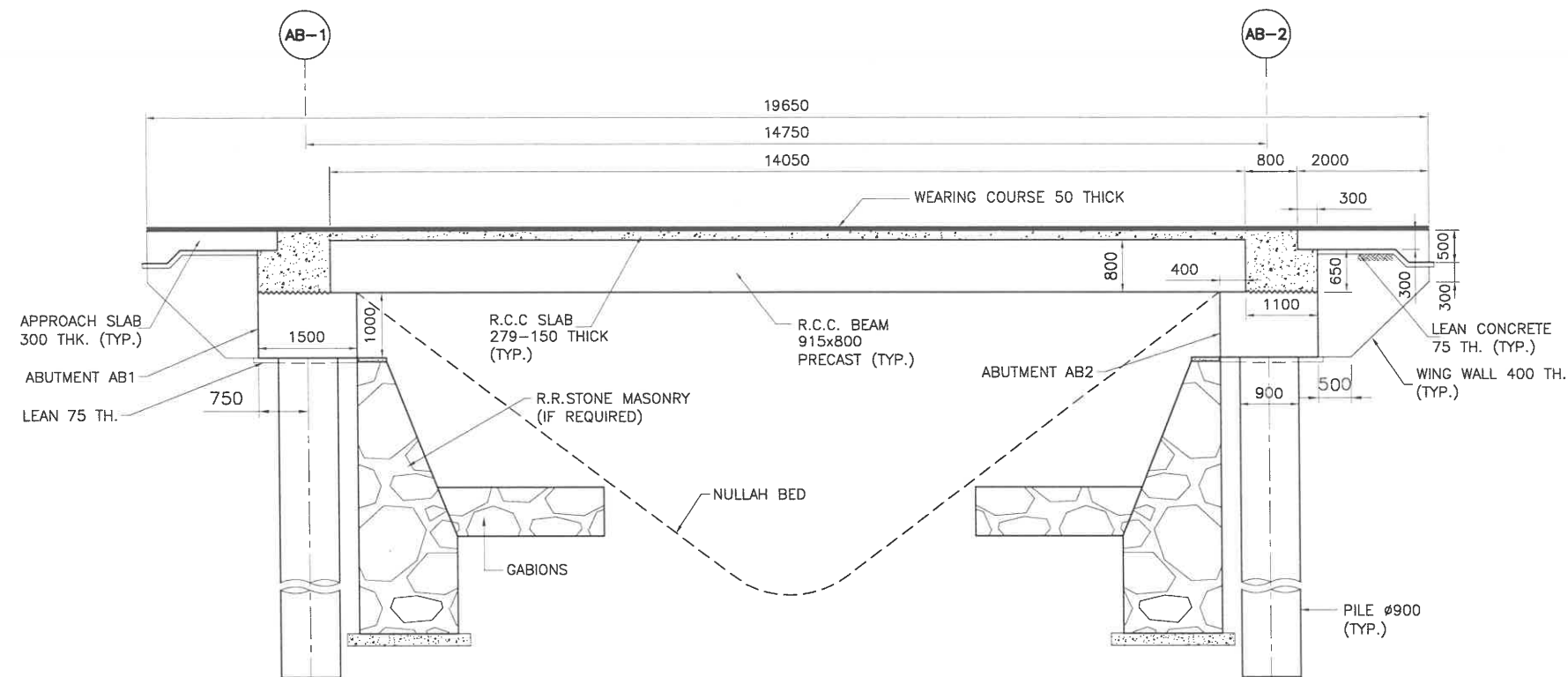
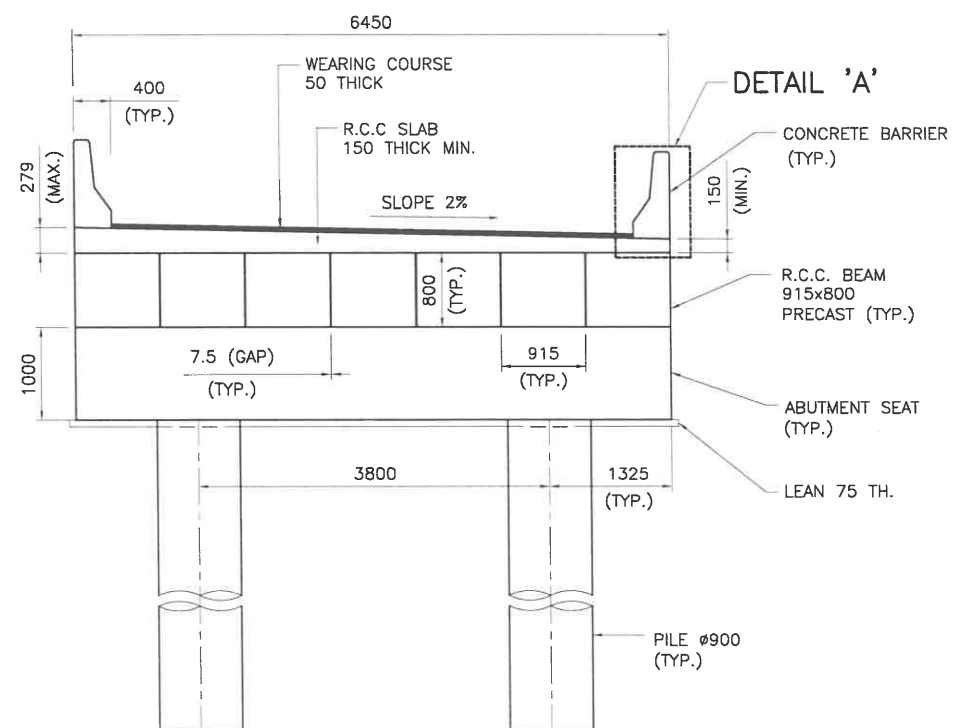
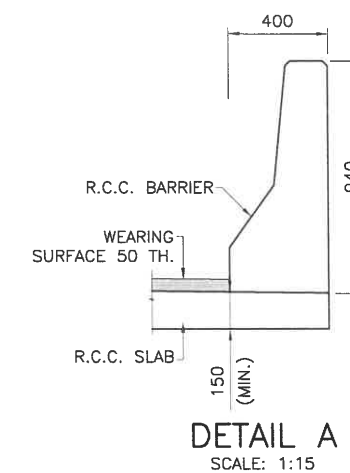




SECTION A-A
SCALE: 1:50



SECTION B-B
SCALE: 1:40

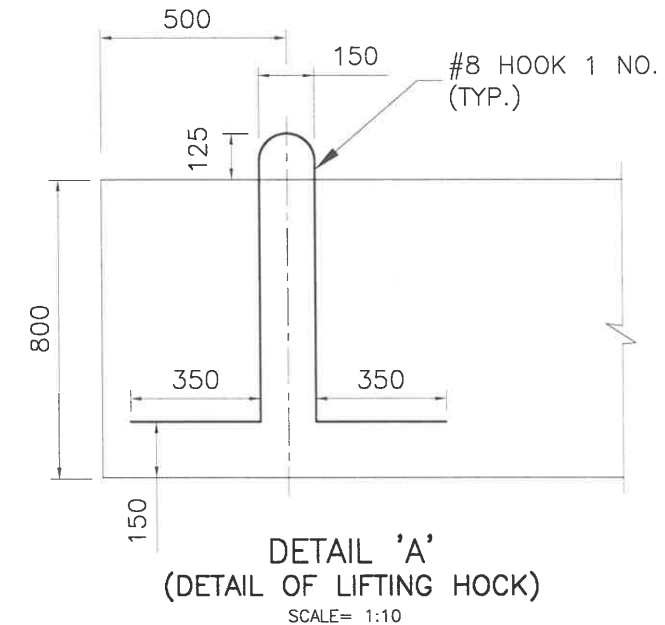
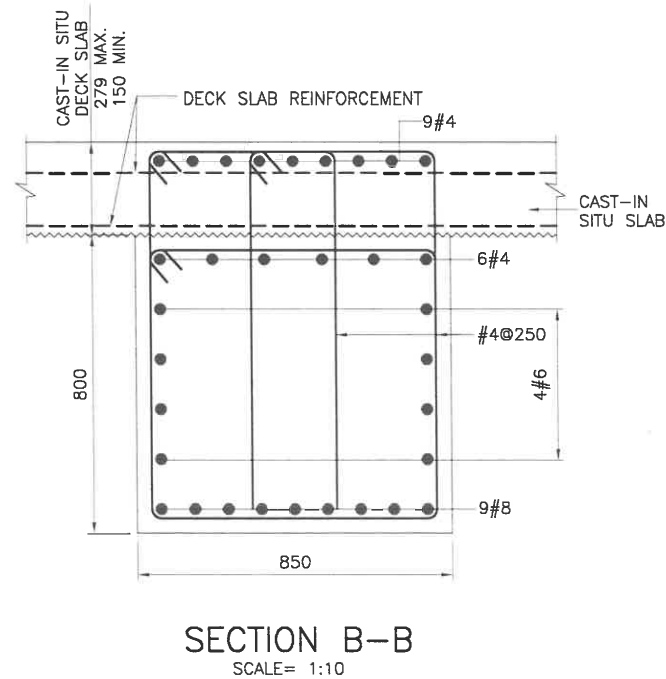
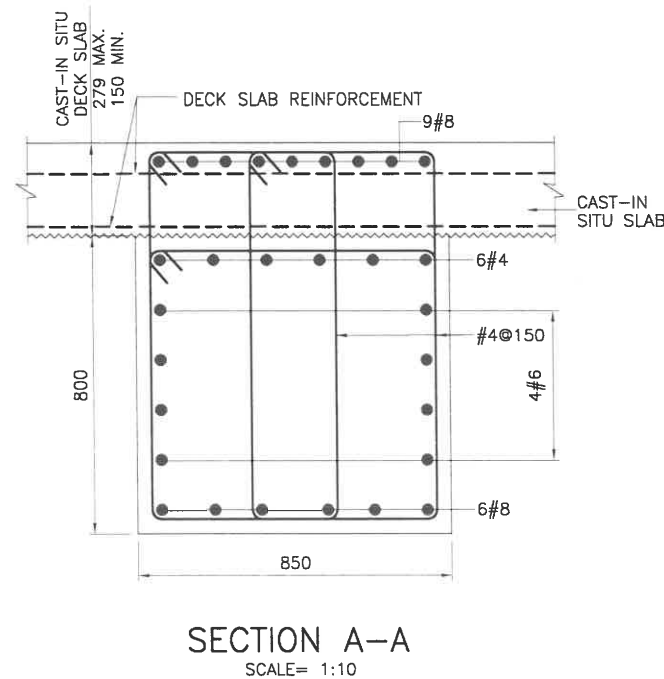
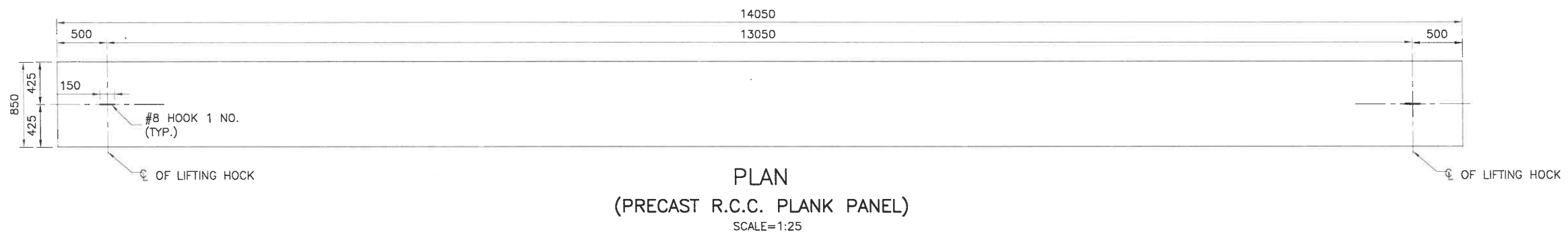
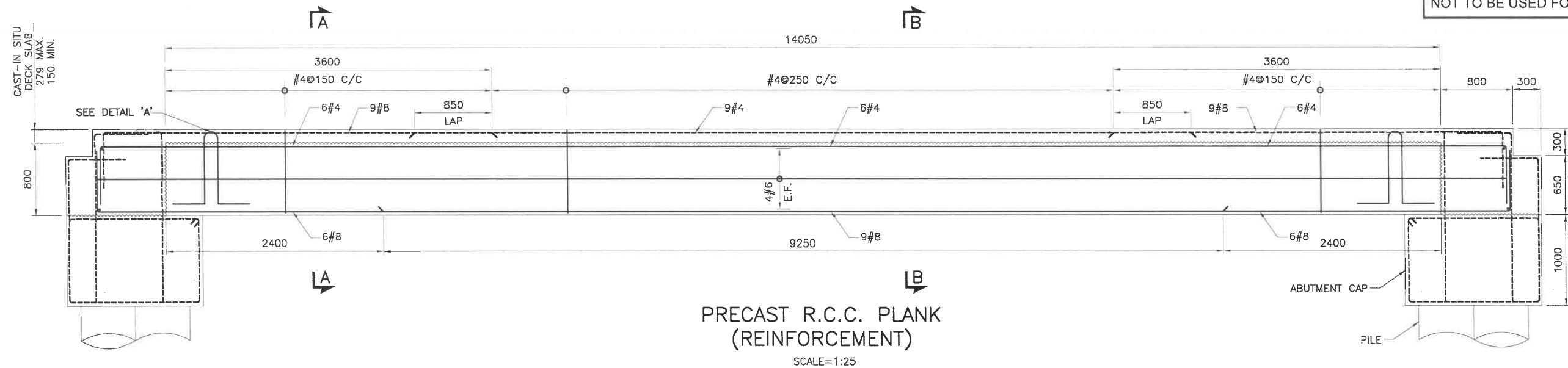


DETAIL A
SCALE: 1:15

NOTES:

- FOR GENERAL NOTES REFER DWG NO. PG001.
- WORK THIS DRAWING IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.
- LENGTH OF PILE WILL BE FINALIZED AFTER GEOTECHNICAL INVESTIGATION AND FULL SCALE PILE LOAD TEST.

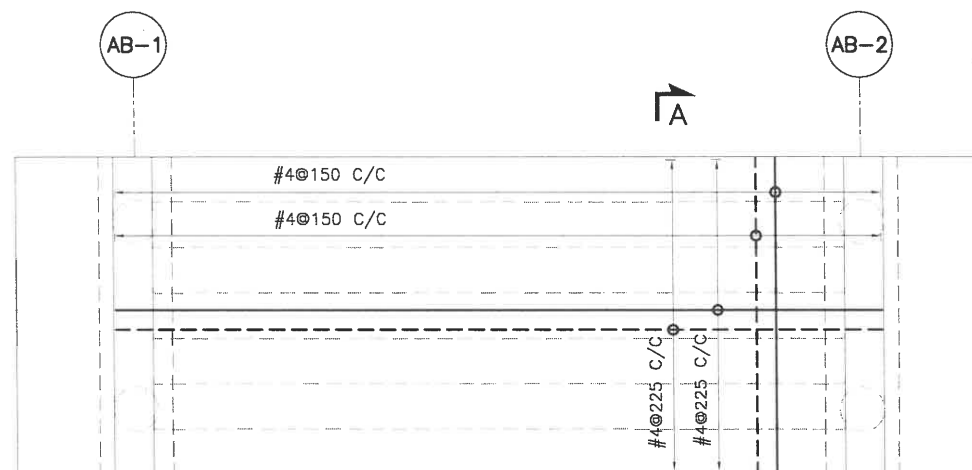
CLIENT  WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		CONSULTANT  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		04				DRAWN	RASHID AZIZ	PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	BRIDGE GENERAL ARRANGEMENT SECTIONS		SCALE
				03				SUBMITTED					AS SHOWN
				02				RECOMMENDED					
				01				CHD./VER.					REV.
				REV.	DATE	DESCRIPTION	APPROVED	APPROVED			DATE	DRAWING No.	REV.
									JULY 2026	4520/102/TD/P1G101A			



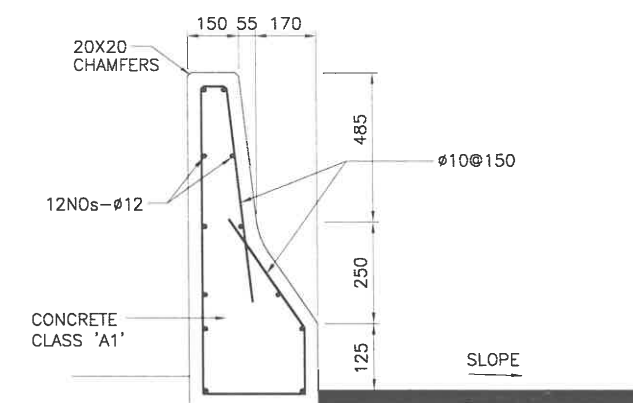
NOTES:

- FOR GENERAL NOTES REFER DWG NO. PG001.
- WORK THIS DRAWING IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.

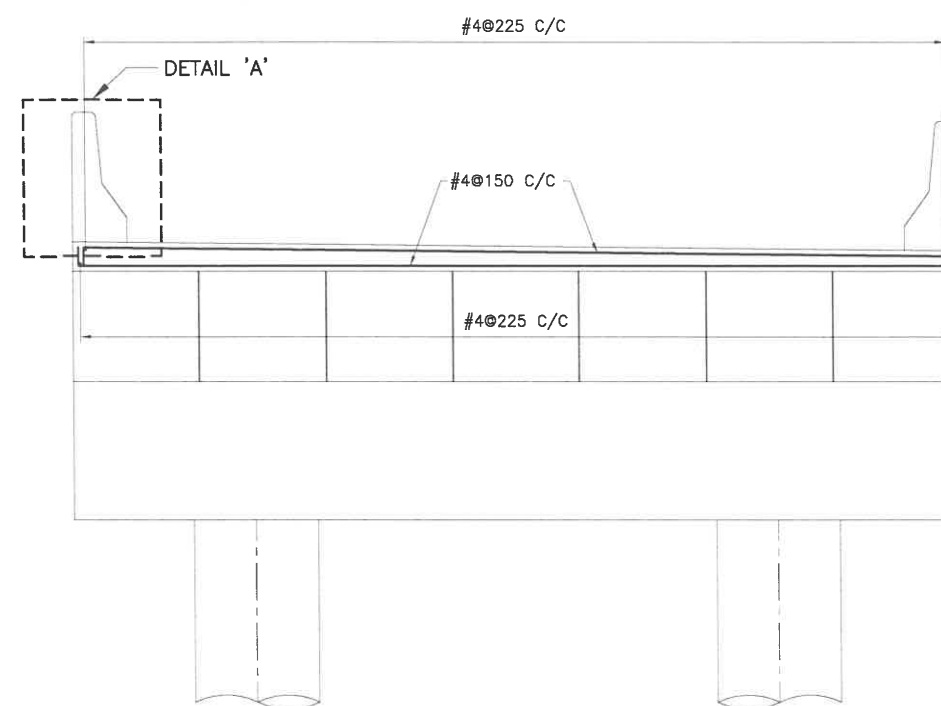
CLIENT  WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		CONSULTANT  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		04				DRAWN	RASHID AZIZ	PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	BRIDGE PRECAST R.C.C. PLANK REINFORCEMENT		SCALE
				SUBMITTED									
				RECOMMENDED									
				CHD./VER.									
REV.	DATE	DESCRIPTION	APPROVED	APPROVED									
										DATE	DRAWING No.	REV.	
										JULY 2026	4520/102/TD/P1G102	0	



DECK SLAB
(REINFORCEMENT PLAN)



DETAIL 'A'
EDGE BARRIER (SINGLE FACE)
(REINFORCEMENT)
SCALE=1:10

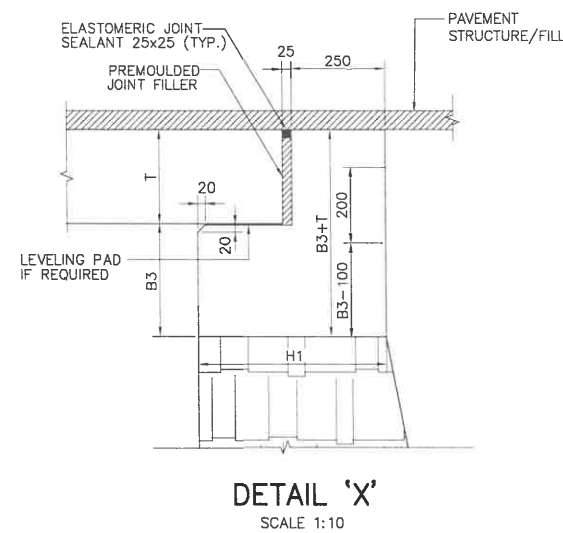
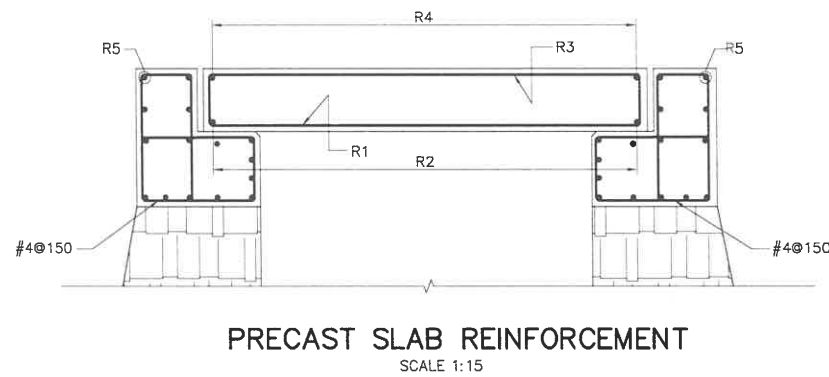
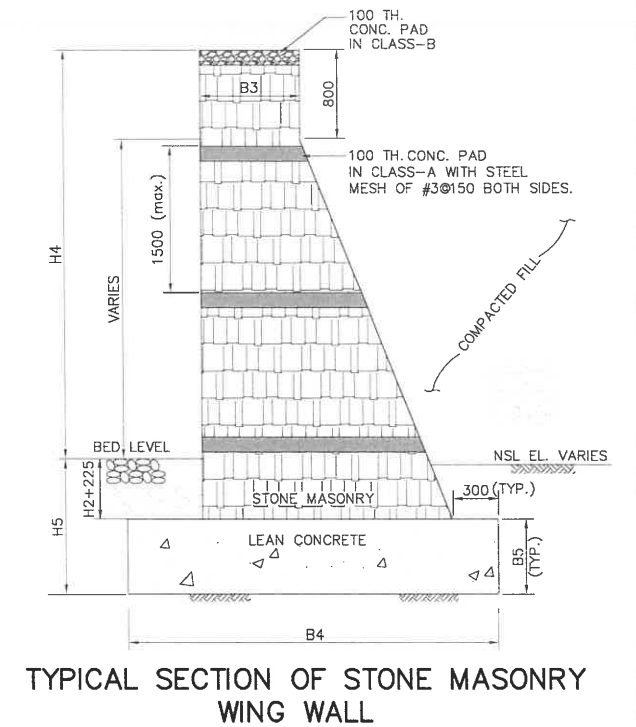
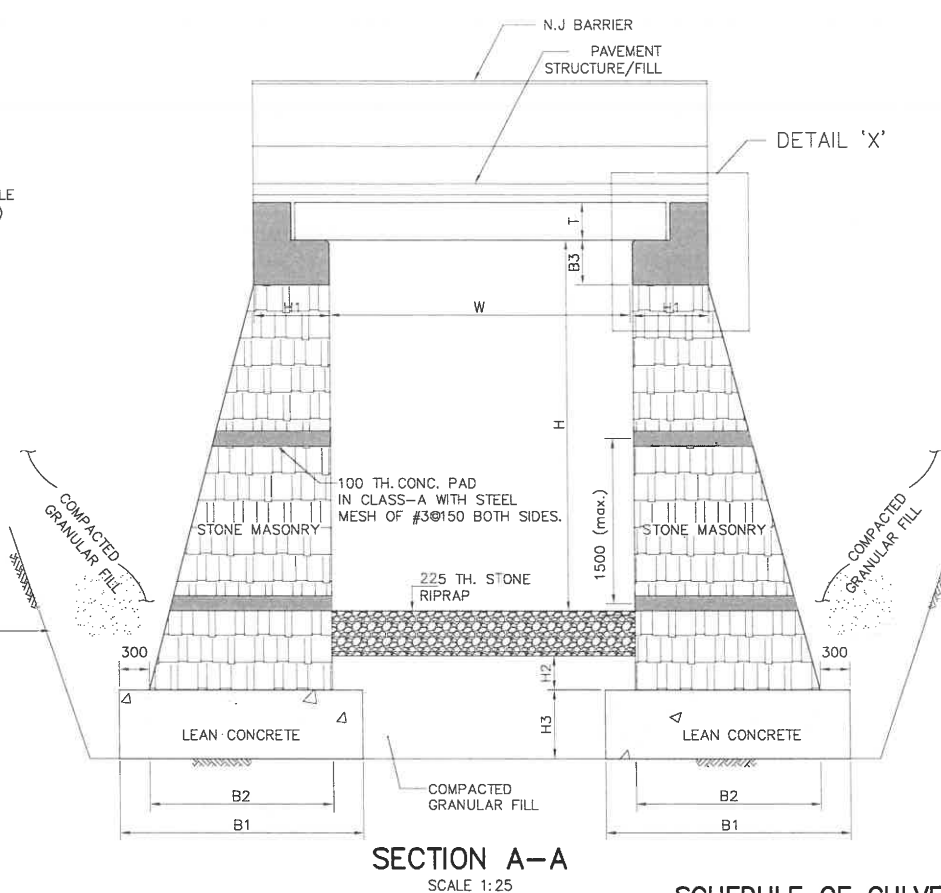
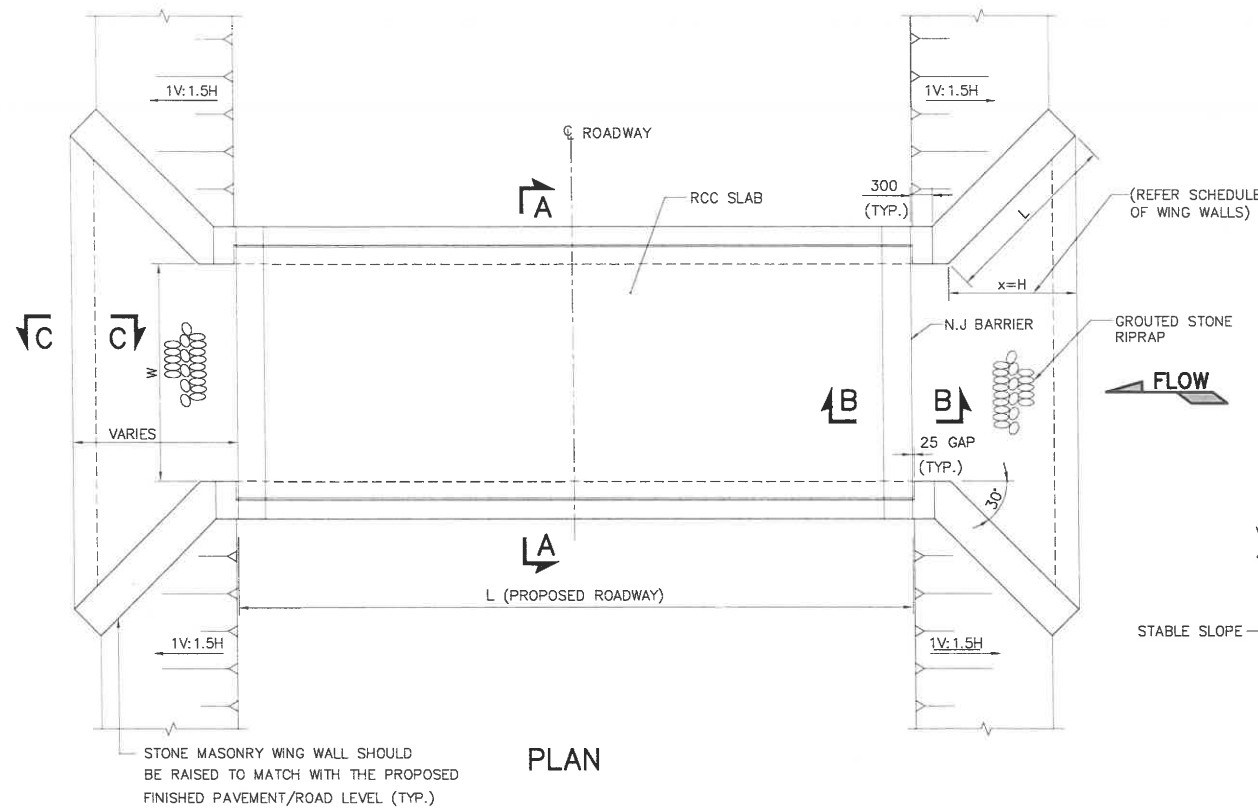


SECTION A-A
SCALE: 1:25

NOTES:

1. FOR GENERAL NOTES REFER DWG NO. PG001.
2. WORK THIS DRAWING IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.

CLIENT  WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	04				DRAWN	RASHID AZIZ	PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMESLY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	BRIDGE		SCALE
		03				SUBMITTED			DECK SLAB, EDGE BARRIER REINFORCEMENT DETAIL		1:75
		02				RECOMMENDED					
		01				CHD./VER.					
		HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		REV.	DATE	DESCRIPTION	APPROVED		APPROVED	DATE	DRAWING No.
								JULY 2026	4520/102/TD/P1G104		

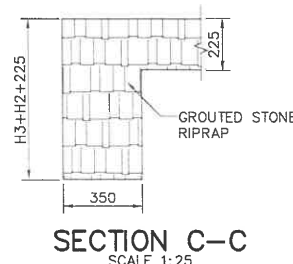
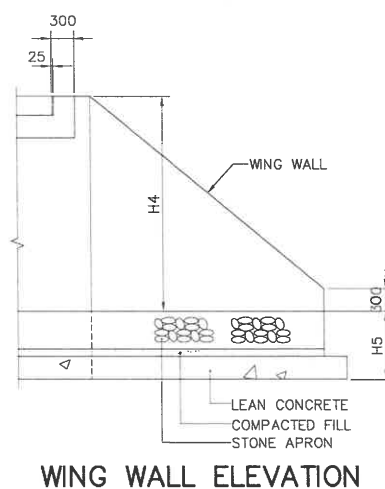
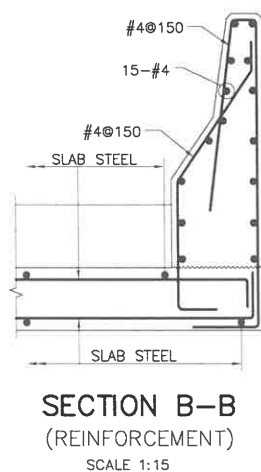
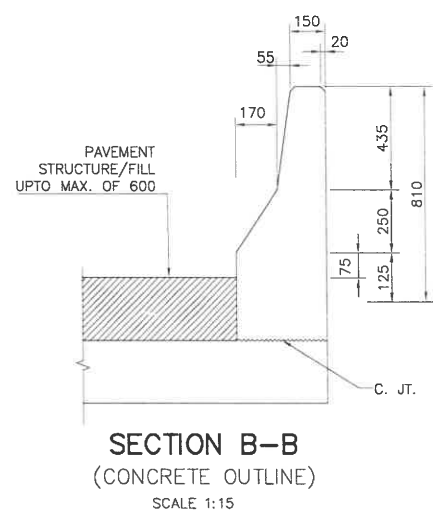


SCHEDULE OF CULVERTS

SECTION	DIMENSIONS								
	H	H1	H2	H3	B1	B2	B3	B4	B5
1	1000 ~ 1500	500	150	600	1500	900	300	450	300
2	1500 ~ 2000	500	150	800	1800	1200	300	450	300
3	2000 ~ 2500	600	200	900	2200	1600	350	500	350
4	2500 ~ 3000	700	200	900	2600	2000	400	600	400

REINFORCEMENT SCHEDULE OF RCC SLAB (SINGLE CELL)

DIMENSIONS		REINFORCEMENT					
W	T	R1	R2	R3	R4	R5	R6
1500	250	#4@150	#3@150	#3@150	#3@150	16-#4	12-#4
2000	300	#6@200	#4@200	#4@200	#3@150	16-#4	12-#4
2500	350	#6@200	#4@200	#4@200	#3@150	16-#4	14-#4
3000	400	#6@150	#4@150	#4@150	#4@200	20-#4	16-#4
3500	450	#6@150	#4@150	#4@150	#4@200	20-#4	16-#4
4000	500	#6@125	#4@125	#4@125	#4@150	24-#4	18-#4



SCHEDULE OF WING WALLS

SECTION	DIMENSIONS			
	H4	B6	B7	B8
1	600 ~ 900	500	800	400
2	900 ~ 1200	500	1050	400
3	1200 ~ 1500	500	1600	450
4	1500 ~ 1800	500	2100	450
5	1800 ~ 2400	500	2700	500
6	2400 ~ 3000	600	3300	600

NOTES

- FOR GENERAL NOTES REFER DRAWING P1G001.
- DOWELS FOR N.J BARRIER SHALL BE PLACED IN END PANELS BEFORE PLACING OF CONCRETE.
- TOP LEVEL OF CULVERT SHALL BE FIXED MAKING ALLOWANCE FOR ASPHALT TOPPING LAYER.
- THE LENGTH AND INCLINATION IN PLAN OF THE WING WALL MAY VARY AS PER SITE CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- PIER SHALL BE OF DRESSED STONE MASONRY IN 1:3 CEMENT SAND MORTAR.
- CROSS SLOPE OF 2% SHALL BE PROVIDED FOR STONE RIPRAP.

CLIENT



WATER AND POWER
DEVELOPMENT AUTHORITY
(WAPDA)

CONSULTANT



NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04

03

02

01

REV.

DATE

DESCRIPTION

APPROVED

DRAWN

SUBMITTED

RECOMMENDED

CHD/VER.

APPROVED

IFTIKHAR

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION /
IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM
(LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND
DOWNSTREAM FISHERIES PLANS;
NAMESLY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

TYPICAL SINGLE CELLS STONE MASONRY
CULVERT CONCRETE OUTLINE AND
REINFORCEMENT

DATE

DRAWING No.

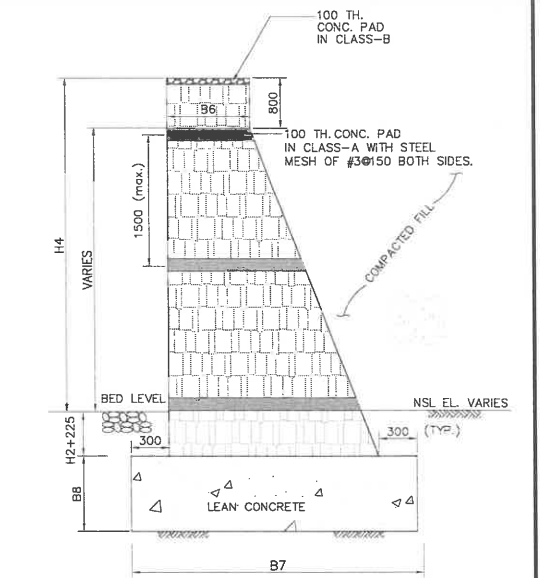
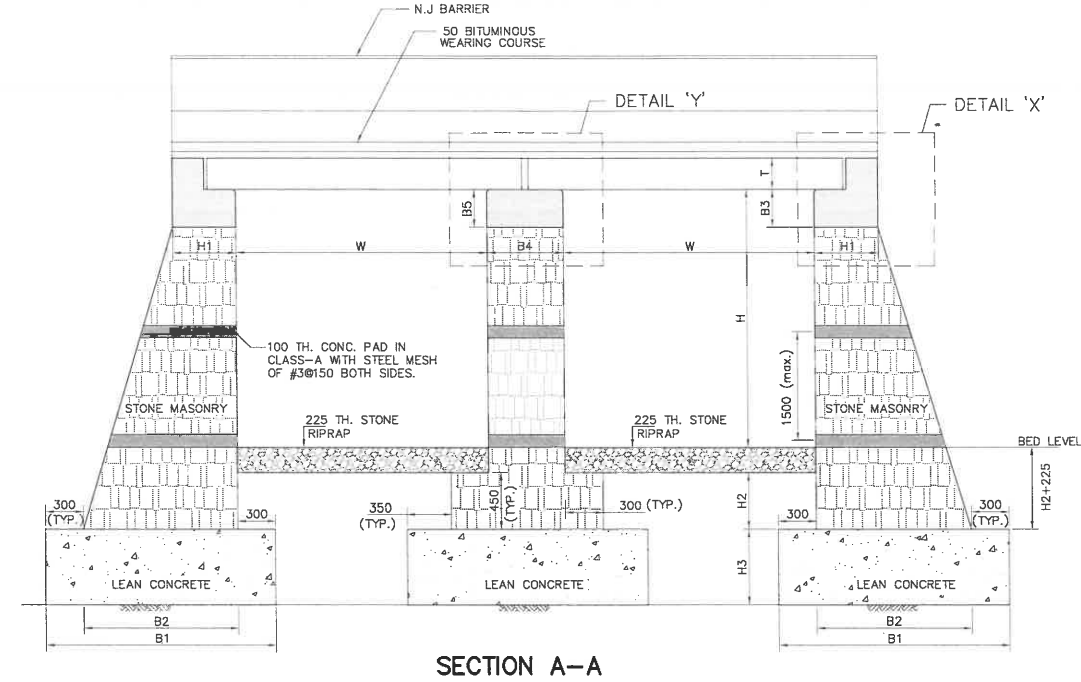
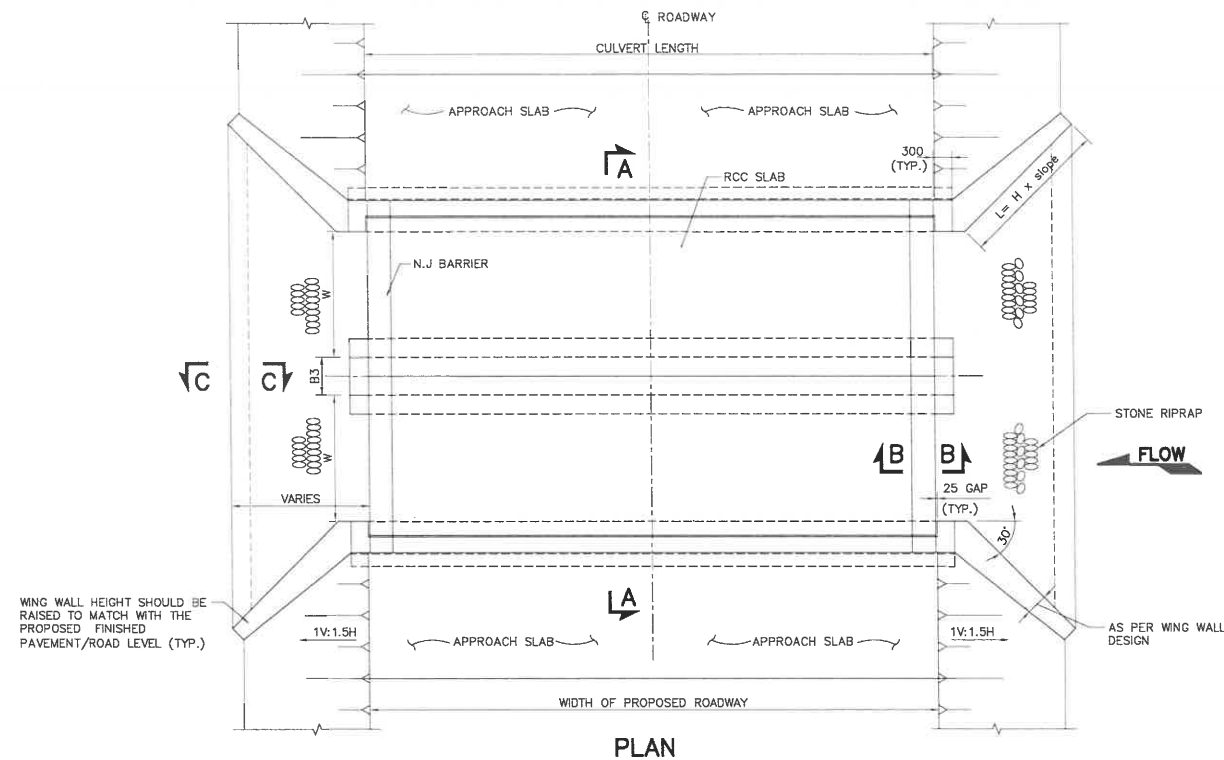
JULY, 2026

4520/102/TD/P1SM101

SCALE

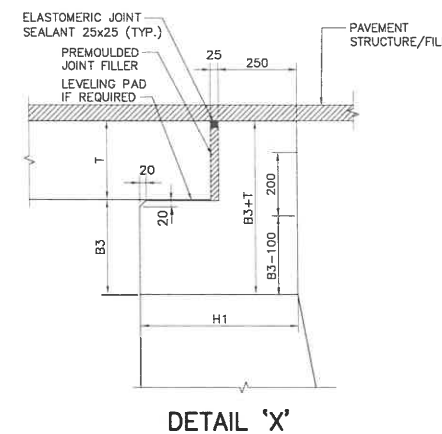
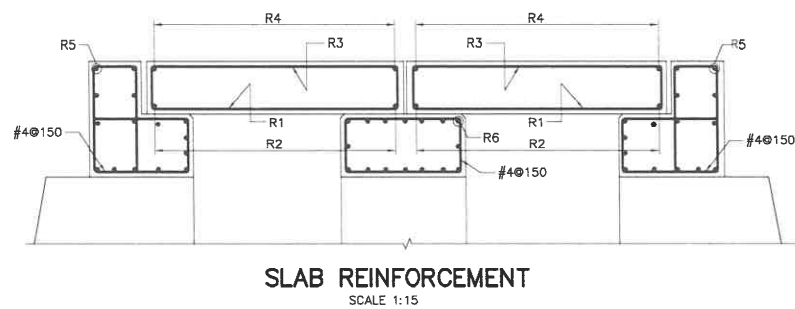
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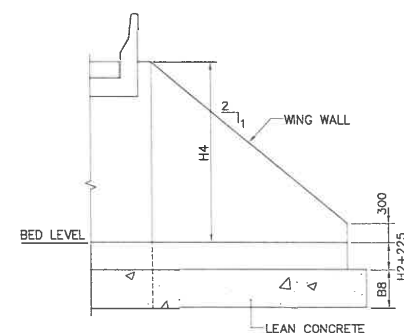
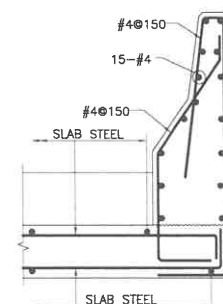
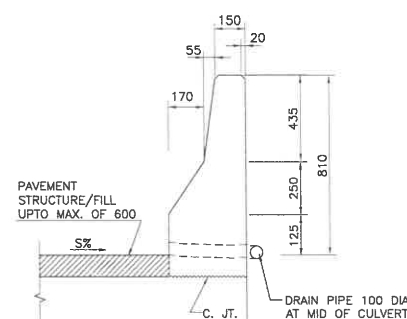
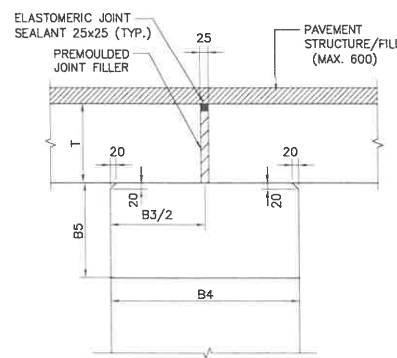
SCHEDULE OF CULVERTS

SECTION	DIMENSIONS								
	H	H1	H2	H3	B1	B2	B3	B4	B5
1	1000 ~ 1500	500	150	600	1500	900	300	450	300
2	1500 ~ 2000	500	150	800	1800	1200	300	450	300
3	2000 ~ 2500	600	200	900	2200	1600	350	500	350
4	2500 ~ 3000	700	200	900	2600	2000	400	600	400



REINFORCEMENT SCHEDULE OF RCC SLAB

DIMENSIONS		REINFORCEMENT					
W	T	R1	R2	R3	R4	R5	R6
1500	250	#4@150	#3@150	#3@150	#3@150	16-#4	12-#4
2000	300	#6@200	#4@200	#4@200	#3@150	16-#4	12-#4
2500	350	#6@200	#4@200	#4@200	#3@150	16-#4	14-#4
3000	400	#6@150	#4@150	#4@150	#4@200	20-#4	16-#4
3500	450	#6@150	#4@150	#4@150	#4@200	20-#4	16-#4
4000	500	#6@125	#4@125	#4@125	#4@150	24-#4	18-#4



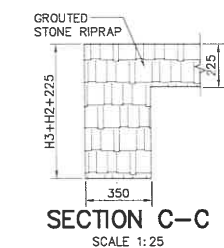
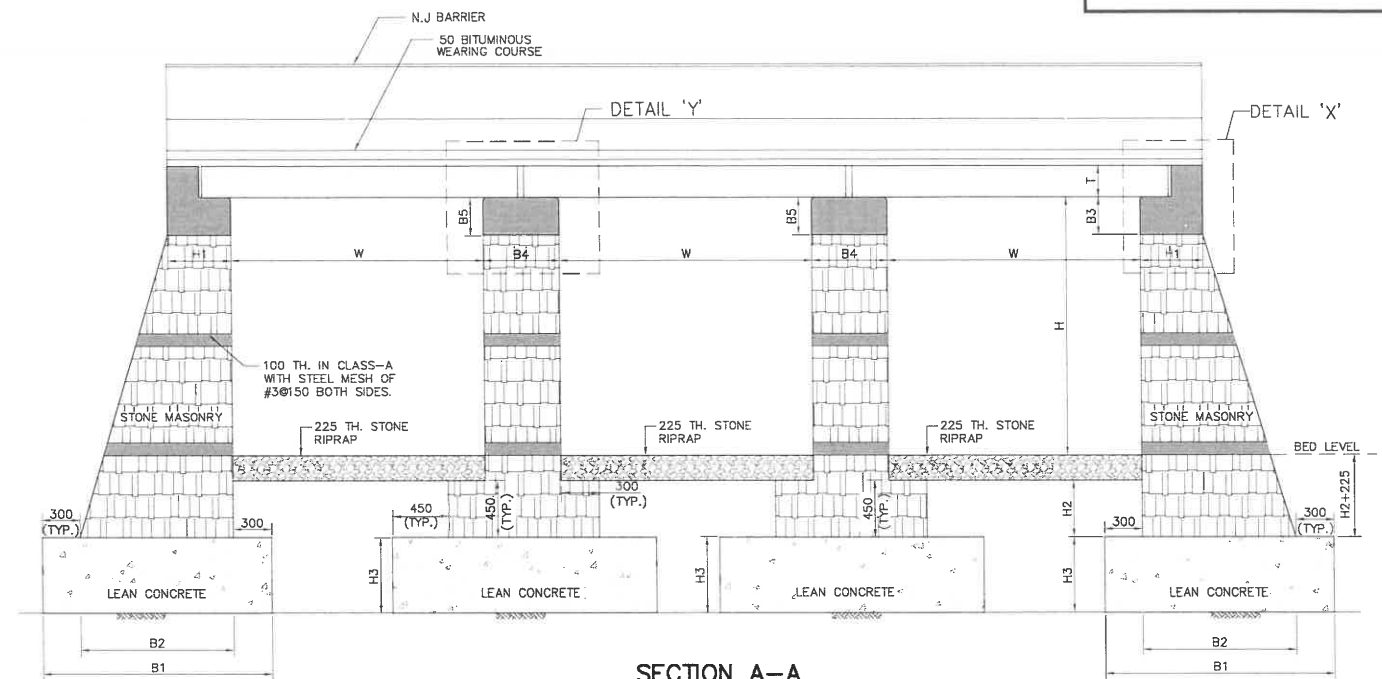
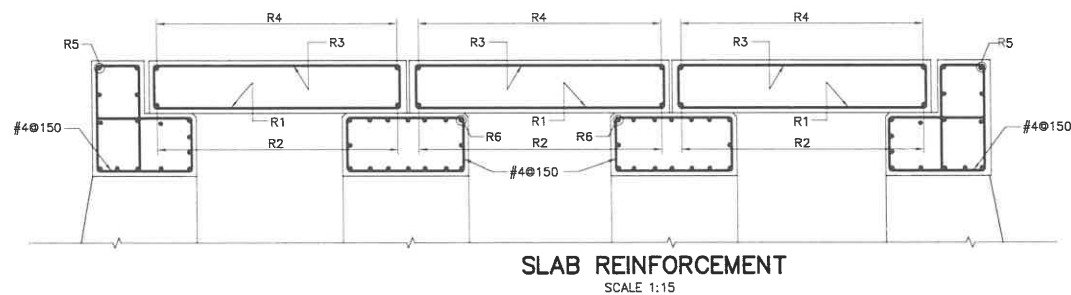
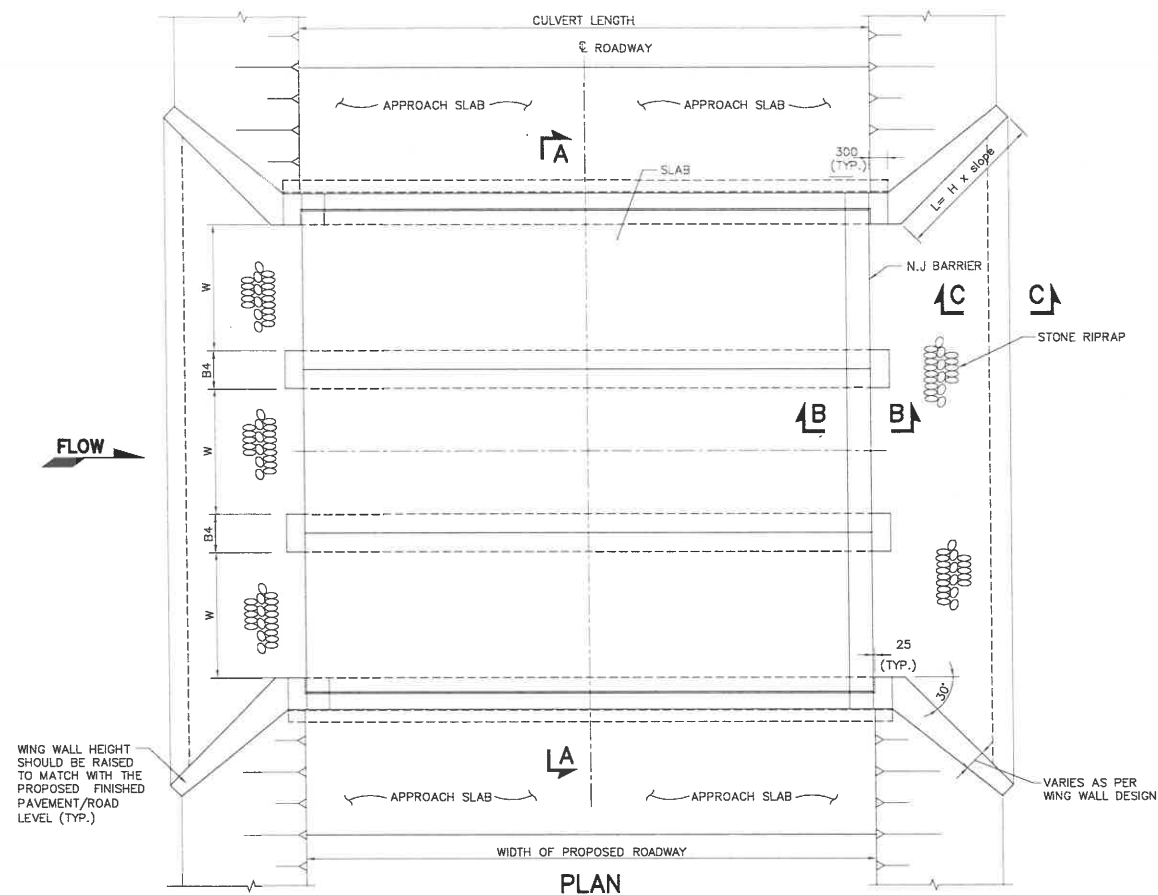
SCHEDULE OF WING WALLS

SECTION	DIMENSIONS			
	H4	B6	B7	B8
1	600 ~ 900	500	800	400
2	900 ~ 1200	500	1050	400
3	1200 ~ 1500	500	1600	450
4	1500 ~ 1800	500	2100	450
5	1800 ~ 2400	500	2700	500
6	2400 ~ 3000	600	3300	600

NOTES

- FOR GENERAL NOTES REFER DRAWING P1G001.
- DOWELS FOR N.J. BARRIER SHALL BE PLACED IN DECK SLAB PLACING OF CONCRETE.
- THE SEAT FOR RCC SLAB SHALL BE LEVELED PERFECTLY USING CEMENT SAND MORTAR BEFORE PLACING OF CULVERT SLAB.
- TOP LEVEL OF CULVERT SHALL BE FIXED MAKING ALLOWANCE FOR ASPHALT TOPPING LAYER.
- THE LENGTH AND INCLINATION IN PLAN OF THE WING WALL MAY VARY AS PER SITE CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- CROSS SLOPE OF 2% SHALL BE PROVIDED FOR STONE RIPRAP.
- ALL REINFORCED CONCRETE SHALL HAVE A MINIMUM CYLINDRICAL STRENGTH OF 3000 PSI.
- ALL STONE MASONRY WORKS SHALL BE AS PER PROJECT SPECS.
- IF THERE IS ANY CONSTRUCTION JOINT IN PLUM CONCRETE IT SHALL BE PROPERLY INTERLOCKED WITH NEW CONCRETE BY PLACING STONES AT APPROPRIATE INTERVAL AS PER ENGINEER DECISION.

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT NESPAC NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 03 02 01 REV. DATE DESCRIPTION APPROVED APPROVED	DRAWN IFTIKHAR SUBMITTED RECOMMENDED CHD./VER. APPROVED	PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-4CS)	TYPICAL 2- CELLS STONE MASONRY CULVERT CONCRETE OUTLINE AND REINFORCEMENT		SCALE REV.



SCHEDULE OF WING WALLS

SECTION	DIMENSIONS			
	H4	B6	B7	B8
1	1200 ~ 1500	500	1600	450
2	1500 ~ 1800	500	2100	450
3	1800 ~ 2400	500	2700	500
4	2400 ~ 3000	600	3300	600

SCHEDULE OF CULVERTS

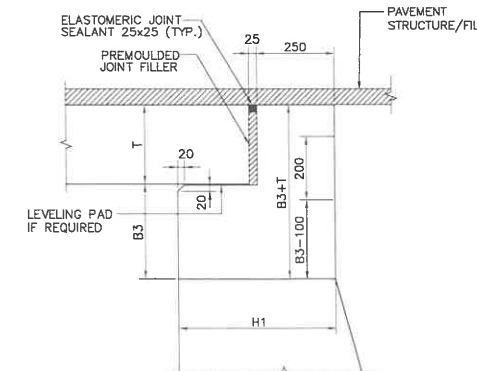
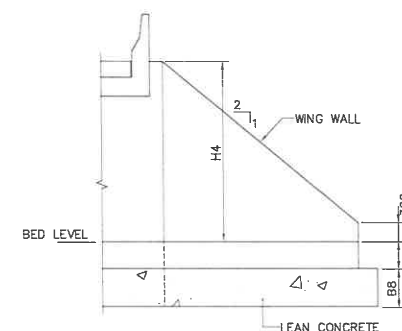
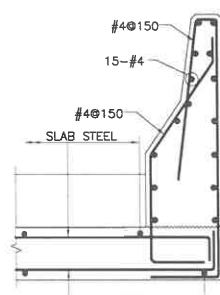
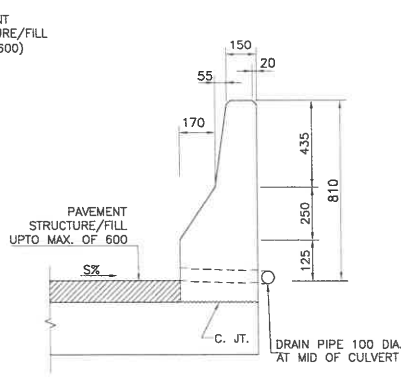
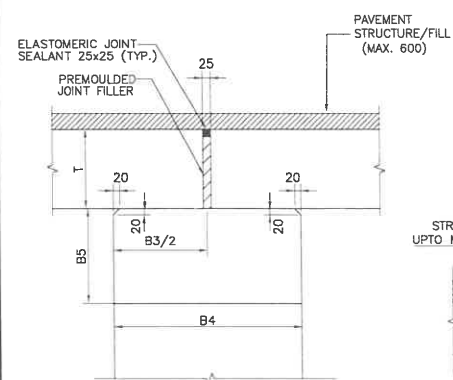
SECTION	DIMENSIONS								
	H	H1	H2	H3	B1	B2	B3	B4	B5
1	1000 ~ 1500	500	150	600	1500	900	300	450	300
2	1500 ~ 2000	500	150	800	1800	1200	300	450	300
3	2000 ~ 2500	600	200	900	2200	1600	350	500	350
4	2500 ~ 3000	700	200	900	2600	2000	400	600	400

REINFORCEMENT SCHEDULE OF RCC SLAB

DIMENSIONS		REINFORCEMENT					
W	T	R1	R2	R3	R4	R5	R6
2000	300	#6@200	#4@200	#4@200	#3@150	16-#4	12-#4
2500	350	#6@200	#4@200	#4@200	#3@150	16-#4	14-#4
3000	400	#6@150	#4@150	#4@150	#4@200	20-#4	16-#4
3500	450	#6@150	#4@150	#4@150	#4@200	20-#4	16-#4
4000	500	#6@125	#4@125	#4@125	#4@150	24-#4	18-#4

NOTES

- FOR GENERAL NOTES REFER DRAWING P1G001.
- DOWELS FOR N.J BARRIER SHALL BE PLACED IN DECK SLAB PLACING OF CONCRETE.
- THE SEAT FOR RCC SLAB SHALL BE LEVELED PERFECTLY USING CEMENT SAND MORTAR BEFORE PLACING OF CULVERT SLAB.
- TOP LEVEL OF CULVERT SHALL BE FIXED MAKING ALLOWANCE FOR ASPHALT TOPPING LAYER.
- THE LENGTH AND INCLINATION IN PLAN OF THE WING WALL MAY VARY AS PER SITE CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- CROSS SLOPE OF 2% SHALL BE PROVIDED FOR STONE RIPRAP.
- ALL REINFORCED CONCRETE SHALL HAVE A MINIMUM CYLINDRICAL STRENGTH OF 3000 PSI.
- ALL STONE MASONRY WORKS SHALL BE AS PER PROJECT SPECS.
- IF THERE IS ANY CONSTRUCTION JOINT IN PLUM CONCRETE IT SHALL BE PROPERLY INTERLOCKED WITH NEW CONCRETE BY PLACING STONES AT APPROPRIATE INTERVAL AS PER ENGINEER DECISION.



CLIENT
**WATER AND POWER
DEVELOPMENT AUTHORITY
(WAPDA)**

CONSULTANT
**NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD.**
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

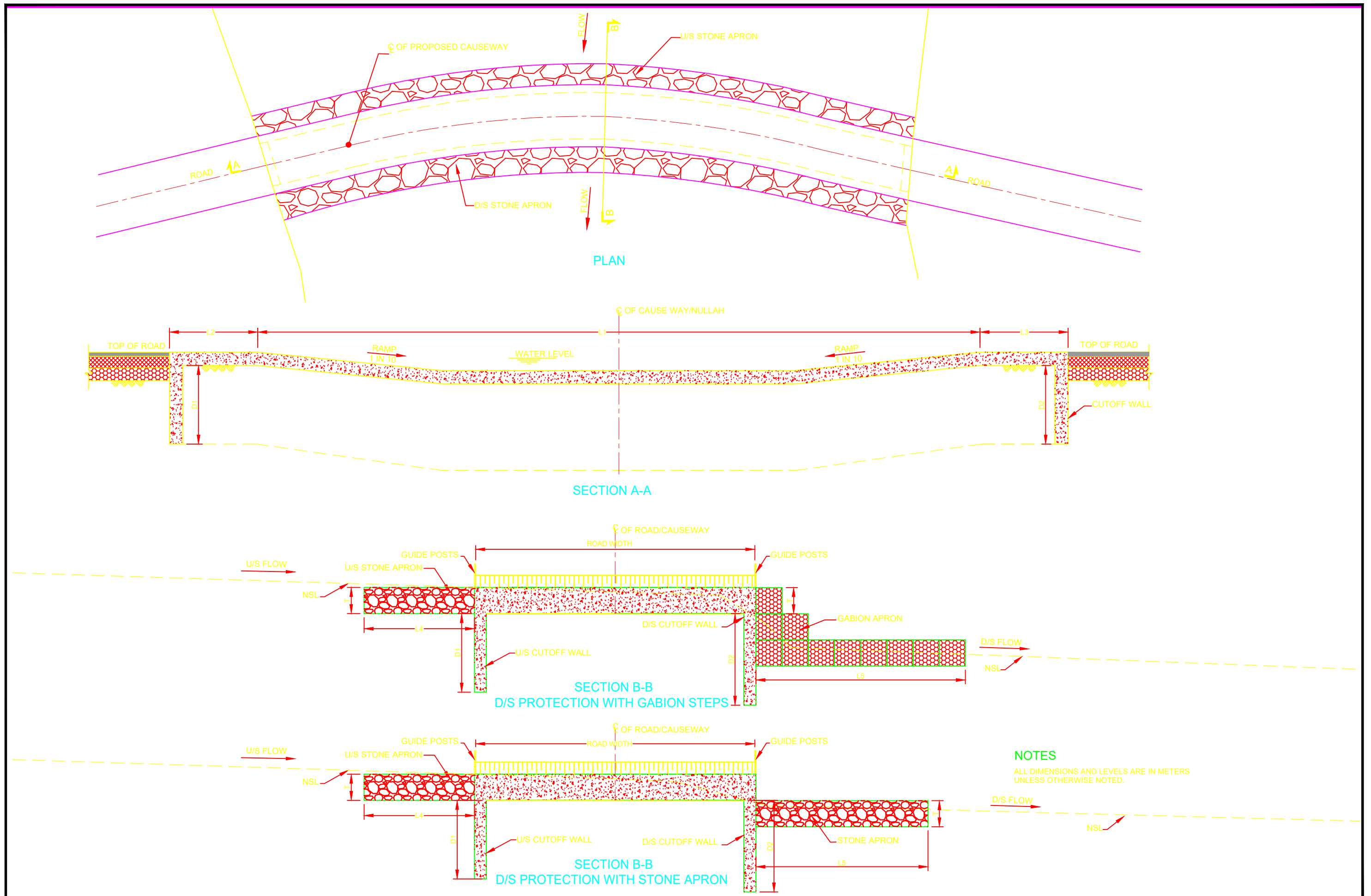
04					
03					
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01					
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

DRAWN	IFTIKHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION /
IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM
(LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND
DOWNSTREAM FISHERIES PLANS;
NAMESLY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

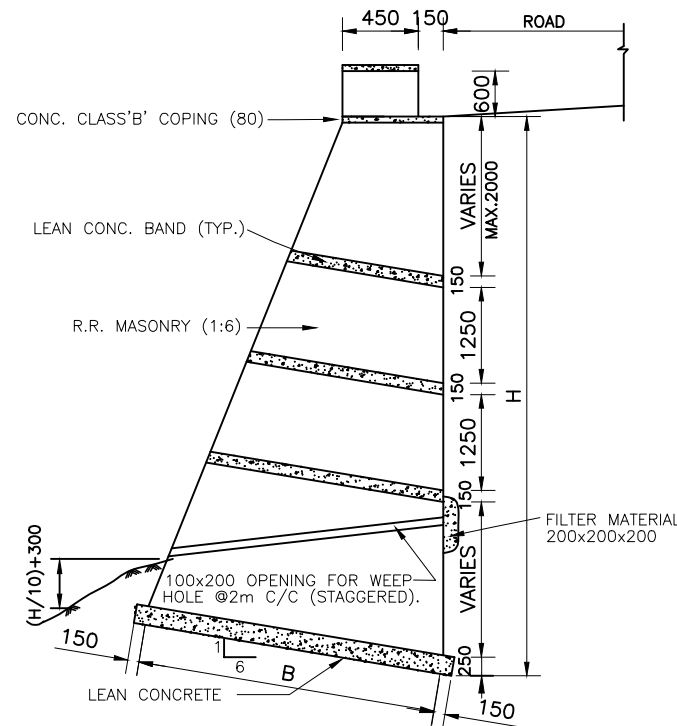
**TYPICAL 3 - CELLS STONE MASONRY
CULVERT CONCRETE OUTLINE AND
REINFORCEMENT**

DATE	DRAWING No.	REV.
JULY, 2026	4520/102/TD/P1SM103	0

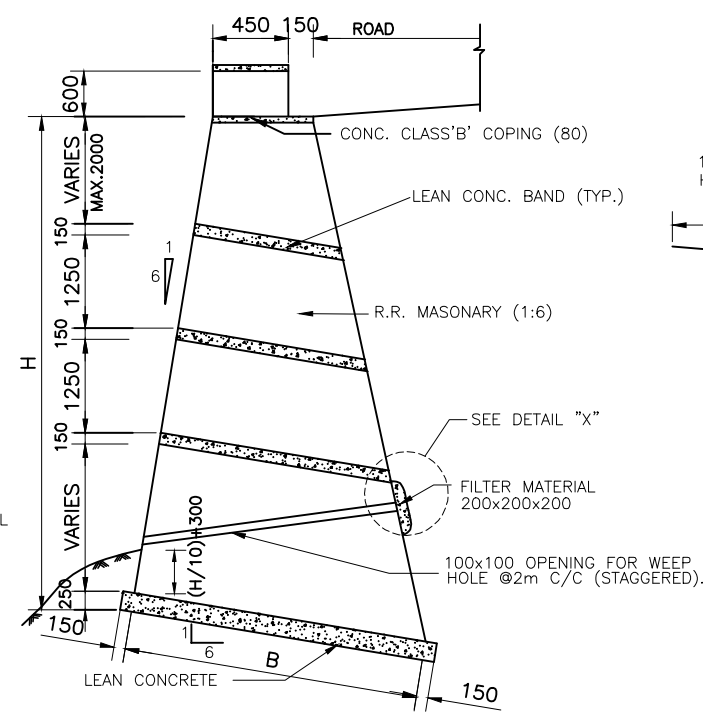


CLIENT  WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04				DRAWN	F.A	PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMESLY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CONSTRUCTION OF DUBAIR ROAD TYPICAL LAYOUT PLAN & SECTIONS OF CAUSEWAYS	SCALE HOR=1:7 VER =1:7
		03				SUBMITTED				
		02				RECOMMENDED				
		01				CHD./VER.				
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				
		DATE		DRAWING No.		FEB, 2025		REV.		0

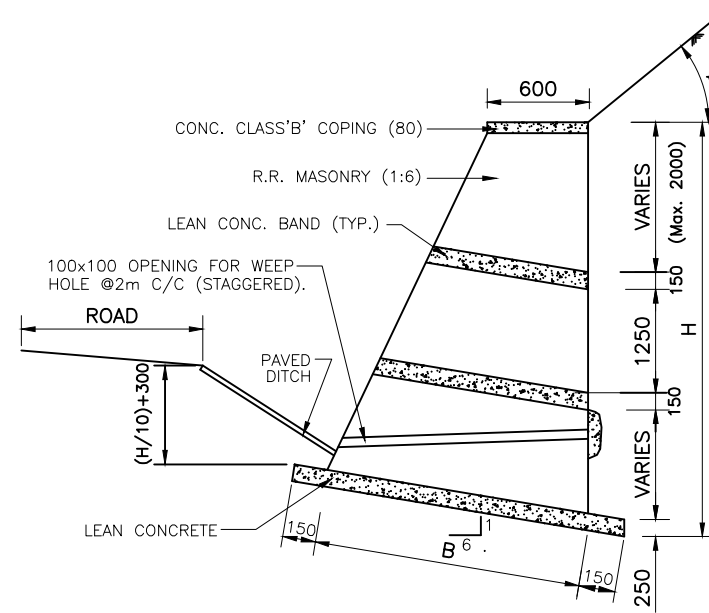
MISCELLANEOUS



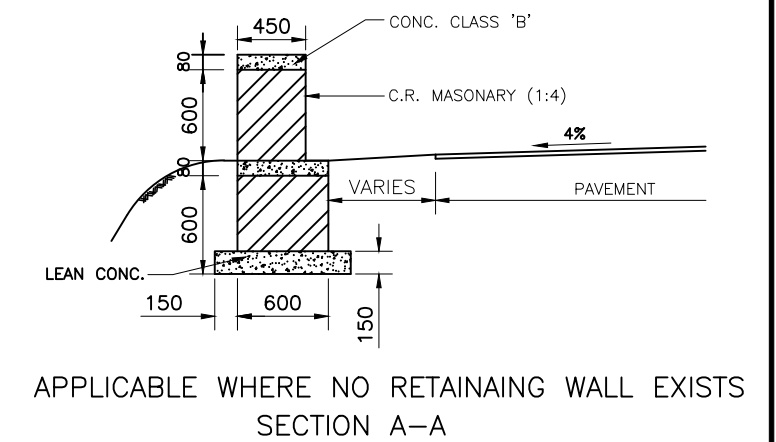
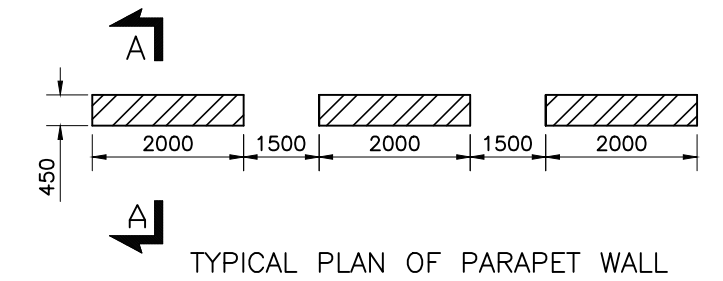
TYPICAL SECTION OF STONE MASONRY
RETAINING WALL TYPE RW1



TYPICAL SECTION OF STONE MASONRY
RETAINING WALL TYPE RW2



TYPICAL SECTION OF STONE MASONRY
RETAINING/BREAST WALL TYPE RW3



APPLICABLE WHERE NO RETAINING WALL EXISTS
SECTION A-A

TABLE RW1

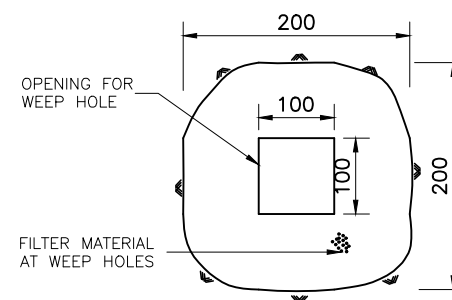
H (m)	B (m)
1.50	0.60
2.00	0.80
2.50	1.00
3.00	1.20
3.50	1.50
4.00	1.80
4.50	2.00
5.00	2.30
5.50	2.60
6.00	2.90
7.00	3.40
8.00	3.90

TABLE RW2

H (m)	B (m)
1.50	0.80
2.00	1.05
2.50	1.40
3.00	1.70
3.50	2.10
4.00	2.40
4.50	2.70
5.00	3.00
5.50	3.30
6.00	4.00
7.00	4.70
8.00	5.50

TABLE RW3
 $\theta \leq 32^\circ$

H (m)	B (m)
1.50	0.75
2.00	0.90
2.50	1.10
3.00	1.40
3.50	1.60
4.00	1.90
4.50	2.10
5.00	2.40
5.50	2.70
6.00	3.00
6.50	3.20
7.00	3.50
7.50	3.70
8.00	4.00



DETAIL "X"

NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- WEEP HOLES SHALL BE STAGGERED AT AN INTERVAL OF 2m VERTICALLY AND HORIZONTALLY AND/OR AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE.
- THE SLOPE OF WEEP HOLE SHALL BE 1 IN 8 FROM BACK OF THE MASONRY TO THE OUTER FACE OR AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE.
- TYPE OF RETAINING WALL TYPE RW1 SHALL BE DECIDED BY THE ENGINEER'S REPRESENTATIVE AS PER SITE CONDITIONS KEEPING FOLLOWING IN VIEW.
 - RETAINING WALL TYPE RW1 SHALL BE PROVIDED WHERE THE ROAD IS WELL AWAY FROM THE NALLAH, RIVER/RIVINE.
 - RETAINING TYPE RW2 WALL SHALL BE PROVIDED WHERE THE ROAD IS IN CLOSE VICINITY OF THE RIVER/RIVINE OR CLIFF FACE.
 - RETAINING WALL TYPE RW3 SHALL BE PROVIDED TO RETAIN THE SCREED MATERIAL.
- R.R MASONRY AND C.R MASONRY STANDS FOR RANDOM RUBBLE MASONRY AND COURSE RUBBLE MASONRY RESPECTIVELY. R.R MASONRY SHALL BE LAID IN 1:6 CEMENT SAND MORTAR, WHERE AS C.R MASONRY IN 1:4 C/S MORTAR.
- TYPICAL PARAPET WALL SHALL BE PROVIDED AT TOP OF RETAINING WALL AND AT OTHER HAZARDOUS LOCATIONS AS APPROVED BY THE ENGINEER'S REPRESENTATIVE.
- THE DESIGN OF RETAINING WALLS IS BASED ON FOLLOWING PARAMETERS.
 - BEARING CAPACITY 2.2 Kg/Cm²
 - ANGLE OF INTERNAL FRICTION
 - FOR WALL TYPE RW 1 & RW 2 = 32°
 - FOR WALL TYPE RW 3 = 32°
- VERTICAL SLOPE TO THE OUTER FACE OF THE RETAINING WALL TYPE RW 2 CAN BE CHANGED UP 1 IN 10.
- PAYMENT FOR WEEP HOLES AND FILTER MATERIAL IS INCLUDED IN THE COST OF OTHER ITEMS AND SHALL NOT BE PAID SEPARATELY.

DUMPING SITE