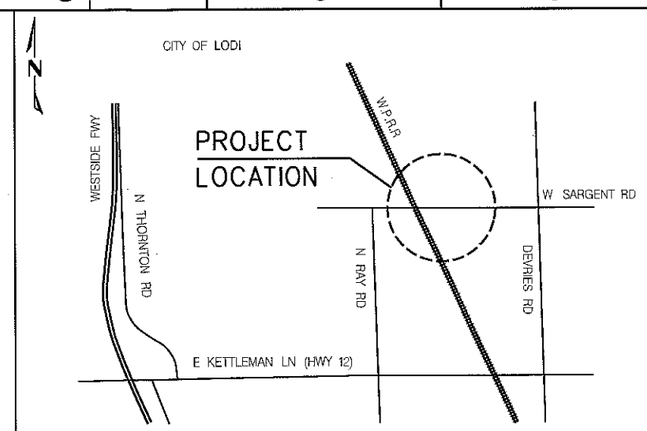
BTU AREA * X-05
CP AREA * T-108-C
WALL MAP 2868
PLAT E7
SAN JOAQUIN COUNTY

REPLACE RECTIFIER & ANODE
W. SARGENT RD. 1550' EAST OF N RAY RD.
LODI, SAN JOAQUIN COUNTY, CA

SCHEDULE OF SHEETS

SHEET 1 -- GENERAL / CONSTRUCTION NOTES
SHEET 2 -- PLAN VIEW
SHEET 3 -- CONSTRUCTION DETAILS & BILL OF MATERIAL



VICINITY SKETCH
NOT TO SCALE

SUMMARY OF PROPOSED WORK:

1. INSTALL MATCOR 5 AMP DEEP WELL ANODE PER CCV 0-13.5
2. REPLACE EXISTING RECTIFIER WITH 10 AMP MODEL ESV-B **-*C 0-13.5
3. EXISTING STRUCTURE CABLE TO BE UTILIZED.
4. EXISTING REMOTE MONITORING UNIT TO BE KEPT OPERATIONAL
5. RETIRE EXISTING ANODE BED IN PLACE

CONTACT INFORMATION:

T&R SUPERVISOR ---- <GARY KRAHMER> <209-847-6536>
CONSTRUCTION SUPERVISOR ---- <LEONARD DOWEIDT> <209-847-6556>
PROJECT MANAGER ---- <ABHISHEK ADHIA> <925-279-5000>
ENGINEER ---- <MICHAEL BRIONES> <925-583-4370>
ESTIMATOR / DESIGNER ---- <TONY TAM> <925-244-3494>
CORROSION SUPERVISOR ---- <RICH MARTINEZ> <925-459-2186>

SEQUENCE OF OPERATIONS

DEEP WELL ANODE -- L-108 MP 41.46

1. BORE 200' DEEP, 8" IN DIAMETER HOLE FOR DEEP WELL ANODE
2. INSTALL MATCORE 10 AMP DEEP WELL ANODE
3. REPLACE EXISTING RECTIFIER WITH WITH 10A/20V W/VARIAC POLE MOUNTED RECTIFIER
4. RETIRE EXISTING ANODE BED IN PLACE

NOTES:

1. UTILIZE THE EXISTING POLE MOUNTED REMOTE MONITORING UNIT
2. ANODE WIRE MUST NOT BE SPLICED UNLESS SITUATIONS FORCE IT. IF SO, REFER TO GS&S 0-12 FOR PROCEDURE.
3. EXISTING STRUCTURE CABLE TO BE UTILIZED.

CONSTRUCTION NOTES:

1) **WELDING REQUIREMENTS:**
ALL ARC WELDING IS TO BE PERFORMED IN ACCORDANCE WITH GAS STANDARD D-22. ALL CANS AND SPOOLS SHALL BE A MINIMUM OF ONE PIPE DIAMETER, WHENEVER POSSIBLE
WELDING VALVES AND FITTINGS:
WHEN 16" AND LARGER VALVES AND FITTINGS ARE WELDED TO EACH OTHER OR TO PIPE, THE JOINT SHALL HAVE A TWO PASS WELD ON THE INSIDE, AS WELL AS THE OUTSIDE WELD, IF THE INTERNAL MISALIGNMENT EXCEEDS 3/32". THIS REQUIREMENT ALSO APPLIES TO SMALLER DIAMETER VALVES AND FITTINGS WHEN IT IS PRACTICAL.
WELD SOAP TEST:
ALL WELDS THAT HAVE NOT BEEN HYDRO TESTED AND ALL FITTINGS SHALL BE SOAP TESTED AT 100PSI AND OPERATING PRESSURE.

2) **HYDROSTATIC TEST REQUIREMENTS**
HYDROSTATIC TESTING SHALL MEET PRESSURE AND DURATION REQUIREMENTS OF GAS STANDARD A-34 AND SHALL BE CONDUCTED IN ACCORDANCE WITH GAS STANDARD A-37. SEE ATTACHED STPR.

3) **PAINTING AND COATING REQUIREMENTS**
ALL EXPOSED PIPE AND FITTINGS ARE TO BE PAINTED IN ACCORDANCE WITH GAS STANDARD E-30.
ALL COATING ON BURIED PIPE AND FITTINGS ARE TO BE APPLIED IN ACCORDANCE WITH GAS STANDARD E-35. FOR COATING SELECTIONS ON BURIED PIPE SEE DIRECT BURIAL SELECTIONS TABLE.

4) CALL USA AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION (811).

5) LOCATION OF EXISTING SUBSTRUCTURES ARE APPROXIMATE. BEFORE POWER OR HEAVY EQUIPMENT IS USED FOR EXCAVATION, THE EXACT DEPTH AND LOCATION OF SUBSTRUCTURES SHALL FIRST BE DETERMINED BY HAND EXCAVATION, IF NECESSARY.

6) ALL BENDS ARE SMOOTH FIELD BENDS EXCEPT WHERE ELBOWS ARE NOTED. FIELD BEND SHALL BE MADE IN ACCORDANCE WITH GAS STANDARD A-36 SECTION 4-D.

7) ALL ANGLES SHOWN IN THE PLAN AND PROFILE ARE APPROXIMATE AND SHALL BE CUT TO SUIT FIELD CONDITION.

8) THIS PIPELINE MUST BE INSTALLED WITH AT LEAST 12 INCHES OF CLEARANCE FROM ANY OTHER UNDERGROUND STRUCTURE NOT ASSOCIATED WITH THE PIPELINE.

9) **COATING REMOVAL**
BEFORE REMOVING THE PIPE COATING ON PRE-1972 PIPE (DOES NOT INCLUDE PLASTIC TAPE OR FUSIONBONDED EPOXY COATINGS) THE FOLLOWING STEPS SHALL BE TAKEN:
A) FOR ALL NON-EMERGENCY WORK, PRE-1972 PIPE WRAP MUST BE EVALUATED TO DETERMINE IF IT CONTAINS ASBESTOS PRIOR TO REMOVAL.
B) FOR EMERGENCY WORK ON PRE-1972 PIPE, ASSUME THE WRAP CONTAINS > 1% ASBESTOS UNTIL THE WRAP CAN BE TESTED.
C) OBTAIN SAMPLES OF THE WRAP, AND HAVE SAMPLES TESTED FOR ASBESTOS IN ACCORDANCE WITH S-4711.
D) TEST RESULTS ARE TO BE INCLUDED WITH AS-BUILTS.
E) FOLLOW PROCEDURE IN S-4711 FOR REMOVAL OF PIPE WRAP.

10) IN ORDER THAT THE CP DEPARTMENT CAN CONDUCT A REVIEW OF THE INTERNAL CONDITION OF THE PIPELINE, APPROXIMATELY TWO DAYS PRIOR TO THE TIE-IN, NOTIFY GLEN RIDDLE AT 760-954-3274 OR BILL GRAVES AT 805-423-7924 IN THE CP DEPARTMENT.

11) DEACTIVATION AND/OR RETIREMENT OF UNDERGROUND GAS FACILITIES SHALL BE DONE IN ACCORDANCE WITH UTILITY PROCEDURE TD-9500P-16

DESIGN & CONSTRUCTION REVIEW FOR INTERNAL CORROSION

DESCRIPTION	ACTION SELECTED	INITIAL	DATE
CORROSION ENGINEER HAS REVIEWED THIS LOCATION AND THERE IS NO KNOWN THREAT OF INTERNAL CORROSION. NO INTERNAL CORROSION DESIGN OR CONSTRUCTION CONSIDERATIONS ARE NECESSARY.			
INTERNAL CORROSION MAY BE A THREAT AND THE CONSTRUCTION DESIGNS HAVE BEEN REVIEWED WITH CORROSION ENGINEERING. DOCUMENTATION OF THE REVIEW AND ACTIONS TAKEN ARE IN THE JOB PACKAGE AND INCORPORATED IN THIS DESIGN.			

DIRECT BURIAL COATING SELECTIONS
LISTED IN ORDER OF PREFERENCE

MAIN LINE COATING	FBE
MINOR REPAIRS	PROTAL 7200, POWERCRETE J
TIE-IN WELDS	PROTAL 7200, POWERCRETE J
GIRTH WELDS	PROTAL 7200, POWERCRETE J
BUTT WELDED FITTINGS	PROTAL 7200, POWERCRETE J
VALVE ASSEMBLIES	PROTAL 7200, POWERCRETE J
SHORT SEGMENTS OF PIPE	PROTAL 7200, POWERCRETE J
AIR-TO-SOIL TRANSITIONS	DEVGRIP 238, POWERCRETE J
PRESSURE CONTROL FITTINGS BODY	PROTAL 7200
FLANGE	WAX TAPE

BORED COATING SELECTIONS
LISTED IN ORDER OF PREFERENCE

MAIN LINE COATING	ARC APPLIED OVER FBE
MINOR REPAIRS	PROTAL 7200, POWERCRETE J
GIRTH WELDS	PROTAL 7200, POWERCRETE J

NOTES:
1) CONTACT THE RESPONSIBLE PIPELINE ENGINEER TO REQUEST A VARIANCE FROM THE ABOVE COATING SELECTIONS
2) ALL COATINGS ARE TO BE APPLIED IN ACCORDANCE WITH GS&S E-30 AND E-35

Installation Tested or Inspected and Noted on Drawing. All Levels Satisfactory per PG&E GS&S 0-16

Qualified Employee _____ Date _____

Corrosion mechanic's signature is required when a CPA boundary is within the scope of the project

SEE RELEASE TO CONSTRUCTION LATER FROM LAND

ENVIRONMENTAL ISSUES

☒ NONE APPARENT IF PROJECT DESIGN CHANGES, CONTACT RESPONSIBLE ENGR.
☐ PERMITS ☐ TAILBOARD ☐ OTHER
☐ APPLICANT DESIGN/RESPONSIBILITY (SEE GS&S 0-16 FOR PERMIT CONDITIONS APPLY TO THIS ACTIVITY)
BY: _____
Signature, name, (Corporate ID), date

WELDING INSPECTED PER PG&E GAS STANDARD D-40
VISUAL ☐
MAGNETIC PARTICLE ☐
INSPECTOR _____
DATE _____

PRELIMINARY
SKETCHES FOR PERMIT REQUEST

NOTIFIED U.S.A.
DATE _____
TICKET NUMBER _____
BY _____

UNDERGROUND SERVICE ALERT USA CALL BEFORE YOU DIG.
CALL: 811

SAFETY
SAFETY PLEDGE
I ALWAYS PUT SAFETY FIRST.
I LOOK FOR AND ACT TO RESOLVE UNSAFE SITUATIONS.
I HELP AND ENCOURAGE OTHERS TO ACT SAFELY.

REFERENCE DRAWINGS:

PM 30411840 - REPLACE DIST. REG. STA. LOHP-07 SARGENT ROAD E/O RAY ROAD

PSRS# 29206

NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
0	- -	ISSUED FOR CONSTRUCTION	30929278	TTJ	SEW6	JZSJ	

REVISIONS

APPROVED BY	
GM	30929278
SUPV	R. SOSA
DSGN	T. TAM
DWN	T. TAM
CHKD	S. WATERS
OK	
DATE	2/25/2013
SCALES	AS SHOWN

REPLACE RECTIFIER & ANODE
W. SARGENT RD. 1550' EAST OF N RAY RD.
LODI, SAN JOAQUIN COUNTY, CA

PACIFIC GAS AND ELECTRIC COMPANY
WALNUT CREEK, CALIFORNIA

MICROFILM
BILL OF MATL SEE SHEET 3
DWG LIST
SUPSDS
SUPSD BY
SHEET NO. 1 OF 3 SHEETS
30929278 0

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PRELIMINARY
SKETCHES FOR PERMIT REQUEST

BTU AREA * X-05
CP AREA * T-108-C
WALL MAP 2868
PLAT E7
SAN JOAQUIN COUNTY

SCALE: 1"=10'

FARM

EXISTING 16" T.L. 108

DETAIL 1/3

EXISTING ANODE TO BE ABANDONED IN PLACE

EP

W. SARGENT RD.

EXISTING DISTRICT REG. STATION LOHP-07

EXISTING CATHODE WIRE

D.E.

EXISTING 2" HP STL.-12'

EXISTING 2" STL. TP MAIN

EXISTING 4" STL HP MAIN

MP:41.46

70' 45' 30' 5' +/- 10'-0" +/- 5'-0" 9' 5'

150'

EXISTING POWER POLE WITH RECTIFIER (TO BE REPLACED)

EXISTING ANODE WIRE

PROPOSED CATHODE WIRE

PROPOSED DEEP WELL ANODE

W.P.R.R.

W.P.R.R. RIGHT OF WAY 100'

PG&E EASEMENT 15'

PLAN VIEW
SCALE:1"=10'

LEGEND:

- PROPOSED GAS LINE
- EXISTING GAS LINE
- ELECTRIC LINE
- TELEPHONE LINE
- TIE-IN WELD
- EXISTING TOWER
- ELECTRIC VAULT
- GAS LINE MARKER
- GAS VALVE
- WATER VALVE
- TREE
- TEL VAULT
- STORM DRAIN
- SEWER MANHOLE
- CITY/COUNTY MON
- AS NOTED
- FENCE
- ETS
- CABLE TV BOX
- COMM VAULT
- EDGE OF PAVEMENT
- FACE OF CURB
- STORM LINE
- SEWER LINE
- GAS SERVICE LINE
- WATER LINE
- PROPOSED ANODE
- EXISTING ANODE
- POWER POLE W/ RECTIFIER

SAFETY

SAFETY PLEDGE

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PSRS® 29206

CALL 811 BEFORE YOU DIG

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0	- -	ISSUED FOR CONSTRUCTION	30929278	T1TJ	SEW6	JZSJ	

REVISIONS

APPROVED BY
GM 30929278
SUPV R. SOSA
DSGN T. TAM
DWN T. TAM
CHKD S. WATERS
OK
DATE 2/25/2013
SCALES AS SHOWN

PIPING - PLAN
REPLACE RECTIFIER & ANODE
W. SARGENT RD. 1550' EAST OF N RAY RD.
LODI, SAN JOAQUIN COUNTY, CA

PACIFIC GAS AND ELECTRIC COMPANY
WALNUT CREEK , CALIFORNIA

MICROFILM
BILL OF MATL SEE SHEET 3
DWG LIST
SUPSDS
SUPSD BY
SHEET NO. 2 OF 3 SHEETS
30929278 0

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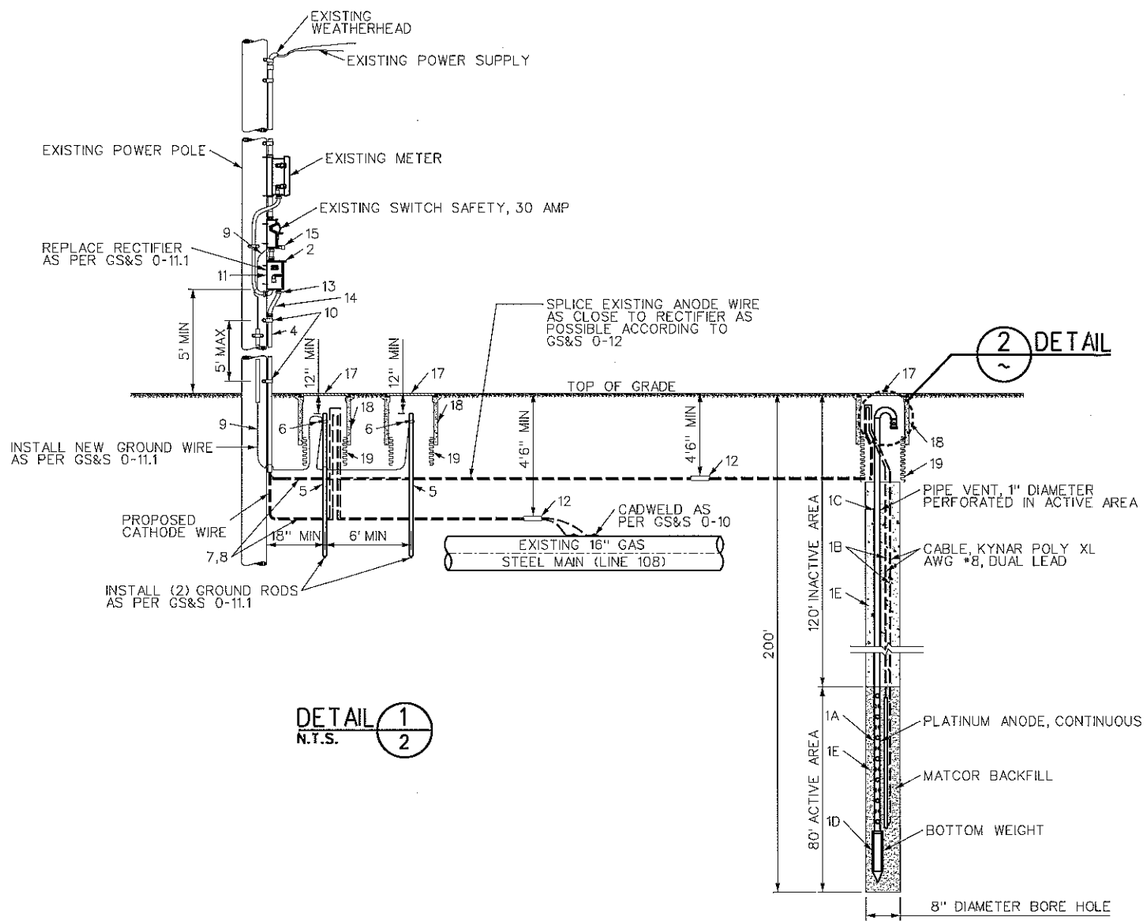
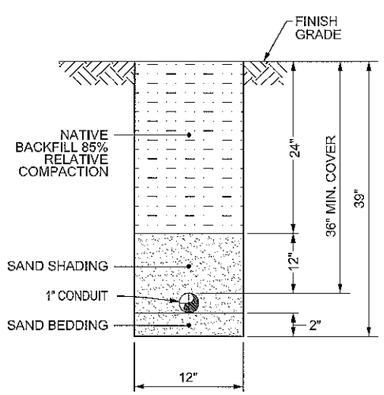
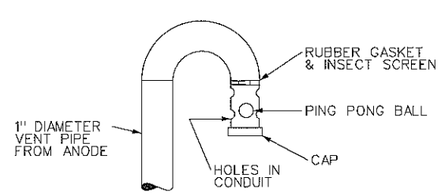


DETAIL 1/2
N.T.S.

PG&E CODE	ITEM NO.	QNTY.	ORDER NO. 30929278 DESCRIPTION	CATALOG OR DWG REF.	OTHER DATA
561443	1	1	10 AMP MATCOR MODEL PL-SP-60-200-SBW DEEP WELL ANODE	GS&S 0-13.5	
INC.	1A	60'	PLATINUM ANODE, CONTINUOUS	GS&S 0-13.5	
INC.	1B	250'	CABLE, KYNAR POLY XL, AWG #8, DUAL LEAD	GS&S 0-13.5	
INC.	1C	210'	PIPE VENT, 1" DIAMETER, PERFORATED IN ACTIVE AREA	GS&S 0-13.5	
INC.	1D	1	BOTTOM WEIGHT WITH EYEBOLT 4" EMT, LENGTH 2' WEIGTH: 45 POUNDS (NOMINAL)	GS&S 0-13.5	
INC.	1E	42	BACKFILL SUPPLIED IN 50-POUND BAGS (2100 POUNDS TOTAL)	GS&S 0-13.5	
M41066	2	1	RECTIFIER, POLE-MOUNTED, VARIAC, AIR-COOLED 20 VOLT OUTPUT, 10 AMP	SPECIAL ORDER	
016583	3	1	PADLOCK, CORPORATION	GS&S 0-11.1	
360305	4	AS REQ.	CONDUIT, 1" PVC	GS&S 0-11.1	
187013	5	2	GROUND ROD, 5/8" X 8'	GS&S 0-11.1	
187012	6	1	CLAMP, GROUND ROD, 5/8"	GS&S 0-11.1	
294991	7	AS REQ.	WIRE, 500 FOOT COIL, #10, HMWPE WITH 47 MIL THICKNESS, SOLID COPPER, 600 VOLT BLACK INSULATION	GS&S 0-11.1	
294107	8	AS REQ.	WIRE, 500 FOOT COIL, #10, HMWPE WITH 47 MIL THICKNESS, SOLID COPPER, 600 VOLT WHITE INSULATION	GS&S 0-11.1	
290072	9	AS REQ.	WIRE, GROUNDING, AWG #6, BARE COPPER	GS&S 0-11.1	
176004	10	AS REQ.	STRAPS, PIPE, GALVANIZED, 1"	GS&S 0-11.1	
196214	11	AS REQ.	LAG SCREWS, STEEL, GALVANIZED, 1"	GS&S 0-11.1	
360368	12	AS REQ.	CONDUIT, PLASTIC, PVC, 1/2", SCHEDULE 40	GS&S 0-11.1	
390269	13	AS REQ.	LOCKNUT, CONDUIT, GALVANIZED, T & B #143, 1"	GS&S 0-11.1	
374785	14	1	FLEX CONNECTOR TUBING, 1" ID X 1/16" WT	GS&S 0-11.1	
170115	15	1	SAFETY EQUIPMENT LOCK	GS&S 0-11.1	
490123	16	AS REQ.	CRC MINIMAL EXPANSION FOAM	GS&S 0-11.1	
04-3225	17	3	CAST IRON VALVE BOX LID	GS&S K-41	
04-3271	18	3	CONCRETE VALVE BOX HEAD	GS&S K-41	
01-6063	19	3	VAVLE BOX EXTENSION	GS&S K-41	
NO CODE	20	AS REQ.	1" PVC 90° BENDS	NO CODE	



DETAIL 3
N.T.S.
TYPICAL TRENCH DETAIL
NON PAVED AREA



DETAIL 2
N.T.S.
BACK FLOW PREVENTER
FIELD FABRICATION, NOT IN STANDARDS

PRELIMINARY
SKETCHES FOR PERMIT REQUEST

SAFETY
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REVISIONS

PSRS# 29206

APPROVED BY	
GM	30929278
SUPV	R. SOSA
DSGN	T. TAM
DWN	T. TAM
CHKD	S. WATERS
OK	
DATE	2/25/2013
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PIPING - SECTIONS & DETAILS
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SHEET NO. 3 OF 3 SHEETS
30929278 0

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