SANITARY SEWER and SANITARY SEWER LIFT STATION and FORCE MAIN

LATERAL 281, SOUTHWEST INTERCEPTOR

CITY OF WICHITA, KANSAS

M. E. LINDEBAK CITY ENGINEER

CITY PROJECT NO. 468 - 76 - 245 - 81948 - 000 - 000 - 001
INDEX NO. 740621

DECEMBER 1990

NOTES.

1. 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:

   KANSAS ONE-CALL 1-800-344-7233

   THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

CABLEVISION	262-4270 OR 263-2061
K.P. & L. GAS SERVICE COMPANY	263-7511
KANSAS GAS & ELECTRIC	264-1141
ARKLA GAS COMPANY	942-8350 OR 263-2761
SOUTHWESTERN BELL TELEPHONE COMPANY	1-571-2611
CITY OF WICHITA WATER DEPARTMENT	268-4908
CITY OF WICHITA SEWER MAINTENANCE	268-4071

2. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA IS TO BE CARRIED THROUGH CONSTRUCTION. LOCAL BUSINESS OR APARTMENT TRAFFIC GENERATED WITHIN THE PROJECT AREA IS TO BE CARRIED THROUGH CONSTRUCTION.

3. 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 THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

4. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES 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 UNSIGHTLY APPEARANCE WILL NOT BE APPROVED.

   ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS. OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

5. THE SANITARY SEWER AND FORCE MAIN SHALL BE CONSTRUCTED ON THE ALIGNMENT SHOWN BY THE PLANS. HEDGE, TREES AND SHRUBS IN EASEMENTS OR 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 COST FOR ANY NECESSARY TREE REMOVAL, TRIMMING, CLEARING AND GRUBBING SHALL BE CONSIDERED SUBSIDIARY AND NOT PAID FOR SEPARATELY.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY 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.

7. THE LUMP SUM PRICE BID FOR FURNISHING AND INSTALLING LIFT STATION WITH STANDBY POWER MODULE AND MISCELLANEOUS APPURTENANCES COMPLETE IN PLACE SHALL INCLUDE ALL COSTS FOR FURNISHING AND INSTALLING THE LIFT STATION AND STANDBY POWER MODULE AS INDICATED ON THE SITE PLAN COMPLETE IN PLACE AND IN OPERATION. SUCH LUMP SUM BID SHALL INCLUDE THE COST OF CONSTRUCTING AND/OR INSTALLING COMPACTED FILL, CONCRETE PAD, ACCESS DRIVE AND CONVERT ELECTRIC PEDESTAL, ELECTRICAL CONDUIT, ELECTRICAL WIRING, DISCONNECT SWITCH, ELECTRICAL POWER SUPPLY, NATURAL GAS FUEL SUPPLY, FINISHED GRADING AND ANY OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK.

8. CONTRACTOR SHALL FURNISH AND INSTALL A METER RACK TO SUPPORT THE DISCONNECT AND METER ENCLOSURES IN A LOCATION APPROVED BY THE ENGINEER.

9. A 2" CONDUIT SHALL BE INSTALLED UNDERGROUND FROM THE DISCONNECT SWITCH LOCATED ON THE ELECTRIC SERVICE PEDESTAL TO THE LIFT STATION MODULE AND FROM THE LIFT STATION MODULE TO THE STANDBY POWER MODULE AND FROM THE STANDBY POWER MODULE TO THE DISCONNECT SWITCH LOCATED ON THE ELECTRIC SERVICE PEDESTAL. A 3/4" CONDUIT SHALL BE INSTALLED UNDERGROUND BETWEEN THE LIFT STATION MODULE AND THE ELECTRIC SERVICE PEDESTAL TO FACILITATE CONNECTION OF THE ALARM SYSTEM BY OTHERS. THE ELECTRICAL POWER SUPPLY TO THE METER BASE MUST BE UNDERGROUND. ALL ELECTRICAL WIRING SHALL CONFORM TO THE CITY OF WICHITA CODE.

10. A UL LISTED LIGHTNING ARRESTOR SHALL BE INSTALLED AFTER THE DISCONNECT SWITCH FOR VOLTAGE SURGE PROTECTION OF THE AUTOMATIC TRANSFER SWITCH AND ALL SECONDARY WIRING.

11. THE DRIVE APPROACH TO THE LIFT STATION AND ALSO THE 2 - 6' GATES (12' OPENING) SHALL BE CONSTRUCTED AS INDICATED ON THE PLAN AND SHALL BE INCLUDED AS PART OF THE LUMP SUM PRICE BID FOR FURNISHING AND INSTALLING LIFT STATION.

12. THE CONTRACTOR SHALL CONTACT K.G. & E. (MIKE PRUITT, 261-6257) TO MAKE ARRANGEMENTS FOR ELECTRICAL SERVICE.

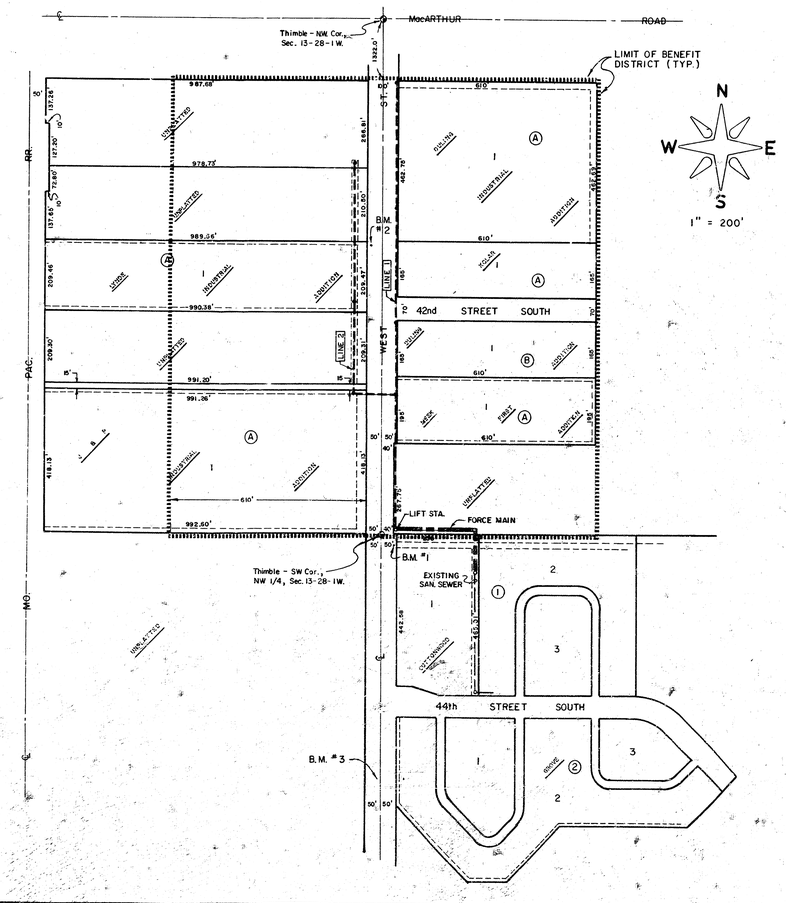
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGEMENTS WITH ARKLA GAS COMPANY (JERRY WATKINS, 942-8350) FOR EXTENSION OF GAS SERVICE TO THE LFIT STATION SITE, AND FOR PAYMENT OF COSTS OF SUCH EXTENSION AND METER SETTING. LOCATION OF METER TO BE ACCEPTABLE TO ARKLA GAS COMPANY AND TO THE CITY OF WICHITA SEWER MAINTENANCE DEPT.

14. FITTINGS AND CONCRETE THRUST BLOCKS SHALL BE CONSIDERED SUBSIDIARY TO THE INSTALLATION OF THE FORCE MAIN AND NOT PAID FOR SEPARATELY.

15. FORCE MAIN WARNING SIGNS SHALL BE PLACED AT THE FOLLOWING STATIONS: 2+30 AND 3+38.

16. UNLESS OTHERWISE SPECIFIED ON THE PLANS, MANHOLES MAY BE TYPE "P", "C", OR "D" MANHOLES. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.

17. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.



IMPROVEMENT DISTRICT DESCRIPTION

LOT 1, BLOCK A, DULING INDUSTRIAL ADDITION

LOT 1, BLOCK A & LOT 1, BLOCK B, DULING-KOLAR ADDITION

LOT 1, BLOCK A, MEEK FIRST ADDITION

THE EAST 610' OF LOT 1, BLOCK A, J & P INDUSTRIAL ADDITION

THE EAST 610' OF LOT 1, BLOCK A, LYNDE INDUSTRIAL ADDITION

AN UNPLATTED TRACT IN THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 28 SOUTH, RANGE 1 WEST OF THE 6th P.M., DESCRIBED AS: THE WEST 660 FEET OF THE SOUTH HALF OF THE SOUTH HALF OF SAID NORTHWEST QUARTER, EXCEPT THE NORTH 395 FEET AND EXCEPT STREET RIGHT-OF-WAY.

AN UNPLATTED TRACT IN THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 28 SOUTH, RANGE 1 WEST OF THE 6th P.M., DESCRIBED AS: THE EAST 660 FEET OF SAID NORTHEAST QUARTER, EXCEPT THE NORTH 1322 FEET AND EXCEPT THE SOUTH 418.13 FEET AND EXCEPT THE NORTH 209.46 FEET OF THE SOUTH 851.91 FEET AND EXCEPT STREET RIGHT-OF-WAY.

BENCHMARKS

1. R.R. Spike in utility pole 40' S. & 40' E. of E. 1/4 Cor., Sec. 14-28-1 W. Elev. = 94.13 City Datum

2. R.R. Spike in E. face utility pole 10' S. & 5' E. of NE property cor., Lynde Industrial Addition. Elev. = 96.26 City Datum

3. "D" on ℄ E. hubguard R.C.B. under West St., approx. 250' S. of 44th St. South. Elev. = 94.18 City Datum

INDEX

Sheet No.	Description
1	Cover Sheet
2	Plan & Profile - Line 1
3	Plan & Profile - Lines 1 & 2
4	Plan & Profile - Line 2
5	Plan & Profile - Force Main
6	Site Plan & Details, Force Main & Lift Station
7	Stand-by Generator
8,9	Lift Station

BOOKED 2-19-92

MOEHRING & ASSOCIATES
CONSULTING ENGINEERS
WICHITA

STA. 0+11 CONSTRUCT STD. M.H.

STA. 4+11 CONSTRUCT STD. M.H.

STA. 6+21 CONSTRUCT STD. M.H.

STA. 11+00 MATCH LINE

1" = 40' Horiz.
1" = 5' Vert.

J - S - P

INDUSTRIAL ADDN. (A)

30' Arkla Gas Esm't

Arkla Esm't

418.13'

Sign

6.13'

UNPLATTED

14" ARKLA Energy Resource

209.31'

LYNDE

30' Arkla Gas Esm't

INDUSTRIAL ADDN. (A)

209.47'

UNPLATTED

75' Chainlink

210.5'

Abandoned Gas Regulator Riser

Thimble - SE Cor., NE 1/4

B.M. #1

120-208 V 3ϕ - 60 Hz.

U.P.

T.S.B.

Gas Regulator

Proposed 12" Water

OE/OT/OCATV

4-Strand Barbed-Wire

B.M. #2

LINE 2 SEE SHT. 3

WEST STREET

Asphalt Paving

4' Woven Wire w/3-Strand Barbed-Wire

267.75'

10' Util. Esm't

Asph.

M.B.

24" CMP

24" x 18" CMPA

18" x 28" CMPA

Anchor

Grvl.

Sign

6'

195'

165'

70'

462.75'

21" CMP

4' Woven Wire

6' Steel Guard Posts (2' high)

Asphalt Parking

25' Utilities Serv. & Oil Comp. Esmt

12' P.A.E.

20' Util. Esm't

10' Util. Esm't

UNPLATTED

CAUTION!! Gas Crossing

Drives to be removed and replaced

Meter To Be Relocated By Arkla Gas.

MEEK

FIRST

DULING

KOLAR

42nd ST.

6+26.75

6+96.75

Drive to be removed and replaced.

CAUTION!! Gas Crossing

CAUTION!! Buried Telephone

STA. 0+00 CENTER LIFT STATION.

FORCE MAIN SEE SHT. 5

CAUTION: Minimal Construction Clearance From Existing Gas Service Line. Upon Notification, Arkla Gas Will Furnish Representative To Tie Back And Secure Gas Line.

STA. 9+55 CONSTRUCT STD. M.H.

LINE 1

Wet Well

MH Top = 93.13

MH Top = 93.5

MH Top = 94.1

MH Top = 95.7

MATCH LINE

95
90
85
80

Proposed Drive Profile

Exist. Ground

1" Gas

Telephone

2" Ga

Proposed Force Main

Bottom Wet Well = 79.15

1100 L.F. 8" V.C.P. at +0.40%

FL. Out (E) = 87.10 (F.M.)
FL. In (W) = 84.00
FL. Out (S) = 84.00
FL. In (N) = 83.74

83.26
83.30
83.40

87.76

84.10

87.76

84.00

86.76

84.00

84.56

84.99

85.30

85.00

FL. Out (S) = 86.34
FL. In (W) = 86.34
FL. In (N) = 86.34

85.02

85.70

86.10

86.18

86.50

86.90

87.30

87.52

87.70

F.H. = 88.10

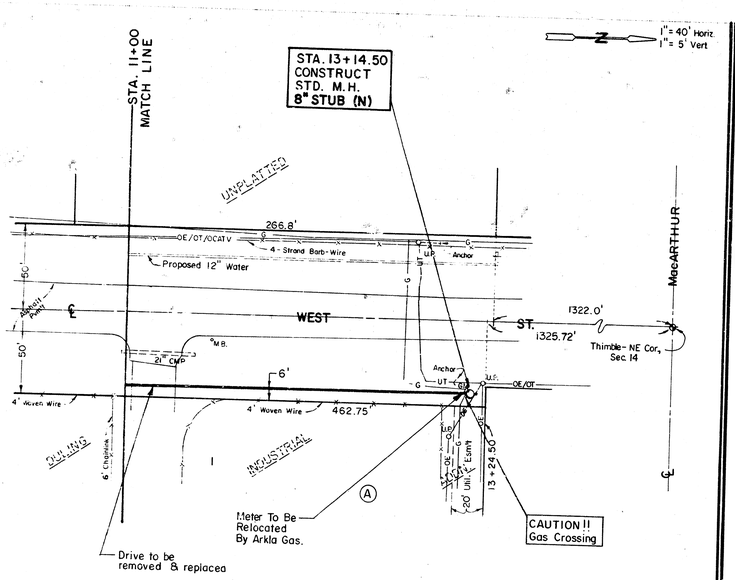
0 | FM | 1 | 2 | 3 | 4 | +11 | 5 | 6 | +21 | 7 | 8 | 9 | +55 | 10 | 11

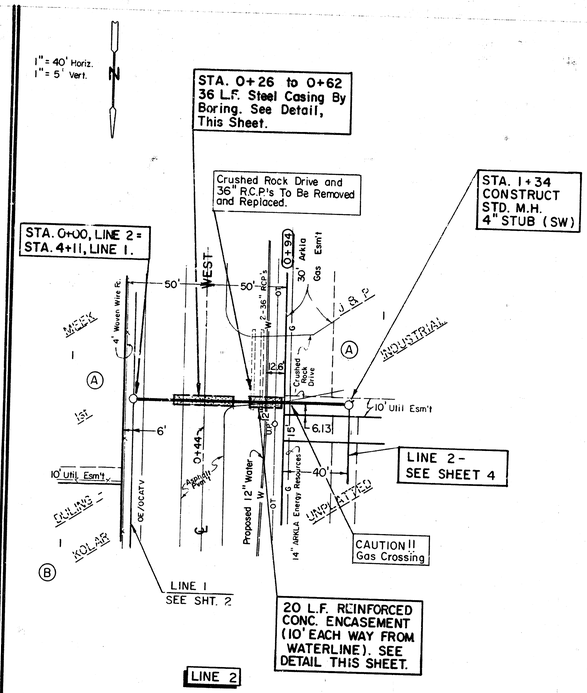
PLATE 1 SINGLE PLAN AND PROFILE FULL LINE

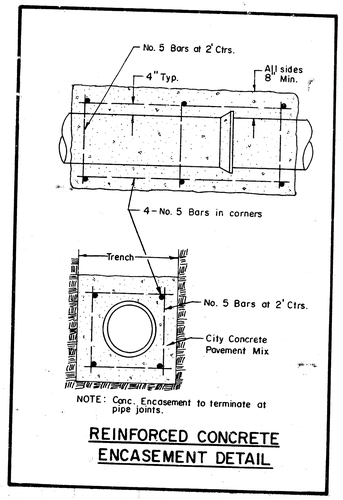
MOEHRING & ASSOCIATES — CONSULTING ENGINEERS

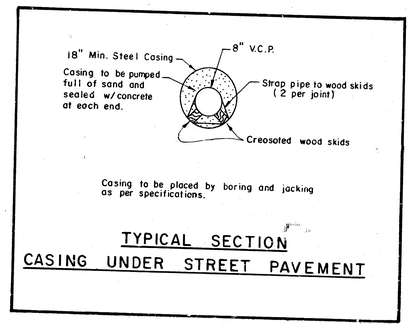
PROJ. NO. 468-76-245-81948-000-000-001

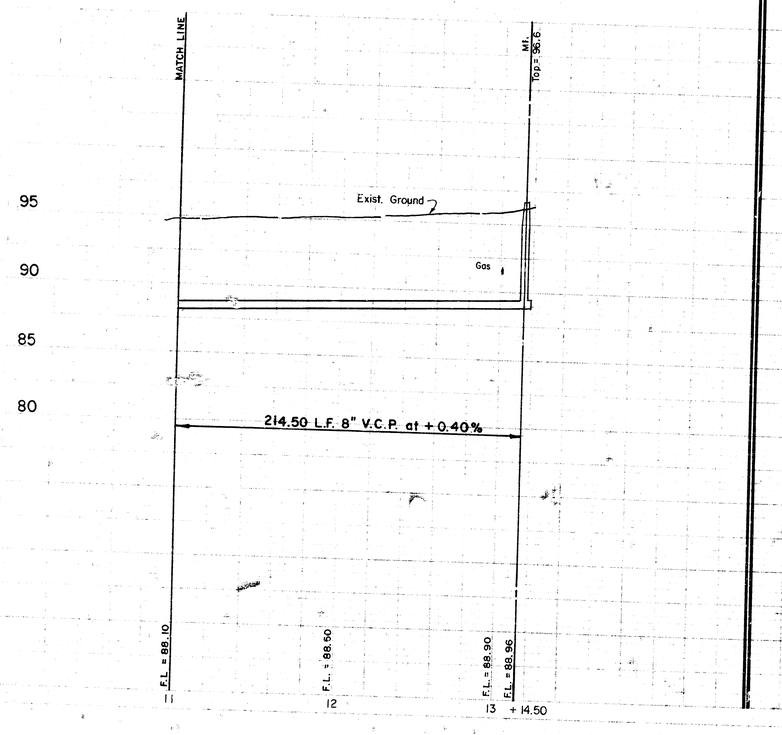
Sheet 2











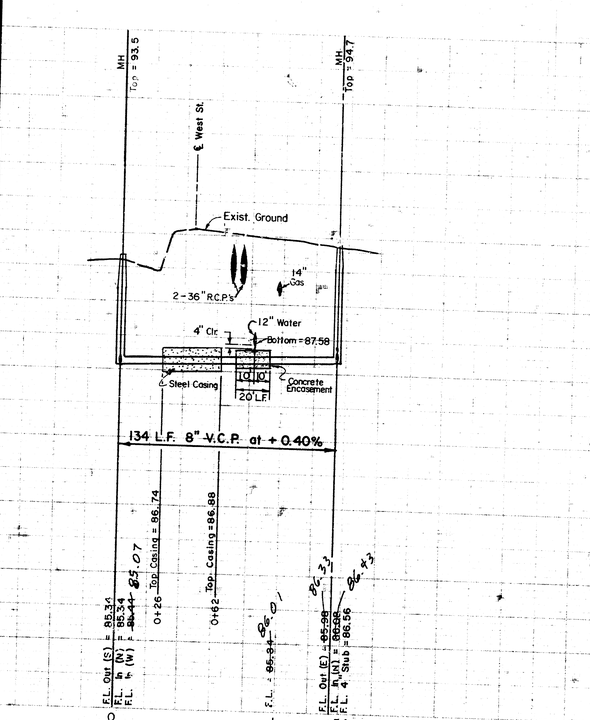


PLATE 1 SINGLE PLAN AND PROFILE LINE

MOEHRING & ASSOCIATES — CONSULTING ENGINEERS

PROJ. NO. 468-76-245-81948-000-000-001

STA. 4+00
CONSTRUCT
STD. M.H.

STA. 7+94.41
CONSTRUCT
STD. M.H.
8" STUB (N)
4" STUB (NW)

1" = 40' Horiz.
1" = 5' Vert.

STA. 1+34
(See Sht. 3)

6.13'

Proposed 15' San. Sewer Esm't
(By Seperate Instrument)

UNPLATTED

10' Util. Esm't

LYNDE

INDUSTRIAL

A

ADDITION

10' Util. Esm't

UNPLATTED

UNPLATTED

15'

40'

209.31'

14" Arkla Energy Resources

30' Arkla Pipeline Esm't

209.47'

6' Chainlink Fc.

210.50'

Abandoned Gas Regulator Riser

40'

20'

266.81'

UNPLATTED

OE/OT/OCATV

U.P. Gas Regulator

U.P.

OE

Proposed 12" Water

B.M. #2

U.P.

4-Strand Baloed Wire

42" x 29" CMPA

U.P.

OE/OT/OCATV

4-Strand Barb-Wire Fc.

U.P. Anchor

LINE 2
SEE SHT. 3

50'

℄

Asphalt Pvmt.

WEST

STREET

1322.0'

Thimble - N.W. Cor., Sec. 13, T. 28 S., R. 1 W.

MacARTHUR RD.

1325.72'

18" 24" CMPA

Sign

U.P. Anchor

OE/OCATV

Asph. Of.

M.B.

21" CMP

Grvl. Of.

Anchor

UT

U.P.

OE/OT

50'

40'

LINE 1
SEE SHT. 2

MEEK

EIGHT

10' Util. Esm't

165'

B

RULING

70'

42nd ST. SO.

165'

Asphalt

6" Steel Guard Posts

4' Woven Wire

462.75'

4' Woven Wire Fc.

KOLAR

A

ADDITION

RULING

INDUSTRIAL

6' Chainlink

A

ADDITION

20' Util. Esm't

UNPLATTED

LINE 2

MH
Top = 94.7

MH
Top = 93.9

MH
Top = 96.1

Exist. Ground

95
90
85
80

660.41 L.F. 8" V.C.P. at +0.40%

F.L. Out (E) = 85.98
F.L. In (N) = ~~85.68~~ 86.43

F.L. = ~~86.34~~ 86.69

F.L. = ~~86.74~~ 87.09

F.L. = ~~87.14~~ 87.49

F.L. = 87.54

F.L. = ~~87.94~~ 88.29

F.L. = ~~88.34~~ 88.69

F.L. = 88.78
F.L. 6" Stub = 88.78
F.L. 4" Stub = 89.60

+34 2 3 4 5 6 7 +94.41

FLATE TRIANGLE PLAN AND PROFILE FOR STORM SEWER

MOEHRING & ASSOCIATES — CONSULTING ENGINEERS

PROJ. NO. 468-76-245-81948-000-000-001

Sheet 4

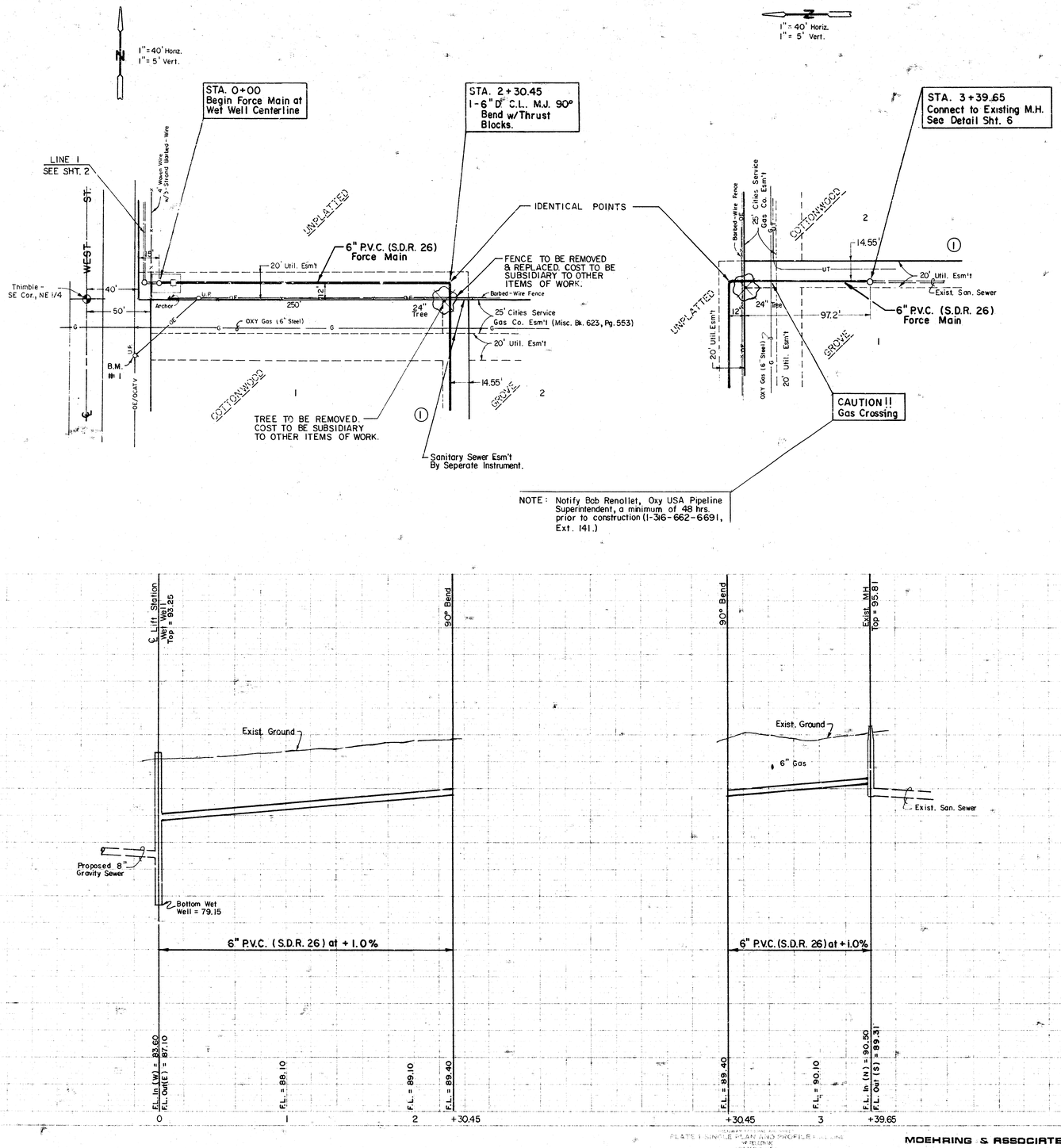
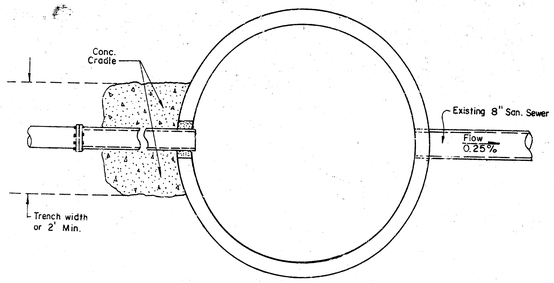


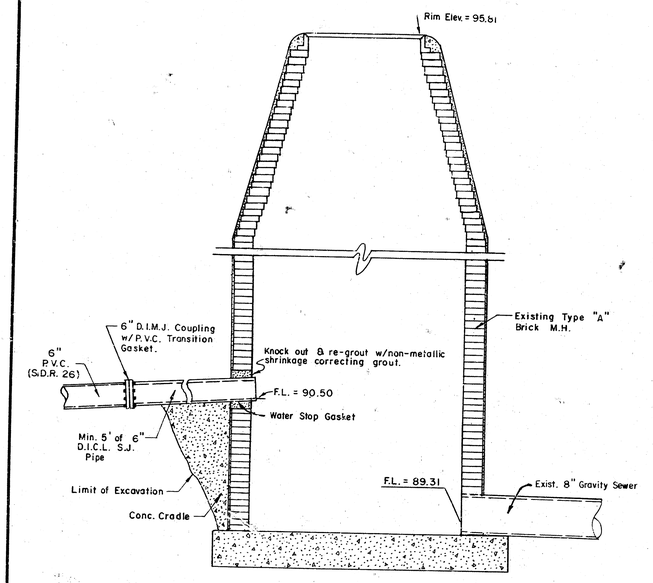
PLATE 1 SINGLE PLAN AND PROFILE LINE

MOEHRING & ASSOCIATES —— CONSULTING ENGINEERS

PROJ. NO. 468-76-245-81948-000-000-001

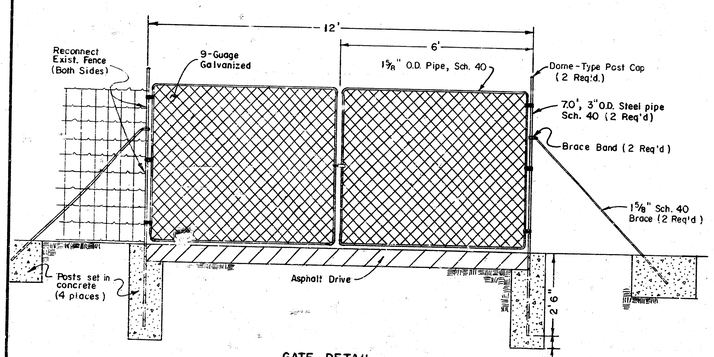


PLAN



SECTION

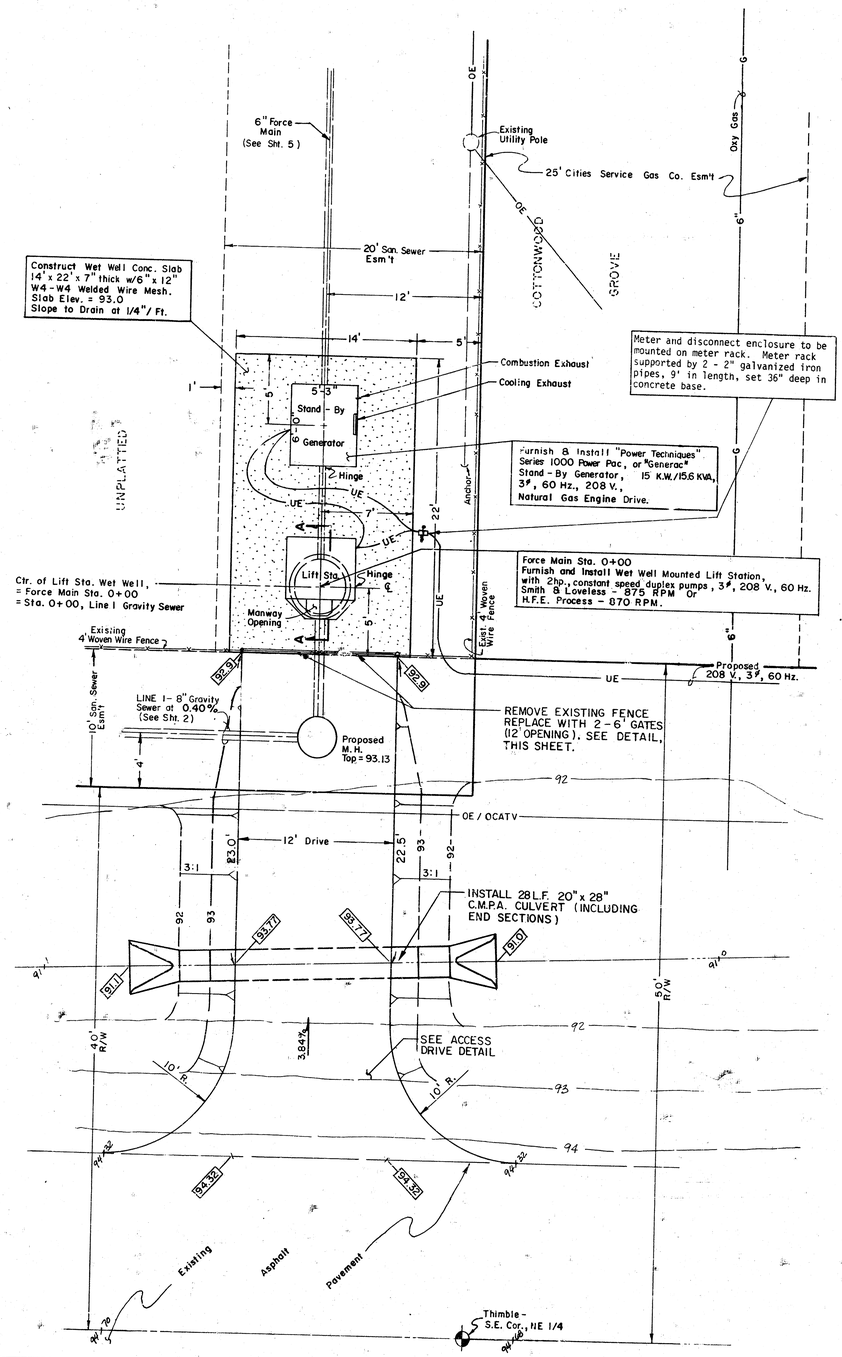
RECEIVING MANHOLE CONNECTION DETAIL
No Scale

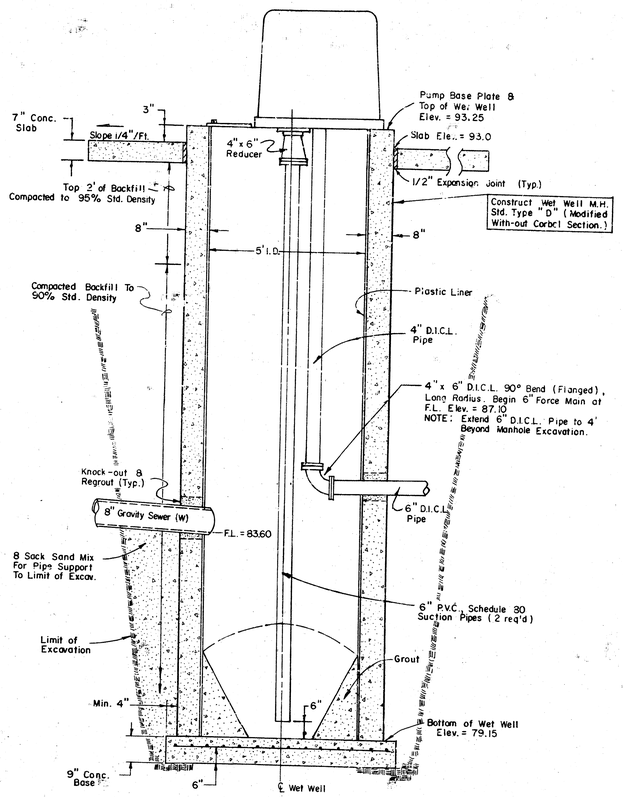


GATE DETAIL
No Scale

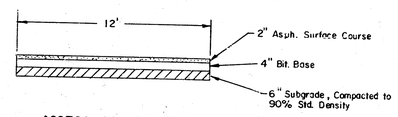
1" = 5'

OE = Overhead Electric
OCATV = Overhead Cable TV
UE = Underground Electric

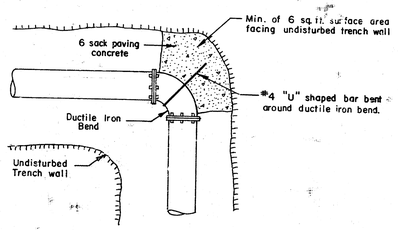




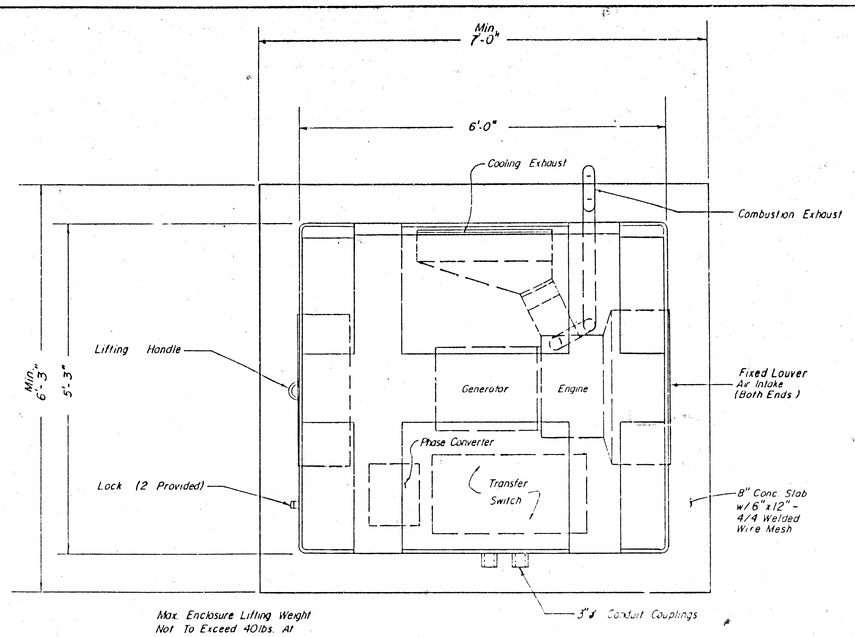
SEC. A - A
LIFT STATION
SECTIONAL ELEVATION
No Scale



ACCESS DRIVE DETAIL
No Scale

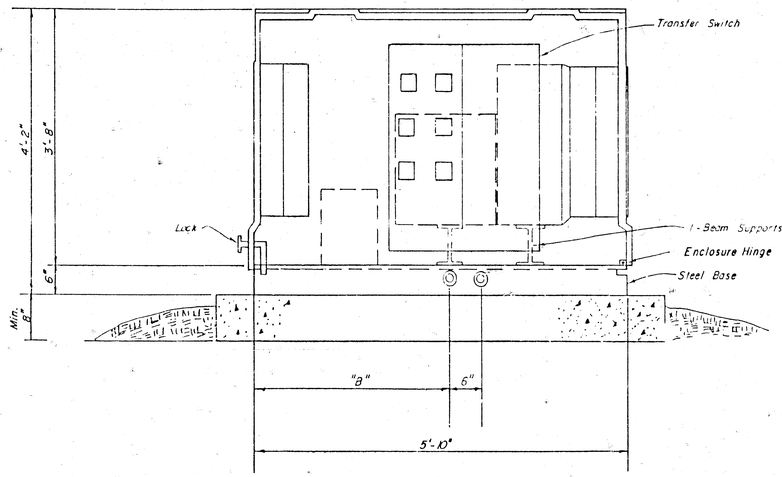


THRUST BLOCK DETAIL
No Scale

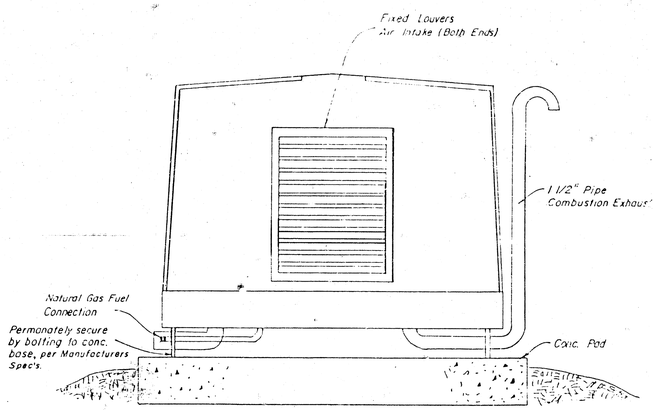


TOP VIEW

STAND-BY GENERATOR DETAILS
STANNARD POWER EQUIPMENT CO.
SERIES 1000 **(NOW POWER TECHNIQUES, INC.)**
(N.T.S.)

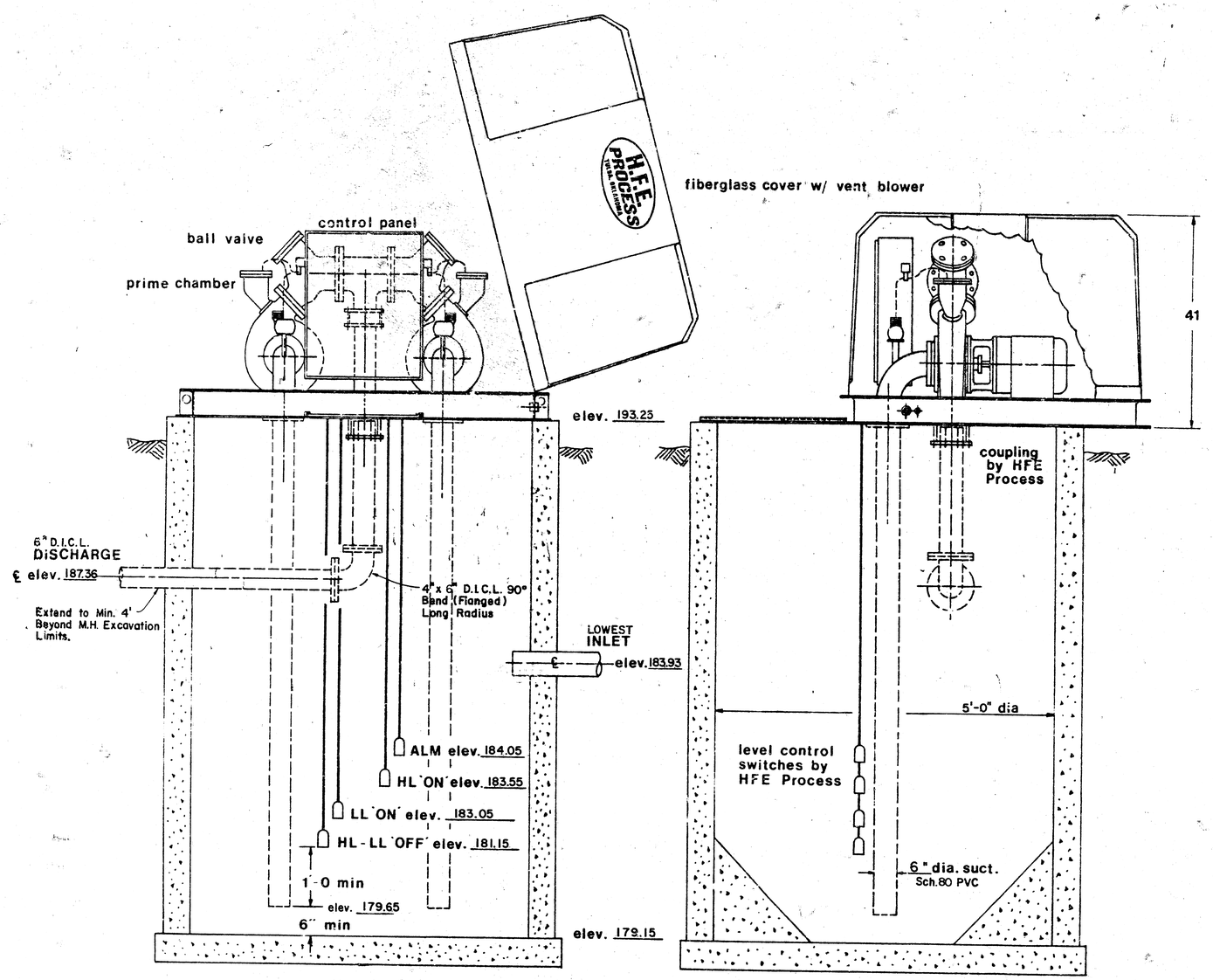


SECTIONAL ELEVATION



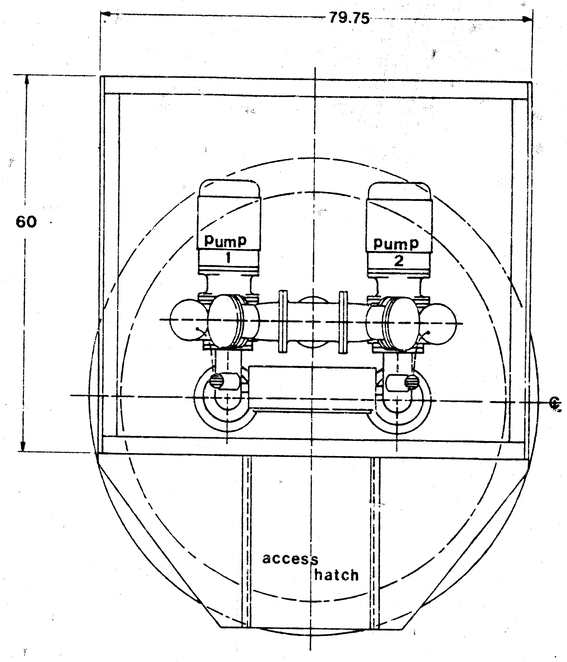
END VIEW

Project No. 468-76-245-81948-000-000-001



FRONT ELEVATION

SIDE ELEVATION



PLAN VIEW

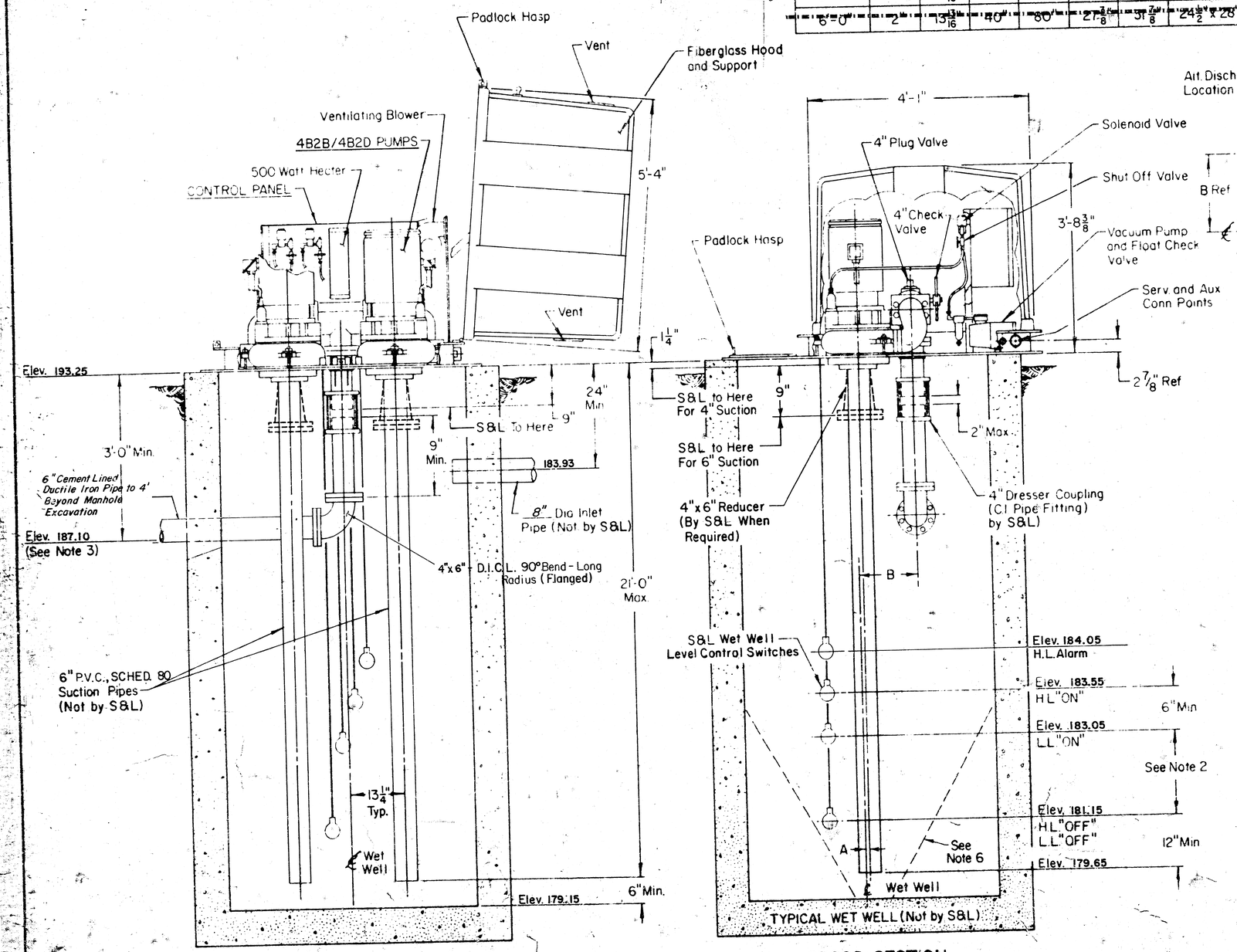
NOTES: 500 watt heater - std.
250 cfm vent fan - std.
1.5 & .75" service conn.

H.F.E. PROCESS
TULSA, OKLAHOMA

Project No.
468-76-245-81948-000-000-001

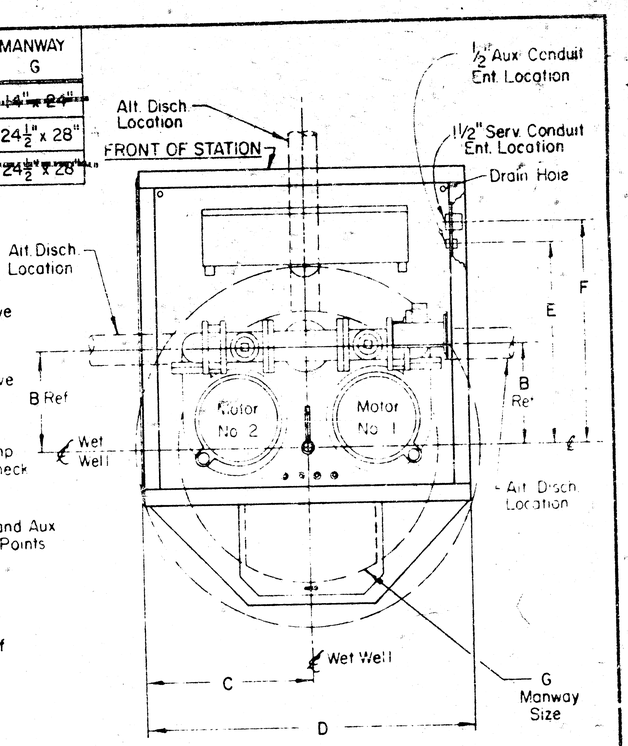
Sheet 8

WET WELL DIAMETER	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	DIM. F	MANWAY G
~~4'-0"~~	~~4"~~	~~15 13/16"~~	~~33"~~	~~66"~~	~~27 7/8"~~	~~32 3/8"~~	~~14" x 24"~~
5'-0"	8"	19 13/16"	34"	68"	33 3/8"	37 7/8"	24 1/2" x 28"
~~6'-0"~~	~~2"~~	~~13 13/16"~~	~~40"~~	~~80"~~	~~27 7/8"~~	~~31 7/8"~~	~~24 1/2" x 28"~~



SECTIONAL ELEVATION

CROSS SECTION



PLAN VIEW
MACH. CHAMBER
(Shown Less Cover)

NOTES:

1. Maximum Capacity - 400 G.P.M.
2. Volume In Gallons Between L.L. "ON" and L.L. "OFF" Should Equal Pumping Rate in G.P.M.
3. If End of Discharge Line is Below Elevation of Discharge Line at Point of Leaving Wet Well, Consult Factory.
4. If Discharge Line is Less than 200 Feet in Length a Check Valve May be Required - Consult Factory.
5. Pump Motors - 20 H.P. Maximum.
6. Provide 60° Slope in Wet Well - As Required.

4B2B/4B2D PUMPS 87D196

THE DESIGN AND DETAIL OF THIS DRAWING IS THE PROPERTY OF SMITH & LOVELESS, INC. AND IS NOT TO BE USED EXCEPT IN CONNECTION WITH OUR WORK. DESIGN AND INVENTION RIGHTS ARE RESERVED. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

C	N82-91	11/82	D. Fisher	2-79	Smith & Loveless, Inc.
B	N82-39	7/82	M.E.W.	2-79	WET WELL MOUNTED PUMP LIFT STA. - MODEL "S" 4" PIPING - 4', 5' & 6' DIA. WELL
A	N80-16	6/80	C.V.	3-79	Ea.
			SCALE none		87D196
			ORIGINAL ISSUE N78-16		

Project No. 468-76-245-91948-000-900-001 Sheet 9