

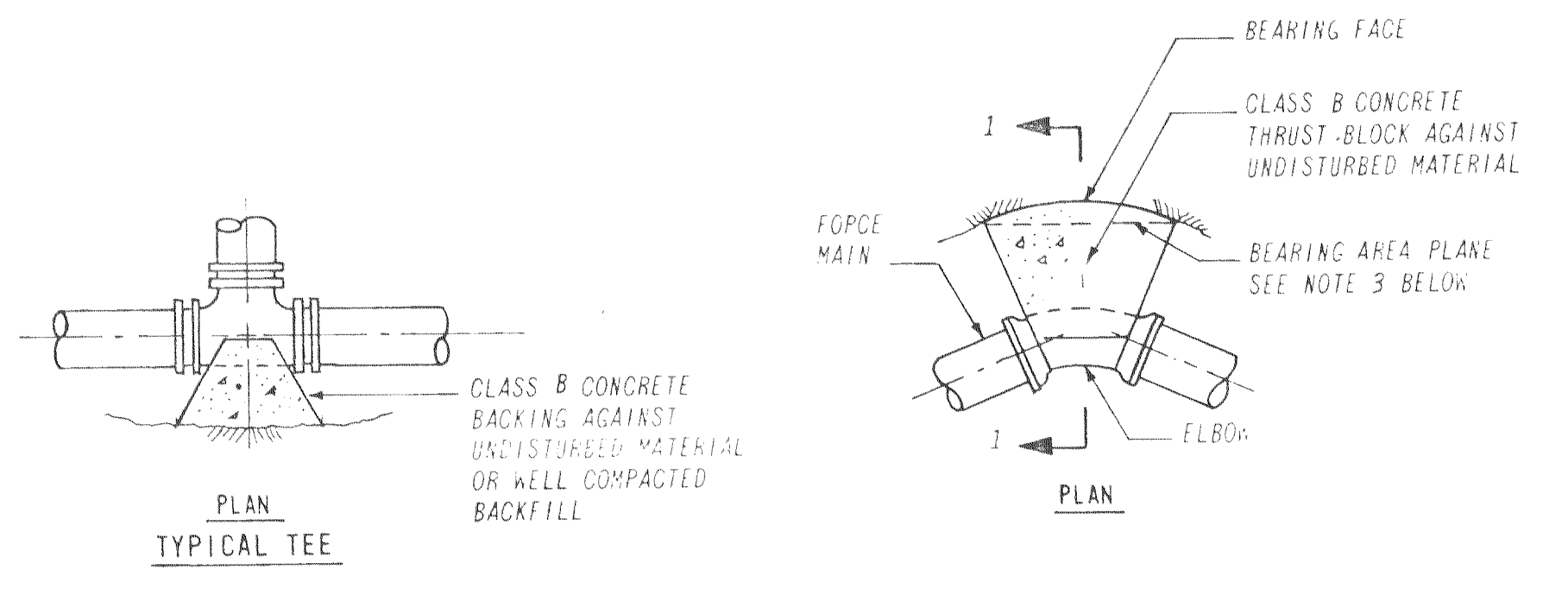
- GENERAL NOTES:
- TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTHS SHOWN ABOVE THE "LINE OF NARROW TRENCH LIMIT".
 - BELOW THE "LINE OF NARROW TRENCH LIMIT" THE TRENCH SHOULD NOT BE EXCAVATED BEYOND THE WIDTH SHOWN.
 - IF EXCAVATION AND BACKFILL BELOW NORMAL DEPTH IS REQUIRED, SHEETING MAY BE ORDERED.
 - SHEETING, IF USED, IN ALL CASES SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF THE PIPE, UNLESS OTHERWISE INDICATED OR DIRECTED.
 - ALL UNEXCAVATED ROCK WITHIN 3'-0" HORIZONTALLY OF THE ENDS OF BUILDING CONNECTIONS, BRANCHES, AND STUBS, AND DOWN TO A HORIZONTAL PLANE 6" BELOW THE BOTTOMS OF SUCH CONNECTIONS, BRANCHES, AND STUBS, SHALL BE SHATTERED. SEE SPECIFICATIONS.
 - CONCRETE ARCH SHALL BE PLACED IN SECTIONS NOT EXCEEDING 2 PIPE LENGTHS AND HAVING ENDS OF SECTIONS LOCATED AT PIPE JOINTS. SECTIONS OF ARCH SHALL BE SEPARATED FROM ADJACENT SECTIONS WITH 1/2" PREMOLDED JOINT FILLER. PIPE SURFACES TO BE IN CONTACT WITH THE ARCH SHALL BE THOROUGHLY CLEANED OF FOREIGN MATERIALS AND SATURATED WITH CLEAN WATER PRIOR TO THE PLACEMENT OF CONCRETE. LONGITUDINAL REINFORCEMENT, WHEN REQUIRED, SHALL NOT EXTEND THROUGH THE JOINT FILLER INTO ADJACENT SECTIONS.
 - CONCRETE CLASSES NOTED ON THE DRAWINGS SIGNIFY MINIMAL STANDARDS.
 - FLEXIBLE JOINTS DENOTE THAT ANY SPECIFIED COUPLING OR RING GASKETED JOINT MAY BE USED AT THE CONTRACTOR'S OPTION.

PIPE TYPE	MATERIAL					
	BEDDING TYPE	COMP	PIPE ZONE TYPE	COMP	BACKFILL TYPE	COMP
DUCTILE IRON (DI)	SELECTED BACKFILL (S-B)	85%	S-B	85%	NATIVE	85%
STEEL (STL)	SELECTED BACKFILL	90%	S-B	90%	NATIVE	85%
ASBESTOS CEMENT (ACP)	SCREENED GRAVEL (S-G)	90%	S-G	90%	NATIVE	85%

- SELECT BACKFILL SHALL BE NATIVE MATERIAL WITH NO STONE OR FRAGMENT LARGER THAN 3 IN. IN GREATEST DIMENSION.
- COMPACTION INDICATES THE DRY DENSITY, EXPRESSED AS A PERCENTAGE OF OPTIMUM DENSITY (SEE SPEC. SECTION 2B-20).
- ALL BACKFILL UNDER ROADWAYS, DRIVEWAYS AND STRUCTURES SHALL BE COMPACTED TO 90 PERCENT DENSITY, EXCEPT THAT THE TOP 2 FEET SHALL BE COMPACTED TO 95 PERCENT DENSITY. FOR COUNTY ROAD CROSSINGS, SEE DETAIL ON THIS DRAWING.

TYPICAL FORCE MAIN TRENCH SECTION

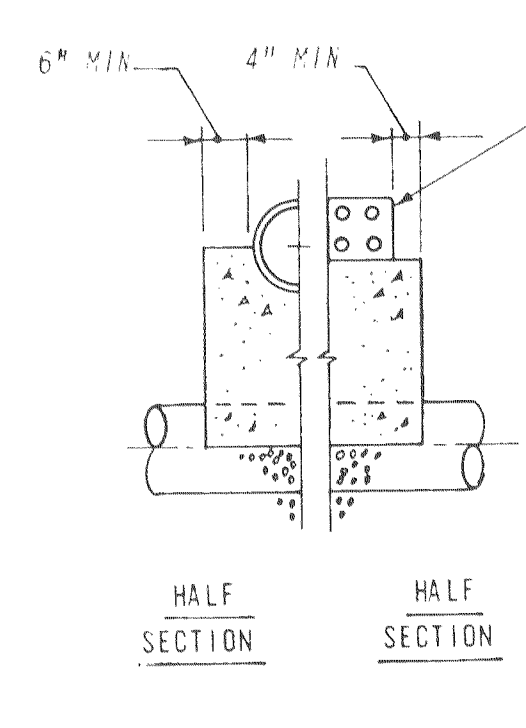
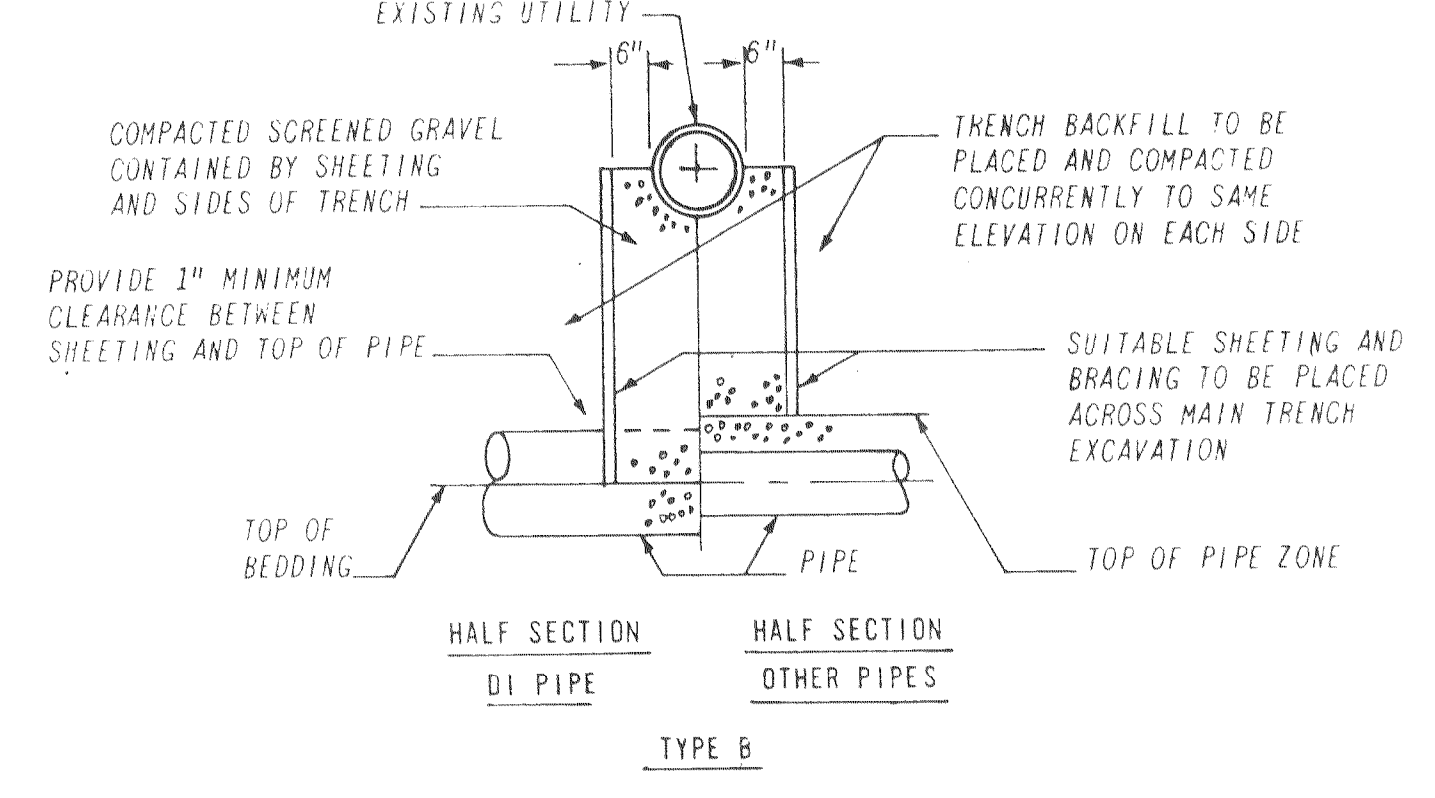
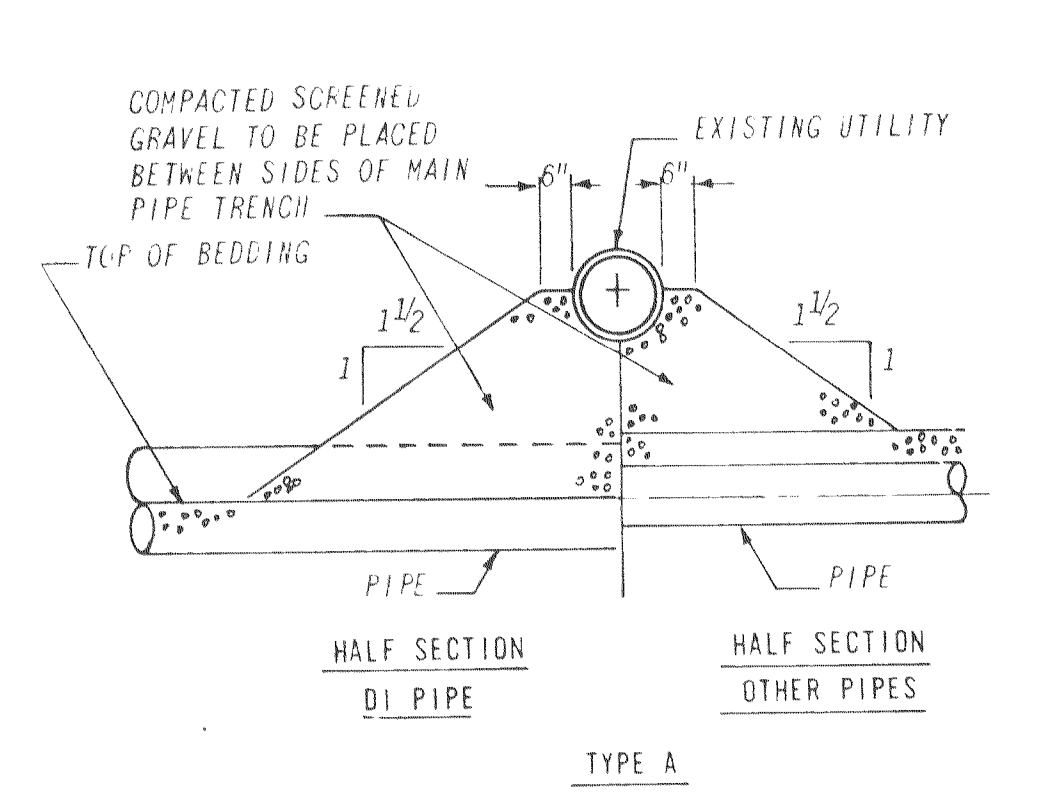
TYPICAL TRENCH SECTIONS COUNTY RIGHTS-OF-WAY NO SCALE



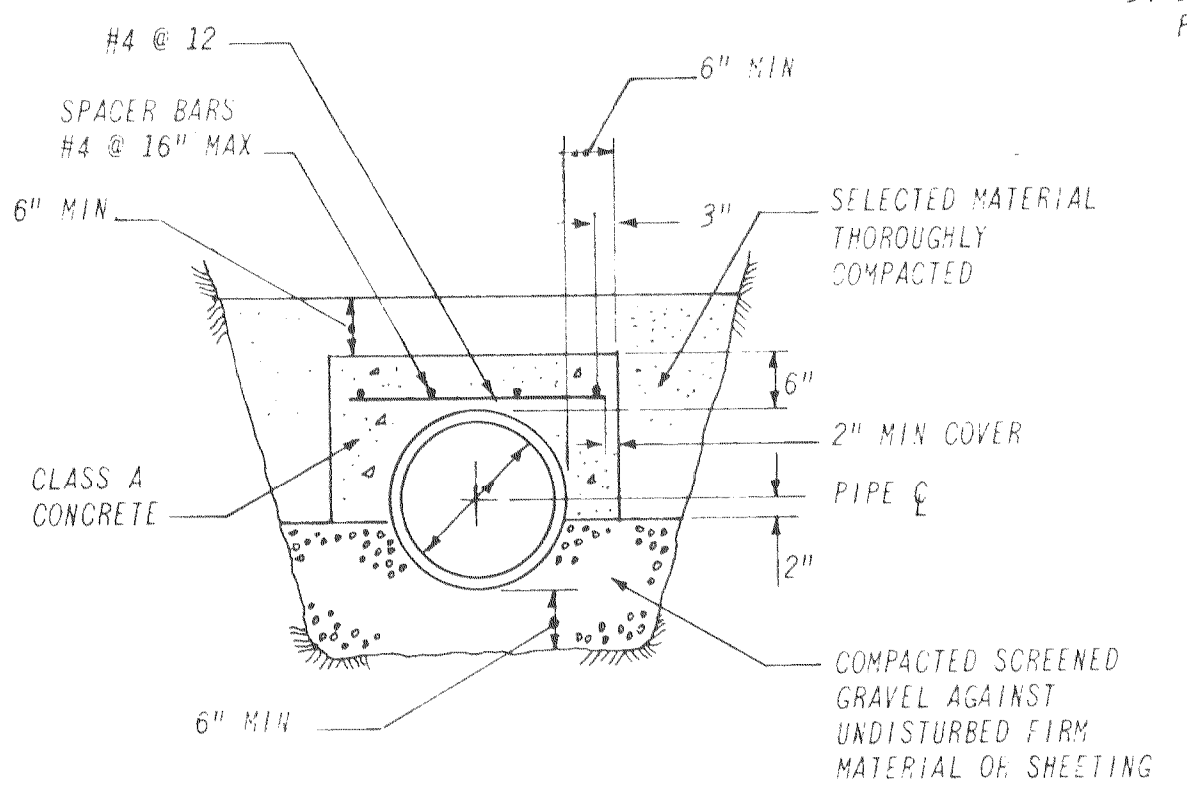
- CONDITIONS FOR COUNTY R.O.W. CROSSINGS:
- NO TRENCH SHEETING TO BE LEFT IN ROADWAY SECTION.
 - NO WATERJETTING OR PUDDLING IN ROADWAY SECTION.
 - ENCROACHMENT PERMIT MUST BE OBTAINED BY CONTRACTOR, AS WELL AS BY OWNER OF FACILITY.
 - NO STOCKPILING OF MATERIALS OR PLACING SPOIL WITHIN COUNTY RIGHT OF WAY.

SYMBOLS

- [R] WARNING SIGN SEE DETAIL, SHEET G-3
- [A] AIR RELEASE VALVE SEE DETAIL, SHEET G-3
- [CO] CLEANOUT SEE DETAIL, SHEET G-3



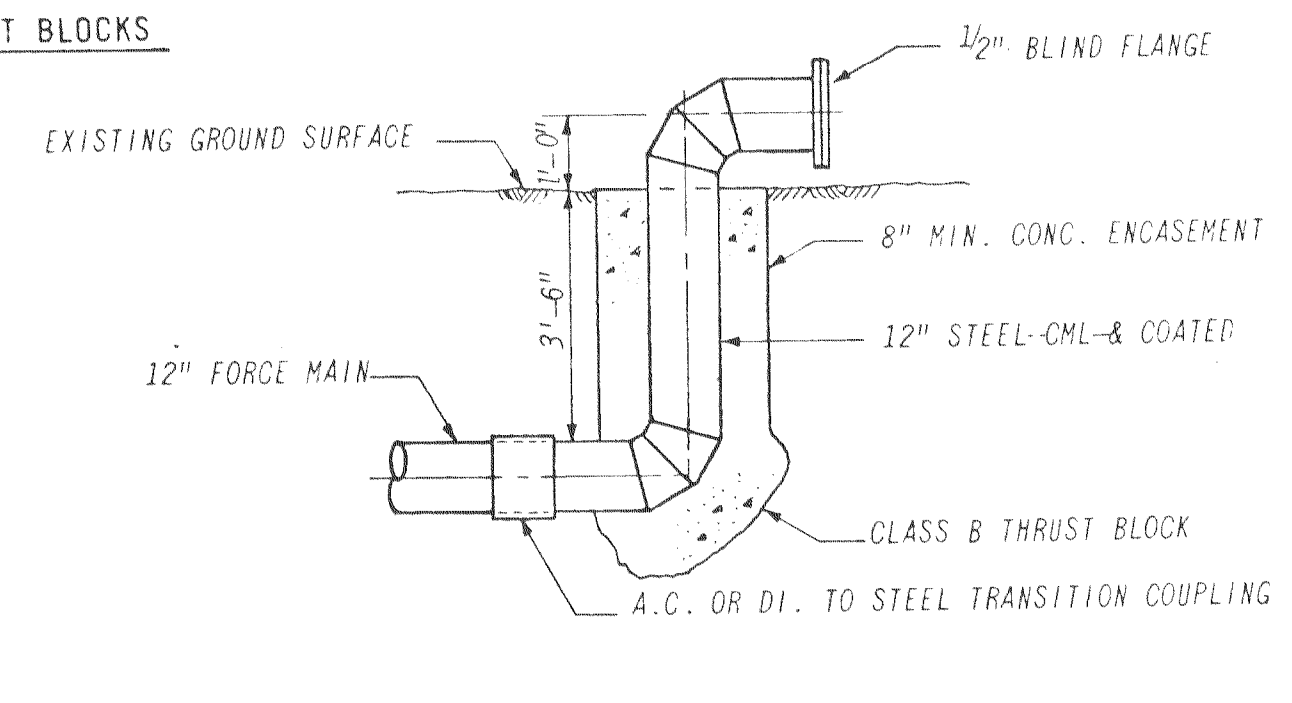
TYPICAL SUPPORTS FOR EXISTING UTILITIES NO SCALE



TYPICAL CONCRETE ARCH DETAIL NO SCALE

TYPICAL FORCE MAIN THRUST BLOCKS NO SCALE

- NOTES:
- ALL FORCE MAIN BENDS SHALL BE BACKED UP WITH A CONCRETE THRUST BLOCK BETWEEN THE PIPE AND UNDISTURBED MATERIAL.
 - ALL THRUST BLOCKS SHALL HAVE 16 SQ FT MIN AREA.
 - BEARING AREA REQUIRED ON VERTICAL PLANE 90° TO RADIUS PLANE PASSING THROUGH MIDPOINT OF BEND.



FIELD OUTLET DETAIL NO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS	DESCRIPTION

DRAWN BY: *[Signature]*
 DEPT. CHECK: *[Signature]*
 PROJ. CHECK: *[Signature]*

REGISTERED PROFESSIONAL ENGINEER
 CHARLES E. FOLLO
 NO. 14,825
 CIVIL
 STATE OF CALIFORNIA

M&E METCALF & EDDY, INC. ENGINEERS
 BOSTON • NEW YORK • PALO ALTO • CHICAGO

REG. PROF. ENGR. _____ DATE _____
 REG. PROF. ENGR. _____ DATE _____

SCALE: AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

PACIFIC COAST PRODUCERS
 GROVILLE, CALIFORNIA
 INDUSTRIAL WASTEWATER TREATMENT & DISPOSAL FACILITIES

FORCE MAIN
 OUTSIDE PIPING DETAILS

JOB: _____
 FILE NO.: _____
 SHEET: G-2