

DRAWINGS FOR

# LEXINGTON WELL #19



## LEXINGTON, NEBRASKA

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SHT. NO.	DESCRIPTION
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**M&A PROJECT NO. 127-C1-067-19**



MILLER & ASSOCIATES Consulting Engineers P.C.  
1111 Central Avenue - Kearney, NE 68847



COORDINATING PROFESSIONAL

SET NO. \_\_\_\_\_

DRAWING NO. 36495

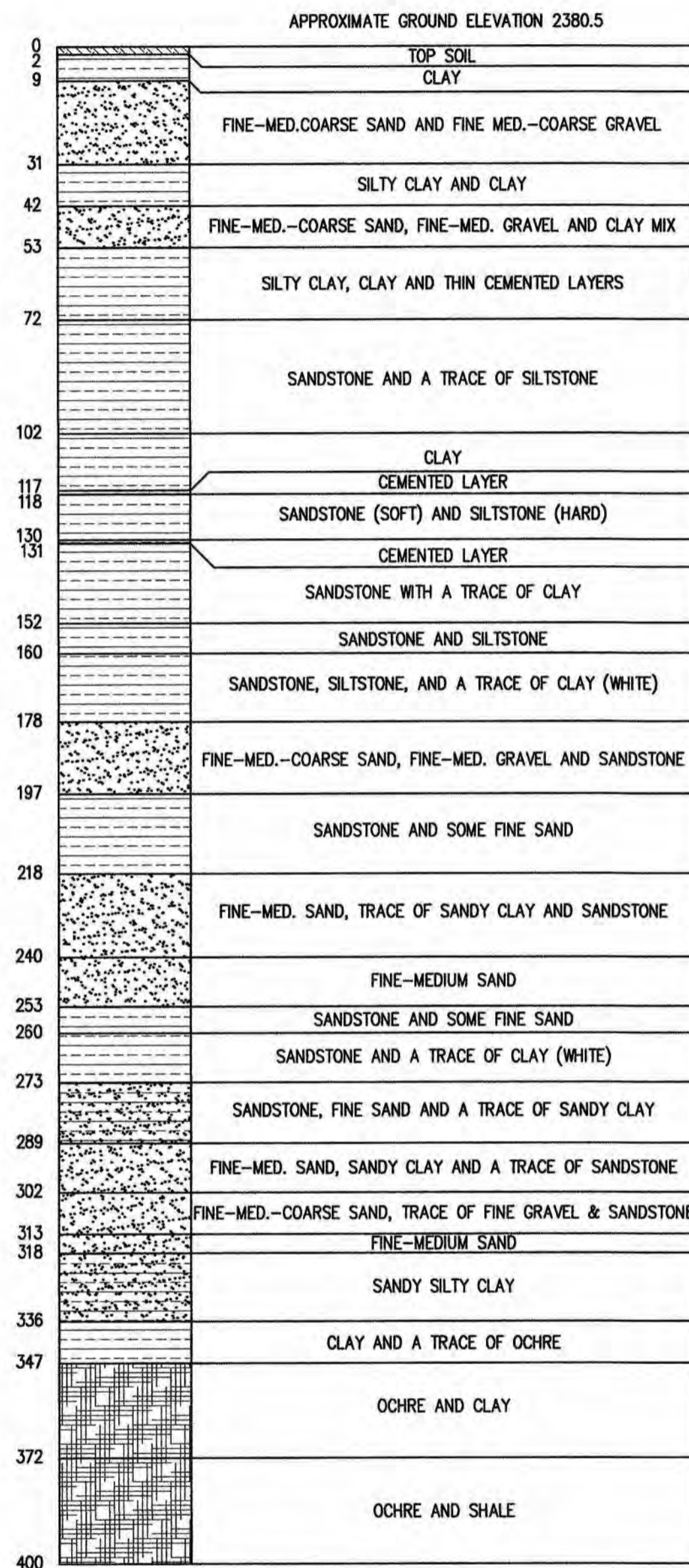
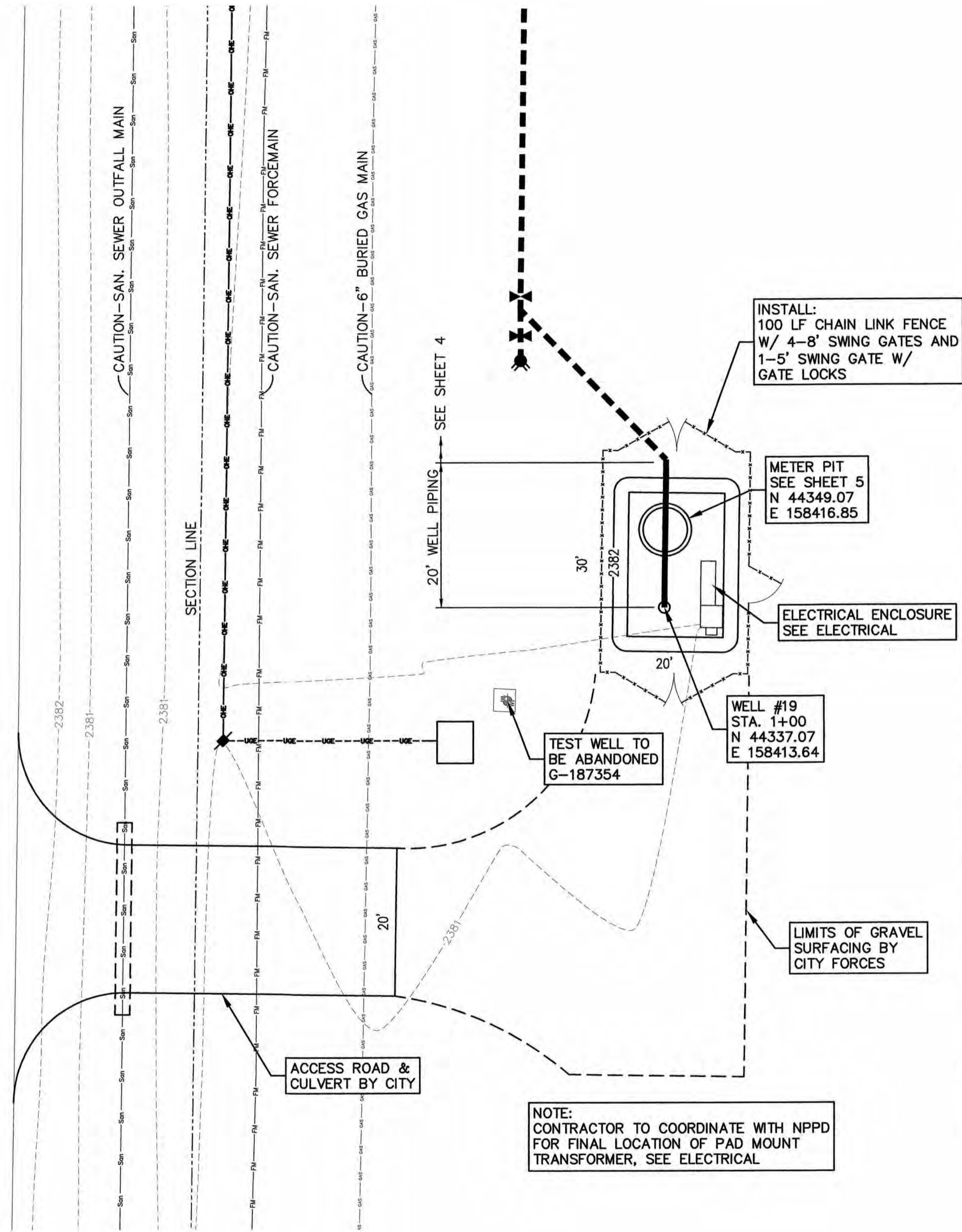
**UTILITIES**

GENERAL DIGGERS HOT LINE  
8-1-1

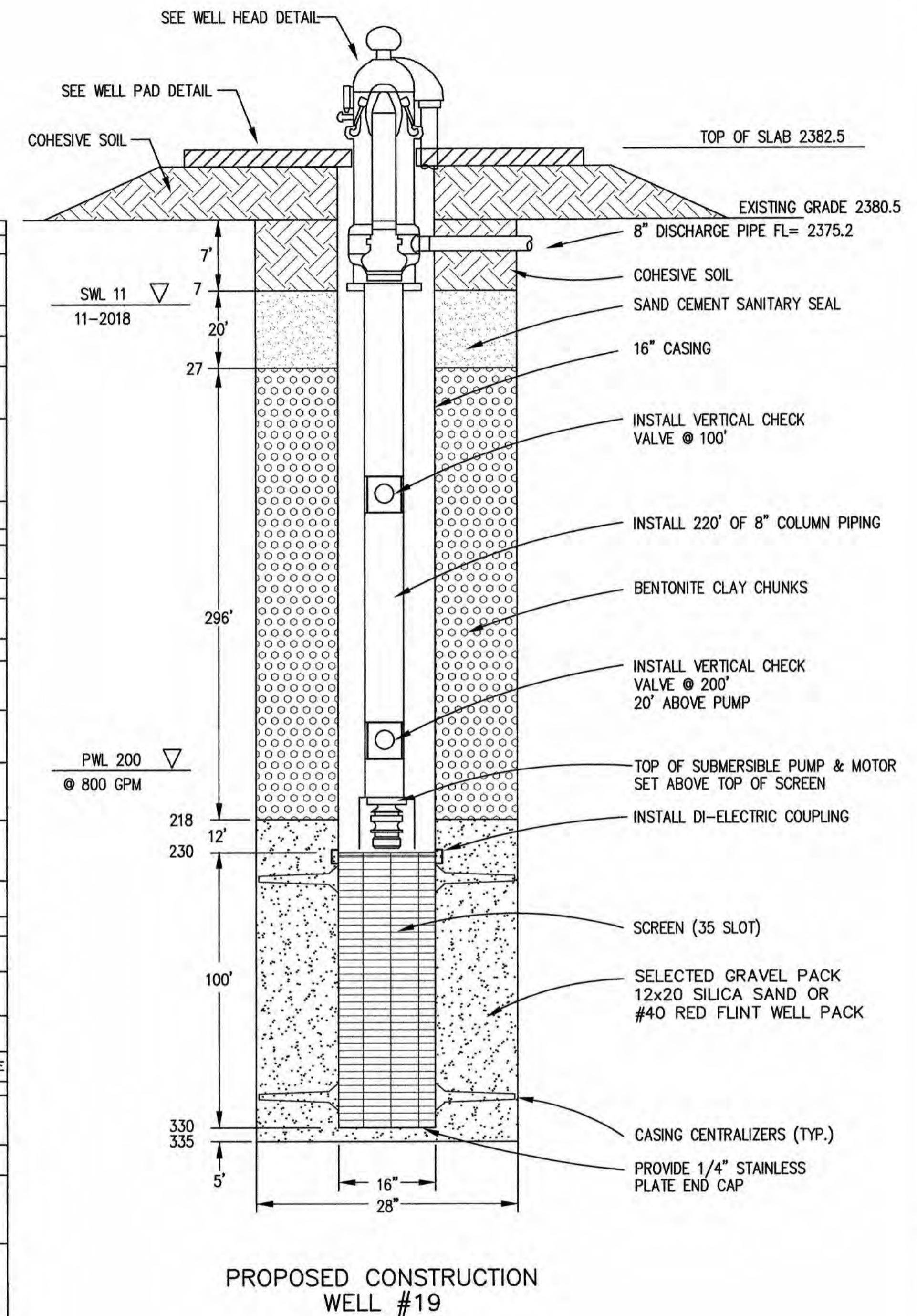
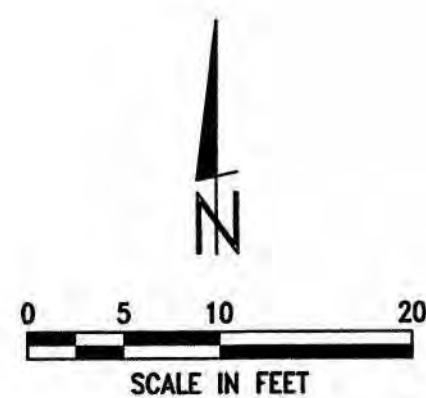


PROJECT: 127-C1-067-Civil-Dwg-Sheet Drawings Well Site & Logging  
 SWED: 6/19/2019 3:59 PM  
 PLOTTED: 6/19/2019 3:59 PM

EAST INDUSTRIAL PARK ROAD



DRILLERS LOG OF TEST HOLE  
 DRILLED BY:  
 DOWNEY DRILLING INC.  
 NOVEMBER 19, 2018  
 G-187354



LEXINGTON WELL #19  
**WELL SITE PLAN AND WELL DESIGN**  
 LEXINGTON, NEBRASKA



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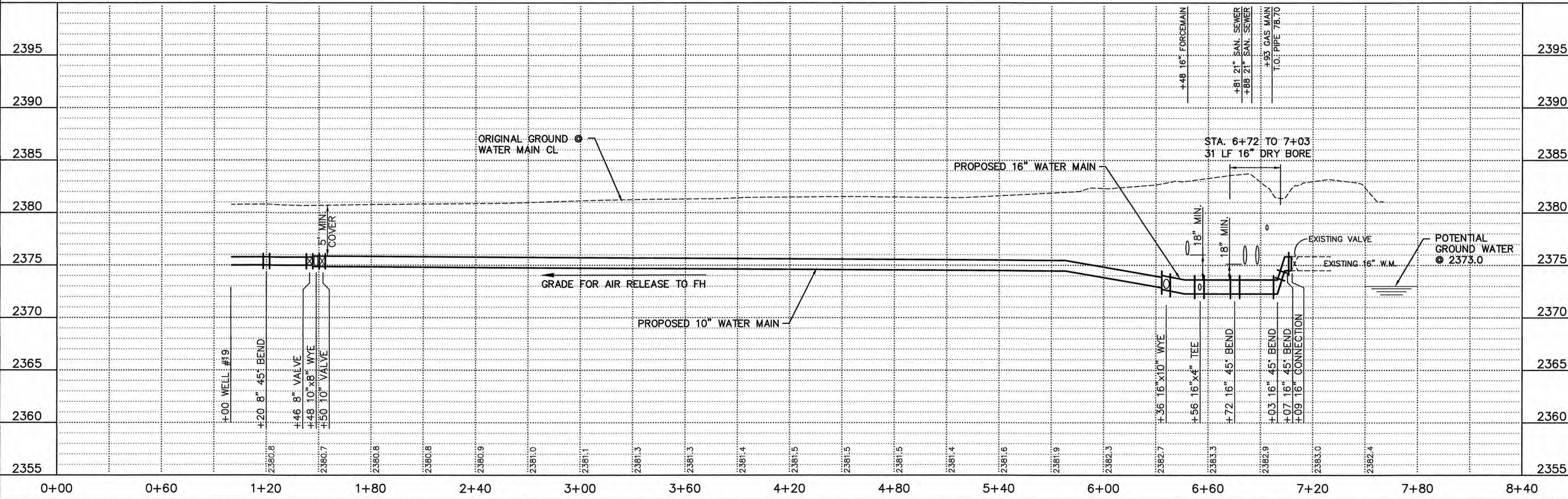
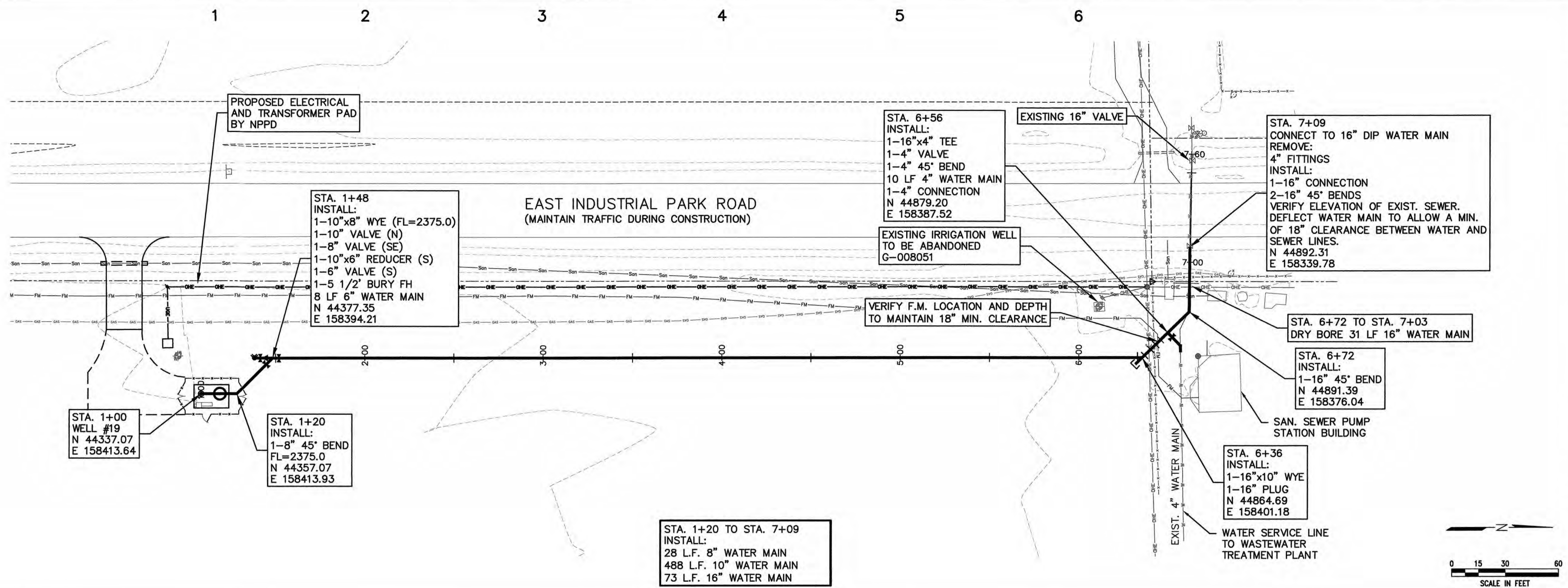
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 PROJECT NO. 127-C1-067  
 DATE: JUNE, 2019  
 FIELD BOOK M&A DWG NO. 36493  
 DRAWN BY: BSF  
 SHEET

LEXINGTON WELL #19  
**WATER MAIN PLAN & PROFILE**  
LEXINGTON, NEBRASKA

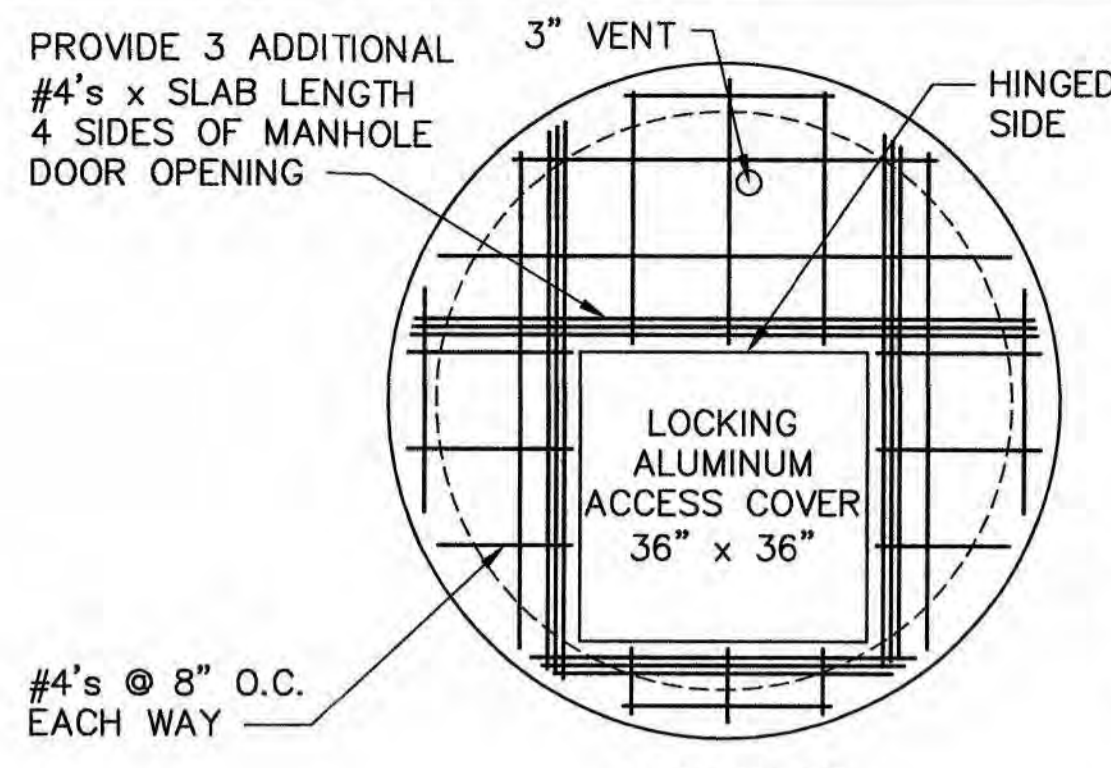


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SCALE:  
PROJECT NO. 127-C1-067  
DATE: JUNE, 2019  
FIELD BOOK M&A DWG NO. 36492  
DRAWN BY: BSF  
APPROV'D BY: *[Signature]*  
SHEET 4



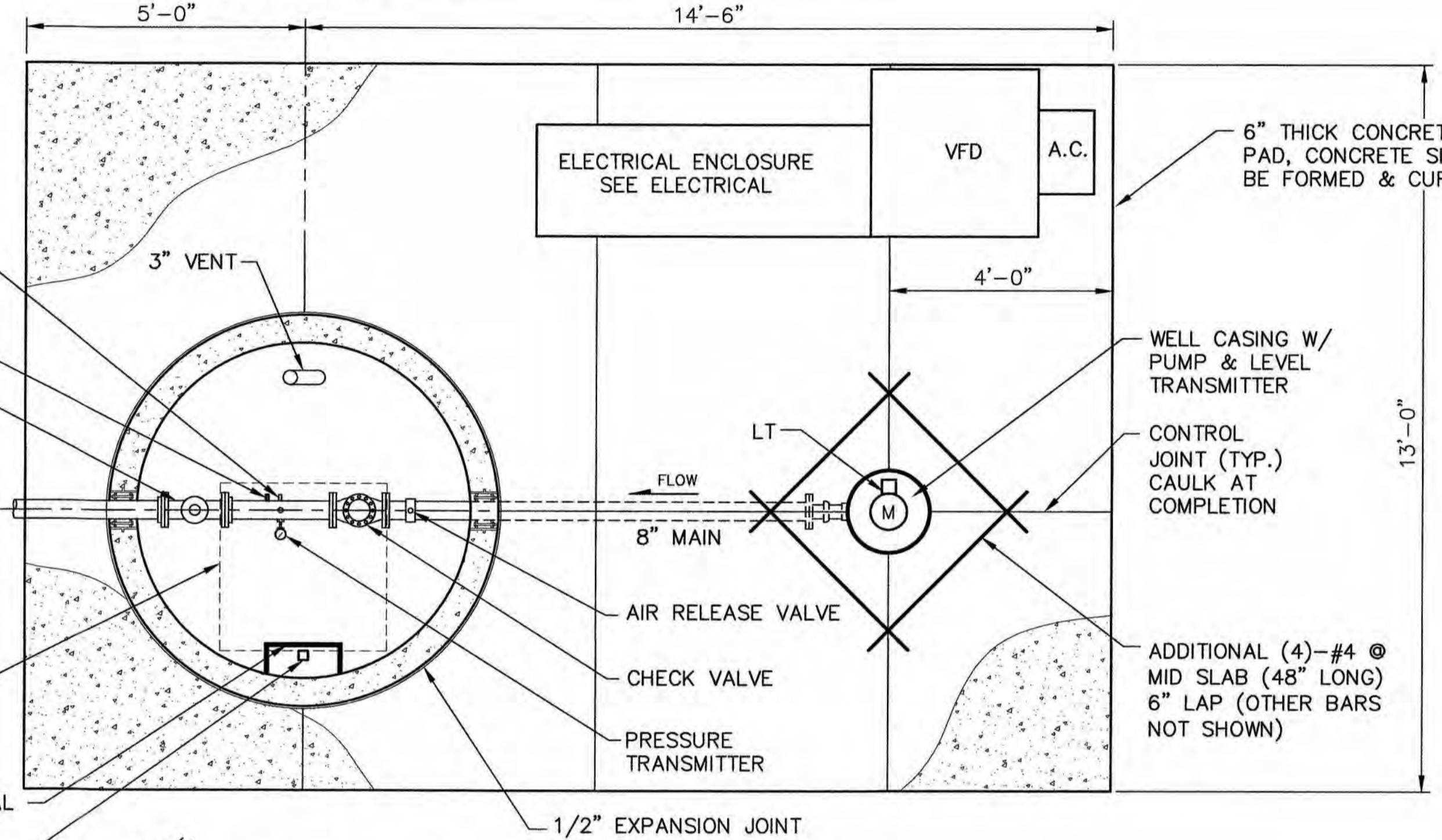
PLOTTER: 6/19/2019 4:03 PM  
 SAVED: 6/19/2019 4:03 PM  
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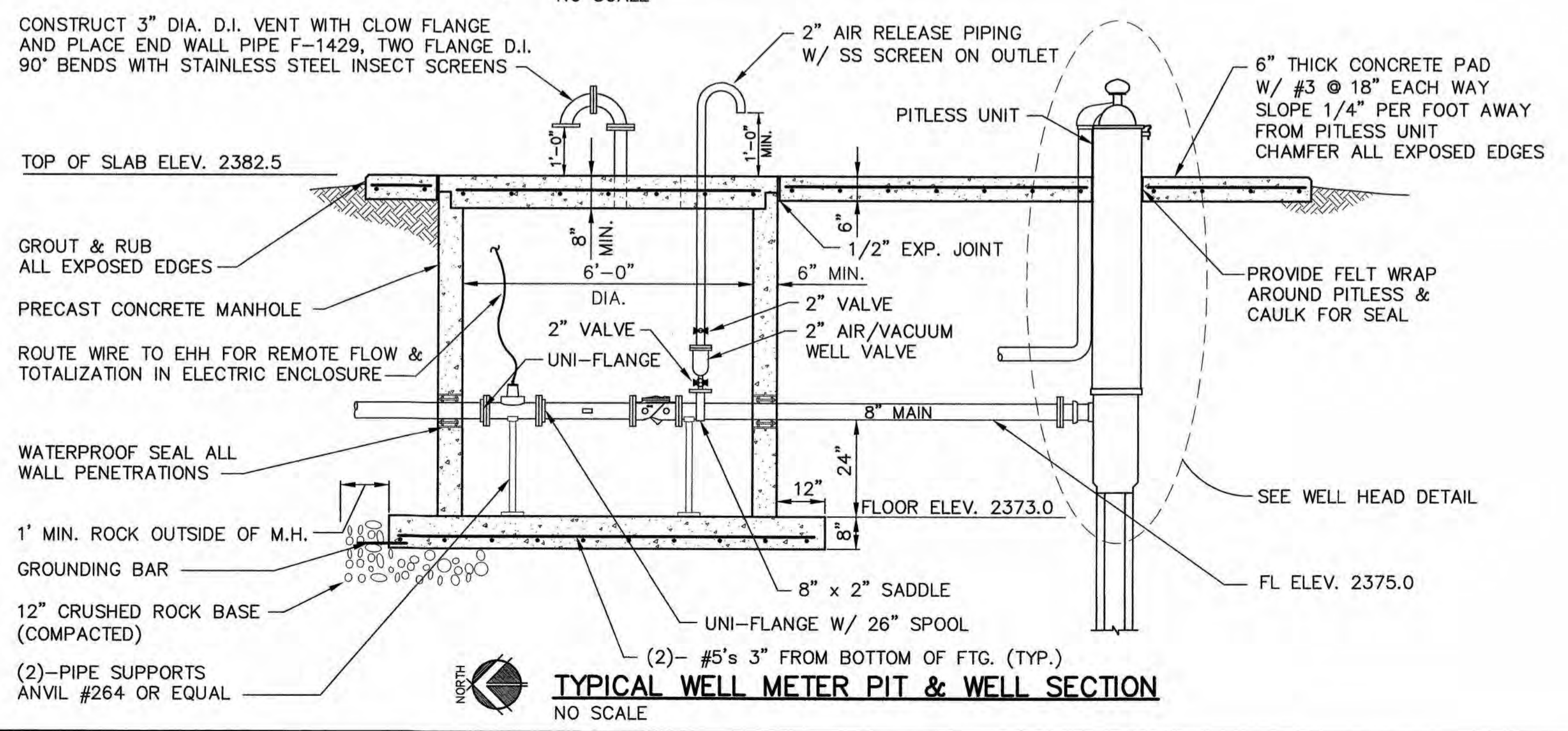
**TOP DECK REINFORCING PLAN**  
NO SCALE

**METER PIT GENERAL NOTES:**

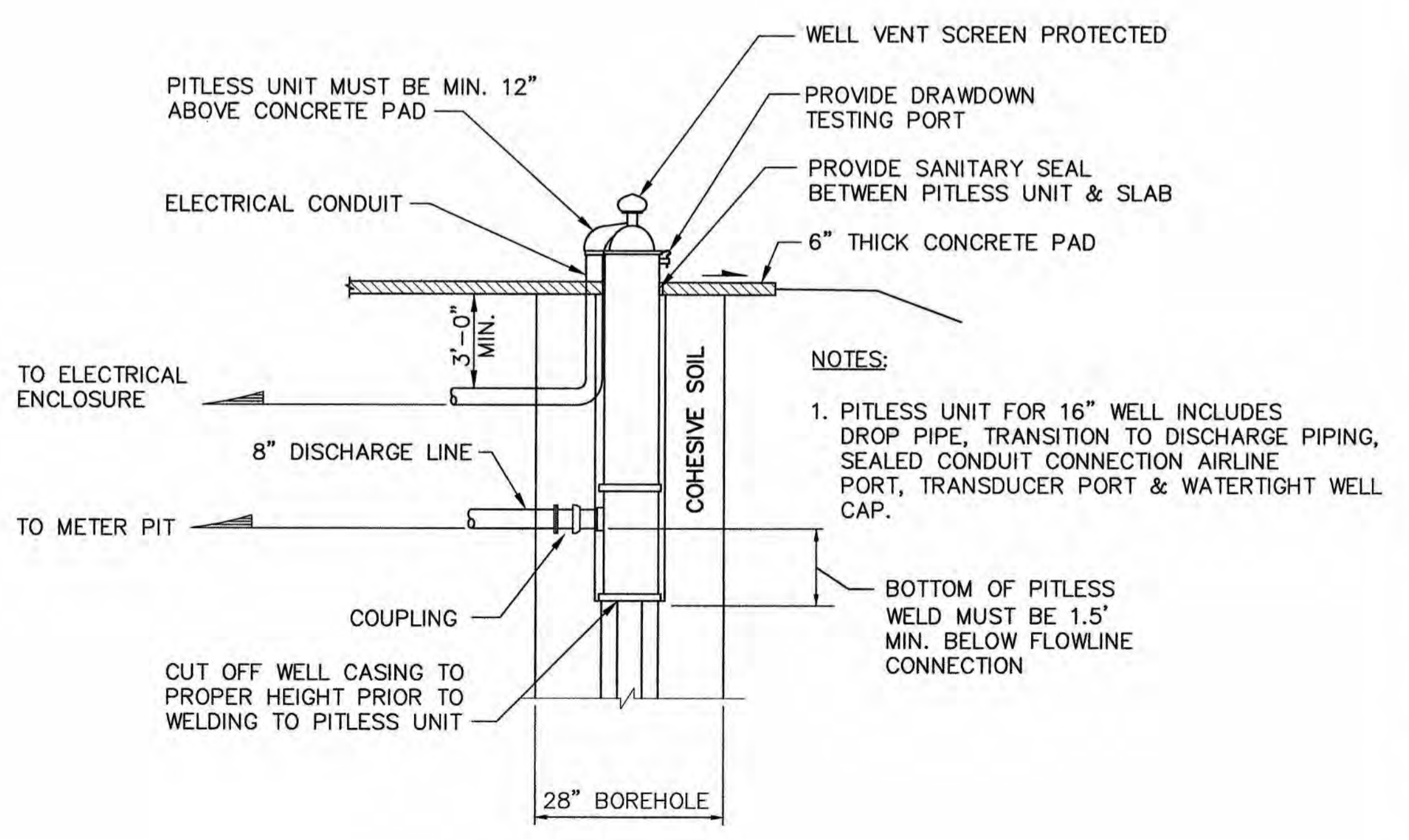
1. CONFIGURATION AND DIMENSIONS SHOWN ARE SUGGESTED MINIMUM REQUIREMENTS ONLY. ALL DETAILS, INCLUDING LOCATION AND METER SPACING ARRANGEMENTS OF ACCESS COVER, ETC., ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. PROVIDE 8" OF CRUSHED ROCK FROM 12" ROCK BASE TO TOP OF FOOTINGS.
3. ALL VERTICAL EXTERIOR WALL SURFACES SHALL RECEIVE A FIBERED ASPHALT COMPOUND TO A FINAL WET THICKNESS OF 1/8 INCH. PROVIDE COATING MEETING ASTM D449 EQUAL TO SONNEBORN HYDROXIDE 700 B SEMI-MASTIC.
4. ALL INTERIOR METAL SURFACES SHALL RECEIVE PAINTING PER SPECIFICATIONS.
5. ACCESS COVER W/ DIAMOND PATTERN MODEL K-4 MANUFACTURED BY BILCO OR HALLIDAY.
6. 6" GROUNDED MAGNETIC FLOW METER WITH PULSE & 4-20mA SIGNAL TO WTP.
7. COORDINATE LADDER STAND OFF WITH ACCESS LID PLACEMENT.
8. ALL PIPING SHALL BE DUCTILE.



**TYPICAL WELL METER PIT & WELL PLAN**  
NO SCALE



**TYPICAL WELL METER PIT & WELL SECTION**  
NO SCALE

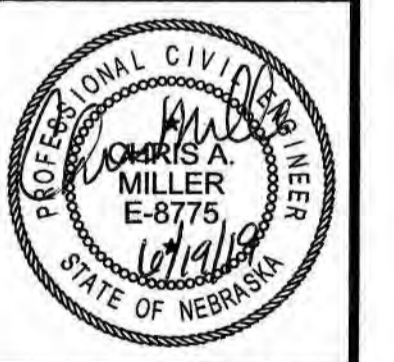


**WELL HEAD DETAIL**  
NO SCALE

REVISIONS	BY

**M&A**  
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LEXINGTON WELL #19  
**DETAILS**  
LEXINGTON, NEBRASKA



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SCALE:	AS SHOWN
PROJECT NO.	127-C1-067
DATE:	JUNE, 2019
FIELD BOOK	M&A DWG NO. 36491
DRAWN BY:	BSF
APPROVED BY:	[Signature]
SHEET	5

PROJECT: 127-C1-067 (C&S-Dwg) Sheet: Drawings (S&S)-S&S  
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 PLOTTED: 6/19/2019 4:03 PM

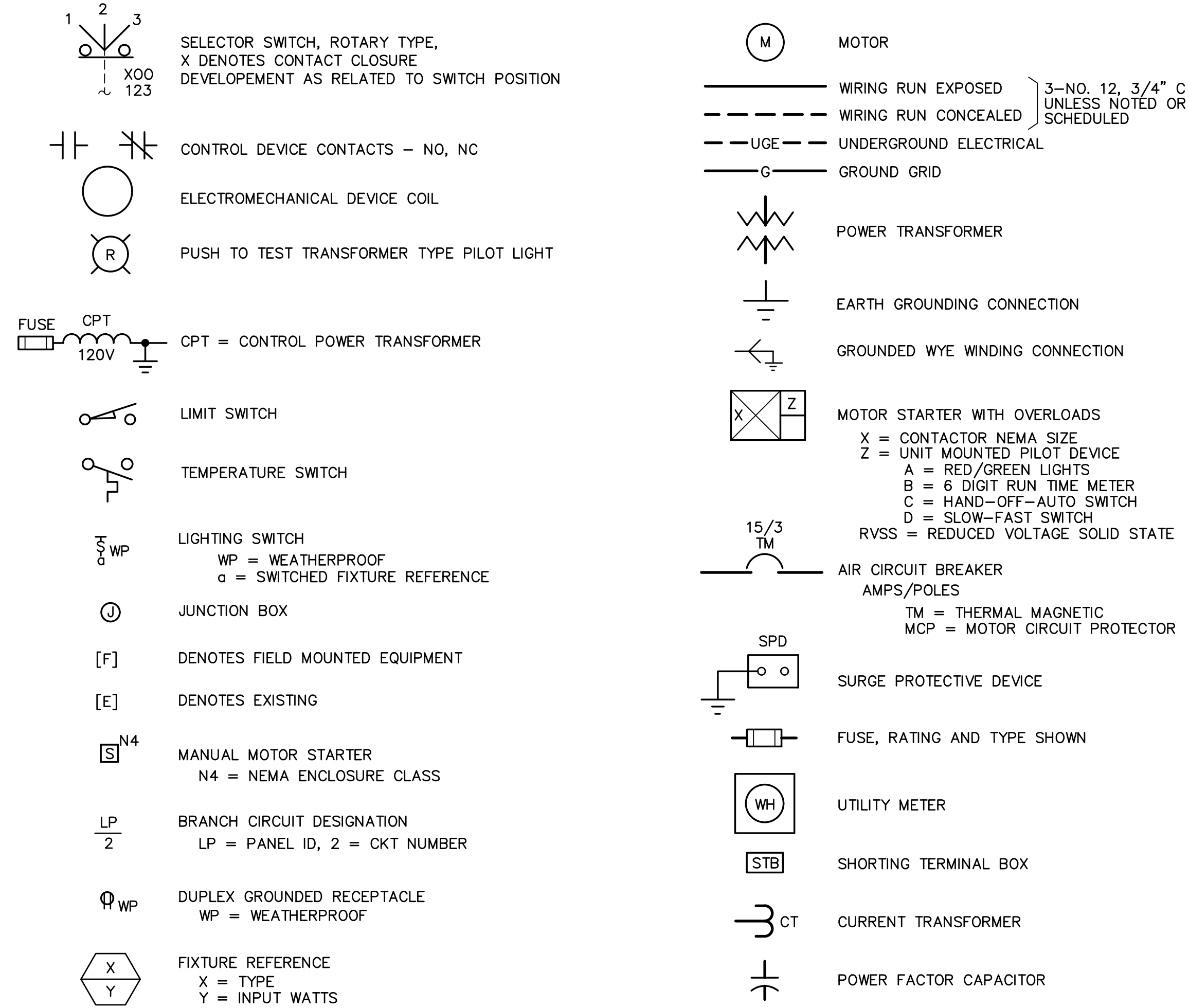
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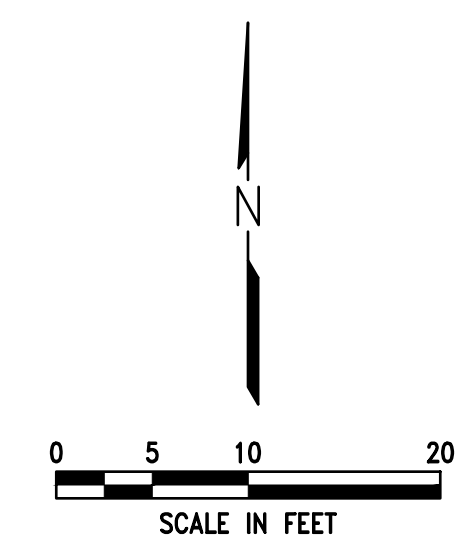
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### ELECTRICAL LEGEND

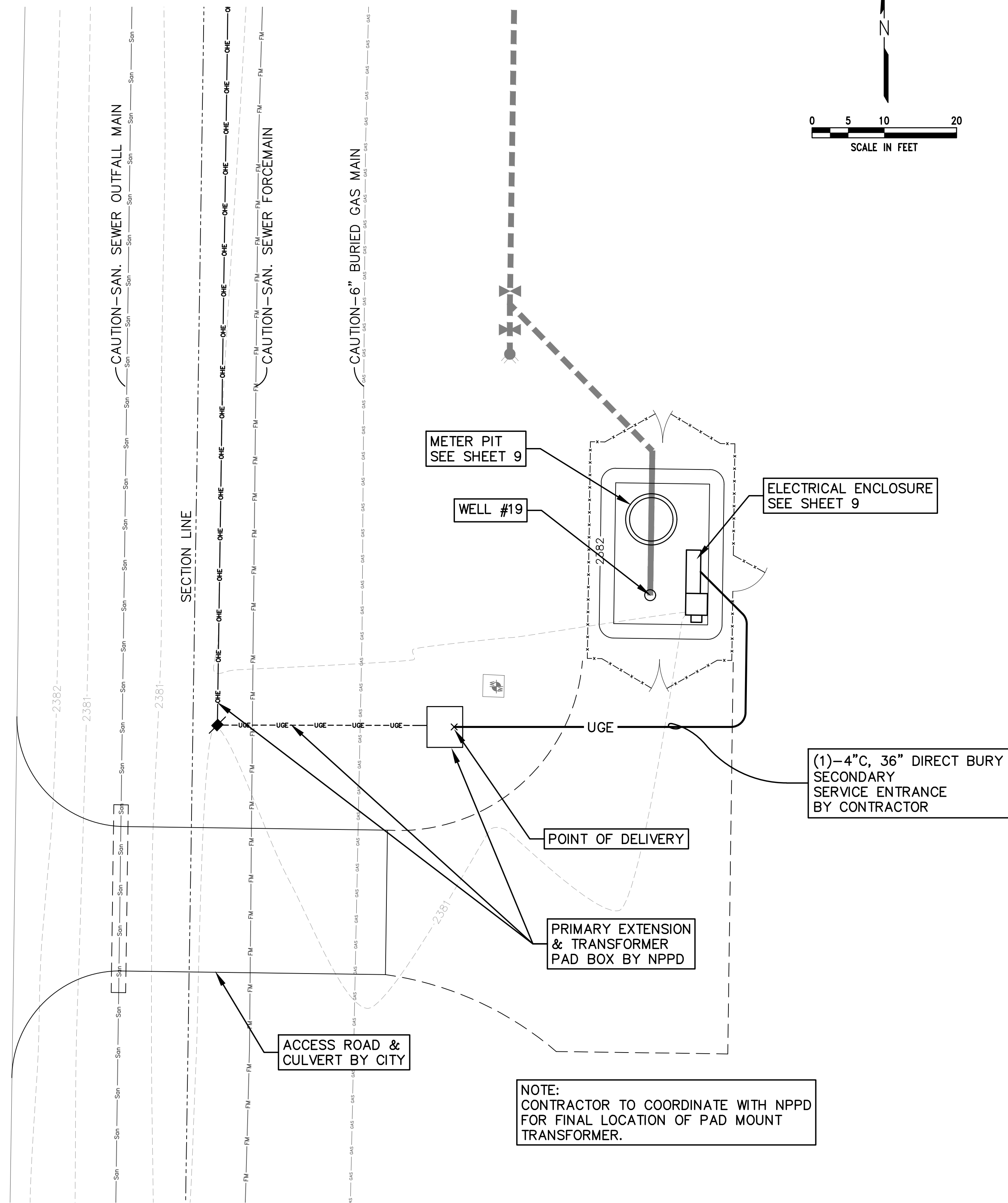


**NOTES:**

1. LEGEND CONTAINS STANDARD INFORMATION. ALL REFERENCES MAY NOT APPLY TO THIS PROJECT.



EAST INDUSTRIAL PARK ROAD



**WELL #19 SITE PLAN**

REVISIONS	BY

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**LEXINGTON WELL #19**  
**ELECTRICAL SITE PLAN & LEGEND**  
**LEXINGTON, NEBRASKA**



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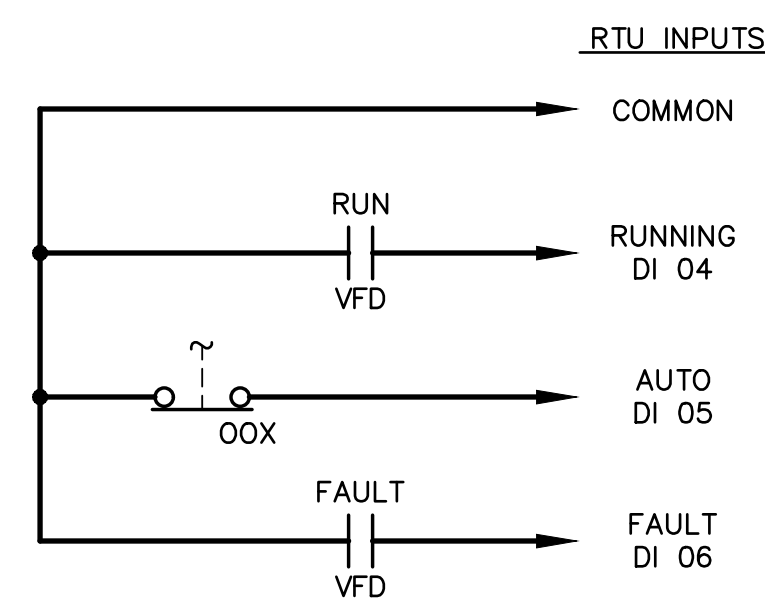
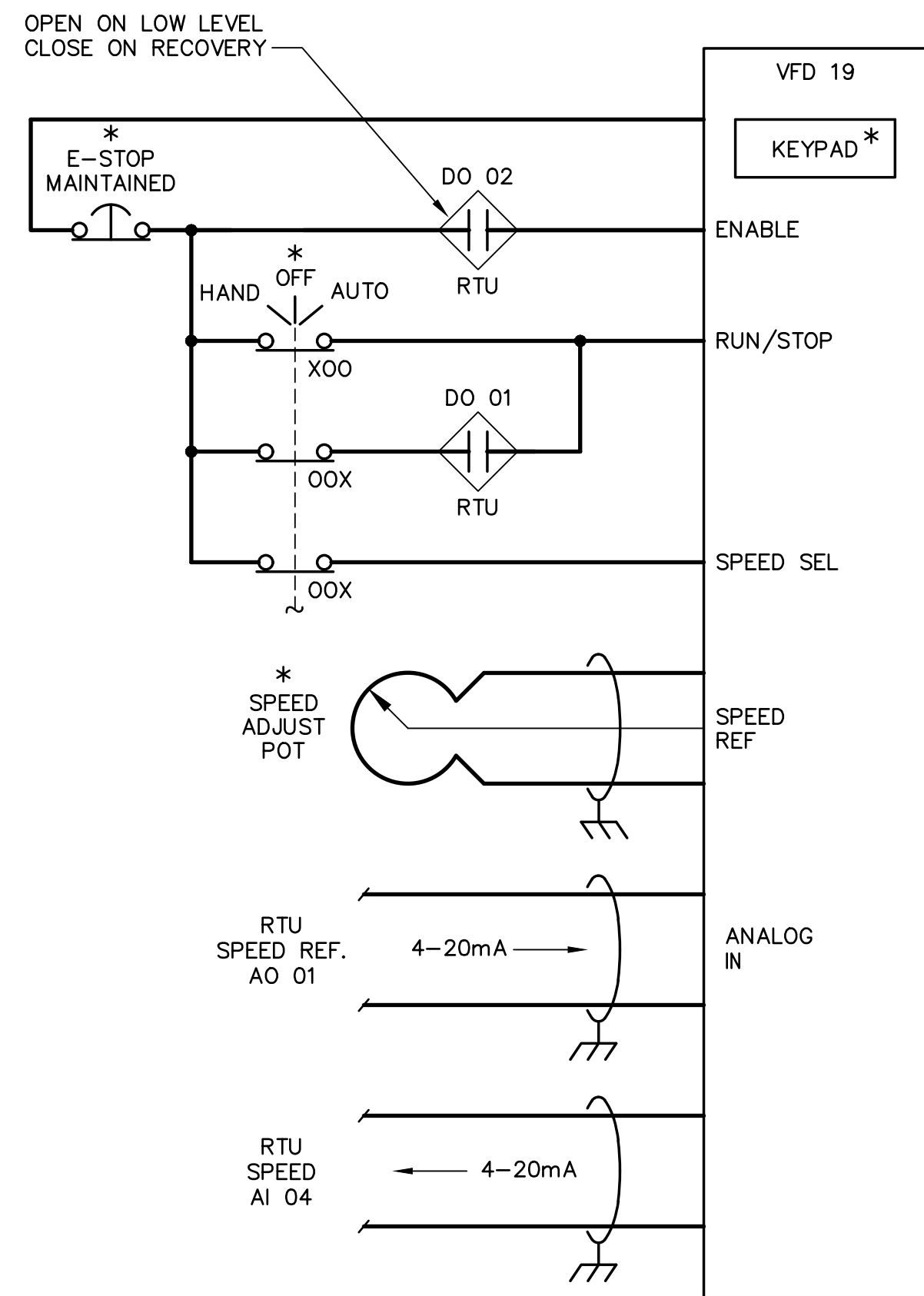
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PROJECT NO.	127-C1-067
DATE:	JUNE, 2019
FIELD BOOK	M&A DWG NO. 36488
DRAWN BY:	APRVD BY:
BSF/DDM	RJS
SHEET	8

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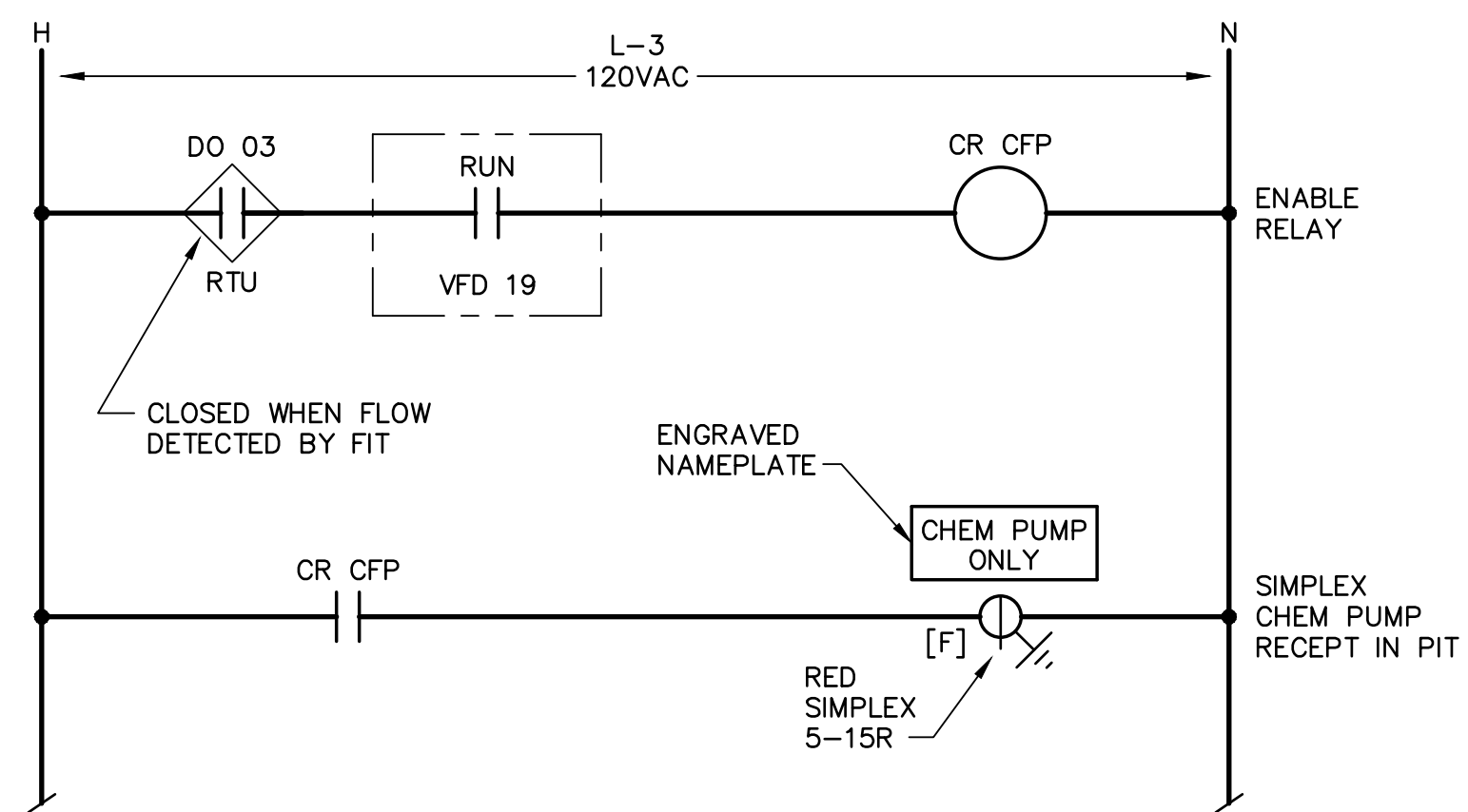








**WELL 19 PUMP VFD**  
ALL DEVICES AT VFD UNLESS NOTED  
\* DENOTES SWING PANEL MOUNTED DEVICE



**CHEMICAL PUMP CFP**  
ALL DEVICES AT RTU UNLESS NOTED

RTU DIGITAL INPUTS				
NO.	POINT TAG	TYPE	DESCRIPTION	FUNCTION
1	DI 01	STATUS	NORMAL POWER	AVAILABLE
2	DI 02	ALARM	UNINTERRUPTABLE POWER SUPPLY	ON BATTERY
3	DI 03	ALARM	UNINTERRUPTABLE POWER SUPPLY	LOW BATTERY
4	DI 04	STATUS	WELL 19 PUMP	RUNNING
5	DI 05	STATUS	WELL 19 PUMP HOA	AUTO
6	DI 06	ALARM	WELL 19 PUMP VFD	FAULT
7	DI 07	ALARM	METER PIT WATER ON FLOOR	HIGH
8	DI 08	PULSE	DISCHARGE FLOW	TOTALIZE
9	DI 09		SPARE	
10	DI 10		SPARE	
11	DI 11		SPARE	
12	DI 12		SPARE	

RTU DIGITAL OUTPUTS				
NO.	POINT TAG	TYPE	DESCRIPTION	FUNCTION
1	DO 01	CONTROL	WELL 19 PUMP VFD	CALL TO RUN
2	DO 02	CONTROL	WELL 19 WATER LEVEL	LOW CUTOFF
3	DO 03	CONTROL	CHEMICAL PUMP	ENABLE
4	DO 04			
5	DO 05			
6	DO 06			

RTU ANALOG INPUTS				
NO.	POINT TAG	TYPE	DESCRIPTION	FUNCTION
1	AI 01	4-20 MA	STATION DISCHARGE	FLOW RATE
2	AI 02	4-20 MA	STATION DISCHARGE	PRESSURE
3	AI 03	4-20 MA	WELL 19 STATIC WATER	LEVEL
4	AI 04	4-20 MA	WELL 19 PUMP VFD	SPEED
5	AI 05	4-20 MA	SPARE	
6	AI 06	4-20 MA	SPARE	

RTU ANALOG OUTPUTS				
NO.	POINT TAG	TYPE	DESCRIPTION	FUNCTION
1	AO 01	4-20 MA	WELL 19 PUMP VFD	SPEED REF
2	AO 02	4-20 MA	CHEMICAL PUMP	FLOW PACE
3	AO 03	4-20 MA	SPARE	
4	AO 04	4-20 MA	SPARE	

REVISIONS BY



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LEXINGTON WELL #19  
**SCHEMATICS & SCHEDULES**  
LEXINGTON, NEBRASKA

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PROJECT NO. 127-C1-067  
DATE: JUNE, 2019  
FIELD BOOK M&A DWG NO. 36485  
DRAWN BY: CBD APRVD BY: RJS  
SHEET



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SCALE: NO SCALE  
PROJECT NO. 127-C1-067  
DATE: JUNE, 2019  
FIELD BOOK M&A DWG NO. 36484  
DRAWN BY: CBD APRVD BY: RJS  
SHEET

CABLE/CONDUIT SCHEDULE							
MARK	PARALLEL RUNS	PHASE	NEUTRAL	GROUND	CONTROL	TRADE SIZE CONDUIT	
1	1	3-250 KCMIL	1-NO. 2	1-NO. 4		4"	
2	1	3-250 KCMIL		1-NO. 4		3"	
3	1	3-NO. 3/0		1-NO. 4		2.5"	
4							
MARK	CONDUCTORS	GROUND	CONDUIT	MARK	CONDUCTORS	GROUND	CONDUIT
10	2-NO. 12	1-NO. 12	3/4"	40	2-NO. 14	1-NO. 14	3/4"
11	3-NO. 12	1-NO. 12	3/4"	41	3-NO. 14	1-NO. 14	3/4"
12	4-NO. 12	1-NO. 12	3/4"	42	4-NO. 14	1-NO. 14	3/4"
13	2-NO. 10	1-NO. 10	3/4"	43	6-NO. 14	1-NO. 14	3/4"
14	3-NO. 10	1-NO. 10	3/4"	44	8-NO. 14	1-NO. 14	3/4"
15	4-NO. 10	1-NO. 10	3/4"	45	10-NO. 14	1-NO. 14	3/4"
16	2-NO. 8	1-NO. 10	3/4"	46	12-NO. 14	1-NO. 14	1"
17	3-NO. 8	1-NO. 10	3/4"	47	16-NO. 14	1-NO. 14	1"
18	4-NO. 8	1-NO. 10	1"	48	20-NO. 14	1-NO. 14	1 1/2"
19	2-NO. 6	1-NO. 8	1"	49	24-NO. 14	1-NO. 14	1 1/2"
20	3-NO. 6	1-NO. 8	1"	50	30-NO. 14	1-NO. 14	2"
21	4-NO. 6	1-NO. 8	1 1/4"	51	36-NO. 14	1-NO. 14	2"
22	3-NO. 4	1-NO. 6	1 1/4"	52	40-NO. 14	1-NO. 14	2"
23	4-NO. 4	1-NO. 6	1 1/4"	53	48-NO. 14	1-NO. 14	2"
24	3-NO. 2	1-NO. 6	1 1/2"	54	60-NO. 14	1-NO. 14	2"
25	4-NO. 2	1-NO. 6	1 1/2"	55			
26	2-NO. 2	1-NO. 6	1 1/2"	56			
27				57			
28				58			
29				59			
30		1-NO. 8	3/4"	70	1-2C #18TS		3/4"
31		1-NO. 6	3/4"	71	2-2C #18TS		3/4"
32		1-NO. 4	3/4"	72	3-2C #18TS		3/4"
33		1-NO. 2	3/4"	73	4-2C #18TS		3/4"
34		1-NO. 1/0	1"	74	5-2C #18TS		1"
35		1-NO. 2/0	1"	75	1-2C #16TS		1 1/4"
36		1-NO. 3/0	1 1/4"	76			
				77			
				78			
				79	MANUF CABLE		3/4"

- NOTES:
- (42) (14) DENOTES COMMON CONDUIT (INCREASE CONDUIT SIZE IF REQUIRED) USE SINGLE LARGEST GROUNDING CONDUCTOR.
  - CONDUIT SIZES MAY VARY IN DUCT BANKS.
  - CONDUCTORS OVER-SIZED FOR VOLTAGE DROP, FIELD INSTALLED IN HDPE SCH 40 UL LISTED CONDUIT.

PANEL SCHEDULE PANEL H								
CIRCUIT NUMBER	BREAKER TRIP	LOAD DESCRIPTION	LOAD VA	PHASE	LOAD VA	LOAD DESCRIPTION	BREAKER TRIP	CIRCUIT NUMBER
1	225/1	WELL 19 PUMP	43181	A		SPD (NOTE 1)	30/3	2
3			43181	B				4
5			43181	C				6
7	15/3	AIR CONDITIONER	941	A	740	TRANSFORMER	20/2	8
9			941	B	807			10
11			941	C		BLANK SPACE		12
13		BUSSED SPACE		A		BUSSED SPACE		14
15				B				16
17				C				18

AMPS	250	A PHASE CONNECTED VA	44862	MAIN	LUGS ONLY		
VOLTAGE	480	B PHASE CONNECTED VA	44929	NEUTRAL	N/A		
PH/WIRE	3/3	C PHASE CONNECTED VA	44122	ENCL.	NEMA 1		
SH. CKT.	25 KAIC	TOTAL CONNECTED VA	133913	MOUNTING	SURFACE		
TYPE	MOLDED CASE	DEMAND VA	167176	MFG.	EATON PRL 3A		
NON-CONTINUOUS LOAD	CONNECTED VA	DEMAND FACTOR	DEMAND VA	PHASE LOADING	AØ VA	BØ VA	CØ VA
TRANSFORMER	1547	1.11	1719		44862	44929	44122
SUBTOTAL	1547		1719	PHASE BALANCE	A-B	B-C	C-A
MOTOR LOAD					99.9%	98.2%	98.4%
LARGEST REMAINDER	129542	1.25	161928				
SUBTOTAL	129542		161928	PANEL AMPACITY OVERCURRENT DEVICE	201	250	
CONTINUOUS LOAD				FEEDER AMPACITY	201	255	
AIR CONDITIONER	2823	1.25	3529				
SUBTOTAL	2823		3529	NOTES:			
				1. SURGE PROTECTIVE DEVICE: 120 KA SURGE CURRENT, UL 1449 FOURTH EDITION, NEMA 12 ENCLOSED, EATON SPD120-240D OR EQUIVALENT.			
TOTALS	VA	133913	167176				
	AMPS	161	201				

PANEL SCHEDULE PANEL L								
CIRCUIT NUMBER	BREAKER TRIP	LOAD DESCRIPTION	LOAD VA	PHASE	LOAD VA	LOAD DESCRIPTION	BREAKER TRIP	CIRCUIT NUMBER
1	20/1	LIGHTING	80	A	360	RECEPTACLES	20/1 GFI	2
3	15/1	CHEM PUMP	200	B	607	SUMP PUMP RECEPT	15/1	4
5	20/1	SPARE		A	300	CONTROLS	15/1	6
7	20/1	SPARE		B		SPARE	15/1	8
9		BUSSED SPACE		A		SPARE	15/1	10
11				B		BUSSED SPACE		12

AMPS	100	A PHASE CONNECTED VA	740	MAIN	MAIN LUGS	
VOLTAGE	240/120	B PHASE CONNECTED VA	807	NEUTRAL	100%	
PH/WIRE	1/3	TOTAL CONNECTED VA	1547	ENCL.	NEMA 1	
SH. CKT.	10 KAIC	DEMAND VA	1719	MOUNTING	SURFACE	
TYPE	PLUG ON			MFG.	EATON MINI POWER CENTER	
NON-CONTINUOUS LOAD	CONNECTED VA	DEMAND FACTOR	DEMAND VA	PHASE LOADING	AØ VA	BØ VA
MISC LIGHTING RECEPTACLES	300	1.00	300		740	807
SUBTOTAL	740		760	PHASE BALANCE	A-B	
92%						
MOTOR LOAD						
LARGEST REMAINDER	607	1.25	759	PANEL AMPACITY OVERCURRENT DEVICE	7	100
SUBTOTAL	807		959	FEEDER AMPACITY	7	35
CONTINUOUS LOAD						
NONE	0	1.00	0	NOTES:		
SUBTOTAL	0		0			
TOTALS	VA	1547	1719			
	AMPS	6	7			