CONSTRUCTION PLANS FOR

LIFT STATION AND FORCE MAIN

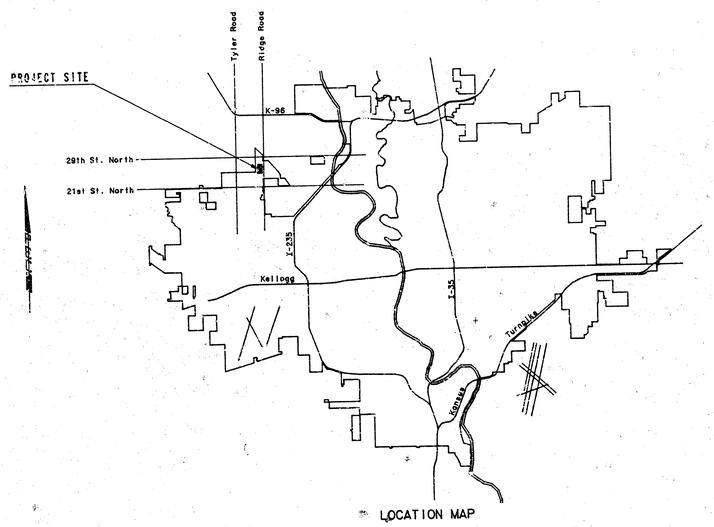
TO SERVE

LATERAL 21 AND 22, MAIN 15 OF THE SOUTHWEST INTERCEPTOR SEWER

THE CITY OF WICHITA,

SEDGWICK COUNTY, KANSAS

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



LOCATION MAP

INDEX OF SHEETS

INDEX CODE 740712

CITY OF WICHITA PROJECT NO. 468-76-245-82097-000

MAY, 1991

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

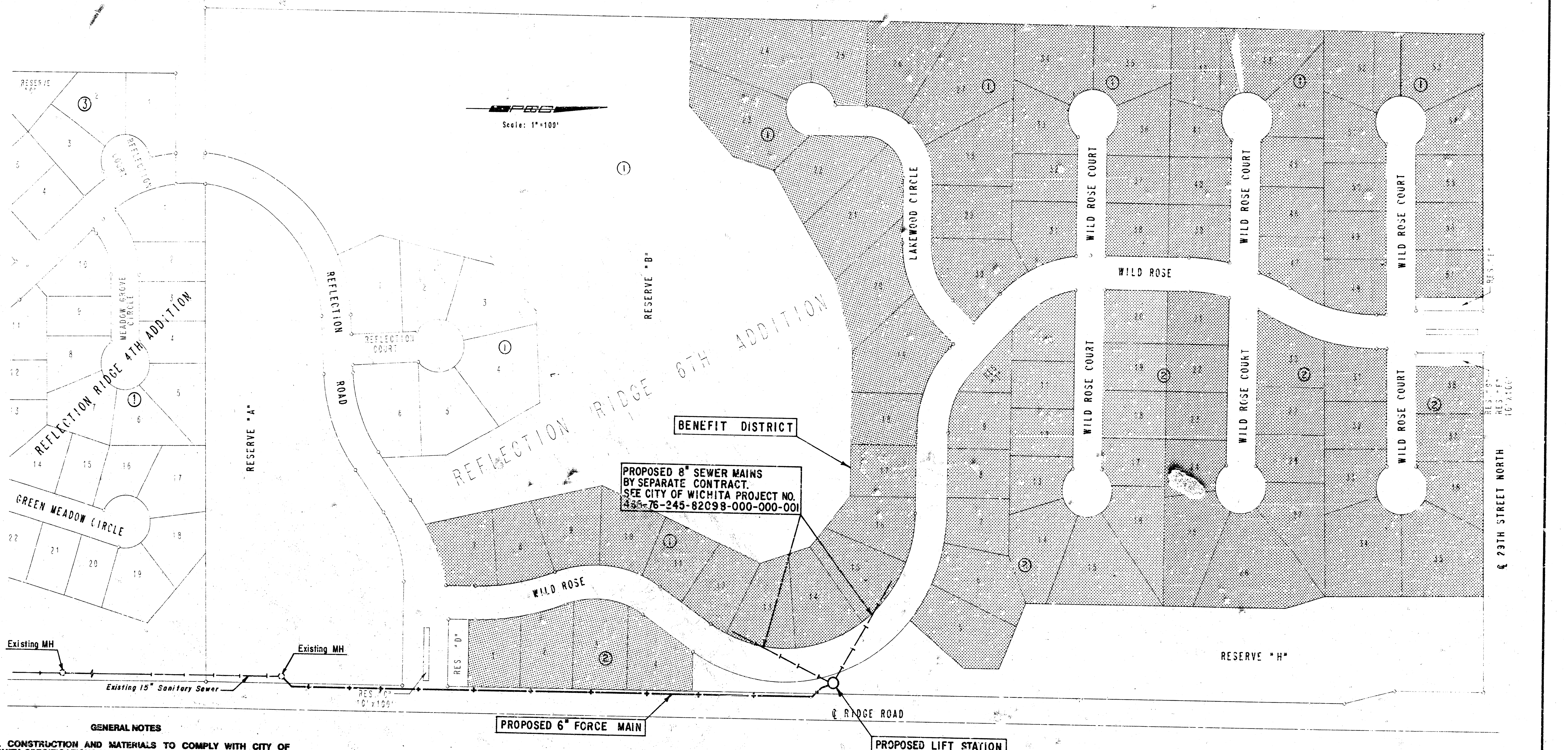
ENGINEERS

WICHITA, KANSAS

DANIEL LYNN MOORE LICENSED 9055 KANSAS PROFESSIONAL ENGINEER

Booked 4-30-92 JKB

DRAWING NAME:24-01081-3 LS Title
LOCATION SPECIFIED: DU DRG.#289
CENTER COORDINATES:
ROTATION ANGLE:
UNITS ARE PLOTTED ON:MAY 31, 1991
SPECIAL INSTRUCTIONS:



GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.

2. ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM (USGS - 1187.18 = CITY DATUM).

3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

4. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA: ARKLA, K.G. & E., THE WICHITA WATER DEPARTMENT, MULTIMEDIA CABLEVISION, AND SOUTHWESTERN BELL TELEPHONE.

5. 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 OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

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. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE OTHER ITEMS OF WORK.

7. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

8. EXCESS EXCAVATED MATERIAL SHALL BE STOCKPILED WITHIN THE LIMITS OF REFLECTION RIDGE 6TH ADDITION AS APPROVED BY THE ENGINEER. STOCKPILE LOCATIONS SHALL BE AS DIRECTED BY MR. MARVIN SCHELLENBERG, VICE PRESIDENT, REFLECTION RIDGE, INC. AT 721-2153. COSTS FOR STOCKPILING SHALL BE SUBSIDIARY TO THE PROJECT.

9. WHERE TREE TRIMMING OR TREE REMOVAL IS REQUIRED OUTSIDE THE LIMITS OF THE GOLF COURSE, THE CONTRACTOR SHALL PERFORM SUCH WORK AS APPROVED BY THE ENGINEER. PRIOR TO BID PREPARATION FOR THIS PROJECT THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO DETERMINE THE EXTENT OF TREE TRIMMING/TREE REMOVAL TO BE PERFORMED. THE PROPERTY OWNER IS CURRENTLY HAVING SOME SITE CLEARING PERFORMED BY PRIVATE CONTRACT. ALL COSTS FOR TREE TRIMMING/TREE REMOVAL SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE CLEARING".

10. WHERE TREE TRIMMING OR TREE REMOVAL IS REQUIRED WITHIN OR ADJACENT TO THE GOLF COURSE, THE CONTRACTOR SHALL COORDINATE SUCH WORK WITH THE GOLF COURSE SUPERINTENDENT, MR. JOHN WRIGHT AT 721-9483. SUCH TREE TRIMMING OR TREE REMOVAL SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE CLEARING".

11. ALL TREE TRIMMINGS OR TREES REMOVED SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. OFF SITE DISPOSAL AREA SHALL BE AS APPROVED BY THE ENGINEER.

12. WHERE RELOCATION, REMOVAL, OR ADJUSTMENTS TO THE GOLF COURSE IRRIGATION SYSTEM ARE REQUIRED DUE TO THE CONSTRUCTION OF THE SANITARY SEWER, THE GOLF COURSE SUPERINTENDENT SHALL PERFORM SUCH WORK. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION OPERATIONS WITH THE GOLF COURSE SUPERINTENDENT, MR. JOHN WRIGHT AT 721-9483 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN THESE AREAS. RESTORATION OF THE IRRIGATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE GOLF COURSE SUPERINTENDENT.

13. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION OF THE 6" FORCE MAIN UNTIL AFTER THE 1991 BEN HOGAN WICHITA CHARITY CLASSIC GOLF TOURNAMENT WHICH HAS BEEN SCHEDULED FOR JULY AT THE REFLECTION RIDGE GOLF COURSE. THE CONTRACTOR SHALL CONTACT MR. MARVIN SCHELLENBERG, VICE PRESIDENT-REFLECTION RIDGE, INC. TO DETERMINE THE EXACT GOLF TOURNAMENT DATES. CONSTRUCTION OF THE WET WELL AND LIFT STATION MAY BE PERFORMED DURING THE GOLF TOURNAMENT. HOWEVER, IMMEDIATELY FOLLOWING THE CONCLUSION OF THE GOLF TOURNAMENT, THE CONTRACTOR SHALL CONSTRUCT THE 6" FORCE MAIN IN ITS ENTIRETY INCLUDING MEETING ALL CITY OF WICHITA TESTING AND INSPECTION REQUIREMENTS.

DARREL LYNN MOORE
LICENSED
9055
KANSAS
PROFESSIONAL ENGINEER

No.	Revision	By	Date

LATERAL 21 AND LATERAL 22, MAIN 15
OF THE SOUTHWEST INTERCEPTOR SEWER

KEY MAP AND GENERAL NOTES

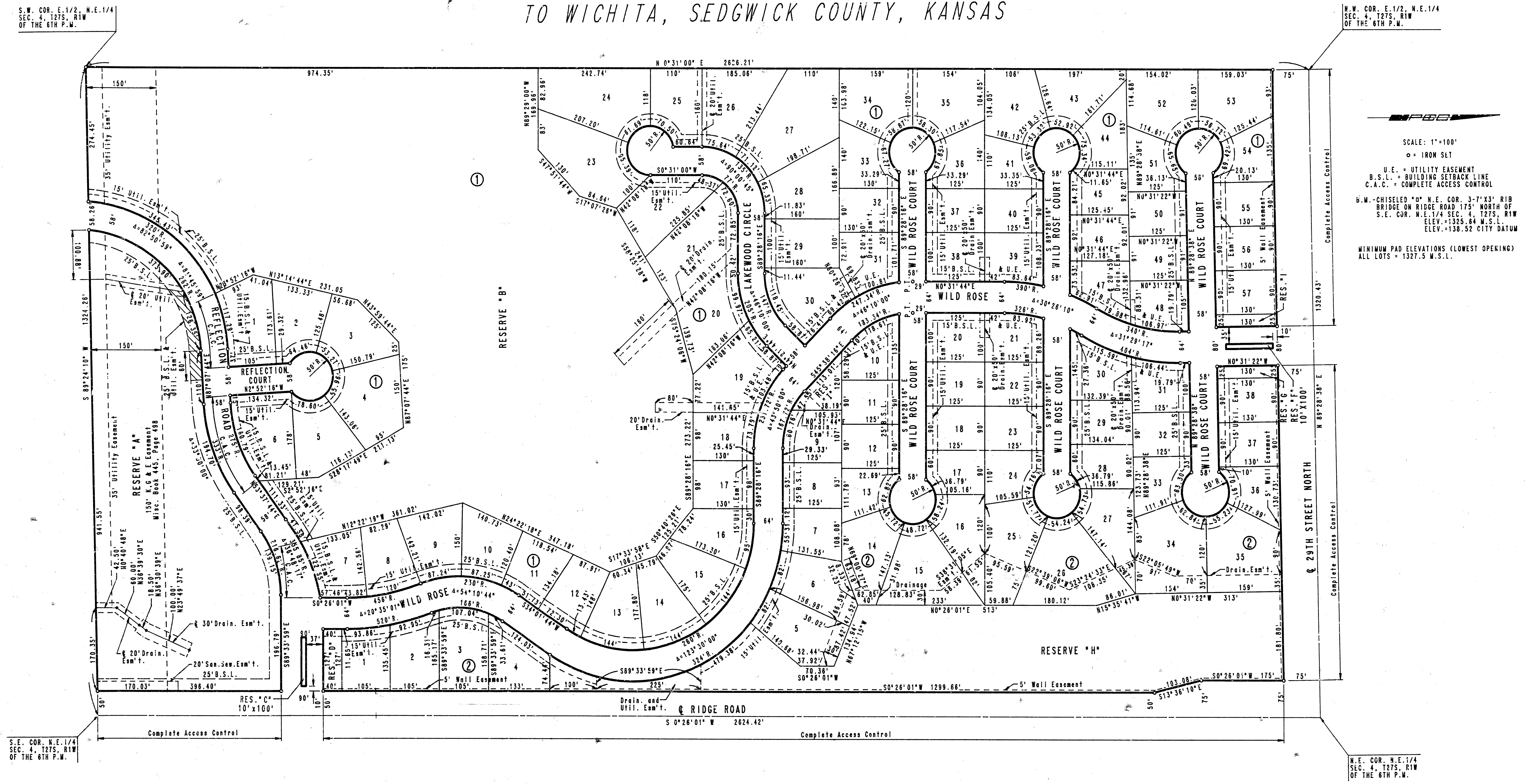
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-82097-000-000-001

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

Designed by DLM, RFJ	Job No. 34-91081-3	Sht. 2 of 6
Drawn by TDS, TLS	Date March, 1991	

REFLECTION RIDGE 6TH ADDITION

TO WICHITA, SEDGWICK COUNTY, KANSAS



No.	Revision	By	Date

LATERAL 21 AND LATERAL 22, MAIN 15
OF THE SOUTHWEST INTERCEPTOR SEWER

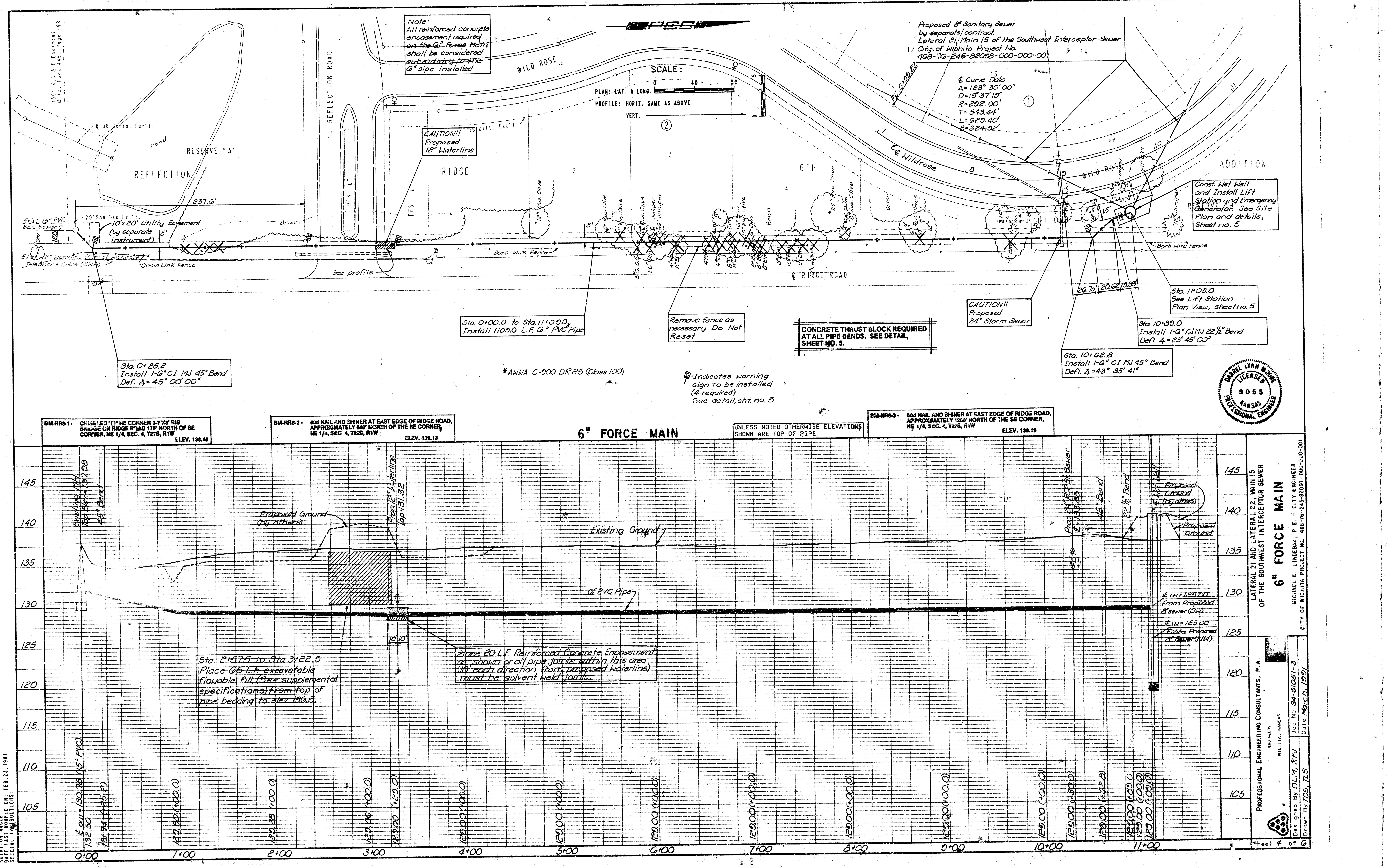
PLAT

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-78-245-82097-000-000-001

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

Designed by | Job No. 34-91081-3 | Sht. 3 of 6
Drawn by TDS | Date March, 1991

DRAWING NAME 34-91081-3 SS PLAT
LOCATION SFM:D.04 DWG # 504
CENTER COORDINATES
ROTATION ANGLE
DATE LAST WORKED ON FEB 23, 1991
SPECIAL INSTRUCTIONS



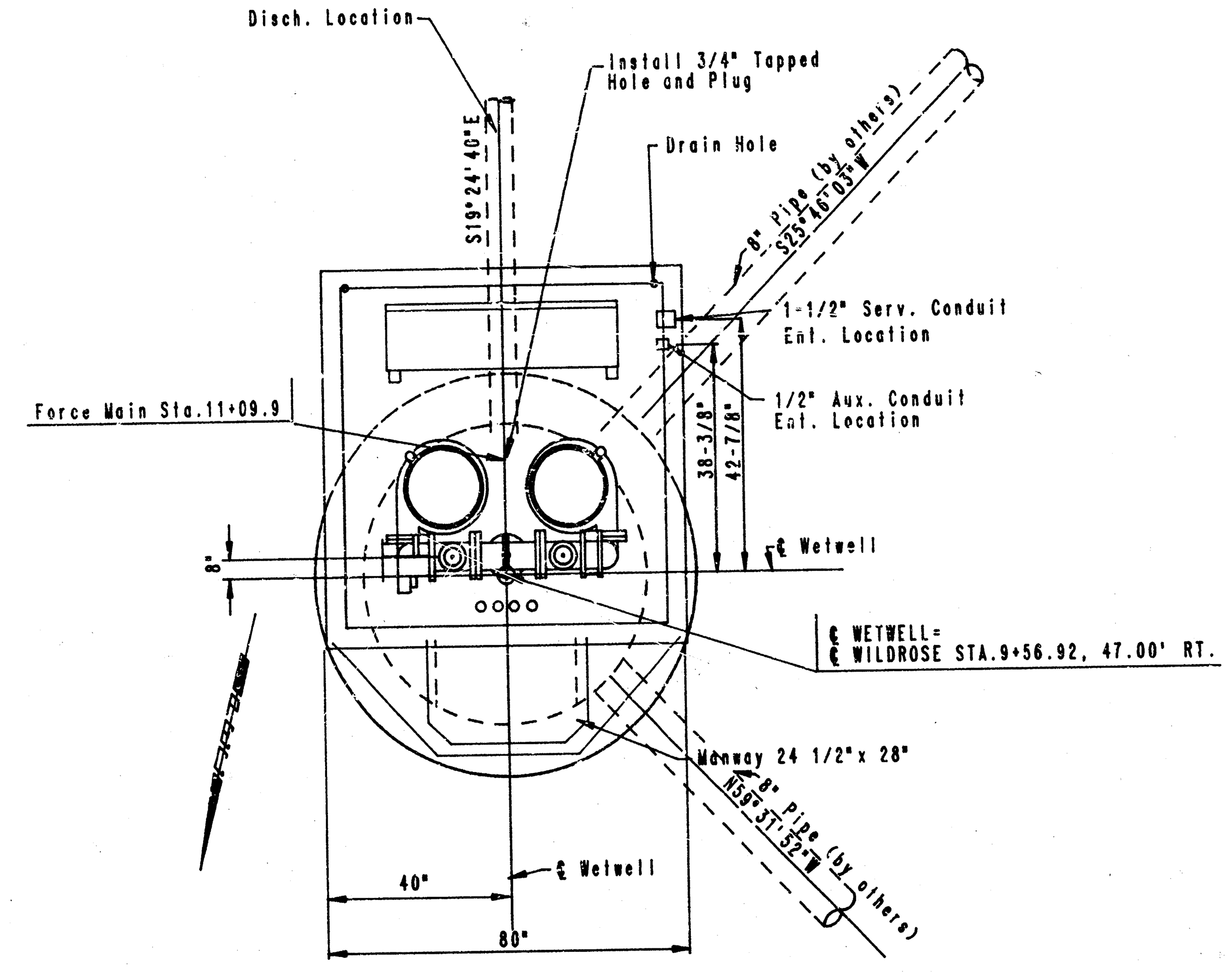
DRAWING NAME: 34-91081-3 RH FM1
LOCATION: SFM10.04 DWG.# 489
CENTER COORDINATES:
ROTATION ANGLE:
DATE LAST WORKED ON: FEB.23,1991
SPECIAL INSTRUCTIONS:

	PUMP	FLOW	TDH	MOTOR HP	IMPELLER DIA.	RPM	ELECT. SERV. REQ.	MOTOR CODE	PUMP EFFICIENCY
NO. 1	4B2B	250 gpm	16 ft	5 hp	7 inch	1170	208V,60HZ,3Ø,4-Wire	H	62%
NO. 2	4B2B	250 gpm	16 ft	5 hp	7 inch	1170	208V,60HZ,3Ø,4-Wire	H	62%

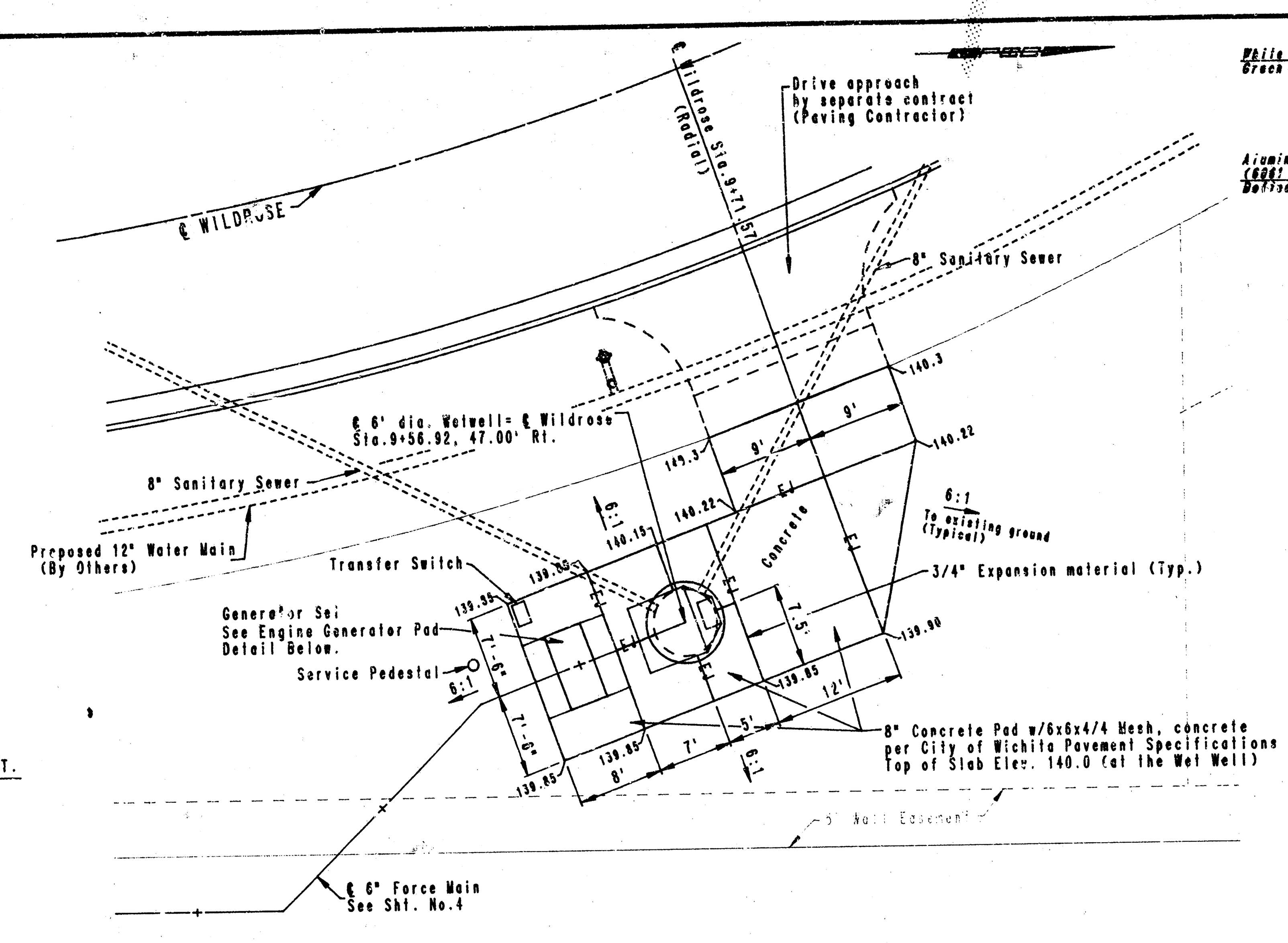
NOTES:

1. THE PRICE BID FOR FURNISHING AND INSTALLING THE WET WELL MOUNTED LIFT STATION WITH STANDBY EMERGENCY POWER AND MISCELLANEOUS APPURTENANCES COMPLETE IN PLACE SHALL INCLUDE ALL COSTS FOR FURNISHING AND INSTALLING THE LIFT STATION AND STANDBY EMERGENCY POWER AS INDICATED IN THE PLANS COMPLETE IN PLACE AND IN OPERATION. THIS PRICE SHALL INCLUDE THE COST OF CONSTRUCTING AND/OR INSTALLING COMPACTED SUBGRADE, CONCRETE PAD, POWER POLE, ELECTRICAL CONDUIT, ELECTRICAL WIRING, DISCONNECT SWITCH, PRIMARY AND SECONDARY ELECTRICAL POWER SUPPLY, NATURAL GAS FUEL SUPPLY, PIPING, FINISHED GRADING AND ANY OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGEMENTS WITH THE GAS COMPANY FOR EXTENSION OF GAS SERVICE TO THE LIFT STATION SITE, AND FOR PAYMENT OF COSTS OF SUCH EXTENSION AND METER SETTING. LOCATION OF METER TO BE ACCEPTABLE TO GAS SERVICE COMPANY AND TO CITY OF WICHITA SEWER MAINTENANCE DIVISION.

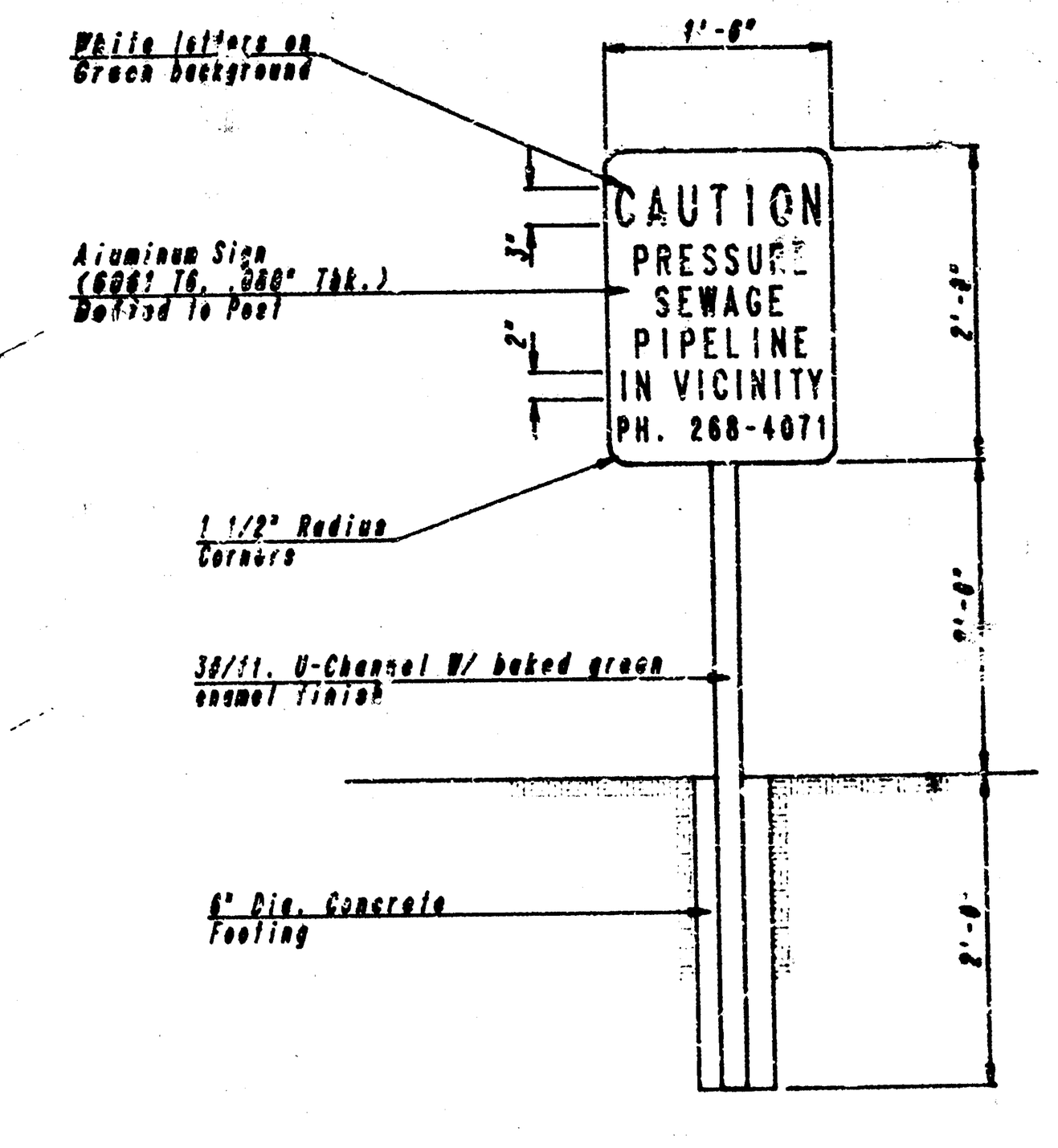


PLAN VIEW

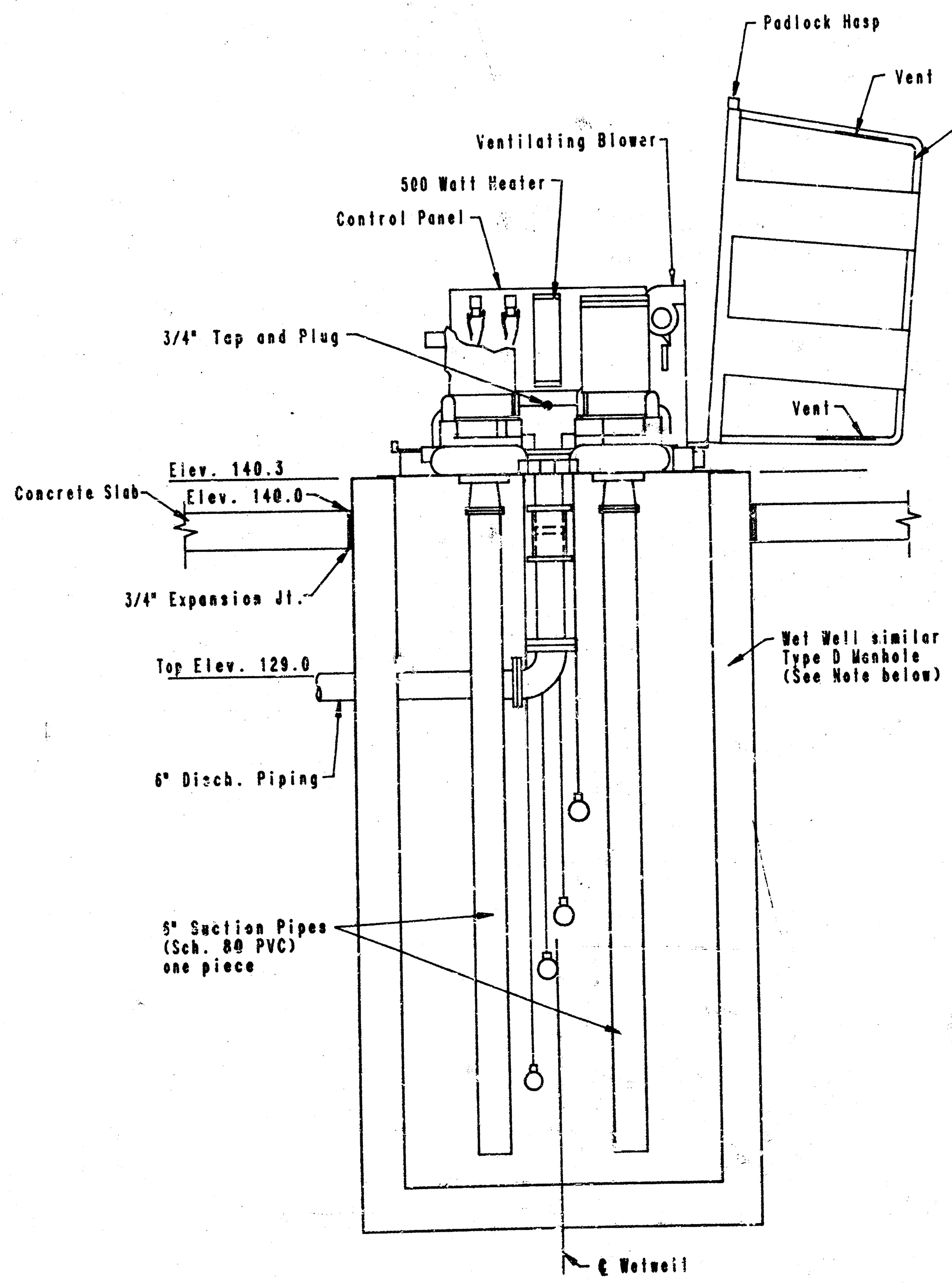


LIFT STATION SITE PLAN

Scale:1"=10'

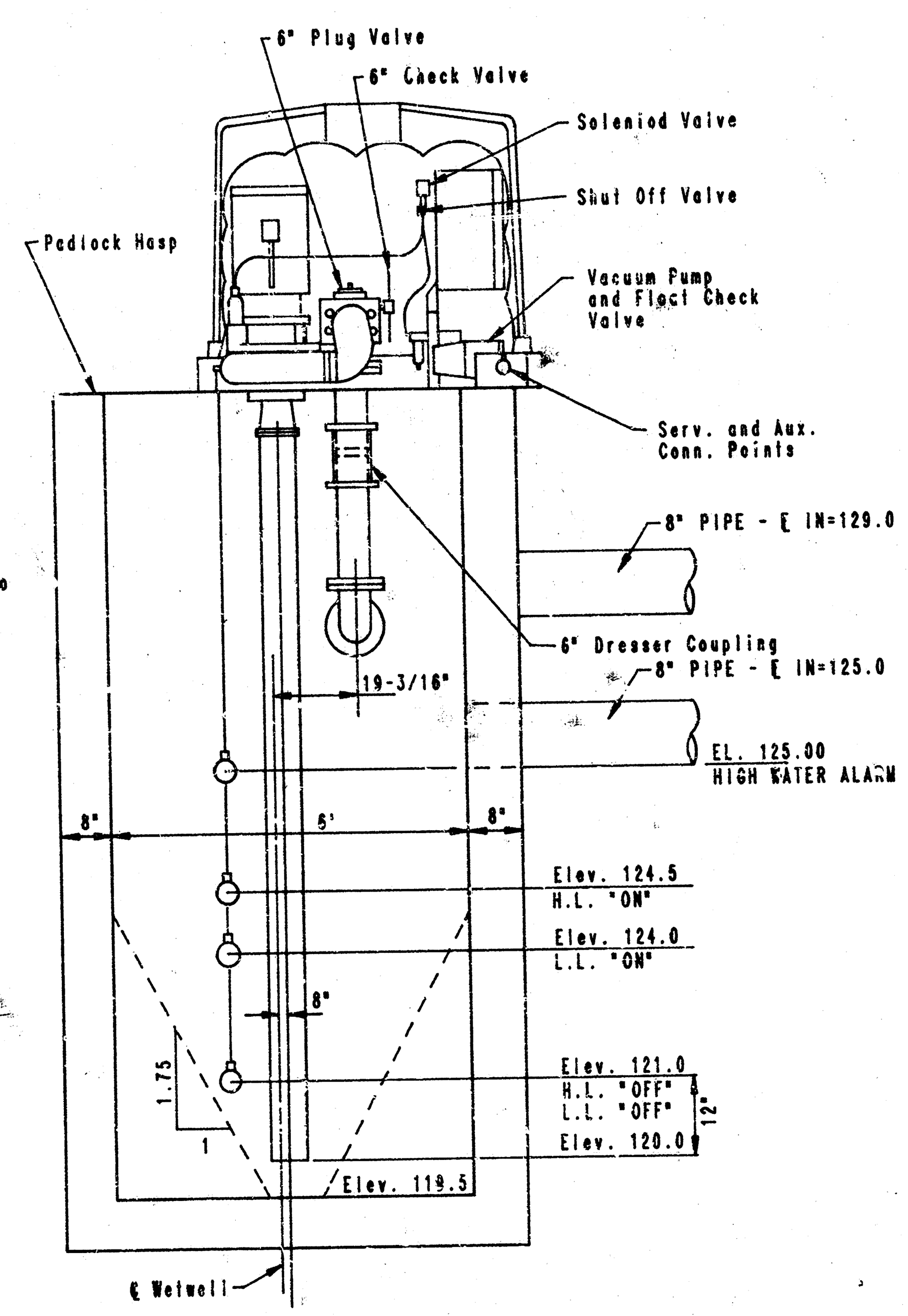


METAL WARNING SIGN DETAIL

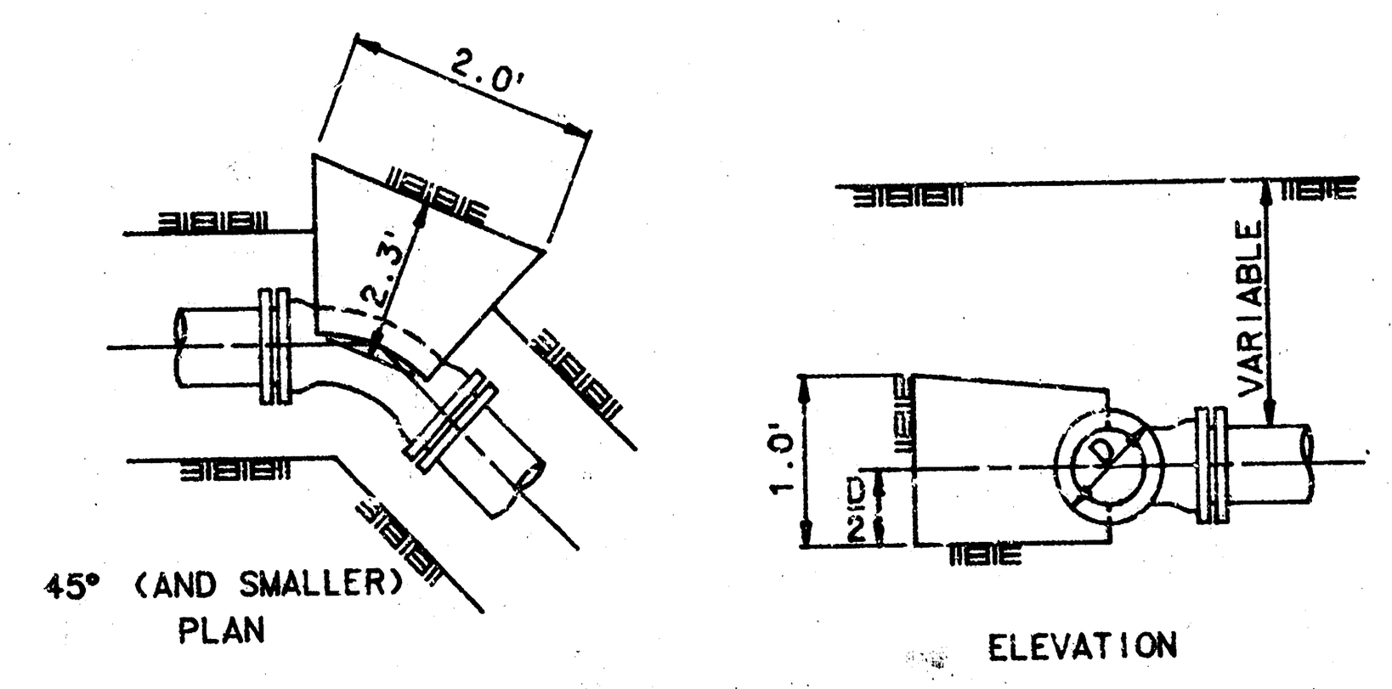


SECTIONAL ELEVATION

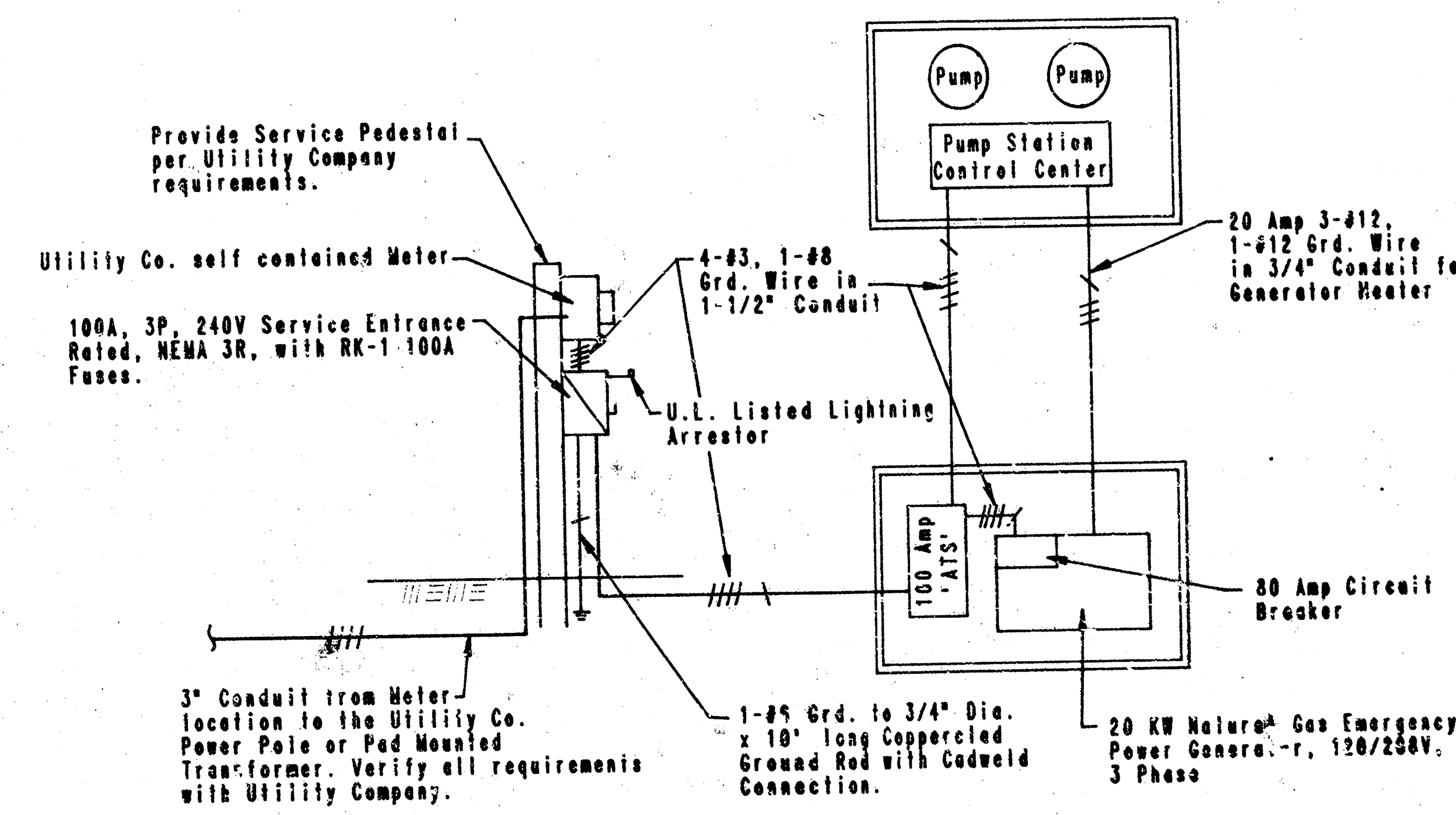
NOTE:
The Wet Well Interior Liner may be substituted with 2 coats THEMEC Series 66Hi-Build Epoxoline, Dry Thickness of 8 Mils, in lieu of a Plastic Liner.



CROSS SECTION



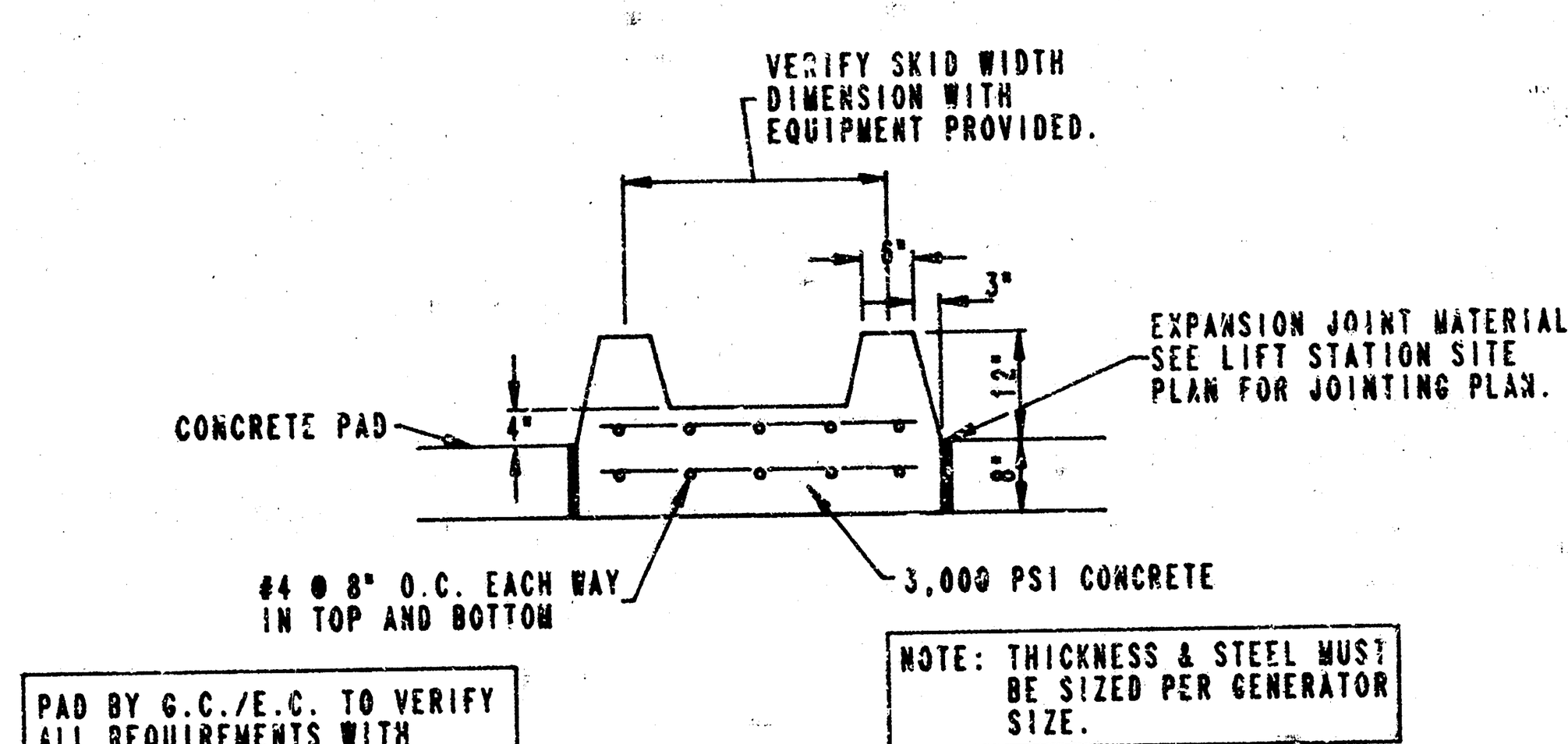
THRUST BLOCK DETAILS



ELECTRICAL RISER DIAGRAM

NOTE:

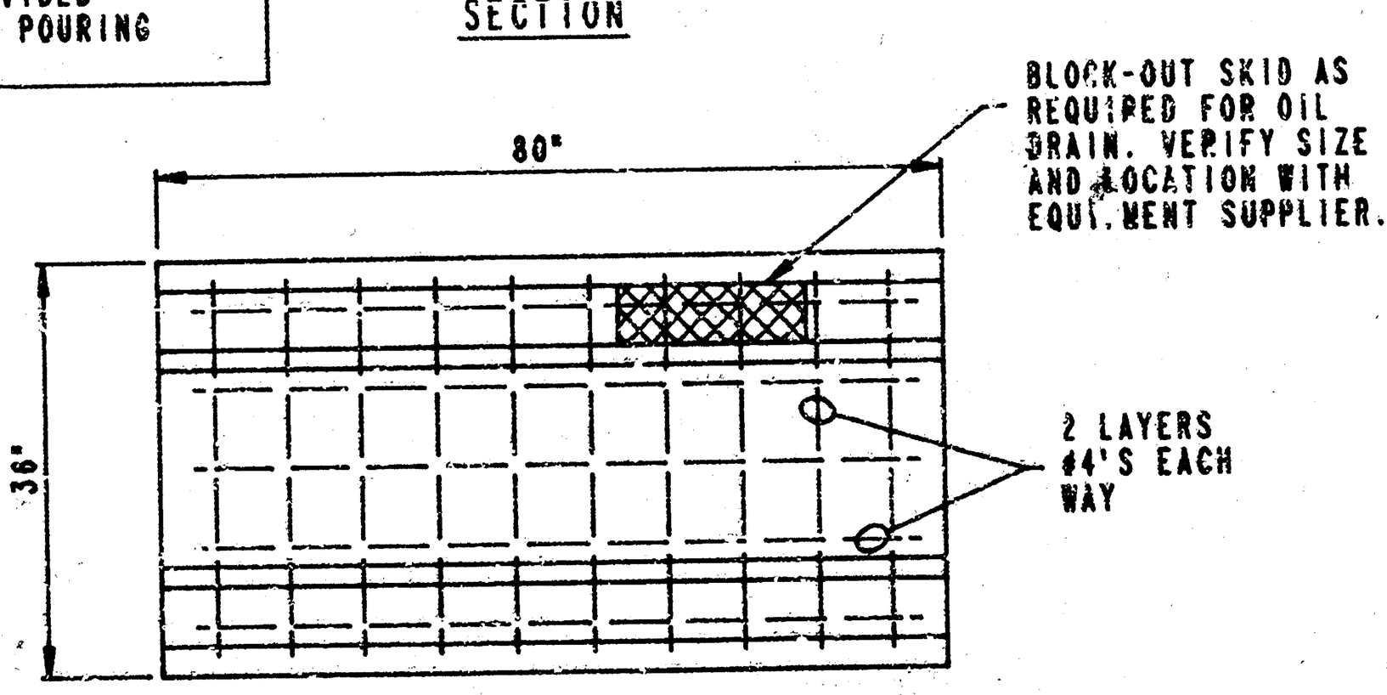
1. Contractor shall provide a 3/4" conduit from the Pump Station to the Emergency Power Unit and from the Emergency Power Unit to the Service Pole for purposes of Alarm Cable Routing.
2. All Electrical work shall conform to local, state, N.E.C., and all other applicable codes.
3. Contractor shall verify location and Service Entrance requirements with KG&E.
4. Generator with standard equipment shall be equal to Kohler Model 20RZ, Model K1283430100 for Automatic Transfer Switch.



PAD BY G.C./E.C. TO VERIFY ALL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO G.C. POURING PAD.

NOTE: THICKNESS & STEEL MUST BE SIZED PER GENERATOR SIZE.

SECTION



PLAN

ENGINE GENERATOR PAD DETAIL

Scale:1/2"=1'-0"

VERIFY EXACT SIZE WITH UNIT PROVIDED - +6" EACH SIDE

DRAWING NAME: 34-91081-3 RR6 L.S.
LOCATION: SFM10.D4 DWG.# 460
CENTER COORDINATES:
ROTATION ANGLE:
DATE LAST WORKED ON: MAY 31, 1991
SPECIAL INSTRUCTIONS:

DARREL LYNN MOORE LICENSED 9066 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK P.E., CITY ENGINEER
REFLECTION RIDGE 6TH ADDITION

LIFT STATION DETAILS

C.O.W. Proj. No. 468-76-245-82097-000-000-042

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

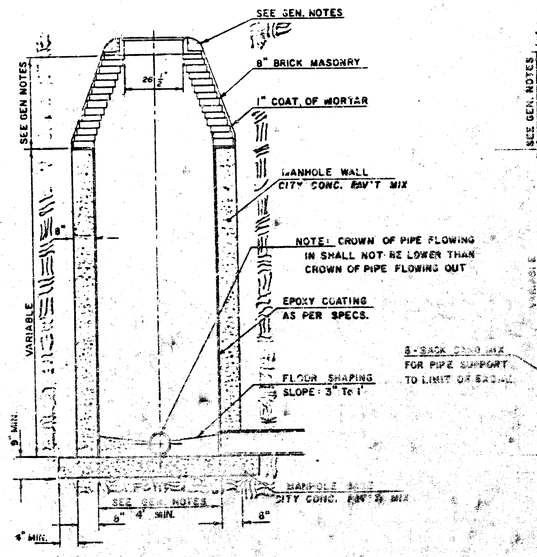
Designed by DLM, DEH, DCG	Job No. 34-91081-3	Sht. 5 of 6
Drawn by RFJ, TDS	Date May, 1991	

SEWER APPURTENANCES DETAILS

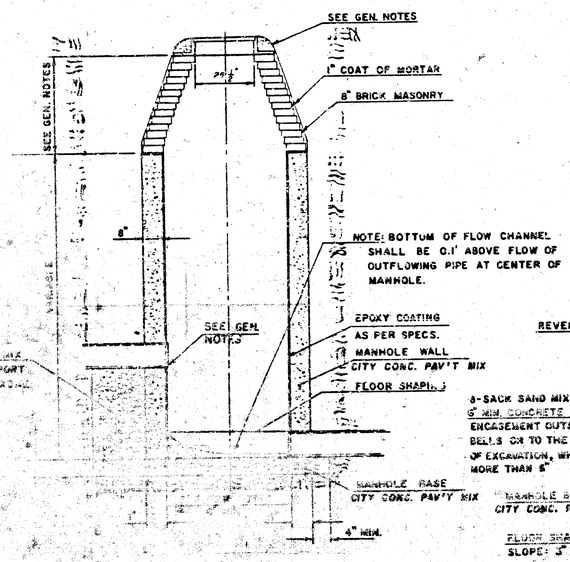
ADOPTED AS STANDARD DESIGN
BY

CITY OF WICHITA, KANSAS

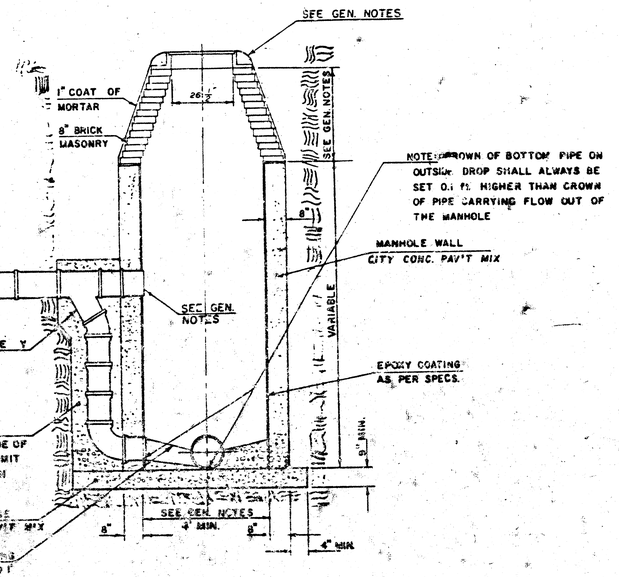
TYPE "D" MANHOLE



TYPE "D" INSIDE DROP MANHOLE



TYPE "D" OUTSIDE DROP MANHOLE



GENERAL NOTES

1. [illegible] USED IN CONCRETE [illegible] CURB AND GUTTER SHALL CONFORM TO THE REQUIREMENTS OF CURRENT CITY STANDARD SPECIFICATIONS AS SPECIFIED IN THE CITY STANDARD TABLE [illegible] MIX WITHOUT AIR ENTRAINING [illegible] SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE [illegible] MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS.

   ALL INSIDE SURFACES OF [illegible] SHALL BE FINISHED TO SEWER GAS SHALL BE PROVIDED [illegible] HOLES MAY BE USED OR PIPE SIZES [illegible] THE REQUIRED CIRCLE HEIGHT BY [illegible] PIPE IN THE MANHOLE.

   MANHOLES CONSTRUCTED [illegible] DIAMETER OF 4'. MANHOLES [illegible] LARGER SHALL HAVE A [illegible] DIAMETER MANHOLES [illegible] CONCRETE OR IN BRICK. [illegible] TIGHT.

2. REINFORCING STEEL SHALL [illegible] STEEL SHALL CONSIST [illegible] DIRECTIONS. REINFORCING [illegible] MANHOLE BASE. COST OF REINFORCING [illegible] BE INCLUDED IN THE UNIT PRICE BID [illegible] MANHOLE.

3. AN OPENING SHALL BE CUT IN THE [illegible] FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE DROP PIPE SHALL BE CONNECTED INTO THIS OPENING WITH [illegible] ON THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE [illegible] AND BITUMINOUS COATING SUCH THAT THE CONNECTION BECOMES WATER TIGHT. [illegible] INTERIOR PLASTIC LINING SHALL BE SEALED AROUND THE INLET PIPE [illegible] IN SUCH A MANNER THAT WILL EFFECTIVELY MAINTAIN THE [illegible] PROTECTIVE PLASTIC LINER.

4. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND [illegible] AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.

5. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

6. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.

7. THE VERTICAL FREE FALL DROP INSIDE MANHOLES SHALL NOT EXCEED 2'.

   THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.

8. STANDARD MANHOLES TYPE "D" AND STANDARD INSIDE DROP MANHOLES TYPE "D" SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "D" SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.

NOTE: EPOXY COATING ON INTERIOR CONCRETE SURFACES MAY BE DELETED WHEN MANHOLES ARE CONSTRUCTED ON SEWERS WITH DIAMETERS SMALLER [illegible]

NOTE NO. 7 REVISED JAN. 1991

APRIL 1987 Sht. 6 of 6

08-02-05-01