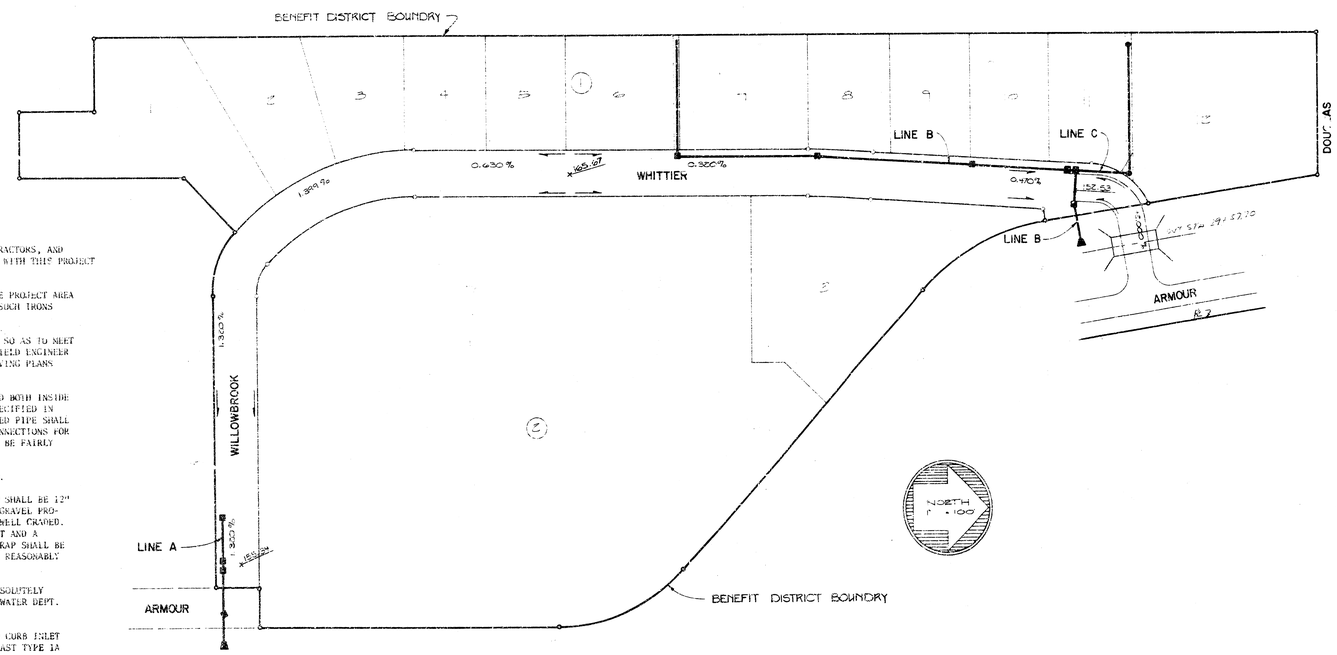
STORM WATER SEWER NO. 165 - PART I

STORM WATER SEWER IN ROCKWOOD So. 5TH ADD.

CITY OF WICHITA KS.
DEAN SELLERS, ACTING CITY ENGINEER
BY LAW/ KINGDON P.A., WICHITA, KANSAS
PROJ. NO. 468-76-245-80786-000-000-001
DATE:



GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY CONTRACTORS, AND CONTACT RELEVANT UTILITY COMPANIES AND OTHER AGENCIES INVOLVED WITH THIS PROJECT SITE DEVELOPMENT.

2. FIELD ENGINEER SHALL TAKE TIES TO ALL IRONS AND THIMBLES IN THE PROJECT AREA BEFORE CONSTRUCTION BEGINS. FIELD ENGINEER SHALL REPLACE ALL SUCH IRONS AND THIMBLES DISTURBED DURING CONSTRUCTION

3. THE TOPS OF INLETS AND MANHOLES AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.

4. ALL METAL PIPES SHALL BE HELICALLY CORRUGATED PIPE FULLY COATED BOTH INSIDE AND OUTSIDE. THE COATING MUST BE BITUMINOUS OR POLYMERIC AS SPECIFIED IN AASHTO DESIGNATION: M246-78, TYPE B. ALL SUCH COATED CORRUGATED PIPE SHALL BE SMOOTH FLOW PIPES FOR SIZES 24" DIAMETER OR LARGER. ALL CONNECTIONS FOR THESE FULLY COATED OR FULLY PAVED AND FULLY COATED PIPES SHALL BE FAIRLY WATERTIGHT CONSTRUCTED USING HUGGER TYPE COUPLER OR EQUAL.

5. ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE NOTED.

6. THE RIPRAP FOR THIS PROJECT SHALL BE TYPE 3. THE TYPE 3 RIPRAP SHALL BE 12" RIPRAP ON 6" SAND AND GRAVEL BEDDING. THE ROCK FOR RIPRAP AND GRAVEL PROTECTION SHALL BE HARD, DENSE, DURABLE, AND SHALL BE REASONABLY WELL GRADED. THE SIZE RANGE OF ROCK USED SHALL BE A MAXIMUM OF ONE CUBIC FOOT AND A MINIMUM OF 1 ½INCH. THE 6 INCH SAND AND GRAVEL BEDDING FOR RIPRAP SHALL BE A CONTINUOUS LAYER OF SAND AND GRAVEL OR SAND AND CRUSHED ROCK, REASONABLY WELL GRADED TO A MAXIMUM OF 1 ½ INCHES IN SIZE.

7. CONTRACTOR SHALL AVOID UNCOVERING EXISTING WATERLINES UNLESS ABSOLUTELY NECESSARY. UNCOVERING SHALL BE DONE ONLY IN THE PRESENCE OF A WATER DEPT. ENGINEER.

8. CONTRACTOR SHALL HAVE THE OPTION OF INSTALLING PRE-CAST TYPE 1A CURB INLET IN LIEU OF THE BRICK TYPE STRUCTURE. SEE STANDARD DETAIL PRE-CAST TYPE 1A CURB INLET DATED AUGUST 1979.

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ROCKWOOD SOUTH 3RD ADD.

STA. 0+24.20 CONSTR TYPE 1A INLET W=4'-2"
T.C.=154.99 8+30.00 LT. WILLOWBROOK
TANGENT STA. 9+55.73

STA. 1+36.82 CONSTR. TYPE 1A CURB INLET W=5'-0"
T.C.=155.10 24.00' LT WILLOWBROOK STA. 10+28.35

STA. 1+44.82 CONSTR. TYPE 1A INLET W=7'-2"
T.C.=155.47 23.58' LT. WILLOWBROOK STA. 10+36.36

STA. 2+09.47 CONSTR. TYPE 1A INLET W=4'-2"
T.C.=156.00 23.58' LT. WILLOWBROOK
STA. 11+00

SCALE 1"=10' HORZ.
1"=1' VERT.

INSTALL TYPE 3 R.I.P. R.I.P.

STA. 0+14
CONSTR. HEADWALL
SEE DETAIL SHEET 3 8+30 LT.
WILLOWBROOK TANG. STA.
9+55.73

STA. 0+21 START PIPE
24.00' LT WILLOWBROOK
TANG. STA. 9+12.73

24" S.W.S.

15" S.W.S.

1.82% 0.69%

CHAIN LINK FENCE

WILLOWBROOK

HIGH VOLTAGE LINE

LOT 1
BLOCK 2

BENCH MARK
'D' CUT IN WEST SIDEWALK ALONG ARMOUR 50'
SOUTH OF THE N.E. COR. OF RUSTY ECK FENCE
ELEV. = 155.27

LINE A

BENCH MARK
EAST END OF NORTH HUBGUARD
OF THE BRIDGE ON DOUGLAS AT
ARMOUR
ELEV. = 167.39 (CITY DATUM)

INSTALL TYPE 3 R.I.P. RAP

STA. 0+13
CONSTR. HEADWALL
SEE DETAIL SHEET 3
24 OR R.I. WHITTIER STA
08+19.46

STA. 0+22.50 START PIPE
75.90 RT. WHITTIER
STA 28+11.58

STA. 0+80.08 CONSTR. TYPE 1A INLET W=4'-8"
T.C.=162.50 23.58' RT. WHITTIER
DIA. 66"CMP

WHITTIER

R/W

4' OF CHAIRTHEL

END 15" S.S.

42" S.W.S.

LOT 10
BLOCK 1

LOT 11
BLOCK 1

STA. 1+27.66 CONSTR. TYPE 1A INLET W=5'-0"
T.C.=162.50 24.00' LT. WHITTIER STA. 28+08.00

SCALE 1"=10' HORZ.
1"=1' VERT.

BENCH MARK
'D' CUT IN EAST CURB OF ARMOUR 55'
SOUTH OF ℄ WHITTIER
ELEV. = 165.03

LOT 2
BLOCK 2

PROPOSED 8" SANITY SEWER

WHITTIER

LOT 10
BLOCK 1

LOT 9
BLOCK 1

LOT 8
BLOCK 1

PROPOSED 8" WATER

PROPOSED 8" SANITY SEWER

STA. 1+38.66 CONSTR. TYPE 1A INLET W=5'-0"
T.C.=162.54 24.00' LT. WHITTIER STA. 27+92

STA. 2+31.01 CONSTR TYPE 1A INLET W=5'-0"
T.C.=163.21 24.00' LT. WHITTIER STA. 26+48.06

STA. 3+58.18 CONSTR TYPE 1A INLET W=5'-0"
T.C.=164.38 24.00' LT. WHITTIER STA. 24+00.38

LINE B

STA. 0+24.20 START PIPE

STA. 0+08.20 TOP ELEV. 154.00 TYPE 1A INLET W=4'-2"

STA. 0+36.82 TOP ELEV. 155.10 TYPE 1A INLET W=5'-0"

STA. 1+44.82 TOP ELEV. 155.47 TYPE 1A INLET W=7'-2"

STA. 2+09.47 TOP ELEV. 156.00 TYPE 1A INLET W=4'-2"

EXIST. GROUND

PROPOSED FINISH GRADE

HEADWALL SEE SHEET 3
START AT STA. 0+14

D.W.S. 158.4

EXIST 25"x 40" ELL. C.M.P.

72.68' OF 24" R.C.P.

163.35' OF 15" R.C.P. @ 1.50%
ALT. 163.65' OF 15" C.M.P. F.C. @ 1.00%

"R.C.P. @ 1.00%
ALT. 73.2' OF 24" C.M.P. F.C.
E.F.F. @ 1.00%

E.F.F. @ 1.00%

1" OF 18" D.W.S. PIPE

E.F.F. @ 1.00%

STA. 0+80.08 TOP ELEV. 162.50 TYPE 1A INLET W=4'-8"

STA. 1+27.66 TOP ELEV. 162.54 TYPE 1A INLET W=5'-0"

STA. 1+38.66 TOP ELEV. 162.54 TYPE 1A INLET W=5'-0"

STA. 2+31.01 TOP ELEV. 163.21 TYPE 1A INLET W=5'-0"

STA. 3+58.18 TOP ELEV. 164.38 TYPE 1A INLET W=5'-0"

PROPOSED CURB GRADE

53.36' OF 18" R.C.P. @ 2.40%

17.50' OF 18" R.C.P. @ 0.57%

EXIST 15" S.S.

ALT. 47.58' OF 15" C.M.P. F.C. @ 0.57%

ALT. 53.58' OF 15" C.M.P. F.C. @ 0.57%

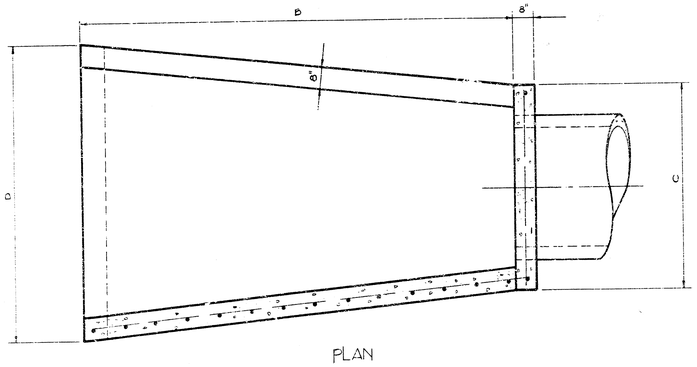
T.C. = 153.50

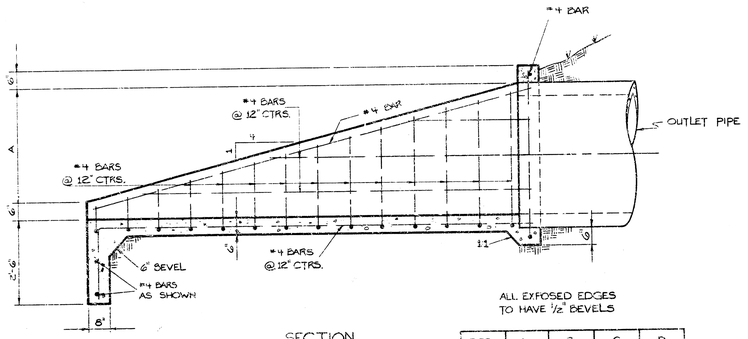
I.E. = 152.00

I.E. = 152.50

I.E. = 152.50

I.E. = 152.50





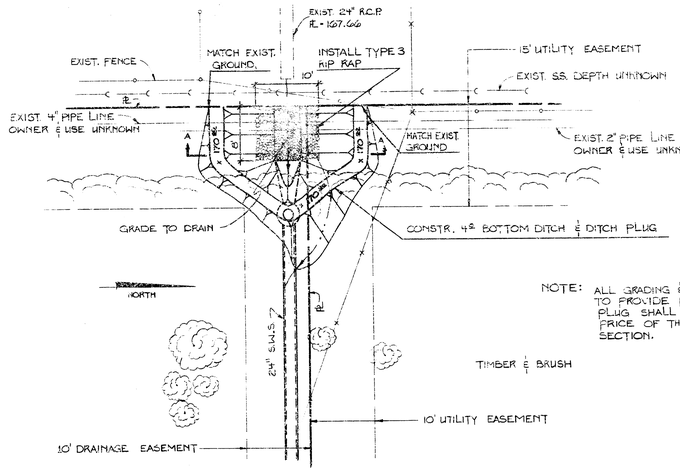
SECTION

ALL EXPOSED EDGES TO HAVE ½" BEVELS

PIPE	A	B	C	D
42"	3'-4½"	13'-6"	6'-1"	8'-9"
24"	1'-9"	7'-0"	4'-4"	5'-9"

OUTLET STRUCTURE

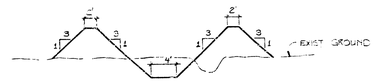
SCALE: ½" = 1'



NOTE: ALL GRADING & EARTHWORK REQUIRED TO PROVIDE FLOW CHANNEL & DITCH PLUG SHALL BE INCLUDED IN THE PRICE OF THE 24" R.C. PIPE END SECTION.

DITCH PLUG & RIP RAP DETAIL

SCALE: 1" = 10'



SECTION A—A

NO SCALE

CITY PROJ. NO. 468-76-046-90786-000-000-001

STORM WATER SEWER IN ROCKWOOD SO. 5th ADD.

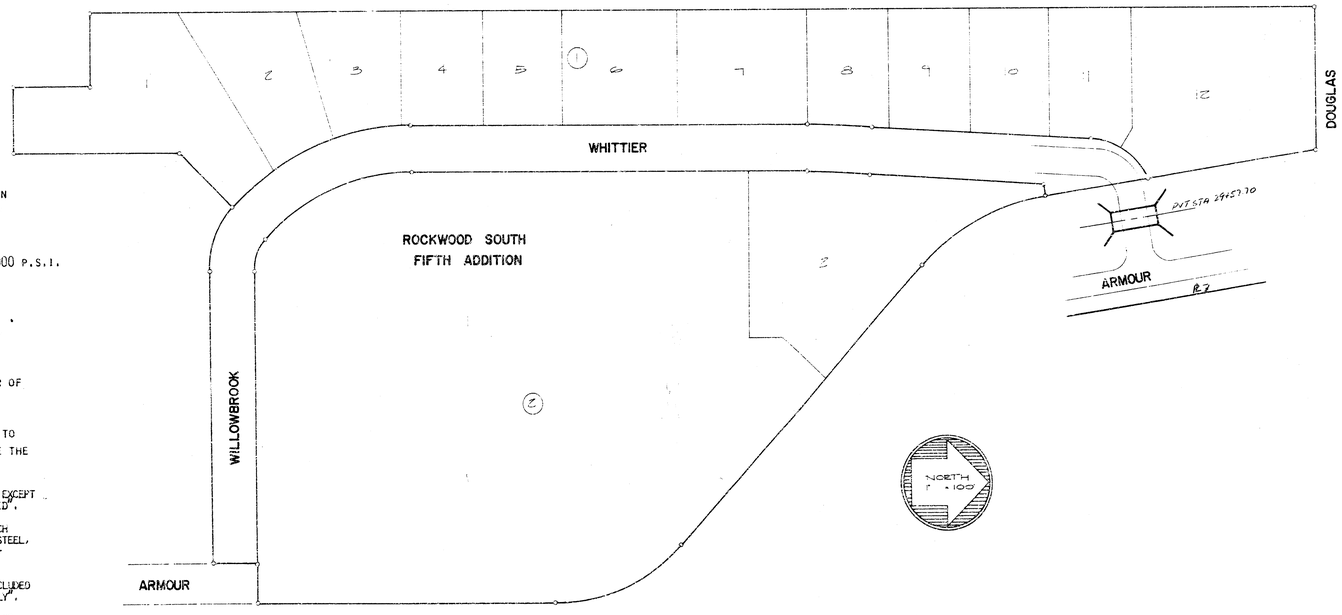
STORM WATER SEWER NO. 165 - PART 2

PROJECT NO. 468-76-245-80786-000-000-001
CITY OF WICHITA, KANSAS
DEPT. OF PUBLIC WORKS - ENG. DIV.
DEAN SELLERS, ACTING CITY ENGINEER
BY LAW/KINGDON, P.A., WICHITA, KANSAS

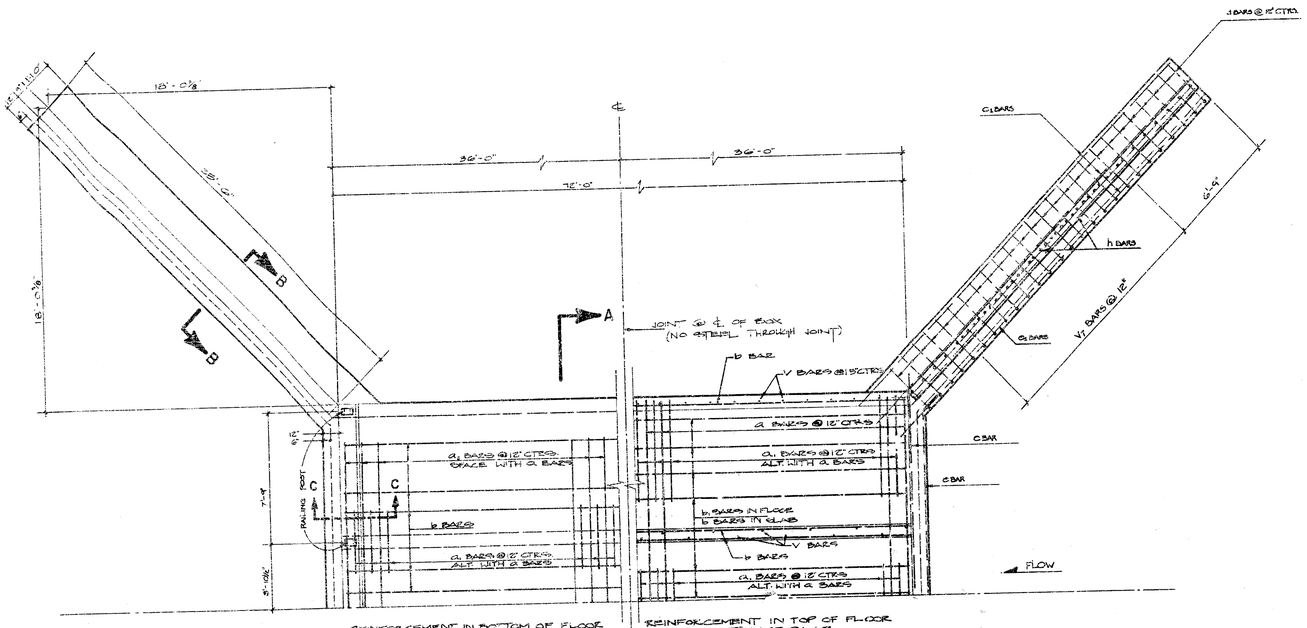
DATE:_____

NOTES:

1. ALL BRIDGE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE KANSAS DEPARTMENT OF TRANSPORTATION.
2. UNIT STRESS: F'C = 3000 P.S.I.; FC = 1200 P.S.I.; FS = 20000 P.S.I.
3. CLASS A AIR ENTRAINED CONCRETE SHALL BE USED THROUGHOUT.
4. BEVEL ALL EXPOSED EDGES WITH 3/4 INCH TRIANGULAR MOULDING, UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTER OF BAR UNLESS OTHERWISE NOTED.
6. COARSE AGGREGATE SHALL BE DEPOSITED BEHIND EACH WEEP HOLE TO OCCUPY A SPACE EXTENDING 15 INCHES IN ALL DIRECTIONS ABOVE THE WEEP HOLE FLOW LINE.
7. EARTHWORK - ALL EARTHWORK SHALL BE CONSIDERED AS "COMMON EXCAVATION" EXCEPT FOR THE TOEWALL. TOEWALL EXCAVATION SHALL BE INCLUDED IN "LUMP SUM BID".
8. BIDDING OF CULVERT - THE CULVERT SHALL BE BID AS A "LUMP SUM BID" WHICH SHALL INCLUDE THE FOLLOWING ITEMS: CLASS A-AE CONCRETE, REINFORCING STEEL, HAND EXCAVATION, AND ALUMINUM HAND RAIL. ALL OTHER ITEMS SHALL BE INCLUDED AS BID ITEMS.
9. THE QUANTITIES SHOWN IN THE "BILL OF MATERIALS OR ITEMS" WHICH ARE INCLUDED IN THE "LUMP SUM BID" OF THE CULVERT ARE FOR "INFORMATION PURPOSES ONLY". THE CONTRACTOR MUST SATISFY HIMSELF AS TO THE "QUANTITIES" AND THE ENGINEER ASSUMES NO RESPONSIBILITIES FOR THEIR ACCURACY. THE CONTRACTOR WILL HAVE THE FULL RESPONSIBILITY FOR PROVIDING ALL MATERIALS ON THE DETAILED PLANS NECESSARY TO COMPLETE THE PROJECT.

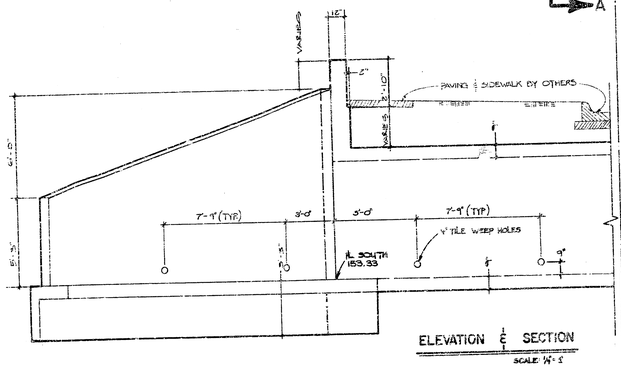






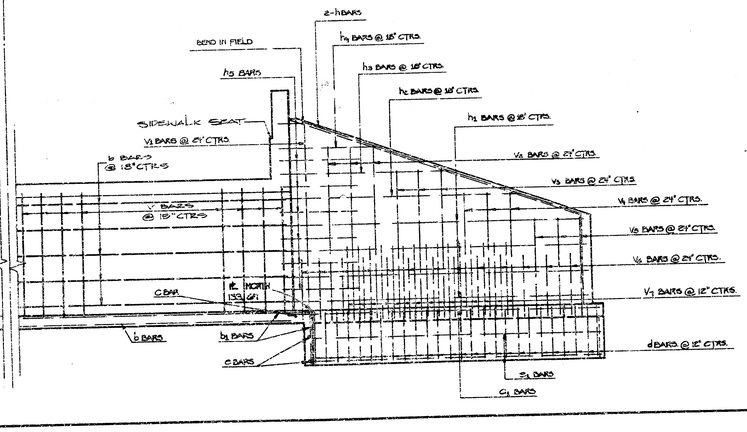
HALF PLAN & SECTION

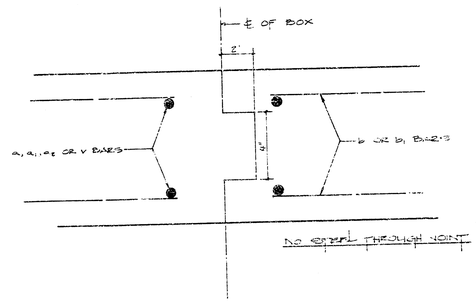
SCALE: ⅛"=1'



ELEVATION & SECTION

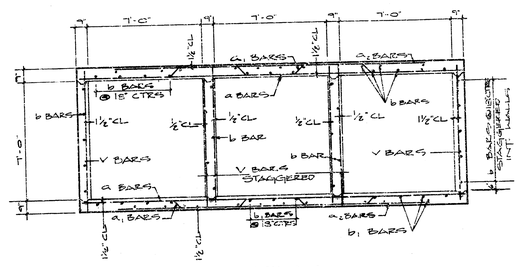
SCALE: ⅛"=1'





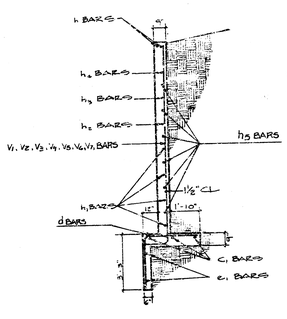
DETAIL AT ℄ OF BOX

SCALE: 3"=1'



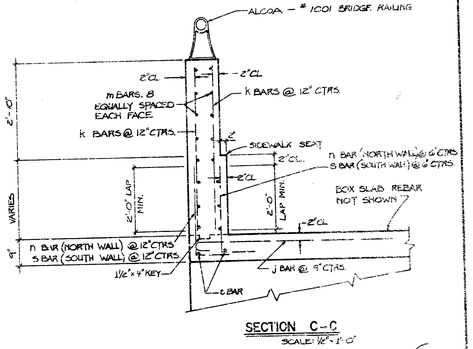
SECTION A–A

SCALE: ⅛"=1'



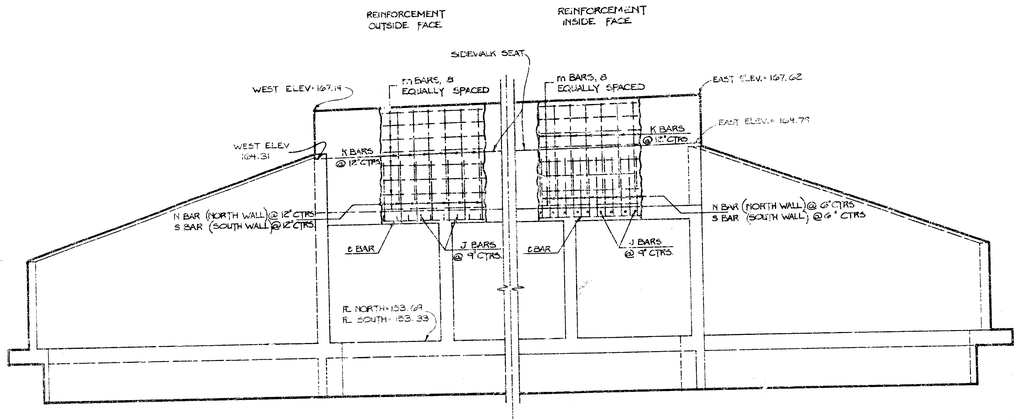
SECTION B–B

SCALE: ⅛"=1'



SECTION C–C

SCALE: ⅛"=1'-0"



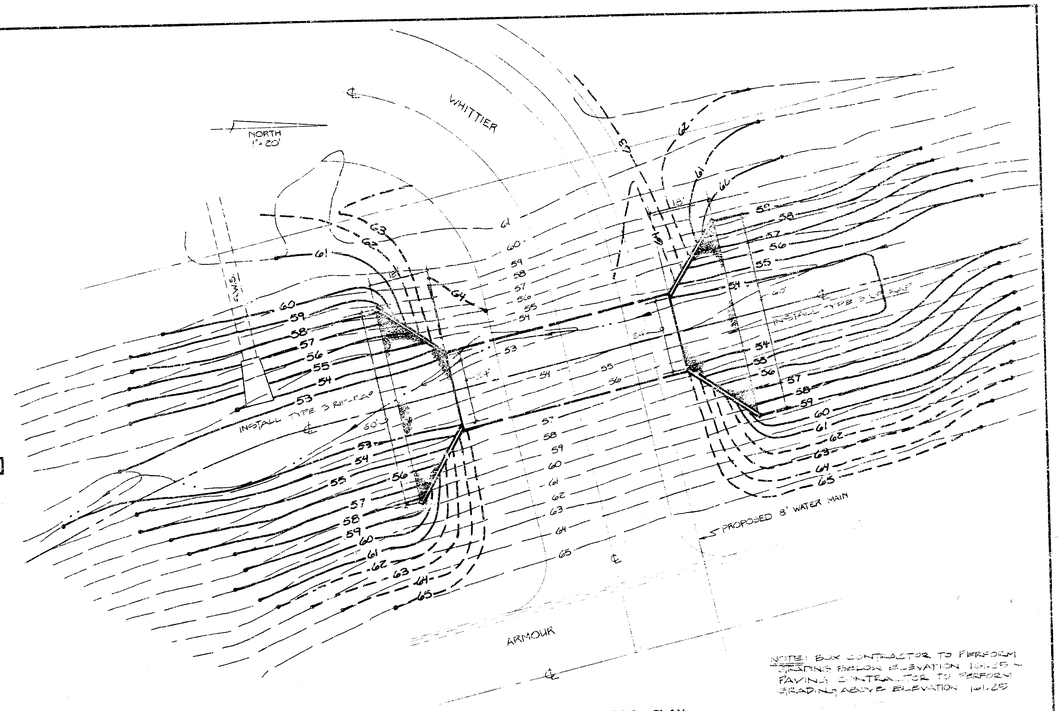
END VIEW & SECTION
LOOKING NORTH
SCALE: 1/4"=1'

BAR	a	a_1	a_2	b	b_1	c	c_1	d	e	e_1
NUMBER / TOTAL WEIGHT	146 / 3491 lb	104 / 3317 lb	146 / 4093 lb	102 / 3417 lb	22 / 382 lb	2 / 33 lb	12 / 228 lb	104 / 400 lb	- / 62 lb	8 / 36 lb
SIZE	#6	#6	#6	#4	#4	#4	#4	#4	#4	#4
LENGTH	25'-½"	24'-7"	18'-8"	35'-7½"	34'-7½"	20'-0"	28'-0"	6'-4"	25'-3"	25'-6"

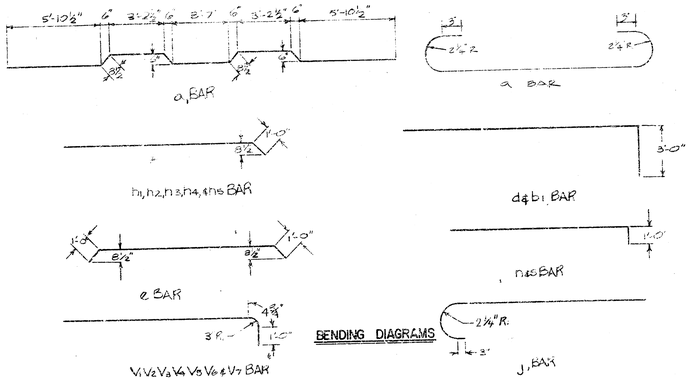
BAR	S	t	v	v_1	v_2	v_3	v_4	v_5	v_6	v_7
NUMBER / TOTAL WEIGHT	73 / 349 lb	4 / 18 lb	280 / 2031 lb	4 / 32 lb	12 / 90 lb	12 / 78 lb	12 / 97 lb	12 / 86 lb	32 / 1142 lb	60 / 518 lb
SIZE	#3	#5	#3	#4	#4	#4	#4	#4	#4	#5
LENGTH	4'-7"	25'-6"	8'-3"	12'-7¾"	11'-2½"	9'-9¼"	8'-4½"	6'-11½"	4'-1"	5'-1"

BAR	h_1	h_1	h_2	h_3	h_4	h_5	j	k	m	n
NUMBER / TOTAL WEIGHT	8 / 230 lb	16 / 287 lb	4 / 58 lb	4 / 42 lb	4 / 29 lb	24 / 110 lb	66 / 697 lb	132 / 556 lb	32 / 302 lb	73 / 322 lb
SIZE	#3	#4	#4	#4	#4	#4	#5	#5	#4	#5
LENGTH	27'-6½"	25'-10"	21'-6¼"	15'-6¾"	9'-2¼"	6'-10"	2'-7¾"	5'-4"	23'-6"	4'-2¼"

BAR LIST



GRADING PLAN



BENDING DIAGRAMS