

**Meeting of the Central Valley Flood Protection Board
May 20, 2016**

Staff Report – Encroachment Permit

**Pacific Gas and Electric Company (PG&E)
PG&E L407 Pipeline Project, Yolo County**

1.0 – ITEM

Consider approval of Permit No. 19031-4 (Attachment B).

2.0 – APPLICANT

Pacific Gas and Electric Company (PG&E)

3.0 – LOCATION

The project is located under the right and left bank levees and across the interior of the Yolo Bypass approximately two (2) miles south of Fremont Weir. (Attachment A)

4.0 – DESCRIPTION

To install a 30-inch diameter gas transmission pipeline (L407) under the right (west) and left (east) bank levees of the Yolo Bypass using the horizontal directional drilling (HDD) method and trench (open cut) across the interior of the Yolo Bypass.

5.0 – AUTHORITY OF THE BOARD

California Water Code § 8534, 8590 – 8610.5, and 8700 – 8710

California Code of Regulations, Title 23 (Title 23)

- § 6, Need for a Permit
- § 13, Evidentiary Hearings

- § 112, Streams Regulated and Nonpermissible Work Periods
- § 123, Pipelines, Conduits, and Utility Lines

6.0 – PROJECT ANALYSIS

PG&E will be expanding their natural gas transmission and distribution pipeline system to provide a larger capacity and enhanced service reliability to the counties of Placer, Sacramento, Sutter, and Yolo. PG&E will construct their new Line 407 (L407) Pipeline Project to connect to existing Lines 400 and 401 in Yolo County and existing Line 123 in Placer County. The L407 project consists of approximately 26 miles of new 30-inch diameter pipeline that will run from north of the City of Woodland to east of the City of Roseville. A new distribution feeder main (DFM) will be installed on L407 pipeline east of Garden Highway near Riego Road to extend natural gas service to planned residential and commercial developments in the region.

The L407 project will cross four (4) different locations of the State Plan of Flood Control (SPFC): Knights Landing Ridge Cut, Sacramento River, Natomas East Main Drainage Canal, and the Yolo Bypass. The four (4) different crossing locations have been separated into four (4) different permit applications for simplicity during the review process: 19031-1 for Knights Landing Ridge Cut crossing, 19031-2 for the Natomas East Main Drainage Canal crossing, 19031-3 for the Sacramento River crossing, and 19031-4 for the Yolo Bypassing crossing.

Permit No. 19031-4 will authorize the portion of the Yolo Bypass crossing located approximately two (2) miles south of Fremont Weir. PG&E is proposing to install a portion of the 30-inch diameter gas transmission line under the right and left bank levees using the HDD method and trench across the Yolo Bypass using the open cut method. The gas line will be placed approximately 45-feet below the Yolo Bypass levees and a minimum of 7-feet within the Yolo Bypass. The HDD entry and exit pits of the Yolo Bypass levees will be located a minimum of 400-feet from the landside and waterside levee toes. The proposed work complies with all applicable Title 23 standards.

6.1 – Hydraulic Analysis

The transmission line will be placed a minimum of 45-feet below the right and left bank levees of the Yolo Bypass and the HDD entry and exit locations are located a minimum of 400-feet from the landside and waterside levee toes. Within the floodway, the transmission line contains a minimum cover of 7-feet. Due to the placement depth of the

transmission line and its distance from the levee toes, there will be no adverse hydraulic impacts to the Yolo Bypass. As such, a hydraulic analysis was not required for this project.

6.2 – Geotechnical Analysis

The transmission line will be placed a minimum of 45-feet below the right and left levees of the Yolo Bypass and the HDD entry and exit locations are a minimum of 400-feet from the levee toes. Due to the placement depth of the transmission line and its distance from the landside levee toes, there will be no adverse geotechnical impacts to the Yolo Bypass. As such, a geotechnical analysis was not required for this project.

7.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- Reclamation District 1600 endorsed the project with conditions on June 15, 2015. The conditions have been incorporated into the permit.
- The USACE 33 USC 408 decision letter has not yet been received for this application. Staff anticipates receipt of a letter indicating that the USACE District Engineer approves the request to alter the Federal flood risk reduction project, subject to conditions. Upon receipt of the letter, board staff will review to ensure its conformity with the permit language and incorporate it into the permit as Exhibit A.

8.0 – CEQA ANALYSIS

Board staff has prepared the following California Environmental Quality Act (CEQA) findings:

The Board, acting as a responsible agency under CEQA, has independently reviewed the Draft Environmental Impact Report (DEIR, SCH No. 2007062091, April 29, 2009) for the PG&E Line 406/407 Natural Gas Pipeline Project, the Final Environmental Impact Report (FEIR, SCH No. 2007062091, October 30, 2009), and the Mitigation Monitoring and Reporting Plan (MMRP) prepared by the lead agency, State Lands Commission (incorporated herein by reference). These documents, including project design, may be

viewed or downloaded from the Board website at <http://www.cvfpb.ca.gov/meetings/2016/05-20-2016.cfm> under a link for this agenda item, and are also available for review in hard copy at the Board and State Lands Commission's offices.

The Board previously approved the PG&E L407 Pipeline Project on April 22, 2016 through Permit No. 19031-2, Permit No. 19031-3 and adopted CEQA findings in Resolution 2016-07 (Attachment D). The Board finds the proposed project to install a 30-inch diameter gas transmission pipeline (L407) under the right (west) and left (east) bank levees of the Yolo Bypass and across the interior of the Yolo Bypass is within the scope of the previously adopted DEIR and FEIR. The Board finds that no new environmental effects could occur and no new mitigation measures are required pursuant to CEQA Guidelines section 15161.

The documents and other materials which constitute the record of the Central Valley Flood Board's proceedings in this matter are in the custody of Leslie Gallagher, Executive Officer, Central Valley Flood Protection Board, 3310 El Camino Ave., Rm. 151, Sacramento, California 95821.

9.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science related to the scientific issues presented by the Executive Officer, legal counsel, the Department of Water Resources (DWR), or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on facilities of the SPFC, and consistency of the proposed project with the Central Valley Flood Protection Plan (CVFPP) as adopted by Board Resolution 2012-25 on June 29, 2012:

The proposed transmission pipeline will be installed using the HDD and open cut trench method. The HDD entry and exit pit locations will be located a minimum of 400-feet from the landside and waterside levee toes and a minimum of 45-feet below the Yolo Bypass levees; therefore, the proposed project is expected to result in no adverse effect on any SPFC facilities and is consistent with the CVFPP.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

The California Department of Water Resources (DWR) is investigating systemwide improvements to the SPFC features in the Yolo Bypass. One improvement feature includes a setback levee on the north-easterly levee of the Yolo Bypass which may affect the proposed PG&E gas line located within Reclamation District 1600. Both PG&E and DWR are aware of the potential issue(s) from the setback levee and the proposed gas line; however, due to uncertainty of the setback levee's alignment and construction schedule, PG&E opted to proceed with their submitted pipe alignment.

10.0 – STAFF RECOMMENDATION

Staff recommends that the Board:

Adopt:

- The CEQA findings;

Approve:

- Draft Encroachment Permit No. 19031-4 in substantially the form provided, conditioned upon receipt of a U.S. Army Corps of Engineers comment letter indicating that the District Engineer approves the request to alter the Federal flood risk reduction project, subject to conditions, and;

Direct:

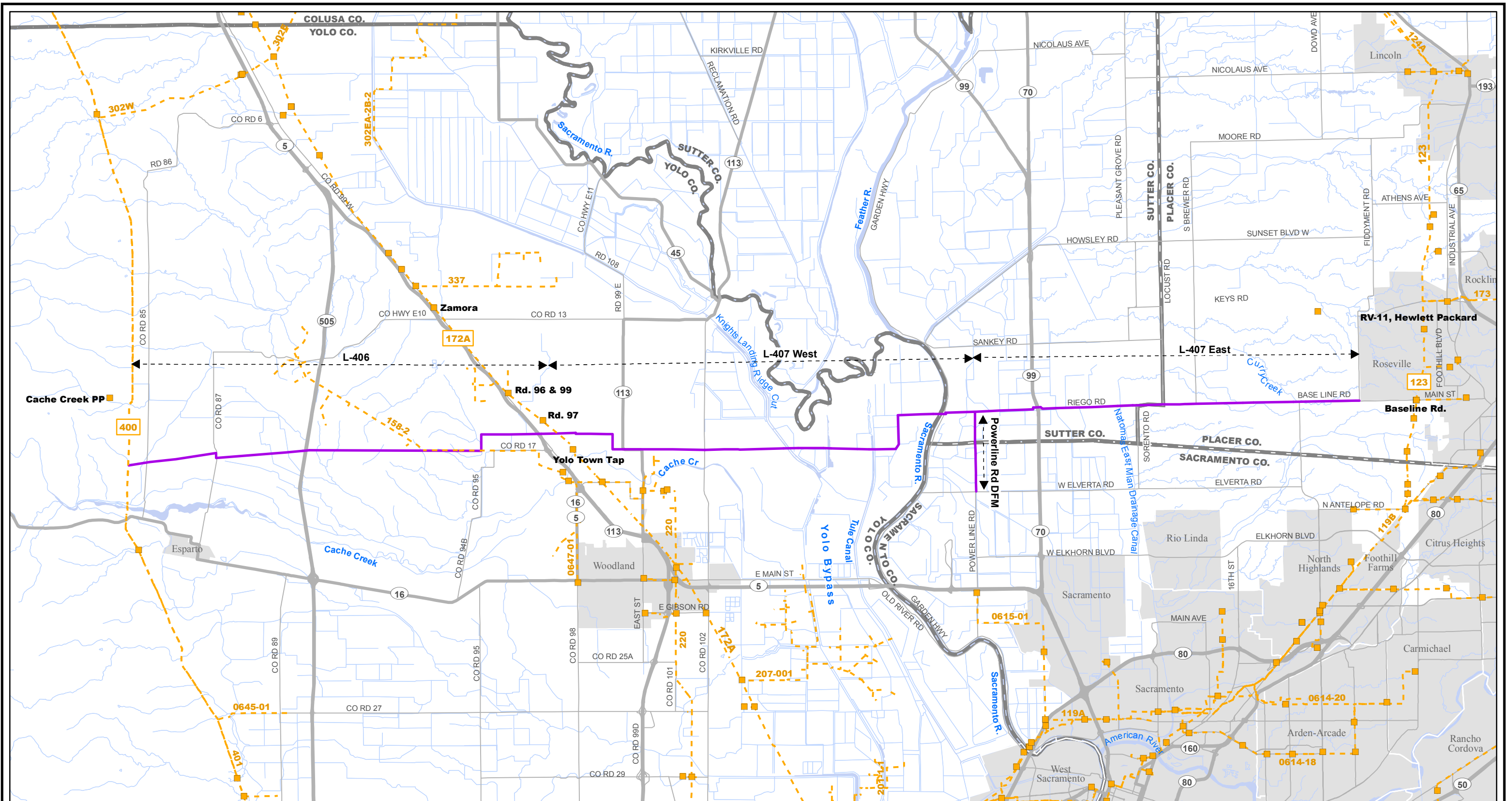
- The Executive Officer to take the necessary actions to execute the permit and file a Notice of Determination pursuant to CEQA with the State Clearinghouse.

11.0 – LIST OF ATTACHMENTS

- A. Location Maps and Photos
- B. Draft Permit No. 19031-4
- C. Construction Plans

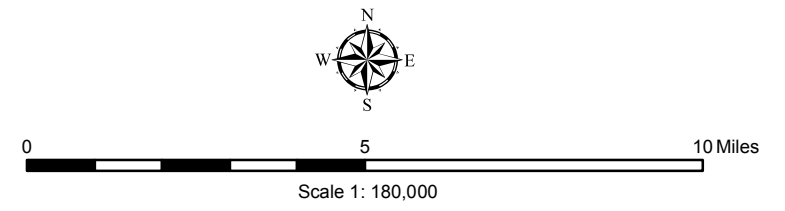
D. Board Resolution No. 2016-07

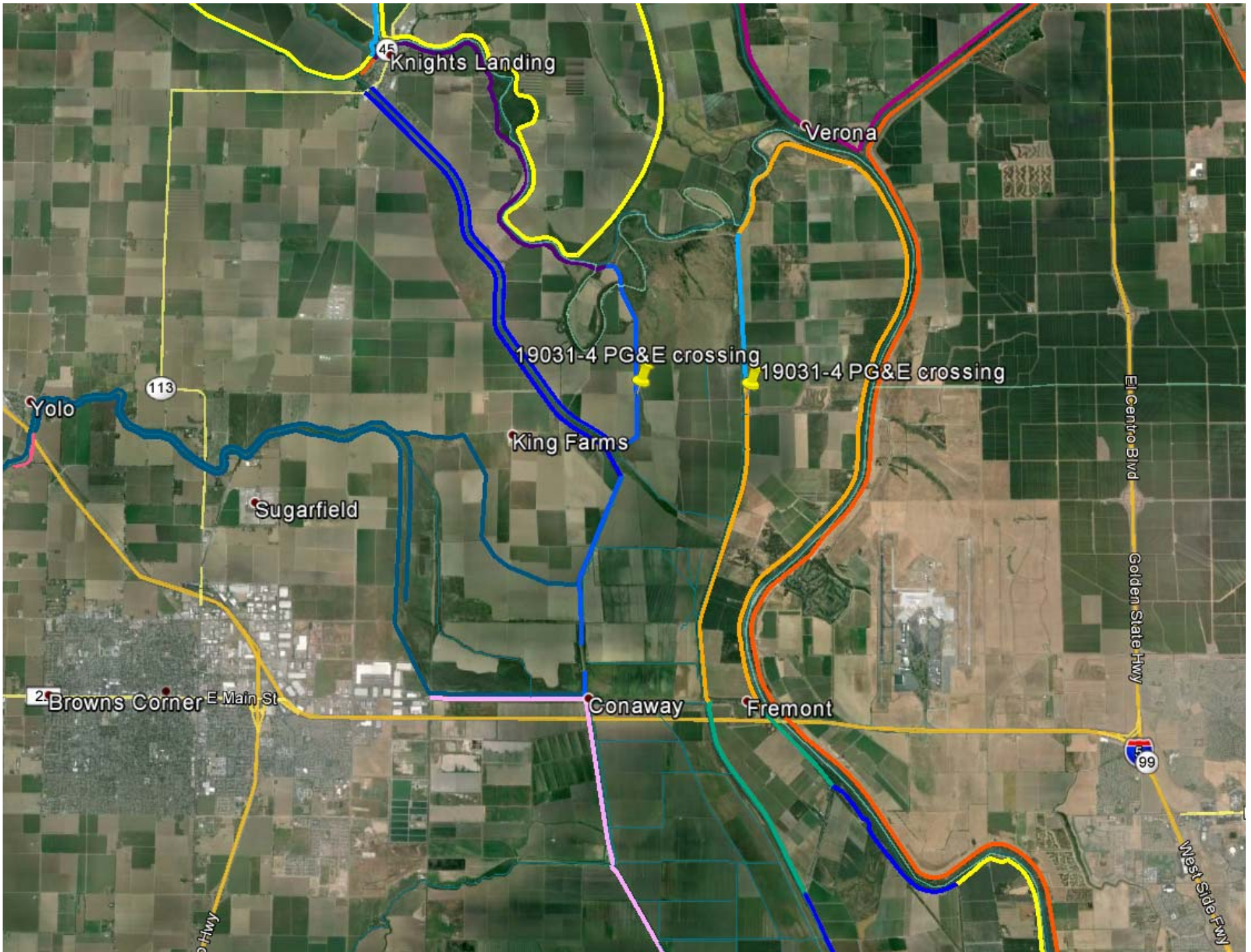
Design Review:	Mike Thao, Water Resources Engineer, Permitting Section
Environmental Review:	James Herota, Senior Environmental Scientist
Document Review:	Gary Lemon, PE, Permitting Section Chief Mitra Emami, PE, Operations Branch Chief
Legal Review:	Kanwarjit Dua, Board Counsel



**Line 406 and Line 407
Pipeline Project
Figure 1-1
Overview Map**

- Proposed Pipeline
- Gas Transmission Station
- Gas Transmission Line
- Highway
- Major Road
- Incorporated Area
- County Boundary
- Hydrology







East Yolo Bypass - Looking Northwest 3/18/2013



East Yolo Bypass - Looking South 3/18/2013



East Yolo Bypass - Looking West 3/18/2013

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 19031-4 BD

This Permit is issued to:

Pacific Gas and Electric Company (PG&E)
2730 Gateway Oaks Drive, Suite 220
Sacramento, California 95833

To install (HDD) a 30-inch diameter gas transmission line (L407) under the right (west) and left (east) bank levees of the Yolo Bypass and trench (open cut) across the interior of the Yolo Bypass.

The project is located approximately 2 miles south of the Freemont Weir. (Section 8, 9, 10, T10N, R3E, MDB&M, Sacramento Maintenance Yard, Yolo Bypass, Yolo County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

Attachment B

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 19031-4 BD

LIABILITY AND INDEMNIFICATION

THIRTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

FOURTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

FIFTEEN: The Central Valley Flood Protection Board, Department of Water Resources, and Reclamation District No. 1600 shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

AGENCY CONDITIONS

SIXTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

SEVENTEEN: No construction work shall occur within the Yolo Bypass during the flood season from November 1st to April 15th without prior approval of the Central Valley Flood Protection Board.

EIGHTEEN: The permittee shall be responsible for all damages due to settlement, consolidation, or heave from any construction-induced activities.

NINETEEN: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY: The permittee shall comply with all conditions set forth in the letter from the Department of the Army (U.S. Army Corps of Engineers, Sacramento District) dated _____, which is attached to this permit as Exhibit ___ and is incorporated by reference.

TWENTY-ONE: Permittee shall pay to the CVFPB, an inspection fee to cover inspection cost(s), including staff and/or consultant time and expenses, for any inspections before, during, post-construction, and regularly thereafter as deemed necessary by the CVFPB.

PRE-CONSTRUCTION

TWENTY-TWO: Upon receipt of a signed copy of the issued permit the permittee shall contact the Central Valley Flood Protection Board by telephone at (916) 574-0609, and submit the enclosed postcard, to schedule a preconstruction conference with the inspector that is assigned to your project. Failure to do so at least 10 working days prior to start of work may result in a delay of the project.

CONSTRUCTION

TWENTY-THREE: A temporary bench mark, set to a known datum, shall be placed at the project site during construction.

TWENTY-FOUR: In the event trees and brush are cleared, they shall be properly disposed of either by burning or removing from the Yolo Bypass prior to the flood season.

TWENTY-FIVE: The gas transmission line shall have readily accessible rapid-closure devices located as close to the east and west levees of the Yolo Bypass as practical.

TWENTY-SIX: The gas transmission line within the Yolo Bypass shall be buried with a minimum of 2 feet of cover.

TWENTY-SEVEN: Backfill material for excavations in the Yolo Bypass shall be placed in 4- to 6-inch

Attachment B

layers and compacted to at least the density of the adjacent, firm, undisturbed material.

TWENTY-EIGHT: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the Yolo Bypass.

TWENTY-NINE: Excess bentonite or other drilling fluids shall be properly disposed of outside of the Yolo Bypass. The bentonite or other drilling fluids shall not be used as backfill.

THIRTY: All debris generated by this project shall be disposed of outside the Yolo Bypass and off all Project Works.

THIRTY-ONE: The project site shall be restored to at least the condition that existed prior to commencement of work.

THIRTY-TWO: Location markers shall be placed near both levee toes for the buried gas transmission line.

POST-CONSTRUCTION

THIRTY-THREE: Upon completion of the project, the permittee shall submit as-constructed drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite 256, Sacramento, California 95821.

THIRTY-FOUR: The pipeline shall be tested and confirmed free of leaks by X-ray, pressure tests, or other approved methods during construction or anytime after construction upon request by the Central Valley Flood Protection Board.

OPERATIONS AND MAINTENANCE

THIRTY-FIVE: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Central Valley Flood Protection Board, the Department of Water Resources, Reclamation District No.1600 or any other agency responsible for maintenance.

THIRTY-SIX: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

PROJECT ABANDONMENT / CHANGE IN PLAN OF FLOOD CONTROL

THIRTY-SEVEN: If the project, or any portion thereof, is to be abandoned in the future, the permittee

Attachment B

or successor shall abandon the project under direction of the Central Valley Flood Protection Board at the permittee's or successor's cost and expense.

THIRTY-EIGHT: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if in the discretion of the Central Valley Flood Protection Board the removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if the Project is not maintained or is damaged by any cause. If the permittee does not comply, or in the event of an emergency, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

END OF CONDITIONS

Attachment C

JOB # 30603988
BOM ITEM # 3

DESIGN CRITERIA
LOCATION CLASS 1
DESIGN FACTOR 0.60
FDP .975 PSIG 48.75 % SMYS
MAOP .975 PSIG 48.75 % SMYS
STRENGTH TEST PRESSURE
MIN. 1584 PSIG 79.20 % SMYS
MAX. 1679 PSIG 83.95 % SMYS
1800 PSIG=90% SMYS
TEST MEDIUM WATER
PIPE SPEC. API 5L X60 DSAW
O.D. 30.000" W.T. 0.500"

WELD INSPECTION
(WELDING MANUAL TD-4160M)*
NON-DESTRUCTIVE TESTING:
MIN % OF THE PROJECT DAILY WORK
100% VISUALLY INSPECT ALL WELDS.
(THIS REQUIREMENT APPLIES
EVEN IF NON-DESTRUCTIVE
TESTING IS REQUIRED)

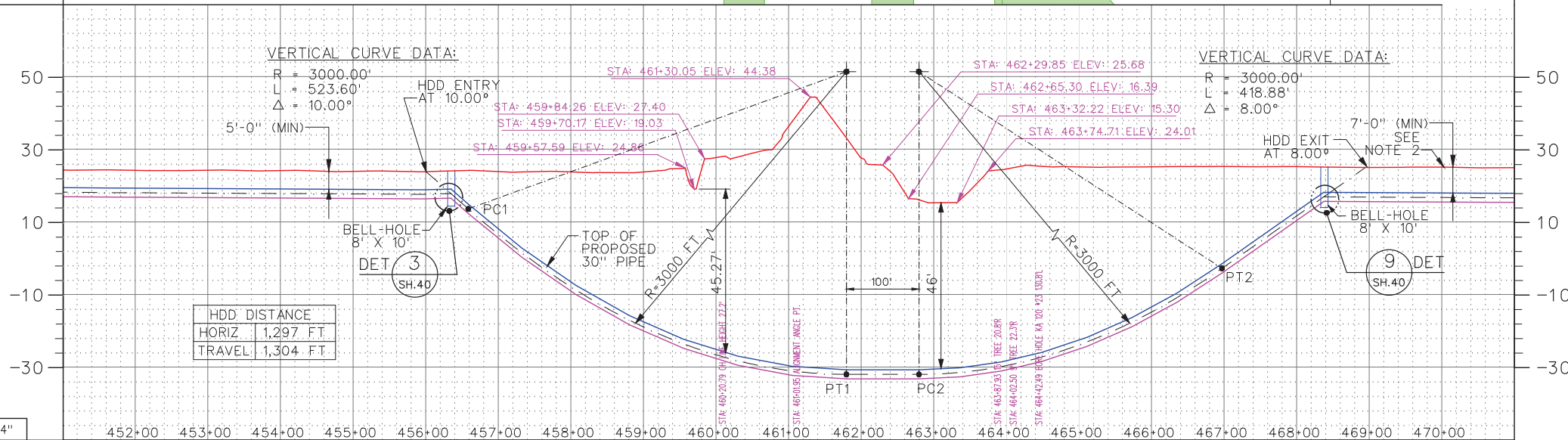
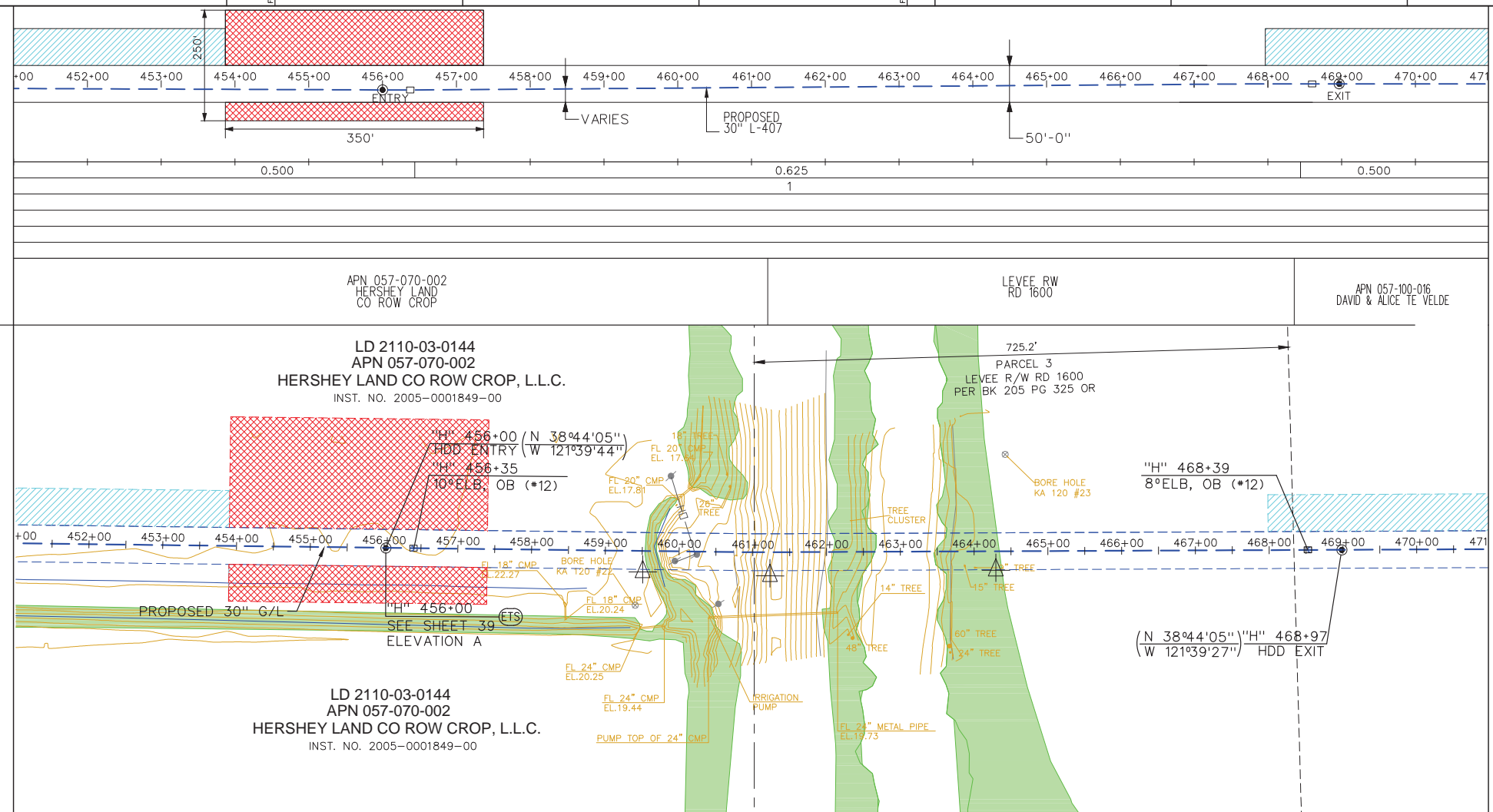
JOB # 30603988
BOM ITEM # 5

DESIGN CRITERIA
LOCATION CLASS 1
DESIGN FACTOR 0.60
FDP .975 PSIG 36.00 % SMYS
MAOP .975 PSIG 36.00 % SMYS
STRENGTH TEST PRESSURE
MIN. 1584 PSIG 58.49 % SMYS
MAX. 1679 PSIG 61.99 % SMYS
2438 PSIG=90% SMYS
TEST MEDIUM WATER
PIPE SPEC. API 5L X65 DSAW
O.D. 30.000" W.T. 0.625"

WELD INSPECTION
(WELDING MANUAL TD-4160M)*
NON-DESTRUCTIVE TESTING:
MIN % OF THE PROJECT DAILY WORK
100% VISUALLY INSPECT ALL WELDS.
(THIS REQUIREMENT APPLIES
EVEN IF NON-DESTRUCTIVE
TESTING IS REQUIRED)

NOTE:

- 1 TO 1 SCALE HDD DETAIL SEE SHEET #35
- TRENCH BACKFILL TO HAVE 2ft OF CONTROLLED LOW-STRENGTH MATERIAL INSTALLED PER TRENCH SECTION ON SHEET 43.



PIPELINE DETAILS STATIONING	DESCRIPTION	SCALE
"H" 451+00	30", 0.500" W.T., X60	*3 (543')
"H" 456+00	ETS (TYPE A)	
"H" 456+35	10° ELB, OB	
"H" 456+43	WT CHANGE	
"H" 456+59	BEGIN CURVE	
"H" 459+50	LINE MARKER	
"H" 461+30	LINE MARKER	
"H" 461+80	END CURVE	
"H" 462+80	BEGIN CURVE	
"H" 464+25	LINE MARKER	
"H" 466+97	END CURVE	
"H" 468+35	WT CHANGE	
"H" 468+39	8° ELB, OB	
"H" 471+00	30", 0.500" W.T., X60	*3 (265')

NOTIFIED U.S.A.
DATE TICKET NO. BY

NOTE: WARNING: CONFIDENTIAL, PROPRIETARY INFORMATION. THIS DOCUMENT CONTAINS CONFIDENTIAL, PROPRIETARY INFORMATION THAT IS THE SOLE PROPERTY OF PACIFIC GAS AND ELECTRIC COMPANY AND IS INTENDED FOR USE ONLY BY AUTHORIZED PACIFIC GAS AND ELECTRIC COMPANY EMPLOYEES & AGENTS. COPYRIGHT PACIFIC GAS AND ELECTRIC COMPANY.



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
2	7/28/15	ISSUED FOR BID					
1	3/25/10	ISSUED FOR CONSTRUCTION - SH.1-4, 38-40	30603988	RC	CEB	RL	RSC GTK

APPROVED BY
GTK

GM 30603988
SUPV J.QUIN
DSGN P.DANIELS
DWN B.SUDIICKY
CHKD
OK
DATE
SCALES AS NOTED

PIPELINE - PLAN & PROFILE
MP-8.54 TO MP-8.92, PHASE II
407 TRANSMISSION LINE

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

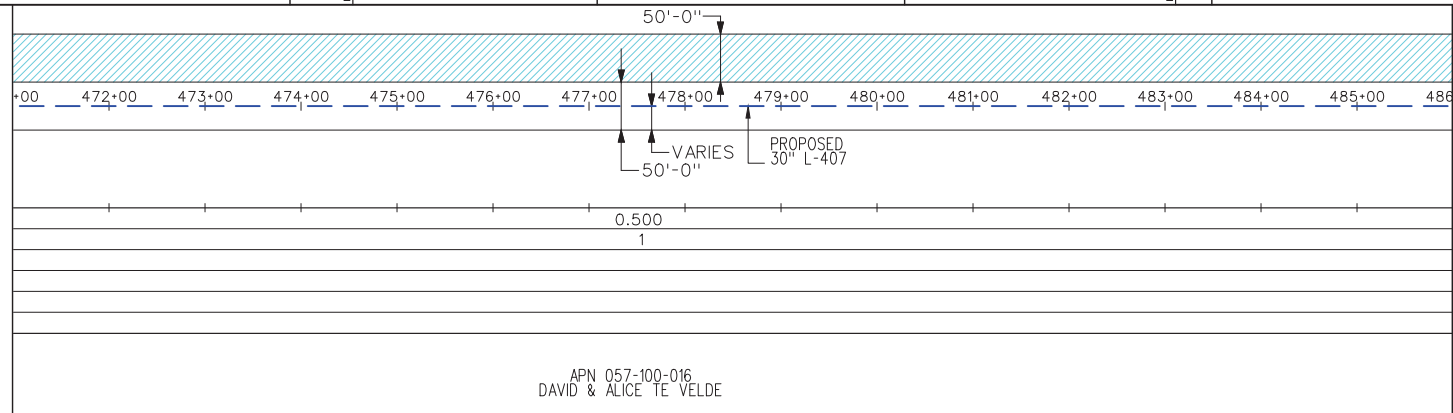
BILL OF MATL SH. 38
DWG LIST
SUPSDS
SUPSD BY
SHEET NO. 21A OF 47 SHEETS

3802911 2

Attachment C

JOB #	30603988
BOM ITEM #	3
DESIGN CRITERIA	
LOCATION CLASS	1
DESIGN FACTOR	0.60
FDP	975 PSIG 48.75 % SMYS
MAOP	975 PSIG 48.75 % SMYS
STRENGTH TEST PRESSURE	
MIN.	1584 PSIG 79.20 % SMYS
MAX.	1679 PSIG 83.95 % SMYS
TEST MEDIUM	WATER
PIPE SPEC.	API 5L X60 DSAW
O.D.	30.000" W.T. 0.500"
WELD INSPECTION	(WELDING MANUAL TD-4160M)*
NON-DESTRUCTIVE TESTING:	
MIN % OF THE PROJECT DAILY WORK	
100% VISUALLY INSPECT ALL WELDS.	(THIS REQUIREMENT APPLIES EVEN IF NON-DESTRUCTIVE TESTING IS REQUIRED)

EASEMENT / WORK SPACE	TEMP CONST ACCESS-FRANCHISE
DRILL RIG FOOTPRINT WORKSPACE	TEMPORARY WORKSPACE
PERMANENT EASEMENT	
ENVIRONMENTAL	GENERAL
	CLASS LOC
	CULTURAL
	BIOLOGICAL
	WATERBODIES
	EXCLUSIONS
RIGHT OF WAY	TRACT NUMBER
	OWNERSHIP/AGENCY
	PROPERTY SKETCH NO.
	PERMIT DWG. NO.



ENVIRONMENTAL

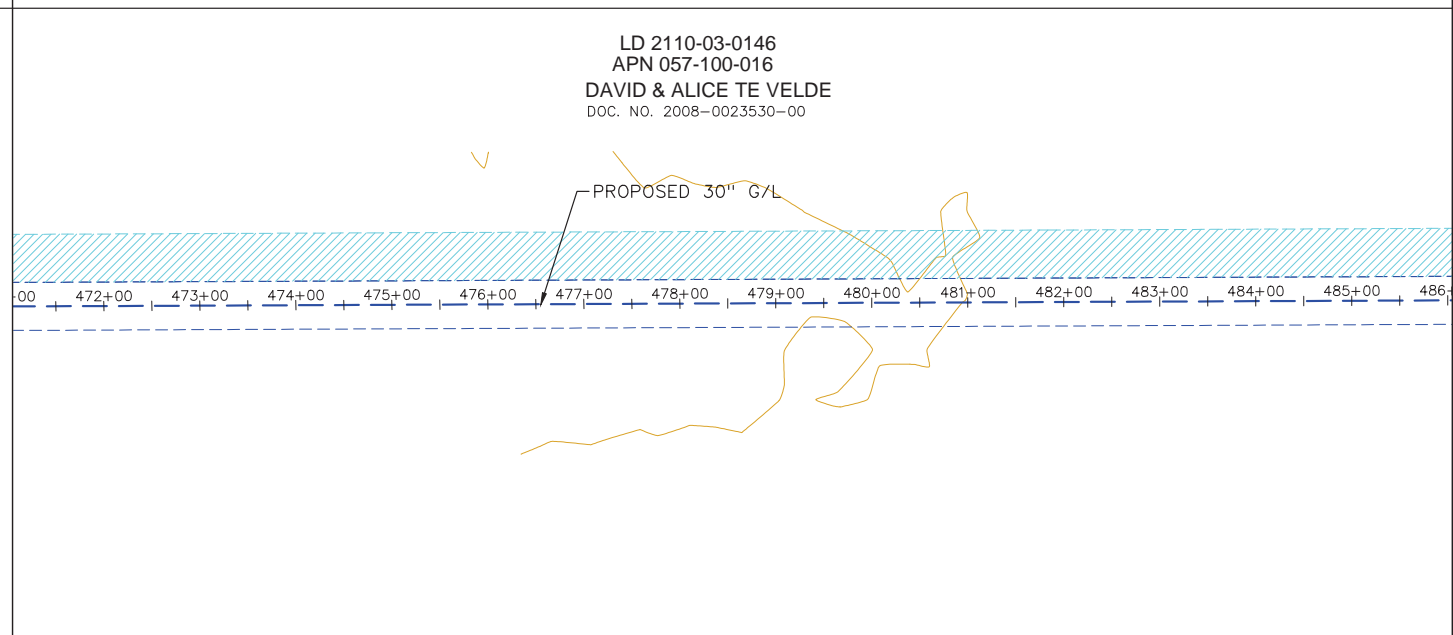
RIGHT OF WAY

TRACT NUMBER

OWNERSHIP/AGENCY

PROPERTY SKETCH NO.

PERMIT DWG. NO.



SURVEY PLAN

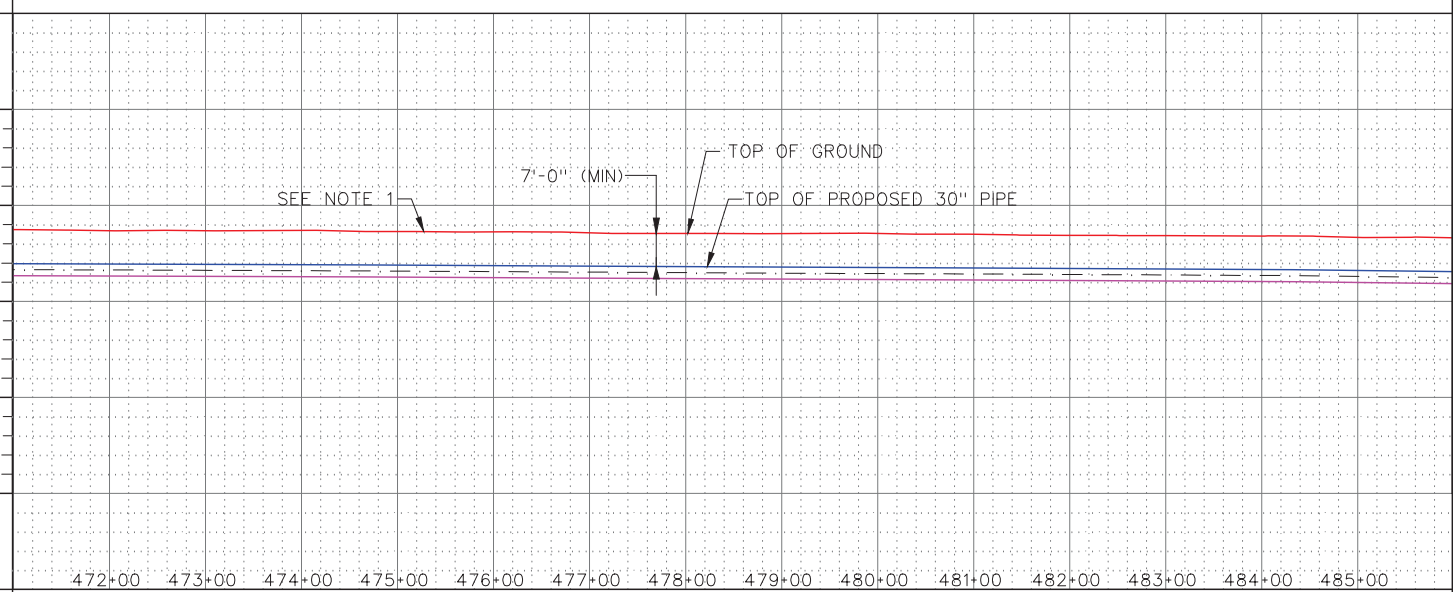
SCALE: 1"=100'

ELEVATION DATUM:

LOCATION OF BENCH MARK:

VERTICAL SCALE: 1"=20'

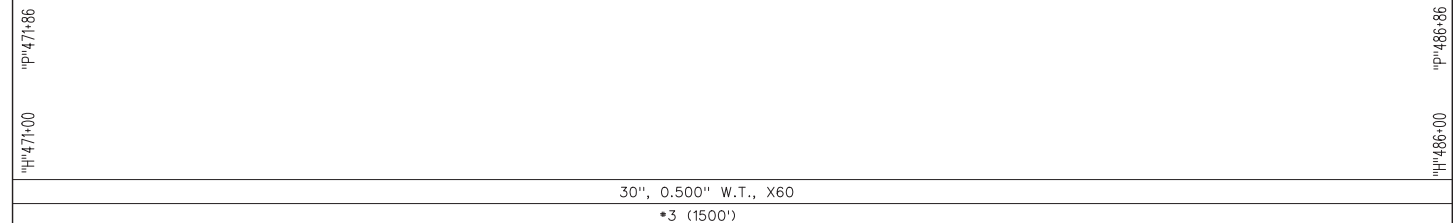
HORIZONTAL SCALE: 1"=100'



PIPELINE DETAILS

STATIONING

MINIMUM COVER: 84"



NOTE:

- TRENCH BACKFILL TO HAVE 2 FT OF CONTROLLED LOW-STRENGTH MATERIAL INSTALLED PER TRENCH SECTION ON SHEET 43.

SAFETY PLEDGE

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

FOR REV. 2 ONLY

REGISTERED PROFESSIONAL ENGINEER

JOHNNA L. QUINN

RCE 75608

Exp. _____

CIVIL

STATE OF CALIFORNIA

FOR REV. 2 ONLY

REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

NOT

APPROVED FOR CONSTRUCTION

STATE OF CALIFORNIA

NOTIFIED U.S.A.

DATE TICKET NO. BY _____

NOTE:
WARNING: CONFIDENTIAL, PROPRIETARY INFORMATION. THIS DOCUMENT CONTAINS CONFIDENTIAL, PROPRIETARY INFORMATION THAT IS THE SOLE PROPERTY OF PACIFIC GAS AND ELECTRIC COMPANY AND IS INTENDED FOR USE ONLY BY AUTHORIZED PACIFIC GAS AND ELECTRIC COMPANY EMPLOYEES & AGENTS. COPYRIGHT PACIFIC GAS AND ELECTRIC COMPANY.



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
2	7/28/15	ISSUED FOR BID					
1	3/25/10	ISSUED FOR CONSTRUCTION - SH.1-4, 38-40	30603988	RC	CEB	RL	RSC GTK

APPROVED BY	GM 30603988
GT	SUPV J.QUIN
GT	DSGN P.DANIELS
GT	DWN B.SUDICKY
CHKD	
OK	
DATE	
SCALE	AS NOTED

PIPELINE - PLAN & PROFILE
MP-8.90 TO MP-9.20, PHASE II
407 TRANSMISSION LINE

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

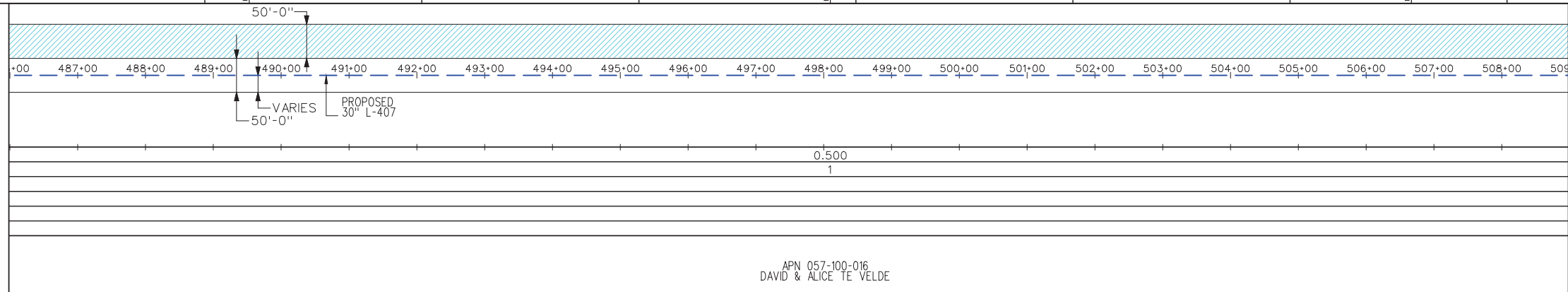
BILL OF MATL SH. 38	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO. 22 OF 47 SHEETS	
3802911	2

REVISIONS

Attachment C

JOB #	30603988
BOM ITEM #	3
DESIGN CRITERIA	
LOCATION CLASS	1
DESIGN FACTOR	0.50
FDP	975 PSIG 48.75 % SMYS
MAOP	975 PSIG 48.75 % SMYS
STRENGTH TEST PRESSURE	
MIN.	1584 PSIG 79.20 % SMYS
MAX.	1679 PSIG 83.95 % SMYS
TEST MEDIUM	WATER
PIPE SPEC.	API 5L X60 DSAW
O.D.	30.000" W.T. 0.500"
WELD INSPECTION	(WELDING MANUAL TD-4160M)*
NON-DESTRUCTIVE TESTING:	
MIN % OF THE PROJECT DAILY WORK	
100% VISUALLY INSPECT ALL WELDS.	(THIS REQUIREMENT APPLIES EVEN IF NON-DESTRUCTIVE TESTING IS REQUIRED)
%	

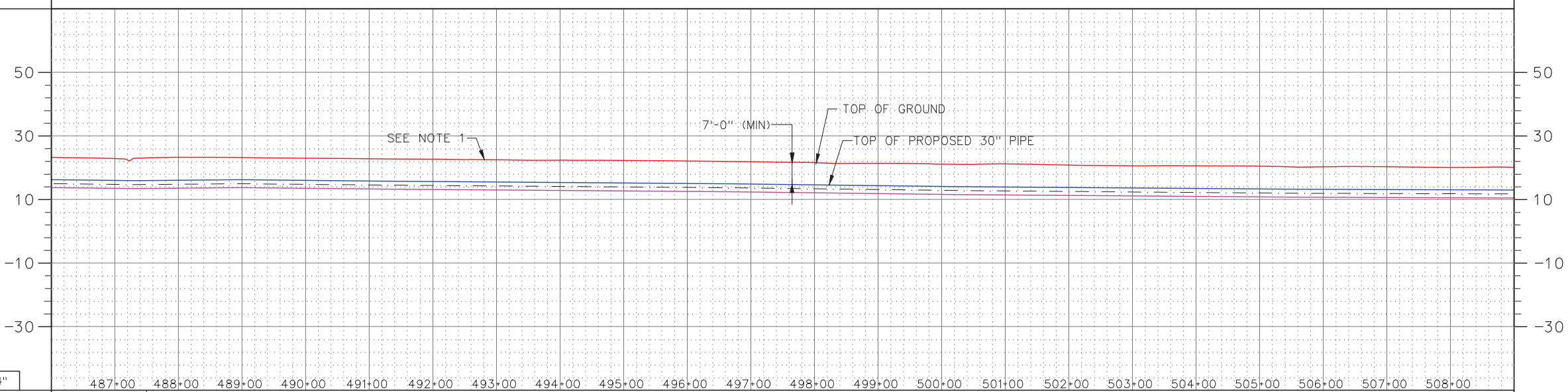
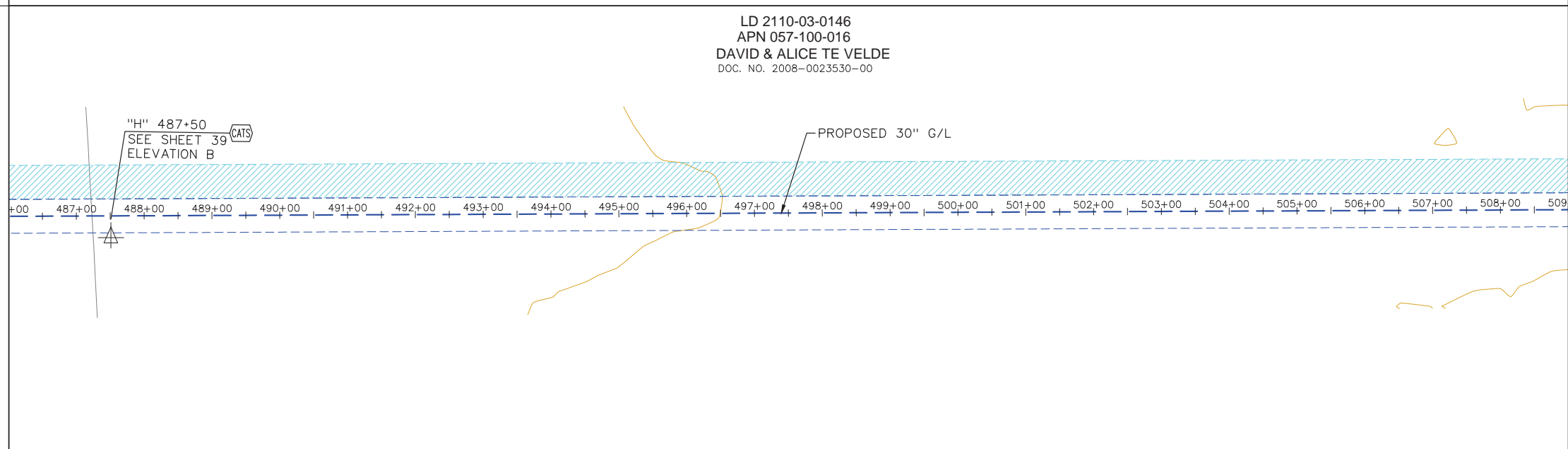
EASEMENT / WORK SPACE	TEMP CONST ACCESS-FRANCHISE
DRILL RIG FOOTPRINT WORKSPACE	TEMPORARY WORKSPACE
PERMANENT EASEMENT	ENVIRONMENTAL
GENERAL	CLASS LOC
CULTURAL	BIOLOGICAL
WATERBODIES	EXCLUSIONS
RIGHT OF WAY	TRACT NUMBER
OWNERSHIP/AGENCY	PROPERTY SKETCH NO.
PERMIT DWG. NO.	



APN 057-100-016
DAVID & ALICE TE VELDE
LD 2110-03-0146
APN 057-100-016
DAVID & ALICE TE VELDE
DOC. NO. 2008-0023530-00

MATCHLINE SEE CONTINUATION SEE SHEET #22

MATCHLINE FOR CONTINUATION SEE SHEET #24



NOTE:
1. TRENCH BACKFILL TO HAVE 2 FT OF CONTROLLED LOW-STRENGTH MATERIAL INSTALLED PER TRENCH SECTION ON SHEET 43.

ELEVATION DATUM:	LOCATION OF BENCH MARK:
VERTICAL SCALE: 1"=20'	HORIZONTAL SCALE: 1"=100'
SURVEY PROFILE	
SCALE: 1"=100'	
SURVEY PLAN	
SCALE: 1"=100'	

PIPELINE DETAILS	STATIONING
"H" 486+00	"H" 487+50
"H" 488+86	CATS, LINE MARKER
"H" 509+00	

FOR REV. 2 ONLY

FOR REV. 2 ONLY

NOTIFIED U.S.A.
DATE TICKET NO. BY

NOTE:
WARNING: CONFIDENTIAL, PROPRIETARY INFORMATION. THIS DOCUMENT CONTAINS CONFIDENTIAL, PROPRIETARY INFORMATION THAT IS THE SOLE PROPERTY OF PACIFIC GAS AND ELECTRIC COMPANY AND IS INTENDED FOR USE ONLY BY AUTHORIZED PACIFIC GAS AND ELECTRIC COMPANY EMPLOYEES & AGENTS. COPYRIGHT PACIFIC GAS AND ELECTRIC COMPANY.



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
2	7/28/15	ISSUED FOR BID					
1	3/25/10	ISSUED FOR CONSTRUCTION - SH.1-4, 38-40	30603988	RC	CEB	RL	RSC GTK

APPROVED BY	GM 30603988
GT	SUPV J.QUIN
	DSGN P.DANIELS
	DWN B.SUDICKY
CHKD	
OK	
DATE	
SCALE	AS NOTED

PIPELINE - PLAN & PROFILE
MP-9.220 TO MP-9.64, PHASE II
407 TRANSMISSION LINE
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

BILL OF MATL SH. 38	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO. 23 OF 47 SHEETS	
3802911	2

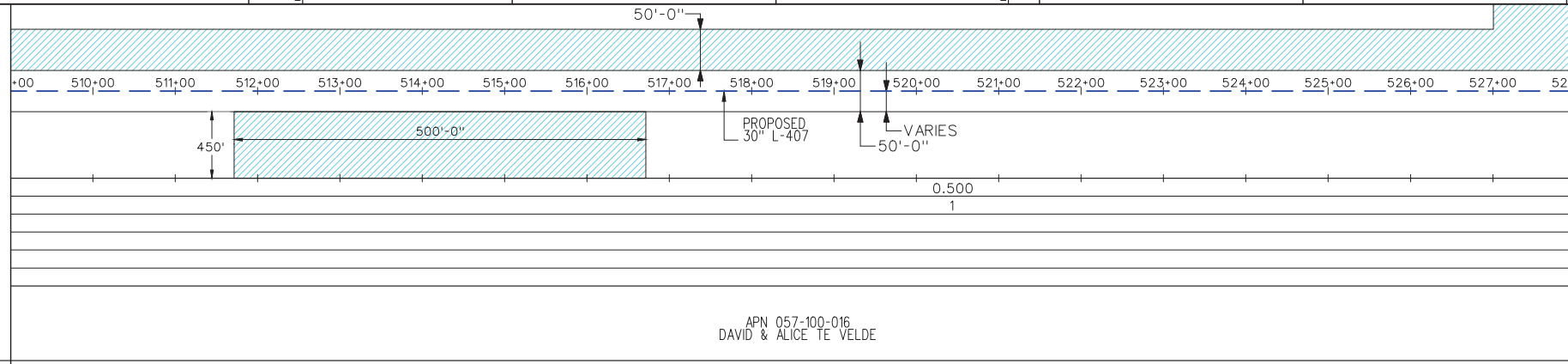
Attachment C

JOB # 30603988
 BOM ITEM # 3
 DESIGN CRITERIA
 LOCATION CLASS 1
 DESIGN FACTOR 0.60
 FDP 975 PSIG 48.75 % SMYS
 MAOP 975 PSIG 48.75 % SMYS
 STRENGTH TEST PRESSURE
 MIN. 1584 PSIG 79.20 % SMYS
 MAX. 1679 PSIG 83.95 % SMYS
 1800 PSIG=90% SMYS
 TEST MEDIUM WATER
 PIPE SPEC. API 5L X60 DSAW
 O.D. 30.000" W.T. 0.500"
 WELD INSPECTION (WELDING MANUAL TD-4160M)*
 NON-DESTRUCTIVE TESTING:
 MIN % OF THE PROJECT DAILY WORK
 100% * VISUALLY INSPECT ALL WELDS.
 (THIS REQUIREMENT APPLIES EVEN IF NON-DESTRUCTIVE TESTING IS REQUIRED)

EASEMENT/WORK SPACE
 TEMP CONST ACCESS-FRANCHISE
 DRILL RIG FOOTPRINT WORKSPACE
 TEMPORARY WORKSPACE
 PERMANENT EASEMENT

ENVIRONMENTAL
 GENERAL
 CLASS LOC
 CULTURAL
 BIOLOGICAL
 WATERBODIES
 EXCLUSIONS

RIGHT OF WAY
 TRACT NUMBER
 OWNERSHIP/AGENCY
 PROPERTY SKETCH NO.
 PERMIT DWG. NO.

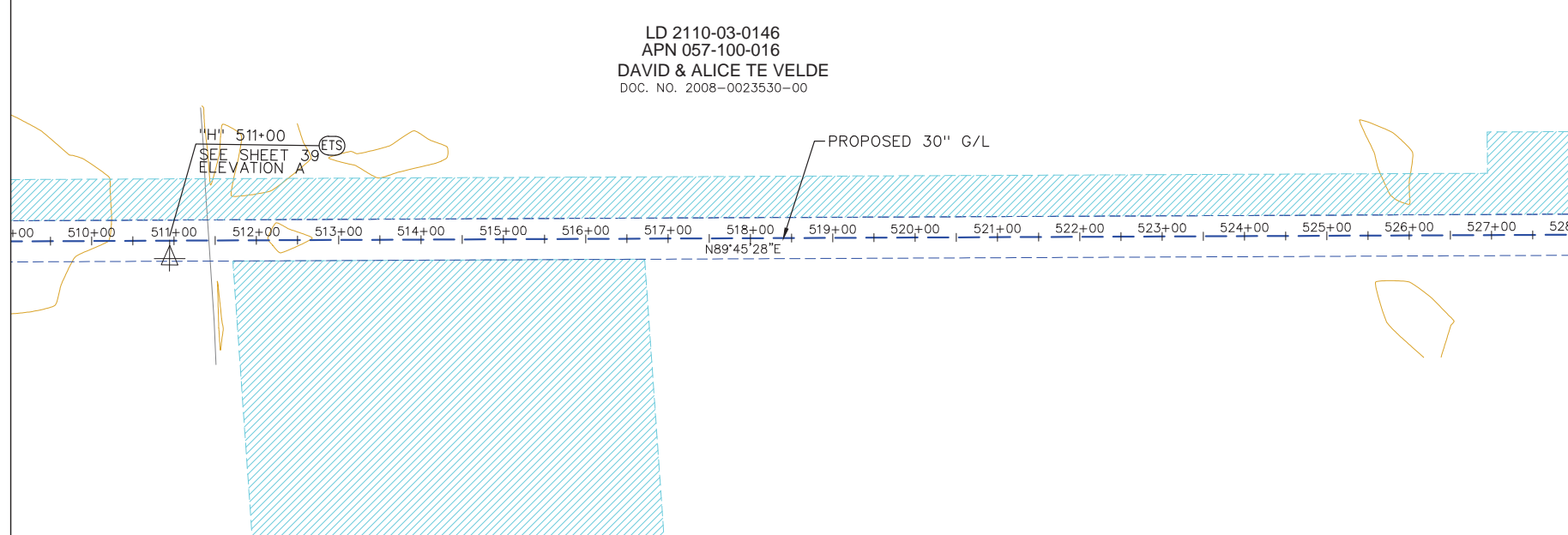


LD 2110-03-0146
 APN 057-100-016
 DAVID & ALICE TE VELDE
 DOC. NO. 2008-0023530-00

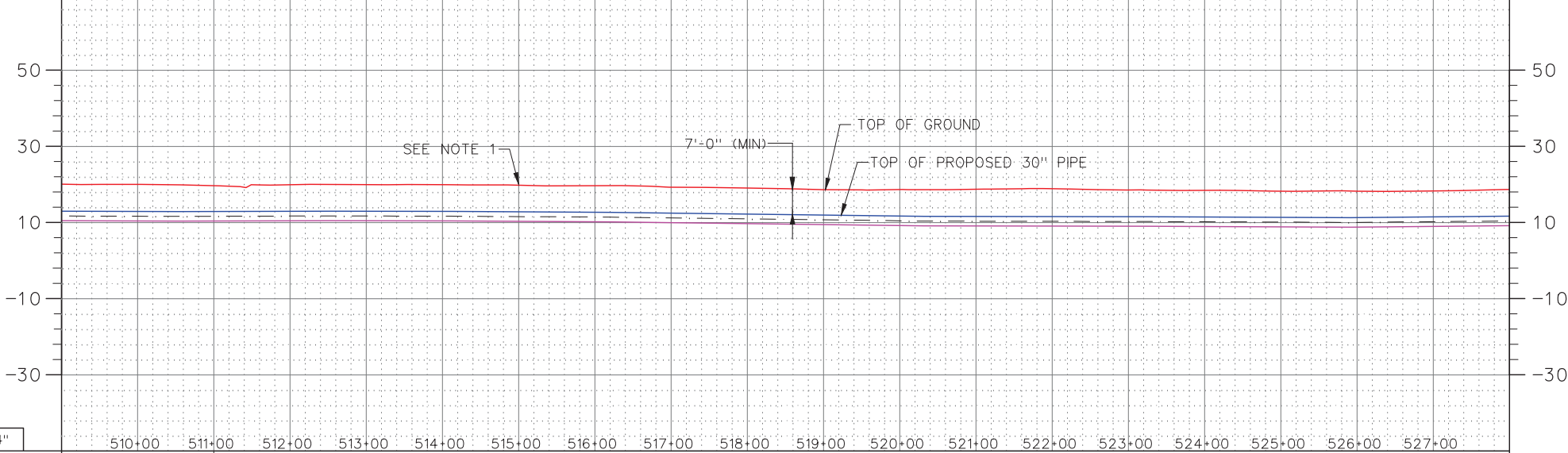
MATCHLINE FOR CONTINUATION SEE SHEET #23

MATCHLINE FOR CONTINUATION SEE SHEET #25

SURVEY PLAN
 SCALE: 1"=100'

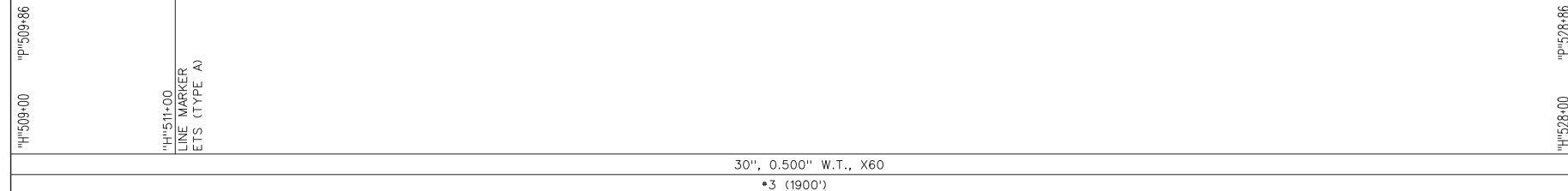


SURVEY PROFILE
 HORIZONTAL SCALE: 1"=100'



NOTE:
 1. TRENCH BACKFILL TO HAVE 2 FT OF CONTROLLED LOW-STRENGTH MATERIAL INSTALLED PER TRENCH SECTION ON SHEET 43.

PIPELINE DETAILS STATIONING
 ELEVATION DATUM: LOCATION OF BENCH MARK:
 VERTICAL SCALE: 1"=20'



NOTIFIED U.S.A.
 DATE TICKET NO. BY

NOTE: WARNING: CONFIDENTIAL, PROPRIETARY INFORMATION. THIS DOCUMENT CONTAINS CONFIDENTIAL, PROPRIETARY INFORMATION THAT IS THE SOLE PROPERTY OF PACIFIC GAS AND ELECTRIC COMPANY AND IS INTENDED FOR USE ONLY BY AUTHORIZED PACIFIC GAS AND ELECTRIC COMPANY EMPLOYEES & AGENTS. COPYRIGHT PACIFIC GAS AND ELECTRIC COMPANY.

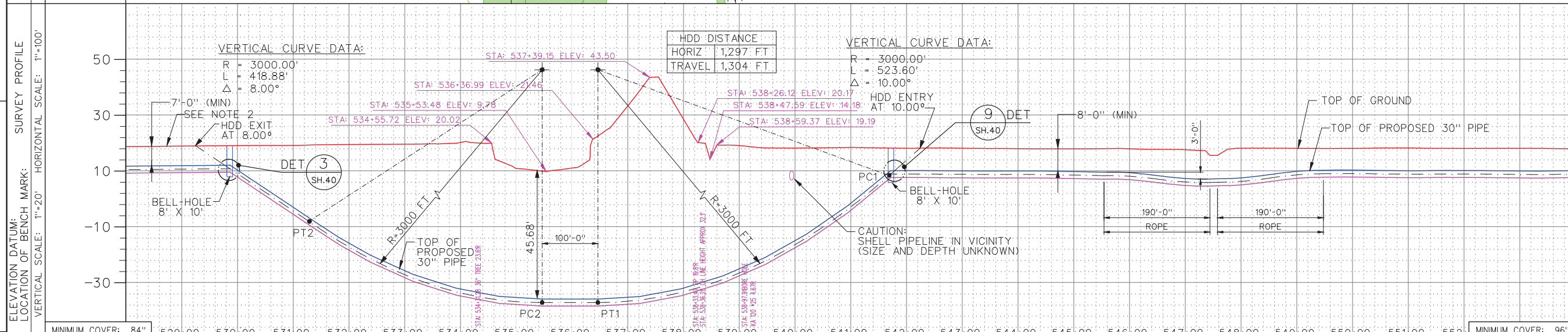
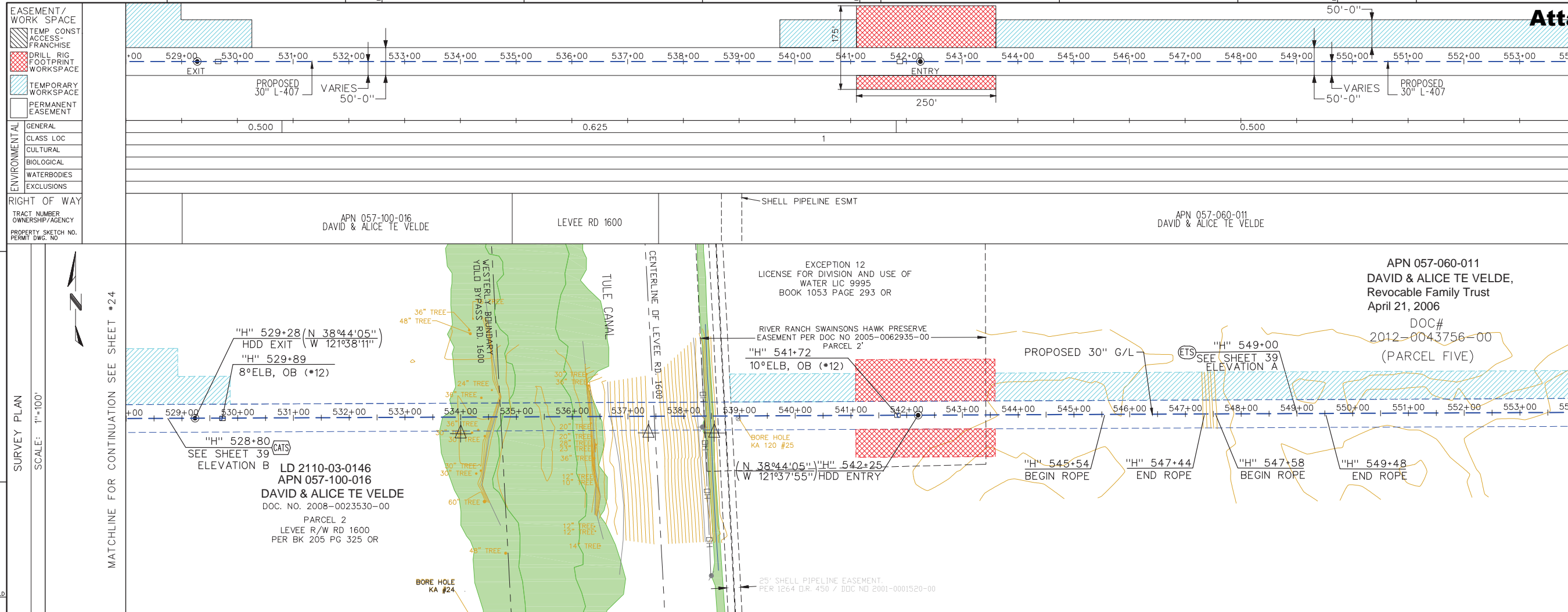


NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
2	7/28/15	ISSUED FOR BID					
1	3/25/10	ISSUED FOR CONSTRUCTION - SH.1-4, 38-40	30603988	RC	CEB	RL	RSC GTK

APPROVED BY	GM 30603988
GTK	SUPV J.QUINN
	DSGN P.DANIELS
	DWN B.SUDICKY
	CHKD
	OK
DATE	
SCALES	AS NOTED

PIPELINE - PLAN & PROFILE
 MP-9.64 TO MP-10.00, PHASE II
 407 TRANSMISSION LINE
 PACIFIC GAS AND ELECTRIC COMPANY
 SAN FRANCISCO, CALIFORNIA

BILL OF MATL SH. 38	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO. 24 OF 47 SHEETS	
3802911	2



PIPELINE STATIONING	PIPELINE DETAILS
"H" 528+00	"P" 528+86
"H" 529+80	30", 0.500" W.T., X60
"H" 529+89	*3 (193')
"H" 529+93	WT CHANGE
"H" 531+30	"H" 531+30 BEGIN CURVE
"H" 534+00	LINE MARKER
"H" 535+48	"H" 535+48 BEGIN CURVE
"H" 536+48	30", 0.625" W.T., X65
"H" 537+40	*5 (1182')
"H" 538+66	LINE MARKER
"H" 541+70	"H" 541+70 END CURVE
"H" 541+72	WT CHANGE
"H" 541+72	"H" 541+72 10° ELB, OB
"H" 545+54	"H" 545+54 BEGIN ROPE
"H" 547+44	"H" 547+44 END ROPE
"H" 547+58	"H" 547+58 BEGIN ROPE
"H" 549+00	"H" 549+00 ETS (TYPE A)
"H" 549+48	"H" 549+48 END ROPE
"H" 554+00	"P" 554+91

JOB # 30603988
BOM ITEM # 3

DESIGN CRITERIA
LOCATION CLASS 1
DESIGN FACTOR 0.60
FDP .975 PSIG 48.75 % SMYS
MAOP .975 PSIG 48.75 % SMYS
STRENGTH TEST PRESSURE
MIN. 1584 PSIG 79.20 % SMYS
MAX. 1679 PSIG 83.95 % SMYS
1800 PSIG=90% SMYS
TEST MEDIUM WATER
PIPE SPEC. API 5L X60, DSAW
O.D. 30.000" W.T. 0.500"

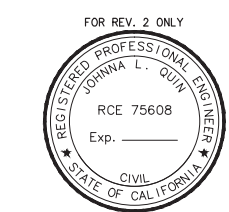
WELD INSPECTION (WELDING MANUAL TD-4160M)*
NON-DESTRUCTIVE TESTING:
MIN % OF THE PROJECT DAILY WORK
100% VISUALLY INSPECT ALL WELDS.
(THIS REQUIREMENT APPLIES EVEN IF NON-DESTRUCTIVE TESTING IS REQUIRED)

JOB # 30603988
BOM ITEM # 5

DESIGN CRITERIA
LOCATION CLASS 1
DESIGN FACTOR 0.60
FDP .975 PSIG 36.00 % SMYS
MAOP .975 PSIG 36.00 % SMYS
STRENGTH TEST PRESSURE
MIN. 1584 PSIG 58.49 % SMYS
MAX. 1679 PSIG 61.99 % SMYS
2438 PSIG=90% SMYS
TEST MEDIUM WATER
PIPE SPEC. API 5L X65, DSAW
O.D. 30.000" W.T. 0.625"

WELD INSPECTION (WELDING MANUAL TD-4160M)*
NON-DESTRUCTIVE TESTING:
MIN % OF THE PROJECT DAILY WORK
100% VISUALLY INSPECT ALL WELDS.
(THIS REQUIREMENT APPLIES EVEN IF NON-DESTRUCTIVE TESTING IS REQUIRED)

NOTE:
1. 1 TO 1 SCALE HDD DETAIL SEE SHEET *36
2. TRENCH BACKFILL TO HAVE 2 FT OF CONTROLLED LOW-STRENGTH MATERIAL INSTALLED PER TRENCH SECTION ON SHEET 43



BILL OF MATL SH. 38
DWG LIST
SUPSDS
SUPSD BY
SHEET NO. 25 OF 47 SHEETS
3802911 2

NOTIFIED U.S.A.
DATE TICKET NO. BY

NOTE:
1. 1 TO 1 SCALE HDD DETAIL SEE SHEET *36

NOTE:
WARNING: CONFIDENTIAL, PROPRIETARY INFORMATION. THIS DOCUMENT CONTAINS CONFIDENTIAL, PROPRIETARY INFORMATION THAT IS THE SOLE PROPERTY OF PACIFIC GAS AND ELECTRIC COMPANY AND IS INTENDED FOR USE ONLY BY AUTHORIZED PACIFIC GAS AND ELECTRIC COMPANY EMPLOYEES & AGENTS. COPYRIGHT PACIFIC GAS AND ELECTRIC COMPANY.



NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY
2	7/28/15	ISSUED FOR BID					
1	3/25/10	ISSUED FOR CONSTRUCTION - SH.1-4, 38-40	30603988	RC	CEB	RL	RSC

APPROVED BY
GTK

GM 30603988
SUPV J.QUIN
DSGN P.DANIELS
DWN B.SUDIICKY
CHKD
OK
DATE
SCALES AS NOTED

PIPELINE - PLAN & PROFILE
MP-10.00 TO MP-10.49, PHASE II
407 TRANSMISSION LINE
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
CENTRAL VALLEY FLOOD PROTECTION BOARD

RESOLUTION NO. 2016-07

FINDINGS AND DECISION AUTHORIZING ISSUANCE OF
ENCROACHMENT PERMITS NO. 19031-2 AND 19031-3
PACIFIC GAS AND ELECTRIC COMPANY
406/407 PIPELINE
YOLO, SUTTER AND PLACER COUNTIES

WHEREAS, The Pacific Gas and Electric (PG&E) Company PG&E is proposing to construct their Line 406/407 Pipeline project in Yolo, Sutter, and Placer counties. The line will provide a larger capacity and service reliability to the existing PG&E natural gas transmission and distribution pipeline system. It will connect existing PG&E lines 400 and 401 in Yolo County and existing Line 123 in Placer County. Also, a new distribution feeder main (DFM) will supply natural gas to developments in northern Sacramento County. The proposed project will include approximately 26 miles of new 30-inch diameter and 2.5 miles of 10-inch diameter natural gas transmission pipeline; and

WHEREAS, Within the Central Valley Flood Protection Board's jurisdiction, the PG&E Line 407 pipeline project will cross the Knights Landing Ridge Cut, Sacramento River, Natomas East Main Drainage Canal, and the Yolo Bypass. All crossings are separately being reviewed, each with a 19031 permit number; and

WHEREAS, The State Lands Commission as lead agency under the California Environmental Quality Act, Public Resources Code sections 21000 *et seq.* ("CEQA") prepared a Draft Environmental Impact Report (DEIR) (SCH No. 2007062091 , April 2009), Final Environmental Impact Report (FEIR) (SCH No. 2007062091 , October 2009) and a Mitigation Monitoring and Reporting Plan (MMRP) on the PG&E Line 406/407 Natural Gas Pipeline Project (incorporated herein by reference and available at the Central Valley Flood Protection Board offices or State Lands Commission offices); and

WHEREAS, On November 18, 2009, the State Lands Commission adopted the FEIR, MMRP, approved findings and a statement of overriding considerations pursuant to the CEQA Guidelines (incorporated herein by reference); and

WHEREAS, As of April 11, 2016 the U.S. Army Corps of Engineers (USACE) 408 decision letter has not been received for this application. Staff anticipates receipt of a letter soon indicating that the USACE District Engineer has no objection to the project, subject to conditions. Upon receipt of the letter, staff will review to ensure conformity with the permit language and incorporate it into the Permit; and

WHEREAS, Board staff completed a technical review of Permit Applications No. 19031-2 and 19031-3; and

WHEREAS, The Board has conducted a public hearing on Permit Applications No. 19031-2 and 19031-3 and has reviewed the Reports of its staff, the documents and correspondence in its file, and the environmental documents prepared by the State Lands Commission;

NOW, THEREFORE, BE IT RESOLVED THAT,

Findings of Fact.

1. The Board hereby adopts as findings the facts set forth in the two Staff Reports.
2. The Board has reviewed all Attachments, Exhibits, Figures, and References listed in the two Staff Reports.

CEQA Findings.

3. The Board, as a responsible agency, has independently reviewed the analyses in the DEIR (SCH No. 2007062091, April 2009) and the FEIR (SCH No. 2007062091, October 2009) which includes the MMRP, the State Lands Commission Lead Agency findings, and has reached its own conclusions.
4. The Board, after consideration of the DEIR (SCH No. 2007062091, April 2009) and the FEIR (SCH No. 2007062091, October 2009) and the State Lands Commission Lead Agency findings, adopts the project description, analysis and findings which are relevant to the project.
5. **Findings regarding Significant Impacts.** Pursuant to CEQA Guidelines sections 15096(h) and 15091, the Board determines that the State Lands Commission findings, attached to the Staff Report, and incorporated herein by reference, summarizes the FEIR determinations regarding impacts of the PG&E Line 406/407 Natural Gas Pipeline Project, before and after mitigation. Having reviewed the FEIR and the State Lands Commission findings, the Board makes its findings:
 - a. **Findings Regarding Significant and Unavoidable Impacts.** The Board finds that the PG&E Line 406/407 Natural Gas Pipeline Project, may have the following significant, unavoidable impacts, as more fully described in the State Lands Commission findings. Mitigation has been adopted for each of these impacts, although it does not reduce the impact to less than significant. The impacts and mitigation measures are set forth in more detail in the State Lands Commission findings.
 - 1) Construction or Operation Emissions Exceeding Regional Thresholds. - The Project would result in construction or operational emissions that exceed quantitative

significance thresholds (including quantitative thresholds for ozone precursors) established by air pollution control districts in which the Project would be constructed.

- 2) Construction or Operation Emissions Exceeding State or Federal Standards - The Project would result in emissions that substantially contribute to an exceedance of a State or Federal ambient air quality standard.
- 3) System Safety and Risk of Serious Injuries and Fatalities Due to Project Upset. - The Project would expose people to an increased risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment
- 4) Result in Safety Risk to Nearby Land Uses. The proposed Project would expose people to an increased risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.

Finding: The Board finds that changes or alterations have been required in, or incorporated into, the project which substantially lessen such impacts, as set forth more fully in the State Lands Commission findings, but that each of the above impacts remains significant after mitigation. Such mitigation measures are within the responsibility of another agency, or the State Lands Commission, and should implement the described mitigation measures. Specific economic, legal, social, technological or other considerations, rendered infeasible mitigation or alternatives that would have reduced these impacts to less than significant.

b. Findings regarding Significant Impacts that can be reduced to Less Than Significant.

The significant impacts and the mitigation measures to reduce them to less than significant are adopted on November 19, 2009 (which includes a Statement of Facts, Findings, Impacts and Mitigation Measures, Statement of Overriding Considerations) and Mitigation Monitoring and Reporting Program(MMRP) which was made part of the FEIR. Based on its independent review of the FEIR which included the MMRP, the Board finds that for each of the significant impacts described, changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects as identified in the FEIR. Moreover, such changes or alterations are within the responsibility and jurisdiction of another public agency, or State Lands Commission, and such changes have been adopted by that agency. It is hereby determined that the impacts addressed by these mitigation measures will be mitigated to a less-than-significant level or avoided by incorporation of these mitigation measures into the project.

As a responsible agency, the Central Valley Flood Protection Board has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of

the Project which it decides to carry out, finance, or approve. The Board confirms that it has reviewed the MMRP, and confirmed that the State Lands Commission has adopted and committed to implementation of the measures identified therein. The Board agrees with the analysis in the MMRP and confirms that there are no feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment. None of the mitigation measures in the MMRP require implementation by the Board directly, although continued implementation of the MMRP shall be made a condition of issuance of the Permit. However, the measures in the MMRP may be modified to accommodate changed circumstances or new information not triggering the need for subsequent or supplemental analysis under CEQA Guidelines sections 15062 or 15063.

6. **Statement of Overriding Considerations.** Pursuant to CEQA Guidelines sections 15096(h) and 15093, the Board has balanced the economic, social, technological and other benefits of the Project described in Permit Applications No. 19031-2 and 19031-3, against its significant and unavoidable impacts, listed in paragraph 5(a) above, and finds that the benefits of the Project outweigh these impacts and they may, therefore, be considered “acceptable”.

The Board finds that there is an immediate need to provide natural gas services to high growth areas in Sacramento, Sutter, and Placer Counties. The Board finds that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable adverse environmental effects of the project, and the adverse environmental effects are considered acceptable when these benefits of the project are considered.

7. **Custodian of Record.** The custodian of the CEQA record for the Board is its Executive Officer, Leslie Gallagher, at the Central Valley Flood Protection Board Offices at 3310 El Camino Avenue, Room 151, Sacramento, California 95821.

Considerations pursuant to Water Code section 8610.5.

8. **Evidence Admitted into the Record.** The Board has considered all the evidence presented in this matter, including the original application for Permits No. 19031-2 and 19031-3 and technical documentation provided by PG&E on the Natural Gas Line Project, past and present Staff Reports and attachments, the original PG&E Line 406/407 Natural Gas Line Environmental Impact Report on the Project (Draft and Final Versions), Statement of Overriding Considerations, and the MMRP.
9. **Best Available Science.** In making its findings, the Board has used the best available science relating to the issues presented by all parties and the design is in compliance with these standards.
10. **Effects on State Plan of Flood Control.** The proposed transmission pipeline will be installed via a horizontal directional drill with entry and exit locations a minimum of 1000-foot from any State Plan of Flood Control feature; therefore the proposed project is expected to result in no adverse effect on any SPFC facilities and is consistent with the CVFPP.

11. **Effects of Reasonably Projected Future Events.** The proposed project will be located deep enough that it will not be affected by scouring of the river bottom in future high water events. Therefore, there are no expected adverse effects to the proposed project from reasonable projected future events.

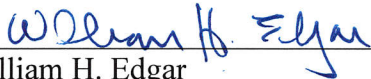
Other Findings/Conclusions regarding Issuance of the Permit.

12. This resolution shall constitute the written decision of the Board in the matter of Permits No. 19031-2 and 19031-3.

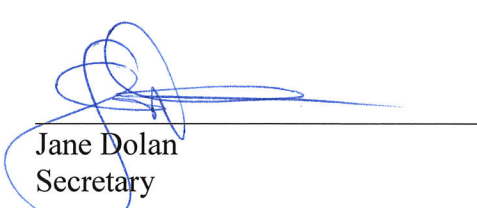
Approval of Encroachment Permits No. 19031-1, 19031-2, and 19031-3.

15. Based on the foregoing, the Board hereby conditionally approves issuance of Permits No. 19031-2 and 19031-3 in substantially the form provided in the Staff Report for Permit 19031-2 and 19031-3, subject to receipt of USACE comment letter indicating that the District Engineer has no objection to the project.
16. The Board directs the Executive Officer to take the necessary actions to prepare and execute Permits No. 19031-2 and 19031-3 and all related documents and to prepare and file a Notice of Determination under the California Environmental Quality Act for PG&E Line 406/407 Natural Gas Pipeline Project.

PASSED AND ADOPTED by vote of the Board on 4/22/16, 2016



William H. Edgar
President


Jane Dolan
Secretary