GOVERNMENT OF ISLAMIC REPUBLIC OF AFGHANISTAN

SWIM STRENGTHENING WATERSHED AND IRRIGATION MANAGEMENT

ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer

05 DEC 2018

Project Name: Kohna Aybak Main Canal Rehabilitation
Province: Samangan
District: Aybak

Afghanistan, Samangan.
Date: 05-Dec-2018

Change History

Change No.	Date	Rev	Change Description
1	05-Dec-18	000	Initial Version.
2	15-Jan-19	001	Specification for plastering in the general notes added, elevation of the BMs corrected, total number of turnouts in plan and profile corrected, station detail of foot culvert corrected.
3			
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10			
11			

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Kohna Aybak Canal
Samangan, Aybak

Choghai
Omar Khil
Mangbash
Kohna Samangan Kalan
Jo-i-Zandan
Larghan (1)
Larghan (2)
Samangan
Samangan Khurd
Qoe Asra
Kochad-Sya
Aybak
Gul Qeshlag
Qoch Nehal
Samangan

12
11
10
9
8
7
6
5
4
3
2
1

Canal Strart Point
Canal End Point
Photo ID
Kohna Aybak
Village
Province Boundary
District Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

MAP INFORMATION
Map Produced : Septmber 2017
Cartographer: Abdul Razaq
Projection : World Mercator
Datum : WGS 1984

Data Source
Base layer information including boundaries and place names courtesy of the Afghan Geodesy and Cartography Head Office (AGCHO).

Data Disclaimer
All boundaries and map features are approximate and should not be considered authoritative.
While every effort is made to use the best available data, accuracy of features or other information cannot be guaranteed.
Map prepared by the SWIM Project GIS Department.

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N W E S

0 0.3 0.6 1.2 1.8 2.4 Kilometers

05 DEC 2018

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GENERAL:

1. SAMPLE OF ALL MATERIALS (STONE, PCC, STEEL GATES, RCC, GRAVEL, SAND, DRY STONE, PVC PIPE, GUARD RILL, WATER STOPPER, ETC.) SHALL BE APPROVED BY SWIM ENGINEER BEFORE THE CONTRACTOR USE FOR THE PROJECT, OTHERWISE SWIM ENGINEERS ARE AUTHORIZED TO REJECT THE USED MATERIALS.
2. ALL CONSTRUCTION WORKS SHALL BE CARRIED OUT WITH CLOSE COORDINATION AND PRIOR APPROVAL OF SWIM ENGINEERS. OTHERWISE SWIM ENGINEERS ARE AUTHORIZED TO REJECT THE EXECUTED WORKS AND CONTRACTOR HAS TO RE-DO IT.
3. ALL QUALITY CONTROL TESTS SHOULD BE CARRIED OUT BY THE CONTRACTOR IN A RECOGNIZED LABORATORY by AECOM SWIMM.
4. TO AVOID DELAY IN IRRIGATION, ALL DIVERSION WILL BE MADE WITH CONSULTATION OF COMMUNITY, EITHER THE DIVERSION SHALL BE MADE LEFT SIDE OR RIGHT SIDE OF THE CANAL

GABION:

1. THE STONE SIZE RANGES FROM 150 MM TO 250 MM. SMALL STONES SHOULD BE AVOIDED. THE STONES USED SHOULD HAVE A MINIMUM SIZE OF NOT LESS THAN "D" (MESH WIDTH) AND NOT GREATER THAN 3.5 TIMES "D", WHERE D IS THE SPECIFIED MESH WIDTH. LARGER STONES CAN BE USED PROVIDED THAT THEIR TOTAL VOLUME DOES NOT EXCEED 5% OF THE CELL VOLUME.

STONE MASONRY:

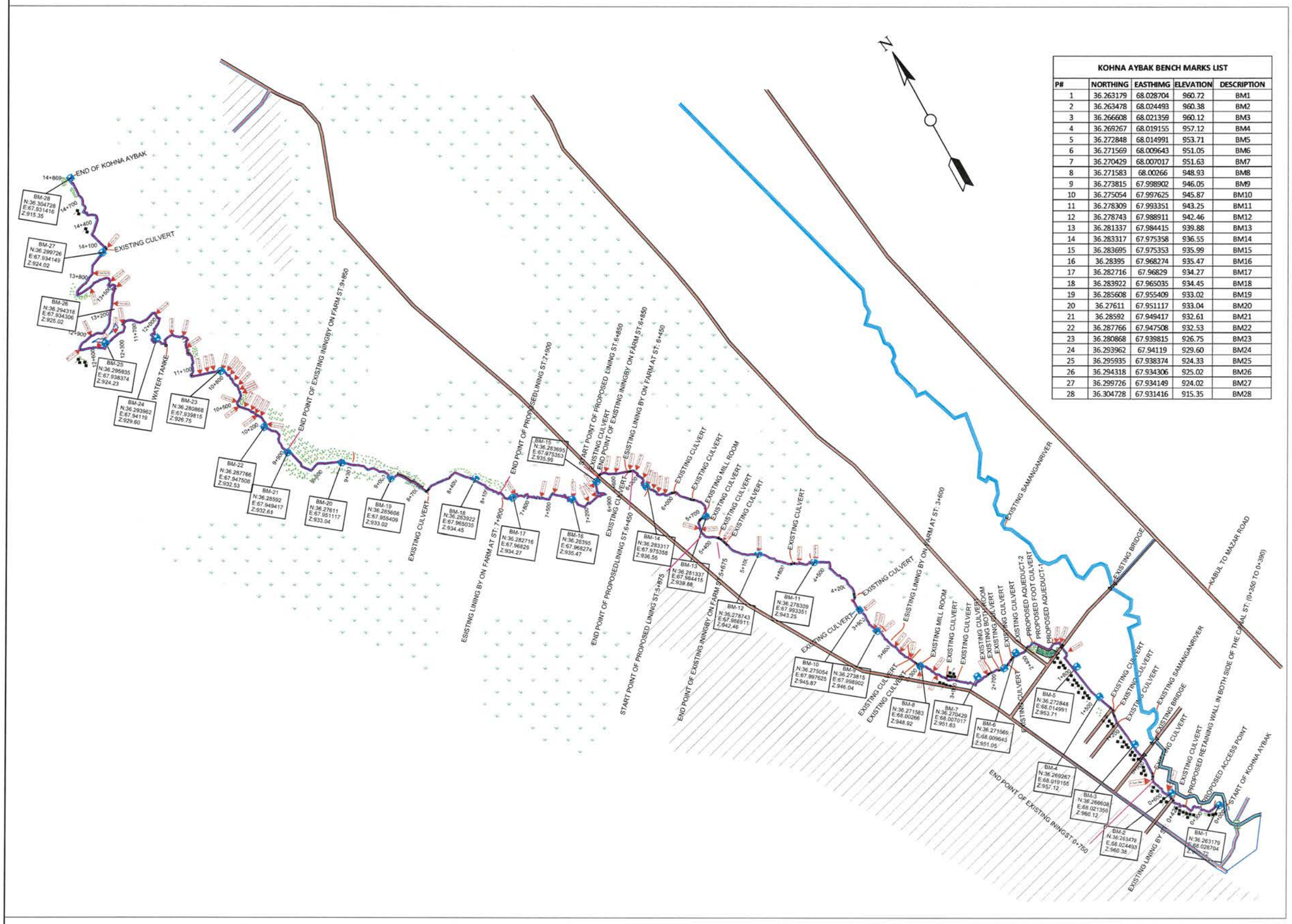
1. ALL STONE MASONRY WALLS SHALL BE WITH RATIO OF 1:4 CEMENT SAND MORTAR WITH CONSIDERING TO 35% OF MASONRY VOLUME.
2. ALL STONES SHALL BE FREE FROM DEFECTS LIKE CAVITIES, CRACKS, SAND HOLES, FLAWS, INJURIOUS VEINS, PATCHES OF LOOSE OR SOFT MATERIALS, ETC. ALSO, THE PERCENTAGE OF WATER ABSORPTION SHALL GENERALLY NOT EXCEED 5%, CERTIFICATION REQUIRED
3. STONES USED SHALL BE SMALL ENOUGH TO BE LIFTED AND PLACED BY HAND, LENGTH OF THE STONES SHALL NOT EXCEED THREE TIMES THEIR HEIGHTS, AND THE BREADTH OF THE BASE SHALL NOT BE GREATER THAN THREE-FOURTHS OR THE THICKNESS OF WALL OR LESS THAN 150MM. THE HEIGHT OF STONES FOR RUBBLE MASONRY MAY BE UP TO 300MM
4. STONES WITH ROUND FACES SHALL NOT BE USED AND NEVER EVER ACCEPTABLE.
5. ALL EXPOSED SURFACES OF MORTARED STONE MASONRY SHALL BE POINTED WITH THE CEMENT SAND MORTAR 1:3

CONCRETE:

1. CONCRETE DESIGN SHOULD BE BASED ON 28 DAYS A COMPRESSIVE STRENGTH OF 25MPa FOR RCC AND 15MPa/20MPa FOR PCC AS SPECIFIED ON THE DRAWINGS.
2. REINFORCEMENT YIELD STRESS "FY" SHALL NOT BE LESS THAN 2500KG/CM^2
3. A MAXIMUM OF 25% STONE WITH A MAXIMUM STONE SIZE OF (25 to 40) CM TO BE USED IN BOULDER CONCRETE. THE CONCRETE MARK SHALL BE 15MPa AS SPECIFIED IN DESIGN AND DRAWINGS.
4. SAND OR FINE AGGREGATE SHALL FREE FROM SALT, ALKALI, CALCIUM SULPHATE OR VEGETATION AND IT SHALL NOT CONTAIN MORE THAN 0.5 PERCENT BY WEIGHT CLAY.
5. AGGREGATE: - COARSE AGGREGATE SHALL CONSIST OF CRUSHED GRAVEL WITH THE MAX SIZE OF 20MM.
6. WATER USED FOR ALL CONCRETE MIXTURE AND CONCRETE CURING SHALL BE FROM A SOURCE APPROVED BY THE SWIM ENGINEER AND AT THE TIME OF USE SHALL BE FREE FROM CONTAMINANTS.
7. THE MAXIMUM SLUMP FOR CONCRETE SHOULD BE BETWEEN (5-7.5) CM.
8. CONCRETE COMPACTION SHOULD BE DONE BY USING CONCRETE VIBRATOR AT THE TIME OF POURING IN SUCH A WAY TO FORM A SOLID COMPACT CONCRETE.
9. ALL CONCRETE AND MASONRY WORKS CURING SHOULD BE CONTINUED FOR 14 DAYS.
10. DURING COLD WEATHER ALL CONCRETING AND MASONRY WORKS SHOULD BE STOPPED, OR THE CONTRACTOR HAS TO CONSIDER COLD WEATHER CONCRETING PROCEDURE AS ACCEPTED BY THE SWIM ENGINEER.
11. CONCRETE SHUTTERING/FRAMEWORK SHOULD BE DONE WITH HIGH STABILITY AND PROPER BRACING.
12. FOR ALL CONCRETE WORKS (RCC, PCC, BOULDER CONCRETE, MORTAR AND GROUT) SHALL BE MIXED BY CONCRETE MIXER. HAND MIXING IS NOT PERMISSIBLE UNLESS THE VOLUME OF CONCRETE IS LESS THAN 1M^3 AND SHALL BE VERIFIED BY SWIM ENGINEERS AS WELL.
13. THE CONTRACTOR SHALL HAVE AN EXPERIENCED SITE ENGINEER FULL TIME ON THE PROJECT SITE FOR FOLLOW UP THE DESIGN, DRAWINGS AND QUALITY CONTROL PURPOSES. EXECUTION OF WORKS WITHOUT PRESENCE OF SITE ENGINEER IS NOT ACCEPTABLE AND PAYABLE BY SWIM.

BACKFILLING:

1. BACKFILLING MATERIAL SHOULD BE PROPERLY TESTED AND SELECTED TO BE SUITABLE AS PER APPROVAL OF SWIM ENGINEER AND STANDARD PRACTICE.
2. FOR BACKFILLING MAXIMUM THICKNESS OF EACH LOOSE SOIL LAYER SHOULD NOT MORE THAN 15CM.
3. STANDARD COMPACTION TESTS SHOULD BE CARRIED OUT FOR THE BACKFILLING LAYERS BY LAYERS.
4. THE PERCENTAGE OF COMPACTION SHOULD BE NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS STATED IN DESIGN AND DRAWINGS.



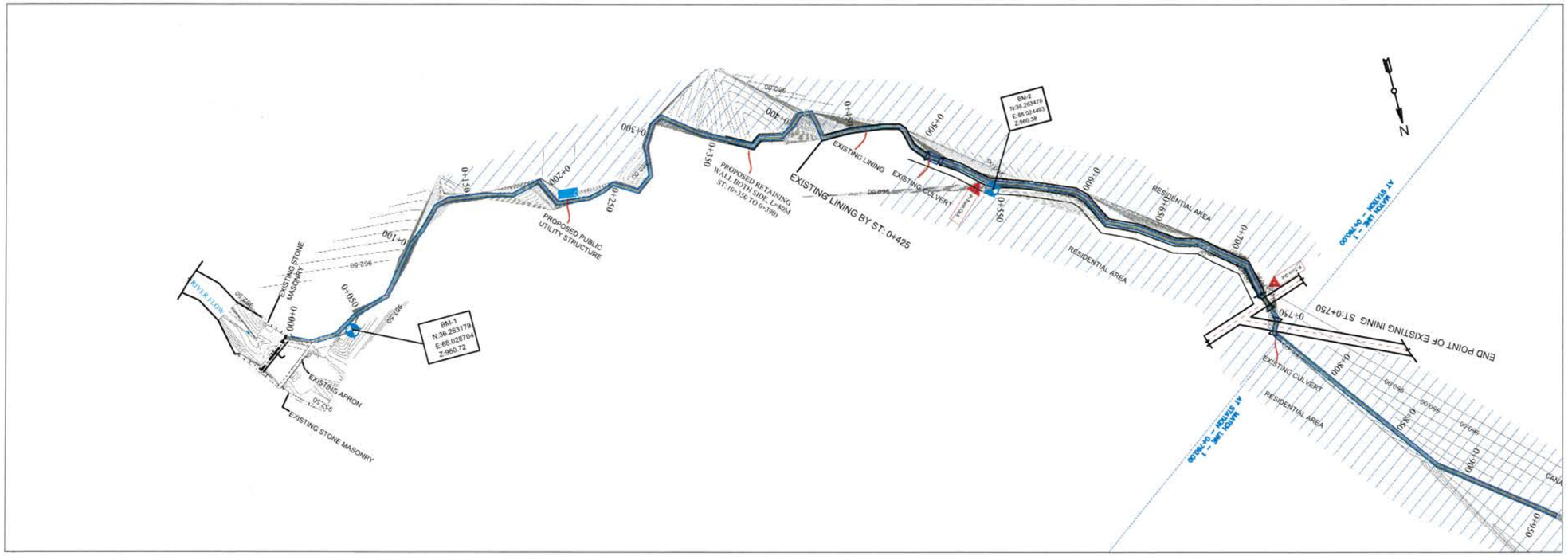
KOHNA AYBAK BENCH MARKS LIST

P#	NORTHING	EASTHIMG	ELEVATION	DESCRIPTION
1	36.263179	68.028704	960.72	BM1
2	36.263478	68.024493	960.38	BM2
3	36.266608	68.021359	960.12	BM3
4	36.269267	68.019155	957.12	BM4
5	36.272848	68.014991	953.71	BM5
6	36.271569	68.009643	951.05	BM6
7	36.270429	68.007017	951.63	BM7
8	36.271583	68.00266	948.93	BM8
9	36.273815	67.998902	946.05	BM9
10	36.275054	67.997625	945.87	BM10
11	36.278309	67.993351	943.25	BM11
12	36.278743	67.988911	942.46	BM12
13	36.281337	67.984415	939.88	BM13
14	36.283317	67.975358	936.55	BM14
15	36.283695	67.975353	935.99	BM15
16	36.28395	67.968274	935.47	BM16
17	36.282716	67.96829	934.27	BM17
18	36.283922	67.965035	934.45	BM18
19	36.285608	67.955409	933.02	BM19
20	36.27611	67.951117	933.04	BM20
21	36.28592	67.949417	932.61	BM21
22	36.287766	67.947508	932.53	BM22
23	36.280868	67.939815	926.75	BM23
24	36.293962	67.94119	929.60	BM24
25	36.295935	67.938374	924.33	BM25
26	36.294318	67.934306	925.02	BM26
27	36.299726	67.934149	924.02	BM27
28	36.304728	67.931416	915.35	BM28

LEGEND:-

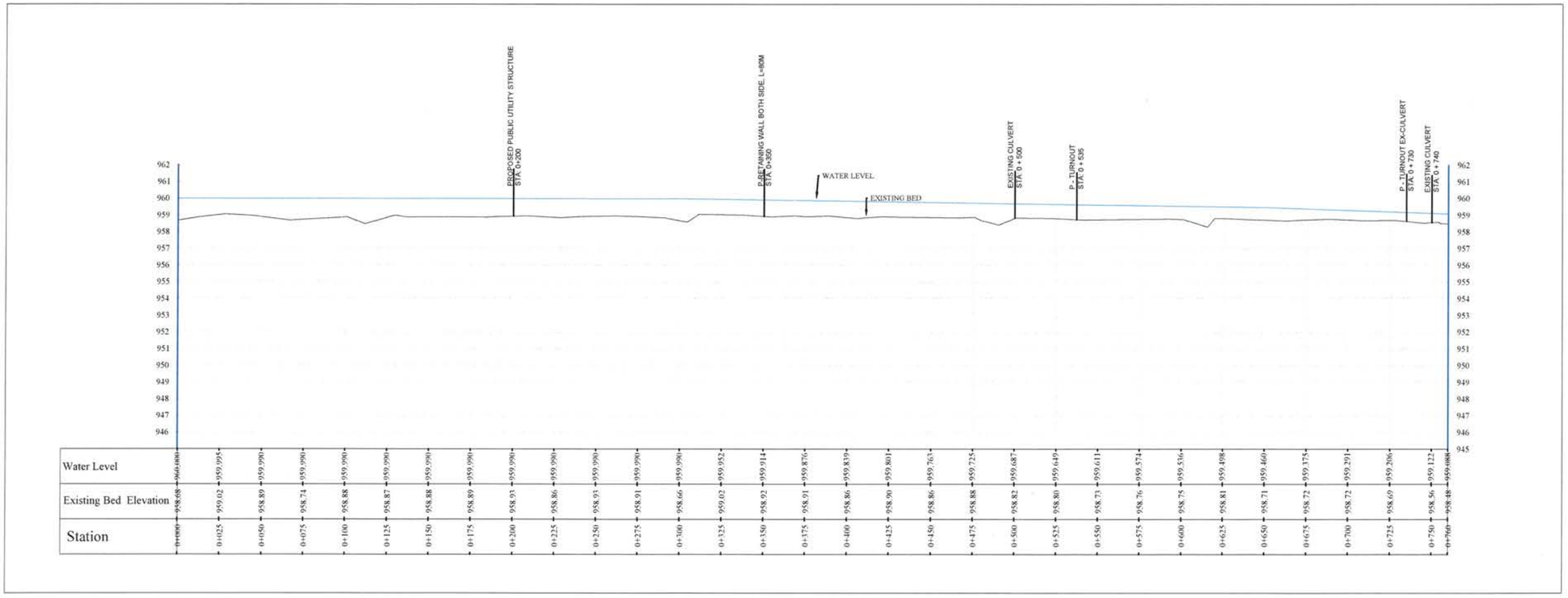
- Agriculture Area
- Orchard(Garden)
- Bench Mark
- River
- Main Canal
- Branch Canal
- P-Turn Out (Turn Out)
- Residential Area
- Road
- Existing Stone Masonry
- Proposed Stone Masonry
- Existing Culvert
- Proposed Culvert
- Masjid Sharif
- Electric Pole
- Cemetery
- Hand Water Pump
- Tree
- River

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 01/34
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	GENERAL SITE PLAN	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	

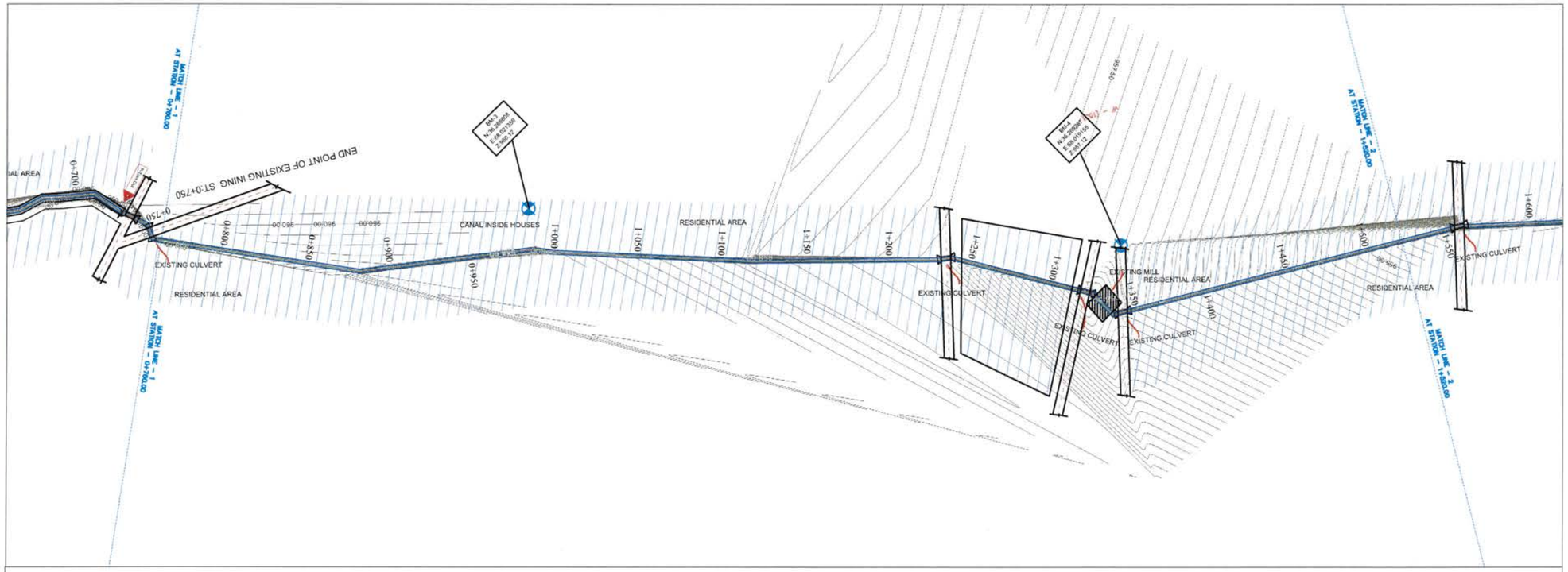


LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 02/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (0+000 TO 0+760)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 5 MAR 2019	DATE:	



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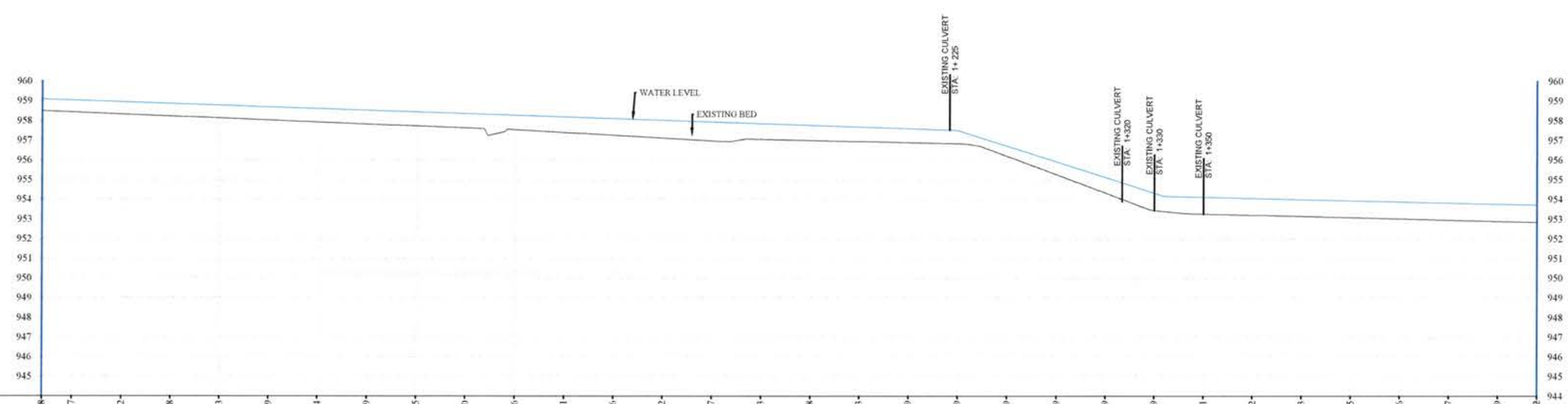
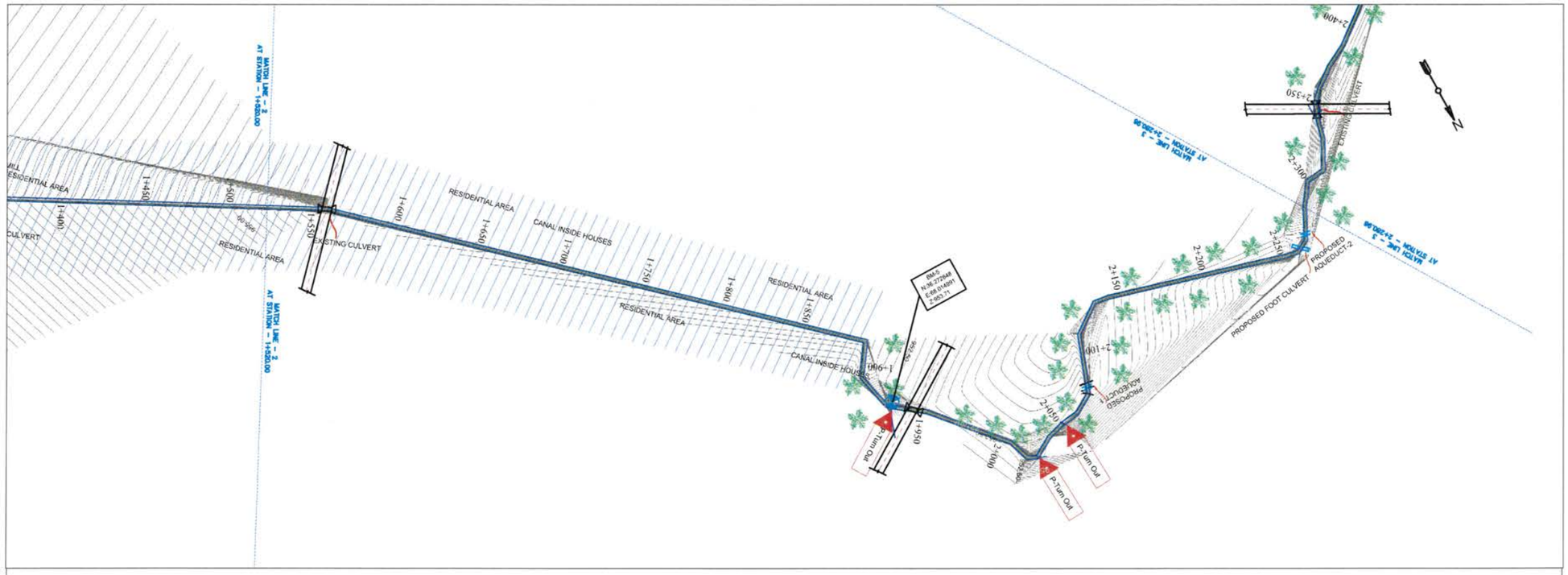


Station	Water Level	Existing Bed Elevation
0+760	959.688	958.48
0+775	959.037	958.42
0+800	958.952	958.32
0+825	958.868	958.22
0+850	958.783	958.12
0+875	958.699	958.02
0+900	958.614	957.92
0+925	958.529	957.82
0+950	958.445	957.72
0+975	958.360	957.63
1+000	958.276	957.54
1+025	958.191	957.40
1+050	958.106	957.26
1+075	958.022	957.12
1+100	957.937	956.97
1+125	957.853	957.05
1+150	957.768	956.99
1+175	957.683	956.94
1+200	957.599	956.88
1+225	957.509	956.82
1+250	956.709	956.19
1+275	955.909	955.25
1+300	955.109	954.31
1+325	954.309	953.43
1+350	954.111	953.26
1+375	954.052	953.20
1+400	953.993	953.13
1+425	953.935	953.07
1+450	953.876	953.01
1+475	953.817	952.94
1+500	953.759	952.88
1+520	953.712	952.83

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (0+760 TO 1+520)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		SHEET NO. 03/34
						DATE:	DATE:	05 MAR 2019	DATE:	



LEGEND:-

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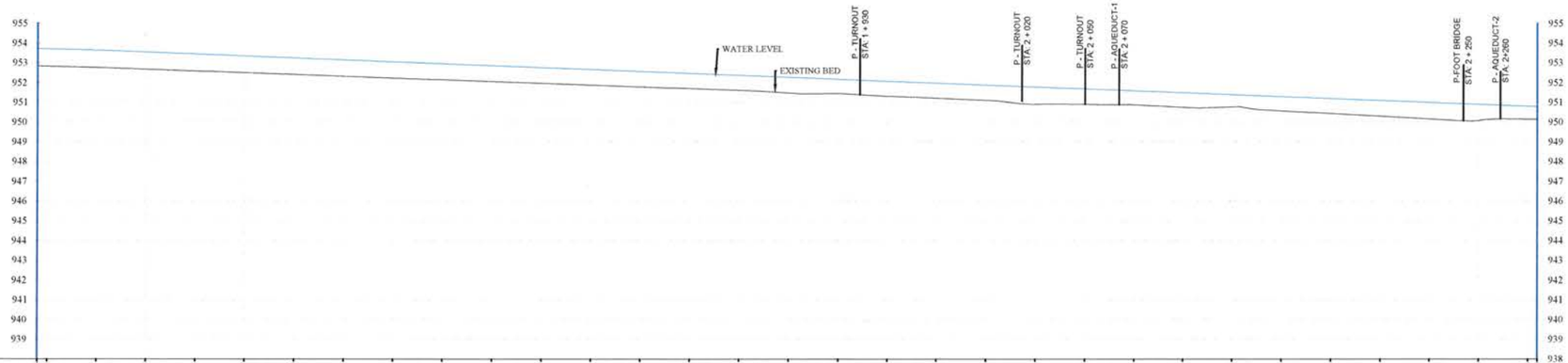
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



Station	Water Level	Existing Bed Elevation
1+520	952.83	952.83
1+525	952.82	953.700
1+550	952.76	953.641
1+575	952.67	953.543
1+600	952.58	953.445
1+625	952.50	953.347
1+650	952.41	953.249
1+675	952.32	953.151
1+700	952.23	953.053
1+725	952.14	952.955
1+750	952.05	952.857
1+775	951.96	952.759
1+800	951.88	952.661
1+825	951.79	952.563
1+850	951.70	952.465
1+875	951.61	952.367
1+900	951.48	952.269
1+925	951.45	952.171
1+950	951.31	952.073
1+975	951.21	951.975
2+000	951.11	951.876
2+025	950.91	951.778
2+050	950.90	951.680
2+075	950.87	951.582
2+100	950.75	951.484
2+125	950.76	951.386
2+150	950.57	951.288
2+175	950.43	951.190
2+200	950.29	951.092
2+225	950.15	950.994
2+250	950.08	950.896
2+275	950.15	950.798
2+280	950.14	950.778

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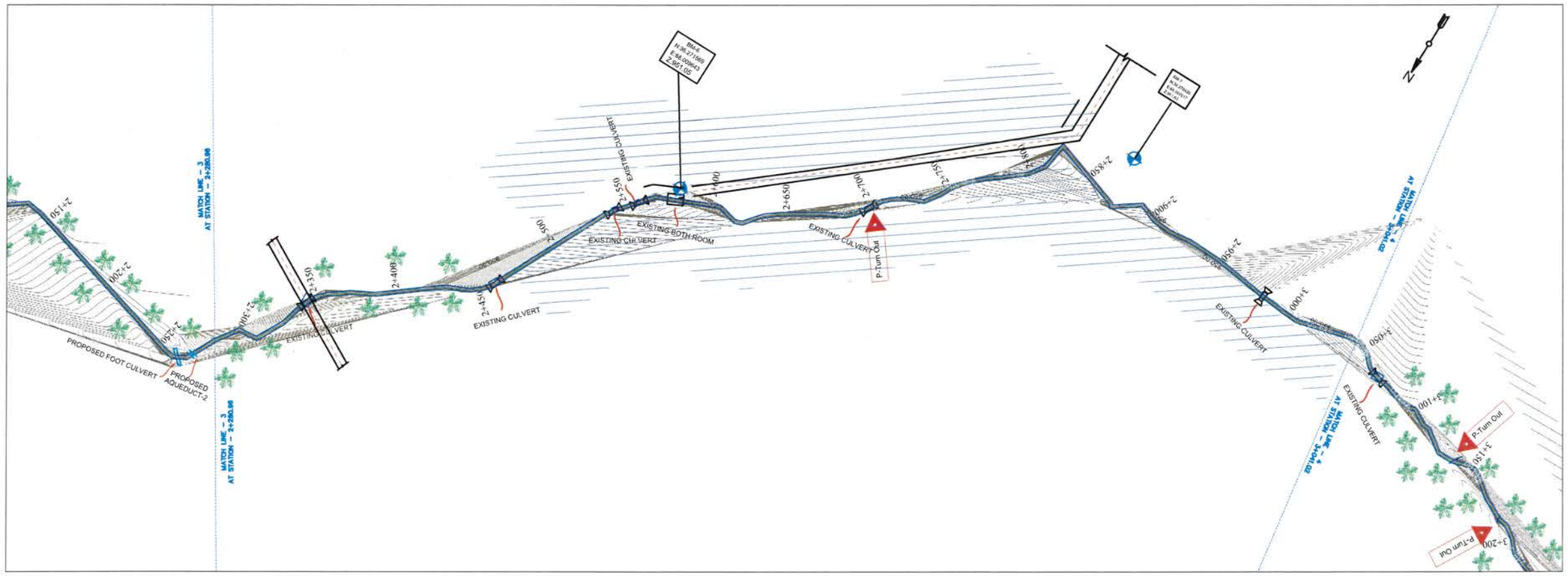
STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA. APPROVAL	SHEET NO.
	KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (1+520 TO 2+280)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		04/34
					DATE:	DATE:	05 MAR 2019	DATE:	



LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
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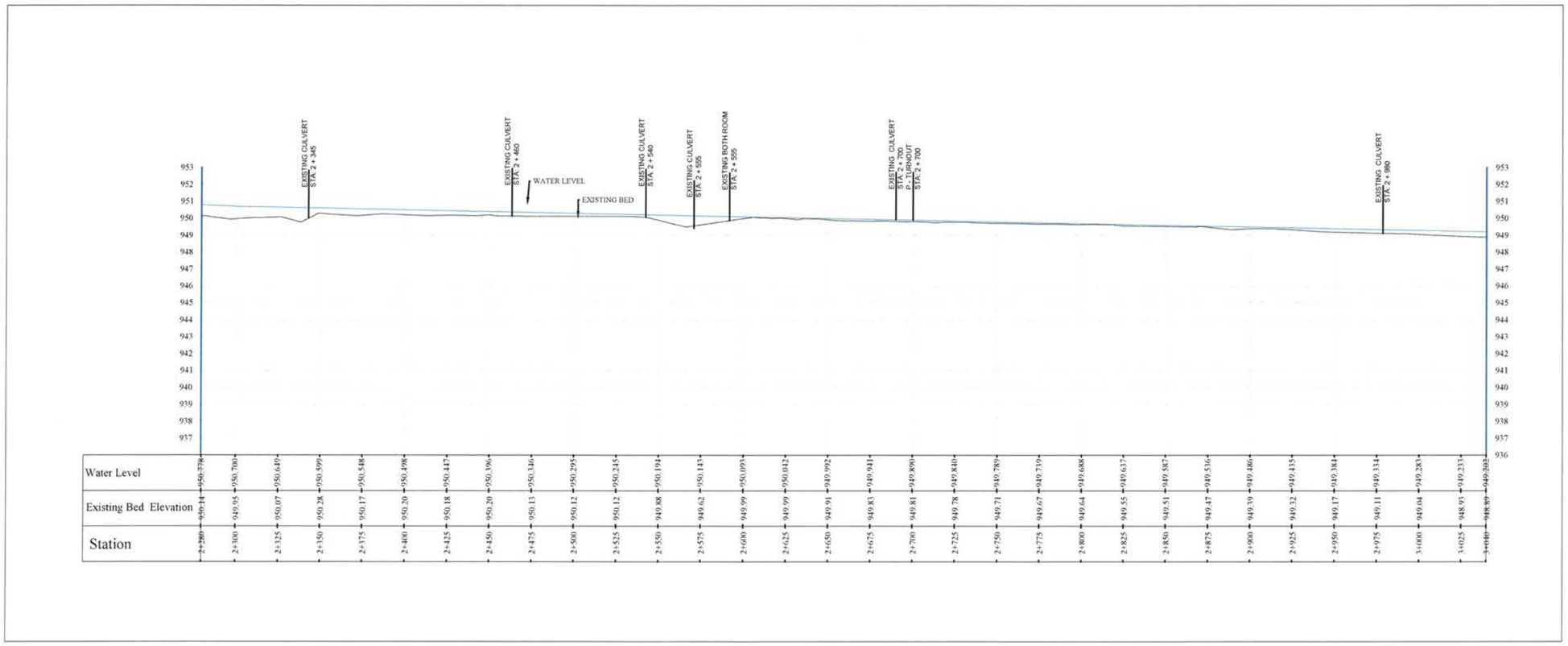
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



Station	Existing Bed Elevation	Water Level
2+280	950.14	950.778
2+300	949.95	950.700
2+325	950.07	950.649
2+350	950.28	950.599
2+375	950.17	950.548
2+400	950.20	950.498
2+425	950.18	950.447
2+450	950.20	950.396
2+475	950.13	950.346
2+500	950.12	950.295
2+525	950.12	950.245
2+550	949.88	950.194
2+575	949.62	950.143
2+600	949.99	950.093
2+625	949.99	950.042
2+650	949.91	949.992
2+675	949.85	949.941
2+700	949.81	949.890
2+725	949.78	949.840
2+750	949.71	949.789
2+775	949.67	949.739
2+800	949.64	949.688
2+825	949.55	949.637
2+850	949.51	949.587
2+875	949.47	949.536
2+900	949.39	949.486
2+925	949.32	949.435
2+950	949.17	949.384
2+975	949.11	949.334
3+000	949.04	949.283
3+025	948.95	949.233
3+040	948.89	949.202

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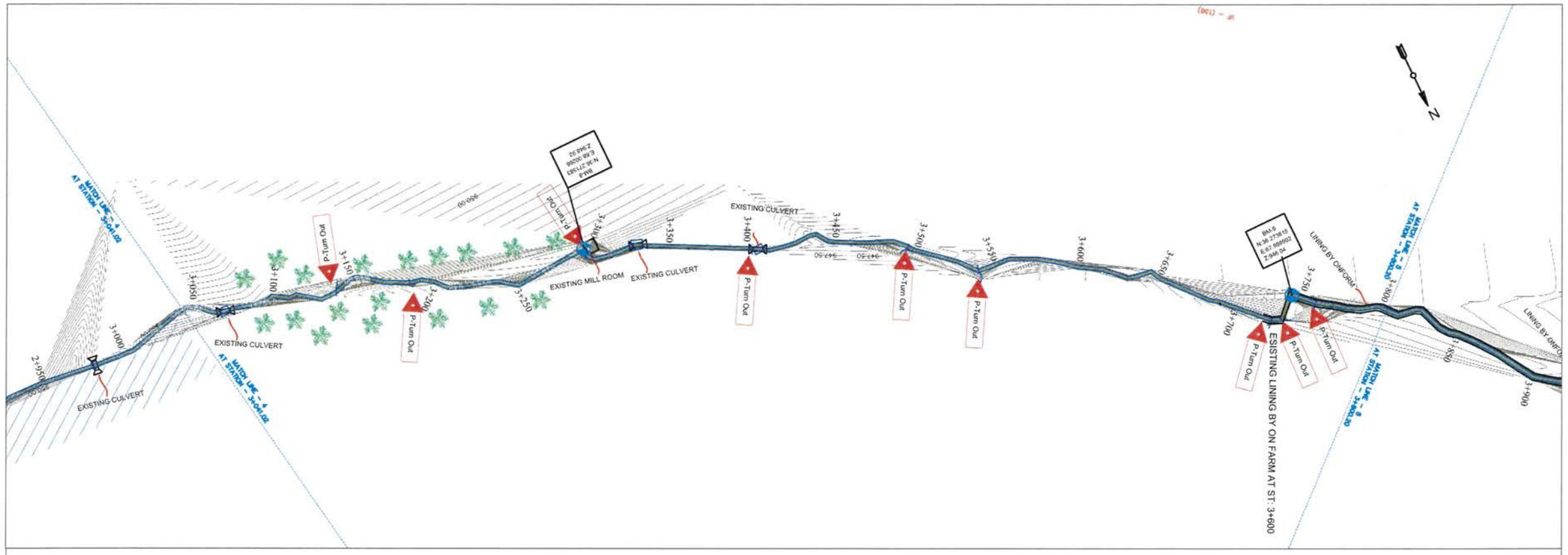
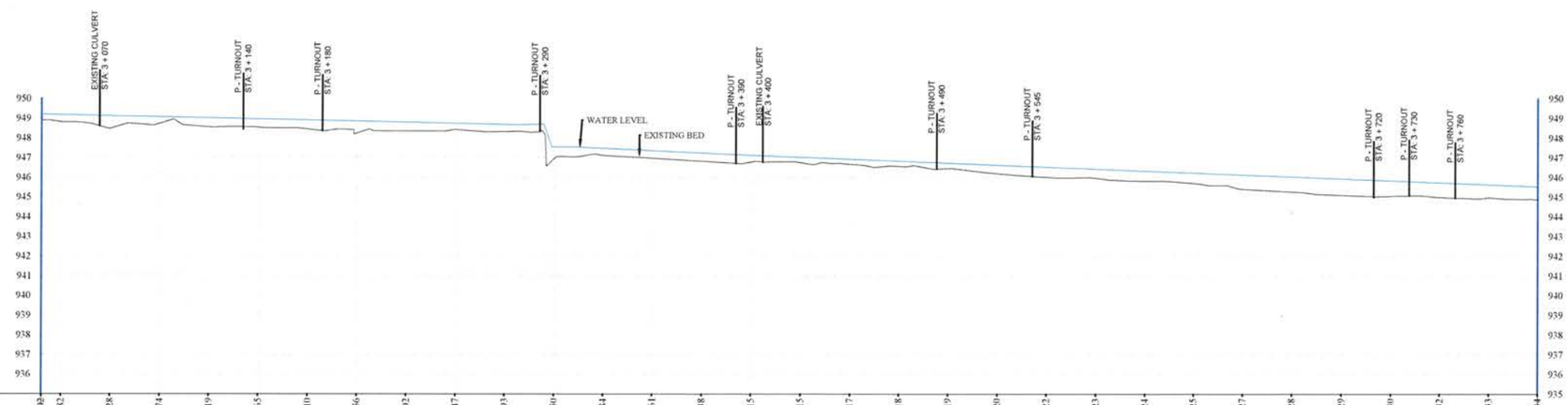
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (2+280 TO 3+040)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OXID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 5 MAR 2013	DATE:	



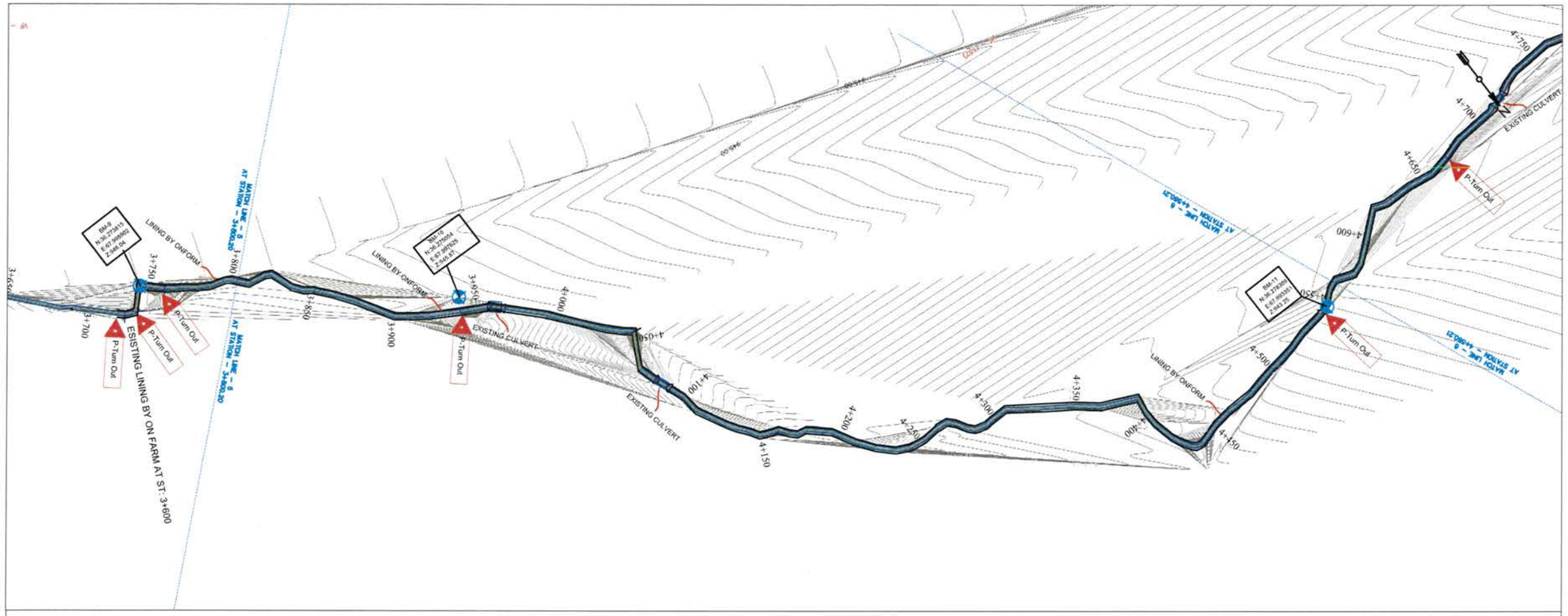


Station	Water Level	Existing Bed Elevation
3+040	949.202	948.89
3+050	949.182	948.82
3+075	949.128	948.49
3+100	949.074	948.74
3+125	949.019	948.56
3+150	948.965	948.54
3+175	948.910	948.45
3+200	948.856	948.25
3+225	948.802	948.35
3+250	948.747	948.43
3+275	948.693	948.33
3+300	947.590	946.95
3+325	947.484	947.11
3+350	947.361	946.97
3+375	947.238	946.82
3+400	947.115	946.78
3+425	947.015	946.75
3+450	946.917	946.66
3+475	946.818	946.56
3+500	946.719	946.44
3+525	946.620	946.18
3+550	946.522	946.00
3+575	946.423	945.96
3+600	946.324	945.81
3+625	946.225	945.69
3+650	946.127	945.39
3+675	946.028	945.26
3+700	945.929	945.09
3+725	945.830	945.01
3+750	945.732	944.98
3+775	945.633	944.96
3+800	945.534	944.86

LEGEND:-

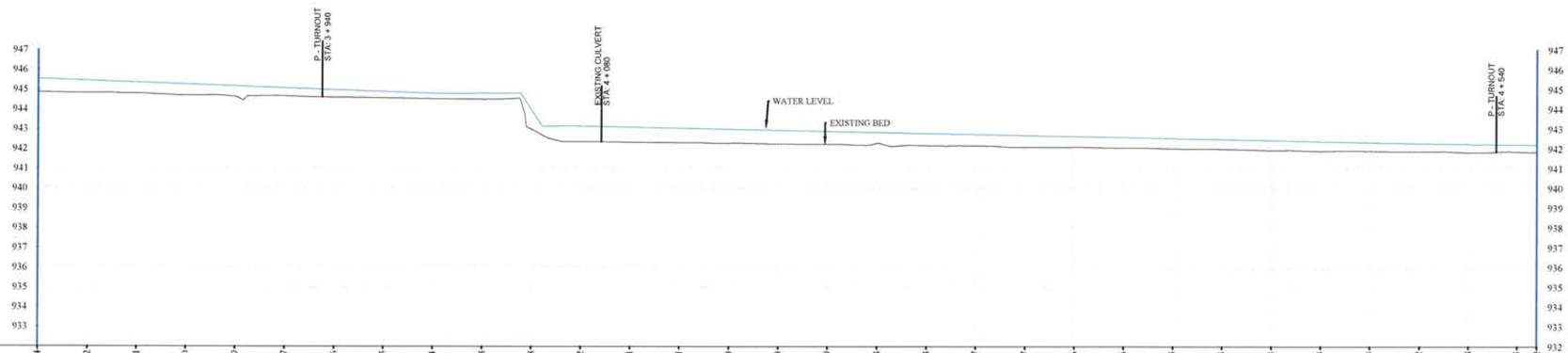
Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO.
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (3+040 TO 3+800)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		06/34
						DATE:	DATE:	05 MAR 2013	DATE:	



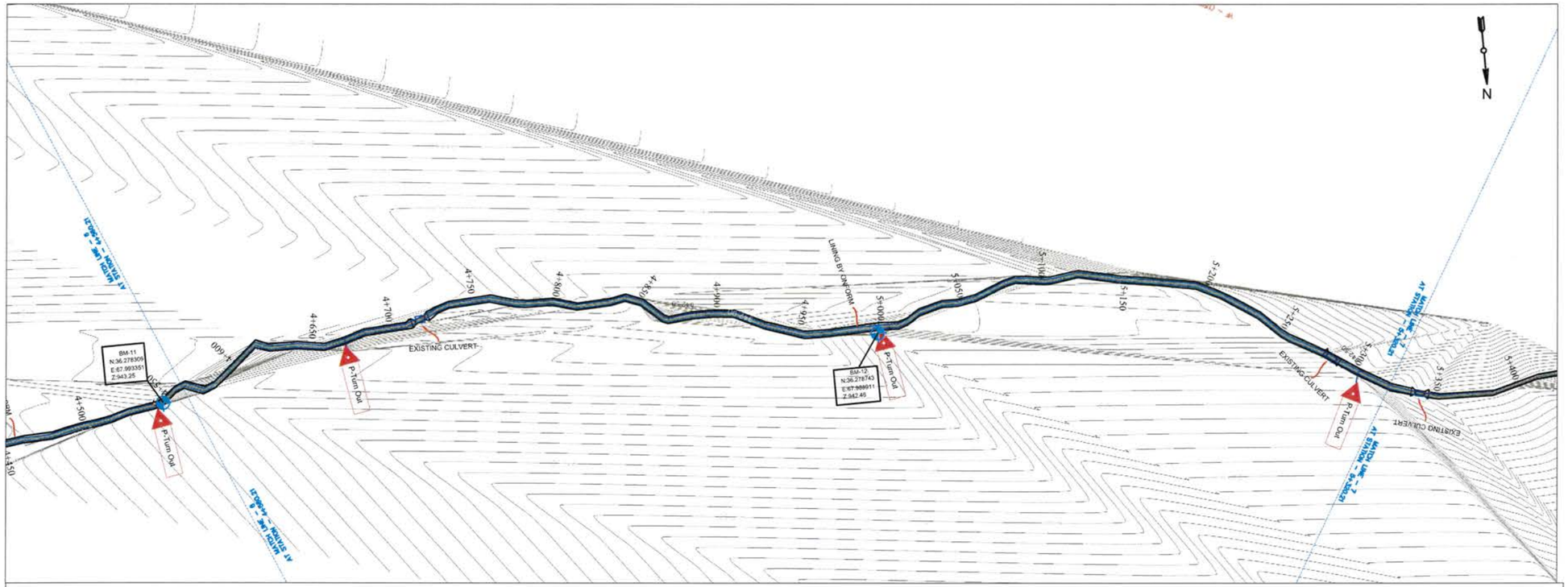
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



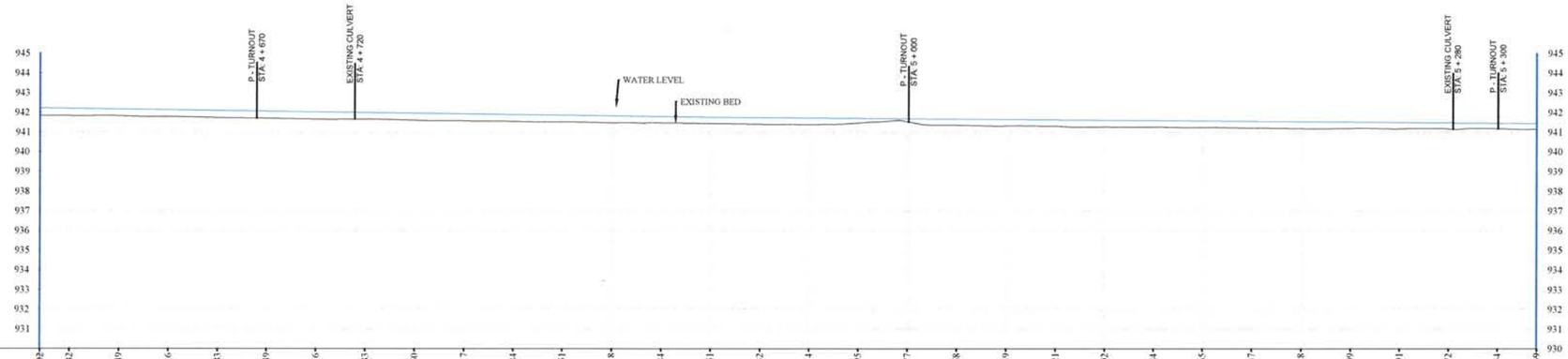
Station	Existing Bed Elevation	Water Level
3+800	944.86	945.534
3+825	944.82	945.442
3+850	944.80	945.351
3+875	944.69	945.260
3+900	944.63	945.169
3+925	944.66	945.077
3+950	944.60	944.986
3+975	944.57	944.895
4+000	944.53	944.804
4+025	944.51	944.808
4+050	942.98	943.958
4+075	942.36	943.142
4+100	942.34	943.091
4+125	942.32	943.041
4+150	942.29	942.990
4+175	942.25	942.940
4+200	942.24	942.889
4+225	942.29	942.838
4+250	942.16	942.788
4+275	942.15	942.737
4+300	942.09	942.687
4+325	942.09	942.636
4+350	942.05	942.586
4+375	942.01	942.535
4+400	941.99	942.484
4+425	941.91	942.434
4+450	941.89	942.383
4+475	941.89	942.333
4+500	941.87	942.282
4+525	941.82	942.248
4+550	941.86	942.215
4+560	941.83	942.202

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 07/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (3+800 TO 4+560)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	5 MAR 2019	DATE:	



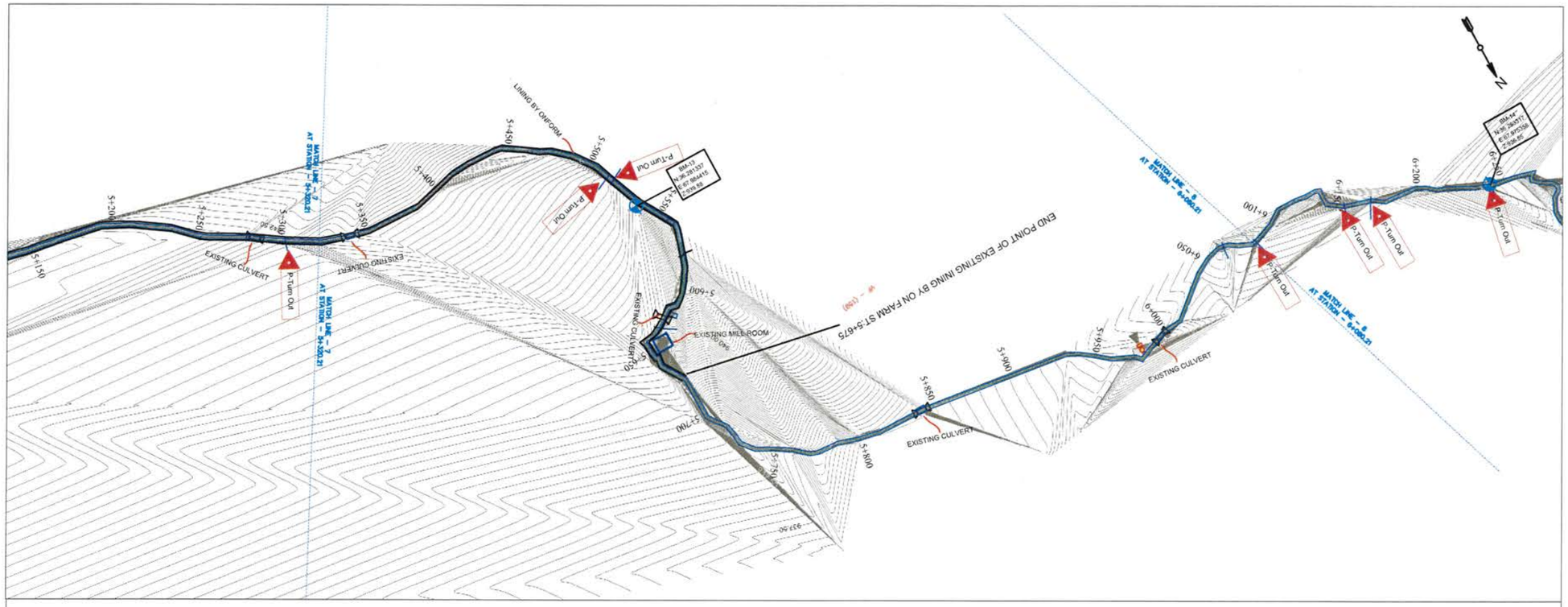
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



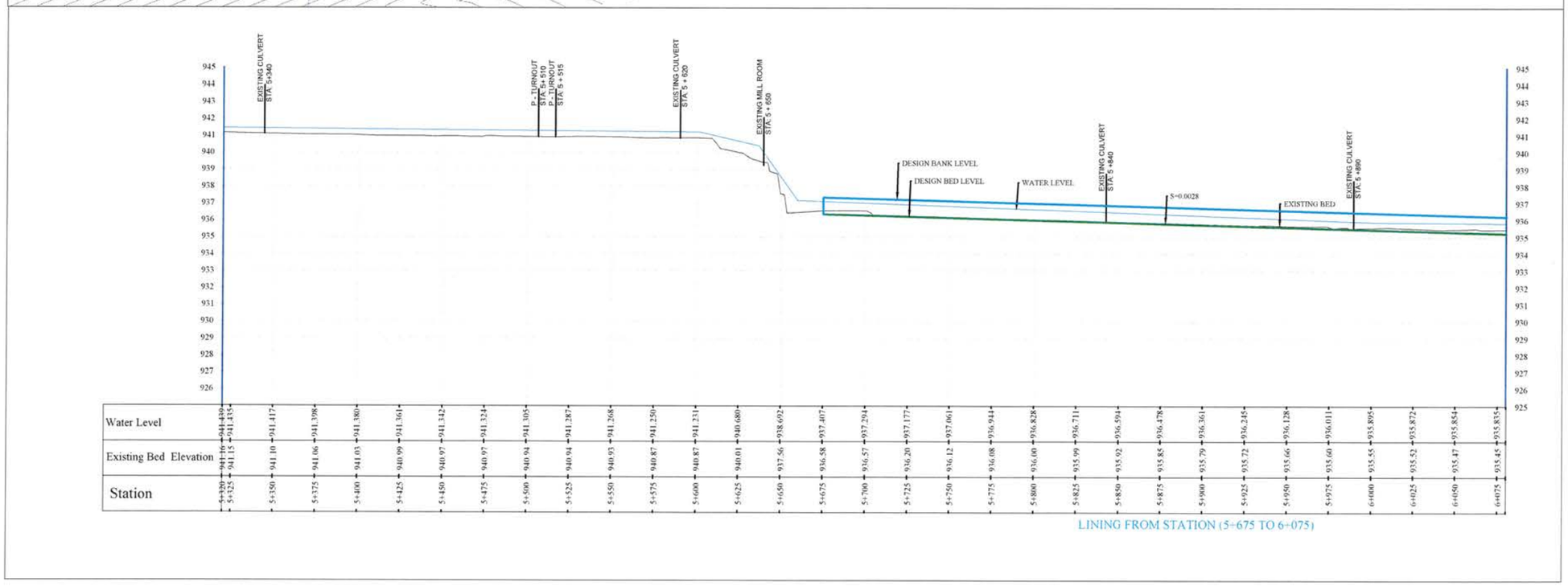
Station	Water Level	Existing Bed Elevation
4+560	942.202	941.85
4+575	942.182	941.82
4+600	942.149	941.81
4+625	942.116	941.78
4+650	942.083	941.73
4+675	942.049	941.69
4+700	942.016	941.66
4+725	941.983	941.66
4+750	941.950	941.60
4+775	941.917	941.57
4+800	941.884	941.55
4+825	941.851	941.51
4+850	941.818	941.46
4+875	941.784	941.47
4+900	941.751	941.43
4+925	941.732	941.40
4+950	941.714	941.38
4+975	941.695	941.46
5+000	941.677	941.53
5+025	941.658	941.35
5+050	941.639	941.31
5+075	941.621	941.30
5+100	941.602	941.27
5+125	941.584	941.25
5+150	941.565	941.24
5+175	941.547	941.21
5+200	941.528	941.18
5+225	941.509	941.19
5+250	941.491	941.17
5+275	941.472	941.16
5+300	941.454	941.18
5+320	941.439	941.16

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO.
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (4+560 TO 5+320)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		08/34
						DATE:	DATE:	DATE: 05 MAR 2013	DATE:	



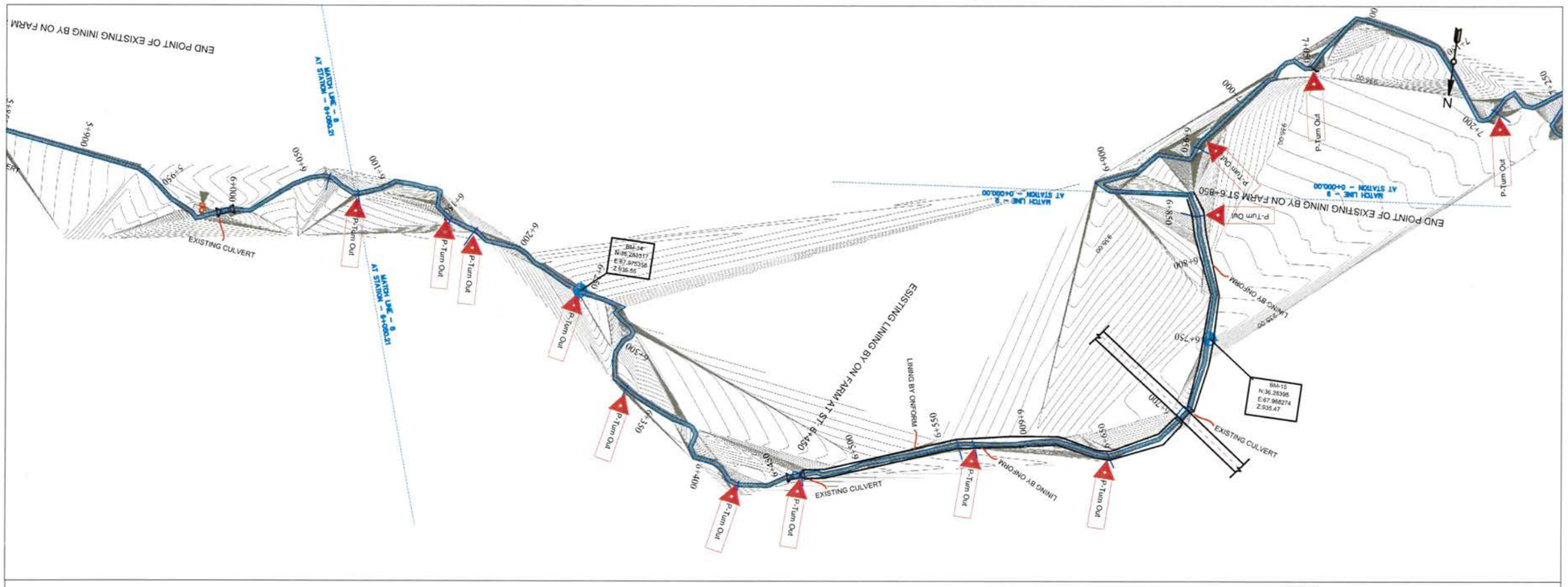
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



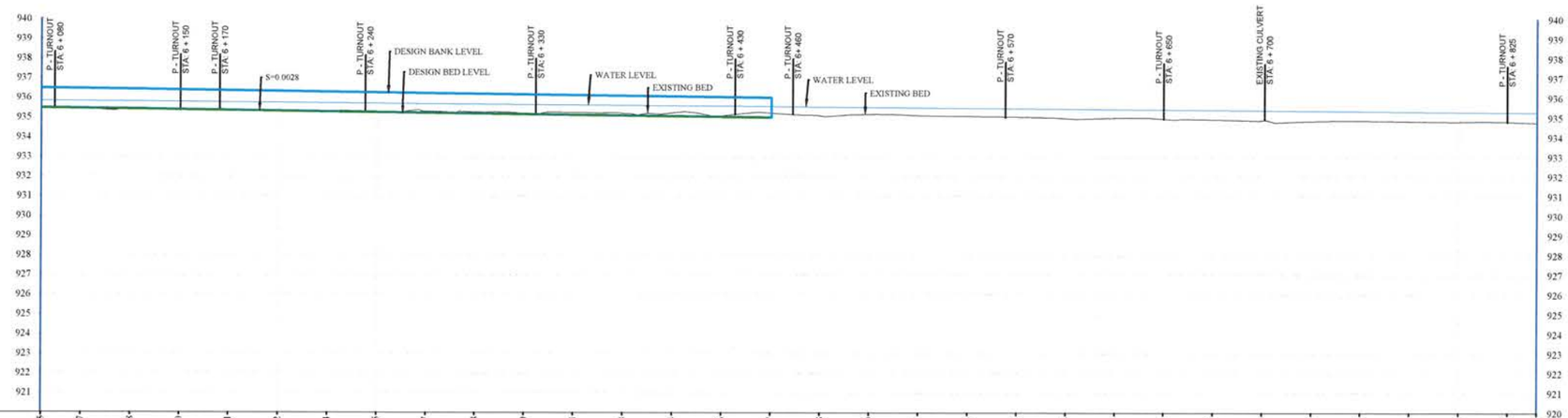
Station	Water Level	Existing Bed Elevation
5+320	941.16	941.15
5+325	941.435	941.435
5+350	941.417	941.10
5+375	941.396	941.06
5+400	941.380	941.03
5+425	941.361	940.99
5+450	941.342	940.97
5+475	941.324	940.97
5+500	941.305	940.94
5+525	941.287	940.94
5+550	941.268	940.93
5+575	941.250	940.87
5+600	941.231	940.87
5+625	940.680	940.01
5+650	938.692	937.56
5+675	937.407	936.58
5+700	937.294	936.57
5+725	937.177	936.20
5+750	937.061	936.12
5+775	936.944	936.08
5+800	936.828	936.00
5+825	936.711	935.99
5+850	936.594	935.92
5+875	936.478	935.85
5+900	936.361	935.79
5+925	936.245	935.72
5+950	936.128	935.66
5+975	936.011	935.60
6+000	935.895	935.55
6+025	935.872	935.52
6+050	935.854	935.47
6+075	935.835	935.45

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA. APPROVAL	SHEET NO. 09/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (5+320 TO 6+075)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	



LEGEND:-

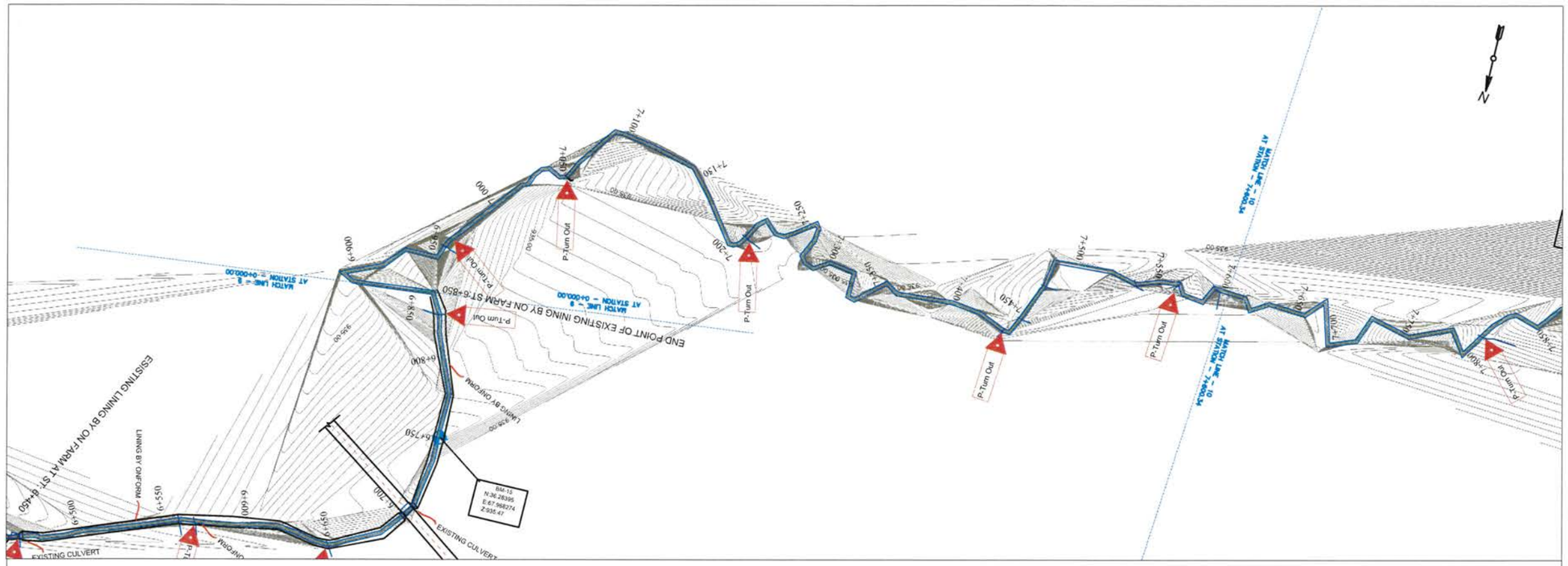
Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



Station	Existing Bed Elevation	Water Level
6+075	935.45	935.835
6+100	935.44	935.817
6+125	935.44	935.798
6+150	935.35	935.780
6+175	935.31	935.761
6+200	935.34	935.742
6+225	935.34	935.724
6+250	935.28	935.705
6+275	935.31	935.687
6+300	935.27	935.668
6+325	935.18	935.650
6+350	935.25	935.631
6+375	935.20	935.613
6+400	935.23	935.594
6+425	935.09	935.576
6+450	935.22	935.557
6+475	935.08	935.538
6+500	935.16	935.520
6+525	935.11	935.501
6+550	935.07	935.483
6+575	935.03	935.464
6+600	934.96	935.446
6+625	934.99	935.427
6+650	934.94	935.409
6+675	934.91	935.390
6+700	934.88	935.372
6+725	934.82	935.353
6+750	934.80	935.335
6+775	934.82	935.316
6+800	934.79	935.297
6+825	934.79	935.279
6+840	934.74	935.268

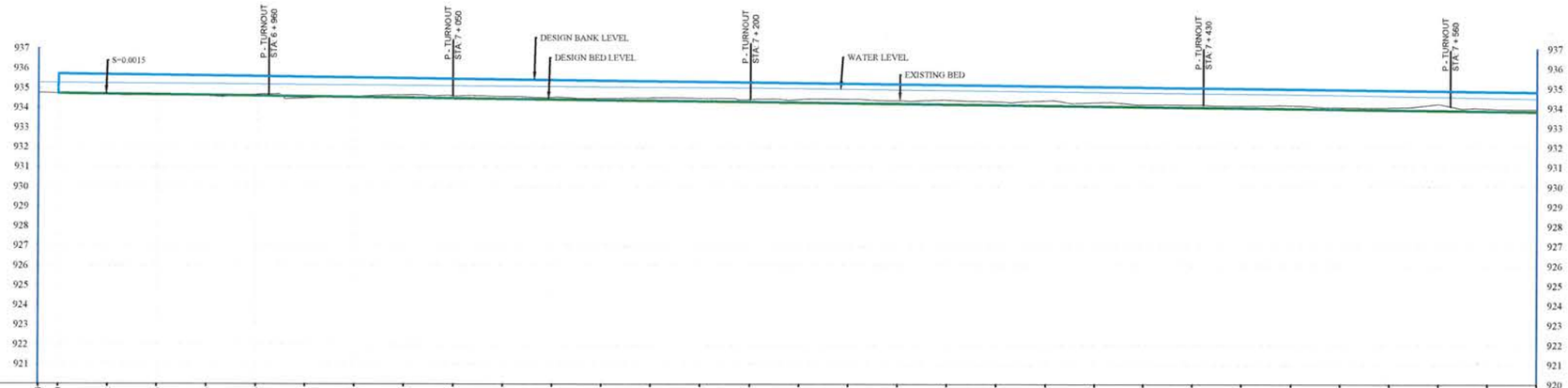
LINING FROM STATION (6+075 TO 6+450)

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 10/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (6+075 TO 6+840)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2015	DATE:	



LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	

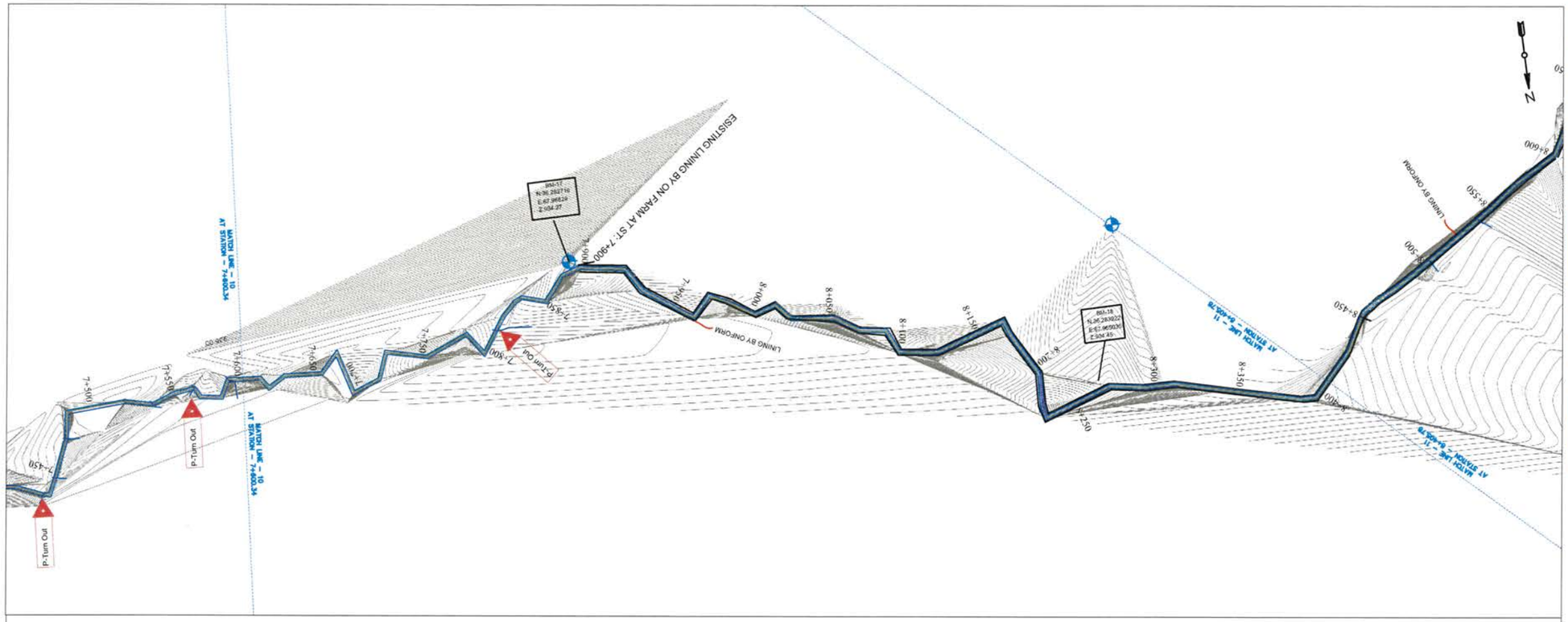


Station	Water Level	Existing Bed Elevation
6+840	935.268	934.74
6+850	935.264	934.71
6+875	935.242	934.64
6+900	935.223	934.62
6+925	935.205	934.58
6+950	935.186	934.66
6+975	935.168	934.49
7+000	935.149	934.58
7+025	935.131	934.65
7+050	935.112	934.60
7+075	935.093	934.57
7+100	935.075	934.53
7+125	935.056	934.48
7+150	935.038	934.51
7+175	935.019	934.49
7+200	935.001	934.43
7+225	934.972	934.43
7+250	934.943	934.46
7+275	934.914	934.38
7+300	934.885	934.40
7+325	934.855	934.32
7+350	934.826	934.37
7+375	934.797	934.27
7+400	934.768	934.18
7+425	934.739	934.16
7+450	934.710	934.12
7+475	934.680	934.13
7+500	934.651	934.04
7+525	934.607	934.03
7+550	934.562	934.20
7+575	934.517	933.97
7+600	934.472	933.93

LINING FROM STATION (6+850 TO 7+600)

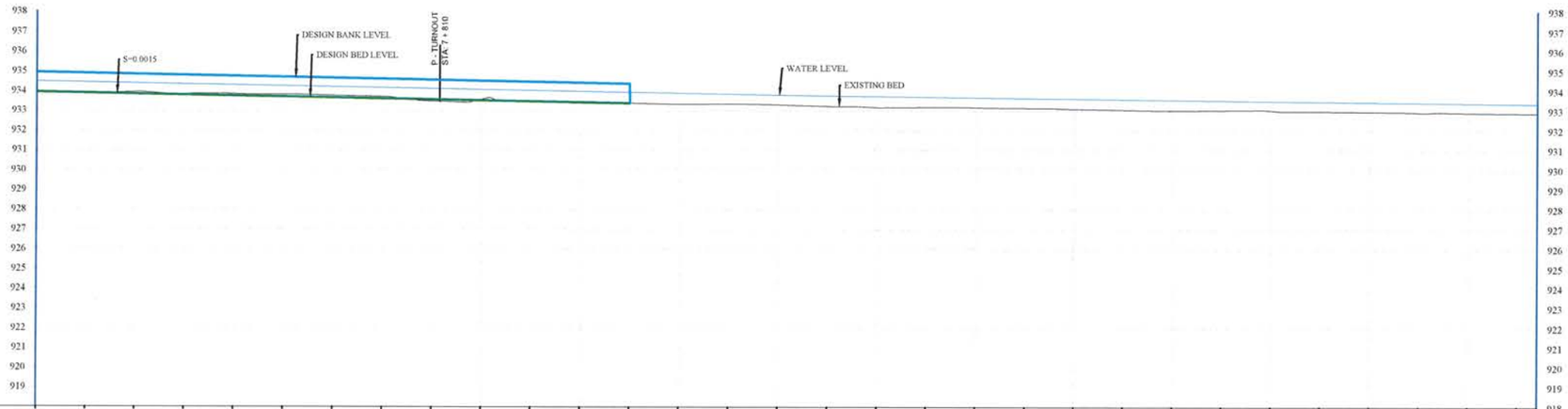
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 11/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (6+840 TO 7+600)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 5 MAR 2013	DATE:	

For



LEGEND:-

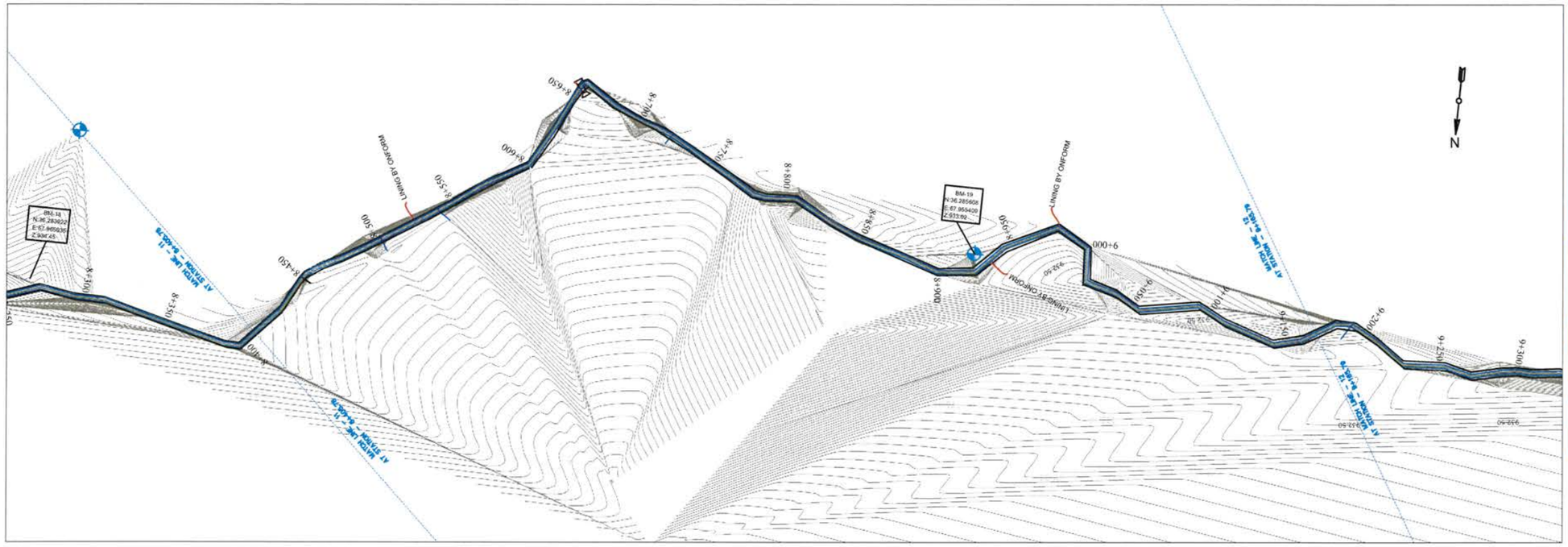
Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



Station	Existing Bed Elevation	Water Level
7+600	933.93	934.472
7+625	933.90	934.427
7+650	933.94	934.382
7+675	933.85	934.337
7+700	933.85	934.292
7+725	933.83	934.247
7+750	933.76	934.202
7+775	933.71	934.157
7+800	933.49	934.112
7+825	933.58	934.067
7+850	933.47	934.022
7+875	933.41	933.977
7+900	933.38	933.932
7+925	933.34	933.887
7+950	933.34	933.842
7+975	933.30	933.797
8+000	933.25	933.752
8+025	933.17	933.723
8+050	933.19	933.694
8+075	933.18	933.666
8+100	933.15	933.638
8+125	933.11	933.609
8+150	933.06	933.581
8+175	933.03	933.552
8+200	933.05	933.524
8+225	933.03	933.496
8+250	932.98	933.467
8+275	932.96	933.439
8+300	932.92	933.410
8+325	932.91	933.382
8+350	932.88	933.353
8+360	932.87	933.342

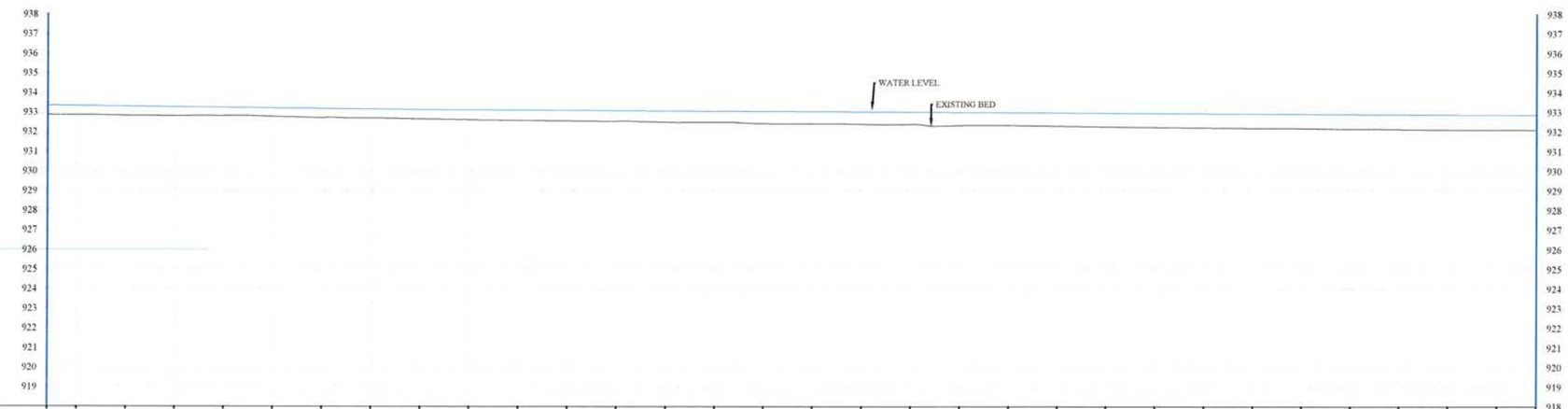
LINING FROM STATION (7+600 TO 7+900)

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 12/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (7+600 TO 8+360)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2013	DATE:	



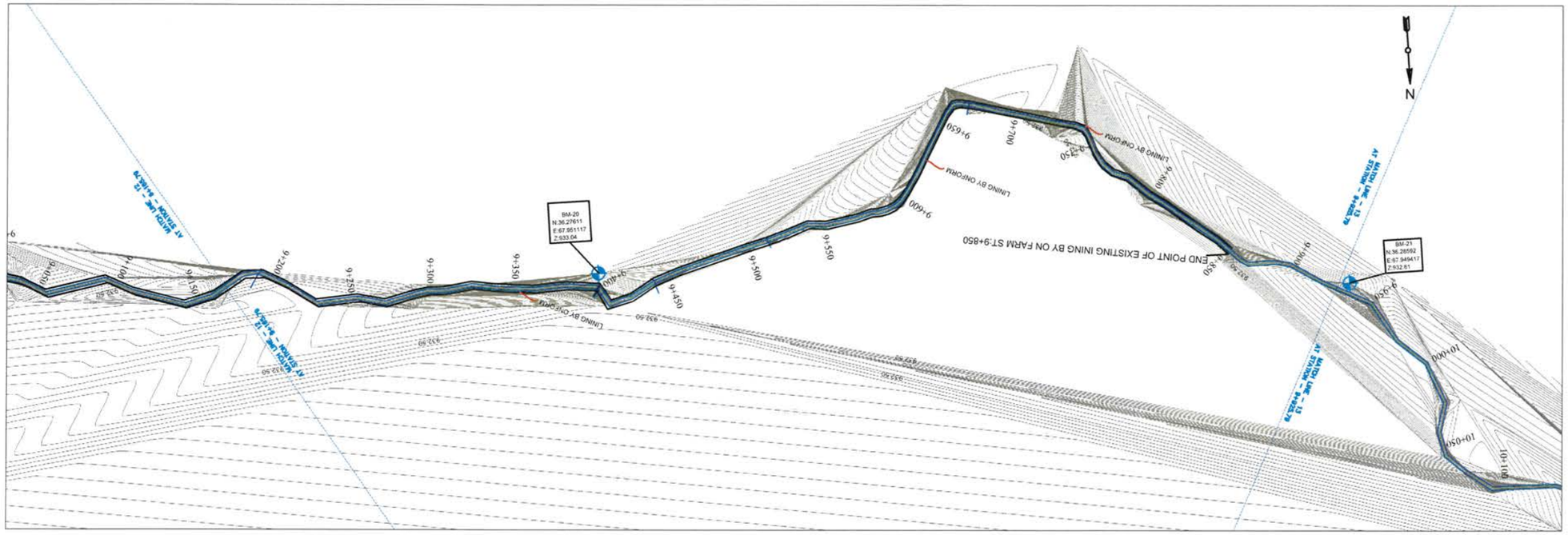
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



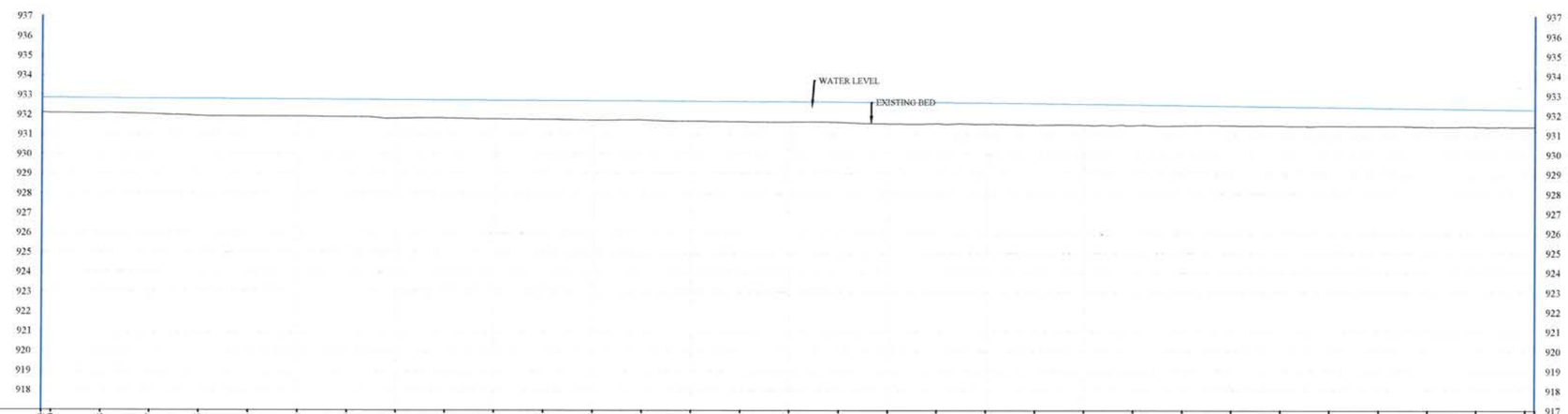
Station	Water Level	Existing Bed Elevation
8+360	933.342	932.89
8+375	933.325	932.87
8+400	933.297	932.83
8+425	933.268	932.80
8+450	933.240	932.81
8+475	933.211	932.77
8+500	933.183	932.71
8+525	933.155	932.70
8+550	933.128	932.66
8+575	933.117	932.62
8+600	933.105	932.58
8+625	933.093	932.56
8+650	933.082	932.55
8+675	933.070	932.50
8+700	933.058	932.50
8+725	933.047	932.43
8+750	933.035	932.43
8+775	933.023	932.39
8+800	933.012	932.38
8+825	933.000	932.33
8+850	932.988	932.34
8+875	932.977	932.30
8+900	932.965	932.27
8+925	932.953	932.24
8+950	932.942	932.21
8+975	932.930	932.20
9+000	932.918	932.19
9+025	932.907	932.16
9+050	932.895	932.14
9+075	932.883	932.12
9+100	932.872	932.11
9+120	932.862	932.10

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA. APPROVAL	SHEET NO. 13/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (8+360 TO 9+120)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2013	DATE:	



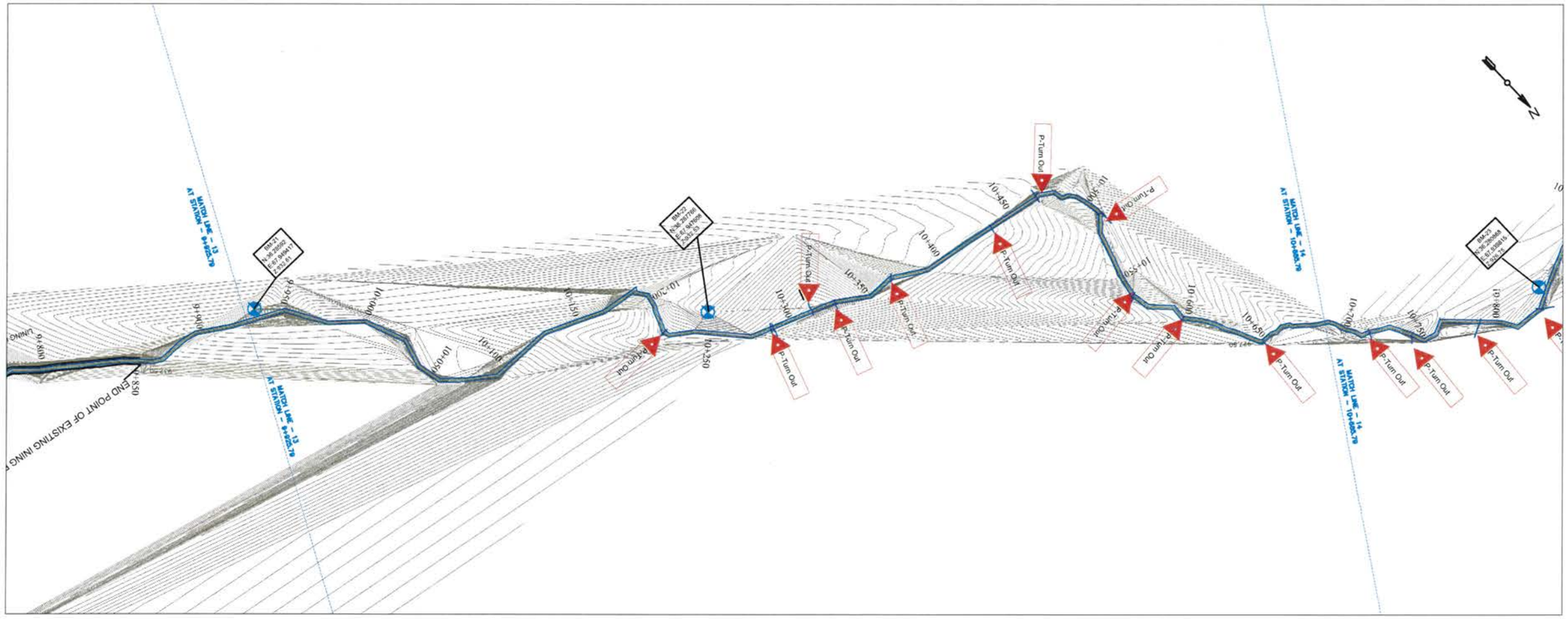
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



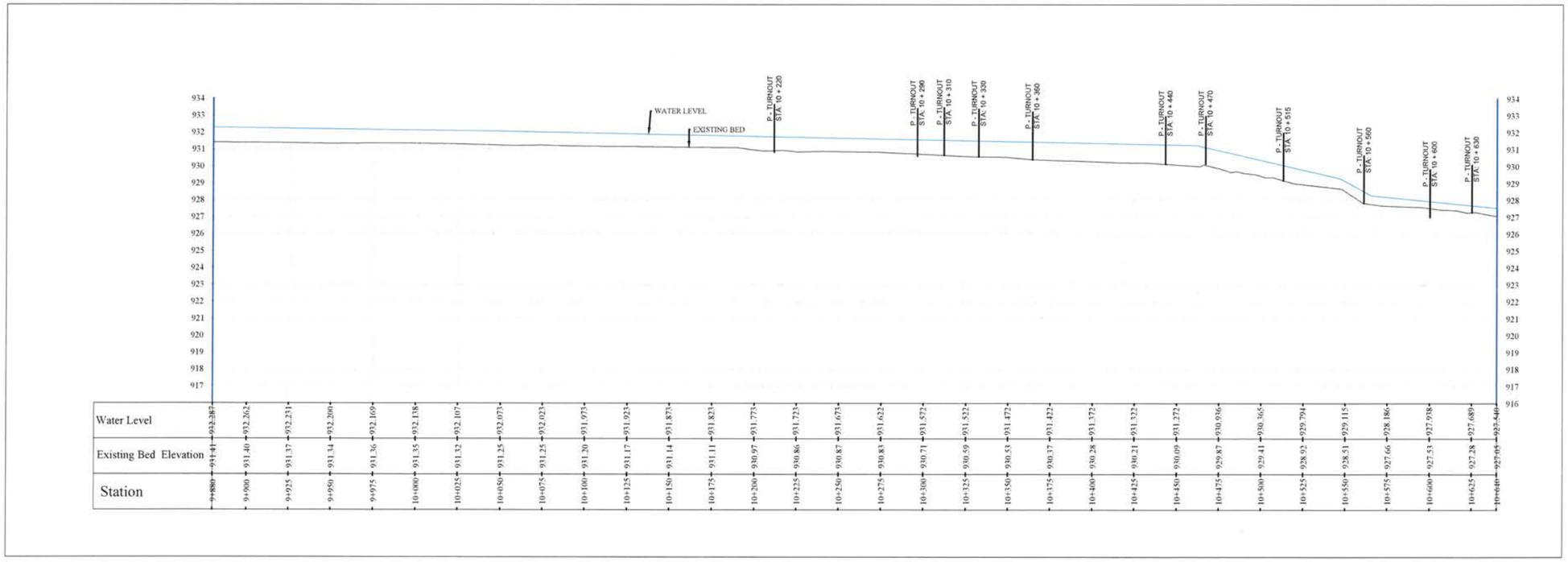
Station	Existing Bed Elevation	Water Level
9+120	932.10	932.862
9+125	932.09	932.860
9+150	932.08	932.848
9+175	932.04	932.837
9+200	931.96	932.825
9+225	931.94	932.813
9+250	931.93	932.802
9+275	931.91	932.790
9+300	931.84	932.778
9+325	931.85	932.767
9+350	931.81	932.755
9+375	931.79	932.743
9+400	931.74	932.732
9+425	931.75	932.720
9+450	931.60	932.708
9+475	931.67	932.697
9+500	931.65	932.685
9+525	931.64	932.673
9+550	931.56	932.662
9+575	931.57	932.650
9+600	931.55	932.636
9+625	931.51	932.605
9+650	931.50	932.574
9+675	931.49	932.542
9+700	931.48	932.511
9+725	931.49	932.480
9+750	931.47	932.449
9+775	931.46	932.418
9+800	931.45	932.387
9+825	931.42	932.356
9+850	931.42	932.325
9+875	931.40	932.294
9+880	931.41	932.287

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 14/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (9+120 TO 9+880)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2013	DATE:	



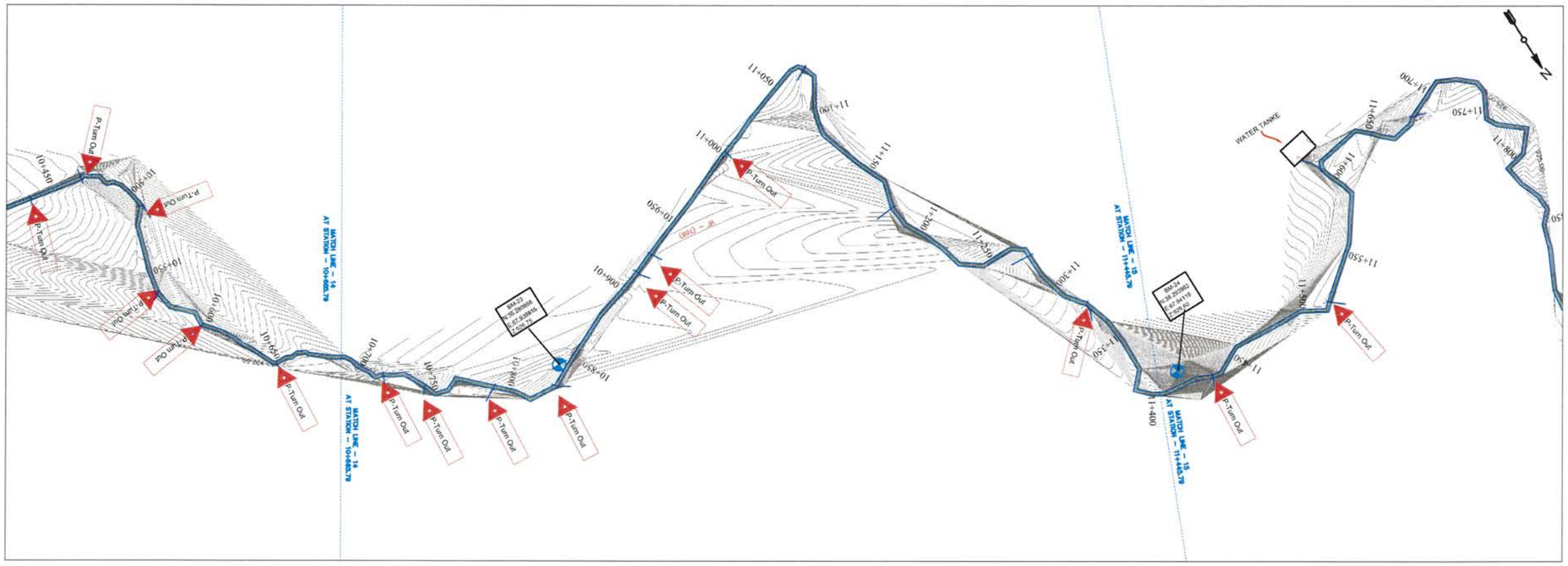
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



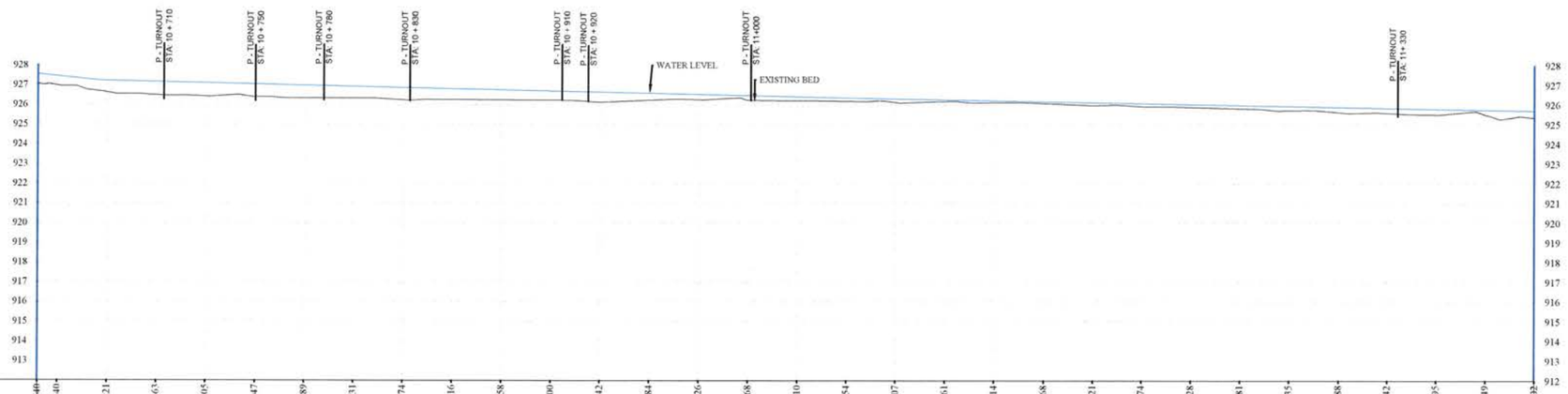
Station	Existing Bed Elevation	Water Level
9+880	931.41	932.387
9+900	931.40	932.362
9+925	931.37	932.231
9+950	931.34	932.200
9+975	931.36	932.169
10+000	931.35	932.138
10+025	931.32	932.107
10+050	931.25	932.073
10+075	931.25	932.023
10+100	931.20	931.973
10+125	931.17	931.923
10+150	931.14	931.873
10+175	931.11	931.823
10+200	930.97	931.773
10+225	930.86	931.723
10+250	930.87	931.673
10+275	930.81	931.622
10+300	930.71	931.572
10+325	930.59	931.522
10+350	930.53	931.472
10+375	930.37	931.422
10+400	930.28	931.372
10+425	930.21	931.322
10+450	930.09	931.272
10+475	929.87	930.936
10+500	929.41	930.365
10+525	928.92	929.794
10+550	928.51	929.115
10+575	927.66	928.186
10+600	927.53	927.938
10+625	927.28	927.689
10+640	927.05	927.540

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO.
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (9+880 TO 10+640)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		15/34
						DATE:	DATE:	05 MAR 2015	DATE:	



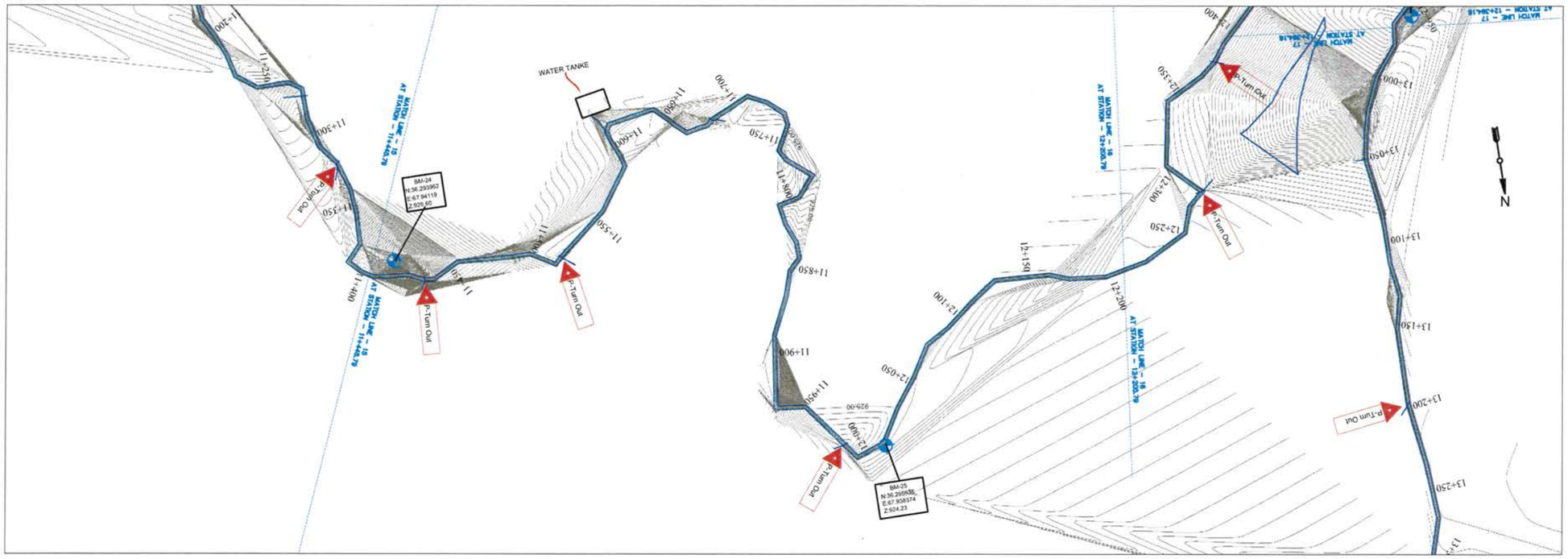
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



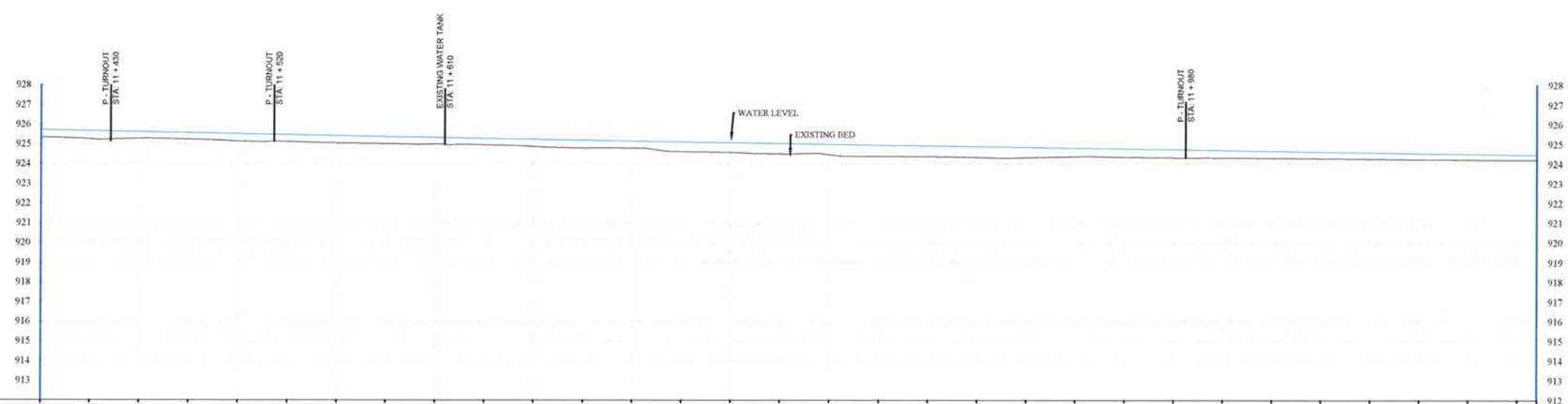
Station	Water Level	Existing Bed Elevation
10+640	927.65	926.96
10+650	927.440	926.61
10+675	927.221	926.49
10+700	927.163	926.42
10+725	927.105	926.39
10+750	927.047	926.33
10+775	926.989	926.34
10+800	926.931	926.24
10+825	926.874	926.25
10+850	926.816	926.24
10+875	926.758	926.23
10+900	926.700	926.13
10+925	926.642	926.23
10+950	926.584	926.25
10+975	926.526	926.23
11+000	926.468	926.20
11+025	926.410	926.18
11+050	926.354	926.12
11+075	926.307	926.17
11+100	926.261	926.12
11+125	926.214	926.08
11+150	926.168	926.18
11+175	926.121	925.98
11+200	926.074	925.92
11+225	926.028	925.88
11+250	925.981	925.81
11+275	925.935	925.71
11+300	925.888	925.62
11+325	925.842	925.59
11+350	925.795	925.51
11+375	925.749	925.50
11+400	925.703	925.34

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO.
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (10+640 TO 11+400)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		16/34
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	



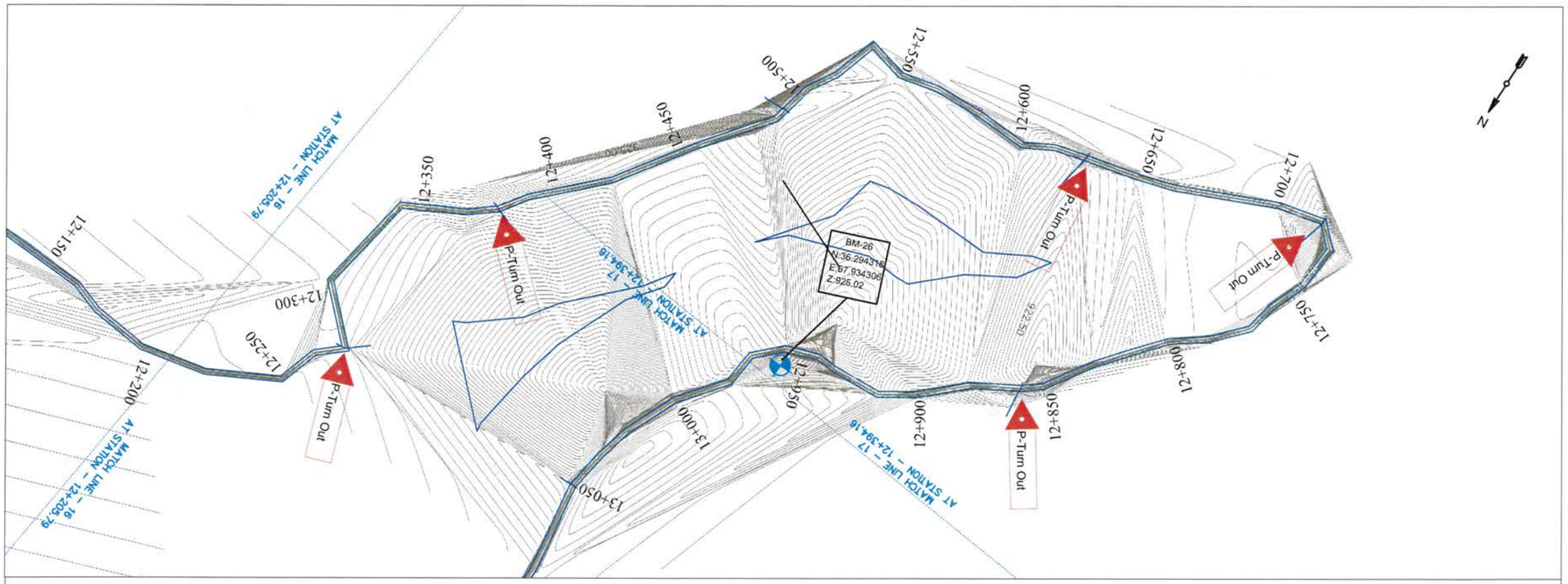
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



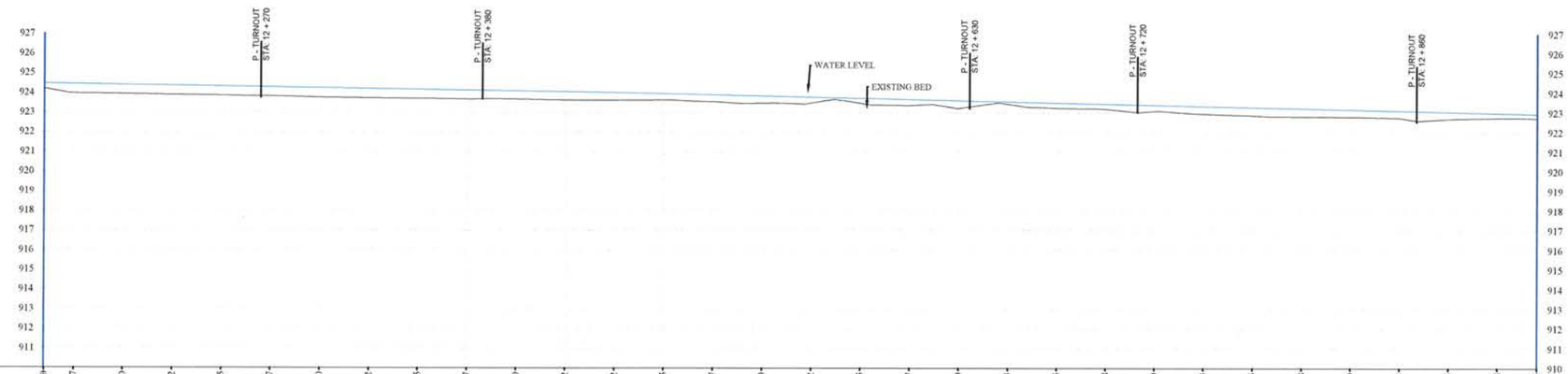
Station	Existing Bed Elevation	Water Level
11+400	925.34	925.702
11+425	925.25	925.656
11+450	925.28	925.609
11+475	925.24	925.563
11+500	925.15	925.516
11+524	925.12	925.469
11+550	925.05	925.423
11+575	925.01	925.376
11+600	925.00	925.330
11+625	924.95	925.283
11+650	924.88	925.237
11+675	924.80	925.190
11+700	924.80	925.145
11+725	924.61	925.107
11+750	924.57	925.069
11+775	924.50	925.031
11+800	924.46	924.993
11+825	924.39	924.955
11+850	924.37	924.917
11+875	924.33	924.879
11+900	924.32	924.841
11+925	924.37	924.803
11+950	924.34	924.765
11+975	924.32	924.727
12+000	924.32	924.690
12+025	924.30	924.652
12+050	924.28	924.615
12+075	924.26	924.577
12+100	924.23	924.540
12+125	924.20	924.502
12+150	924.19	924.465
12+160	924.19	924.450

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA. APPROVAL	SHEET NO.
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (11+400 TO 12+160)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		17/34
						DATE:	DATE: For	DATE: 5 MAR 2019	DATE:	



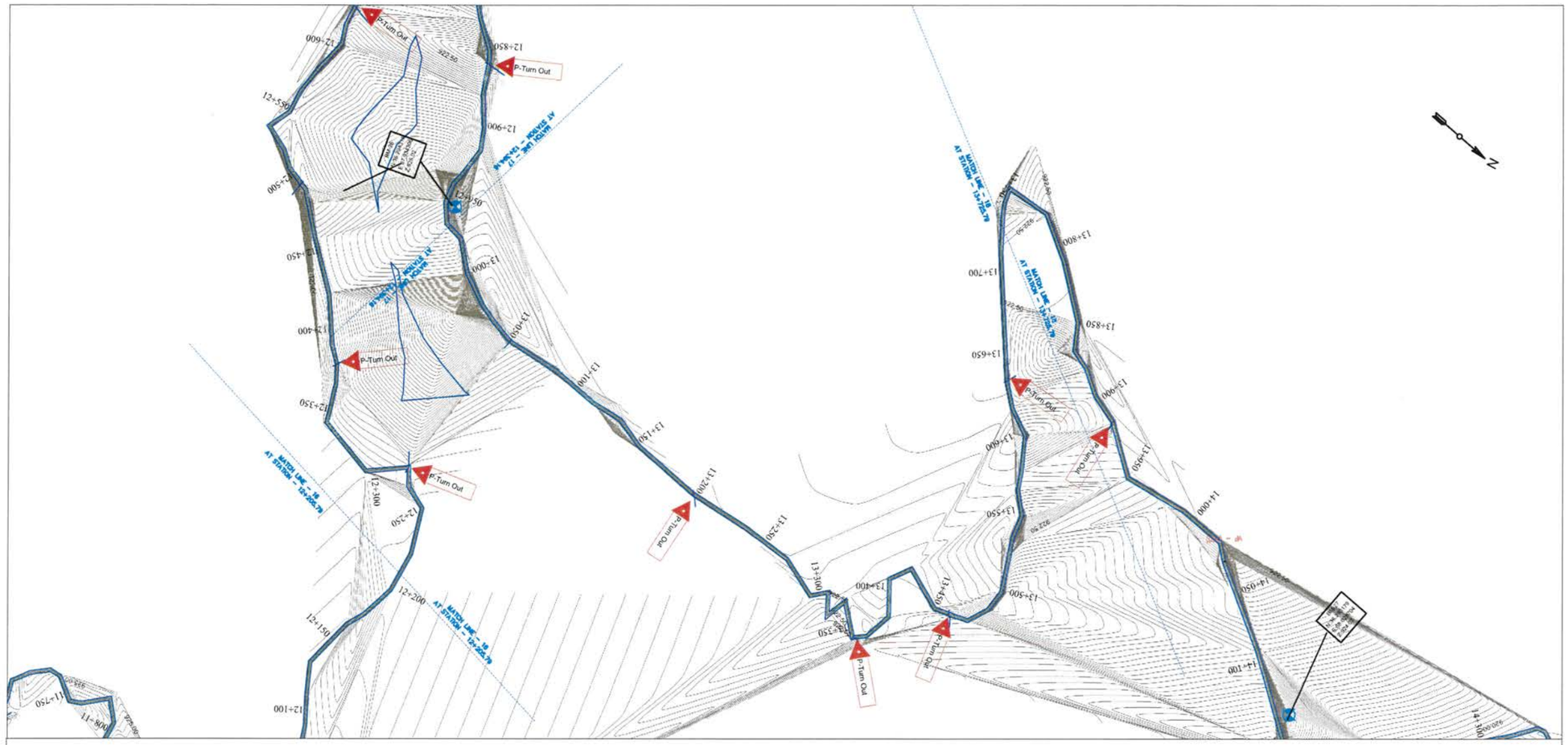
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



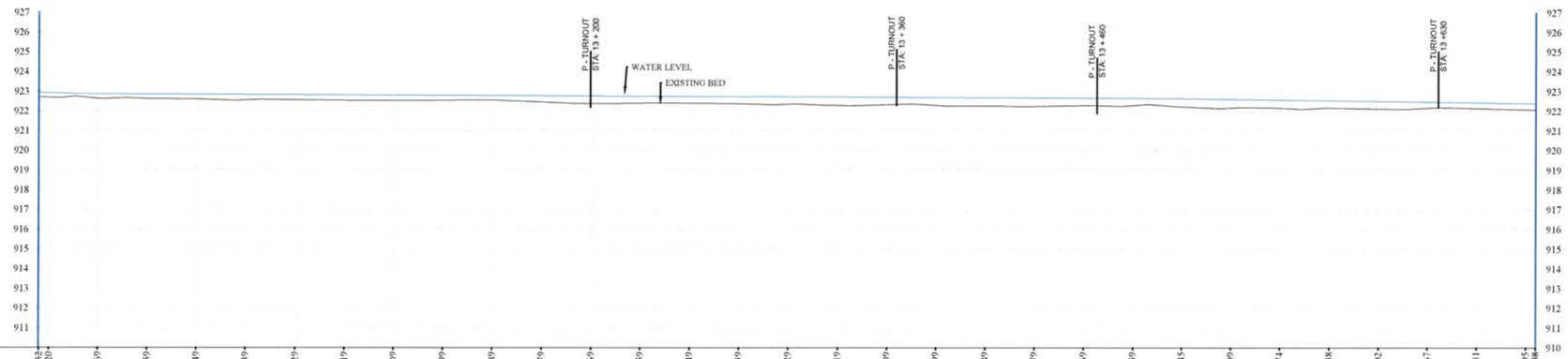
Station	Water Level	Existing Bed Elevation
12+160	924.450	924.19
12+175	924.427	923.95
12+200	924.390	923.92
12+225	924.352	923.88
12+250	924.315	923.85
12+275	924.277	923.82
12+300	924.240	923.76
12+325	924.202	923.73
12+350	924.165	923.70
12+375	924.127	923.67
12+400	924.090	923.68
12+425	924.052	923.64
12+450	924.012	923.62
12+475	923.955	923.65
12+500	923.897	923.55
12+525	923.840	923.48
12+550	923.782	923.49
12+575	923.725	923.47
12+600	923.667	923.37
12+625	923.610	923.23
12+650	923.553	923.43
12+675	923.495	923.24
12+700	923.438	923.17
12+725	923.380	923.07
12+750	923.323	922.94
12+775	923.265	922.86
12+800	923.208	922.81
12+825	923.150	922.78
12+850	923.093	922.73
12+875	923.035	922.68
12+900	922.978	922.73
12+920	922.932	922.70

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (12+160 TO 12+920)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN QMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		SHEET NO. 18/34
						DATE:	DATE: For	05 MAR 2019	DATE:	



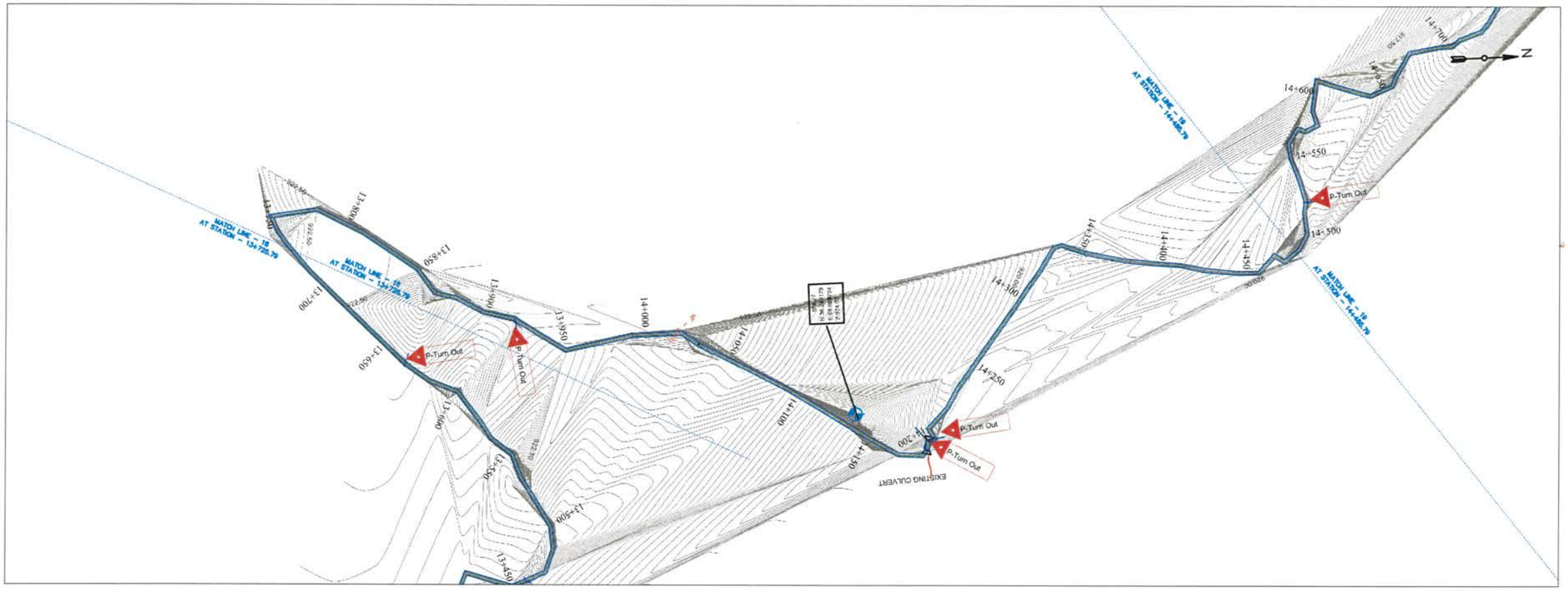
LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



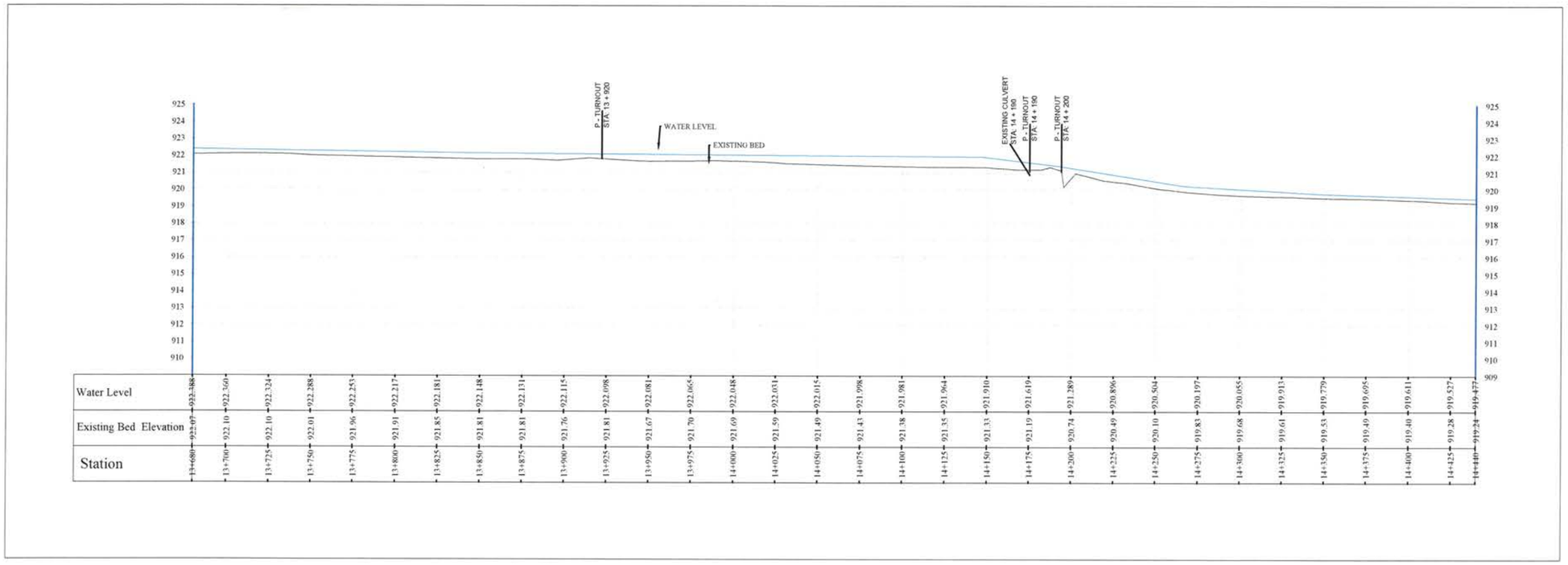
Station	Water Level	Existing Bed Elevation
12+920	922.933	922.68
12+925	922.930	922.68
12+950	922.869	922.63
12+975	922.859	922.63
13+000	922.840	922.61
13+025	922.839	922.56
13+050	922.829	922.57
13+075	922.819	922.54
13+100	922.809	922.53
13+125	922.799	922.55
13+150	922.789	922.56
13+175	922.779	922.46
13+200	922.769	922.38
13+225	922.759	922.41
13+250	922.749	922.41
13+275	922.739	922.37
13+300	922.729	922.35
13+325	922.719	922.29
13+350	922.709	922.32
13+375	922.699	922.29
13+400	922.689	922.26
13+425	922.679	922.24
13+450	922.669	922.28
13+475	922.659	922.29
13+500	922.645	922.22
13+525	922.609	922.17
13+550	922.574	922.15
13+575	922.538	922.16
13+600	922.502	922.12
13+625	922.467	922.16
13+650	922.431	922.14
13+675	922.395	922.07
13+680	922.387	922.07

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO.
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (12+920 TO 13+680)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		19/34
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	

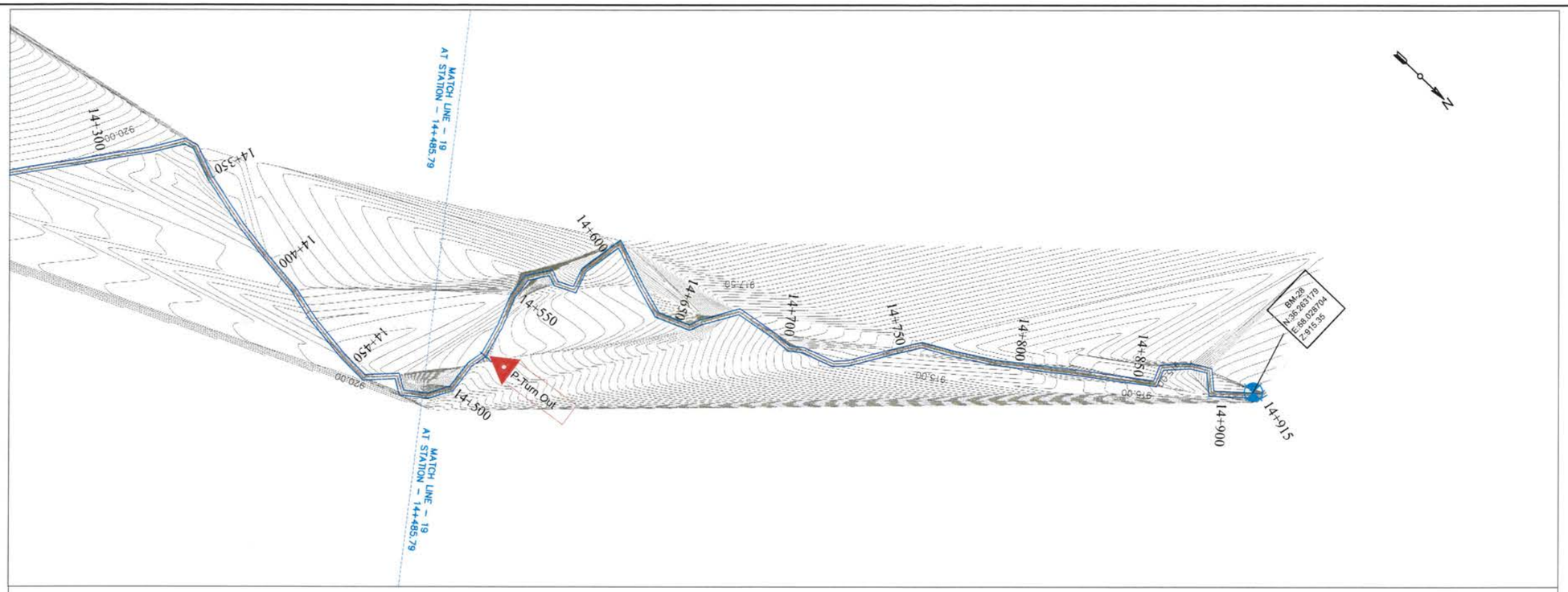


LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	T O
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	

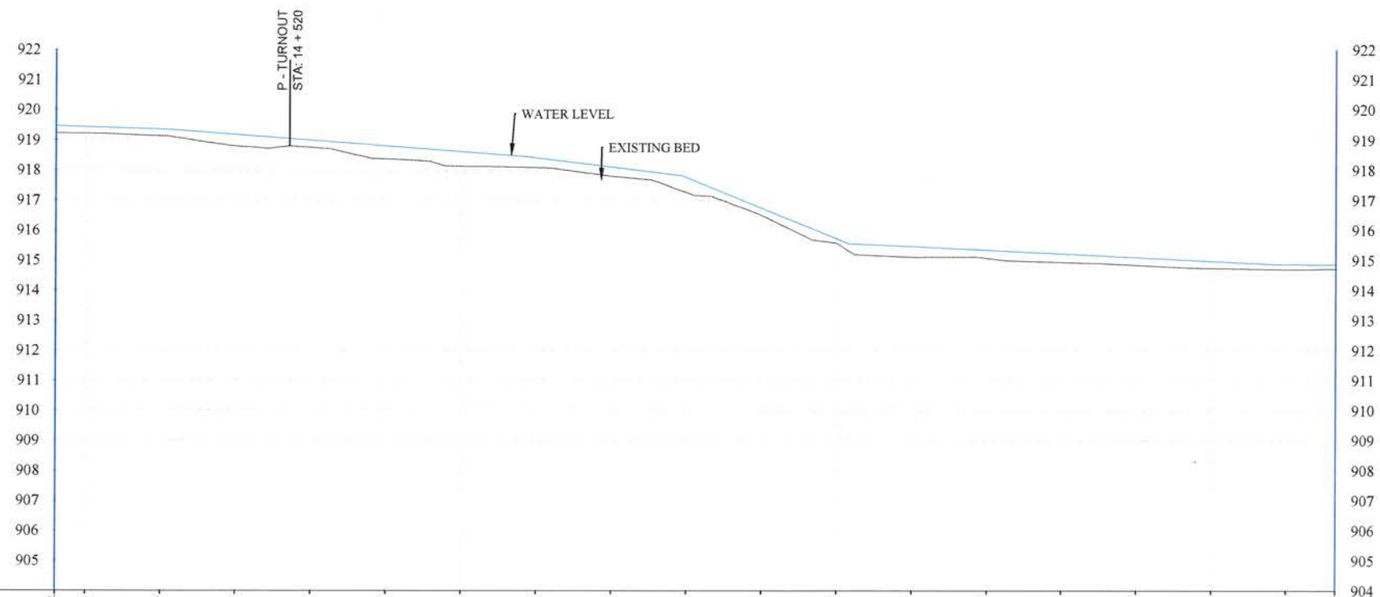


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 20/34
		KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (13+680 TO 14+440)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	05 MAR 2019	DATE:	



LEGEND:-

Agriculture Area	
Orchard(Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	TO
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
Proposed Culvert	
Tree	
River	
Residential Area	



Station	Water Level	Existing Bed Elevation
14+440	919.477	919.24
14+450	919.443	919.22
14+475	919.359	919.14
14+500	919.182	918.80
14+525	918.993	918.75
14+550	918.803	918.37
14+575	918.614	918.13
14+600	918.409	918.08
14+625	918.105	917.79
14+650	917.754	917.24
14+675	916.733	916.49
14+700	915.713	915.56
14+725	915.459	915.11
14+750	915.338	915.07
14+775	915.217	914.93
14+800	915.096	914.84
14+825	914.975	914.74
14+850	914.868	914.70
14+866.5	914.860	914.72

USAID FROM THE AMERICAN PEOPLE

STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO.
	KOHNA AYBAK AIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (14+440 TO 14+866.5)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		21/34
					DATE:	DATE:	DATE: 5 MAR 2019	DATE:	

For

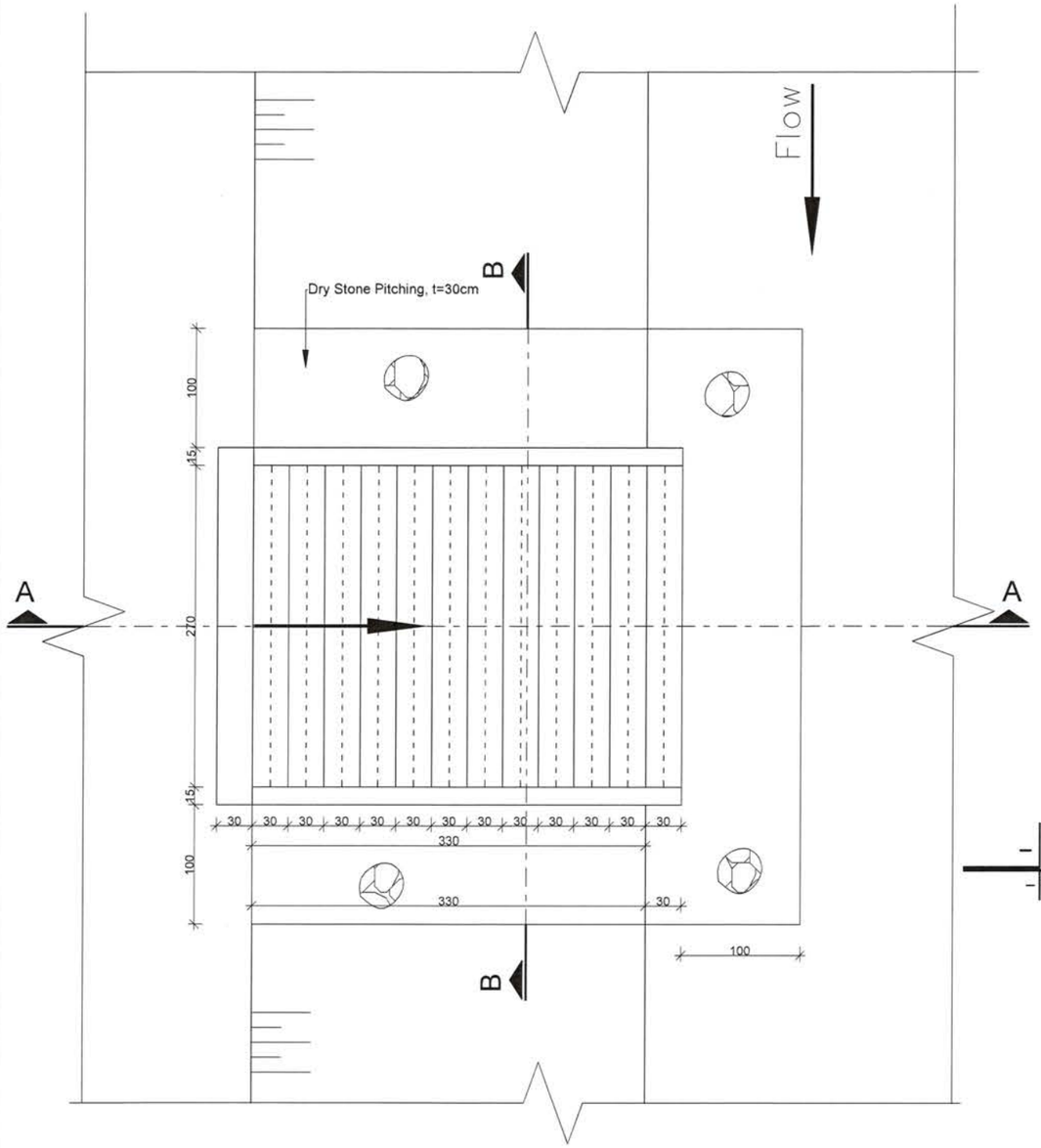
ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer

KONA YABAK CANAL STRUCTURE LIST ALONG WITH GPS COORDINATES

S.NO	Station	Description	NORTHING	EASTHING	Elevation	S.NO	Station	Description	NORTHING	EASTHING	Elevation
1	0+200	PUBLIC UTILITY STRUCTURE	36.26249	68.02710	959.08	39	7+050	TURNOUT- 34	36.28896	67.94610	934.84
2	0+350	RETAINING WALL	36.26293	68.02678	958.9	40	7+200	TURNOUT- 35	36.28904	67.94575	934.48
3	0+535	TURNOUT- 1	36.26361	68.02441	958.83	41	7+430	TURNOUT- 36	36.28914	67.94541	934.26
4	0+730	TURNOUT- 2	36.26829	68.01967	958.89	42	7+560	TURNOUT- 37	36.28986	67.94556	934.15
5	1+930	TURNOUT- 3	36.27255	68.01466	951.48	43	7+810	TURNOUT- 38	36.29050	67.94528	933.68
6	2+020	TURNOUT- 4	36.27291	68.01497	951.09	44	10+220	TURNOUT- 39	36.29097	67.94478	931.02
7	2+050	TURNOUT- 5	36.27351	68.01423	950.98	45	10+290	TURNOUT- 40	36.29123	67.94458	931.01
8	2+070	AQUDACT-1	36.27344	68.01388	951.9	46	10+310	TURNOUT- 41	36.29143	67.94433	930.85
9	2+250	FOOT CULVERT	36.27343	68.01236	950.07	47	10+330	TURNOUT- 42	36.29163	67.94402	930.64
10	2+260	AQUDACT-2	36.27343	68.01236	950.07	48	10+360	TURNOUT- 43	36.29151	67.94349	930.6
11	2+700	TURNOUT- 6	36.27272	68.01140	950.6	49	10+470	TURNOUT- 44	36.29146	67.94298	930.32
12	3+140	TURNOUT- 7	36.33559	67.96268	948.72	50	10+560	TURNOUT- 45	36.29131	67.94215	930.15
13	3+180	TURNOUT- 8	36.27094	68.00442	948.44	51	10+600	TURNOUT- 46	36.29124	67.94100	929.46
14	3+290	TURNOUT- 9	36.27115	68.00392	948.52	52	10+630	TURNOUT- 47	36.29213	67.94155	928.01
15	3+390	TURNOUT- 10	36.27144	68.00289	946.99	53	10+710	TURNOUT- 48	36.29280	67.94108	927.6
16	3+490	TURNOUT- 11	36.27193	68.00188	946.62	54	10+750	TURNOUT- 49	36.29320	67.94101	927.29
17	3+545	TURNOUT- 12	36.27227	68.00113	946.28	55	10+780	TURNOUT- 50	36.29378	67.94101	926.63
18	3+720	TURNOUT- 13	36.27268	68.00073	945.24	56	10+830	TURNOUT- 51	36.29394	67.94012	926.56
19	3+730	TURNOUT- 14	36.28289	67.98204	945.03	57	10+910	TURNOUT- 52	36.29348	67.93928	926.34
20	3+760	TURNOUT- 15	36.27051	68.00718	945.36	58	10+920	TURNOUT- 53	36.29362	67.93869	926.48
21	3+940	TURNOUT- 16	36.28386	67.97916	944.91	59	11+000	TURNOUT- 54	36.29378	67.93812	926.31
22	4+540	TURNOUT- 17	36.28299	67.98020	944.69	60	11+330	TURNOUT- 55	36.29581	67.93812	926.15
23	4+670	TURNOUT- 18	36.28425	67.97850	941.94	61	11+430	TURNOUT- 56	36.29498	67.93660	926.22
24	5+000	TURNOUT- 19	36.28438	67.97808	941.79	62	11+520	TURNOUT- 57	36.29478	67.93577	925.77
25	5+300	TURNOUT- 20	36.28228	67.97455	941.18	63	11+980	TURNOUT- 58	36.29414	67.93538	925.38
26	5+510	TURNOUT- 21	36.28256	67.97338	940.94	64	12+380	TURNOUT- 59	36.29318	67.93320	925.06
27	5+515	TURNOUT- 22	36.28284	67.97258	940.96	65	12+630	TURNOUT- 60	36.29306	67.93219	924.42
28	5+840	TURNOUT- 23	36.28295	67.97169	935.81	66	12+720	TURNOUT- 61	36.29401	67.93306	924.3
29	6+150	TURNOUT- 24	36.28292	67.97153	935.36	67	12+810	TURNOUT- 62	36.29494	67.93456	924.03
30	6+170	TURNOUT- 25	36.28408	67.97549	936.46	68	12+860	TURNOUT- 63	36.29621	67.93482	923.35
31	6+240	TURNOUT- 26	36.28268	67.97077	935.39	69	13+200	TURNOUT- 64	36.29737	67.93508	923.18
32	6+330	TURNOUT- 27	36.28265	67.97131	936.12	70	13+360	TURNOUT- 65	36.29776	67.93460	922.51
33	6+430	TURNOUT- 28	36.28268	67.97026	935.24	71	13+460	TURNOUT- 66	36.29790	67.93433	922.41
34	6+460	TURNOUT- 29	36.28286	67.96845	935.29	72	13+630	TURNOUT- 67	36.29734	67.93309	922.28
35	6+570	TURNOUT- 30	36.28800	67.94759	935.1	73	13+920	TURNOUT- 68	36.29798	67.93277	922.26
36	6+650	TURNOUT- 31	36.28841	67.94715	935.12	74	14+190	TURNOUT- 69	36.29848	67.93317	922.25
37	6+825	TURNOUT- 32	36.28853	67.94686	934.95	75	14+200	TURNOUT- 70	36.30002	67.93425	921.94
38	6+960	TURNOUT- 33	36.28877	67.94640	934.88	76	14+520	TURNOUT- 71	36.30217	67.93337	921.16

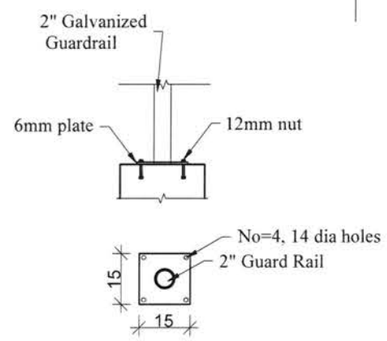
TABLE OF PUBLIC UTILITY STRUCTURE

No	Station	Public Utility Structure	Dimensions (M)		GPS Point		Remarks
			Length	High	North	East	
1	0+200	Kohna Aybak Canal	3.0	2.45	36.27343	68.01236	



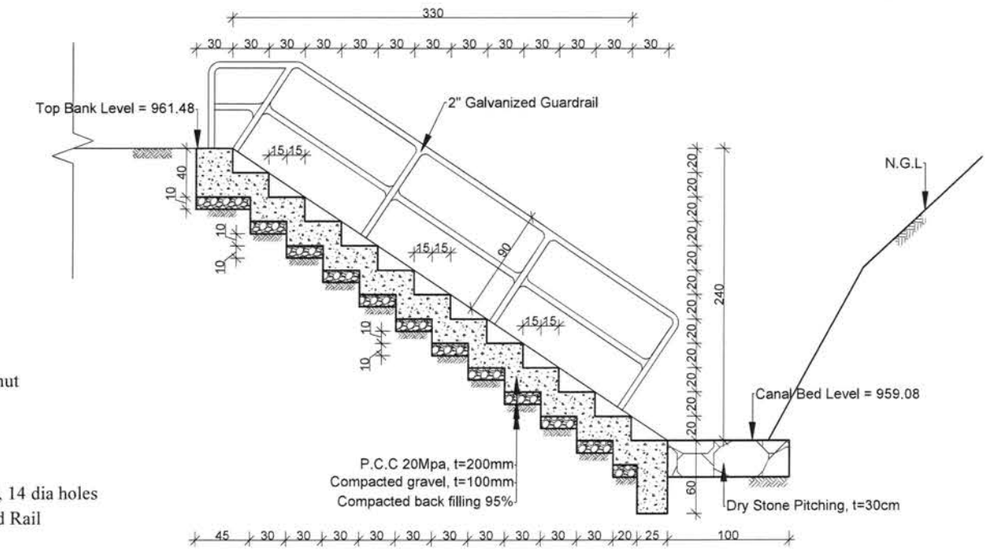
Plan of Public Utility Structure

REF. SCALE: 1:50



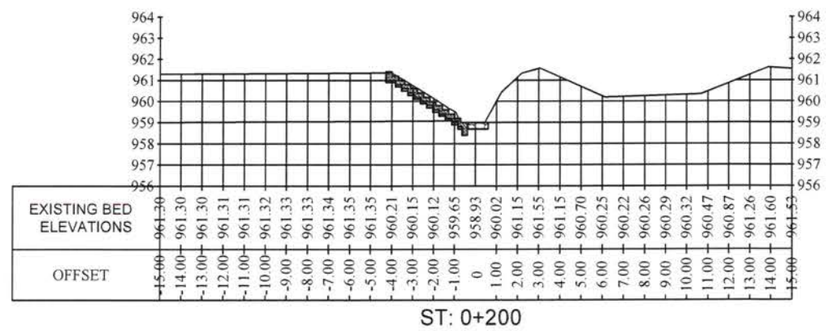
Detail of Guard Rail Bearing

REF. SCALE: 1:25

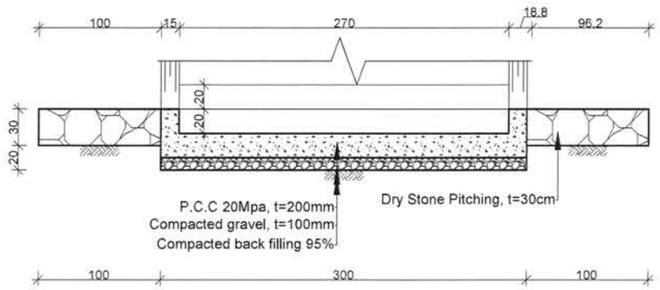


Section "A-A"

REF. SCALE: 1:50



ST: 0+200



Section "B-B"

REF. SCALE: 1:50

Note:

1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2: Sand and Gravel should be clean and free from organic material
3: Fresh cement to be used
4: Clean water should be used (suitable for drinking)

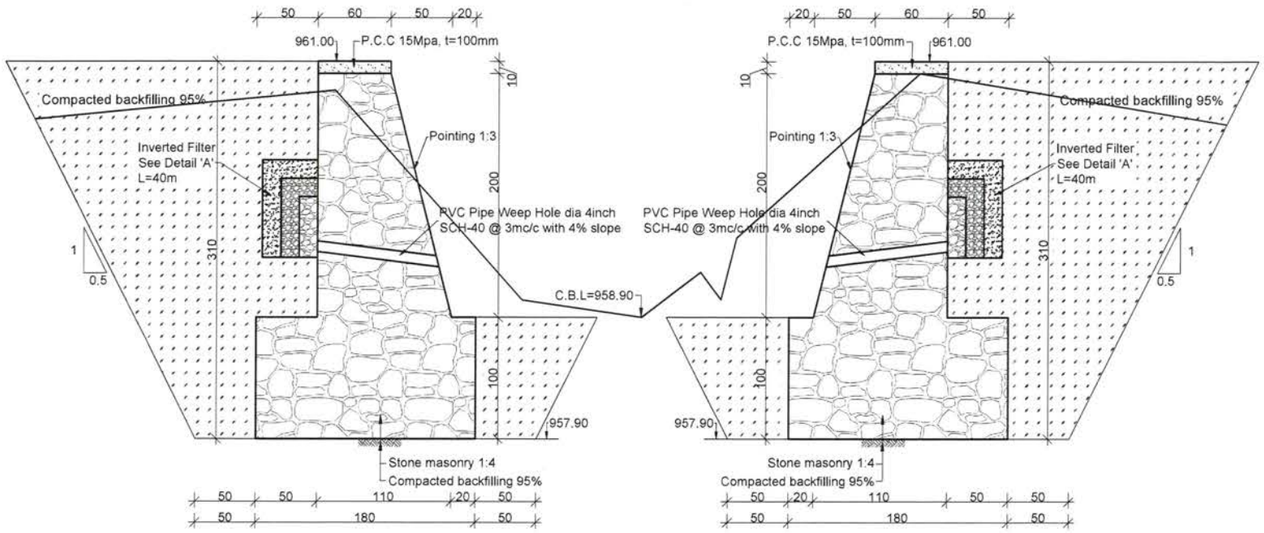
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	SHEET NO. 23/34
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	PUBLIC UTILITY STRUCTURE PLAN AND SECTIONS ST: (0+200)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DAUD SAYEED CHIEF OF PARTY		
						DATE	DATE	05 MAR 2019	DATE	

TABLE-

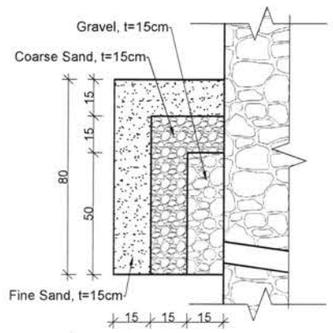
No	Station	Retaining Walls Detail	Dimensions (M)			GPS Coordinate		Remarks
			Length	Height	Width	North	East	
1	0+350 to 0+390	Retaining Wall	80	3.10	1.8	36.26293	68.02678	

Note:

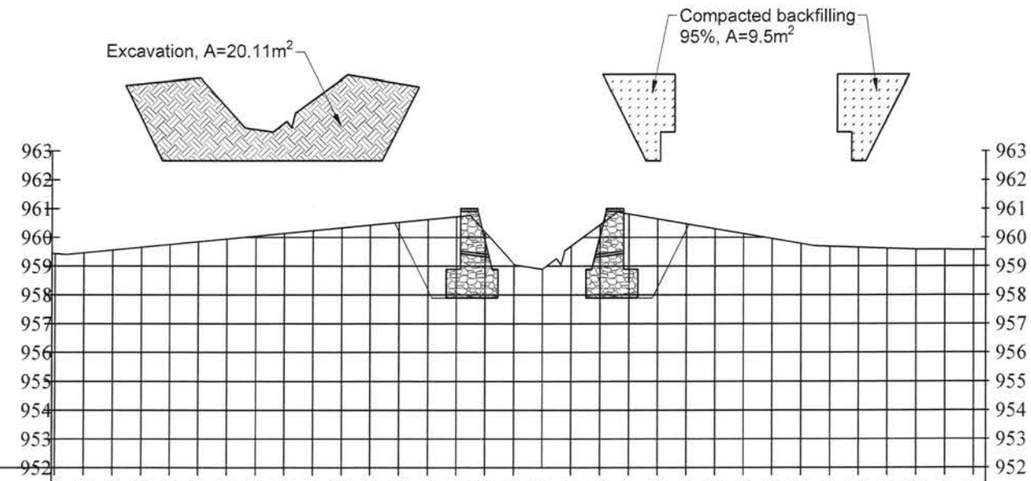
1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2: Excavation for the Foundation should be checked by the site Engineer
3: Sand and Gravel should be clean and free from organic material
4: All inside and out side filling should be compacted properly in layers of 15cm each
5: Stone masonry should be done by Type B (1:4)
6: All inside and out side filling should be compacted properly in layers of 15cm each
7: Fresh cement to be used
8: Clean water should be used (suitable for drinking)
9: Angle of walls to be adjusted by SWIM engineer as per site conditions.
10: Gravel: Material passing a 75-mm (3-inch) sieve and retained on a 4.75-mm (No.4) sieve.
11: Coarse Sand: Material passing a 4.75-mm sieve (No. 4) and retained on a 2.00-mm (No.10) sieve.
12: Fine Sand: Material passing a 0.475-mm (No. 40) sieve and retained on a 0.075-mm (No. 200) sieve.
13. The construction joints are recommended after each segment of 30M length of stone masonry along canal lining.



Retaining Wall in Both Side
at ST: 0+350, with Total Length of 80m
REF. SCALE: 1:50



DETAIL "A"
REF. INVERTED FILTER SCALE: 1:25



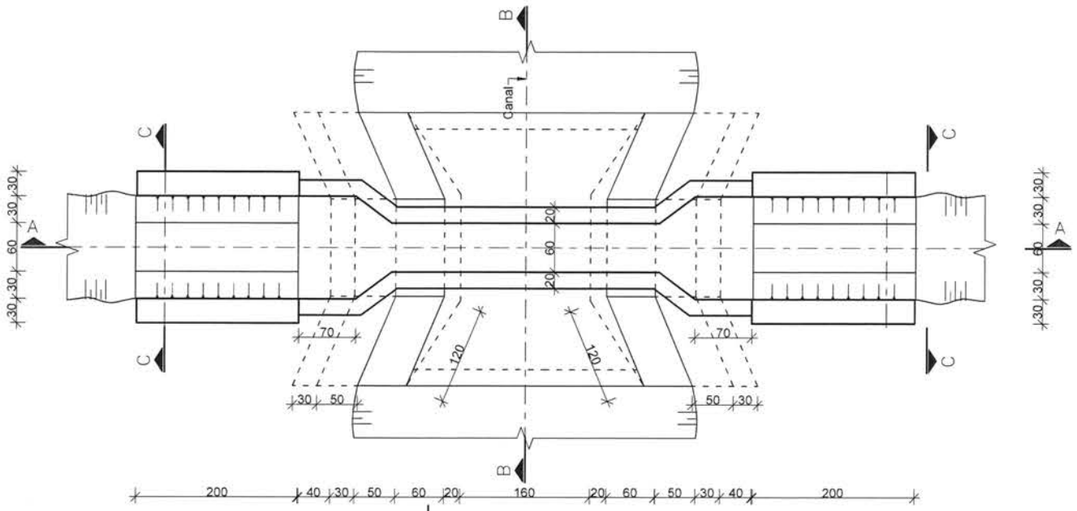
EXISTING BED ELEVATIONS	959.44	959.46	959.56	959.65	959.75	959.85	959.94	960.04	960.13	960.23	960.33	960.42	960.52	960.62	960.71	960.18	959.06	958.90	959.71	960.44	960.81	960.64	960.47	960.30	960.13	959.95	959.78	959.69	959.65	959.61	959.58	959.57	959.57
OFFSET	-17.00	-16.00	-15.00	-14.00	-13.00	-12.00	-11.00	-10.00	-9.00	-8.00	-7.00	-6.00	-5.00	-4.00	-3.00	-2.00	-1.00	0	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00

Station: 0+350 to 0+390

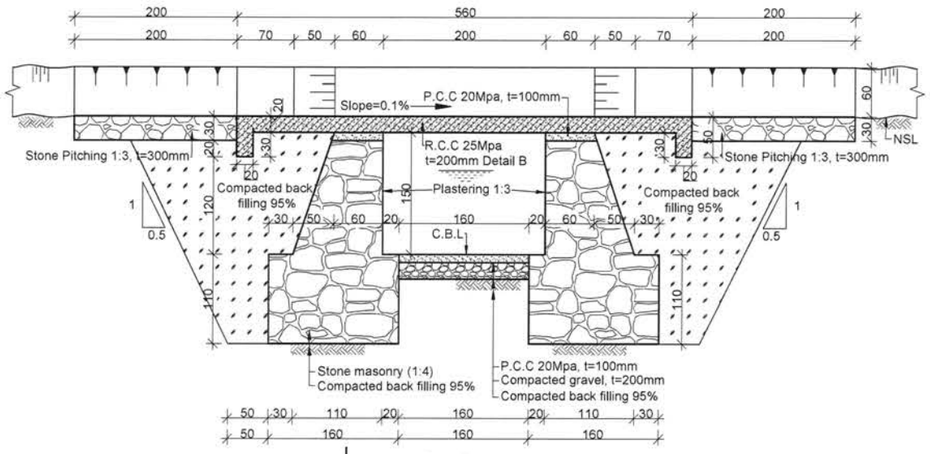
	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	KOHNA AYBAK MAIN CANAL	DISTRICT: SHOLGARA PROVINCE: BALKH	RETAINING WALL SECTIONS AND DETAIL	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	CHIEF OF PARTY		SHEET NO. 24/34
						DATE:	DATE:	05 MAR 2019	DATE:	

TABLE OF AQUEDUCTS

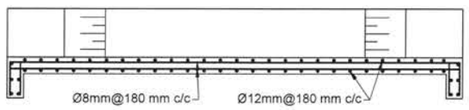
No	Station	Aqueduct Detail	Dimensions (M)			GPS Point		Remarks
			Length	High	Wide	North	East	
1	2+070	Aqueduct	2.0	0.60	0.60	36.27344	68.01388	
2	2+260	Aqueduct	2.0	0.60	0.60	36.27343	68.01236	



Plan of Aqueduct
REF. SCALE: 1:75



Section "A-A"
REF. SCALE: 1:75

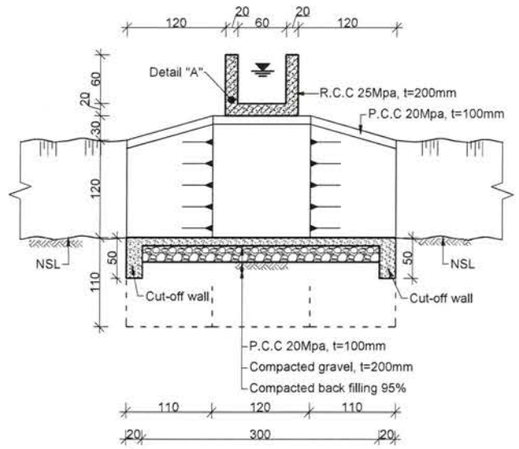


Detail "B"
REF. SCALE: 1:75

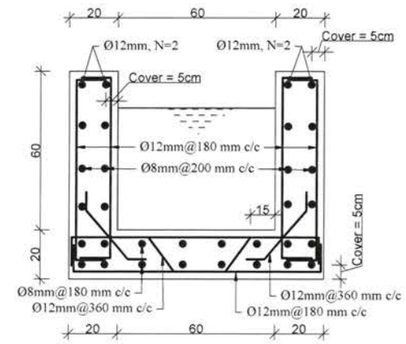
Bar Schedule (No. of bars and total bar length presented is for 1m aqueduct)

Member	Bar Diameter	Shape Code	No. of Bars	Segment length (mm) a	b	c	d	e	Total length - ***varies*** (metres)
Slab	12	b; a a	6	100	900				6.600
	12	a a	6	100	900				6.600
Wall	12	b; a a	6	100	700				5.400
	12	a a; b	6	100	700				5.400
Corner bar	12	a b a	3	100	270				1.410
Angle bar		a b d c d b a	3	100	250	300	175		4.050

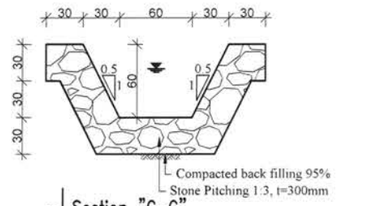
Note: No. of bars and total bar length Should be calculate as per required length



Section "B-B"
REF. SCALE: 1:75



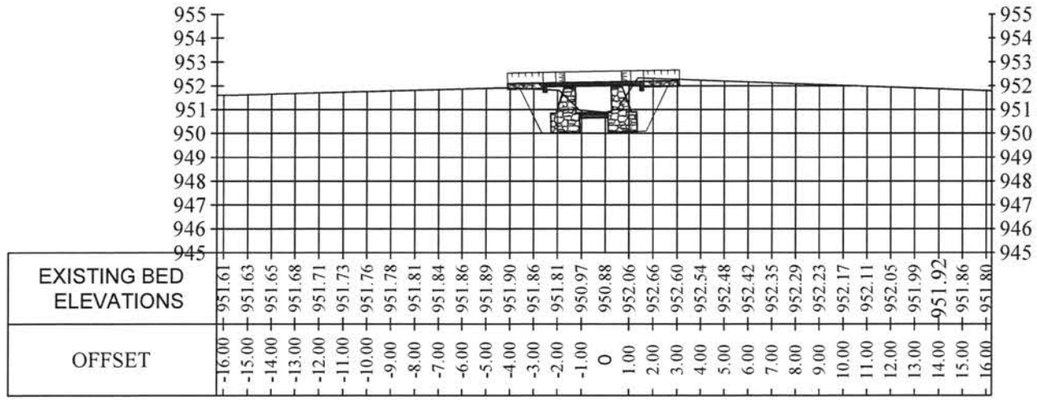
Detial "A"
REF. SCALE: 1:25



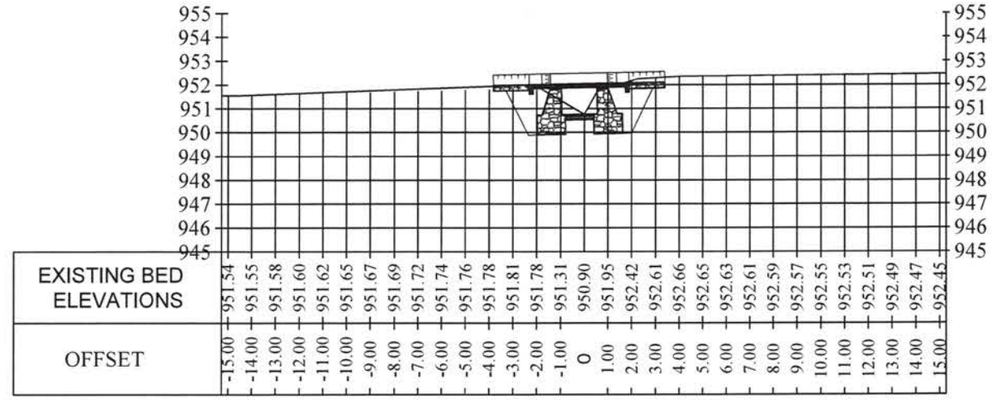
Section "C-C"
REF. SCALE: 1:50

Note:
1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2: Excavation for the Foundation should be checked by the site Engineer, so as to have a hard bed and not less than 1 M
3: Sand and Gravel should be clean and free from organic material
4: All inside and out side filling should be compacted properly in layers of 15cm each
5: Stone masonry should be done by Type B (1:4)
6: Mild steel Grad 60 rebar to be used.
7: All inside and out side filling should be compacted properly in layers of 15cm each
8: Fresh cement to be used
9: Clean water should be used (suitable for drinking)
10: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	SHEET NO.
		KHONA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	AQUEDUCT PLAN, SECTIONS & DETAIL ST: (2+070 & 2+260)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		25/34
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	



STATION: 2+070



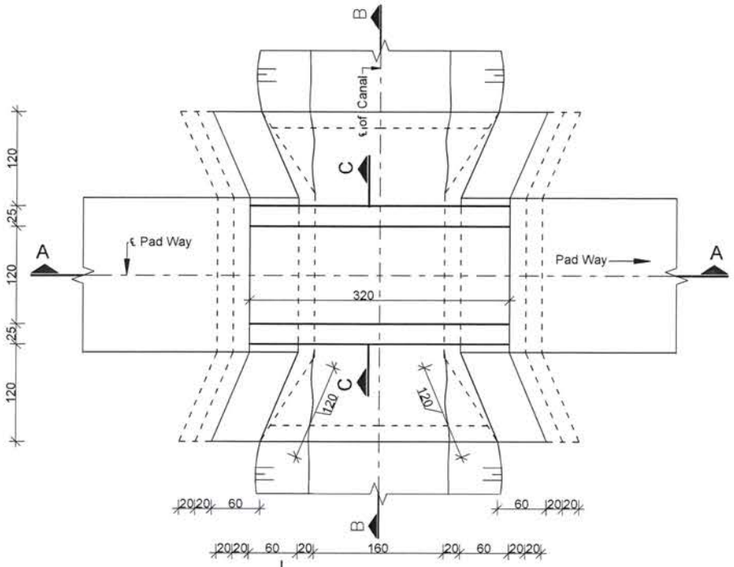
STATION: 2+260

ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer

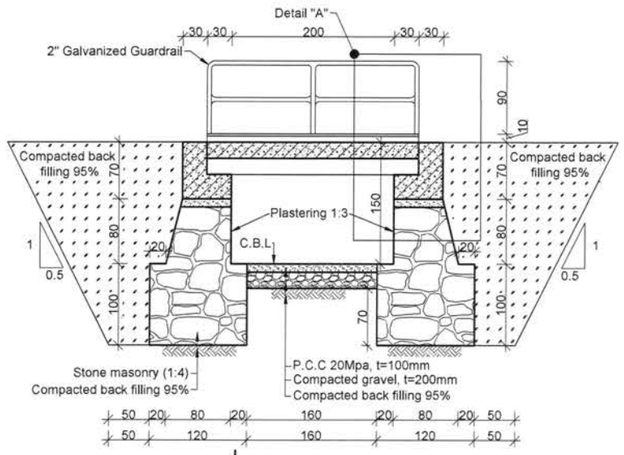
	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	AQUEDUCT SURVEY SECTIONS	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		SHEET NO 26-34
						DATE:	DATE:	DATE: 05 DEC 2018	DATE:	

TABLE OF FOOT CULVERT

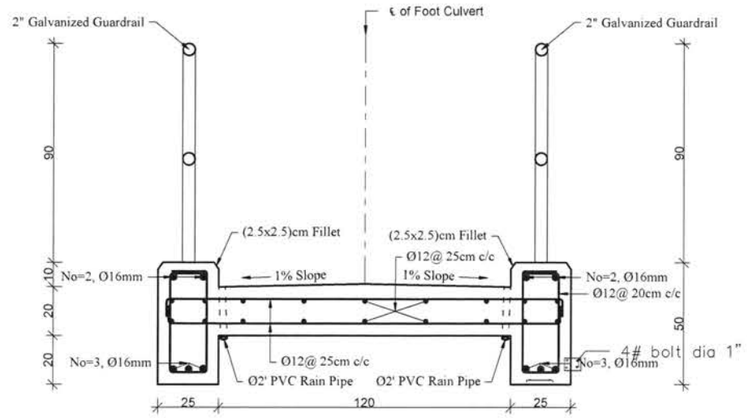
No	Station	Foot Culvert	Dimensions (M)			GPS Point		Remarks
			Length	High	Wide	North	East	
1	2+250	Kohna Aybak Canal	2.0	1.50	1.20	36.27343	68.01236	



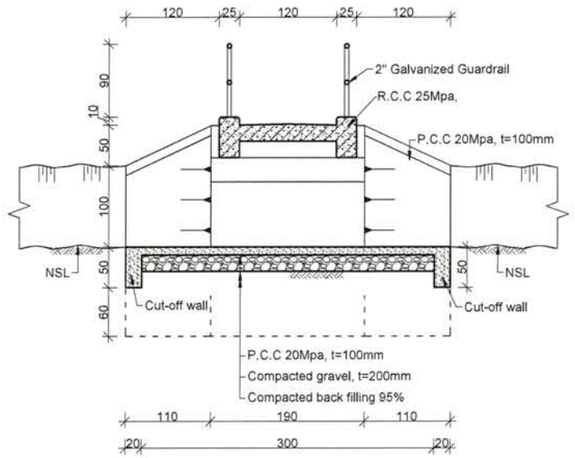
Plan of Foot Culvert
REF. SCALE: 1:75



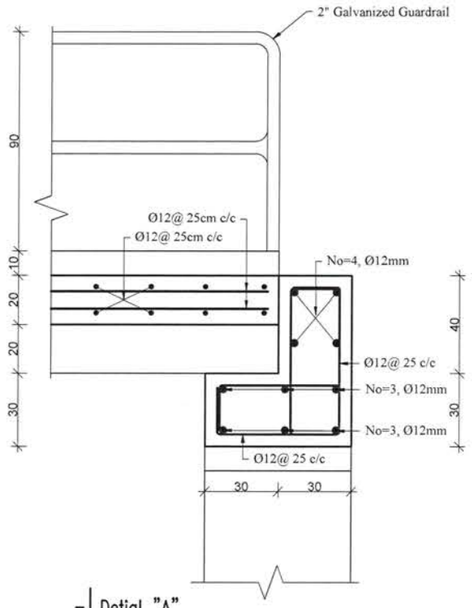
Section "A-A"
REF. SCALE: 1:75



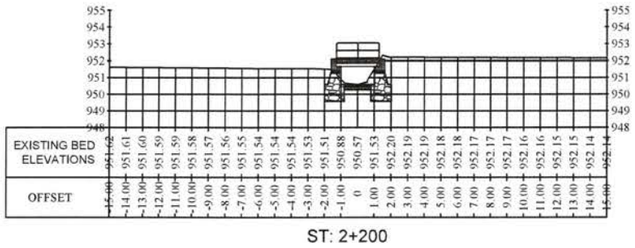
Section "C-C"
REF. SCALE: 1:25



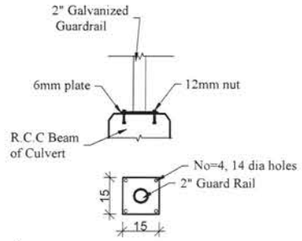
Section "B-B"
REF. SCALE: 1:75



Detial "A"
REF. SCALE: 1:25



ST: 2+200



Detail of Guard Rail Bearing
REF. SCALE: 1:25

Note:

1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
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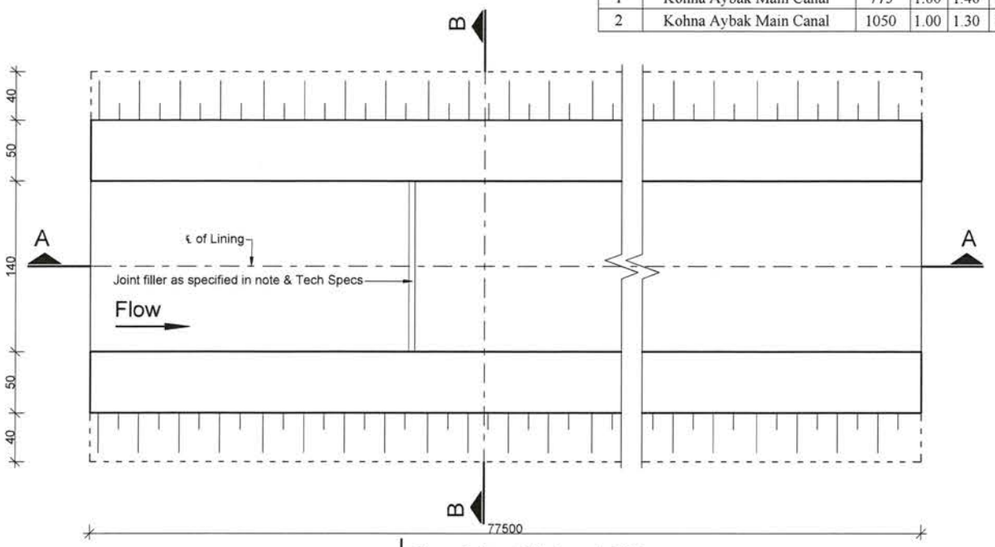
8: Fresh cement to be used
9: Clean water should be used (suitable for drinking)
10: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	SHEET NO.
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	FOOT CULVERT PLAN, SECTIONS & DETAILS ST: (2+200)	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. DARREN SAYWELL ACTING CHIEF OF PARTY		27/34
						DATE:	DATE:	DATE: 05 MAR 201	DATE:	

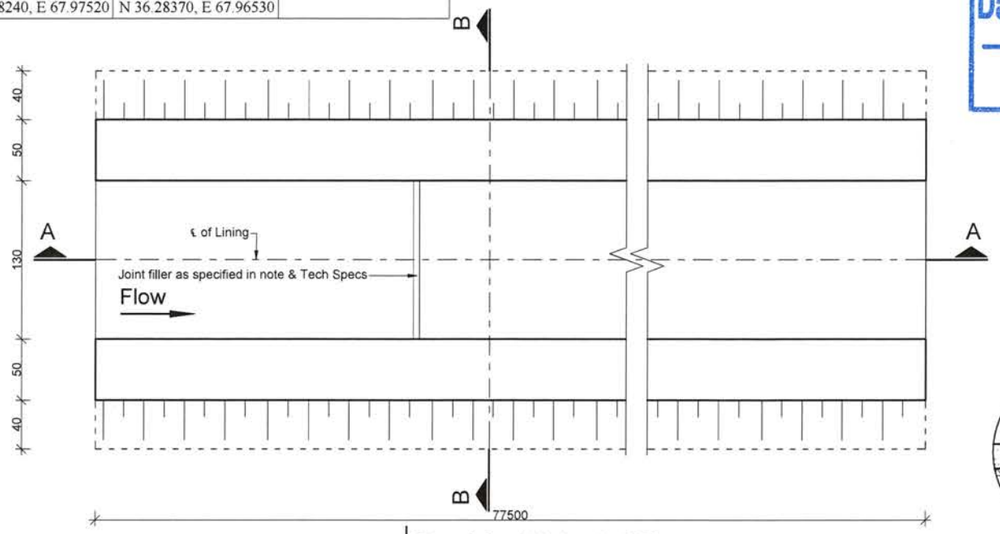
TABLE OF LINING

No	Canal Lining Detail	Dimensions (M)			GPS Coordinate		Remarks
		Length	High	Wide	Start	End	
1	Kohna Aybak Main Canal	775	1.00	1.40	N 36.28330, E 67.96630	N 36.28450, E 67.97740	
2	Kohna Aybak Main Canal	1050	1.00	1.30	N 36.28240, E 67.97520	N 36.28370, E 67.96530	

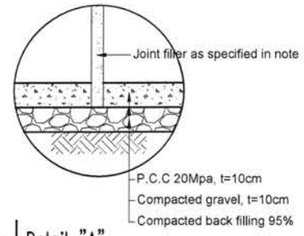
ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer



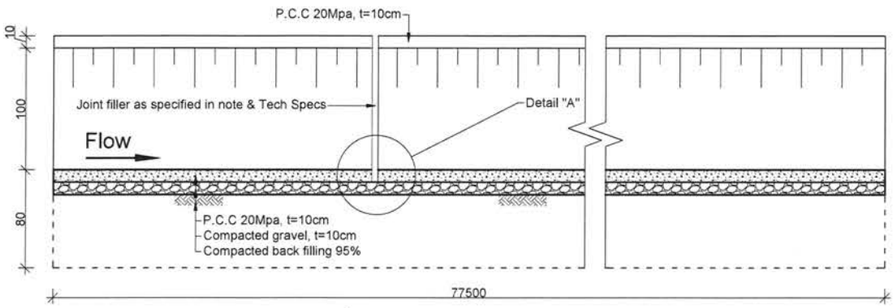
Plan of Canal Lining, L=775m
REF. St: (5+675 to 6+450) SCALE: 1:50



Plan of Canal Lining, L=1050m
REF. St: (6+850 to 7+900) SCALE: 1:50



Detail "A"
REF. SCALE: 1:25



Section "A-A", L=775m
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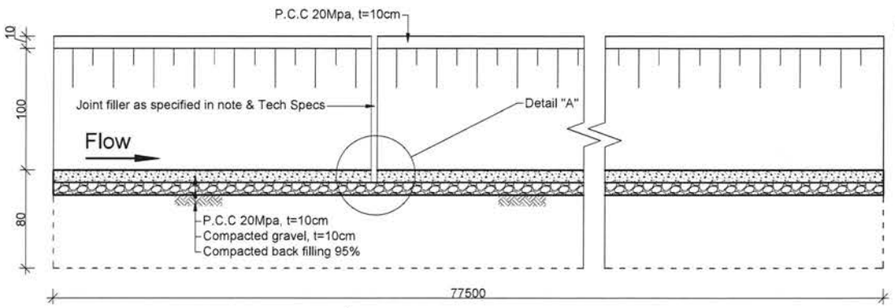
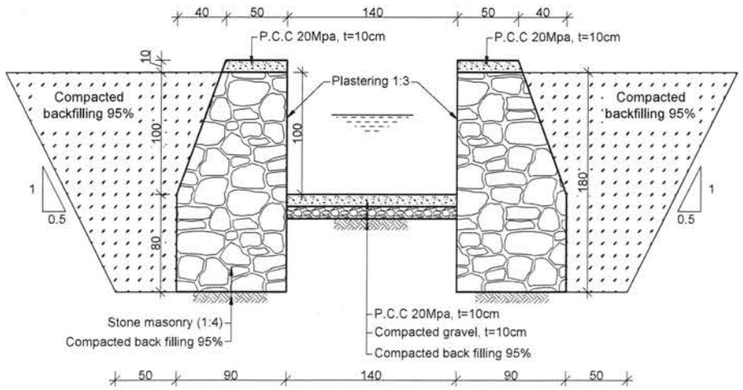
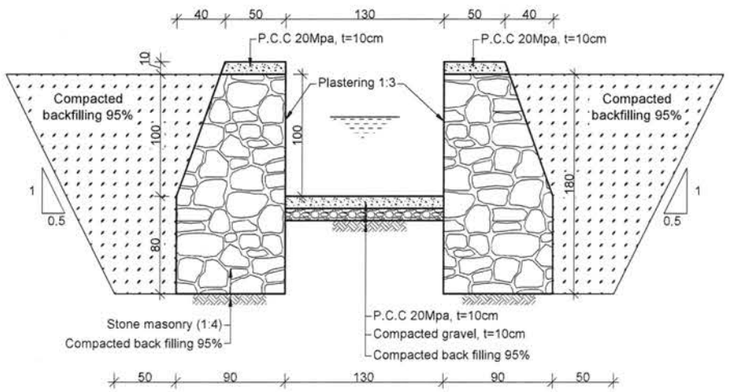


Section "A-A", L=1050m
REF. St: (6+850 to 7+900) SCALE: 1:50



Section "B-B", L=775M
REF. St: (5+675 to 6+450) SCALE: 1:50



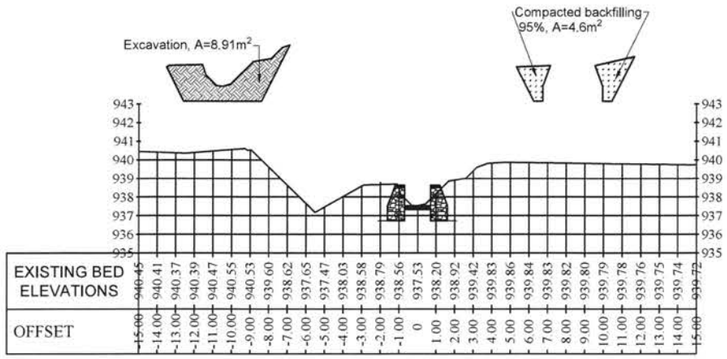
Section "B-B", L=1050M
REF. St: (6+850 to 7+900) SCALE: 1:50

Note:

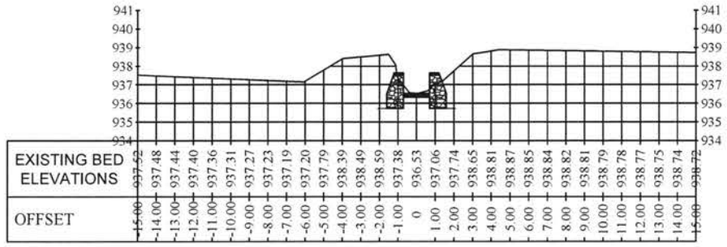
1. Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2. The construction joints are recommended after each segment of 30M length of stone masonry along canal lining.
3. The joint's gape will be around (3.5 to 4)cm and should be filled properly as specified in technical specification.
4. The control joints are recommend on P.C.C coping of all canal linings @ 2.5M c/c with approximately 5mm wide.
5. Excavation for the Foundation should be checked by the site Engineer.
6. Sand and Gravel should be clean and free from organic material.
7. All inside and out side filling should be compacted properly in layers of 15cm each.
8. Stone masonry should be done by Type B (1:4).
9. All inside and out side filling should be compacted properly in layers of 15cm each.
10. Fresh cement to be used.
11. Clean water should be used (suitable for drinking).
12. Angle of walls to be adjusted by SWIM engineer as per site conditions.

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	SHEET NO. 28/34
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	CANAL LINING PLAN, SECTIONS & DETAIL	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		
						DATE:	DATE:	DATE: 5 DEC 2018	DATE:	

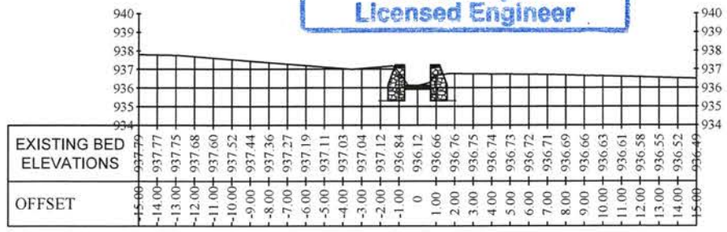
ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer



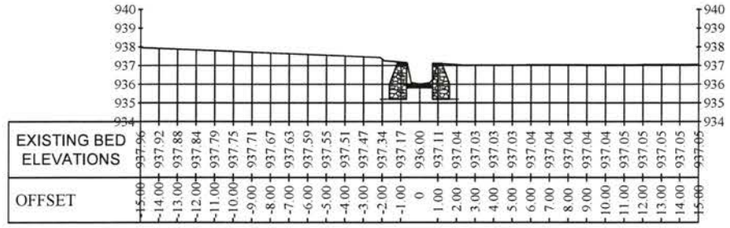
KOHNA AYBAK MAIN CANAL AVERAGE CUTTING AND FILLING FOR FOR LINING FROM STATION: (5+675 TO 6+450)



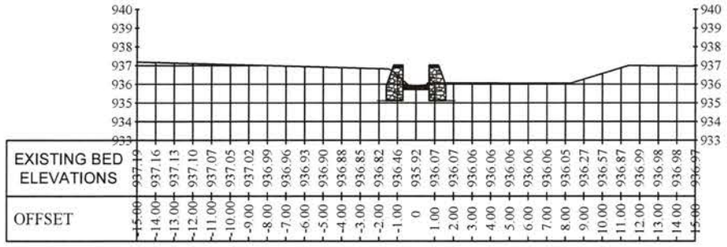
STATION: 5+700



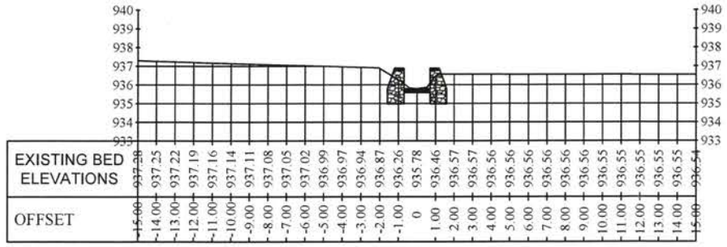
STATION: 5+750



STATION: 5+800



STATION: 5+850



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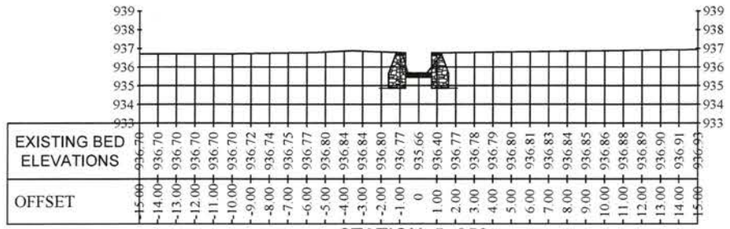

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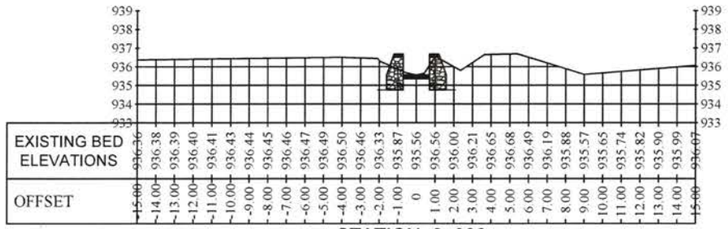
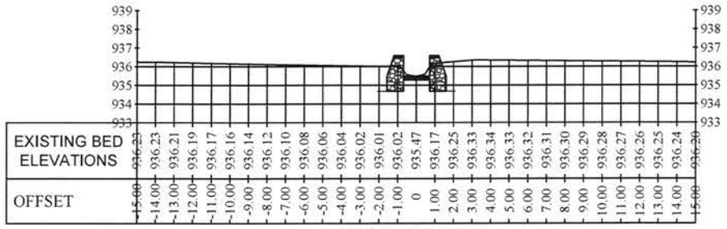
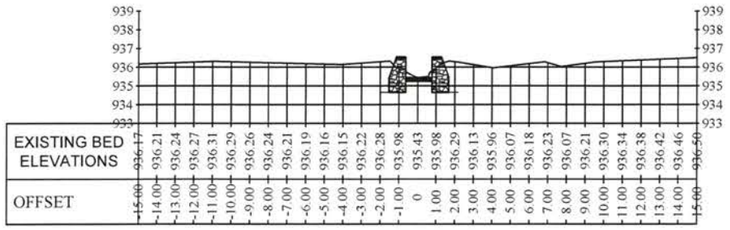


STATION: 6+000



STATION: 6+050



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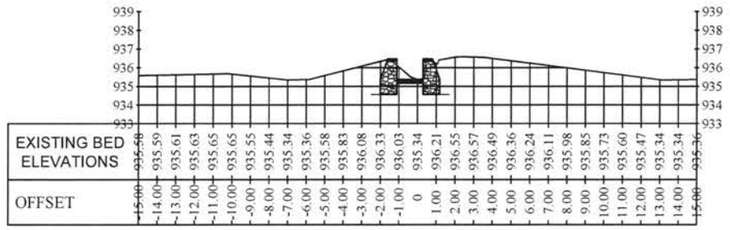

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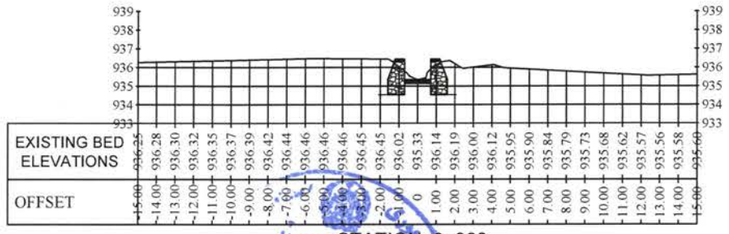
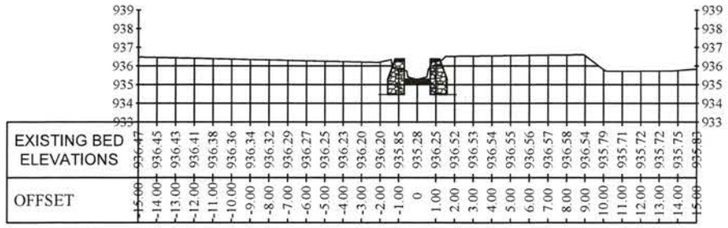


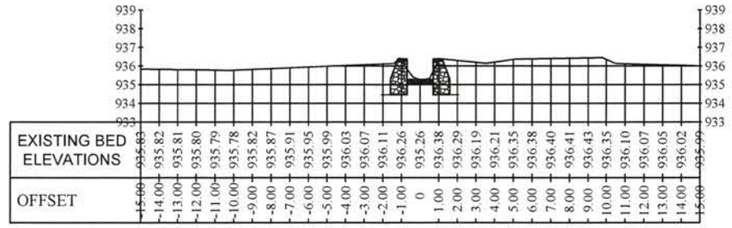
STATION: 6+200

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	CANAL LINING SURVEY SECTIONS	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		SHEET NO 29/34
						DATE:	DATE:	DATE: 05 DEC 2018	DATE:	

ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer



STATION: 6+250



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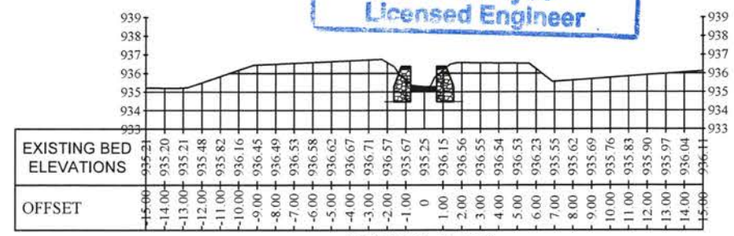

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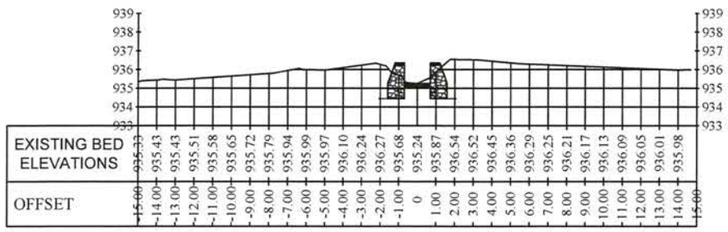

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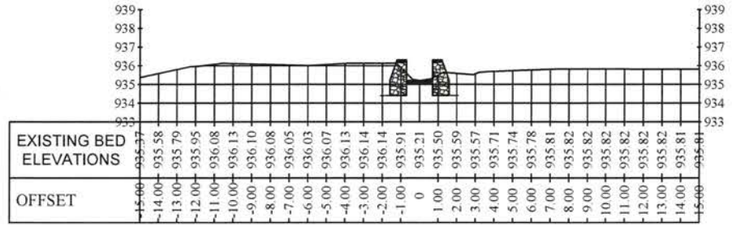

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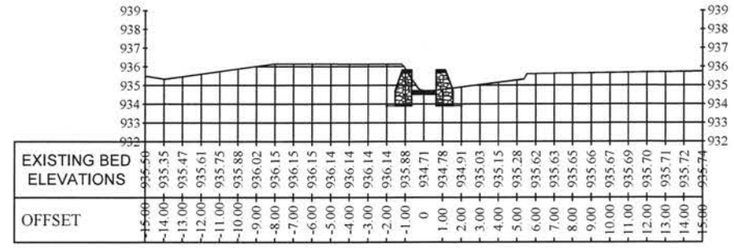
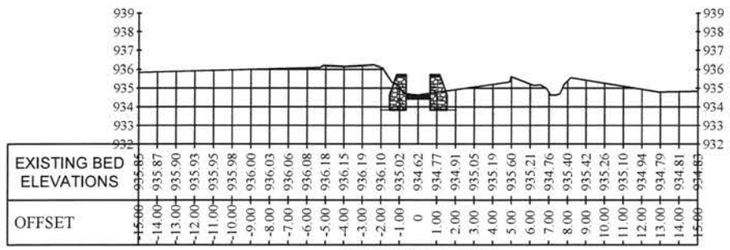
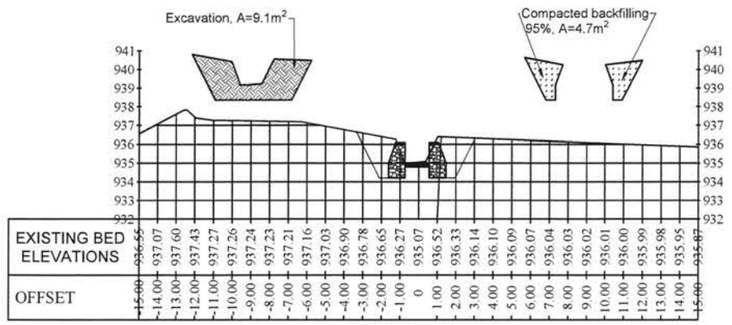


KOHNA AYBAK MAIN CANAL AVERAGE CUTTING AND FILLING FOR FOR LINING FROM STATION: (6+850 TO 7+900)



STATION: 6+900



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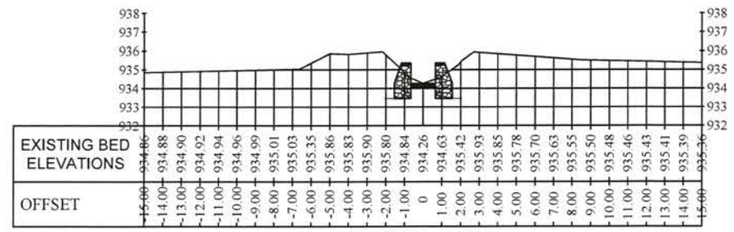
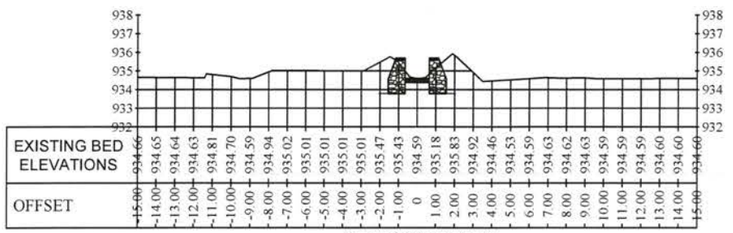


STATION: 7+000



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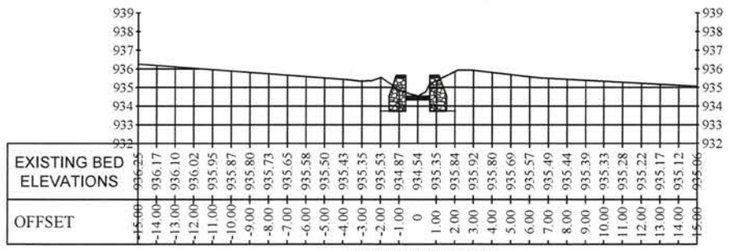

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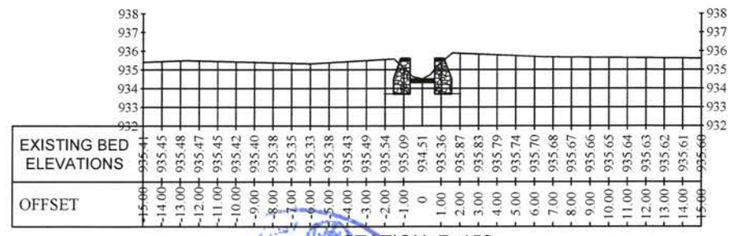
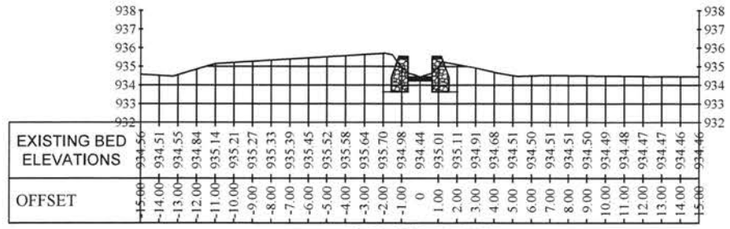


STATION: 7+150

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	CANAL LINING SURVEY SECTIONS	SWIM	SAYED ROHULLAH ATAYI ENGINEER DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 05 DEC 2018	DATE:	SHEET NO. 30/34

ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer



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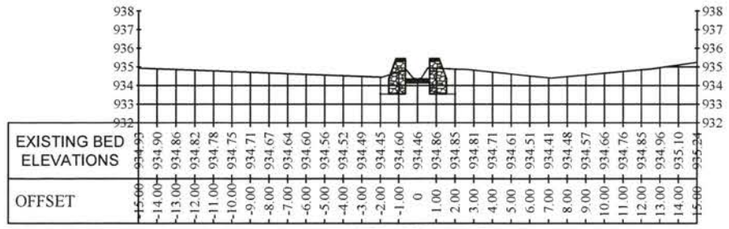

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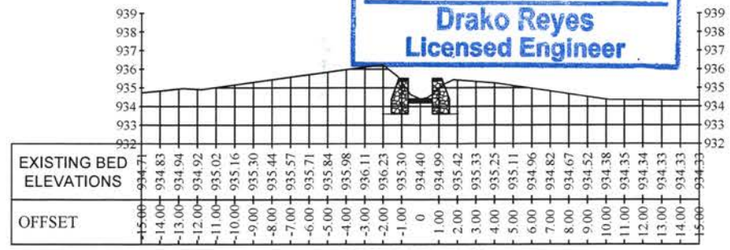

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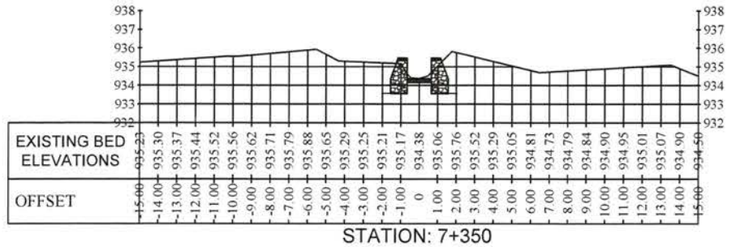

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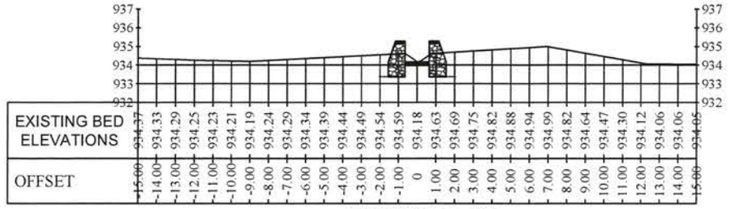

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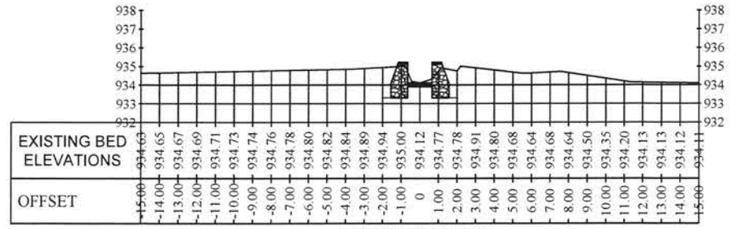

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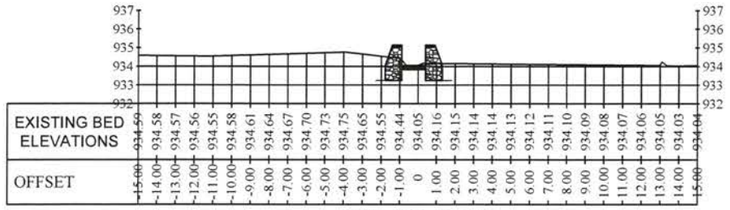

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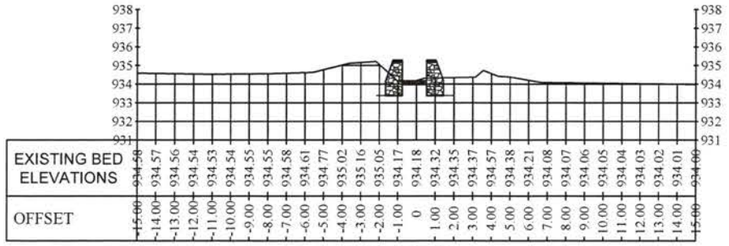

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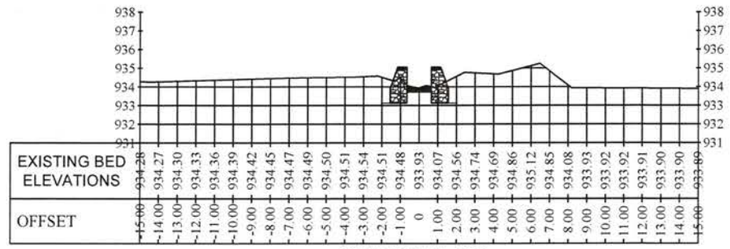

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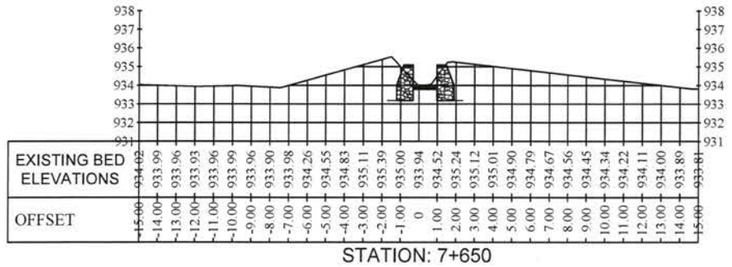

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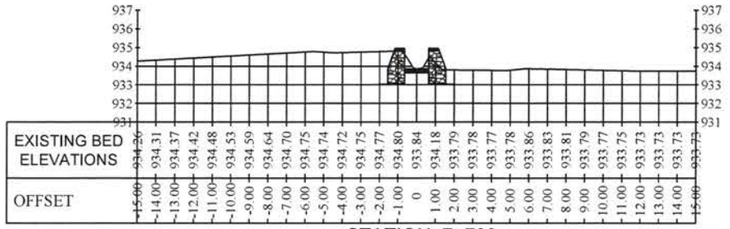

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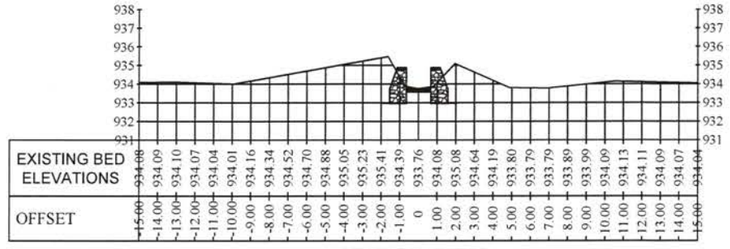

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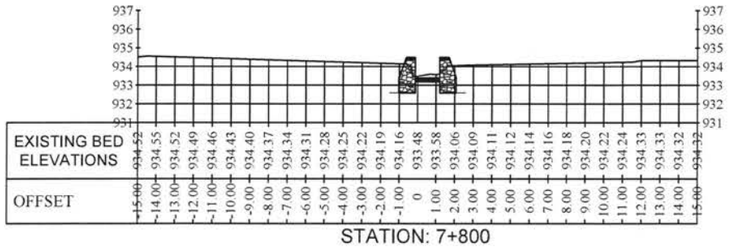

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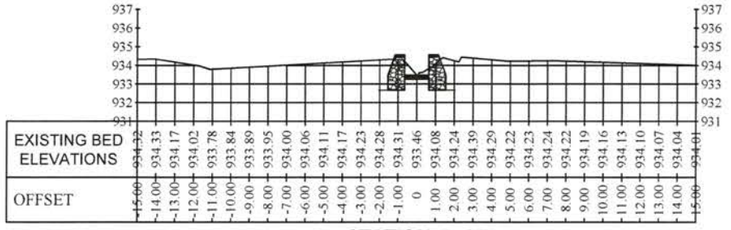

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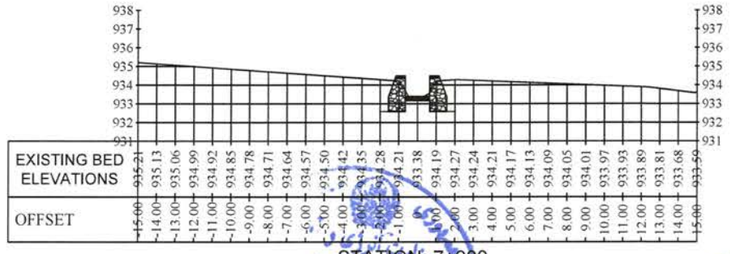
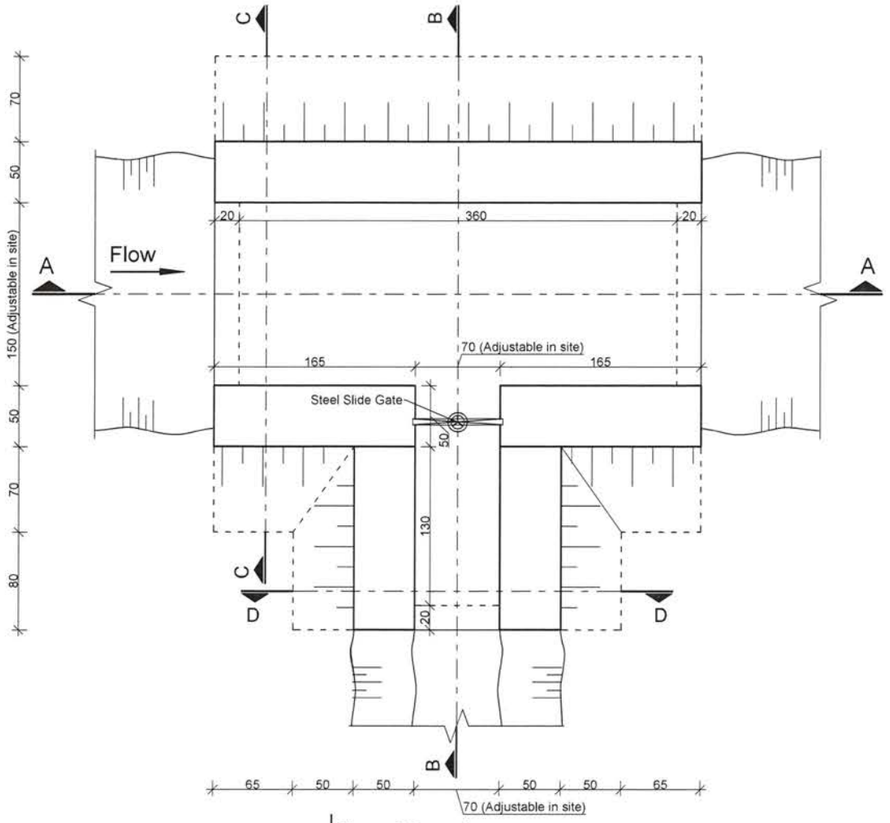


STATION: 7+900

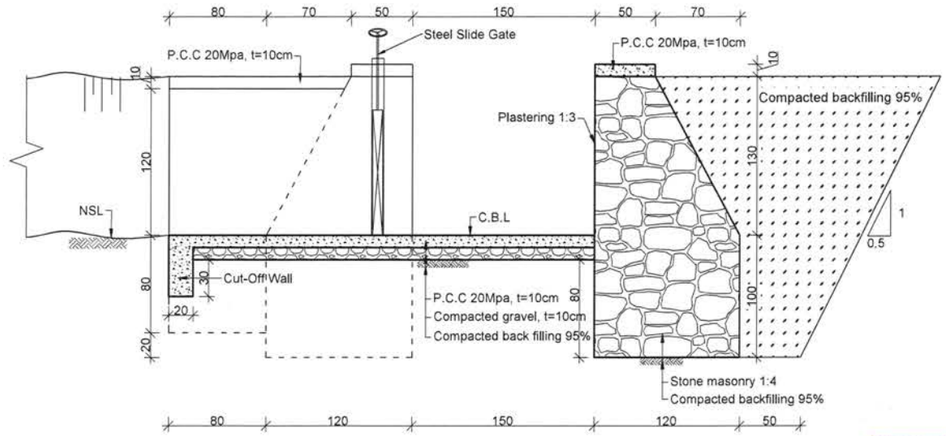
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	SHEET NO
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	CANAL LINING SURVEY SECTIONS	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		31/34
						DATE:	DATE:	DATE: 05 DEC 2018	DATE:	

Note:

1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2: Excavation for the Foundation should be checked by the site Engineer, so as to have a hard bed and not less than 1 M
3: Sand and Gravel should be clean and free from organic material
4: All inside and out side filling should be compacted properly in layers of 15cm each
5: Stone masonry should be done by (1:4)
6: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions

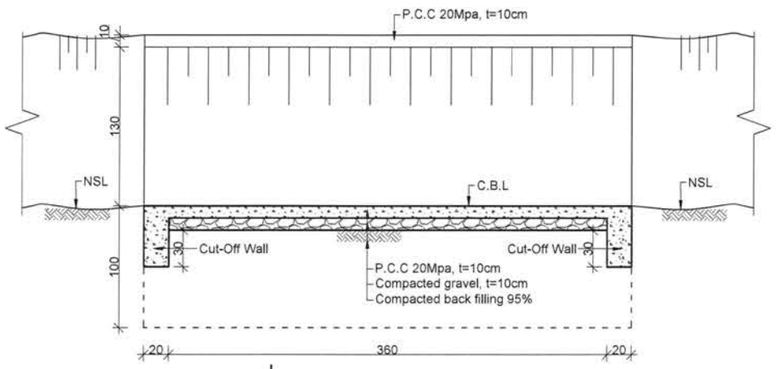


Plan of Turnout
REF. SCALE: 1:50



Section "B-B"
REF. SCALE: 1:50

ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer



Section "A-A"
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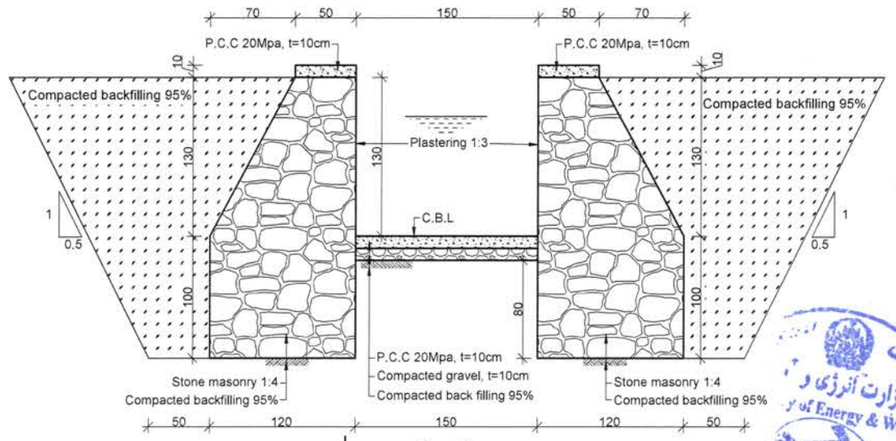
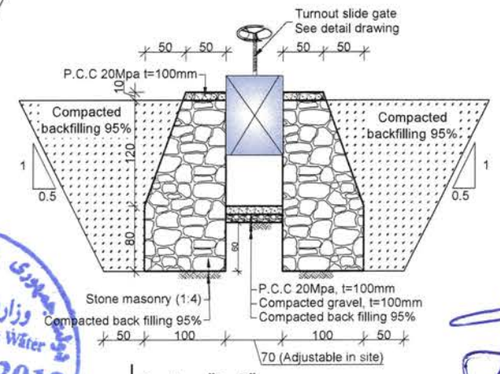


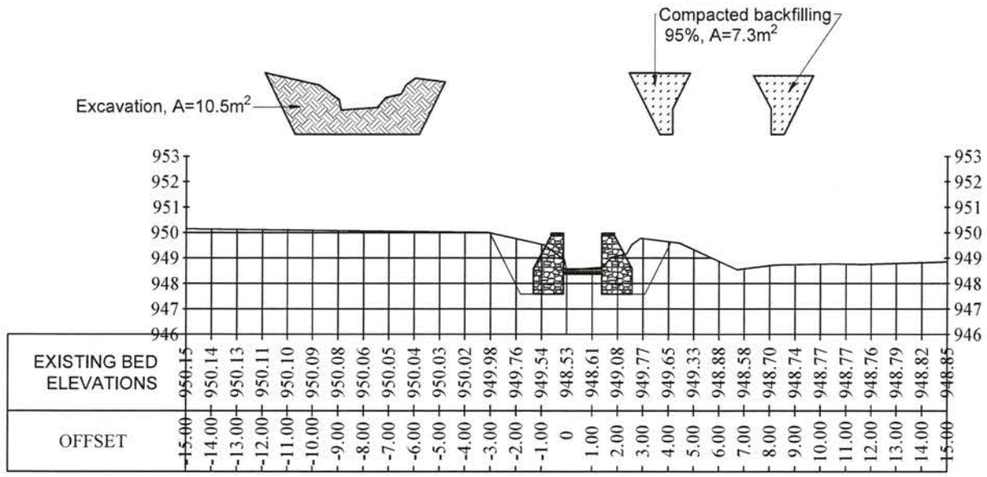
Section "C-C"
REF. SCALE: 1:50



Section "D-D"
REF. SCALE: 1:75

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL
		KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	TURNOUT PLAN AND SECTIONS	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY	
						DATE:	DATE:	DATE: 05 DEC 2018	DATE:

SHEET NO. 32/34

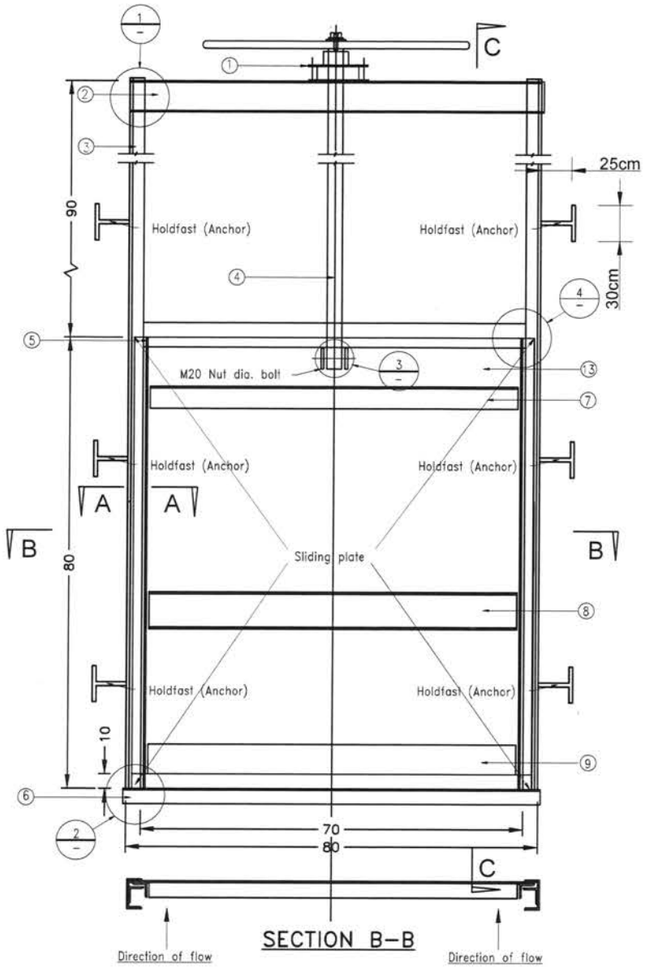


KOHNA AYBAK MAIN CANAL AVERAGE CUTTING
AND FILLING FOR TURNOUT STRUCTURES

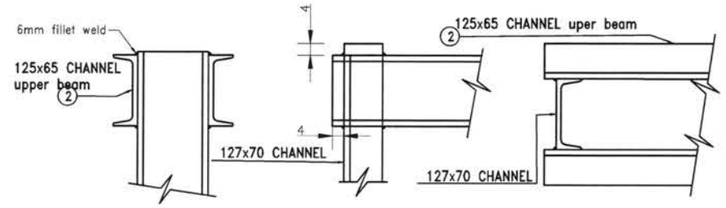
ISSUED FOR CONSTRUCTION
Date: 06 FEB 2019
Drako Reyes
Licensed Engineer

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA, APPROVAL	SHEET NO. 33/34
		KOHNA AYBAK MAIN CANL	DISTRICT: AYBAK PROVINCE: SAMANGAN	TURNOUT SURVEY SECTIONS	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		
						DATE	DATE	DATE 05 DEC 2018	DATE	

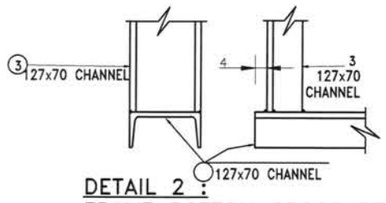
Steel Slide Gate Detail, Size (70x80) cm
For Turnouts Control



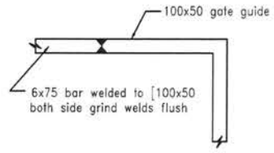
SECTION B–B



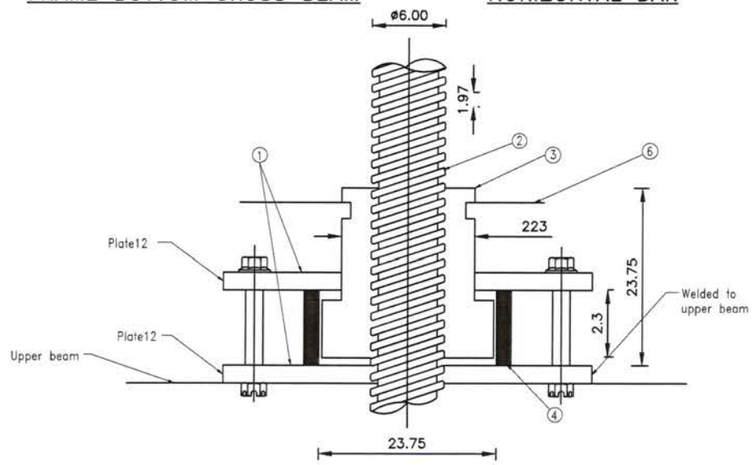
DETAIL 1:
FRAME CROSS BEAM(TOP)

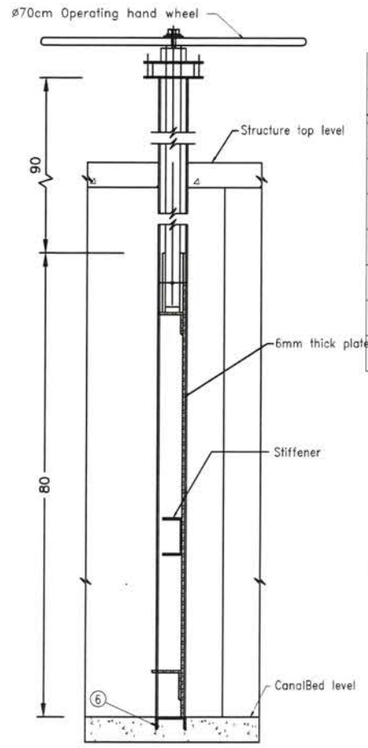


DETAIL 2 :
FRAME BOTTOM CROSS BEAM



DETAIL 4:
HORIZONTAL BAR

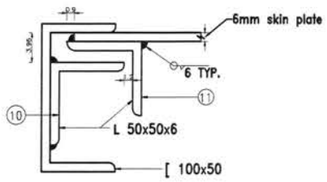




SECTION C–C

TABLE (2)
LIFTING COMPONENT

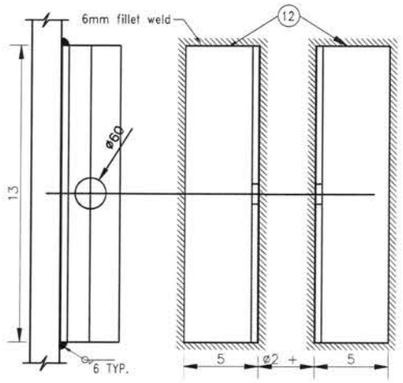
Item	Description
1	Upper&lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts , nuts
6	ø700mm handle



SECTION A–A

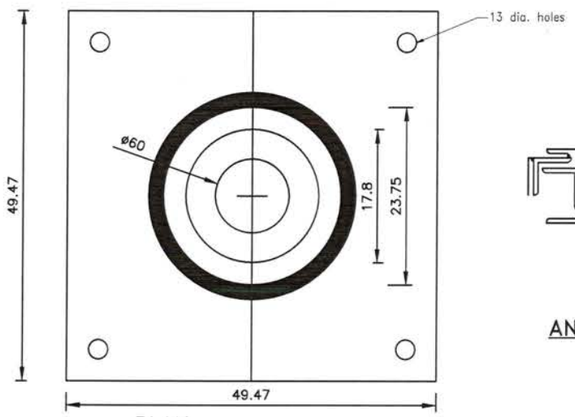
NOTE:

1.Three coats of enamel paint (one coat of red–oxide+ two coat of enamel paint).
2. Operation of the gates to be done by Mirab as per their scheduling.

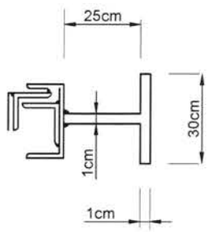


SECTION ELEVATION

DETAIL 3:
LIFTING BRACKETS



PLAN
THRUST BEARING



ANCHOR DETAIL

TABLE(1)
GATE COMPONENT

Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam)
7	Stiffener L 75x75x6
8	Stiffener [100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MEW/RBA APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	KOHNA AYBAK MAIN CANAL	DISTRICT: AYBAK PROVINCE: SAMANGAN	TURNOUT STRUCTURE STEEL SLIDE GATE	SWIM	SAYED ROHULLAH ATAYI ENGINEER	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DAWOOD SAWER DIS CHIEF OF PARTY		SHEET NO. 34/34
						DATE:	DATE:	DATE: 05 MAR 2013	DATE:	