F.
3-A438 @ 12" F.F.
FOR SECT. R'R 5-A513 @ 12" F.F.
FOR SECT S-S 5-A505 @ 12" F.F.

SECTION R-R (AS SHOWN)
SECTION S-S (OPPOSITE HAND)

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

TOP PLAN.

ELEVATION.

SECTION M-M

DETAIL "P"

SECTIONAL PLAN A-A.

DETAIL "R"

SECTION N-N

ELEVATION B-B.

ELEVATION C-C.

SECTION H-H & J-J

SECTION K-K

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NOTES: FOR LOCATION OF PILES SEE SHEET 4
N.F. = NEAR FACE, F.F. = FAR FACE, E.F. = EACH FACE
I = STEEL PILE, ‡ = BATTERED STEEL PILE
1½" x 5½" KEY TO BE USED ON ALL CONSTRUCTION JOINTS.
FOR REINFORCING BAR DETAILS SEE SHEET 34

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

NORTH ABUTMENT

DESIGNED	S.G.
DRAWN	H.R.V.
CHECKED	E.H.L. W.G.H.
APPROVED	L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 3/16" = 1'-0" 1/4" = 1'-0" 3/8" = 1'-0"
SHEET 6 OF 41

NO.	DATE	REVISION	BY

X18714

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	25	65

SECTION R-R (AS SHOWN)
SECTION S-S (OPPOSITE HAND)

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

TOP PLAN.

ELEVATION.

SECTIONAL PLAN A-A.

SECTION M-M

DETAIL "P"

DETAIL "R"

SECTION N-N

ELEVATION B-B.

ELEVATION C-C.

SECTION H-H & J-J

SECTION K-K

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NOTES: FOR LOCATION OF PILES SEE SHEET 4
N.F. - NEAR FACE, F.F. - FAR FACE, E.F. - EACH FACE
I - STEEL PILE, ⅄ - BATTERED STEEL PILE
1½" x 5½" KEY TO BE USED ON ALL CONSTRUCTION JOINTS.
FOR REINFORCING BAR DETAILS SEE SHEET 34
Conc. = 234.1 C.Y.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

NORTH ABUTMENT

DESIGNED	S.G.
DRAWN	H.R.V.
CHECKED	E.H.L. W.G.H.
APPROVED	L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

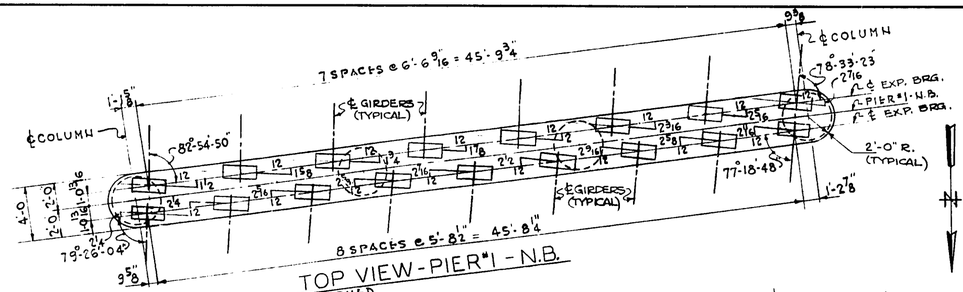
SCALE: 3/16" = 1'-0" 1/4" = 1'-0" 3/8" = 1'-0"

SHEET 6 OF 41

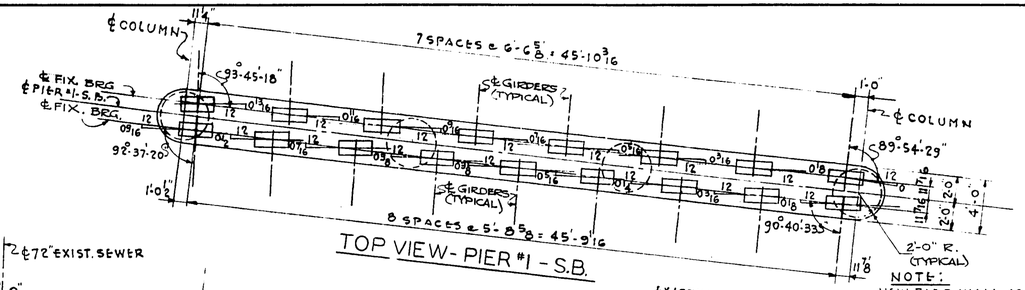
NO.	DATE	REVISION	BY

X18714

B.P.R. DIVISION	STATE	FEDERAL PROJE T	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	26	65

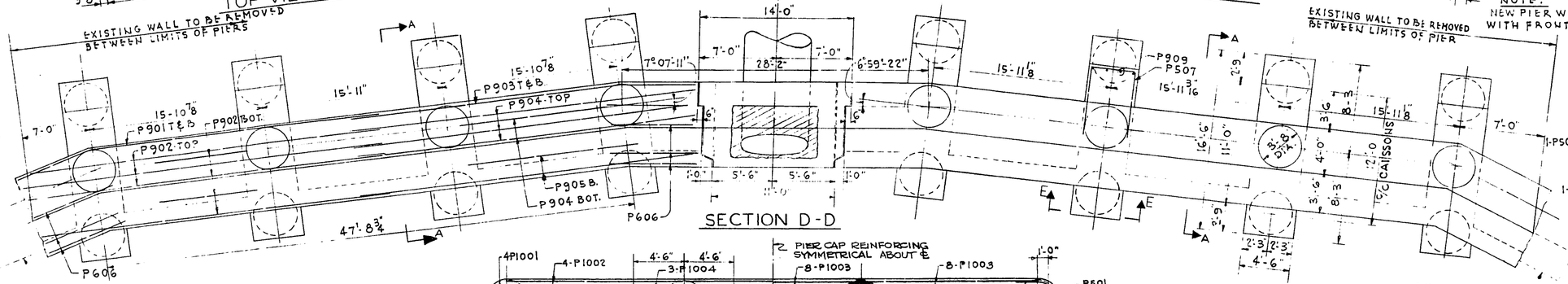


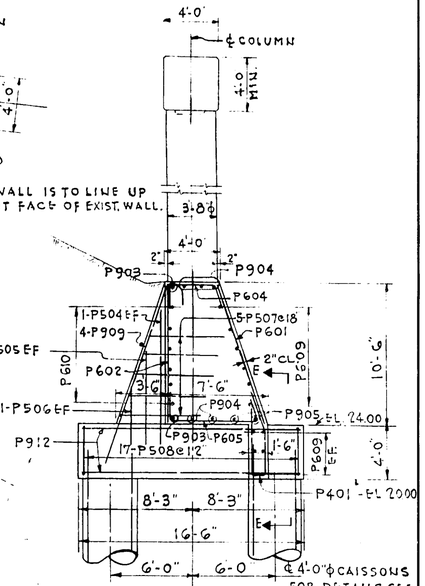
TOP VIEW - PIER #1 - N.B.

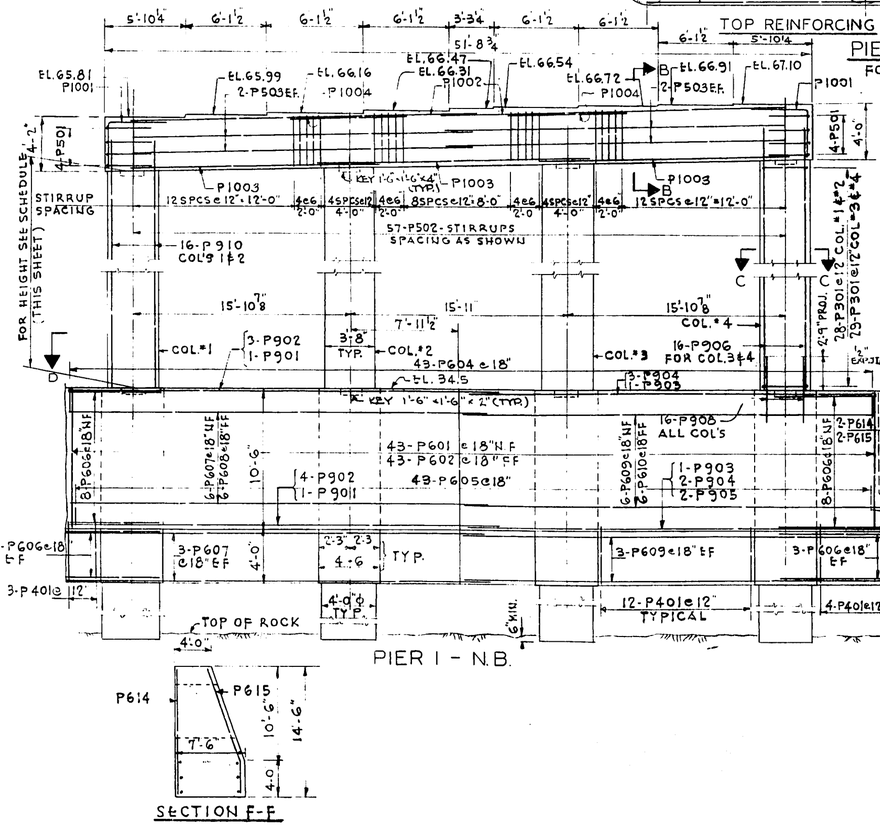


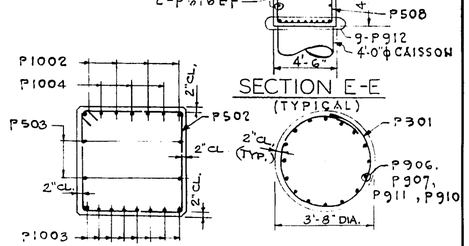
TOP VIEW - PIER #1 - S.B.

NOTE:
NEW PIER WALL IS TO LINE UP WITH FRONT FACE OF EXIST. WALL.









PIER #1 COLUMN HEIGHT SCHEDULE

NORTH BOUND		SOUTH BOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
#1	27'-2 7/16"	#5	29'-2 7/8"
#2	27'-7 1/2"	#6	29'-6 5/8"
#3	28'-1 1/4"	#7	29'-10 1/16"
#4	28'-6 1/2"	#8	30'-2 3/4"

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 AND 4
FOR REINFORCING BAR DETAILS SEE SHEET 35
FOR BEARING DETAILS SEE SHEET 32.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

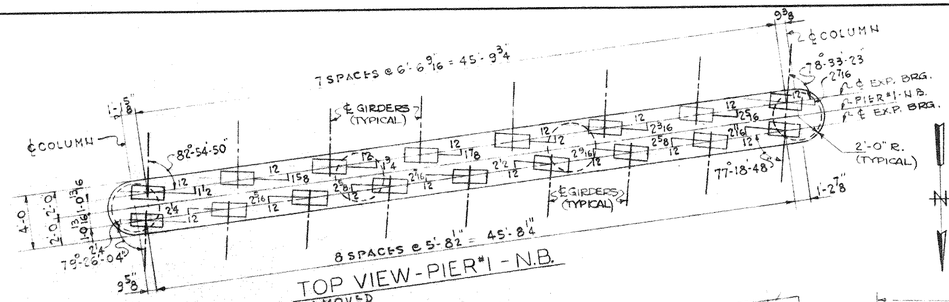
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER I N.B. & S.B.

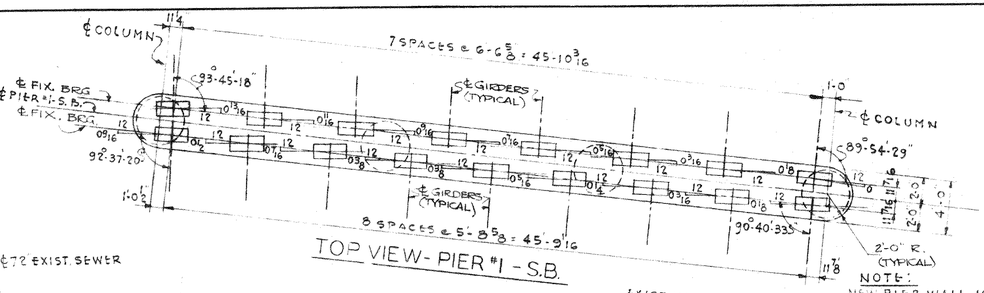
DESIGNED	S.G.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: 3/16" = 1'-0"
DRAWN	AL. B.		7 OF 41 SHEET
CHECKED	K.N.J. W.G.H.		
APPROVED	L. N. R		

X18715

B.P.R. DIVISION	STATE	FEDERAL PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	26	65

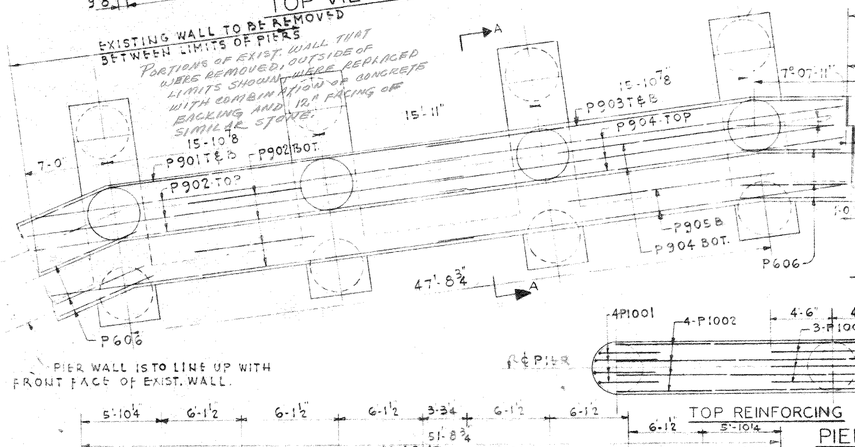


TOP VIEW - PIER #1 - N.B.

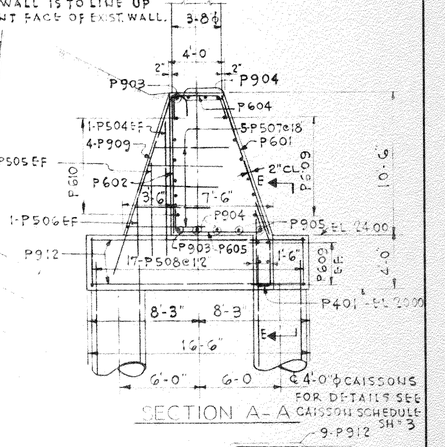


TOP VIEW - PIER #1 - S.B.

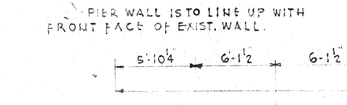
NOTE:
NEW PIER WALL IS TO LINE UP WITH FRONT FACE OF EXIST. WALL.



SECTION D-D



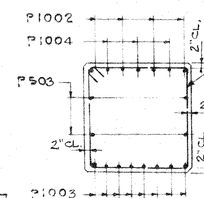
SECTION A-A



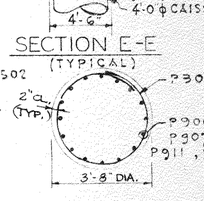
SECTION F-F

PIER CAP REINFORCING
FOR N.B & S.B. PIERS

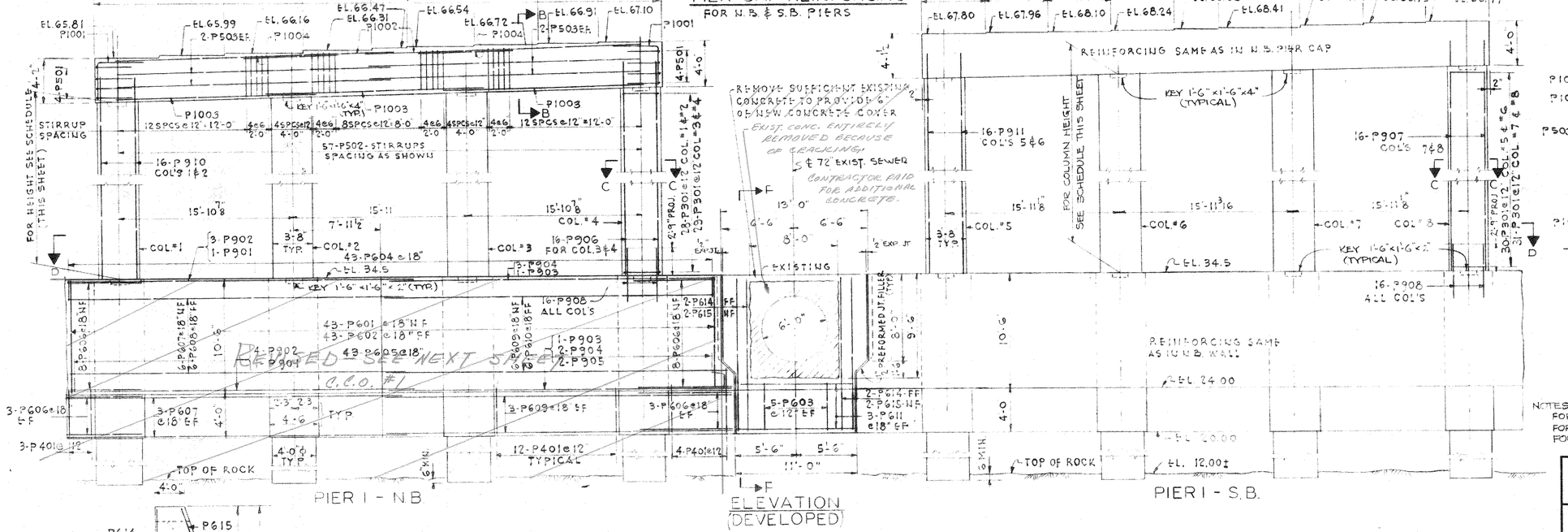
SECTION E-E (TYPICAL)



SECTION B-B



SECTION C-C



PIER #1 COLUMN HEIGHT SCHEDULE

NORTH BOUND		SOUTH BOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
#1	27'-2 7/16"	#5	29'-2 1/8"
#2	27'-7 1/8"	#6	29'-6 15/16"
#3	28'-1 1/4"	#7	29'-10 11/16"
#4	28'-6 1/2"	#8	30'-2 3/8"

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 AND 4
FOR REINFORCING BAR DETAILS SEE SHEET 35
FOR BEARING DETAILS SEE SHEET 32.
CONC. = 571.5 C.Y. (REVISED PLAN - SEE NEXT PG.)

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

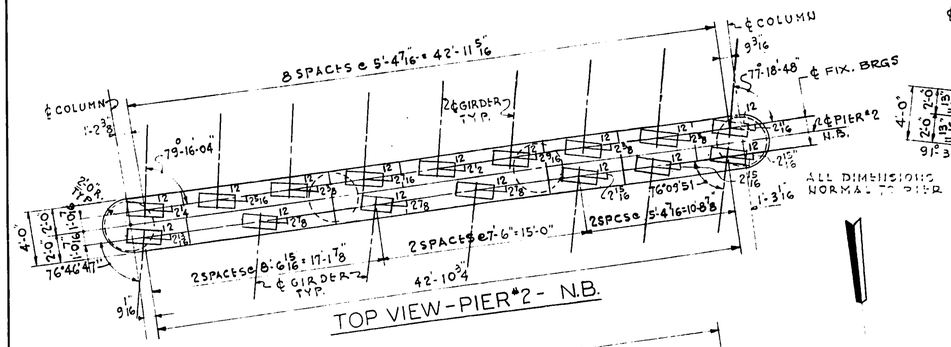
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER I N.B. & S.B.

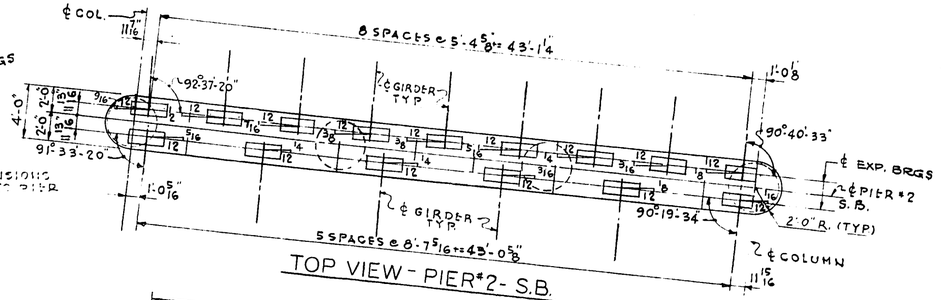
DESIGNED	S.G.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: 3/16" = 1'-0"
DRAWN	A.L.B.		7 OF 41 SHEET
CHECKED	K.N.J. W.G.H.		
APPROVED	L.N.R		

X18715

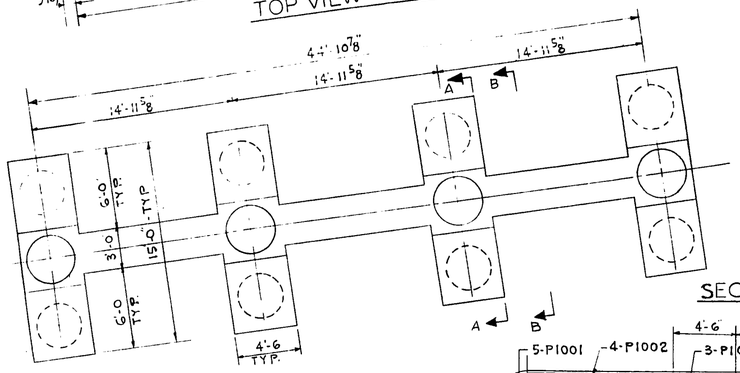
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	27	65

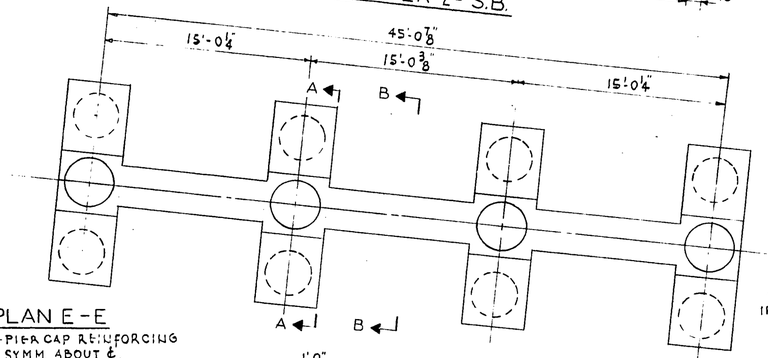


TOP VIEW - PIER #2 - N.B.

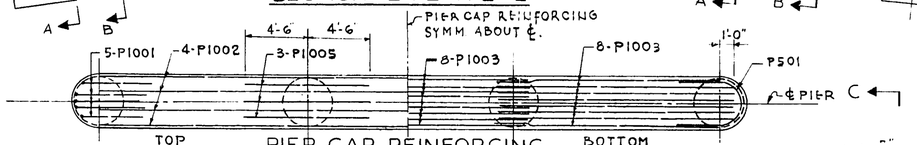


TOP VIEW - PIER #2 - S.B.

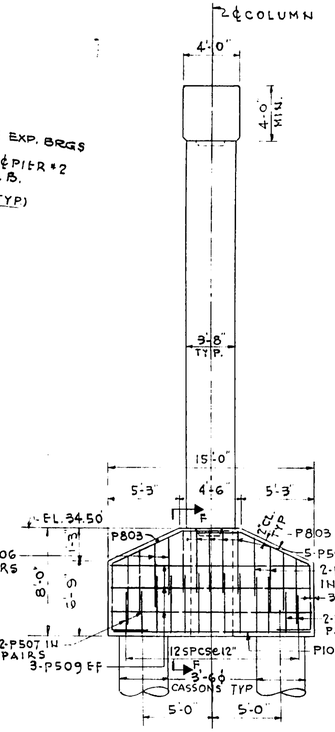




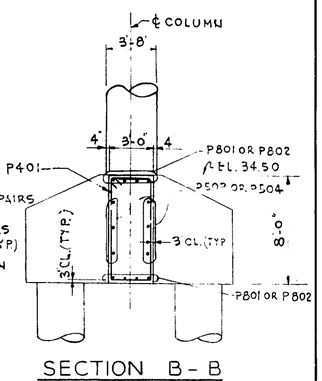
SECTIONAL PLAN E - E



PIER CAP REINFORCING FOR N.B. & S.B. PIERS



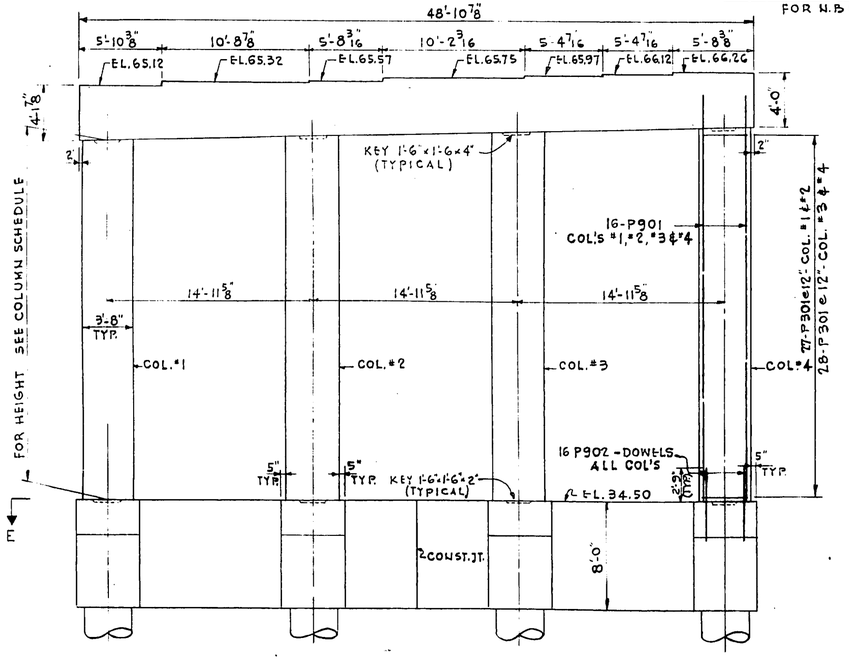
SECTION A - A



SECTION B - B

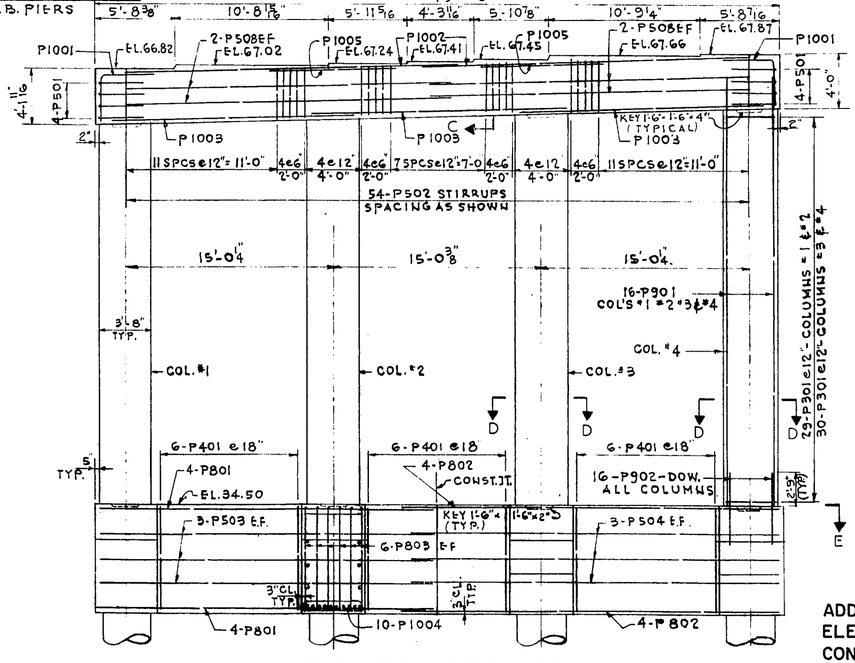
PIER #2 COLUMN HEIGHT SCHEDULE

NORTH BOUND		SOUTH BOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
1	26'-6 3/16"	1	28'-2 3/4"
2	26'-10 1/16"	2	28'-7 1/8"
3	27'-3 3/4"	3	28'-11 1/2"
4	27'-8 1/2"	4	29'-3 7/8"

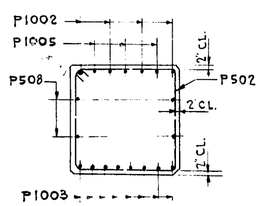


ELEVATION PIER #2 - N.B.

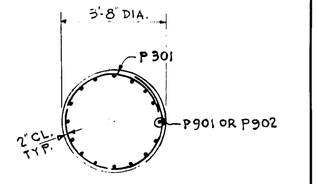
REINFORCING SIMILAR AS PIER 2 - S.B. EXCEPT AS NOTED



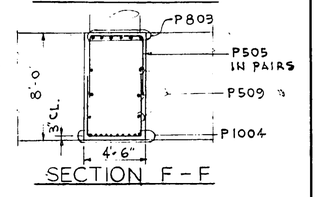
ELEVATION PIER #2 - SB



SECTION C - C



SECTION D - D



SECTION F - F

NOTES:
FOR CAISSON LOCATION PLAN & DETAILS SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 35
FOR BEARING DETAILS SEE SHEET 32

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

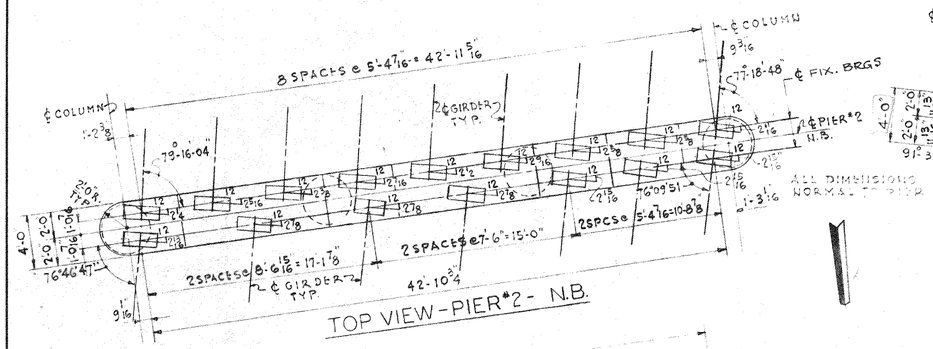
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER 2 N.B. & S.B.

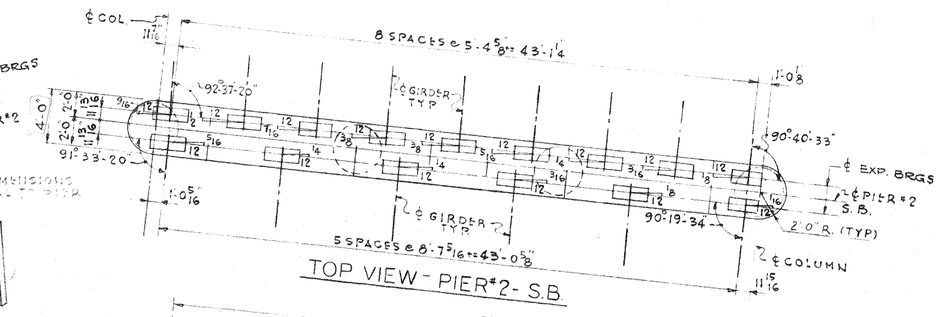
DESIGNED	S.G.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/16" = 1'-0"
DRAWN	AL.B.		
CHECKED	S.E. W.G.H.		8 OF 41 SHEET
APPROVED	L.N.R.		

X18716

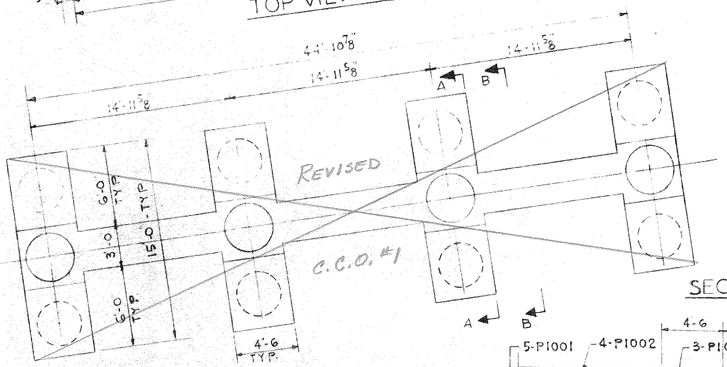
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	27	65

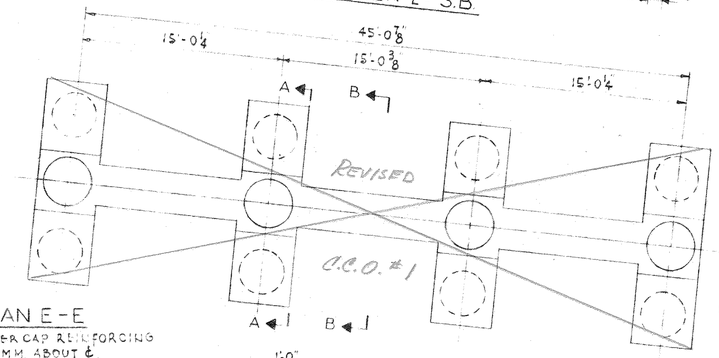


TOP VIEW - PIER #2 - N.B.

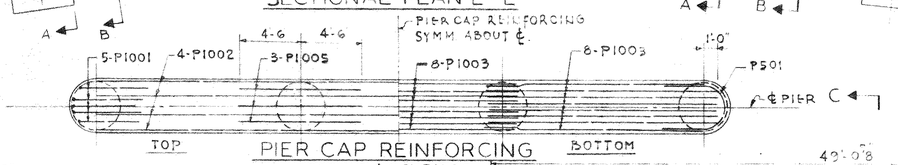


TOP VIEW - PIER #2 - S.B.

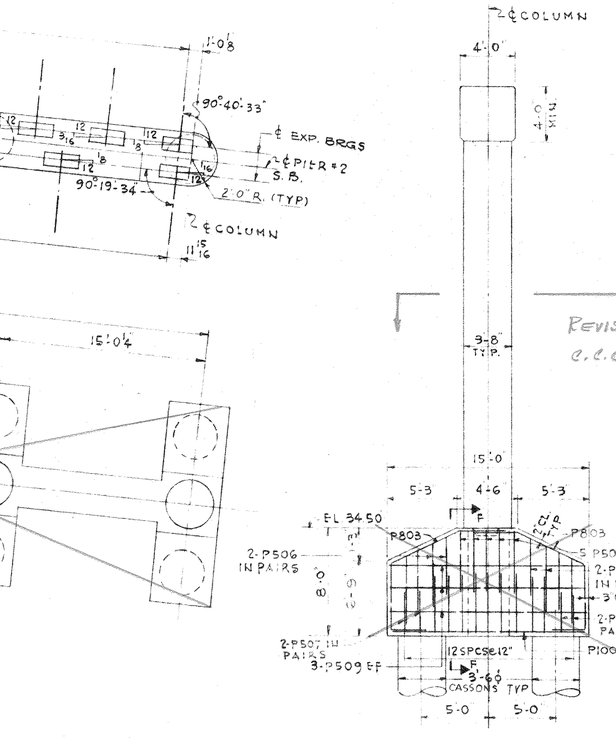




SECTIONAL PLAN E-E



PIER CAP REINFORCING
FOR N.B. & S.B. PIERS

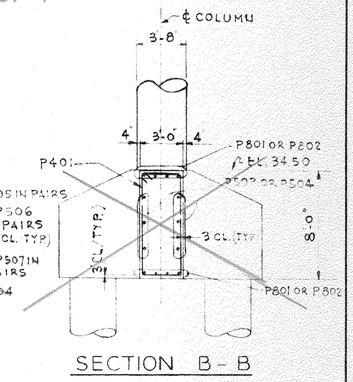


SECTION A-A

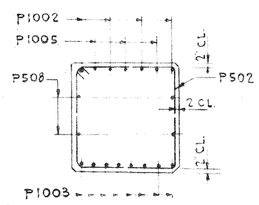
PIER #2 COLUMN HEIGHT SCHEDULE

NORTH BOUND		SOUTH BOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
1	26'-6 7/16"	1	28'-2 3/4"
2	26'-10 15/16"	2	28'-7 1/2"
3	27'-3 3/4"	3	28'-11 1/2"
4	27'-8 1/2"	4	29'-3 5/8"

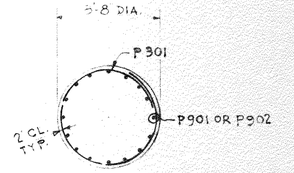
REVISED C.C.O. #1



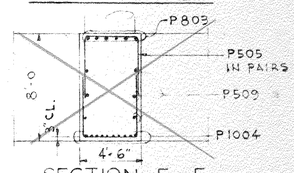
SECTION B-B



SECTION C-C

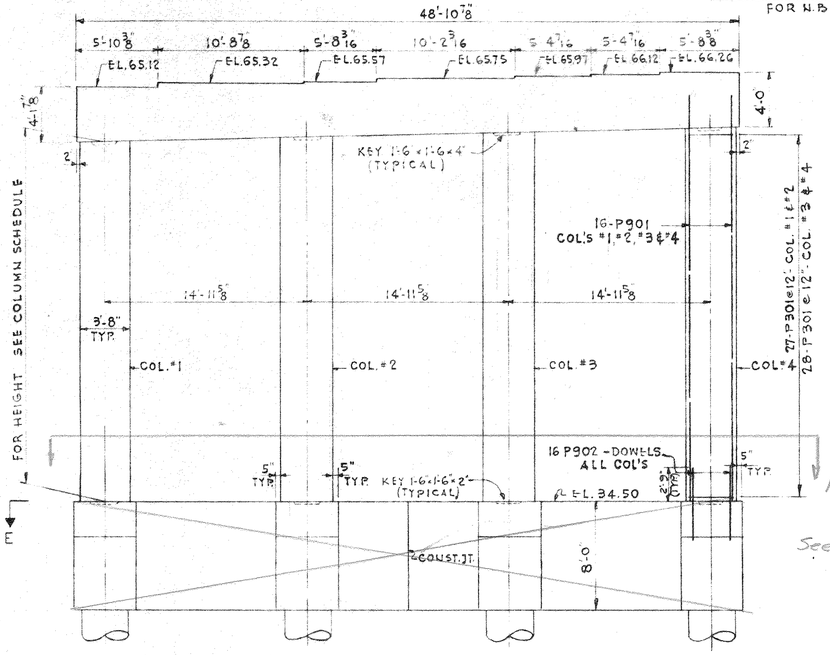


SECTION D-D

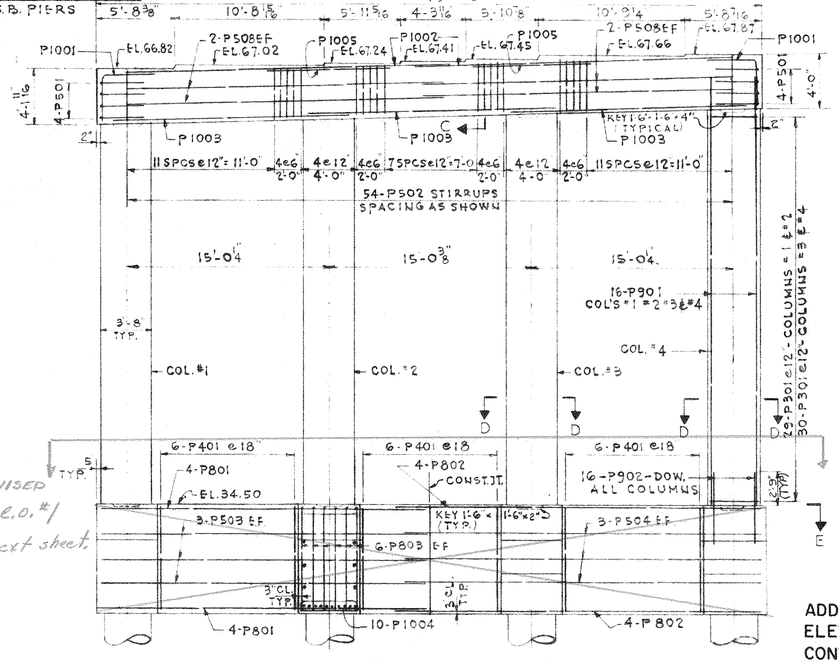


SECTION F-F

NOTES:
FOR CAISSON LOCATION PLAN & DETAILS SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 35
FOR BEARING DETAILS SEE SHEET 32



ELEVATION PIER #2 - N.B.
REINFORCING SIMILAR AS PIER 3 - S.B. EXCEPT AS NOTED



ELEVATION PIER #2 - S.B.

Revised C.C.O. #1
See next sheet.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

Revised Conc. Pier 2NB - 111.5 C.Y. Pier 2S - 114.4 C.Y.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

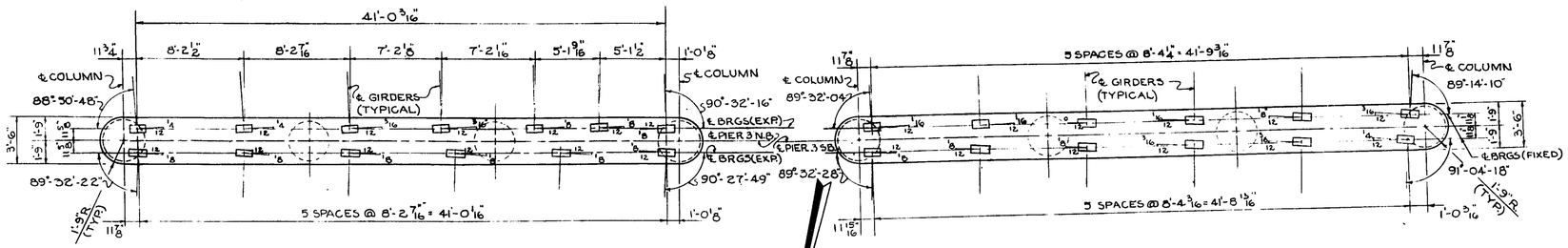
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER 2 N.B. & S.B.

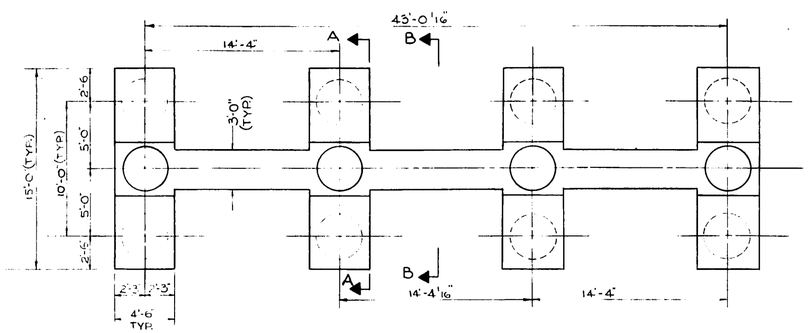
DESIGNED	S.G.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/16" = 1'-0"
DRAWN	AL.B.		8 OF 41 SHEET
CHECKED	S.E. W.G.H.		
APPROVED	L.N.R.		

X18716

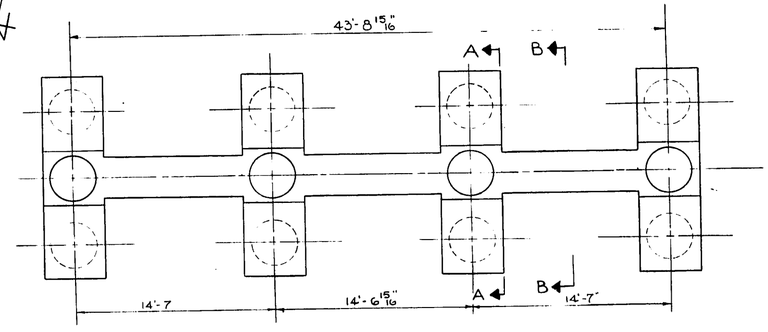
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	28	65



TOP VIEW - PIER 3 N.B.

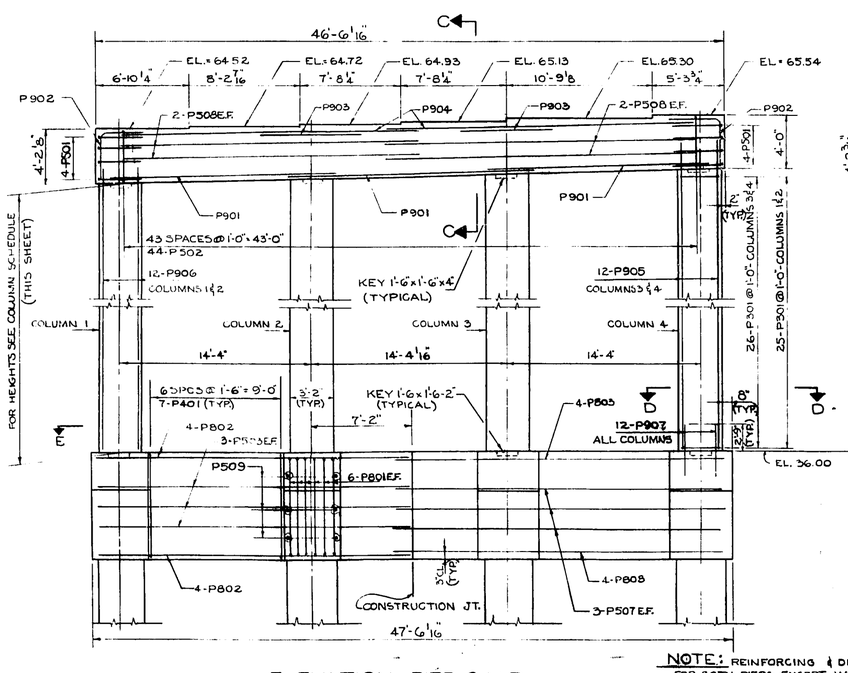


TOP VIEW - PIER 3 S.B.



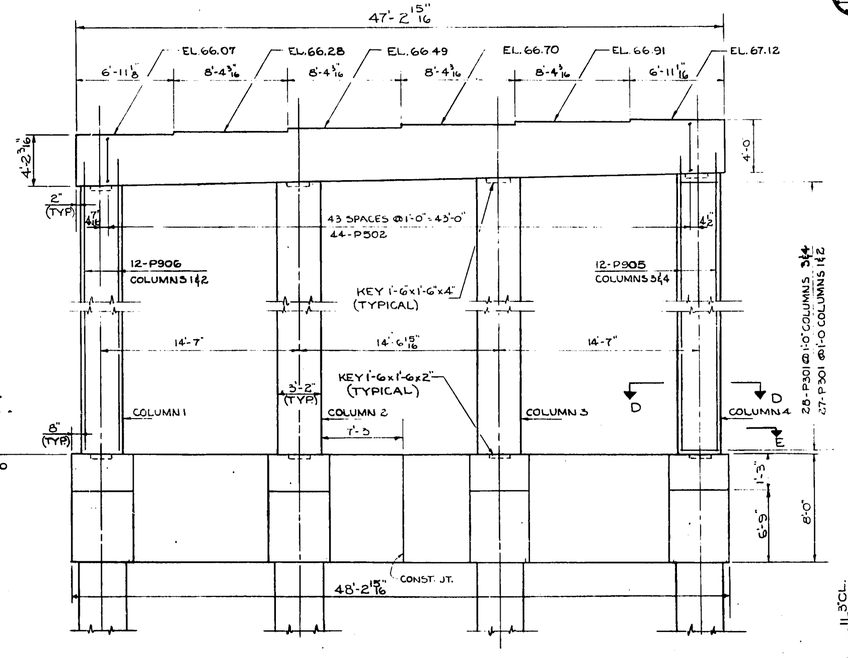
SECTIONAL PLAN E-E

ELEVATION - PIER 3 N.B.



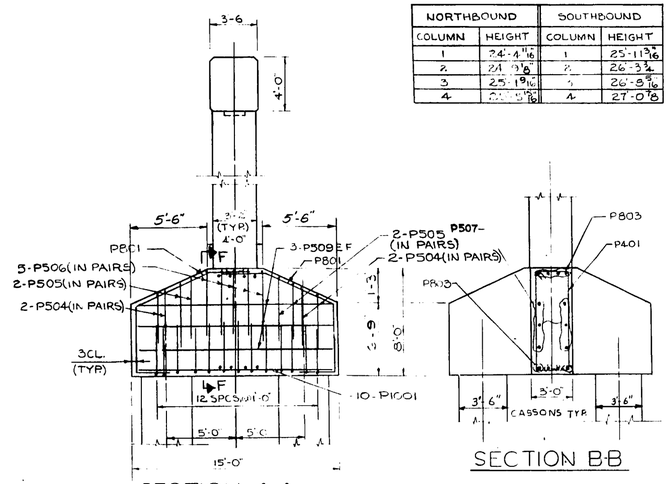
NOTE: REINFORCING & DIMENSIONING SIMILAR FOR BOTH PIERS EXCEPT WHERE NOTED.

ELEVATION - PIER 3 S.B.



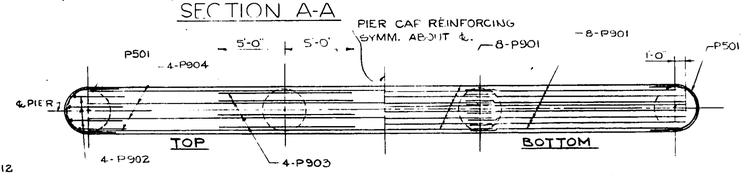
COLUMN SCHEDULE

NORTHBOUND		SOUTHBOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
1	34'-4 11/16"	1	25'-11 3/16"
2	31'-3 1/8"	2	26'-3 3/4"
3	25'-1 9/16"	3	26'-8 5/16"
4	20'-0 5/8"	4	27'-0 1/8"

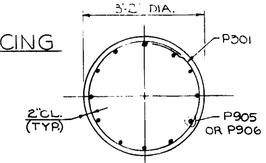


SECTION A-A

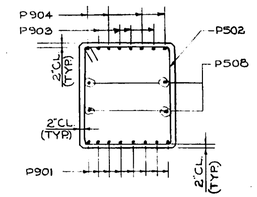
SECTION B-B



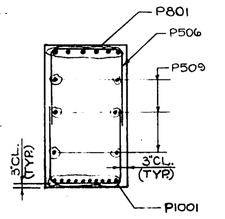
PIER CAP REINFORCING



SECTION D-D



SECTION C-C



SECTION F-F

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 AND 4
FOR REINFORCING BAR DETAILS SEE SHEET 35
FOR BEARING DETAILS SEE SHEET 32

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
PIER 3 N.B.
PIER 3 S.B.

NO.	DATE	REVISION	BY

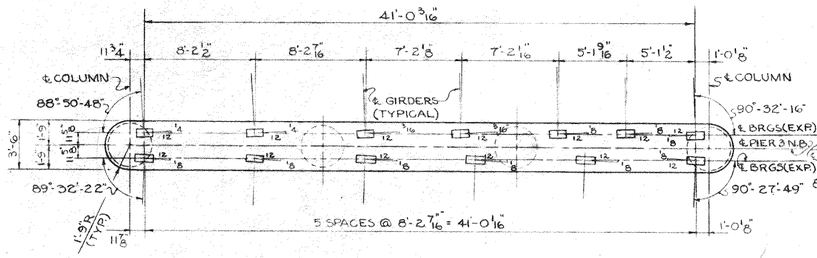
DESIGNED S.E.
DRAWN K.N.J
CHECKED S.E. W.G.H.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

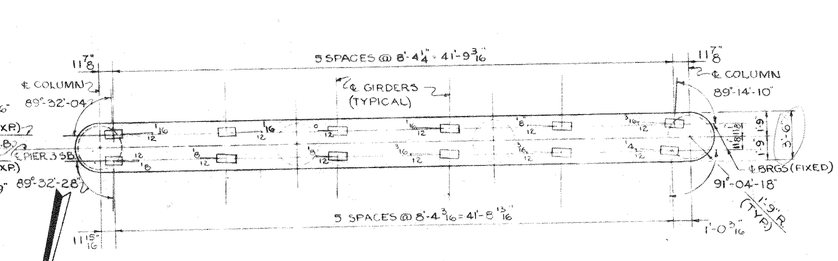
SCALE: 3/16" = 1'-0"
9 OF 41 SHEET

X18717

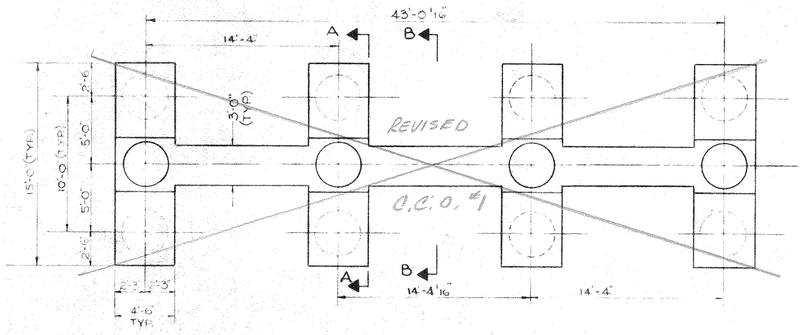
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	28	65

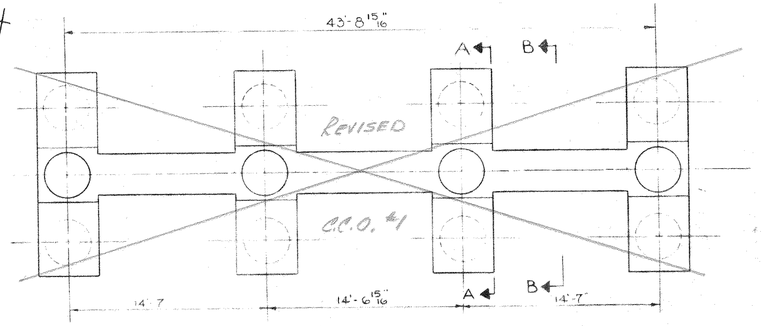


TOP VIEW- PIER 3 N.B.

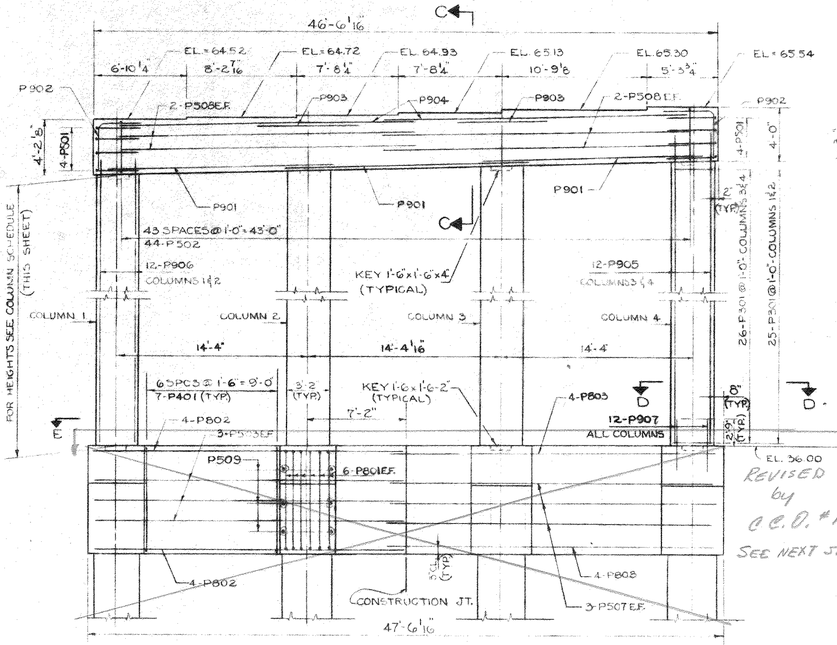


TOP VIEW-PIER 3 S.B.

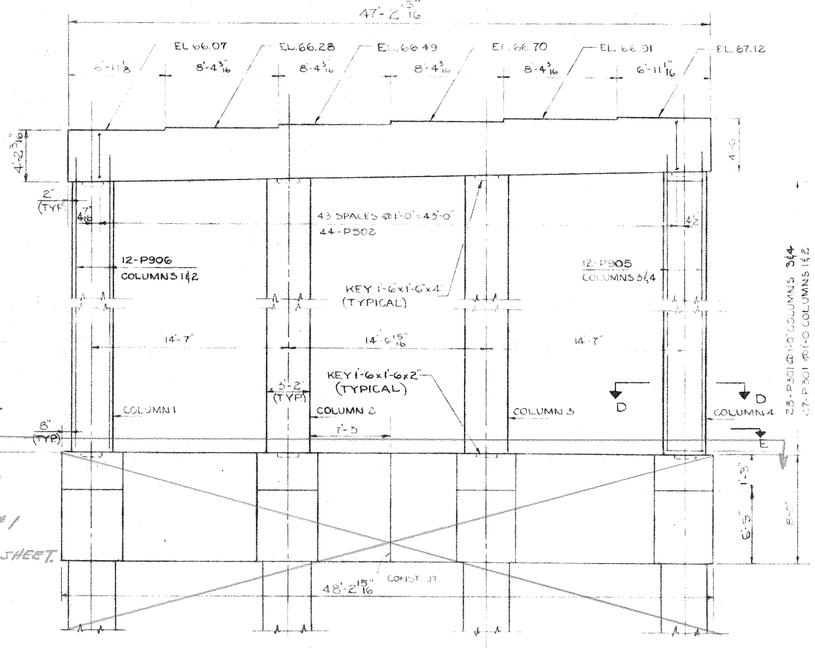




SECTIONAL PLAN E-E



ELEVATION- PIER 3 N.B.

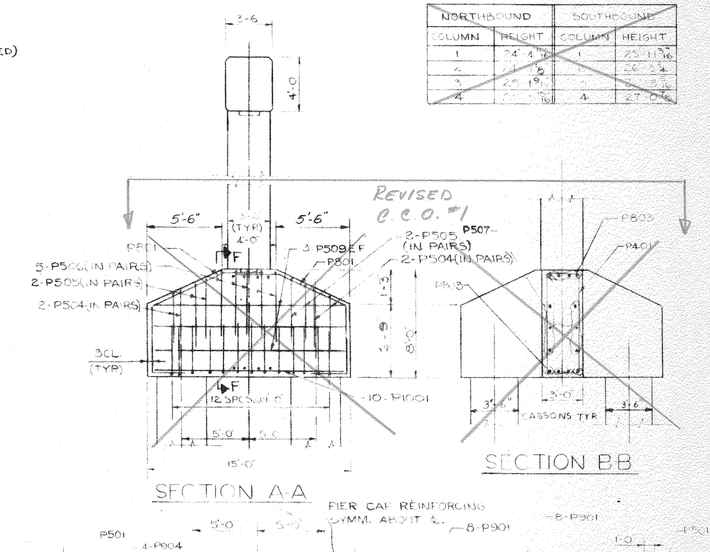


ELEVATION - PIER 3 S.B.

NOTE: REINFORCING & DIMENSIONING SIMILAR FOR BOTH PIERS EXCEPT WHERE NOTED.

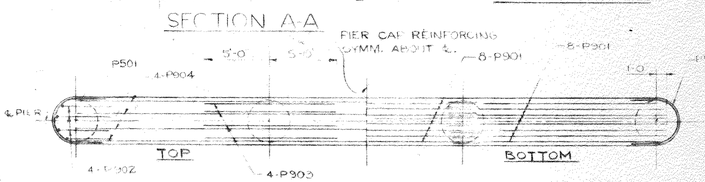
COLUMN SCHEDULE

NORTHBOUND		SOUTHBOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
1	24'-4 13/16"	1	25'-11 13/16"
2	24'-5 5/16"	2	26'-0 3/4"
3	25'-1 9/16"	3	26'-8 3/16"
4	25'-10 1/16"	4	27'-0 5/8"

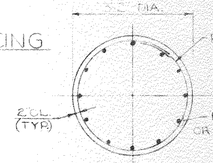


SECTION A-A

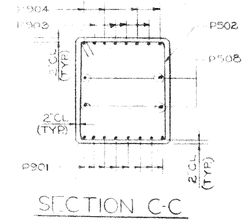
SECTION B-B



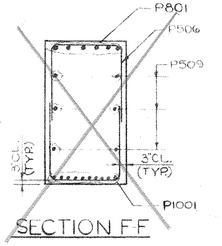
PIER CAP REINFORCING



SECTION D-D



SECTION C-C



SECTION F-F

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 AND 4
FOR REINFORCING BAR DETAILS SEE SHEET 35
FOR BEARING DETAILS SEE SHEET 32

REVISED CONCRETE
PIER 3 N.B. - 89.1 C.Y. ADD 3 S.B. - 91.7 C.Y.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
PIER 3 N.B.
PIER 3 S.B.

NO.	DATE	REVISION	BY

DESIGNED S.E.
DRAWN K.N.J.
CHECKED S.E. W.G.H.
APPROVED L.N.R.

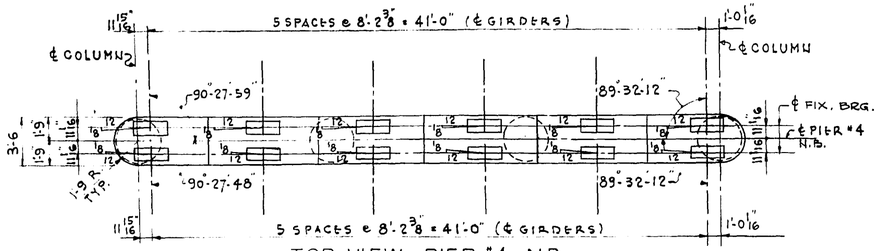
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 3/16"=1'-0"
9 OF 41 SHEET

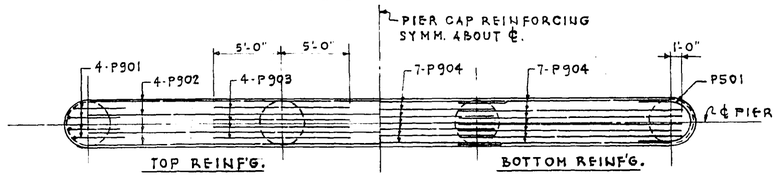
X18717

K+E PHOENIX RING ® MADE IN U.S.A.

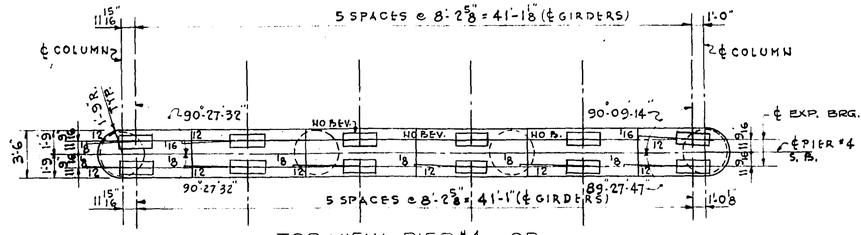
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	29	65



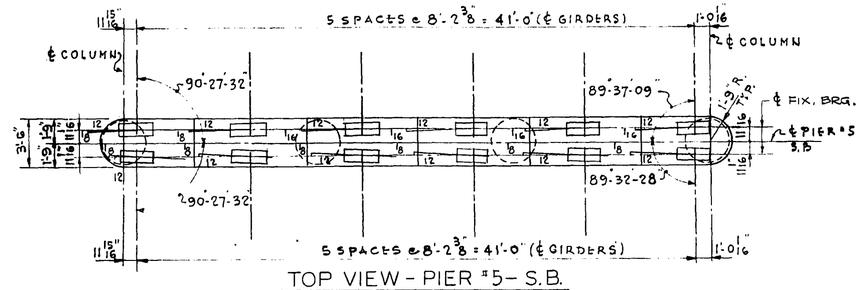
TOP VIEW - PIER #4 - N.B.



PIER CAP REINFORCING - PIER #4-N.B. & S.B.
PIER #5 - S.B.



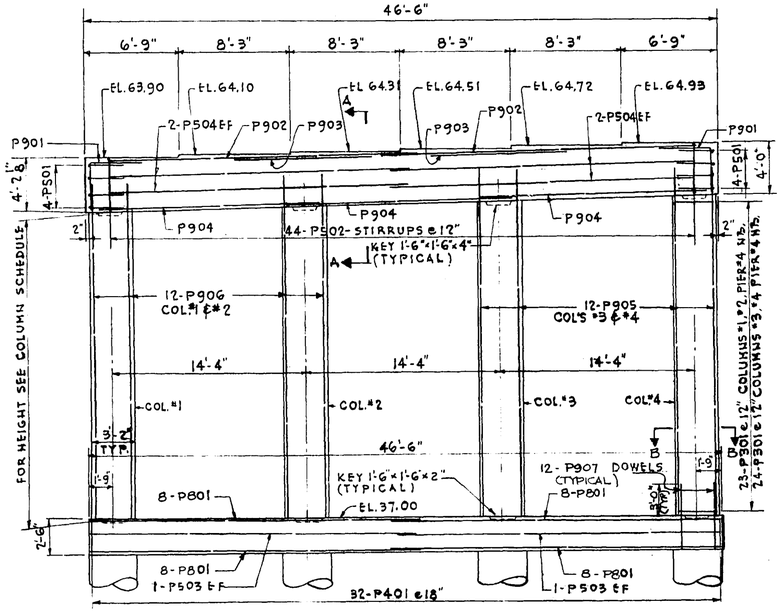
TOP VIEW - PIER #4 - S.B.



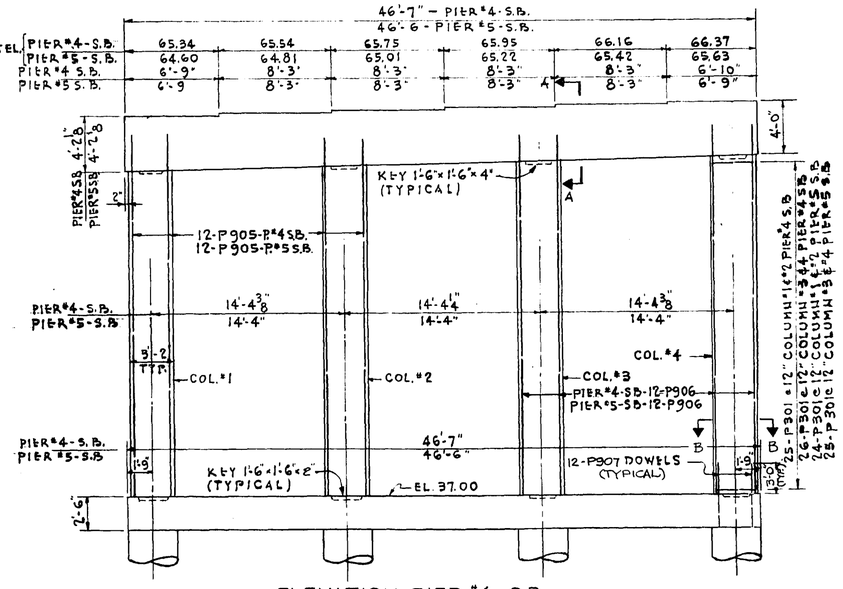
TOP VIEW - PIER #5 - S.B.

COLUMN HEIGHT SCHEDULE

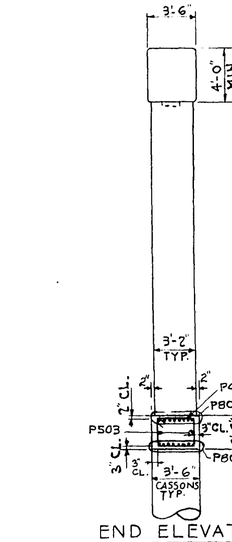
PIER #4 N. BOUND		PIER #4 S. BOUND		PIER #5 S. BOUND	
COL.	HEIGHT	COL.	HEIGHT	COL.	HEIGHT
1	22-9 1/4"	1	24-2 1/2"	1	23-5 5/8"
2	23-1 11/16"	2	24-7"	2	23-10 5/8"
3	23-6 3/16"	3	24-11 7/16"	3	24-2 9/16"
4	23-10 5/8"	4	25-3 7/8"	4	24-7"



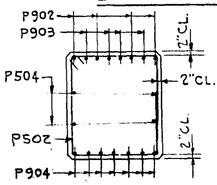
ELEVATION - PIER #4 - N.B.



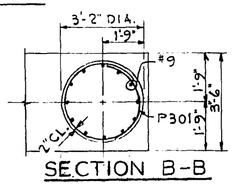
ELEVATION PIER #4 - S.B.
PIER #5 - S.B.
REINFORCING SAME AS PIER #4 - N.B.
EXCEPT AS SHOWN



END ELEVATION



SECTION A - A



SECTION B-B

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 36
FOR BEARING DETAILS SEE SHEET 32

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

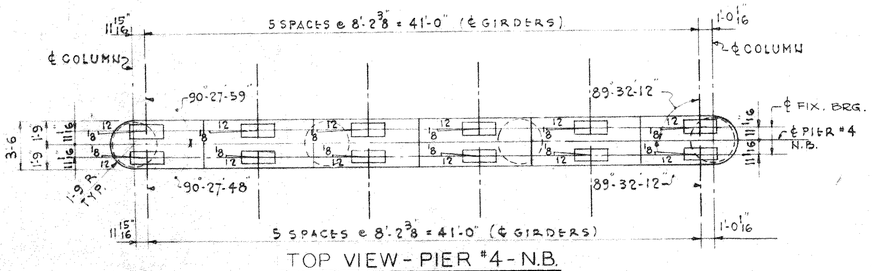
NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
PIERS 4 & 5 S.B.
PIER 4 N.B.

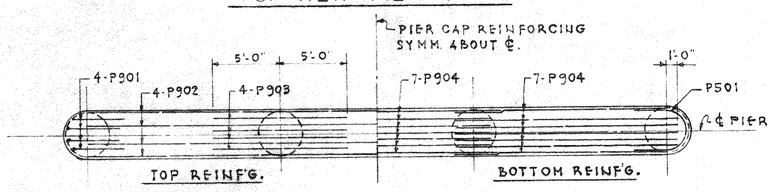
DESIGNED S.E.	DE LEUW, CATHER & CO.	SCALE 3/16" = 1'-0
DRAWN AL. B.	CONSULTING ENGINEERS	10 OF 41
CHECKED R.E.P. W.G.H.	CHICAGO	SHEET
APPROVED L.N.R.		

X18718

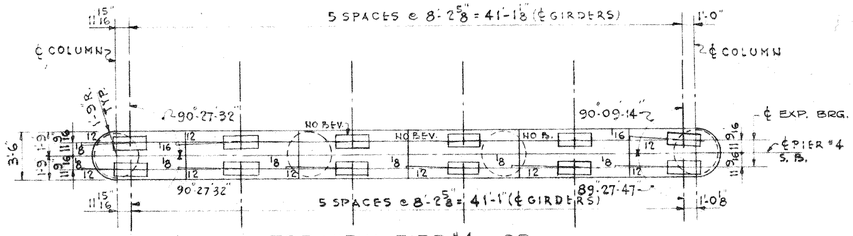
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	29	65



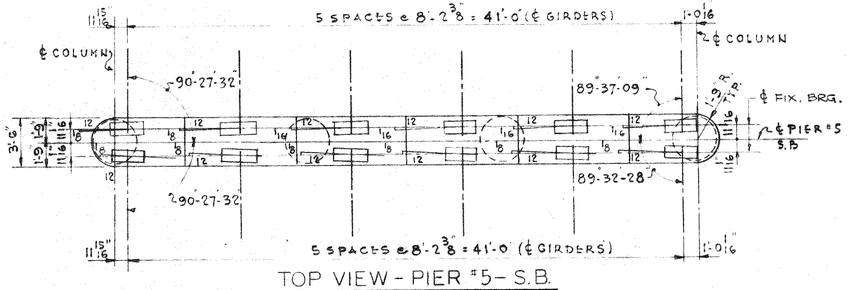
TOP VIEW - PIER #4 - N.B.



PIER CAP REINFORCING - PIER #4-N.B.℄S.B.
PIER #5 - S.B.



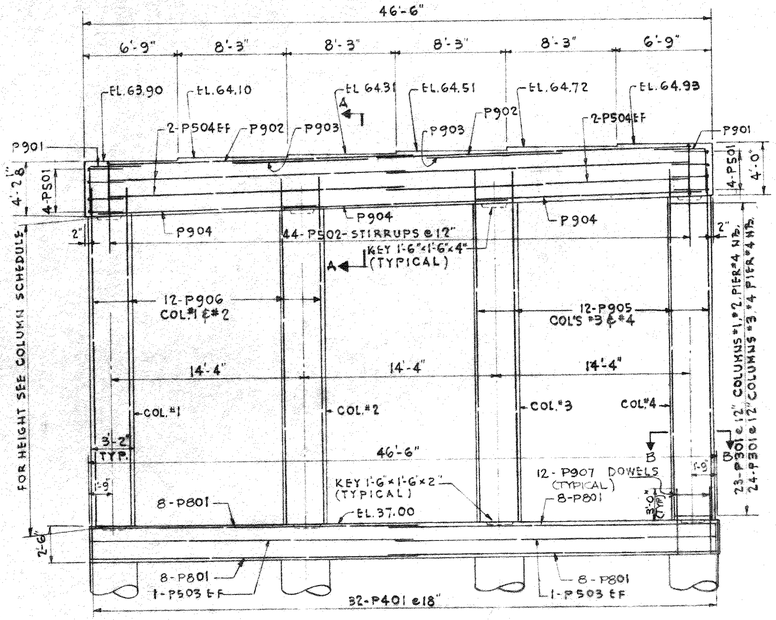
TOP VIEW - PIER #4 - S.B.



TOP VIEW - PIER #5 - S.B.

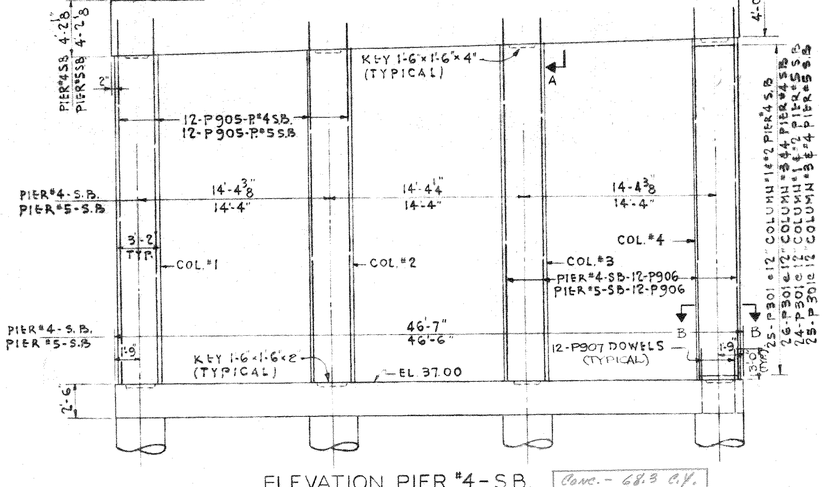
COLUMN HEIGHT SCHEDULE

PIER #4 N. BOUND		PIER #4 S. BOUND		PIER #5 S. BOUND	
COL.	HEIGHT	COL.	HEIGHT	COL.	HEIGHT
1	22-9 1/4"	1	24'-2 1/2"	1	23-5 5/8"
2	23'-1 1/16"	2	24'-7"	2	23-10 3/8"
3	23'-6 3/16"	3	24-11 1/16"	3	24-2 9/16"
4	23'-10 5/8"	4	25-3 3/8"	4	24-7"

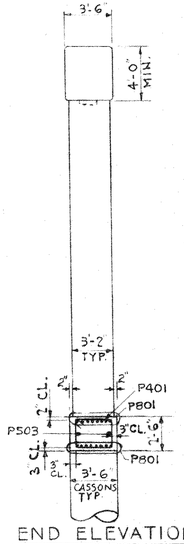


ELEVATION - PIER #4 - N.B. Conc. - 66.7 C.Y.

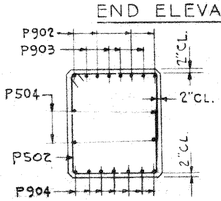
BRG. SEAT EL.						
PIER #4 - S.B.	65.34	65.54	65.75	65.95	66.16	66.37
PIER #5 - S.B.	64.60	64.81	65.01	65.22	65.42	65.63
PIER #4 S.B.	6'-9"	8'-3"	8'-3"	8'-3"	8'-3"	6'-10"
PIER #5 S.B.	6'-9"	8'-3"	8'-3"	8'-3"	8'-3"	6'-9"



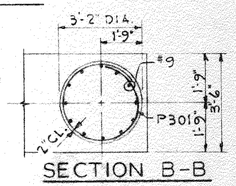
ELEVATION PIER #4 - S.B. Conc. - 68.3 C.Y.
PIER #5 - S.B. Conc. - 67.5 C.Y.
REINFORCING SAME AS PIER #4 - N.B. EXCEPT AS SHOWN



END ELEVATION



SECTION A - A



SECTION B-B

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 36
FOR BEARING DETAILS SEE SHEET 32

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

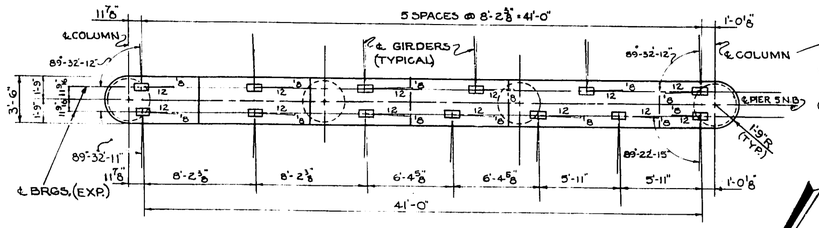
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIERS 4 & 5 S.B.
PIER 4 N.B.

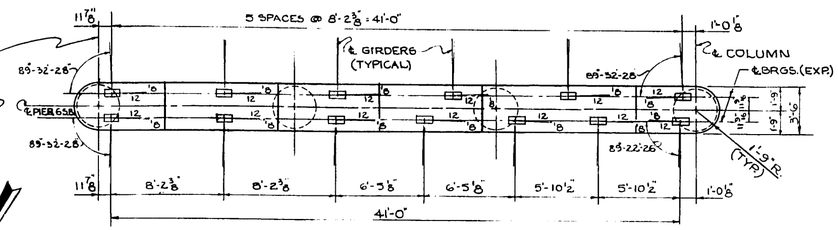
DESIGNED S.E.	DE LEUW, CATHER & CO.	SCALE 3/16"=1'-0
DRAWN AL. B.	CONSULTING ENGINEERS	10 OF 41
CHECKED R.E.P. W.G.H.	CHICAGO	SHEET
APPROVED L.N.R.		

X18718

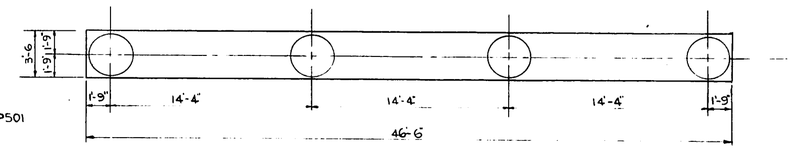
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	30	65



TOP VIEW - PIER 5 N.B.



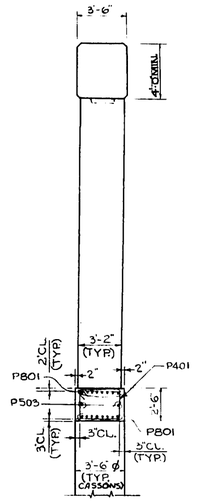
TOP VIEW - PIER 6 S.B.



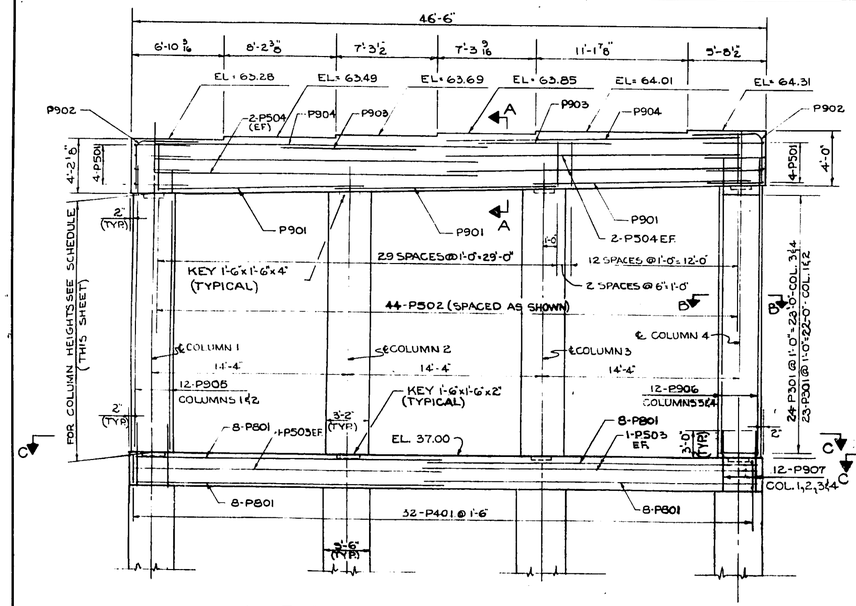
TOP REINFORCING BOTTOM REINFORCING

PIER CAP REINFORCING

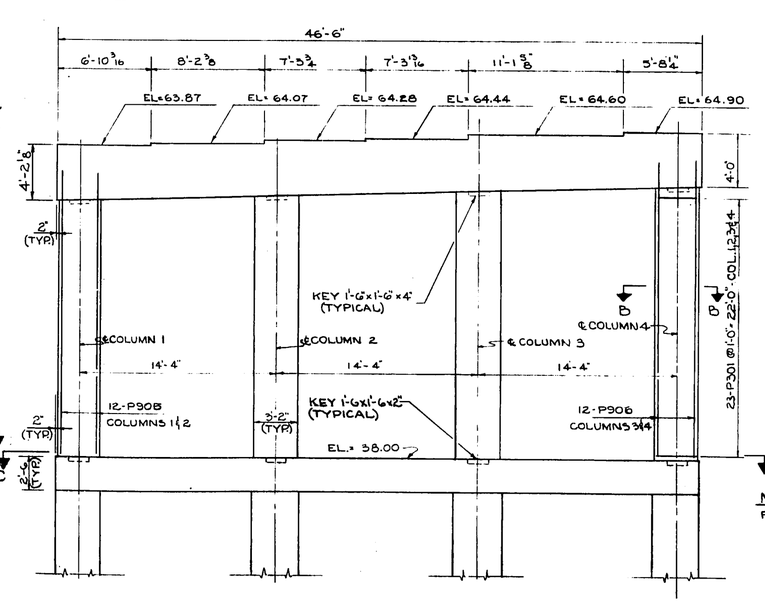
SECTION C-C



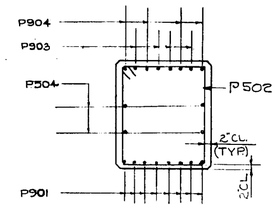
END ELEVATION



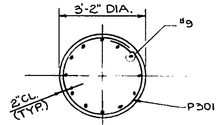
ELEVATION - PIER 5 N.B.



ELEVATION - PIER 6 S.B.



SECTION A-A



SECTION B-B

COLUMN HEIGHT SCHEDULE

PIER "5 N. BOUND		PIER "6 S. BOUND	
COLUMN NO.	HEIGHT	COLUMN NO.	HEIGHT
1	22'-1 13/16"	1	21-8 5/8
2	22-6 1/4	2	22-1 1/16
3	22-10 11/16	3	22-3 3/4
4	23'-3 3/8	4	22-10 9/16"

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 36
FOR BEARING DETAILS SEE SHEET 32

NOTE: REINFORCING & DIMENSIONING SIMILAR FOR BOTH PIERS EXCEPT WHERE NOTED.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER 6 S.B.
PIER 5 N.B.

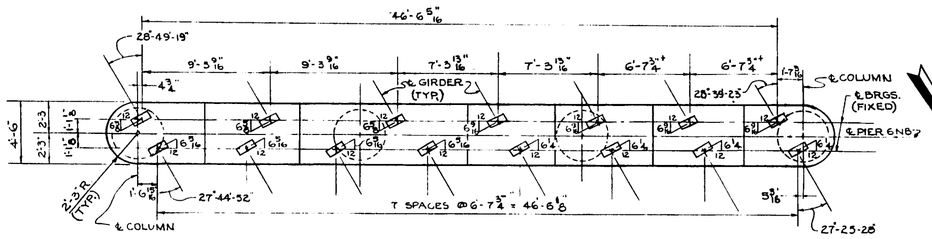
DESIGNED S.E.
DRAWN K.N.J.
CHECKED R.E.P.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

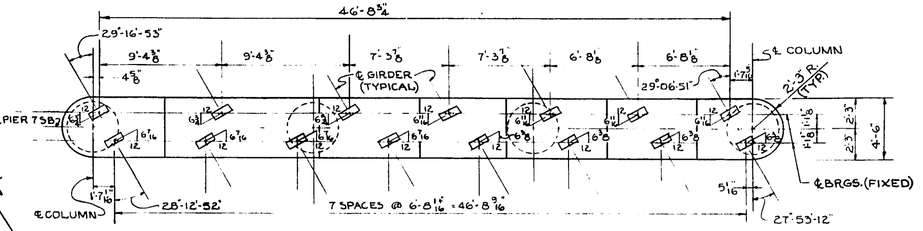
SCALE 3/16" = 1'-0"
11 OF 41 SHEET

X18719

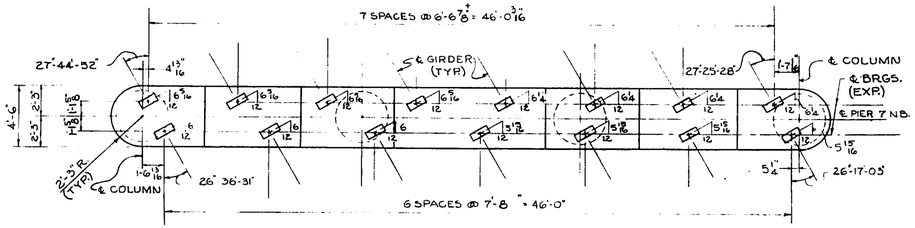
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	31	65



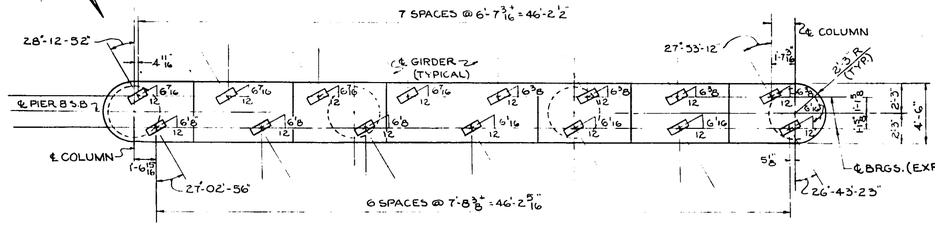
TOP VIEW PIER 6 N.B.



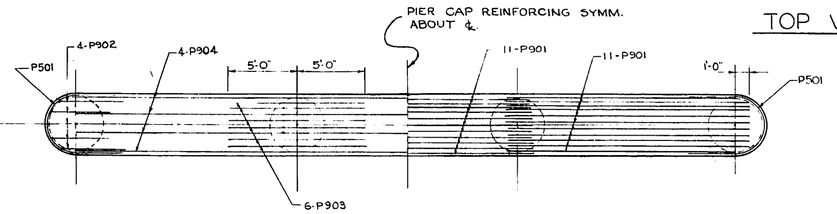
TOP VIEW PIER 7 S.B.



TOP VIEW PIER 7 N.B.

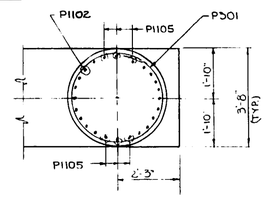


TOP VIEW PIER 8 S.B.

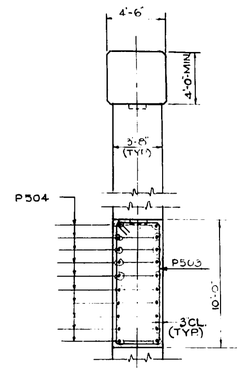


TOP REINFORCING BOTTOM REINFORCING

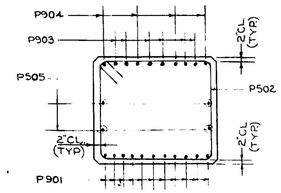
PIER CAP REINFORCING



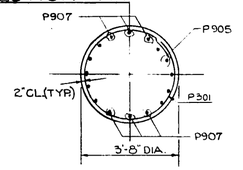
SECTION C-C (END COLUMN)



END ELEVATION

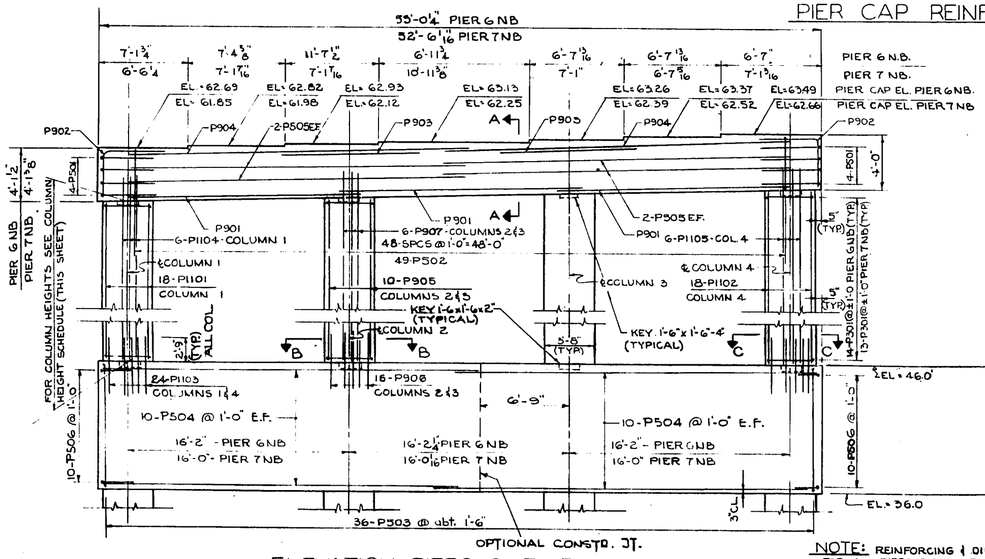


SECTION A-A



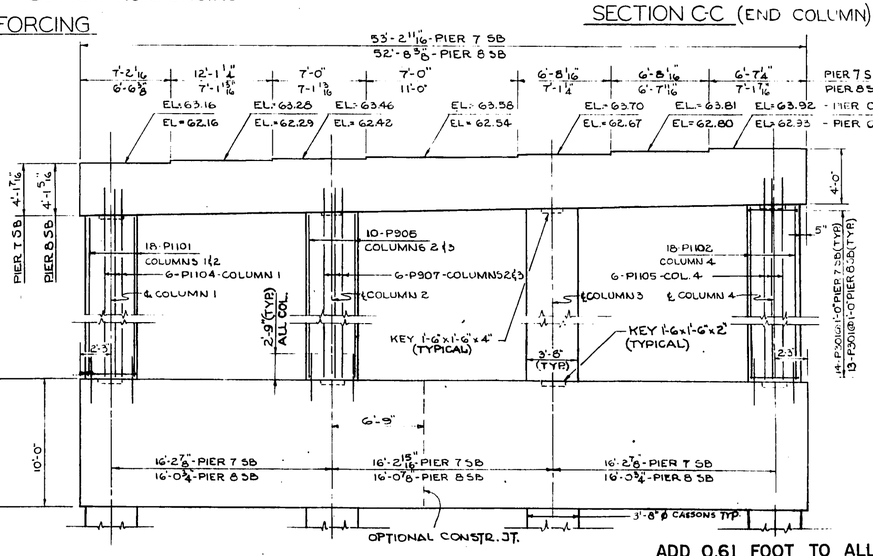
SECTION B-B

INTERIOR COLUMNS



ELEVATION - PIERS 6 & 7 N.B.

NOTE: REINFORCING & DIMENSIONING SIMILAR FOR ALL PIERS SHOWN EXCEPT WHERE NOTED.



ELEVATION PIERS 7 & 8 S.B.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

COLUMN HEIGHT SCHEDULE

	COLUMN HEIGHTS			
COLUMN NO.	1	2	3	4
PIER 6 N.B.	12'-7 3/16"	12'-10 5/8"	13'-2"	13'-5 3/8"
PIER 7 N.B.	11'-9 1/4"	12'-0 5/8"	12'-4 1/16"	12'-7 7/16"
PIER 7 S.B.	13'-1"	13'-4 3/16"	13'-7 3/8"	13'-10 9/16"
PIER 8 S.B.	12'-11 1/16"	13'-4 1/4"	12'-7 1/2"	12'-10 1/16"

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4.
FOR REINFORCING BAR DETAILS SEE SHEETS 36 AND 37
FOR BEARING DETAILS SEE SHEET 32

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND ; BRIDGE B-40-64 NORTH BOUND

PIERS 6 & 7 N.B.
PIERS 7 & 8 S.B.

NO.	DATE	REVISION	BY

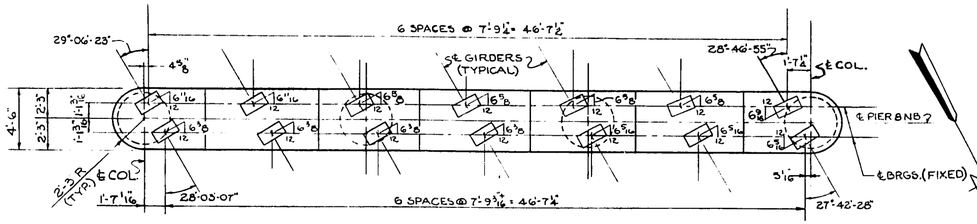
DESIGNED S.E.
DRAWN K.N.J.
CHECKED J.R.G.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

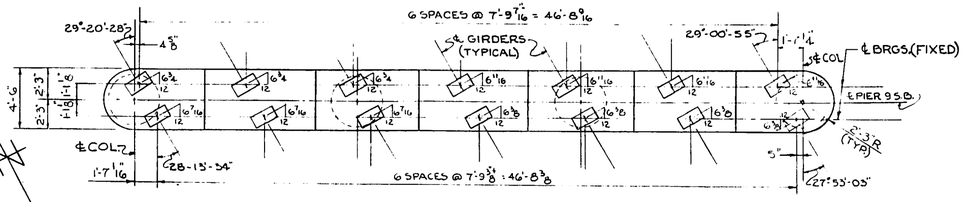
SCALE: 3/16" = 1'-0"
12 OF 41 SHEET

X18720

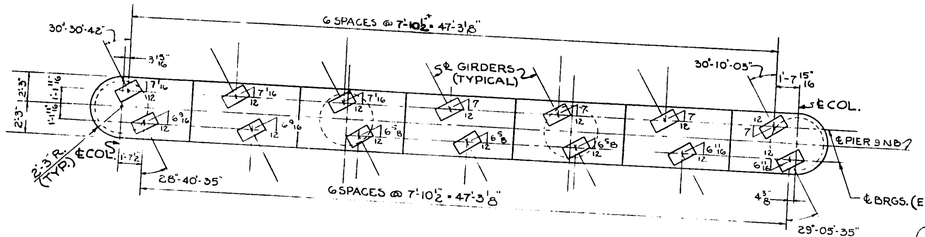
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	32	65



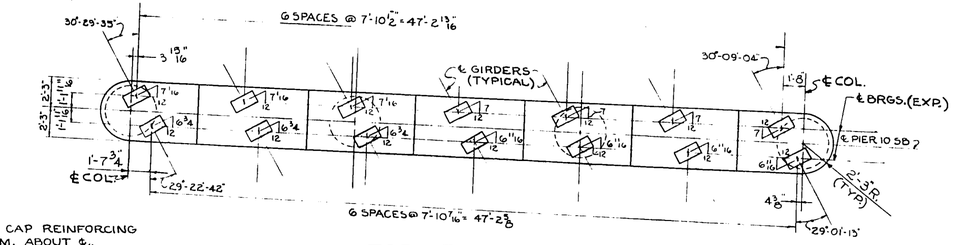
TOP VIEW PIER 8 NB



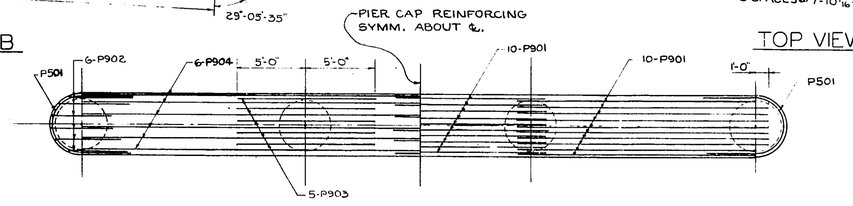
TOP VIEW PIER 9 S.B.



TOP VIEW PIER 9 NB



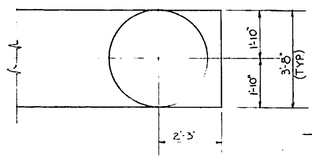
TOP VIEW PIER 10 S.B.



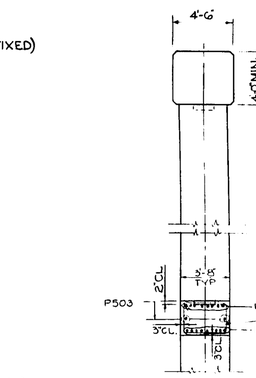
TOP REINFORCING

BOTTOM REINFORCING

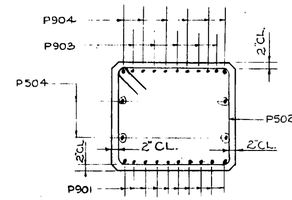
PIER CAP REINFORCING



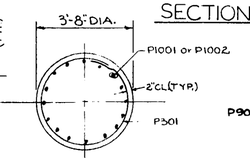
SECTION D-D



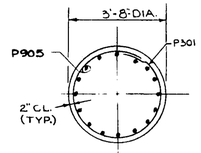
END ELEVATION



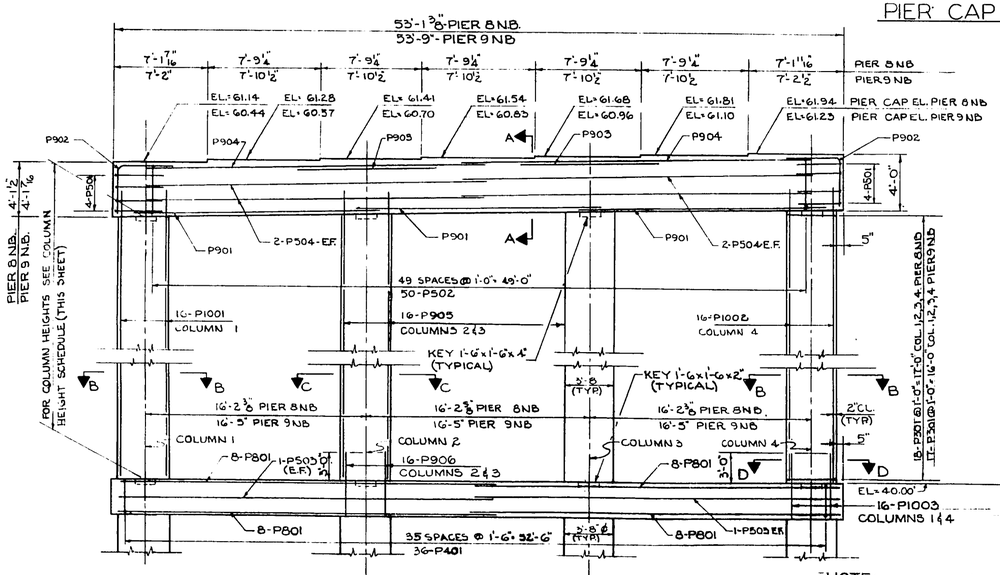
SECTION A-A



SECTION B B

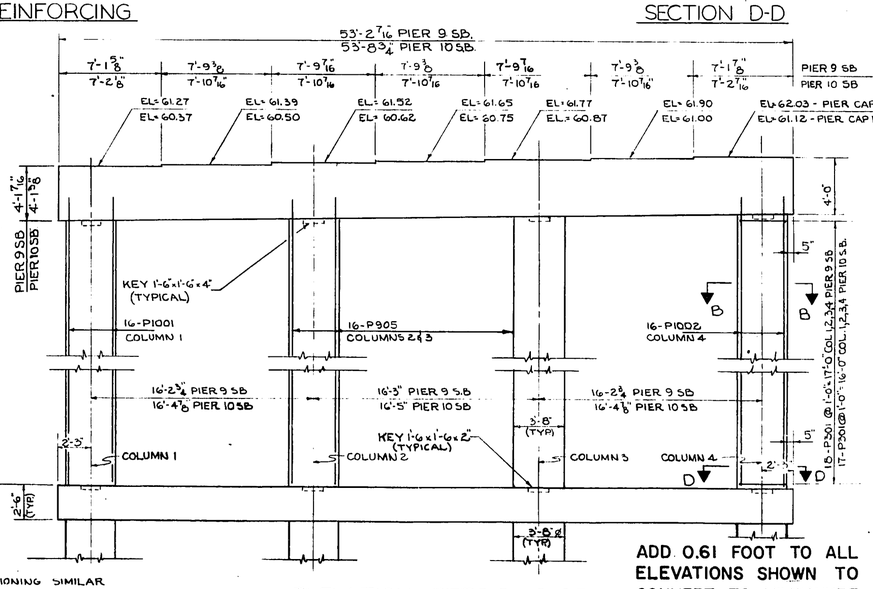


SECTION C C



ELEVATION PIERS 8 & 9 N.B.

NOTE: REINFORCING & DIMENSIONING SIMILAR FOR ALL PIERS SHOWN EXCEPT WHERE NOTED.



ELEVATION PIERS 9 & 10 S.B.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

COLUMN HEIGHT SCHEDULE

COLUMN HEIGHTS				
COLUMN NO.	1	2	3	4
PIER 8 NB	17'-0 11/16"	17'-4 1/16"	17'-7 1/2"	17'-10 7/8"
PIER 9 NB	16'-4¼"	16'-7 5/8"	16'-10 7/8"	17'-2 5/16"
PIER 9 SB	17'-2 5/16"	17'-5 7/16"	17'-8 3/8"	17'-11 7/8"
PIER 10 SB	16'-5 9/16"	16'-8 3/8"	16'-9 7/8"	17'-1"

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEETS 37 AND 38
FOR BEARING DETAILS SEE SHEET 32

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

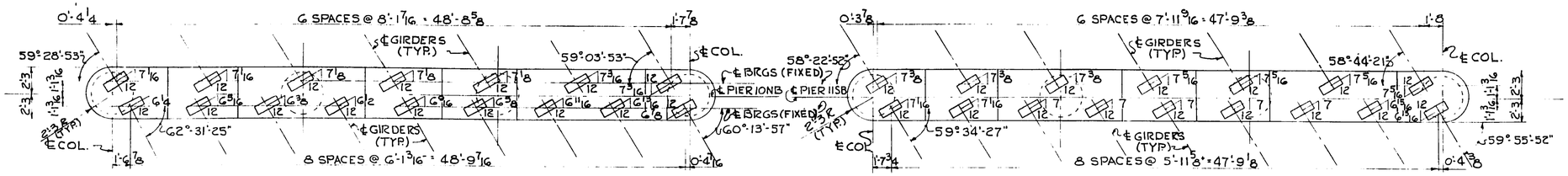
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIERS 8 & 9 N.B.
PIERS 9 & 10 S.B.

DESIGNED S.E. DRAWN K.N.S. CHECKED J.R.G. APPROVED L.N.R.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/16"=1'-0" 13 OF 41 SHEET

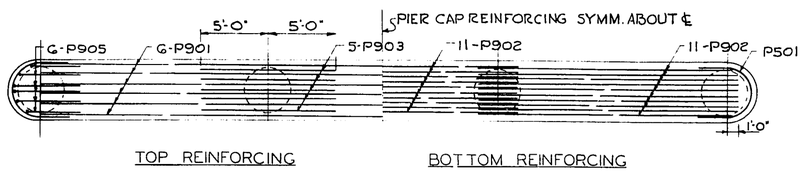
X18721

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	33	65

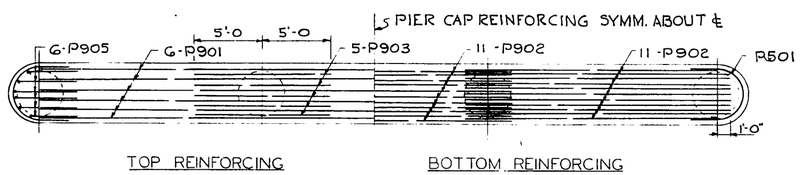


TOP VIEW - PIER 10 N.B.

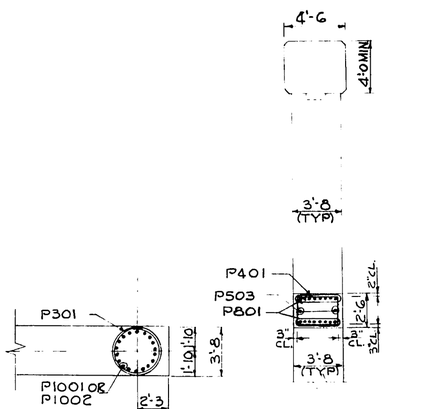
TOP VIEW - PIER 11 S.B.



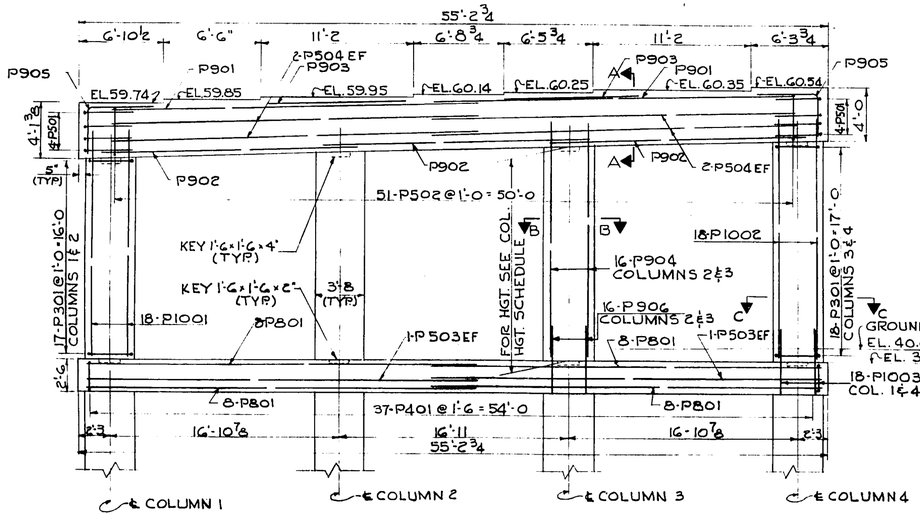
TOP REINFORCING BOTTOM REINFORCING



TOP REINFORCING BOTTOM REINFORCING

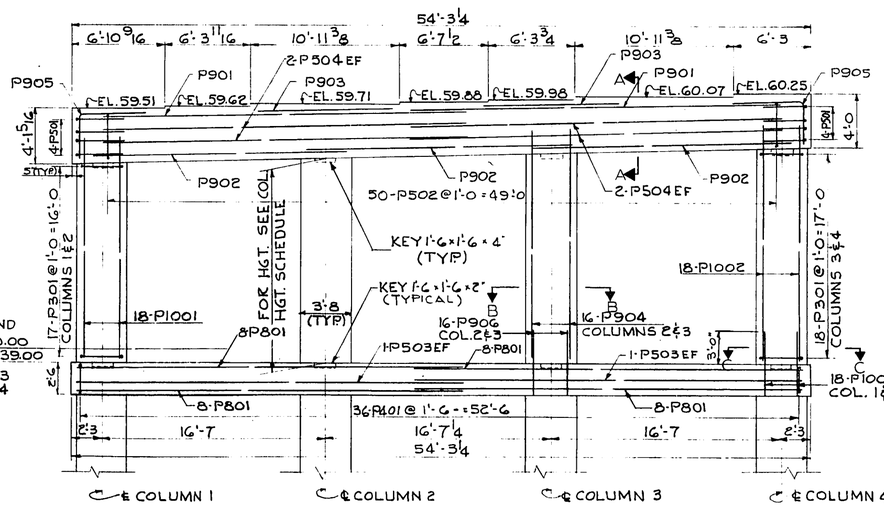


PIER CAP REINFORCING

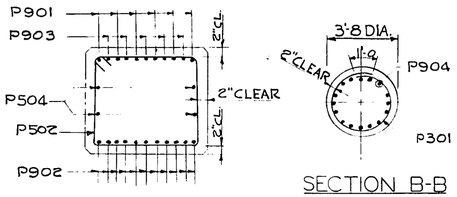


ELEVATION - PIER 10 N.B.

PIER CAP REINFORCING



ELEVATION - PIER 11 S.B.



SECTION A-A

SECTION B-B

COLUMN HEIGHT SCHEDULE

PIER 10 N.B.		PIER 11 S.B.	
COL. NO.	HEIGHT	COL. NO.	HEIGHT
1	16'-7 15/16	1	16'-5 1/4
2	16'-11 5/16	2	16'-8 5/8
3	17'-2 11/16	3	16'-11 1/2
4	17'-6 1/16	4	17'-2 9/16

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 38
FOR BEARING DETAILS SEE SHEET 32

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER 10 N.B.
PIER 11 S.B.

DESIGNED S.E.
DRAWN J.R.G.
CHECKED R.E.P.
APPROVED L. N.R.

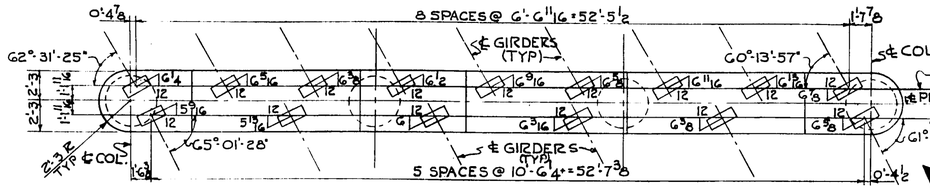
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 3/16" = 1'-0"

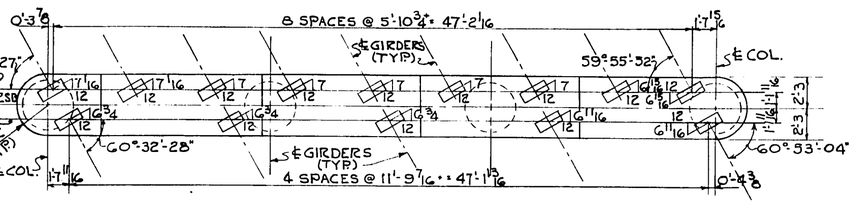
14 OF 41 SHEET

X18722

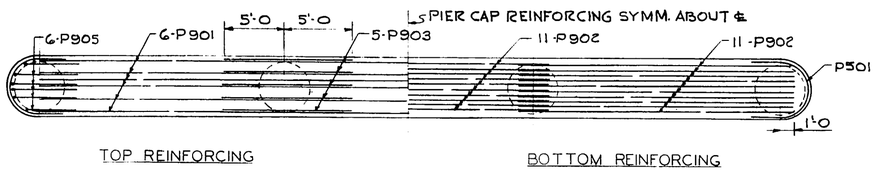
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	34	65



TOP VIEW - PIER 11 N.B.

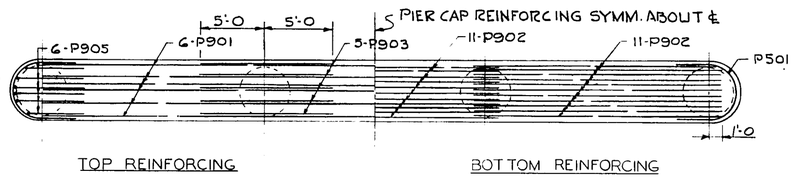


TOP VIEW - PIER 12 S.B.



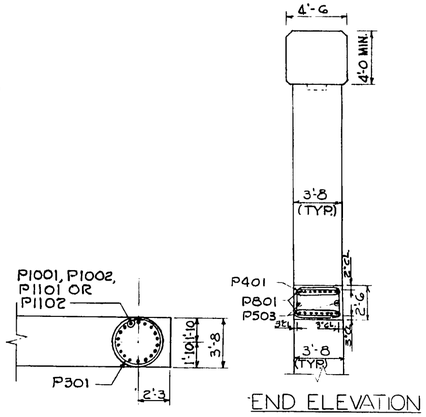
TOP REINFORCING BOTTOM REINFORCING

PIER CAP REINFORCING

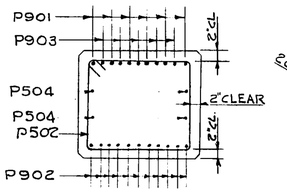


TOP REINFORCING BOTTOM REINFORCING

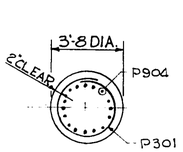
PIER CAP REINFORCING



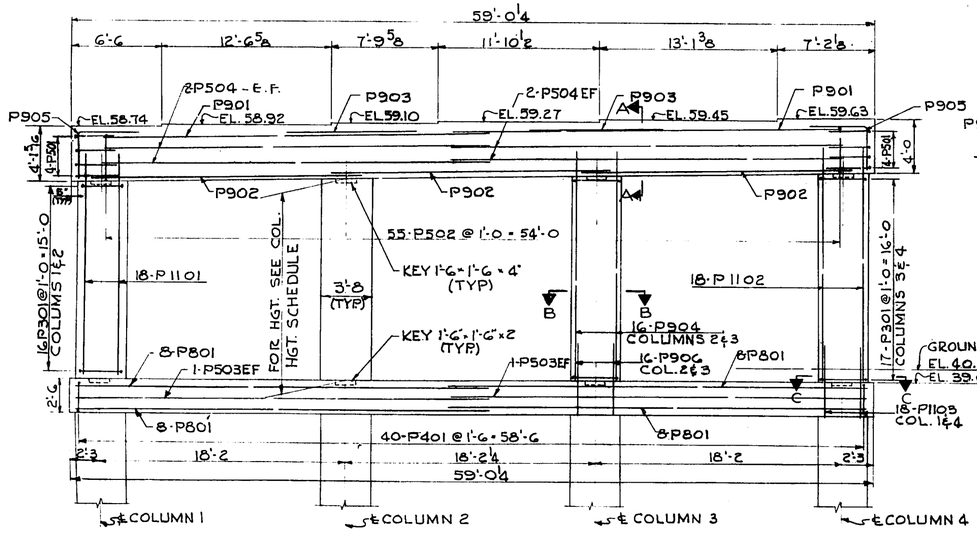
SECTION C-C



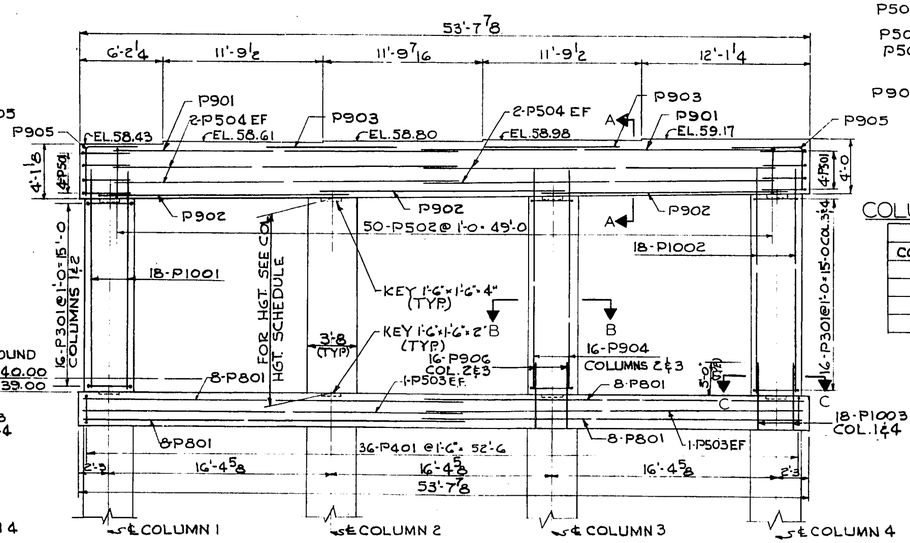
SECTION A-A



SECTION B-B



ELEVATION - PIER 11 N.B.



ELEVATION - PIER 12 S.B.

COLUMN HEIGHT SCHEDULE

PIER # 11 N.B.		PIER # 12 S.B.	
COL. NO.	HEIGHT	COL. NO.	HEIGHT
1	15'-8	1	15'-4 7/16
2	15'-11 11/16	2	15'-7 1/2
3	16'-3 7/16	3	15'-10 9/16
4	16'-7 1/8	4	16'-1 5/8

NOTES:
FOR CAISSON LOCATION PLAN SEE SHEETS 3 & 4
FOR REINFORCING BAR DETAILS SEE SHEET 38
FOR BEARING DETAILS SEE SHEET 32

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PIER 11 N. B.
PIER 12 S. B.

NO.	DATE	REVISION	BY

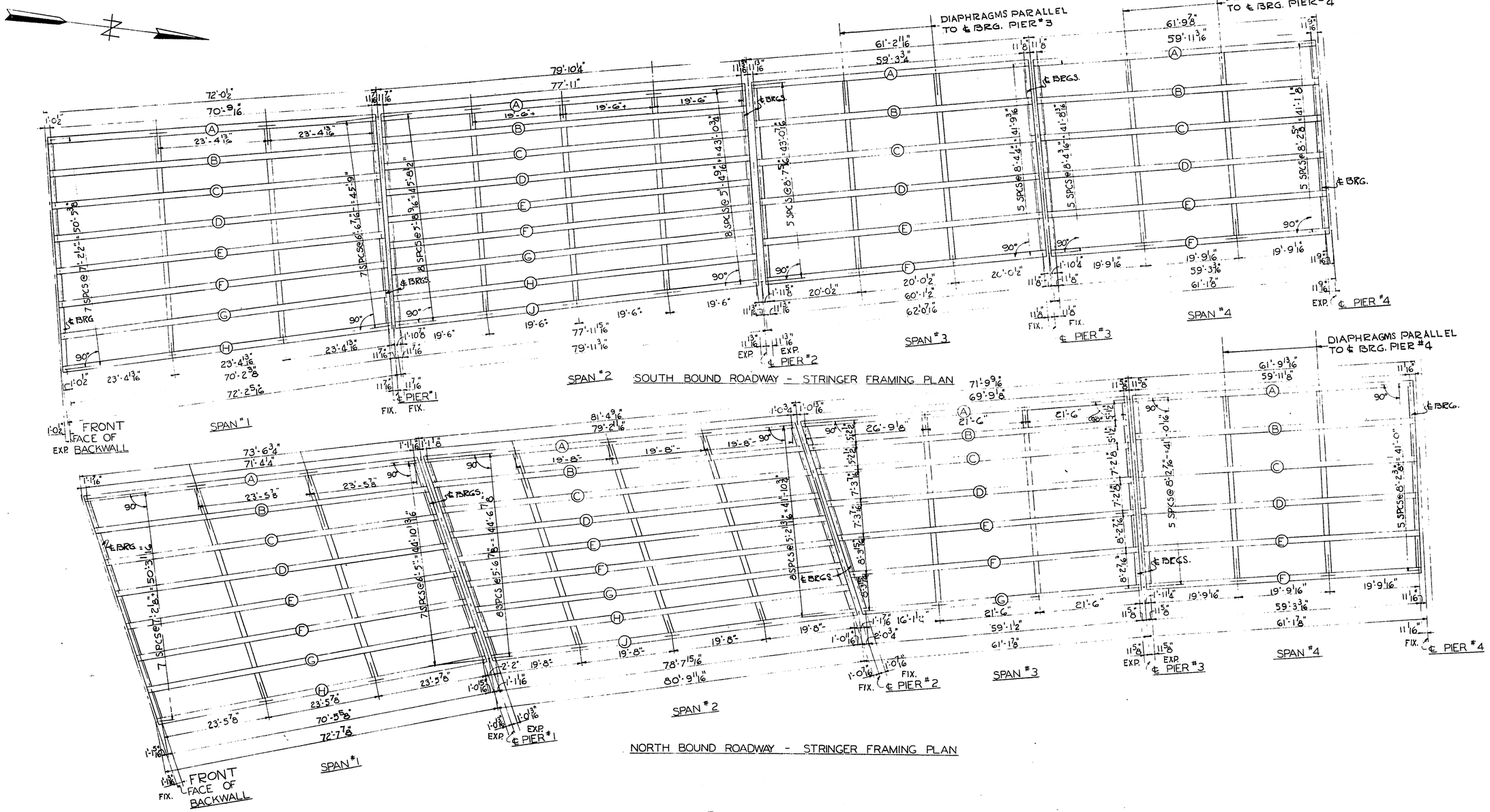
DESIGNED S.E.
DRAWN J.R.G.
CHECKED R.E.P.
APPROVED L.N.R.

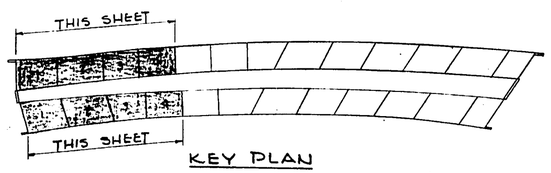
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE 3/16" = 1'-0
15 OF 41 SHEET

X18723

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73')	35	65





KEY PLAN

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FRAMING PLAN
SPANS 1, 2, 3 & 4 N.B.
SPANS 1, 2, 3 & 4 S.B.

NO.	DATE	REVISION	BY

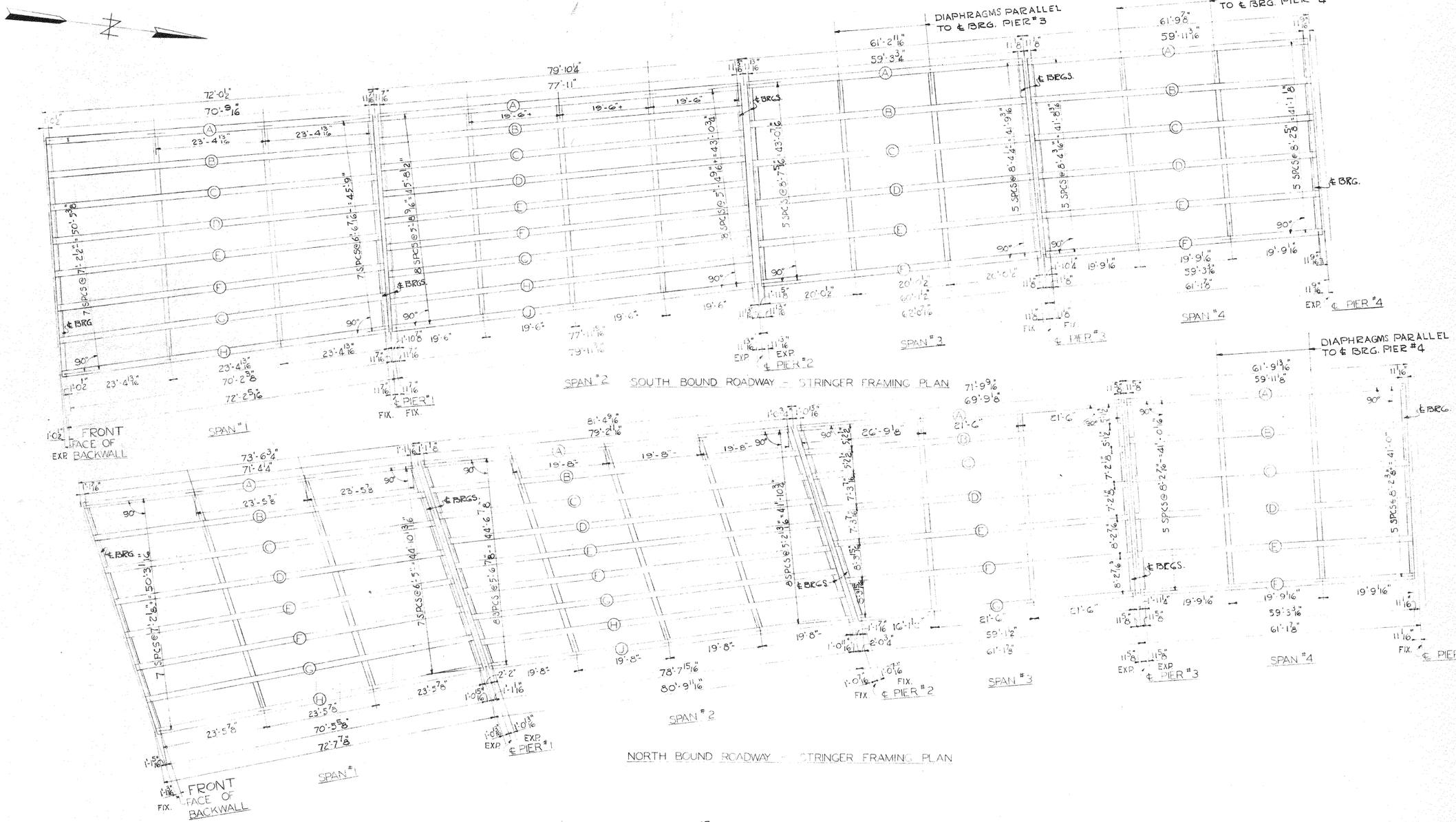
DESIGNED D.M.A.
DRAWN D.M.A.
CHECKED J.R.G. W.G.H.
APPROVED L. N. R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 3/32" = 1'-0"
16 OF 41 SHEET

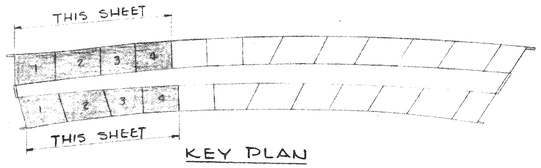
X18724

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	35	65



SPAN #2 SOUTH BOUND ROADWAY - STRINGER FRAMING PLAN

NORTH BOUND ROADWAY - STRINGER FRAMING PLAN



KEY PLAN

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

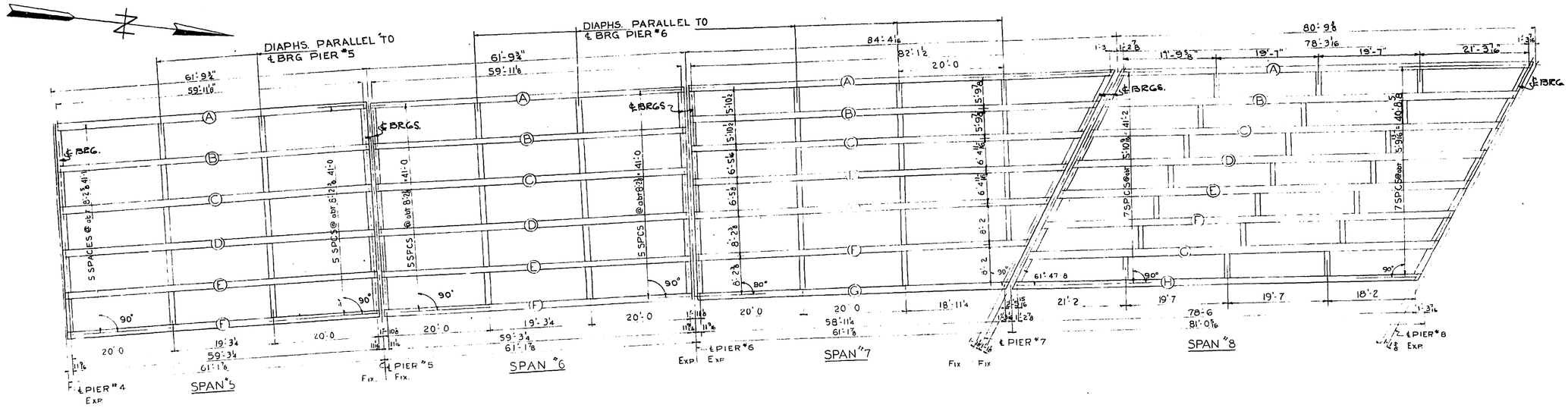
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FRAMING PLAN
SPANS 1, 2, 3 & 4 N.B.
SPANS 1, 2, 3 & 4 S.B.

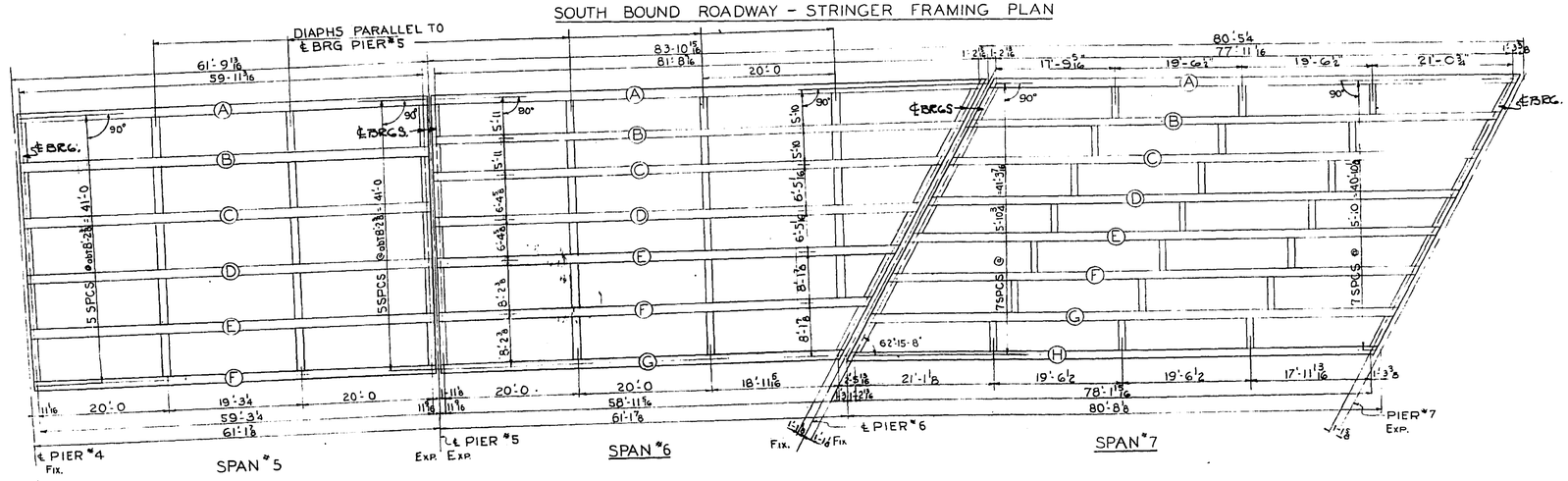
DESIGNED	D.M.A.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/32"=1'-0"
DRAWN	D.M.A.		16 OF 41 SHEET
CHECKED	J.R.G. W.G.H.		
APPROVED	L.N.R.		

X18724

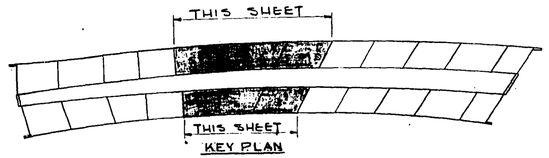
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	36	65



SOUTH BOUND ROADWAY - STRINGER FRAMING PLAN



NORTH BOUND ROADWAY - STRINGER FRAMING PLAN



MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FRAMING PLAN
SPANS 5, 6, & 7 N.B.
SPANS 5, 6, 7 & 8 S.B.

NO.	DATE	REVISION	BY

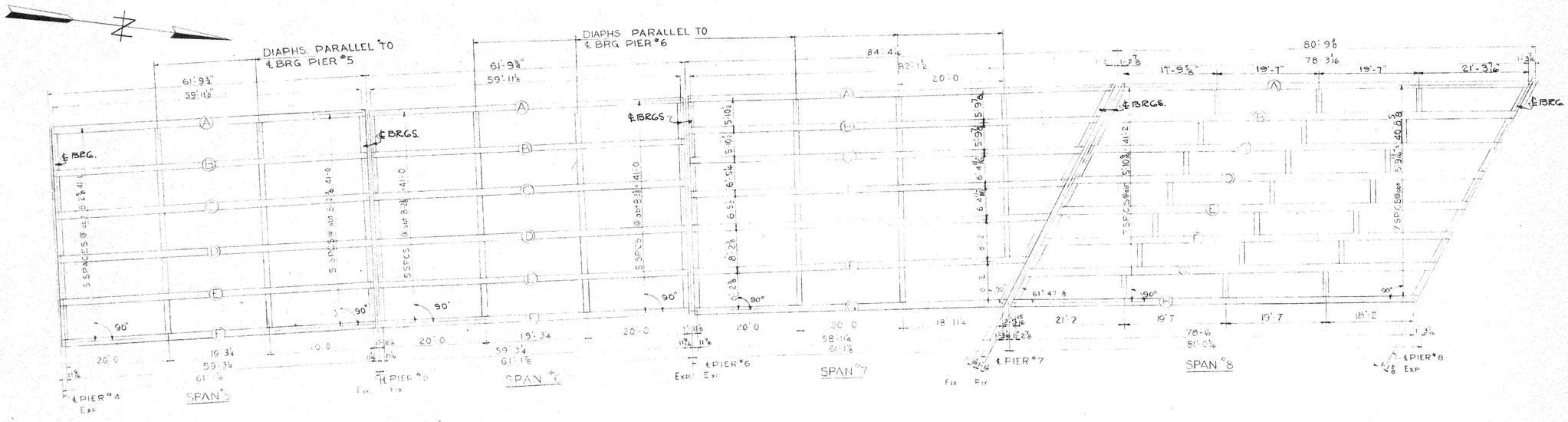
DESIGNED D.M.A.
DRAWN D.M.A.
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APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

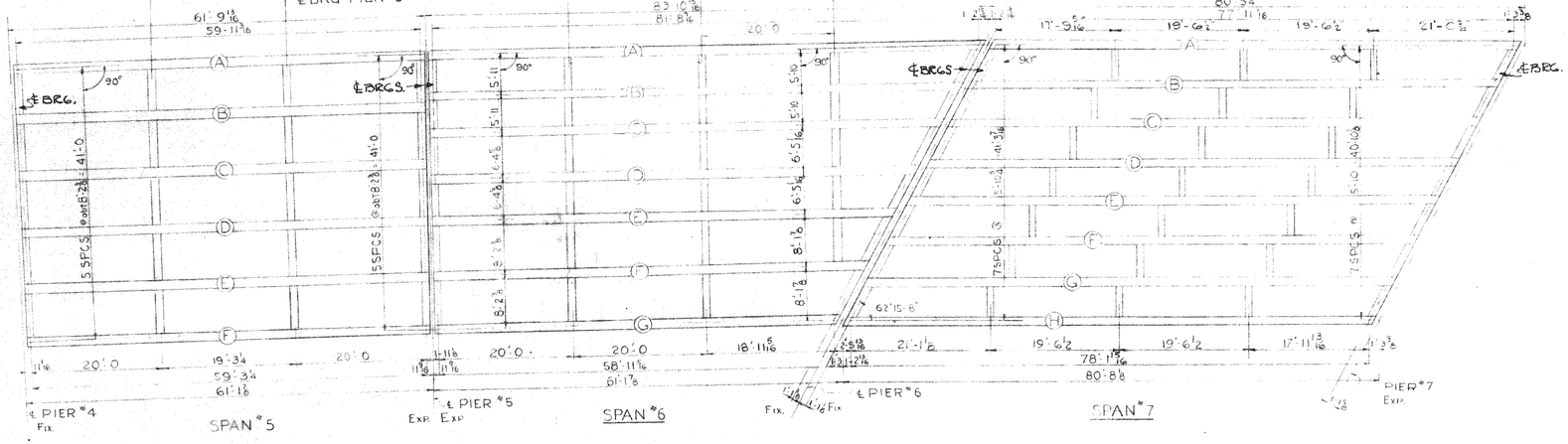
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17 OF 41 SHEET

X18725

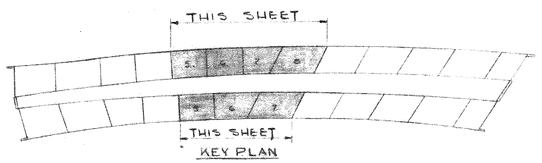
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	36	65



SOUTH BOUND ROADWAY - STRINGER FRAMING PLAN



NORTH BOUND ROADWAY - STRINGER FRAMING PLAN



NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

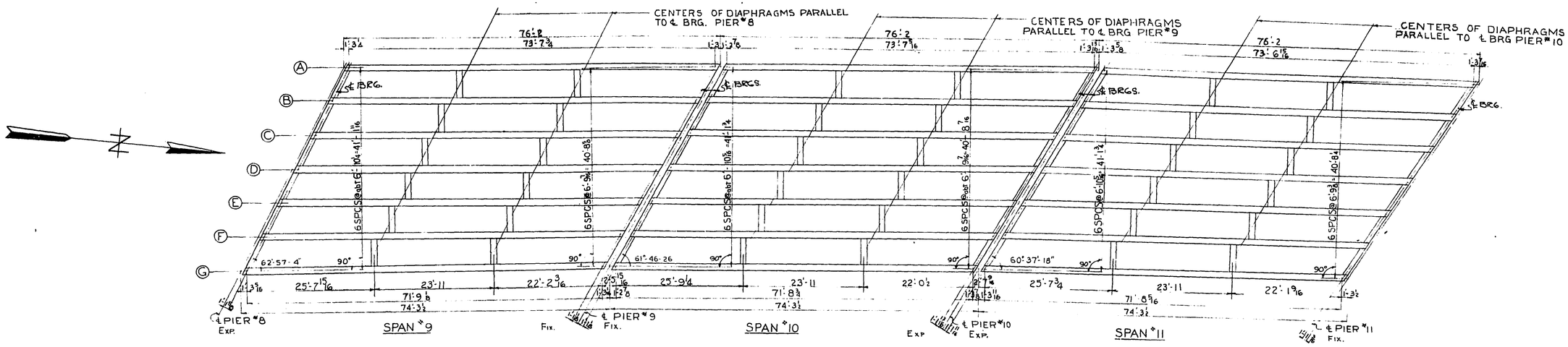
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FRAMING PLAN
SPANS 5, 6, & 7 N. B.
SPANS 5, 6, 7 & 8 S.B.

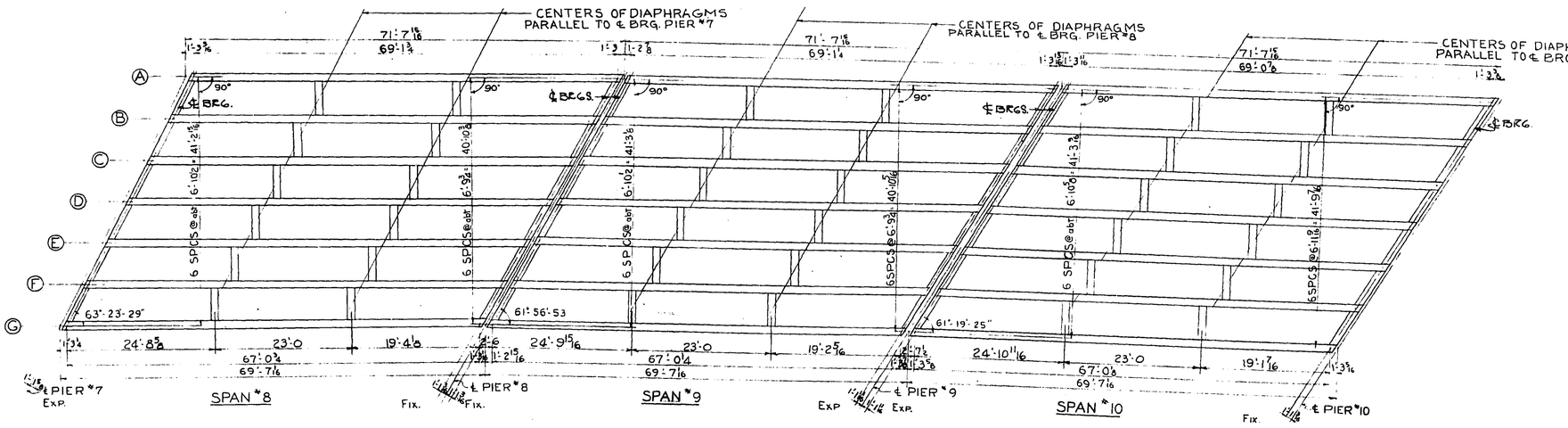
DESIGNED	D.M.A.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/32" = 1'-0"
DRAWN	D.M.A.		17 OF 41 SHEET
CHECKED	J.R.G. W.G.H.		
APPROVED	L. N. R.		

X18725

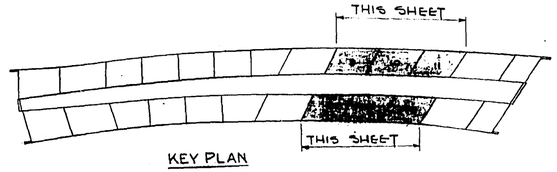
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	37	65



SOUTH BOUND ROADWAY — STRINGER FRAMING PLAN



NORTH BOUND ROADWAY - STRINGER FRAMING PLAN



KEY PLAN

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FRAMING PLAN
SPANS 8, 9 & 10 N. B.
SPANS 9, 10 & 11 S. B.

NO.	DATE	REVISION	BY

DESIGNED D.M.A.
DRAWN D.M.A.
CHECKED J.R.G. W.G.H.
APPROVED L.N.R.

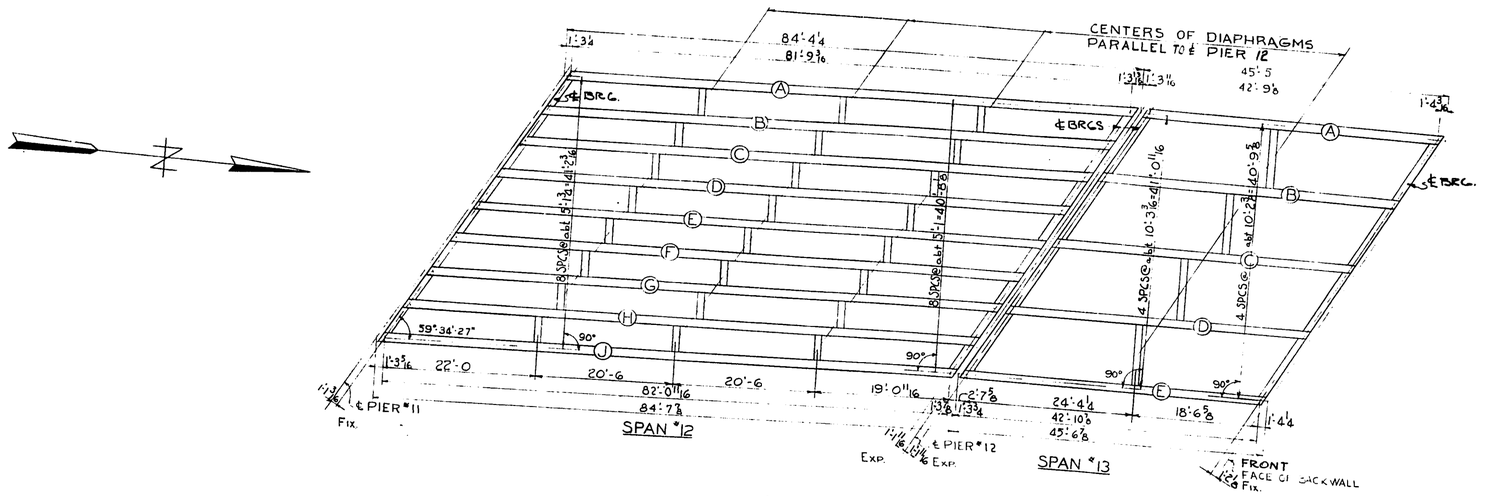
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 3/32" = 1'-0

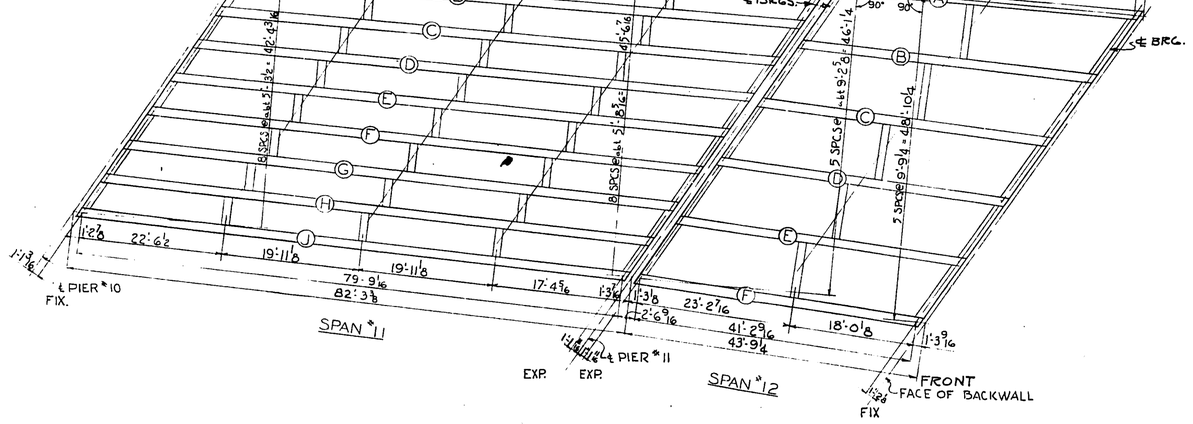
18 OF 41 SHEET

X18726

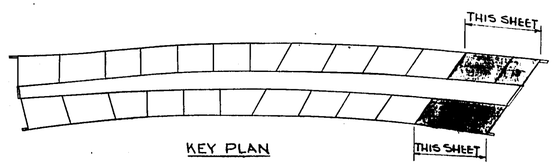
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	38	65



SOUTH BOUND ROADWAY – STRINGER FRAMING PLAN



NORTH BOUND ROADWAY – STRINGER FRAMING PLAN



NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

FRAMING PLAN
SPANS 11 & 12 N.B.
SPANS 12 & 13 S.B.

DESIGNED D.M.A. DRAWN J.R.G. CHECKED R.E.P. W.G.H. APPROVED L.N.R.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE 3/32"=1'-0"	19 OF 41 SHEET

X18727

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	39	65

CONCRETE ABOVE JOINT TO BE PLACED AFTER BRIDGE DECK CONCRETE IS IN PLACE

AT PIERS THIS DIMENSION TO BE EQUAL IN BOTH SPANS.

1'-6 MIN. 9" 3'-0 MAX. | 3" 1'-0" NORMAL | 9" 1'-6 MIN. 3'-0 MAX. | 1'-6 MIN. 9" 3'-0 MAX. | 9" 1'-6 MIN. 3'-0 MAX. | 1'-6 MIN. 9" 3'-0 MAX. | 9" 1'-6 MIN. 3'-0 MAX.

TOP OF ROADWAY — TOP OF CURVE

CONST. JT. — CONST. JT.

℄ EXP. BRG. — ℄ FIXED BRG. — ℄ FIXED BRG. B — B — ℄ EXP. BRG. — ℄ EXP. BRG. — ℄ FIXED BRG.

TYP. INTERIOR DIAPHRAGM

SEE SHEET 32 FOR BEARINGS

¾" BEVEL (TYP.)

ALL DIMENSIONS ARE ALONG ℄ OF GIRDER EXCEPT THOSE MARKED NORMAL

SOUTH ABUT. SOUTH BOUND RDWY ONLY

℄ PIER — ℄ PIER

NORTH ABUT.

TYP. STRINGER DETAIL

KEYWAY SPACING 9" 1'-0" 1'-0" — 9@1'-9" = 15'-9" — SYMM. ABOUT ℄

STIRRUP SPC'G. — SECTION 1-5" — SECTION 2-9" — SECTION 3-18" — SECTION 4-18"

WHERE STIRRUPS INTERFERE WITH KEYWAY SPACING SHIFT KEYWAY TO CLEAR STIRRUPS

POST TENSION GIRDER CTR. OF GRAVITY OF PRESTRESSING STEEL

LIFTING DEVICE-SEE DETAIL "A"

END OF PRECAST GIRDER — ℄ BRG — c/c BEARING + 3" — c/c BEARING — c/c BEARING + 3"

TYP. STRINGER DETAIL

℄ BRG — MAX. SLOPE FOR LIFT — 1½ — 1¼ϕ HOLE BAR 4"×1"×2'-6" — 7" — 2" — 4" — 2'-2" — 2" — 2-¾"ϕ×1'-0" BARS — 1¼

DETAIL "A" - LIFTING DEVICE

1'-4" — 4½" — 4½" — 1'-7" — 7½" — 7" — 7½" — 7" — 3'-9" — 1'-10"

TYPICAL GIRDER CROSS SECTION

END OF PRECAST GIRDER

6×6 NO. 8 WIRE MESH — NO. 4 BARS BEND IN FIELD — 2-NO. "X" FULL LENGTH — 4-NO. "Y" 8'-0" LG. 2 EACH END OF GIRDER — COMBINATION TYPE GIRDERS ONLY — 2-NO. "X" FULL LENGTH 4-NO. "Y" 8'-0", 2 EACH END OF GIRDER — SHEAR KEYS-1"×4"×6" TO MISS STIRRUPS

ENDS OF GIRDERS SHALL BE ROUGHENED BY SAND BLASTING OR OTHER SUITABLE MEANS AS APPROVED BY THE ENGINEER PRIOR TO PLACING OF IN SITU CONCRETE AT GIRDER ENDS.

NO. 4 STIRRUPS IN PAIRS — NO. 6 BARS FULL LENGTH FOR POST TENSIONED OR PRETENSIONED GIRDERS

1'-4" — 1'-10"

TOP VIEW OF GIRDER

2-NO. 6 ALL SPANS FOR POST TENSION OR PRETENSIONED GIRDERS

1¼ MIN. CL. — NO. 4 STIRR. IN PAIRS — 1¼ MIN. CL. — NO. 4 BARS AT ENDS OF GIRD.

NO. 5 BARS FULL LENGTH POST TENSION ONLY

SECT. C-C — SECT. D-D

NO. 4 BARS BEND IN FIELD — END OF PRECAST GIRDER — 1¼ MIN. CL.

℄ GIRDER SYMM. ABOUT ℄ — 6×6 NO. 8 WIRE MESH — NO. 4 STIRRUPS IN PAIRS — NO. 5 BAR FULL LENGTH POST TENSION ONLY

32" — 7½" — SECT. A-A — 8'-8" — SECT. B-B

HALF SECTIONS A-A ℄ B-B

COVER MAY BE CAST WITH GIRDER WHERE NO HARDWARE OR WIRE PROJECT.

END OF PRECAST GIRDER — 1" DEEP-TYP. — 2" — ℄ GIRDER — CAST IN PLACE CONC. — FACE OF ABUTMENT BACKWALL — 4" — 4" 6" — ℄ BRG. — VARIES WITH SKEW

SECTION E-E AT ABUT.

END OF PRECAST GIRDER — 9" — PRESET BOLT WHERE REQUIRED FOR EXPANSION JOINTS, SEE SHEETS 30 & 31 — CAST IN PLACE CONC. — 3" EXPANSION END — 2" FIXED END — 4" TYP. — 4½" — 5½" — ℄ GIRDER — ℄ PIER — 4" 6" — ℄ BRG. — VARIES WITH SKEW

SECTION E-E AT PIER

FOR PRETENSION & COMBINATION TYPE GIRDERS

FOR POST TENSION TYPE GIRDERS

c/c BRG. + 6" — 4 POINT — c — d — a — f — BOTTOM OF GIRDER

SEE SHEETS 21, 22, & 23 FOR DIMENSIONS a, b, c, d, e, & f

CENTER OF GRAVITY OF POST TENSION ELEMENT FOR COMBINATION TYPE GIRDERS. IN THE PRETENSIONED TYPE OF GIRDER, THE CENTER OF GRAVITY OF THE TENDONS MARKED 'TO BE DEFLECTED' MAY BE RAISED A MAX. OF 3" AT THE 4 POINT AND THE GIVEN END DIMENSIONS HELD.

DEFLECTED STRAND PROFILE

1'-4" TYP. — 4" TYP. — 2" CL. TYP. — 2-NO. 6 BARS FULL LENGTH OF GIRDER — NO. 4 STIRRUPS IN PAIRS BEND AS SHOWN — 1¼ MIN. CL. TYP. — 2-1½ I.D. SLEEVES AT 6" CTRS. TO BE CAST IN INTERIOR GIRDERS WHICH HAVE SKEWED DIAPHRAGMS AND THREADED INSERTS AT 6" CTRS TO BE CAST IN INTERIOR SIDES OF FASCIA GIRDERS AND GIRDERS WITH DIAPHRAGMS NORMAL TO ℄ GIRDER. SKEW SLEEVES AND INSERTS IN DIRECTIONS OF DIAPHRAGMS. SLEEVES AND INSERTS SHALL BE BEVELED TO FIT FLAT AGAINST FORM.

3'-9" — 1'-7" — 3'-11¼" — 4½" — 4½" — 7" — 7½" TYP. — 7" — 7½" TYP. — 8" — 8" — 1'-6" — 1'-10" TYP.

SECTION G - G PRETENSION GIRDERS

2-NO. "X" FULL LENGTH — 4-NO. "Y" 8'-0" LG. 2 EACH END OF GIRDER — 8" — 8" — ℄ POST TENSION ELEMENT

ALT. SECTION G - G COMBINATION TYPE GIRDERS

¾ MALLEABLE HEX NUT 3" LG. OR APPROVED EQUAL INSERT WELD TO 4" TIE ROD. — CAP THIS END

SECTION F-F

VARIES-SEE PIER PLANS — GIRDER STIRR. — #4 TIE ROD, 4'-0" LG. WELDED TO STIRR — 6" — 6" — GONC. DIAPHRAGM — #6 BARS — THREADED INSERT FOR FASCIA GIRDERS AND GIRDERS WITH DIAPHRAGMS NORMAL TO ℄ GIRDER.

THREADED INSERT DETAIL

CTR. GRAVITY OF WIRE STRANDS

2"2"2" 4" 2"2"2" — 2" 4" — 2"2" 4" 2"2" — 2" 4" 2" — 2" 4" 2" — 2" 4" 2" — 2" 4" 2"

2"4"2"8" — 5⅛" — 2"4"2"8" — 5⅜" — 2"4"2"8" — 5⅝" — 2"5"2"10" — 5⅞"

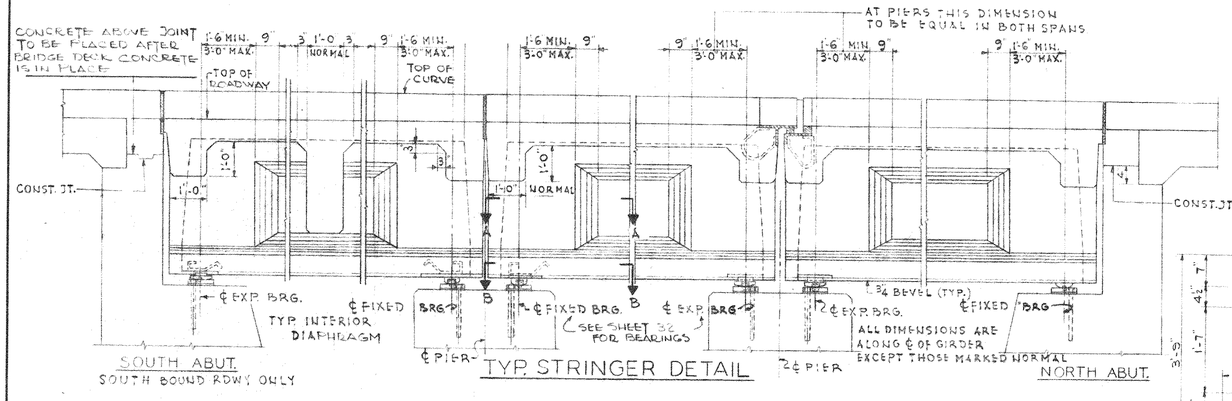
2 9 SPCS @ 2"-1"-6" 2

16 STRANDS — 24 STRANDS — 28 STRANDS — 30 STRANDS — 32 STRANDS — 34 STRANDS — 36 STRANDS — 42 STRANDS — 44 STRANDS — 46 STRANDS — 38 STRANDS — 40 STRANDS

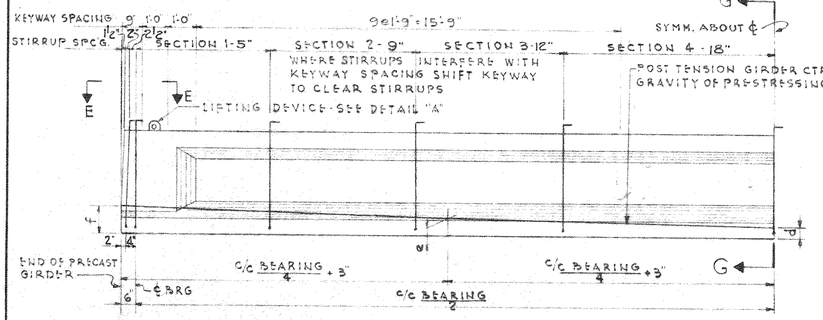
TO BE DEFLECTED (TYPICAL)

2"3"2"6" — 4" — 4½" — 4⅝" — 4½" — 4⅝" — 4½" — 4⅝

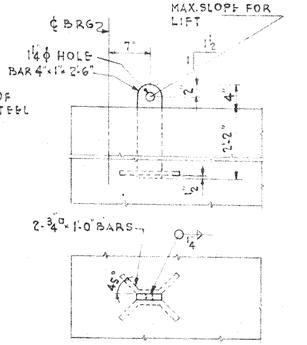
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	39	65



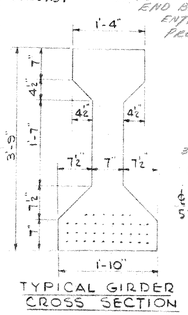
TYP. STRINGER DETAIL



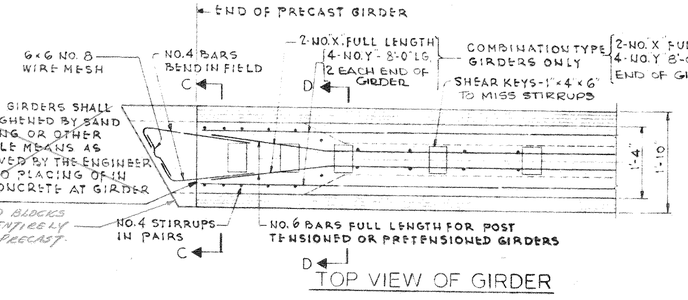
TYP. STRINGER DETAIL



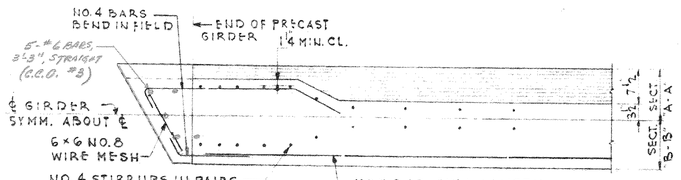
DETAIL "A" - LIFTING DEVICE



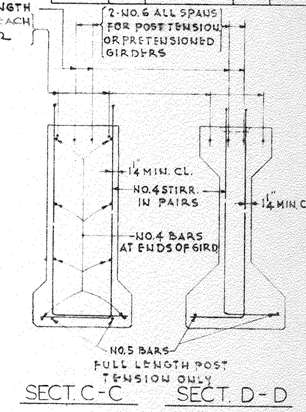
TYPICAL GIRDER CROSS SECTION



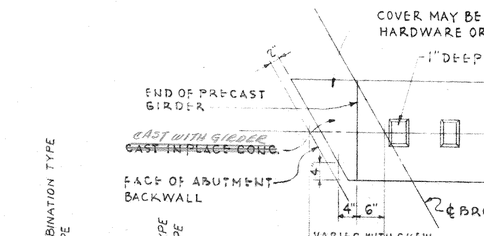
TOP VIEW OF GIRDER



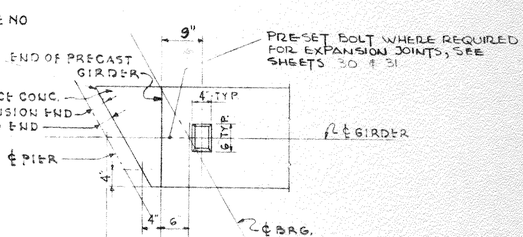
HALF SECTIONS A-A ℄ B-B



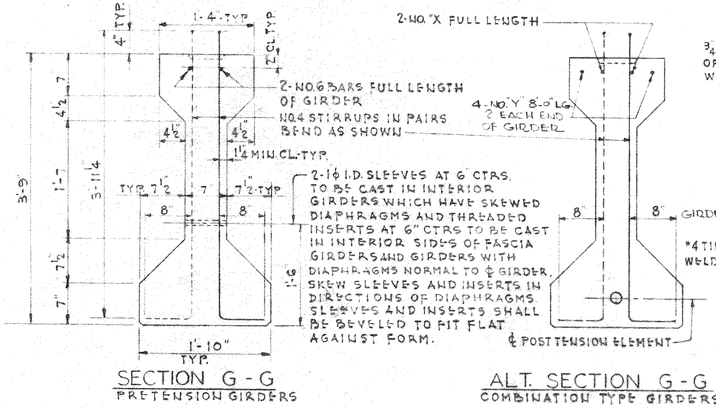
SECT. C-C SECT. D-D



SECTION E-E AT ABUT.

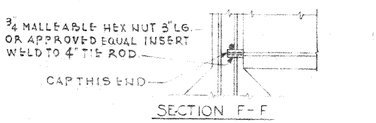


SECTION E-E AT PIER

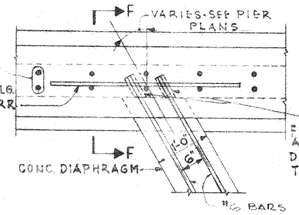


SECTION G - G
PRETENSION GIRDERS

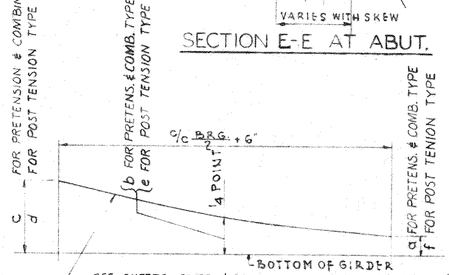
ALT. SECTION G - G
COMBINATION TYPE GIRDERS



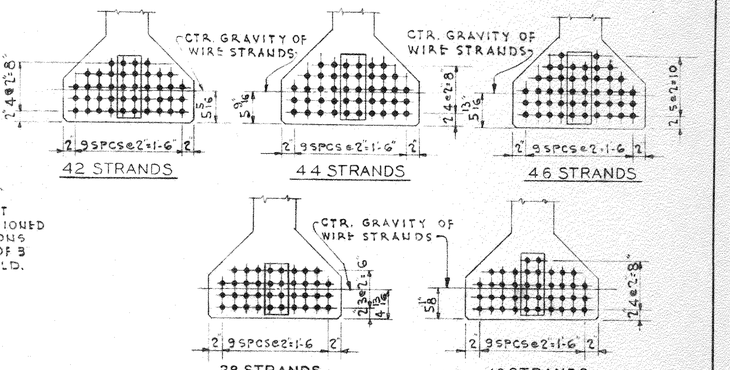
SECTION F - F

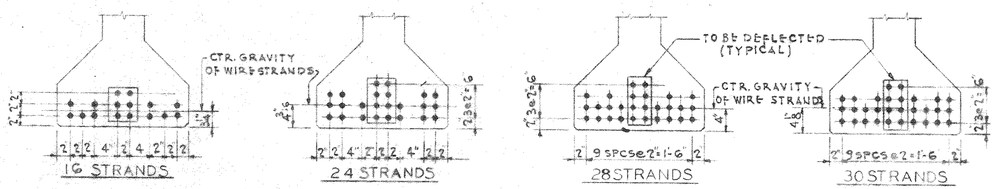


THREADED INSERT DETAIL



DEFLECTED STRAND PROFILE





NOTE: THIS SHEET SHALL BE WORKED WITH SHEETS 21, 22 & 23

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PRESTRESSED GIRDER DETAILS

NO.	DATE	REVISION	BY

DESIGNED A.L.B
DRAWN A.L.B
CHECKED J.R.G W.G.H
APPROVED L.N.R

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: ⅜ ¾ 1" = 1'-0
SHEET 20 OF 41

X18728

PRESTRESSED GIRDERS NORTH BOUND SPANS I TO 8

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	40	65

SPAN	GIRDER	C/C BEARING	PRETENSIONED GIRDERS: NO. STRANDS	NO. OF DEFLECTED STRANDS	TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	a	b	c	POST-TENSIONED GIRDERS: TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	d	e	f	COMBINATION TYPE GIRDERS: TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQUIRED STRENGTH AT TRANSFER IN P.S.I. PRETENSION	POST-TENSION	POST-TENSION ELEMENT INITIAL PRESTRESS-KIPS	a	b	c	BARS X	BARS Y	DEFLECTION AT 1/4 PT. OF SPAN: NATURAL CAMBER IN FEET	DEFLECTION AT 1/4 PT. OF SPAN: DEAD LOAD IN FEET	DEFLECTION AT CENTER OF SPAN: NATURAL CAMBER IN FEET	DEFLECTION AT CENTER OF SPAN: DEAD LOAD IN FEET	NO. 4 STIRRUPS: IN SECTION 1	IN SECTION 2	IN SECTION 3	IN SECTION 4
							IN INCHES					IN INCHES							IN INCHES													
1	A	71' - 11 3/8	32	8	610	4,000	5	13 1/4	38	585	4,000	5	8 7/8	20 1/2	457	4,000	4,000	149	5	13 1/4	38	#7	#9	0.058	0.030	0.079	0.043	21	15	10	4
	B	71' - 2 9/16	42	10	800	4,500	6	13 3/4	37	792	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.081	0.034	0.111	0.048	48	11	8	0
	C	71' - 0 13/16	42	10	800	4,500	6	13 3/4	37	792	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.081	0.034	0.111	0.048	48	11	8	0
	D	70' - 11 3/16	42	10	800	4,500	6	13 3/4	37	792	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.081	0.034	0.111	0.048	48	11	8	0
	E	70' - 9 5/8	42	10	800	4,500	6	13 3/4	37	792	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.081	0.034	0.111	0.048	48	11	8	0
	F	70' - 8 3/16	42	10	800	4,500	6	13 3/4	37	792	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.081	0.034	0.111	0.048	48	11	8	0
	G	70' - 6 7/8	42	10	800	4,500	6	13 3/4	37	792	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.081	0.034	0.111	0.048	48	11	8	0
	H	70' - 5 5/8	32	8	610	4,000	5	13 1/4	38	585	4,000	5	8 7/8	20 1/2	457	4,000	4,000	149	5	13 1/4	38	#7	#9	0.058	0.030	0.079	0.043	21	15	10	4
2	A	79' - 2 11/16	36	8	686	4,000	5	13 1/4	38	664	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.041	0.096	0.058	49	9	6	5
	B	79' - 1 13/16	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	C	79' - 0 15/16	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	D	79' - 0 1/16	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	E	78' - 11 3/16	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	F	78' - 10 3/8	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	G	78' - 9 9/16	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	H	78' - 8 3/4	44	10	838	4,350	6	13 3/4	37	804	4,500	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.093	0.040	0.126	0.056	48	12	8	2
	J	78' - 7 15/16	36	8	686	4,000	5	13 1/4	38	664	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.041	0.096	0.058	49	9	6	4
3	A	69' - 9 3/16	28	8	534	4,000	5	13 1/4	38	524	4,000	5	8 7/8	20 1/2	381	4,000	4,000	149	5	13 1/4	38	#7	#8	0.043	0.025	0.060	0.035	9	12	10	8
	B	68' - 5 3/16	32	8	610	4,000	5	13 1/4	38	594	4,000	5	8 7/8	20 1/2	457	4,000	4,000	149	5	13 1/4	38	#7	#9	0.056	0.022	0.077	0.031	21	15	10	3
	C	67' - 1 3/16	34	8	648	4,000	5	13 1/4	38	640	4,000	5	8 7/8	20 1/2	496	4,000	4,000	149	5	13 1/4	38	#7	#9	0.060	0.024	0.082	0.034	15	13	9	6
	D	65' - 2 7/8	38	8	724	4,200	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.069	0.025	0.093	0.035	49	9	6	0
	E	63' - 3 9/16	38	8	724	4,200	5	13 1/4	38	685	4,450	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.066	0.024	0.090	0.034	49	9	5	0
	F	61' - 3 1/16	38	8	724	4,300	5	13 1/4	38	684	4,500	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.064	0.023	0.087	0.032	49	9	4	0
	G	59' - 1 1/2	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.029	0.017	0.039	0.024	37	6	4	4
4	A	59' - 11 1/8	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
	B	59' - 9 1/2	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	C	59' - 7 15/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	D	59' - 6 5/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	E	59' - 4 3/4	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	F	59' - 3 1/8	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
5	A	59' - 11 3/16	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
	B	59' - 9 9/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	C	59' - 8	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	D	59' - 6 3/8	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	E	59' - 4 13/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	F	59' - 3 1/4	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
6	A	81' - 8 1/2	40	10	762	4,000	6	13 3/4	37	757	4,000	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.032	0.050	0.111	0.070	51	9	7	4
	B	78' - 5 3/8	46	10	877	4,600	6	13 3/4	37	849	4,750	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.045	0.132	0.063	39	15	11	1
	C	75' - 2 1/4	44	10	838	4,500	6	13 3/4	37	817	4,650	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.090	0.040	0.123	0.056	48	12	9	0
	D	71' - 7 9/16	42	10	800	4,400	6	13 3/4	37	780	4,500	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.082	0.035	0.112	0.049	48	11	8	0
	E	68' - 0 13/16	42	10	800	4,500	6	13 3/4	37	780	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.073	0.032	0.107	0.044	48	11	6	0
	F	63' - 6 1/16	40	10	762	4,450	6	13 3/4	37	753	4,600	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.068	0.026	0.094	0.037	51	9	4	0
	G	58' - 11 5/16	24	8	457	4,000	5	13 1/4	38	446	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.016	0.039	0.022	37	6	4	4
7	A	77' - 11 1/8	36	8	686	4,000	5	13 1/4	38	668	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.041	0.096	0.057	49	9	6	5
	B	77' - 11 1/2	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	12	0
	C	77' - 11 15/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	12	0
	D	78' - 0 5/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	12	0
	E	78' - 0 11/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	12	0
	F	78' - 1 1/8	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	12	0
	G	78' - 1 1/2	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	12	0
	H	78' - 1 7/8	36	8	686	4,000	5	13 1/4	38	668	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.041	0.096	0.057	49	9	6	5
8	A	69' - 1 11/16	30	8	572	4,000	5	13 1/4	38	552	4,000	5	8 7/8	20 1/2	419	4,000	4,000	149	5	13 1/4	38	#7	#9	0.050	0.026	0.069	0.037	12	13	9	7
	B	68' - 9 1/2	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	C	68' - 5 3/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	D	68' - 1 3/16	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	E	67' - 9 1/16	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	F	67' - 4 7/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	G	67' - 0 3/4	28	8	534	4,000	5	13 1/4	38	525	4,000	5	8 7/8	20 1/2	381	4,000	4,000	149	5	13 1/4	38	#7	#8	0.043	0.024	0.059	0.033	9	12	10	7

NOTE: NATURAL CAMBER INCLUDES DEFLECTION OF GIRDER.

DEAD LOAD DEFLECTION CONSISTS OF SUPERIMPOSED LOAD OF ROADWAY SLAB AND SAFETY CURB.

WORK THIS SHEET WITH SHEET 20.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PRESTRESSED GIRDER SCHEDULE
NORTH BOUND SPANS I TO 8 INCL.

DESIGNED R.F.P.
DRAWN H.M.W.
CHECKED J.R.G. W.G.H.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
21 OF 41
SHEET

X18729

B.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	41	65

PRESTRESSED GIRDERS NORTH BOUND SPANS 9 TO 12

SPAN	GIRDER	C/C BEARING	PRETENSIONED GIRDERS: NO. STRANDS	NO. OF DEFLECTED STRANDS	TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	a (IN INCHES)	b (IN INCHES)	c (IN INCHES)	POST-TENSIONED GIRDERS: TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	d (IN INCHES)	e (IN INCHES)	f (IN INCHES)	COMBINATION TYPE GIRDERS: TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQUIRED STRENGTH AT TRANSFER IN P.S.I. PRETENSION	POST-TENSION	POST-TENSION ELEMENT INITIAL PRESTRESS-KIPS	a	b	c	BARS X	BARS Y	DEFLECTION AT 1/4 PT. OF SPAN: NATURAL CAMBER IN FEET	DEAD LOAD IN FEET	AT CENTER OF SPAN: NATURAL CAMBER IN FEET	DEAD LOAD IN FEET	NO. 4 STIRRUPS: IN SECTION 1	IN SECTION 2	IN SECTION 3	IN SECTION 4
9	A	69'-1 3/16	30	8	572	4,000	5	13 1/4	38	552	4,000	5	8 7/8	20 1/2	419	4,000	4,000	149	5	13 1/4	38	#7	#9	0.050	0.026	0.068	0.037	12	13	9	7
	B	68'-9	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	C	68'-4 7/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	D	68'-0 11/16	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	E	67'-8 9/16	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	F	67'-4 3/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	G	67'-0 1/16	28	8	534	4,000	5	13 1/4	38	525	4,000	5	8 7/8	20 1/2	381	4,000	4,000	149	5	13 1/4	38	#7	#8	0.043	0.024	0.059	0.033	12	13	9	7
10	A	69'-0 7/8	30	8	572	4,000	5	13 1/4	38	552	4,000	5	8 7/8	20 1/2	419	4,000	4,000	149	5	13 1/4	38	#7	#9	0.050	0.026	0.068	0.037	12	13	9	7
	B	68'-8 3/4	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	C	68'-4 5/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	D	68'-0 1/2	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	E	67'-8 3/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	F	67'-4 1/8	40	10	762	4,300	6	13 3/4	37	742	4,300	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.071	0.029	0.102	0.041	51	9	6	0
	G	67'-0 1/16	28	8	534	4,000	5	13 1/4	38	525	4,000	5	8 7/8	20 1/2	381	4,000	4,000	149	5	13 1/4	38	#7	#8	0.043	0.024	0.059	0.033	12	13	9	7
11	A	81'-6 3/16	38	8	724	4,000	5	13 1/4	38	705	4,000	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.079	0.046	0.106	0.065	49	9	7	4
	B	81'-3 9/16	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	C	81'-0 15/16	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	D	80'-10 3/16	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	E	80'-7 9/16	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	F	80'-4 7/8	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	G	80'-2 1/4	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	H	79'-11 5/8	46	10	877	4,500	6	13 3/4	37	854	4,650	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.099	0.045	0.134	0.063	39	15	11	1
	J	79'-9 1/16	38	8	724	4,000	5	13 1/4	38	705	4,000	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.079	0.046	0.106	0.065	49	9	7	3
12	A	42'-7 5/8	16	6	305	4,000	4	12 3/4	39	274	4,000	3 1/2	5 5/8	12	191	4,000	4,000	111	4	12 3/4	39	#6	#6	0.012	0.005	0.016	0.007	6	9	7	3
	B	42'-4 11/16	24	9	457	4,000	5	13 1/4	38	424	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.009	37	6	1	0
	C	42'-0 1/2	24	8	457	4,000	5	13 1/4	38	424	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.009	37	6	1	0
	D	41'-9 1/8	24	8	457	4,000	5	13 1/4	38	424	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.009	37	6	1	0
	E	41'-5 13/16	24	8	457	4,000	5	13 1/4	38	424	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.009	37	6	1	0
	F	41'-2 9/16	16	6	305	4,000	4	12 3/4	39	274	4,000	3 1/2	5 5/8	12	191	4,000	4,000	111	4	12 3/4	39	#6	#6	0.012	0.005	0.016	0.007	6	9	7	3

PRESTRESSED GIRDERS SOUTH BOUND SPANS 1 TO 4

SPAN	GIRDER	C/C BEARING	PRETENSIONED GIRDERS: NO. STRANDS	NO. OF DEFLECTED STRANDS	TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	a (IN INCHES)	b (IN INCHES)	c (IN INCHES)	POST-TENSIONED GIRDERS: TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	d (IN INCHES)	e (IN INCHES)	f (IN INCHES)	COMBINATION TYPE GIRDERS: TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQUIRED STRENGTH AT TRANSFER IN P.S.I. PRETENSION	POST-TENSION	POST-TENSION ELEMENT INITIAL PRESTRESS-KIPS	a	b	c	BARS X	BARS Y	DEFLECTION AT 1/4 PT. OF SPAN: NATURAL CAMBER IN FEET	DEAD LOAD IN FEET	AT CENTER OF SPAN: NATURAL CAMBER IN FEET	DEAD LOAD IN FEET	NO. 4 STIRRUPS: IN SECTION 1	IN SECTION 2	IN SECTION 3	IN SECTION 4
1	A	70'-0 9/16	30	8	572	4,000	5	13 1/4	38	571	4,000	5	8 7/8	20 1/2	419	4,000	4,000	149	5	13 1/4	38	#7	#9	0.050	0.028	0.069	0.040	12	13	9	8
	B	70'-0 9/16	42	10	800	4,450	6	13 3/4	37	782	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.080	0.032	0.109	0.046	48	11	7	0
	C	70'-0 11/16	42	10	800	4,450	6	13 3/4	37	782	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.080	0.032	0.109	0.046	48	11	7	0
	D	70'-0 7/8	42	10	800	4,450	6	13 3/4	37	782	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.080	0.032	0.109	0.046	48	11	7	0
	E	70'-1 1/8	42	10	800	4,450	6	13 3/4	37	782	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.080	0.032	0.109	0.046	48	11	7	0
	F	70'-1 7/16	42	10	800	4,450	6	13 3/4	37	782	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.080	0.032	0.109	0.046	48	11	7	0
	G	70'-1 7/8	42	10	800	4,450	6	13 3/4	37	782	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.080	0.032	0.109	0.046	48	11	7	0
	H	70'-2 5/8	30	8	572	4,000	5	13 1/4	38	571	4,000	5	8 7/8	20 1/2	419	4,000	4,000	149	5	13 1/4	38	#7	#9	0.050	0.028	0.069	0.040	12	13	9	8
2	A	77'-10 15/16	36	8	686	4,000	5	13 1/4	38	649	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.039	0.096	0.054	49	9	6	4
	B	77'-11	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	C	77'-11 1/16	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	D	77'-11 3/16	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	E	77'-11 5/16	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	F	77'-11 7/16	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	G	77'-11 9/16	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	H	77'-11 11/16	44	10	838	4,400	6	13 3/4	37	800	4,550	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.092	0.038	0.125	0.054	48	12	8	2
	J	77'-11 7/8	36	8	686	4,000	5	13 1/4	38	649	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.039	0.096	0.054	49	9	6	4
3	A	59'-3 3/4	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
	B	59'-5 11/16	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.059	0.022	0.079	0.030	49	9	3	0
	C	59'-7 7/8	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	D	59'-9 9/16	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	E	59'-11 9/16	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	F	60'-1 9/16	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
4	A	59'-11 3/16	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
	B	59'-9 9/16	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	C	59'-7 15/16	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	D	59'-6 3/8	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	E	59'-4 7/8	36	8	686	4,100	5	13 1/4	38	677	4,350	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.022	0.079	0.030	49	9	3	0
	F	59'-3 3/16	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4

NOTE: NATURAL CAMBER INCLUDES DEFLECTION OF GIRDER

DEAD LOAD DEFLECTION CONSISTS OF SUPERIMPOSED LOAD OF ROADWAY SLAB AND SAFETY CURB.

WORK THIS SHEET WITH SHEET 20.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PRESTRESSED GIRDER SCHEDULE

NORTH BOUND SPANS 9 TO 12 INCL.

SOUTH BOUND SPANS 1 TO 4 INCL.

DESIGNED	J.R.G.
DRAWN	H.M.W.
CHECKED	R.F.P. W.G.H.
APPROVED	L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:

22 OF 41 SHEET

X18730

PRESTRESSED GIRDERS SOUTH BOUND SPANS 5 TO 13

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(731)	42	65

			PRETENSIONED GIRDERS							POST-TENSIONED GIRDERS						COMBINATION TYPE GIRDERS										DEFLECTION AT 1/4 PT. OF SPAN		DEFLECTION AT CENTER OF SPAN		NO. 4 STIRRUPS			
SPAN	GIRDER	C/C BEARING	NO. STRANDS	NO. OF DEFLECTED STRANDS	TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	a	b	c	TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQ'D STRENGTH AT TRANSFER IN P.S.I.	d	e	f	TOTAL INITIAL PRESTRESS FORCE IN KIPS	REQUIRED STRENGTH AT TRANSFER IN P.S.I. PRETENSION	REQUIRED STRENGTH AT TRANSFER IN P.S.I. POST-TENSION	POST-TENSION ELEMENT INITIAL PRESTRESS-KIPS	a	b	c	BARS X	BARS Y	NATURAL CAMBER IN FEET	DEAD LOAD IN FEET	NATURAL CAMBER IN FEET	DEAD LOAD IN FEET	IN SECTION 1	IN SECTION 2	IN SECTION 3	IN SECTION 4
							IN INCHES					IN INCHES																					
5	A	59'-11 1/8	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
	B	59'- 9 1/2	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	C	59'- 7 15/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	D	59'- 6 3/8	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	E	59'- 4 13/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	F	59'- 3 1/4	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
6	A	59'-11 1/8	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
	B	59'- 9 1/2	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	C	59'- 7 15/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	D	59'- 6 3/8	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	E	59'- 4 13/16	36	8	686	4,100	5	13 1/4	38	658	4,250	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.058	0.021	0.079	0.029	49	9	3	0
	F	59'- 3 1/4	24	8	457	4,000	5	13 1/4	38	453	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.017	0.039	0.024	37	6	4	4
7	A	82'- 1 7/16	40	10	762	4,000	6	13 3/4	37	757	4,000	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.082	0.050	0.111	0.070	51	9	7	4
	B	78'- 9 11/16	46	10	877	4,550	6	13 3/4	37	849	4,750	6	9 3/4	21	696	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.045	0.132	0.063	39	15	11	1
	C	75'- 5 15/16	44	10	838	4,500	6	13 3/4	37	817	4,650	6	9 3/4	21	649	4,000	4,950	186	6	13 3/4	37	#8	#9	0.090	0.040	0.123	0.056	48	12	9	0
	D	71'-10 1/4	42	10	800	4,400	6	13 3/4	37	780	4,500	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.082	0.035	0.112	0.049	48	11	8	0
	E	68'- 2 1/2	42	10	800	4,500	6	13 3/4	37	780	4,600	6	9 3/4	21	610	4,000	4,800	186	6	13 3/4	37	#8	#9	0.078	0.032	0.107	0.044	48	11	6	0
	F	63'- 6 7/8	40	10	762	4,450	6	13 3/4	37	753	4,600	6	9 3/4	21	572	4,000	4,800	186	6	13 3/4	37	#8	#9	0.068	0.026	0.094	0.037	51	9	4	0
	G	50'-11 1/4	24	8	457	4,000	5	13 1/4	38	446	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.028	0.016	0.039	0.022	37	6	4	4
8	A	79'- 3 1/8	36	8	686	4,000	5	13 1/4	38	668	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.041	0.096	0.057	49	9	6	4
	B	79'- 3 1/2	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	11	1
	C	79'- 3 15/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	11	1
	D	79'- 4 5/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	11	1
	E	79'- 4 3/4	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	11	1
	F	79'- 5 3/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	11	1
	G	79'- 5 9/16	46	10	877	4,600	6	13 3/4	37	834	4,800	6	9 3/4	21	686	4,000	4,950	186	6	13 3/4	37	#8	#9	0.097	0.042	0.131	0.058	39	15	11	1
	H	79'- 6	36	8	686	4,000	5	13 1/4	38	668	4,000	5	8 7/8	20 1/2	534	4,000	4,450	149	5	13 1/4	38	#8	#9	0.071	0.041	0.096	0.057	49	9	6	4
9	A	73'- 7 3/4	34	8	648	4,000	5	13 1/4	38	618	4,000	5	8 7/8	20 1/2	496	4,000	4,000	149	5	13 1/4	38	#7	#9	0.064	0.034	0.087	0.048	15	13	9	8
	B	73'- 4	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	8	0
	C	73'- 0 1/4	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	8	0
	D	72'- 9 7/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	8	0
	E	72'- 4 11/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	8	0
	F	72'- 0 15/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	8	0
	G	71'- 9 1/8	32	3	610	4,000	5	13 1/4	38	585	4,000	5	8 7/8	20 1/2	457	4,000	4,000	149	5	13 1/4	38	#7	#9	0.058	0.030	0.079	0.043	21	15	10	4
10	A	73'- 7 3/8	34	8	648	4,000	5	13 1/4	38	618	4,000	5	8 7/8	20 1/2	496	4,000	4,000	149	5	13 1/4	38	#7	#9	0.064	0.034	0.087	0.048	15	13	9	8
	B	73'- 3 15/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	C	72'-11 13/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	D	72'- 8	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	E	72'- 4 1/4	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	F	72'- 0 1/2	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	G	71'- 8 3/4	32	3	610	4,000	5	13 1/4	38	585	4,000	5	8 7/8	20 1/2	457	4,000	4,000	149	5	13 1/4	38	#7	#9	0.058	0.030	0.079	0.043	21	15	10	4
11	A	73'- 7	34	8	648	4,000	5	13 1/4	38	618	4,000	5	8 7/8	20 1/2	496	4,000	4,000	149	5	13 1/4	39	#7	#9	0.064	0.034	0.087	0.048	15	13	9	8
	B	73'- 3 3/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	C	72'-11 7/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	D	72'- 7 5/8	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	E	72'- 3 7/8	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	F	72'- 0 1/16	44	10	838	4,550	6	13 3/4	37	824	4,750	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.088	0.038	0.120	0.053	48	12	7	0
	G	71'- 8 5/16	32	8	610	4,000	5	13 1/4	38	585	4,000	5	8 7/8	20 1/2	457	4,000	4,000	149	5	13 1/4	38	#7	#9	0.058	0.030	0.079	0.043	21	15	10	4
12	A	81'- 9 3/16	38	8	724	4,000	5	13 1/4	38	697	4,000	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.079	0.046	0.106	0.065	49	9	7	5
	B	81'- 9 5/8	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	649	4,000	4,950	186	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	C	81'-10 1/16	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	649	4,000	4,950	186	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	D	81'-10 1/2	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	649	4,000	4,950	186	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	E	81'-10 15/16	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	F	81'-11 3/8	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	648	4,000	4,950	186	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	G	81'-11 13/16	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	649	4,000	4,950	186	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	H	82'- 0 5/16	44	10	838	4,250	6	13 3/4	37	824	4,400	6	9 3/4	21	648	4,000	4,950	196	6	13 3/4	37	#8	#9	0.091	0.043	0.128	0.060	48	12	8	3
	J	82'- 0 3/4	38	8	724	4,000	5	13 1/4	38	697	4,000	5	8 7/8	20 1/2	572	4,000	4,650	149	5	13 1/4	38	#8	#9	0.079	0.046	0.106	0.065	49	9	7	5
13	A	42'- 9 3/16	16	6	305	4,000	4	12 3/4	39	274	4,000	3 1/2	5 3/8	12	191	4,000	4,000	111	4	12 3/4	39	#6	#6	0.012	0.005	0.016	0.007	6	9	7	3
	B	42'- 9 9/16	24	8	457	4,000	5	13 1/4	38	452	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.010	37	6	2	0
	C	42'- 10	24	8	457	4,000	5	13 1/4	38	452	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.010	37	6	2	0
	D	42'-10 7/16	24	8	457	4,000	5	13 1/4	38	452	4,000	5	8 7/8	20 1/2	305	4,000	4,000	149	5	13 1/4	38	#7	#7	0.020	0.007	0.028	0.010	37	6	2	0
	E	42'-10 7/8	16	6	305	4,000	4	12 3/4	39	274	4,000	3 1/2	5 3/8	12	191	4,000	4,000	111	4	12 3/4	39	#6	#6	0.012	0.005	0.016	0.007	6	9	7	3

NOTE: NATURAL CAMBER INCLUDES DEFLECTION OF GIRDER.

DEAD LOAD DEFLECTION CONSISTS OF SUPERIMPOSED LOAD OF ROADWAY SLAB AND SAFETY CURB.

WORK THIS SHEET WITH SHEET 20.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

PRESTRESSED GIRDER SCHEDULES
SOUTH BOUND SPANS 5 TO 13 INCL.

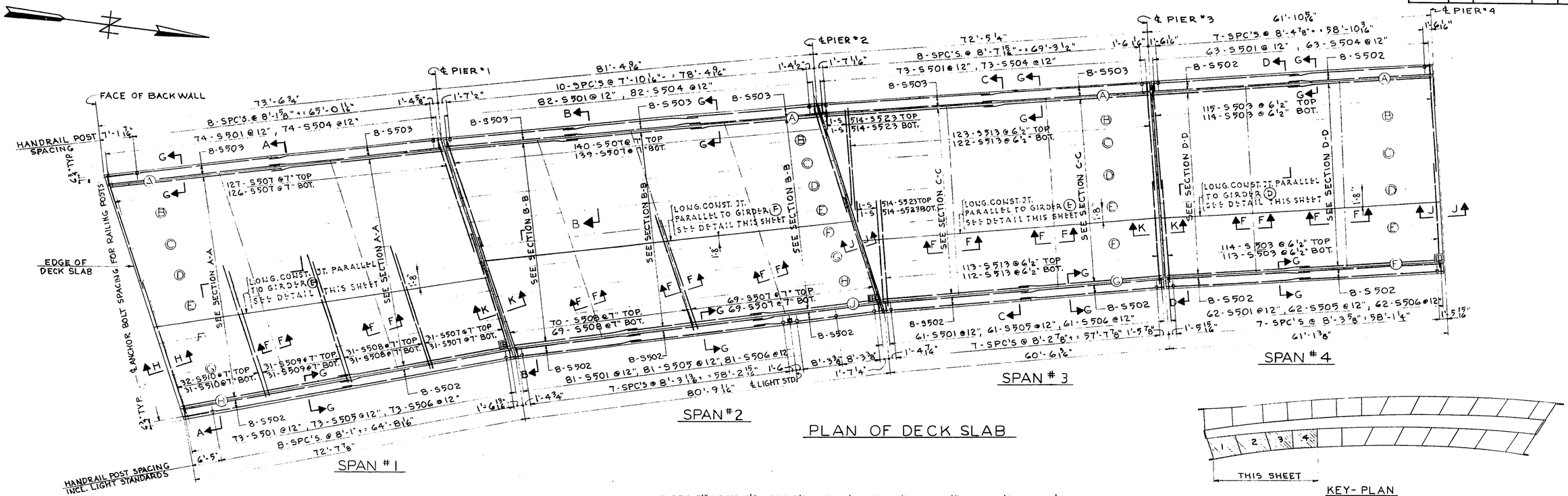
DESIGNED R.F.P
DRAWN H.M
CHECKED J.R.G W.G.H
APPROVED L.N.R

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
23 OF 41
SHEET

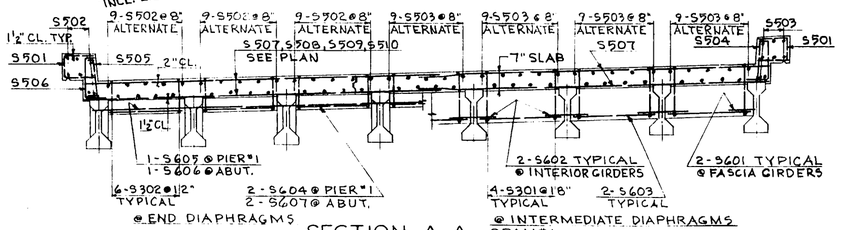
X18731

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-63-1(73)	4365	

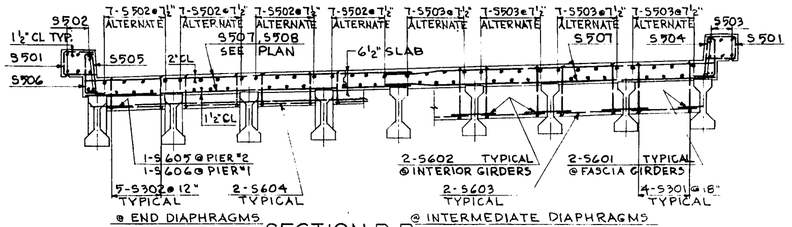


PLAN OF DECK SLAB

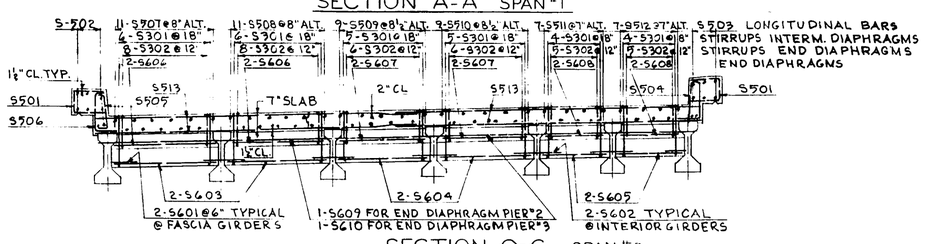
KEY- PLAN



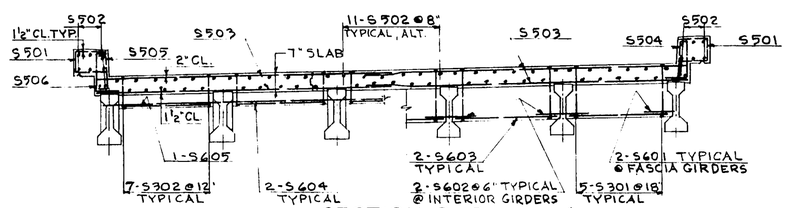
SECTION A-A SPAN #1



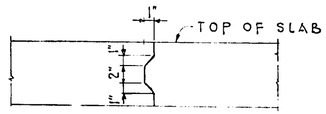
SECTION B-B SPAN #2



SECTION C-C SPAN #3



SECTION D-D SPAN #4



LONG CONST. JT. DETAIL
REINF. NOT SHOWN

NOTES: FOR REINFORCING BAR DETAILS SEE SHEET 39
CUT BARS IN FIELD TO CLEAR DECK DRAIN.
FOR NOTES & SECTIONS PERTAINING TO DECK SLABS SEE SHEET 25

ELEVATIONS T.F. OF ROADWAY AT ℄ GIRDERS

	SPAN #1					SPAN #2					SPAN #3					SPAN #4				
GIRDER	℄ ABUT. BRG.	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER #1	GIRDER	℄ BRG. PIER #1	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER #2	GIRDER	℄ BRG. PIER #2	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER #3	GIRDER	℄ BRG. PIER #3	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER #4
A	72.34	72.20	72.03	71.86	71.69	A	71.67	71.46	71.26	71.06	70.87	A	70.85	70.67	70.50	70.32	70.15	A	70.13	69.98	69.83	69.68	69.53
B	72.08	71.96	71.81	71.65	71.50	B	71.50	71.31	71.11	70.92	70.73	B	70.70	70.53	70.36	70.19	70.02	B	69.93	69.77	69.62	69.47	69.33
C	71.82	71.71	71.58	71.45	71.31	C	71.34	71.16	70.97	70.77	70.58	C	70.56	70.39	70.22	70.06	69.89	C	69.72	69.57	69.42	69.27	69.12
D	71.56	71.47	71.36	71.24	71.13	D	71.18	71.00	70.81	70.62	70.44	D	70.36	70.20	70.04	69.87	69.72	D	69.52	69.36	69.21	69.06	68.92
E	71.30	71.23	71.14	71.04	70.94	E	71.02	70.89	70.65	70.46	70.30	E	70.16	70.00	69.85	69.69	69.54	E	69.31	69.16	69.01	68.86	68.71
F	71.04	70.99	70.91	70.84	70.76	F	70.86	70.69	70.50	70.30	70.19	F	69.93	69.78	69.63	69.48	69.33	F	69.11	68.95	68.80	68.65	68.51
G	70.78	70.75	70.69	70.64	70.58	G	70.70	70.53	70.34	70.14	70.01	G	69.70	69.55	69.41	69.26	69.13						
H	70.52	70.50	70.47	70.44	70.40	H	70.55	70.37	70.18	69.98	69.87												
						J	70.39	70.22	70.03	69.82	69.72												

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

DECK SLABS - PLAN & SECTIONS

NORTH BOUND SPANS 1, 2, 3 & 4

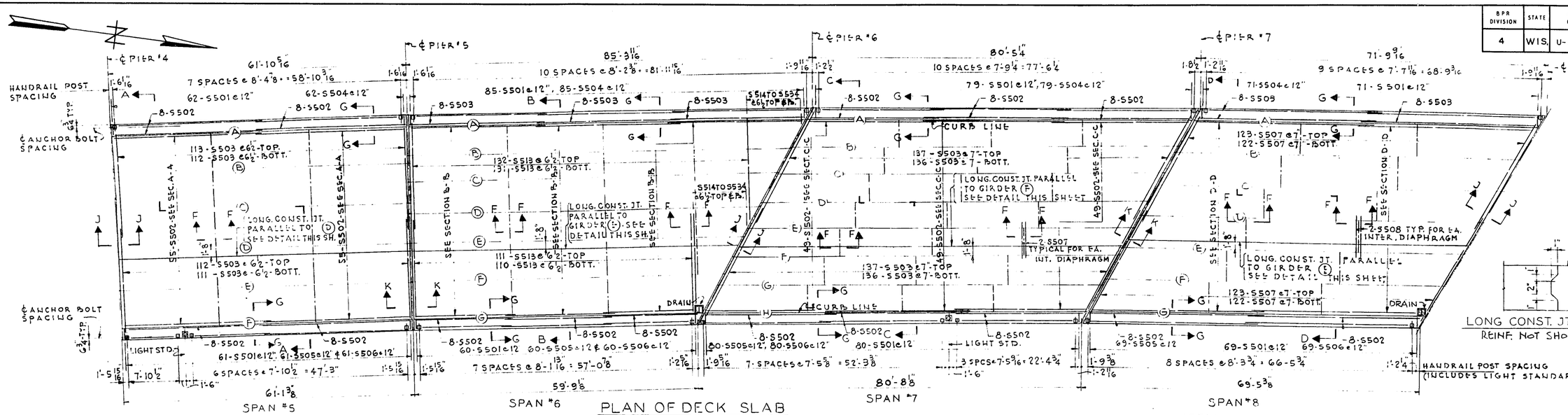
DESIGNED H.R.V.
DRAWN H.R.V.
CHECKED R.E.P.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 3/32"=1'-0" 3/16"=1'-0"
24 OF 41 SHEET

X18732

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	44	65



PLAN OF DECK SLAB

DECK SLAB NOTES:

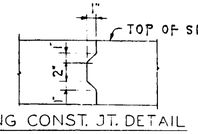
TOP AND BOTTOM TRANSVERSE STEEL IN THE SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS ON OR ADJACENT TO EACH GIRDER AND BY INDIVIDUAL BAR CHAIRS @ 3'-0" CENTERS APPROX. MIDWAY BETWEEN GIRDERS.

TOP OF SAFETY CURB TO BE BUILT TO ESTABLISHED GRADE AFTER SPANS HAVE TAKEN THE DEAD LOAD DEFLECTION. THE 9" HEIGHT OF CURB IS TO BE MAINTAINED AT THE POINTS OF BEARING.

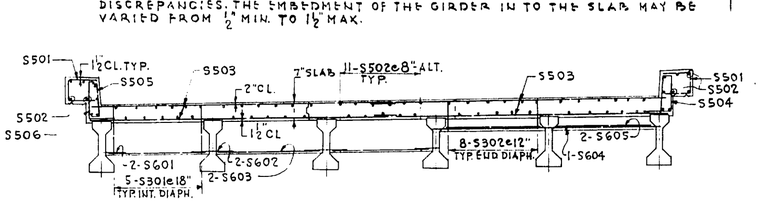
TO COMPENSATE FOR VARIATION IN CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES, THE EMBEDMENT OF THE GIRDER IN TO THE SLAB MAY BE VARIED FROM 1/2" MIN. TO 1 1/2" MAX.

FACE OF CURB AND OUTSIDE EDGE OF SIDEWALK TO BE CONSTRUCTED TO RADIUS OF CURVE SHOWN ON ALIGNMENT SHEET. R-4.
EDGE OF SLAB TO BE PARALLEL TO ℄ FASC. GIRDER ON EAST EDGE OF ROADWAY AND PARALLEL TO FACE OF CURB ON WEST EDGE OF ROADWAY.

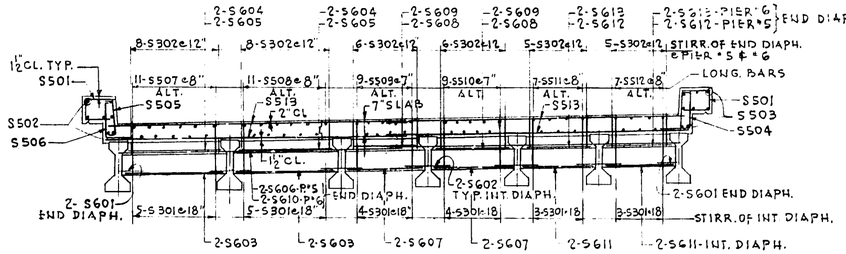
NOTE:
FOR REINFORCING BAR DETAILS SEE SHEET 36
FOR LIGHT STANDARDS AND RAILING DETAILS SEE SHEET 32
FOR JOINT DETAILS SEE SHEET 30
FOR LOCATION OF DIAPHRAGMS SEE SHEETS 16, 17, 18 & 19
⊞ INDICATES DRAINS. FOR DETAILS AND EXACT LOCATION SEE SHEET 33
CUT BARS IN FIELD TO CLEAR DECK DRAINS.



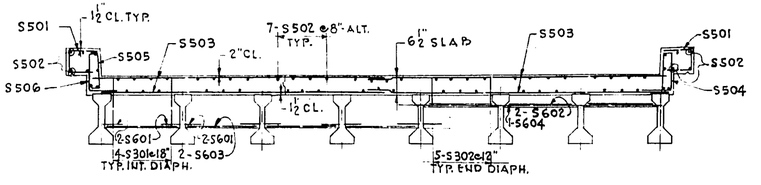
LONG CONST. JT. DETAIL
REINF. NOT SHOWN



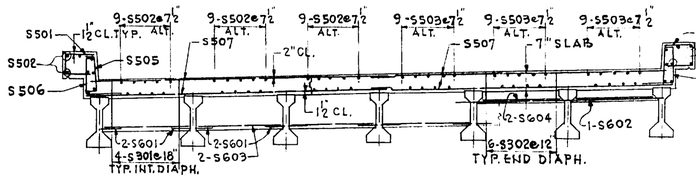
SECTION A - A
SPAN "5



SECTION B-B
SPAN "6

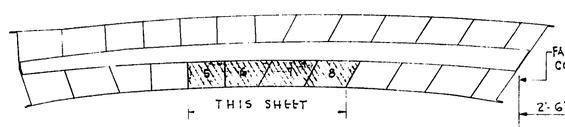


SECTION C - C
SPAN "7

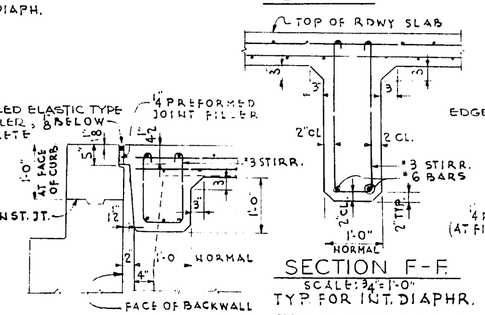


SECTION D-D
SPAN "8

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.



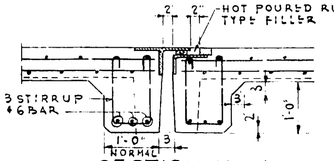
KEY PLAN



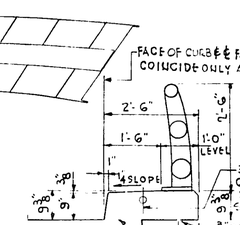
SECTION H-H
SCALE: 3/4" = 1'-0"

SECTION F-F
SCALE: 3/4" = 1'-0"
TYP. FOR INT. DIAPHR.

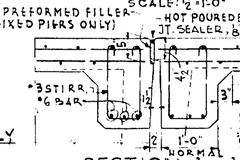
THESE DETAILS FOR NORTH BOUND SPANS ONLY



SECTION K-K
(TYP. AT EXPANSION PIERS)
SCALE: 3/4" = 1'-0"



SECTION G-G
SCALE: 1/2" = 1'-0"



SECTION J-J (TYP. AT FIX PIERS)
SCALE: 3/4" = 1'-0"

ELEVATIONS TOP OF ROADWAY AT ℄ GIRDERS

SPAN "5					
GIRDER	℄ BRG. PIER "4	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER "5
A	69.51	69.36	69.21	69.06	68.91
B	69.31	69.16	69.01	68.86	68.71
C	69.10	68.95	68.80	68.65	68.50
D	68.90	68.75	68.60	68.45	68.30
E	68.69	68.54	68.39	68.24	68.09
F	68.49	68.34	68.19	68.04	67.89

SPAN "6					
GIRDER	℄ BRG. PIER "5	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER "6
A	68.90	68.69	68.48	68.29	68.08
B	68.75	68.55	68.35	68.16	67.96
C	68.60	68.41	68.22	68.03	67.85
D	68.44	68.26	68.08	67.90	67.72
E	68.28	68.11	67.93	67.77	67.60
F	68.08	67.91	67.75	67.59	67.44
G	67.87	67.72	67.57	67.42	67.28

SPAN "7					
GIRDER	℄ BRG. PIER "6	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER "7
A	68.05	67.86	67.66	67.47	67.27
B	67.94	67.74	67.54	67.35	67.16
C	67.82	67.62	67.43	67.23	67.04
D	67.71	67.51	67.31	67.12	66.92
E	67.59	67.39	67.20	67.00	66.81
F	67.48	67.28	67.08	66.89	66.69
G	67.36	67.16	66.96	66.77	66.58
H	67.25	67.05	66.85	66.65	66.46

SPAN "8					
GIRDER	℄ BRG. PIER "7	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER "8
A	67.25	67.07	66.90	66.73	66.56
B	67.11	66.94	66.77	66.59	66.42
C	66.98	66.80	66.63	66.46	66.29
D	66.84	66.67	66.50	66.33	66.16
E	66.70	66.53	66.36	66.19	66.02
F	66.57	66.40	66.23	66.06	65.89
G	66.43	66.26	66.09	65.92	65.76

NO	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

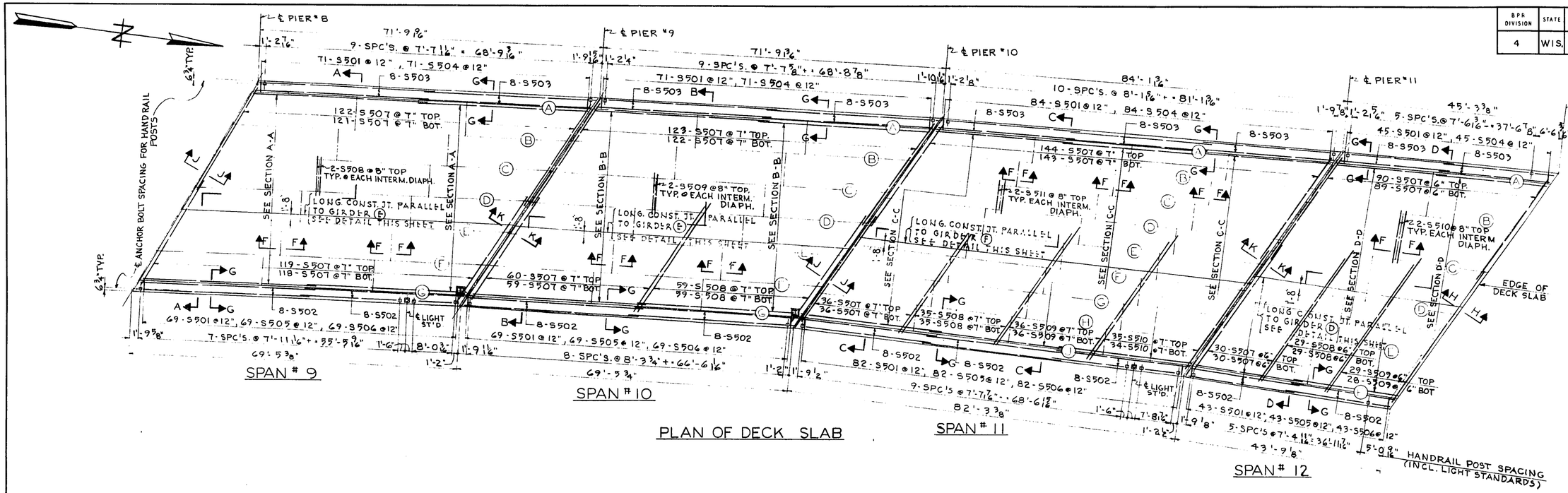
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

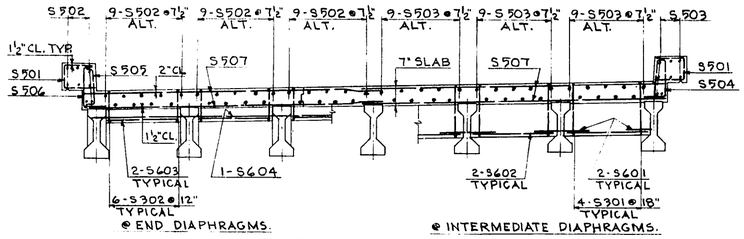
DECK SLABS - PLAN & SECTIONS NORTH BOUND SPANS 5,6,7 & 8

DESIGNED AL. B.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: 3/32" = 1'-0"
DRAWN AL. B.		25 OF 41 SHEET
CHECKED H.R.V. W.G.H.		
APPROVED L.N.R.		

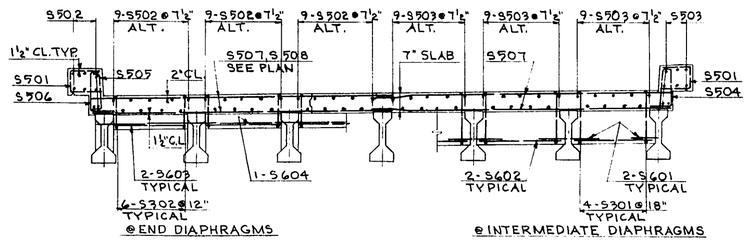
X18733

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	45	65

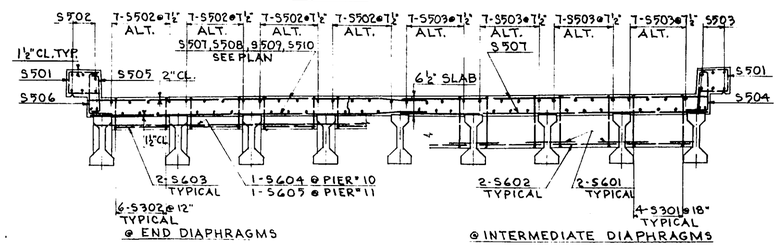




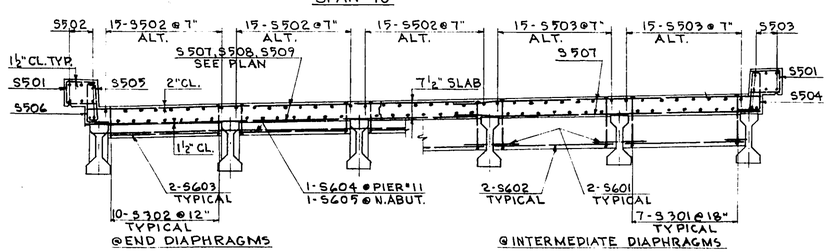
SECTION A-A
SPAN #9



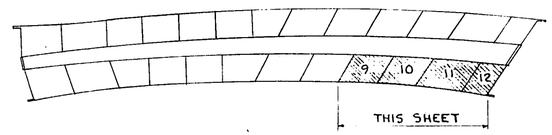
SECTION B-B
SPAN #10



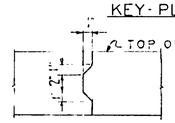
SECTION C-C
SPAN #11



SECTION D-D
SPAN #12



KEY-PLAN



LONG. CONST. JT. DETAIL
REINF NOT SHOWN

NOTES: FOR REINFORCING BAR DETAILS SEE SHEETS 39 & 40
CUT BARS IN FIELD TO CLEAR DECK DRAINS.
FOR NOTES & SECTIONS PERTAINING TO DECK SLABS SEE SHEET 25

ELEVATIONS TOP OF ROADWAY AT ℄ GIRDERS

SPAN "9					
GIRDER	℄ BRG. PIER "8	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER "9
A	66.73	66.36	66.18	66.01	65.84
B	66.40	66.22	66.05	65.88	65.71
C	66.26	66.09	65.92	65.75	65.58
D	66.13	65.96	65.79	65.62	65.45
E	66.00	65.82	65.65	65.48	65.32
F	65.86	65.69	65.52	65.35	65.18
G	65.73	65.56	65.39	65.22	65.05

SPAN "10					
GIRDER	℄ BRG. PIER "9	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER "10
A	65.82	65.64	65.47	65.30	65.13
B	65.68	65.51	65.33	65.16	64.99
C	65.55	65.38	65.20	65.03	64.86
D	65.42	65.24	65.07	64.90	64.73
E	65.29	65.11	64.94	64.76	64.59
F	65.16	64.98	64.80	64.63	64.46
G	65.03	64.85	64.67	64.50	64.33

SPAN "11					
GIRDER	℄ BRG. PIER "10	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER "11
A	65.10	64.89	64.69	64.49	64.29
B	65.00	64.79	64.58	64.38	64.17
C	64.90	64.69	64.48	64.27	64.06
D	64.80	64.58	64.37	64.16	63.95
E	64.70	64.48	64.27	64.05	63.84
F	64.60	64.38	64.16	63.94	63.73
G	64.50	64.28	64.05	63.84	63.62
H	64.40	64.17	63.95	63.73	63.51
J	64.30	64.07	63.84	63.62	63.40

SPAN "12				
GIRDER	℄ BRG. PIER "11	¼ POINT	½ POINT	¾ POINT	℄ ABUT. BRG.
A	64.26	64.16	64.08	64.02	63.97
B	64.08	63.97	63.88	63.81	63.75
C	63.90	63.79	63.69	63.60	63.53
D	63.73	63.61	63.50	63.40	63.31
E	63.55	63.43	63.31	63.20	63.11
F	63.37	63.25	63.12	63.01	62.90

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

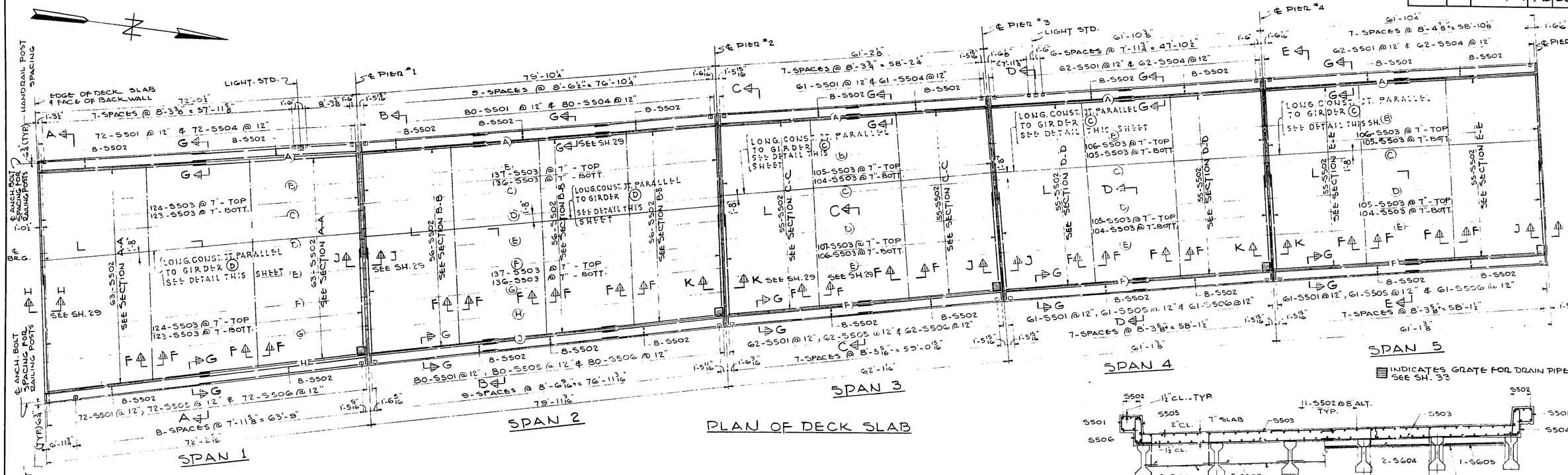
NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

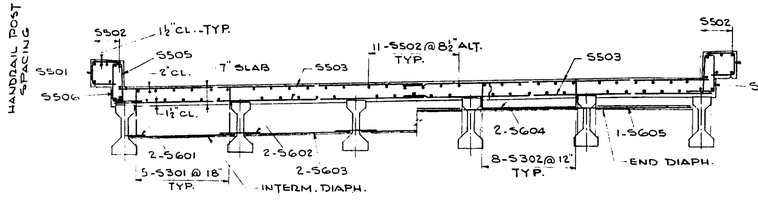
DECK SLABS - PLAN & SECTIONS
NORTH BOUND SPANS 9, 10, 11, & 12

DESIGNED	H.R.V.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE:
DRAWN	H.R.V.		26 OF 41 SHEET
CHECKED	R.E.P.		
APPROVED	L.N.R.		

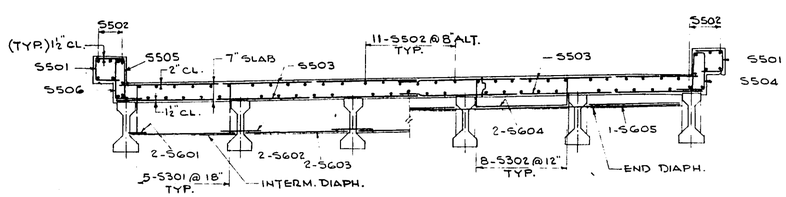
X18734

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
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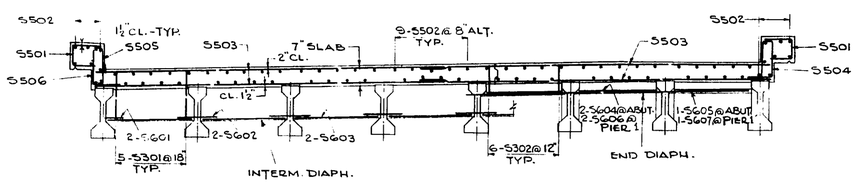




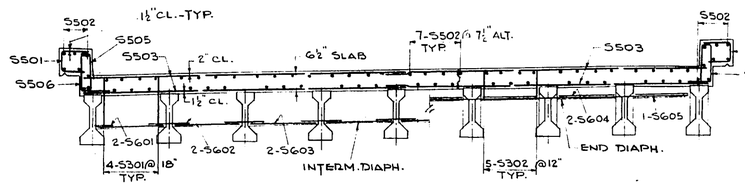
SECTION "C-C"
SPAN 3



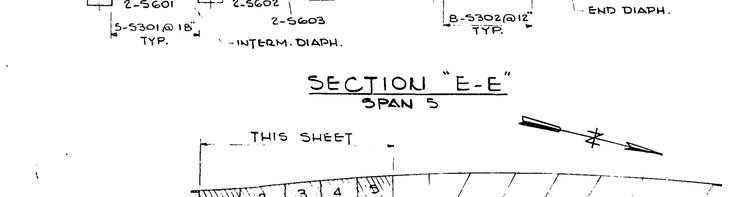
SECTION "D-D"
SPAN 4



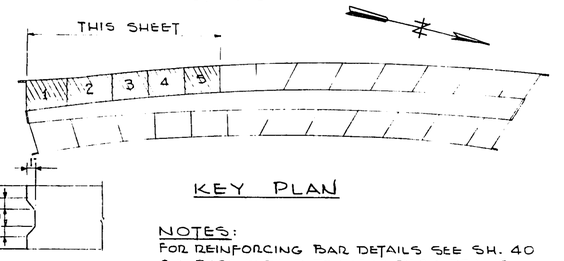
SECTION "A-A"
SPAN 1



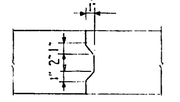
SECTION "B-B"
SPAN 2



SECTION "E-E"
SPAN 5



KEY PLAN



LONG. CONST. JT. DETAIL
REINF NOT SHOWN

NOTES:
FOR REINFORCING BAR DETAILS SEE SH. 40
CUT BARS IN FIELD TO CLEAR DECK DRAINS.
FOR NOTES AND SECTIONS PERTAINING TO DECK SLAB SEE SH. 29

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

ELEVATIONS TOP OF ROADWAY AT ℄ GIRDERS

SPAN # 1					
GIRDER	℄ ABUT. BRG.	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER # 1
A	73.94	73.78	73.62	73.51	73.39
B	74.05	73.88	73.70	73.52	73.32
C	74.10	73.87	73.64	73.41	73.18
D	73.93	73.70	73.47	73.25	73.02
E	73.75	73.53	73.31	73.08	72.87
F	73.58	73.36	73.14	72.92	72.71
G	73.41	73.19	72.97	72.76	72.55
H	73.23	73.02	72.81	72.60	72.39

SPAN # 2					
GIRDER	℄ BRG. PIER # 1	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER # 2
A	73.37	73.18	72.98	72.73	72.49
B	73.31	73.08	72.84	72.60	72.35
C	73.20	72.95	72.71	72.46	72.22
D	73.06	72.81	72.57	72.33	72.09
E	72.92	72.68	72.44	72.20	71.96
F	72.78	72.54	72.30	72.06	71.83
G	72.64	72.40	72.16	71.93	71.69
H	72.50	72.27	72.03	71.79	71.56
J	72.37	72.13	71.89	71.66	71.43

SPAN # 3					
GIRDER	℄ BRG. PIER # 2	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER # 3
A	72.46	72.28	72.09	71.91	71.73
B	72.25	72.07	71.88	71.70	71.52
C	72.04	71.86	71.67	71.49	71.31
D	71.83	71.64	71.46	71.28	71.10
E	71.62	71.43	71.25	71.07	70.89
F	71.41	71.22	71.04	70.86	70.68

SPAN # 4					
GIRDER	℄ BRG. PIER # 3	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER # 4
A	71.71	71.52	71.34	71.16	70.98
B	71.50	71.31	71.13	70.95	70.77
C	71.29	71.10	70.92	70.74	70.57
D	71.08	70.90	70.72	70.54	70.36
E	70.87	70.69	70.51	70.33	70.16
F	70.66	70.48	70.30	70.13	69.95

SPAN # 5				
GIRDER	℄ BRG. PIER # 4	¼ POINT	½ POINT	¾ POINT	℄ BRG. PIER # 5
A	70.95	70.77	70.59	70.42	70.24
B	70.75	70.57	70.39	70.21	70.04
C	70.54	70.36	70.18	70.01	69.83
D	70.34	70.16	69.98	69.80	69.63
E	70.13	69.95	69.77	69.60	69.42
F	69.93	69.75	69.57	69.39	69.22

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

DECK SLABS - PLAN & SECTIONS SOUTH BOUND SPANS 1,2,3,4 & 5

DESIGNED S.E.
DRAWN S.E.
CHECKED H.R.V.
APPROVED L.N.R.

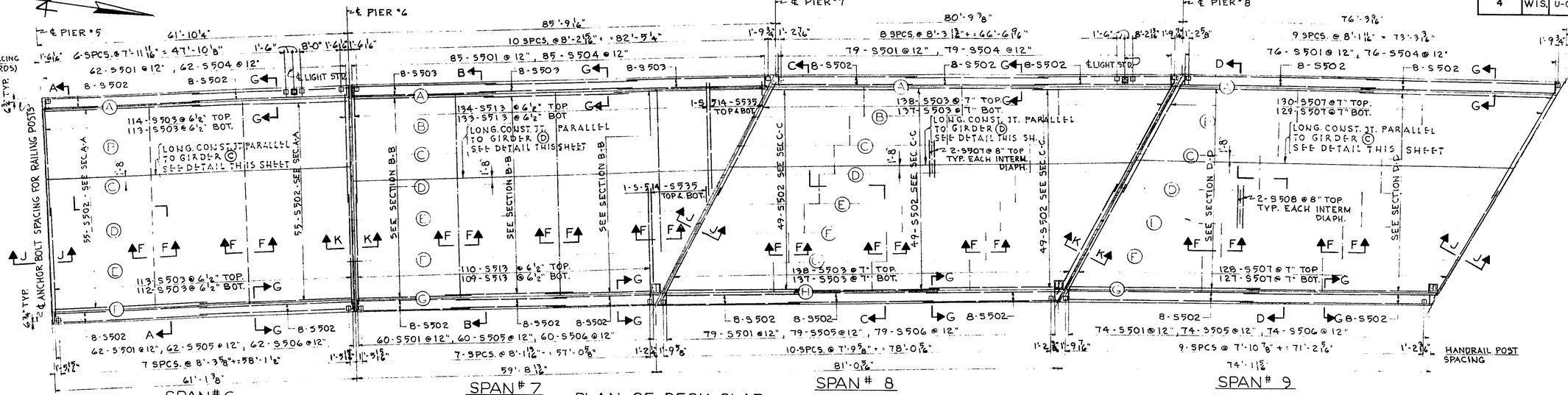
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

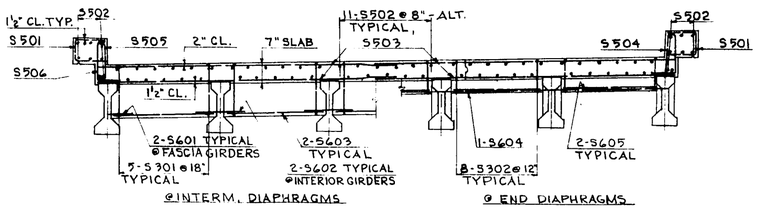
SCALE 3/32" = 1'-0" 3/16" = 1'-0"
27 OF 41 SHEET

X18735

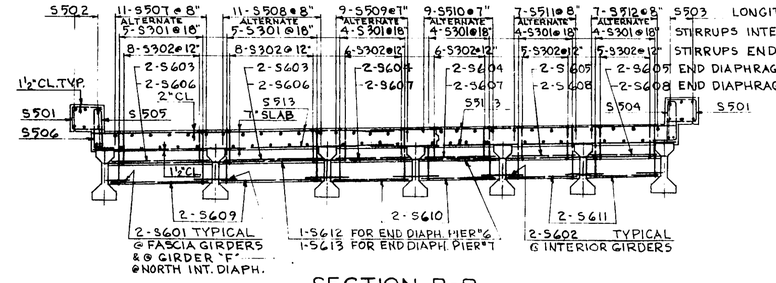
B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(173)	47	65

HANDRAIL POST SPACING (INCL. LIGHT STANDARDS)

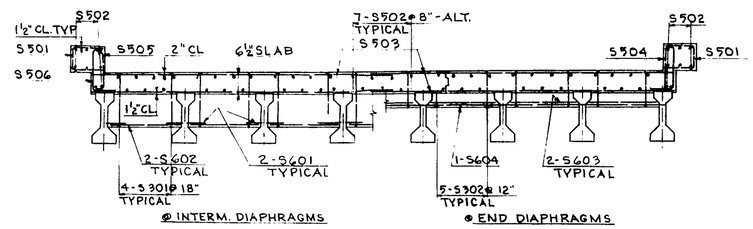




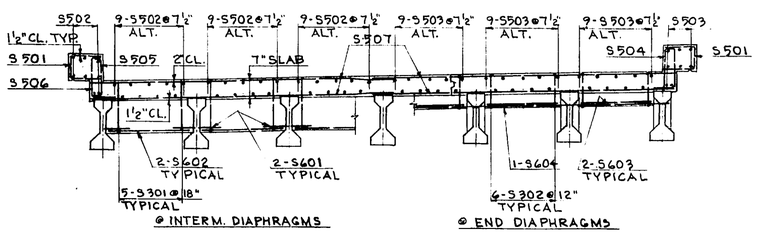
SECTION A-A
SPAN # 6



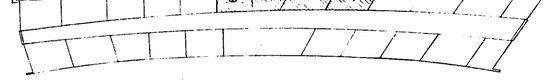
SECTION B-B
SPAN # 7



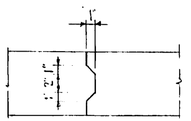
SECTION C-C
SPAN # 8



SECTION D-D
SPAN # 9



KEY-PLAN



LONG. CONST JT DETAIL
REINF. NOT SHOWN

NOTES: FOR REINFORCING BAR DETAILS SEE SHEETS 40 & 41
CUT BARS IN FIELD TO CLEAR DECK DRAINS.
FOR NOTES & SECTIONS PERTAINING TO DECK SLABS SEE SHEET 29

ELEVATIONS TOP OF ROADWAY AT ℄ GIRDERS

GIRDER	SPAN #6 ℄ BRG. PIER #5	¼ POINT	½ POINT	¾ POINT	SPAN #6 ℄ BRG. PIER #6
A	70.22	70.04	69.85	69.68	69.51
B	70.01	69.83	69.65	69.48	69.30
C	69.81	69.63	69.45	69.27	69.10
D	69.60	69.42	69.24	69.07	68.89
E	69.40	69.22	69.04	68.86	68.69
F	69.19	69.01	68.83	68.66	68.48

GIRDER	SPAN #7 ℄ BRG. PIER #6	¼ POINT	½ POINT	¾ POINT	SPAN #7 ℄ BRG. PIER #7
A	69.48	69.24	68.99	68.75	68.51
B	69.34	69.10	68.86	68.63	68.40
C	69.19	68.96	68.74	68.51	68.29
D	69.03	68.81	68.60	68.38	68.17
E	68.87	68.66	68.46	68.25	68.05
F	68.66	68.47	68.28	68.09	67.90
G	68.46	68.28	68.10	67.93	67.75

GIRDER	SPAN #8 ℄ BRG. PIER #7	¼ POINT	½ POINT	¾ POINT	SPAN #8 ℄ BRG. PIER #8
A	68.48	68.24	68.01	67.78	67.55
B	68.31	68.13	67.90	67.67	67.44
C	68.26	68.02	67.79	67.56	67.33
D	68.15	67.92	67.68	67.45	67.22
E	68.04	67.81	67.57	67.34	67.11
F	67.94	67.70	67.46	67.23	67.00
G	67.83	67.59	67.35	67.12	66.89
H	67.72	67.48	67.24	67.01	66.78

GIRDER	SPAN #9 ℄ BRG. PIER #8	¼ POINT	½ POINT	¾ POINT	SPAN #9 ℄ BRG. PIER #9
A	67.52	67.30	67.08	66.86	66.64
B	67.39	67.17	66.95	66.73	66.52
C	67.26	67.04	66.82	66.60	66.39
D	67.13	66.91	66.69	66.48	66.26
E	67.00	66.78	66.57	66.35	66.14
F	66.88	66.66	66.44	66.22	66.01
G	66.75	66.53	66.31	66.10	65.89

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

DECK SLABS - PLAN & SECTIONS SOUTH BOUND SPANS 6, 7, 8 & 9

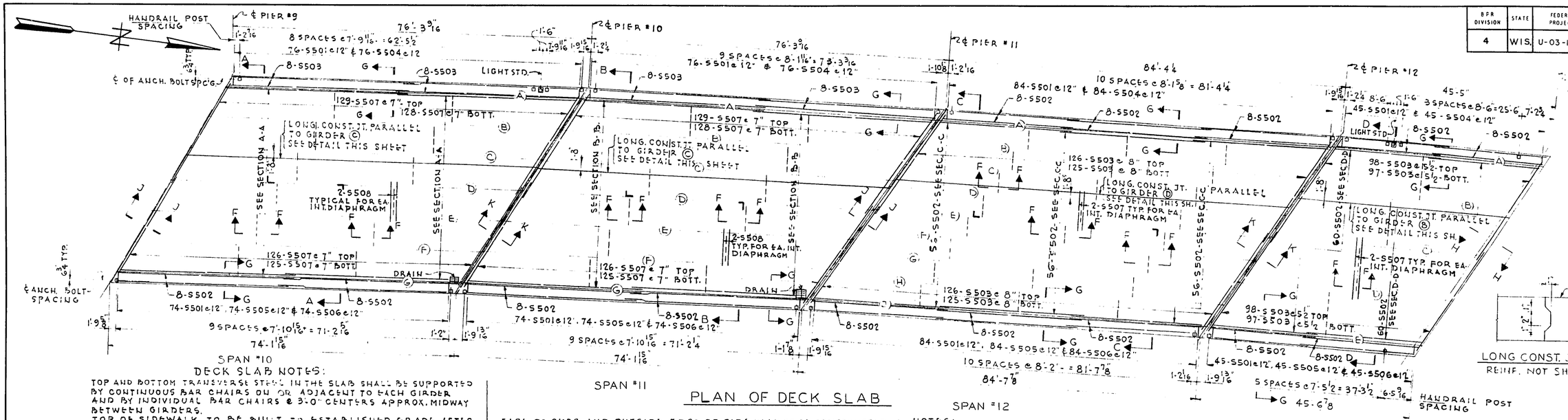
DESIGNED H. R. V.
DRAWN H. R. V.
CHECKED R. E. P.
APPROVED L. N. R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

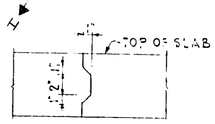
SCALE: 3/32" = 1'-0" 3/16" = 1'-0"
SHEET 28 OF 41

X18736

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	48	65



PLAN OF DECK SLAB



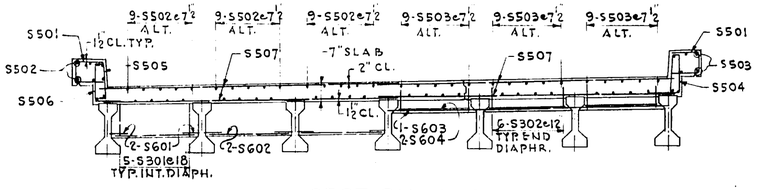
LONG CONST. JT. DETAIL
REINF. NOT SHOWN

DECK SLAB NOTES:

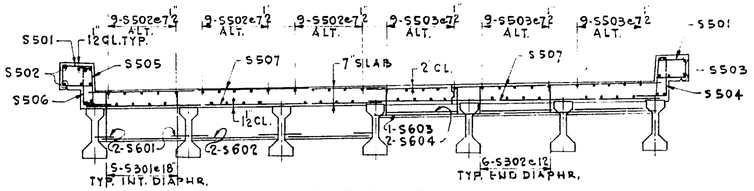
TOP AND BOTTOM TRANSVERSE STEEL IN THE SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS ON OR ADJACENT TO EACH GIRDER AND BY INDIVIDUAL BAR CHAIRS @ 3'-0" CENTERS APPROX. MIDWAY BETWEEN GIRDERS.
TOP OF SIDEWALK TO BE BUILT TO ESTABLISHED GRADE AFTER SPANS HAVE TAKEN THE DEAD LOAD DEFLECTION.
THE 9" HEIGHT OF CURB IS TO BE MAINTAINED AT THE POINTS OF BEARING.
TO COMPENSATE FOR VARIATION IN CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES THE EMBEDMENT OF THE GIRDER IN TO THE SLAB MAYBE VARIED FROM 1/2 MIN TO 1 1/2 MAX.

FACE OF CURB AND OUTSIDE EDGE OF SIDEWALK TO BE CONSTRUCTED TO RADIUS OF CURVE SHOWN ON ALIGNMENT SHEET
EDGE OF SLAB TO BE PARALLEL TO ℄ FASC. GIRDER ON EAST EDGE OF ROADWAY AND PARALLEL TO FACE OF CURB ON THE WEST EDGE OF ROADWAY.

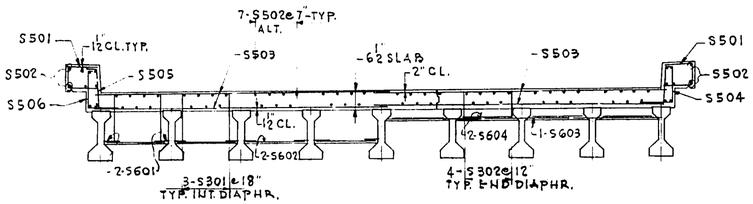
NOTES:
FOR REINFORCING BAR DETAILS SEE SHEET 47
FOR LIGHT STANDARDS AND RAILING DETAILS SEE SHEET 32
FOR JOINT DETAILS SEE SHEET 31
FOR LOCATION OF DIAPHRAGMS SEE SHEETS 16, 17, 18 & 19
[D] INDICATES DRAINS. FOR DETAILS AND EXACT LOCATION SEE SHEET 33
CUT BARS IN FIELD TO CLEAR DECK DRAINS.



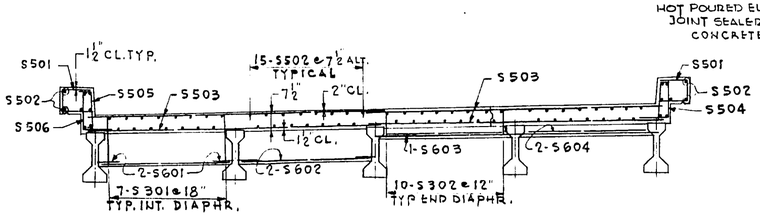
SECTION A-A
SPAN #10



SECTION B-B
SPAN #11

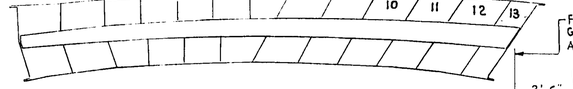


SECTION C-C
SPAN #12

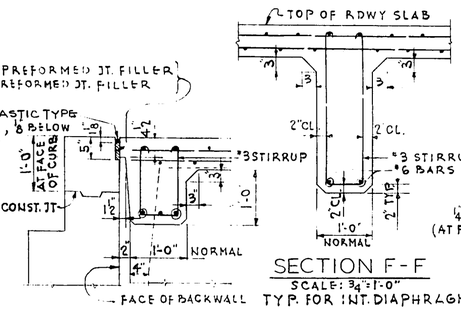


SECTION D-D
SPAN #13

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

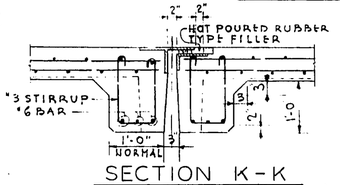


KEY PLAN



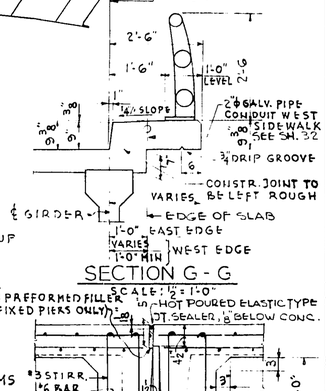
SECTION H-H
SCALE: 3/4" = 1'-0"

THESE DETAILS FOR SOUTH BOUND SPANS ONLY



SECTION K-K
(TYP. AT EXPANSION PIERS)
SCALE: 3/4" = 1'-0"

SECTION F-F
SCALE: 3/4" = 1'-0"
TYP. FOR INT. DIAPHRAGMS



SECTION G-G
SCALE: 1/2" = 1'-0"

SECTION J-J (TYP. AT FIX. PIERS)
SCALE: 3/4" = 1'-0"

ELEVATIONS TOP OF ROADWAY AT ℄ GIRDERS

SPAN #10						SPAN #11						SPAN #12						SPAN #13					
GIRDER	℄ BRG. PIER #9	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER #10	GIRDER	℄ BRG. PIER #10	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER #11	GIRDER	℄ BRG. PIER #11	1/4 POINT	1/2 POINT	3/4 POINT	℄ BRG. PIER #12	GIRDER	℄ BRG. PIER #12	1/4 POINT	1/2 POINT	3/4 POINT	℄ ABUT. BRG
A	66.61	66.39	66.17	65.95	65.74	A	65.71	65.49	65.27	65.05	64.83	A	64.80	64.56	64.31	64.07	63.83	A	63.80	63.67	63.55	63.44	63.34
B	66.49	66.27	66.05	65.83	65.61	B	65.58	65.36	65.14	64.93	64.71	B	64.71	64.46	64.22	63.98	63.74	B	63.61	63.49	63.36	63.24	63.13
C	66.36	66.14	65.92	65.70	65.49	C	65.46	65.24	65.02	64.80	64.59	C	64.62	64.37	64.13	63.88	63.65	C	63.43	63.30	63.17	63.04	62.93
D	66.23	66.01	65.80	65.58	65.37	D	65.33	65.11	64.90	64.68	64.47	D	64.53	64.28	64.03	63.79	63.55	D	63.24	63.11	62.98	62.85	62.73
E	66.11	65.89	65.67	65.46	65.24	E	65.21	64.99	64.77	64.56	64.35	E	64.44	64.19	63.94	63.70	63.46	E	63.05	62.92	62.80	62.67	62.54
F	65.98	65.76	65.55	65.33	65.12	F	65.09	64.87	64.65	64.44	64.22	F	64.35	64.10	63.85	63.61	63.37						
G	65.86	65.64	65.42	65.21	64.99	G	64.96	64.74	64.53	64.31	64.10	G	64.25	64.00	63.76	63.51	63.27						
												H	64.16	63.91	63.67	63.42	63.18						
												J	64.07	63.82	63.57	63.33	63.09						

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

DECK SLABS - PLAN & SECTIONS
SOUTH BOUND SPANS 10, 11, 12, & 13

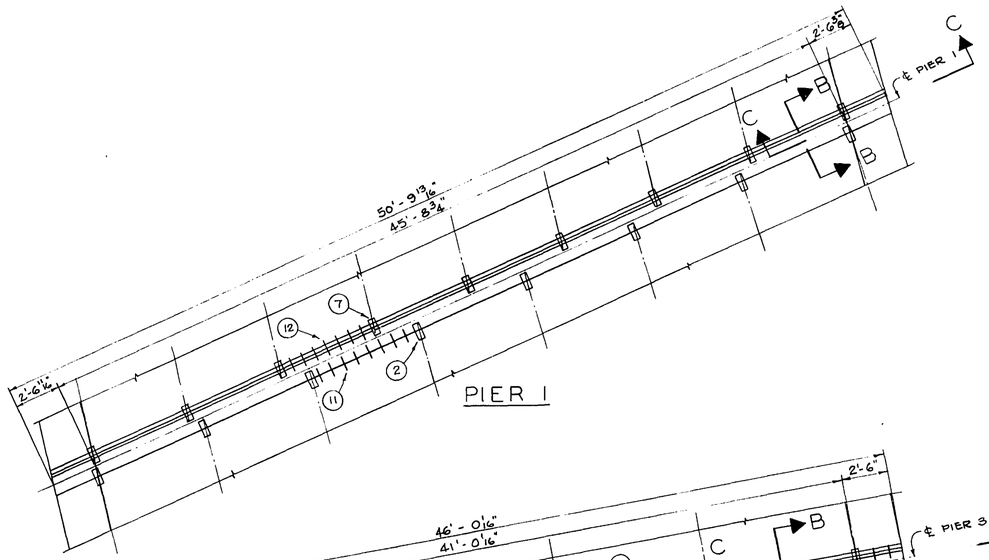
DESIGNED AL. B
DRAWN AL. B
CHECKED R.E.D
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

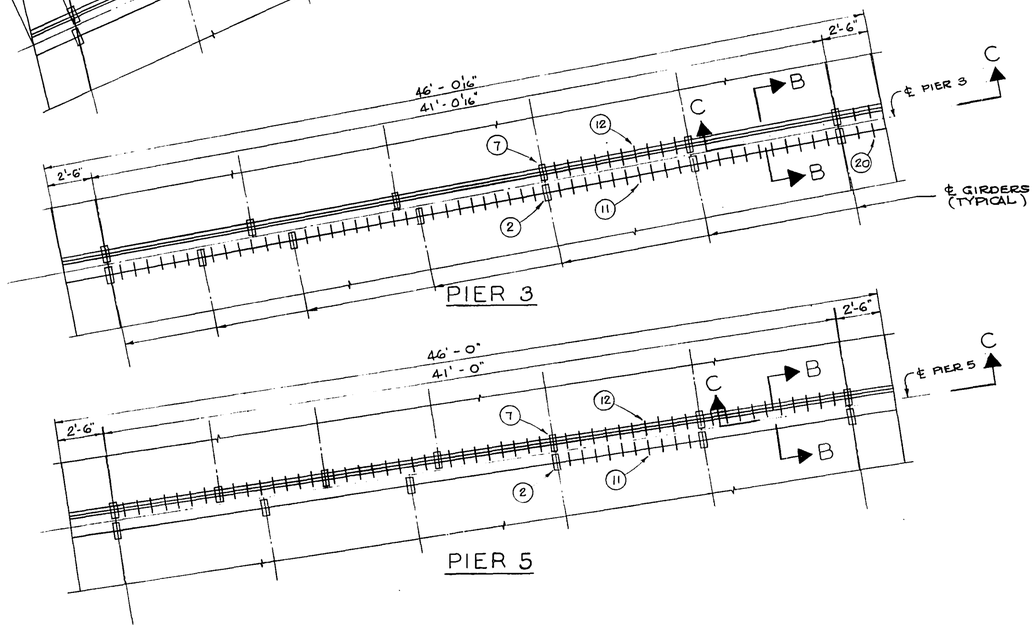
SCALE:
29 OF 41
SHEET

X18737

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	29	65

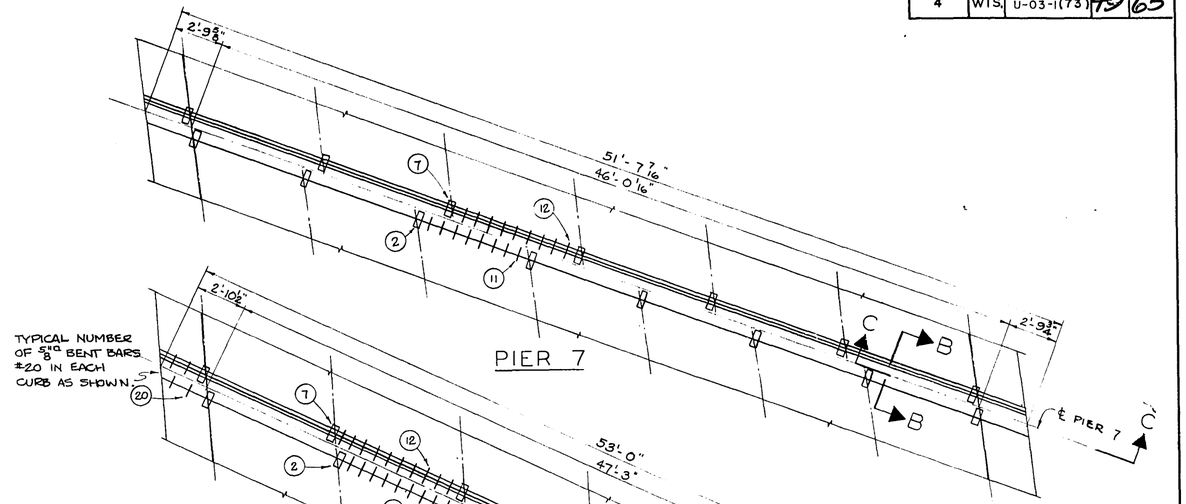


PIER 1



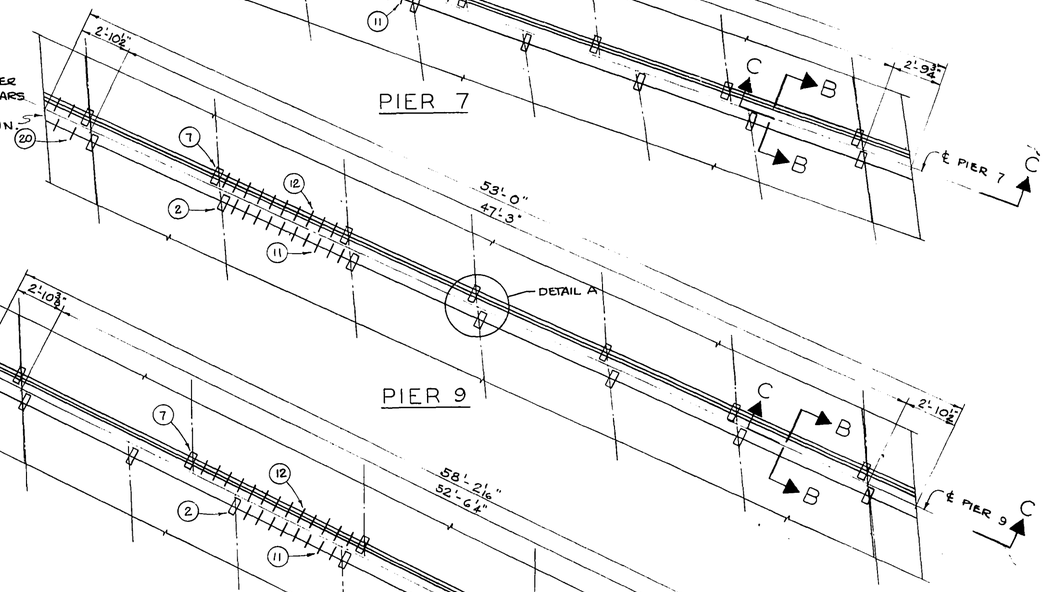
PIER 3

PIER 5

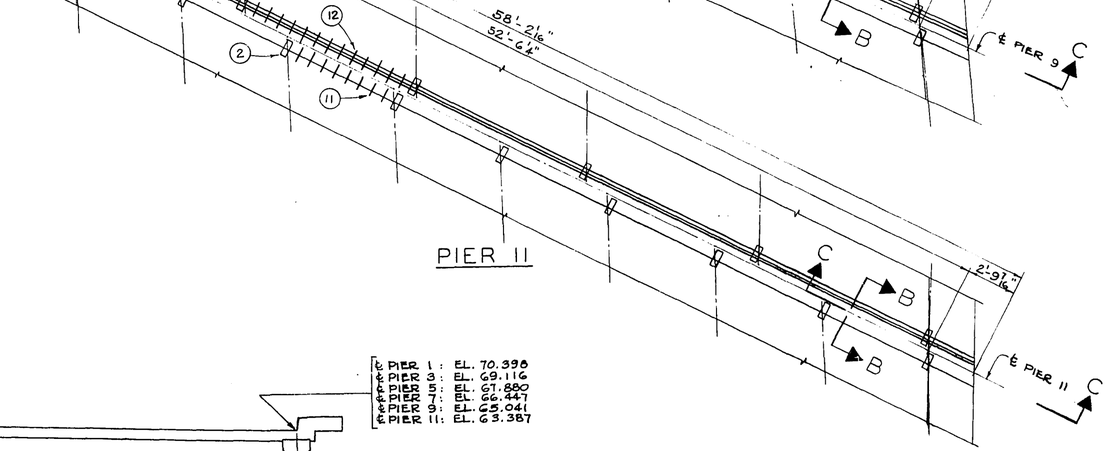


PIER 7

TYPICAL NUMBER OF 5/8" ℄ BENT BARS ±20 IN EACH CURB AS SHOWN

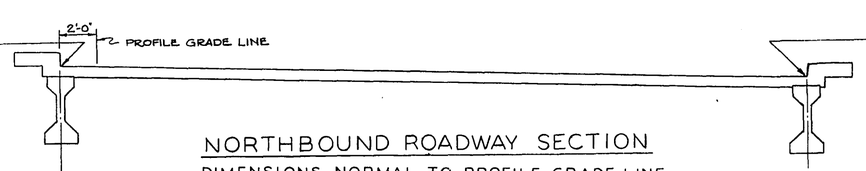


PIER 9



PIER 11

℄ PIER 1 :	EL. 71.677
℄ PIER 3 :	EL. 70.141
℄ PIER 5 :	EL. 68.905
℄ PIER 7 :	EL. 67.262
℄ PIER 9 :	EL. 65.830
℄ PIER 11 :	EL. 64.273



℄ PIER 1 :	EL. 70.398
℄ PIER 3 :	EL. 69.116
℄ PIER 5 :	EL. 67.880
℄ PIER 7 :	EL. 66.447
℄ PIER 9 :	EL. 65.041
℄ PIER 11 :	EL. 63.387

NORTHBOUND ROADWAY SECTION

DIMENSIONS NORMAL TO PROFILE GRADE LINE

NOTES

1. FOR SECTIONS B-B & C-C, DETAIL A, & LEGEND, SEE SH. 31
2. ROADWAY SURFACE STRAIGHT BETWEEN ELEVATIONS GIVEN ON ROADWAY SECTION.
3. FOR GIRDER SPACING SEE SHEETS 16 TO 19
4. TYPICAL NUMBER OF 5/8" ℄ BARS #11 AND #12 BETWEEN GIRDERS IS SHOWN FOR EACH SIDE OF JOINT.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

EXPANSION JOINTS NORTH BOUND SPANS

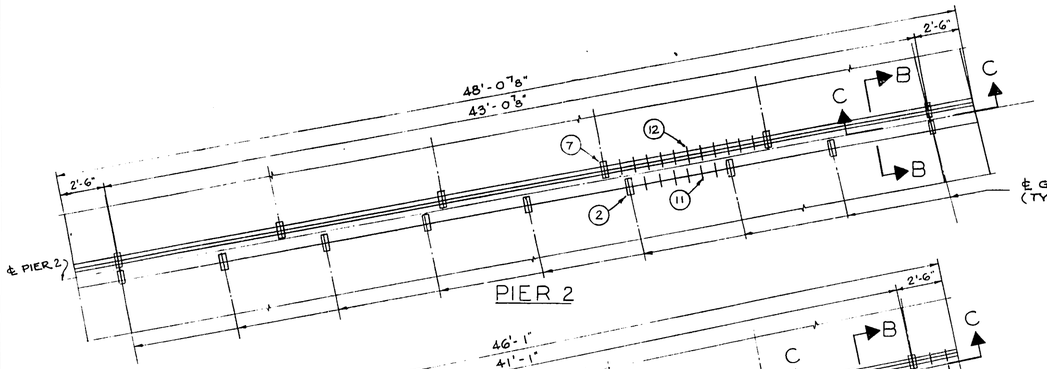
DESIGNED E.H.L.
DRAWN E.H.L.
CHECKED J.R.G. W.G.H.
APPROVED L.N.R.

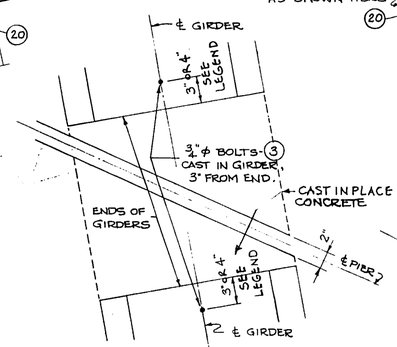
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: 1/4" = 1'-0"
30 OF 41 SHEET

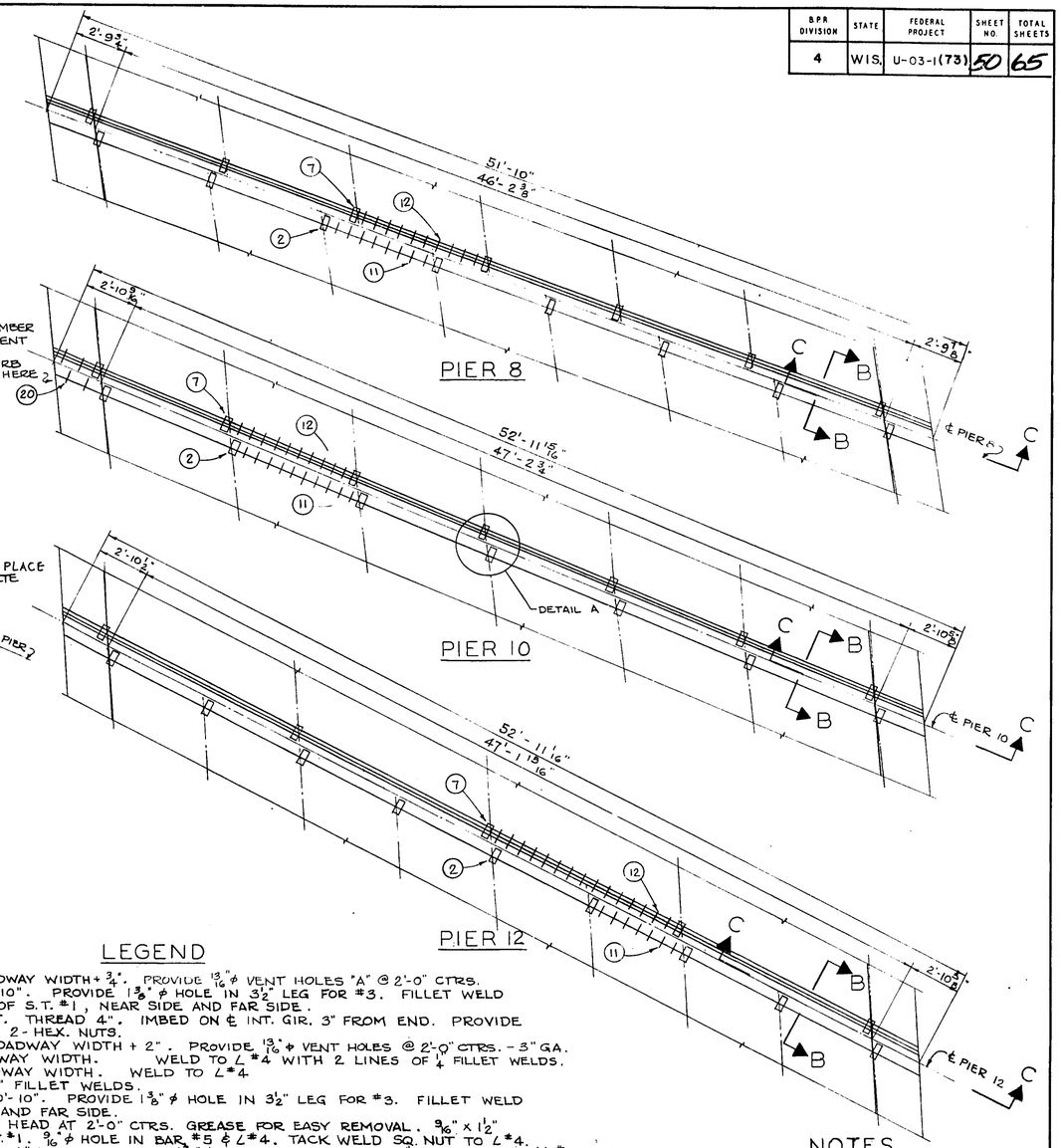
X18738

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	50	65



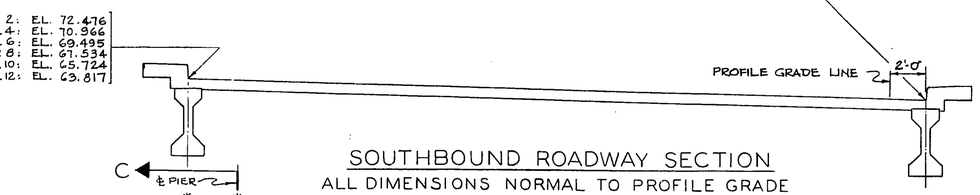


DETAIL A



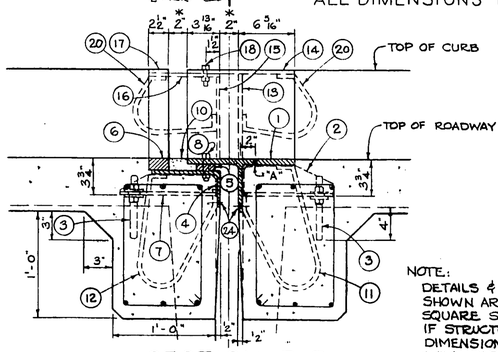
℄ PIER 2:	EL. 71.418
℄ PIER 4:	EL. 69.939
℄ PIER 6:	EL. 68.470
℄ PIER 8:	EL. 66.763
℄ PIER 10:	EL. 64.979
℄ PIER 12:	EL. 63.071

℄ PIER 2:	EL. 72.476
℄ PIER 4:	EL. 70.966
℄ PIER 6:	EL. 69.495
℄ PIER 8:	EL. 67.534
℄ PIER 10:	EL. 65.724
℄ PIER 12:	EL. 63.817

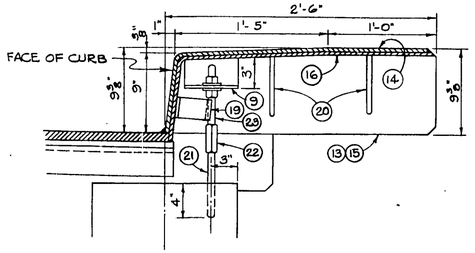


SOUTHBOUND ROADWAY SECTION

ALL DIMENSIONS NORMAL TO PROFILE GRADE



SECTION B-B



SECTION C-C

NOTE:
DETAILS & DIMENSIONS SHOWN ARE FOR A SQUARE STRUCTURE. IF STRUCTURE IS SKEWED, DIMENSIONS & DETAILS WILL VARY.

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

LEGEND

1. S.T. 6"WF39.5# × ROADWAY WIDTH + 3/4". PROVIDE 13/16" ϕ VENT HOLES "A" @ 2'-0" CTRS.
2. ∠ - 3 1/2" × 3" × 3/8" × 0'-10". PROVIDE 1 3/8" ϕ HOLE IN 3 1/2" LEG FOR #3. FILLET WELD TO FLANGE AND WEB OF S.T. #1, NEAR SIDE AND FAR SIDE.
3. 3/4" ϕ × 0'-8" LG. BOLT. THREAD 4". IMBED ON ℄ INT. GIR. 3" FROM END. PROVIDE 2 - ℔ WASHERS AND 2 - HEX. NUTS.
4. ∠ - 8" × 4" × 7/16" × ROADWAY WIDTH + 2". PROVIDE 13/16" ϕ VENT HOLES @ 2'-0" CTRS. - 3" GA.
5. BAR - 2" × 3/8" × ROADWAY WIDTH. WELD TO ∠ #4 WITH 2 LINES OF 1/4" FILLET WELDS.
6. BAR - 2 1/2" × 1 1/2" × ROADWAY WIDTH. WELD TO ∠ #4 WITH 2 LINES OF 1/4" FILLET WELDS.
7. ∠ - 3 1/2" × 2 1/2" × 5/8" × 0'-10". PROVIDE 1 3/8" ϕ HOLE IN 3 1/2" LEG FOR #3. FILLET WELD TO ∠ #4 NEAR SIDE AND FAR SIDE.
8. † 1/2" ϕ BOLT WITH SQ. HEAD AT 2'-0" CTRS. GREASE FOR EASY REMOVAL. 9/16" × 1 1/2" SLOTTED HOLE IN S.T. #1. 9/16" ϕ HOLE IN BAR #5 & ∠ #4. TACK WELD SQ. NUT TO ∠ #4.
9. ∠ - 5" × 3" × 3/8" × 0'-6" LG. PROVIDE 1 3/8" ϕ HOLE IN 5" LEG FOR #23. WELD TO ℔'s #14 & 16.
10. AFTER CONCRETE HAS SET, FILL JOINT WITH HOT POURED RUBBER TYPE FILLER.
11. 5/8" □ BENT BAR AT 0'-9" CTRS. BETWEEN GIRDERS. WELD TO S.T. #1 WITH 1/4" FILLET WELD ALL AROUND.
12. 5/8" □ BENT BAR SPACED AS #11. WELD TO ∠ #4 WITH 1/4" FILLET WELD ALL AROUND.
13. 3/8" PLATE. CUT TO CURB LIMITS AS SHOWN.
14. ℔ - 12 1/8" × 3/8". BEND DOWN FLUSH WITH FACE OF CURB. WELD TO ℔ #13 WITH 2 LINES OF 1/4" FILLET WELDS. FIELD WELD TO S.T. #1.
15. 3/8" PLATE. CUT TO CURB LIMITS AS SHOWN.
16. ℔ - 8 1/16" × 3/8". BEND DOWN FLUSH WITH FACE OF CURB. WELD TO ℔ #15 WITH 1 LINE OF 1/4" FILLET WELD. FIELD WELD TO ∠ #4.
17. BAR - 2 1/2" × 3/8". BEND DOWN FLUSH WITH FACE OF CURB. WELD TO ℔ #16 WITH ONE LINE OF 1/4" FILLET WELD. FIELD WELD TO BAR #6.
18. 1/2" ϕ BOLT. SAME AS #8 EXCEPT FOR LENGTH.
19. ANCHOR BAR - 2 1/2" × 3/8" × 1'-0" ⌐, WELD TO ℔ #14 AND ℔ #16.
20. 5/8" □ BENT BAR. WELD TO ℔'s #13 & 14, AND ℔'s #15 & #16 WITH 1/4" FILLET WELDS ALL AROUND.
21. 3/4" ϕ × 1'-0" LG. BOLT. THREAD 8". IMBED 4" FROM END OF GIRDER ON ℄.
22. 3/4" MALLEABLE HEX. NUT × 0'-3" LG. (OR EQUAL)
23. 1/2" ϕ THREADED BOLT. PROVIDE 2 - ℔ WASHERS AND 2 - HEX. NUTS.
24. 9/16" ϕ HOLES @ 3'-0" CENTERS.

* 2" OPENING BASED ON NORMAL TEMPERATURE OF 60°F.

† LONG DIMENSION OF SLOTTED HOLES PARALLEL TO ℄ ROADWAY. AFTER BOLTS ARE REMOVED, FILL HOLES WITH HOT POURED RUBBER TYPE FILLER.

NOTES

1. ROADWAY SURFACE STRAIGHT BETWEEN ELEVATIONS GIVEN ON ROADWAY SECTION.
2. FOR GIRDER SPACING SEE SHEETS 16 TO 19
3. TYPICAL NUMBER OF 5/8" □ BENT BARS #11 AND #12 BETWEEN GIRDERS IS SHOWN FOR EACH SIDE OF JOINT.

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

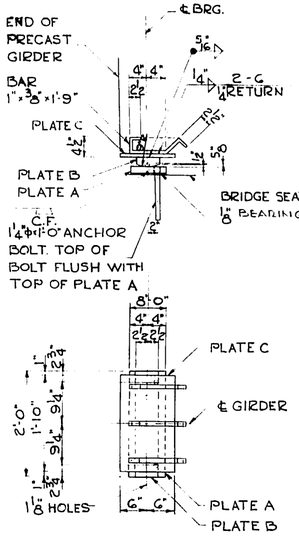
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

EXPANSION JOINTS SOUTH BOUND SPANS

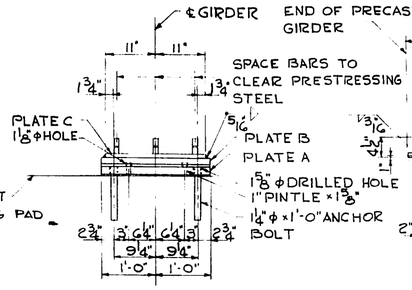
DESIGNED E.H.L.	DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE: 1/4" = 1'-0" 1 1/2" = 1'-0"	
DRAWN E.H.L.		31 OF 41 SHEET	
CHECKED J.R.G. W.G.H.			
APPROVED L.N.R.			

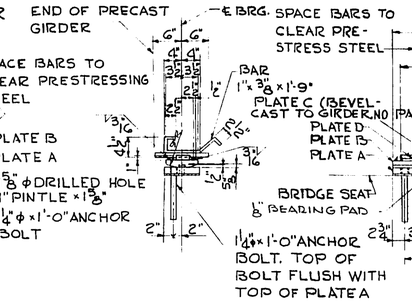
X18739

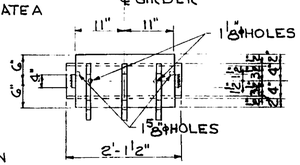
BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	51	65



FIXED BEARING
SCALE ¾"=1'-0"







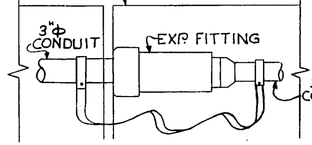
MATERIAL

PLATE A - 8"x1½"x2'-0"
SOLE PLATE B 5"x2'-0" TH. VARIES (SEE SCHED)
PLATE C - 12"x¾"x1'-10"
3 BARS - 1"x⅜"x1'-9"
BEARING PAD 8"x⅛"x2'-0"
2 ANCHOR BOLTS 1¼"φx1'-0" (NO HEAD)
2 PINTLES - 1"φx1⅝" (CHAMFER TOP OF PINTLE ⅛")

MATERIAL

PLATE A - 8"x1½"x2'-1½"
PLATE B - 7"x2'-1½" TH. VARIES
PLATE C - 12"x1 11/16"x1'-10"
PLATE D - 5"x½"x1'-8⅝" LUBRICATED BRONZE (LUBRICATION ON TOP SURFACE ONLY)
2 KEEPER BARS - 1"x1"x0'-4"
3 BARS - 1"x⅜"x1'-9"
2 BARS - ¾"x1"x0'-3"
BEARING PAD 8"x⅛"x2'-1½"
2 ANCHOR BOLTS - 1¼"φx1'-0" (NO HEADS)
2 PINTLES - 1⅛"x1⅝" (CHAMFER TOP PINTLE ⅛")

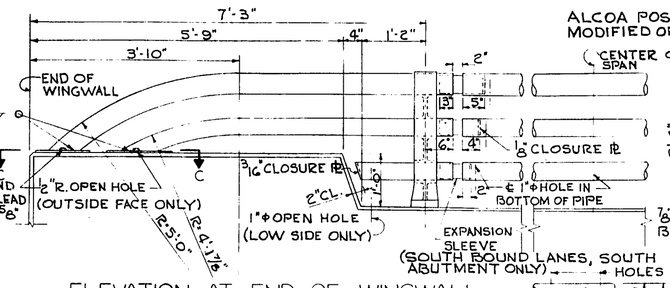
EXPANSION BEARING
SCALE: ¾"=1'-0"



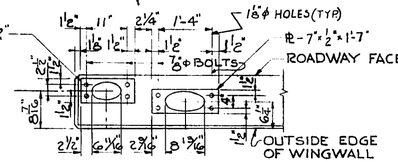
DETAIL OF EXPANSION FITTING
FOR CONDUITS AT PIERS AND ABUTMENTS FOR TYPE OF FITTING SEE SPECIAL PROVISIONS (TYP)

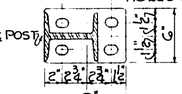
ELECTRICAL WORK LUMP SUM

ITEM	UNIT	ESTIMATED QUANTITY FURNISHED AND PLACED BY CONTRACTOR B-40-63	B-40-64
JUNCTION BOX	EACH	6	5
EXPANSION FITTING	EACH	14	13
2"φ GALV. STEEL CONDUIT	LIN. FT.	30	25
3"φ GALV STEEL CONDUIT	LIN FT	920	860
4"φ SLEEVES	EACH	2	2



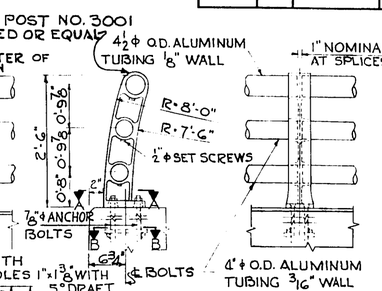
ELEVATION AT END OF WINGWALL
SCALE ¾"=1'-0"



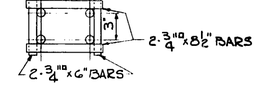


SECTION A-A

ALCOA POST NO. 3001 MODIFIED OR EQUAL

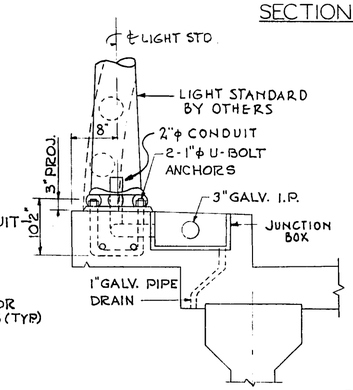


ELEVATION AT INTERIOR POST
SCALE ¾"=1'-0"

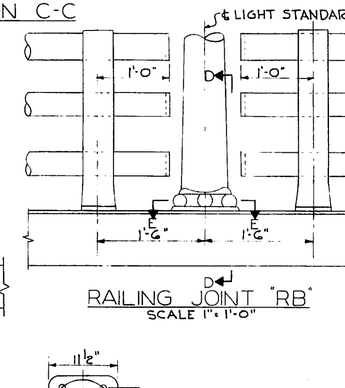


SECTION B-B

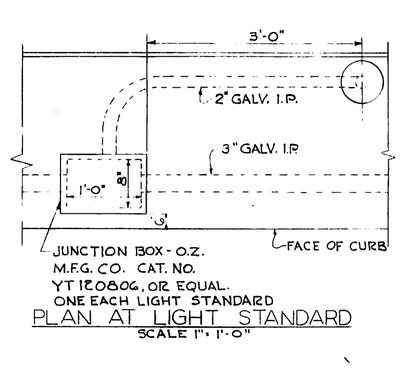
SECTION C-C



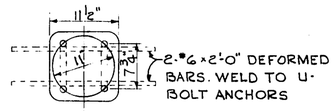
SECTION D-D
SCALE 1"=1'-0"



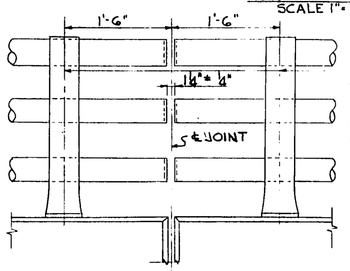
RAILING JOINT "RB"
SCALE 1"=1'-0"



JUNCTION BOX - O.Z. M.F.G. CO. CAT. NO. YT120806, OR EQUAL.
ONE EACH LIGHT STANDARD
PLAN AT LIGHT STANDARD
SCALE 1"=1'-0"



SECTION E-E
SCALE 1"=1'-0"



RAILS TO BE CONTINUOUS THRU POSTS AT THESE POINTS. REAM DRAFT FROM HOLE IN POST IF NECESSARY

RAILING JOINT 'RA"
SCALE 1"=1'-0"

NOTES:
RAILING POSTS TO BE SET NORMAL TO GRADE.
ALUMINUM ALLOY SHIMS SHALL BE USED UNDER POST BASES WHERE REQUIRED FOR ALIGNMENT.

NORTH BOUND LANES - SOLE PLATE THICKNESS

GIRDER	SPAN 1		SPAN 2		SPAN 3		SPAN 4		SPAN 5		SPAN 6		SPAN 7		SPAN 8		SPAN 9		SPAN 10		SPAN 11		SPAN 12	
	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.
	S. ABUT.	PIER 1	PIER 1	PIER 2	PIER 2	PIER 3	PIER 3	PIER 4	PIER 4	PIER 5	PIER 5	PIER 6	PIER 6	PIER 7	PIER 7	PIER 8	PIER 8	PIER 9	PIER 9	PIER 10	PIER 10	PIER 11	PIER 11	N. ABUT
A	1 15/16	1 15/16	1 11/16	2 11/16	2 7/16	2 3/16	1 15/16	2 9/16	2 5/16	2 1/16	1 15/16	2 7/16	2 1/8	2 3/16	1 15/16	2 13/16	2 7/16	2 3/16	1 15/16	2 7/16	2 1/8	2 13/16	2 7/16	2
B	1 15/16	1 7/16	1 15/16	2 11/16	1 13/16	3	1 15/16	2 3/16	1 15/16	2 3/4	3 1/4	1 15/16	2 3/16	2 9/16	1 7/16	2 3/16	1 15/16	1 11/16	1 3/8	2 9/16	3 3/16	3 1/2	1 7/16	1 15/16
C	1 15/16	1 7/16	2 5/16	2 11/16	1 15/16	1 7/16	1 7/16	2 3/16	1 15/16	2 3/16	1 7/16	1 15/16	2 1/8	2 11/16	1 7/16	2 3/16	1 13/16	1 13/16	1 7/16	2 3/16	2	2 3/16	1 7/16	1 15/16
D	1 15/16	1 7/16	2 9/16	3 5/8	2 3/16	1 7/16	1 7/16	2 3/16	1 15/16	1 11/16	1 7/16	1 15/16	2 5/16	2 15/16	1 7/16	2 5/16	1 15/16	1 13/16	1 7/16	2	2	3 1/16	1 7/16	1 13/16
E	1 15/16	1 15/16	1 1/2	2	1 15/16	1 11/16	1 7/16	2 3/16	1 15/16	1 9/16	1 7/16	2 15/16	3 5/16	1 5/8	1 3/8	2 3/16	1 15/16	1 13/16	1 7/16	2 9/16	2 1/8	1 11/16	1 7/16	2 1/16
F	1 15/16	1 9/16	1 1/2	2 5/16	2 3/16	1 11/16	1 15/16	2 11/16	2 7/16	2 3/16	1 7/16	2 5/16	2	1 11/16	1 7/16	2 3/16	1 13/16	1 11/16	1 7/16	2 9/16	3 3/16	2 7/16	2 7/16	2 9/16
G	1 15/16	1 7/16	1 3/8	3 5/8	2 5/16	2 3/16					1 15/16	2 7/16	1 7/8	2 1/16	1 13/16	2 13/16	2 7/16	2 3/16	1 15/16	2 7/16	2	3 1/4		
H	1 15/16	1 15/16	1 5/8	2									2 1/8	2 3/16							2	1 15/16		
J			1 13/16	2 9/16																	2 1/8	2 13/16		

SOUTH BOUND LANES - SOLE PLATE THICKNESS

GIRDER	SPAN 1		SPAN 2		SPAN 3		SPAN 4		SPAN 5		SPAN 6		SPAN 7		SPAN 8		SPAN 9		SPAN 10		SPAN 11		SPAN 12		SPAN 13	
	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.	FIX.	EXP.	EXP.	FIX.
	S. ABUT	PIER 1	PIER 1	PIER 2	PIER 2	PIER 3	PIER 3	PIER 4	PIER 4	PIER 5	PIER 5	PIER 6	PIER 6	PIER 7	PIER 7	PIER 8	PIER 8	PIER 9	PIER 9	PIER 10	PIER 10	PIER 11	PIER 11	PIER 12	PIER 12	N. ABUT
A	1 7/16	2 13/16	2 9/16	2 5/16	1 15/16	2 11/16	2 7/16	2 3/16	1 13/16	2 11/16	2 7/16	2 3/16	1 13/16	2 7/16	2 1/8	2 5/16	1 15/16	2 11/16	2 5/16	1 15/16	2 5/16	2	2 13/16	2 7/16	2
B	1 7/16	1 15/16	2 5/16	3 1/8	1 7/16	2 3/16	1 15/16	1 11/16	1 7/16	2 5/16	1 15/16	2 3/4	3 1/4	1 15/16	2 1/8	2 9/16	1 7/16	2 5/16	1 15/16	1 13/16	1 7/16	2 3/16	2	1 11/16	1 7/16	1 15/16
C	1 7/16	1 15/16	2 11/16	1 5/8	1 7/16	2 3/16	1 15/16	1 13/16	1 7/16	2 3/16	1 15/16	2 5/16	1 7/16	1 15/16	2 1/8	2 13/16	1 7/16	2 5/16	1 15/16	1 13/16	1 7/16	2 3/16	2	2 15/16	1 7/16	1 15/16
D	1 7/16	2 3/16	3 3/16	2 9/16	1 7/16	2 3/16	1 15/16	1 11/16	1 7/16	2 5/16	1 15/16	1 11/16	1 7/16	1 15/16	2 3/16	3 1/16	1 7/16	2 3/16	1 13/16	1 3/8	1 15/16	2 9/16	3 1/16	1 11/16	1 7/16	1 15/16
E	1 7/16	2 7/16	1 7/8	1 1/2	1 9/16	2 3/16	1 15/16	1 13/16	1 7/16	2 3/16	1 15/16	1 13/16	1 7/16	1 15/16	2 5/16	1 11/16	1 3/8	2 5/16	1 15/16	1 13/16	1 7/16	2 9/16	2 1/8	2 13/16	2 5/16	2
F	1 7/16	2 3/16	1 7/8	1 15/16	1 15/16	2 11/16	2 7/16	2 3/16	1 15/16	2 13/16	2 7/16	2 3/16	1 7/16	2 5/16	3 5/16	1 13/16	1 7/16	2 5/16	1 15/16	1 13/16	1 7/16	2 7/16	3 1/16	1 11/16		
G	1 7/16	1 15/16	1 7/8	2 15/16									1 15/16	2 7/16	2	2 7/16	1 15/16	2 13/16	2 7/16	2 5/16	1 15/16	2 7/16	1 7/8	2 13/16		
H	1 7/16	2 7/16	1 7/8	1 3/8											2 1/8	2 5/16							1 7/8	1 11/16		
J			2 3/16	2 3/16																			2 1/8	2 13/16		

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

BEARINGS, RAILING, AND MISCELLANEOUS DETAILS

NO.	DATE	REVISION	BY
2	APR. 16, '59	SEC. C-C DIMENSIONS ADDD	D.S.
1	FEB 17 1959	SOLE PLATE THICKNESS TABLE REVISED	W.G.H.

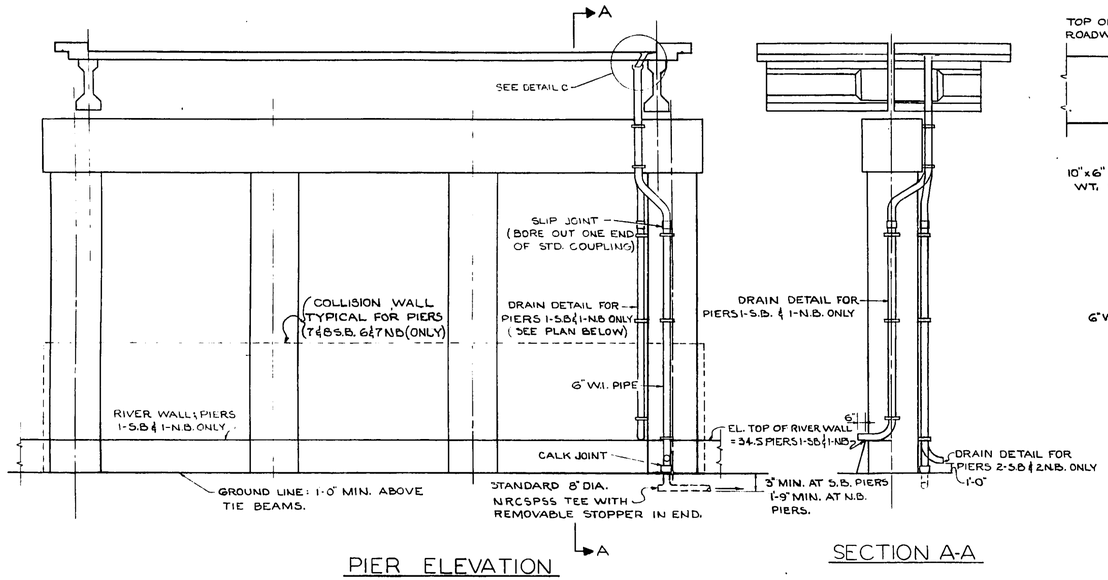
DESIGNED J.R.G.
DRAWN J.R.G.
CHECKED E.H.L.
APPROVED L.N.R

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: AS SHOWN
32 OF 41 SHEET

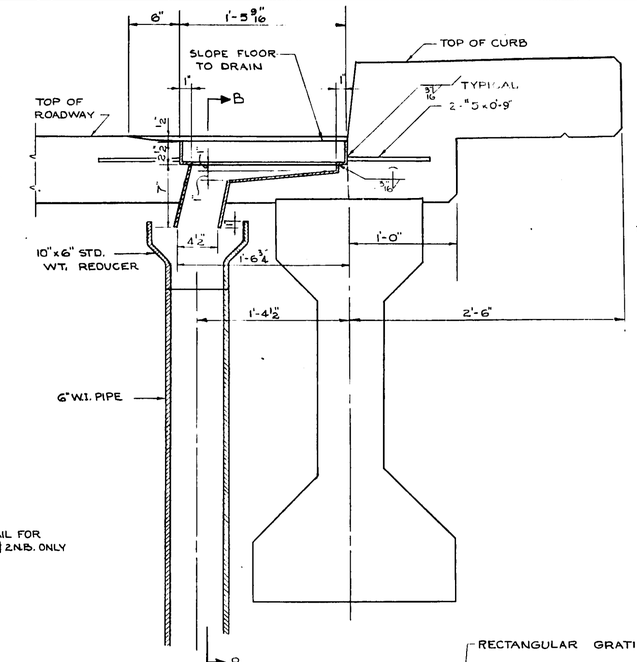
X18740

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	52	65



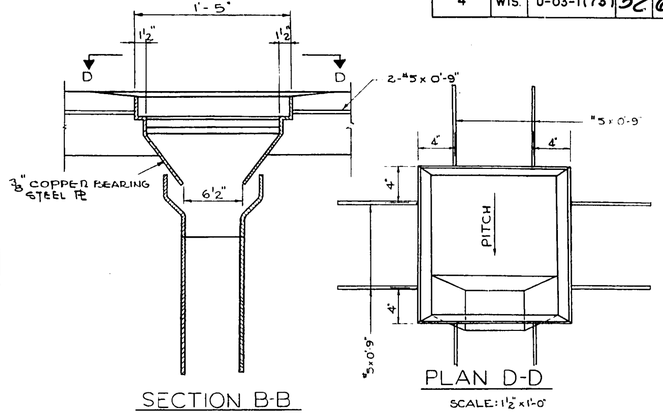
PIER ELEVATION

SECTION A-A



DETAIL C

SCALE: 1 1/2"=1'-0"

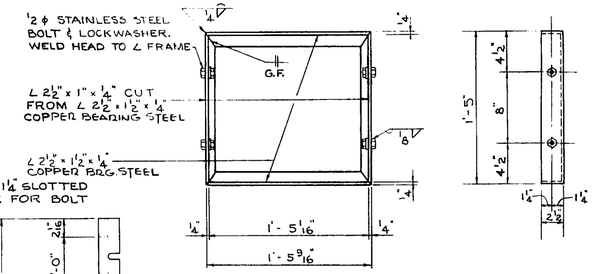


SECTION B-B

SCALE: 1 1/2"=1'-0"

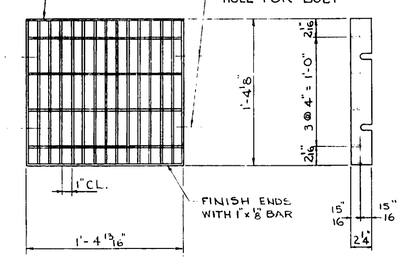
PLAN D-D

SCALE: 1 1/2"=1'-0"



FRAME

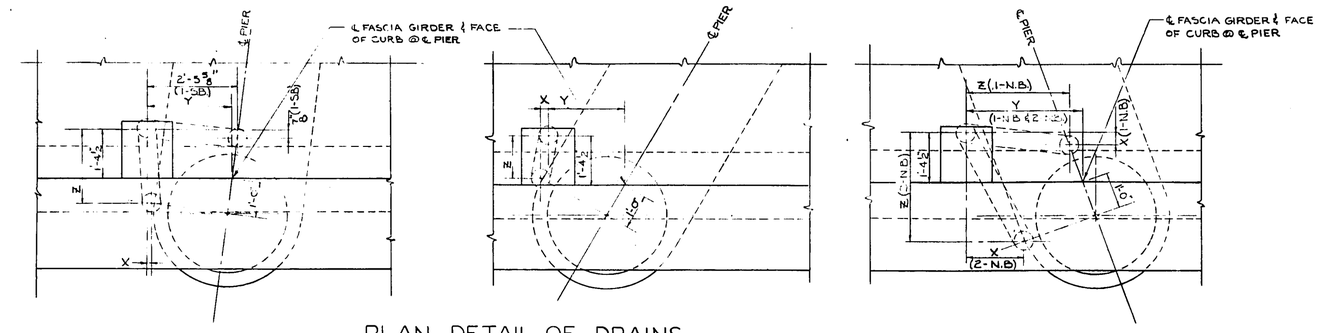
SCALE: 1 1/2"=1'-0"



GRATE

SCALE: 1 1/2"=1'-0"

DRAIN DETAILS



PLAN DETAIL OF DRAINS

PIER	X	Y	Z	GROUND EL.
1-S.B.	*	2'-4 5/8"	*	*
2-S.B.	3/4"	2'-4 7/8"	2'-5 1/4"	30
3-S.B.	1 1/4"	2'-2 1/2"	2'-4 5/16"	36
4-S.B.	1 3/4"	2'-2 1/2"	2'-4 7/16"	37
5-S.B.	1 3/4"	2'-2 1/2"	2'-4 7/16"	37
1-N.B.	1 3/4"	2'-2 1/2"	2'-4 9/16"	36

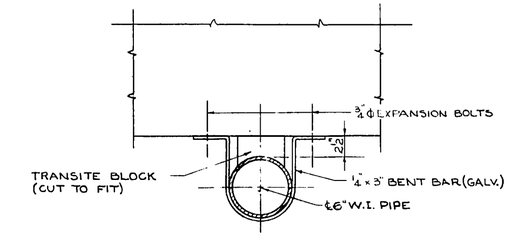
* SEE DETAILS ABOVE TABLE

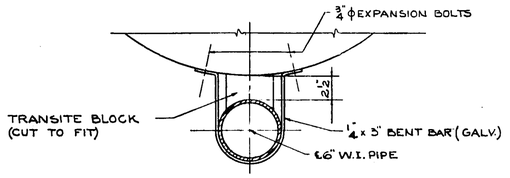
PIER	X	Y	Z	GROUND EL.
7-S.B.	1 15/16"	2'-4 3/16"	1'-1 7/16"	40
8-S.B.	1 15/16"	2'-4 3/16"	1'-2"	39
9-S.B.	1 15/16"	2'-4 3/16"	1'-1 7/16"	40
10-S.B.	1 3/4"	2'-4 5/8"	1'-0 13/16"	40
11-S.B.	1 11/16"	2'-4 5/8"	1'-0 1/2"	40
6-N.B.	1 15/16"	2'-4 3/16"	1'-1 11/16"	38
8-N.B.	1 15/16"	2'-4 3/16"	1'-1 9/16"	40
9-N.B.	1 3/4"	2'-4 1/8"	1'-0 15/16"	40
10-N.B.	1 3/4"	2'-4 1/8"	1'-0 13/16"	40

PIER	X	Y	Z	GROUND EL.
1-N.B.	1"	2'-7 13/16"	2'-6"	*
2-N.B.	8 5/8"	2'-9 5/16"	2'-9 7/16"	29

SEE DETAILS ABOVE TABLE

NOTE: ALL EL. ARE TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD





DETAILS OF RISER SUPPORT

SCALE: 1 1/2"=1'-0"

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

BRIDGE DRAINAGE DETAILS

NO.	DATE	REVISION	BY

DESIGNED K.N.J.
DRAWN K.N.J.
CHECKED J.R.G. W.G.H.
APPROVED L.N.R

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE: AS NOTED

33 OF 41 SHEET

X18741

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	53	65

REINFORCING STEEL LIST

SOUTH ABUTMENT

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
A 401	4	19	7	20'-0"	254	BANK BLOCK STIRRUPS
A 402	4	19	19	17'-5"	222	WING WALL FOOTING STIRRUPS
A 403	4	21	5	23'-3"	326	RETAINING WALL HORIZ.
A 404	4	8	5	5'-6"	29	WINGWALL PARAPET HORIZ.
A 405	4	2	3	11'-2"	15	SHORT WING WALLS VERTICAL
A 406	4	16	3	5'-0"	53	RETAINING WALL
A 407	4	6	5	29'-8"	119	ABUTMENT BACKWALL HORIZ.
A 408	4	6	5	28'-9"	115	" " "
A 409	4	12	5	27'-3"	218	" " "
A 410	4	57	21	19'-4"	736	BANK BLOCK STIRRUPS
A 411	4	18	5	4'-3"	51	WINGWALL CORNERS
A 412	4	6	4	5'-3"	21	WEST WINGWALL CORNERS
A 413	4	6	1	5'-3"	21	EAST " "
A 414	4	2	5	13'-6"	18	WEST " VERTICAL
A 415	4	2	5	10'-0"	13	EAST " "
A 416	4	6	5	7'-6"	30	EAST " "
A 417	4	19	3	3'-6"	44	WINGWALLS
A 418	4	2	5	9'-6"	13	WINGWALL VERTICAL
A 419	4	4	2	7'-0"	19	WINGWALLS
A 420	4	2	5	8'-9"	12	WINGWALL VERTICAL
A 421	4	4	3	11'-6"	31	" "
A 422	4	2	3	10'-0"	13	" "
A 423	4	10	5	13'-9"	92	" HORIZONTAL
A 424	4	2	5	11'-9"	16	" "
A 425	4	6	5	9'-9"	39	" "
A 426	4	9	5	8'-6"	51	" VERTICAL
A 427	4	10	5	19'-6"	130	" HORIZONTAL
A 428	4	6	5	15'-6"	62	" "
A 429	4	2	5	17'-6"	23	" "
A 430	4	3	2	9'-2"	18	SHORT WINGWALLS HORIZ.
A 431	4	4	3	7'-2"	19	" " VERT.
A 432	4	4	3	9'-8"	26	" " "
A 433	4	3	2	9'-2"	18	" " HORIZ.
A 434	4	6	5	7'-11"	32	" " "
A 435	4	4	2	9'-3"	25	" " "
A 501	5	13	5	30'-0"	407	ABUTMENT BANK BLOCK HORIZ.
A 502	5	31	5	27'-3"	881	" " " "
A 503	5	6	5	13'-0"	81	EAST WINGWALL FOOTING
A 504	5	2	5	11'-3"	28	" " "
A 505	5	35	5	4'-0"	146	DOWELS, WINGWALL & RET. WALL
A 506	5	40	5	10'-8"	445	RETAINING NEAT WALL
A 507	5	9	5	8'-6"	80	WINGWALL VERTICAL
A 508	5	2	5	9'-6"	20	" "
A 509	5	5	1	9'-7"	50	BANK BLOCK CORNER
A 510	5	24	4	7'-3"	181	BEARING SEATS
A 511	5	17	5	29'-3"	519	BANK BLOCK HORIZONTAL
A 512	5	38	4	9'-0"	357	BEARING SEATS
A 513	5	7	2	5'-5"	40	BANK BLOCK CORNER
A 514	5	8	2	5'-5"	45	" "
A 515	5	8	4	8'-1"	67	" "
A 516	5	8	5	16'-0"	133	WINGWALL FOOTING
A 517	5	6	3	7'-6"	47	BANK BLOCK CORNER
A 518	5	2	5	5'-6"	11	" "
A 519	5	8	5	2'-2"	18	CURB SECTION
A 520	5	34	5	4'-9"	168	CORNER BARS
A 521	5	2	5	4'-9"	10	DOWELS CORNER OF ABUTMENT
A 522	5	6	5	7'-6"	47	WINGWALL VERTICAL
A 523	5	2	5	8'-9"	18	" "
A 524	5	48	5	7'-2"	359	RETAINING WALL FOOTING
A 601	6	24	5	4'-9"	171	RETAINING WALL DOWELS
A 602	6	3	5	29'-6"	133	BEARING SEATS HORIZONTAL
A 603	6	6	5	27'-3"	246	" " "

SOUTH ABUTMENT

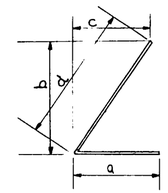
MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
A 604	6	5	5	9'-3"	42	BEARING SEATS HORIZ.
A 605	6	72	4	6'-9"	730	ABUTMENT BACKWALL
A 606	6	10	3	11'-11"	179	" " CURB SECT.
A 607	6	68	3	10'-5"	1064	" "
A 608	6	3	5	22'-6"	101	BEARING SEAT HORIZ.
A 609	6	16	5	23'-3"	559	RETAINING WALL FOOTING
				TOTAL	10,302	LBS.

NORTH ABUTMENT

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
A 401	4	6	5	22'-0"	88	HORIZONTAL BACKWALL FRONT
A 402	4	6	5	31'-6"	126	" " "
A 403	4	31	21	17'-3"	357	BANKBLOCK STIRRUPS
A 404	4	41	7	20'-0"	548	" " "
A 405	4	6	2	5'-0"	20	HORIZ. CORNER BACKWALL FRONT
A 406	4	8	5	2'-6"	13	HORIZ. SIDEWALK
A 407	4	13	19	17'-5"	175	WINGWALL FOOTING
A 408	4	12	5	8'-0"	64	WINGWALL VERT. FRONT
A 409	4	4	5	9'-0"	24	" " "
A 410	4	10	5	14'-3"	95	WINGWALL HORIZONTAL
A 411	4	2	5	12'-3"	16	" "
A 412	4	8	5	10'-3"	55	WINGWALL HORIZ. & END OF BACKWALL VERTICAL
A 413	4	4	3	11'-6"	31	WINGWALL VERTICAL
A 414	4	47	3	5'-0"	157	WINGWALL & RETAINING WALL VERT.
A 415	4	2	3	10'-2"	14	WINGWALL VERTICAL
A 416	4	8	5	5'-5"	29	WINGWALL PARAPET HORIZ.
A 417	4	4	2	7'-0"	19	WINGWALL INCLINED
A 418	4	2	5	11'-0"	15	END OF BACKWALL VERTICAL
A 419	4	9	5	4'-0"	24	END OF BACKWALL HORIZONTAL
A 420	4	10	5	13'-3"	89	WINGWALL HORIZONTAL
A 421	4	2	5	11'-3"	15	" "
A 422	4	6	5	9'-3"	37	" "
A 423	4	6	1	5'-9"	23	HORIZ. CORNER BACKWALL FRONT
A 424	4	6	5	33'-0"	132	HORIZ. BACKWALL FRONT
A 425	4	6	5	29'-9"	119	" " "
A 426	4	17	5	20'-3"	230	HORIZ. RETAINING WALL
A 427	4	18	5	27'-0"	325	" " "
A 428	4	4	5	5'-0"	13	BANK BLOCK CORNERS
A 429	4	9	5	4'-6"	27	END OF BACKWALL HORIZ.
A 430	4	82	5	7'-2"	392	RETAINING WALL FOOTING
A 431	4	32	5	23'-6"	502	" " "
A 432	4	4	2	9'-8"	26	WINGWALL INCLINED
A 433	4	4	3	9'-0"	24	WINGWALL VERTICAL
A 434	4	2	3	11'-0"	15	" "
A 435	4	3	1	9'-6"	19	WINGWALL HORIZONTAL FRONT
A 436	4	3	2	9'-6"	19	" " "
A 437	4	4	3	7'-0"	19	WINGWALL VERTICAL
A 438	4	3	5	8'-6"	17	WINGWALL HORIZ. BACK
A 439	4	3	5	7'-6"	15	" " "
A 501	5	14	5	22'-3"	325	HORIZ. BANKBLOCK & BACKWALL
A 502	5	13	5	31'-6"	427	" " " "
A 503	5	5	2	9'-5"	49	HORIZ. BANKBLOCK CORNER FRONT
A 504	5	5	1	5'-10"	30	" " " "
A 505	5	15	5	5'-1"	80	CORNER TIE BANKLOCK BACK
A 506	5	36	4	6'-10"	257	BEARING SEAT STIRRUP
A 507	5	46	5	3'-10"	184	RTNG. & WINGWALL FOOTING DOWELS
A 508	5	12	5	8'-0"	100	WINGWALL VERTICAL BACK
A 509	5	4	5	9'-0"	38	" " "
A 510	5	6	5	15'-6"	97	WINGWALL FOOTING HORIZ.
A 511	5	8	5	12'-3"	102	" " "
A 512	5	5	1	9'-1"	47	HORIZ. BANKBLOCK CORNER FRONT
A 513	5	15	5	4'-4"	68	CORNER TIE BANKBLOCK BACK
A 514	5	14	5	33'-3"	486	HORIZ. BANKBLOCK & BACKWALL
A 515	5	13	5	29'-0"	393	" " " "
A 516	5	6	2	5'-10"	37	HORIZ. BANKBLOCK CORNER FRONT

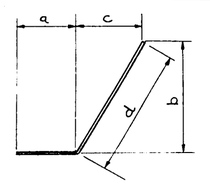
NORTH ABUTMENT

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
A 517	5	31	5	9'-0"	291	VERTICAL RETAINING WALL
A 518	5	45	5	9'-6"	446	" " "
A 519	5	2	5	10'-9"	22	WINGWALL FOOTING
A 601	6	3	5	21'-9"	98	HORIZ. BEARING SEAT
A 602	6	6	5	32'-6"	293	" " "
A 603	6	68	3	8'-5"	860	VERT. BACKWALL FRONT
A 604	6	75	4	8'-7"	967	" " BACK
A 605	6	10	3	10'-0"	150	VERT. BACKWALL FRONT SIDEWALK
A 606	6	45	5	4'-3"	287	RETAINING WALL FTG. & DOWELS
A 607	6	3	5	30'-6"	137	HORIZ. BEARING SEAT
				TOTAL	10199	LBS.



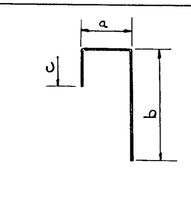
DETAIL 1

MARK	a	b	c	d
A 413	1'-3	3'-11 1/8"	3 1/4"	4'-0
A 509	1'-7	8'-0	6 1/2"	8'-0
A 423	1'-3	4'-1 1/2"	1'-9 3/8"	4'-6
A 435	1'-7"	6'-10 1/2"	3'-10 5/8"	7'-11"
A 504	1'-7"	3'-8 1/2"	2'-1"	4'-3
A 512	1'-7"	6'-10 1/16"	3'-0 1/16"	7'-6



DETAIL 2

MARK	a	b	c	d
A 419	1'-3"	5'-1 3/4"	2'-6 3/8"	5'-9"
A 435	1'-3"	7'-5 3/8"	2'-10 1/4"	8'-0
A 513	1'-7"	3'-9"	5"	3'-10
A 514	1'-7"	3'-10"	3"	3'-10"
A 405	1'-3"	3'-3 1/4"	1'-10"	3'-9"
A 417	1'-3"	5'-1 3/4"	2'-6 3/8"	5'-9"
A 432	1'-3"	7'-10"	3'-1 1/8"	8'-5"
A 436	1'-7"	6'-11 1/4"	3'-10"	7'-11"
A 503	1'-7"	6'-9 3/8"	3'-10 5/8"	7'-10
A 516	1'-7"	3'-8 3/8"	2'-0 5/8"	4'-3"
A 430	1'-3"	7'-9 3/8"	1'-5 3/8"	7'-11"
A 433	1'-3"	7'-10 3/8"	7 3/8"	7'-11"

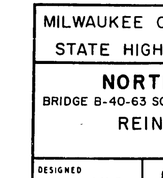


DETAIL 3

MARK	a	b	c
A 406	8"	2'-2"	2'-2"
A 417	8"	1'-5"	1'-5"
A 421	8"	5'-5	5'-5
A 422	8"	4'-8"	4'-8"
A 431	8"	3'-3"	3'-3"
A 432	8"	4'-6	4'-6
A 405	8"	5'-3"	5'-3"
A 517	2'-4"	2'-7"	2'-7"
A 606	8"	7'-3	4'-5
A 607	8"	6'-6	3'-3
A 413	8"	5'-5"	5'-5"
A 414	8"	2'-2"	2'-2"
A 415	8	4'-9	4'-9
A 433	8"	4'-2"	4'-2"
A 434	8"	5'-2	5'-2
A 437	8"	3'-2"	3'-2"
A 603	8"	5'-6	2'-3"
A 605	8"	6'-3	3'-1"

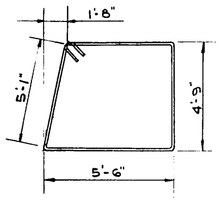
DETAIL 4

MARK	a	b
A 412	1'-3"	4'-0"
A 510	3'-9"	3'-6"
A 512	3'-9"	5'-3"
A 515	1'-7"	6'-6
A 605	1'-4"	5'-5
A 506	3'-10"	3'-0"
A 604	1'-4"	7'-3"

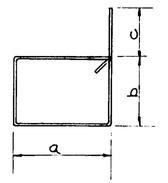


DETAIL 5

MARK	a	b	c
A 520	4'-2"	5"	5"
A 505	4'-6	5"	5"
A 513	3'-9"	5"	5"

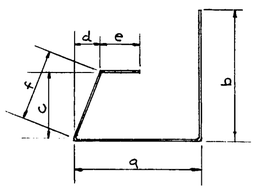


DETAIL 7
A 401
A 404



DETAIL 19

MARK	a	b	c
A 402	5'-8	2'-1"	1'-6"
A 407	5'-8	2'-1	1'-6"



DETAIL 21

MARK	a	b	c	d	e	f
A 410	5'-6"	7'-6"	4'-9"	1'-8"	1'-3"	5'-1"
A 403	5'-6"	5'-5"	4'-9"	1'-8"	1'-3"	5'-1"

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
ABUTMENTS

NO.	DATE	REVISION	BY

DESIGNED
DRAWN J.M.G.
CHECKED H.R.V. E.H.L.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
34 OF 41
SHEET

X18742

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	54	65

REINFORCING STEEL LIST

PIER #1 N.B. & S.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	236	8	11'-6"	1020	COLUMN
P401	4	86	20	11'-5"	656	COUNTERFORT
P501	5	16	9	8'-0"	134	PIER CAP
P502	5	114	6	15-8	1863	" "
P503	5	16	5	24-9	413	" "
P504	5	8	5	10'-6"	88	COUNTERFORT S.B
P505	5	8	5	7-6	63	" "
P506	5	8	5	5-0	42	" "
P507	5	20	3	13-8	286	" "
P508	5	68	6	16-8	1182	" "
P601	6	98	5	11-0	1619	WALL VERTICAL BARS
P602	6	98	5	10-2	1484	" " "
P603	6	10	5	4-6	68	" " "
P604	6	86	14	7'10"	1012	TOP OF WALL
P605	6	43	21	11'-6	743	BOTT. OF WALL
P606	6	56	5	7'-6"	631	WALL HORIZ. BARS
P607	6	24	5	28-0	1009	" " "
P608	6	12	2	33'-0"	595	" " "
P609	6	24	5	25'-0"	901	" " "
P610	6	12	2	31'-3"	563	" " "
P611	6	6	5	10'-8"	96	" " "
P612	6	43	21	11'-2"	722	BOTT. OF WALL-N.B.
P613	6	24	5	3'-6"	126	DOWELS N.B.
P614	6	4	5	14'-9"	89	WALL VERT. BARS
P615	6	4	2	14'-0"	84	" " "
P616	6	16	5	16'-2"	389	WALL SUPPORT
P509	5	68	5	4'-6"	319	FTG. N.B.
P901	9	4	2	33'-6"	456	WALL HORIZ. BARS
P902	9	14	5	33'-0"	1571	" " "
P903	9	4	2	31'-3"	425	WALL " "
P904	9	10	5	30'-6"	1037	WALL " "
P905	9	4	5	29'-6"	401	WALL " "
P906	9	32	5	31'-4"	3409	COLUMN
P907	9	32	5	33'-1"	3599	COLUMN
P908	9	128	5	5-6"	2394	COLUMN
P909	9	16	5	14'-9"	802	COUNTERFORT
P910	9	32	5	30'-5"	3309	COLUMN
P911	9	32	5	32'-5"	3527	"
P912	9	72	5	16'-2"	3958	WALL SUPPORT S.B.
P1001	10	16	4	9'-3"	637	PIER CAP
P1002	10	16	5	25'-3"	1738	PIER CAP
P1003	10	48	5	18'-9"	3873	" "
P1004	10	12	5	9'-0"	465	" "
P1101	11	40	5	16'-0"	3400	FTGS. N.B.
				TOTAL	51,219	LB.

PIER #2 N.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	130	8	11'-6"	562	COLUMN
P401	4	30	6	12-3	245	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	PIER CAP
P503	5	20	5	6'-6"	136	EXT. FTG.
P504	5	34	5	4'-6"	160	EXT. & INT. FTG.
P505	5	8	5	23-6"	196	TIE WALL
P508	5	8	5	23'-0"	192	PIER CAP
P701	7	20	5	9-0	368	INT. FTG.

PIER #2 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P901	9	64	5	34'-9"	7562	COLUMN
P902	9	64	5	5'-6"	1197	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-1"	829	" "
P1003	10	24	5	17'-10"	1842	" "
P1004	10	8	5	47'-0"	1618	TIE WALL
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	16,486	LBS.

PIER #2 S.B.

P301	3	138	8	11'-6"	597	COLUMN
P401	4	30	6	12-3	245	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	" "
P503	5	20	5	6'-6"	136	EXT. FTG.
P504	5	34	5	4'-6"	160	EXT. & INT. FTG.
P505	5	8	5	23'-6"	196	TIE WALL
P508	5	8	5	23'-1"	193	PIER CAP
P701	7	20	5	9'-0"	368	INT. FTG.
P901	9	64	5	36'-6"	7942	COLUMN
P902	9	64	5	5'-6"	1197	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-1"	832	" "
P1003	10	24	5	17'-11"	1850	" "
P1004	10	8	5	47'-0"	1618	TIE WALL
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	16,913	LBS.

PIER #3 N.B.

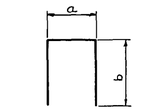
P301	3	122	8	9'-11"	455	COLUMN
P401	4	30	6	11'-9"	235	TIE WALL

PIER #3 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	20	5	6'-6"	136	EXT. FTG.
P504	5	34	5	4'-6"	160	EXT. & INT. FTG.
P505	5	8	5	24'-3"	202	TIE WALL
P508	5	8	5	22'-1"	184	
P701	7	20	5	9'-0"	368	INT. FTG.
P901	9	24	5	16'-11"	1380	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0"	272	" "
P904	9	8	5	22'-11"	623	" "
P905	9	24	5	31'-3"	2550	COLUMN 3&4
P906	9	24	5	30'-6"	2489	COLUMN 1&2
P907	9	48	5	5'-6	898	" DOWELS
P1001	10	8	5	47'-6"	1635	TIE WALL
				TOTAL	12,553	LBS.

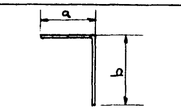
PIER #3 S.B.

P301	3	130	8	9'-11"	485	COLUMN
P401	4	30	6	11'-9"	235	TIE WALL
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	20	5	6-6	136	EXT. FTG.
P504	5	34	5	4-6	160	EXT. & INT. FTG.
P505	5	8	5	24-6	204	TIE WALL
P508	5	8	5	22'-5"	187	PIER CAP
P701	7	20	5	9'-0"	368	INT. FTG.
P901	9	24	5	17'-2"	1401	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0	272	" "
P904	9	8	5	24'-4"	662	" "
P905	9	24	5	32'-9"	2672	COLUMN 3&4
P906	9	24	5	32'-0"	2611	COLUMN 1&2
P907	9	48	5	5'-6	898	" DOWELS
P1001	10	8	5	48'-3"	1661	TIE WALL
				TOTAL	12,918	LBS.



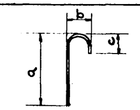
DETAIL 3

MARK	a	b	Pier
P507	4'-7"	4'-9"	1



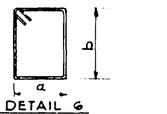
DETAIL 4

MARK	a	b	PIER
P 902	4'-11"	3'-8"	3
P1001	5'-7"	3'-8"	1, 2



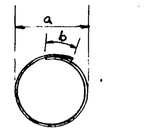
DETAIL 5

MARK	a	b	c	PIER
P909	13'-6"	8'-11"	4'-10"	1



DETAIL 6

MARK	a	b	PIER
P401	2'-8"	3'-1"	2, 3
P502	3'-8"	3'-8"	1, 2
P502	3'-2"	3'-8"	3
P508	3'-8"	4'-2"	1



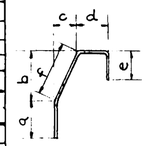
DETAIL 8

MARK	a	b	PIER
P301	3'-4"	1'-0"	1, 2
P 301	2'-10"	1'-0"	3



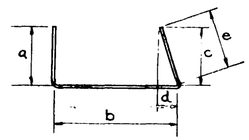
DETAIL 9

MARK	a	b	c	PIER
P501	2'-8"	1'-7"	1'-1"	3
P501	2'-11"	1'-10"	1'-1"	1, 2



DETAIL 14

MARK	a	b	c	d	e	f	PIER
P604	0	2'-0	8"	3'-8"	2'-0	2'-2"	1

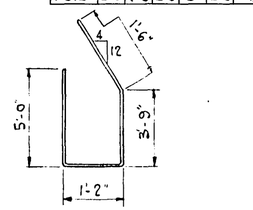


DETAIL 21

MARK	a	b	c	d	e	PIER
P605	2'-0	7'-2"	2'-0	8"	2'-2"	1
P612	2'-0	7'-0	2'-0	8"	2'-2"	1

DETAIL 7

MARK	a	b	c	d	PIER
P608	26'0	6'-10	1'-8"	7'-0"	1
P610	23'9	7'-6"	11"	7'-6"	1
P615	9'-9"	3'-2"	1'-0"	3'-3"	1
P901	26'-6	6'-10	1'-8"	7'-0"	1
P903	23'9	7'-6"	11"	7'-6	1



P401-PIER 1
DETAIL 20

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
PIERS

NO.	DATE	REVISION	BY

DESIGNED
DRAWN J.M.G.
CHECKED K.N.L.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
35 OF 41
SHEET

X18743-R

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4.	WIS.	U-03-1(73)	54	65

REINFORCING STEEL LIST

PIER #1 N.B. & S.B. *Revised*

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	236	8	11'-6"	1020	COLUMN
P401	4	86	20	11'-5"	656	COUNTERFORT
P501	5	16	9	8'-0	134	PIER CAP
P502	5	114	6	15'-8	1863	" "
P503	5	16	5	24-9	413	" "
P504	5	8	5	10'-6"	88	COUNTERFORT S.B
P505	5	8	5	7-6	63	" "
P506	5	8	5	5-0	42	" "
P507	5	20	3	13-8	286	" "
P508	5	68	6	16-8	1182	" "
P601	6	98	5	11-0	1619	WALL VERTICAL BARS
P602	6	198	5	10-2	1484	" " "
P603	6	10	5	4-6	68	" " "
P604	6	86	14	7-10	1012	TOP OF WALL
P605	6	43	21	11'-6	743	BOTT. OF WALL
P606	6	56	5	7'-6"	631	WALL HORIZ. BARS
P607	6	24	5	28-0	1009	" " "
P608	6	12	2	33'-0"	595	" " "
P609	6	24	5	25'-0"	901	" " "
P610	6	12	2	31'-3"	563	" " "
P611	6	6	5	10'-8"	96	" " "
P612	6	43	21	11'-2"	722	BOTT. OF WALL-N.B.
P613	6	24	5	3'-6"	126	DOWELS N.B.
P614	6	4	5	14'-9"	89	WALL VERT. BARS
P615	6	4	2	14'-0"	84	" " "
P616	6	16	5	16'-2"	389	WALL SUPPORT
P509	5	68	5	4'-6"	319	FTG. N.B.
P901	9	4	2	33'-6"	456	WALL HORIZ. BARS
P902	9	14	5	33'-0"	1571	" " "
P903	9	4	2	31'-3"	425	WALL " "
P904	9	10	5	30'-6"	1037	WALL " "
P905	9	4	5	29'-6"	401	WALL " "
P906	9	32	5	31'-4"	3409	COLUMN
P907	9	32	5	33'-1"	3599	COLUMN
P908	9	128	5	5'-6"	2394	COLUMN
P909	9	16	5	14'-9"	802	COUNTERFORT
P910	9	32	5	30'-5"	3309	COLUMN
P911	9	32	5	32'-5"	3527	"
P912	9	72	5	16'-2"	3958	WALL SUPPORT S.B.
					639	
P1001	10	16	4	9'-3"	637	PIER CAP
P1002	10	16	5	25'-3"	1738	PIER CAP
P1003	10	48	5	14'-9"	3873	" "
P1004	10	12	5	3'-0	495	" "
P1101	11	40	5	16'-0"	3400	FTGS. N.B.
				TOTAL	51,219	LB.
					51,198	

PIER #2 N.B *Revised*

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	130	8	11'-6"	562	COLUMN
P401	4	30	6	12-3	245	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	PIER CAP
P503	5	20	5	6'-6"	136	EXT. FTG.
P504	5	34	5	4'-6"	160	EXT. & INT. FTG
P505	5	8	5	23'-6"	196	TIE WALL
P508	5	8	5	23'-0"	192	PIER CAP
P701	7	20	5	9-0	368	INT. FTG.

PIER #2 N.B. *Revised*

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P901	9	64	5	34'-9"	7562	COLUMN
P902	9	64	5	5'-6"	1197	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-1"	829	" "
P1003	10	24	5	17'-10"	1842	" "
P1004	10	8	5	47'-0"	1618	TIE WALL
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	16,486	LBS. ✓

PIER #2 S.B. *Revised*

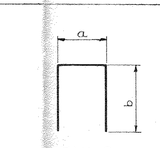
MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	138	8	11'-6"	597	COLUMN
P401	4	30	6	12-3	245	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	" "
P503	5	20	5	6'-6"	136	EXT. FTG.
P504	5	34	5	4'-6"	160	EXT. & INT. FTG.
P505	5	8	5	23'-6"	196	TIE WALL
P508	5	8	5	23'-1"	193	PIER CAP
P701	7	20	5	9'-0"	368	INT. FTG
P901	9	64	5	36'-6"	7942	COLUMN
P902	9	64	5	5'-6"	1197	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-1"	832	" "
P1003	10	24	5	17'-11"	1850	" "
P1004	10	8	5	47'-0"	1618	TIE WALL
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	16,913	LBS. ✓

PIER #3 N.B. *Revised*

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	122	8	9'-11"	455	COLUMN
P401	4	30	6	11'-9"	235	TIE WALL
P501	5	8	9	7'-7"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	20	5	6'-6"	136	EXT. FTG.
P504	5	34	5	4'-6"	160	EXT. & INT. FTG.
P505	5	8	5	24'-3"	202	TIE WALL
P508	5	8	5	22'-1"	184	
P701	7	20	5	9'-0"	368	INT. FTG.
P901	9	24	5	16'-11"	1380	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0"	272	" "
P904	9	8	5	22'-11"	623	" "
P905	9	24	5	31'-3"	2550	COLUMN 3&4
P906	9	24	5	30'-6"	2489	COLUMN 1&2
P907	9	48	5	5'-6	898	" DOWELS
P1001	10	8	5	47'-6"	1635	TIE WALL
				TOTAL	12,553	LBS. ✓

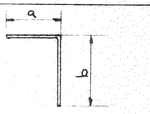
PIER #3 S.B. *Revised*

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P 301	3	130	8	9'-11"	485	COLUMN
P401	4	30	6	11'-9"	235	TIE WALL
P501	5	8	9	7'-7"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	20	5	6-6	136	EXT. FTG.
P504	5	34	5	4-6	160	EXT. & INT. FTG
P505	5	8	5	24-6	204	TIE WALL
P508	5	8	5	22'-5"	187	PIER CAP
P701	7	20	5	9'-0"	368	INT. FTG.
P901	9	24	5	17'-2"	1401	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0"	272	" "
P904	9	8	5	24'-4"	662	" "
P905	9	24	5	32'-	2672	COLUMN 3&4
P906	9	24	5	32'-0"	2611	COLUMN 1&2
P907	9	48	5	5'-6	898	" DOWELS
P1001	10	8	5	48'-3"	1661	TIE WALL
				TOTAL	12,918	LBS. ✓



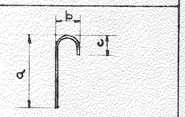
DETAIL 3

MARK	a	b	Pier
P507	4'-2"	4'-9"	1



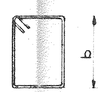
DETAIL 4

MARK	a	b	PIER
P 902	4'-11	3'-8"	3
P1001	5'-7	3'-8	1, 2



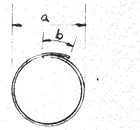
DETAIL 5

MARK	a	b	c	PIER
P909	13-6	0-11	4-0	104 1



DETAIL 6

MARK	a	b	PIER
P401	2'-8"	3'-1"	2, 3
P502	3'-8	3'-8	1, 2
P502	3'-2"	3'-8"	3
P508	3'-8	4'-2"	1



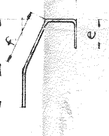
DETAIL 8

MARK	a	b	PIER
P301	3'-4	1'-0"	1, 2
P 301	2'-10	1'-0"	3



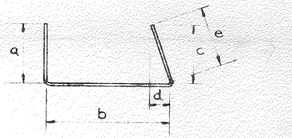
DETAIL 9

MARK	a	b	c	PIER
P501	2'-8	1'-7"	1'-1"	3
P501	2'-11"	1'-10	1'-1"	1, 2



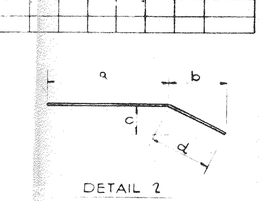
DETAIL 14

MARK	a	b	c	d	e	f	PIER
P604	3	2'-0	8"	3'-8	2'-0	2'-2"	1



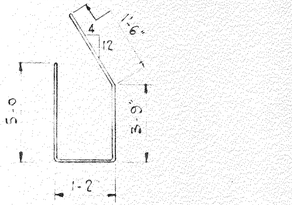
DETAIL 21

MARK	a	b	c	d	e	PIER
P605	2'-0	7'-2"	2'-0	8"	2'-2"	1
P612	2'-0"	7'-0	2'-0	8"	2'-2"	1



DETAIL 2

MARK	a	b	c	d	PIER
P608	2'-0	6'-10	1'-8"	7'-0"	1
P610	2'-9	7'-6	11"	7'-6	1
P615	3'-7	3'-2"	1'-0"	3'-8	1
P901	2'-6	6'-10	1'-8"	7'-0"	1
P903	2'-9	7'-6	11	7'-6	1



P401-PIER 1
DETAIL 20

C.C.O. #1

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
PIERS

NO	DATE	REVISION	BY

DESIGNED
DRAWN J.M.G.
CHECKED K.N.L.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
35 OF 41
SHEET

X18743-REVISED

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4.	WIS.	U-03-1(73)	54	65

REINFORCING STEEL LIST

PIER #1 N.B. & S.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	236	8	11'-6"	1020	COLUMN
P401	4	86	20	11'-5"	656	COUNTERFORT
P501	5	16	9	8'-0"	134	PIER CAP
P502	5	114	6	15-8	1863	" "
P503	5	16	5	24-9	413	" "
P504	5	16	5	10'-6"	175	COUNTERFORT
P505	5	16	5	7'-6"	125	"
P506	5	16	5	5'-0	83	"
P507	5	40	3	13'-8	570	"
P508	5	136	6	16'-8"	2365	WALL SUPPORT TIES
P601	6	86	5	11'-0"	1421	WALL VERTICAL BARS
P602	6	86	5	10'-2"	1313	" " "
P603	6	10	5	4'-6"	68	" " "
P604	6	86	14	7'-10"	1012	TOP OF WALL
P605	6	86	21	11'-4"	1464	BOTT. OF WALL
P606	6	56	5	7'-6"	631	WALL HORIZ. BARS
P607	6	24	5	28'-0"	1009	" " "
P608	6	12	2	33'-0"	595	" " "
P609	6	24	5	25'-0"	901	" " "
P610	6	12	2	31'-3"	563	" " "
P611	6	6	5	10'-8"	96	" " "
P614	6	4	5	14'-9"	89	WALL VERT. BARS
P615	6	4	2	14'-0"	86	" " "
P616	6	32	5	16'-2"	777	WALL SUPPORT
P901	9	4	2	33'-6"	456	WALL HORIZ. BARS
P902	9	14	5	33'-0"	1571	" " "
P903	9	4	2	31'-3"	425	WALL " "
P904	9	10	5	30'-6"	1037	WALL " "
P905	9	4	5	29'-6"	401	WALL " "
P906	9	32	5	31'-4"	3409	COLUMN
P907	9	32	5	33'-1"	3599	COLUMN
P908	9	128	5	5'-6"	2394	COLUMN
P909	9	32	5	14'-9"	1605	COUNTERFORT
P910	9	32	5	30'-5"	3309	COLUMN
P911	9	32	5	32'-8"	3527	"
P912	9	144	5	16-2	7915	WALL SUPPORT
P1001	10	16	4	9'-3"	657	PIER CAP
P1002	10	16	5	25'-3"	1738	PIER CAP
P1003	10	48	5	18'-9"	3873	" "
P1004	10	12	5	9'-0"	465	" "
				TOTAL	53,790	LB.

PIER #2 N.B

P301	3	110	8	11'-6"	476	COLUMN
P401	4	18	6	21'-2"	255	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	PIER CAP
P503	5	6	5	24'-2	151	TIE WALL
P504	5	6	5	25'-7"	160	" "
P505	5	40	3	12'-10"	535	COUNTERFORT
P506	5	32	3	12'-6"	417	"
P507	5	32	3	12'-0"	401	"
P508	5	8	5	23'-0"	192	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	8	5	24'-2"	516	TIE WALL
P802	8	8	5	26'-10	573	" "

PIER #2 N. B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P803	8	48	14	17'-8"	2264	COUNTERFORT
P901	9	64	5	30'-4	6601	COLUMN
P902	9	64	5	5'-6"	1197	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-1"	829	" "
P1003	10	24	5	17'-10"	1842	" "
P1004	10	40	5	14'-6"	2496	COUNTERFORT
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	20,847	LBS.

PIER #2 S. B.

P301	3	118	8	11'-6"	510	COLUMN
P401	4	18	6	21'-2"	255	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	" "
P503	5	6	5	24'-3"	152	TIE WALL
P504	5	6	5	25'-8"	161	" "
P505	5	40	3	12'-10"	535	COUNTERFORT
P506	5	32	3	12'-6"	417	"
P507	5	32	3	12'-0"	401	"
P508	5	8	5	23'-1"	193	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	8	5	24'-3"	518	TIE WALL
P802	8	8	5	26'-11"	575	" "
P803	8	48	14	17'-8"	2264	COUNTERFORT
P901	9	64	5	32'-1"	6981	COLUMN
P902	9	64	5	5'-6"	1197	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-2"	832	" "
P1003	10	24	5	17'-11"	1850	" "
P1004	10	40	5	14'-6"	2496	COUNTERFORT
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	21,279	LBS.

PIER #3 N.B.

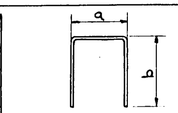
P301	3	102	8	9'-11"	380	COLUMN
P401	4	21	6	21'-2"	297	TIE WALL

PIER # 3 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P808	5	6	5	23'-4"	146	TIE WALL
P504	5	32	3	12'-0"	401	COUNTERFORT
P505	5	32	3	12'-6"	417	"
P506	5	40	3	12'-10"	535	"
P507	5	6	5	24'-9"	155	TIE WALL
P508	5	8	5	22'-1"	184	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	48	14	17'-8"	2264	COUNTERFORT
P802	8	8	5	23'-4"	498	TIE WALL
P803	8	8	5	26'-2	555	TIE WALL
P901	9	24	5	16'-11"	1380	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0	272	" "
P904	9	8	5	22'-11"	623	" "
P905	9	24	5	28'-3"	2305	" "
P906	9	24	5	27'-7"	2251	COLUMN
P907	9	48	5	5'-6"	898	" DOWELS
P1001	10	40	5	14'-6"	2496	COUNTERFORT
				TOTAL	17390	LBS.

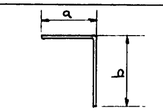
PIER # 3 S.B.

P 301	3	110	8	9'-11"	410	COLUMN
P401	4	21	6	21'-2	297	TIE WALL
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	6	5	23'-9	149	TIE WALL
P504	5	32	3	12'-0"	401	COUNTERFORT
P505	5	32	3	12'-6"	417	"
P506	5	40	3	12'-10	535	"
P507	5	6	5	25'-2"	157	TIE WALL
P508	5	8	5	22'-5"	187	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	48	14	17'-8"	2264	COUNTERFORT
P802	8	8	5	23'-9	507	TIE WALL
P803	8	8	5	26'-7	568	TIE WALL
P901	9	24	5	17'-7"	1401	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0	272	" "
P904	9	8	5	24'-4	662	" "
P905	9	24	5	29'-10	2434	COLUMN
P906	9	24	5	28'-1"	2573	COLUMN
P907	9	48	5	5'-6"	898	" DOWELS
P1001	10	40	5	14'-6"	2496	COUNTERFORT
				TOTAL	17757	LBS.



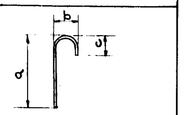
DETAIL 3

MARK	a	b	PIER
P 504	4'-0"	3'-9"	3
P505	4'-0"	4'-3"	3
P506	4'-0"	4'-5"	3
P505	4'-0"	4'-5"	2
P506	4'-0"	4'-3"	2
P507	4'-0"	4'-0"	2
P507	4'-2"	4'-9"	1



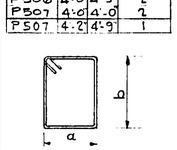
DETAIL 4

MARK	a	b	PIER
P 902	4'-11"	3'-8"	3
P1001	5'-7"	3'-8"	1, 2



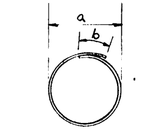
DETAIL 5

MARK	a	b	c	PIER
P909	13'-6"	3'-11"	4'-10"	1



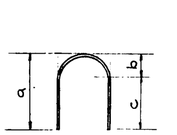
DETAIL 6

MARK	a	b	PIER
P401	2'-6"	7'-7"	2, 3
P502	3'-8"	3'-8"	1, 2
P502	3'-2"	3'-6"	3
P508	4'-2"	3'-8"	1



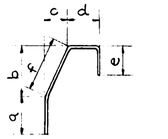
DETAIL 8

MARK	a	b	PIER
P 301	3'-4"	1'-0"	1, 2
P 301	2'-10"	1'-0"	3



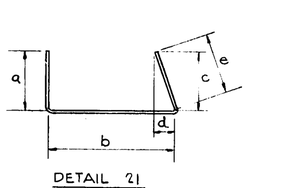
DETAIL 9

MARK	a	b	c	PIER
P501	2'-8"	1'-7"	1'-1"	3
P501	2'-11"	1'-10"	1'-1"	1, 2



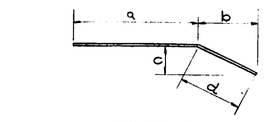
DETAIL 14

MARK	a	b	c	d	e	f	PIER
P 801	3'-6"	5'-1"	1'-3"	6'-5"	2'-6"	5'-3"	3
P604	0	2'-0"	8"	3'-8"	2'-0"	2'-2"	1
P803	3'-6"	5'-1"	1'-3"	6'-5"	2'-6"	5'-3"	2



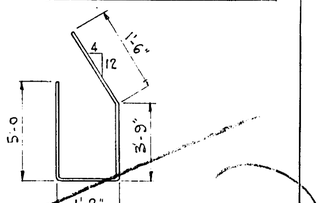
DETAIL 21

MARK	a	b	c	d	e	PIER
P605	2'-0"	7'-2"	2'-0"	8"	2'-2"	1



DETAIL 2

MARK	a	b	c	d	PIER
P608	26'0	6'-10	1'-8"	7'-0"	1
P610	23'9	7'-6"	11"	7'-6	1
P615	10'-3"	3'-6 3/8"	1'-2 1/4"	3'-9"	1
P901	26'-6	6'-10	1'-8"	7'-0"	1
P903	23'-9	7'-6"	11"	7'-6	1



P401- PIER 1
DETAIL 20

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
PIERS.

NO.	DATE	REVISION	BY

DESIGNED
DRAWN J.M.G.
CHECKED K.N.L.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
35 OF 41
SHEET

X18743

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4.	WIS.	U-03-1(73)	54	65

REINFORCING STEEL LIST

PIER #1 N.B. & S.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	236	8	11'-6"	1020	COLUMN
P401	4	86	20	11'-5"	656	COUNTERFORT
P501	5	15	9	8'-0"	134	PIER CAP
P502	5	114	6	15'-6"	1863	"
P503	5	16	5	24'-3"	413	"
P504	5	16	5	10'-6"	175	COUNTERFORT
P505	5	16	5	7'-6"	125	" "
P506	5	16	5	5'-0"	83	" "
P507	5	40	3	13'-8"	570	"
P508	5	136	6	16'-8"	2365	WALL SUPPORT TIES
P601	6	86	5	11'-0"	1421	WALL VERTICAL BARS
P602	6	86	5	10'-2"	1313	" " "
P603	6	10	5	4'-6"	68	" " "
P604	6	86	14	7'-10"	1012	TOP OF WALL
P605	6	86	21	11'-4"	1464	BOTT. OF WALL
P606	6	56	5	7'-6"	631	WALL HORIZ. BARS
P607	6	24	5	28'-0"	1009	" " "
P608	6	12	2	33'-0"	595	" " "
P609	6	24	5	25'-0"	901	" " "
P610	6	12	2	31'-3"	563	" " "
P611	6	6	5	10'-8"	96	" " "
P614	6	4	5	14'-9"	89	WALL VERT. BARS
P615	6	4	2	14'-0"	86	" " "
P616	6	32	5	16'-2"	777	WALL SUPPORT
P901	9	4	2	33'-6"	456	WALL HORIZ BARS
P902	9	14	5	33'-0"	1571	" " "
P903	9	4	2	31'-3"	425	WALL " "
P904	9	10	5	30'-6"	1037	WALL " "
P905	9	4	5	29'-6"	401	WALL " "
P906	9	32	5	31'-4"	3409	COLUMN
P907	9	32	5	33'-1"	3539	COLUMN
P908	9	128	5	5'-6"	2394	COLUMN
P909	9	32	5	14'-9"	1605	COUNTERFORT
P910	9	32	5	30'-5"	3305	COLUMN
P911	9	32	5	32'-5"	3527	"
P912	9	144	5	16'-2"	7915	WALL SUPPORT
P1001	10	16	4	9'-3"	637	PIER CAP
P1002	10	16	5	25'-3"	1738	PIER CAP
P1003	10	48	5	18'-9"	3873	" "
P1004	10	12	5	9'-0"	465	" "
				TOTAL	53,790	LBS. Revised C.C.O. #1

PIER #2 N.B

P301	3	110	8	11'-6"	476	COLUMN
P401	4	18	6	21'-2"	255	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	PIER CAP
P503	5	6	5	24'-2"	181	TIE WALL
P504	5	6	5	25'-7"	160	" "
P505	5	40	3	12'-10"	535	COUNTERFORT
P506	5	32	3	12'-6"	417	"
P507	5	32	3	12'-0"	401	"
P508	5	8	5	23'-0"	192	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	8	5	24'-2"	516	TIE WALL
P802	8	8	5	26'-10"	573	" "

PIER #2 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P803	8	48	14	17'-5"	2264	COUNTERFORT
P901	9	64	5	30'-1"	6601	COLUMN
P902	9	64	5	5'-2"	1137	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-1"	828	" "
P1003	10	24	5	17'-10"	1842	" "
P1004	10	40	5	14'-6"	2496	COUNTERFORT
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	20,847	LBS. Revised C.C.O. #1

PIER #2 S.B.

P301	3	118	8	11'-6"	510	COLUMN
P401	4	18	6	21'-2"	255	TIE WALL
P501	5	8	9	8'-0"	67	PIER CAP
P502	5	54	6	15'-8"	882	" "
P503	5	6	5	24'-3"	152	TIE WALL
P504	5	6	5	25'-8"	161	" "
P505	5	40	3	12'-10"	535	COUNTERFORT
P506	5	32	3	12'-6"	417	"
P507	5	32	3	12'-0"	401	"
P508	5	6	5	23'-1"	193	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	8	5	24'-3"	518	TIE WALL
P802	8	8	5	26'-11"	575	" "
P803	8	48	14	17'-2"	2264	COUNTERFORT
P901	9	64	5	32'-1"	6981	COLUMN
P902	9	64	5	5'-2"	1137	COLUMN DOWELS
P1001	10	10	4	9'-3"	398	PIER CAP
P1002	10	8	5	24'-2"	832	" "
P1003	10	24	5	17'-11"	1850	" "
P1004	10	40	5	14'-6"	2496	COUNTERFORT
P1005	10	6	5	9'-0"	232	PIER CAP
				TOTAL	21,278	LBS. Revised C.C.O. #1

PIER #3 N.B.

P301	3	102	8	9'-11"	396	COLUMN
P401	4	21	6	21'-2"	297	TIE WALL

PIER # 3 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P501	5	8	9	7'-6"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	6	5	23'-4"	146	TIE WALL
P504	5	32	3	12'-7"	401	COUNTERFORT
P505	5	32	3	13'-0"	417	"
P506	5	40	3	13'-10"	535	"
P507	5	6	5	24'-6"	155	TIE WALL
P508	5	8	5	22'-1"	184	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	48	14	17'-8"	2264	COUNTERFORT
P802	8	8	5	23'-4"	498	TIE WALL
P803	8	8	5	26'-2"	556	TIE WALL
P901	9	24	5	12'-11"	1380	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0"	272	" "
P904	9	8	5	23'-11"	623	" "
P905	9	24	5	28'-3"	2305	" "
P906	9	24	5	27'-7"	2251	COLUMN
P907	9	48	5	5'-6"	898	" DOWELS
P1001	10	40	5	14'-6"	2496	COUNTERFORT
				TOTAL	17390	LBS. Revised C.C.O. #1

PIER #3 S.B.

P301	3	110	8	9'-11"	410	COLUMN
P401	4	21	6	21'-2"	297	TIE WALL
P501	5	8	9	7'-6"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	6	5	23'-9"	149	TIE WALL
P504	5	32	3	12'-7"	401	COUNTERFORT
P505	5	32	3	13'-0"	417	"
P506	5	40	3	13'-10"	535	"
P507	5	6	5	25'-2"	157	TIE WALL
P508	5	8	5	22'-5"	187	PIER CAP
P509	5	24	5	14'-6"	363	COUNTERFORT
P801	8	48	14	17'-5"	2264	COUNTERFORT
P802	8	8	5	23'-9"	507	TIE WALL
P803	8	8	5	26'-7"	568	TIE WALL
P901	9	24	5	11'-2"	1401	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-6"	272	" "
P904	9	8	5	24'-4"	662	" "
P905	9	24	5	29'-10"	2434	COLUMN
P906	9	24	5	29'-1"	2373	COLUMN
P907	9	48	5	5'-6"	898	" DOWELS
P1001	10	40	5	14'-6"	2496	COUNTERFORT
				TOTAL	17767	LBS. Revised C.C.O. #1

DETAIL 3

MARK	a	b	PIER
P 504	4'-0"	3'-9"	3
P505	4'-0"	4'-3"	3
P506	4'-0"	4'-5"	3
P505	4'-0"	4'-5"	2
P506	4'-0"	4'-3"	2
P507	4'-0"	4'-0"	2
P507	4'-2"	4'-9"	1

DETAIL 4

MARK	a	b	PIER
P 902	4'-11"	3'-8"	3
P1001	5'-7"	3'-8"	1, 2

DETAIL 5

MARK	a	b	c	PIER
P903	13'-6"	0'-11"	0'-10½"	1

DETAIL 6

MARK	a	b	PIER
P401	2'-6"	7'-7"	2, 3
P502	3'-8"	3'-8"	1, 2
P502	3'-2"	3'-8"	3
P503	4'-2"	3'-8"	1

DETAIL 8

MARK	a	b	PIER
P301	3'-4"	1'-0"	1, 2
P 301	2'-16"	1'-0"	3

DETAIL 9

MARK	a	b	c	PIER
P501	2'-8"	1'-7"	1'-1"	3
P501	2'-11"	1'-10"	1'-1"	1, 2

DETAIL 14

MARK	a	b	c	d	e	f	PIER
P801	3'-6"	5'-1"	1'-3"	6'-5"	2'-6"	5'-3"	3
P604	0	2'-0"	8"	3'-8"	2'-6"	2'-2"	1
P803	3'-6"	5'-1"	1'-3"	6'-5"	2'-6"	5'-3"	2

DETAIL 2

MARK	a	b	c	d	PIER
P608	26'-0"	6'-10"	1'-8"	7'-0"	1
P610	23'-9"	7'-6"	11"	7'-6"	1
P615	10'-3"	3'-6"	1'-4"	3'-9"	1
P901	26'-6"	6'-10"	1'-8"	7'-0"	1
P902	23'-7"	7'-6"	11"	7'-6"	1

DETAIL 21

MARK	a	b	c	d	e	PIER
P605	2'-0"	7'-2"	2'-0"	8"	2'-2"	1

P401-PIER 1
DETAIL 20

See NEXT SHEET FOR REVISED SCHEDULES - C.C.O. #1

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
PIERS

DESIGNED
DRAWN J.M.G.
CHECKED K.N.L.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
35 OF 41
SHEET

X18743

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	55	65

REINFORCING STEEL LIST

PIER #4 N. B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	94	8	9'-11"	351	COLUMN
P401	4	32	6	11'-2"	239	TIE BEAM
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	4	5	23'-7"	98	TIE BEAM
P504	5	8	5	22'-3"	186	PIER CAP
P801	8	32	5	24'-6	2093	TIE BEAM
P901	9	8	4	8'-7"	233	PIER CAP
P902	9	8	5	23'-0"	626	" "
P903	9	8	5	10'-0"	272	" "
P904	9	21	5	17'-0"	1214	" "
P905	9	24	5	26'-9"	2183	COLUMN
P906	9	24	5	26'-0"	2122	"
P907	9	48	5	5'-6"	898	TIE BEAM (DOWELS)
				TOTAL	11248	LBS.

PIER #4 S. B.

P301	3	102	8	9'-11"	380	COLUMN
P401	4	32	6	11'-2"	239	TIE BEAM
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	4	5	23'-7"	98	TIE BEAM
P504	5	8	5	22'-3"	186	PIER CAP
P801	8	32	5	24'-6	2093	TIE BEAM
P901	9	8	4	8'-7"	233	PIER CAP
P902	9	8	5	23'-0"	626	" "
P903	9	8	5	10'-0"	272	" "
P904	9	21	5	17'-0"	1214	" "
P905	9	24	5	27'-5"	2237	COLUMN
P906	9	24	5	28'-2"	2298	"
P907	9	48	5	5'-6"	898	TIE BEAM (DOWELS)
				TOTAL	11507	LBS.

PIER #5 N. B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	94	8	9'-11"	351	COLUMN
P401	4	32	6	11'-2"	239	TIE BEAM
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	4	5	23'-8"	99	TIE BEAM
P504	5	8	5	22'-1"	184	PIER CAP
P801	8	32	5	24'-	2093	TIE BEAM
P901	9	24	5	16'-11"	1380	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0"	272	" "
P904	9	8	5	22'-11"	623	" "
P905	9	24	5	25'-3"	2060	COLUMN
P906	9	24	5	26'-0"	2122	"
P907	9	48	5	5'-6"	898	TIE BEAM (DOWELS)
				TOTAL	11287	LBS.

PIER #5 S. B.

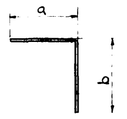
P301	3	98	8	9'-11"	366	COLUMN
P401	4	32	6	11'-2"	239	TIE BEAM
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	4	5	23'-7"	98	TIE BEAM
P504	5	8	5	22'-3"	186	PIER CAP
P801	8	32	5	24'-6	2093	TIE BEAM
P901	9	8	4	8'-7"	233	PIER CAP
P902	9	8	5	23'-0"	626	" "
P903	9	8	5	10'-0"	272	" "
P904	9	21	5	17'-0"	1214	" "
P905	9	24	5	26'-8"	2176	COLUMN
P906	9	24	5	27'-5"	2237	"
P907	9	48	5	5'-6"	898	TIE BEAM (DOWELS)
				TOTAL	11371	LBS.

PIER #6 N. B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	56	8	11'-6"	247	COLUMN
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	49	6	16'-8"	852	" "
P503	5	36	6	26'-6	995	COLLISION WALL
P504	5	40	5	27'-0"	1126	" "
P505	5	8	5	25'-0"	209	PIER CAP
P506	5	20	3	5'-0"	104	COLLISION WALL
P901	9	33	5	18'-9"	2104	PIER CAP
P902	9	8	4	8'-1"	247	" "
P903	9	12	5	10'-0"	408	" "
P904	9	8	5	25'-9"	700	" "
P905	9	20	5	13'-0"	884	COLUMN
P906	9	32	5	6'-0"	653	"
P907	9	12	5	16'-0"	653	"
P1101	11	18	5	12'-6"	1195	COLUMN
P1102	11	18	5	13'-3"	1267	"
P1103	11	48	5	5'-6"	1403	" DOWELS
P1104	11	6	5	16'-3"	518	"
P1105	11	6	5	17'-0"	542	"
				TOTAL	14175	LBS.

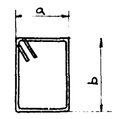
PIER #6 S. B.

P301	3	92	8	9'-11"	343	COLUMN
P401	4	32	6	11'-2"	239	TIE BEAM
P501	5	8	9	7'-2"	60	PIER CAP
P502	5	44	6	14'-8"	673	" "
P503	5	4	5	23'-8"	99	TIE BEAM
P504	5	8	5	22'-1"	184	PIER CAP
P801	8	32	5	24'-6	2093	TIE BEAM
P901	9	24	5	16'-11"	1380	PIER CAP
P902	9	8	4	8'-7"	233	" "
P903	9	8	5	10'-0"	272	" "
P904	9	8	5	22'-11"	623	" "
P905	9	24	5	25'-0"	2090	COLUMN
P906	9	24	5	25'-9"	2101	"
P907	9	48	5	5'-6	898	TIE BEAM (DOWELS)
				TOTAL	11238	LBS.



DETAIL 4

MARK	a	b	PIER N.B.	PIER S.B.
P901	4'-11"	3'-8"	4	4,5
P902	4'-11"	3'-8"	5	6
P902	5'-5"	3'-8"	6	



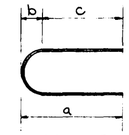
DETAIL 6

MARK	a	b	PIER N.B.	PIER S.B.
P401	3'-0"	2'-1"	4,5,	4,5,6
P502	3'-2"	3'-8	4,5,	4,5,6
P502	4'-2	3'-8	6	
P503	3'-2	9'-7	6	



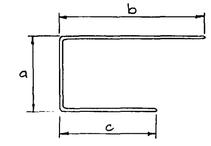
DETAIL 8

MARK	a	b	PIER N.B.	PIER S.B.
P301	2'-10"	1'-0"	4,5	4,5,6
P301	3'-4"	1'-0"	6	



DETAIL 9

MARK	a	b	c	PIER N.B.	PIER S.B.
P501	1'-8"	1'-7"	1'-1"	4,5	4,5,6
P501	3'-2	2'-1"	1'-1"	6	



DETAIL 3

MARK	a	b	c	PIER N.B.
P506	3'-0"	1'-0"	1'-0"	6

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
FOR PIERS

DESIGNED
DRAWN J.M.G.
CHECKED K.N.J.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
36 OF 41
SHEET

X18744

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	56	65

REINFORCING STEEL LIST

PIER # 7 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	52	8	11'-6"	225	COLUMN
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	49	6	16'-8"	852	" "
P503	5	36	6	26'-6	995	COLLISION WALL
P504	5	40	5	26'-3	1116	" "
P505	5	8	5	24'-9"	207	PIER CAP
P506	5	20	3	5'-0"	104	COLLISION WALL
P901	9	33	5	18'-7"	2085	PIER CAP
P902	9	8	4	9'-1"	247	" "
P903	9	12	5	10'-0"	408	" "
P904	9	8	5	25'-6"	694	" "
P905	9	20	5	12'-0"	816	COLUMN
P906	9	32	5	6'-0"	653	"
P907	9	12	5	15'-1"	619	"
P1101	11	18	5	11'-9"	1124	COLUMN
P1102	11	18	5	12'-6"	1195	"
P1103	11	48	5	5'-6"	1403	" DOWELS
P1104	11	6	5	15'-4"	489	"
P1105	11	6	5	16'-1"	513	"
				TOTAL	13818	LBS.

PIER #7 S.B.

P301	3	56	8	11'-6"	242	COLUMN
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	49	6	16'-8"	852	" "
P503	5	36	6	26'-6	995	COLLISION WALL
P504	5	40	5	27'-3	1126	" "
P505	5	8	5	25'-0"	209	PIER CAP
P506	5	20	3	5'-0"	104	COLLISION WALL
P901	9	33	5	18'-10"	2113	PIER CAP
P902	9	8	4	9'-1"	247	" "
P903	9	12	5	10'-0"	408	" "
P904	9	8	5	25'-9"	700	" "
P905	9	20	5	13'-3"	901	COLUMN
P906	9	32	5	6'-0"	653	"
P907	9	12	5	16'-5"	670	"
P1101	11	18	5	12'-11"	1235	COLUMN
P1102	11	18	5	13'-9"	1315	"
P1103	11	48	5	5'-6	1403	" DOWELS
P1104	11	6	5	16'-8"	531	"
P1105	11	6	5	17'-5"	555	"
				TOTAL	14332	LBS.

PIER # 8 N.B.

MARK	SIZE	NO	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	72	8	11'-6"	311	COLUMN
P401	4	36	6	11'-6"	277	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	50	6	16'-8"	869	" "
P503	5	4	5	27'-0"	113	TIE BEAM
P504	5	8	5	25'-0"	209	PIER CAP
P801	8	32	5	27'-6"	2350	TIE BEAM
P901	9	30	5	18'-10"	1921	PIER CAP
P902	9	12	4	9'-1"	371	" "
P903	9	10	5	10'-0"	340	" "
P904	9	12	5	25'-9"	1051	" "
P905	9	32	5	20'-6"	2230	COLUMN
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1001	10	16	5	20'-3"	1394	COLUMN
P1002	10	16	5	21'-3"	1963	"
P1003	10	32	5	5'-6"	757	TIE BEAM (DOWELS)
				TOTAL	14327	LBS.

PIER #8 S.B.

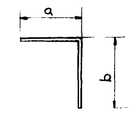
P301	3	52	8	11'-6"	225	COLUMN
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	49	6	16'-8"	852	" "
P503	5	36	6	26'-6	995	COLLISION WALL
P504	5	40	5	26'-9"	1116	" "
P505	5	8	5	24'-9"	207	PIER CAP
P506	5	20	3	5'-0"	104	COLLISION WALL
P901	9	33	5	18'-8"	2095	PIER CAP
P902	9	8	4	9'-1"	247	" "
P903	9	12	5	10'-0"	408	" "
P904	9	8	5	25'-6"	694	" "
P905	9	20	5	12'-3"	833	COLUMN
P906	9	32	5	6'-0"	653	"
P907	9	12	5	15'-5"	629	"
P1101	11	18	5	11'-11"	1140	COLUMN
P1102	11	18	5	12'-8"	1211	"
P1103	11	48	5	5'-6"	1403	" DOWELS
P1104	11	6	5	15'-8"	499	"
P1105	11	6	5	16'-6"	526	"
				TOTAL	13910	LBS.

PIER # 9 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	68	8	11'-6"	294	COLUMN
P401	4	36	6	11'-6"	277	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	50	6	16'-8"	869	" "
P503	5	4	5	27'-3"	114	TIE BEAM
P504	5	8	5	25'-3"	211	PIER CAP
P801	8	32	5	28'-9"	2456	TIE BEAM
P901	9	30	5	20'-0"	2040	PIER CAP
P902	9	12	4	9'-1"	371	" "
P903	9	10	5	10'-0"	340	" "
P904	9	12	5	26'-0"	1061	" "
P905	9	32	5	19'-9"	2149	COLUMN
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1001	10	16	5	19'-6"	1343	COLUMN
P1002	10	16	5	20'-6"	1411	"
P1003	10	32	5	5'-6"	757	TIE BEAM (DOWELS)
				TOTAL	14364	LBS.

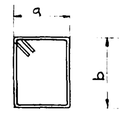
PIER # 9 S.B.

P301	3	72	8	11'-6"	311	COLUMN
P401	4	36	6	11'-6"	277	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	50	6	16'-8"	869	" "
P503	5	4	5	27'-0"	113	TIE BEAM
P504	5	8	5	25'-0"	209	PIER CAP
P801	8	32	5	27'-6"	2350	TIE BEAM
P901	9	30	5	18'-10"	1921	PIER CAP
P902	9	12	4	9'-1"	371	" "
P903	9	10	5	10'-0"	340	" "
P904	9	12	5	25'-9"	1051	" "
P905	9	32	5	20'-6"	2230	COLUMN
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1001	10	16	5	20'-6"	1411	COLUMN
P1002	10	16	5	21'-3"	1463	"
P1003	10	32	5	5'-6"	757	TIE BEAM (DOWELS)
				TOTAL	14344	LBS.



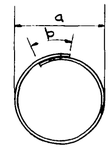
DETAIL 4

MARK	a	b	PIER N.B	PIER S.B.
P902	5'-5	3'-8	7	7,8
P902	5'-5	3'-8	8,9	9



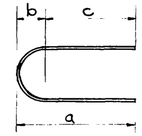
DETAIL 6

MARK	a	b	PIER N.B	PIER S.B
P401	3'-2	2'-1"	8, 9	9
P502	4'-2	3'-8	7,8,9	7,8,9
P503	3'-2	9'-7	7	7,8



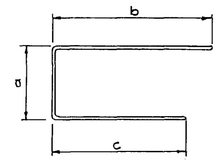
DETAIL 8

MARK	a	b	PIER N.B	PIER S.B.
P301	3'-4	1'-0"	7,8,9	7,8,9



DETAIL 9

MARK	a	b	c	PIER N.B	PIER S.B.
P501	3'-2"	2'-1"	1'-1"	7,8,9	7,8,9



DETAIL 3

MARK	a	b	c	PIER N.B.	PIER S.B.
P506	3'-0"	1'-0"	1'-0"	7	7, 8

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND
REINFORCING BAR DETAILS
PIERS

NO.	DATE	REVISION	BY

DESIGNED
DRAWN J.M.G.
CHECKED K.N.J.
APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:
37 OF 41
SHEET

X18745

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	57	65

REINFORCING STEEL LIST

PIER #10 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	70	8	11'-6"	303	COLUMNS
P401	4	37	6	11'-6"	284	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	51	6	16'-8"	887	" "
P503	5	4	5	28'-0"	117	TIE BEAM
P504	5	8	5	26'-0"	217	PIER CAP
P801	8	32	5	28'-8"	2449	TIE BEAM
P901	9	12	5	26'-10"	1095	PIER CAP
P902	9	33	5	19'-6"	2188	" "
P903	9	10	5	10'-0"	340	" "
P904	9	32	5	20'-0"	2176	COLUMN
P905	9	12	4	9'-2"	374	PIER CAP
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1001	10	18	5	19'-11"	1543	COLUMN
P1002	10	18	5	20'-8"	1601	"
P1003	10	36	5	5'-6"	851	TIE BEAM (DOWELS)
				TOTAL	15096	LBS.

PIER #10 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	68	8	11'-6"	294	COLUMNS
P401	4	36	6	11'-6"	277	TIE BEAM
P501	5	8	9	8'-9	73	PIER CAP
P502	5	50	6	16'-8"	869	" "
P503	5	4	5	27'-3"	114	TIE BEAM
P504	5	8	5	25'-3"	211	PIER CAP
P801	8	32	5	28'-9"	2456	TIE BEAM
P901	9	30	5	20'-0"	2040	PIER CAP
P902	9	12	4	9'-1"	371	" "
P903	9	10	5	10'-0"	340	" "
P904	9	12	5	26'-0"	1061	" "
P905	9	32	5	19'-9"	2148	COLUMN
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1001	10	16	5	19'-6"	1343	COLUMN
P1002	10	16	5	20'-3"	1394	"
P1003	10	32	5	5'-6	756	TIE BEAM (DOWELS)
				TOTAL	14346	LBS.

PIER #11 N.B.

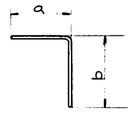
MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	66	8	11'-6"	285	COLUMNS
P401	4	40	6	11'-6"	307	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	55	6	16'-8"	956	" "
P503	5	4	5	30'-5"	127	TIE BEAM
P504	5	8	5	27'-10"	232	PIER CAP
P801	8	32	5	30'-9"	2627	TIE BEAM
P901	9	12	5	28'-6"	1163	PIER CAP
P902	9	33	5	20'-9"	2328	" "
P903	9	10	5	10'-0"	340	" "
P904	9	32	5	19'-1"	2075	COLUMNS
P905	9	12	4	9'-2"	374	PIER CAP
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1101	11	18	5	19'-3"	1841	COLUMN
P1102	11	18	5	20'-1"	1920	"
P1103	11	36	5	5'-6	1052	TIE BEAM (DOWELS)
				TOTAL	16298	LBS.

PIER #11 S. B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	70	8	11'-6"	303	COLUMNS
P401	4	36	6	11'-6"	277	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	50	6	16'-8"	869	" "
P503	5	4	5	27'-6"	115	TIE BEAM
P504	5	8	5	25'-6"	213	PIER CAP
P801	8	32	5	28'-2"	2407	TIE BEAM
P901	9	12	5	26'-4"	1074	PIER CAP
P902	9	33	5	19'-2"	2151	" "
P903	9	10	5	10'-0"	340	" "
P904	9	32	5	19'-10"	2158	COLUMN
P905	9	12	4	9'-2"	374	PIER CAP
P906	9	32	5	5'-6"	598	TIE BEAM (DOWELS)
P1001	10	18	5	19'-8"	1523	COLUMN
P1002	10	18	5	20'-4"	1575	"
P1003	10	36	5	5'-6"	851	TIE BEAM (DOWELS)
				TOTAL	14901	LBS.

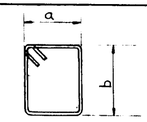
PIER #12 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
P301	3	64	8	11'-6"	277	COLUMNS
P401	4	36	6	11'-6"	277	TIE BEAM
P501	5	8	9	8'-9"	73	PIER CAP
P502	5	50	6	16'-8"	869	" "
P503	5	4	5	27'-9"	116	TIE BEAM
P504	5	8	5	25'-2"	210	PIER CAP
P801	8	32	5	28'-0"	2392	TIE BEAM
P901	9	12	5	26'-0"	1061	PIER CAP
P902	9	33	5	19'-0"	2132	" "
P903	9	10	5	10'-0"	340	" "
P904	9	32	5	18'-8"	2051	COLUMN
P905	9	12	4	9'-2"	374	PIER CAP
P906	9	32	5	5'-6"	598	TIE BEAM DOWELS
P1001	10	18	5	18'-7"	1439	COLUMN
P1002	10	18	5	19'-4"	1497	"
P1003	10	36	5	5'-6"	851	TIE BEAM (DOWELS)
				TOTAL	14537	LBS.



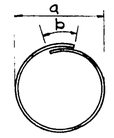
DETAIL 4

MARK	a	b	PIER N.B.	PIER S.B.
P902	5'-5	3'-8"		10
P905	5'-6	3'-8"	10,11	11,12



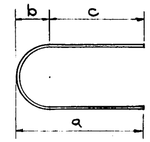
DETAIL 6

MARK	a	b	PIER N.B.	PIER S.B.
P401	3'-2	2'-1"	10,11	10,11,12
P502	4'-2	3'-8"	10,11	10,11,12



DETAIL 8

MARK	a	b	PIER N.B	PIER S.B.
P301	3'-4	1'-0	10,11	10,11,12



DETAIL 9

MARK	a	b	c	PIER N.B	PIER S.B
P501	3'-2	2'-1"	1'-1	10,11	10,11,12

NO.	DATE	REVISION	BY

MILWAUKEE COUNTY EXPRESSWAY COMMISSION
STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY
BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

REINFORCING BAR DETAILS
PIERS

DESIGNED		DE LEUW, CATHER & CO. CONSULTING ENGINEERS CHICAGO	SCALE:
DRAWN	J.M.G.		38 OF 41
CHECKED	K.N.J.		SHEET
APPROVED	L.N.R.		

X18746

BPR DIVISION	STATE	FEDERAL PROJECT	SHEET NO.	TOTAL SHEETS
4	WIS.	U-03-1(73)	58	65

REINFORCING STEEL LIST

DECK SLAB SPAN #1 N.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	56	10	7'-0"	147	INTERM. DIAPH. STIRRUP
S302	3	84	10	4'-0"	126	END DIAPHRAGM STIRRUP
S501	5	147	3	4'-10"	741	SIDEWALK STIRRUP
S502	5	70	5	37'-0"	2701	DECK SLAB LONGITUDINAL
S503	5	88	5	37'-6"	3442	" " "
S504	5	74	21	4'-3"	328	SIDEWALK STIRRUP
S505	5	73	3	2'-3"	171	" "
S506	5	73	3	3'-2"	241	" "
S507	5	315	5	25'-6"	8378	DECK SLAB TRANSVERSE
S508	5	62	5	27'-0"	1746	" " "
S509	5	62	5	28'-6"	1843	" " "
S510	5	63	5	29'-9"	1935	" " "
S601	6	8	13	1'-8"	20	INTERM. DIAPH. THR'D. DWL.
S602	6	24	5	3'-9"	135	INTERM. DIAPH. DOWEL
S603	6	28	5	5'-9"	242	INTERM. DIAPH. HORIZ. BOTT.
S604	6	14	5	4'-9"	100	END DIAPH. @ PIER #1
S605	6	2	5	24'-0"	72	" " @ " #1
S606	6	2	5	27'-0"	81	" " @ ABUTMENT
S607	6	14	5	5'-10"	123	END DIAPH. @ "
				TOTAL	22,592	LBS.

DECK SLAB SPAN #2 N.B

S301	3	96	10	6'-11"	250	INTERM. DIAPH. STIRRUP
S302	3	80	10	3'-11"	118	END DIAPHRAGM "
S501	5	163	3	4'-10"	822	SIDEWALK STIRRUP
S502	5	108	5	28'-0"	3154	DECK SLAB LONGITUDINAL
S503	5	108	5	28'-3"	3182	" " "
S504	5	82	21	4'-2"	356	SIDEWALK STIRRUP
S505	5	81	3	2'-3"	190	" "
S506	5	81	3	3'-2"	268	" "
S507	5	417	5	23'-6"	10221	DECK SLAB TRANSVERSE
S508	5	139	5	24'-9"	3588	" " "
S601	6	12	13	1'-8"	30	INTERM. DIAPH. THR'D. DOWEL
S602	6	42	5	3'-9"	237	INTERM. DIAPH. DOWEL
S603	6	48	5	4'-6"	324	INTERM. DIAPH. HORIZ. BOTT.
S604	6	32	5	3'-7	172	END DIAPH. HORIZ. BOTT.
S605	6	2	5	22'-9"	68	" " " "
S606	6	2	5	24'-3"	73	" " " "
				TOTAL	23,053	LBS.

DECK SLAB SPAN #3 N.B

S301	3	60	10	7'-0"	158	INTERM. DIAPH. STIRRUP
S302	3	76	10	4'-0"	114	END DIAPH. STIRRUP
S501	5	134	3	4'-10"	675	SIDEWALK STIRRUP
S502	5	16	5	30'-9"	513	SIDEWALK LONGITUDINAL
S503	5	16	5	36'-9"	613	SIDEWALK LONGITUDINAL
S504	5	78	21	4'-3"	324	SIDEWALK STIRRUP
S505	5	61	3	2'-3"	143	" "
S506	5	61	3	3'-2"	202	" "
S507	5	22	5	32'-3"	740	DECK SLAB LONGITUDINAL
S508	5	22	5	33'-3"	763	" " "
S509	5	18	5	34'-0"	638	" " "
S510	5	18	5	35'-0"	657	" " "

DECK SLAB SPAN #3 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S511	5	14	5	35'-9"	522	DECK SLAB LONGITUDINAL
S512	5	14	5	36'-6"	533	" " "
S513	5	470	5	22'-3"	10907	" " TRANSVERSE
S514	5	4	5	2'-6"	10	" " "
S515	5	4	5	4'-3"	18	" " "
S516	5	4	5	6'-8"	26	" " "
S517	5	4	5	8'-3"	34	" " "
S518	5	4	5	10'-3"	43	" " "
S519	5	4	5	12'-3"	51	" " "
S520	5	4	5	14'-3"	59	" " "
S521	5	4	5	16'-3"	68	" " "
S522	5	4	5	18'-3"	76	" " "
S523	5	4	5	20'-3"	84	" " "
S601	6	8	13	1'-8"	20	INTERM. DIAPH. THR'D. DOWEL
S602	6	20	5	3'-9"	113	" " DOWEL
S603	6	8	5	7'-3"	87	" " HORIZ. BOTT.
S604	6	8	5	6'-3"	75	" " " "
S605	6	8	5	4'-3"	51	" " " "
S606	6	8	5	6'-8"	80	END DIAPHRAGM HORIZ. BOTT.
S607	6	8	5	5'-8"	68	" " " "
S608	6	8	5	5'-6"	42	" " " "
S609	6	2	5	22'-9"	68	" " " PIER #2
S610	6	2	5	21'-9"	65	" " " PIER #3
				TOTAL	18,642	LBS.

DECK SLAB SPAN #4 N.B.

S301	3	50	10	7'-0"	132	INTERM. DIAPHRAGM STIRRUP
S302	3	70	10	4'-0"	105	END DIAPHRAGM STIRRUP
S501	5	125	3	4'-11"	640	SIDEWALK STIRRUP
S502	5	142	5	31'-6"	4665	DECK SLAB LONGITUDINAL
S503	5	456	5	22'-3"	10582	DECK SLAB TRANSVERSE
S504	5	63	21	4'-3"	279	SIDEWALK STIRRUP
S505	5	62	3	2'-3"	145	" "
S506	5	62	3	3'-2"	205	" "
S601	6	8	13	1'-8"	20	INTERM. DIAPH. THR'D. DOWEL
S602	6	16	5	3'-9"	90	INTERM. DIAPH. DOWEL
S603	6	20	5	7'-3"	218	INTERM. DIAPH. HORIZ. BOTT.
S604	6	20	5	6'-6"	195	END DIAPH. HORIZ. BOTT.
S605	6	4	5	21'-9"	131	" " " "
				TOTAL	17,407	LBS.

DECK SLAB SPAN #5 N.B

S301	3	50	10	7'-0"	132	DIAPHRAGM STIRRUPS INT.
S302	3	80	10	4'-0"	120	" " END
S501	5	123	3	4'-10"	620	SIDEWALK
S502	5	142	5	31'-7"	4677	LONGITUDINAL BARS
S503	5	448	5	22'-0"	10279	TRANSVERSE BARS
S504	5	62	21	4'-3"	275	SIDEWALK
S505	5	61	3	2'-3"	143	"
S506	5	61	3	3'-2"	201	"
S601	6	8	13	1'-8"	20	INTER. DIAPHRAGM
S602	6	16	5	3'-9"	90	" "
S603	6	20	5	7'-5"	223	" "
S604	6	4	5	21'-3"	128	END "
S605	6	20	5	7'-0"	210	" "

TOTAL 17118 LBS.

DECK SLAB SPAN #5 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION

DECK SLAB SPAN #6 N.B

S301	3	67	10	7'-0"	176	INTER. DIAPH. STIRRUPS
S302	3	76	10	4'-0"	114	END " "
S501	5	145	3	4'-10"	731	SIDEWALK STIRRUPS
S502	5	24	5	21'-0"	526	" LONGITUDINAL
S503	5	24	5	29'-0"	726	" "
S504	5	85	21	4'-3"	377	" STIRRUP
S505	5	60	3	2'-3"	141	" "
S506	5	60	3	3'-2"	198	" "
S507	5	33	5	22'-9"	783	SLAB LONGITUDINAL
S508	5	33	5	24'-5"	840	" "
S509	5	27	5	25'-7"	720	" "
S510	5	27	5	26'-9"	753	" "
S511	5	21	5	27'-9"	608	" "
S512	5	21	5	28'-9"	630	" "
S513	5	484	5	22'-0"	11105	SLAB TRANSVERSE
S514	5	2	5	20'-9"	43	" "
S515	5	2	5	19'-9"	41	" "
S516	5	2	5	18'-10"	39	" "
S517	5	2	5	17'-10"	37	" "
S518	5	2	5	16'-11"	35	" "
S519	5	2	5	15'-11"	33	" "
S520	5	2	5	15'-0"	31	" "
S521	5	2	5	14'-0"	29	" "
S522	5	2	5	13'-1"	27	" "
S523	5	2	5	12'-1"	25	" "
S524	5	2	5	11'-0"	23	" "
S525	5	2	5	10'-0"	21	" "
S526	5	2	5	9'-1"	19	" "
S527	5	2	5	8'-1"	17	" "
S528	5	2	5	7'-2"	15	" "
S529	5	2	5	6'-2"	13	" "
S530	5	2	5	5'-3"	11	" "
S531	5	2	5	4'-3"	9	" "
S532	5	2	5	3'-4"	7	" "
S533	5	2	5	2'-4"	5	" "
S534	5	2	5	1'-9"	4	" "
S601	6	12	13	1'-8"	30	INTERM. DIAPHRAGM
S602	6	28	5	3'-9"	158	" "
S603	6	10	5	7'-5"	111	" "
S604	6	4	5	7'-11"	48	END DIAPHRAGM
S605	6	4	5	7'-0"	42	" "
S606	6	2	5	21'-3"	64	" "
S607	6	12	5	5'-8"	102	INTERM. DIAPHRAGM
S608	6	4	5	5'-2"	31	END DIAPHRAGM
S609	6	4	5	5'-10"	35	" "
S610	6	2	5	24'-0"	72	" "
S611	6	12	5	5'-1"	92	INTER. DIAPHRAGM
S612	6	4	5	4'-8"	28	END DIAPHRAGM
S613	6	4	5	5'-8"	32	" "
				TOTAL	19757	LBS.

DECK SLAB SPAN #7 N.B

S301	3	84	10	6'-11"	218	INTER. DIAPH. STIRRUPS
S302	3	70	10	3'-11"	103	END " "
S501	5	159	3	4'-10"	802	SIDEWALK
S502	5	193	5	27'-8"	5627	LONG. BARS

DECK SLAB SPAN #7 N.B

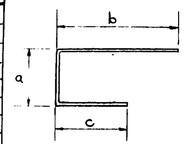
MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S503	5	546	5	24'-8"	14047	TRANSVERSE BARS
S504	5	79	21	4'-2"	343	SIDEWALK
S505	5	80	3	2'-3"	188	"
S506	5	80	3	3'-2"	264	"
S507	5	41	5	8'-0"	350	TOP OF INTER. DIAPHRAGM
S601	6	84	13	1'-8"	210	INTER. DIAPHRAGM
S602	6	28	5	5'-2"	217	END "
S603	6	42	5	5'-0"	315	INTER. "
S604	6	4	5	24'-0"	144	END "
				TOTAL	22828	LBS.

DECK SLAB SPAN #8 N.B

S301	3	48	10	7'-0"	126	INTER. DIAPH. STIRRUPS
S302	3	72	10	4'-0"	108	END " "
S501	5	140	3	4'-10	706	SIDEWALK STIRRUP
S502	5	70	5	35'-3	2574	LONG. BARS
S503	5	70	5	36'-5	2659	" "
S504	5	71	21	4'-3	315	SIDEWALK STIRRUP
S505	5	69	3	2'-3	162	" "
S506	5	69	3	3'-2	228	" "
S507	5	490	5	24'-8	12606	TRANSVERSE BARS
S508	5	24	5	9'-0	225	INTER. DIAPHRAGM
S601	6	48	13	1'-8"	120	INTER. DIAPHRAGM
S602	6	4	5	24'-3"	146	END "
S603	6	24	5	6'-0"	216	INTER. "
S604	6	24	5	6'-3"	225	END "
				TOTAL	20416	LBS.

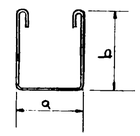
DECK SLAB SPAN #9 N.B

S301	3	48	10	7'-0"	126	INTER. DIAPHRAGM STIRRUP
S302	3	72	10	4'-0"	108	END " "
S501	5	142	3	4'-10"	706	SIDEWALK STIRRUP
S502	5	70	5	36'-0"	2630	DECK SLAB LONG.
S503	5	70	5	36'-6"	2664	" " "
S504	5	71	21	4'-3"	315	SIDEWALK STIRRUP
S505	5	69	3	2'-3"	162	" "
S506	5	69	3	3'-2"	228	" "
S507	5	480	5	25'-3"	12641	DECK SLAB TRANSVERSE
S508	5	24	5	8'-9"	219	DECK SLAB TRANS. TOP
S601	6	48	13	1'-8"	120	INTER. DIAPH. THR'D. DOWELS
S602	6	24	5	6'-0"	216	" " HORIZ. BOTT.
S603	6	24	5	5'-10"	210	END DIAPH. " "
S604	6	4	5	25'-0"	150	" " " "
				TOTAL	20495	LBS.



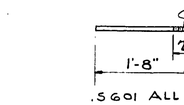
DETAIL 3

MARK	a	b	c	SPAN
S501	6"	2'-2"	2'-2"	ALL SPANS
S505	1'-0"	7"	8"	1, 3, 4, 5, 6, 8, 9
S505	11½"	7½"	7"	2, 7
S506	1'-0"	7"	1'-7"	1, 3, 4, 5, 6, 8, 9
S506	11½"	7"	1'-7½"	2, 7



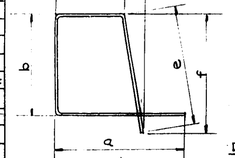
DETAIL 10

MARK	a	b	SPAN
S301	8	2'-9"	1,3,4,5,6,8,9
S301	8	2'-8½"	2, 7
S302	8	1'-3"	1,3,4,5,6,8,9
S302	8	1'-2½"	2, 7



.S601 ALL SPANS

DETAIL 13



DETAIL 21

MARK	a	b	c	d	e	f	SPAN
S504	1'-7"	1'-0"	7"	1½"	1'-1"	1'-1"	1,3,4,5,6,8,9
S504	1'-7"	11½"	7"	1½"	1'-0½"	1'-0½"	2, 7

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

REINFORCING BAR DETAILS DECK SLABS

NO.	DATE	REVISION	BY

DESIGNED
DRAWN J. M. G.
CHECKED H. R. V.
APPROVED L. N. R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:

SHEET 39 OF 41

X18747

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	59	65

REINFORCING STEEL LIST

DECK SLAB SPAN #10 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	48	10	7'-0"	126	INTERM. DIAPHRAGM STIRRUP
S302	3	72	10	4'-0"	108	END " "
S501	5	140	3	4'-10"	706	SIDEWALK STIRRUP
S502	5	70	5	36'-0"	2628	DECK SLAB LONG.
S503	5	70	5	36'-6"	2665	" " "
S504	5	71	21	4'-3"	315	SIDEWALK STIRRUP
S505	5	69	3	2'-3"	162	" "
S506	5	69	3	3'-2"	228	" "
S507	5	364	5	25'-6"	9681	DECK SLAB TRANSVERSE
S508	5	118	5	26'-3"	3231	" " "
S509	5	24	5	8'-9"	219	DECK SLAB TRANS. TOP
S601	6	48	13	1'-8"	120	INTERM. DIAPH. THR'D. DOWEL
S602	6	24	5	6'-0"	216	" " HORIZ. BOTT.
S603	6	24	5	6'-3"	225	END DIAPH. " "
S604	6	4	5	25'-9"	155	" " " "
				TOTAL	20785	LBS.

DECK SLAB SPAN #11 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	96	10	6'-11"	250	INTERM. DIAPH. STIRRUP
S302	3	96	10	3'-11"	141	END " "
S501	5	166	3	4'-10"	837	SIDEWALK STIRRUP
S502	5	108	5	28'-6"	3210	DECK SLAB LONGITUDINAL
S503	5	108	5	29'-0"	3267	" " "
S504	5	84	21	4'-2"	365	SIDEWALK STIRRUP
S505	5	82	3	2'-3"	192	" "
S506	5	82	3	3'-2"	271	" "
S507	5	359	5	26'-6"	9923	DECK SLAB TRANSVERSE
S508	5	70	5	27'-3"	1990	" " "
S509	5	72	5	28'-3"	2121	" " "
S510	5	69	5	29'-3"	2105	" " "
S511	5	48	5	7'-6"	375	" " " TOP
S601	6	96	13	1'-8"	240	INTER. DIAPH. THR'D. DOWEL
S602	6	48	5	4'-6"	324	" " HORIZ. BOTT.
S603	6	32	5	4'-4"	208	END DIAPH. " "
S604	6	2	5	25'-9"	77	" " " "
S605	6	2	5	27'-6"	83	" " " "
				TOTAL	25979	LBS.

DECK SLAB SPAN #12 N.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	35	10	7'-1"	93	INTERM. DIAPH. STIRRUP
S302	3	100	10	4'-1"	153	END " "
S501	5	88	3	4'-10"	444	SIDEWALK STIRRUP
S502	5	106	5	23'-0"	2543	DECK SLAB LONG.
S503	5	76	5	23'-3"	1843	" " "
S504	5	45	21	4'-4"	203	SIDEWALK STIRRUP
S505	5	43	3	2'-3"	101	" "
S506	5	43	3	3'-2"	142	" "
S507	5	139	5	28'-6"	7104	DECK SLAB TRANSVERSE

DECK SLAB SPAN #12 N.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S508	5	58	5	29'-3"	1769	DECK SLAB TRANSVERSE
S509	5	57	5	29'-9"	1769	" " "
S510	5	10	5	11'-9"	123	" " " TOP
S601	6	20	13	1'-8"	50	INTER. DIAPH. THR'D. DOWELS
S602	6	10	5	8'-6"	128	" " HORIZ. BOTT.
S603	6	20	5	7'-6"	225	END " " "
S604	6	2	5	27'-9"	83	" " " "
S605	6	2	5	29'-6"	89	" " " "
				TOTAL	16862	LBS.

DECK SLAB SPAN #1 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	70	10	7'-0"	184	INTERM. DIAPHRAGMS
S302	3	84	10	4'-0"	126	END "
S501	5	1144	3	4'-10"	726	SIDEWALK STIRRUP
S502	5	1158	5	36'-7"	6028	LONGITUDINAL SLAB
S503	5	494	5	26'-6"	13654	TRANSVERSE SLAB
S504	5	72	21	4'-3"	319	SIDEWALK STIRRUP
S505	5	72	3	2'-3"	169	" "
S506	5	72	3	3'-2"	238	" "
S601	6	8	13	1'-8"	20	INTERM. DIAPHRAGM
S602	6	24	5	3'-9"	135	" "
S603	6	28	5	6'-0"	252	" "
S604	6	14	5	5'-7"	117	END "
S605	6	2	5	26'-0"	78	" "
S606	6	14	5	5'-0"	105	" "
S607	6	2	5	23'-9"	71	" "
				TOTAL	22222	LBS.

DECK SLAB SPAN #2 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	96	10	6'-11"	250	INTERM. DIAPHRAGM
S302	3	80	10	3'-11"	118	END DIAPHRAGM
S501	5	160	3	4'-10"	807	SIDEWALK STIRRUP
S502	5	216	5	27'-6"	6195	LONGITUDINAL SLAB
S503	5	546	5	24'-3"	13809	TRANSVERSE "
S504	5	80	21	4'-2"	348	SIDEWALK STIRRUP
S505	5	80	3	2'-3"	188	" "
S506	5	80	3	3'-2"	264	" "
S601	6	12	13	1'-8"	30	INTERM. DIAPHRAGM
S602	6	42	5	3'-9"	237	" "
S603	6	48	5	4'-9"	342	" "
S604	6	32	5	3'-9"	188	END "
S605	6	4	5	23'-6"	141	" "
				TOTAL	22917	LBS.

DECK SLAB SPAN #3 S.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	50	10	7'-0"	132	INTERM. DIAPHRAM
S302	3	80	10	4'-0"	120	END "
S501	5	123	3	4'-10"	620	SIDEWALK STIRRUP
S502	5	142	5	31'-4"	4641	LONGITUDINAL SLAB
S503	5	422	5	22'-11"	10086	TRANSVERSE SLAB
S504	5	61	21	4'-3"	270	SIDEWALK STIRRUP
S505	5	62	3	2'-3"	146	" "
S506	5	62	3	3'-2"	205	" "
S601	6	8	13	1'-8"	20	INTERM. DIAPHRAGM
S602	6	16	5	3'-9"	90	" "
S603	6	20	5	7'-7"	228	" "
S604	6	20	5	6'-10"	205	END "
S605	6	4	5	22'-3"	134	" "
				TOTAL	16897	LBS.

DECK SLAB SPAN #4 S.B

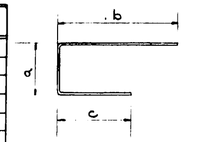
MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	50	10	7'-0"	132	INTERM. DIAPHRAGM
S302	3	80	10	4'-0"	120	END. "
S501	5	123	3	4'-10"	620	SIDEWALK STIRRUP
S502	5	142	5	31'-5"	4653	LONGITUDINAL SLAB
S503	5	420	5	22'-3"	9747	TRANSVERSE SLAB
S504	5	62	21	4'-3"	275	SIDEWALK STIRRUP
S505	5	61	3	2'-3"	143	" "
S506	5	61	3	3'-2"	201	" "
S601	6	8	13	1'-8"	20	INTERM. DIAPHRAGM
S602	6	16	5	3'-9"	90	" "
S603	6	20	5	7'-4"	220	" "
S604	6	20	5	6'-7"	198	END "
S605	6	4	5	21'-5"	129	" "
				TOTAL	16548	LBS.

DECK SLAB SPAN #5 S.B

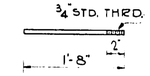
MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	50	10	7'-0"	132	INTERM. DIAPHRAGM
S302	3	80	10	4'-0"	120	END "
S501	5	123	3	4'-10"	620	SIDEWALK STIRRUP
S502	5	142	5	31'-5"	4653	LONGITUDINAL SLAB
S503	5	420	5	22'-0"	9637	TRANSVERSE SLAB
S504	5	62	21	4'-3"	275	SIDEWALK STIRRUP
S505	5	61	3	2'-3"	143	" "
S506	5	61	3	3'-2"	201	" "
S601	6	8	13	1'-8"	20	INTERM. DIAPHRAGM
S602	6	16	5	3'-9"	90	" "
S603	6	20	5	7'-3"	218	" "
S604	6	20	5	6'-7"	198	END "
S605	6	4	5	21'-5"	129	" "
				TOTAL	16436	LBS.

DECK SLAB SPAN #6 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	50	10	7'-0"	132	INTERM. DIAPH. STIRRUP
S302	3	80	10	4'-0"	120	END " "
S501	5	124	3	4'-10"	625	SIDEWALK STIRRUP
S502	5	142	5	31'-6"	4665	DECK SLAB LONGITUDINAL
S503	5	452	5	22'-3"	10489	" " TRANSVERSE
S504	5	62	21	4'-3"	275	SIDEWALK STIRRUP
S505	5	62	3	2'-3"	143	" "
S506	5	62	3	3'-2"	205	" "
S601	6	8	13	1'-8"	20	INTERM. DIAPH. THRD DOWEL
S602	6	16	5	3'-9"	90	" " DOWEL
S603	6	20	5	7'-3"	218	" " HORIZ. BOTT.
S604	6	4	5	22'-0"	132	END " " "
S605	6	20	5	6'-6"	195	" " " "
				TOTAL	17309	LBS.

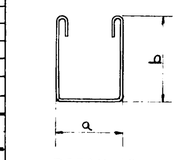


DETAIL 3



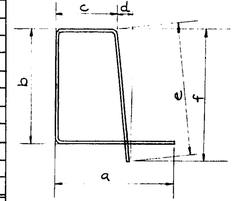
DETAIL 13

MARK	a	b	c	N.B. SPAN	S.B. SPAN
S501	6"	2'-2"	2'-2"	ALL SPANS	ALL SPANS
S505	1'-0"	7"	8"	10	1,3,4,5,6
S505	11½"	7½"	8"	11	2
S505	1'-0½"	6½"	8"	12	
S506	1'-0"	7"	1'-7"	10	1,3,4,5,6
S506	11½"	7"	1'-7½"	11	2
S506	1'-0½"	7"	1'-6½"	12	



DETAIL 10

MARK	a	b	N.B. SPAN	S.B. SPAN
S301	8"	2'-9"	10	1,3,4,5,6
S301	8"	2'-8½"	11	2
S301	8"	2'-9½"	12	
S302	8"	1'-3"	10	1,3,4,5,6
S302	8"	1'-2½"	11	2
S302	8"	1'-3½"	12	



DETAIL 21

MARK	a	b	c	d	e	f	N.B. SPAN	S.B. SPAN
S504	1'-7"	11½"	7"	1½"	1'-0½"	1'-0½"	11	2
S504	1'-7"	1'-0"	7"	1½"	1'-1"	1'-1"	10	1,3,4,5,6
S504	1'-7"	1'-0½"	7"	1½"	1'-1½"	1'-1½"	12	

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

REINFORCING BAR DETAILS

DECK SLABS

NO.	DATE	REVISION	BY

DESIGNED

DRAWN J.M.G.

CHECKED H.R.V.

APPROVED L.N.R.

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:

40 OF 41
SHEET

X18748

B.P.R. DIVISION	STATE	FEDERAL PROJECT	SHEET NO	TOTAL SHEETS
4	WIS.	U-03-1(73)	60	65

REINFORCING STEEL LIST

DECK SLAB SPAN #7 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	73	10	7'-0"	192	INTERM. DIAPH. STIRRUP
S302	3	76	10	4'-0"	114	END " "
S501	5	145	3	4'-10"	731	SIDEWALK STIRRUP
S502	5	24	5	21'-6"	538	" LONGITUDINAL
S503	5	24	5	29'-9"	745	" "
S504	5	85	21	4'-2"	370	" STIRRUP
S505	5	60	3	2'-3"	141	" "
S506	5	60	3	3'-2"	198	" "
S507	5	33	5	23'-3"	800	DECK SLAB LONGITUDINAL
S508	5	33	5	24'-6"	843	" " "
S509	5	27	5	25'-9"	725	" " "
S510	5	27	5	26'-9"	753	" " "
S511	5	21	5	28'-0"	618	" " "
S512	5	21	5	29'-0"	635	" " "
S513	5	486	5	22'-3"	11278	" " TRANSVERSE
S514	5	4	5	21'-9"	91	" " "
S515	5	4	5	20'-10"	87	" " "
S516	5	4	5	19'-11"	83	" " "
S517	5	4	5	19'-0"	79	" " "
S518	5	4	5	18'-1"	75	" " "
S519	5	4	5	17'-2"	72	" " "
S520	5	4	5	16'-3"	68	" " "
S521	5	4	5	15'-4"	64	" " "
S522	5	4	5	14'-5"	60	" " "
S523	5	4	5	13'-6"	56	" " "
S524	5	4	5	12'-7"	52	" " "
S525	5	4	5	11'-8"	49	" " "
S526	5	4	5	10'-9"	45	" " "
S527	5	4	5	9'-10"	41	" " "
S528	5	4	5	8'-11"	37	" " "
S529	5	4	5	8'-0"	33	" " "
S530	5	4	5	7'-1"	30	" " "
S531	5	4	5	6'-2"	26	" " "
S532	5	4	5	5'-3"	22	" " "
S533	5	4	5	4'-4"	18	" " "
S534	5	4	5	3'-5"	14	" " "
S535	5	4	5	2'-6"	10	" " "
S601	6	12	13	1'-8"	30	INTERM. DIAPH. THRD. DWL
S602	6	28	5	3'-9"	158	" " DOWELS
S603	6	4	5	6'-6"	39	END DIAPH. HORIZ. PIER 6
S604	6	4	5	4'-7"	28	" " " " 6
S605	6	4	5	4'-3"	25	" " " " 6
S606	6	4	5	7'-6"	45	" " " " 7
S607	6	4	5	5'-4"	33	" " " " 7
S608	6	4	5	4'-10"	29	" " " " 7
S609	6	10	5	7'-3"	109	INTERM. DIAPH. HORIZ.
S610	6	12	5	5'-6"	99	" " "
S611	6	12	5	5'-0"	90	" " "
S612	6	2	5	22'-3"	67	END DIAPH. HORIZ. PIER 6
S613	6	2	5	25'-6"	77	" " " " 7
				TOTAL	20617	LBS.

DECK SLAB SPAN #8 S.B

S301	3	84	10	6'-11"	219	INTERM. DIAPH. STIRRUP
S302	3	70	10	3'-11"	103	END " "
S501	5	158	3	4'-10"	796	SIDEWALK STIRRUP
S502	5	195	5	28'-0"	5695	DECK SLAB LONG.
S503	5	550	5	25'-0"	14341	DECK SLAB TRANSVERSE
S504	5	79	21	4'-2"	344	SIDEWALK STIRRUP
S505	5	79	3	2'-3"	188	" "

DECK SLAB SPAN #8 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S506	5	79	3	3'-2"	261	SIDEWALK STIRRUP
S507	5	42	5	7'-9"	339	DECK SLAB AT INTERM. DIAPH.
S601	6	84	13	1'-8"	211	INTERM. DIAPH. THRD. DOWEL
S602	6	42	5	5'-0"	315	" " HORIZ.
S603	6	28	5	4'-10"	204	END DIAPHRAGM HORIZ.
S604	6	4	5	25'-0"	150	" " "
				TOTAL	28163	LBS.

DECK SLAB SPAN #9 S.B

S301	3	60	10	7'-0"	158	INTERM. DIAPH. STIRRUP
S302	3	72	10	4'-0"	108	END " "
S501	5	150	3	4'-10"	756	SIDEWALK STIRRUP
S502	5	70	5	38'-9"	2829	DECK SLAB LONGITUDINAL
S503	5	70	5	39'-0"	2847	" " "
S504	5	76	21	4'-3"	337	SIDEWALK STIRRUP
S505	5	74	3	2'-3"	174	" "
S506	5	74	3	3'-2"	245	" "
S507	5	514	5	24'-9"	13269	DECK SLAB TRANSVERSE
S508	5	24	5	8'-9"	219	DECK SLAB AT INTER. DIAPH.
S601	6	48	13	1'-8"	120	INTERM. DIAPH. THR'D. DOWEL
S602	6	24	5	5'-11"	213	" " HORIZ.
S603	6	24	5	6'-0"	216	END " "
S604	6	4	5	25'-0"	150	" " "
				TOTAL	21641	LBS.

DECK SLAB SPAN #10 S.B

S301	3	60	10	7'-0"	158	INTERM. DIAPH.
S302	3	72	10	4'-0"	108	END "
S501	5	150	3	4'-10"	756	SIDEWALK STIRRUP
S502	5	70	5	38'-8"	2794	SLAB LONGITUDINAL
S503	5	70	5	38'-9"	2829	" "
S504	5	76	21	4'-3"	337	SIDEWALK STIRRUP
S505	5	74	3	2'-3"	174	" "
S506	5	74	3	3'-2"	245	" "
S507	5	508	5	25'-3"	13380	SLAB TRANSVERSE
S508	5	24	5	9'-0"	225	INTERM. DIAPH.
S601	6	48	13	1'-8"	120	INTERM. DIAPH.
S602	6	24	5	6'-0"	216	" "
S603	6	4	5	24'-3"	146	END "
S604	6	24	5	6'-3"	226	" "
				TOTAL	21714	LBS.

DECK SLAB SPAN #11 S.B.

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION
S301	3	60	10	7'-0"	158	DIAPHRAGM INTERM.
S302	3	72	10	4'-0"	108	" END
S501	5	150	3	4'-10"	756	SIDEWALK STIRRUP
S502	5	70	5	38'-3"	2794	SLAB LONGITUDINAL
S503	5	70	5	38'-5"	2829	" "
S504	5	76	21	4'-3"	337	SIDEWALK STIRRUPS
S505	5	74	3	2'-3"	174	" "
S506	5	74	3	3'-2"	245	" "
S507	5	508	5	25'-3"	13380	SLAB TRANSVERSE
S508	5	24	5	9'-0"	225	DIAPHRAGM
S601	6	48	13	1'-8"	120	INTERM. DIAPH.
S602	6	24	5	6'-0"	216	" "
S603	6	4	5	24'-3"	146	END "
S604	6	24	5	6'-3"	226	" "
				TOTAL	21714	LBS.

DECK SLAB SPAN #12 S.B

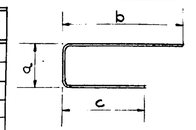
S301	3	72	10	6'-11"	187	INTERM. DIAPH.
S302	3	64	10	3'-11"	94	END "
S501	5	168	3	4'-10"	846	SIDEWALK STIRRUP
S502	5	216	5	29'-0"	6533	SLAB LONGITUDINAL
S503	5	502	5	25'-3"	13220	" TRANSVERSE
S504	5	84	21	4'-2"	364	SIDEWALK STIRRUP
S505	5	84	3	2'-3"	197	" "
S506	5	84	3	3'-2"	278	" "
S507	5	48	5	7'-3"	363	INTERM. DIAPH.
S601	6	96	13	1'-8"	240	INTERM. DIAPH.
S602	6	48	5	4'-3"	306	" "
S603	6	4	5	24'-8"	148	END "
S604	6	32	5	3'-9"	180	" "
				TOTAL	22956	LBS.

DECK SLAB SPAN #13 S.B

S301	3	28	10	7'-1"	74	INTERM. DIAPH.
S302	3	80	10	4'-1"	124	END "
S501	5	90	3	4'-10"	454	SIDEWALK STIRRUP
S502	5	152	5	23'-3"	3686	SLAB LONGITUDINAL
S503	5	390	5	25'-3"	10271	" TRANSVERSE
S504	5	45	21	4'-4"	204	SIDEWALK STIRRUP
S505	5	45	3	2'-3"	105	" "
S506	5	45	3	3'-2"	149	" "
S507	5	8	5	12'-3"	102	INTERM. DIAPH.
S601	6	16	13	1'-8"	40	INTERM. DIAPH.
S602	6	8	5	9'-5"	113	" "
S603	6	4	5	24'-9"	149	END "
S604	6	16	5	10'-0"	240	" "
				TOTAL	15711	LBS.

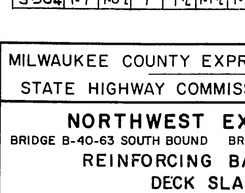
DECK SLAB SPAN #13 S.B

MARK	SIZE	NO.	DETAIL	LENGTH	WEIGHT	LOCATION



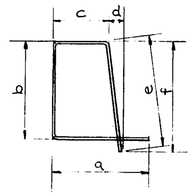
DETAIL 3

MARK	a	b	c	SPAN
S501	6"	2'-2"	2'-2"	ALL SPANS
S505	1'-0"	7"	8"	7, 9, 10, 11
S506	1'-0"	7"	1'-7"	7, 9, 10, 11
S505	11½"	7½"	8"	8, 12
S506	11½"	7"	1'-7½"	8, 12
S505	1'-0½"	6½"	8"	13
S506	1'-0½"	7"	1'-6½"	13



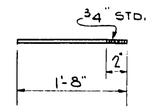
DETAIL 10

MARK	a	b	SPAN
S301	8"	2'-9"	7, 9, 10, 11
S302	8"	1'-3"	7, 9, 10, 11
S301	8"	2'-8½"	8, 12
S302	8"	1'-2½"	8, 12
S301	8"	2'-9½"	13
S302	8"	1'-3½"	13



DETAIL 21

MARK	a	b	c	d	e	f	SPAN
S504	1'-7"	1'-0"	7"	1½"	1'-1"	1'-1"	7, 9, 10, 11
S504	1'-7"	11½"	7"	1½"	1'-0½"	1'-0½"	8, 12
S504	1'-7"	1'-0½"	7"	1½"	1'-1½"	1'-1½"	13



DETAIL 13

MILWAUKEE COUNTY EXPRESSWAY COMMISSION

STATE HIGHWAY COMMISSION OF WISCONSIN

NORTHWEST EXPRESSWAY

BRIDGE B-40-63 SOUTH BOUND BRIDGE B-40-64 NORTH BOUND

REINFORCING BAR DETAILS

DECK SLABS

NO.	DATE	REVISION	BY

DESIGNED
DRAWN J.M.G.
CHECKED H.K.V.
APPROVED L.N.R.

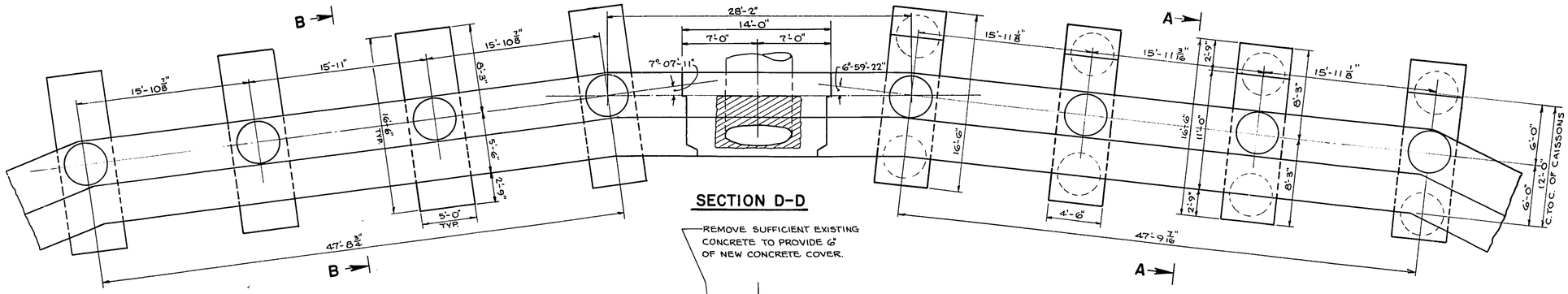
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
CHICAGO

SCALE:

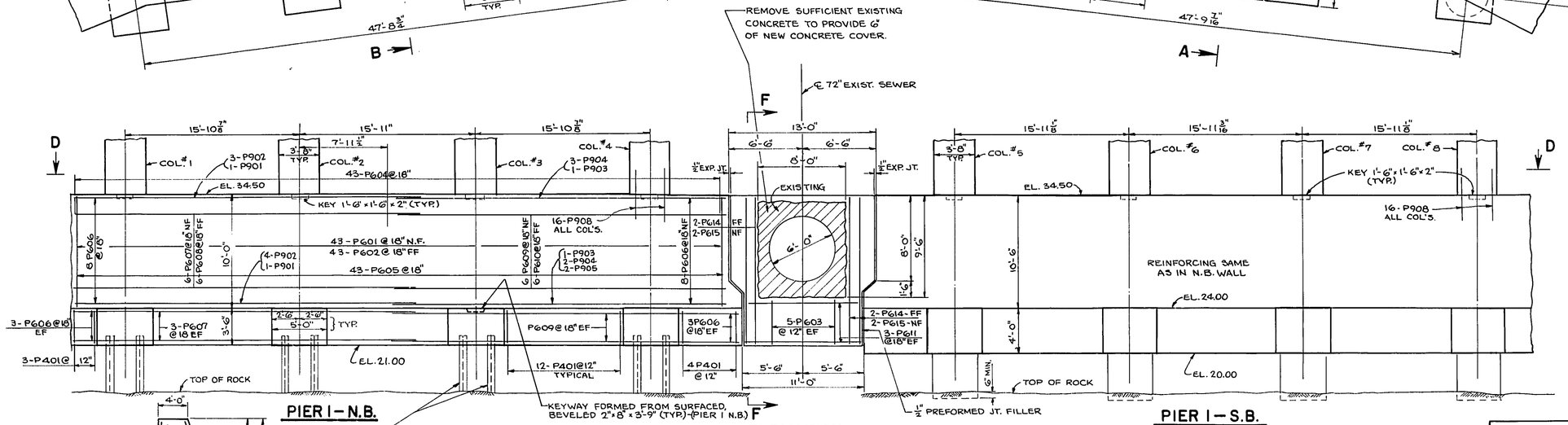
41 OF 41 SHEET

X18749

B.P.R. DIVISION	PROJECT	TOTAL SHEETS
4		



SECTION D-D



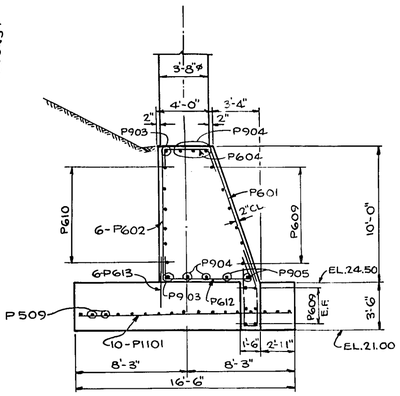
PIER 1 — N.B.

NOTE: ALL PILING IN FOOTINGS TO BE 10 BP 42 (STEEL PILING) EST. 10'-0" LG. AND DRIVEN TO REFUSAL. (45 TON BRG.)

ELEVATION (DEVELOPED)

PIER 1 — S.B.

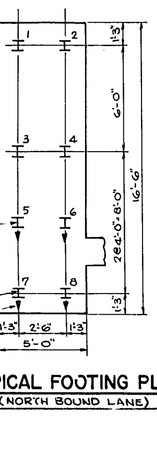
(NOT REVISED)



SECTION B-B

(PILING NOT SHOWN)

NOTE: ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT MILWAUKEE CITY DATUM.



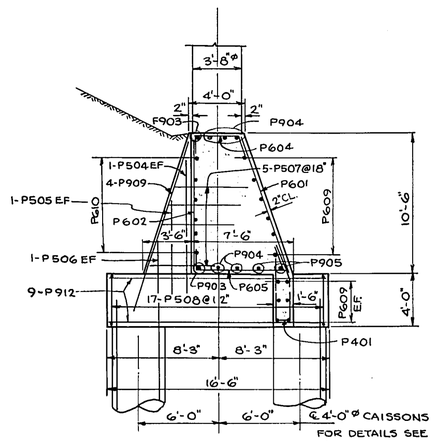
SECTION F-F

REVISED ESTIMATED QUANTITIES

BID ITEMS	UNIT	PIER 1 N.B. INCREASE	PIER 1 N.B. DECREASE
EXCAVATION FOR STRUCTURES	C.Y.		15
GRANULAR BACKFILL	C.Y.		10
CONCRETE MASONRY	C.Y.		15.0
BAR STEEL REINFORCEMENT	LB.		2,570
STEEL PILING (DELIVERED)	L.F.	320	
STEEL PILING (DRIVEN)	L.F.	320	
CONCRETE MASONRY - CAISSONS	C.F.		663

TYPICAL FOOTING PLAN

(NORTH BOUND LANE)



FOR DETAILS SEE CAISSON SCHEDULE X18711

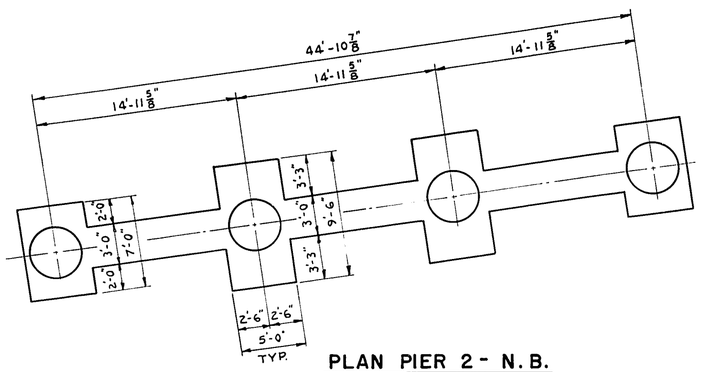
SECTION A-A

NOTE: WORK THIS SHEET WITH X18715 AND REVISED BILL OF BARS SHEET X18743

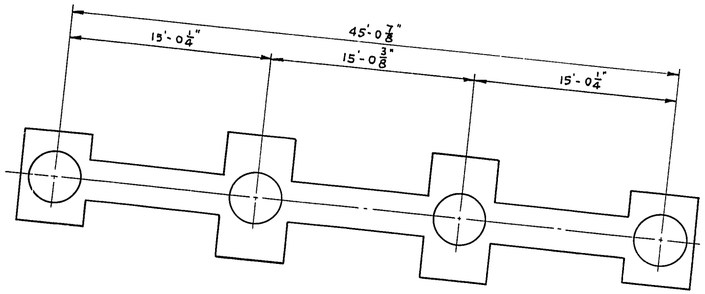
REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	REVISED PIER I FOOTINGS
	DESIGN SPEC A.A.S.H.O. '57 LOADING CONST. SPEC 1957
	DATE 7-15-59 DESIGN RLR DRAWN TML CKD 4.4.6
STRUCTURE B-40-63/64	SHEET 1 OF 3

X20433

B P R DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4			



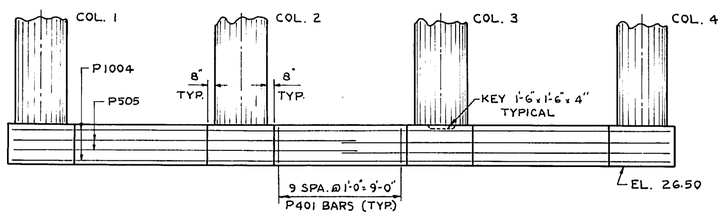
PLAN PIER 2 - N.B.



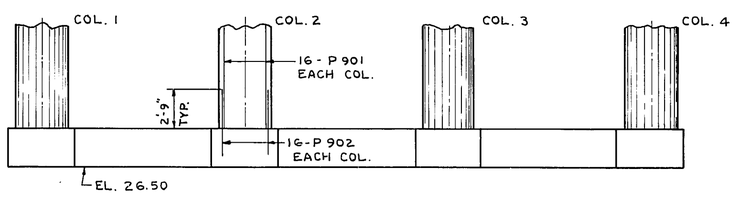
PLAN PIER 2 - S.B.

REVISED COLUMN HEIGHT SCHEDULE

NORTH BOUND		SOUTH BOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
1	31'-0 3/16"	1	32'-8 3/4"
2	31'-4 15/16"	2	33'-1 5/8"
3	31'-9 3/16"	3	33'-5 5/8"
4	32'-2 1/2"	4	33'-9 3/8"



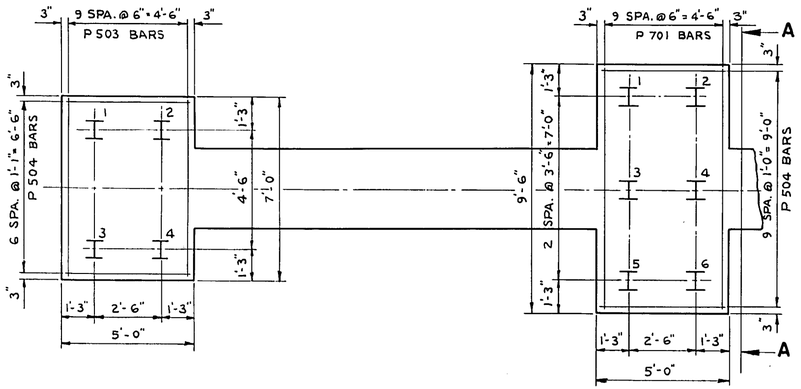
PART ELEVATION PIER 2 - N.B.



PART ELEVATION PIER 2 - S.B.

REVISED ESTIMATED QUANTITIES

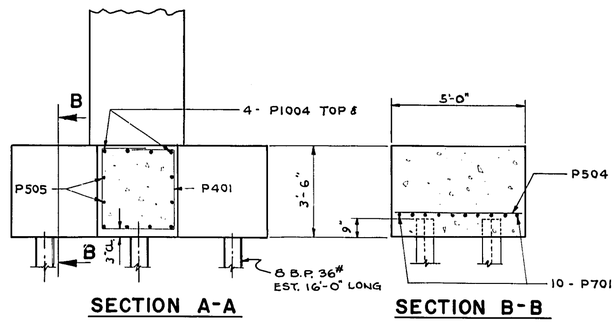
BID ITEMS	UNIT	PIER 2	
		INCREASE	DECREASE
EXCAVATION FOR STRUCTURES	C.Y.		55
GRANULAR BACKFILL	C.Y.		20
CONCRETE MASONRY	C.Y.		127.2
BAR STEEL REINFORCEMENT	LB.		8,730
STEEL PILING - DELIVERED	L.F.	640	
STEEL PILING - DRIVEN	L.F.	640	
CONCRETE MASONRY - CASSIONS	C.F.		2,160



TYPICAL FOR EXT. FTG.

TYPICAL FOR INT. FTG.

FOOTING PLAN



SECTION A-A

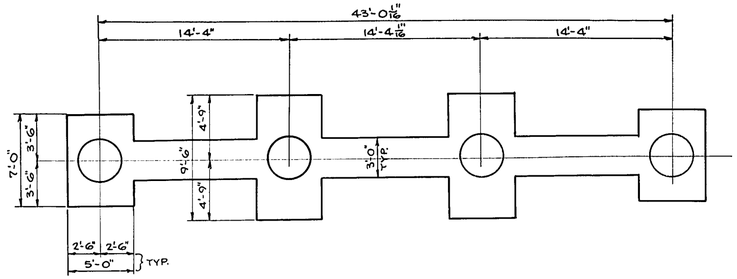
SECTION B-B

NOTES:
ADD 0.61 FEET TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.
PILING ARE 8" B.P. 36# PILING DRIVEN TO REFUSAL. (39 TONS)
REINFORCING & DIMENSIONS SIMILAR FOR BOTH PIERS EXCEPT AS NOTED OR SHOWN.
WORK THIS SHEET WITH X18716 AND REVISED BILL OF BARS SHEET X18743.

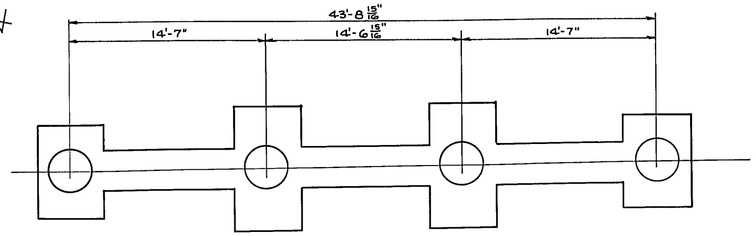
REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	REVISED PIER 2 FOOTINGS
	DESIGN PER A.A.S.H.O. '57 LOADING CONST. SPEC. 1957
	DATE 7-15-59 DRAWN RLR TRACED VGH CHKD. G.L.G.
STRUCTURE B - 40 63 64	SHEET 2 OF 3

X20434

B.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4			



PLAN PIER 3 N.B.



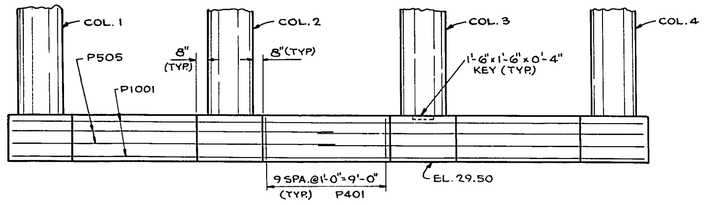
PLAN PIER 3 S.B.

REVISED PIER 3 COLUMN HEIGHTS SCHEDULE

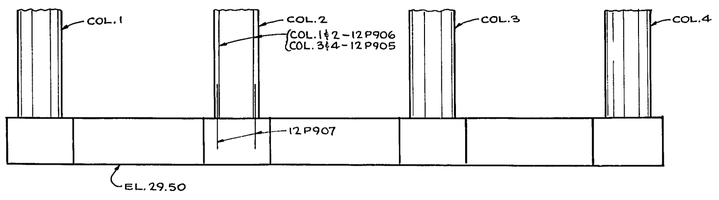
NORTHBOUND		SOUTH BOUND	
COLUMN	HEIGHT	COLUMN	HEIGHT
1	27'-4 7/16"	1	28'-11 3/16"
2	27'-9 11/16"	2	29'-3 3/4"
3	28'-1 9/16"	3	29'-8 5/16"
4	28'-5 15/16"	4	30'-0 5/8"

REVISED ESTIMATED QUANTITIES

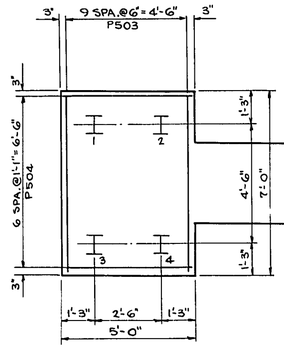
BID ITEMS	UNIT	PIER 3	
		INCREASE	DECREASE
EXCAVATION FOR STRUCTURES	C.Y.		180
GRANULAR BACKFILL	C.Y.		150
CONCRETE MASONRY	C.Y.		130
BAR STEEL REINFORCEMENT	LB.		9,680
STEEL PILING (DELIVERED)	L.F.	640	
STEEL PILING (DRIVEN)	L.F.	640	
CONCRETE MASONRY - CAISSONS	C.F.		2,230



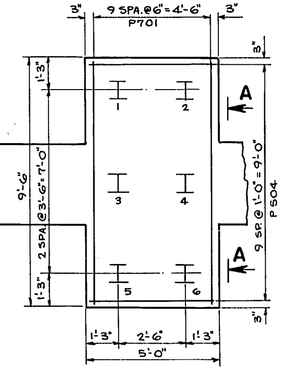
PART ELEVATION PIER 3 N.B.
PILING NOT SHOWN



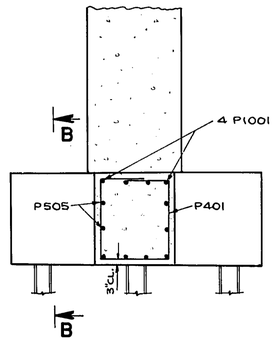
PART ELEVATION PIER 3 S.B.
PILING NOT SHOWN



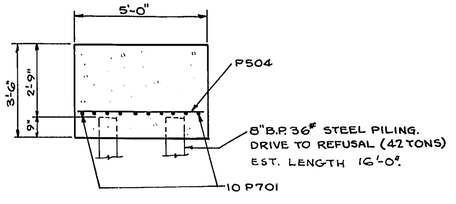
TYPICAL FOR EXT. FTGS.



TYPICAL FOR INT. FTGS.



SECTION A-A



SECTION B-B

NOTE: ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.
WORK THIS SHEET WITH SHEET X18717 AND REVISED BILL OF BARS SHEET X18743.
REINFORCING AND DIMENSIONS SIMILAR FOR BOTH PIERS EXCEPT AS SHOWN OR NOTED.

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	REVISED PIER 3 FOOTINGS
	DESIGN SPEC. A.A.S.H.O. '57 LOADING CONST. SPEC. 1957
	DATE 7-15-59 DRAWN R.L.R. CHECKED MM CHIEF ENG. G.L.L.
STRUCTURE B-40-63/64	SHEET 3 OF 3

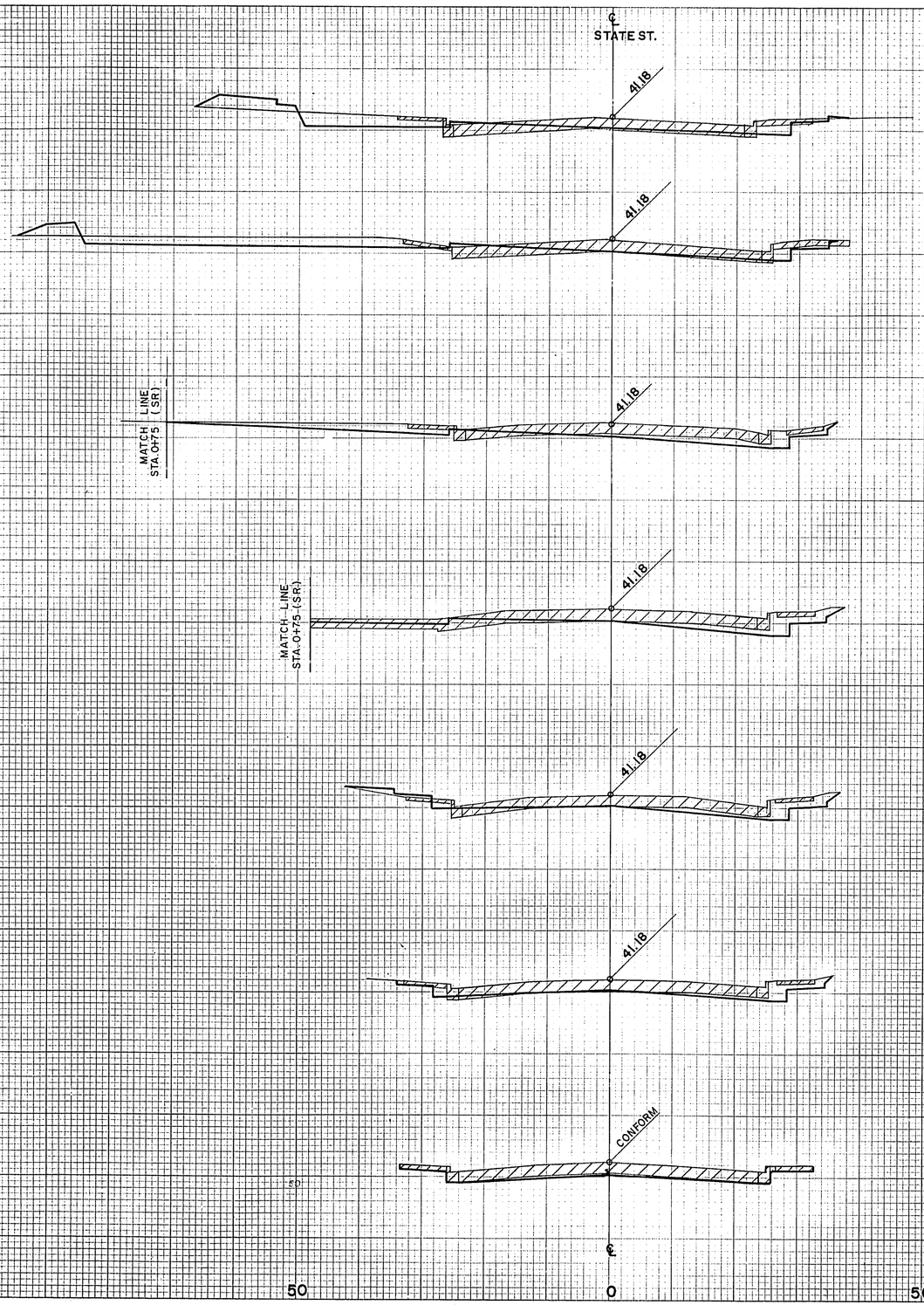
X20435

(23)

B.P.R. DISTRICT OFFICE	PROJECT	SHEET NUMBER	TOTAL SHEETS
WIS. 4	U03-1(73)	61	65

FINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO, DATE, BY

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO, DATE, BY, FIELD CHECKED



STATION	DISTANCE	YARDAGE EXCAVATION UNCL.			EARTH BACKFILL	FILL
5+00 (ST)	40					
4+50 (ST)	40					
2+00	50	19			0	4
2+50	50	28			0	12
4+00 (ST)	40					
3+00	50	32			0	29
3+50	50	54			0	29
4+00	50	70			26	33
3+50 (ST)	40					
4+50	50	57			29	54
5+00						
3+00 (ST)	40					
2+50 (ST)	40					
2+00	40					
SHEET TOTAL		260			55	161

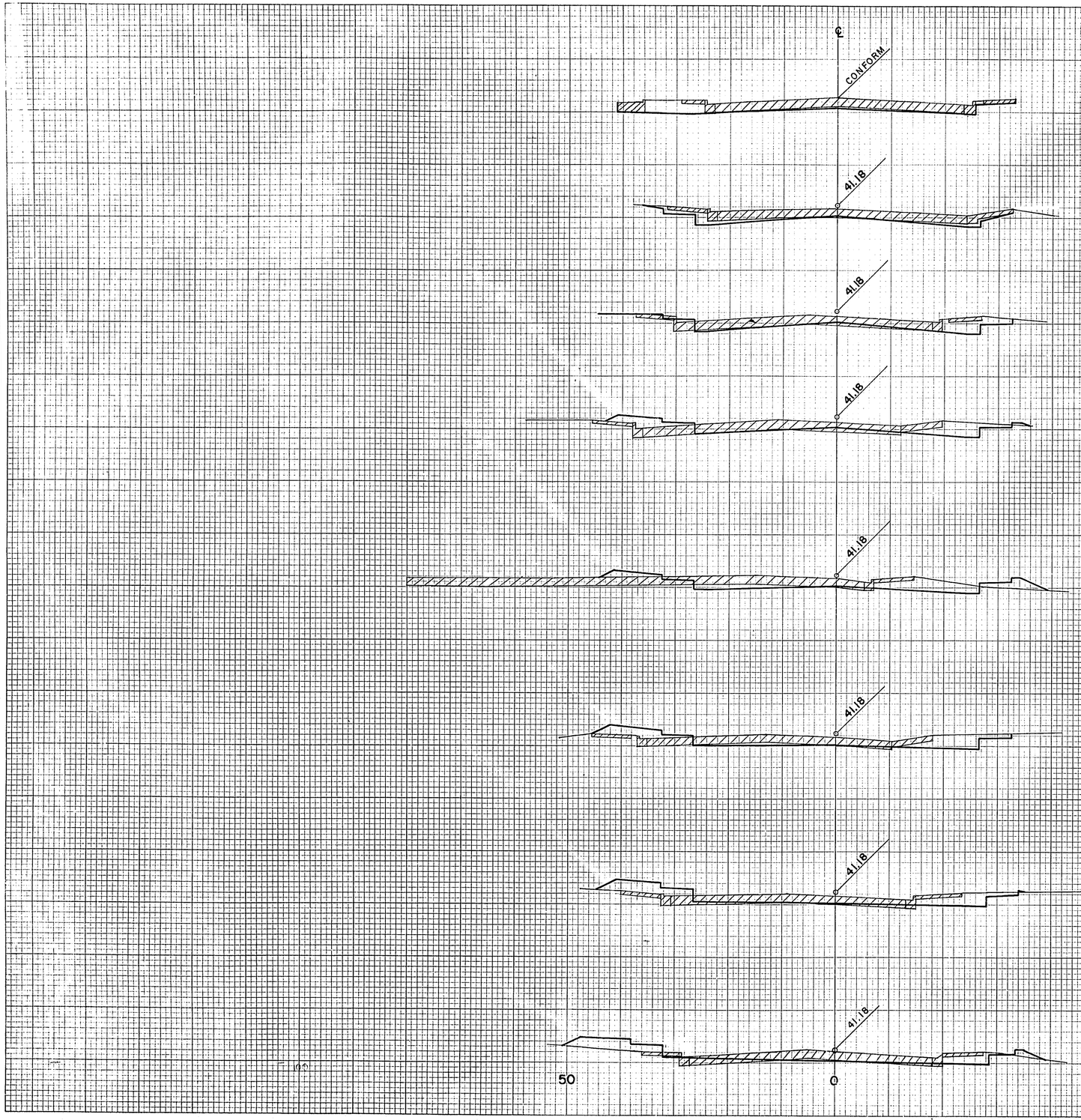
ADD 0.01 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO MILWAUKEE CITY DATUM.

SCALES
HOR. 1" = 10'
VERT. 1" = 5'

PLATE 3 - CROSS SECTION O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. NO. 345-3

WEST STATE STREET
DE LEUW, CATHER & CO.

(24)



B.P.R. DISTRICT OFFICE	PROJECT	SHEET NUMBER	TOTAL SHEETS
WIS. 4	U03-1(73)	62	65

STATION	DISTANCE	YARDAGE EXCAVATION UNCL.			EARTH BACKFILL	FILL
9+00 (ST)	40					
8+50 (ST)	40					
5+00						
5+50	50	28			3	52
8+00 (ST)	40	18			0	51
6+00	50	31			0	44
6+50	50	42			0	39
7+50 (ST)	40					
7+00	50	33			0	46
7+50	50	23			0	34
7+00 (ST)	40					
8+00	50	19			0	11
8+50	50	20			0	3
9+00						
6+50 (ST)	40					
6+00 (ST)	40					
5+50 (ST)	40					
SHEET TOTAL		214			3	280

SCALES
HOR. 1"=10'
VERT. 1"=5'

FINAL SURVEY	SURVEYED BY: DRAWN BY: TEMPLATE: AREAS: NOTE BOOK: NO.	DATE

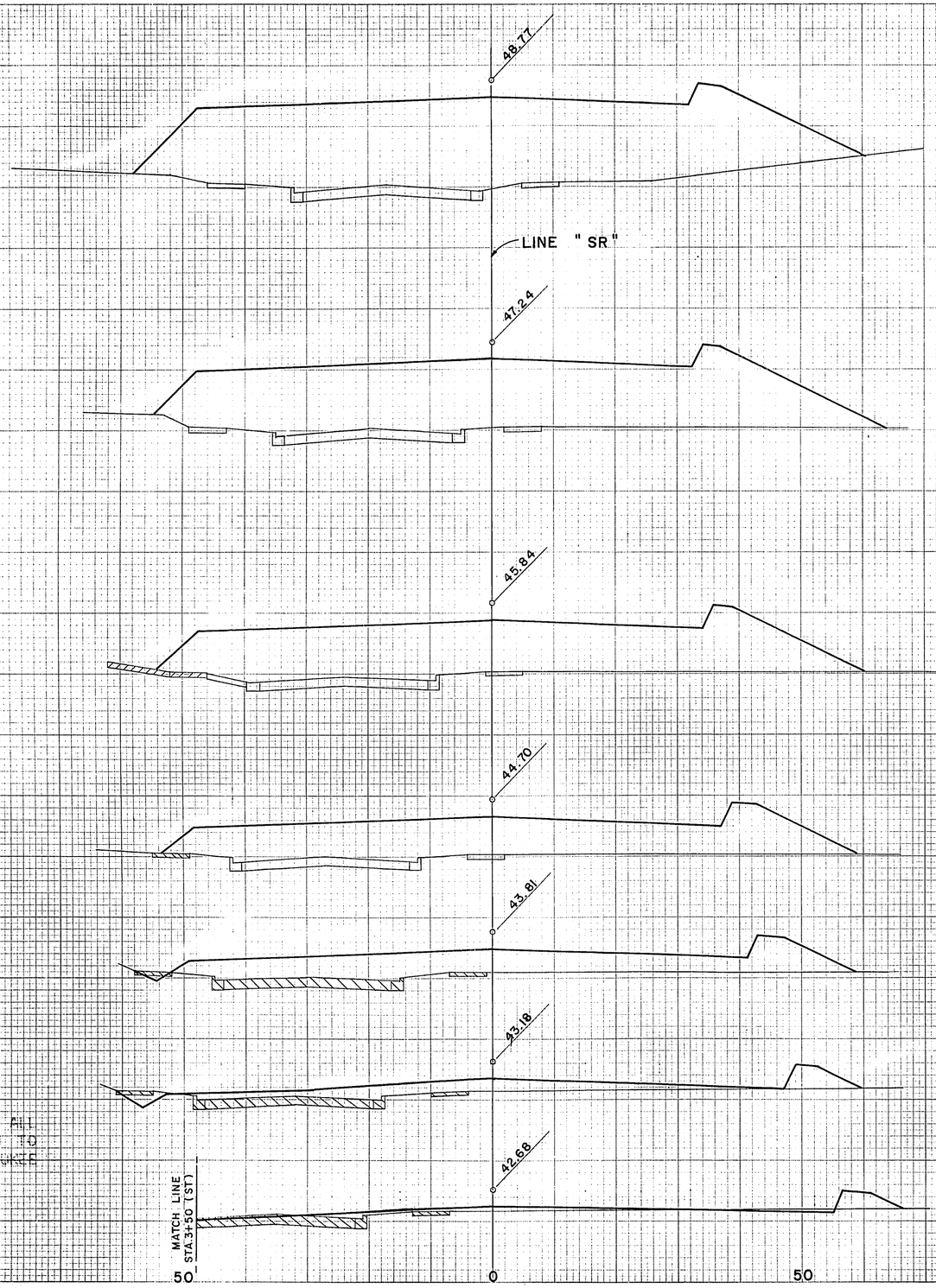
ORIGINAL SURVEY	SURVEYED: DRAWN: STAKED: FIELD CHECKED: NOTE BOOK: NO.	BY	DATE

PLATE 3-CROSS SECTION O.P.R.& H. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. NO. 345-3

WEST STATE STREET
DE LEUW, CATHER & CO.

(25)

B.P.R. DISTRICT OFFICE	PROJECT	SHEET NUMBER	TOTAL SHEETS
WIS. 4	U03-1 (73)	65	65



STATION	DISTANCE	YARDAGE EXCAVATION UNCL			EARTH BACK FILL	FILL
0+75						
1+00	25	3			21	65
1+25	25	2			21	145
1+50	25	1			21	245
1+75	25	0			21	353
2+00	25	0			21	467
2+25	25	0			21	583
2+60	35	0			0	453
SHEET TOTAL		6			126	2311

2+25 (SR) 140
2+00 (SR) 140
1+75 (SR) 140
1+50 (SR) 140
1+25 (SR) 140
1+00 (SR) 140
0+75 (SR) 140

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO METROPOLITAN CITY DATUM

SCALES
HOR. 1" = 10'
VERT. 1" = 5'

FINAL SURVEY
NOTE BOOK
NO.

ORIGINAL SURVEY
SURVEYED
TRACED
CHECKED
NOTE BOOK
NO.

NO.	BY	DATE

PLATE 3 - CROSS SECTION O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. NO. 345-3

LINE "SR"
DE LEUW, CATHER & CO.

(26)

B.P.R. DISTRICT OFFICE	PROJECT	SHEET NUMBER	TOTAL SHEETS
WIS. 4	U03-1(73)	54	65

E.P. LINE "S"

PROFILE LINE

10' MIN

LIMITS OF SOUTHBOUND STRUCTURE

4.5

15.5

LIMITS OF NORTHBOUND STRUCTURE

GRADE TO MATCH BACK OF SIDEWALK W. STATE ST.

41.0 ±

0.5 % MIN.

BACK OF SIDEWALK

TIE BEAM 39.0

TIE BEAM 39.0

87+00(S) 40

41.5 ±

10' MIN.

0.5 % MIN.

0.5 % MIN.

TIE BEAM 40.0

TIE BEAM 40.0

86+00(S) 40

42.0 ±

0.5 % MIN.

0.5 % MIN.

TIE BEAM 40.0

TIE BEAM 40.0

85+00(S) 40

NOTE:

GRADING FROM NORTH OF MENOMONEE RIVER (STA. 81 ± TO SOUTH SIDE OF W. STATE ST. STA. 87 ±) TO BE AS SHOWN ON THIS SHEET.
GROUND LEVEL AT PIERS TO BE NOT LESS THAN 3.5 FEET ABOVE BOTTOM OF TIE BEAM.

GRADE TO MATCH C.M. ST. P. & P. RR. RIGHT OF WAY

℄ E.B.M.

℄ W.B.M.

C.M. ST.P. & P R.R.

39.5 ±

0.5 % MIN.

TIE BEAM 38.0

84+00(S) 40

39.0 ±

0.5% MIN.

TIE BEAM 37.0

TIE BEAM 37.0

83+00(S) 40

10' MIN.

38.5

10' MIN.

0.5 % MIN.

TIE BEAM 36.0

TIE BEAM 36.0

82+00(S) 40

ADD 0.61 FOOT TO ALL ELEVATIONS SHOWN TO CONVERT TO NEW DATUM.

LIMITS OF SOUTHBOUND STRUCTURE

F - 0

LIMIT OF NORTHBOUND STRUCTURE

SCALES
HOR. 1" = 10'
VERT. 1" = 5'

50 0 50

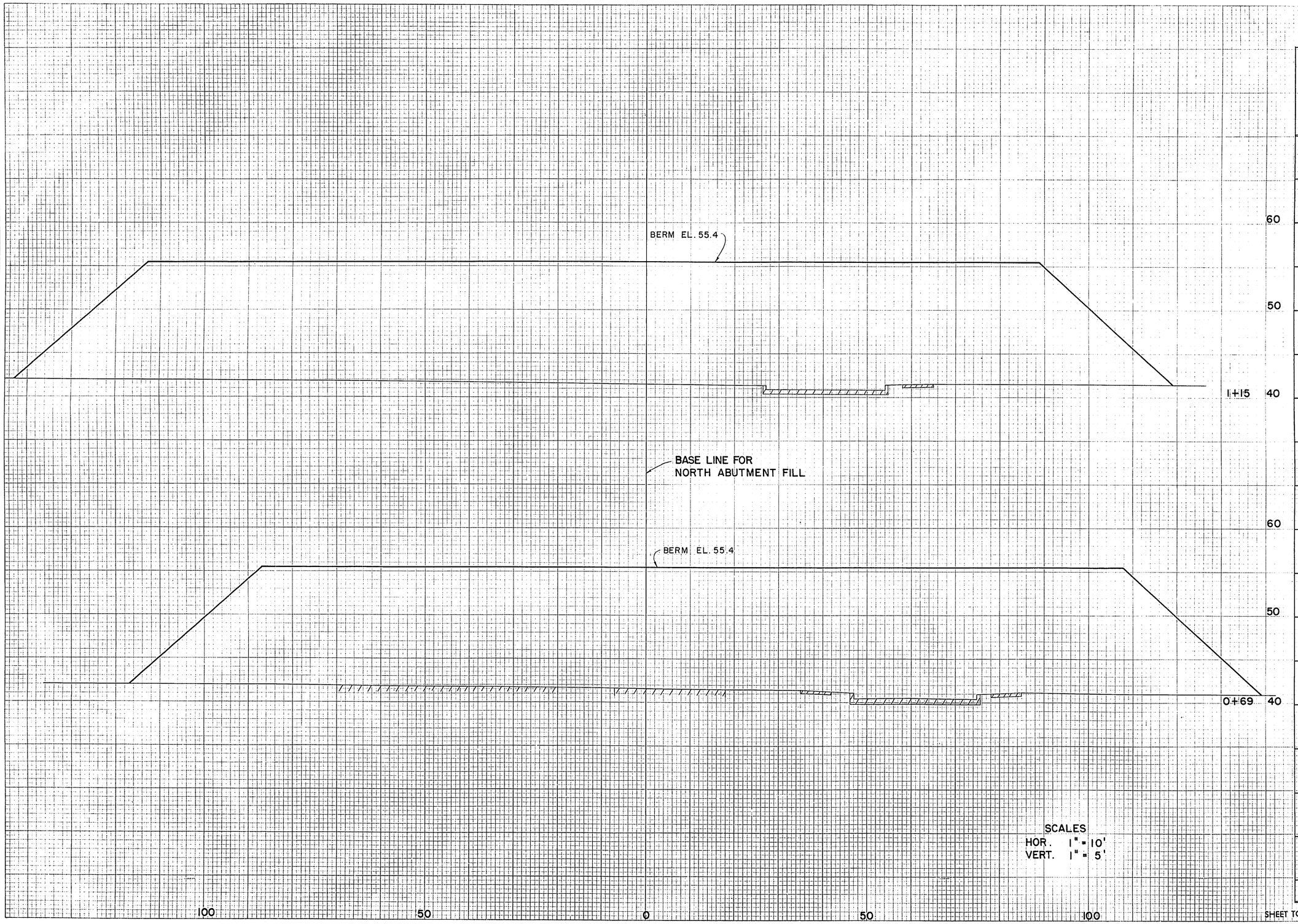
STATION	DISTANCE	YARDAGE EXCAVATION UNCL				FILL
81 + 00						
	100	182				427
82 + 00						
	100	320				427
83 + 00						
	100	138				197
84 + 00						
	100	—				—
85 + 00						
	100	0				722
86 + 00						
	100	0				571
87 + 00						
SHEET TOTAL		640				2344

PLATE 3 - CROSS SECTION O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. NO. 345-3

NORTHWEST EXPRESSWAY
DE LEUW, CATHER & CO.

(27)

B.P.R. DISTRICT OFFICE	PROJECT	SHEET NUMBER	TOTAL SHEETS
WIS. 4	U03-1(73)	65	65



STATION	DISTANCE	YARDAGE EXCAVATION	YARDAGE GRANULAR BACKFILL
0+40			
0+69	29		1708
1+15	46		5460
1+85	70		4187
SHEET TOTAL			11,355

FINAL SURVEY
NOTE BOOK
NO.

ORIGINAL SURVEY
SURVEYED
BY
NOTE BOOK
NO.

PLATE 3 - CROSS SECTION O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. NO. 345-3

NORTH ABUTEMENT FILL
DE L'EUW, CATHER & CO.