

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

STORM WATER DRAIN NO. 81

IN CORPORATE LAKES

CITY OF WICHITA PROJECT NO. 468-76-245-81975-000-000-001

INDEX NO. 750083

INDEX OF SHEETS

1. TITLE SHEET
2. PLAN
3. TYPICAL SECTION & RIPRAP DETAILS
4. GENERAL NOTES, PLAN AND MISCELLANEOUS DETAILS
5. 3'-0" x 4'-0" x 10'-0" R.C.B. DETAILS
6. WALL SECTIONS
7. SECTION DETAILS
8. REINFORCEMENT DETAILS
9. SUPPORTS AND SPACERS FOR REINFORCING STEEL
- 10-11. CROSS SECTIONS

PROJECT SURVEY CONTROL

PROJECT DATUM: CITY OF WICHITA DATUM.

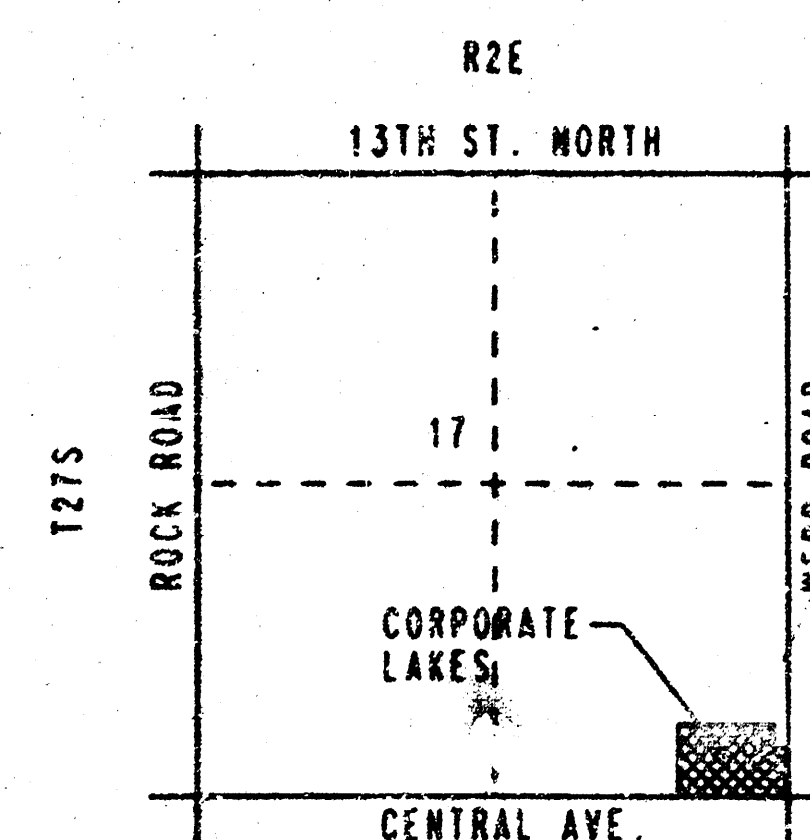
BENCH MARK: CHISELED "M" SOUTH END EAST CURB EAST ENTRANCE TO ART MUSEUM. ELEV. -165.35

BENCH MARK: CHISELED "M" NORTH END OF ISLAND NORTH OF CENTRAL AND WEBB. ELEV. -174.00

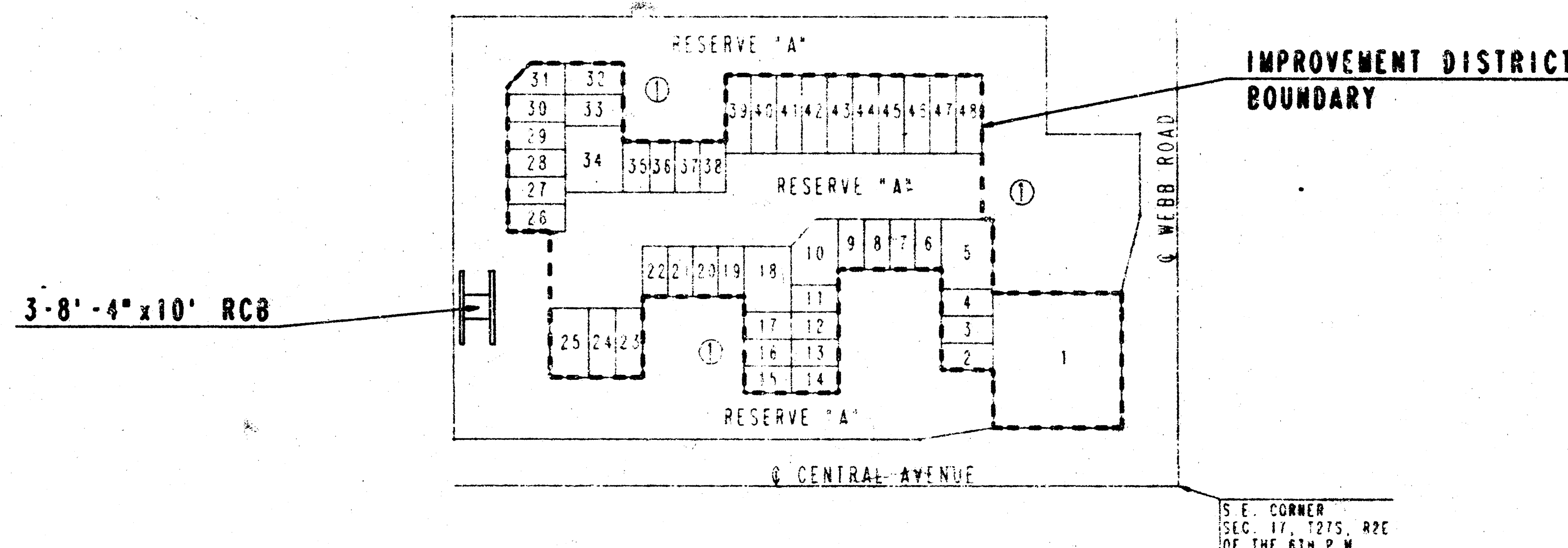
EARTHWORK

EXCAVATION
X-SECTIONS CU. YDS.

COMPACTED FILL
X-SECTIONS CU. YDS.



VICINITY MAP



GENERAL NOTES

UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THE ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

PURPLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITE TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNGAUNTLY APPEARANCE WILL NOT BE APPROVED.

CONTRACTOR SHALL SATISFY HIMSELF OF SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION.

TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

THE SUB CONTRACTOR SHALL COORDINATE HIS WORK WITH THE EXISTING CONSTRUCTION FOR ROAD ITEMS ADJACENT TO POND. (NOW UNDER CONSTRUCTION BY OTHERS).

THE SUB CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION OF ANY CURB, GUTTERS, EARTH BERM, STREET PILING ETC. AND/OR PAVING REQUIRED TO INSURE PROPER CONSTRUCTION OF THE WCD AND PROPER INSTALLATION OF RIPRAP. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO OTHER WORK ITEMS.

CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF TWENTY-FOUR (24) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

EASTWICH SYSTEM BELL TELEPHONE COMPANY	1-316-571-7511
CABLEVISION	262-4270 OR 262-2441
API GAS SERVICE	262-1511
KANSAS GAS & ELECTRIC	262-1511
CITY OF WICHITA WATER DEPARTMENT	262-4400
CITY OF WICHITA SEWER DEPARTMENT	262-4400
ARLIS GAS COMPANY	942-8350 OR 942-8651

ALL DISTURBED AREAS WITHIN RESERVE "A" AND ON WICHITA ANY RESTORATION PROPERTY SHALL BE SEED, FERTILIZED AND MULCHED IN ACCORDANCE WITH CITY SPECIFICATIONS. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.



NOVEMBER, 1989

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

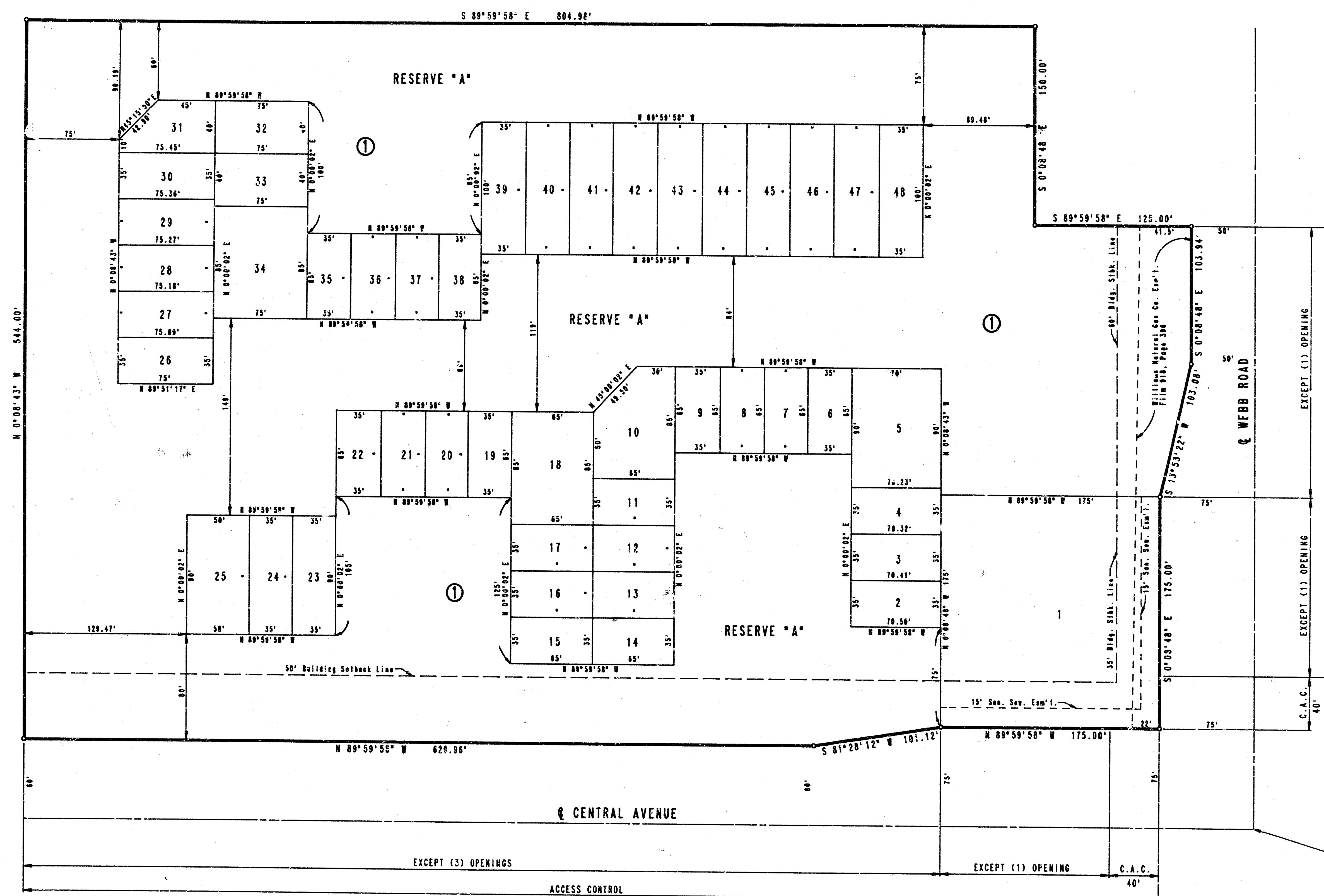
WICHITA, KANSAS

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CORPORATE LAKES

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

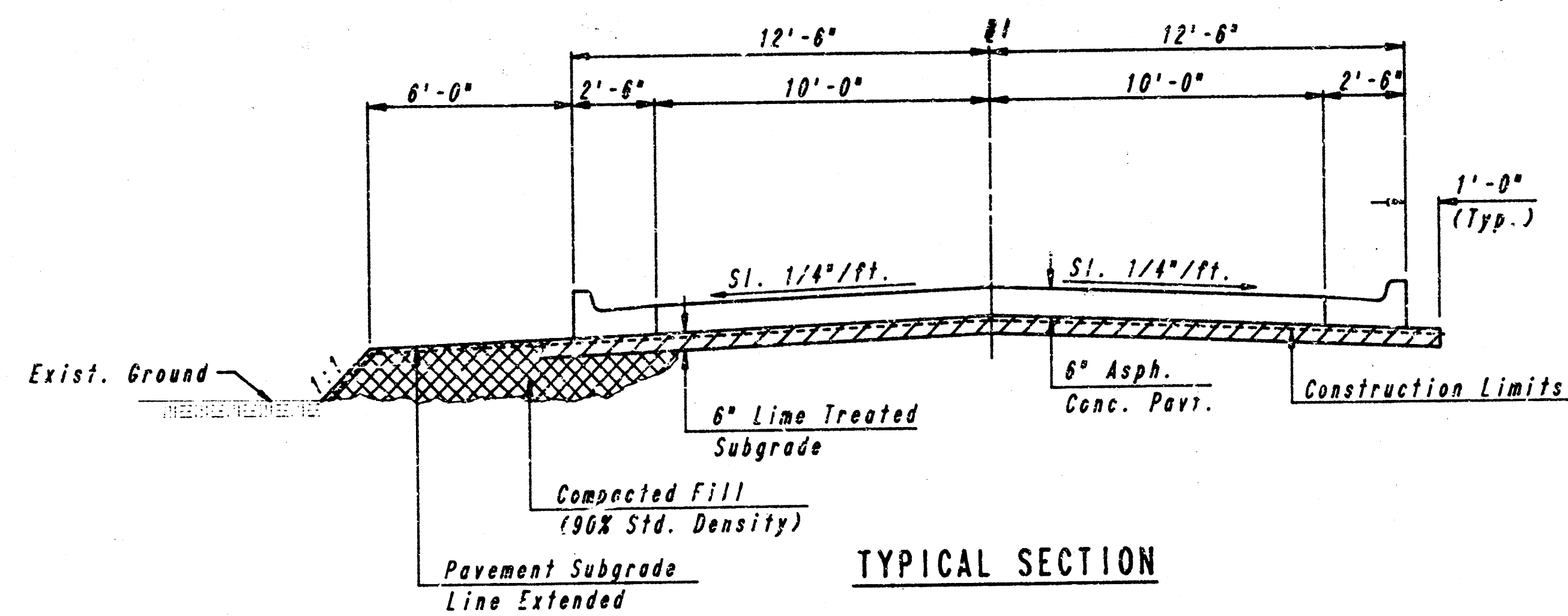
PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-TG-245-81973-000-000-001	2	11



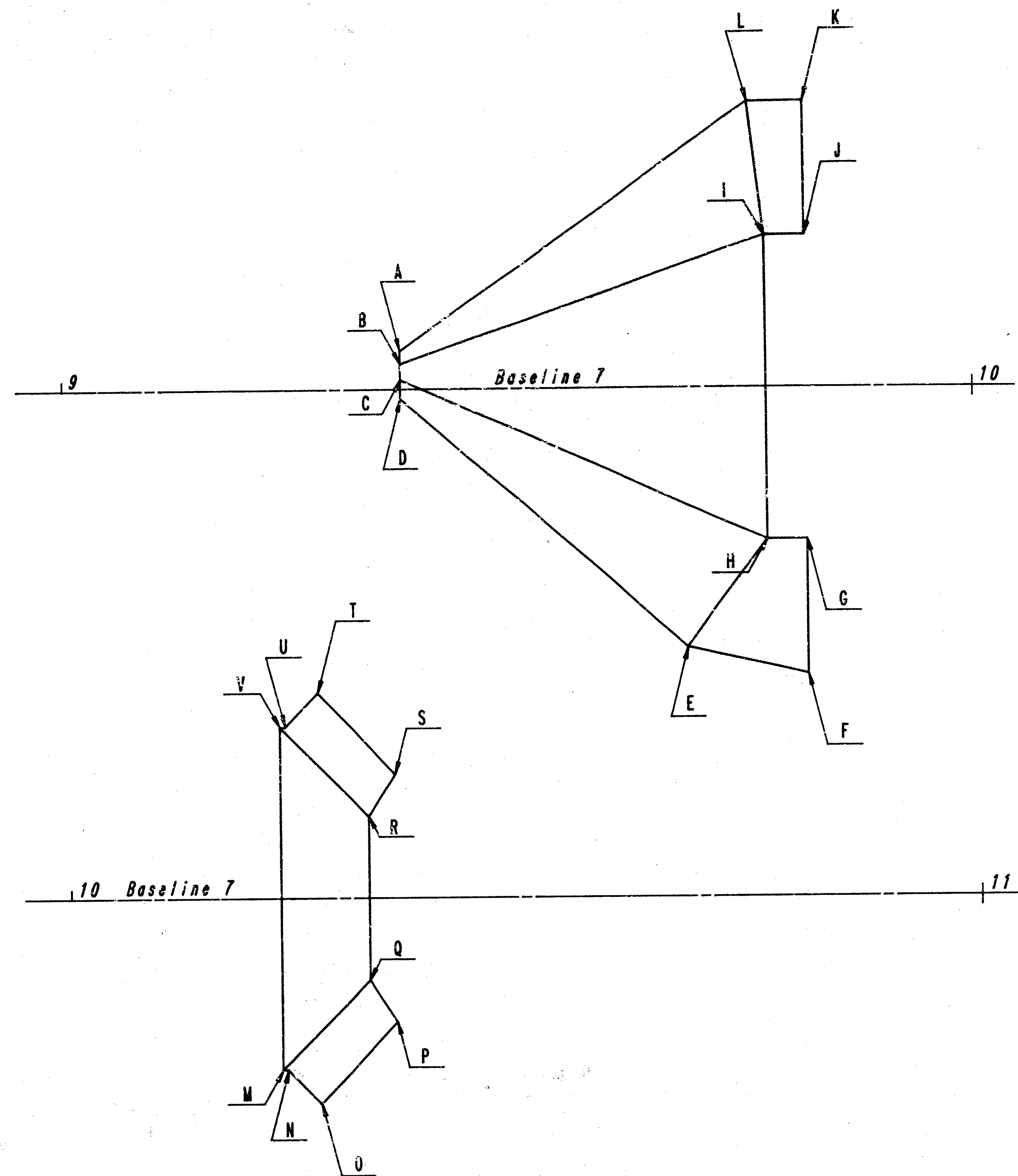
SCALE: 1" = 50'
 ○ = IRON SET
 B.M. - CITY OF WICHITA B.M. DISC
 32 FT. NORTH AND 42 FT. WEST OF
 INTERSECTION OF CENTERLINES
 OF CENTRAL AND WEBB RD.
 CITY DATUM ELEV. +172.88

CORPORATE LAKES STORM WATER DRAIN NO. 81	
PLAT	
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS	
Designed by	Checked by
Drawn by DEP	Date SEPT. 1988 Job No. 88277-3

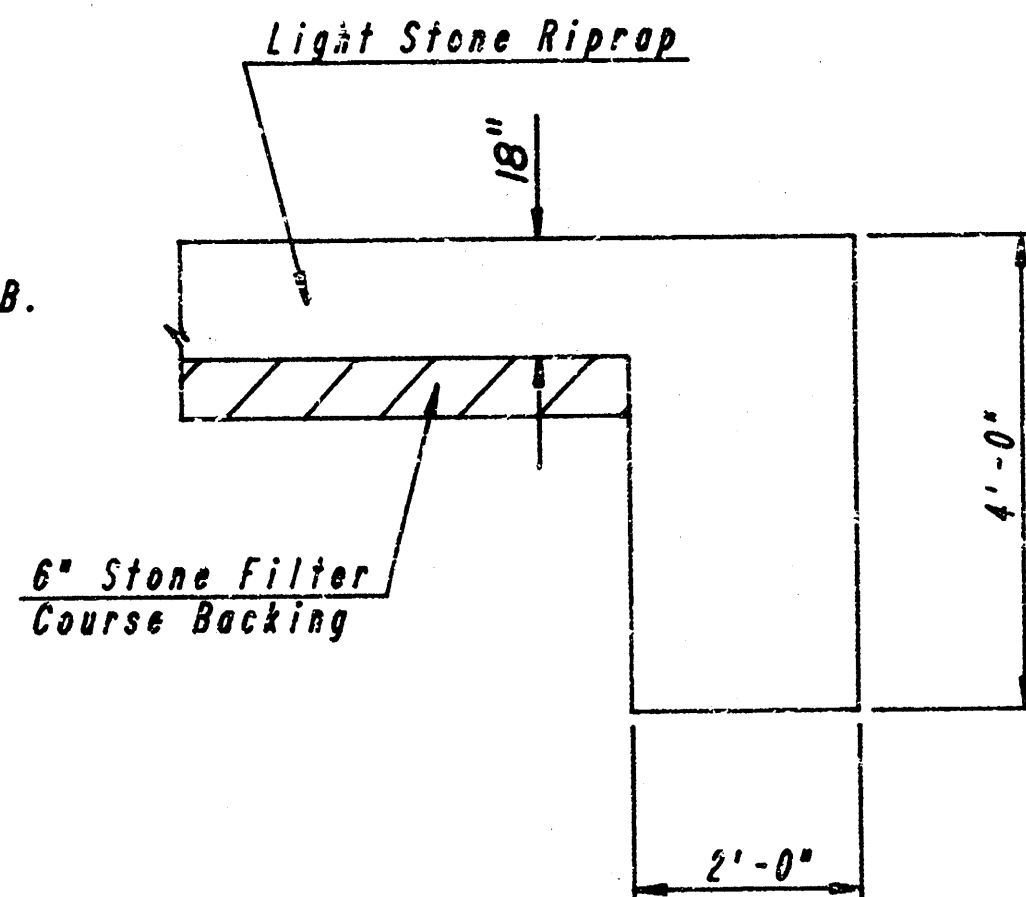
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NOTE:
Curb and Gutter, Asphalt and Lime Treated
Subgrade are by Others.



RIPRAP PLAN
Scale: 1"=10'



- NOTES
1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED.
 2. TOEWALLS SHALL BE INSTALLED ALONG ALL EDGES OF STONE RIPRAP EXCEPT AS NOTED.
 3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

PROJECT NO.	SHEET NO.	TOTAL SHEETS
466-76-245-81975-000-000-001	3	11

LOCATION	OFFSET @ 7	ELEVATION	STATION @ 7
A	4.00' Lt.	156.0	9+37.08
B	2.50' Lt.	155.0	9+37.08
C	1.00' Lt.	155.0	9+37.08
D	1.00' Rt.	156.0	9+37.08
E	27.00' Rt.	162.0	9+88.50
F	29.83' Rt.	162.0	9+81.50
G	15.33' Rt.	155.0	9+81.50
H	15.83' Rt.	155.0	9+77.08
I	15.03' Lt.	155.0	9+77.08
J	15.83' Lt.	155.0	9+81.50
K	29.83' Lt.	162.0	9+81.50
L	29.83' Lt.	159.5	9+75.50
M	17.83' Rt.	155.0	10+22.92
N	17.83' Rt.	155.0	10+23.50
O	21.37' Rt.	155.0	10+27.04
P	12.88' Rt.	151.0	10+35.53
Q	8.50' Rt.	151.0	10+32.50
R	8.50' Lt.	151.0	10+32.50
S	12.88' Lt.	151.0	10+35.53
T	21.37' Lt.	155.0	10+27.04
U	17.83' Lt.	155.0	10+23.50
V	17.83' Lt.	155.0	10+22.92

CORPORATE LAKES
STORM WATER DRAIN NO. 81

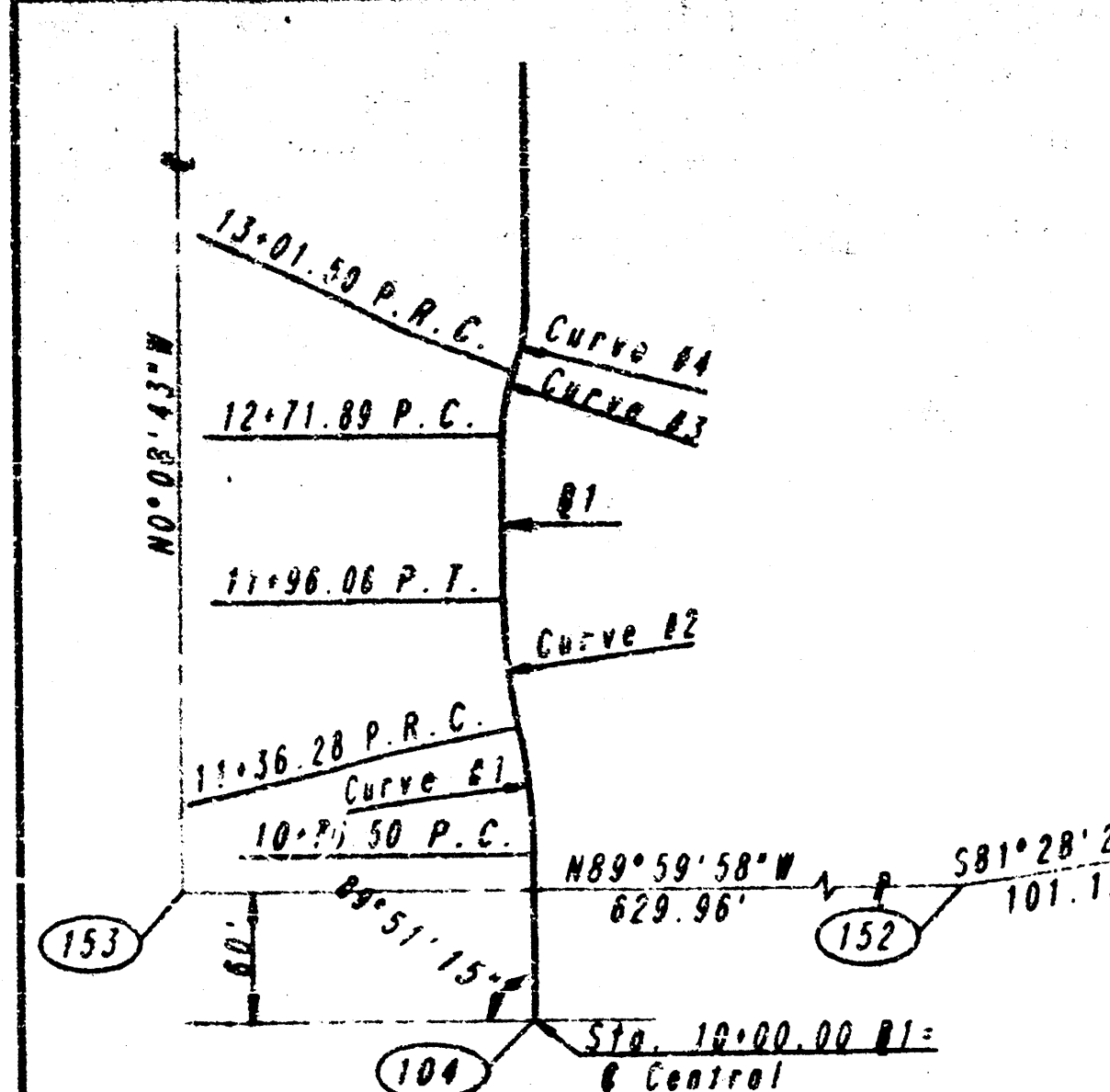
**TYPICAL SECTION AND
RIPRAP DETAILS**

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by R.A.S.	Checked by R.A.S.
Drawn by W.L.L.	Date Sept. 1989 Job No. 89277-3

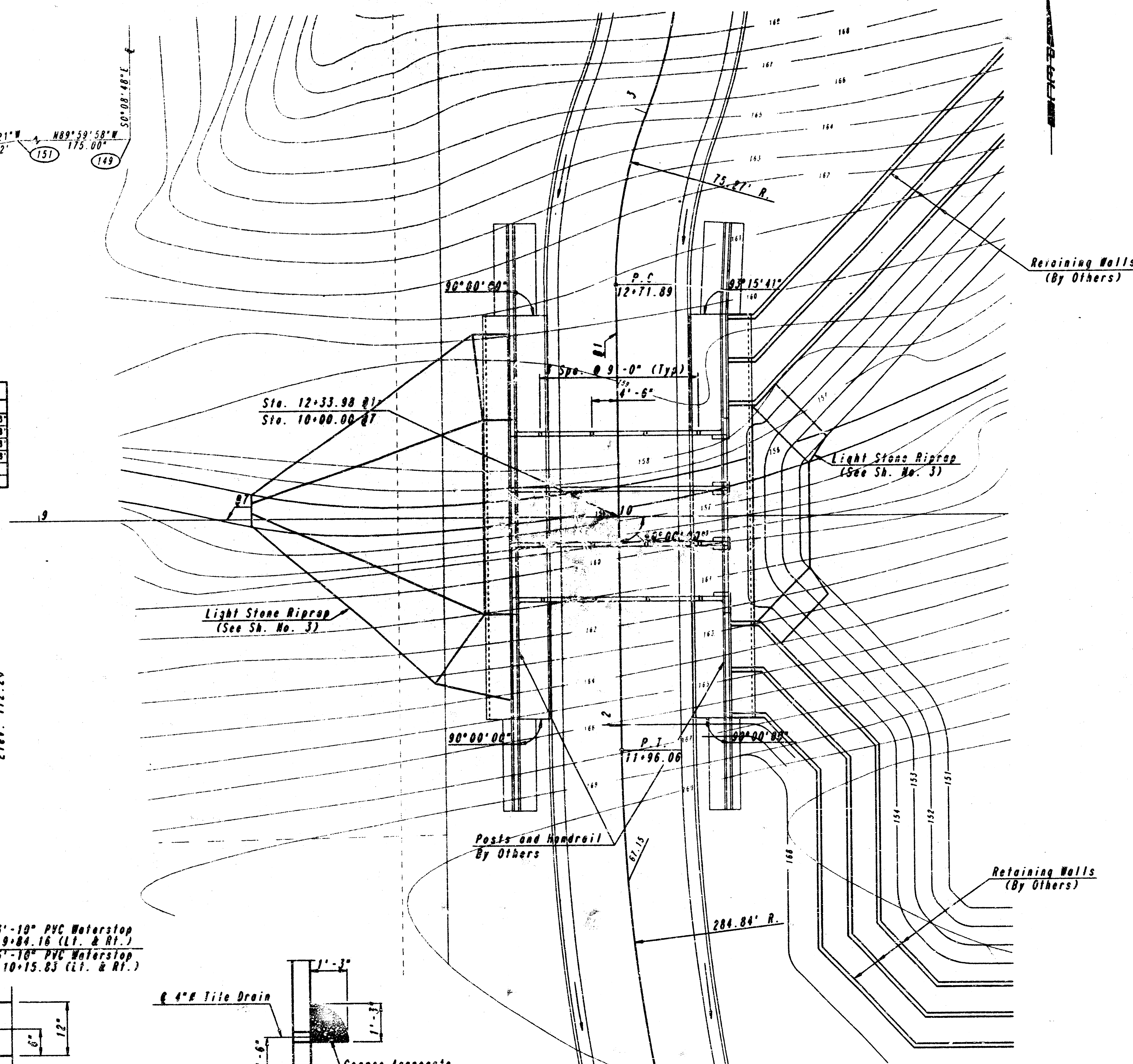
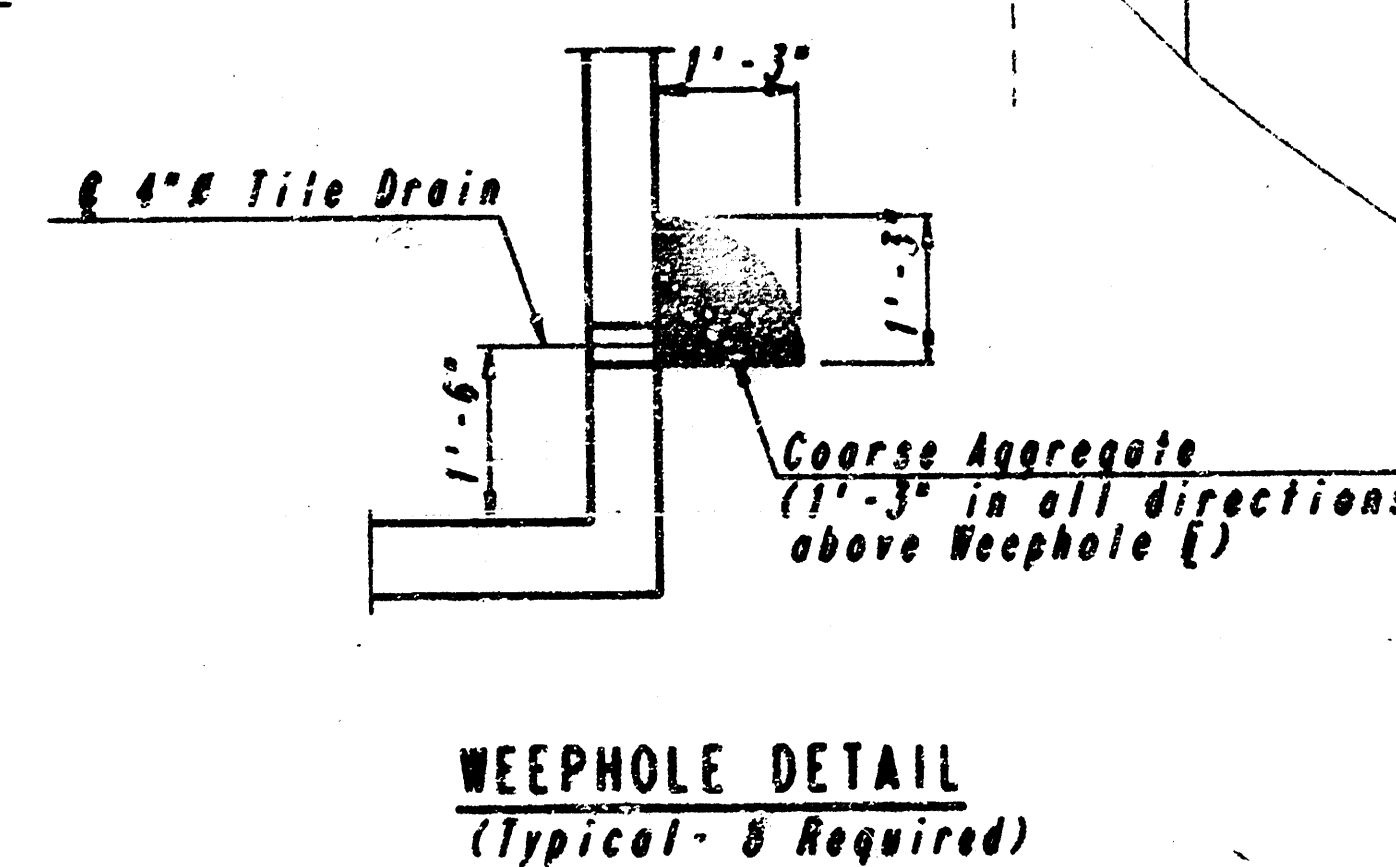
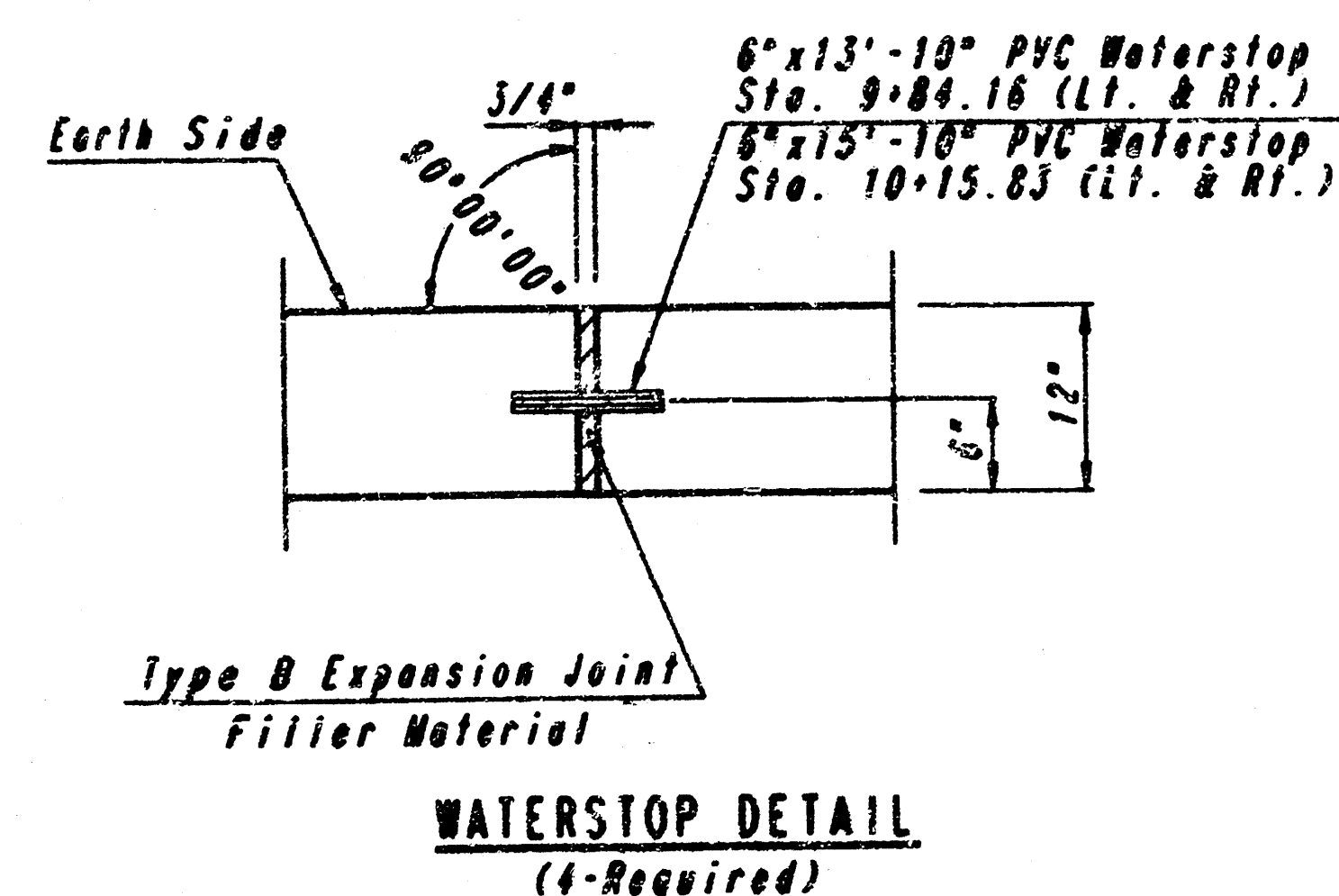
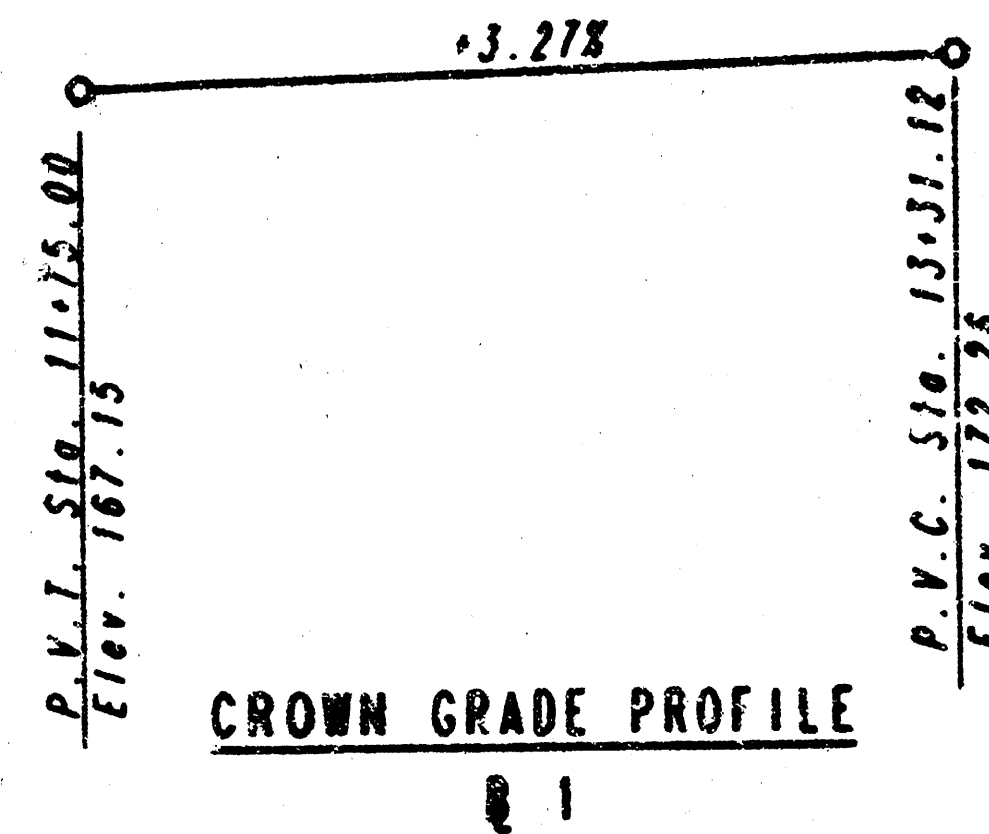
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PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-243-81875-000-000-001	4	11



POINT NO.	NORTH	EAST
104	4694.70031048	9069.40529733
148	4769.69015100	9931.71292600
151	4769.69221300	9756.71292600
152	4769.69350100	9656.71275000
153	4754.70601300	9926.73315000

CURVE NO.	A	D	R	T	L	F
1	12°01'29"	20°06'54"	284.84	58.90	59.79	1.55
2	12°01'29"	20°06'54"	284.84	58.90	59.79	1.55
3	22°32'25"	76°07'07"	75.27	15.00	29.61	1.48
4	22°32'25"	76°07'07"	75.27	15.00	29.61	1.48



GENERAL NOTES

LOADING: HS20-44 A.A.S.H.T.O. SPECIFICATION, 1993 EDITION AND SUBSEQUENT INTERIMS.

UNIT STRESSES:
F'c = 4,000 P.S.I., Fy = 60,000 P.S.I.

CONCRETE: CLASS AAA CONCRETE (AE) SHALL BE USED THROUGHOUT. CLASS AAA CONCRETE (AC) AND CLASS A CONCRETE SHALL COMPLY TO SECTION 402 OF THE 1980 KANSAS STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTION. BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOLDING, UNLESS OTHERWISE NOTED.

SEAL COURSE: A SEAL COURSE, CONSISTING OF 3" OF CLASS A CONCRETE SHALL BE CONSTRUCTED. NO REINFORCING SHALL BE PLACED UNTIL THE SEAL COURSE HAS GAINED SUFFICIENT STRENGTH TO PERMIT WORKING UPON IT WITHOUT INJURY.

REINFORCING STEEL: ALL DIMENSIONS RELATIVE TO REINFORCING ARE TO CENTERLINE OF BARS UNLESS OTHERWISE NOTED. BAR BENDING AND DIMENSIONS SHALL BE AS SHOWN AND NOTED ON THE BAR BENDING DIAGRAMS. THE CONCRETE COVER FOR ALL REINFORCING SHALL BE A MINIMUM OF 1 1/2" UNLESS OTHERWISE NOTED.

JOINTS: CONSTRUCTION JOINTS SHALL ONLY BE FORMED AT LOCATIONS SHOWN OR AS APPROVED BY THE ENGINEER.

EXCAVATION: ALL EXCAVATION AND BACKFILL SHALL EXTEND TO (2') BEYOND SIDES OF BOX AND WINGWALL.

WEEPHOLES: COURSE AGGREGATE SHALL BE DEPOSITED BEHIND EACH WEEPHOLE TO OCCUPY A SPACE EXTENDING (15") IN ALL DIRECTIONS ABOVE WEEPHOLE FLOWLINE.

MASONRY: THE SURFACES OF THE BOX CULVERT AND WALLS, AS SHOWN, SHALL BE FACED WITH BRICKS. THESE BRICKS SHALL BE AS MANUFACTURED BY NORMAL CORPORATION AND SHALL BE "MODULAR SMOOTH FACE" WITH THE COLOR OF BURGUNDY BLEND AND INTERLUXED WITH THESE SHALL BE "FEATHERLITE" BURNISHED MASONRY UNITS WITH THE COLOR OF LIMESTONE, 8"x16"x4" NOMINAL DEPTH.

BASIS OF PAYMENT

THE "3'-8" x 17'-0" R.C. BOX CULVERT" SHALL BE BID LUMP SUM WHICH SHALL INCLUDE ALL LABOR, MATERIAL, EXCAVATION, CONCRETE, REINFORCING STEEL, WATERSTOPS, BRICKWORK AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK. QUANTITIES ARE FOR INFORMATION ONLY.

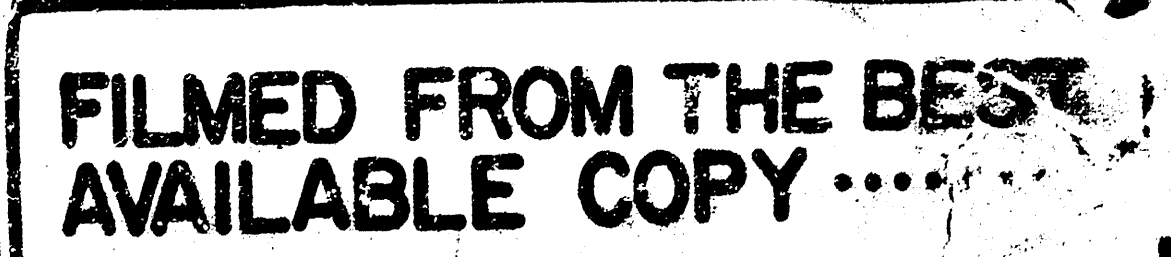
THE R.C. BOX CULVERT SHALL BE FACED WITH BRICK AS SHOWN IN SECTION B-B AND SECTION C-C, SHEET NO. 5 & 6, FOR 95'-8" EACH. NOTE ONLY THE UPSTREAM (EAST) FACE OF THE STRUCTURE HAS BRICK LEDGES LOWER THAN 1'-1 1/2" FROM TOP OF WALLS AND ONLY THE UPSTREAM (EAST) FACE OPENINGS HAVE ARCHED BRICKWORK EXTENDING 2'-0" INTO THE CULVERT CELLS ALONG THE LIMITS SHOWN. THE BRICK FACIA QUANTITY SHOWN ON SHEET NO. 4 IS BASED ON THE EXTERIOR OR INTERIOR VERTICAL WALL FACES TO BE BRICKED WITH NO ADJUSTMENT FOR PROJECTIONS INTO THE CULVERT CELLS OR TOP SURFACES. THE FOLLOWING IS AN ITEMIZED BREAKDOWN OF THE BRICK SURFACES FOR INFORMATION ONLY.

LOOKING WEST AT WEST WALL	107.2 S.F.
LOOKING EAST AT WEST WALL	107.2 S.F.
LOOKING EAST AT EAST WALL	107.2 S.F.
LOOKING WEST AT EAST WALL	695.9 S.F.

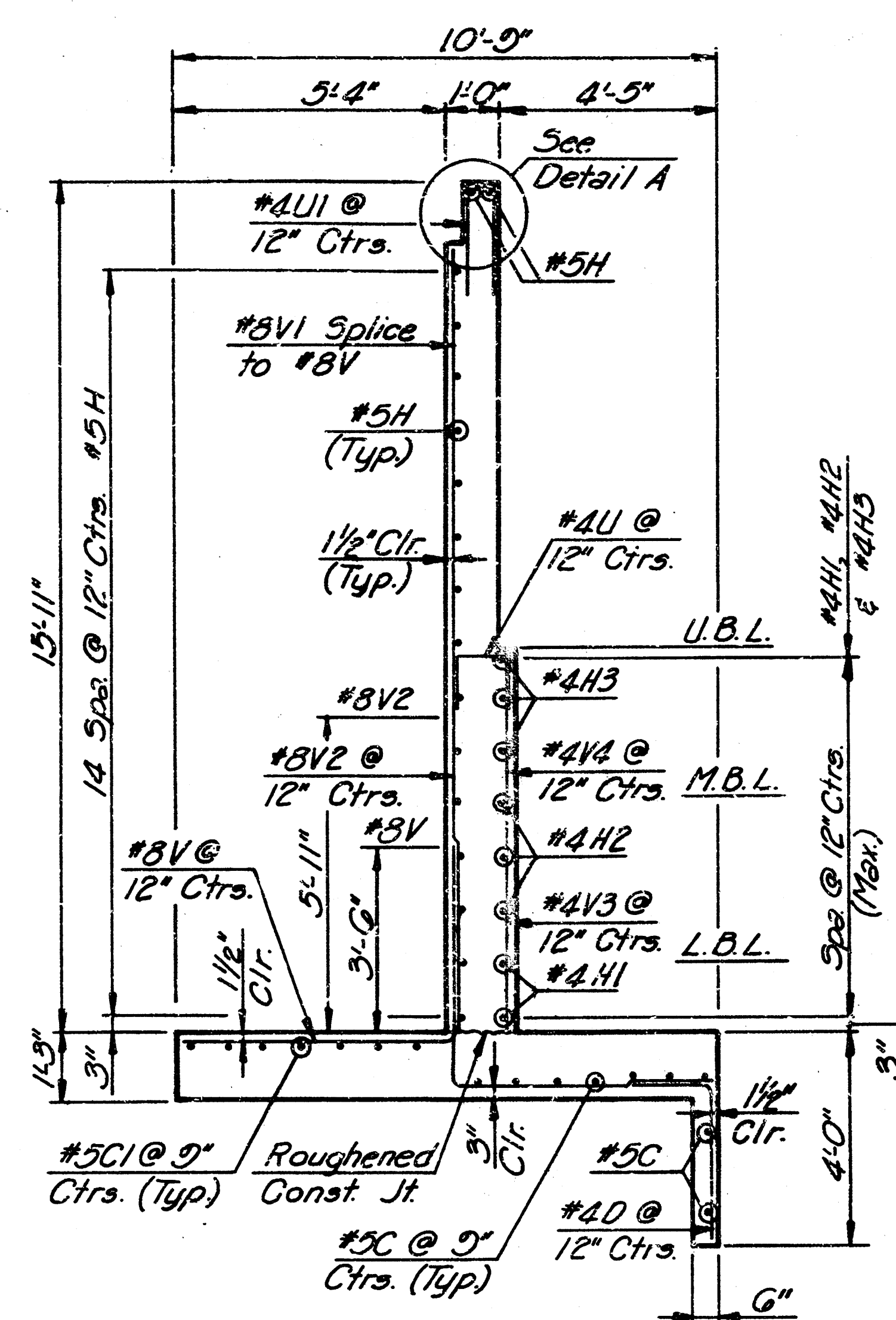
SUMMARY OF QUANTITIES (INFO. ONLY)	
CLASS AAA CONCRETE (AE)	255.7 C.Y.
REINFORCING STEEL (GRADE 60)	25,390 LBS.
BRICK FACIA	1017.5 S.F.
SEAL COURSE (CLASS A CONCRETE)	19 C.Y.

CORPORATE LAKES STORM WATER DRAIN NO. 81	
GENERAL NOTES, PLAN AND MISCELLANEOUS DETAILS	
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS	
Designed by R.A.S.	Checked by P.D.F.
Drawn by W.L.L.	Date Oct. 1989 Job No. 89277-3

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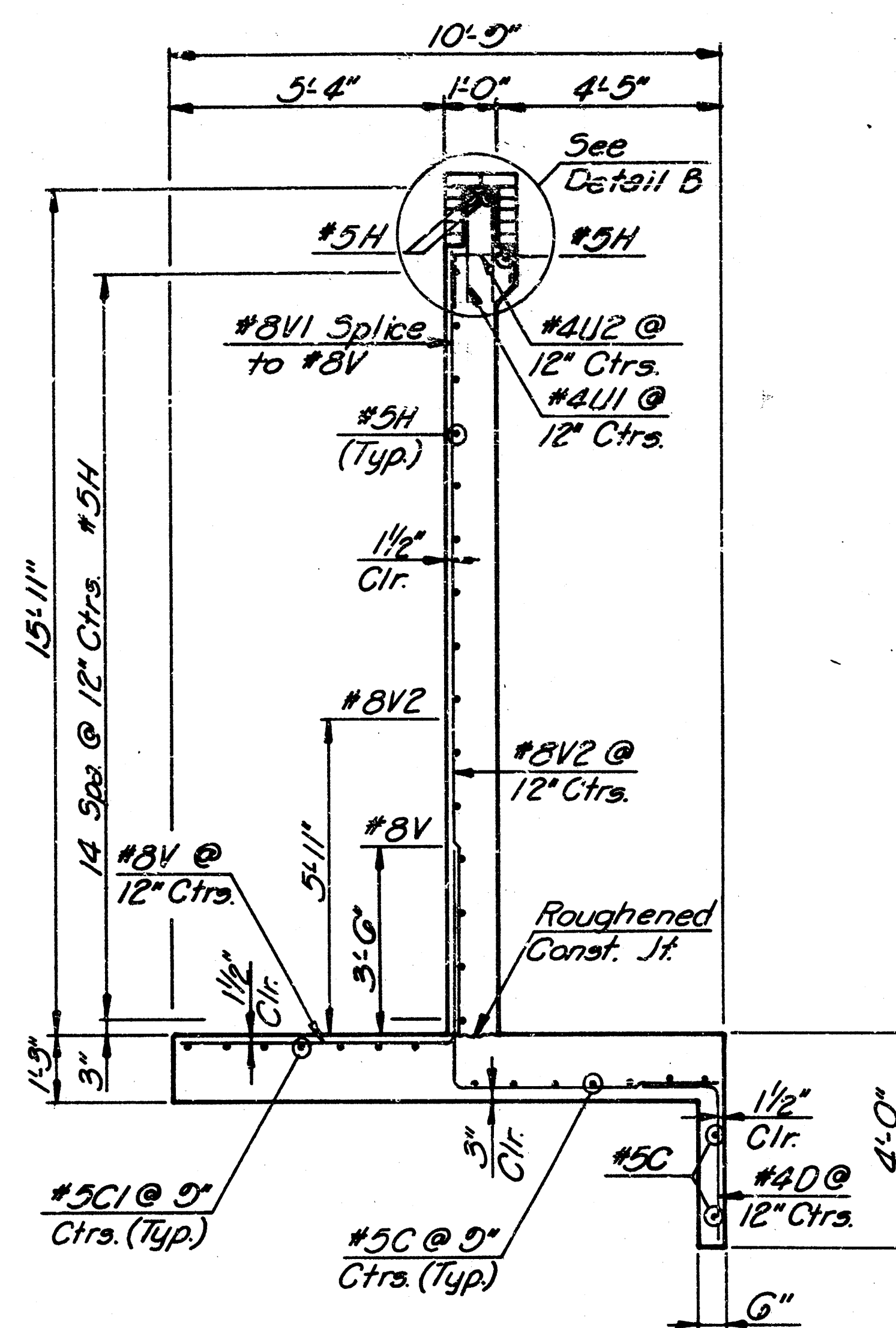


PROJECT NO.	SHEET NO.	TOTAL SHEETS
468-76-243-81975-000-001	G	11



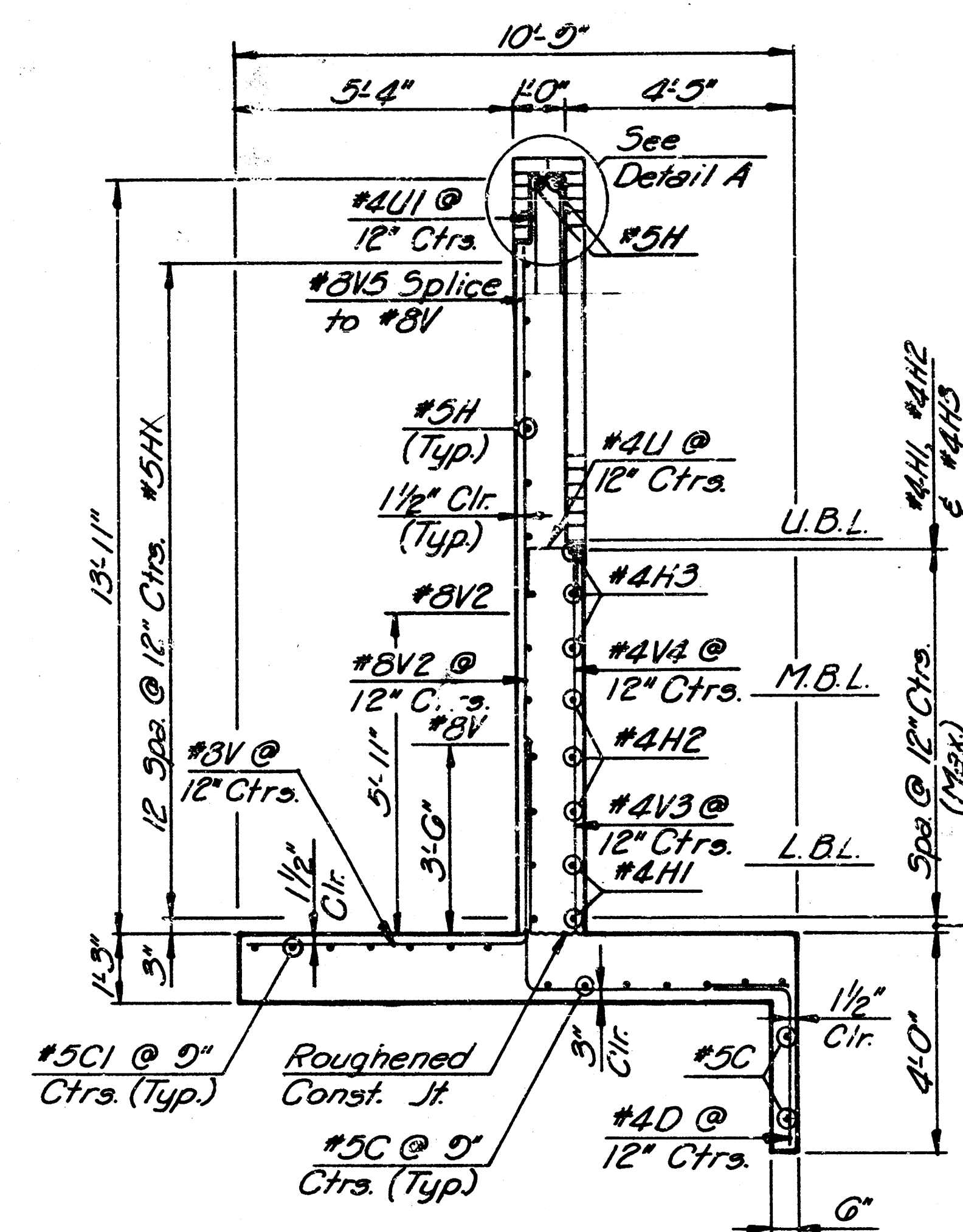
SECTION A-A

SEE WALL "A" OF REINFORCEMENT SUMMATION



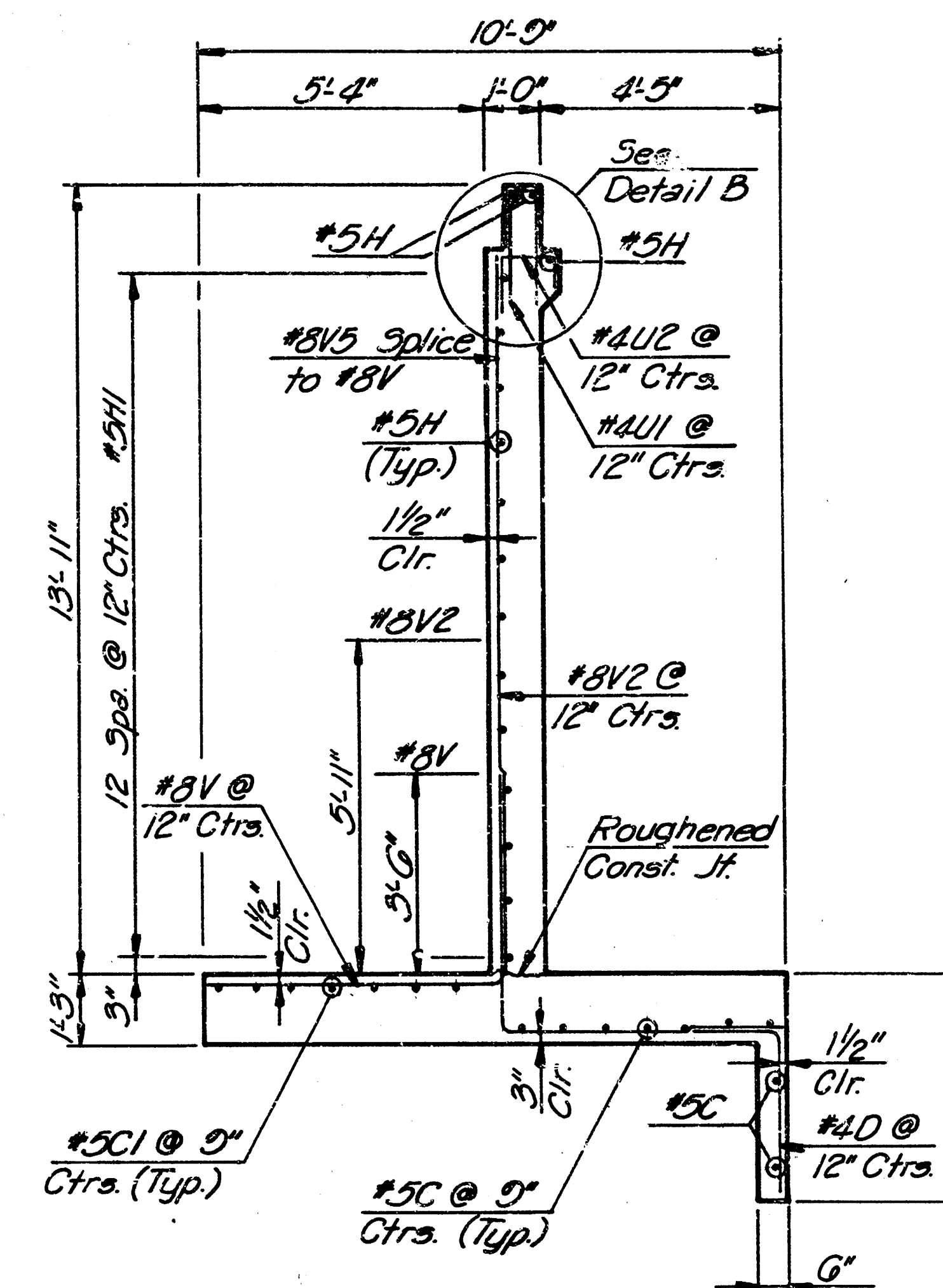
SECTION B-B

SEE WALL "B" OF REINFORCEMENT SUMMATION



SECTION C-C

SEE WALL "C" OF REINFORCEMENT SUMMATION

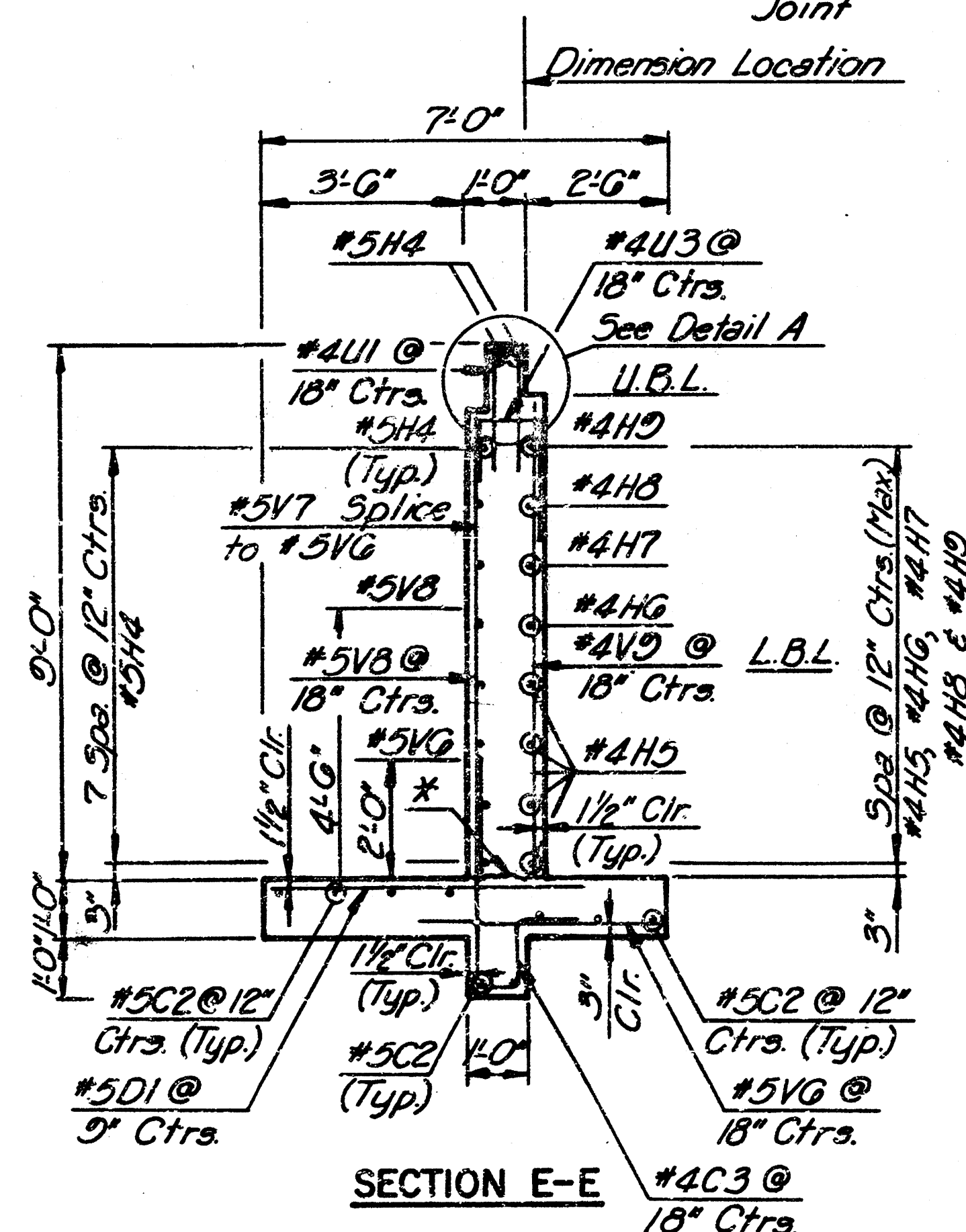


SECTION D-D

SEE WALL "D" OF REINFORCEMENT SUMMATION

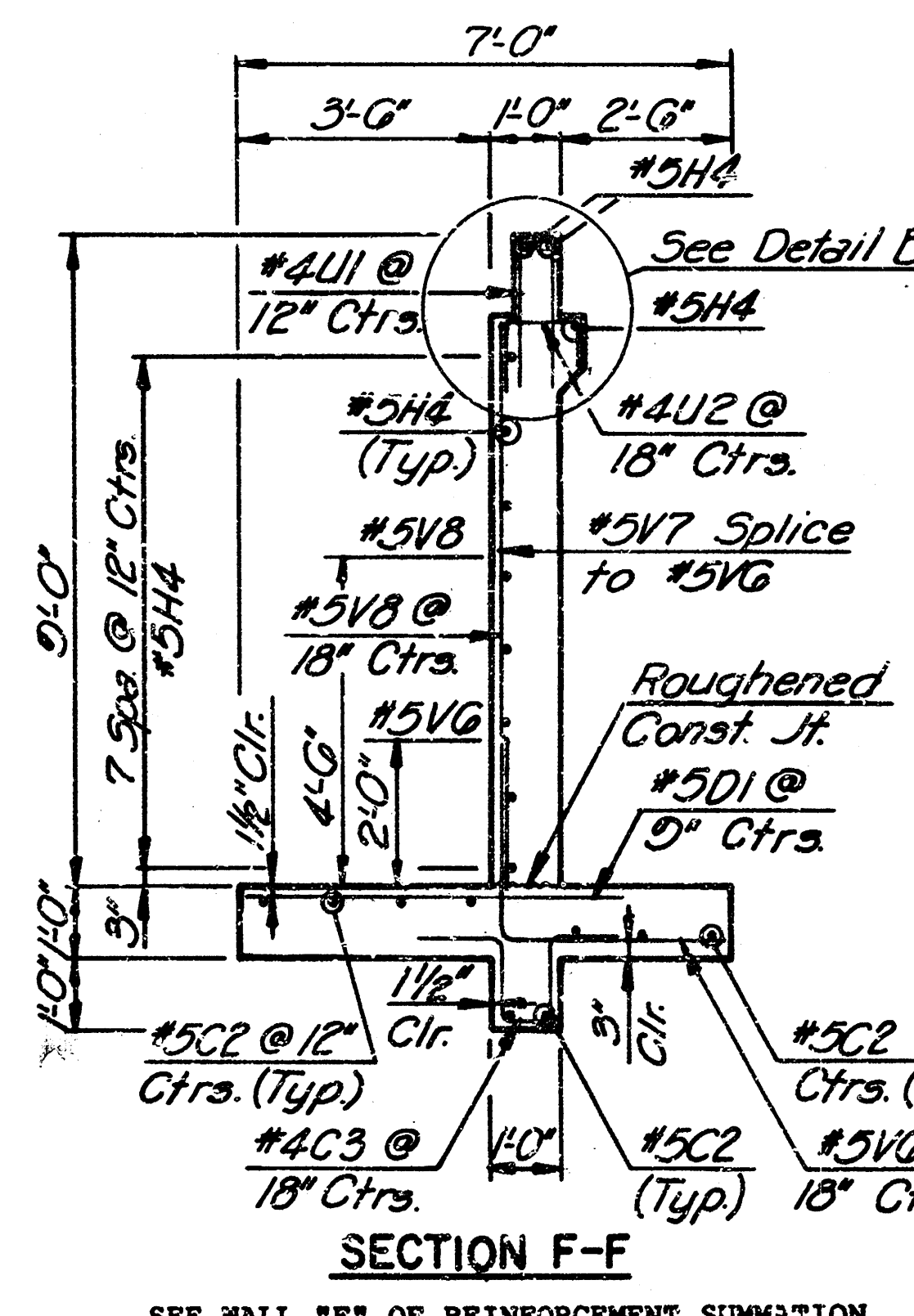
U.B.L., M.B.L. & L.B.L. denote
Upper Brick Ledge, Middle
Brick Ledge & Lower Brick
Ledge respectively.

* denotes Roughened Construction
Joint



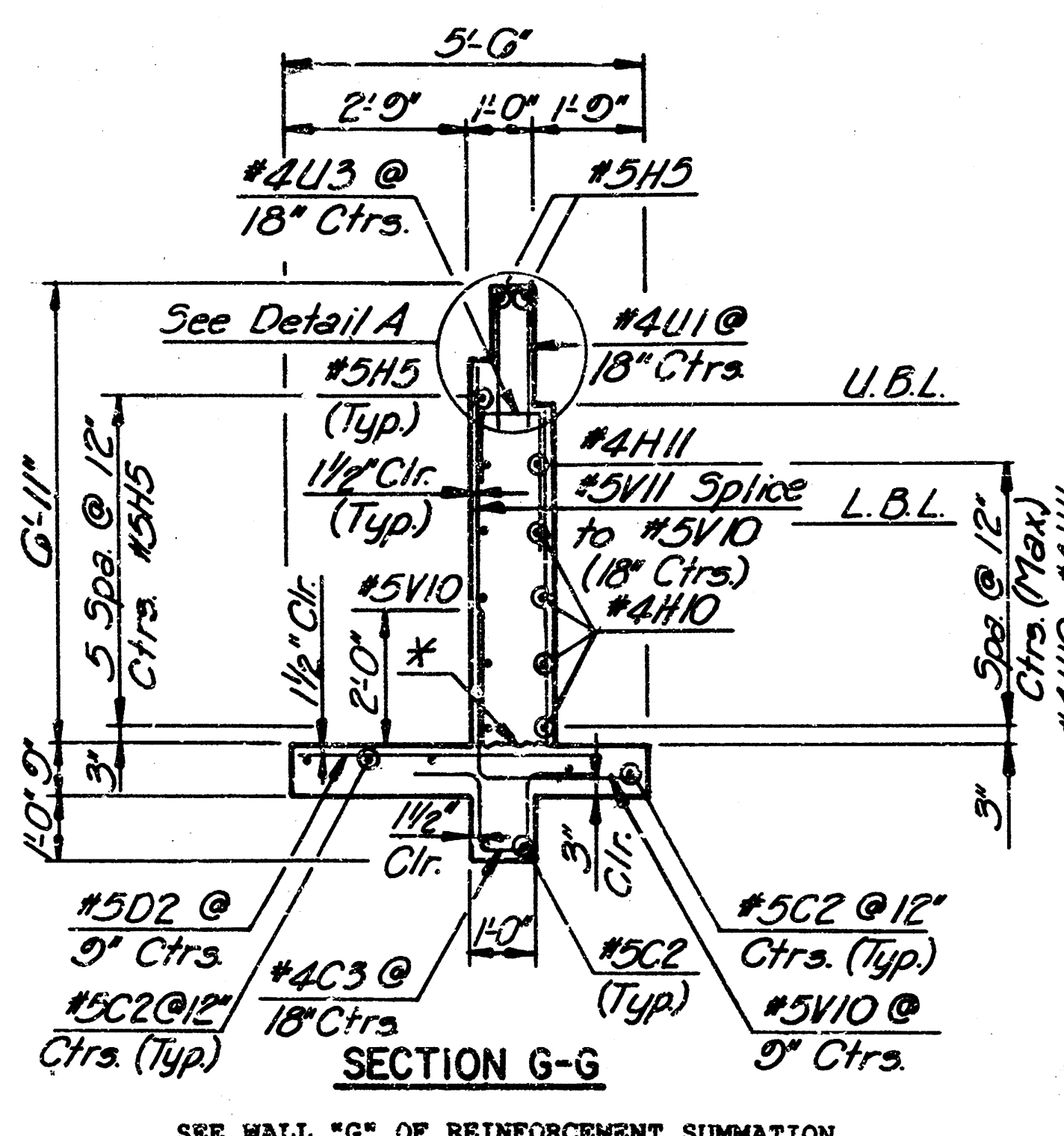
SECTION E-E

SEE WALL "E" OF REINFORCEMENT SUMMATION



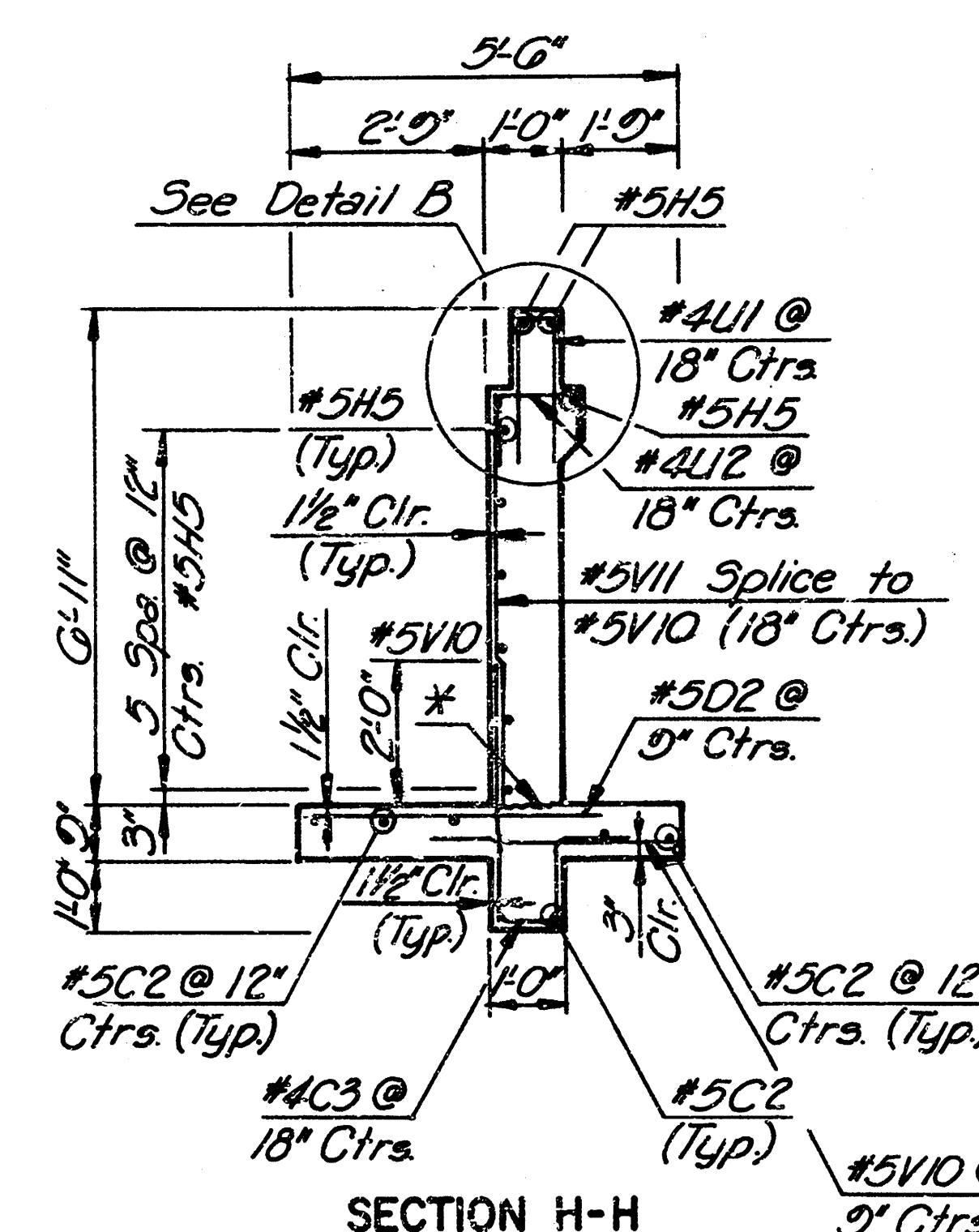
SECTION F-F

SEE WALL "F" OF REINFORCEMENT SUMMATION



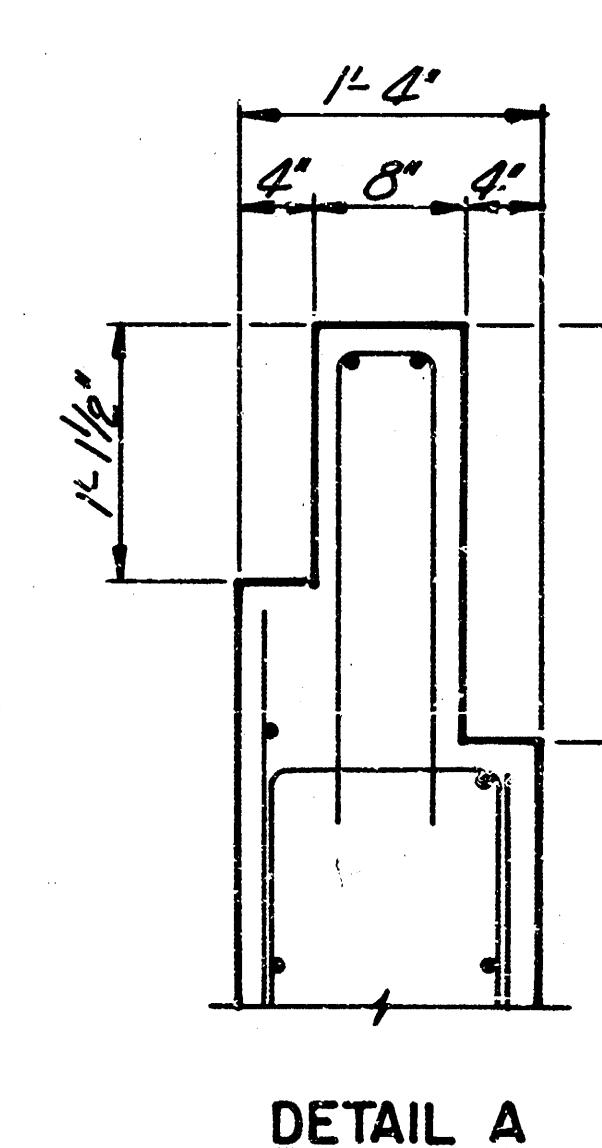
SECTION G-G

SEE WALL "G" OF REINFORCEMENT SUMMATION

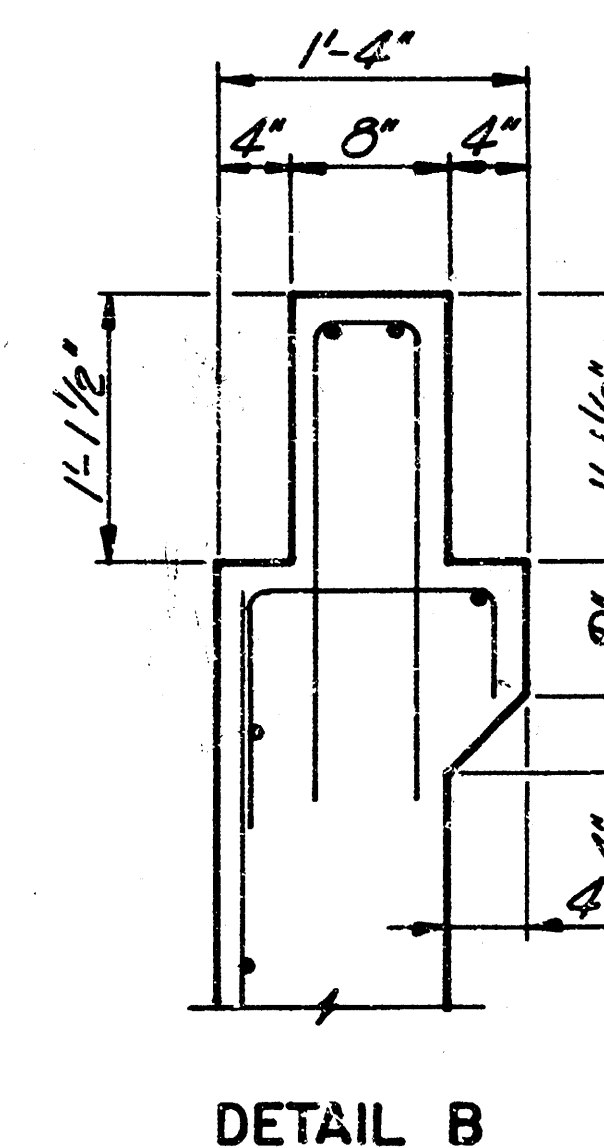


SECTION H-H

SEE WALL "H" OF REINFORCEMENT SUMMATION



DETAIL A

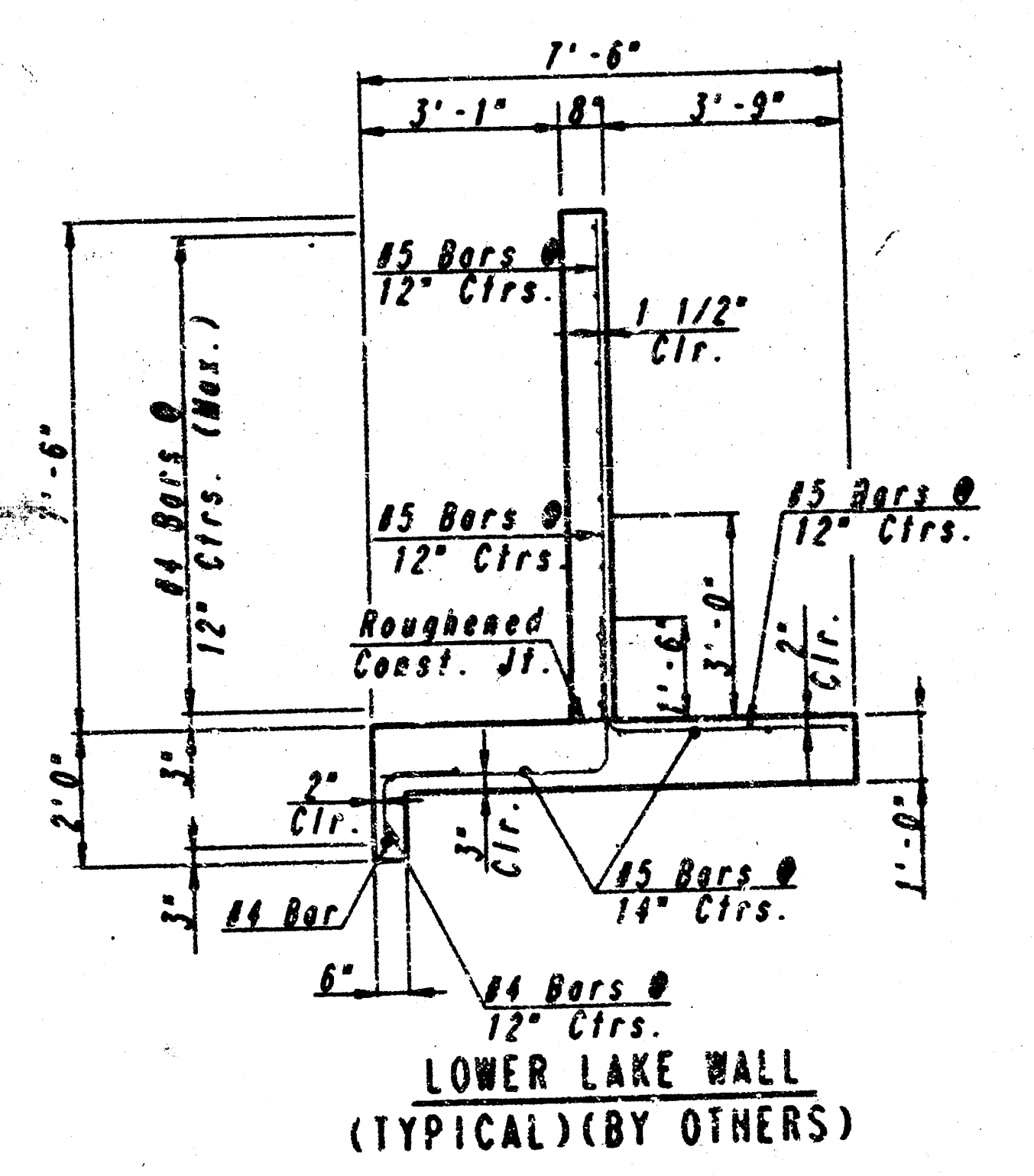
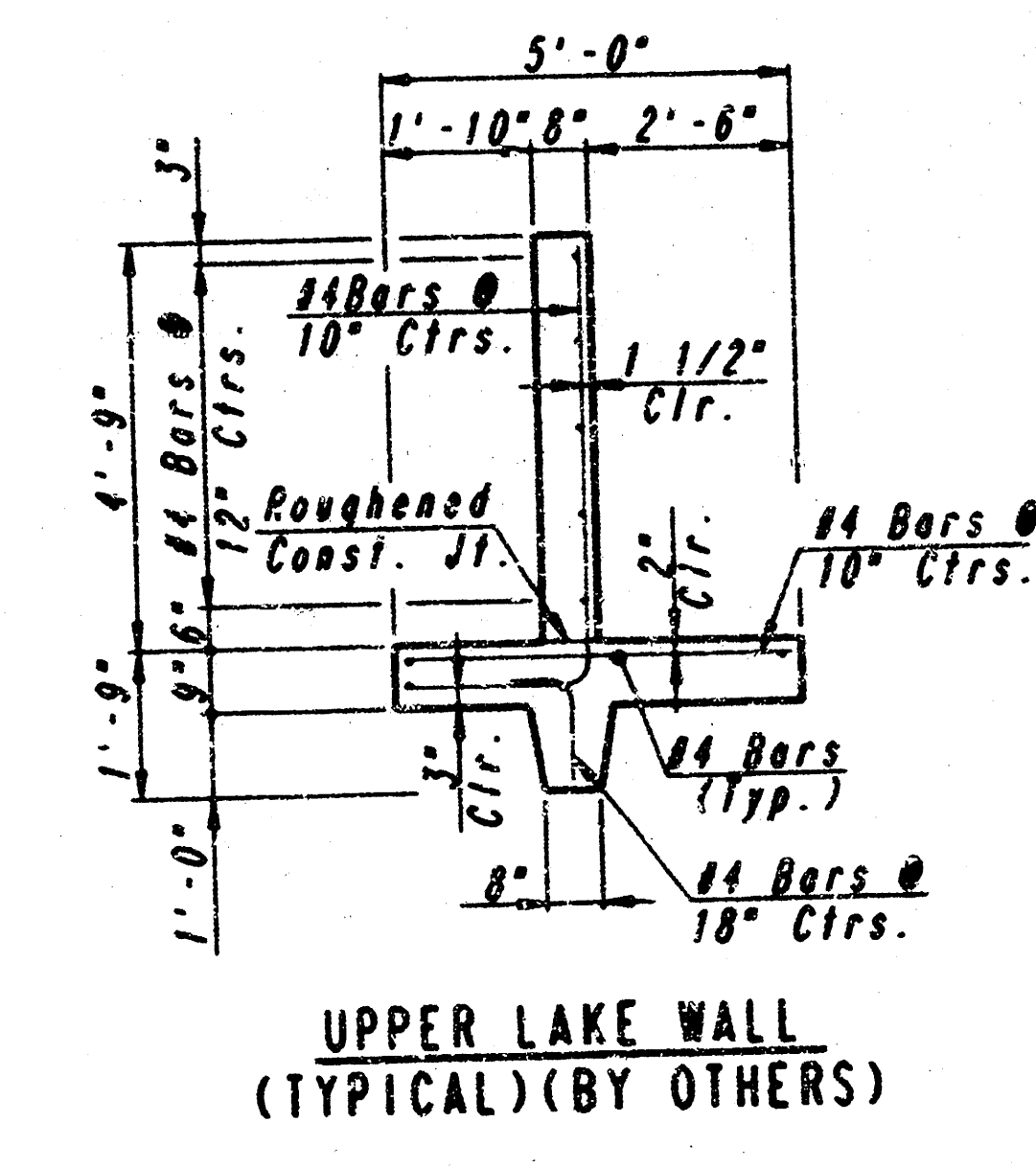
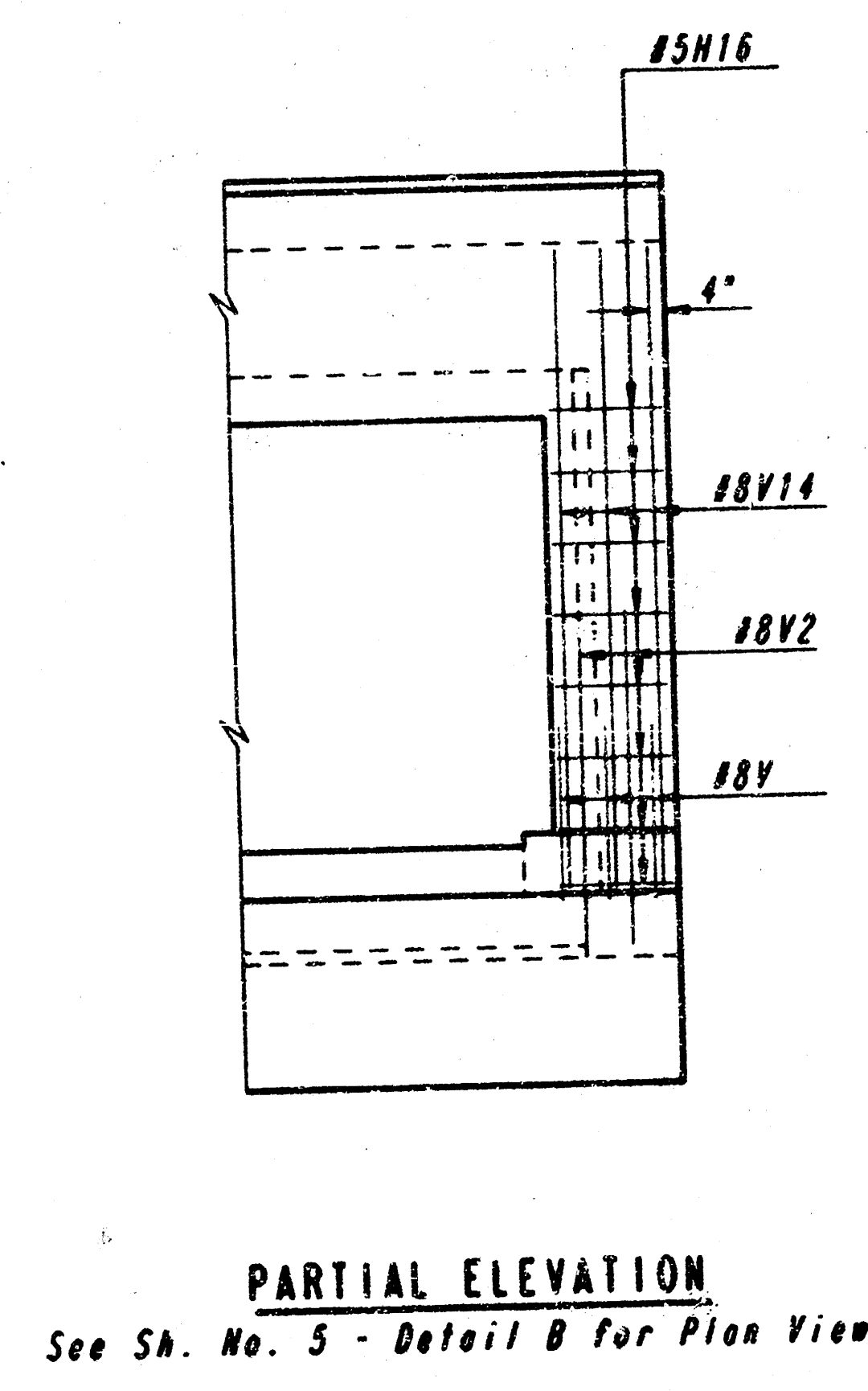
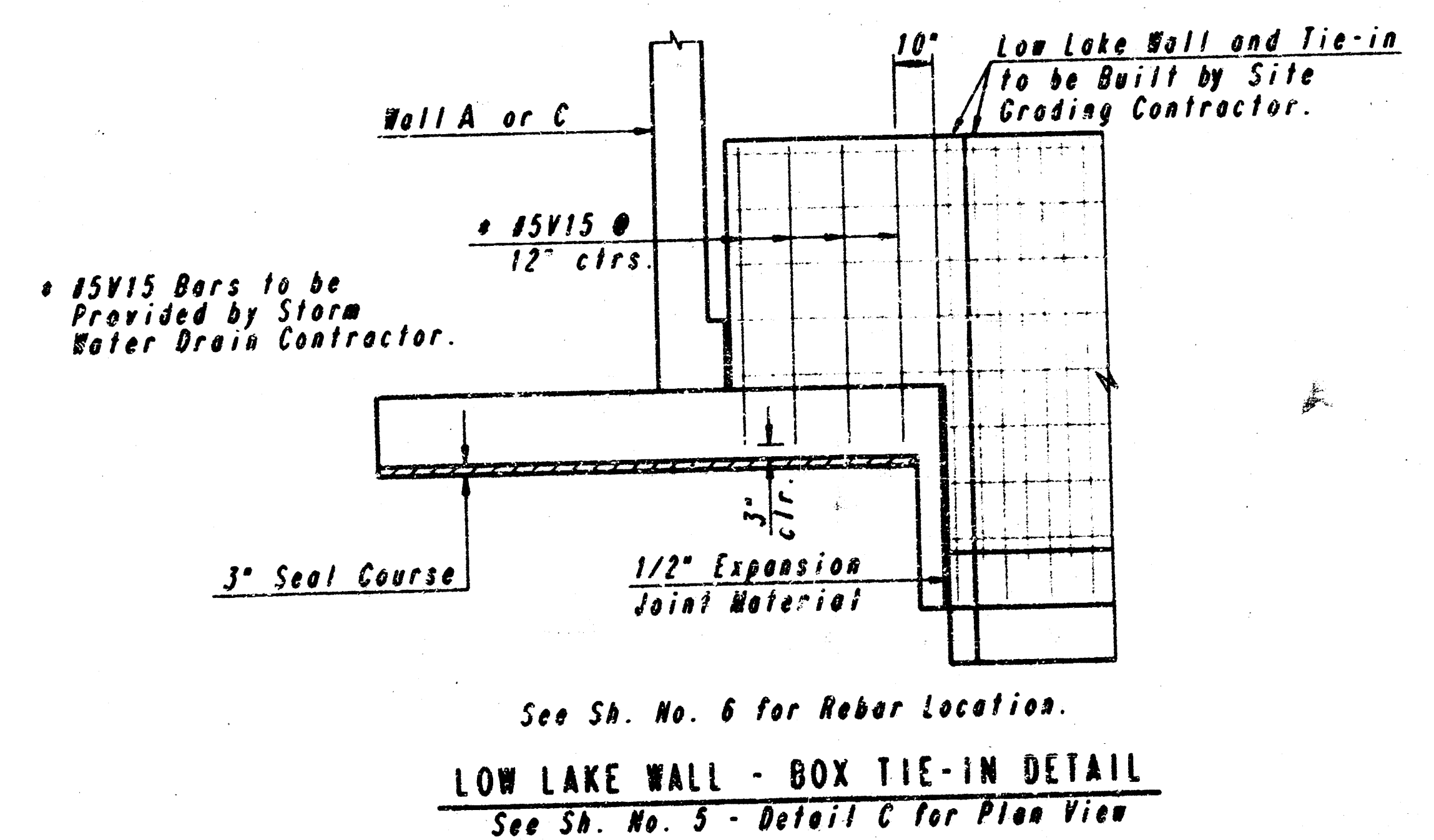
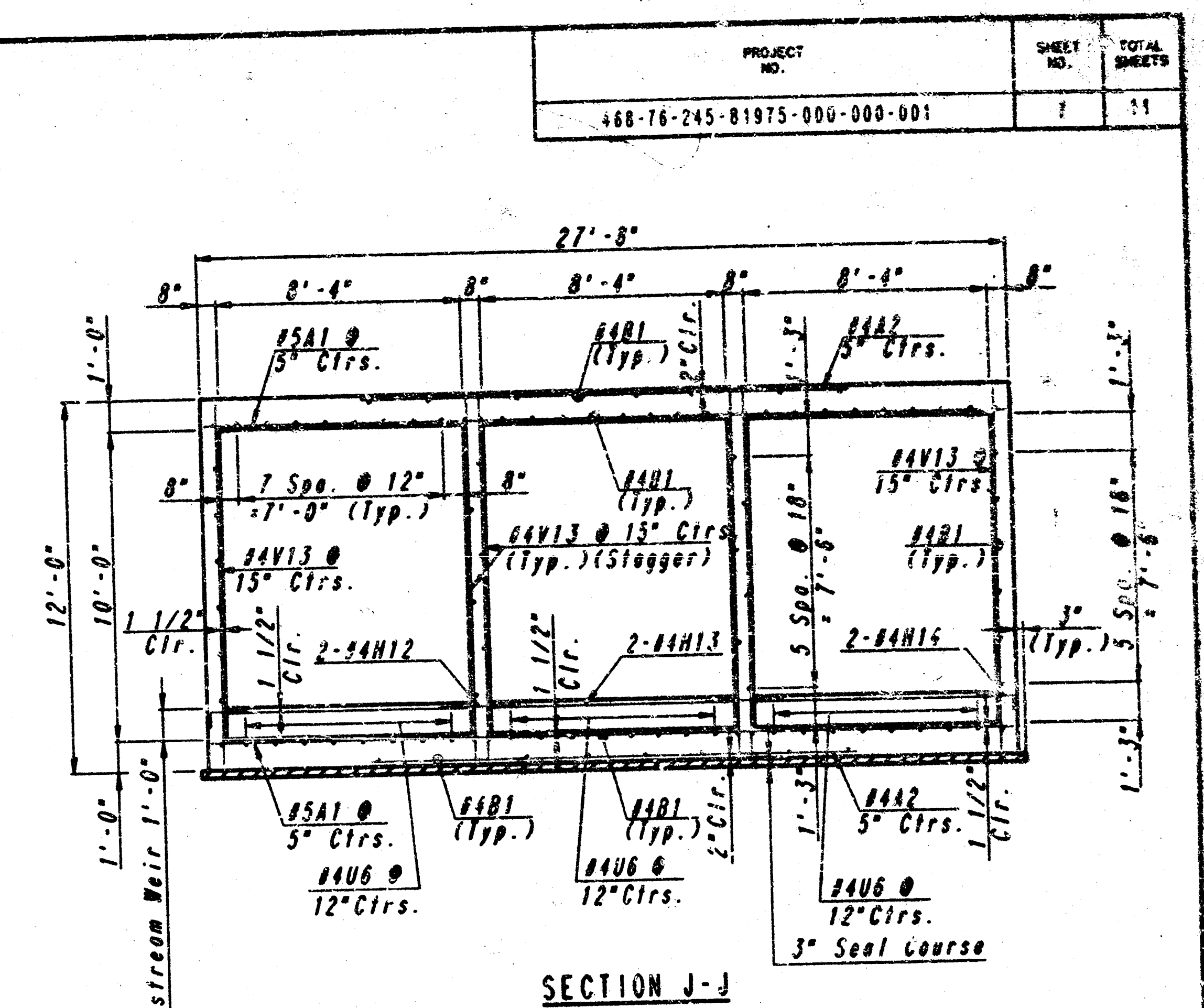
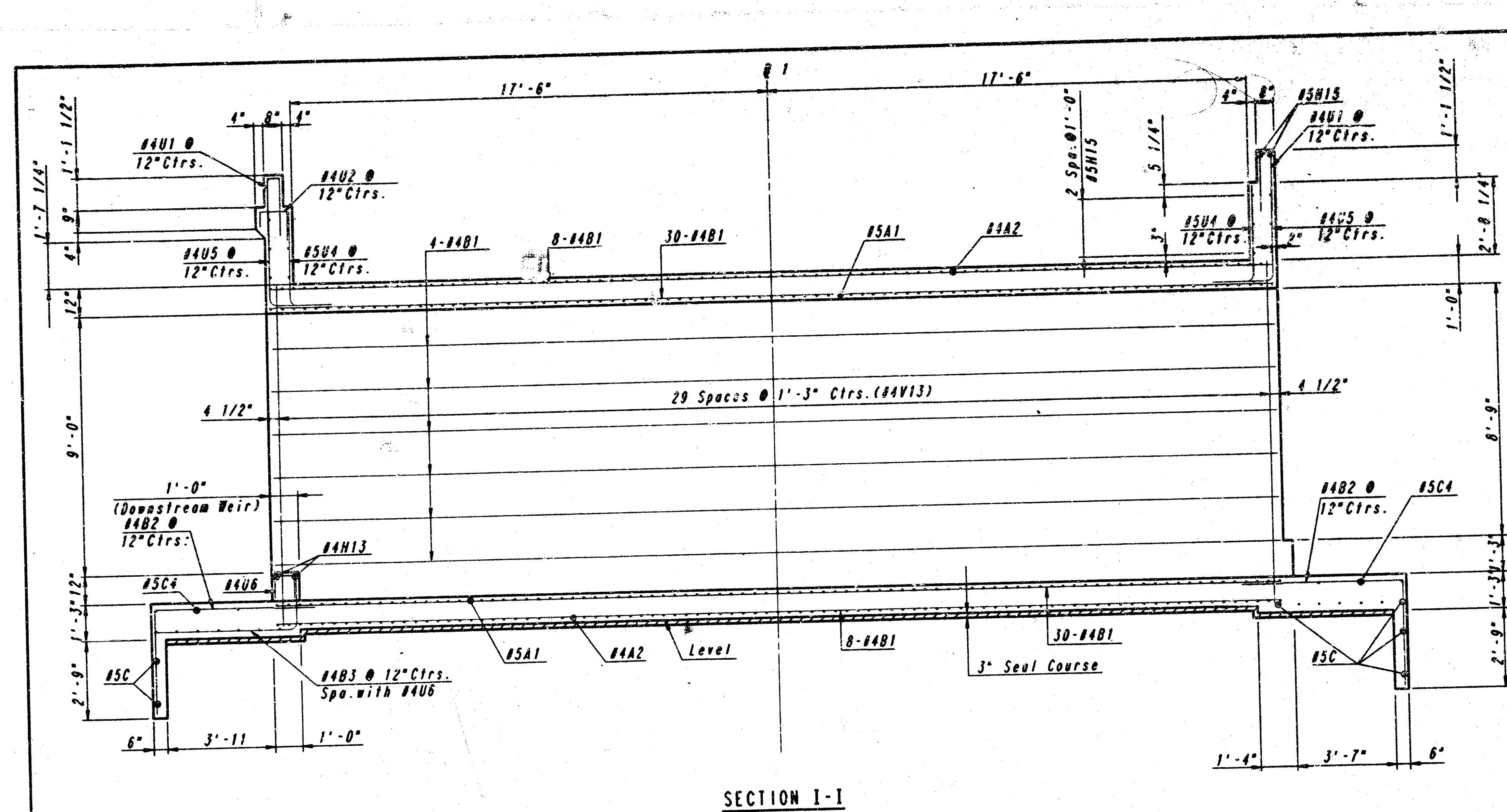


DETAIL B

See Sh. No. 8 for Reinforcement Details

CORPORATE LAKES STORM WATER DRAIN NO. 81	
WALL SECTIONS	
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.	
ENGINEERS WICHITA, KANSAS	
Designed by P.D.F.	Checked by V.J.K.
Drawn by V.J.K.	Date Oct. 1980 Job No. 35277-3

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See Sh. No. 5 for Section Locations.

CORPORATE LAKES
STORM WATER DRAIN NO. 81

SECTION DETAILS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

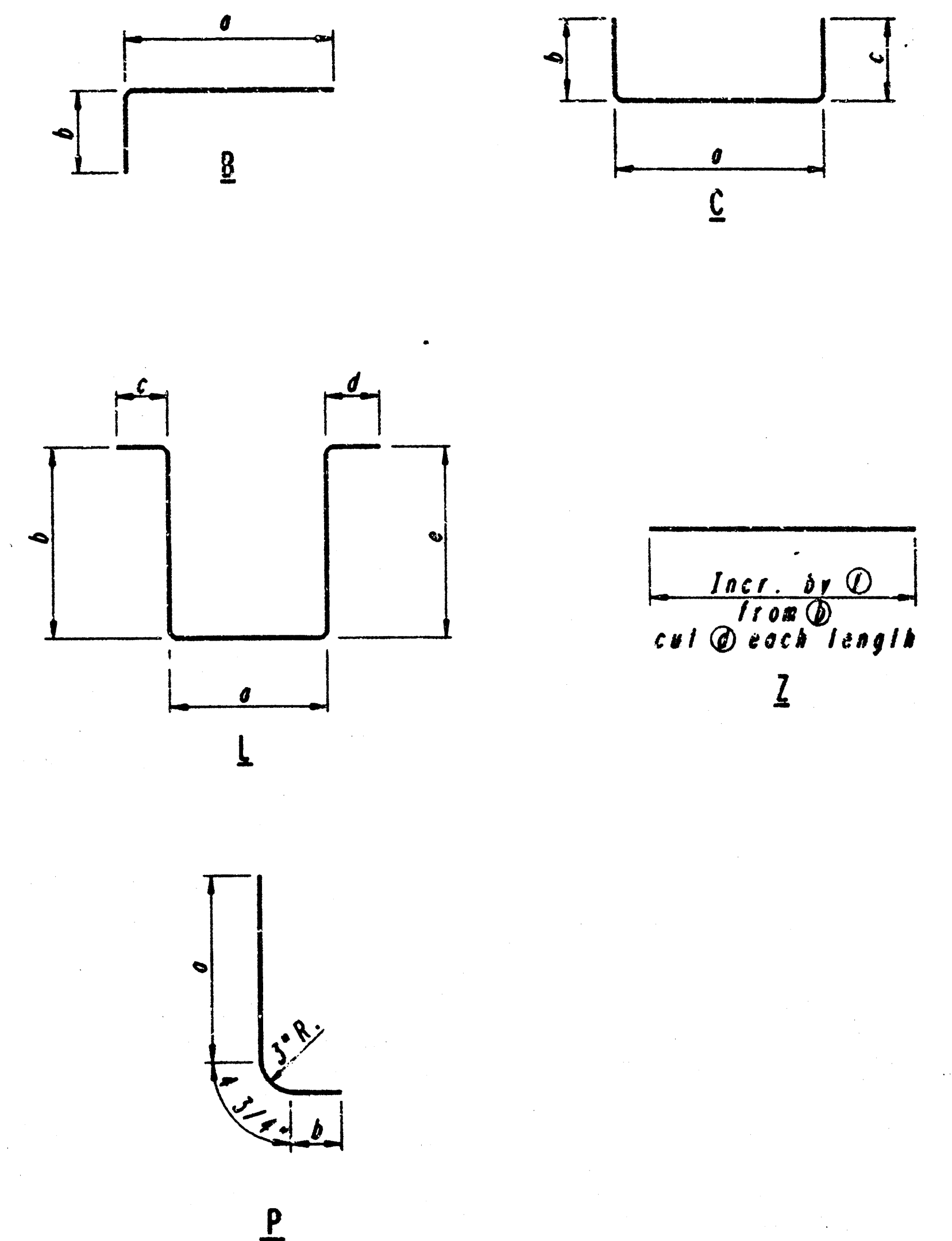
Designed by P. D. F. Checked by B. A. S.
Drawn by V. J. K. Date OCT. 1989 Job No. 89277-5

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MARK	REIN. TYPE	SIZE	NO.	LENGTH	DIMENSIONS					
					a	b	c	d	e	f
WALL SECTION										
A1	STR	5	178	27'-5"						
A2	STR	4	178	17'-0"						
B1	STR	4	100	56'-6"						
B2	B	4	62	9'-7"	3'-9"	5'-10"				
B3	B	4	24	7'-1"	1'-11"	5'-2"				
C4	STR	5	6	35'-0"						
H12	STR	4	4	3'-0"						
H13	STR	4	6	8'-3"						
H14	B	4	4	1'-10"	1'-4"	6"				
H15	STR	5	15	31'-5"						
H16	B	5	14	3'-11"	2'-5"	1'-6"				
U4	B	5	54	4'-11"	3'-5"	1'-6"				
U5	B	4	54	4'-10"	3'-10"	1'-0"				
U6	C	4	24	2'-3"	9"	9"	9"			
V	P	8	12	8'-8"	5'-1"	3'-2"				
V13	STR	4	120	11'-7"						
V14	STR	8	6	13'-6"						
V15	B	5	8	6'-9"	5'-3"	1'-6"				
V2	P	8	8	12'-0"	4'-11"	6'-8"				
WALL "A"										
C	STR	5	9	33'-9"						
C1	STR	5	7	21'-0"						
D	B	4	17	4'-4"	2'-10"	1'-6"				
H	STR	5	17	16'-9"						
H1	STR	4	2	16'-9"						
H2	STR	4	3	14'-3"						
H3	STR	4	3	7'-3"						
U	C	4	17	3'-1"	1'-1"	1'-0"	1'-0"			
U1	C	4	17	4'-11"	5"	2'-3"	2'-3"			
V	P	8	17	8'-8"	5'-1"	3'-2"				
V1	STR	8	17	14'-6"						
V2	P	8	17	12'-0"	4'-11"	6'-8"				
V3	STR	4	7	4'-1"						
V4	STR	4	8	7'-0"						
WALL "B"										
C	STR	5	9	33'-9"						
C1	STR	5	7	21'-0"						
D	B	4	17	4'-4"	2'-10"	1'-6"				
H	STR	5	18	16'-9"						
U2	C	4	17	2'-7"	1'-1"	1'-0"	6"			
U1	C	4	17	4'-11"	5"	2'-3"	2'-3"			
V	P	8	17	8'-8"	5'-1"	3'-2"				
V1	STR	8	17	14'-6"						
V2	P	8	17	12'-0"	4'-11"	6'-8"				
WALL "C"										
C	STR	5	9	33'-9"						
C1	STR	5	7	21'-0"						
D	B	4	17	4'-4"	2'-10"	1'-6"				
H	STR	5	15	16'-9"						
H1	STR	4	2	16'-9"						
H2	STR	4	3	14'-3"						
H3	STR	4	3	7'-3"						
U	C	4	17	3'-1"	1'-1"	1'-0"	1'-0"			
U1	C	4	17	4'-11"	5"	2'-3"	2'-3"			
V	P	8	17	8'-8"	5'-1"	3'-2"				
V2	P	8	17	12'-0"	4'-11"	6'-8"				
V3	STR	4	7	4'-1"						
V4	STR	4	8	7'-0"						
V5	STR	8	17	12'-6"						

MARK	REIN. TYPE	SIZE	NO.	LENGTH	DIMENSIONS					
					a	b	c	d	e	f
WALL "D"										
C	STR	5	9	33'-9"						
C1	STR	5	7	21'-0"						
D	B	4	17	4'-4"	2'-10"	1'-6"				
H	STR	5	15	16'-9"						
U1	C	4	17	4'-11"	5"	2'-3"	2'-3"			
U2	C	4	17	2'-7"	1'-1"	1'-0"	6"			
V	P	8	17	8'-8"	5'-1"	3'-2"				
V2	P	8	17	12'-0"	4'-11"	6'-8"				
V5	STR	8	17	12'-6"						
WALL "E"										
C2	STR	5	9	14'-9"						
C3	L	4	10	5'-1"	9"	1'-2"	1'-0"	1'-0"	1'-2"	
D1	STR	5	20	5'-6"						
H4	STR	5	10	14'-9"						
H5	STR	4	4	14'-9"						
H6	STR	4	1	10'-9"						
H7	STR	4	1	8'-9"						
H8	STR	4	1	4'-9"						
H9	STR	4	1	2'-9"						
U3	C	4	10	4'-1"	1'-1"	1'-0"	2'-0"			
U1	C	4	10	4'-11"	5"	2'-3"	2'-3"			
V6	P	5	10	5'-11"	3'-0"	2'-6"				
V7	STR	5	10	7'-8"						
V8	P	5	10	8'-5"	3'-0"	5'-0"				
V9	Z	4	10			2'-9"				6"
WALL "F"										
C2	STR	5	9	14'-9"						
C3	L	4	10	5'-1"	9"	1'-2"	1'-0"	1'-0"	1'-2"	
D1	STR	5	20	5'-6"						
H4	STR	5	11	14'-9"						
U1	C	4	10	4'-11"	5"	2'-3"	2'-3"			
U2	C	4	10	2'-7"	1'-1"	1'-0"	6"			
V6	P	5	10	5'-11"	3'-0"	2'-6"				
V7	STR	5	10	7'-8"						
V8	P	5	10	8'-5"	3'-0"	5'-0"				
WALL "G"										
C2	STR	5	7	14'-9"						
C3	L	4	10	5'-1"	9"	1'-2"	1'-0"	1'-0"	1'-2"	
D2	STR	5	20	4'-9"						
H4	STR	5	8	14'-9"						
H10	STR	4	4	14'-9"						
H11	STR	4	1	4'-9"						
U3	C	4	10	4'-1"	1'-1"	1'-0"	2'-0"			
U1	C	4	10	4'-11"	5"	2'-3"	2'-3"			
V10	P	5	20	4'-11"	2'-3"	2'-3"				
V11	STR	5	10	5'-8"						
V12	Z	4	10			2'-8"				2 3/4"
WALL "H"										
C2	STR	5	7	14'-9"						
C3	L	4	10	5'-1"	9"	1'-2"	1'-0"	1'-0"	1'-2"	
D2	STR	5	20	4'-9"						
H4	STR	5	8	14'-9"						
U1	C	4	10	4'-11"	5"	2'-3"	2'-3"			
U2	C	4	10	2'-7"	1'-1"	1'-0"	6"			
V10	P	5	20	4'-11"	2'-3"	2'-3"				
V11	STR	5	10	5'-8"						

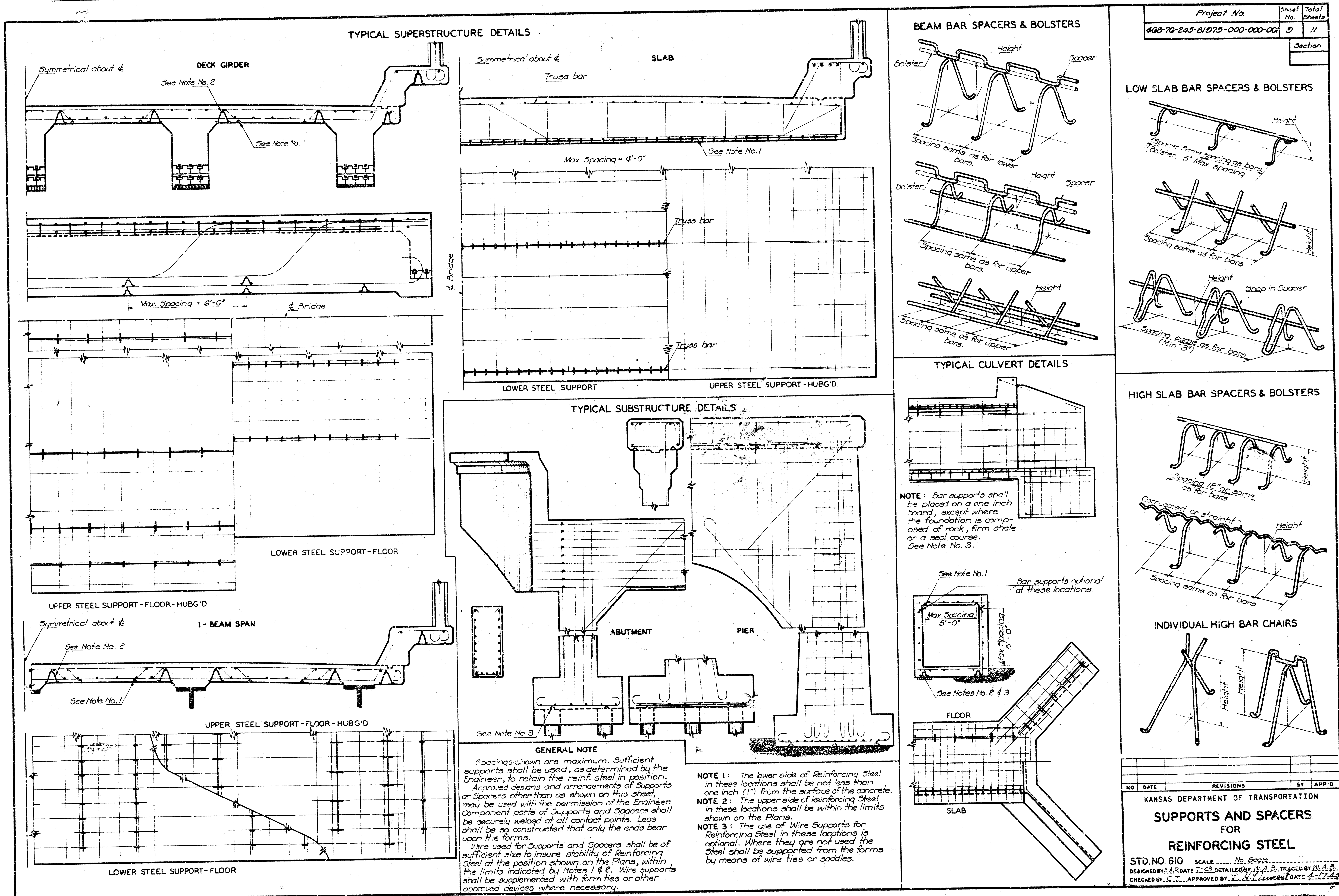
LEGEND
STR=Straight bar
*See Bending Diagrams



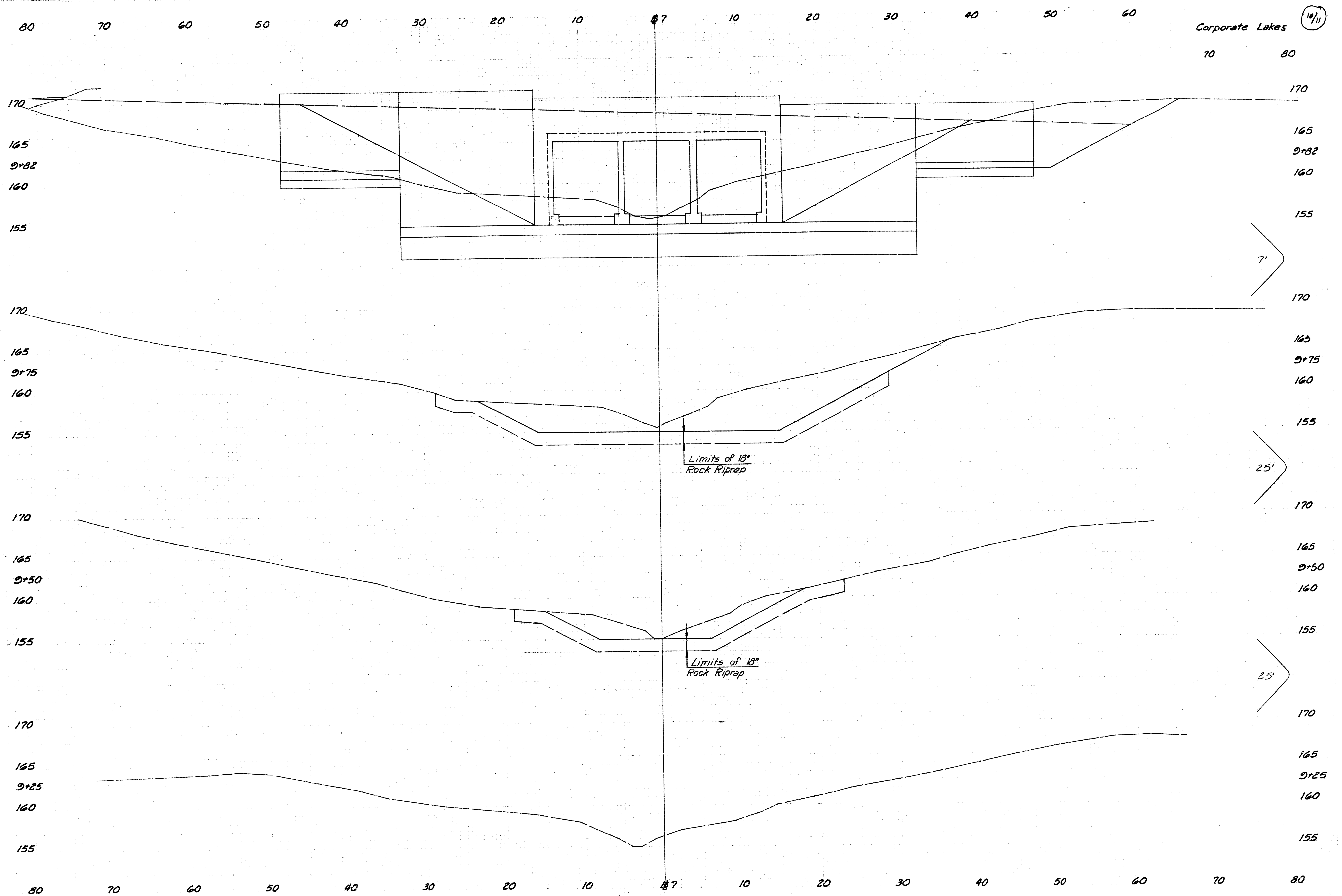
BENDING DIAGRAMS
Dimensions are out to out of bars

COPORATE LAKES STORM WATER DRAIN NO. 81			
REINFORCING STEEL			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS			
Designed by	P.D.F.	Checked by	R.A.S.
Drawn by	D.C.P.	Date	Oct. 1983 Job No. 69277-3

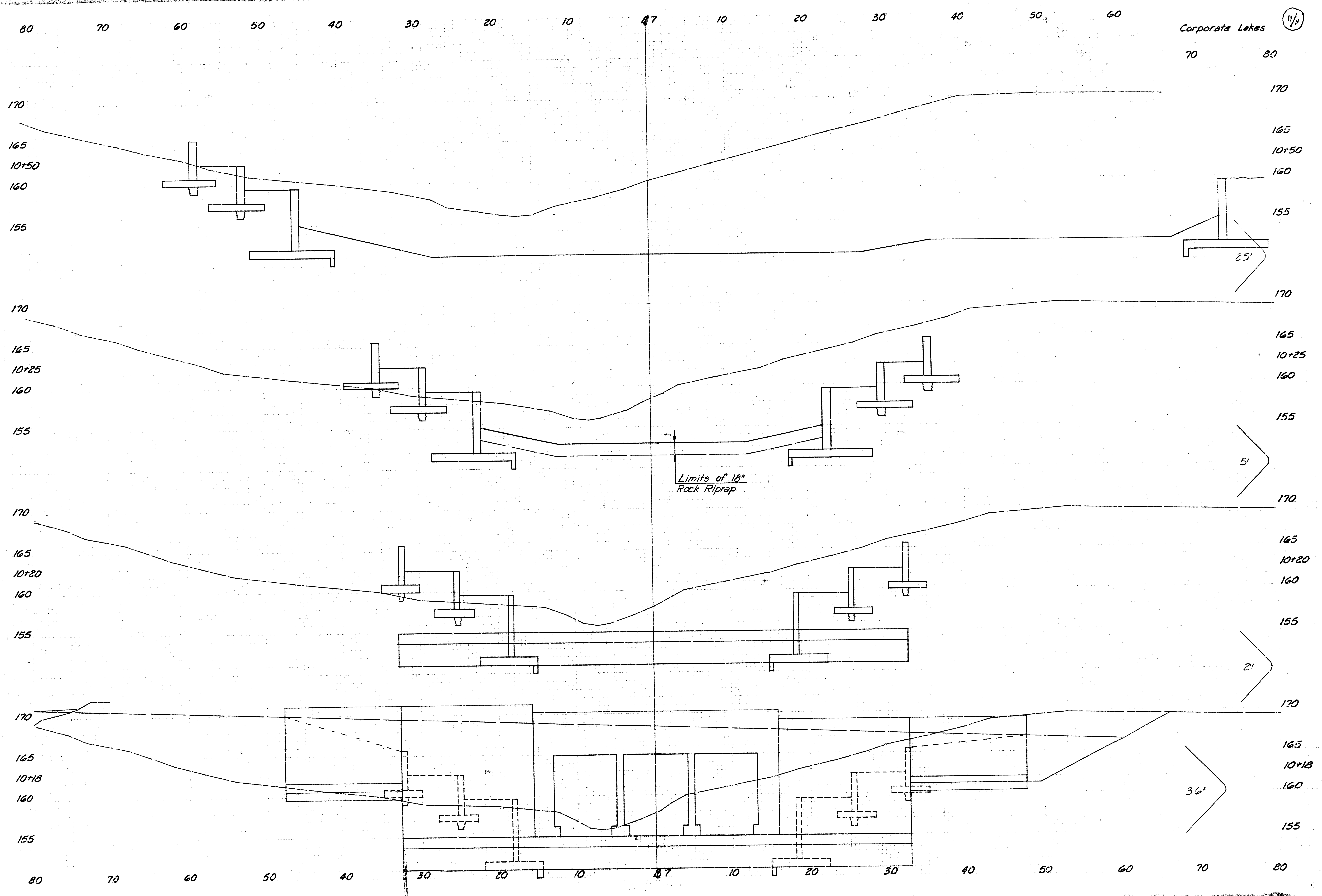
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