



PROJECT VICINITY MAP  
(NO SCALE)

### GENERAL NOTES

1. The completed pump station and forcemain shall be owned and maintained by the Missouri Department of Transportation.
2. The engineering information shown on these plans is from studies made in the field and represents the best information available to SHAFER, KLINE AND WARREN, INC.
3. All grassed area disturbed by the contractor shall be fertilized, seeded, and mulched unless otherwise noted on the plans.
4. All utilities and their connections shall be moved or adjusted by the Contractor to fit the new construction unless otherwise noted on the plans.
5. Contractor shall contact utility companies at least three working days, but no more than ten working days, prior to digging by calling DIGRITE at 1-800-344-7483.
6. It is the Contractor's responsibility to coordinate the adjustment of the various utilities by the respective companies.
7. There shall be a minimum distance of 18" vertical clearance between the forcemain and water lines. See specifications.
8. All roads, driveways, culverts, fencing, landscape, structures & other improvements damaged during construction shall be repaired or replaced to equal or better condition.
9. Contractor to only remove trees & shrubs as needed for actual construction of utilities. Preserve existing vegetation to the maximum extent practical. Protect all trees not designated for removal. Do not drive or store equipment under dripline.
10. All signs damaged or removed during construction shall be replaced.
11. The locations of utility mains, structures & service connections plotted on these drawings are approximate only and were obtained from records made available to Shafer, Kline & Warren Inc. (SKW). There may be other existing utility mains, structures & service connections not known to SKW and not shown on the drawings. The verification of the existence and the determination of the exact location of utility mains, structures & service connections shall be the responsibility of the construction contractor(s).
12. Site clean up on a daily basis.
13. All open excavations shall be protected.
14. Replace any property monuments removed or destroyed by construction. All monuments shall be set by a surveyor licensed in the State of Missouri.
15. Contractor is to coordinate electrical power installation with electrical utility.
16. Contractor to ensure erosion is kept to a minimum at all disturbed areas.

# MISSOURI DEPARTMENT OF TRANSPORTATION SEWER IMPROVEMENTS KING CITY, MISSOURI T60N, R32W, SECTIONS 5 AND 8



## PROJECT VICINITY MAP

### LEGEND

• IB_E	= EXIST IRON BAR	EXIST SEWER LINE	— SAN —
• IBPC_E	= EXIST. IRON BAR W/ PLASTI	EXIST MAJOR CONTOUR	— — — — —
• FPST	= FENCE POST	EXIST MINOR CONTOUR	— — — — —
• FFD	= FIBER OPTIC MARKER	EXIST FLOW LINE	— — — — —
• FH	= FIRE HYDRANT	TREE LINE	— — — — —
• FG	= GAS MARKER	EXIST BUILDING	— — — — —
• GTPST	= GATE POST	EXIST EASEMENT	— — — — —
• GA	= GUY ANCHOR	EXIST EDGE OF ASPHALT	— — — — —
• H&V	= CONTROL POINT	EXIST EDGE OF GRAVEL	— — — — —
• LP	= LIGHT POLE	EXIST GRAVEL SHOULDER	— — — — —
• MS	= METAL SIGN	EXIST CHAINLINK FENCE	— — — — —
• PP	= POWER POLE	EXIST OVERHEAD POWER	— — — — —
• RW	= R/W MARKER	EXIST STORM PIPE	— — — — —
• SSMH	= SANITARY SEWER MANHOLE	EXIST PROPERTY LINE	— — — — —
• STMH	= STORM MANHOLE	EXIST SEWER PIPE	— — — — —
• STUMP	= STUMP	EXIST GAS LINE	— — — — —
• TEP	= TELEPHONE PEDESTAL	EXIST POWER	— — — — —
• TBM	= TEMP BENCHMARK	EXIST TELEPHONE LINE	— — — — —
• TREE	= TREE	EXIST WATER LINE	— — — — —
		EXIST EDGE OF WATER	— — — — —
		PROPOSED SEWER LINE	— — — — —
		PERMANENT EASEMENT	— — — — —
		TEMPORARY EASEMENT	— — — — —

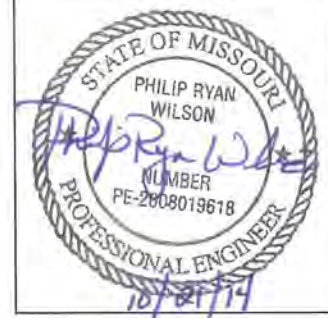
### INDEX

### DESCRIPTION

COVER SHEET  
GENERAL LAYOUT  
FORCEMAIN PLAN & PROFILE  
WATER SERVICE CONNECTION  
PUMP STATION DETAILS  
DETAILS  
ELECTRICAL IMPROVEMENTS

### SHEET NO

G1  
G2  
C1-2  
C3  
C4  
C5-C6  
E-1-3



THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT-OF-WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE.

### BENCHMARK

- TBM1:  
STEPED NAILS IN POST ON EAST SIDE OF ENTRANCE TO CITY WASTEWATER LAGOON. ELEVATION = 1059.73
- TBM2:  
CHISELED SQUARE ON SOUTHWEST CORNER OF CONCRETE PAD SOUTH OF MoDOT MAINTENANCE SHED. ELEVATION = 1104.48

TELEPHONE/TV  
CENTURYLINK  
1-800-366-8201

AT&T  
1-877-762-0503

WATER  
CITY OF KING CITY  
1-660-535-6121

ELECTRIC  
UNITED ELECTRIC COOPERATIVE  
1-800-748-1488  
LOST CREEK WIND FARM  
1-314-685-3000

SEWER  
CITY OF KING CITY  
1-660-535-6121

SHAFER, KLINE & WARREN, INC.  
107 Butler Street, Macon, MO 63552-1628  
660/385-6441 FAX: 660/385-6614



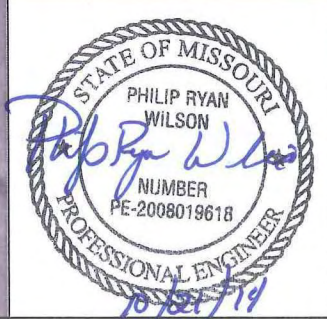
MODOT SEWER IMPROVEMENTS  
KING CITY, MO

COVER

140396-010  
SHEET NO.  
G1



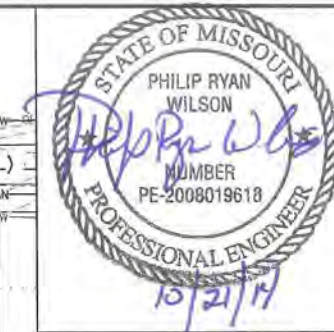
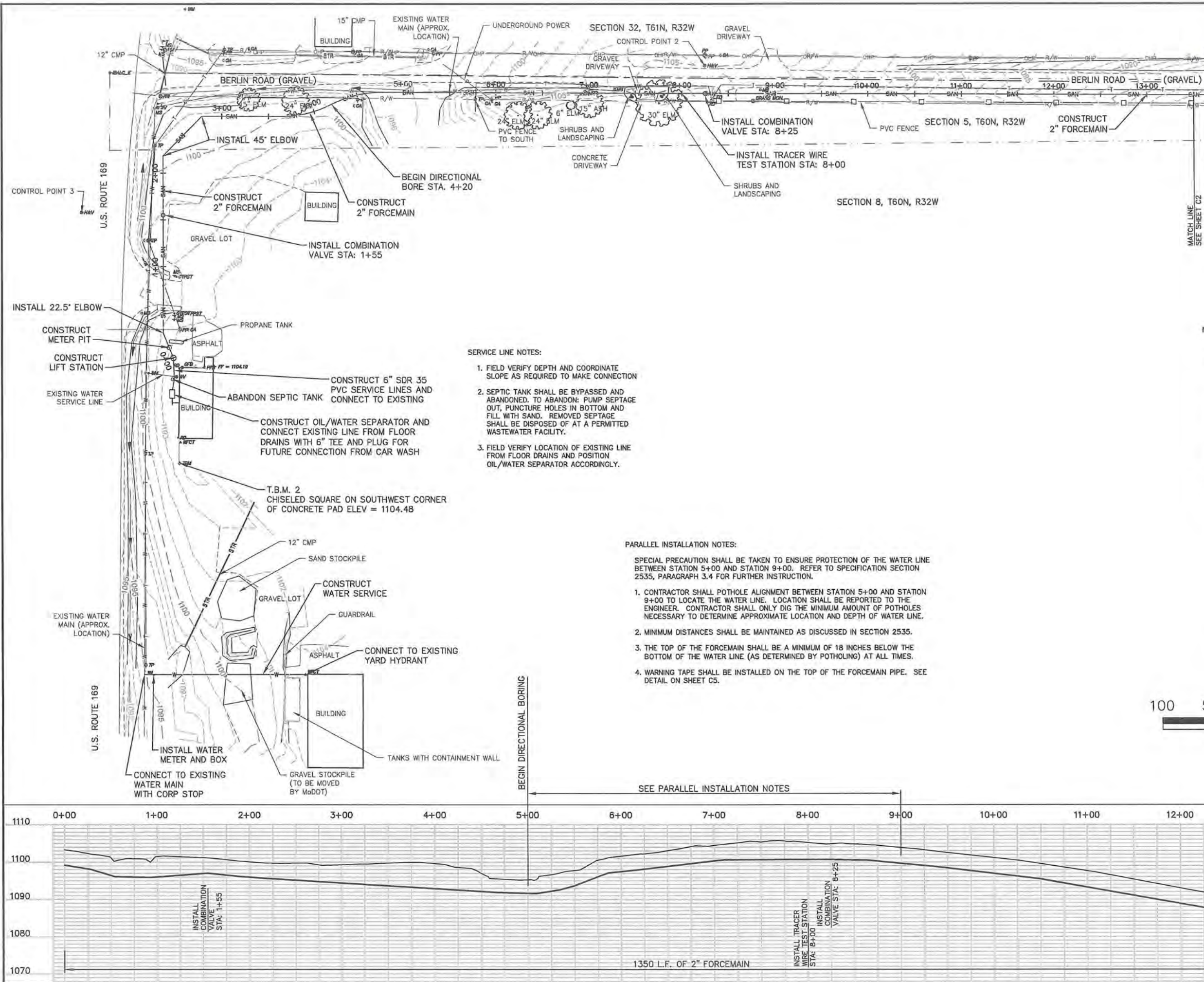
L: 140396-010 CAD\CIVIL\140396-010 GEN LAYOUT.DWG
LAYOUT: G2
BY: JCARTER
DATE: 10/13/2014
XREF DWG1: 140396-010 Base.dwg
XREF DWG2: 140396-010 Site Design.dwg
XREF DWG3: NONE
XREF DWG4: NONE



<b>MODOT SEWER IMPROVEMENTS</b> <b>KING CITY, MO</b>		<b>SHAFER, KLINE &amp; WARREN, INC.</b> 107 Butler Street, Macon, MO 63552-1628 660/385-6441 FAX: 660/385-6614 OFFICE LOCATIONS: Columbia, MO Lenexa, KS Macon, MO North Kansas City, MO Houston, TX Tulsa, OK		CIVIL ENGINEERS ELECTRICAL ENGINEERS MECHANICAL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS LAND PLANNERS	
<b>GENERAL LAYOUT</b>		Designed By: PRW Drawn By: JDC Checked By: PRW Issue Date:		NO. DATE REVISIONS 1 2 3 4 5	
140396-010 SHEET NO. <b>G2</b>		COPYRIGHT © - 2014 - SHAFER, KLINE & WARREN INC. MISSOURI CERTIFICATE OF AUTHORITY: F00139850			



L:\140396-010\CAD\CIVIL\140396-010 SITE.DWG  
DATE: 10/21/2014  
BY: JCARTER  
XREF DWG1: 140396-010 Base.dwg  
XREF DWG2: 140396-010 Site Design.dwg  
XREF DWG3: NONE  
XREF DWG4: NONE



- NOTE:
1. SEED & MULCH DISTURBED AREAS.
  2. REPLACE ANY DAMAGED CULVERTS.
  3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE REGULATIONS OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES REGARDING LAND DISTURBANCE AND, IF REQUIRED, DEVELOP A SWPPP AND OBTAIN A LAND DISTURBANCE PERMIT.
  4. SEE SPECIFICATION SECTION 02530 FOR FORCEMAIN MATERIAL REQUIREMENTS.
  5. FROM STATION 0+00 TO 4+20 THE FORCEMAIN MAY BE INSTALLED BY OPEN CUT OR DIRECTIONAL BORING. THE REMAINING SHALL BE INSTALLED BY DIRECTIONAL BORING, WITH A MINIMUM AMOUNT OF SURFACE DISTURBANCE.

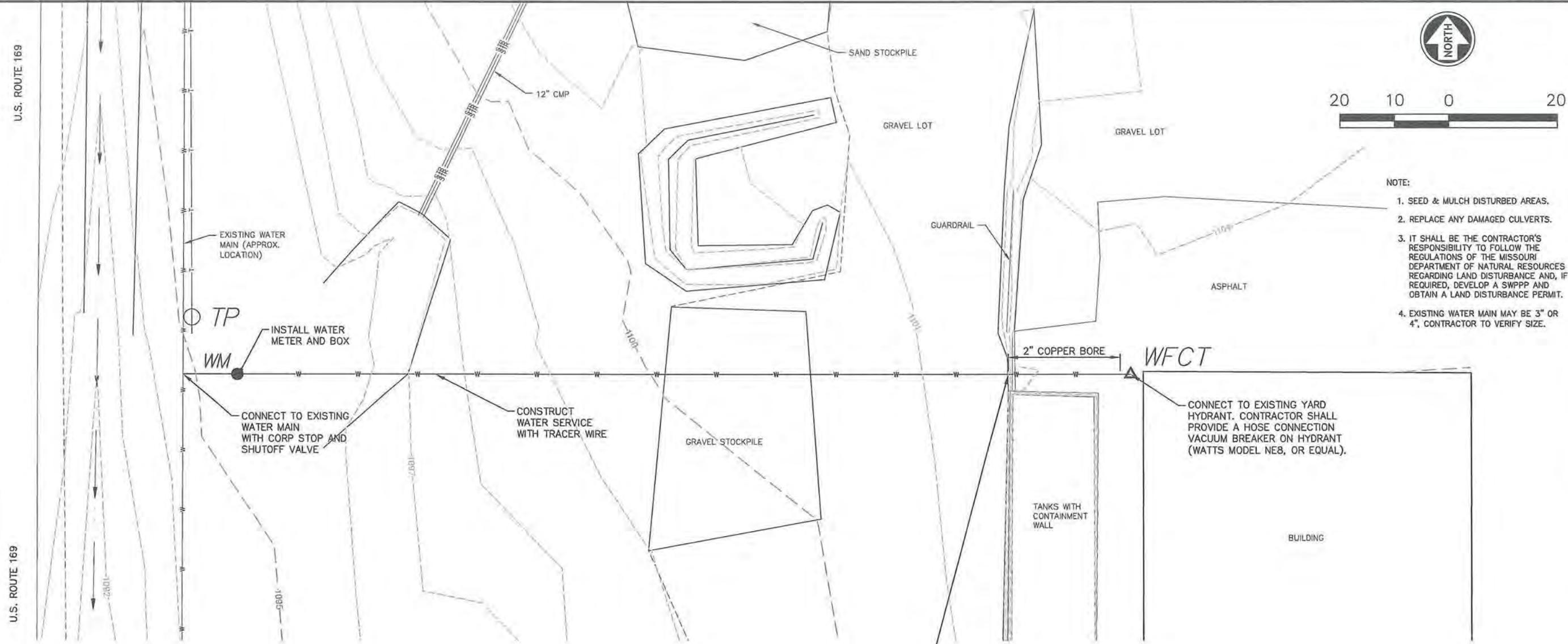
SHAHER, KLINE & WARREN, INC. 107 Butler Street, Macon, MO 63552-1628 660/385-6441 FAX: 660/385-6614		OFFICE LOCATIONS: Columbia, MO Ceneca, MS Macon, MO		NORTH Kansas City, MO Houston, TX Tulsa, OK	
MODOT SEWER IMPROVEMENTS KING CITY, MO		FORCEMAIN PLAN AND PROFILE		140396-010 SHEET NO. C1	
DESIGNED BY: PRW		DRAWN BY: JBC		CHECKED BY: PRW	
DATE		REVISIONS		BY APPD	
NO.		1		2	
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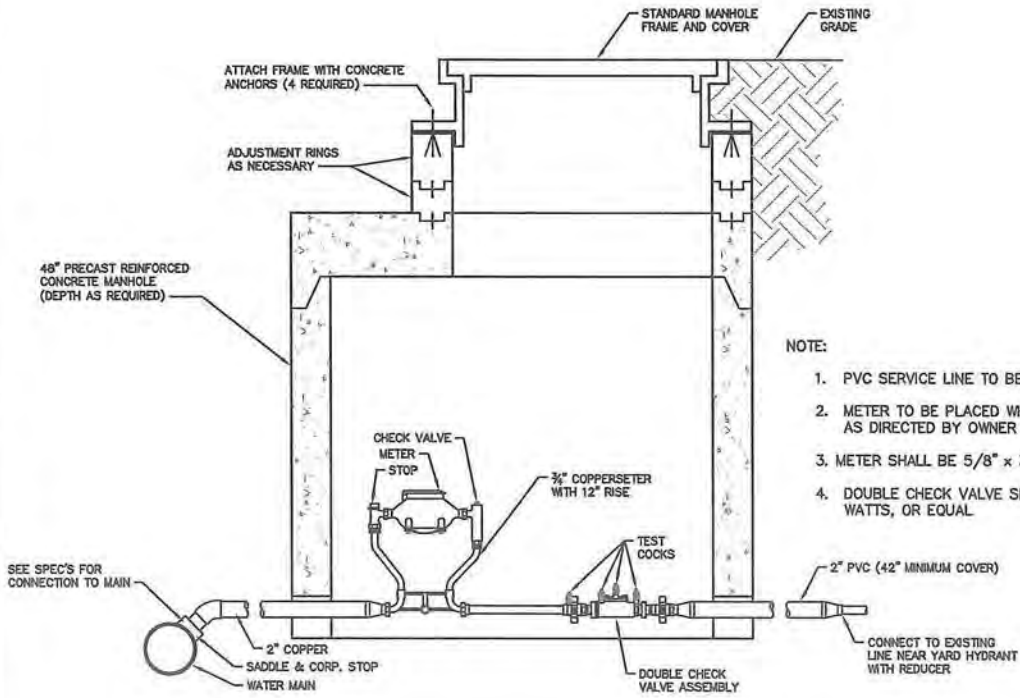




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XREF DWG2: 140396-010 Site Design.dwg  
XREF DWG3: NONE  
XREF DWG4: NONE  
DATE: 1/7/2015  
BY: JCARTER



- NOTE:
1. SEED & MULCH DISTURBED AREAS.
  2. REPLACE ANY DAMAGED CULVERTS.
  3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE REGULATIONS OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES REGARDING LAND DISTURBANCE AND, IF REQUIRED, DEVELOP A SWPPP AND OBTAIN A LAND DISTURBANCE PERMIT.
  4. EXISTING WATER MAIN MAY BE 3" OR 4", CONTRACTOR TO VERIFY SIZE.



**SERVICE METER SETTING DETAIL**  
NOT TO SCALE

- NOTE:
1. PVC SERVICE LINE TO BE SCHEDULE 80
  2. METER TO BE PLACED WHERE SHOWN ON PLAN OR AS DIRECTED BY OWNER OR ENGINEER
  3. METER SHALL BE 5/8" x 3/4" SENSUS TOUCH READ
  4. DOUBLE CHECK VALVE SHALL BE SERIES 007 BY WATTS, OR EQUAL

BORE UNDER RETAINING WALL

- NOTE:
1. COORDINATE WITH THE CITY OF KING CITY FOR INSTALLATION AND CONNECTION OF THE WATER METER TO THE WATER MAIN.
  2. THE TIMING OF INSTALLATION OF THE WATER LINE UNDER THE RETAINING WALL AND CONNECTION OF THE WATER HYDRANT MUST BE SCHEDULED WITH AND APPROVED BY MoDOT.



SHAFER, KLINE & WARREN, INC. 107 Butler Street, Macon, MO 63552-1628 660/385-6441 FAX: 660/385-6614 OFFICE LOCATIONS: Columbia, MO Lenexa, KS Macon, MO		North Kansas City, MO Houston, TX Tulsa, OK	
MODOT SEWER IMPROVEMENTS KING CITY, MO		WATER SERVICE CONNECTION	
140396-010 SHEET NO.		C3	

DESIGNED BY: PRW  
DRAWN BY: JDC  
CHECKED BY: PRW  
ISSUE DATE:

REVISIONS

NO.	DATE	REVISIONS	BY	APPD
1	01-07-15	REVISED METER NOTES AND ADDED VALVE	JDC	

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MISSOURI CERTIFICATE OF AUTHORITY: F00139650





Designed By: PRW  
Drawn By: JDC  
Checked By: PRW  
Issue Date:

**SHAFER, KLINE & WARREN, INC.**  
107 Butler Street, Macon, MO 63552-1628  
860/385-6441 FAX: 660/385-6614

**OFFICE LOCATIONS:**  
Columbia, MO  
Lenexa, KS  
Macon, MO  
North Kansas City, MO  
Houston, TX  
Tulsa, OK



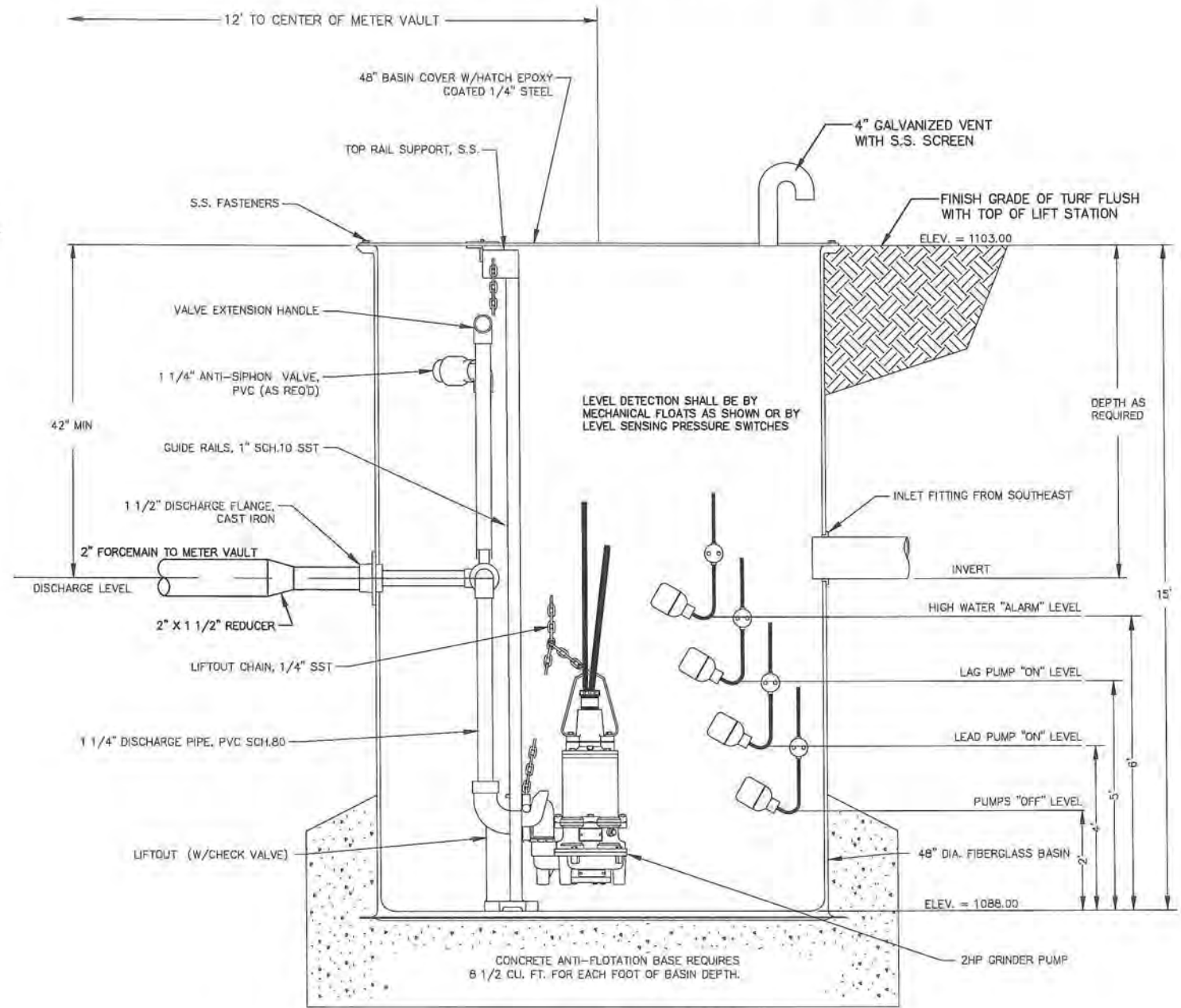
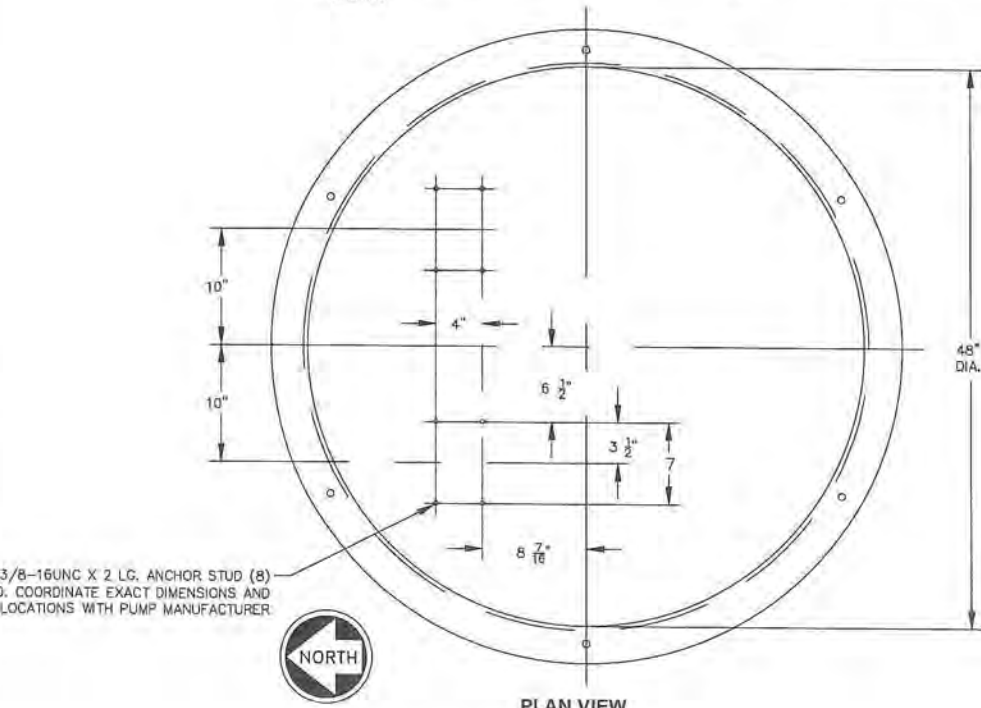
# MODOT SEWER IMPROVEMENTS KING CITY, MO

140396-010  
SHEET NO.  
**C4**



DESCRIPTION	SEWER PUMP STATION
NUMBER OF UNITS	2
RATED TOTAL HEAD (FT) MIN.	45
CAPACITY (PER PUMP) AT RATED TOTAL HEAD (GPM)	20
MINIMUM SHUTOFF HEAD (FT)	60
OPERATING HEAD RANGE (FT)	40-50
(FT) MOTOR POWER (VOLTS/PHASE/HZ)	230/1/60
MAXIMUM NAMEPLATE HORSEPOWER	3
IMPELLER TYPE MINIMUM	GRINDER
DISCHARGE SIZE (INCHES)	1 1/4"

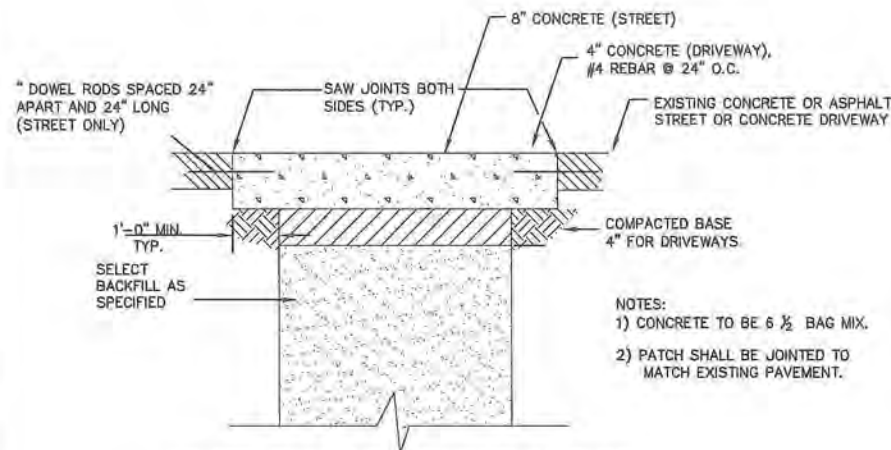
NOTE: MAX (NOMINAL) PUMP OPERATING SPEED AT RATED HEAD SHALL BE 3450 R.P.M.



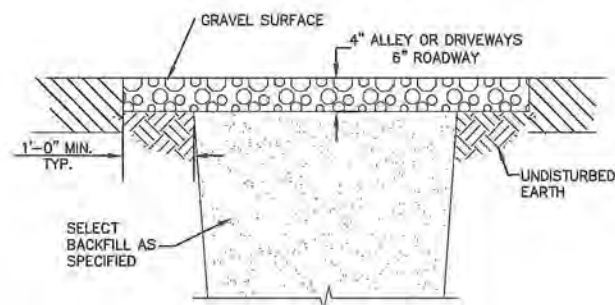
**PACKAGE PUMP STATION PLAN**  
SCALE: 3/4" = 1'

PUMP STATION DETAILS PROVIDED BY ENVIROLINE INC.



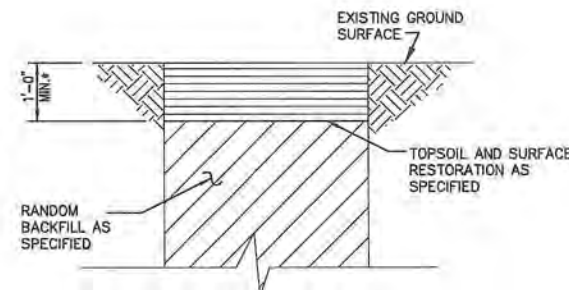


CONCRETE DRIVING SURFACES AND ASPHALT STREETS



NOTE:  
ROADWAYS TO BE BACKFILLED WITH 1\"

GRAVEL SURFACED AREA



\* 2\"

NON-PAVED AND NON-GRAVELED SURFACE AREA

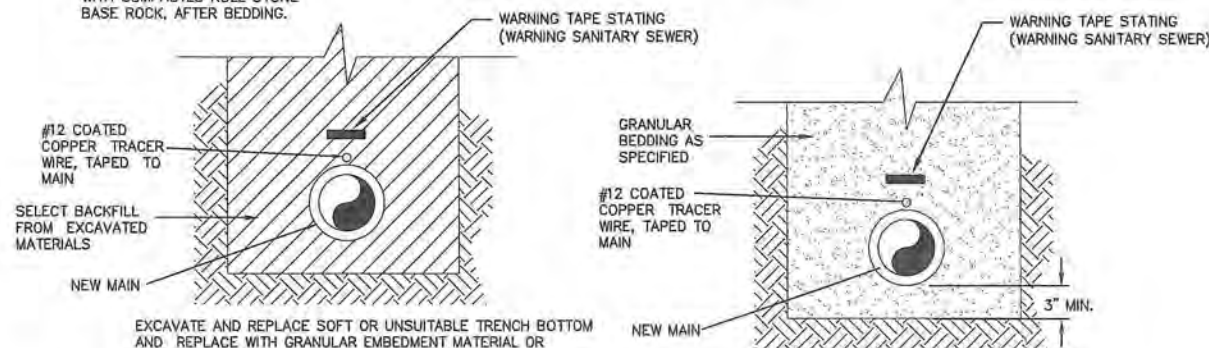
TYPICAL TRENCH BACKFILL & SURFACE RESTORATION DETAILS  
SCALE: N.T.S.

NOTES: PIPE INSTALLATION/BEDDING (FORCEMAIN)

- 1) PIPE SHALL BE BURIED TO A MINIMUM DEPTH OF 42\"
- 2) PVC PIPE SHALL BE SLIP JOINT SDR21 AND SHALL MEET REQUIREMENTS OF ASTM 2241. JOINTS SHALL BE 20\"
- 3) ALL CHANGES IN THE MAIN LINE DIRECTION GREATER THAN 11.25\"
- 5) TRACER WIRE SHALL BE TYPE UF #12 SOLID CONDUCTOR
- 6) TRACER WIRE SHALL BE INSTALLED WITH ALL MAIN LINES AND SERVICE LINES
- 7) WARNING TAPE SHALL BE INSTALLED WITH ALL MAIN LINES

TRENCH WIDTH				
PIPE SIZE (INCHES)	MIN. TRENCH WIDTH IN EARTH (INCHES)	MAX. TRENCH WIDTH IN EARTH (INCHES)	MIN. TRENCH WIDTH IN ROCK (INCHES)	
≤ 4	20	26	20	
4 - 6	22	30	24	
8	22	30	24	
10	24	32	24	
12	30	35	26	

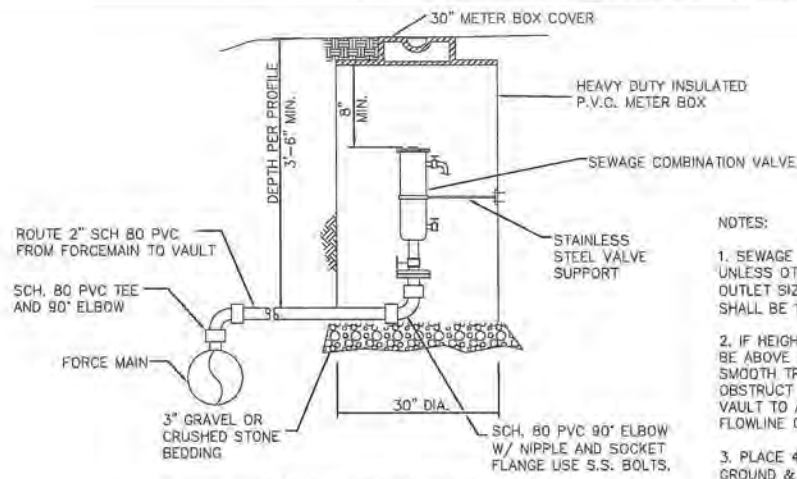
NOTE:  
WHEN ANY TRENCH IS AT EDGE OF PAVEMENT, BACKFILL TRENCH WITH COMPACTED ROLL STONE BASE ROCK, AFTER BEDDING.



NON-PAVED AND NON-GRAVELED SURFACE AREA (FORCEMAIN)

IN DRIVING SURFACES (FORCEMAIN)

TYPICAL PIPE INSTALLATION/BEDDING DETAILS  
SCALE: N.T.S.



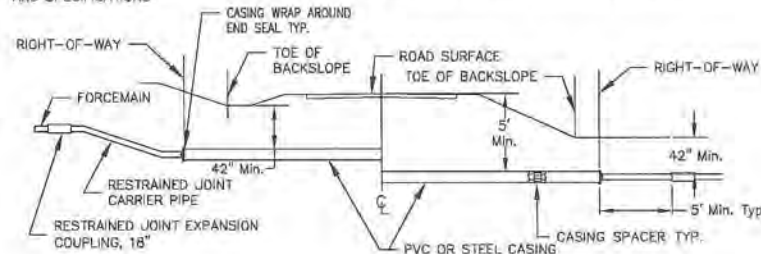
COMBINATION VALVE & VAULT  
SCALE: N.T.S.

NOTES:

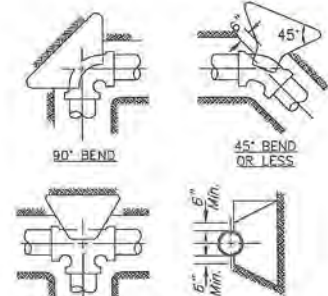
1. SEWAGE AIR CONTROL VALVE INLETS SHALL BE 2\"
2. IF HEIGHT OF VAULT CAUSES FRAME AND COVER TO BE ABOVE GRADE, PERFORM GRADING TO PROVIDE A SMOOTH TRANSITION. DO NOT LOCATE VAULT TO OBSTRUCT DITCH. IF NECESSARY, OFFSET ALIGNMENT AT VAULT TO AVOID PLACING THE STRUCTURE IN DITCH FLOWLINE OR ROADWAY.
3. PLACE 4\"
4. INSTALL TRACER WIRE TEST STATION BESIDE EACH AIR RELEASE VAULT

NOTES: COUNTY ROAD CROSSINGS

- 1) CARRIER PIPE BETWEEN COUPLINGS TO BE RESTRAINED JOINT; PIPING TO MEET ASTM D 2241. CROSSINGS LESS THAN 80 L.F. MAY BE SLIP JOINT PVC
- 2) FOR ALL PIPELINES 2\"
- 3) INSTALL HDPE CASING SPACERS AND END SEALS PER THE MANUFACTURERS RECOMMENDATIONS BASED ON CARRIER PIPE AND CASING SIZES. CASING SPACERS SHALL BE A MAX OF 9\"
- 4) GRAVELED COUNTY ROADS MAY BE OPEN CUT UNLESS OTHERWISE NOTED ON PLANS OR COUNTY PERMITS
- 5) COUNTY ROAD PERMITS AND REGULATIONS SHALL BE FOLLOWED AND WILL SUPERCEDE CONTRACT PLANS AND SPECIFICATIONS



CUT SECTION  
FILL SECTION  
COUNTY ROAD CROSSING DETAIL  
SCALE: N.T.S.

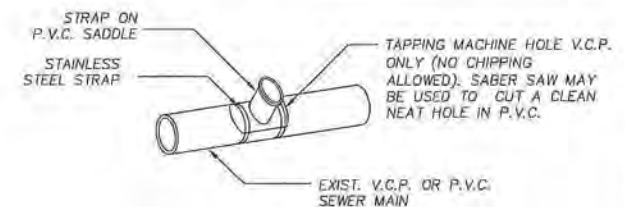


THRUST BLOCK AREA TABLE										
PIPE SIZE	24"	20"	18"	16"	14"	12"	10"	8"	6"	4" & UNDER
90° BEND	40	30	25	20		12	8	5	3	1
45° BEND	24	18	14	12		7	5	3	1.5	1
22 1/2° BEND	12	8	7	5.5		3.5	2.5	1.5	1	1
11 1/4° BEND	6	4	3.5	3		2	1.5	1	1	1
TEE	30	22	18	14		8	6	3.5	2	1

\*TABLE GIVES REQUIRED AREA OF BEARING IN SQUARE FEET BETWEEN CONCRETE AND UNDISTURBED TRENCH WALL.

- NOTE:
1. THRUST BLOCKS SHALL BE POURED CONCRETE.
  2. THRUST BLOCKS SHALL BE PLACED AT EVERY FITTING.

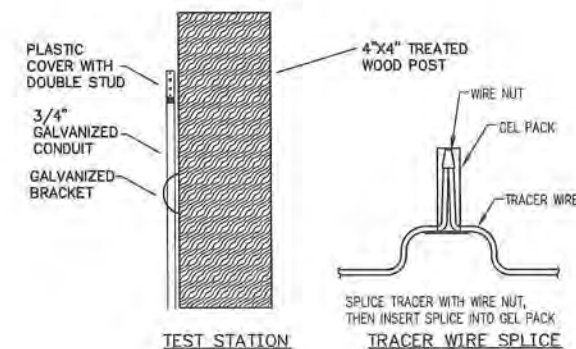
TYPICAL CONCRETE THRUST BLOCKS  
SCALE: N.T.S.



SADDLE INSTALLATION PROCEDURE:  
THE CONTRACTOR SHALL CUT A CLEAN, NEAT HOLE IN THE EXISTING SEWER MAIN ABOVE THE SPRING LINE AND INSTALL "STRAP ON PVC SADDLE" WITH STAINLESS STEEL STRAPS. THIS APPLIES TO P.V.C. OR V.C.P., WHICHEVER IS EXISTING.

NOTE:  
1. CONTRACTOR SHALL COORDINATE SERVICE CONNECTION WITH THE CITY OF KING CITY AND ENSURE A CITY INSPECTOR IS PRESENT WHEN THE CONNECTION IS MADE.

SADDLE DETAIL  
SCALE: N.T.S.



TEST STATION

NOTE:

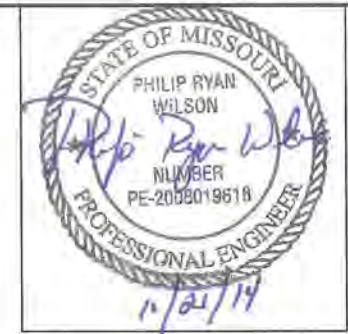
1. TRACER WIRE TEST STATIONS SHALL BE PLACED NEAR FENCE OR POWER POLES, IF POSSIBLE.

TRACER WIRE DETAILS  
SCALE: N.T.S.



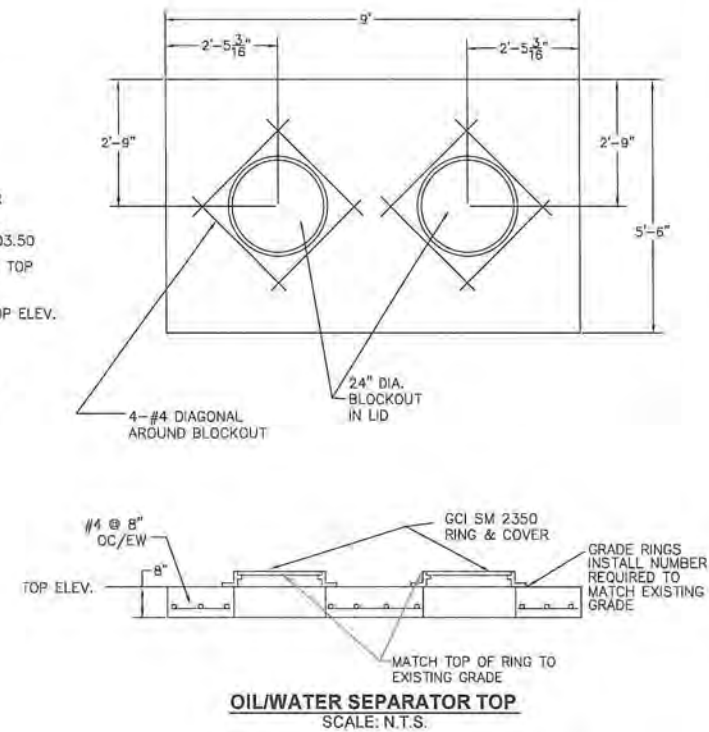
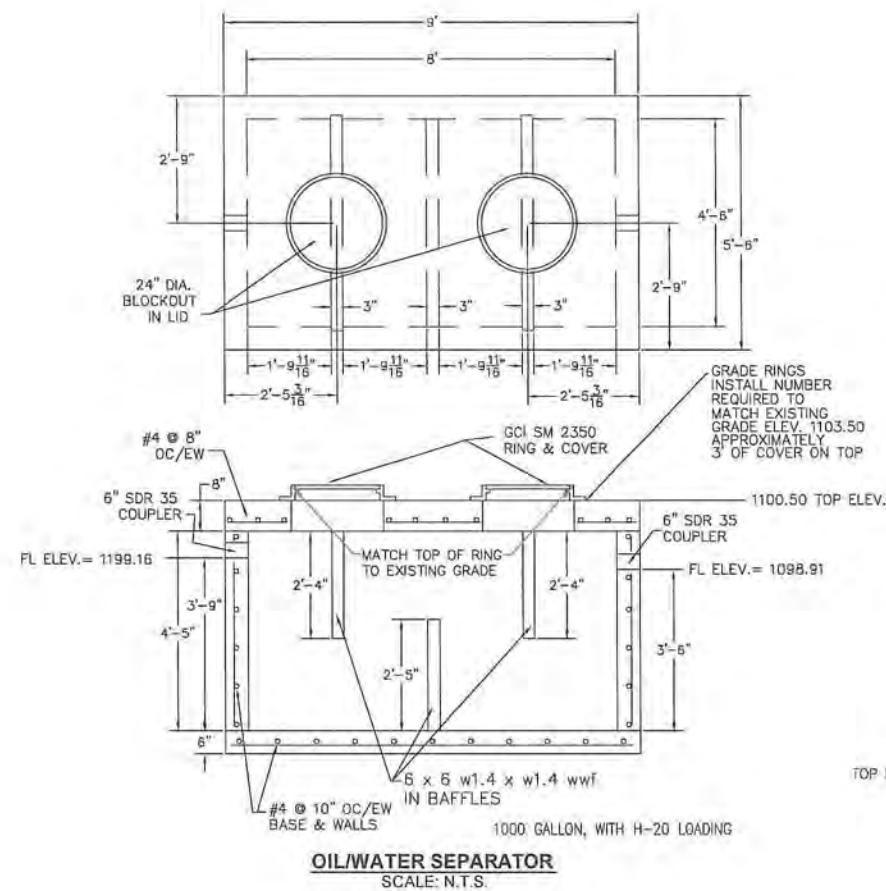
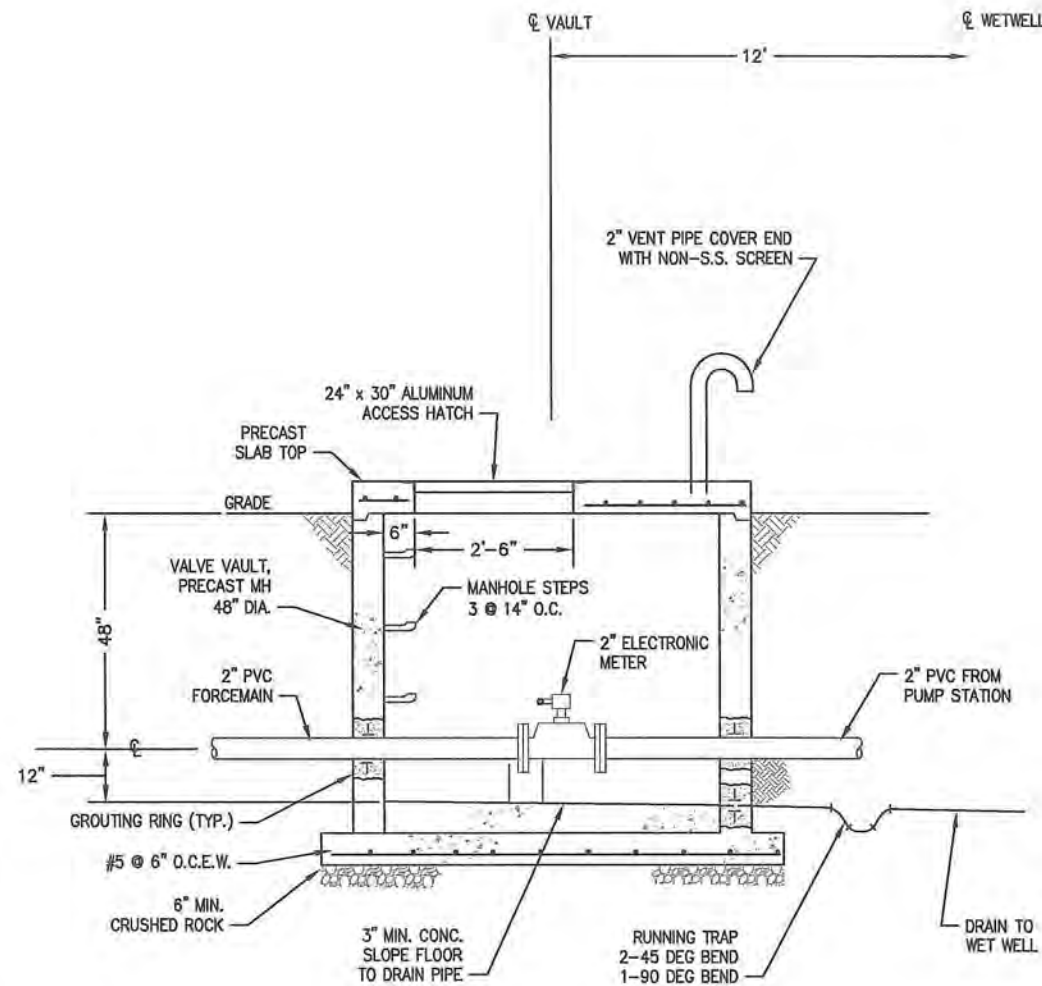
- NOTES: NAME PLATES AND SEWER LINE MARKERS
- 1) NAME PLATES SHALL BE PLACED IN ALL FENCE CROSSINGS.
  - 2) NAME PLATES AND POSTS SHALL BE PLACED ON BOTH SIDES OF ALL ROAD CROSSINGS AND CREEK/STREAM CROSSINGS.
  - 3) NAME PLATES AND POSTS SHALL BE PLACED AT ALL FORCEMAIN APPURTENANCES, I.E. GATE VALVES, AIR RELEASE VALVES, TEST STATIONS...
  - 4) 48\"
  - 5) COORDINATE WITH OWNER FOR LOCATION NUMBERS ON NAME PLATE.

NAME PLATE DETAIL  
SCALE: N.T.S.

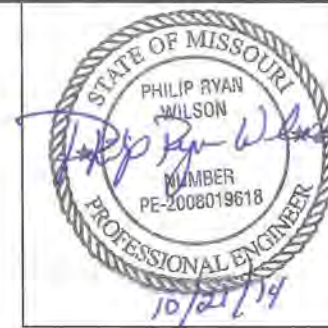




L: \\140396-010\\\_CAD\\CIVIL\\140396-010 DETAILS.DWG  
LAYOUT: C6  
XREF DWG1: NONE  
XREF DWG2: NONE  
XREF DWG3: NONE  
XREF DWG4: NONE  
BY: JCARTER  
DATE: 10/21/2014



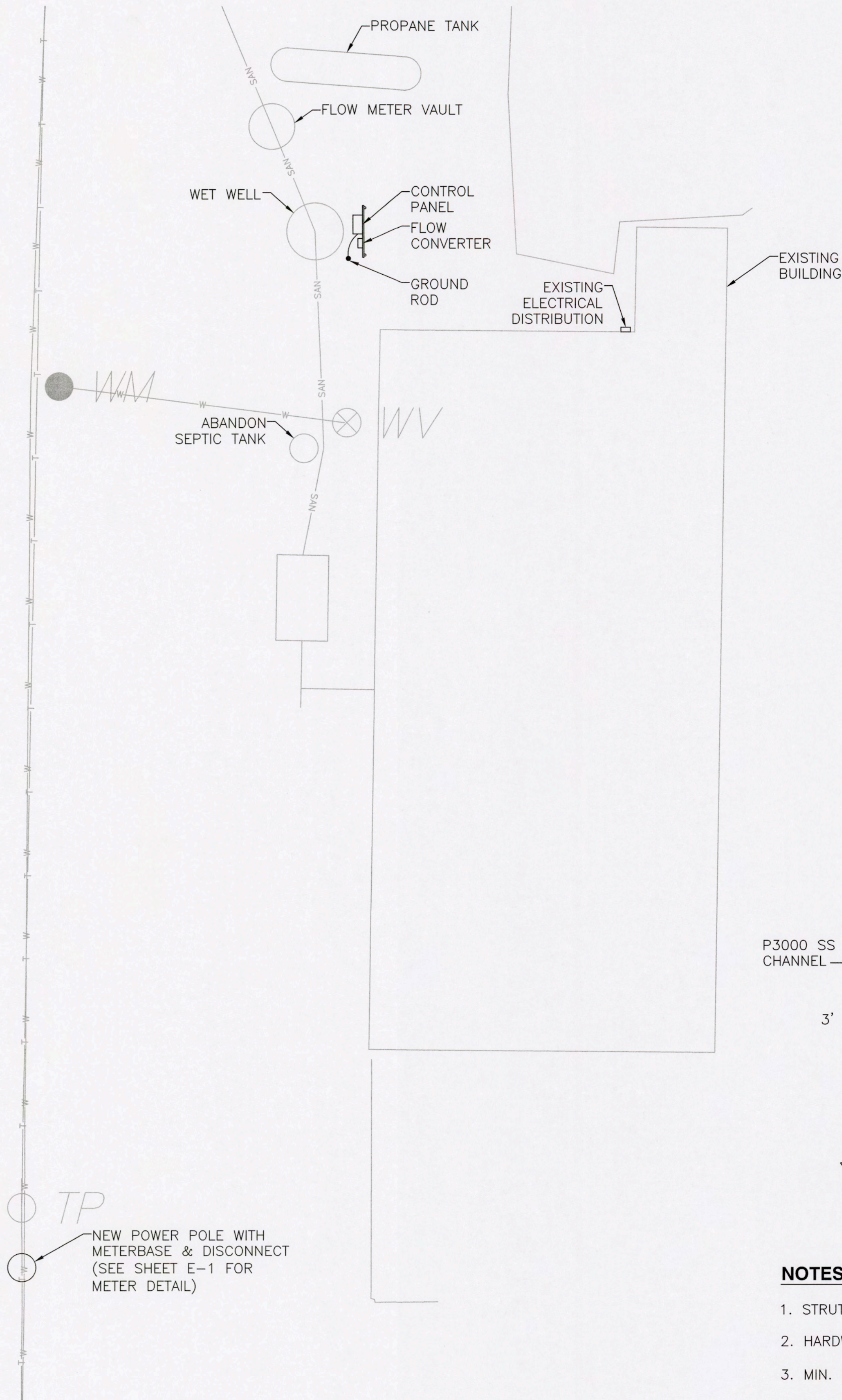
NOTES:  
1. OIL/WATER SEPARATOR SHALL BE LOWERED, IF NECESSARY TO ADEQUATE DEPTH FOR CONNECTION FROM EXISTING DRAIN LINE.



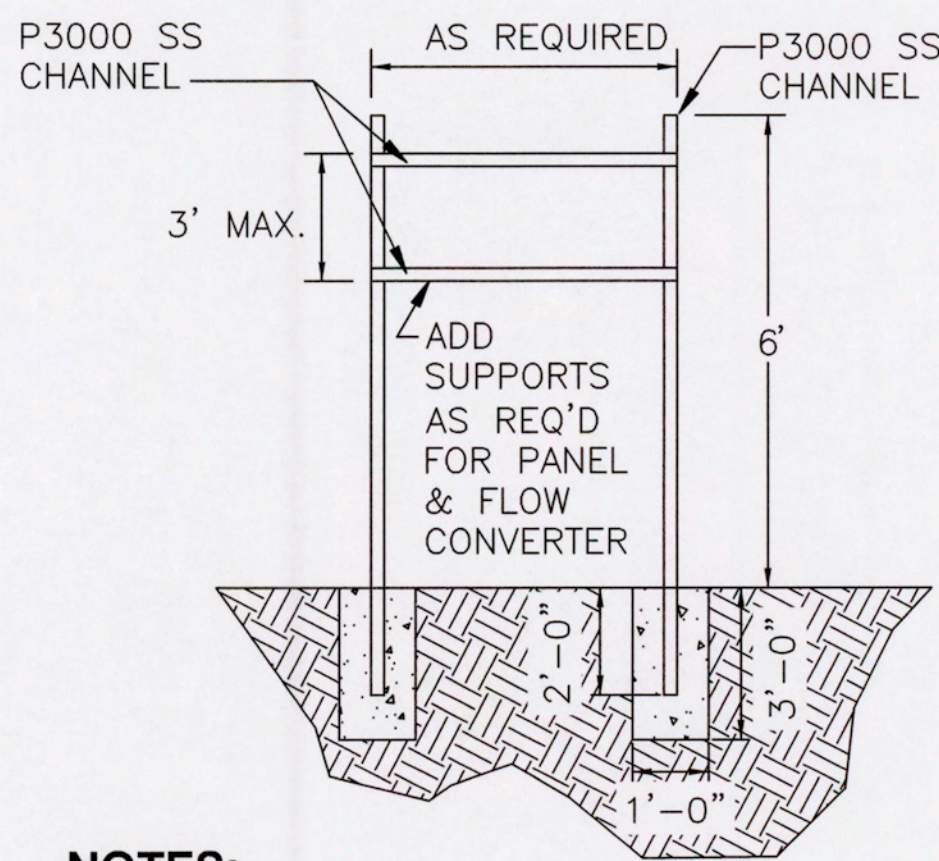
MODOT SEWER IMPROVEMENTS KING CITY, MO		SHAHER, KLINE & WARREN, INC. 107 Butler Street, Macon, MO 63552-1628 660/385-6441 FAX: 660/385-6614 OFFICE LOCATIONS: Columbia, MO Lenexa, KS Macon, MO North Kansas City, MO Houston, TX Tulsa, OK		DETAILS	
140396-010 SHEET NO.		C6		DESIGNED BY: PRW DRAWN BY: JDC CHECKED BY: PRW ISSUE DATE:	
5		4		3	
2		1		NO.	
DATE		REVISIONS		BY	
10/21/14		2014-SHAHER, KLINE & WARREN INC.		APPROVED	
MISSOURI CERTIFICATE OF AUTHORITY: P00139650					



L: 140396-010_CAD\ELECTRICAL\140396-010 E-1.DWG	DATE: 10/22/2014
LAYOUT: LAYOUT1	BY: CPORTER
XREF DWG1: NONE	
XREF DWG3: NONE	
XREF DWG4: NONE	



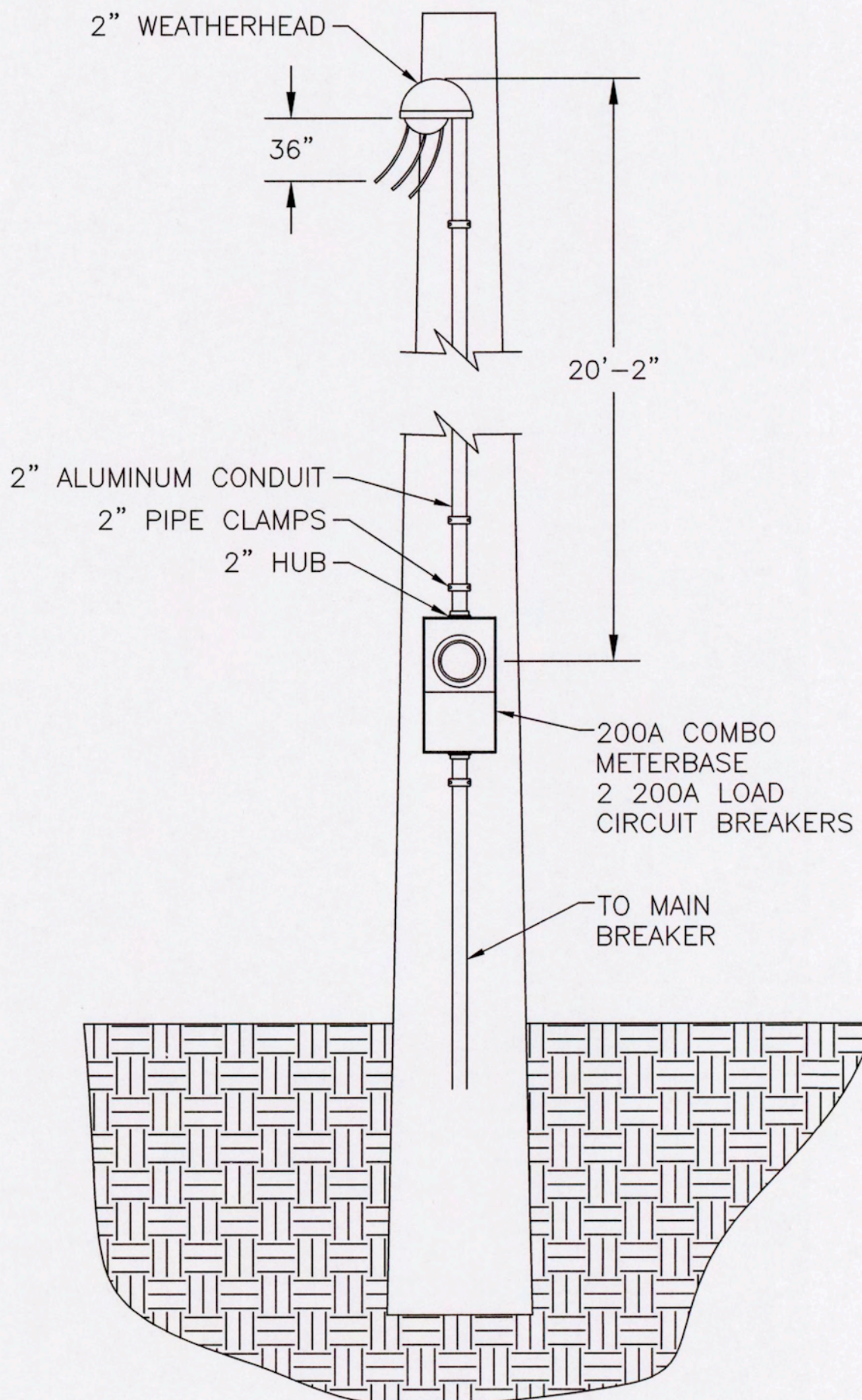
**PUMP STATION SITE PLAN**  
SCALE: 1"=8'



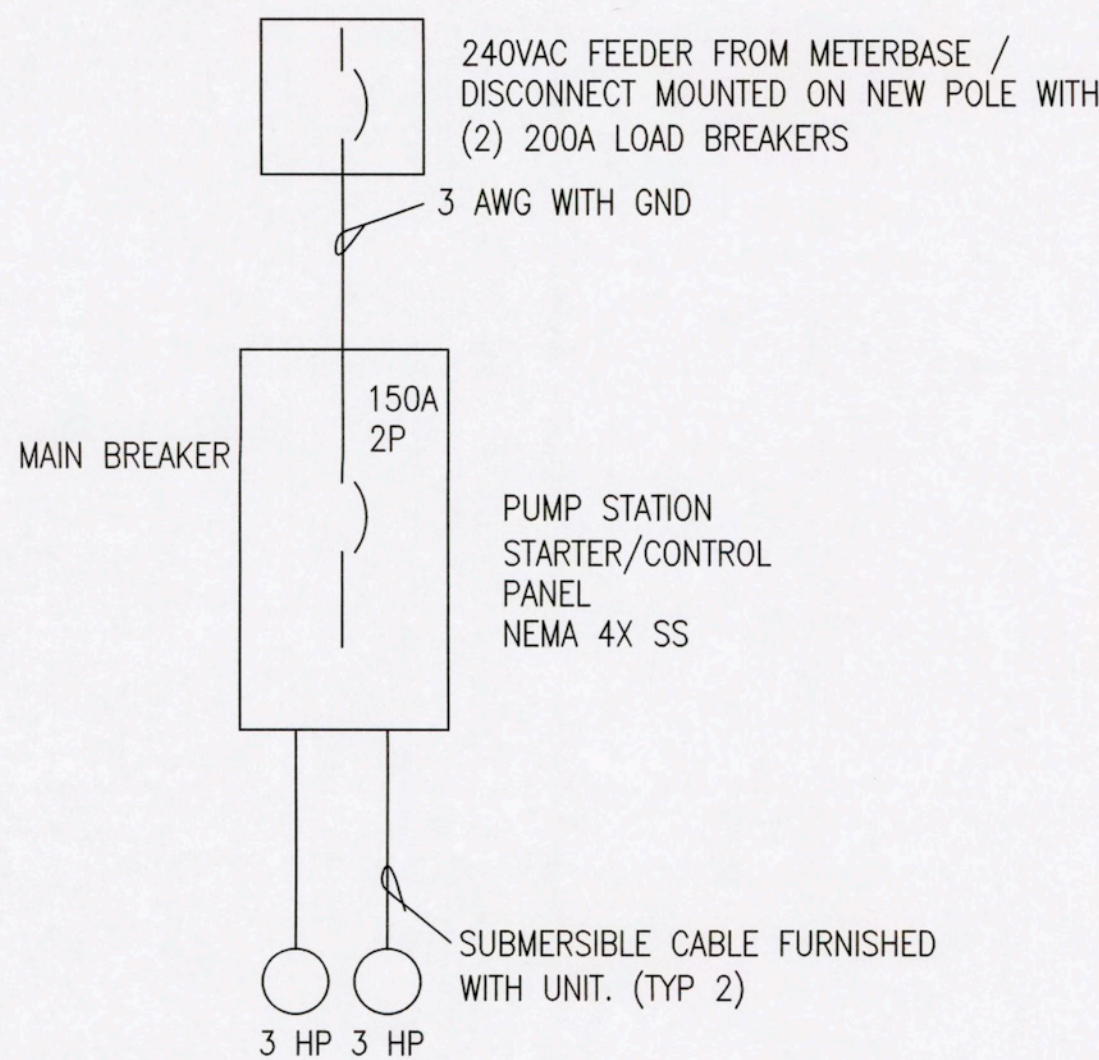
**NOTES:**

1. STRUT PRODUCT NUMBERS SHOWN ARE BY UNISTRUT CORP.
2. HARDWARE SHALL BE STAINLESS STEEL
3. MIN. EMBEDMENT OF EXP. BOLTS SHALL BE 3 1/2"
4. FOR SMALL ENCLOSURES, LESS THAN 6"x8"—A SINGLE POST IS ADEQUATE, 42" HEIGHT.

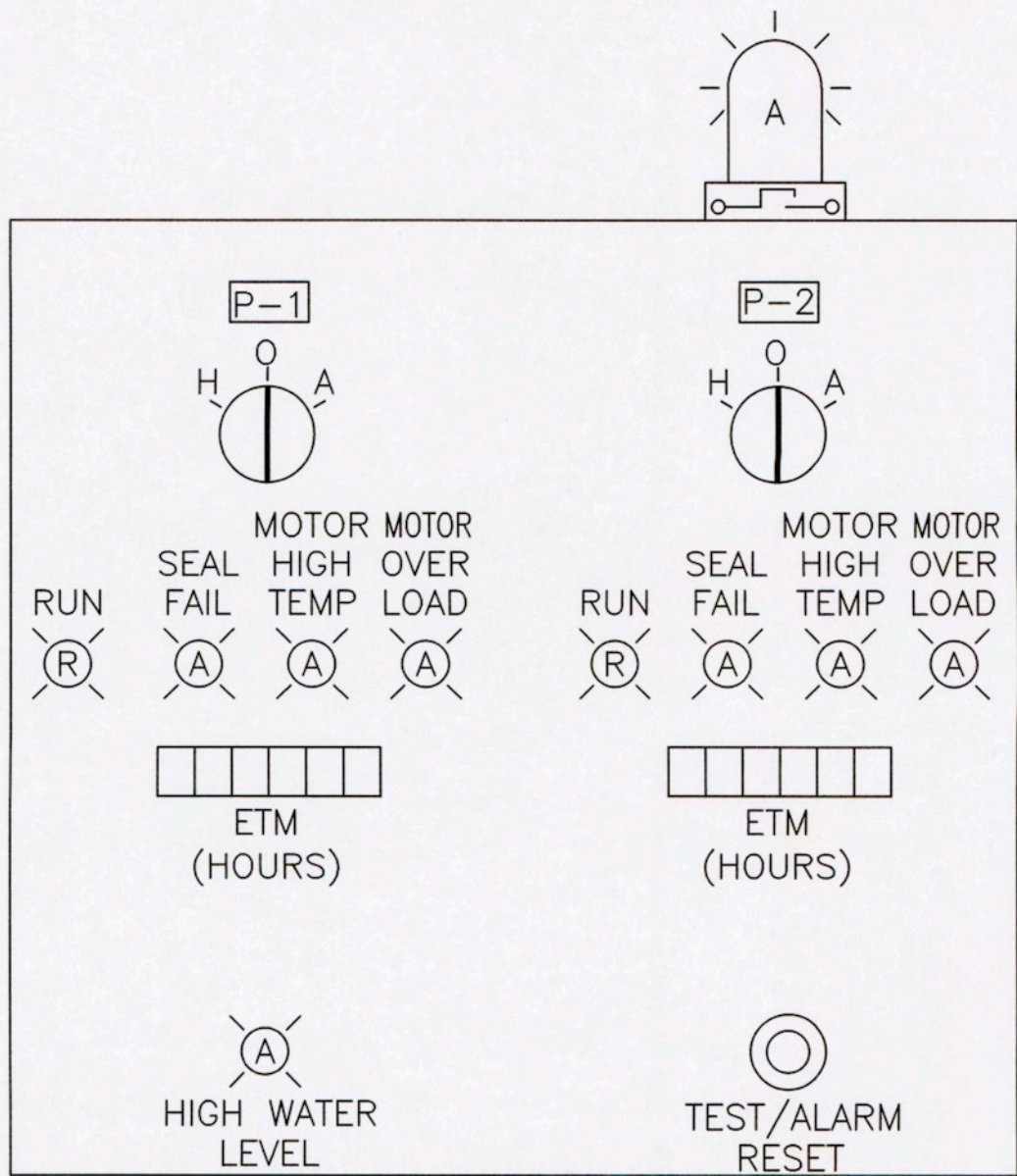
**PANEL MOUNTING DETAIL**  
NOT TO SCALE



**METER DETAIL**  
NOT TO SCALE



**ONE-LINE**





**NOTE:**

1. INSTALL 100A/2P BREAKER IN PANEL AT SERVICE. ROUTE 2-#8 WITH GND, 1" CONDUIT TO PUMP CONTROL PANEL.

**LEGEND**

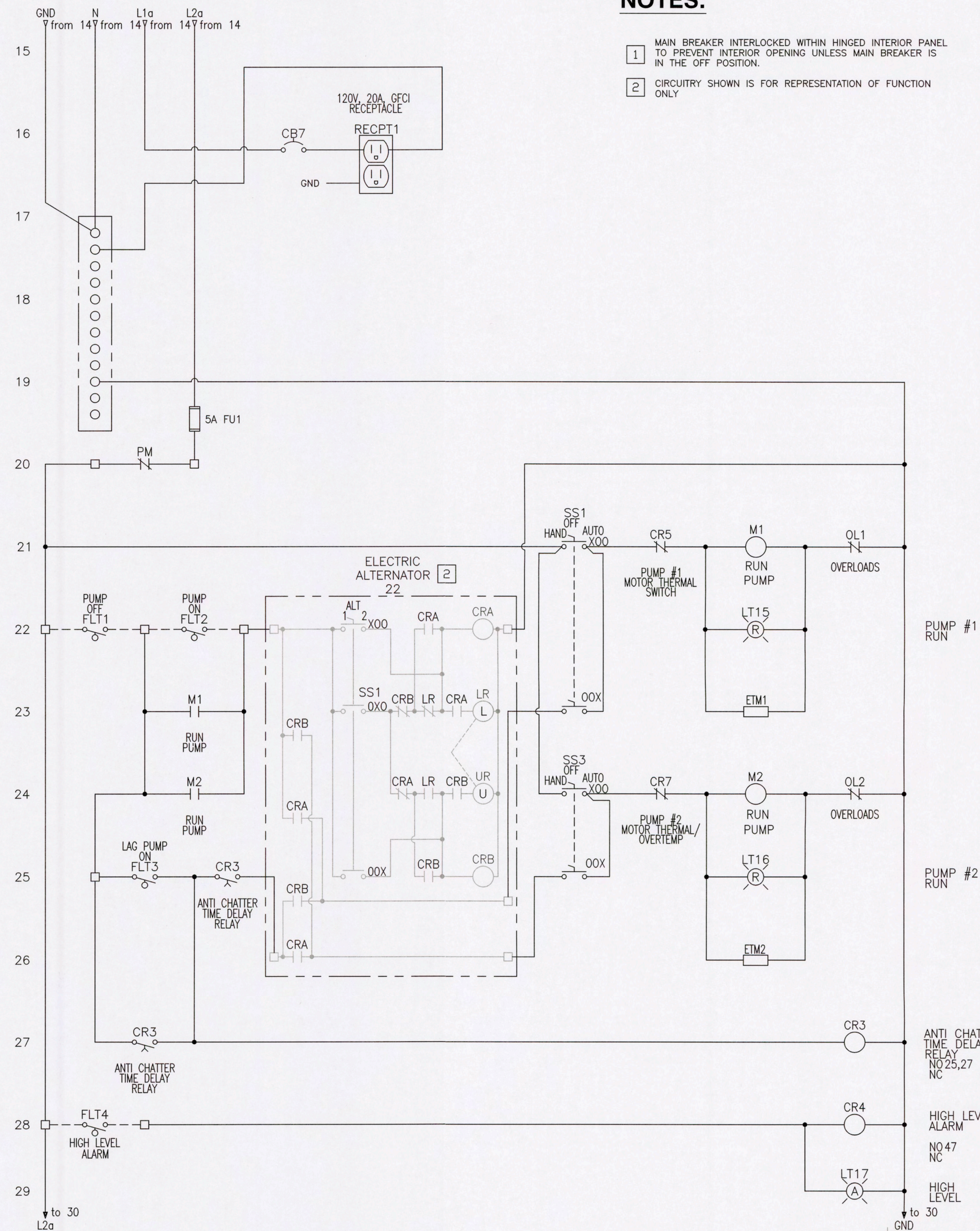
- WIRING WITHIN PANEL
- FIELD WIRING
- ENCLOSURE BORDER
- PM PHASE MONITOR
- SPD SURGE PROTECTION DEVICE
- \* INDICATED DEVICE MOUNTED ON HINGED DEADFRONT INTERIOR
- DELAY TO MAKE
- DUSK TO DAWN LIGHT 20 WATT LED
- PILOT LIGHT ALARM BEACON



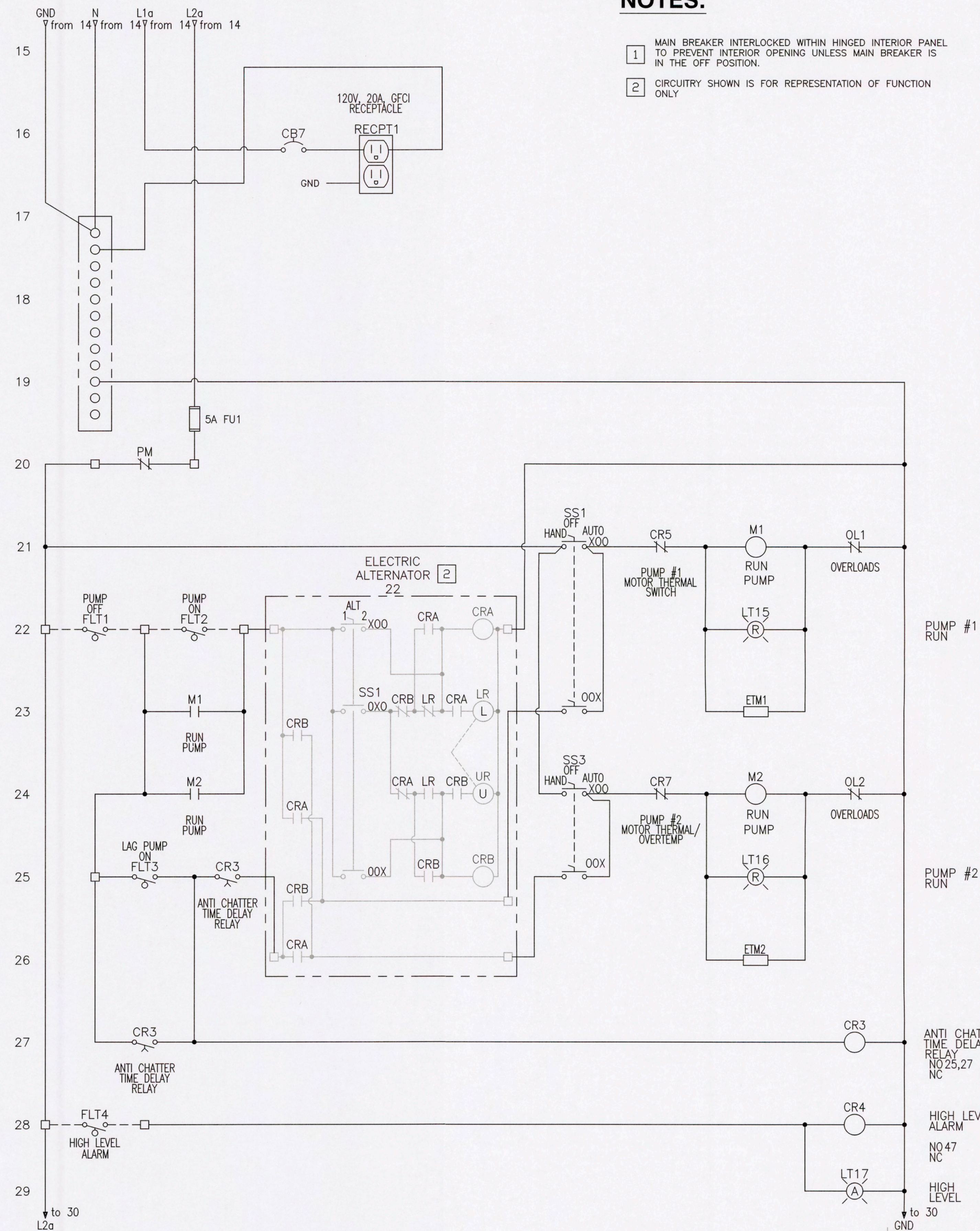
140396-010 SHEET NO. E-1	MODOT SEWER IMPROVEMENTS KING CITY, MO		SHAFER, KLINE & WARREN, INC. 107 Butler Street, Macon, MO 63552-1628 660/385-6441 FAX: 660/385-6614  OFFICE LOCATIONS: Columbia, MO Houston, TX Lenexa, KS Macon, MO North Kansas City, MO Tulsa, OK  CIVIL ENGINEERS ELECTRICAL ENGINEERS MECHANICAL ENGINEERS STRUCTURAL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS LAND PLANNERS	5										
				4										
				3										
				2										
				1										
				Designed By: JLM										
				Drawn By: CJP										
				Checked By: JLM										
				Issue Date: 10/22/14										
														
				COPYRIGHT © - 2014 - SHAFER, KLINE & WARREN INC. MISSOURI CERTIFICATE OF AUTHORITY: F00139850 10/23/14										

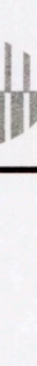
140396-010  
SHEET NO.  
E-1





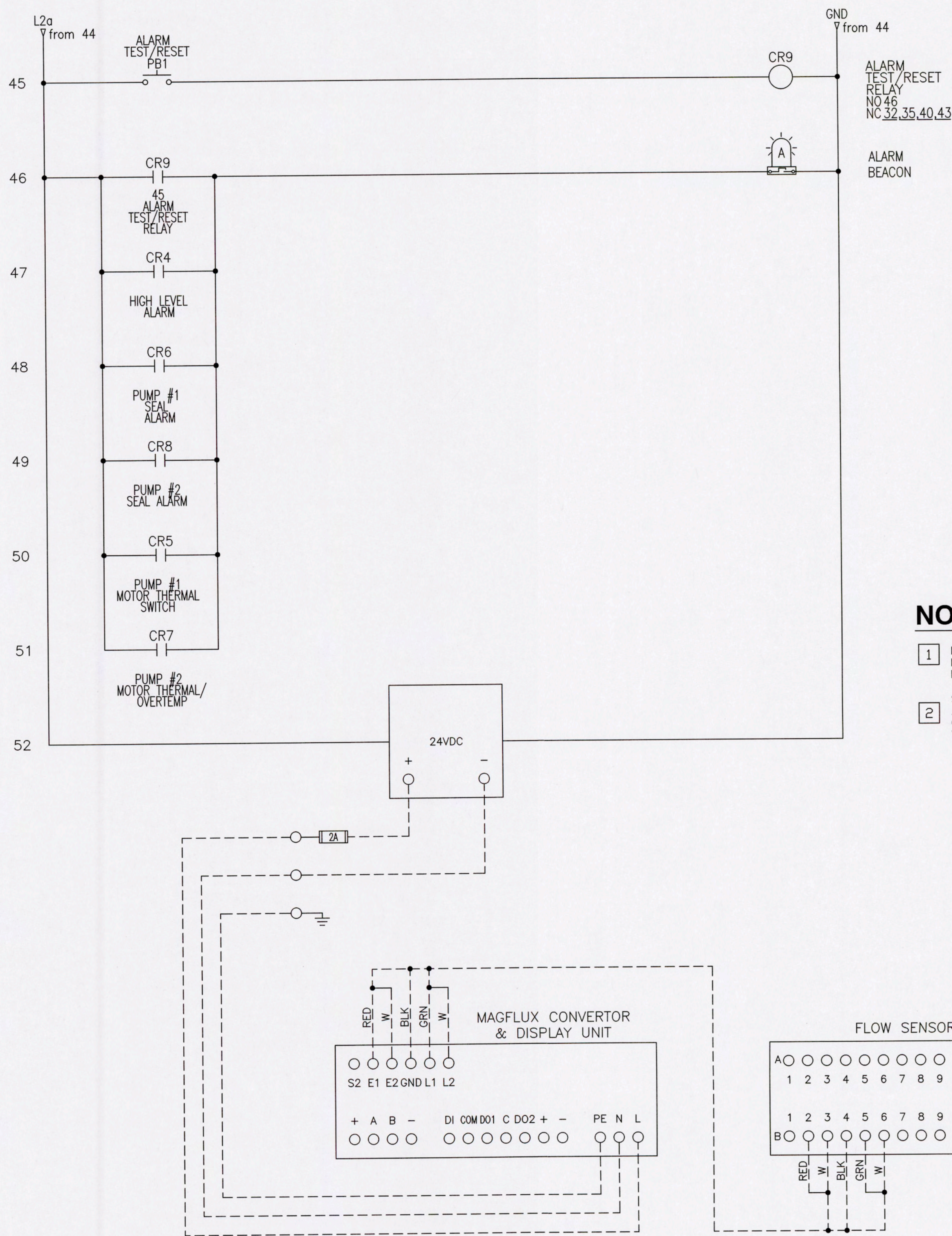
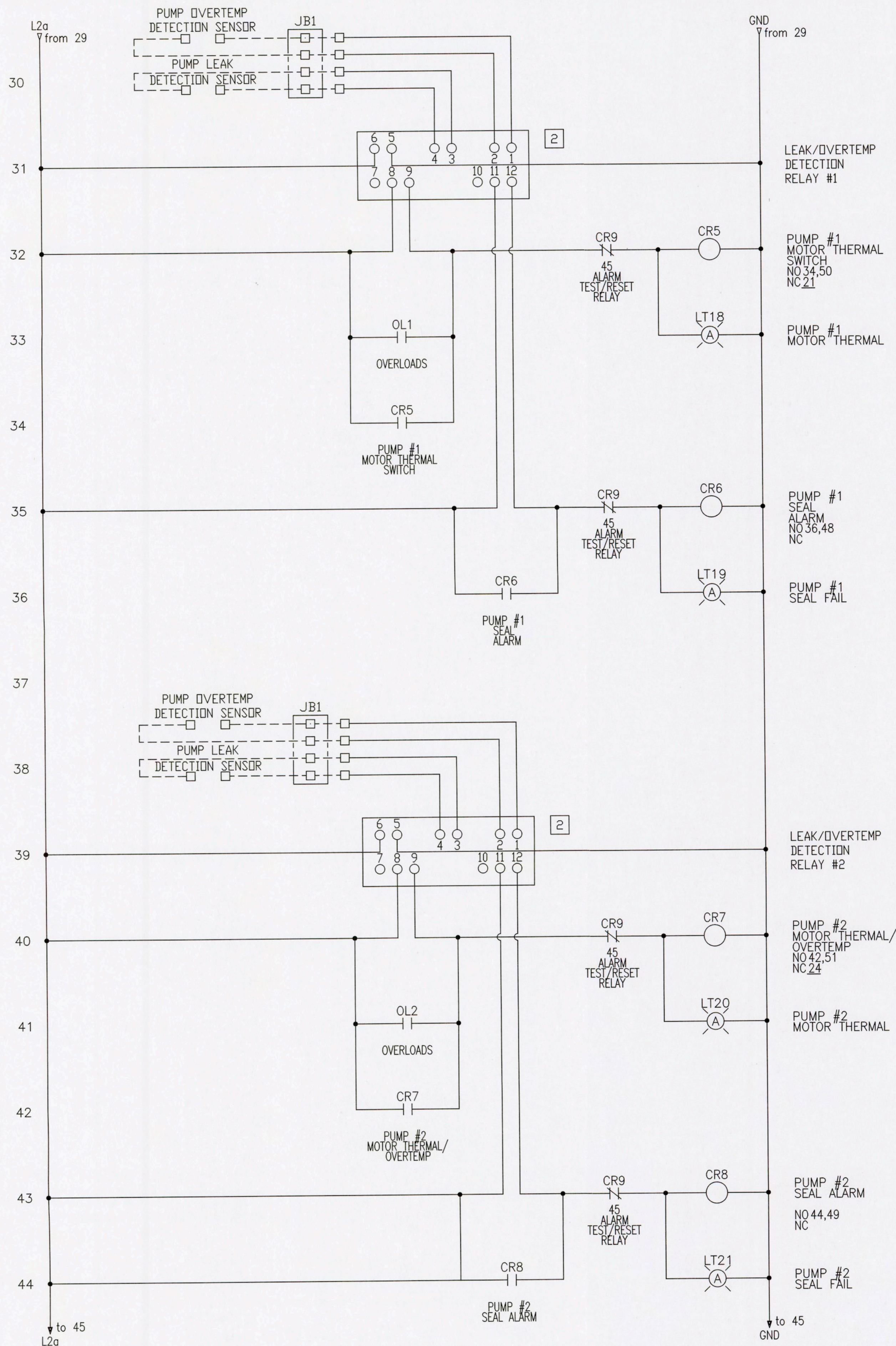
- 1 MAIN BREAKER INTERLOCKED WITHIN HINGED INTERIOR PANEL TO PREVENT INTERIOR OPENING UNLESS MAIN BREAKER IS IN THE OFF POSITION.
- 2 CIRCUITRY SHOWN IS FOR REPRESENTATION OF FUNCTION ONLY



<div style="text-align: center;">  </div> <p><b>MODOT SEWER IMPROVEMENTS KING CITY, MO</b></p>	<p><b>SHAFFER, KLINE &amp; WARREN, INC.</b>          107 Butler Street, Macon, MO 63552-1628          660/385-6441 FAX: 660/385-6614</p>		<p>DESIGNED BY: JLM          4          DRAWN BY: CJP          2          CHECKED BY: JLM          1          NO. DATE REVISIONS BY APP'D</p>
	<p><b>OFFICE LOCATIONS:</b>          Macon, MO          Columbia, MO          Houston, TX          Lenexa, KS</p>		
	<p>CIVIL ENGINEERS ELECTRICAL ENGINEERS MECHANICAL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS LAND PLANNERS</p>		
	<p><b>SCHEMATICS</b></p>		
	<p>140396-010</p>		
	<p>SHEET NO. E-2</p>		



L:\140396-010\CAD\ELECTRICAL\140396-010 E-3.DWG
LAYOUT: LAYOUT1
XREF DWG1: NONE
XREF DWG2: NONE
XREF DWG3: NONE
XREF DWG4: NONE



# NOTES:

- ROUTE MAGFLUX #691080 CABLE INTO FLOW METER VAULT AND DOWN TO FLOW SENSOR
- SEAL LEAK/OVERTEMP DETECTION RELAY AND ITS INPUT CONFIGURATION TO CONFORM TO SENSOR TYPES SUPPLIED WITH PUMP



MODOT SEWER IMPROVEMENTS KING CITY, MO		SCHEMATICS		140396-010 SHEET NO. E-3	
SHAHER, KLINE & WARREN, INC. 107 Butler Street, Macon, MO 63552-1628 660/385-6441 FAX: 660/385-6614		OFFICE LOCATIONS: Macon, MO North Kansas City, MO Tulsa, OK		CIVIL ENGINEERS ELECTRICAL ENGINEERS MECHANICAL ENGINEERS STRUCTURAL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS LAND PLANNERS	
Designed By: JLM		Drawn By: CJP		Checked By: JLM	
Issue Date: 10/22/14		NO. 1		DATE 10/22/14	
REVISIONS		BY APPD		COPYRIGHT © - 2014 - SHAHER, KLINE & WARREN INC.	
5		4		3	
2		1		MISSOURI CERTIFICATE OF AUTHORITY: F00139850	