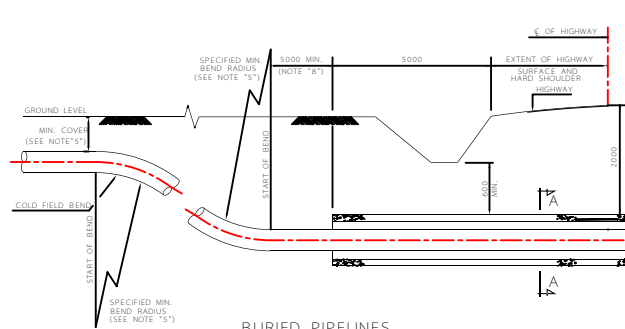
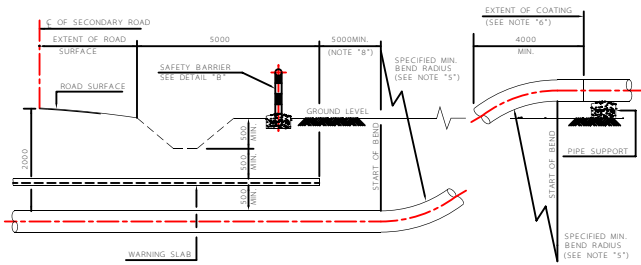


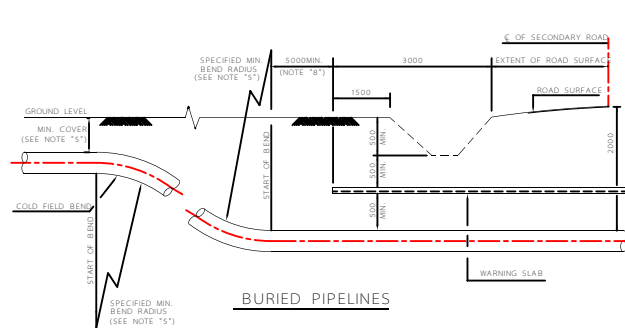
ABOVE GROUND PIPELINES



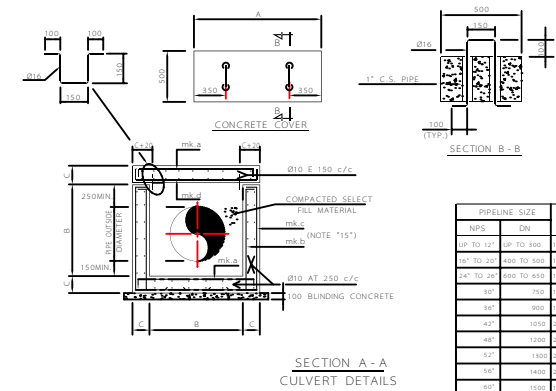
BURIED PIPELINES



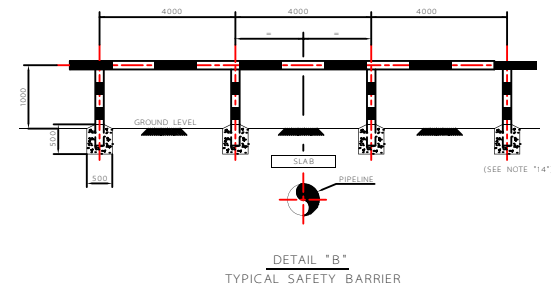
ABOVE GROUND PIPELINES



BURIED PIPELINES



SECTION A - A
CULVERT DETAILS



DETAIL "B"
TYPICAL SAFETY BARRIER

NOTES

- 1- ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE STATED.
- 2- THE SPECIFIED PROTECTIVE COATING OF BURIED PIPELINES IS TO BE CONTINUOUS AT ROAD CROSSING.
- 3- DOUBLE COAT AND DOUBLE WRAP SHALL BE APPLIED AT ALL ABOVE GROUND/BURIED PIPELINES ROAD CROSSING.
- 4- ALL ROAD CROSSINGS SHOWN ON THIS DRAWING WILL BE CONSTRUCTED BY CUT-AND-FILL METHOD, WHERE THIS METHOD IS UNACCEPTABLE TO THE ROAD AUTHORITIES, THE CROSSING MAY BE LAD-IN THRUST BORED CASING AS DETAILED IN SHEET 2.
- 5- THE MINIMUM BEND RADIUS AND THE MINIMUM COVER ARE SPECIFIED ON THE PROJECT DRAWINGS.
- 6- ABOVE GROUND PIPELINES TO BE COATED WITH CLASS A OR B (REF. IPS-C-TP-274) PROTECTIVE COATING FOR THE COMPLETE LENGTH OF THE CROSSING. THE COATING SHALL EXTEND FOR AT LEAST 4 METERS FROM WHERE THE PIPELINE IS COMPLETELY CLEAR OF THE GROUND.
- 7- BACKFILL OVER PIPE SHALL BE PLACED IN 150 LAYERS AND PNEUMATICALLY TAMPED TO REACH THE DENSITY OF UNDISTURBED SURROUNDING AND SURFACE MATERIAL SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER.
- 8- CARRIER PIPE TO BE CONTINUED WITHOUT VERTICAL OR SIDE BENDS IN PROPERTY LIMIT OR MINIMUM DISTANCE OF 5000MM.
- 9- CONCRETE TO BE OF 1:2:4 MIX WITH MINIMUM CUBE OF 210 N/CM² CRUSHING STRENGTH AT 28 DAYS.
- 10- BUNDING CONCRETE TO BE CLASS 1:4:8.
- 11- ALL REINFORCEMENT TO BE MILD STEEL.
- 12- ALL REINFORCEMENT TO HAVE 40 COVER.
- 13- DISTRIBUTION BARS FOR ALL CASES TO BE Ø 10 AT 250 C/C.
- 14- SAFETY BARRIER TO BE FABRICATED FROM Ø10(Ø200) PIPE (OR OTHER AVAILABLE MATERIAL) AND SET IN CONCRETE. BARRIER TO BE PAINTED BLACK AND WHITE AS SHOWN. BARRIER TO BE LOCATED IN ACCORDANCE WITH INSTRUCTIONS OF THE ENGINEER.
- 15- THE SHAPES OF REFERED MK ARE AS FOLLOWS:



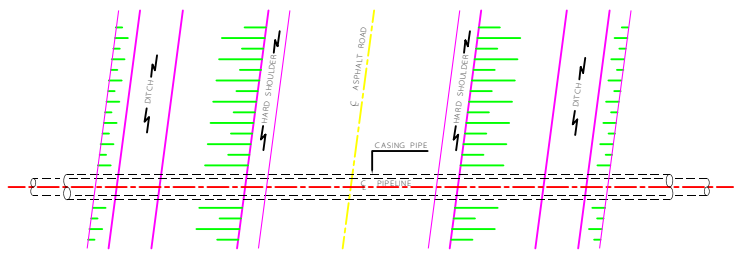
THIS DWG. SUPERSEDES DWG. No. S4L-6502

NO.	DESCRIPTION	DATE

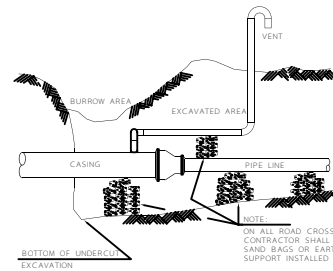
IRANIAN PETROLEUM STANDARDS
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PIPELINE ROAD CROSSING
MAJOR & SECONDARY ROAD CROSSING

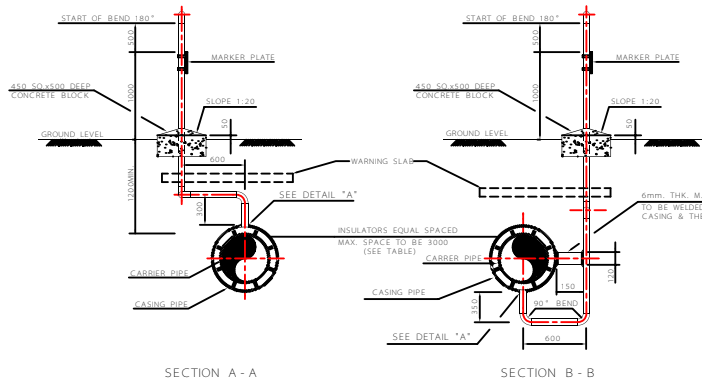
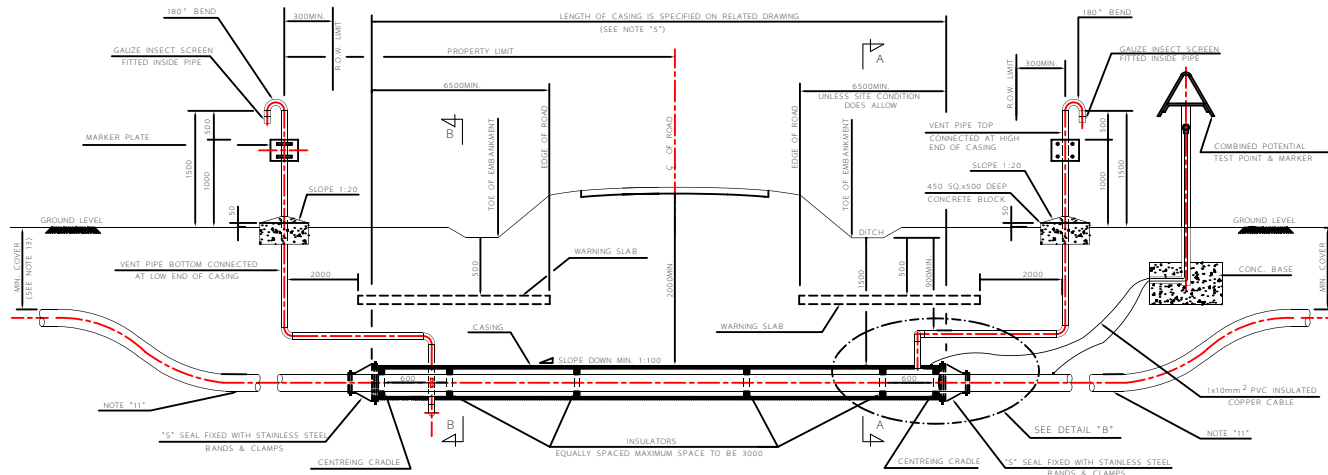
DWG.	DRAWING NO.	SHEET	REV.
	IPS - D - PI - 175		



ROAD CROSSING PLAN

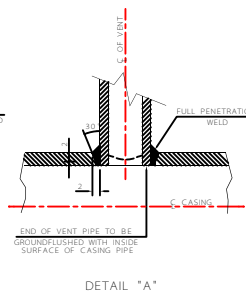


DETAIL 'B'



SECTION A - A

SECTION B - B



DETAIL 'A'

CARRIER PIPE	CASING PIPE	VENT	INSULATOR SPACE
NOM. DN	NPS DN	DN	DN
4"	100	8"	200
6"	150	10"	250
8"	200	12"	300
10"	250	16"	400
12"	300	18"	450
14"	350	20"	500
16"	400	24"	600
20"	500	24"	600
22"	550	30"	750
24"	600	30"	750
30"	750	36"	900
36"	900	42"	1050
40"	1000	48"	1200
42"	1050	48"	1200

NOTES

- 1- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- 2- WITHIN A CASED CROSSING THE PIPELINE IS CATHODICALLY PROTECTED. CARE SHOULD BE TAKEN NOT TO DAMAGE COAT & WRAP WHEN PULLING THROUGH CARRIER PIPE AND THAT INSIDE OF THE CASING IS DRY BEFORE END SEALS ARE APPLIED.
- 3- DOUBLE COAT AND DOUBLE WRAP ON CARRIER PIPE OVER LENGTH OF CASING AND EXTENDING 3 METERS EITHER SIDE OF END OF CASING. CASING PIPE TO BE SINGLE COAT DOUBLE WRAP. VENT PIPE TO BE SIMILARLY TREATED TO A HEIGHT OF 300 mm ABOVE GROUND LEVEL. ABOVE THIS LEVEL THE VENT PIPE TO BE PRIMED AND PAINTED DAYGLOW YELLOW.
- 4- CASING SHALL BE FREE OF BURRS AT WELDS. VENT PIPES SHALL BE INSTALLED BEFORE INSERTION OF CARRIER PIPE.
- 5- EACH CASING END SHALL HAVE A MINIMUM DISTANCE OF 8 METER FROM THE CENTER LINE OF ROAD.
- 6- THE CASING SHALL BE SUPPORTED FOR ITS ENTIRE LENGTH AND SHALL BE LAD SO AS TO SLOPE SLIGHTLY.
- 7- CASING SHALL BE THOROUGHLY CHECKED TO ENSURE THAT NO OUT-OF-ROUNDNESS OR DENTS ARE EXISTING. HOLES IN CASING PIPE FOR VENTS SHOULD BE PREPARED AND VENTS WELDED IN BEFORE INSERTION OF CARRIER PIPE.
- 8- EXPOSED PIPES SHALL BE PAINTED IN ACCORDANCE WITH N.I.O.C. SPECIFICATION.
- 9- BACKFILL OVER CASING SHALL BE PLACED IN 150 LAYERS AND PNEUMATICALLY TAMPED TO REACH THE DENSITY OF UNDISTURBED SURROUNDINGS AND SURFACE MATERIAL SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER.
- 10- PROPERTY LIMIT FOR DIFFERENT ROAD CROSSING IS ANNOUNCED BY ENGINEER ACCORDING TO REGULATIONS OF MINISTRY OF ROAD AND TRANSPORTATION.
- 11- CARRIER PIPE TO BE CONTINUED WITHOUT VERTICAL OR SIDE BENDS IN PROPERTY LIMIT OR FOR MINIMUM DISTANCE OF 5000.
- 12- BLOCK VALVES SHALL BE INSTALLED AT EACH SIDE OF ROAD CROSSING WHERE SPECIFIED IN ROUTE AND PROFILE DRAWING.
- 13- THE MIN COVER ARE SPECIFIED ON THE PROJECT DRAWINGS.
- 14- CASING PIPE SHALL BE CARBON STEEL API 5LX-52.

THIS DWG. SUPERSEDES DWG. No.SM-6014

NO.	DESCRIPTION	DATE

IRANIAN PETROLEUM STANDARDS

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PIPELINE ROAD CROSSING
TYPICAL ARRANGEMENT OF
CASED PIPE ROAD CROSSING

DWG.	DRAWING NO.	SHEET	REV.
	IPS - D - PI - 175		