GOVERNMENT OF ISLAMIC REPUBLIC OF AFGHANISTAN

SWIM STRENGTHENING WATERSHED AND IRRIGATION MANAGEMENT

ISSUED FOR CONSTRUCTION
Date: 17 FEB 2019
Drako Reyes
Licensed Engineer

Project Name: Asyabad Secondary Canal Rehabilitation
Province: Samangan
District: Hazrat Sultan

Afghanistan, Samangan.
Date: 10-Jan-2019

15 JAN 2019

TABLE OF CONTENTS FOR ASYABAD CANAL

SHEET #	SHEET CONTENTS	REMARKS
n/a	GIS Map	
n/a	General Note	
01	General Site Plan	
02	Plan and Profile 0+000 to 0+820	
03	Plan and Profile 0+820 to 1+640	
04	Plan and Profile 1+640to 2+260	
05	Plan and Profile 2+260 to 3+280	
06	Plan and Profile 3+280 to 3+450	
07-24	Lining Cross Sections 0+000 to 3+450	
25	Structure List	
26	Canal Lining and it's sections	
27	Turn out and it's sections	
28	Retaining wall and Sections	
29	Slab Culvert	
30	Slab Culverts' Cross sections	
31	Steel Slide Gate for Check Structure	
32	Steel Slide Gate for Turnout	

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Asya Abad Canal
Samangan, Aybak

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Drako Reyes
Licensed Engineer

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

N W E S

0 0.125 0.25 0.5 0.75 1 Kilometers

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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:

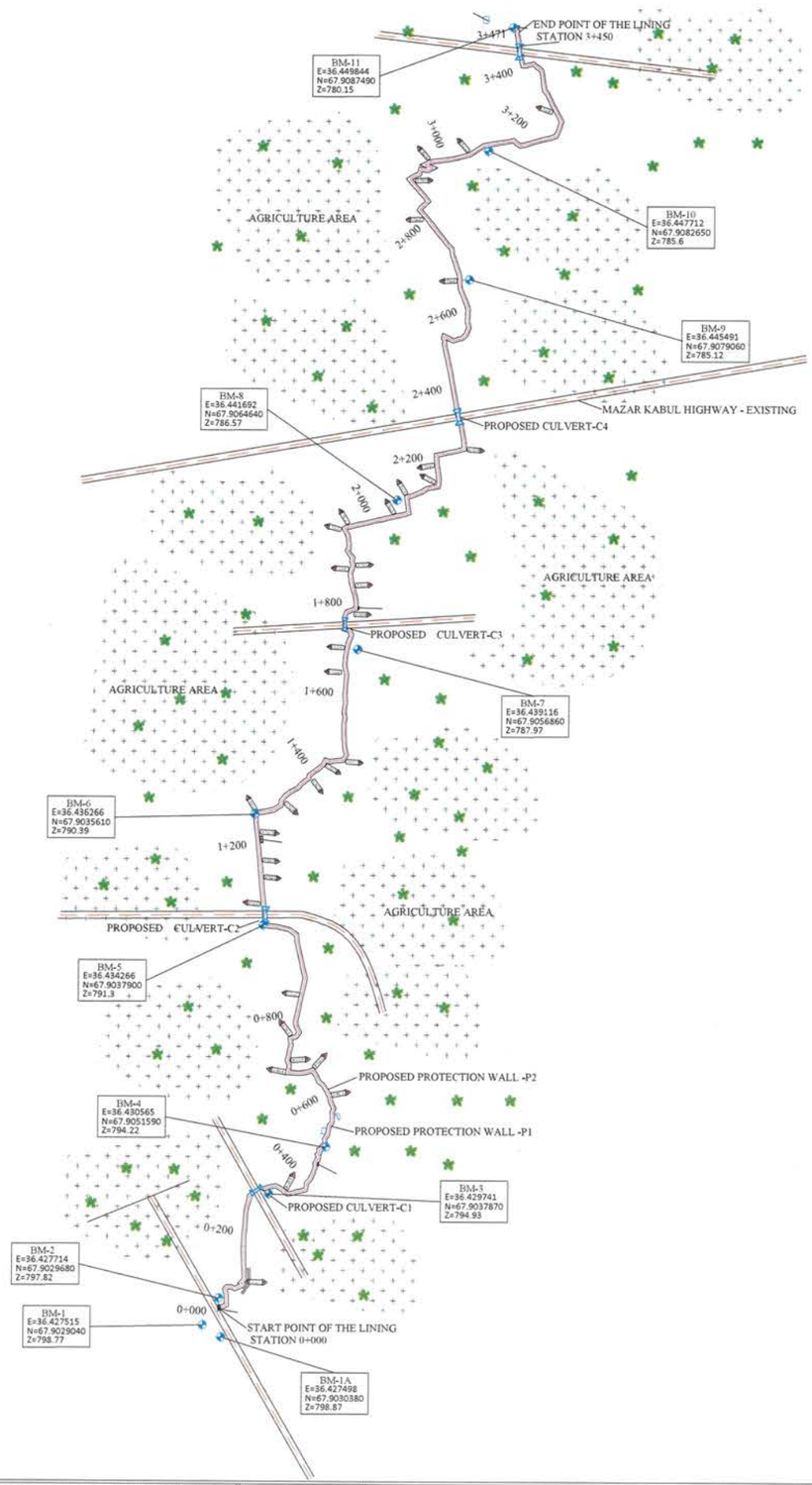
1. ALL STONE MASONRY WALLS SHALL BE WITH RATIO OF 1:4 CEMENT SAND MORTAR WITH CONSIDERING TO 35% OF MASONRY VOLUME.
2. ALL STONES SHALL BE FREE FROM DEFECTS LIKE CAVITIES, CRACKS, SAND HOLES, FLAWS, INJURIOUS VEINS, PATCHES OF LOOSE OR SOFT MATERIALS, ETC. ALSO, THE PERCENTAGE OF WATER ABSORPTION SHALL 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
6. FOR FACES OF THE STONEMASONRY THAT WILL BE BACKFILLED, CONTRACTOR IS TO MAKES SURE ALL GAPS BETWEEN STONES ARE FILLED WITH MORTAR.

CONCRETE:

1. CONCRETE DESIGN SHOULD BE BASED ON 28 DAYS A COMPRESSIVE STRENGTH OF 25MPa FOR RCC AND 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.



N

ASYA ABAD BENCH MARKS LIST

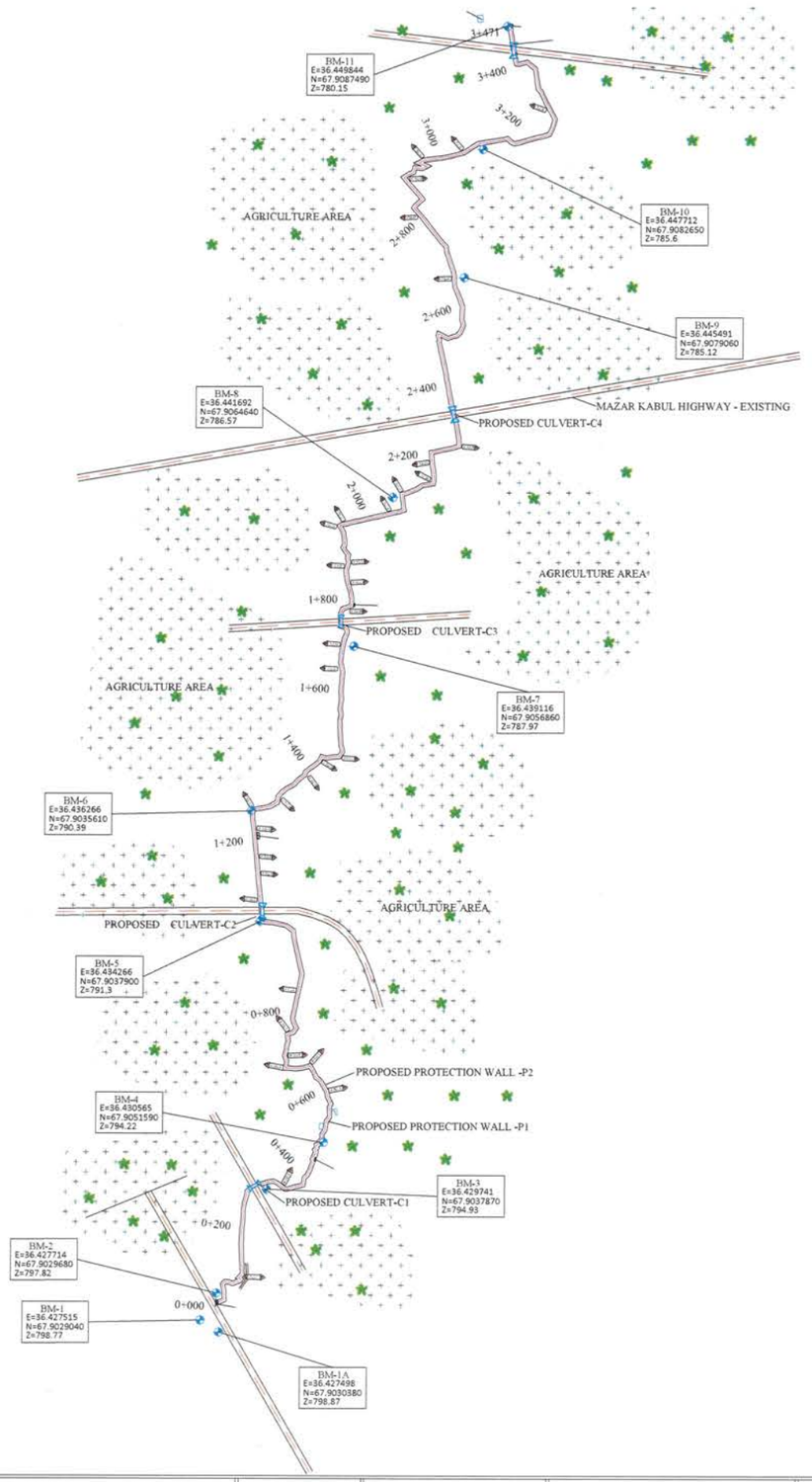
S/N	EASTHING	NORTHING	ELEVATION	DESCRIPTION
1	36.427515	67.9029040	798.77	BM1
2	36.427498	67.9030380	798.87	BM1A
3	36.427714	67.9029680	797.82	BM2
4	36.429741	67.9037870	794.93	BM3
5	36.430565	67.9051590	794.22	BM4
6	36.434266	67.9037900	791.3	BM5
7	36.436266	67.9035610	790.39	BM6
8	36.439116	67.9056860	787.97	BM7
9	36.441692	67.9064640	786.57	BM8
10	36.445491	67.9079060	785.12	BM9
11	36.447712	67.9082650	785.6	BM10
12	36.449844	67.9087490	780.15	BM11

LEGEND:-

- Agriculture Area
- Orchard(Garden)
- Bench Mark
- Parental Canal
- Main Canal
- Branch Canal
- P-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
- 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	MAIL/DAIL, APPROVAL	SHEET NO. 1 / 32
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	SITE PLAN	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DARREN SAMWELL ACTING CHIEF OF PARTY		
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	

FOR



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5	36.430565	67.9051590	794.22	BM4
6	36.434266	67.9037900	791.3	BM5
7	36.436266	67.9035610	790.39	BM6
8	36.439116	67.9056860	787.97	BM7
9	36.441692	67.9064640	786.57	BM8
10	36.445491	67.9079060	785.12	BM9
11	36.447712	67.9082650	785.6	BM10
12	36.449844	67.9087490	780.15	BM11

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ISSUED FOR CONSTRUCTION
Date: 17 FEB 2013
Drako Reyes
Licensed Engineer

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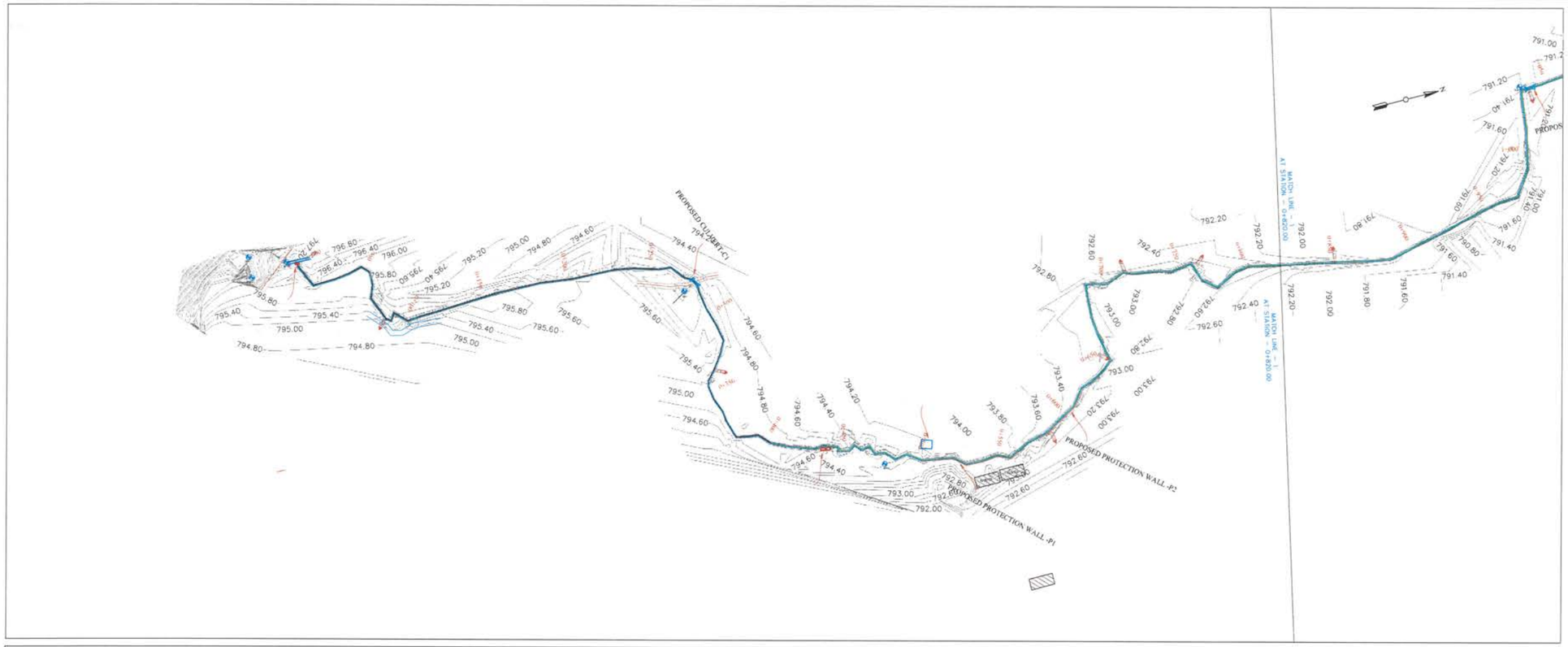
SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	SITE PLAN	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		SHEET NO. 1 / 32
					DATE:	DATE:	DATE: 30 JAN 2013	DATE:	



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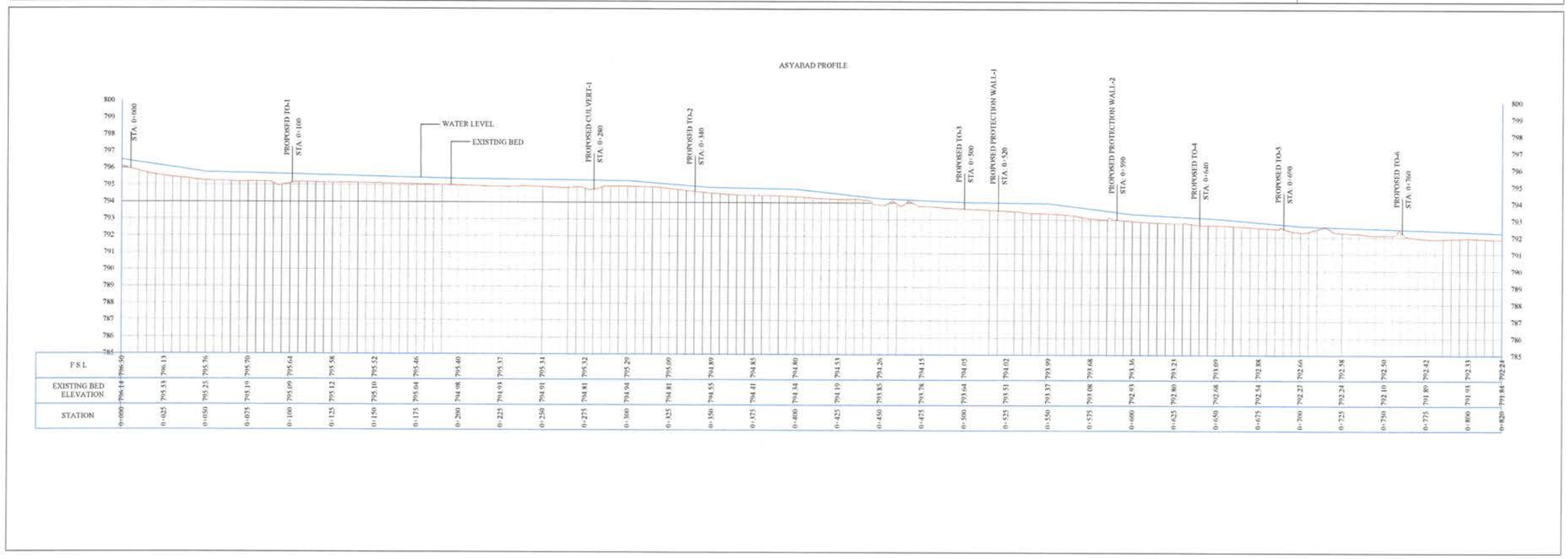

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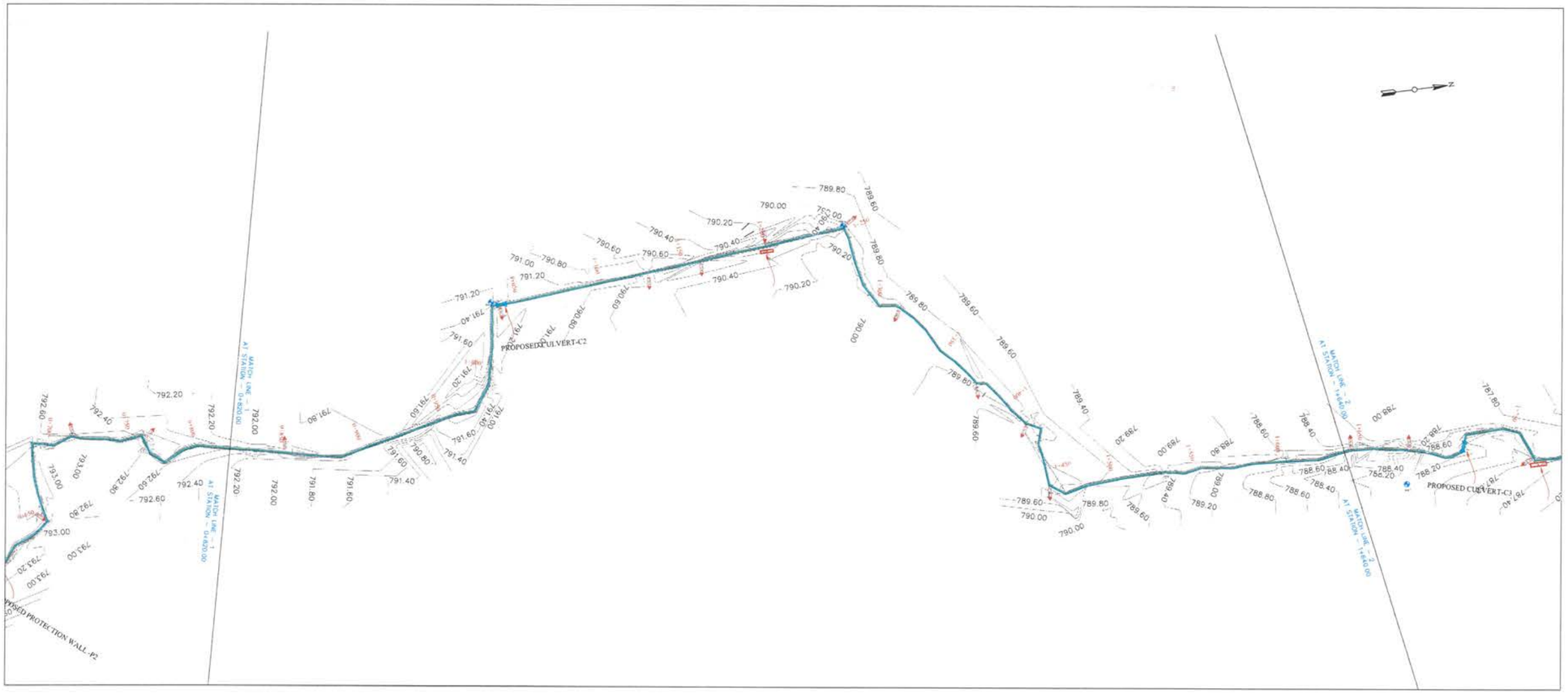
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME: ASYABAD SECONDARY CANAL	LOCATION: DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	DRAWING TITLE: PLAN AND PROFILE ST: (0+000 TO 0+820)	SURVEYED BY: SWIM	DRAWING AND DESIGN BY: RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	REVIEWED AND CHECKED BY: ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	SWIM APPROVAL: DRAKO REYES CHIEF OF PARTY DATE: 30 JAN 2019	MAIL/DAIL, APPROVAL: DATE:	SHEET NO 2 /32



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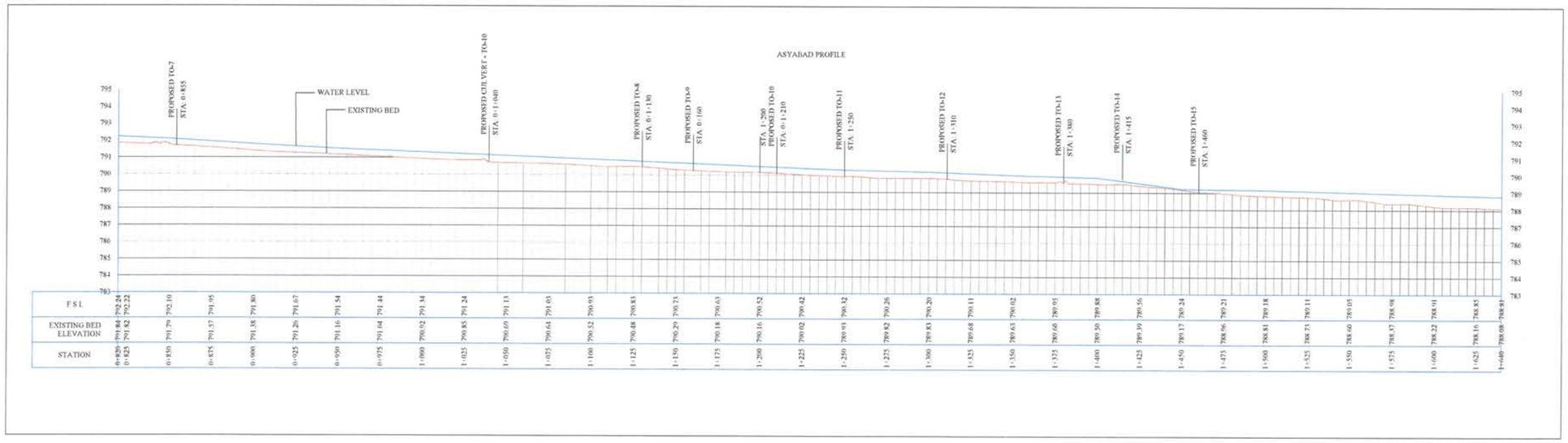

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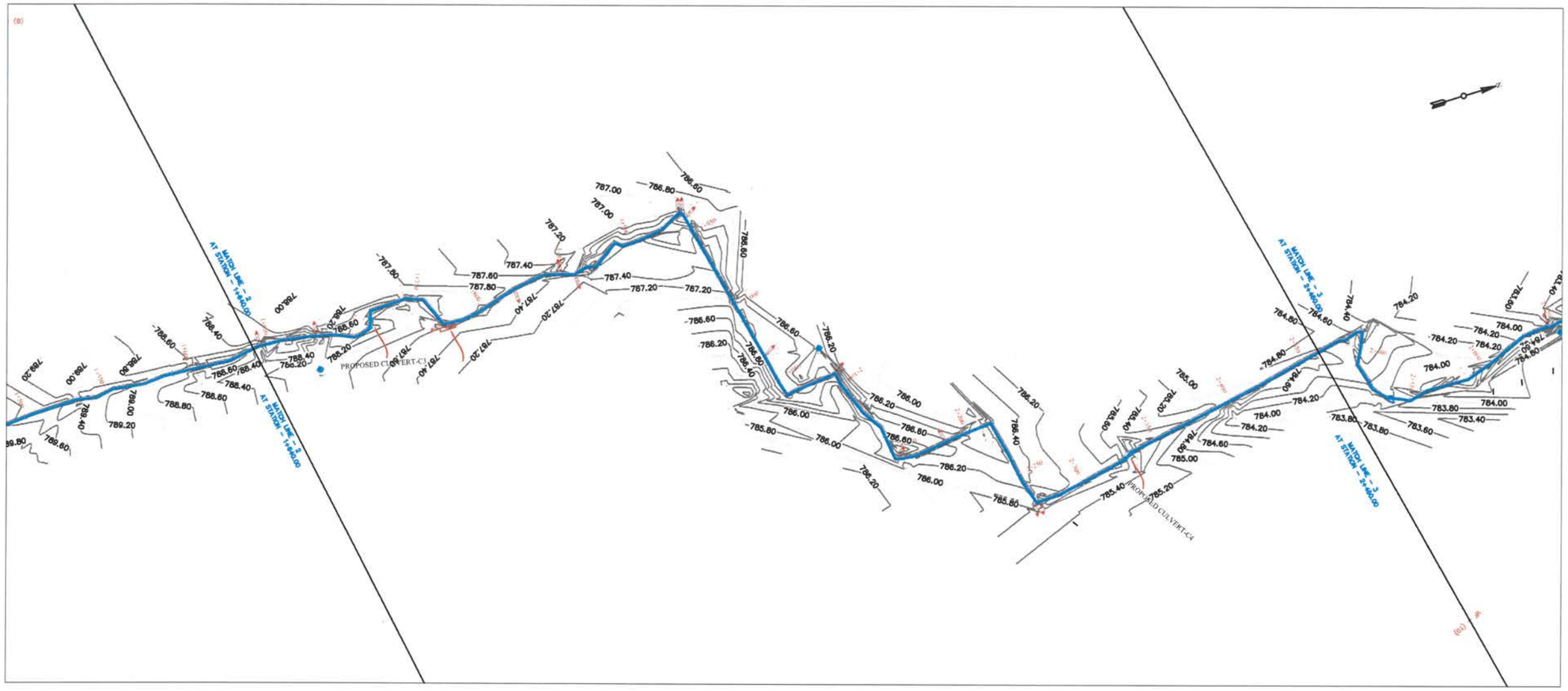
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (0+820 TO 1+640)	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		
						DATE:	DATE:	DATE 30 JAN 2013	DATE:	



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River	
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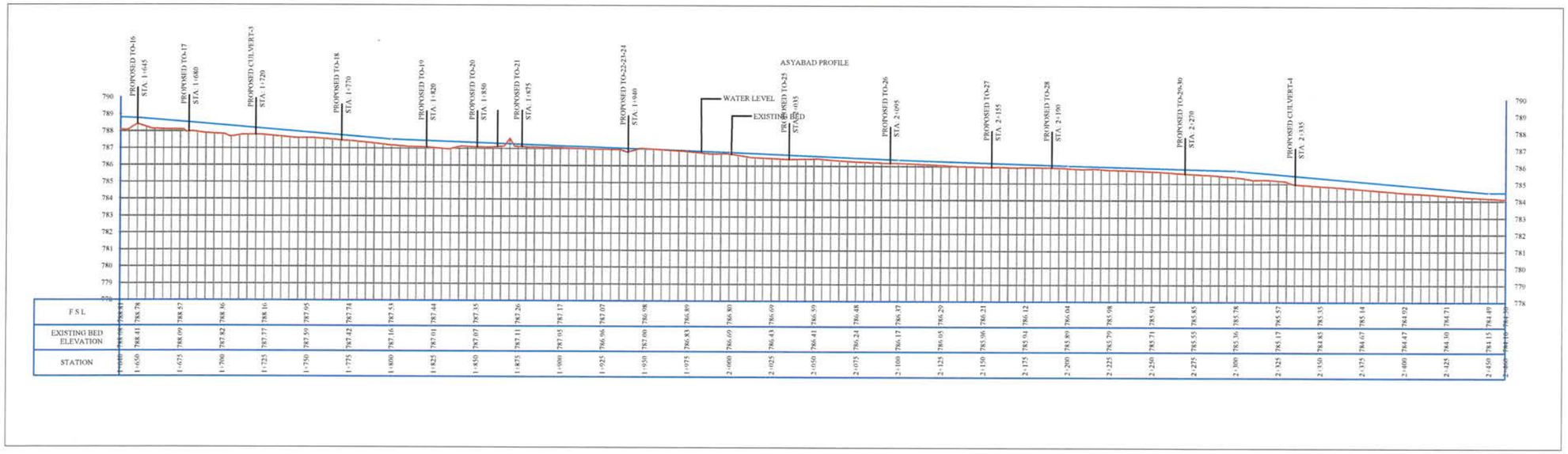

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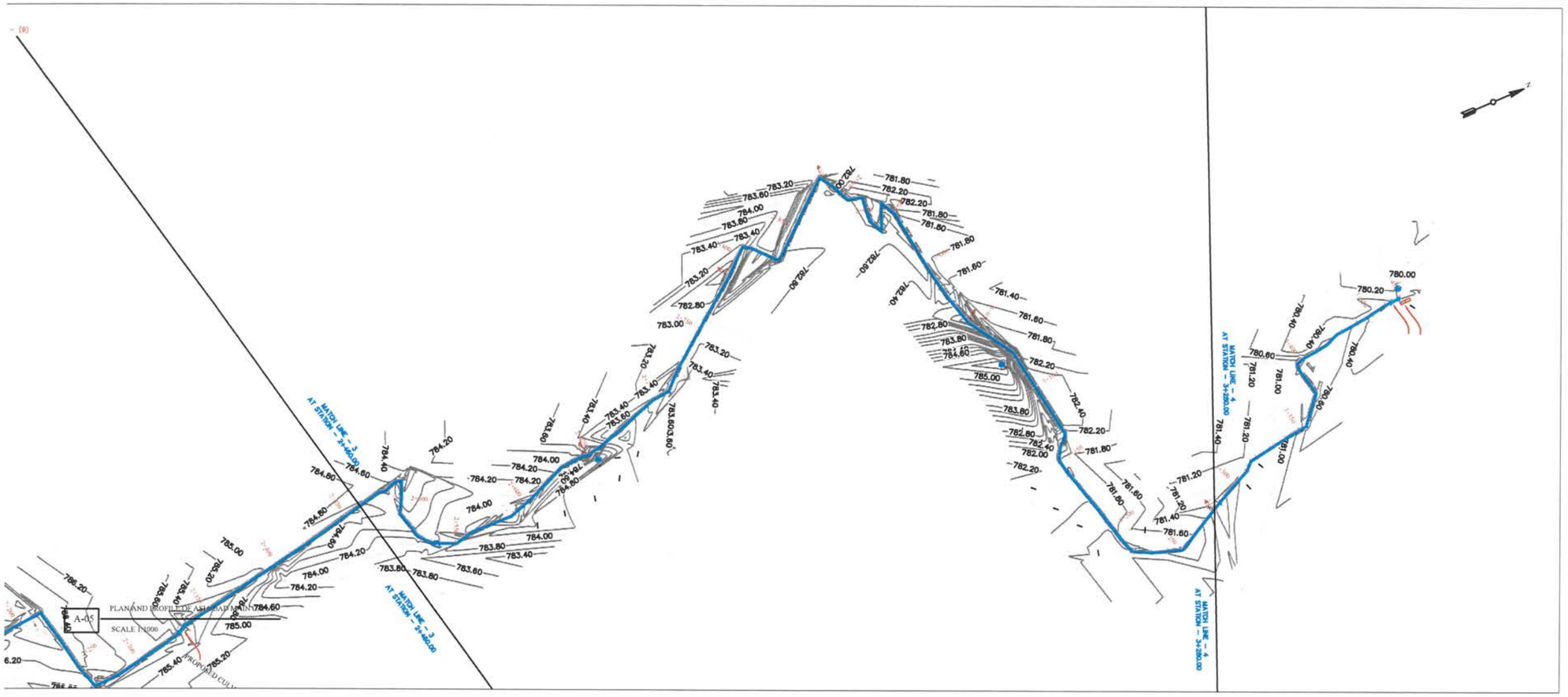
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (1+640 TO 2+260)	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 30 JAN 2019	DATE:	4 /32



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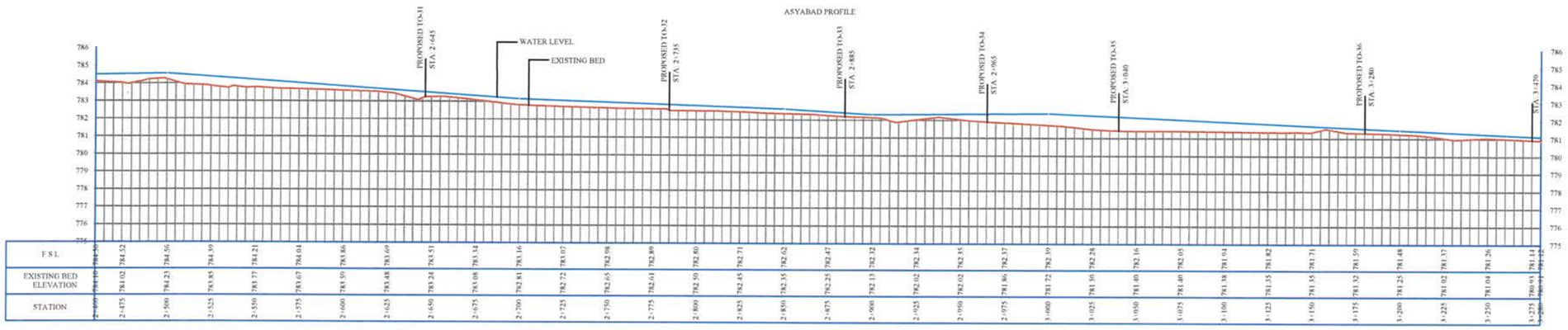

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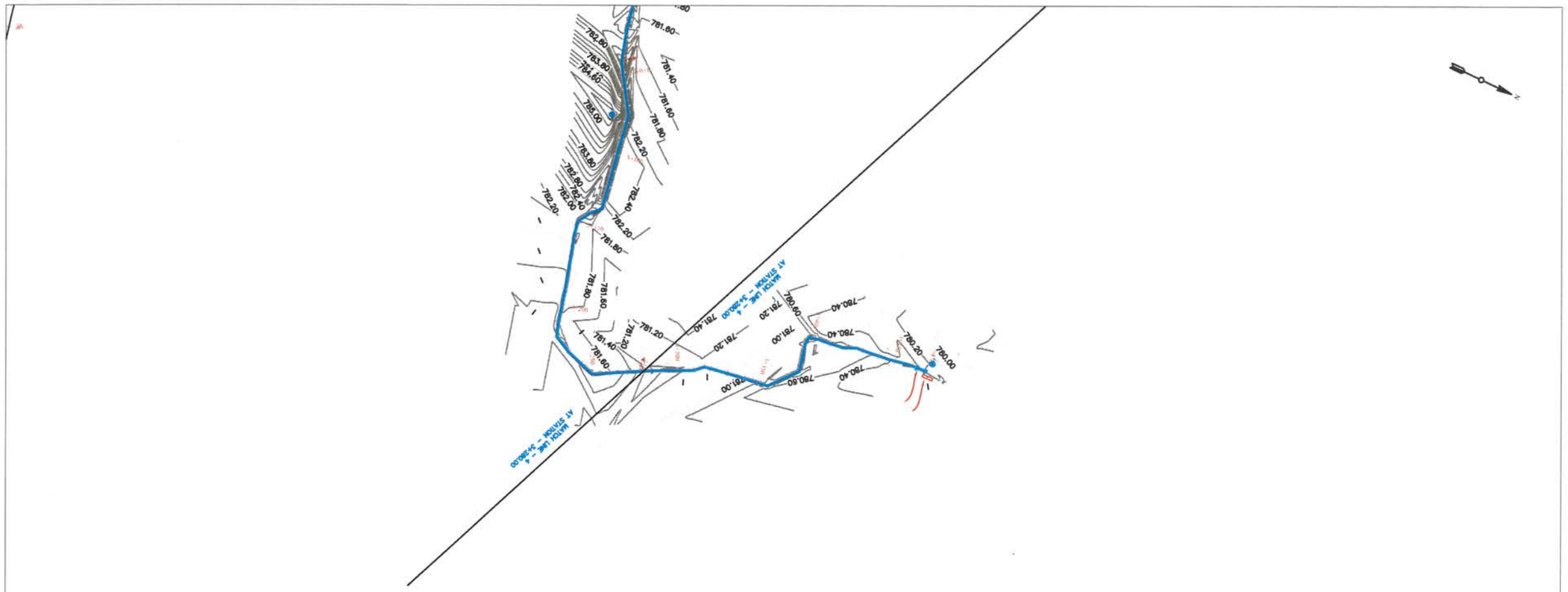
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (2+460 TO 3+280)	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE	DRAKO REYES CHIEF OF PARTY DATE: 30 JAN 2019	DATE:	



A-06 PLAN AND PROFILE OF ASYABAD CANAL

SCALE 1:1000

LEGEND:-	
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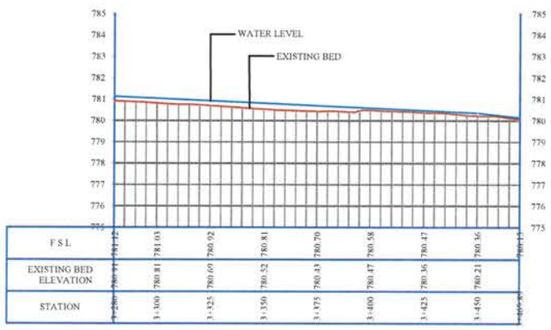
Proposed Culvert	
Tree	
River	
Residential Area	

ASYABAD PROFILE



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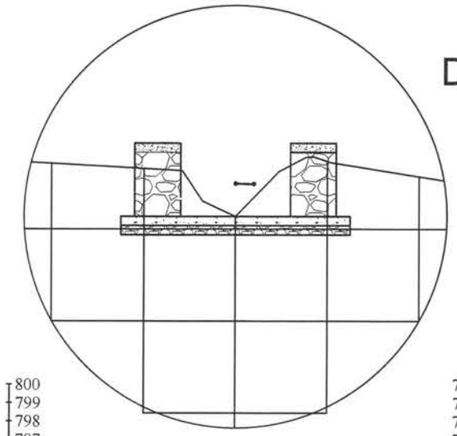
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	PLAN AND PROFILE ST: (3+280 TO 3+450)	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 30 JAN 2019	DATE: 12/12/2018	6 /32

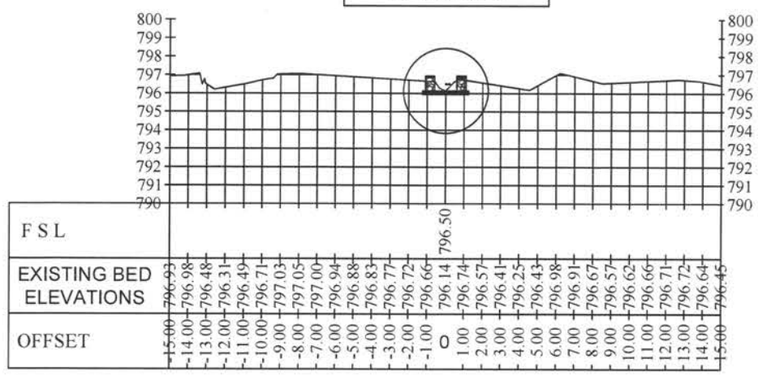


DETAIL-A

Cutting Area=2.4 sqm

Filling Area=1.12 sqm

Cross Section
0+000.00



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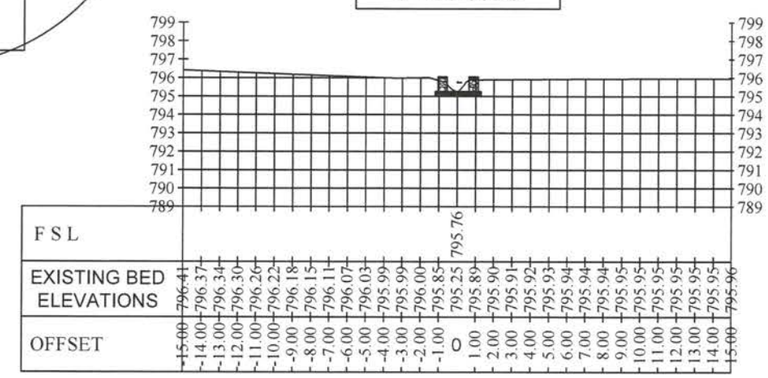

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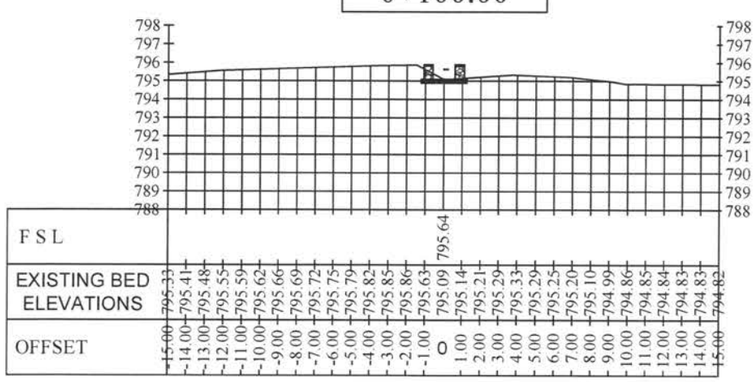

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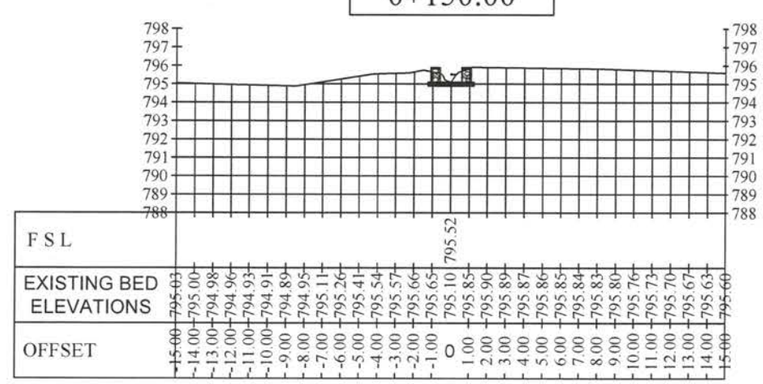

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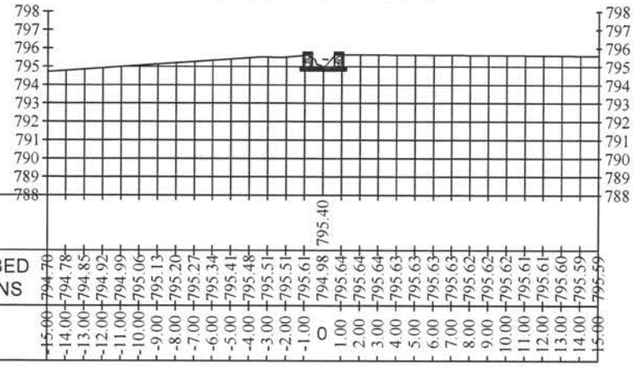
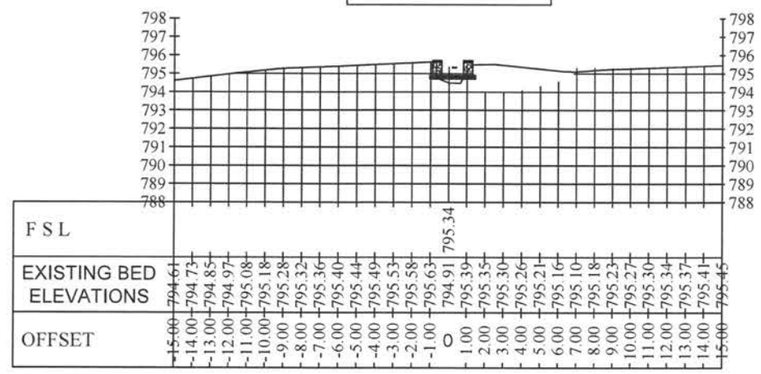
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	

Cross Section 0+200.00



Cross Section 0+250.00



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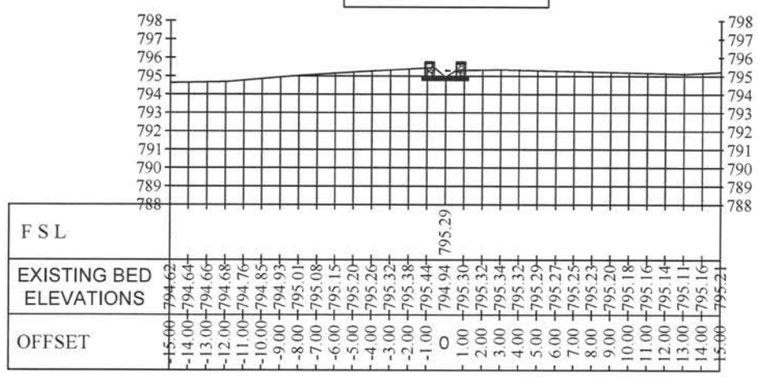
Licensed Engineer

Cross Section 0+300.00



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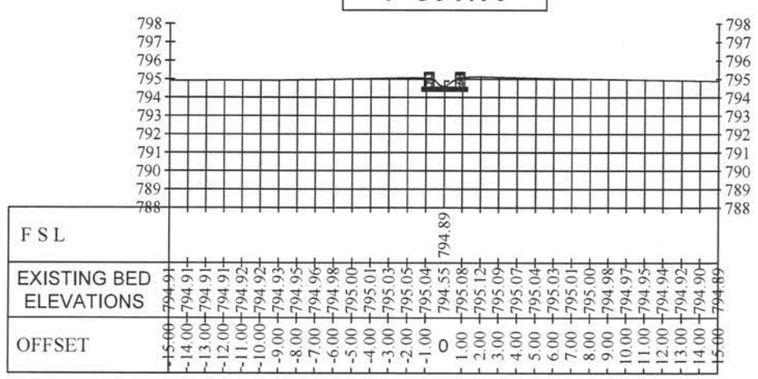
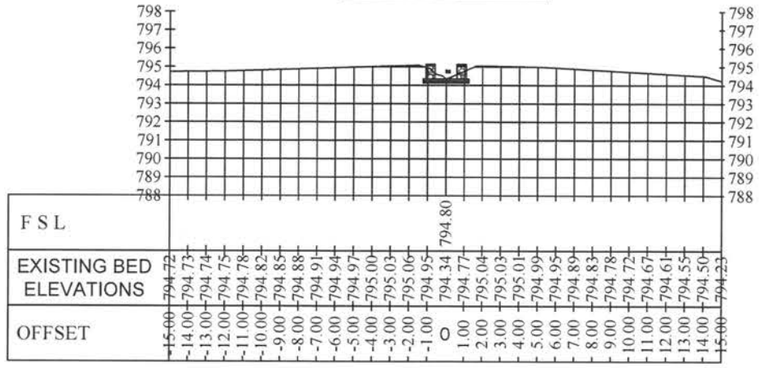
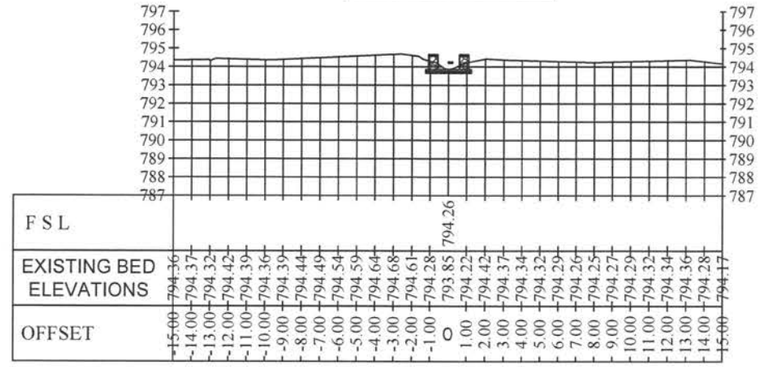


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	SHEET NO. 8 /32

Cross Section 0+400.00

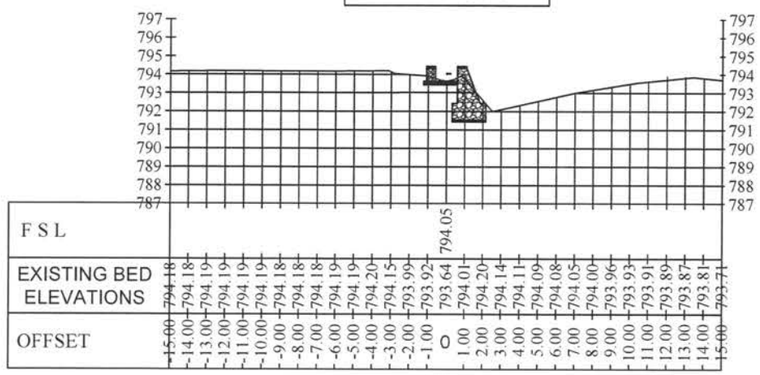


Cross Section 0+450.00

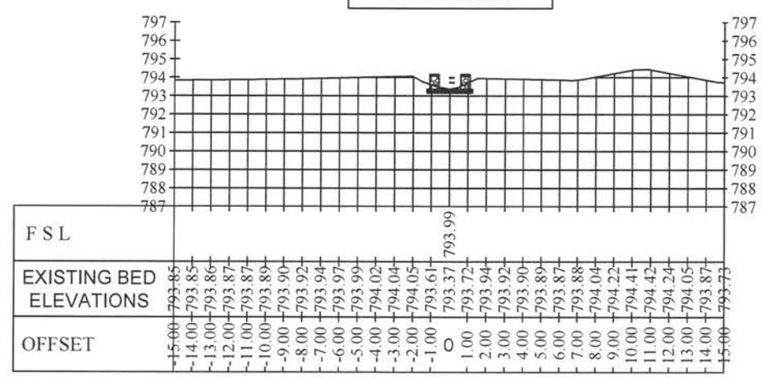


ISSUED FOR CONSTRUCTION
Date: 17 FEB 2019
Drako Reyes
Licensed Engineer

Cross Section 0+500.00

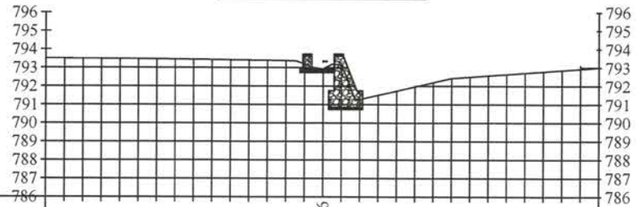


Cross Section 0+550.00



	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	SHEET NO. 9 /32

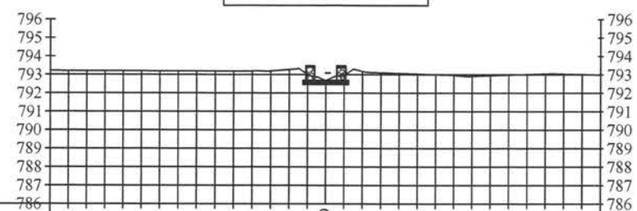
Cross Section 0+600.00



OFFSET	EXISTING BED ELEVATIONS
-15.00	793.50
-14.00	793.49
-13.00	793.49
-12.00	793.48
-11.00	793.47
-10.00	793.47
-9.00	793.46
-8.00	793.45
-7.00	793.44
-6.00	793.42
-5.00	793.41
-4.00	793.40
-3.00	793.38
-2.00	793.37
-1.00	793.20
0	792.93
1.00	793.19
2.00	793.47
3.00	793.35
4.00	793.31
5.00	793.29
6.00	793.27
7.00	793.25
8.00	793.23
9.00	793.21
10.00	793.19
11.00	793.17
12.00	793.15
13.00	793.13
14.00	793.11
15.00	793.09

FSL 793.36

Cross Section 0+650.00



OFFSET	EXISTING BED ELEVATIONS
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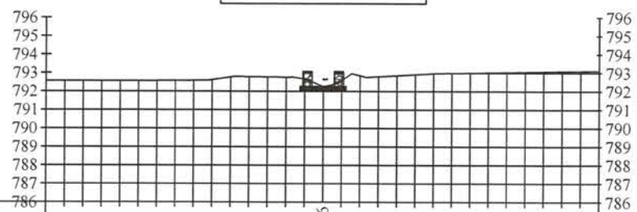
-14.00	793.20
-13.00	793.20
-12.00	793.20
-11.00	793.20
-10.00	793.19
-9.00	793.19
-8.00	793.19
-7.00	793.19
-6.00	793.19
-5.00	793.19
-4.00	793.19
-3.00	793.20
-2.00	793.27
-1.00	793.00
0	792.68
1.00	793.00
2.00	793.18
3.00	793.11
4.00	793.07
5.00	793.04
6.00	793.00
7.00	792.96
8.00	792.91
9.00	792.95
10.00	792.98
11.00	793.02
12.00	793.05
13.00	793.05
14.00	793.02
15.00	792.98

FSL 793.09

ISSUED FOR CONSTRUCTION
Date: 17 [illegible]
Drako Reyes
Licensed Engineer

Cross Section 0+700.00



OFFSET	EXISTING BED ELEVATIONS
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-14.00	792.57
-13.00	792.57
-12.00	792.56
-11.00	792.56
-10.00	792.56
-9.00	792.57
-8.00	792.57
-7.00	792.58
-6.00	792.62
-5.00	792.78
-4.00	792.80
-3.00	792.78
-2.00	792.77
-1.00	792.68
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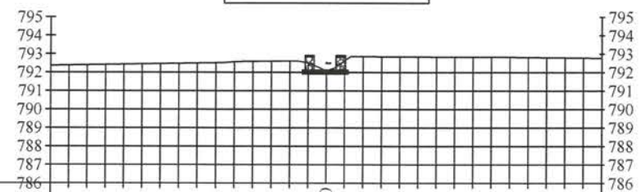
1.00	792.59
2.00	792.85
3.00	792.80
4.00	792.86
5.00	792.91
6.00	792.97
7.00	792.99
8.00	793.00
9.00	793.01
10.00	793.03
11.00	793.04
12.00	793.06
13.00	793.07
14.00	793.09
15.00	793.11

FSL 792.66

Cross Section 0+750.00



OFFSET	EXISTING BED ELEVATIONS
-15.00	792.36
-14.00	792.38
-13.00	792.40
-12.00	792.41
-11.00	792.43
-10.00	792.44
-9.00	792.46
-8.00	792.48
-7.00	792.49
-6.00	792.51
-5.00	792.57
-4.00	792.59
-3.00	792.60
-2.00	792.62
-1.00	792.52
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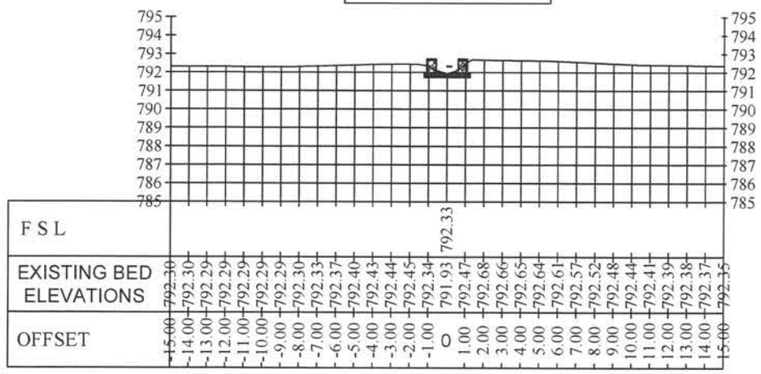
2.00	792.86
3.00	792.85
4.00	792.85
5.00	792.84
6.00	792.84
7.00	792.84
8.00	792.84
9.00	792.84
10.00	792.83
11.00	792.82
12.00	792.81
13.00	792.81
14.00	792.80
15.00	792.79

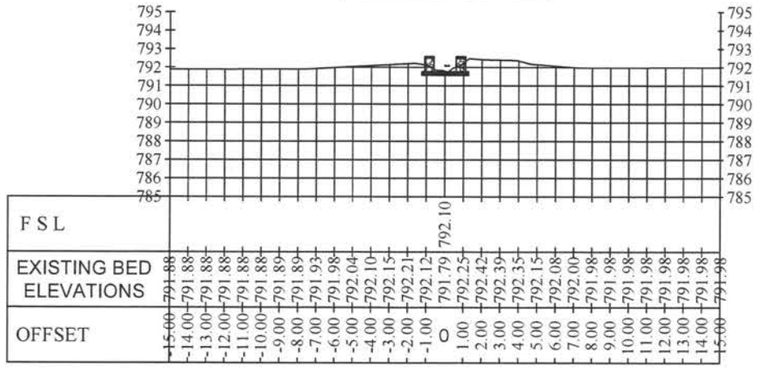
FSL 792.50

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		SHEET NO. 10/32
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

Cross Section 0+800.00

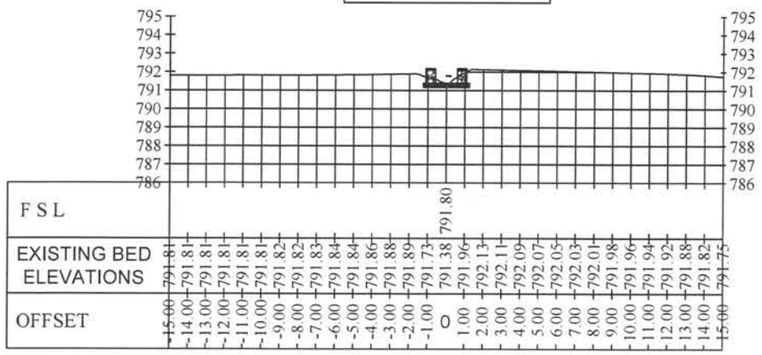


Cross Section 0+850.00

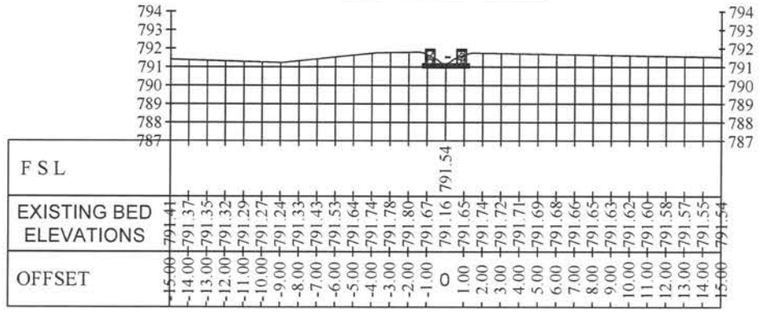


ISSUED FOR CONSTRUCTION
Date: 17 FEB 2019
Drako Reyes
Licensed Engineer

Cross Section 0+900.00

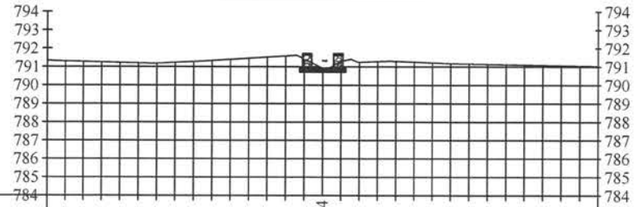


Cross Section 0+950.00



	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		SHEET NO. 11/32
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

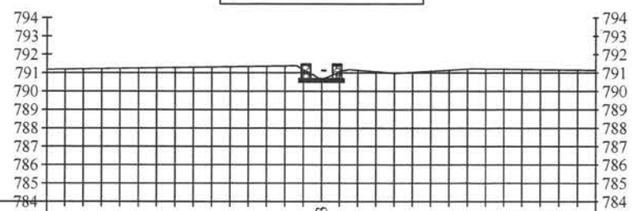
Cross Section 1+000.00



OFFSET	EXISTING BED ELEVATIONS
-15.00	791.33
-14.00	791.30
-13.00	791.28
-12.00	791.25
-11.00	791.23
-10.00	791.20
-9.00	791.19
-8.00	791.23
-7.00	791.28
-6.00	791.34
-5.00	791.40
-4.00	791.46
-3.00	791.52
-2.00	791.58
-1.00	791.39
0	790.92
1.00	791.28
2.00	791.26
3.00	791.30
4.00	791.31
5.00	791.27
6.00	791.22
7.00	791.18
8.00	791.16
9.00	791.14
10.00	791.12
11.00	791.10
12.00	791.08
13.00	791.06
14.00	791.04
15.00	791.03

FSL: 791.34

Cross Section 1+050.00

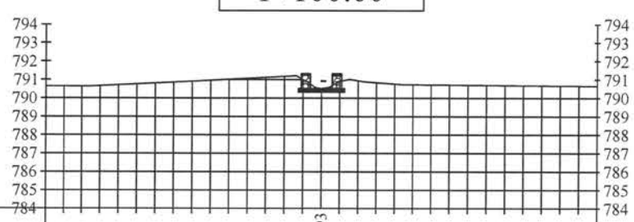


OFFSET	EXISTING BED ELEVATIONS
-15.00	791.18
-14.00	791.20
-13.00	791.21
-12.00	791.23
-11.00	791.24
-10.00	791.26
-9.00	791.27
-8.00	791.29
-7.00	791.30
-6.00	791.32
-5.00	791.33
-4.00	791.35
-3.00	791.36
-2.00	791.38
-1.00	791.18
0	790.69
1.00	791.04
2.00	791.14
3.00	791.06
4.00	790.98
5.00	791.03
6.00	791.09
7.00	791.15
8.00	791.21
9.00	791.22
10.00	791.21
11.00	791.19
12.00	791.18
13.00	791.17
14.00	791.16
15.00	791.14

FSL: 791.13

ISSUED FOR CONSTRUCTION
Date: 17 [illegible]
Drako Reyes
Licensed Engineer

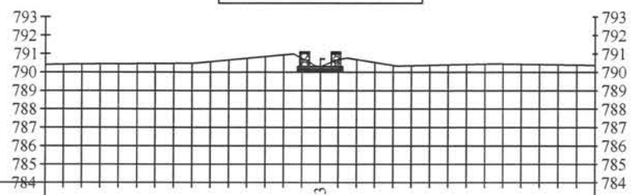
Cross Section 1+100.00



OFFSET	EXISTING BED ELEVATIONS
-15.00	790.64
-14.00	790.64
-13.00	790.63
-12.00	790.66
-11.00	790.71
-10.00	790.76
-9.00	790.81
-8.00	790.86
-7.00	790.91
-6.00	790.97
-5.00	791.02
-4.00	791.08
-3.00	791.13
-2.00	791.19
-1.00	791.01
0	790.52
1.00	790.91
2.00	790.94
3.00	790.84
4.00	790.77
5.00	790.73
6.00	790.72
7.00	790.72
8.00	790.71
9.00	790.70
10.00	790.69
11.00	790.69
12.00	790.68
13.00	790.67
14.00	790.66
15.00	790.66

FSL: 790.93

Cross Section 1+150.00

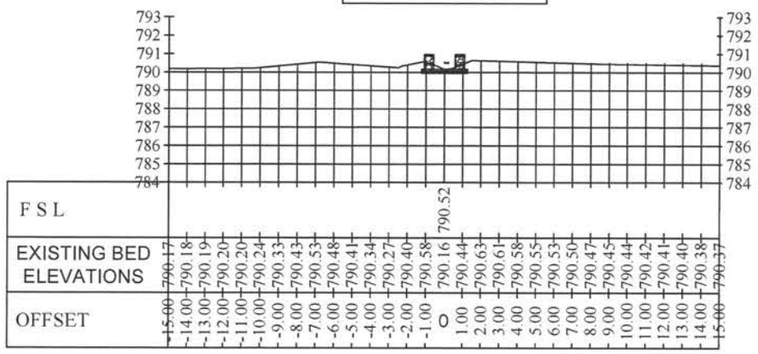


OFFSET	EXISTING BED ELEVATIONS
-15.00	790.41
-14.00	790.42
-13.00	790.44
-12.00	790.44
-11.00	790.45
-10.00	790.45
-9.00	790.46
-8.00	790.47
-7.00	790.47
-6.00	790.56
-5.00	790.65
-4.00	790.74
-3.00	790.84
-2.00	790.93
-1.00	790.75
0	790.29
1.00	790.68
2.00	790.69
3.00	790.53
4.00	790.37
5.00	790.36
6.00	790.38
7.00	790.40
8.00	790.42
9.00	790.44
10.00	790.45
11.00	790.43
12.00	790.42
13.00	790.40
14.00	790.39
15.00	790.38

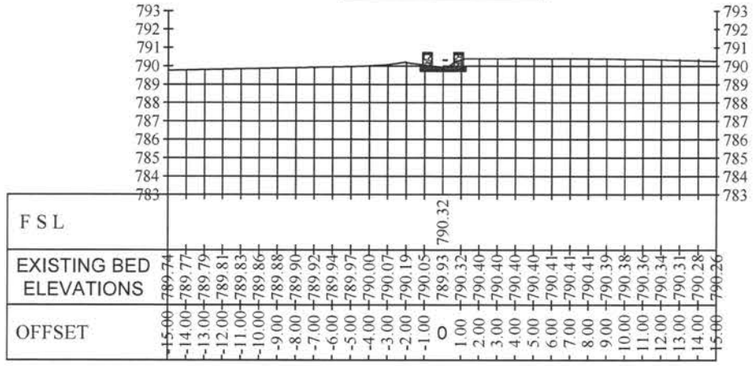
FSL: 790.73

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	SHEET NO. 12/32

Cross Section 1+200.00

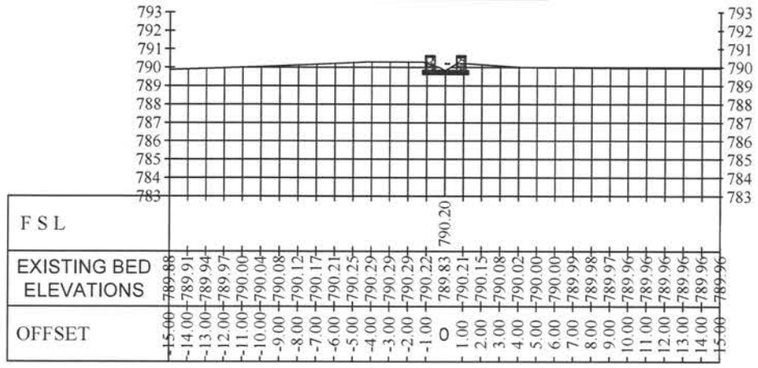


Cross Section 1+250.00

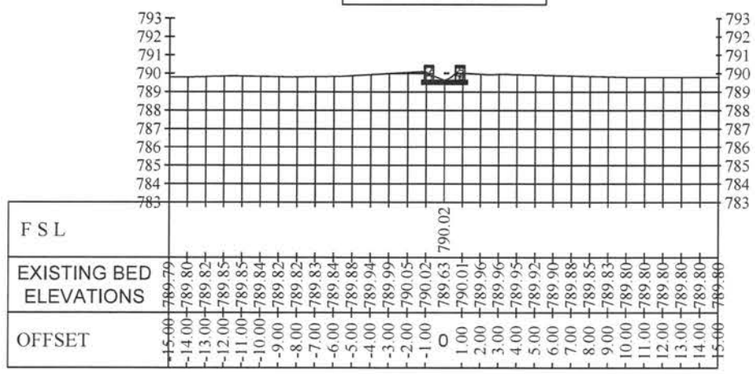


ISSUED FOR CONSTRUCTION
Date: 17 FEB 2019
Jurdy Andres
Engineer Supervisor

Cross Section 1+300.00

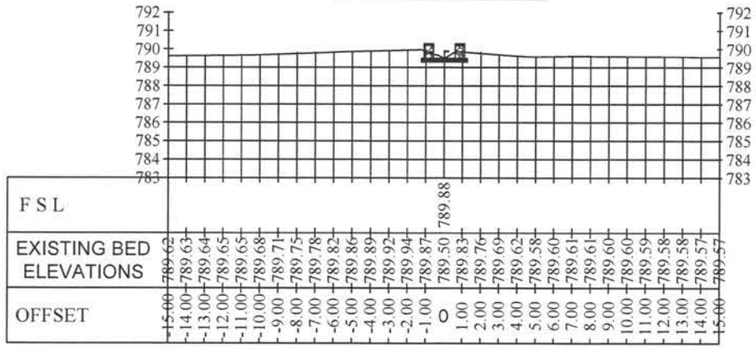


Cross Section 1+350.00

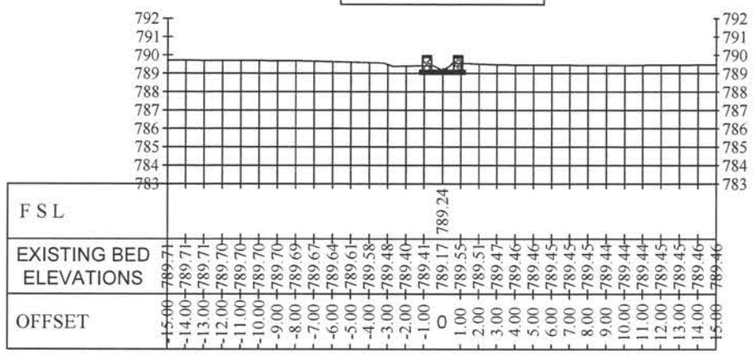


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	13/32

Cross Section 1+400.00

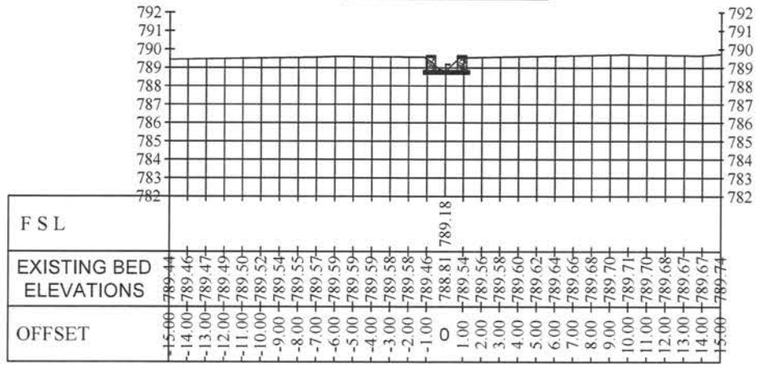


Cross Section 1+450.00

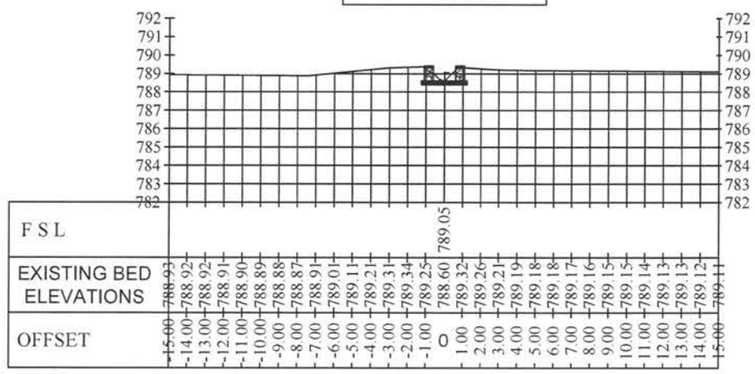


ISSUED FOR CONSTRUCTION
Date:
Drako Reyes
Engineer

Cross Section 1+500.00

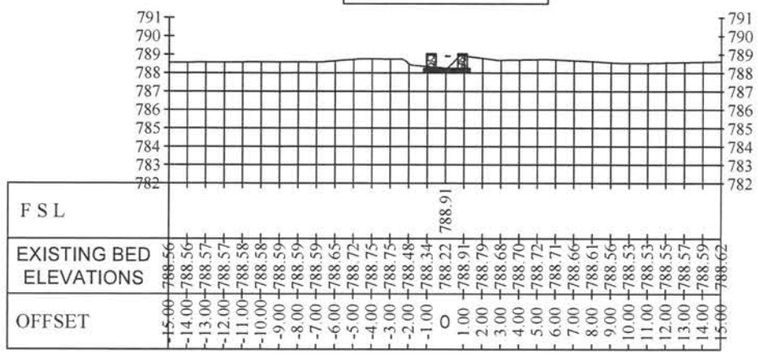


Cross Section 1+550.00

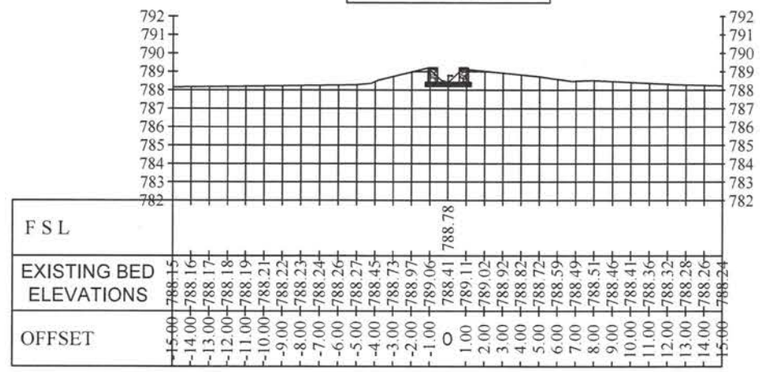


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	14/32

Cross Section 1+600.00

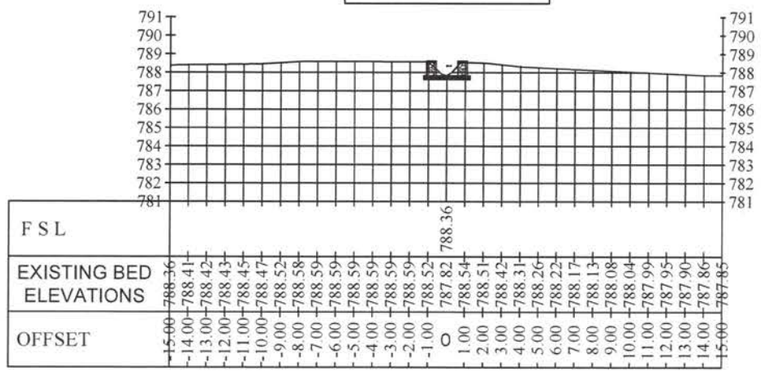


Cross Section 1+650.00



ISSUED FOR CONSTRUCTION
Date:
Orlando Reyes
Chief of Party

Cross Section 1+700.00



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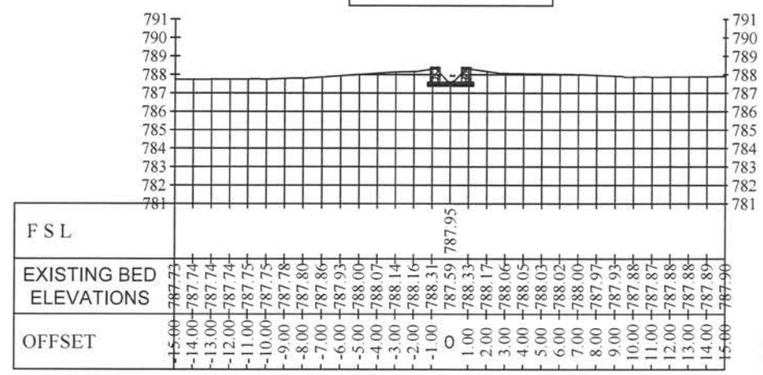
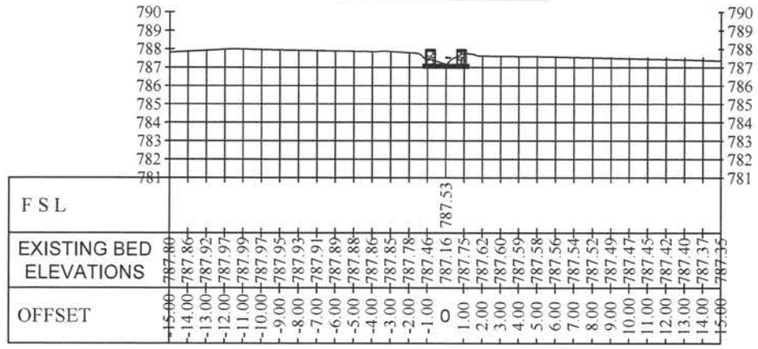


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 15/32
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	

Cross Section 1+800.00



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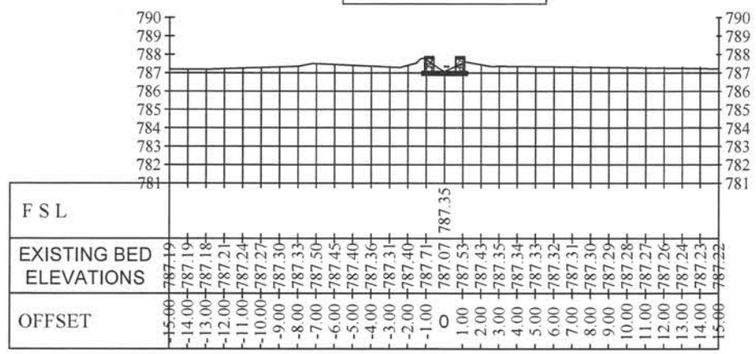
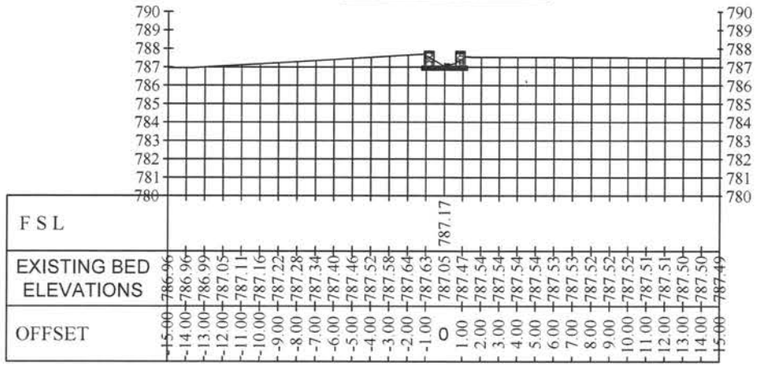


ISSUED FOR CONSTRUCTION
Date: 17 [illegible] 2018
Drako Reyes
Licensed Engineer

Cross Section 1+900.00



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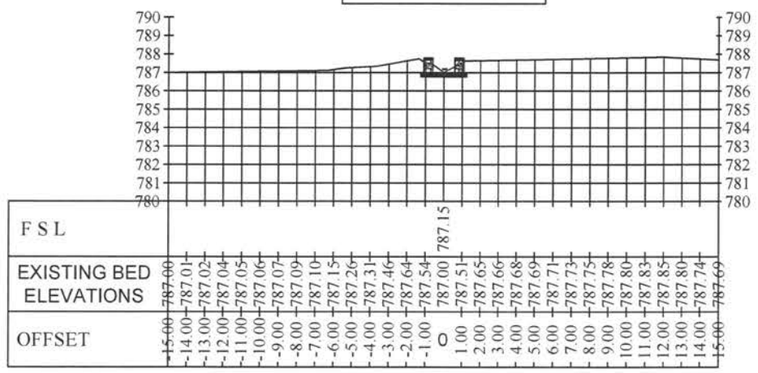

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 16/32
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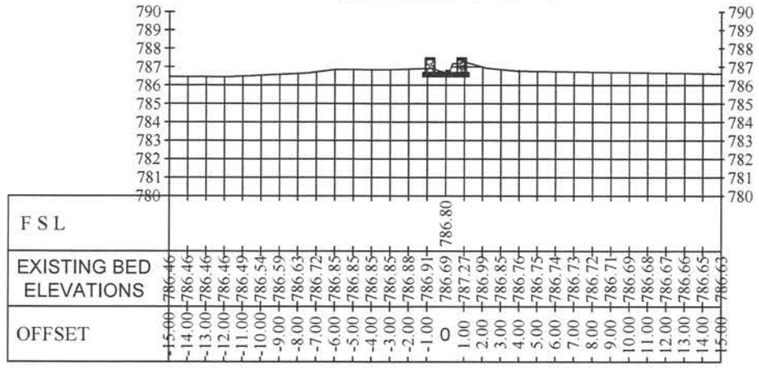
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

Cross Section 2+000.00



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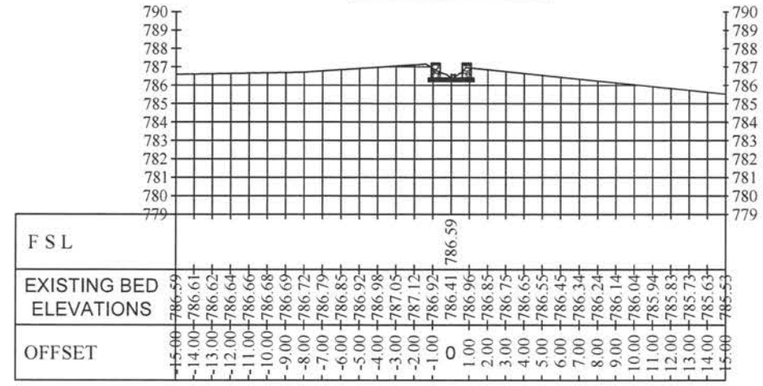
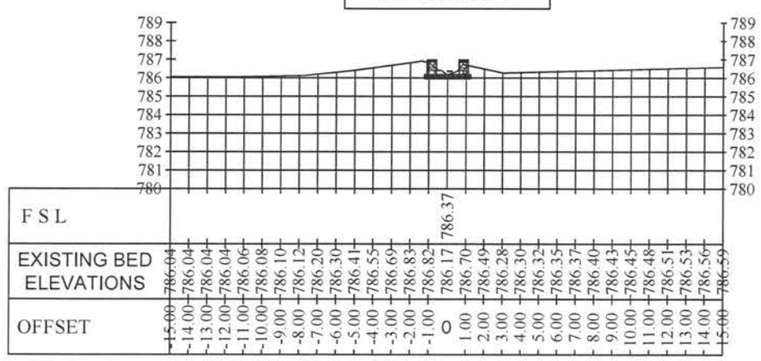


ISSUED FOR CONSTRUCTION
Date:
Drako Reyes
Licensed Engineer

Cross Section 2+100.00



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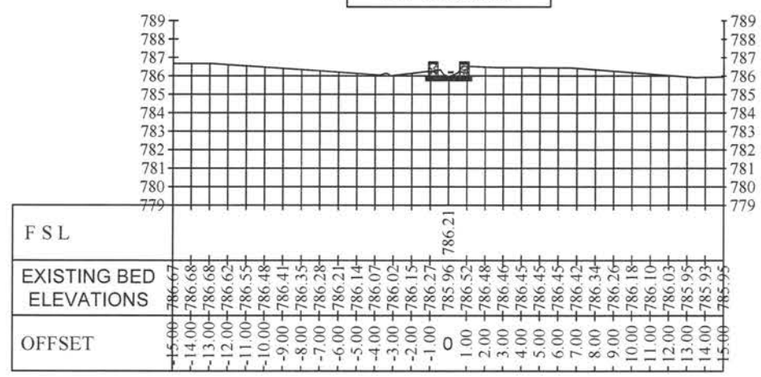
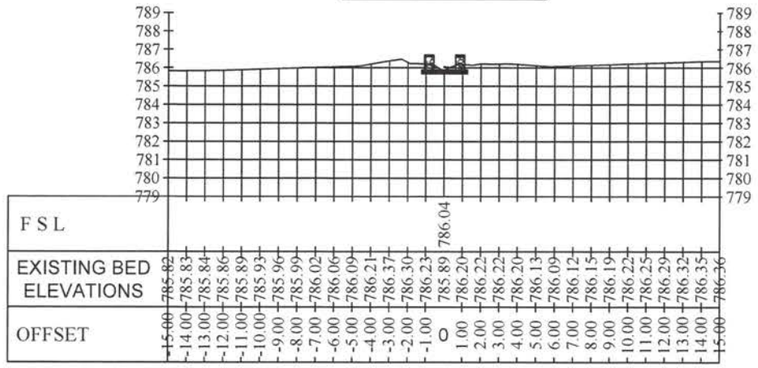


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 17/32
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

Cross Section 2+200.00



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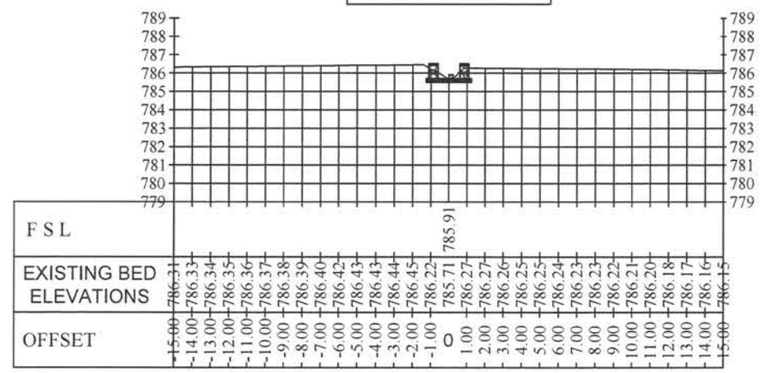

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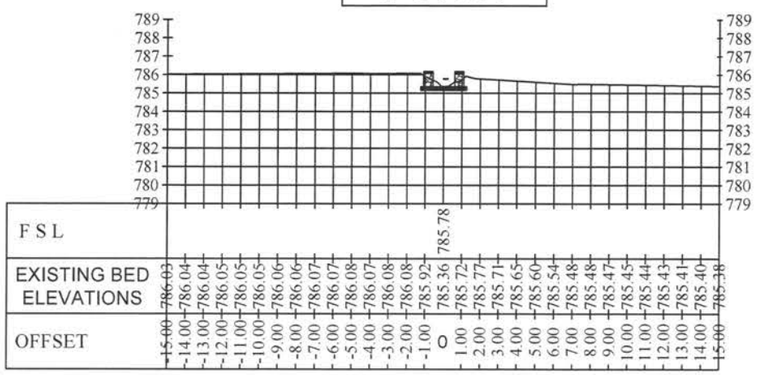
Cross Section 2+300.00



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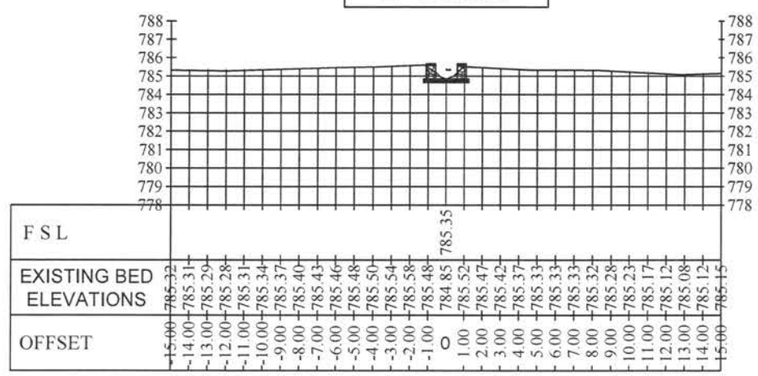
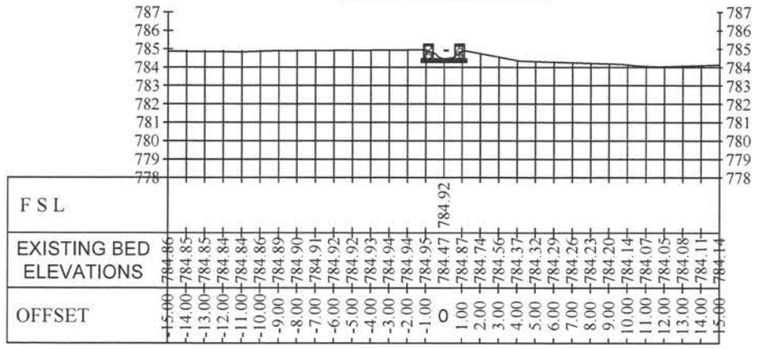


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		18/32
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

Cross Section 2+400.00



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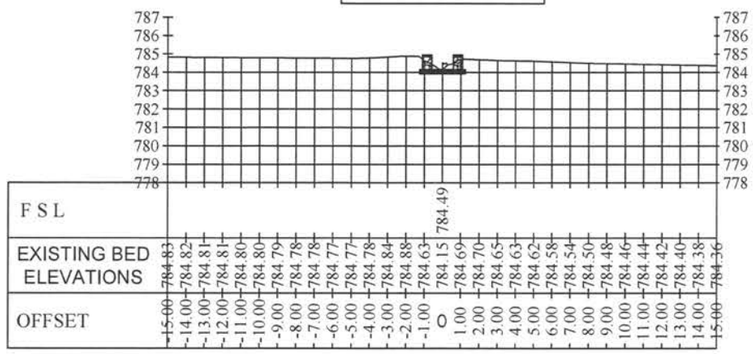
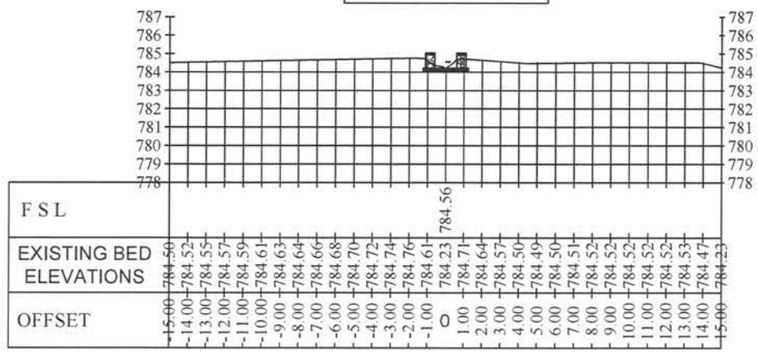


ISSUED FOR CONSTRUCTION
Date:
Licensed Engineer

Cross Section 2+500.00



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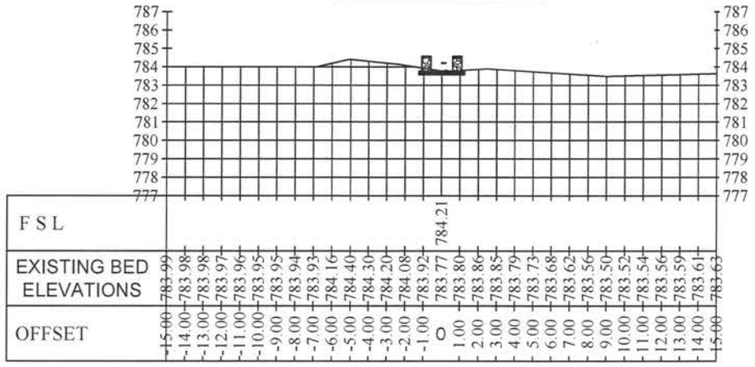
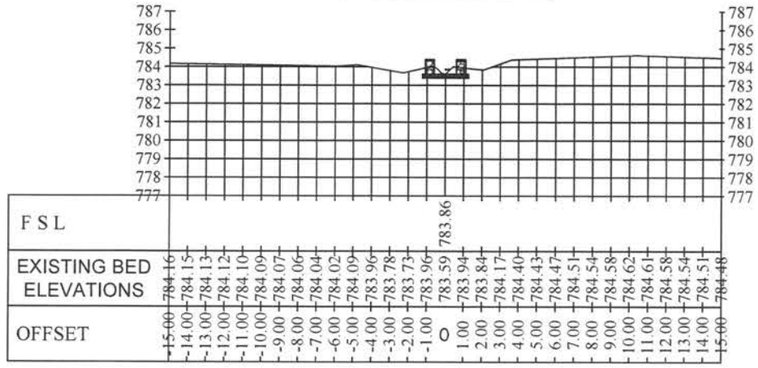


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 19/32
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	

Cross Section 2+600.00



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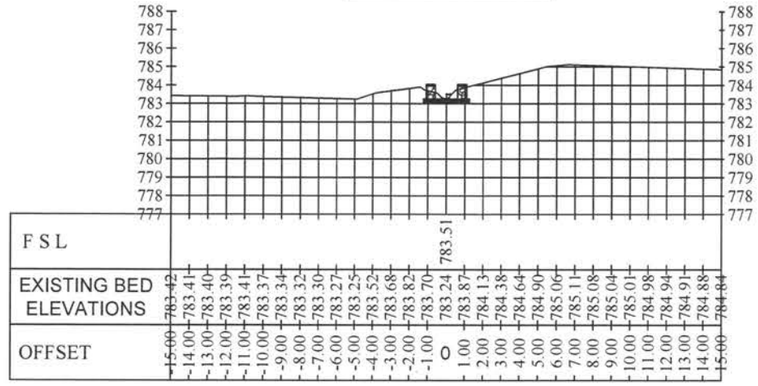

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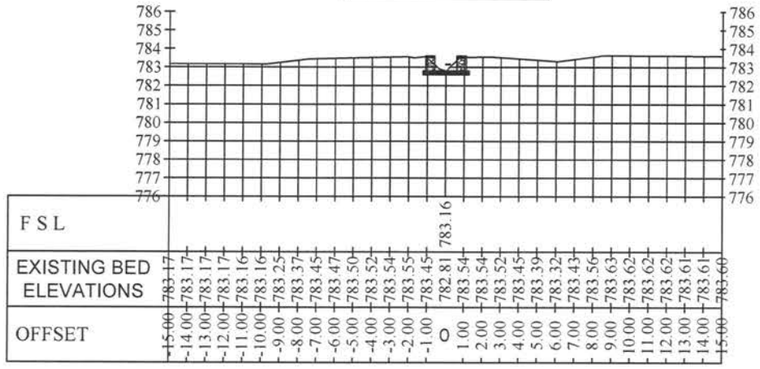
Date:
Drako Reyes
Licensed Architect

Cross Section 2+700.00



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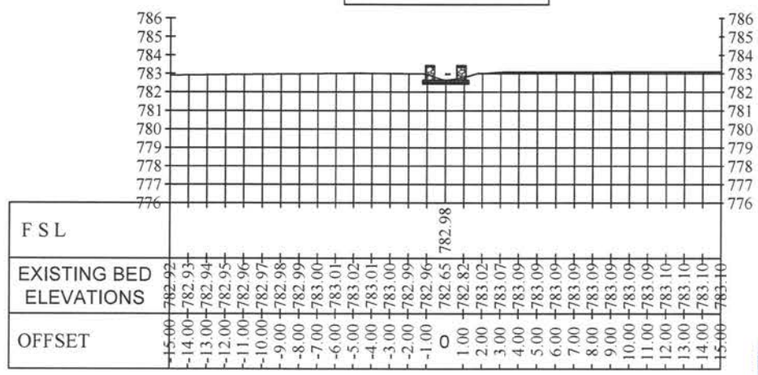
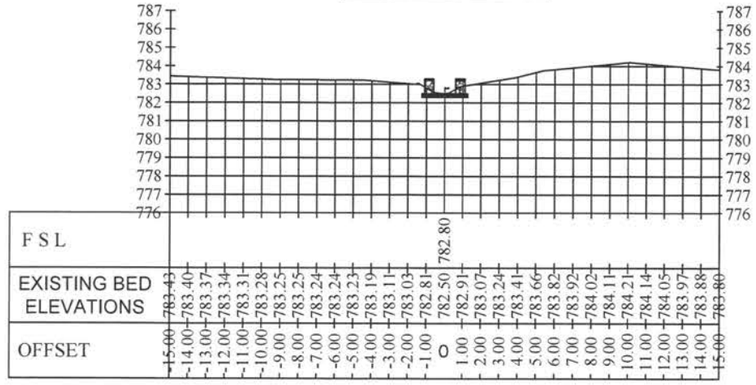


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 20/32
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

Cross Section 2+800.00



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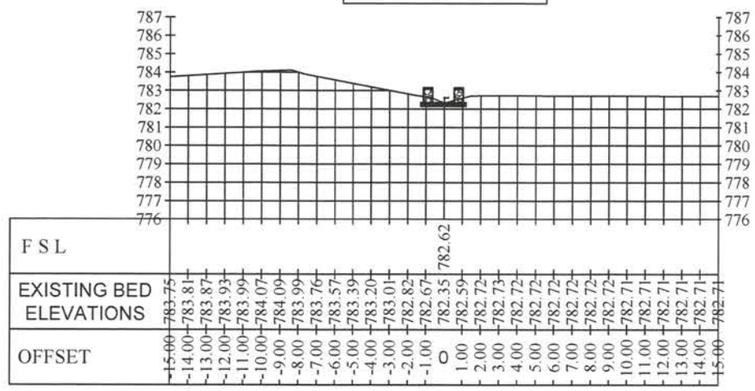

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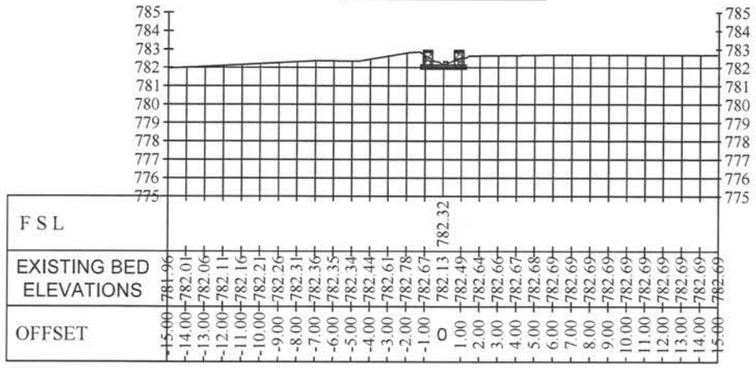
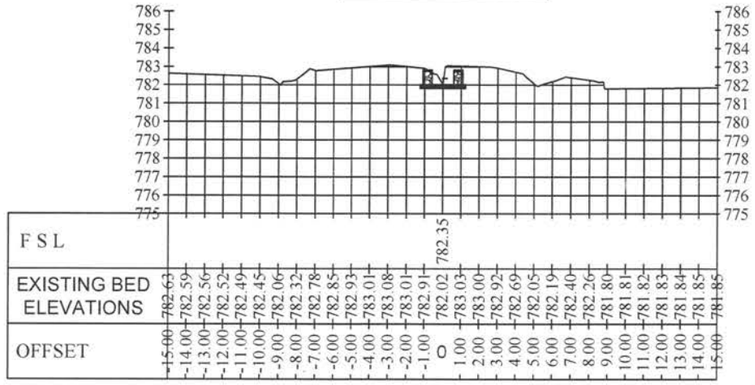
Date:
Drako Reyes
Licensed Engineer

Cross Section 2+900.00

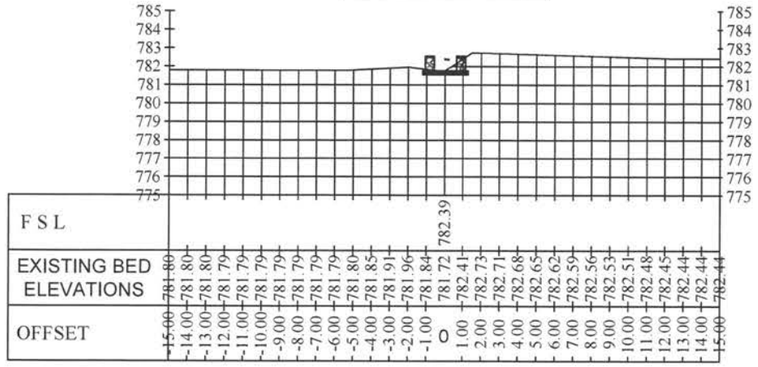


Cross Section 2+950.00



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	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL X SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DRAKO REYES CHIEF OF PARTY DATE: 15 JAN 2019	DATE:	21/32

Cross Section 3+000.00



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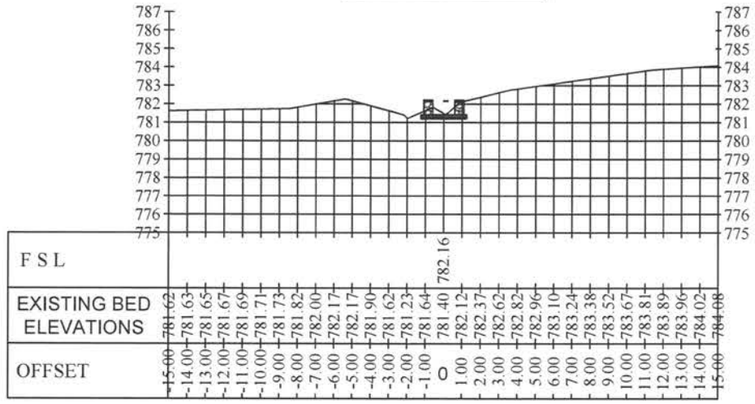
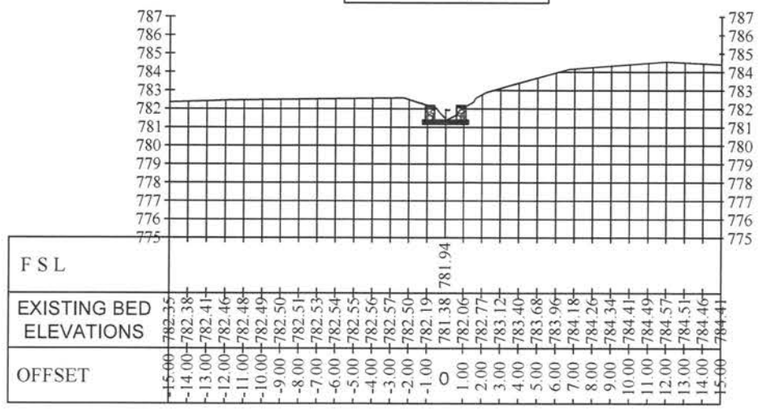


ISSUED FOR CONSTRUCTION
Date:
Drako Reyes
License Engineer

Cross Section 3+100.00



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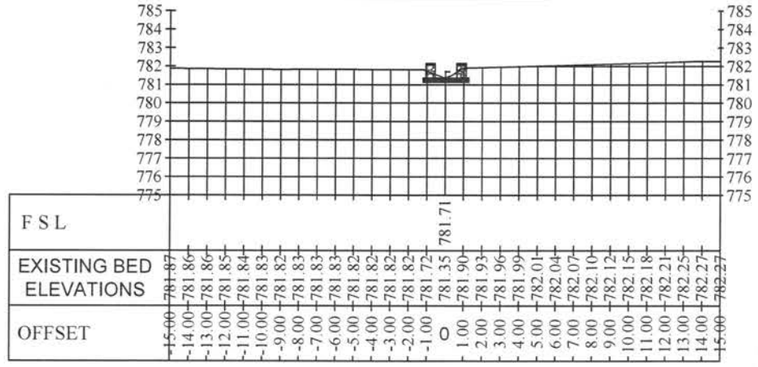

USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 22/32
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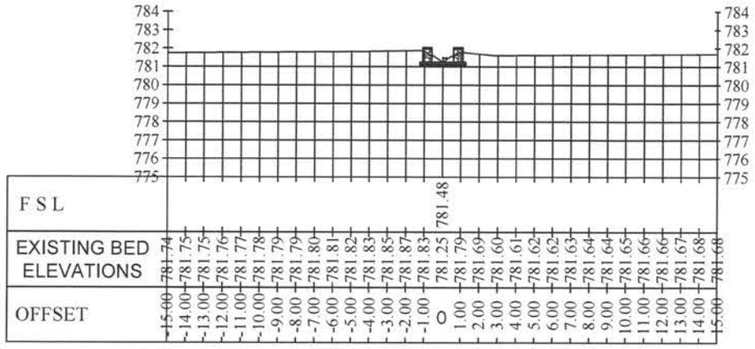
						DATE:	DATE:	DATE: 15 JAN 2019	DATE:	

Cross Section 3+200.00



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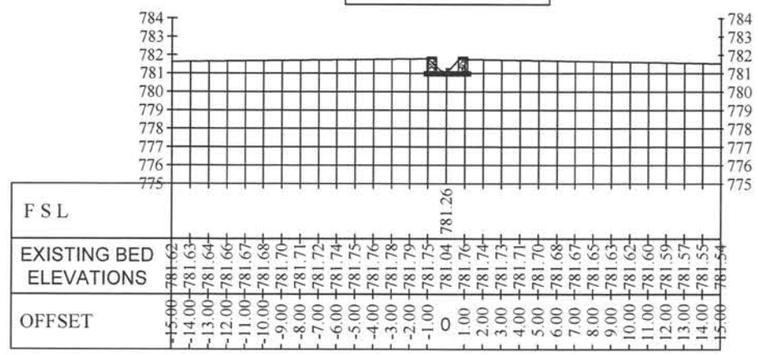
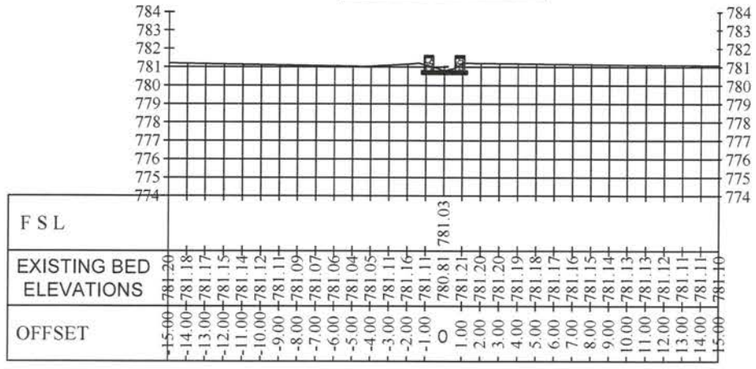


ISSUED FOR CONSTRUCTION
Date:
Drako Reyes
Licensed Engineer

Cross Section 3+300.00



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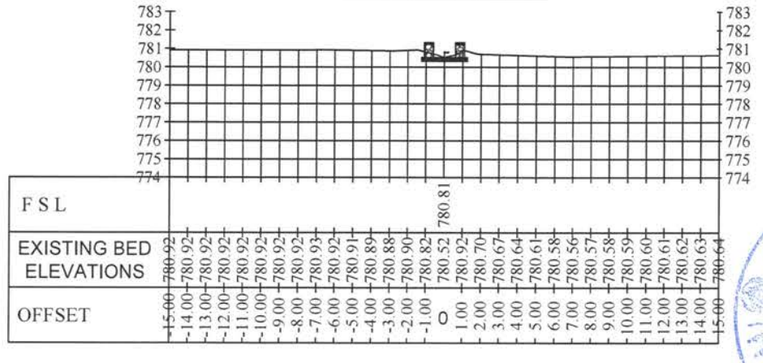

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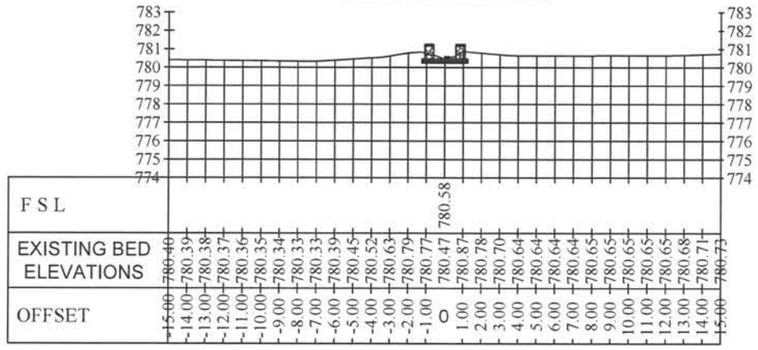
Cross Section 3+400.00



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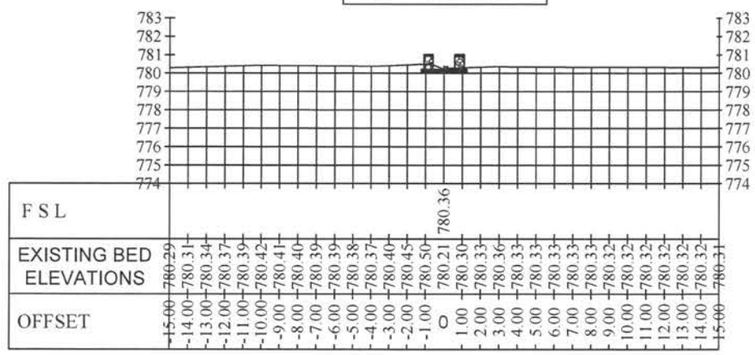

ISSUED FOR CONSTRUCTION
Date:
Drako Reyes
Licensed Engineer

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	MAIL/DAIL APPROVAL	SHEET NO. 24/32
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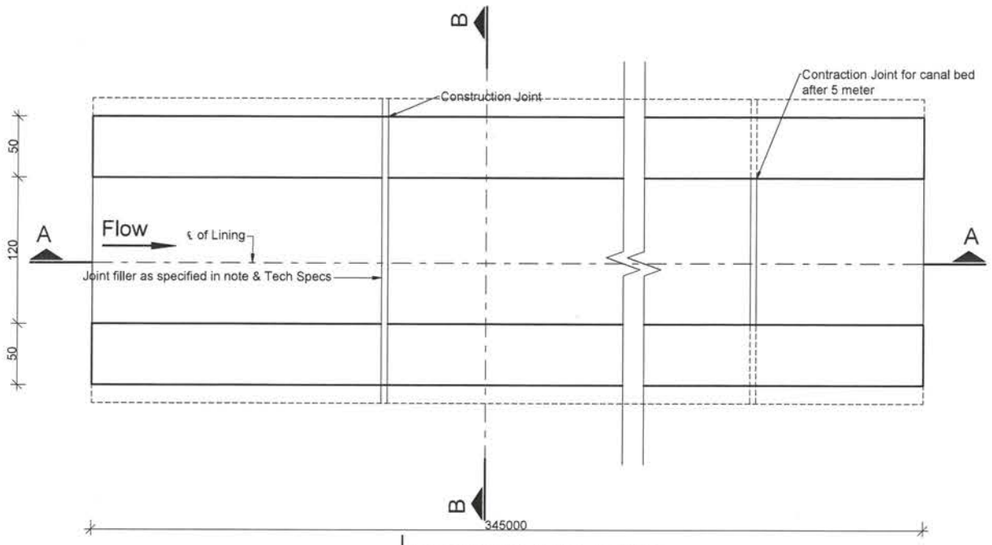
ASIYA ABAD STRUCTURE LIST

S/N	DESCRIPTION	NORTHING	EASTHING	STATIONS	ELEVATION
1	Culvert-Proposed	36.42979	67.90374	0+280	794.85
2	ProtectionWall- Proposed	36.43096	67.90529	0+520	793.62
3	2 Turnouts-Proposed	36.42827	67.90357	0+340	795.08
4	Turnout-Proposed	36.42982	67.90436	0+500	794.89
5	ProtectionWall, Turnout- Proposed	36.43148	67.90522	0+590	793.28
6	Turnout-Proposed	36.4319	67.9049	0+640	792.5
7	Turnout-Proposed	36.43252	67.90462	0+690	792.48
8	Turnout-Proposed	36.43317	67.90463	0+670	792.11
9	Turnout-Proposed	36.43188	67.90435	0+855	792.04
10	Turnout-Proposed	36.43291	67.90454	1+130	791.86
11	Culvert, Turnout-Proposed	36.43439	67.9038	1+040	790.77
12	Turnout-Proposed	36.43522	67.90374	1+160	790.45
13	Turnout-Proposed	36.4355	67.90369	1+210	790.21
14	Turnout-Proposed	36.43623	67.90361	1+250	790.17
15	Turnout-Proposed	36.43697	67.90466	1+310	789.88
16	2 Turnouts-Proposed	36.43716	67.90499	1+380	789.68
17	Turnout-Proposed	36.43885	67.90541	1+415	789.5
18	3 Turnouts-Proposed	36.44114	67.90532	1+460	789.4
19	Turnout-Proposed	36.43729	67.90546	1+645	788.2
20	Turnout-Proposed	36.43915	67.90545	1+680	788.06
25	Culvert, Turnout- Proposed	36.44315	67.90768	1+720	787.63
21	Turnouts-Proposed	36.44048	67.90554	1+770	787.49
22	Turnout-Proposed	36.44136	67.90639	1+820	787.36
23	Turnout-Proposed	36.44171	67.90666	1+850	787.07
24	3Turnout-Proposed	36.44258	67.90783	1+940	787.01
26	Turnout-Proposed	36.4422	67.90739	2+035	786.43
27	Turnout-Proposed	36.44544	67.90787	2+095	786.17
28	Turnout-Proposed	36.44649	67.90711	2+155	785.95
29	Turnout-Proposed	36.44737	67.9072	2+190	785.73
30	Turnout-Proposed	36.44758	67.90792	2+270	785.59
31	Culvert-Proposed	36.44453	67.90807	2+335	784.95
32	Turnout-Proposed	36.44848	67.90965	3+040	781.94
33	Turnout-Proposed	36.4492	67.90934	3+280	781.74

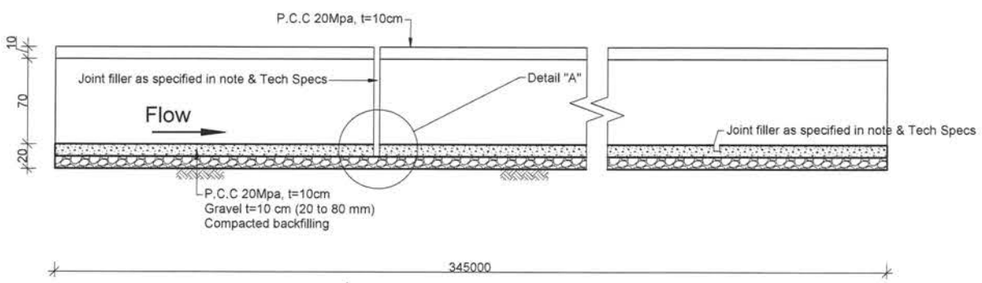
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	STRUCTURE LIST ALONG WITH GPS COORDINATES	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DARREN SAYWELL ACTING CHIEF OF PARTY DATE: 14 MAR 2016	DATE:	25/32

TABLE OF LINING

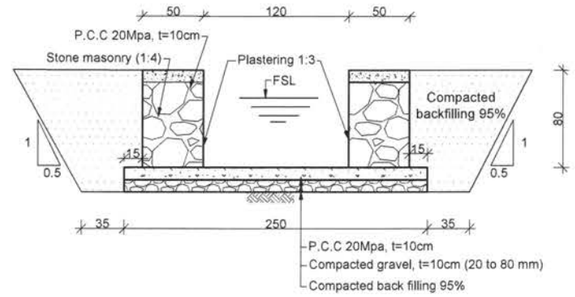
No	Canal Lining Detail	Dimensions (M)			GPS Coordinate		Slope	D of Flow	Discharge	Remarks
		Length	High	Wide	Start	End				
1	Asyabad Secondary Canal	3450	0.80	1.2	N 36.42775, E 67.90299	N 36.42775, E 67.90878	0.0044	0.6	1.26 cum	Entire canal is going to be lined



Plan of Canal Lining, L=3450m
REF. St: (0+000 to 3+450) SCALE: 1:50



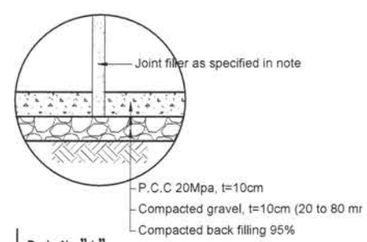
Section "A-A", L=3450m
REF. St: (0+000 to 3+450) SCALE: 1:50



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

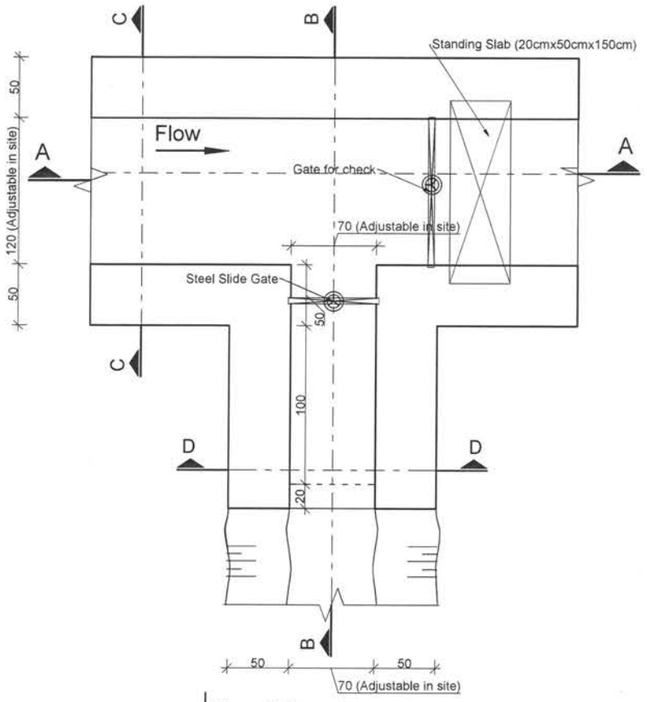
Note:

1. Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2. 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 and Canal Bed of all canal linings @ 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.



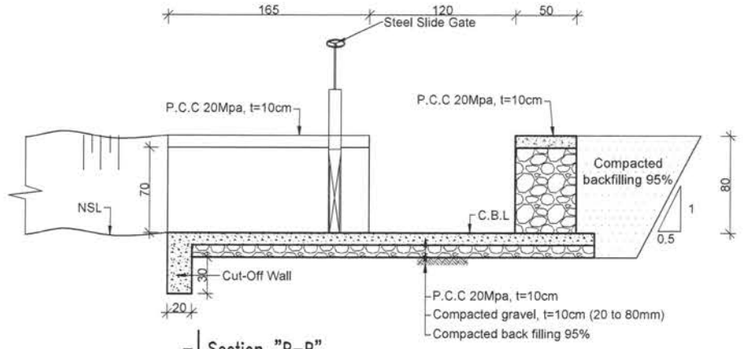
Detail "A"
REF. Construction Joint SCALE: 1:25

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	CANAL LINING PLAN, SECTIONS & DETAIL	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DARREN SAVELL ACTING CHIEF OF PARTY		SHEET NO. 26/32
						DATE:	DATE:	DATE: 05 MAR 2019	DATE:	



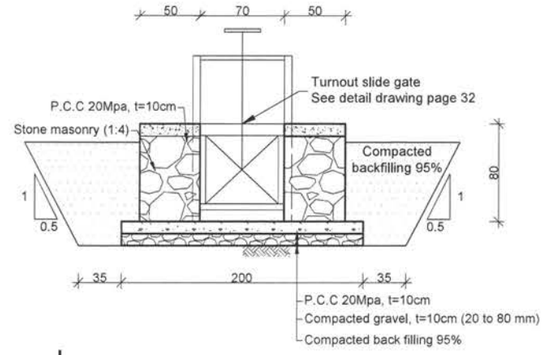
Plan of Turnout

REF. SCALE: 1:50



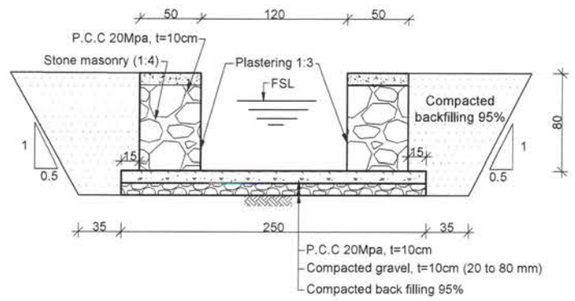
Section "B-B"

REF. SCALE: 1:50



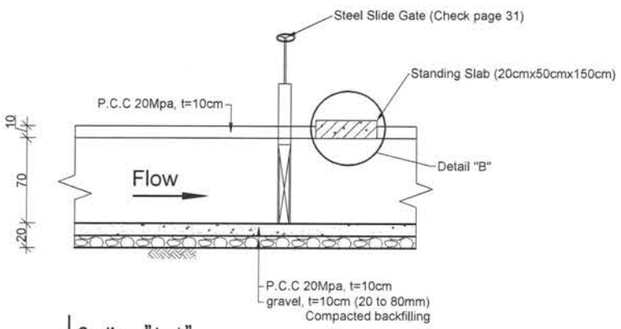
Section "D-D"

REF. SCALE: 1:50



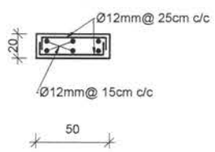
Section "C-C"

REF. SCALE: 1:50



Section "A-A"

REF. SCALE: 1:50



Detail "B"

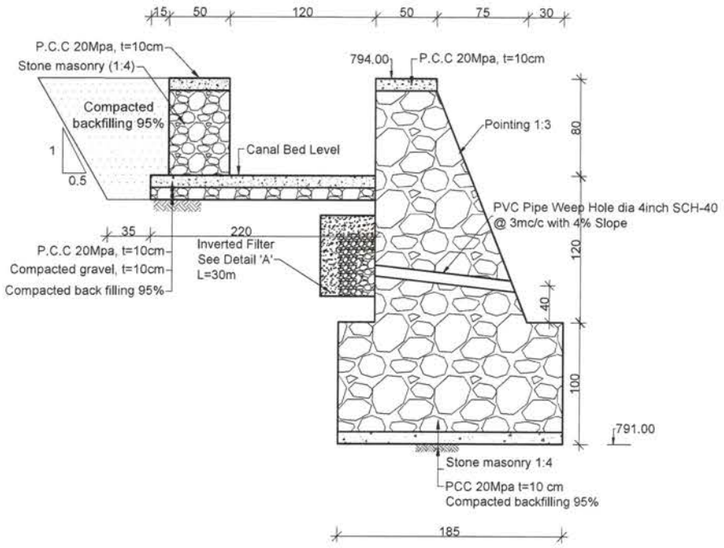
REF. SCALE: 1:50

Note:

1. Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2. 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.

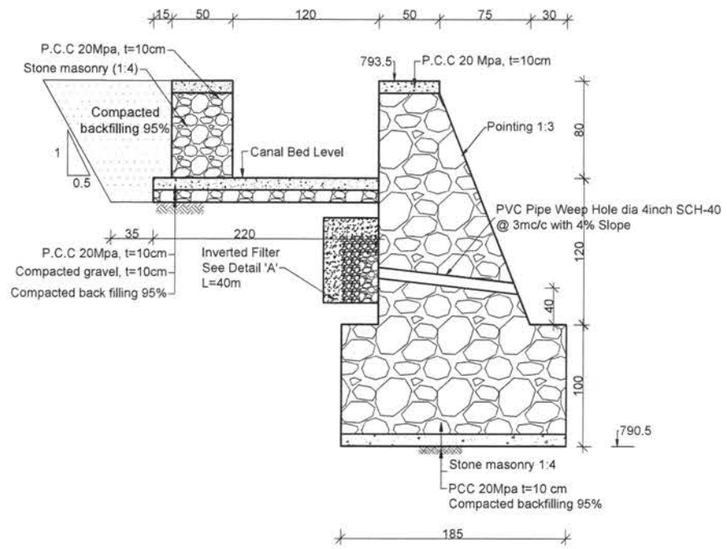
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	TURN OUT PLAN, SECTIONS & DETAIL	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DARREN SAYWELL ACTING CHIEF OF PARTY		27/32
						DATE:	DATE:	DATE: 5 MAR 2016	DATE:	

FOR



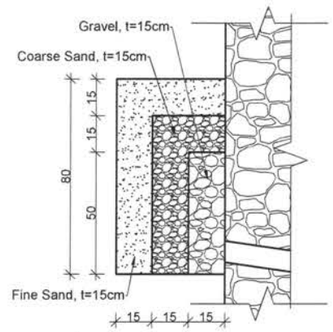
Retaining Wall, ST: 0+520 L=30m

REF. SCALE: 1:50



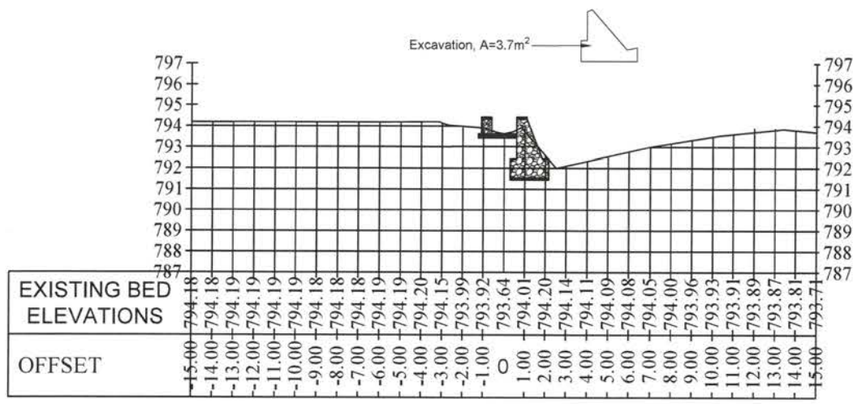
Retaining Wall, ST: 0+590, L=40m

REF. SCALE: 1:50

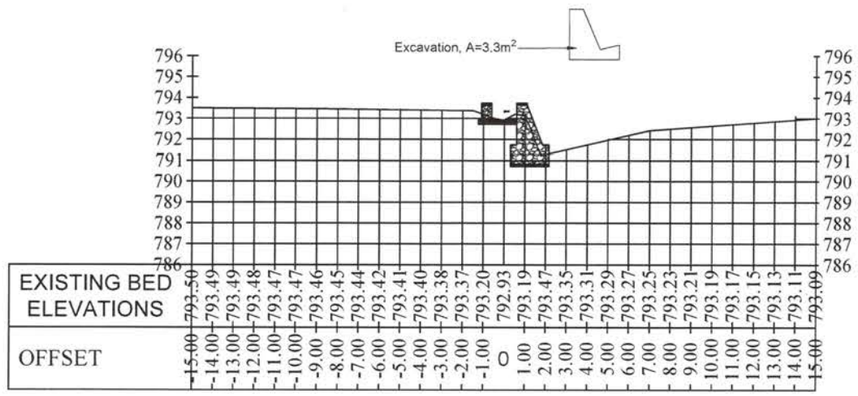


DETAIL "A"

REF. INVERTED FILTER SCALE: 1:25



STATION: (520 TO 550)



STATION: (590 TO 630)

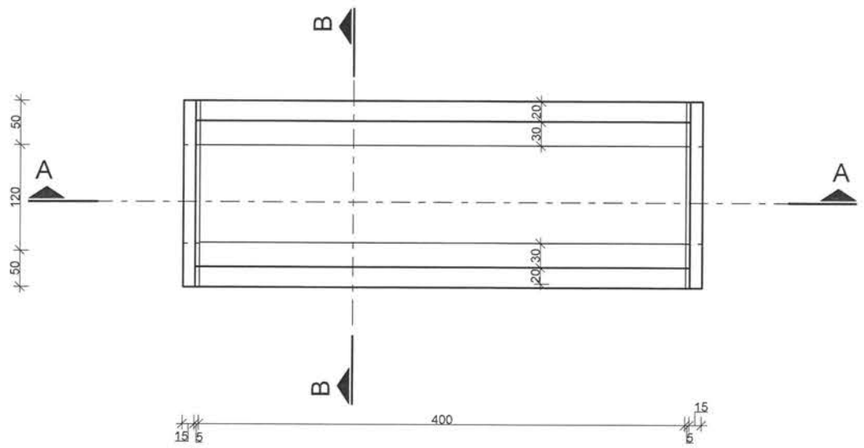
Note:

1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevatior
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: 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.
11:The construction joints are recommended after each segment of 30M length of stone masonry along
12: Gravel: Material passing a 75-mm (3-inch) sieve and retained on a 4.75-mm (No.4) sieve.
13: Coarse Sand: Material passing a 4.75-mm sieve (No. 4) and retained on a 2.00-mm (No.10) sieve.
14: Fine Sand: Material passing a 0.475-mm (No. 40) sieve and retained on a 0.075-mm (No. 200) siev

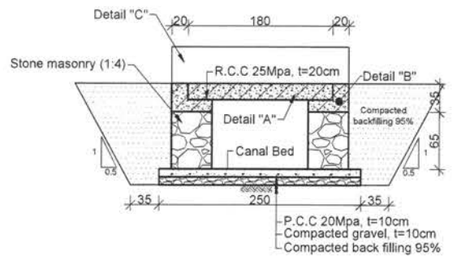
USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	RETAINING WALL PLAN, SECTIONS & DETAIL	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DARREN SAYWELL ACTING CHIEF OF PARTY		28/32
						DATE	DATE	14 MAR 2019	DATE	

TABLE-SLAB CULVERT

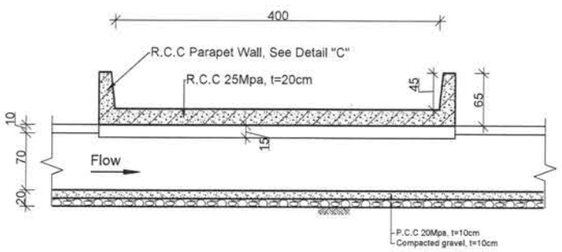
No	Station	Culvert Detail	Dimensions (M)			GPS Coordinate		Bed Elevation	Remarks
			Length	Height	Width	North	East		
1	0+280	Deck Slab Culvert	4	0.80	1.2	36.42979	67.90374	794.85	
2	1+040	Deck Slab Culvert	4	0.80	1.2	36.43439	67.9038	790.77	
3	1+715	Deck Slab Culvert	4	0.80	1.2	36.44315	67.90768	788.63	
4	2+331	Deck Slab Culvert	4	0.80	1.2	36.44453	67.90807	785.45	



Plan of Slab Culvert
REF. St: 0+280 SCALE: 1:75



Section "B-B"
REF. St: 0+280 SCALE: 1:75

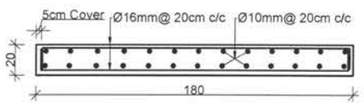


Section "A-A"
REF. St: 0+280 SCALE: 1:75

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

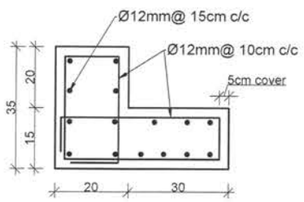
Member	Bar Diameter	Shape Code	No. of Bars	Segment length (mm)					Total length - *varies* (metres)
				a	b	c	d	e	
Deck	16	a b a	5	150	1700				10.00
Deck	16	a b a	5	150	1700				10.00
Deck	10	a	5	3900					19.5
Deck	10	a	5	3900					19.5
Bearing Shelf	12	c b e d	10		340	240	328	216	9.340
Bearing Shelf	12	d c e b	10		440	90	416	66	10.12
Bearing Shelf	12	a	13	1000					13.000
Parapet Wall	8	a	13	1000					13.000
Parapet wall	12	e b a d c	16	600	400	200	140	100	23.04

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

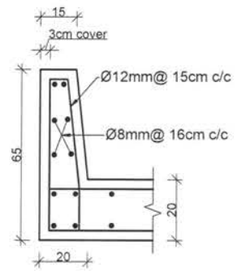


Detail "A"
REF. St: 0+280 SCALE: 1:50

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



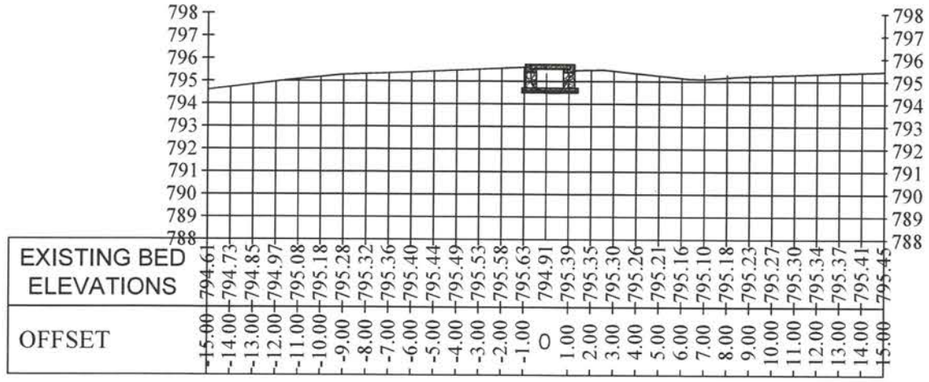
Detail "B"
REF. St: 0+280 SCALE: 1:25



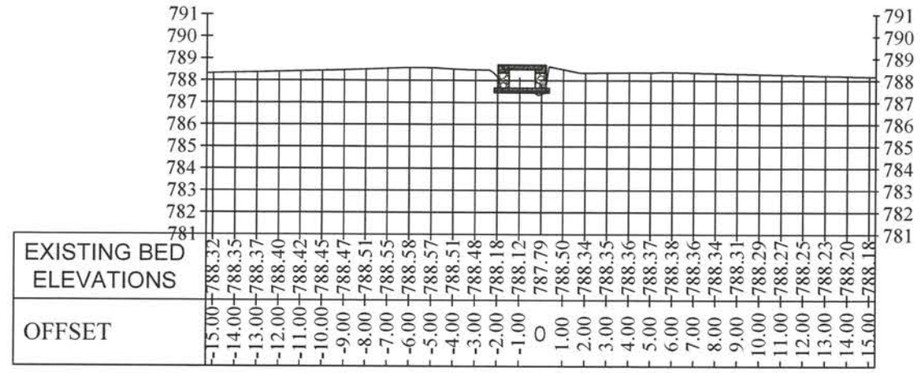
Detail "C"
REF. St: 0+280 SCALE: 1:25

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	MAIL/DAIL, APPROVAL	SHEET NO.
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	SLAB CULVERT STRUCTURE PLAN, SECTIONS & DETAIL	SWIM	RAFIULLAH RAHMANI ENINGEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE: For	DARREN SAYWELL ACTING CHIEF OF PARTY DATE: 05 MAR 2019	DATE:	29/32

Cross Section
0+280.00

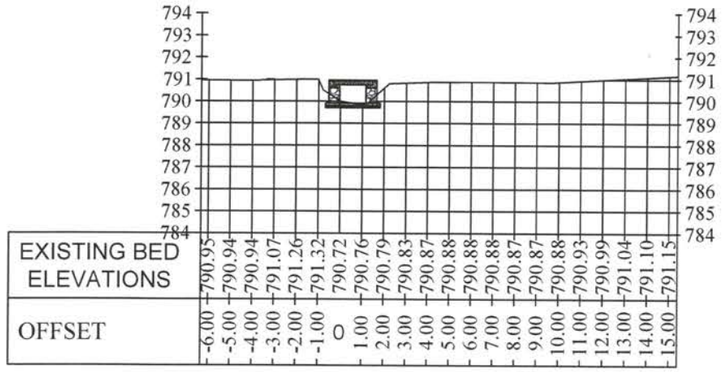


Cross Section
1+715.00

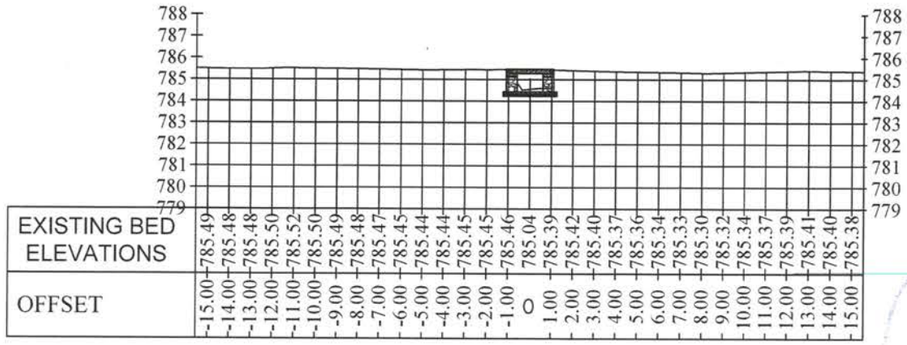


ISSUED FOR CONSTRUCTION
Date: 17 FEB 2019
Drako Reyes
Licensed Engineer

Cross Section
1+040

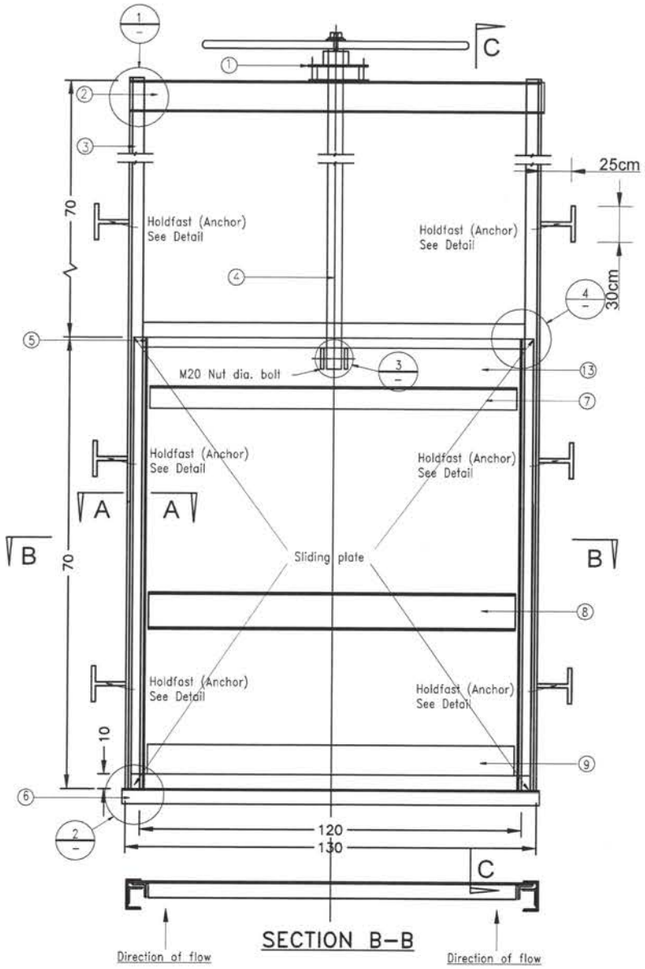


Cross Section
2+331.00

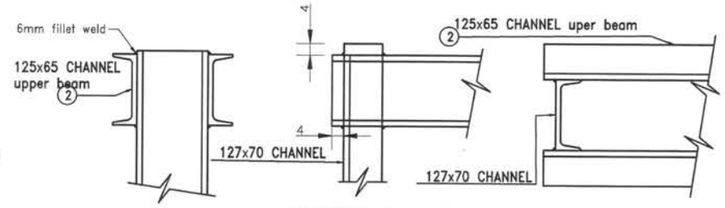


USAID FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT SWIM	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 30/32
		ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	SLAB CULVERT SURVEY SECTIONS	SWIM	RAFIULLAH RAHMANI ENINGEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DRAKO REYES CHIEF OF PARTY		
						DATE:	DATE:	DATE: 30 JAN 2019	DATE:	

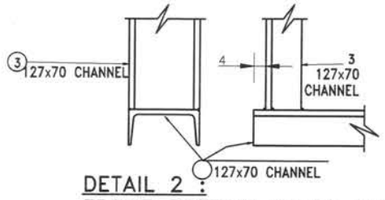
Steel Slide Gate Detail, Size (120*100)cm For Check Structure



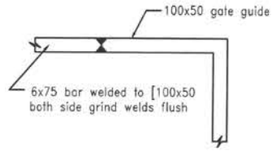
SECTION B–B



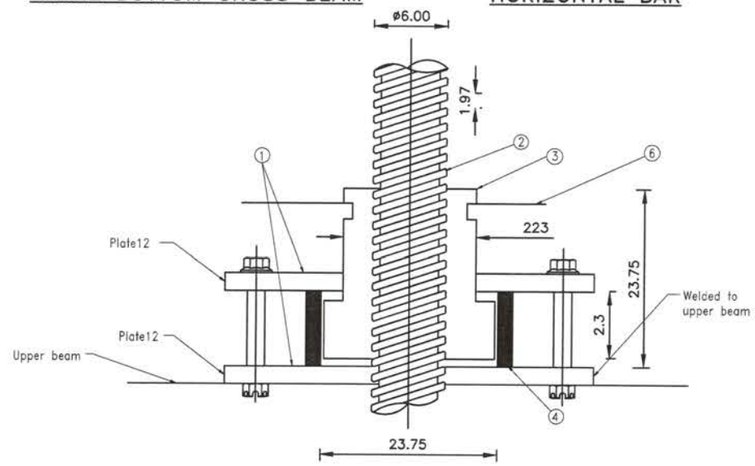
DETAIL 1:
FRAME CROSS BEAM(TOP)

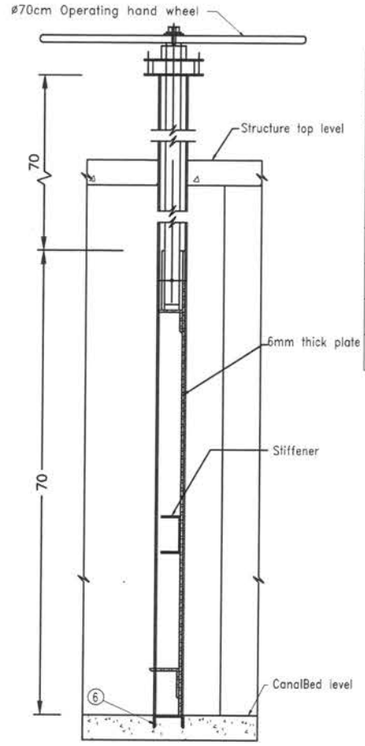


DETAIL 2 :
FRAME BOTTOM CROSS BEAM



DETAIL 4:
HORIZONTAL BAR

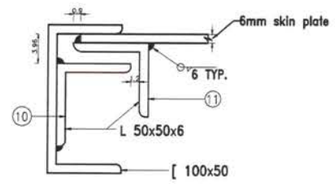




SECTION C–C

TABLE (2)
LIFTING COMPONENT

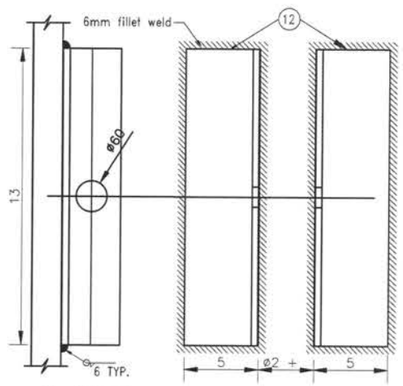
Item	Description
1	Upper&lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts , nuts
6	ø700mm handle



SECTION A–A

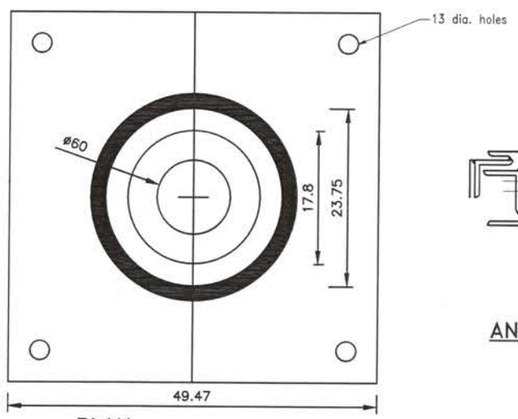
NOTE:

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.

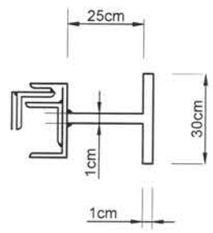


SECTION ELEVATION

DETAIL 3:
LIFTING BRACKETS



PLAN
THRUST BEARING



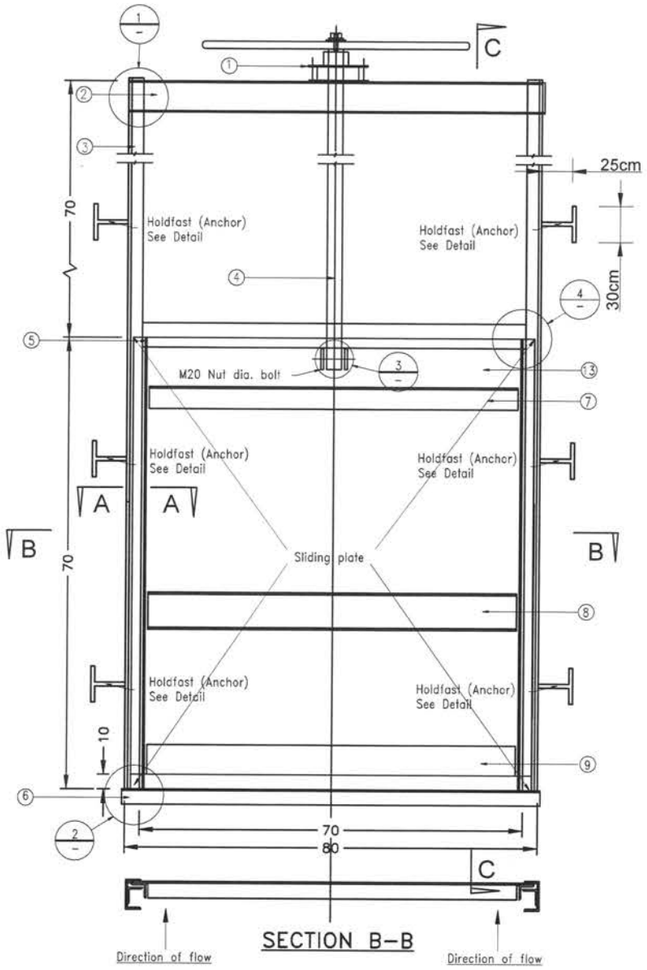
ANCHOR DETAIL

TABLE(1)
GATE COMPONENT

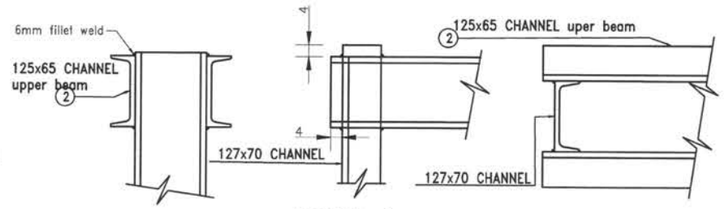
Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam)
7	Stiffener L 75x75x6
8	Stiffener [100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
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	MAIL/DAIL APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	INTAKE STRUCTURE STEEL SLIDE GATE	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST)	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DARREN SAYWELL ACTING CHIEF OF PARTY		SHEET NO. 31/32
						DATE:	DATE:	14 MAR 2019	DATE:	

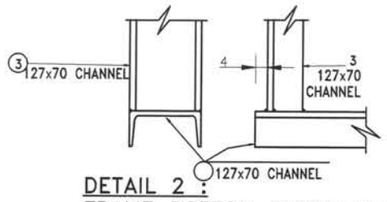
Steel Slide Gate Detail For Turnouts Control



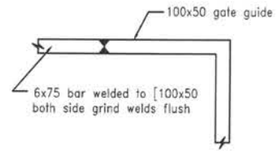
SECTION B–B



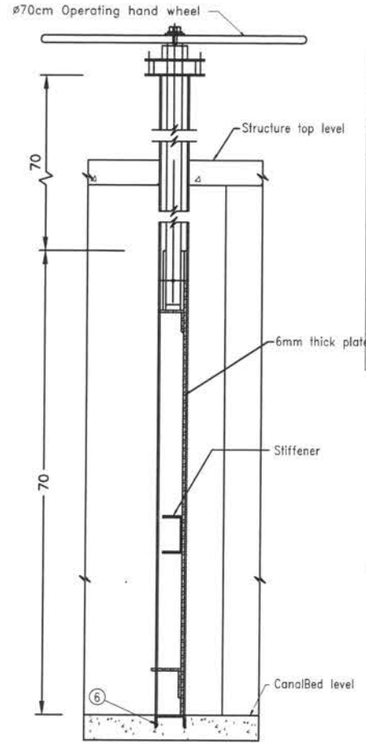
DETAIL 1:
FRAME CROSS BEAM(TOP)



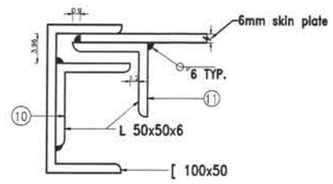
DETAIL 2 :
FRAME BOTTOM CROSS BEAM



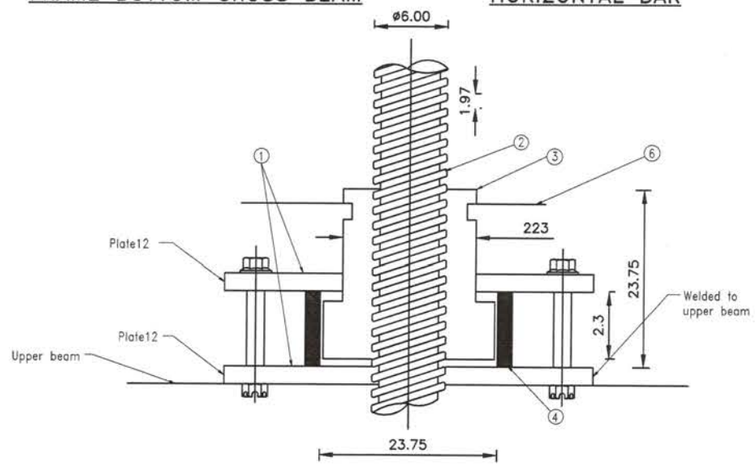
DETAIL 4:
HORIZONTAL BAR



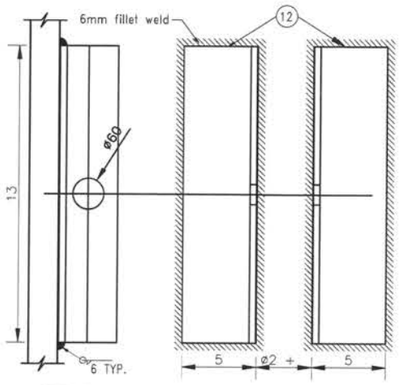
SECTION C–C



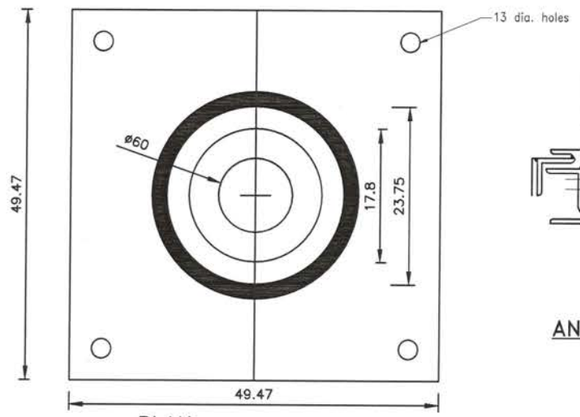
SECTION A–A



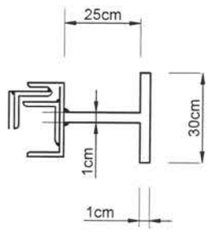
DETAIL 3:
LIFTING BRACKETS



SECTION ELEVATION



PLAN
THRUST BEARING



ANCHOR DETAIL

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

TABLE(1)
GATE COMPONENT

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11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)

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.

	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	
USAID FROM THE AMERICAN PEOPLE	SWIM	ASYABAD SECONDARY CANAL	DISTRICT: HAZRAT SULTAN PROVINCE: SAMANGAN	TURNOUT STRUCTURE STEEL SLIDE GATE	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE:	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE:	DARREN SAYWELL ACTING CHIEF OF PARTY DATE: 14 MAR 2010	DATE:	SHEET NO. 32/32