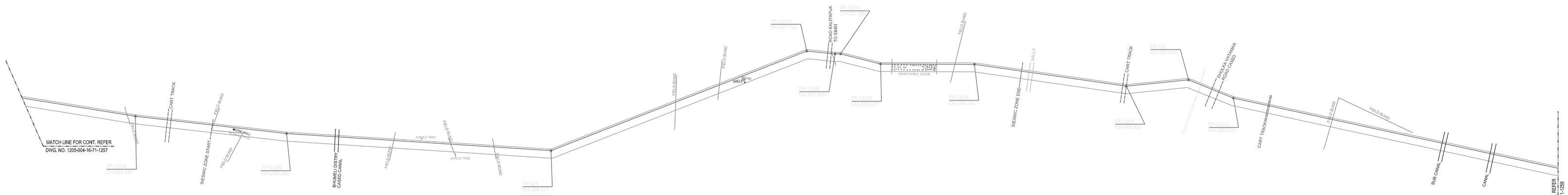
TURNING POINT (TP)	TP-123/A, TP-123/B, TP-124, TP-124/A, TP-124/B, TP-213, TP-124/C, TP-124/E, TP-124/F, TP-125, TP-125/A
DEFLECTION ANGLE ('_ ' _ ")	2°30'00"L, 3°00'00"L, 25°00'00"L, 27°00'00"R, 5°30'00"L, 14°00'00"R, 14°00'00"L, 8°00'00"R, 14°00'00"L, 28°00'00"R, 10°00'00"L
DISTANCE BETWEEN TP's (m)	212.535, 476.170, 908.210, 910.875, 94.622, 15.000, 136.825, 311.495, 509.305, 207.490, 160.680, 1053.703
STATE & DISTRICT	DHOLKA, AHEMADABAD, GUJARAT

SURVEY DETAILS



PLANIMETRY

SCALE :-

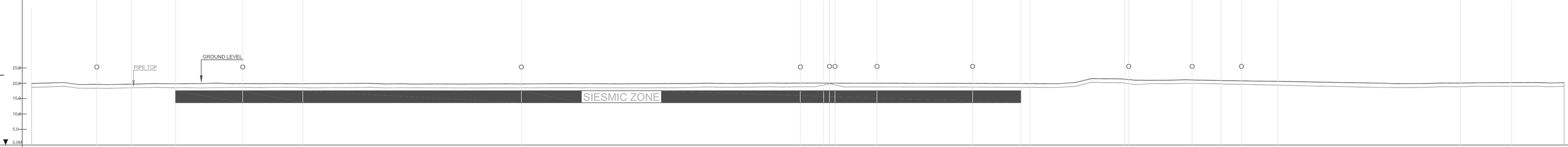
ALONG LINE 1:5000
ACROSS LINE 1:5000

GROUND PROFILE

SCALE :-

HORIZONTAL 1:5000
VERTICAL 1:500

REFERENCE DATUM



GROUND LEVELS(m)	20.043, 20.220, 20.350, 19.700, 19.780, 19.700, 19.790, 19.890, 20.030, 19.930, 19.980, 20.020, 20.160, 19.980, 20.000, 19.980, 20.040, 20.050, 19.950, 20.020, 20.040, 20.050, 20.070, 20.100, 19.900, 19.940, 19.860, 19.880, 19.910, 19.950, 19.980, 20.010, 20.040, 20.060, 20.100, 20.130, 20.070, 20.040, 20.090, 20.200, 20.130, 20.190, 20.170, 20.160, 20.140, 20.120, 20.130, 20.100, 20.080, 20.050, 20.090, 20.070, 20.060, 20.030, 20.050, 20.010, 19.980, 19.950, 20.410, 21.630, 21.580, 21.540, 21.110, 21.080, 21.110, 21.250, 21.140, 21.040, 20.960, 20.890, 20.810, 20.750, 20.680, 20.570, 20.490, 20.400, 20.310, 20.220, 20.140, 19.970, 20.020, 20.030, 20.190, 20.180, 20.240, 20.290, 20.300, 20.335, 20.370, 20.200, 20.301
PIPE TOP LEVELS(m)	18.792, 18.850, 19.140, 19.510, 18.490, 18.480, 18.600, 18.690, 18.790, 18.650, 18.680, 18.600, 18.690, 18.660, 18.760, 18.760, 18.700, 18.760, 18.810, 18.620, 18.660, 18.690, 18.720, 18.800, 18.600, 18.640, 18.530, 18.620, 18.600, 18.580, 18.620, 18.610, 18.630, 18.650, 18.670, 18.660, 18.650, 18.630, 18.610, 18.630, 18.620, 18.640, 18.650, 18.750, 18.910, 18.830, 18.830, 18.890, 18.880, 18.890, 18.970, 18.960, 19.940, 19.920, 18.950, 18.920, 18.930, 18.910, 18.900, 18.920, 18.890, 18.870, 18.840, 18.820, 18.790, 18.800, 18.770, 18.750, 19.150, 20.440, 20.340, 20.300, 19.670, 19.990, 19.940, 20.110, 20.050, 19.980, 19.940, 19.760, 19.620, 19.340, 19.420, 19.280, 19.160, 19.090, 18.950, 18.820, 18.750, 18.730, 18.730, 18.800, 19.010, 18.940, 19.120, 19.120, 19.110, 19.150, 19.120, 19.010, 19.111
DISTANCE BETWEEN LEVEL POINTS (IN METRES)	59.0, 47.0, 48.0, 48.0, 48.0, 59.0, 48.0, 46.0, 48.0, 46.0, 55.0, 48.0, 49.0, 48.0, 48.0, 49.0, 61.0, 49.0, 45.0, 57.0, 47.0, 48.0, 49.0, 48.0, 49.0, 47.0, 49.0, 60.0, 48.0, 48.0, 48.0, 49.0, 58.0, 47.0, 49.0, 49.0, 47.0, 59.0, 48.0, 47.0, 47.0, 49.0, 49.0, 50.0, 49.0, 61.0, 49.0, 47.0, 49.0, 50.0, 52.0, 49.0, 46.0, 58.0, 48.0, 49.0, 46.0, 49.0, 58.0, 50.0, 48.0, 49.0, 47.0, 50.0, 48.0, 50.0, 48.0, 59.0, 49.0, 48.0, 49.0, 48.0, 49.0, 61.0, 49.0, 49.0, 49.0, 47.0, 48.0, 49.0, 53.0, 51.0, 46.0, 50.0, 49.0, 58.0, 48.0, 49.0, 48.0, 49.0, 48.0, 49.0, 57.0, 47.0, 47.0, 49.0, 48.0, 58.0, 48.0, 45.0
SURFACE /TERRAIN DETAILS	CULTIVATION, NALLA, CULTIVATION, CULTIVATION
CLASS/ZONE LOCATION	NOT APPLICABLE
DESIGN FACTOR	0.72
LINE PIPE DETAILS – MATERIAL	API 5L Gr. X-70, HSAW; API 5L Gr. X-70, LSAW; API 5L Gr. X-70, HSAW/ LSAW
LINE PIPE DETAILS – O.D.X. WALL THICKNESS (mm x mm)	610, 7.1; 610, 11.9; 610, 7.1; 610,7.9; 610, 7.1
CUMULATIVE CHAINAGE (000 + 000) (KM METRES)	285.274, 285.333, 285.380, 285.428, 285.476, 285.524, 285.583, 285.631, 285.679, 285.727, 285.775, 285.830, 285.878, 285.927, 285.975, 286.023, 286.072, 286.133, 286.182, 286.237, 286.284, 286.331, 286.379, 286.428, 286.476, 286.525, 286.572, 286.621, 286.681, 286.729, 286.777, 286.825, 286.874, 286.932, 286.979, 287.028, 287.077, 287.124, 287.183, 287.231, 287.278, 287.325, 287.374, 287.423, 287.473, 287.522, 287.583, 287.632, 287.679, 287.728, 287.786, 287.830, 287.879, 287.925, 287.983, 288.031, 288.080, 288.126, 288.175, 288.233, 288.283, 288.331, 288.380, 288.427, 288.477, 288.525, 288.575, 288.623, 288.682, 288.731, 288.779, 288.828, 288.878, 288.925, 288.986, 289.035, 289.084, 289.133, 289.180, 289.228, 289.285, 289.330, 289.381, 289.427, 289.477, 289.526, 289.584, 289.632, 289.681, 289.729, 289.779, 289.826, 289.875, 289.932, 289.979, 290.026, 290.075, 290.123, 290.181, 290.229, 290.274 KM; 285.274 KM; 286.274 KM; 287.274 KM; 288.274 KM; 289.274 KM; 290.274 KM; SY-8
SPECIAL PROVISIONS	
PIPE LINE COVER MINIMUM (METRES)	1.0; 1.2; 1.0; 1.5; 1.0; 1.2; 1.0; 1.5; 1.0; 1.2; 1.0; 1.2; 1.0; 1.2; 1.0; 1.5; 1.0; 1.5; 1.0
CROSSINGS	CART TRACK 285.631 / 285.679; SIESMIC ZONE START 285.727 / 285.775; BHIMELI DISTRY CASED CANAL 286.133 / 286.182; ROAD KALIYAPURA TO DABID 287.077 / 287.124; SIESMIC ZONE END 287.830 / 287.879; NALLA 287.925 / 287.983; CART TRACK 288.525 / 288.575; PIPOLIA VATAMAN ROAD CASED 289.084 / 289.133; CART TRACK 289.180 / 289.228; SUB CANAL 289.929 / 289.979; CANAL 290.075 / 290.123
SPECIAL INSTALLATION FITTING/MARKERS	W; W; W; K; W/A; W; W; W; W; W; W
COATING SCHEME	LINE PIPE: THREE LAYER POLYETHYLENE COATING (3LPE) (MIN. 2.5 mm THK) AS PER SPEC. No. 6-71-0041 AND FIELD JOINT COATING HEAT SHRINK SLEEVE AS PER SPEC. NO. 6-71-0044
CATHODIC PROTECTION INSTALLATIONS	REFER GENERAL NOTE-6
SOIL RESISTIVITY (OHM-M)	REFER GENERAL NOTE-7
SOIL STRATIFICATION DEPTH IN (m)	REFER GENERAL NOTE-7

PIPELINE DETAILS

SUB-SOIL DETAILS

TOPOGRAPHIC SYMBOLS

PROPOSED PIPE LINE; EXISTING PIPE LINE; TURNING POINT; INTERMEDIATE POINT; METALLED ROAD; UNMETALLED ROAD; RAILWAY LINE; STREAM > 5m WIDTH; STREAM <5m WIDTH (DRY); STREAM (PERENNIAL) > 5 m; CANAL (DESCRIBED); BRIDGE; POWER LINE; TELEPHONE LINE; FENCES; GROUND PROFILE; DAM (DESCRIBED); WATER TANK, LAKE OR RESERVOIR; QUARRY; SWAMP OR MARSH; MUD; WELL (DESCRIBED)/TUBEWELL; PLACE OF WORSHIP; MONUMENT; HUTS (TEMPORARY); HUTS (PERMANENT); GRAVES; TREE

PIPELINE SYMBOLS

CATHODIC PROTECTION TEST STATION; POTENTIAL GRADIENT CONTROL MAT (PGCM); TRANSFORMER RECTIFIER; AC INTERFERANCE MITIGATION Zn RIBBON PARALLEL TO PIPE; ANODE GROUND BED; EXISTING CABLE/ PIPELINE CROSSING; HOT BEND (RHBD); CS COOLIMT FOR OFC; OFC PULLING PIT; UNCASED CROSSING; CASED CROSSING; CONTINUOUS CONCERETE WEIGHTING; INSULATING JOINT; SCRAPER TRAP; KM MARKER; PIPE LINE WARNING SIGN; AERIAL MARKER; NAVIGABLE WATER WAY PIPE LINE WARNING SIGN; DIRECTION MARKER; HDPE DUCT FOR OFC; SECTIONALISING VALVES; ZINC GROUNDING CELL; DECIPOSTE BANDS; INTERMEDIATE SURVEY STATION

SOIL SYMBOLS

CH INORGANIC CLAY WITH HIGH PLASTICITY; CI INORGANIC CLAY WITH MEDIUM PLASTICITY; SC CLAYEY SAND; SW DILTY SAND POORLY GRADED SAND; SL SILT WITH LOW PLASTICITY; CLI INORGANIC CLAY WITH LOW PLASTICITY; ML INORGANIC SILTY CLAY WITH MEDIUM PLASTICITY; SW WELL GRADED SAND; CL INORGANIC CLAY WITH LOW PLASTICITY; SS SILTY SAND; ROAK ROCK; GW WELL GRADED GRAVELS; SGM SOFT ROCK WITH GABGES; SLGR SHATE LIME WITH KANKARS; GP POORLY GRADED SAND; CLWSF CLAY WITH KANKAR BASALT; GP POORLY GRADED GRAVELS; GM SILTY GRAVELS,POORLY GRADED; GC CLAYEY GRAVELS,POORLY GRADED; CLWKH CLAY WITH KANKAR; WB INTERMEDIATE BASALT; CL CLAY; SC SILTY CLAY; SCWS SANDY CLAY WITH KANKAR; MWS MEDIUM WITH BOULDERS; WB INTERMEDIATE ROCK; M MEDIUM; RCLWK RED CLAY WITH KANKARS; SM SANDY MEDIUM; MR RED ROCK; HR HARD ROCK; MW MEDIUM WITH GRAVELS; ER EXPOSED ROCK; GC GREY BEH CLAY; BLC BLACK COTTON SOIL; STW EXPOSED WEATHERED BASALT; SLWM SILTY CLAY WITH MEDIUM; CLWM CLAY WITH MEDIUM; BSCW BLACK COTTON SOIL WITH KANKAR; SW SANDY GRAVEL; BSCW BLACK COTTON SOIL WITH KANKARS; SLWS SILTY CLAY WITH SAND; SC SANDY CLAY; RS RED ROCK; CLS CLAYEY SILT; CLWK SILTY CLAY WITH KANKARS; SWK SOIL WITH KANKARS; SWS SILTY SAND WITH KANKARS; CSWK CLAYEY SILT WITH KANKARS; BSC BLACK SILTY CLAY; SS SANDY SILT; S SWC; CSW EXPOSED WEATHERED ROCK; CLWG CLAY WITH GRAVELS

GENERAL NOTES :-

1. ALL DIMENSIONS ARE IN "METERS" AND CORRESPOND TO MEAN SEA LEVEL (MSL).
2. 0.00 CHAINAGE CORRESPONDS TO INSULATING JOINT AT VADINAR.
3. ANTI BUOYANCY MEASURES, IF REQUIRED, SHALL BE DECIDED AT SITE IN CONSULTATION WITH ENGINEER-IN-CHARGE.
4. THE EXTENT OF CASED CROSSING PROVIDED AS PER INSTRUCTION OF ENGINEER-IN-CHARGE.

NOTES :-

1. FOR ALL CROSSINGS, THE THICKNESS OF CASING PIPES PROVIDED AS PER SPECIFIC REQUIREMENTS & THE SAME IS TABULATED IN B.O.M. ALL THE CROSSINGS EXECUTED AS PER RELEVANT OB STANDARD/DRAWINGS.
2. LOCATION OF SLOPE BREAKERS ARE PROVIDED AS PER STANDARD & AS PER INSTRUCTIONS OF ENGINEER-IN-CHARGE.
3. INSTALLATION OF CATHODIC PROTECTION FACILITIES PROVIDED AS PER DRAWINGS/ DOCUMENTS SUBMITTED BY CONTRACTOR AND APPROVED BY COMPANY.
4. FOR DETAILS REGARDING SOIL STRATIFICATION AND SOIL RESISTIVITY ALONG THE ROUTE, REFER M/S PETRO IT'S SOIL INVESTIGATION & RESISTIVITY REPORT.
5. ANTI BUOYANCY CONTROL (CONCRETE WEIGHT COATING) AND GEOTEXTILE BAGS, IF REQUIRE, SHALL BE DECIDED AT SITE (BESIDE THE LOCATION AS SHOWN IN ALIGNMENT SHEET) CASE TO CASE BASIS AND AS PER INSTRUCTION OF ENGINEER-IN-CHARGE.

BILL OF MATERIAL FOR THIS DRAWING

610	7.1	3LPE	2181.138	K.M. POST	1
610	7.9	3LPE	53.429	DIRECTION MARKER	1
610	11.9	3LPE	2765.457	AERIAL MARKER	1
			5000	INSULATING JOINTS	1
				HOT BENDS	
				NAVIGABLE WATERWAY	
762	10.3		29.995	WARNING MARKER	7
762	8.4		35.670	OFC JOINT PIT	2
168.3	8.4		65.685	CP TEST STATION	8

REFERENCE DRAWINGS

TITLE		NUMBER
CROSSING	CHAINAGE(m)	
CART TRACK	285600	
CANAL	286159	VBPL/CC/AB/SP II/17
ROAD	287858	
NALLA	288532	
CART TRACK	288846	
ROAD	289154	VBPL/CC/AB/SP II/18
CART TRACK	289340	
CANAL	289935	
CANAL	290102	

AS BUILT DRAWING			
DESCRIPTION	ECIL	EIL	BORL

AS BUILT DRAWING

इंजीनियर्स इंडिया लिमिटेड (भारत सरकार का उद्यम) ENGINEERS INDIA LIMITE (A Govt. of India Undertaking)

BHARAT OMAN REFINERIES LIMITED

ESSAR ESSAR CONSTRUCTIONS (INDIA) LIMITED

बीना रिफायनरी परियोजना (वाडीनार बीना पाइपलाइन) | BINA REFINERY PROJECT (VADINAR-BINA PIPELINE)

एलाइनमैन्ट शीट वाडीनार से बीना चैनेज 285.274 से 290.274 कि.मी. | ALIGNMENT SHEET VADINAR TO BINA CHAINAGE 285.274 KM TO 290.274 KM

SCALE	JOB NO.	UNIT	DEPT.	SECT.	DWG. NO.	REV.
AS SHOWN	12050041	6711			1258	0