

GOVERNMENT OF PAKISTAN
PORT QASIM AUTHORITY

TENDER AND CONTRACT DOCUMENTS

FOR CONSTRUCTION OF
IRON-ORE AND COAL BERTH
AND
RELATED FACILITIES

VOL IV : DRAWINGS
PART 2 SMALL CRAFTS PIER
AND LAND RECLAMATION

DECEMBER 1975

JAPAN INTERNATIONAL COOPERATION AGENCY



國庫協力事業団
18615

DRAWING LIST

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SMALL CRAFTS PIER

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S--104 DETAILS OF PIER (2)

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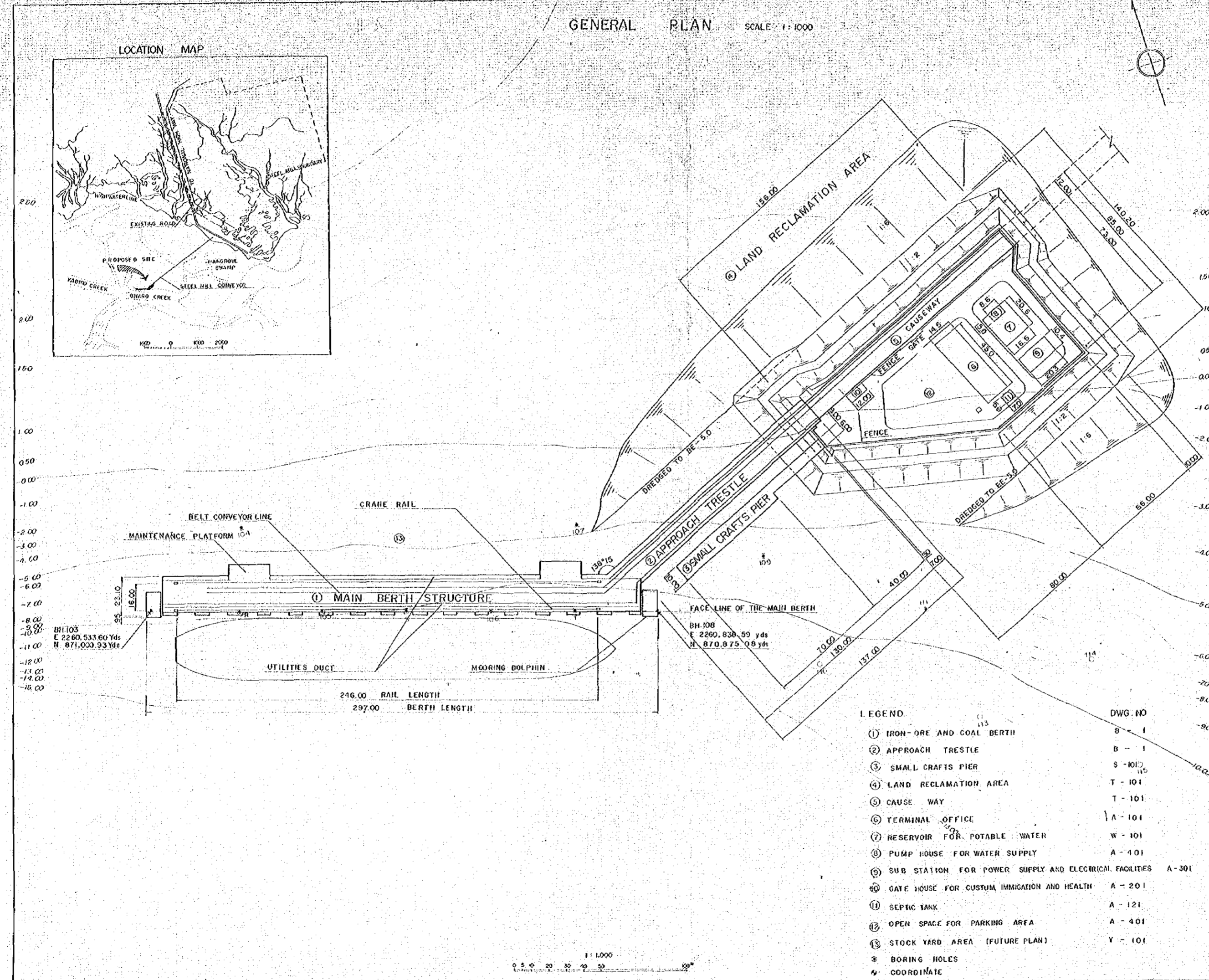
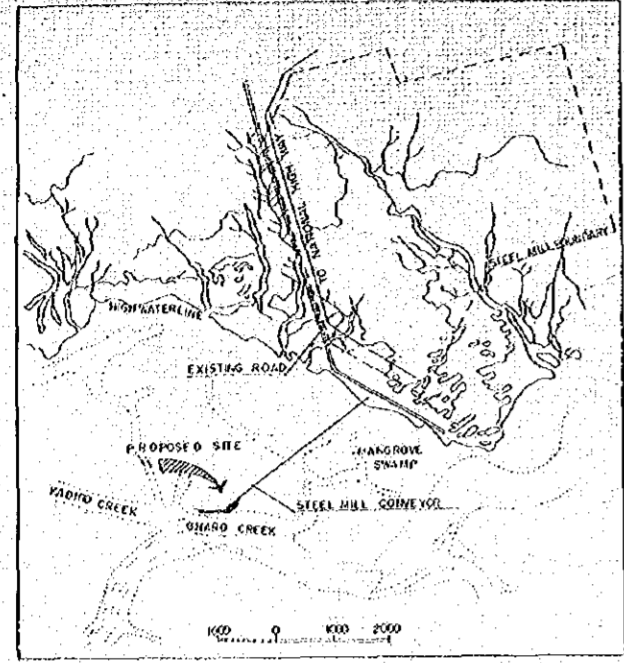
T--112 PAVEMENT AND DRAINAGE OF GASOLINE STATION

T--113 LOCATION OF FENCE AND GATE

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GENERAL PLAN SCALE 1:1000

LOCATION MAP

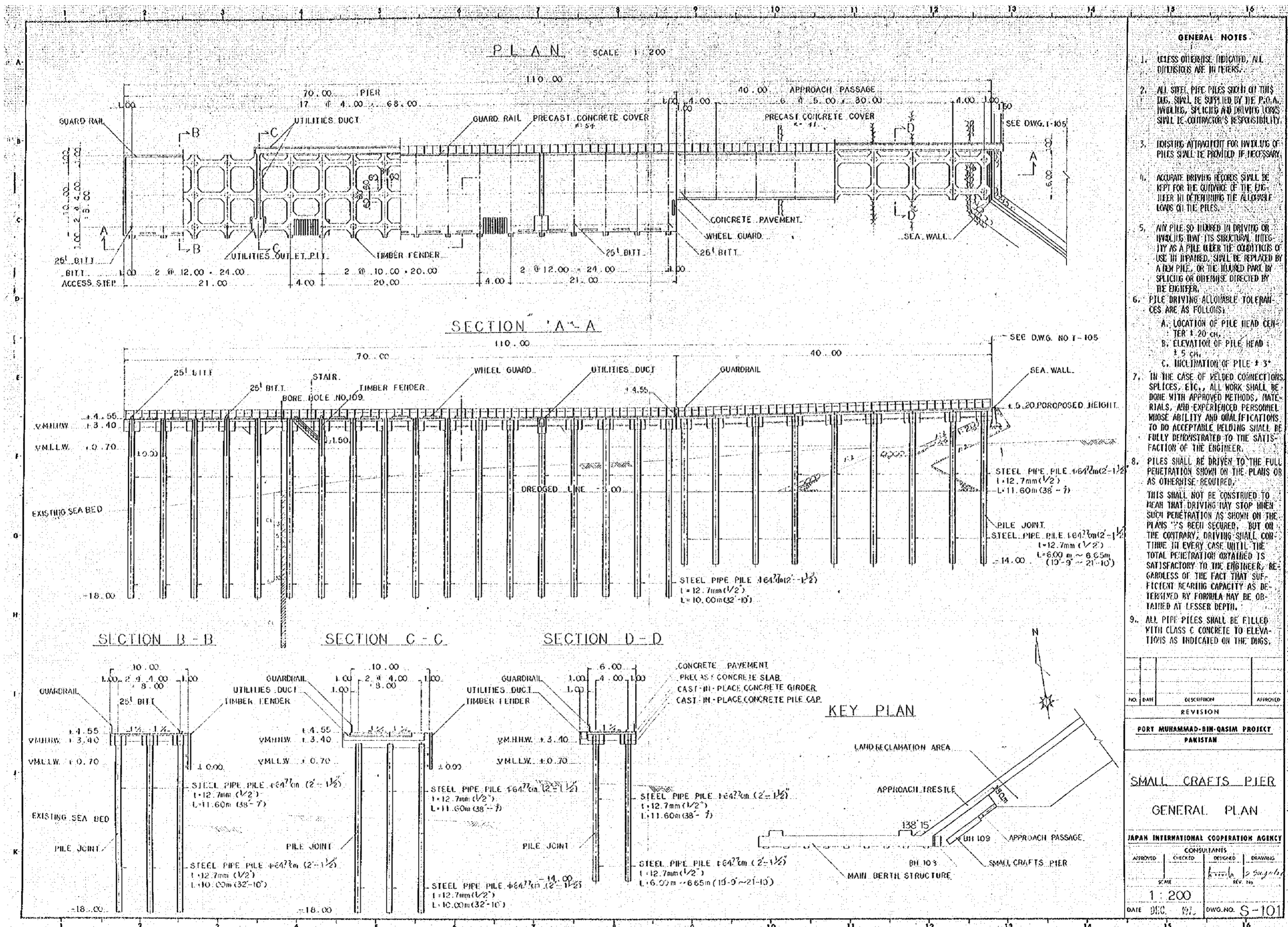


- GENERAL NOTES
- UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METERS.
 - ELEVATIONS INDICATED ON ALL DGS ARE SHOWN WITH + OR - AND EXPRESSED IN METERS ABOVE OR BELOW THE CHART DATUM.
 - DREDGING WORKS IN THE VICINITY OF THE MAIN BERTH SHALL BE PERFORMED BY OTHERS. THE MINIMUM DEPTH TO BE DREDGED SHALL BE -12.80 M; DREDGING DEPTH FOR FUTURE EXTENSION WORKS SHALL BE -14.30 M.

LEGEND

NO.	DESCRIPTION	DWG. NO.
1	IRON-ORE AND COAL BERTH	B - 1
2	APPROACH TRESTLE	B - 1
3	SMALL CRAFTS PIER	S - 101
4	LAND RECLAMATION AREA	T - 101
5	CAUSEWAY	T - 101
6	TERMINAL OFFICE	A - 101
7	RESERVOIR FOR POTABLE WATER	W - 101
8	PUMP HOUSE FOR WATER SUPPLY	A - 401
9	SUB STATION FOR POWER SUPPLY AND ELECTRICAL FACILITIES	A - 301
10	GATE HOUSE FOR CUSTOM IMMIGRATION AND HEALTH	A - 201
11	SEPTIC TANK	A - 121
12	OPEN SPACE FOR PARKING AREA	A - 401
13	STOCK YARD AREA (FUTURE PLAN)	Y - 101
*	BORING HOLES	
+	COORDINATE	

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD - BIN-QASIM PROJECT PAKISTAN			
GENERAL PLAN OF PROJECT			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE 1:1,000			
DATE	DWG. NO. G - 101		



GENERAL NOTES

1. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS ARE IN METERS.
2. ALL STEEL PIPE PILES SOUTH OF THIS DAG. SHALL BE SUPPLIED BY THE P.C.O.A. UNLESS, SPLICING AND DRIVING WORKS SHALL BE CONTRACTOR'S RESPONSIBILITY.
3. EXISTING ATTACHMENT FOR HULLING OF PILES SHALL BE PROVIDED IF NECESSARY.
4. ACCURATE DRIVING RECORDS SHALL BE KEPT FOR THE OUTRIGER OF THE ENGINEER IN DETERMINING THE ALLOWABLE LENGTHS OF THE PILES.
5. ANY PILE SO DAMAGED IN DRIVING OR HULLING THAT ITS STRUCTURAL INTEGRITY AS A PILE UNDER THE CONDITIONS OF USE IS IMPAIRED, SHALL BE REPLACED BY A NEW PILE, OR THE DAMAGED PART BY SPLICING OR OTHERWISE DIRECTED BY THE ENGINEER.
6. PILE DRIVING ALLOWABLE TOLERANCES ARE AS FOLLOWS:
 - A. LOCATION OF PILE HEAD CENTER: ± 20 cm.
 - B. ELEVATION OF PILE HEAD: ± 5 cm.
 - C. INCLINATION OF PILE: $\pm 3^\circ$.
7. IN THE CASE OF WELDED CONNECTIONS, SPLICES, ETC., ALL WORK SHALL BE DONE WITH APPROVED METHODS, MATERIALS, AND EXPERIENCED PERSONNEL WHOSE ABILITY AND QUALIFICATIONS TO DO ACCEPTABLE WORKING SHALL BE FULLY DEMONSTRATED TO THE SATISFACTION OF THE ENGINEER.
8. PILES SHALL BE DRIVEN TO THE FULL PENETRATION SHOWN ON THE PLANS OR AS OTHERWISE REQUIRED. THIS SHALL NOT BE CONSTRUED TO MEAN THAT DRIVING MAY STOP WHEN SUCH PENETRATION AS SHOWN ON THE PLANS HAS BEEN SECURED, BUT ON THE CONTRARY, DRIVING SHALL CONTINUE IN EVERY CASE UNTIL THE TOTAL PENETRATION OBTAINED IS SATISFACTORY TO THE ENGINEER, REGARDLESS OF THE FACT THAT SUFFICIENT BEARING CAPACITY AS DETERMINED BY FORMULA MAY BE OBTAINED AT LESSER DEPTH.
9. ALL PIPE PILES SHALL BE FILLED WITH CLASS C CONCRETE TO ELEVATIONS AS INDICATED ON THE DWGS.

NO.	DATE	DESCRIPTION	APPROVED

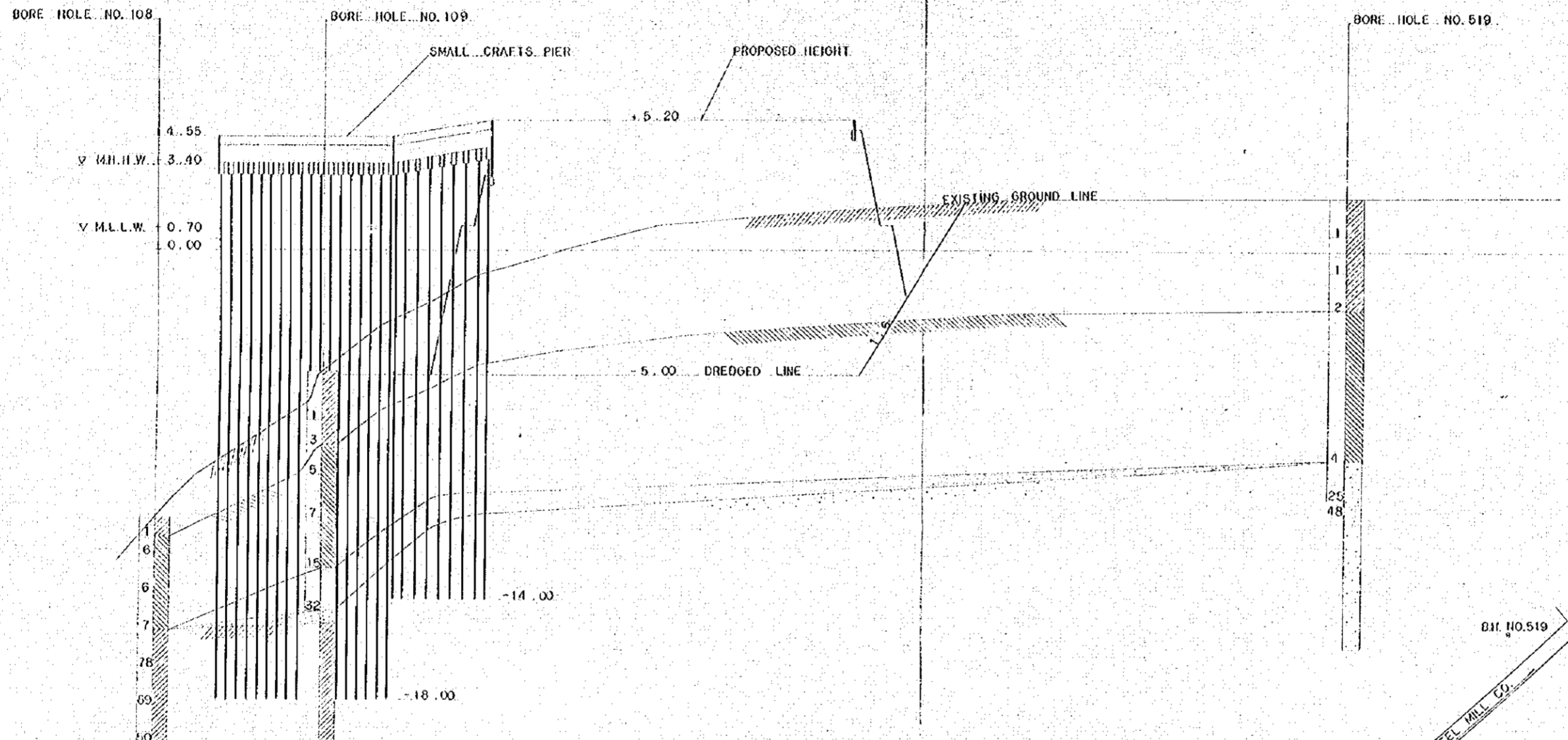
REVISION
PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

SMALL CRAFTS PIER
GENERAL PLAN

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE			
1:200			
DATE DEC. 1971		DWG. NO. S-101	

PROFILE OF ASSUMED SOIL PROPERTIES

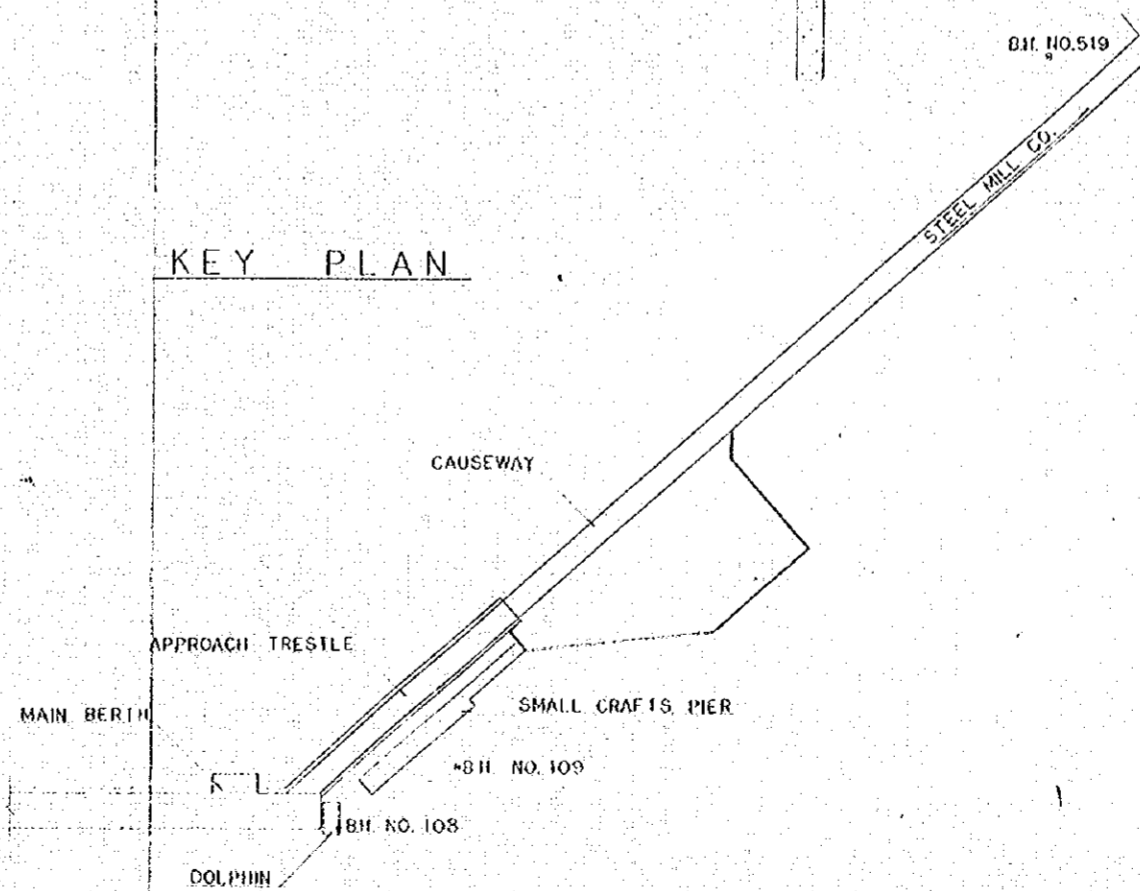
SCALE H. 1 : 1,000
V. 1 : 100



LEGEND

- SILTY CLAY SPT Blows/H 1 - 3
- SILTY CLAY SPT Blows/H 4 - 15
- SILTY CLAY SPT Blows/H 15 - 32
- GREY FINE SAND
- HARD SILTY CLAY

KEY PLAN



GENERAL NOTES

1. THE SOIL PROFILE SHOWN ON THIS DWG. IS FROM THE SOIL INVESTIGATION REPORT PREPARED BY THE NATIONAL ENGINEERING SERVICE LTD., PAKISTAN.
2. FURTHER SOIL INVESTIGATIONS SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.
3. THE ABBREVIATION SPT. SHOWN IN THE LEGEND MEANS STANDARD PENETRATION TEST.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

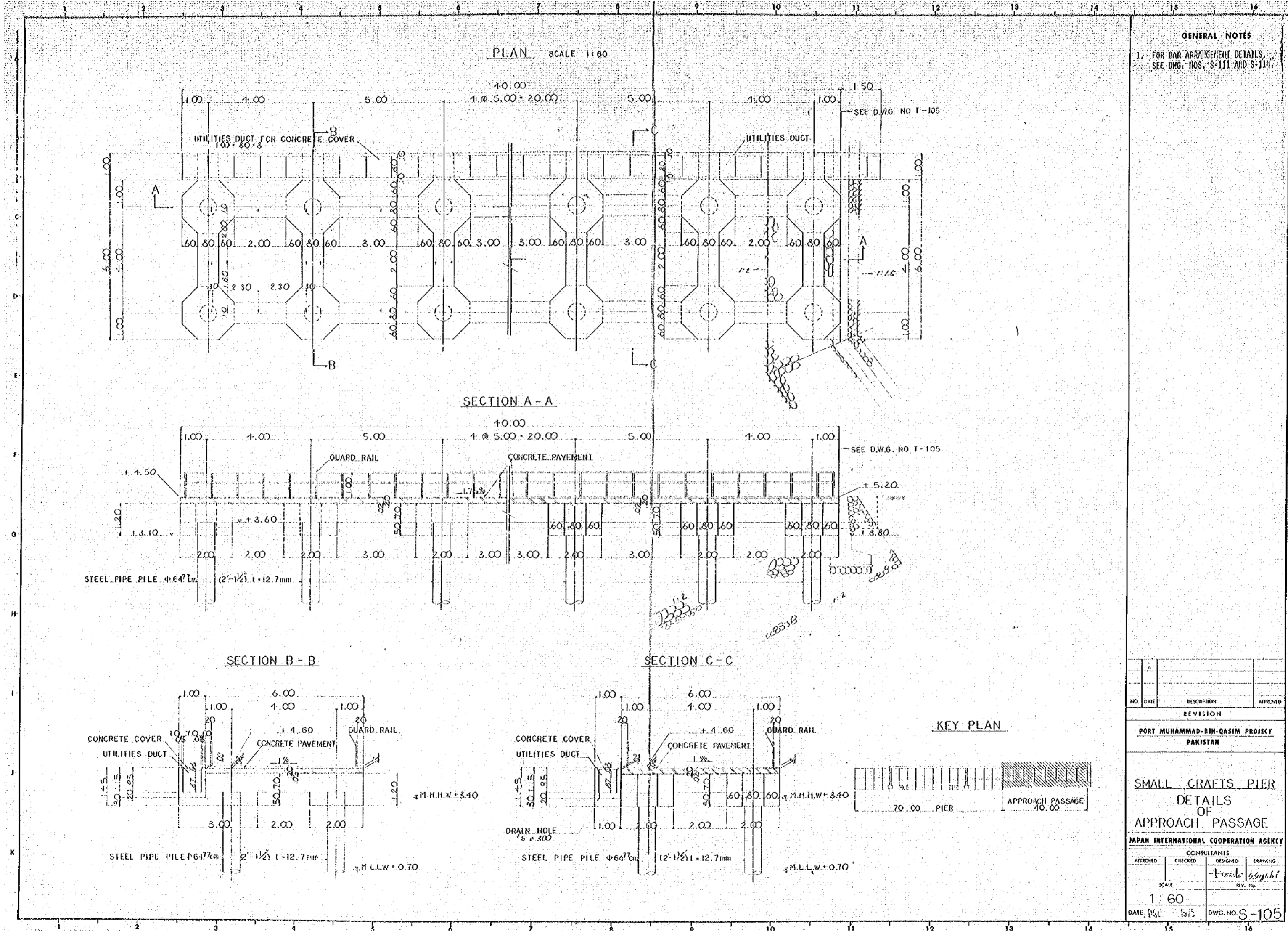
PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

SMALL CRAFTS PIER
AND
LAND RECLAMATION

SUBSOIL INFORMATION

JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
			<i>Amir Saeed</i>
SCALE			
H	1	1,000	
V		100	
DATE	08/08/75	DWG. NO.	S-102



GENERAL NOTES
 1. FOR BAR ARRANGEMENT DETAILS, SEE DWG. NOS. S-111 AND S-114.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

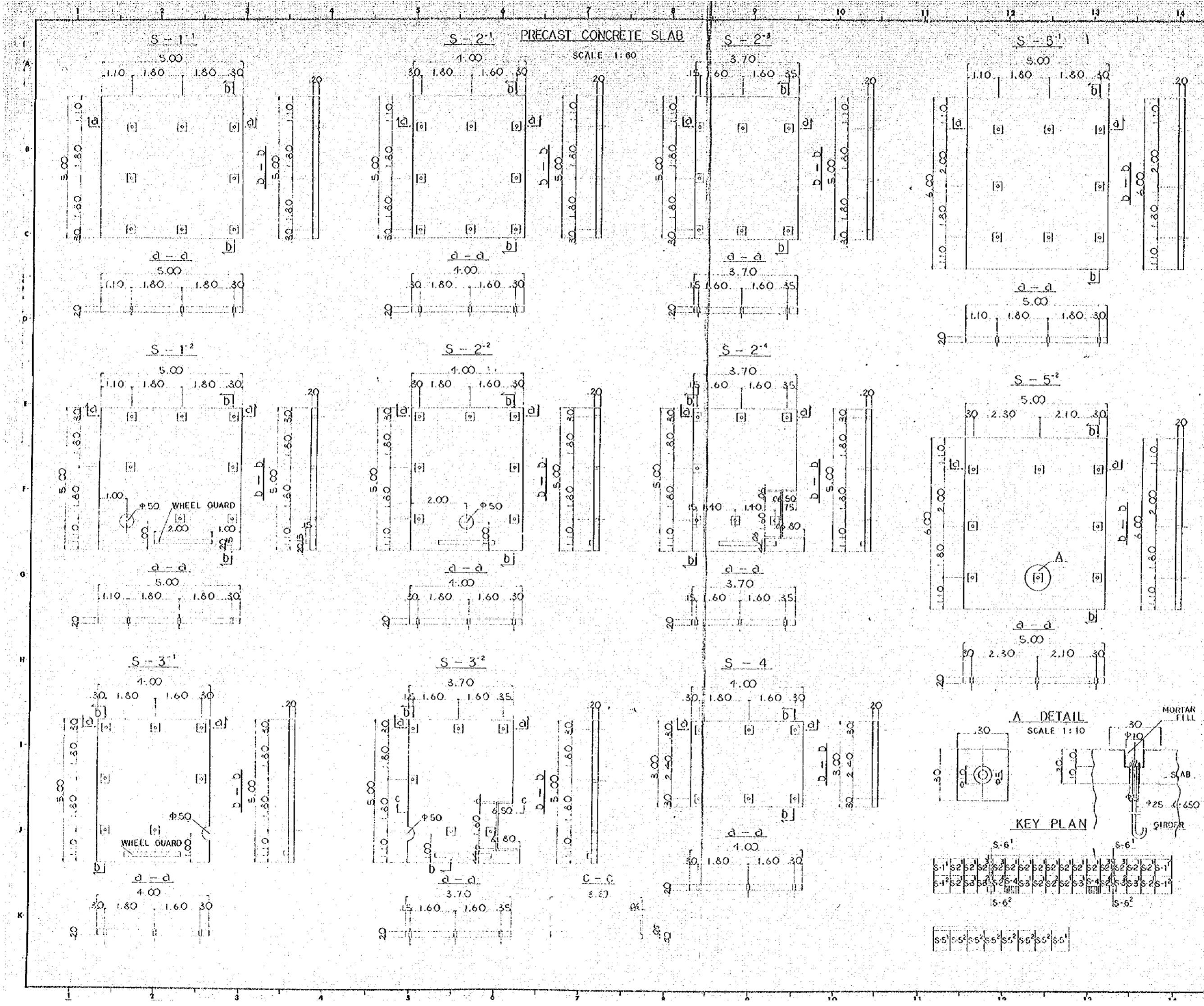
PORT MUHAMMAD-BIN-QASIM PROJECT
 PAKISTAN

SMALL CRAFTS PIER
 DETAILS OF
 APPROACH PASSAGE

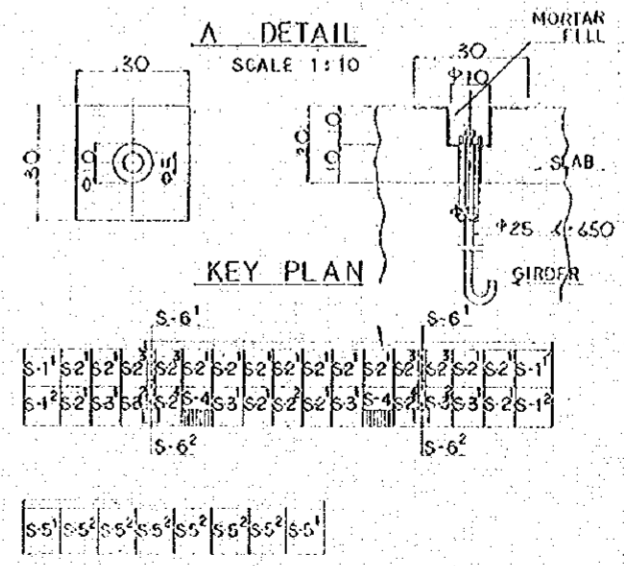
JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		Trade	Shayab
SCALE			
1:60			

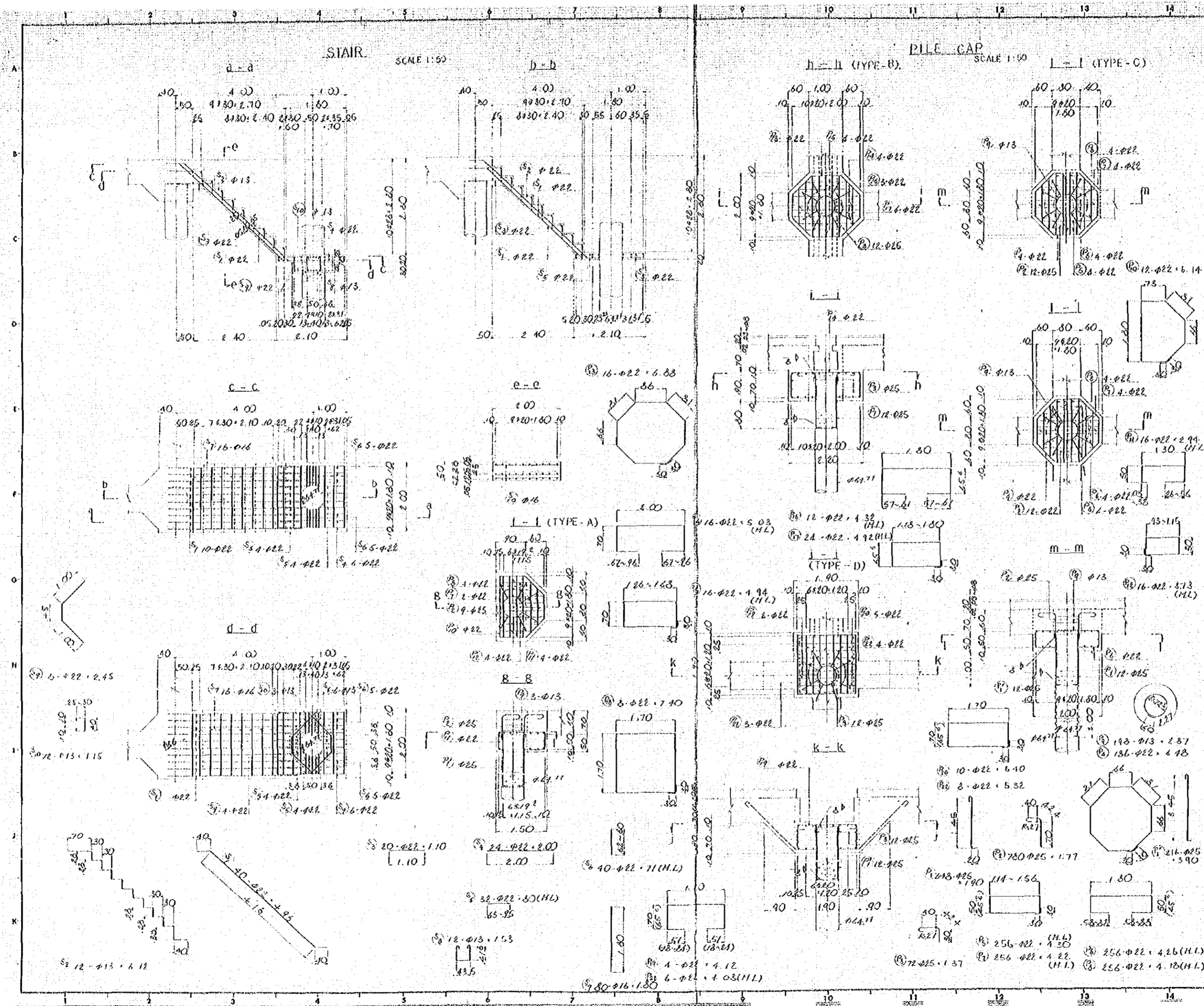
DATE: 19/11/85 DWG. NO. S-105



- GENERAL NOTES**
1. FOR BAR ARRANGEMENT DETAILS, S-112 - S-119.
 2. CONCRETE COVERING THICKNESS FOR REINFORCING BARS ON ALL CONTACT SIDES OF PRECAST CONCRETE SLABS SHALL BE REDUCED BY 10mm DURING FABRICATION TO FACILITATE CONVEINENCE OF INSTALLATIONS.
 3. LEVELLING MORTAR SHALL BE DEPOSITED ON THE SUPPORTING GIR- DERS AS SHOWN ON DWG. NO. S-103, PRIOR TO SETTING OF PRECAST CON- CRETE SLABS. ALL SLABS SHALL BE SET IN POSITION WHEN MORTAR IS FRESH.

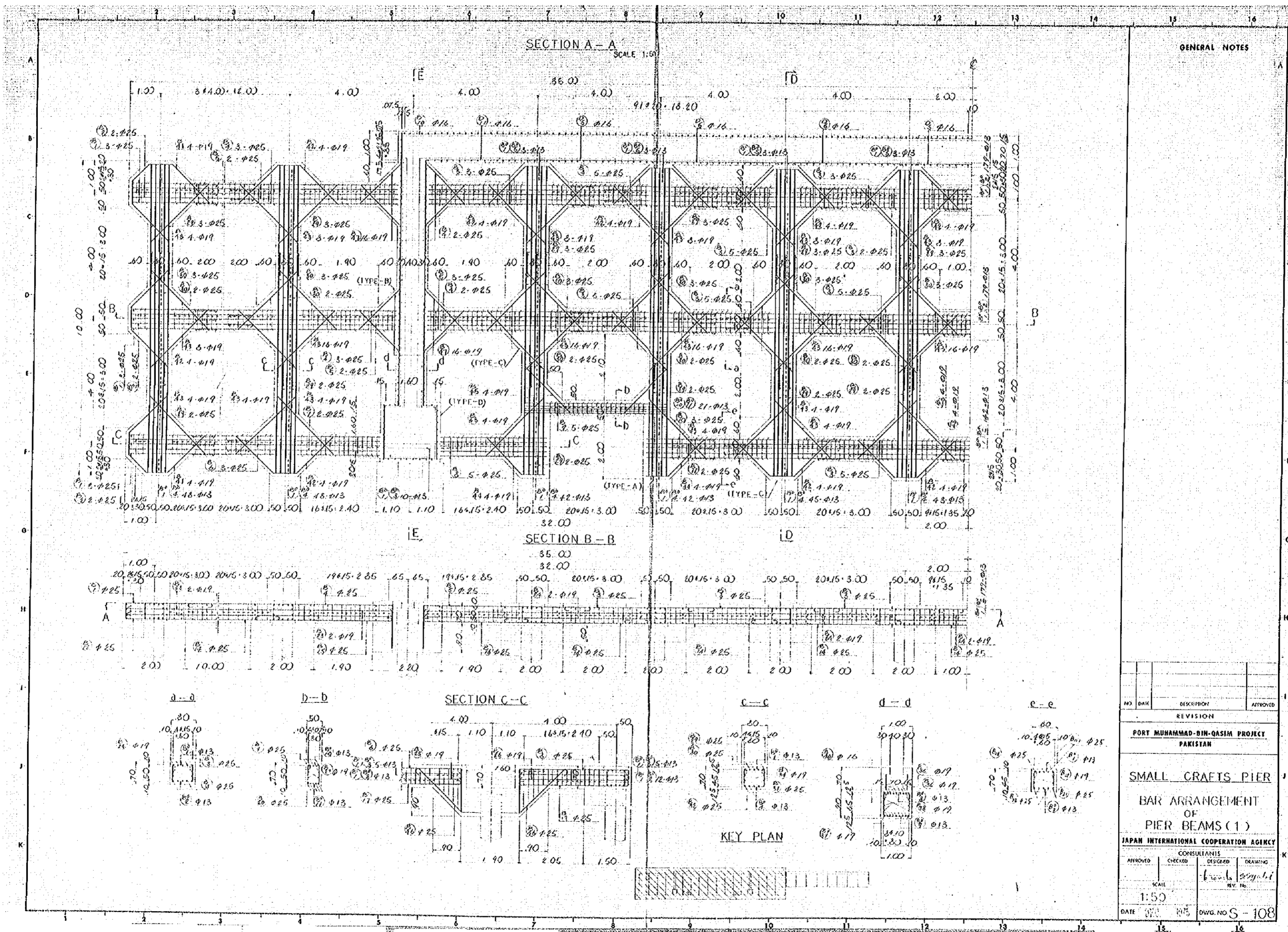


NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER OF PRECAST SLAB			
JAPAN INTERNATIONAL COOPERATION AGENCY CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>L. M. Asyraf</i>	REV. NO.
SCALE 1:60			
DATE		DWG. NO. S-106	



- GENERAL NOTES**
1. ALL REINFORCING STEEL SHALL PLAIN BARS CONFORMING TO ASTM A 615 GRADE 40 OR ASTM A 617 GRADE 40 OR APPROVED EQUIVALENT.
 2. EXTERNAL CORNERS THAT WILL BE EXPOSED SHALL BE CHAMFERED, BEVELED OR ROUNDED.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
BAR ARRANGEMENT OF PILE CAP AND STAIR			
JAPAN INTERNATIONAL COOPERATION AGENCY			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>[Signature]</i>	<i>[Signature]</i>
SCALE		REV. NO.	
1:50			
DATE	DWG. NO.		
	S-107		



GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED

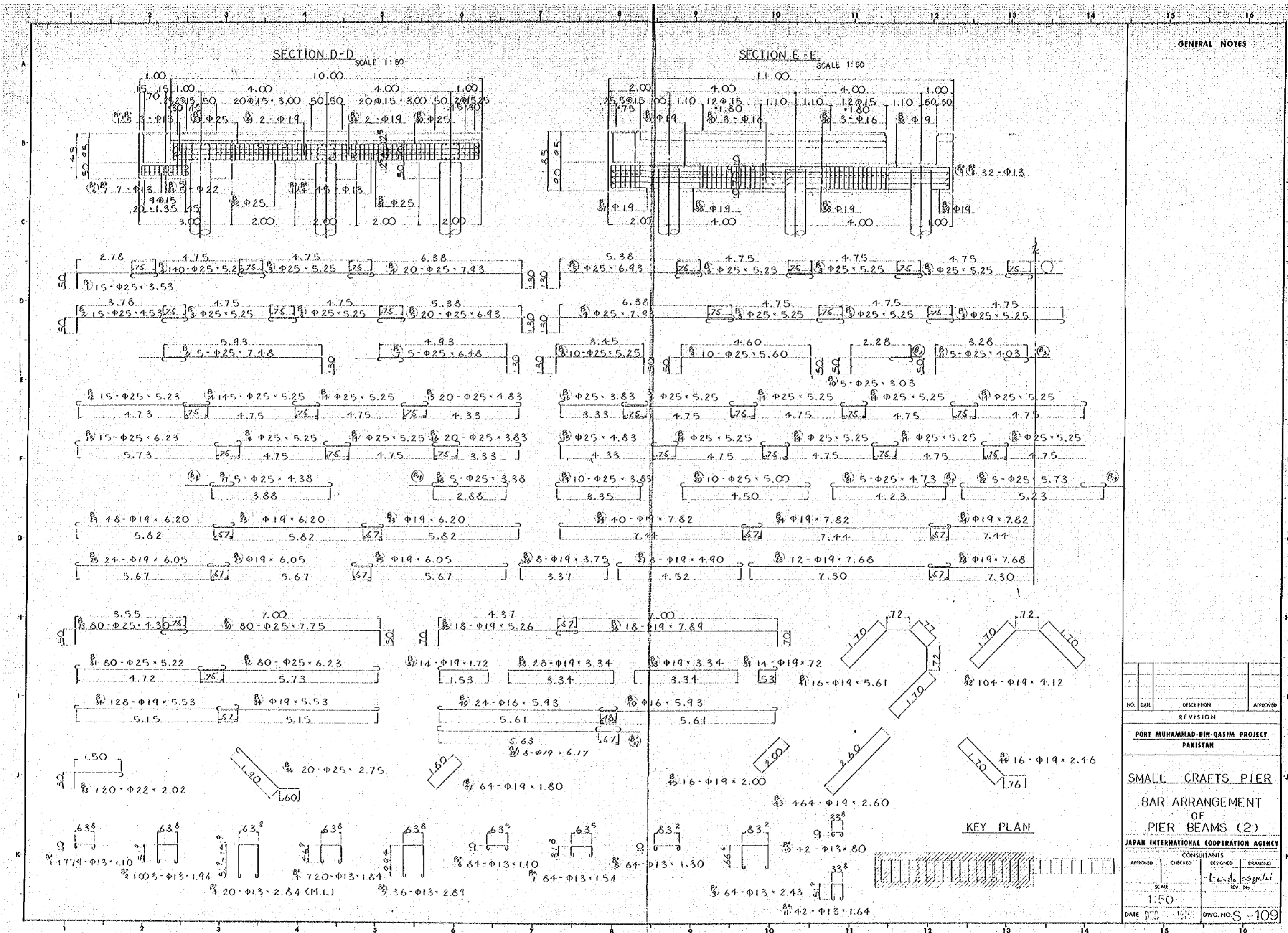
PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

SMALL CRAFTS PIER
BAR ARRANGEMENT
OF
PIER BEAMS (1)

JAPAN INTERNATIONAL COOPERATION AGENCY

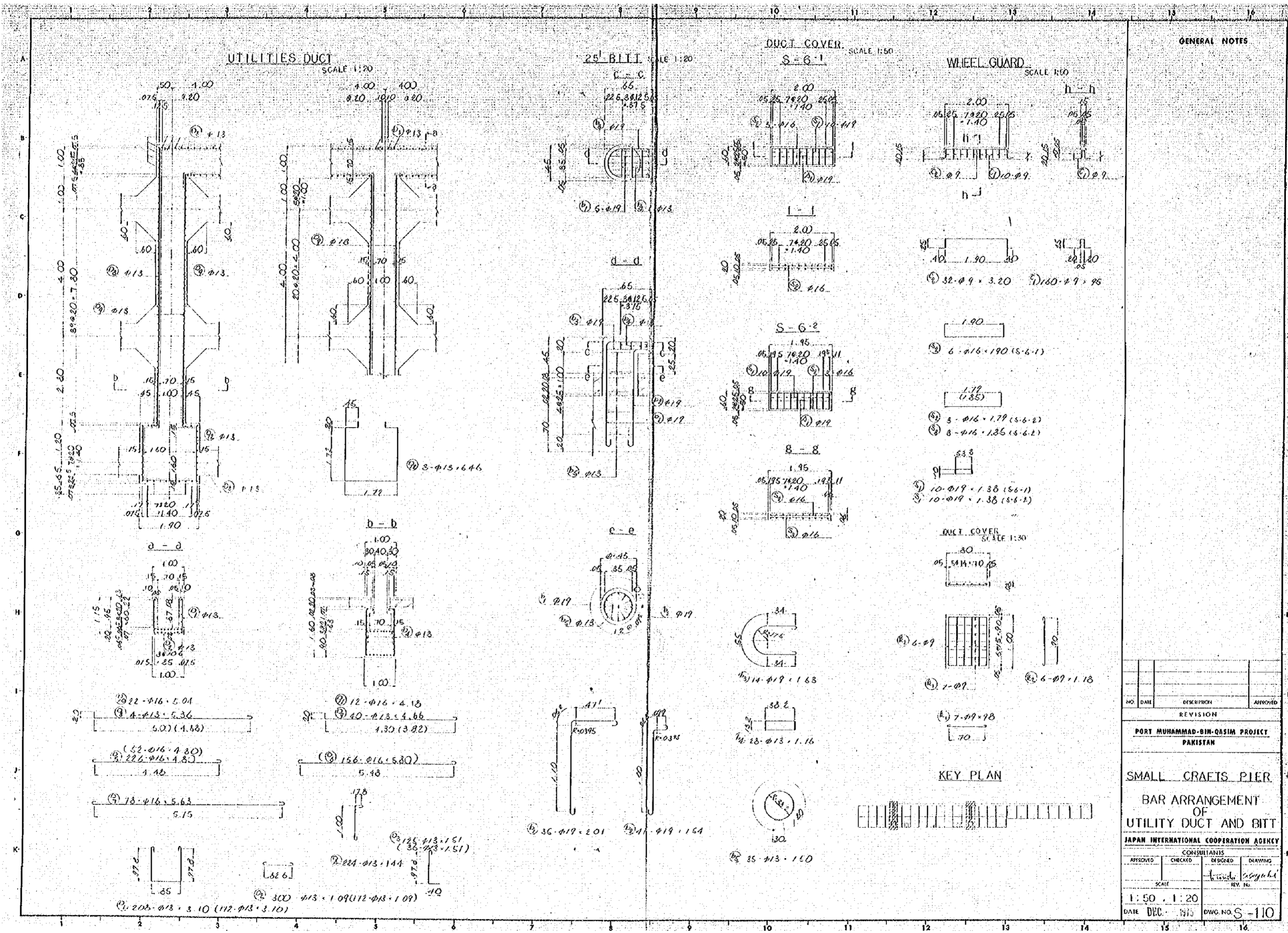
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING

SCALE: 1:50
DATE: 2015/05/05 DWG. NO: S-108



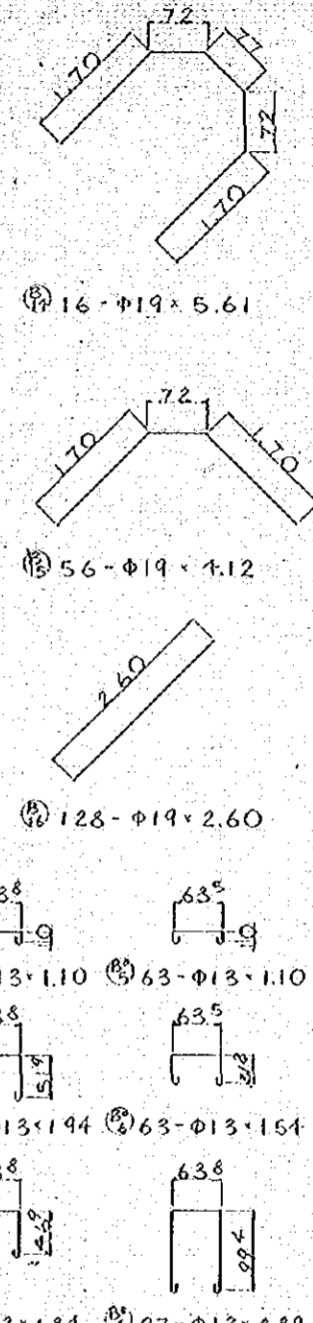
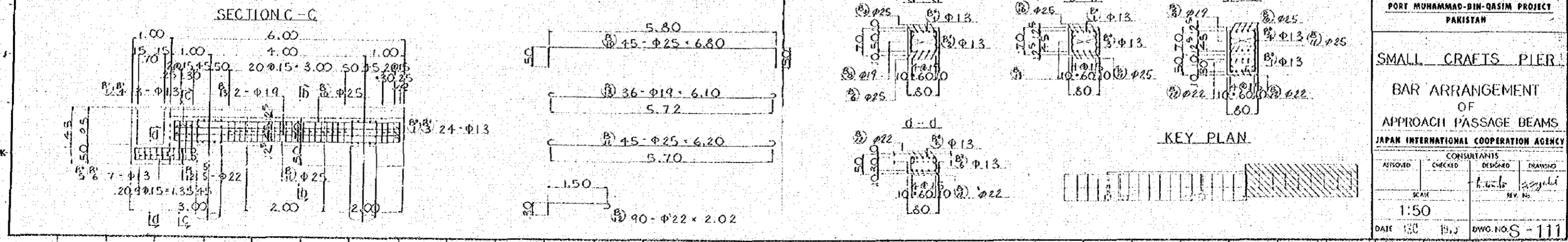
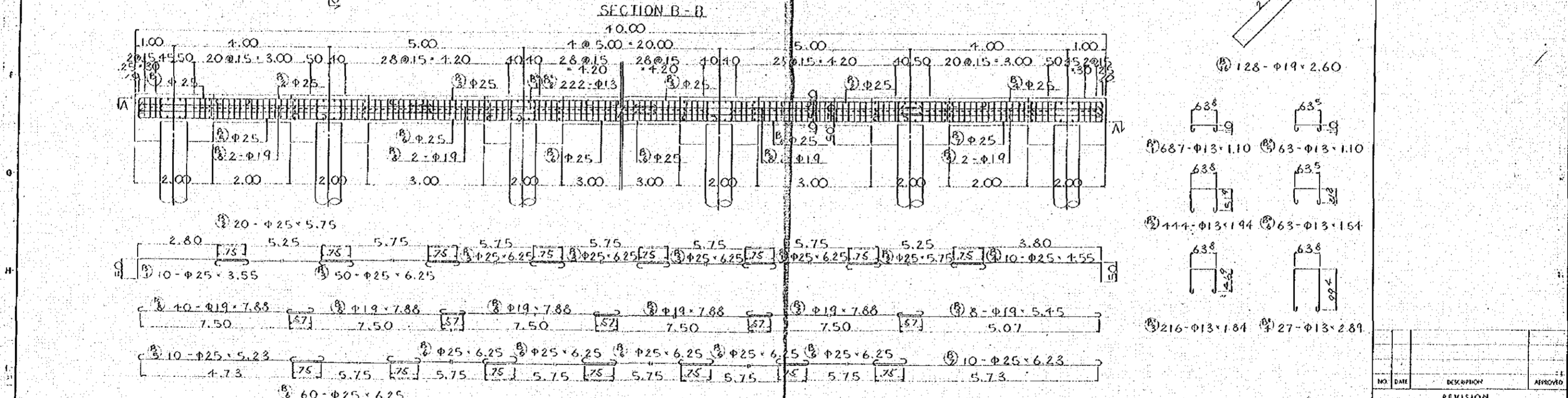
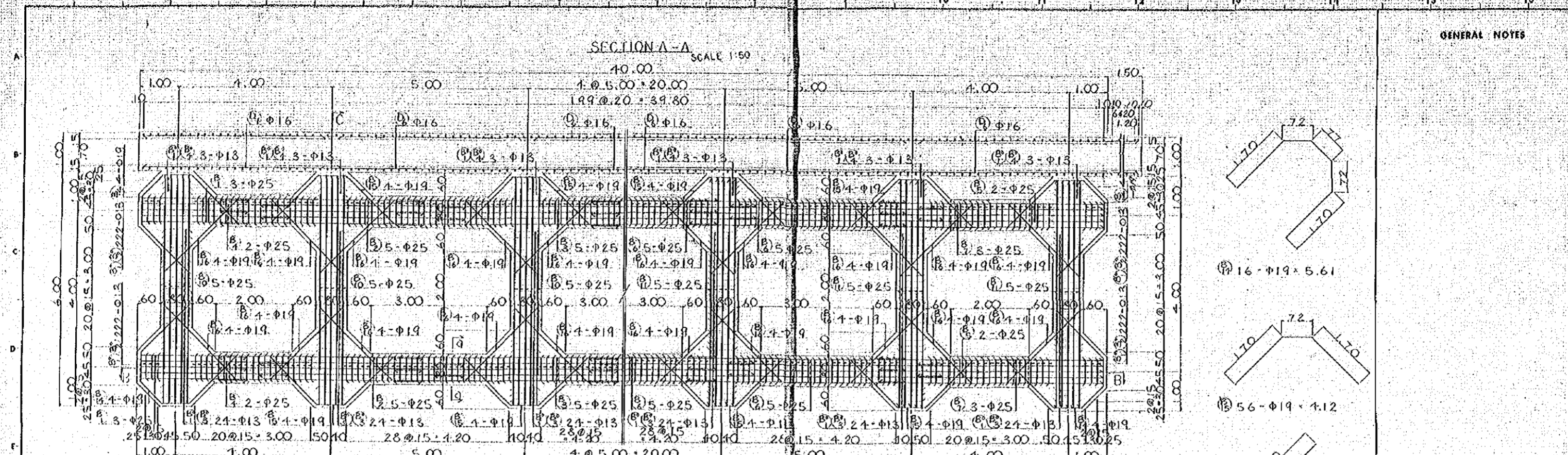
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIH-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER OF PIER BEAMS (2)			
JAPAN INTERNATIONAL COOPERATION AGENCY CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>L. Aslam</i>	
SCALE		REV. NO.	
1:50			
DATE	BY	DWG. NO. S-109	



GENERAL NOTES

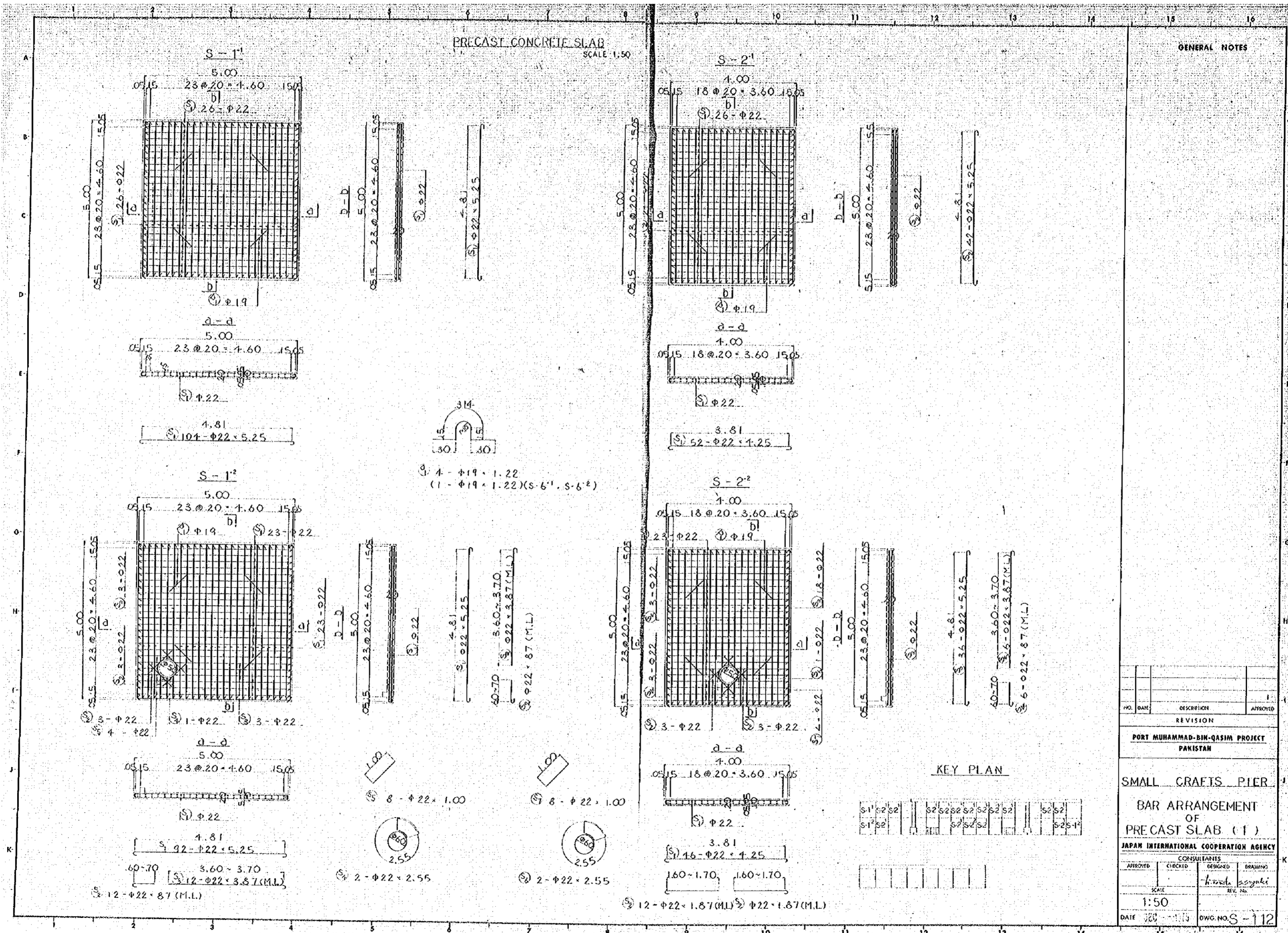
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
BAR ARRANGEMENT OF UTILITY DUCT AND BITT			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE		REV. NO.	
1:50, 1:20			
DATE	DEC. 1975	DWG. NO.	S-110



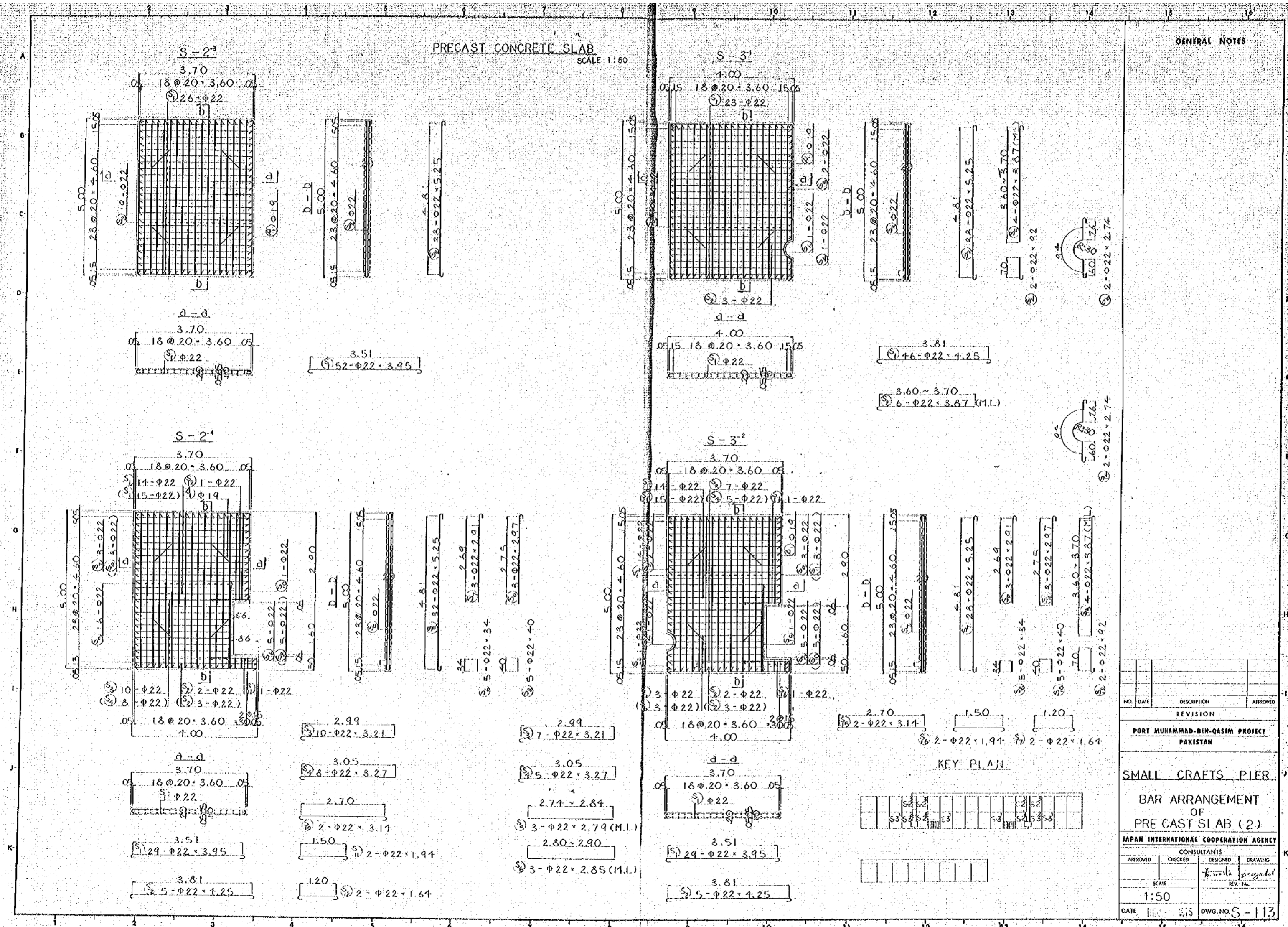
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
BAR ARRANGEMENT OF APPROACH PASSAGE BEAMS			
JAPAN INTERNATIONAL COOPERATION AGENCY			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE		REV. NO.	
1:50			
DATE	BY	DWG. NO.	
13.0	13.2	S-111	

PRECAST CONCRETE SLAB
SCALE: 1:50

GENERAL NOTES

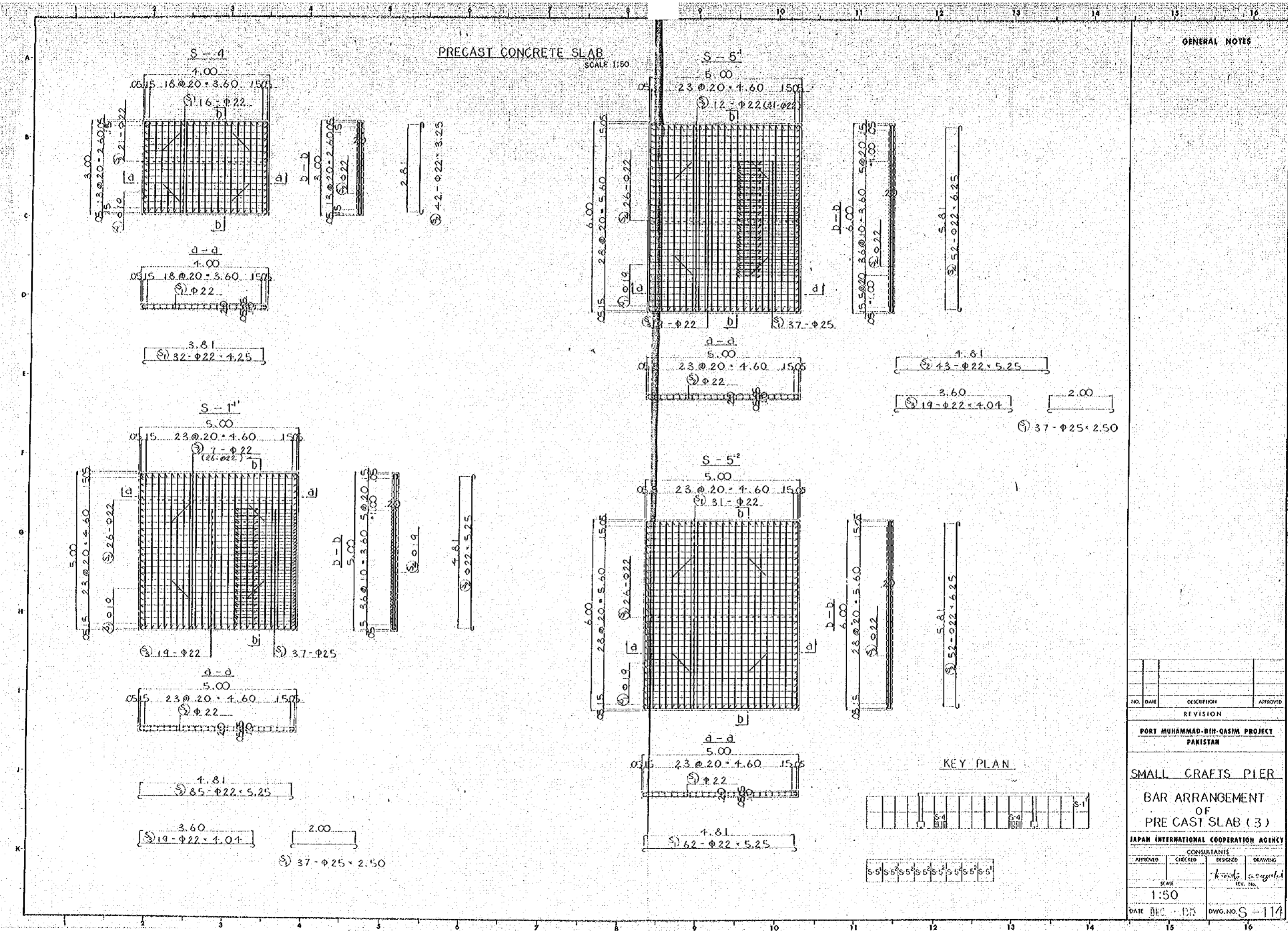


NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
BAR ARRANGEMENT OF PRECAST SLAB (1)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE		REV. NO.	
1:50			
DATE		OWG. NO.	
		S-112	



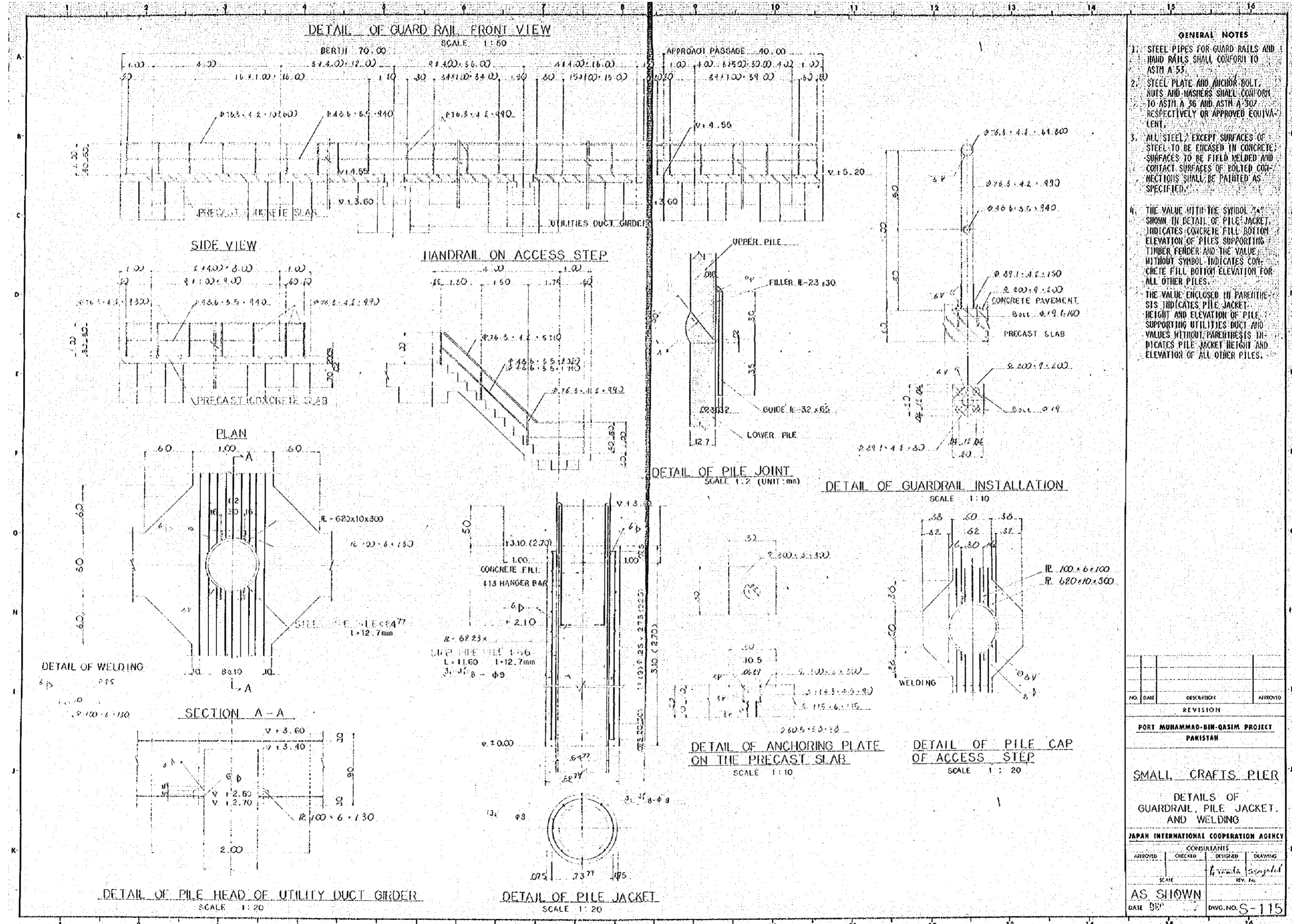
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
BAR ARRANGEMENT OF PRE CAST SLAB (2)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>Amirul Hossain</i>	<i>Shahid</i>
SCALE		REV. No.	
1:50			
DATE	NO.	DWG. NO.	
15/05/05	015	S-113	

PRECAST CONCRETE SLAB
SCALE 1:50



GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIH-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
BAR ARRANGEMENT OF PRE CAST SLAB (3)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>h. wale</i>	<i>o. ayub</i>
SCALE			
1:50			
DATE 01.02.03		DWG. NO. S-114	



- GENERAL NOTES**
1. STEEL PIPES FOR GUARD RAILS AND HAND RAILS SHALL CONFORM TO ASTM A 53.
 2. STEEL PLATE AND ANCHOR BOLT, NUTS AND WASHERS SHALL CONFORM TO ASTM A 36 AND ASTM A 307 RESPECTIVELY OR APPROVED EQUIVALENT.
 3. ALL STEEL, EXCEPT SURFACES OF STEEL TO BE ENCASED IN CONCRETE, SURFACES TO BE FIELD WELDED AND CONTACT SURFACES OF BOLTED CONNECTIONS SHALL BE PAINTED AS SPECIFIED.
 4. THE VALUE WITH THE SYMBOL "E" SHOWN IN DETAIL OF PILE JACKET INDICATES CONCRETE FILL BOTTOM ELEVATION OF PILES SUPPORTING TIMBER FENDER AND THE VALUE WITHOUT SYMBOL INDICATES CONCRETE FILL BOTTOM ELEVATION FOR ALL OTHER PILES. THE VALUE ENCLOSED IN PARENTHESES INDICATES PILE JACKET HEIGHT AND ELEVATION OF PILE SUPPORTING UTILITIES DUCT AND VALUES WITHOUT PARENTHESES INDICATES PILE JACKET HEIGHT AND ELEVATION OF ALL OTHER PILES.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

SMALL CRAFTS PIER
DETAILS OF
GUARDRAIL, PILE JACKET,
AND WELDING

JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>Hamid Asghar</i>	
SCALE		REV. NO.	

AS SHOWN
DATE 08/11/15
DWG. NO. S-115

MARK	DIA	LEN	NO	WGT	WGT		
PRECAST CONCRETE SLAB							
S-1-1							
S	1	φ22	5.25	194	2.98	15.65	1627.6
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1627.6	
		φ19				13.8	
		TOTAL				1641.4	
S-1-1'							
S	1	φ25	2.50	37	3.85	7.63	356.3
2		φ22	5.25	85	2.98	15.65	1350.3
3			4.04	19		12.04	228.8
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ25				356.3	
		φ22				1559.1	
		φ19				13.8	
		TOTAL				1929.2	
S-1-2							
S	1	φ22	5.25	72	2.98	15.65	1437.8
2			8.7	12		2.59	31.1
3			3.87	12		11.53	138.4
4			2.55	2		7.60	15.2
5			1.00	8		2.98	23.8
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1648.3	
		φ19				13.8	
		TOTAL				1662.1	3324.2
S-2-1							
S	1	φ22	4.25	52	2.98	12.67	658.8
2			5.25	42		15.65	657.3
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1316.1	
		φ19				13.8	
		TOTAL				1329.9	19945.5
S-2-2							
S	1	φ22	4.25	46	2.98	12.67	582.8
2			1.87	12		5.57	66.8
3			5.25	36		15.65	563.4
4			3.7	6		2.59	15.5
5			3.87	6		11.53	69.2
6			2.55	2		7.60	15.2
7			1.00	8		2.98	23.8
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1336.7	
		φ19				13.8	
		TOTAL				1350.5	

MARK	DIA	LEN	NO	WGT	WGT		
LIST OF MATERIALS							
S-2-3							
S	1	φ22	3.95	62	2.98	11.77	612.7
2			5.25	38		15.65	594.7
		φ22				1206.7	
		φ19				13.8	
		TOTAL				1220.5	1882.0
S-2-4							
S	1	φ22	3.95	29	2.98	11.77	341.7
2			4.25	5		12.67	63.3
3			3.21	10		9.57	95.7
4			3.27	8		9.74	77.7
5			5.25	32		15.65	500.7
6			3.4	5		1.01	5.1
7			2.91	3		8.67	26.0
8			4.0	5		1.19	6.0
9			2.97	3		8.85	26.6
10			3.14	2		9.36	18.7
11			1.94	2		5.78	11.6
12			1.64	2		4.87	9.7
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1182.7	
		φ19				13.8	
		TOTAL				1196.5	2393.0
S-3-1							
S	1	φ22	4.25	46	2.98	12.67	582.8
2			3.87	6		11.53	69.2
3			5.25	38		15.65	594.7
4			3.2	2		2.74	5.5
5			3.87	4		11.53	46.1
6			2.74	2		8.17	16.3
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1314.7	
		φ19				13.8	
		TOTAL				1328.5	5314.0
S-3-2							
S	1	φ22	3.95	29	2.98	11.77	341.7
2			4.25	5		12.67	63.3
3			3.21	7		9.57	67.0
4			3.27	5		9.74	48.7
5			2.91	3		8.67	26.0
6			2.85	3		8.19	25.5
7			5.25	28		15.65	438.2
8			3.4	5		1.01	5.1
9			2.91	3		8.67	26.0
10			4.0	5		1.19	6.0
11			2.97	3		8.85	26.6
12			3.2	2		2.74	5.5
13			3.27	4		11.53	46.1
14			2.74	2		8.17	16.3
15			3.14	2		9.36	18.7
16			1.94	2		5.78	11.6
17			1.64	2		4.87	9.7
Δ	1	φ19	1.22	4	2.23	3.45	13.8

MARK	DIA	LEN	NO	WGT	WGT		
S-4							
		φ22			1180.7		
		φ19			13.8		
		TOTAL			1194.5	2389.0	
S-5-1							
S	1	φ22	4.25	32	2.98	12.67	405.4
2			3.25	42		9.69	407.0
Δ	1	φ19	1.24	4	2.23	3.45	13.8
		φ22				812.4	
		φ19				13.8	
		TOTAL				826.2	1652.4
S-5-2							
S	1	φ22	2.50	37	2.98	7.45	275.7
2			5.25	43		15.65	673.0
3			4.04	19		12.04	228.8
4			6.25	52		18.65	968.8
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				2146.3	
		φ19				13.8	
		TOTAL				2160.1	4320.2
S-5-2							
S	1	φ22	5.25	62	2.98	15.65	970.3
2			6.25	52		18.65	968.8
Δ	1	φ19	1.22	4	2.23	3.45	13.8
		φ22				1959.1	
		φ19				13.8	
		TOTAL				1952.9	11717.4
S-6-1							
S	1	φ19	1.38	10	2.23	3.08	30.8
2		φ16	1.90	6	1.50	3.00	18.0
Δ	1	φ19	1.22	1	2.23	3.45	3.5
		φ19				34.3	
		φ16				18.0	
		TOTAL				52.3	53.3
S-6-2							
S	1	φ19	1.38	10	2.23	3.08	30.8
2		φ16	1.79	3	1.50	2.83	8.5
3			1.35	3		2.92	8.8
Δ	1	φ19	1.22	1	2.23	3.45	3.5
		φ19				34.3	
		φ16				17.3	
		TOTAL				51.6	103.2
CAR STOPPER							
C	1	φ9	95	160	0.49	0.48	76.8
2			320	32		1.60	51.2
		TOTAL				φ9	128.0

GENERAL NOTES

NO	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER LIST OF MATERIAL (1)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>h. w. s. g. h. i.</i>	<i>REV. NO.</i>
DATE	SCALE	DWG. NO.	
05.01.1975		S-116	

GENERAL NOTES

LIST OF MATERIALS

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
PIER GIRDER					
B	φ25	3.55	15	3.85	13.59
2	4.55	15			17.44
3	5.25	140			20.21
4	7.93	20			30.55
5	6.93	20			26.63
6	7.48	5			28.30
7	6.48	5			24.95
8	5.25	10			20.21
9	5.30	10			21.56
10	3.02	5			11.67
11	4.03	5			15.52
12	5.23	15			20.14
13	6.23	15			23.99
14	5.25	145			20.21
15	4.83	20			18.60
16	5.83	20			24.75
17	4.38	5			16.36
18	3.38	5			13.01
19	3.85	10			14.82
20	5.00	10			19.25
21	4.73	5			18.21
22	5.73	5			22.06
23	φ19	6.20	48	2.23	13.83
24	7.82	40			17.44
25	6.05	24			13.49
26	3.75	8			8.36
27	4.90	8			10.93
28	7.68	12			17.13
29	φ25	4.30	80	3.85	16.56
30	7.75	80			29.84
31	5.22	80			20.10
32	6.23	80			23.99
33	φ22	2.02	120	2.98	6.02
34	φ19	5.53	128	2.23	12.33
35	5.26	18			11.73
36	7.89	18			17.59
37	1.72	14			3.34
38	3.34	28			7.45
39	72	14			1.61
40	φ16	5.93	24	1.58	9.37
41	φ19	5.61	16	2.23	12.51
42	1.12	104			7.19
43	2.60	464			5.30
44	2.46	16			5.49
45	2.00	16			4.46
46	φ25	2.75	20	3.85	10.59
47	φ19	1.80	64	2.23	4.01
48	6.17	8			13.76
49	φ15	1.10	1779	1.04	1.14
50	1.94	1003			2.02
51	2.84	20			2.95
52	1.84	720			1.71
53	2.89	36			3.01
54	1.10	84			1.14
55	1.54	34			1.60
56	1.50	64			1.35
57	2.43	64			2.53
58	80	42			0.33
59	1.64	42			1.71
				φ25	17663.6
				φ22	722.4
				φ19	8809.0
				φ16	224.9
				φ13	6182.3
				TOTAL	33602.2

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
APPROACHING GIRDER					
B	φ25	3.55	10	3.85	13.67
2	5.75	20			22.14
3	6.25	50			24.06
4	4.55	10			17.52
5	5.23	10			20.14
6	6.25	60			24.06
7	6.23	10			23.99
8	φ19	7.88	40	2.23	17.57
9	5.45	8			12.15
10	φ25	6.80	45	3.85	26.18
11	6.20	45			23.87
12	φ22	2.02	90	2.98	6.02
13	φ19	6.10	36	2.23	13.60
14	5.61	16			12.51
15	4.12	56			9.19
16	2.60	128			5.80
UTILITIES DUCT PIER					
D	φ13	3.10	208	1.04	3.22
2	1.09	300			7.13
3	1.51	125			1.57
4	1.44	224			1.50
5	φ16	4.80	226	1.58	7.58
6					
7	φ16	5.63	78		3.90
8	φ13	5.36	4	1.04	5.57
9	4.66	40			4.85
10	φ16	5.04	22	1.58	7.96
11	4.18	12			4.60
12	φ13	6.46	8	1.04	4.72
				φ16	1.944.4
				φ13	1.811.2
				TOTAL	3.778.6

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
APPROACH					
D	φ13	3.10	172	1.04	3.22
2	1.09	172			1.13
3	1.51	36			1.57
5	φ16	4.80	52	1.58	7.58
8	5.80	156			9.16
				φ16	301.7
				φ13	1,823.2
				TOTAL	2,627.9
ACCESS STEP					
S	φ22	4.96	40	2.98	14.78
2	φ13	6.12	20	1.04	6.26
3	φ22	1.10	20	2.98	3.28
4		2.00	29		5.96
5		80	32		2.38
6		71	40		2.12
7	φ16	1.80	84	1.58	2.84

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
S	φ13	1.53	12	1.01	1.29
7	φ22	2.45	8	2.98	7.30
10	φ13	1.15	12	1.01	1.20
				φ22	719.2
				φ16	238.6
				φ13	160.1
				TOTAL	1317.9

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
PILE CAP					
P	φ25	1.90	648	3.85	7.32
2	1.77	780			6.81
3	1.37	72			5.27
4	φ22	6.48	136	2.98	19.31
5	4.30	256			12.81
6	4.26	256			12.69
7	4.22	256			12.53
8	4.18	256			12.46
9	φ13	2.87	198	1.04	2.98
10	φ22	6.14	12	2.98	18.30
11	2.94	16			8.76
12	3.73	16			11.12
13	6.68	16			20.50
14	5.03	16			14.79
15	4.94	16			14.72
16	4.32	12			12.67
17	4.72	24			14.07
18	7.40	8			22.05
19	4.12	4			12.28
20	5.40	19			16.09
21	4.03	6			12.09
22	5.32	3			15.85
P	φ25	3.90	216	3.85	15.02
				φ25	13,904.2
				φ22	18,943.8
				φ13	590.0
				TOTAL	33,443.0

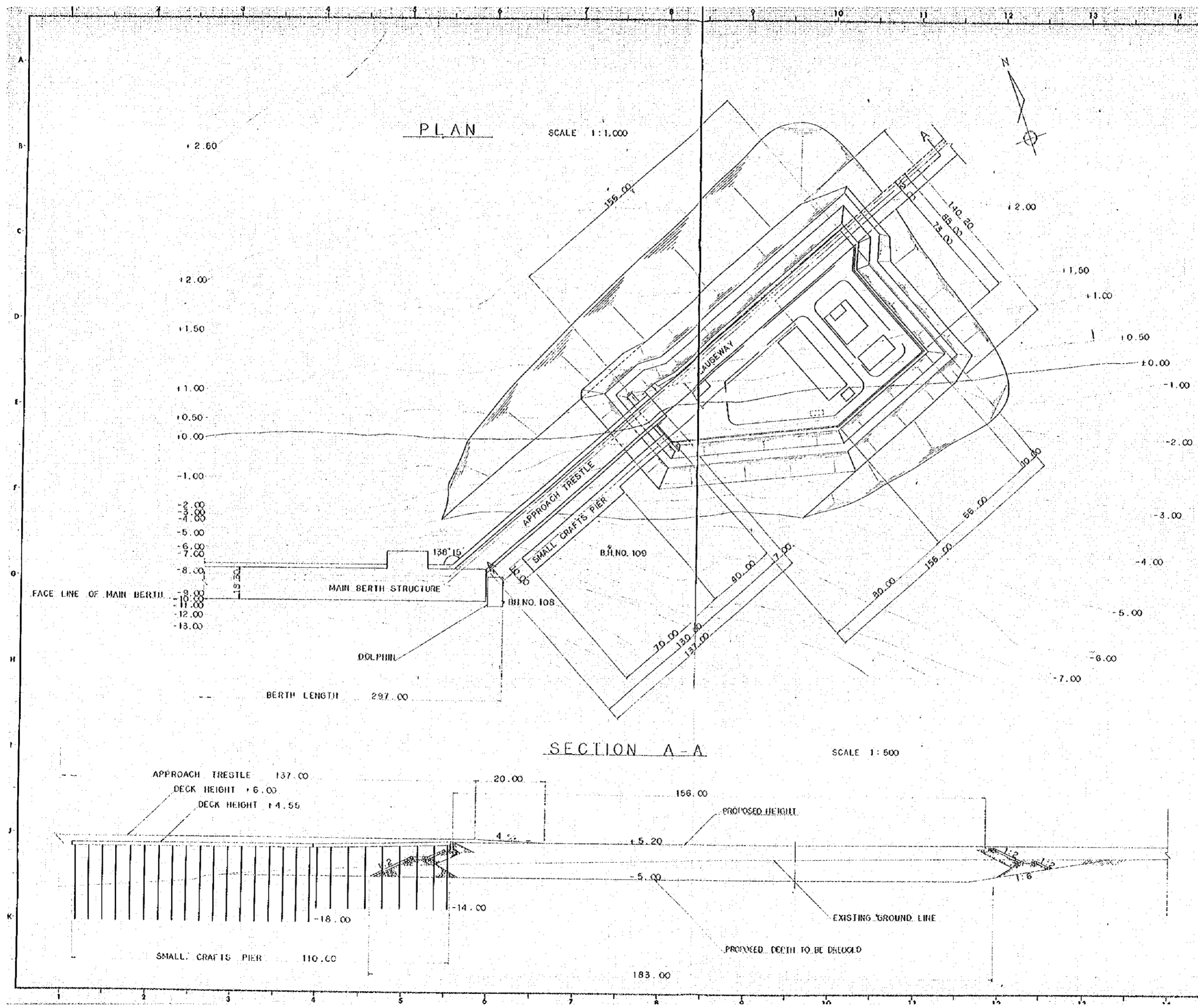
MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
BITT					
b	φ19	2.01	35	2.23	4.48
2	1.54	49			3.43
3	1.63	14			3.63
4	φ13	1.16	28	1.04	1.21
5	1.50	35			1.56
				φ19	363.3
				φ13	88.5
				TOTAL	451.5

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
CONCRETE COVER					
k	φ9	98	7	0.499	0.49
2	118	6			0.59
				φ9	6.9
				TOTAL	6.9 x 45 = 310.5

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
PILE JACKET PIER					
J	φ9	3.34	384	0.499	1.67
1	2.94	48			1.47
2	2.57	690			1.28
				φ9	1595.1

MARK	DIAM	LENGTH	EACH UNIT	WEIGHT	WEIGHT
APPROACH					
J	φ9	3.34	144	0.499	1.67
2	2.57	234			1.28
				φ9	540.0

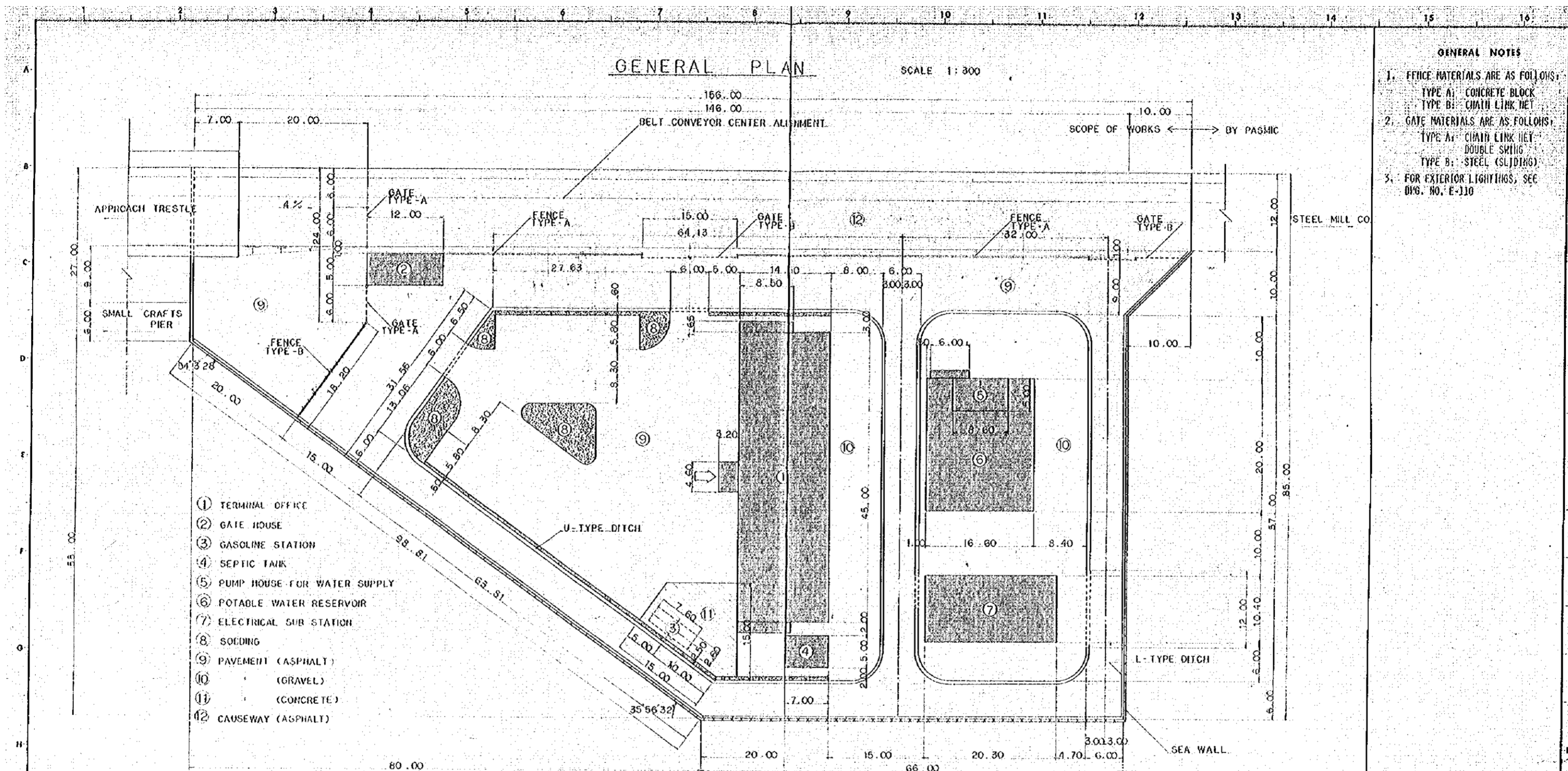
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
SMALL CRAFTS PIER			
LIST OF MATERIAL (2)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		Shirazi	Shirazi
SCALE			
DATE DEC-1975			
DWG. NO. S-117			



GENERAL NOTES

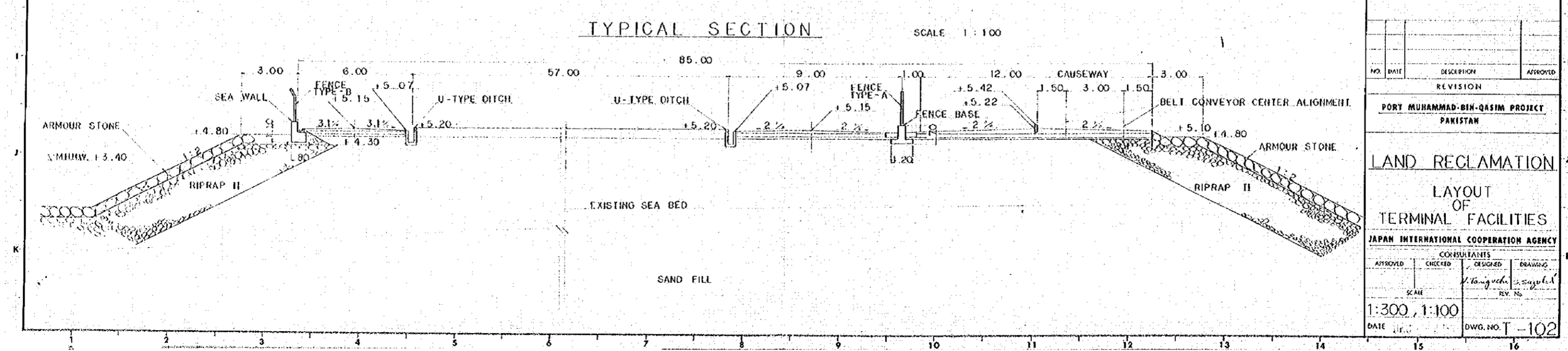
1. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THIS DWG. ARE IN METERS.
2. ELEVATIONS INDICATED ON ALL DWGS. ARE SHOWN WITH + OR - AND EXPRESSED IN METERS ABOVE OR BELOW THE CHART DATUM.
3. SCOPE OF DREDGING WORKS SHOWN ON THIS DWG. SHALL BE PERFORMED BY OTHERS.
4. FOR SOIL INFORMATION, SEE DWG. NO. S-102.
5. PRIOR TO COMMENCEMENT OF DREDGING WORKS, CONTRACTOR SHALL PERFORM FURTHER BORINGS AND SOIL INVESTIGATIONS OF THE RECLAMATION AREA AS DIRECTED BY THE ENGINEER. THE ENGINEER MAY MODIFY THE DESIGN FROM RESULTS OF SOIL INFORMATION TO SUIT THE SITE CONDITION. ANY MODIFICATIONS THEREBY SHALL NOT RELIEVE CONSTRUCTION'S RESPONSIBILITY TO PERFORM THE WORKS.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION PLAN AND SECTION OF TERMINAL AREA			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		M. Taniguchi	Suzuki
SCALE			
1:1,000, 1:500			
DATE DEC 1975		DWG. NO. T-101	



GENERAL NOTES

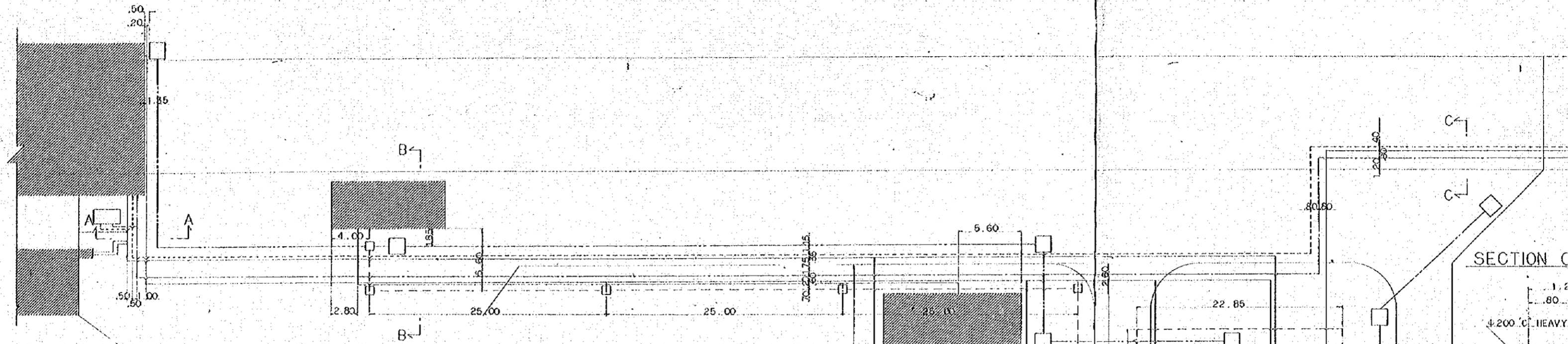
- FENCE MATERIALS ARE AS FOLLOWS:
TYPE A: CONCRETE BLOCK
TYPE B: CHAIN LINK NET
- GATE MATERIALS ARE AS FOLLOWS:
TYPE A: CHAIN LINK NET
DOUBLE SLIDING
TYPE B: STEEL (SLIDING)
- FOR EXTERIOR LIGHTINGS, SEE
DWG. NO. E-110



NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION LAYOUT OF TERMINAL FACILITIES			
JAPAN INTERNATIONAL COOPERATION AGENCY			
APPROVED		CONSULTANTS	
SCALE	1:300, 1:100	DESIGNED	DRAWING
DATE		REV. NO.	
		DWG. NO. T-102	

P L A N

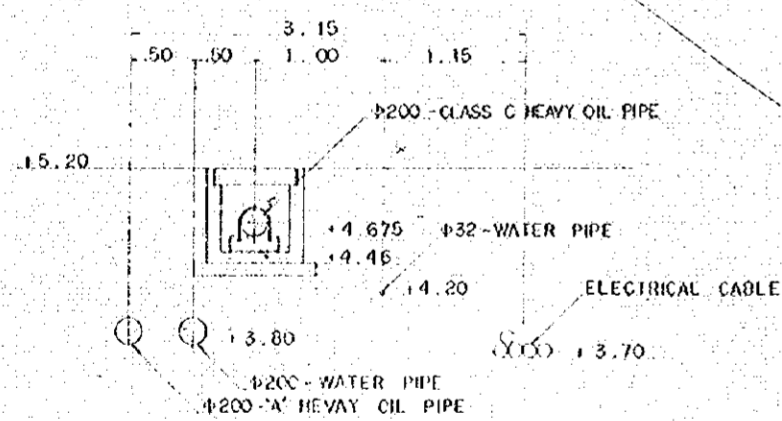
SCALE 1:200



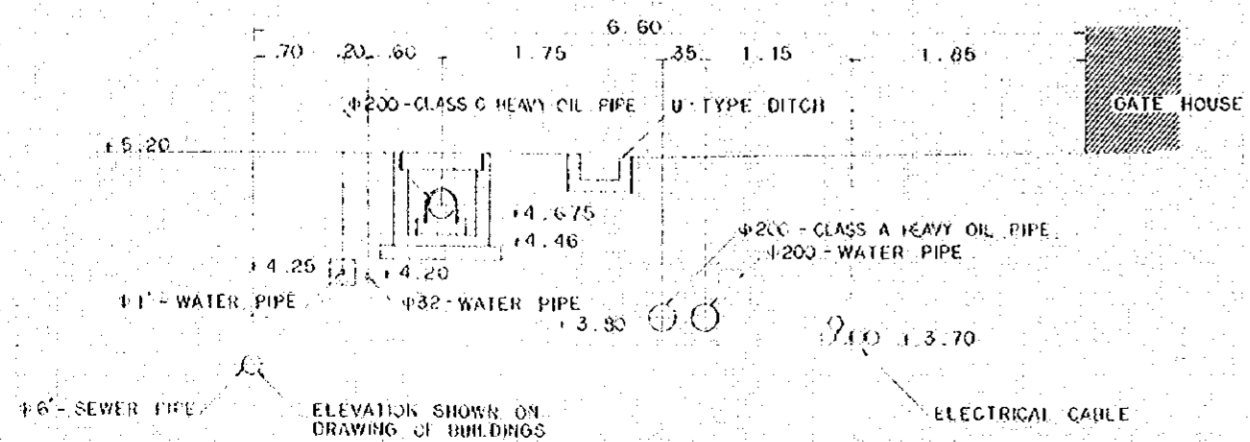
LEGEND

- ELECTRICAL CABLE
- CLASS A HEAVY OIL PIPE
- WATER PIPE
- CLASS C HEAVY OIL PIPE
- SEWER PIPE
- MANHOLE

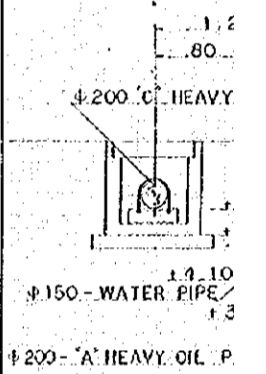
SECTION A-A SCALE 1:30



SECTION B-B SCALE 1:30



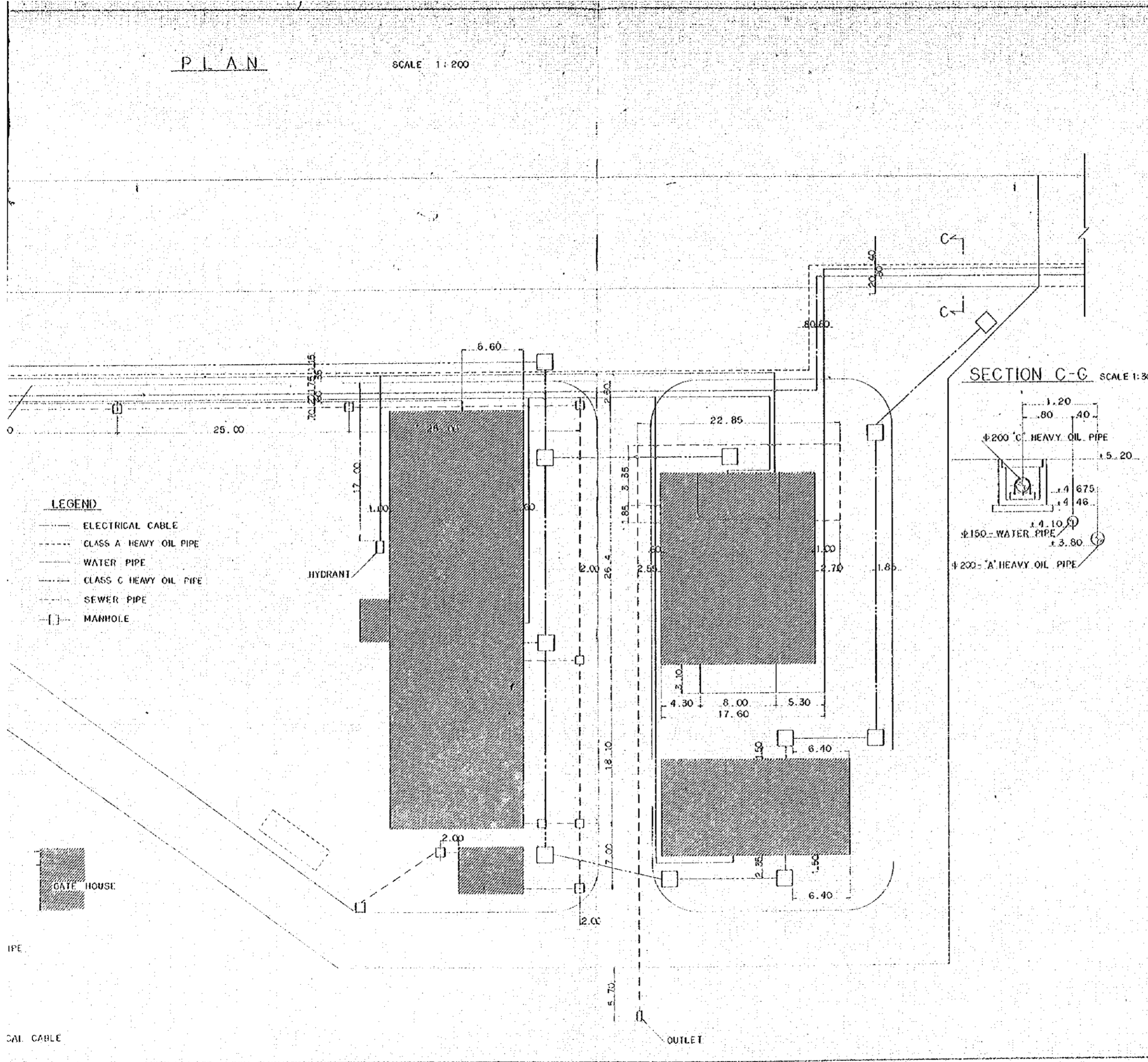
SECTION C-C



OUTLET

P L A N

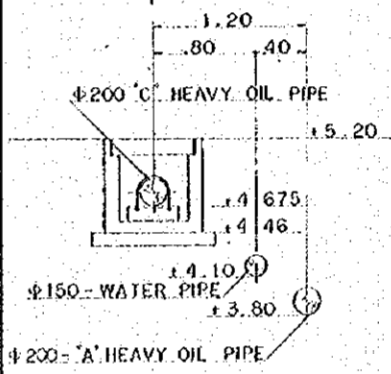
SCALE 1:200



LEGEND

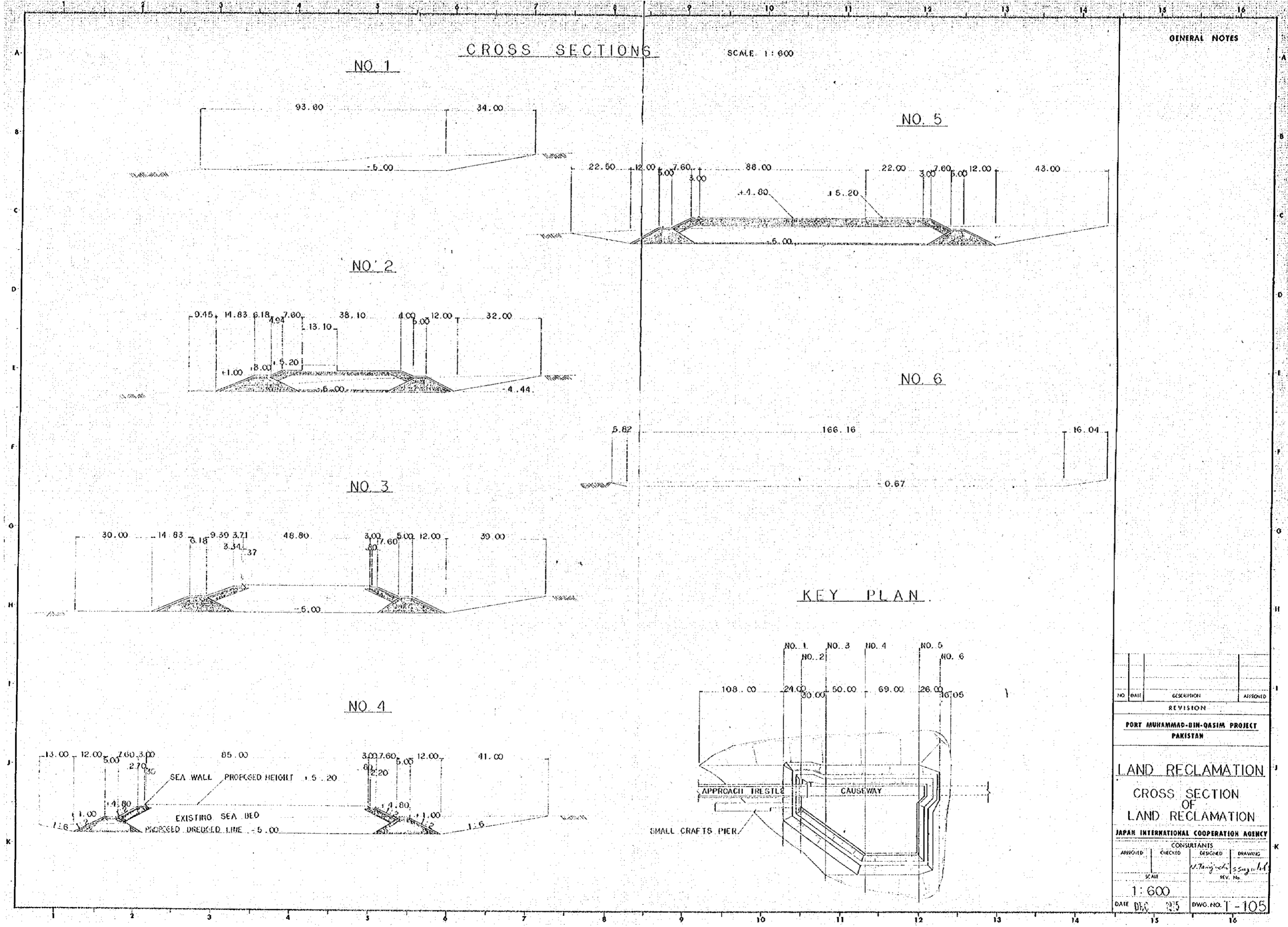
- ELECTRICAL CABLE
- - - CLASS A HEAVY OIL PIPE
- WATER PIPE
- - - CLASS C HEAVY OIL PIPE
- - - SEWER PIPE
- [] MANHOLE

SECTION C-C SCALE 1:30



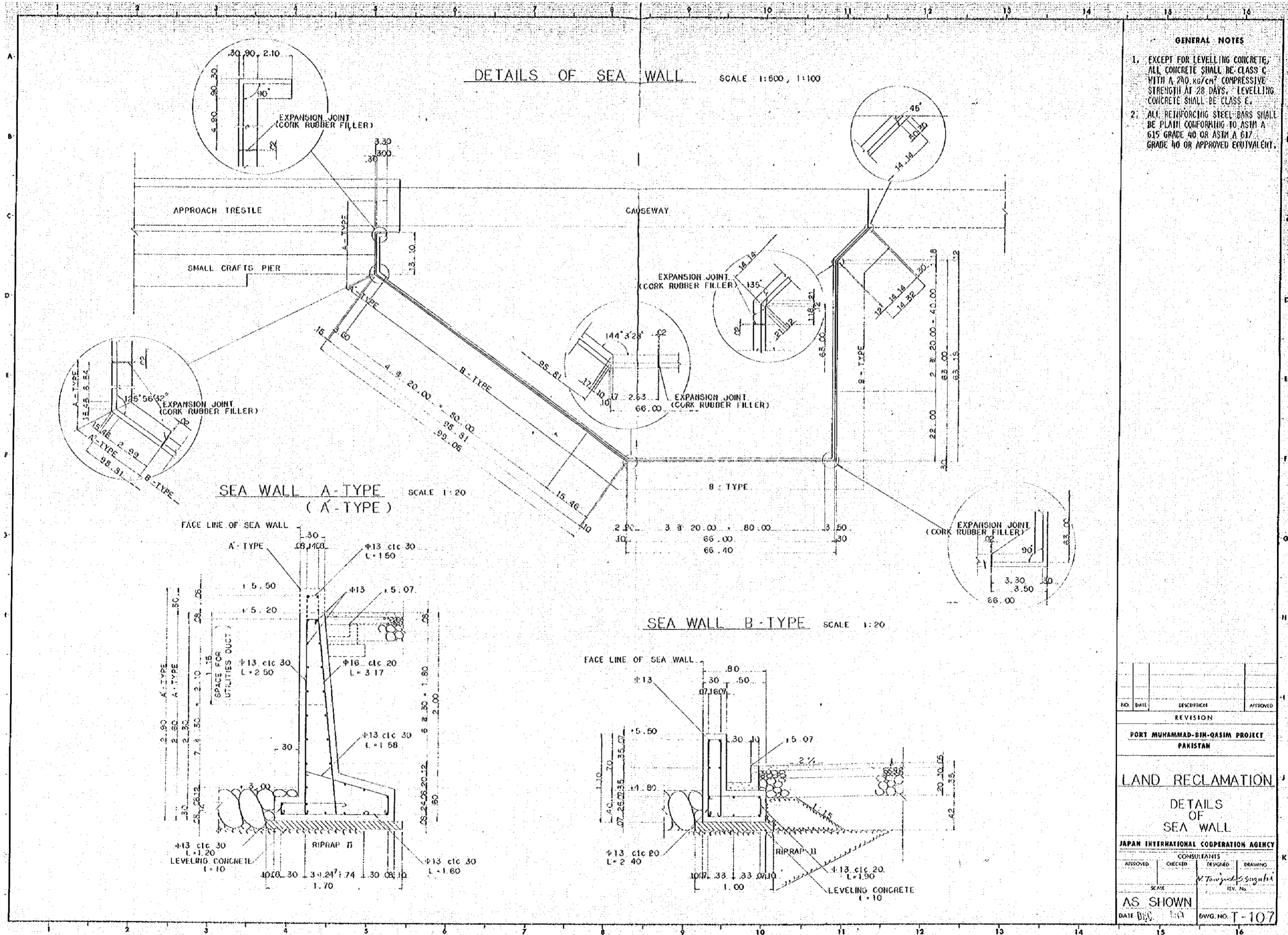
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION			
PLAN OF PIPING AND CABLES			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE		REV. NO.	
1:200, 1:30			
DATE	1990	DWG. NO.	T-103



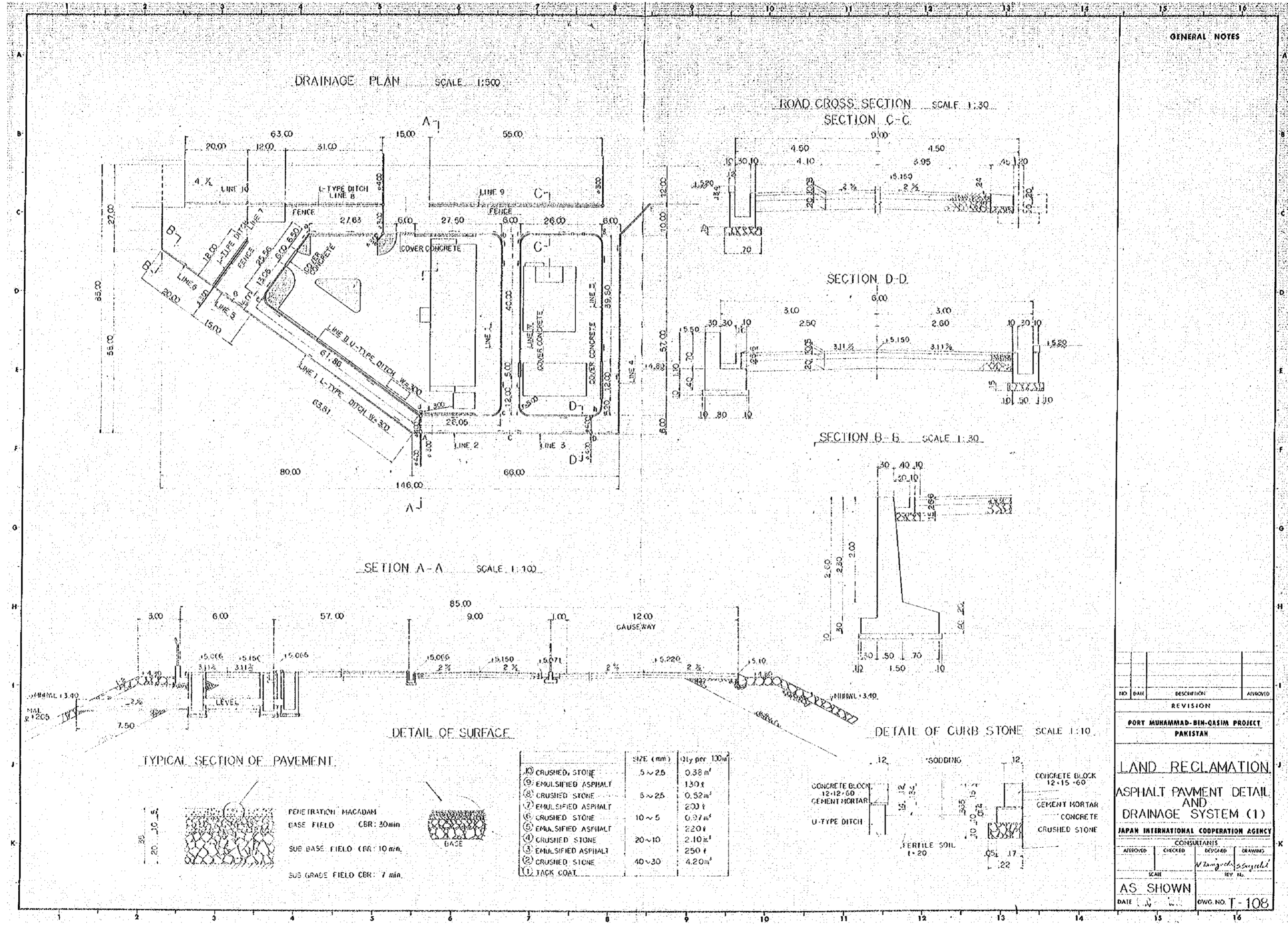
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION CROSS SECTION OF LAND RECLAMATION			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>U. Taniguchi</i>	<i>S. Sugimori</i>
SCALE			
1:600			
DATE	DEC 1975		DWG. NO. T-105



- GENERAL NOTES**
- EXCEPT FOR LEVELLING CONCRETE, ALL CONCRETE SHALL BE CLASS C WITH A 240 kg/cm² COMPRESSIVE STRENGTH AT 28 DAYS. LEVELLING CONCRETE SHALL BE CLASS E.
 - ALL REINFORCING STEEL BARS SHALL BE PLAIN CONFORMING TO ASTM A 615 GRADE 40 OR ASTM A 617 GRADE 40 OR APPROVED EQUIVALENT.

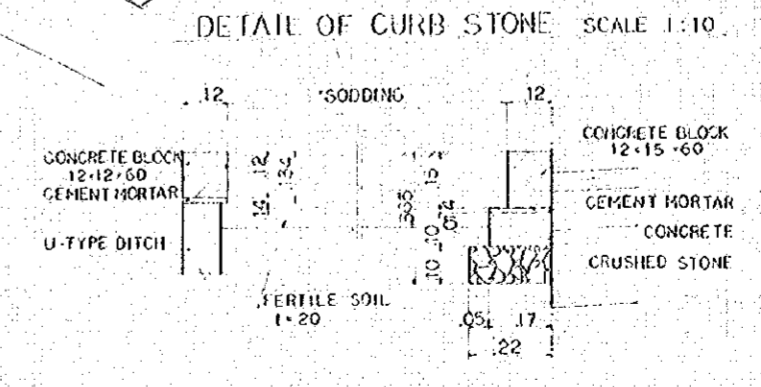
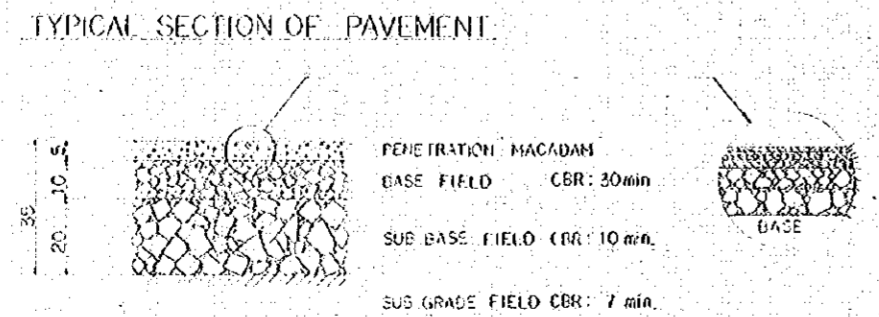
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIH-QASIM PROJECT PAKISTAN			
LAND RECLAMATION DETAILS OF SEA WALL			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>M. Tawajul S. Sughra</i>	
SCALE			
AS SHOWN			
DATE	BY	DWG. NO. T-107	

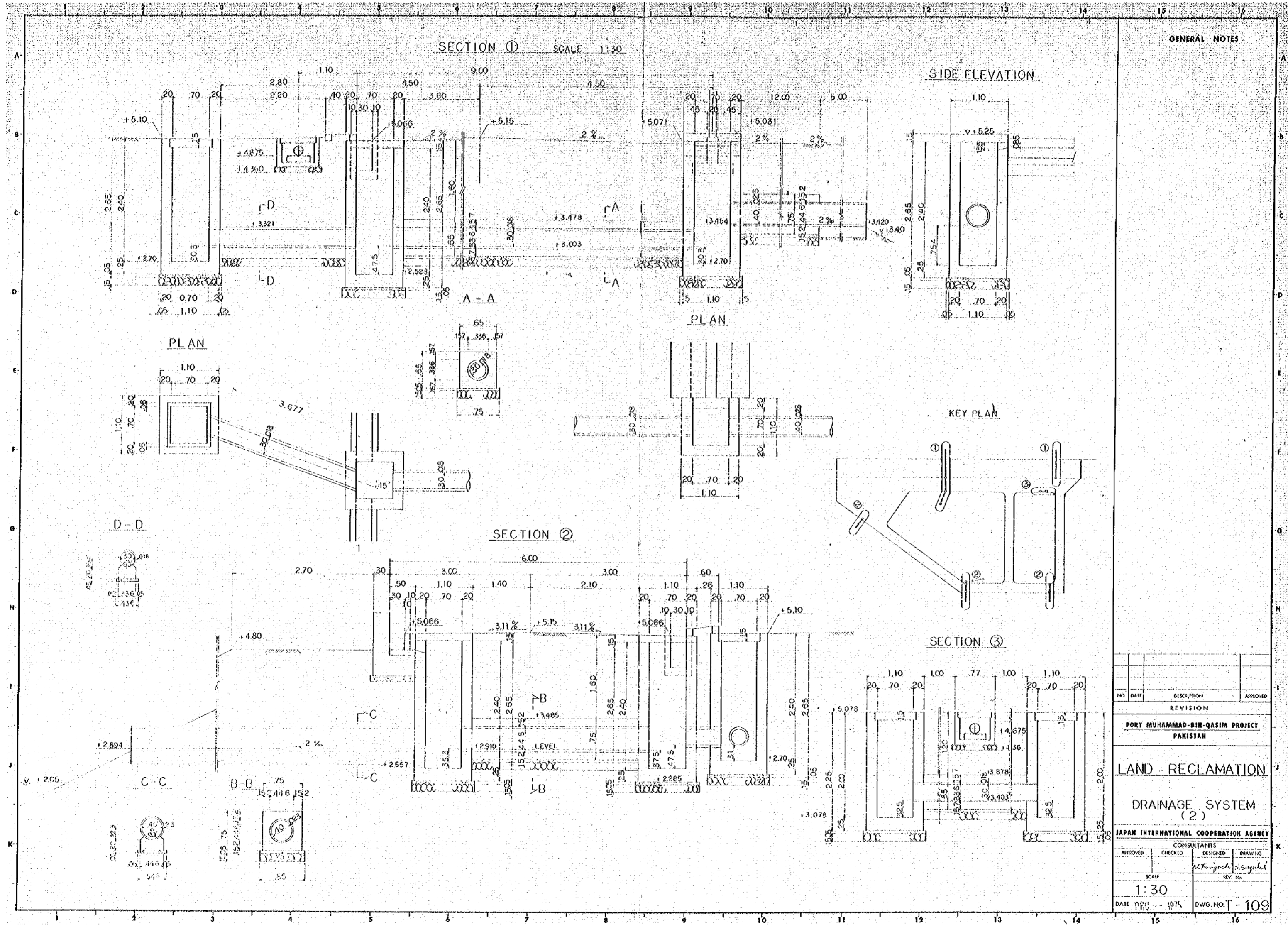


GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION			
ASPHALT PAVMENT DETAIL AND DRAINAGE SYSTEM (1)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>N. Taniguchi</i>	<i>S. Saito</i>
SCALE		REV. NO.	
AS SHOWN			
DATE	DWG. NO. T-108		

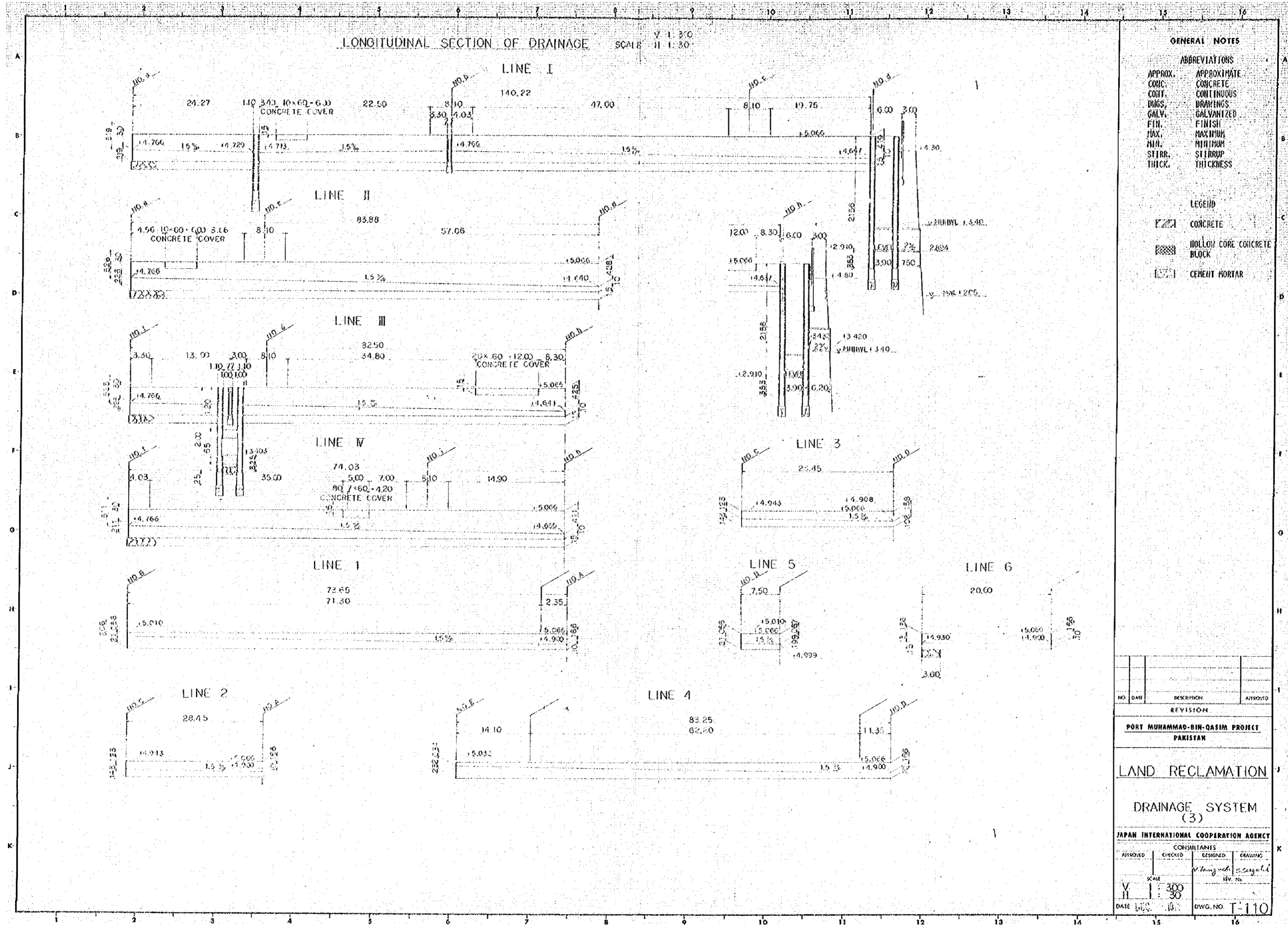
	SIZE (mm)	Qty per 100m ²
⑩ CRUSHED STONE	5~25	0.38 m ³
⑨ EMULSIFIED ASPHALT		130 t
⑧ CRUSHED STONE	5~25	0.52 m ³
⑦ EMULSIFIED ASPHALT		200 t
⑥ CRUSHED STONE	10~5	0.37 m ³
⑤ EMULSIFIED ASPHALT		220 t
④ CRUSHED STONE	20~10	2.10 m ³
③ EMULSIFIED ASPHALT		250 t
② CRUSHED STONE	40~30	4.20 m ³
① JACK COAT		





GENERAL NOTES

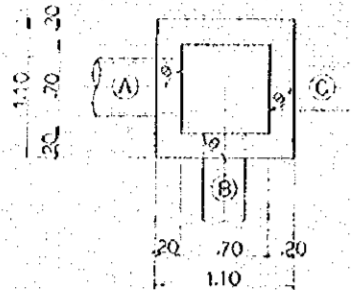
NO	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION			
DRAINAGE SYSTEM (2)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>M. Farooq</i>	<i>S. Saqib</i>
SCALE		REV. NO.	
1:30			
DATE	1975	DWG. NO. T-109	



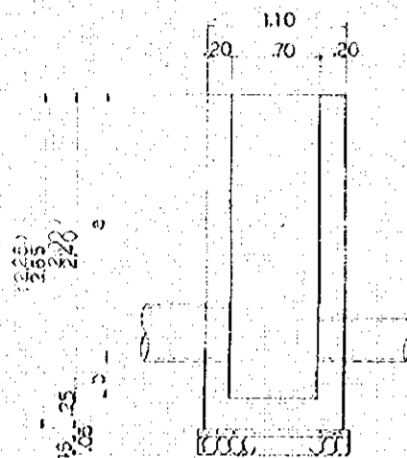
BAR ARRANGEMENT OF MANHOLE SCALE 1:30

GENERAL NOTES

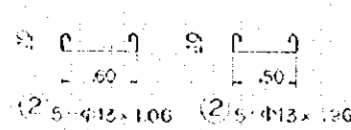
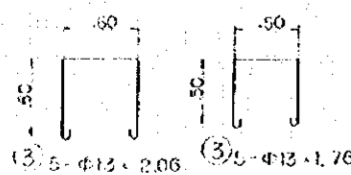
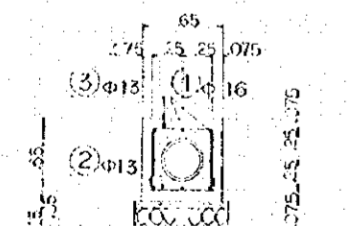
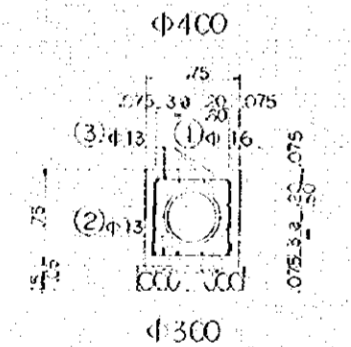
PLAN



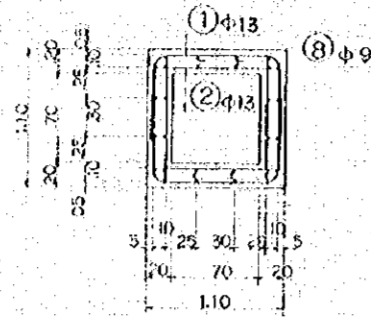
SIDE VIEW



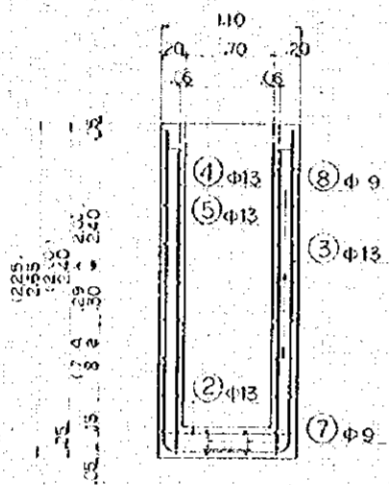
PIPE PROTECTOR



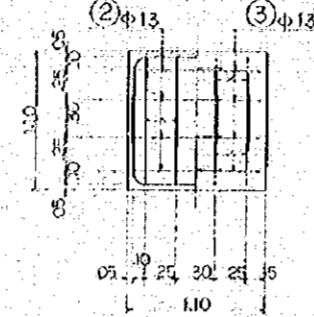
PLAN



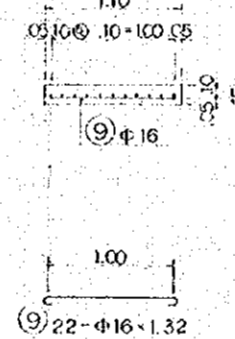
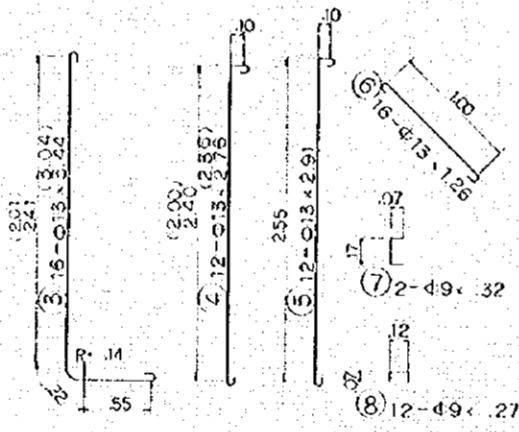
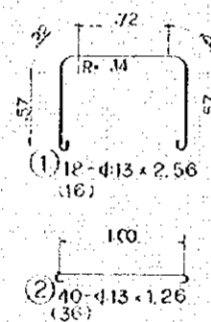
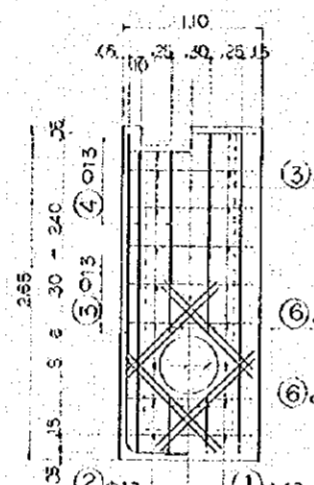
SECTION



BOTTOM SLAB



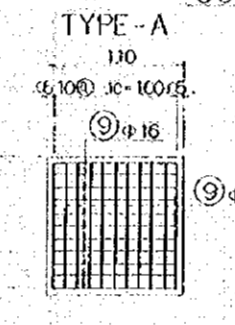
SIDE WALL



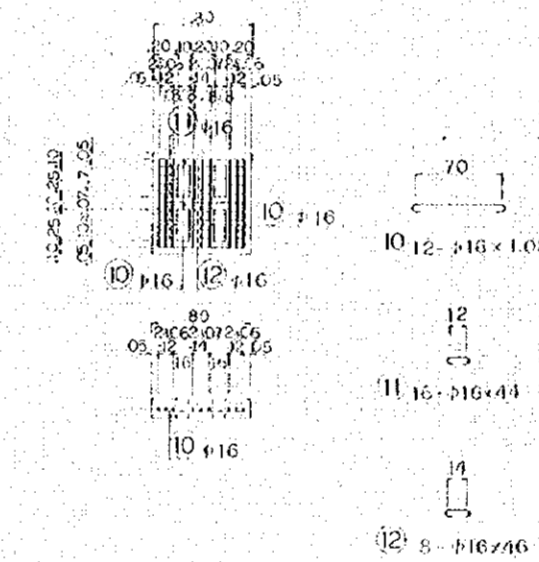
DIMENSION OF MANHOLE

NO	TYPE	Ø	D	PIPE ELEVATION	(A)	(B)	(C)	NOTE
1	A	2097	303	+3.003	Ø	Ø	Ø	
2	B	1946	754	+3.454	300 IN 90°		400 OUT 90°	
3	A	1925	475	+3.003	300 IN 45°		300 OUT 90°	
4	A	2097	303	+3.003	300 OUT 90°			
5	B	2090	310	+3.010	300 OUT 90°	300 IN 80°		
6	A	2025	375	+2.910	400 OUT 90°		300 IN 90°	
7	A	2047	353	+2.910	400 OUT 90°		400 IN 90°	
8	A	2025	375	+2.910	400 OUT 90°			
9	A	1925	475	+3.010	400 OUT 90°		400 IN 90°	
10	A	2047	353	+2.910	400 OUT 90°			
11	C	1675	325	+3.402	300 OUT 90°			
12	C	1675	325	+3.403	300 IN 90°			

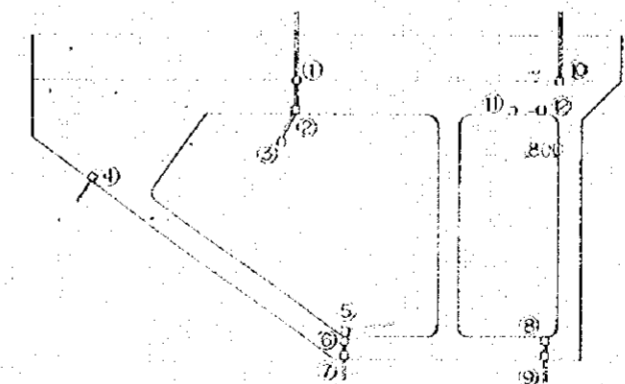
CONCRETE COVER



TYPE-B

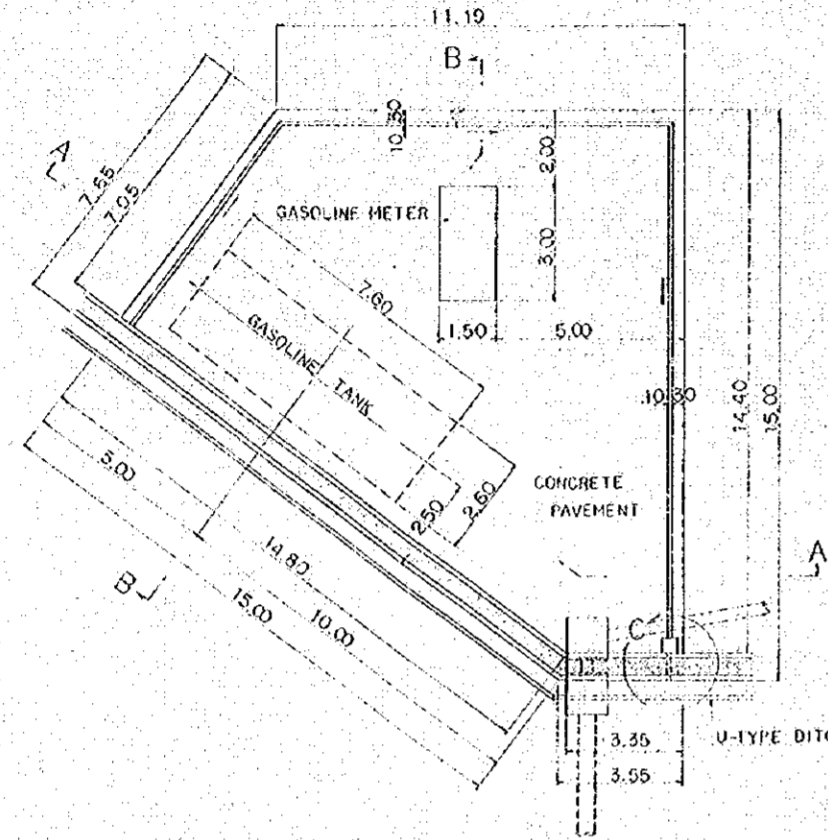


KEY PLAN

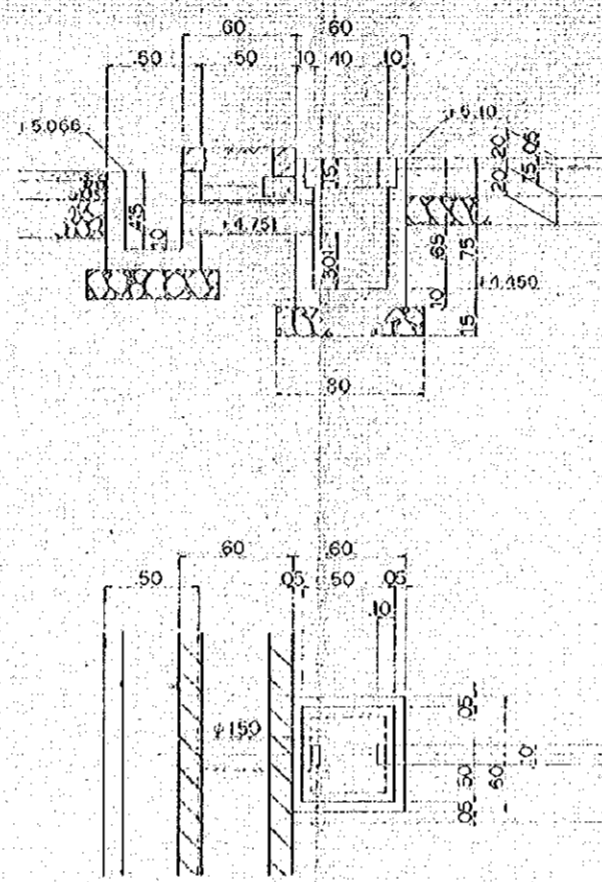


NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
LAND RECLAMATION			
DRAINAGE SYSTEM (4)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE 1:30			
DATE	10/10/10	DWG. NO.	T-111

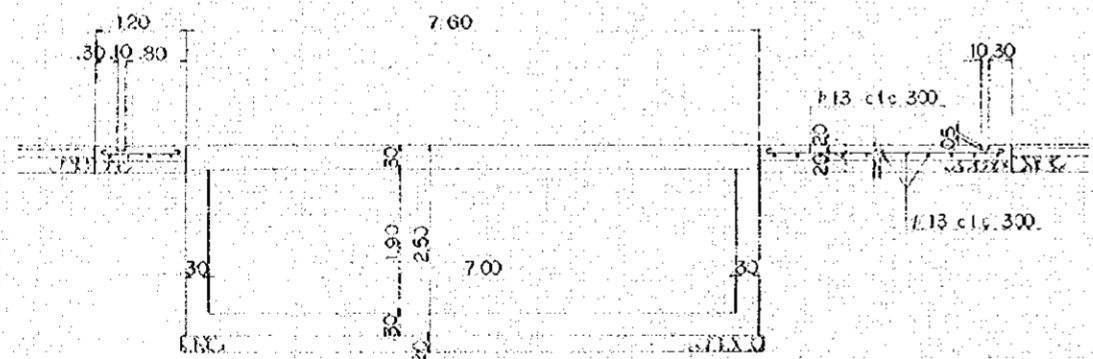
PLAN OF GASOLINE STATION SCALE 1:100



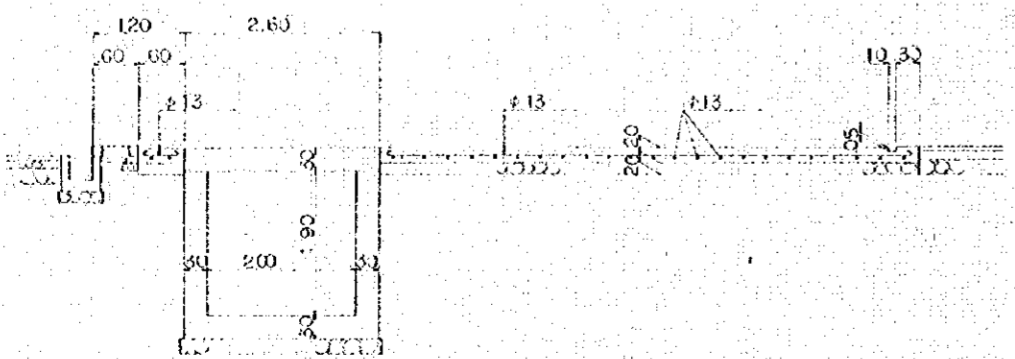
DETAIL 'C' SCALE 1:20



SECTION A - A SCALE 1:50



SECTION B - B



GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

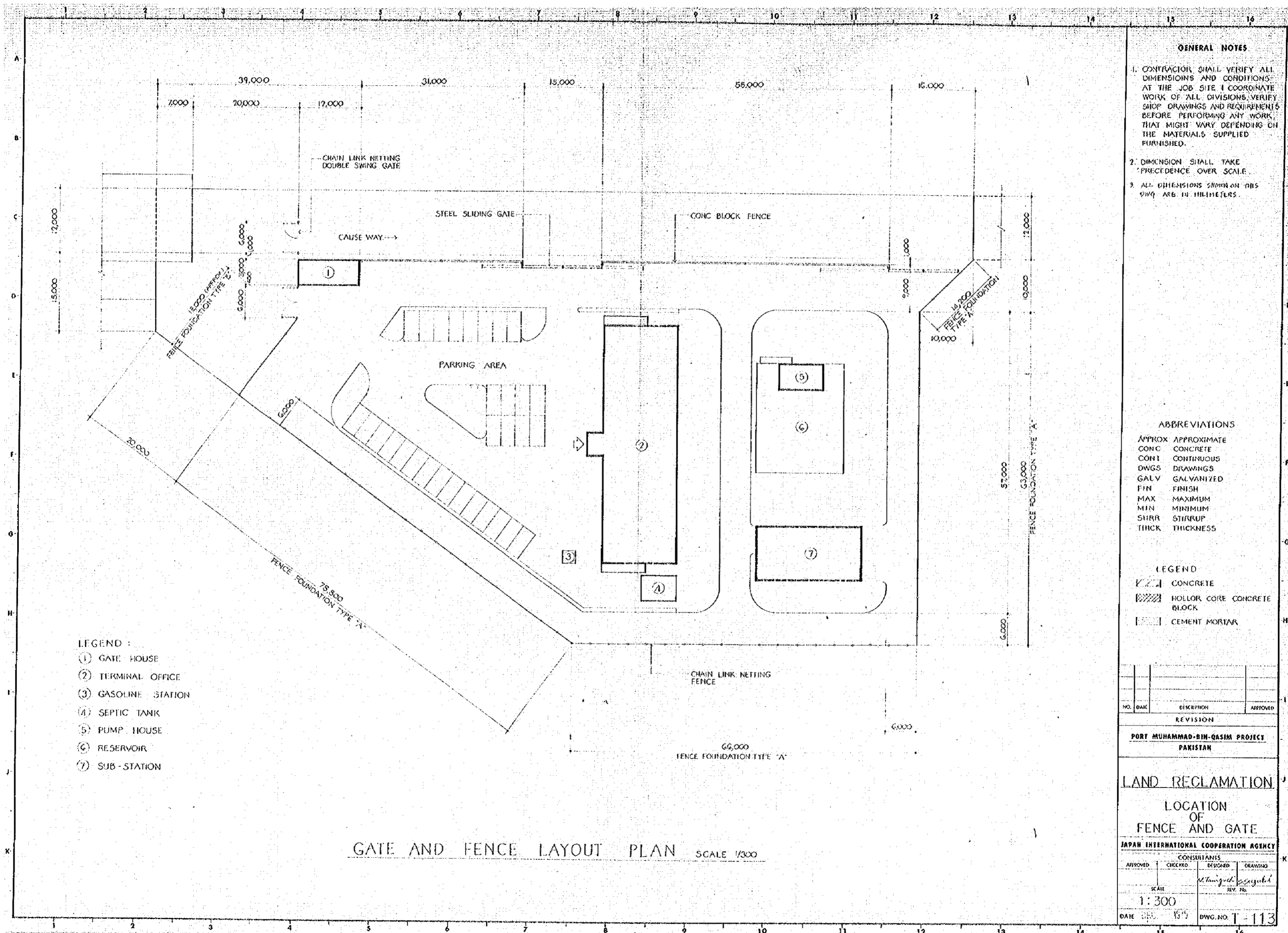
PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

LAND RECLAMATION
PAVEMENT AND DRAINAGE
OF
GASOLINE STATION

JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>M. Tanzeem-ur-Rahman</i>	
SCALE		REV. NO.	

AS SHOWN
DATE 10/01/85 DWG. NO. T-112



GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE & COORDINATE WORK OF ALL DIVISIONS. VERIFY SHOP DRAWINGS AND REQUIREMENTS BEFORE PERFORMING ANY WORK. THAT MIGHT VARY DEPENDING ON THE MATERIALS SUPPLIED FURNISHED.
2. DIMENSION SHALL TAKE PRECEDENCE OVER SCALE.
3. ALL DIMENSIONS SHOWN ON THIS DWG ARE IN MILLIMETERS.

ABBREVIATIONS

- APPROX APPROXIMATE
 CONC CONCRETE
 CONT CONTINUOUS
 DWGS DRAWINGS
 GALV GALVANIZED
 FIN FINISH
 MAX MAXIMUM
 MIN MINIMUM
 SHRR STIRRUP
 THICK THICKNESS

LEGEND

- CONCRETE
 HOLLOW CORE CONCRETE BLOCK
 CEMENT MORTAR

LEGEND :

- ① GATE HOUSE
- ② TERMINAL OFFICE
- ③ GASOLINE STATION
- ④ SEPTIC TANK
- ⑤ PUMP HOUSE
- ⑥ RESERVOIR
- ⑦ SUB-STATION

GATE AND FENCE LAYOUT PLAN SCALE 1/300

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

PORT MUHAMMAD-BIN-QASIM PROJECT
 PAKISTAN

LAND RECLAMATION
 LOCATION OF FENCE AND GATE

JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>M. Iqbal</i>	<i>M. Iqbal</i>
SCALE 1:300			
DATE	15/5	DWG. NO. T-113	

