



Community Based Agriculture and Rural Development

TOTAK SIDE INTAKE
BADGHIS-020

Sub Project DRAWINGS

2020

Sheet		SMB/BDG-020-01	
Reference		TOTAK-SIDE-INTAKE-IRRIGATION-PROJECT	
Date		21/07/2018	
Project No.		SMB/BDG-020	
Scale		1:1	
Designed By		JAWANSHER DAND	
Reviewed By		FARUJ FAYAZI	
Checked By		SOLID TORSON	
Sheet Title		COVERPAGE	
Project Name and Address		TOTAK-SIDE-INTAKE-IRRIGATION-PROJECT	
Coverpage		COVERPAGE	
Ministry of Agriculture and Livestock		Community Based Agriculture and Rural Development (CBARD)	

LIST OF DRAWINGS

S.#		DRAWING NO.
1	COVER SHEET	CBARD-BDG-025/001
2	DRWINGS LIST	CBARD-BDG-025/002
3	LEGEND AND ABBREVIATIONS	CBARD-BDG-025/003
4	TECHNICAL SPECIFICATION	CBARD-BDG-025/004
5	PITAW PREOTECTION WALL PLAN VIEW AND SECTION DETAILS	CBARD-BDG-025/005
6		CBARD-BDG-025/006

FEDERAL REPUBLIC OF BURUNDI MINISTRY OF AGRICULTURE AND LIVESTOCK Community Based Agriculture and Rural Development (CBARD)	
Sheet Title COVERPAGE	Sheet Location COVERPAGE
Prepared By UWASHIRI OMBI	Checked By FREDERICK Approved By YVONNE Valid URBAN
Project Name and Address COMMUNICATIVE-REGIOTOURISME	
Sheet Reference SBARD-BDG-025-001	Date 21/07/2018 Scale 1:1

ABBREVIATION:-

	Center Line
	Direction of flow
	Dry Stone Pitching/Section
	Grouted Stone Masonry/Pitching Section
	Brick Masonry
	P.C.C Block
	Gabion
	Gabion Section
	Wash/River Bed Material
	Geotextile Mattress
	Plain Cement Concrete
	Reinforced Cement Concrete
	Bank Protection
	Compacted Soil
	Hill
	H.F.L / M.W.L
	Elevation of the point is 100 m
	Elevation of the point (100m) in Plan view
	Traverse Station
	Bench Mark
	Lined Slope
	Earthen Slope
	Ground Level
	Stone Masonry

Av	AVERAGE
BM	BENCH MARK
B	WIDTH
C/C	CENTER TO CENTER
D	DEPTH OF WATER
DRG	DRAWING
DIA , ϕ	DIAMETER
D.W.L	DESIGN WATER LEVEL
D/S	DOWNSTREAM
EL.	ELEVATION
F.B	FREE BOARD
HFL	HIGH FLOOD LEVEL
HT.	HEIGHT
H.G.L	HYDRAULIC GRADE LINE
KM , km	KILOMETERE
M ,m	METER
Chkd	CHECKED
Apprvd	APPROVED
M . W .L	MAXIMUM WATER LEVEL
MIN	MINIMUM
No(s)	NUMBER(S)
N.G.L	NATURAL GROUND LEVEL
P.C.C	PLAIN CEMENT CONCRETE
R.C.C	REINFORCED CEMENT CONCRETE

ST	STATION
THK	THICKNESS
TYP	TYPICAL
HFL	HIGH FLOOD LEVEL
U/S	UPSTREAM
YRS	YEARS
Q	DESIGN DISCHARGE
W.L	WATER LEVEL

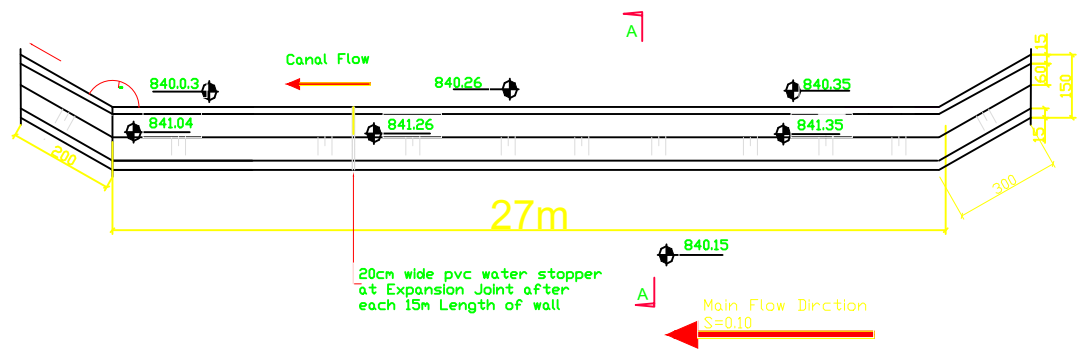
DESIGNER: DR. S. S. SINGH MINISTRY OF AGRICULTURE AND LIVESTOCK Community Based Agriculture and Rural Development (CBARD)	
Checked By: S. S. SINGH	COVERPAGE COVERPAGE
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TECHNICAL SPECIFICATIONS

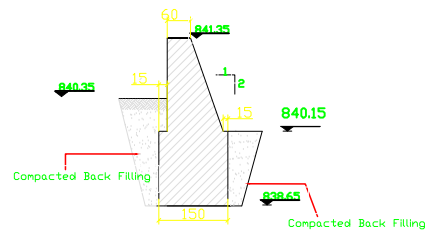
- 1- A maximum of 25% stone with a maximum stone size of 20cm to be used in Plum/ Mass Concrete . The concrete Mark shall be M150 or as specified in Design.
- 2- A good quality Stone for stone masonry, mass concrete, gabion and All stone related construction work should be of and approved by The Engineer.
- 3- All Grouted stone pitching in stilling basin and foundations should be with ratio of 1:3.
- 4- All Masonry cutoff wall shall be with 1:4 Cement Sand Mortar or as specified on the drawing.
- 5- Bitumen coating should be used in all construction / expansion joints.
- 6- The Ratio for Mark of Plain cement concrete as specified on the drawings.
- 7- Backfilling material should be properly tested and selected to be suitable as per standard practice.
- 8- For backfilling maximum thickness of each loose soil layer should not more than 15 cm.
- 9- Standard Compaction tests should be carried out for the backfilling.
- 10- The percentage of compaction should be not less than 95% of the maximum dry density.
- 11- All Quality control tests should be carried out by the Contractor in a specified laboratory as per the attached testing plan.
- 12- Construction joints for walls should be provided as (15-20)m centre to centre.
- 13- Stone size for gabion shall range from (20-30) cm.
- 14- Galvanized iron wire of specified thickness (3mm) should be properly woven and knotted together to form the required mesh in hexagonal / rectangularshape of size (6-8)cm for gabion basket and & gabion mattress to fabricate gabion boxes to the satisfaction of the Engineer.
- 15- Principal wire along the gabion edges (selvedges) for Gabion boxes should be of Galvanized Iron having minimum thickness of 4mm
- 16- Gabion Galvanized Iron wire tensile strength should be 350-575 N/mm² & quantity of zinc should be 275g/m² for 3mm wires and 290 g/m² for 4mm gabion wires. Gabion wire sample shall be tested by the contractor in presence of CBARD engineer to ensure it has required strength and zinc coating layer prior to fabrication of sheets. Crashed Mountain Stone shall be used for all gabion works , round stones are not permissible at all.
- 17- All PCC under footings to have cement, sand and aggregate as specified on the drawings.
- 18- Reinforcement yield stress fy shall not be less than 2500 kg/cm².
- 19- Concrete design should be based on a compressive strength of fc =200 kg/cm² or 150 Kg/ cm² as specified on the draqwings & high quality crashed gravel shall be used for all RCC works.
- 20- Weight per unit volume of concrete W=2400 kgf/m³
- 21- Sand or fine aggregate shall be free from salt, alkali, calcium sulphate or vegetation and it shall not contain more than 0.5 percent by weight of clay.
- 22- Aggregate:- Coarse aggregate shall consist of crushed gravel with the max. size of 20mm.
- 23- The maximum slump for concrete should be between (5-7.5) cm.
- 24- To increase the workability of the concrete provide the chemical admixture (Super plasticizer)
- 25- Water used for concrete mixture and concrete curing shall be from a source approved by the Engineer and at the time of use shall be free from contaminants.
- 26- Concrete compaction should be done by using concrete vibrator at the time of pouring in such a way to form a solid compact concrete.
- 27- Concrete curing should be continued for 14 days.
- 28- During Cold weather concreting should be stopped or the contractor has to consider cold weather concreting procedure as accepted by the engineer.
- 29- Concrete shuttering/formwork should be of Steel type.
- 30- Concrete shuttering can be removed as per below minimum duartion:
Side of beams,walls,columns 16-24 hours
Forms from beneath the slabs(spaning upto 6m) 14 days
Forms from beneath the slabs(spaning above 6m) 21days
- 31- For all concrete works (PCC , RCC , Mass Concrete , Mortar) concrete shall be mixed by Machine , hand mixing is not permissible unless the volume of concrete is less than 1M³.
- 32- The contractor shall have an experienced site engineer full time on the project site for quality control purposes , execution of works without presence of site engineer is not acceptable and payable by CBARD.
- 33- Sample of all materials shall be approved by the CBARD engineer before the contractor use for the project , otherwise , CBARD engineer is authorized to reject the executed works.
- 33- All construction works shall be carried out with close coordination and prior approval of CBARD engineer , otherwise CBARD engineer is authorized to reject the executed works,contractor has to re-do it.

GOVERNMENT OF ASSAM MINISTRY OF AGRICULTURE AND LIVESTOCK Community Based Agriculture and Rural Development (CBARD)	
Name of the CONTRACTOR Name of the CONTRACTOR	Name of the CONTRACTOR Name of the CONTRACTOR
Approved by CHAIRMAN CBARD Approved by CHAIRMAN Approved by CHAIRMAN Approved by CHAIRMAN	Approved by CHAIRMAN Approved by CHAIRMAN Approved by CHAIRMAN Approved by CHAIRMAN
Date of Issue of Certificate DATE OF ISSUE OF CERTIFICATE	
Date of Submission DATE OF SUBMISSION	Date of Submission DATE OF SUBMISSION

TOTAK SIDE INTAKE PLAN VIEW



TOTAK SIDE INTAKE SECTION DETAIL



SECTION A - A

ISLAMIC REPUBLIC OF AFGHANISTAN MINISTRY OF AGRICULTURE AND LIVESTOCK Community Based Agriculture and Rural Development (CBARD)	
SHEET TITLE SITE#1-SECTION	SHEET NUMBER SITE#1-SECTION
DESIGNED BY AWANSHER OMID	CHECKED BY FATEH KAZEMI
PROJECT NAME AND ADDRESS WAKHAN RIVER IRRIGATION PROJECT PROTECTION	DRAWN BY FATEH KAZEMI
SHEET NO. 01.02.01B	SCALE 1:1