

GOVERNMENT OF KHYBER PAKHTUNKHWA		
KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)		
REHABILITATION, IMPROVEMENT AND CONSTRUCTION OF ROAD FROM ARKARI VALLEY ROAD DISTRICT CHITRAL (TOTAL LENGTH 10.10KM)(RRD-N-CHT-5)		
PACKAGE 8 LOT-1		
SUMMARY OF BILLS		
S No	DESCRIPTION	TOTAL AMOUNT IN FIGURES (RS)
1	BILL NO: 1 EARTH WORK	-
2	BILL NO: 2 ROAD WORK (SUB-BASE, BASE AND SURFACE COURSE )	-
3	BILL NO: 3 CULVERTS AND CAUSEWAYS	-
4	BILL NO: 4 RETAINING WALLS AND BREAST WALL	-
5	BILL NO: 4a CONSTRUCTION OF RCC BRIDGES	-
6	BILL NO: 5 DRAINAGE AND ANTI EROSION WORK	-
7	BILL NO: 6 ANCILLARY WORKS	-
8	BILL NO: 6d CLEARANCE OF SNOWFALL	11,650,000.00
<b>TOTAL AMOUNT OF CIVIL WORK:</b>		
<b>TOTAL AMOUNT OF CIVIL WORK IN MILLIONS:</b>		



Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

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PACKAGE 8 LOT-1						
BILLS OF QUANTITIES						
NHA Specification Item No.	DESCRIPTION	Unit	BOQ			
			QTY	Unit Rate (Rs) in Figures	Unit Rate (Rs) in Words	Total Amount (Rs) in Figures

**BILL NO: 1 EARTH WORK**

101	Clearing and Grubbing.	SM	12,221.00			-
104	Compaction of Natural Ground.	SM	12,221.00			-
108a	Formation of Embankment from Road way excavation in common material	CM	12,163.06			-
108b (iii)	Formation of Embankment from Roadway excavation in Soft Rock Material	CM	8,108.71			-
106a / 106c	Excavate Unsuitable / Surplus Common Material	CM	14,646.82			-
106bi / di	Excavate Unsuitable / Surplus Hard Rock Material	CM	13,077.52			-
106bi / dii	Excavate Unsuitable / Surplus Medium Rock Material	CM	12,031.32			-
106biii / diii	Excavate Unsuitable / Surplus Soft Rock Material	CM	12,554.42			-
109a	Subgrade preparation in Earth Cut	SM	24,442.00			-
<b>Total:</b>						-

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**BILL # 2 ROAD WORK (SUB-BASE, BASE AND SURFACE COURSE )**

201	Granular Sub Base	CM	9,019.00			-
401a2 ii	Concrete Class A2 (ON GROUND)	CM	10,153.00			-
310.2.3	Providing and laying Polythene sheet heavy weight under rigid pavement including overlapping, wastage and cutage etc.complete as per drawing.	SM	49,490.00			-
SIW-15 406a	Pre-moulded Joint Filler 20 mm Thick with Bitumastic joint seal	M	9,898.00			-
<b>Total:</b>						-

*[Handwritten Signature]*  
**Project Director (PUS)**  
 Provincial Roads Improvement  
 C&W Department Peshawar

*[Handwritten Signature]*



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**BILL # 3 (CULVERTS AND CAUSEWAYS)**

107a	Structural Excavation in Common Material	CM	656.00			-
401f	Lean Concrete	CM	164.00			-
401 a3ii	Concrete Class A3 (On ground)	CM	1,231.00			-
404b	Reinforcement as per AASHTO M 31 Grade 60	Ton	125.62			-
507 b	Rock Fill in Gabions	CM	5,220.00			-
SIW-17 507 a	Steel Wire Mesh for Gabion	SM	7,200.00			-
501d	R.C.C. Pipe Culvert AASHTO M 170 Class II Dia 610 mm	M	150.00			-
501f	R.C.C. Pipe Culvert AASHTO M 170 Class II Dia 910 mm	M	60.00			-
502 b	Concrete Class B in Bedding and Encasement of Concrete Pipe Culvert.	CM	360.00			-
SIW-13	Providing and filling sand behind abutment of culverts and causeways	CM	1,748.00			-
<b>Total:</b>						-

Project Director  
Provincial Roads Development  
C&W Department



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NHA Specification Item No.	DESCRIPTION	Unit	BOQ		
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**BILL # 4 ( RETAINING WALLS AND TOE WALLS )**

107a	Structural Excavation in Common Material	CM	14,670.00			-
107e	Common Backfill	CM	3,165.00			-
401b	Concrete Class B	CM	3,335.00			-
401af (ii)	Concrete Class A1 (ON GROUND)	CM	288.00			-
401f	Lean Concrete	CM	3,084.00			-
SIW-8 401h	Plain Concrete (Class 'B' with 40% Boulders/ Rock) as per drawing & Engineer's Instructions	CM	35,221.00			-
<b>Total:</b>						-

  
Project Director (FIU)  
Provincial Roads Improvement Project  
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BILLS OF QUANTITIES					
SMA Specification Item No.	DESCRIPTION	Unit	BOQ		
			QTY	Unit Rate (Rs) in Figures	Unit Rate (Rs) in Words

**BILL # 4a (CONSTRUCTION OF RCC BRIDGES)**

407i	Pile Load Tests to 2 times the design load	Each	3.00			-
SIW 7 (Item 407)	Exploratory/Confirmatory Boring and Soil testing, including soil investigation report					-
SIW 7 a	Exploratory/Confirmatory Boring	M	90.00			-
SIW 7 b	Soil testing, / investigation report	L.SUM	3.00			-
407d	Cast-in-place, Reinforced Concrete Cylindrical Piles dia 1200 mm	M	995.00			-
107a	Structural Excavation in Common Material.	CM	1,309.77			-
401f	Lean Concrete	CM	152.23			-
401a3 (ii)	Concrete Class 'A 3' (ON GROUND)	CM	1,235.17			-
404b	Reinforcement as per AASHTO M 31 Grade 60	Ton	461.12			-
SIW-13	Providing and filling sand behind abutment of bridges	CM	4,161.60			-
406 c	Elastomeric Bearing Pads & as per approved drawing	Cu.cm	237,600.00			-
401 d ii	Concrete Class 'D 2'	CM	249.22			-
SIW 4 405b	Launching of Girders in place including lifting, handling and temporary works	M	300.00			-
SIW-5	Galvanized Iron Drain Pipe, 75 mm Diameter	Each	48.00			-
401a3 (iii)	Concrete Class 'A 3' (ELEVATED) (Deck Slab, Diaphragm, Walkway and Barrier)	CM	350.97			-
SIW 12 406c	Supply and place in position expansion joint assemblies as specified & as per approved drawing	M	55.80			-
SIW 4 405a	Prestressing High Tensile Steel Including Sheathing, Anchorages, Assemblies, Grouting and Stressing Complete in All Respect	KG	9,974.02			-
SIW-6	PVC Pipe sched. 40 200 mm Dia. for Services.	M	420.00			-
<b>Total:</b>						-



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			QTY	Unit Price (Rs) in Figures	Unit Rate (Rs) in Words	Total Amount (Rs) in Figures

**BILL # 5 ( DRAINAGE AND ANTI EROSION WORK )**

107a	Structural Excavation in Common Material.	CM	1,634.00			-
107c	Common Backfill	CM	1,733.00			-
401b	Concrete Class B	CM	2,450.00			-
401a(ii)	Concrete Class A1 (ON GROUND)	CM	47.00			-
404 b	Reinforcement as per AASHTO M 31 Grade 60	Ton	7.38			-
507 b	Rock Fill in Gabions	CM	16,095.00			-
SIW-17 507 a	Steel Wire Mesh for Gabion	SM	22,200.00			-
401f	Lean Concrete	CM	1,215.00			-
<b>Total:</b>						-

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**BILL # 6 ( ANCILLARY WORKS )**

610 c	Kilometer Post	EACH	10.00			-
607 a	Traffic Road Signs Category 1 Size 75 CM	EACH	6.00			-
607 b	Traffic Road Signs Category 2 Size dia 75 CM	EACH	3.00			-
607c	Traffic Road Signs Category 3 (a)	EACH	2.00			-
607 d	Traffic Road Signs Category 3 (b)	EACH	2.00			-
608 h	Pavement Marking in reflective TP paint for line of 15 cm width	M	21,210.00			-
609 a	Reflectinised Pavement Stud (Flush Surface Type Single)	EACH	2,020.00			-
604 a	Metal Guard Rail	M	2,100.00			-
604 b	Guard Rail End pieces	EACH	40.00			-
604 d	Steel Post for Guard Rail	EACH	700.00			-
<b>Total:</b>						-

**BILL # 6d (CLEARANCE OF SNOWFALL. )**

SIW-6-1	Removal of Snowfall Till end of Defect Liability and cost will paid as per The Engineer Directive.	LS	11,650,000.00			11,650,000.00
<b>Total:</b>						11,650,000.00

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.





**PROJECT:**  
**KHYBER PAKHTUNKHWA**  
**RURAL ROAD DEVELOPMENT PROJECT**  
**(KP-RRDP)**

**TENDER DRAWINGS**

**N-CHT-5**  
**ARKARI VALLEY ROAD**

**AUGUST, 2024.**

*Project Director (PIU)*  
Provincial Roads Improvement Project  
C&W Department Peshawar.



**Project Director (PIU)**  
Provincial Roads Improvement Project  
C&W Department Peshawar.



**GOVERNMENT OF KHYBER  
PAKHTUNKHWA**

**COMMUNICATION & WORKS  
DEPARTMENT  
PROJECT IMPLEMENTATION UNIT (PIU)**



**MINCONSULT SDN BHD**  
(Company No : 58835-P)



**CREATIVE ENGINEERING CONSULTANTS**  
CREATIVE HOUSE, PHASE 3 CHOWK MAIN JAMRUD ROAD,  
PESHAWAR.

SR.NO	TITLE	DWG NO.	SR.NO	TITLE	DWG NO.
1	TITLE PAGE		27		
			28		
2	LIST OF DRAWINGS	CEC/HW/KP-RRDP/N-CHT-5/LD-01	29		
3	PROJECT LOCATION MAP		30		
4	GENERAL & TYPICAL DRAWINGS				
5	SYMBOLS & ABBREVIATIONS	CEC/KP-RRDP/HW/N-CHT-5/SA-03(a&b)			
6	GENERAL NOTES FOR ROAD CONSTRUCTION	CEC/KP-RRDP/HW/N-CHT-5/GN-04			
7	TYPICAL MINOR ROAD JUNCTION	CEC/KP-RRDP/HW/N-CHT-5/MJD-05(a-b)			
8	TYPICAL SUPER ELEVATION DETAILS	CEC/KP-RRDP/HW/N-CHT-5/SE-06			
9	TRAFFIC SIGNS DETAILS	CEC/KP-RRDP/HW/N-CHT-5/TSD-07(a-g)			
10	PAVEMENT MARKING DETAILS	CEC/KP-RRDP/HW/N-CHT-5/PM-08			
11	KILOMETER POST DETAILS	CEC/KP-RRDP/HW/N-CHT-5/KM-09			
12	GUARD RAIL DETAILS	CEC/KP-RRDP/HW/N-CHT-5/GR-10			
13	TYPICAL CROSS SECTIONS				
14	TYPICAL CROSS SECTIONS	CECKP-RRDP/HW/N-CHT-5/TCS-01			
15	CENTER LINE DATA				
16	CENTER LINE DATA	CEC/KP-RRDP/HW/N-CHT-5/CL-01-04			
17	HORIZONTAL CURVE DATA				
18	HORIZONTAL CURVE DATA	CEC/KP-RRDP/HW/N-CHT-5/HCD-01-11			
19	LIST OF BENCH MARKS	CECKP-RRDP/HW/N-CHT-5/BM-01			
20	LIST OF INVENTORY SHEET	CEC/KP-RRDP/HW/N-CHT-5/SI-01			
21	PLAN & PROFILE DRAWINGS				
22	PLAN & PROFILE DRAWINGS	CEC/KP-RRDP/HW/N-CHT-5/P&P-(01-14)			
23	STRUCTURAL DRAWINGS				
24	TYPICAL SLAB CULVERT	CEC/KP-RRDP/STR/N-CHT-5/STR-(01-02)			
25	TYPICAL SIDE DRAIN	CEC/KP-RRDP/STR/N-CHT-5/STR-03			
26	BRIDGE DRAWING				

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department

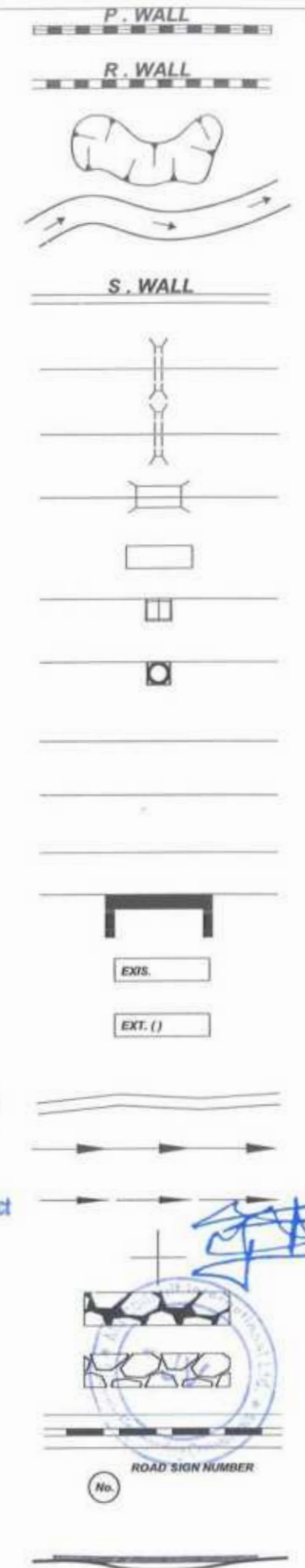
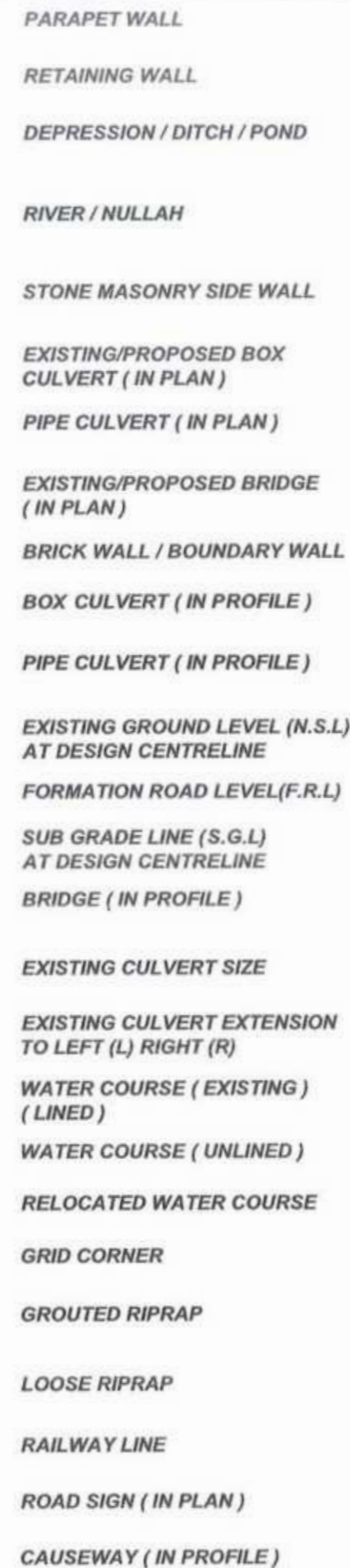
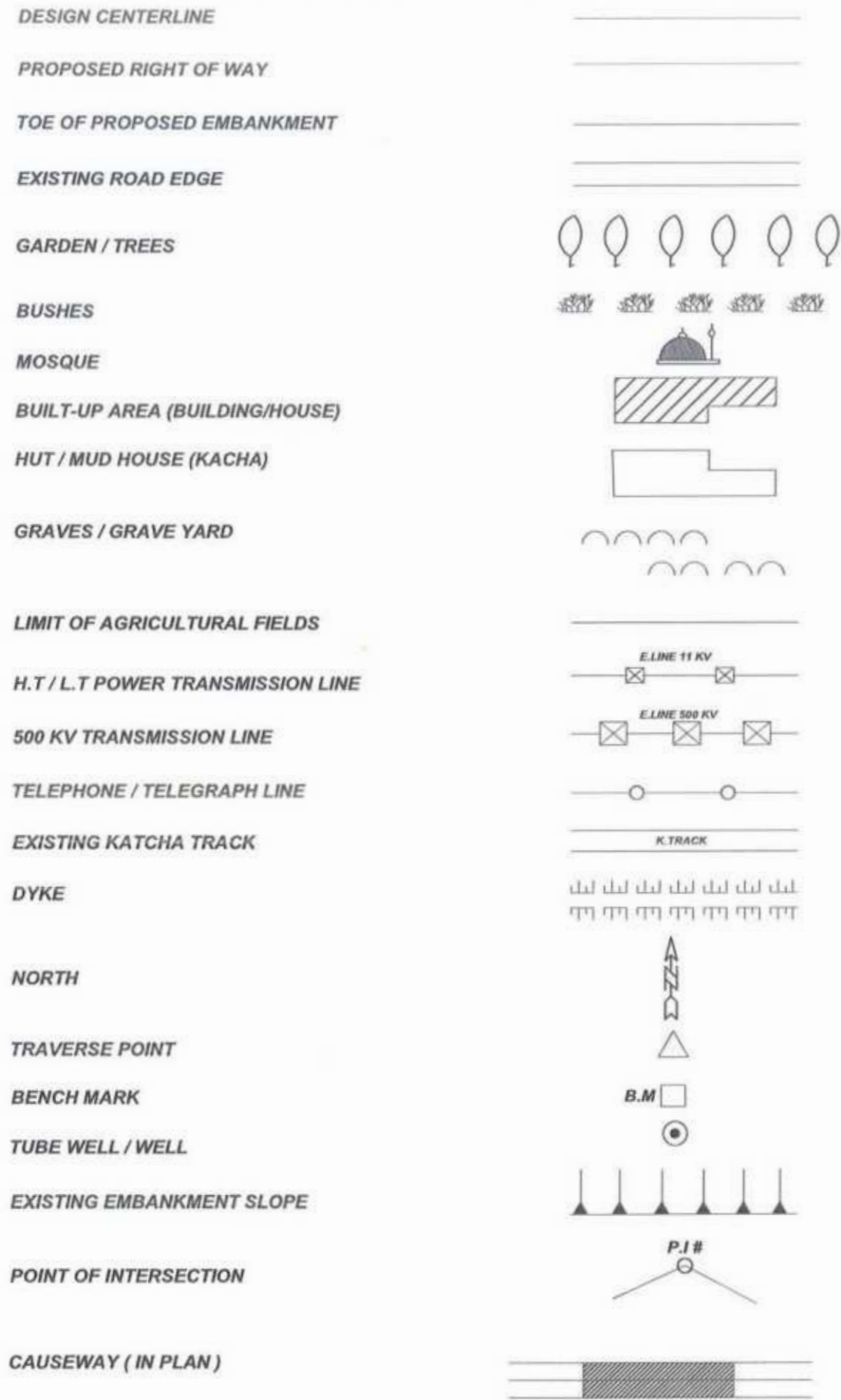
CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58635-P) J.V. CREATIVE ENGINEERING	REV DATE DESCRIPTION 0 AUGUST, 2024 TENDER DRAWINGS 1 2	NAMES: G. DESIGNED REHMAT DRAWN INAM ULLAH CHECKED S. DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. DATE: AUG	SHEET CONTENT: LIST OF DRAWINGS
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# GENERAL & TYPICAL DRAWINGS

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Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department, Peshawar.





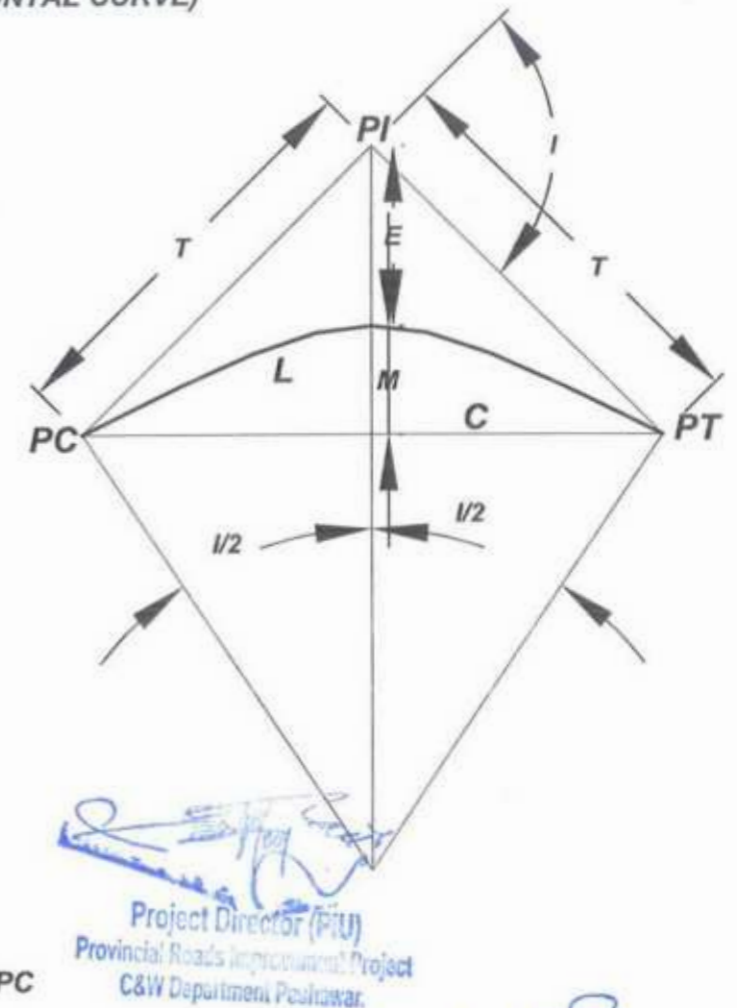
*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 59835-P) J.V. <b>CREATIVE ENGINEERING</b>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:	
		0	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED	REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	SYMBOLS & ABBREVIATION
		a			DRAWN	INAM ULLAH			DATE:	
b			CHECKED	S.DURRANI	AUG					

A	AREA
B	BREADTH
BC	REINFORCED CONCRETE BOX CULVERT
B.M	BENCH MARK
BOP	BEGINNING OF PROJECT
C	CHORD LENGTH
C.B.R	CALIFORNIA BEARING RATIO
C/C	CENTER TO CENTER
CHD	CHECKED
C/L	CENTER LINE
CM	CENTIMETER
CONC	CONCRETE
CONST/JT	CONSTRUCTION JOINT
CUL	CULVERT
Cu.m	CUBIC METER
CURVE LEN	VERTICAL CURVE LENGTH
D	DEPTH
Da	DEGREE OF CURVE (BY ARC)
Dc	DEGREE OF CURVE (BY CHORD)
DEG	DEGREE
DIA	DIAMETER
DIM	DIMENSION
D/S	DOWNSTREAM
D.S.T	DOUBLE SURFACE TREATMENT
DRG	DRAWING
E	EASTING , EAST
E	EXTERNAL DISTANCE (SHIFT)
ELEV./EL	ELEVATION
EOP	END OF PROJECT
EXIS	EXISTING
EXT/JT	EXPANSION JOINT
F.R.L	FORMATION ROAD LEVEL
G.I	GALVANIZED IRON
H	HORIZONTAL
H.T/L.T	HIGH TENSION/LOW TENSION
HF	HEIGHT OF FILL
HWY	HIGHWAY
I	DEFLECTION ANGLE (HORIZONTAL CURVE)
Ic	CIRCULAR DEFLECTION ANGLE
I.L	INVERT LEVEL
K	K-FACTOR (VERTICAL CURVE)
Kg	KILOGRAM
KM/km	KILOMETER
L	LENGTH OF HORIZONTAL CURVE
LIN.M	LINEAR METER
LHS	LEFT HAND SIDE
LT	LEFT
M/m	METER
M	MIDDLE ORDINATE
MAX	MAXIMUM
M.H	MAN HOLE
MIN	MINIMUM
MM	MILLIMETER

MSE	CROSS SLOPE AT MAXIMUM SUPERELEVATION
N	NORTHING, NORTH
No	NUMBER
N.T.S	NOT TO SCALE
NSL	NATURAL SURFACE LEVEL
PROP:	PROPOSED
PC	POINT OF HORIZONTAL CURVATURE (START OF HORIZONTAL CURVE)
PC	REINFORCED CONCRETE PIPE CULVERT
PGL	PROFILE GRADE LINE
PI	POINT OF HORIZONTAL INTERSECTION
PR	POINT OF ROTATION
PT	POINT OF HORIZONTAL TANGENCY (END OF HORIZONTAL CURVE)
P.C.C	PLAN CEMENT CONCRERE
R	RADIUS OF HORIZONTAL CURVE
R.C.C	REINFORCED CONCRETE
REINF	REINFORCEMENT
REV	REVISION
RHS	RIGHT HAND SIDE
R.O.W	RIGHT OF WAY
R.R	RIP RAP
RT	RIGHT
R/W	RETAINING WALL
RWC ( )	RELOCATION WATER COURSE (TYPE)
S.G.L	SUB GRADE LEVEL
S	SLOPE GRADIENT (PERCENT)
SE	SUPERELEVATION
S.B.P	SHOULDER BREAK POINT
SC	SLAB CULVERT
SHLD	SHOULDER
Sq.m	SQUARE METER
STA./STA	STATION
STRUCT	STRUCTURE
S'WALL	SIDE WALL
T	TANGENT LENTH OF HORIZONTAL CURVE
T.D	TOE DITCH
T.S.T	TRIPPLE SURFASE TREATMENT
TAN	TANGENT
TH	THICKNESS
TR	TRANSITION
TR	(TANGENT RUN OUT) = DISTANCE FROM BS TO THE PC
TYP	TYPICAL
U/S	UPSTREAM
V	VERTICAL
VAR	VARIABLE
VER	VERIFIED
VPC	VERTICAL POINT OF CURVATURE (START OF VERTICAL CURVE)
VPI	VERTICAL POINT INTERSECTION OF PROFILE GRADE.
VPT	VERTICAL POINT OF TANGENCY (END OF VERTICAL CURVE)
W	WEST, WIDTH OF ROADWAY
W.B.M	WATER BOUND MACADAM
WC	WATER COURSE
Ø	SKEW ANGLE





CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING</p>	0	AUGUST, 2024	TENDER DRAWINGS	G. DESIGNED: REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	SYMBOLS & ABBREVIATION
		a			DRAWN: INAM ULLAH			DATE:	
		b			CHECKED: S.DURRANI			AUG.	

## GENERAL NOTES FOR ROAD CONSTRUCTION

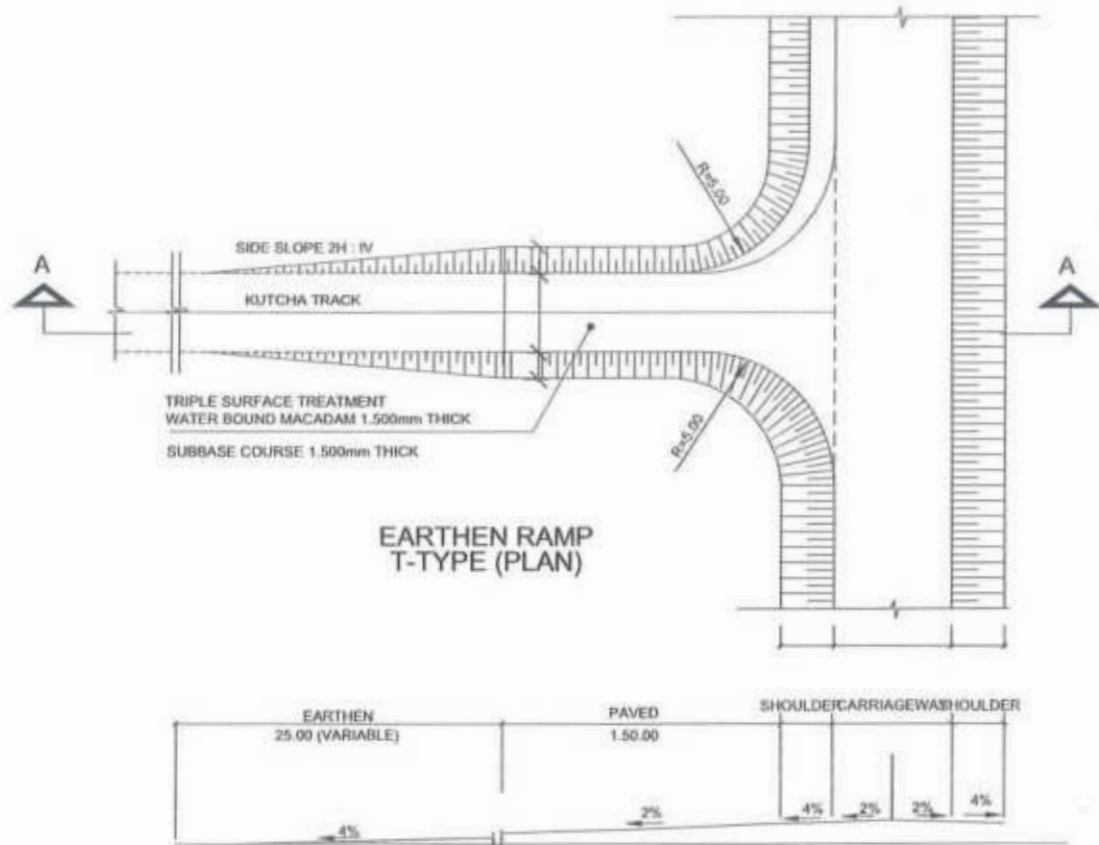
  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.

1. GRID COORDINATES & ELEVATIONS FOR THE PROJECT ARE BASED ON UNIVERSAL TRANSVERSE MERCATOR (UTM WGS84).
2. EACH DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS.
3. NOTES GIVEN ON DRAWINGS ADJACENT TO A SECTION OR DETAIL PERTAIN TO THAT PARTICULAR DETAIL ONLY.
4. THE CONTRACTOR SHALL ENDEAVOR MAXIMUM TO MAINTAIN UNINTERRUPTED FLOW OF TRAFFIC AT ITS ADJOINING CROSS ROADS AND SUBMIT A COMPREHENSIVE DIVERSION PLAN TO ENGINEER FOR APPROVAL.
5. ANY DAMAGE CAUSED TO THE UTILITIES DURING EXCAVATION/EXECUTION OF WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST TO THE EMPLOYER IN CONSULTATION WITH THE CONCERNED UTILITY PROVIDER.
6. CONTRACTOR SHALL PREPARE AND SUBMIT, FOR ENGINEER'S REPRESENTATIVE APPROVAL, CROSS-SECTION @25m INTERVAL DULY DESIGN TEMPLATES, SHOP DRAWINGS FOR STRUCTURES, PAVEMENT MARKINGS (LOCATION, TYPE AND SIZE), ROAD SIGNS ETC. ON THE PLAN SHEETS FOR THE APPROVAL OF ENGINEER/ENGINEER'S REPRESENTATIVE BEFORE EXECUTION OF RELATED WORKS WITHOUT ANY EXTRA COST TO THE EMPLOYER.
7. SERVICE DUCTS SHALL BE PROVIDED AT JUNCTION LOCATIONS OR AT AN INTERVAL AS DIRECTED BY THE ENGINEER.
8. STRUCTURES SHOWN ON PLAN ARE SYMBOLIC. THE LENGTHS, SIZES, SLOPE, INVERT LEVELS, SKEW ANGLE AND OTHERS DETAILS OF THE PROPOSED STRUCTURES AS SHOWN ON DRAWINGS ARE TENTATIVE. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF EACH STRUCTURE LOCATIONS WITH THE REQUIRED SKEW ANGLE AND OTHER DETAILS AS PER SITE REQUIREMENTS AND SHALL SUBMIT THEM TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION EXECUTION.\
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO CATER FOR ALL TEMPORARY TRAFFIC DIVERSION DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER INCLUDING DETOUR ROAD AND ITS MAINTENANCE, SPRINKLING OF WATER, GRADING AND COMPACTION WHEN AND WHERE REQUIRED WITHOUT ANY EXTRA COST TO EMPLOYER.
10. ROADWAY EXCAVATION MATERIAL SHALL BE UTILIZED IN THE MOST EFFECTIVE MANNER IN THE EMBANKMENT EVEN WITH BLENDING/ MIXING THE SUPERIOR MATERIALS (WHERE REQUIRED WITHOUT AT ANY EXTRA COST).ROADWAY SUITABLE EXCAVATION SHALL NOT BE DISPOSED OFF OUTSIDE RIGHT OF WAY WITHOUT WRITTEN APPROVAL OF THE ENGINEER BY EMPLOYER.

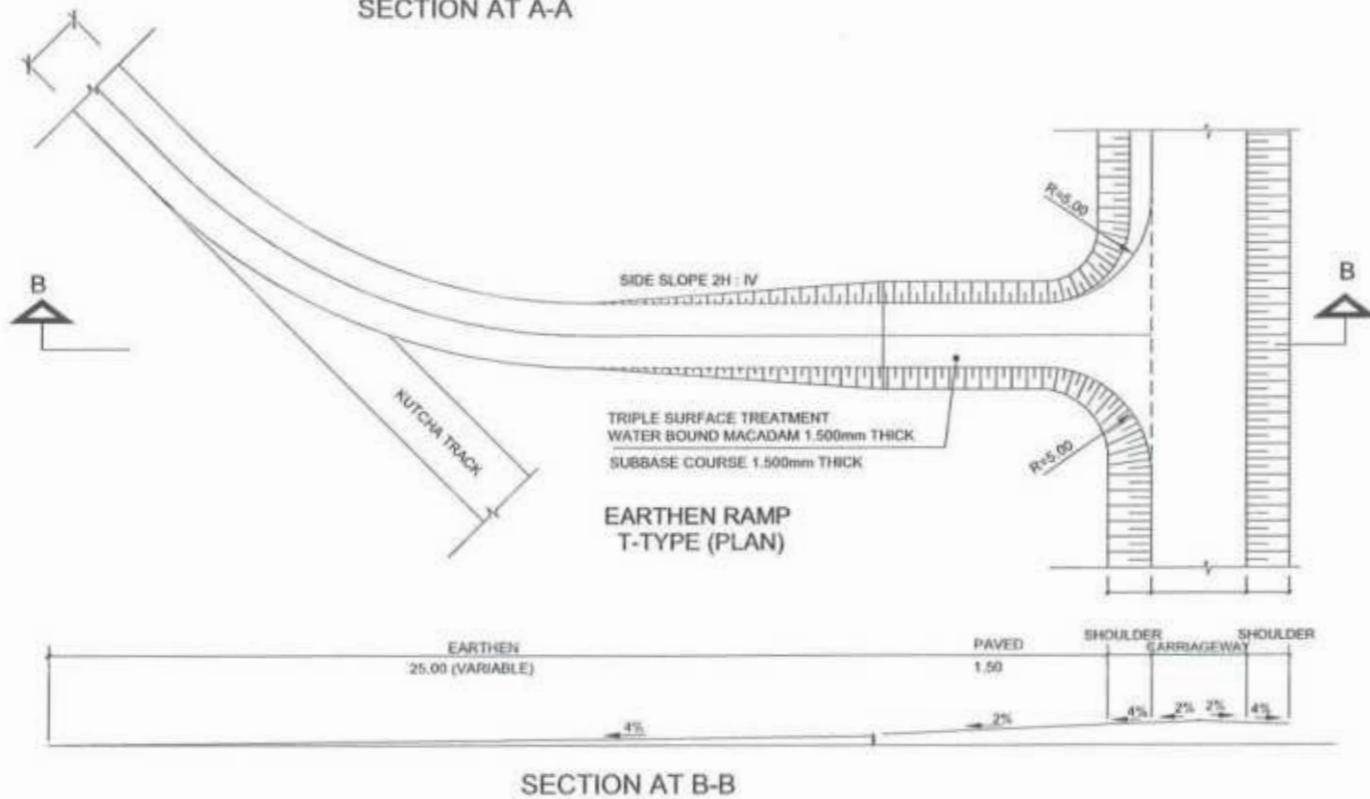
  


CLIENT:	DESIGN CONSULTANT: (MIN - JV - CEC)	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:	
 <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	 <b>MINCONSULT SDN BHD</b> <small>(COMPANY NO. 5835-P)</small> J.V. CREATIVE ENGINEERING	0	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED	REHMAT	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	<b>GENERAL NOTES FOR ROAD CONSTRUCTION</b>	
		1			DRAWN	INAM ULLAH		KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)		DATE:
		2			CHECKED	S.DURRANI				DATE:

# MINOR JUNCTION DETAIL



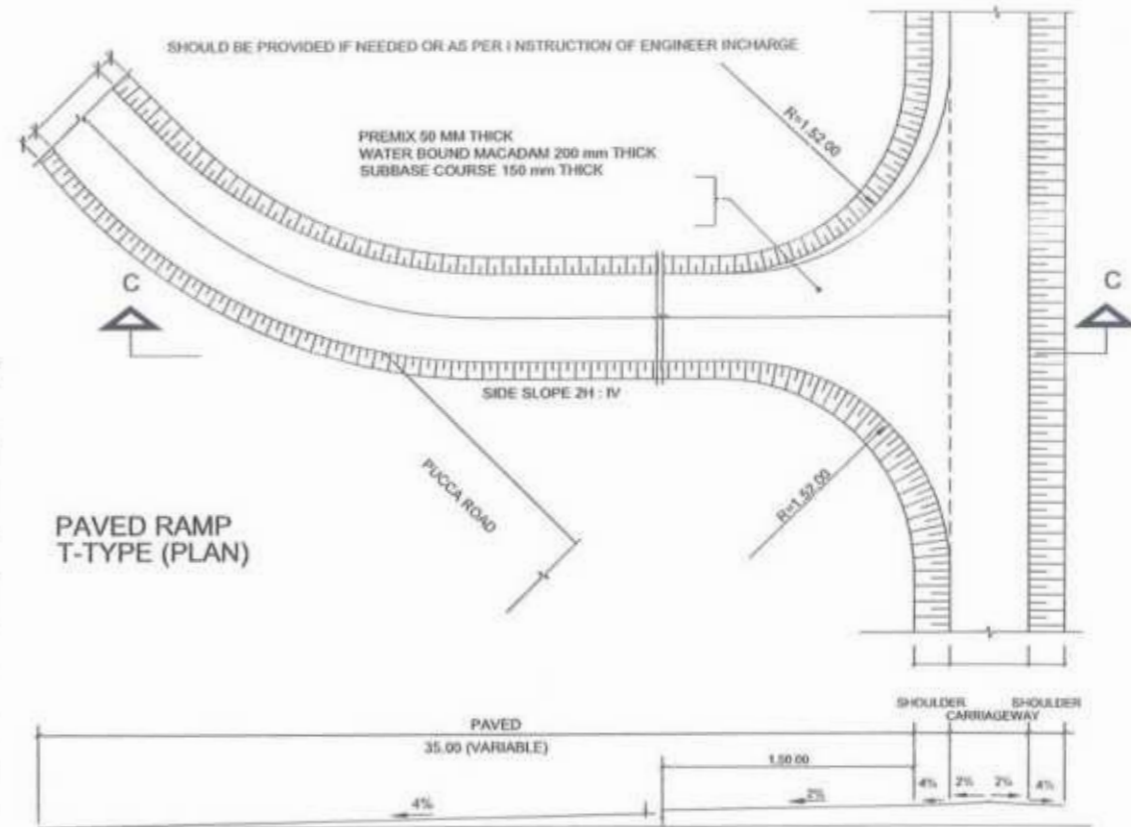
SECTION AT A-A



SECTION AT B-B

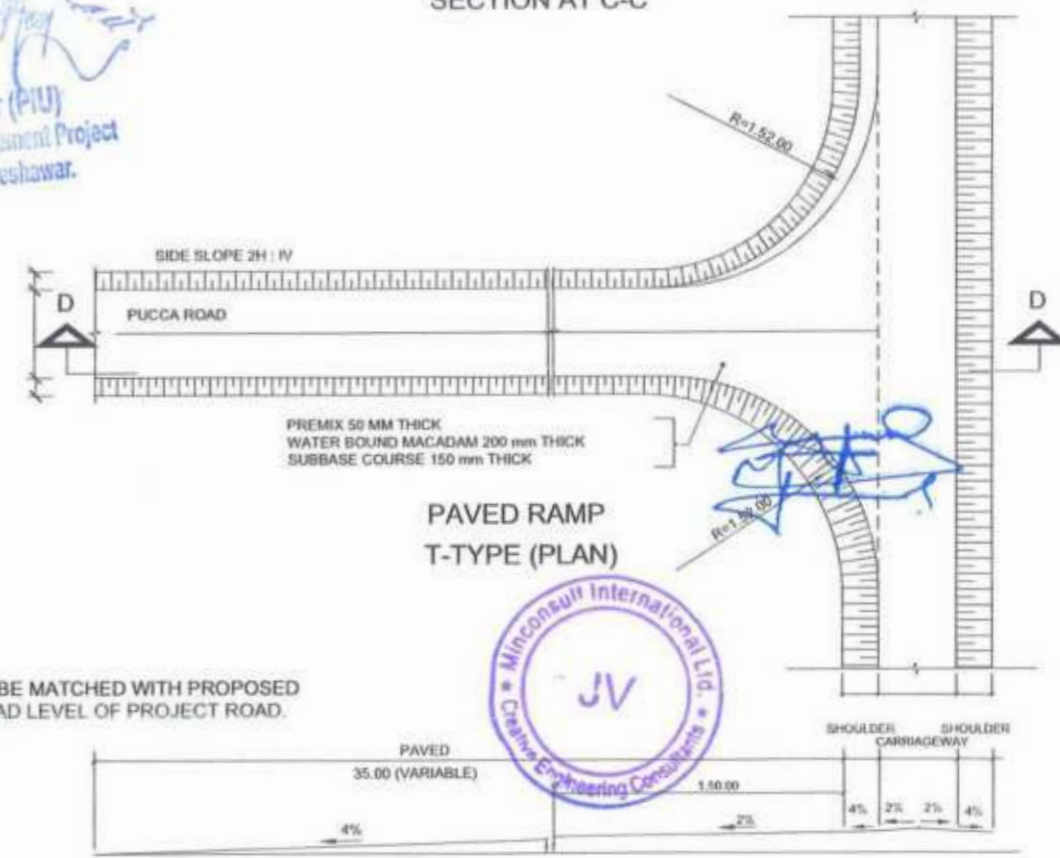
RECOMMENDED CURVE RADII FOR DIFFERENT ANGLES OF TURN

ANGLE OF TURN (DEGREES)	SIMPLE CURVE RADIUS (R) (METRES)
30	30
45	23
60	1.58
75	1.56
90	1.52 TO 1.55
>90	VARIABLE



SECTION AT C-C

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



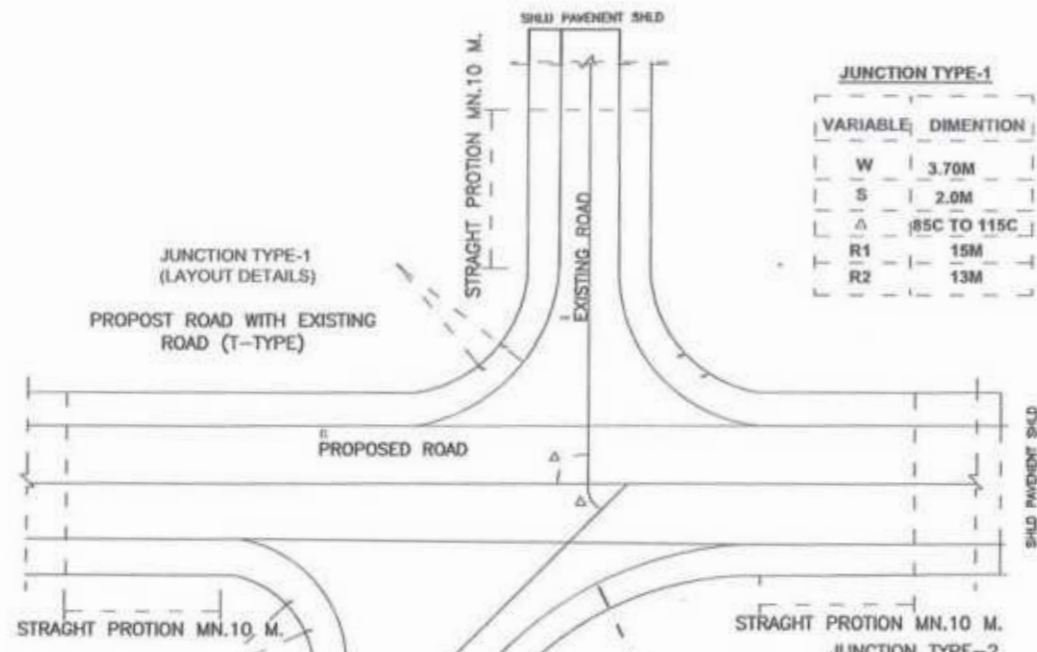
SECTION AT D-D

NOTE:  
1.5- RAMPS ARE TO BE MATCHED WITH PROPOSED FINISHED ROAD LEVEL OF PROJECT ROAD.



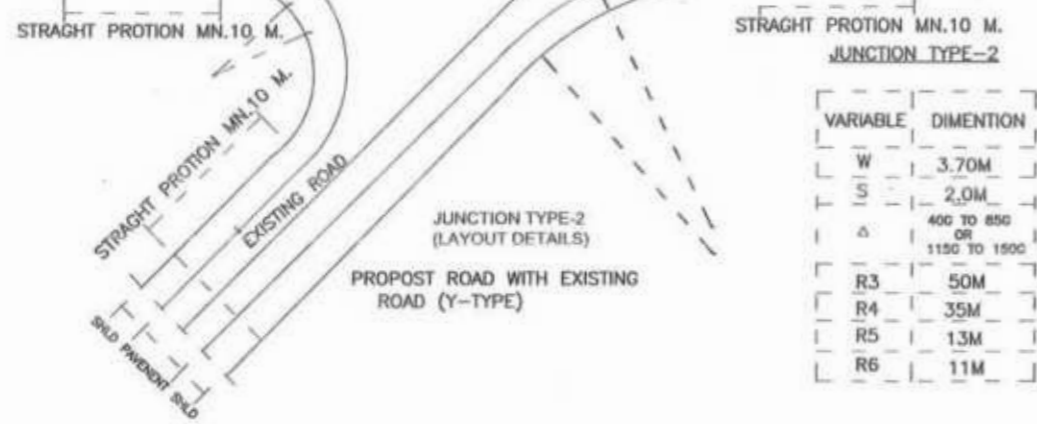
CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 08835-P) J.V. CREATIVE ENGINEERING	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	AUGUST, 2024	TENDER DRAWINGS	G. DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S. DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S. DATE: AUG	MINOR JUNCTION DETAILS

# MINOR JUNCTION DETAIL



**JUNCTION TYPE-1**

VARIABLE	DIMENTION
W	3.70M
S	2.0M
Δ	85C TO 115C
R1	15M
R2	13M



**JUNCTION TYPE-2**

VARIABLE	DIMENTION
W	3.70M
S	2.0M
Δ	400 TO 850 OR 1150 TO 1500
R3	50M
R4	35M
R5	13M
R6	11M

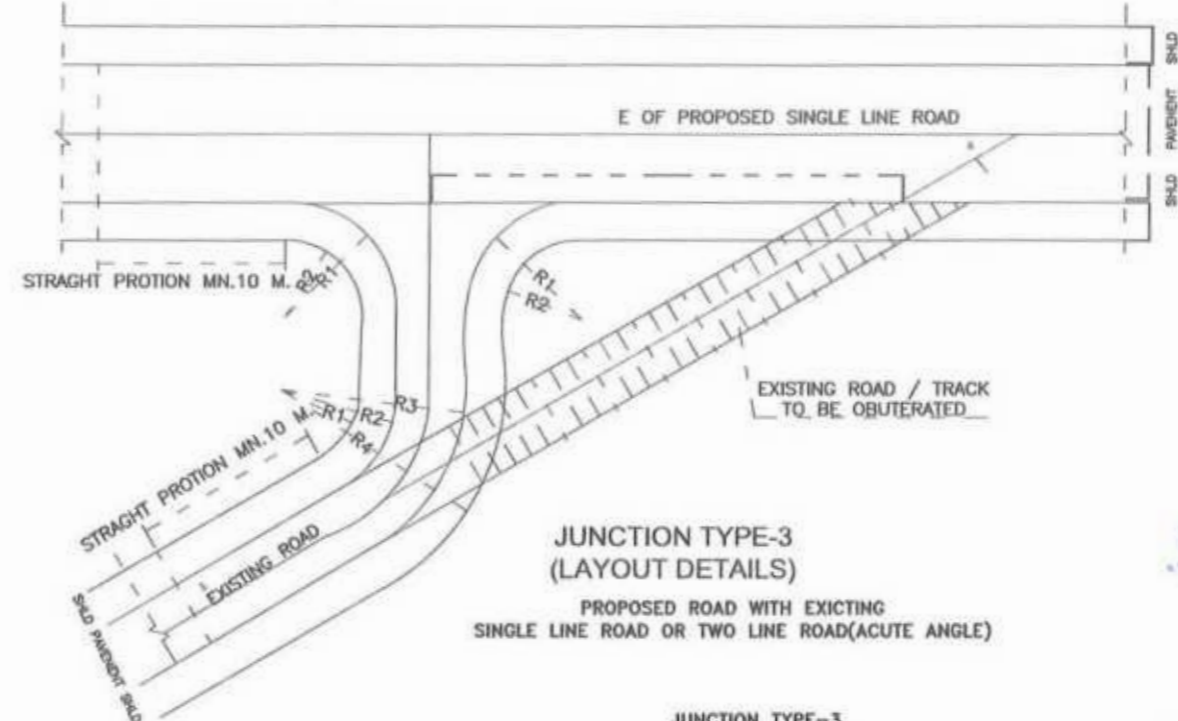
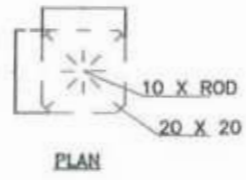
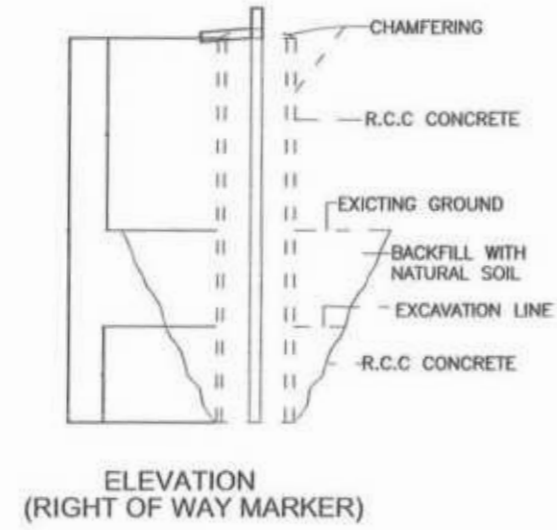
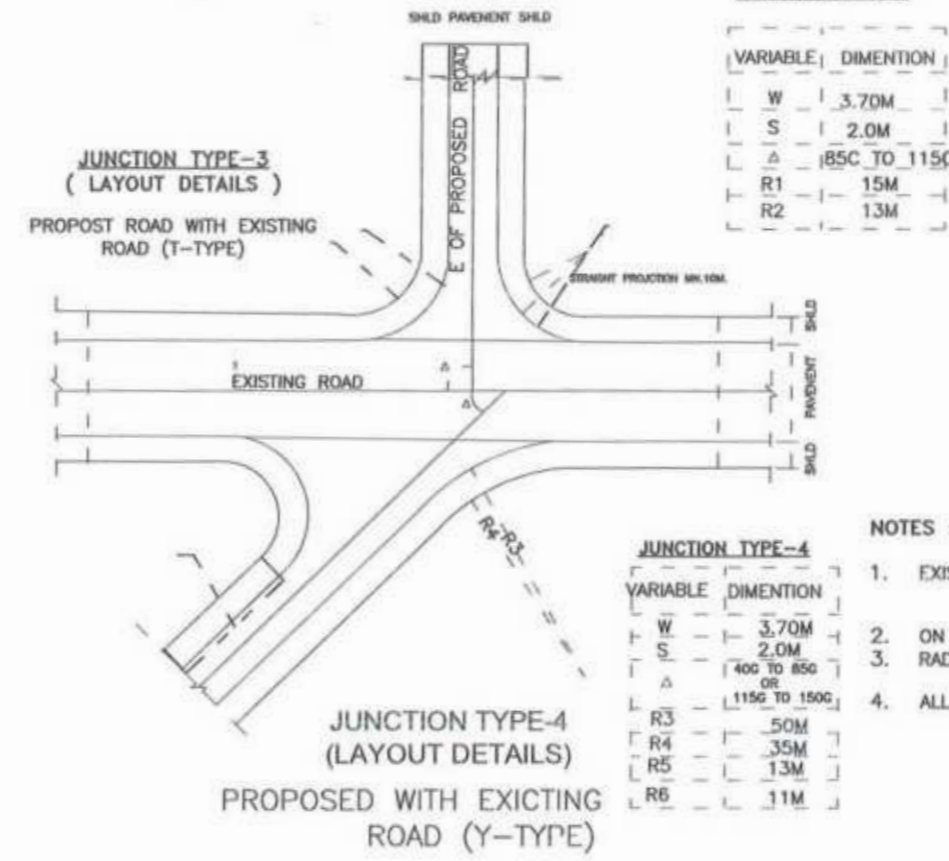


TABLE NO.5 APPLICABLE WHEN  
1 <500 OR >1500  
(JUNCTION WITH 2 LINE  
ROAD)(2) 400 OR 1800 )  
JUNCTION WITH SINGLE ROAD)

DIMENTION FOR JUSTIFICATION SINGLE LINE ROAD

VARIABLE	DIMENTION
W	3.70M
S	2.0M
R1	15M
R2	13M
R3	25M
R4	27M



**JUNCTION TYPE-3**

VARIABLE	DIMENTION
W	3.70M
S	2.0M
Δ	85C TO 115C
R1	15M
R2	13M

**NOTES :**

- EXISTING ROAD TO BE DISMANTLED WHERE IT MEETS PROPOSED ROAD AT THE JUNCTION LOCATION ONLY AND WILL BE RECONSTRUCTED ACCORDING TO JUNCTION DETAIL AND LIMITS.
- ON JUNCTION MIN. 10 METER STRAIGHT PORTION SHOULD BE PROVIDED.
- RAD# SHOWN ARE TYPICAL AND MAY BE ADJUSTED AS PER SITE CONDITIONS AS APPROVED BY THE ENGINEER.
- ALL DIMENSIONS ARE IN MILLI-METER UNLESS OTHERWISE SPECIDIED.

*[Handwritten Signature]*

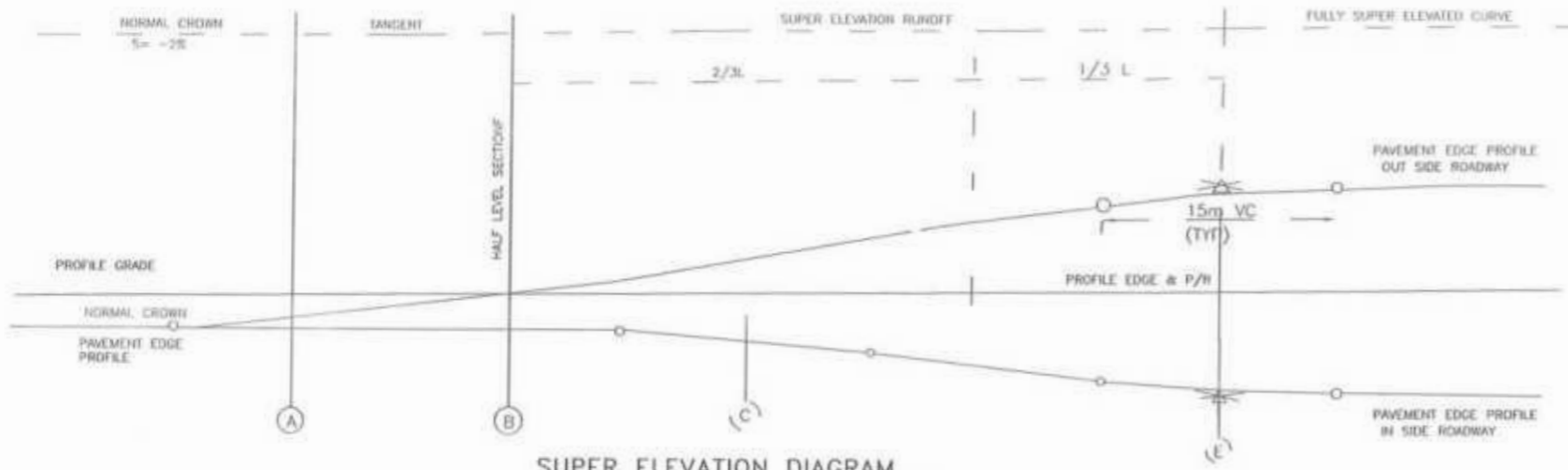
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

*[Handwritten Signature]*

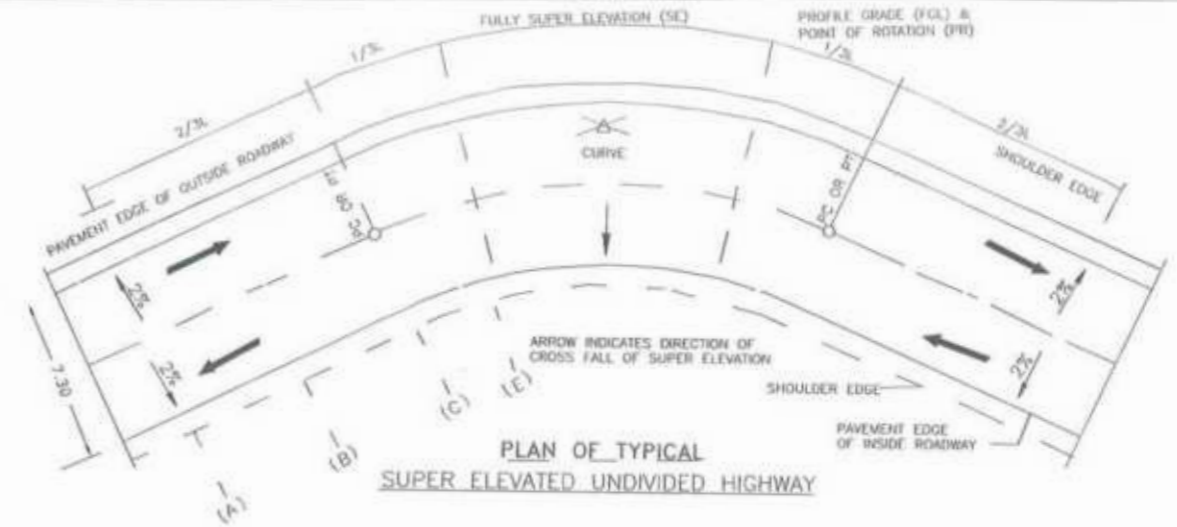


CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS	(MIN - JV - CEC) MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.	0	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S.DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S DATE:	MINOR JUNCTION DETAILS





**SUPER ELEVATION DIAGRAM ON SIMPLE RIGHT AND CURVES**



**PLAN OF TYPICAL SUPER ELEVATED UNDIVIDED HIGHWAY**

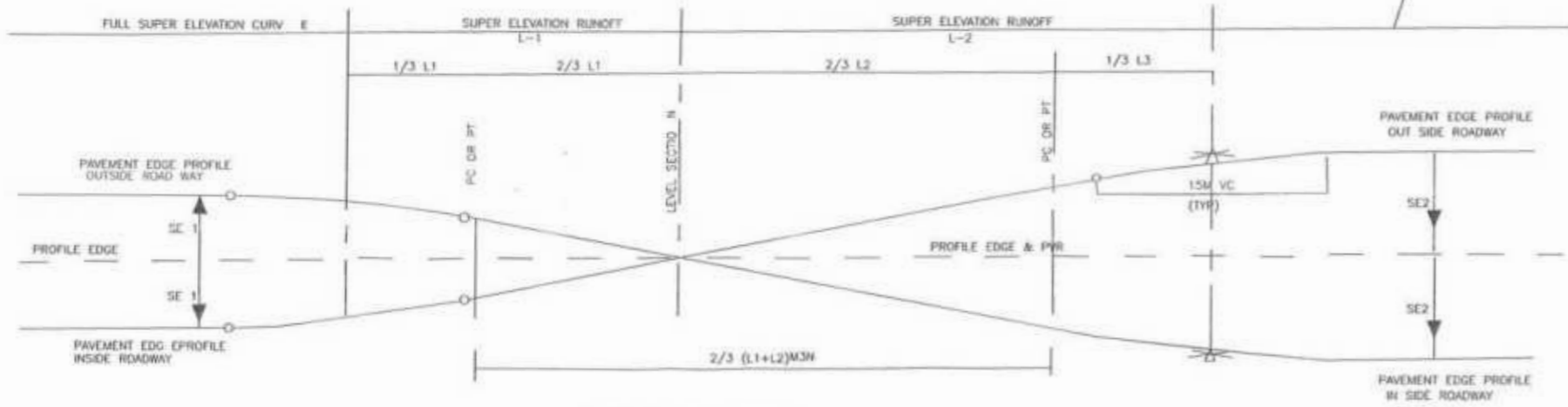
**COMPUTATION OF SUPER ELEVATION**

RADIUS	40 KPH		60 KPH	
	SE (m/m)	L (m/m)	SE (m/m)	L (m/m)
950				
900				
850	NC			
800	NC			
750	RC			
700	RC			
650	RC			
600	RC			
550	0.020	10	NC	
500	0.021	10	NC	
460	0.022	11	RC	
400	0.023	12	RC	
350	0.027	15	RC	
300	0.030	15	0.020	10
250	0.033	17	0.023	12
200	0.036	19	0.027	13
150	0.042	25	0.037	18
90	0.050	26	0.039	19
80	0.052	27	0.040	19
70	0.054	28	0.042	20
60	0.056	29	0.044	21
50	0.057	30	0.046	23
40	0.060	31	0.052	25
30			0.057	28
21			0.060	29

**ROADWAY WIDENING**

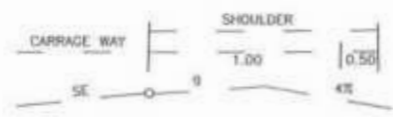
RADIUS (M)	SE (m/m)	L(M)	W(M)	RADIUS (M)	SE (m/m)	L(M)	W(M)
15.00	0.06	32.00	1.20	80.00	0.060	32.00	1.00
20.00	0.060	32.00	1.20	90.00	0.060	32.00	0.80
25.00	0.060	32.00	1.20	100.00	0.060	32.00	0.80
35.00	0.060	32.00	1.20	120.00	0.060	32.00	0.60
40.00	0.060	32.00	1.20	150.00	0.060	32.00	0.60
45.00	0.060	32.00	1.20	200.00	0.058	30.00	-
55.00	0.060	32.00	1.20	300.00	0.050	25.00	-
60.00	0.060	32.00	1.20	400.00	0.043	22.00	-
70.00	0.060	32.00	1.20	500.00	-	-	-
				600.00	-	-	-
				700.00	-	-	-

**FULLY SUPER ELEVATION CURVE**



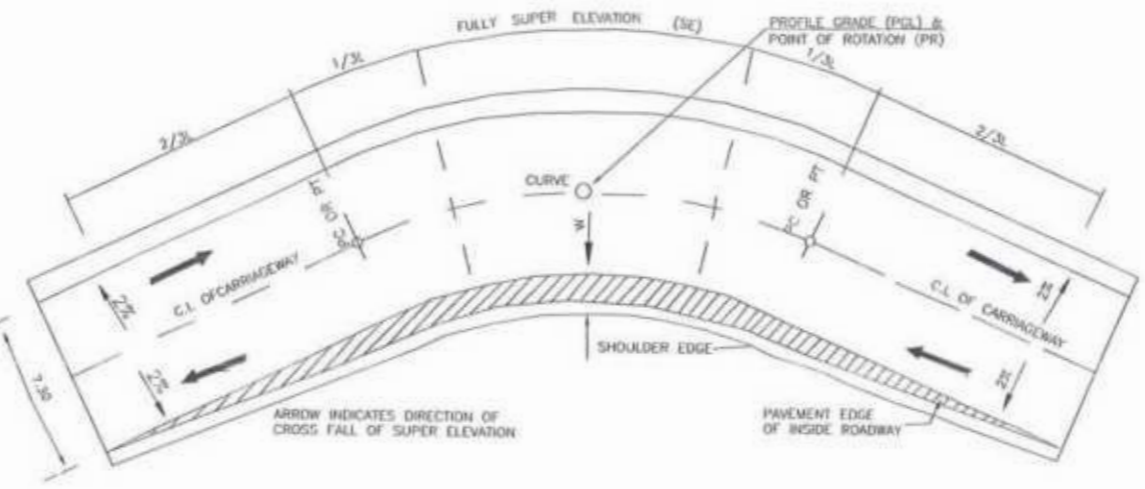
**SUPER ELEVATION DIAGRAM ON REVERSE CURVES**

SHOULDER	7.30 CARRIAGEWAY		SHOULDER
2.00	3.65	3.65	2.00
-4%	-2%	-2%	-4%
-4%	0%	-2%	-4%
-2%	+2%	+2%	-4%
-2%	+2%	+2%	-4%
-3%	+3%	-3%	-4%
+0%	+4%	+4%	-4%
+1%	+5%	-5%	-3%
+2%	+6%	-6%	-4%



**CROWNING AND ROUNDING OF OUTER SHOULDER WHERE > 4%**

- ROLL OVER ALGEBRAIC DIFFERENCE SE AND NORMAL SHOULDER SLOPE LE 4% AT PAVEMENT EDGE NOT TO BE EXCEED 6%
- WHERE THE DIFFERENCE EXCEED 6% THE ABOVE CROWNING OF SHOULDERS SHOULD BE USED WITH  $g = (S - SE) \%$

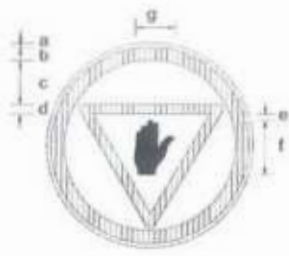


**ROAD WIDENING AND SUPER ELEVATED UNDIVIDED HIGHWAY**

*[Signature]*  
**Project Director (PIU)**  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



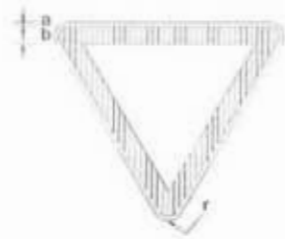
CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 5835-P) J.V. CREATIVE ENGINEERING	REV: 0 DATE: AUGUST, 2024 DESCRIPTION: TENDER DRAWINGS	NAMES: G. DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S. DURRANI	PROJECT: <b>KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)</b>	ROAD NAME: <b>N-CHT-5 ARKARI VALLEY ROAD</b>	SCALE: <b>N.T.S.</b> DATE:	SHEET CONTENT: <b>SUPER ELEVATION DETAILS</b>
---	--	--	---	---	--	-------------------------------	---



STOP SIGN R-1

DIMENSIONS (cm)

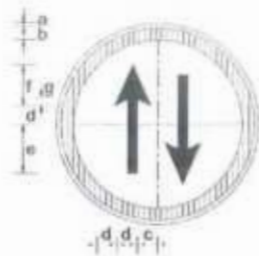
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	16.0	18.70
d	5.5	6.4
e	3.5	4.1
f	30.0	35.0
g	18.5	21.60



GIVE WAY SIGN R-2

DIMENSIONS (cm)

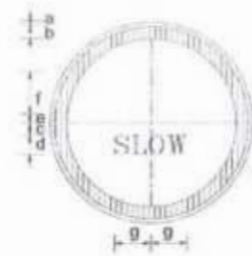
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
f	3.5	4.1



PRIORITY ROAD SIGN R-3

DIMENSIONS (cm)

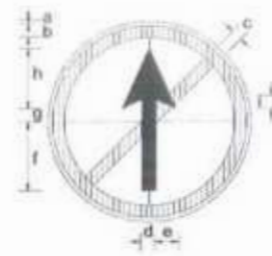
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	10.5	12.20
d	7.0	8.2
e	26.0	30.3
f	19.0	22.2
g	2.0	2.3



SLOW SIGN R-4

DIMENSIONS (cm)

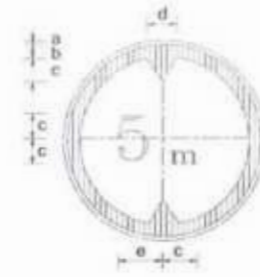
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	4.0	4.7
d	14.5	16.9
e	2.0	2.3
f	24.5	28.6
g	27.6	31.5



NO ENTRY SIGN R-5

DIMENSIONS (cm)

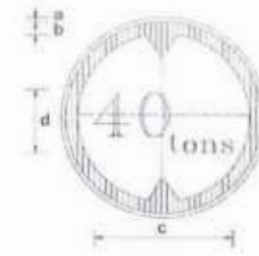
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	5.5	6.4
d	8.0	9.3
e	9.0	10.5
f	30.5	35.6
g	7.0	8.2
h	23.5	27.4
i	4.5	5.2



HEIGHT LIMIT SIGN R-10

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	16.5	19.2
d	26.0	30.3
e	20.0	23.3



GROSS WEIGHT LIMIT SIGN R-18

DIMENSIONS (cm)

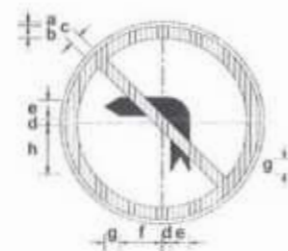
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	49.0	57.2
d	40.0	46.7



NO RIGHT TURN SIGN R-20

DIMENSIONS (cm)

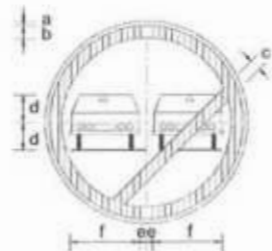
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	5.5	6.4
d	6.0	7.0
e	10.0	11.6
f	25.0	29.2
g	5.0	5.8
h	30.0	35.0



NO LEFT TURN SIGN R-21

DIMENSIONS (cm)

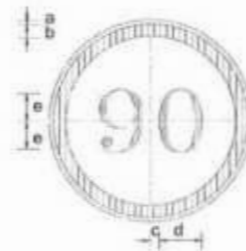
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	5.5	6.4
d	6.0	7.0
e	10.0	11.6
f	25.0	29.2
g	5.0	5.8
h	30.0	35.0



OVERTAKING PROHIBITED SIGN R-23

DIMENSIONS (cm)

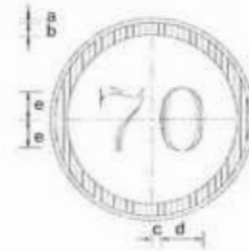
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	5.5	6.4
d	12.0	14.0
e	3.0	3.5
f	29.5	34.4



SPEED LIMIT SIGN R-25-1

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	23.0	26.8
e	20.0	23.3



SPEED LIMIT SIGN R-25-2

DIMENSIONS (cm)

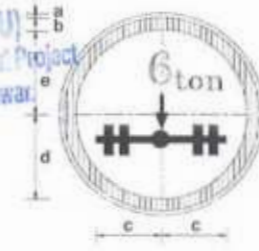
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	23.0	26.8
e	20.0	23.3



SPEED LIMIT SIGN R-25-3

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	23.0	26.8
e	20.0	23.3



AXLE WEIGHT LIMIT SIGN R-19

DIMENSIONS (cm)

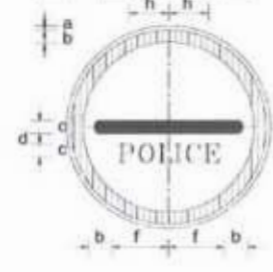
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	28.0	32.7
d	23.0	26.8
e	32.0	37.3



SPEED LIMIT SIGN R-25-4

DIMENSIONS (cm)

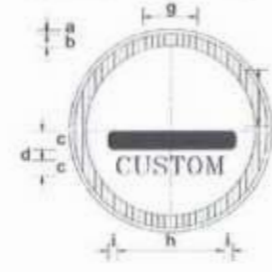
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	23.0	26.8
e	20.0	23.3



POLICE CHECK POST SIGN R-27

DIMENSIONS (cm)

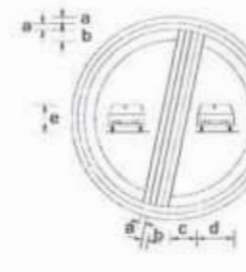
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	7.5	8.8
d	3.0	3.5
e	10.0	11.7
f	27.5	32.1
g	29.0	33.8
h	28.0	32.7



CUSTOM CHECK SIGN R-28

DIMENSIONS (cm)

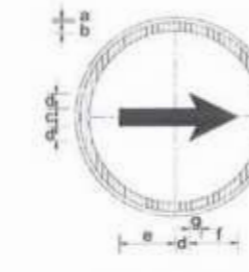
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	6.5	7.6
c	8.0	9.3
d	4.0	4.7
e	11.0	12.8
f	31.0	36.2
g	41.0	47.8
h	52.0	60.7
i	7.5	8.7



END OF OVERTAKING RESTRICTION SIGN R-31

DIMENSIONS (cm)

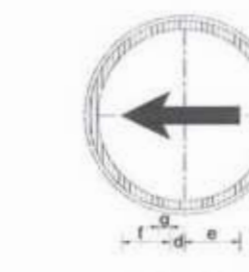
PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	1.7	7.6
c	10.0	11.7
d	25.0	29.2
e	21.0	24.5



TURN RIGHT SIGN R-34

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	4.0	4.7
c	8.0	9.3
d	9.0	10.5
e	32.0	37.3
f	23.0	26.8
g	4.5	5.2



TURN LEFT SIGN R-35

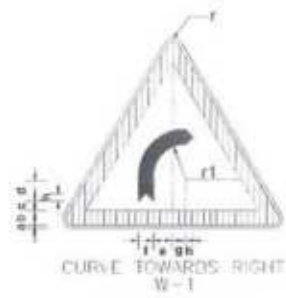
DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
a	1.0	1.2
b	4.0	4.7
c	8.0	9.3
d	9.0	10.5
e	32.0	37.3
f	23.0	26.8
g	4.5	5.2

- NOTES:
- 1 - For Sign Locations Refer To Plan Sheets.
  - 2 - Final Location To Be Decide By The Engineer As Per Site.
  - 3 - Some Of The Sign Faces As Shown Are Reversible And The Actual Face Detail Shall Be Identified Prior To Placing Any
  - 4 - All Signs To Have High Intensity Reflective Sheetalings In Accordance With The Relevant Clause In The Specification.
  - 5 - Sign Legends Shall Be Approved By Engineer And Client.

CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V. <b>CREATIVE ENGINEERING</b>	REV: 01 DATE: AUGUST, 2024 DESCRIPTION: TENDER DRAWINGS	NAMES: G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S.DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. SHEET CONTENT: TRAFFIC SIGNS DETAILS
		DATE: AUG.	CHECKED: S.DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. SHEET CONTENT: TRAFFIC SIGNS DETAILS

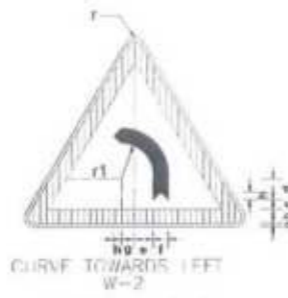




CURVE TOWARDS RIGHT  
W-1

DIMENSIONS (cm)

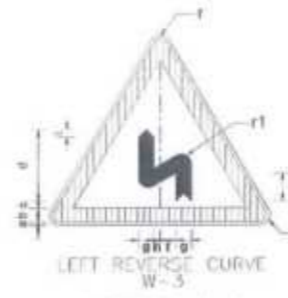
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	4.0	4.7
d	11.5	13.4
e	8.5	9.9
f	7.0	8.2
g	6.0	7.0
h	3.5	4.1
r1	12.5	14.6



CURVE TOWARDS LEFT  
W-2

DIMENSIONS (cm)

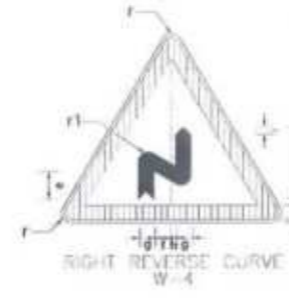
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	4.0	4.7
d	11.5	13.4
e	8.5	9.9
f	7.0	8.2
g	6.0	7.0
h	3.5	4.1
r1	12.5	14.6



LEFT REVERSE CURVE  
W-3

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	33.0	38.5
e	14.0	16.3
f	8.0	9.3
g	7.0	8.2
h	2.0	2.3
i	3.5	4.1
r1	4.5	5.2



RIGHT REVERSE CURVE  
W-4

DIMENSIONS (cm)

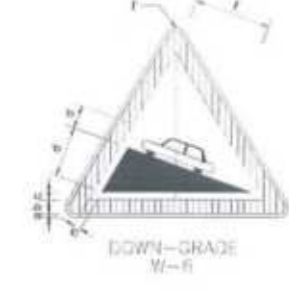
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	33.0	38.5
e	14.0	16.3
f	8.0	9.3
g	7.0	8.2
h	2.0	2.3
i	3.5	4.1
R1	4.5	5.2



UP-GRADE  
W-5

DIMENSIONS (cm)

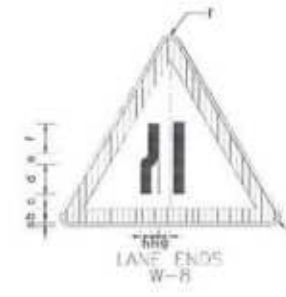
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.5	4.1
d	23.5	27.4
e	11.5	13.4
f	33.0	38.5



DOWN-GRADE  
W-6

DIMENSIONS (cm)

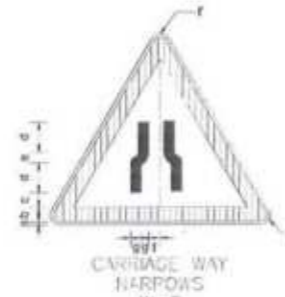
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.5	4.1
d	23.5	27.4
e	11.5	13.4
f	33.0	38.5



LANE ENDS  
W-8

DIMENSIONS (cm)

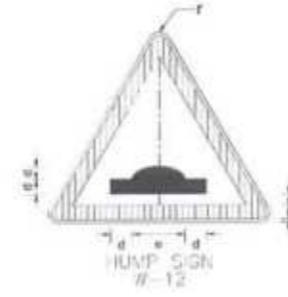
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	14.0	16.3
e	7.2	8.4
f	11.3	13.2
g	3.5	4.1
h	33.0	38.5



CARRIAGE WAY  
NARROWS  
W-9

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.5	4.1
d	10.0	11.7
e	14.0	16.3
f	2.5	2.9
g	5.0	5.8



HUMP SIGN  
W-12

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	4.0	4.7
d	7.0	8.2
e	32.0	37.3



FALLING ROCK  
W-16

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.5	4.1
d	38.0	44.3
e	12.0	14.3



PEDESTRIAN CROSSING  
W-17

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	2.9	3.5
a	0.8	1.0
b	5.4	6.5
c	2.1	2.5
d	35.8	43.0
e	19.2	23.0



CHILDREN CROSSING  
W-18

DIMENSIONS (cm)

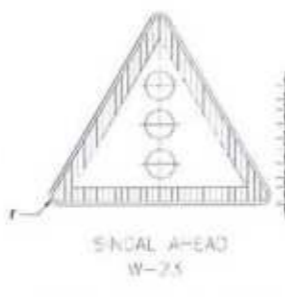
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	4.5	5.3
d	28.5	33.3
e	37.5	43.8



CATTLE CROSSING  
W-20

DIMENSIONS (cm)

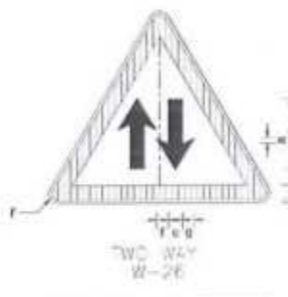
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	2.0	2.3
d	22.0	26.7
e	18.5	21.6
f	17.5	20.4



SIGNAL AHEAD  
W-23

DIMENSIONS (cm)

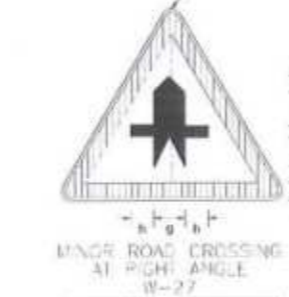
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	2.5	2.9
R1	6.5	7.6



TWO WAY  
W-26

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	4.0	4.7
d	9.0	10.5
e	19.0	22.2
f	5.0	5.8
g	3.5	4.1



MINOR ROAD CROSSING  
AT RIGHT ANGLE  
W-27

DIMENSIONS (cm)

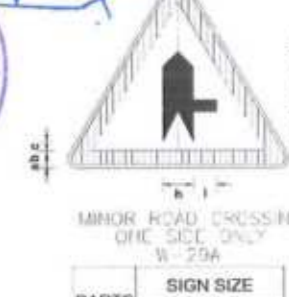
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	4.0	4.7
d	35.0	41.5
e	6.0	7.0
f	11.0	12.8
g	13.5	15.7
h	6.5	7.6



MINOR ROAD CROSSING  
ONE SIDE ONLY  
W-29

DIMENSIONS (cm)

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	13.5	15.8
e	5.5	6.4
f	15.0	17.5
g	7.0	8.2
h	14.0	16.3
i	10.5	12.3



MINOR ROAD CROSSING  
ONE SIDE ONLY  
W-29A

DIMENSIONS (cm)

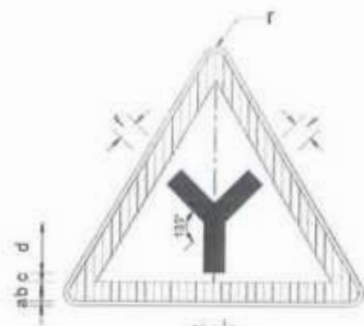
PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	13.5	15.8
e	5.5	6.4
f	15.0	17.5
g	7.0	8.2
h	14.0	16.3
i	10.5	12.3

*Handwritten signature*

Project Director (P/M)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

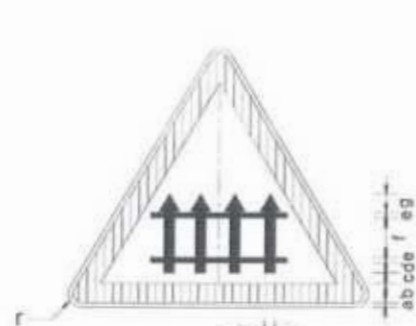


CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58935-P) J.V. CREATIVE ENGINEERING	REV. DATE. DESCRIPTION 1. AUGUST, 2024. TENDER DRAWINGS	NAMES: G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S.DURKHANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S	SHEET CONTENT: TRAFFIC SIGNS DETAILS
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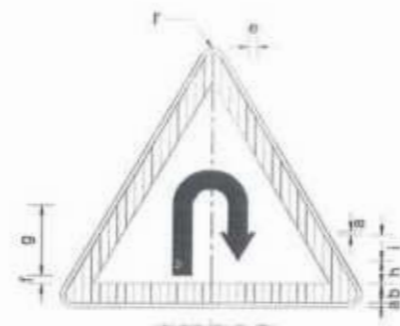
JUNCTION SIGN  
W-31

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	17.0	19.8
e	13.0	15.2
f	7.0	8.2



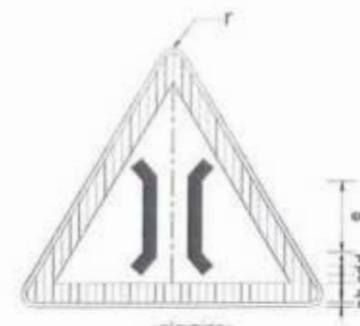
LEVEL CROSSING  
WITH GATES  
W-33

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	1.5	1.8
d	2.5	2.9
e	3.0	3.5
f	7.5	8.8
g	3.5	4.1
h	2.0	2.3
i	4.0	4.7



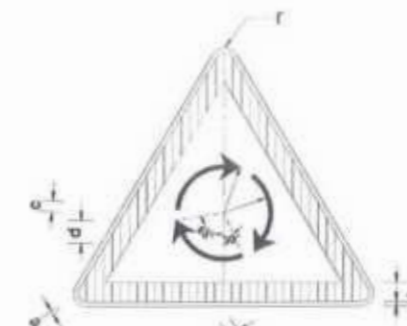
U-TURN  
W-34

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	5.5	6.4
d	7.0	8.2
e	5.0	5.8
f	2.5	2.9
g	23.0	26.8
h	7.5	8.8
i	12.0	14.0



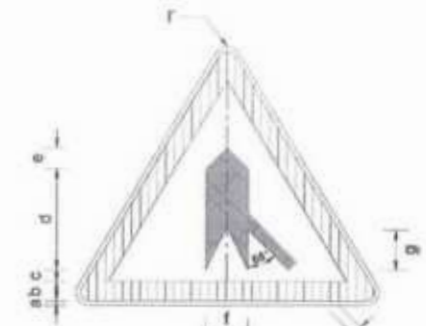
NARROW BRIDGE  
W-35

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	6.0	7.0
d	2.5	2.9
e	15.0	17.5
f	4.0	4.7
g	3.0	3.5



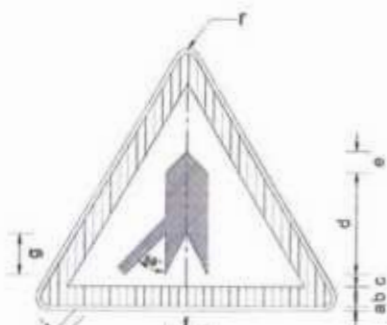
ROUNDABOUT AHEAD  
W-36

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	9.0	10.5
R1	12.0	14.0
R2	16.0	18.7



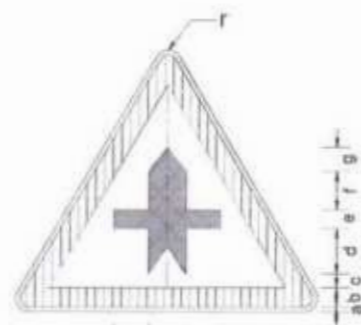
MERGE SIGN  
W-37

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.5	4.1
d	33.0	38.5
e	7.0	8.2
f	14.0	16.3
g	15.0	17.5
h	3.0	3.5
i	5.5	6.4



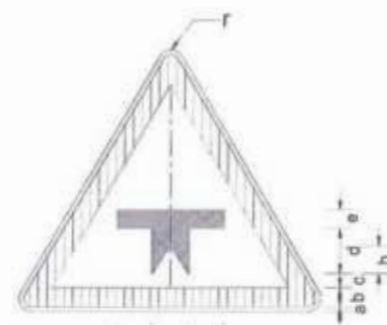
MERGE SIGN  
W-37A

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.5	4.1
d	33.0	38.5
e	7.0	8.2
f	14.0	16.3
g	15.0	17.5
h	3.0	3.5
i	5.5	6.4



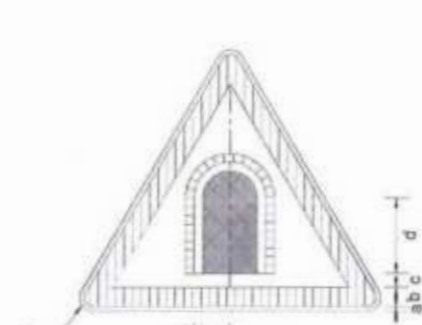
MAJOR ROAD AHEAD  
W-38

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	13.0	15.2
e	7.0	8.2
f	10.0	11.7
g	2.5	2.9
h	5.0	5.8



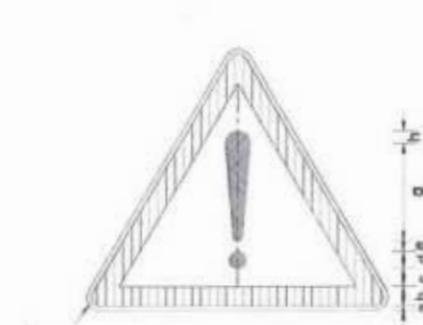
MAJOR ROAD AHEAD  
W-39

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	3.0	3.5
d	15.5	18.1
e	7.0	8.2
f	5.0	5.8
g	11.0	12.8
h	2.5	2.9



TUNNEL SIGN  
W-40

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	2.5	2.9
d	17.0	19.8
e	9.0	10.5
f	2.0	2.3
g	4.0	4.7



OTHER DANGER WARNING  
W-40

PARTS	SIGN SIZE	
	90cm	105cm
r	3.5	4.1
a	1.0	1.2
b	6.5	7.6
c	2.5	2.9
d	10.0	11.7
e	2.0	2.3
f	1.7	2.0
g	25.0	29.2
h	5.0	5.8

*[Handwritten signature]*

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

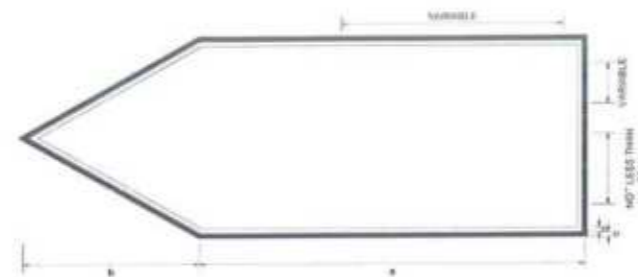
*[Handwritten signature]*  
JV  
Mincon International Ltd.  
Creative Engineering Consultants

CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) JV. CREATIVE ENGINEERING	REV. DATE AUGUST, 2024	DESCRIPTION TENDER DRAWINGS	NAMES: G.DESIGNED REHMAT DRAWN NIAM ULLAH CHECKED S.DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. DATE: AUGUST, 2024	SHEET CONTENT: TRAFFIC SIGNS DETAILS
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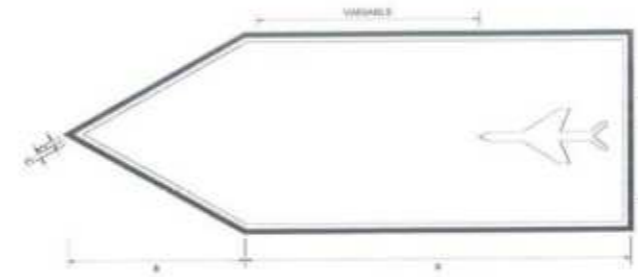
DESTINATION SIGN  
1-1

PARTS	SIGN SIZE	
	120 x 120	240 x 240
a	4.5	6.0
b	1.8	2.4
c	12.0	16.0
d	22.5	30.0



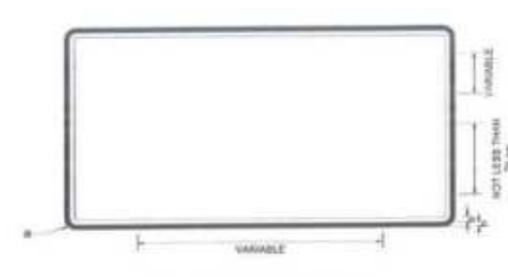
DIRECTION SIGN  
1-2

PARTS	SIGN SIZE	
	225 x 90	300 x 120
a	180.0	240.0
b	45.0	60.0
c	1.8	2.4



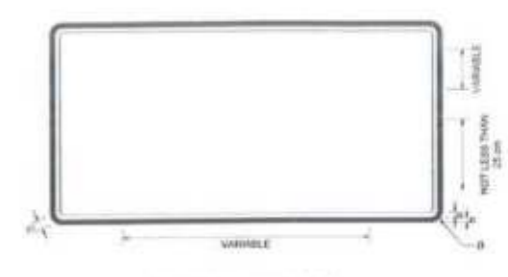
DIRECTION SIGN  
1-4

PARTS	SIGN SIZE	
	225 x 90	300 x 120
a	180.0	240.0
b	45.0	60.0
c	1.8	2.4



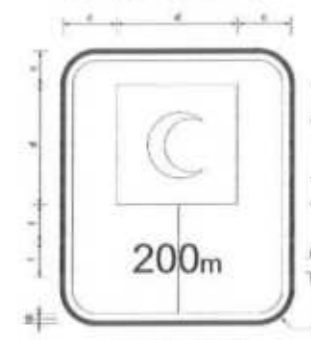
BEGINNING OF MUNICIPAL LIMIT  
1-5

PARTS	SIGN SIZE	
	225 x 135	300 x 180
a	4.5	6.0
b	1.8	2.4



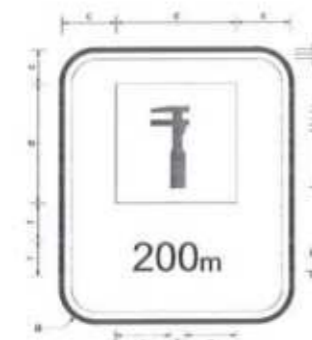
END OF MUNICIPAL LIMIT  
1-6

PARTS	SIGN SIZE	
	225 x 135	300 x 180
a	4.5	6.0
b	1.8	2.4
c	20.3	27.0



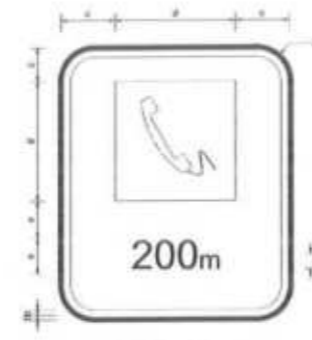
FIRST AID STATION  
1-3

PARTS	SIGN SIZE	
	120 x 180	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	26.0	
g	14.0	



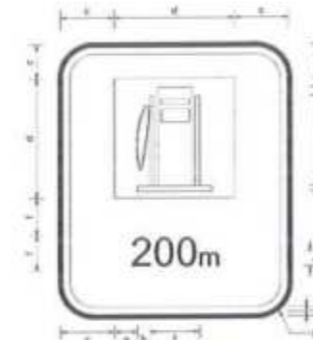
AUTO REPAIR SHOP  
1-10

PARTS	SIGN SIZE	
	120 x 180	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	15.0	
g	35.0	
h	5.0	
i	11.0	
j	7.0	
k	44.0	
l	26.0	
m	14.0	



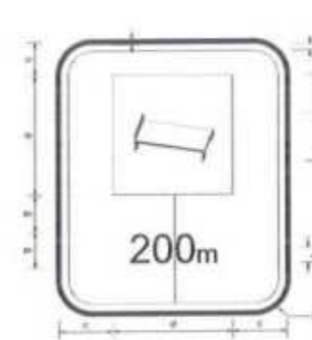
PHONE SERVICE  
1-11

PARTS	SIGN SIZE	
	120 x 180	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	14.0	



PETROL PUMP  
1-12

PARTS	SIGN SIZE	
	120 x 180	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	60.0	
g	8.0	
h	12.0	
i	17.0	
j	26.0	
k	14.0	



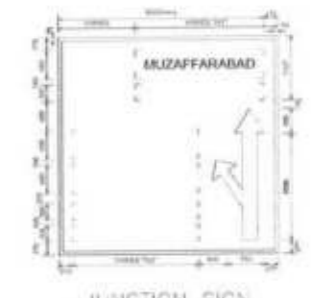
HOTEL / MOTEL  
1-13

PARTS	SIGN SIZE	
	90 x 135	120 x 180
a	4.5	6.0
b	1.8	2.4
c	15.0	20.0
d	60.0	80.0
e	18.5	25.0
f	24.0	32.0
g	19.0	26.0
h	10.5	14.0

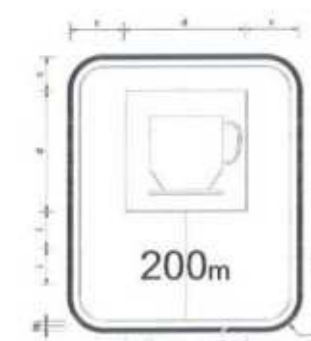


RESTAURANT  
1-14

PARTS	SIGN SIZE	
	90 x 135	120 x 180
a	4.5	6.0
b	1.8	2.4
c	15.0	20.0
d	60.0	80.0
e	18.5	25.0
f	12.0	16.0
g	16.0	20.0
h	19.5	26.0
i	10.5	14.0



JUNCTION SIGN  
(200m - START OF JUNCTION)



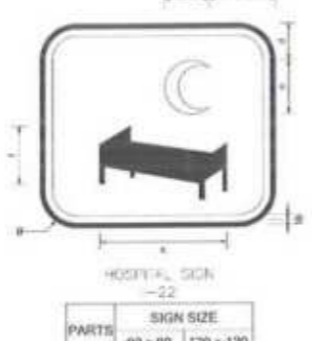
CAFE / TEA  
1-15

PARTS	SIGN SIZE	
	120 x 180	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	16.0	
g	34.0	
h	8.0	
i	26.0	
j	14.0	



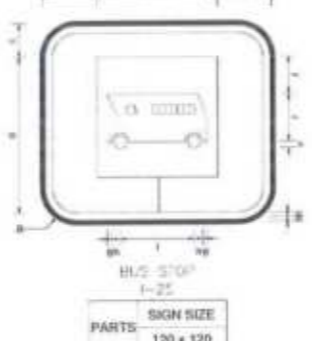
POND SITE  
1-16

PARTS	SIGN SIZE	
	90 x 135	120 x 180
a	4.5	6.0
b	1.8	2.4
c	15.0	20.0
d	67.0	80.0
e	3.0	6.0
f	42.0	56.0
g	17.0	22.0
h	6.0	8.0
i	48.0	64.0
j	19.0	26.0
k	10.5	14.0



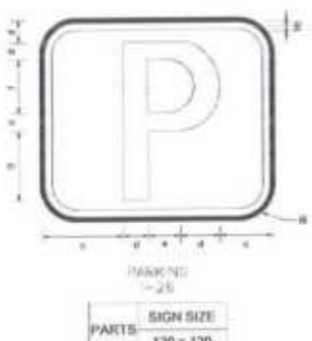
HOSPITAL SIGN  
1-22

PARTS	SIGN SIZE	
	90 x 90	120 x 120
a	4.5	6.0
b	1.8	2.4
c	67.5	90.0
d	18.0	24.0
e	33.5	35.0
f	33.0	40.0



BUS STOP  
1-25

PARTS	SIGN SIZE	
	120 x 120	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	26.0	
g	4.0	
h	11.0	
i	45.0	



PARKING  
1-26

PARTS	SIGN SIZE	
	120 x 120	
a	6.0	
b	2.4	
c	20.0	
d	20.0	
e	40.0	
f	34.0	
g	78.0	
h	42.0	



GENERAL INFORMATION  
1-27

PARTS	SIGN SIZE	
	90 x 135	120 x 180
a	4.5	6.0
b	1.8	2.4
c	15.0	20.0
d	60.0	80.0
e	12.0	16.0
f	20.3	27.0
g	10.5	14.2
h	26.0	36.0
i	18.0	24.0

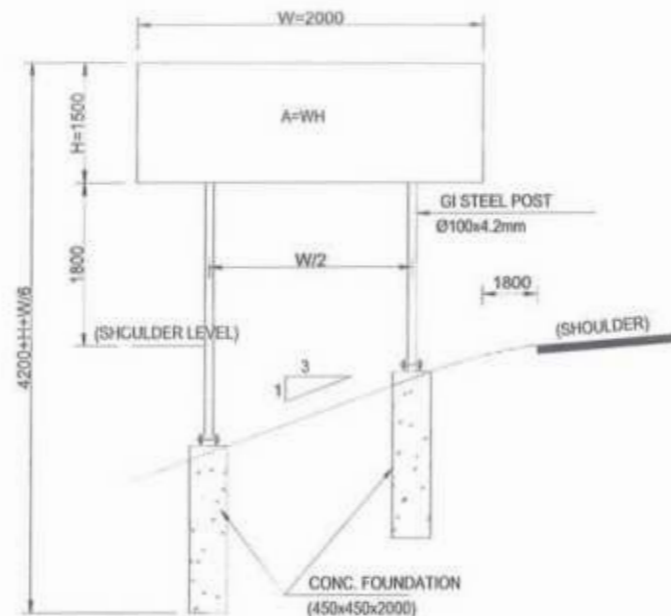
Project Director (PRD)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



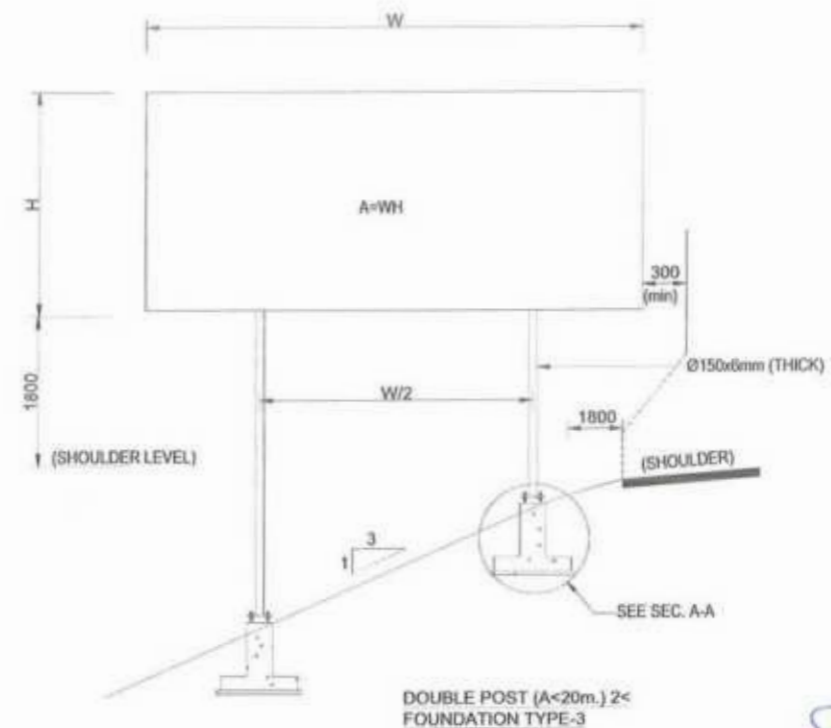
CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	REV: 0 DATE: AUGUST, 2024 DESCRIPTION: TENDER DRAWINGS	NAMES: G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S. DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD FLOOD-AFFECTED ROAD	SCALE: N.T.S DATE: AUG,	SHEET CONTENT: TRAFFIC SIGNS DETAILS
---	--	--	--	---	--	----------------------------------	---



**2 SINGLE POST**  
(A<1.5m.) 2<  
FOUNDATION TYPE-1

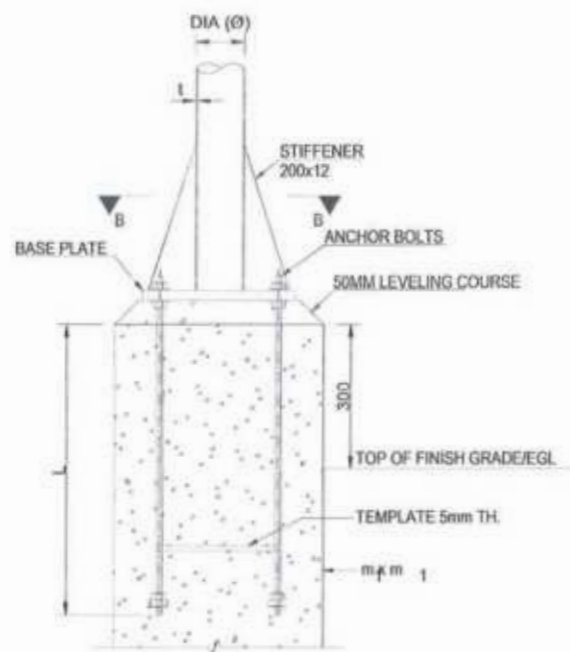


**DOUBLE POST (A<3m.)**  
2<FOUNDATION TYPE-2

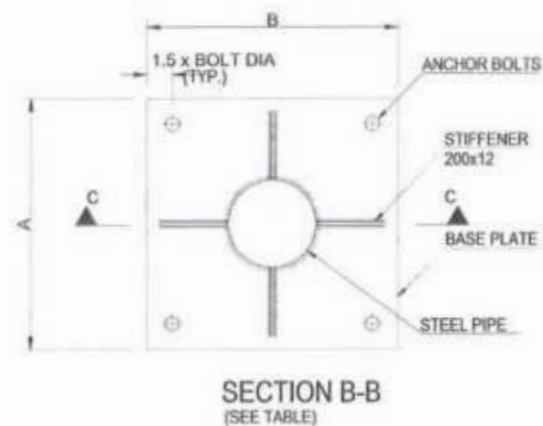


**DOUBLE POST (A<20m.) 2<**  
FOUNDATION TYPE-3

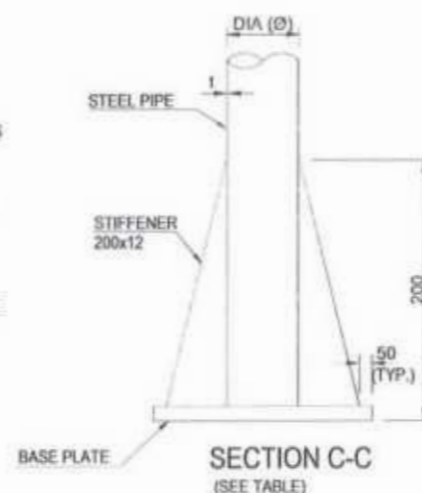
**Project Director (PIU)**  
Provincial Roads Improvement Project  
C&W Department Peshawar.



**BASE PLATE &**  
**ANCHORAGE ELEVATION**



**SECTION B-B**  
(SEE TABLE)

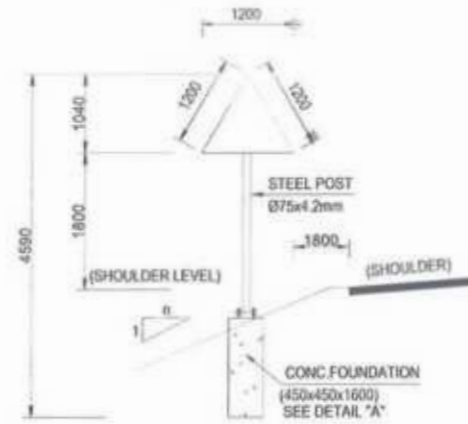
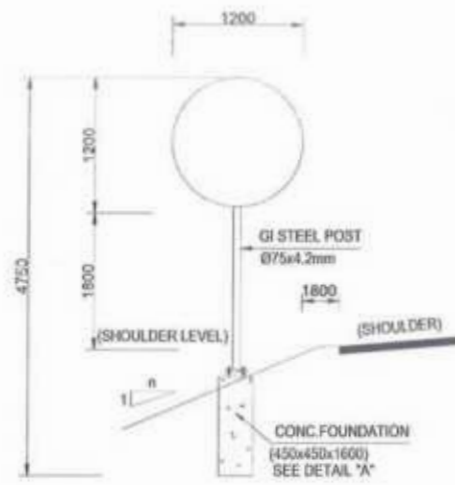


**SECTION C-C**  
(SEE TABLE)

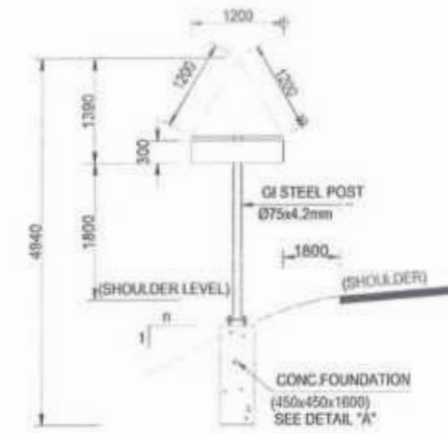
**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. FABRICATION GALVANIZING AND ERECTION TO BE IN ACCORDANCE WITH AISC SPECIFICATIONS.
3. AFTER FABRICATION AND BEFORE GALVANIZING THE TRIAL ASSEMBLY OF COMPLETE STRUCTURE SHALL BE DONE.
4. ALL COMPONENTS TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. GALVANIZATION THICKNESS SHALL NOT BE LESS THAN 90 MICRONS.
5. BASE PLATES SHALL BE SET LEVEL TO CORRECT ELEVATION WITH THE HELP OF LEVELING NUTS.
6. STEEL STRUCTURE SHALL BE ASTM A36, OR EQUIVALENT.
7. BOLTS (GALVANIZED) SHALL BE ISO 898-1, GRADE 8.8, OR EQUIVALENT.
8. NUTS (GALVANIZED) SHALL BE ISO 896-2, GRADE 8, OR EQUIVALENT.
9. PLAIN WASHERS (GALVANIZED) SHALL BE ISO 7089, GRADE A CLASS 200, OR EQUIVALENT. ALL BOLTS SHALL BE FIXED WITH ONE PLAIN WASHER.
10. ANCHOR RODS SHALL BE G60 DEFORMED BARS IN ACCORDANCE WITH ASTM A615.
11. WELDING ELECTRODES SHALL BE E 60 XX.
12. SIGN PANELS SHALL BE MADE OF ALUMINUM ALLOY PLATES OF MIN. 3mm TH.
13. SIGN PANELS SHOULD BE RIVETED TO STEEL MEMBER OF SUPPORTING FRAME.
14. ALL STRUCTURAL CONCRETE SHALL HAVE MINIMUM CYLINDER STRENGTH EQUAL TO 3000psi AT 28 DAYS.
15. ALL REINFORCEMENT SHALL BE GRADE 60 DEFORMED IN ACCORDANCE WITH ASTM A-615 SPECIFICATION.

CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-F) J.V. CREATIVE ENGINEERING	REV. DATE. DESCRIPTION 0 AUGUST, 2024. TENDER DRAWINGS	NAMES: G.DESIGNED REHMAT DRAWN INAM ULLAH CHECKED S.DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. DATE: AUG	SHEET CONTENT: TRAFFIC SIGNS FOUNDATION DETAILS
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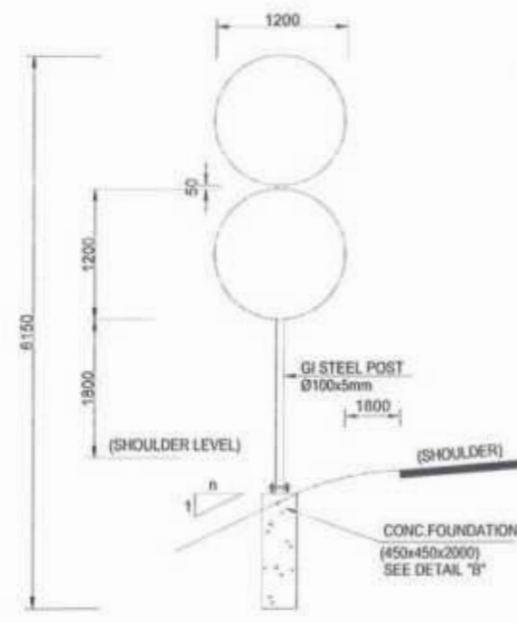
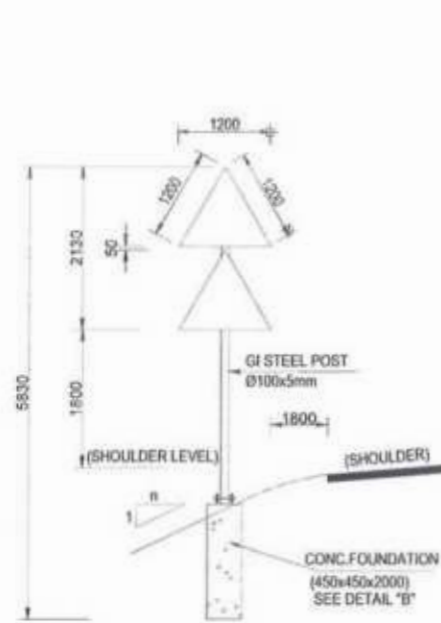


TYPICAL PLAN

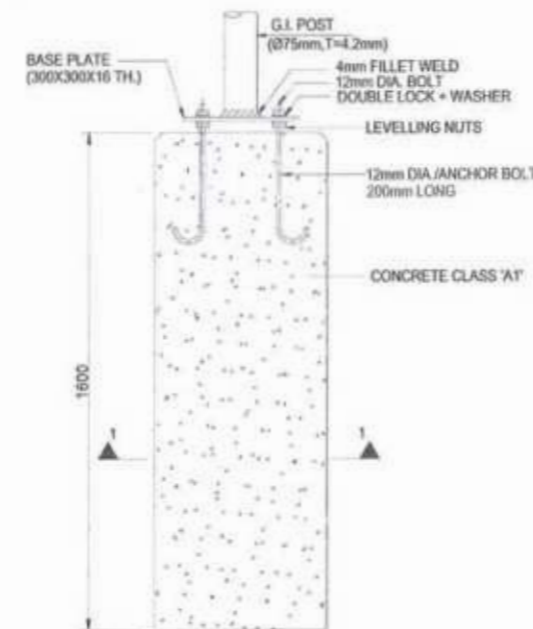


SINGLE SIGNS  
FOUNDATION TYPE-1

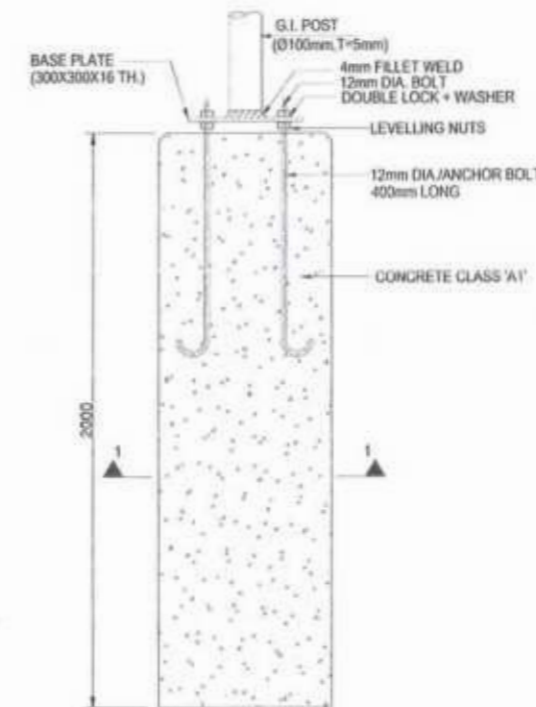
SINGLE SIGNS WITH ADDITIONAL PLATE  
FOUNDATION TYPE-1



DOUBLE SIGNS  
FOUNDATION TYPE-2



DETAIL 'A'  
CONCRETE FOUNDATION  
(TYPE-1)



DETAIL 'B'  
CONCRETE FOUNDATION  
(TYPE-2)

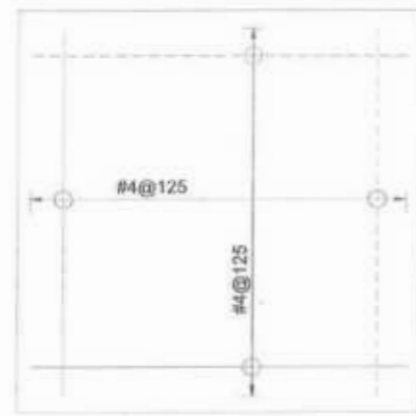
*[Signature]*  
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

*[Signature]*  
Minconsult International Ltd  
JV

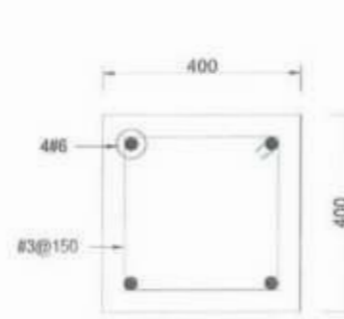
NOTE:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. ALL STRUCTURAL CONCRETE SHALL HAVE MINIMUM CYLINDER STRENGTH EQUAL TO 30MPa AT 28 DAYS.
3. SIGN PANELS SHALL BE MADE OF ALUMINUM ALLOY PLATES OF MIN. 3mm TH.
4. SIGN PANELS SHOULD BE RIVETED TO STEEL MEMBER OF SUPPORTING FRAME.

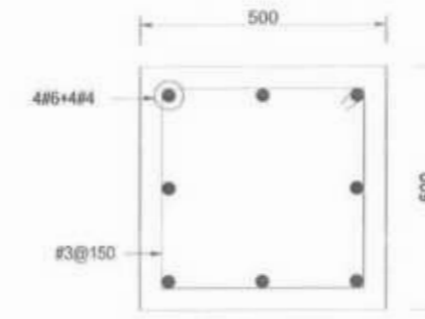
CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 5803-P) J.V. CREATIVE ENGINEERING	(MIN - JV - CEC)	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
			1	AUGUST, 2024	TENDER DRAWINGS	G. DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S. DATE: AUG.	TRAFFIC SIGNS FOUNDATION DETAILS



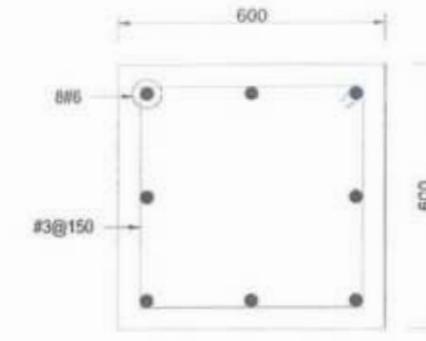
FOUNDATION PLAN (SEE TABLE)



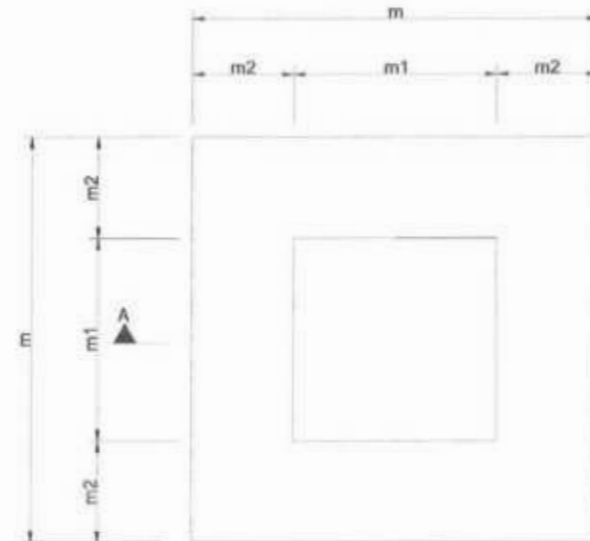
SECTION 1-1



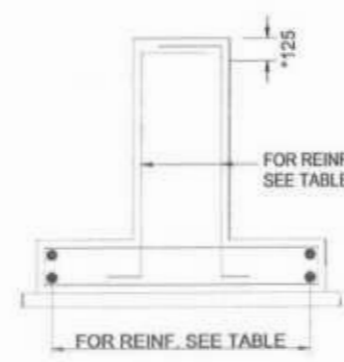
SECTION 2-2



SECTION 3-3

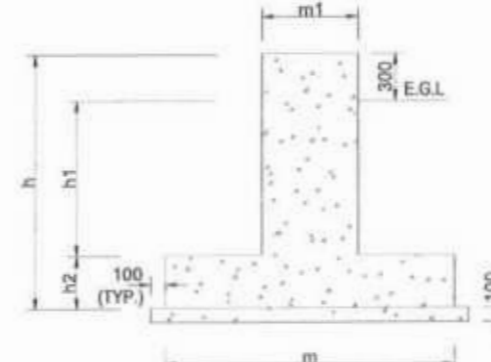


FOUNDATION PLAN (SEE TABLE)



SECTION A-A (REINFORCEMENT) (SEE TABLE)

\*ADD 3 TIES OF Ø10 IN THE TOP 125MM OF PEDESTAL WITH EXISTING LATERAL/ SHEAR REINFORCEMENT.



SECTION A-A (CONCRETE OUTLINE) (SEE TABLE)

\*ADD 3 TIES OF Ø10 IN THE TOP 125MM OF PEDESTAL WITH EXISTING LATERAL/ SHEAR REINFORCEMENT.

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar

TABLE - 1

AREA OF SIGN BOARD A (M) <sup>2</sup>	STRUCTURAL CONCRETE SIZING (mm)						STRUCTURAL STEEL SIZING (mm)						REINFORCEMENT	
	PEDESTAL m <sub>1</sub> x m <sub>1</sub>	FOUNDATION PAD m x m	m <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	h	PIPE		BASE PLATE		ANCHOR BOLTS (J-TYPE)		PEDESTAL	PAD
							DIA (Ø)	THICKNESS (t)	PLAN SIZE (AxB)	THICKNESS (T)	DIA	EMBEDMENT (L)		
3- A < 5	400x400	1000x1000	400	1250	350	1600	125	6	300x300	22	16	400	4	SEE SEC. 1-1
5- A < 10	500x500	1350x1350	525	1175	425	1600	150	10	400x400	25	20	450	4	SEE SEC. 2-2
10- A < 15	500x500	1500x1500	525	1125	475	1600	175	10	400x400	28	22	500	4	SEE SEC. 2-2
15 < A < 20	600x600	1750x1750	625	1050	550	1600	200	10	500x500	32	25	600	4	SEE SEC. 3-3

TABLE - 2

INFORMATION	
FOUNDATION TYPE-1	FOR SINGLE SIGNS AND SINGLE SIGNS WITH ADDITIONAL PLATE
FOUNDATION TYPE-2	FOR DOUBLE SIGNS, FOR SINGLE POST SIGNS WITH AREA <1.5m <sup>2</sup> & FOR DOUBLE POST SIGNS WITH AREA <3m <sup>2</sup>
FOUNDATION TYPE-3	FOR DOUBLE SIGNS WITH 3< AREA <20m <sup>2</sup>



CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	REV: 1, 2, 3, 4	DATE: AUGUST, 2024	DESCRIPTION: TENDER DRAWINGS	NAMES: G.DESIGNED: REHMAT, DRAWN: INAM ULLAH, CH-CKLU: S. DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S	SHEET CONTENT: TRAFFIC SIGNS FOUNDATION DETAILS
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**PAVEMENT MARKING LINES**

FOR DIMENSIONS L & W1 TO W5, SEE TABLE-1



**L1 - BROKEN GUIDE LINE-WHITE**

AT CENTERLINE OF DIVIDED 2-LANE



**L2 - BROKEN WARNING LINE -WHITE**

LANE MARKING FOR MIX TRAFFIC



**L3 - CONTINUOUS LINE - WHITE**

AT NO PASSING ZONES



**L4 - CONTINUOUS EDGE LINE -YELLOW**

AT EDGE OF PAVEMENT AT ALL LOCATIONS



**L5 - DASHED LINE - WHITE**

AT SEPARATION OF THROUGH LANES FROM ACCELERATION LANE



**L6 - DOTTED LINE - WHITE**

FOR DEFINING VEHICLE PATHS WITHIN INTERSECTIONS



**L7 - STOP LINE - WHITE**

AT INTERSECTIONS ACROSS PAVEMENT



**L8 - TRANSVERSE YIELD LINE - WHITE**

AT INTERSECTIONS ACROSS PAVEMENT IN THE SAME POSITION AS L7 LINE TO INDICATE GIVE WAY

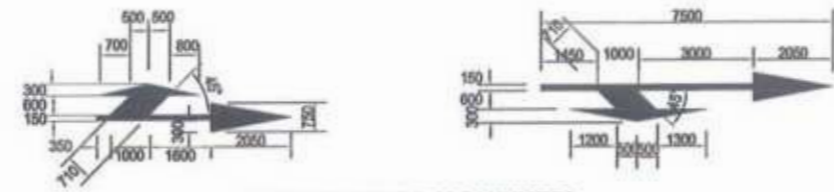


**L9 - DOTTED LINE - YELLOW**

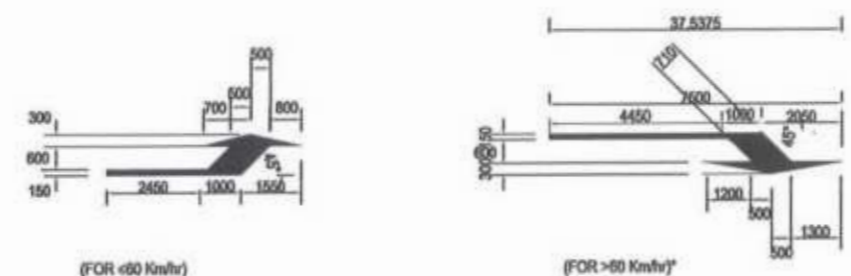
FOR EDGE LINE WHERE PARKING BAYS ARE PROVIDED OUTSIDE THE LANE



**ARROWS TYPE-I (STRAIGHT)**

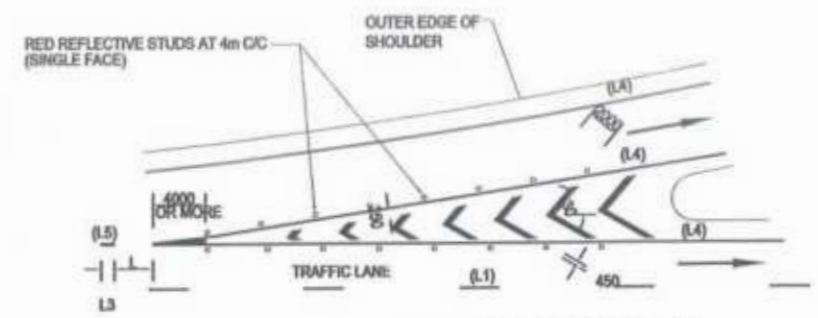


**ARROWS TYPE-II (COMBINED)**

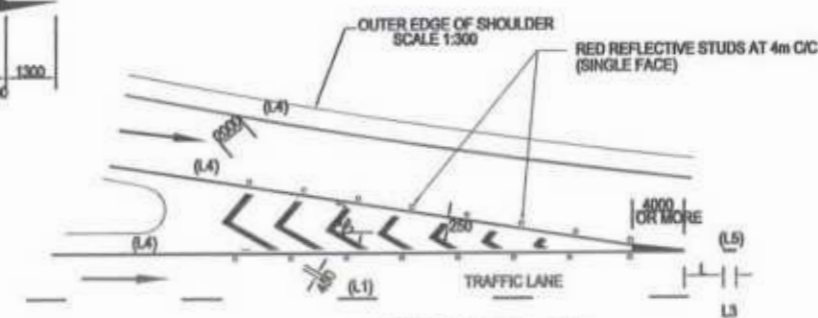


**ARROWS TYPE-III (DEFLECTION)**

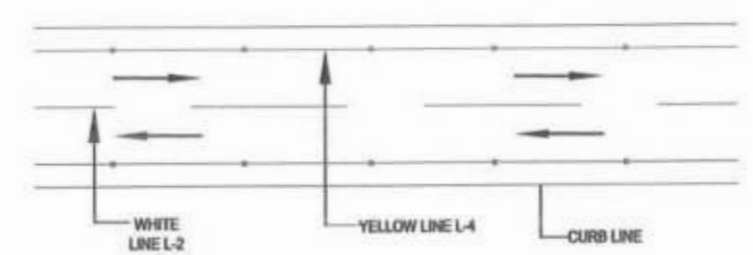
LANE SELECTION ARROWS - WHITE



**ENTRANCE NOSE DETAIL**



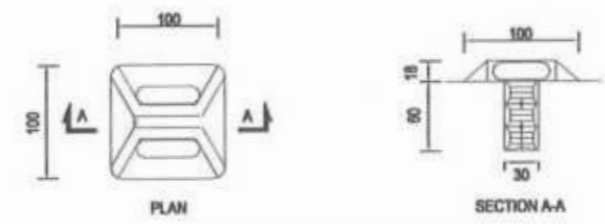
**EXIT NOSE DETAIL**  
SCALE 1:300



**PROJECT ROAD**

TABLE - 1

ROADWAY SPEED	L (mm)	W1	W2	W3	W4	W5
$\le 50 \text{ Km/hr}$	2000	100	100	100	300	100
60-80 Km/hr*	3000	120	120	150	300	100
$> 80 \text{ Km/hr}$	4000	150	150	150	300	120
SERVICE ROAD	2000	100	120	100	300	100



**REFLECTORISED PAVEMENT STUD**  
(RAISED PROFILE TYPE)

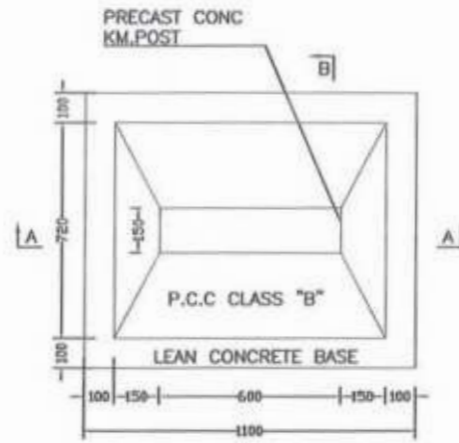
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



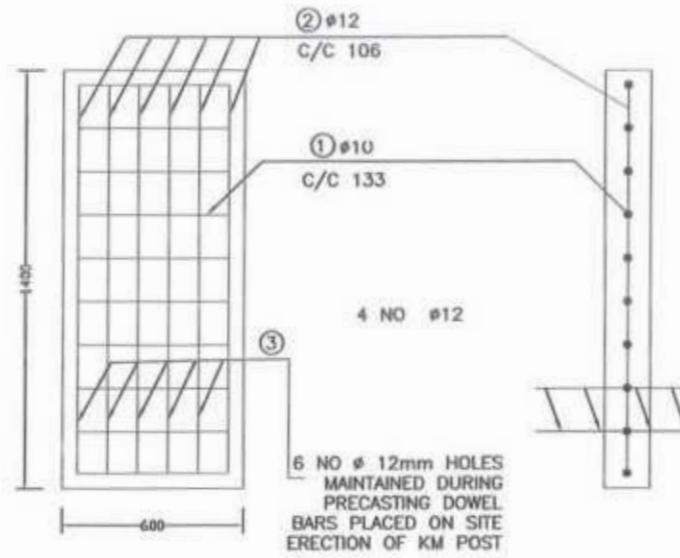
CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS	MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	0	AUGUST, 2024	TENDER DRAWINGS	G. DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S. DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S DATE: AUG.	TYPICAL PAVEMENT MARKING DETAILS

BAR NO	DESCRIPTION	DIA. (mm)	NO
①	530mm	10	11
②	1330mm	10	6
③	620mm	12	6
④	620mm	12	4

TABLE-1  
REINFORCEMENT SCHEDULE

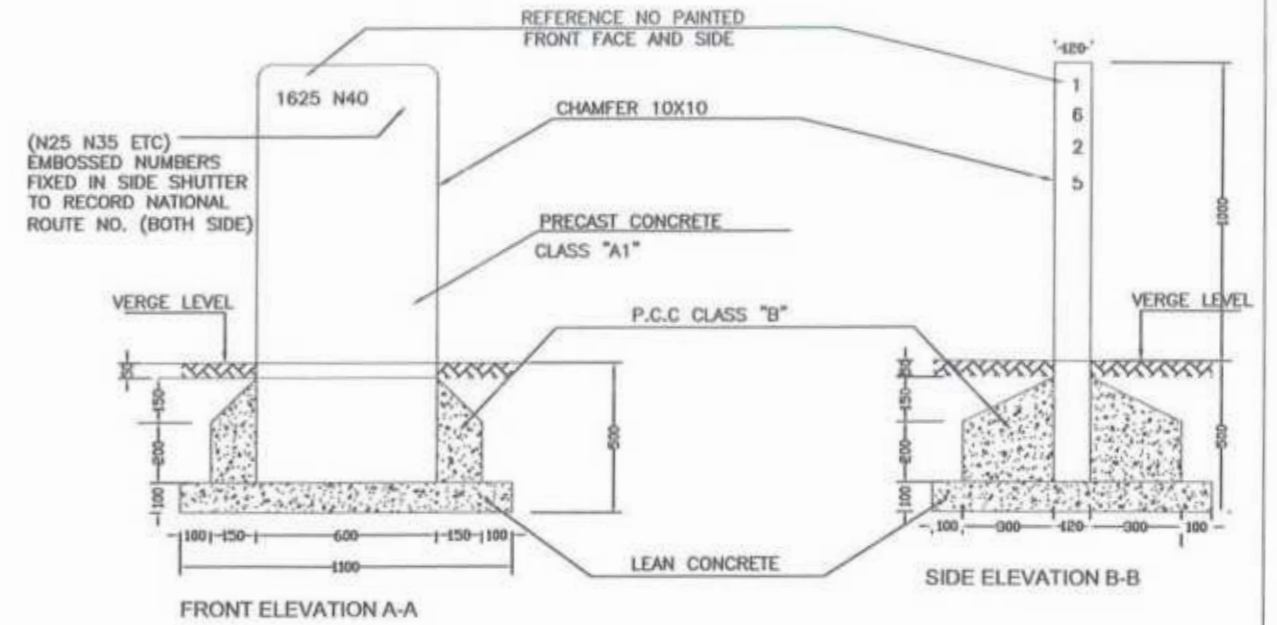


PLAN



REINFORCEMENT DETAIL

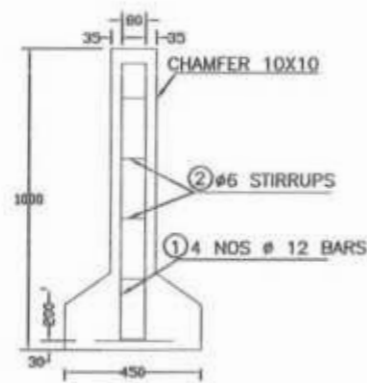
.SEE TABLE-1 OF REINFORCEMENT SCHEDULE



FRONT ELEVATION A-A

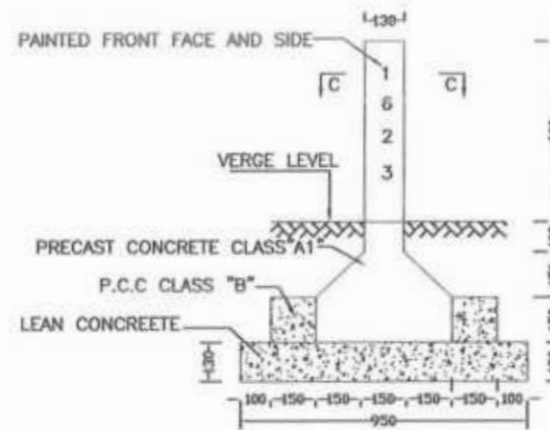
SIDE ELEVATION B-B

### FIVE KILOMETER POST

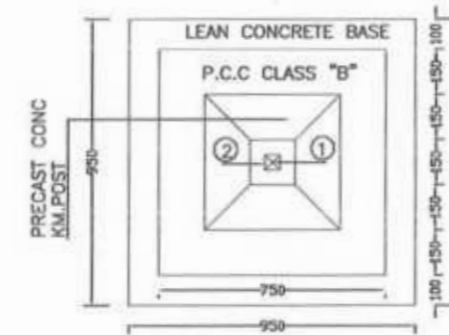


REINFORCEMENT DETAIL

.SEE TABLE-2 OF REINFORCEMENT SCHEDULE



FRONT AND SIDE ELEVATION



SECTION C-C

### ONE KILOMETER POST

*[Signature]*

Project Director (P/W)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

BAR NO	DESCRIPTION	DIA. (mm)	NO
①	230	12	4
②	40/80	6	9

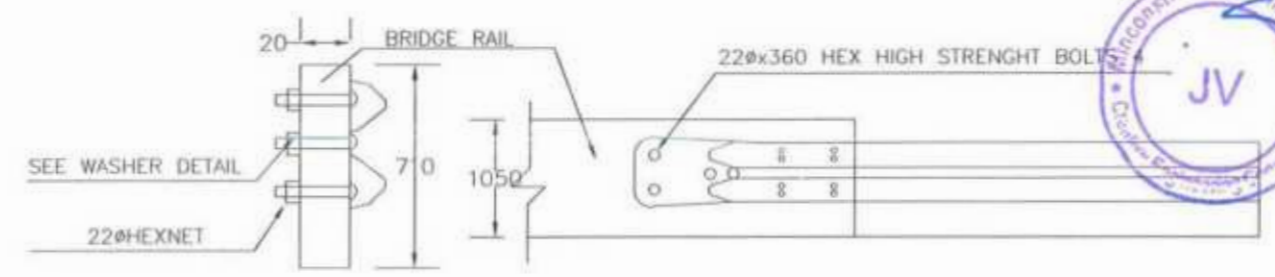
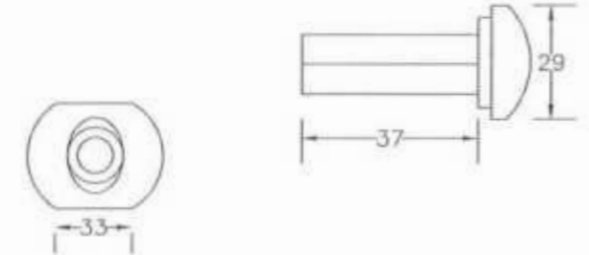
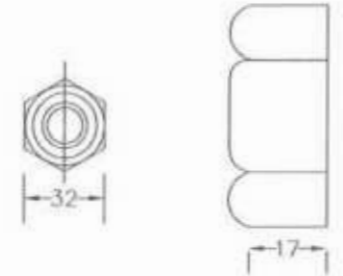
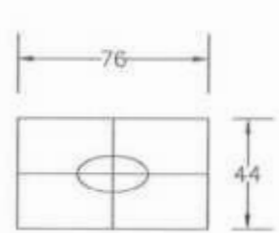
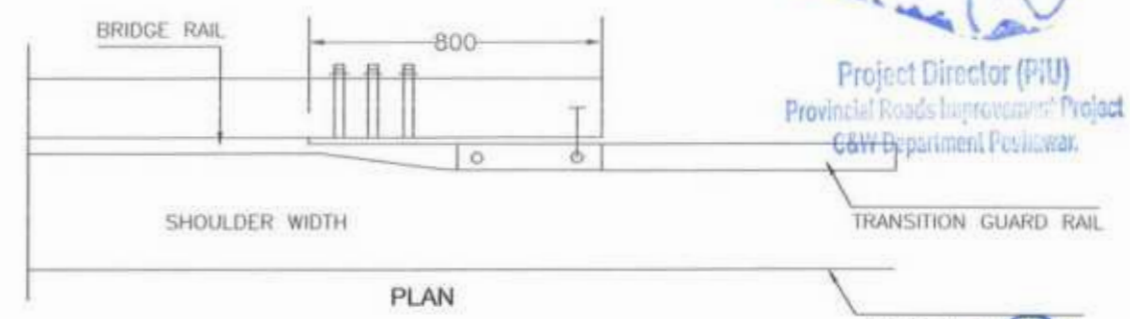
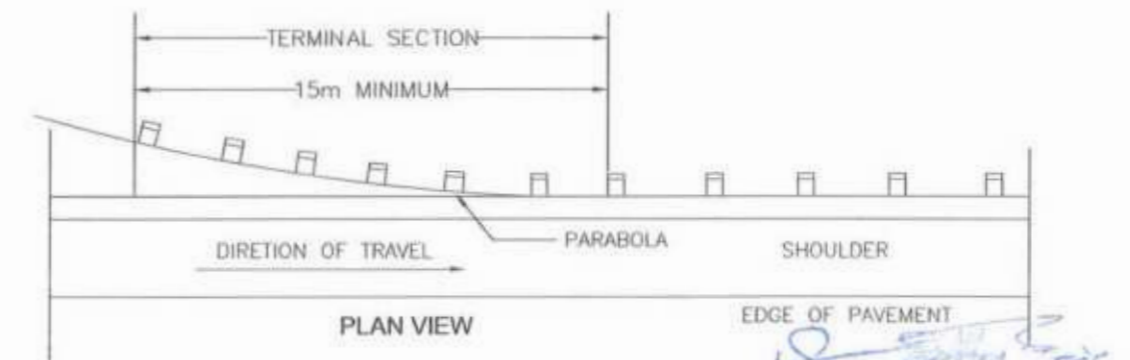
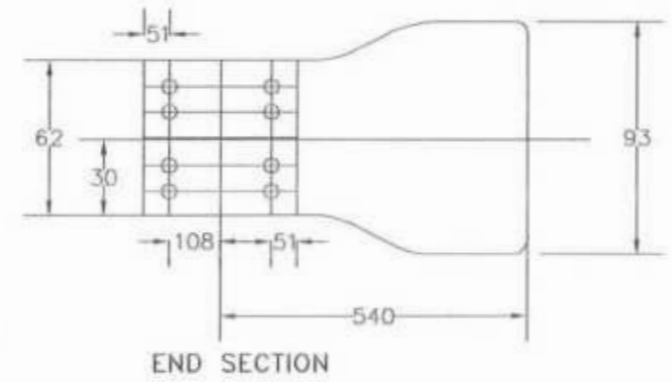
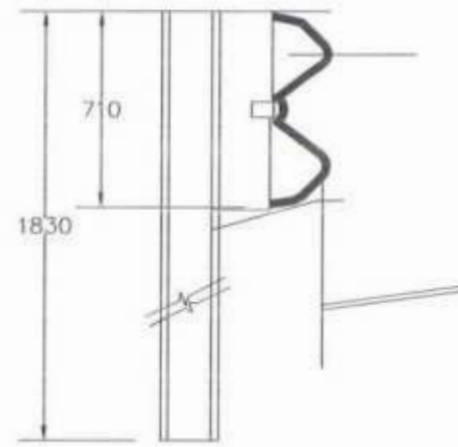
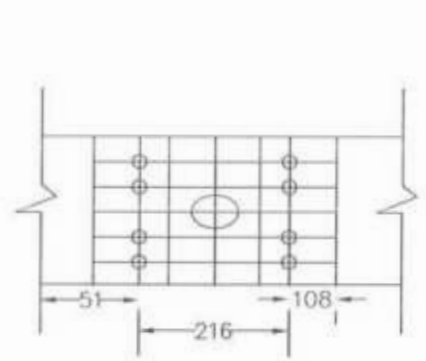
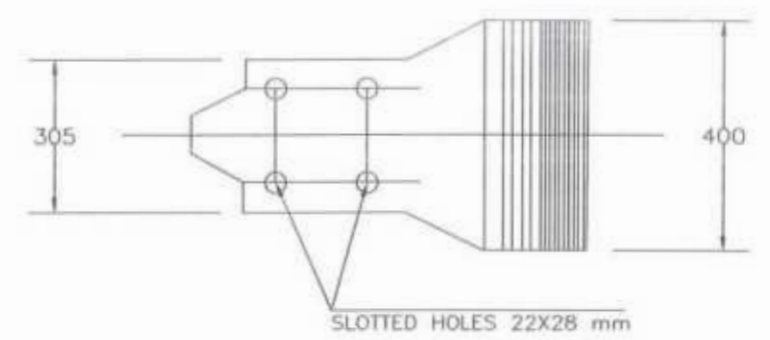
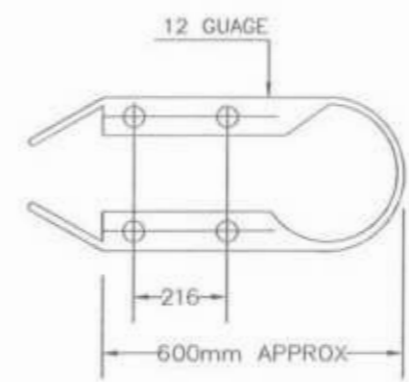
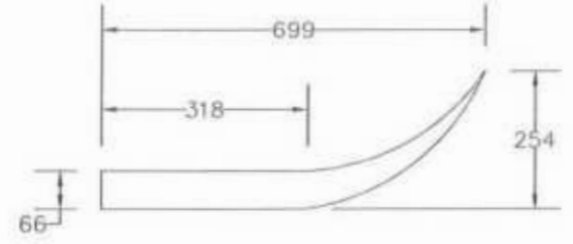
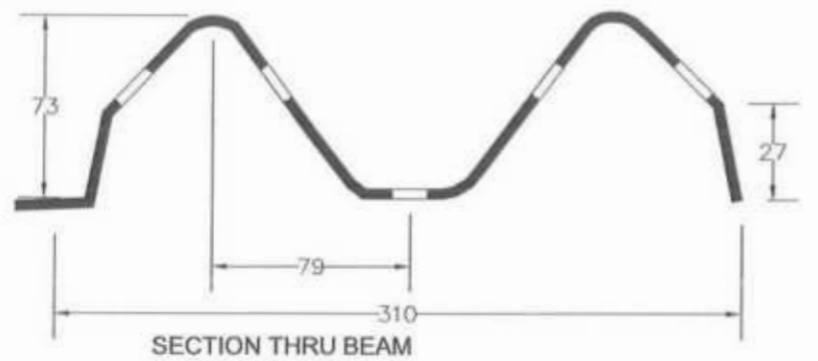
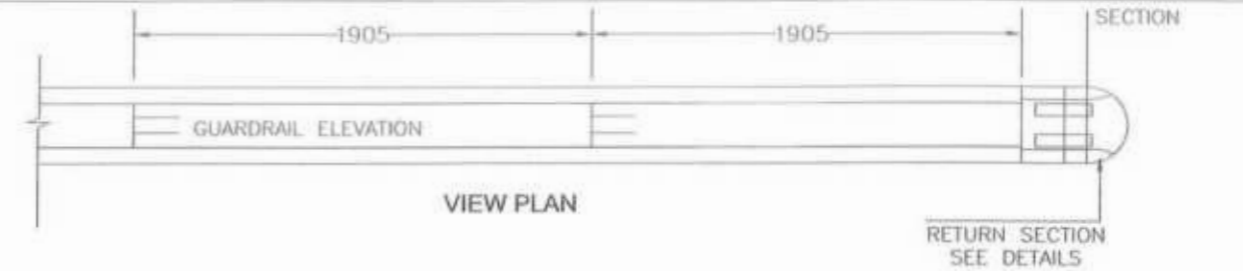
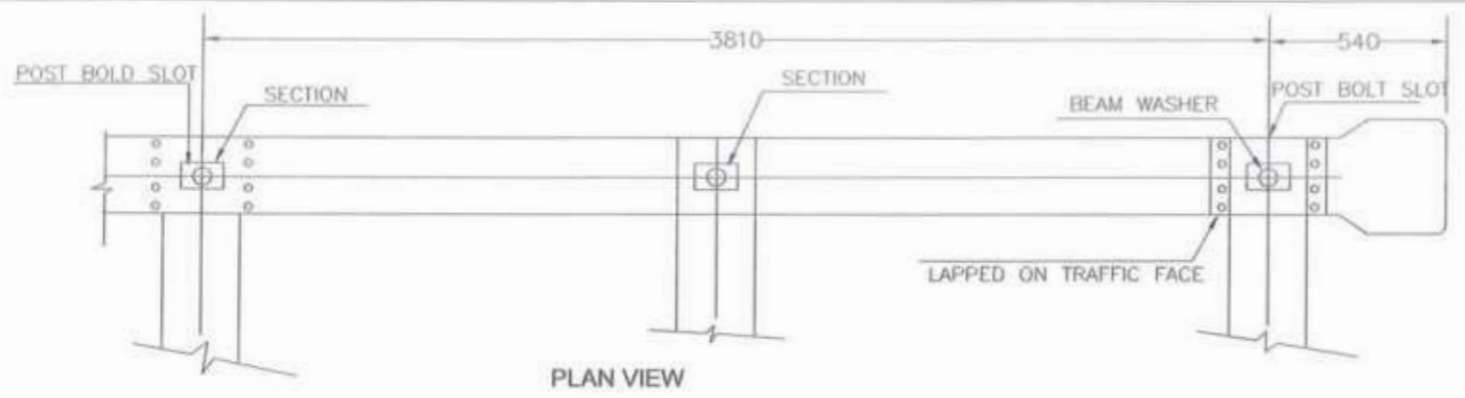
TABLE-2  
REINFORCEMENT SCHEDULE

#### NOTES:-

1. PRECAST CONCRETE SHALL BE CLASS "A1" AS PER G.S.I 401
2. CONCRETE COVER 35mm
3. P.C.C CLASS "B" AS PER G.S.I 401
4. LEAN CONCRETE SHALL BE AS PER G.S.I 401
5. REINFORCEMENT DEFORMED GRADE 40 AS PER AASHTO M-31
6. BACKGROUND COLOUR WILL BE WHITE WHILE LETTERING COLOUR WILL BE BLACK.
7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

*[Signature]*  
Minconsult International Ltd.

CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	KM POST DETAILS
		0			DRAWN: INAM ULLAH			DATE:	
		b			CHECKED: S.DURRANI				



Project Director (PIU)  
Provincial Roads Improvement Project  
G&W Department Peshawar.



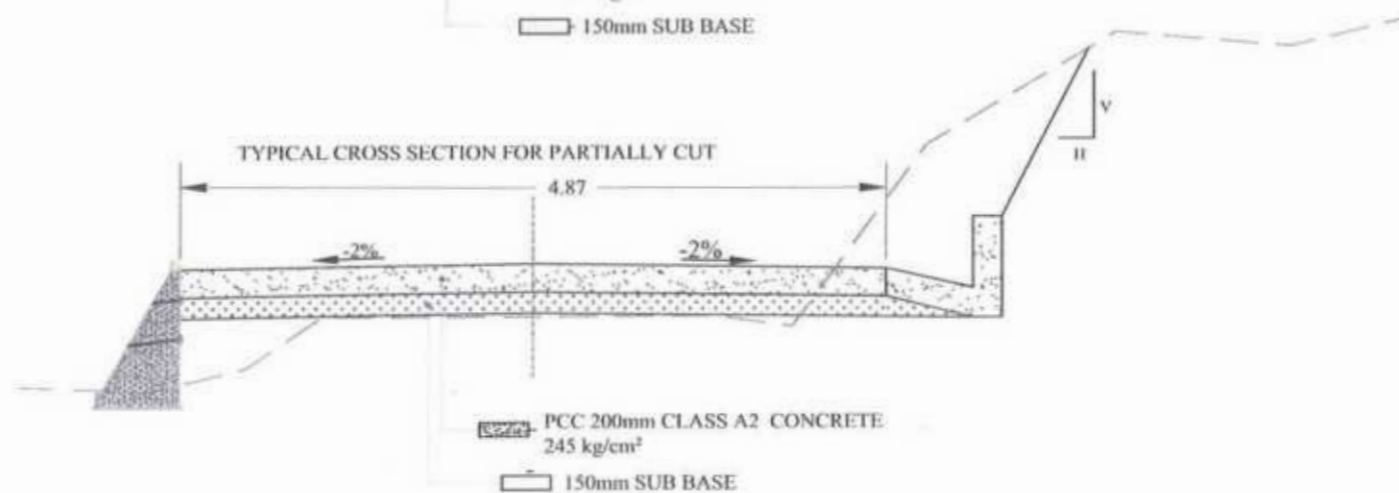
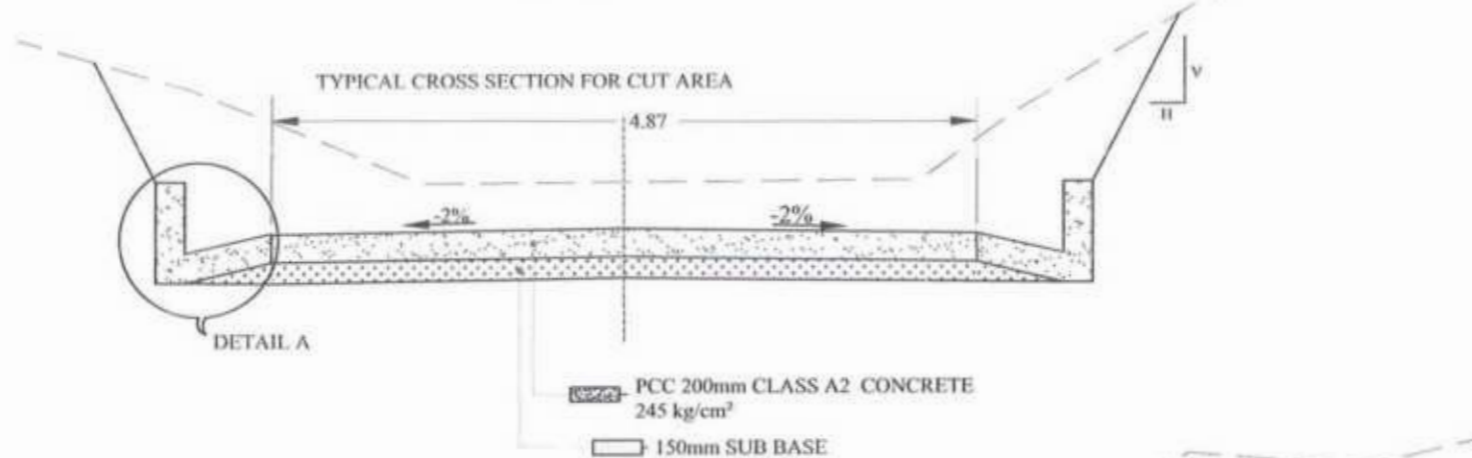
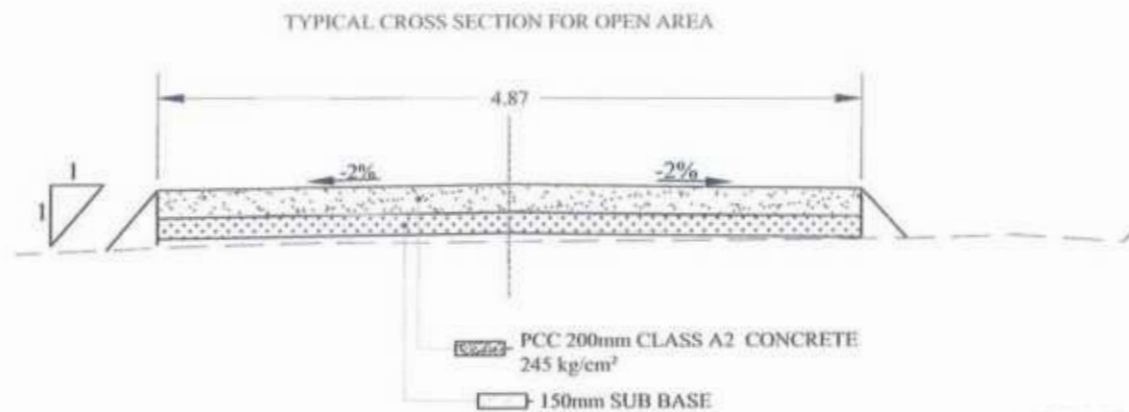
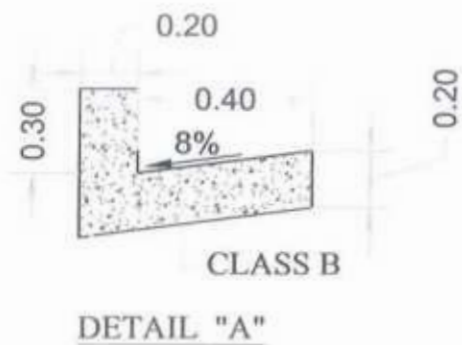
CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT	(MIN - JV - CEC) MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	0	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S.DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	GUARD RAIL DETAILS

# TYPICAL CROSS SECTIONS



Project Director (PIB)  
Provincial Roads Improvement Project  
C&W Department Peshawar.





S.NO	DESCRIPTION	SIDE SLOPE DETAIL (V : H)
1	HARD & MEDIUM ROCK	1:0.25
2	COMMON & SOFT	1: 0.5

Project Director (P/I)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

JV

CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES	PROJECT:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	MINS CONSULTANT J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	0	AUG. 2024	TENDER DRAWINGS	DESIGNED REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP) N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED ROAD	NTS:	TYPICAL CROSS SECTIONS
		1			DRAWN: INAM ULLAH		DATE:	
		2			CHECKED: S-DURRANI		AUG 2024	

# CENTER LINE DATA



Project Director (VIJ)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



**CENTER LINE DATA**

S:No	Station	Northing	Easting
1	0+000.00	3989301.86	745200.65
2	0+025.00	3989288.19	745221.58
3	0+050.00	3989280.58	745243.76
4	0+075.00	3989296.63	745262.93
5	0+100.00	3989313.96	745280.81
6	0+125.00	3989322.67	745304.22
7	0+150.00	3989323.84	745328.52
8	0+175.00	3989310.12	745349.37
9	0+200.00	3989299.28	745371.62
10	0+225.00	3989293.07	745395.83
11	0+250.00	3989288.77	745420.43
12	0+275.00	3989286.10	745445.28
13	0+300.00	3989283.44	745470.14
14	0+325.00	3989283.85	745495.09
15	0+350.00	3989285.90	745520.00
16	0+375.00	3989284.71	745544.95
17	0+400.00	3989283.28	745569.88
18	0+425.00	3989286.38	745594.66
19	0+450.00	3989287.78	745619.43
20	0+475.00	3989278.87	745642.73
21	0+500.00	3989276.62	745667.35
22	0+525.00	3989278.19	745692.30
23	0+550.00	3989278.58	745717.25
24	0+575.00	3989271.82	745741.27
25	0+600.00	3989267.96	745765.87
26	0+625.00	3989270.24	745790.75
27	0+650.00	3989269.62	745815.61
28	0+675.00	3989265.82	745840.25
29	0+700.00	3989278.92	745860.98
30	0+725.00	3989286.95	745883.84
31	0+750.00	3989293.54	745907.36
32	0+775.00	3989308.09	745927.69
33	0+800.00	3989322.64	745948.02
34	0+825.00	3989337.19	745968.35
35	0+850.00	3989351.99	745988.48
36	0+875.00	3989370.20	746005.58
37	0+900.00	3989387.66	746023.25
38	0+925.00	3989399.67	746045.18

**CENTER LINE DATA**

S:No	Station	Northing	Easting
39	0+950.00	3989411.37	746067.27
40	0+975.00	3989422.12	746089.84
41	1+000.00	3989432.87	746112.41
42	1+025.00	3989442.98	746135.27
43	1+050.00	3989451.07	746158.92
44	1+075.00	3989458.82	746182.69
45	1+100.00	3989466.57	746206.46
46	1+125.00	3989474.32	746230.23
47	1+150.00	3989482.57	746253.81
48	1+175.00	3989496.75	746274.27
49	1+200.00	3989513.18	746293.11
50	1+225.00	3989529.61	746311.96
51	1+250.00	3989544.41	746331.96
52	1+275.00	3989549.48	746356.31
53	1+300.00	3989554.61	746380.69
54	1+325.00	3989564.38	746403.69
55	1+350.00	3989568.44	746428.26
56	1+375.00	3989565.88	746453.09
57	1+400.00	3989563.06	746477.90
58	1+425.00	3989567.34	746502.44
59	1+450.00	3989573.86	746526.57
60	1+475.00	3989580.46	746550.68
61	1+500.00	3989593.13	746572.08
62	1+525.00	3989609.50	746590.69
63	1+550.00	3989633.64	746596.89
64	1+575.00	3989657.35	746604.52
65	1+600.00	3989681.92	746604.12
66	1+625.00	3989704.13	746615.37
67	1+650.00	3989728.20	746620.10
68	1+675.00	3989753.18	746620.42
69	1+700.00	3989777.69	746625.25
70	1+725.00	3989802.14	746630.34
71	1+750.00	3989824.92	746621.63
72	1+775.00	3989845.11	746606.88
73	1+800.00	3989867.67	746597.55
74	1+825.00	3989892.59	746599.52
75	1+850.00	3989916.29	746606.60
76	1+875.00	3989939.80	746607.67

**CENTER LINE DATA**

S:No	Station	Northing	Easting
77	1+900.00	3989961.84	746595.86
78	1+925.00	3989984.98	746587.11
79	1+950.00	3990009.94	746588.37
80	1+975.00	3990034.78	746590.95
81	2+000.00	3990059.28	746595.92
82	2+025.00	3990083.78	746600.89
83	2+050.00	3990108.59	746600.12
84	2+075.00	3990132.40	746592.49
85	2+100.00	3990156.14	746584.67
86	2+125.00	3990180.07	746577.46
87	2+150.00	3990204.84	746574.22
88	2+175.00	3990229.71	746571.70
89	2+200.00	3990254.43	746568.12
90	2+225.00	3990278.28	746560.71
91	2+250.00	3990301.41	746551.23
92	2+275.00	3990322.70	746538.73
93	2+300.00	3990341.84	746523.45
94	2+325.00	3990365.39	746515.06
95	2+350.00	3990389.58	746508.84
96	2+375.00	3990414.11	746506.48
97	2+400.00	3990438.41	746509.83
98	2+425.00	3990463.04	746505.57
99	2+450.00	3990487.68	746501.31
100	2+475.00	3990512.31	746497.04
101	2+500.00	3990537.11	746494.30
102	2+525.00	3990562.08	746495.55
103	2+550.00	3990586.98	746494.50
104	2+575.00	3990611.48	746489.50
105	2+600.00	3990636.34	746488.71
106	2+625.00	3990661.27	746490.64
107	2+650.00	3990686.20	746492.56
108	2+675.00	3990711.11	746494.64
109	2+700.00	3990735.47	746500.10
110	2+725.00	3990759.71	746505.72
111	2+750.00	3990783.57	746498.72
112	2+775.00	3990807.00	746489.99
113	2+800.00	3990830.43	746481.26
114	2+825.00	3990853.99	746472.92

CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	REV: 0 DATE: AUGUST, 2024	DESCRIPTION: TENDER DRAWINGS	NAMES: DESIGNED: REHMAT DRAWN: RAM ULLAH CHECKED: DR. ANWAR	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S.	SHEET CONTENT: CENTER LINE DATA
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**CENTER LINE DATA**

S:No	Station	Northing	Easting
115	2+850.00	3990878.58	746468.68
116	2+875.00	3990903.52	746469.59
117	2+900.00	3990928.15	746473.76
118	2+925.00	3990952.29	746468.46
119	2+950.00	3990970.60	746451.85
120	2+975.00	3990981.64	746429.45
121	3+000.00	3990999.42	746412.28
122	3+025.00	3991019.82	746398.17
123	3+050.00	3991033.89	746377.50
124	3+075.00	3991044.09	746354.86
125	3+100.00	3991044.74	746330.03
126	3+125.00	3991038.29	746305.88
127	3+150.00	3991031.53	746281.82
128	3+175.00	3991024.80	746257.74
129	3+200.00	3991024.06	746232.93
130	3+225.00	3991029.47	746208.53
131	3+250.00	3991034.18	746183.98
132	3+275.00	3991037.89	746159.25
133	3+300.00	3991040.68	746134.41
134	3+325.00	3991044.02	746109.64
135	3+350.00	3991049.57	746085.27
136	3+375.00	3991055.33	746060.94
137	3+400.00	3991064.18	746037.63
138	3+425.00	3991075.88	746015.64
139	3+450.00	3991095.75	746000.54
140	3+475.00	3991109.14	745979.59
141	3+500.00	3991120.12	745957.17
142	3+525.00	3991125.56	745932.78
143	3+550.00	3991124.98	745907.86
144	3+575.00	3991122.41	745882.99
145	3+600.00	3991119.83	745858.13
146	3+625.00	3991116.21	745833.44
147	3+650.00	3991106.66	745810.35
148	3+675.00	3991100.67	745786.11
149	3+700.00	3991096.02	745761.55
150	3+725.00	3991087.18	745738.20
151	3+750.00	3991083.20	745713.54
152	3+775.00	3991079.76	745688.77

**CENTER LINE DATA**

S:No	Station	Northing	Easting
153	2+850.00	3990878.58	746468.68
154	2+875.00	3990903.52	746469.59
155	2+900.00	3990928.15	746473.76
156	2+925.00	3990952.29	746468.46
157	2+950.00	3990970.60	746451.85
158	2+975.00	3990981.64	746429.45
159	3+000.00	3990999.42	746412.28
160	3+025.00	3991019.82	746398.17
161	3+050.00	3991033.89	746377.50
162	3+075.00	3991044.09	746354.86
163	3+100.00	3991044.74	746330.03
164	3+125.00	3991038.29	746305.88
165	3+150.00	3991031.53	746281.82
166	3+175.00	3991024.80	746257.74
167	3+200.00	3991024.06	746232.93
168	3+225.00	3991029.47	746208.53
169	3+250.00	3991034.18	746183.98
170	3+275.00	3991037.89	746159.25
171	3+300.00	3991040.68	746134.41
172	3+325.00	3991044.02	746109.64
173	3+350.00	3991049.57	746085.27
174	3+375.00	3991055.33	746060.94
175	3+400.00	3991064.18	746037.63
176	3+425.00	3991075.88	746015.64
177	3+450.00	3991095.75	746000.54
178	3+475.00	3991109.14	745979.59
179	3+500.00	3991120.12	745957.17
180	3+525.00	3991125.56	745932.78
181	3+550.00	3991124.98	745907.86
182	3+575.00	3991122.41	745882.99
183	3+600.00	3991119.83	745858.13
184	3+625.00	3991116.21	745833.44
185	3+650.00	3991106.66	745810.35
186	3+675.00	3991100.67	745786.11
187	3+700.00	3991096.02	745761.55
188	3+725.00	3991087.18	745738.20
189	3+750.00	3991083.20	745713.54
190	3+775.00	3991079.76	745688.77

**CENTER LINE DATA**

S:No	Station	Northing	Easting
191	4+750.00	3991374.10	744930.65
192	4+775.00	3991375.19	744905.67
193	4+800.00	3991376.27	744880.69
194	4+825.00	3991377.35	744855.72
195	4+850.00	3991383.99	744831.85
196	4+875.00	3991394.59	744809.21
197	4+900.00	3991405.21	744786.58
198	4+925.00	3991426.02	744774.94
199	4+950.00	3991437.01	744755.61
200	4+975.00	3991440.95	744731.49
201	5+000.00	3991452.31	744709.22
202	5+025.00	3991464.78	744687.60
203	5+050.00	3991478.52	744666.77
204	5+075.00	3991488.45	744643.90
205	5+100.00	3991497.30	744621.00
206	5+125.00	3991511.94	744600.73
207	5+150.00	3991526.58	744580.47
208	5+175.00	3991541.25	744560.22
209	5+200.00	3991559.33	744543.09
210	5+225.00	3991579.54	744528.42
211	5+250.00	3991602.28	744518.08
212	5+275.00	3991625.27	744508.26
213	5+300.00	3991648.26	744498.44
214	5+325.00	3991672.28	744498.84
215	5+350.00	3991696.58	744504.38
216	5+375.00	3991721.07	744501.98
217	5+400.00	3991743.32	744490.59
218	5+425.00	3991766.13	744480.54
219	5+450.00	3991790.76	744482.01
220	5+475.00	3991811.80	744495.26
221	5+500.00	3991834.81	744506.41
222	5+525.00	3991858.52	744510.15
223	5+550.00	3991883.24	744511.40
224	5+575.00	3991903.09	744496.55
225	5+600.00	3991927.53	744480.96
226	5+625.00	3991946.68	744475.10
227	5+650.00	3991970.21	744466.90
228	5+675.00	3991993.21	744457.09




CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION:	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS	MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING		AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S DURRANI	Project Director (PIN) KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	CENTER LINE DATA



CENTER LINE DATA			
S:No	Station	Northing	Easting
229	5+700.00	3992012.29	744441.64
230	5+714.66	3992020.53	744429.52
231	5+715.00	3992020.53	744429.52
232	5+740.00	3992034.01	744408.46
233	5+765.00	3992052.04	744391.52
234	5+790.00	3992075.44	744382.84
235	5+815.00	3992100.32	744380.88
236	5+840.00	3992123.67	744373.21
237	5+865.00	3992146.47	744365.23
238	5+890.00	3992169.74	744357.63
239	5+915.00	3992193.30	744360.98
240	5+940.00	3992217.47	744354.61
241	5+965.00	3992241.64	744348.24
242	5+990.00	3992265.72	744341.54
243	6+015.00	3992289.29	744333.19
244	6+040.00	3992310.44	744321.26
245	6+065.00	3992334.82	744317.52
246	6+090.00	3992347.01	744296.14
247	6+115.00	3992364.34	744278.92
248	6+140.00	3992376.80	744258.13
249	6+165.00	3992399.05	744247.46
250	6+190.00	3992417.82	744232.80
251	6+215.00	3992431.23	744211.76
252	6+240.00	3992444.28	744193.04
253	6+265.00	3992468.01	744190.79
254	6+290.00	3992489.79	744186.11
255	6+315.00	3992512.98	744179.00
256	6+340.00	3992533.59	744165.14
257	6+365.00	3992551.99	744148.26
258	6+390.00	3992569.53	744130.73
259	6+415.00	3992581.65	744108.97
260	6+440.00	3992598.85	744090.83
261	6+465.00	3992616.10	744072.74
262	6+490.00	3992637.97	744061.12
263	6+515.00	3992654.21	744042.14
264	6+540.00	3992671.84	744024.84
265	6+565.00	3992695.97	744019.02
266	6+590.00	3992718.78	744009.11

CENTER LINE DATA			
S:No	Station	Northing	Easting
267	6+615.00	3992737.78	743995.73
268	6+640.00	3992756.74	743982.24
269	6+665.00	3992780.28	743973.81
270	6+690.00	3992803.82	743965.38
271	6+715.00	3992828.03	743959.27
272	6+740.00	3992852.73	743955.40
273	6+765.00	3992877.59	743952.89
274	6+790.00	3992902.56	743951.55
275	6+815.00	3992927.48	743949.85
276	6+840.00	3992948.41	743936.92
277	6+865.00	3992969.31	743923.52
278	6+890.00	3992993.37	743916.79
279	6+915.00	3993017.54	743910.38
280	6+940.00	3993041.70	743903.97
281	6+965.00	3993065.48	743896.31
282	6+990.00	3993088.20	743885.90
283	7+015.00	3993109.72	743873.19
284	7+040.00	3993131.04	743860.14
285	7+065.00	3993152.37	743847.09
286	7+090.00	3993173.69	743834.04
287	7+115.00	3993197.35	743826.83
288	7+140.00	3993220.52	743829.56
289	7+165.00	3993221.33	743854.17
290	7+190.00	3993219.97	743879.13
291	7+215.00	3993237.94	743892.58
292	7+240.00	3993262.53	743897.10
293	7+265.00	3993286.61	743892.05
294	7+290.00	3993309.38	743881.83
295	7+315.00	3993329.03	743866.38
296	7+340.00	3993348.14	743850.29
297	7+365.00	3993363.52	743830.62
298	7+390.00	3993377.94	743810.21
299	7+415.00	3993392.30	743789.74
300	7+440.00	3993399.05	743765.89
301	7+465.00	3993409.00	743743.36
302	7+490.00	3993423.62	743723.07
303	7+515.00	3993443.27	743707.92
304	7+540.00	3993464.85	743695.31

CENTER LINE DATA			
S:No	Station	Northing	Easting
305	7+565.00	3993486.43	743682.69
306	7+590.00	3993510.26	743676.34
307	7+615.00	3993533.30	743684.09
308	7+640.00	3993556.79	743687.20
309	7+665.00	3993580.85	743688.71
310	7+690.00	3993605.13	743694.47
311	7+715.00	3993630.01	743696.96
312	7+740.00	3993654.79	743700.12
313	7+765.00	3993678.67	743707.47
314	7+790.00	3993703.57	743708.26
315	7+815.00	3993725.57	743719.34
316	7+840.00	3993748.58	743717.94
317	7+865.00	3993755.74	743694.62
318	7+890.00	3993758.97	743669.83
319	7+915.00	3993762.20	743645.04
320	7+940.00	3993766.36	743620.40
321	7+965.00	3993772.04	743596.06
322	7+990.00	3993778.07	743571.79
323	8+015.00	3993795.29	743554.32
324	8+040.00	3993815.25	743539.28
325	8+065.00	3993827.89	743519.13
326	8+090.00	3993841.91	743502.14
327	8+115.00	3993856.62	743485.49
328	8+140.00	3993867.12	743464.09
329	8+165.00	3993884.38	743446.88
330	8+190.00	3993901.66	743429.20
331	8+215.00	3993919.34	743411.72
332	8+240.00	3993934.37	743391.74
333	8+265.00	3993954.23	743378.47
334	8+290.00	3993979.04	743375.58
335	8+315.00	3993998.36	743360.54
336	8+340.00	3994014.20	743341.20
337	8+365.00	3994030.04	743321.86
338	8+390.00	3994043.74	743301.14
339	8+415.00	3994056.62	743280.07
340	8+440.00	3994073.75	743261.86
341	8+465.00	3994090.88	743243.65
342	8+490.00	3994108.01	743225.44




CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
 <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	 <b>MINCONSULT SDN BHD</b> (COMPANY NO. 38835-P) J.V. CREATIVE ENGINEERING	3	AUGUST, 2024	TENDER DRAWINGS  Project Director (PIL) Provincial Roads Improvement Project C&W Department, Government of Khyber Pakhtunkhwa	G. DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S. DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S DATE: AUG	CENTER LINE DATA

**CENTER LINE DATA**

S:No	Station	Northing	Easting
343	8+515.00	3994125.13	743207.23
344	8+540.00	3994141.34	743188.23
345	8+565.00	3994154.73	743167.13
346	8+590.00	3994167.63	743145.73
347	8+615.00	3994177.04	743122.57
348	8+640.00	3994184.64	743098.87
349	8+665.00	3994186.34	743074.07
350	8+690.00	3994193.18	743050.02
351	8+715.00	3994202.21	743026.96
352	8+740.00	3994222.75	743013.66
353	8+765.00	3994216.19	742990.49
354	8+790.00	3994206.19	742967.61
355	8+815.00	3994207.38	742942.87
356	8+840.00	3994212.30	742918.44
357	8+865.00	3994234.33	742908.96
358	8+890.00	3994257.15	742898.92
359	8+915.00	3994280.77	742890.90
360	8+940.00	3994300.68	742876.44
361	8+965.00	3994318.79	742859.20
362	8+990.00	3994337.48	742842.64
363	9+015.00	3994359.60	742831.11
364	9+040.00	3994382.42	742820.89
365	9+065.00	3994405.12	742810.44
366	9+090.00	3994423.53	742793.82
367	9+115.00	3994438.11	742773.51
368	9+140.00	3994450.34	742751.96
369	9+165.00	3994457.18	742728.00
370	9+190.00	3994466.01	742704.81
371	9+215.00	3994470.54	742680.25
372	9+240.00	3994486.03	742661.19
373	9+265.00	3994505.50	742645.51
374	9+290.00	3994524.97	742629.83
375	9+315.00	3994546.71	742617.78
376	9+340.00	3994570.20	742609.44
377	9+365.00	3994588.23	742592.34
378	9+390.00	3994608.41	742577.92
379	9+415.00	3994630.38	742565.99
380	9+440.00	3994652.35	742554.07

**CENTER LINE DATA**

S:No	Station	Northing	Easting
381	9+465.00	3994674.89	742543.34
382	9+490.00	3994696.40	742531.19
383	9+515.00	3994714.58	742514.03
384	9+540.00	3994733.16	742497.32
385	9+565.00	3994754.78	742484.83
386	9+590.00	3994776.21	742472.03
387	9+615.00	3994794.36	742454.86
388	9+640.00	3994812.16	742437.31
389	9+665.00	3994829.97	742419.76
390	9+690.00	3994850.06	742405.01
391	9+715.00	3994869.86	742389.87
392	9+740.00	3994888.00	742372.67
393	9+765.00	3994907.52	742357.13
394	9+790.00	3994928.27	742343.18
395	9+815.00	3994949.21	742329.54
396	9+840.00	3994973.07	742322.34
397	9+865.00	3994997.39	742316.54
398	9+890.00	3995021.71	742310.74
399	9+915.00	3995046.03	742304.94
400	9+940.00	3995070.35	742299.18
401	9+965.00	3995094.95	742301.41
402	9+990.00	3995119.10	742307.87
403	10+015.00	3995143.60	742312.82
404	10+040.00	3995168.36	742316.26
405	10+065.00	3995193.16	742319.42
406	10+090.00	3995217.65	742318.85
407	10+115.00	3995227.83	742297.56
408	10+140.00	3995239.55	742276.75
409	10+142.43	3995241.39	742275.16

CLIENT:  <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC)  <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V.  <b>CREATIVE ENGINEERING</b>	REV: 0 DATE: AUGUST, 2024 DESCRIPTION: TENDER DRAWINGS	NAMES: G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. DATE: AUG	SHEET CONTENT: CENTER LINE DATA
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# HORIZONTAL CURVE DATA



Project Director (PIU)  
Provincial Roads Improvement Project  
C&V Department, Kathmandu



Curve Table: Alignments

Curve #	PI Station	PI Easting	PI Northing	PC Station	PC Easting	PC Northing	PT Station	PT Easting	PT Northing	Radius	Length	Tangent Length	Delta Angle	Chord Direction
C1	0+046.14	745239.2762	3989278.6327	0+038.65	745233.0058	3989280.7273	0+051.52	745244.9952	3989281.4675	10.06	12.87	7.489	73.3558	N86° 28' 01.87"E
C2	0+078.65	745265.7117	3989292.9809	0+075.46	745263.2773	3989296.9229	0+081.83	745267.8460	3989301.3487	47.01	6.31	3.185	7.7582	N45° 54' 36.71"E
C3	0+098.82	745279.2207	3989313.9678	0+092.08	745274.7127	3989308.9666	0+105.26	745285.5795	3989316.1811	26.24	13.18	6.733	28.7774	N56° 25' 11.19"E
C4	0+144.40	745322.5351	3989329.0443	0+129.78	745308.7353	3989324.2409	0+156.78	745334.4756	3989320.6221	28.44	27.00	14.612	54.3886	S81° 59' 50.07"E
C5	0+186.96	745360.7857	3989302.0644	0+181.84	745354.9538	3989306.1779	0+195.95	745367.6962	3989300.2897	38.89	14.12	7.137	20.7983	S65° 12' 07.55"E
C6	0+236.51	745406.5775	3989290.2054	0+226.72	745397.9008	3989292.6384	0+246.26	745416.7059	3989289.1839	135.04	19.53	9.784	8.2878	S79° 44' 42.36"E
C7	0+309.29	745479.3783	3989282.4540	0+289.92	745470.0653	3989283.4511	0+318.60	745488.7080	3989283.2809	95.73	18.67	9.566	11.1760	S89° 28' 37.34"E
C8	0+365.90	745525.8651	3989286.5743	0+343.63	745513.6487	3989285.4915	0+368.09	745538.0714	3989285.3828	131.71	24.46	12.264	10.6398	S89° 44' 42.38"E
C9	0+401.40	745571.2244	3989282.1469	0+384.32	745554.2240	3989283.8062	0+418.27	745586.0334	3989285.1844	122.96	33.95	17.081	15.8180	N87° 39' 56.97"E
C10	0+447.03	745616.3427	3989290.3000	0+433.36	745602.8835	3989287.8679	0+453.92	745628.8924	3989284.8620	45.20	26.56	13.677	33.6713	S83° 24' 26.94"E
C11	0+483.32	745650.3620	3989275.5587	0+474.23	745642.0251	3989279.1713	0+492.07	745659.4302	3989276.1267	37.83	17.83	9.086	27.0123	S80° 04' 40.59"E
C12	0+550.14	745717.3903	3989279.7570	0+537.79	745705.0662	3989278.9851	0+562.16	745729.1069	3989275.8579	63.55	24.39	12.348	21.9908	S82° 35' 19.23"E
C13	0+581.97	745757.3694	3989266.4526	0+573.98	745740.2955	3989272.1345	0+609.40	745775.2492	3989268.4811	81.57	35.42	17.995	24.8794	S84° 01' 58.78"E
C14	0+638.48	745804.1445	3989271.7593	0+629.03	745794.7519	3989270.6937	0+647.79	745813.4362	3989270.0222	63.02	18.77	9.453	17.0622	S87° 56' 29.85"E
C15	0+678.95	745844.0604	3989264.2969	0+669.32	745834.5965	3989266.0662	0+687.26	745851.3463	3989270.5908	20.00	17.95	9.628	51.4120	N74° 53' 00.37"E
C16	0+710.42	745868.8689	3989285.7281	0+703.89	745863.9274	3989281.4593	0+716.51	745875.3773	3989286.2584	20.00	10.62	6.530	36.1637	N67° 15' 33.35"E
C17	0+741.21	745899.9300	3989288.2642	0+735.67	745894.4741	3989287.8147	0+746.47	745904.4902	3989291.4853	20.00	10.80	5.534	30.9347	N69° 52' 25.55"E
C18	0+852.82	745990.9666	3989353.3816	0+842.59	745982.6484	3989347.4278	0+862.95	745997.6760	3989361.1034	86.95	20.37	10.229	13.4190	N47° 41' 48.84"E
C19	0+894.69	746018.4900	3989385.0578	0+889.07	746014.8091	3989380.8215	0+900.18	746023.4129	3989387.7522	31.32	11.11	5.812	20.3196	N51° 08' 49.89"E
C20	0+943.95	746061.8105	3989408.7682	0+939.61	746058.0000	3989406.6826	0+948.30	746065.7325	3989410.6308	154.07	8.69	4.344	3.2299	N62° 55' 19.06"E
C21	1+022.41	746132.6465	3989442.4992	1+006.50	746118.2871	3989435.6615	1+038.27	746147.7673	3989447.4295	245.81	31.76	15.904	7.4038	N68° 14' 19.85"E
C22	1+155.75	746259.4749	3989483.8533	1+141.25	746245.6791	3989479.3550	1+169.88	746270.4129	3989493.3883	71.26	28.63	14.511	23.0206	N60° 25' 49.74"E
C23	1+250.67	746331.3116	3989546.4758	1+236.41	746320.5607	3989537.1038	1+264.08	746345.4718	3989548.1800	46.34	27.67	14.262	34.2172	N66° 01' 43.65"E
C24	1+293.57	746374.7488	3989551.7035	1+282.55	746363.8033	3989550.3862	1+304.41	746384.7563	3989556.3306	69.79	21.87	11.024	17.9534	N74° 09' 38.44"E
C25	1+340.26	746417.2929	3989571.3761	1+314.52	746393.9272	3989560.5717	1+364.53	746442.7374	3989567.4693	85.41	50.01	25.743	33.5474	N81° 57' 27.58"E
C26	1+403.34	746481.0979	3989561.5765	1+388.70	746466.0395	3989563.8895	1+418.13	746495.8060	3989565.5488	72.16	30.03	15.235	23.8439	N86° 48' 33.88"E
C27	1+481.61	746557.0880	3989582.0983	1+471.96	746547.7709	3989579.5822	1+491.04	746564.8610	3989587.8186	51.48	19.08	9.651	21.2376	N64° 16' 07.18"E
C28	1+523.74	746591.2029	3989607.2042	1+514.90	746584.0844	3989601.8656	1+531.80	746593.0614	3989615.8449	23.32	16.90	8.838	41.5110	N32° 53' 39.70"E
C29	1+563.50	746599.7267	3989646.8328	1+556.07	746598.1653	3989639.5737	1+570.85	746602.8172	3989653.5841	68.03	14.79	7.425	12.4580	N18° 22' 04.29"E
C30	1+581.26	746607.1431	3989663.0341	1+574.15	746604.1853	3989656.5727	1+587.81	746605.3609	3989669.9131	20.00	13.66	7.106	39.1212	N5° 02' 10.45"E
C31	1+599.53	746602.4216	3989661.2587	1+591.44	746604.4504	3989673.4278	1+606.81	746606.4074	3989688.2980	20.00	15.37	8.089	44.0438	N7° 29' 51.12"E
C32	1+634.73	746620.1647	3989712.5946	1+627.35	746616.5251	3989706.1668	1+641.79	746620.1335	3989719.9812	27.80	14.44	7.387	29.7610	N14° 38' 20.25"E
C33	1+676.41	746619.9876	3989754.6024	1+666.41	746620.0297	3989744.6058	1+686.32	746622.2077	3989764.3495	87.24	19.91	9.997	13.0732	N6° 17' 42.22"E
C34	1+733.06	746632.5889	3989809.9257	1+719.79	746629.6407	3989796.9825	1+744.70	746624.7574	3989820.6442	29.14	24.91	13.275	48.9854	N11° 39' 17.00"W
C35	1+792.10	746596.7929	3989858.9177	1+781.78	746602.8816	3989850.5844	1+801.54	746597.6270	3989869.2046	27.76	19.76	10.321	40.7896	N15° 45' 17.00"W
C36	1+838.81	746603.6411	3989906.3748	1+827.52	746599.7265	3989895.0963	1+849.75	746606.4680	3989916.0745	48.32	22.23	11.315	26.3584	N17° 48' 32.00"E
C37	1+864.03	746613.8213	3989928.3154	1+852.65	746607.9598	3989918.5580	1+873.35	746608.4450	3989938.3483	20.05	20.70	11.383	59.1797	N1° 24' 16.00"E
C38	1+919.70	746586.5504	3989979.2067	1+910.10	746591.0868	3989970.7411	1+928.82	746587.1186	3989985.7944	33.97	18.72	9.605	31.5773	N12° 23' 46.22"W
C39	1+967.26	746589.3931	3990027.1691	1+957.96	746588.8428	3990017.8449	1+976.53	746591.2462	3990036.2821	131.30	18.57	9.300	8.1026	N7° 26' 35.49"E
C40	2+039.55	746603.6034	3990038.0334	2+023.49	746600.6017	3990030.3033	2+054.87	746608.7837	3990053.2800	60.50	37.38	16.752	29.7182	N3° 21' 52.61"W



Project Director (RRD)  
Provincial Roads Improvement Project  
C&W Department Peshawar



CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: <b>MINCONSULT SDN BHD</b> (COMPANY NO. 9835-P) J.V. CREATIVE ENGINEERING	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		1	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S.DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S DATE: A.M.C.	HORIZONTAL CURVE DATA

Curve Table: Alignments

Curve #	PI Station	PI Easting	PI Northing	PC Station	PC Easting	PC Northing	PT Station	PT Easting	PT Northing	Radius	Length	Tangent Length	Delta Angle	Chord Direction
C41	2+125.51	746576.6944	3990160.3712	2+112.83	746580.6805	3990168.3250	2+138.09	746575.4164	3990192.9869	116.36	25.26	12.682	12.4403	N12° 00' 12.76"W
C42	2+204.06	746565.7684	3990258.6264	2+181.96	746570.9958	3990236.6353	2+225.86	746560.3845	3990279.0782	152.38	43.90	22.104	16.9070	N14° 02' 12.73"W
C43	2+268.42	746544.2424	3990318.4557	2+260.12	746547.3901	3990310.7772	2+276.34	746537.6856	3990323.5425	31.07	16.22	8.299	29.9056	N37° 14' 35.38"W
C44	2+289.85	746527.0091	3990331.8252	2+281.05	746533.9620	3990326.4305	2+298.18	746524.0581	3990340.1167	30.09	17.12	8.801	32.6050	N35° 53' 36.51"W
C45	2+332.70	746512.4808	3990372.6458	2+324.89	746515.0998	3990365.2871	2+340.49	746510.6378	3990380.2819	120.00	15.60	7.811	7.4483	N15° 52' 00.51"W
C46	2+370.54	746504.5164	3990409.6618	2+364.19	746505.8534	3990403.4480	2+376.50	746507.0119	3990415.5074	20.00	12.31	6.356	35.2606	N5° 29' 15.52"E
C47	2+388.79	746511.8378	3990426.8118	2+378.74	746507.8939	3990417.5733	2+395.26	746510.1252	3990436.7090	33.98	19.53	10.045	32.9343	N6° 39' 05.77"E
C48	2+493.71	746493.8540	3990530.7496	2+483.00	746495.6809	3990520.1912	2+504.34	746494.4332	3990541.4496	94.67	21.34	10.719	12.9148	N3° 21' 32.34"W
C49	2+540.70	746496.3987	3990577.7601	2+529.72	746495.8052	3990566.7952	2+531.56	746494.1966	3990588.5180	85.33	21.84	10.981	14.6665	N4° 14' 05.63"W
C50	2+584.79	746487.5331	3990621.0717	2+575.25	746489.2460	3990612.7036	2+593.22	746488.1908	3990629.5877	60.83	16.97	8.541	15.9844	N3° 34' 33.69"W
C51	2+682.51	746495.0661	3990718.6118	2+668.64	746493.9978	3990704.7792	2+696.28	746499.0323	3990731.9066	129.87	27.64	13.674	12.1950	N10° 30' 49.26"E
C52	2+725.74	746507.4529	3990760.1328	2+715.02	746504.3852	3990749.8599	2+735.70	746503.7093	3990770.1782	31.99	20.69	10.720	37.0503	N1° 54' 50.12"W
C53	2+849.50	746463.9720	3990876.8060	2+814.98	746476.0271	3990844.4582	2+882.23	746470.8048	3990910.8442	120.97	67.25	34.521	31.8551	N4° 30' 41.41"W
C54	2+930.85	746480.4291	3990958.3068	2+892.58	746472.8542	3990920.7933	2+957.19	746445.5389	3990974.0330	47.98	64.61	38.271	77.1534	N27° 09' 36.36"W
C55	2+984.80	746420.5731	3990985.3760	2+969.49	746434.5320	3990973.0843	2+999.11	746412.7278	3990998.6419	47.43	29.62	15.311	35.7818	N47° 50' 47.31"W
C56	3+020.61	746401.9932	3991017.7680	3+014.62	746404.9832	3991012.0796	3+026.39	746397.0384	3991020.8304	26.06	11.77	5.988	25.8827	N42° 53' 48.90"W
C57	3+080.87	746351.9543	3991051.2256	3+051.71	746376.0831	3991034.8512	3+106.31	746323.8803	3991043.3406	62.75	54.59	29.160	49.8496	N80° 45' 46.98"W
C58	3+185.03	746245.2037	3991021.2439	3+173.01	746259.6640	3991025.3051	3+202.43	746230.5521	3991024.5489	59.36	29.42	15.020	28.3998	S88° 30' 43.31"W
C59	3+253.43	746180.7990	3991035.7721	3+217.55	746215.8012	3991027.8764	3+289.23	746145.1165	3991039.5487	615.73	71.68	35.882	6.6703	N80° 37' 23.70"W
C60	3+321.04	746113.4899	3991042.8960	3+307.64	746126.8119	3991041.4860	3+334.40	746100.4533	3991045.9798	210.96	26.76	13.396	7.2671	N80° 19' 29.43"W
C61	3+384.64	746051.5569	3991057.5463	3+375.33	746060.6214	3991055.4021	3+393.89	746043.1483	3991061.5536	87.36	18.56	9.315	12.1726	N70° 36' 17.82"W
C62	3+424.07	746015.9040	3991074.5370	3+417.83	746021.5401	3991071.8516	3+430.03	746012.3656	3991079.6816	23.30	12.20	6.243	29.9956	N49° 31' 14.62"W
C63	3+453.15	745999.2588	3991098.7359	3+442.62	746005.2302	3991090.0548	3+463.28	745989.9455	3991103.6637	42.91	20.66	10.537	27.5933	N48° 19' 10.03"W
C64	3+497.28	745959.8940	3991119.5644	3+491.72	745964.8093	3991116.9636	3+502.76	745954.4818	3991120.8425	43.42	11.06	5.561	14.5969	N69° 24' 52.22"W
C65	3+529.89	745928.0956	3991127.0736	3+517.28	745940.3664	3991124.1758	3+542.26	745915.5543	3991125.7758	74.56	24.96	12.608	19.1952	N86° 18' 37.97"W
C66	3+622.32	745835.9200	3991117.5350	3+614.77	745843.4365	3991118.3128	3+629.76	745828.9812	3991114.5422	49.32	15.00	7.557	17.4230	S75° 22' 49.43"W
C67	3+656.00	745804.8908	3991104.1518	3+644.59	745815.3644	3991108.6691	3+667.31	745793.6755	3991102.0735	101.43	22.72	11.406	12.8327	S73° 05' 06.99"W
C68	3+702.31	745759.2573	3991095.6954	3+696.90	745764.5847	3991096.8827	3+707.69	745754.2650	3991093.5900	50.00	10.79	5.418	12.3691	S73° 19' 01.47"W
C69	3+725.61	745737.5652	3991086.5465	3+719.07	745743.7771	3991089.1667	3+732.46	745730.8877	3991085.6178	51.39	13.41	6.742	14.9466	S74° 36' 20.92"W
C70	3+828.05	745636.2262	3991072.4472	3+819.91	745644.2952	3991073.5899	3+835.38	745629.6693	3991077.2822	20.00	15.47	8.147	44.3266	N75° 45' 29.05"W
C71	3+867.00	745604.2218	3991096.0470	3+859.63	745610.1510	3991091.6749	3+874.32	745599.1908	3991101.4283	80.00	14.69	7.367	10.5225	N48° 20' 02.37"W
C72	3+909.74	745575.0031	3991127.3006	3+893.33	745586.2119	3991115.3112	3+923.62	745558.7435	3991125.0626	31.69	30.29	16.413	54.7641	N70° 27' 17.26"W
C73	3+952.75	745529.8763	3991121.0894	3+944.35	745538.2052	3991122.2358	3+961.01	745522.3804	3991117.2822	50.00	16.66	8.407	19.0896	S72° 37' 05.92"W
C74	3+987.34	745498.9012	3991105.3558	3+979.11	745506.2405	3991109.0845	3+995.47	745492.8255	3991099.8027	60.46	16.36	8.232	15.5055	S65° 19' 14.65"W
C75	4+020.72	745474.1939	3991082.7706	4+011.60	745480.9219	3991085.9210	4+029.48	745465.3669	3991080.4188	37.28	17.88	9.116	27.4811	S61° 18' 30.65"W
C76	4+117.71	745380.1442	3991057.6063	4+089.29	745407.5977	3991064.9873	4+142.06	745357.6844	3991073.3629	57.33	52.76	28.415	52.7270	N78° 35' 14.00"W
C77	4+166.03	745338.7361	3991089.7480	4+156.92	745345.9394	3991084.1652	4+175.06	745330.4617	3991093.5875	80.00	18.15	9.112	12.9980	N56° 43' 20.00"W
C78	4+203.88	745304.2988	3991105.6442	4+196.21	745309.4502	3991103.2664	4+209.36	745298.6259	3991105.5531	24.67	11.16	5.674	25.6987	N78° 04' 10.00"W
C79	4+219.51	745288.4827	3991105.5901	4+213.40	745294.5871	3991105.4982	4+225.39	745282.9942	3991108.0639	25.53	11.99	6.105	26.8942	N77° 28' 24.00"W
C80	4+240.32	745269.5589	3991114.6042	4+232.53	745276.5781	3991111.1905	4+247.81	745261.7790	3991114.3685	31.59	15.28	7.736	27.7211	N77° 53' 12.92"W

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



CLIENT:	DESIGN CONSULTANT:	(MIN - JV - CEC)	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 8835-P) J.V. CREATIVE ENGINEERING</p>		1	AUGUST, 2024	TENDER DRAWINGS	G. DESIGNED: REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	HORIZONTAL CURVE DATA
			2			DRAWN: INAM ULLAH			DATE: AUG.	
			3			CHECKED: S DURRANI				

Curve Table: Alignments

Curve #	Pi Station	Pi Easting	Pi Northing	PC Station	PC Easting	PC Northing	PT Station	PT Easting	PT Northing	Radius	Length	Tangent Length	Delta Angle	Chord Direction
C81	4+258.34	745251.2540	3991114.0454	4+250.00	745259.5923	3991114.2998	4+265.57	745245.7869	3991120.3464	17.57	15.58	8.342	50.8008	N56° 20' 49.40"W
C82	4+341.75	745195.8665	3991177.8815	4+332.83	745201.7100	3991171.1486	4+349.61	745196.9702	3991186.7294	20.00	16.78	8.917	48.0572	N16° 55' 05.03"W
C83	4+357.42	745197.9380	3991194.4880	4+352.23	745197.2950	3991189.3335	4+362.43	745196.2249	3991199.3919	22.18	10.20	5.194	26.3673	N6° 04' 23.16"W
C84	4+374.25	745192.3292	3991210.5431	4+367.17	745194.6626	3991203.8638	4+381.23	745191.9406	3991217.6076	50.00	14.06	7.075	16.1082	N11° 12' 09.47"W
C85	4+401.35	745190.8354	3991237.6994	4+392.05	745191.3461	3991228.4165	4+408.83	745182.4386	3991241.6901	15.65	16.78	9.297	61.4313	N33° 51' 51.10"W
C86	4+419.27	745173.0081	3991246.1721	4+415.36	745176.5400	3991244.4935	4+423.15	745169.9087	3991248.5568	36.73	7.79	3.911	12.1547	N58° 30' 09.01"W
C87	4+476.60	745127.5532	3991281.1454	4+464.62	745137.0452	3991273.8421	4+488.51	745119.4839	3991289.9953	135.97	23.89	11.976	10.0671	N47° 23' 29.68"W
C88	4+527.57	745093.1701	3991318.8551	4+520.84	745097.7010	3991313.8858	4+533.82	745092.5620	3991325.5525	20.00	12.97	6.725	37.1700	N23° 46' 22.95"W
C89	4+560.73	745090.1281	3991352.3580	4+553.87	745090.7482	3991345.5282	4+567.09	745085.4474	3991357.3702	20.00	13.21	6.858	37.8533	N24° 06' 52.88"W
C90	4+575.17	745072.9310	3991363.2772	4+568.53	745084.4605	3991358.4270	4+581.35	745079.1395	3991369.8730	20.00	12.82	6.636	36.7131	N24° 41' 05.23"W
C91	4+603.44	745076.7643	3991391.8317	4+593.18	745077.8951	3991381.6356	4+609.31	745066.5665	3991390.7169	10.27	16.12	10.259	89.9102	N51° 17' 00.16"W
C92	4+636.49	745039.5452	3991387.7631	4+629.82	745046.1747	3991388.4878	4+643.05	745033.0129	3991389.1070	42.43	13.23	6.669	17.8635	N87° 18' 24.30"W
C93	4+669.46	745007.1453	3991394.4286	4+661.64	745014.8052	3991392.8527	4+676.74	745000.0703	3991391.0968	23.48	15.10	7.820	36.8420	S83° 12' 14.39"W
C94	4+719.72	744981.1798	3991372.7822	4+712.48	744967.7341	3991375.8688	4+726.68	744953.9418	3991373.0955	29.39	14.21	7.245	27.6957	S78° 37' 51.00"W
C95	4+835.69	744845.0341	3991377.8099	4+826.06	744854.6569	3991377.3933	4+845.07	744836.3120	3991381.8958	48.15	19.01	9.632	22.6324	N76° 12' 36.42"W
C96	4+909.69	744777.7963	3991409.3080	4+899.23	744787.2703	3991404.8698	4+918.51	744776.0388	3991419.6213	20.00	19.28	10.462	55.2283	N37° 17' 05.18"W
C97	4+938.13	744772.7422	3991438.9667	4+924.63	744775.0103	3991425.6572	4+946.25	744759.3284	3991437.4323	14.26	21.62	13.501	86.8549	N53° 05' 53.13"W
C98	4+963.48	744742.2111	3991435.4743	4+954.39	744751.2446	3991436.5077	4+972.05	744734.1128	3991439.6083	30.15	17.66	9.092	33.5887	N79° 44' 28.35"W
C99	5+016.91	744694.1593	3991460.0035	5+010.62	744699.7596	3991457.1447	5+023.17	744689.0744	3991463.7022	80.00	12.55	6.288	8.9881	N58° 27' 46.08"W
C100	5+043.36	744672.7476	3991475.5779	5+038.19	744676.9321	3991472.5342	5+045.51	744665.1038	3991477.9602	60.00	10.32	5.174	9.8579	N58° 53' 51.72"W
C101	5+071.99	744647.0346	3991488.2154	5+064.99	744653.3135	3991485.1294	5+078.86	744640.9975	3991489.1236	42.46	13.87	6.996	18.7148	N73° 11' 02.69"W
C102	5+098.46	744630.5785	3991490.3698	5+081.60	744637.3805	3991489.4793	5+095.04	744625.0185	3991494.3880	27.11	13.44	6.860	28.3972	N68° 20' 34.40"W
C103	5+183.15	744553.6052	3991545.9985	5+173.17	744561.6884	3991540.1568	5+192.99	744547.4268	3991553.8274	71.58	19.82	9.973	15.8649	N46° 12' 43.23"W
C104	5+223.44	744528.5678	3991577.7244	5+211.57	744535.9161	3991568.4131	5+235.16	744523.9091	3991588.6329	89.17	23.58	11.862	15.1536	N20° 42' 10.04"W
C105	5+311.09	744494.0549	3991658.4675	5+303.40	744497.1091	3991651.3863	5+318.10	744496.5901	3991665.7484	20.00	14.70	7.700	42.1129	N2° 04' 09.89"W
C106	5+340.59	744503.9081	3991687.0171	5+328.28	744499.9034	3991675.3781	5+352.74	744504.5697	3991699.3079	88.11	24.46	12.309	15.9056	N11° 02' 03.16"E
C107	5+367.88	744505.3838	3991714.4299	5+360.53	744504.9888	3991707.0924	5+374.89	744502.0346	3991720.9703	27.24	14.35	7.348	30.1974	N12° 01' 02.21"W
C108	5+441.87	744471.5070	3991780.5855	5+433.53	744484.4215	3991755.3657	5+464.11	744488.6657	3991803.1332	45.01	50.58	28.334	64.3871	N5° 04' 39.27"E
C109	5+491.12	744505.0221	3991824.6264	5+481.61	744499.2633	3991817.0590	5+500.23	744506.4437	3991834.0290	37.21	18.62	9.509	28.6734	N22° 56' 03.93"E
C110	5+550.38	744513.9419	3991883.6222	5+539.00	744512.2405	3991872.3689	5+560.28	744506.3583	3991892.1087	24.20	21.28	11.381	50.3819	N16° 35' 35.57"W
C111	5+602.30	744478.3587	3991923.4421	5+589.28	744487.0337	3991913.7341	5+614.56	744476.5637	3991936.3370	42.77	25.28	13.019	33.8596	N24° 51' 15.67"W
C112	5+631.35	744474.2484	3991952.9703	5+623.23	744475.3684	3991944.9242	5+638.38	744471.0627	3991960.4432	61.03	16.15	8.124	15.1638	N15° 30' 23.29"W
C113	5+688.13	744451.9456	3992005.2877	5+677.48	744456.1213	3991995.4925	5+698.19	744443.1384	3992011.2724	36.28	20.71	10.648	32.7145	N39° 26' 44.79"W

*[Handwritten Signature]*  
 Project Director (PIU)  
 Provincial Road Improvement Project  
 C&W Department Peshawar.



CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58039-P) J.V. SOCIETY ENGINEERING	REV. DATE 1 AUGUST, 2024	DESCRIPTION TENDER DRAWINGS	NAMES: G. DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S. DURRANI	PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	ROAD NAME: N-CHT-5 ARKARI VALLEY ROAD	SCALE: N.T.S. DATE: AUG	SHEET CONTENT: HORIZONTAL CURVE DATA
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Curve Table: Alignments

Curve #	PI Station	PI Easting	PI Northing	PC Station	PC Easting	PC Northing	PT Station	PT Easting	PT Northing	Radius	Length	Tangent Length	Delta Angle	Chord Direction
C153	7+098.70	743829.4976	3993181.1134	7+092.38	743832.7975	3993175.7209	7+104.87	743828.4729	3993187.3518	32.32	12.49	6.322	22.1371	N20° 23' 45.44"W
C154	7+141.08	743822.6041	3993223.0836	7+127.40	743824.8122	3993209.6396	7+147.01	743836.2072	3993222.3264	10.93	19.56	13.624	102.5134	N41° 55' 45.81"E
C155	7+200.05	743889.1603	3993219.3788	7+189.16	743878.2890	3993219.9839	7+207.01	743891.1334	3993230.0858	12.36	17.85	10.887	82.7446	N51° 48' 49.48"E
C156	7+248.14	743898.5899	3993270.5310	7+238.99	743896.9288	3993261.5342	7+256.79	743895.1438	3993279.0068	31.34	17.80	9.148	32.5492	N5° 49' 59.35"W
C157	7+288.31	743883.2817	3993306.2083	7+279.84	743886.4682	3993300.3638	7+296.65	743877.9457	3993314.7823	56.80	16.81	8.467	16.9577	N30° 35' 11.79"W
C158	7+342.85	743848.8347	3993350.6478	7+331.29	743856.1172	3993341.6754	7+354.26	743839.5974	3993357.3164	83.88	22.97	11.556	15.6877	N48° 54' 33.52"W
C159	7+421.37	743784.5864	3993396.0485	7+412.47	743791.8526	3993390.9139	7+429.96	743775.8012	3993397.4572	38.33	17.49	8.897	26.1372	N67° 49' 18.31"W
C160	7+451.27	743754.7568	3993400.8316	7+442.87	743763.0518	3993399.5015	7+459.37	743747.9289	3993405.7281	35.64	16.50	8.401	26.5252	N67° 37' 39.96"W
C161	7+497.62	743716.8452	3993428.0085	7+487.64	743724.9568	3993422.1937	7+507.30	743711.8080	3993436.8245	46.85	19.67	9.980	24.0533	N42° 20' 18.63"W
C162	7+574.46	743677.9143	3993494.5992	7+568.07	743681.1400	3993489.0817	7+580.65	743677.2732	3993500.9581	29.37	12.59	6.391	24.5547	N18° 02' 04.21"W
C163	7+598.51	743675.4821	3993518.7227	7+591.95	743676.1403	3993512.1951	7+604.63	743678.8184	3993524.3717	20.00	12.68	6.561	36.3225	N12° 24' 14.76"E
C164	7+630.30	743691.8743	3993546.4786	7+619.89	743688.5821	3993537.5176	7+639.09	743687.5726	3993555.9550	20.00	19.19	10.407	54.9809	N3° 04' 29.76"E
C165	7+647.96	743683.9034	3993564.0378	7+642.55	743686.1406	3993559.1098	7+652.92	743685.3897	3993569.2421	14.73	10.37	5.412	40.3548	N4° 14' 17.24"W
C166	7+683.72	743693.8477	3993598.8571	7+678.55	743692.4258	3993593.8783	7+688.87	743694.3619	3993604.0093	57.79	10.33	5.178	10.2405	N10° 49' 08.41"E
C167	7+738.31	743699.2706	3993653.1997	7+729.52	743698.3981	3993644.4557	7+747.03	743702.0214	3993661.5455	79.95	17.50	8.797	12.5438	N11° 58' 14.31"E
C168	7+768.96	743708.8891	3993682.3816	7+760.97	743706.3854	3993674.7853	7+776.79	743708.5876	3993690.3742	44.45	15.83	7.998	30.4029	N8° 02' 27.91"E
C169	7+795.44	743707.8847	3993709.0090	7+787.05	743708.2010	3993700.6223	7+803.25	743712.6597	3993715.9108	25.20	16.20	8.393	36.8377	N16° 15' 30.53"E
C170	7+845.06	743736.4448	3993750.2900	7+815.50	743719.6301	3993725.9860	7+852.38	743707.1387	3993754.1069	18.02	36.88	29.554	117.2568	N23° 57' 03.80"W
C171	7+934.19	743626.0172	3993764.6723	7+913.74	743646.2968	3993762.0310	7+954.60	743606.1585	3993769.5586	365.64	40.86	20.451	6.4026	N79° 22' 41.23"A
C172	7+995.62	743566.3256	3993779.3596	7+988.50	743573.2369	3993777.6501	8+002.17	743562.0424	3993785.0438	20.00	13.68	7.117	39.1780	N56° 35' 18.07"A
C173	8+054.14	743530.7726	3993826.5422	8+046.36	743535.4538	3993820.3298	8+061.05	743523.0457	3993827.4367	18.16	14.70	7.779	46.3829	N60° 11' 24.78"W
C174	8+079.53	743504.6936	3993829.5681	8+071.59	743512.5791	3993828.6531	8+085.34	743503.0863	3993837.3421	10.99	13.75	7.938	71.7001	N47° 31' 53.80"W
C175	8+103.41	743499.4270	3993855.0408	8+094.35	743501.2627	3993846.1624	8+110.64	743490.8185	3993856.0616	12.51	15.89	9.066	71.8534	N47° 36' 29.87"W
C176	8+131.52	743469.0721	3993858.4805	8+121.43	743479.1040	3993857.3437	8+140.12	743464.0293	3993867.2271	20.00	18.70	10.096	53.5700	N56° 45' 00.11"W
C177	8+152.78	743457.7107	3993878.1968	8+147.37	743460.4121	3993873.5012	8+157.93	743453.0159	3993880.9722	20.00	10.56	5.409	30.2650	N45° 05' 51.10"W
C178	8+174.34	743438.7726	3993889.0196	8+167.31	743444.8720	3993885.5306	8+181.18	743434.5311	3993894.6218	34.38	13.86	7.027	23.1005	N48° 40' 47.22"W
C179	8+203.19	743421.2454	3993912.1698	8+194.80	743426.3089	3993905.4819	8+211.47	743414.5419	3993917.2126	60.00	16.67	8.388	15.9177	N45° 05' 18.16"W
C180	8+255.29	743379.5205	3993943.5579	8+246.51	743386.5369	3993938.2797	8+263.06	743378.6570	3993952.2953	20.00	16.55	8.780	47.4029	N29° 20' 44.66"W
C181	8+297.20	743375.2992	3993986.2709	8+284.93	743376.5062	3993974.0578	8+308.19	743365.8049	3993994.0473	29.60	23.27	12.273	45.0360	N28° 09' 44.25"W
C182	8+381.98	743308.7199	3994040.8036	8+375.49	743313.7448	3994036.8879	8+388.37	743302.6640	3994043.1518	40.72	12.88	6.495	18.1252	N59° 44' 34.56"W
C183	8+403.47	743288.5837	3994048.6117	8+397.10	743294.5259	3994046.3075	8+409.69	743283.9414	3994052.9784	32.71	12.59	6.373	22.0537	N57° 46' 43.30"W
C184	8+534.38	743193.1158	3994138.4131	8+523.56	743201.0010	3994130.9960	8+545.14	743183.9483	3994144.1705	111.22	21.58	10.825	11.1184	N52° 18' 39.80"W
C185	8+589.71	743146.2060	3994167.8735	8+580.70	743153.8290	3994163.0861	8+598.65	743137.8130	3994171.1273	94.01	17.95	9.002	10.3396	N63° 20' 24.26"W
C186	8+637.56	743101.5324	3994185.1924	8+630.60	743108.0217	3994182.6766	8+644.28	743094.6014	3994184.5569	20.67	13.67	6.960	26.4044	N82° 00' 43.36"W
C187	8+655.15	743083.7747	3994183.5718	8+644.32	743094.5624	3994184.5563	8+665.74	743073.3555	3994186.5360	58.18	21.42	10.833	21.0946	N84° 40' 00.89"W
C188	8+716.93	743024.1158	3994200.5441	8+706.09	743036.4660	3994197.0306	8+727.76	743019.9414	3994212.6868	24.59	23.67	12.840	55.1476	N46° 32' 44.31"A
C189	8+743.53	743014.8143	3994227.6005	8+732.59	743018.3710	3994217.2547	8+749.07	743004.9096	3994222.9547	9.82	16.49	10.940	96.1570	N67° 03' 01.85"A
C190	8+794.18	742964.0690	3994203.7984	8+783.15	742974.0617	3994208.4855	8+804.54	742953.1801	3994205.6389	35.30	21.39	11.037	34.7279	S82° 14' 05.85"W
C191	8+845.28	742913.0193	3994212.4318	8+835.28	742922.8736	3994210.7653	8+852.72	742911.2272	3994222.2643	14.26	17.43	9.994	70.0484	N45° 22' 36.80"W
C192	8+869.45	742908.2172	3994238.7183	8+862.65	742900.4303	3994232.0782	8+876.10	742905.1751	3994244.7455	46.82	13.41	6.750	16.4064	N18° 33' 21.27"W

  
**Project Director (PIU)**  
 Provincial Roads Improvement Project  
 C&W Department, Peshawar.



<b>CLIENT:</b> GOVERNMENT OF KHYBER PAKHTUNKHWA  COMMUNICATION & WORKS DEPARTMENT	<b>DESIGN CONSULTANT:</b> (MIN - JV - CEC)  MINCONSULT SDN BHD (COMPANY NO. 58035-P) JV CREATIVE ENGINEERING	<b>REV</b> 2 1 1	<b>DATE</b> AUGUST, 2024	<b>DESCRIPTION</b> TENDER DRAWINGS	<b>NAMES:</b>		<b>PROJECT:</b> KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	<b>ROAD NAME:</b> N-CHT-5 ARKARI VALLEY ROAD	<b>SCALE:</b> N.T.S.  DATE: A.M.C.	<b>SHEET CONTENT:</b> HORIZONTAL CURVE DATA
					G.DESIGNED	REHMAT				
					DRAWN	INAM ULLAH				
					CHECKED	S.DURRANI				



Curve Table: Alignments

Curve #	PI Station	PI Easting	PI Northing	PC Station	PC Easting	PC Northing	PT Station	PT Easting	PT Northing	Radius	Length	Tangent Length	Delta Angle	Chord Direction
C193	8+896.51	742895.9896	3994262.9680	8+891.79	742898.1157	3994258.7515	8+901.20	742894.6904	3994267.5079	50.00	9.42	4.722	10.7903	N21° 21' 50.22"W
C194	8+922.04	742888.9594	3994287.5354	8+917.12	742890.3124	3994282.8073	8+926.76	742885.5680	3994291.0370	20.00	9.64	4.818	27.6295	N29° 47' 00.74"W
C195	8+991.84	742840.6878	3994338.2287	8+978.00	742850.2367	3994328.2608	9+005.40	742835.0266	3994350.8656	80.73	27.43	13.847	19.4665	N33° 51' 54.15"W
C196	9+075.02	742606.5727	3994414.3805	9+050.63	742812.8639	3994400.3372	9+089.69	742794.0710	3994423.3531	57.03	30.06	15.388	30.2011	N39° 13' 56.37"W
C197	9+133.71	742758.3122	3994449.0174	9+126.86	742763.8794	3994445.0217	9+140.36	742751.6042	3994450.4184	32.42	13.51	6.853	23.8700	N66° 16' 04.31"W
C198	9+159.50	742732.6743	3994454.3303	9+150.87	742741.3236	3994452.5656	9+167.99	742725.3625	3994458.5822	55.39	17.13	8.632	17.7142	N69° 20' 44.75"W
C199	9+179.43	742715.4055	3994464.2182	9+170.74	742722.9698	3994459.9366	9+187.95	742706.8347	3994465.6653	49.48	17.21	8.692	19.9217	N70° 27' 09.04"W
C200	9+222.28	742672.9995	3994471.3782	9+210.02	742685.0770	3994469.3390	9+233.43	742665.3158	3994480.9167	32.28	23.41	12.248	41.5634	N59° 38' 04.79"W
C201	9+304.31	742620.8499	3994538.1166	9+291.33	742628.9916	3994528.0096	9+316.95	742617.2024	3994548.5719	65.16	25.62	12.978	22.5303	N27° 35' 16.13"W
C202	9+342.01	742610.1597	3994572.6207	9+328.85	742613.8587	3994559.9896	9+354.47	742600.2594	3994581.2932	45.21	25.62	13.162	32.4595	N32° 33' 08.76"W
C203	9+373.78	742585.7340	3994594.0172	9+366.70	742591.0587	3994580.3528	9+380.71	742582.3564	3994600.2383	39.57	14.01	7.079	20.2835	N38° 38' 25.65"W
C204	9+455.66	742546.5920	3994666.1116	9+447.93	742550.2520	3994659.3150	9+463.37	742543.9062	3994673.3640	108.19	15.44	7.734	8.1775	N24° 24' 35.95"W
C205	9+480.17	742538.0712	3994669.1200	9+473.19	742540.4967	3994662.5708	9+486.97	742533.2759	3994694.1978	34.27	13.78	6.984	23.0401	N31° 50' 28.99"W
C206	9+540.78	742496.3262	3994733.3236	9+530.12	742503.6504	3994725.5683	9+551.33	742491.2901	3994742.7275	80.00	21.21	10.567	15.1902	N35° 45' 58.31"W
C207	9+587.81	742474.0672	3994774.8870	9+576.40	742479.4520	3994764.8323	9+599.06	742466.0593	3994783.0090	79.03	22.66	11.406	16.4239	N36° 22' 59.97"W
C208	9+674.98	742412.7572	3994837.0751	9+664.50	742420.1130	3994829.6095	9+685.36	742407.3830	3994846.0800	86.70	20.87	10.484	13.7896	N37° 42' 00.69"W
C209	9+702.04	742398.8411	3994860.4061	9+692.61	742403.6737	3994852.3011	9+711.40	742392.3472	3994867.2527	84.93	18.80	9.436	12.6802	N37° 08' 43.73"W
C210	9+752.07	742364.3628	3994896.7570	9+743.95	742369.9484	3994890.8701	9+760.14	742359.8352	3994903.4900	96.96	16.19	8.114	9.5668	N38° 42' 07.83"W
C211	9+818.19	742327.4464	3994951.6555	9+808.74	742332.7161	3994943.8189	9+827.43	742325.2561	3994960.8416	52.20	16.69	9.444	20.5075	N23° 39' 54.00"W
C212	9+949.20	742297.0115	3995079.2967	9+938.37	742293.5245	3995068.7574	9+959.57	742299.9401	3995089.7282	41.76	21.20	10.855	29.0928	N1° 08' 06.63"E
C213	10+002.23	742311.4704	3995130.7993	9+974.92	742304.0875	3995104.3015	10+029.45	742314.9242	3995157.8945	371.18	54.53	27.314	6.4174	N11° 28' 22.46"E
C214	10+098.96	742323.7160	3995226.8667	10+077.93	742321.0545	3995206.9875	10+109.87	742302.6820	3995227.6395	19.23	31.94	21.048	95.1601	N40° 18' 56.89"W
C215	10+126.02	742286.5441	3995228.2304	10+117.32	742295.2411	3995227.9129	10+133.74	742280.8501	3995234.8142	20.00	16.42	8.703	47.0321	N64° 22' 47.18"W

Project Director (P/W)  
Provincial Road's Improvement  
C&W Department, Peshawar





CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT	DESIGN CONSULTANT: (MIN - JV - CEC) MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		1	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S.DURRANI	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S DATE: M/C	HORIZONTAL CURVE DATA

S/NO	Easting	Northing	Elevation
A1	3989298.411	745257.65	1852.688
A2	3989281.59	745720.355	1849.659
A3	3989436.825	746118.412	1843.248
A4	3989587.032	746558.048	1851.882
A5	3990030.654	746587.555	1862.496
A6	3990324.302	746540.506	1868.248
A7	3990718.87	746499.568	1871.796
A8	3991043.167	746132.262	1894.938
A9	3991120.408	745563.522	1941.825
A10	3991259.802	745169.038	1984.327
A11	3991457.319	744683.025	1992.147
A12	3991852.324	744500.798	1997.624
A13	3992432.208	744219.013	2038.553
A14	3992863.09	743950.378	2048.814
A15	3993288.002	743829.677	2070.426
A16	3993585.677	743682.009	2124.177
A17	3993826.581	743512.594	2159.048
A18	3993840.007	743499.872	2158.816
A19	3994227.507	742992.442	2163.321
A20	3994634.737	742581.285	2170.239
A21	3994652.789	742560.253	2170.91
A22	3994191.564	743049.095	2160.727
A23	3994094.993	743238.474	2158.681
A24	3994049.74	743289.804	2155.941
A25	3994045.955	743288.535	2155.923



Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



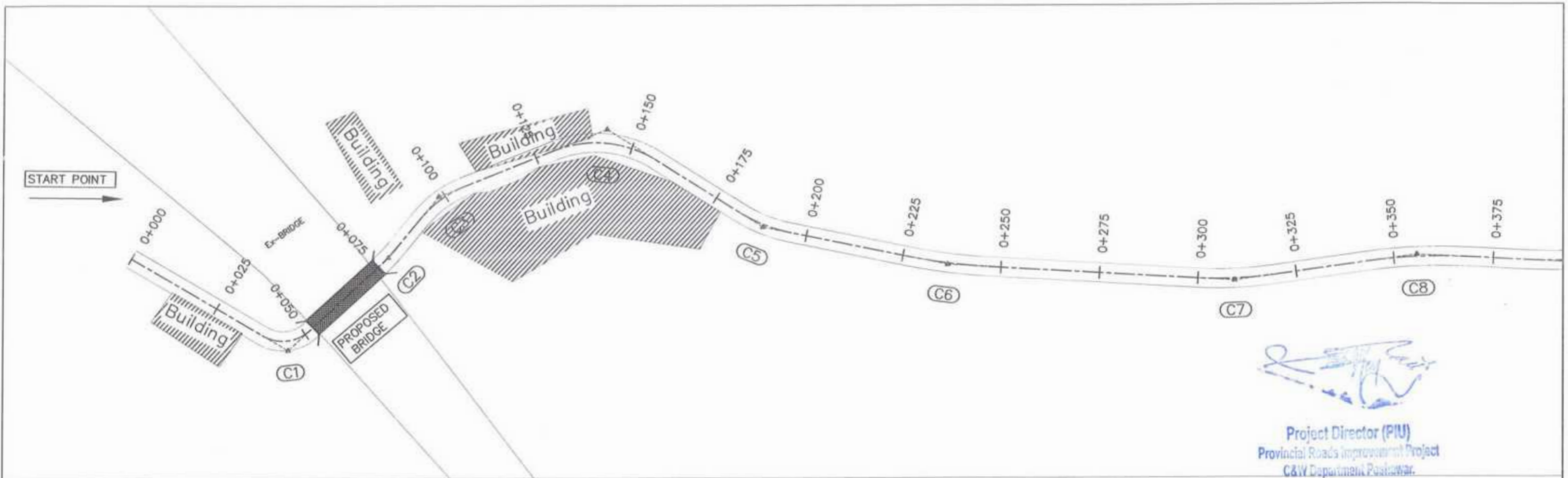
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 <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS	 <b>MINCONSULT SDN BHD</b> (COMPANY NO. 56935-P) J.V.	0	AUGUST, 2024	TENDER DRAWINGS	G.DESIGNED: REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	N.T.S	BM LIST
		0			DRAWN: INAM ULLAH			DATE:	
					CHECKED: S.DURRANI				



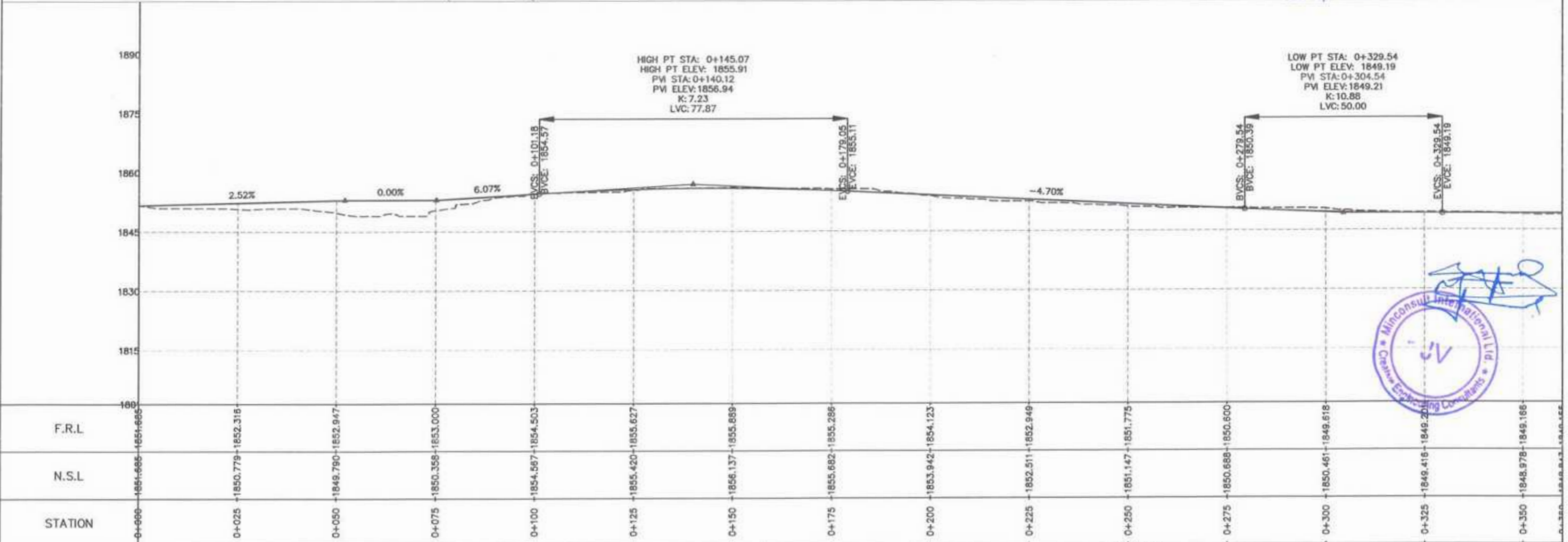
# PLAN & PROFILE DRAWINGS

  
Project Director  
Provincial Roads Improvement Project  
C&W Department Postswar






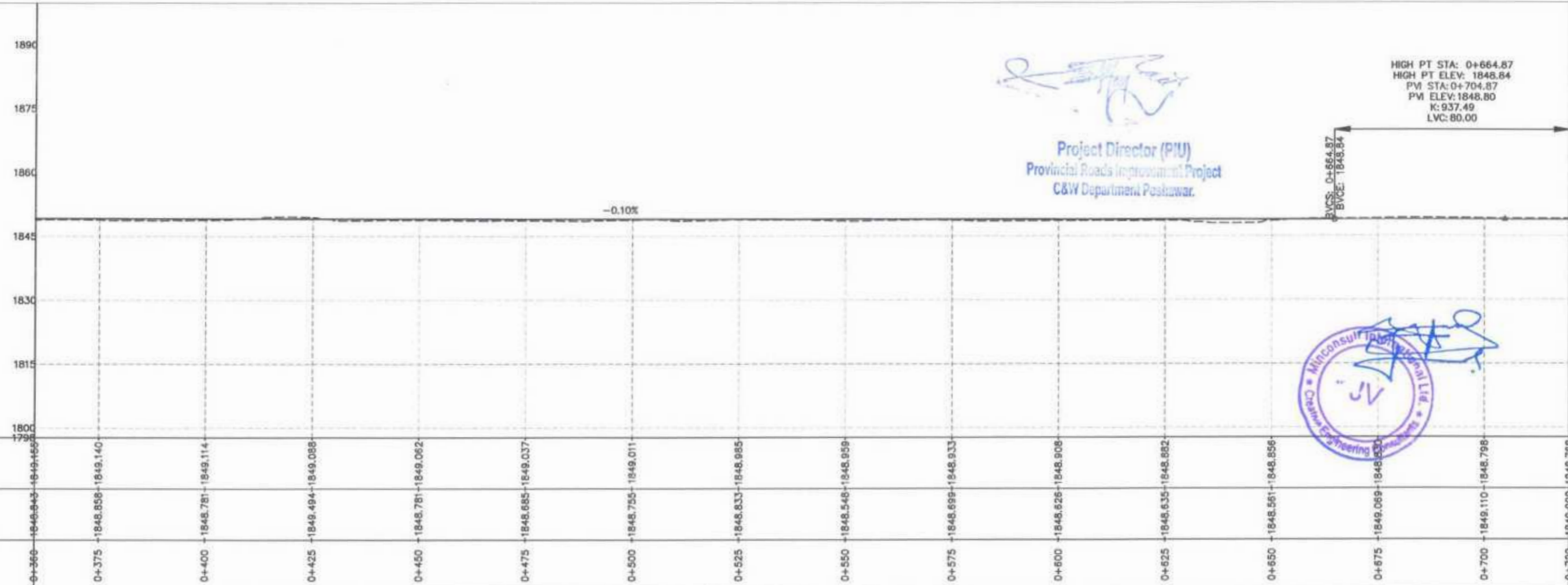


  
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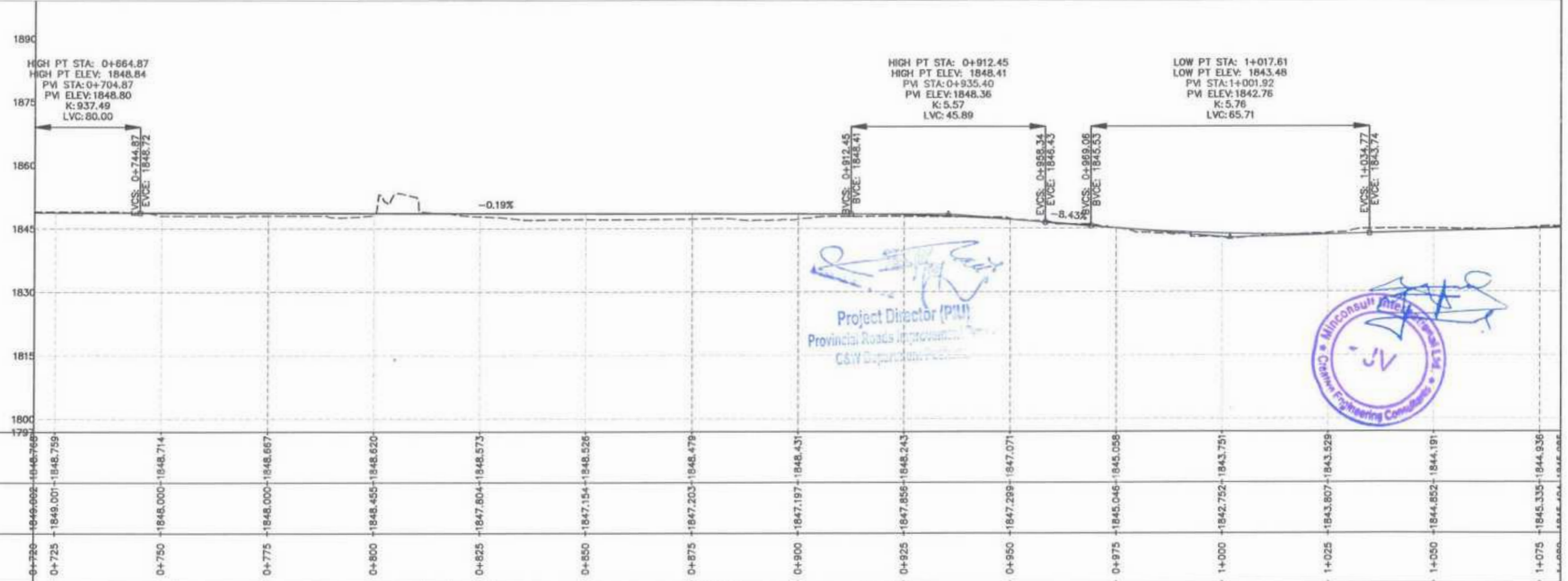
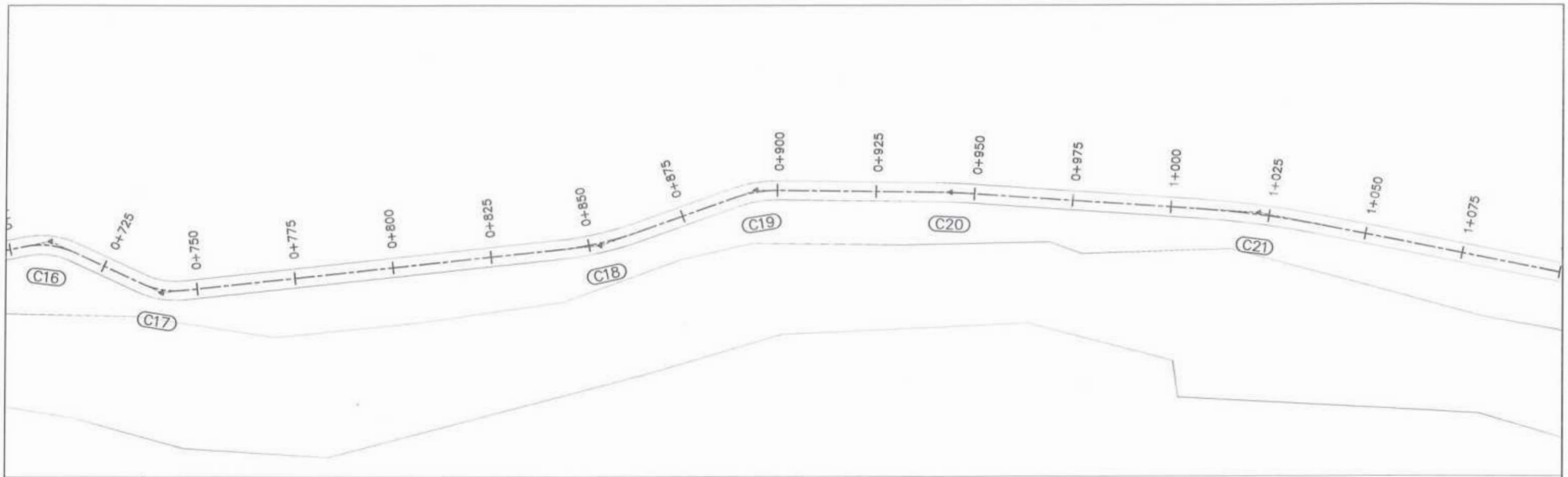



CLIENT:  <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: (MIN - JV - CEC)  <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V.  <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings	G.DESIGNED	REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000
a			DRAWN	INAM ULLAH	DATE:	Aug 2024			DWG NO: CEC/RRDP/N-CHT-5/PP/1
			CHECKED	S-DURRANI	APPROVED	AQFEL YOUSUF			



CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings	G.DESIGNED: REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000	PLAN & PROFILE 0+360.00 - 0+720.00
		a			DRAWN: INAM ULLAH			DATE: Aug 2024	
		b			CHECKED: S-DURRANI				

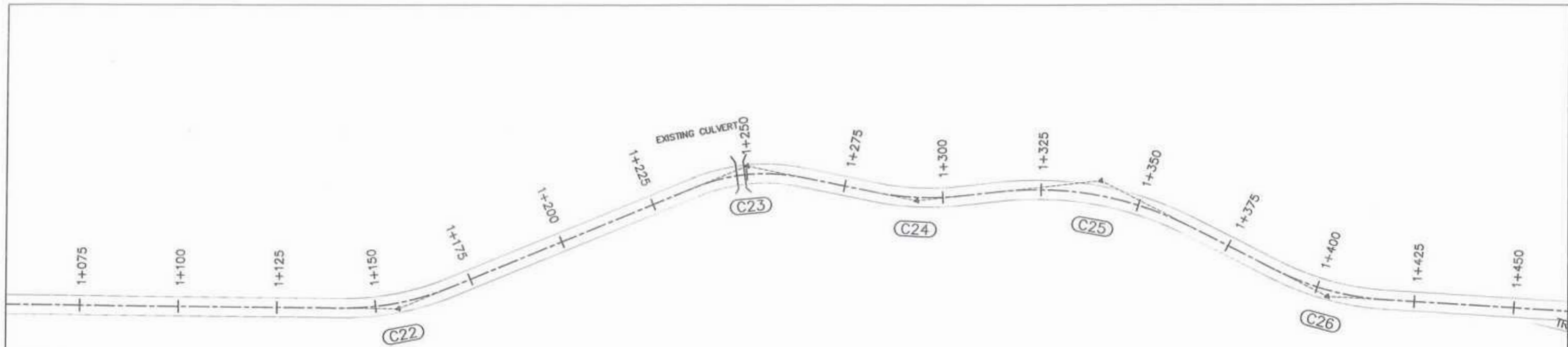


Project Director (PIU)  
 Provincial Roads Department  
 G.W. Department

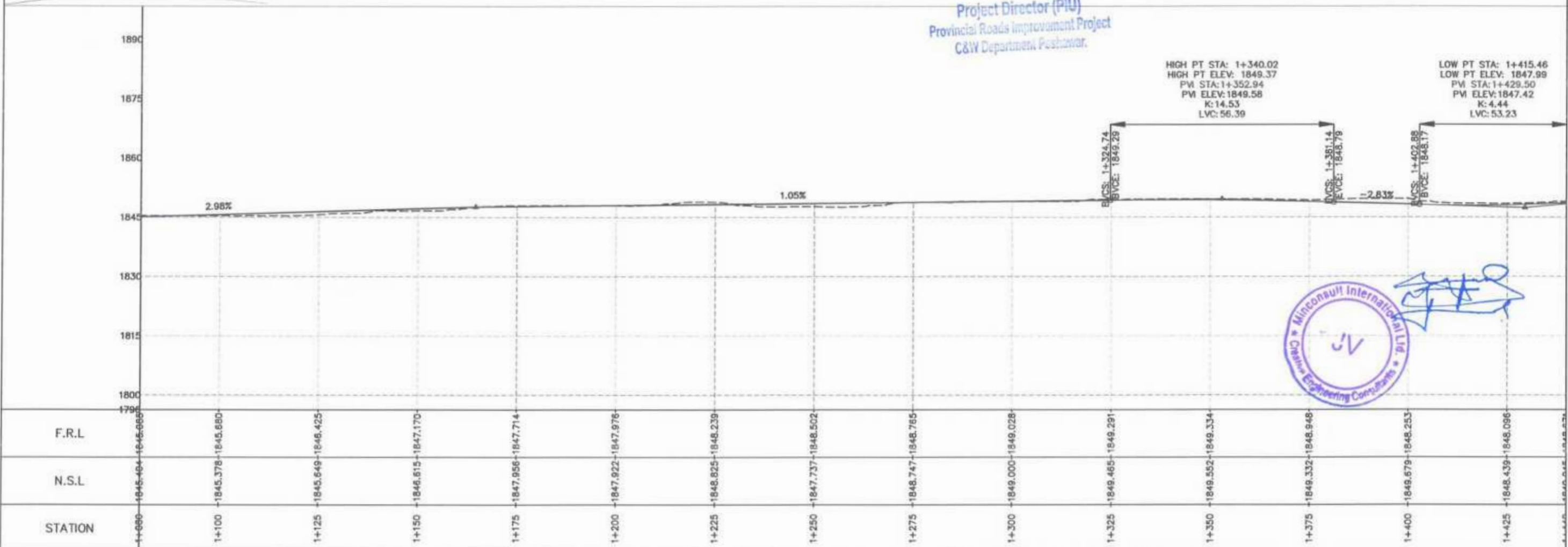


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N.S.L	1846.002	1849.001	1848.000	1848.667	1848.455	1848.620	1847.804	1848.573	1847.154	1848.526	1847.203	1848.479	1847.197	1848.431	1847.856	1848.243	1847.289	1847.071	1845.046	1845.058	1842.752	1843.751	1843.807	1843.529	1844.852	1844.191	1845.335	1844.936
STATION	0+725	0+725	0+750	0+775	0+800	0+825	0+850	0+875	0+900	0+925	0+950	0+975	1+000	1+025	1+050	1+075												

CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: (MIN - JV - CEC)  MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings	G.DESIGNED	REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000 DATE: Aug 2024	PLAN & PROFILE 0+720.00 - 1+080.00 DWG NO: CEC/HWRRDP/N-CHT-5/PP/
a			DRAWN	INAM ULLAH						
b			CHECKED	S-DURRANI						
-			APPROVED	AQEEL YOUNIS						



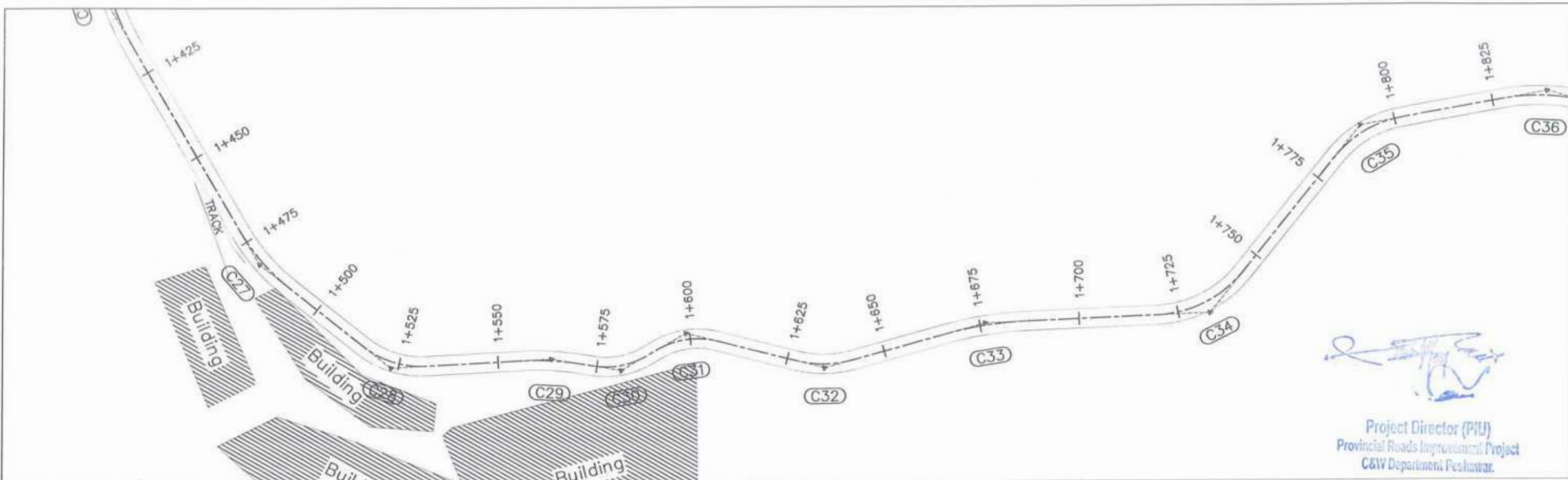
*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



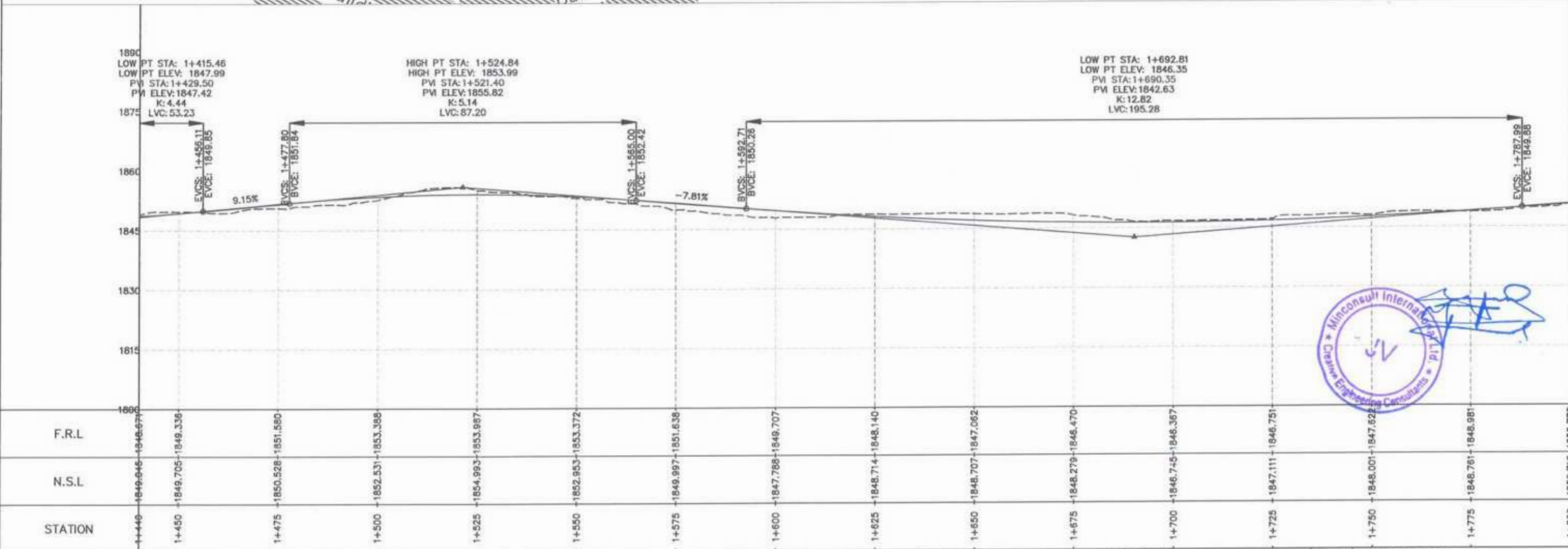
*[Signature]*  
 Minconsult International Pvt. Ltd.  
 Creative Engineering Consultants




CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: MINCONSULT SDN BHD (COMPANY NO. 5835-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings	G.DESIGNED	REHMAT				
a			DRAWN	INAM ULLAH	PROJECT IMPLEMENTATION UNIT (PIU)	PROJECT IMPLEMENTATION UNIT (PIU)	Aug 2024	PIU NO. CEC/ARRDP/RRDP/N-CHT-5/001		
b			CHECKED	S-DURRANI						

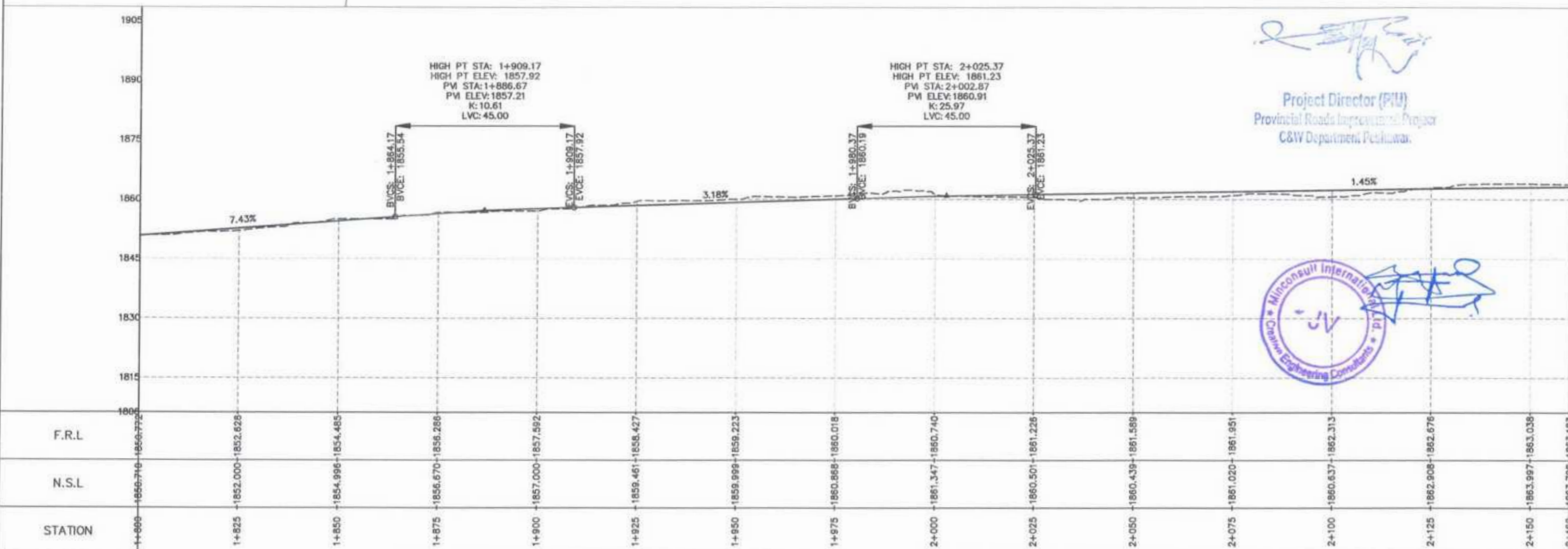
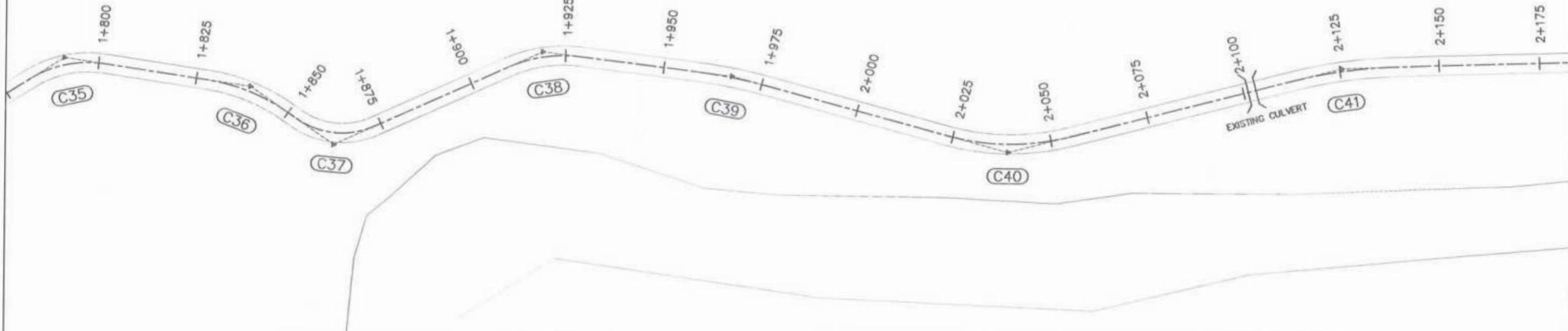




  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.






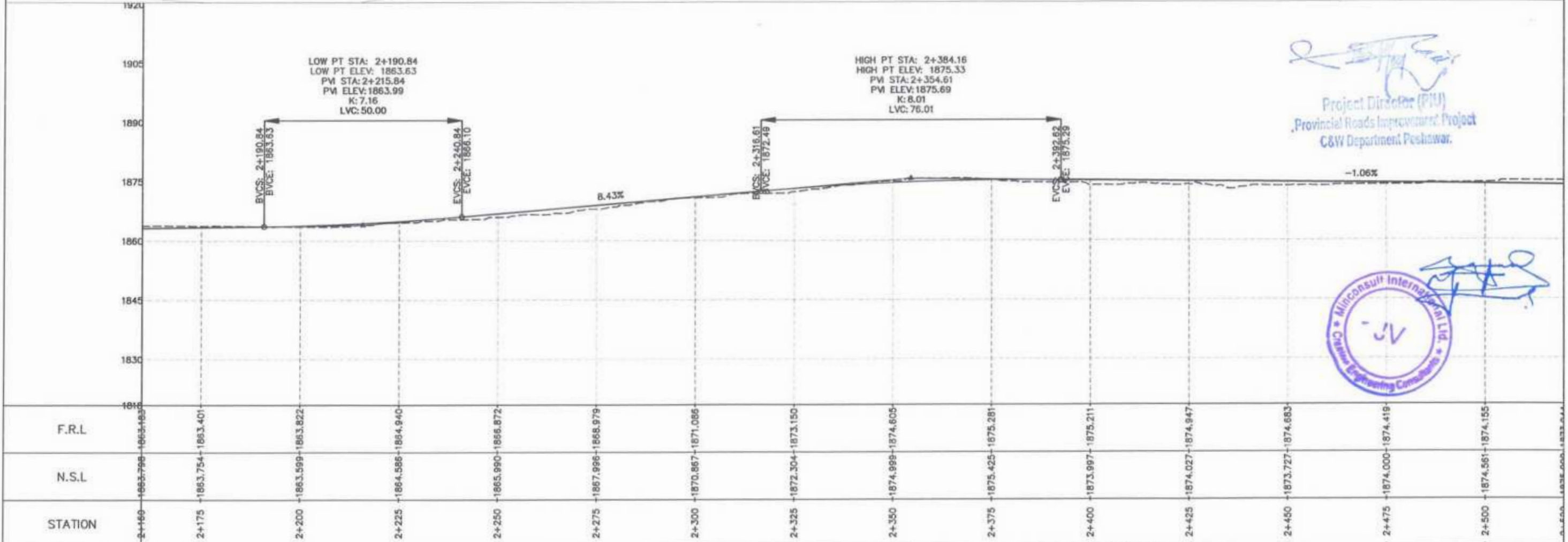
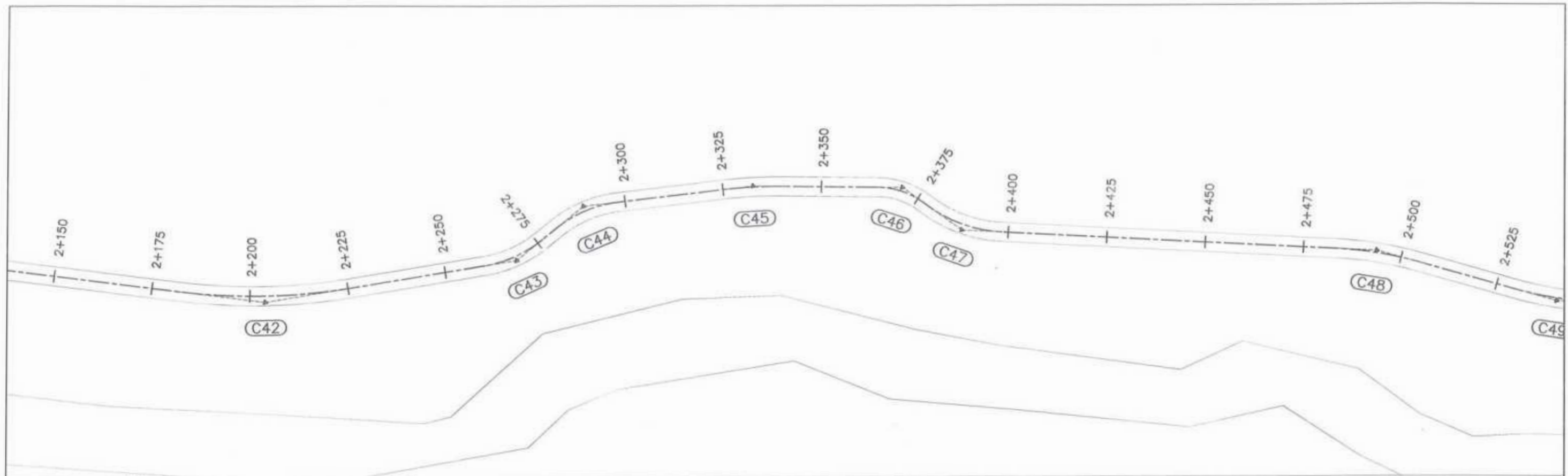
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 GOVERNMENT OF KHYBER PAKHTUNKHWA  COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	 MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.   CREATIVE ENGINEERING CONSULTANTS (CEC)	0	Aug 2024	Tender Drawings.	G.DESIGNED REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5	H=1:1000	PLAN & PROFILE 1+440.00 - 1+800.00  DWG NO: CEC/R/RRDP/N-CHT-5/PP/ 5
		a			DRAWN INAM ULLAH		ARKARI VALLEY ROAD	DATE:	
		b			CHECKED S-DURRANI		FLOOD AFFECTED	Aug 2024	
					APPROVED AQEEL YOUNIS				



  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



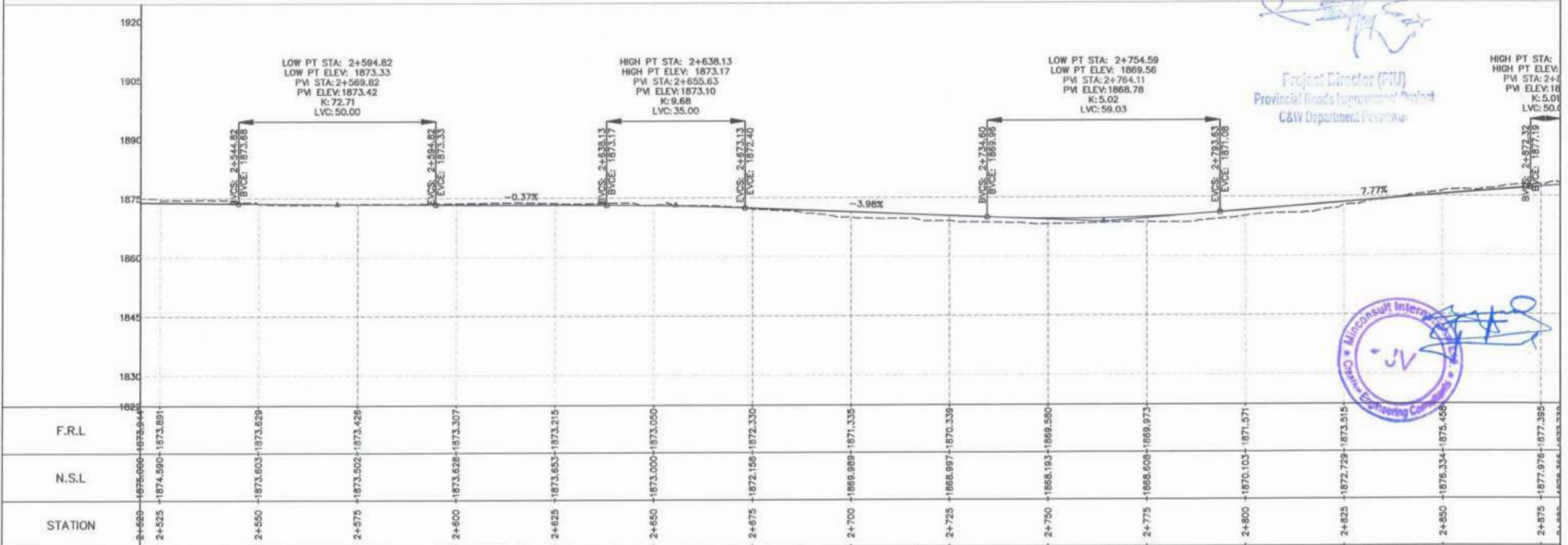
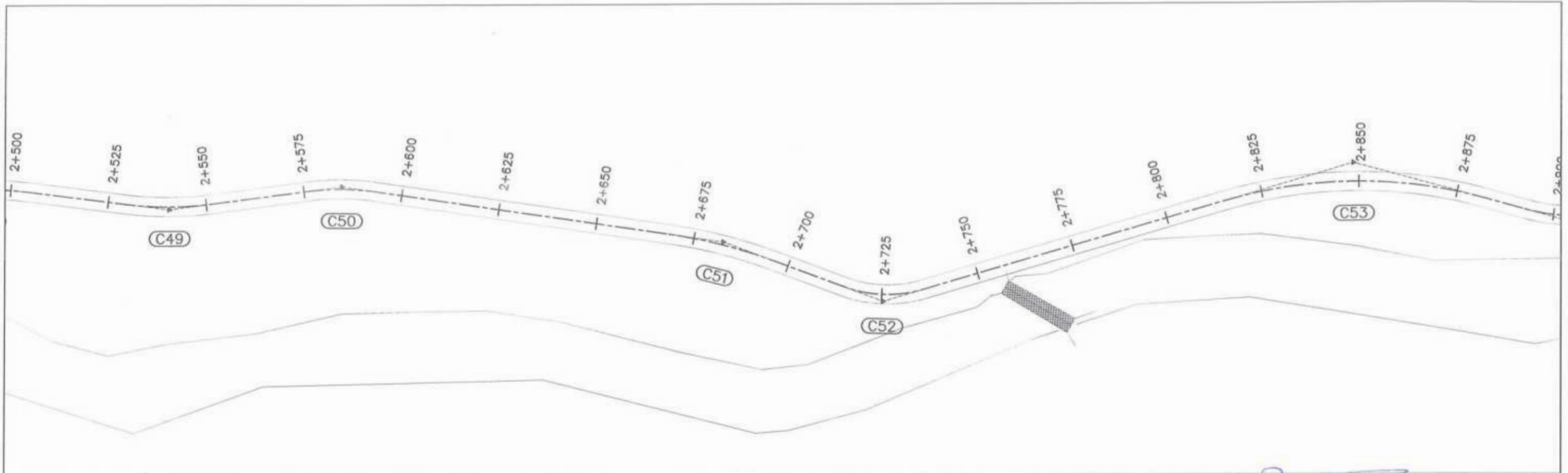
CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:	
 GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	 MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)	0	Aug 2024	Tender Drawings.	G.DESIGNED	REHMAT	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000	PLAN & PROFILE 1+800.00 - 2+160.00	
		a			DRAWN	INAM ULLAH		KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)		DATE:
		b			CHECKED	S-DURRANI				Aug



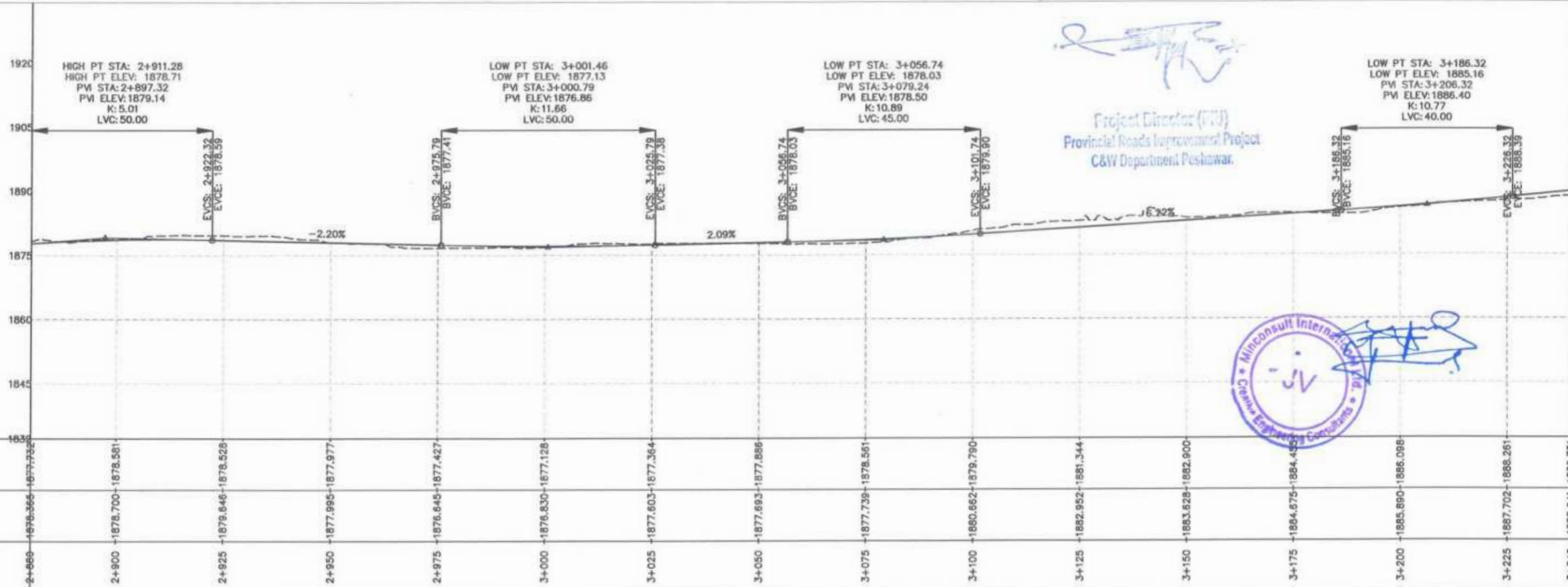
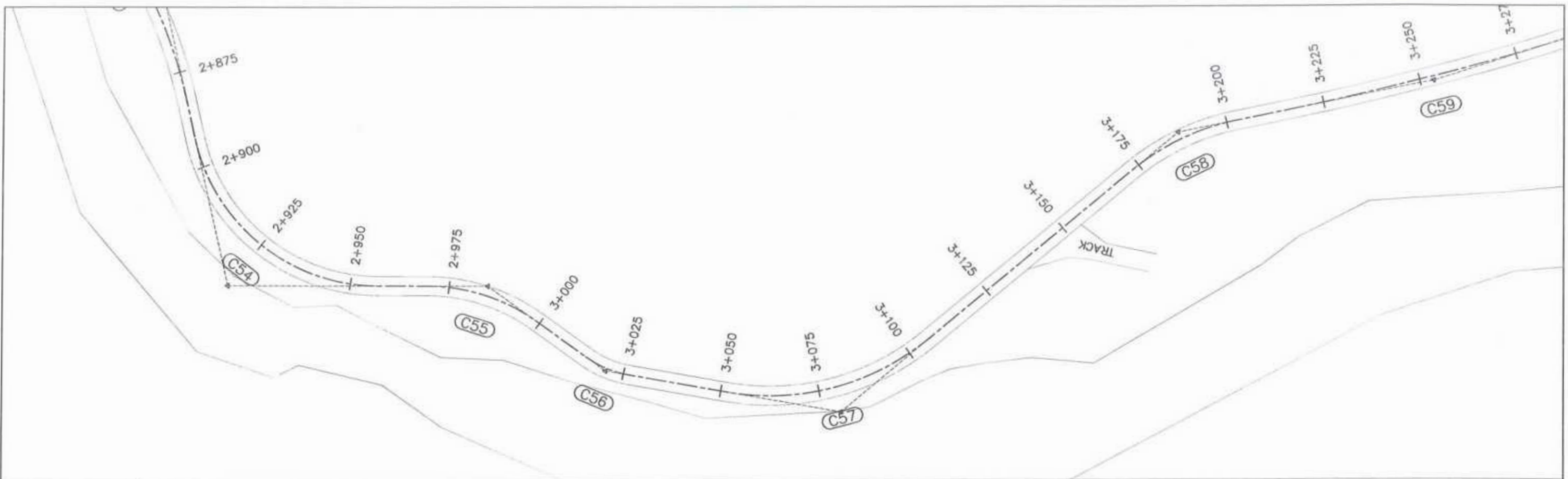
*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58935-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:				
		0	Aug 2024	Tender Drawings.	G. DESIGNED	REHMAT					KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000 DATE: Aug 2024	PLAN & PROFILE 2+160.00 - 2+520.00 DWG NO: CEC/WR/RRDP/N-CHT-5/PP/1
		a			DRAWN	INAM ULLAH								
b			CHECKED	S-DURRANI										






CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA  COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	MINCONSULT SDN BHD (COMPANY NO. 56835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)	0	Aug 2024	Tender Drawings.	G.DESIGNED REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5	H=1:1000	PLAN & PROFILE 2+520.00 - 2+880.00  DWG NO. CEC/WR/RRDP/N-CHT-5/PP/ 8
		a			DRAWN INAM ULLAH		ARKARI VALLEY ROAD	DATE:	
		b			CHECKED S-DURRANI		FLOOD AFFECTED	Aug 2024	
		-			APPROVED AQEEL YOUNIS				



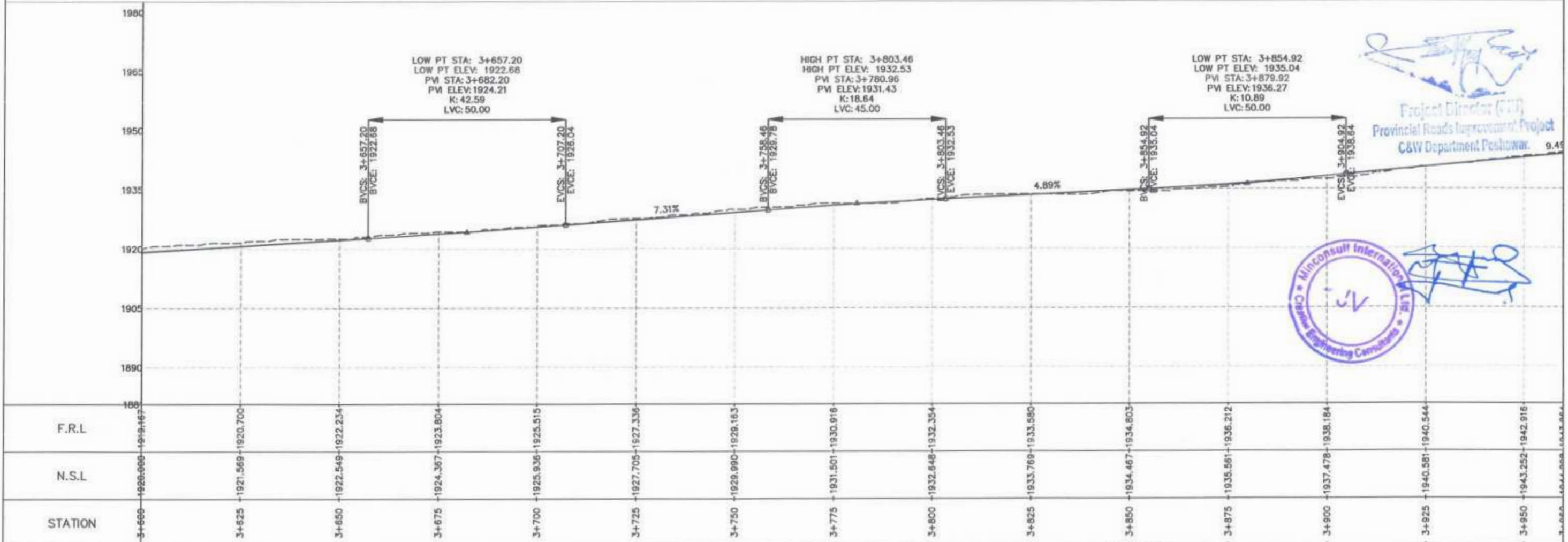
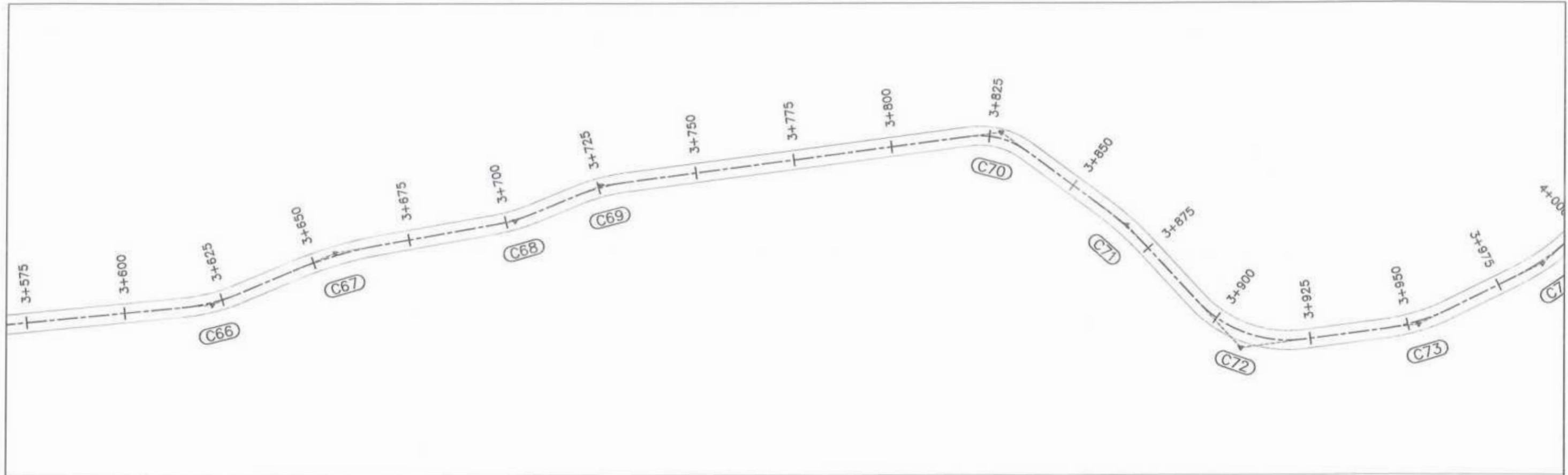
  
 Project Director (PVI)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



F.R.L	1875.332	1878.581	1878.528	1877.977	1877.427	1876.128	1877.364	1877.886	1877.561	1879.790	1881.344	1882.900	1884.433	1886.088	1888.261
N.S.L	1878.366	1878.700	1878.646	1877.995	1876.645	1876.830	1877.603	1877.693	1877.739	1880.662	1882.952	1883.628	1884.575	1885.890	1887.702
STATION	2+880	2+900	2+925	2+950	2+975	3+000	3+025	3+050	3+075	3+100	3+125	3+150	3+175	3+200	3+225

CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
 <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	 <b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V.  <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S-DURRANI APPROVED: AQUEEL YOUSUF	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000 DATE: Aug 2024	PLAN & PROFILE 2+880.00 - 3+240.00 DWG NO: CECAR/RW/RRDP/N-CHT-5/PP/

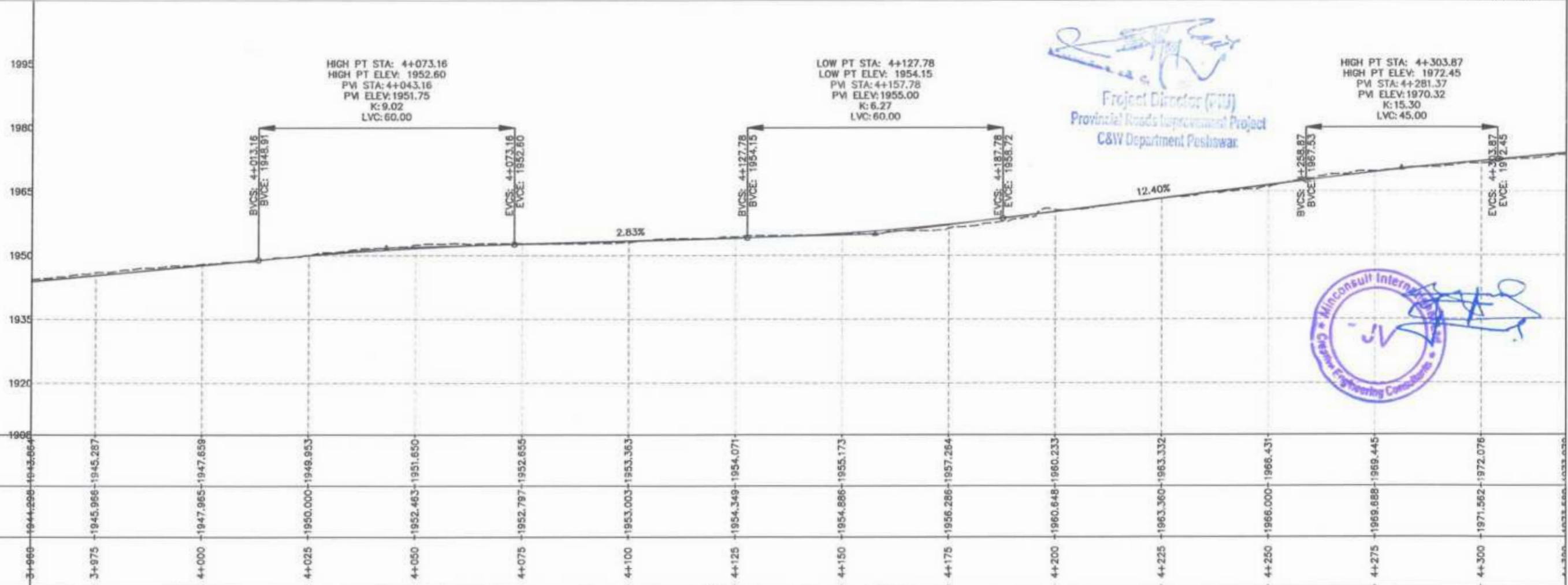
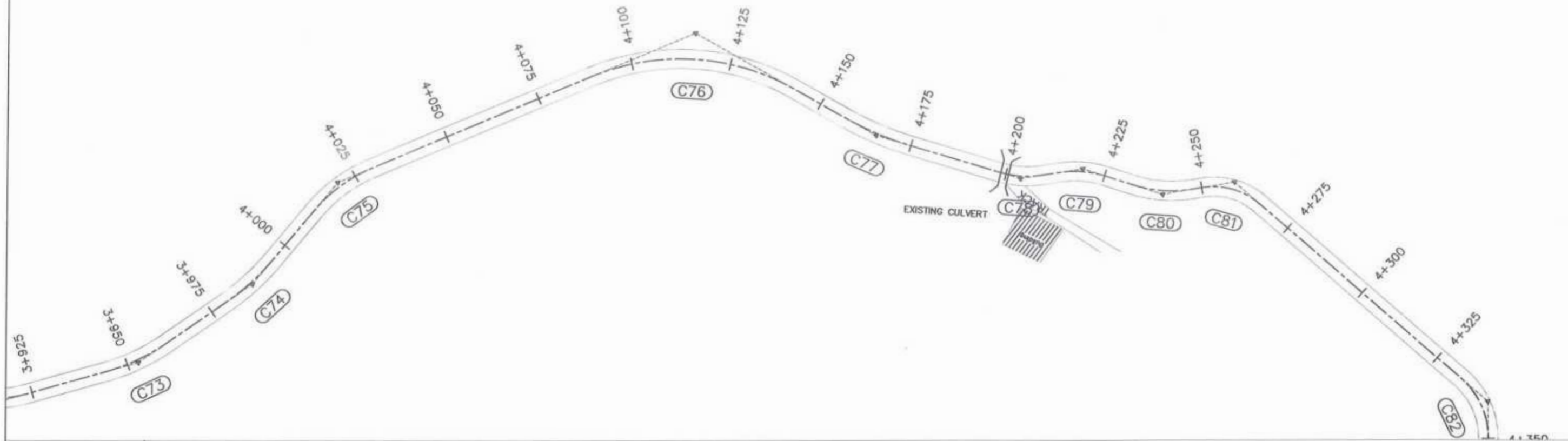




Project Director (C&W)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:	
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	0	Aug 2024.	Tender Drawings.	G. DESIGNED	REHMAT	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000	PLAN & PROFILE 3+600.00 - 3+960.00	
		a			DRAWN	INAM ULLAH		KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)		DATE:
		b			CHECKED	S-DURRANI				Aug 2024
			APPROVED	AMEEL YOUSUF	DWG NO: CEC/ARRRDP/N-CHT-5/PP/11					

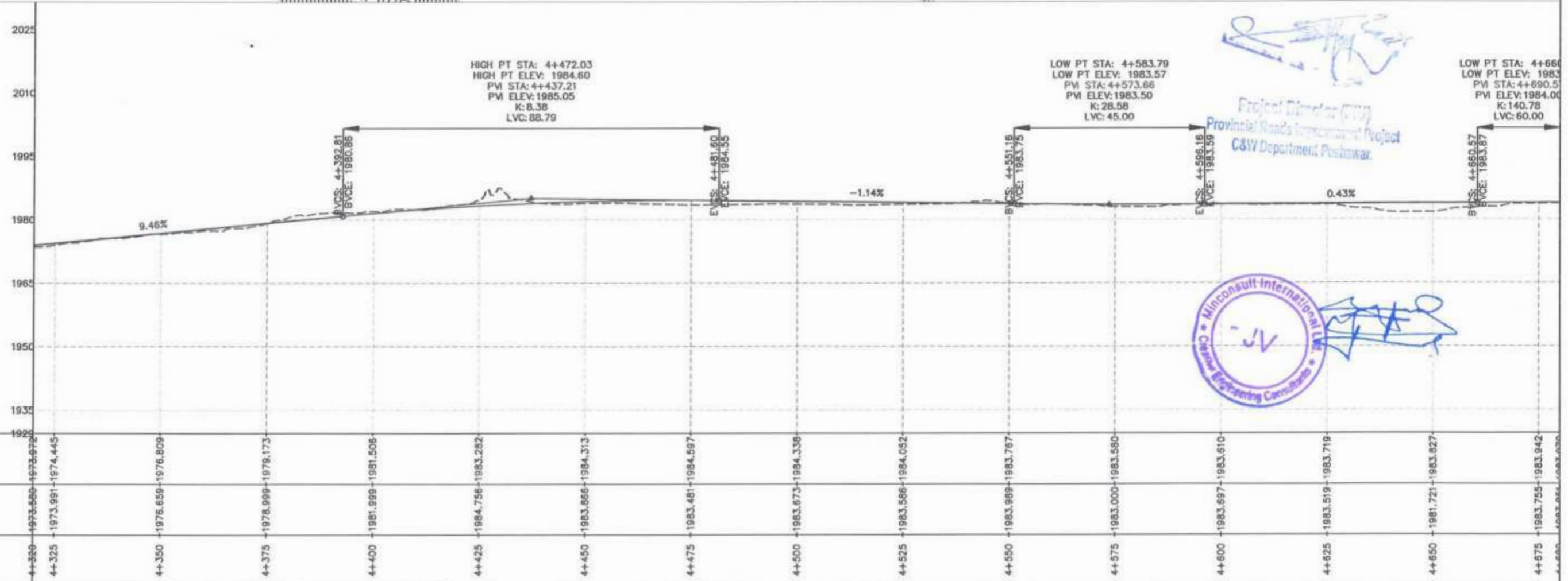
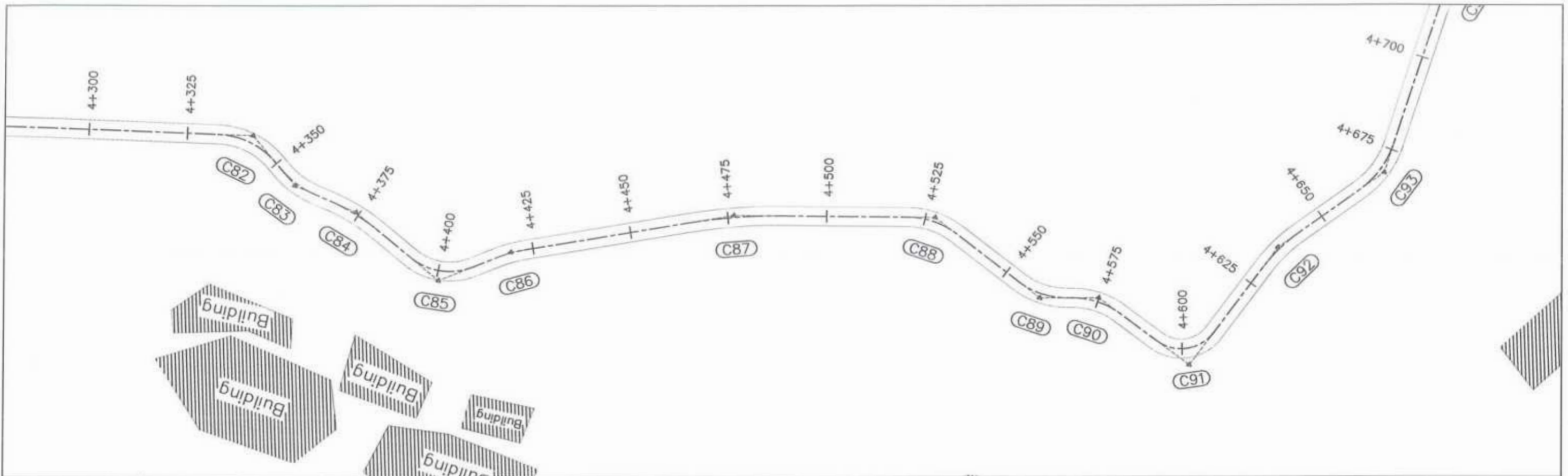


Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar



<p>GOVERNMENT OF KHYBER PAKHTUNKHWA          COMMUNICATION &amp; WORKS DEPARTMENT          PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD          (COMPANY NO. 58835-P)          J.V.          CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings	G.DESIGNED REHMAT DRAWN INAM ULLAH CHECKED S-DURRANI APPROVED AQEEL YOUNIS	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000 DATE: Aug 2024	PLAN & PROFILE 3+960.00 - 4+320.00 DWG NO: CEC/MW/RRDP/N-CHT-5/PP/12

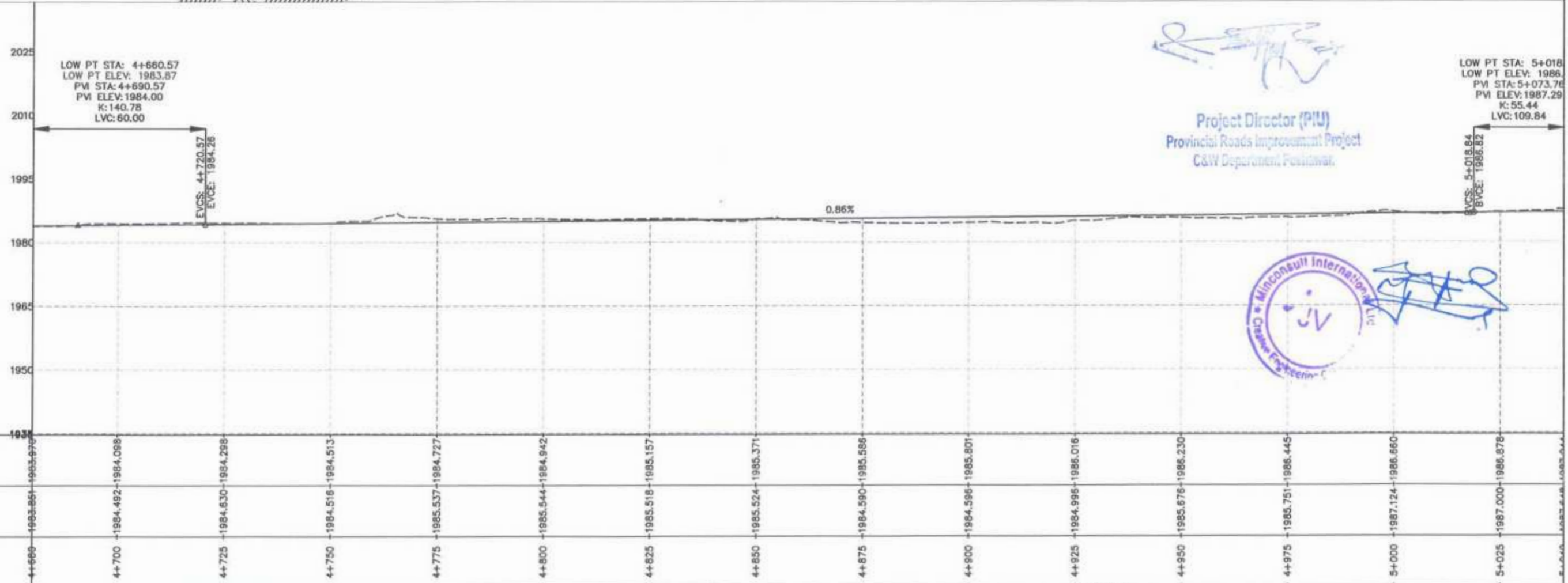
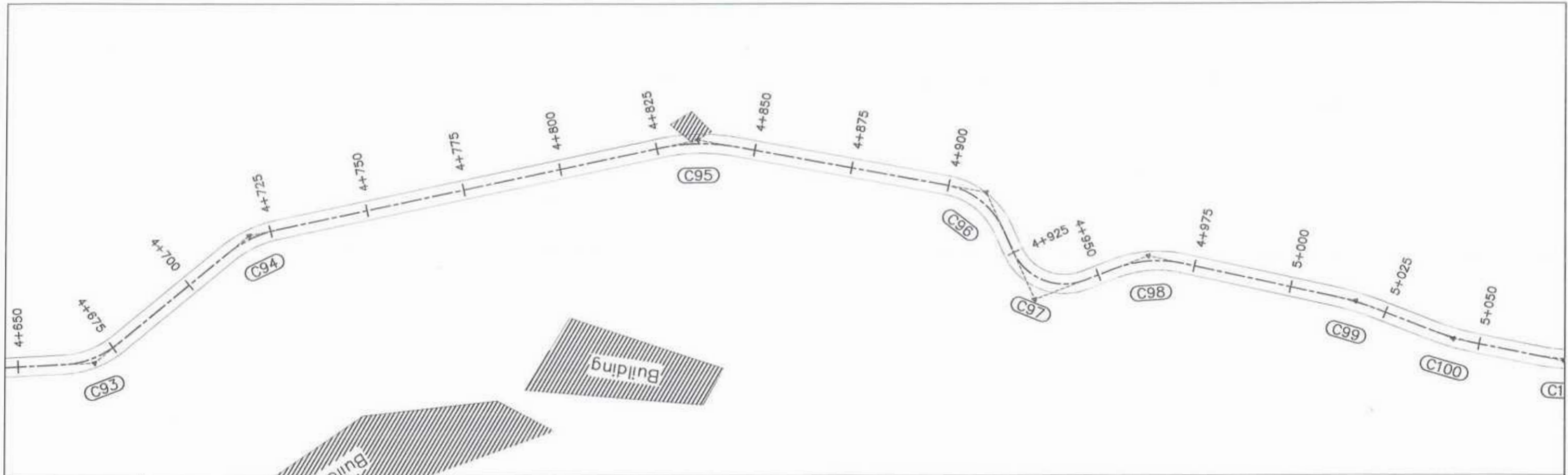




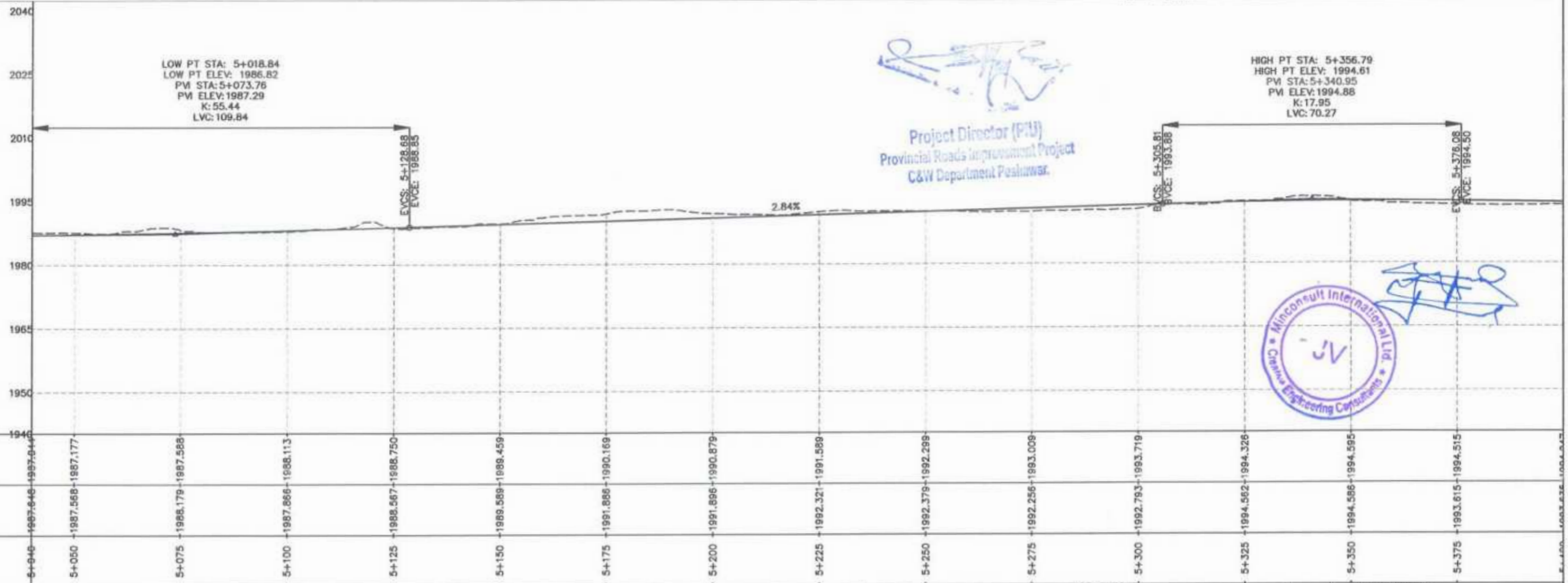
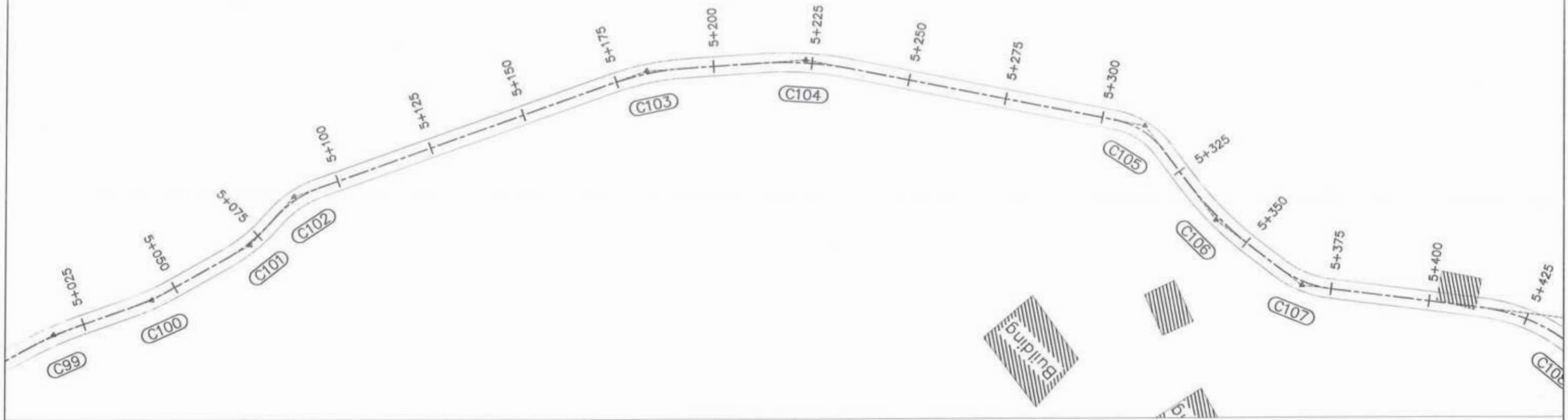
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department, Peshawar.

Minconsult International Ltd.  
Creative Engineering Consultants

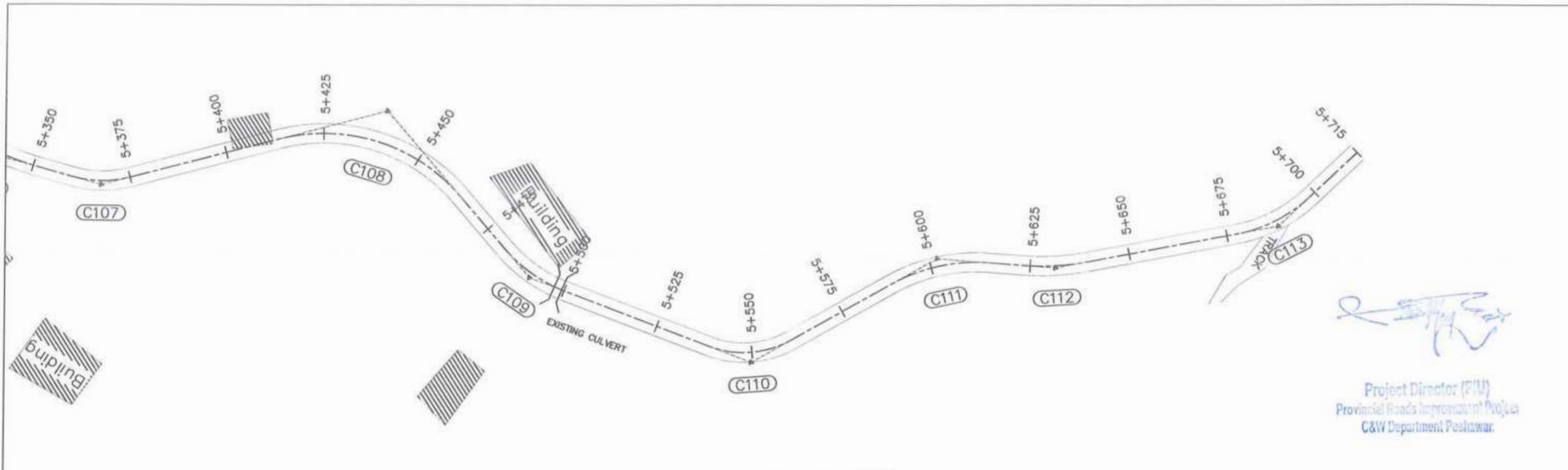
CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	0	Aug 2024	Tender Drawings.	G.DESIGNED REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000	PLAN & PROFILE 4+320.00 - 4+680.00 DWG NO: CECAR/RRDP/N-CHT-5/PPV 13
		a			DRAWN INAM ULLAH			DATE:	
		b			CHECKED S-DURRANI			Aug 2024	
					APPROVED ADFEL YOUNIS				



CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> <small>(COMPANY NO. 58835-P)</small> J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings.	G.DESIGNED REHMAT	<b>KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)</b>	<b>N-CHT-5</b> <b>ARKARI VALLEY ROAD</b> <b>FLOOD AFFECTED</b>	H=1:1000	<b>PLAN &amp; PROFILE</b> 4+680.00 - 5+040.00
		a			DRAWN INAM ULLAH				
		b			CHECKED S-DURRANI				
					ACEEL YOUSUF			Aug 2024	DWG NO: CEC/RRDP/N-CHT-5/PP/14



CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings	G.DESIGNED REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5	H=1:1000	PLAN & PROFILE 5+040.00 - 5+400.00  DWG NO: CEC/HWRRDP/N-CHT-5/PP/ 15
		a			DRAWN INAM ULLAH		ARKARI VALLEY ROAD	DATE: Aug 2024	
		b			CHECKED S-DURRANI		FLOOD AFFECTED		
					APPROVED AOFFI YOUSUF				



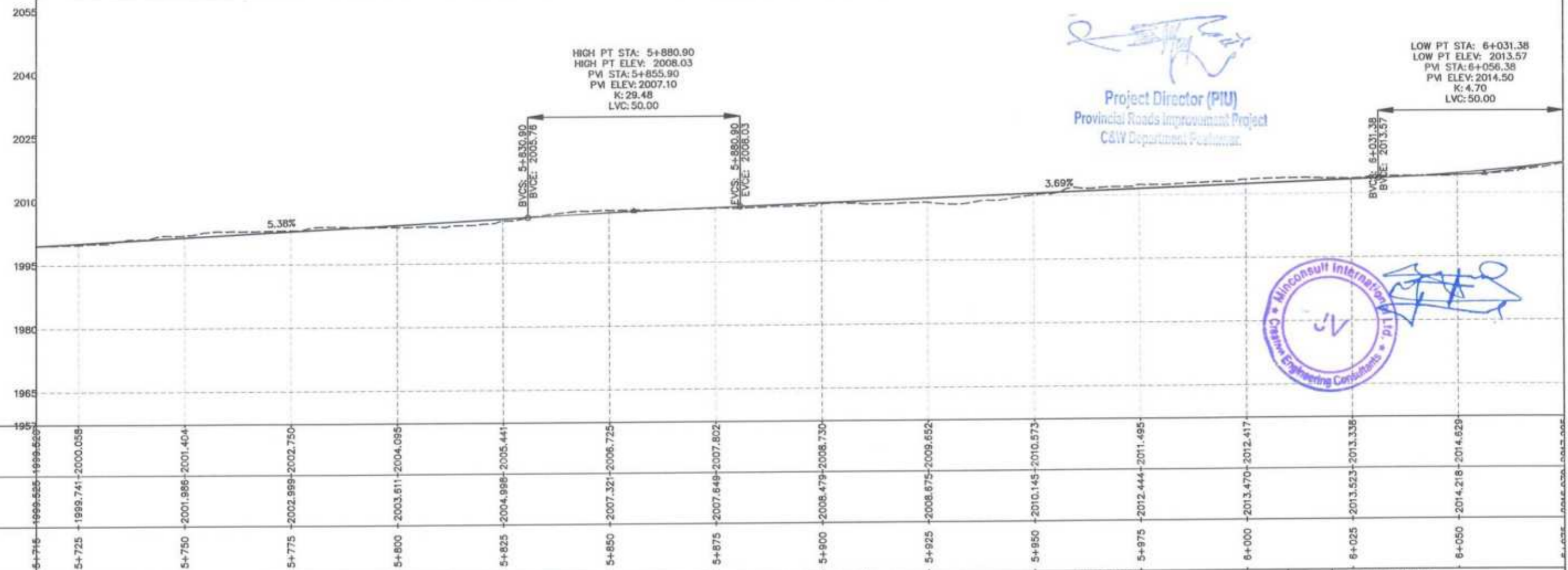
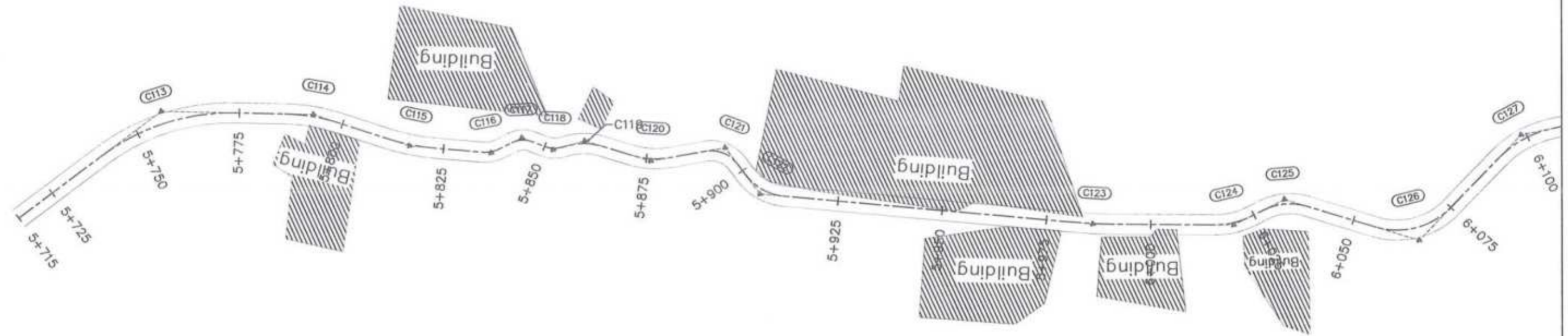
*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar



*[Signature]*  
 Minconsult International P.L.C.  
 Creative Engineering Consultants P.L.C.

F.R.L.	1994.247	1993.978	1993.709	1993.547	1993.785	1994.440	1995.284	1996.128	1997.013	1998.223	1999.717	2000.469	2000.110	1999.525
N.S.L.	1993.635	1993.666	1991.794	1991.772	1994.125	1995.595	1995.407	1997.902	1997.739	1998.000	2000.572	2000.846	2000.037	1999.525
STATION	5+400	5+425	5+450	5+475	5+500	5+525	5+550	5+575	5+600	5+625	5+650	5+675	5+700	5+715

CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: (MIN - JV - CEC) MINCONSULT SDN BHD (COMPANY NO. 58035-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
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a			DRAWN	INAM ULLAH						
b			CHECKED	S-DURRANI						

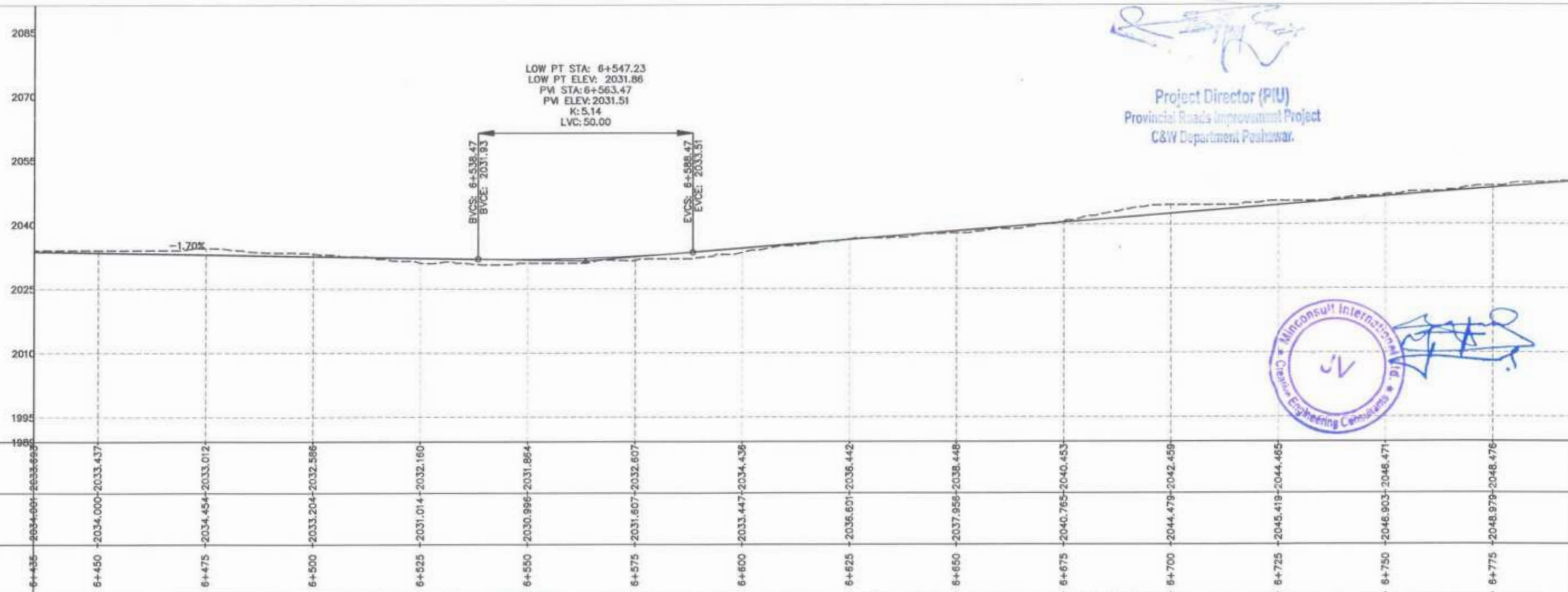
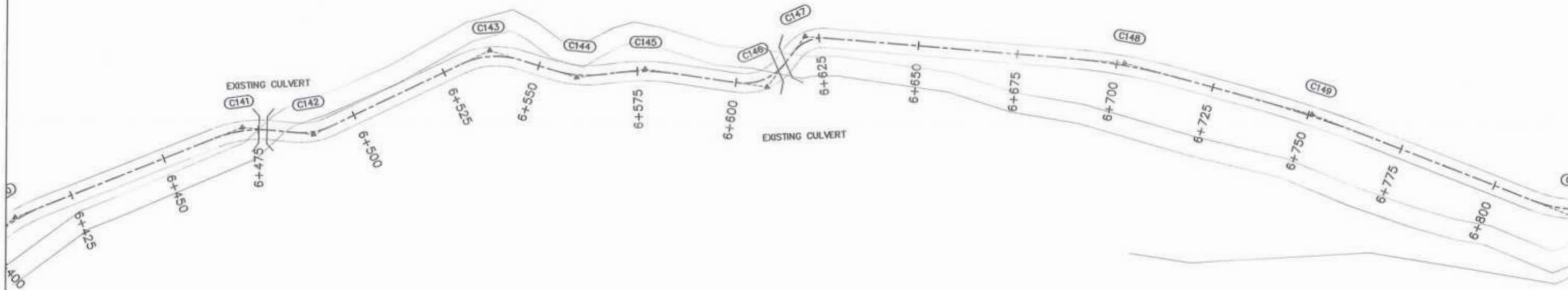


STATION	N.S.L	F.R.L
5+715	1999.525	1999.525
5+725	1999.741	2000.058
5+750	2001.986	2001.404
5+775	2002.989	2002.750
5+800	2003.611	2004.085
5+825	2004.999	2005.441
5+850	2007.321	2006.725
5+875	2007.649	2007.802
5+900	2008.479	2008.730
5+925	2008.675	2009.652
5+950	2010.145	2010.573
5+975	2012.444	2011.495
6+000	2013.470	2012.417
6+025	2013.523	2013.336
6+050	2014.218	2014.629
6+075	2014.629	2014.629

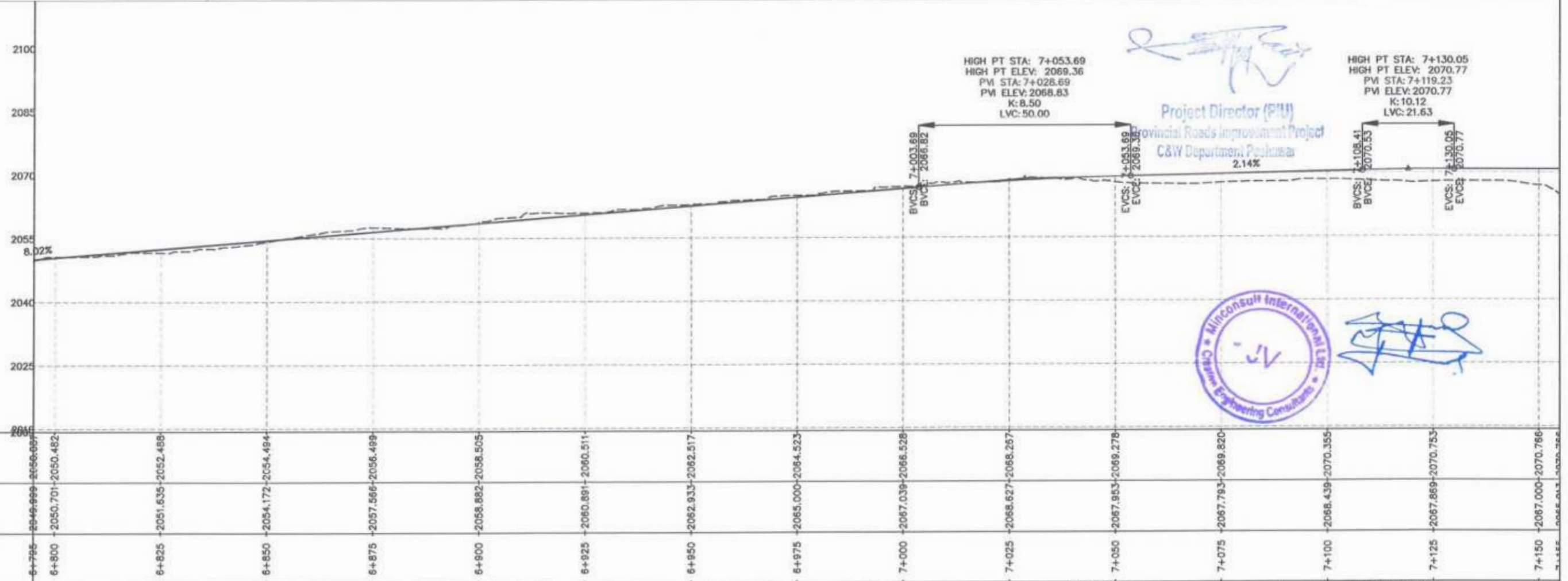
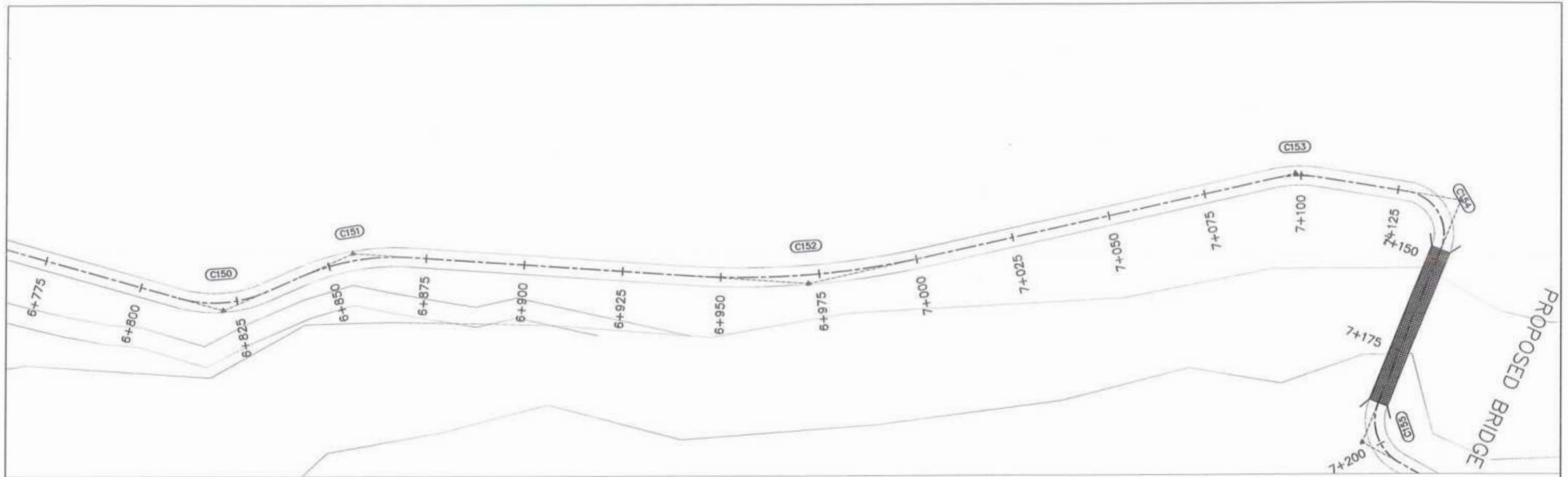
CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58035-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings.	G.DESIGNED	REHMAT	<b>N-CHT-5</b> ARKARI VALLEY ROAD	H=1:1000	PLAN & PROFILE 5+715.00 - 6+075.00
		0			DRAWN	INAM ULLAH		KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	
		b			CHECKED	S-DURRANI	FLOOD AFFECTED		Aug 2024
					APPROVED	AQFEL YOUNIS		1	





F.R.L	2033.699	2033.437	2033.012	2032.586	2032.160	2031.864	2032.607	2033.436	2033.442	2033.448	2040.453	2042.459	2044.465	2046.471	2048.476	2050.481
N.S.L	2034.000	2034.000	2034.454	2033.204	2031.014	2030.996	2031.607	2033.447	2036.601	2037.956	2040.765	2044.479	2045.419	2046.903	2048.979	2050.984
STATION	6+435	6+450	6+475	6+500	6+525	6+550	6+575	6+600	6+625	6+650	6+675	6+700	6+725	6+750	6+775	6+795

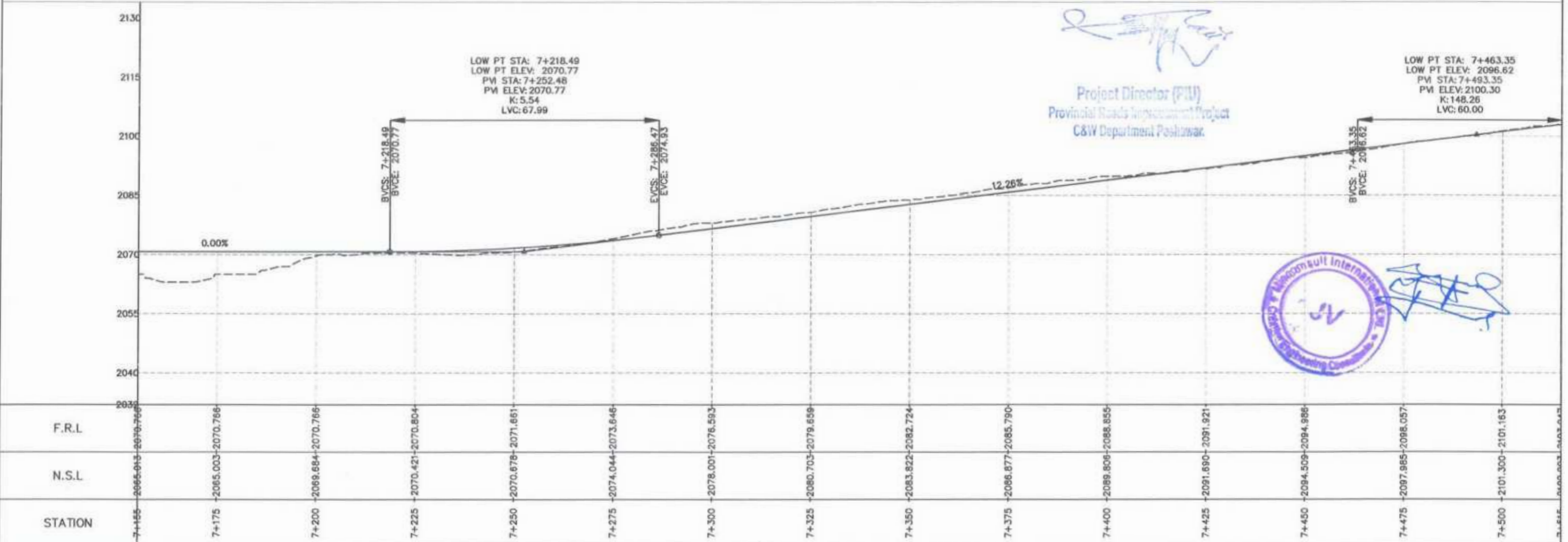
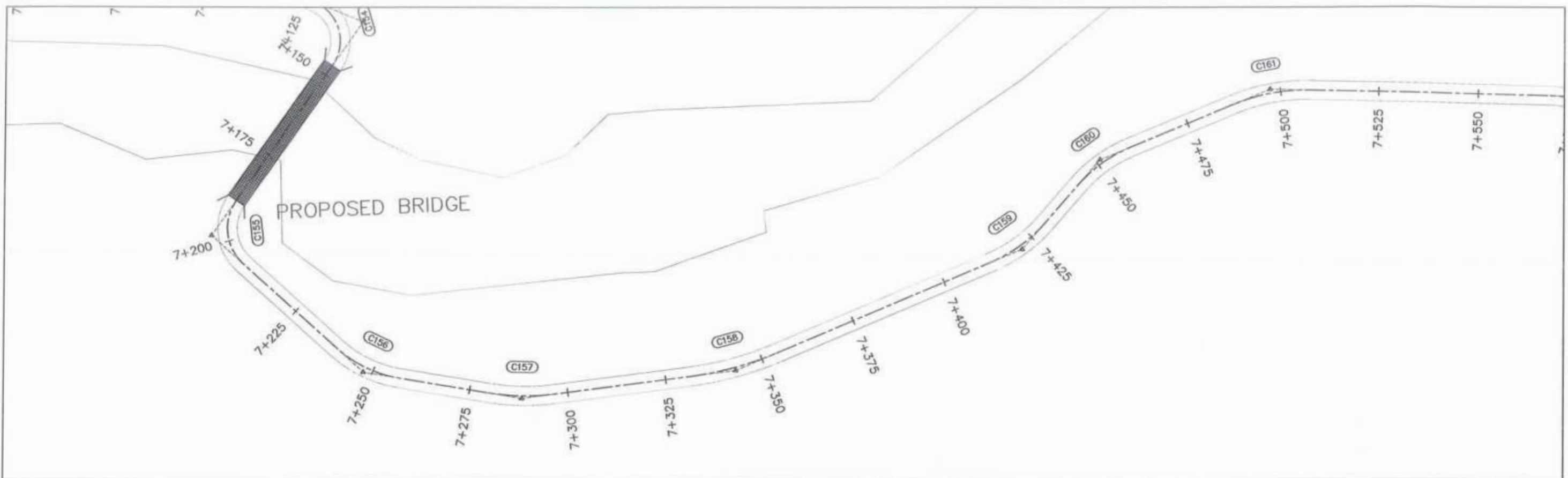
<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings.	G.DESIGNED	REHMAT			KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	
a			DRAWN	INAM ULLAH	PROJECT IMPLEMENTATION UNIT (PIU)	DATE:	Aug 2024			
b			CHECKED	S-DURRANI			DWG NO: CEC/HW/RRDP/N-CHT-5/PP/	3		
			APPROVED	AQFEL YOUSUF						



F.R.L	2046.999	2050.482	2052.488	2054.494	2056.499	2058.505	2060.511	2062.517	2064.523	2066.528	2068.534	2069.278	2069.820	2070.355	2070.753	2070.786
N.S.L	2046.999	2050.701	2051.635	2054.172	2057.566	2058.882	2060.891	2062.933	2065.000	2067.039	2068.627	2069.953	2067.793	2068.439	2067.869	2067.000
STATION	6+795	6+800	6+825	6+850	6+875	6+900	6+925	6+950	6+975	7+000	7+025	7+050	7+075	7+100	7+125	7+150

CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: (MIN - JV - CEC) MINCONSULT SDN BHD (COMPANY NO. 58635-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings.	G.DESIGNED	REHMAT			KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	
a			DRAWN	INAM ULLAH	APPROVED	ADFI YOUSUF	DATE:	6+795.00 - 7+155.00		
b			CHECKED	S-DURRANI			Aug 2024		DWG NO: CEC/HW/RRDP/N-CHT-5/PP/ 4	

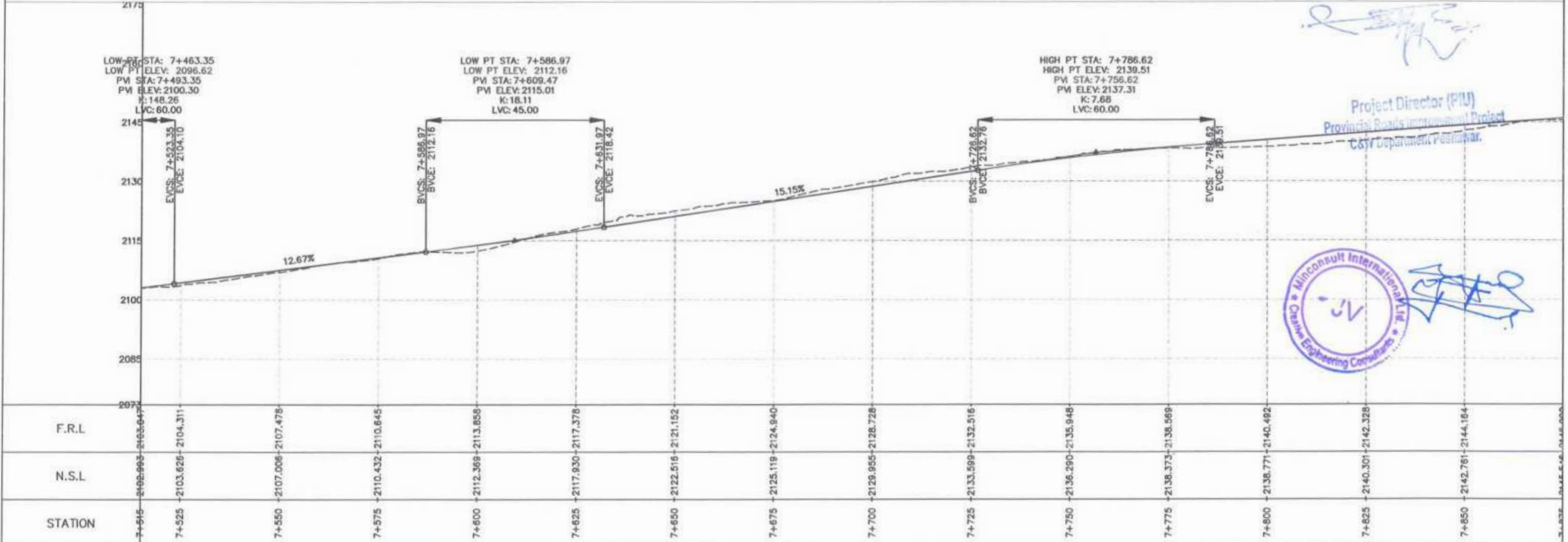
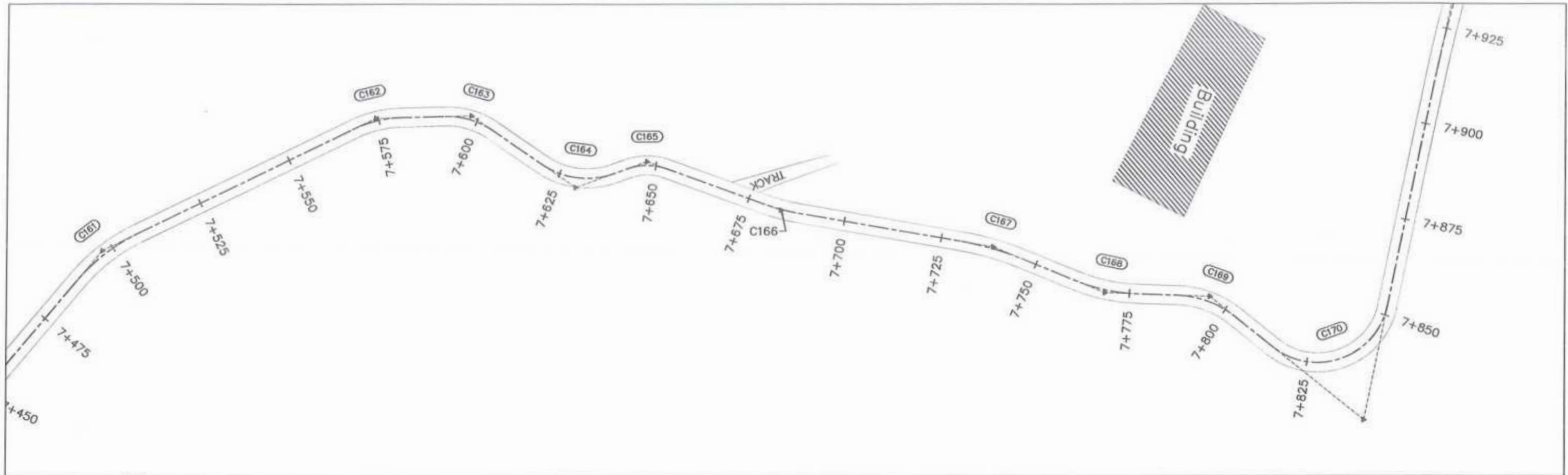




STATION	N.S.L.	F.R.L.
7+155	2065.013	2070.766
7+175	2065.003	2070.766
7+200	2069.684	2070.766
7+225	2070.421	2070.804
7+250	2070.678	2071.861
7+275	2074.044	2073.646
7+300	2078.001	2076.593
7+325	2080.703	2079.659
7+350	2083.822	2082.724
7+375	2086.877	2085.790
7+400	2089.806	2088.855
7+425	2091.690	2091.921
7+450	2094.509	2094.986
7+475	2097.985	2098.057
7+500	2101.300	2101.163

CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58335-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings	G.DESIGNED: REHMAT DRAWN: INAM ULLAH CHECKED: S-DURRANI APPROVED: ADEEL YOUSUF	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000 DATE: Aug 2024	PLAN & PROFILE 7+155.00 - 7+515.00 DWG NO. CECAR/RRDP/N-CHT-5/RR

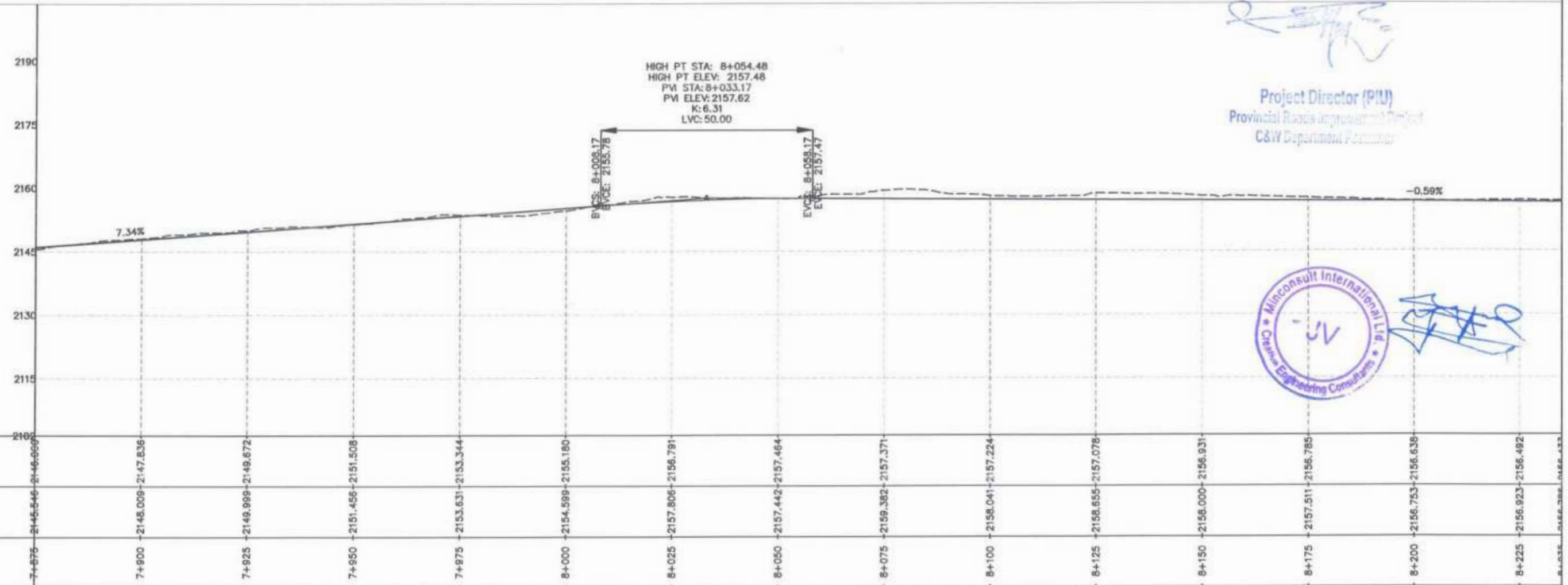
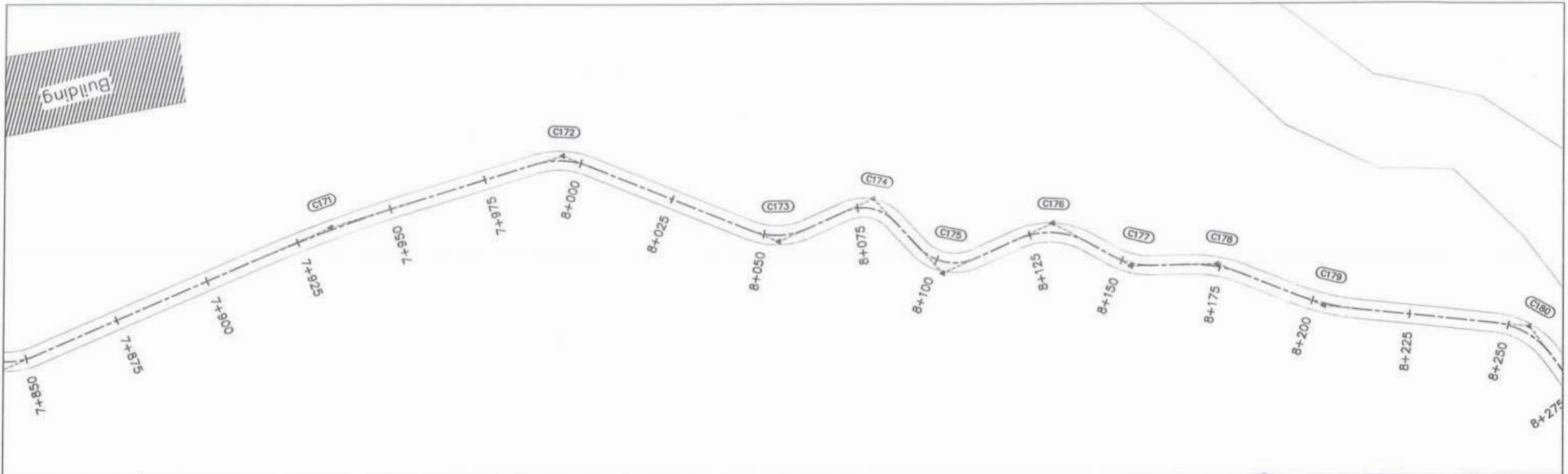


STATION	N.S.L	F.R.L
7+450	2102.993	2103.647
7+525	2103.626	2104.311
7+550	2107.006	2107.478
7+575	2110.432	2110.645
7+600	2112.369	2113.858
7+625	2117.930	2117.378
7+650	2122.516	2121.152
7+675	2125.119	2124.840
7+700	2129.955	2128.728
7+725	2133.599	2132.516
7+750	2136.290	2135.848
7+775	2138.373	2138.669
7+800	2138.771	2140.482
7+825	2140.301	2142.328
7+850	2142.761	2144.164

CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT ROAD & RIVER DEVELOPMENT UNIT (RRDU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58035-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings	G.DESIGNED: REHMAT	<b>KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)</b>	<b>N-CHT-5</b> <b>ARKARI VALLEY ROAD</b> <b>FLOOD AFFECTED</b>	H=1:1000	<b>PLAN &amp; PROFILE</b> <b>7+515.00 - 7+875.00</b>
		e			DRAWN: INAM ULLAH			PROJECT NO:	
		b			CHECKED: S-DURRANI			DATE:	
					APPROVED: AQUEL YOUSUF			Aug 2024	DWG NO: CEC/RRDP/RRD/CHY/500/

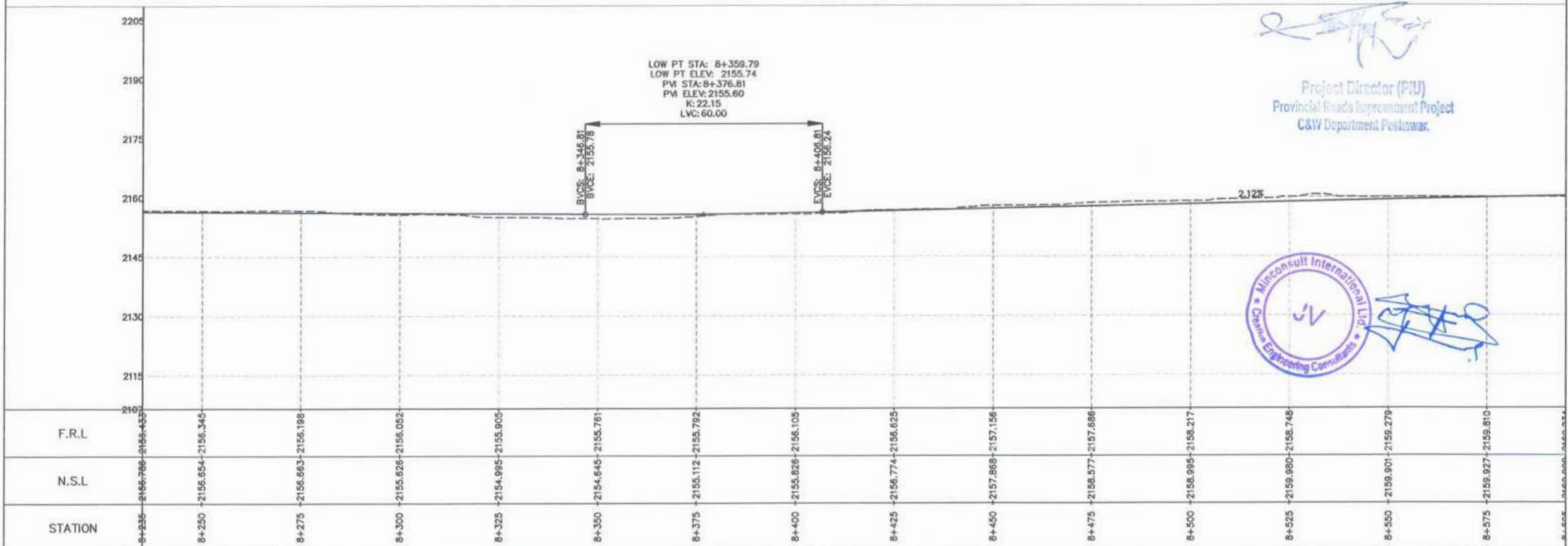
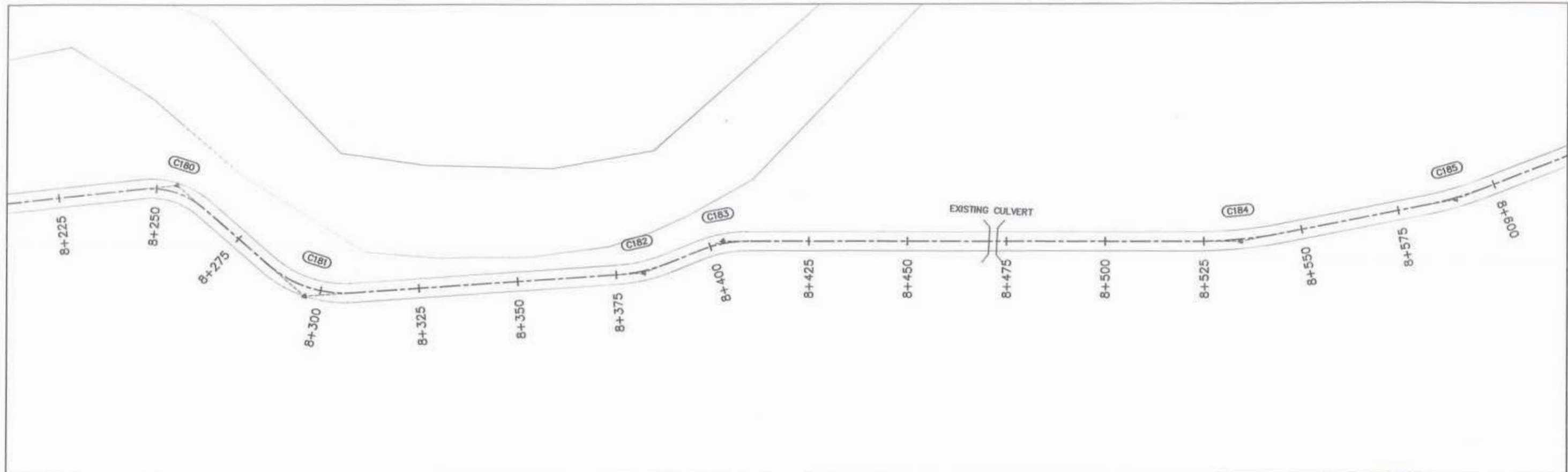
Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department, Peshawar.



Project Director (PIU)  
 Provincial Road Improvement Project  
 C&W Department Formosa



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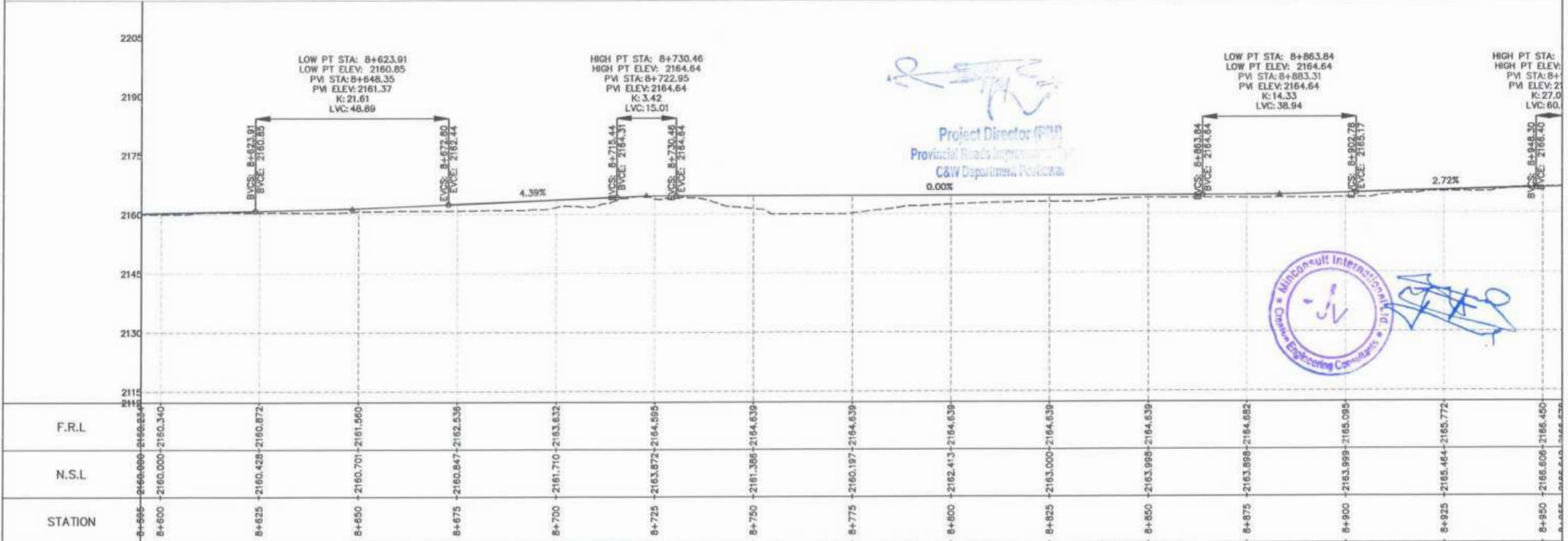
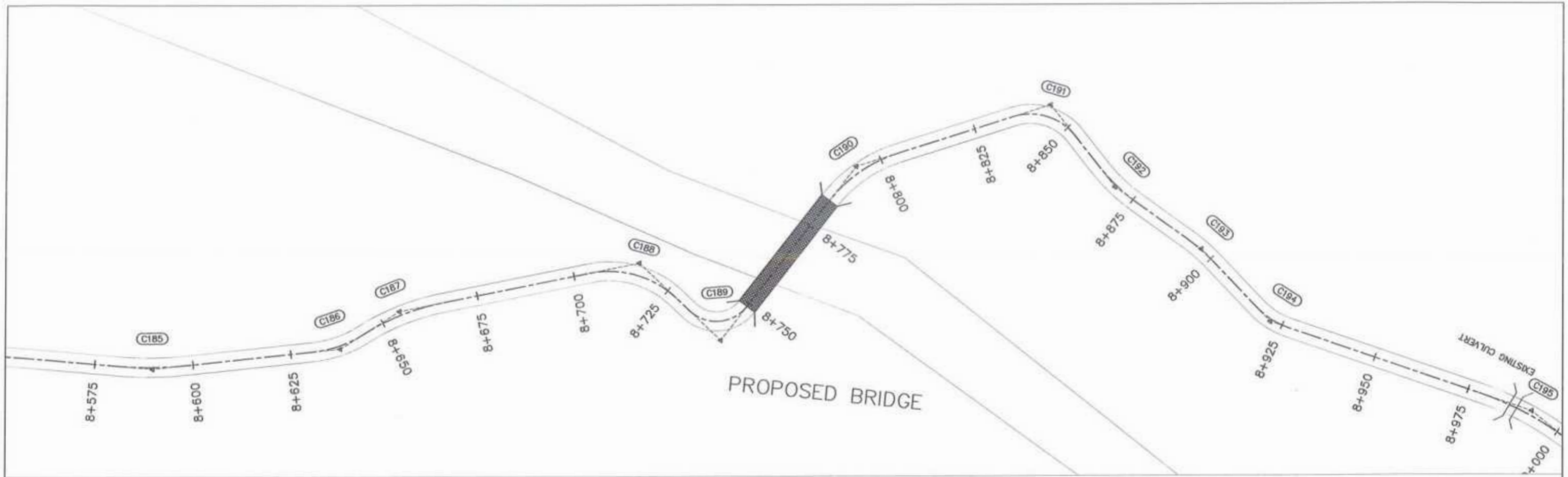
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 GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	 MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)	0	Aug 2024	Tender Drawings	G.DESIGNED: REHMAT	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5	H=1:1000	PLAN & PROFILE 7+875.00 - 8+235.00 DWG NO: CEC/HW/RRDP/N-CHT-5/PP/ 7
		a			DRAWN: INAM ULLAH		ARKARI VALLEY ROAD	DATE:	
		b			CHECKED: S-DURRANI		FLOOD AFFECTED	Aug 2024	
					APPROVED: AQEEL YOUNIS				



*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshwar.

*[Signature]*  
  
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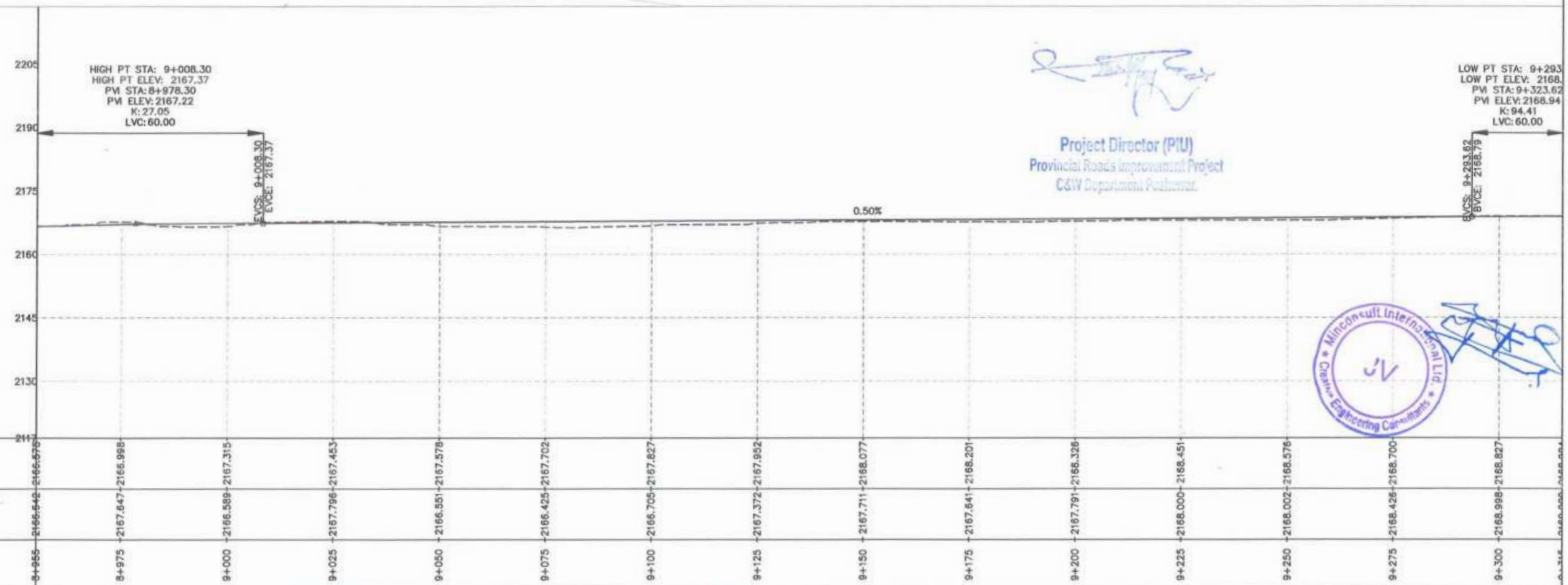
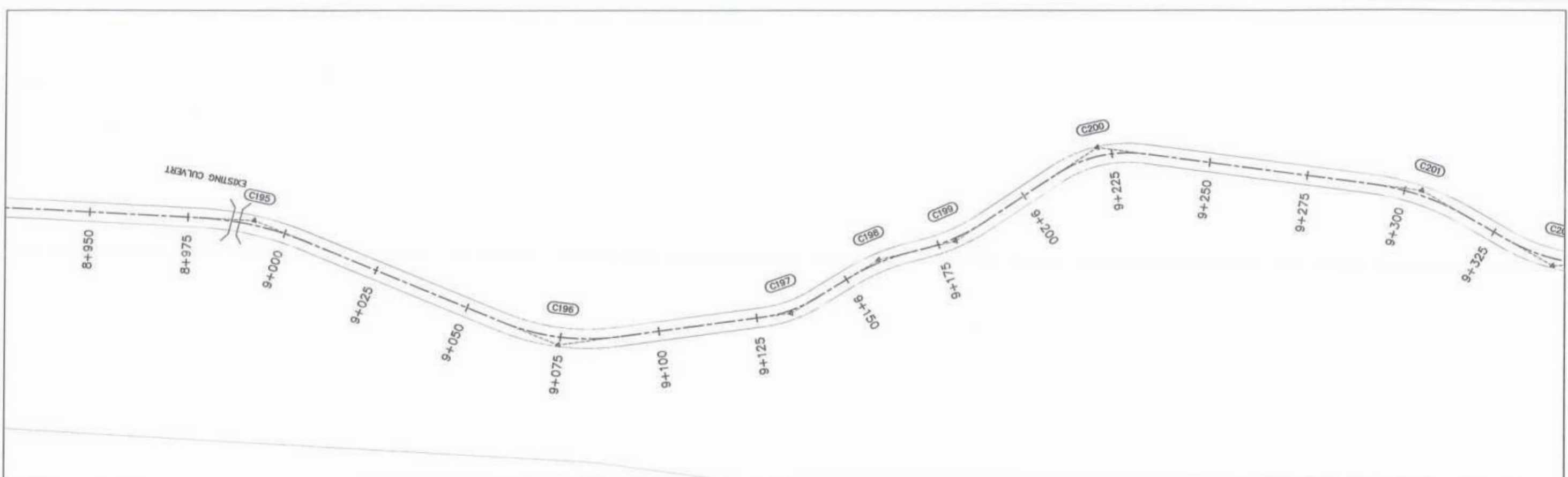
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 <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT	 <b>MINCONSULT SDN BHD</b> (COMPANY NO. 5835-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings.	G.DESIGNED	REHMAT	<b>N-CHT-5</b> ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000	<b>PLAN &amp; PROFILE</b> 8+235.00 - 8+595.00 DWG NO: CEC/RRRDP/N-CHT-5/PP/	
		a			DRAWN	INAM ULLAH		<b>KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)</b>		DATE:
		b			CHECKED	S-DURRANI				Aug 2024
					APPROVED	ADFEI YOUSUF				



Project Director (PIU)  
 Provincial Roads Improvement  
 C&W Department, Peshawar






CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:	
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> (COMPANY NO. 58835-F) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024	Tender Drawings	G.DESIGNED	REHMAT	<b>N-CHT-5</b> <b>ARKARI VALLEY ROAD</b>  <b>FLOOD AFFECTED</b>	H=1:1000	<b>PLAN &amp; PROFILE</b> 8+595.00 - 8+955.00  DWG NO: CEC/HW/RRDP/N-CHT-5/PP/ 9	
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		b			CHECKED	S-DURRANI				Aug 2024
					APPROVED	AQFEL YOUSUF				

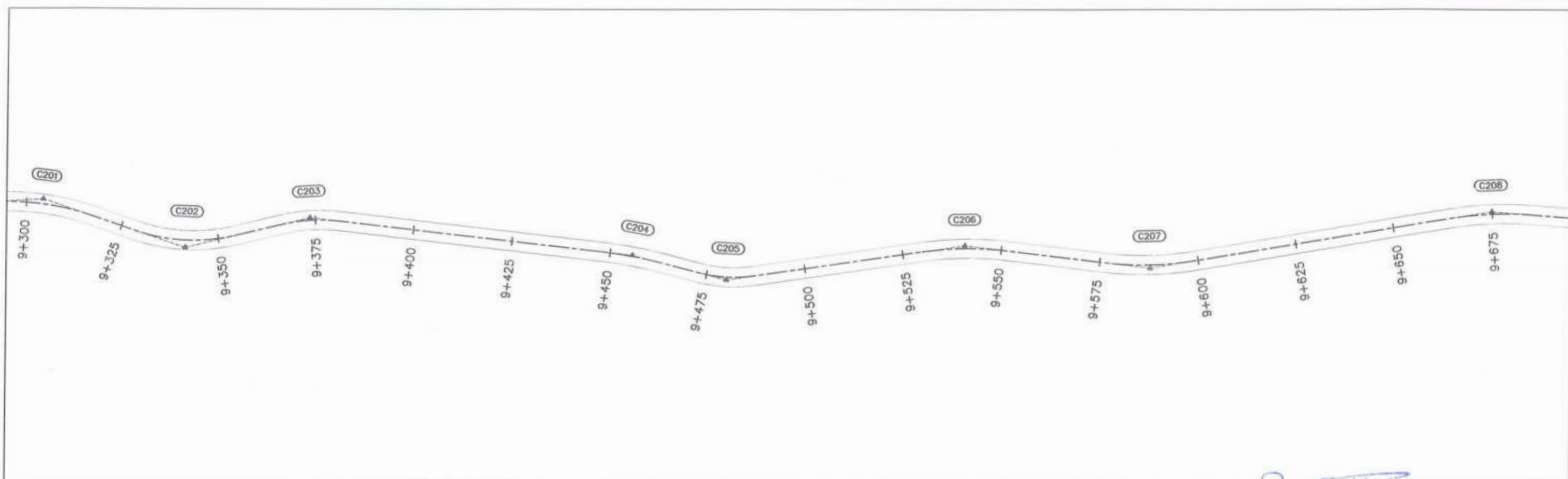


F.R.L	2166.642	2167.647	2166.589	2167.315	2167.453	2167.578	2167.702	2167.827	2167.952	2168.077	2168.201	2168.326	2168.451	2168.576	2168.700	2168.827
N.S.L	2166.642	2167.647	2166.589	2167.315	2167.453	2167.578	2167.702	2167.827	2167.952	2168.077	2168.201	2168.326	2168.451	2168.576	2168.700	2168.827
STATION	8+950	8+975	9+000	9+025	9+050	9+075	9+100	9+125	9+150	9+175	9+200	9+225	9+250	9+275	9+300	

  
**Project Director (PIU)**  
 Provincial Roads Improvement Project  
 C&W Department, Peshawar.





CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:	
 <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT AND CREATION UNIT (P&CU)	 <b>MINCONSULT SDN BHD</b> (COMPANY NO. 5805-P) J.V.  <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	0	Aug 2024.	Tender Drawings.	G.DESIGNED	REHMAT	N-CHT-5 ARKARI VALLEY ROAD FLOOD AFFECTED	H=1:1000 DATE: Aug 2024	PLAN & PROFILE 8+955.00 - 9+315.00	
		a			DRAWN	INAM ULLAH				KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)
		b			CHECKED	S-DURRANI				

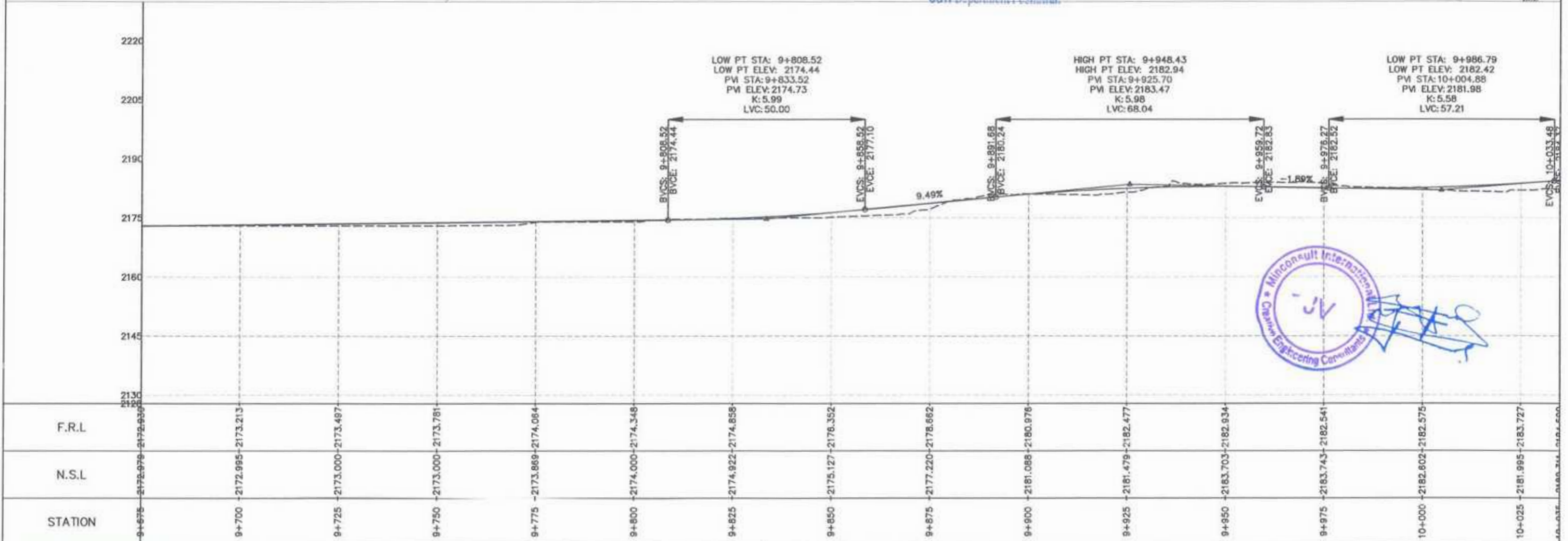
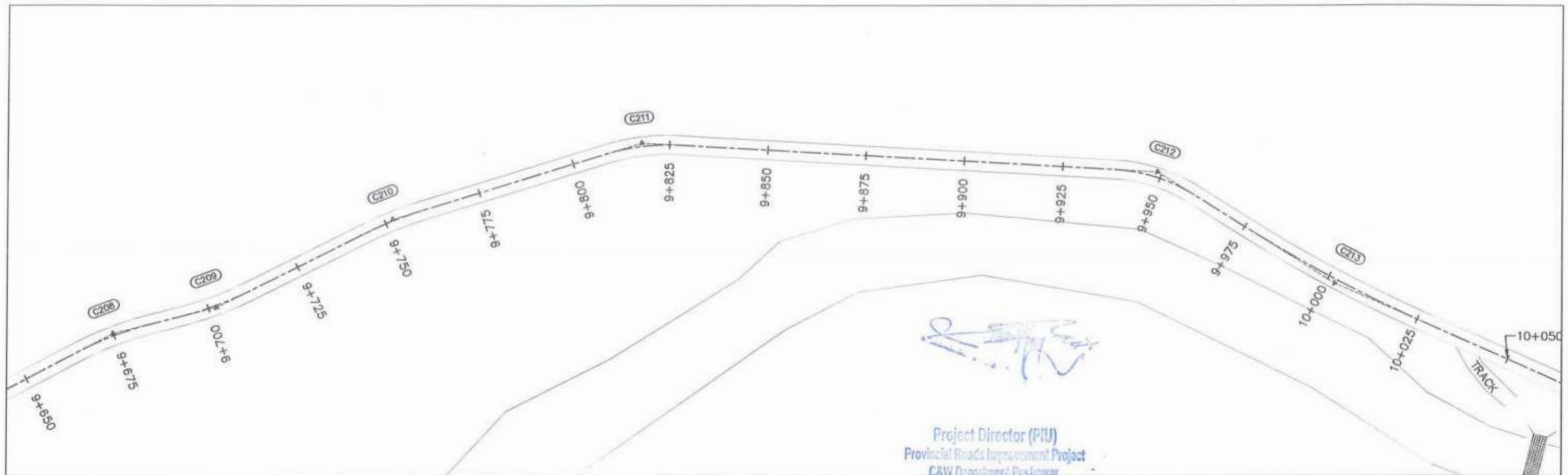


  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



F.R.L	2169.000	2169.002	2169.243	2169.526	2170.810	2170.093	2170.377	2171.661	2171.944	2171.228	2171.511	2171.795	2172.079	2173.362	2172.846	2173.129
N.S.L	2169.000	2169.000	2169.411	2169.969	2170.002	2170.030	2171.000	2171.008	2171.374	2171.993	2172.000	2172.136	2172.642	2173.000	2173.000	2173.000
STATION	9+316	9+325	9+350	9+375	9+400	9+425	9+450	9+475	9+500	9+525	9+550	9+575	9+600	9+625	9+650	9+675

 GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	 MINCONSULT SDN BHD (COMPANY NO. 58635-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings	G.DESIGNED	REHMAT				
a			DRAWN	INAM ULLAH	APPROVED	ADFEEL YOUSUF				
b			CHECKED	S-DURRANI						



STATION	N.S.L	F.R.L
9+675	2172.979	2172.979
9+700	2172.995	2173.213
9+725	2173.000	2173.497
9+750	2173.000	2173.781
9+775	2173.869	2174.064
9+800	2174.000	2174.348
9+825	2174.922	2174.658
9+850	2175.127	2176.352
9+875	2177.220	2178.662
9+900	2181.086	2180.876
9+925	2181.479	2182.477
9+950	2183.703	2182.934
9+975	2183.743	2182.541
10+000	2182.602	2182.575
10+025	2181.995	2183.727
10+035	2183.511	2183.511

CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA  
COMMUNICATION & WORKS DEPARTMENT  
PROJECT IMPLEMENTATION UNIT (PIU)

DESIGN CONSULTANT: (MIN - JV - CEC)  
MINCONSULT SDN BHD (COMPANY NO. 58835-P)  
J.V.  
CREATIVE ENGINEERING CONSULTANTS (CEC)

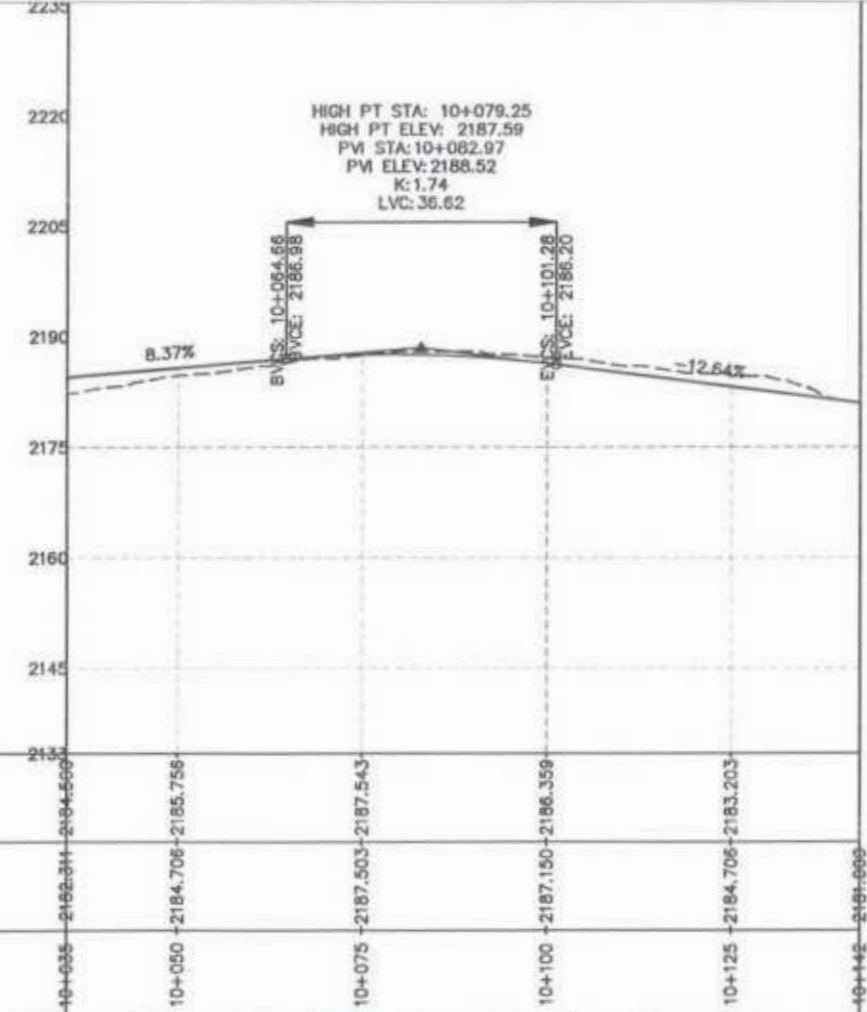
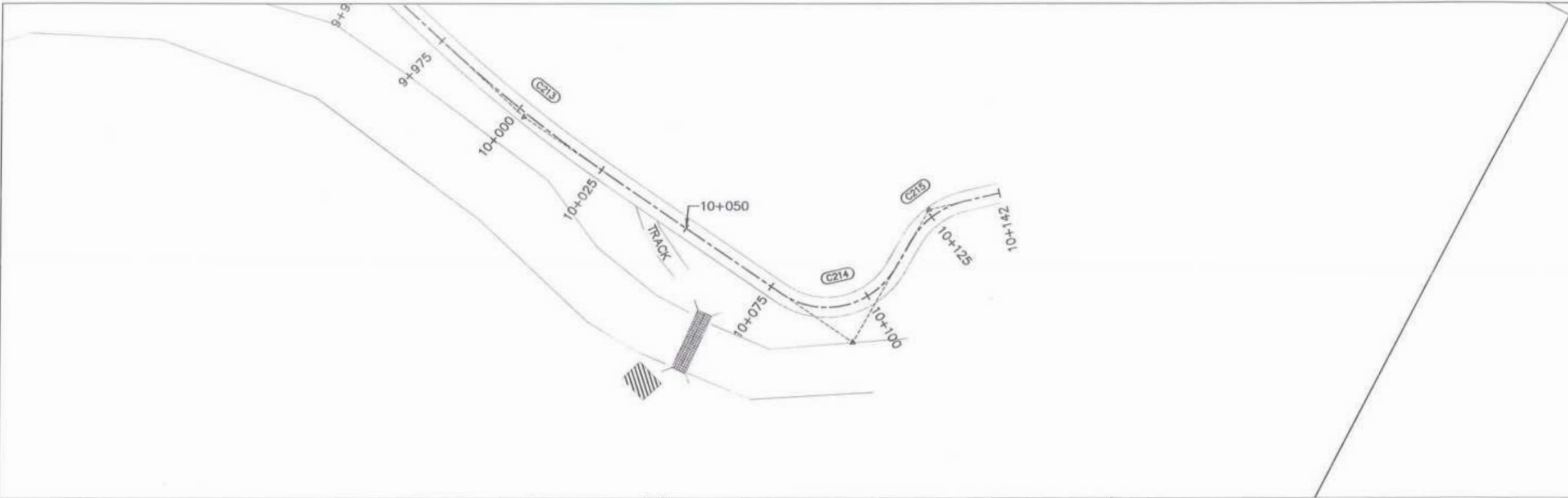
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a			DRAWN: INAM ULLAH
b			CHECKED: S-DURRANI
			APPROVED: ADEEL YOUSUF

PROJECT: KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)

ROAD NAME: N-CHT-5  
ARKARI VALLEY ROAD  
FLOOD AFFECTED

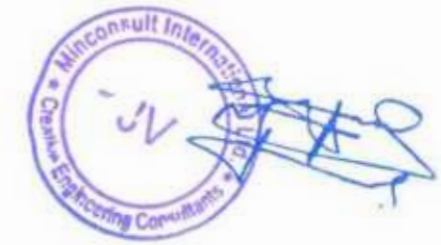
SCALE: H=1:1000  
DATE: Aug 2024  
SHEET CONTENT: PLAN & PROFILE  
9+675.00 - 10+035.00





F.R.L	2184.500	2185.758	2187.543	2186.359	2183.203	2181.000
N.S.L	2182.311	2184.706	2187.503	2187.150	2184.706	2181.000
STATION	10+035	10+050	10+075	10+100	10+125	10+142

*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement  
 C&W Department, Peshawar



CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: (MIN - JV - CEC) <b>MINCONSULT SDN BHD</b> (COMPANY NO. 38835-P) J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	ROAD NAME:	SCALE:	SHEET CONTENT:
		0	Aug 2024	Tender Drawings	G.DESIGNED			REHMAT	
		a			DRAWN	INAM ULLAH	KHYBER PAKHTUNKHWA RURAL ROAD DEVELOPMENT PROJECT (KP-RRDP)	N-CHT-5 ARKARI VALLEY ROAD	PLAN & PROFILE 10+035.00 - 10+142.43
		b			CHECKED	S-DURRANI			
					APPROVED	ADFEI YOUSUF		Aug 2024	DWG NO: CEC/RWRDDP/N-CHT-5/PP/

# STRUCTURAL DRAWINGS



Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department, Peshawar.





Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

# BRIDGES DRAWINGS



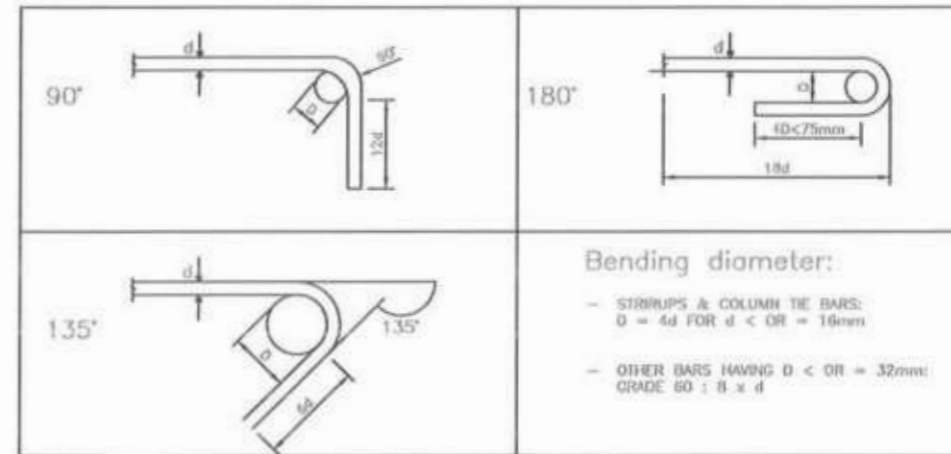
Minconsult International Pvt. Ltd.  
Civil Engineering Consultants

# GENERAL NOTES – CULVERTS

1. THE DESIGN IS IN ACCORDANCE WITH AASHTO "LFRD 2020" AND PAKISTAN CODE OF PRACTICE FOR HIGHWAY BRIDGES, 1987.
2. THE DESIGN IS BASED ON THE ASSUMPTION OF A HOMOGENEOUS FOUNDATION MATERIAL AT AND AROUND THE LOCATION OF THE CULVERT. IN CASE NON-HOMOGENEOUS MATERIAL IS ENCOUNTERED, CASE SHOULD BE REFERRED TO THE DESIGN ENGINEER FOR OPENION/REDESIGN.
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS GRADE 60, CONFORMING TO ASTM A – 615 STANDARDS HAVING 4200 Kg/Sq.Cm (60,000 PSI) MIN YIELD STRENGTH.
4. DESIGN OF SPECIFIED CONCRETE MIX SHALL BE SUBMITTED BY THE CONTRACTOR AND SHALL BE APPROVED FROM THE ENGINEER WELL BEFORE CONCRETING OF RELEVANT STRUCTURE ALONG WITH RESULT OF TEST SPECIMEN TESTED AS PER ASTM C – 39. TEST SPECIMEN SHALL BE MADE AND CURED IN ACCORDANCE WITH ASTM C – 31.
5. ORDINARY PORTLAND CEMENT, CONFORMING TO BS – 12/ PS – 232 SHALL BE USED IN ALL R.C.C WORKS.
6. CEMENT FROM DIFFERENT SOURCES SHALL NOT BE MIXED FOR THE SAME STRUCTURE, UNLESS APPROVED.
7. WELL GRADED CRUSHED STONE FROM APPROVED QUARRIES/SOURCES SHALL BE USED, AS COARSE AGGREGATE. MAXIMUM NOMINAL SIZE OF THE COARSE AGGREGATE SHALL BE 20MM FOR ALL R.C.C WORKS. IT SHALL BE CONFORM TO THE SPECIFICATIONS.
8. POTABLE WATER SHALL BE USED FOR CONCRETE & SHALL BE FREE OF ORGANIC & OTHER IMPURITIES.
9. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL DIMENSIONS ARE IN MILLIMETERS IN BOX CULVERT DRAWINGS.
10. CONCRETE COVER PROVIDED FOR REINFORCEMENT SHALL BE AS SHOWN ON THE DRAWINGS.
11. ALL LAYOUT, CONFIGURATION, DIMENSIONS & LEVELS SHALL BE VERIFIED BEFORE PROCEEDING WITH WORK.
12. ALL REINFORCING BARS SHALL BE HELD FIRMLY IN PLACE BEFORE AND DURING THE POURING OF CONCRETE BY MEANS OF ADEQUATE NUMBER OF WIRES, CHAIRS AND SUPPORTS TO PREVENT DISLOCATION DURING THE COURSE OF CONSTRUCTION.
13. DURING CONSTRUCTION, SAFETY AND STABILITY OF STRUCTURE AND ALL THE TEMPORARY WORKS SHALL BE GIVEN PRIME IMPORTANCE. UTMOST CARE AND PRECAUTION SHALL BE EXERCISED BY THE CONTRACTOR DURING THE WORK AGAINST ANY MISHAP OR ACCIDENT.
14. CONCRETE TEST CYLINDERS / CUBES SHALL BE CURED WITH THE SAME METHOD AND CONDITIONS AS THOSE FOR THE CONCRETE WORK THEY REPRESENT.
15. THE CLASS OF CONCRETE BASED ON 28 DAYS' CYLINDER STRENGTH SHALL BE AS FOLLOWS:
  - BLINDING/LEAN CONCRETE                      100 Kg/Sq.Cm.
  - CULVERTS    280 Kg/Sq.Cm. (4000 PSI)
16. THE CONTRACTION JOINTS SHALL BE PROVIDED AROUND THE OVER ALL BARREL, AT INTERVAL 9M TO 12M ALONG THE LENGTH OF CULVERTS.
17. EXPANSION JOINTS SHALL BE PROVIDED AT THE CULVERT ENDS WHERE IT MEET THE WING WALLS AND APRON SLABS AND AT EACH 30M ALONG THE LENGTH OF CULVERT.
18. BACKFILLING AND COMPACTION SHALL BE CARRIED OUT USING APPROVED GRANULAR FILL/A3 MATERIAL IN LAYERS, NOT EXCEEDING 150MM, AND THE DIFFERENCE IN THE LEVELS OF BACKFILL ON EITHER SIDE OF CULVERT SHALL AT NO TIME EXCEED 50CM.
19. DETAILED BAR BENDING SCHEDULE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED FOR ENGINEER'S APPROVAL. DEVELOPMENT / SPLICE / LAP LENGTH AND STANDARD HOOKS SHALL BE AS GIVEN BELOW.
20. TWO COATS OF HOT BITUMEN SHALL BE APPLIED TO ALL STRUCTURAL CONCRETE COMING IN CONTACT WITH EARTH WITHOUT ANY EXTRA COST.
21. CONCRETE SURFACE ON EXPANSION JOINT AT THE JUNCTION OF BASE SLAB OF BARREL AND APRON SLAB SHALL BE MADE FLUSH IRRESPECTIVE OF THICKNESS OF THE BASE SLAB OF BARREL AND APRON SLAB. SIMILARLY, CONCRETE SURFACE OF EXPANSION JOINT IN BARREL AND WING WALL SHALL BE FLUSH ON WATER SIDE.

22. AT LEAST A MINIMUM OF 300 MM DIFFERENCE SHOULD BE PROVIDED BETWEEN CULVERT TOP SLAB AND FRL.
23. DRAINAGE ENGINEER SHOULD PROVIDE MINIMUM SELF CLEANSING SLOPE FOR CULVERT. CONTRACTOR SHOULD MAKE SURE THAT THE CULVERTS ARE SELF CLEANSING WITH THE APPROVAL OF THE ENGINEER.
24. PRIOR TO THE CONSTRUCTION, CONTRACTOR SHOULD SUBMIT MIX DESIGN TO THE ENGINEER FOR APPROVAL THE DESIRE STRENGTH ACHIEVEMENT ON SITE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR IRRESPECT OF THE CONDITION ON SITE.
25. SHOP DRAWING AND BBS CONFIRMING WITH DRAWING SHOULD BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER PRIOR TO THE CONSTRUCTION.
26. DETAILED BAR BENDING SCHEDULE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED FOR ENGINEER'S APPROVAL.

Ø10	=	#3
Ø12 / Ø13	=	#4
Ø16	=	#5
Ø19 / Ø20	=	#6
Ø22	=	#7
Ø25	=	#8



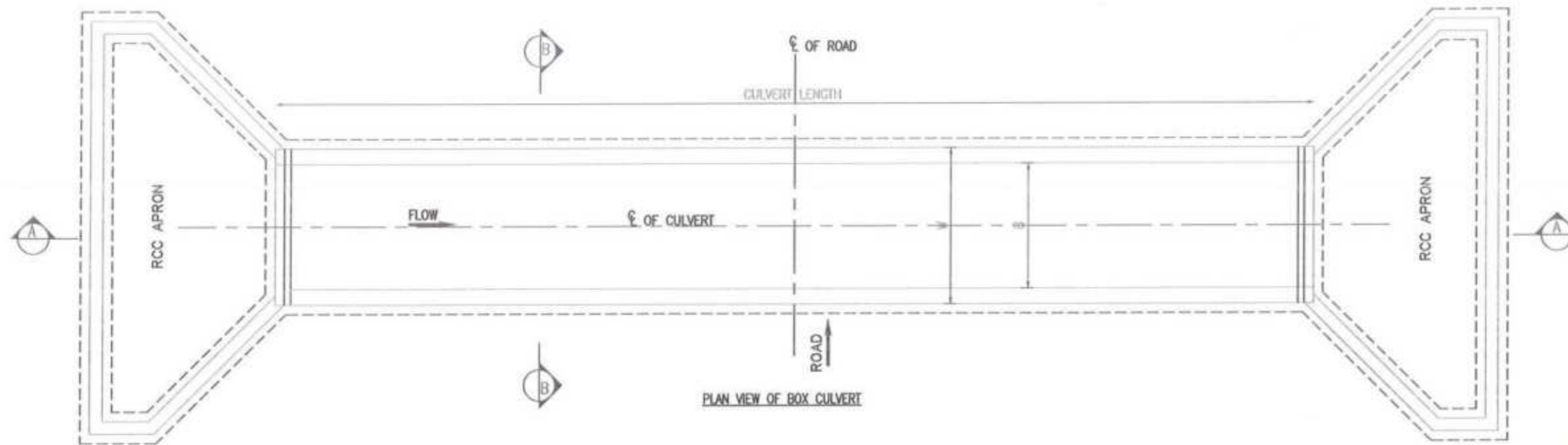
BAR DIA (mm)	DEVELOPMENT LENGTH (mm)		SPLICE/LAP LENGTH (mm)	
	fc' = 210-280 kg/sq.cm fy' = 4200 kg/sq.cm		fc' = 210-280 kg/sq.cm fy' = 4200 kg/sq.cm	
	Straight Bar	Bar with Hook	Straight Bar	Bar with Hook
10.00	500.00	250.00	500.00	250.00
12.00	600.00	300.00	600.00	300.00
16.00	800.00	400.00	800.00	400.00
18.00	900.00	450.00	900.00	450.00
20.00	1000.00	500.00	1000.00	500.00
22.00	1100.00	550.00	1100.00	550.00
25.00	1250.00	625.00	1250.00	625.00

*[Handwritten Signature]*

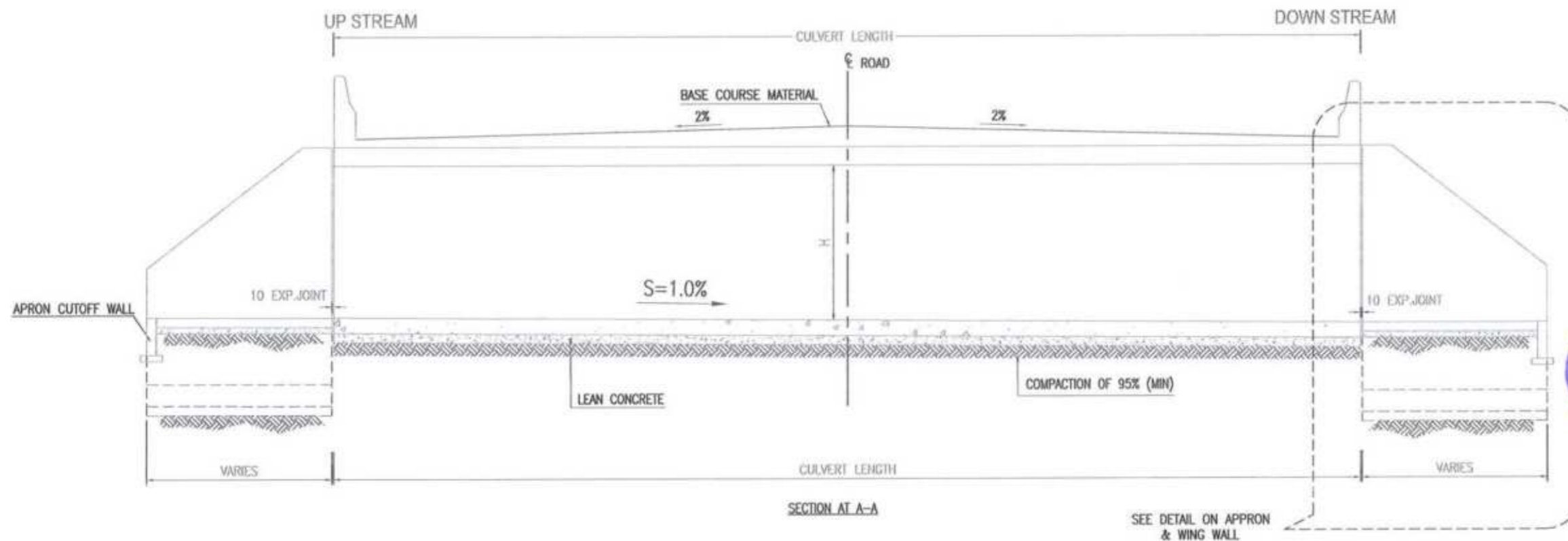
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshwar.

*[Handwritten Signature]*  
*[Stamp: Minconsult International Ltd. - Civil Engineering Consultants]*

CLIENT:	DESIGN CONSULTANT: (MIN - JV - CEC)	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA  COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	MINCONSULT SON BHD (COMPANY NO. 38835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)	0	SEP, 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	GENERAL NOTES FOR CULVERTS
		*			DRAWN: MUSHTAQ		LOT-1	N.T.5
		0			CHECKED: M.ISLAM		DATE:	SEP.



PLAN VIEW OF BOX CULVERT

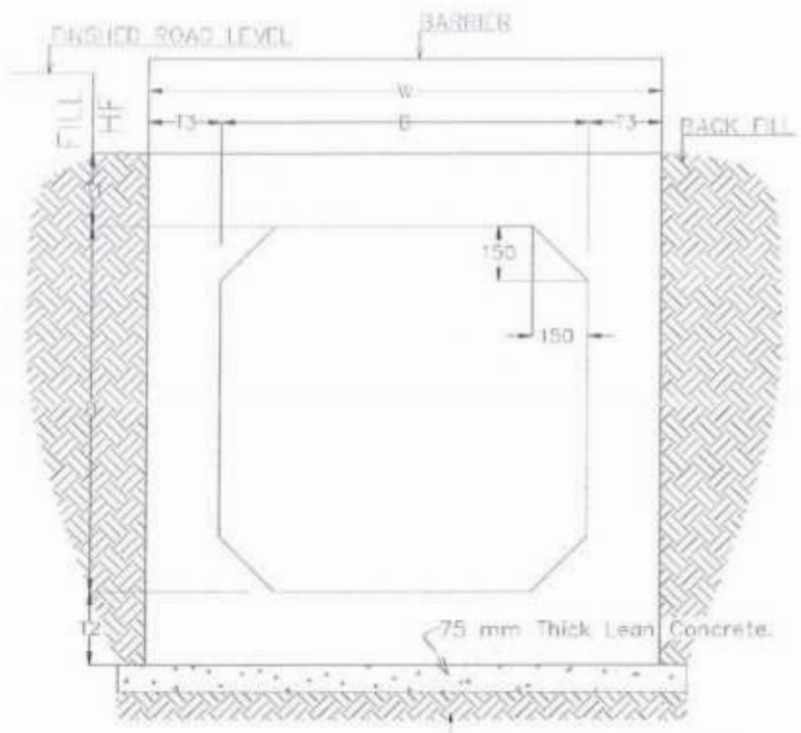


SECTION AT A-A

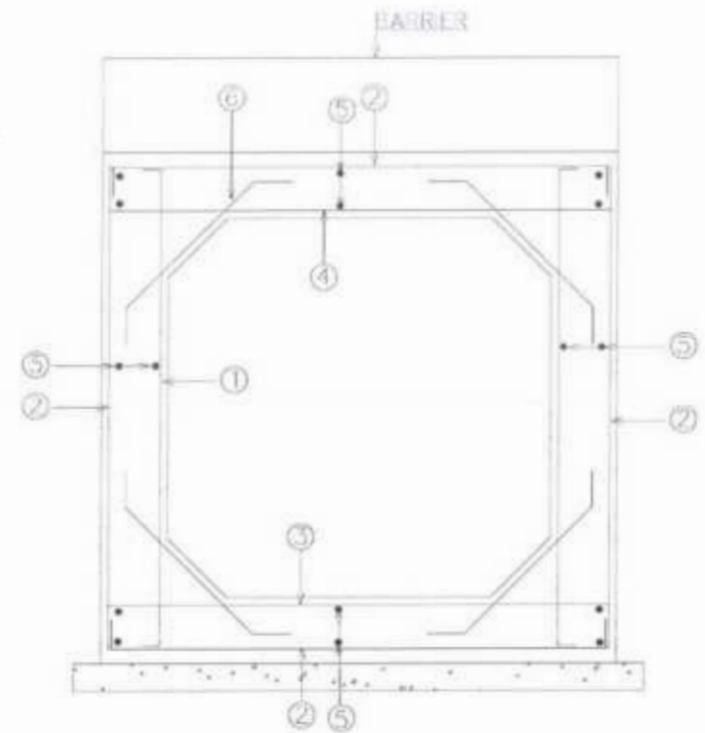
*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.

*[Signature]*  
 Minconsult International Ltd.  
 Creative Engineering Consultants

CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	0	SEP. 2024	TENDER DRAWINGS	DESIGNED M. FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	N.T.S
		a			DRAWN MUSHTAQ		LOT-1	DATE:
		b			CHECKED M. ISLAM		SEP. 2024	



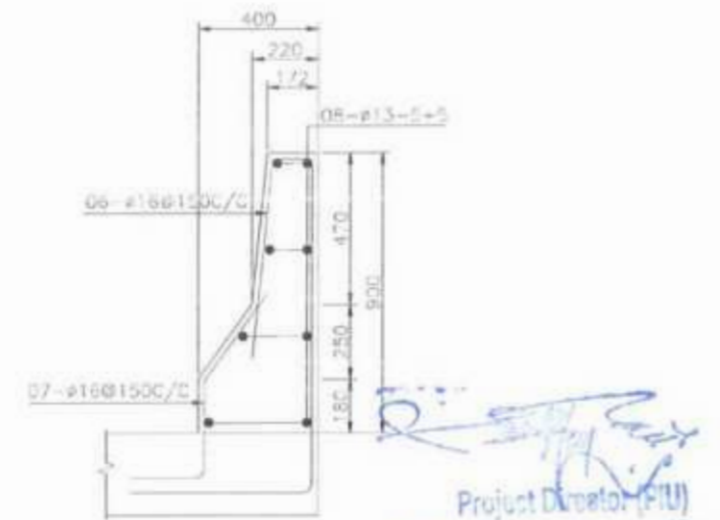
TYPICAL SECTION B-B



REINFORCEMENT DETAILS



BARRIER



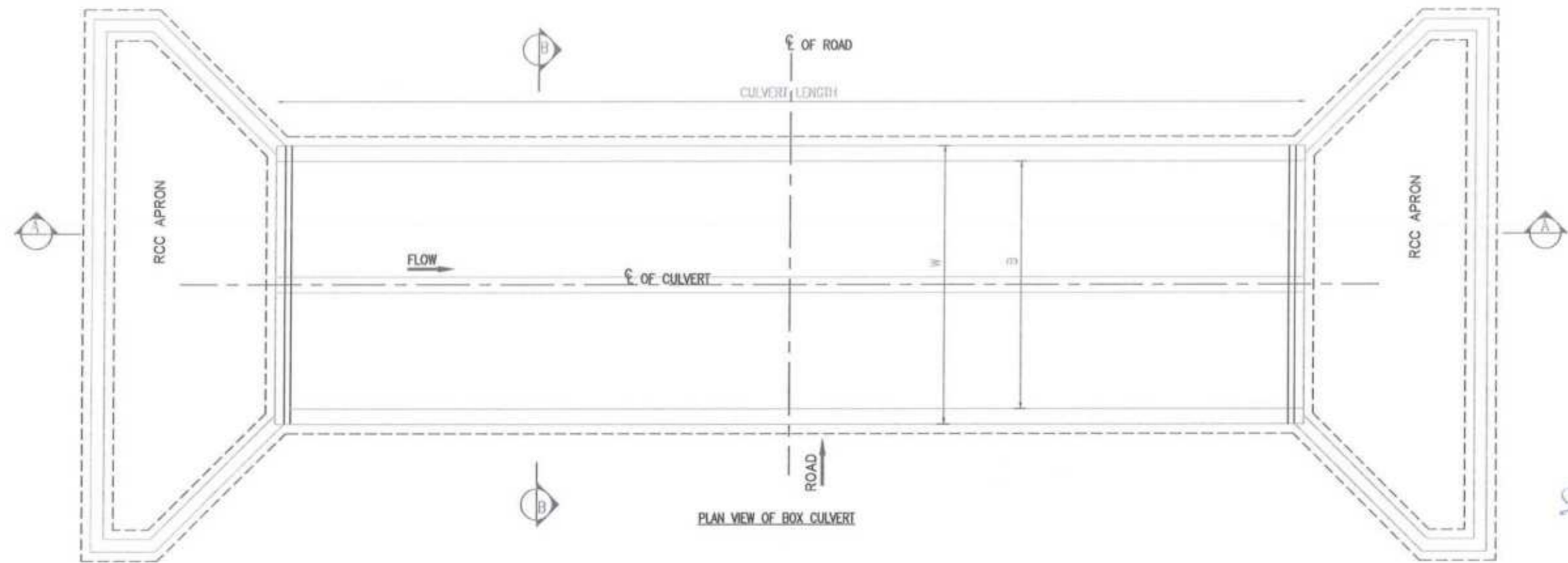
BARRIER REINFORCEMENT

- NOTES:-
- 1- ALL DIMENSIONS ARE IN MILLIMETER UNLESS NOTED.
  - 2- ALL CONCRETE SHALL BE REINFORCED CONCRETE CLASS A3.
  - 3- REINFORCEMENT FOR REINFORCED CONCRETE SHALL BE DEFORMED BAR OF (GRADE 60) CONFORMING TO AASHTO M-31 (ASTM A615) WITH MINIMUM YIELD STRENGTH OF 4200 kg/sq cm (60,000 psi).
  - 4- ALL FACES OF CONCRETE IN CONTACT WITH SOIL SHALL BE DAMP PROOFED WITH 2 LAYERS OF BITUMINOUS COATING MATERIAL.
  - 5- THE DEPTH OF SELECT FILL SHALL BE DECIDED BY THE ENGINEER AT SITE. 300mm SHALL BE (min.)
  - 6- WING WALLS SHALL BE AT LEAST 45° FOR SKEW D, HOWEVER IF SKEW IT SHALL BE FINALIZED AS PER SITE REQUIREMENT.
  - 7- CONCRETE COVER: OUTER SIDE = 50mm, INNER SIDE = 40mm, BOTTOM = 40mm & TOP = 40mm

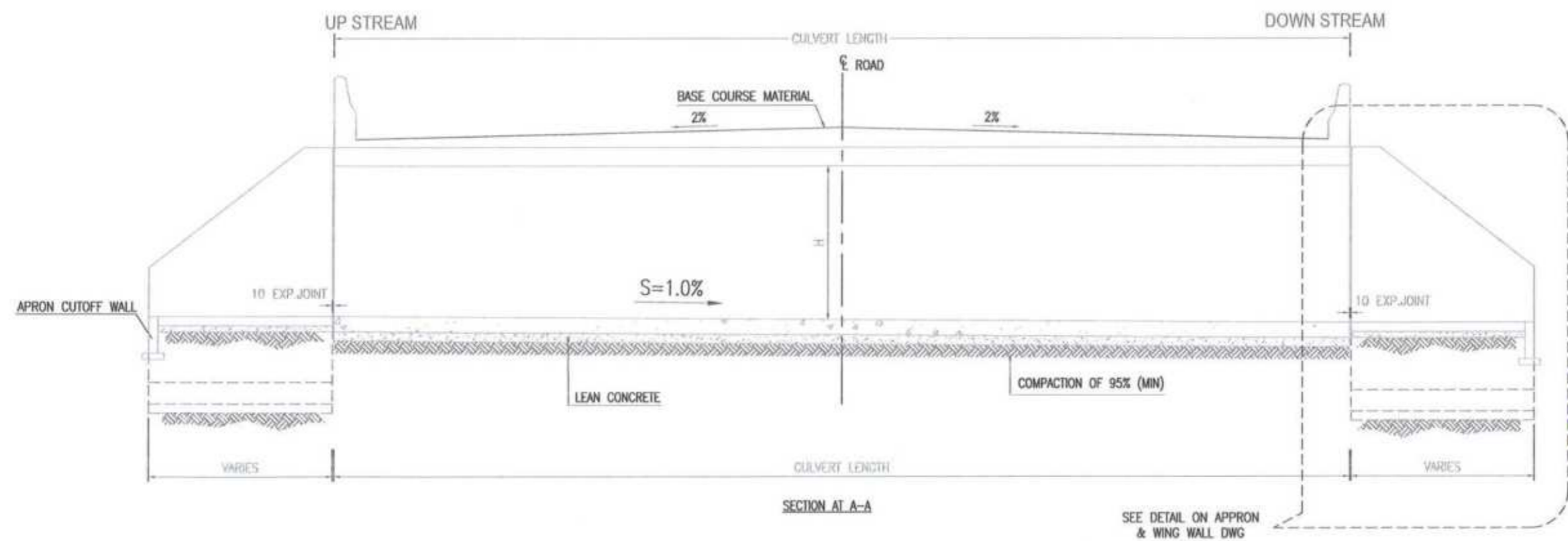
SINGLE CELL BOX CULVERT DIMENSION AND REINFORCEMENT											
SIZE	FILL	T1	T2	T3	W	BAR 1	BAR 2	BAR 3	BAR 4	BAR 5	BAR 6
B	D	IF				DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C
1000	1000	300-600	250	250	250	18-150	16-150	16-150	16-150	10-150	10-150
		601-1000	200	200	200	12-150	16-150	16-150	16-150	10-150	10-150
		1001-2000	200	200	200	1400	12-150	12-150	12-150	16-150	10-150
1000	1500	300-600	250	250	250	19-150	20-150	16-150	20-150	10-150	10-150
		601-1000	200	200	200	1400	16-150	16-150	16-150	20-150	10-150
		1001-2000	200	200	200	1400	16-150	16-150	12-150	16-150	10-150
1500	1000	300-600	275	275	225	19-200	20-200	16-150	20-200	10-150	10-150
		601-1000	225	225	225	1950	16-150	16-150	16-150	20-200	10-150
		1001-2000	225	225	225	1950	16-150	16-150	12-150	16-150	10-150
2000	1000	300-600	300	315	250	20-250	20-150	16-150	20-150	10-150	10-150
		601-1000	250	250	250	2500	16-150	20-150	16-150	20-150	10-150
		1001-2000	250	250	250	2500	16-150	16-150	16-150	16-150	10-150
2500	1000	300-600	325	325	300	3100	20-150	20-150	16-150	20-150	10-150
		601-1000	275	275	275	3050	16-150	20-150	16-150	20-150	10-150
		1001-2000	275	275	275	3050	16-150	16-150	16-150	16-150	10-150
1500	1500	300-600	275	275	225	1950	20-150	20-150	16-150	20-150	10-150
		601-1000	225	225	225	1950	16-150	16-150	16-150	20-150	10-150
		1001-2000	225	225	225	1950	16-150	16-150	12-150	16-150	10-150
2000	1500	300-600	300	315	250	2500	20-200	20-200	20-200	20-200	10-150
		601-1000	250	250	250	2500	16-150	16-150	16-150	20-200	10-150
		1001-2000	250	250	250	2500	16-150	16-150	16-150	16-150	10-150
2500	1500	300-600	325	325	300	3050	20-150	20-150	20-150	20-150	10-150
		601-1000	275	275	275	3050	16-150	20-150	16-150	20-150	10-150
		1001-2000	275	275	275	3050	16-150	16-150	16-150	16-150	10-150
3000	1500	300-600	400	415	325	3850	20-150	20-150	16-150	20-150	10-150
		601-1000	300	300	300	3600	16-150	20-150	16-150	16-150	10-150
		1001-2000	300	300	300	3600	20-200	20-200	20-200	20-200	10-150
2000	2000	300-600	300	315	250	2500	20-150	20-150	16-150	20-150	10-150
		601-1000	250	250	250	2800	16-150	20-150	16-150	20-200	10-150
		1001-2000	250	250	250	2500	16-150	16-150	16-150	16-150	10-150
2000	2500	300-600	300	325	275	2550	20-150	20-150	16-150	20-150	10-150
		601-1000	250	275	275	2550	16-150	20-150	16-150	20-200	10-150
		1001-2000	250	275	275	2550	16-150	16-150	16-150	16-150	10-150
2500	2000	300-600	325	325	325	3150	20-150	20-150	20-150	20-150	12-150
		601-1000	275	275	275	3050	16-150	20-150	16-150	20-150	12-150
		1001-2000	275	275	275	3050	20-200	20-200	20-200	20-200	12-150
3000	2000	300-600	400	425	325	3650	20-150	20-150	20-150	20-150	12-150
		601-1000	300	275	275	3550	16-150	20-150	16-150	20-150	12-150
		1001-2000	300	275	275	3550	20-200	20-200	20-200	20-200	12-150
3000	3000	300-600	400	425	350	3700	20-150	20-150	20-150	20-150	12-150
		601-1000	300	300	300	3800	16-150	20-150	16-150	20-150	12-150
		1001-2000	300	300	300	3600	20-200	20-200	20-200	20-200	12-150
3000	3500	300-600	400	425	375	3750	20-150	20-150	20-150	20-150	12-150
		601-1000	300	325	325	3650	16-150	20-150	16-150	20-150	12-150
		1001-2000	300	325	325	3650	20-200	20-200	20-200	20-200	12-150
4000	2000	300-600	500	500	350	4700	20-125	20-125	20-150	20-100	12-150
		601-1000	350	350	350	4700	20-150	20-150	20-150	20-100	12-150
		1001-2000	350	350	350	4700	20-170	20-170	20-170	20-100	12-150

Project Director (PIU)  
Provincial Roads Improvement  
& C&W Department Pakistan

<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	<p>PACKAGE-8 LOT-1</p>	<p>SHEET CONTENT:</p> <p>SINGLE CELL BOX CULVERT SECTION &amp; REINFORCEMENT DETAIL</p> <p>DATE: SEP, 2024 DWG NO. CEC/PIU/RRDP/STR/518-028</p>
		a	SEP, 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN DRAWN: MUSHTAQ CHECKED: M.ISLAM APPROVED: ACEEL YOUSUF	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)		



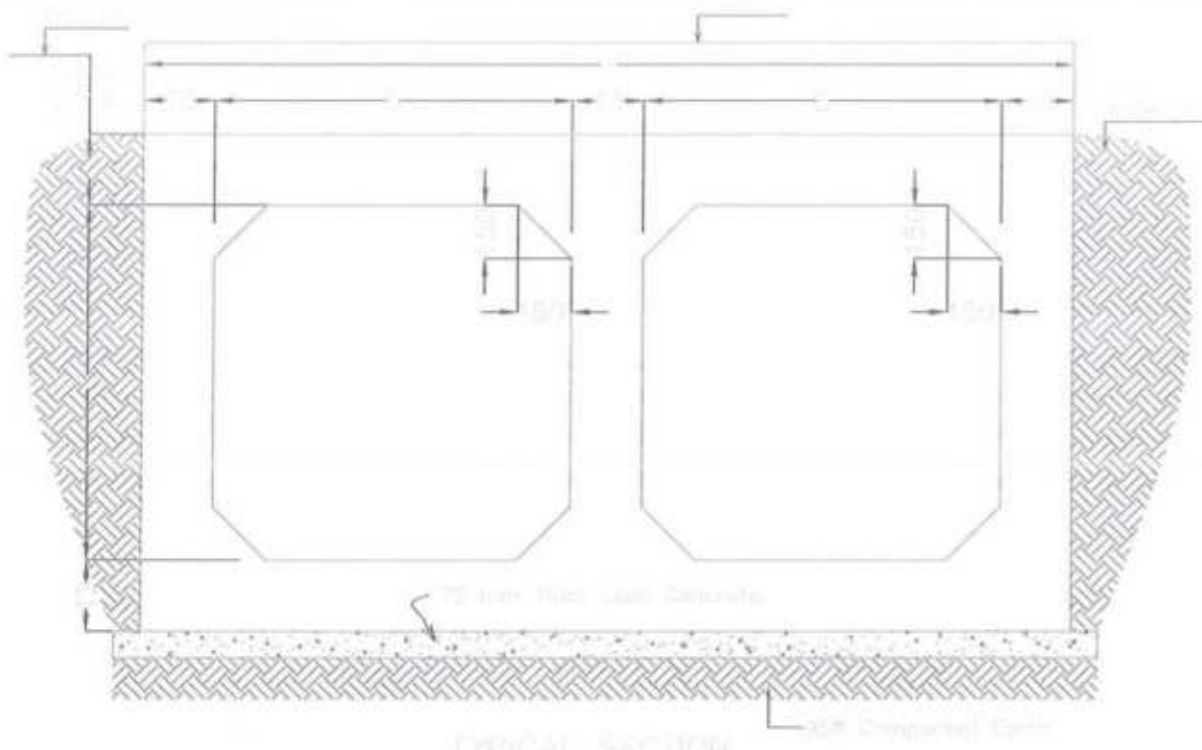
*[Signature]*  
 Project Director (PIU)  
 Provincial Road's Improvement Project  
 C&W Department Peshawar.



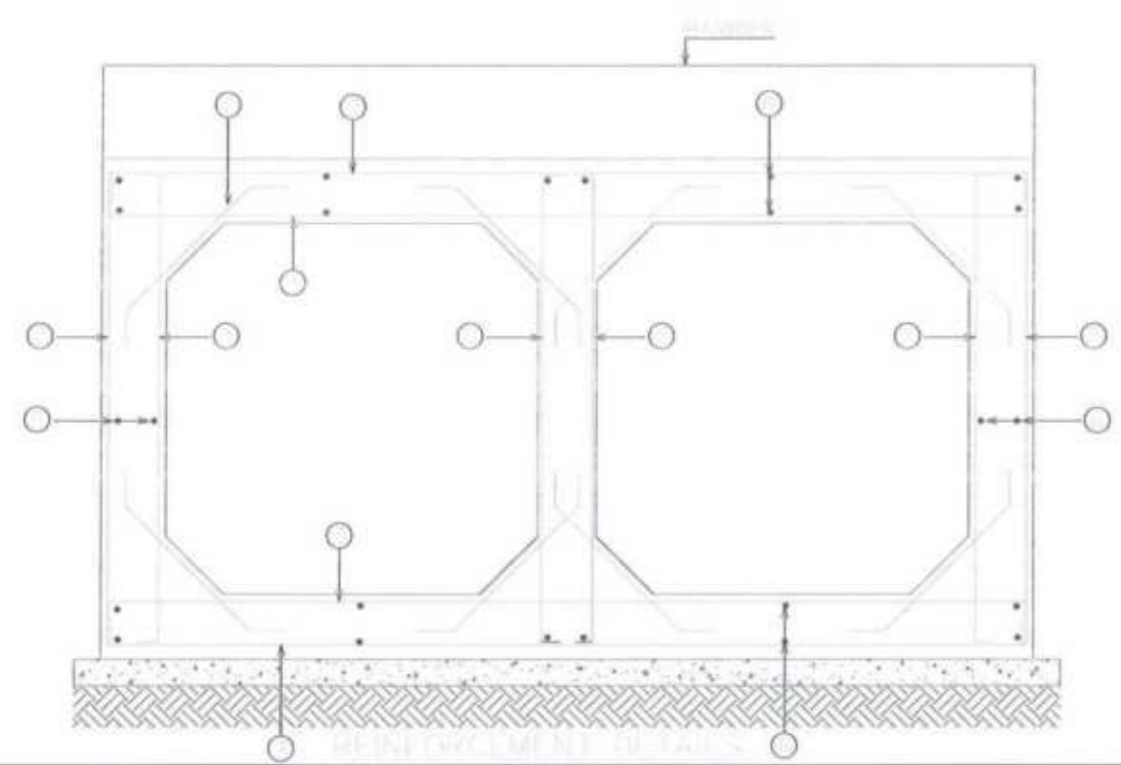
*[Signature]*  
 JV  
 Minconsult International Ltd  
 Creative Engineering Consultants

<p>GOVERNMENT OF KHYBER PAKHTUNKHWA          COMMUNICATION &amp; WORKS DEPARTMENT          PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD          (COMPANY NO. 58835 P)          J.V.           CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE: N.T.S DATE: SEP. 2024 DWG NO: CEC/KP/RRDP/STR/STR-20	SHEET CONTENT: 2 CELL BOX CULVERT PLAN & SECTION VIEW	
		0	SEP. 2024	TENDER DRAWINGS	DESIGNED	M.FAIZAN			KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)
		*			DRAWN	MUSHTAQ			
		1			CHECKED	M.ISLAM			
		-			APPROVED	AQEEB YOUSUF			
CLIENT: GOVERNMENT OF KHYBER PAKHTUNKHWA DESIGN CONSULTANT: (MIN - JV - CEC) PROJECT: KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP) PACKAGE-8 LOT-1									

SEE DETAIL ON APRON & WING WALL DWG



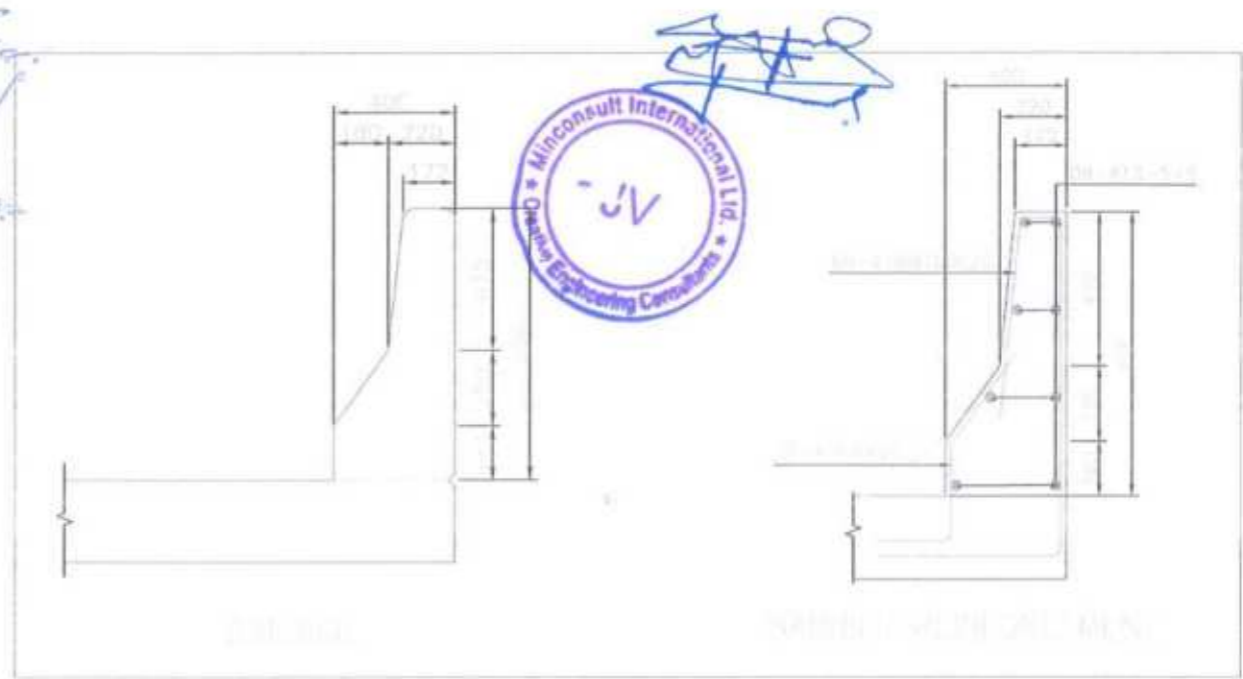
TYPICAL SECTION



REINFORCEMENT DETAIL

TWO CELL BOX CULVERT DIMENSION AND REINFORCEMENT													
SIZE		FILL HF	T1	T2	T3	W	BAR 1	BAR 2	BAR 3	BAR 4	BAR 5	BAR 6	BAR 7
B	D						DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C
2000	1000	300-600	300	315	250	4750	16-150	20-150	16-150	20-150	16-150	12-200	12-200
		601-1000	250	250	250	4750	16-150	16-150	16-150	20-150	16-150	12-200	12-200
		1001-2000	250	250	250	4750	16-150	16-150	16-150	20-175	16-150	12-200	12-200
2500	1000	300-600	325	325	300	5900	20-150	20-150	20-175	20-125	16-150	12-200	12-200
		601-1000	275	275	275	5825	20-150	20-150	20-175	20-125	16-150	12-200	12-200
		1001-2000	275	275	275	5825	16-150	20-150	20-175	20-125	16-150	12-200	12-200
2000	1500	300-600	300	315	250	4750	16-150	20-150	20-150	20-150	16-150	12-200	12-200
		601-1000	250	250	250	4750	16-150	16-150	20-150	20-150	16-150	12-200	12-200
		1001-2000	250	250	250	4750	16-150	16-150	20-150	20-150	16-150	12-200	12-200
3000	1500	300-600	400	415	325	6975	16-125	20-125	20-150	20-100	20-200	12-200	12-200
		601-1000	300	300	300	6900	16-150	20-150	20-150	20-100	20-200	12-200	12-200
		1001-2000	300	300	300	6900	16-150	20-150	20-150	20-150	20-200	12-200	12-200
2000	2000	300-600	300	315	250	4750	16-150	20-150	20-150	20-150	16-170	12-200	12-200
		601-1000	250	250	250	4750	16-150	20-150	20-150	20-150	16-150	12-200	12-200
		1001-2000	250	250	250	4750	16-150	20-150	16-150	20-150	16-150	12-200	12-200
3000	2000	300-600	400	425	325	6975	16-125	20-125	20-125	20-125	20-175	12-200	12-200
		601-1000	300	300	300	6900	16-150	20-150	20-150	20-150	20-175	12-200	12-200
		1001-2000	300	300	300	6900	20-170	20-170	20-170	20-170	20-175	12-200	12-200
4000	2000	300-600	500	500	350	9050	20-125	20-125	20-125	20-100	20-150	12-200	12-200
		601-1000	350	350	350	9050	20-150	20-150	20-150	20-100	20-150	12-200	12-200
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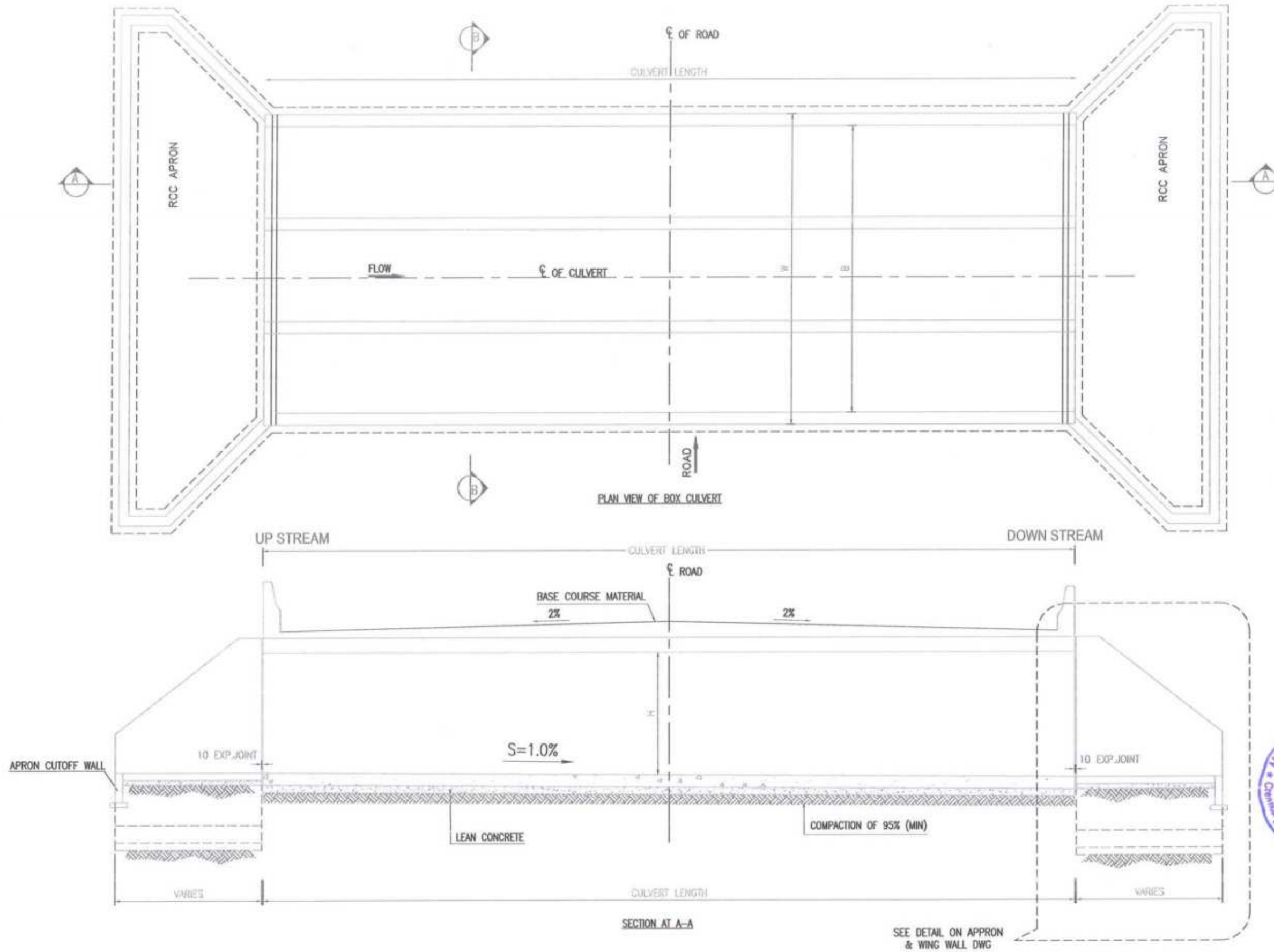
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department, Peshawar.



**NOTES:-**  
 1- ALL DIMENSIONS ARE IN MILLIMETER UNLESS NOTED.  
 2- ALL CONCRETE SHALL BE REINFORCED CONCRETE CLASS A3.  
 3- REINFORCEMENT FOR REINFORCED CONCRETE SHALL BE DEFORMED BAR OF (GRADE 60) CONFORMING TO AASHTO M-31(ASTM A615) WITH MINIMUM YIELD STRENGTH OF 4200 kg/sq.cm (60,000 psi).  
 4- ALL FACES OF CONCRETE IN CONTACT WITH SOIL SHALL BE DAMP PROOFED WITH 2 LAYERS OF BITUMINOUS COATING MATERIAL.  
 5- THE DEPTH OF SELECT FILL SHALL BE DECIDED BY THE ENGINEER AT SITE, 300mm SHALL BE (min.).  
 6- WING WALLS SHALL BE AT LEAST 45° FOR SKEW 0, HOWEVER IF SKEW IT SHALL BE FINALIZED AS PER SITE REQUIREMENT.  
 7- CONCRETE COVER: OUTER SIDE = 50mm, INNER SIDE = 40mm, BOTTOM = 40mm & TOP = 40mm

CLIENT: <b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	DESIGN CONSULTANT: <b>(MIN - JV - CEC)</b> MINCONSULT SDN BHD (CORP'Y NO. 58835 P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES	PROJECT	SCALE	SHEET CONTENT
		0	SEP, 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN DRAWN: MUSHTAQ CHECKED: M.ISLAM APPROVED: ADEEL YOUSUF	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8  LOT-1	N.T.S  DATE: SEP, 2024

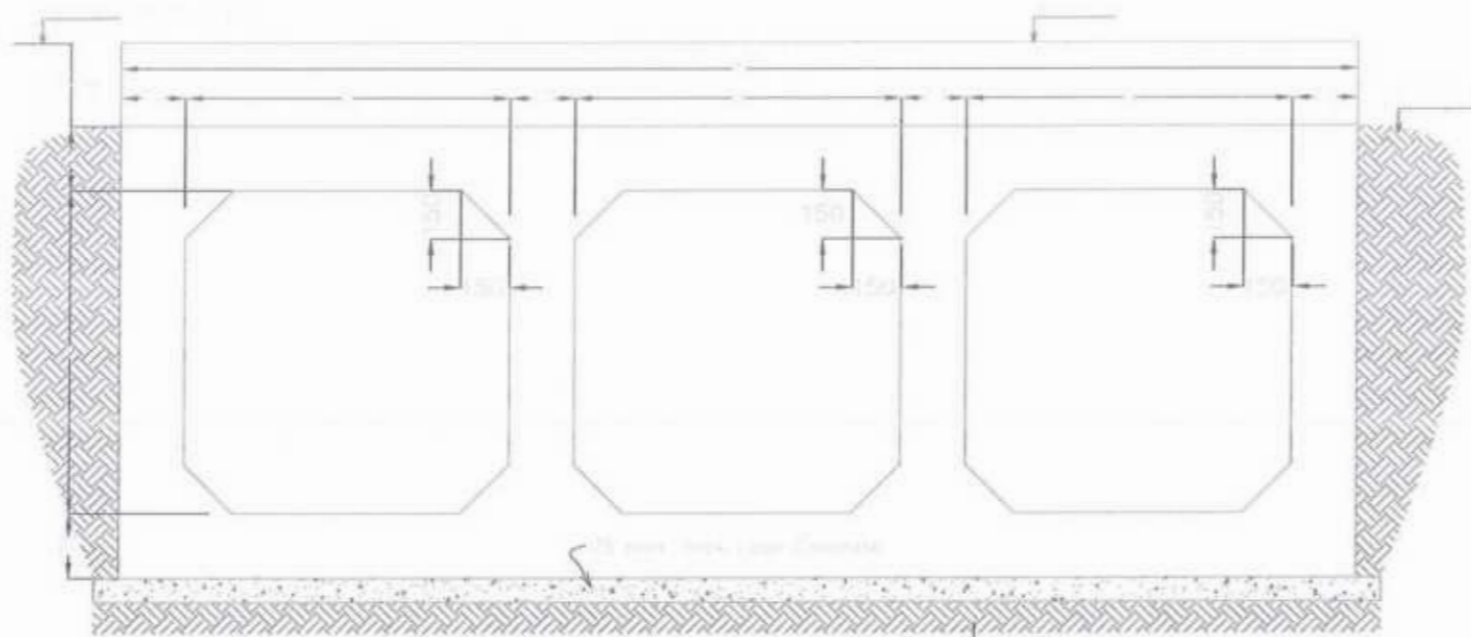




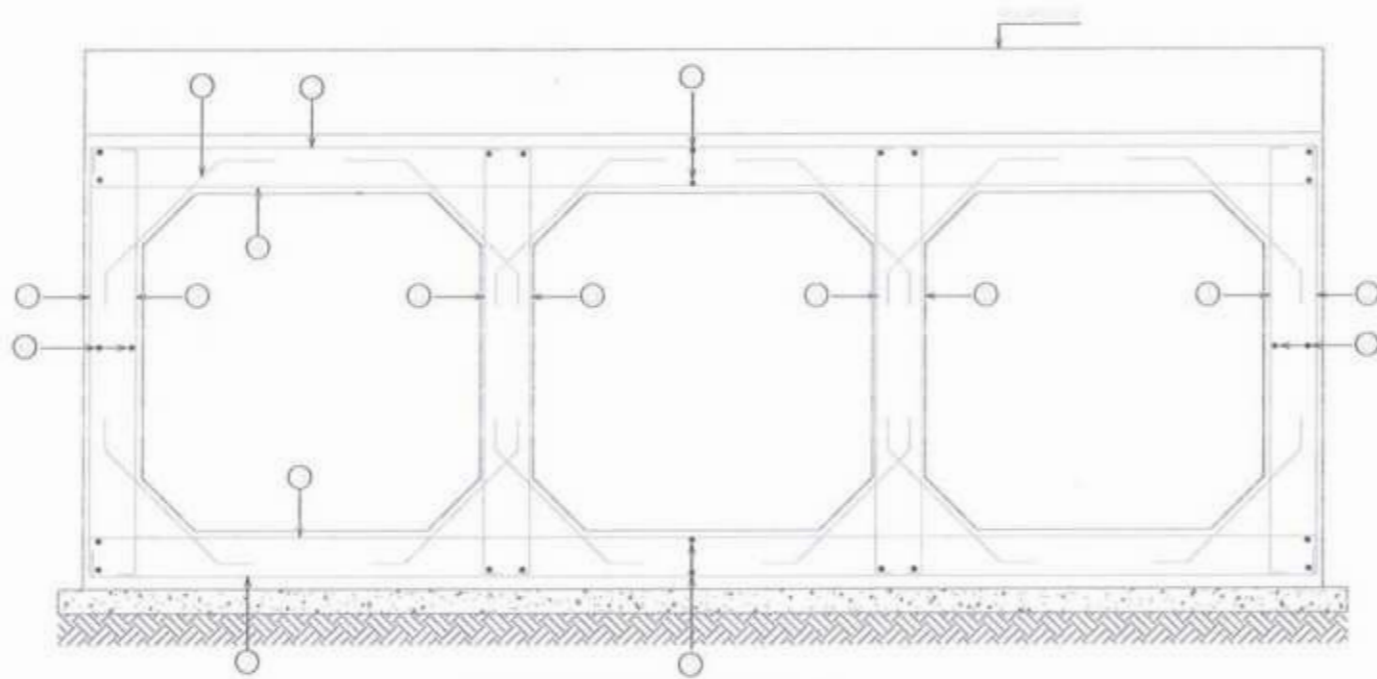
*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department, Peshawar



CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:
<b>GOVERNMENT OF KHYBER PAKHTUNKHWA</b> COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>MINCONSULT SDN BHD</b> <small>(COMPANY NO. 58825-P)</small> J.V. <b>CREATIVE ENGINEERING CONSULTANTS (CEC)</b>	a	SEP. 2024	TENDER DRAWINGS	DESIGNED: M.FAZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8  LOT-1	THREE/MULTI CELL BOX CULVERT PLAN & SECTION VIEW
		b			DRAWN: MUSHTAQ			
		c			CHECKED: M.ISLAM			
		d			APPROVED: A.SHAH			
							N.T.S	
							DATE:	
							SEP. 2024	



TYPICAL SECTION

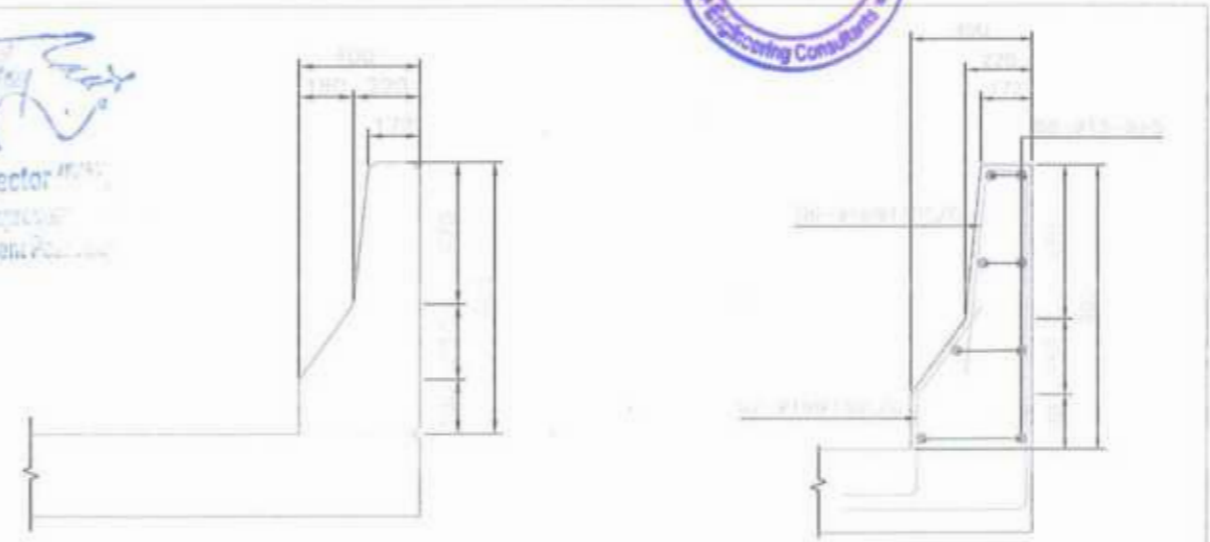


REINFORCEMENT DETAILS

THREE / MULTI CELL BOX CULVERT DIMENSION AND REINFORCEMENT													
SIZE		FILL HF	T1	T2	T3	W	BAR 1	BAR 2	BAR 3	BAR 4	BAR 5	BAR 6	BAR 7
B	D						DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C	DIA-C/C
2000	1000	300-600	300	315	250	7000	16-150	20-150	16-150	20-150	16-150	12-200	12-200
		601-1000	250	250	250	7000	16-150	16-150	16-150	20-150	16-150	12-200	12-200
		1001-2000	250	250	250	7000	16-150	16-150	16-150	20-175	16-150	12-200	12-200
2500	1000	300-600	325	325	300	8700	20-150	20-150	20-175	20-125	16-150	12-200	12-200
		601-1000	275	275	275	8600	20-150	20-150	20-175	20-125	16-150	12-200	12-200
		1001-2000	275	275	275	8600	16-150	20-150	20-175	20-125	16-150	12-200	12-200
2000	1500	300-600	300	315	250	7000	16-150	20-150	20-150	20-150	16-150	12-200	12-200
		601-1000	250	250	250	7000	16-150	16-150	20-150	20-150	16-150	12-200	12-200
		1001-2000	250	250	250	7000	16-150	16-150	20-150	20-150	16-150	12-200	12-200
3000	1500	300-600	400	415	325	10300	16-125	20-125	20-150	20-100	20-200	12-200	12-200
		601-1000	300	300	300	10200	16-150	20-150	20-150	20-100	20-200	12-200	12-200
		1001-2000	300	300	300	10200	16-150	20-150	20-150	20-150	20-200	12-200	12-200
2000	2000	300-600	300	315	250	7000	16-150	20-150	20-150	20-150	16-170	12-200	12-200
		601-1000	250	250	250	7000	16-150	20-150	20-150	20-150	16-150	12-200	12-200
		1001-2000	250	250	250	7000	16-150	20-150	16-150	20-150	16-150	12-200	12-200
3000	2000	300-600	400	425	325	10300	16-125	20-125	20-125	20-125	20-175	12-200	12-200
		601-1000	300	300	300	10200	16-150	20-150	20-150	20-150	20-175	12-200	12-200
		1001-2000	300	300	300	10200	20-170	20-170	20-170	20-170	20-175	12-200	12-200
4000	2000	300-600	500	500	350	13400	20-125	20-125	20-125	20-100	20-150	12-200	12-200
		601-1000	350	350	350	13400	20-150	20-150	20-150	20-100	20-150	12-200	12-200
		1001-2000	250	250	250	13000	20-170	20-170	20-170	20-100	20-150	12-200	12-200
3000	3000	300-600	400	415	375	10500	16-125	20-125	20-125	20-125	20-125	12-125	12-125
		601-1000	300	300	300	10200	16-150	20-150	20-150	20-150	20-125	12-150	12-150
		1001-2000	300	300	300	10200	20-170	20-170	20-170	20-170	20-125	12-170	12-170

- NOTES:-**
- 1- ALL DIMENSIONS ARE IN MILLIMETER UNLESS NOTED.
  - 2- ALL CONCRETE SHALL BE REINFORCED CONCRETE CLASS A3
  - 3- REINFORCEMENT FOR REINFORCED CONCRETE SHALL BE DEFORMED BAR OF (GRADE 60) CONFORMING TO AASHTO M-31(ASTM A615) WITH MINIMUM YIELD STRENGTH OF 4200 kg/sq cm (60,000 psi).
  - 4- ALL FACES OF CONCRETE IN CONTACT WITH SOIL SHALL BE DAMP PROOFED WITH 2 LAYERS OF BITUMINOUS COATING MATERIAL.
  - 5- THE DEPTH OF SELECT FILL SHALL BE DECIDED BY THE ENGINEER AT SITE, 300mm SHALL BE (min.)
  - 6- WING WALLS SHALL BE AT LEAST 45° FOR SKEW 0, HOWEVER IF SKEW IT SHALL BE FINALIZED AS PER SITE REQUIREMENT
  - 7- CONCRETE COVER: OUTER SIDE = 50mm, INNER SIDE = 40mm, BOTTOM = 40mm & TOP = 40mm

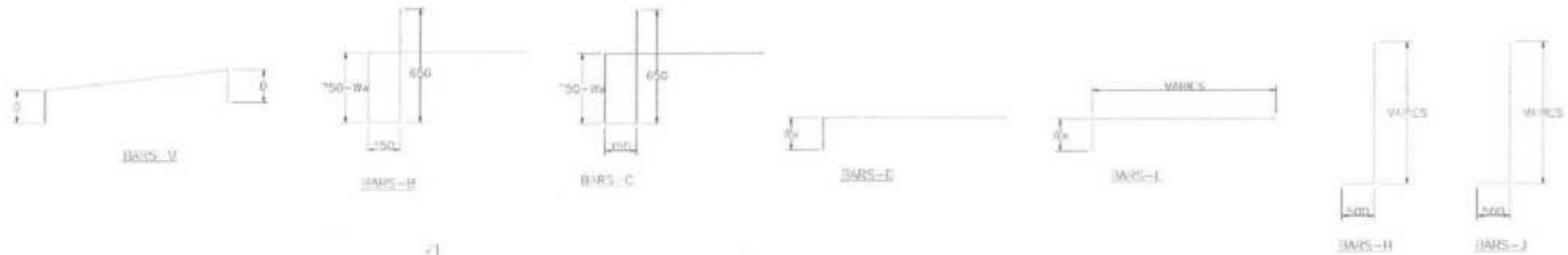
Project Director  
Provincial Roads Department  
C&W Department



<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	PACKAGE-8  LOT-1	SCALE:	SHEET CONTENT:  THREE/MULTI CELL BOX CULVERT SECTION & REINFORCEMENT DETAIL
		0	SEP, 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN DRAWN: MUSHTAQ CHECKED: M.ISLAM APPROVED: ADEEL YOUSUF	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)		N.T.S	
								DATE:	
								SEP, 2024	DWG NO. CEC/KP-RRDP/STR/STR-02E

APRON & WINGWALLS DIMENSIONS & REINFORCEMENTS

BOX DIMENSIONS	APRON & WING WALL DIMENSIONS								BAR - A		BAR - B		BAR - C		BAR - D		BAR - E		BAR - F		BAR - G		BAR - H		BAR - I		BAR - J		BAR - K		BAR - L		BAR - M		
	L	B	H	L	L	HT	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W			
1500	1500	250	1500	1500	1415	1000	250	400	120	5 x 2	3100	3400	100	12	2200	100	5-5	1600	2200	100	12	1100	100	5-5	1700	1200	100	12	1300	100	5-5	1800	1200	100	12
	1500	250	1500	1500	1415	1000	250	400	120	10 x 2	2100	2400	100	12	2700	100	7-7	1750	2700	100	12	1600	100	7-7	1800	1200	100	12	1300	100	7-7	1900	1200	100	12
	1500	250	1500	1500	1415	1000	250	400	120	15 x 2	2100	2400	100	12	3200	100	9-9	1800	3200	100	12	1700	100	9-9	1850	1200	100	12	1350	100	9-9	1950	1200	100	12
2000	2000	300	2000	2000	1415	1000	250	400	120	5 x 2	3100	3400	100	12	2200	100	5-5	1600	2200	100	12	1100	100	5-5	1700	1200	100	12	1300	100	5-5	1800	1200	100	12
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2500	2500	350	2500	2500	1415	1000	250	400	120	5 x 2	3100	3400	100	12	2200	100	5-5	1600	2200	100	12	1100	100	5-5	1700	1200	100	12	1300	100	5-5	1800	1200	100	12
	2500	350	2500	2500	1415	1000	250	400	120	10 x 2	2100	2400	100	12	2700	100	7-7	1750	2700	100	12	1600	100	7-7	1800	1200	100	12	1300	100	7-7	1900	1200	100	12
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3000	3000	400	3000	3000	1415	1000	250	400	120	5 x 2	3100	3400	100	12	2200	100	5-5	1600	2200	100	12	1100	100	5-5	1700	1200	100	12	1300	100	5-5	1800	1200	100	12
	3000	400	3000	3000	1415	1000	250	400	120	10 x 2	2100	2400	100	12	2700	100	7-7	1750	2700	100	12	1600	100	7-7	1800	1200	100	12	1300	100	7-7	1900	1200	100	12
	3000	400	3000	3000	1415	1000	250	400	120	15 x 2	2100	2400	100	12	3200	100	9-9	1800	3200	100	12	1700	100	9-9	1850	1200	100	12	1350	100	9-9	1950	1200	100	12

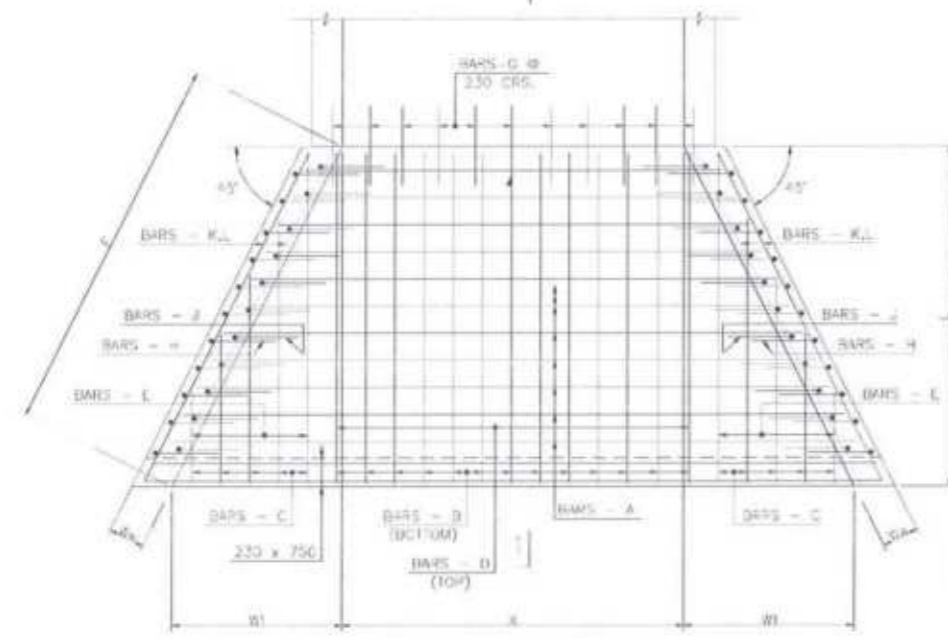


NOTES

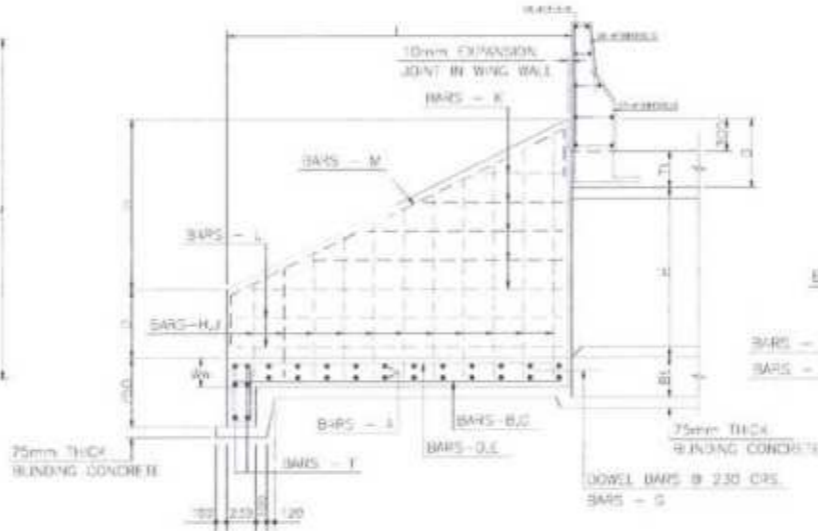
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
- ALL STRUCTURAL CONCRETE SHALL BE CLASS-A3 HAVING COMPRESSIVE STRENGTH OF 280 kg/cm<sup>2</sup>
- ALL STRUCTURAL REINFORCEMENT SHALL BE OF GRADE-60 STEEL, CONFORMING TO ASTM A-615.
- MINIMUM COVER TO THE REINFORCEMENT TO BE 40mm.

*[Handwritten signature]*

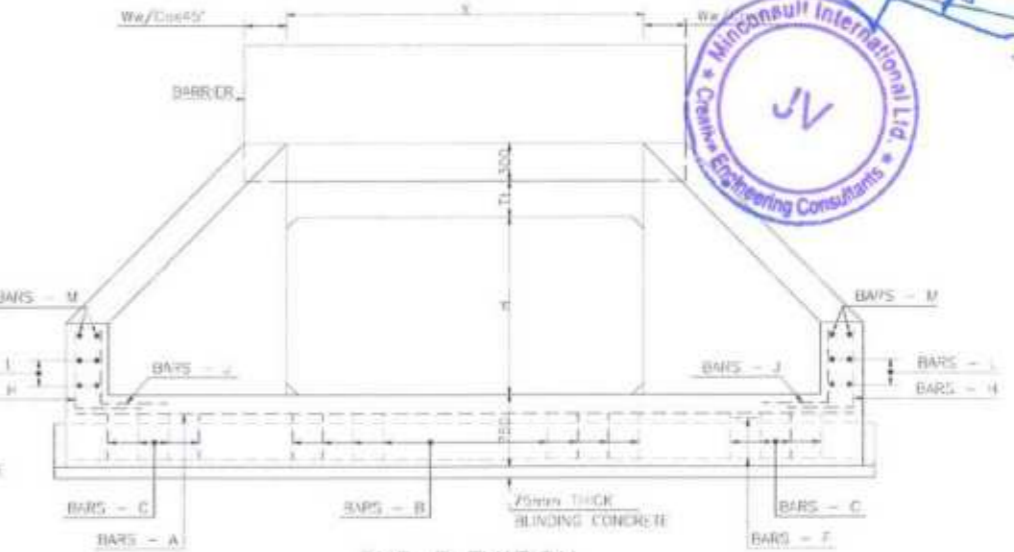
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.



PLAN OF SLAB AT GROUND LEVEL



TYP. SEC. 1 - 1



END ELEVATION  
INTERNAL WALL (IF ANY) OMITTED FOR CLARITY.



<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:	
		a	SEP, 2024	TENDER DRAWINGS	DESIGNED	M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	REINFORCEMENT DETAIL OF BOX CULVERT APRON & WING WALL
		b			DRAWN	MUSHTAQ			
		c			CHECKED	M.ISLAM			
d			APPROVED	ADIFEL YOUSUF					
							LOT-1	DATE:	DWG NO:CEC/KP/RRDP/STR/STR-26

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH MSHTD STANDARDS FOURTEENTH EDITION 1986 AND THE GENERAL SPECIFICATION OF THIS CONTRACT.

**PIPE CULVERT NOTES**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. CLASS 'C' CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 20.0 N/mm<sup>2</sup> AT 28 DAYS.
3. CLASS 'B' CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 25.0 N/mm<sup>2</sup> AT 28 DAYS.
4. LEAN CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 10.0 N/mm<sup>2</sup> AT 28 DAYS.
5. CONCRETE PIPE SHALL CONFORM TO ISM 1112, REINFORCED CONCRETE CULVERT, 900mm DIA AND SHALL FOLLOW IS-1012 SPECIFICATIONS.
6. ALL SUBSTRUCTURE WORKING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
7. ALL ELEVATIONS SHOWN ARE ESTIMATED AND SUBJECT TO CHECK TO SURVEY FIELD CONDITIONS.
8. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED TO 10mm.
9. FOR CULVERT LOCATION, TYPE, SKEW ANGLE AND RISE ELEVATION REFER TO ROAD ALIGNMENT PROFILE DRAWING AND SCHEDULE OF CULVERTS.
10. ACTUAL CULVERT LENGTH, SKEW ANGLE AND RISE ELEVATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION AT SITE.
11. PROVIDE MINIMUM 300mm FILL OVER THE TOP OF PIPE CULVERT.

**MORTAR :**

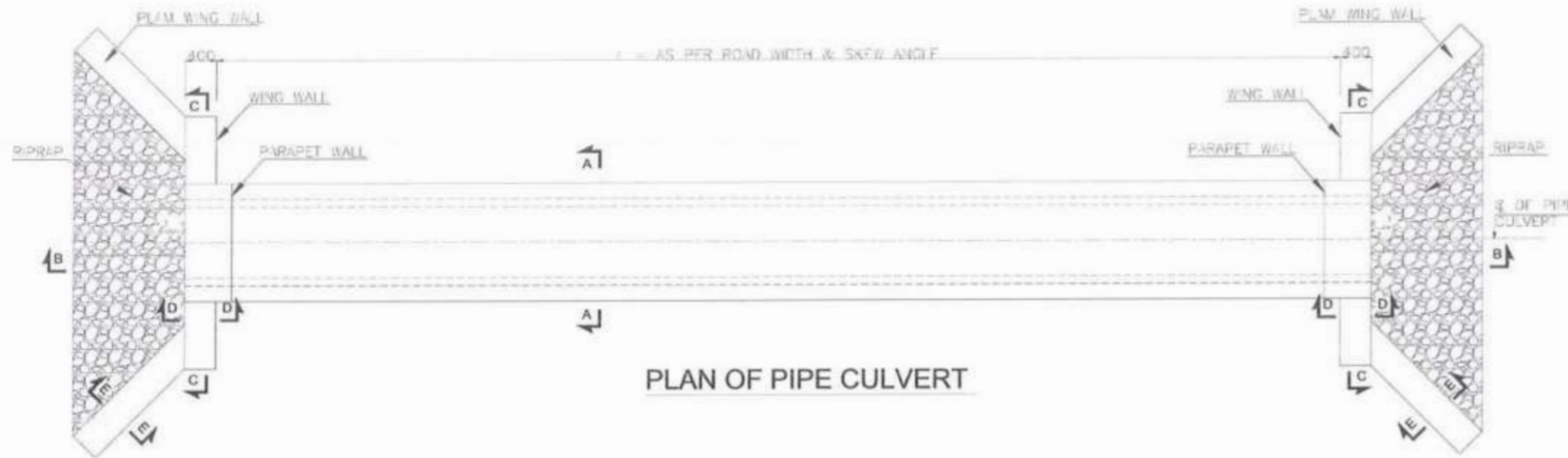
- 1 - PORTLAND CEMENT - AS PER SPEC
- 2 - SAND - MASHED MS

**PORTLAND CEMENT CONCRETE :**

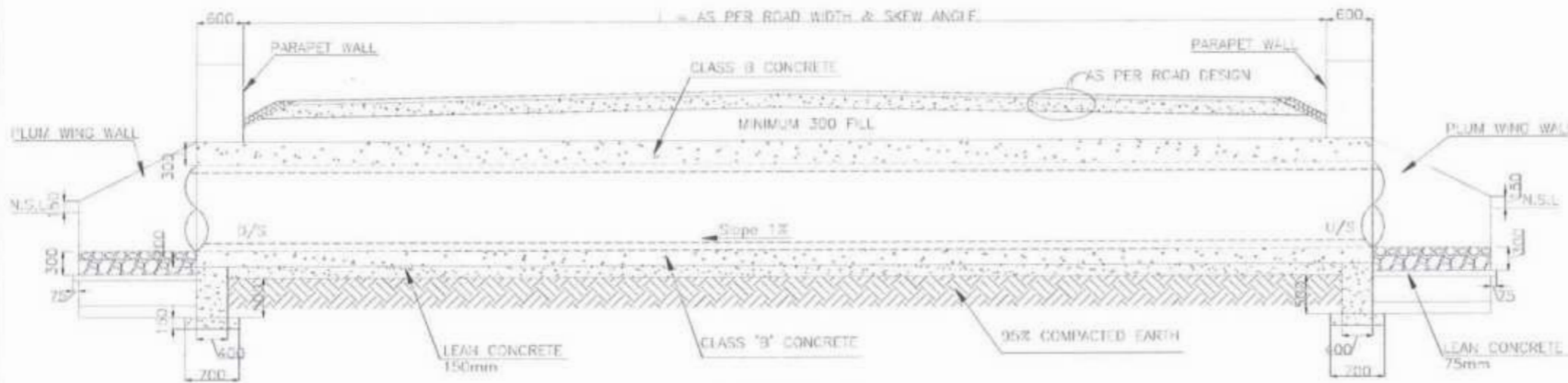
- 1 - LEAN CONCRETE 28 DAYS COMPRESSIVE STRENGTH  $f_c = 10.0 \text{ N/mm}^2$  @ 28 DAYS.
- 2 - CLASS 'B' CONCRETE 28 DAYS COMPRESSIVE STRENGTH  $f_c = 25.0 \text{ N/mm}^2$  @ 28 DAYS.
- 3 - REINFORCED CONCRETE 28 DAYS COMPRESSIVE STRENGTH  $f_c = 20.0 \text{ N/mm}^2$  @ 28 DAYS.

**REINFORCEMENT :**

- 1 - REINFORCING STEEL SHALL BE GR60 OR STEEL CONFORMING TO IS-1786.
- 2 - ALL BARS SHALL BE WITH MINIMUM YIELD STRENGTH OF 420 N/mm<sup>2</sup> (50000 PSI).



**PLAN OF PIPE CULVERT**



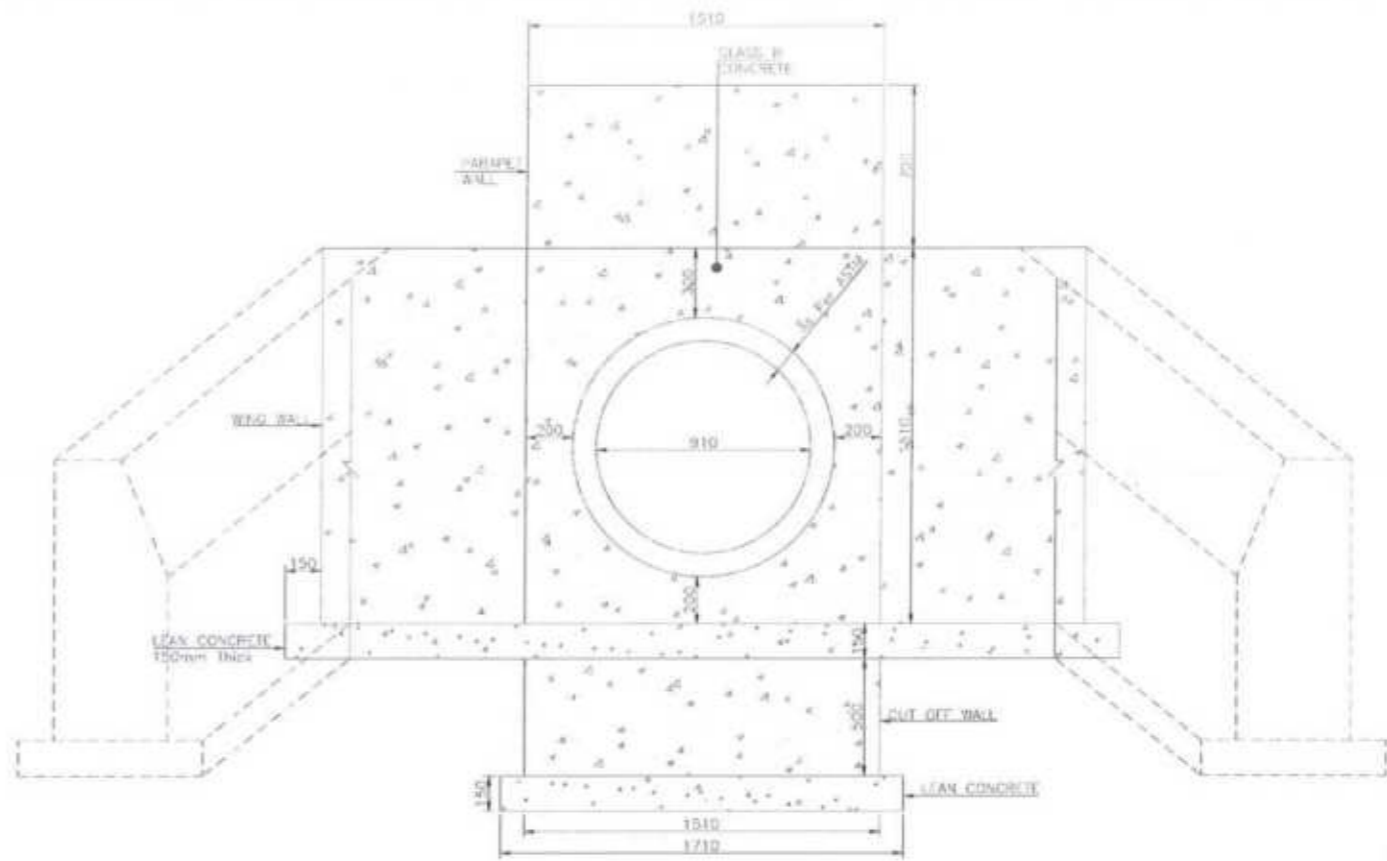
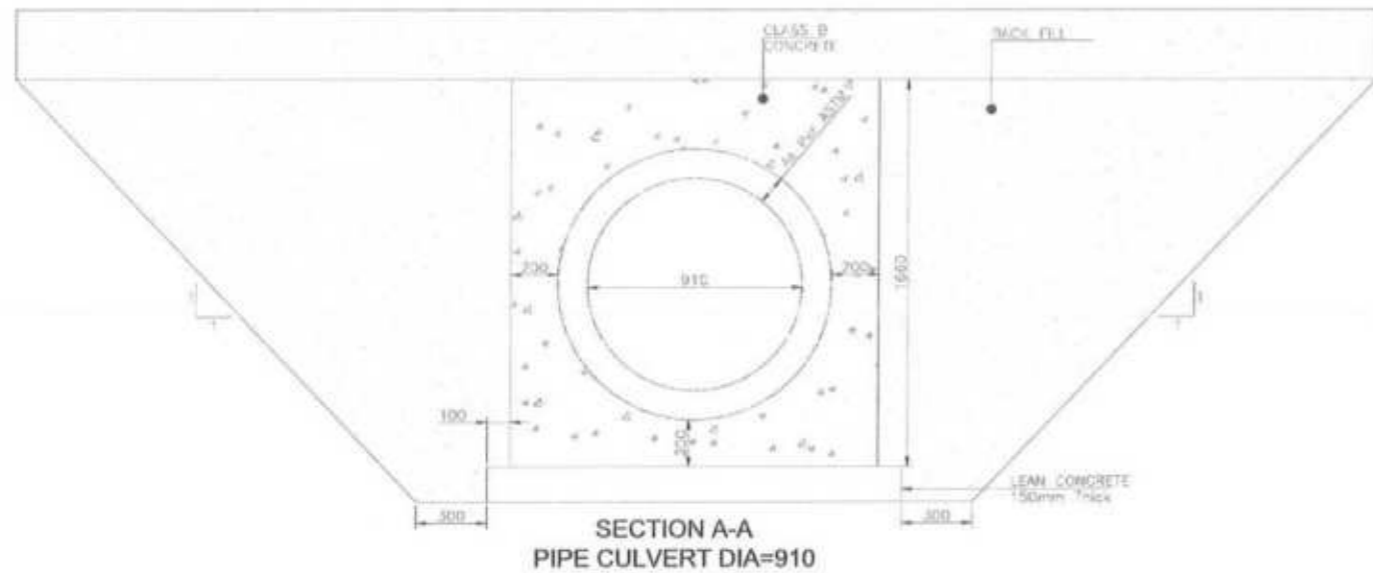
**SECTION BB**

*[Handwritten Signature]*

Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

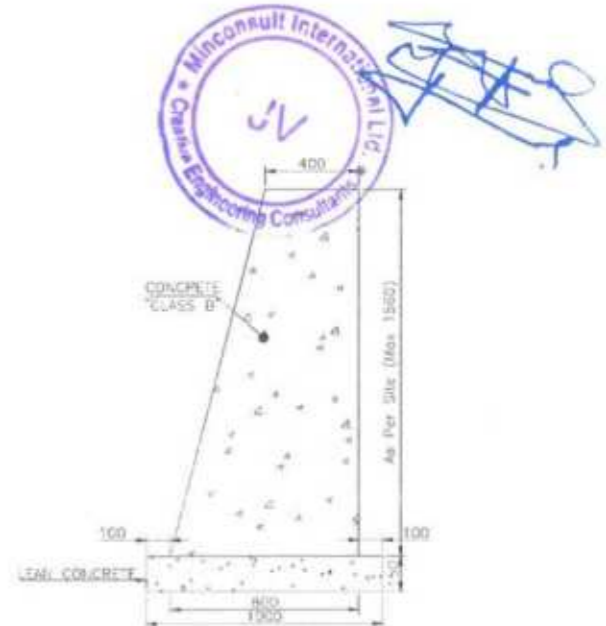
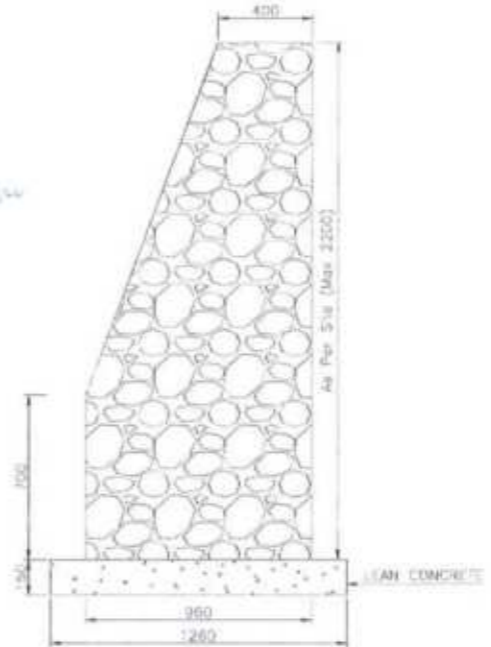
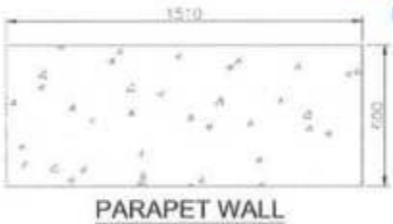
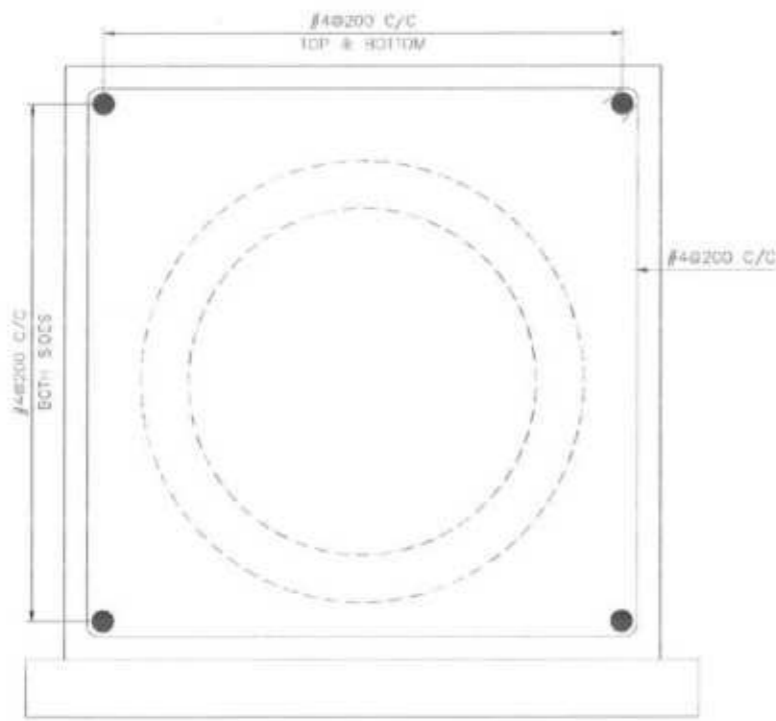


CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:
<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	0	SEP. 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	TYPICAL PIPE CULVERT PLAN & SECTIONS
		1			DRAWN: MUSHTAQ		LOT-1	N.T.S
		2			CHECKED: M.ISLAM		DATE:	
		3			APPROVED: AQFFI YOUSUF		SEP. 2024	DWG NO:CEC/KP-RRDP/STR/STR-3a



*Handwritten signature in blue ink.*

Project Director  
Provincial Roads Improvement Project  
C&W Department



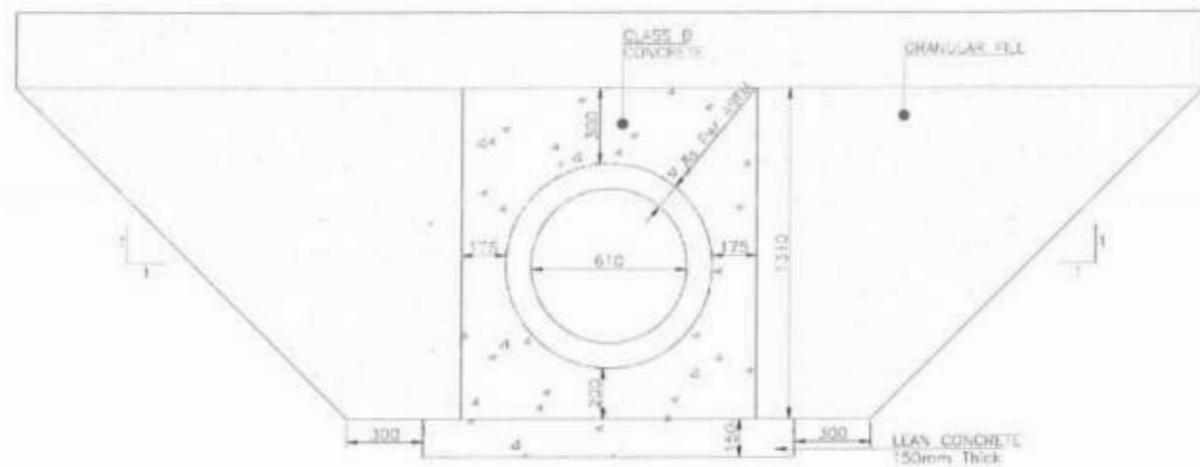
Minconsult International Ltd.  
Creative Engineering Consultants  
JV  
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PIPE CULVERT ENCASEMENT REINFORCEMENT

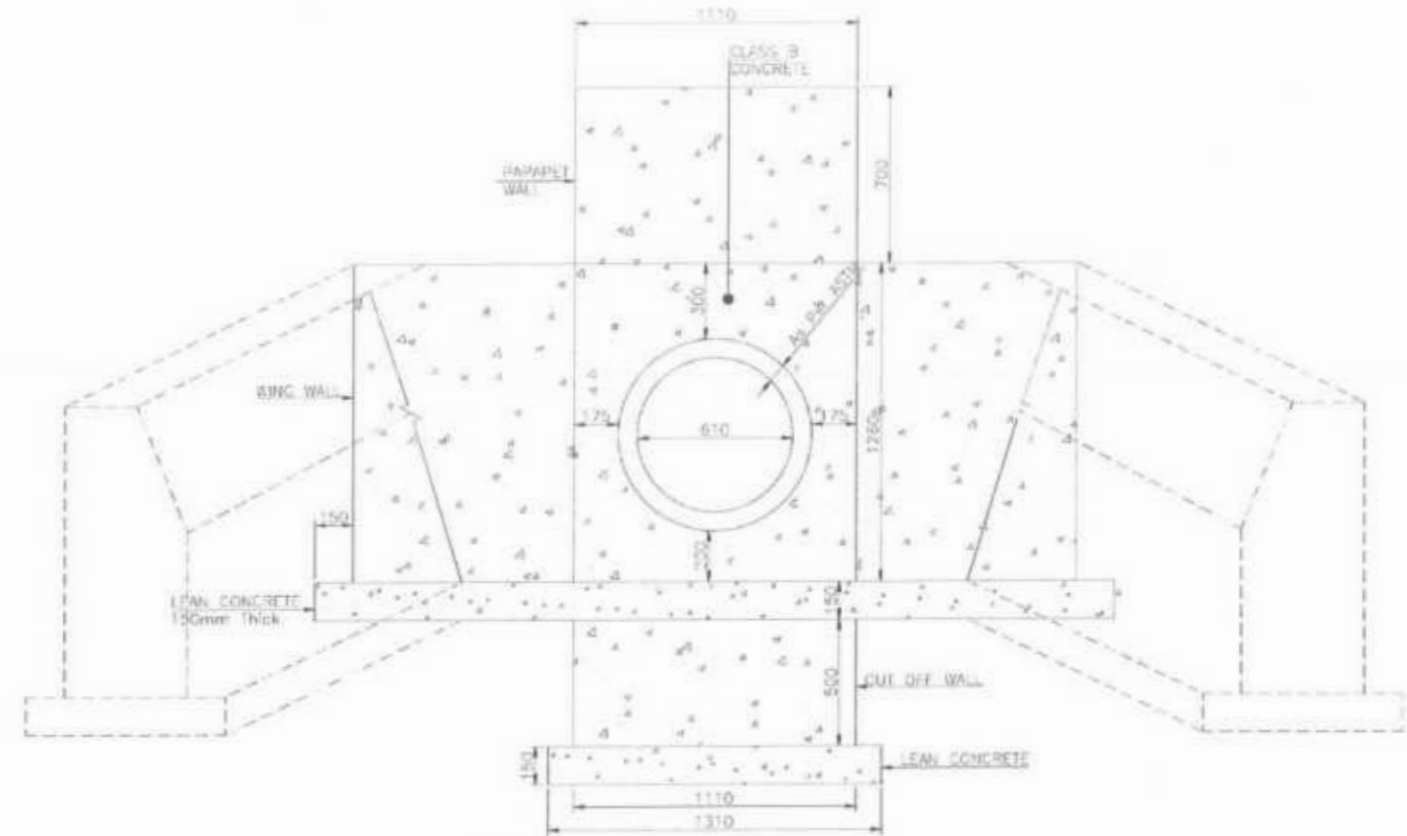
SECTION E-E PIPE CULVERT DIA = 910mm PLUM WALL X-SECTION

SECTION D-D PIPE CULVERT DIA = 910mm WING WALL X-SECTION

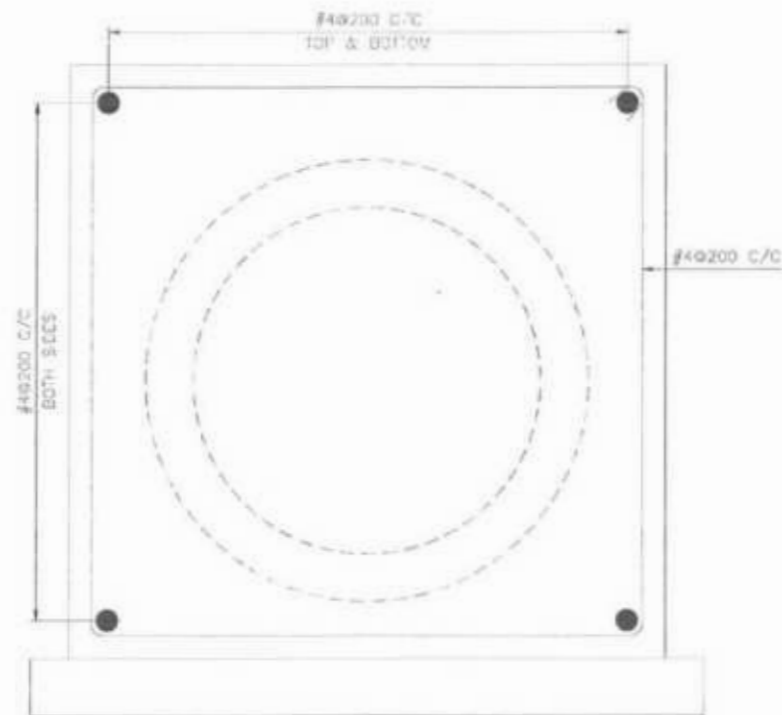
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<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	0	SEP, 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	N.T.S	
					DRAWN: MUSHTAQ		LOT-1	DATE: SEP, 2024	Ø910 mm TYPICAL PIPE CULVERT SECTION DETAILS DWG NO: CEC/KP/RRDP/STR/STR-30
					CHECKED: M.ISLAM				
					APPROVED: ACEEL YOUSUF				



SECTION A-A  
PIPE CULVERT DIA=610

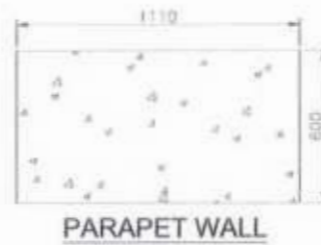


SECTION C-C PIPE CULVERT DIA=610  
WITH WING WALL X-SECTION

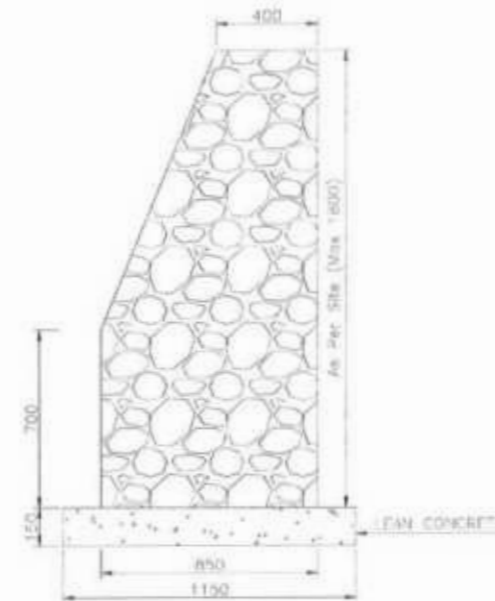


PIPE CULVERT  
ENCASEMENT REINFORCEMENT

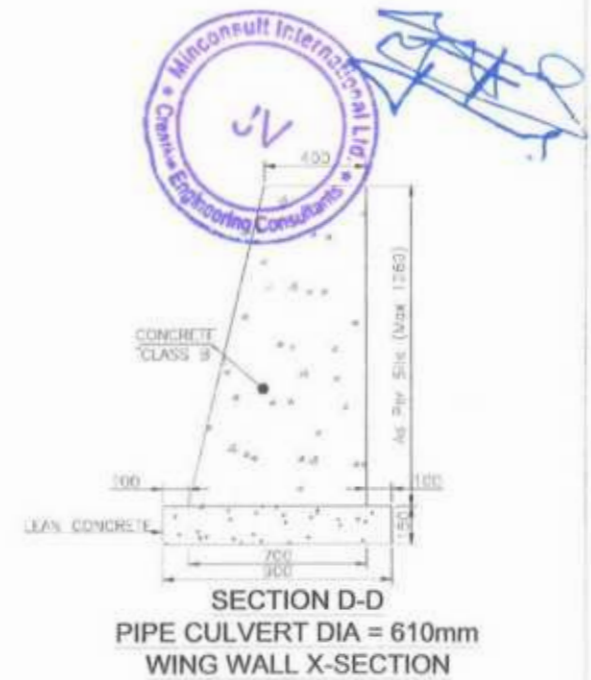
*[Signature]*  
Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department, Peshawar



PARAPET WALL

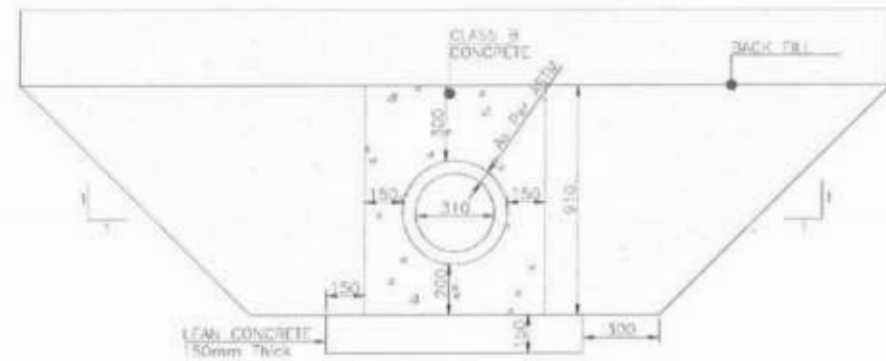


SECTION E-E  
PIPE CULVERT DIA = 610mm  
PLUM WALL X-SECTION

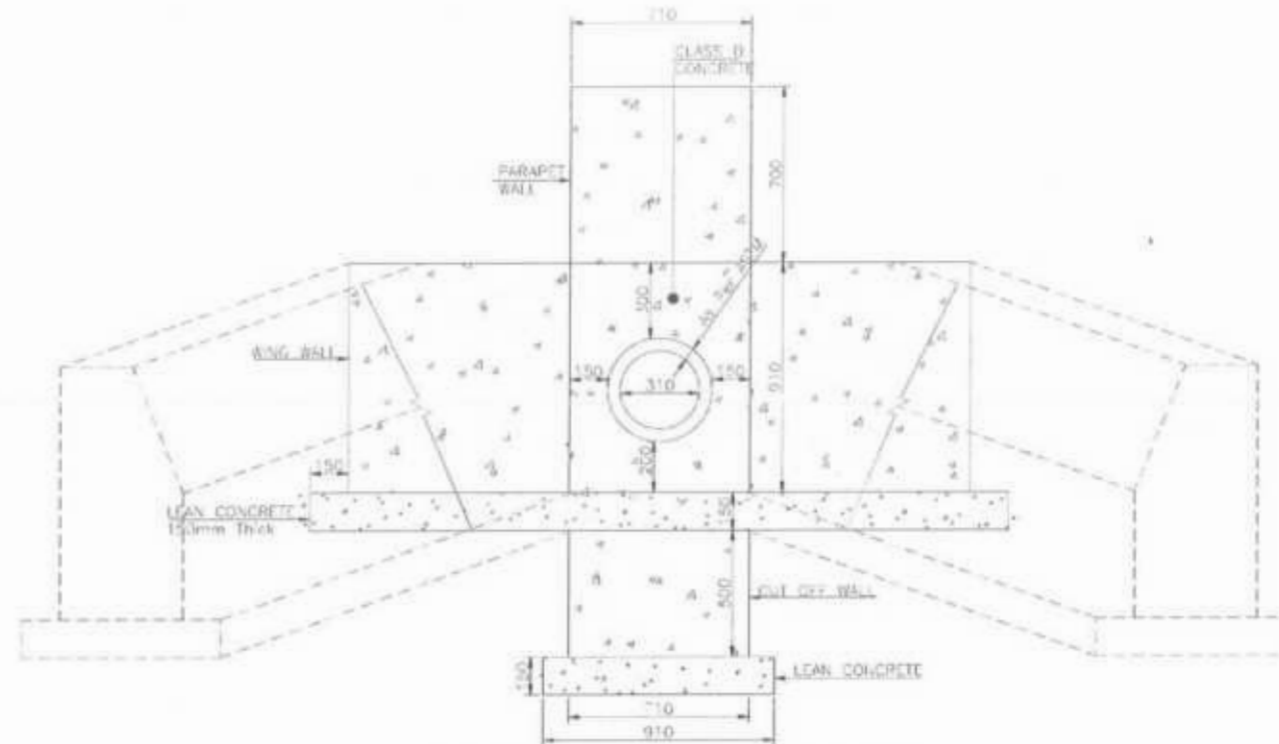


SECTION D-D  
PIPE CULVERT DIA = 610mm  
WING WALL X-SECTION

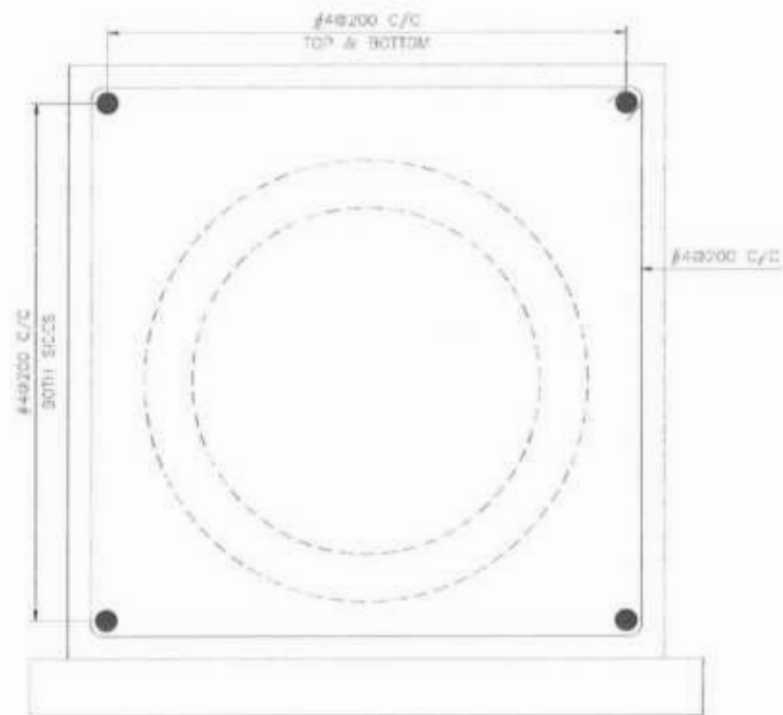
CLIENT:	DESIGN CONSULTANT:	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:
GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	a	SEP, 2024	TENDER DRAWINGS	DESIGNED: M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	Ø610 mm TYPICAL PIPE CULVERT SECTION DETAILS DWG NO CEC/KPRRDP/STR/ STR-3c
		b			DRAWN: MUSHTAQ		SCALE: N.T.S	
		c			CHECKED: M.ISLAM		DATE: SEP, 2024	
		d			APPROVED: ADEEL YOUSUF		LOT-1	



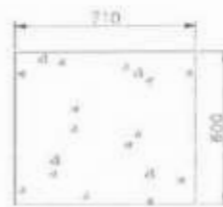
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PIPE CULVERT DIA=310



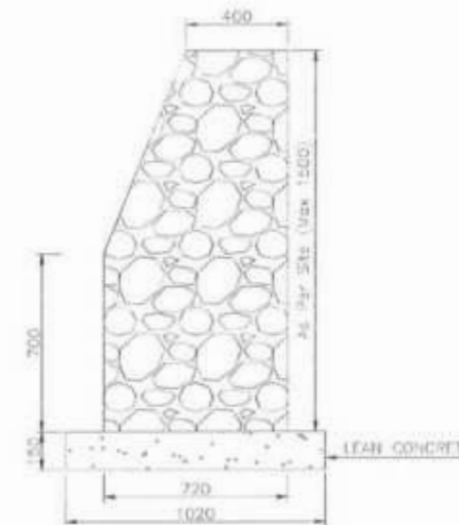
SECTION C-C PIPE CULVERT DIA=310  
WITH WING WALL X-SECTION



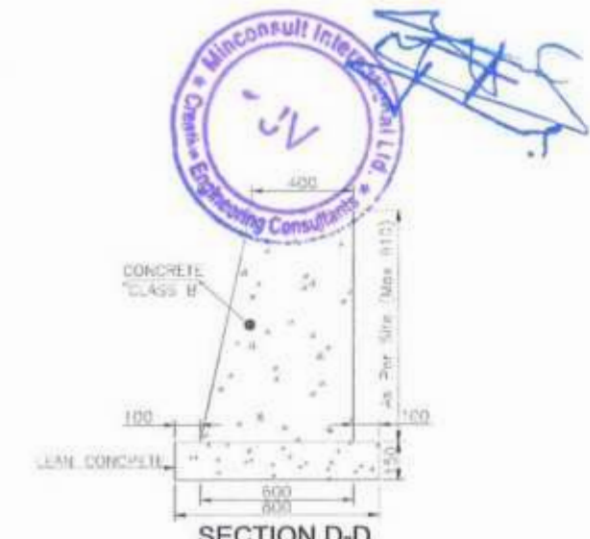
PIPE CULVERT  
ENCASEMENT REINFORCEMENT



PARAPET WALL



SECTION E-E  
PIPE CULVERT DIA = 310mm  
PLUM WALL X-SECTION



SECTION D-D  
PIPE CULVERT DIA = 310mm  
WING WALL X-SECTION

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Project Director (PIU)  
Provincial Roads Improvement Project  
C&W Department Peshawar.

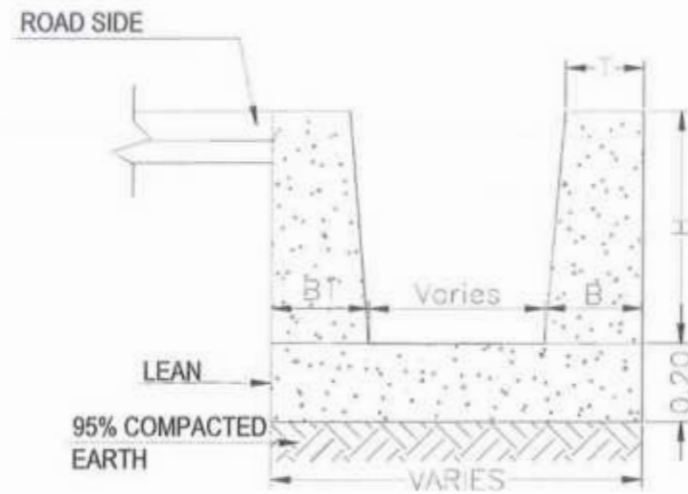
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<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	0	SEP. 2024	TENDER DRAWINGS	DESIGNED	M.FAIZAN	PACKAGE-8  LOT-1	N.T.S  DATE: SEP, 2024 DWG NO:CECK/PRRDP/STR/STR-3d	
		1			DRAWN	MUSHTAQ			KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)
		2			CHECKED	M.ISLAM			
		3			APPROVED	AGEEL YOUNIS			



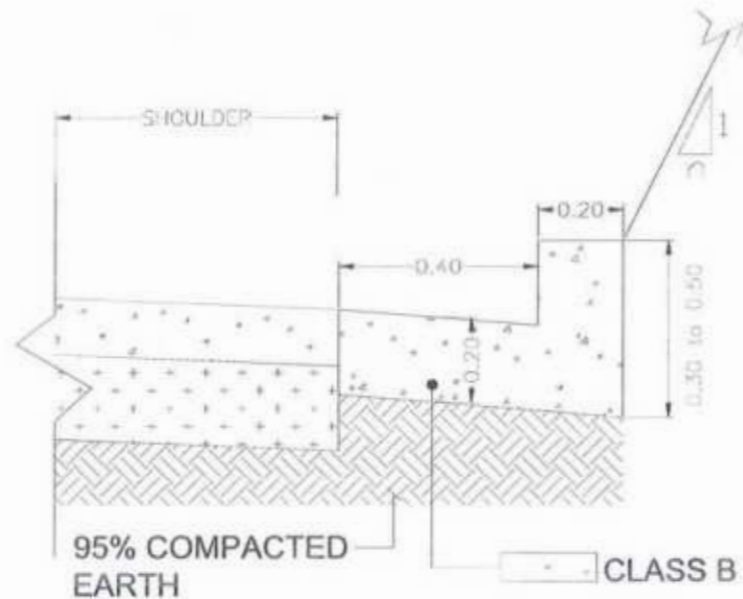
**SLAB FOR NON VEHICLES**



**SLAB FOR VEHICLES**



**TYPE -I P.C.C. DRAIN**



**TYPE -III DRAIN**

**NOTES :**

- 1 - TYPE-I DRAIN IS APPLICABLE FOR BUILTUP AREA.
- 2 - TYPE-II DRAIN IS APPLICABLE FOR HILLY AREA CUTTING PORTIONS.  
TYPE OF DRAIN & LOCATION SHALL DECIDED BY THE ENGINEER INCHARGE.
- 3 - ACTUAL LOCATION, LENGTH, SLOPE AND ELEVATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION
- 4 - ALL DIMENSIONS ARE IN METERS

**PORTLAND CEMENT CONCRETE :**

- 1 - PLAIN CEMENT CONCRETE 28 DAYS COMPRESSIVE
- 2 - CLASS 'A' CONCRETE 28 DAYS COMPRESSIVE  
STRENGTH  $f_c' = 210 \text{ Kg per cm}^2$ .
- 3 - CLASS 'B' CONCRETE 28 DAYS COMPRESSIVE  
STRENGTH  $f_c' = 170 \text{ Kg per cm}^2$ .
- 4 - LEAN CONCRETE  
STRENGTH  $f_c' = 100 \text{ Kg per cm}^2$ .
- 5 - REINFORCING STEEL SHALL BE GRADE 60 STEEL CONFORMING TO AASHTO M-31 (ASTM A-615) WITH MINIMUM YIELD STRENGTH OF 4220 Kg/Sq.Cm (60,000 Psi).

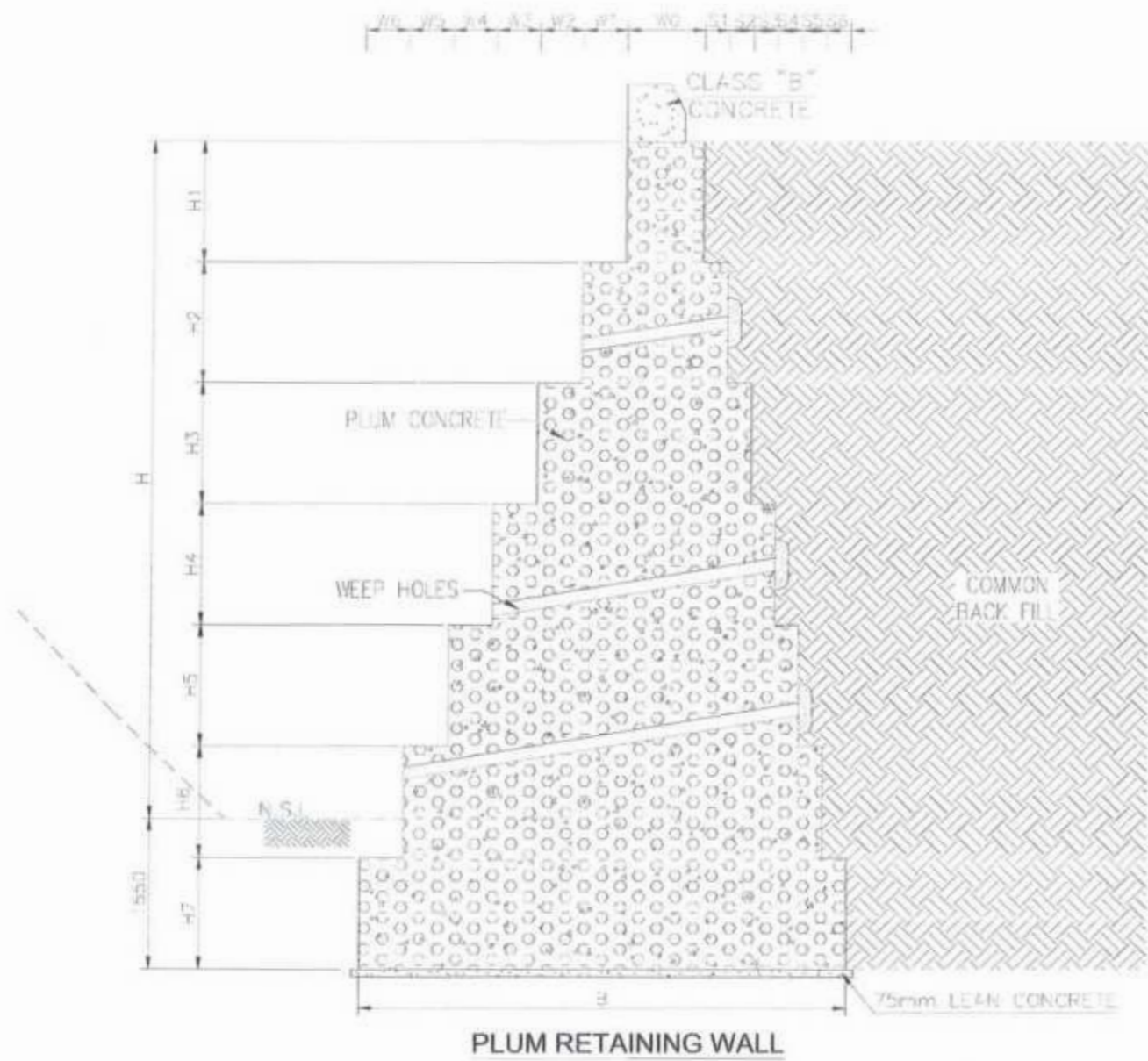
TYPE -I PCC DRAIN			
H (m)	B (m)	B1 (m)	T (m)
0.30	0.200	0.260	0.150
0.45	0.250	0.430	0.175
0.60	0.300	0.510	0.200
0.75	0.350	0.560	0.200
1.00	0.400	0.730	0.200



Project Director (RRD)  
Provincial Roads Improvement Project  
C&W Department, Peshawar.

<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SDN BHD (COMPANY NO. 58835-P) J.V.  CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES	PROJECT: KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	SCALE: N.T.S DATE: SEP, 2024	SHEET CONTENT: TYPICAL DETAILS OF ROAD SIDE DRAINS DWG NO:CEC/KPRRDP/STR/STR-04	
		0	SEP, 2024	TENDER DRAWINGS	DESIGNED				M.FAIZAN
		1			DRAWN				MUSHTAQ
		2			CHECKED				M.ISLAM
		3			APPROVED				AQEEL YOUNIS

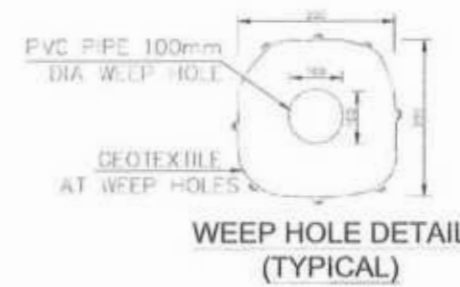
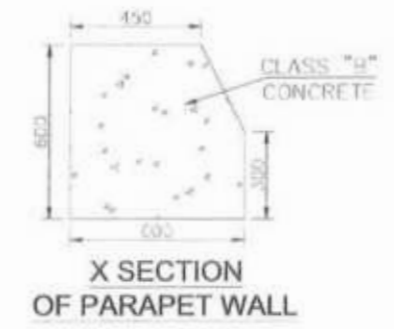




**NOTES**

1. WEEP HOLES PVC PIPE 100mm DIA SHALL BE STAGGERED AT AN INTERVAL OF 1500mm VERTICAL AND HORIZONTAL AND AS ADDITIONALLY DIRECTED BY THE ENGINEER.
2. THE SLOPE OF WEEP HOLES SHALL BE 1 IN 8 FROM BACK OF THE WALL TO THE OUTER FACE OR AS DIRECTED BY THE ENGINEER.
3. PLUM CONCRETE IN 3:2 (3 PARTS CONCRETE CLASS 'B' & 2 PART ROCK FILL MATERIAL) HAVING STONE SIZE RANGING BETWEEN 200-300) BE UTILIZED.
4. RCC PARAPET SHALL BE PROVIDED AT TOP OF RETAINING WALL AND AT OTHER HAZARDOUS LOCATIONS, GUARD RAIL SHALL BE PROVIDED OVER 4m HIGH FILL OR AS DIRECTED BY THE ENGINEER.
5. SAFE BEARING CAPACITY MENTIONED IN THE TABLE SHOULD BE ACHIEVED PRIOR TO CONSTRUCTION AT SITE IF LESS IT SHOULD BE COMMUNICATED TO THE ENGINEER.
6. AFTER 10m LENGTH CONSTRUCTION JOINT SHOULD BE PROVIDE.
7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
8. MINIMUM 28 DAYS CYLINDER COMPRESSIVE STRENGTH OF CONCRETE IN FOOTING SHOULD BE 210 Kg/cm<sup>2</sup> (3000 Psi)
9. NSL SHOULD BE AT LEAST 2m ABOVE THE BOTTOM OF FOOTING ON THE OUTER SIDE OF PLUM RETAINING WALL.
10. ALL SUB-STRUCTURE FOOTING SHALL BE SUBJECTED TO APPROVAL BY THE ENGINEER. ALL ELEVATION SHOWN ARE ESTIMATED AND SUBJECT TO CHANGE TO SUIT FILL CONDITION.
11. COMPACTION OF FILL MATERIAL (AS PER SPECIFICATION BY JETTING OR PONDING WITH WATER IS NOT PERMITTED. EACH LAYER OF FILL, MAXIMUM 200mm IN THICKNESS, SHALL BE MOISTENED AS REQUIRED. (OPTIMUM MOISTURE CONTENT FROM STANDARD PROCTOR TEST) AND THOROUGHLY TEMPERED OR OTHERWISE COMPACTED TO MINIMUM OF 95% COMPACTION (STANDARD PROCTOR TEST).

*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Pakistan.

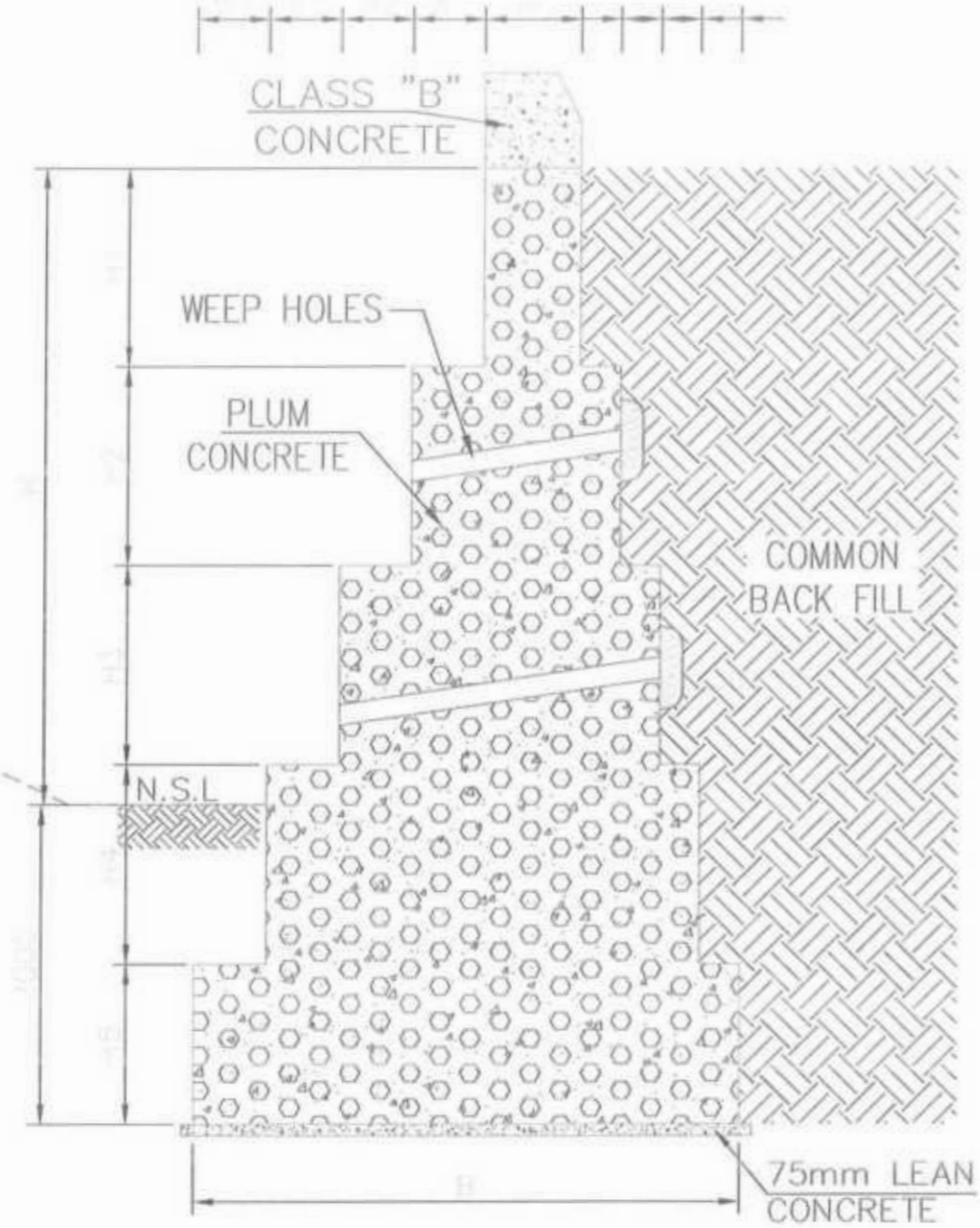


*[Signature]*  
 Minconsult International Ltd  
 Creative Engineering Consultants



RETAINING WALL DIMENSIONS																			1. $f_{cd} = 107.2 \text{ kPa}$			
H	H1	H2	H3	H4	H5	H6	H7	W0	W1	S1	W2	S2	A3	S3	W4	S4	W5	S5	W6	S6	B	BEARING PRESSURE (kpa)
5000	1250	1250	1250	1250	1550			800	450	250	450	250	450	250	450	250	450	250	450	250	3600	216.25
6000	1250	1250	1250	1250	1250	1300		800	450	250	450	250	450	250	450	250	450	250	450	250	4300	220
7000	1250	1250	1250	1250	1250	1150	1150	800	450	250	450	250	450	250	450	250	450	250	450	250	5000	236.84

<b>CLIENT:</b> GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>DESIGN CONSULTANT:</b> (MIN - JV - CEC) MINCONSULT SON BHD (COMPANY NO. 58835-P) J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:	
		0	SEP, 2024	TENDER DRAWINGS	DESIGNED	M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP) PACKAGE-8 LOT-1	N.T.B	DETAIL OF PLUM CONCRETE RETAINING WALL
		1			DRAWN	MUSHTAQ		DATE:	
		2			CHECKED	M.ISLAM		SEP, 2024	
3			APPROVED	AQEEL YOUNIS	DWG NO: CEC/KPRRDP/STR&RT-05a				

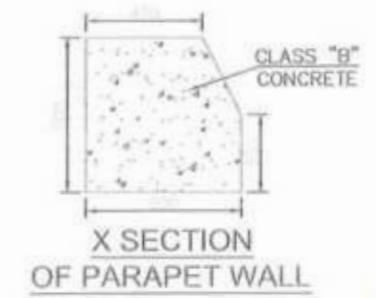


**PLUM RETAINING WALL**

**RETAINING WALL DIMENSIONS**

*Project Director (RRD)  
Provincial Roads Development  
C&W Department, Peshawar*

- NOTES**
1. WEEP HOLES PVC PIPE 100mm DIA SHALL BE STAGGERED AT AN INTERVAL OF 1500mm VERTICAL AND HORIZONTAL AND AS ADDITIONALLY DIRECTED BY THE ENGINEER.
  2. THE SLOPE OF WEEP HOLES SHALL BE 1 IN 8 FROM BACK OF THE WALL TO THE OUTER FACE OR AS DIRECTED BY THE ENGINEER.
  3. PLUM CONCRETE IN 3:2 (3 PARTS CONCRETE CLASS 'B' & 2 PART ROCK FILL MATERIAL) HAVING STONE SIZE RANGING BETWEEN 200~300) BE UTILIZED.
  4. PCC PARAPET SHALL BE PROVIDED AT TOP OF RETAINING WALL AND AT OTHER HAZARDOUS LOCATIONS, GUARD RAIL SHALL BE PROVIDED OVER 4m HIGH FILL OR AS DIRECTED BY THE ENGINEER.
  5. SAFE BEARING CAPACITY MENTIONED IN THE TABLE SHOULD BE ACHIEVED PRIOR TO CONSTRUCTION AT SITE IF LESS IT SHOULD BE COMMUNICATED TO THE ENGINEER
  6. AFTER 10m LENGTH CONSTRUCTION JOINT SHOULD BE PROVIDE.
  7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
  8. MINIMUM 28 DAYS CYLINDER COMPRESSIVE STRENGTH OF CONCRETE IN FOOTING SHOULD BE 210 Kg/cm<sup>2</sup> (3000 Psi)
  9. NSL SHOULD BE AT LEAST 2m ABOVE THE BOTTOM OF FOOTING ON THE OUTER SIDE OF PLUM RETAINING WALL.
  10. ALL SUB-STRUCTURE FOOTING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. ALL ELEVATION SHOWN ARE ESTIMATED AND SUBJECT TO CHANGE TO SUIT FILL CONDITION.
  11. COMPACTION OF FILL MATERIAL (AS PER SPECIFICATION BY JETTING OR PONDING WITH WATER IS NOT PERMITTED. EACH LAYER OF FILL, MAXIMUM 200mm IN THICKNESS, SHALL BE MOISTENED AS REQUIRED. (OPTIMUM MOISTER CONTENT FROM STANDARD PROCTOR TEST) AND THOROUGHLY TEMPERED OR OTHERWISE COMPACTED TO MINIMUM OF 95% COMPACTION (STANDARD PROCTOR TEST).

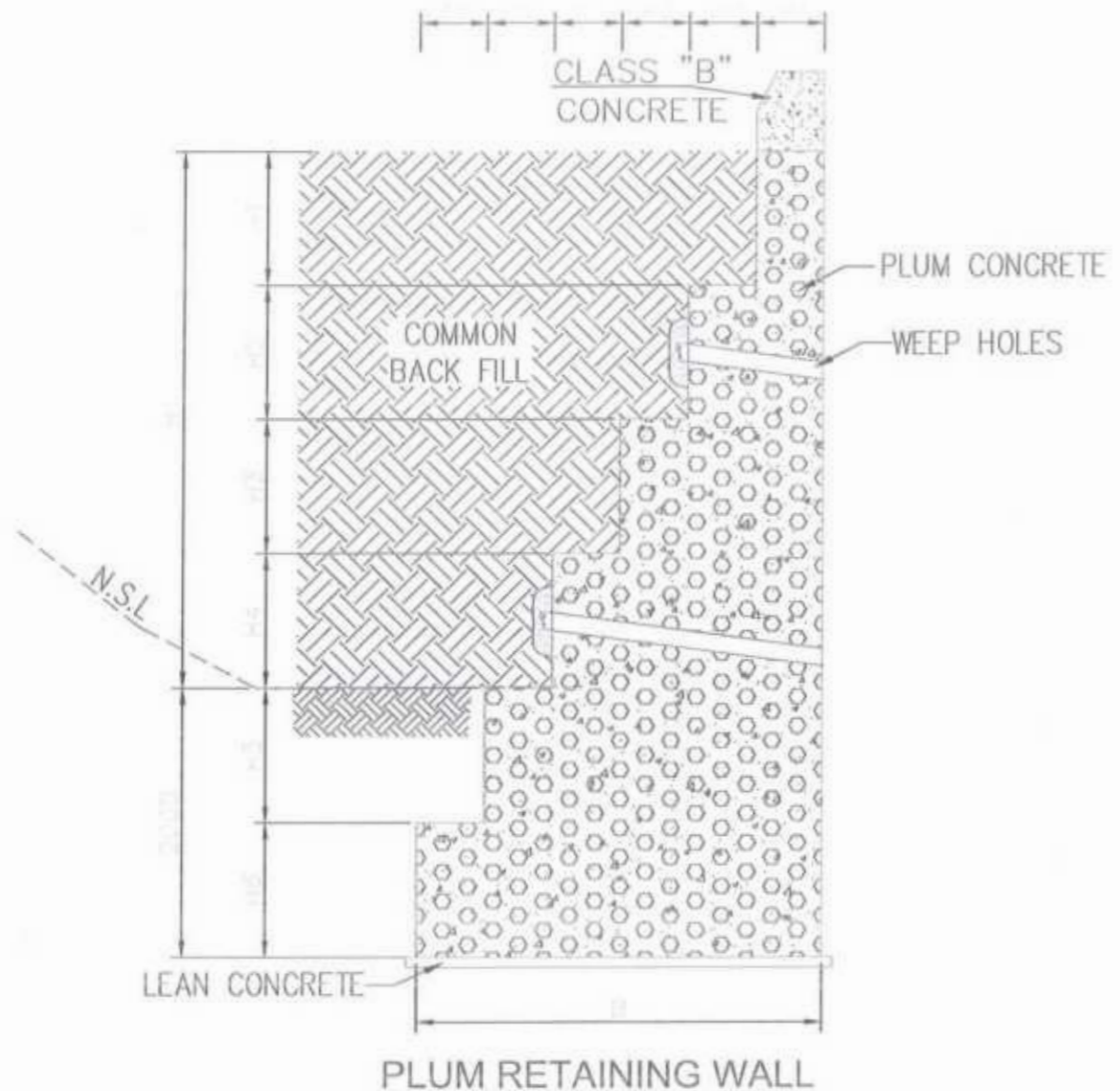


H	H1	H2	H3	H4	H5	W0	B	W1		W2		W3		W4	BEARING PRESSURE (Kpa)
								S1	S2	S2	S3	S3	S4		
1000	1500	1500				600	1300	450							143
2000	1250	1250	1500			600	2000	450	450	250					145
3000	1250	1250	1250	1250		600	2700	450	450	250	450	250			150
4000	1250	1250	1250	1250	1000	600	3400	450	450	250	450	250	450	250	158

1 Ts<sub>f</sub>=107.2 kPa

<p>GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION &amp; WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)</p>	<p>MINCONSULT SON DHD CREATIVE ENGINEERING CONSULTANTS (CEC)</p>	REV	DATE	DESCRIPTION	NAMES:	PROJECT:	SCALE:	SHEET CONTENT:	
		0	SEP. 2024	TENDER DRAWINGS	DESIGNED	M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)	PACKAGE-8	DETAIL OF PLUM CONCRETE RETAINING WALL
		*			DRAWN	MUSHTAQ		LOT-1	
		h			CHECKED	M.ISLAM			
		i			APPROVED	AGEEL YOUNIS			

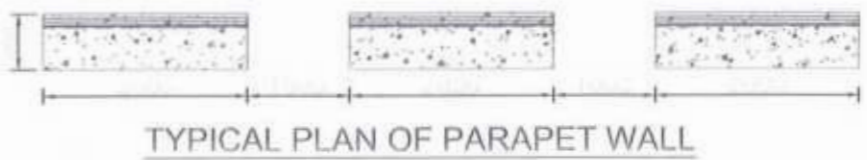
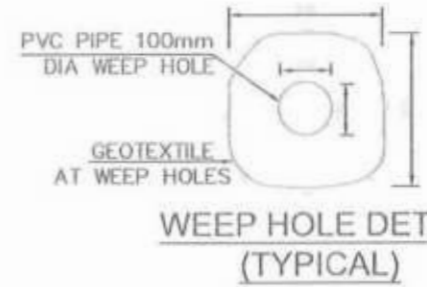
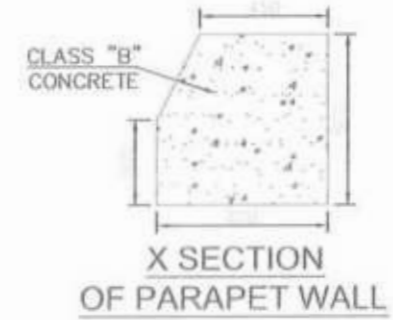
*Minconsult International Ltd.*



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*[Signature]*  
 Project Director (PIU)  
 Provincial Roads Improvement Project  
 C&W Department Peshawar.



RETAINING WALL DIMENSIONS

H	H1	H2	H3	H4	H5	H6	W1	W2	W3	W4	W5	W6	B	BEARING PRESSURE (Kpa)
2000	1000	1500	1500				750	750	750				2250	188.3
3000	1000	1500	1500				750	750	750	750			3000	223
4000	1500	1500	1500	1500			750	1000	1000	1000			3750	257
5000	1000	1500	1500	1500	1500		750	1200	1200	1200	1200		5550	260
6000	1000	1000	1500	1500	1500	1500	750	1070	1070	1070	1070	1070	6100	299

1 Tsf=107.2 kPa  
 BEARING PRESSURE (Kpa)

<b>CLIENT:</b> GOVERNMENT OF KHYBER PAKHTUNKHWA COMMUNICATION & WORKS DEPARTMENT PROJECT IMPLEMENTATION UNIT (PIU)	<b>DESIGN CONSULTANT:</b> (MIN - JV - CEC)  MINCONSULT SON DHD J.V. CREATIVE ENGINEERING CONSULTANTS (CEC)	REV	DATE	DESCRIPTION	NAMES:		PROJECT:	SCALE: N.T.S DATE: SEP. 2024 DWG NO. CEC/KPRRDP/STR/SRT 05c	SHEET CONTENT: DETAIL OF PLUM CONCRETE RETAINING WALL	
		a	SEP. 2024	TENDER DRAWINGS	DESIGNED	M.FAIZAN	KHYBER PAKHTUNKHWA RURAL ROADS DEVELOPMENT PROJECT (KP-RRDP)			PACKAGE-8
		a			DRAWN	MUSHTAQ				LOT-1
		b			CHECKED	M.ISLAM				
		x			APPROVED	ADEEL YOUNIS				