INDEX OF SHEETS

SHEET NO.	1	TITLE SHEET
	2-5a	FORCE MAIN
	6	PUMP STATION
	7,7a	DETAIL SHEET
	8	MANHOLE STANDARD

DEPARTMENT OF PUBLIC WORKS
SEDGWICK COUNTY

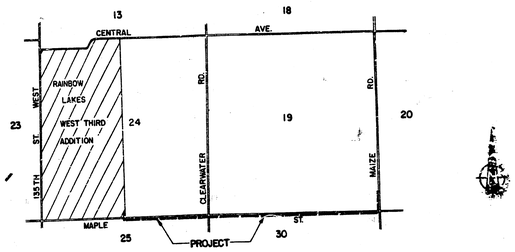
CONSTRUCTION PLANS FOR SANITARY SEWER EXTENSIONS

PUMPING STATION & FORCE MAIN

FOR

RAINBOW LAKES WEST THIRD ADDITION TO SEDGWICK COUNTY, KANSAS

CITY OF WICHITA PROJECT NO 542-80-245-80032-000-000-003



REISS AND GOODNESS ENGINEERS

WICHITA, KANSAS

1981

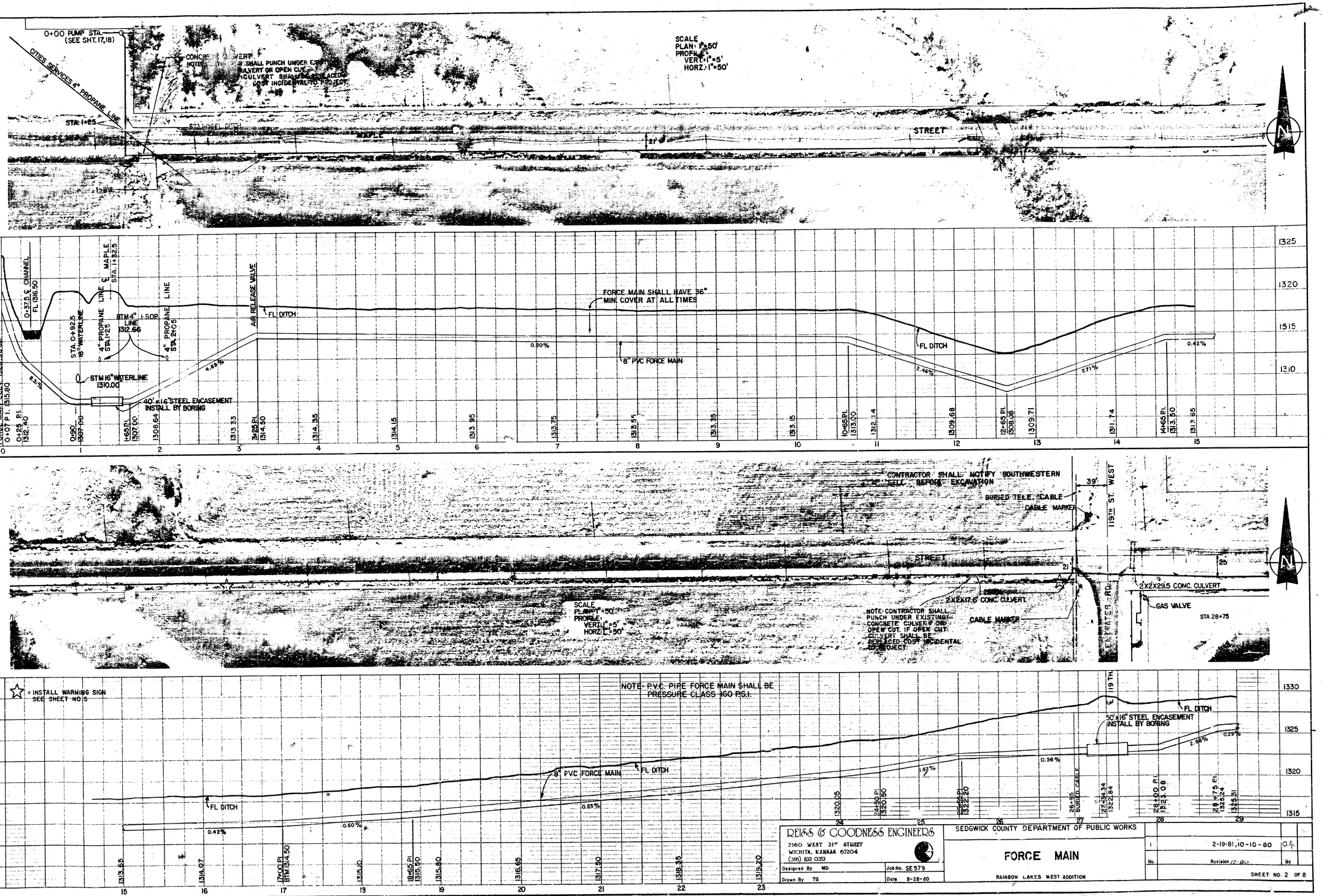
PLANS PREPARED BY
REISS & GOODNESS ENGINEERS
2160 WEST 21st STREET
WICHITA, KANSAS 67204
(316) 832-0213
DATE 1-6-81

FILED
FILED IN THE OFFICE OF
THE SEDGWICK COUNTY CLERK
Dorothy L. White 2-23-81
COUNTY CLERK DATE

APPROVED
COUNTY ENGINEER/DIRECTOR OF PUBLIC WORKS
DATE 2-23-81

APPROVED DATE
CHAIRMAN
BOARD OF COUNTY COMMISSIONERS

R.W. Bruggeman
CITY ENGINEER, CITY OF WICHITA, KANSAS
DATE 2-12-81



PLAN
SURVEYED
PLOTTED
NOTE BOOK
CROSS CHECKED
No.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
STRUCTURE LOCATIONS CHECKED
BY
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
CROSS CHECKED
No.
ALIGNMENT CHECKED
STRUCTURE LOCATIONS CHECKED
BY
DATE

REISS & GOODNESS ENGINEERS
2160 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 832-0213
Designed By MD
Drawn By TG
Job No. SE 579
Date 8-28-80

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

FORCE MAIN

RAINBOW LAKES WEST ADDITION

No.		By
1	2-19-81, 10-10-80	D.F.
	Revision (2-8-)	

SHEET NO. 2 OF 8

K•E PLATE 2, FLAT PLAN-PROFILE
KEUFFEL & ESSER CO.
48 7032 MADE IN U.S.A.

2/9

FILMED FROM THE BEST AVAILABLE COPY

SCALE
PLAN: 1"=50'
PROFILE:
VERT: 1"=5'
HORZ: 1"=50'

CONTRACTOR SHALL NOTIFY GAS SERVICE CO. PRIOR TO ANY EXCAVATION

119TH ST. WEST

MAPLE

STA. 26+89

21'

DEAD END 6' N. OF S. PL. 32' E. OF ℄

25'

STA. 28+73

8' N. OF S. PL. & 42' E. OF CL.

6" STEEL GAS LINE

6" GAS VALVE

8" STEEL GAS LINE

CLEARWATER RD.

P.I.

CEDAR CREST RD.

1.3 x 23' CONC. CULVERT

2'x2'x30' CONC. CULVERT

PARKRIDGE

DEAD END

P.I.

6" STEEL GAS LINE

STREET

STA. 38+54

25'

4x4x4 TEE 21' S. OF ℄

DEAD END

8' S. OF ℄ OF ROAD 6' W. OF E. R.

P.I.

4" STEEL GAS LINE

272' W. OF W. OF R. 8' N. OF S. R.

PARKRIDGE

2'

= INSTALL WARNING SIGN SEE SHEET NO.5

℄ CEDAR CREST STA 133+75

STA. 38+54 6" GAS L

1228.60

FORCE MAIN SHALL HAVE 36" MIN. COVER AT ALL TIMES

FL DITCH

0.29%

0.13%

8" PVC FORCE MAIN

0.62%

3.12%

0.62%

	29	30	30+65 P.I.	31	32	33	34	35	36	37	38	38+76 P.I.	39	39+40 P.I.	40	41
1335																
1330																
1325	1325.31	1325.61	1325.80	1325.87	1325.97	1326.11	1326.24	1326.37	1326.51	1326.64	1326.77	1326.87	1328.43	1328.90	1328.27	1328.89

SCALE:
PLAN: 1"=50'
PROFILE:
VERT: 1"=5'
HORZ: 1"=50'

SHEFFORD ST.

MAPLE

25'

4" STEEL GAS LINE

2" STEEL

STA. 46+65 AIR RELEASE

4" STEEL GAS LINE

2'x24" CMP CULVERT

2'x3' CULVERT

25'

FL ASPHALT TO BE REPLACED. STREET CROSSING COST INCIDENTAL TO PROJECT.

STA. 46+65 AIR RELEASE

GAS LINE

FL DITCH

8" PVC FORCE MAIN

0.62%

0.22%

37%

3%

℄ PARKRIDGE

℄ SHEFFORD

	41	42	43	44	45	46	46+90 P.I.	47	47+72	48	48+85 P.I.	49	50	51	52	53	54
1335																	
1330																	
1325	1329.89	1330.51	1331.14	1331.76	1332.38	1333.00	1333.50	1333.29		1333.10		1332.27	1331.24	1329.87	1328.50 P.I.	1326.65	1324.80 P.I.

PLAN
SURVEYED
NOTE BOOK
No.
PLOTTED
CHECKED
ALIGNMENT CHECKED
EL. OF RAP CHECKED

PROFILE
SURVEYED
NOTE BOOK
No.
PLOTTED
CHECKED
R. & L. NOTES
STRUCTURE NOTATIONS CHECKED

DATE
BY

REISS & GOODNESS ENGINEERS
2160 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 832-0213
Designed By MD
Drawn By TG
Job No. SE 579
Date 8-29-80

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

FORCE MAIN

RAINBOW LAKES WEST ADDITION

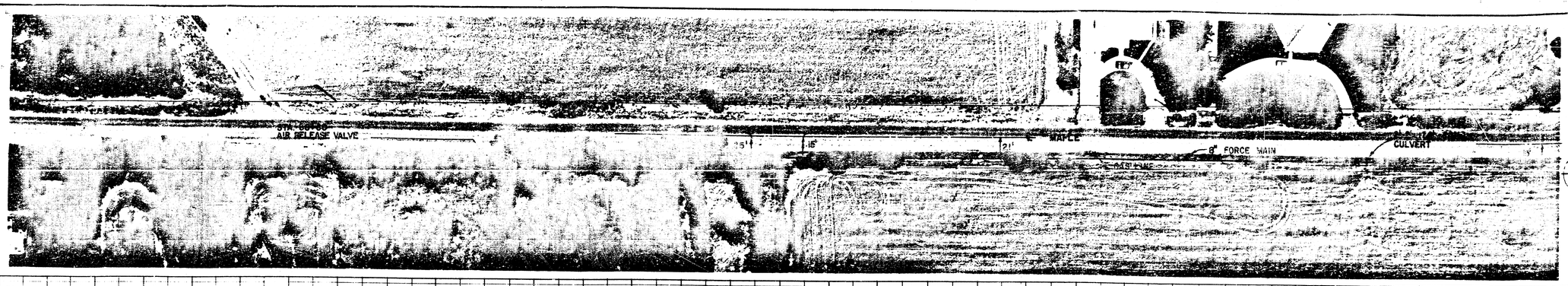
No.	Revision 12-80	By
1	2-19-81, 10-10-80	D.G.

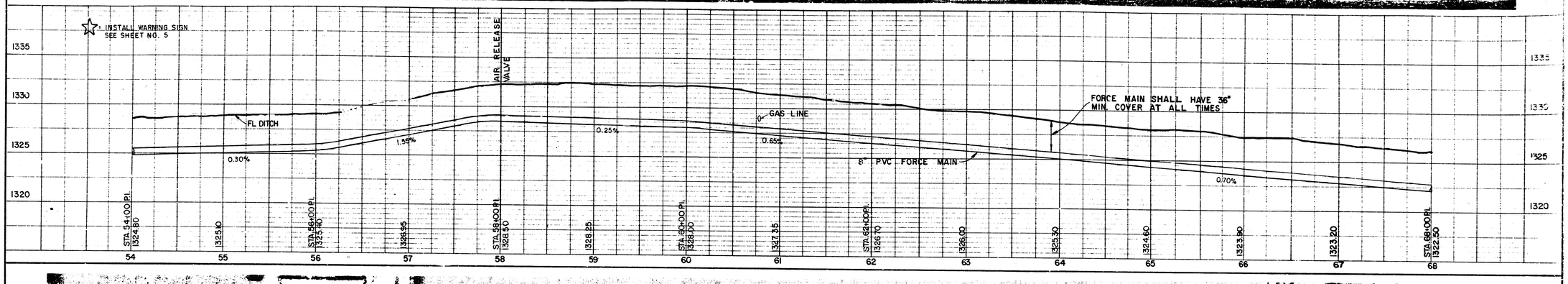
SHEET NO. 3 OF 8

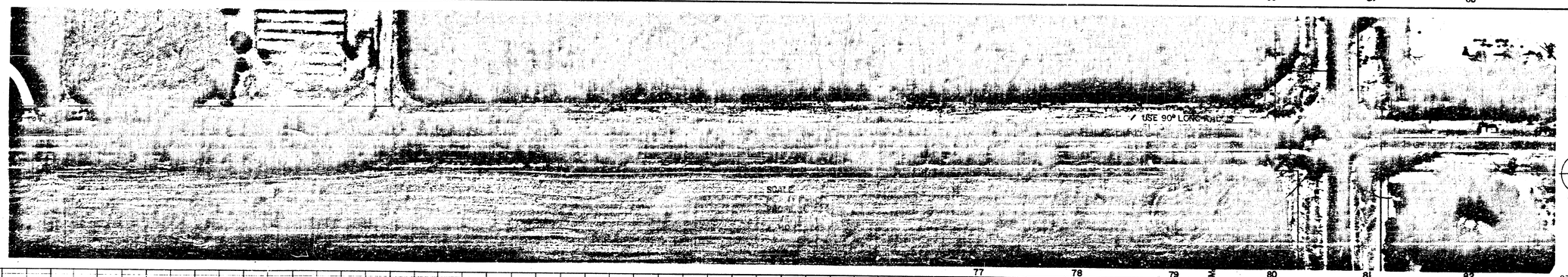
3/9

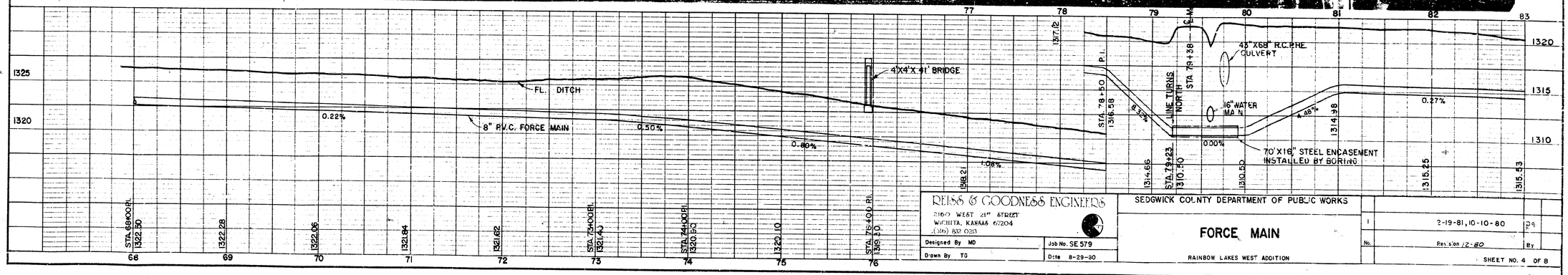
K·E PLATE 2, FLAT PLAN PROFILE
KEUFFEL & ESSER CO.
48 7032 MADE IN U.S.A.

FILMED FROM THE BEST AVAILABLE COPY









PLAN — SURVEYED, PLOTTED, NOTE BOOK, No., ALIGNMENT CHECKED, R/T. OF WAY CHECKED, BY, DATE

PROFILE — SURVEYED, PLOTTED, NOTE BOOK, No., GRADES CHECKED, R.C.P. CHECKED, STRUCTURE NOTATIONS CHECKED, BY, DATE

REISS & GOODNESS ENGINEERS
2160 WEST 21st STREET
WICHITA, KANSAS 67204
(316) 832 0213

Designed By MD
Drawn By TG
Job No. SE 579
Date 8-29-80

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

FORCE MAIN

RAINBOW LAKES WEST ADDITION

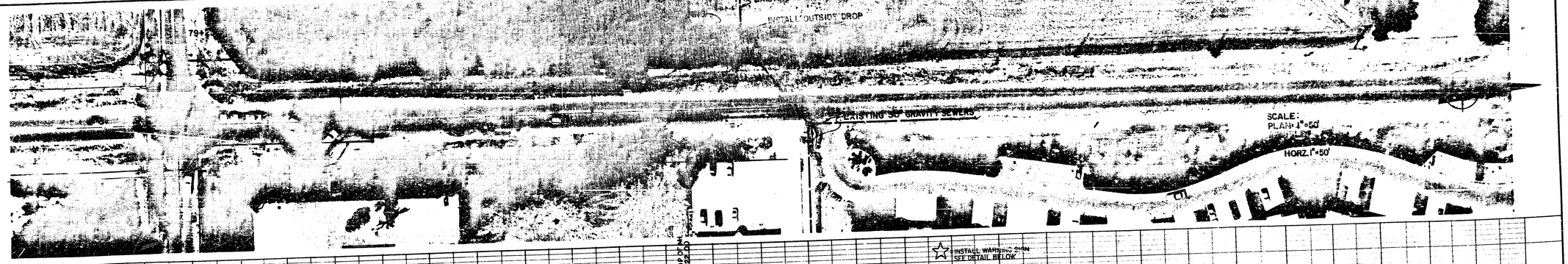
No.	Revision / Z-80	By
1	2-19-81, 10-10-80	TG

SHEET NO. 4 OF 8

K&E PLATE 2, FLAT PLAN-PROFILE
KEUFFEL & ESSER CO.

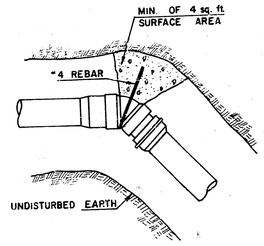
4/9

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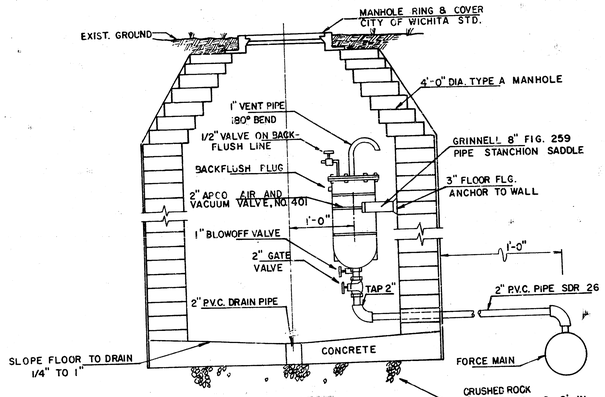


NOTES:
1. EXISTING MANHOLE IS A PLASTIC LINED TYPE D MANHOLE. THE OUTSIDE DROP INSTALLATION INTO THIS MANHOLE MUST MAINTAIN INTEGRITY OF PROTECTIVE PLASTIC LINING. SET CROWN OF BOTTOM OPENING TO MATCH CROWN OF 15" PIPE FLOWING OUT.
2. A FLEXIBLE WATER TIGHT GASKET SHALL BE USED TO CONNECT PVC PIPE TO MANHOLE 0+00

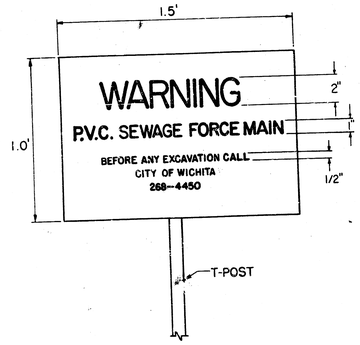
ADDENDUM NO. 1
3-19-1981



THURST BLOCK DETAIL
NO SCALE



AIR RELEASE VALVE MANHOLE
NO SCALE



WARNING SIGN DETAIL
SCALE: 1"=5"

REISS & GOODNESS ENGINEERS
2160 WEST 21st STREET
WICHITA, KANSAS 67204
(316) 832 0213
Designed By MD | Job No. SE 579
Drawn By TG | Date 8-29-80

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

FORCE MAIN

RAINBOW LAKES WEST ADDITION

No.	Revision / Date	By
1	2-19-81, 10-10-80	
	Revision / 2-19, 2-81	

SHEET NO. 5A OF 8
5/9

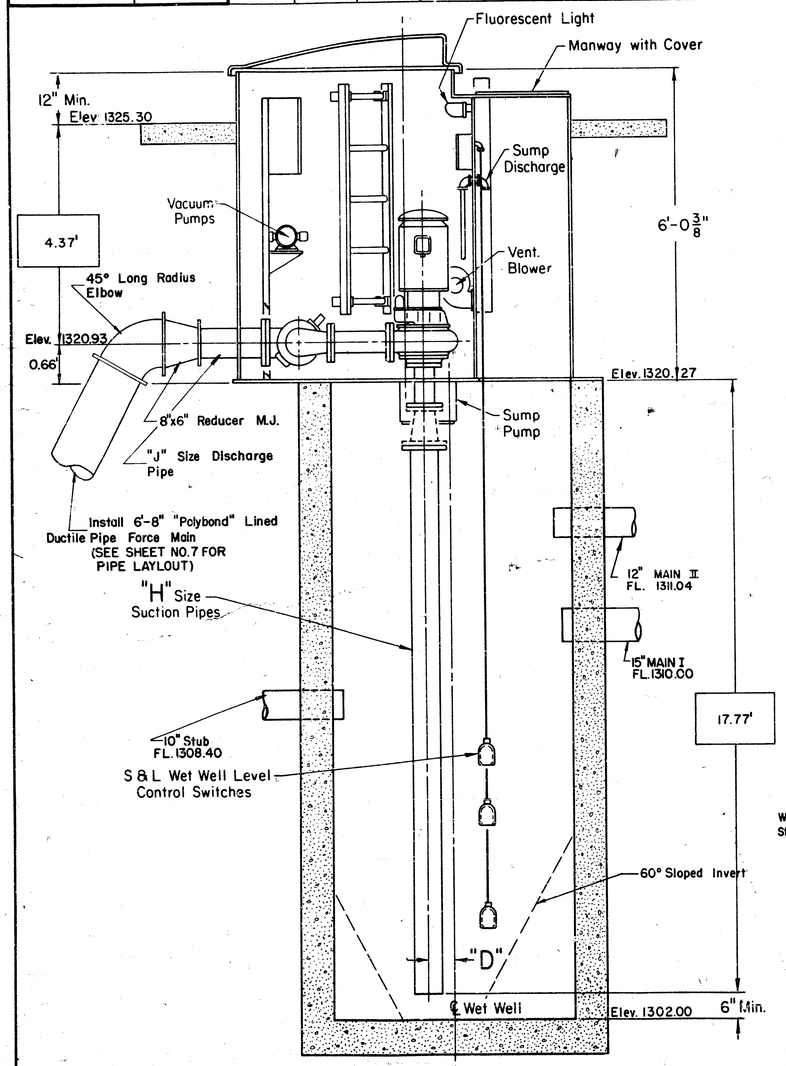
PLAN: SURVEYED, PLOTTED, NOTE BOOK, No., DATE, BY, QUANTITIES CHECKED, R/W MONUMENTS CHECKED, R/L OF WAY CHECKED

PROFILE: SURVEYED, PLOTTED, NOTE BOOK, No., DATE, BY, GRADES CHECKED, R.R.'s NOTIFIED, STRUCTURE LOCATIONS CHECKED

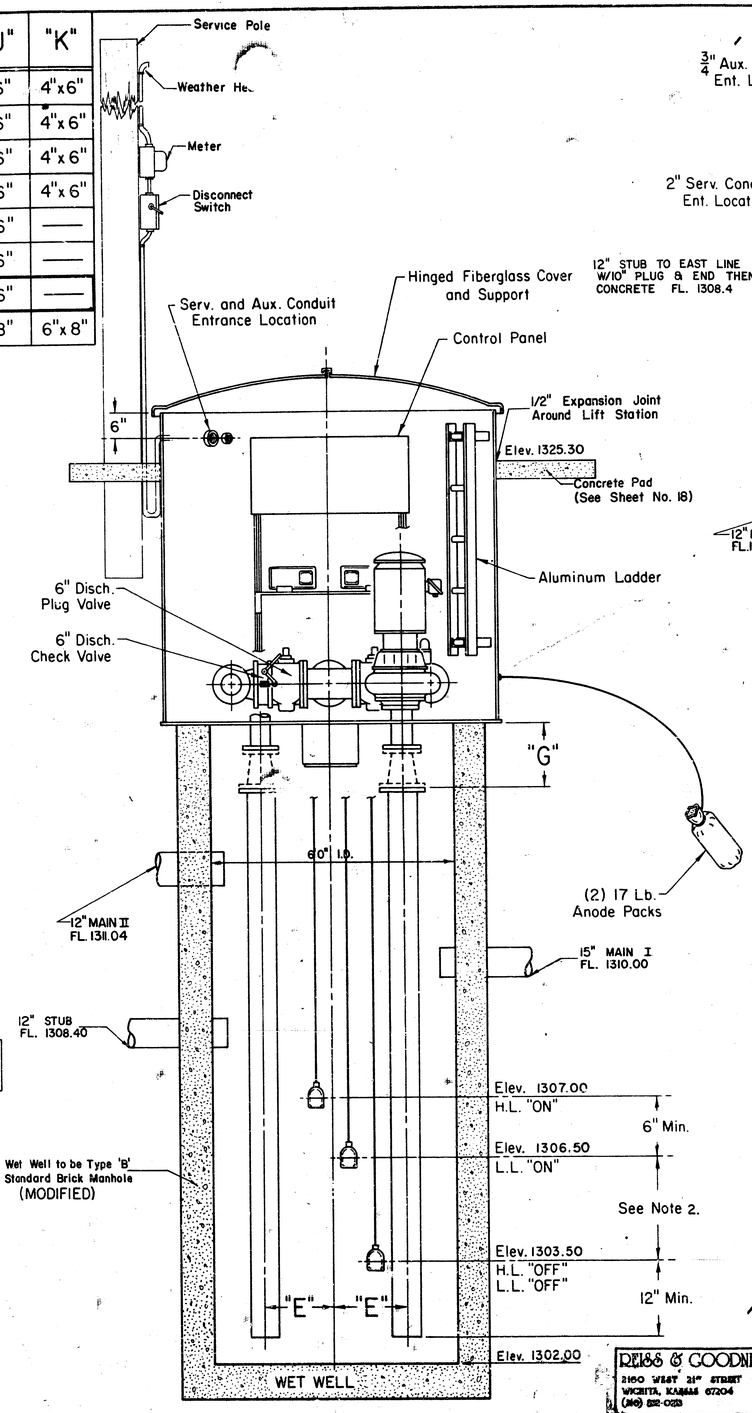
K+E PLATE 2, FLAT PLAN-PROFILE KEUFFEL & ESSER CO.

FILMED FROM THE BEST

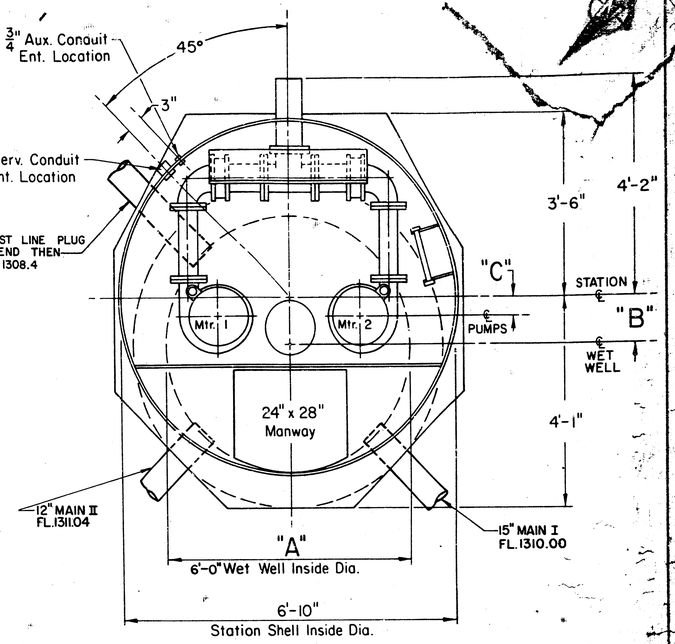
PUMPS	Pump Motor Maximum Horsepower	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"
4B2B	20	5'-0"	11"	4 3/4"	6 1/4"	22 7/16"	7 7/8"	15 1/16"	6"	6"	4"x6"
		6'-0"	5"	4 3/4"	1/4"	22 7/16"	7 7/8"	15 1/16"	6"	6"	4"x6"
4B2C	20	5'-0"	11"	4 3/4"	6 1/4"	22 7/16"	7 7/8"	15 1/16"	6"	6"	4"x6"
		6'-0"	5"	4 3/4"	1/4"	22 7/16"	7 7/8"	15 1/16"	6"	6"	4"x6"
4B3B/4C3B	30	5'-0"	11"	4 3/4"	6 1/4"	20 7/16"	7 7/8"	6"	6"	6"	—
		6'-0"	5"	4 3/4"	1/4"	20 7/16"	7 7/8"	6"	6"	6"	—
6B3B/6C3B	30	6'-0"	5"	4"	1"	20 7/16"	7 7/8"	6"	6"	6"	—
		6'-0"	5"	4"	1"	20 7/16"	6 7/8"	17 1/16"	8"	8"	6"x8"



CROSS SECTION



SECTIONAL ELEVATION



PLAN VIEW

NOTES 1. A dehumidifier assembly w/ hermetically sealed freon refrigeration type compressor expansion coil, fan and condensor coil shall be furnished to maintain the relative humidity of air in the pump chamber low enough to keep electrical equipment dry and to prevent condensation on the walls.

2. Station Design Characteristics:
   Suction Line 8" Discharge 6"
   2 Pumps at 600 GPM at 85' TDH Singly Operated

3. Backfill Around Station shall be Compacted to 95 % Standard Proctor to Prevent Settlement Prior to Installation of Concrete Pad.

4. These Drawings show a Recessed Wet Well Mounted Sewage Pumping Station Manufactured by Smith and Loveless (S & L). Station by any Other Manufacturer must be Approved be City Engineer Prior to Submitting Bids.

5. Pumping Station shall include an alarm system compatible to city's lift station alarm system for power outage, High water in wet well & high water in pump chamber.

6. A Dual Range Electric Heater w/ an automatic circulating fan thermostat control & an "ON-OFF" switch is to be provided. The Heater shall be capable of keeping the tempuratures in the station above freezing. The Heater is to be operated by connection to the convenience receptacle location on control panel.

DELISS & GOODNESS ENGINEERS
2160 WEST 21st STREET
WICHITA, KANSAS 67204
(316) 832-0233
Designed By MD
Drawn By TB
Job No. SE 579
Date 8-29-80

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

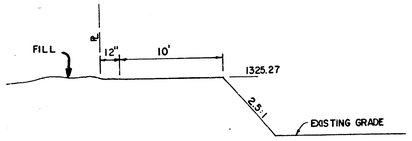
PUMP STATION

RAINBOW LAKES WEST ADDITION

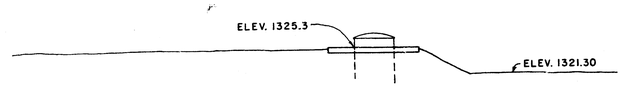
No.	Revision	By
2	11-4-80, 2-19-81	
1	10-10-80	

SHEET NO. 6 OF 8

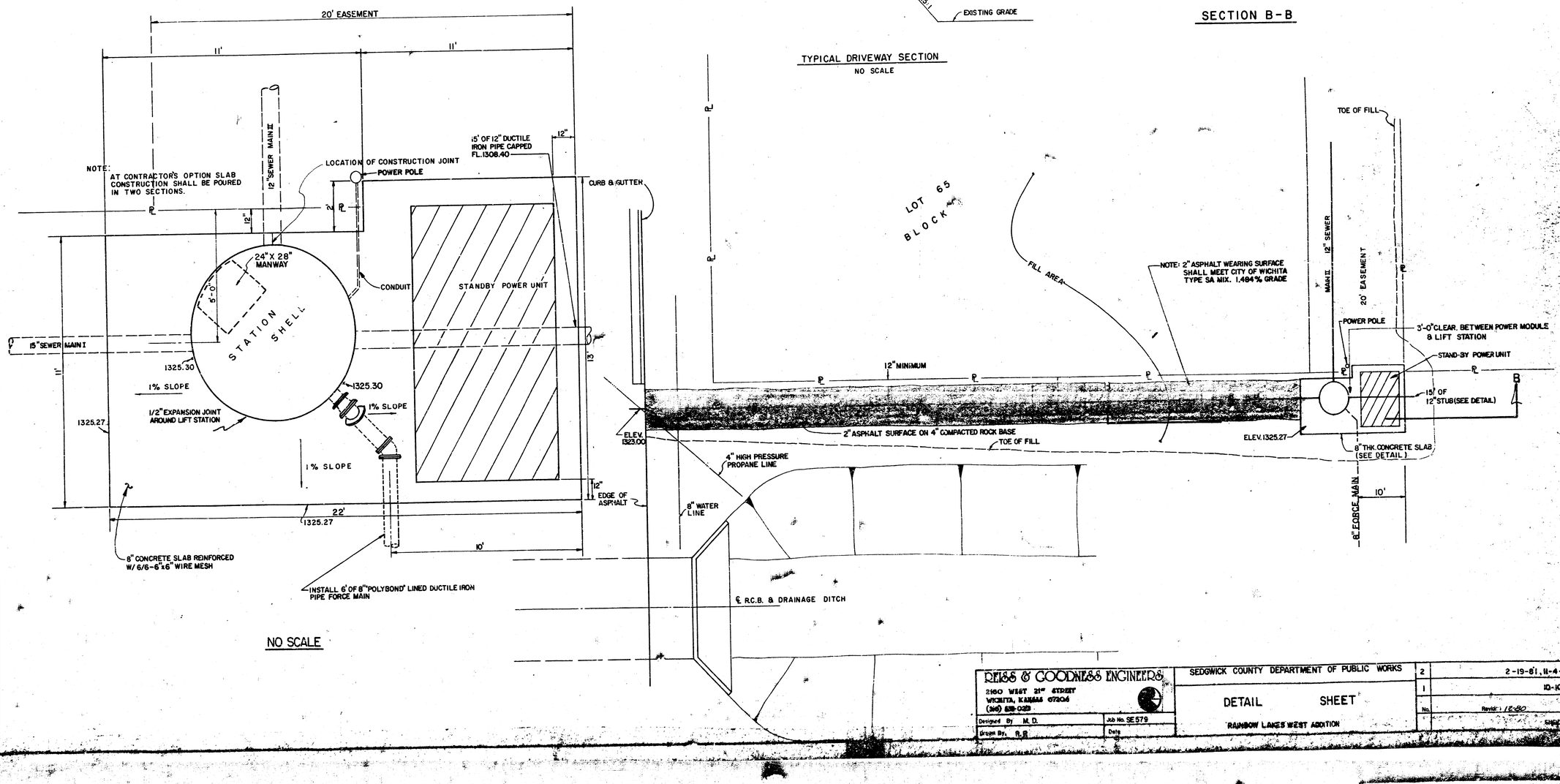
SCALE: 1"=10'



TYPICAL DRIVEWAY SECTION
NO SCALE



SECTION B-B



REISS & GOODNESS ENGINEERS
2160 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 838-0229
Designed By M. D.
Drawn By R. B.
Job No. SE579
Date

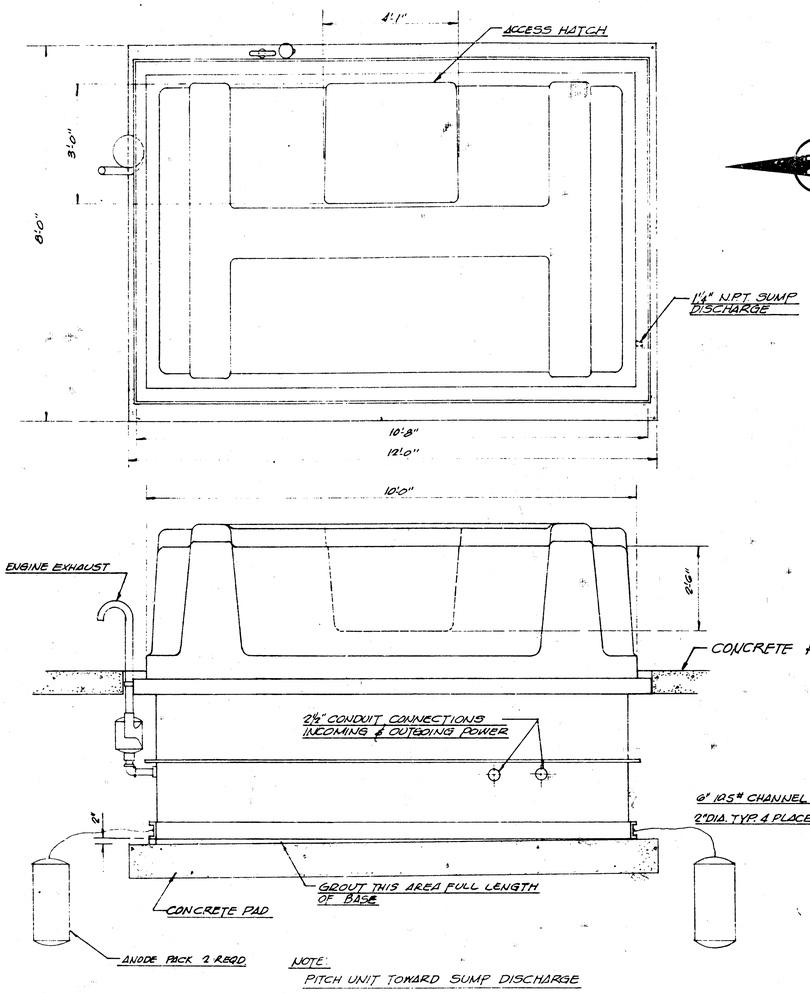
SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

DETAIL SHEET

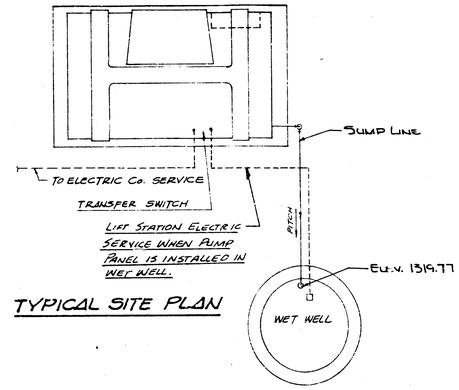
RAINBOW LAKES WEST ADDITION

No.	Revision	By
2	2-19-81, 11-4-80	CG
1	10-10-80	D.J.

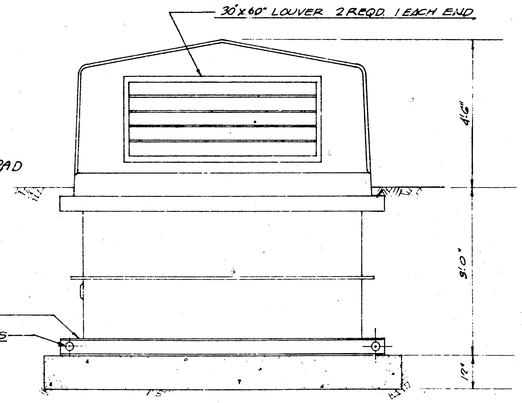
SHEET NO. 7 OF 9



NOTE:
PITCH UNIT TOWARD SUMP DISCHARGE



TYPICAL SITE PLAN



No.	Revision	By	Date

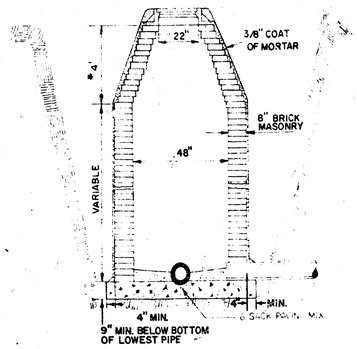
SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

ADDENDUM NO. 1
SANITARY SEWER EXTENSIONS
PUMPING STATION & FORCE MAIN
RAINBOW LAKES WEST THIRD ADDITION

REISS & GOODNESS ENGINEERS
2160 WEST 21st STREET
WICHITA, KANSAS 67204
(316) 832-0213

Designed by STANNARD POWER EQUIP. CO.	Job No.	Sht. 7a of 8 8/9
Drawn by	Date 3-2-81	

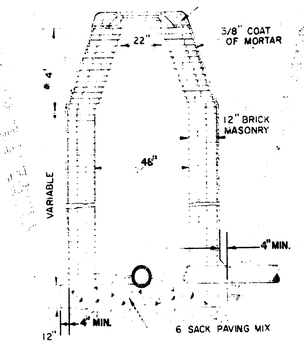
FILMED FROM THE BEST AVAILABLE COPY



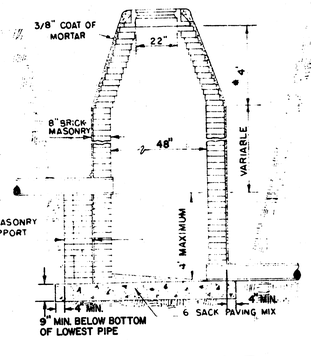
STANDARD MANHOLE TYPE "A"

* DRAW = 6' ON 5' DIA. M.H.

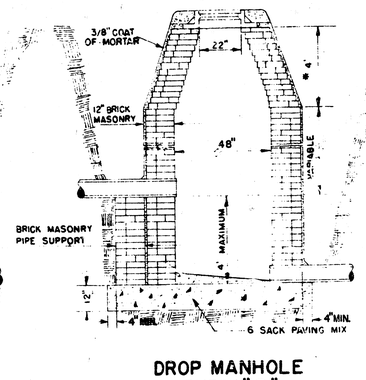
GROUT TO BE PLACED AROUND MANHOLE RING ONLY WHEN MANHOLE IS CONSTRUCTED IN UNPAVED AREAS. (TYPICAL ALL MANHOLES)



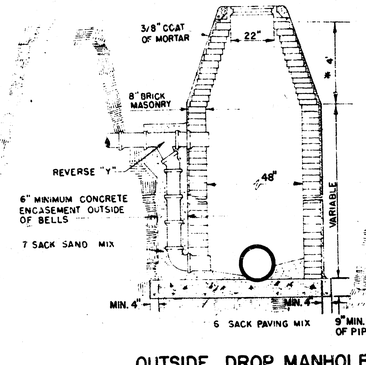
STANDARD MANHOLE TYPE "B"



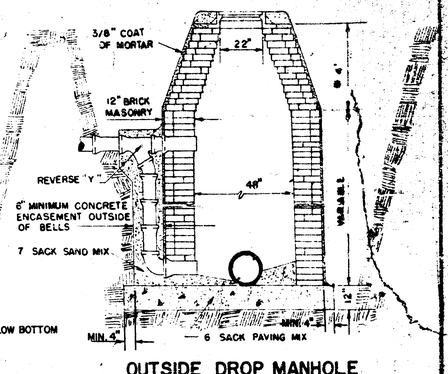
DROP MANHOLE TYPE "A"



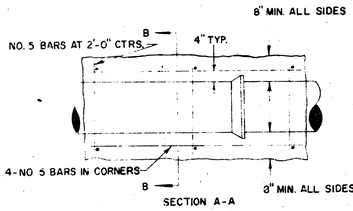
DROP MANHOLE TYPE "B"

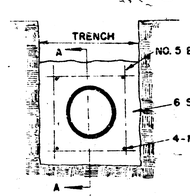


OUTSIDE DROP MANHOLE TYPE "A"



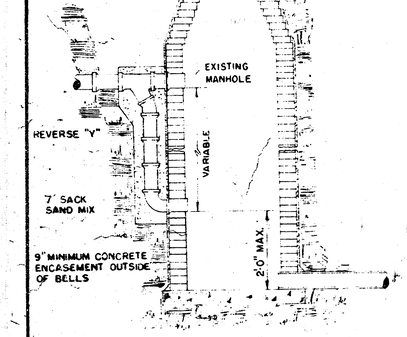
OUTSIDE DROP MANHOLE TYPE "B"





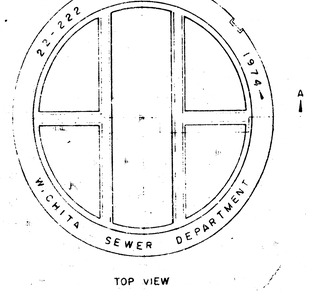
REINFORCED CONCRETE ENCASEMENT

NOTE : CONCRETE ENCASEMENT AND CONCRETE CRADLE SHALL BEGIN AND END AT A JOINT WHEN CLAY PIPE IS USED.
3" MINIMUM CONCRETE COVER OVER REBAR.



DETAIL OF DROP STACK

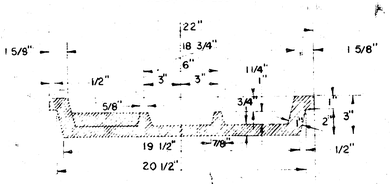
FOR EXISTING MANHOLES IN GROUND WATER



TOP VIEW

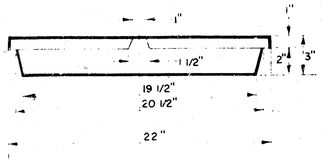
MANHOLE COVER

WEIGHT 110 LBS.



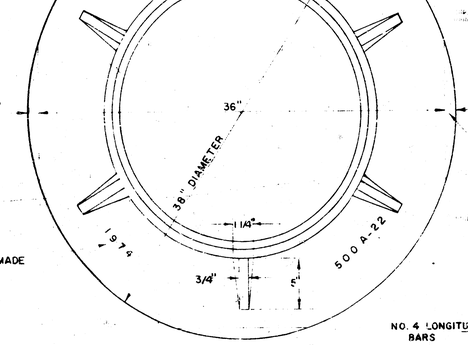
SECTION A-A

MANHOLE COVER



SIDE VIEW

MANHOLE COVER



THIS PORTION OF FLANGE MAY BE OMITTED

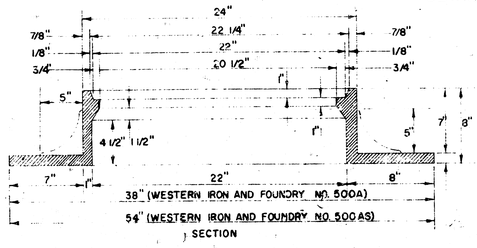
YEAR CASTING IS MADE

TOP VIEW

MANHOLE RING

WEIGHT 325 LBS. RING NO. 500A

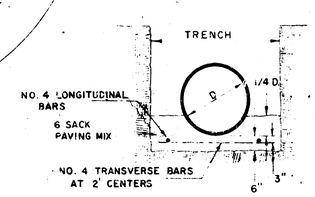
WEIGHT 800 LBS. RING NO. 500AS



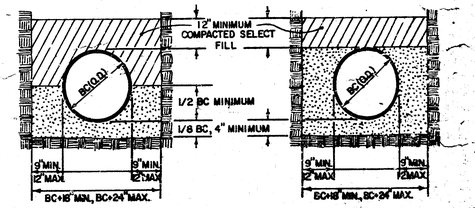
SECTION

MANHOLE RING

OUTSIDE CIRCUMFERENCE OF COVER AND THE INNER FACE AND SEAT OF RING TO BE MACHINE FIT.



DETAIL OF CONCRETE CRADLE



A.B.S. PIPE BEDDING DETAIL

P.V.C. PIPE BEDDING DETAIL

GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD.
- STANDARD MANHOLES TYPE 'A' OR TYPE 'B' AND STANDARD DROP MANHOLES TYPE 'A' OR TYPE 'B' SHALL BE BID PER LINEAR FOOT OF MANHOLES CONSTRUCTED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE. MANHOLES WITH PIPE SIZES LARGER THAN 24" SHALL BE 5' DIAMETER.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED TO INCREASE HYDRAULIC EFFICIENCY USING 8 SACK SAND MIX CONCRETE.
- PIPES INSTALLED WITHIN THE MANHOLE EXCAVATION SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. COST OF CRADLE WITHIN MANHOLE EXCAVATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLES CONSTRUCTED. CRADLE SHALL EXTEND TO FIRST JOINT OUTSIDE OF MANHOLE WHEN CLAY PIPE IS USED.

NOTE : REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES 6" ABOVE THE BOTTOM. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE COST OF REINFORCING STEEL IS TO BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLES CONSTRUCTED.

NO.	REVISION	BY	DATE
	2-19-81, 1-8-81, 12-3-80, 11-14-80, 6-26-80 (SG.CO.)	D.J.	

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS

BRICK MANHOLE DETAILS
(TYPES A&B)
& MISC. DETAILS

DEES & COODNESS ENGINEERS
260 WEST 21ST STREET
WICHITA, KANSAS 67204
(316) 838-0488

DESIGNED BY	CITY OF WICHITA	JOB NO.	SHT. 8 OF 8 SHTS.
DRAWN BY	CITY OF WICHITA	DATE 6-26-80	