PG&E Pipeline Integrity Management Program

External Corrosion Direct Assessment

Pipeline Integrity Management Program (IMP)

✓ **Above Ground Surveys**

1. Centerline and depth
2. Cathodic Protection levels
3. Location of damaged coating

✓ **Direct Examinations of Highest Priority Locations**

- Physical examination of pipe
- Integrity assessment of any damage to pipe

Above Ground Surveys
(three types desired for each pipeline)

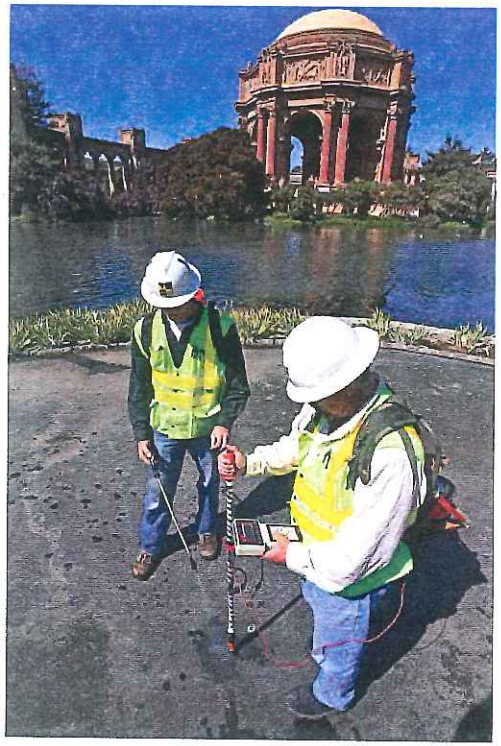
Survey 1 – Pipeline Current Mapper (PCM); assesses the location, depth and general coating condition:

- May require traffic control to protect technicians surveying in traveled ways
- **No** drilling required
- May be impacted by light rail or other AC interference and require night work.

Above Ground Surveys
(three types desired for each pipeline)

Survey 2 – Close interval surveys (CIS);
assess the level of cathodic protection:

- May require traffic control to protect technicians surveying in traveled ways
- Drilling of a ½" hole is required in asphalt or concrete to contact base rock or soil
- May be impacted by light rail or other AC interference and require night work.



Above Ground Surveys
(three types desired for each pipeline)

Survey 3 – Direct Current Voltage Gradient (DCVG); identifies locations of damaged coating:

- May require traffic control to protect technicians surveying in traveled ways
- Drilling of a ½" hole is required in asphalt or concrete to contact base rock or soil
- May be impacted by light rail or other AC interference and require night work.

Hole Drilling

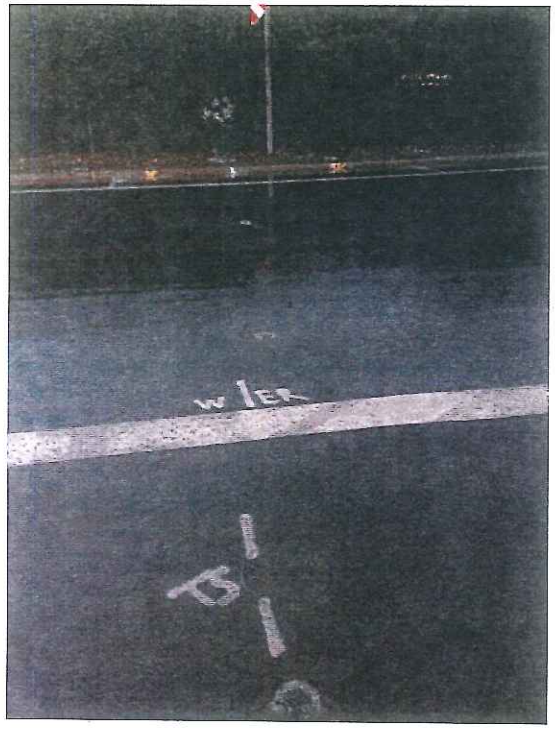
If hole drilling is required, a ½" hole will be drilled through A/C or concrete to soil or baserock

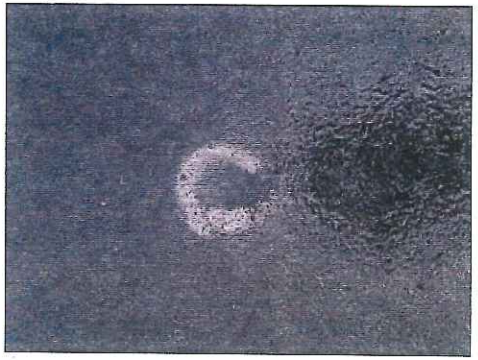
- USA called and facilities located before drilling
- Fast process, 1 hole/minute

Hole Repair

Drilled hole is filled with backer rod and 3M Loop Detector Sealant 5000

- Hole repair is final step - after all surveys and data verification. May occur several weeks after initial drilling

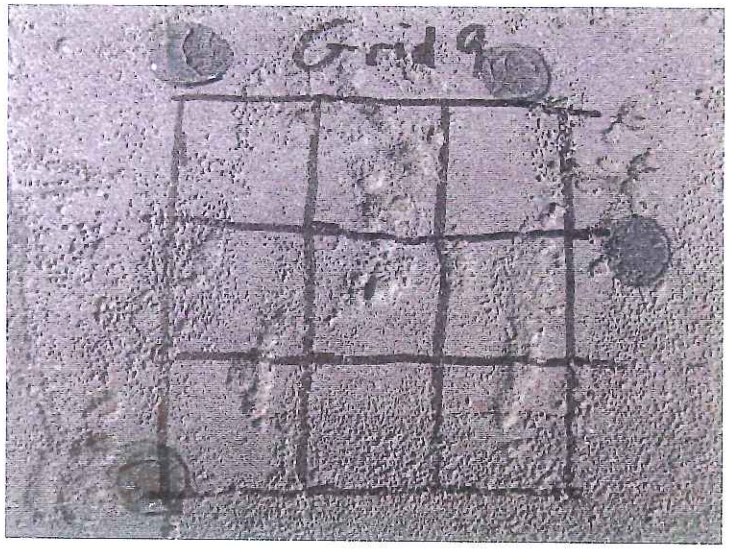




Direct Examinations

The areas of highest concern are excavated and examined to determine integrity of pipelines:

- Select highest priority locations
- Permit excavations
- Excavate pipeline
- Perform direct examination and verify integrity
- Repair and or recoat, then backfill



T-345-14B Summary of Proposed Work

LINE	OD	HYDROTEST MILE POINTS	JOB #	SHEETS
L-197B	6.625"	MP 4.75-MP 5.49	41921654	05

SUMMARY OF WORK PER LOCATION DATA

INSTALL		EXPENSE	GM	41921654	Total	LOC A DET 1	LOC B DET 2	LOC B Detail 7			
INSTALL	6'-8"	12.750" OD x 0.281" WT, API 5L, X-52, ERW, FBE Coated			6'-8"	6'-8"					
INSTALL	29'-2"	6.625" OD x 0.280" WT, GR B, SMLS			29'-2"	3'-8"	25'-6"				
INSTALL	9'-6"	3.500" OD x 0.216" WT, API 5L, GR B, ERW			9'-6"			9'-6"			

REMOVE		EXPENSE	GM	Year	Total	LOC A DET 1	LOC B DET 2				
REMOVE	5'-8"	12.750" OD x 0.219" WT, API 5LX-X42, ERW	170196	1968	5'-8"	5'-8"					
REMOVE	29'-4"	6.625" OD x 0.188" WT, 30,000 SMYS*, ERW*	66400	1941	29'-4"	4'-8"	24'-8"				
REMOVE	9'-6"	3.500" OD x 0.216" WT, API 5L, GR B, ERW	135396	1957	9'-6"			9'-6"			

INSTALL	CAPITAL	GM	31032324	Total	LOC A DET 1	LOC B DET 2				

REMOVE		CAPITAL	GM	Year	Total	LOC A DET 1	LOC B DET 2				
REMOVE ONE (1) 6" PCF, Mueller H-17256 INSTALLED ON GM 170196 (1968)			170196	1968	1.00	1					
REMOVE ONE (1) 6" PCF, Mueller H-17256 INSTALLED ON GM 135396 (1957)			135396	1957	1.00		1				
REMOVE	8'-1"	6.625" OD x 0.188" WT, 30,000 SMYS*, ERW*	66400	1941	8'-1"		8'-1"				

FORMATTED SUMMARY OF PROPOSED WORK

SUMMARY OF PROPOSED WORK

HYDROSTATICALLY TEST 6.625" L-197B FROM MP 4.75-MP 5.49 PER DRAWINGS AND STRENGTH TEST PRESSURE REPORTS (#41921654) AND MATERIAL OF RECORD DRAWING #41921654 SHEET 05 OF 05.

EXPENSE ORDER #41921654

INSTALL 6'-8" OF 12.750" OD x 0.281" WT, API 5L, X-52, ERW, FBE Coated PIPE.
INSTALL 29'-2" OF 6.625" OD x 0.280" WT, GR B, SMLS PIPE.
INSTALL 9'-6" OF 3.500" OD x 0.216" WT, API 5L, GR B, ERW PIPE.

REMOVE 5'-8" OF 12.750" OD x 0.219" WT, API 5LX-X42, ERW PIPE INSTALLED ON GM 170196 (1968).
REMOVE 29'-4" OF 6.625" OD x 0.188" WT, 30,000 SMYS*, ERW* PIPE INSTALLED ON GM 66400 (1941).
REMOVE 9'-6" OF 3.500" OD x 0.216" WT, API 5L, GR B, ERW PIPE INSTALLED ON GM135396 (1957).

CAPITAL ORDER #31032324

REMOVE ONE (1) 6" PCF, Mueller H-17256 INSTALLED ON GM 170196 (1968)
REMOVE ONE (1) 6" PCF, Mueller H-17256 INSTALLED ON GM 135396 (1957)
REMOVE 8'-1" OF 6.625" OD x 0.188" WT, 30,000 SMYS*, ERW* PIPE INSTALLED ON GM 66400 (1941).

APPLICATION FOR ENCROACHMENT PERMIT

PLEASE PRINT:

Date 1/24/14

To: San Joaquin County
Department of Public Works

PG&E - CHRIS JENNINGS
(Applicant Name)

6121 BOLLINGER CANYON RD
(Mailing Address)

SAN RAMON, CA 94583
(City, State, Zip Code)

925-324-5219
(Area Code - Telephone Number)

OFFICE USE ONLY			
JOB #	730052	REF #	
APN		CR #	
EXP. DATE			
VALID	TO		DRIVEWAYS:
STREET	Turner Rd		*
AREA	Lodi	QUAD NW	*
TYPE	Moving Survey		*
FORMS	SS/WW, R-29, ~~3900~~		
NOTES			

Sketch (Detailed plans may be submitted)

* SEE ENCLOSED CONTROL MAP. SURVEY WILL BE OF ROADWAY ON SHOULDER AND PRIVATE PROPERTY

(NO TCP REQUIRED

PG&E IT SURVEY NS-108-2 PM 4P05341 MP 2.43-2.59

The undersigned hereby applies for permission to excavate, construct and/or otherwise encroach on County Highway Right-of-Way on the S side of TURNER RD approximately 1000 feet/mile E of DAVIS RD, _____, by performing the following work (description of work):

ELECTRONIC SURVEY OF EXISTING PG&E GAS LINE. READINGS TO BE TAKEN EVERY 10 FEET. DRILL 1/2" (ONE HALF INCH) HOLE WHERE PAVEMENT OR CONCRETE IS COVER

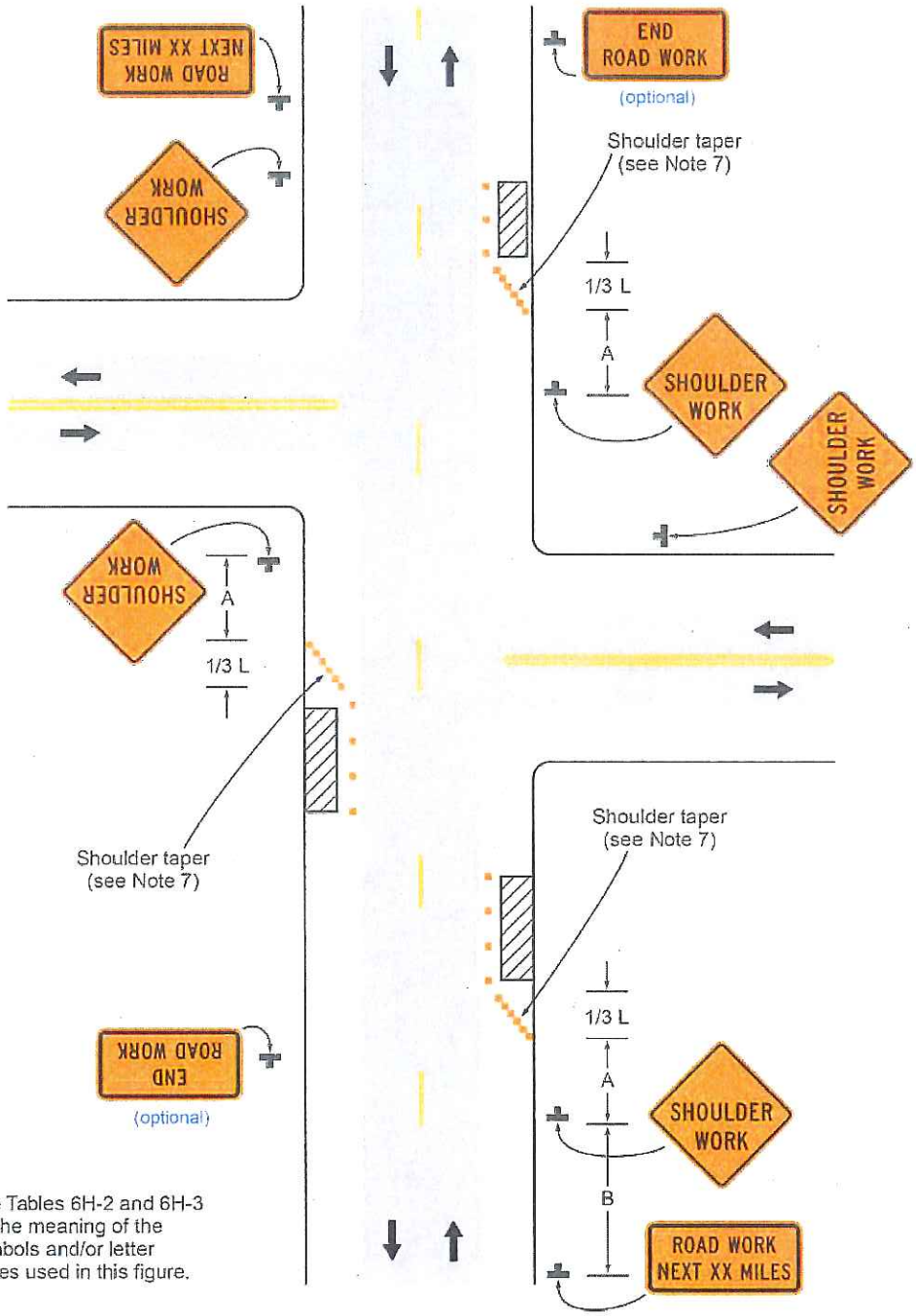
Work will commence on or about 2/24/14 for approximately 1-3 days.

I, the undersigned, certify that I am the owner of the respective property, or am qualified to represent the owner and agree to do the work described above in accordance with the rules and regulations of San Joaquin County and subject to inspection and approval.

Signature of Applicant - Title

1/31/14
Date

Figure 6H-3. Work on the Shoulders (TA-3)



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 3