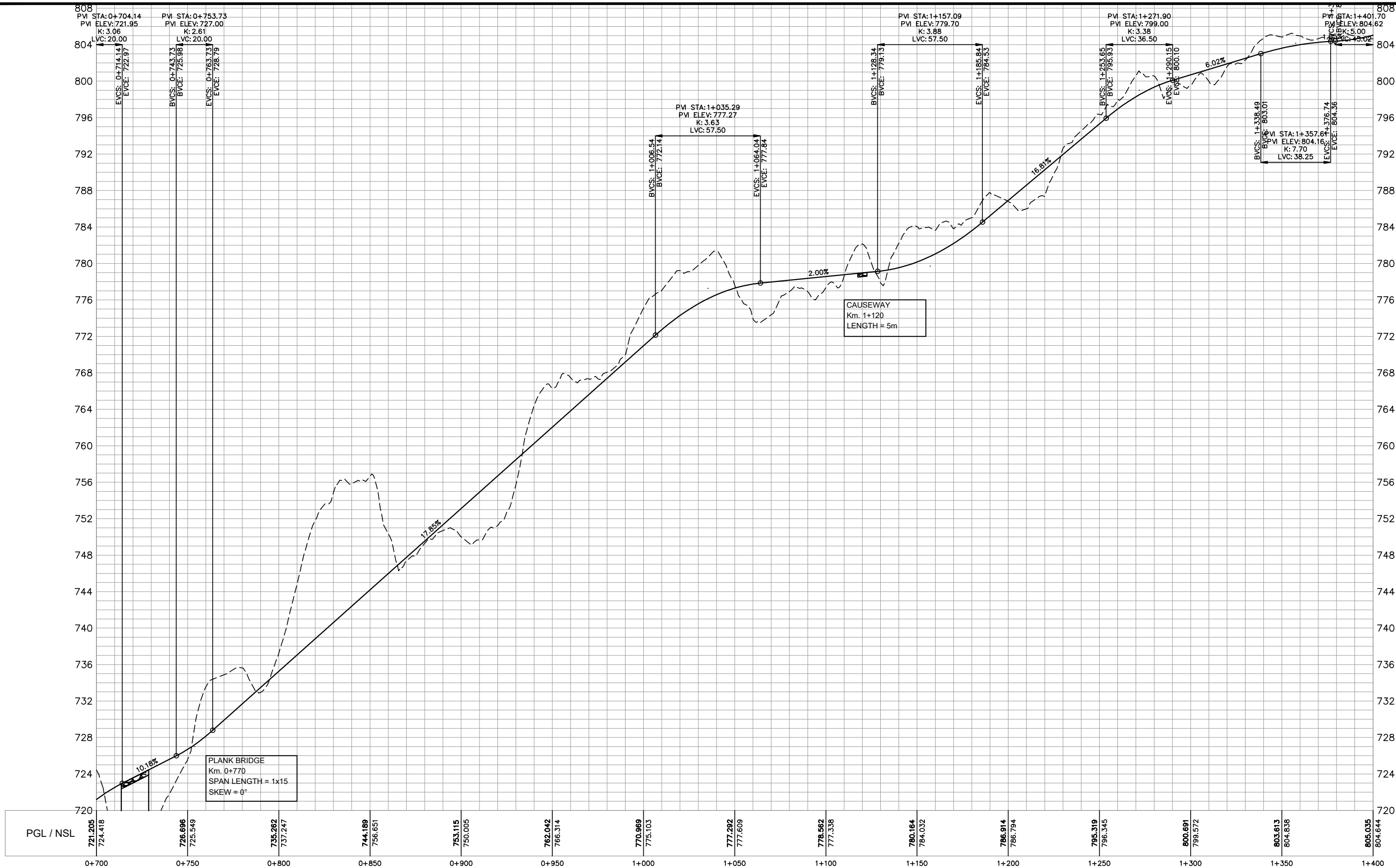
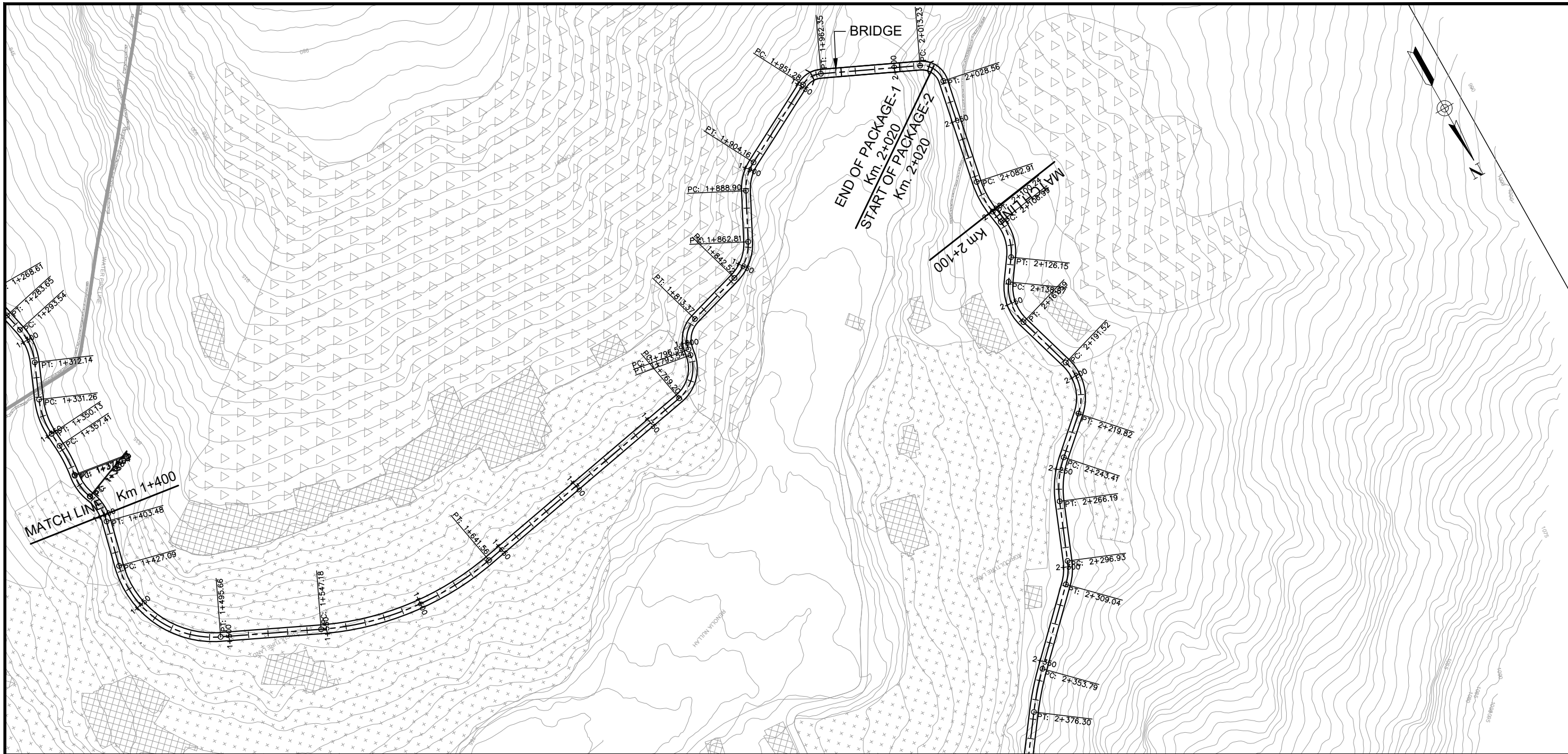




HORIZONTAL GEOMETRY										
	Sup. Elev. LT.									
	Sup. Elev. RT.									

	CLIENT WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	04				DRAWN	Faisal	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)	DUBAIR ROAD PROFILE		
			NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.		03			SUBMITTED			FROM KM. 0+700 TO KM. 1+400	
			HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		02			RECOMMENDED			DATE	DRAWING No.
					01			CHD./VER.			JUNE, 2026	4520/102/C/1C002A
					REV.	DATE	DESCRIPTION	APPROVED		APPROVED		



PI # 16
PI STA =1+467.995
N = 3880299.060
E = 307775.493
I = 101°25'

T = 40.910
R = 50.00
L = 68.574
C = 63.324
E = 14.604
M = 11.302

PI # 17
PI STA =1+595.993
N = 3880358.815
E = 307647.512
I = 143°57'

T = 48.815
R = 150.00
L = 94.367
C = 92.837
E = 7.743
M = 7.363

PI # 18
PI STA =1+783.132
N = 3880322.407
E = 307460.643
I = 110°18'

T = 13.927
R = 20.00
L = 24.331
C = 22.858
E = 4.372
M = 3.587

PI # 19
PI STA =1+805.980
N = 3880296.380
E = 307456.395
I = 115°55'

T = 9.388
R = 15.00
L = 16.776
C = 15.916
E = 2.696
M = 2.285

PI # 20
PI STA =1+853.264
N = 3880282.261
E = 307409.178
I = 133°30'

T = 10.742
R = 25.00
L = 20.291
C = 19.738
E = 2.210
M = 2.030

PI # 21
PI STA =1+896.775
N = 3880242.377
E = 307388.987
I = 145°01'

T = 7.877
R = 25.00
L = 15.262
C = 15.026
E = 1.212
M = 1.156

PI # 22
PI STA =1+957.245
N = 3880213.595
E = 307335.247
I = 127°10'

T = 5.961
R = 12.00
L = 11.064
C = 10.677
E = 1.399
M = 1.253

PI # 23
PI STA =2+022.276
N = 3880241.083
E = 307275.367
I = 103°38'

T = 9.045
R = 11.50
L = 15.329
C = 14.219
E = 3.131
M = 2.461

PI # 24
PI STA =2+091.665
N = 3880311.901
E = 307289.168
I = 160°08'

T = 8.756
R = 50.00
L = 17.336
C = 17.249
E = 0.761
M = 0.749

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

CONSULTANT
**NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LTD.**

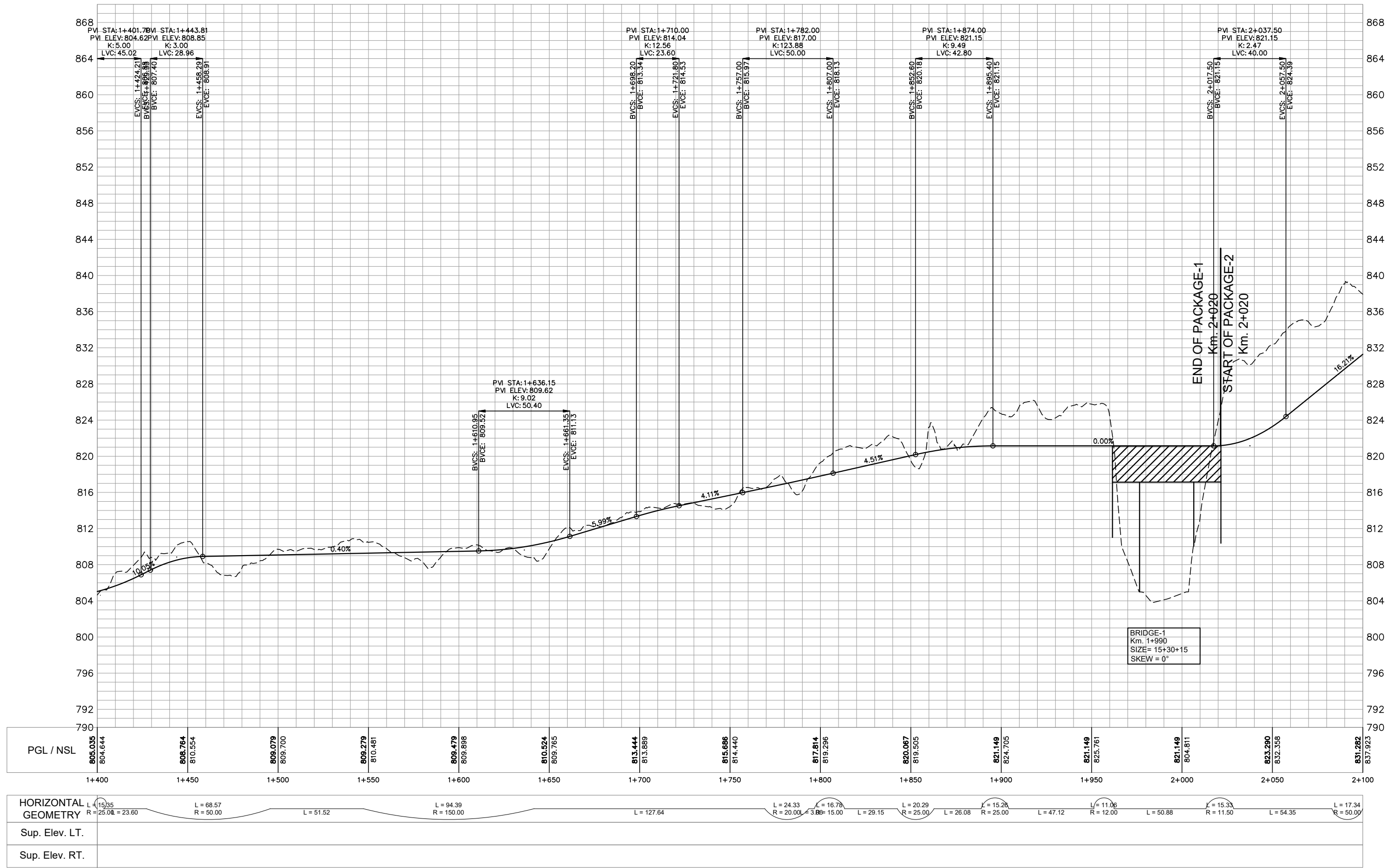
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N,
MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

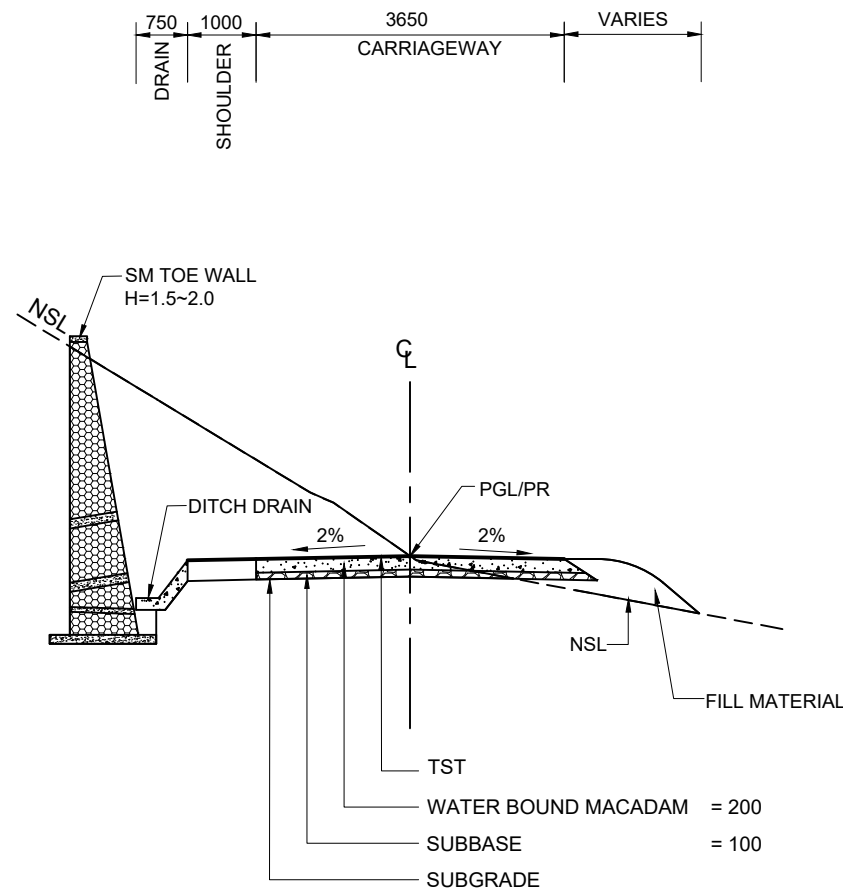
PROJECT
**DETAILED DESIGN AND CONSTRUCTION SUPERVISION /
IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM
(LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND
DOWNSTREAM FISHERIES PLANS;
NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

DUBAIR ROAD PLAN FROM KM. 1+400 TO KM. 2+100		SCALE
DATE JUNE, 2026	DRAWING No. 4520/102/C/1C003	REV. 0

Dubair Road PROFILE



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	Faisal	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)	DUBAIR ROAD PROFILE FROM KM. 1+400 TO KM. 2+100		SCALE
		03				SUBMITTED					
		02				RECOMMENDED					
		01				CHD./VER.					
		REV.		DATE	DESCRIPTION	APPROVED	APPROVED				
							JUNE, 2026	4520/102/C/1C003A	REV.		

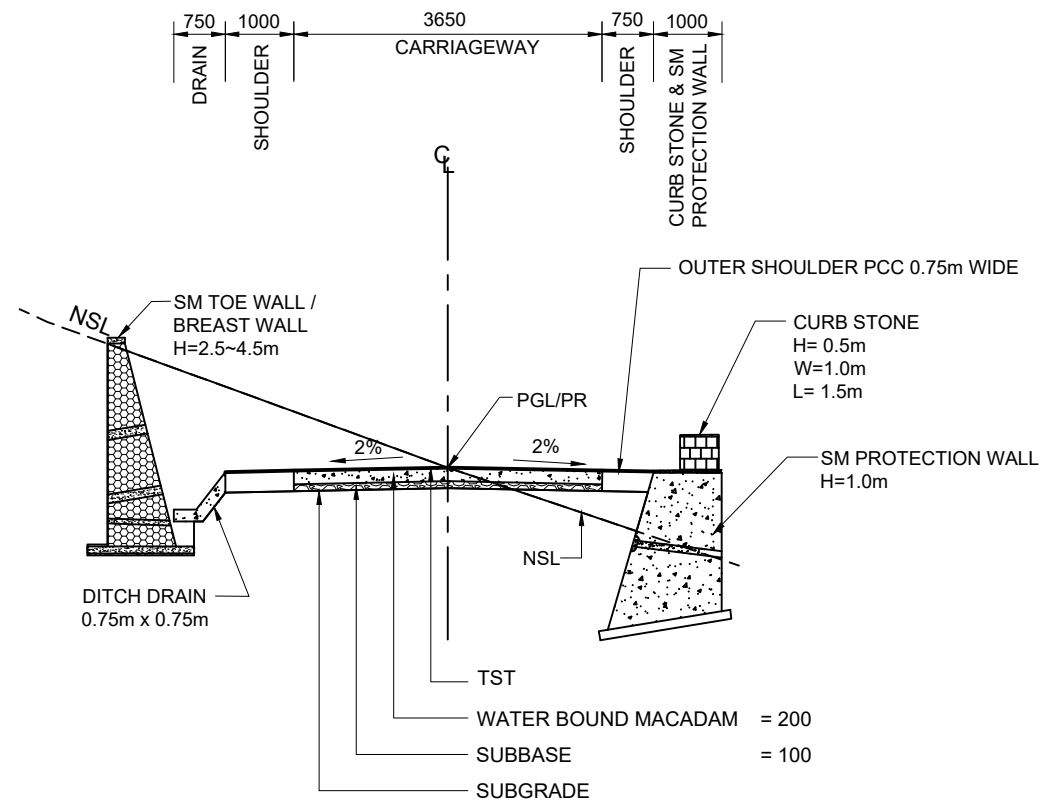


TYPICAL CROSS SECTION MODULE-1
(CUT = 80-100%)
(FILL = 0-20%)

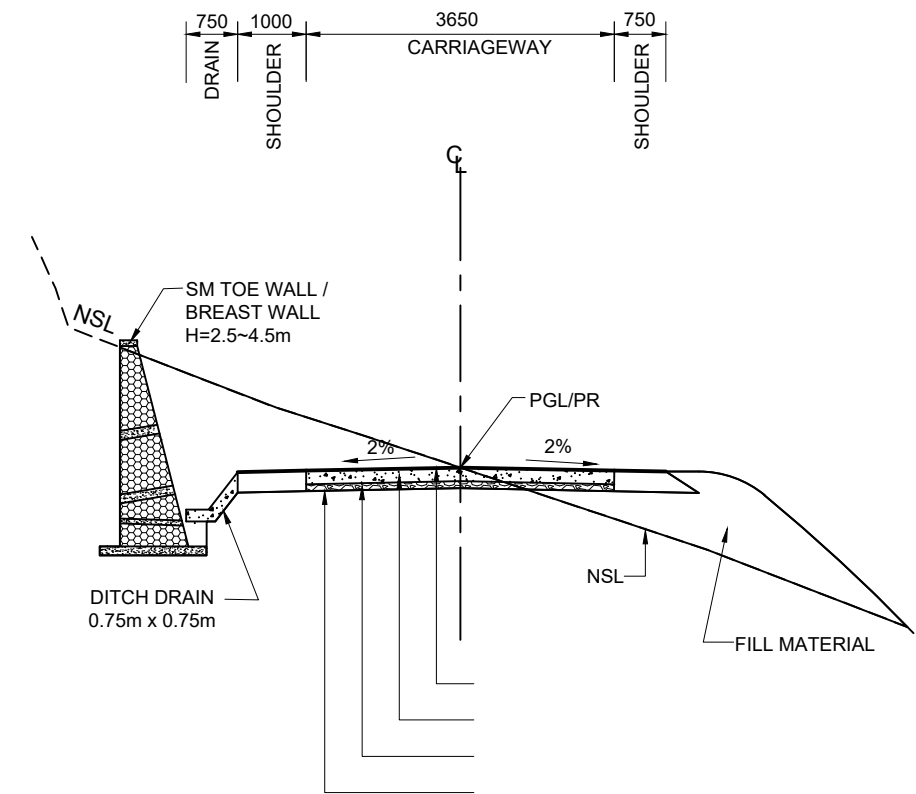
NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. REFER GEOHAZARDS MITIGATION LOG TABLE - 03.

CLIENT		CONSULTANT		04		DRAWN		Faisal		PROJECT		TYPICAL CROSS SECTION		SCALE					
 WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		 NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		03		SUBMITTED				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)		SLOPE PROTECTION WORKS							
				02		RECOMMENDED													
				01		CHD./VER.													
				REV.		DATE		DESCRIPTION								APPROVED		APPROVED	
										DATE		DRAWING No.		REV.					
										JUNE, 2026		4520/102/C/XS008		0					



TYPICAL CROSS SECTION MODULE-2
(CUT = 50%)
(FILL = 50%)



TYPICAL CROSS SECTION MODULE-2A
(CUT = 50%)
(FILL = 50%)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. REFER GEOHAZARDS MITIGATION LOG TABLE - 03.

CLIENT		CONSULTANT		04		DRAWN		Faisal		PROJECT		TYPICAL CROSS SECTION SLOPE PROTECTION WORKS		SCALE									
 WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		 NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		03		SUBMITTED				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)		DATE JUNE, 2026		DRAWING No. 4520/102/C/XS009		REV. 0							
				02		RECOMMENDED																	
				01		CHD./VER.																	
				REV.		DATE		DESCRIPTION										APPROVED		APPROVED			

CUT SLOPE IN ROCK 1H : 2.5V, HEIGHT VARIES UPTO 10.0m MAXIMUM.
FOR H > 10.0m, ADD 2.0m WIDE BERM WITH 0.75m x 0.75m SM OR PCC DRAIN

SM INTERCEPT DRAIN (1.0x1.0m)

CUT SLOPE IN ROCK OR HARD SOIL 1H : 2V (WITH 75mm SHOTCRETE + WIREMESH IF REQUIRED) AND H = 8m

BERM W = 3.0m

BERM W = 3.0m, PROTECTED BY 0.15m THICK STONE - PITCHING WITH 1:3 CS MORTAR.

SM TOE WALL / BREAST WALL H=5.5m THREE ROWS OFF 75mm DIA WEEPHOLES, C.C 1.5m, STAGGERED.

GRANULAR BACK FILL RANDOM MATERIAL

SM TOE WALL / BREAST WALL H=5.5m THREE ROWS OFF 75mm DIA WEEPHOLES, C.C 1.5m, STAGGERED.

DITCH DRAIN 1.5m WIDE x 0.15m THICK

1500 3650 1000 1000
SHOULDER CARRIAGEWAY SHOULDER CURB STONE & SM PROTECTION WALL

GRANULAR SUBBASE (BACK FILL) AT 98% COMPACTION.

1.0m WIDE AND 0.15m THICK

CURB STONE H= 0.5m W=1.0m L= 1.5m

SM PROTECTION WALL H= VARIES

PGL/PR

NSL

TST

WATER BOUND MACADAM = 200

SUBBASE = 100

SUBGRADE

TYPICAL CROSS SECTION MODULE-3
(CUT TO FILL RATIO = 40 : 60%)
(VARIES)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. REFER GEOHAZARDS MITIGATION LOG TABLE - 03.

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

Faisal

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-ICS)

TYPICAL CROSS SECTION
SLOPE PROTECTION WORKS

SCALE

DATE

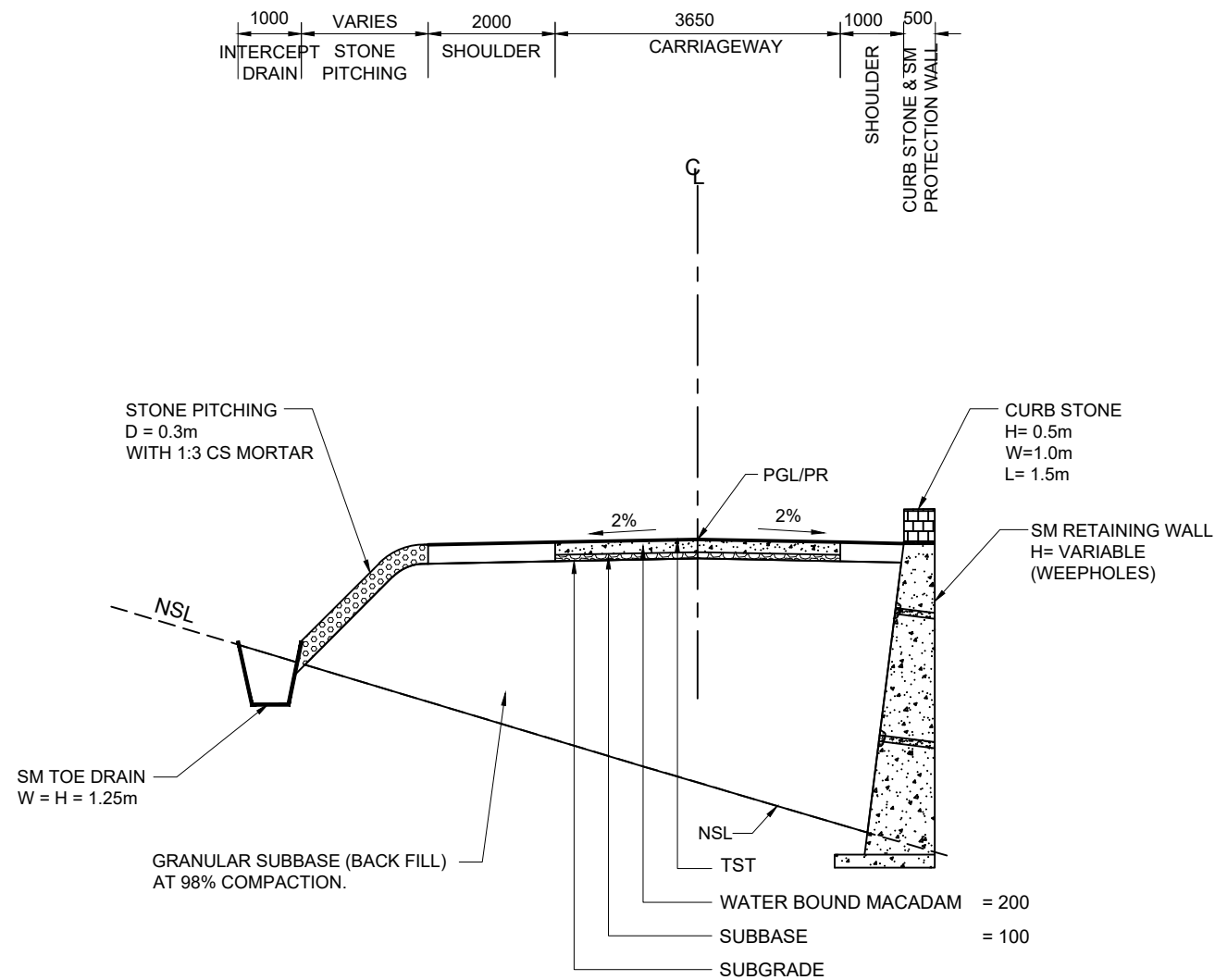
JUNE, 2026

DRAWING No.

4520/102/C/XS010

REV.

0

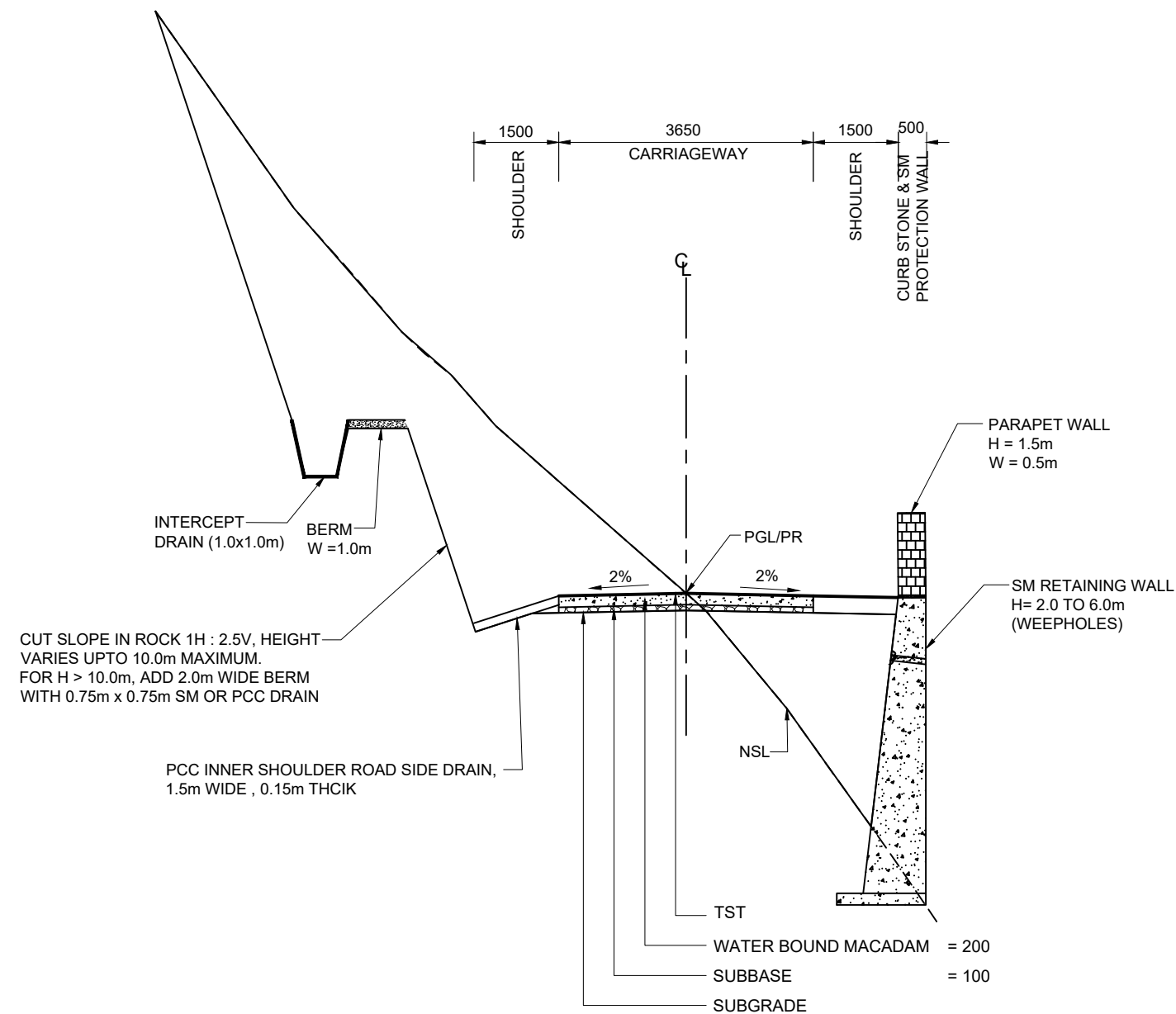


TYPICAL CROSS SECTION MODULE-5
(FILL = 100%)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. REFER GEOHAZARDS MITIGATION LOG TABLE - 03.

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	Faisal	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)	TYPICAL CROSS SECTION SLOPE PROTECTION WORKS		SCALE
		03				SUBMITTED					
		02				RECOMMENDED					
		01				CHD./VER.					
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED			DATE	DRAWING No.	REV.
									JUNE, 2026	4520/102/C/XS012	0

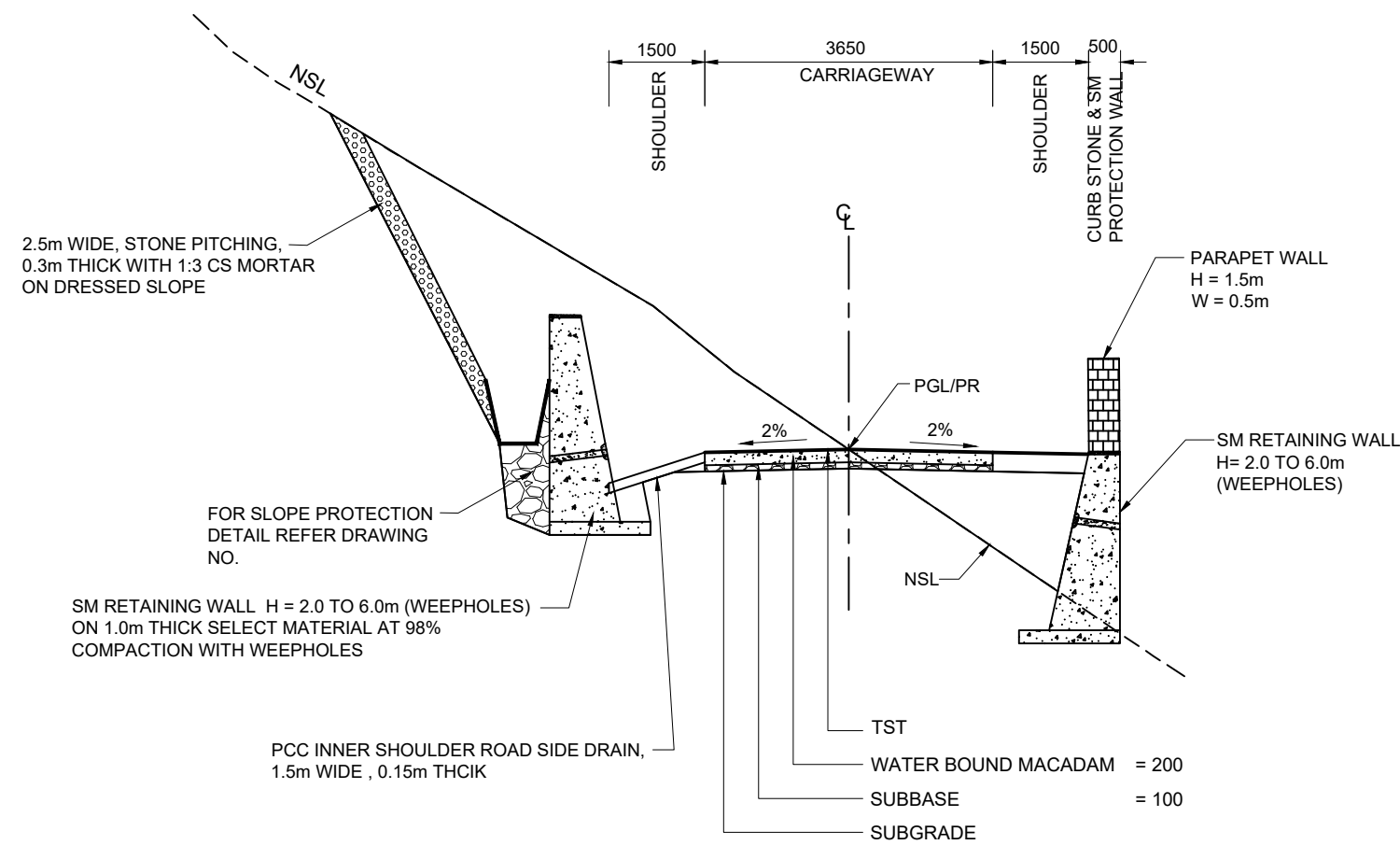


TYPICAL CROSS SECTION MODULE-6A
(CUT = 20 ~ 25 %)
(FILL = 75 ~ 80 %)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. REFER GEOHAZARDS MITIGATION LOG TABLE - 03.

CLIENT		CONSULTANT		04		DRAWN		Faisal		PROJECT		TYPICAL CROSS SECTION SLOPE PROTECTION WORKS		SCALE			
 WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		 NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		03		SUBMITTED				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)		DATE JUNE, 2026		DRAWING No. 4520/102/C/XS013		REV. 0	
				02		RECOMMENDED											
				01		CHD./VER.											
				REV.		DATE		DESCRIPTION									



TYPICAL CROSS SECTION MODULE-6B
(CUT = 20 ~ 25 %)
(FILL = 75 ~ 80 %)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHER WISE NOTED.
2. REFER GEOHAZARDS MITIGATION LOG TABLE - 03.

CLIENT		CONSULTANT		04					DRAWN	Faisal	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)	TYPICAL CROSS SECTION SLOPE PROTECTION WORKS		SCALE
	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	03					SUBMITTED			DATE JUNE, 2026	DRAWING No. 4520/102/C/XS014	REV. ⬆
				02					RECOMMENDED					
				01					CHD./VER.					
				REV.		DATE	DESCRIPTION	APPROVED	APPROVED					
			HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.											