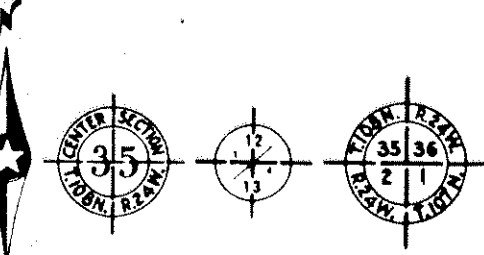


CONVENTIONAL SIGNS

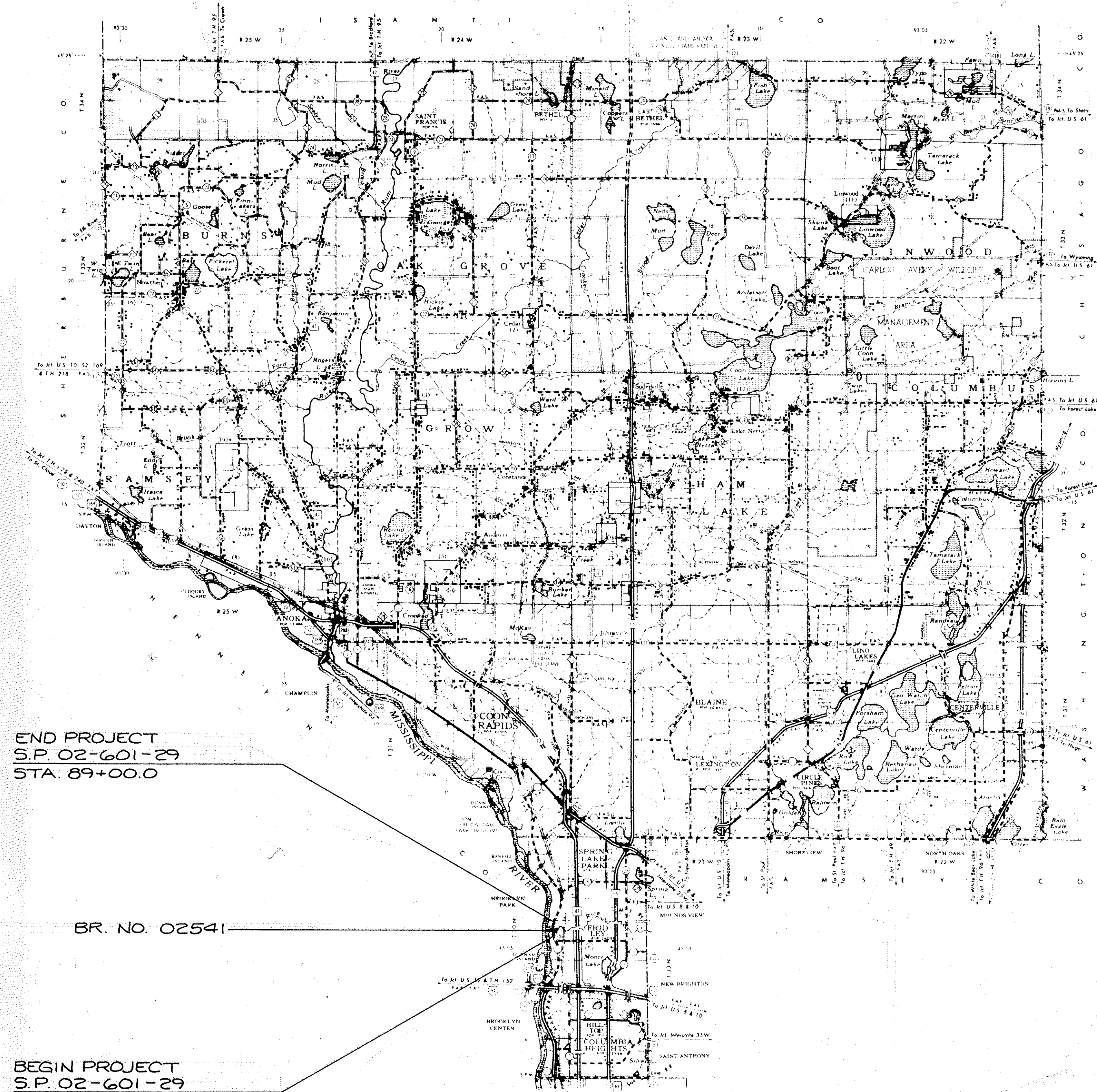
STATE LINE	----
COUNTY LINE	----
TOWNSHIP OR RANGE LINE	----
SECTION LINE	----
QUARTER LINE	----
SIXTEENTH LINE	----
RIGHT OF WAY LINE	----
PRESERV. RIGHT OF WAY LINE	----
CONTROL OF ACCESS LINE	----
PROPERTY LINE (Except Land Lines)	----
VEICLED PLATTED PROPERTY	----
CORPORATE OR CITY LIMITS	----
TRUNK HIGHWAY CENTER LINE	----
RAILROAD	----
RAILROAD RIGHT OF WAY LINE	----
RIVER OR CREEK	----
DRY RUN	----
DRAINAGE DITCH	----
ELECTRIC POWER LINE	----
TELEPHONE OR TELEGRAPH LINE	----
JOINT TELEPHONE AND POWER	----
CONDUIT	----
TELEPHONE CABLE - AERIAL	----
TELEPHONE CABLE - UNDERGROUND	----
POWER CABLE - UNDERGROUND	----
DAY MAIN	----
GULLY	----
DRIP INLET	----
GUARD RAIL	----
BARBED WIRE FENCE	----
WOVEN WIRE FENCE	----
CHAIN LINK FENCE	----
RAILROAD SNOW FENCE	----
STONE WALL OR FENCE	----
HERSE	----
WATER PIPE	----
SEWER PIPE	----
DRAIN TILE	----
SPRINGS	----
MARSH	----
TIMBER	----
ORCHARD	----
BRUSH	----
NURSERY	----
CATCH BASIN	----
MANHOLE	----
FIRE HYDRANT	----
STREET LIGHT	----
RAILROAD CROSSING SIGN	----
RAILROAD CROSSING BELL	----
ELECTRIC WARNING SIGN	----
CROSSING GATE	----
CATTLE GUARD	----
OVERPASS (Highway Over)	----
UNDERPASS (Highway Under)	----
BRIDGE	----
BUILDING (One Story Frame)	----
1 FRAME 1 CONCRETE	----
2 STONE 1 TILE	----
3 BRICK 1 STUCCO	----
IRON PIPE OR ROD	----
MONUMENT (STONE, CONCRETE, OR METAL)	----
WOODEN HUB	----
GRAVEL PIT	----
SAND PIT	----
BIRCHON PIT	----
ROCK QUARRY	----
MEANDER CORNER	----



STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING & BRIDGE  
County State Aid Highway No. 1

Between C.S.A.H. 6 And LOCKE LAKE RD.



END PROJECT  
S.P. 02-601-29  
STA. 89+00.0

BR. NO. 02541

BEGIN PROJECT  
S.P. 02-601-29  
STA. 74+65

GROSS LENGTH 1435.00 FEET 0.272 MILES  
BRIDGES LENGTH 56.07 FEET 0.011 MILES  
EXCEPTIONS LENGTH FEET MILES  
NET LENGTH 1435.00 FEET 0.272 MILES

INDEX OF SHEETS

- 1 TITLE SHEET & LAYOUT MAP
- G1 ESTIMATED QUANTITIES
- G2-G3 TYPICAL SECTIONS
- G4 CONCRETE FOOTING DETAILS
- G5-G6 TABULATIONS
- G7 SUPER. CHART & WALL DETAIL
- G8-G10 RETAINING WALL DETAILS
- G11 PLAN & PROFILE
- G12-G15 CROSS-SECTION
- 1 GENERAL PLAN & ELEVATION
- 2 CROSS SECTION OF DECK
- 3 BRIDGE LAYOUT
- 4-7 50' ABUTMENT DETAILS
- 8-13 50' ABUTMENT REINF.
- 14-18 NO. ABUTMENT DETAILS
- 19-24 NO. ABUTMENT REINF.
- 25-29 RETAINING WALL
- 30-32 SUPERSTRUCTURE DETAILS
- 33 STRUCTURAL STEEL DETAILS
- 34-35 TYPE SPECIAL RAILING DETAILS
- 36 UTILITY DETAILS
- 37 FENCE DETAILS
- 38-42 BRIDGE DETAILS
- 43-44 BRIDGE SURVEY
- T1 - T3 TRAFFIC CONTROLS

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

SCALE

INDEX MAP	2 MI.
PLAN & PROFILE	HORIZ. 50'
	VERT. 5'
CROSS SECTIONS	10'
SIGNAL	30'

RECOMMENDED FOR APPROVAL *Paul K. Lund* COUNTY ENGINEER DATE 1/30/87

RECOMMENDED FOR APPROVAL *C. W. Weichselbaum* DISTRICT STATE AID ENGINEER DATE 10/15/87

RECOMMENDED FOR APPROVAL *Quinn Stallman* AS REVISOR 7/18/88  
STATE AID PLANS & SPECS. ENGR. 4/11/88

APPROVED *4-11-88* STATE ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: 3-30-88 *Robert K. Tomczak* REG. NO. 6324

RECOMMENDED FOR APPROVAL *Robert H. Hogland* FOR BRIDGE ENGINEER 4-4-88

DESIGN DESIGNATION  
ADT (CURRENT YEAR) 27261 (1987)  
ADT (FUTURE YEAR) 43618 (2007) 4 TRAFFIC LANES - NO PARKING  
T (HEAVY COMMERCIAL) 1300 (FUTURE)  $\Sigma NB = 3,600,000$   
10 Ton Design SOIL FACTOR A-3.50% R=62  
Design Speed 40 MPH BASED ON STOPPING SIGHT DIST., HGT. OF EYE 3.50', HGT. OF OBJECT 0.50'

Design Speed not achieved at:  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH

GOVERNING SPECIFICATIONS  
THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY CURRENT SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN.

STATEMENT OF ESTIMATED QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
0402.606	FIXED CURVED PLATE BRG. ASSEMBLY TYPE 1	EACH	10
0401.601	FOUNDATION PREPARATION, SOUTH ABUTMENT	LUMP SUM	1
2021.501	MOBILIZATION	LUMP SUM	1
2401.501	STRUCTURE CONCRETE (1A43)	CU. YD.	551 (P)
2401.501	STRUCTURE CONCRETE (3Y43)	CU. YD.	816 (P)
2401.512	BRIDGE SLAB CONCRETE (3X36)	SQ. FT.	5514 (P)
2404.501	CONCRETE OVERLAY (3U17A)	SQ. FT.	3813 (P)
2401.515	SIDEWALK CONCRETE (3X46)	SQ. FT.	823 (P)
2401.513	TYPE SPECIAL RAILING CONCRETE (3X46)	LIN. FT.	434 (P)
2401.541	REINFORCEMENT BARS	POUND	98,030 (P)
2401.541	REINFORCEMENT BARS (EPOXY COATED)	POUND	56,710 (P)
0402.607	EXPANSION CURVED PLATE BRG. ASSEMBLY TYPE 1	EACH	10
2405.501	PRESTRESSED CONC. BEAMS, TYPE 36-53	EACH	10
2452.519	C.I.P. CONC. TEST PILES, 35 FT. LONG - 12"	EACH	8
2452.507	C.I.P. CONC. PILING DELIVERED - 12"	LIN. FT.	4855
2452.508	C.I.P. CONC. PILING DRIVEN - 12"	LIN. FT.	4855
2442.501	REMOVE OLD BRIDGE	LUMP SUM	1
0401.601	STRUCTURE EXCAVATION	LUMP SUM	1
2511.507	GROUTED RIPRAP, CLASS III	CU. YD.	185
2405.511	DIAPHRAGMS FOR TYPE 36 PREST. BEAMS	LIN. FT.	92 (P)
2557.501	WIRE FENCE DES S-1	LIN. FT.	32 (P)
0504.601	WATERMAIN SYSTEM	LUMP SUM	1
0502.603	DRAINAGE SYSTEM TYPE B910	LUMP SUM	1
2402.583	ORNAMENTAL METAL RAILING, TYPE SPECIAL	LIN. FT.	425 (P)
2402.544	FLOOR DRAINS, TYPE B701	EACH	4
0401.601	FOUNDATION PREPARATION, NORTH ABUTMENT	LUMP SUM	1
2401.516	RAISED MEDIAN CONCRETE (3X46)	SQ. FT.	898 (P)
2101.501	CLEARING	ACRE	0.3
2101.502	CLEARING	TREE	21
2101.506	GRUBBING	ACRE	0.3
2101.507	GRUBBING	TREE	22
2104.501	REMOVE PIPE SEWERS (C.M.P.)	LIN. FT.	203
2104.501	REMOVE PIPE SEWERS (R.C.P.)	LIN. FT.	454
2104.501	REMOVE CURB AND GUTTER	LIN. FT.	1372
2104.505	REMOVE CONCRETE PAVEMENT	SQ. YD.	89
2104.521	SALVAGE FENCE	LIN. FT.	1436
0557.603	INSTALL FENCE	LIN. FT.	743
2105.501	COMMON EXCAVATION	CU. YD.	13551 (P)
2105.522	SELECT GRANULAR BORROW L.V.	CU. YD.	5085
2105.523	COMMON BORROW L.V.	CU. YD.	9553
2211.503	AGGREGATE BASE PLACED, CLASS 5	CU. YD.	3163 (P)
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	212
2331.510	BINDER COURSE MIXTURE	TON	2000
2331.514	BASE COURSE MIXTURE	TON	2000
0331.601	2" THICK WEARING COURSE PLACED	SQ. YD.	163
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	65
2341.508	WEARING COURSE MIXTURE	TON	1000
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1210
2105.525	TOPSOIL BORROW	CU. YD.	512
2501.515	24" R.C. PIPE APRON	EACH	2
2503.541	12" R.C. PIPE SEWER DES. 3006	LIN. FT.	373
2503.541	15" R.C. PIPE SEWER DES. 3006	LIN. FT.	510
2503.541	18" R.C. PIPE SEWER DES. 3006	LIN. FT.	278
2506.507	CONSTRUCT CATCH BASINS, DESIGN A OR F	LIN. FT.	73.6
2506.507	CONSTRUCT CATCH BASINS, DESIGN C OR G	LIN. FT.	57.9
2506.511	RECONSTRUCT MANHOLES	LIN. FT.	5.1
2506.516	CASTING ASSEMBLIES	EACH	21
2506.522	ADJUST FRAME AND RING CASTINGS	EACH	6
2503.541	21" R.C. PIPE SEWER DES. 3006	LIN. FT.	102
2503.541	24" R.C. PIPE SEWER DES. 3006	LIN. FT.	100
2531.501	CONCRETE CURB AND GUTTER B612	LIN. FT.	2135
2531.501	CONCRETE CURB AND GUTTER B618	LIN. FT.	2740
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	127
2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ. YD.	9
0411.604	CONCRETE RETAINING WALL	LIN. FT.	336
2564.513	CONCRETE FOOTINGS	EACH	20
0504.602	RELOCATE HYDRANT	EACH	3
0504.602	ADJUST WATER GATE HOUSING	EACH	6
0504.603	RELOCATE SPRINKLER SYSTEM	LIN. FT.	126
2031.501	FIELD OFFICE, TYPE D	LUMP SUM	1
2575.505	SODDING	SQ. YD.	4652
0563.601	TRAFFIC CONTROL PHASE I	LUMP SUM	1
0563.601	TRAFFIC CONTROL PHASE II	LUMP SUM	1
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	0.25
0011.601	REVISED BRIDGE PLANS	LUMP SUM	1
0505.601	GAS MAIN PROVISIONS	LUMP SUM	1
2531.503	BRICK MEDIAN (BRIDGE PORTION)	SQ. YD.	92
2531.503	BRICK MEDIAN (GRADING PORTION)	SQ. YD.	755
2545.509	CONDUIT SYSTEM (TELEPHONE)	LUMP SUM	1

THE FOLLOWING STANDARD PLATES AS APPROVED BY F.W.H.A. SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE #	DESCRIPTION
0004 A	SPEC. REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3006 D	GASKET JOINT FOR R.C. PIPE
3100 F	CONC. APRON FOR R.C. PIPE
3133 B	RIPRAP AT R.C.P. OUTLETS
3145 C	CONCRETE PIPE TIES
4000 I	MANHOLE OR CATCH BASIN
4002 E	MANHOLE OR CATCH BASIN
4005 K	MANHOLE OR CATCH BASIN
4006 K	MANHOLE OR CATCH BASIN
4010 F	CONC. SHORT CONE AND ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4126 E	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7035 J	CONC. WALK AND CURB RETURNS AT ENT.
7100 F	CONCRETE CURB AND GUTTER
7110 E	CURB AND GUTTER CONST. AT C.B.
7111 G	INSTALLATION & REINF. OF C.B. CASTINGS
8000 I	STANDARD BARRICADES
8003 B	BREAKAWAY SIGN SUPPORT (PLASTIC)
9322 I	CHAIN LINK FENCE

CONSTRUCTION NOTES

INPLACE TOPSOIL SHALL BE SALVAGED AND USED TO THE FULLEST EXTENT POSSIBLE PRIOR TO THE USE OF TOPSOIL BORROW ON AREAS DISTURBED BY CONSTRUCTION OPERATIONS. SALVAGE OF INPLACE TOPSOIL FOR USE IN TURF ESTABLISHMENT SHALL BE CONSIDERED TO BE INCIDENTAL TO COMMON EXCAVATION AND NO DIRECT COMPENSATION WILL BE MADE THEREFORE.

ALL BITUMINOUS PAVEMENT SCHEDULED TO BE REMOVED IS INCLUDED IN COMMON EXCAVATION QUANTITIES. DISPOSAL WILL NOT BE ALLOWED WITHIN RIGHT OF WAY.

DISPOSAL OF ANY EXCESS EXCAVATED MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE PROVISIONS OF 2104. DISPOSAL WILL NOT BE ALLOWED WITHIN RIGHT OF WAY.

SLOPES WITHIN PROJECT LIMITS SHALL BE COVERED WITH NOT LESS THAN 3" OF TOPSOIL.

FILLS BEHIND THE RETAINING WALLS AND ABUTMENTS SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR DENSITY.

CONTRACTOR SHALL CONTACT PUBLIC UTILITIES FOR LOCATION OF ALL UNDERGROUND WIRES, CABLES, OR OTHER BURIED STRUCTURES BEFORE GRADING OPERATIONS BEGIN.

BASIS OF PLANNED QUANTITIES

- 2331 PLANT MIXED BASE COURSE BITUMINOUS MIXTURE 110#/S.Y. PER 1" THICKNESS.
- 2331 PLANT MIXED BINDER COURSE BITUMINOUS MIXTURE 5.3 % BY WT. MATERIAL FOR MIXTURE 110#/S.Y. PER 1" THICKNESS.
- 2341 PLANT MIXED WEARING COURSE BITUMINOUS MIXTURE 110#/S.Y. PER 1" THICKNESS. MATERIAL FOR MIXTURE 5.3 % BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GALLON PER S.Y.
- 2575 COMMERCIAL FERTILIZER ANALYSIS 10-10-10, 500\*/ACRE. ON ALL SOD AREAS AND SEED AREAS.

- ① INCLUDES 15 SQ. YD. FOR ISLAND NOSE, STA. 76+03.
- ② COMMON EXCAVATION QUANTITY INCLUDES ALL BITUMINOUS PAVEMENT MATERIAL TO BE REMOVED AND 387 CU. YD. FOR STREET APPROACHES.
- ③ INCLUDES 1317 CU. YD. FOR SOUTH RETAINING WALL AND 2100 CU. YD. BEHIND ABUTS. AND BRIDGE WINGS.
- ④ INCLUDES 186 CU. YD. FOR STREET APPROACHES.
- ⑤ INCLUDES 105 CU. YD. FOR STREET APPROACHES.
- ⑥ INCLUDES 122 TONS FOR STREET APPROACHES.
- ⑦ INCLUDES 122 TONS FOR STREET APPROACHES.
- ⑧ PROVIDED FOR DRIVEWAY RESTORATION. PAYMENT BY SQ. YD. INCLUDES BITUMINOUS MATERIAL AND 3" CL.-5 AGG. BASE.
- ⑨ INCLUDES 61 TONS FOR STREET APPROACHES.
- ⑩ FOR MEDIAN CONSTRUCTION.
- ⑪ STA. 81+00, SEE SPECIAL PROVISIONS.

- ⑫ NON-PARTICIPATING ITEMS
- ⑬ PAY ITEMS APPLY ONLY TO ALTERNATE 1-1, STEEL BRIDGE ALTERNATE. SEE SHEET NO. 1-A FOR ITEMS WHICH ARE INCLUDED ONLY IN ALTERNATE 1-2, PRESTRESSED CONCRETE BEAM ALTERNATE. ALL OTHER ITEMS APPLY TO BOTH ALTERNATES.
- ⑭ REVISED BRIDGE PLANS PAY ITEM.


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Robert L. Long*  
REG. NO. 2271

DATE: 1-30-87

PLANS PREPARED BY:

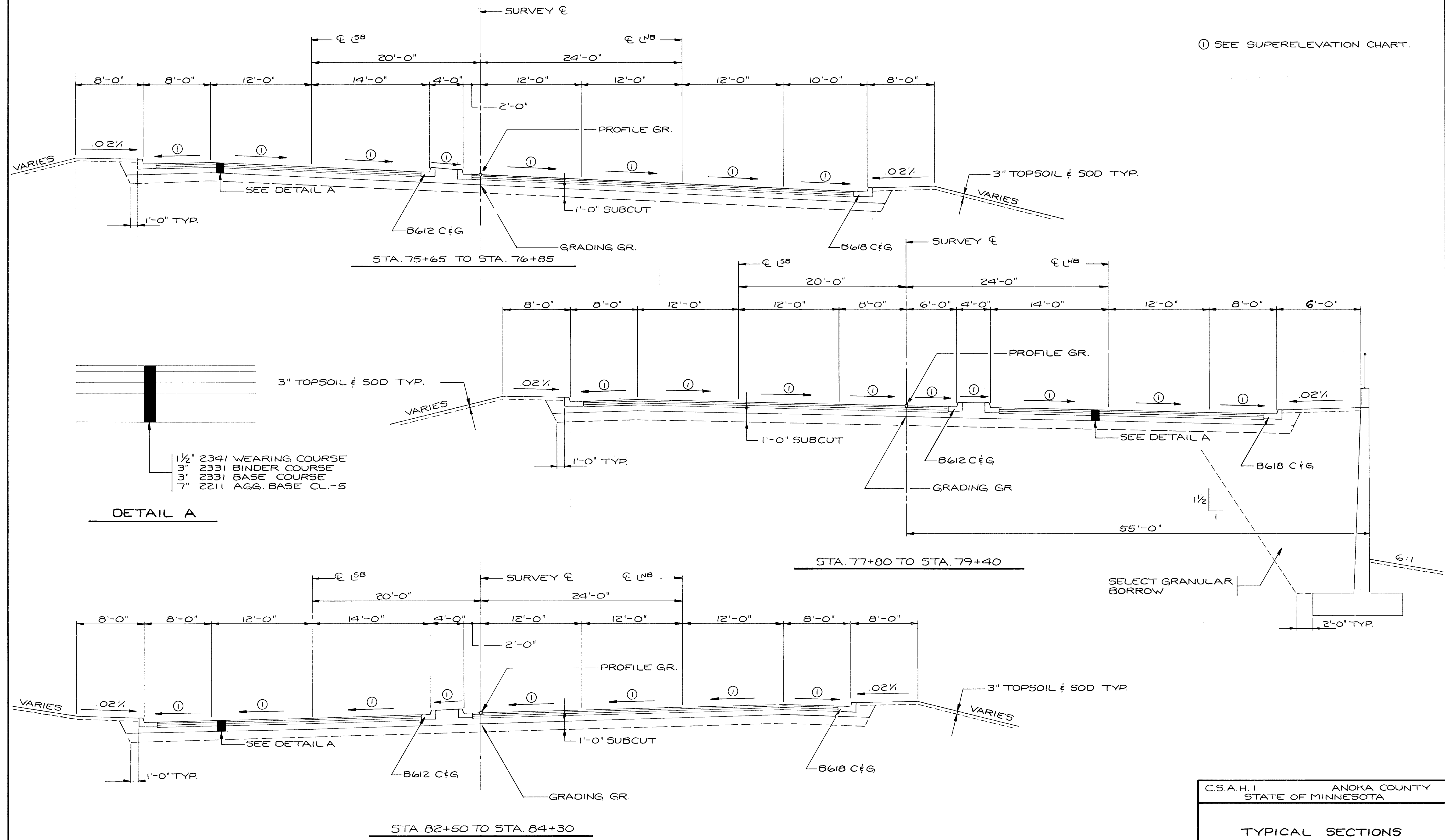
ERICKSON ENGINEERING  
3340 REPUBLIC AVE.  
ST. LOUIS PARK, MN. 55426



C.S.A. H. 1 ANOKA COUNTY  
STATE OF MINNESOTA

ESTIMATED QUANTITIES CONSTRUCTION NOTES

① SEE SUPERELEVATION CHART.



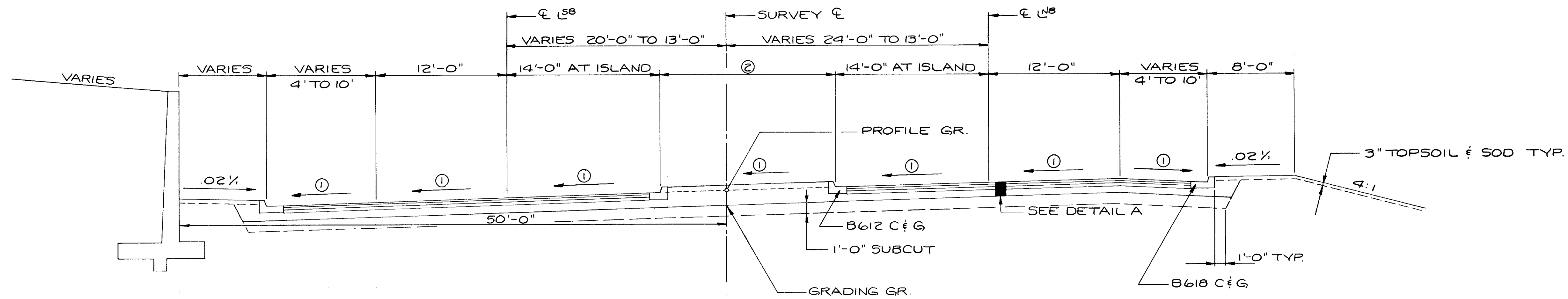
- 1 1/2" 2341 WEARING COURSE
- 3" 2331 BINDER COURSE
- 3" 2331 BASE COURSE
- 7" 2211 AGG. BASE CL.-5

DETAIL A

C.S.A.H. 1 ANOKA COUNTY  
STATE OF MINNESOTA

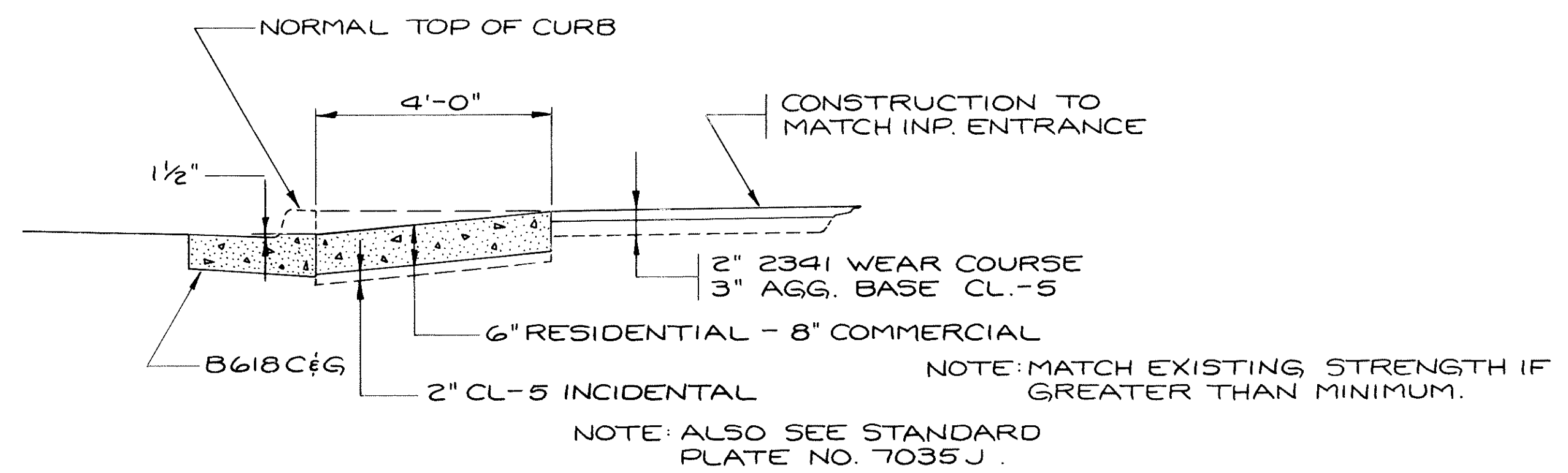
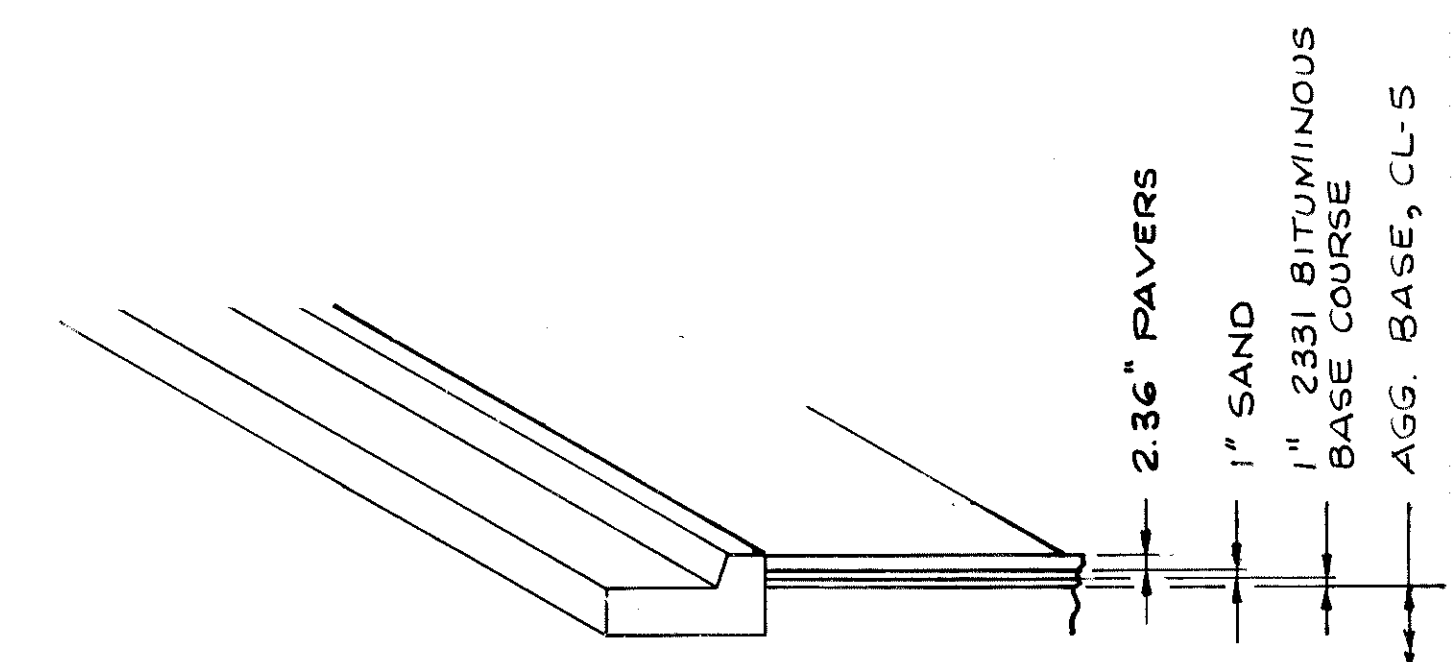
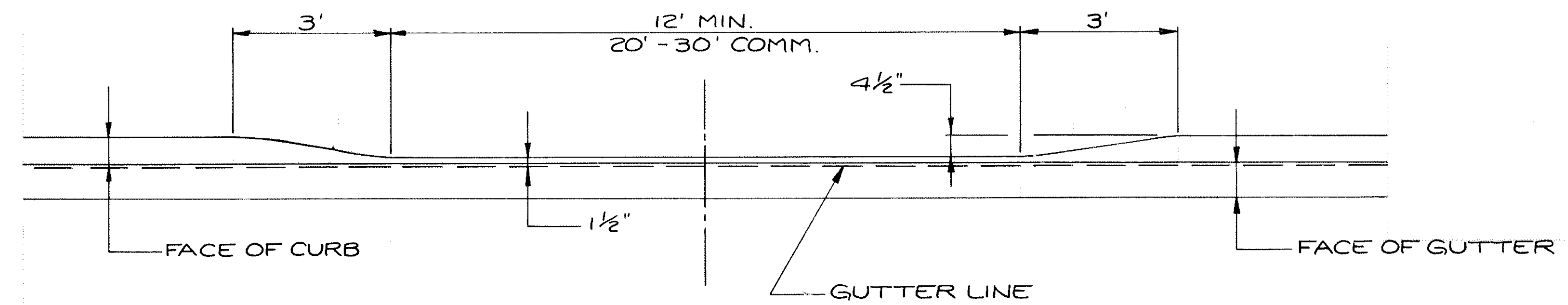
TYPICAL SECTIONS

APPROVED: \_\_\_\_\_  
S.A.P. 02-601-29 L.H.C.  
SHEET 02 OF 015 SHEETS F.M.J.

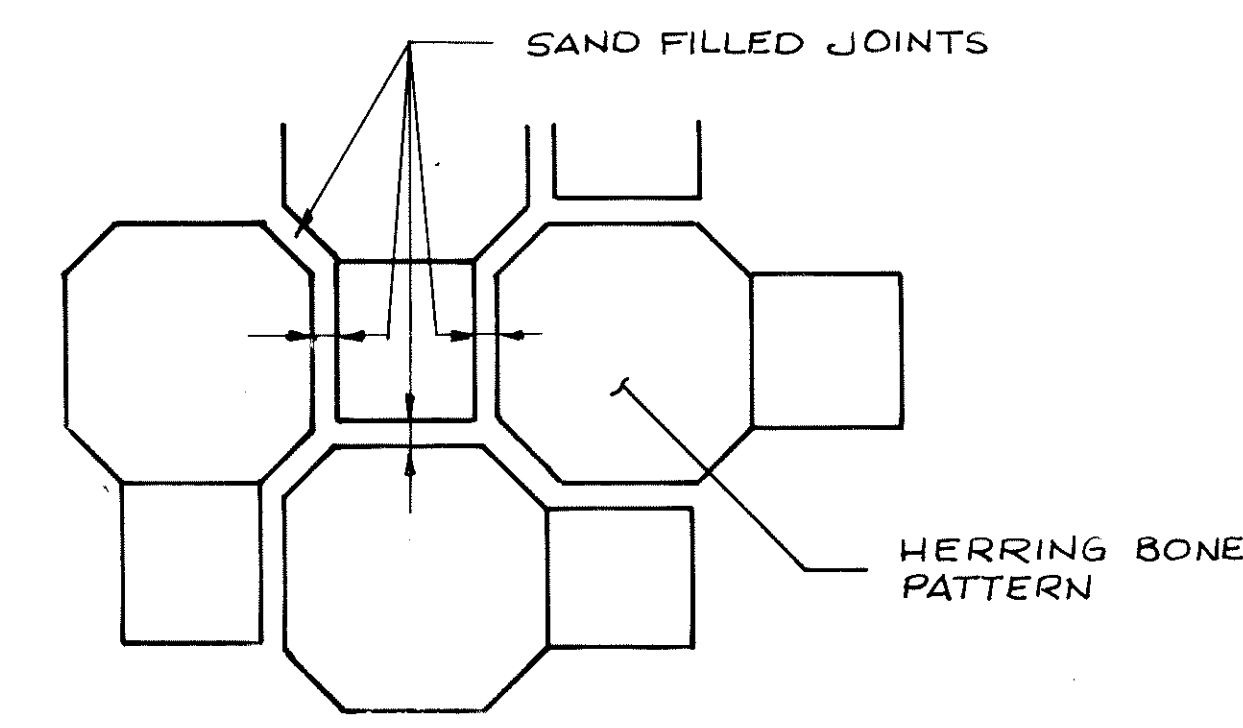
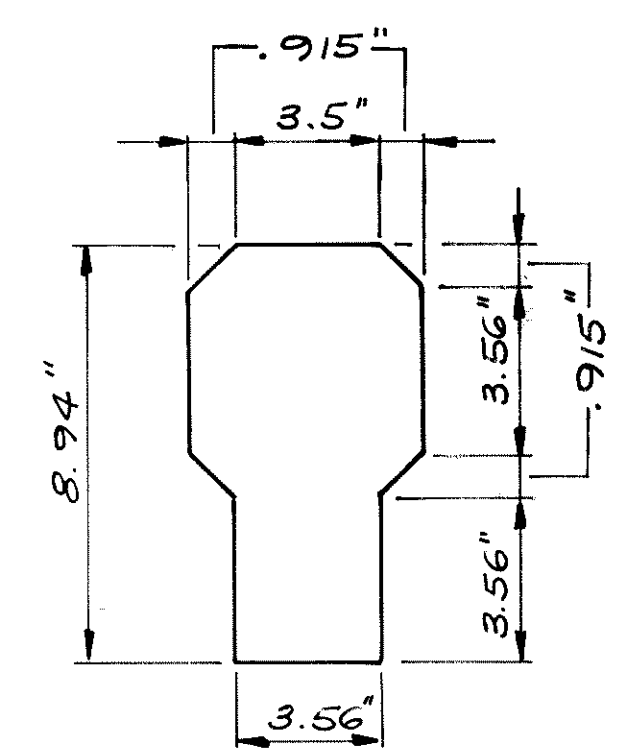


STA. 85+00 TO STA. 89+00

② SEE PLAN & PROFILE SHEET FOR ISLAND LOCATION AND GEOMETRICS.

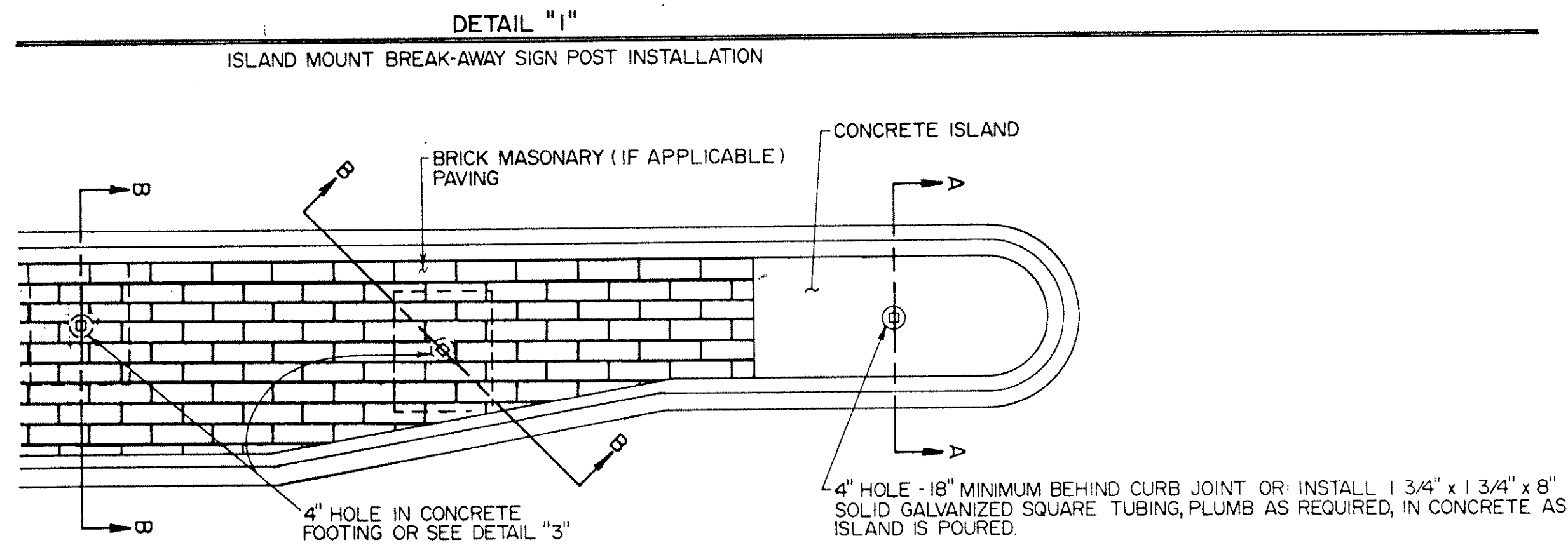


CONCRETE APRON DETAIL



PAVING STONE DETAIL

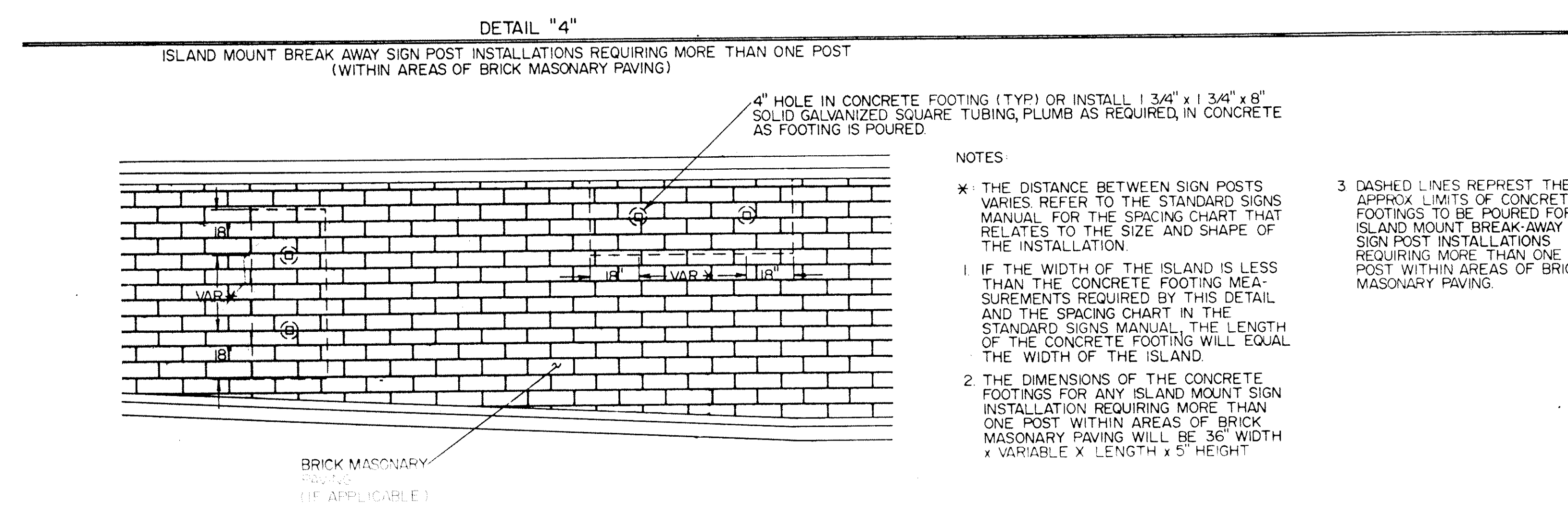
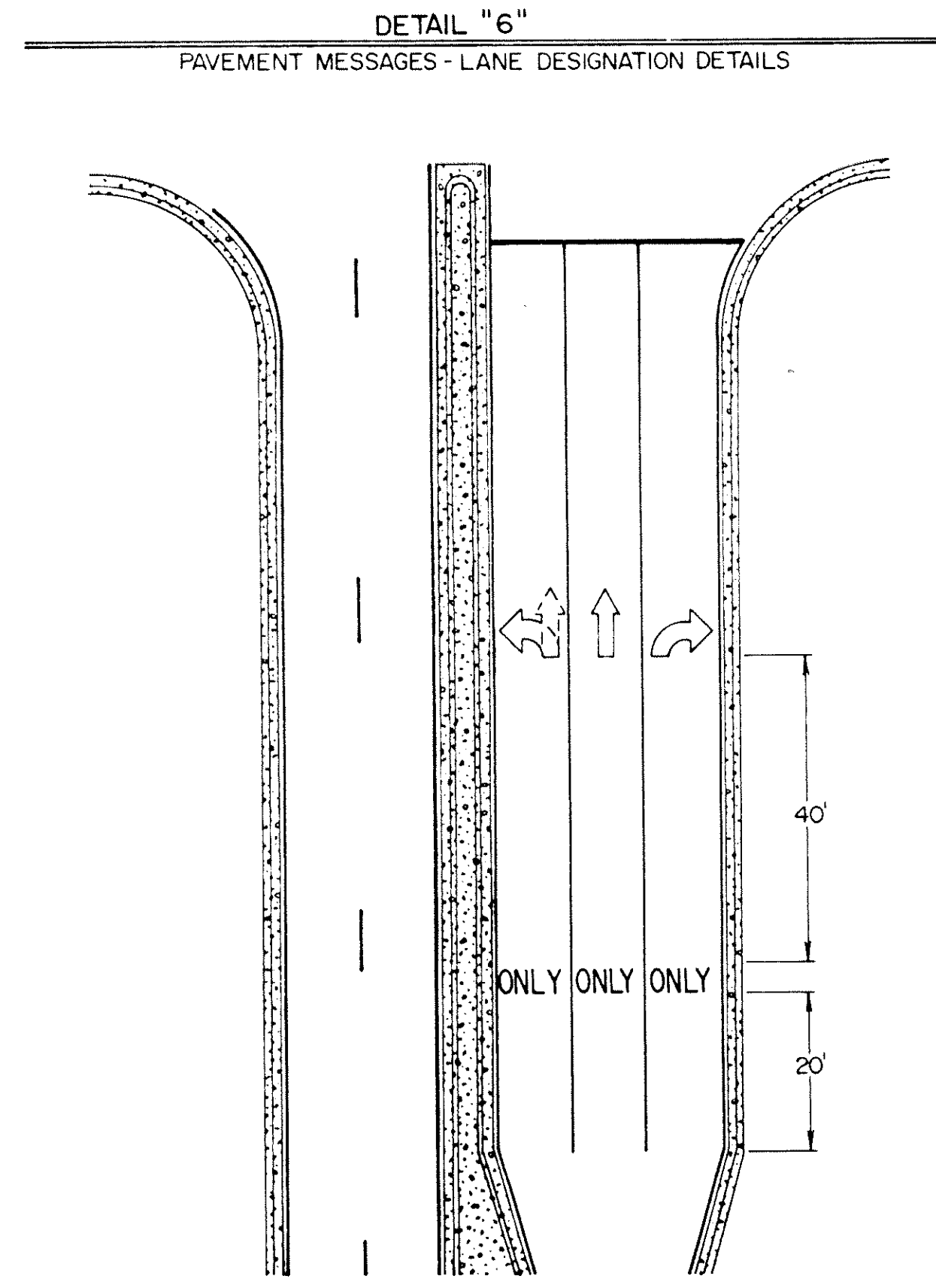
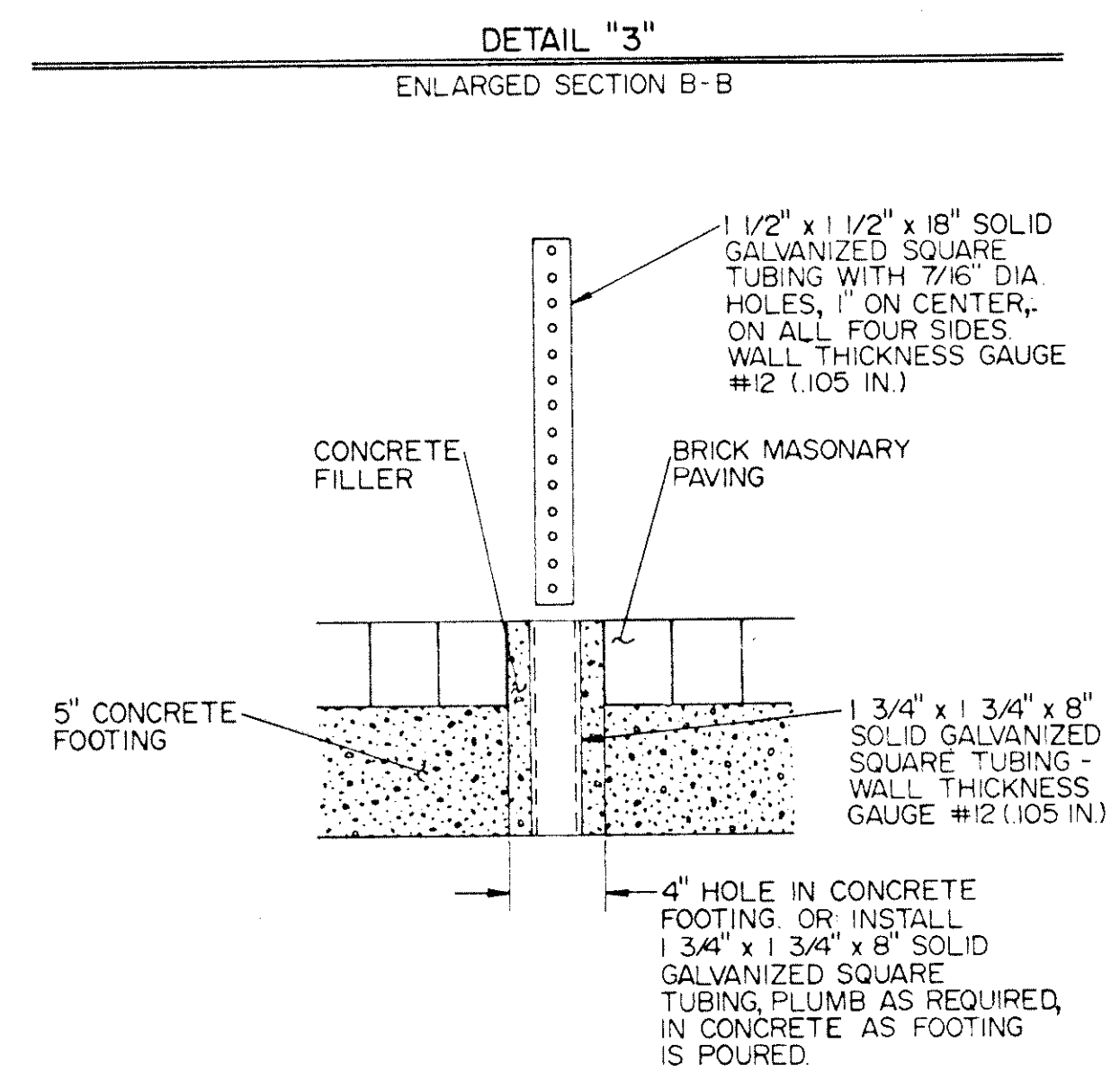
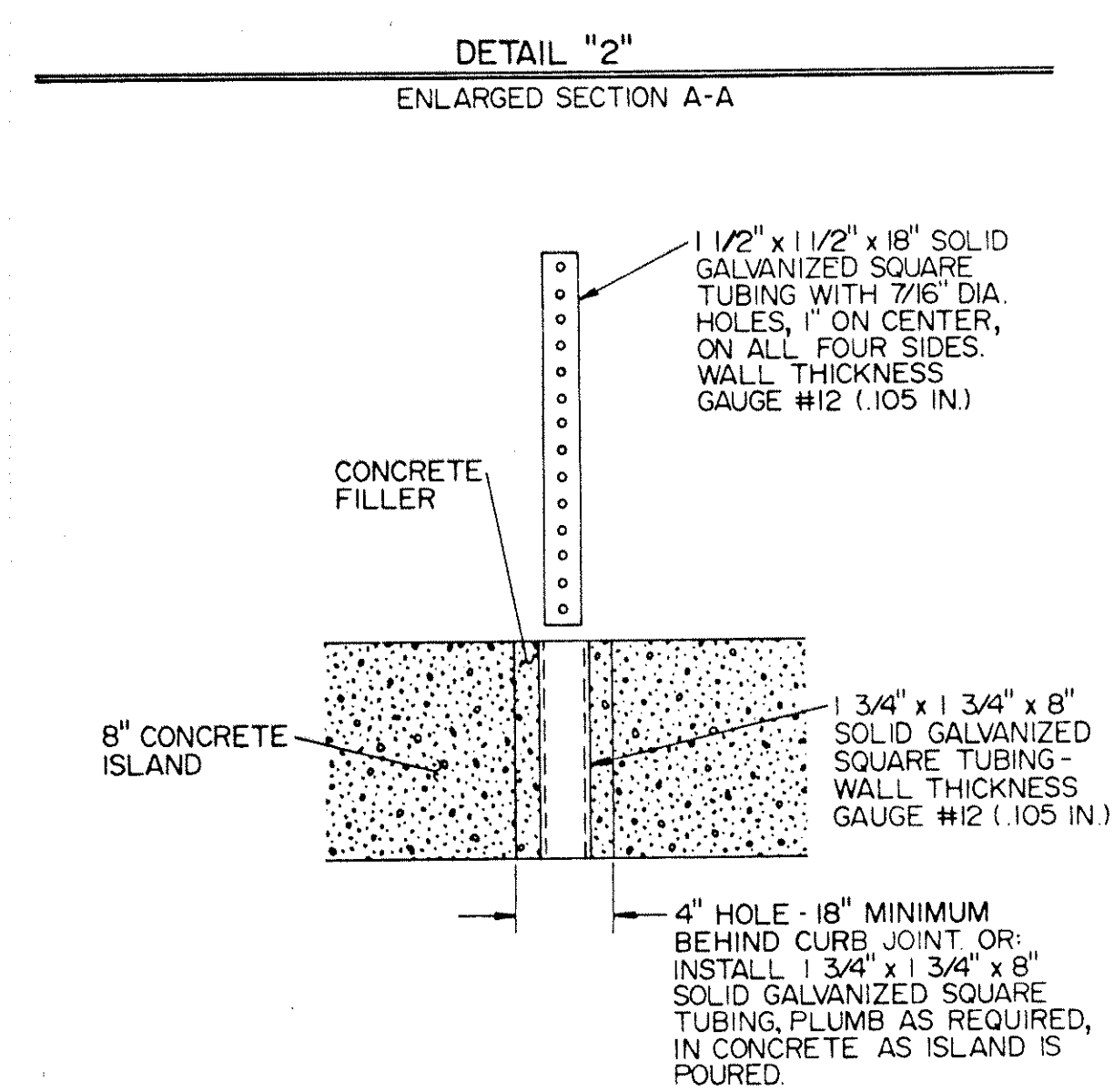
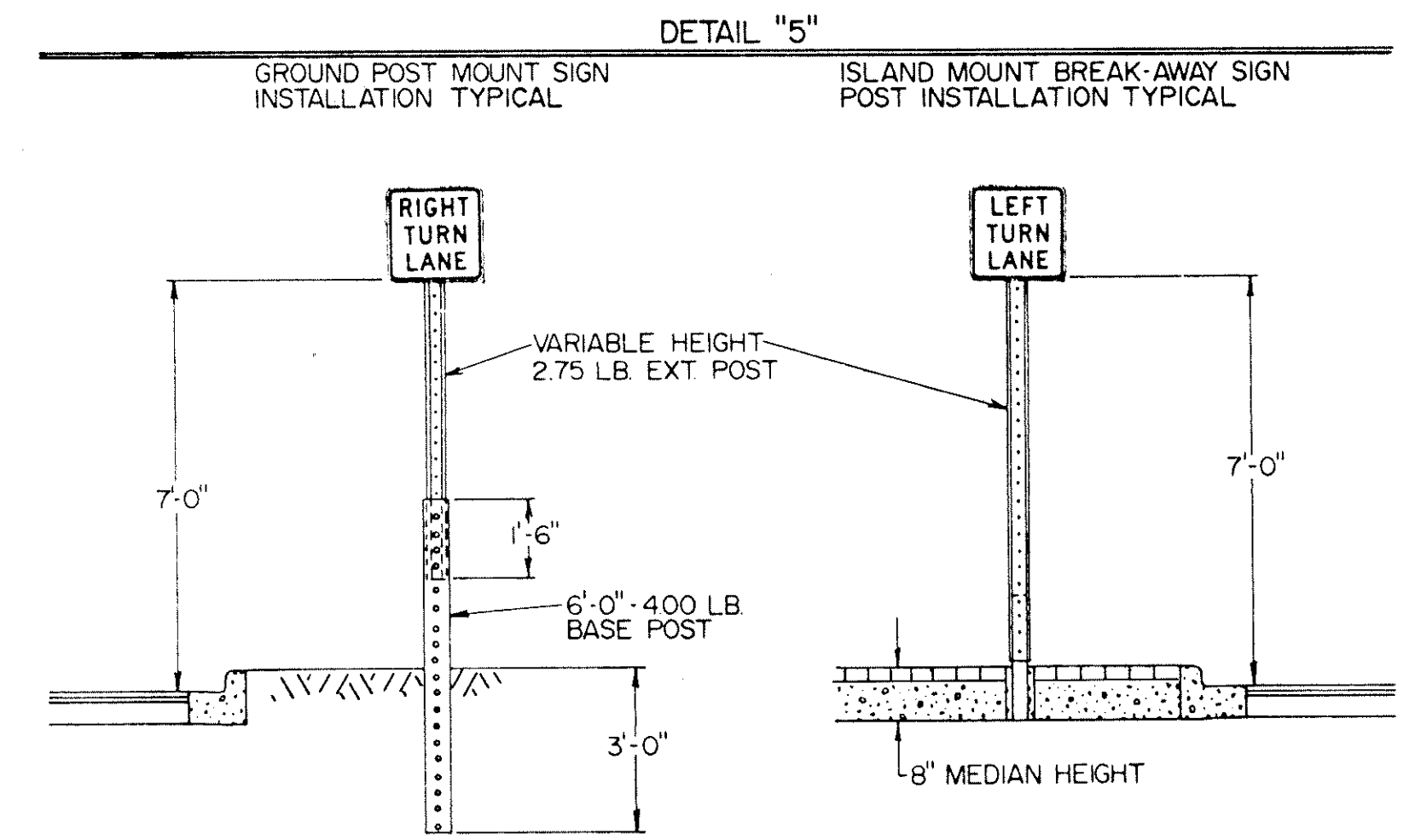
CSAH. 1 ANOKA COUNTY STATE OF MINNESOTA	
TYPICAL SECTION AND DETAILS	
S.A.P. 02-601-29	L.H.C.
SHEET 63 OF 615 SHEETS	F.M.J.



NOTES: DASHED LINES REPRESENT THE APPROX. LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR EACH ISLAND MOUNT SIGN POST INSTALLATION WITHIN AREAS OF BRICK MASONRY PAVING (36" LENGTH x 48" WIDTH x 5" HEIGHT) IF THE ISLAND IS LESS THAN 48" WIDE, THE WIDTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND IF MORE THAN ONE POST IS REQUIRED FOR AN INSTALLATION, SEE DETAIL "4".

SECTION B-B: THE SOLID GALVANIZED SQUARE TUBING FOR THE DO NOT ENTER SIGNS SHALL BE SET AT THE PROPER ANGLE. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

FOR PAYMENT OF CONCRETE FOOTINGS, REFER TO THE STATEMENT OF ESTIMATED QUANTITIES, ITEM 2564513 CONCRETE FOOTINGS.



NOTES:

- \* THE DISTANCE BETWEEN SIGN POSTS VARIES. REFER TO THE STANDARD SIGNS MANUAL FOR THE SPACING CHART THAT RELATES TO THE SIZE AND SHAPE OF THE INSTALLATION.
- 1. IF THE WIDTH OF THE ISLAND IS LESS THAN THE CONCRETE FOOTING MEASUREMENTS REQUIRED BY THIS DETAIL AND THE SPACING CHART IN THE STANDARD SIGNS MANUAL, THE LENGTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND.
- 2. THE DIMENSIONS OF THE CONCRETE FOOTINGS FOR ANY ISLAND MOUNT SIGN INSTALLATION REQUIRING MORE THAN ONE POST WITHIN AREAS OF BRICK MASONRY PAVING WILL BE 36" WIDTH x VARIABLE x LENGTH x 5" HEIGHT
- 3. DASHED LINES REPRESENT THE APPROX. LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST WITHIN AREAS OF BRICK MASONRY PAVING.

ARROWS: 6'-11" HIGH  
WORDS: 8'-0" HIGH

NOTE: SEE SHEETS 34-36 FOR INDIVIDUAL PAVEMENT MESSAGE TYPES AND LOCATIONS. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR LAYOUT SPECIFICATIONS.

STORM SEWER											FURNISH & INSTALL					DRAINS TO					
NO.	STA.	LOC.	REMARKS	DESIGN	LIN. FT.	REMOVE PIPE	① F&I CASTING ASSEMBLY	TOP	OUTLET	FURNISH & INSTALL					DRAINS TO						
										12" LIN. FT.	15" LIN. FT.	18" LIN. FT.	20" LIN. FT.	24" LIN. FT.	APRON	NO.	%	INLET			
A	75+50	38.87'LT.		A OR F	6.5	12"x34'R.C.P.	1	833.89	827.18	31						8	1.0	826.87			
B	75+50	8.13'LT.		A OR F	6.7	12"x125'R.C.P.	1	833.68	826.83		127					3	1.0	825.56			
1	76+65	38.87'LT.		A OR F	5.8		1	833.35	827.35	32						2	1.5	826.87			
2	76+65	7.13'LT.		C OR G	5.3		1	832.31	826.80	52						3	2.0	825.76			
3	76+65	44.87'RT.		C OR G	4.4	12"x100'R.C.P.	1	829.90	825.36		135					4	1.9	822.80			
4	78+00	42.87'RT.		C OR G	4.2	15"x93'R.C.P.	1	827.07	822.72		100					5	1.8	820.92			
5	79+00	42.87'RT.		C OR G	4.3	15"x102'R.C.P.	1	825.28	820.86			70				8	1.1	820.09			
6	79+00	38.87'LT.		A OR F	6.9		1	829.16	822.12	44						7	1.0	821.68			
7	79+00	4.87'RT.		C OR G	5.2		1	827.03	821.64	38						5	1.0	821.26			
8	79+70	42.87'RT.		C OR G	5.0		1	824.86	819.69				52			9	0.6	819.38			
9	80+00	1.07'RT.		A OR F	7.3		1	826.78	819.34				50			10	0.6	819.04			
10	80+30	38.87'LT.	TIE LAST 3 R.C.P. SECTIONS @ OUTLET	A OR F	15.9		1	828.22	812.18					53	1	②	2.0	811.00			
11	82+00	42.87'RT.		C OR G	4.3		1	829.19	824.69	37						12	1.0	824.32			
12	82+00	4.13'RT.		C OR G	5.0		1	829.43	824.28	13						13	1.0	824.15			
13	82+00	7.13'LT.		C OR G	5.2		1	829.42	824.09	32						14	2.0	823.46			
14	82+00	38.87'LT.	TIE LAST 3 R.C.P. SECTIONS @ OUTLET	A OR F	12.2		1	829.42	817.06					47	1	②	2.0	816.00			
15	83+70	38.87'LT.		C OR G	5.4		1	833.43	827.90			170				14	2.0	824.50			
16	83+70	0.87'LT.		C OR G	4.8		1	834.73	829.37			38				15	0.55	829.16			
17	83+90	42.87'RT.		A OR F	6.0		1	836.38	830.24	47						16	1.0	829.77			
18	85+18	1.40'RT.		A OR F	6.3		1	839.34	832.83		148					16	1.7	830.31			
19	85+40	39.87'LT.		C OR G	4.8		1	838.40	833.40	47						18	1.0	832.93			
TOTALS											454	21	373	510	278	102	100	2			

① CASTING 801  
GRATE 810  
CURB BOX 821 B

② OUTLET

DRIVEWAY CONSTRUCTION													
STATION	ADDRESS	REMARKS	REMOVE		CONC. DRIVEWAY PAVEMENT						BIT. PAVEMENT		
			CONC.	BIT.	APRON SQ. YD.		DRIVEWAY S. Y.		DRIVEWAY SQ. YD.		REPL.	NEW	
			S. Y.	S. Y.	WIDTH	6"	8"	WIDTH	6"	8"	WIDTH	REPL.	NEW
74+67 RT.	6661		8	4	18	9					18	4	
75+14 LT.		PAVE TO R/W			14'	8					14'	20	16
75+62 LT.	6654			17	12'	7					12'	20	
77+21 LT.	6664			13	12'	7					12'	20	
77+46 LT.					16'		9				16'		9
81+70 RT.	6745			89	18'	10					18'	44	
82+50 RT.	6755			44	16'	9					16'	4	
83+63 RT.	6765		33		12'	7		12'	19				
84+00 RT.	6775		25		12'	7		12'	29				
85+38 RT.	6785			33	12'	7					12'	3	
85+90 RT.	6795			72	14'	8					14'	44	
75+58 RT.		REMOVE	8										
TOTALS			74	272	79	9	48				139	25	

③ ALL BITUMINOUS REMOVALS ARE INCLUDED WITH COMMON EXCAVATION FOR PAYMENT.

REMOVE CONC. CURB & GUTTER		
LOCATION	LIN. FT.	REMARKS
74+55-77+27 RT.	267	
74+65-76+03 LT.	138	ISLAND
74+65-76+03 RT.	138	ISLAND
74+92-78+54 LT.	362	
77+54-80+20 LT.	287	
84+50 LT.	52	HARTMAN CIRCLE
84+95 LT.	49	HARTMAN CIRCLE
88+05 RT.	45	LOCKE LAKE RD.
88+40 RT.	34	LOCKE LAKE RD.
TOTAL		1372

CLEARING & GRUBBING					
STA.	LOC.	DESCR.	CLR.	GRUB	REMARKS
75+88	38' LT.	TREE	1	1	
75+91	45' LT.	TREE	1	1	
75+96	38' LT.	TREE	1	1	
76+60	40' LT.	BUSH			REMOVE
76+68	50' LT.	TREE			SAVE
76+88	37' LT.	TREE	1	1	
76+91	43' LT.	TREE	1	1	
76+93	37' LT.	TREE	1	1	
77+65	45' LT.	BUSH			REMOVE
77+97	59' RT.	TREE			SAVE
78+00	55' LT.	BUSH			SAVE
79+06	73' RT.	TREE			SAVE
79+22	68' RT.	TREE			SAVE
79+78	68' RT.	TREE	1	1	
79+86	68' RT.	TREE	1	1	
80+23	65' RT.	TREE	1	1	
80+27	62' RT.	TREE	1	1	
80+32	65' RT.	TREE	1	1	
80+38	65' RT.	TREE	1	1	
82+01	57' RT.	TREE			SAVE
82+05	53' RT.	TREE	1	1	
82+39	41' RT.	TREE	1	1	
82+92	57' RT.	TREE			SAVE
82+94	47' RT.	TREE	1	1	
82+99	54' RT.	TREE			SAVE
83+46	52' RT.	TREE	1	1	
84+44	55' RT.	TREE			SAVE
84+74	55' RT.	TREE			SAVE
85+10	58' RT.	TREE			SAVE
85+12	64' LT.	TREE	1	1	
85+56	34' RT.	TREE	1	1	
85+65	34' RT.	TREE	1	1	
86+37	37' LT.	BUSH			REMOVE
86+37	40' LT.	TREE	1	1	
86+83	59' LT.	TREE			SAVE
87+26	55' LT.	TREE			SAVE
87+27	48' LT.	STUMP			
87+64	40' LT.	TREE	1	1	
87+66	44' RT.	HEDGE			REMOVE PORTION
88+29	40' LT.	BUSH			REMOVE
TOTALS 21 22					

NOTE: PARK AREA BY ACRE = 0.3 ACRE

C.S.A.H.I ANOKA COUNTY  
STATE OF MINNESOTA

TABULATIONS

S.A.P. 02-601-29 L.H.C.  
SHEET 65 OF 615 SHEETS F.M.J.

ADJUST GATE VALVES		
STA.	LOC.	REMARKS
75+30	44' RT.	
77+10	31' RT.	
77+26	31' RT.	
83+62	22' LT.	GAS, ADJ. BY OTHERS
84+68	23' RT.	
88+13	31' RT.	

REMOVE PIPE SEWER (C.M.P.)		
LOC.	LIN. FT.	REMARKS
79+72 RT.	100	
81+08 RT.	20	
82+51 LT.	83	
TOTAL		203

SALVAGE & INSTALL FENCE				
LOCATION	SALV.	INST.	TYPE	REMARKS
77+16-80+63 RT.	347	52	CHAIN LK.	
81+19-81+51 RT.	50	50	CHAIN LK.	
77+50-78+30 LT.	80	80	WOOD	
78+30-80+63 LT.	233	196	CHAIN LK.	
81+51-83+62 LT.	211	250	CHAIN LK.	
84+98-89+00 LT.	438	100	CHAIN LK.	
86+34 LT.	25	5	CHAIN LK.	LINE FENCE
87+50 LT.	26	5	CHAIN LK.	LINE FENCE
88+29 LT.	26	5	CHAIN LK.	LINE FENCE
TOTALS		1436	743	

NOTE: FENCE INSTALLATION LOCATIONS TO BE DETERMINED BY ENGINEER IN FIELD.

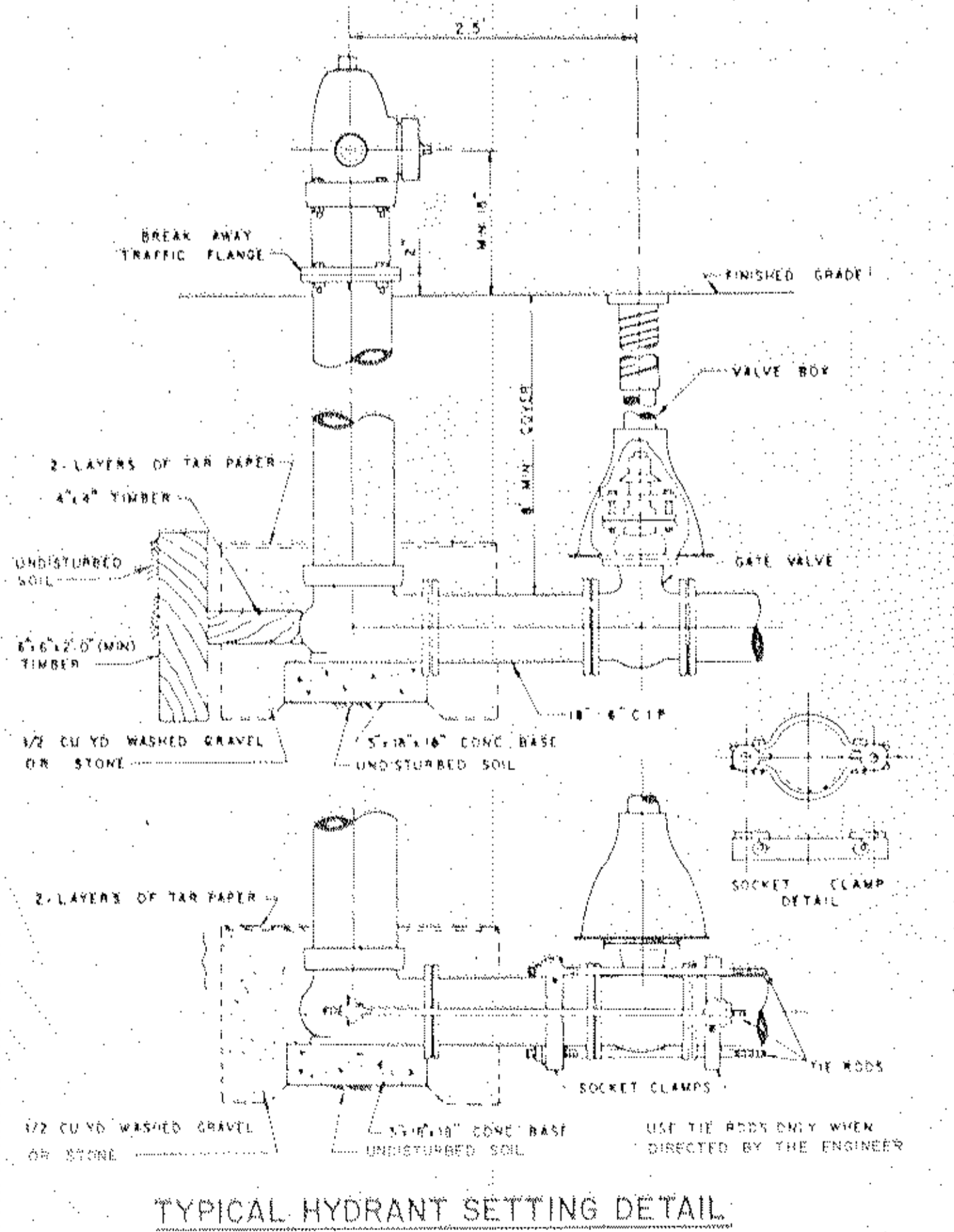
HYDRANT RELOCATION	
EXISTING LOC.	PROPOSED LOC.
76+83 49' RT.	7' EAST
84+96 38' LT.	20' N.W.
88+03 34' RT.	20' S.E.

NOTE: ALL HYDRANT LEADS, TIE BARS, BRACING AND OTHER EQUIPMENT, WORK AND MATERIALS REQUIRED TO COMPLETE THE JOB AS SPECIFIED SHALL BE CONSIDERED AS INCIDENTAL TO RELOCATING HYDRANTS.

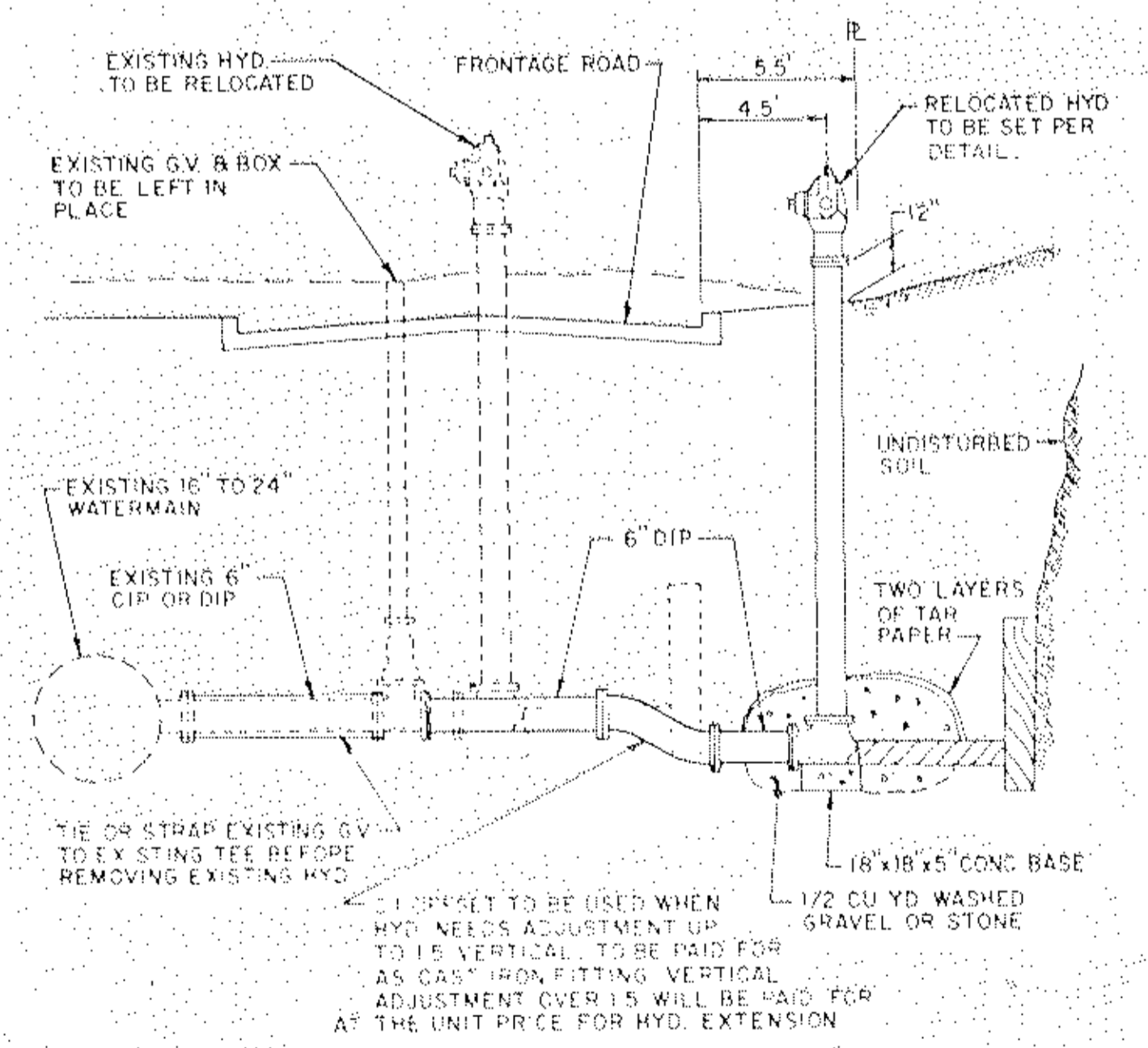
RECONSTRUCT MANHOLES			
STA.	LOC.	LIN. FT.	REMARKS
82+90	37' RT.	5.1	SAN. SEWER

NOTE: THE CITY MAY FURNISH A NEW HYDRANT AND REMOVE THE EXISTING HYDRANT FROM THE JOB SITE. THE CONTRACTOR SHALL INSTALL THIS REPLACEMENT HYDRANT AS IF IT WAS THE HYDRANT REMOVED AND NO ADDITIONAL COMPENSATION WILL BE MADE.

ADJUST FRAME & RING CASTINGS			
STA.	LOC.	TYPE	REMARKS
76+06	4' LT.	M.H.	SAN. SEWER
76+20	37' LT.	M.H.	SAN. SEWER
77+28	54' RT.	M.H.	SAN. SEWER
77+36	37' LT.	M.H.	SAN. SEWER
84+80	35' RT.	M.H.	SAN. SEWER
88+24	29' RT.	M.H.	SAN. SEWER

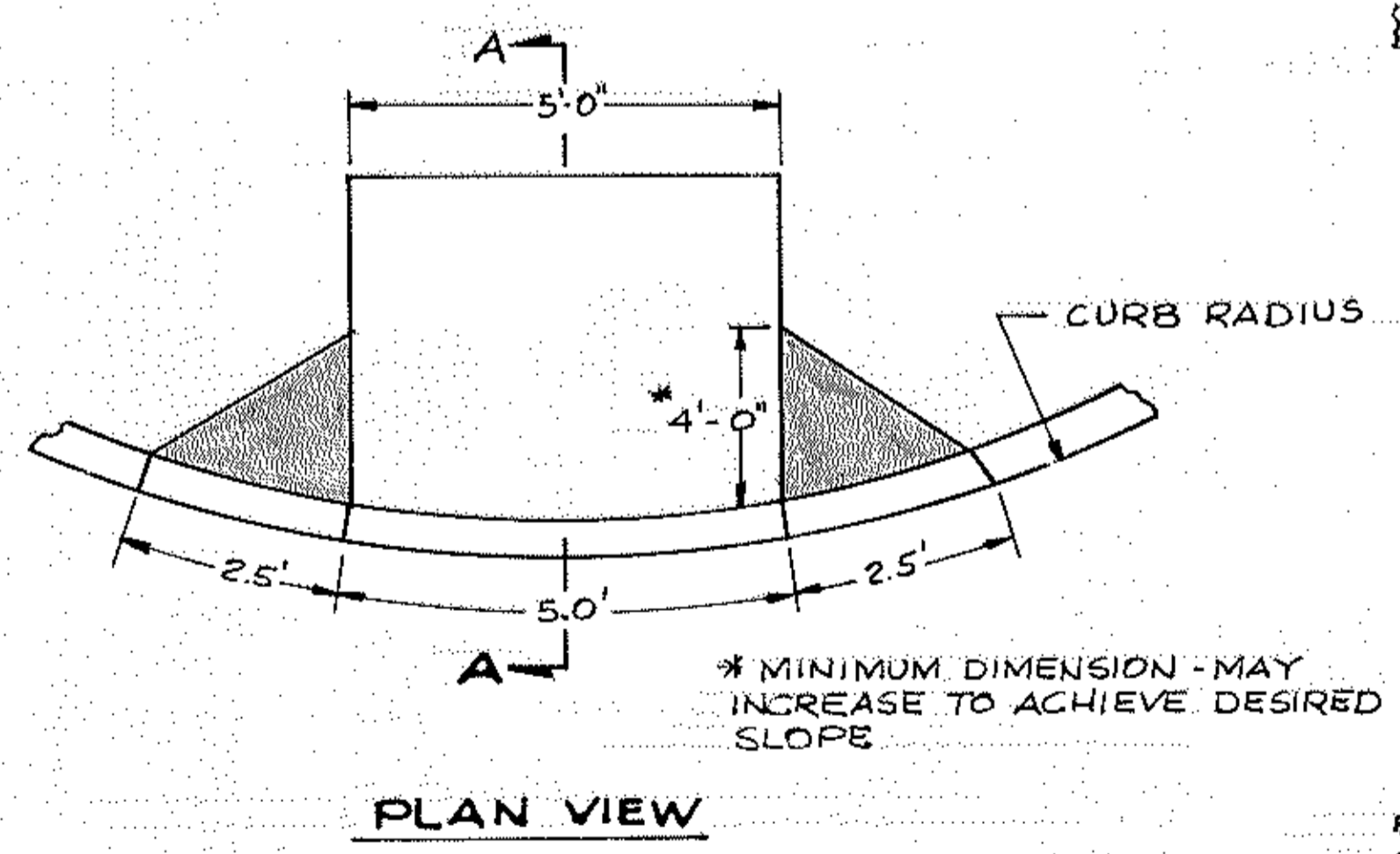


TYPICAL HYDRANT SETTING DETAIL



HYDRANT RELOCATION DETAIL

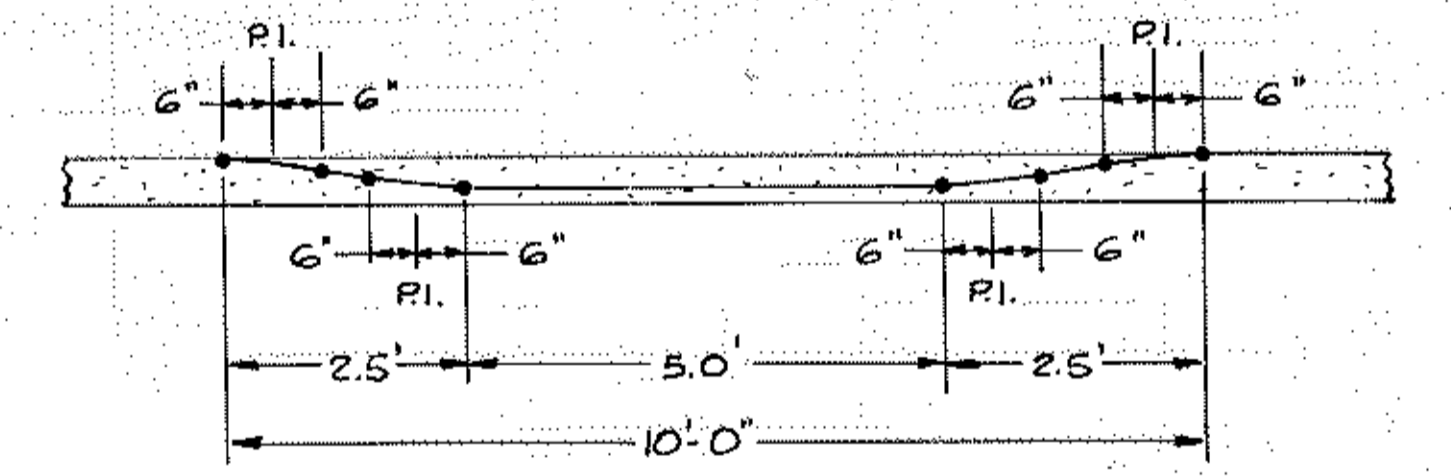
NOTE: HYDRANT RELOCATION SHALL INCLUDE ALL TOOLS, MATERIALS AND LABOR TO SECURE THE EXISTING GATE VALVE TO THE EXISTING TEE, REMOVE AND RELOCATE THE EXISTING HYDRANT WITHOUT SHUTTING DOWN THE EXISTING WATERMAIN.



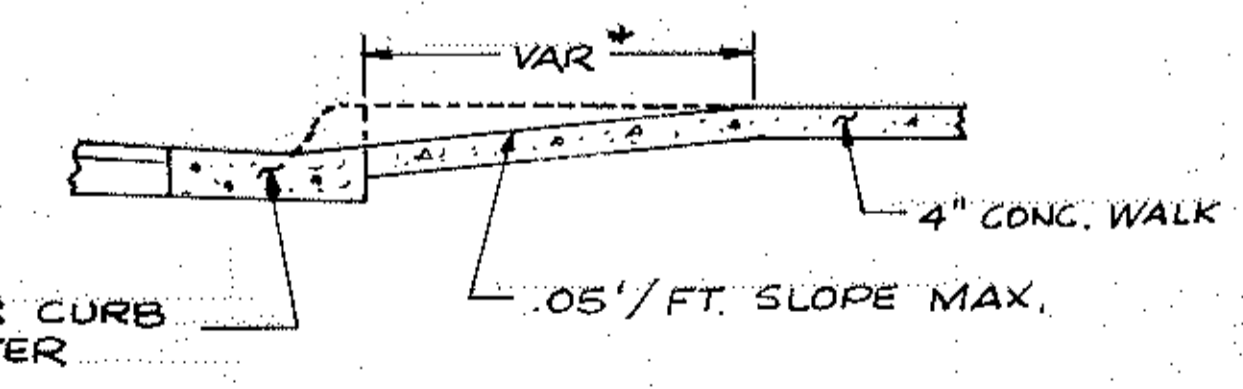
PLAN VIEW

\* MINIMUM DIMENSION - MAY INCREASE TO ACHIEVE DESIRED SLOPE

PEDESTRIAN RAMP DETAIL



ELEVATION



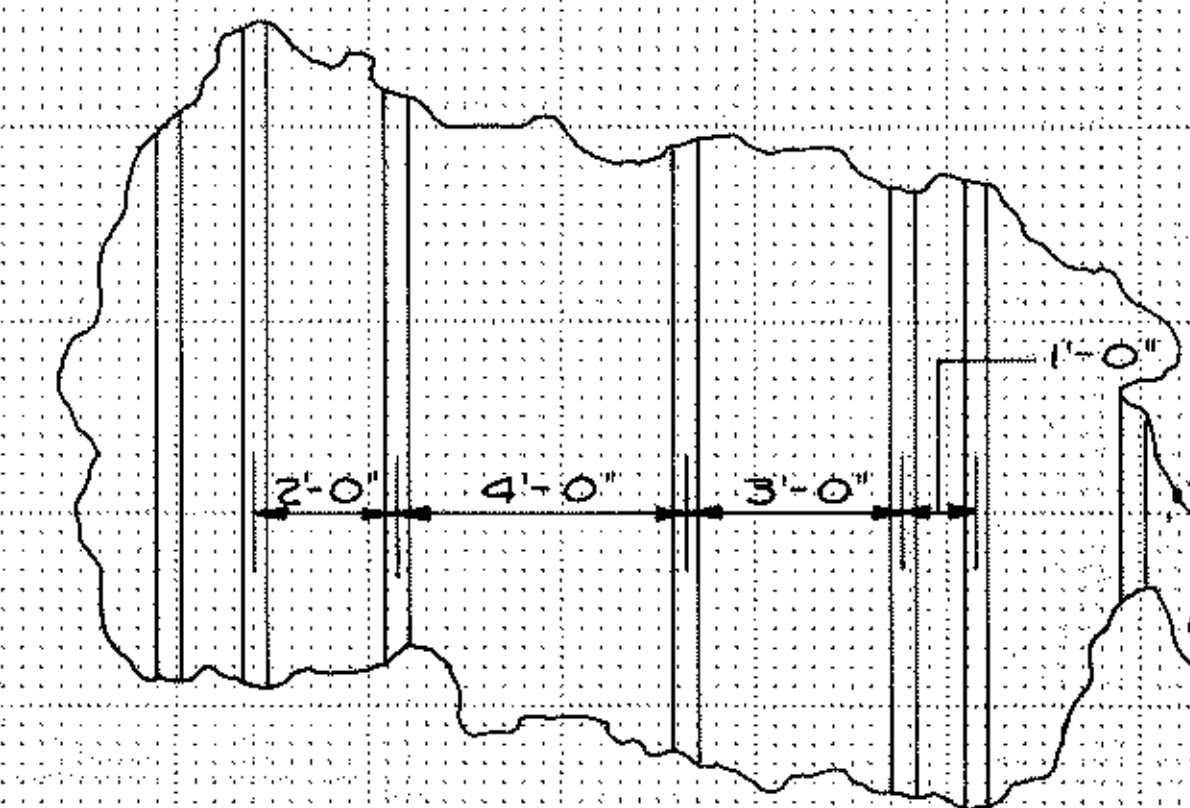
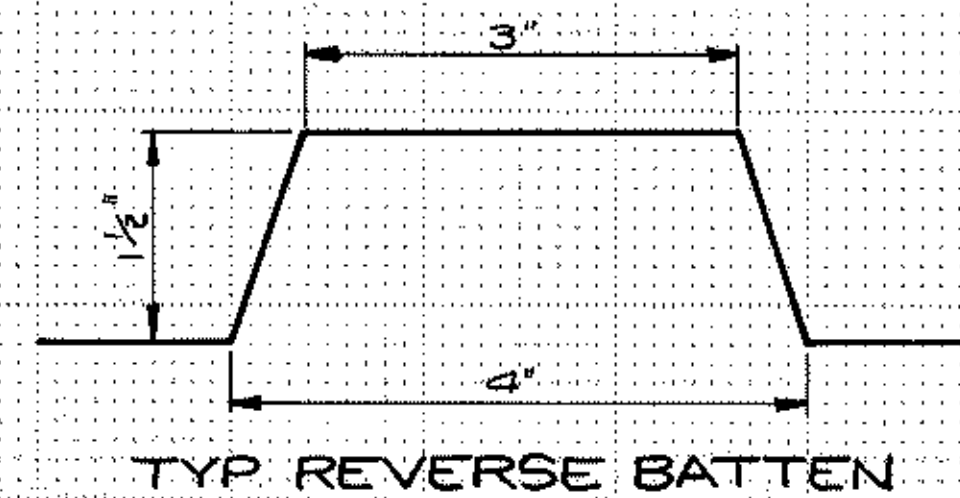
SECTION A-A

CSA.H.1 ANOKA COUNTY  
STATE OF MINNESOTA

TABULATIONS

NOTE: WORK AND ALL MATERIAL FOR PED. OPENING & 4" PVC DRAIN INCLUDED IN PRICE BID FOR CONCRETE RETAINING WALL.

PROVIDE 4' PED. OPENING & STEPS @ 87+75. LOCATION, ELEVATION & STEP SIZE TO BE DETERMINED BY THE ENGINEER IN FIELD.



TYP REVERSE BATTEN RUSTICATION PATTERN

NOTES

FOR RETAINING WALL AND FOOTING REINFORCEMENT SEE SHEETS G8 TO G10

FOOTING STEP AND FOOTING WIDTH SHOWN ARE GUIDELINES ONLY. ACTUAL DIMENSIONS MAY BE DETERMINED FROM MN/DOT STANDARD SHEETS 5-297.620 AND THE ENGINEERS APPROVAL.

TOP OF STEM ELEVATIONS ARE TO BE VERIFIED BY ENGINEER IN FIELD.

FOR FENCE POST BOLT ANCHORAGE DETAILS SEE SHEET 37

FOR SPECIAL SURFACE TREATMENT SEE SPECIAL PROVISIONS.

REVERSED BATTEN TREATMENT SHALL EXTEND 1 FT. BELOW GROUND LINE, INCLUDED IN PRICE BID FOR CONC. RETAINING WALL. SEE SPECIAL PROVISIONS.

LANE TAPER SEE PLAN & PROFILE SHT.

STA. 84+95.73  
 $\Delta = 90^\circ$   
 $R = 25'$   
 $L = 39.27'$

STA. 85+35

PLAN

BEGIN TYPICAL BATTEN SPG.

6' CHAIN LINK FENCE SEE SHT 37

STA. 87+00  
 EL. 853.00

PROVIDE DRAIN OPENING FOR 4" PVC @ 87+57. LOCATION & ELEVATION TO BE DETERMINED BY THE ENGINEER IN FIELD.

BEGIN TYPICAL BATTEN SPG.

STA. 87+50  
 EL. 849.00

STA. 88+32  
 EL. 849.00

APPROX. EXIST. GROUND ELEV.

APPROX. ELEV. OF CLAY

STA. 84+95.73  
 EL. 844.00

STA. 85+50  
 EL. 851.00

BOTTOM OF FTG.

EL. 836.75

EL. 839.50

EL. 834.50

LEVEL

LEVEL

LEVEL

STA. 88+32

STA. 84+95.73

129.27'  $\text{\textcircled{1}}$

STA. 86+25  
 125.00'

STA. 87+50  
 82.00'

STA. 88+32

8'-11 1/2"

8'-5"

5'-2"

FTG. STEP SPG.

FTG. WIDTH

JOINT SPG.

FENCE POST SPG.

13 SPS. @ 20' = 260.00'

17.27'

2 SPS. @ 20' = 40.00'

15'

4.27' 10 SPS. @ 5' = 50.00'

15 SPS. @ 10' = 150.00'

5 SPS. @ 10' = 50.00'

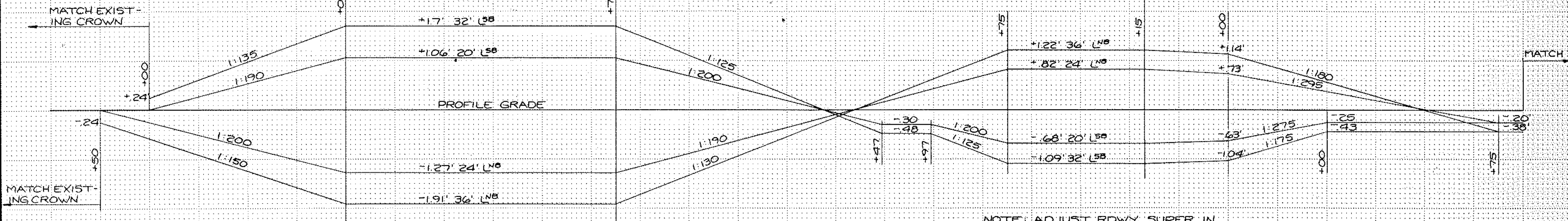
3 SPS. @ 7'-8" = 23'

6 SPS. @ 9'-2" = 55'

ELEVATION

RETAINING WALL

$\text{\textcircled{1}}$  LIMITS OF 3' SUBCUT BELOW BOTTOM OF FOOTING (APPROX.). SIDE SLOPES OF EXCAVATION TO BE MIN. 0.5:1. BACKFILL WITH SELECT GRANULAR BORROW AND COMPACT TO 100% OF STANDARD PROCTOR DENSITY. ACTUAL DIMENSIONS TO BE DETERMINED BY THE FIELD ENGINEER. SUBCUT EXCAVATION (215 C.Y.) INCLUDED IN COMMON EXCAVATION. BACKFILL (215 C.Y.) INCLUDED IN SELECT GRANULAR BORROW.



NOTE: ADJUST RDWY. SUPER. IN VICINITY OF BRIDGE TO MATCH DECK ELEVATIONS.

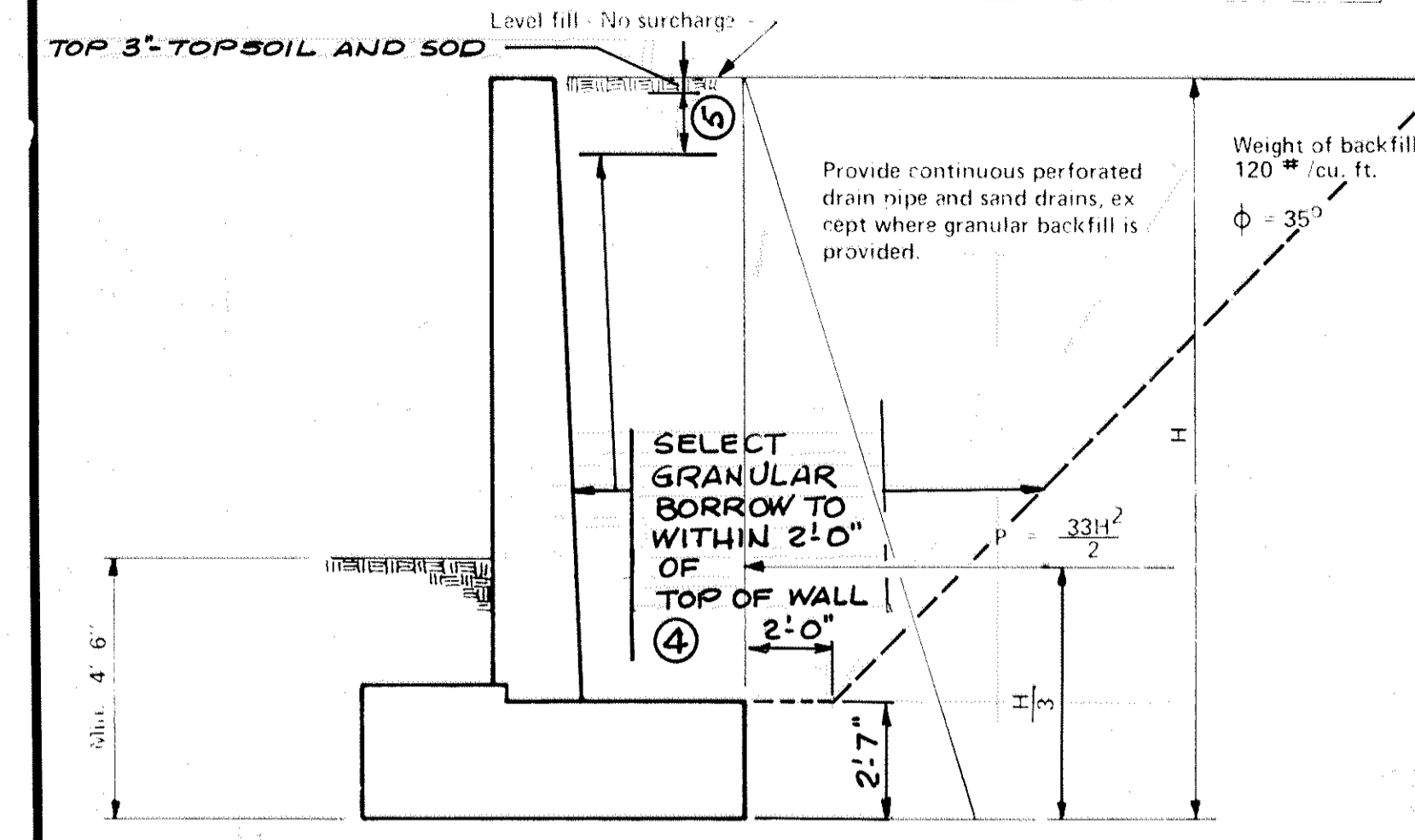
SUPERELEVATION CHART

74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89

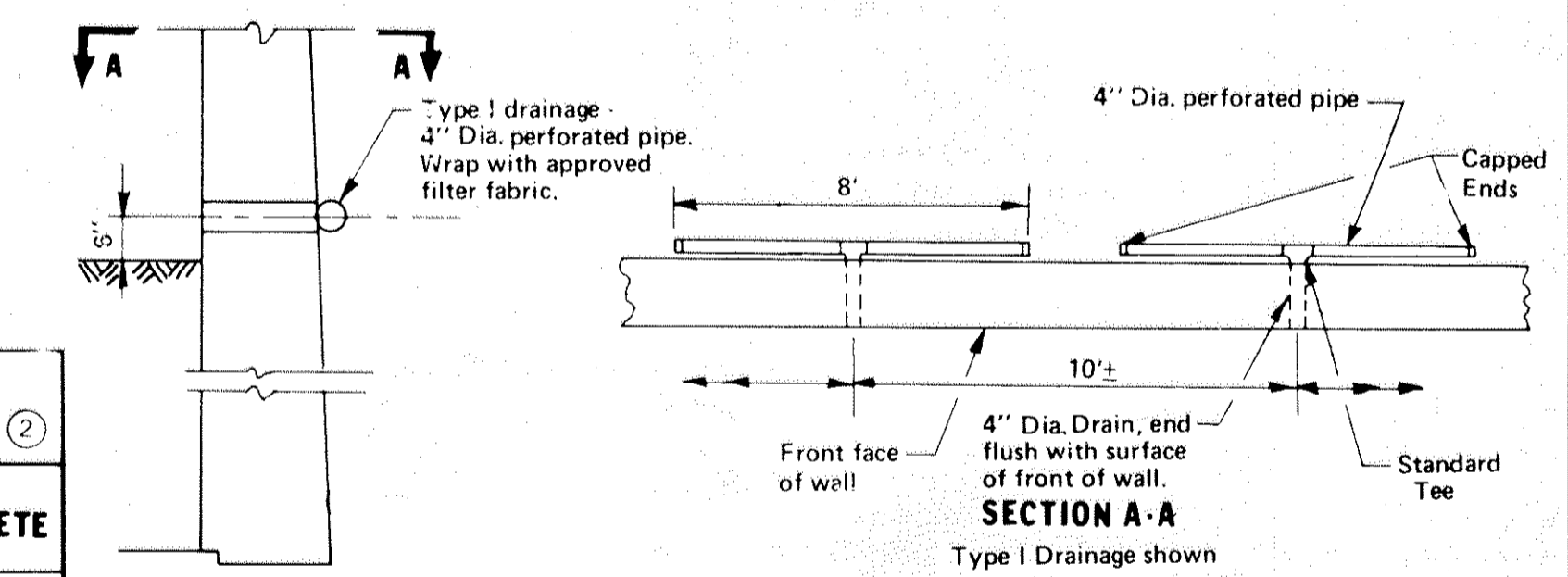


APPROVED Feb. 27, 1930  
*Charles F. Hunter*  
 Director  
 OFFICE OF ENGINEERING STANDARDS

**Fed. Proj. No.**  
**A.A.S.H.T.O. DESIGN SPECIFICATIONS**  
 fc = 1600 p.s.i.      n = 8 Concrete  
 fs = 24,000 p.s.i.      Reinforcement



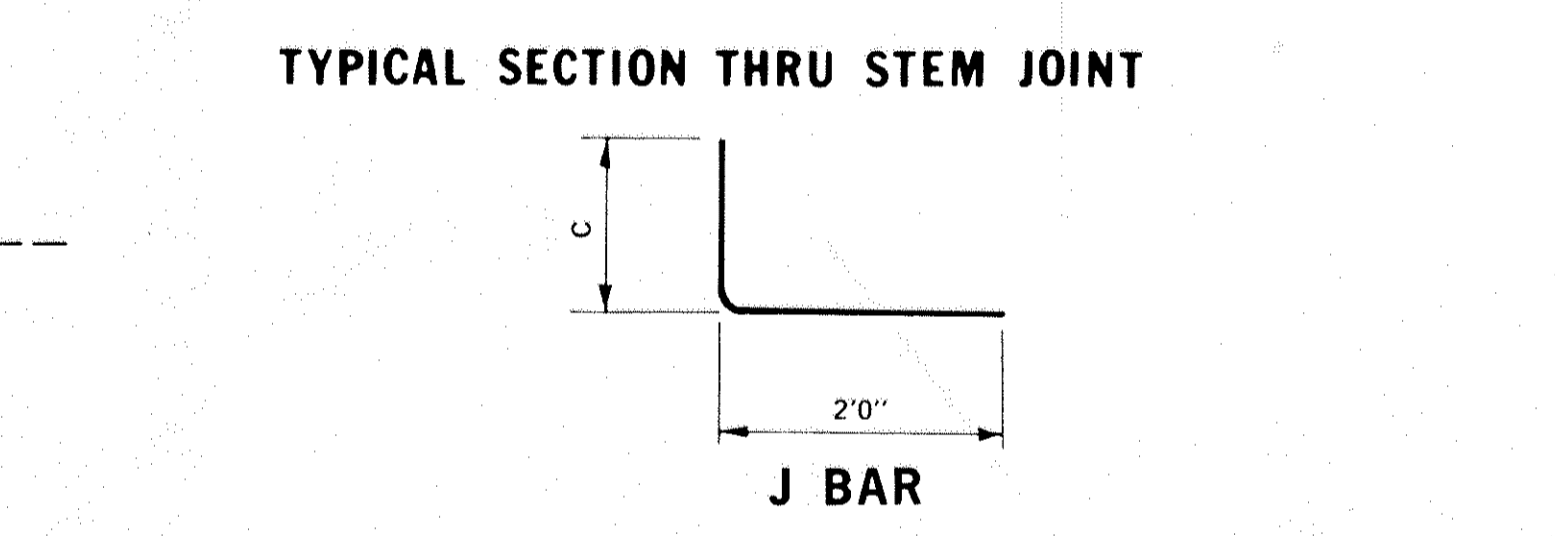
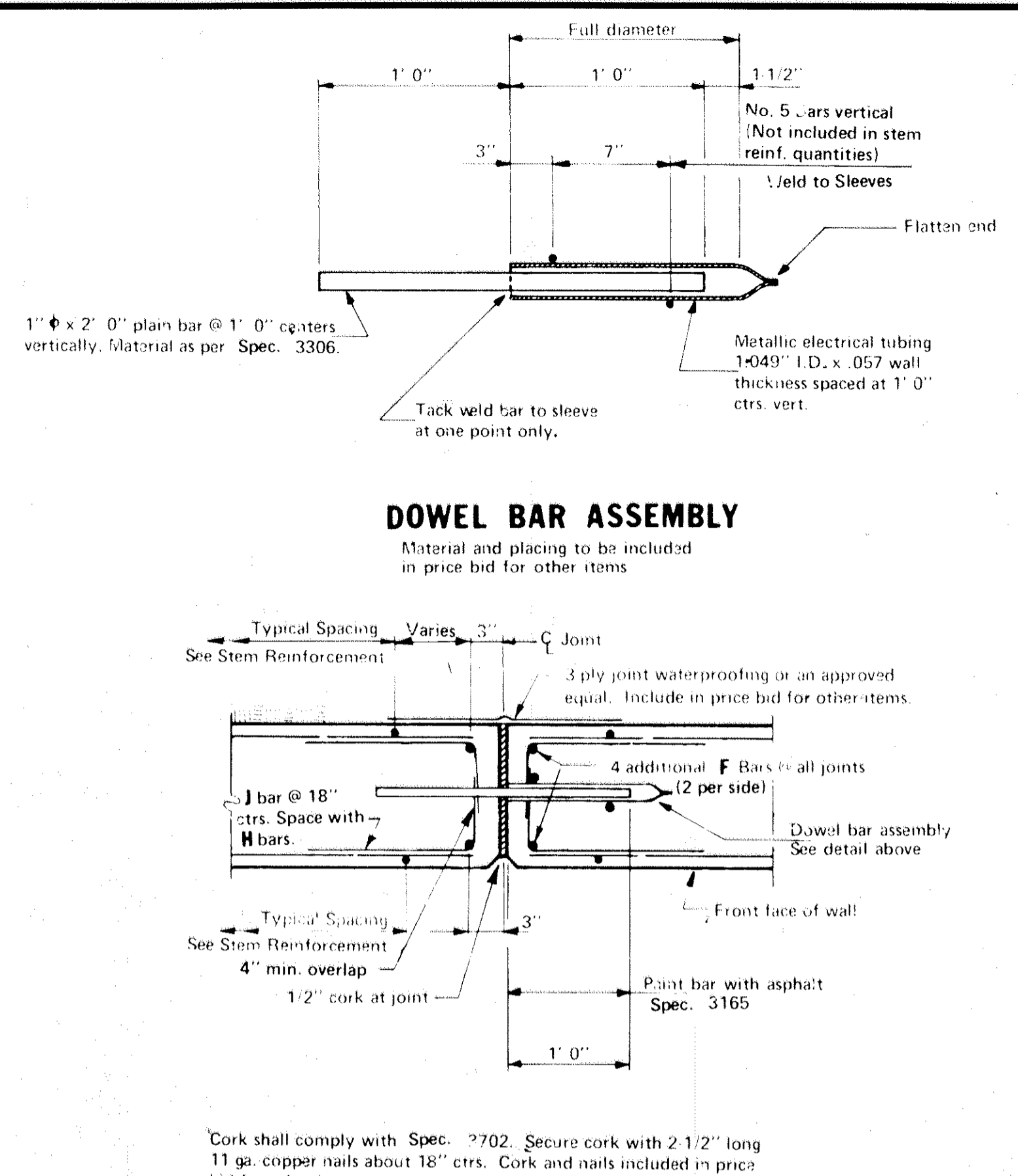
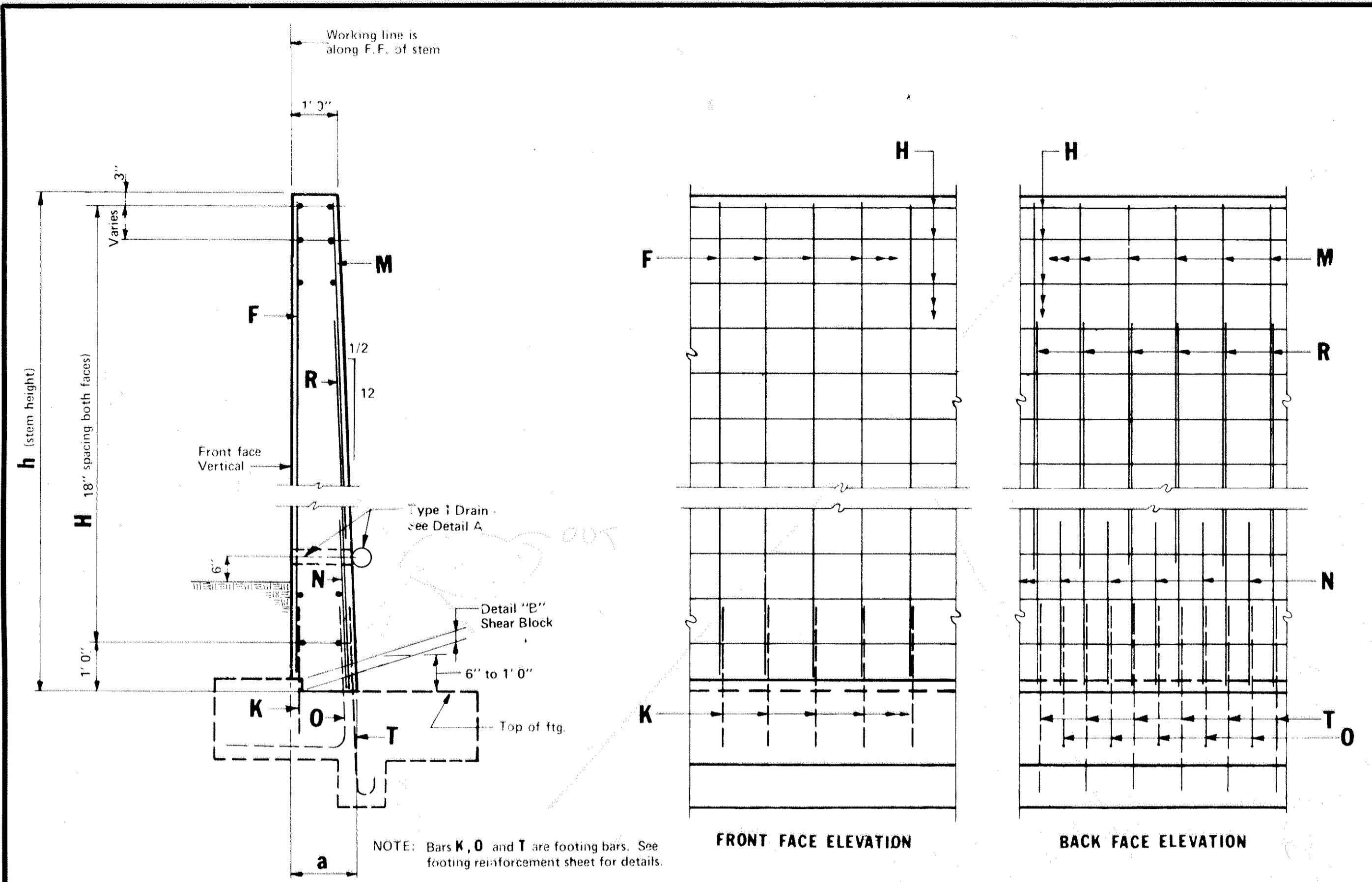
**DESIGN CRITERIA**  
 DRAINAGE: USE TYPE I DRAINAGE AS SHOWN.  
 SPREAD FTGS: SEE SOIL REPORT.  
 ④ 1500 CU. YDS OF GRANULAR BORROW INCLUDED IN PRICE BID FOR RETAINING WALL.  
 ⑤ COMMON BORROW - INCLUDED IN PRICE BID FOR RETAINING WALL



**STEM NOTES**

- Maximum spacing of stem joints (panels) is 32 feet. Use dowel assemblies at all joints. No reinf. thru joint.
- Concrete in stems to be Concrete Mix No. 3Y43.
- Reinforcement bars shall be deformed billet steel bars conforming to ASTM A615 Grade 60.
- Bar lap at authorized splices: 36 diameters for No. 4 to No. 7 bars and 40 diameters for No. 8 to No. 11 bars except as noted.
- All reinforcement bars to have a 2" minimum cover. When 1" or less rustication is used, move front face reinf. bars in to maintain 2" cover. For rustication over 1" in depth, increase stem width to depth of rustication to maintain minimum reinforcement cover.
- Edges of concrete on all exposed joints and top of stem wall shall be formed with 1/2" vee unless otherwise noted.
- Construction to be in accordance with Spec. 2411 AND SPECIAL PROVISIONS.
- When stem heights vary by less than four feet in any panel, the rebar shall be sized and spaced for the maximum height in the panel.
- When stem heights at the ends of any panel differ by more than four feet, but less than eight feet, the panel shall be divided into two approximately equal parts (or on some other logical basis) for rebar design. The bars for each portion of the panel shall be sized and spaced for the maximum stem height in that portion.
- When stem heights vary by more than eight feet, the panel shall be divided into 3 parts for rebar design. The maximum stem height in each portion shall be used for determining rebar sizing and spacing in that portion.
- When stem heights are five feet or less, the rebar shall be sized and spaced as required for h = 5 feet.
- Vertical bars F and M in stems or varying heights and transverse bars O, P, and Q in footings of varying widths shall vary in length in accordance with the dimensions of the structure.

**RETAINING WALL - LEVEL FILL**  
 (STEM DETAILS)



- The smallest "C" dimension bar to be placed at the top of wall and increases downward with wall depth.
- Use "J" Bars and 4 additional "F" Bars at dowel joints. These bars are not included in quantities per lineal foot of stem. (See stem joint detail)
- Weight includes "J" bars and four "F" bars per stem joint.

STEM GEOMETRICS		STEM REINFORCEMENT BARS															QUANTITIES / LIN. FT. OF STEM ②								
h	a	J (BARS) ① ②				TOTAL WEIGHT ③	F ② (VERTICAL)			H (HORIZONTAL)			M (VERTICAL)			N (VERTICAL)			R (VERTICAL)			REINF. POUND	CONCRETE CU. YDS.		
		SIZE	LENGTH	7"	10"		13"	16"	SIZE	LENGTH	SPAC.	SIZE	NO.	MAX. SP.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	SIZE			LENGTH	SPAC.
5'	1'	2 1/2"	6	2' + C	16				4	4' 8"	12"	5	8	18"	4	4' 10"	14 1/2"							12.1	203
6'	1'	3"	6	2' + C	20				4	5' 8"	12	5	10	18	4	5' 10"	14 1/2"							17.4	249
7'	1'	3 1/2"	6	2' + C	20				4	6' 8"	12	5	10	18	4	6' 10"	14 1/2"							18.7	296
8'	1'	4"	6	2' + C	20	4			4	7' 8"	12	5	12	18	4	7' 10"	14 1/2"							22.0	345
9'	1'	4 1/2"	6	2' + C	20	8			4	8' 8"	12	5	14	18	4	8' 10"	14 1/2"							25.3	395
10'	1'	5"	6	2' + C	20	8			4	9' 8"	12	5	14	18	4	9' 10"	14 1/2"							26.5	446
11'	1'	5 1/2"	6	2' + C	20	12			4	10' 8"	12	5	16	18	4	10' 10"	14 1/2"							29.8	500
12'	1'	6"	6	2' + C	20	16			4	11' 8"	12	5	18	18	5	11' 10"	14 1/2"							36.8	555
13'	1'	6 1/2"	6	2' + C	20	16			4	12' 8"	12	5	18	18	5	12' 0"	14 1/2"							41.9	611
14'	1'	7"	6	2' + C	20	20			4	13' 8"	12	5	20	18	5	12' 0"	14 1/2"							46.6	669
15'	1'	7 1/2"	6	2' + C	20	24			4	14' 8"	12	5	22	18	5	12' 0"	14 1/2"							51.6	728
16'	1'	8"	6	2' + C	20	24			4	15' 8"	12	5	22	18	5	12' 0"	14 1/2"							53.9	789
17'	1'	8 1/2"	6	2' + C	20	28			4	16' 8"	12	5	24	18	5	12' 0"	14 1/2"							62.0	851
18'	1'	9"	6	2' + C	20	32			4	17' 8"	12	5	26	18	5	12' 0"	13							72.2	916
19'	1'	9 1/2"	6	2' + C	20	32			4	18' 8"	12	5	26	18	5	12' 0"	13	6	7' 0"	13"				74.0	981
20'	1'	10"	6	2' + C	20	32	4		4	19' 8"	12	5	28	18	5	12' 0"	13	7	8' 0"	13				87.8	1,049
21'	1'	10 1/2"	6	2' + C	20	32	8		4	20' 6"	12	5	30	18	5	12' 0"	13	7	7' 0"	13				90.5	1,116
22'	1'	11"	6	2' + C	20	32	8		4	21' 6"	12	5	30	18	5	12' 0"	13	7	8' 0"	13				94.9	1,186
23'	1'	11 1/2"	6	2' + C	20	32	12		4	22' 6"	12	5	32	18	5	12' 0"	13	8	9' 0"	13				106.7	1,257
24'	2'	0"	6	2' + C	20	32	16		4	23' 6"	12	5	34	18	5	12' 0"	13	8	10' 0"	13				113.8	1,331
25'	2'	0 1/2"	6	2' + C	20	32	16		4	24' 6"	12	5	34	18	5	12' 0"	13	8	9' 0"	13				122.5	1,406
26'	2'	1"	6	2' + C	20	32	20		4	25' 6"	12	5	36	18	5	12' 0"	14 1/2"	9	10' 0"	14 1/2"				138.1	1,482
27'	2'	1 1/2"	6	2' + C	20	32	24		4	26' 6"	12	5	38	18	5	12' 0"	14 1/2"	10	10' 0"	14 1/2"				151.1	1,560
28'	2'	2"	6	2' + C	20	32	24		4	27' 6"	12	5	38	18	5	12' 0"	13	10	11' 0"	13				169.7	1,639
29'	2'	2 1/2"	6	2' + C	20	32	28		4	28' 6"	12	5	40	18	5	12' 0"	12	9	19' 0"	12				185.2	1,720
30'	2'	3"	6	2' + C	20	32	32		4	29' 6"	12"	5	42	18	5	12' 0"	11"	10	11' 0"	11"				203.3	1,803





CAUTION: BURIED GAS  
GROUTED RIPRAP

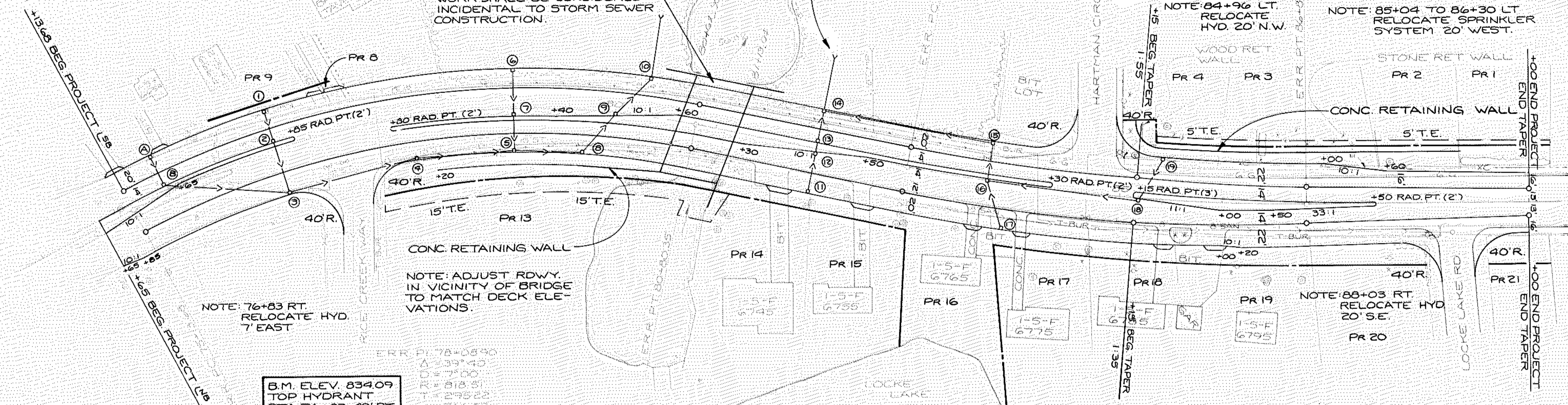
ERR. P.I. 84+87.53  
Δ = 11° 45'  
D = 3° 00'  
R = 1909.816  
T = 196.52'  
L = 391.67'

B.M. ELEV. 843.77  
TOP HYDRANT  
STA. 84+96.38' LT.

NOTE: PLACE GROUTED RIPRAP FROM OUTLET TO STREAM AS DIRECTED BY ENG. IN FIELD (APPROX. QUANTITY = 30 CU. YD.). THIS WORK SHALL BE CONSIDERED INCIDENTAL TO STORM SEWER CONSTRUCTION.

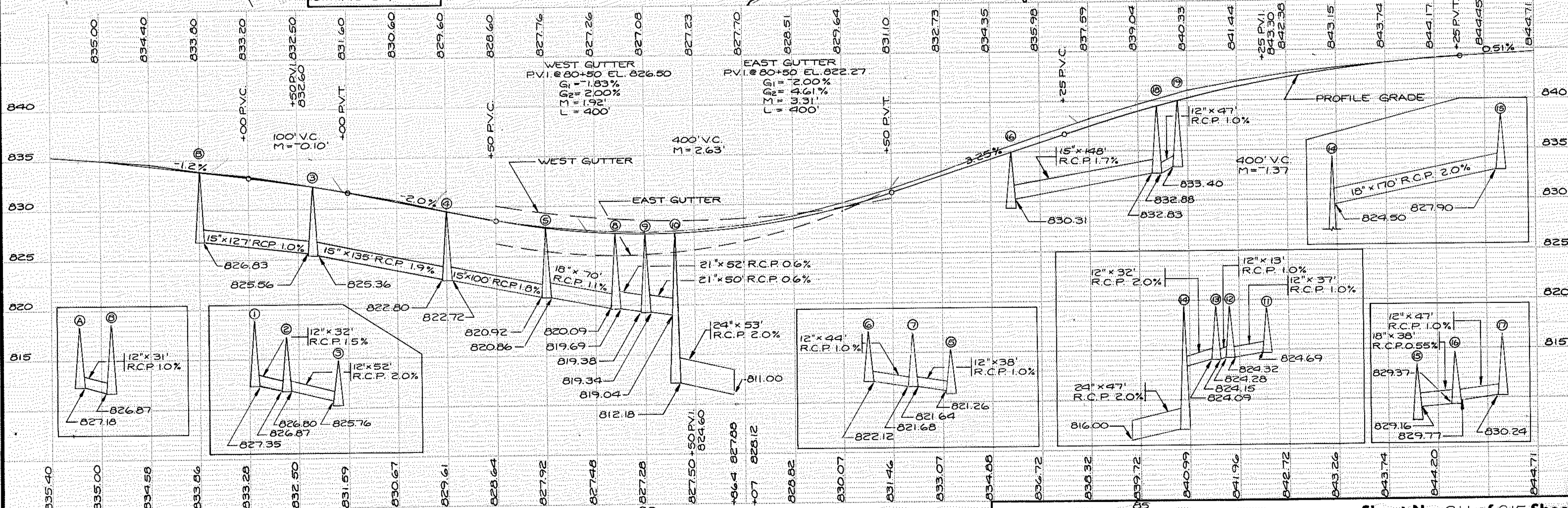
NOTE: 84+96 LT. RELOCATE HYD. 20' N.W.

NOTE: 85+04 TO 86+30 LT. RELOCATE SPRINKLER SYSTEM 20' WEST.



B.M. ELEV. 834.09  
TOP HYDRANT  
STA. 76+83.49' RT.

ERR. P.I. 78+08.90  
Δ = 33° 45'  
D = 7° 00'  
R = 818.51  
T = 298.22'  
L = 566.67'



EXC. FILL

EXC. FILL

75+61.6 834.19  
BIT. ENT. LT.

77+35 830.94  
RICE CR. WAY RT.

75+50 834.36

77+23 831.22  
SO. GUTTER RICE CR. WAY RT.

MATCH INPLACE @ 75+13.68

323 183

75+00 835.08

77+21 831.15  
ENT. LT.

86 51

MATCH INPLACE @ 74+65 RT.

74+50 835.51

77+00 831.59

473 256

74+00 835.90

76+50 832.50

473 256

73+50 836.36

76+00 833.28

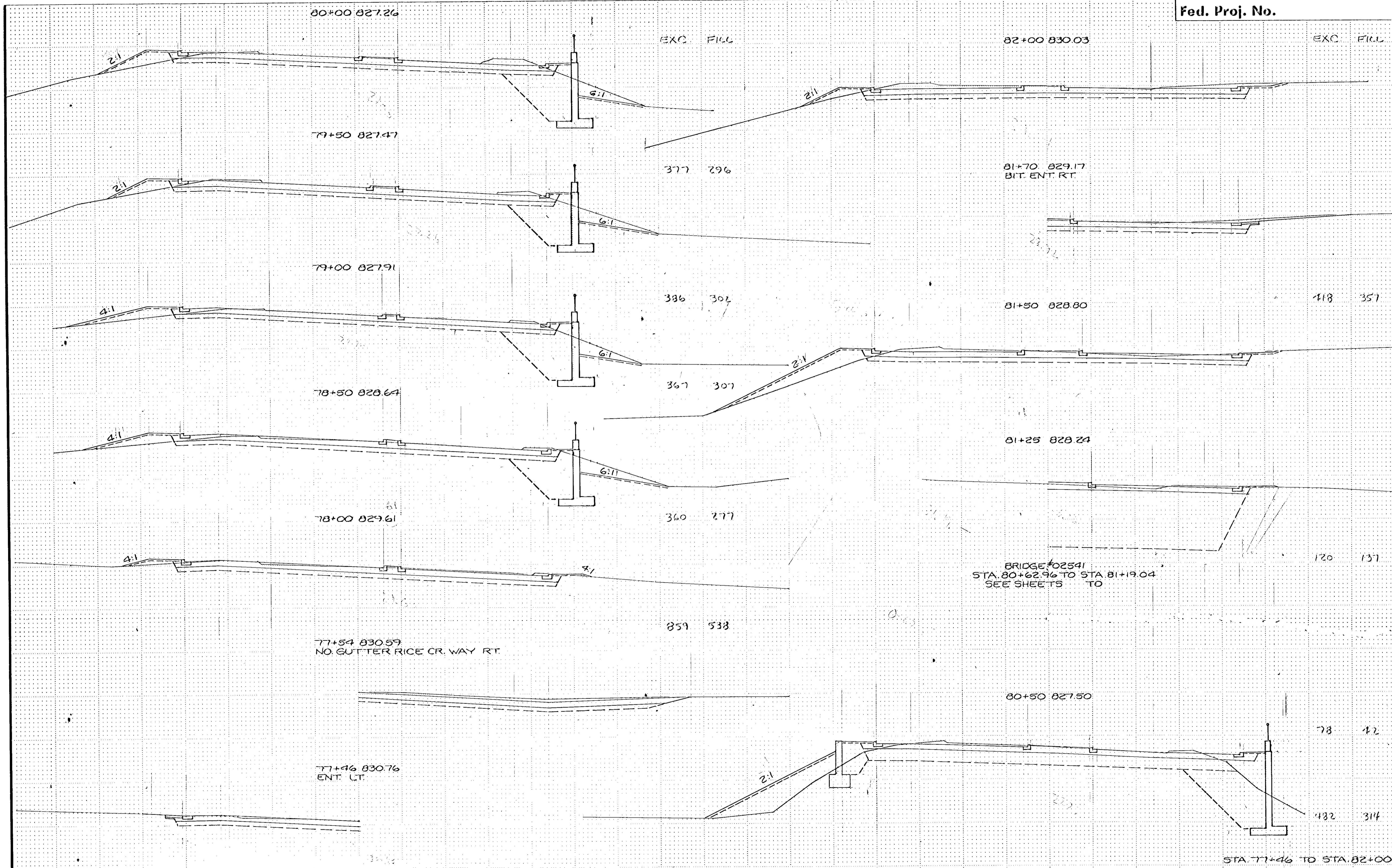
443 229

73+00 836.79

2.1

417 225

STA 73+00 TO STA. 77+35



80+00 827.26

EXC. FILL

82+00 830.03

EXC. FILL

79+50 827.47

377 296

81+70 829.17  
BIT. ENT. RT.

79+00 827.91

386 302

81+50 828.80

118 357

78+50 828.67

367 307

81+25 828.24

78+00 829.61

360 277

BRIDGE #02541  
STA. 80+62.96 TO STA. 81+19.04  
SEE SHEETS TO

120 137

77+54 830.59  
NO. GUTTER RICE CR. WAY RT.

859 538

80+50 827.50

77+46 830.76  
ENT. LT.

78 42

432 314

STA. 77+46 TO STA. 82+00

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EXC. FILL

85+89.5 841.70  
BIT. ENT. RT.

EXC. FILL

84+50 838.30  
SO. GUTTER HARTMAN CIRCLE LT.

85+50 840.98

84+00 836.72  
CONC. ENT. RT.

538 218

SEE SHT G7 FOR LIMITS OF FOUNDATION  
SUBCUT.

85+38 840.66  
BIT. ENT. RT.

673 232

83+68 835.64  
CONC. ENT. RT.

622 221

85+00 839.72

83+50 834.88

547 227

84+95 839.53  
NO. GUTTER HARTMAN CIRCLE LT.

83+00 833.06

539 228

84+72 838.96  
E HARTMAN CIRCLE LT.

82+50 831.43  
BIT. ENT. RT.

469 252

444 271

STA. 82+50 TO STA. 85+89.5

COPY EQUIPMENT FROM 11 SHEETS

88+05 84424  
SO. GUTTER LOCKE LAKE RD. RT.

88+00 84420

87+50 84374

87+00 84326

86+50 84272

86+00 84194

431 197

512 194

653 207

637 213

677 224

90+00 84533

89+00 84471

88+40 84418  
NO. GUTTER LOCKE LAKE RD. RT.

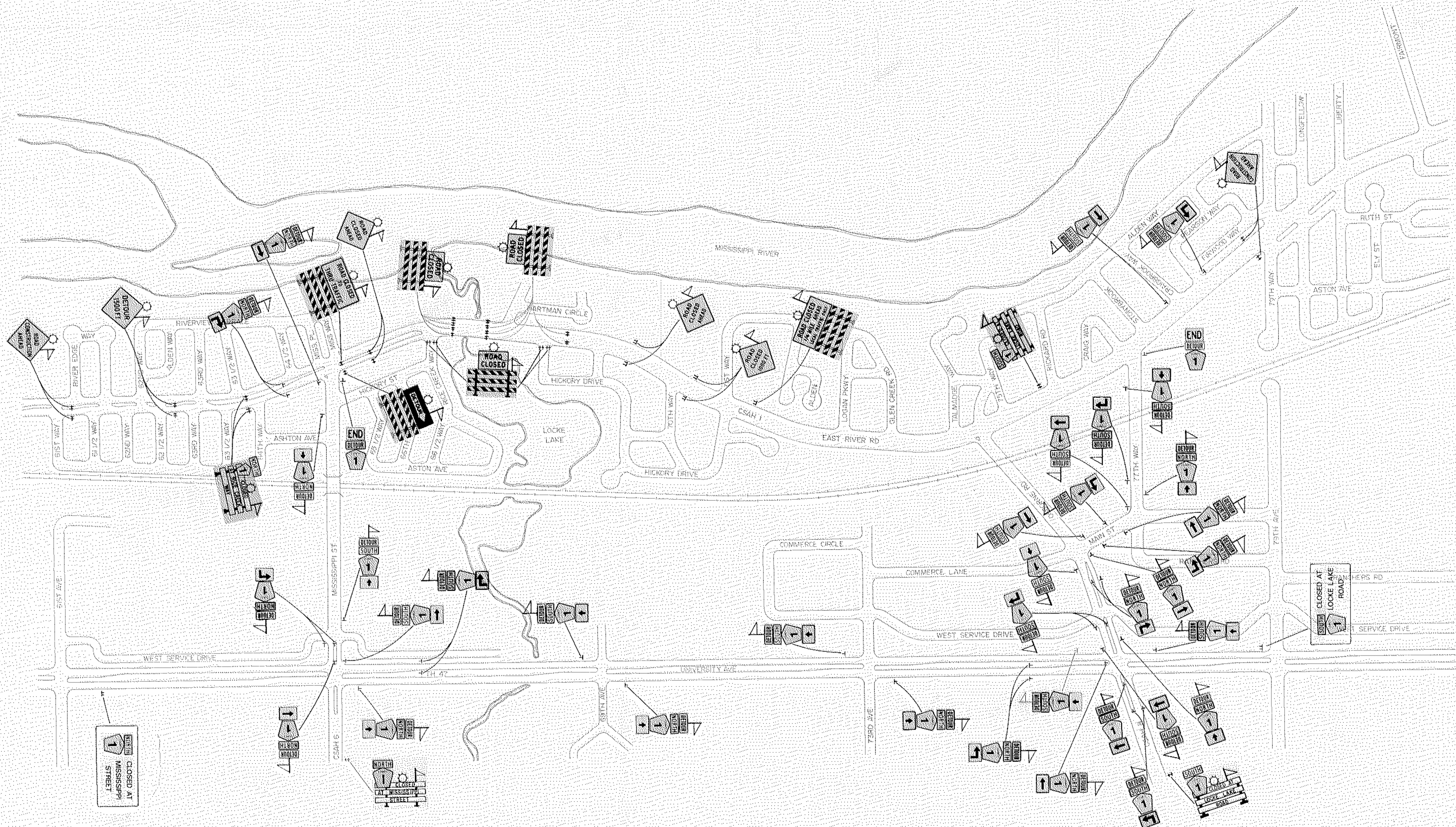
88+24 84441  
E. LOCKE LAKE RD. RT.

769 363

STA. 86+00 TO STA. 90+00

SEE SHT. G7 FOR LIMITS OF FOUNDATION  
SUBCUT.

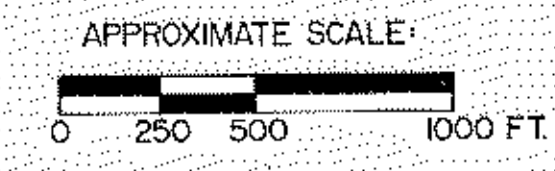


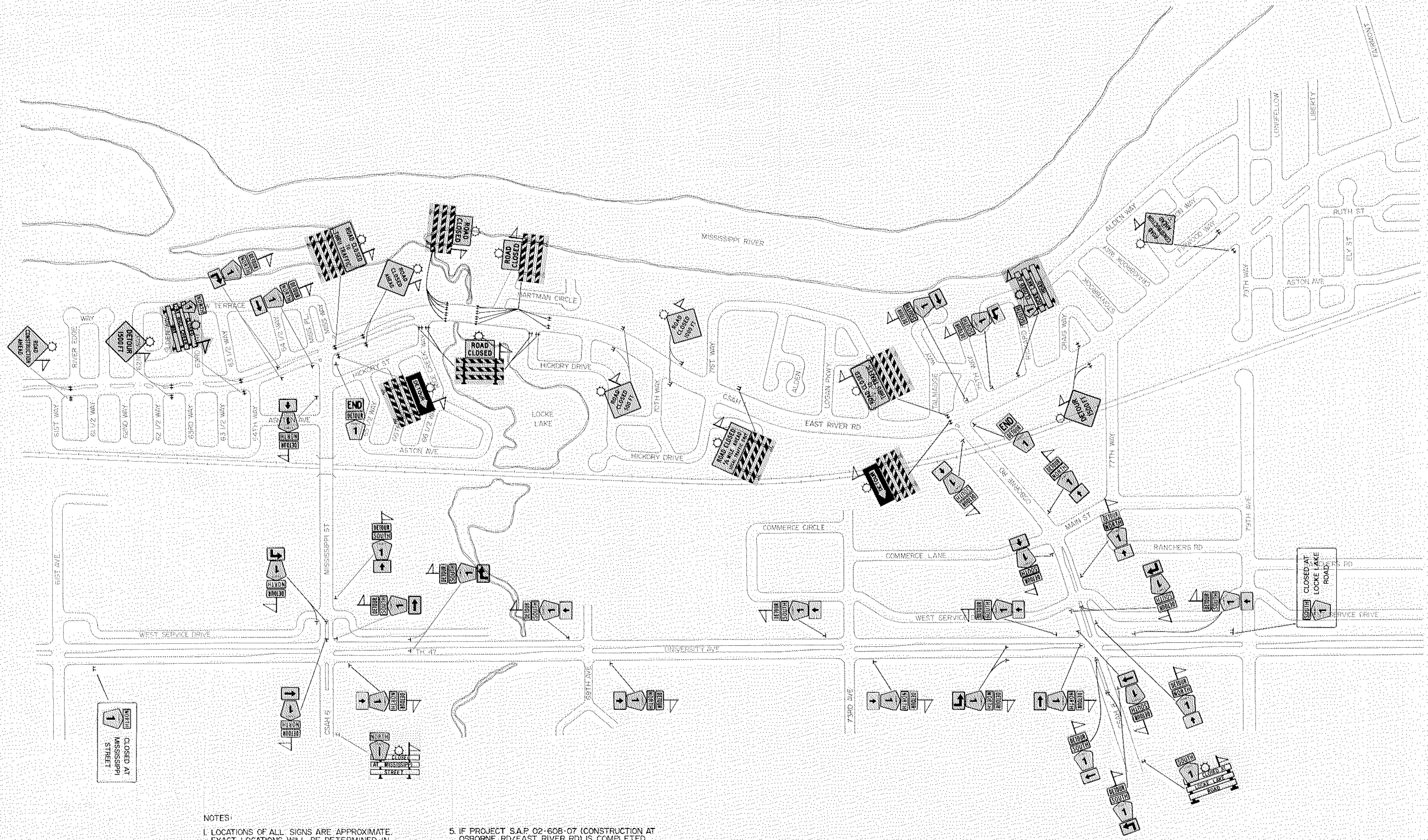


**NOTES:**

1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET \_\_\_\_\_ FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. IF PROJECT S.A.P. 02-606-07 (CONSTRUCTION AT OSBORNE RD/EAST RIVER RD) IS COMPLETED BEFORE S.P. 02-601-29, THE DETOUR LAYOUT SHOWN ON SHEET \_\_\_\_\_ (TRAFFIC CONTROL-PART II) WILL BE INSTALLED BY THE CONTRACTOR IN PLACE OF THE DETOUR LAYOUT SHOWN ON THIS SHEET (TRAFFIC CONTROL-PART I).

**RICE CREEK BRIDGE - DETOUR LAYOUT  
(TRAFFIC CONTROL- PART I)**

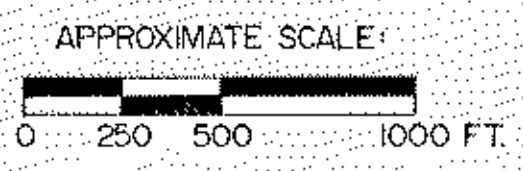




**NOTES:**

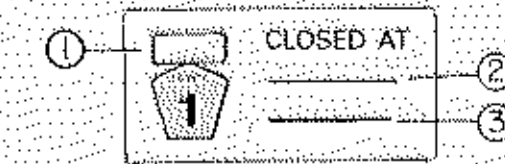
1. LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE SHEET FOR SIGNING SCHEDULE.
3. ALL BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
4. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. IF PROJECT SAP 02-608-07 (CONSTRUCTION AT OSBORNE RD/EAST RIVER RD) IS COMPLETED BEFORE SP 02-601-29, THE DETOUR LAYOUT SHOWN ON THIS SHEET (TRAFFIC CONTROL - PART II) WILL BE INSTALLED BY THE CONTRACTOR IN PLACE OF THE DETOUR LAYOUT SHOWN ON SHEET (TRAFFIC CONTROL - PART I).

**RICE CREEK BRIDGE - DETOUR LAYOUT**  
(TRAFFIC CONTROL - PART II)



M.U.T.C.D. CODE	SIZE		TRAFFIC CONTROL-PART I QUANTITIES	TRAFFIC CONTROL-PART II QUANTITIES	M.U.T.C.D. CODE	SIZE		TRAFFIC CONTROL-PART I QUANTITIES	TRAFFIC CONTROL-PART II QUANTITIES
YELLOW FLASHER					M4-8	24" x 12"			
R11-2	48" x 30"		14	14	M3-1	24" x 12"		3	2
TYPE III	8 FT.				M1-6	24" x 24"			
YELLOW FLASHER					M5-1(R)	21" x 15"			
YELLOW FLASHER					M4-8	24" x 12"			
R11-3	60" x 30"		1	1	M3-1	24" x 12"		5	4
TYPE III	8 FT.				M1-6	24" x 24"			
YELLOW FLASHER					M5-1(L)	21" x 15"			
YELLOW FLASHER					M4-8	24" x 12"			
R11-4	60" x 30"		1	2	M3-1	24" x 12"		2	1
TYPE III	8 FT.				M1-6	24" x 24"			
YELLOW FLASHER					M6-1(R)	21" x 15"			
YELLOW FLASHER					M4-8	24" x 12"			
W20-1	48" x 48"		4	4	M3-1	24" x 12"		4	2
YELLOW FLASHER					M1-6	24" x 24"			
YELLOW FLASHER					M6-1(L)	21" x 15"			
W20-2	48" x 48"		1	4	M4-8	24" x 12"			
YELLOW FLASHER					M3-1	24" x 12"			
YELLOW FLASHER					M1-6	24" x 24"			
W20-3	48" x 48"		2	2	M6-3	21" x 15"		6	7
YELLOW FLASHER					M4-8	24" x 12"			
W20-3	48" x 48"		2	2	M3-3	24" x 12"		5	4
YELLOW FLASHER					M1-6	24" x 24"			
W20-3	48" x 48"		2	2	M5-1(L)	21" x 15"		3	2
YELLOW FLASHER					M4-8	24" x 12"			
M4-10(R)	48" x 18"		1	1	M3-3	24" x 12"		3	2
TYPE III	8 FT.				M1-6	24" x 24"			
YELLOW FLASHER					M6-1(R)	21" x 15"			
M4-10(L)	48" x 18"		0	1	M4-8	24" x 12"			
TYPE III	8 FT.				M3-3	24" x 12"		3	2
M3-1	24" x 12"				M1-6	24" x 24"			
M1-6	24" x 24"		2	2	M6-1(L)	21" x 15"		7	7
	8 FT.				M6-3	21" x 15"			
M3-3	24" x 12"				M4-6	24" x 12"			
M1-6	24" x 24"		2	2	M4-8	24" x 12"		2	2
	8 FT.				M1-6	24" x 24"			
M3-1	24" x 12"								
M1-6	24" x 24"		1	1					
	8 FT.								

T.H. 47 CONSTRUCTION INFORMATION SIGNS



LOCATION ALONG T.H. 47  
S. OF MISSISSIPPI STREET  
N. OF 73RD STREET

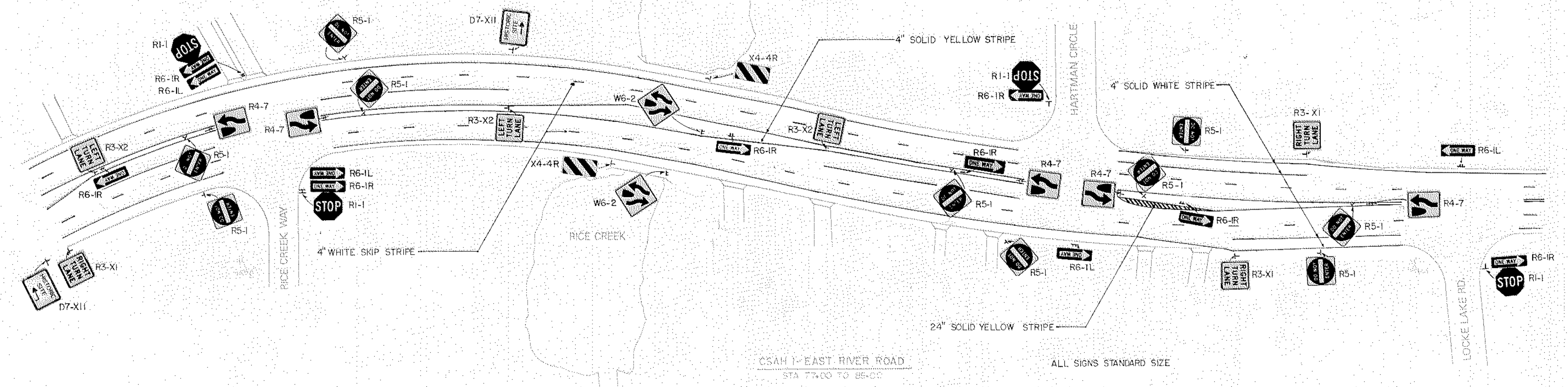
CLOSED AT

SIGN NO. LEGEND

① M3-1A MISSISSIPPI STREET  
② M3-3A LOCKE LAKE ROAD

ALL LETTERS NOT PART OF AN OVERLAY  
SHALL BE 8" HWY. GOTHIC SERIES "D", BLACK

SIGN PANEL SHALL BE 48" x 96", ORANGE



M.U.T.C.D. CODE NUMBER	PANEL SIZE (INCHES)	PANEL AREA (SQ. FT.)	NO. OF GROUND MOUNT INSTALLATIONS	NO. OF ISLAND MOUNT INSTALLATIONS	SIGN PANEL LEGEND	NO. OF POSTS/INSTALLATIONS
R1-I	30"x30"	6.25	4		STOP	1
R3-X1	30"x30"	6.25	3		RIGHT TURN LANE	1
R3-X2	30"x30"	6.25		3	LEFT TURN LANE	1
R4-7	24"x30"	5.00		5	KEEP RIGHT	1
R5-I	30"x30"	6.25	5	5	DO NOT ENTER	1
R6-IR	36"x18"	4.50	4	4	ONE WAY	2*
R6-IL			4		ONE WAY	
W6-2	36"x36"	9.00	1	1	DIVIDED HIGHWAY ENDS	2
D7-XII	24"x30"	5.00	1		HISTORIC SITE	1
X4-4	18"x36"	4.50		2	CLEARANCE MARKER	1

INSTALL ONE X4-2 BELOW EACH R4-7

USE 2 POSTS TO SUPPORT INDEPENDENTLY-MOUNTED ONE WAY SIGNS-SEE PLAN TO DETERMINE WHICH SIGNS ARE MOUNTED JOINTLY WITH OTHER SIGNS

REVISIONS			
DATE	BY	DATE	BY