

**UNITED NATION DEVELOPMENT PROGRAM
UNDP**

**Community Based Agriculture and Rural Development - Access to Licit
Livelihoods (CBARD-ALL) in Eastern region.**

Reference No. UNDP/AFGRPA/2024/01/29]



**LAGHMAN PROVINCE QARGHAYEE, DISTRICTS
LAMATI, KAMALPOOR, HUSSAIN ABAD, SANGERI
CANAL REHABILITATION**

CONSTRUCTION DRAWINGS

DATE: SEPTEMBER-2024




ACTION AID AFGHANISTAN (AAA)

SL#	DESCRIPTION	DRAWING/SHEET NO.
01	TITLE SHEET	000
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06	PROPOSED SITE PLAN OF OF STRUCTURES #11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29 OF Qarghayee DISTRICT	011 to 029
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LEGEND:-

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:

ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION

SUB-PROJECT:
REHABILITATION OFKAMAL POOR &SANGERICANAL

DRAWING: List of Key Drawing

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE:

DRAWING PAGE NO:001

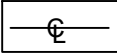
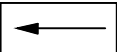




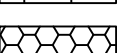
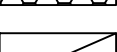
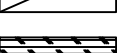
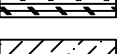
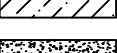

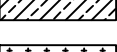
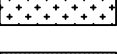

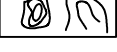
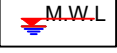

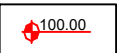


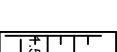
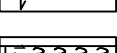
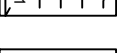
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Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA NGR Technical Team	AAA NGR T..I Team
Reviewed By:	AAA Technical Team	AAA Technical Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024

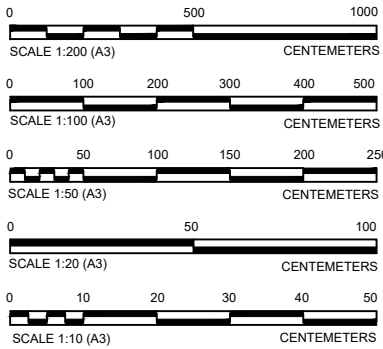
LEGEND:-

	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 Pitching/Rip Rap

Av	AVERAGE
BM	BENCH MARK
B	WIDTH
C/C	CENTER TO CENTER
D	DEPTH OF WATER
DRG	DRAWING
DIA , Ø	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	METRE
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

ABBREVIATION:-

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



LEGEND:-

FUNDED BY:
United Nation Deveplemment Proggmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29]**

SUB-PROJECT:
Nangarhar Province Khogyani District
Ahmad Khill Canal Canstruction

DRAWING:
Legends

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: NGR-KHGN-01,Str-1

DRAWING PAGE NO.003

REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024



GENERAL SPECIFICATIONS

- 1- All Mass Concrete Should be (40% crushed stone with 60% concrete the maximum size of stone shall be 20cm) with ration 1:2:4 of the concrete.
- 2- The stone for mass concrete , stone masonry and grouted stone pitching Should be good quality and approved by engineer.
- 3- All Grouted stone pitching in stilling basin and foundations Should be with ratio of 1:3.
- 4- All Masonry Wall Should be with mortar 1:3.
- 5- Bitumen Should be used in all construction joints.
- 6- All Plain Cement concrete Should be 1:2:4 or as specified
- 7- All tests which are needed for selection of the well graded soil Should be done before any backfilling.
- 8- In all backfilling the max. thickness of each layer Should be 15 cm.
- 9- The compaction tests Should be done during the backfilling.
- 10- The percentage of compaction Should be not less than 95%.
- 11- All the tests Should be done by an organization which is accepted by the client.
- 12- Provide construction joint for stone masonry wall at 10-16m.
- 13- Stone for gabion Should be good quality.
- 14- Stone size for gabion Shall be range 20 cm -30 cm.
- 15- Woven using galvanized gabion wire.
- 16- Principal wires along the gabion edges(selvedges) to be strong.
- 17- Tensile strength of wire Should be 38-50 kg/mm².
- 18- Galvanized gabion wire used for mesh panel have a diameter of 4mm.
- 19- Galvanized gabion wire used for frame of gabion have a diameter of 4mm.
- 20- Mesh size for gabion basket 8x10cm and for mattress 8x10cm Should follow Macaffere Standard

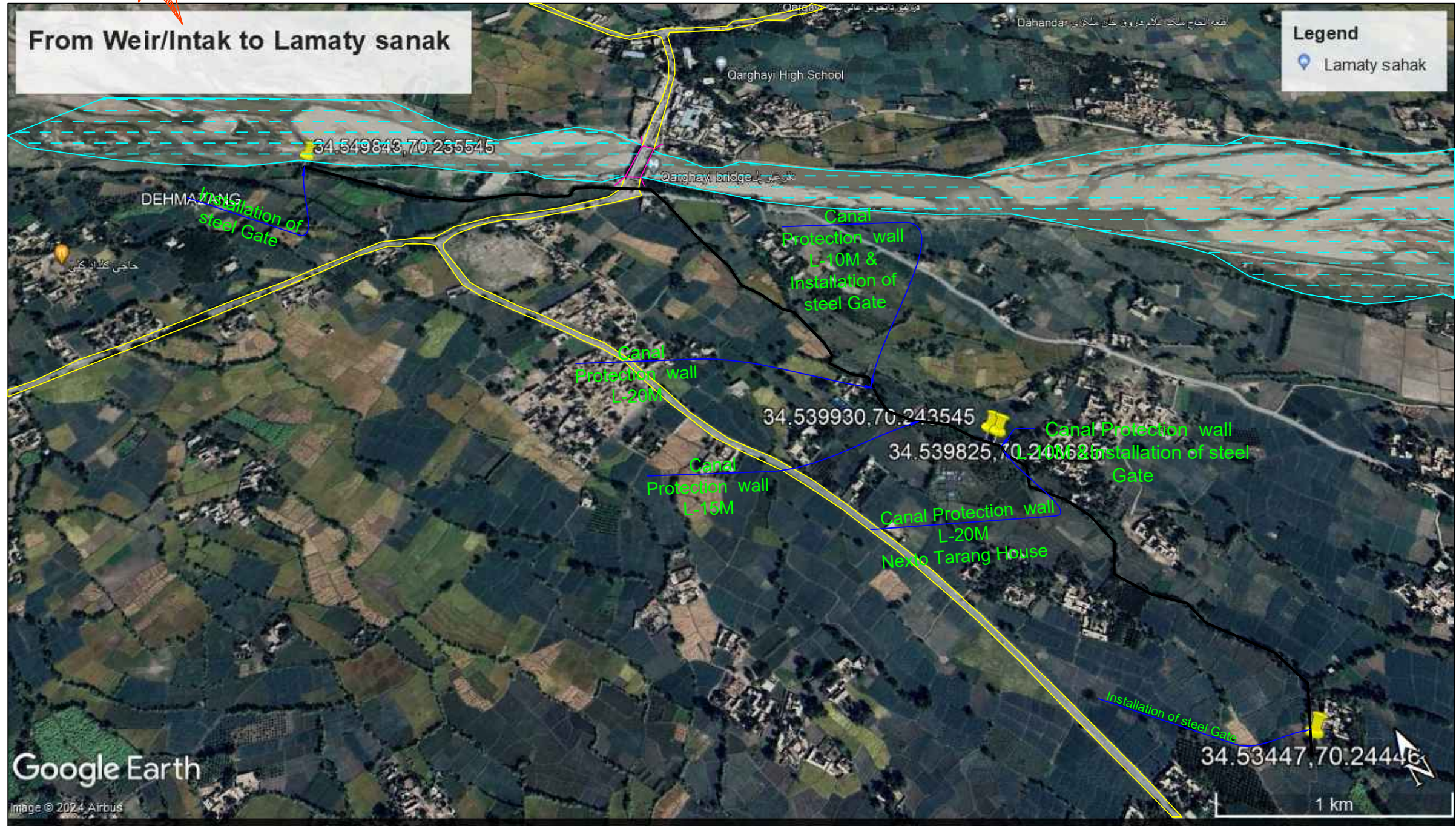
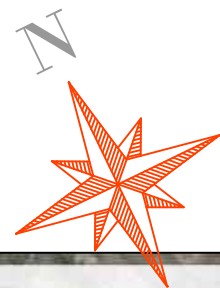
- 21- All P.C.C under footings to have cement,sand and agg. ratio 1:2:4 or as specified
- 22- The Reinforcement yield stress f_y Shall not be less than 3000 kg/cm² or as specified
- 23- Concrete design based on a compressive strength of $f_c = 250$ kg/cm² or as specified
- 24- Weight per unit volume of concrete $W = 2400$ kgf/m³
- 25- Sand or fine aggregate Shall be free from salt,alkali,calcium sulphate or vegetable and it Shall not contain more than 0.5 percent by weight of clay.
- 26- Aggregate:- Coarse aggregate Shall consist of crush ed gravel with the max. size of 20mm.
- 27- The Max slump Should be between 5-7.5 cm.
- 28- To increase the workability of the concrete provide the chemical admixture (Supper plasticizer)
- 29- The water used for making and curing of concrete Shall be from a source approved by the Engineer and at the time of use Shall be free from polluting matter.
- 30- Concrete is poured and vibrate in such a way to form a solid compact concrete.
- 31- The concrete is to be cured for 14 days.
- 32- During the cold wether concreting Should be stop or the contractor has to consider the cold wether concreting procedure.
- 33- All Shuttering Should be from steel type.
- 34- Shuttering can be removed after :

Side of beams,walls,columns	16-24 hours
Forms from beneath the slabs(spaning up to 6m)	14 days
Forms from beneath the slabs(spaning above 6m)	21days
- 35- Steel bar overlap Should not be less than 60 Ø bar

LEGEND:-

FUNDED BY: United Nation Developement Proggmm		
IMPLEMENTATION PARTNER: ACTION AID AFGHANISTAN (AAA)		
		
PROJECT: CBARD ALL PROJECTS EASTERN REGION PROJECT CODE: : UNDP AFGRPA/2024/01/29]		
SUB-PROJECT: Nangarhar Province Khogyani District Ahmad Khill Canal Canstruction		
DRAWING: Key Elements		
PROJECT SYMBOL: CBARD ALL /AFG/EAST		
SUB-PROJECT CODE: NGR-KHGN-01,Str-1		
DRAWING PAGE NO:004		
REVISION NO: 1		
Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		
Drawing Scale: As Shown		Date:August. 2024

Qarghayee Distdrikt Lamatay / Kamalpoor Canal Scheme GIS MAP For CBARD ALL Project



LEGEND:-

- Proposed Canal ————
- Existing Asphalt Road ————
- Mountains Area ————
- Command Area ————
- River ————
- Desert ————
- Start point of Canal ————

FUNDED BY:
United Nation Development Program



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGSPA/2024/01/29**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Qarghayee/Lamatay GIS MAP

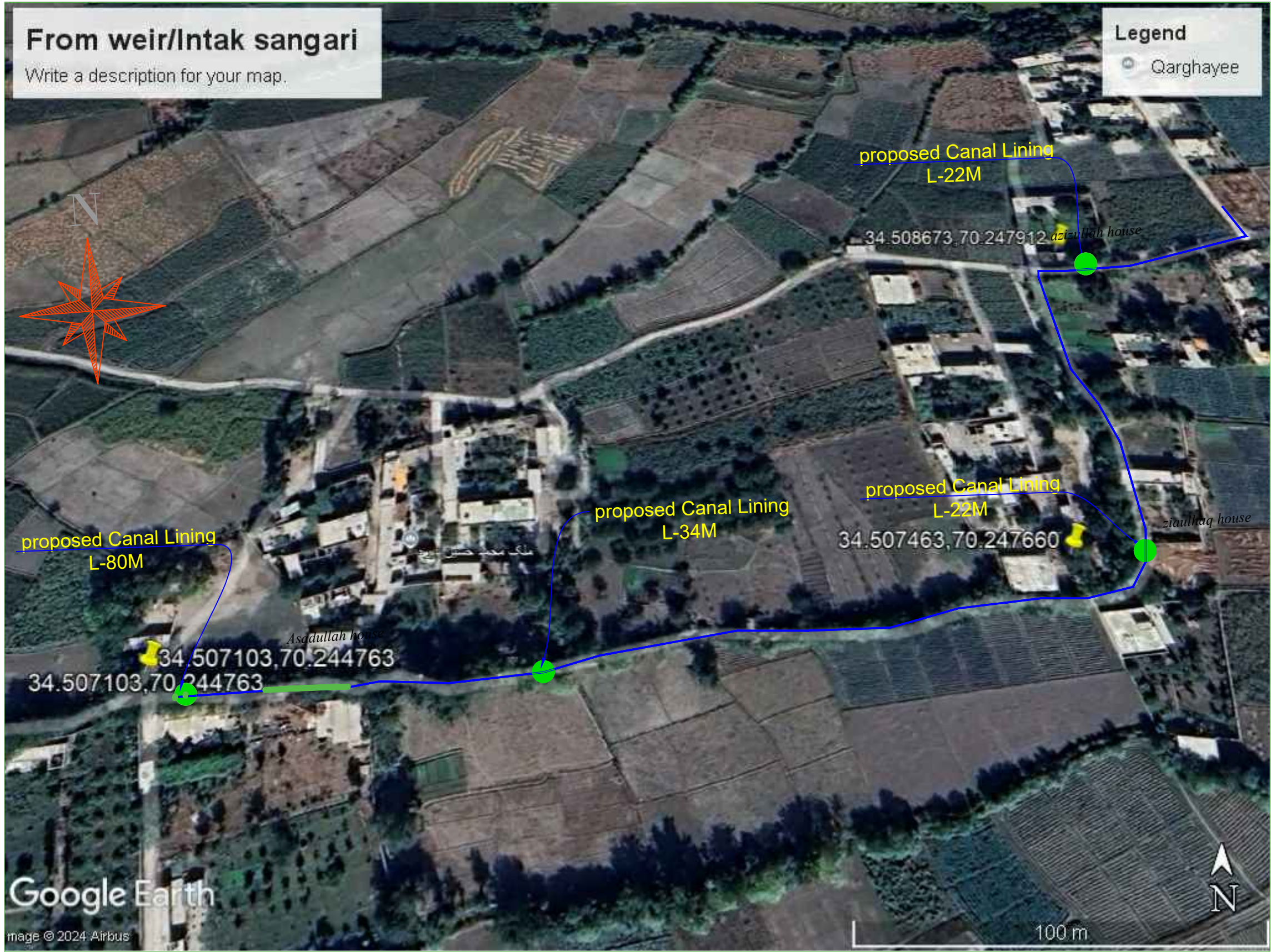
PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:005
REVISION NO: 1

Action Taken	Name	Designation
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Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024

Qarghayee Distdriect Lamatay / Kamalpoor Canal Scheme GIS MAP For CBARD ALL Project



LEGEND:-

- Proposed Canal ————
- Existing Asphalt Road ————
- Mountains Area ————
- Command Area ————
- River ————
- Desert ————
- Start point of Canal ————

FUNDED BY:
United Nation Development Proggmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri CanalStone Masonary Wall

DRAWING:
Qarghayee/Sangeri GIS MAP

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:006
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown Date:August. 2024

QarghyeeDistdrict Lamati,Kamal poor,Daraghar,Canal Site Plan

LEGEND:-

- Parent Canal ————
- Drainage Canale ————
- Branches ————
- Benchmark ————
- Temporary Benchmark ————
- Masjid ————
- Village ————
- House ————
- Village Road ————
- Cemetery ————
- Hand pump/Tube Well ————
- Cultivated are ————
- Garden ————
- E.R.W ————
- Proposed Culvert Type one ————
- Existing Culvert Type one ————
- Proposed Aqueduct-Spn-m ————

FUNDED BY:
United Nation Development Proggmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Qarghayee/ Kamal poor Canal Sit Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

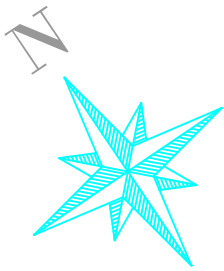
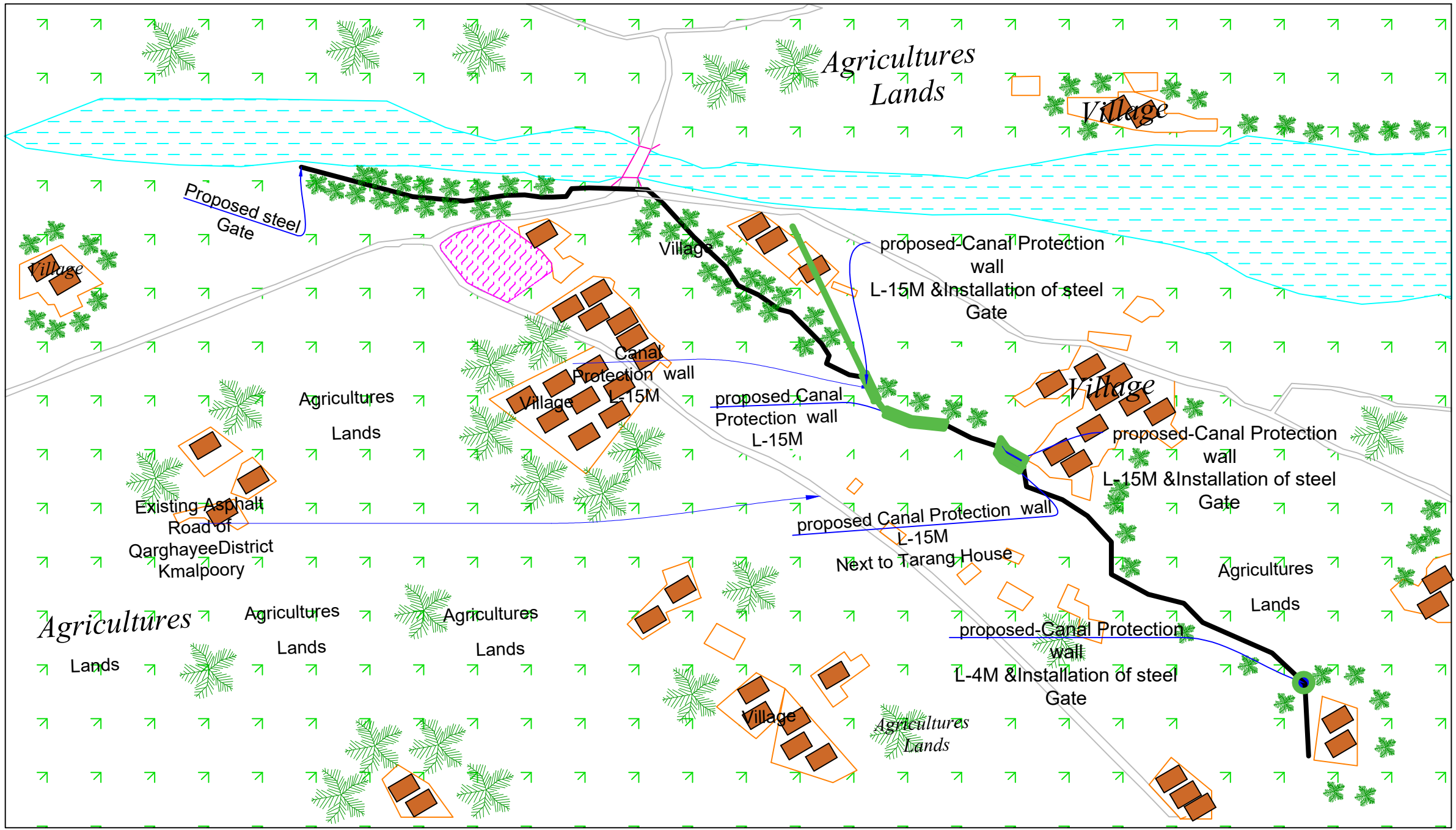
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REVISION NO: 1

Action Taken	Name	Designation
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Design/Drawn By:	AAA Design Team	AAA Design Team
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Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024



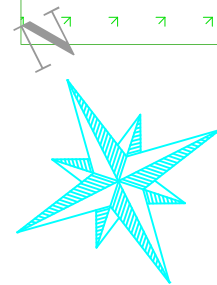
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Point #	Elevation	Northing	Easting	Description
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86	644.383	3823827.75	613368.37	bm0002

BENCH MARKS COORDINATES TABLE

















Point #	Elevation	Northing	Easting	Description
1	637.000	3822130	614214.4	bm1
2	637.548	3822129.59	614213.56	bm2
19	645.711	3822716.97	614114.51	bm01
20	645.711	3822720.27	614123.58	bm02

Qarghaye Distdrict Sangery Canal Site PLan



BENCH MARKS COORDINATES TABLE				
Point #	Elevation	Northing	Easting	Description
4	625.154	3819092.179	614268.756	bm1
86	625.225	3819088.323	614266.95	bm2
100	625.565	3819117.292	614313.195	bm3
99	627.686	3819266.961	614556.758	bm001
100	628.019	3819261.081	614541.093	bm002

LEGEND:-

- | | | |
|---------------------------|---|---|
| Parent Canal | — |  |
| Drainage Canale | — |  |
| Branches | — |  |
| Benchmark | — |  |
| Temporary Benchmark | — |  |
| Masjid | — |  |
| Village | — |  |
| House | — |  |
| Village Road | — |  |
| Cemetery | — |  |
| Hand pump/Tube Well | — |  |
| Cultivated are | — | |
| Garden | — |  |
| E.R.W | — |  |
| Proposed Culvert Type one | — |  |
| Existing Culvert Type one | — |  |
| Proposed Aqueduct-Spn-m | — |  |

FUNDED BY:
United Nation Development Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFRPA/2024/01/29]**

SUB-PROJECT:

Laghman Province Qarghayee District

Sangarei Canal Protection wall

DRAWING:

Qarghayee/ Sangarei Canal Sit Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

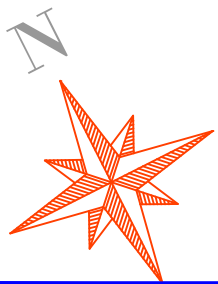
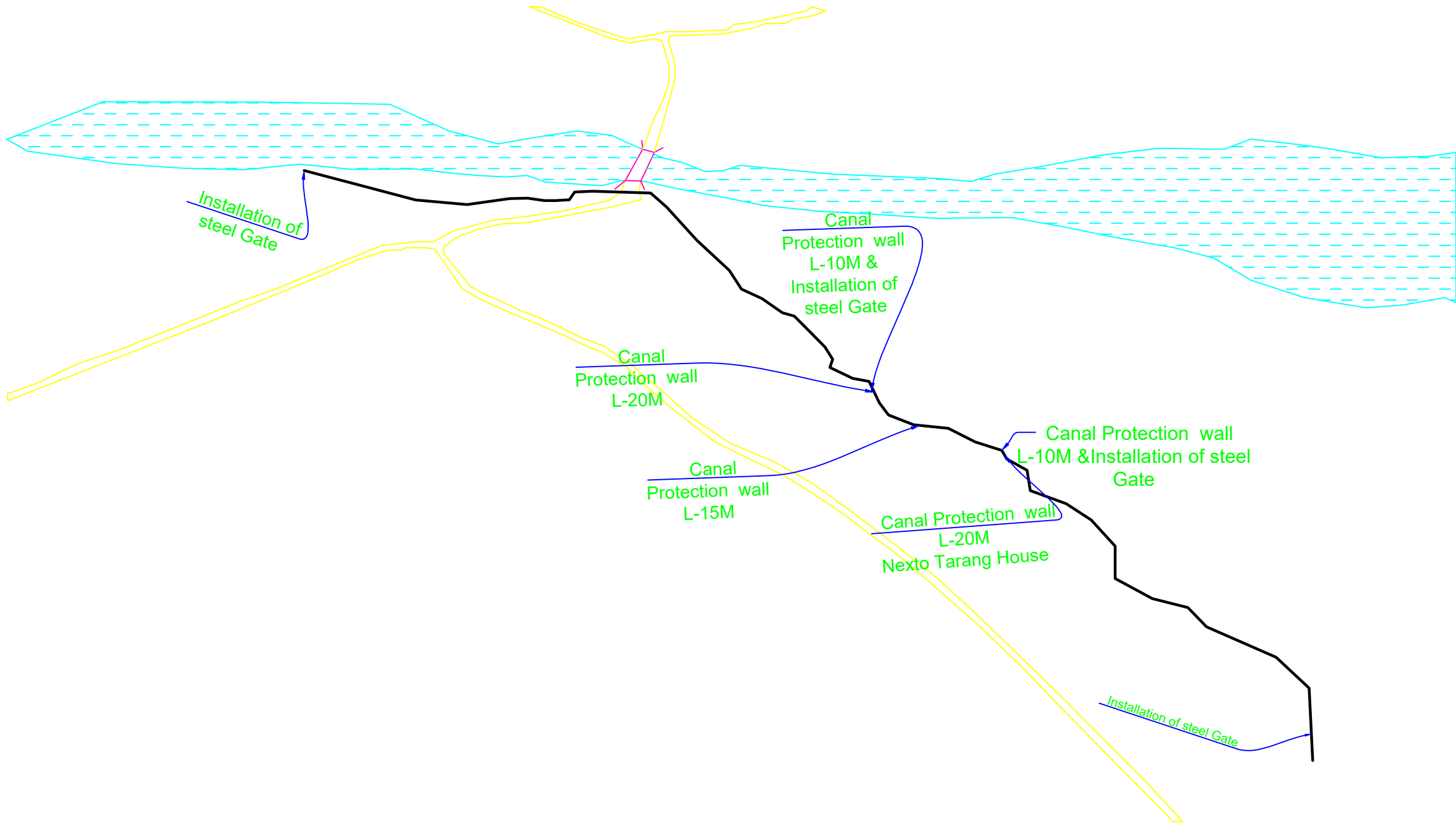
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REVISION NO: 1








Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown	Date: August. 2024
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Qarghayee Distdriect Lamatay / Kamalpoor GIS MAP For CBARD ALL Project



LEGEND:-

- Proposed Canal ———— 
- Existing Asphalt Road ———— 
- Mountains Area ———— 
- Command Area ———— 
- River ———— 
- Desert ———— 
- Start point of Canal ———— 

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IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGSPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Lamatay / Kamal poor GIS MAP First Page

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:009

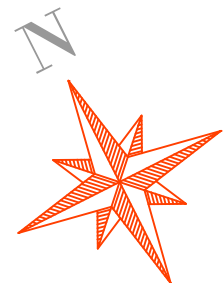
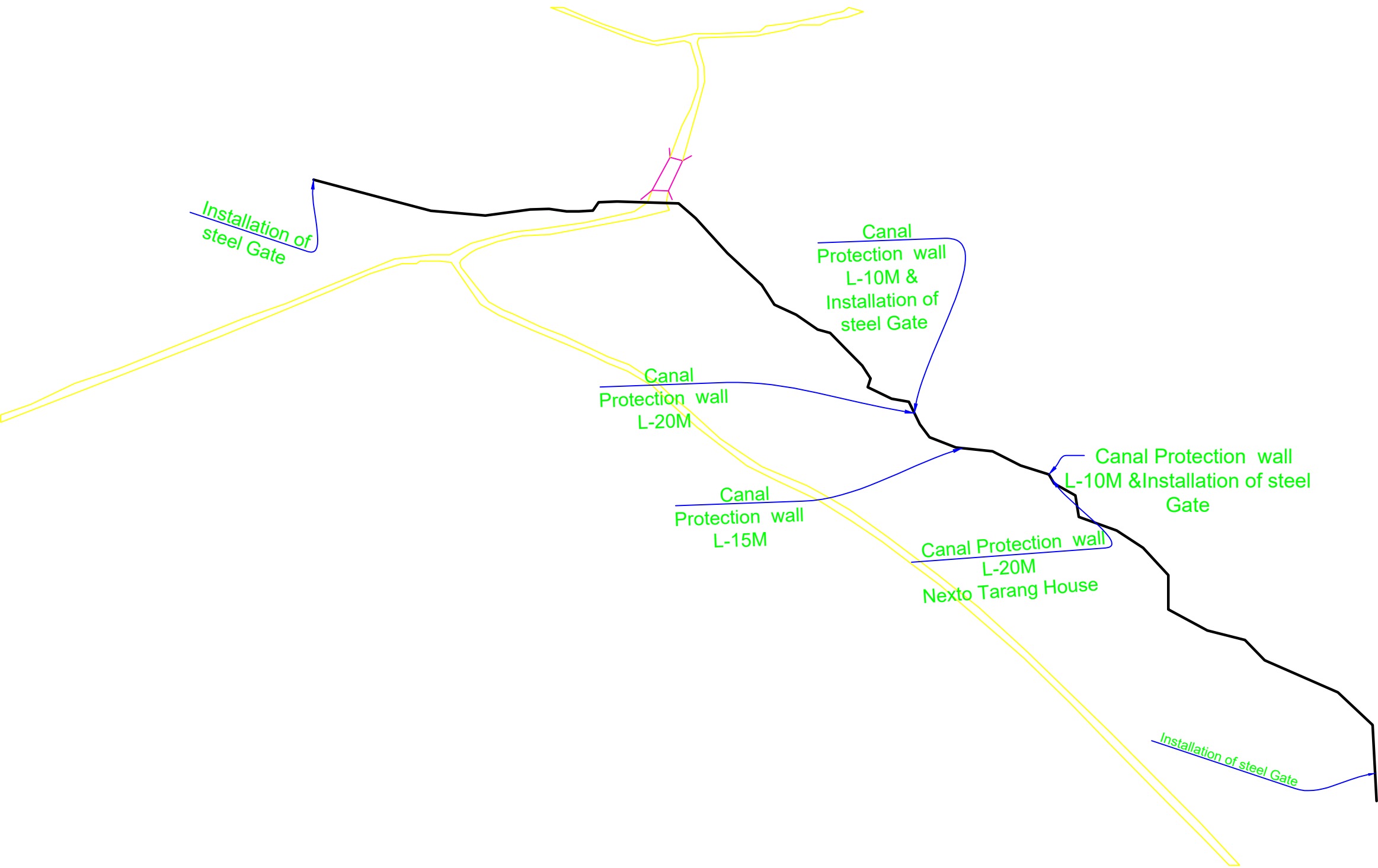
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Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024

Qarghayee Distdriect Lamatay/Kamal poor village Canal GIS MAP For CBARD ALL Project



LEGEND:-

- Proposed Canal ————
- Existing Asphalt Road ————
- Mountains Area ————
- Command Area ————
- River ————
- Desert ————
- Start point of Canal ————

FUNDED BY:
United Nation Development Proggmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Ahmad khil Dosrarak GIS MAP Second Page

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:010

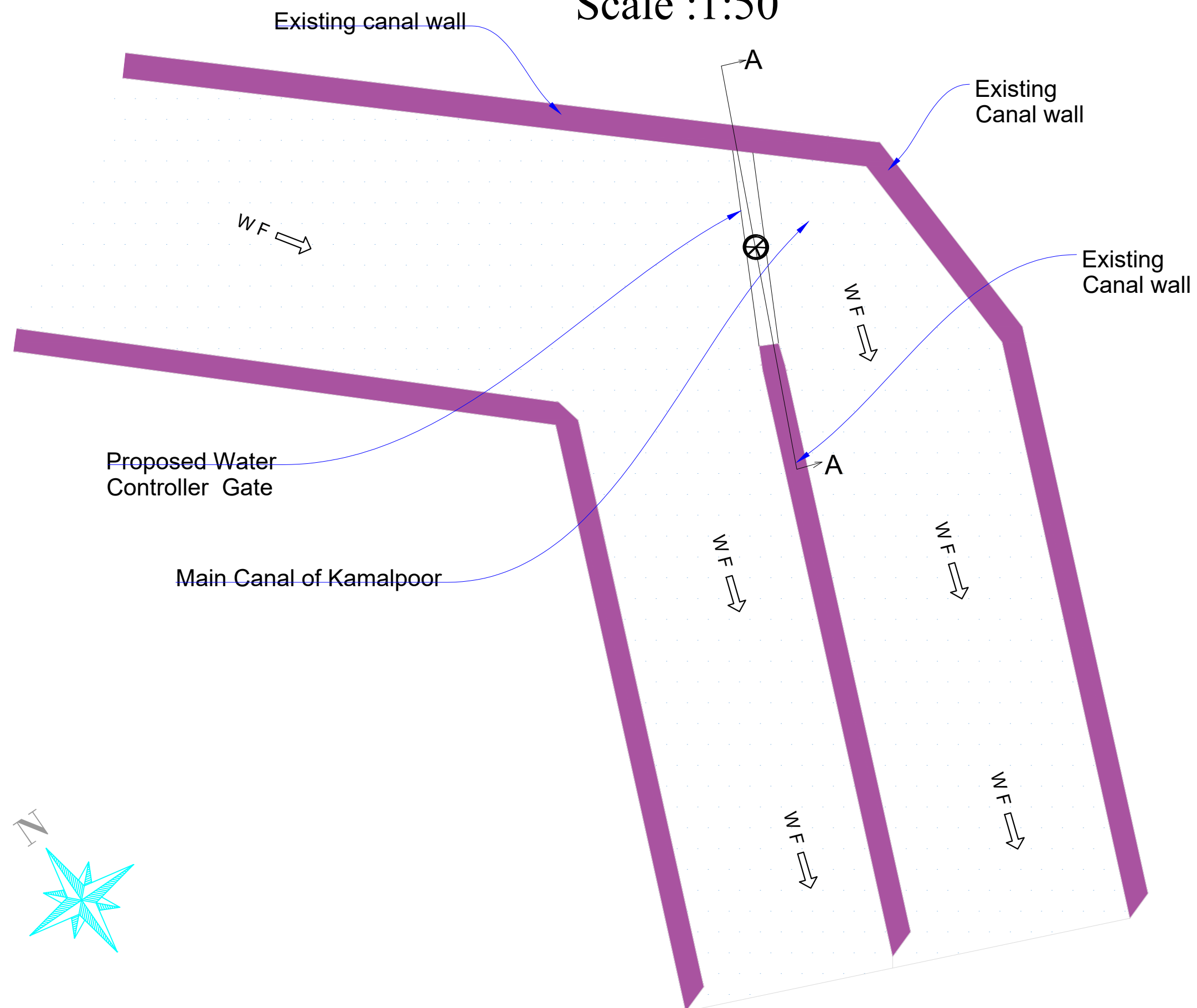
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024

Section(A-A)-Plan of Water Divider
Scale :1:50



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry/Pitching
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point is 100 m in Elevation
- Elevation of the point (100m) in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Llevel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplement Proggm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Kamal poor water control Sit Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO.011

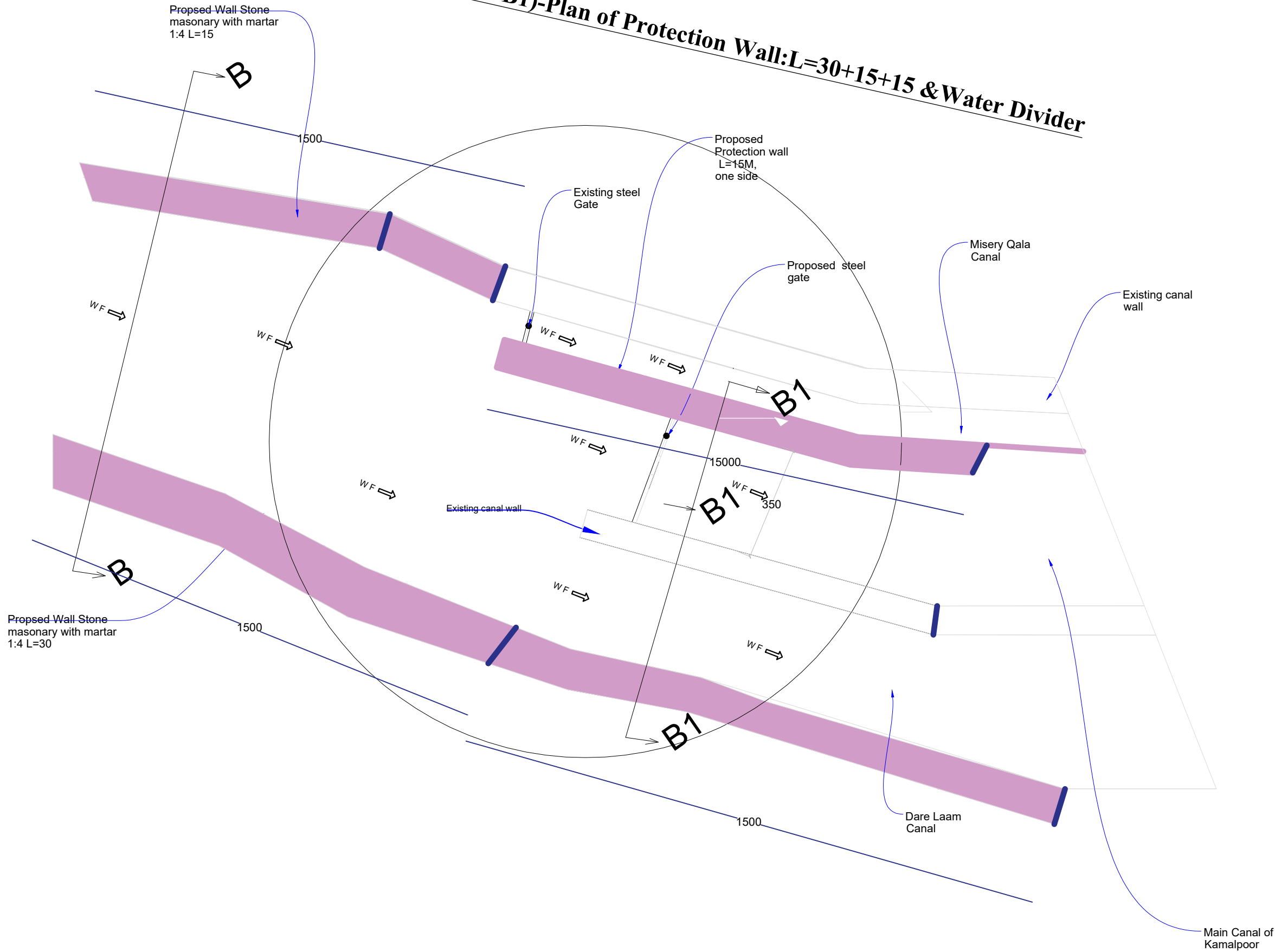
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

Section(B-B)& (B1-B1)-Plan of Protection Wall:L=30+15+15 & Water Divider



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry/Pitching
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point is 100 m in Elevation
- Elevation of the point (100m) in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Lelevel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplement Proggm

IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGIPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

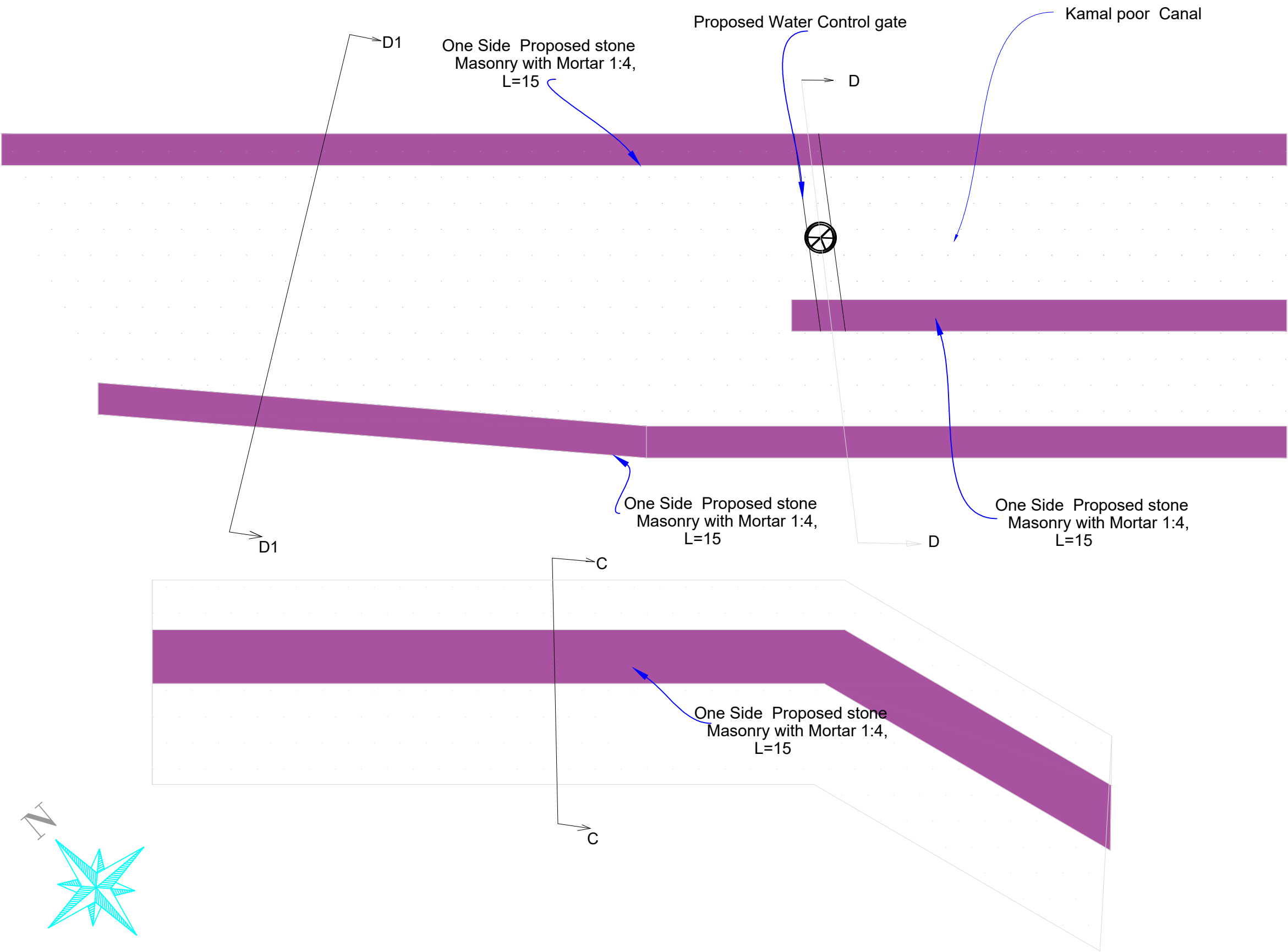
DRAWING:
Kamal Poor Canal Sit Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01.Qarg
DRAWING PAGE NO: 012
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown
Date: August, 2024

Plan of water divider & Protection Wall for Section(C-C)& (D-D), (D1-D1) -L=15+10*3+10*2



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplemment Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Kamal poor Canal Sit Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:013

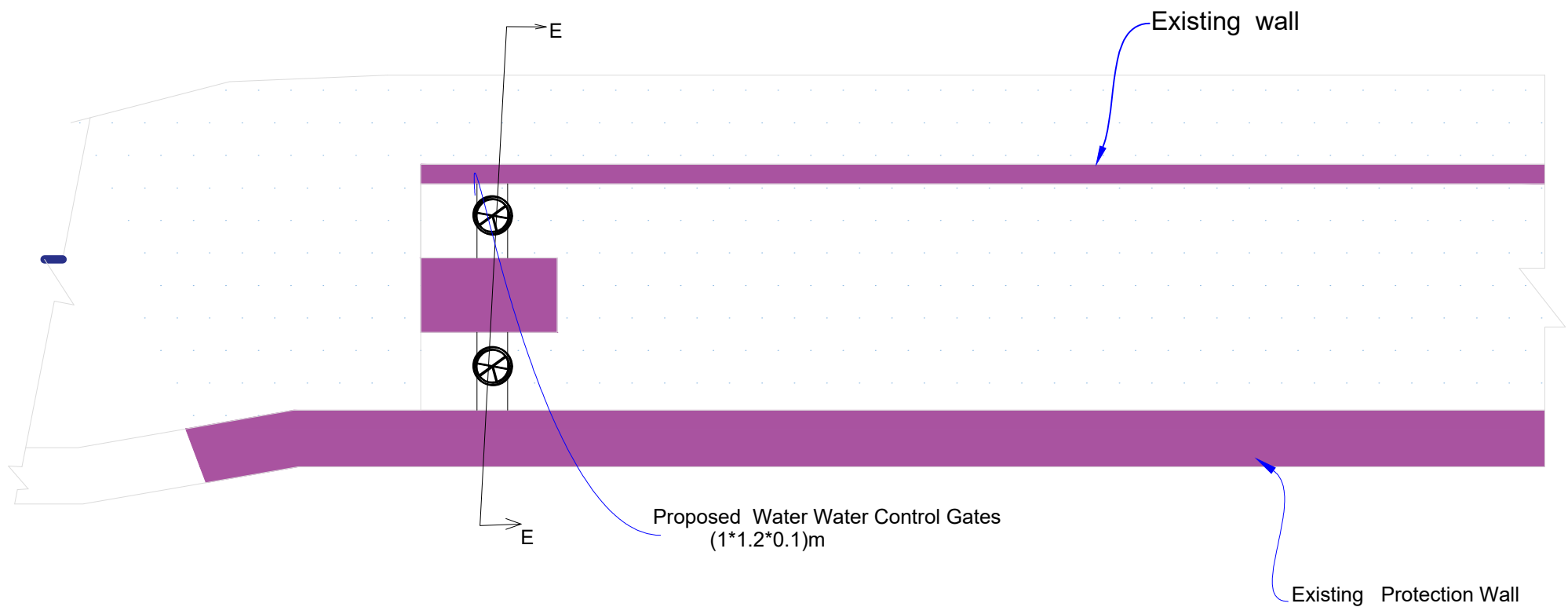
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

Plan of Lamati /Kamal Poor Main Canal Intake
Proposed Main Water Control gate



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Leevel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Plan of water Control Gates and details of structure

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:014

REVISION NO: 1

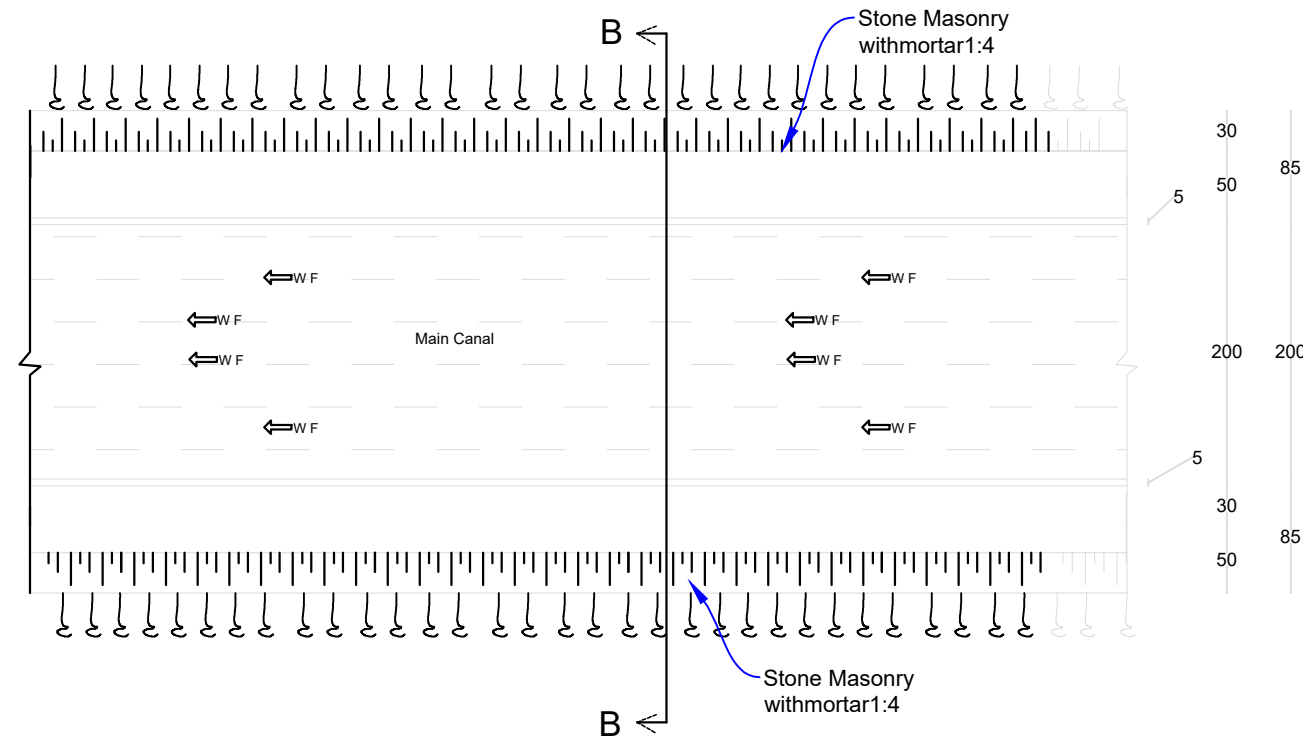
Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

Section (B-B) Plan of Canal Protection wall

Scale 1:50

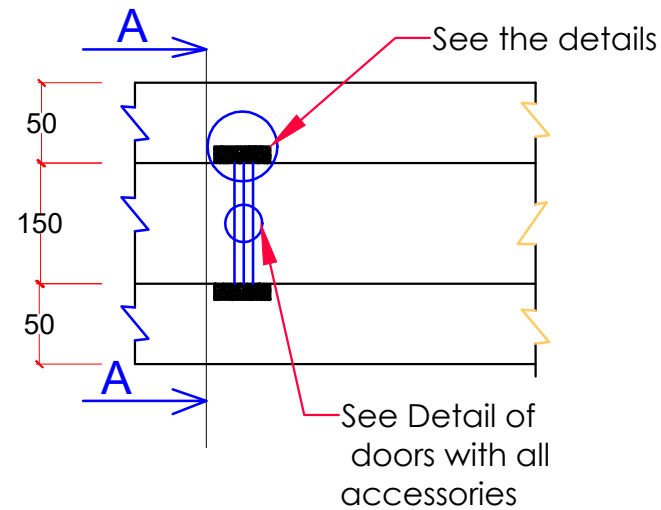


Section (A-A)

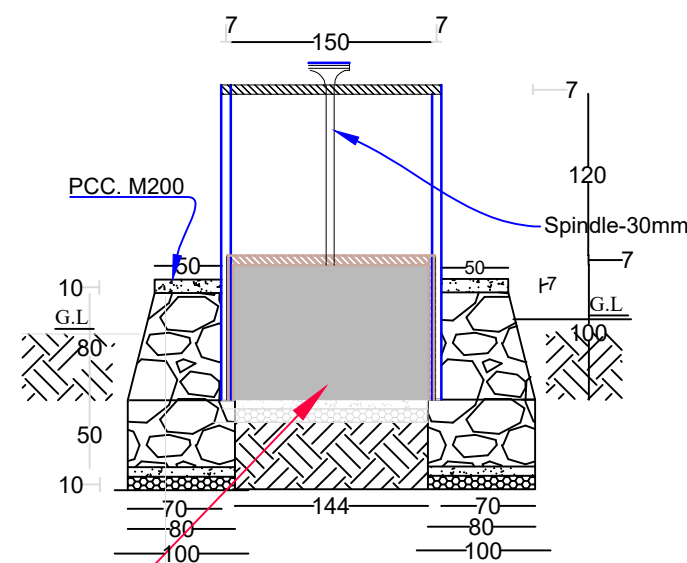
Detail Plan for Water Control Gates

Scale 1:50

Plan of Water Control Gate

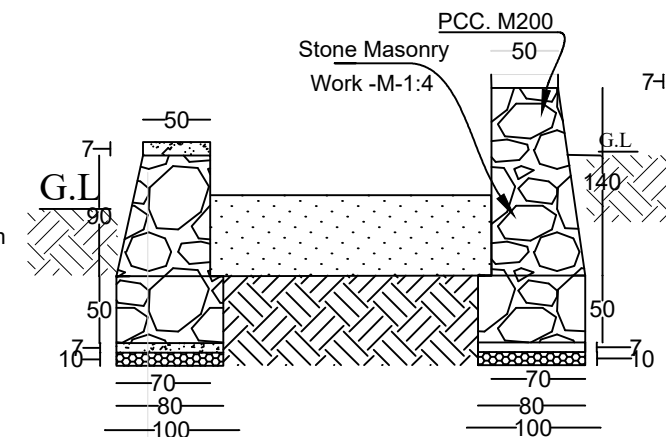


Steel plate -
5mm with all fixing
accessories



PCC M200 7cm
Stone Masonry with Mortar 1:4
PCC M200 7cm
Boulder 10cm
Compacted soil with compactor 95%

Section (B-B) , L=15 Both Site



PCC M200 7cm
Stone Masonry with Mortar 1:4
PCC M200 7cm
Boulder 10cm
Compacted soil with compactor 95%

LEGEND:-

	Center Line
	Direction of flow
	Grouted Stone Masonry
	Plain Cement Concrete
	Reinforced Cement Concrete
	Bank Protection
	Compacted Soil
	H.F.L / M.W.L
	Elevation of the point
	Elevation of the point in Plan view
	Earthen Slope
	Ground Level
	Stone Pitching/Rip Rap

Abbrevation

c/c	- center to center
U/S	- Up Stream
D/S	- Down Stream
W.L	- Water Level
RCC	- Reinforce Cement Concrete
PCC	- Plain Cement Concrete
WF	- Water Flow Line

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Canal Protection wall Plan& Section

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:015
REVISION NO: 1

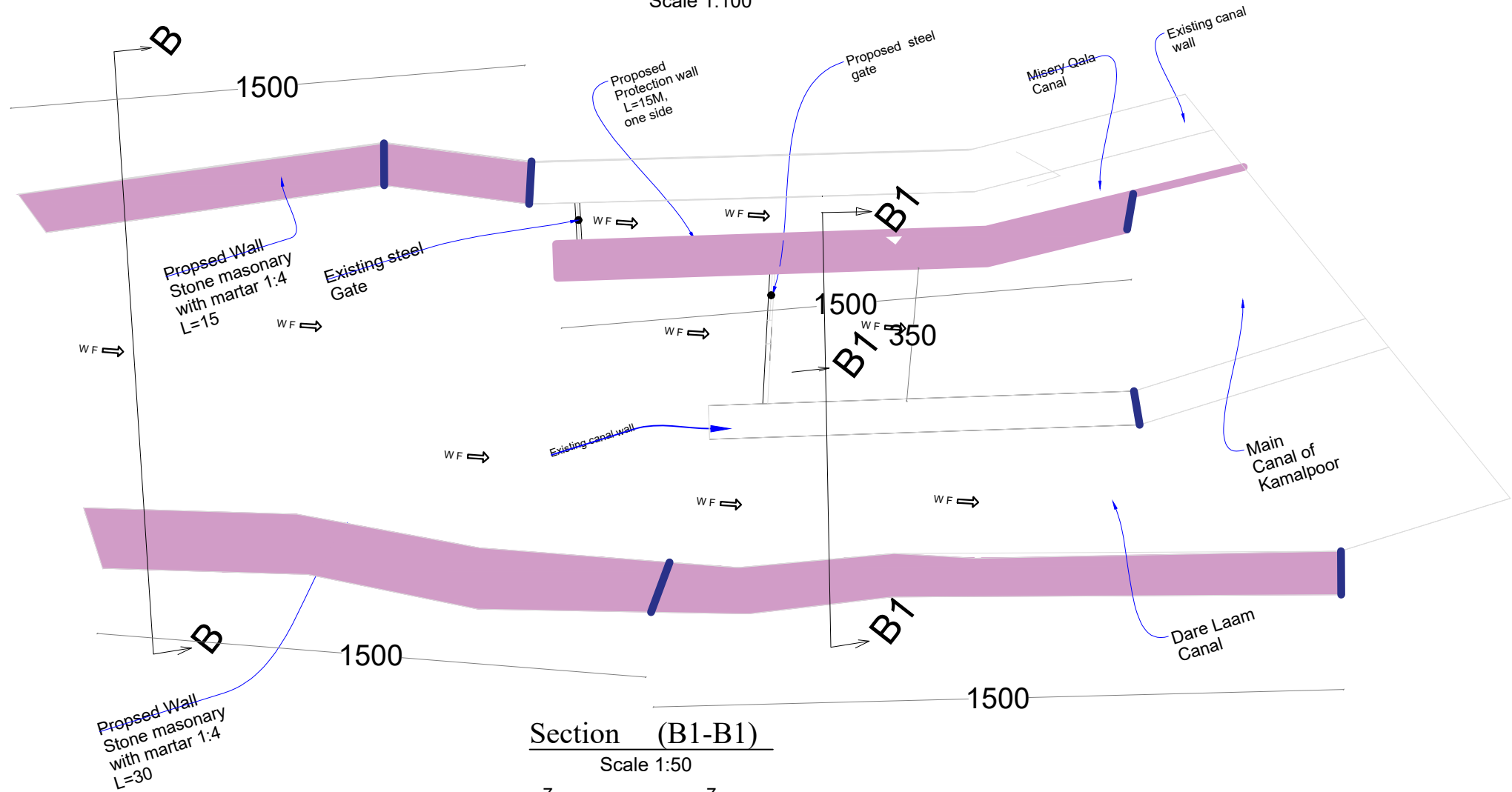
Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

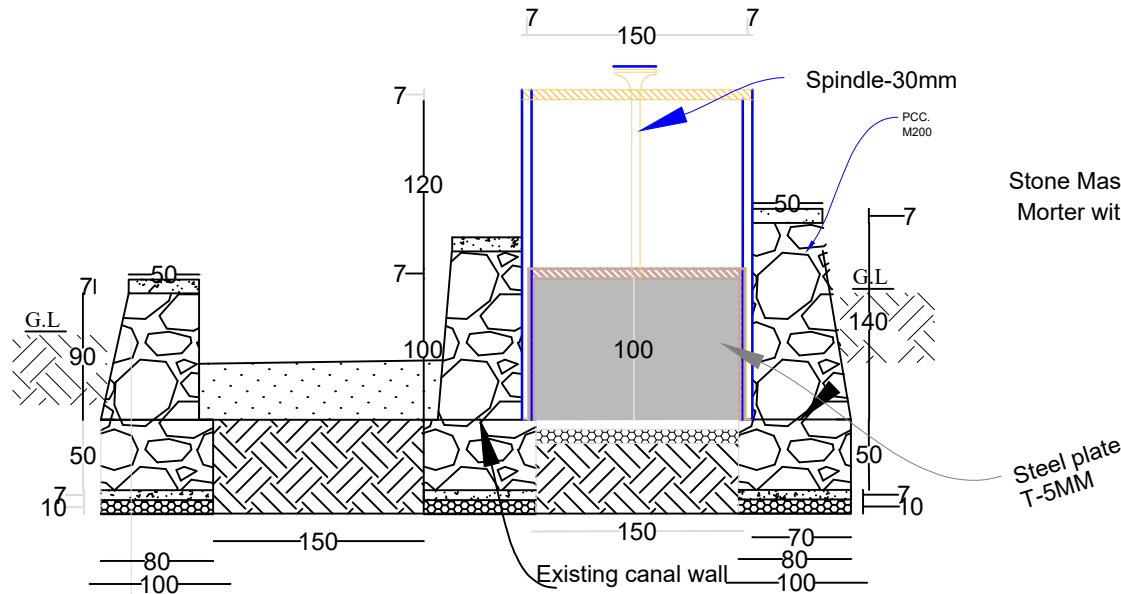
Plan of Protection Wall & Water Divider 15m

Scale 1:100



Section (B1-B1)

Scale 1:50



- PCC M200 7cm
- Stone Masonry with Mortar 1:4
- PCC M200 7cm
- Boulder 10cm
- Compacted soil wit

LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Lveel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Plan of water Control Gates and details of structure
Protection Wall

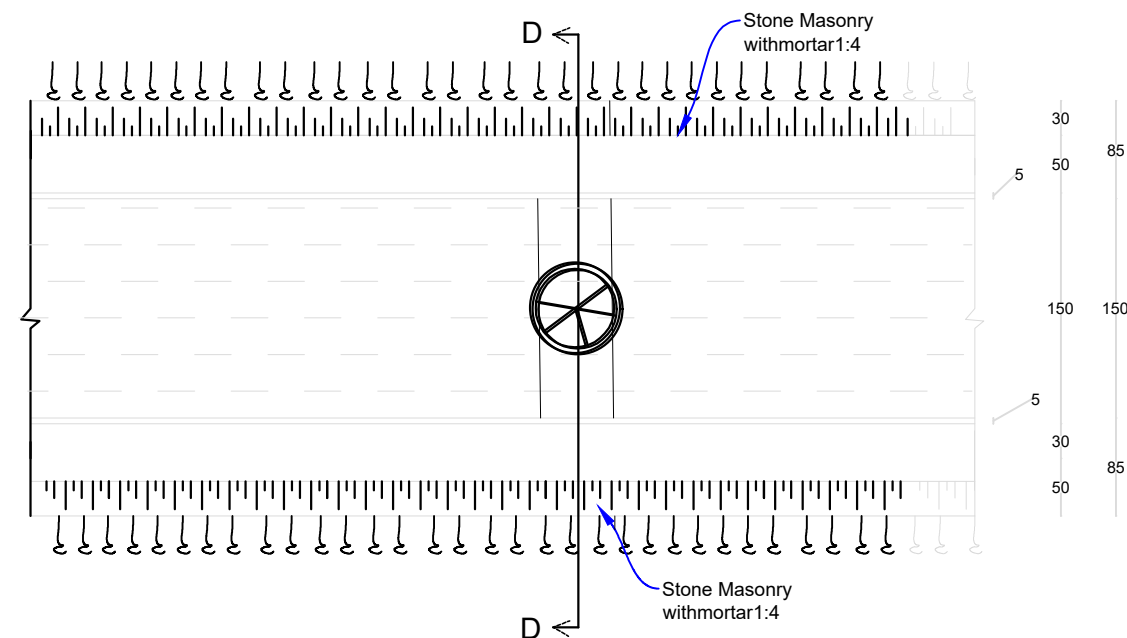
PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:016
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
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Checked By:		
Approved By:		

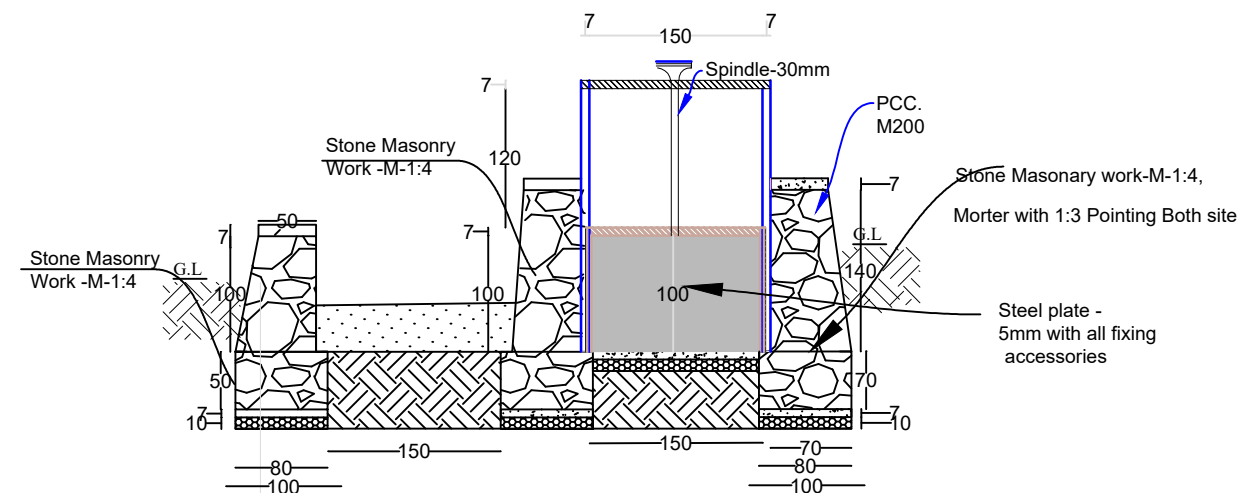
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Date:August, 2024














Section (D-D) Protection Wall& Installation water Control Gates L=15



Detail Plan for Water Control Gates



LEGEND:-

- | | |
|---|---------------------------------------|
|  | — Center Line |
|  | — Direction of flow |
|  | — Grouted Stone Masonry |
|  | — Plain Cement Concrete |
|  | — Reinforced Cement Concrete |
|  | — Bank Protection |
|  | — Compacted Soil |
|  | — H.F.L / M.W.L |
|  | — Elevation of the point |
|  | — Elevation of the point in Plan view |
|  | — Earthen Slope |
|  | — Ground Level |
|  | — Stone Pitching/Rip Rap |

Abbreviation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L ----- Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29]**

SUB-PROJECT:

Laghman Province Qarghayee District

Kamal poor Canal Protection wall

DRAWING:

Plan of water Control Gates and details of structure
Protection Wall

PROJECT SYMBOL:	CBARD ALL /AFG/EAST
SUB-PROJECT CODE:	Laghman-01,Qarg
DRAWING PAGE NO:017	
REVISION NO:	1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown	Date: August. 2024
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Details of Water control Gate

LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : UNDP AFRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Plan of water Control Gates and details of structure
and details of steel fixing

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

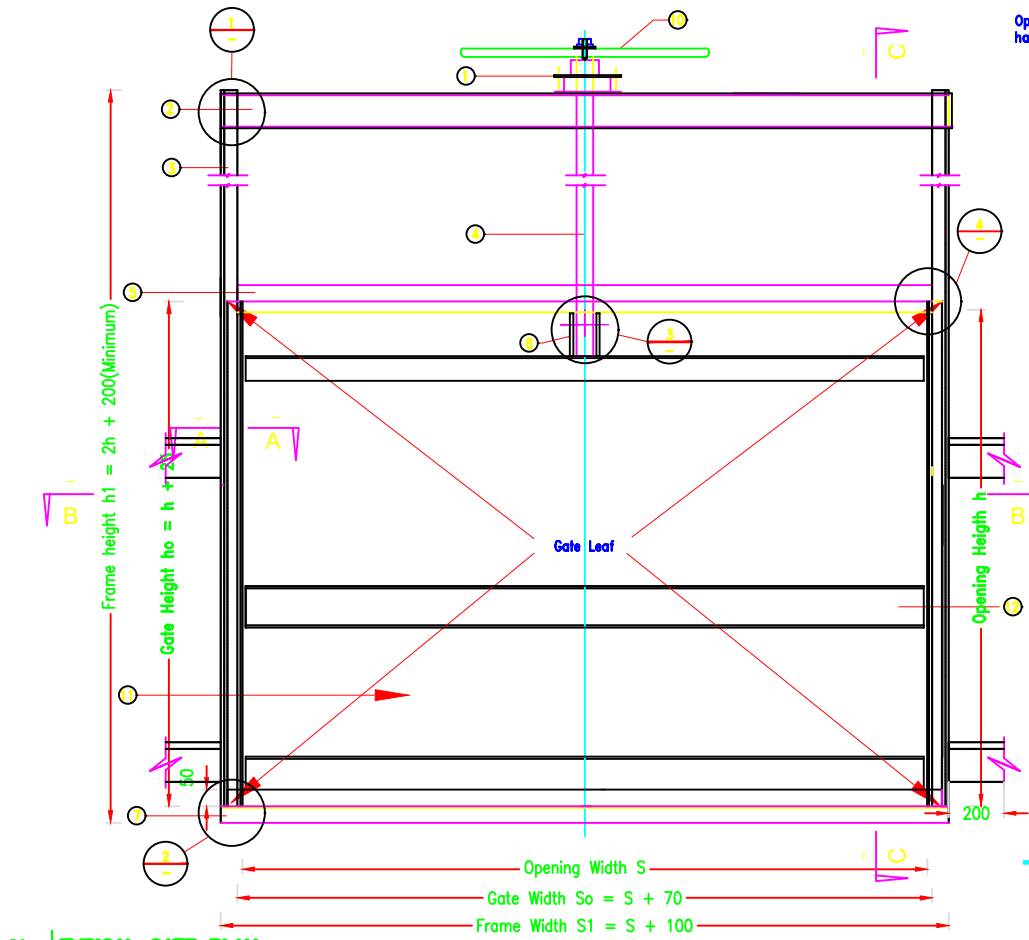
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REVISION NO: 1

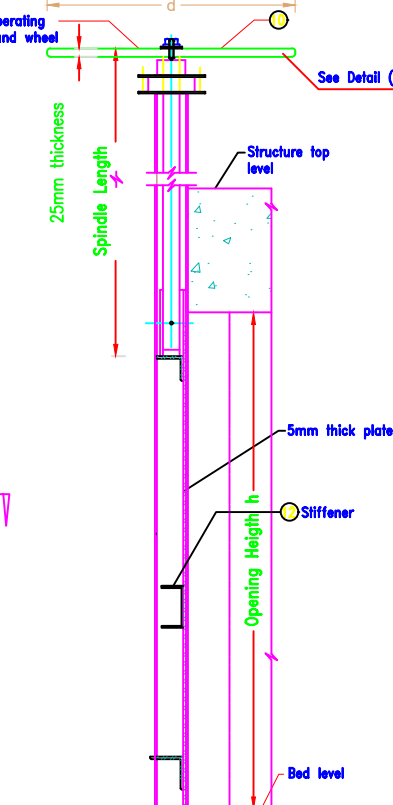
Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
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Checked By:		
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Drawing Scale: As Shown

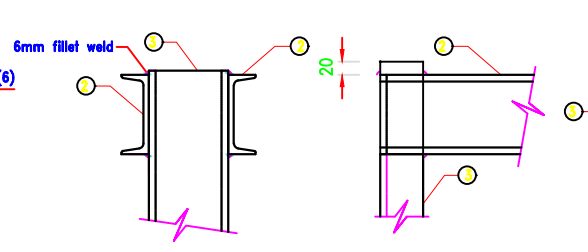
Date:August, 2024



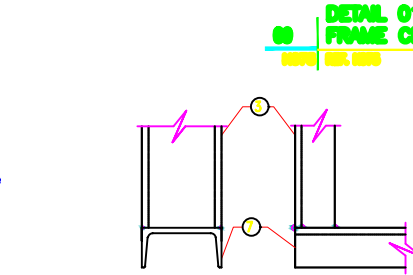
01 TYPICAL GATE PLAN



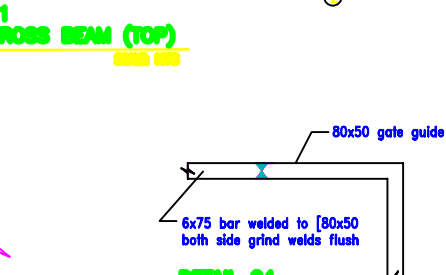
04 SECTION C-C



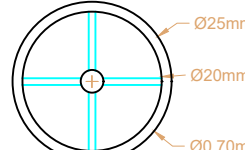
01 DETAIL 01 FRAME CROSS BEAM (TOP)



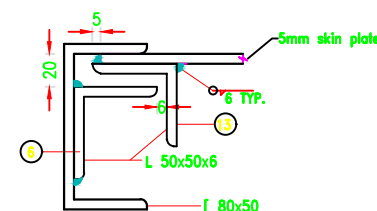
02 DETAIL 02 FRAME BOTTOM CROSS BEAM



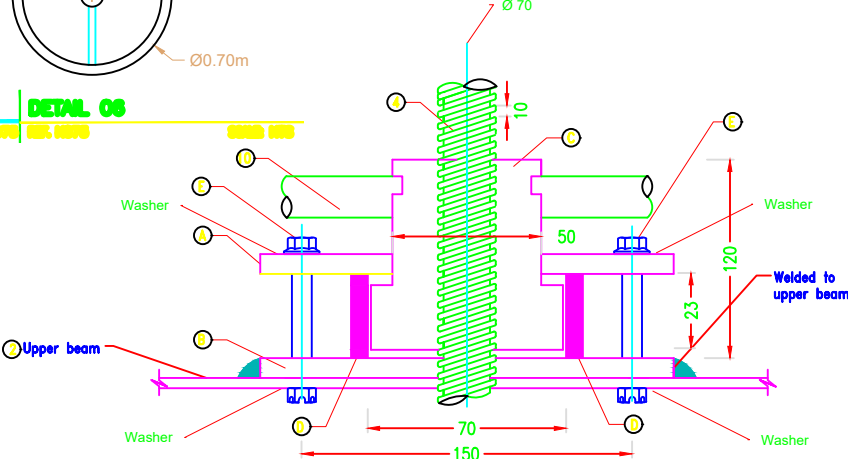
04 DETAIL 04 HORIZONTAL PLAIN BAR



03 DETAIL 03



05 SECTION A-A

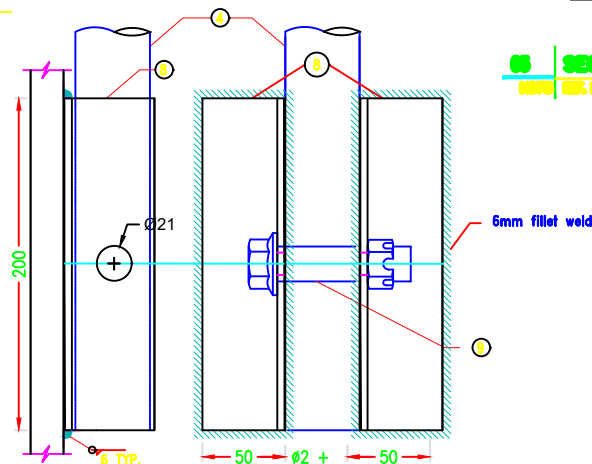


11 PLAN THRUST BEARING ASSEMBLY

Item	Description
1	Thrust bearing/nut assembly
2	[100 x 50 Channel (Upper beam)
3	[80 x 50 Channel
4	Spindle # 40 or 45
5	6x75 bar
6	Guide rail L50x50x6
7	[80x50 lower beam
8	L 50 X 50 X 6 lifting brackets
9	M20 Bolt & Nut
10	Hand Wheel (Steering Wheel)
11	Skin plate 5mm
12	Stiffener channel 150x50
13	L 50x50x6

12 DETAIL 03 GATE COMPONENT

K075 REF. K075 SCALE: NTS



06 SECTION 06 LIFTING BRACKETS

Item	Description
A	Upper plate 12mm thick
B	Lower plate 12mm thick
C	Bearing nut
D	Spacer
E	Four M12 bolts with nuts + washer

TABLE 02 THRUST BEARING ASSEMBLY COMP.

STEEL GATE PANEL DIMENSIONS TABLE			
S.N	Height (h)	Width (s)	Quantity
1	0.45	1.00	10.0

The diagram illustrates a cross-section of a retaining wall. The wall is composed of several layers and materials, with dimensions and material specifications provided.

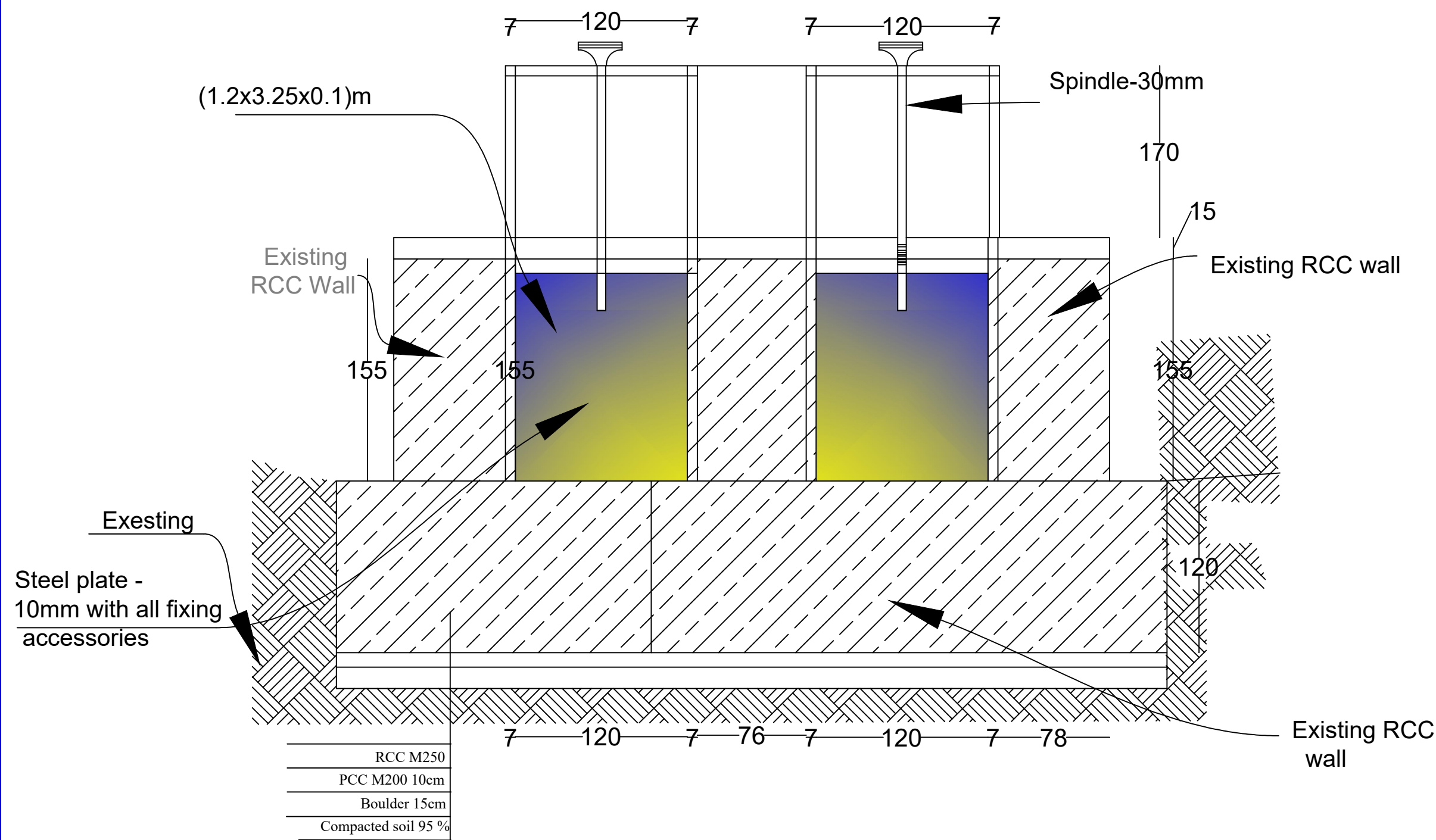
- Top Layer:** A thin layer of concrete, labeled "PCC. M200" in blue text, with a thickness of 50 mm.
- Stone Masonry:** The main body of the wall is made of stone masonry, labeled "Stone Masonry Work -M-1:4". The height of this section is 140 mm.
- Base Layer:** A layer of concrete, labeled "PCC. M200", with a thickness of 70 mm.
- Foundation:** The wall is founded on a base layer, labeled "PCC. M200", with a thickness of 70 mm.
- Dimensions:**
 - The total height of the wall is 210 mm (140 mm + 70 mm).
 - The top width of the wall is 70 mm.
 - The bottom width of the wall is 100 mm.
 - The height of the stone masonry section is 140 mm.
 - The height of the concrete base layer is 70 mm.
 - The height of the concrete foundation layer is 70 mm.
- Labels:**
 - "G.L." (Ground Level) is indicated on the left side.
 - "PCC. M200" is labeled in blue text for the concrete layers.
 - "Stone Masonry Work -M-1:4" is labeled for the masonry section.

The diagram shows a cross-section of a wall. At the top is a layer labeled 'PCC. M200' with a thickness of 50. Below this is a layer labeled 'Stone Masonry' with a thickness of 7. Below the stone masonry is a layer labeled 'Work -M-1:4' with a thickness of 7. The ground level is marked 'G.L.' at a height of 90. Below the work layer is a layer with a thickness of 50. At the bottom is a layer with a thickness of 10. The total height of the wall is 100. The diagram also shows a section of the wall with a diagonal hatching pattern, indicating a different material or construction detail.

Drawing Scale: As Shown Date: August, 2024

Water Control Gates at Intake , SecE-E

Scale 1:50



Details of Water control Gate at Intake

LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbreviation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Development Program



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Kamal poor Canal Protection wall

DRAWING:
Plan of water Control Gates and details of structure
and details of steel fixing

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

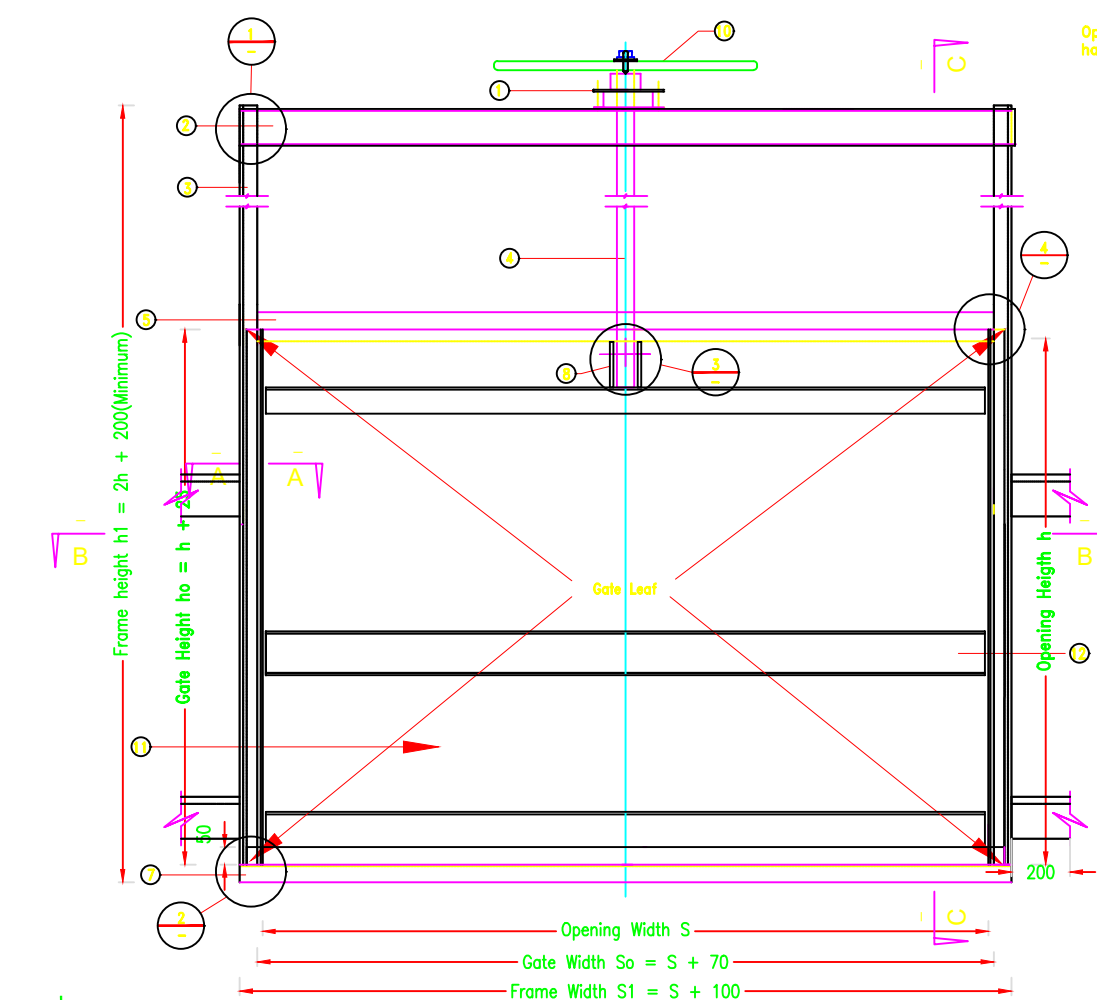
DRAWING PAGE NO:021

REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

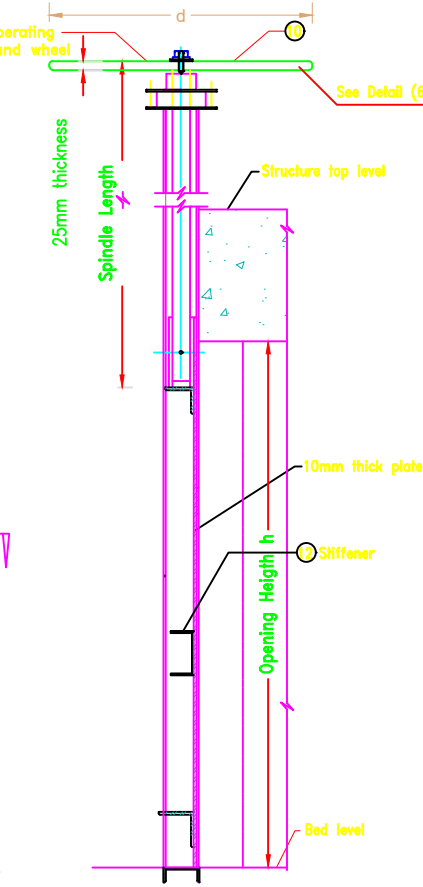


01 TYPICAL GATE PLAN

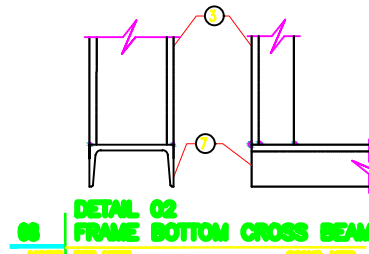
02 SECTION D-D

Item	Description
1	Thrust bearing/nut assembly
2	[100 x 50 Channel (Upper beam)
3	[80 x 50 Channel
4	Spindle Ø 40 or 45
5	6x75 bar
6	Guide rail L50x50x6
7	[80x50 lower beam
8	L 50 X 50 X 6 lifting brackets
9	M20 Bolt & Nut
10	Hand Wheel (Steering Wheel)
11	Skin plate 10mm
12	Stiffener channel 150x50
13	L 50x50x6

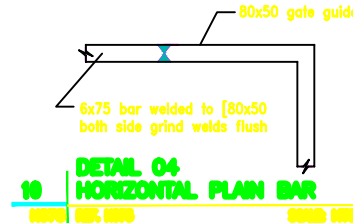
12 DETAIL 03 GATE COMPONENT



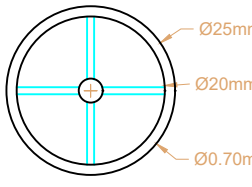
01 DETAIL 01 FRAME CROSS BEAM (TOP)



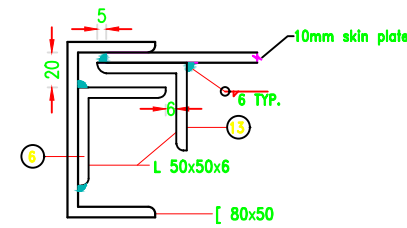
02 DETAIL 02 FRAME BOTTOM CROSS BEAM



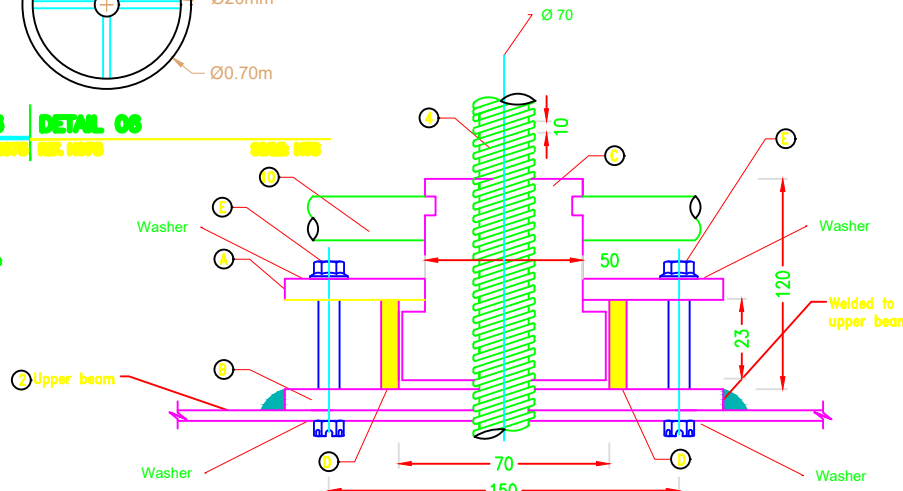
04 DETAIL 04 HORIZONTAL PLAN BAR



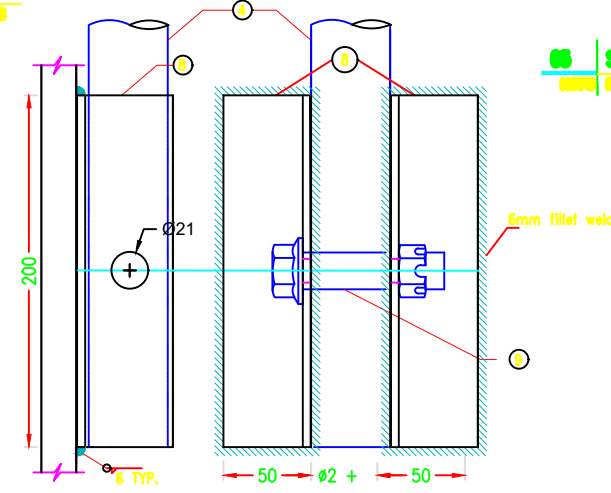
06 DETAIL 06



05 SECTION A-A



11 PLAN THRUST BEARING ASSEMBLY



03 SECTION ELEVATION

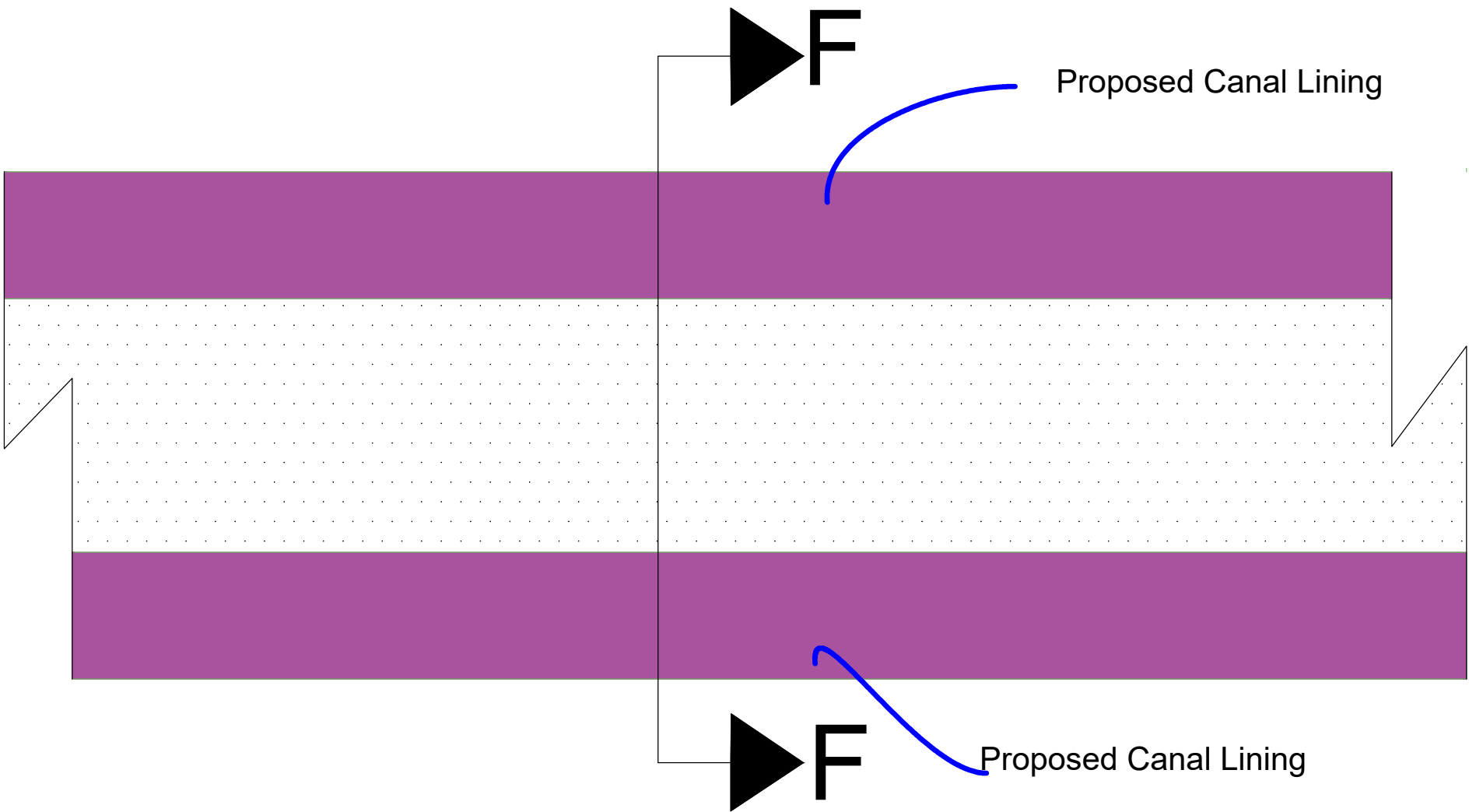
05 DETAIL 05 LIFTING BRACKETS

Item	Description
A	Upper plate 12mm thick
B	Lower plate 12mm thick
C	Bearing nut
D	Spacer
E	Four M12 bolts with nuts + washer

07 TABLE 02 THRUST BEARING ASSEMBLY COMP.

STEEL GATE PANEL DIMENSIONS TABLE			
S.N	Height (h)	Width (s)	Quantity
1	0.45	1.00	10.0

Section(F-F),L=30 - (G-G),L=50- (H-H),L=22-(J-J),L=22-(K-K), L=34- Plan of Canal Lining



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

FUNDED BY:
United Nation Deveplement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29]**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangarei Canal Protection wall

DRAWING:
Sangarei Canal Sit Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO.022

REVISION NO: 1

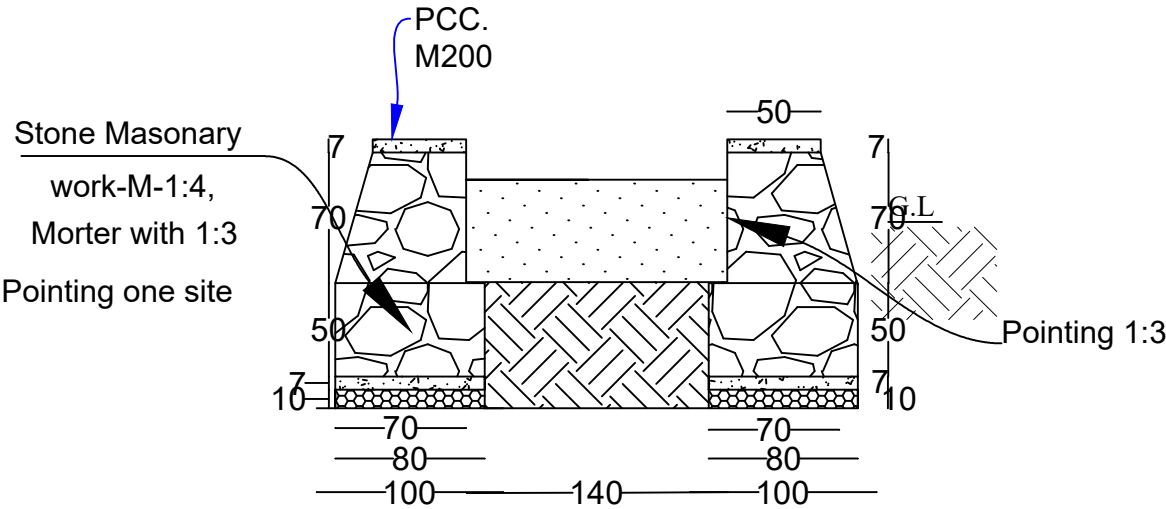
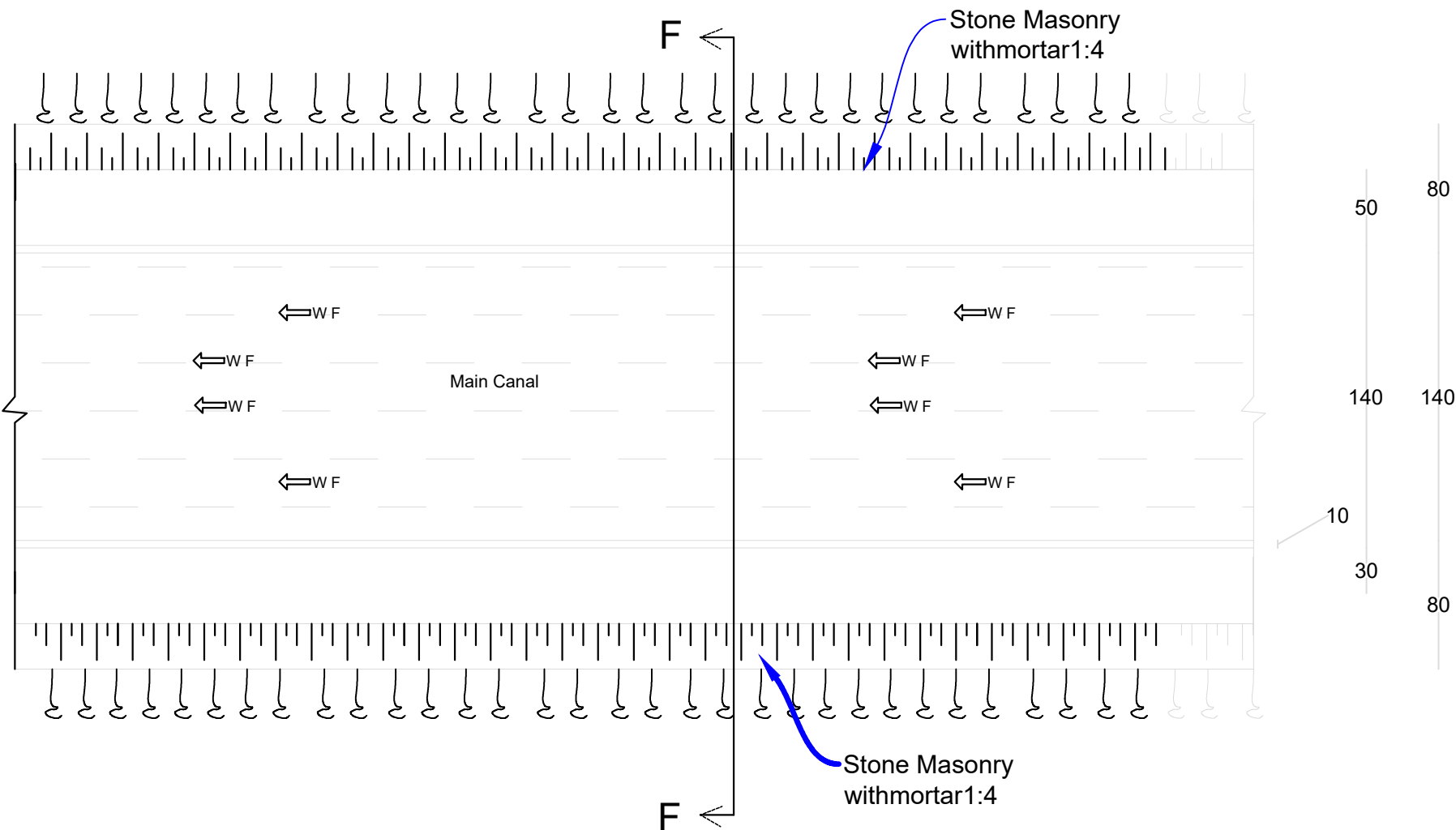
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Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024

Section (F-F) Plan of Canal Lining L=30

Scale 1:50



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Leavel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplement Proggm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Sangarei Canal Protection wall

DRAWING:
Canal Stone Masonary structure of and details

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:023
REVISION NO: 1

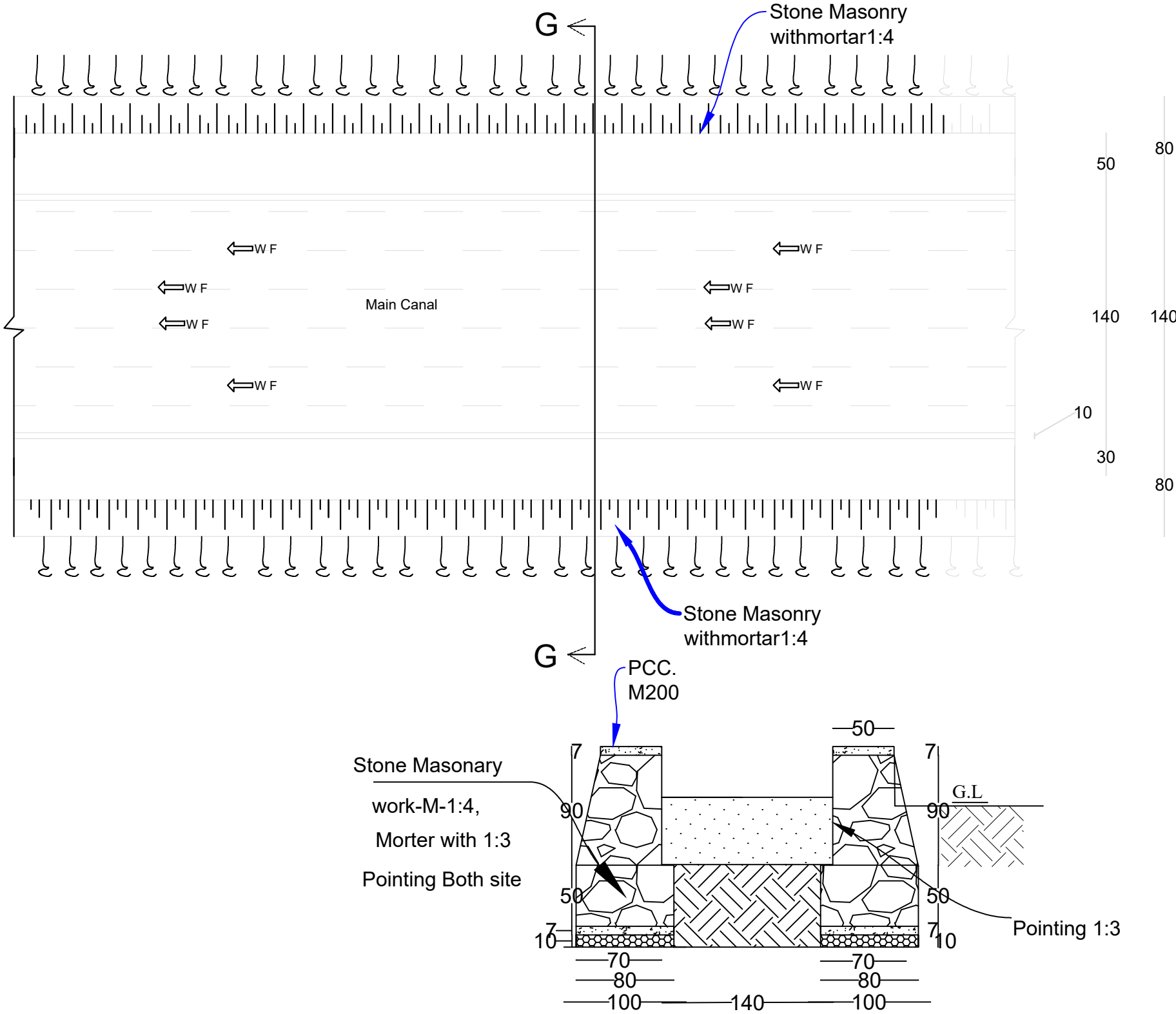
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Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August. 2024

Section (G-G)Plan of Canal Lining L=50

Scale 1:50



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Lelevel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplemment Proggmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Protection wall

DRAWING:
Plan Aqueduct structure and details

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO.024
REVISION NO: 1

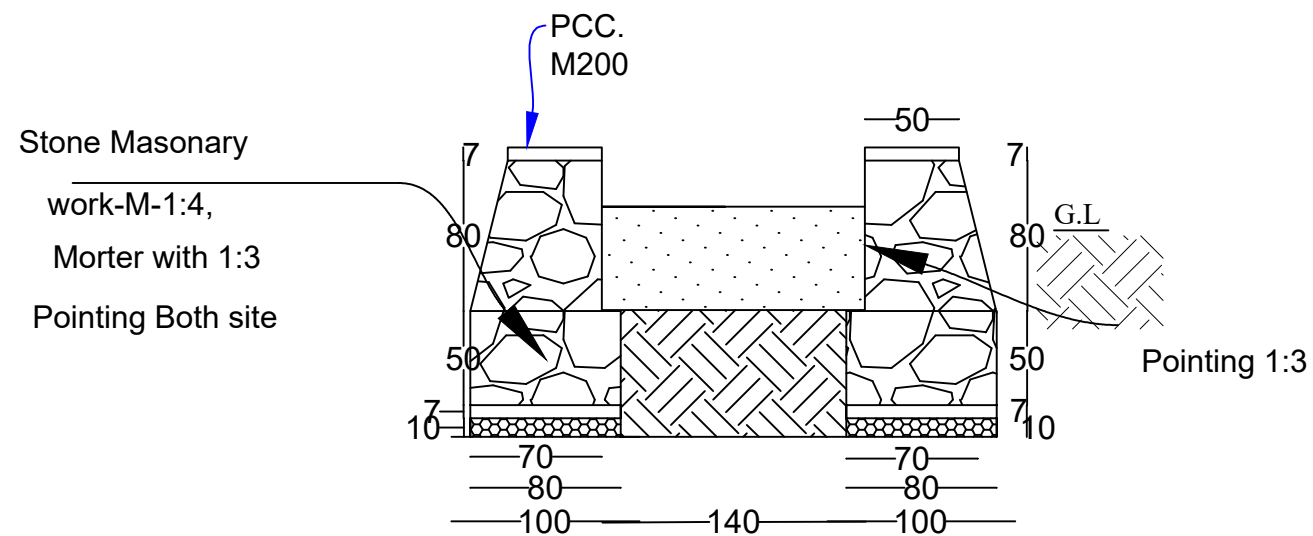
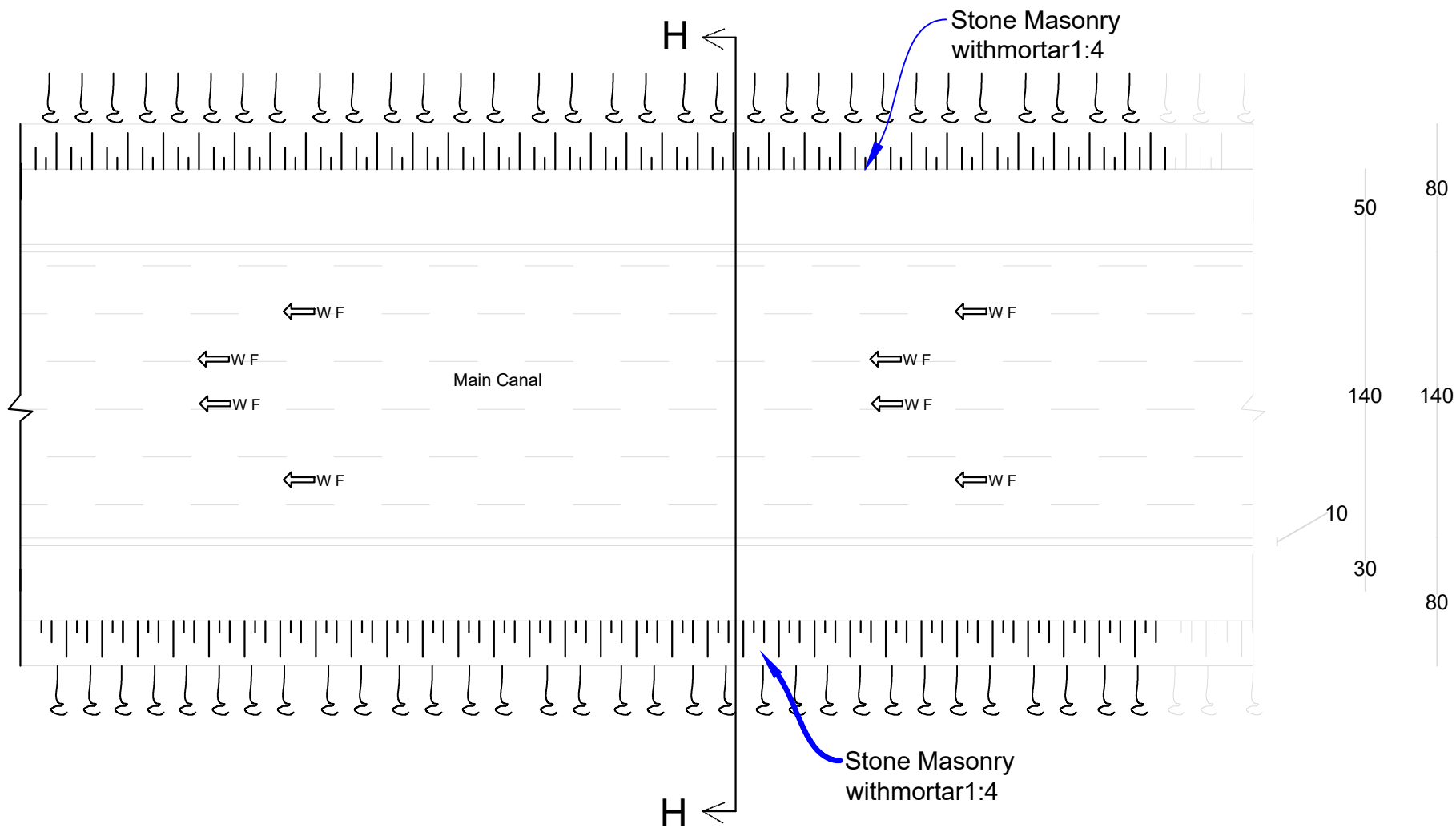
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Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

Section (H-H)Plan of Canal Lining L=22

Scale 1:50



LEGEND:-

- | | |
|--|---------------------------------------|
| | — Center Line |
| | — Direction of flow |
| | — Grouted Stone Masonry |
| | — Plain Cement Concrete |
| | — Reinforced Cement Concrete |
| | — Bank Protection |
| | — Compacted Soil |
| | — H.F.L / M.W.L |
| | — Elevation of the point |
| | — Elevation of the point in Plan view |
| | — Earthen Slope |
| | — Ground Level |
| | — Stone Pitching/Rip Rap |

Abbreviation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L ----- Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Development Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFRPA/2024/01/29]**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Protection wall

DRAWING:

Plan Aqueduct structure and details

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE:	Laghman-01,Qarg
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DRAWING PAGE NO:025

REVISION NO: 1

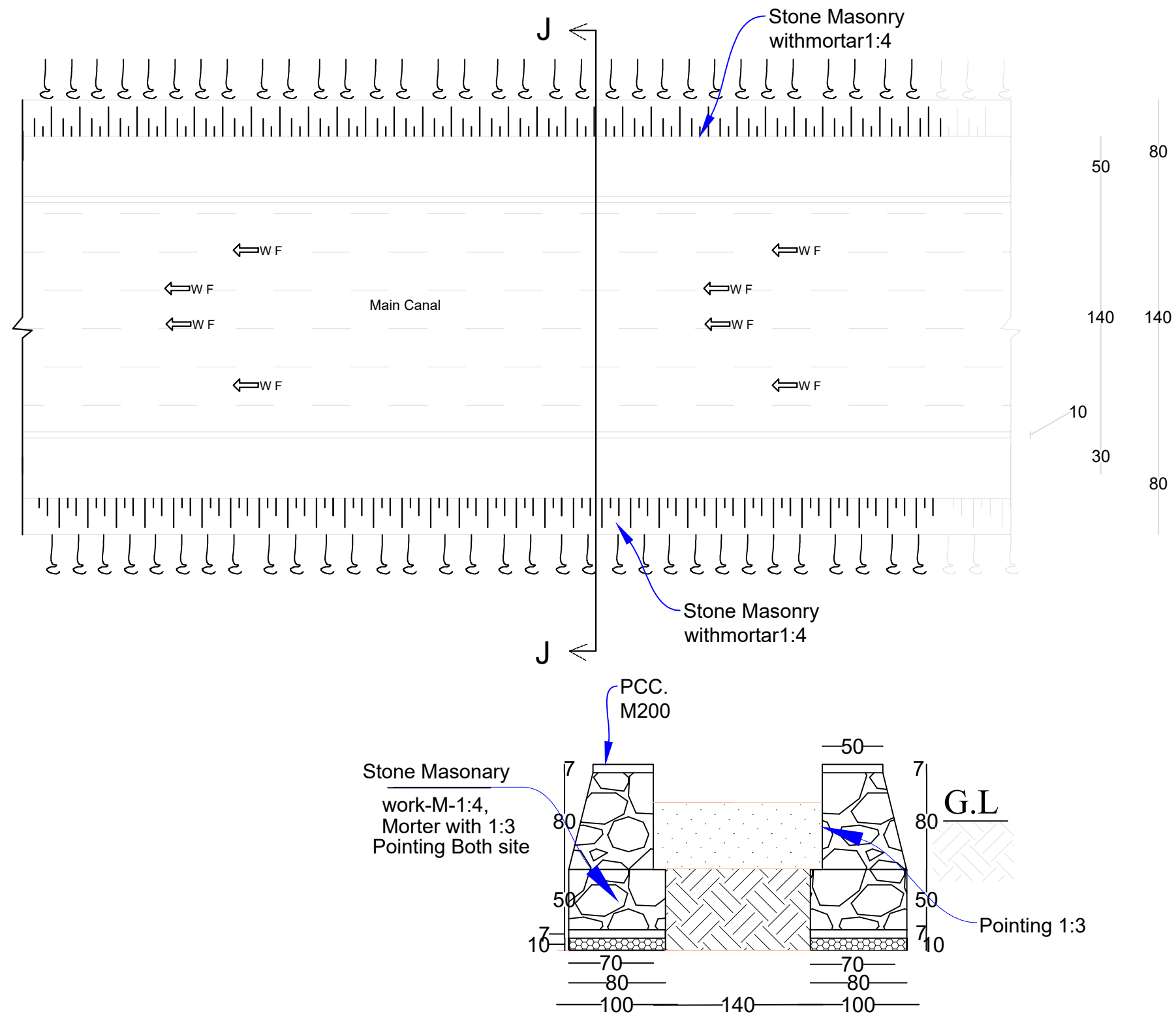
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Design/Drawn By:	AAA Design Team	AAA Design Team
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Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date: August. 2024

Section (J-J)Plan of Canal Lining L=22

Scale 1:50



LEGEND:-

- | | |
|--|-------------------------------------|
| | Center Line |
| | Direction of flow |
| | Grouted Stone Masonry |
| | Plain Cement Concrete |
| | Reinforced Cement Concrete |
| | Bank Protection |
| | Compacted Soil |
| | H.F.L / M.W.L |
| | Elevation of the point |
| | Elevation of the point in Plan view |
| | Earthen Slope |
| | Ground Level |
| | Stone Pitching/Rip Rap |

Abbreviation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L ----- Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29]**

SUB-PROJECT:

Laghman Province Qarghayee District

Sangeri Canal Protection wall

DRAWING:

Canal Stone Masonry Section and details

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE:	Laghman-01,Qarg
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DRAWING PAGE NO:026

REVISION NO: 1

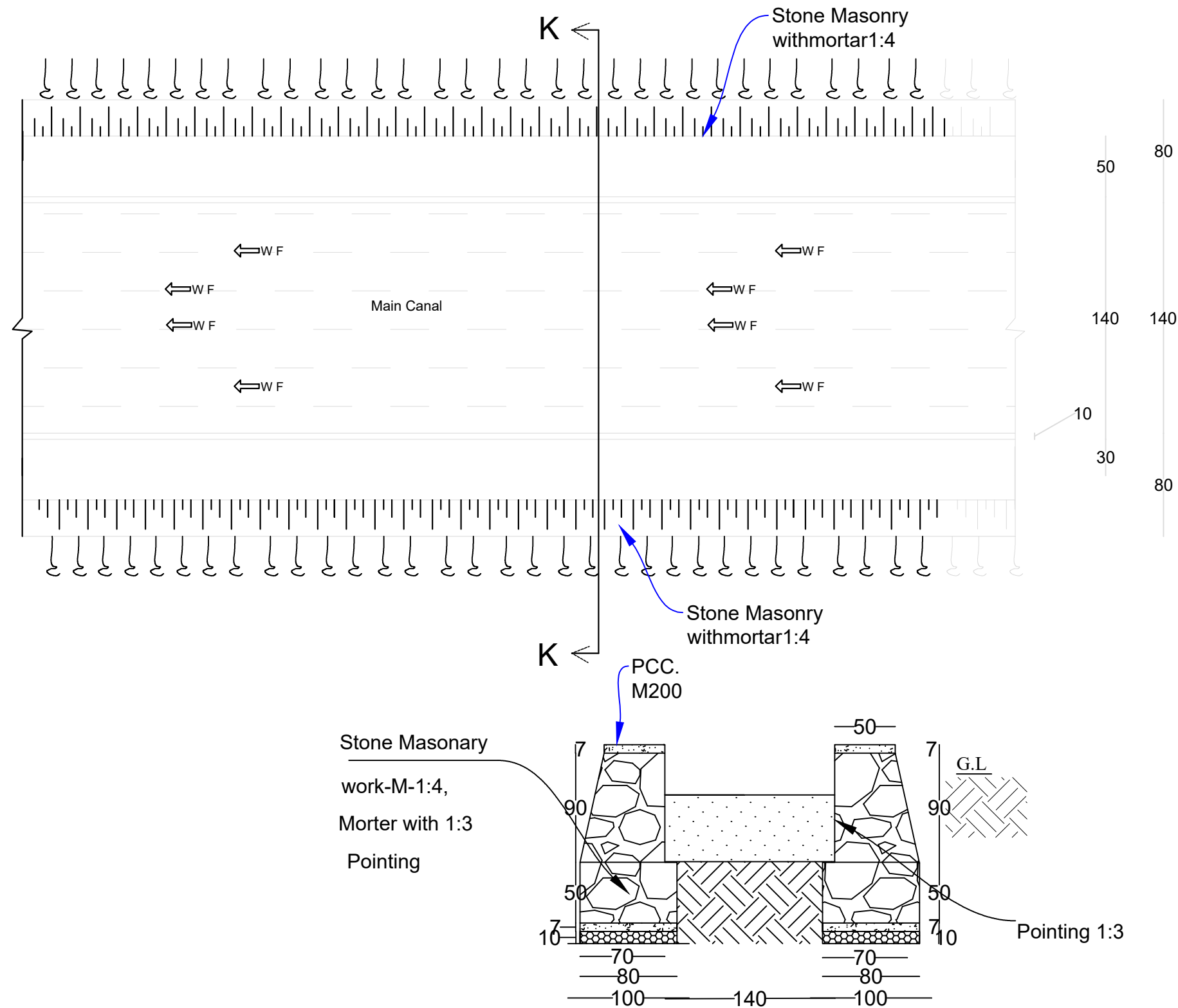
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Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date: August, 2024

Section (K-K) Plan of Canal Lining L=34

Scale 1:50



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplemment Proggmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Protection wall

DRAWING:
Canal Stone Masonry Section and details

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qag

DRAWING PAGE NO.027

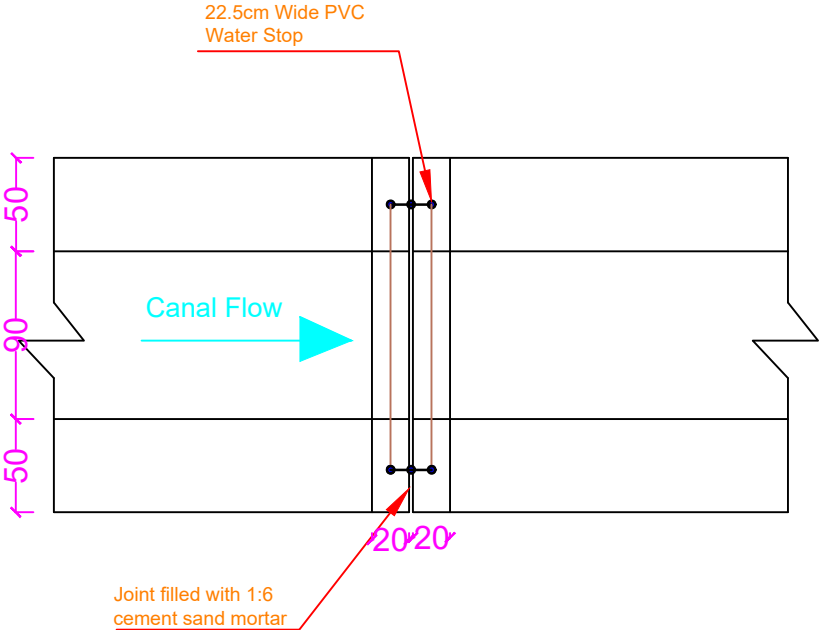
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Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
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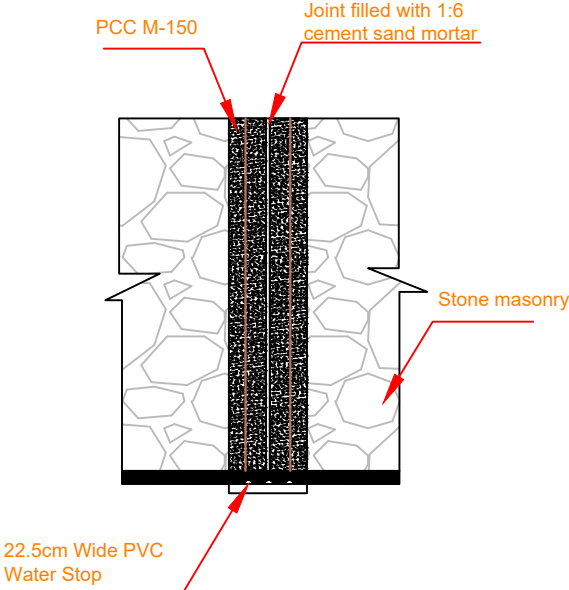
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Date:August, 2024

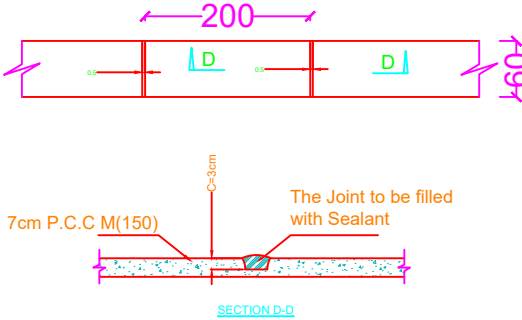
PLAN OF CONSTRUCTION
JOINT FOR COVERED
SECTION
Stone masonry
Scale: 1:50



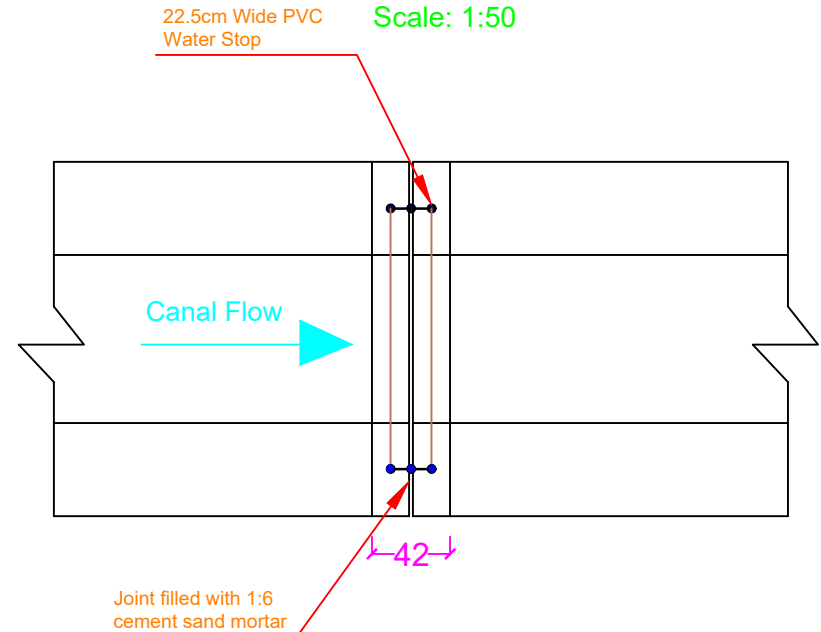
SECTION A-A
Scale: 1:50



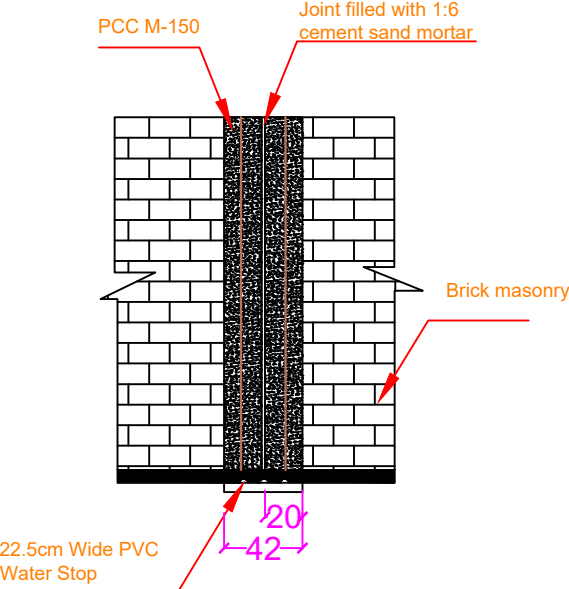
PLAN OF WALL COPING



PLAN OF CONSTRUCTION
JOINT FOR COVERED
SECTION
Brick masonry
Scale: 1:50



SECTION B-B
Scale: 1:50



Sample of 22.5cm Wide PVC Water Stop



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Leveel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplemment Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Protection wall

DRAWING:
Water stopper sections and details

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qag
DRAWING PAGE NO:028
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
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Reviewed By:	AAA Design Team	AAA Design Team
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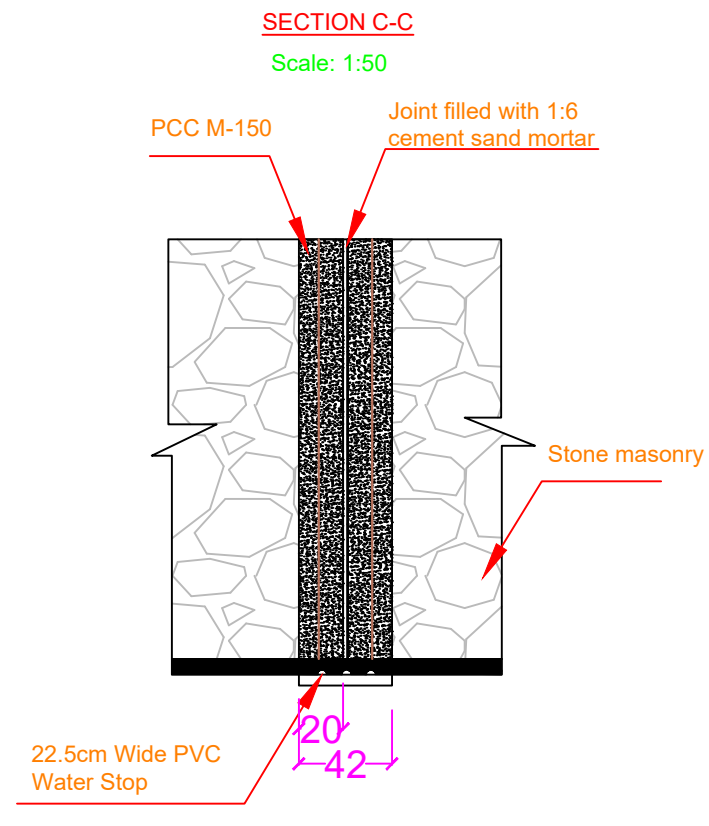
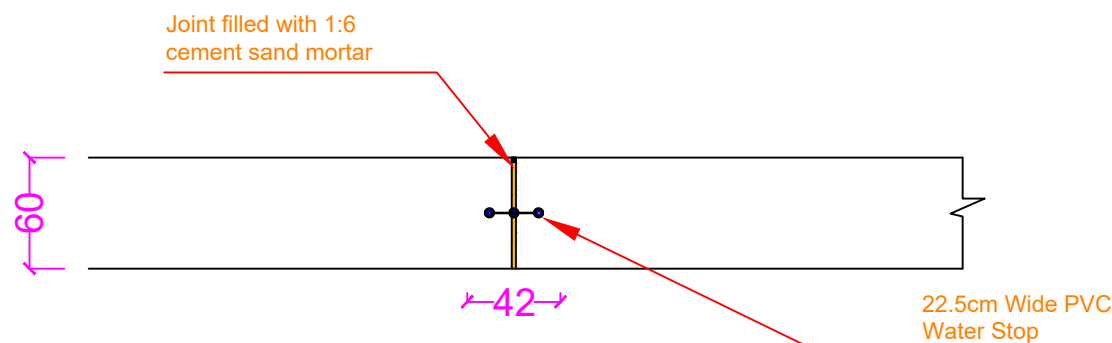
Drawing Scale: As Shown

Date:August, 2024



PLAN OF CONSTRUCTION JOINT FOR ONE SIDE WALL

Stone masonry
Scale: 1:50



PCC and all necessary material for Joint Preparation.

1- Implementation of Construction joint at every 25 m with 22.5 cm wide PVC water stop(The water stopper shall be of extruded polyvinyl chloride complying with BS 2571: Class 3, Compound Type G4) or equivalent and (2) cm thick cork filling including all material and labor all as per relevant drawing, specification and complete satisfaction of the site engineer.

2- Length of water stopper depend to the cross section.

All expansion joint should have 2cm gap with the PVC water stop.the canal side of the gap should be packed with bitumen and sand Mastic.

LEGEND:-

	Center Line
	Direction of flow
	Grouted Stone Masonry
	Plain Cement Concrete
	Reinforced Cement Concrete
	Bank Protection
	Compacted Soil
	H.F.L / M.W.L
	Elevation of the point
	Elevation of the point in Plan view
	Earthen Slope
	Ground Level
	Stone Pitching/Rip Rap

Abbrevation

c/c	- center to center
U/S	- Up Stream
D/S	- Down Stream
W.L	- Water Level
RCC	- Reinforce Cement Concrete
PCC	- Plain Cement Concrete
WF	- Water Flow Line

FUNDED BY:
United Nation Deveplement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Protection wall

DRAWING:
Water stopper sections and details

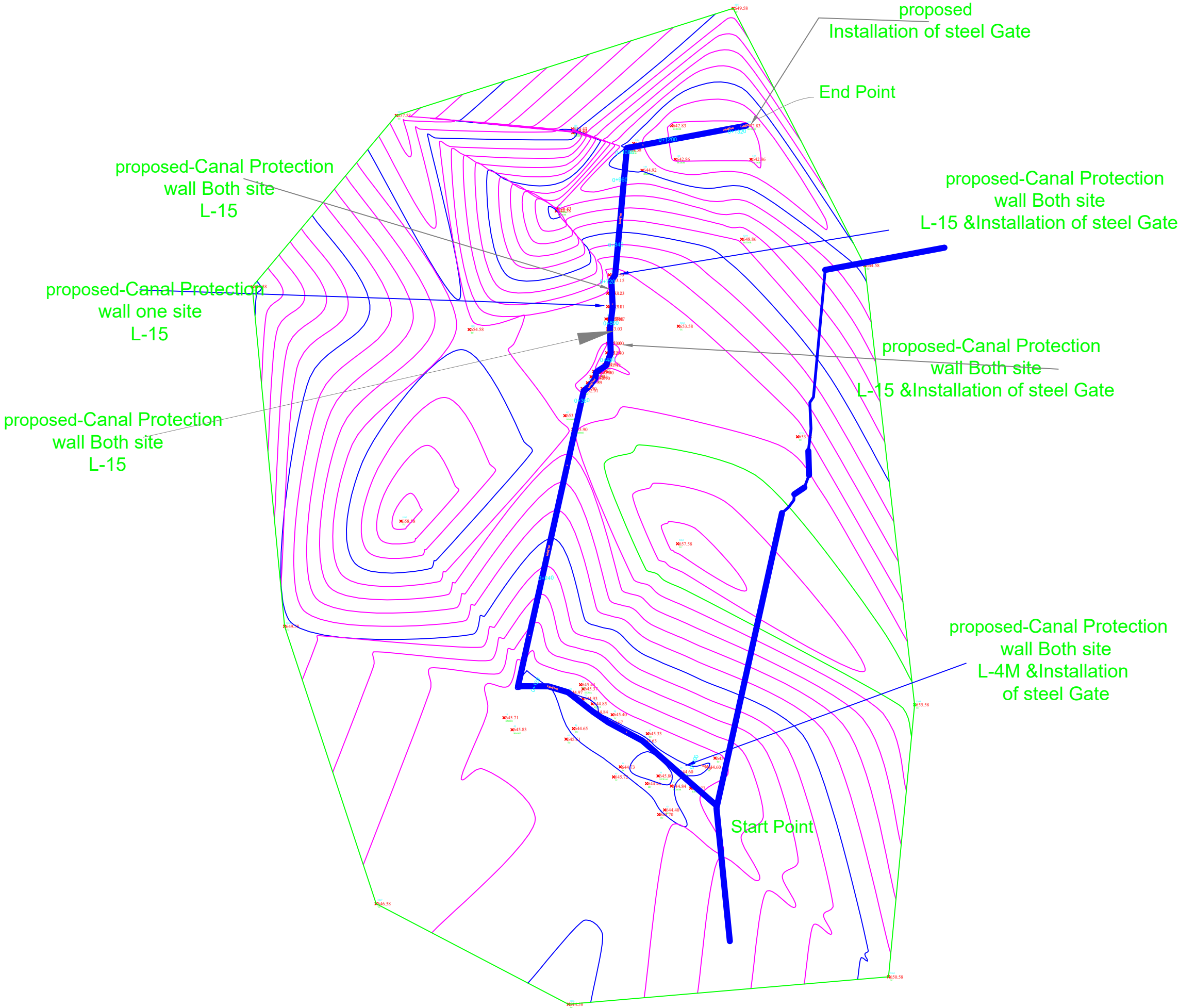
PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qag
DRAWING PAGE NO:029
REVISION NO: 1

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Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date:August, 2024

Contour Map of Kamal por , Lamaty, Dare- Laam Village Canal



LEGEND:-

	Center Line
	Direction of flow
	Grouted Stone Masonry
	Plain Cement Concrete
	Reinforced Cement Concrete
	Bank Protection
	Compacted Soil
	H.F.L / M.W.L
	Elevation of the point
	Earthen Slope
	Ground Level
	Stone Pitching/Rip Rap

FUNDED BY:
United Nation Development Progrmm

IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Qarghayee Cantor Map

DRAWING:
Lamatay/Kamal Poor Canal Contour Map or Plan

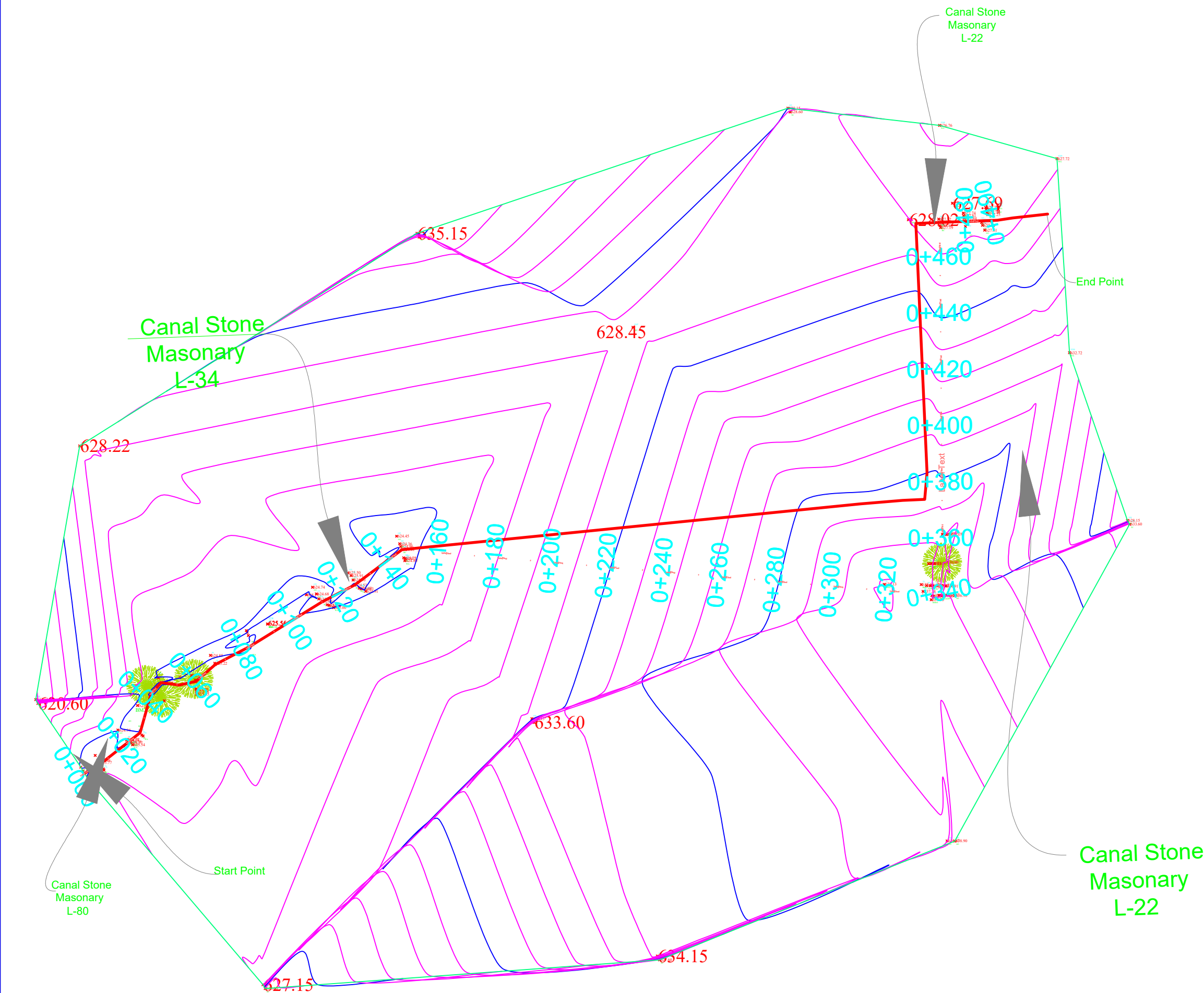
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Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

Date: August, 2024

Contour Map of Sangery,Shert Abad , Sour Dag, Hosian Abad



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

FUNDED BY:
United Nation Development Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29]**

SUB-PROJECT:
Laghman Province Qarghayee District
Qarghayee Cantore Map

DRAWING:
Sangeri Canal Contour Map or Plan

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:031

REVISION NO: 1

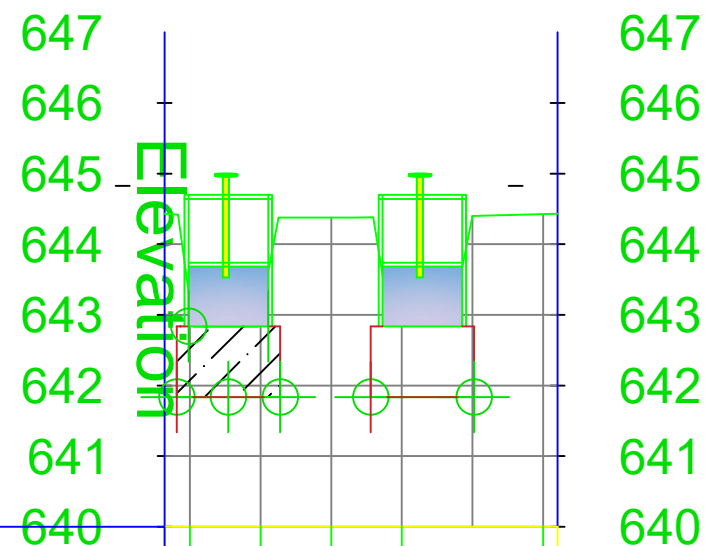
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Design/Drawn By:	AAA Design Team	AAA Design Team
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Drawing Scale: As Shown

Date:August, 2024

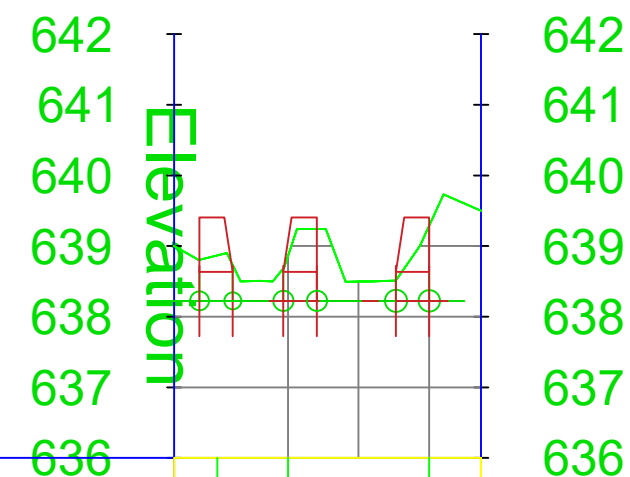
Section (E-E)

Cross Section
0+000.00



Section (D-D) L=15

Cross Section
0+007.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Kamalpoor Canal Protection wall & Itake cross Section

DRAWING:
Cross Sections of Lamati&Kamal Poor Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:032

REVISION NO: 1

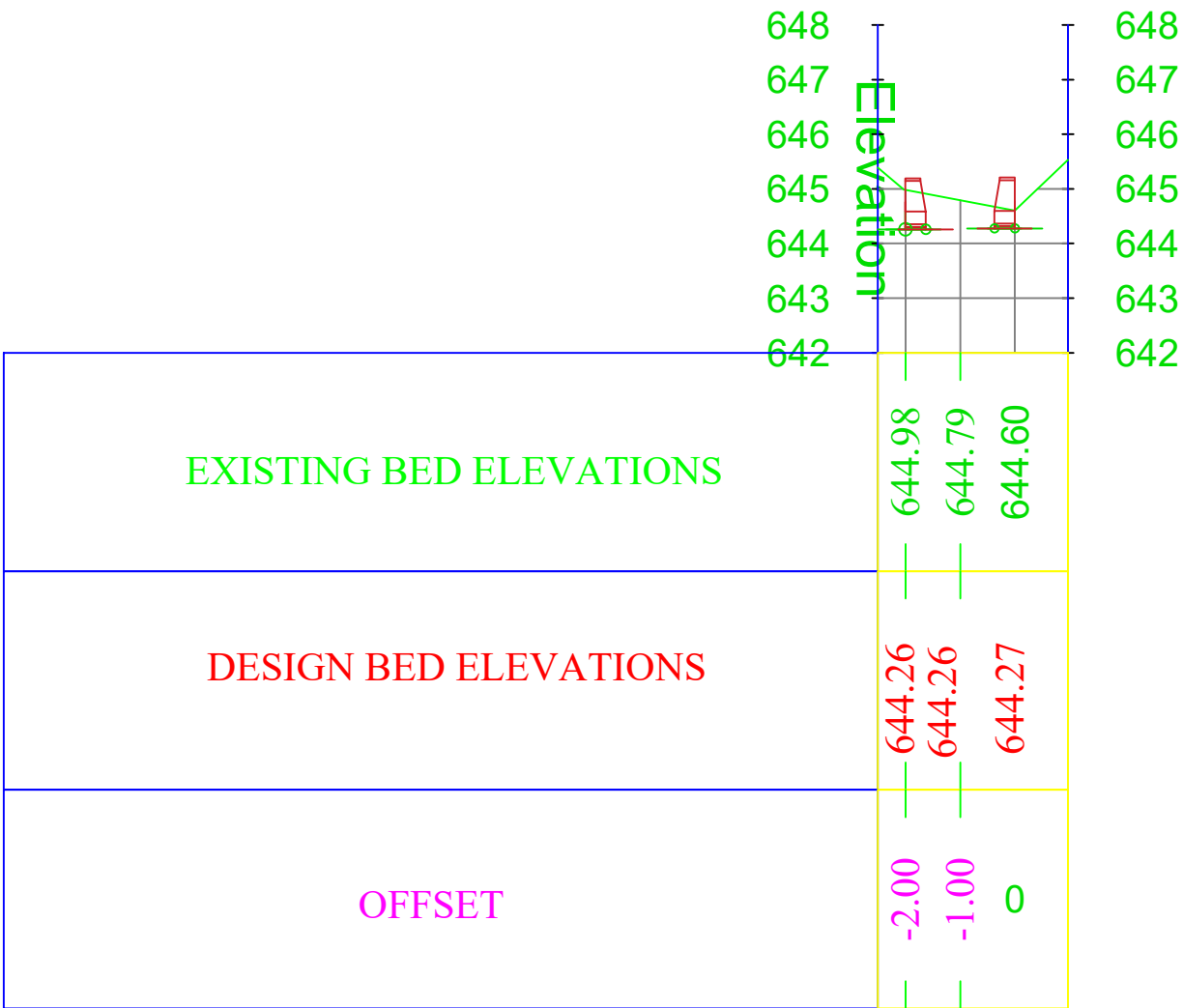
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Drawing Scale: As Shown

Date:August, 2024

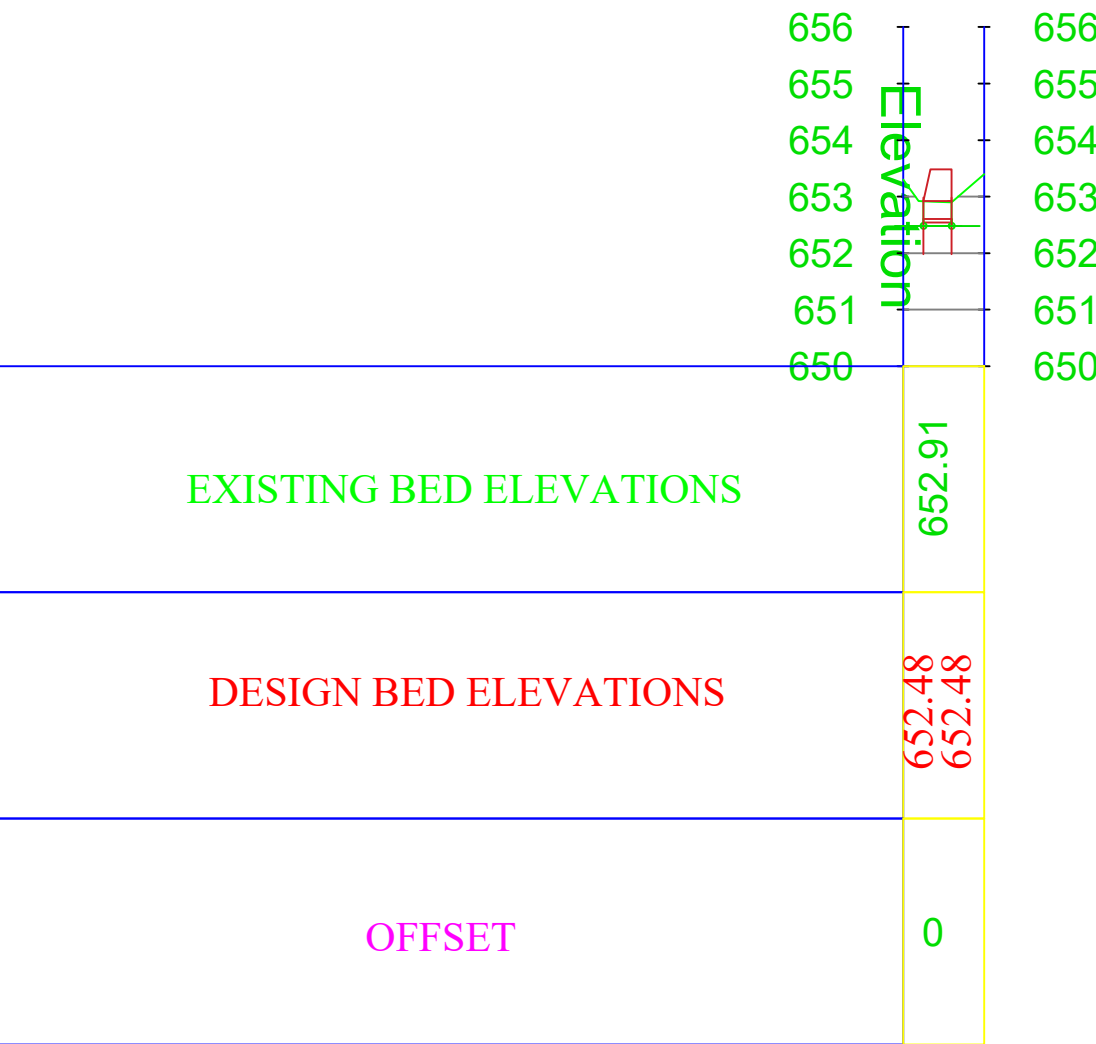
Section (B1-B1) L=15

Cross Section
0+007.00



Section (C-C) L=15

Cross Section
0+005.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Leveel
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Deveplemment Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Nangarhar Province Khogyani District
Ahmad Khill Canal Itake cross Section

DRAWING:
Cross Sections of Lamati&Kamal Poor Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:033

REVISION NO: 1

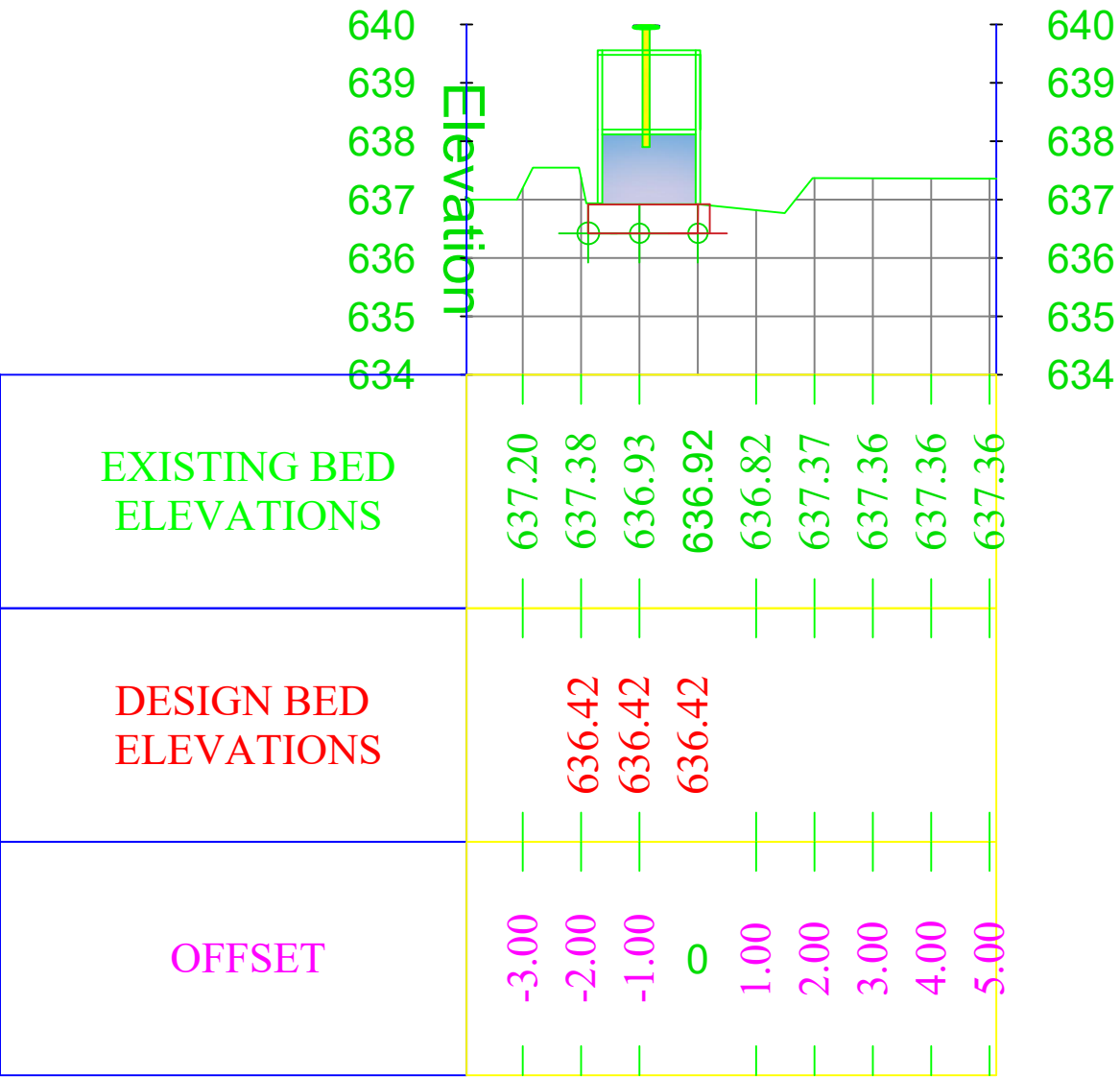
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Design/Drawn By:	AAA Design Team	AAA Design Team
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Drawing Scale: As Shown

Date:August. 2024

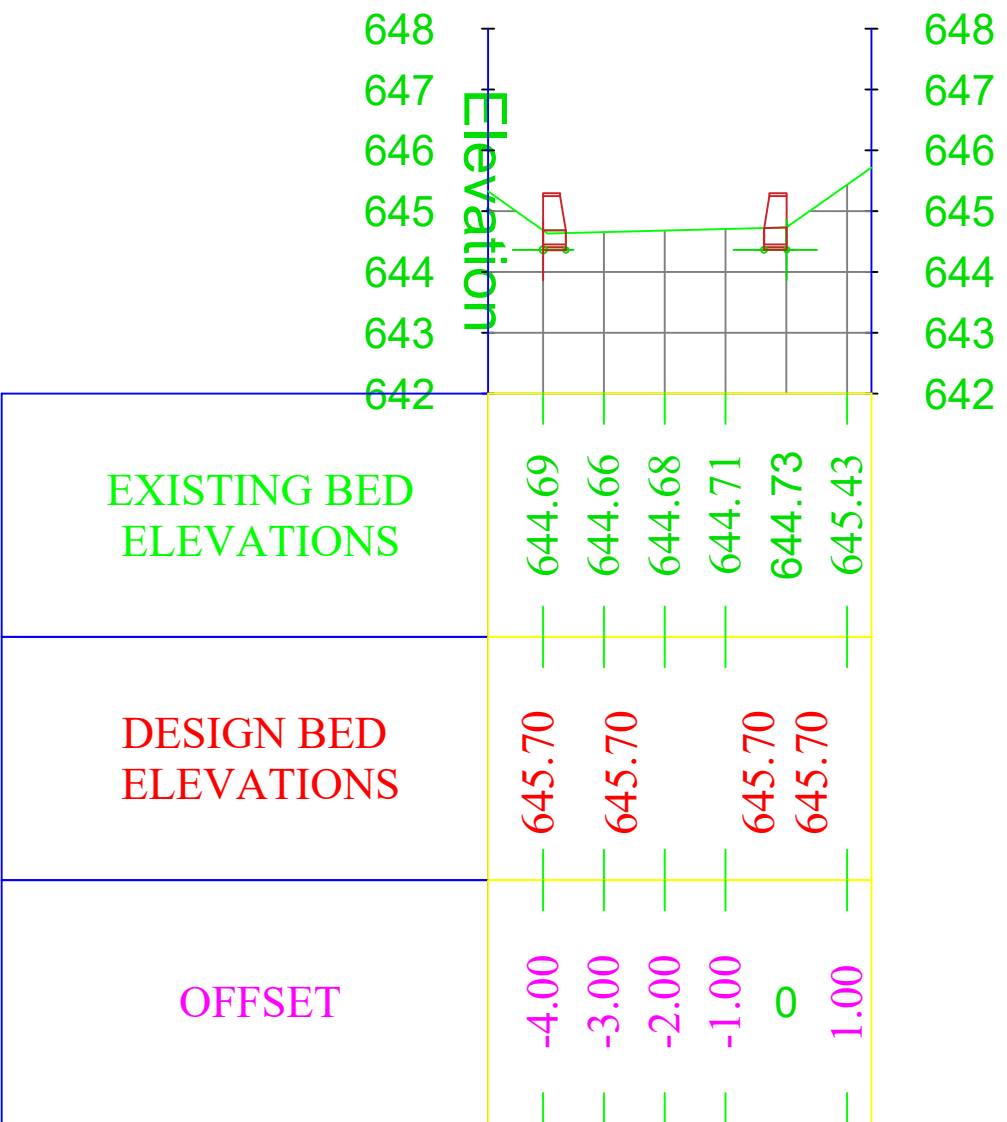
Section (A-A)

Cross Section
0+002.00



Section (B-B) Protection Wall, L=15

Cross Section
0+006.00



LEGEND:-

Center Line

Direction of flow

Grouted Stone Masonry

Plain Cement Concrete

Reinforced Cement Concrete

Bank Protection

Compacted Soil

H.F.L / M.W.L

Elevation of the point

Elevation of the point in Plan view

Earthen Slope

Ground Level

Stone Pitching/Rip Rap

Abbrevation

c/c

- center to center

U/S

- Up Stream

D/S

- Down Stream

W.L

- Water Level

RCC

- Reinforce Cement Concrete

PCC

- Plain Cement Concrete

WF

- Water Flow Line

FUNDED BY:

United Nation Developement Progrmm

IMPLEMENTATION PARTNER:

ACTION AID AFGHANISTAN (AAA)

PROJECT:

CBARD ALL PROJECTS EASTERN REGION

PROJECT CODE: : UNDP AFGRPA/2024/01/29J

SUB-PROJECT:

Laghman Province Qarghayee District

Kamalpoor Canal Protection wall & Itake cross Section

DRAWING:

Cross Sections of Lamati&Kamal Poor Canal

PROJECT SYMBOL:

CBARD ALL /AFG/EAST

SUB-PROJECT CODE:

Laghman-01,Qarg

DRAWING PAGE NO:034

REVISION NO:

1

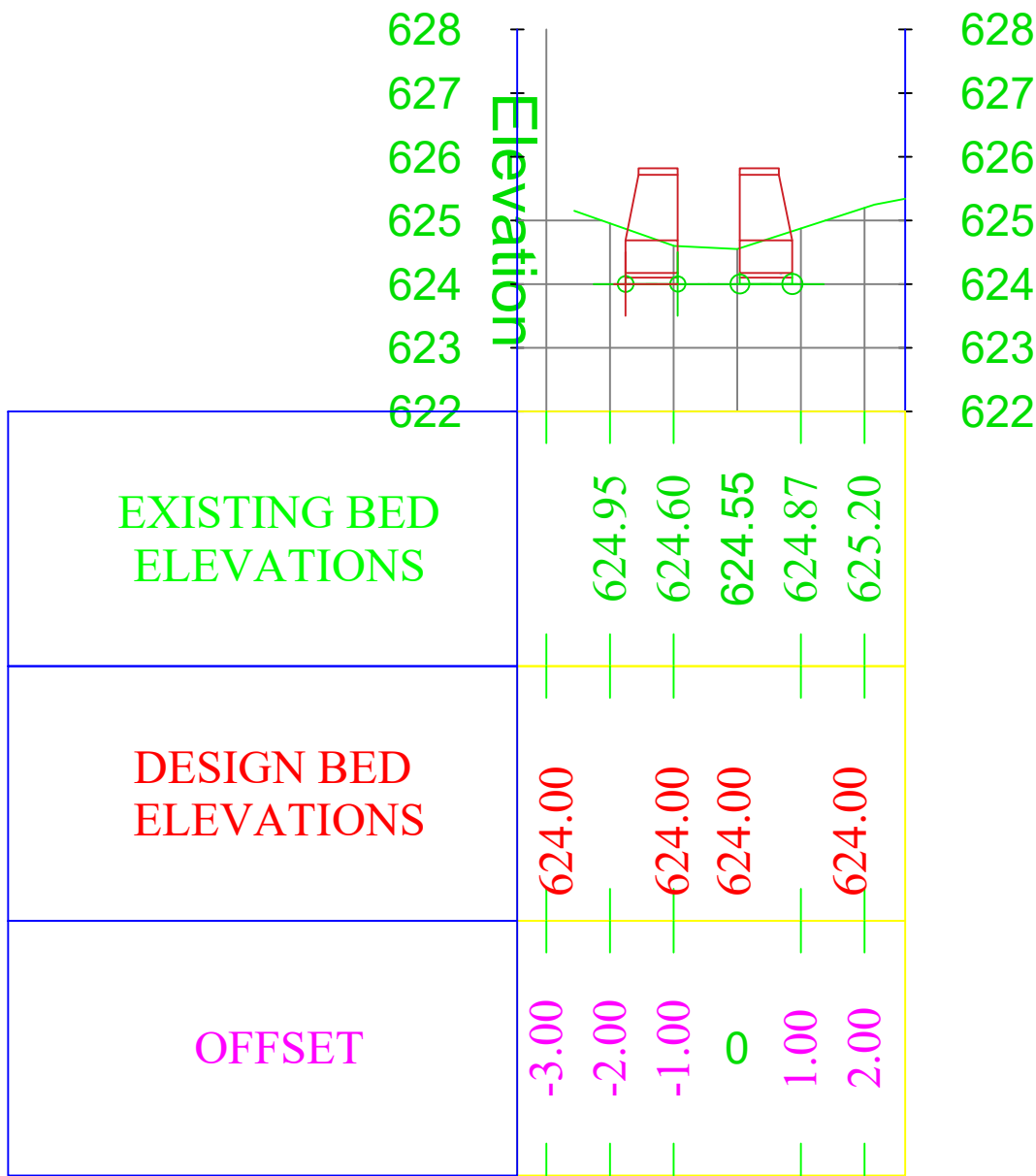
Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

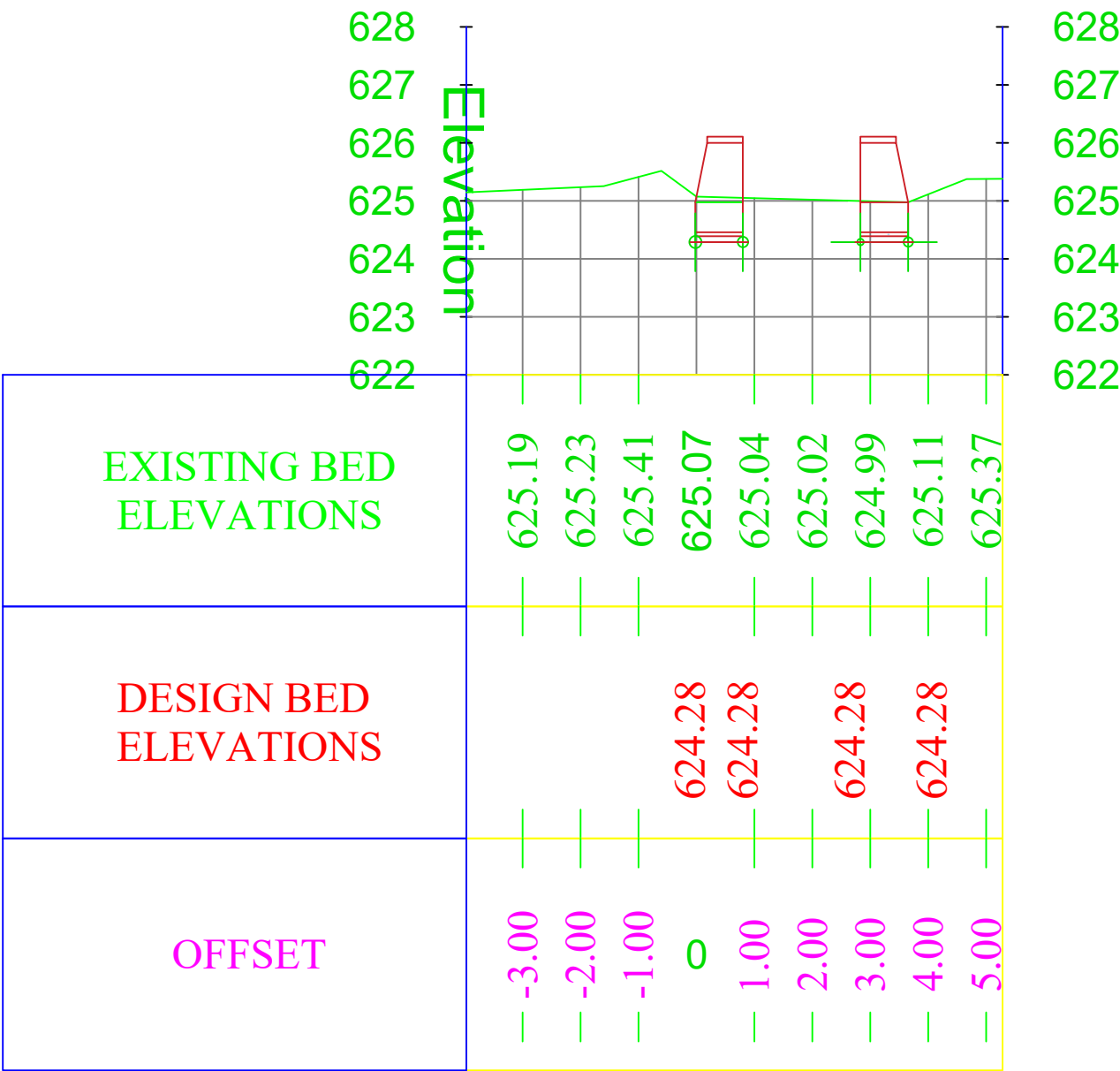
Date:August, 2024

Section (F-F) L=30

Cross Section
0+000.00



Cross Section
0+025.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Stone Masonary wall cross Section

DRAWING:
Cross Sections of Sangeri Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:035
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

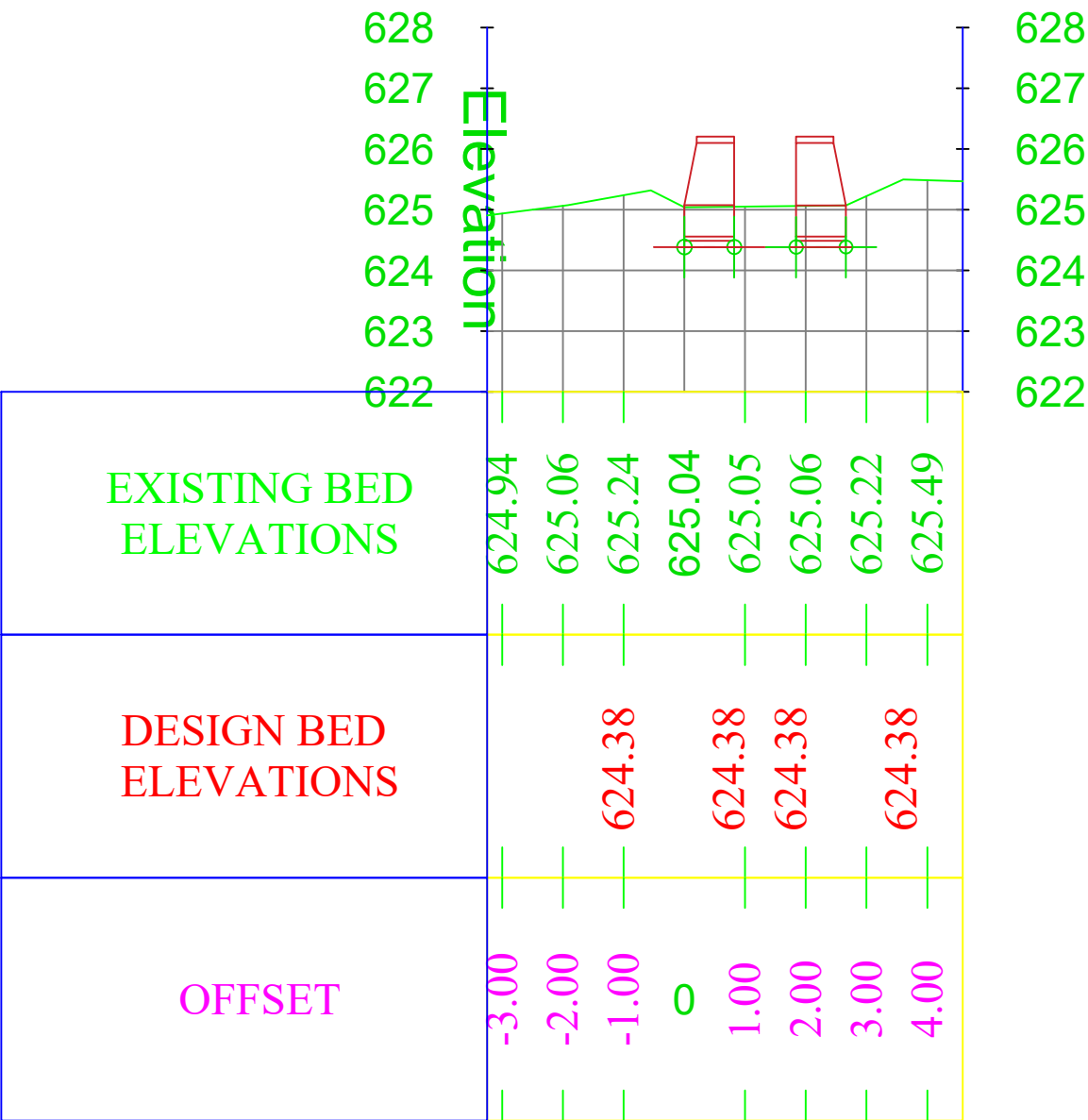
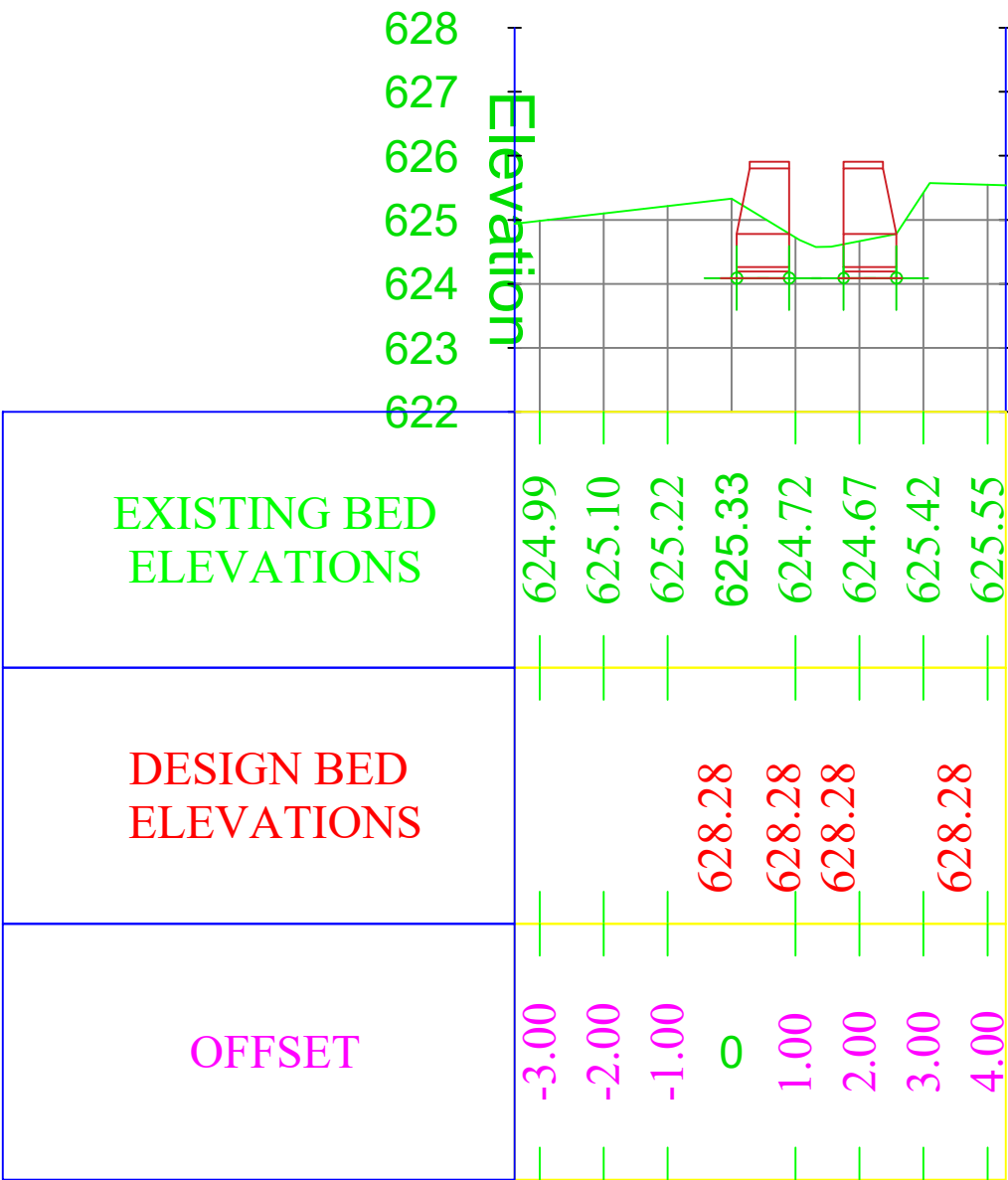
Drawing Scale: As Shown

Date:August. 2024

Section (G-G) L=50

Cross Section
0+050.00

Cross Section
0+080.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm

IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Stone Masonary wall cross Section

DRAWING:
Cross Sections of Sangeri Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:036

REVISION NO: 1

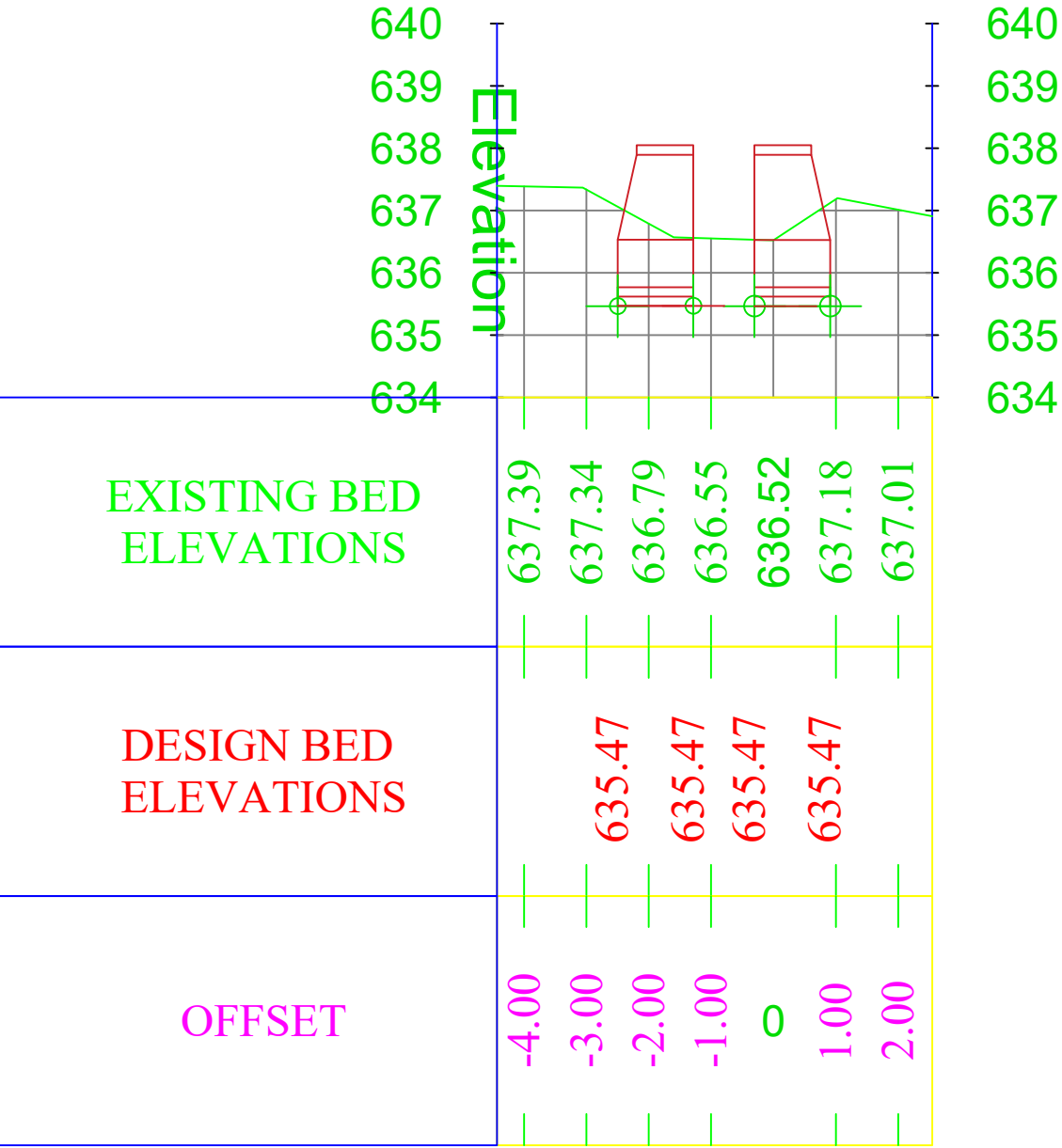
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Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
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Checked By:		
Approved By:		

Drawing Scale: As Shown

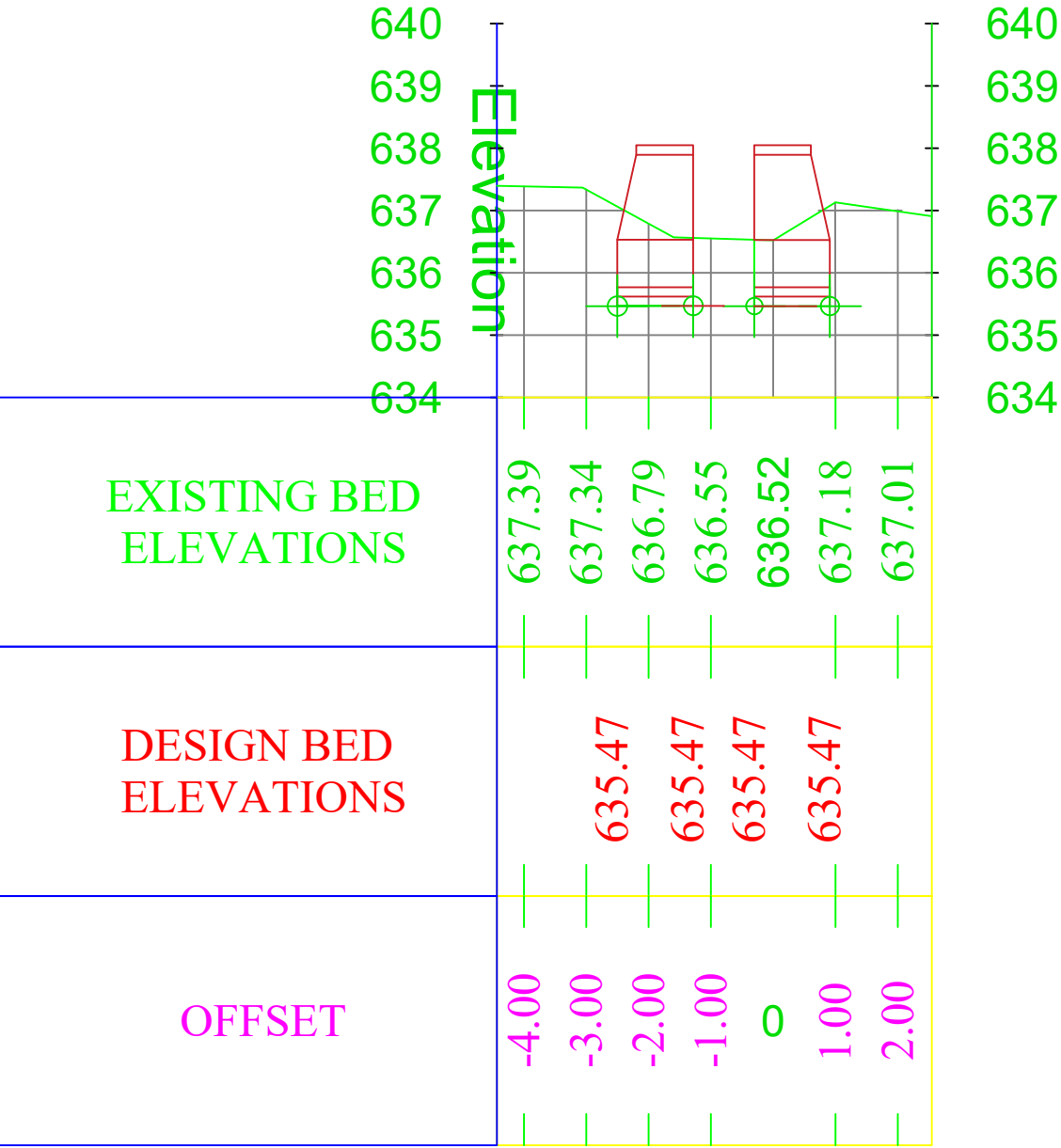
Date:August, 2024

Section (H-H) L=22

Cross Section
0+000.00



Cross Section
0+010.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm

IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Stone Masonary wall cross Section

DRAWING:
Cross Sections of Sangeri Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:037

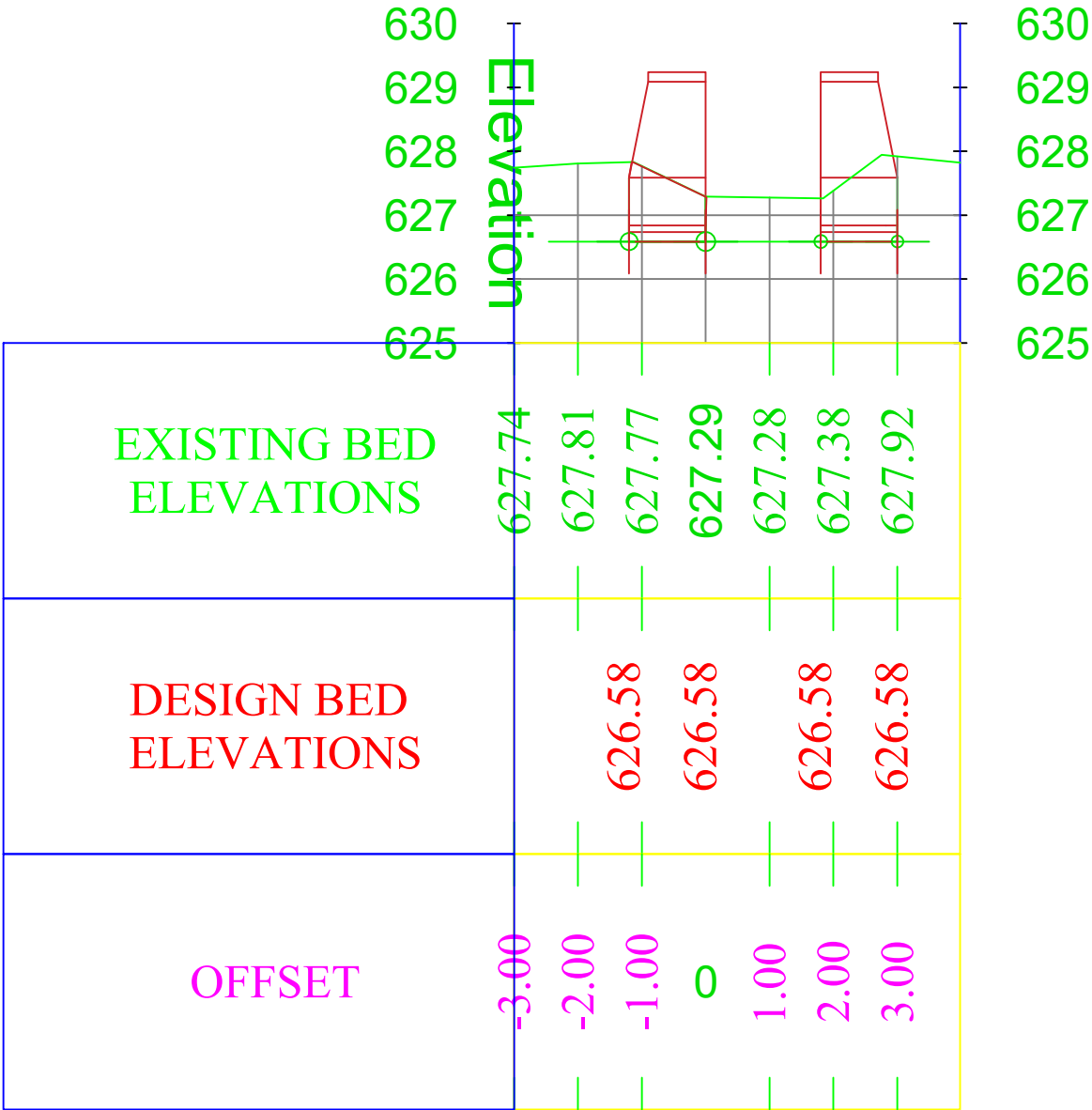
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

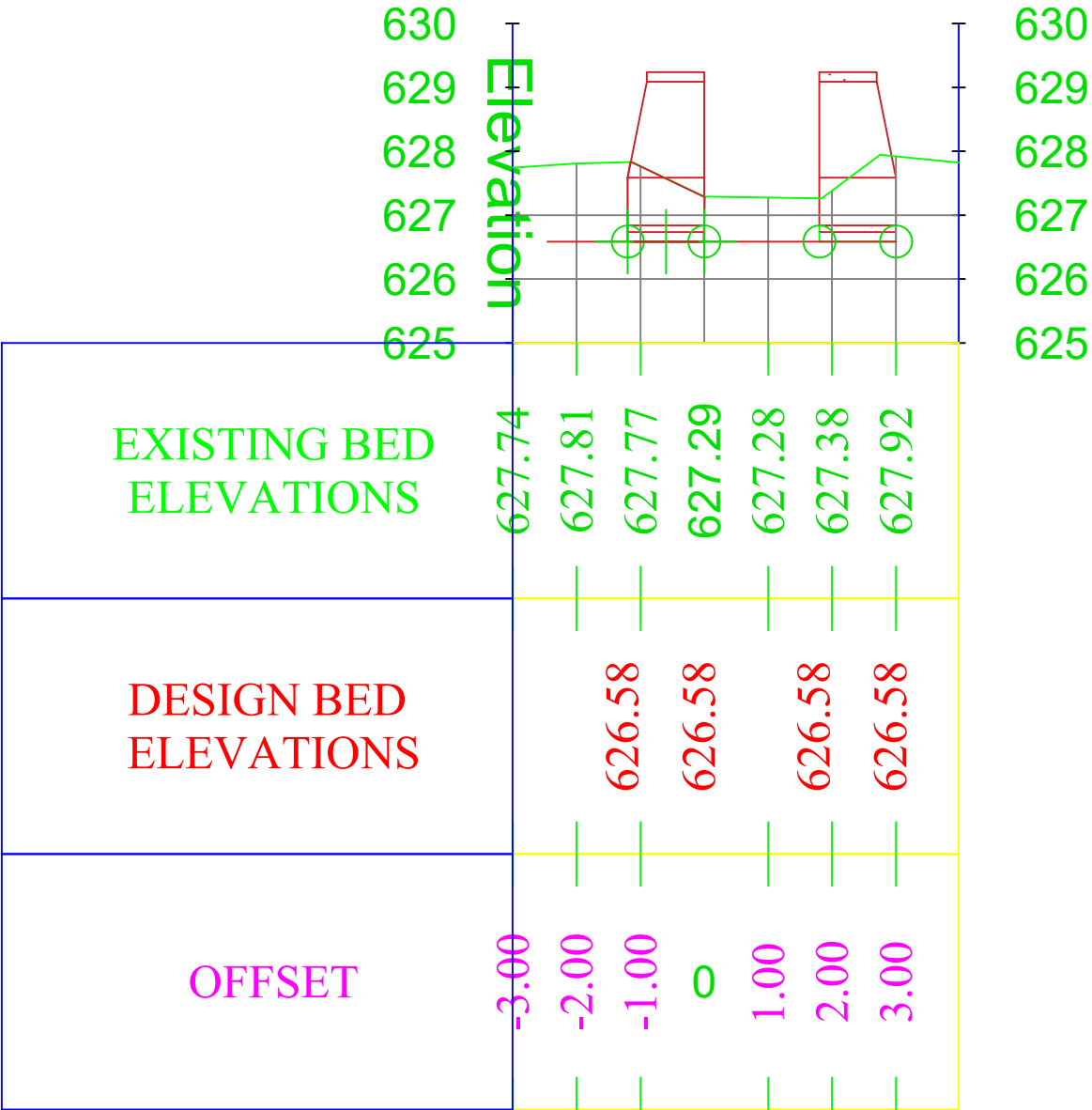
Drawing Scale: As Shown Date:August, 2024

Section (J-J) L=22

Cross Section
0+000.00



Cross Section
0+012.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbrevation

- c/c - center to center
- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm

IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)

act:onaid

PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : UNDP AFGRPA/2024/01/29]

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Stone Masonary wall cross Section

DRAWING:
Cross Sections of Sangeri Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST

SUB-PROJECT CODE: Laghman-01,Qarg

DRAWING PAGE NO:038

REVISION NO: 1

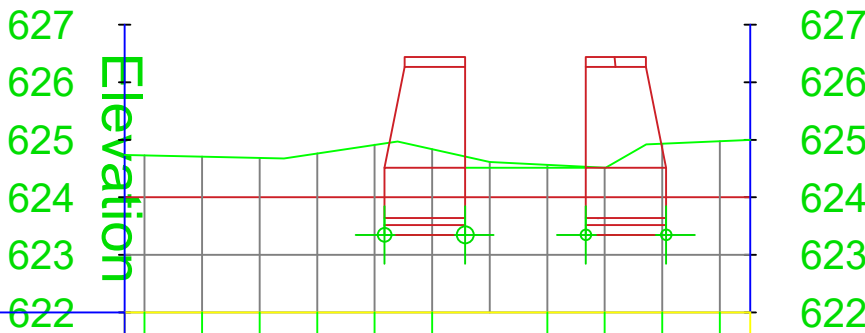
Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown

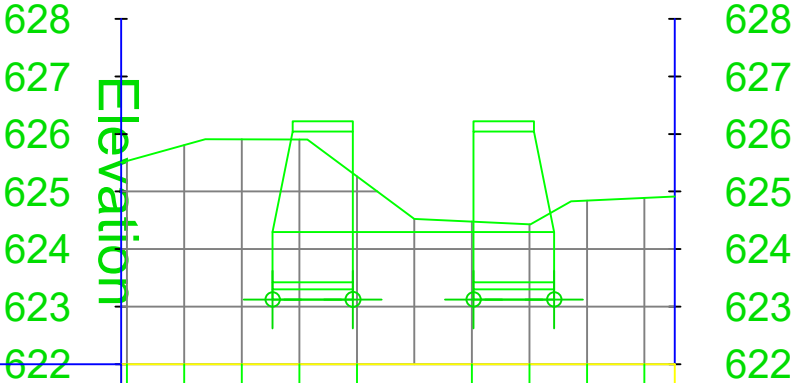
Date:August. 2024

Section (K-K) L=34

Cross Section
0+000.00



Cross Section
0+017.00



LEGEND:-

- Center Line
- Direction of flow
- Grouted Stone Masonry
- Plain Cement Concrete
- Reinforced Cement Concrete
- Bank Protection
- Compacted Soil
- H.F.L / M.W.L
- Elevation of the point
- Elevation of the point in Plan view
- Earthen Slope
- Ground Level
- Stone Pitching/Rip Rap

Abbravation

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- U/S - Up Stream
- D/S - Down Stream
- W.L - Water Level
- RCC - Reinforce Cement Concrete
- PCC - Plain Cement Concrete
- WF - Water Flow Line

FUNDED BY:
United Nation Developement Progrmm



IMPLEMENTATION PARTNER:
ACTION AID AFGHANISTAN (AAA)



PROJECT:
CBARD ALL PROJECTS EASTERN REGION
PROJECT CODE: : **UNDP AFGRPA/2024/01/29J**

SUB-PROJECT:
Laghman Province Qarghayee District
Sangeri Canal Stone Masonary wall cross Section

DRAWING:
Cross Sections of Sangeri Canal

PROJECT SYMBOL: CBARD ALL /AFG/EAST
SUB-PROJECT CODE: Laghman-01,Qarg
DRAWING PAGE NO:039
REVISION NO: 1

Action Taken	Name	Designation
Surveyed By:	AAA Survey Team	AAA Survey Team
Design/Drawn By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Reviewed By:	AAA Design Team	AAA Design Team
Checked By:		
Approved By:		

Drawing Scale: As Shown
Date:August, 2024