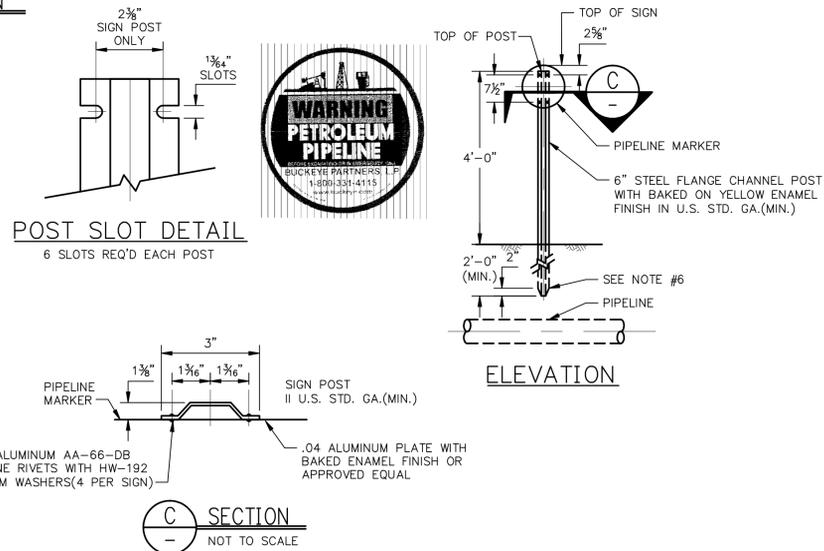


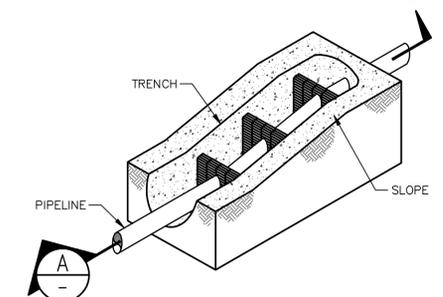
10 OPEN TRENCH THROUGH MOUNTAINOUS TERRAIN
NOT TO SCALE



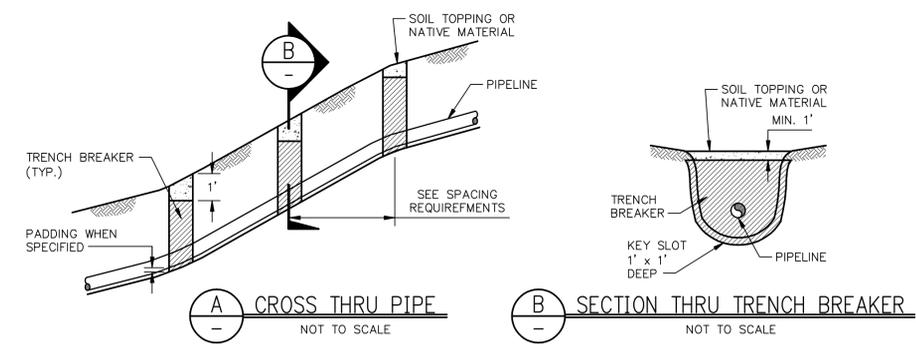
- NOTES:
- SIGN SHALL BE STEEL.
 - SIGN TO BE INSTALLED TO FACE ALONG PIPELINE ALIGNMENT IN CALTRANS R.O.W.
 - REPLACE "PETROLEUM" WITH "GAS".
 - REPLACE "BUCKEYE PARTNERS LP" WITH "SAN DIEGO GAS & ELECTRIC".
 - REPLACE "1-800-331-4115" WITH "1-800-661-7343" (SDG&E).
 - REPLACE www.buckeye.com WITH www.sdge.com/safety.
 - PROVIDE & INSTALL PIPELINE SIGNS ALONG THE PIPELINE AT LOCATIONS DETERMINED BY CALTRANS.

- FABRICATION NOTES:
- POSTS TO BE FURNISHED WITH FOUR(4) SLOTTED HOLES AS INDICATED FOR ATTACHING PIPELINE MARKER.
 - PIPELINE MARKERS TO SUPPLIED WITH OR WITHOUT BLACK ARROW, FIGURES AND NUMBERS ON A YELLOW BACKGROUND.
 - PIPELINE MARKERS AND POSTS TO BE FURNISHED UNASSEMBLED. CONTRACTOR SHALL PROVED POP RIVETS AND GUN TO INSTALL SIGNS ON POSTS.
 - SIGN TO BE FURNISHED WITH FOUR HOLES AS INDICATED.
 - ARROW TO BE OMITTED ON SIGNS THAT ARE INSTALLED AT P.I.'s
 - POSTS SHALL BE TAPPED ON ONE END TO FACILITATE DRIVING.

12 PIPELINE SIGN DETAIL
NOT TO SCALE



11 TYPICAL TRENCH BREAKER
NOT TO SCALE



- SPACING REQUIREMENTS:
- 5 TO 15% SLOPES. MINIMUM 300'
 - TO 30% SLOPES. MINIMUM 200'
 - >30% SLOPES. MINIMUM 100'

- NOTES:
- INSTALL TRENCH BREAKERS AT LOCATIONS ALONG THE TRENCH WHERE THE PROFILE IS 5% SLOPE OR GREATER. INSTALL BREAKERS ALSO AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS AND WHERE NEEDED TO AVOID DRAINING OF A WETLAND.
 - TRENCH BREAKERS TO BE CONSTRUCTED OF SAND BAGS (MIXTURES OF SAND AND CEMENT, 6:1).
 - KEY TRENCH BREAKER A MINIMUM OF 1 FT. INTO SIDES OF PIPELINE TRENCH.
 - BACKFILL THE TRENCH ON THE DOWNSLOPE SIDE OF BREAKER BEFORE UPSLOPE SIDE.
 - FINAL LOCATIONS AND DESIGN OF TRENCH BREAKERS WILL BE DETERMINED BY THE PROJECT ENGINEER BASED ON SITE-SPECIFIC CONDITIONS AT THE TIME OF CONSTRUCTION.

REV.	DATE	DESCRIPTION	DWN	CHK
0	8-5-08	ISSUED FOR GRADING PERMIT	RAD	WHR

Sega
 Engineers - Architects - Technicians
 Design - Construction - Field Service
 16041 Foster
 P.O. Box 1000
 Stilwell, Kansas 66085-1000

ORANGE GROVE ENERGY L.P.
 Schaumburg, IL

ORANGE GROVE PROJECT
 GAS PIPELINE DETAILS

DESIGN BY: J. LANGEL	CHECKED BY: T. HEAUSLER
DRAWN BY: R. DAVILA	DATE: 07-24-08
CLIENT I.D. JPO00101	SEGA PROJECT NO. 07-201

CADD FILE NAME: 07201-GP-C852.dwg	REV. 0
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