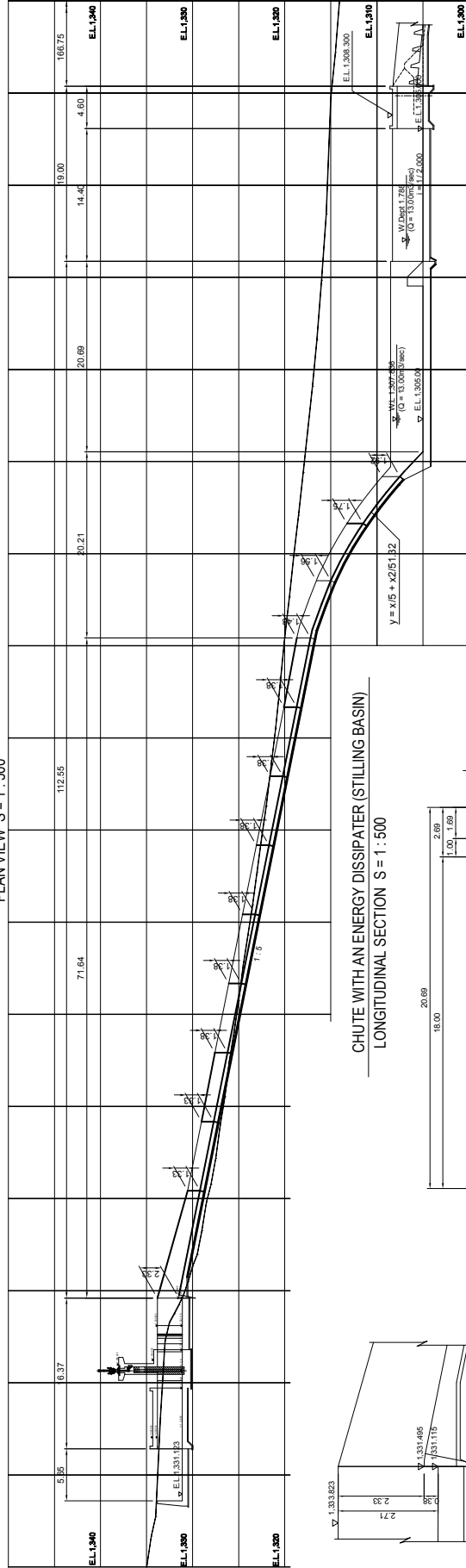
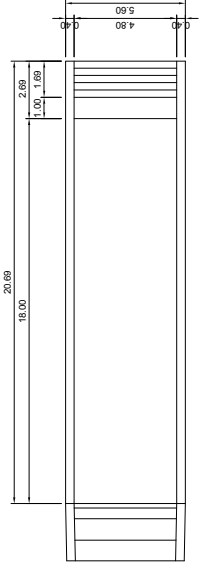


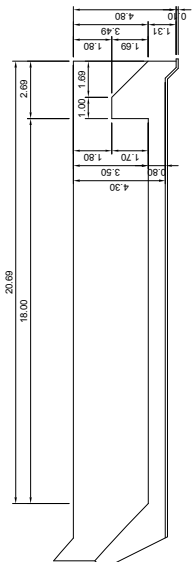
CHUTE WITH AN ENERGY DISSIPATER (STILLING BASIN)  
PLAN VIEW S = 1 : 500



CHUTE WITH AN ENERGY DISSIPATER (STILLING BASIN)  
LONGITUDINAL SECTION S = 1 : 500

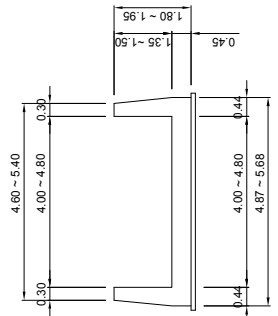


ENERGY DISSIPATER (STILLING BASIN): PLAN VIEW S = 1 : 250

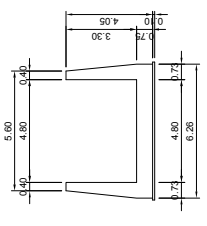


ENERGY DISSIPATER (STILLING BASIN)  
CROSS SECTION S = 1 : 250

DETAIL A: INLET OF THE CHUTE S = 1 : 25

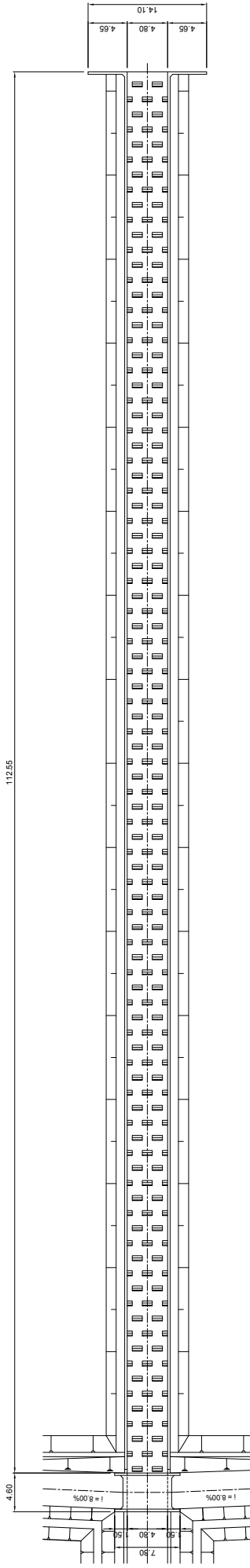


CHUTE CANAL: SECTION VIEW S = 1 : 125

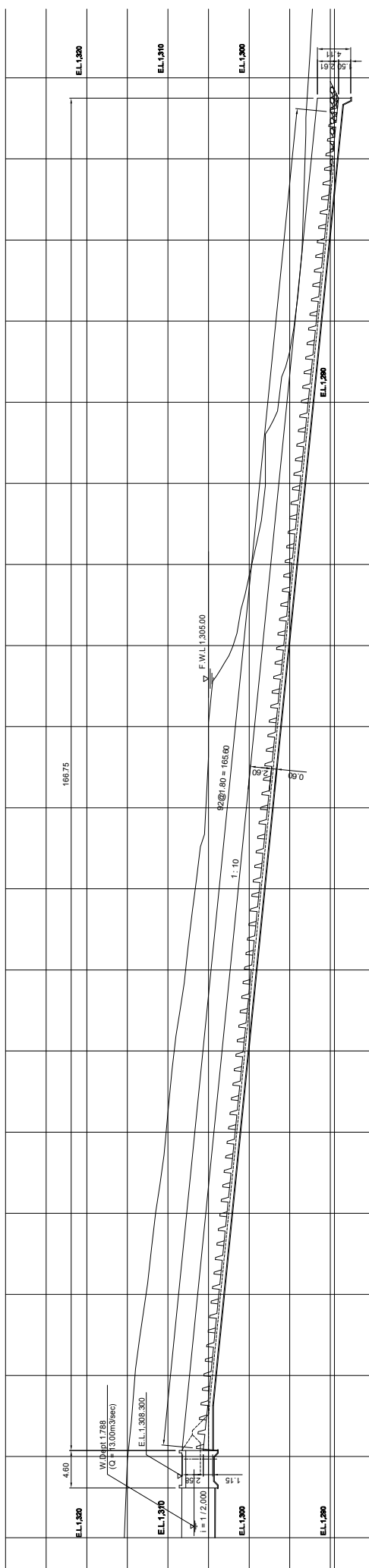


TRANSITION:  
CROSS SECTION S = 1 : 250

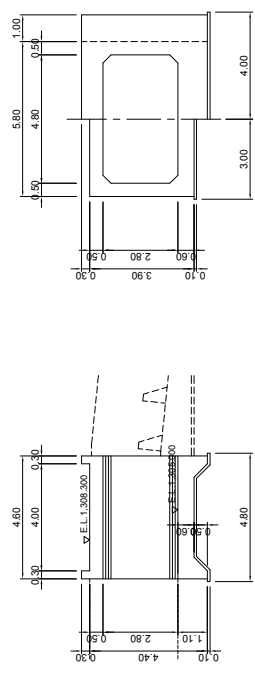
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:	Drawn by:
Drawing Title:	Feeder Canal System 2, Structural Drawing of Chute with an Energy Dissipater	Scale:	Checked by:
Revision:	Initials	All dimension in:	Approved by:
			Meter



BAFFLED CHUTE  
PLAN VIEW S = 1 : 500



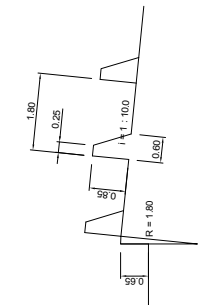
BAFFLED CHUTE  
LONGITUDINAL SECTION S = 1 : 500



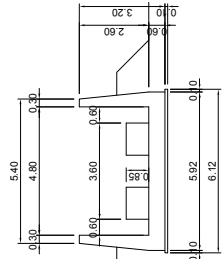
FRONT VIEW

LONGITUDINAL SECTION

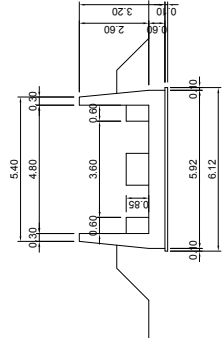
ROAD CULVERT S = 1 : 200



LAYOUT OF THE BAFFLED BLOCK

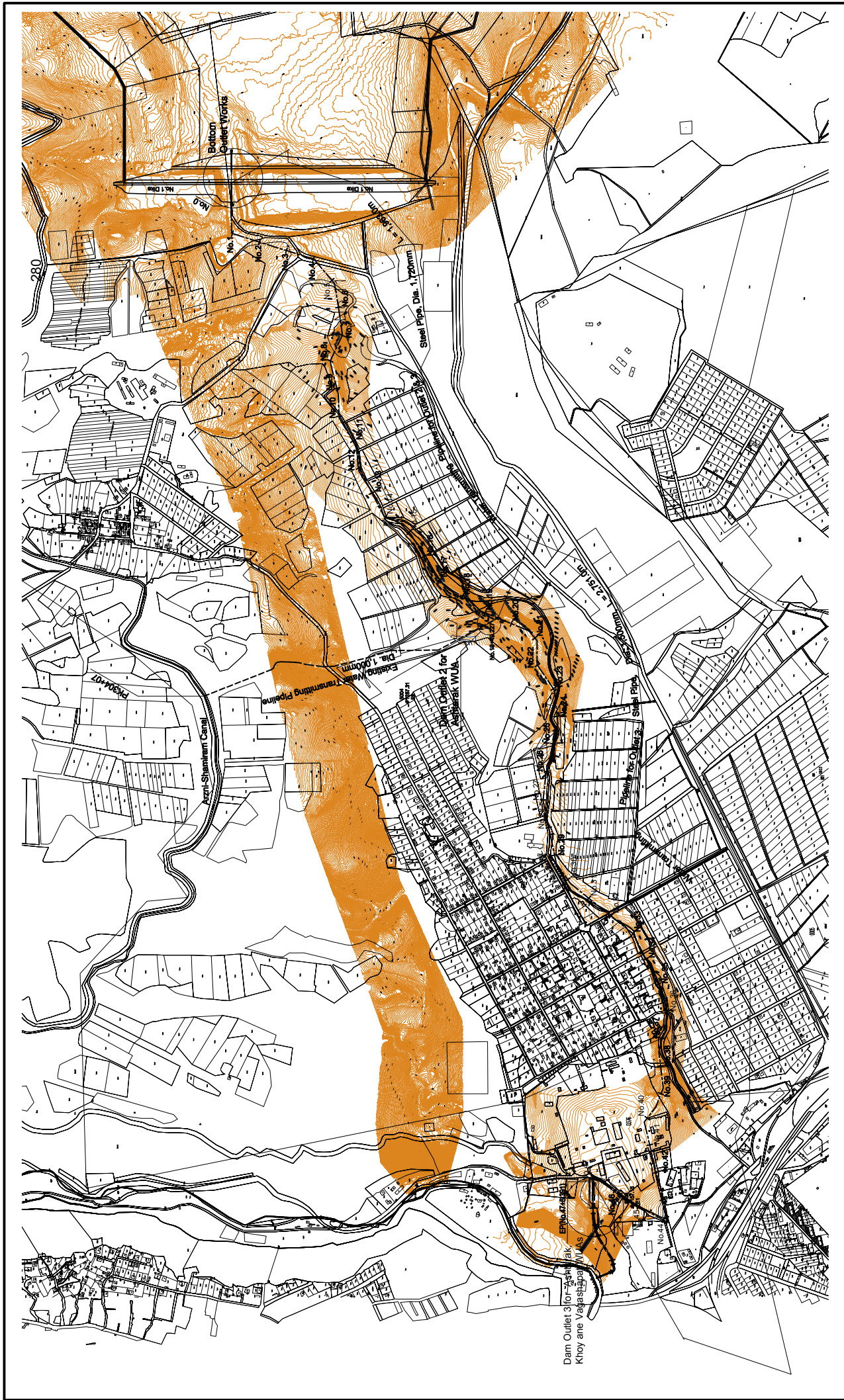


CROSS SECTION OF THE BAFFLED CHUTE  
BAFFLED CHUTE S = 1 : 200



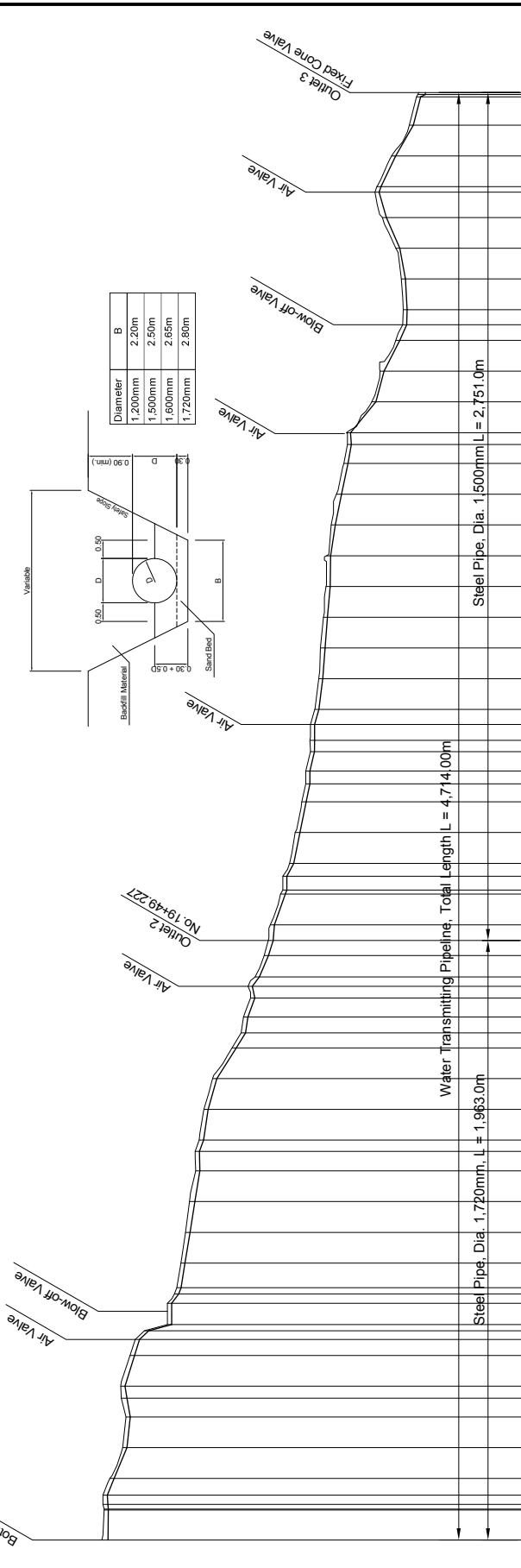
CROSS SECTION OF THE BAFFLED CHUTE

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Feeder Canal System 2 - Structural Drawing of Baffled Chute	Scale:	Indicated	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	

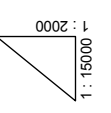


Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	Outlet System Layout of the No.1 Dike, Water Distribution System of the Outlet 2 and Outlet 3	Scale:	S = 1 / 12,500	Checked by:	
Revision:		All dimension in:	Meter	Approved by:	

Project: Preparatory Survey for Yeghvard Irrigation System Improvement Project  
 Drawing No.: Sanyu Consultants Inc.  
 Drawing Title: Longitudinal Profile of Water Transmitting Pipeline for Outlet 2 and Outlet 3  
 Scale: Indicated  
 Revision: All dimension in: Meter  
 Initials: \_\_\_\_\_  
 Approved by: \_\_\_\_\_  
 Checked by: \_\_\_\_\_  
 Drawn by: \_\_\_\_\_



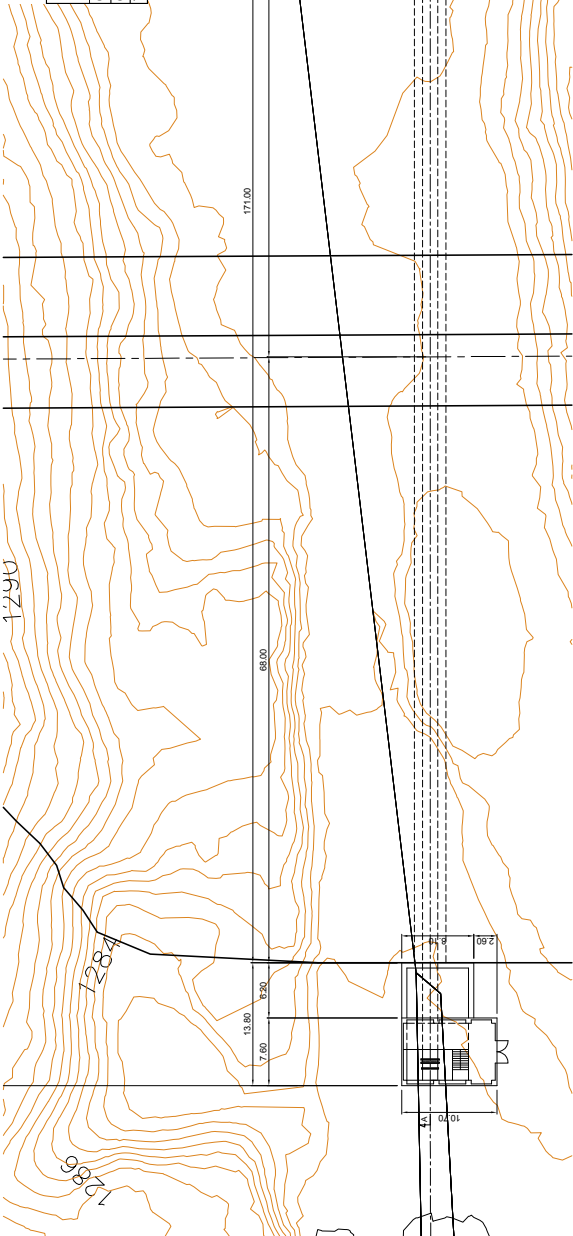
Station	Distance (m)	Accumulate Distance (m)	Ground Elevation	Elevation of Pipe Center	Earth Covering	Slope (%)
No.0	0.00	0.00	1282.50	1279.80	1.84	0.10
No.1	31.00	31.00	1282.00	1279.70	1.00	0.96
No.2	54.00	85.00	1279.00	1280.14	1.02	5.58
No.3	100.00	185.00	1273.00	1271.54	1.00	1.40
No.4	100.00	285.00	1272.00	1270.14	1.00	2.30
No.5	39.00	324.00	1274.30	1272.44	1.00	4.14
No.6	100.00	424.00	1270.00	1268.30	1.14	14.29
No.7	28.00	452.00	1254.00	1252.14	1.00	0.00
No.8	24.00	476.00	1254.00	1254.14	1.00	5.00
No.9	80.00	556.00	1248.00	1248.14	1.00	2.16
No.10	100.00	656.00	1246.20	1244.26	1.08	0.93
No.11	100.00	756.00	1244.50	1242.10	1.54	0.32
No.12	63.00	819.00	1242.00	1239.94	1.00	4.86
No.13	37.00	856.00	1240.00	1240.14	1.00	2.00
No.14	100.00	956.00	1238.00	1236.34	1.00	3.70
No.15	100.00	1056.00	1234.50	1232.64	1.00	8.50
No.16	100.00	1156.00	1226.00	1224.14	1.00	8.16
No.17	49.00	1205.00	1220.00	1220.14	1.00	1.96
No.18	38.00	1243.00	1218.00	1216.14	1.00	4.84
No.19	70.00	1313.00	1210.00	1210.14	1.00	5.71
No.20	50.77	1363.77	1200.00	1207.65	1.00	4.28
No.21	45.00	1408.77	1204.00	1202.25	1.00	7.14
No.22	42.00	1450.77	1201.00	1199.25	1.00	2.71
No.23	100.00	1550.77	1198.00	1196.54	1.23	0.00
No.24	100.00	1650.77	1195.00	1193.82	1.00	3.17
No.25	42.00	1692.77	1194.00	1192.25	1.00	0.10
No.26	37.00	1729.77	1192.00	1190.25	1.09	0.10
No.27	49.00	1778.77	1190.00	1188.35	1.00	3.70
No.28	100.00	1878.77	1188.00	1186.65	1.00	1.70
No.29	100.00	1978.77	1187.00	1184.65	1.30	1.20
No.30	100.00	2078.77	1186.00	1184.65	1.00	1.20
No.31	100.00	2178.77	1185.00	1183.45	1.00	0.20
No.32	100.00	2278.77	1183.00	1183.25	1.00	2.00
No.33	100.00	2378.77	1183.00	1181.25	1.00	2.75
No.34	100.00	2478.77	1180.00	1175.75	1.00	1.45
No.35	100.00	2578.77	1175.00	1174.65	1.00	1.05
No.36	38.00	2616.77	1174.00	1174.65	1.00	1.00
No.37	100.00	2716.77	1165.00	1163.65	1.00	3.60
No.38	100.00	2816.77	1161.00	1160.05	1.00	6.80
No.39	51.00	2867.77	1153.00	1150.25	1.00	5.88
No.40	49.00	2916.77	1151.00	1150.05	1.00	0.80
No.41	100.00	3016.77	1150.00	1150.85	1.00	2.40
No.42	100.00	3116.77	1155.00	1153.25	1.00	5.80
No.43	100.00	3216.77	1160.00	1159.05	1.00	3.90
No.44	82.00	3298.77	1164.00	1162.25	1.00	4.44
No.45	100.00	3400.77	1155.00	1161.45	1.00	6.40
No.46	100.00	3500.77	1149.10	1147.35	1.00	3.37
No.47	92.00	3592.77	1142.20	1142.20	1.00	0.00



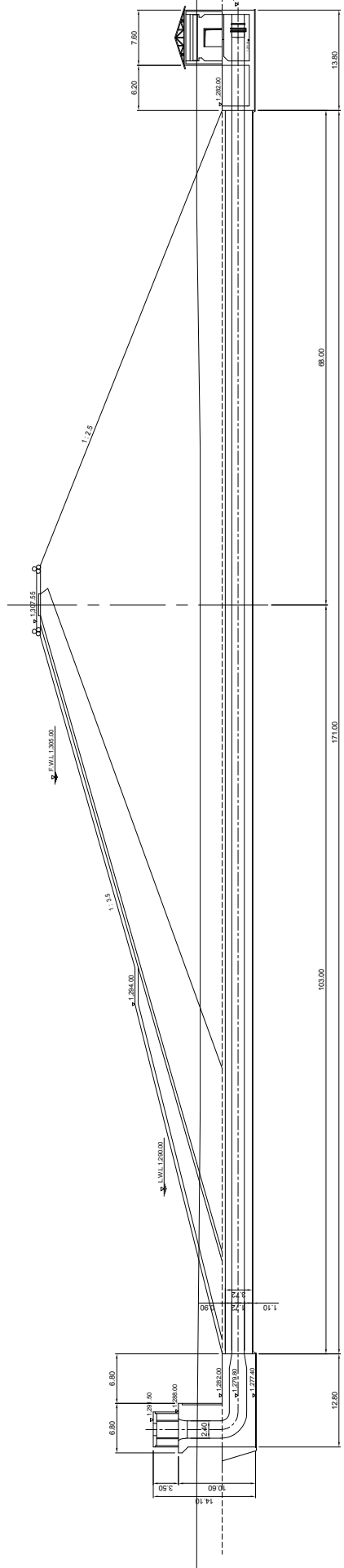
Flow Conditions of Bottom Outlet Works

Unit: m<sup>3</sup>/s

	Mar			Apr			May			Jun			Jul			Aug			Sep			Oct		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Outlet 2	0.00	0.00	0.00	0.00	0.07	0.28	0.32	0.24	0.09	0.12	0.40	0.51	0.56	0.55	0.54	0.54	0.51	0.44	0.42	0.08	0.05	0.05	0.25	0.11
Outlet 3	0.00	0.00	0.00	0.16	0.68	0.75	0.56	0.22	0.48	0.24	0.99	0.81	0.88	0.75	0.95	0.89	0.51	0.37	0.20	0.32	0.02	0.59	0.25	
Total	0.00	0.00	0.00	0.23	0.94	1.07	0.80	0.31	0.60	0.64	1.40	1.37	1.43	1.49	1.44	1.38	0.95	0.79	0.62	0.37	0.37	0.84	0.36	

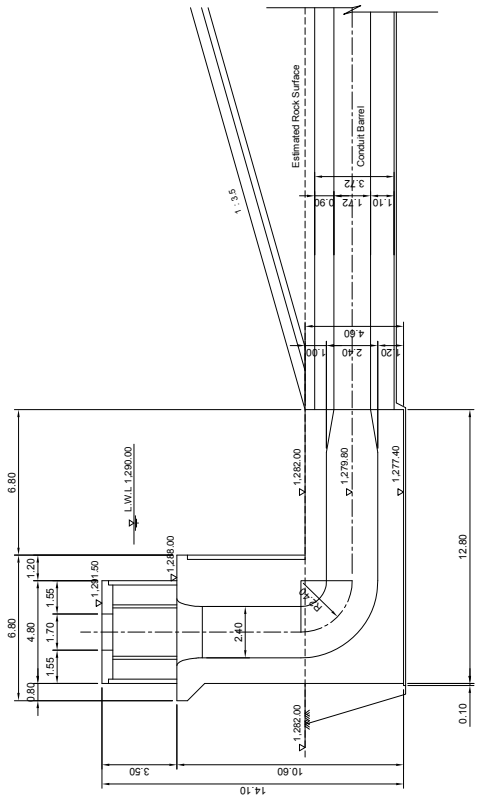


PLAN VIEW  
S = 1 : 600

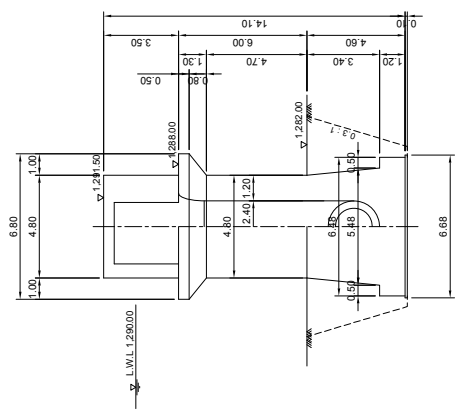


LONGITUDINAL SECTION (A - A)  
S = 1 : 600

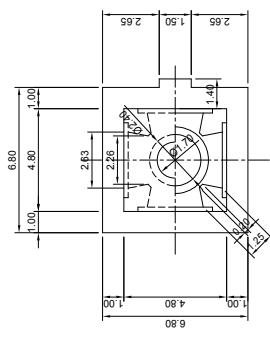
Project:	Preparatory Survey for Yeghward Irrigation Improvement Project	Drawing No:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	Outlet System: Structural Drawing of the Bottom Outlet Works for Outlet 2 and Outlet 3 (1/2)	Scale:	S = 1 : 600	Checked by:	
Revision:	Initials	All dimension in:	Meter	Approved by:	



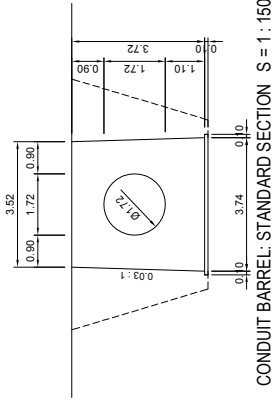
INLET TOWER OF BOTTOM OUTLET OF DIKE NO 1  
LONGITUDINAL SECTION S = 1 : 250



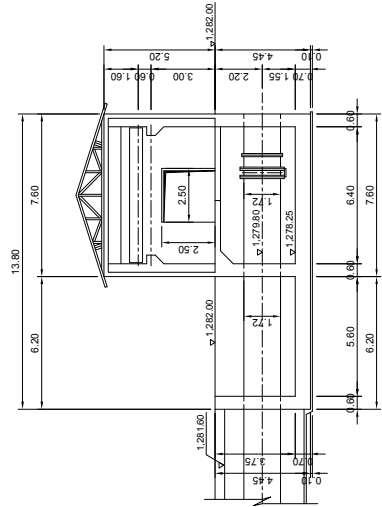
INLET TOWER OF BOTTOM OUTLET  
FRONT VIEW S = 1 : 250



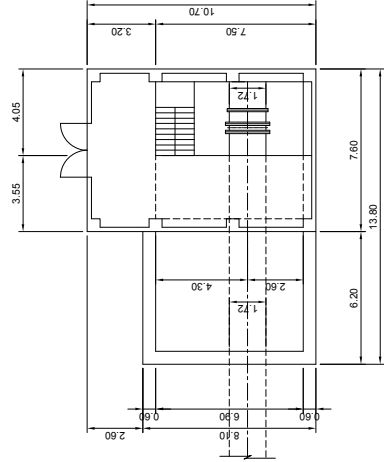
INLET TOWER OF BOTTOM OUTLET  
PLAN VIEW S = 1 : 250



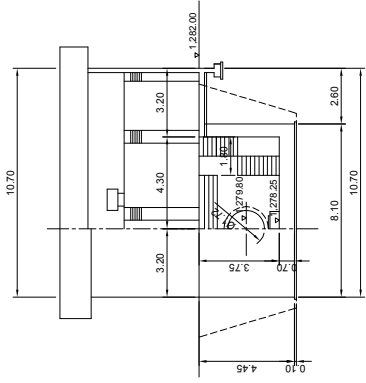
CONDUIT BARREL: STANDARD SECTION S = 1 : 150



OPERATION HOUSE OF BOTTOM OUTLET  
LONGITUDINAL SECTION S = 1 : 250

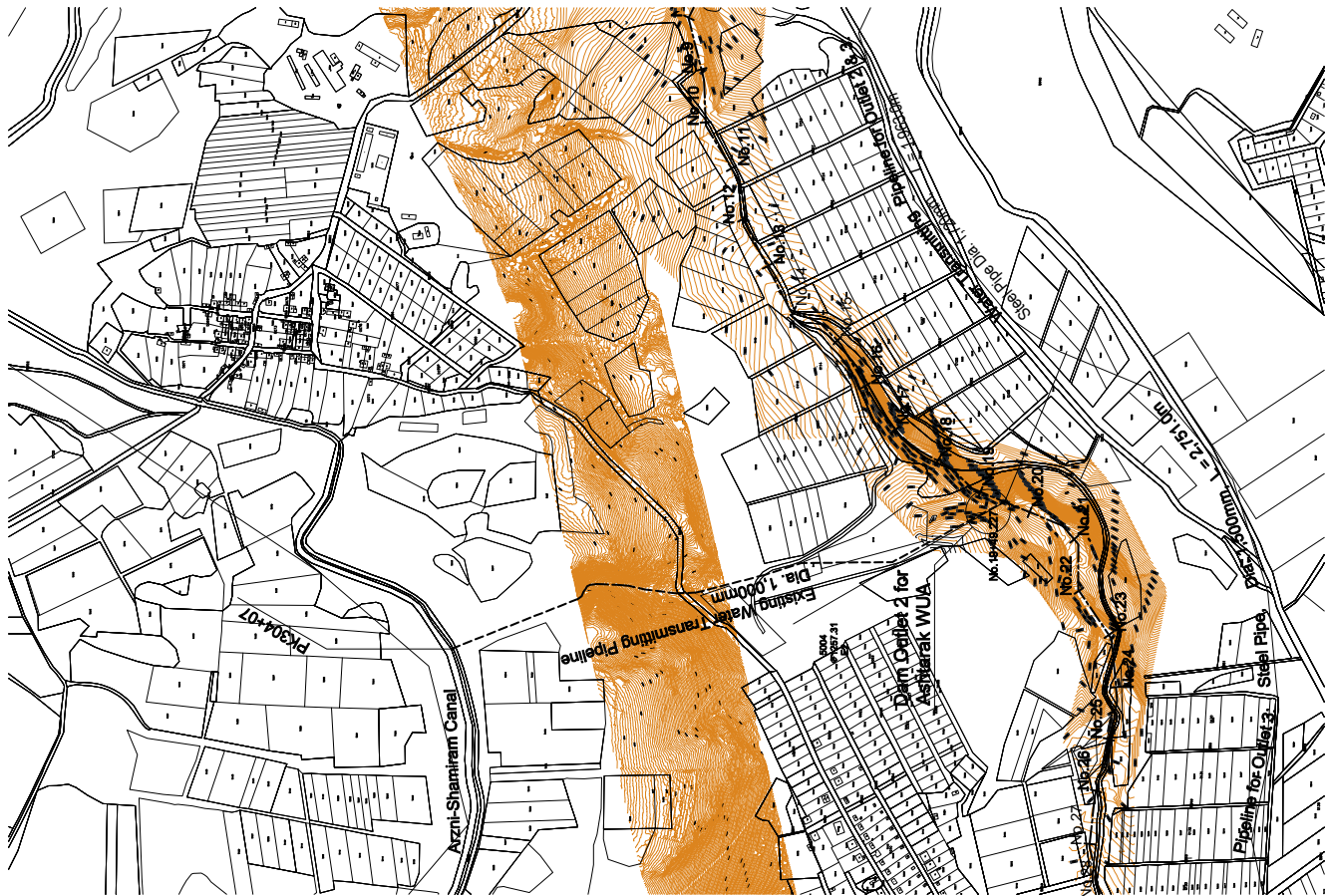


OPERATION HOUSE OF BOTTOM OUTLET  
PLAN VIEW S = 1 : 250

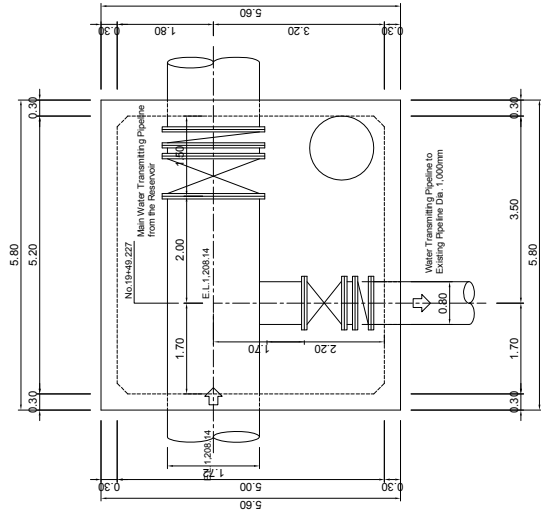


OPERATION HOUSE OF BOTTOM OUTLET  
FRONT VIEW S = 1 : 250

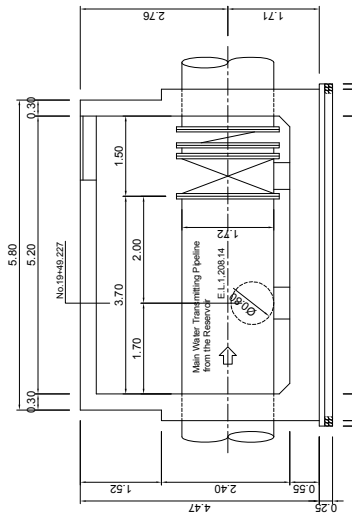
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Outlet System, Structural Drawing of the Bottom Outlet Works for Outlet 2 and Outlet 3 (2/2)	Scale:	Indicated	Checked by:	
Revision:		All dimension in:	Meter	Approved by:	
		Initials			



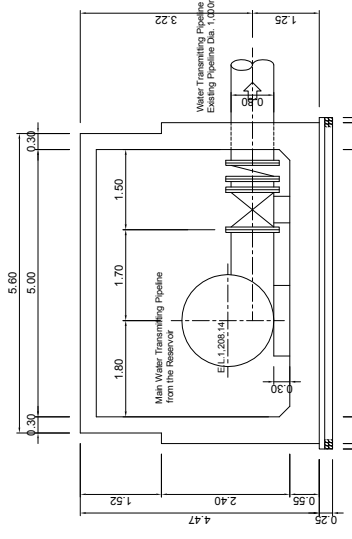
LOCATION MAP OF OUTLET 2  
S = 1 : 10,000



DIVERSION WORKS FOR OUTLET 2: PLAN VIEW  
S = 1 : 100

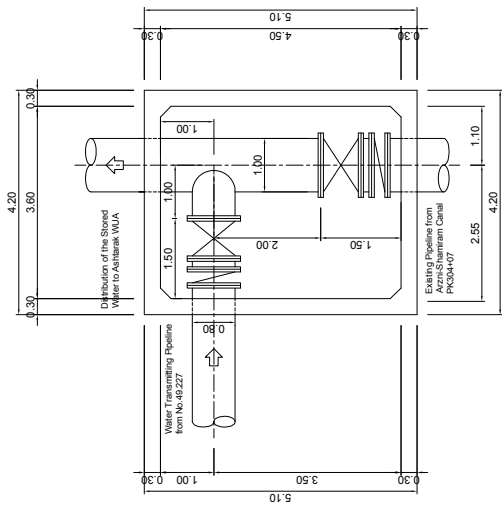


DIVERSION WORKS FOR Outlet 2: LONGITUDINAL SECTION  
S = 1 : 100

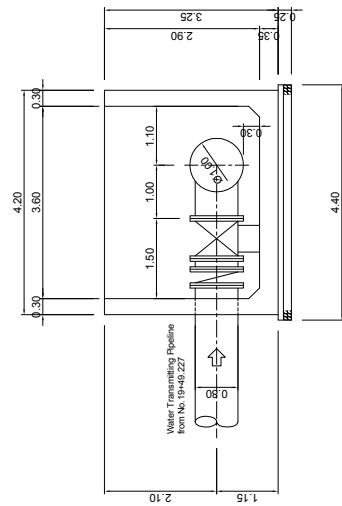


DIVERSION WORKS FOR OUTLET 2: SECTION  
S = 1 : 100

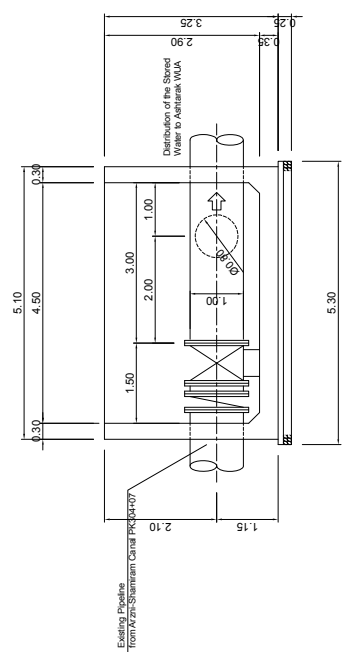
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:	Drawn by:
Drawing Title:	Outlet 2 & 3. Diversion Works for Outlet 2 for Ashtrak WUA	Scale:	Indicated
Revision:	Initials	All dimension in:	Meter
			Checked by:
			Approved by:



OUTLET 2: PLAN VIEW  
S = 1 : 100



OUTLET 2: LONGITUDINAL SECTION  
S = 1 : 100



OUTLET 2: SECTION  
S = 1 : 100

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Outlet 2, Structural Drawing of the Outlet 2 for Asharak WUA	Scale:	Indicated	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	



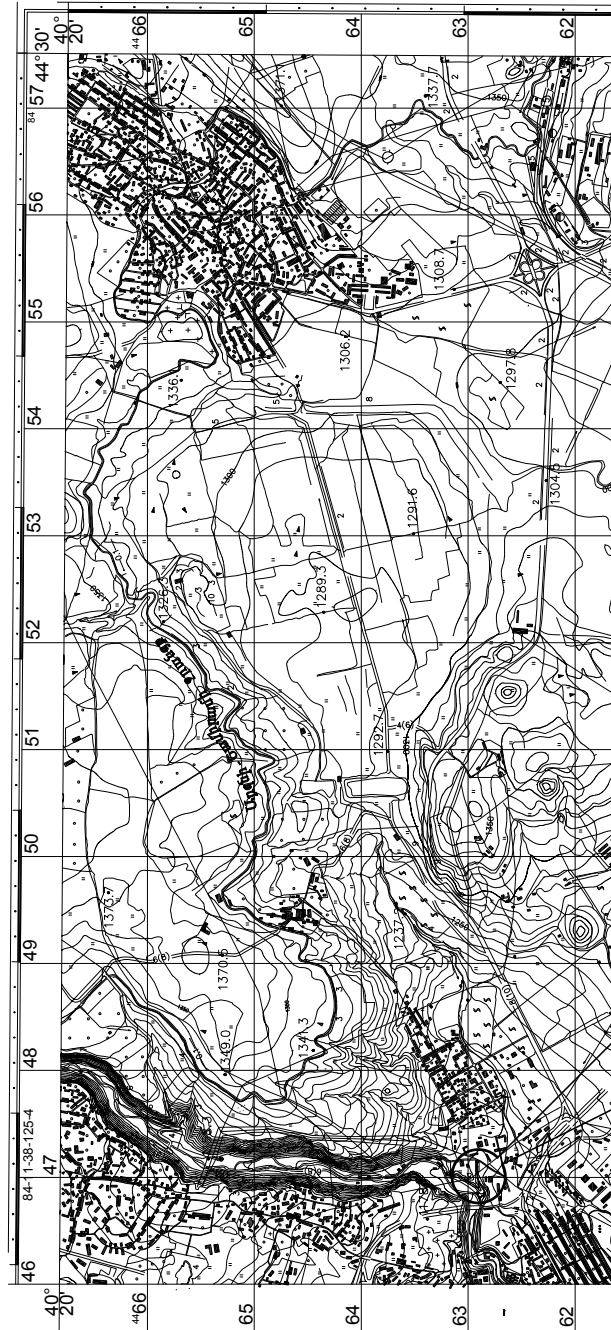
Table: Design Discharge with Effective Water Head of Outlet 2 and Outlet 3  
Outlet 3

Dam Water Level	Discharge	Effective W. Head		Effective W. Head			
		Ø 1,200mm	Ø 350mm				
Apr	1st	1,301.524	0.07	1,301.495	0.00	** 0.19	158.777
	2nd	1,302.862	0.28	1,302.145	0.00	0.66	154.096
	3rd	1,303.815	0.32	1,303.373	0.00	0.75	153.611
May	1st	1,304.905	0.24	1,304.657	0.00	0.55	158.241
	2nd	1,304.945	0.09	1,304.907	0.00	0.22	162.447
	3rd	1,304.141	0.12	1,295.502	6.48	0.00	128.256
Jun	1st	1,302.970	0.40	1,287.897	8.24	0.00	102.159
	2nd	1,301.648	0.51	1,283.206	8.99	0.00	89.487
	3rd	1,300.535	0.56	1,283.716	6.61	0.00	120.069
Jul	1st	1,299.381	0.55	1,287.852	6.88	0.00	115.741
	2nd	1,298.130	0.54	1,287.016	6.75	0.00	116.110
	3rd	1,298.879	0.54	1,287.916	5.95	0.00	123.338
Aug	1st	1,295.605	0.51	1,287.469	5.69	0.00	124.990
	2nd	1,294.254	0.44	1,287.704	5.13	0.00	128.840
	3rd	1,293.197	0.42	1,289.988	3.37	0.00	140.896
Sep	1st	1,292.609	0.08	1,291.409	0.00	2.39	70.267
	2nd	1,291.839	0.05	1,289.591	3.32	0.00	140.256
	3rd	1,290.968	0.05	1,289.098	3.02	0.00	141.007
Oct	1st	1,290.444	0.25	1,290.170	0.00	0.59	143.281
	2nd	1,290.126	0.11	1,290.088	0.00	0.25	147.041

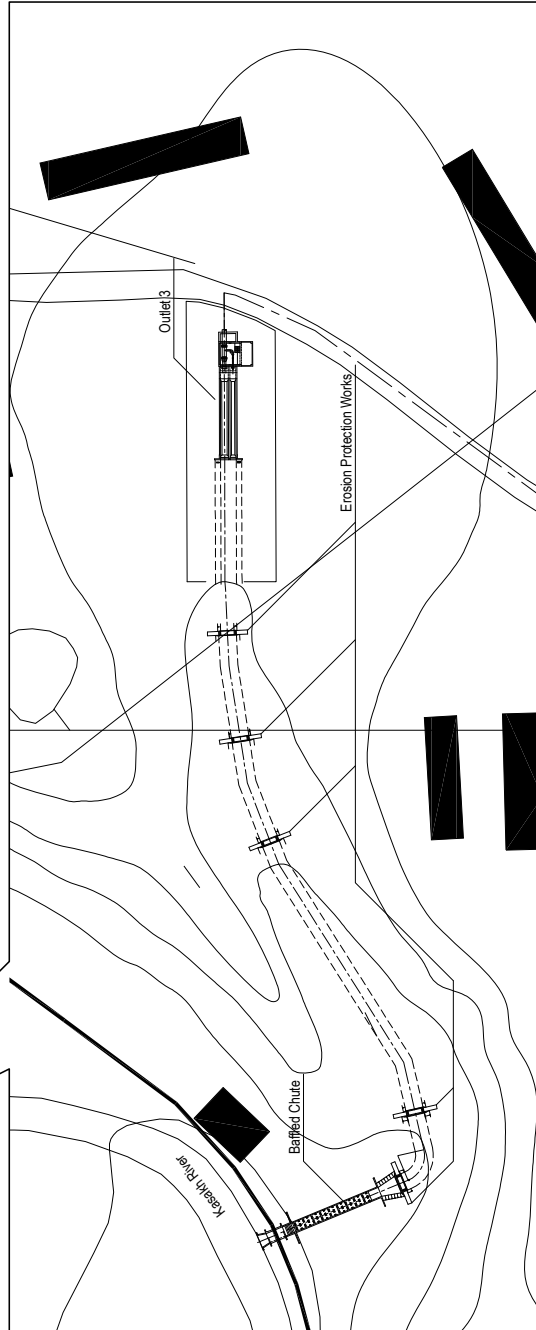
Note: 0.15m<sup>3</sup>/sec in Apr 2nd is the discharge based on the 20 hours operation.

Table: Discharge to be released in the Emergency Case

Dam Water Level	F.C.Valve Dia 1,200mm		F.C.Valve Dia 350mm		Total Discharge to be released (5) = (1) * (3)
	Discharge	Eff. W. Head	Discharge	Eff. W. Head	
1,305	13.39	9.197	0.12	21.862	13.51
1,304	13.36	8.913	0.11	21.560	13.47
1,303	13.32	8.792	0.12	21.328	13.44
1,302	13.27	8.944	0.12	21.368	13.39
1,301	13.23	8.782	0.12	21.142	13.35
1,300	13.18	8.591	0.13	20.785	13.31
1,299	13.14	8.708	0.12	20.896	13.26
1,298	13.11	8.527	0.12	20.650	13.23
1,297	13.06	8.674	0.11	20.762	13.17
1,296	13.02	8.532	0.12	20.486	13.14
1,295	12.97	8.382	0.12	20.245	13.09
1,294	12.93	8.411	0.12	20.193	13.05
1,293	12.90	8.560	0.10	20.401	13.00
1,292	12.84	8.362	0.12	19.973	12.96
1,291	12.81	8.143	0.11	19.764	12.92
1,290	12.75	8.034	0.13	19.420	12.88

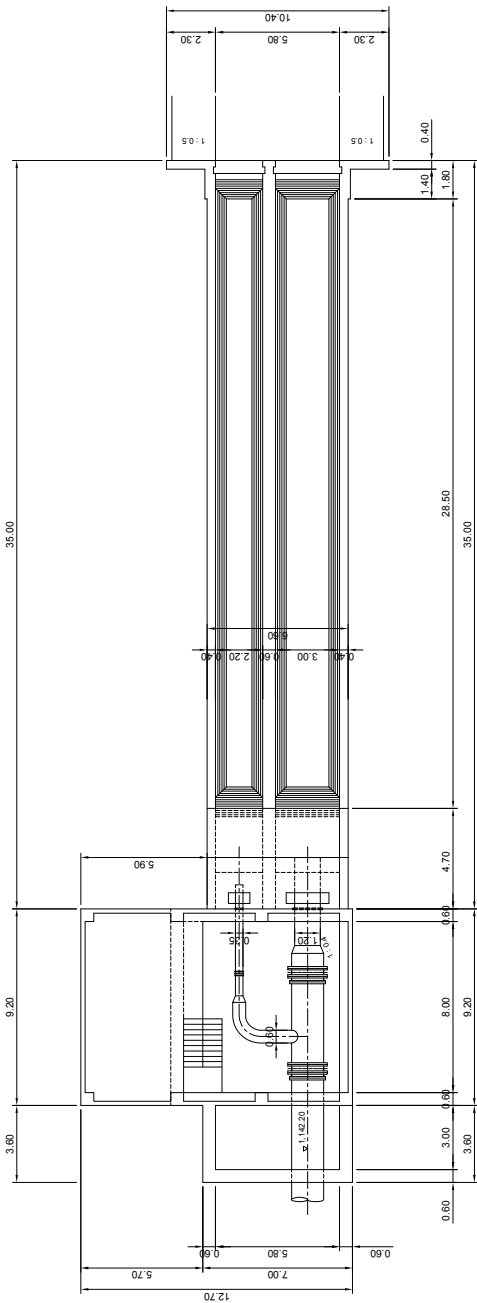


LOCATION MAP OF OUTLET 3 WITH ENERGY DISSIPATOR  
Scale 1 : 50,000

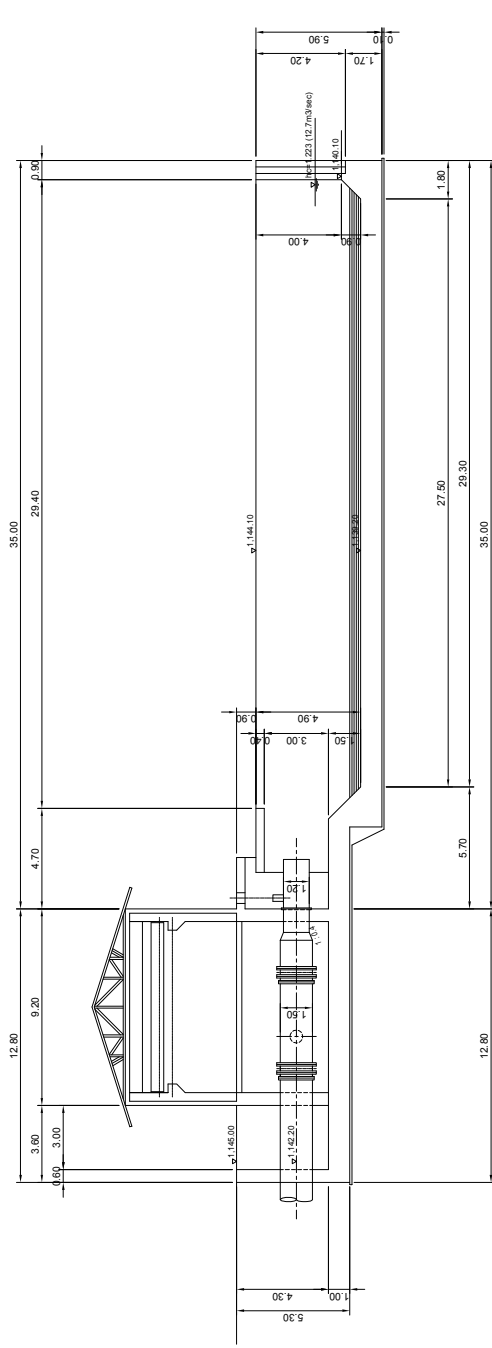


LAYOUT OF OUTLET 3 WITH ENERGY DISSIPATOR  
Scale 1 : 2,000

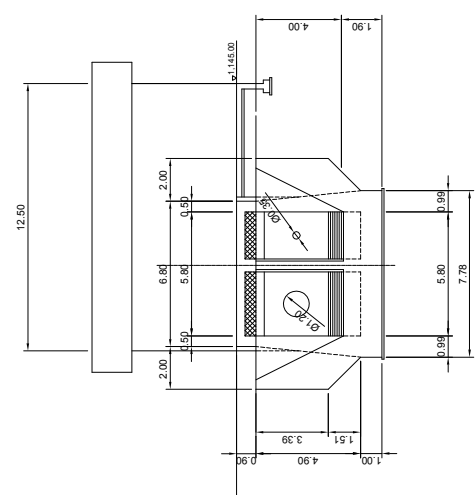
Project:	Preparatory Survey for Yeghward Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Outlet 3_Layout of the Outlet Facilities	Scale:	Indicated	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	



OUTLET WORKS 3: PLAN VIEW S = 1 : 250

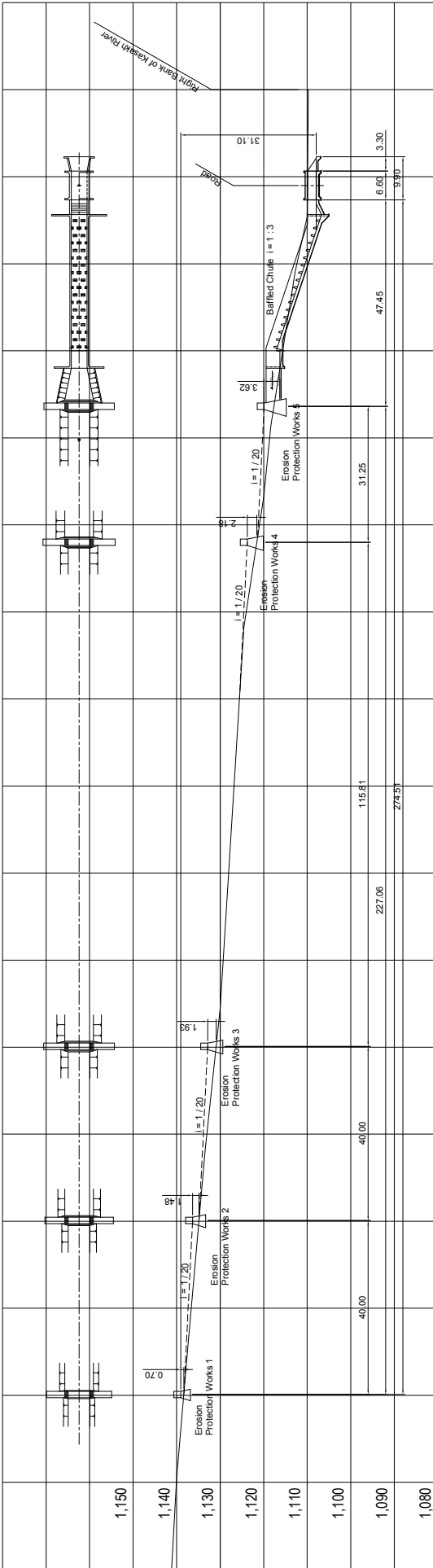


OUTLET WORKS 3: LONGITUDINAL SECTION S = 1 : 250

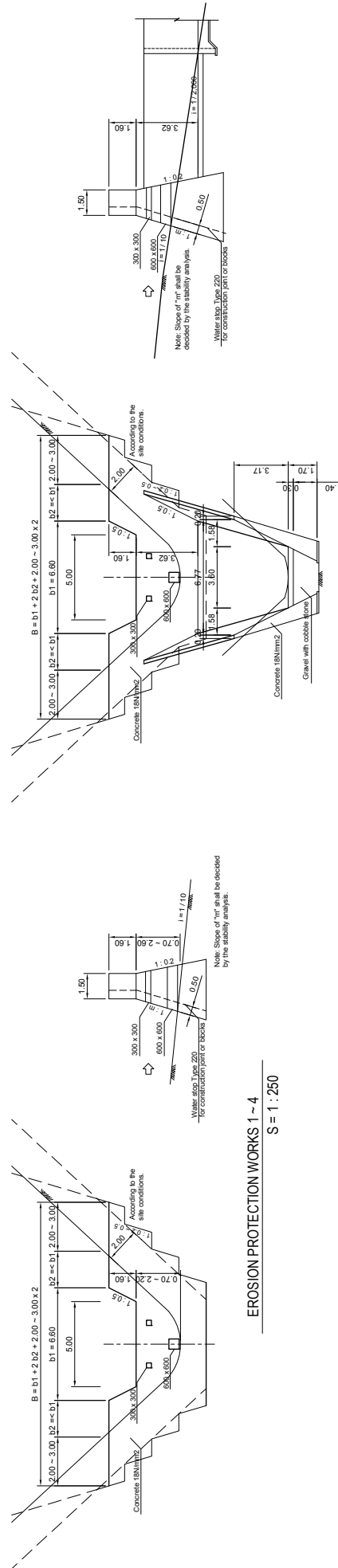


OUTLET WORKS 3: FRONT VIEW S = 1 : 250

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:	Saryu Consultants Inc.
Drawing Title:	Outlet 3, Fixed Cone Valve with an Energy Dissipation Chamber	Scale:	Indicated
Revision	Initials	All dimension in:	Meter
		Checked by:	
		Approved by:	



EROSION PROTECTION WORKS WITH A BAFFLED CHUTE  
LONGITUDINAL SECTION S = 1 : 1,000

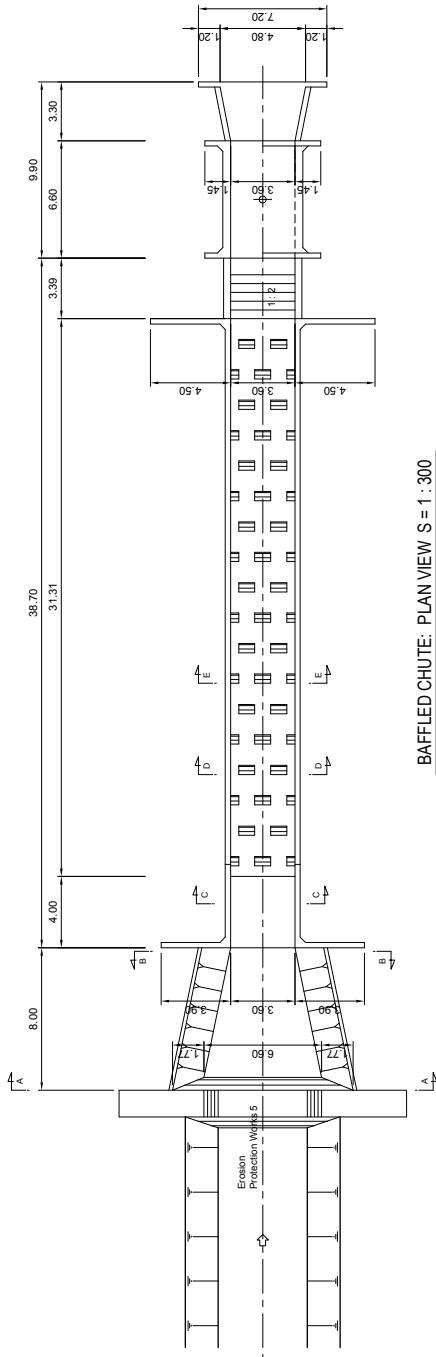


EROSION PROTECTION WORKS 1 ~ 4  
S = 1 : 250

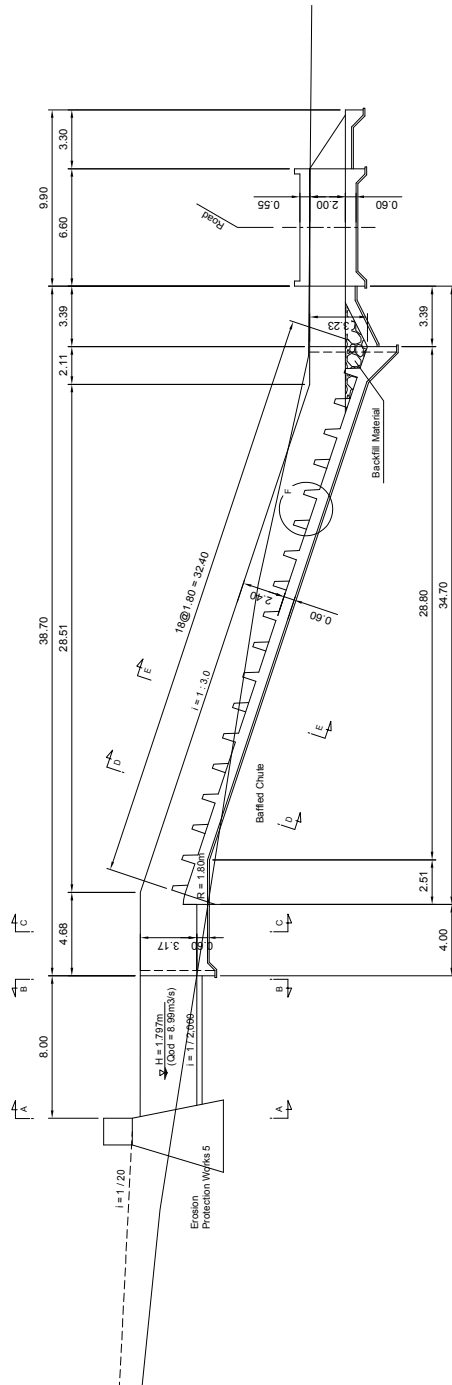
EROSION PROTECTION WORKS 5  
S = 1 : 250

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project
Drawing No:	Indicated
Drawing Title:	Outlet 3. Longitudinal Profile of the Waterway from Outlet 3
Revision:	Initials

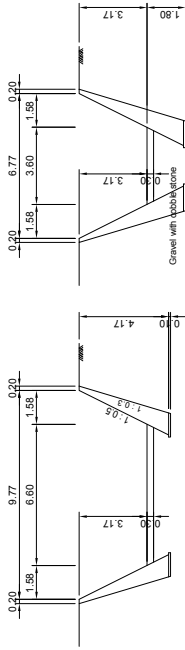
Drawn by:	Saryu Consultants Inc.
Checked by:	
Approved by:	



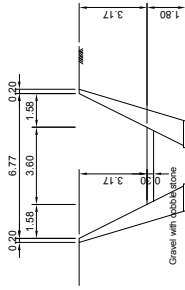
BAFFLED CHUTE: PLAN VIEW S = 1 : 300



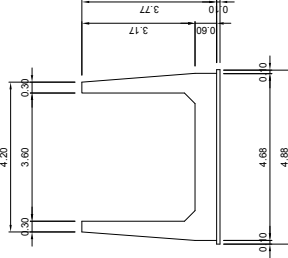
BAFFLED CHUTE: LONGITUDINAL SECTION VIEW S = 1 : 300



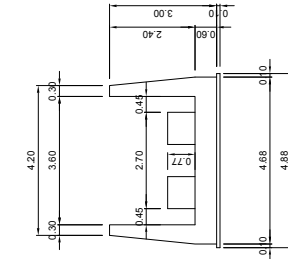
SECTION A-A  
S = 1 : 250



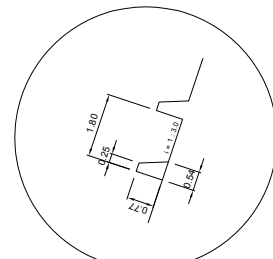
SECTION B-B  
S = 1 : 250



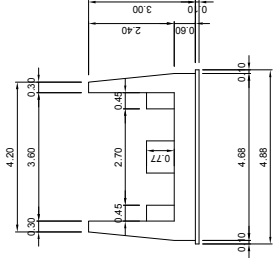
SECTION C-C  
S = 1 / 150



SECTION D-D  
S = 1 / 150

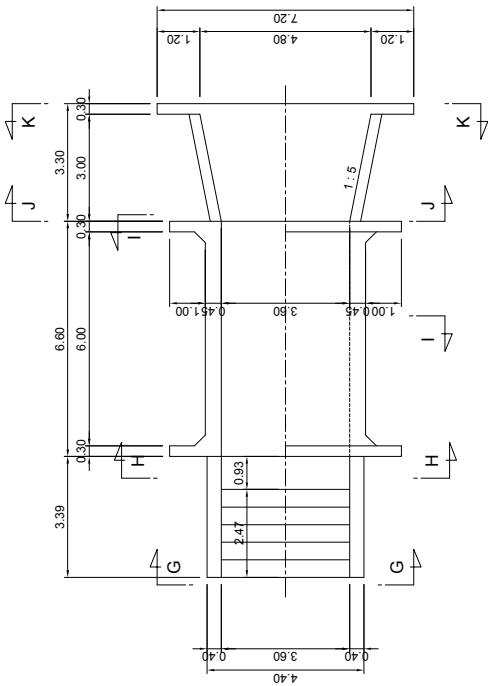


DETAIL F S = 1 / 125

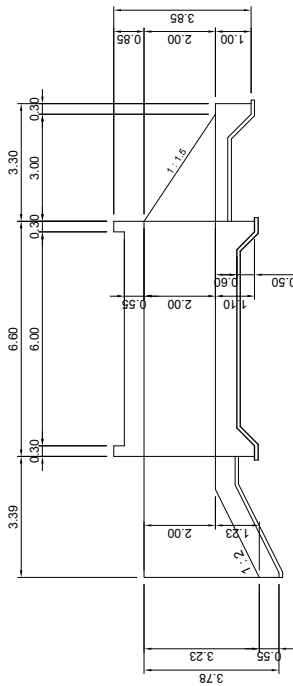


SECTION E-E  
S = 1 / 150

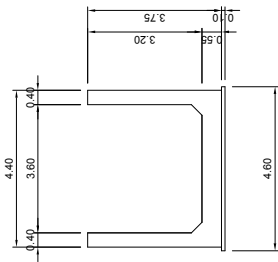
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Outlet 3, Structural Drawing of a Baffled Chute	Scale:	Indicated	Checked by:	
Revision:	Initials	All dimension in:	Meter	Approved by:	



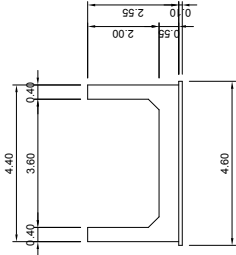
ROAD CROSSING CULVERT: PLAN VIEW S = 1 : 150



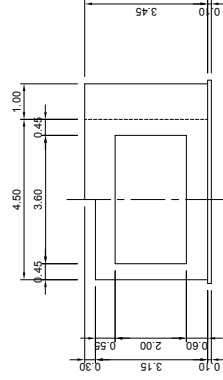
ROAD CROSSING CULVERT: SECTION S = 1 : 150



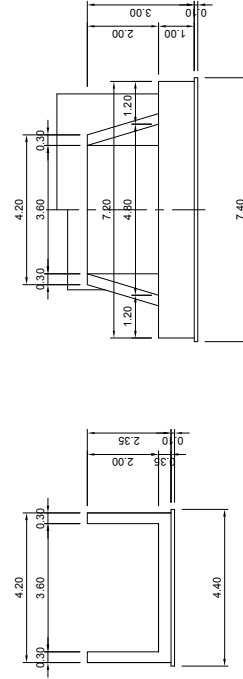
SECTION G-G  
S = 1 : 150



SECTION H-H  
S = 1 : 150



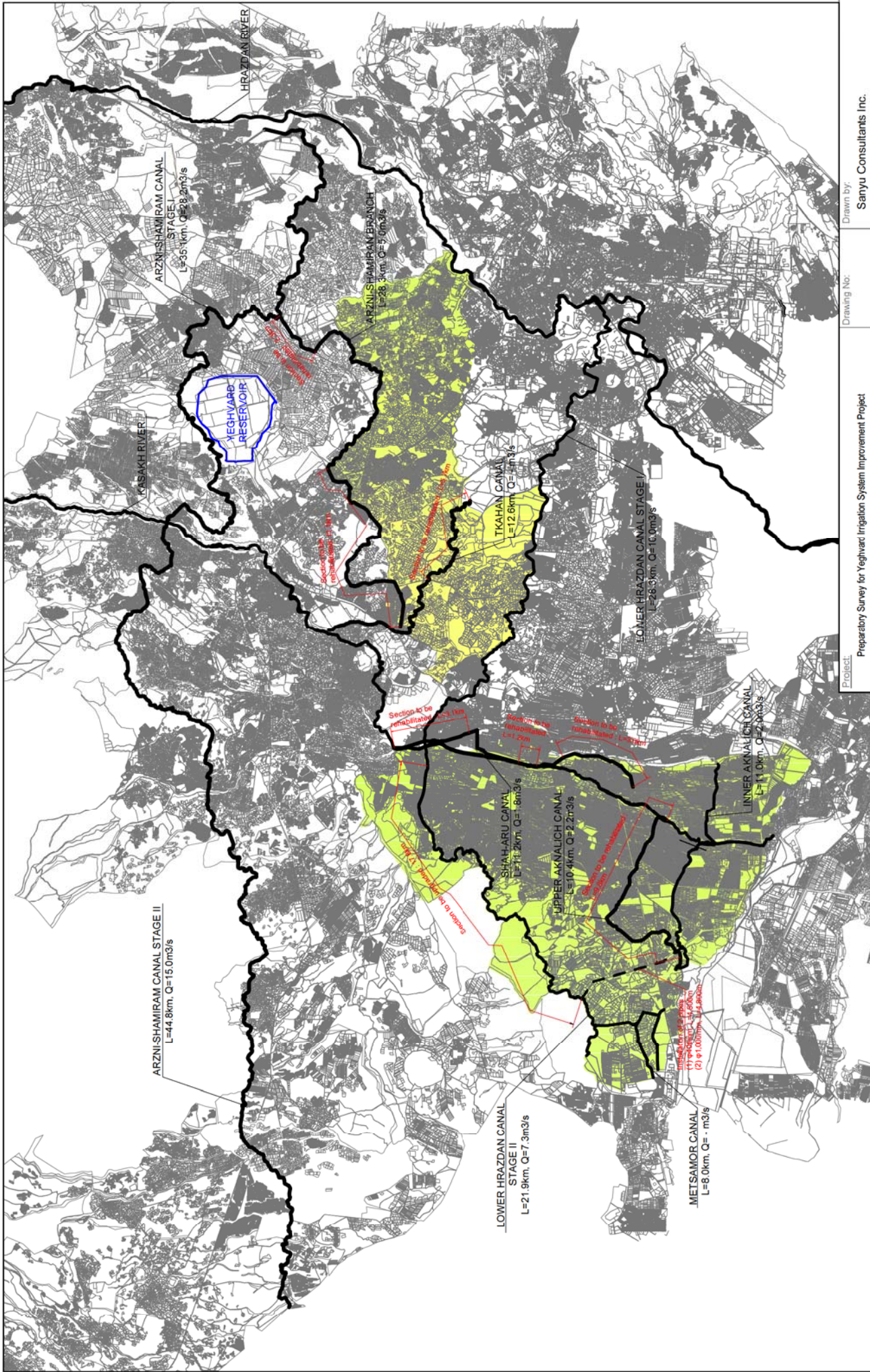
SECTION I-I  
S = 1 : 150



SECTION J-J  
S = 1 : 150

SECTION K-K  
S = 1 : 150

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:	Drawn by:
Drawing Title:	Outlet 3. Structural Drawing of a Road Crossing Culvert	Scale:	Indicated
Revision	Initials	All dimension in:	Meter
		Checked by:	Saryu Consultants Inc.
		Approved by:	



**GENERAL PLAN**

Note  
 Beneficiary area : 12,347ha  
 (Upstream area : 3,644ha, Downstream area : 8,703ha)

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No.:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	General plan	Scale:	1:150,000	Checked by:	
Revision		All dimension in:	Meter	Approved by:	