GOVERNMENT OF THE KHYBER PAKHTUNKHWA
IRRIGATION DEPARTMENT

REMODELING OF WARSAK CANAL SYSTEM
IN PESHAWAR AND NOWSHERA DISTRICTS

CONTRACT NO. RWCS-13

BALANCE WORK OF REMODELING OF WARSAK CANAL
CONSTRUCTION OF OUTLETS AND OTHER MISCELLANEOUS STRUCTURES

VOLUME II

TENDER DRAWINGS

AUGUST, 2021

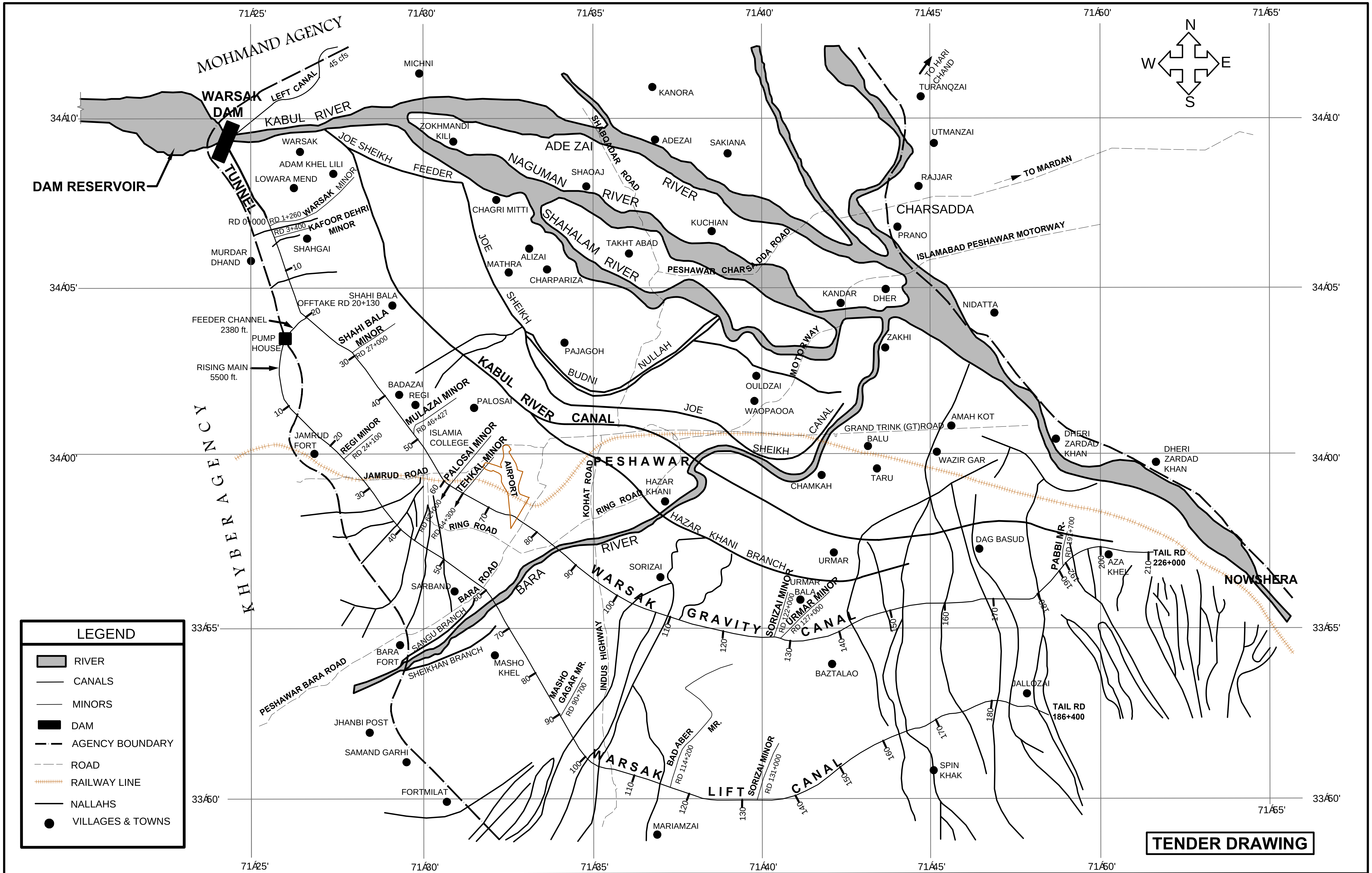
A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT) LIMITED
1-C, BLOCK-N, MODEL TOWN EXTENSION,
LAHORE - PAKISTAN

ELECTRA CONSULTANTS
100, SECTOR N-3, STREET 6, PHASE IV,
HAYATABAD, PESHAWAR - PAKISTAN

INTEGRATED CONSULTING
SERVICES (PVT) LIMITED
219-a, NEW MUSLIM TOWN,
LAHORE - PAKISTAN

A. GENERAL DRAWINGS (GD)



CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	MN
CHECKED	
RECOMMENDED	
APPROVED	

REMODELING OF WARSAK CANAL SYSTEM

PROJECT AREA MAP

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/GD/01	0

G E N E R A L   N O T E S

A. GENERAL

1. ALL DIMENSIONS AND ELEVATIONS ETC. SHOWN ON DRAWINGS ARE IN FP SYSTEM UNLESS OTHERWISE INDICIATED.
2. THE GRID, CO-ORDINATES OF POINTS AND CONTOURS ARE IN FEET.
3. CANAL CHAINAGES ARE SHOWN AS REDUCED DISTANCES (RD) IN 1000 FEET MEASURED ALONG CENTER LINE OF CANAL.
4. THE CONTRACTOR SHALL PREPARE AND SUBMIT HIS PLAN FOR EXCAVATION OF FOUNDATION AND LIFT DRAWINGS FOR CONCRETE STRUCTURES TO THE ENGINEER PRIOR TO POURING OF CONCRETE AT SITE.
5. ALL AREAS DISTURBED DUE TO THE CONSTURCTION ACTIVITES SHALL BE PROPERLY RESTORED TO ITS ORIGINAL FORM OR AS DIRECTED BY THE ENGINEER.
6. LOCATIONS OF VARIABLE FEATURES SUCH AS NATURAL STREAMS, DEPRESSIONS AND HOUSES ETC., SHOWN IN DRAWINGS ARE SUBJECT TO CHANGE.
7. TO RECORD THE EXISTING GROUND LEVELS FOR MEASUREMENT OF EXCAVATION AND FILL IN EMBANKMENTS, THE AREA SHALL BE JOINTLY SURVEYED BY THE CONTRACTOR AND THE ENGINEER BEFORE STARTING THE WORKS, AND SAME SHALL BE USED FOR QUANTITY CERTIFICATION.
8. ANY VARIATION BETWEEN DRAWINGS AND SITE CONDITIONS SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR CLARIFICATION BEFORE EXECUTION OF THE WORK.
9. DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS.
10. GIRDERS SHALL BE INSTALLED IN THEIR CORRECT POSITION BY "LIFTING OR LAUNCHING".

(i) IF LIFTING IS USED, GIRDER SHALL BE LIFT FROM THE LEFT SLEEVE LOCATED AT ENDS OF GIRDERS OR BY OTHER MEANS AS APPROVED BY THE ENGINEER TO ENSURE PROPER PLACEMENT OF GIRDERS. A SINGLE CRANE OF REQUIRED LIFTING CAPACITY MAY BE USED FOR LIFTING ONLY IF A SPREADER BAR IS UTILIZED.

(ii) IF LAUNCHING IS USED, THE MAXIMUM CANTILEVER AND SPAN FOR ALL GIRDERS SHALL NOT EXCEED 12ft.

11. GRIDER/PRECAST SECTIONS SHALL BE PLACED AT THEIR CORRECT POSITIONS ON TOP OF THE ELASTOMERIC BEARING PADS AS SHOWN ON DRAWINGS AND TEMPORARILY BRACED LATERLLY UNIT DECK SLAB ARE CASTED.

B. EARTHWORK

1. EXCAVATION SHALL BE CARRIED TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE EXCAVATED AREA.
2. FILL, BACKFILL AND SELECT FILL MATERIAL WHERE REQUIRED, SHALL BE PLACED AND COMPACTED TO THE REQUIREMENTS AS PER TECHNICAL SPECIFICATIONS AND DRAWINGS.
3. THE EARTHEN RAMPS AROUND THE STRUCTURE SHALL HAVE SLOPE OF 1V:30H UNLESS OTHERWISE MENTIONED.
4. ANY LOOSE SOIL ENCOUNTERED DURING EXCAVATION OF CANAL OR STRUCTURE FOUNDATIONS, SHALL BE REPLACED WITH APPROVED FILL MATERIAL AS PER SPECIFICATIONS AND DRAWINGS.
5. THE CONTRACTOR SHOULD KEEP THE EXCAVATED AREA DRY DURING THE CONSTRUCTION ACTIVITY AND AT LEAST 12 HOURS AFTER CONCRETING IT OR AS DIRECTED BY THE ENGINEER.
6. DEVELOPMENT OF ANY EXCESSIVE PRESSURE BEHIND THE ABUTMENT AND RETAINING WALLS DUE TO OVER COMPACTION SHALL BE AVOIDED.
7. ALL BACKFILL MATERIAL FOR BRIDGE ABUTMENT WALLS SHALL BE COMPACTED TO 95% OF MAXIMUM MODIFIED DRY DENSITY (ASTM D1557).
8. TYPICALLY IN MAIN CANAL & MINOR(S), DOWEL IS PROVIDED AS WHEEL GUARD ALONG PATROL ROAD. THE PROVISION OF DOWEL MAY BE AVOIDED TO SUIT SITE CONDITIONS OR AS DIRECTED BY THE ENGINEER.
9. IN TYPICAL CROSS SECTION OF MAIN CANAL AND MINOR(S), SIDE SLOPES OF EARTHEN PART ABOVE LINING TOP IS FIXED AS 1.5H:1V, WHICH MAY VARY AS PER AVAILABLE SPACE ON SITE TO SUIT SITE CONDITIONS OR AS DIRECTED BY THE ENGINEER.
10. FILL UNDERNEATH THE CANAL BED LINING (HORIZONTAL PART) MAY BE OF SUITABLE COMPACTED FILL BUT FILL BEHIND THE CANAL LINING ON SLOPE PART MAY BE OF LEAN CONCRETE (RATIO 1:7:20) OR AS DIRECTED BY THE ENGINEER.
11. CEMENT SAND PLASTER (RATIO 1:6) USED FOR STABILIZING LAYER UNDER THE CANAL LINING SHOULD NOT BE PROVIDED WHERE LEAN CONCRETE FILL (RATIO 1:7:20) IS RECOMMENDED.

C. CONCRETE

1. CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF ACI CODE.
2. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE MINIMUM COMPRESSIVE CYLINDER STRENGTH fc' OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS:

i) CLASS 'A'	5000	Psi	PRESTRESSED MEMBERS
ii) CLASS 'B'	4000	Psi	STRUCTURAL CONCRETE, PRE-CAST GIRDERS,W.C.
iii) CLASS 'C'	3000	Psi	CANAL LINNING, FILL CONCRETE
iv) CLASS 'D'	1500	Psi	BLINDING CONCRETE

3. ORDINARY PORTLAND CEMENT SHALL BE USED IN CONCRETE UNLESS OTHERWISE SPECIFIED ELSEWHERE.
4. CONCRETE FINISHES AND TOLERANCES SHALL BE AS PER TECHNICAL SPECIFICATIONS.
5. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED ¾"x¾" UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
6. THE DESIGN OF FORMWORK AND FALSE WORK AS WELL AS ITS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DESIGN OF FORMWORK AND FALSE WORK SHALL CONFORM TO THE TECHNICAL SPECIFICATIONS.
7. ALL REINFORCED CONCRETE SHALL BE FAIR-FACED TO BE CAST IN PROPERLY DESIGNED STEEL FORM WORK AND PLATES.

D. REINFORCEMENT

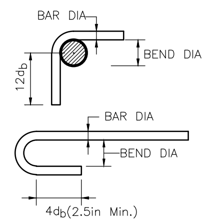
1. REINFORCEMENT STEEL INDICATED ON DRAWINGS SHALL CONFORM TO ASTM A615 GRADE 60,000 Psi DEFORMED BARS EXCEPT #3 BARS WHICH SHOULD BE OF ASTM A615 GRADE 40,000 Psi.
2. MINIMUM COVER TO THE REINFORCEMENT (UNLESS OTHERWISE INDICATED) SHALL BE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FOOTINGS	3"
TOP SURFACE OF GLACIS AND STILLING BASIN	2½"
PILES	3"
BEAMS, COLUMNS: TIES, STIRRUPS	1½"
RAILINGS, SPIRALS, PILE CAPS	1"

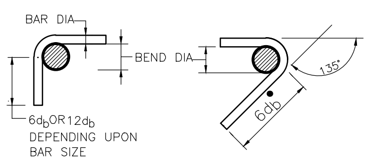
3. THE BEND DETAILS SHALL BE AS SHOWN IN THE TABLE AND FIGURES BELOW:

MINIMUM DIAMETER OF BEND

BAR SIZE	MINIMUM DIAMETER OF BEND
#3 THROUGH #8	6db
#9,#10 AND #11	8db



STANDARD HOOKS FOR REINFORCEMENT OTHER THAN STIRRUPS, TIES AND HOOPS



STANDARD HOOKS FOR STIRRUPS, TIES AND HOOPS

4. DEVELOPMENT LENGTH

UNLESS NOTED OTHERWISE ON THE DRAWINGS, MINIMUM BASIC DEVELOPMENT LENGTH FOR REINFORCEMENT STEEL OF GRADE-60 (60,000 Psi) SHALL BE AS FOLLOWS:

(i) DEVELOPMENT LENGTH IN TENSION

TOP BARS*

fc' MPa(Psi) \ BAR SIZE	DEVELOPMENT LENGTH (in)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000	18	25	31	37	54	62	69	77	85
5000	17	22	28	33	48	55	62	69	76

OTHER BARS

fc' MPa(Psi) \ BAR SIZE	DEVELOPMENT LENGTH (in)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000	15	19	24	28	42	47	53	59	65
5000	13	17	21	25	37	42	48	53	58

(ii) DEVELOPMENT LENGTH IN COMPRESSION

fc' MPa(Psi) \ BAR SIZE	DEVELOPMENT LENGTH (in)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000	8	10	12	15	17	19	21	24	26
5000	8	9	11	14	16	18	20	23	25

* HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12in. OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW

5. SPLICE/LAP LENGTH

a) WELDED WIRE FABRIC MESH SHOULD BE LAPPED OVER ADJACENT SHEET BY 12in.

b) BARS SHALL BE SPLICED ONLY WHERE INDICATED, OR AT LOCATIONS SPECIFICALLY APPROVED BY THE ENGINEER.

c) EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS, WHENEVER REINFORCING BARS OF DIFFERENT SIZES ARE TO BE LAP SPLICED IN COMPRESSION, SPLICE LENGTH SHALL BE THE LAGER OF THE DEVELOPMENT LENGTH OF THE LAGER BAR, OR SPLICE LENGTH OF THE SMALLER BAR.

d) THE LAPS SHOULD BE STAGGERED.

e) UNLESS NOTED OTHERWISE ON THE DRAWINGS, MINIMUM LAP LENGTH FOR REINFORCEMENT STEEL OF GRADE-60 (60,000 Psi) SHALL BE AS FOLLOWS:

(i) LAP SPLICE LENGTH IN TENSION

TOP BARS*

fc' MPa(Psi) \ BAR SIZE	SPLICE LENGTH (in)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000	24	32	40	48	70	80	90	100	110
5000	22	29	36	43	63	72	81	90	99

OTHER BARS

fc' MPa(Psi) \ BAR SIZE	SPLICE LENGTH (in)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000	18	25	31	37	54	62	69	77	85
5000	17	22	28	33	48	55	62	69	76

(ii) LAP SPLICE LENGTH IN COMPRESSION

fc' MPa(Psi) \ BAR SIZE	SPLICE LENGTH (in)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000	11	15	19	23	26	30	34	38	41
5000	11	15	19	23	26	30	34	38	41

6. EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS, WHENEVER REINFORCING BARS OF DIFFERENT SIZES ARE TO BE LAP SPLICED IN COMPRESSION, SPLICE LENGTH SHALL BE THE LARGER OF THE DEVELOPMENT LENGTH OF THE LARGER BAR, OR SPLICE LENGTH OF THE SMALLER BAR.
7. THE LAPS SHOULD BE STAGGERED.
8. THE CONTRACTOR SHALL PREPARE ALL BAR BENDING SCHEDULES AS PER CONSTRUCTION DRAWINGS AND SUBMIT TO THE ENGINEER WELL BEFORE EXECUTION FOR APPROVAL.
9. ALL REINFORCING STEEL SHALL BE ACCURATELY PLACED IN THE FORM WORK AND HELD FIRMLY BEFORE PLACING CONCRETE, BY MEANS OF 16 GAUGE BLACK ANNEALED WIRES AND ADEQUATELY DESIGNED SPACERS.

E. PRESTRESSED STEEL

1. MULTISTRAND PRESTRESSING SYSTEM HAS BEEN USED IN THE DESIGN. FIXTURES AND DETAILS SHALL CONFORM TO ONE OF THE FOLLOWING SYSTEMS:
   STRONG HOLD
   STRONG FORCE
   FREYSSINET
2. PRESTRESSING STEEL SHALL CONFORM TO ASTM-A416 (GRADE -270) ORDINARY STRESS RELIEVED STRANDS WITH MINIMUM ULTIMATE TENSILE STRENGTH OF 270 Ksi.
3. ALL TENDONS SHALL BE STRESSED FROM ONE END OF THE GIRDER.
4. IF ANCHORAGE PULL-IN OF STRANDS EXCEEDS 1/4" TENDONS SHALL BE DESTRESSED BY APPROVED MEANS.
5. TENDONS SHALL BE STRESSED AFTER THE CONCRETE HAS ATTAINED 6"X12" CYLINDER COMPRESSIVE STRENGTH OF AT LEAST 4000 PSI. THE EXTENSIONS SHOWN IN DRAWINGS ARE THE TOTAL EXTENSIONS TO BE ACHIEVED BEFORE LOCKING AND ARE CALCULATED ON THE BASIS OF $29X10^6$ Psi AS MODULUS OF ELASTICITY OF STEEL. FOR OTHER VALUES OF MODULUS OF ELASTICITY, EXTENSIONS SHOULD BE CALCULATED ON PRO-RATA BASIS. IN CASE OF VARIATION, THE MATTER SHALL BE REPORTED TO THE ENGINEER FOR FURTHER INSTRUCTIONS.
6. THE CONTRACTOR SHALL PROPOSE AT LEAST TWO THIXOTROPIC AGENTS FOR GROUTING, MANUFACTURED BY KNOWN BONAFIDE FIRMS. SAMPLES SHALL BE TESTED IN THE LABORATORY IN ACCORDANCE WITH AASHTO SPECIFICATIONS AND THE RESULTS SHALL BE SUBMITTED TO THE ENGINEER, WHO WILL DECIDE IF FURTHER TESTS ARE NECESSARY OR MAY APPROVE ONE OF THE MANUFACTURES BRANDS. NO OTHER ADDITIVE SHALL BE USED.
7. PRESTRESSING TENDONS SHALL COMPRISE OF 0.5in. DIAMETER, UNCOATED ORDINARY STRESS RELIEVED WIRE STRANDS, IN NUMBERS STATED IN THE RESPECTIVE DRAWING.
8. EXTENSION, JACKING FACE AND OTHER LIMITING VALUES HAS BEEN PRESENTED ON RELEVANT DRAWINGS.
9. THE ORDER OF STRESSING OF TENDONS SHALL BE AS STATED IN THE RELAVANT DRAWINGS.
10. THE PRESTRESSED CONCRETE GIRDERS SHALL BE CAST ON ADEQUATELY BRACED STEEL BOTTOM FORMWORK. CASTING OF GIRDERS ON CONCRETE PADS OR STRIPS SUPPORTED ON THE GROUND AS BOTTOM FORWORK SHALL NOT BE ALLOWED.
11. INITIAL JACKING FORCE IN EACH TENDON AT PRESTRESSING END SHALL BE AS SHOWN ON THE RELEVANT DRAWING.
12. ANCHORAGE POCKET SHALL BE FILLED WITH CONCRETE HAVING 4000 Psi CYLINDER STRENGTH @ 28 DAYS USING 3/8" DOWN AGGREGATE, AFTER GROUTING AND TRIMMING TENDONS.

F. BEARING PADS UNDER BRIDGE GIRDERS

1. BRIDGE BEARING PADS SHALL BE PLACED IN HORIZONTAL POSITION. INCLINED OR TAPERED PLACEMENT SHALL NOT BE ALLOWED.
2. ELASTOMERIC BEARING PADS, STEEL REINFORCED (DURO 60) CONFORMING TO DIN 4141 PART 14 OR EQUIVALENT, CONFORMING TO AASHTO SPECIFICATIONS OR EQUIVALENT SHALL BE PROVIDED FOR THE PRESTRESSED CONCRETE GIRDERS AS PER SIZE/DETAIL GIVEN ON THE DRAWINGS. CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVEL, THE TEST CERTIFICATE FROM THE MANUFACTURER/SUPPLIER BEFORE INSTALLATION.
3. ALL BEARING PADS SHALL BE LAID ON CONCRETE PEDESTALS MADE ACCURATELY FLAT AND LEVELLED BY GRINDING IF NECESSARY.

G. BORING, CASTING & TESTING OF INDEX PILES

1. A TEST PILE SHALL BE BORED, CAST & TESTED BEFORE THE COMMENCEMENT OF THE CONSTRUCTION OF THE ACTUAL PILE WORK AND THE RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. THE TEST PILE, SHALL BE BORED & CAST NEAR THE SITE OF ACTUAL PILE. ITS SIZE, DEPTH ,STRENGTH OF CONCRETE AND REINFORCEMENT SHALL BE SAME AS OF ACTUAL PILES.
3. LOAD TEST WILL BE CARRIED OUT AS PER ASTM D1143 STANDARD OR CP 2004, AFTER LAPSE OF AT LEAST 28 DAYS OR WHEN 6"X12" CYLINDER MINIMUM COMPRESSVE STRENGTH OF 4000 Psi IS ATTAINED.
4. APPROVED METHOD & PROCEDURE OF LOAD TESTING SHALL BE USED. THE PROGRAMME SHALL BE NOTIFIED TO THE ENGINEER WELL IN ADVANCE.
5. THE VERTICAL DESIGNED WORKING LOAD AND TEST LOAD ON EACH PILE WILL BE AS SHOWN ON THE RELEVANT DRAWINGS.
6. PILES SHALL NOT BE OUT OF ALIGNMENT BY MORE THAN 1 IN 114.
7. THE PILE TIP LEVELS SHOWN ON THE DRAWING ARE TENTATIVE AND SHALL BE CONFIRMED AFTER THE PERFORMANCE OF PILE LOAD TEST.

TENDER DRAWING

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DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

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REMODELING OF WARSAK CANAL SYSTEM
GENERAL NOTES

DATE	DWG. NO.	REV.
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G E N E R A L   N O T E S

H. STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENT OF ASTM A36.
2. ALL WELDED CONSTRUCTION SHALL BE WITH CONTINUOUS FILLET WELD WITH ELECTRODES OF APPROVED QUALITY UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
3. ALL STRUCTURAL STEEL SHALL BE GALVANIZED OR PAINTED AS DIRECTED BY THE ENGINEER.

I. STONE PROTECTION WORKS

1. STONES FOR PITCHING AND APRON ON MAIN CANAL SHALL BE GENERALLY CUBOID IN SHAPE WITH THE LARGEST DIMENSIONS NOT EXCEEDING TWICE THE SMALLEST DIMENSIONS.
2. STONES FOR PITCHING AND APRON ON MAIN CANAL SHALL INDIVIDUALLY WEIGH BETWEEN 18–54kg WITH 80 PERCENT SHALL BE 36kg OR LARGER AND NOT MORE THAN 5 PERCENT SHALL WEIGH LESS THAN 18kg, EXCEPT WHERE NOTIFIED ON THE DRAWINGS.
3. STONES FOR PITCHING AND APRON OTHER THAN MAIN CANAL SHALL HAVE THE MAXIMUM SIZE AS THAT OF THICKNESSES FOR PITCHING AND APRON, MENTIONED ON DRAWINGS WITH THE LARGEST DIMENSIONS NOT EXCEEDING TWICE THE SMALLEST DIMENSIONS AND SHALL CONFORM TO RELEVANT TECHNICAL SPECIFICATIONS.
4. ALL INTERSTICES IN STONE WORK SHALL BE WELL FILLED WITH ROCK SPALLS. THE ROCK SPALLS SHALL BE ROCK FRAGMENTS SIZE BETWEEN 2in. AND 4in.

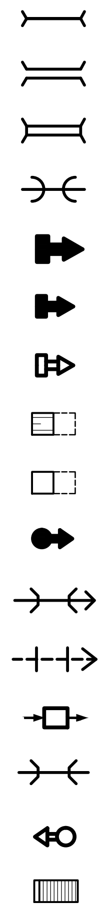
J. IRRIGATION SYSTEM

1. ALL THE LAYOUTS MUST BE READ IN CONJUNCTION WITH THE DRAWINGS REFERRED TO. THESE MAY BE ADJUSTED AS PER SITE CONDITIONS AND PRIOR APPROVAL OF EXACT LAYOUT AFTER SITE ADJUSTMENTS MUST BE VERIFIED BY THE ENGINEER BEFORE EXECUTION OF WORK.
2. EXISTING METALLED BANK WHEREVER EXCAVATED OR FILLED MUST BE RESTORED AS METALLED ROAD WITH TST SURFACING.
3. BANK WIDTH ON EITHER SIDE ALONG MAIN CANAL(WGC/WLC) MUST BE MAINTAINED MINIMUM OF 15ft.
4. WIDTH OF THE BANK ALONG THE MINOR, WHICH IS BEING USED AS SERVICE ROAD, MUST BE OF MINIMUM 15ft AND OTHER BANK BE OF MINIMUM 5ft. EXISTING BANKS WIDER THAN DEFINED LIMIT MUST BE RETAINED.
5. EXISTING CANAL BANK LEVELS MUST BE MAINTAINED UNLESS OTHERWISE GOVERNED BY THE STRUCTURAL LEVEL OR MINIMUM REQUIREMENT OF CANAL FREE BOARD.
6. VILLAGE ROAD BRIDGES, FOOT BRIDGES, WATERCOURSE OUTLETS AND WATERCOURSE CROSSINGS SHALL BE CONSTRUCTED JUST U/S OR D/S OF THE EXISTING OR AS DIRECTED BY THE ENGINEER. EXISTING STRUCTURE SHALL BE USED AS DIVERSION UNTILL NEW STRUCTURE IS COMPLETED AND SHALL BE DISMANTLED AND DISPOSED THEN.

K. MISCELLANEOUS

1. TWO COATS OF APPROVED QUALITY OF BITUMEN SHALL BE APPLIED ON THE EARTH FACE OF THE STRUCTURES FOR WATERPROOFING AS PER CONTRACT SPECIFICATIONS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL WATERSTOPS SHALL BE 9" WIDE PVC WATERSTOPS WITH THREE BULBS AND OF THE SHAPE AND SIZE SHOWN ON THE DRAWINGS.
3. THE CONSTRUCTION OF EXPANSION, CONTRACTION,DUMMY AND CONSTRUCTION JOINTS IN CONCRETE LINING OR STRUCTURE WHERE SHOWN ON THE DRAWINGS, SHALL BE CARRIED OUT AS PER THE REQUIREMENTS OF TECHNICAL SPECIFICATIONS AND THE DRAWINGS.
4. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, CONSTRUCTION JOINTS SHALL BE PROVIDED, WITH THE APPROVAL OF THE ENGINEER AND SHALL BE PLANNED BEFORE EXECUTION OF WORK.
5. CONSTRUCTION OF ALL COMPONENTS OF THE BRIDGE SHALL CONFORM TO THE RELEVANT CLAUSES OF LATEST VERSION OF AASHTO SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED. ALL MATERIALS WORKMANSHIP AND TESTS SHALL CONFORM TO AASHTO SPECIFICATIONS EXCEPT WHERE SPECIFICALLY NOTIFIED ON THE DRAWINGS.
6. RAIN WATER OUTLET PIPE OF 9" DIA SHALL BE PROVIDED AS SHOWN ON DRAWINGS AND SHALL CONFORM TO RELEVANT TECHNICAL SPECIFICATIONS.
7. REFERENCE BENCH MARKS (BM) ESTABLISHED BY THE CONSULTANTS IN THE PROJECT AREA SHALL BE USED FOR CARRYING OUT ALL FURTHER SURVEY AND CONSTRUCTION WORKS.
8. CONCRETE REINFORCEMENT STRENGTH OF ALL PRECAST RC PIPES DIA. 6" & 9" SHALL CONFORM TO THE REQUIREMENTS OF BS 5911: 1981 (PART–1).
9. CONCRETE AND REINFORCEMENT STRENGTH OF ALL PRECAST RCC PIPES USED SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C–76 FOR CLASS–III, WALL–A PIPE.
10. CONSTRUCTION OF ALL COMPONENTS OF THE BRIDGE SHALL CONFORM TO THE REQUIREMENT OF AASHTO SPECIFICATIONS.
11. BATHING STEPS MUST BE PROVIDED AT THE INTERVAL OF 2500 ft ALTERNATIVELY ON EITHER SIDE OF MAIN CANAL AND CAN BE ADJUSTED AS PER STRUCTURAL LOCATION AND NEARBY POPULATION OR AS DIRECTED BY THE SITE ENGINEER.

SYMBOLS



ABBREVIATIONS

ADS	ANIMAL DRINKING STRUCTURE
BL	BED LEVEL
BM	BENCH MARK
BW	BED WIDTH
CC	CANAL CONDUIT
C. JT.	CONSTRUCTION JOINT
℄	CENTRE LINE
CONC.	CONCRETE
CONT. JT.	CONTRACTION JOINT
CR	CROSS REGULATOR
DISTY.	DISTRIBUTARY
D/S	DOWNSTREAM
EF	EACH FACE
EGT	ESCAPE STRUCTURE–MECHANICAL GATES
E.I.	ENAMELED IRON
EL	ELEVATION
ES	ESCAPE
EXP. JT.	EXPANSION JOINT
FB	FREE BOARD
FTB	FOOT BRIDGE
FCL	FULL CAPACITY LEVEL
FSD	FULL SUPPLY DEPTH
FSL	FULL SUPPLY LEVEL
GFS	GLACIS TYPE FALL STRUCTURE
HL	HEAD LOSS
HTC	HILL TORRENT CROSSING
HTC(AQ)	CANAL ACQUEDUCT
HTC(SYN)	CANAL SYPHON
HTC(SP)	SUPERPASSAGE
HTC(DC)	DRAINAGE CULVERT
IL	INVERT LEVEL
ILT	INLET
MR	MINOR
NSL	NATURAL SURFACE LEVEL
NTS	NOT TO SCALE
PCC	PLAIN CEMENT CONCRETE
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENT
RB	ROAD BRIDGE
RB(VRB)	VILLAGE ROAD BRIDGE
RB(DRB)	DISTRICT ROAD BRIDGE
RB(ARB)	ARTERIAL ROAD BRIDGE
RC	REINFORCED CONCRETE
RD	REDUCED DISTANCE
RL	REDUCED LEVEL
RW	ROAD WIDTH
ROW	RIGHT OF WAY
SE	SILT EJECTOR
T&B	TOP AND BOTTOM
TOB	TOP OF BANK
TOL	TOP OF LINING
TYP.	TYPICAL
ULC	UTILITY LINE CROSSING(SAINTARY PIPE, GAS PIPE, CABLES ETC.)
U/S	UPSTREAM
VFS	VERTICAL TYPE FALL STRUCTURE
WC	WATERCOURSE (PRECAST)
WCO	WATERCOURSE OUTLET
WCC	WATERCOURSE CROSSING
WCT	WATERCOURSE CULVERT
WGT	WATERCOURSE OUTLET–MECHANICAL GATES
WL	WATER LEVEL
WS	WATERSTOP (PVC)
WCS	WATERCOURSE SUMP

TENDER DRAWING

SHEET 2 OF 2

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PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

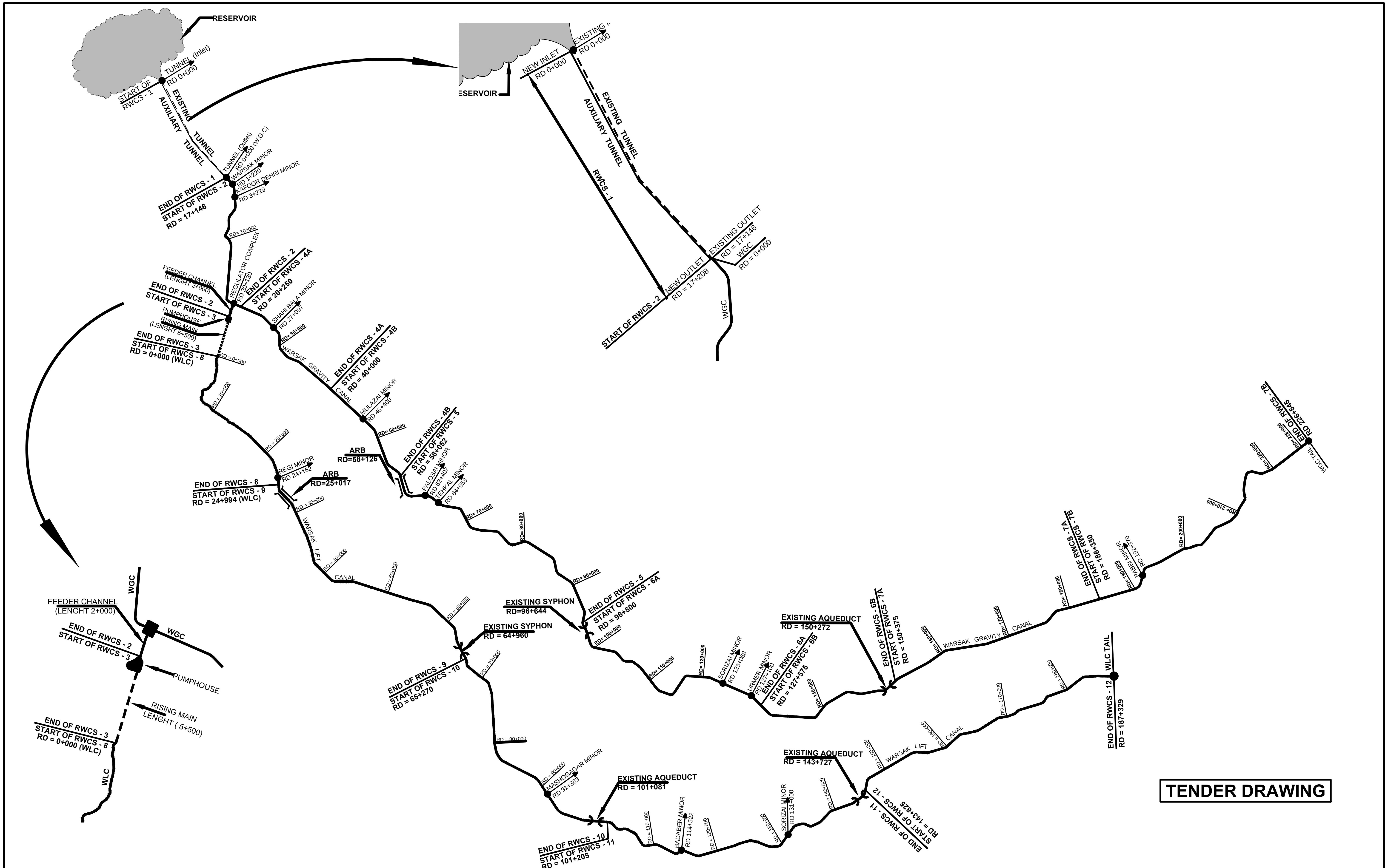
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	MAK
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELING OF WARSAK CANAL SYSTEM

GENERAL NOTES

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/GD/03	0



CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

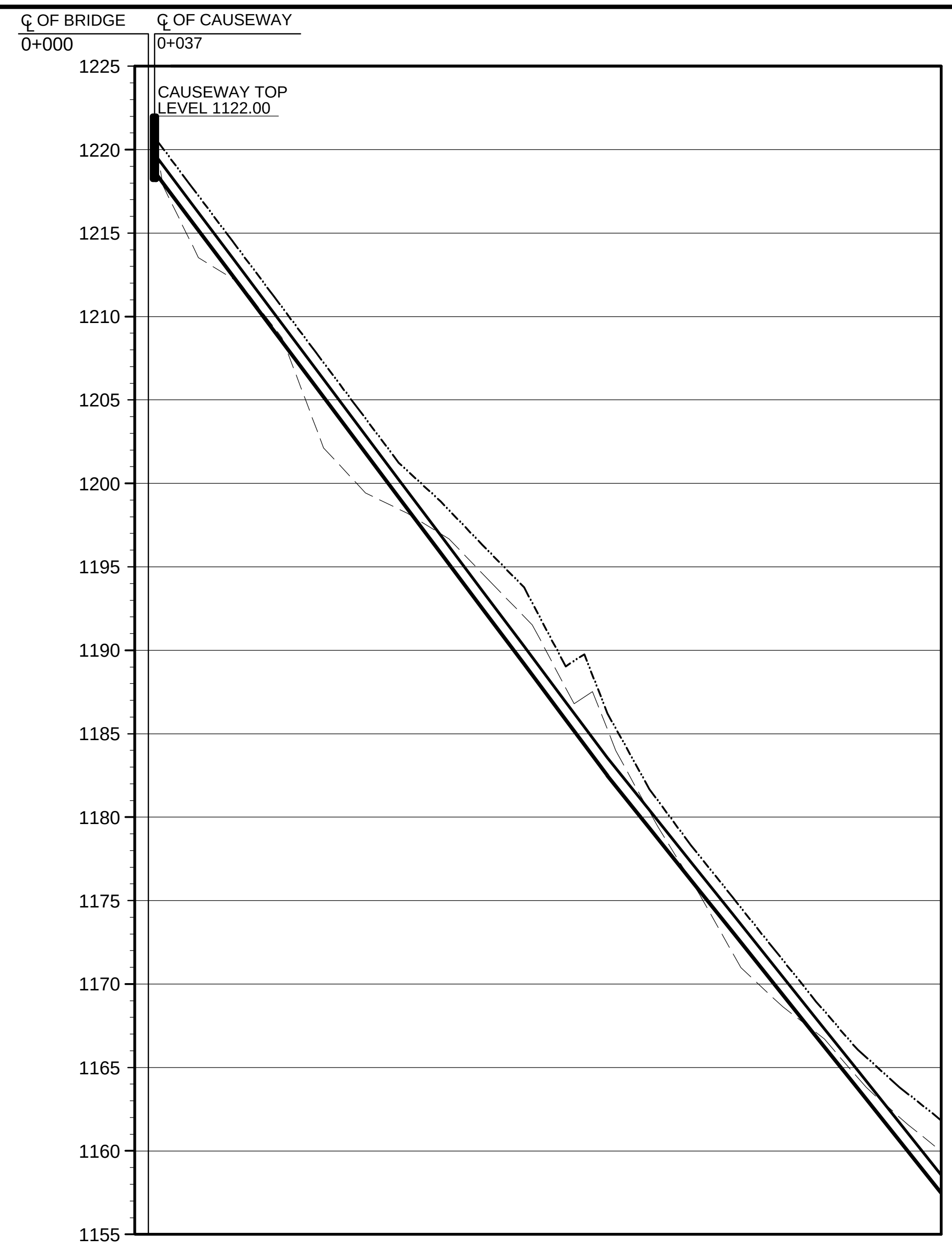
DRAWN	ISH
CHECKED	
RECOMMENDED	
APPROVED	

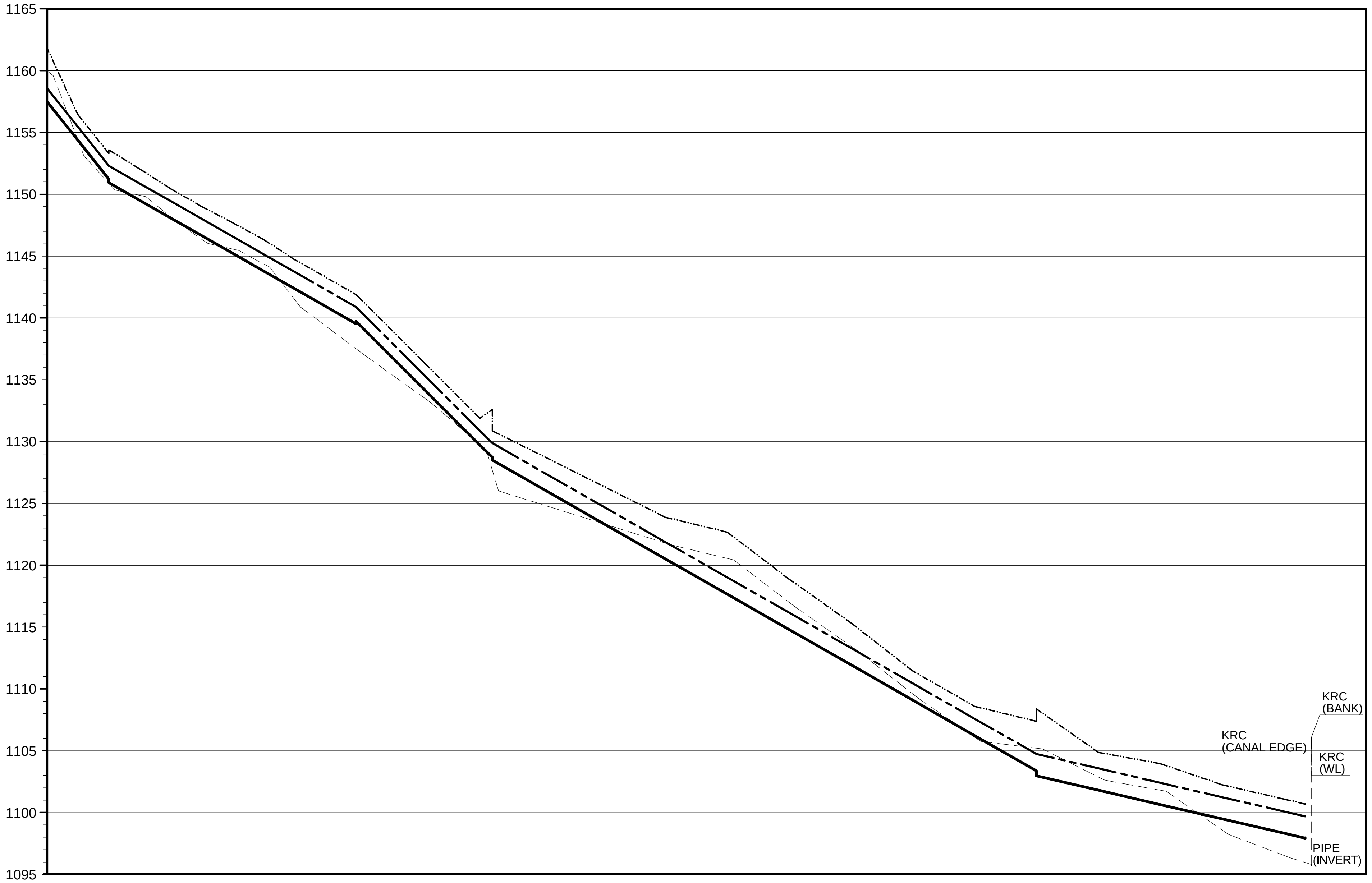
REMODELING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
GENERAL DRAWINGS
CONTRACT PACKAGES

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/GD/04	0

B. MAIN CANAL & DISTRIBUTION SYSTEM

B.1 CHANNELIZATION OF NULLAH AT RD 2+279





BED WIDTH (Feet): 10.00

DISTANCE (Feet)	BANK LEVEL (Feet)	FSL (Feet)	BED LEVEL (Feet)	NSL (Feet)
0+000				
0+050	1220.56	1219.56	1218.50	1220.08
0+250	1217.89	1216.89	1215.83	1215.77
0+500	1214.56	1213.56	1212.50	1214.22
0+750	1211.23	1210.23	1209.17	1210.97
1+000	1207.89	1206.89	1205.83	1204.37
1+250	1204.56	1203.56	1202.50	1201.67
1+500	1201.23	1200.23	1199.17	1200.45
1+750	1198.92	1196.89	1195.83	1198.92
2+000	1196.32	1193.56	1192.50	1196.32
2+250	1193.77	1190.23	1189.17	1193.77
2+500	1189.03	1186.89	1185.83	1189.03
2+611	1189.76	1185.41	1184.35	1189.76
2+750	1186.22	1183.56	1182.50 / 1182.48	1186.22
3+000	1181.69	1180.44	1179.36	1181.69
3+250	1178.31	1177.31	1176.23	1177.64
3+500	1175.19	1174.19	1173.11	1173.22
3+750	1172.06	1171.06	1169.98	1170.88
4+000	1168.94	1167.94	1166.86	1168.94
4+250	1166.05	1164.81	1163.73	1166.05
4+500	1163.81	1161.69	1160.61	1163.81
4+750	1161.83	1158.56	1157.48	1161.83

DISTANCE (Feet)	BANK LEVEL (Feet)	FSL (Feet)	BED LEVEL (Feet)	NSL (Feet)
4+750	1161.83	1158.56	1157.48	1161.83
5+000	1156.44	1155.44	1154.36	1155.33
5+250	1153.59 / 1153.31	1152.31	1151.23 / 1150.95	1152.59
5+500	1152.05	1150.88	1149.52	1152.05
5+750	1150.45	1149.45	1148.09	1150.00
6+000	1149.02	1148.02	1146.66	1148.27
6+250	1147.70	1146.60	1145.24	1147.70
6+500	1146.35	1145.17	1143.81	1146.35
6+750	1144.74	1143.74	1142.38	1143.13
7+250	1141.88	1140.88	1139.73 / 1139.52	1139.36
7+800	1136.38	1135.38	1134.23	1135.42
8+250	1131.88	1130.88	1129.73	1131.60
8+350	1132.60	1129.88	1128.52	1128.26
9+750	1123.88	1121.88	1120.52	1123.88
10+250	1122.68	1119.02	1117.66	1122.68
10+750	1118.87	1116.17	1114.81	1118.87
11+250	1115.35	1113.31	1111.95	1115.35
11+750	1111.45	1110.45	1109.09	1111.44
12+250	1108.59	1107.59	1106.23	1108.00
12+750	1107.38 / 1108.38	1104.74	1103.38 / 1102.98	1107.38
13+250	1104.87	1103.58	1101.82	1104.87
13+750	1103.96	1102.41	1100.65	1103.96
14+250	1102.25	1101.25	1099.49	1100.49
14+750	1101.09	1100.09	1098.33	1098.59
14+922	1100.69	1099.69	1097.93	1098.05 1097.91 1108.29 1106.98 1105.26

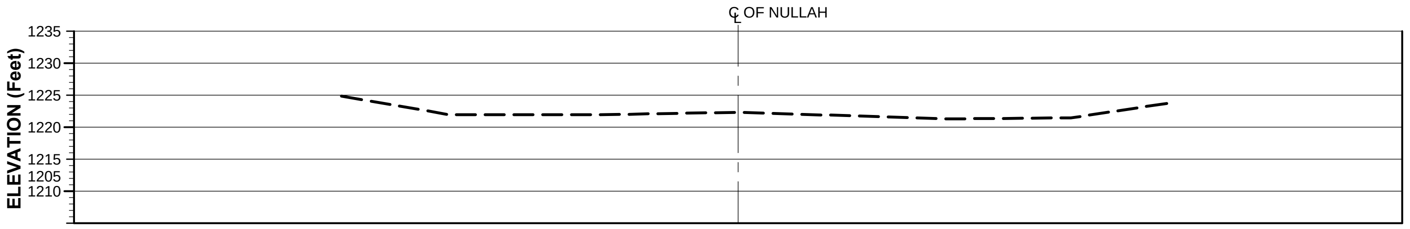
TENDER DRAWING

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT - A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	**REMODELLING OF WARSAK CANAL SYSTEM** **CONTRACT RWCS-13** BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT CHANNELIZATION OF NULLAH (RD 2+279) **PROFILE**

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

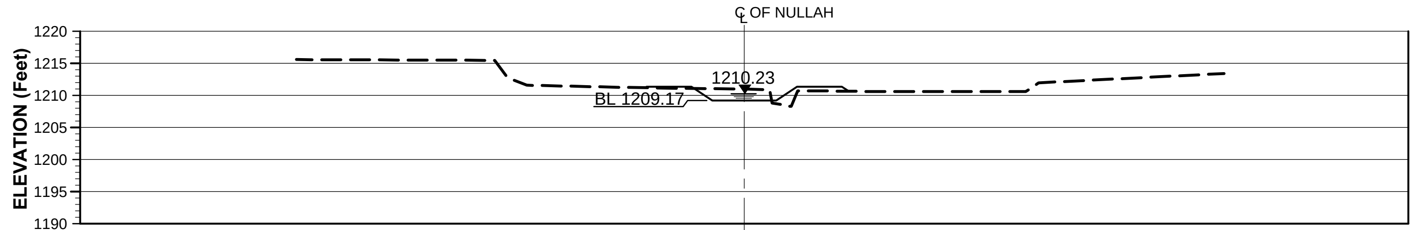
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/01	0



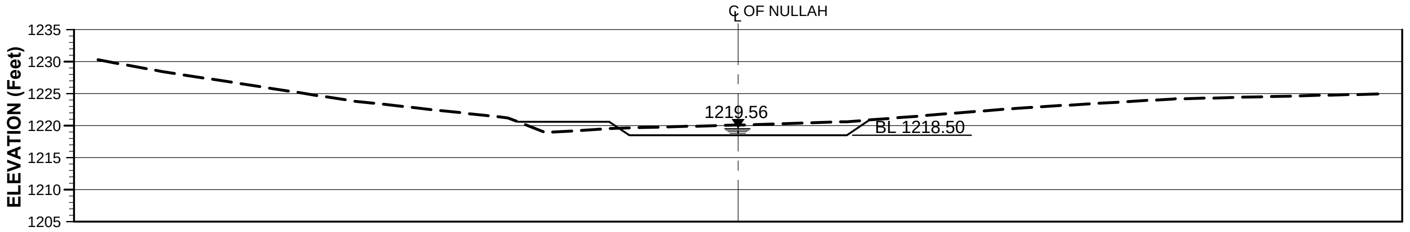
NSL (Feet)	1224.83	1221.92	1221.92	1222.32	1221.28	1221.44	1223.70
DISTANCE (Feet)	62.00	45.00	22.00	0.00	33.00	52.00	67.00

RD 0+000 (CAUSEWAY)



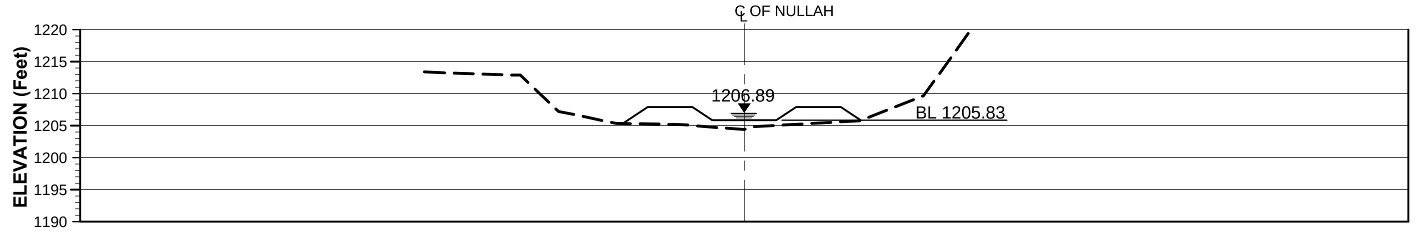
NSL (Feet)	1215.57	1215.45	1212.78	1211.57	1211.14	1210.97	1210.84	1208.79	1208.27	1210.71	1210.57	1210.58	1211.94	1213.40
DISTANCE (Feet)	70.00	39.00	37.00	34.00	14.00	0.00	4.00	4.35	7.35	8.35	22.00	44.00	46.00	75.00

RD 0+750



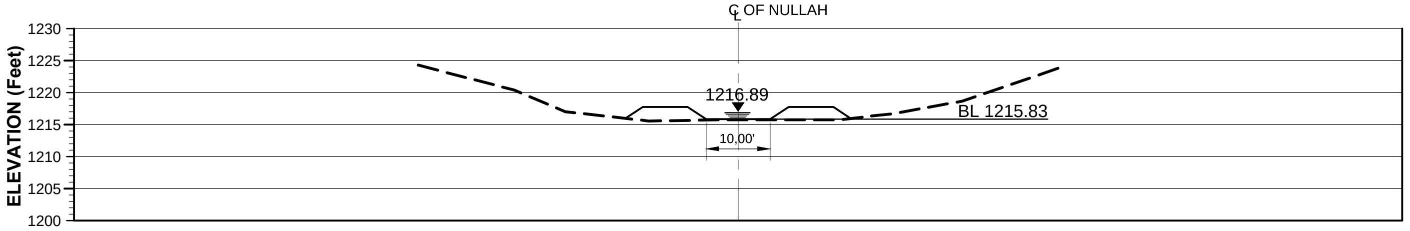
NSL (Feet)	1230.27	1228.44	1223.82	1221.21	1218.90	1219.55	1220.08	1220.60	1222.81	1224.16	1224.94
DISTANCE (Feet)	100.00	90.00	60.00	36.00	30.00	20.00	0.00	17.00	45.00	68.00	100.00

RD 0+050



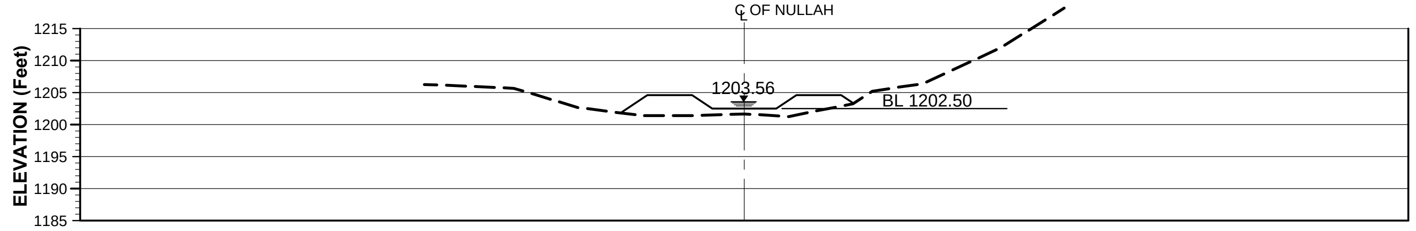
NSL (Feet)	1213.37	1212.87	1207.21	1205.35	1205.15	1204.37	1204.80	1205.74	1209.65	1219.37
DISTANCE (Feet)	50.00	35.00	29.00	20.00	9.70	0.00	0.75	18.00	28.00	35.00

RD 1+000



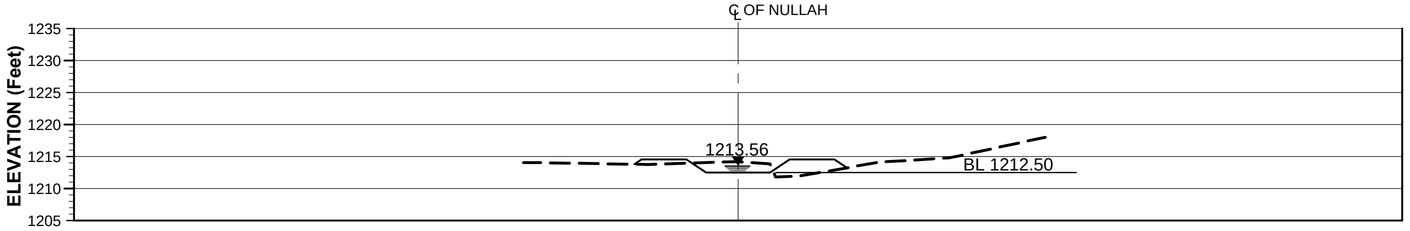
NSL (Feet)	1224.27	1220.41	1217.02	1215.55	1215.77	1215.76	1216.68	1218.63	1223.77
DISTANCE (Feet)	50.00	35.00	27.00	14.00	0.00	16.00	24.00	35.00	50.00

RD 0+250



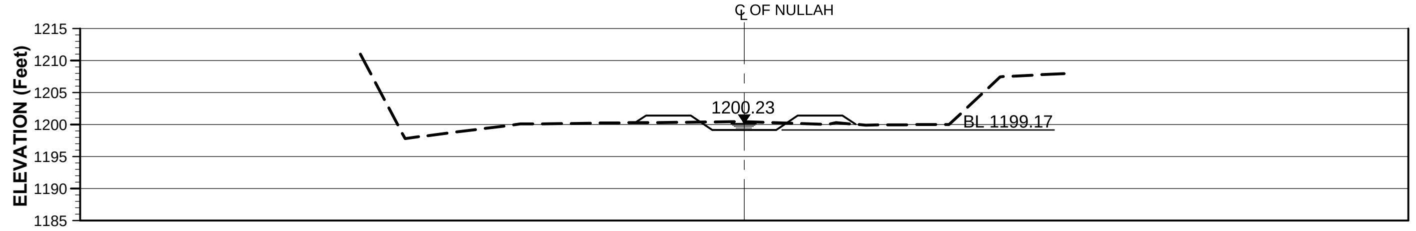
NSL (Feet)	1206.27	1205.67	1202.67	1201.39	1201.41	1201.67	1201.24	1201.87	1203.25	1205.21	1206.41	1211.96	1218.17
DISTANCE (Feet)	50.00	36.00	26.00	16.00	7.00	0.00	7.00	10.00	17.00	20.00	28.00	40.00	50.00

RD 1+250



NSL (Feet)	1214.07	1213.76	1214.22	1213.83	1211.82	1211.92	1211.93	1214.11	1214.78	1218.01
DISTANCE (Feet)	33.55	14.00	0.00	5.00	5.85	8.50	9.50	22.00	33.00	48.00

RD 0+500



NSL (Feet)	1210.98	1197.82	1200.08	1200.29	1200.45	1200.03	1199.27	1199.24	1199.92	1200.02	1207.45	1207.95
DISTANCE (Feet)	60.00	53.00	35.00	17.00	0.00	13.00	14.35	18.70	19.00	32.00	40.00	50.00

RD 1+500

TENDER DRAWING

SHEET 1 0F 6

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

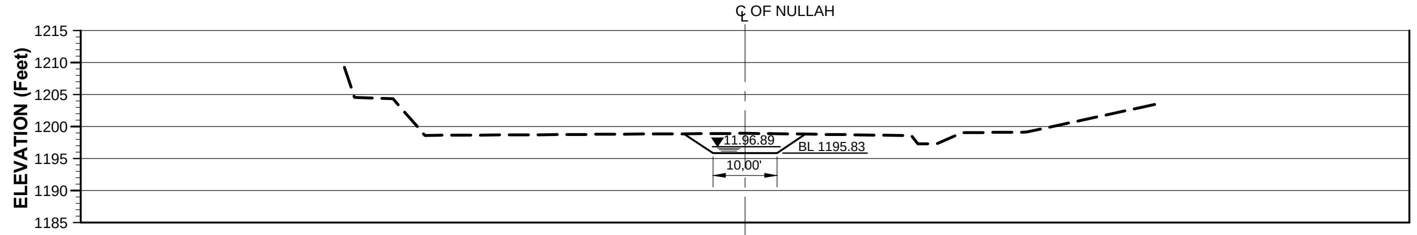
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13

BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
CHANNELIZATION OF NULLAH (RD 2+279)

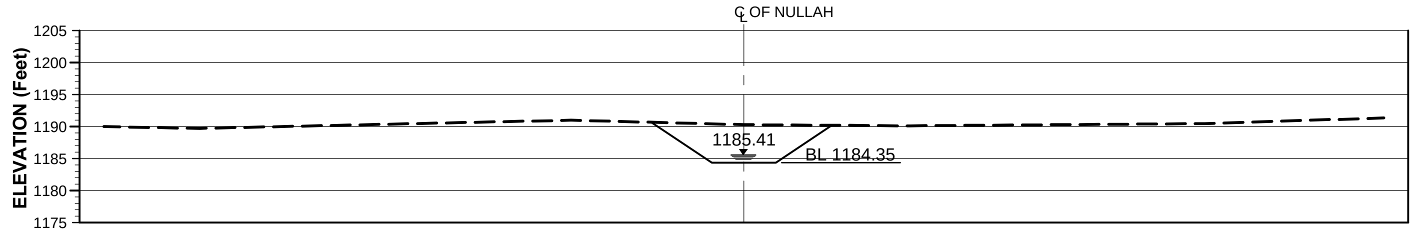
SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/02	0



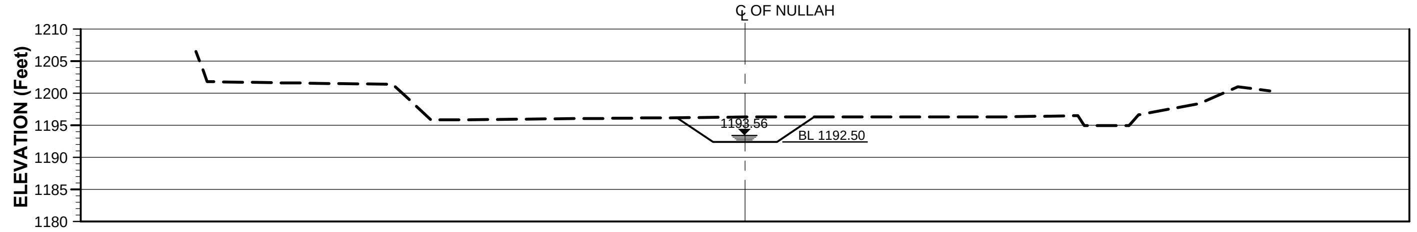
NSL (Feet)	1209.24	1204.52	1204.34	1198.60	1198.92	1198.59	1297.31	1297.24	1199.03	1199.12	1203.42
DISTANCE (Feet)	62.55	61.00	55.00	50.00	0.00	26.00	27.00	30.00	34.00	44.00	64.00

RD 1+750



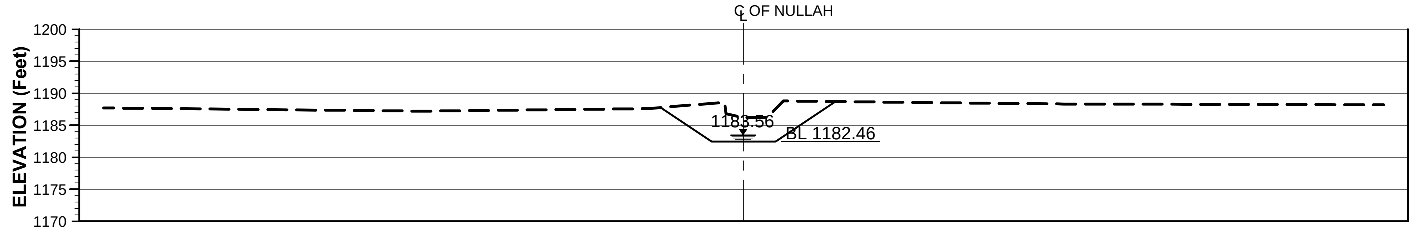
NSL (Feet)	1189.98	1189.70	1190.98	1190.28	1190.10	1190.45	1191.35
DISTANCE (Feet)	100.00	85.00	27.00	0.00	26.00	72.00	100.00

RD 2+611



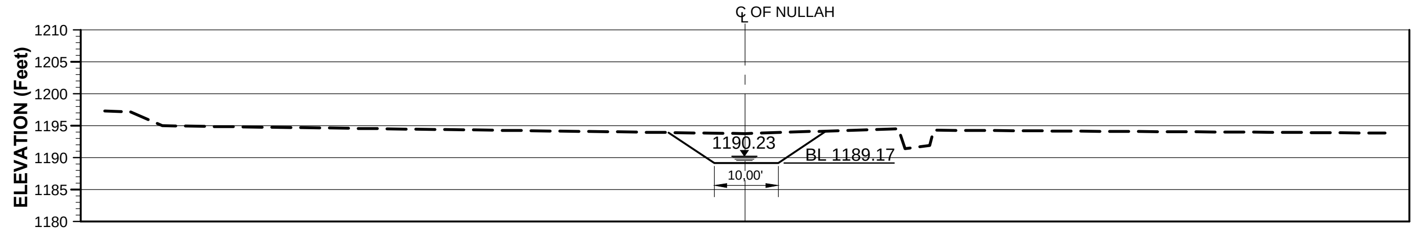
NSL (Feet)	1206.52	1201.83	1201.41	1296.26	1196.32	1196.34	1196.53	1194.98	1194.97	1196.67	1198.44	1201.04	1200.37
DISTANCE (Feet)	85.75	84.00	55.00	49.00	0.00	40.00	52.00	53.00	60.00	61.50	71.00	77.00	82.00

RD 2+000



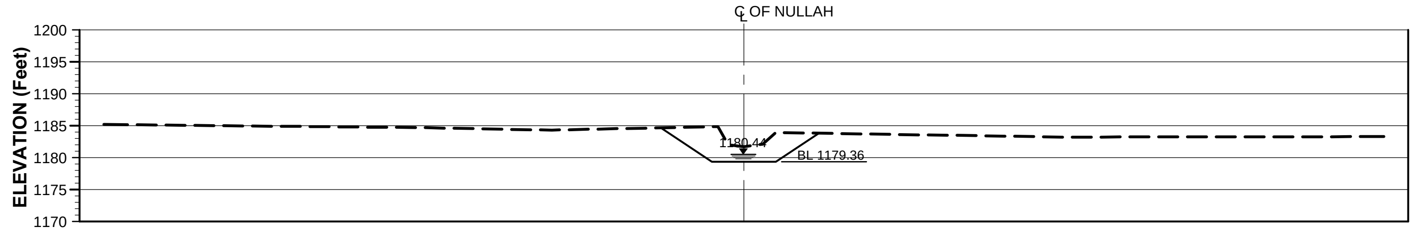
NSL (Feet)	1187.72	1187.22	1187.61	1188.81	1186.22	1186.20	1186.82	1188.59	1188.33	1188.22
DISTANCE (Feet)	100.00	50.00	15.00	3.00	2.75	0.00	3.65	6.20	50.00	100.00

RD 2+750



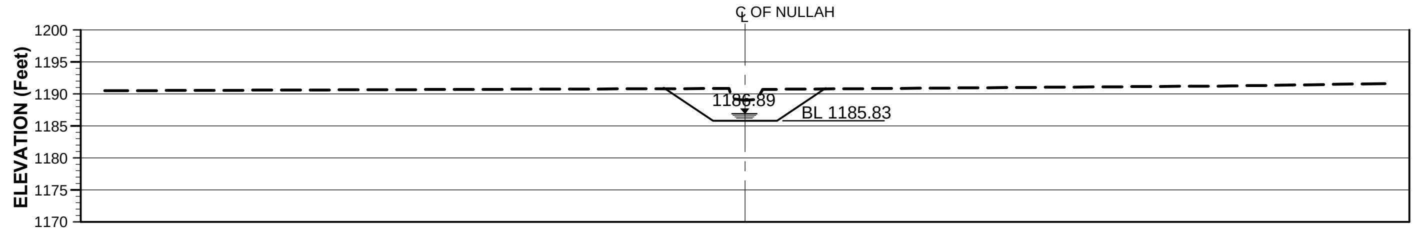
NSL (Feet)	1197.32	1197.17	1194.98	1193.77	1194.51	1191.42	1191.89	1194.29	1193.85
DISTANCE (Feet)	100.00	96.00	91.00	0.00	24.00	25.08	28.88	29.50	100.00

RD 2+250



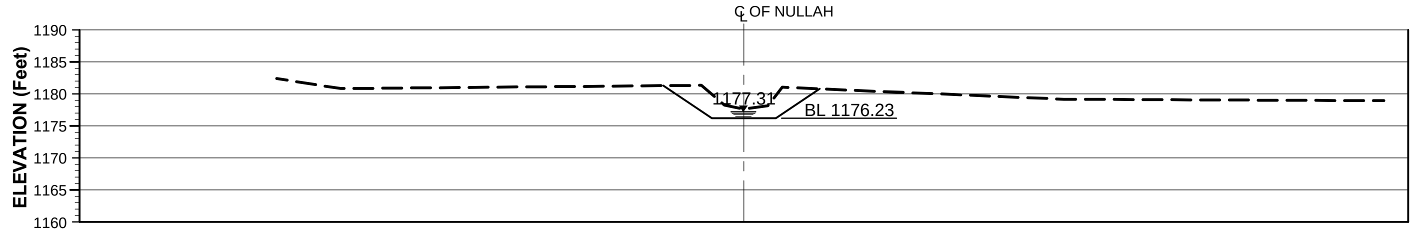
NSL (Feet)	1185.19	1184.69	1184.31	1184.87	1182.02	1181.69	1182.11	1183.92	1183.22	1183.29
DISTANCE (Feet)	100.00	50.00	30.00	4.06	2.46	0.00	2.95	5.00	50.00	100.00

RD 3+000



NSL (Feet)	1190.50	1190.89	1189.27	1189.03	1189.22	1190.75	1191.28	1191.62
DISTANCE (Feet)	100.00	2.50	2.00	0.00	2.00	2.75	76.00	100.00

RD 2+500



NSL (Feet)	1182.39	1180.84	1181.35	1178.26	1177.64	1178.17	1181.04	1179.18	1178.94
DISTANCE (Feet)	73.00	63.00	6.65	3.04	0.00	3.75	6.00	50.00	100.00

RD 3+250

TENDER DRAWING

SHEET 2 0F 6

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

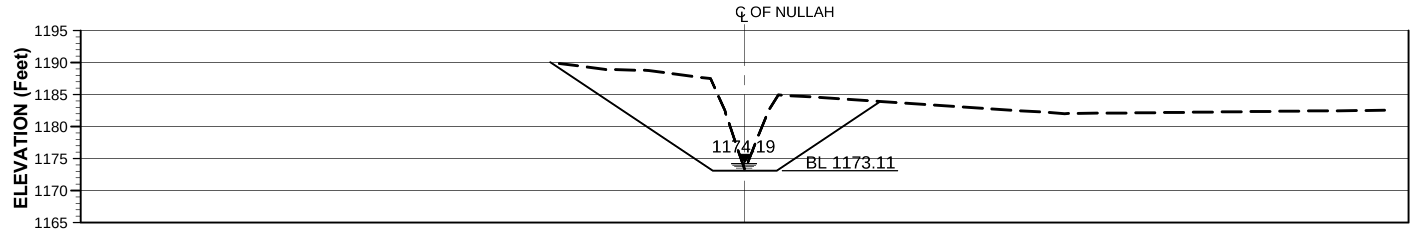
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

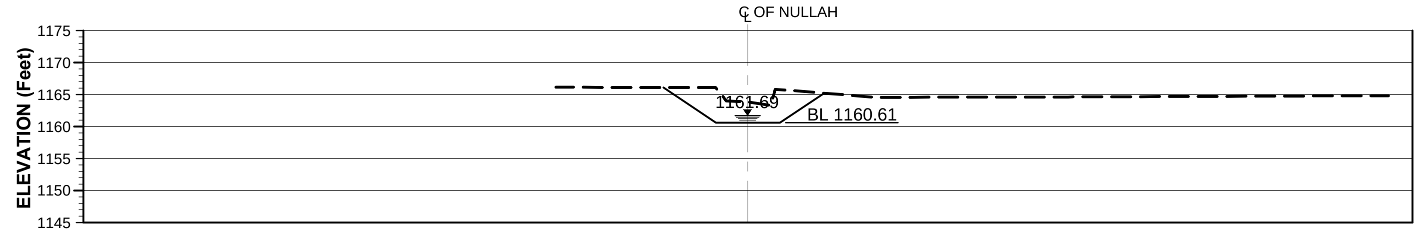
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
CHANNELIZATION OF NULLAH (RD 2+279)
SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/03	0



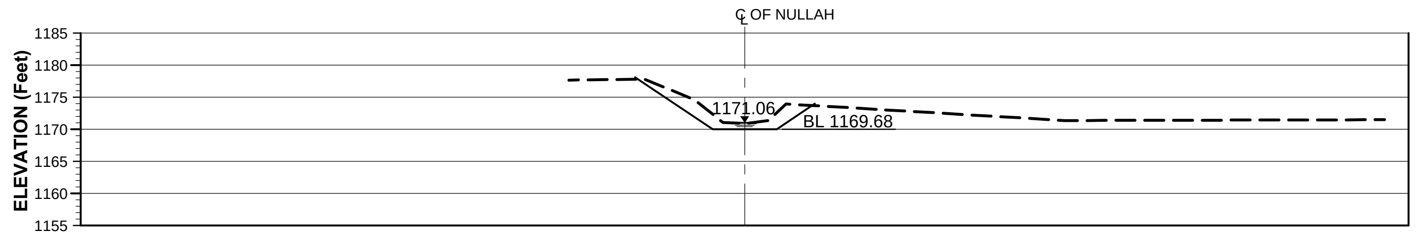
NSL (Feet)	1189.84	1188.92	1188.75	1187.47	1182.48	1173.22	1182.38	1184.94	1182.01	1182.54
DISTANCE (Feet)	29.00	22.00	15.00	5.32	3.10	0.00	3.69	5.25	50.00	100.00

RD 3+500



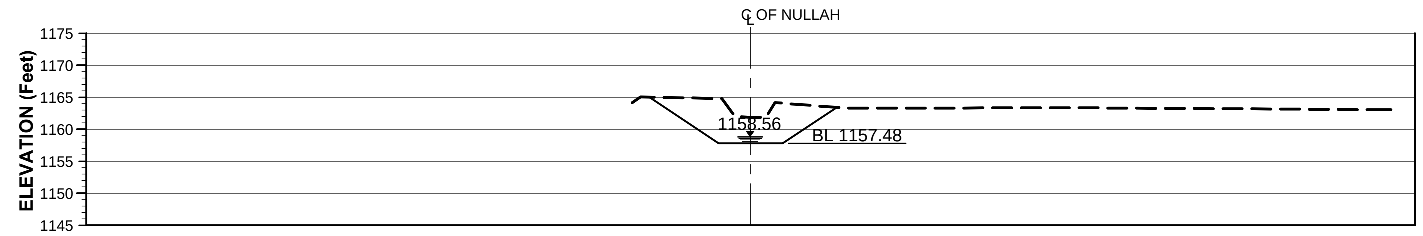
NSL (Feet)	1166.16	1166.09	1266.06	1166.09	1164.01	1163.81	1163.31	1165.81	1164.55	1164.61	1164.81
DISTANCE (Feet)	30.00	20.00	15.20	5.05	3.40	0.00	3.55	4.25	20.00	50.00	100.00

RD 4+500



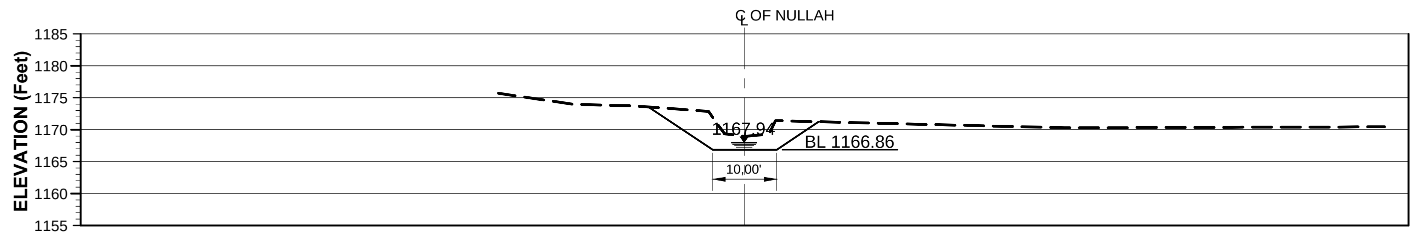
NSL (Feet)	1177.66	1177.78	1174.62	1171.06	1170.88	1171.36	1173.94	1171.35	1171.48
DISTANCE (Feet)	27.50	15.65	7.85	3.40	0.00	3.75	6.45	50.00	100.00

RD 3+750



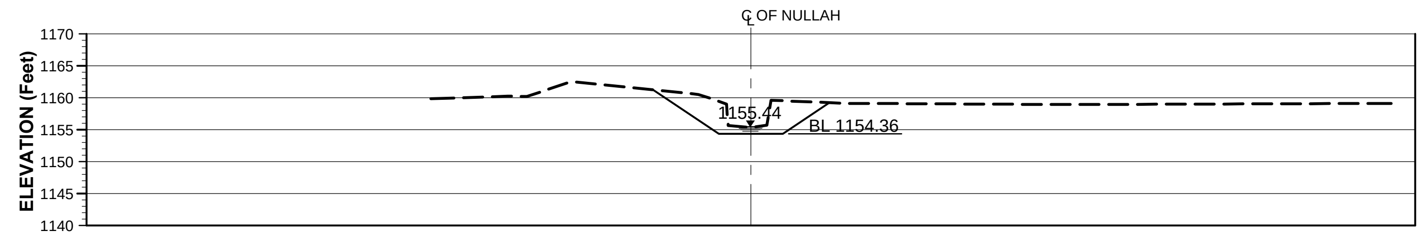
NSL (Feet)	1164.15	1165.03	1164.78	1162.01	1161.83	1161.88	1164.15	1163.28	1163.35	1163.03
DISTANCE (Feet)	18.50	17.20	4.50	2.50	0.00	2.35	3.80	15.00	50.00	100.00

RD 4+750



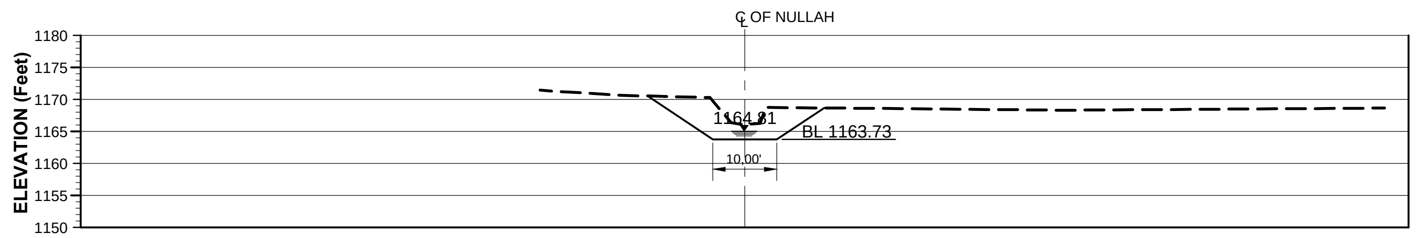
NSL (Feet)	1175.71	1174.01	1173.69	1172.85	1169.35	1168.94	1169.33	1171.40	1170.29	1170.44
DISTANCE (Feet)	38.50	27.00	16.90	5.65	3.15	0.00	3.80	4.80	50.00	100.00

RD 4+000



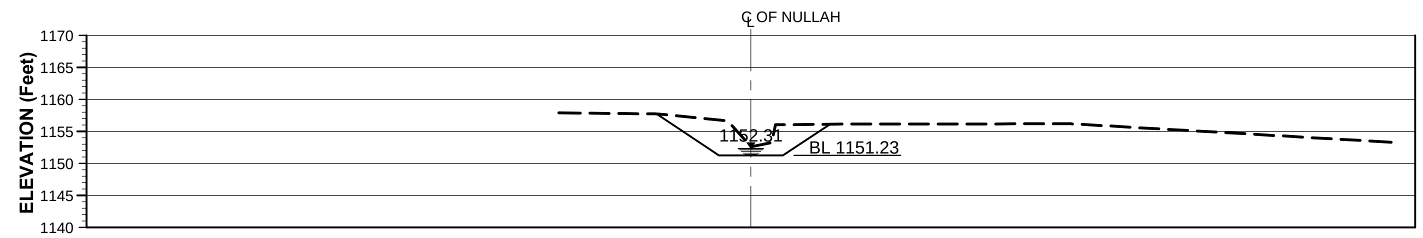
NSL (Feet)	1159.83	1160.23	1160.21	1162.52	1160.52	1159.02	1155.66	1155.33	1159.60	1155.71	1159.12	1158.93	1159.12
DISTANCE (Feet)	50.00	38.00	35.00	28.00	8.20	3.81	3.57	0.00	2.50	3.15	15.00	50.00	100.00

RD 5+000



NSL (Feet)	1171.44	1170.67	1170.41	1170.29	1166.34	1166.05	1166.25	1168.75	1168.31	1168.64
DISTANCE (Feet)	32.00	20.00	11.00	5.44	2.09	0.00	2.44	3.30	50.00	100.00

RD 4+250



NSL (Feet)	1157.88	1157.79	1157.76	1156.70	1156.36	1152.59	1153.26	1156.04	1156.15	1156.19	1153.32
DISTANCE (Feet)	30.00	20.00	15.00	4.16	3.38	0.00	3.23	3.85	15.00	50.00	100.00

RD 5+250

TENDER DRAWING

SHEET 3 0F 6

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

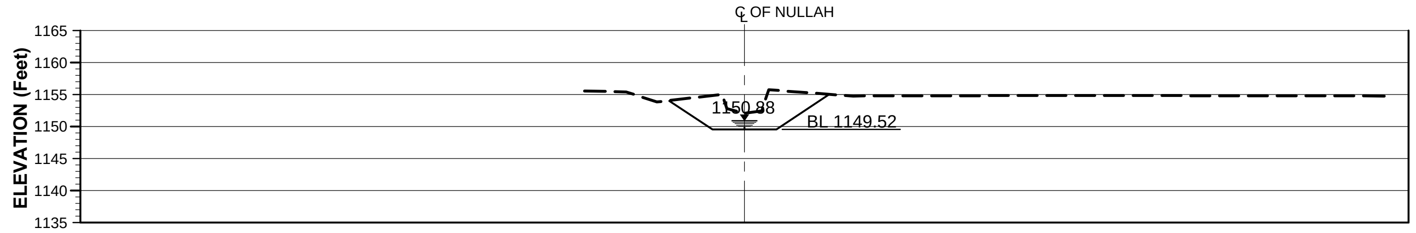
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

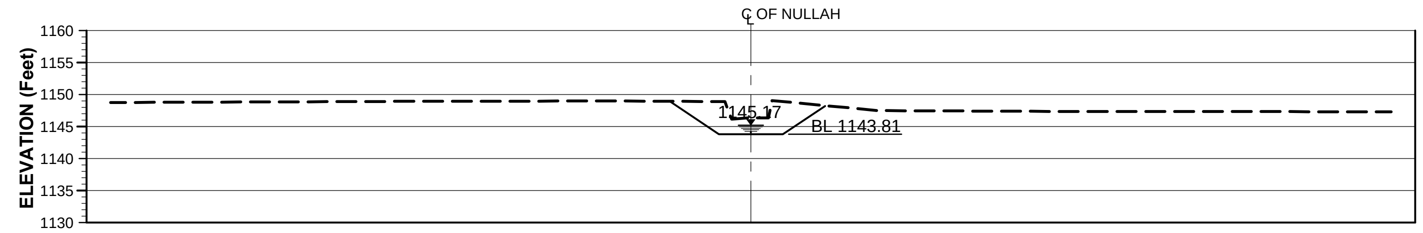
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
CHANNELIZATION OF NULLAH (RD 2+279)
SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/04	0



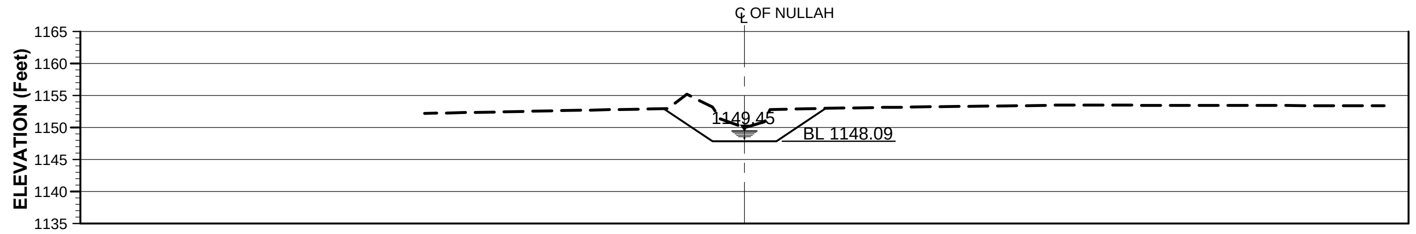
NSL (Feet)	1155.55	1155.41	1153.82	1155.02	1152.80	1152.05	1152.44	1155.73	1154.76	1154.85	1154.76
DISTANCE (Feet)	25.00	18.50	13.70	3.50	2.75	0.00	2.73	3.78	17.00	50.00	100.00

RD 5+500



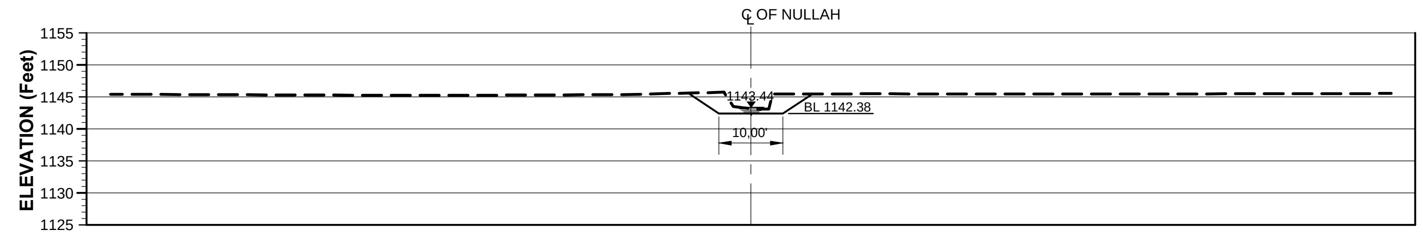
NSL (Feet)	1148.74	1148.94	1148.98	1148.88	1146.16	1146.35	1146.33	1149.06	1147.47	1147.35	1147.30
DISTANCE (Feet)	100.00	50.00	20.00	4.07	3.00	0.00	2.75	3.29	20.00	50.00	100.00

RD 6+500



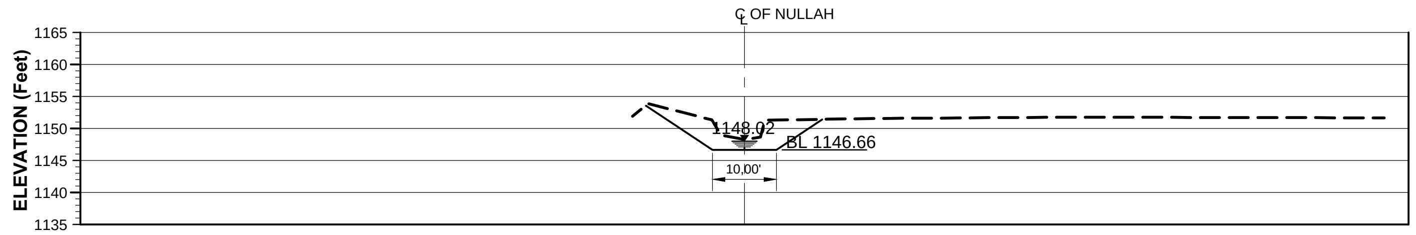
NSL (Feet)	1152.20	1153.21	1155.20	1152.96	1151.33	1150.00	1150.89	1152.82	1153.12	1153.50	1153.40
DISTANCE (Feet)	50.00	12.00	9.00	5.00	3.80	0.00	3.17	4.00	20.00	50.00	100.00

RD 5+750



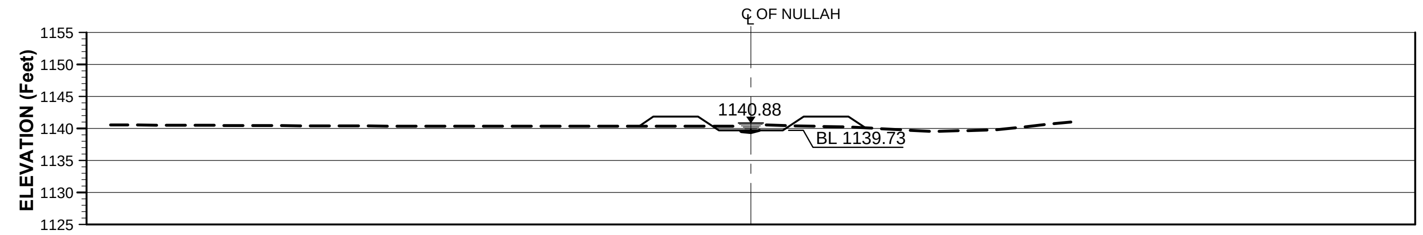
NSL (Feet)	1245.31	1245.13	1245.25	1145.73	1143.49	1143.13	1143.08	1145.45	1145.48	1145.43	1145.53
DISTANCE (Feet)	100.00	50.00	20.00	4.20	2.75	0.00	2.80	3.38	20.00	50.00	100.00

RD 6+750



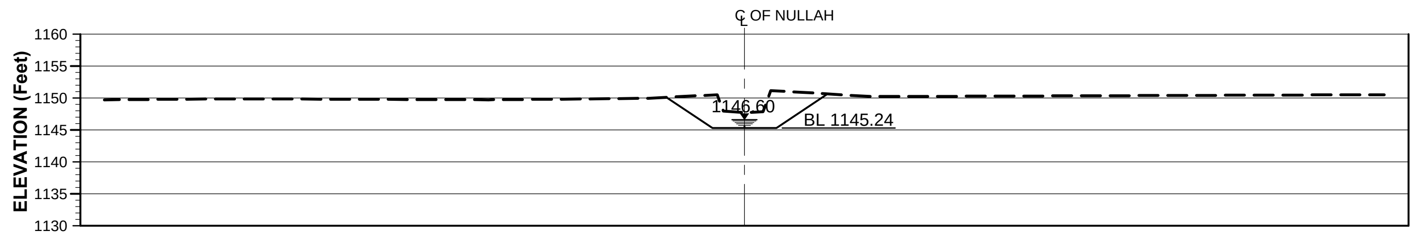
NSL (Feet)	1151.89	1153.87	1151.34	1149.00	1148.27	1148.64	1151.28	1151.55	1151.77	1151.66
DISTANCE (Feet)	17.50	15.00	5.08	3.74	0.00	2.50	3.16	20.00	50.00	100.00

RD 6+000



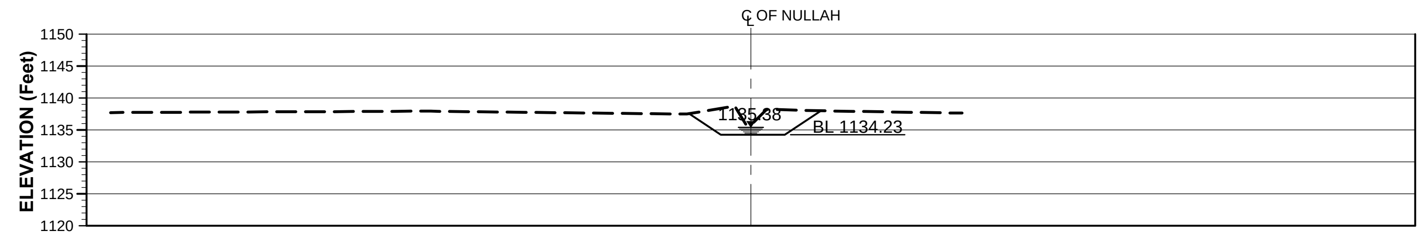
NSL (Feet)	1140.56	1140.36	1140.39	1140.38	1139.54	1139.36	1139.74	1140.55	1140.25	1139.56	1139.78	1141.03
DISTANCE (Feet)	100.00	50.00	20.00	2.55	1.50	0.00	1.54	2.06	15.00	28.00	38.00	50.00

RD 7+250



NSL (Feet)	1149.70	1149.85	1149.70	1149.92	1150.50	1147.92	1147.70	1147.81	1151.15	1150.20	1150.50
DISTANCE (Feet)	100.00	80.00	40.00	15.00	4.25	3.27	0.00	2.91	4.12	20.00	100.00

RD 6+250



NSL (Feet)	1137.70	1137.92	1137.46	1138.72	1135.75	1135.72	1136.37	1138.20	1137.96	1137.61
DISTANCE (Feet)	100.00	50.00	10.00	2.50	0.70	0.05	0.65	2.46	12.00	33.00

RD 7+800

TENDER DRAWING

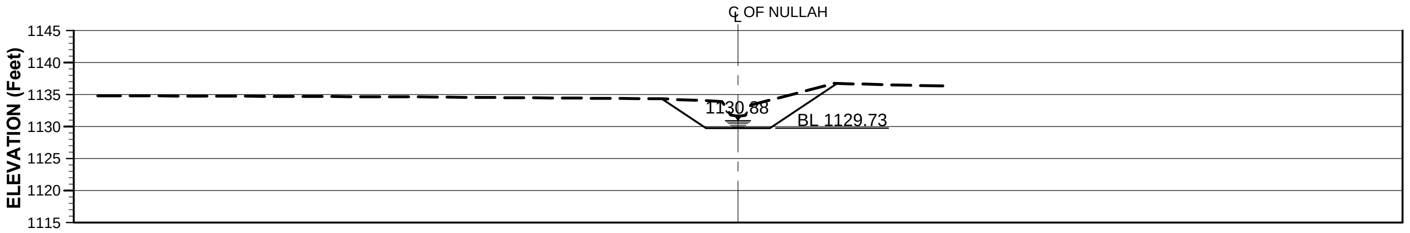
SHEET 4 0F 6

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT - A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	**REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13** BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT CHANNELIZATION OF NULLAH (RD 2+279) **SECTIONS**

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

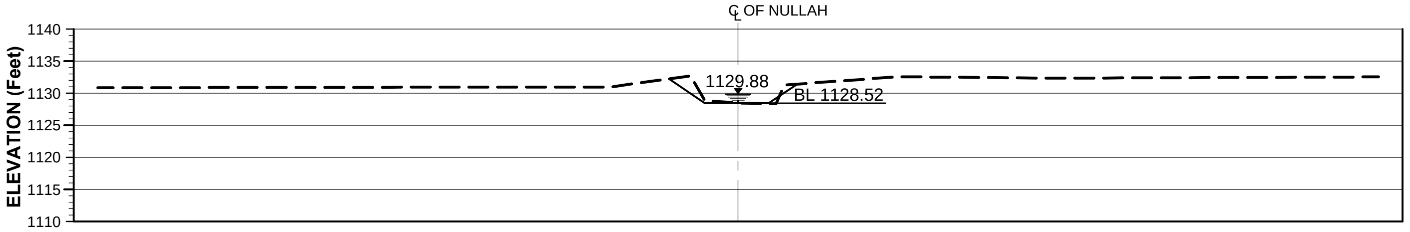
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/05	0



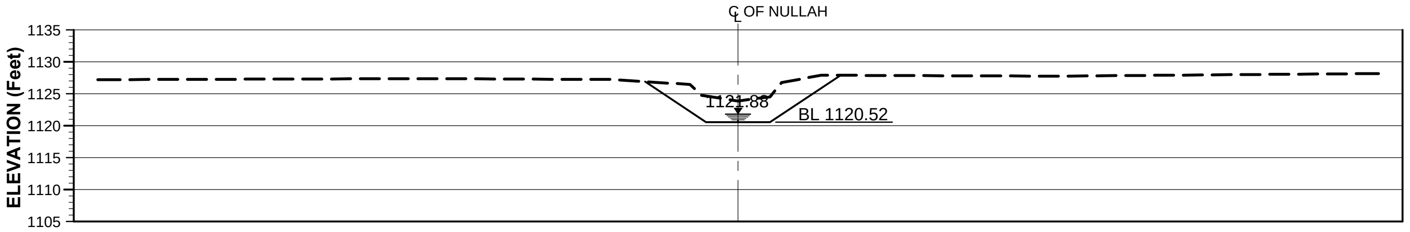
NSL (Feet)	1134.80	1134.62	1134.32	1133.91	1131.81	1131.60	1131.75	1133.34	1136.73	1136.32
DISTANCE (Feet)	100.00	50.00	12.00	2.50	1.16	0.00	1.14	2.00	15.00	32.00

RD 8+250



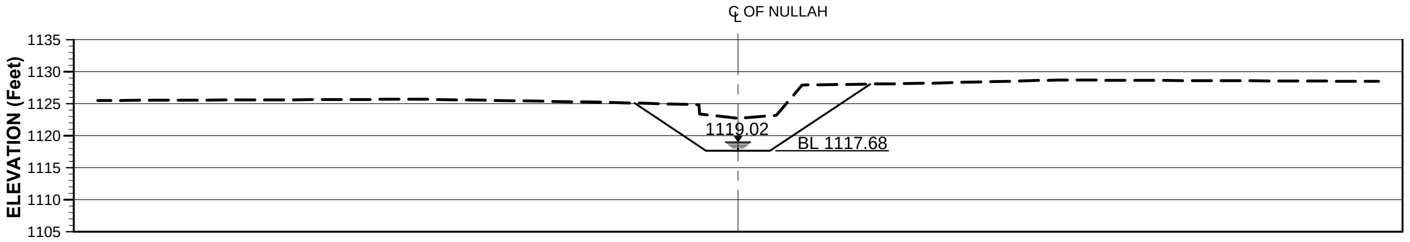
NSL (Feet)	1130.63	1130.72	1130.74	1132.50	1128.65	1128.26	1128.12	1131.06	1132.35	1132.12	1132.32
DISTANCE (Feet)	100.00	50.00	20.00	7.41	5.20	0.00	5.92	7.23	25.00	50.00	100.00

RD 8+350



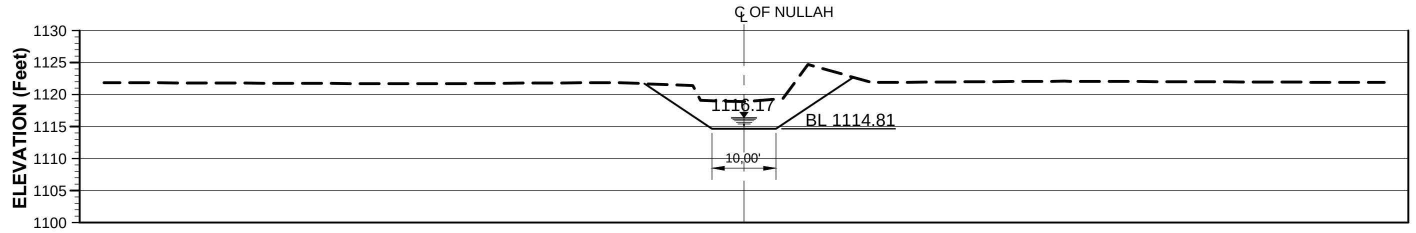
NSL (Feet)	1127.22	1127.38	1127.25	1126.47	1124.76	1123.88	1124.54	1126.75	1127.94	1127.88	1127.77	1128.18
DISTANCE (Feet)	100.00	50.00	20.00	7.50	5.72	0.00	5.00	6.77	13.00	20.00	50.00	100.00

RD 9+750



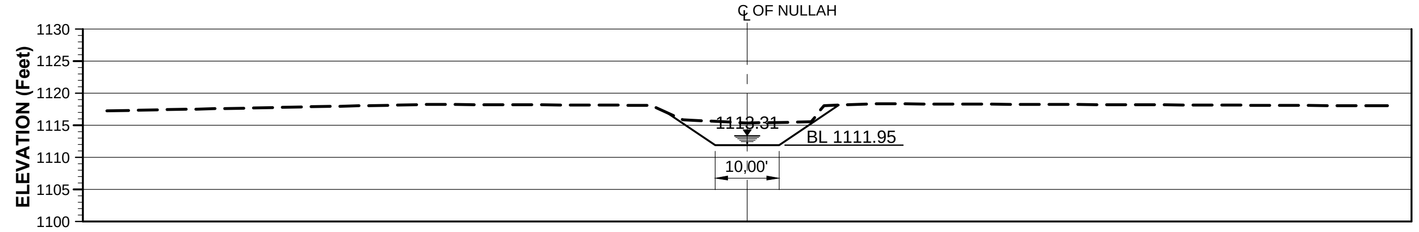
NSL (Feet)	1125.48	1125.68	1125.18	1124.82	1123.37	1122.68	1123.18	1127.89	1128.18	1128.68	1128.47
DISTANCE (Feet)	100.00	50.00	20.00	6.10	6.00	0.00	6.00	10.00	30.00	50.00	100.00

RD 10+250



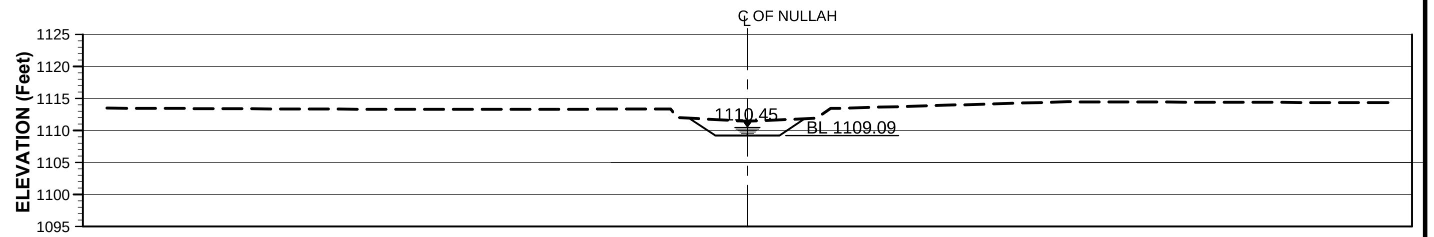
NSL (Feet)	1121.85	1121.67	1121.87	1121.37	1119.07	1118.87	1119.37	1124.67	1121.87	1122.07	1121.87
DISTANCE (Feet)	100.00	50.00	20.00	8.00	6.80	0.00	6.10	10.00	20.00	50.00	100.00

RD 10+750



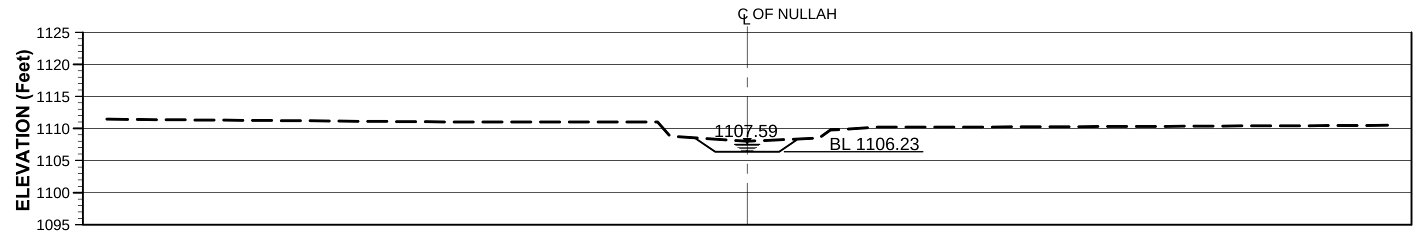
NSL (Feet)	1117.25	1118.25	1118.11	1115.85	1115.35	1115.55	1118.05	1118.35	1118.24	1118.04
DISTANCE (Feet)	100.00	50.00	15.00	10.00	0.00	10.00	12.00	20.00	50.00	100.00

RD 11+250



NSL (Feet)	1113.49	1113.29	1113.36	1112.04	1111.44	1111.94	1113.44	1114.49	1114.34
DISTANCE (Feet)	100.00	50.00	12.00	11.00	0.00	10.80	13.00	50.00	100.00

RD 11+750



NSL (Feet)	1111.46	1111.05	1111.00	1108.80	1108.00	1108.50	1109.75	1110.20	1110.28	1110.50
DISTANCE (Feet)	100.00	50.00	14.00	12.00	0.00	11.20	13.00	20.00	50.00	100.00

RD 12+250

TENDER DRAWING

SHEET 5 0F 6

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

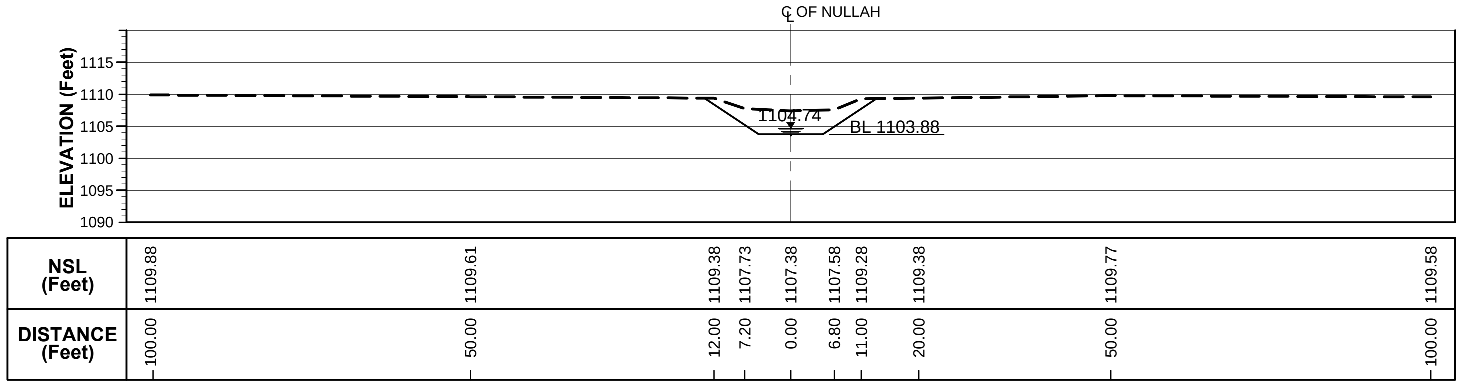
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

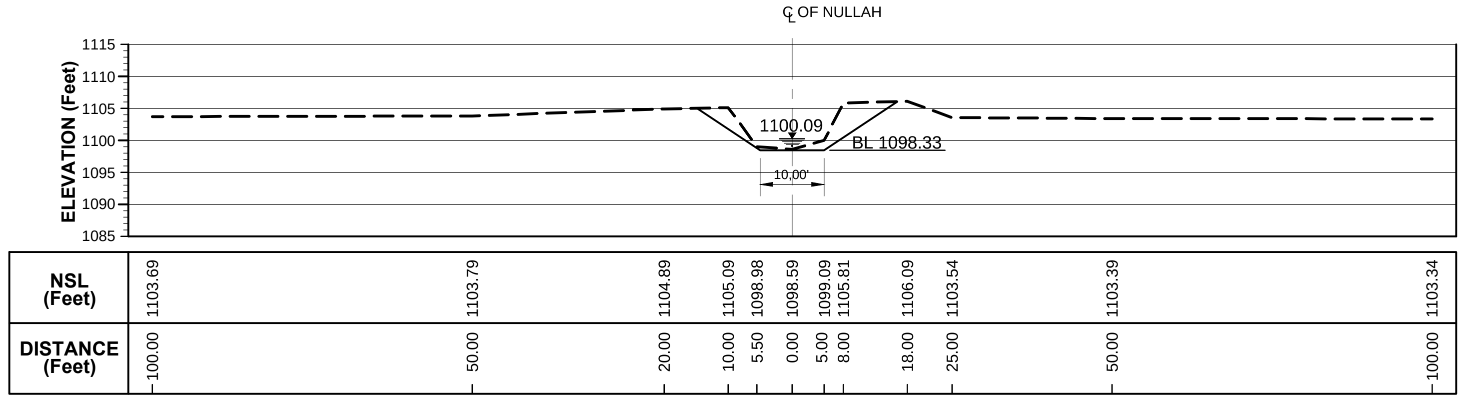
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
CHANNELIZATION OF NULLAH (RD 2+279)
SECTIONS

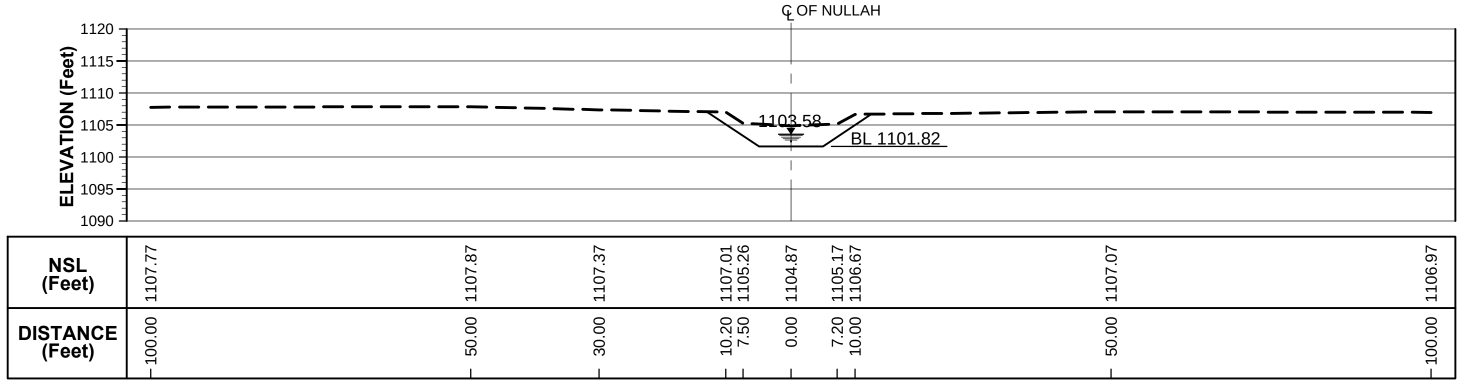
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/06	0



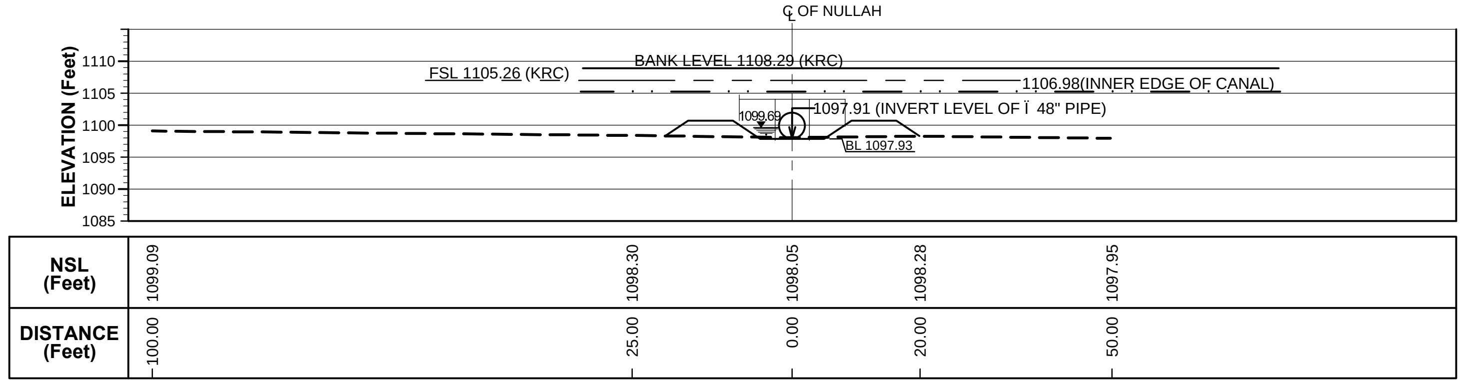
RD 12+750



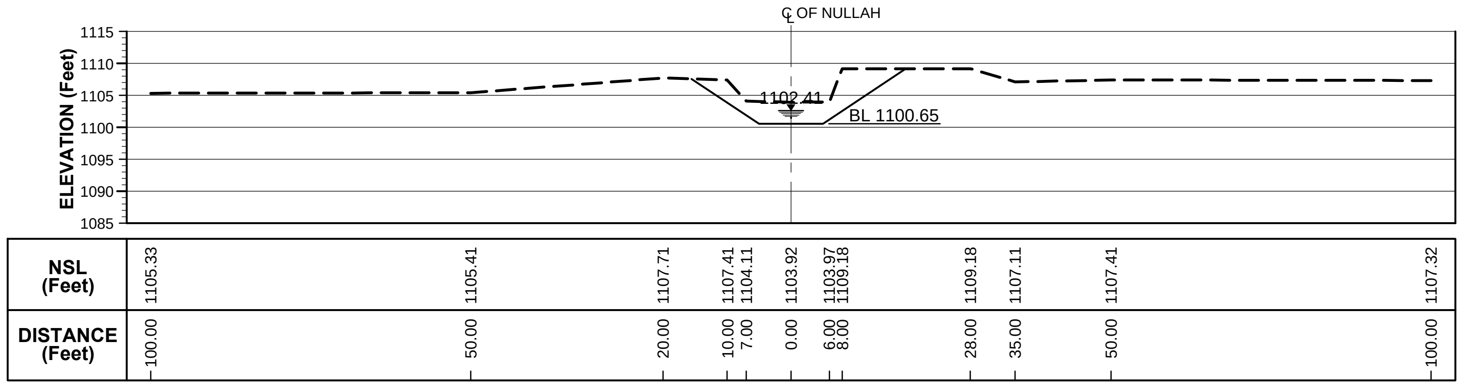
RD 14+750



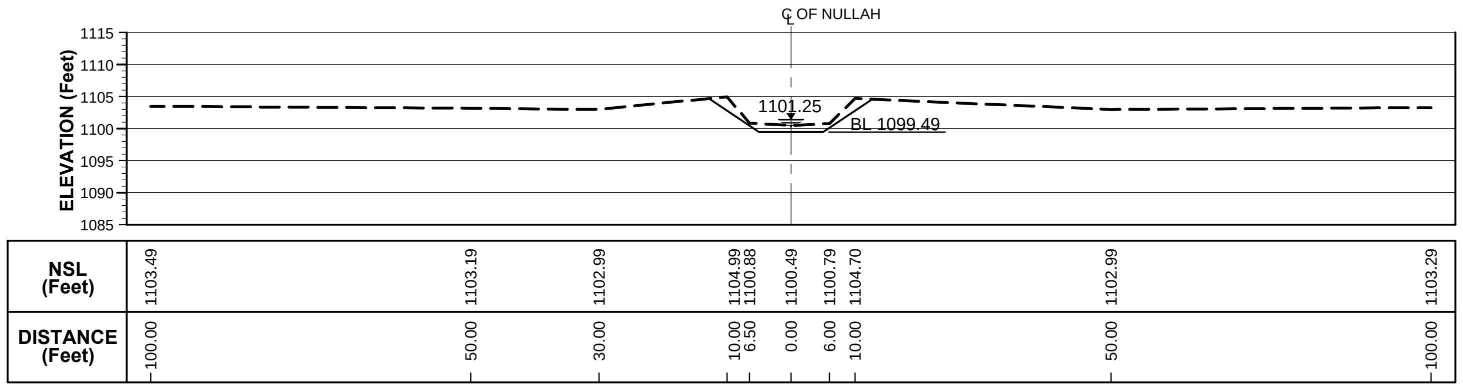
RD 13+250



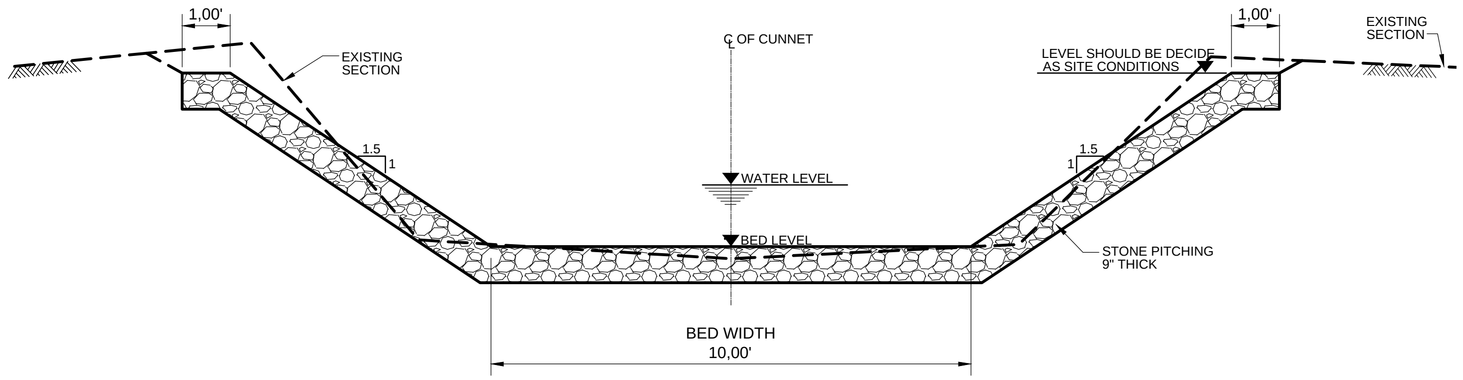
RD 14+922



RD 13+750



RD 14+250



TYPICAL CROSS SECTION (STONE PITCHING) FROM RD 14+885 TO RD 14+922

TENDER DRAWING

SHEET 6 0F 6

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

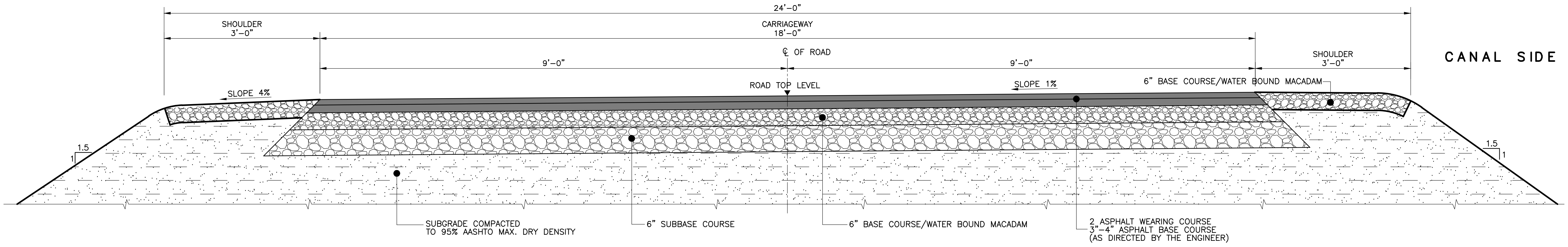
REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

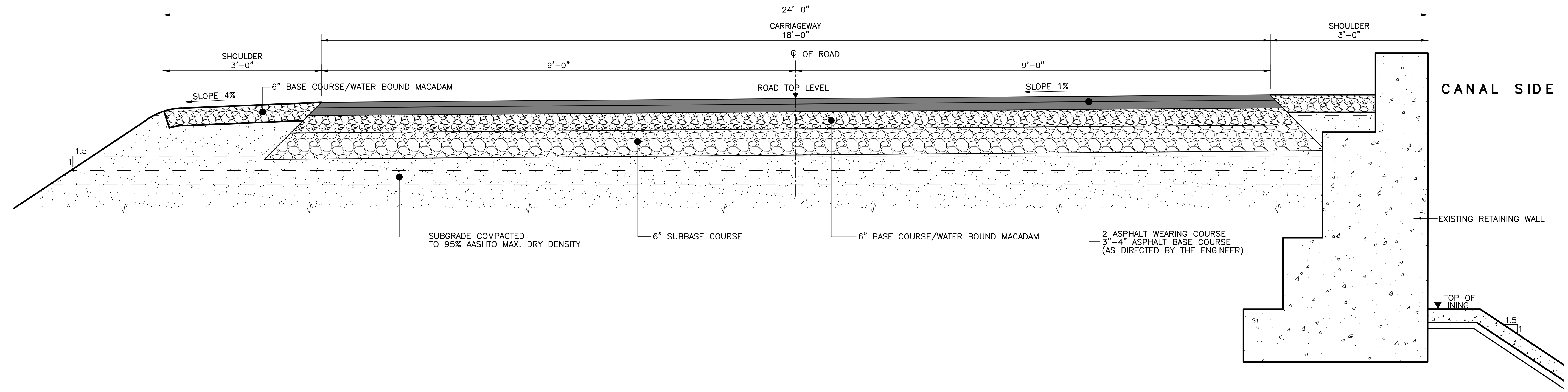
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

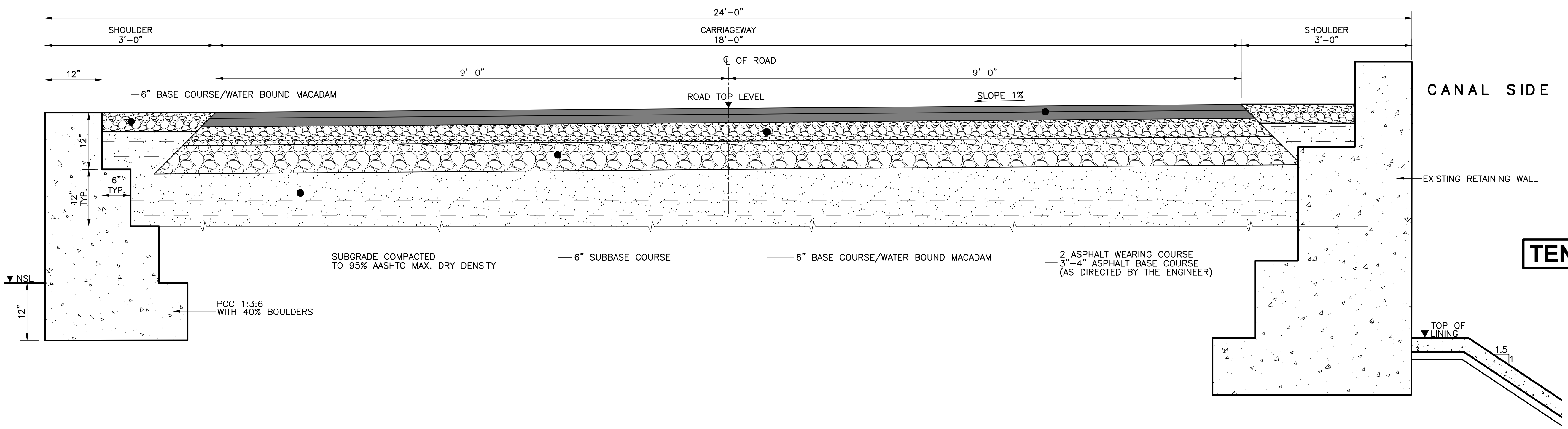
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
CHANNELIZATION OF NULLAH (RD 2+279)
SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/CHN/07	0

B.2 ROAD ALONG CANAL (WGC) FROM RD 1+083 TO RD 20+090







TENDER DRAWING

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

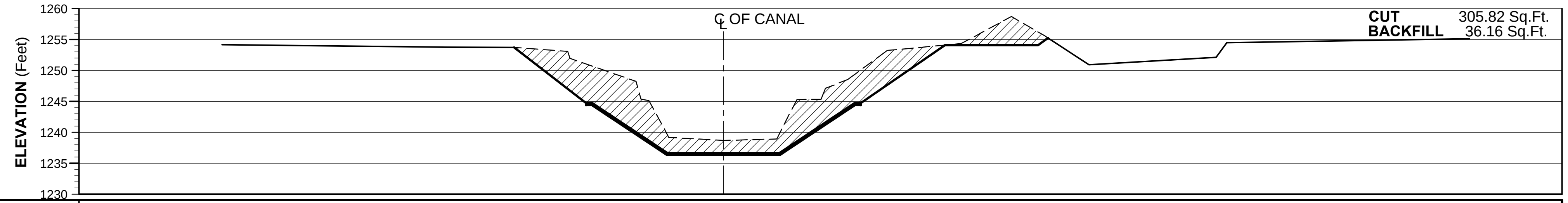
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

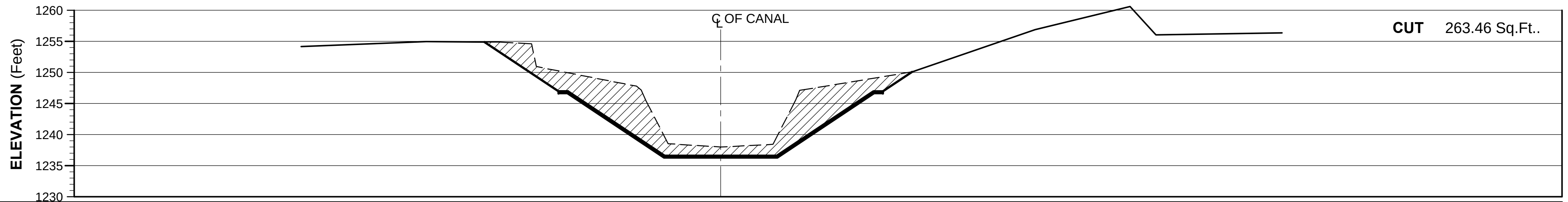
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
TYPICAL CROSS SECTION

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/01	0



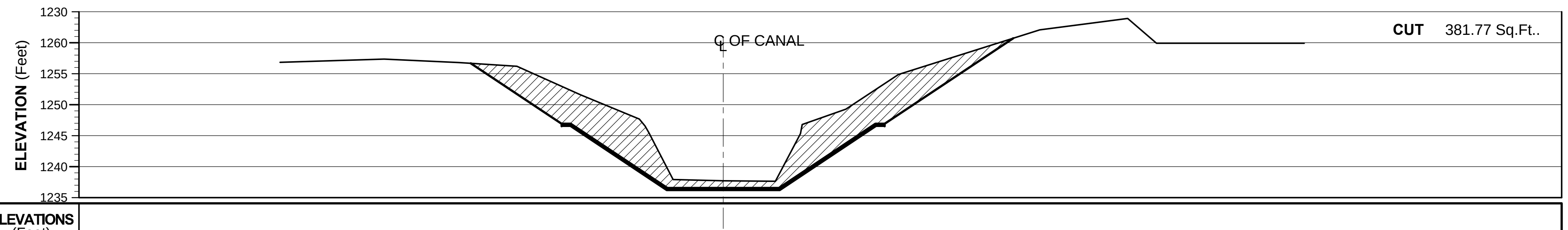
WORK DONE ELEVATIONS (Feet)																							
WORK DONE DISTANCE (Feet)																							
DESIGNED SECTION ELEVATIONS (Feet)	1244.72	1244.72	1236.64	1236.64	1236.64	1244.72	1244.72	1246.97	1253.79	1253.79	1256.04												
DESIGNED SECTION DISTANCE (Feet)	22.12	21.12	9.00	0.00	9.00	21.12	22.12	23.12	32.62	47.62	50.99												
NSL ELEVATIONS (Feet)	1254.16	1253.73	1253.70	1253.07	1251.93	1248.22	1245.35	1245.10	1239.17	1238.67	1238.91	1245.29	1245.31	1247.11	1248.52	1253.21	1254.33	1258.70	1255.58	1250.89	1252.11	1254.45	1255.12
NSL DISTANCE (Feet)	80.74	44.87	33.75	25.05	24.71	14.06	13.26	11.97	8.78	0.00	8.60	11.84	15.72	16.47	20.03	26.41	38.32	46.42	51.77	58.89	79.35	81.08	120.15

CROSS SECTION AT RD 1+083



WORK DONE ELEVATIONS (Feet)																		
WORK DONE DISTANCE (Feet)																		
DESIGNED SECTION ELEVATIONS (Feet)	1246.95	1246.95	1236.60	1236.60	1236.60	1246.95	1246.95											
DESIGNED SECTION DISTANCE (Feet)	26.03	24.53	9.00	0.00	9.00	24.53	26.03											
NSL ELEVATIONS (Feet)	1254.15	1254.94	1254.86	1254.59	1250.94	1247.78	1247.16	1245.44	1238.54	1238.00	1238.43	1245.55	1247.11	1250.14	1256.88	1260.59	1256.02	1256.37
NSL DISTANCE (Feet)	67.37	47.26	35.50	30.34	29.61	13.51	12.75	12.01	8.45	0.00	8.40	12.04	12.68	31.06	50.47	65.71	69.86	90.11

CROSS SECTION AT RD 1+250



WORK DONE ELEVATIONS (Feet)																			
WORK DONE DISTANCE (Feet)																			
DESIGNED SECTION ELEVATIONS (Feet)	1246.90	1246.90	1236.55	1236.55	1236.55	1246.90	1246.90												
DESIGNED SECTION DISTANCE (Feet)	26.03	24.53	9.00	0.00	9.00	24.53	26.03												
NSL ELEVATIONS (Feet)	1256.83	1257.36	1256.78	1256.19	1251.58	1247.67	1246.57	1245.44	1237.93	1237.71	1237.65	1245.32	1246.78	1249.26	1254.86	1262.05	1263.89	1259.92	1259.92
NSL DISTANCE (Feet)	71.38	54.63	42.55	33.21	23.00	13.52	12.57	11.96	8.07	0.00	8.43	12.46	12.75	19.76	28.24	51.01	65.15	69.80	93.59

CROSS SECTION AT RD 1+500

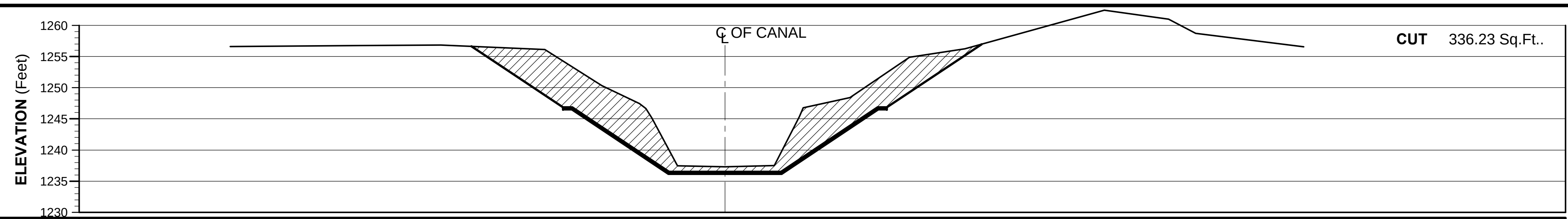
LEGEND

EXISTING CROSS SECTION/NSL	
DESIGNED CROSS SECTION	
FILL	
CUT	
BACKFILL	

TENDER DRAWING

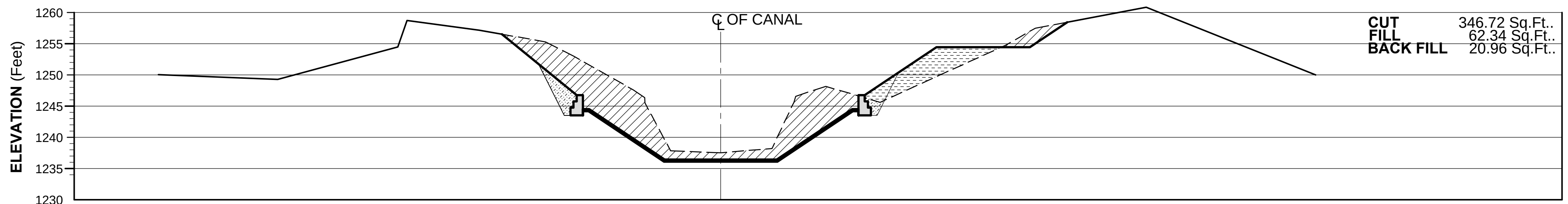
SHEET 1 OF 34

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**						DRAWN CHECKED RECOMMENDED APPROVED		**REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13** BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090 **DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS**
			REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		DATE: AUG., 2021 · DWG. NO.: **RWCS-13/TD/WCP/RAC/02** · REV.: 0



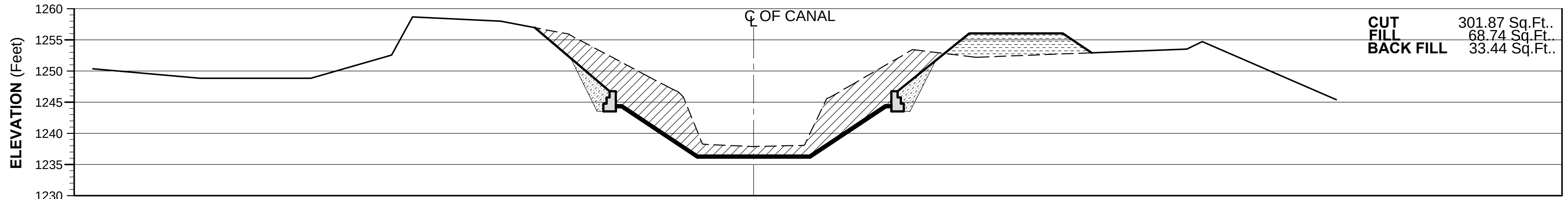
WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1246.84 1246.84, 1236.49, 1236.49, 1236.49, 1246.84 1246.84
	DISTANCE (Feet)	26.03 24.53, 9.00, 0.00, 9.00, 24.53 26.03
NSL	ELEVATIONS (Feet)	1256.62, 1256.77, 1256.87, 1256.13, 1250.32, 1247.44 1246.66 1245.14, 1237.48, 1237.32, 1237.49, 1245.37 1246.79, 1248.41, 1254.91, 1256.25, 1262.46, 1260.99, 1258.73, 1256.58
	DISTANCE (Feet)	79.49, 58.64, 45.66, 28.95, 19.77, 13.73 12.70 11.73, 7.64, 0.00, 7.94, 11.98 12.58, 20.11, 29.63, 38.58, 60.98, 71.29, 75.65, 93.00

CROSS SECTION AT RD 1+750



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1244.51 1244.51, 1236.43, 1236.43, 1236.43, 1244.51 1244.51 1246.76, 1254.43, 1254.43, 1258.45
	DISTANCE (Feet)	22.12 21.12, 9.00, 0.00, 9.00, 21.12 22.12 23.12, 34.62, 49.62, 55.65
NSL	ELEVATIONS (Feet)	1250.04, 1249.27, 1254.48 1258.70, 1257.15, 1255.29, 1252.96, 1247.59 1246.36 1245.52 1237.85, 1237.54, 1238.21, 1245.60 1246.57, 1248.17, 1245.62, 1254.72, 1257.48, 1260.83, 1249.99
	DISTANCE (Feet)	90.27, 71.13, 51.83 50.35, 38.76, 28.10, 23.52, 14.03 12.19 12.16 8.04, 0.00, 8.22, 11.74 12.02, 16.86, 25.60, 45.66, 50.51, 68.32, 95.52

CROSS SECTION AT RD 2+000



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1244.50 1244.50, 1236.42, 1236.42, 1236.42, 1244.50 1244.50 1246.77, 1256.03, 1256.03, 1253.02
	DISTANCE (Feet)	22.12 21.12, 9.00, 0.00, 9.00, 21.12 22.12 23.12, 34.62, 49.62, 54.12
NSL	ELEVATIONS (Feet)	1250.34, 1248.82, 1248.85, 1252.56, 1258.67, 1257.99, 1255.93, 1249.32, 1247.15 1246.62 1245.84, 1238.26, 1237.88, 1238.06, 1245.60 1245.70, 1247.97, 1253.41, 1252.19, 1253.52 1254.70, 1245.41
	DISTANCE (Feet)	106.10, 88.86, 71.10, 58.15, 54.78, 40.60, 29.79, 17.30, 13.18 12.10 11.30, 8.22, 0.00, 8.13, 11.73 12.11, 16.05, 25.49, 35.70, 69.55 72.00, 93.55

CROSS SECTION AT RD 2+050

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 2 OF 34

CLIENT

IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

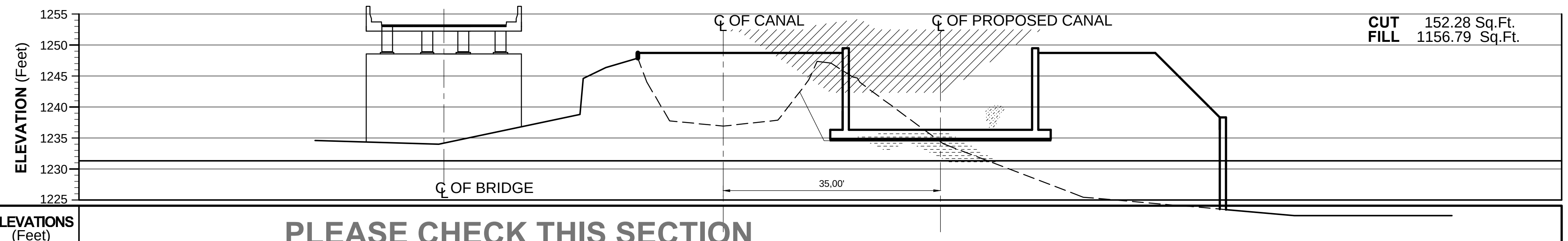
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

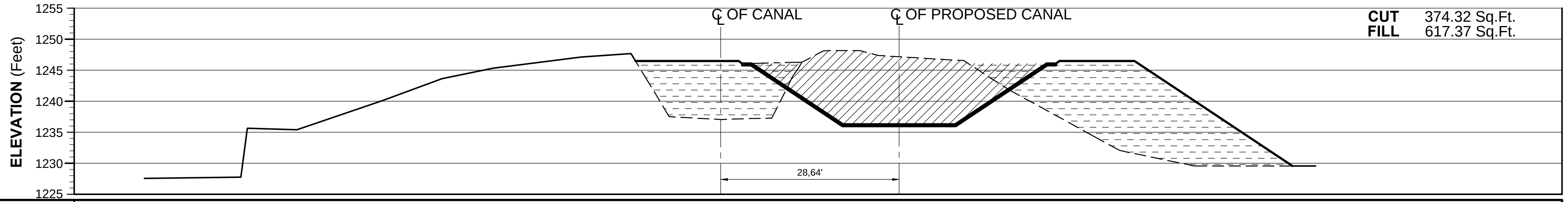
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/03	0



PLEASE CHECK THIS SECTION

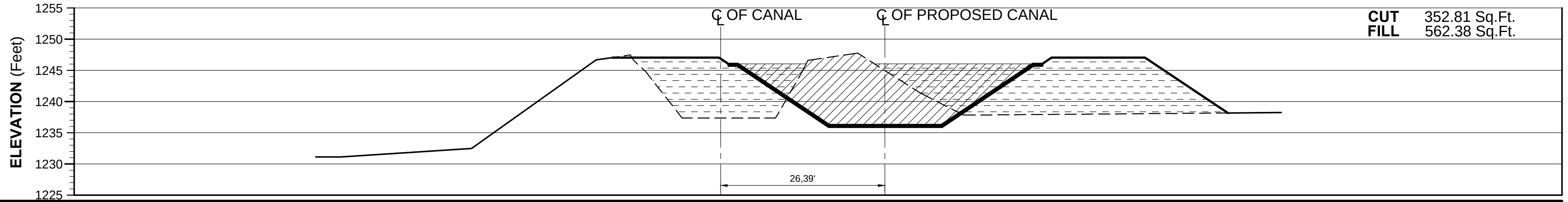
		Distance (Feet)	Elevation (Feet)
WORK DONE			
DESIGNED SECTION		11.05	1242.12
		3.65	1247.06
		0.00	
		11.35	1247.06
		12.85	1244.43
		13.85	1244.43
		26.00	1236.33
		35.00	1236.33
		44.00	1236.33
		56.15	1244.43
		57.15	1244.43
		58.65	1247.06
		73.65	1247.06
		99.91	1229.55
NSL		92.50	1227.55
		77.05	1227.75
		75.98	1235.64
		68.02	1235.38
		54.36	1240.05
		44.71	1243.63
		36.54	1245.30
		22.39	1247.11
		14.41	1247.65
		12.20	1244.04
		8.27	1237.50
		0.00	1237.05
		8.21	1237.27
		11.61	1244.08
		12.46	1245.32
		13.05	1246.28
		16.52	1248.12
		22.33	1248.16
		25.36	1247.35
		39.00	1246.53
		46.34	1241.80
		59.80	1234.40
		64.02	1232.06
		76.00	1229.57
		90.50	1229.55

CROSS SECTION AT RD 2+355



		Distance (Feet)	Elevation (Feet)
WORK DONE			
DESIGNED SECTION		0.00	
		4.95	1246.09
		3.45	1246.09
		19.64	1236.29
		37.64	1236.29
		52.33	1246.09
		53.83	1246.09
NSL		54.36	1240.05
		44.71	1243.63
		36.54	1245.30
		22.39	1247.11
		14.41	1247.65
		12.20	1244.04
		8.27	1237.50
		0.00	1237.05
		8.21	1237.27
		11.61	1244.08
		12.46	1245.32
		13.05	1246.28
		16.52	1248.12
		22.33	1248.16
		25.36	1247.35
		39.00	1246.53
		46.34	1241.80
		59.80	1234.40
		64.02	1232.06
		76.00	1229.57
		90.50	1229.55

CROSS SECTION AT RD 2+500



		Distance (Feet)	Elevation (Feet)
WORK DONE			
DESIGNED SECTION		0.00	
		1.26	1246.05
		2.76	1246.05
		17.45	1236.25
		26.45	1236.25
		35.45	1236.25
		50.14	1246.05
		51.64	1246.05
NSL		65.00	1231.14
		61.00	1231.15
		40.00	1232.48
		20.00	1246.70
		14.50	1247.47
		14.00	1246.45
		12.00	1244.77
		0.00	
		13.00	1244.66
		14.00	1246.61
		22.00	1247.75
		32.00	1241.41
		39.00	1237.83
		90.00	1238.24

CROSS SECTION AT RD 2+650

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 3 OF 34

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

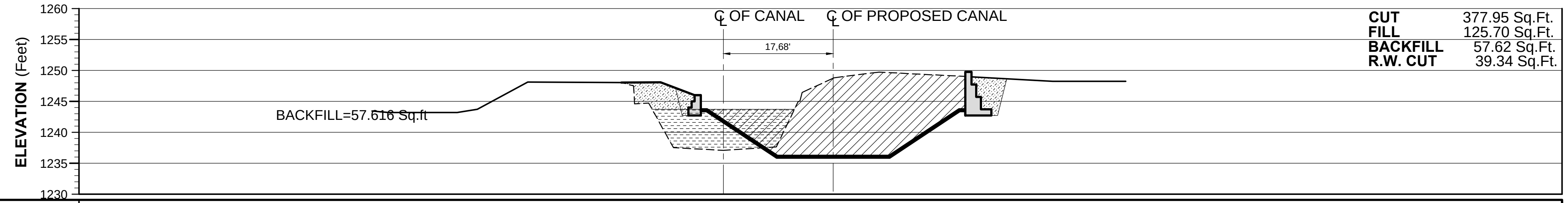
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

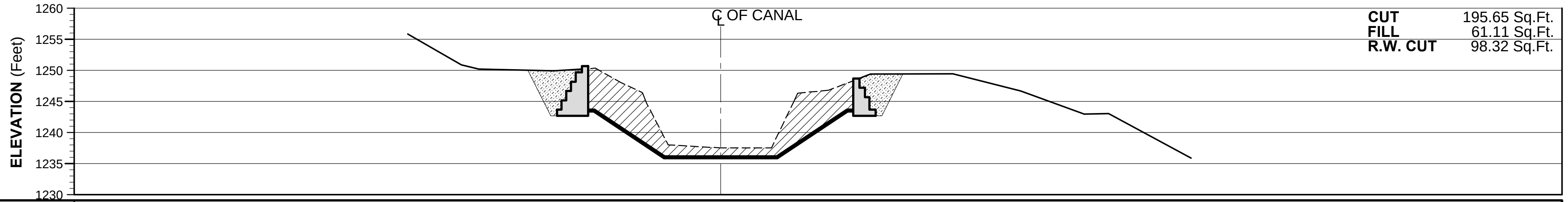
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/04	0



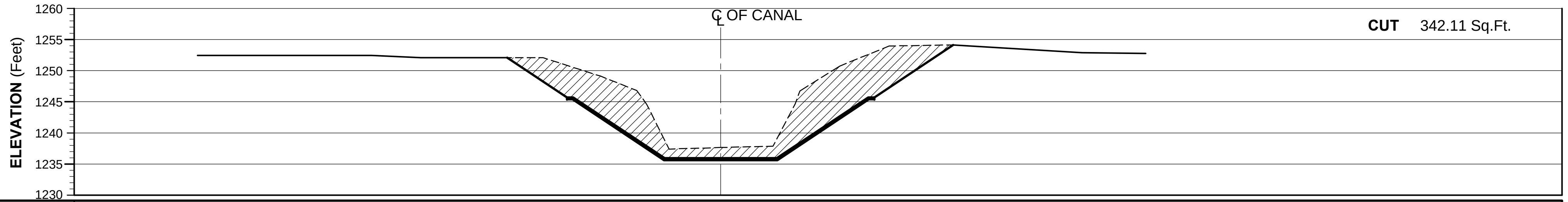
WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1243.75, 1243.75, 1236.22, 1236.22, 1236.22, 1243.75, 1243.75
DESIGNED SECTION	DISTANCE (Feet)	3.62, 2.62, 0.00, 8.68, 17.68, 26.68, 37.98, 38.98
NSL	ELEVATIONS (Feet)	1243.20, 1243.74, 1248.12, 1248.07, 1247.52, 1244.60, 1244.75, 1237.53, 1237.10, 1237.66, 1244.97, 1245.04, 1246.46, 1248.83, 1249.74, 1248.26
NSL	DISTANCE (Feet)	42.85, 39.62, 31.51, 16.42, 14.45, 14.30, 12.04, 8.03, 0.00, 8.54, 12.04, 12.33, 12.71, 17.83, 25.07, 53.05

CROSS SECTION AT RD 2+750



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1243.69, 1243.69, 1236.16, 1236.16, 1236.16, 1243.69, 1243.69
DESIGNED SECTION	DISTANCE (Feet)	20.80, 20.30, 9.00, 0.00, 9.00, 20.30, 20.80
NSL	ELEVATIONS (Feet)	1255.82, 1250.87, 1250.19, 1249.91, 1250.33, 1248.03, 1246.40, 1244.76, 1238.00, 1237.52, 1237.53, 1244.83, 1246.32, 1246.78, 1249.38, 1249.43, 1246.67, 1242.97, 1243.02, 1235.86
NSL	DISTANCE (Feet)	50.25, 41.64, 38.82, 26.79, 20.10, 16.02, 12.54, 11.93, 8.43, 0.00, 8.15, 11.67, 12.36, 17.31, 24.04, 37.29, 48.17, 58.35, 62.28, 75.50

CROSS SECTION AT RD 3+000



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1245.79, 1245.79, 1236.00, 1236.00, 1245.79, 1245.79
DESIGNED SECTION	DISTANCE (Feet)	24.69, 23.69, 9.00, 0.00, 9.00, 23.69, 24.69
NSL	ELEVATIONS (Feet)	1252.51, 1252.53, 1252.17, 1252.17, 1252.17, 1249.20, 1246.88, 1244.66, 1237.47, 1237.72, 1237.94, 1244.75, 1246.81, 1250.82, 1254.04, 1254.23, 1252.97, 1252.84
NSL	DISTANCE (Feet)	84.00, 56.01, 48.16, 37.42, 28.49, 19.28, 13.46, 11.86, 8.28, 0.00, 8.40, 11.97, 12.72, 19.12, 27.04, 37.57, 58.02, 68.24

CROSS SECTION AT RD 3+260

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 4 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

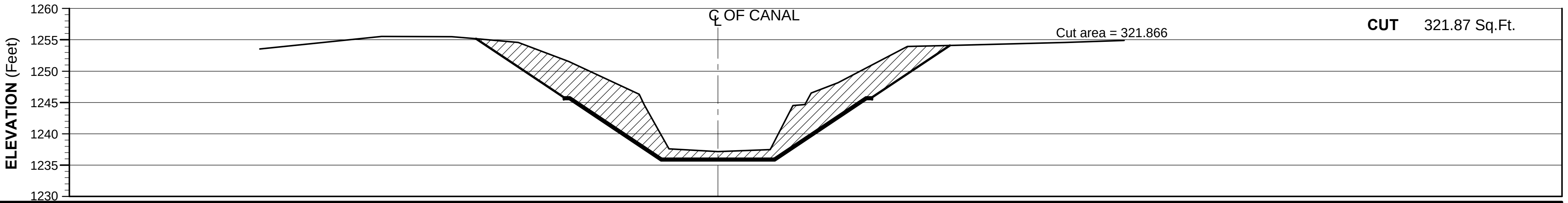
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

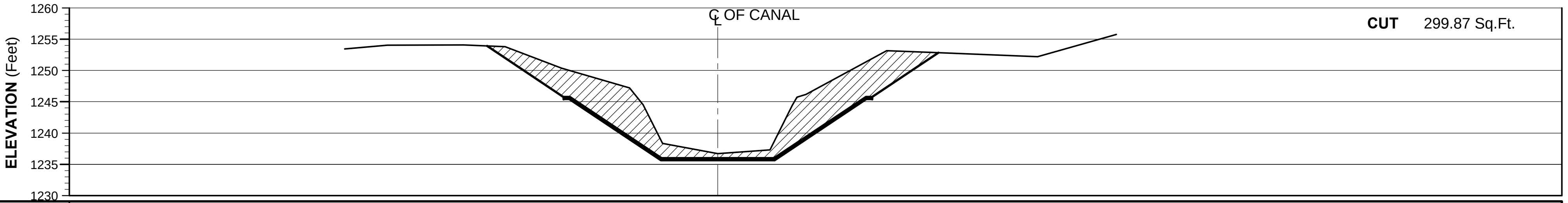
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/05	0



CUT 321.87 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)																	
WORK DONE	DISTANCE (Feet)																	
DESIGNED SECTION	ELEVATIONS (Feet)	1245.82	1245.82	1236.03	1236.03	1245.82	1245.82											
DESIGNED SECTION	DISTANCE (Feet)	24.69	23.69	9.00	0.00	9.00	23.69	24.69										
NSL	ELEVATIONS (Feet)	1253.56	1255.52	1255.50	1254.60	1251.55	1246.30	1244.63	1237.58	1237.13	1237.45	1244.51	1244.68	1246.52	1248.14	1253.94	1254.59	1254.91
NSL	DISTANCE (Feet)	73.30	53.84	42.61	31.97	23.89	12.58	11.81	7.84	0.00	8.38	12.00	13.94	14.91	19.20	30.31	55.58	65.00

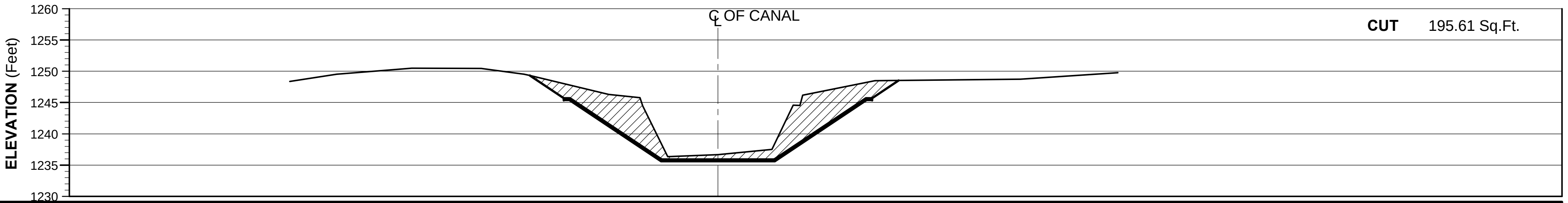
CROSS SECTION AT RD 3+500



CUT 299.87 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)																
WORK DONE	DISTANCE (Feet)																
DESIGNED SECTION	ELEVATIONS (Feet)	1245.76	1245.76	1235.97	1235.97	1245.76	1245.76										
DESIGNED SECTION	DISTANCE (Feet)	24.69	23.69	9.00	0.00	9.00	23.69	24.69									
NSL	ELEVATIONS (Feet)	1253.44	1254.05	1254.07	1253.79	1250.37	1247.21	1244.55	1238.33	1236.69	1237.29	1244.43	1245.75	1246.16	1253.17	1252.20	1255.76
NSL	DISTANCE (Feet)	59.74	52.90	40.69	34.05	25.00	14.11	11.96	8.87	0.00	8.35	11.92	12.65	14.12	27.01	51.18	63.79

CROSS SECTION AT RD 3+750



CUT 195.61 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)																	
WORK DONE	DISTANCE (Feet)																	
DESIGNED SECTION	ELEVATIONS (Feet)	1245.70	1245.70	1235.91	1235.91	1245.70	1245.70											
DESIGNED SECTION	DISTANCE (Feet)	24.69	23.69	9.00	0.00	9.00	23.69	24.69										
NSL	ELEVATIONS (Feet)	1248.37	1249.52	1250.51	1250.46	1249.54	1246.29	1245.77	1244.45	1236.36	1236.68	1237.50	1244.57	1244.54	1246.16	1248.48	1248.74	1249.78
NSL	DISTANCE (Feet)	68.51	61.00	48.98	37.88	31.04	17.47	12.46	12.05	8.03	0.00	8.63	12.05	13.13	13.58	25.13	48.42	64.00

CROSS SECTION AT RD 4+000

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

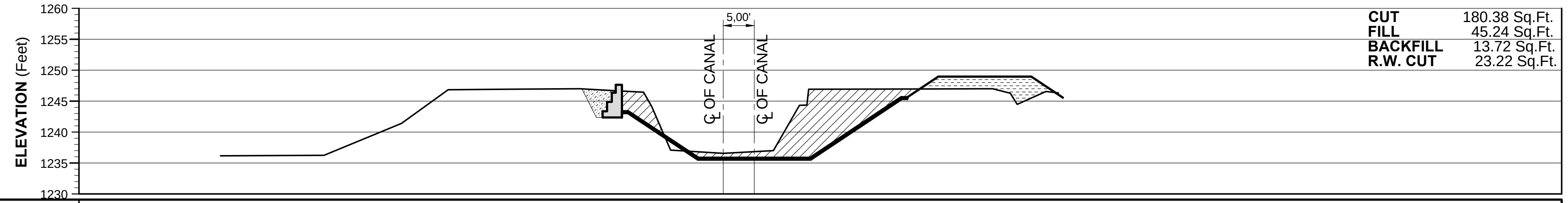
TENDER DRAWING

SHEET 5 OF 34

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	**REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13** BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090 **DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS**

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/06	0

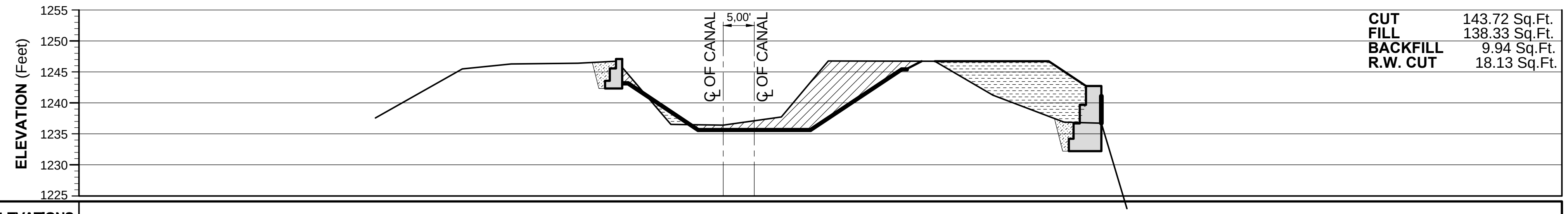


WORK DONE
- ELEVATIONS (Feet):
- DISTANCE (Feet):

DESIGNED SECTION
- ELEVATIONS (Feet): 1243.38, 1243.38, 1235.85, 1235.85, 1245.65, 1245.65
- DISTANCE (Feet): 16.30, 15.30, 4.00, 0.00, 14.00, 28.69, 29.69

NSL
- ELEVATIONS (Feet): 1236.19, 1236.27, 1241.39, 1246.84, 1246.93, 1246.99, 1246.45, 1244.14, 1237.11, 1236.57, 1237.02, 1244.31, 1244.37, 1246.91, 1247.00, 1246.30, 1244.49, 1246.57, 1246.31
- DISTANCE (Feet): 81.00, 64.30, 51.82, 44.32, 35.02, 23.13, 12.84, 11.50, 8.47, 0.00, 8.08, 12.27, 12.50, 13.75, 43.42, 46.25, 47.37, 52.00, 54.00

CROSS SECTION AT RD 4+250

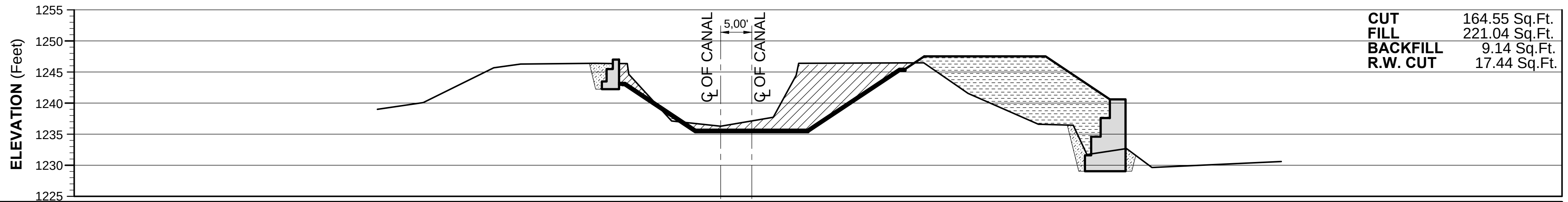


WORK DONE
- ELEVATIONS (Feet):
- DISTANCE (Feet):

DESIGNED SECTION
- ELEVATIONS (Feet): 1243.32, 1243.32, 1235.79, 1235.79, 1245.59, 1245.59
- DISTANCE (Feet): 16.30, 15.30, 4.00, 14.00, 28.69, 29.69

NSL
- ELEVATIONS (Feet): 1237.59, 1245.50, 1246.29, 1246.41, 1246.72, 1236.53, 1236.43, 1237.74, 1246.78, 1246.71, 1241.24, 1236.91, 1236.73, 1222.93
- DISTANCE (Feet): 56.06, 42.03, 34.18, 23.40, 17.11, 8.46, 0.00, 9.33, 16.91, 34.06, 43.43, 54.90, 60.90, 65.00

CROSS SECTION AT RD 4+500



WORK DONE
- ELEVATIONS (Feet):
- DISTANCE (Feet):

DESIGNED SECTION
- ELEVATIONS (Feet): 1243.23, 1243.23, 1235.70, 1235.70, 1245.50, 1245.50
- DISTANCE (Feet): 16.31, 15.31, 4.02, 13.98, 28.68, 29.68

NSL
- ELEVATIONS (Feet): 1239.01, 1240.07, 1245.67, 1246.26, 1246.39, 1246.33, 1244.61, 1237.12, 1236.28, 1237.71, 1244.46, 1246.38, 1246.47, 1241.56, 1236.58, 1236.43, 1231.70, 1232.66, 1229.62, 1230.58
- DISTANCE (Feet): 55.10, 47.77, 36.44, 32.13, 20.13, 15.00, 14.75, 7.88, 0.00, 8.44, 12.12, 12.53, 32.62, 39.74, 51.02, 56.59, 58.80, 65.17, 69.25, 90.00

CROSS SECTION AT RD 4+750

LEGEND
- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 6 OF 34

CLIENT: IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

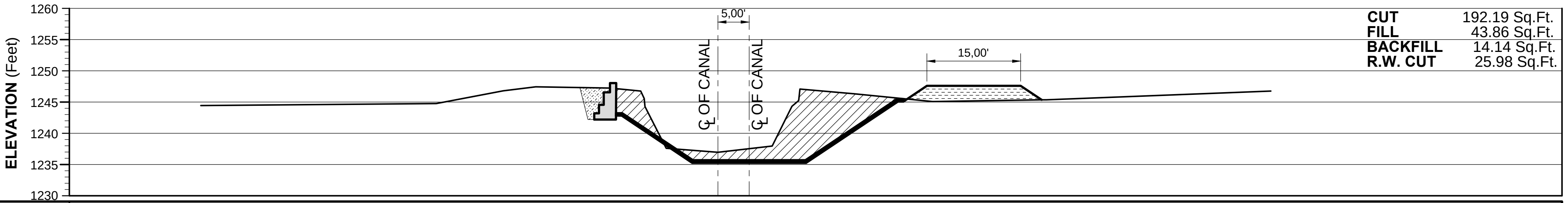
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/07	0

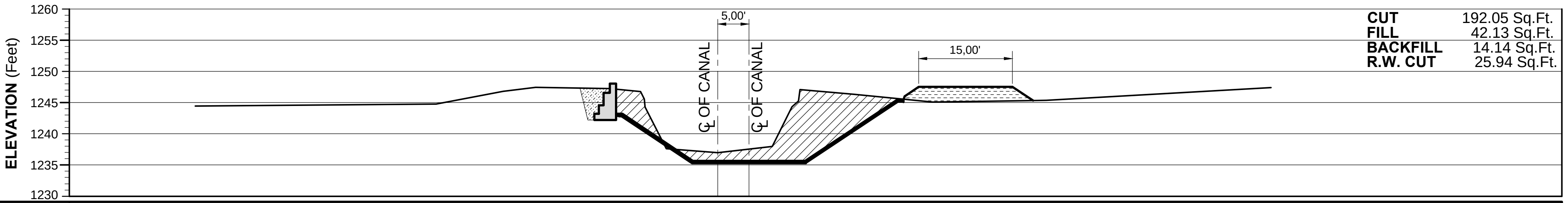


CUT	192.19 Sq.Ft.
FILL	43.86 Sq.Ft.
BACKFILL	14.14 Sq.Ft.
R.W. CUT	25.98 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)																		
WORK DONE	DISTANCE (Feet)																		
DESIGNED SECTION	ELEVATIONS (Feet)	1243.20	1243.20	1235.67	1235.67	1245.47	1245.47												
DESIGNED SECTION	DISTANCE (Feet)	16.30	15.30	4.00	14.00	28.69	29.69												
NSL	ELEVATIONS (Feet)	1244.45	1244.75	1246.82	1247.45	1247.23	1246.76	1245.58	1244.28	1237.60	1236.97	1237.96	1244.34	1245.23	1247.10	1246.33	1245.08	1245.36	1247.40
NSL	DISTANCE (Feet)	83.64	45.08	34.37	29.16	17.24	12.37	11.78	11.67	8.27	0.00	8.70	11.86	12.92	13.13	21.84	34.38	52.57	88.51

R.W CUT=25.983 Sq.ft

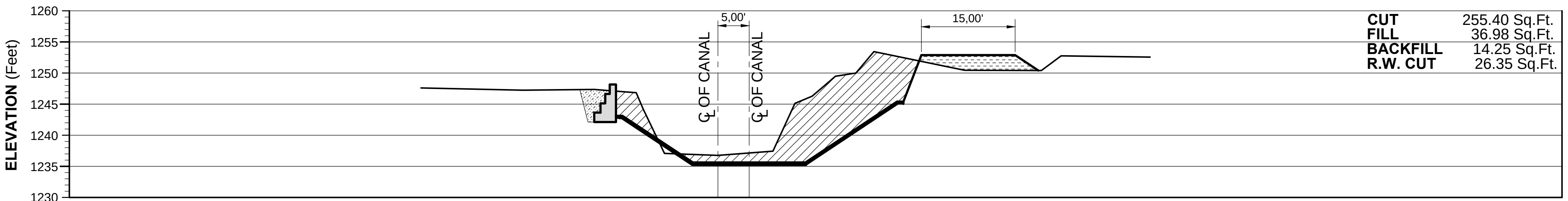
CROSS SECTION AT RD 5+000



CUT	192.05 Sq.Ft.
FILL	42.13 Sq.Ft.
BACKFILL	14.14 Sq.Ft.
R.W. CUT	25.94 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)																		
WORK DONE	DISTANCE (Feet)																		
DESIGNED SECTION	ELEVATIONS (Feet)	1243.20	1243.20	1235.67	1235.67	1245.47	1245.47												
DESIGNED SECTION	DISTANCE (Feet)	16.30	15.30	4.00	14.00	28.69	29.69												
NSL	ELEVATIONS (Feet)	1244.45	1244.75	1246.82	1247.45	1247.23	1246.76	1245.58	1244.28	1237.60	1236.97	1237.96	1244.34	1245.23	1247.10	1246.33	1245.08	1245.36	1247.40
NSL	DISTANCE (Feet)	83.64	45.08	34.37	29.16	17.24	12.37	11.78	11.67	8.27	0.00	8.70	11.86	12.92	13.13	21.84	34.38	52.57	88.51

CROSS SECTION AT RD 5+050



CUT	255.40 Sq.Ft.
FILL	36.98 Sq.Ft.
BACKFILL	14.25 Sq.Ft.
R.W. CUT	26.35 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)																	
WORK DONE	DISTANCE (Feet)																	
DESIGNED SECTION	ELEVATIONS (Feet)	1243.13	1243.13	1235.60	1235.60	1245.40	1245.40											
DESIGNED SECTION	DISTANCE (Feet)	16.30	15.30	4.00	14.00	28.69	29.69											
NSL	ELEVATIONS (Feet)	1247.57	1247.21	1247.33	1246.85	1244.29	1237.07	1236.76	1237.44	1245.10	1246.27	1249.45	1249.99	1253.42	1250.42	1250.38	1252.76	1252.56
NSL	DISTANCE (Feet)	47.53	31.24	19.78	13.09	11.99	8.54	0.00	8.82	12.33	15.09	18.81	22.09	24.97	39.50	51.78	54.94	69.15

CROSS SECTION AT RD 5+250

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

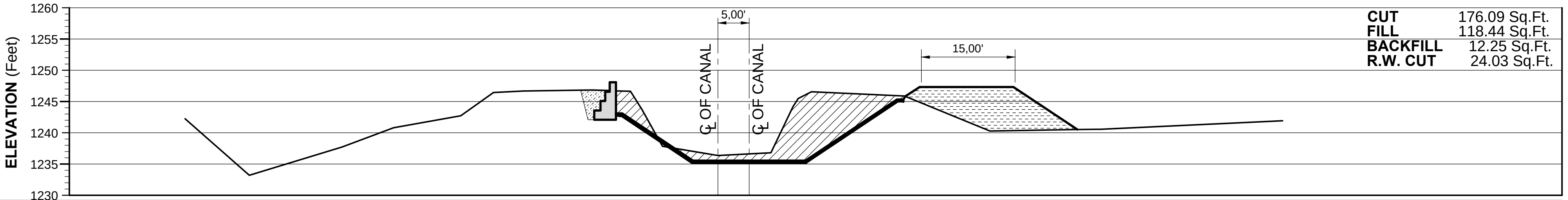
SHEET 7 OF 34

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	
CHECKED	
RECOMMENDED	
APPROVED	

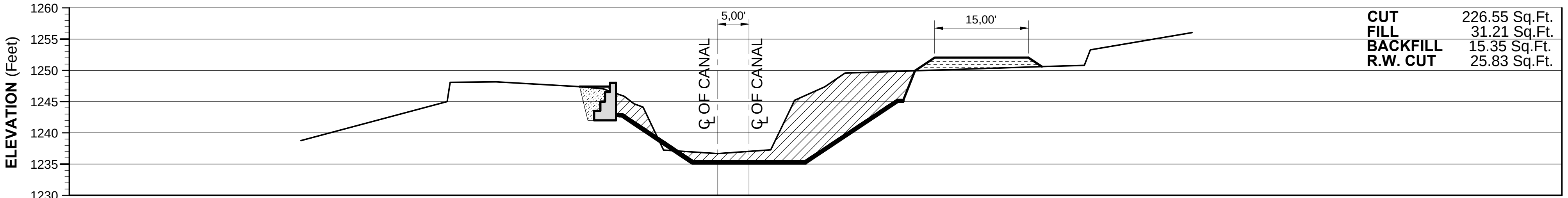
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	**RWCS-13/TD/WCP/RAC/08**	0



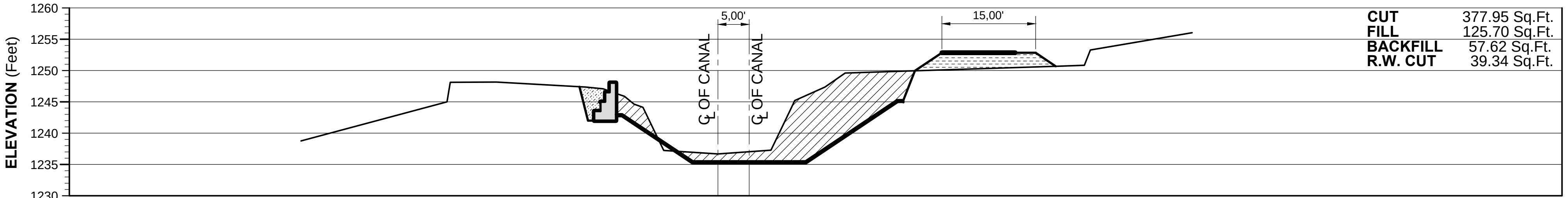
WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	R.w CUT=24.027 Sq.ft
DESIGNED SECTION	ELEVATIONS (Feet)	1243.07, 1243.07, 1235.54, 1235.54, 1245.34, 1245.34
	DISTANCE (Feet)	16.30, 15.30, 4.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1242.23, 1233.22, 1237.71, 1240.80, 1242.71, 1246.43, 1246.68, 1246.83, 1246.64, 1243.71, 1237.85, 1236.36, 1236.82, 1244.18, 1245.48, 1246.56, 1245.89, 1240.27, 1240.57, 1241.94
	DISTANCE (Feet)	85.27, 75.00, 60.15, 51.93, 41.14, 35.92, 31.13, 20.20, 14.01, 12.16, 8.87, 0.00, 8.49, 12.00, 12.85, 14.98, 29.86, 43.52, 61.27, 90.35

CROSS SECTION AT RD 5+500



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1243.01, 1243.01, 1235.48, 1235.48, 1245.28, 1245.28
	DISTANCE (Feet)	16.30, 15.30, 4.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1242.23, 1238.77, 1245.00, 1248.09, 1248.16, 1247.33, 1247.05, 1245.86, 1244.63, 1244.11, 1237.24, 1236.67, 1237.28, 1244.08, 1245.20, 1247.35, 1249.57, 1250.81, 1253.26, 1256.04, 1255.85
	DISTANCE (Feet)	85.27, 66.71, 43.34, 42.85, 35.47, 21.16, 18.35, 14.96, 13.42, 11.99, 8.69, 0.00, 8.48, 11.76, 12.28, 17.12, 20.35, 58.64, 59.62, 75.90, 86.00

CROSS SECTION AT RD 5+620



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1243.01, 1243.01, 1235.48, 1235.48, 1245.28, 1245.28
	DISTANCE (Feet)	16.30, 15.30, 4.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1242.23, 1238.77, 1245.00, 1248.09, 1248.16, 1247.33, 1247.05, 1245.86, 1244.63, 1244.11, 1237.24, 1236.67, 1237.28, 1244.08, 1245.20, 1247.35, 1249.57, 1250.81, 1253.26, 1256.04, 1255.85
	DISTANCE (Feet)	85.27, 66.71, 43.34, 42.85, 35.47, 21.16, 18.35, 14.96, 13.42, 11.99, 8.69, 0.00, 8.48, 11.76, 12.28, 17.12, 20.35, 58.64, 59.62, 75.90, 86.00

CROSS SECTION AT RD 5+800

LEGEND

EXISTING CROSS SECTION/NSL

DESIGNED CROSS SECTION

FILL

CUT

BACKFILL

TENDER DRAWING

SHEET 8 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

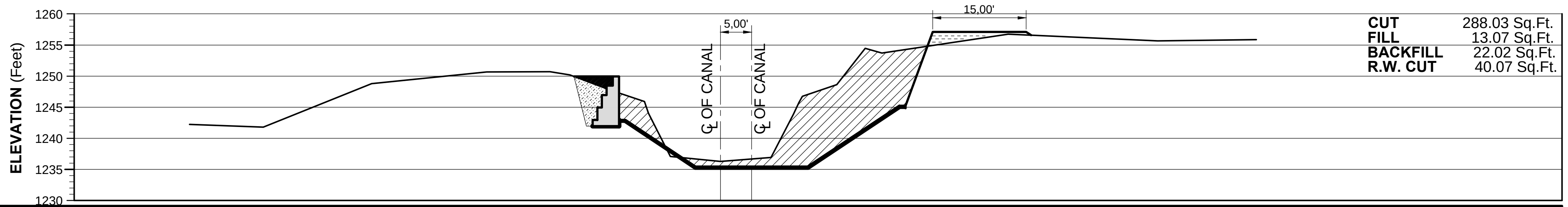
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	
						CHECKED	
						RECOMMENDED	
						APPROVED	

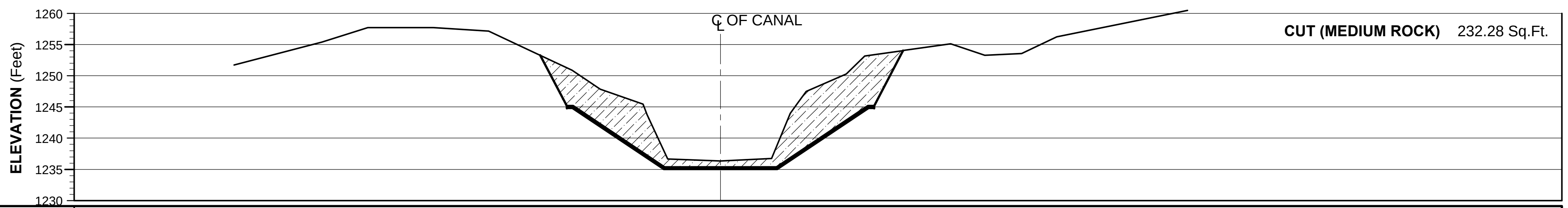
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/09	0



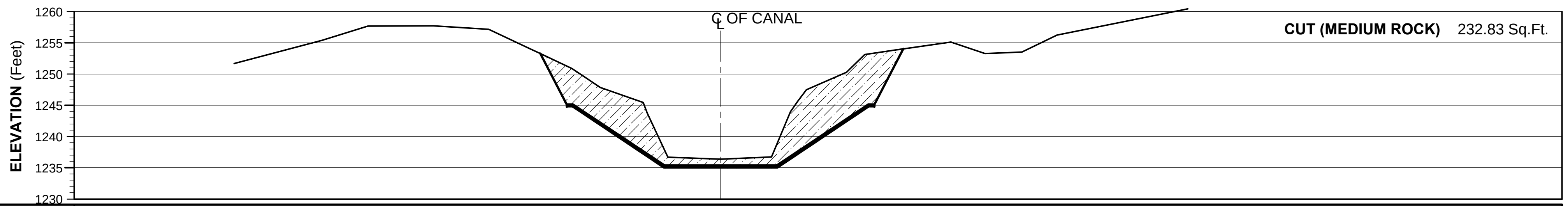
WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1242.95, 1242.95, 1235.42, 1235.42, 1245.22, 1245.22
	DISTANCE (Feet)	16.30, 15.30, 4.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1241.77, 1248.79, 1250.65, 1250.71, 1250.18, 1247.77, 1245.90, 1244.01, 1237.07, 1236.27, 1236.91, 1243.88, 1245.74, 1246.76, 1248.64, 1254.45, 1253.70, 1256.73, 1255.65
	DISTANCE (Feet)	73.43, 56.00, 37.52, 27.38, 24.18, 17.82, 12.22, 11.57, 8.07, 0.00, 8.10, 11.71, 12.57, 13.14, 18.66, 23.23, 25.88, 46.19, 70.17

CROSS SECTION AT RD 6+000



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1245.16, 1245.16, 1235.36, 1235.36, 1245.16, 1245.16
	DISTANCE (Feet)	24.69, 23.69, 9.00, 0.00, 9.00, 23.69, 24.69
NSL	ELEVATIONS (Feet)	1251.71, 1255.41, 1257.71, 1257.73, 1257.17, 1254.02, 1250.88, 1247.86, 1245.45, 1243.79, 1236.68, 1236.36, 1236.74, 1243.97, 1245.71, 1247.51, 1250.30, 1253.15, 1255.14, 1253.30, 1253.55, 1256.26, 1260.47
	DISTANCE (Feet)	78.11, 64.00, 56.63, 46.12, 37.22, 30.50, 23.85, 19.32, 12.43, 11.80, 8.47, 0.00, 8.19, 11.21, 12.43, 13.77, 20.21, 23.15, 36.96, 42.45, 48.36, 54.00, 75.00

CROSS SECTION AT RD 6+200



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1245.16, 1245.16, 1235.36, 1235.36, 1245.16, 1245.16
	DISTANCE (Feet)	24.69, 23.69, 9.00, 0.00, 9.00, 23.69, 24.69
NSL	ELEVATIONS (Feet)	1251.71, 1255.41, 1257.71, 1257.73, 1257.17, 1254.02, 1250.88, 1247.86, 1245.45, 1243.79, 1236.68, 1236.36, 1236.74, 1243.97, 1245.71, 1247.51, 1250.30, 1253.15, 1255.14, 1253.30, 1253.55, 1256.26, 1260.47
	DISTANCE (Feet)	78.11, 64.00, 56.63, 46.12, 37.22, 30.50, 23.85, 19.32, 12.43, 11.80, 8.47, 0.00, 8.19, 11.21, 12.43, 13.77, 20.21, 23.15, 36.96, 42.45, 48.36, 54.00, 75.00

CROSS SECTION AT RD 6+300

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 9 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

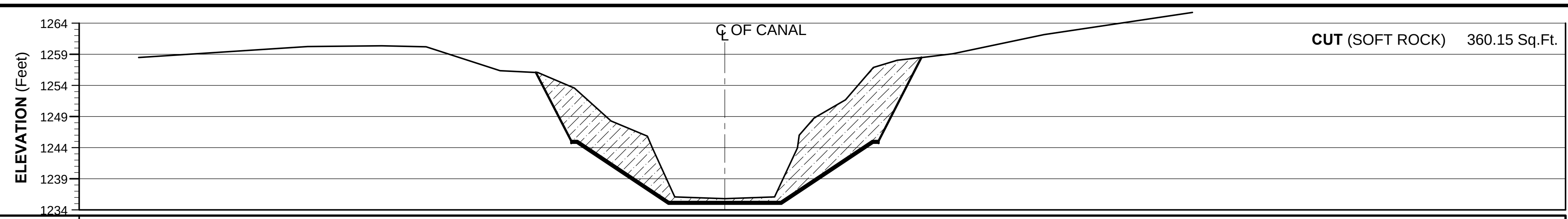
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/10	0



WORK DONE

	ELEVATIONS (Feet)	DISTANCE (Feet)

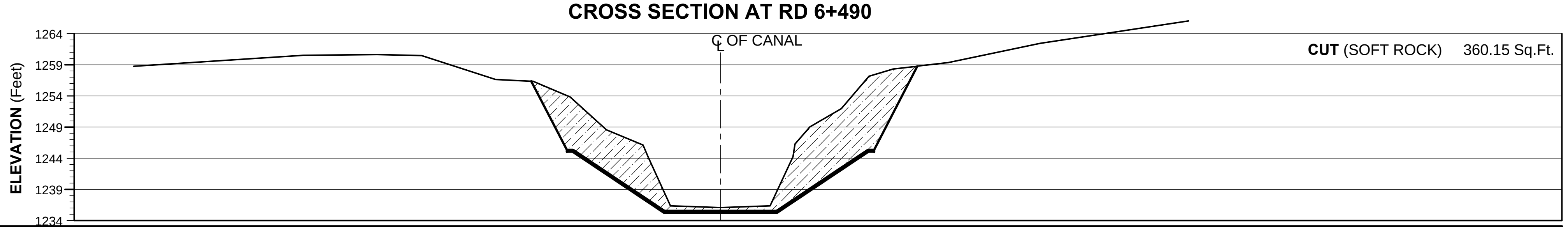
DESIGNED SECTION

DISTANCE (Feet)	ELEVATIONS (Feet)
24.69	1245.10
23.69	1245.10
9.00	1235.30
0.00	
9.00	1235.30
23.69	1245.10
24.69	1245.10

NSL

DISTANCE (Feet)	ELEVATIONS (Feet)
94.21	1258.48
67.04	1260.26
55.13	1260.37
48.01	1260.22
36.12	1256.37
30.10	1256.08
24.17	1253.55
18.30	1248.28
12.45	1245.85
11.65	1243.96
8.04	1236.09
0.00	1235.82
7.97	1236.11
11.65	1243.97
11.94	1246.03
14.35	1248.76
19.39	1251.70
23.85	1256.89
27.71	1258.04
36.60	1259.07
51.31	1262.18
75.15	1265.74

CROSS SECTION AT RD 6+490



WORK DONE

	ELEVATIONS (Feet)	DISTANCE (Feet)

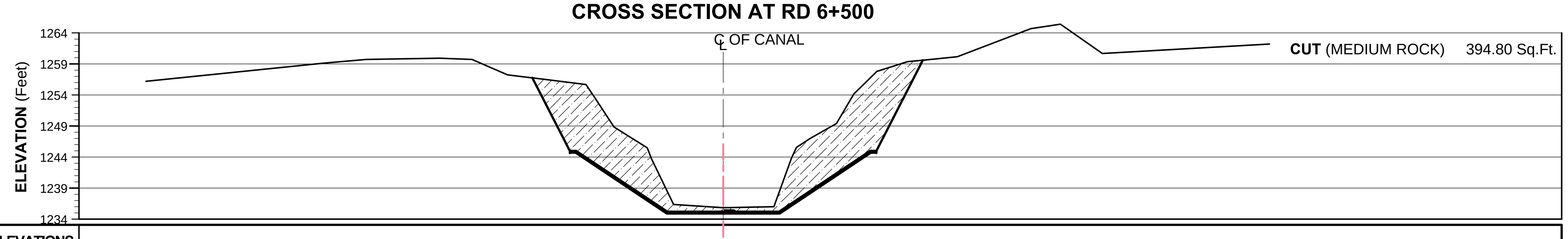
DESIGNED SECTION

DISTANCE (Feet)	ELEVATIONS (Feet)
24.69	1245.10
23.69	1245.10
9.00	1235.30
0.00	
9.00	1235.30
23.69	1245.10
24.69	1245.10

NSL

DISTANCE (Feet)	ELEVATIONS (Feet)
94.21	1258.48
67.04	1260.26
55.13	1260.37
48.01	1260.22
36.12	1256.37
30.10	1256.08
24.17	1253.55
18.30	1248.28
12.45	1245.85
11.65	1243.96
8.04	1236.09
0.00	1235.82
7.97	1236.11
11.65	1243.97
11.94	1246.03
14.35	1248.76
19.39	1251.70
23.85	1256.89
27.71	1258.04
36.60	1259.07
51.31	1262.18
75.15	1265.74

CROSS SECTION AT RD 6+500



WORK DONE

	ELEVATIONS (Feet)	DISTANCE (Feet)

DESIGNED SECTION

DISTANCE (Feet)	ELEVATIONS (Feet)
24.69	1245.03
23.69	1245.03
9.00	1235.23
0.00	
9.00	1235.23
23.69	1245.03
24.69	1245.03

NSL

DISTANCE (Feet)	ELEVATIONS (Feet)
93.00	1256.19
64.40	1259.11
57.52	1259.74
45.66	1259.93
40.46	1259.74
34.75	1257.25
22.12	1255.67
20.63	1253.50
17.60	1248.86
12.23	1245.49
11.56	1243.71
7.99	1236.39
0.00	1235.87
8.16	1236.01
11.00	1243.86
11.81	1245.57
14.11	1247.03
18.25	1249.40
21.06	1254.15
24.78	1257.81
29.69	1259.37
37.72	1260.15
49.56	1264.68
54.31	1265.40
61.07	1260.68
88.00	1262.22

CROSS SECTION AT RD 6+705

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 10 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELLING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

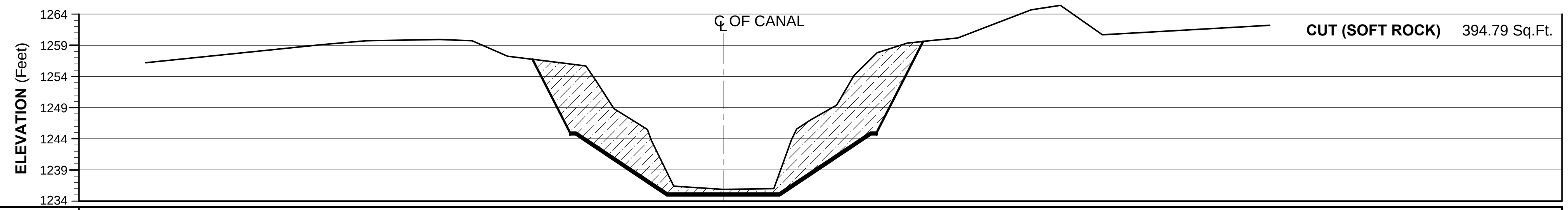
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	
CHECKED	
RECOMMENDED	
APPROVED	

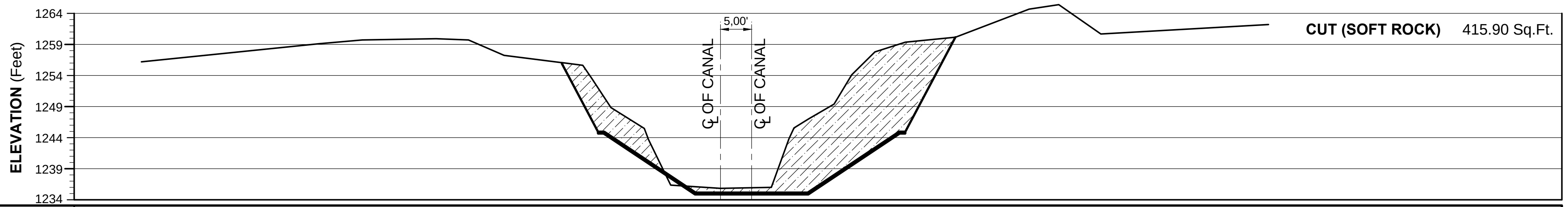
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/11	0



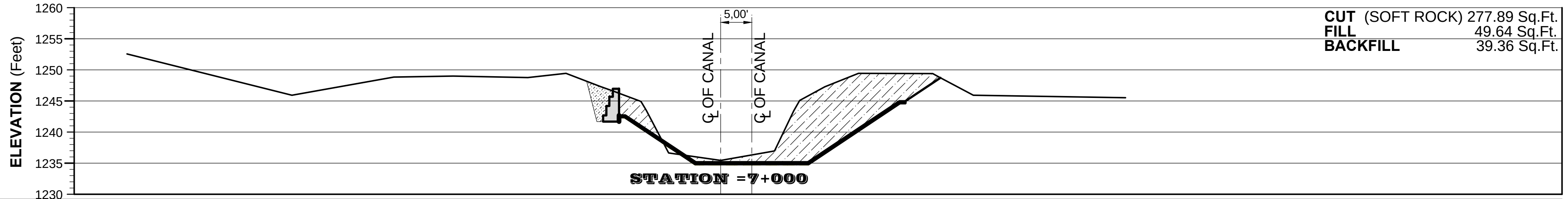
WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1245.03, 1245.03, 1235.23, 1235.23, 1245.03, 1245.03
DESIGNED SECTION	DISTANCE (Feet)	24.69, 23.69, 9.00, 9.00, 23.69, 24.69
NSL	ELEVATIONS (Feet)	1256.19, 1259.11, 1259.74, 1259.93, 1259.74, 1257.25, 1255.67, 1253.50, 1248.86, 1245.49, 1243.71, 1236.39, 1235.87, 1236.01, 1243.86, 1245.57, 1247.03, 1249.40, 1254.15, 1257.81, 1259.37, 1260.15, 1264.68, 1265.40, 1260.68, 1262.22
NSL	DISTANCE (Feet)	93.00, 64.40, 57.52, 45.66, 40.46, 34.75, 22.12, 20.63, 17.60, 12.23, 11.56, 7.99, 0.00, 8.16, 11.00, 11.81, 14.11, 18.25, 21.06, 24.78, 29.69, 37.72, 49.56, 54.31, 61.07, 88.00

CROSS SECTION AT RD 6+750



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1244.98, 1244.98, 1235.19, 1235.19, 1244.98, 1244.98
DESIGNED SECTION	DISTANCE (Feet)	19.69, 18.69, 4.00, 0.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1256.19, 1259.11, 1259.74, 1259.93, 1259.74, 1257.25, 1255.67, 1253.50, 1248.86, 1245.49, 1243.71, 1236.39, 1235.87, 1236.01, 1243.86, 1245.57, 1247.03, 1249.40, 1254.15, 1257.81, 1259.37, 1260.15, 1264.68, 1265.40, 1260.68, 1262.22
NSL	DISTANCE (Feet)	93.00, 64.40, 57.52, 45.66, 40.46, 34.75, 22.12, 20.63, 17.60, 12.23, 11.56, 7.99, 0.00, 8.16, 11.00, 11.81, 14.11, 18.25, 21.06, 24.78, 29.69, 37.72, 49.56, 54.31, 61.07, 88.00

CROSS SECTION AT RD 6+942



WORK DONE	ELEVATIONS (Feet)	1243.67, 1244.99, 1248.07, 1249.22, 1249.03, 1249.32, 1249.00, 1249.03, 1244.00, 1243.98, 1246.98, 1246.98, 1249.46, 1249.20, 1246.11, 1245.72
WORK DONE	DISTANCE (Feet)	83.25, 74.25, 61.25, 42.48, 31.57, 24.80, 19.50, 18.25, 0.00, 28.22, 29.47, 33.75, 57.22, 63.48, 74.22
DESIGNED SECTION	ELEVATIONS (Feet)	1244.94, 1244.94, 1235.15, 1235.15, 1244.94, 1244.94
DESIGNED SECTION	DISTANCE (Feet)	19.69, 18.69, 4.00, 0.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1252.56, 1245.94, 1248.86, 1249.00, 1248.79, 1249.47, 1247.35, 1244.95, 1243.45, 1236.64, 1235.44, 1236.99, 1243.41, 1245.09, 1247.29, 1249.44, 1249.40, 1245.94, 1245.52
NSL	DISTANCE (Feet)	95.32, 68.81, 52.48, 42.96, 30.95, 24.84, 19.31, 12.77, 11.89, 8.34, 0.00, 8.66, 11.75, 12.70, 16.75, 22.15, 34.04, 40.57, 65.00

CROSS SECTION AT RD 7+000

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 11 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

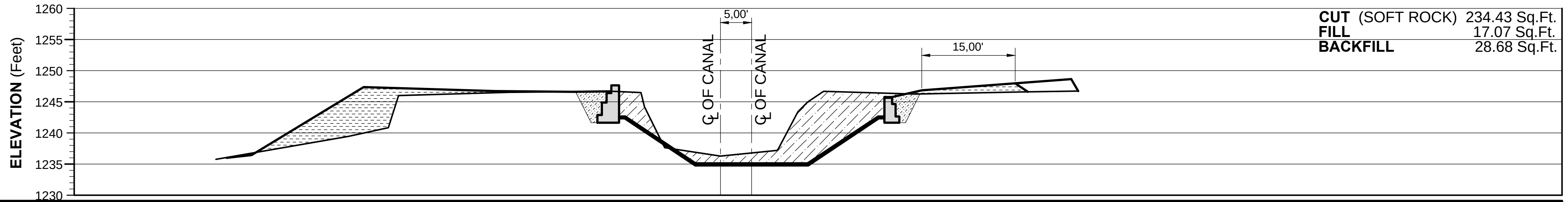
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	
CHECKED	
RECOMMENDED	
APPROVED	

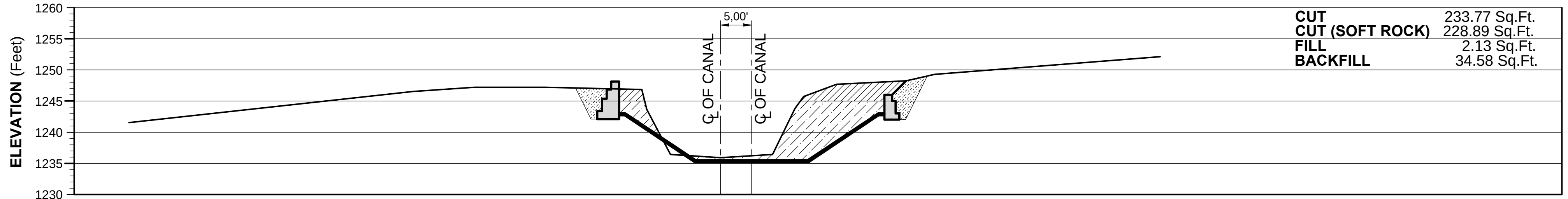
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/12	0



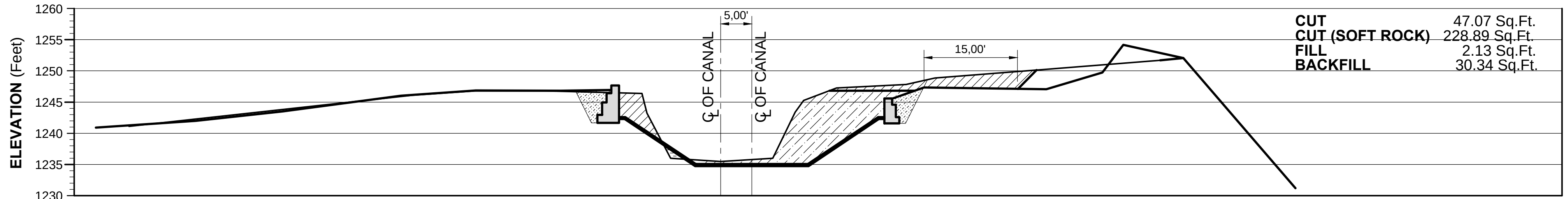
WORK DONE	ELEVATIONS (Feet)	1235.99, 1236.43, 1247.38, 1246.73, 1246.60, 1246.72, 1247.72, 1247.72, 1242.72, 1242.76, 1245.76, 1245.76, 1246.85, 1248.62
	DISTANCE (Feet)	79.30, 75.30, 57.30, 36.30, 23.80, 18.02, 17.55, 16.30, 0.00, 26.30, 27.55, 32.30, 56.30
DESIGNED SECTION	ELEVATIONS (Feet)	1242.64, 1242.64, 1235.11, 1235.11, 1235.11, 1242.64, 1242.64
	DISTANCE (Feet)	16.30, 15.30, 4.00, 0.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1235.76, 1239.46, 1240.83, 1245.99, 1246.52, 1246.70, 1246.47, 1244.22, 1237.64, 1236.27, 1237.21, 1243.41, 1244.97, 1246.69, 1246.25, 1246.74
	DISTANCE (Feet)	81.00, 59.78, 53.32, 51.70, 33.96, 17.51, 12.78, 12.21, 8.98, 0.00, 9.15, 12.44, 13.97, 16.53, 31.20, 57.40

CROSS SECTION AT RD 7+242



WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1242.58, 1242.58, 1235.05, 1235.05, 1235.05, 1242.58, 1242.58
	DISTANCE (Feet)	16.30, 15.30, 4.00, 0.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1246.10, 1246.78, 1246.78, 1246.40, 1243.21, 1235.98, 1235.45, 1236.00, 1243.37, 1245.28, 1247.25, 1247.82, 1248.85, 1251.71
	DISTANCE (Feet)	49.44, 39.52, 28.17, 12.63, 11.82, 8.04, 0.00, 8.37, 11.97, 13.35, 18.63, 29.79, 34.41, 70.58

CROSS SECTION AT RD 7+400



WORK DONE	ELEVATIONS (Feet)	1240.89, 1242.00, 1243.51, 1246.03, 1246.86, 1246.82, 1246.83, 1247.59, 1247.56, 1242.56, 1242.56, 1245.56, 1245.56, 1247.33, 1247.05, 1249.74, 1254.17, 1252.07, 1231.18
	DISTANCE (Feet)	100.30, 84.30, 70.30, 51.30, 39.30, 25.66, 17.80, 17.55, 16.30, 26.30, 27.55, 32.65, 52.30, 61.30, 64.66, 74.30, 92.30
DESIGNED SECTION	ELEVATIONS (Feet)	1242.58, 1242.58, 1235.05, 1235.05, 1235.05, 1242.58, 1242.58
	DISTANCE (Feet)	16.30, 15.30, 4.00, 0.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1246.10, 1246.78, 1246.78, 1246.40, 1243.21, 1235.98, 1235.45, 1236.00, 1243.37, 1245.28, 1247.25, 1247.82, 1248.85
	DISTANCE (Feet)	49.44, 39.52, 28.17, 12.63, 11.82, 8.04, 0.00, 8.37, 11.97, 13.35, 18.63, 29.79, 34.41

CROSS SECTION AT RD 7+500

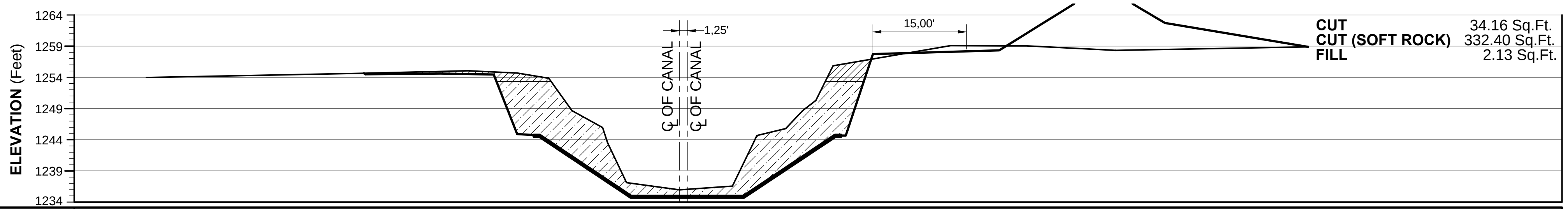
LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

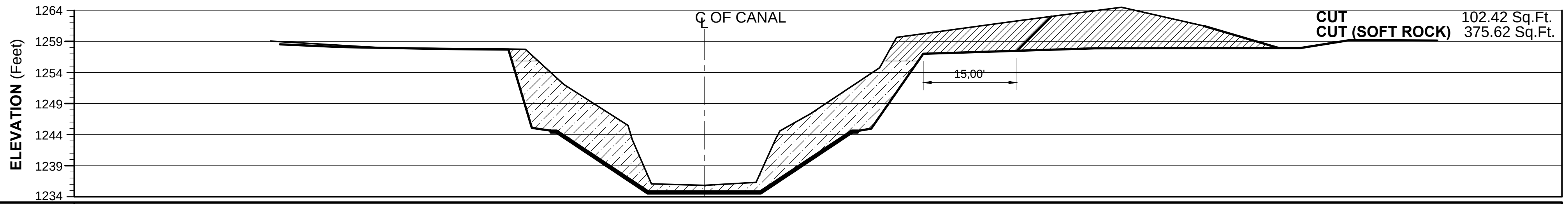
SHEET 12 OF 34

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	REV.	DATE	DESCRIPTION	BY	CKD.	APPR.
DRAWN		CHECKED		RECOMMENDED		APPROVED		
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13 BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090 **DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS**	DATE AUG., 2021	DWG. NO. **RWCS-13/TD/WCP/RAC/13**	REV. 0					



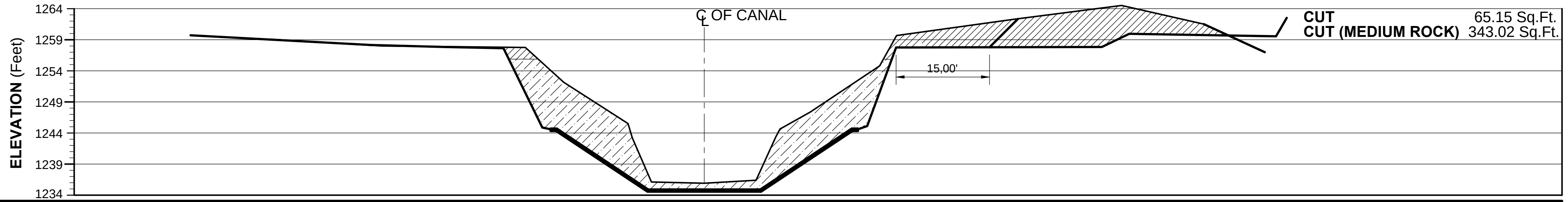
WORK DONE	ELEVATIONS (Feet)	1255.85, 1254.48, 1254.61, 1254.45, 1244.90, 1244.73, 1244.68, 1244.68, 1257.73, 1258.35, 1268.68, 1262.74, 1258.89
	DISTANCE (Feet)	86.00, 50.42, 38.38, 29.85, 26.09, 23.42, 25.92, 26.67, 31.05, 51.33, 67.92, 77.92, 100.92
DESIGNED SECTION	ELEVATIONS (Feet)	1244.77, 1244.77, 1234.99, 1234.99, 1234.99, 1244.77, 1244.77
	DISTANCE (Feet)	23.42, 22.42, 7.75, 1.25, 10.25, 24.92, 25.92
NSL	ELEVATIONS (Feet)	1253.96, 1254.76, 1255.07, 1254.70, 1253.87, 1248.67, 1245.95, 1243.49, 1237.09, 1235.96, 1236.54, 1243.62, 1244.68, 1245.80, 1248.67, 1250.28, 1255.87, 1259.08, 1259.06, 1258.32
	DISTANCE (Feet)	85.58, 45.94, 33.96, 26.09, 21.00, 17.29, 12.35, 11.57, 8.53, 0.00, 8.47, 11.93, 12.38, 17.04, 19.74, 21.86, 24.62, 43.50, 55.66, 70.00

CROSS SECTION AT RD 7+750



WORK DONE	ELEVATIONS (Feet)	1258.57, 1258.11, 1257.81, 1257.71, 1245.12, 1244.63, 1244.63, 1245.02, 1257.03, 1257.93, 1257.94, 1259.23, 1259.16
	DISTANCE (Feet)	68.12, 58.22, 41.27, 31.45, 27.68, 24.67, 24.67, 26.78, 35.17, 62.67, 95.67, 103.67, 117.67
DESIGNED SECTION	ELEVATIONS (Feet)	1242.45, 1242.45, 1234.92, 1234.92, 1234.92, 1242.45, 1242.45
	DISTANCE (Feet)	20.80, 20.30, 9.00, 0.00, 9.00, 20.30, 20.80
NSL	ELEVATIONS (Feet)	1259.06, 1257.99, 1257.87, 1257.76, 1252.14, 1245.52, 1243.25, 1236.12, 1235.90, 1236.38, 1243.35, 1244.65, 1247.36, 1254.79, 1259.66, 1262.29, 1264.50, 1261.52
	DISTANCE (Feet)	69.67, 51.67, 39.57, 28.71, 22.55, 12.24, 11.57, 8.50, 0.00, 8.32, 11.49, 12.17, 16.98, 28.14, 30.87, 49.86, 66.99, 80.18

CROSS SECTION AT RD 8+000



WORK DONE	ELEVATIONS (Feet)	1259.72, 1258.15, 1257.84, 1257.61, 1244.88, 1244.61, 1244.59, 1245.09, 1257.74, 1257.84, 1259.94, 1259.55, 1262.51
	DISTANCE (Feet)	82.48, 53.51, 41.67, 32.25, 26.00, 24.67, 24.67, 26.17, 30.80, 63.82, 68.23, 91.77, 93.49
DESIGNED SECTION	ELEVATIONS (Feet)	1244.45, 1244.70, 1244.70, 1234.92, 1234.92, 1234.92, 1244.70, 1244.70, 1244.45
	DISTANCE (Feet)	24.67, 23.67, 9.00, 0.00, 9.00, 23.67, 24.67, 24.67
NSL	ELEVATIONS (Feet)	1259.06, 1257.99, 1257.87, 1257.76, 1252.14, 1245.52, 1243.25, 1236.12, 1235.90, 1236.38, 1243.35, 1244.65, 1247.36, 1254.79, 1259.66, 1262.29, 1264.50, 1261.52
	DISTANCE (Feet)	69.67, 51.67, 39.57, 28.71, 22.55, 12.24, 11.57, 8.50, 0.00, 8.32, 11.49, 12.17, 16.98, 28.14, 30.87, 49.86, 66.99, 80.18

CROSS SECTION AT RD 8+060

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 13 OF 34

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

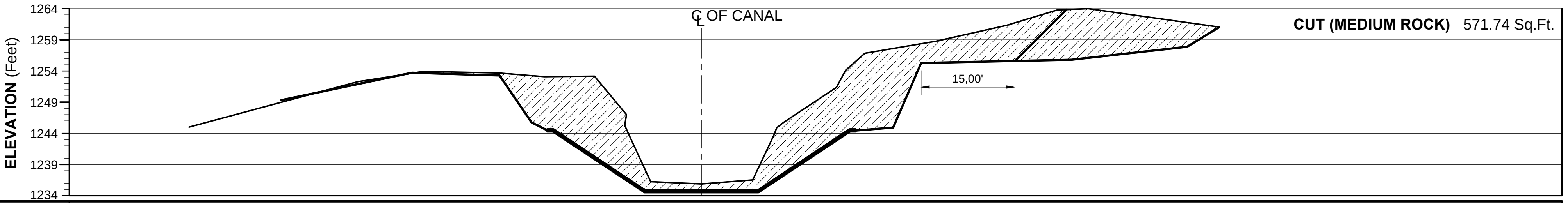
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

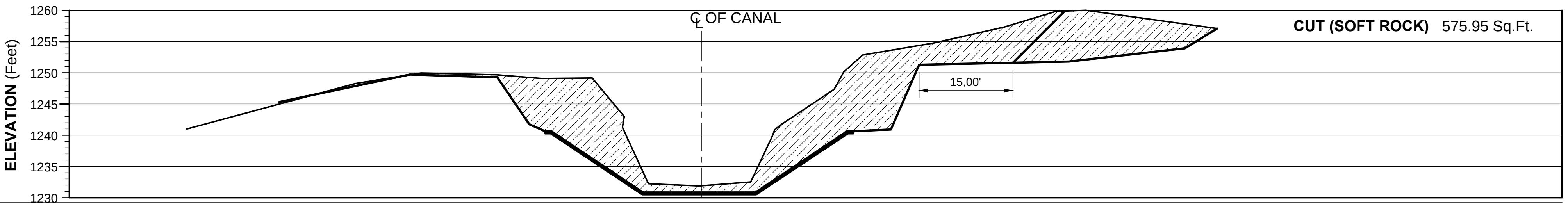
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/14	0



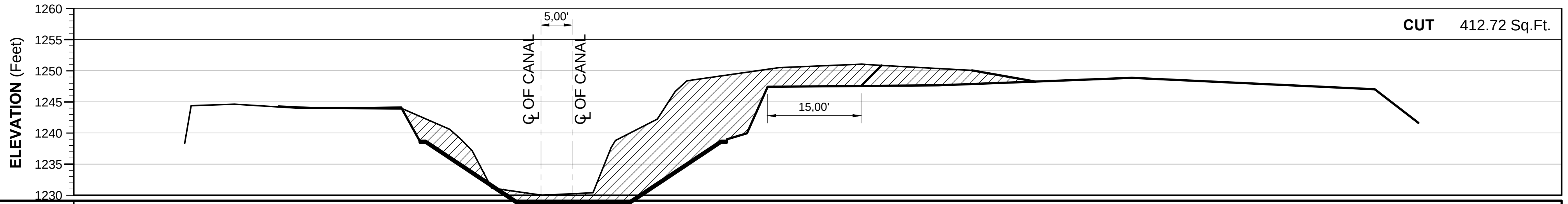
WORK DONE	ELEVATIONS (Feet)	1249.32, 1253.71, 1253.40, 1253.28, 1245.76, 1244.47, 1244.43, 1244.93, 1255.29, 1255.80, 1257.90
	DISTANCE (Feet)	67.21, 46.29, 36.60, 32.31, 27.21, 24.67, 24.67, 30.67, 35.17, 59.20, 77.70
DESIGNED SECTION	ELEVATIONS (Feet)	1244.64, 1244.64, 1234.86, 1234.86, 1234.86, 1244.64, 1244.64
	DISTANCE (Feet)	24.67, 23.67, 9.00, 0.00, 9.00, 23.67, 24.67
NSL	ELEVATIONS (Feet)	1241.09, 1246.81, 1247.31, 1247.31, 1247.00, 1244.14, 1243.26, 1236.24, 1235.89, 1236.38, 1243.46, 1244.81, 1247.93, 1247.65, 1247.84, 1244.73
	DISTANCE (Feet)	65.00, 53.73, 36.28, 23.84, 19.74, 12.45, 11.35, 8.26, 0.00, 8.37, 11.69, 18.98, 23.02, 31.58, 59.01, 72.00

CROSS SECTION AT RD 8+160



WORK DONE	ELEVATIONS (Feet)	1249.32, 1253.71, 1253.40, 1253.28, 1245.76, 1244.47, 1244.43, 1244.93, 1255.29, 1255.80, 1257.90
	DISTANCE (Feet)	67.21, 46.29, 36.60, 32.31, 27.21, 24.67, 24.67, 30.67, 35.17, 59.20, 77.70
DESIGNED SECTION	ELEVATIONS (Feet)	1244.64, 1244.64, 1234.86, 1234.86, 1234.86, 1244.64, 1244.64
	DISTANCE (Feet)	24.67, 23.67, 9.00, 0.00, 9.00, 23.67, 24.67
NSL	ELEVATIONS (Feet)	1241.09, 1246.81, 1247.31, 1247.31, 1247.00, 1244.14, 1243.26, 1236.24, 1235.89, 1236.38, 1243.46, 1244.81, 1247.93, 1247.65, 1247.84, 1244.73
	DISTANCE (Feet)	65.00, 53.73, 36.28, 23.84, 19.74, 12.45, 11.35, 8.26, 0.00, 8.37, 11.69, 18.98, 23.02, 31.58, 59.01, 72.00

CROSS SECTION AT RD 8+280



WORK DONE	ELEVATIONS (Feet)	1250.12, 1249.87, 1249.86, 1249.94, 1244.79, 1244.85, 1245.80, 1253.29, 1253.50, 1254.72, 1252.86, 1247.47
	DISTANCE (Feet)	42.33, 37.20, 26.97, 22.63, 19.69, 29.69, 32.90, 36.19, 63.69, 94.69, 133.69, 140.69
DESIGNED SECTION	ELEVATIONS (Feet)	1244.61, 1244.61, 1234.82, 1234.82, 1234.82, 1244.61, 1244.61
	DISTANCE (Feet)	19.69, 18.69, 4.00, 0.00, 5.00, 14.00, 28.69, 29.69
NSL	ELEVATIONS (Feet)	1244.14, 1250.24, 1250.47, 1249.85, 1249.75, 1249.69, 1246.45, 1244.77, 1242.99, 1236.99, 1235.85, 1236.24, 1243.50, 1244.64, 1248.07, 1252.52, 1254.23, 1256.37, 1256.89, 1255.90
	DISTANCE (Feet)	57.41, 56.34, 49.39, 39.18, 27.09, 22.26, 14.84, 12.94, 11.22, 8.11, 0.00, 8.18, 11.09, 11.78, 18.48, 21.37, 23.25, 38.04, 51.33, 69.00

CROSS SECTION AT RD 8+425

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 14 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

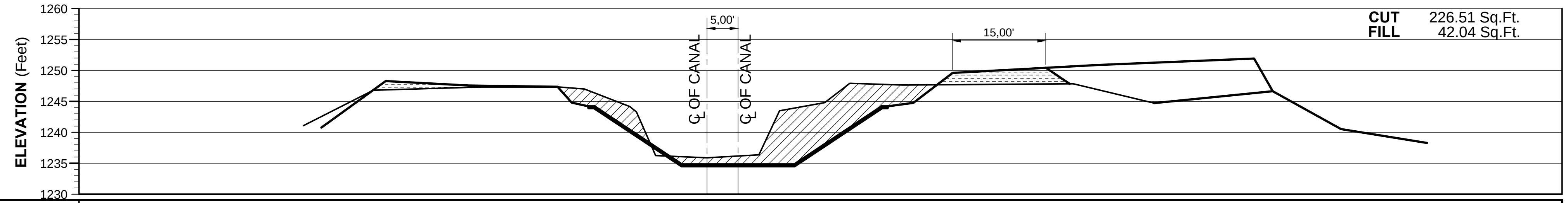
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

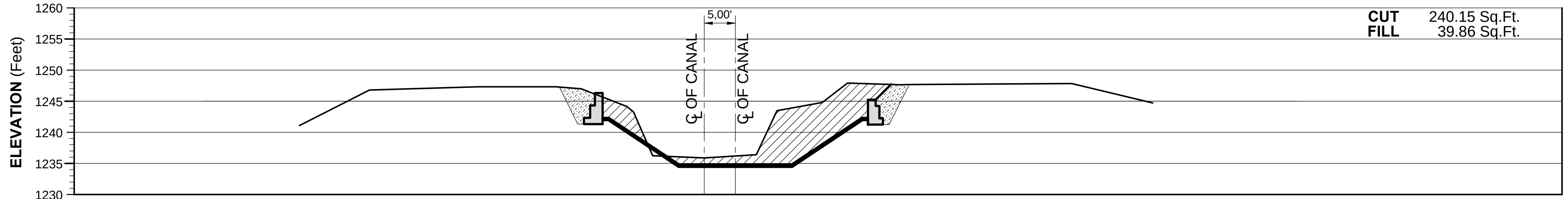
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/15	0



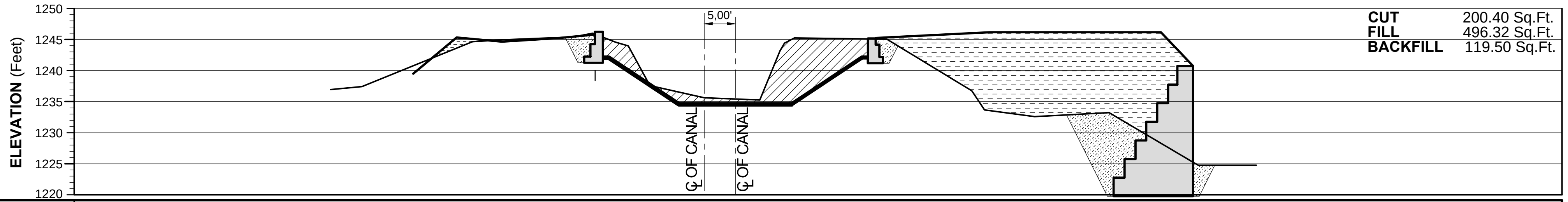
WORK DONE	ELEVATIONS (Feet)	1240.76, 1248.28, 1247.57, 1247.42, 1247.37, 1244.79, 1244.22, 1244.22, 1244.77, 1249.58, 1250.88, 1251.90, 1246.63, 1240.51
WORK DONE	DISTANCE (Feet)	62.12, 51.73, 38.32, 27.06, 24.07, 21.77, 19.12, 29.12, 33.24, 39.54, 62.95, 88.12, 91.12, 102.12
DESIGNED SECTION	ELEVATIONS (Feet)	1244.22, 1234.80, 1234.80, 1234.80, 1244.22
DESIGNED SECTION	DISTANCE (Feet)	18.12, 4.00, 5.00, 14.00, 28.12
NSL	ELEVATIONS (Feet)	1241.09, 1246.81, 1247.31, 1247.31, 1247.00, 1244.14, 1243.26, 1236.24, 1235.89, 1236.38, 1243.46, 1244.81, 1247.93, 1247.65, 1247.84, 1244.73
NSL	DISTANCE (Feet)	65.00, 53.73, 36.28, 23.84, 19.74, 12.45, 11.35, 8.26, 0.00, 8.37, 11.69, 18.98, 23.02, 31.58, 59.01, 72.00

CROSS SECTION AT RD 8+500



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1242.33, 1242.33, 1234.80, 1234.80, 1234.80, 1242.33, 1242.33
DESIGNED SECTION	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1228.93, 1241.09, 1246.81, 1247.31, 1247.31, 1247.00, 1244.14, 1243.26, 1236.24, 1235.89, 1236.38, 1243.46, 1244.81, 1247.93, 1247.65, 1247.84, 1244.73
NSL	DISTANCE (Feet)	86.90, 65.00, 53.73, 36.28, 23.84, 19.74, 12.45, 11.35, 8.26, 0.00, 8.37, 11.69, 18.98, 23.02, 31.58, 59.01, 72.00

CROSS SECTION AT RD 8+550



WORK DONE	ELEVATIONS (Feet)	1239.49, 1245.34, 1244.64, 1245.23, 1245.79, 1246.38, 1246.33, 1242.33, 1242.25, 1245.38, 1245.25, 1246.16, 1246.17, 1240.75, 1224.75
WORK DONE	DISTANCE (Feet)	46.74, 39.75, 32.50, 23.64, 17.80, 17.55, 16.30, 26.30, 27.55, 45.83, 73.30, 78.47, 79.30
DESIGNED SECTION	ELEVATIONS (Feet)	1242.27, 1242.27, 1234.74, 1234.74, 1234.74, 1242.27, 1242.27
DESIGNED SECTION	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1236.92, 1237.41, 1244.66, 1244.96, 1245.42, 1246.01, 1244.57, 1243.98, 1237.59, 1235.63, 1235.26, 1243.19, 1244.43, 1245.25, 1245.07, 1236.72, 1233.68, 1232.60, 1233.21, 1224.75, 1224.75
NSL	DISTANCE (Feet)	60.00, 54.96, 37.21, 31.95, 21.02, 17.92, 14.23, 12.19, 8.71, 0.00, 8.92, 12.16, 12.88, 14.46, 29.32, 42.95, 45.00, 53.02, 65.00, 79.30, 88.61

CROSS SECTION AT RD 8+750

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 15 OF 34

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

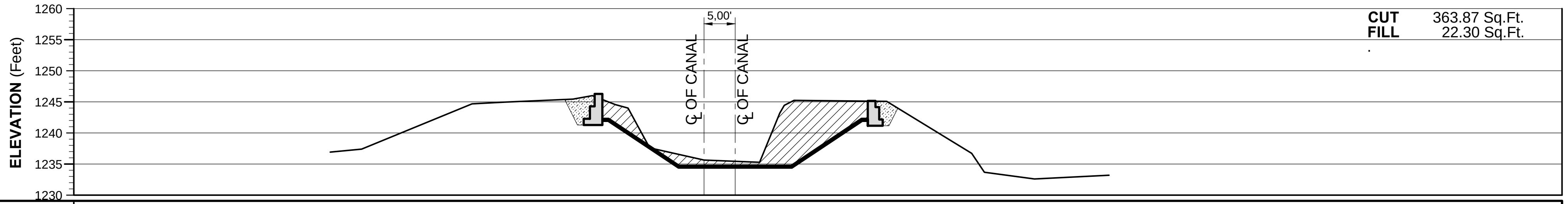
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN
CHECKED
RECOMMENDED
APPROVED

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

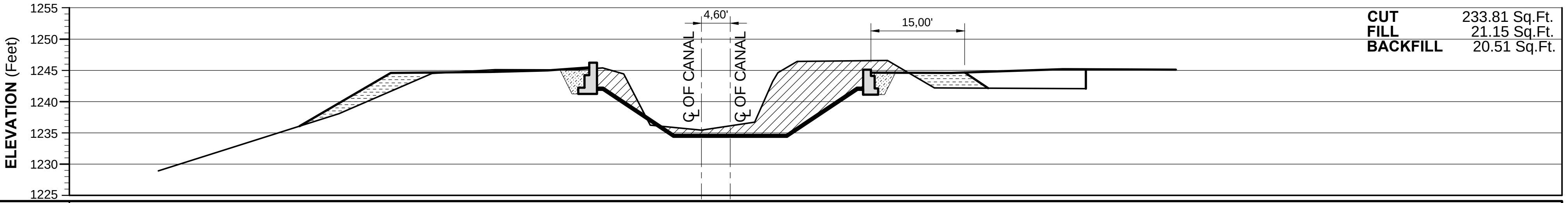
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/16	0



CUT 363.87 Sq.Ft.
FILL 22.30 Sq.Ft.

		Distance (Feet)	Elevations (Feet)
WORK DONE			
DESIGNED SECTION		16.30	1242.26
		15.30	1242.26
		4.00	1234.73
		5.00	1234.73
		14.00	1234.73
		25.30	1242.26
		26.30	1242.26
NSL		86.90	1228.93
		60.00	1236.92
		54.96	1237.41
		37.21	1244.66
		31.95	1244.96
		21.02	1245.42
		17.92	1246.01
		14.23	1244.57
		12.19	1243.98
		8.71	1237.59
		0.00	1235.63
		8.92	1235.26
		12.16	1243.19
		12.88	1244.43
		14.46	1245.25
		29.32	1245.07
		42.95	1236.72
		45.00	1233.68
		53.02	1232.60
		65.00	1233.21

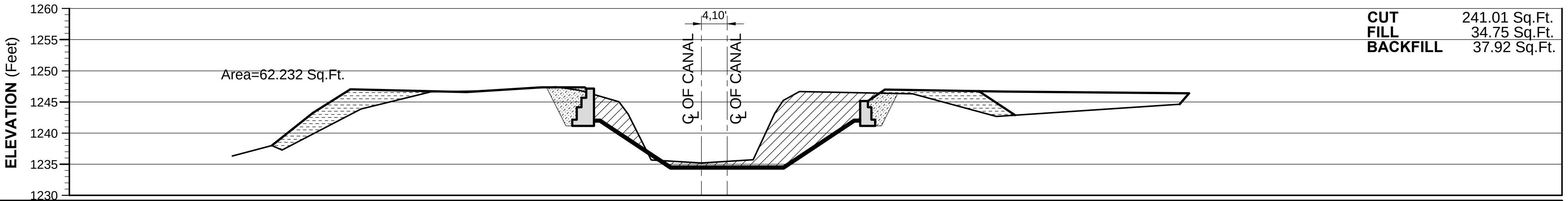
CROSS SECTION AT RD 8+800



CUT 233.81 Sq.Ft.
FILL 21.15 Sq.Ft.
BACKFILL 20.51 Sq.Ft.

	Distance (Feet)	Elevations (Feet)
WORK DONE	63.70	1236.42
	49.70	1244.59
	33.76	1244.76
	24.65	1245.00
	18.20	1245.44
	17.95	1246.15
	16.70	1246.20
		1242.15
	25.90	1242.15
		1245.15
	27.15	1245.15
	27.40	1244.57
	40.03	1244.58
	57.90	1245.17
	75.90	1245.12
DESIGNED SECTION	16.70	1242.21
	15.70	1242.21
	4.40	1234.68
	4.60	1234.68
	13.60	1234.68
	24.90	1242.21
	25.90	1242.21
NSL	58.00	1238.06
	43.10	1244.51
	33.02	1245.09
	20.84	1245.06
	15.80	1245.37
	12.42	1244.41
	8.21	1236.23
	0.00	1235.43
	8.51	1236.71
	11.40	1243.23
	12.24	1244.61
	15.32	1246.42
	29.77	1246.59
	37.29	1242.20
	61.50	1242.06

CROSS SECTION AT RD 9+000



CUT 241.01 Sq.Ft.
FILL 34.75 Sq.Ft.
BACKFILL 37.92 Sq.Ft.

	Distance (Feet)	Elevations (Feet)
WORK DONE	62.20	1243.24
	56.20	1247.03
	37.59	1246.60
	25.62	1247.36
	18.70	1247.34
	18.45	1247.16
	17.20	1242.11
	17.20	1247.11
	25.40	1242.06
		1245.07
	26.65	1245.06
	29.37	1247.00
	48.40	1246.66
	78.05	1246.38
DESIGNED SECTION	17.20	1242.15
	16.20	1242.15
	4.90	1234.62
	4.10	1234.62
	13.10	1234.62
	24.40	1242.15
	25.40	1242.15
NSL	75.06	1236.29
	68.74	1238.00
	67.11	1237.25
	54.46	1243.85
	43.26	1246.63
	36.07	1246.73
	23.27	1247.42
	19.51	1246.88
	13.19	1245.03
	11.73	1243.01
	8.05	1235.67
	0.00	1235.17
	8.27	1235.72
	11.73	1243.16
	13.08	1245.22
	15.68	1246.66
	33.79	1246.30
	47.20	1242.66
	76.53	1244.61

CROSS SECTION AT RD 9+250

LEGEND

EXISTING CROSS SECTION/NSL

DESIGNED CROSS SECTION

FILL

CUT

BACKFILL

TENDER DRAWING

SHEET 16 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

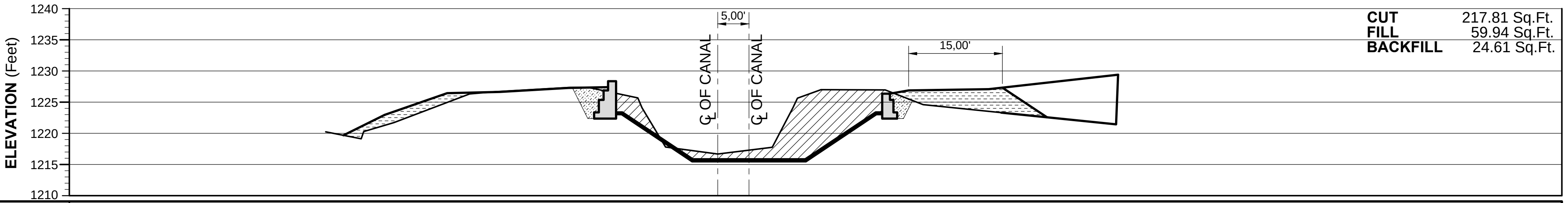
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	
						CHECKED	
						RECOMMENDED	
						APPROVED	

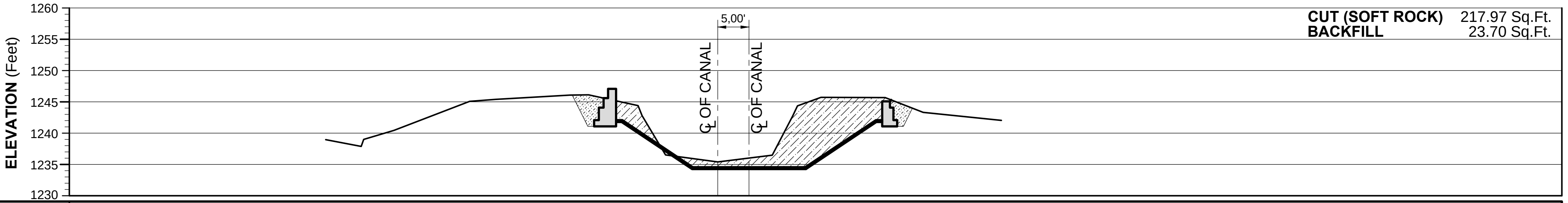
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/17	0



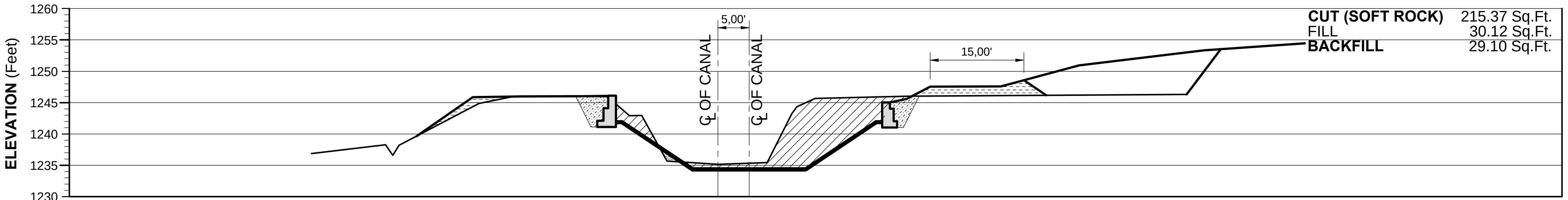
WORK DONE	ELEVATIONS (Feet)	1222.97, 1226.43, 1226.64, 1227.29, 1227.41, 1227.41, 1227.36, 1223.36, 1223.37, 1226.44, 1226.37, 1226.89, 1227.07, 1229.38
WORK DONE	DISTANCE (Feet)	53.30, 43.30, 34.90, 23.94, 17.80, 17.55, 16.30, 26.30, 27.55, 30.57, 43.34, 64.08
DESIGNED SECTION	ELEVATIONS (Feet)	1223.36, 1223.36, 1215.83, 1215.83, 1215.83, 1223.36, 1223.36
DESIGNED SECTION	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1220.22, [illegible], 1221.70, 1226.33, 1226.66, 1227.36, 1227.37, 1225.67, 1224.06, 1217.78, 1216.68, 1217.77, 1224.04, 1225.64, 1226.99, 1226.96, 1224.58, 1223.30
NSL	DISTANCE (Feet)	62.74, [illegible], 51.84, 39.71, 35.53, 23.65, 20.70, 12.78, 12.11, 8.36, 0.00, 8.73, 11.99, 12.74, 16.51, 26.78, 32.86, 45.37

CROSS SECTION AT RD 9+500



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1242.09, 1242.09, 1234.56, 1234.56, 1234.56, 1242.09, 1242.09
DESIGNED SECTION	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1238.95, 1237.86, 1238.99, 1240.43, 1245.06, 1245.39, 1246.09, 1246.10, 1244.40, 1242.79, 1236.51, 1235.41, 1236.50, 1242.77, 1244.37, 1245.72, 1245.69, 1243.31, 1242.03
NSL	DISTANCE (Feet)	62.74, 57.09, 56.66, 51.84, 39.71, 35.53, 23.65, 20.70, 12.78, 12.11, 8.36, 0.00, 8.73, 11.99, 12.74, 16.51, 26.78, 32.86, 45.37

CROSS SECTION AT RD 9+600



WORK DONE	ELEVATIONS (Feet)	1238.89, 1245.87, 1245.99, 1246.02, 1246.08, 1246.08, 1246.08, 1242.08, 1242.04, 1245.04, 1245.09, 1245.57, 1247.54, 1247.57, 1250.96, 1253.35, 1254.46
WORK DONE	DISTANCE (Feet)	49.30, 39.24, 31.30, 20.97, 17.96, 17.55, 16.30, 26.30, 26.30, 27.55, 30.22, 33.96, 45.30, 57.81, 77.78, 93.91
DESIGNED SECTION	ELEVATIONS (Feet)	1242.02, 1242.02, 1234.49, 1234.49, 1234.49, 1242.02, 1242.02
DESIGNED SECTION	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1236.86, 1238.27, 1236.59, 1238.19, 1244.85, 1246.04, 1246.03, 1245.93, 1242.90, 1242.95, 1235.65, 1235.16, 1235.43, 1243.28, 1244.33, 1245.67, 1246.03, 1246.32
NSL	DISTANCE (Feet)	65.00, 53.19, 52.00, 51.00, 38.21, 32.45, 21.34, 17.65, 14.13, 12.18, 8.13, 0.00, 7.90, 11.86, 12.65, 15.56, 30.58, 75.00

CROSS SECTION AT RD 9+750

TENDER DRAWING

SHEET 17 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

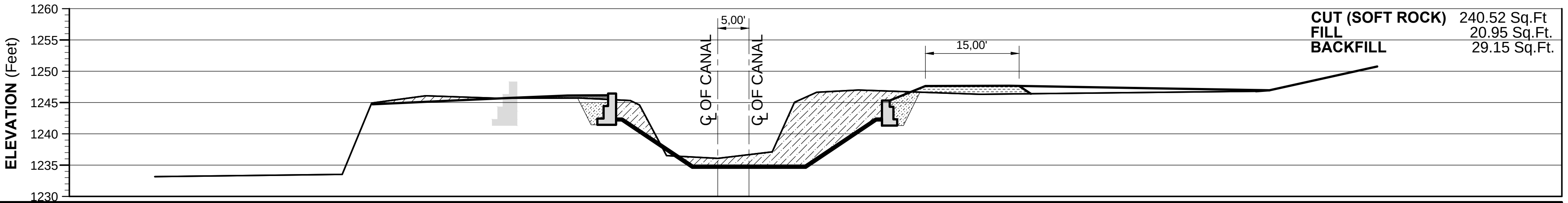
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN
CHECKED
RECOMMENDED
APPROVED

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

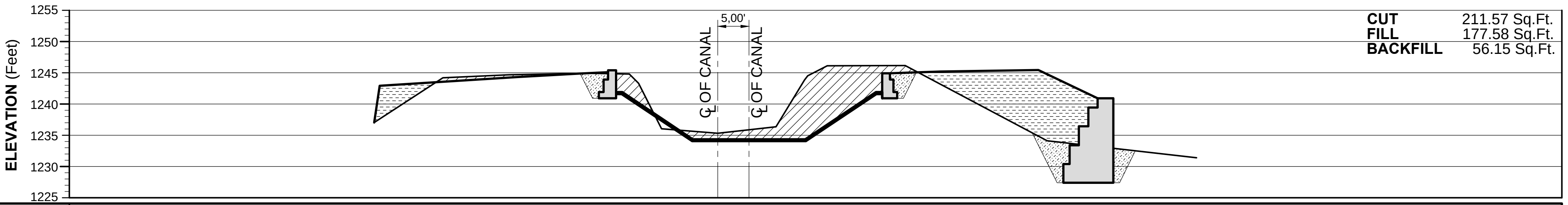
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/18	0



WORK DONE	ELEVATIONS (Feet)	1244.25	1245.24	1245.22	1245.67	1245.97	1245.98	1241.97	1241.98	1244.98	1245.03	1247.17	1247.19	1246.79	1246.49	1250.30
	DISTANCE (Feet)	55.28	33.69	24.05	17.80	17.55	16.30	26.30	27.55	33.25	46.71	69.30	88.30	105.56		
DESIGNED SECTION	ELEVATIONS (Feet)	1241.96	1241.96	1234.43	1234.43	1234.43	1241.96	1241.96								
	DISTANCE (Feet)	16.30	15.30	4.00	5.00	14.00	25.30	26.30								

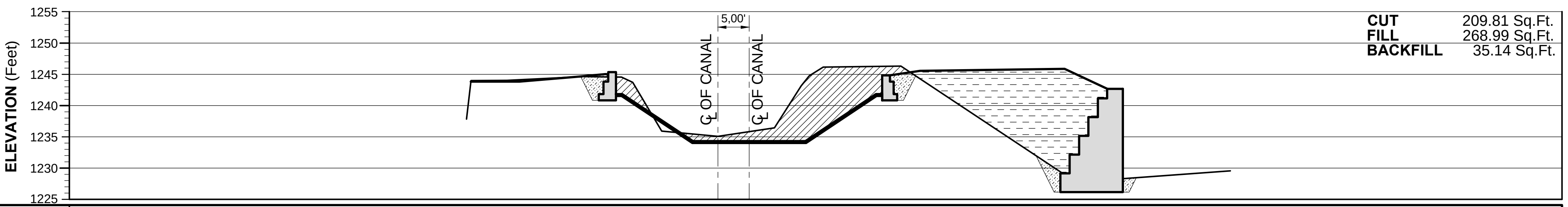
NSL	ELEVATIONS (Feet)	1232.70	1233.04	1244.45	1245.60	1245.22	1245.26	1244.84	1244.14	1236.06	1235.59	1236.64	1244.57	1246.15	1246.53	1245.84	1246.33
	DISTANCE (Feet)	90.11	60.12	55.39	46.77	35.07	22.14	14.00	12.50	8.21	0.00	8.70	12.28	15.84	22.50	42.00	86.15

CROSS SECTION AT RD 10+000



WORK DONE	ELEVATIONS (Feet)	1242.91	1244.33	1244.69	1245.09	1245.41	1245.41	1241.91	1241.92	1244.98	1244.92	1245.18	1245.44	1240.90	1240.92	1234.25
	DISTANCE (Feet)	54.13	32.10	22.65	17.80	17.55	16.30	26.30	27.55	35.65	51.30	60.79	63.30	65.30		
DESIGNED SECTION	ELEVATIONS (Feet)	1241.90	1241.90	1234.37	1234.37	1234.37	1241.90	1241.90								
	DISTANCE (Feet)	21.30	20.30	9.00	0.00	9.00	20.30	21.30								
NSL	ELEVATIONS (Feet)	1237.05	1244.21	1244.67	1244.90	1244.79	1243.33	1236.05	1235.31	1236.35	1243.82	1244.52	1246.10	1246.14	1234.13	1231.40
	DISTANCE (Feet)	55.00	44.00	33.39	20.75	14.17	12.67	9.00	0.00	9.31	13.88	14.40	17.53	30.00	52.71	76.62

CROSS SECTION AT RD 10+250



WORK DONE	ELEVATIONS (Feet)	1243.84	1243.82	1244.61	1245.01	1245.34	1245.34	1241.84	1241.84	1244.84	1244.84	1245.55	1245.87	1242.65	1231.20	1231.74
	DISTANCE (Feet)	38.96	31.73	22.27	17.97	17.55	16.30	0.00	26.30	27.55	32.35	55.48	62.32	64.80	106.30	
DESIGNED SECTION	ELEVATIONS (Feet)	1241.84	1241.84	1234.31	1234.31	1234.31	1241.84	1241.84								
	DISTANCE (Feet)	16.30	15.30	4.00	5.00	14.00	25.30	26.30								

NSL	ELEVATIONS (Feet)	1237.84	1244.00	1244.03	1244.64	1244.53	1243.71	1235.91	1235.08	1236.42	1243.14	1244.75	1246.16	1246.32	1242.40	1263.82	1229.54
	DISTANCE (Feet)	40.24	39.52	33.75	21.60	15.43	13.64	9.00	0.00	9.06	13.34	14.60	16.86	29.30	57.28	80.00	82.00

CROSS SECTION AT RD 10+500

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

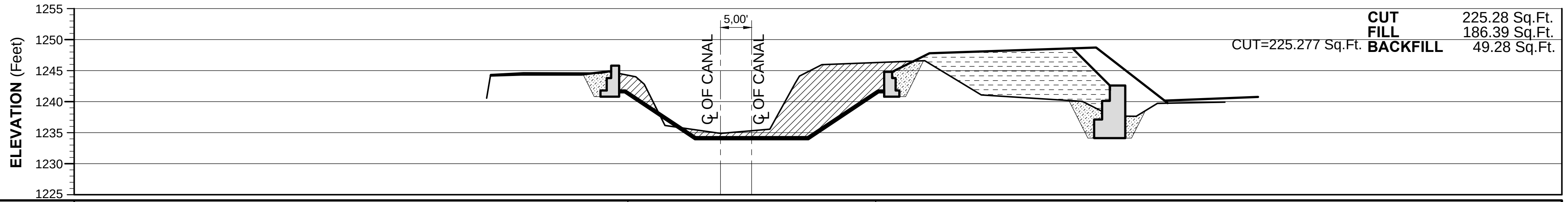
SHEET 18 OF 34

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

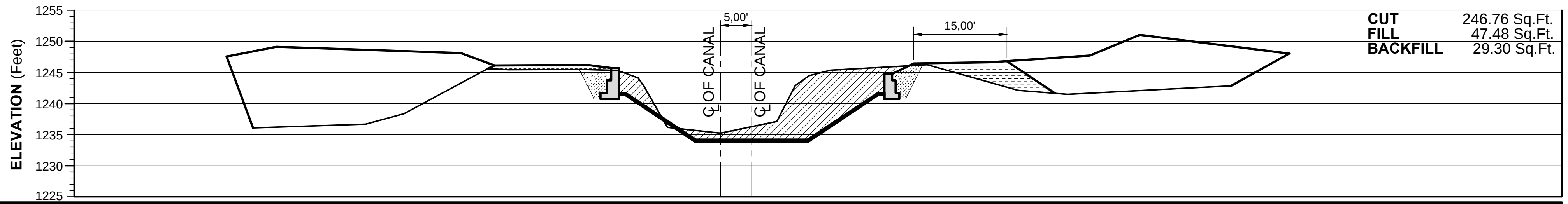
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/19	0



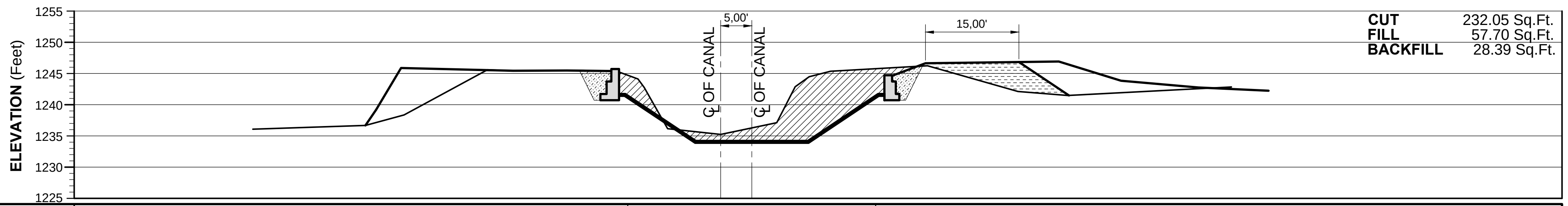
WORK DONE	ELEVATIONS (Feet)	1236.28, 1244.17, 1244.34, 1244.34, 1244.87, 1245.27, 1245.26, 1241.76, 1241.76, 1244.83, 1244.78, 1247.80, 1248.71, 1240.16, 1240.75
	DISTANCE (Feet)	128.12, 38.30, 31.95, 22.27, 17.97, 17.55, 16.30, 26.30, 27.55, 33.55, 60.30, 71.30, 86.30
DESIGNED SECTION	ELEVATIONS (Feet)	1241.79, 1241.79, 1234.26, 1234.26, 1234.26, 1241.79, 1241.79
	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1240.56, 1244.34, 1244.62, 1244.60, 1244.82, 1243.98, 1242.78, 1236.16, 1234.89, 1235.54, 1242.92, 1244.10, 1245.94, 1246.60, 1241.09, 1240.03, 1237.68, 1237.63, 1239.73, 1239.91
	DISTANCE (Feet)	37.54, 36.90, 31.65, 19.17, 17.81, 13.58, 12.22, 8.91, 0.00, 7.93, 11.94, 12.69, 16.26, 32.79, 41.86, 58.11, 62.74, 66.74, 70.14, 81.00

CROSS SECTION AT RD 10+750



WORK DONE	ELEVATIONS (Feet)	1247.53, 1249.09, 1248.12, 1246.09, 1246.17, 1244.72, 1244.72, 1241.68, 1241.76, 1244.76, 1244.76, 1246.43, 1246.62, 1247.70, 1251.02, 1248.02
	DISTANCE (Feet)	79.30, 71.30, 41.72, 36.30, 21.33, 17.55, 16.30, 26.30, 27.55, 30.98, 43.30, 59.30, 67.30, 91.30
DESIGNED SECTION	ELEVATIONS (Feet)	1241.72, 1241.72, 1234.19, 1234.19, 1234.19, 1241.72, 1241.72
	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1236.08, 1236.66, 1238.36, 1245.58, 1245.44, 1245.46, 1245.31, 1244.10, 1242.76, 1236.14, 1235.23, 1237.12, 1242.86, 1244.47, 1245.34, 1246.22, 1242.12, 1241.48, 1242.82
	DISTANCE (Feet)	75.09, 57.00, 50.83, 37.41, 34.05, 22.12, 16.54, 13.26, 12.27, 8.52, 0.00, 9.02, 11.98, 14.22, 17.66, 33.19, 47.73, 55.72, 82.00

CROSS SECTION AT RD 10+800



WORK DONE	ELEVATIONS (Feet)	1239.20, 1245.87, 1245.45, 1245.12, 1245.41, 1245.54, 1245.55, 1241.64, 1241.64, 1244.64, 1244.64, 1246.64, 1246.93, 1243.84, 1242.74, 1242.25
	DISTANCE (Feet)	55.30, 51.30, 33.30, 24.67, 17.80, 17.55, 16.30, 26.30, 27.55, 32.90, 54.30, 64.30, 76.69, 87.98
DESIGNED SECTION	ELEVATIONS (Feet)	1241.72, 1241.72, 1234.19, 1234.19, 1234.19, 1241.72, 1241.72
	DISTANCE (Feet)	16.30, 15.30, 4.00, 5.00, 14.00, 25.30, 26.30
NSL	ELEVATIONS (Feet)	1236.66, 1238.36, 1245.58, 1245.44, 1245.46, 1245.31, 1244.10, 1242.76, 1236.14, 1235.23, 1237.12, 1242.86, 1244.47, 1245.34, 1246.22, 1242.12, 1241.48, 1242.82
	DISTANCE (Feet)	57.00, 50.83, 37.41, 34.05, 22.12, 16.54, 13.26, 12.27, 8.52, 0.00, 9.02, 11.98, 14.22, 17.66, 33.19, 47.73, 55.72, 82.00

CROSS SECTION AT RD 11+000

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 19 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

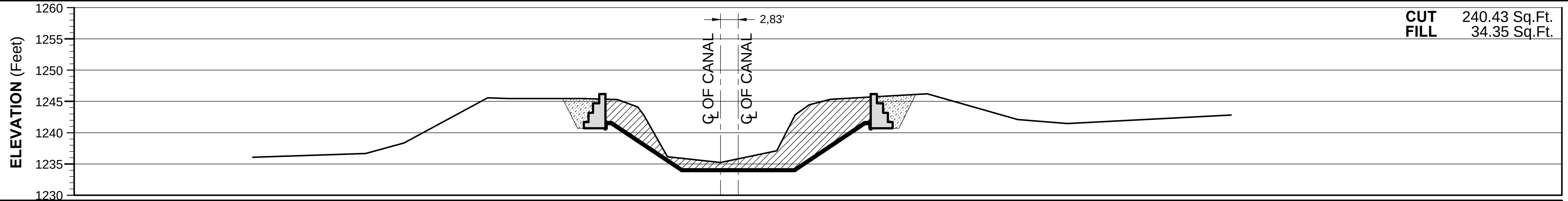
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN
CHECKED
RECOMMENDED
APPROVED

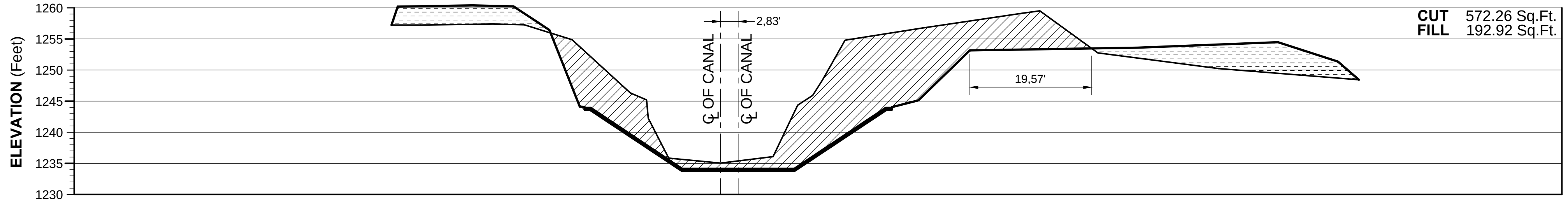
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/20	0



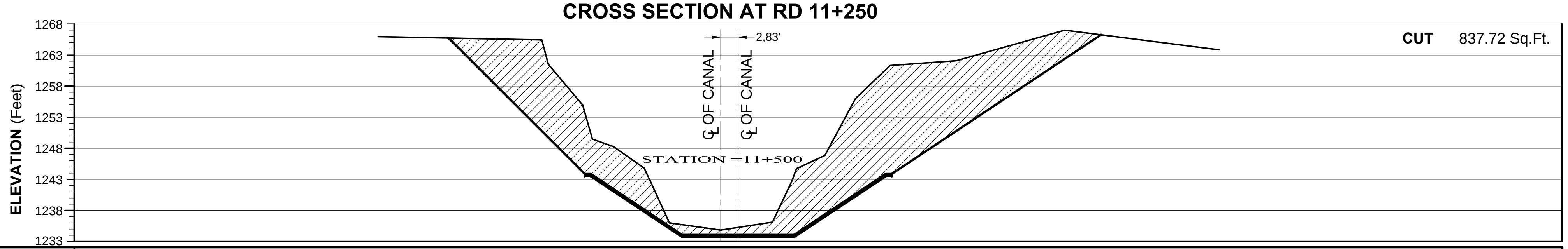
WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1241.68, 1241.68, 1234.15, 1234.15, 1234.15, 1241.68, 1241.68
DESIGNED SECTION	DISTANCE (Feet)	18.47, 17.47, 6.17, 2.83, 11.83, 23.13, 24.13
NSL	ELEVATIONS (Feet)	1236.08, 1236.66, 1238.36, 1245.58, 1245.44, 1245.46, 1245.31, 1244.10, 1242.76, 1236.14, 1235.23, 1237.12, 1242.86, 1244.47, 1245.34, 1246.22, 1242.12, 1241.48
NSL	DISTANCE (Feet)	75.09, 57.00, 50.83, 37.41, 34.05, 22.12, 16.54, 13.26, 12.27, 8.52, 0.00, 9.02, 11.98, 14.22, 17.66, 33.19, 47.73, 55.72

CROSS SECTION AT RD 11+150



WORK DONE	ELEVATIONS (Feet)	1260.19, 1260.37, 1260.23, 1256.41, 1244.12, 1244.06, 1244.05, 1245.12, 1253.16, 1253.58, 1254.45, 1251.36, 1248.42
WORK DONE	DISTANCE (Feet)	51.84, 39.84, 33.22, 27.49, 22.59, 21.84, 27.50, 31.74, 40.02, 67.03, 89.50, 99.16, 102.50
DESIGNED SECTION	ELEVATIONS (Feet)	1243.91, 1243.91, 1234.13, 1234.13, 1234.13, 1243.91, 1243.91
DESIGNED SECTION	DISTANCE (Feet)	21.84, 20.84, 6.17, 2.83, 11.83, 26.50, 27.50
NSL	ELEVATIONS (Feet)	1257.23, 1257.39, 1257.25, 1254.88, 1246.31, 1245.19, 1242.23, 1235.83, 1235.04, 1236.09, 1243.03, 1244.37, 1245.91, 1248.42, 1254.78, 1256.69, 1259.12, 1259.51, 1252.75, 1250.24
NSL	DISTANCE (Feet)	48.19, 36.56, 31.53, 23.86, 14.48, 11.87, 11.62, 8.33, 0.00, 8.45, 11.77, 12.39, 14.81, 16.39, 20.00, 32.15, 48.34, 51.28, 60.58, 80.00

CROSS SECTION AT RD 11+250



WORK DONE	ELEVATIONS (Feet)	1263.76, 1265.30, 1265.39, 1265.31, 1261.91, 1244.03, 1243.97, 1243.97, 1259.52, 1260.94, 1263.98, 1264.65
WORK DONE	DISTANCE (Feet)	69.59, 54.84, 44.84, 40.84, 33.58, 23.84, 21.84, 27.50, 38.50, 64.50, 76.50, 105.50
DESIGNED SECTION	ELEVATIONS (Feet)	1243.86, 1243.86, 1234.08, 1234.08, 1234.08, 1243.86, 1243.86
DESIGNED SECTION	DISTANCE (Feet)	21.84, 20.84, 6.17, 2.83, 11.83, 26.50, 27.50
NSL	ELEVATIONS (Feet)	1265.72, 1265.45, 1261.52, 1254.95, 1249.48, 1248.27, 1244.81, 1242.75, 1235.98, 1234.82, 1236.12, 1242.85, 1244.70, 1246.84, 1255.99, 1261.31, 1262.09, 1267.01, 1263.82
NSL	DISTANCE (Feet)	43.02, 28.71, 27.68, 22.16, 20.60, 17.24, 12.26, 11.30, 8.24, 0.00, 8.34, 11.49, 12.16, 16.73, 21.63, 27.19, 37.79, 55.26, 80.00

CROSS SECTION AT RD 11+500

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 20 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

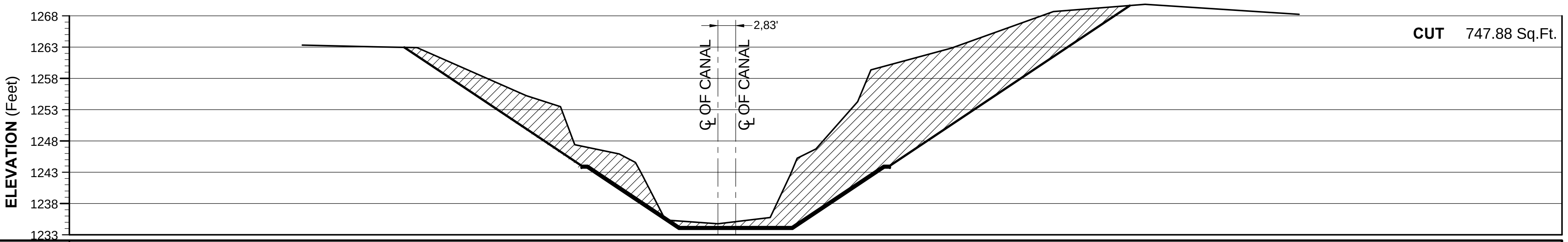
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

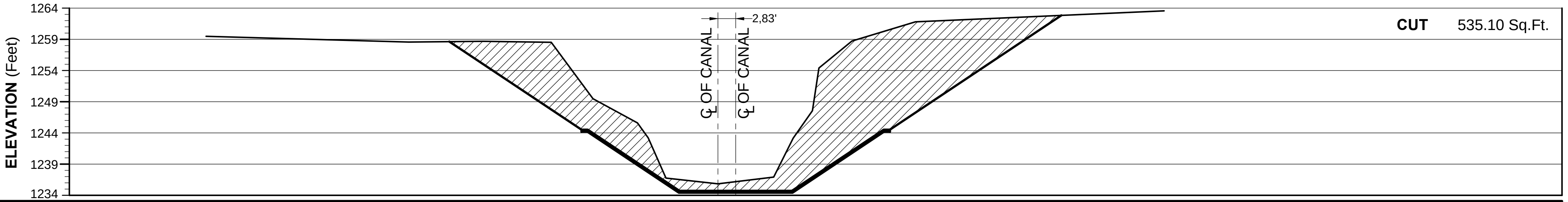
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/21	0



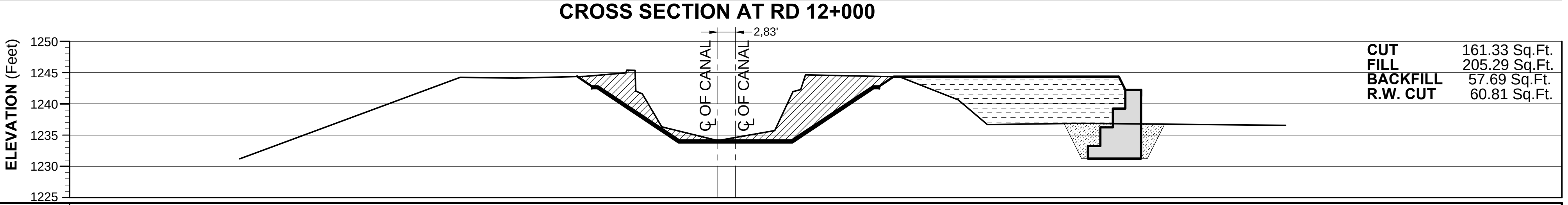
WORK DONE – ELEVATIONS (Feet)																					
WORK DONE – DISTANCE (Feet)																					
DESIGNED SECTION – ELEVATIONS (Feet)	1244.05	1244.05	1234.26	1234.26	1244.05	1244.05															
DESIGNED SECTION – DISTANCE (Feet)	21.86	20.86	6.17	11.83	26.52	27.52															
NSL – ELEVATIONS (Feet)	1263.32	1263.04	1262.91	1255.22	1253.49	1247.40	1245.92	1244.56	1242.71	1235.38	1234.76	1235.76	1242.66	1245.26	1246.71	1254.27	1259.34	1262.84	1268.67	1269.84	1268.22
NSL – DISTANCE (Feet)	66.53	54.56	48.14	30.68	25.19	22.92	15.80	13.18	12.18	8.41	0.00	8.35	11.62	12.68	15.67	22.38	24.47	37.35	53.68	68.35	93.00

CROSS SECTION AT RD 11+750



WORK DONE – ELEVATIONS (Feet)																
WORK DONE – DISTANCE (Feet)																
DESIGNED SECTION – ELEVATIONS (Feet)	1243.73	1243.73	1233.94	1233.94	1243.73	1243.73										
DESIGNED SECTION – DISTANCE (Feet)	21.86	20.86	6.17	11.83	26.52	27.52										
NSL – ELEVATIONS (Feet)	1258.66	1257.76	1257.88	1257.73	1248.68	1244.82	1242.41	1235.99	1235.06	1236.15	1242.38	1246.76	1253.58	1257.93	1260.98	1262.75
NSL – DISTANCE (Feet)	81.90	49.46	37.58	26.68	19.99	12.89	11.15	8.32	0.00	8.92	12.06	15.14	16.15	21.45	31.62	71.42

CROSS SECTION AT RD 12+000



WORK DONE – ELEVATIONS (Feet)	1234.38	1237.64	1244.52	1244.04	1244.16	1244.88	1244.88	1241.38	1241.38	1244.38	1244.38	1244.24	1243.82	1243.45	1242.23	1237.32	1235.26						
WORK DONE – DISTANCE (Feet)	68.47	60.47	45.28	32.83	22.81	19.72	18.47	24.13	25.38	28.13	52.13	59.13	67.74	69.13	84.13								
DESIGNED SECTION – ELEVATIONS (Feet)	1242.80	1242.80	1234.13	1234.13	1242.80	1242.80																	
DESIGNED SECTION – DISTANCE (Feet)	20.17	19.17	6.17	11.83	24.83	25.83																	
NSL – ELEVATIONS (Feet)	1231.17	1244.25	1244.12	1244.41	1244.96	1245.38	1245.36	1241.58	1242.02	1236.31	1234.10	1235.72	1241.94	1242.28	1244.64	1244.32	1240.62	1236.66	1236.85	1236.55			
NSL – DISTANCE (Feet)	76.55	41.27	32.45	21.23	14.73	14.58	13.27	13.12	12.11	8.98	0.00	9.12	12.03	13.27	14.01	29.11	38.47	43.14	58.00	90.85			

CROSS SECTION AT RD 12+250

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 21 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

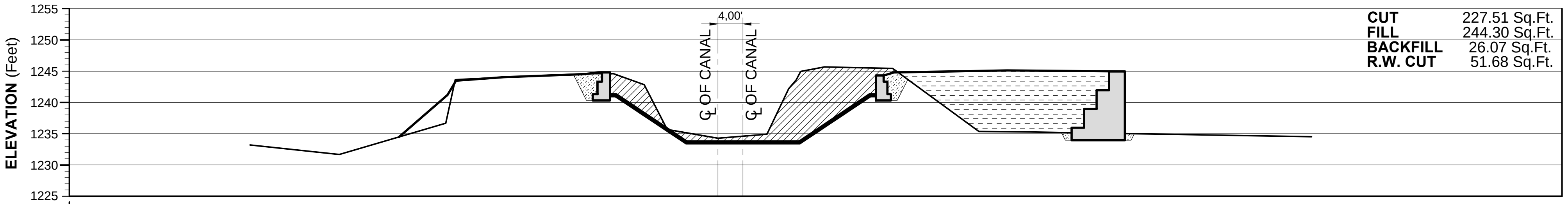
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/22	0



CUT	227.51 Sq.Ft.
FILL	244.30 Sq.Ft.
BACKFILL	26.07 Sq.Ft.
R.W. CUT	51.68 Sq.Ft.

WORK DONE

DISTANCE (Feet)	ELEVATIONS (Feet)
52.30	1233.38
43.30	1241.20
41.91	1243.49
34.30	1244.02
21.62	1244.51
18.90	1244.78
18.55	1244.88
17.30	1244.88
	1241.38
25.30	1241.33
	1244.33
26.55	1244.33
28.17	1244.81
46.30	1245.12
65.11	1244.94
73.30	1240.50
86.30	1234.44
95.30	1234.33

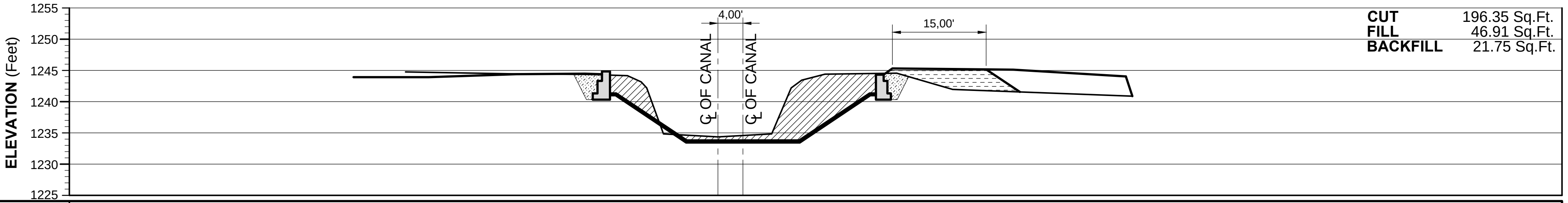
DESIGNED SECTION

DISTANCE (Feet)	ELEVATIONS (Feet)
17.30	1241.30
16.30	1241.30
5.00	1233.77
4.00	1233.77
13.00	1233.77
24.30	1241.30
25.30	1241.30

NSL

DISTANCE (Feet)	ELEVATIONS (Feet)
74.87	1233.21
60.58	1231.67
43.54	1236.69
42.02	1243.63
33.31	1244.07
21.00	1244.60
16.73	1244.61
11.81	1242.84
8.10	1235.67
0.00	1234.28
7.85	1234.90
11.31	1242.18
12.52	1243.61
13.26	1244.95
17.04	1245.68
27.97	1245.44
41.78	1235.36
50.00	1235.28
95.00	1234.53

CROSS SECTION AT RD 12+500



CUT	196.35 Sq.Ft.
FILL	46.91 Sq.Ft.
BACKFILL	21.75 Sq.Ft.

WORK DONE

DISTANCE (Feet)	ELEVATIONS (Feet)
58.31	1243.89
46.30	1243.92
32.21	1244.39
21.30	1244.48
18.85	1244.40
18.55	1244.80
17.30	1244.80
	1241.30
25.29	1241.29
	1244.29
26.54	1244.29
27.93	1245.31
47.29	1245.11
65.29	1244.03

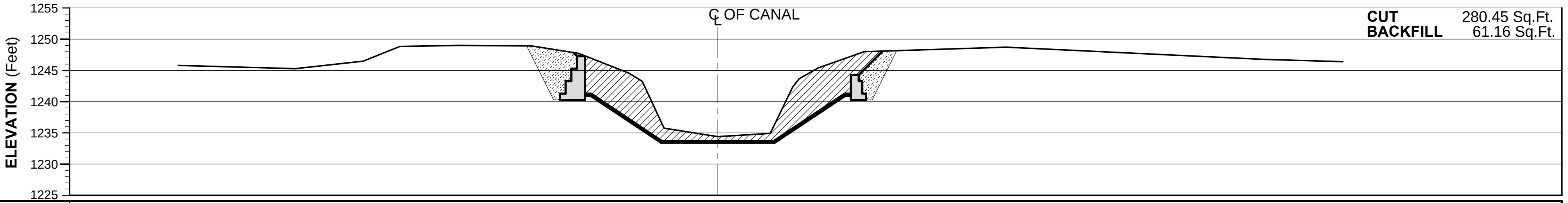
DESIGNED SECTION

DISTANCE (Feet)	ELEVATIONS (Feet)
17.30	1241.31
16.30	1241.31
5.00	1233.78
4.00	1233.78
13.00	1233.78
24.30	1241.31
25.30	1241.31

NSL

DISTANCE (Feet)	ELEVATIONS (Feet)
50.00	1244.75
32.03	1244.43
20.90	1244.35
14.50	1244.13
12.27	1243.14
11.39	1242.21
8.74	1234.83
0.00	1234.36
8.60	1234.84
11.71	1242.21
13.38	1243.43
17.12	1244.39
28.61	1244.55
37.54	1241.96
66.30	1240.89

CROSS SECTION AT RD 12+750



CUT	280.45 Sq.Ft.
BACKFILL	61.16 Sq.Ft.

WORK DONE

DISTANCE (Feet)	ELEVATIONS (Feet)

DESIGNED SECTION

DISTANCE (Feet)	ELEVATIONS (Feet)
20.80	1241.25
20.30	1241.25
9.00	1233.72
0.00	1233.72
9.00	1233.72
20.30	1241.25
20.80	1241.25

NSL

DISTANCE (Feet)	ELEVATIONS (Feet)
86.37	1245.79
67.67	1245.28
56.77	1246.46
50.88	1248.82
41.56	1248.97
29.81	1248.91
22.25	1247.69
14.22	1244.53
12.09	1243.21
8.62	1235.74
0.00	1234.38
8.38	1234.91
11.94	1242.27
13.04	1243.67
16.06	1245.39
23.41	1247.97
46.15	1248.69
87.52	1246.75
100.00	1246.38

CROSS SECTION AT RD 12+850

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 22 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELLING OF WARSAK CANALS PROJECT
PESHAWAR

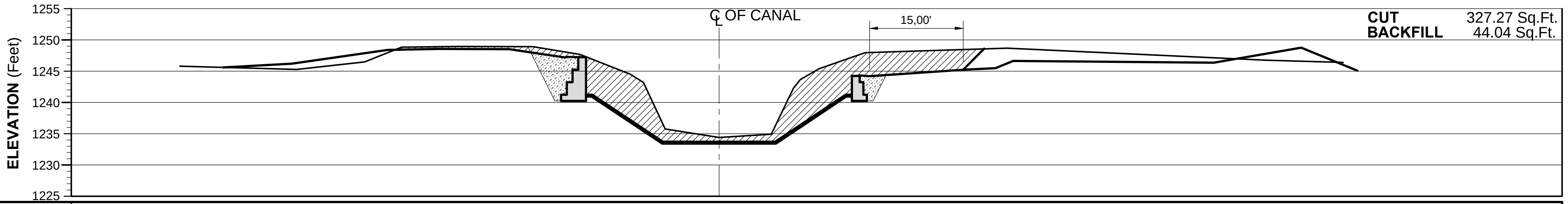
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

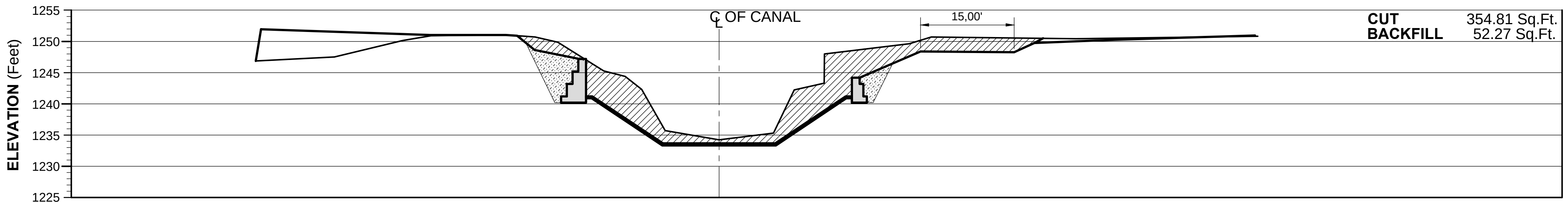
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/23	0



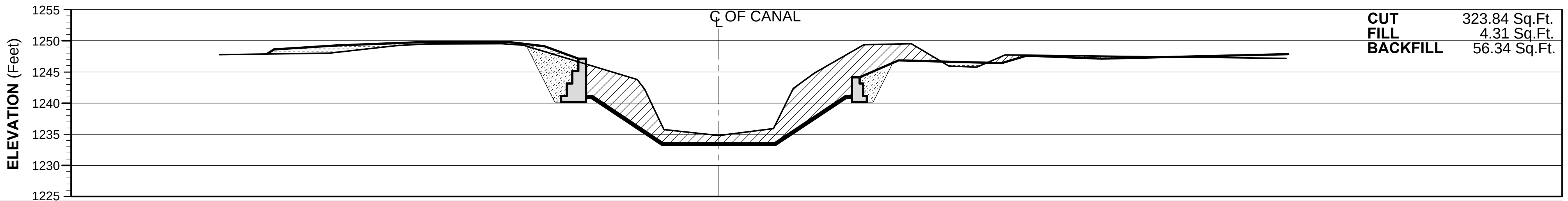
WORK DONE	ELEVATIONS (Feet)	1245.73, 1246.21, 1248.41, 1248.54, 1248.51, 1247.19, 1247.26, 1247.26, 1241.26, 1241.25, 1244.31, 1244.31, 1244.19, 1245.23, 1245.47, 1246.63, 1246.36, 1248.75, 1245.06
WORK DONE	DISTANCE (Feet)	77.11, 68.47, 53.11, 45.11, 33.61, 24.70, 24.36, 23.11, 21.30, 22.55, 22.55, 24.14, 39.30, 44.30, 47.13, 79.30, 93.30, 102.30
DESIGNED SECTION	ELEVATIONS (Feet)	1241.25, 1241.25, 1233.72, 1233.72, 1233.72, 1241.25, 1241.25
DESIGNED SECTION	DISTANCE (Feet)	21.30, 20.30, 9.00, 0.00, 9.00, 20.30, 21.30
NSL	ELEVATIONS (Feet)	1245.79, 1245.28, 1246.46, 1248.82, 1248.97, 1248.91, 1247.69, 1244.53, 1243.21, 1235.74, 1234.38, 1234.91, 1242.27, 1243.67, 1245.39, 1247.97, 1248.69, 1246.75, 1246.38
NSL	DISTANCE (Feet)	86.37, 67.67, 56.77, 50.88, 41.56, 29.81, 22.25, 14.22, 12.09, 8.62, 0.00, 8.38, 11.94, 13.04, 16.06, 23.41, 46.15, 87.52, 100.00

CROSS SECTION AT RD 13+000



WORK DONE	ELEVATIONS (Feet)	1251.94, 1251.01, 1251.04, 1250.85, 1248.62, 1247.21, 1247.25, 1241.21, 1241.23, 1244.23, 1244.28, 1248.38, 1248.25, 1249.75, 1250.28, 1250.93
WORK DONE	DISTANCE (Feet)	73.38, 46.30, 35.57, 32.30, 29.54, 22.55, 21.30, 21.30, 22.55, 32.30, 46.30, 50.52, 63.36, 85.89
DESIGNED SECTION	ELEVATIONS (Feet)	1241.19, 1241.19, 1233.66, 1233.66, 1233.66, 1241.19, 1241.19
DESIGNED SECTION	DISTANCE (Feet)	21.30, 20.30, 9.00, 0.00, 9.00, 20.30, 21.30
NSL	ELEVATIONS (Feet)	1246.88, 1247.49, 1250.14, 1250.92, 1251.05, 1250.69, 1249.88, 1245.26, 1244.37, 1242.29, 1235.70, 1234.22, 1235.31, 1242.23, 1243.30, 1247.97, 1249.64, 1250.70, 1250.43, 1250.83
NSL	DISTANCE (Feet)	74.21, 61.64, 50.67, 46.15, 34.33, 29.47, 25.84, 18.46, 15.04, 12.40, 8.63, 0.00, 8.74, 12.04, 16.85, 16.90, 30.49, 33.99, 57.15, 86.34

CROSS SECTION AT RD 13+250



WORK DONE	ELEVATIONS (Feet)	1248.62, 1249.27, 1249.84, 1249.82, 1249.14, 1247.12, 1247.12, 1241.12, 1241.12, 1244.24, 1244.21, 1246.86, 1246.42, 1247.62, 1247.12, 1247.86
WORK DONE	DISTANCE (Feet)	71.30, 61.30, 45.91, 33.78, 27.95, 22.55, 21.30, 21.30, 22.55, 28.80, 45.30, 49.30, 61.30, 91.23
DESIGNED SECTION	ELEVATIONS (Feet)	1241.13, 1241.13, 1233.60, 1233.60, 1233.60, 1241.13, 1241.13
DESIGNED SECTION	DISTANCE (Feet)	21.30, 20.30, 9.00, 0.00, 9.00, 20.30, 21.30
NSL	ELEVATIONS (Feet)	1247.77, 1248.02, 1249.22, 1249.51, 1249.52, 1249.31, 1243.77, 1242.21, 1235.76, 1234.80, 1235.89, 1242.35, 1244.82, 1249.38, 1249.55, 1245.94, 1245.77, 1247.74, 1247.18
NSL	DISTANCE (Feet)	80.00, 62.44, 51.75, 47.03, 34.71, 31.31, 13.09, 11.87, 8.79, 0.00, 8.77, 11.92, 15.31, 23.25, 30.83, 36.87, 41.33, 45.88, 90.88

CROSS SECTION AT RD 13+500

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

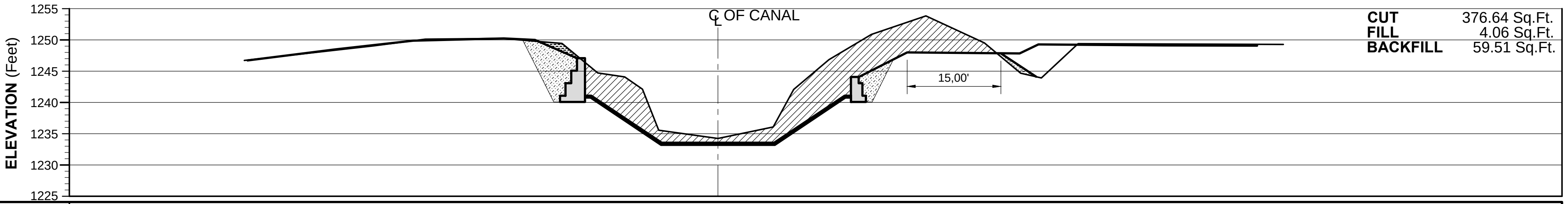
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/24	0



WORK DONE

ELEVATIONS (Feet)	1246.70	1248.46	1249.86	1250.24	1249.97	1247.08	1247.08	1241.08	1241.08	1244.08	1244.08	1247.97	1247.81	1249.28	1249.12	1249.08
DISTANCE (Feet)	75.30	61.30	48.75	34.30	29.30	22.55	21.30	21.30	22.55	30.30	48.30	51.30	71.30	86.30		

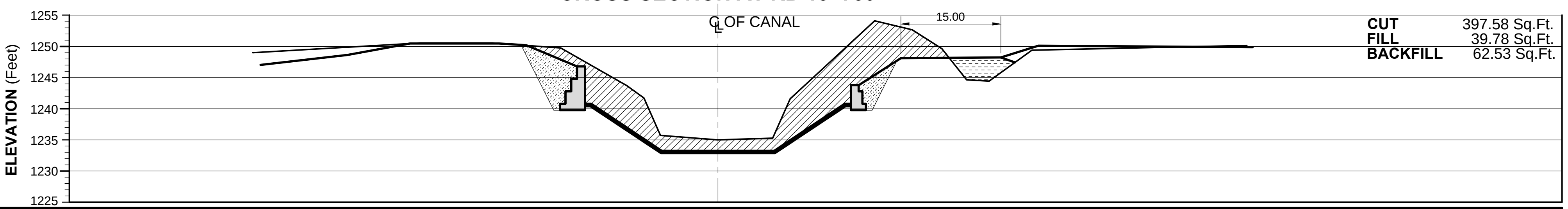
DESIGNED SECTION

ELEVATIONS (Feet)	1241.07	1241.07	1233.54	1233.54	1233.54	1241.07	1241.07
DISTANCE (Feet)	21.30	20.30	9.00	0.00	9.00	20.30	21.30

NSL

ELEVATIONS (Feet)	1246.72	1249.04	1250.11	1250.24	1249.44	1244.69	1244.08	1242.09	1235.55	1234.25	1236.06	1242.08	1246.83	1250.85	1253.82	1249.50	1244.65	1243.90	1249.40	1249.25
DISTANCE (Feet)	75.79	55.21	46.83	34.68	24.96	19.22	14.90	12.08	9.49	0.00	8.86	12.14	17.75	24.58	33.30	42.65	48.46	51.78	57.64	90.50

CROSS SECTION AT RD 13+750



WORK DONE

ELEVATIONS (Feet)	1247.28	1248.88	1250.71	1250.70	1250.41	1247.03	1247.03	1241.03	1241.03	1244.03	1244.03	1248.34	1248.48	1250.33	1250.09
DISTANCE (Feet)	73.20	59.30	49.30	35.09	30.69	22.55	21.30	21.30	22.55	29.30	45.30	51.30	85.58		

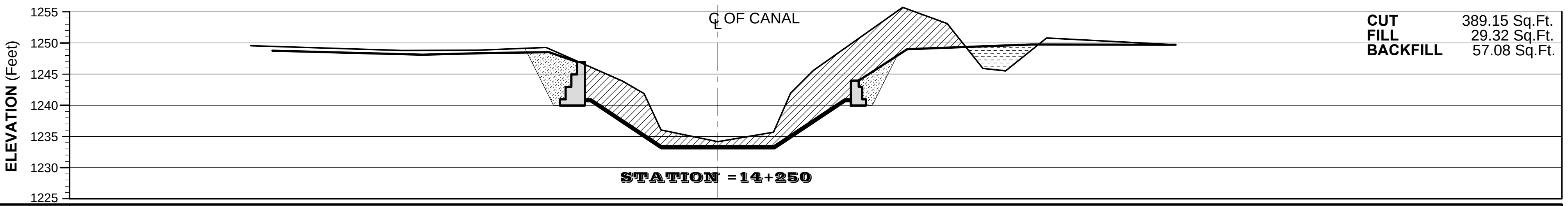
DESIGNED SECTION

ELEVATIONS (Feet)	1241.01	1241.01	1233.48	1233.48	1233.48	1241.01	1241.01
DISTANCE (Feet)	21.30	20.30	9.00	0.00	9.00	20.30	21.30

NSL

ELEVATIONS (Feet)	1249.22	1250.80	1250.78	1250.00	1243.93	1241.94	1235.94	1235.24	1235.53	1241.84	1254.34	1252.90	1249.87	1244.87	1244.65	1249.62	1250.39
DISTANCE (Feet)	74.44	47.68	36.07	25.15	14.59	11.85	9.19	0.00	8.74	11.55	25.08	31.07	35.82	39.80	43.38	50.24	84.64

CROSS SECTION AT RD 14+000



WORK DONE

ELEVATIONS (Feet)	1248.74	1248.12	1248.37	1248.49	1246.96	1246.96	1240.96	1240.96	1243.96	1243.96	1248.97	1249.73	1249.69
DISTANCE (Feet)	71.30	47.30	36.30	27.01	22.55	21.30	21.30	22.55	30.30	50.30	71.30		

DESIGNED SECTION

ELEVATIONS (Feet)	1240.95	1240.95	1233.42	1233.42	1233.42	1240.95	1240.95
DISTANCE (Feet)	21.30	20.30	9.00	0.00	9.00	20.30	21.30

NSL

ELEVATIONS (Feet)	1249.56	1248.78	1248.81	1249.27	1243.88	1241.87	1236.01	1234.14	1235.68	1241.91	1245.58	1255.71	1253.12	1245.91	1245.51	1250.77	1249.69
DISTANCE (Feet)	74.78	50.62	38.49	27.48	15.26	11.83	9.09	0.00	8.92	11.62	15.31	29.57	36.70	42.42	46.06	52.61	73.27

CROSS SECTION AT RD 14+250

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 24 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

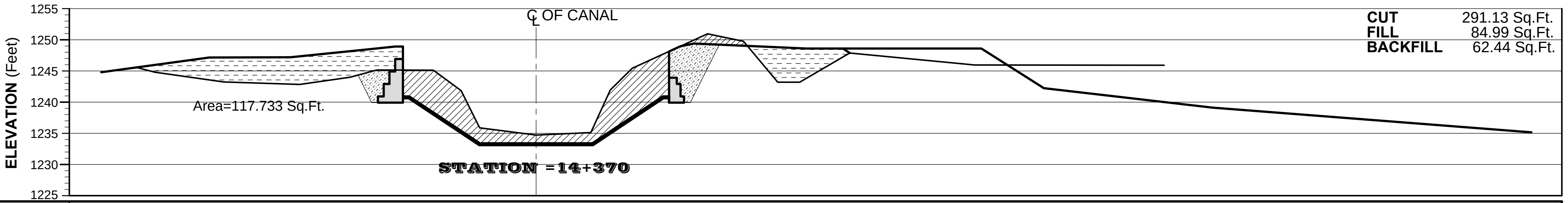
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/25	0

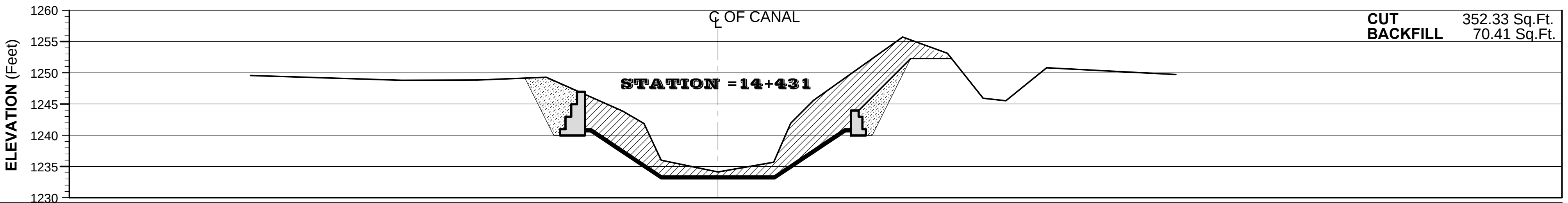


WORK DONE	ELEVATIONS (Feet)	1244.80, 1247.15, 1247.19, 1248.41, 1248.92, 1248.92, 1240.92, 1240.92, 1248.92, 1248.92, 1249.38, 1248.59, 1248.57, 1242.23, 1239.13, 1235.17
WORK DONE	DISTANCE (Feet)	69.59, 52.30, 39.30, 27.15, 22.55, 21.30, 21.30, 22.55, 25.30, 43.30, 71.30, 81.30, 108.30, 159.30
DESIGNED SECTION	ELEVATIONS (Feet)	1240.92, 1240.92, 1233.39, 1233.39, 1233.39, 1240.92, 1240.92
DESIGNED SECTION	DISTANCE (Feet)	21.30, 20.30, 9.00, 0.00, 9.00, 20.30, 21.30
NSL	ELEVATIONS (Feet)	1244.78, 1243.25, 1242.84, 1244.01, 1245.14, 1245.13, 1241.84, 1235.89, 1234.73, 1235.10, 1241.95, 1245.42, 1250.93, 1249.74, 1243.21, 1243.21, 1247.88, 1245.97, 1245.93
NSL	DISTANCE (Feet)	61.00, 50.02, 37.81, 29.74, 25.48, 16.42, 12.00, 9.04, 0.00, 8.77, 11.88, 15.41, 27.43, 33.22, 38.68, 42.20, 50.22, 70.20, 100.50

CROSS SECTION AT RD 14+370

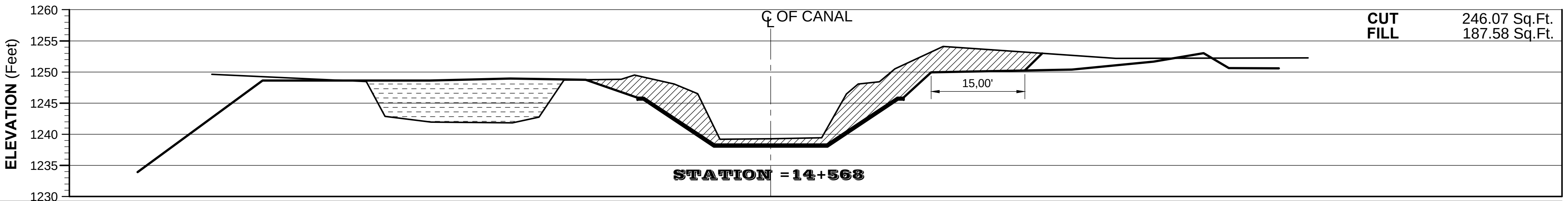
LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1240.95, 1240.95, 1233.42, 1233.42, 1233.42, 1240.95, 1240.95
DESIGNED SECTION	DISTANCE (Feet)	20.80, 20.30, 9.00, 0.00, 9.00, 20.30, 20.80
NSL	ELEVATIONS (Feet)	1249.56, 1248.78, 1248.81, 1249.27, 1243.88, 1241.87, 1236.01, 1234.14, 1235.68, 1241.91, 1245.58, 1255.71, 1253.12, 1245.91, 1245.51, 1250.77, 1249.69
NSL	DISTANCE (Feet)	74.78, 50.62, 38.49, 27.48, 15.26, 11.83, 9.09, 0.00, 8.92, 11.62, 15.31, 29.57, 36.70, 42.42, 46.06, 52.61, 73.27

CROSS SECTION AT RD 14+431



WORK DONE	ELEVATIONS (Feet)	1228.90, 1243.62, 1243.61, 1243.96, 1243.76, 1240.90, 1240.90, 1244.96, 1245.40, 1246.66, 1248.02, 1245.64, 1245.60
WORK DONE	DISTANCE (Feet)	101.30, 81.30, 54.50, 41.69, 29.58, 21.30, 21.30, 25.68, 48.20, 61.30, 69.30, 73.30, 81.30
DESIGNED SECTION	ELEVATIONS (Feet)	1240.87, 1240.87, 1233.34, 1233.34, 1233.34, 1240.87, 1240.87
DESIGNED SECTION	DISTANCE (Feet)	21.30, 20.30, 9.00, 0.00, 9.00, 20.30, 21.30
NSL	ELEVATIONS (Feet)	1244.61, 1243.47, 1237.87, 1236.96, 1236.83, 1237.76, 1243.71, 1243.82, 1244.51, 1243.05, 1241.51, 1234.19, 1234.26, 1234.42, 1241.46, 1243.07, 1243.44, 1245.51, 1249.09, 1247.18, 1247.27
NSL	DISTANCE (Feet)	89.44, 64.72, 61.72, 54.35, 41.33, 37.09, 33.07, 23.93, 21.78, 15.43, 11.69, 8.13, 0.00, 8.16, 12.13, 14.00, 17.40, 19.89, 27.61, 55.23, 86.00

CROSS SECTION AT RD 14+568

TENDER DRAWING

SHEET 25 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

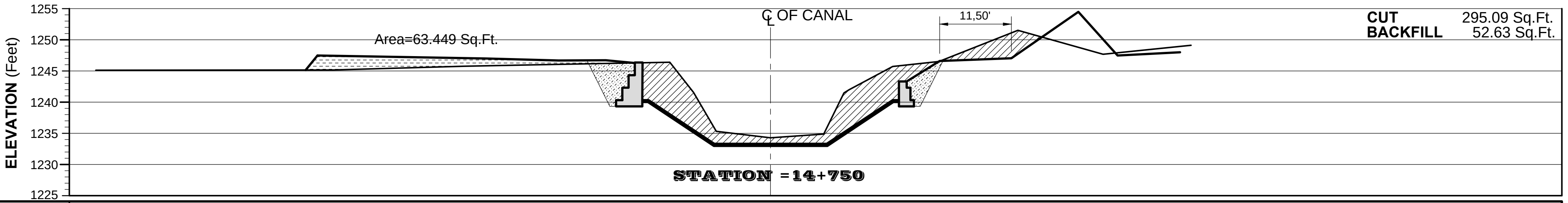
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

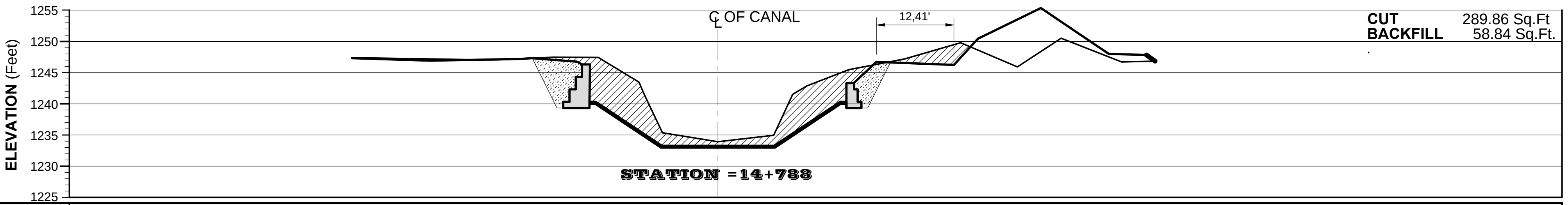
REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/26	0



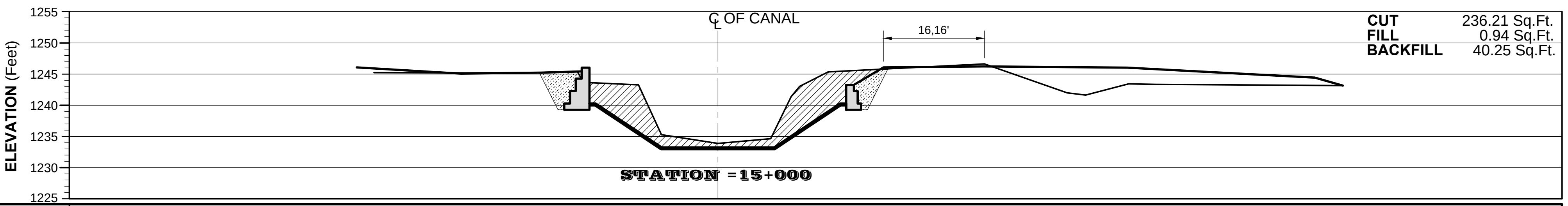
WORK DONE	ELEVATIONS (Feet)	1247.48, 1246.98, 1246.68, 1246.72, 1246.48, 1246.98, 1240.48, 1240.48, 1243.48, 1243.48, 1246.58, 1247.02, 1254.48, 1247.48, 1247.98
WORK DONE	DISTANCE (Feet)	72.54, 45.54, 33.94, 26.39, 21.79, 20.54, 20.55, 21.80, 27.05, 38.55, 49.28, 55.55, 65.55
DESIGNED SECTION	ELEVATIONS (Feet)	1240.33, 1240.33, 1233.30, 1233.30, 1233.30, 1240.33, 1240.33
DESIGNED SECTION	DISTANCE (Feet)	20.55, 19.55, 9.00, 0.00, 9.00, 19.55, 20.55
NSL	ELEVATIONS (Feet)	1245.09, 1245.15, 1245.73, 1245.98, 1246.39, 1241.55, 1235.32, 1234.29, 1234.86, 1241.46, 1241.99, 1245.70, 1246.49, 1251.49, 1247.68, 1249.11
NSL	DISTANCE (Feet)	108.00, 70.00, 49.09, 37.15, 16.15, 12.33, 8.71, 0.00, 8.50, 11.76, 12.57, 19.54, 26.93, 39.57, 53.22, 67.29

CROSS SECTION AT RD 14+750



WORK DONE	ELEVATIONS (Feet)	1247.31, 1246.92, 1247.02, 1247.06, 1246.75, 1246.34, 1246.34, 1240.34, 1240.34, 1243.34, 1246.70, 1246.21, 1250.43, 1255.34, 1248.00, 1247.84
WORK DONE	DISTANCE (Feet)	58.55, 46.09, 31.65, 28.55, 22.55, 21.80, 20.55, 20.55, 25.35, 37.76, 41.62, 51.69, 62.55, 68.55
DESIGNED SECTION	ELEVATIONS (Feet)	1240.32, 1240.32, 1233.29, 1233.29, 1233.29, 1240.32, 1240.32
DESIGNED SECTION	DISTANCE (Feet)	20.55, 19.55, 9.00, 0.00, 9.00, 19.55, 20.55
NSL	ELEVATIONS (Feet)	1247.39, 1247.03, 1247.07, 1247.45, 1247.41, 1243.48, 1241.52, 1235.37, 1233.91, 1234.97, 1241.50, 1242.86, 1245.45, 1247.19, 1249.79, 1245.89, 1250.52, 1246.70, 1246.83
NSL	DISTANCE (Feet)	58.46, 36.31, 34.22, 26.40, 19.17, 12.65, 11.80, 8.88, 0.00, 8.92, 11.95, 14.25, 20.94, 29.89, 38.84, 47.91, 54.91, 64.58, 69.94

CROSS SECTION AT RD 14+788



WORK DONE	ELEVATIONS (Feet)	1246.07, 1245.08, 1245.09, 1244.92, 1245.67, 1245.63, 1240.27, 1240.27, 1243.27, 1246.06, 1246.24, 1246.03, 1244.41
WORK DONE	DISTANCE (Feet)	57.79, 41.09, 29.19, 22.05, 21.80, 20.55, 20.55, 26.51, 42.55, 65.55, 95.55
DESIGNED SECTION	ELEVATIONS (Feet)	1240.26, 1240.26, 1233.23, 1233.23, 1233.23, 1240.26, 1240.26
DESIGNED SECTION	DISTANCE (Feet)	20.55, 19.55, 9.00, 0.00, 9.00, 19.55, 20.55
NSL	ELEVATIONS (Feet)	1245.23, 1245.18, 1245.21, 1245.41, 1243.65, 1243.26, 1241.26, 1235.26, 1233.86, 1234.63, 1241.40, 1243.04, 1245.35, 1246.62, 1241.99, 1241.62, 1243.41, 1243.36, 1243.16
NSL	DISTANCE (Feet)	55.00, 40.56, 29.06, 22.49, 21.51, 12.72, 11.80, 9.03, 0.00, 8.44, 11.72, 13.10, 17.64, 42.66, 55.88, 58.86, 65.71, 70.00, 100.00

CROSS SECTION AT RD 15+000

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

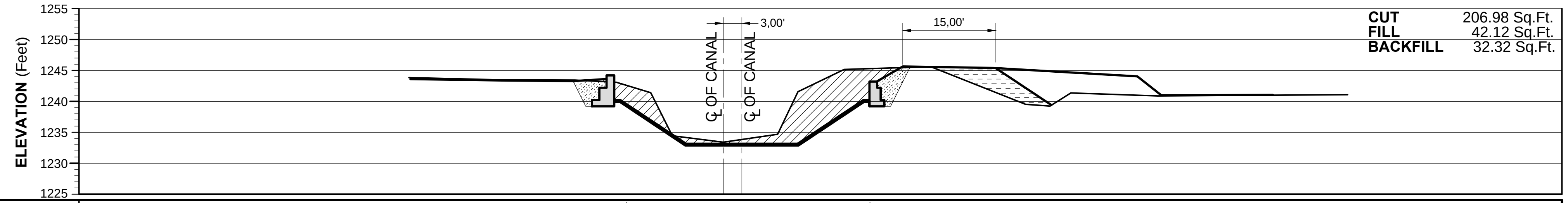
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/27	0

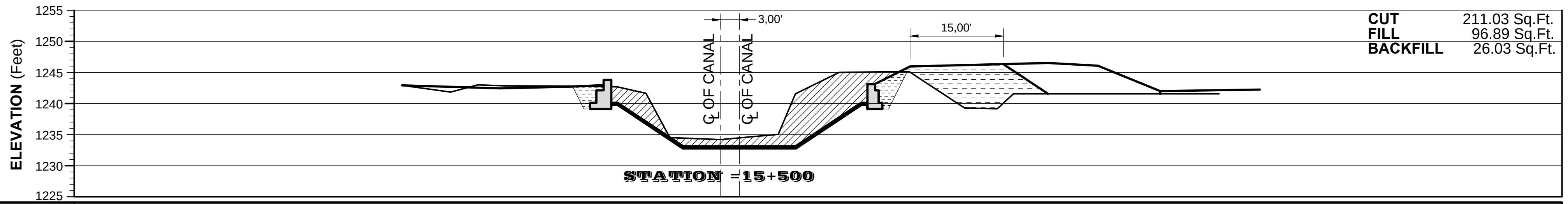


WORK DONE	ELEVATIONS (Feet)	1243.60	1243.35	1243.27	1243.60	1244.19	1244.19	1240.19	1240.19	1243.19	1245.63	1245.37	1244.01	1241.00	1241.04		
WORK DONE	DISTANCE (Feet)	50.40	34.56	24.08	19.05	18.80	17.55	23.55	28.92	43.55	66.70	70.55	88.55				
DESIGNED SECTION	ELEVATIONS (Feet)	1240.19	1240.19	1233.16	1233.16	1233.16	1240.19	1240.19									
DESIGNED SECTION	DISTANCE (Feet)	17.55	16.55	6.00	3.00	12.00	22.55	23.55									
NSL	ELEVATIONS (Feet)	1243.82	1243.48	1243.41	1243.05	1241.39	1234.43	1233.39	1234.67	1241.56	1245.15	1245.59	1239.50	1239.25	1241.36	1240.89	1241.09
NSL	DISTANCE (Feet)	50.65	35.78	23.88	17.21	11.68	8.22	0.00	8.75	12.05	19.47	33.42	48.71	52.63	56.00	70.00	100.60

CROSS SECTION AT RD 15+250

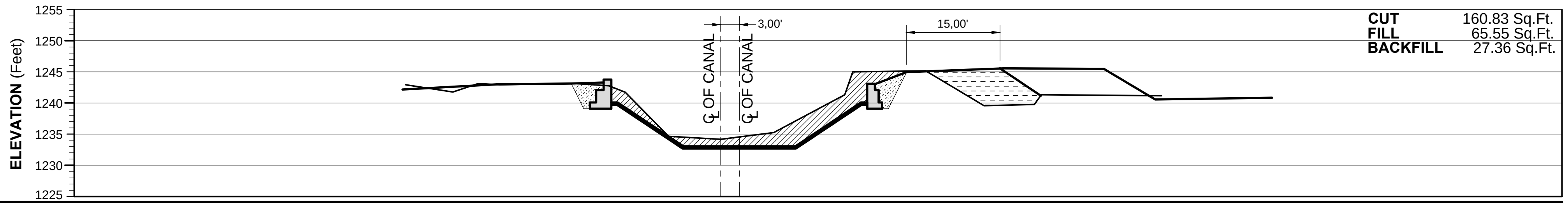
LEGEND

EXISTING CROSS SECTION/NSL	
DESIGNED CROSS SECTION	
FILL	
CUT	
BACKFILL	



WORK DONE	ELEVATIONS (Feet)	1242.92	1242.43	1242.70	1242.96	1244.17	1244.17	1240.17	1240.17	1243.17	1243.17	1245.96	1246.50	1246.05	1241.99	1242.22		
WORK DONE	DISTANCE (Feet)	51.18	35.35	23.99	19.05	18.80	17.55	23.55	24.80	30.40	52.55	60.55	70.55	86.55				
DESIGNED SECTION	ELEVATIONS (Feet)	1240.13	1240.13	1233.10	1233.10	1233.10	1240.13	1240.13										
DESIGNED SECTION	DISTANCE (Feet)	17.55	16.55	6.00	3.00	12.00	22.55	23.55										
NSL	ELEVATIONS (Feet)	1242.76	1241.83	1243.00	1242.84	1242.79	1242.69	1241.63	1234.50	1234.19	1235.04	1241.57	1244.98	1245.15	1239.27	1239.14	1241.54	1241.57
NSL	DISTANCE (Feet)	50.00	43.34	39.00	34.67	22.72	16.58	12.00	8.15	0.00	9.24	12.00	18.99	30.21	39.17	44.41	47.00	80.00

CROSS SECTION AT RD 15+500



TENDER DRAWING

WORK DONE	ELEVATIONS (Feet)	1242.18	1243.01	1243.14	1243.28	1244.06	1244.06	1240.06	1240.06	1243.06	1243.06	1244.97	1245.59	1245.51	1240.57	1240.87		
WORK DONE	DISTANCE (Feet)	51.05	35.75	23.99	19.05	18.80	17.55	23.55	24.80	29.85	45.55	61.55	69.76	88.55				
DESIGNED SECTION	ELEVATIONS (Feet)	1240.10	1240.10	1233.07	1233.07	1233.07	1240.10	1240.10										
DESIGNED SECTION	DISTANCE (Feet)	17.55	16.55	6.00	3.00	12.00	22.55	23.55										
NSL	ELEVATIONS (Feet)	1242.94	1241.79	1243.12	1242.94	1243.14	1242.76	1241.72	1234.66	1234.18	1235.26	1241.34	1245.00	1245.18	1239.58	1239.76	1241.32	1241.18
NSL	DISTANCE (Feet)	50.54	42.96	38.88	35.47	23.40	17.94	15.31	8.35	0.00	8.55	19.93	21.22	32.94	42.28	50.39	51.51	70.75

CROSS SECTION AT RD 15+620

SHEET 27 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

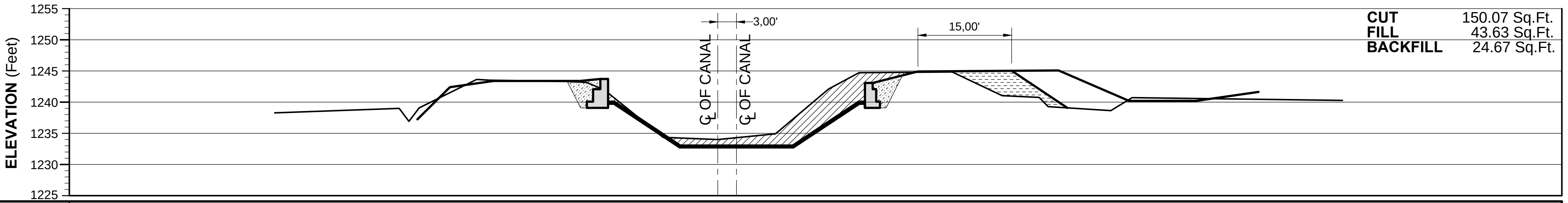
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	
CHECKED	
RECOMMENDED	
APPROVED	

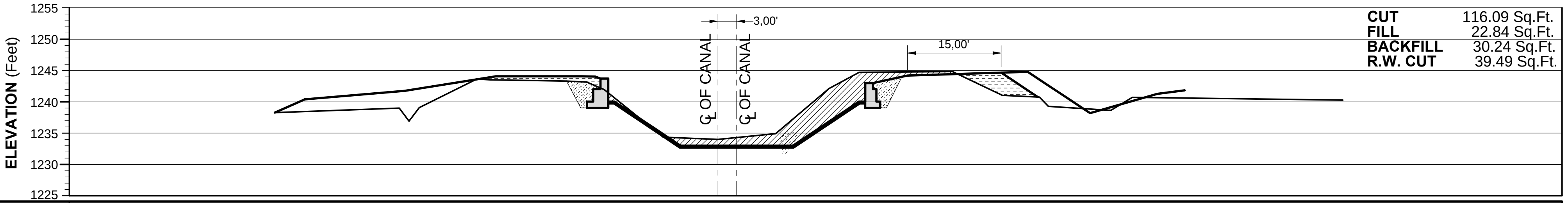
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/28	0



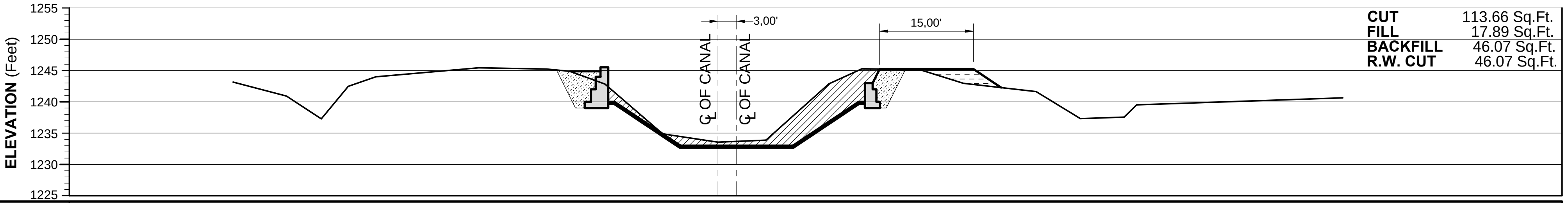
WORK DONE	ELEVATIONS (Feet)	1237.24, 1242.38, 1243.38, 1243.38, 1244.06, 1244.06, 1240.06, 1240.06, 1243.06, 1243.06, 1244.91, 1245.06, 1240.21, 1240.18, 1241.61
WORK DONE	DISTANCE (Feet)	48.07, 42.87, 35.89, 22.05, 18.80, 17.55, 23.55, 24.80, 32.05, 54.55, 65.85, 76.55, 86.55
DESIGNED SECTION	ELEVATIONS (Feet)	1240.06, 1240.06, 1233.03, 1233.03, 1233.03, 1240.06, 1240.06
DESIGNED SECTION	DISTANCE (Feet)	17.55, 16.55, 6.00, 3.00, 12.00, 22.55, 23.55
NSL	ELEVATIONS (Feet)	1238.29, 1238.98, 1236.93, 1239.09, 1243.61, 1243.50, 1243.32, 1243.15, 1241.93, 1234.34, 1233.98, 1234.91, 1242.12, 1244.69, 1244.84, 1241.03, 1240.74, 1239.28, 1238.62, 1240.71, 1240.28
NSL	DISTANCE (Feet)	70.90, 51.01, 49.45, 47.80, 38.59, 36.44, 24.23, 21.00, 18.18, 8.75, 0.00, 9.22, 17.77, 22.58, 37.51, 45.52, 51.45, 52.86, 62.89, 66.31, 100.00

CROSS SECTION AT RD 15+750



WORK DONE	ELEVATIONS (Feet)	1240.37, 1240.37, 1241.75, 1244.08, 1244.08, 1244.00, 1243.80, 1240.00, 1240.00, 1243.00, 1243.00, 1244.17, 1244.79, 1238.21, 1241.25, 1241.81
WORK DONE	DISTANCE (Feet)	69.12, 66.12, 50.12, 35.55, 21.75, 18.80, 17.55, 23.55, 24.80, 30.33, 49.55, 59.55, 70.31, 74.68
DESIGNED SECTION	ELEVATIONS (Feet)	1240.03, 1240.03, 1233.00, 1233.00, 1233.00, 1240.03, 1240.03
DESIGNED SECTION	DISTANCE (Feet)	17.55, 16.55, 6.00, 3.00, 12.00, 22.55, 23.55
NSL	ELEVATIONS (Feet)	1238.98, 1236.93, 1239.09, 1243.61, 1243.50, 1243.32, 1243.15, 1241.93, 1234.34, 1233.98, 1234.91, 1242.12, 1244.69, 1244.84, 1241.03, 1240.74, 1239.28, 1238.62, 1240.71, 1240.28
NSL	DISTANCE (Feet)	51.01, 49.45, 47.80, 38.59, 36.44, 24.23, 21.00, 18.18, 8.75, 0.00, 9.22, 17.77, 22.58, 37.51, 45.52, 51.45, 52.86, 62.89, 66.31, 100.00

CROSS SECTION AT RD 15+836



WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1240.00, 1240.00, 1232.97, 1232.97, 1232.97, 1240.00, 1240.00
DESIGNED SECTION	DISTANCE (Feet)	17.05, 16.55, 6.00, 3.00, 12.00, 22.55, 23.05
NSL	ELEVATIONS (Feet)	1243.14, 1240.90, 1237.26, 1242.48, 1243.98, 1245.92, 1245.24, 1244.88, 1242.82, 1234.86, 1233.55, 1233.88, 1242.87, 1245.26, 1245.13, 1242.94, 1241.63, 1237.32, 1237.55, 1239.52, 1240.62
NSL	DISTANCE (Feet)	77.58, 69.00, 63.45, 59.14, 54.74, 38.27, 27.38, 23.67, 18.05, 8.82, 0.00, 7.71, 17.79, 23.07, 32.27, 39.28, 50.93, 58.00, 65.00, 67.00, 100.00

CROSS SECTION AT RD 16+000

LEGEND

EXISTING CROSS SECTION/NSL	
DESIGNED CROSS SECTION	
FILL	
CUT	
BACKFILL	

TENDER DRAWING

SHEET 28 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

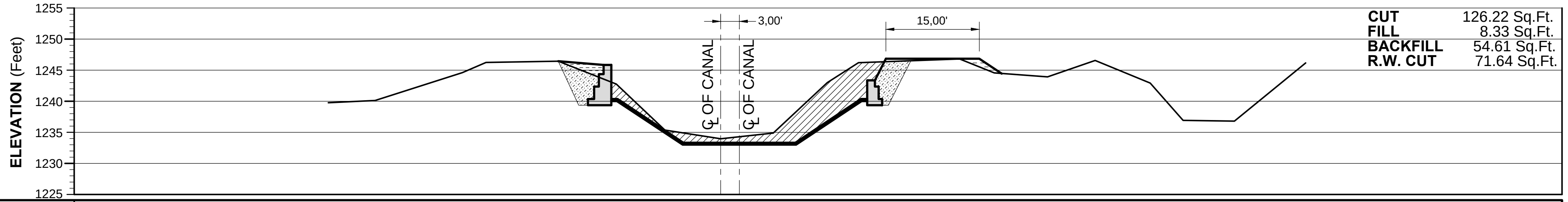
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

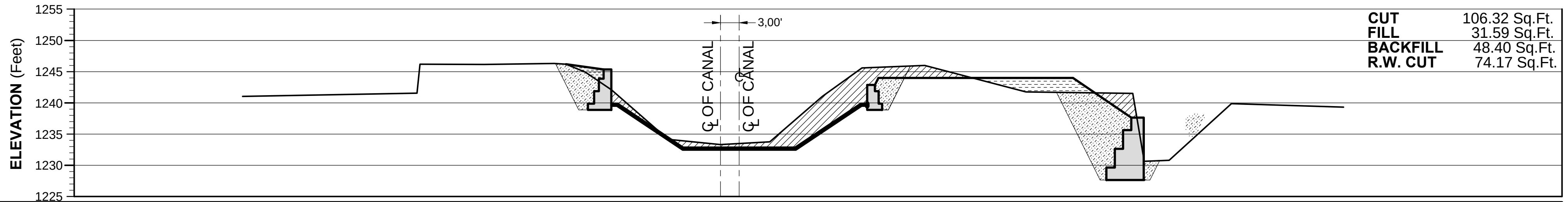
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/29	0



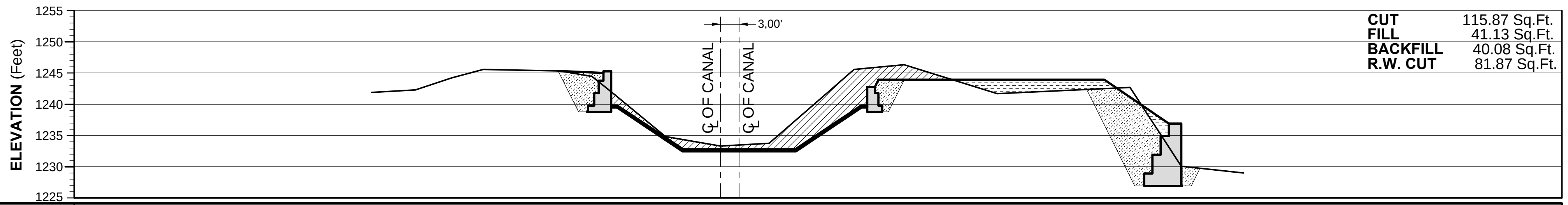
WORK DONE	ELEVATIONS (Feet)																			
	DISTANCE (Feet)																			
DESIGNED SECTION	ELEVATIONS (Feet)	1239.93	1239.93	1232.90	1232.90	1232.90	1239.93	1239.93												
	DISTANCE (Feet)	17.55	16.55	6.00	3.00	12.00	22.55	23.55												
NSL	ELEVATIONS (Feet)	1239.36	1239.69	1244.16	1245.80	1246.00	1242.34	1234.95	1233.54	1234.47	1242.59	1245.79	1246.39	1244.12	1243.51	1246.12	1242.51	1236.52	1236.38	1245.72
	DISTANCE (Feet)	63.00	55.48	41.47	37.65	26.07	16.76	8.93	0.00	8.44	17.15	22.12	38.35	43.94	52.50	60.13	68.96	74.25	82.49	93.91

CROSS SECTION AT RD 16+250



WORK DONE	ELEVATIONS (Feet)																				
	DISTANCE (Feet)																				
DESIGNED SECTION	ELEVATIONS (Feet)	1239.86	1239.86	1232.83	1232.83	1232.83	1239.86	1239.86													
	DISTANCE (Feet)	17.05	16.55	6.00	3.00	12.00	22.55	23.05													
NSL	ELEVATIONS (Feet)	1241.02	1241.54	1246.20	1246.13	1246.29	1246.19	1244.90	1242.07	1234.15	1233.30	1233.76	1241.02	1245.59	1245.97	1241.73	1241.51	1230.64	1230.80	1239.86	1239.30
	DISTANCE (Feet)	76.72	48.74	48.27	37.93	26.70	24.80	21.68	17.49	8.42	0.00	7.89	16.33	22.69	32.79	49.00	66.19	68.00	72.00	82.00	100.00

CROSS SECTION AT RD 16+500



WORK DONE	ELEVATIONS (Feet)																	
	DISTANCE (Feet)																	
DESIGNED SECTION	ELEVATIONS (Feet)	1239.80	1239.80	1232.77	1232.77	1232.77	1239.80	1239.80										
	DISTANCE (Feet)	17.05	16.55	6.00	3.00	12.00	22.55	23.05										
NSL	ELEVATIONS (Feet)	1241.90	1242.32	1244.21	1245.57	1245.33	1244.47	1241.93	1234.81	1233.30	1233.75	1241.98	1245.56	1246.32	1241.71	1242.70	1230.05	1229.00
	DISTANCE (Feet)	56.00	49.00	43.22	38.12	25.74	20.65	17.50	8.83	0.00	7.81	17.33	21.44	29.48	44.41	65.74	74.00	84.00

CROSS SECTION AT RD 16+750

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

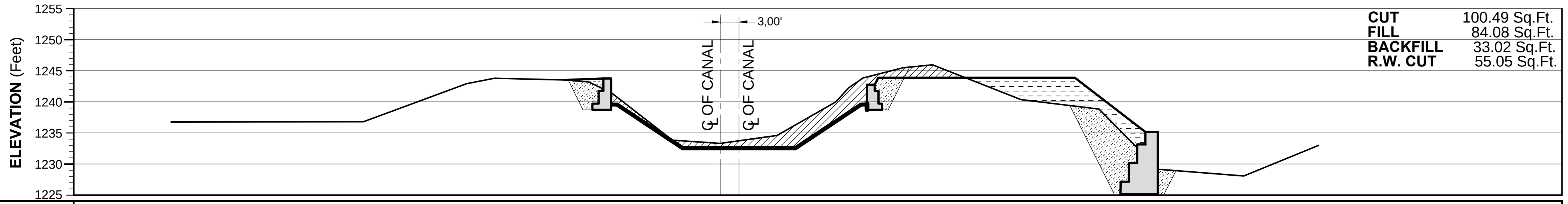
SHEET 29 OF 34

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/30	0



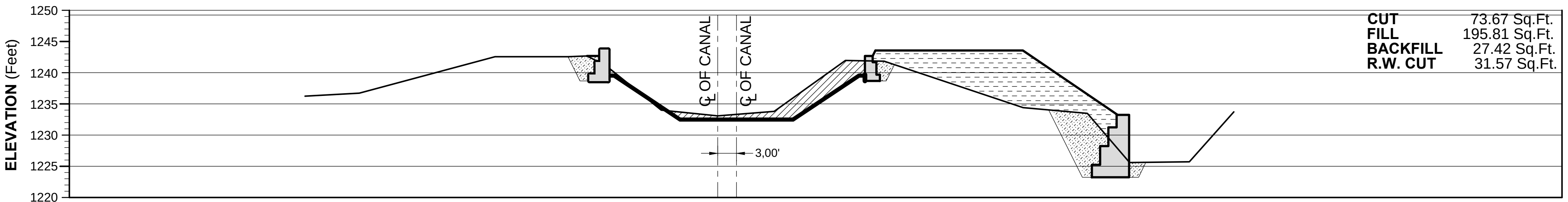
CUT	100.49 Sq.Ft.
FILL	84.08 Sq.Ft.
BACKFILL	33.02 Sq.Ft.
R.W. CUT	55.05 Sq.Ft.

WORK DONE: ELEVATIONS (Feet) / DISTANCE (Feet)

DESIGNED SECTION DISTANCE (Feet)	DESIGNED SECTION ELEVATIONS (Feet)
17.05	1239.73
16.55	1239.73
6.00	1232.70
3.00	1232.70
12.00	1232.70
22.55	1239.73
23.05	1239.73

NSL DISTANCE (Feet)	NSL ELEVATIONS (Feet)
88.19	1236.74
57.28	1236.81
40.74	1242.89
36.26	1243.80
24.92	1243.50
21.12	1243.18
17.45	1241.41
7.71	1233.82
0.00	1233.30
9.10	1234.59
18.53	1240.01
20.58	1242.22
22.90	1243.83
29.31	1245.47
34.05	1245.96
48.26	1240.34
60.78	1238.84
70.29	1229.14
84.00	1228.06
96.00	1233.00

CROSS SECTION AT RD 17+000



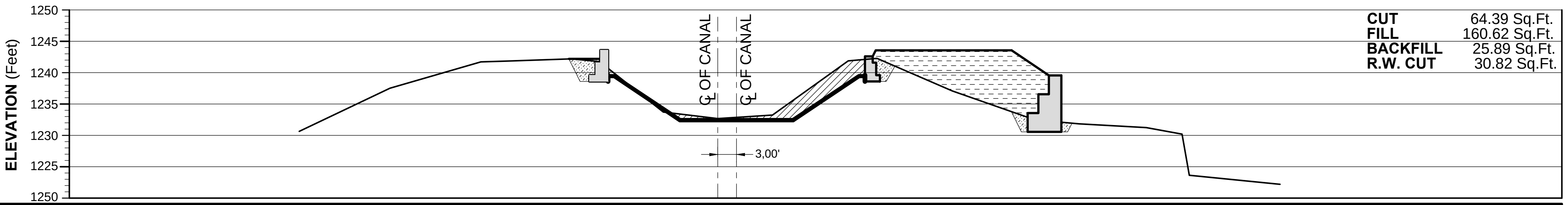
CUT	73.67 Sq.Ft.
FILL	195.81 Sq.Ft.
BACKFILL	27.42 Sq.Ft.
R.W. CUT	31.57 Sq.Ft.

WORK DONE: ELEVATIONS (Feet) / DISTANCE (Feet)

DESIGNED SECTION DISTANCE (Feet)	DESIGNED SECTION ELEVATIONS (Feet)
21.05	1239.67
19.55	1239.67
9.00	1232.64
0.00	1232.64
9.00	1232.64
19.55	1239.67
21.05	1239.67

NSL DISTANCE (Feet)	NSL ELEVATIONS (Feet)
66.04	1236.25
57.38	1236.70
35.65	1242.53
23.99	1242.65
20.93	1242.53
17.92	1241.16
9.06	1234.01
0.00	1233.09
9.02	1233.78
20.44	1241.96
26.62	1241.81
48.84	1234.38
59.15	1233.47
65.89	1225.60
75.44	1225.74
82.59	1233.73

CROSS SECTION AT RD 17+250



CUT	64.39 Sq.Ft.
FILL	160.62 Sq.Ft.
BACKFILL	25.89 Sq.Ft.
R.W. CUT	30.82 Sq.Ft.

WORK DONE: ELEVATIONS (Feet) / DISTANCE (Feet)

DESIGNED SECTION DISTANCE (Feet)	DESIGNED SECTION ELEVATIONS (Feet)
21.05	1239.60
19.55	1239.60
9.00	1232.57
0.00	1232.57
9.00	1232.57
19.55	1239.60
21.05	1239.60

NSL DISTANCE (Feet)	NSL ELEVATIONS (Feet)
67.00	1230.63
52.48	1237.50
37.94	1241.69
33.95	1241.82
23.43	1242.20
18.92	1241.76
8.71	1233.71
0.00	1232.68
8.75	1233.24
20.86	1241.87
25.49	1242.26
37.54	1237.08
50.73	1232.46
57.84	1231.84
68.60	1231.23
74.32	1230.19
75.45	1223.63
90.00	1222.18

CROSS SECTION AT RD 17+500

LEGEND
- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 30 OF 34

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

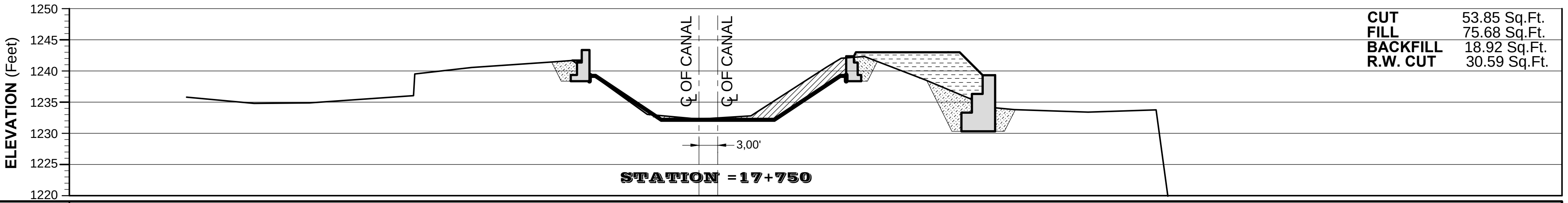
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN
CHECKED
RECOMMENDED
APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

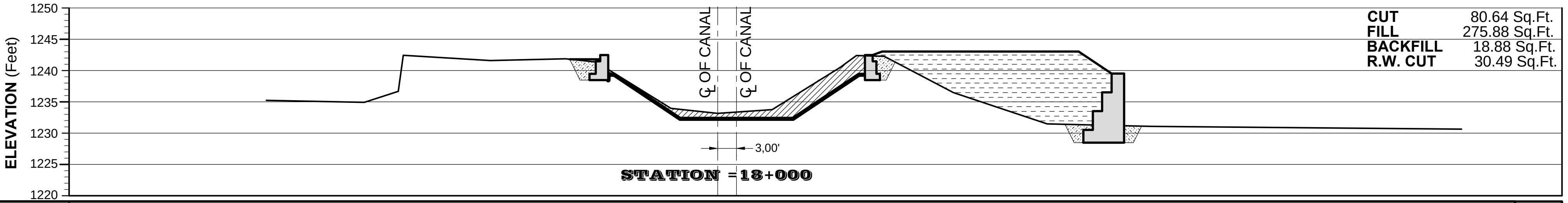
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/31	0



CUT 53.85 Sq.Ft.
FILL 75.68 Sq.Ft.
BACKFILL 18.92 Sq.Ft.
R.W. CUT 30.59 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1239.54, 1239.54, 1232.51, 1232.51, 1232.51, 1239.54, 1239.54
	DISTANCE (Feet)	17.55, 16.55, 6.00, 3.00, 12.00, 22.55, 23.55
NSL	ELEVATIONS (Feet)	1235.97, 1234.97, 1235.08, 1236.21, 1239.71, 1240.72, 1241.60, 1241.87, 1241.18, 1233.23, 1232.46, 1232.98, 1240.78, 1242.20, 1242.50, 1238.72, 1234.35, 1233.99, 1233.60, 1233.95, 1220.11
	DISTANCE (Feet)	82.00, 71.22, 62.33, 45.68, 45.49, 36.36, 23.54, 20.28, 19.35, 8.30, 0.00, 8.30, 20.39, 22.76, 26.44, 36.22, 46.64, 50.44, 62.26, 73.14, 75.00

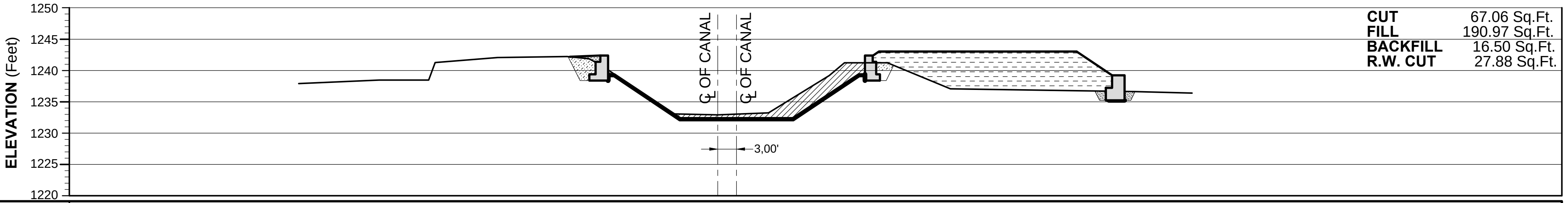
CROSS SECTION AT RD 17+750



CUT 80.64 Sq.Ft.
FILL 275.88 Sq.Ft.
BACKFILL 18.88 Sq.Ft.
R.W. CUT 30.49 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1239.47, 1239.47, 1232.44, 1232.44, 1232.44, 1239.47, 1239.47
	DISTANCE (Feet)	17.55, 16.55, 6.00, 3.00, 12.00, 22.55, 23.55
NSL	ELEVATIONS (Feet)	1235.25, 1234.91, 1236.68, 1242.41, 1241.57, 1241.87, 1241.36, 1233.96, 1233.17, 1233.77, 1240.47, 1242.37, 1242.27, 1236.48, 1231.49, 1231.08, 1230.64
	DISTANCE (Feet)	72.23, 56.58, 51.13, 50.32, 36.42, 24.38, 19.45, 7.51, 0.00, 8.71, 19.53, 22.20, 26.64, 37.70, 52.71, 69.48, 119.00

CROSS SECTION AT RD 18+000



CUT 67.06 Sq.Ft.
FILL 190.97 Sq.Ft.
BACKFILL 16.50 Sq.Ft.
R.W. CUT 27.88 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)	
	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1239.40, 1239.40, 1232.37, 1232.37, 1232.37, 1239.40, 1239.40
	DISTANCE (Feet)	21.05, 19.55, 9.00, 0.00, 9.00, 19.55, 21.05
NSL	ELEVATIONS (Feet)	1237.89, 1238.47, 1238.46, 1241.26, 1242.08, 1241.86, 1242.22, 1240.72, 1233.07, 1232.89, 1233.22, 1239.18, 1241.24, 1241.21, 1237.05, 1236.63, 1236.39
	DISTANCE (Feet)	67.08, 54.19, 46.29, 45.24, 35.25, 24.13, 20.59, 18.46, 7.36, 0.00, 8.11, 17.84, 20.29, 27.17, 37.25, 66.69, 75.90

CROSS SECTION AT RD 18+250

LEGEND

EXISTING CROSS SECTION/NSL	
DESIGNED CROSS SECTION	
FILL	
CUT	
BACKFILL	

TENDER DRAWING

SHEET 31 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

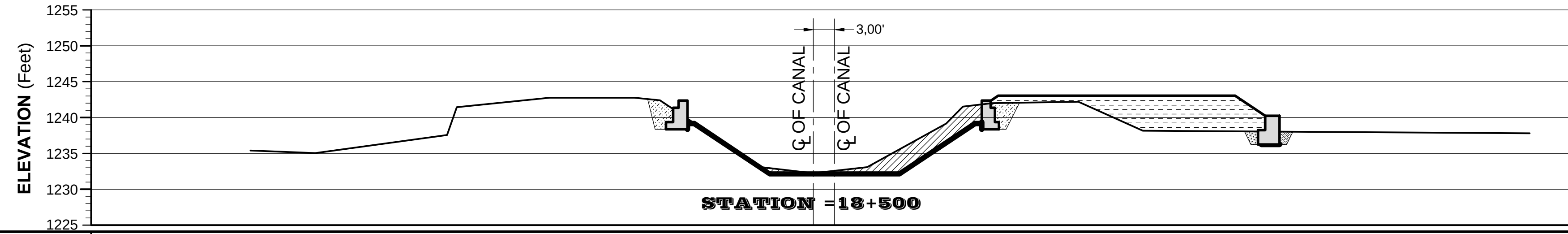
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN
CHECKED
RECOMMENDED
APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

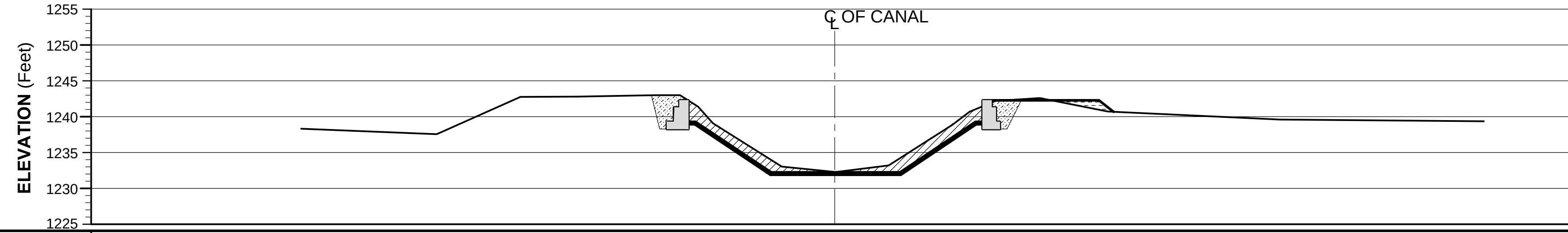
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/32	0



CUT	61.26 Sq.Ft.
FILL	114.83 Sq.Ft.
BACKFILL	19.26 Sq.Ft.
R.W. CUT	31.32 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1239.34, 1239.34, 1232.31, 1232.31, 1232.31, 1239.34, 1239.34
DESIGNED SECTION	DISTANCE (Feet)	21.05, 19.55, 9.00, 0.00, 9.00, 19.55, 21.05
NSL	ELEVATIONS (Feet)	1235.39, 1235.02, 1237.56, 1241.41, 1242.73, 1242.74, 1242.40, 1240.39, 1239.36, 1233.13, 1232.23, 1233.07, 1239.16, 1241.50, 1241.99, 1242.19, 1238.14, 1237.81
NSL	DISTANCE (Feet)	78.54, 69.49, 51.10, 49.72, 36.78, 24.92, 21.36, 18.37, 16.80, 7.59, 0.00, 7.53, 18.57, 20.91, 25.00, 37.00, 46.00, 100.00

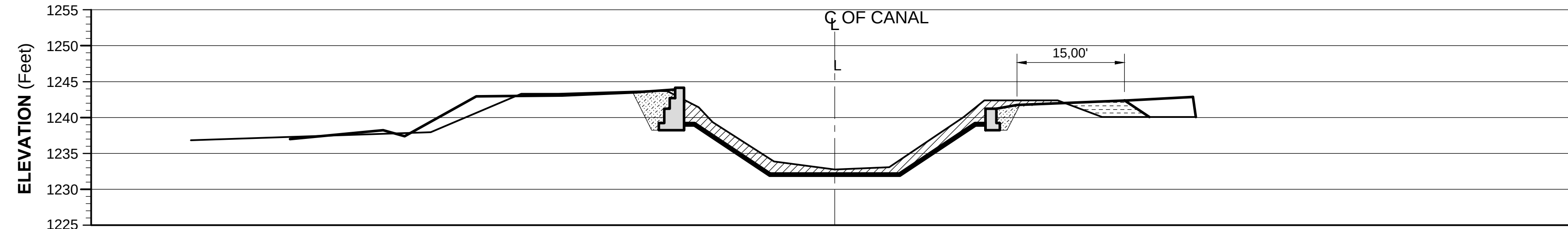
CROSS SECTION AT RD 18+500



CUT	70.83 Sq.Ft.
FILL	5.70 Sq.Ft.
BACKFILL	23.39 Sq.Ft.
R.W. CUT	38.33 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)	
WORK DONE	DISTANCE (Feet)	
DESIGNED SECTION	ELEVATIONS (Feet)	1239.27, 1239.27, 1232.24, 1232.24, 1232.24, 1239.27, 1239.27
DESIGNED SECTION	DISTANCE (Feet)	21.05, 19.55, 9.00, 0.00, 9.00, 19.55, 21.05
NSL	ELEVATIONS (Feet)	1238.33, 1237.58, 1242.77, 1242.81, 1243.00, 1243.00, 1241.42, 1239.10, 1233.04, 1232.31, 1233.23, 1238.87, 1240.70, 1242.19, 1242.60, 1240.73, 1239.60, 1239.36
NSL	DISTANCE (Feet)	74.59, 55.65, 44.00, 35.96, 25.10, 21.71, 19.18, 17.09, 7.49, 0.00, 7.40, 16.34, 18.69, 22.33, 28.51, 38.00, 62.00, 90.50

CROSS SECTION AT RD 18+750



CUT	134.32 Sq.Ft.
FILL	16.59 Sq.Ft.
BACKFILL	26.05 Sq.Ft.

WORK DONE	ELEVATIONS (Feet)	1236.97, 1238.21, 1237.39, 1242.95, 1243.06, 1243.50, 1243.85, 1243.91, 1239.21, 1243.92, 1239.21, 1241.34, 1241.73, 1242.39, 1242.88
WORK DONE	DISTANCE (Feet)	75.05, 62.05, 59.05, 49.05, 37.05, 26.80, 21.55, 21.30, 20.05, 22.05, 26.44, 42.05, 50.99
DESIGNED SECTION	ELEVATIONS (Feet)	1239.21, 1239.21, 1232.18, 1232.18, 1232.18, 1239.21, 1239.21
DESIGNED SECTION	DISTANCE (Feet)	21.05, 19.55, 9.00, 0.00, 9.00, 19.55, 21.05
NSL	ELEVATIONS (Feet)	1236.84, 1237.95, 1243.29, 1243.30, 1243.72, 1243.65, 1241.43, 1239.33, 1233.85, 1232.75, 1233.05, 1240.06, 1242.39, 1242.37, 1240.07, 1240.05
NSL	DISTANCE (Feet)	89.89, 56.41, 43.74, 38.62, 25.00, 23.35, 19.00, 17.05, 8.50, 0.00, 7.58, 17.98, 20.86, 31.13, 37.30, 50.41

CROSS SECTION AT RD 19+000

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 32 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

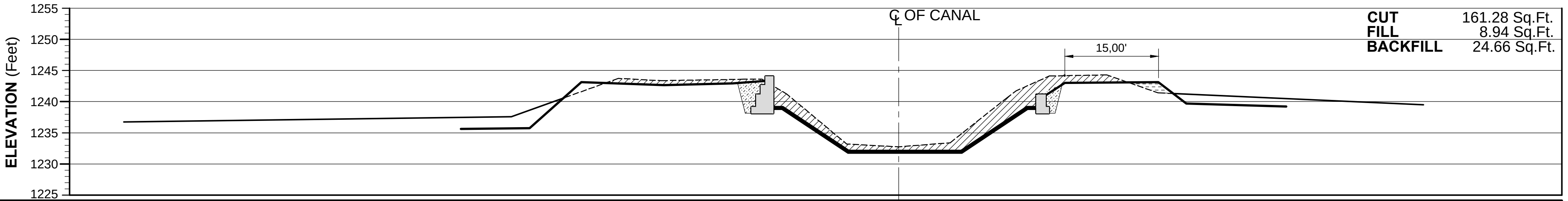
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN
CHECKED
RECOMMENDED
APPROVED

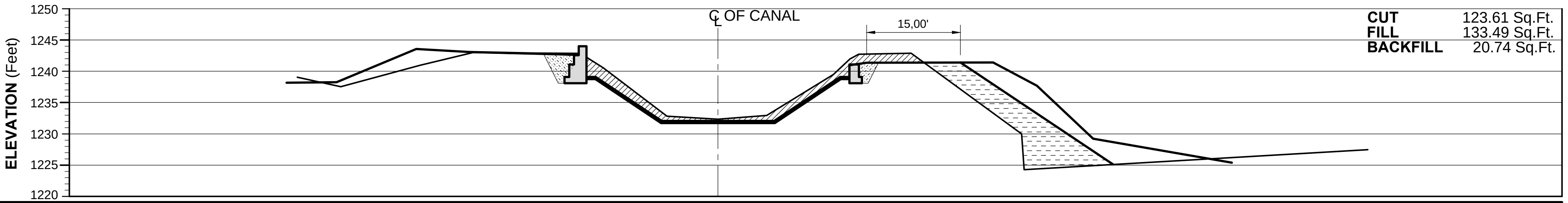
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/33	0



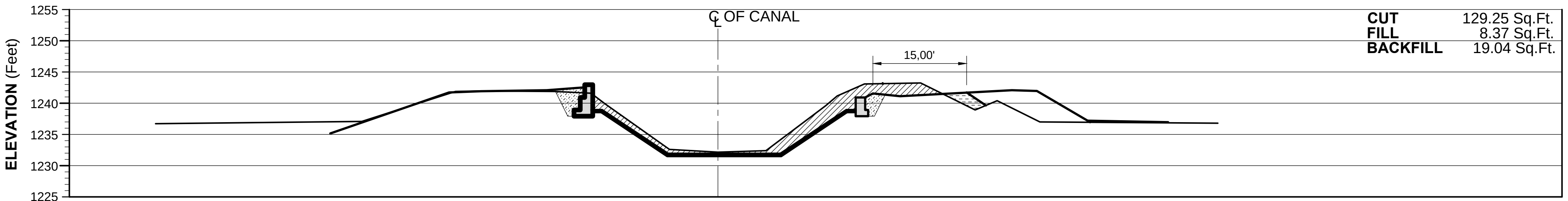
WORK DONE	ELEVATIONS (Feet)	1235.64, 1235.73, 1243.14, 1242.64, 1242.94, 1243.53, 1243.94, 1243.94, 1239.14, 1239.14, 1241.02, 1243.02, 1243.13, 1239.70, 1239.23
WORK DONE	DISTANCE (Feet)	70.05, 59.05, 50.78, 37.55, 26.55, 21.55, 21.30, 20.05, 0.00, 22.05, 26.60, 42.05, 46.05, 62.05
DESIGNED SECTION	ELEVATIONS (Feet)	1239.14, 1239.14, 1232.11, 1232.11, 1232.11, 1239.14, 1239.14
DESIGNED SECTION	DISTANCE (Feet)	20.05, 18.55, 8.00, 0.00, 1.00, 10.00, 20.55, 22.05
NSL	ELEVATIONS (Feet)	1236.74, 1237.59, 1243.74, 1243.38, 1243.60, 1243.60, 1241.23, 1233.20, 1232.74, 1233.39, 1240.71, 1241.74, 1244.13, 1244.30, 1241.42, 1239.50
NSL	DISTANCE (Feet)	124.00, 62.00, 44.86, 37.98, 24.75, 21.86, 17.90, 8.30, 0.00, 8.24, 17.47, 18.83, 24.13, 33.32, 41.52, 84.00

CROSS SECTION AT RD 19+250



WORK DONE	ELEVATIONS (Feet)	1238.18, 1238.24, 1243.56, 1243.10, 1242.84, 1242.80, 1243.98, 1244.03, 1239.08, 1239.08, 1240.97, 1241.37, 1241.41, 1237.71, 1229.21, 1225.37
WORK DONE	DISTANCE (Feet)	69.05, 61.05, 48.30, 39.84, 29.15, 22.66, 21.30, 21.05, 21.05, 23.80, 44.05, 51.05, 60.05, 82.23
DESIGNED SECTION	ELEVATIONS (Feet)	1239.08, 1239.08, 1232.05, 1232.05, 1232.05, 1239.08, 1239.08
DESIGNED SECTION	DISTANCE (Feet)	21.05, 19.55, 9.00, 0.00, 9.00, 19.55, 21.05
NSL	ELEVATIONS (Feet)	1239.07, 1237.54, 1240.96, 1243.02, 1242.69, 1242.54, 1240.55, 1232.84, 1232.33, 1232.93, 1239.51, 1241.93, 1242.73, 1242.89, 1230.00, 1224.28, 1227.46
NSL	DISTANCE (Feet)	67.32, 60.34, 47.65, 39.17, 26.65, 21.50, 18.34, 8.16, 0.00, 7.78, 18.47, 21.13, 22.50, 30.91, 48.61, 49.00, 104.00

CROSS SECTION AT RD 19+500



WORK DONE	ELEVATIONS (Feet)	1235.25, 1241.79, 1242.01, 1242.16, 1242.60, 1242.76, 1242.76, 1239.01, 1239.01, 1241.01, 1241.65, 1241.19, 1242.17, 1242.02, 1237.29, 1237.05
WORK DONE	DISTANCE (Feet)	62.05, 43.05, 37.88, 27.39, 21.55, 21.30, 20.05, 22.05, 24.80, 29.17, 47.05, 51.05, 59.18, 72.05
DESIGNED SECTION	ELEVATIONS (Feet)	1239.01, 1239.01, 1231.98, 1231.98, 1231.98, 1231.98, 1239.01, 1239.01
DESIGNED SECTION	DISTANCE (Feet)	20.05, 18.55, 8.00, 0.00, 1.00, 10.00, 20.55, 22.05
NSL	ELEVATIONS (Feet)	1237.14, 1241.95, 1242.02, 1241.94, 1241.68, 1239.97, 1232.66, 1232.23, 1232.48, 1239.67, 1241.25, 1243.16, 1243.31, 1238.99, 1240.47, 1237.08, 1236.88
NSL	DISTANCE (Feet)	57.00, 42.00, 38.19, 26.14, 20.30, 18.02, 7.77, 0.00, 7.69, 17.23, 19.10, 23.46, 32.44, 41.15, 44.68, 51.53, 80.00

CROSS SECTION AT RD 19+750

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 33 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

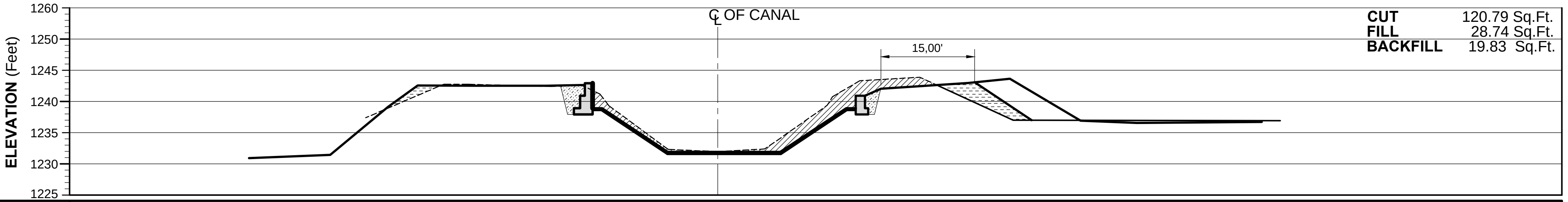
CONSULTANT A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

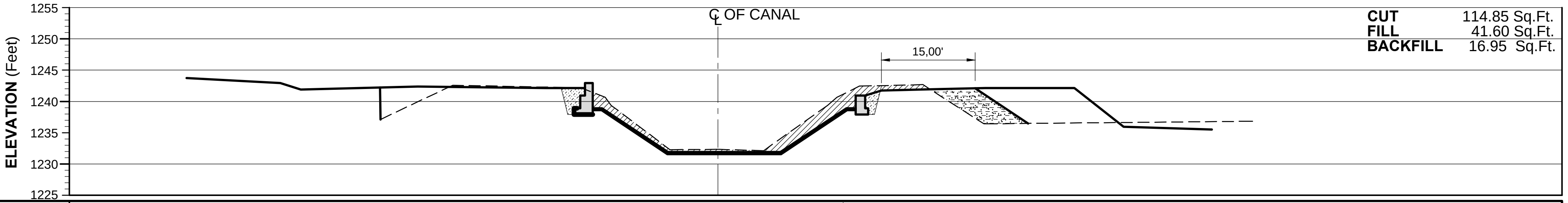
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/34	0



WORK DONE	ELEVATIONS (Feet)	1231.45, 1239.15, 1242.59, 1242.54, 1242.54, 1242.65, 1242.65, 1238.95, 1238.95, 1240.88, 1242.04, 1242.99, 1243.65, 1236.93, 1236.59, 1236.75
	DISTANCE (Feet)	62.05, 52.81, 48.05, 38.72, 27.47, 21.30, 20.05, 22.05, 26.09, 40.05, 46.75, 58.05, 67.05, 87.05
DESIGNED SECTION	ELEVATIONS (Feet)	1238.95, 1238.95, 1231.92, 1231.92, 1231.92, 1231.92, 1238.95, 1238.95
	DISTANCE (Feet)	20.05, 18.55, 8.00, 0.00, 1.00, 10.00, 20.55, 22.05
NSL	ELEVATIONS (Feet)	1237.41, 1242.78, 1242.77, 1242.41, 1242.63, 1241.23, 1239.34, 1232.32, 1231.98, 1232.40, 1239.40, 1240.76, 1243.33, 1243.90, 1237.00, 1236.92
	DISTANCE (Feet)	56.37, 43.85, 39.85, 26.73, 21.88, 18.89, 17.45, 7.95, 0.00, 7.52, 17.52, 18.35, 22.71, 32.32, 47.27, 90.00

CUT	120.79 Sq.Ft.
FILL	28.74 Sq.Ft.
BACKFILL	19.83 Sq.Ft.

CROSS SECTION AT RD 20+000



WORK DONE	ELEVATIONS (Feet)	1243.75, 1242.95, 1241.88, 1242.37, 1242.26, 1242.15, 1242.12, 1242.92, 1242.90, 1238.95, 1238.95, 1240.85, 1241.74, 1242.15, 1242.15, 1235.94, 1235.51
	DISTANCE (Feet)	85.05, 70.05, 66.77, 48.04, 37.99, 27.55, 21.55, 21.30, 20.05, 0.00, 22.05, 26.17, 42.74, 57.05, 64.90, 79.05
DESIGNED SECTION	ELEVATIONS (Feet)	1238.92, 1238.92, 1231.89, 1231.89, 1231.89, 1231.89, 1238.92, 1238.92
	DISTANCE (Feet)	20.05, 18.55, 8.00, 0.00, 1.00, 10.00, 20.55, 22.05
NSL	ELEVATIONS (Feet)	1237.12, 1242.59, 1242.17, 1240.64, 1239.36, 1232.27, 1232.34, 1232.11, 1239.35, 1240.67, 1242.44, 1242.68, 1236.41, 1236.83
	DISTANCE (Feet)	54.00, 42.45, 21.92, 18.06, 17.07, 7.68, 0.00, 7.30, 17.51, 19.02, 22.63, 32.80, 42.56, 85.56

CUT	114.85 Sq.Ft.
FILL	41.60 Sq.Ft.
BACKFILL	16.95 Sq.Ft.

CROSS SECTION AT RD 20+090

LEGEND

- EXISTING CROSS SECTION/NSL
- DESIGNED CROSS SECTION
- FILL
- CUT
- BACKFILL

TENDER DRAWING

SHEET 34 OF 34

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELLING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	
						DRAWN
						CHECKED
						RECOMMENDED
						APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
ROAD ALONG CANAL (WGC)-FROM RD 1+083 TO RD 20+090
DESIGNED SECTIONS SUPERIMPOSED ON EXISTING SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/RAC/35	0

B.3 VILLAGE ROAD BRIDGE
AT
RD 1+700

LIST OF REFERENCE DRAWINGS

SR.	TITLE	DRAWING NO.
A.	**GENERAL REFERENCES**	
1	PROJECT AREA MAP	RWCS-13/TD/GD/01
2	GENERAL NOTES	RWCS-13/TD/GD/02
3	CONTRACT PACKAGES	RWCS-13/TD/GD/03
4	SURVEY CONTROL POINTS - DATA TABLE	RWCS-13/TD/GD/04
5	VILLAGE ROAD BRIDGE AT RD 1+7000 (WGC) - LIST OF REFERENCE DRAWINGS AND NOTES	RWCS-13/TD/WCP/VRB/01

SR.	TITLE	DRAWING NO.
B.	**VILLAGE ROAD BRIDGE AT RD 1+700 (WGC) - REFERENCE DRAWINGS**	
1	GENERAL ARRANGEMENT PLAN	RWCS-13/TD/WCP/VRB/02
2	DETAIL PLAN	RWCS-13/TD/WCP/VRB/03
3	SECTION A-A	RWCS-13/TD/WCP/VRB/04
4	SECTION B-B	RWCS-13/TD/WCP/VRB/05
5	SECTION C-C	RWCS-13/TD/WCP/VRB/06
6	SECTIONS AND DETAILS	RWCS-13/TD/WCP/VRB/07
7	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/VRB/08
8	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/VRB/09
9	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/VRB/10

NOTES

1 LOCATION OF STRUCTURES IS TENTATIVE AND SUBJECT TO VERIFICATION BY THE ENGINEER AT SITE.

2 FOR ELEVATIONS AND DIMENSIONS SHOWN ON DRAWINGS, REFER TO TABLE OF ELEVATIONS AND DIMENSIONS.

3 EXCAVATED MATERIAL SUITABLE FOR EMBANKMENT FILL SHALL BE USED FOR COMPACTED EMBANKMENTS.

4 EARTHFILL IN EMBANKMENTS SHALL BE COMPACTED AS PER SPECIFICATIONS.

5 THE STRUCTURES TO BE CONSTRUCTED ON FILL, SHALL BE PLACED ON FILL COMPACTED TO 95 % OF DRY DENSITY.

6 THE EARTHEN RAMPS AROUND THE STRUCTURE SHALL HAVE SLOPE OF 1:30.

TENDER DRAWING

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

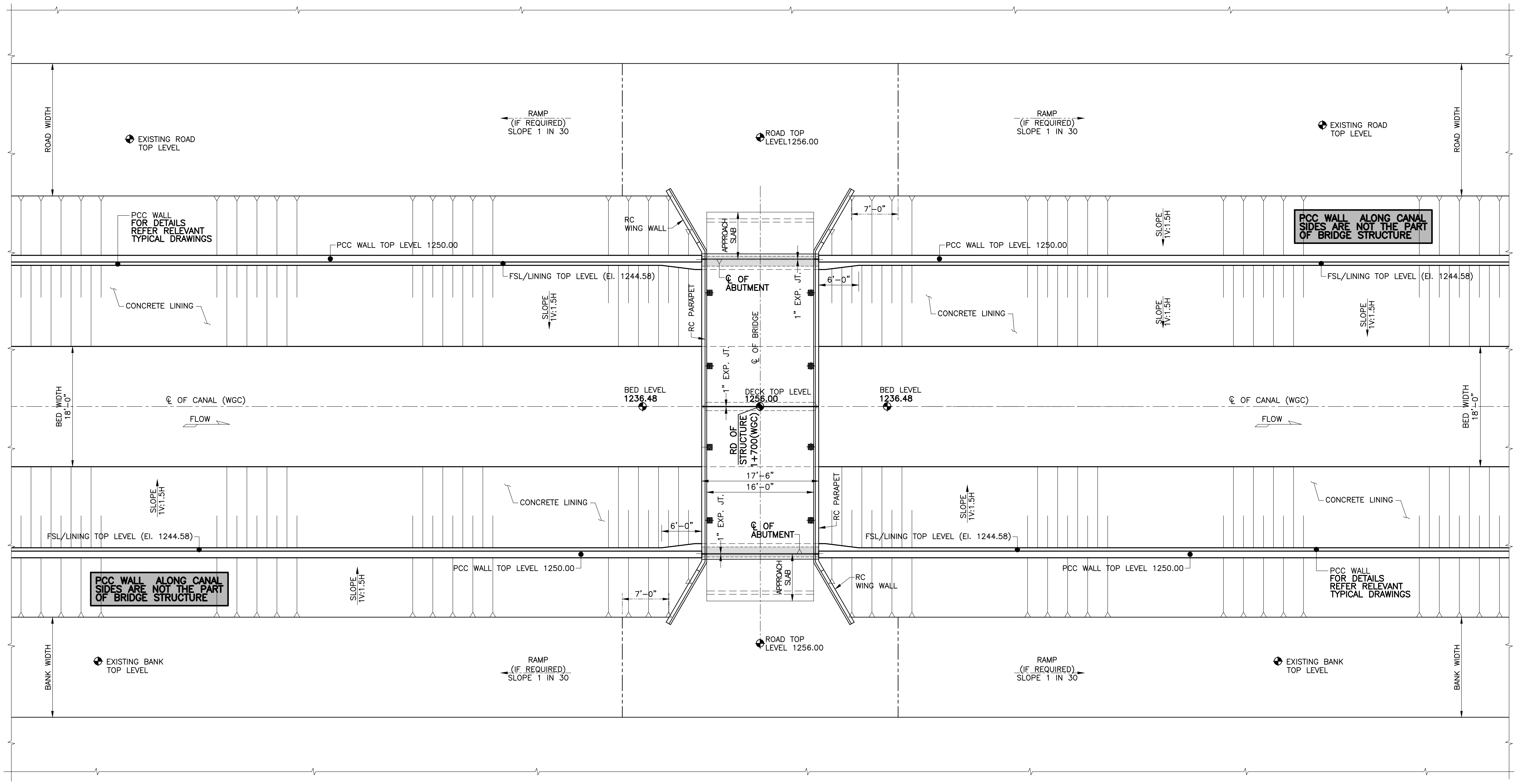
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
LIST OF REFERENCE DRAWINGS AND NOTES

DATE	DWG. NO.	REV.
AUG., 2021	**RWCS-13/TD/WCP/VRB/01**	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

0 3' 6' 9' 12' 15'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

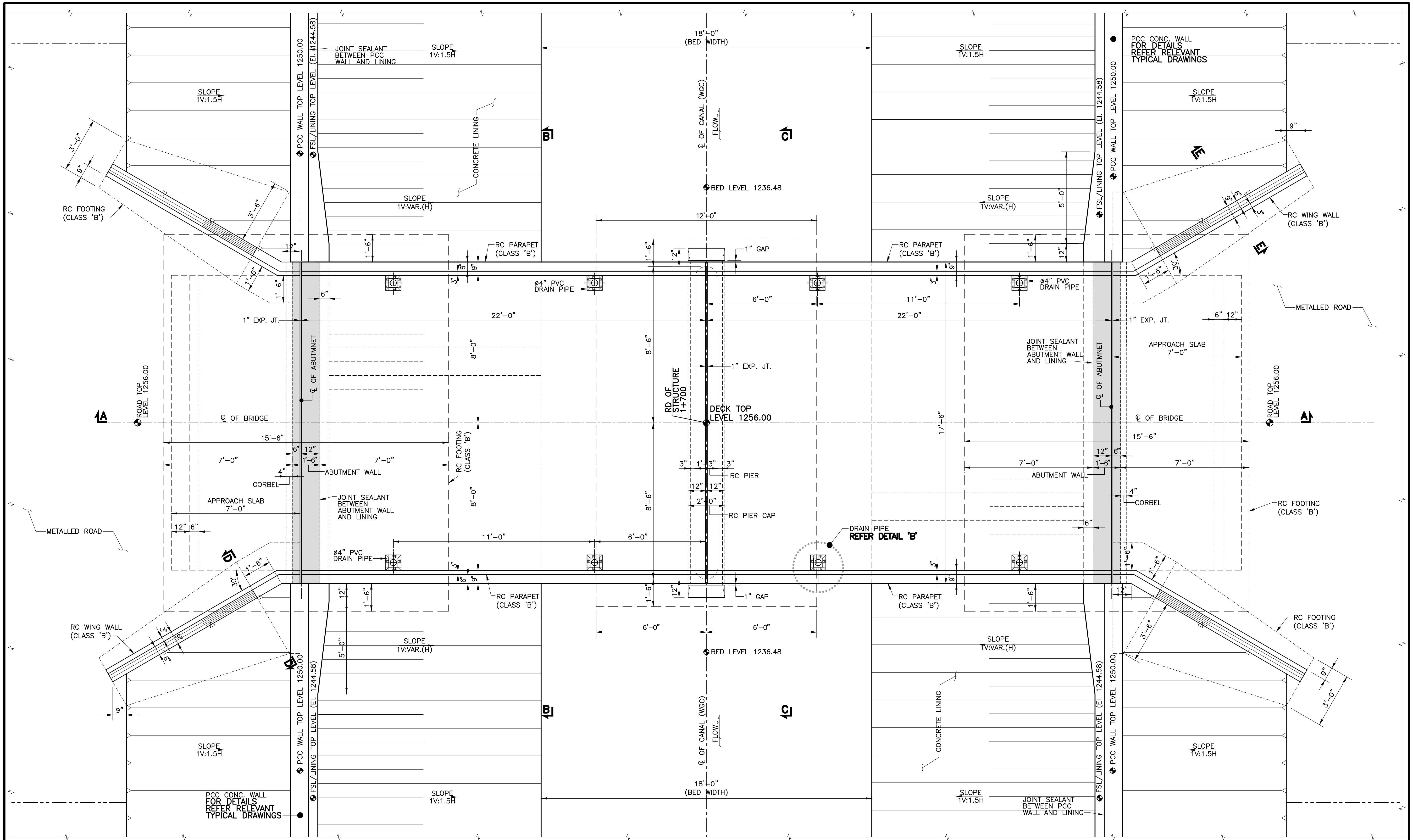
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
GENERAL ARRANGEMENT PLAN

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/02	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

0 1' 2' 3' 4' 5'
SCALE

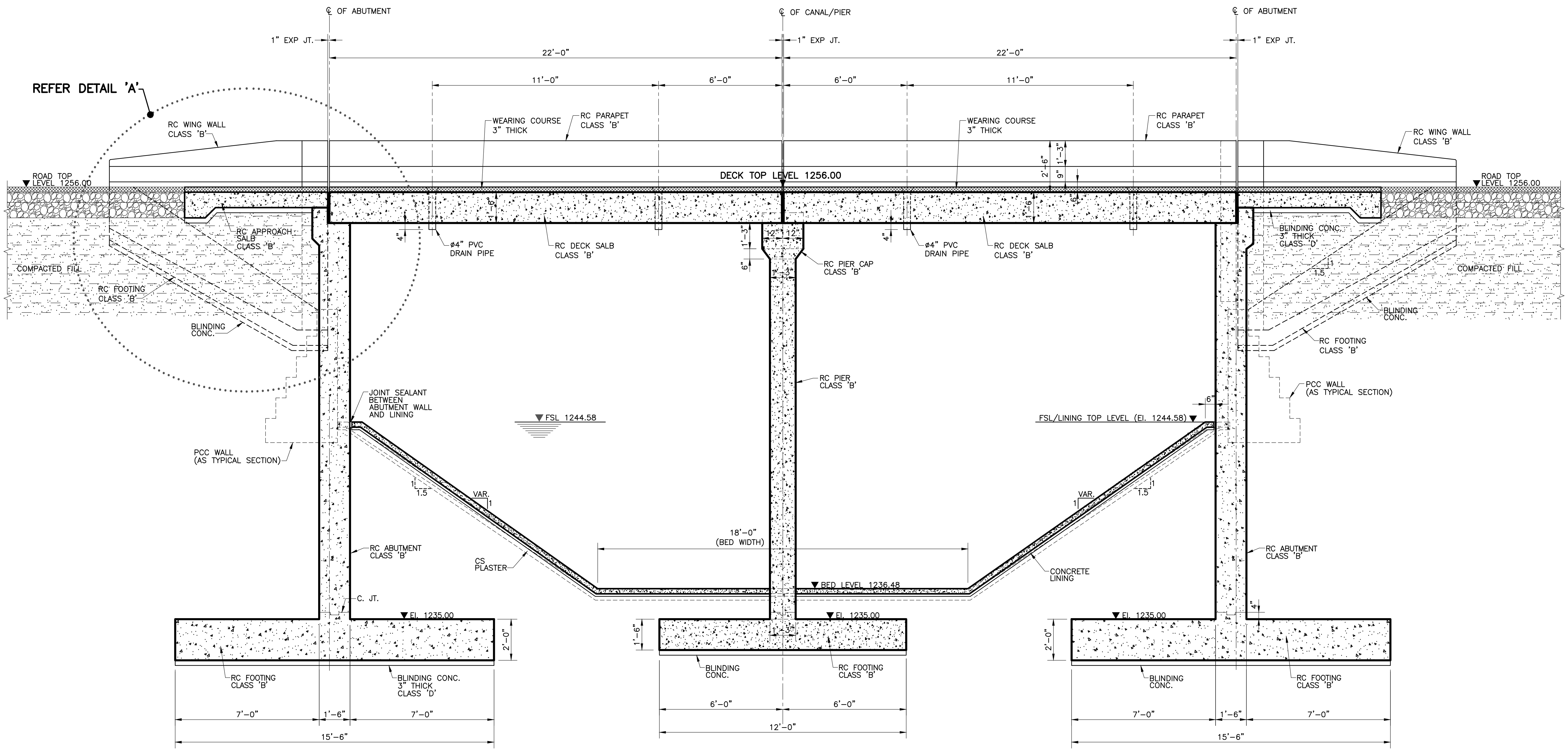
CLIENT	CONSULTANT - A JOINT VENTURE OF	PROJECT		
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS		

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
DETAIL PLAN

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/03	0



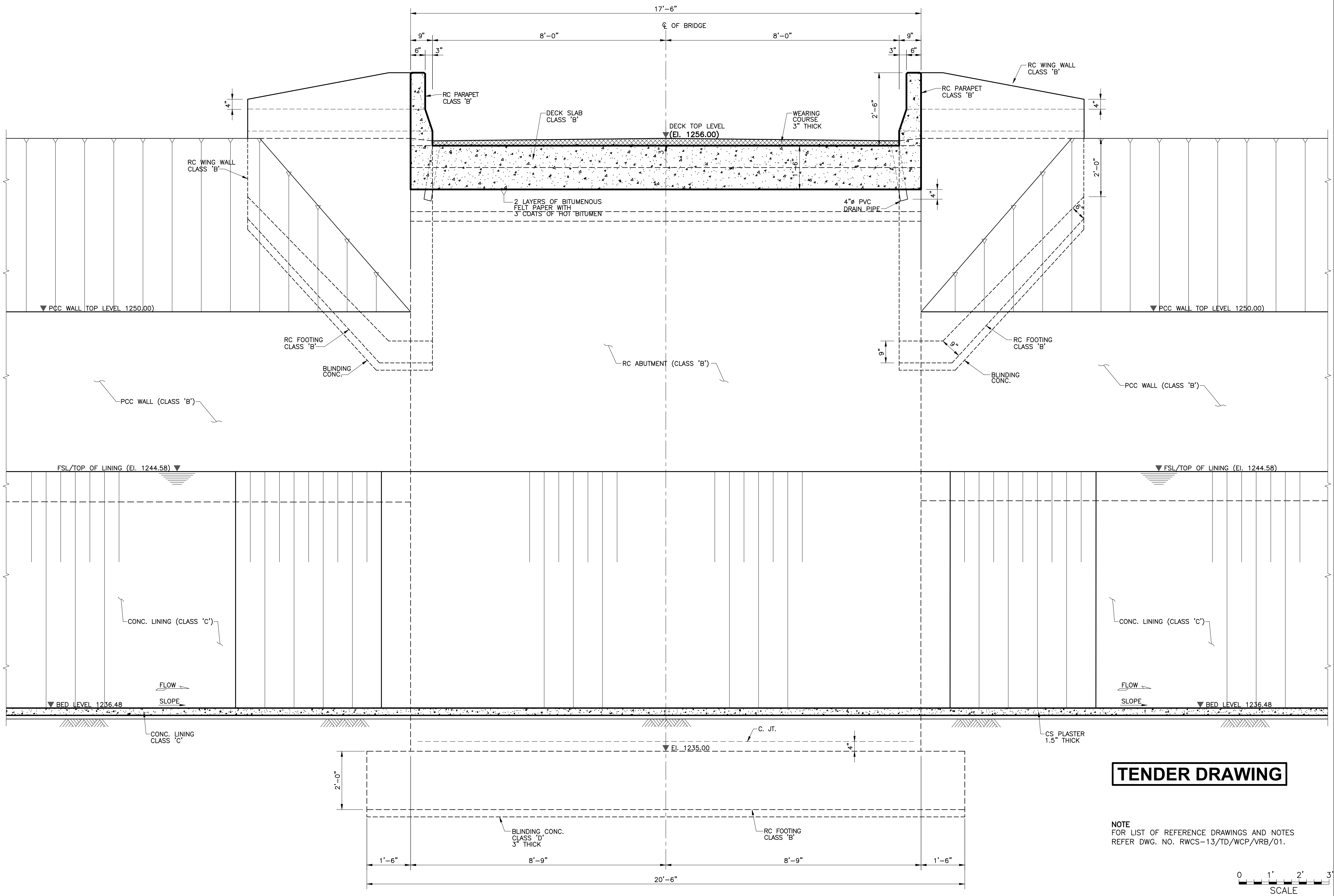
TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

0 1' 2' 3' 4' 5'
SCALE

CLIENT	CONSULTANT - A JOINT VENTURE OF			
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	DRAWN: Ishtiaq CHECKED RECOMMENDED APPROVED	**REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13** BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT VILLAGE ROAD BRIDGE AT RD 1+700 (WGC) **SECTION A-A** DATE: AUG., 2021 DWG. NO.: **RWCS-13/TD/WCP/VRB/04** REV.: 0

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.



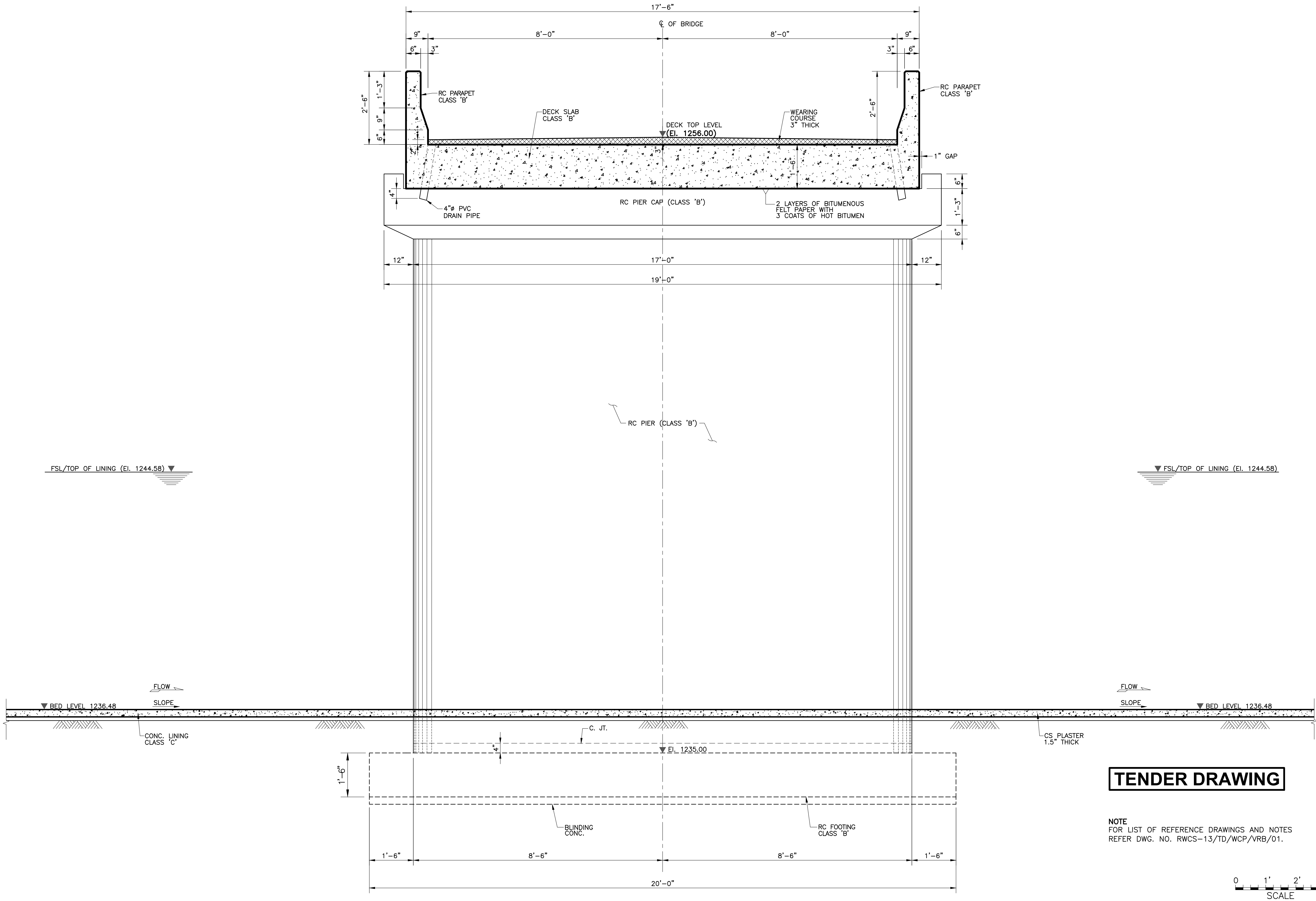
TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

CLIENT **IRRIGATION DEPARTMENT** GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT - A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	**REMODELING OF WARSAK CANAL SYSTEM PROJECT** **DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS**	REV.	DATE	DESCRIPTION	BY	CKD. APPR.
DRAWN	Ishtiaq						
CHECKED							
RECOMMENDED							
APPROVED							

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
SECTION B-B

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/05	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

SCALE 0 1' 2' 3'

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

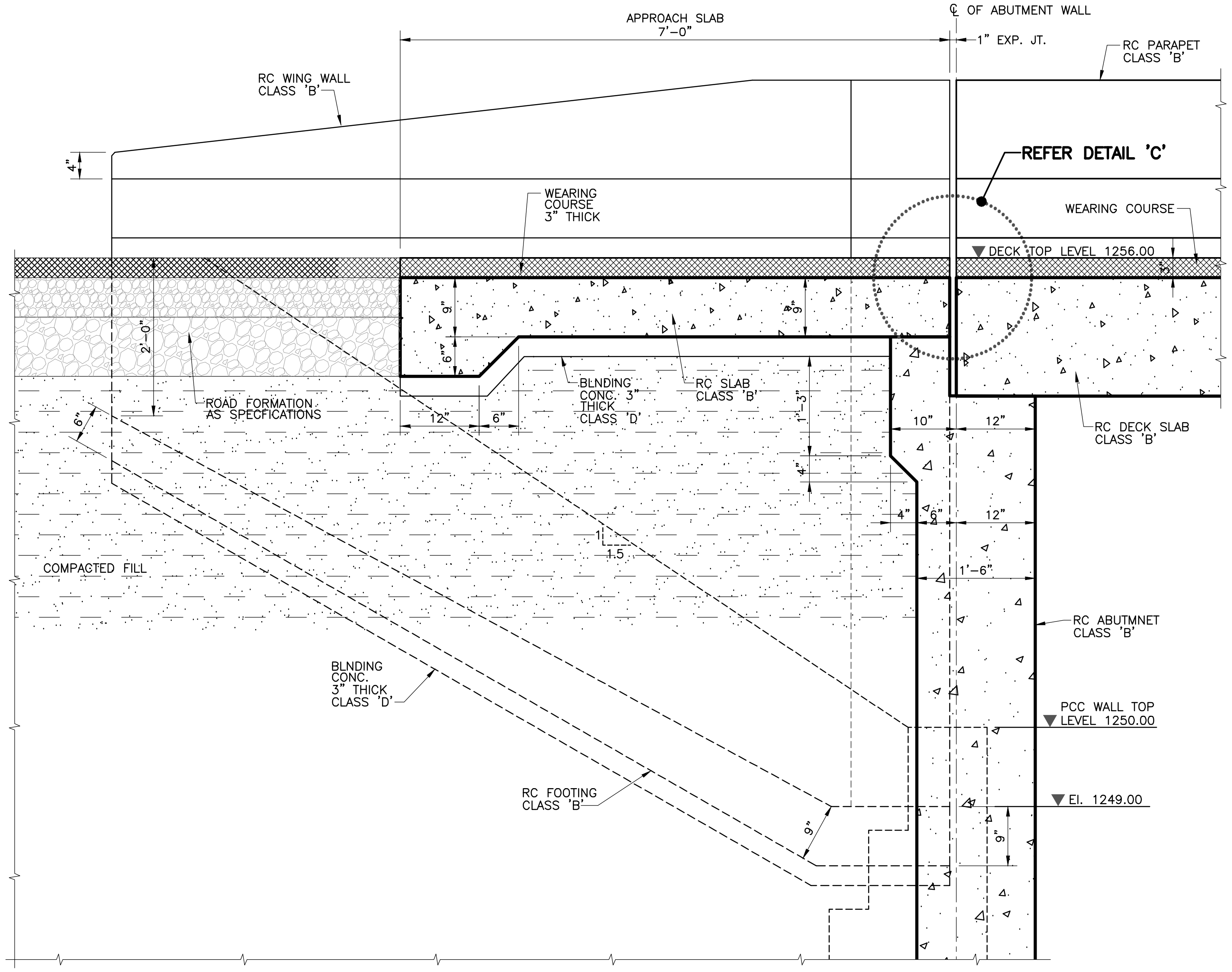
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
SECTION C-C

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/06	0



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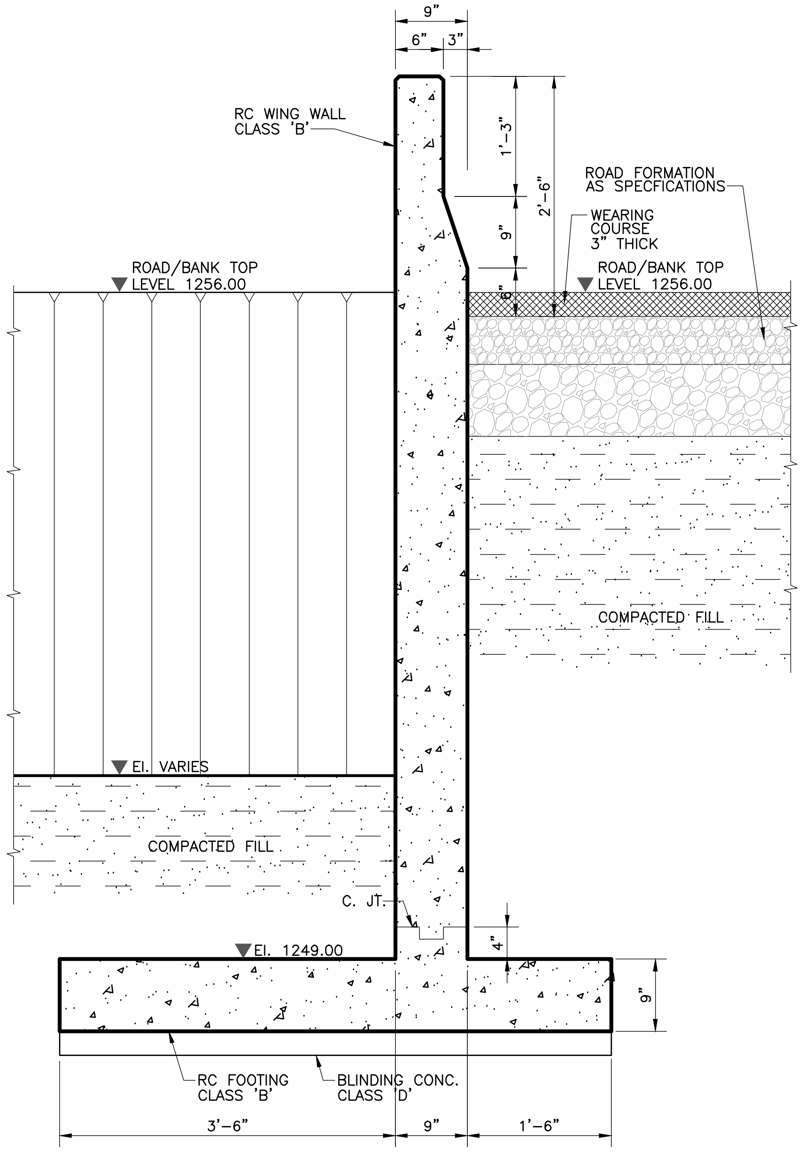
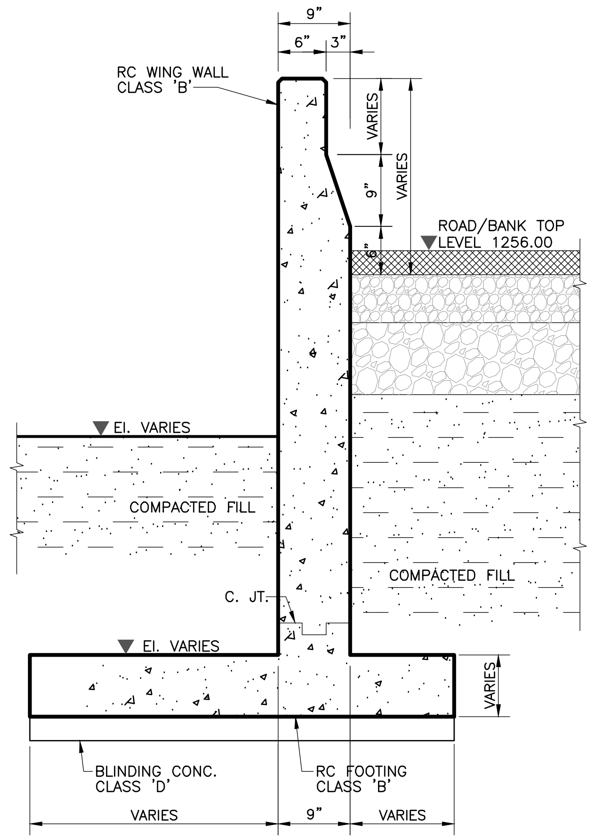
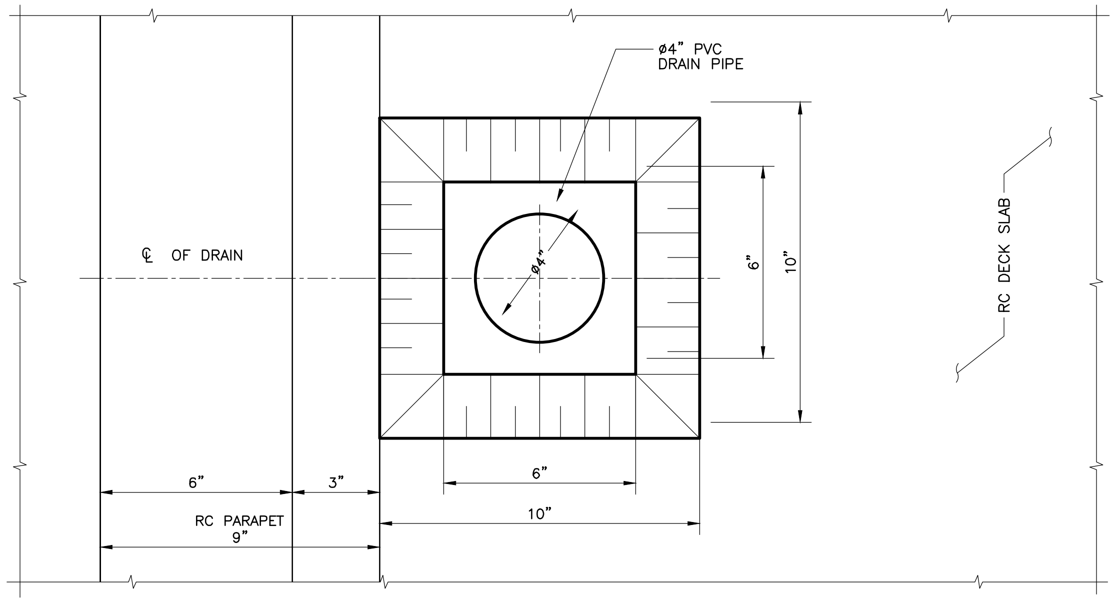


SECTION D – D

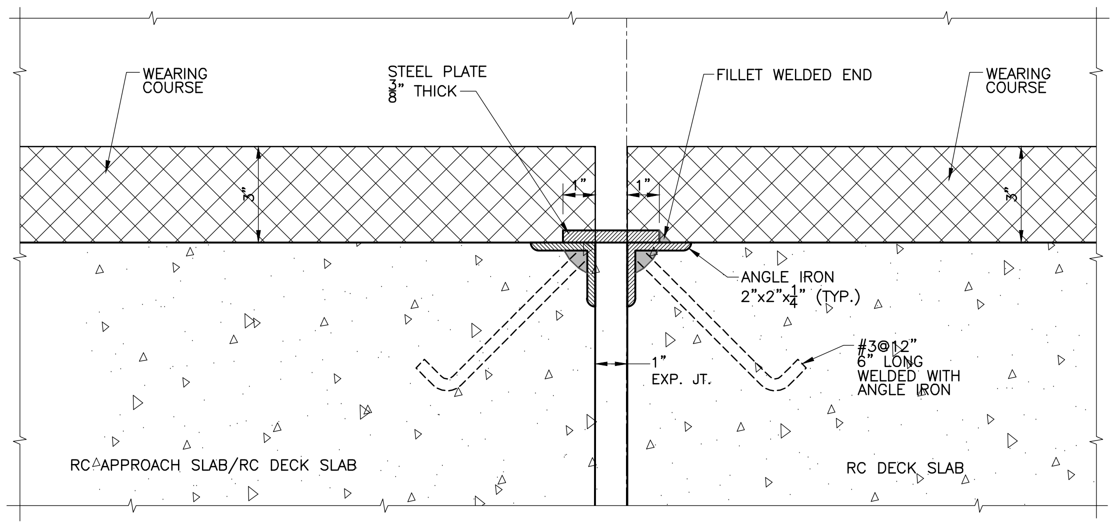


SECTION E – E



DETAIL 'B'
RAIN WATER DRAIN

0 2" 4" 6"
SCALE



DETAIL 'C'
EXPANSION JOINT DETAIL

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES
REFER DWG. NO. RWCS–13/TD/WCP/VRB/01.

0 1' 2'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

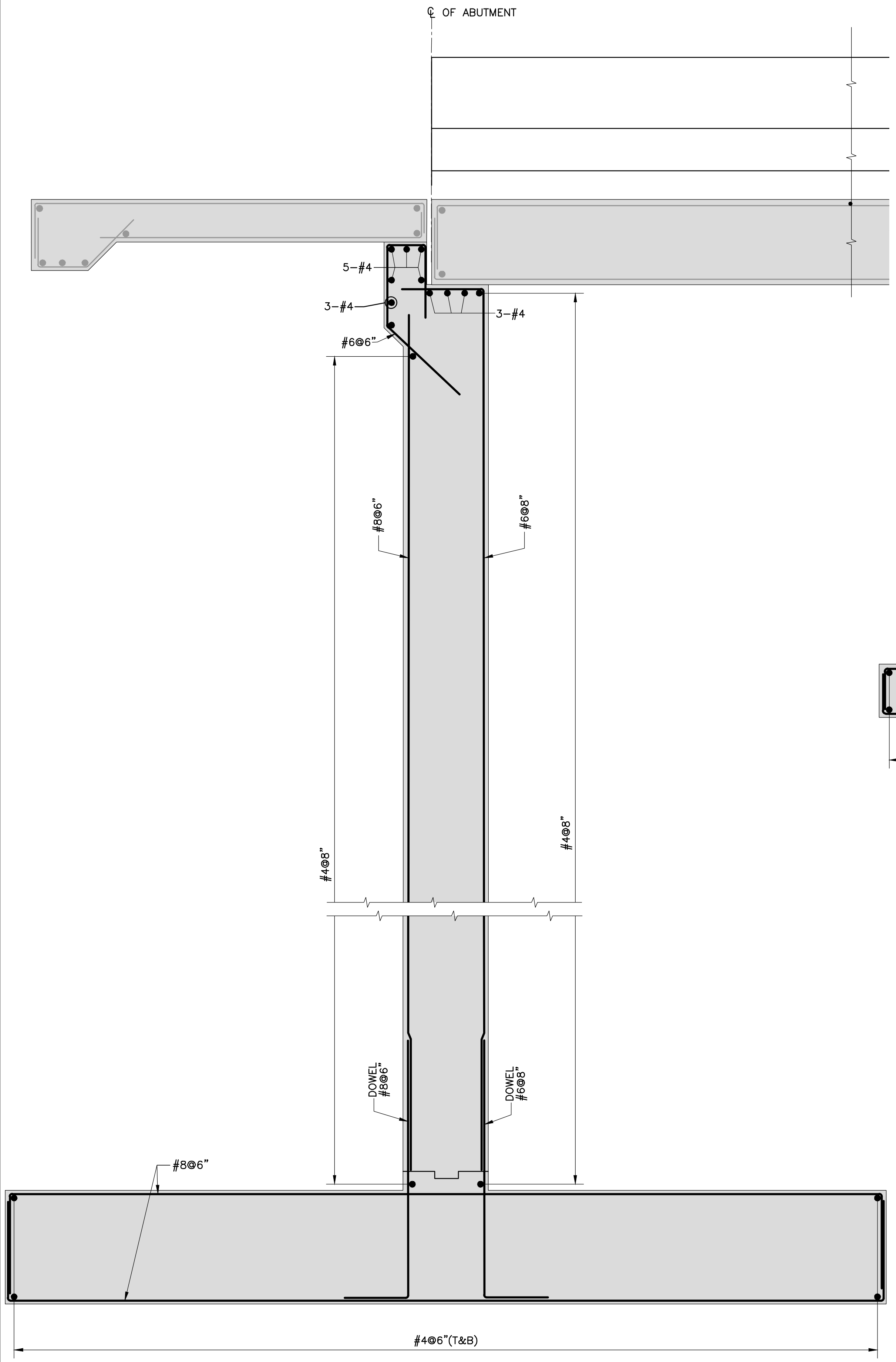
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

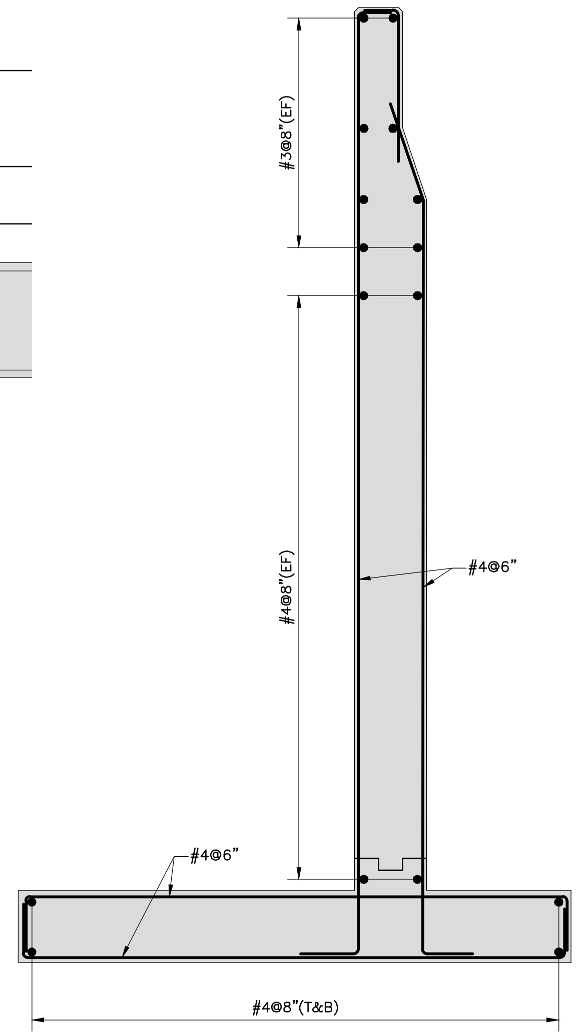
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
SECTIONS AND DETAILS

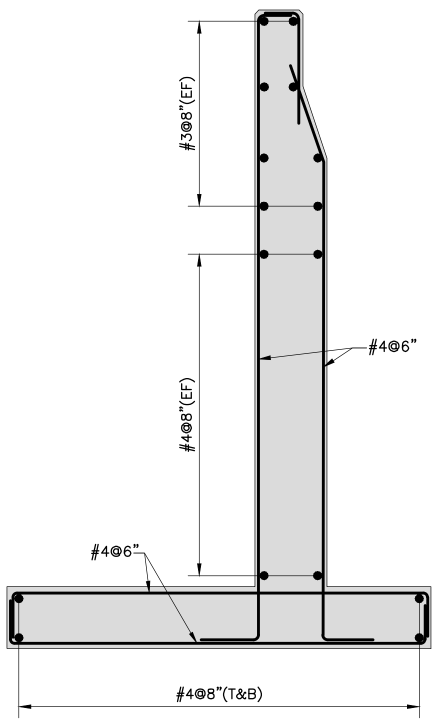
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/07	0



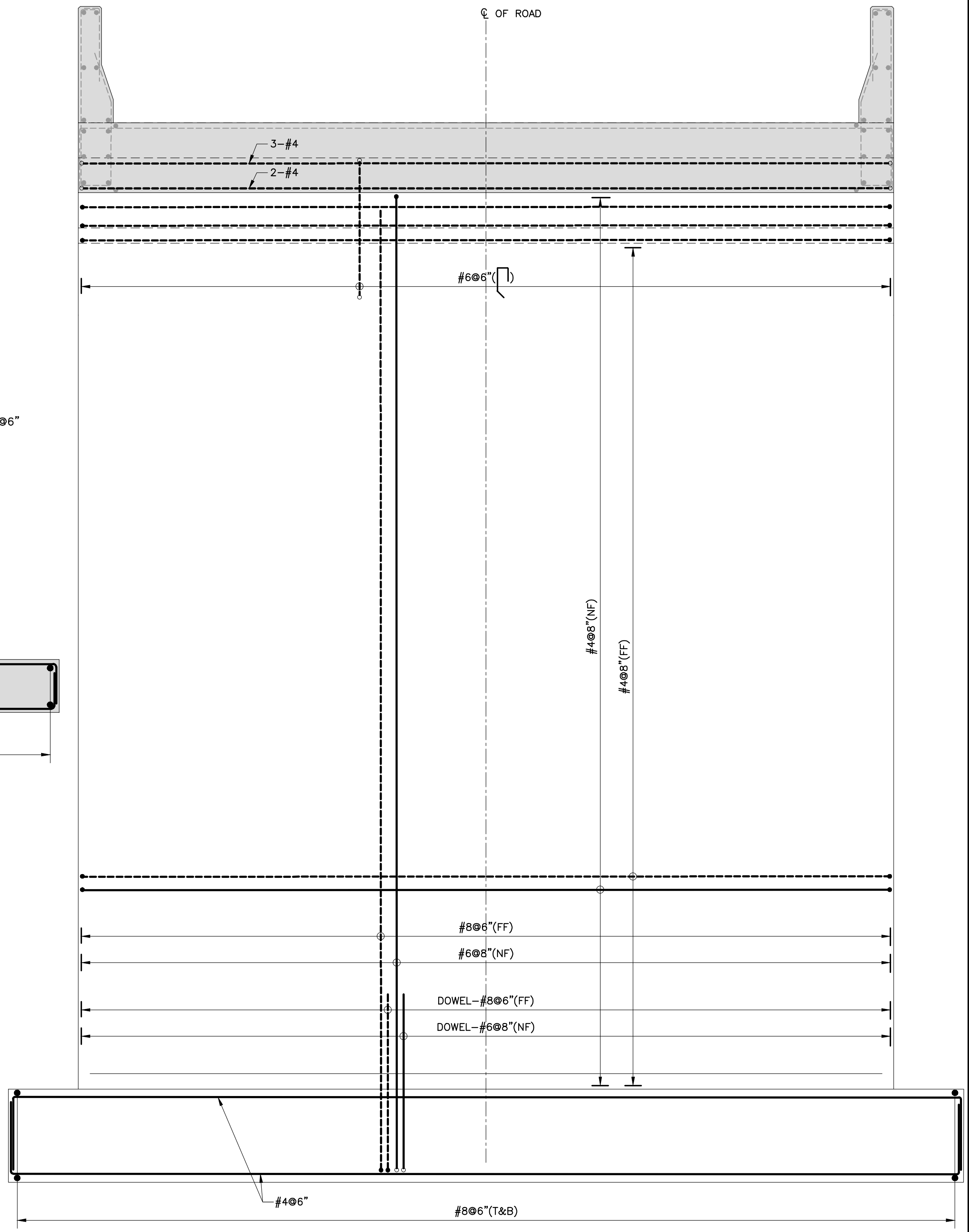
SECTION A-A
ABUTMENT WALL



SECTION D-D



SECTION E-E



SECTION B-B
ELEVATION-ABUTMENT WALL

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

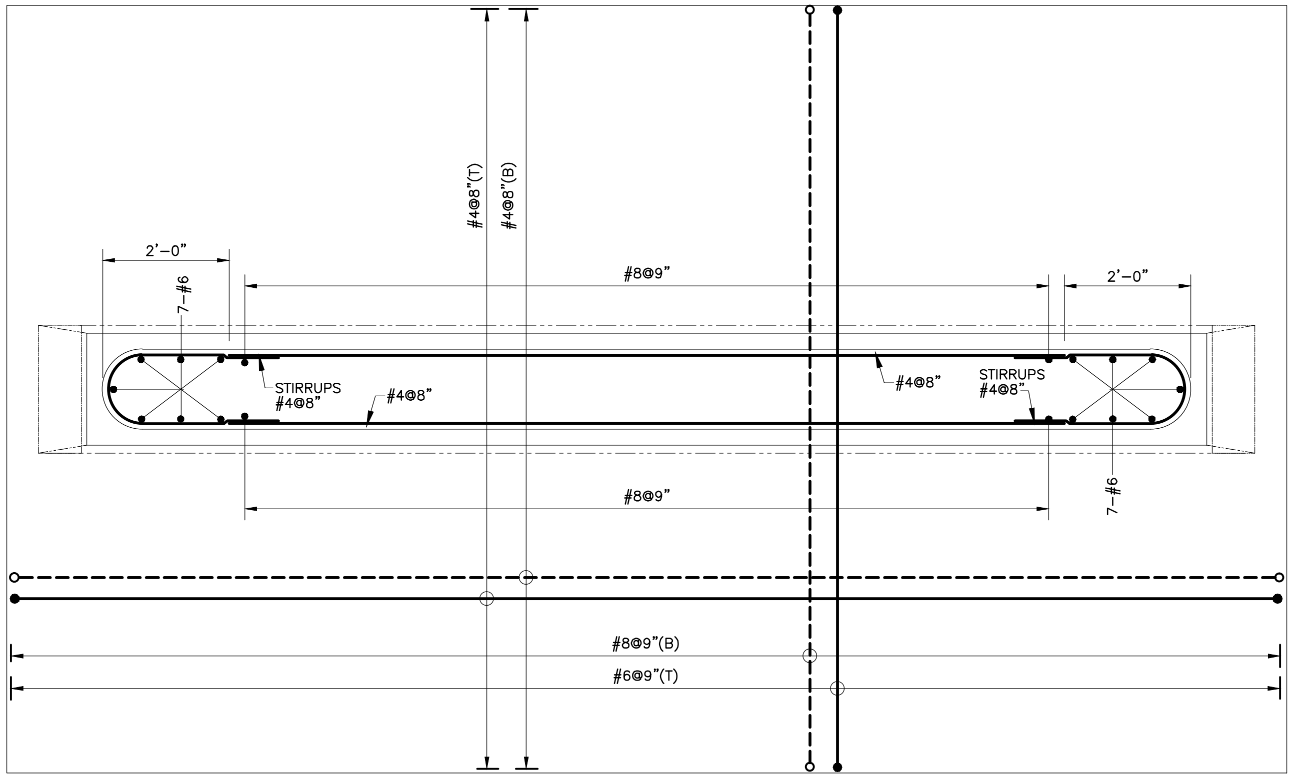
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

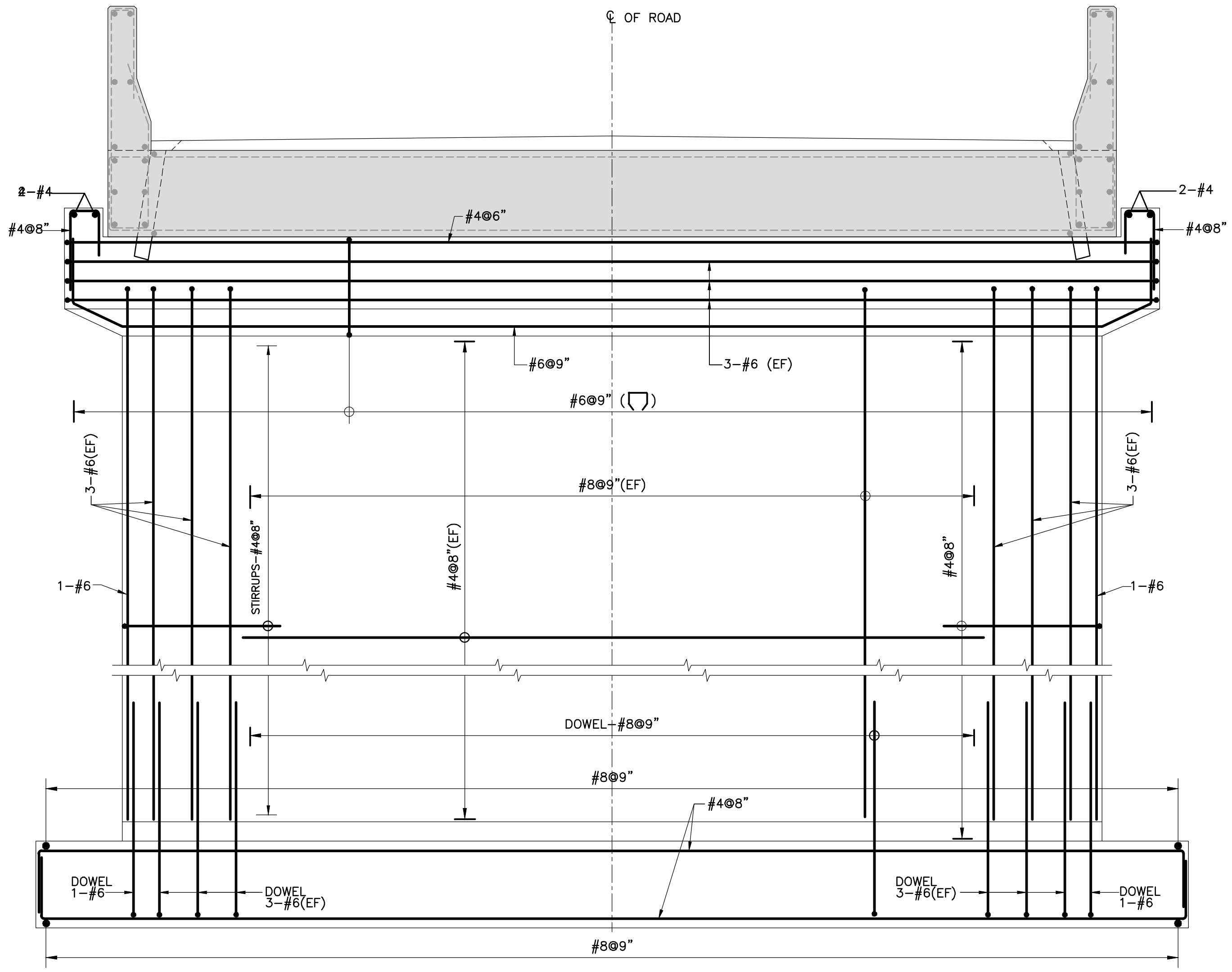
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
REINFORCEMENT DETAILS

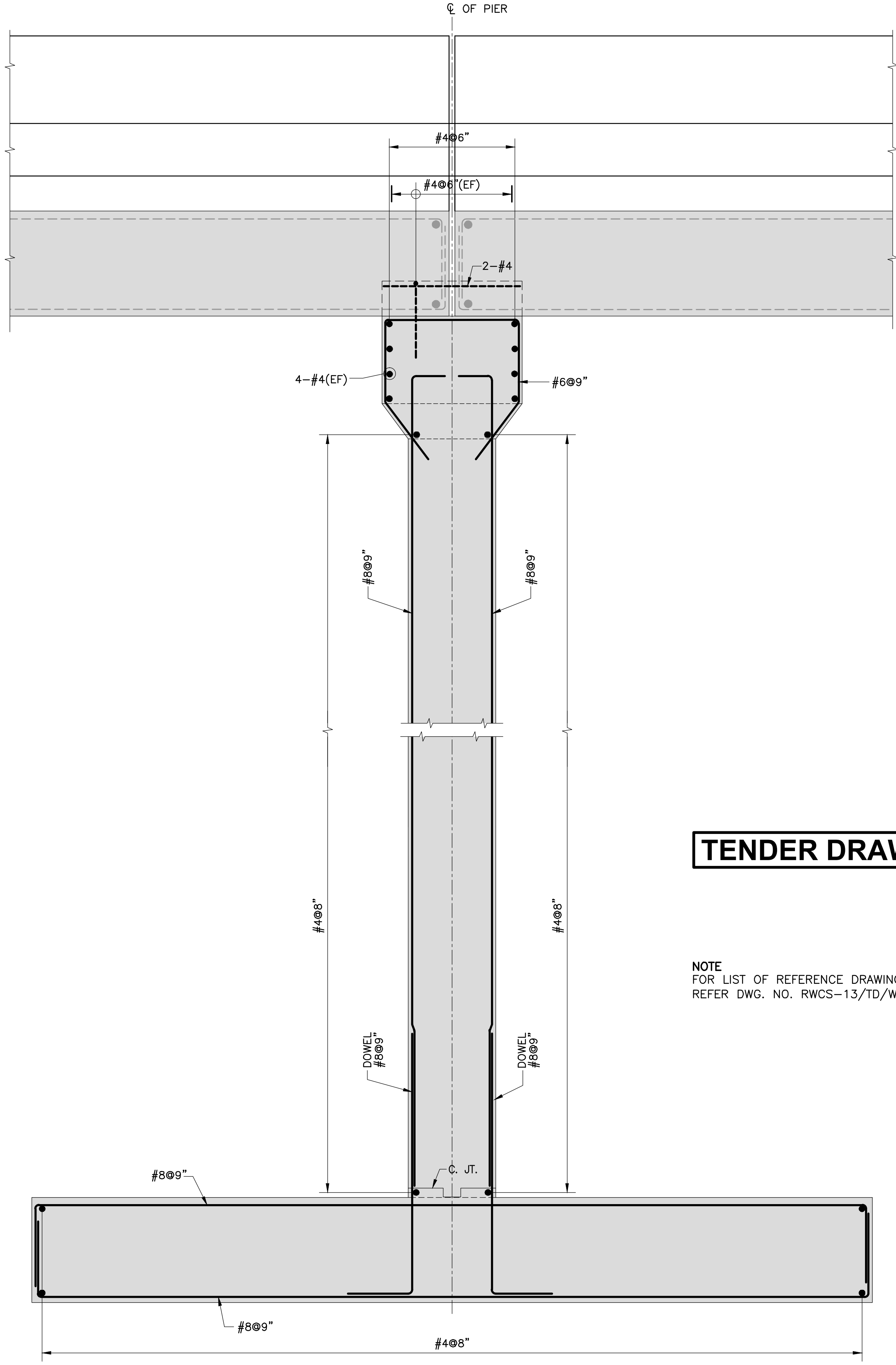
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/08	0



PIER – PLAN



SECTION C – C
PIER – ELEVATION



SECTION A – A
PIER DETAIL

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

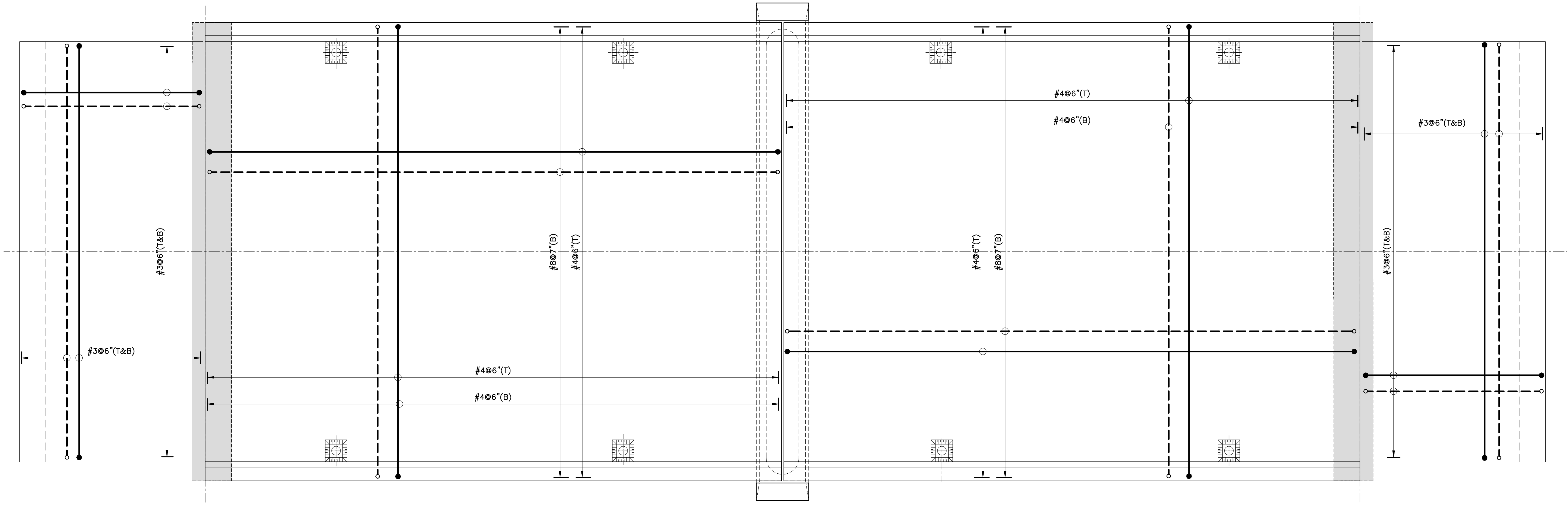
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

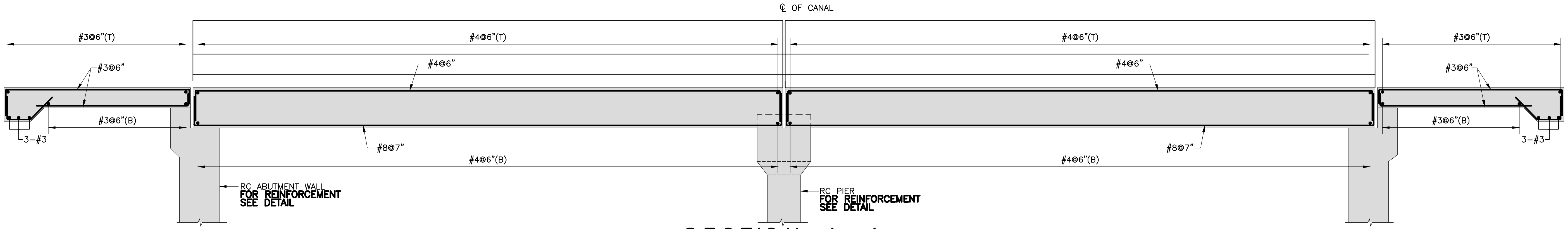
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
REINFORCEMENT DETAILS

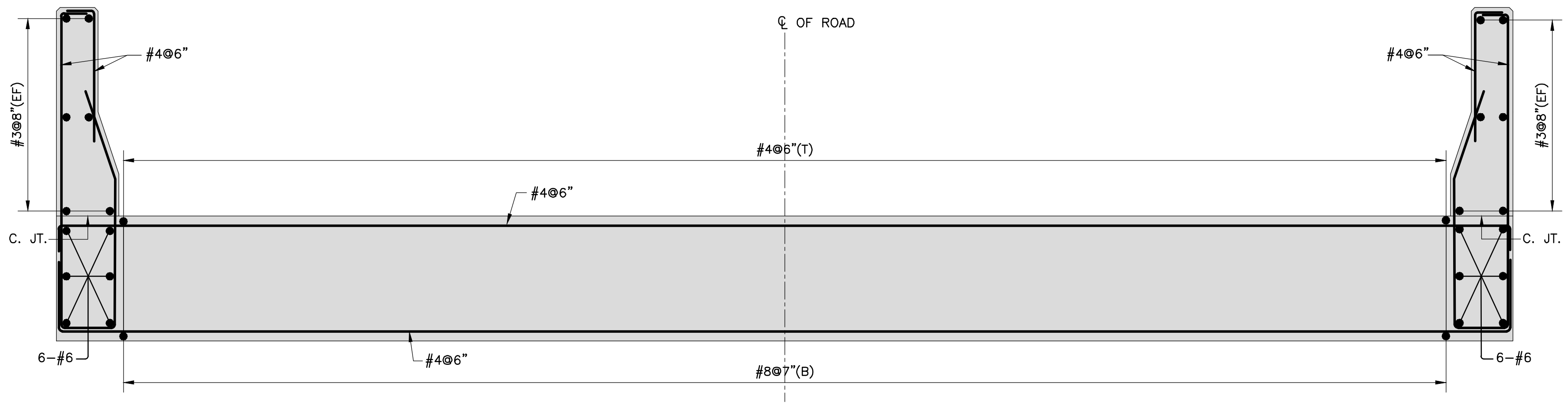
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/09	0



DECK SLAB/APPROACH SLAB



SECTION A–A



SECTION B–B

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/VRB/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
VILLAGE ROAD BRIDGE AT RD 1+700 (WGC)
REINFORCEMENT DETAILS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/VRB/10	0

B.4. FOOT BRIDGE
AT
RD 16+500

LIST OF REFERENCE DRAWINGS

SR.	TITLE	DRAWING NO.
A.	**GENERAL REFERENCES**	
1	PROJECT AREA MAP	RWCS-13/TD/GD/01
2	GENERAL NOTES (2 SHEETS)	RWCS-13/TD/GD/02
3	CONTRACT PACKAGES	RWCS-13/TD/GD/03
4	SURVEY CONTROL POINTS - DATA TABLE	RWCS-13/TD/GD/04
5	FOOT BRIDGE AT RD 16+500 (WGC)	RWCS-13/TD/MSC/01

SR.	TITLE	DRAWING NO.
B.	**FOOT BRIDGE AT RD 16+500 (WGC) - REFERENCE DRAWINGS**	
1	GENERAL ARRANGEMENT PLAN	RWCS-13/TD/WCP/FTB/02
2	DETAIL PLAN	RWCS-13/TD/WCP/FTB/03
3	SECTION A-A	RWCS-13/TD/WCP/FTB/04
4	SECTIONS	RWCS-13/TD/WCP/FTB/05
5	SECTION AND DETAILS	RWCS-13/TD/WCP/FTB/06
6	TABLE OF ELEVATIONS AND DIMENSONS	RWCS-13/TD/WCP/FTB/07
7	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/FTB/08
8	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/FTB/09

NOTES

1 LOCATION OF STRUCTURES IS TENTATIVE AND SUBJECT TO VERIFICATION BY THE ENGINEER AT SITE.

2 FOR ELEVATIONS AND DIMENSIONS SHOWN ON DRAWINGS, REFER TO TABLE OF ELEVATIONS AND DIMENSIONS.

3 EXCAVATED MATERIAL SUITABLE FOR EMBANKMENT FILL SHALL BE USED FOR COMPACTED EMBANKMENTS.

4 EARTHFILL IN EMBANKMENTS SHALL BE COMPACTED AS PER SPECIFICATIONS.

5 THE STRUCTURES TO BE CONSTRUCTED ON FILL, SHALL BE PLACED ON FILL COMPACTED TO 95 % OF DRY DENSITY.

6 THE EARTHEN RAMPS AROUND THE STRUCTURE SHALL HAVE SLOPE OF 1:30.

7 CONCRETE IN DECK SLAB SHALL BE PLACED IN FULL WIDTH. NO CONSTRUCTION JOINT SHALL BE PERMITTED.

TENDER DRAWING

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

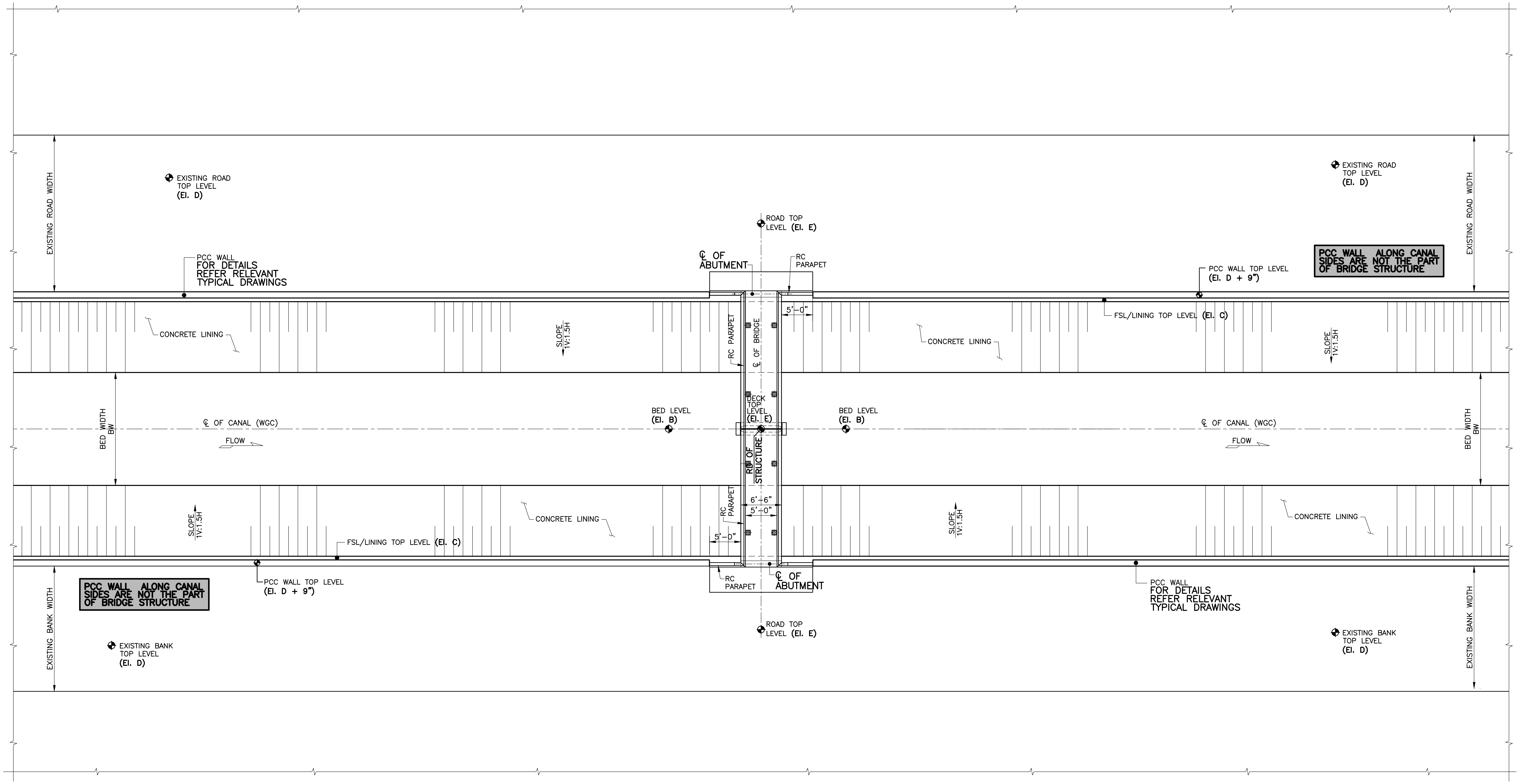
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
LIST OF REFERENCE DRAWINGS AND NOTES

DATE	DWG. NO.	REV.
AUG., 2021	**RWCS-13/TD/WCP/FTB/01**	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

0 4' 8' 12' 16'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

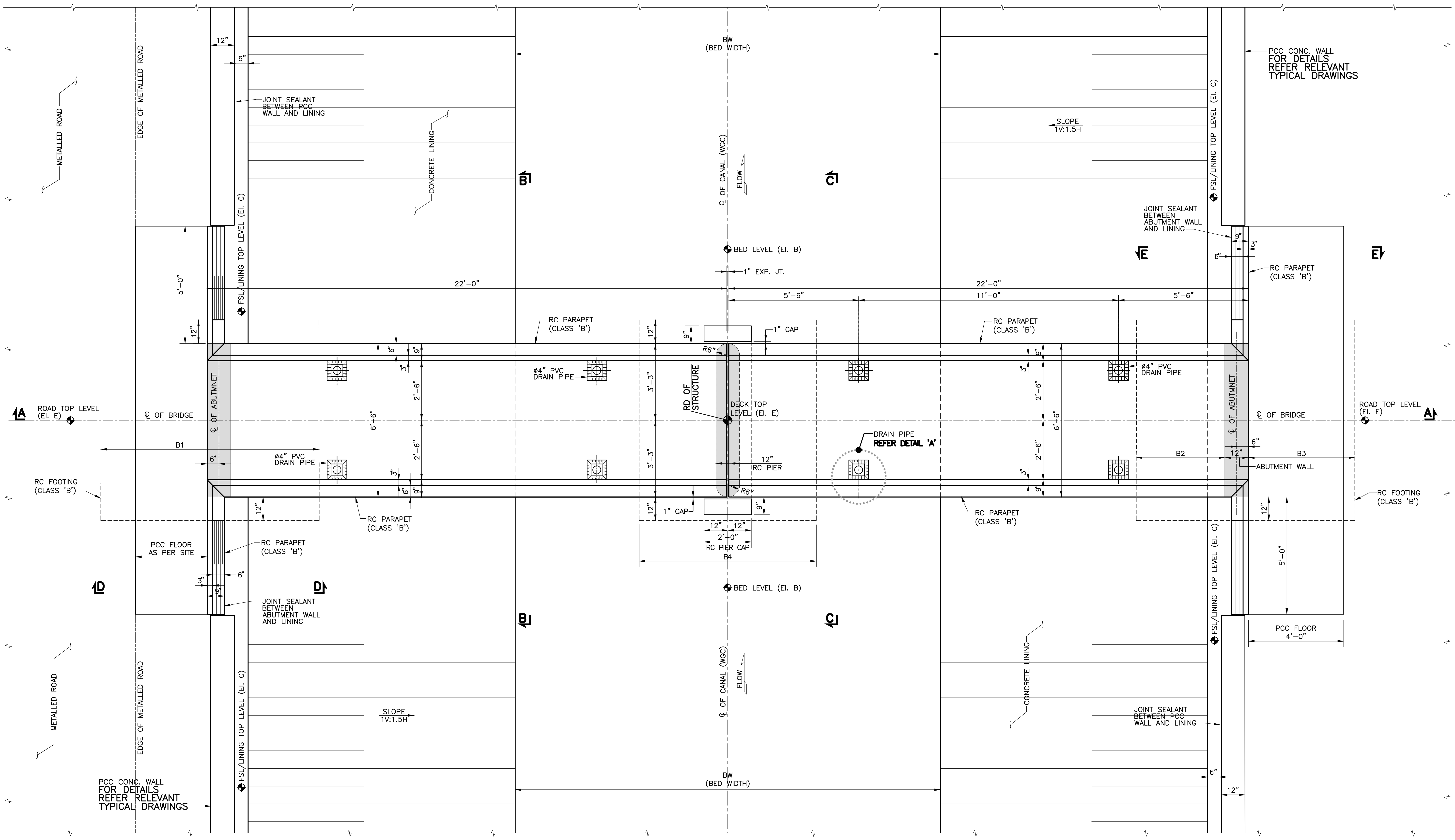
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
GENERAL ARRANGEMENT PLAN

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/02	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

0 1' 2' 3' 4'
SCALE

CLIENT	IRRIGATION DEPARTMENT	GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR
CONSULTANT - A JOINT VENTURE OF	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE; ELECTRA CONSULTANTS PESHAWAR; INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	

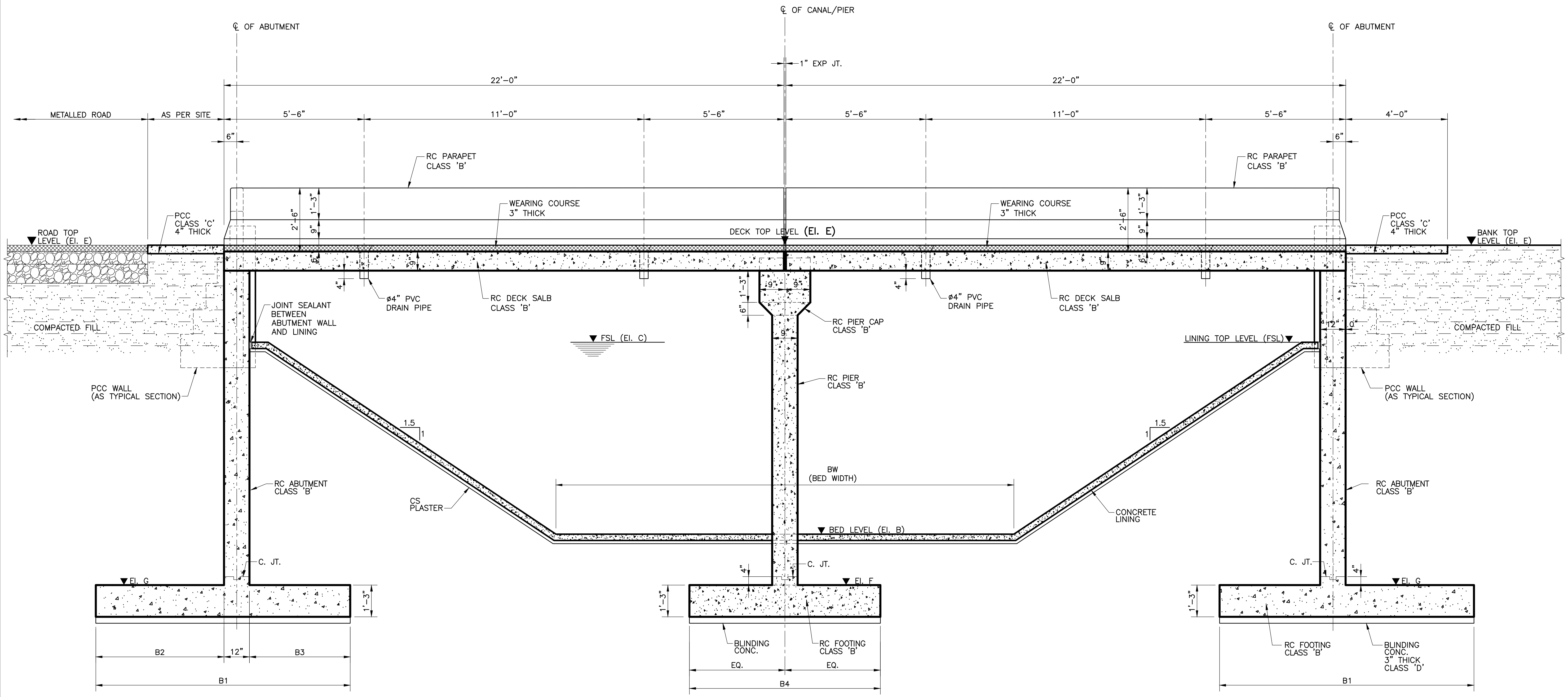
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
PART PLAN

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/03	0



TENDER DRAWING

NOTE

FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

0 1' 2' 3' 4'
SCALE

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

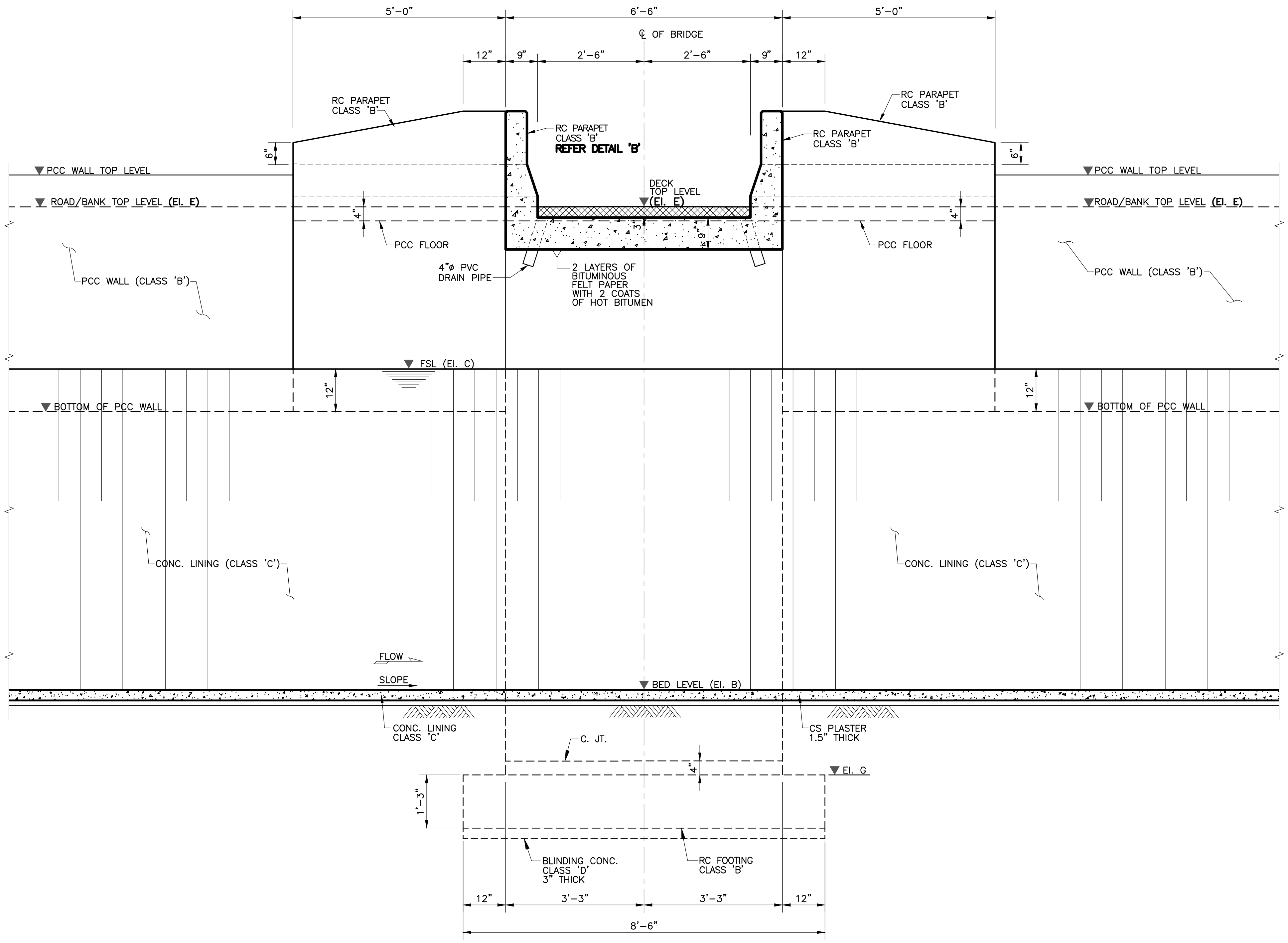
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

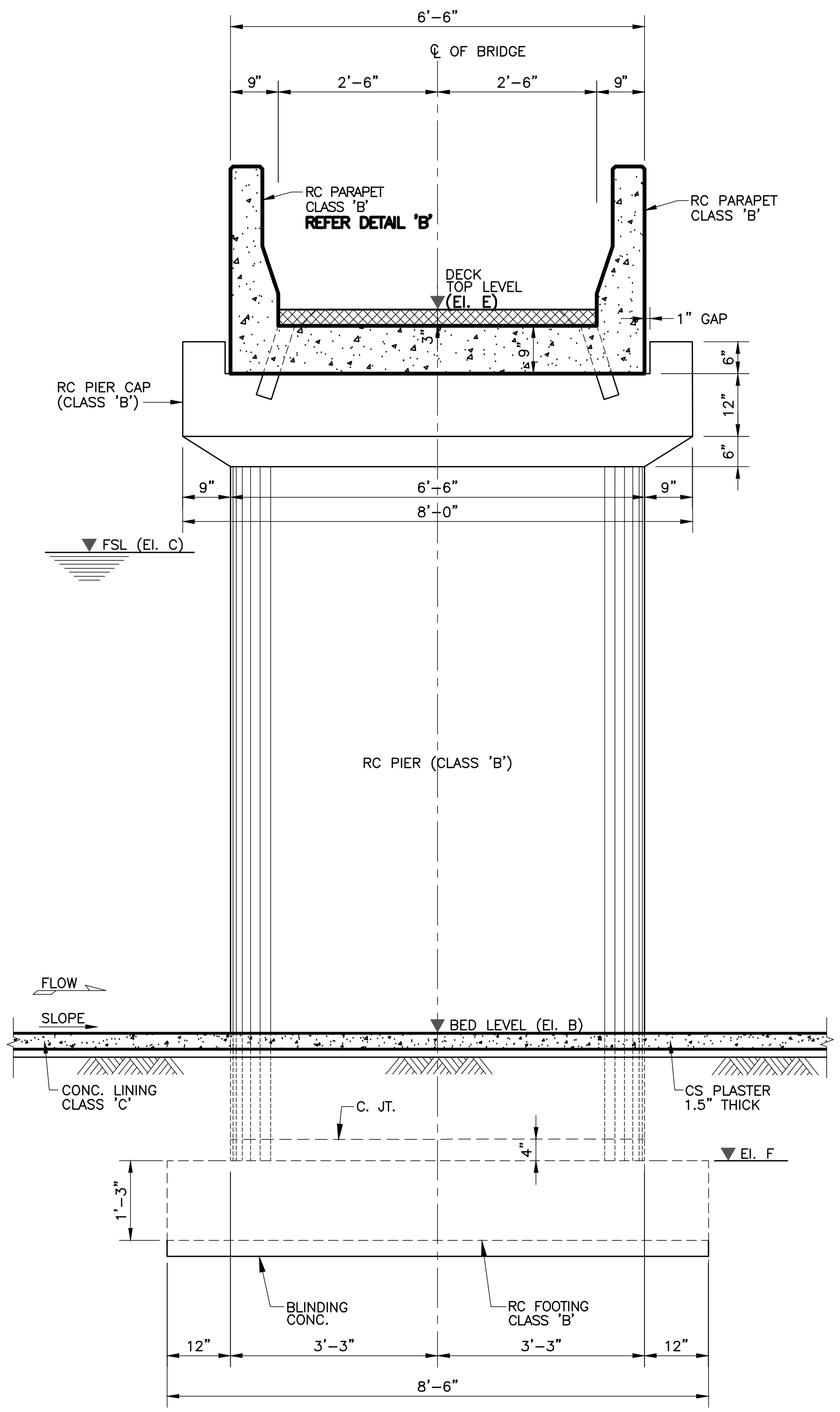
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
SECTION A-A

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/04	0



SECTION B – B



SECTION C – C

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

0 1' 2' 3'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

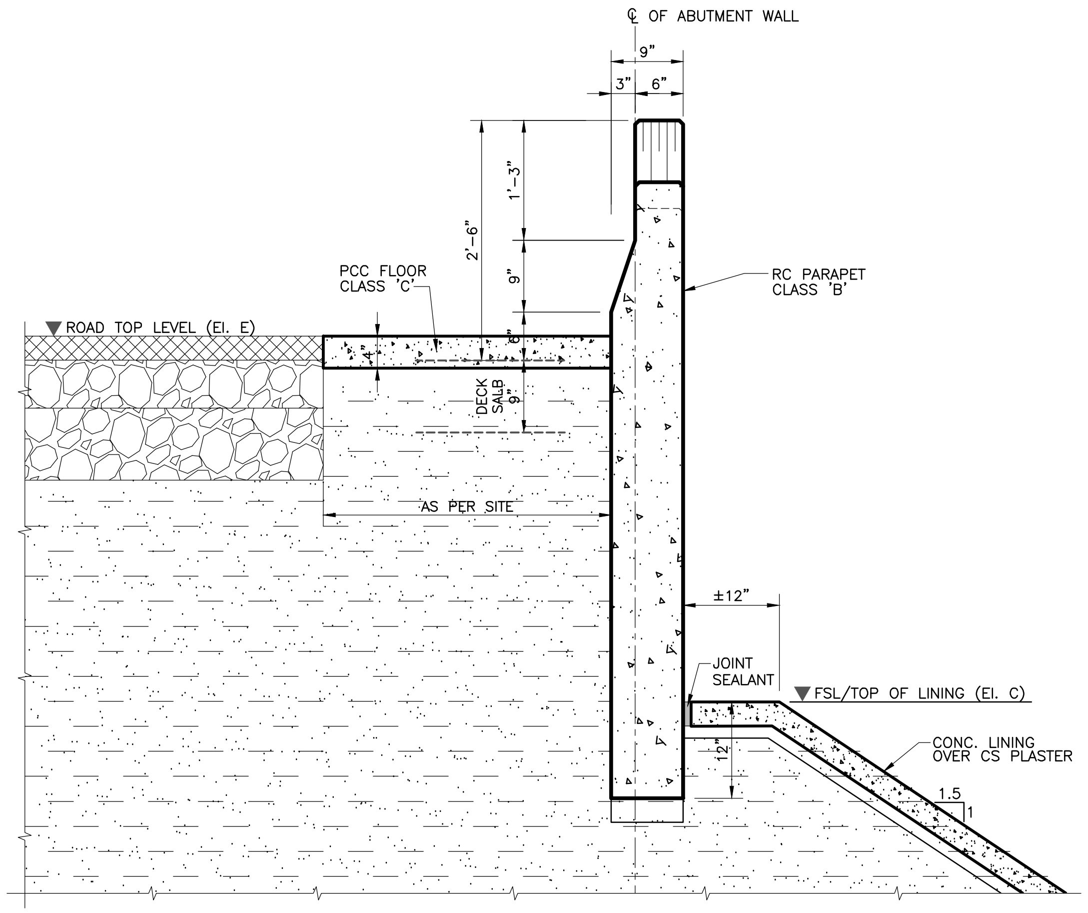
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

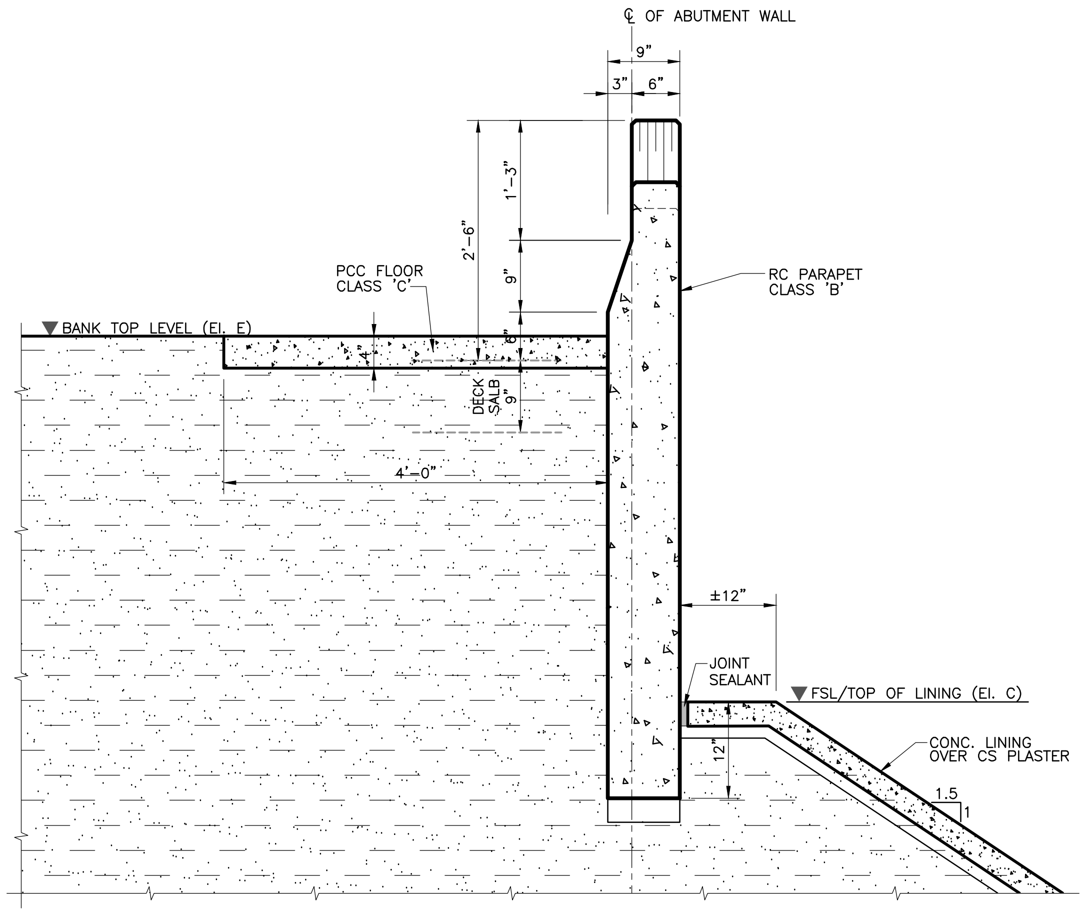
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
SECTIONS

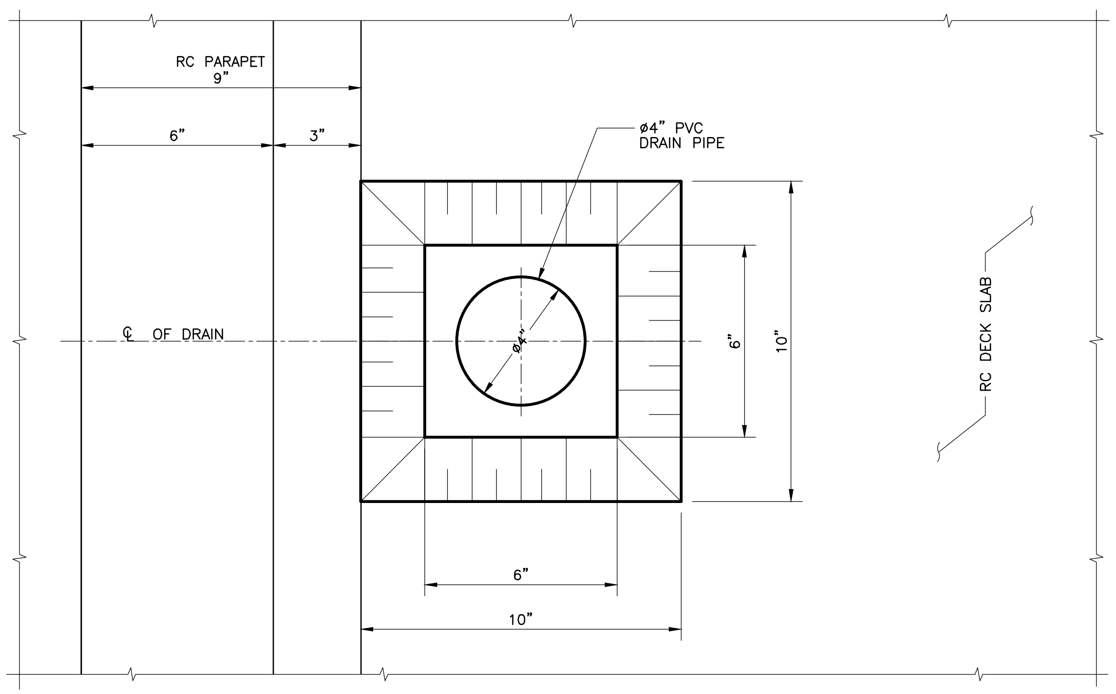
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/05	0



SECTION D–D

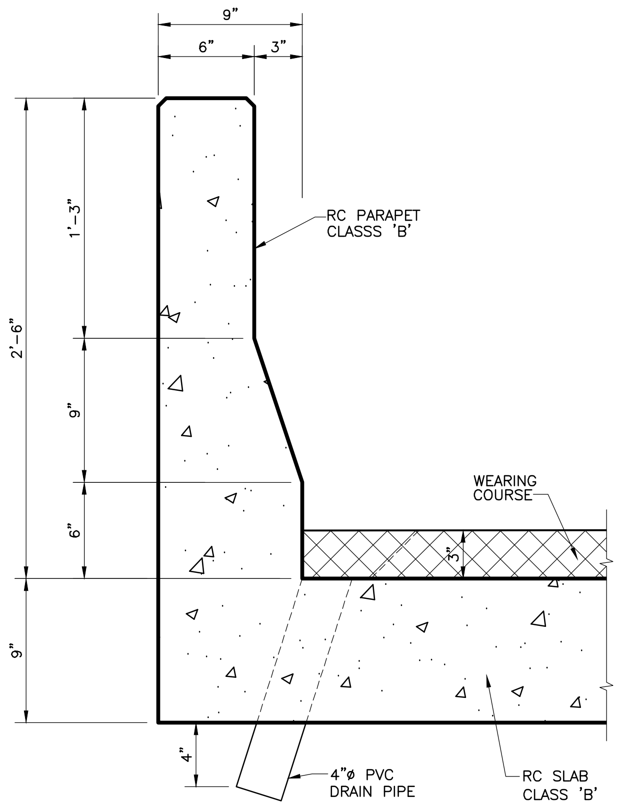


SECTION E–E



DETAIL 'A'
RAIN WATER DRAIN

0 2" 4" 6"
SCALE



DETAIL 'B'

0 3" 6" 9" 12"
SCALE

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

0 1' 2'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
SECTIONS AND DETAILS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/06	0

FOOT BRIDGE AT RD 16+500
TABLE OF ELEVATIONS AND DIMENSIONS

Sr. No.	Irrigation Canal	RD	Q	El. B	El. C	El. D	El. E	El. F	El. G	BW	B1	B2	B3	B4
		(ft)	(ft^3/sec)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1	WARSAK CANAL	16+500	910.65	1236.49	1244.57	1256.59	1257.34	1235.49	1238.49	18.00	16.00	5.50	9.00	7.00

ELEVATIONS

EL. B	WGC BED LEVEL
EL. C	WGC FULL SUPPLY LEVEL
EL. D	WGC BANK LEVEL
EL. E	DECK LEVEL OF BRIDGE
EL. F	INTERMEDIATE FOOTING TOP LEVEL
EL. G	ABUTMENT FOOTING TOP LEVEL

DIMENSIONS

Q	DISCHARGE OF WGC
BW	WGC BED WIDTH
B1	WIDTH OF ABUTMENT WALL FOOTING
B2	HEEL LENGTH OF ABUTMENT WALL
B3	TOE LENGTH OF ABUTMENT WALL
B4	WIDTH OF INTERMEDIATE WALL FOOTING

TENDER DRAWING

NOTES

1. FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/FTB/01.
2. *DECK LEVEL (El. E) IS GOVERNED BY THE EXISTING BANK LEVEL (El. D+9") AND MUST BE VERIFIED AT SITE OTHERWISE MINIMUM REQUIREMENT OF DECK LEVEL SHALL BE FULFILLED.

CLIENT

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ELECTRA CONSULTANTS PESHAWAR

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REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

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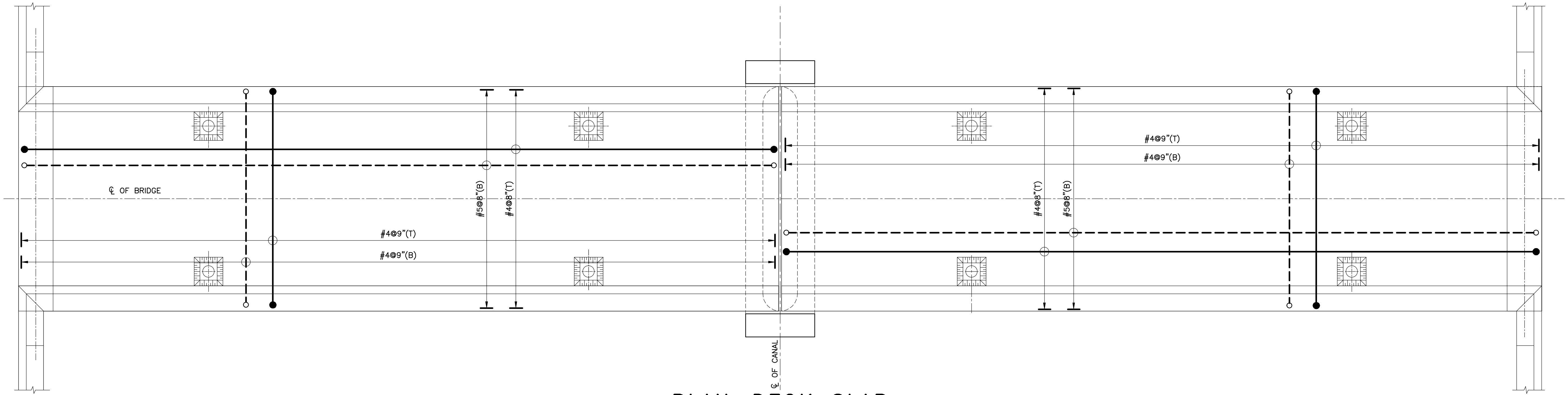
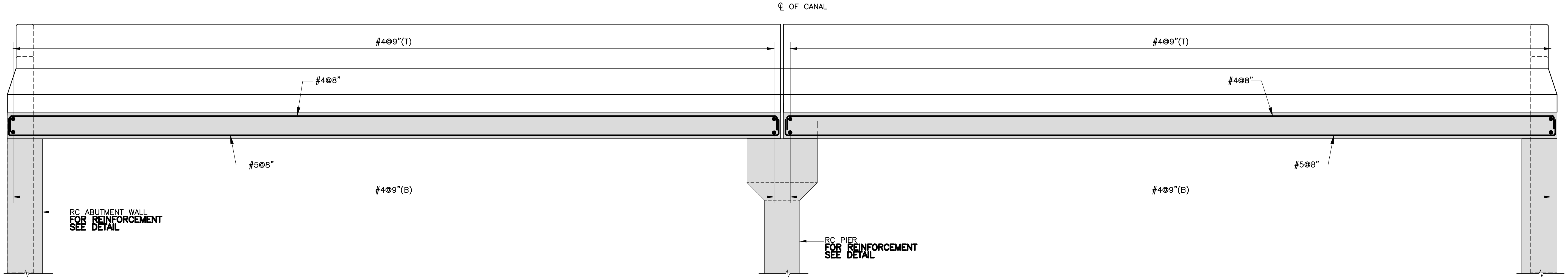
REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
TABLE OF ELEVATIONS AND DIMENSIONS

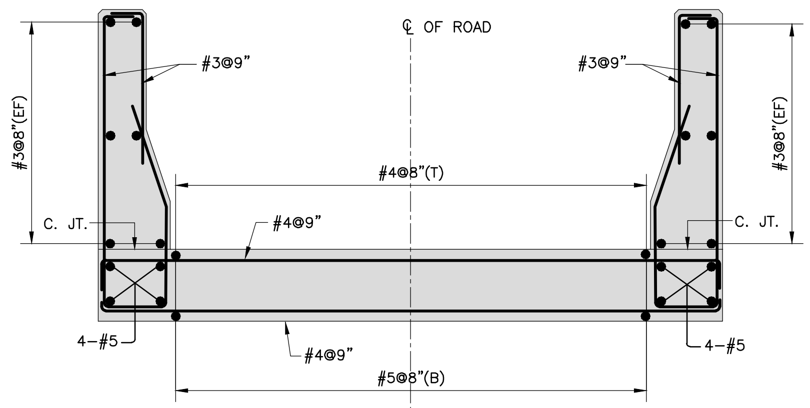
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/07	0



PLAN—DECK SLAB



SECTION A—A
DECK SLAB



SECTION B—B
DECK SLAB

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

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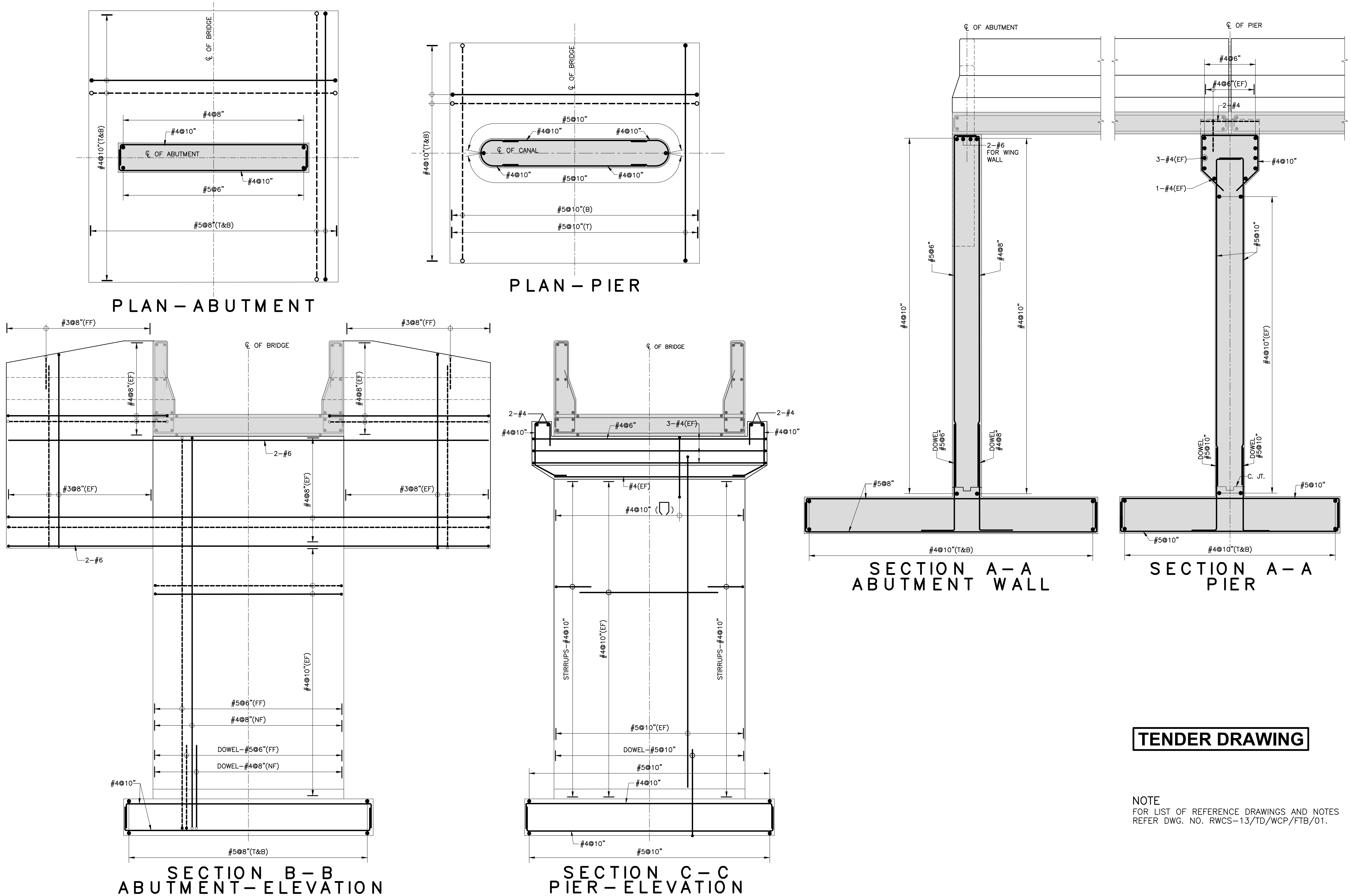
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
REINFORCEMENT DETAILS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/08	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/FTB/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
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APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL FOOT BRIDGE
REINFORCEMENT DETAILS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/FTB/09	0

B.5. CANAL SYPHON
AT
RD 96+644

LIST OF REFERENCE DRAWINGS

SR.	TITLE	DRAWING NO.
A.	**GENERAL REFERENCES**	
1	PROJECT AREA MAP	RWCS-13/TD/GD/01
2	GENERAL NOTES (2 SHEETS)	RWCS-13/TD/GD/02
3	CONTRACT PACKAGES	RWCS-13/TD/GD/03
4	SURVEY CONTROL POINTS - DATA TABLE	RWCS-13/TD/GD/04
5	MISCELLANEOUS DRAWINGS	RWCS-13/TD/MSC/05
6	WARSAK GRAVITY CANAL - SYPHON AT RD 96+644 - LIST OF REFERENCE DRAWINGS AND NOTES	RWCS-13/TD/WCP/SYN/01
B.	**HILL TORRENT CROSSING (HTC) - SYPHON AT RD 96+644**	
1	EXISTING SYPHON AT RD 96+644 - DISMANTLING OF STRUCTURE - PLAN AND SECTION	RWCS-13/TD/WCP/SYN/02
2	GENERAL ARRANGEMENT PLAN	RWCS-13/TD/WCP/SYN/03
3	PLAN	RWCS-13/TD/WCP/SYN/04
4	PLAN	RWCS-13/TD/WCP/SYN/05
5	SECTION A-A	RWCS-13/TD/WCP/SYN/06
6	SECTION B-B	RWCS-13/TD/WCP/SYN/07
7	SECTIONS	RWCS-13/TD/WCP/SYN/08
8	SECTIONS	RWCS-13/TD/WCP/SYN/09
9	SECTIONS AND DETAIL	RWCS-13/TD/WCP/SYN/10
10	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/SYN/11
11	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/SYN/12
12	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/SYN/13
13	TRAFFIC DIVERSION PLAN (STAGE-I)	RWCS-13/TD/WCP/SYN/14
14	TRAFFIC DIVERSION PLAN (STAGE-II)	RWCS-13/TD/WCP/SYN/15
15	TRAFFIC DIVERSION PLAN (STAGE-III)	RWCS-13/TD/WCP/SYN/16

NOTES

1 LOCATION OF STRUCTURES IS TENTATIVE AND SUBJECT TO VERIFICATION BY THE ENGINEER AT SITE.

2 ALL THE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE DRAWINGS REFERRED AND RELEVANT SPECIFICATIONS

3 EXCAVATED MATERIAL SUITABLE FOR EMBANKMENT FILL SHALL BE USED FOR COMPACTED EMBANKMENTS.

4 EARTHFILL IN EMBANKMENTS SHALL BE COMPACTED AS PER SPECIFICATIONS.

5 THE STRUCTURES TO BE CONSTRUCTED ON FILL, SHALL BE PLACED ON FILL COMPACTED TO 95 % OF DRY DENSITY.

MECHANICAL NOTES

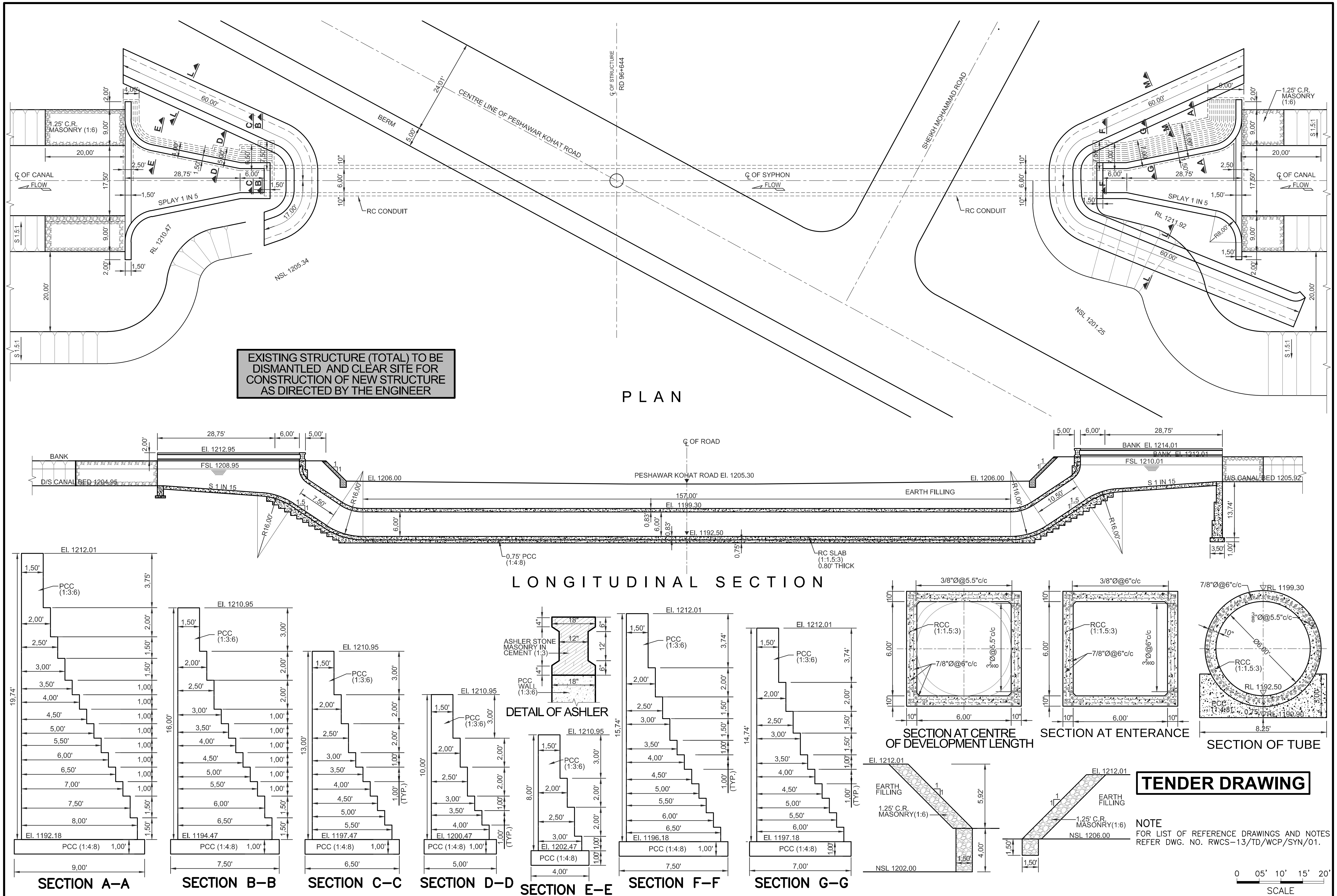
1. ALL MATERIALS / PAINTINGS AND THEIR THICKNESSES SHALL BE ACCORDING TO THE SPECIFICATIONS AND THE DRAWINGS AND SUBJECT TO PRIOR APPROVAL OF THE ENGINEER.
2. MATERIALS TEST CERTIFICATES SHALL BE SUBMITTED FOR APPROVAL BEFORE START OF FABRICATION.
3. FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AISC - SPECIFICATIONS FOR THE DEISGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS CODE D-1.1 WELDING IN BUILDING CONSTRUCTION.
5. DIMESNSIONS / SIZES PROVIDED ON THE DRAWINGS ARE THE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL DESIGN A SUBMIT THE SHOP DRAWINGS / CALCULATIONS FOR APPROVAL BEFORE START OF MANUFACTURING. NO MANUFACTURING BE DONE WITHOUT APPROVAL BY THE ENGINEER.
6. ALL RELEVANT STANDARDS, CATALOGS ETC. SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS / CALCULATIONS.
7. THE PIPES SHALL NOT BE TRANSPORTED TO SITE BEFORE SHOP INSPECTION BY THE ENGINEER'S REPRESENTATIVE.
8. ALL INSTALLATION WORK SHALL BE CARRIED OUT ACCORDING TO APPROVED SCHEDULE AND IN THE PRESENCE OF ENGINEER'S REPRESENTATIVE.
9. COMPLETE BOQ SHALL BE PROVIDED ON EACH SHOP DRAWING INCLUDING ITEM NOS., DESCRIPTION, DIMENSIONS, QUANTI MATERIALS ALONG WITH STANDARDS AND TOTAL WEIGHT OF EACH ITEM.
10. ALL BUTT WELDS SHALL BE RT ACORDING TO THE REQUIREMENTS OF SPECIFICATIONS.
11. THE CONTRACTOR SHALL SUBMIT FINAL PROFILE OF THE PIPELEINE/RISING/MAIN ALONGWITH ENROUTE FACILITIES /CROSSI

TENDER DRAWING

CLIENT	CONSULTANT - A JOINT VENTURE OF	PROJECT		
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS	DRAWN: Ishtiaq CHECKED RECOMMENDED APPROVED	REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13 BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT SYPHON AT RD 96+644 LIST OF REFERENCE DRAWINGS AND NOTES

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

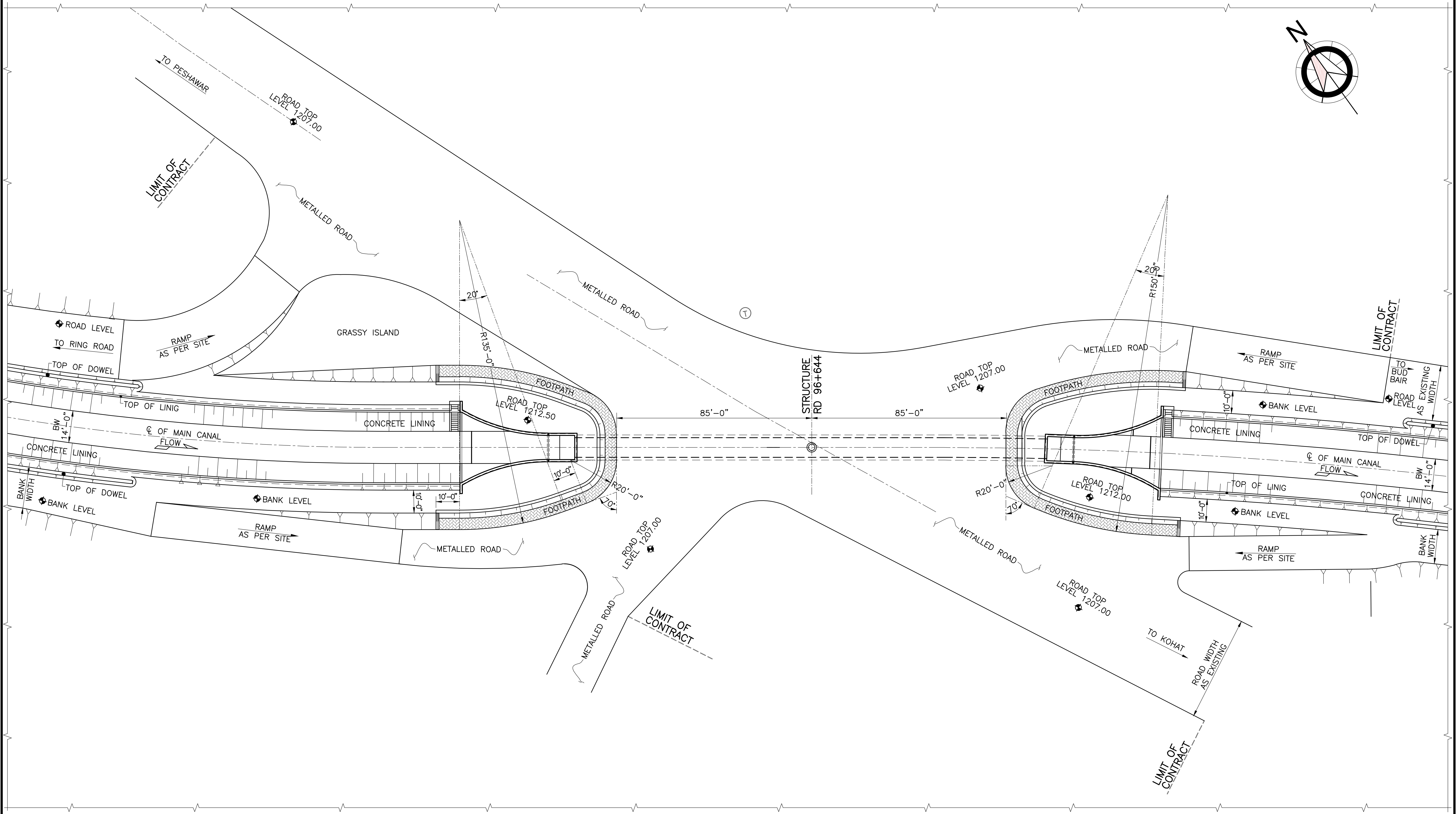
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/01	0



CLIENT	CONSULTANT - A JOINT VENTURE OF			
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS	DRAWN: Ishtiaq CHECKED RECOMMENDED APPROVED	REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13 BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT SYPHON AT RD 96+644 DISMANTLING OF STRUCTURE

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/02	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/SYN/01.

0 10' 20' 30' 40'
SCALE

CLIENT

IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

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NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

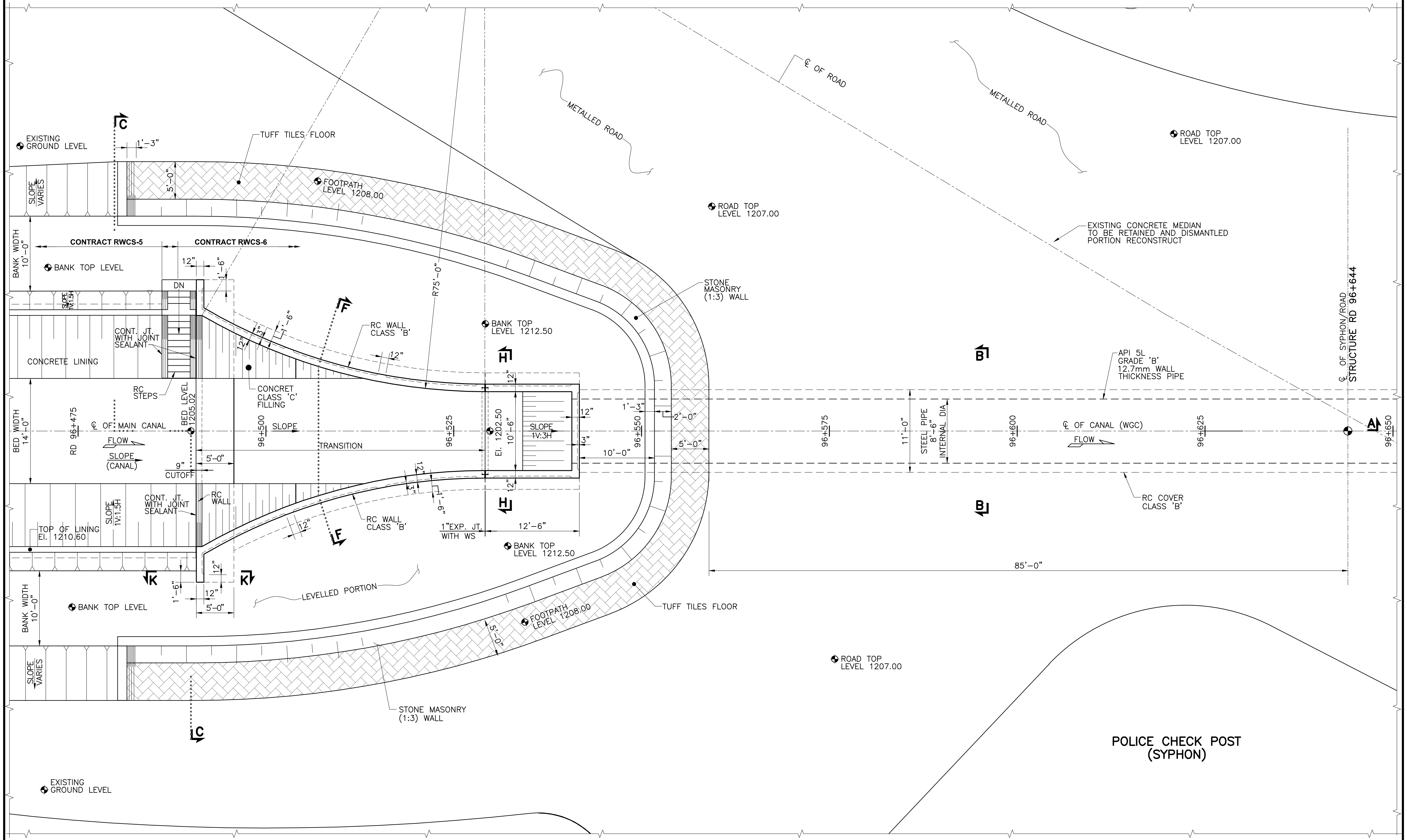
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
GENERAL ARRANGEMENT PLAN

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/03	0



TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/SYN/01.

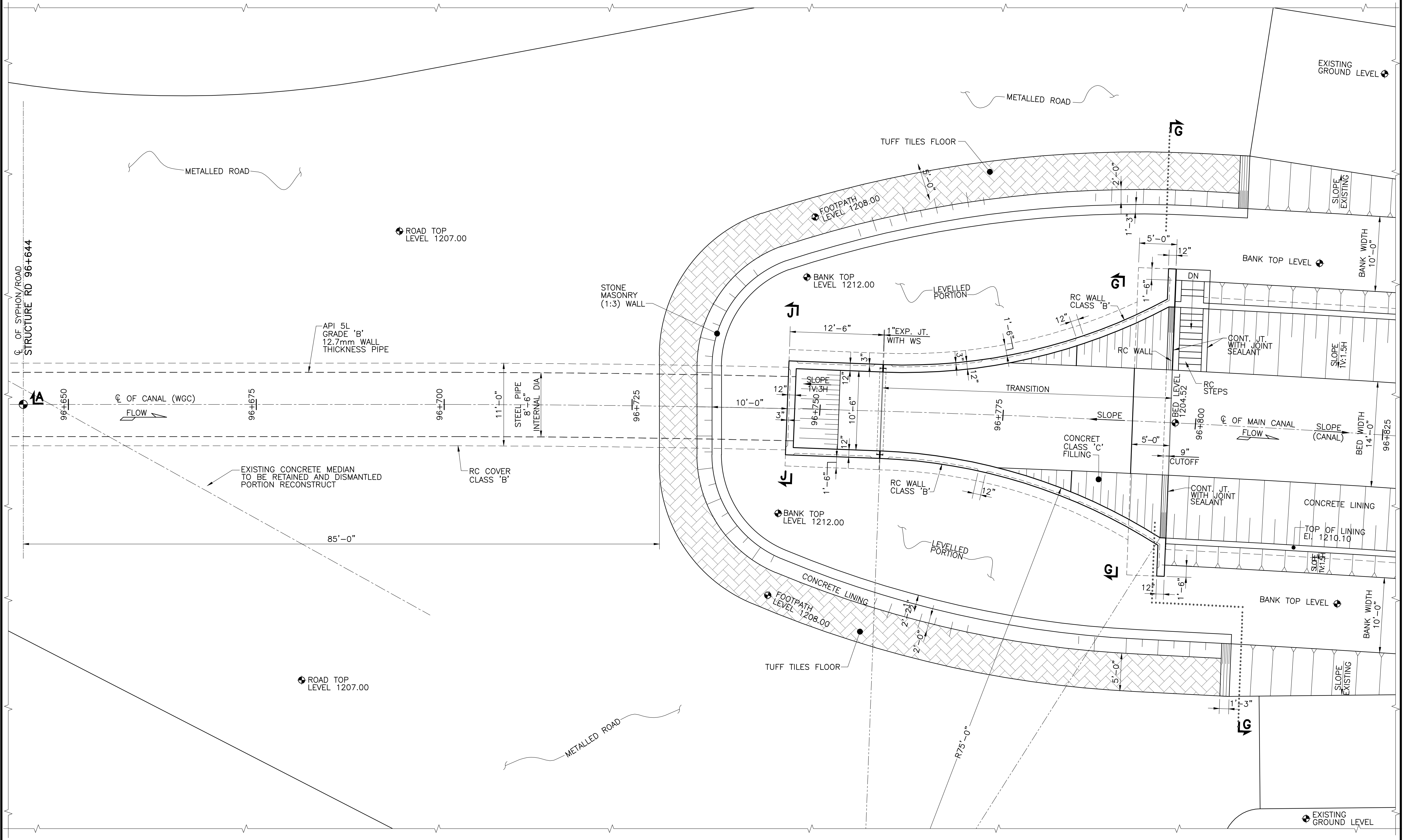
0 4' 8' 12'
SCALE

						DRAWN	Ishtiaq	REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13 BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT SYPHON AT RD 96+644 PART PLAN
						CHECKED		
						RECOMMENDED		
REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	APPROVED		DATE: AUG., 2021 / DWG. NO.: RWCS-13/TD/WCP/SYN/04 / REV.: 0

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS



TENDER DRAWING

NOTE
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0 4' 8' 12'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

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ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

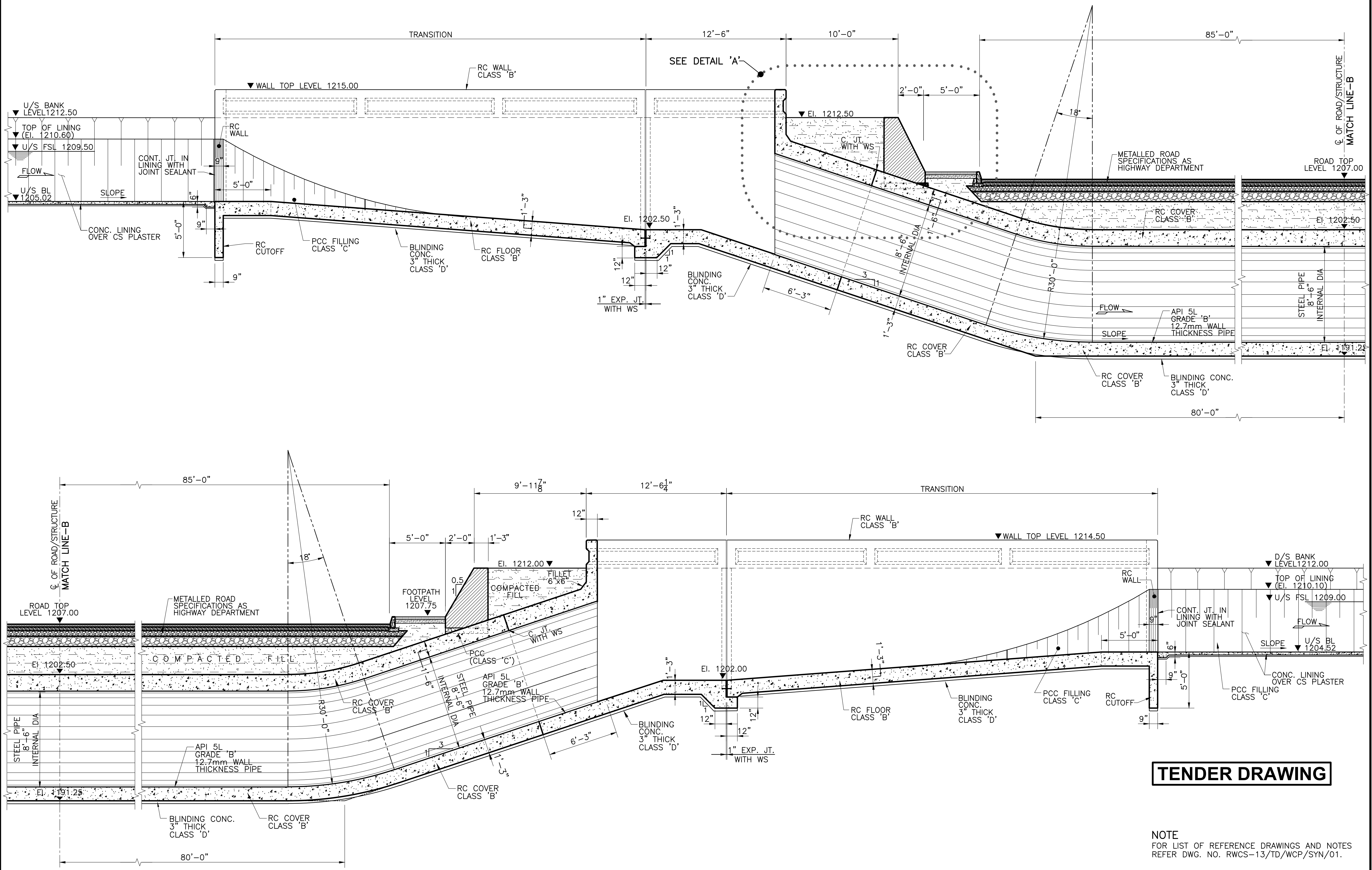
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
PART PLAN

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/05	0



NOTE

FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/SYN/01.

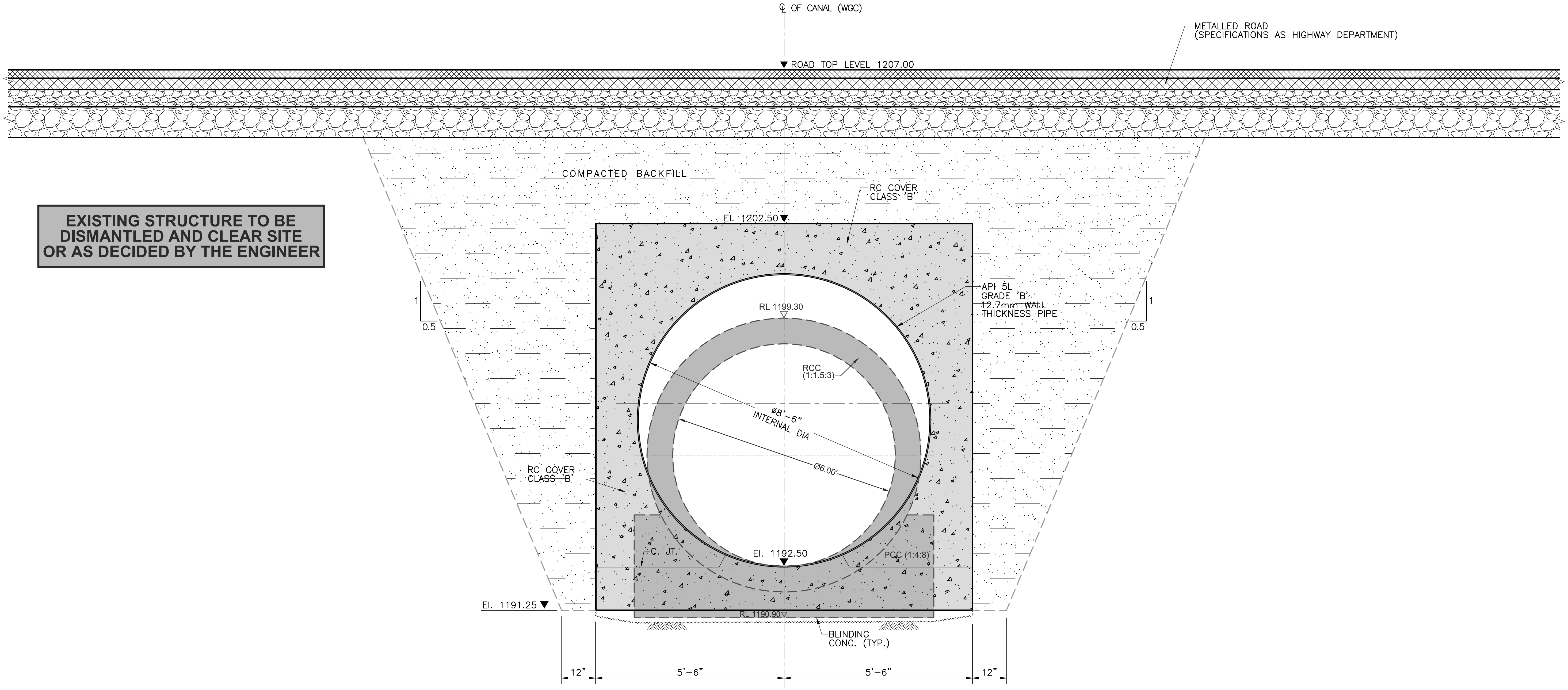
0 2' 4' 6' 8'
SCALE

CLIENT	CONSULTANT - A JOINT VENTURE OF							
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS						

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
SECTION A-A

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/06	0



EXISTING STRUCTURE TO BE DISMANTLED AND CLEAR SITE OR AS DECIDED BY THE ENGINEER

TENDER DRAWING

NOTE

FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/SYN/01.

0 1' 2' 3'
SCALE

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
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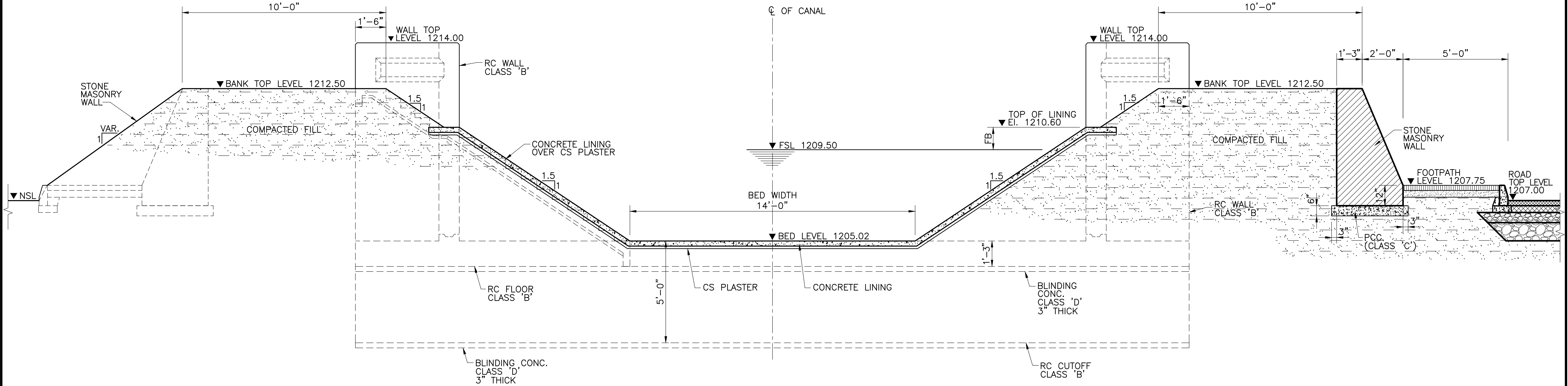
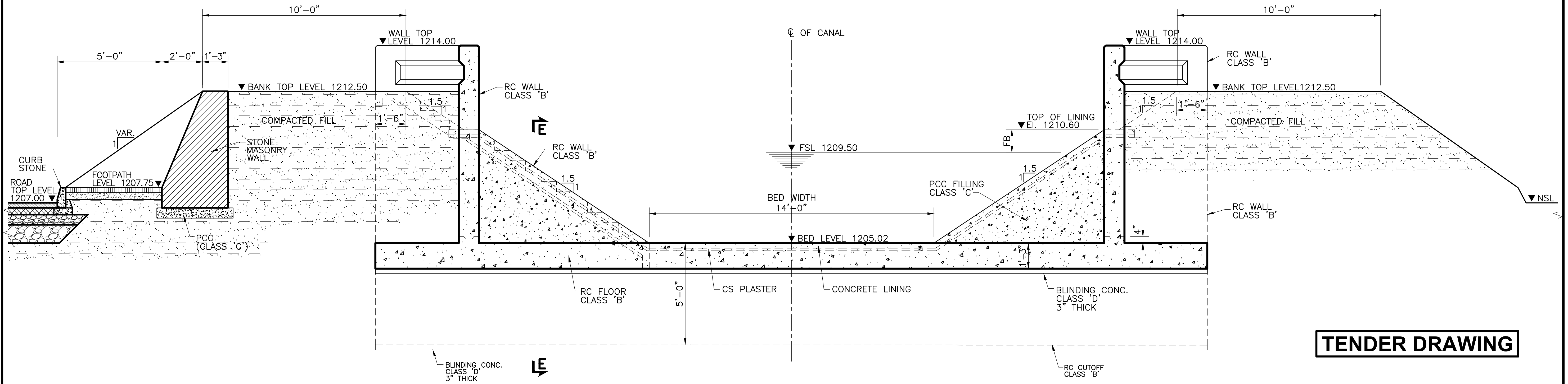
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
SECTION B-B

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/07	0



SECTION C – C



SECTION D – D

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/SYN/01.

0 1' 2' 3' 4' 5'
SCALE

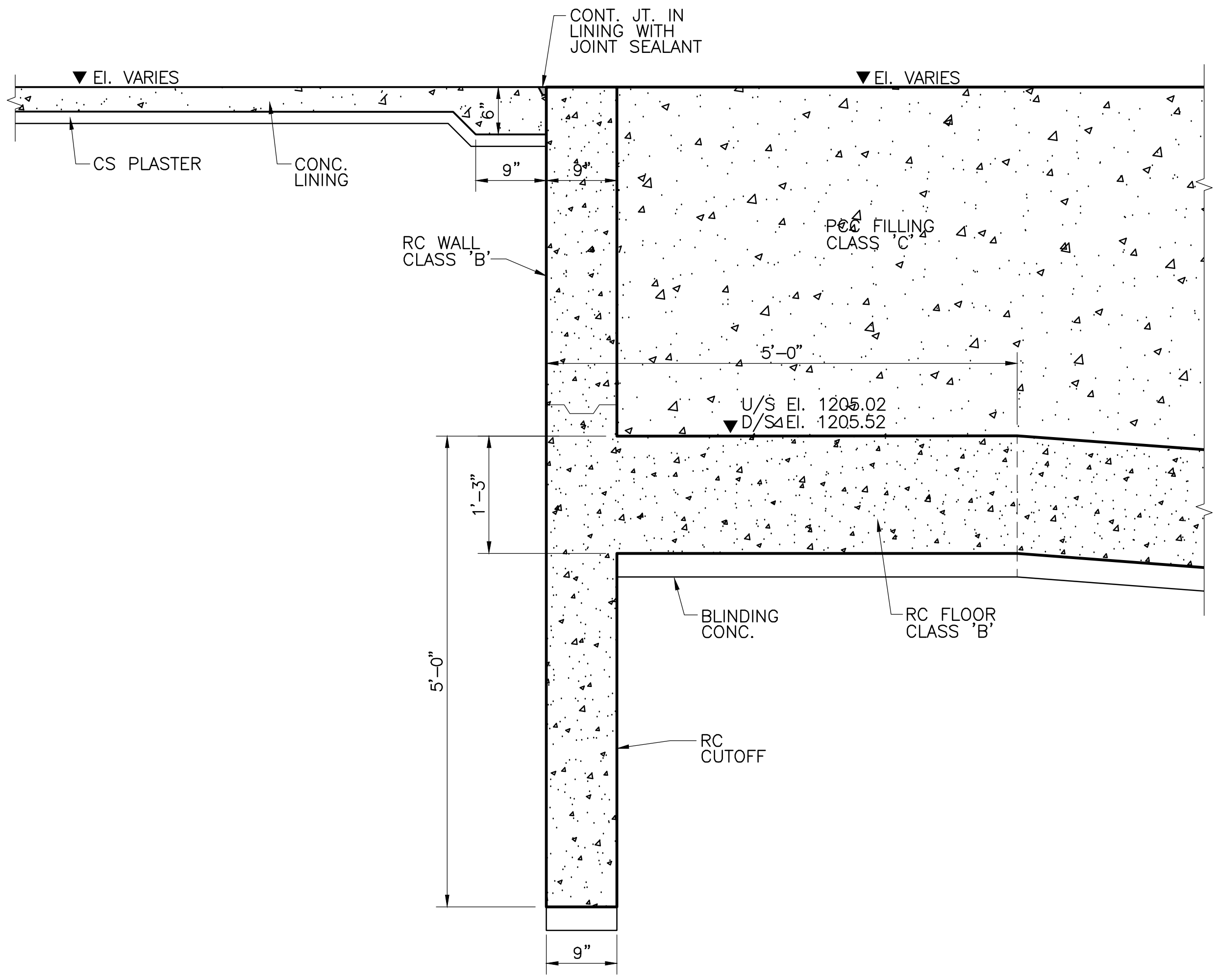
CLIENT IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	CONSULTANT - A JOINT VENTURE OF NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/08	0



SECTION E– E

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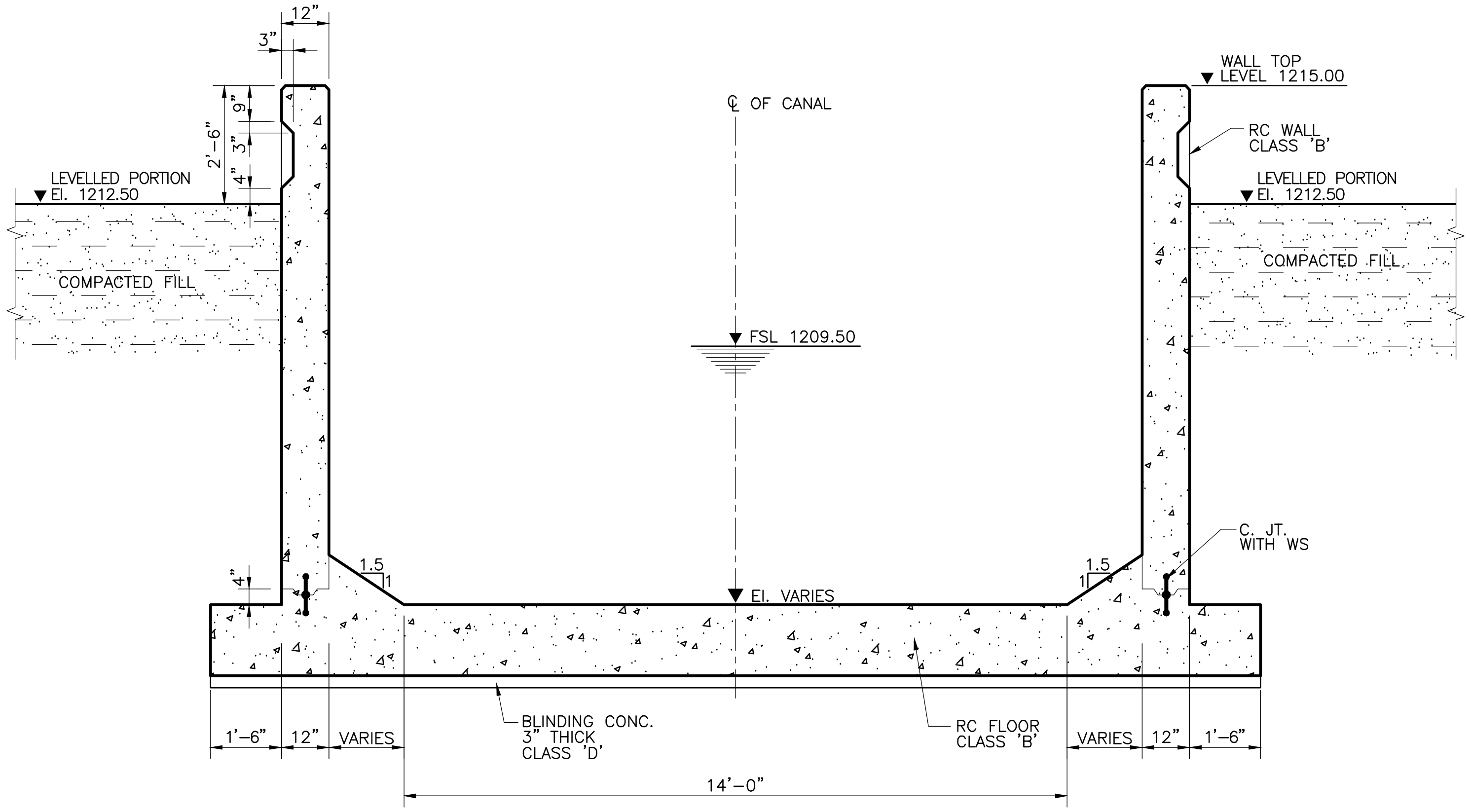
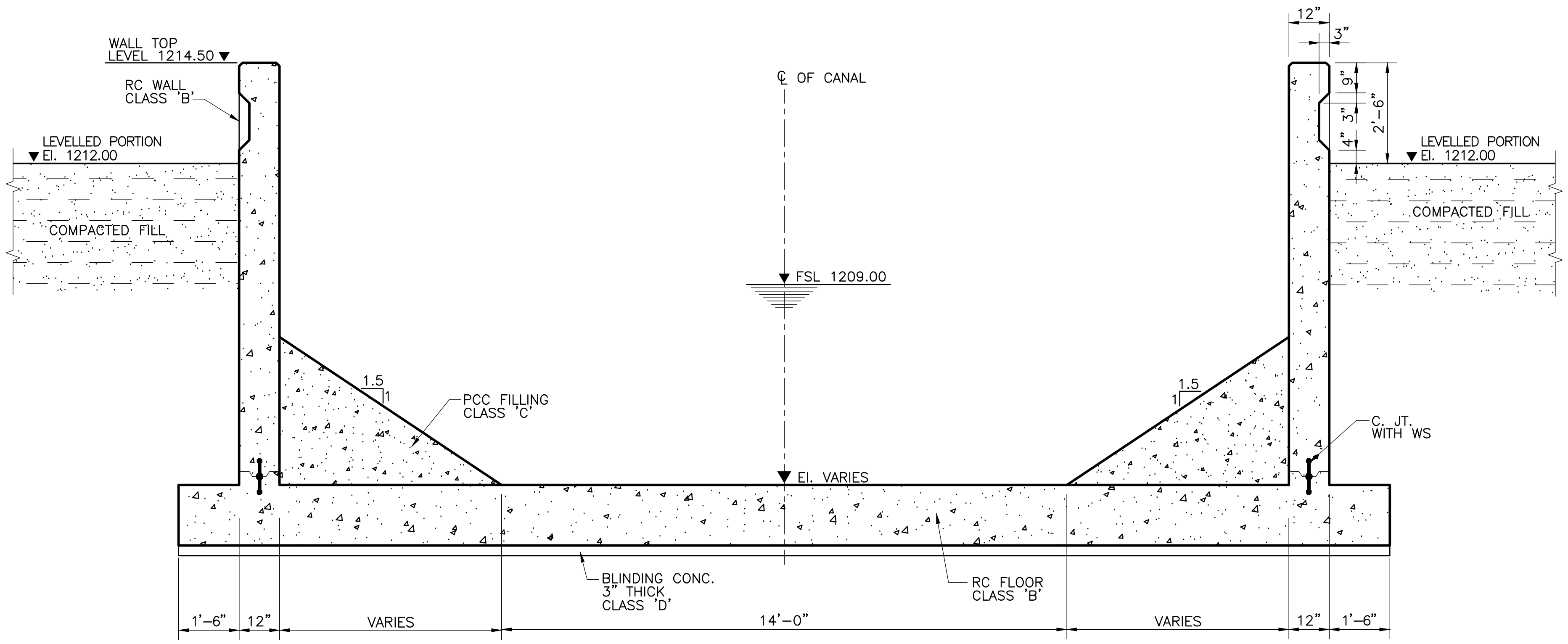
SCALE



SECTION F– F



SECTION G – G

TENDER DRAWING

NOTE
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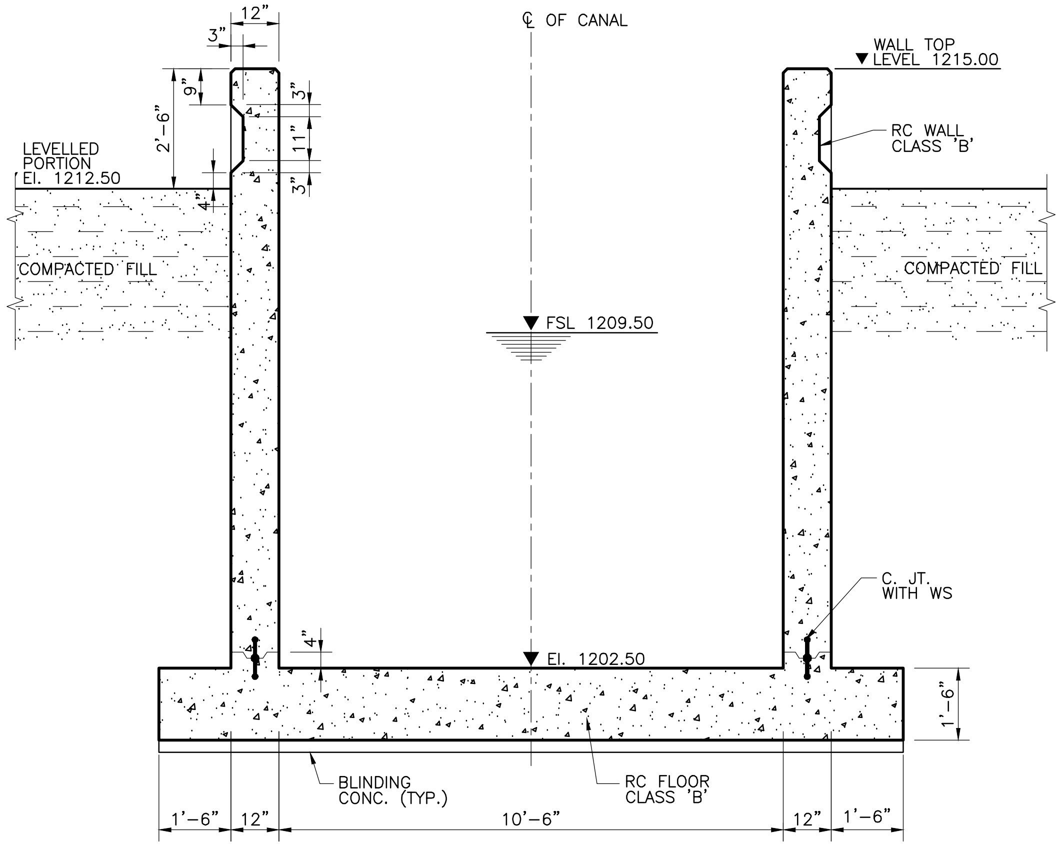
0 1' 2' 3' 4'
SCALE

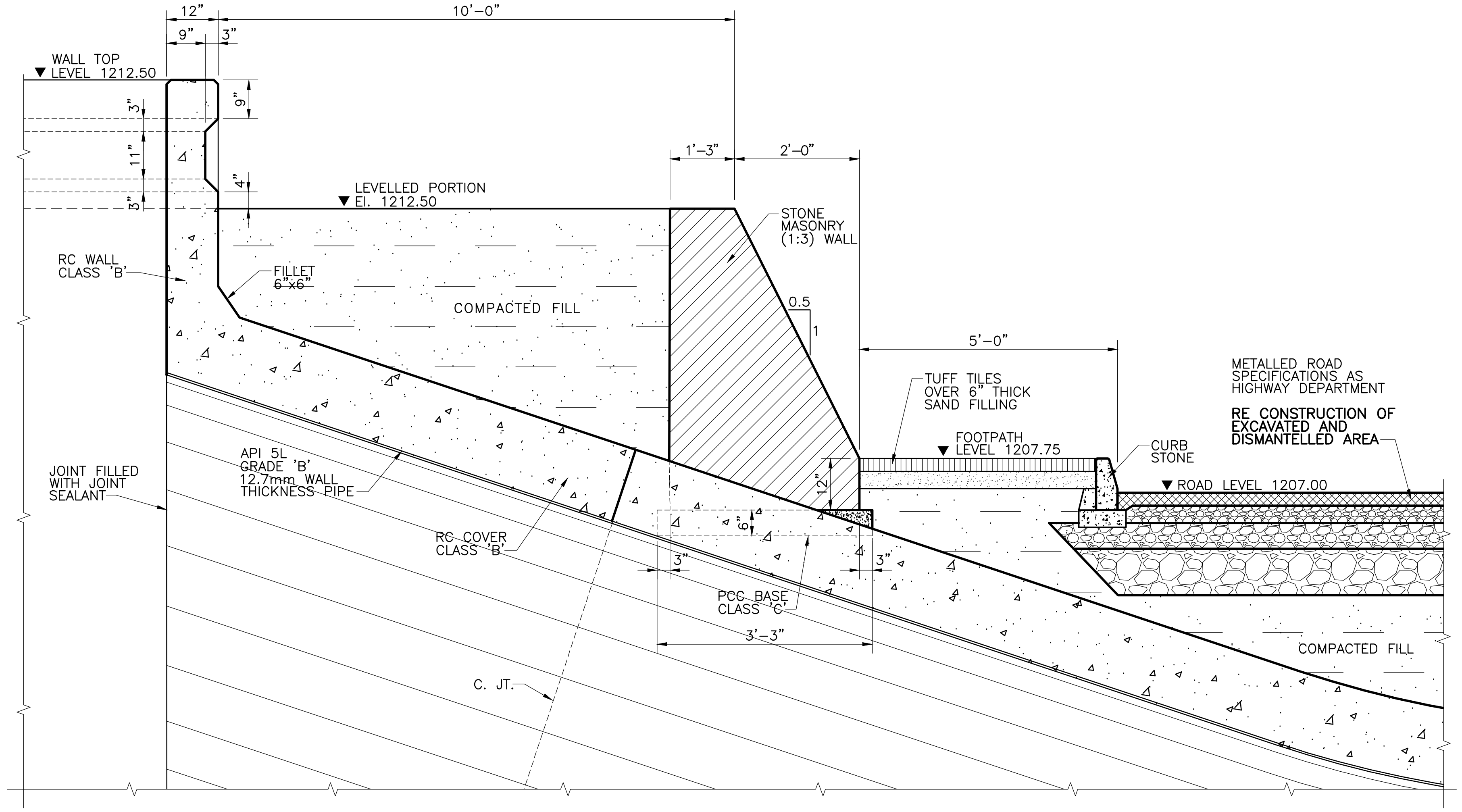
CLIENT	CONSULTANT - A JOINT VENTURE OF			
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS	DRAWN: Ishtiaq CHECKED RECOMMENDED APPROVED	REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13 BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT SYPHON AT RD 96+644 SECTIONS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/09	0

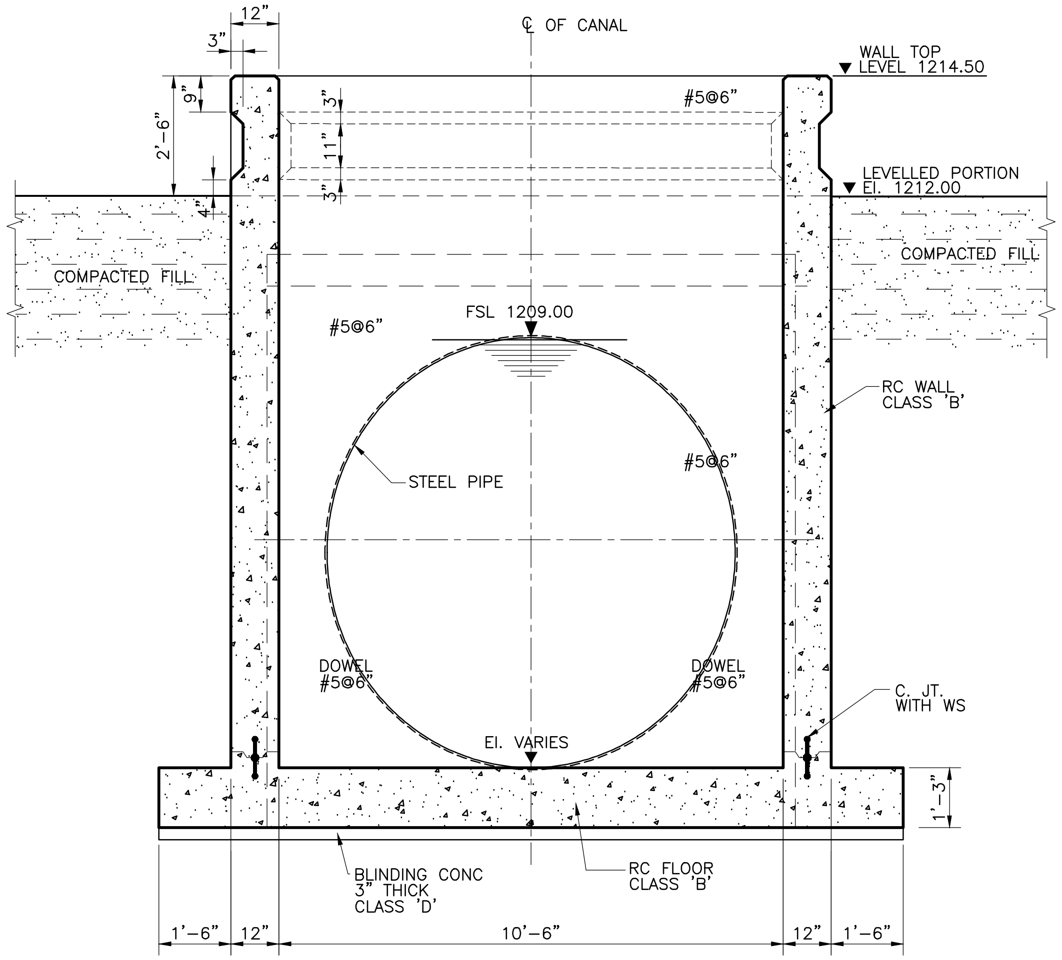


SECTION H—H

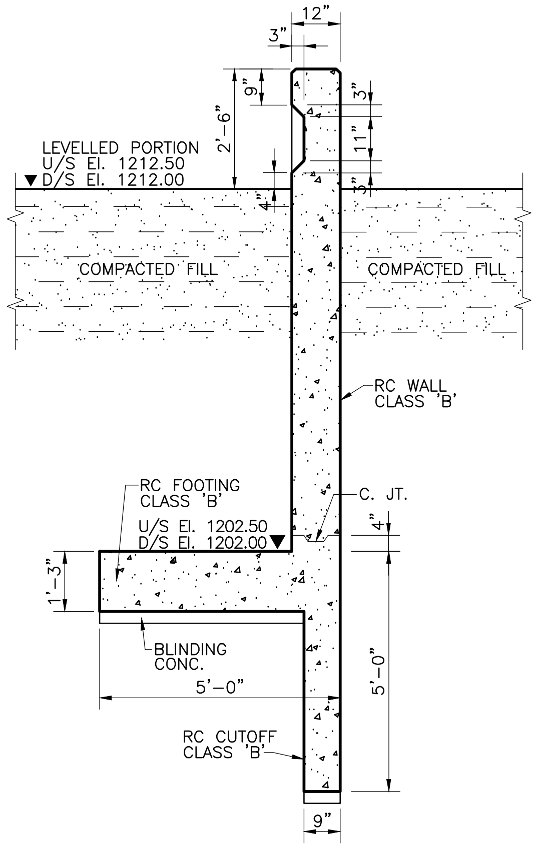


DETAIL 'A'

0 1' 2' 3'
SCALE



SECTION J—J



SECTION K—K

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/SYN/01.

0 1' 2' 3' 4'
SCALE

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

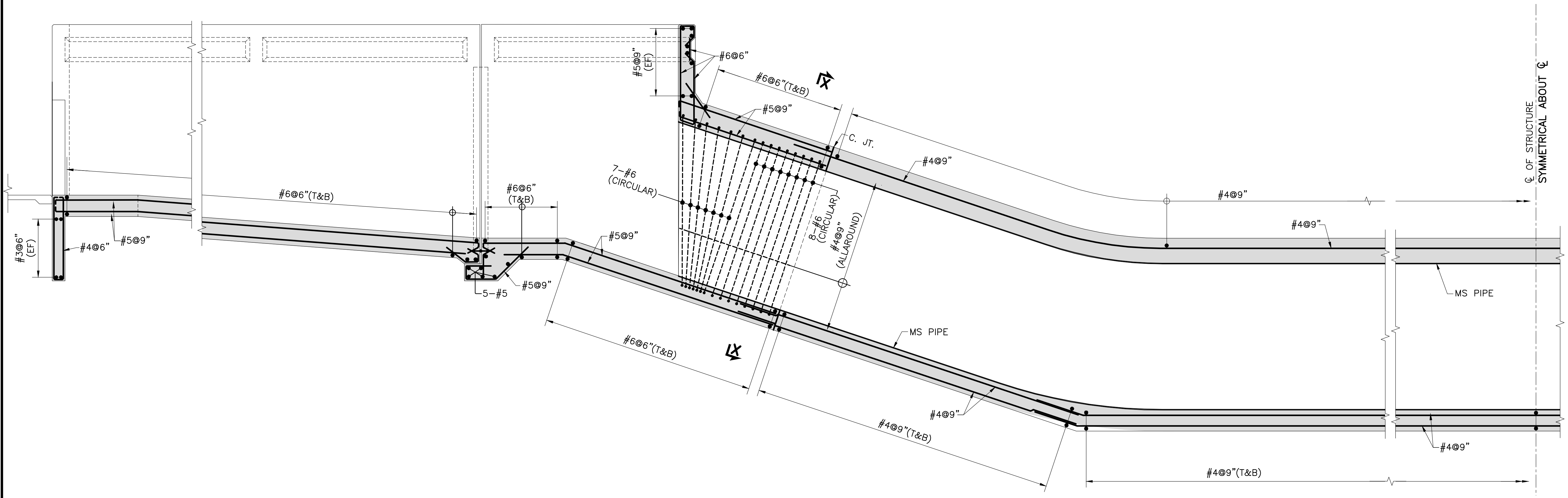
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

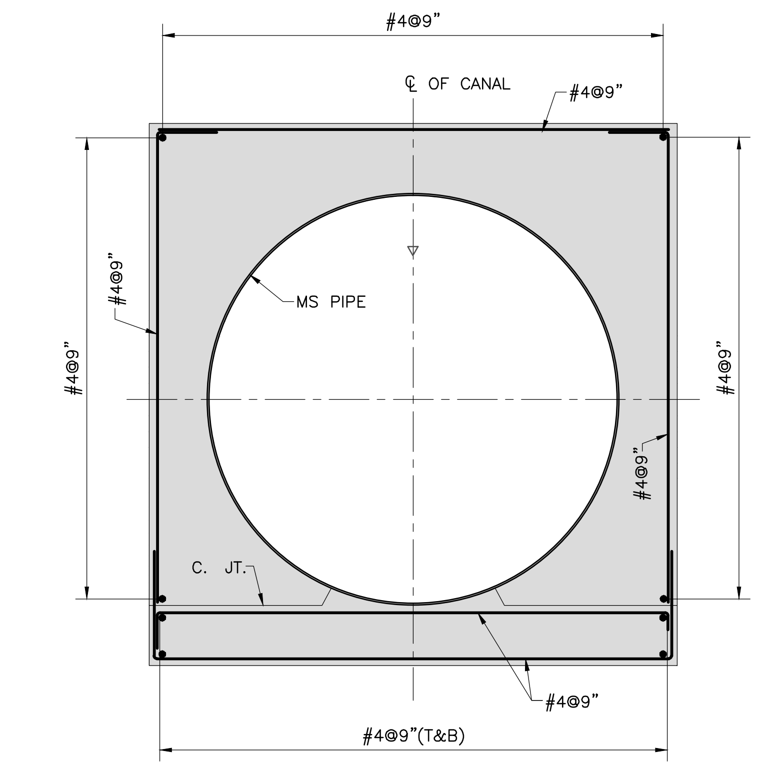
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
SECTIONS AND DETAIL

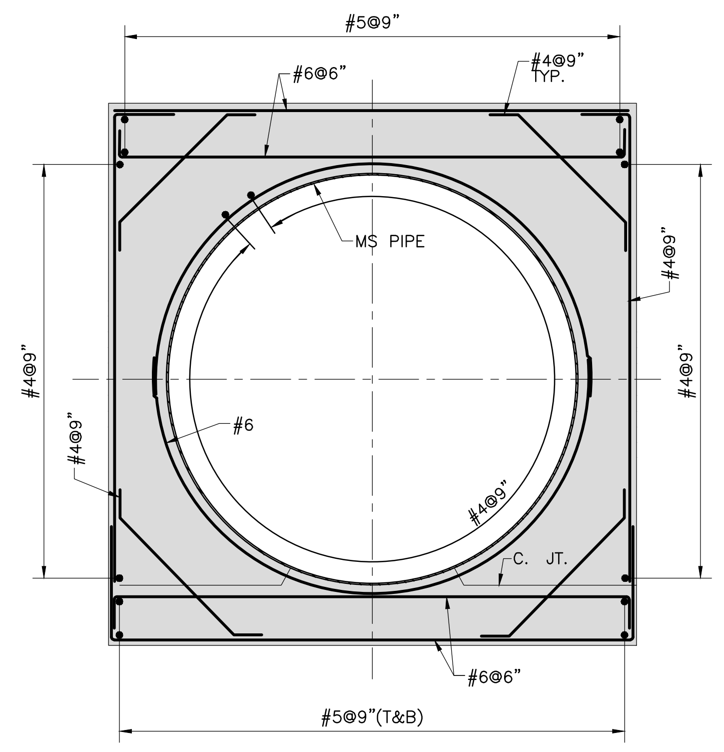
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/10	0



SECTION A—A



SECTION B—B



SECTION X—X

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/SYN/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

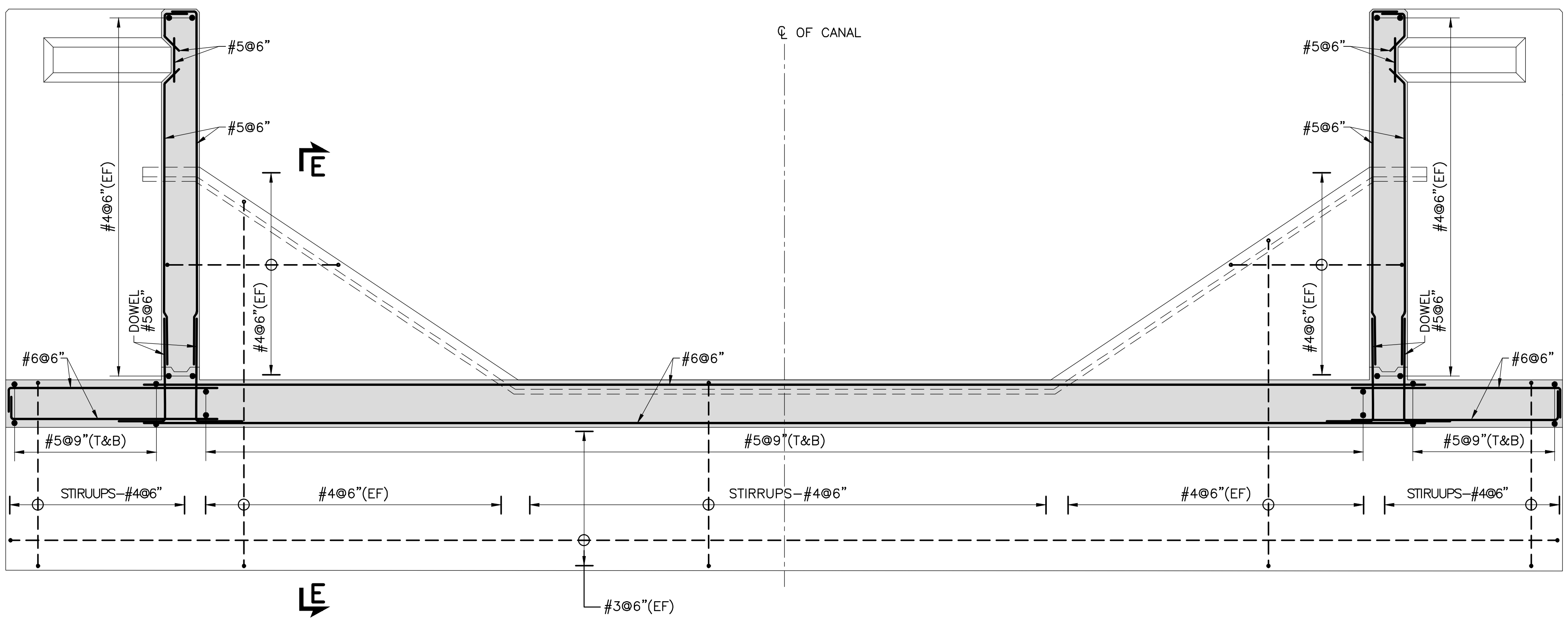
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

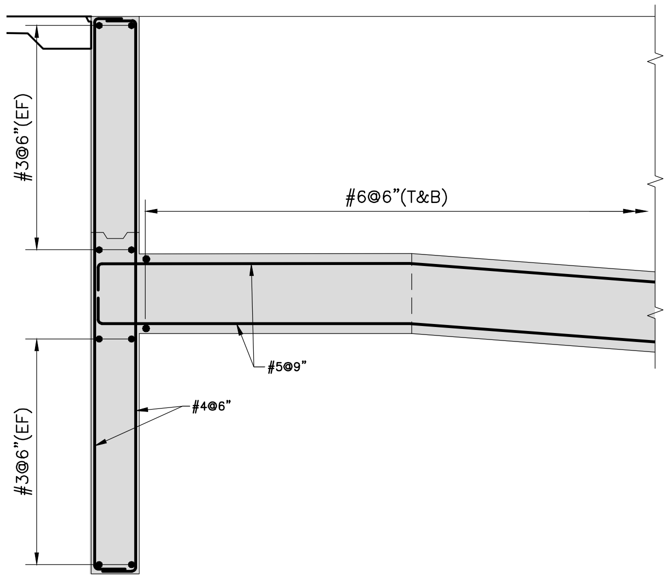
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
REINFORCEMENT DETAILS

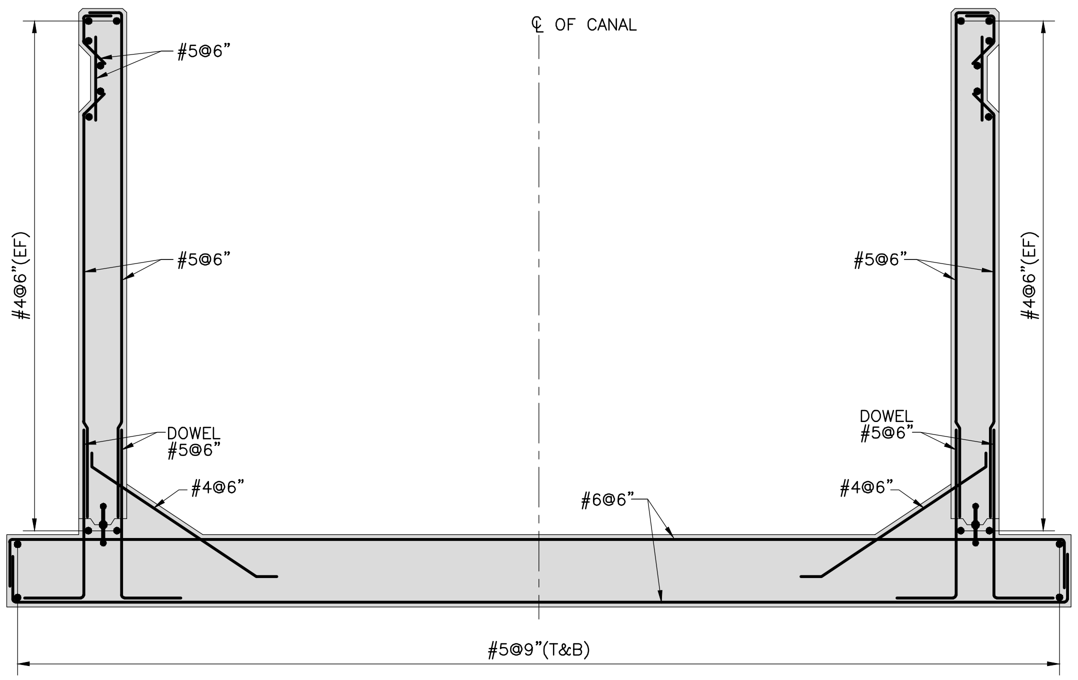
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/11	0



SECTION B – B



SECTION E – E



SECTION F – F

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/SYN/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

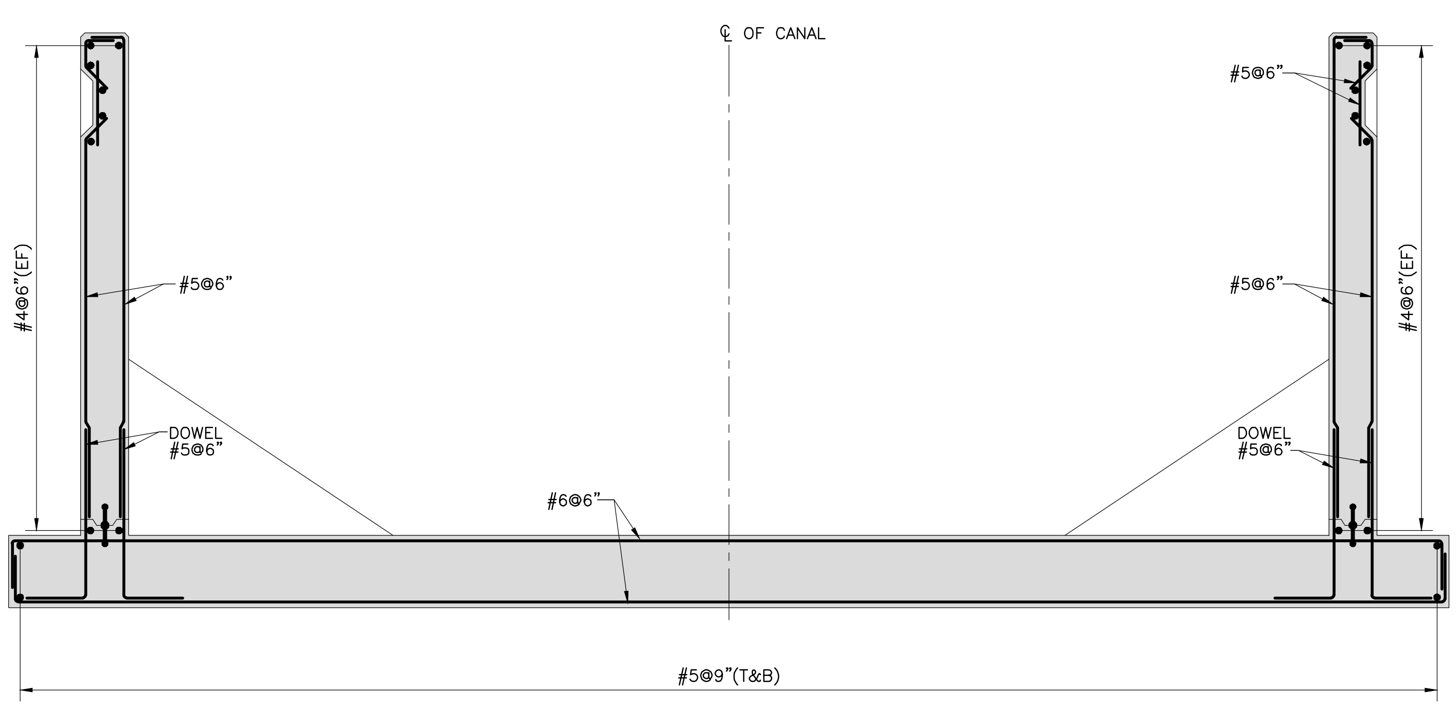
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

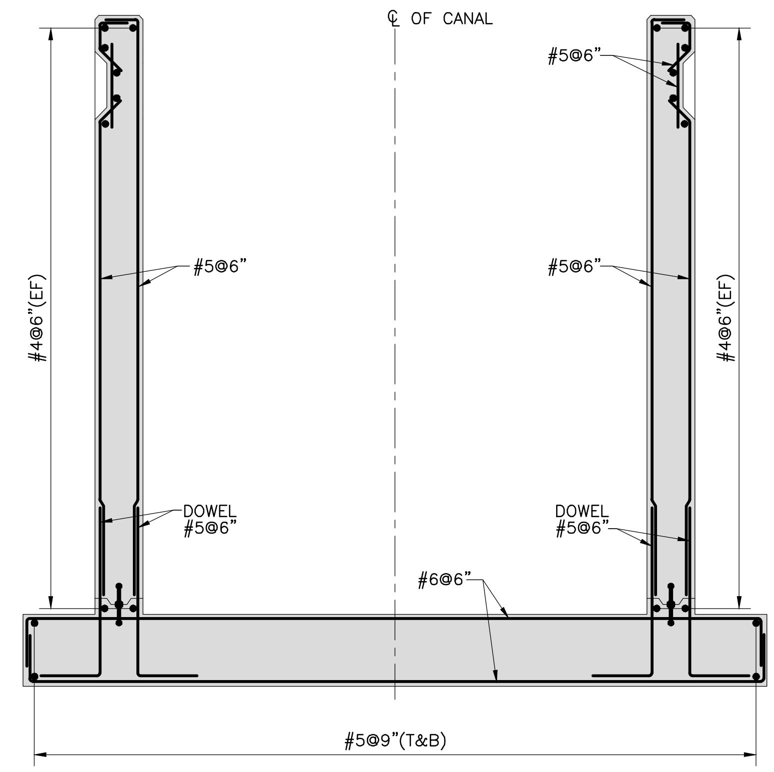
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
REINFORCEMENT DETAILS

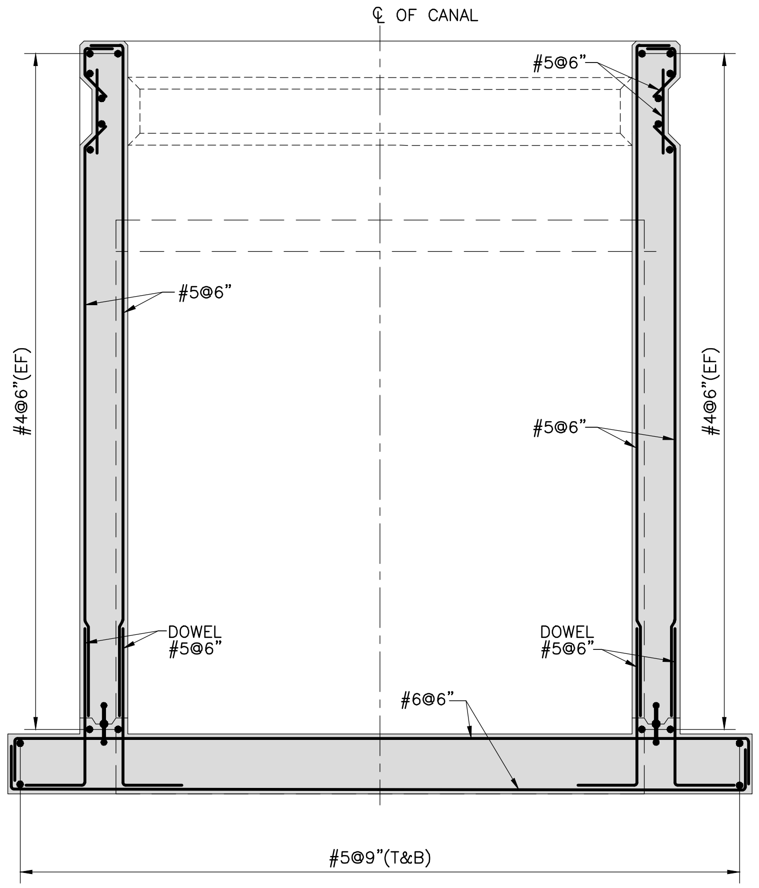
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/12	0



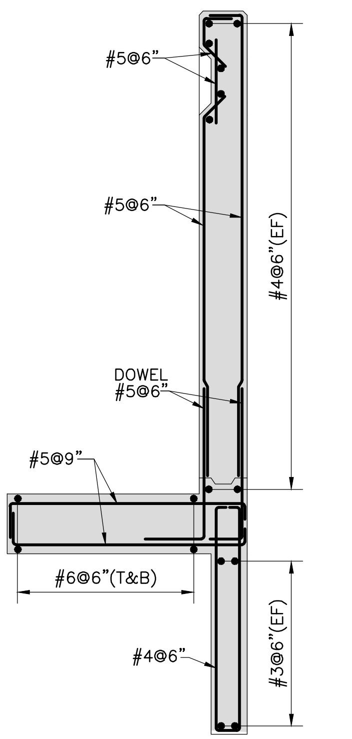
SECTION G—G



SECTION H—H



SECTION J—J



SECTION K—K

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/SYN/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
REINFORCEMENT DETAILS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/13	0

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS–13/TD/WCP/SYN/01.

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
TRAFFIC DIVERSION PLAN (STAGE-I)

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/14	0

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/SYN/01.

CLIENT	CONSULTANT - A JOINT VENTURE OF									
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NESPAK NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR ICS INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS	REV.	DATE	DESCRIPTION	BY	CKD.	APPR.	DRAWN Ishtiaq CHECKED RECOMMENDED APPROVED	REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13 BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT SYPHON AT RD 96+644 **TRAFFIC DIVERSION PLAN (STAGE-II)** DATE AUG., 2021 — DWG. NO. RWCS-13/TD/WCP/SYN/15 — REV. 0

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/SYN/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM
IN
PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
SYPHON AT RD 96+644
TRAFFIC DIVERSION PLAN (STAGE-III)

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/SYN/16	0

B.6. WATERCOURSE OUTLETS
AT
W.G.C , W.L.C
AND
DISTRIBUTION SYSTEM

LIST OF REFERENCE DRAWINGS

SR.	TITLE	DRAWING NO.
A.	**GENERAL REFERENCES**	
1	PROJECT AREA MAP	RWCS-13/TD/GD/01
2	GENERAL NOTES (SHEET 1 OF 2)	RWCS-13/TD/GD/02
3	GENERAL NOTES (SHEET 2 OF 2)	RWCS-13/TD/GD/03
4	CONTRACT PACKAGES	RWCS-13/TD/GD/04
5	WARSAK LIFT CANAL - TYPICAL WATERCOURSE OUTLET - LIST OF REFERENCE DRAWINGS AND NOTES	RWCS-13/TD/WCP/XS/01
B.	**TYPICAL WATERCOURSE OUTLET - REFERENCE DRAWINGS**	
1	PLAN AND SECTION	RWCS-13/TD/WCP/WCO/02
2	SECTIONS	RWCS-13/TD/WCP/WCO/03
3	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/04
4	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/05
5	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/06
6	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/07
7	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/08
8	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/09
9	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/10
10	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/11
11	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/12
12	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/13
13	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/14
14	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/15
15	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/16
16	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/17
17	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/18
18	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/19
19	TABLE OF ELEVATIONS AND DIMENSIONS	RWCS-13/TD/WCP/WCO/20
20	REINFORCEMENT DETAILS	RWCS-13/TD/WCP/WCO/21

NOTES

1. LOCATION OF STRUCTURES IS TENTATIVE AND SUBJECT TO VERIFICATION BY THE ENGINEER AT SITE.
2. FOR ELEVATIONS AND DIMENSIONS SHOWN ON DRAWINGS, REFER TO TABLE OF ELEVATIONS AND DIMENSIONS.
3. EXCAVATED MATERIAL SUITABLE FOR EMBANKMENT FILL SHALL BE USED FOR COMPACTED EMBANKMENTS.
4. EARTHFILL IN EMBANKMENTS SHALL BE COMPACTED AS PER SPECIFICATIONS.
5. THE STRUCTURES TO BE CONSTRUCTED ON FILL, SHALL BE PLACED ON FILL COMPACTED TO 95 % OF DRY DENSITY.
6. THE EARTHEN RAMPS AROUND THE STRUCTURE SHALL HAVE SLOPE OF 1:30.
7. OFFTAKING ANGLE OF WATERCOURSE IS 90 DEGREE EXCEPT OTHERWISE MENTIONED.

TENDER DRAWING

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE

ELECTRA CONSULTANTS PESHAWAR

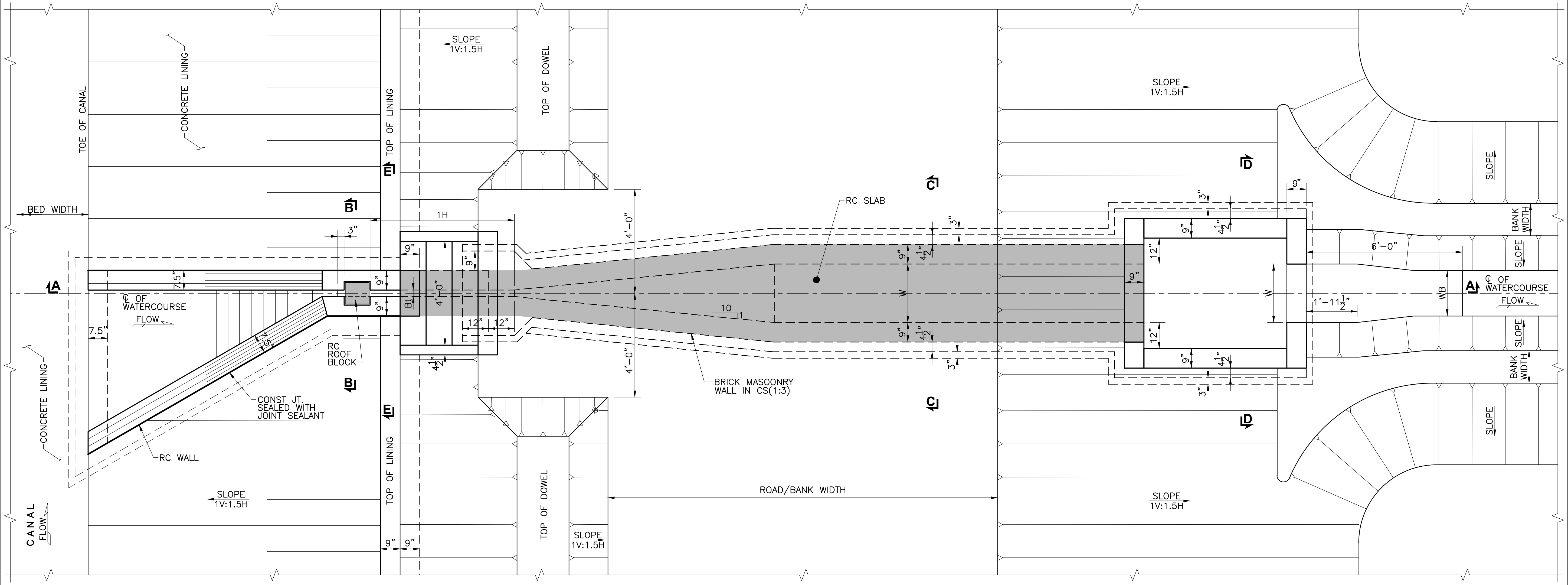
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

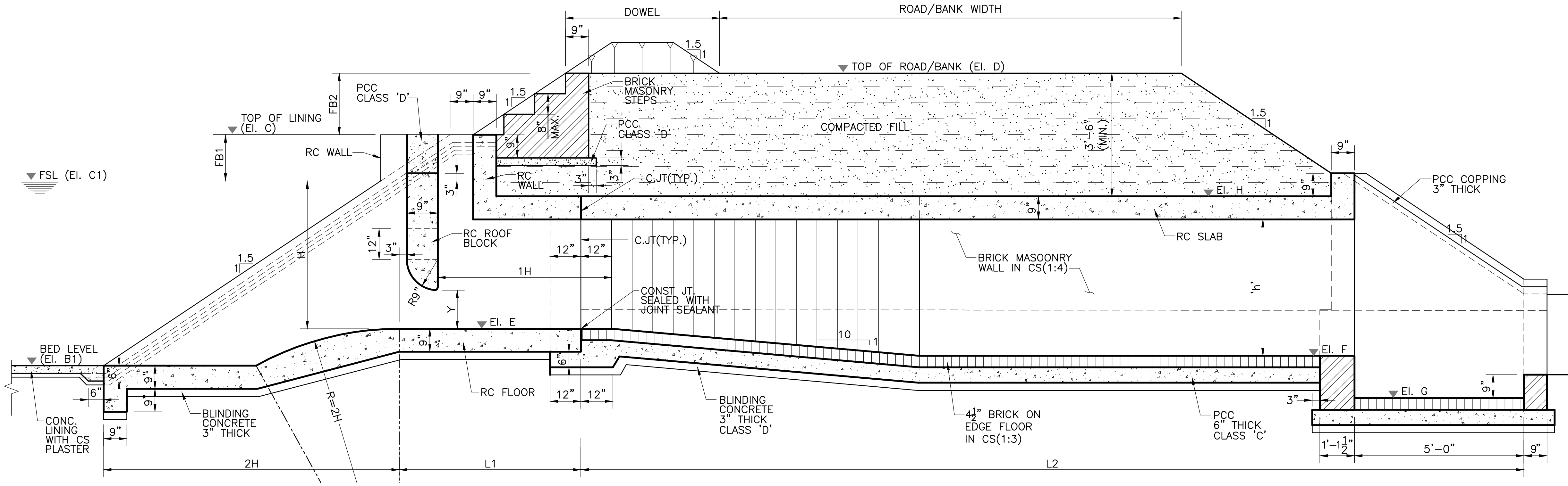
REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
LIST OF REFERENCE DRAWINGS AND NOTES

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/01	0



PLAN



SECTION A-A

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

0 1' 2' 3' 4'
SCALE

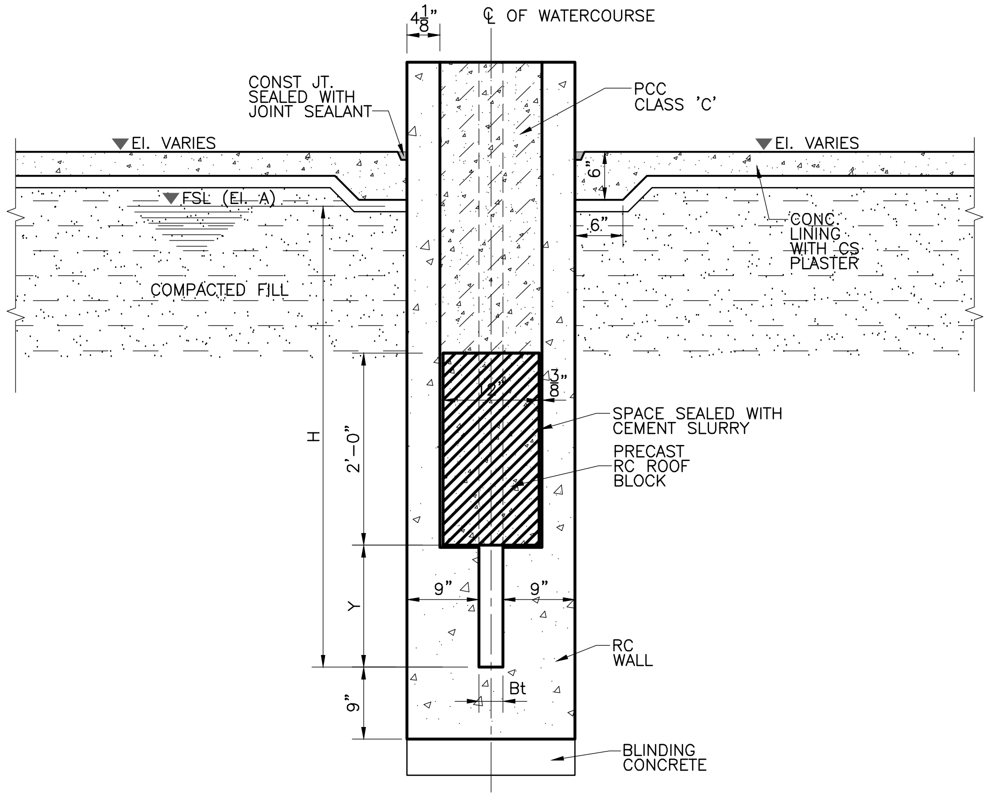
CLIENT	CONSULTANT - A JOINT VENTURE OF	
IRRIGATION DEPARTMENT GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE ELECTRA CONSULTANTS PESHAWAR INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE	REMODELING OF WARSAK CANAL SYSTEM PROJECT DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

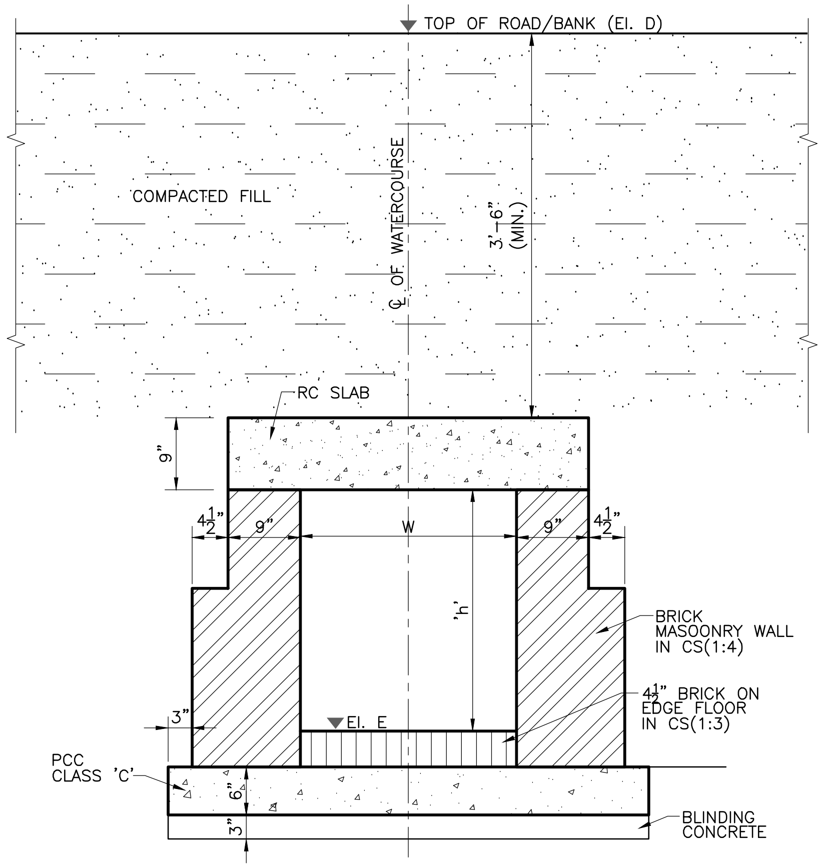
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
PLAN AND SECTION

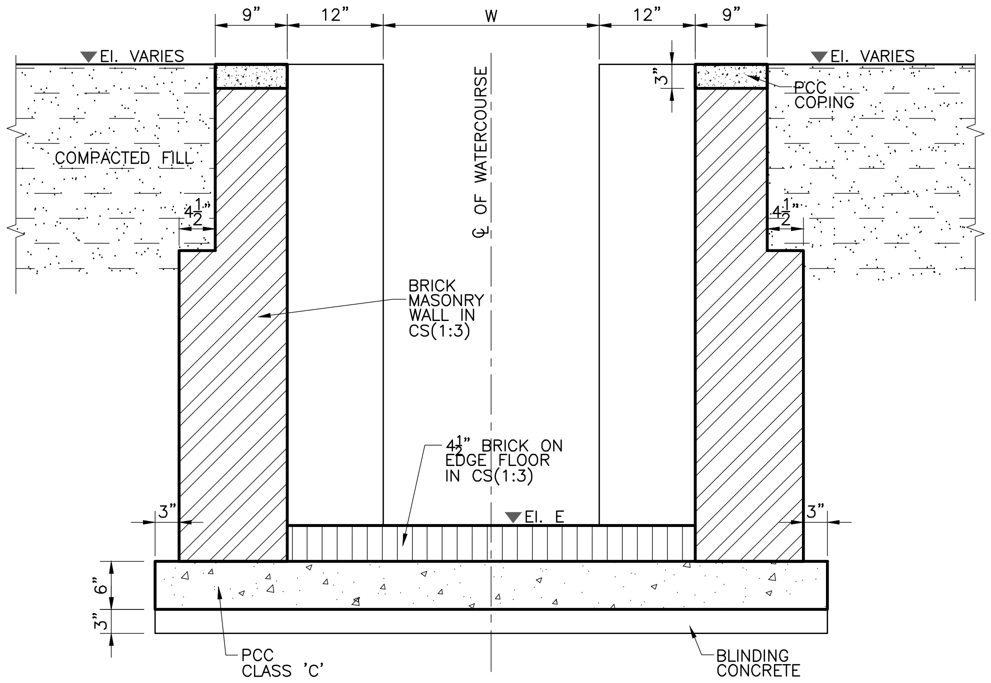
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/02	0



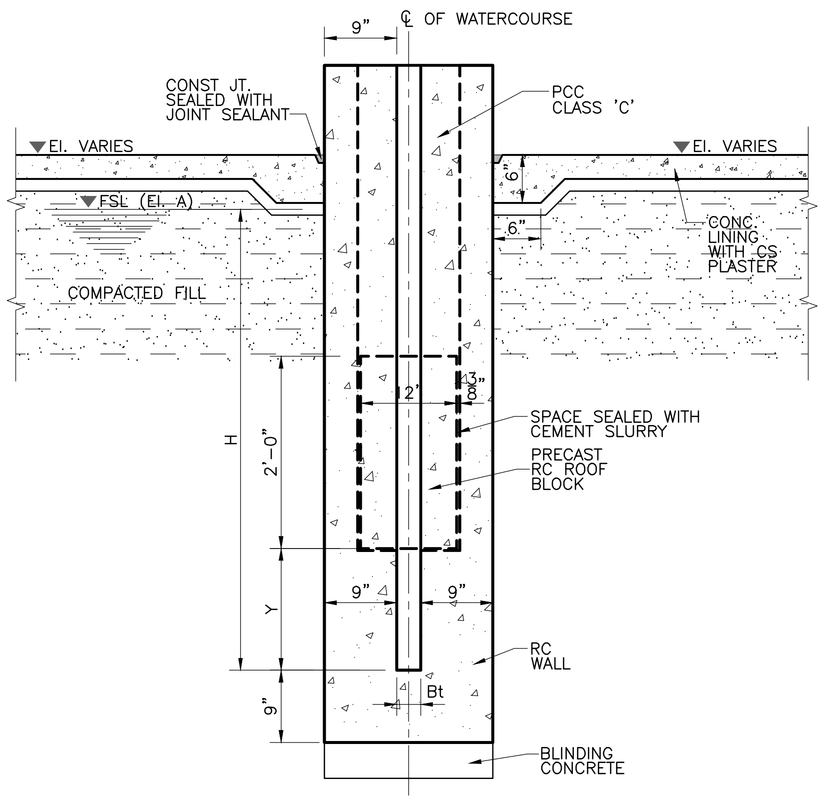
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

0 1' 2' 3' 4'
SCALE

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
SECTIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/03	0

WATERCOURSE OUTLET - WARSAK GRAVITY CANAL

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WGC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	h	Y	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	0+950	953.34	844.92	4.20	1236.66	1242.28	1244.76	1243.25	1248.26	1243.75	1238.28	1237.94	1237.19	1241.19	18.00	48.3	0.25	3.00	2.50	7.50	34.00	6.48	1.74	1 in 4000	1 in 4035	1 in 100
2	2+791	844.92	827.82	4.37	1236.22	1239.17	1243.76	1241.33	1253.66	1241.83	1237.73	1237.26	1236.51	1240.51	18.00	46.62	0.25	3.00	2.50	7.05	46.75	6.03	1.79	1 in 3880	1 in 3920	1 in 100
3	4+166	827.82	827.21	0.53	1235.88	1235.52	1243.42	1236.54	1250.03	1237.04	1237.39	1236.92	1234.77	1239.67	18.00	46.62	0.25	2.00	2.00	7.05	46.80	6.03	0.44	1 in 4040	1 in 4050	1 in 100
4	4+996	827.21	826.94	0.19	1235.68	1238.40	1243.23	1239.73	1247.14	1240.23	1237.19	1236.81	1236.06	1239.56	18.00	46.65	0.25	2.00	2.00	7.05	38.15	6.04	0.25	1 in 4050	1 in 4050	1 in 100
5	5+260	826.94	823.83	3.09	1235.61	1238.81	1243.15	1240.45	1247.34	1240.95	1237.12	1236.74	1235.99	1239.49	18.00	46.62	0.25	2.00	2.00	7.05	37.80	6.03	1.42	1 in 4050	1 in 4080	1 in 100
6	7+076	823.83	823.07	0.60	1235.16	1239.30	1242.70	1239.96	1253.00	1240.46	1236.67	1236.21	1235.46	1238.96	18.00	46.62	0.25	2.00	2.00	7.05	45.60	6.03	0.48	1 in 4080	1 in 4085	1 in 100
7	9+679	823.07	822.21	0.62	1234.52	1237.02	1242.06	1238.52	1246.53	1239.02	1236.03	1235.64	1234.89	1238.39	18.00	46.62	0.25	2.00	2.00	7.05	39.30	6.03	0.49	1 in 4085	1 in 4095	1 in 100
8	10+619	822.21	819.71	2.42	1234.29	1237.74	1241.83	1238.10	1246.70	1238.60	1235.80	1235.41	1234.66	1238.16	18.00	46.62	0.25	2.00	2.00	7.05	38.45	6.03	1.21	1 in 4095	1 in 4120	1 in 100
9	12+731	819.71	817.42	2.10	1233.78	1238.18	1241.32	1239.53	1247.29	1240.03	1235.29	1234.90	1234.15	1237.65	18.00	46.62	0.25	2.00	2.00	7.05	38.70	6.03	1.10	1 in 4120	1 in 4145	1 in 100
10	12+911	817.42	814.08	3.32	1233.74	1237.30	1241.28	1239.10	1247.34	1239.60	1235.25	1234.85	1234.10	1237.60	18.00	46.62	0.25	2.00	2.00	7.05	40.10	6.03	1.49	1 in 4145	1 in 4175	1 in 100
11	13+995	814.08	747.67	0.26	1233.48	1237.10	1241.02	1238.06	1249.78	1238.56	1234.99	1234.55	1233.80	1237.30	18.00	46.62	0.25	2.00	2.00	7.05	44.05	6.03	0.28	1 in 4175	1 in 4180	1 in 100
12	15+220	747.67	746.24	1.37	1233.17	1238.40	1240.21	1239.31	1245.09	1239.81	1234.58	1234.23	1233.48	1236.98	18.00	45.12	0.25	2.00	2.00	6.65	35.05	5.63	0.83	1 in 3800	1 in 3810	1 in 100
13	18+148	746.24	741.86	0.76	1232.40	1236.10	1239.43	1238.65	1243.46	1239.15	1233.81	1233.45	1232.70	1236.20	18.00	45.09	0.25	2.00	2.00	6.65	36.05	5.62	0.56	1 in 3810	1 in 3820	1 in 100

ELEVATIONS

EL. B1 BED LEVEL OF WGC
EL. B2 BED LEVEL OF WATERCOURSE
EL. C1 FULL SUPPLY LEVEL OF WGC
EL. C2 FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1 BANK LEVEL OF WGC
EL. D2 BANK LEVEL OF WATERCOURSE
EL. E CREST LEVEL
EL. F CONDUIT BED LEVEL AT END
EL. G SUMP BED LEVEL
EL. H CONDUIT SLAB LEVEL

DIMENSIONS

Q1 DISCHARGE OF WGC U/S OF WCO
Q2 DISCHARGE OF WGC D/S OF WCO
Q3 DISCHARGE OF WATERCOURSE OUTLET
Bw BED WIDTH OF WGC
T1 TOP WIDTH OF WGC
T2 TOP WIDTH OF WATERCOURSE
W WIDTH OF CONDUIT
H HEIGHT OF CONDUIT
L1 LENGTH OF CREST
L2 LENGTH OF CONDUIT

S1 U/S WGC BED SLOPE
S2 D/S WGC BED SLOPE
S3 CONDUIT BED SLOPE
h HEAD ABOVE CREST
Y THROAT HEIGHT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE AUG., 2021 | DWG. NO. RWCS-13/TD/WCP/WCO/04 | REV. 0

WATERCOURSE OUTLET - KAFOOR DEHRI - (WGC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	h	Y	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	1+045	12.66	8.28	4.37	1228.40	1228.05	1229.41	1228.56	1230.82	1229.06	1228.40	1228.11	1227.30	1231.36	1.50	6.03	1.75	3.00	2.50	2.05	29.20	1.01	0.49	1 in 200	1 in 200	1 in 100
2	1+196	8.28	5.22	3.06	1227.65	1227.11	1228.47	1227.56	1230.07	1228.06	1227.65	1227.36	1226.36	1230.11	1.50	5.46	1.75	2.00	2.00	1.85	29.45	0.82	0.39	1 in 200	1 in 250	1 in 100

WATERCOURSE OUTLET - WARSAK MINOR - (WGC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	h	Y	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	0+600	34.96	31.36	3.59	1236.15	1235.12	1238.70	1235.78	1242.53	1236.28	1236.66	1236.30	1234.37	1239.05	2.25	11.40	0.50	2.00	2.00	3.05	36.15	2.04	0.99	1 in 2000	1 in 2000	1 in 100
2	1+719	31.36	29.85	1.49	1235.72	1236.00	1238.14	1237.40	1240.60	1237.90	1236.20	1235.89	1235.14	1238.64	2.25	11.01	0.25	2.00	2.00	2.95	31.90	1.94	0.87	1 in 2000	1 in 2000	1 in 100
3	7+103	29.85	27.51	2.26	1156.26	1155.63	1157.77	1157.17	1159.20	1157.67	1156.56	1156.26	1154.88	1159.01	2.25	8.28	0.75	2.00	2.00	2.25	30.40	1.21	0.55	1 in 300	1 in 300	1 in 100
4	9+300	27.51	26.67	0.79	1135.06	1135.99	1137.46	1136.91	1141.84	1137.41	1135.54	1135.20	1134.45	1137.95	2.25	10.95	0.25	2.00	2.00	2.95	33.80	1.92	0.57	1 in 2500	1 in 2500	1 in 100
5	11+100	26.67	26.26	0.37	1133.84	1135.00	1136.31	1135.71	1144.14	1136.21	1134.33	1133.95	1133.20	1136.70	2.25	11.16	0.25	2.00	2.00	3.00	38.75	1.98	0.34	1 in 3000	1 in 3000	1 in 100
6	13+386	26.26	21.19	5.02	1133.10	1132.91	1135.55	1133.18	1139.38	1133.68	1133.59	1133.24	1132.16	1136.49	2.25	11.10	0.75	3.00	2.50	3.00	34.75	1.96	0.94	1 in 3000	1 in 3000	1 in 100
7	14+207	21.19	19.98	1.19	1133.06	1133.66	1135.28	1134.66	1136.22	1135.16	1133.50	1133.22	1132.47	1135.97	2.25	10.41	0.25	2.00	2.00	2.80	28.85	1.78	0.75	1 in 3000	1 in 2450	1 in 100
8	15+400	19.98	12.80	7.16	1132.73	1132.68	1134.79	1133.61	1137.34	1134.11	1133.14	1132.82	1131.93	1136.07	2.25	9.93	1.50	3.00	2.50	2.65	32.00	1.65	0.75	1 in 2450	1 in 1975	1 in 100
9	16+344	12.80	12.11	0.68	1132.37	1132.88	1134.31	1133.90	1141.68	1134.40	1132.76	1132.38	1131.63	1135.13	1.75	9.07	0.25	2.00	2.00	2.60	38.20	1.55	0.52	1 in 1975	1 in 2200	1 in 100
10	17+044	12.11	11.75	0.34	1132.09	1131.89	1133.83	1133.59	1135.24	1134.09	1132.44	1132.14	1131.14	1134.89	1.75	8.47	0.25	2.00	2.00	2.40	30.05	1.39	0.33	1 in 2200	1 in 3000	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF MINOR
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF MINOR
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF MINOR
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF MINOR U/S OF WCO
Q2	DISCHARGE OF MINOR D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF MINOR
T1	TOP WIDTH OF MINOR
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S MINOR BED SLOPE
S2	D/S MINOR BED SLOPE
S3	CONDUIT BED SLOPE
h	HEAD ABOVE CREST
Y	THROAT HEIGHT

TENDER DRAWING

NOTE

FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT

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GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF

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ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/05	0

WATERCOURSE OUTLET - WARSAK GRAVITY CANAL
TABLE OF ELEVATIONS AND DIMENSIONS

SR	WGC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	H	Bt	Y	W	h	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	40+819	405.02	404.68	0.26	1224.60	1221.45	1229.63	1222.64	1235.36	1223.14	1226.11	1225.70	1220.70	1228.45	16.00	35.14	3.52	0.25	0.28	2.00	2.00	4.55	40.90	1 in 3060	1 in 3065	1 in 100
2	41+683	404.68	404.38	0.24	1224.32	1224.36	1229.35	1225.21	1236.98	1225.71	1225.83	1225.44	1223.61	1228.19	16.00	35.14	3.52	0.25	0.25	2.00	2.00	4.55	38.95	1 in 3065	1 in 3070	1 in 100
3	43+454	404.38	401.51	2.75	1223.74	1222.18	1228.77	1223.55	1238.58	1224.05	1225.25	1224.80	1221.43	1227.55	16.00	35.14	3.52	0.25	1.32	2.00	2.00	4.55	44.60	1 in 3070	1 in 3115	1 in 100
4	44+469	401.51	398.75	2.69	1223.41	1221.67	1228.44	1222.90	1238.87	1223.40	1224.92	1224.46	1220.92	1227.21	16.00	35.14	3.52	0.25	1.29	2.00	2.00	4.55	45.80	1 in 3115	1 in 3160	1 in 100
5	46+092	398.75	381.37	7.76	1222.54	1219.67	1227.57	1221.71	1237.09	1222.21	1224.05	1223.59	1218.92	1226.84	16.00	34.39	3.52	0.50	1.65	3.00	2.50	4.55	46.15	1 in 3160	1 in 3285	1 in 100
6	47+784	381.37	380.93	0.35	1221.38	1223.55	1226.35	1225.45	1233.45	1225.95	1222.87	1222.52	1221.77	1225.27	16.00	34.21	3.48	0.25	0.33	2.00	2.00	4.50	34.90	1 in 3315	1 in 3320	1 in 100
7	48+632	380.93	376.30	4.57	1221.12	1221.16	1226.09	1222.20	1233.30	1222.70	1222.61	1222.23	1220.41	1225.48	16.00	34.21	3.48	0.32	1.56	3.00	2.50	4.50	38.25	1 in 3320	1 in 3400	1 in 100
8	48+684	376.30	373.38	2.92	1221.10	1219.98	1226.07	1221.08	1233.30	1221.58	1222.59	1222.19	1219.23	1224.94	16.00	34.21	3.48	0.25	1.37	2.00	2.00	4.50	40.00	1 in 3400	1 in 3455	1 in 100
9	51+595	373.38	372.83	0.35	1220.26	1221.88	1225.23	1223.29	1230.68	1223.79	1221.75	1221.42	1220.67	1224.17	16.00	34.21	3.48	0.25	0.33	2.00	2.00	4.50	33.20	1 in 3455	1 in 3465	1 in 100
10	53+177	372.83	371.26	1.46	1219.80	1220.82	1224.77	1222.00	1228.85	1222.50	1221.29	1220.97	1220.07	1223.72	16.00	34.21	3.48	0.25	0.86	2.00	2.00	4.50	32.05	1 in 3465	1 in 3495	1 in 100
11	54+867	371.26	371.11	0.03	1218.88	1218.99	1224.41	1220.20	1228.29	1220.70	1220.54	1220.20	1218.24	1222.95	16.00	35.89	3.87	0.25	0.25	2.00	2.00	4.90	33.95	1 in 5185	1 in 5185	1 in 100
12	56+079	371.11	369.54	1.48	1217.67	1215.50	1223.68	1216.72	1227.46	1217.22	1219.47	1219.09	1214.75	1221.84	16.00	37.33	4.21	0.25	0.87	2.00	2.00	5.25	37.95	1 in 7143	1 in 7143	1 in 100
13	57+132	369.54	368.76	0.70	1217.52	1218.52	1223.53	1220.77	1227.99	1221.27	1219.32	1218.98	1217.77	1221.73	16.00	37.33	4.21	0.25	0.53	2.00	2.00	5.25	34.25	1 in 7143	1 in 7143	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WGC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WGC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WGC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WGC U/S OF WCO
Q2	DISCHARGE OF WGC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WGC
T1	TOP WIDTH OF WGC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEAD ABOVE CREST
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WGC BED SLOPE
S2	D/S WGC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	THROAT WIDTH
Y	THROAT HEIGHT
h	HEIGHT OF CONDUIT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

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REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/06	0

WATERCOURSE OUTLET - WARSAK GRAVITY CANAL

TABLE OF ELEVATIONS AND DIMENSIONS

SR.NO.	WGC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	H	Bt	Y	W	h	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
14	84+022	325.30	325.07	0.19	1210.53	1209.93	1215.31	1210.96	1220.39	1211.46	1211.96	1211.61	1209.18	1214.36	14.00	31.64	3.35	0.25	0.25	2.00	2.00	4.35	35.70	1 in 3170	1 in 3175	1 in 100
15	84+425	325.07	322.79	2.25	1210.40	1203.50	1215.18	1204.50	1220.04	1205.00	1211.83	1211.39	1202.75	1214.14	14.00	31.64	3.35	0.25	1.15	2.00	2.00	4.35	44.85	1 in 3175	1 in 3220	1 in 100
16	84+981	322.79	318.10	4.66	1210.23	1203.23	1215.07	1204.28	1220.26	1204.78	1211.68	1211.23	1202.48	1214.48	14.00	31.82	3.39	0.32	1.59	3.00	2.50	4.40	45.55	1 in 3220	1 in 3315	1 in 100
17	85+183	318.10	315.76	2.33	1210.17	1209.00	1214.95	1210.00	1220.24	1210.50	1211.60	1211.24	1208.25	1213.99	14.00	31.64	3.35	0.25	1.18	2.00	2.00	4.35	36.90	1 in 3315	1 in 3360	1 in 100
18	85+915	315.76	310.89	4.82	1209.95	1208.00	1214.73	1209.50	1219.93	1210.00	1211.38	1211.01	1207.25	1214.26	14.00	31.64	3.35	0.32	1.62	3.00	2.50	4.35	37.90	1 in 3360	1 in 3465	1 in 100
19	86+800	310.89	308.76	2.07	1208.62	1208.09	1212.95	1209.32	1222.25	1209.82	1209.92	1209.51	1207.34	1212.26	16.00	32.29	3.03	0.25	1.09	2.00	2.00	4.05	41.25	1 in 3000	1 in 3050	1 in 100
20	89+770	308.76	305.31	2.32	1207.65	1209.49	1211.96	1210.60	1215.45	1211.10	1208.94	1208.65	1207.90	1211.40	16.00	32.23	3.02	0.25	1.17	2.00	2.00	4.05	28.95	1 in 3050	1 in 3115	1 in 100
21	91+420	305.31	304.34	0.87	1207.12	1207.54	1211.45	1208.77	1215.59	1209.27	1208.42	1208.10	1206.79	1210.85	16.00	32.29	3.03	0.25	0.61	2.00	2.00	4.05	32.10	1 in 3115	1 in 3140	1 in 100
22	91+884	304.34	303.92	0.39	1206.97	1204.51	1211.30	1205.95	1214.35	1206.45	1208.27	1207.92	1203.76	1210.67	16.00	32.29	3.03	0.25	0.35	2.00	2.00	4.05	34.80	1 in 3140	1 in 3145	1 in 100
23	93+450	303.92	301.54	2.28	1206.47	1205.00	1210.80	1206.00	1215.58	1206.50	1207.77	1207.41	1204.25	1210.16	16.00	32.29	3.03	0.25	1.16	2.00	2.00	4.05	35.90	1 in 3145	1 in 3195	1 in 100
24	93+872	301.54	293.18	8.33	1206.34	1205.00	1210.67	1206.50	1214.37	1207.00	1207.64	1207.30	1204.25	1210.55	16.00	32.29	3.03	0.75	1.32	3.00	2.50	4.05	34.10	1 in 3195	1 in 3380	1 in 100
25	94+771	293.18	288.97	4.15	1206.07	1207.34	1210.40	1209.09	1214.72	1209.59	1207.37	1207.06	1206.31	1210.31	16.00	32.29	3.03	0.32	1.47	3.00	2.50	4.05	31.10	1 in 3380	1 in 3475	1 in 100
26	95+950	288.97	274.45	14.45	1205.73	1205.00	1210.06	1206.75	1214.16	1207.25	1207.03	1206.69	1204.25	1209.94	16.00	32.29	3.03	1.25	1.36	3.00	2.50	4.05	33.75	1 in 3475	1 in 3850	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WGC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WGC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WGC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WGC U/S OF WCO
Q2	DISCHARGE OF WGC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WGC
T1	TOP WIDTH OF WGC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEAD ABOVE CREST
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WGC BED SLOPE
S2	D/S WGC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	THROAT WIDTH
Y	THROAT HEIGHT
h	HEIGHT OF CONDUIT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM
IN
PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/07	0

WATCOURSE OUTLET - WARSAK GRAVITY CANAL

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WGC RD	OFFTAKING SIDE	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	H	Bt	Y	W	h	L1	L2	S1	S2	S3
	(ft)		(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	97+391	LEFT	274.45	273.32	1.04	1204.33	1206.18	1208.81	1207.34	1203.29	1207.84	1205.67	1205.52	1204.77	1208.27	14.00	30.74	3.14	0.25	0.69	2.00	2.00	4.15	15.70	1 in 3500	1 in 3530	1 in 100
2	99+044	LEFT	273.32	272.92	0.30	1203.86	1206.03	1208.34	1207.96	1204.65	1208.46	1205.20	1205.02	1204.27	1207.77	14.00	30.74	3.14	0.25	0.30	2.00	2.00	4.15	17.95	1 in 3530	1 in 3540	1 in 100
3	100+411	LEFT	272.92	270.80	2.04	1203.47	1204.33	1207.95	1206.05	1202.34	1206.55	1204.81	1204.64	1203.58	1207.39	14.00	30.74	3.14	0.25	1.08	2.00	2.00	4.15	17.05	1 in 3540	1 in 3595	1 in 100
4	100+819	LEFT	270.80	270.16	0.62	1203.36	1200.78	1207.84	1201.79	1202.73	1202.29	1204.70	1204.47	1200.03	1207.22	14.00	30.74	3.14	0.25	0.49	2.00	2.00	4.15	22.95	1 in 3595	1 in 3615	1 in 100
5	102+385	LEFT	270.16	268.41	1.66	1202.93	1196.10	1207.41	1197.31	1204.09	1197.81	1204.27	1203.95	1195.35	1206.70	14.00	30.74	3.14	0.25	0.94	2.00	2.00	4.15	32.00	1 in 3615	1 in 3660	1 in 100
6	106+545	LEFT	268.41	264.26	3.90	1201.49	1186.62	1205.97	1189.52	1204.31	1190.02	1202.83	1202.37	1185.87	1205.12	14.00	30.74	3.14	0.32	1.41	2.00	2.00	4.15	46.55	1 in 3660	1 in 3775	1 in 100
7	107+439	LEFT	264.26	263.26	0.95	1201.25	1199.69	1205.73	1201.27	1200.44	1201.77	1202.59	1202.38	1198.94	1205.13	14.00	30.74	3.14	0.25	0.65	2.00	2.00	4.15	21.15	1 in 3775	1 in 3805	1 in 100
8	107+732	LEFT	263.26	259.05	4.19	1201.17	1203.13	1205.65	1203.77	1197.78	1204.27	1202.51	1202.39	1201.64	1205.64	14.00	30.74	3.14	0.32	1.48	3.00	2.50	4.15	12.00	1 in 3805	1 in 3930	1 in 100
9	107+877	LEFT	259.05	256.22	2.82	1201.13	1202.30	1205.61	1203.22	1197.47	1203.72	1202.47	1202.35	1201.55	1205.10	14.00	30.74	3.14	0.25	1.34	2.00	2.00	4.15	12.80	1 in 3930	1 in 4015	1 in 100
10	109+448	LEFT	256.22	254.48	1.65	1200.74	1202.48	1205.22	1204.55	1198.45	1205.05	1202.08	1201.94	1201.19	1204.69	14.00	30.74	3.14	0.25	0.94	2.00	2.00	4.15	14.00	1 in 4015	1 in 4070	1 in 100
11	113+416	LEFT	254.48	168.48	1.00	1199.77	1198.30	1204.25	1200.16	1198.04	1200.66	1201.11	1200.92	1197.55	1203.67	14.00	30.74	3.14	0.25	0.67	2.00	2.00	4.15	19.65	1 in 4070	1 in 4110	1 in 100
12	117+952	LEFT	253.24	169.48	4.23	1198.67	1195.41	1203.15	1198.31	1198.04	1198.81	1200.01	1199.77	1194.66	1203.02	14.00	30.74	3.14	0.32	1.49	3.00	2.50	4.15	23.95	1 in 4110	1 in 4260	1 in 100
13	126+037	LEFT	222.08	170.48	2.15	1196.67	1196.13	1201.09	1197.50	1198.04	1198.00	1198.00	1197.77	1195.38	1200.52	10.00	26.56	3.09	0.25	1.12	2.00	2.00	4.10	22.90	1 in 3000	1 in 3060	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WGC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WGC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WGC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WGC U/S OF WCO
Q2	DISCHARGE OF WGC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WGC
T1	TOP WIDTH OF WGC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEAD ABOVE CREST
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WGC BED SLOPE
S2	D/S WGC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	THROAT WIDTH
Y	THROAT HEIGHT
h	HEIGHT OF CONDUIT

TENDER DRAWING

NOTE
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CLIENT
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GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
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PESHAWAR

CONSULTANT - A JOINT VENTURE OF
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ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/08	0

WATERCOURSE OUTLET - URMAR MINOR - (WGC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	OFFTAKING SIDE	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	y	W	H	L1	L2	S
	(ft)		(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)
1	2+701	LEFT	30.71	27.24	3.42	1195.13	1193.56	1196.98	1193.20	1199.53	1193.70	1195.50	1195.21	1192.81	1197.96	3.00	10.05	0.75	0.73	2.00	2.00	2.50	29.00	1 in 100
2	3+622	RIGHT	27.24	24.70	2.52	1194.69	1192.71	1196.21	1193.13	1197.61	1193.63	1194.99	1194.72	1191.96	1197.47	3.00	9.06	0.75	0.60	2.00	2.00	2.25	27.40	1 in 100
3	8+487	LEFT	24.70	22.59	2.03	1161.00	1159.97	1162.89	1159.76	1164.87	1160.26	1161.38	1161.10	1159.22	1163.85	2.50	9.67	0.50	0.68	2.00	2.00	2.55	27.35	1 in 100
4	8+718	RIGHT	22.59	19.84	2.75	1160.05	1158.53	1161.52	1158.46	1163.35	1158.96	1160.34	1160.07	1157.78	1162.82	-	-	1.00	0.52	2.00	2.00	2.20	27.25	1 in 100
5	10+270	RIGHT	19.84	18.82	1.01	1150.77	1149.52	1152.67	1149.47	1153.92	1149.97	1151.15	1150.88	1148.77	1153.63	2.50	9.7	0.25	0.67	2.00	2.00	2.55	26.65	1 in 100
6	11+794	LEFT	18.82	16.10	2.69	1150.06	1150.67	1151.91	1150.59	1153.67	1151.09	1150.43	1150.19	1149.44	1152.94	2.50	9.55	0.75	0.62	2.00	2.00	2.50	24.50	1 in 100
7	13+332	LEFT	16.10	15.22	0.86	1148.82	1147.53	1150.37	1147.05	1154.90	1147.55	1149.13	1148.82	1146.78	1151.57	2.00	8.15	0.25	0.61	2.00	2.00	2.25	31.10	1 in 100
8	14+281	LEFT	15.22	15.22	3.23	1147.92	1146.05	1149.42	1145.88	1151.48	1146.38	1148.22	1147.94	1145.30	1150.69	2.00	8	1.00	0.58	2.00	2.00	2.20	28.15	1 in 100
9	14+281	RIGHT	15.22	10.50	1.48	1147.92	1145.88	1149.42	1145.88	1151.48	1146.38	1148.22	1147.94	1145.13	1150.69	2.00	8	0.50	0.55	2.00	2.00	2.20	28.40	1 in 100
10	15+906	RIGHT	10.50	9.60	0.89	1143.56	1141.49	1145.10	1139.29	1146.35	1139.79	1143.87	1143.60	1140.74	1146.35	-	-	0.32	0.53	2.00	2.00	2.25	27.30	1 in 100
11	17+960	LEFT	9.60	8.75	0.83	1142.20	1141.56	1143.66	1140.65	1144.91	1141.15	1142.49	1142.24	1140.81	1144.99	-	-	0.32	0.50	2.00	2.00	2.20	25.05	1 in 100
12	18+426	RIGHT	8.75	5.16	3.59	1142.02	1138.45	1143.04	1137.98	1144.81	1138.48	1142.22	1141.93	1137.70	1144.68	-	-	2.00	0.39	2.00	2.00	1.85	29.55	1 in 100
13	20+354	LEFT	5.16	3.69	1.46	1134.24	1132.11	1135.32	1130.91	1136.96	1131.41	1134.46	1134.18	1131.36	1136.93	-	-	0.75	0.41	2.00	2.00	1.90	27.30	1 in 100

WATERCOURSE OUTLET - SORIZAI MINOR - (WGC)

SR	MINOR RD	OFFTAKING SIDE	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	y	W	H	L1	L2	S
	(ft)		(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)
1	1+681	RIGHT	26.40	25.60	0.77	1195.66	1194.56	1197.84	1196.65	1203.34	1197.15	1196.10	1195.76	1193.81	1198.51	2.50	10.54	0.25	0.56	2.00	2.00	2.75	33.20	1 in 3500
2	4+435	LEFT	25.60	25.60	3.66	1194.21	1191.70	1196.39	1193.59	1197.79	1194.09	1194.65	1194.35	1190.95	1197.10	2.25	10.29	0.75	0.76	2.00	2.00	2.75	29.15	1 in 3530
3	4+435	RIGHT	25.60	19.35	2.55	1194.21	1191.70	1196.39	1193.59	1197.79	1194.09	1194.65	1194.35	1190.95	1197.10	2.25	10.29	0.50	0.79	2.00	2.00	2.75	29.15	1 in 3530
4	6+377	LEFT	19.35	18.51	0.81	1193.33	1192.27	1195.25	1193.86	1198.10	1194.36	1193.71	1193.43	1191.52	1196.18	2.00	9.26	0.25	0.58	2.00	2.00	2.55	28.75	1 in 3595
5	6+947	RIGHT	18.51	16.78	1.72	1193.07	1190.77	1194.89	1192.10	1197.06	1192.60	1193.43	1193.14	1190.02	1195.89	2.00	8.96	0.40	0.70	2.00	2.00	2.50	29.45	1 in 3615
6	8+635	LEFT	16.78	16.39	0.36	1191.85	1189.40	1193.59	1191.32	1196.21	1191.82	1192.20	1191.90	1188.65	1194.65	1.75	8.47	0.25	0.34	2.00	2.00	2.40	30.25	1 in 3660
7	8+713	RIGHT	16.39	14.16	2.23	1191.79	1187.41	1193.53	1188.74	1194.78	1189.24	1192.14	1191.83	1186.66	1194.58	1.75	8.47	0.75	0.55	2.00	2.00	2.40	31.10	1 in 3775

ELEVATIONS

EL. B1	BED LEVEL OF MINOR
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF MINOR
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF MINOR
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF MINOR U/S OF WCO
Q2	DISCHARGE OF MINOR D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF MINOR
T	TOP WIDTH OF MINOR
Bt	THROAT WIDTH
y	THROAT HEIGHT
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S	CONDUIT BED SLOPE

TENDER DRAWING

NOTE
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PESHAWAR

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REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/09	0

WATERCOURSE OUTLET - WARSAK GRAVITY CANAL
TABLE OF ELEVATIONS AND DIMENSIONS

SR.NO.	WGC RD	OFFTAKING SIDE	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	H	Bt	Y	W	h	L1	L2	S1	S2	S3
	(ft)		(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	129+935	LEFT	188.95	187.75	1.08	1195.74	1195.45	1199.80	1196.94	1203.29	1197.44	1196.96	1196.64	1194.70	1199.39	10.00	24.73	2.84	0.25	0.71	2.00	2.00	3.85	31.80	1 in 3000	1 in 3040	1 in 100
2	132+431	LEFT	187.75	184.27	3.36	1194.92	1193.14	1198.98	1196.43	1204.65	1196.93	1196.14	1195.77	1192.39	1198.52	10.00	24.73	2.84	0.32	1.27	2.00	2.00	3.85	37.30	1 in 3040	1 in 3155	1 in 100
3	136+823	LEFT	184.27	183.03	1.03	1192.45	1191.75	1196.82	1193.96	1202.34	1194.46	1193.76	1193.40	1191.00	1196.15	8.00	23.66	3.06	0.25	0.68	2.00	2.00	4.10	35.90	1 in 3025	1 in 3065	1 in 100
4	140+447	LEFT	183.03	180.55	2.31	1191.27	1190.84	1195.64	1192.20	1202.73	1192.70	1192.58	1192.20	1190.09	1194.95	8.00	23.66	3.06	0.25	1.17	2.00	2.00	4.10	37.85	1 in 3065	1 in 3150	1 in 100
5	142+247	LEFT	180.55	179.14	1.32	1190.70	1190.08	1195.07	1192.22	1204.09	1192.72	1192.01	1191.60	1189.33	1194.35	8.00	23.66	3.06	0.25	0.80	2.00	2.00	4.10	41.05	1 in 3150	1 in 3200	1 in 100
6	142+427	LEFT	179.14	177.35	1.78	1190.64	1189.83	1195.01	1191.57	1204.31	1192.07	1191.95	1191.53	1189.08	1194.28	8.00	23.66	3.06	0.25	0.98	2.00	2.00	4.10	41.75	1 in 3200	1 in 3265	1 in 100
7	143+442	LEFT	177.35	175.65	1.65	1190.33	1188.12	1194.70	1189.83	1200.44	1190.33	1191.64	1191.26	1187.37	1194.01	8.00	23.66	3.06	0.25	0.93	2.00	2.00	4.10	38.50	1 in 3265	1 in 3330	1 in 100
8	146+507	LEFT	175.65	174.09	1.41	1189.41	1190.29	1193.78	1191.59	1197.78	1192.09	1190.72	1190.41	1189.54	1193.16	8.00	23.66	3.06	0.25	0.84	2.00	2.00	4.10	31.25	1 in 3330	1 in 3390	1 in 100
9	146+813	LEFT	174.09	172.86	1.22	1189.32	1187.03	1193.69	1188.18	1197.47	1188.68	1190.63	1190.27	1186.28	1193.02	8.00	23.66	3.06	0.25	0.77	2.00	2.00	4.10	35.70	1 in 3390	1 in 3435	1 in 100
10	147+670	LEFT	172.86	169.18	3.64	1189.07	1185.10	1193.44	1186.47	1198.45	1186.97	1190.38	1189.98	1184.35	1192.73	8.00	23.66	3.06	0.32	1.34	2.00	2.00	4.10	40.05	1 in 3435	1 in 3590	1 in 100
11	149+052	LEFT	169.18	168.48	0.72	1188.69	1187.21	1193.06	1188.66	1198.04	1189.16	1190.00	1189.64	1186.46	1192.39	8.00	23.66	3.06	0.25	0.54	2.00	2.00	4.10	36.25	1 in 3590	1 in 3620	1 in 100

ELEVATIONS

EL B1	BED LEVEL OF WGC
EL B2	BED LEVEL OF WATERCOURSE
EL C1	FULL SUPPLY LEVEL OF WGC
EL C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL D1	BANK LEVEL OF WGC
EL D2	BANK LEVEL OF WATERCOURSE
EL E	CREST LEVEL
EL F	CONDUIT BED LEVEL AT END
EL G	SUMP BED LEVEL
EL H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WGC U/S OF WCO
Q2	DISCHARGE OF WGC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WGC
T1	TOP WIDTH OF WGC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEAD ABOVE CREST
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WGC BED SLOPE
S2	D/S WGC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	THROAT WIDTH
Y	THROAT HEIGHT
h	HEIGHT OF CONDUIT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/10	0

WATERCOURSE OUTLET - WARSAK GRAVITY CANAL

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WGC RD (ft)	OFFTAKING SIDE	Q_1 (cfs)	Q_2 (cfs)	Q_3 (cfs)	El. B1 (ft)	El. B2 (ft)	El. C1 (ft)	El. C2 (ft)	El. D1 (ft)	El. D2 (ft)	El. E (ft)	El. F (ft)	El. G (ft)	El. H (ft)	Bw (ft)	T (ft)	H (ft)	Bt (ft)	Y (ft)	W (ft)	h (ft)	L1 (ft)	L2 (ft)	S1 (ft/ft)	S2 (ft/ft)	S3 (ft/ft)
16	170+963	RIGHT	124.10	122.67	1.35	1182.38	1179.32	1186.29	1181.46	1192.39	1181.96	1183.55	1183.16	1178.57	1185.91	5.00	19.28	2.74	0.25	0.82	2.00	2.00	3.75	39.65	1 in 2320	1 in 2370	1 in 100
17	171+359	LEFT	122.67	120.34	2.31	1182.21	1177.90	1186.12	1179.08	1191.62	1179.58	1183.38	1182.98	1177.15	1185.73	5.00	19.28	2.74	0.25	1.17	2.00	2.00	3.75	40.60	1 in 2370	1 in 2465	1 in 100
18	172+252	LEFT	120.34	115.83	4.48	1181.85	1177.23	1185.76	1178.47	1191.36	1178.97	1183.02	1182.61	1176.48	1185.86	5.00	19.28	2.74	0.40	1.33	3.00	2.50	3.75	41.20	1 in 2465	1 in 2660	1 in 100
19	172+452	LEFT	115.83	109.55	6.27	1181.77	1178.30	1185.68	1179.54	1191.42	1180.04	1182.94	1182.55	1177.55	1185.80	5.00	19.28	2.74	0.75	1.09	3.00	2.50	3.75	39.70	1 in 2660	1 in 2970	1 in 100
20	174+623	LEFT	109.55	107.11	2.36	1181.04	1177.03	1184.95	1178.54	1188.58	1179.04	1182.21	1181.84	1176.28	1184.59	5.00	19.28	2.74	0.25	1.19	2.00	2.00	3.75	37.35	1 in 2970	1 in 3110	1 in 100
21	176+071	LEFT	107.11	106.65	0.40	1180.57	1177.11	1184.48	1178.13	1189.94	1178.63	1181.74	1181.35	1176.36	1184.10	5.00	19.28	2.74	0.25	0.37	2.00	2.00	3.75	39.25	1 in 3110	1 in 3130	1 in 100
22	177+893	LEFT	106.65	105.05	1.53	1179.99	1175.61	1183.90	1177.09	1188.84	1177.59	1181.16	1180.76	1174.86	1183.51	5.00	19.28	2.74	0.25	0.89	2.00	2.00	3.75	39.85	1 in 3130	1 in 3225	1 in 100
23	179+318	LEFT	105.05	102.63	2.37	1179.55	1175.94	1183.46	1177.35	1189.64	1177.85	1180.72	1180.32	1175.19	1183.07	5.00	19.28	2.74	0.25	1.19	2.00	2.00	3.75	40.60	1 in 3225	1 in 3380	1 in 100
24	180+170	LEFT	102.63	95.59	7.01	1179.30	1173.05	1183.21	1174.25	1186.04	1174.75	1180.47	1180.08	1172.30	1183.33	5.00	19.28	2.74	0.75	1.18	3.00	2.50	3.75	39.50	1 in 3380	1 in 3890	1 in 100
25	180+731	LEFT	95.59	92.71	2.86	1179.54	1172.44	1182.85	1173.65	1185.33	1174.15	1180.53	1180.14	1171.69	1182.89	4.00	15.73	2.32	0.32	1.14	2.00	2.00	3.35	39.35	1 in 1500	1 in 1600	1 in 100
26	182+095	LEFT	92.71	90.69	1.98	1178.71	1173.56	1182.02	1174.88	1189.46	1175.38	1179.70	1179.26	1172.81	1182.01	4.00	15.73	2.32	0.25	1.06	2.00	2.00	3.35	43.90	1 in 1600	1 in 1670	1 in 100
27	185+119	LEFT	90.69	87.81	2.78	1176.90	1175.87	1180.21	1177.34	1185.06	1177.84	1177.89	1177.56	1175.12	1180.31	4.00	15.73	2.32	0.32	1.12	2.00	2.00	3.35	33.80	1 in 1670	1 in 1780	1 in 100
28	185+216	LEFT	87.81	84.35	3.46	1176.85	1171.90	1180.16	1173.00	1184.96	1173.50	1177.84	1177.45	1171.15	1180.20	4.00	15.73	2.32	0.40	1.12	2.00	2.00	3.35	39.60	1 in 1780	1 in 1930	1 in 100
29	185+608	LEFT	84.35	84.41	3.93	1176.65	1171.78	1179.96	1172.92	1183.64	1173.42	1177.64	1177.27	1171.03	1180.02	4.00	15.73	2.32	0.50	1.05	2.00	2.00	3.35	37.80	1 in 1930	1 in 2120	1 in 100
30	185+701	RIGHT	80.41	75.46	4.95	1176.61	1171.54	1179.92	1173.42	1183.17	1173.92	1177.60	1177.23	1170.79	1180.48	4.00	15.73	2.32	0.75	0.94	3.00	2.50	3.35	37.45	1 in 2120	1 in 2410	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WGC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WGC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WGC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WGC U/S OF WCO
Q2	DISCHARGE OF WGC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WGC
T1	TOP WIDTH OF WGC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEAD ABOVE CREST
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WGC BED SLOPE
S2	D/S WGC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	THROAT WIDTH
Y	THROAT HEIGHT
h	HEIGHT OF CONDUIT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/11	0

WATERCOURSE OUTLET - WARSAK GRAVITY CANAL
TABLE OF ELEVATIONS AND DIMENSIONS

SR	WGC RD (ft)	OFFTAKING SIDE	Q_1 (cfs)	Q_2 (cfs)	Q_3 (cfs)	El. B1 (ft)	El. B2 (ft)	El. C1 (ft)	El. C2 (ft)	El. D1 (ft)	El. D2 (ft)	El. E (ft)	El. F (ft)	El. G (ft)	El. H (ft)	Bw (ft)	T (ft)	Bt (ft)	y (ft)	W (ft)	H (ft)	L1 (ft)	L2 (ft)	S1 (ft/ft)	S2 (ft/ft)	S3 (ft/ft)
1	187+241	LEFT	75.46	73.87	1.55	1169.73	1164.19	1172.79	1165.69	1175.96	1166.19	1170.34	1169.97	1163.44	1172.72	3.50	14.48	0.25	0.90	2.00	2.00	3.45	37.70	1 in 1500	1 in 1565	1 in 100
2	189+484	LEFT	73.87	66.15	7.65	1168.30	1160.33	1171.36	1162.09	1174.59	1162.59	1168.91	1168.50	1159.58	1171.75	3.50	14.48	1.00	1.03	3.00	2.50	3.45	41.40	1 in 1565	1 in 1955	1 in 100
3	190+085	LEFT	66.15	66.15	2.69	1167.99	1162.35	1171.05	1163.30	1172.11	1163.80	1168.60	1168.26	1161.60	1171.01	3.50	14.48	0.32	1.10	2.00	2.00	3.45	34.65	1 in 1955	1 in 1955	1 in 100
4	190+085	RIGHT	66.15	62.44	1.00	1167.99	1162.83	1171.05	1164.39	1172.11	1164.89	1168.60	1168.26	1162.08	1171.01	3.50	14.48	0.25	0.67	2.00	2.00	3.45	33.95	1 in 1955	1 in 2190	1 in 100
5	195+219	LEFT	53.75	51.61	2.07	1133.82	1127.07	1136.59	1128.47	1140.12	1128.97	1134.37	1133.98	1126.32	1136.73	3.00	13.11	0.25	1.09	2.00	2.00	3.25	39.60	1 in 1620	1 in 1755	1 in 100
6	196+509	LEFT	51.61	50.89	0.69	1133.08	1128.24	1135.85	1128.97	1140.28	1129.47	1133.63	1133.25	1127.49	1136.00	3.00	13.11	0.25	0.52	2.00	2.00	3.25	38.10	1 in 1755	1 in 1805	1 in 100
7	197+812	LEFT	50.89	41.27	9.59	1132.36	1126.25	1135.13	1128.61	1147.95	1129.11	1132.91	1132.39	1125.50	1135.64	3.00	13.11	1.50	0.92	3.00	2.50	3.25	52.55	1 in 1805	1 in 2745	1 in 100
8	198+618	LEFT	41.27	36.94	4.31	1132.07	1125.80	1134.36	1126.59	1143.40	1127.09	1132.53	1132.06	1125.05	1135.31	2.50	11.02	0.75	0.85	3.00	2.50	2.85	46.40	1 in 1005	1 in 1250	1 in 100
9	199+439	RIGHT	36.94	34.92	2.00	1131.41	1126.18	1133.70	1125.50	1141.37	1126.00	1131.87	1131.44	1125.43	1134.19	2.50	10.87	0.32	0.90	2.00	2.00	2.85	42.80	1 in 1250	1 in 1400	1 in 100
10	200+777	LEFT	34.92	34.19	0.70	1130.45	1125.96	1132.74	1127.23	1138.98	1127.73	1130.91	1130.51	1125.21	1133.26	2.50	10.87	0.25	0.53	2.00	2.00	2.85	39.55	1 in 1400	1 in 1460	1 in 100
11	201+807	LEFT	34.19	33.39	0.78	1124.35	1115.32	1126.36	1116.35	1129.47	1116.85	1124.75	1124.34	1114.57	1127.09	2.25	9.78	0.25	0.57	2.00	2.00	2.65	41.25	1 in 750	1 in 790	1 in 100
12	202+238	RIGHT	33.39	30.76	2.62	1123.80	1117.24	1125.81	1118.40	1128.34	1118.90	1124.20	1123.84	1116.49	1126.59	2.25	9.78	0.50	0.80	2.00	2.00	2.65	36.65	1 in 790	1 in 930	1 in 100
13	203+408	LEFT	30.76	30.41	0.33	1122.54	1114.80	1124.55	1115.70	1127.48	1116.20	1122.94	1122.55	1114.05	1125.30	2.25	9.78	0.25	0.32	2.00	2.00	2.65	39.05	1 in 930	1 in 950	1 in 100
14	204+066	LEFT	30.41	27.12	3.28	1121.85	1114.80	1123.86	1115.70	1127.79	1116.20	1122.25	1121.86	1114.05	1124.61	2.25	9.78	0.75	0.71	2.00	2.00	2.65	39.50	1 in 950	1 in 1195	1 in 100
15	205+462	LEFT	27.12	27.12	3.53	1120.66	1115.61	1122.67	1116.93	1127.04	1117.43	1121.06	1120.69	1114.86	1123.44	2.25	9.78	0.75	0.75	2.00	2.00	2.65	37.15	1 in 1195	1 in 1195	1 in 100
16	205+462	RIGHT	27.12	22.39	1.17	1120.66	1112.46	1122.67	1114.38	1127.04	1114.88	1121.06	1120.64	1111.71	1123.39	2.25	9.78	0.25	0.74	2.00	2.00	2.65	41.90	1 in 1195	1 in 1750	1 in 100
17	208+306	RIGHT	22.39	21.20	1.15	1118.09	1112.46	1120.10	1114.38	1124.02	1114.88	1118.49	1118.12	1111.71	1120.87	1.75	9.28	0.25	0.73	2.00	2.00	2.65	37.35	1 in 600	1 in 670	1 in 100
18	208+395	LEFT	21.20	20.43	0.77	1118.01	1111.10	1119.97	1112.08	1123.57	1112.58	1118.40	1118.01	1110.35	1120.76	1.75	9.13	0.25	0.56	2.00	2.00	2.60	38.75	1 in 670	1 in 720	1 in 100
19	209+452	LEFT	20.43	20.43	1.97	1114.72	1110.21	1116.38	1111.28	1122.10	1111.78	1115.05	1114.67	1109.46	1117.42	1.75	8.23	0.50	0.66	2.00	2.00	2.35	37.85	1 in 720	1 in 720	1 in 100
20	209+452	RIGHT	20.43	17.68	0.76	1114.72	1110.01	1116.38	1110.98	1122.10	1111.48	1115.05	1114.67	1109.26	1117.42	1.75	8.23	0.25	0.56	2.00	2.00	2.35	38.15	1 in 720	1 in 960	1 in 100
21	209+463	LEFT	17.68	16.53	1.15	1114.71	1108.12	1116.37	1108.89	1122.09	1109.39	1115.04	1114.63	1107.37	1117.38	1.75	8.23	0.32	0.62	2.00	2.00	2.35	41.00	1 in 960	1 in 65	1 in 100
22	211+839	LEFT	16.53	15.51	0.99	1091.04	1084.41	1092.48	1085.76	1096.00	1086.26	1091.33	1090.95	1083.66	1093.70	1.75	7.57	0.32	0.56	2.00	2.00	2.20	37.40	1 in 600	1 in 685	1 in 100
23	211+918	RIGHT	15.51	14.17	1.34	1090.92	1084.79	1092.36	1085.93	1097.16	1086.43	1091.21	1090.82	1084.04	1093.57	1.75	7.57	0.50	0.51	2.00	2.00	2.20	38.60	1 in 685	1 in 820	1 in 100
24	214+954	LEFT	14.17	13.67	0.46	1027.35	1023.10	1028.69	1024.00	1032.23	1024.50	1027.62	1027.28	1022.35	1030.03	1.50	7.02	0.25	0.40	2.00	2.00	2.10	33.70	1 in 500	1 in 540	1 in 100
25	216+750	LEFT	13.67	13.28	0.37	1000.20	992.19	1002.03	993.41	1006.70	993.91	1000.57	1000.15	991.44	1002.90	-	6.99	0.25	0.34	2.00	2.00	2.50	41.80	1 in 750	1 in 790	1 in 100
26	218+139	LEFT	13.28	13.28	0.88	998.43	990.12	1000.26	991.07	1006.98	991.57	998.80	998.34	989.37	1001.09	-	6.99	0.25	0.62	2.00	2.00	2.50	45.30	1 in 790	1 in 790	1 in 100
27	218+139	RIGHT	13.28	9.42	2.97	998.43	990.12	1000.26	991.07	1006.98	991.57	998.80	998.34	989.37	1001.09	-	6.99	0.75	0.67	2.00	2.00	2.50	45.30	1 in 790	1 in 1575	1 in 100
28	218+730	LEFT	9.42	8.02	1.39	990.86	988.32	992.49	989.36	998.88	989.86	991.19	990.83	987.57	993.58	-	6.39	0.40	0.61	2.00	2.00	2.35	35.85	1 in 1000	1 in 1380	1 in 100
29	221+835	LEFT	8.02	7.58	0.41	986.79	981.87	988.47	982.49	992.55	982.99	987.13	986.77	981.12	989.52	-	6.54	0.25	0.37	2.00	2.00	2.35	36.05	1 in 1550	1 in 1735	1 in 100
30	222+278	LEFT	7.58	6.99	0.59	986.53	981.62	988.21	983.10	989.84	983.60	986.87	986.54	980.87	989.29	-	6.54	0.25	0.47	2.00	2.00	2.35	32.35	1 in 1735	1 in 2040	1 in 100
31	222+780	LEFT	6.99	6.06	0.93	986.28	978.10	987.96	978.70	989.56	979.20	986.62	986.24	977.35	988.99	-	6.54	0.25	0.64	2.00	2.00	2.35	37.20	1 in 2040	1 in 2715	1 in 100
32	223+938	LEFT	6.06	4.89	1.16	978.13	972.42	979.16	973.50	979.52	974.00	978.34	978.03	971.67	980.78	-	4.59	0.75	0.35	2.00	2.00	1.85	30.70	1 in 150	1 in 210	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WGC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WGC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WGC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WGC U/S OF WCO
Q2	DISCHARGE OF WGC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WGC
T	TOP WIDTH OF WGC
Bt	THROAT WIDTH
y	THROAT HEIGHT
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WGC BED SLOPE
S2	D/S WGC BED SLOPE
S3	CONDUIT BED SLOPE

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/12	0

WATERCOURSE OUTLET - PABBI MINOR (WGC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	OFFTAKING SIDE	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	y	W	H	L1	L2	S1	S2	S3
	(ft)		(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	0+682	RIGHT	8.63	8.41	0.21	1138.64	1138.67	1140.47	1139.50	1142.46	1140.00	1139.01	1138.75	1137.92	1141.50	-	-	0.25	0.23	2.00	2.00	2.50	25.70	1 in 1900	1 in 1900	1 in 100
2	1+308	RIGHT	8.41	7.75	0.65	1138.33	1135.29	1140.14	1137.39	1142.08	1137.89	1138.69	1138.39	1134.54	1141.14	-	-	0.25	0.50	2.00	2.00	2.45	30.20	1 in 1900	1 in 1900	1 in 100
3	3+943	RIGHT	7.75	5.36	2.36	1124.76	1120.62	1126.50	1122.18	1129.48	1122.68	1125.11	1124.78	1119.87	1127.53	-	-	0.75	0.57	2.00	2.00	2.40	33.30	1 in 1900	1 in 65	1 in 100
4	4+077	LEFT	5.36	4.24	1.12	1125.03	1120.46	1126.47	1122.02	1128.30	1122.52	1125.32	1125.00	1119.71	1127.75	-	-	0.40	0.53	2.00	2.00	2.20	31.80	1 in 65	1 in 65	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF MINOR
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF MINOR
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF MINOR
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF MINOR U/S OF WCO
Q2	DISCHARGE OF MINOR D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF MINOR
T	TOP WIDTH OF MINOR
Bt	THROAT WIDTH
y	THROAT HEIGHT
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S MINOR BED SLOPE
S2	D/S MINOR BED SLOPE
S3	CONDUIT BED SLOPE

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/15	0

TYPICAL WATERCOURSE OUTLET - WARSAK LIFT CANAL (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WLC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	9+256	282.27	280.96	1.16	1394.30	1395.33	1399.48	1396.64	1402.89	1397.14	1395.85	1395.54	1394.58	1398.29	12.00	30.84	0.25	2.00	2.00	4.65	31.35	1 in 4490	1 in 4530	1 in 100
2	9+738	280.96	279.62	1.31	1394.19	1394.16	1399.37	1395.57	1402.76	1396.07	1395.74	1395.42	1393.41	1398.17	12.00	30.84	0.25	2.00	2.00	4.65	32.90	1 in 4530	1 in 4575	1 in 100
3	10+232	279.62	279.29	0.28	1394.08	1390.44	1399.26	1391.84	1402.63	1392.34	1395.63	1395.25	1389.69	1398.00	12.00	30.84	0.25	2.00	2.00	4.65	38.30	1 in 4020	1 in 4585	1 in 100
4	11+580	279.29	278.57	0.66	1393.79	1393.91	1398.97	1395.05	1402.26	1395.55	1395.34	1395.02	1393.16	1397.77	12.00	30.84	0.25	2.00	2.00	4.65	32.55	1 in 4585	1 in 4605	1 in 100
5	12+000	278.57	278.25	0.29	1393.70	1392.98	1398.88	1394.17	1402.15	1394.67	1395.25	1394.92	1392.23	1397.67	12.00	30.84	0.25	2.00	2.00	4.65	33.80	1 in 4605	1 in 4615	1 in 100
6	21+989	278.25	272.12	5.52	1391.54	1389.17	1396.72	1390.10	1399.38	1390.60	1393.09	1392.74	1388.42	1395.99	12.00	30.84	0.32	3.00	2.50	4.65	35.35	1 in 4615	1 in 4805	1 in 100
7	23+425	272.12	267.68	4.35	1390.04	1385.67	1394.96	1386.58	1397.88	1387.08	1391.52	1391.13	1384.92	1394.38	12.00	30.06	0.32	3.00	2.50	4.45	38.35	1 in 3945	1 in 4080	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WLC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WLC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WLC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WLC U/S OF WCO
Q2	DISCHARGE OF WLC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WLC
T1	TOP WIDTH OF WLC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WLC BED SLOPE
S2	D/S WLC BED SLOPE
S3	CONDUIT BED SLOPE

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM
IN
PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN: Ishtiaq
CHECKED
RECOMMENDED
APPROVED

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE: AUG., 2021
DWG. NO. RWCS-13/TD/WCP/WCO/14
REV. 0

TYPICAL WATERCOURSE OUTLET - WARSAK LIFT CANAL (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WLC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	y	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	25+100	262.46	261.39	0.97	1389.59	1386.12	1394.51	1387.49	1397.21	1387.99	1391.07	1390.70	1385.37	1393.45	12.00	30.06	0.25	0.65	2.00	2.00	4.44	36.64	1 in 4240	1 in 4275	1 in 100
2	26+600	261.39	260.38	0.92	1389.19	1387.23	1394.11	1388.50	1396.81	1389.00	1390.67	1390.32	1386.48	1393.07	12.00	30.06	0.25	0.63	2.00	2.00	4.44	34.37	1 in 4275	1 in 4310	1 in 100
3	28+100	260.38	259.37	0.92	1388.84	1387.50	1393.76	1388.64	1396.46	1389.14	1390.32	1389.98	1386.75	1392.73	12.00	30.06	0.25	0.63	2.00	2.00	4.44	33.44	1 in 4310	1 in 4340	1 in 100
4	29+200	259.37	258.21	1.09	1388.59	1388.09	1393.51	1389.00	1396.21	1389.50	1390.07	1389.74	1387.34	1392.49	12.00	30.06	0.25	0.71	2.00	2.00	4.44	32.18	1 in 4340	1 in 4380	1 in 100
5	31+512	258.21	257.17	0.90	1388.06	1388.22	1392.98	1390.33	1395.68	1390.83	1389.54	1389.22	1387.47	1391.97	12.00	30.06	0.25	0.62	2.00	2.00	4.44	31.19	1 in 4380	1 in 4415	1 in 100
6	33+700	257.17	256.69	0.35	1387.56	1385.79	1392.48	1386.16	1395.18	1386.66	1389.04	1388.70	1385.04	1391.45	12.00	30.06	0.25	0.33	2.00	2.00	4.44	34.09	1 in 4415	1 in 4435	1 in 100
7	35+800	256.69	255.62	0.95	1386.96	1384.91	1391.88	1385.84	1394.58	1386.34	1388.44	1388.09	1384.16	1390.84	12.00	30.06	0.25	0.65	2.00	2.00	4.44	34.51	1 in 4435	1 in 4470	1 in 100
8	40+700	255.62	254.40	0.93	1385.16	1385.00	1390.08	1385.50	1392.78	1386.00	1386.64	1386.32	1384.25	1389.07	12.00	30.06	0.25	0.64	2.00	2.00	4.44	31.67	1 in 4470	1 in 4510	1 in 100
9	43+973	254.40	253.94	0.27	1384.43	1383.99	1389.35	1384.16	1392.05	1384.66	1385.91	1385.59	1383.24	1388.34	12.00	30.06	0.25	0.28	2.00	2.00	4.44	32.09	1 in 4510	1 in 4530	1 in 100
10	46+309	253.94	252.46	1.34	1383.91	1383.92	1388.83	1385.19	1391.53	1385.69	1385.39	1385.07	1383.17	1387.82	12.00	30.06	0.25	0.81	2.00	2.00	4.44	31.42	1 in 4530	1 in 4580	1 in 100
11	47+511	252.46	251.40	0.99	1383.65	1382.85	1388.57	1384.41	1391.27	1384.91	1385.13	1384.80	1382.10	1387.55	12.00	30.06	0.25	0.67	2.00	2.00	4.44	32.63	1 in 4580	1 in 4620	1 in 100
12	49+604	251.40	249.84	1.44	1383.07	1380.78	1387.99	1381.99	1390.69	1382.49	1384.55	1384.20	1380.03	1386.95	12.00	30.06	0.25	0.85	2.00	2.00	4.44	34.87	1 in 4620	1 in 4675	1 in 100
13	51+525	249.84	741.86	0.77	1382.66	1380.43	1387.58	1381.95	1390.28	1382.45	1384.14	1383.79	1379.68	1386.54	12.00	30.06	0.25	0.56	2.00	2.00	4.44	34.78	1 in 4675	1 in 4710	1 in 100
14	52+000	248.96	742.86	0.64	1382.56	1380.39	1387.48	1381.26	1390.18	1381.76	1384.04	1383.69	1379.64	1386.44	12.00	30.06	0.25	0.50	2.00	2.00	4.44	34.68	1 in 4710	1 in 4740	1 in 100
15	53+084	248.29	743.86	3.14	1382.33	1380.30	1387.25	1381.97	1389.95	1382.47	1383.81	1383.46	1379.55	1386.21	12.00	30.06	0.25	1.43	2.00	2.00	4.44	34.48	1 in 4740	1 in 4860	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WLC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WLC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WLC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WLC U/S OF WCO
Q2	DISCHARGE OF WLC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WLC
T1	TOP WIDTH OF WLC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WLC BED SLOPE
S2	D/S WLC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	WIDTH OF THROAT
y	HEIGHT OF THROAT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
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ELECTRA CONSULTANTS PESHAWAR

INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM
IN
PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/15	0

TYPICAL WATERCOURSE OUTLET-WARSAK LIFT CANAL (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WLC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	y	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
16	53+292	245.09	744.86	2.11	1382.29	1378.19	1387.21	1379.63	1389.91	1380.13	1383.77	1383.39	1377.44	1386.14	12.00	30.06	0.25	1.10	2.00	2.00	4.44	37.58	1 in 4860	1 in 4950	1 in 100
17	54+240	242.97	745.86	2.26	1382.10	1377.69	1387.02	1379.10	1389.72	1379.60	1383.58	1383.20	1376.94	1385.95	12.00	30.06	0.25	1.15	2.00	2.00	4.44	38.05	1 in 4950	1 in 5040	1 in 100
18	54+282	240.65	746.86	4.00	1382.09	1377.15	1387.01	1379.08	1389.71	1379.58	1383.57	1383.18	1376.40	1385.93	12.00	30.06	0.25	1.69	2.00	2.00	4.44	38.84	1 in 5040	1 in 5215	1 in 100
19	54+598	236.65	747.86	1.61	1382.27	1377.35	1387.19	1378.47	1389.89	1378.97	1383.75	1383.36	1376.60	1386.11	10.00	28.06	0.25	0.92	2.00	2.00	4.44	38.81	1 in 3980	1 in 4040	1 in 100
20	55+597	235.02	748.86	0.00	1382.02	1236.10	1386.94	1238.65	1389.64	1239.15	1383.50	1380.99	1235.35	1383.74	10.00	28.06	0.25	0.00	2.00	2.00	4.44	250.31	1 in 4040	1 in 4060	1 in 100
21	56+610	235.02	749.86	0.43	1381.77	1378.65	1386.69	1380.06	1389.39	1380.56	1383.25	1382.88	1377.90	1385.63	10.00	28.06	0.25	0.38	2.00	2.00	4.44	36.11	1 in 4060	1 in 4120	1 in 100
22	57+984	234.48	750.86	1.70	1381.43	1375.18	1386.35	1376.33	1389.05	1376.83	1382.91	1382.50	1374.43	1385.25	10.00	28.06	0.25	0.95	2.00	2.00	4.44	40.81	1 in 4120	1 in 4150	1 in 100
23	58+067	232.70	751.86	0.93	1381.41	1378.46	1386.33	1379.78	1389.03	1380.28	1382.89	1382.53	1377.71	1385.28	10.00	28.06	0.25	0.64	2.00	2.00	4.44	35.86	1 in 4150	1 in 4270	1 in 100
24	62+897	231.77	752.86	3.16	1380.25	1372.95	1385.17	1374.83	1387.87	1375.33	1381.73	1381.30	1372.20	1384.05	10.00	28.06	0.25	1.44	2.00	2.00	4.44	42.38	1 in 4270	1 in 4450	1 in 100
25	63+204	228.34	753.86	4.53	1380.18	1376.24	1385.10	1378.51	1387.80	1379.01	1381.66	1381.28	1375.49	1384.53	10.00	28.06	0.32	1.55	3.00	2.50	4.44	37.34	1 in 4450	1 in 4575	1 in 100
26	63+627	223.79	754.86	3.14	1380.08	1374.30	1385.00	1375.85	1387.70	1376.35	1381.56	1381.16	1373.55	1383.91	10.00	28.06	0.25	1.44	2.00	2.00	4.44	40.10	1 in 4575	1 in 4785	1 in 100
27	63+688	220.63	755.86	4.88	1380.07	1373.57	1384.99	1375.12	1387.69	1375.62	1381.55	1381.13	1372.82	1384.38	10.00	28.06	0.32	1.63	3.00	2.50	4.44	41.18	1 in 4785	1 in 4840	1 in 100
28	63+799	215.75	756.86	1.14	1380.05	1372.23	1384.97	1373.51	1387.67	1374.01	1381.53	1381.09	1371.48	1383.84	10.00	28.06	0.25	0.73	2.00	2.00	4.44	43.16	1 in 4840	1 in 4860	1 in 100
29	64+046	214.60	757.86	0.47	1380.00	1376.14	1384.92	1377.67	1387.62	1378.17	1381.48	1381.10	1375.39	1383.85	10.00	28.06	0.25	0.40	2.00	2.00	4.44	37.22	1 in 4860	1 in 4950	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WLC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WLC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WLC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WLC U/S OF WCO
Q2	DISCHARGE OF WLC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WLC
T1	TOP WIDTH OF WLC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WLC BED SLOPE
S2	D/S WLC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	WIDTH OF THROAT
y	HEIGHT OF THROAT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA, PMU - REMODELING OF WARSAK CANALS PROJECT PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/16	0

TYPICAL WATERCOURSE OUTLET-WARSAK LIFT CANAL (WLC)
TABLE OF ELEVATIONS AND DIMENSIONS

SR	WLC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	Y	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	65+767	212.22	204.92	7.21	1379.15	1376.00	1384.07	1378.00	1386.81	1378.50	1380.63	1380.26	1375.25	1383.51	10.00	28.06	0.50	1.57	3.00	2.50	4.45	36.25	1 in 4950	1 in 4000	1 in 100
2	65+826	204.92	204.75	0.17	1379.14	1375.55	1383.71	1376.61	1386.74	1377.11	1380.51	1380.14	1374.80	1382.89	10.00	27.01	0.25	0.20	2.00	2.00	4.20	36.80	1 in 4000	1 in 4020	1 in 100
3	65+955	204.75	195.03	9.71	1379.11	1375.23	1383.68	1377.80	1386.71	1378.30	1380.48	1380.11	1374.48	1383.36	10.00	27.01	0.75	1.47	3.00	2.50	4.20	37.25	1 in 4020	1 in 4420	1 in 100
4	70+600	195.03	194.31	0.47	1378.06	1376.55	1382.63	1377.49	1385.17	1377.99	1379.43	1379.10	1375.80	1381.85	10.00	26.26	0.25	0.40	2.00	2.00	4.20	32.95	1 in 4420	1 in 4455	1 in 100
5	70+800	194.31	191.10	3.20	1378.02	1375.77	1382.59	1376.73	1385.13	1377.23	1379.39	1379.05	1375.02	1381.80	10.00	26.26	0.25	1.45	2.00	2.00	4.20	34.05	1 in 4455	1 in 4605	1 in 100
6	71+423	191.10	185.99	5.08	1377.88	1375.45	1382.45	1376.94	1384.92	1377.44	1379.25	1378.91	1374.70	1382.16	10.00	26.26	0.40	1.45	3.00	2.50	4.20	34.25	1 in 4605	1 in 4855	1 in 100
7	72+193	185.99	184.84	1.11	1378.04	1375.13	1382.61	1376.45	1384.84	1376.95	1379.41	1379.07	1374.38	1381.82	8.00	24.26	0.25	0.72	2.00	2.00	4.20	34.60	1 in 3540	1 in 3585	1 in 100
8	73+500	184.84	183.34	1.44	1377.68	1374.98	1382.25	1375.56	1384.48	1376.06	1379.05	1378.71	1374.23	1381.46	8.00	24.26	0.25	0.85	2.00	2.00	4.20	34.25	1 in 3585	1 in 3650	1 in 100
9	74+900	183.34	182.37	0.90	1377.30	1374.50	1381.87	1375.00	1384.09	1375.50	1378.67	1378.33	1373.75	1381.08	8.00	24.26	0.25	0.62	2.00	2.00	4.20	34.40	1 in 3650	1 in 3685	1 in 100
10	76+450	182.37	181.27	1.02	1376.88	1374.00	1381.45	1375.27	1383.66	1375.77	1378.25	1377.91	1373.25	1380.66	8.00	24.26	0.25	0.68	2.00	2.00	4.20	34.50	1 in 3685	1 in 3725	1 in 100
11	77+500	181.27	178.31	2.91	1376.60	1373.75	1381.17	1375.25	1383.38	1375.75	1377.97	1377.63	1373.00	1380.38	8.00	24.26	0.25	1.36	2.00	2.00	4.20	34.45	1 in 3725	1 in 3855	1 in 100
12	77+850	178.31	175.90	2.39	1376.51	1373.45	1381.08	1374.75	1383.29	1375.25	1377.88	1377.53	1372.70	1380.28	8.00	24.26	0.25	1.20	2.00	2.00	4.20	34.80	1 in 3855	1 in 3960	1 in 100
13	78+400	175.90	174.85	1.02	1376.37	1373.00	1380.94	1374.05	1383.15	1374.55	1377.74	1377.39	1372.25	1380.14	8.00	24.26	0.25	0.68	2.00	2.00	4.20	35.25	1 in 3960	1 in 4005	1 in 100
14	80+000	174.85	174.43	0.34	1375.97	1373.55	1380.54	1374.50	1382.77	1375.00	1377.34	1377.00	1372.80	1379.75	8.00	24.26	0.25	0.32	2.00	2.00	4.20	33.85	1 in 4005	1 in 4025	1 in 100
15	81+280	174.43	173.89	0.48	1375.65	1373.35	1380.22	1374.27	1382.60	1374.77	1377.02	1376.68	1372.60	1379.43	8.00	24.26	0.25	0.41	2.00	2.00	4.20	33.90	1 in 4025	1 in 4050	1 in 100
16	83+300	173.89	173.42	0.37	1375.15	1372.00	1379.72	1373.75	1381.97	1374.25	1376.52	1376.17	1371.25	1378.92	8.00	24.26	0.25	0.35	2.00	2.00	4.20	35.00	1 in 4050	1 in 4070	1 in 100
17	84+600	173.42	172.11	1.25	1374.83	1372.75	1379.40	1373.95	1381.66	1374.45	1376.20	1375.87	1372.00	1378.62	8.00	24.26	0.25	0.78	2.00	2.00	4.20	33.40	1 in 4070	1 in 4135	1 in 100
18	85+600	172.11	169.87	2.19	1374.59	1373.40	1379.16	1374.49	1381.42	1374.99	1375.96	1375.64	1372.65	1378.39	8.00	24.26	0.25	1.13	2.00	2.00	4.20	32.05	1 in 4135	1 in 4245	1 in 100
19	89+560	169.87	169.18	0.50	1373.66	1372.50	1378.23	1373.29	1380.64	1373.79	1375.03	1374.71	1371.75	1377.46	8.00	24.26	0.25	0.42	2.00	2.00	4.20	32.25	1 in 4245	1 in 4275	1 in 100
20	90+555	169.18	168.18	0.95	1373.43	1372.25	1378.00	1373.27	1380.38	1373.77	1374.80	1374.48	1371.50	1377.23	8.00	24.26	0.25	0.64	2.00	2.00	4.20	32.20	1 in 4275	1 in 4330	1 in 100
21	90+784	168.18	161.82	0.15	1373.38	1373.08	1377.95	1373.75	1380.33	1374.25	1374.75	1374.44	1372.33	1377.19	8.00	24.26	0.25	0.19	2.00	2.00	4.20	30.90	1 in 4330	1 in 4335	1 in 100
22	92+000	161.82	158.05	3.68	1373.40	1370.25	1377.65	1372.29	1379.86	1372.79	1374.68	1374.33	1369.50	1377.08	8.00	23.3	0.32	1.35	2.00	2.00	4.00	34.45	1 in 3500	1 in 3670	1 in 100
23	95+000	158.05	156.19	1.72	1372.58	1370.10	1376.83	1371.48	1379.02	1371.98	1373.86	1373.52	1369.35	1376.27	8.00	23.3	0.25	0.96	2.00	2.00	4.00	33.40	1 in 3670	1 in 3760	1 in 100
24	95+200	156.19	155.84	0.34	1372.53	1369.97	1376.78	1370.73	1378.97	1371.23	1373.81	1373.47	1369.22	1376.22	8.00	23.3	0.25	0.32	2.00	2.00	4.00	33.50	1 in 3760	1 in 3775	1 in 100
25	98+200	155.84	154.37	1.33	1371.74	1369.65	1375.99	1370.49	1378.16	1370.99	1373.02	1372.69	1368.90	1375.44	8.00	23.3	0.25	0.81	2.00	2.00	4.00	32.80	1 in 3775	1 in 3850	1 in 100
26	99+300	154.37	153.07	1.25	1371.45	1369.22	1375.70	1370.05	1377.90	1370.55	1372.73	1372.39	1368.47	1375.14	8.00	23.3	0.25	0.78	2.00	2.00	4.00	33.05	1 in 3850	1 in 3915	1 in 100
27	100+000	153.07	150.04	3.00	1371.27	1369.08	1375.52	1370.47	1377.73	1370.97	1372.55	1372.22	1368.33	1374.97	8.00	23.3	0.25	1.39	2.00	2.00	4.00	33.00	1 in 3915	1 in 4075	1 in 100
28	100+834	150.04	144.10	5.92	1371.07	1368.76	1375.32	1370.25	1377.47	1370.75	1372.35	1372.01	1368.01	1375.26	8.00	23.3	0.50	1.38	3.00	2.50	4.00	33.10	1 in 4075	1 in 4415	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WLC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WLC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WLC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WLC U/S OF WCO
Q2	DISCHARGE OF WLC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WLC
T1	TOP WIDTH OF WLC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WLC BED SLOPE
S2	D/S WLC BED SLOPE
S3	CONDUIT BED SLOPE
Bt	THROAT WIDTH
Y	THROAT HEIGHT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/17	0

TYPICAL WATERCOURSE OUTLET - WARSAK LIFT CANAL (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WLC RD	OFF TAKING SIDE	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	H	Bt	Y	W	h	L1	L2	S1	S2	S3
	(ft)		(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	101+969	LEFT	144.08	143.13	0.90	1370.80	1364.63	1374.90	1365.80	1377.20	1366.30	1372.03	1371.64	1363.88	1374.39	7.00	21.85	2.87	0.25	0.63	2.00	2.00	3.90	38.90	1 in 3200	1 in 3245	1 in 100
2	102+801	LEFT	143.13	140.84	2.25	1370.54	1368.90	1374.64	1370.32	1376.94	1370.82	1371.77	1371.45	1368.15	1374.20	7.00	21.85	2.87	0.25	1.15	2.00	2.00	3.90	32.10	1 in 3245	1 in 3350	1 in 100
3	103+508	LEFT	140.84	136.09	4.72	1370.33	1369.98	1374.43	1371.78	1376.73	1372.28	1371.56	1371.26	1369.23	1374.51	7.00	21.85	2.87	0.40	1.38	3.00	2.50	3.90	30.15	1 in 3350	1 in 3585	1 in 100
4	104+821	LEFT	136.09	135.25	0.78	1369.96	1369.77	1374.06	1370.85	1376.36	1371.35	1371.19	1370.89	1369.02	1373.64	7.00	21.85	2.87	0.25	0.57	2.00	2.00	3.90	29.90	1 in 3585	1 in 3630	1 in 100
5	110+159	LEFT	135.25	132.57	2.45	1368.49	1367.83	1372.59	1369.17	1374.89	1369.67	1369.72	1369.41	1367.08	1372.16	7.00	21.85	2.87	0.25	1.22	2.00	2.00	3.90	30.60	1 in 3630	1 in 3775	1 in 100
6	112+025	LEFT	132.57	130.54	1.95	1368.00	1368.45	1372.10	1369.46	1374.40	1369.96	1369.23	1368.94	1367.70	1371.69	7.00	21.85	2.87	0.25	1.04	2.00	2.00	3.90	28.95	1 in 3775	1 in 3895	1 in 100
7	113+700	LEFT	130.54	129.45	1.02	1367.41	1367.75	1371.51	1369.00	1373.81	1369.50	1368.64	1368.35	1367.00	1371.10	7.00	21.85	2.87	0.25	0.68	2.00	2.00	3.90	29.10	1 in 3895	1 in 3960	1 in 100
8	114+156	LEFT	129.45	95.22	1.53	1367.29	1367.21	1371.39	1367.96	1373.69	1368.46	1368.52	1368.22	1366.46	1370.97	7.00	21.85	2.87	0.25	0.89	2.00	2.00	3.90	29.75	1 in 3960	1 in 4060	1 in 100
9	114+854	LEFT	95.22	94.72	0.49	1367.95	1365.50	1371.40	1366.00	1373.20	1366.50	1368.99	1368.67	1364.75	1371.42	6.00	18.15	2.42	0.25	0.42	2.00	2.00	3.45	31.60	1 in 3000	1 in 3035	1 in 100
10	115+778	LEFT	94.72	92.93	1.76	1367.65	1366.99	1371.10	1368.32	1372.90	1368.82	1368.69	1368.40	1366.24	1371.15	6.00	18.15	2.41	0.25	0.98	2.00	2.00	3.45	28.90	1 in 3035	1 in 3150	1 in 100
11	116+379	LEFT	92.93	88.18	4.73	1367.46	1366.21	1370.91	1367.96	1372.71	1368.46	1368.50	1368.20	1365.46	1371.45	6.00	18.15	2.42	0.50	1.19	3.00	2.50	3.45	29.75	1 in 3150	1 in 3500	1 in 100
12	117+590	LEFT	88.18	87.99	0.15	1367.11	1366.28	1370.56	1367.20	1372.36	1367.70	1368.15	1367.85	1365.53	1370.60	6.00	18.15	2.42	0.25	0.19	2.00	2.00	3.45	29.15	1 in 3500	1 in 3515	1 in 100
13	118+420	LEFT	87.99	87.46	0.50	1366.87	1365.92	1370.32	1367.00	1372.12	1367.50	1367.91	1367.61	1365.17	1370.36	6.00	18.15	2.42	0.25	0.42	2.00	2.00	3.45	29.30	1 in 3510	1 in 3555	1 in 100
14	119+710	LEFT	87.46	86.76	0.65	1366.51	1365.42	1369.96	1366.50	1371.76	1367.00	1367.55	1367.25	1364.67	1370.00	6.00	18.15	2.42	0.25	0.50	2.00	2.00	3.45	29.55	1 in 3555	1 in 3615	1 in 100
15	122+328	LEFT	86.76	86.22	0.44	1365.79	1364.77	1369.24	1365.77	1371.04	1366.27	1366.83	1366.53	1364.02	1369.28	6.00	18.15	2.42	0.25	0.39	2.00	2.00	3.45	29.45	1 in 3615	1 in 3655	1 in 100
16	122+668	LEFT	86.22	84.97	1.24	1365.70	1364.85	1369.15	1366.10	1370.95	1366.60	1366.74	1366.44	1364.10	1369.19	6.00	18.15	2.42	0.25	0.77	2.00	2.00	3.45	29.20	1 in 3655	1 in 3765	1 in 100
17	124+000	RIGHT	84.97	84.79	0.13	1364.90	1364.47	1368.35	1365.30	1370.15	1365.80	1365.94	1365.65	1363.72	1368.40	6.00	18.15	2.41	0.25	0.17	2.00	2.00	3.45	28.55	1 in 3765	1 in 3785	1 in 100
18	124+827	RIGHT	84.79	81.97	2.79	1364.68	1362.76	1368.13	1364.25	1369.93	1364.75	1365.72	1365.41	1362.01	1368.16	6.00	18.15	2.42	0.32	1.13	2.00	2.00	3.45	30.80	1 in 3785	1 in 4045	1 in 100
19	125+157	RIGHT	81.97	80.99	0.97	1364.60	1366.33	1368.05	1367.50	1369.85	1368.00	1365.64	1365.38	1364.63	1368.13	6.00	18.15	2.42	0.25	0.65	2.00	2.00	3.45	25.30	1 in 4045	1 in 4150	1 in 100
20	126+331	RIGHT	80.99	80.54	0.41	1364.32	1363.25	1367.77	1364.25	1369.57	1364.75	1365.36	1365.06	1362.50	1367.81	6.00	18.15	2.42	0.25	0.37	2.00	2.00	3.45	29.50	1 in 4150	1 in 4195	1 in 100
21	127+648	RIGHT	80.54	80.44	0.05	1364.01	1363.23	1367.46	1364.15	1369.26	1364.65	1365.05	1364.75	1362.48	1367.50	6.00	18.15	2.42	0.25	0.09	2.00	2.00	3.45	29.05	1 in 4195	1 in 4205	1 in 100
22	129+265	RIGHT	80.44	79.97	0.41	1363.63	1363.00	1367.08	1364.00	1368.88	1364.50	1364.67	1364.38	1362.25	1367.13	6.00	18.15	2.41	0.25	0.37	2.00	2.00	3.45	28.85	1 in 4205	1 in 4255	1 in 100
23	130+370	RIGHT	79.97	70.15	1.20	1363.37	1364.00	1366.82	1365.25	1368.62	1365.75	1364.41	1364.14	1363.25	1366.89	6.00	18.15	2.42	0.25	0.76	2.00	2.00	3.45	26.95	1 in 4255	1 in 4390	1 in 100
24	132+716	RIGHT	70.15	68.32	1.79	1363.19	1362.67	1366.20	1364.00	1368.00	1364.50	1364.09	1363.81	1361.92	1366.56	6.00	16.83	2.11	0.25	0.99	2.00	2.00	3.15	28.00	1 in 3200	1 in 3370	1 in 100
25	134+680	RIGHT	68.32	67.94	0.29	1362.43	1360.16	1365.44	1361.08	1367.24	1361.58	1363.33	1363.03	1359.41	1365.78	6.00	16.83	2.11	0.25	0.30	2.00	2.00	3.15	30.65	1 in 3370	1 in 3410	1 in 100
26	136+598	RIGHT	67.94	66.04	1.84	1361.87	1359.17	1364.88	1360.50	1366.68	1361.00	1362.77	1362.46	1358.42	1365.21	6.00	16.83	2.11	0.25	1.01	2.00	2.00	3.15	31.30	1 in 3410	1 in 3610	1 in 100
27	138+400	RIGHT	66.04	64.81	1.17	1361.37	1359.18	1364.38	1360.35	1366.18	1360.85	1362.27	1361.97	1358.43	1364.72	6.00	16.83	2.11	0.25	0.74	2.00	2.00	3.15	30.55	1 in 3610	1 in 3750	1 in 100
28	139+224	RIGHT	64.81	63.90	0.88	1361.15	1359.92	1364.16	1361.00	1365.96	1361.50	1362.05	1361.76	1359.17	1364.51	6.00	16.83	2.11	0.25	0.62	2.00	2.00	3.15	29.10	1 in 3750	1 in 3855	1 in 100
29	140+752	RIGHT	63.90	63.16	0.69	1360.75	1361.00	1363.76	1362.00	1365.56	1362.50	1361.65	1361.38	1360.25	1364.13	6.00	16.83	2.11	0.25	0.52	2.00	2.00	3.15	26.85	1 in 3855	1 in 3945	1 in 100

EVATIONS

EL. B1 BED LEVEL OF WLC
EL. B2 BED LEVEL OF WATERCOURSE
EL. C1 FULL SUPPLY LEVEL OF WLC
EL. C2 FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1 BANK LEVEL OF WLC
EL. D2 BANK LEVEL OF WATERCOURSE
EL. E CREST LEVEL
EL. F CONDUIT BED LEVEL AT END
EL. G SUMP BED LEVEL
EL. H CONDUIT SLAB LEVEL

DIMENSIONS

Q1 DISCHARGE OF WLC U/S OF WCO
Q2 DISCHARGE OF WLC D/S OF WCO
Q3 DISCHARGE OF WATERCOURSE OUTLET
Bw BED WIDTH OF WLC
T1 TOP WIDTH OF WLC
T2 TOP WIDTH OF WATERCOURSE
W WIDTH OF CONDUIT
H HEAD ABOVE CREST
L1 LENGTH OF CREST
L2 LENGTH OF CONDUIT

S1 U/S WLC BED SLOPE
S2 D/S WLC BED SLOPE
S3 CONDUIT BED SLOPE
Bt THROAT WIDTH
Y THROAT HEIGHT
h HEIGHT OF CONDUIT

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT
IRRIGATION DEPARTMENT
GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.		
						DRAWN	Ishtiaq
						CHECKED	
						RECOMMENDED	
						APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/18	0

TYPICAL WATERCOURSE OUTLET-WARSAK LIFT CANAL (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	WLC RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	144+000	63.16	62.77	0.28	1359.68	1359.05	1362.69	1360.25	1364.49	1360.75	1360.58	1360.30	1358.30	1363.05	6.00	16.83	0.25	2.00	2.00	3.15	28.20	1 in 3945	1 in 3995	1 in 100
2	144+900	62.77	60.58	2.16	1359.45	1358.00	1362.46	1359.59	1364.26	1360.09	1360.35	1360.06	1357.25	1362.81	6.00	16.83	0.32	2.00	2.00	3.15	29.40	1 in 3995	1 in 4285	1 in 100
3	145+250	60.58	59.47	1.10	1359.37	1358.18	1362.38	1359.46	1364.18	1359.96	1360.27	1359.98	1357.43	1362.73	6.00	16.83	0.25	2.00	2.00	3.15	29.00	1 in 4285	1 in 4450	1 in 100
4	145+270	59.47	55.07	4.40	1359.37	1357.25	1362.38	1358.69	1364.18	1359.19	1360.27	1359.97	1356.50	1363.22	6.00	16.83	0.75	3.00	2.50	3.15	30.40	1 in 4450	1 in 5185	1 in 100
5	145+330	55.07	49.90	5.17	1359.36	1357.00	1362.37	1358.63	1364.17	1359.13	1360.26	1359.96	1356.25	1363.21	6.00	16.83	0.75	3.00	2.50	3.15	30.80	1 in 5185	1 in 6315	1 in 100
6	145+370	49.90	48.84	1.06	1359.35	1357.15	1362.36	1357.92	1363.96	1358.42	1360.25	1359.95	1356.40	1362.70	6.00	16.68	0.25	2.00	2.00	3.15	30.25	1 in 6315	1 in 6595	1 in 100
7	145+400	48.84	47.54	1.30	1359.35	1357.10	1362.36	1358.33	1363.96	1358.83	1360.25	1359.95	1356.35	1362.70	6.00	16.68	0.25	2.00	2.00	3.15	30.30	1 in 6595	1 in 6965	1 in 100
8	148+800	47.54	44.61	2.83	1357.87	1356.98	1360.76	1357.50	1362.36	1358.00	1358.74	1358.46	1356.23	1361.21	4.50	14.82	0.40	2.00	2.00	3.05	28.10	1 in 4000	1 in 4545	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WLC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WLC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WLC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WLC U/S OF WCO
Q2	DISCHARGE OF WLC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WLC
T1	TOP WIDTH OF WLC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WLC BED SLOPE
S2	D/S WLC BED SLOPE
S3	CONDUIT BED SLOPE

TENDER DRAWING

NOTE
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REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

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INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/19	0

TYPICAL WATERCOURSE OUTLET-REGI MINOR (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	REGI MINOR RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	0+300																							

TYPICAL WATERCOURSE OUTLET - MASHOGAGAR MINOR (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	0+790	6.20	4.59	1.60	1373.20	1371.99	1374.40	1373.25	1379.28	1373.75	1373.56	1373.25	1371.24	1376.00	1.50	6.6	1.00	2.00	2.00	1.85	30.95	1 in 1675	1 in 1850	1 in 100
2	1+710	4.59	1.88	2.70	1372.70	1371.55	1373.76	1372.65	1375.03	1373.15	1373.02	1372.77	1370.80	1375.52	1.50	6.18	1.75	2.00	2.00	1.75	25.25	1 in 1850	1 in 1850	1 in 100

TYPICAL WATERCOURSE OUTLET - BADABER MINOR (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	6+600	32.57	30.09	2.39	1327.48	1326.00	1328.86	1326.50	1330.36	1327.00	1327.62	1327.35	1325.25	1330.10	2.00	7.64	0.75	2.00	2.00	2.25	26.55	1 in 150	1 in 85	1 in 100
2	6+670	30.09	26.21	3.88	1326.83	1326.25	1327.98	1327.77	1329.52	1328.27	1326.95	1326.70	1325.50	1329.45	2.00	6.95	1.75	2.00	2.00	2.05	24.95	1 in 85	1 in 85	1 in 100
3	6+670	26.21	25.41	0.80	1326.65	1328.77	1327.72	1327.22	1331.06	1327.72	1326.76	1326.52	1325.77	1329.27	2.00	6.71	0.40	2.00	2.00	2.00	23.45	1 in 85	1 in 85	1 in 100
4	6+720	25.41	24.39	1.02	1326.06	1328.75	1327.11	1326.61	1331.13	1327.11	1326.17	1325.93	1325.18	1328.68	2.00	6.65	0.50	2.00	2.00	1.95	23.60	1 in 85	1 in 135	1 in 100
5	7+865	24.39	23.56	0.82	1317.58	1318.42	1318.74	1318.24	1320.14	1318.74	1317.70	1317.47	1316.72	1320.22	2.00	6.98	0.32	2.00	2.00	2.05	22.60	1 in 135	1 in 135	1 in 100
6	8+623	23.56	20.80	2.75	1310.78	1312.41	1311.81	1311.31	1313.21	1311.81	1310.88	1310.67	1309.92	1313.42	2.00	6.59	1.25	2.00	2.00	1.95	21.20	1 in 90	1 in 90	1 in 100
7	9+483	20.80	19.84	0.95	1306.32	1306.20	1307.67	1306.75	1310.19	1307.25	1306.46	1306.20	1305.45	1308.95	1.50	7.05	0.32	2.00	2.00	2.25	26.00	1 in 240	1 in 500	1 in 100
8	13+040	19.84	17.50	2.30	1284.15	1284.00	1285.45	1285.10	1286.70	1285.60	1284.28	1284.04	1283.25	1286.79	1.50	6.9	0.75	2.00	2.00	2.20	24.10	1 in 225	1 in 160	1 in 100
9	13+180	17.50	16.48	1.02	1283.28	1285.83	1284.41	1283.91	1286.65	1284.41	1283.39	1283.18	1282.43	1285.93	1.50	6.39	0.40	2.00	2.00	2.05	21.25	1 in 160	1 in 125	1 in 100
10	13+875	16.48	13.74	2.73	1277.72	1277.00	1278.75	1277.85	1284.91	1278.35	1277.82	1277.50	1276.25	1280.25	1.50	6.09	1.25	2.00	2.00	1.95	31.90	1 in 125	1 in 625	1 in 100
11	15+023	13.74	12.37	1.39	1275.88	1275.00	1277.27	1275.80	1279.02	1276.30	1276.02	1275.76	1274.25	1278.51	1.50	7.17	0.40	2.00	2.00	2.30	26.05	1 in 625	1 in 100	1 in 100
12	17+317	12.37	10.12	2.22	1262.58	1261.75	1263.89	1262.50	1265.44	1263.00	1262.71	1262.46	1261.00	1265.21	1.50	6.93	0.75	2.00	2.00	2.20	25.55	1 in 600	1 in 800	1 in 100
13	24+575	10.12	8.95	1.08	1253.51	1253.21	1254.78	1253.78	1256.99	1254.28	1253.64	1253.38	1252.46	1256.13	1.50	6.81	0.40	2.00	2.00	2.15	25.70	1 in 800	1 in 450	1 in 100
14	25+380	8.95	7.33	1.61	1251.72	1251.35	1252.76	1251.99	1254.86	1252.49	1251.82	1251.57	1250.60	1254.32	1.50	6.12	0.75	2.00	2.00	1.95	25.30	1 in 450	1 in 450	1 in 100
15	25+380	7.33	6.62	0.71	1251.72	1251.40	1252.76	1251.75	1254.88	1252.25	1251.82	1251.57	1250.65	1254.32	1.50	6.12	0.32	2.00	2.00	1.95	25.25	1 in 450	1 in 450	1 in 100
16	27+000	6.62	4.86	1.75	1244.83	1244.12	1245.50	1244.79	1247.69	1245.29	1244.90	1244.64	1243.37	1247.39	1.50	5.01	1.75	2.00	2.00	1.65	25.40	1 in 140	1 in 180	1 in 100
17	27+500	4.86	3.63	1.23	1242.05	1241.85	1242.66	1241.50	1244.82	1242.00	1242.11	1241.87	1241.10	1244.62	1.50	4.83	1.25	2.00	2.00	1.55	24.50	1 in 180	1 in 225	1 in 100
18	27+600	3.63	2.10	1.53	1241.61	1241.75	1242.16	1241.66	1244.35	1242.16	1241.67	1241.43	1240.68	1244.18	1.50	4.65	1.75	2.00	2.00	1.50	23.95	1 in 225	1 in 195	1 in 100

TYPICAL WATERCOURSE OUTLET - SORIZAI MINOR (WLC)

TABLE OF ELEVATIONS AND DIMENSIONS

SR	MINOR RD	Q_1	Q_2	Q_3	El. B1	El. B2	El. C1	El. C2	El. D1	El. D2	El. E	El. F	El. G	El. H	Bw	T	Bt	W	H	L1	L2	S1	S2	S3
	(ft)	(cfs)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/ft)	(ft/ft)
1	3+000	8.53	7.28	1.23	1336.67	1334.50	1337.47	1334.88	1338.72	1335.38	1336.75	1336.49	1333.75	1339.24	1.00	4.9	1.00	2.00	2.00	1.75	26.35	1 in 100	1 in 80	1 in 100

ELEVATIONS

EL. B1	BED LEVEL OF WLC
EL. B2	BED LEVEL OF WATERCOURSE
EL. C1	FULL SUPPLY LEVEL OF WLC
EL. C2	FULL SUPPLY LEVEL OF WATERCOURSE
EL. D1	BANK LEVEL OF WLC
EL. D2	BANK LEVEL OF WATERCOURSE
EL. E	CREST LEVEL
EL. F	CONDUIT BED LEVEL AT END
EL. G	SUMP BED LEVEL
EL. H	CONDUIT SLAB LEVEL

DIMENSIONS

Q1	DISCHARGE OF WLC U/S OF WCO
Q2	DISCHARGE OF WLC D/S OF WCO
Q3	DISCHARGE OF WATERCOURSE OUTLET
Bw	BED WIDTH OF WLC
T1	TOP WIDTH OF WLC
T2	TOP WIDTH OF WATERCOURSE
W	WIDTH OF CONDUIT
H	HEIGHT OF CONDUIT
L1	LENGTH OF CREST
L2	LENGTH OF CONDUIT
S1	U/S WLC BED SLOPE
S2	D/S WLC BED SLOPE
S3	CONDUIT BED SLOPE

TENDER DRAWING

NOTE
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INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

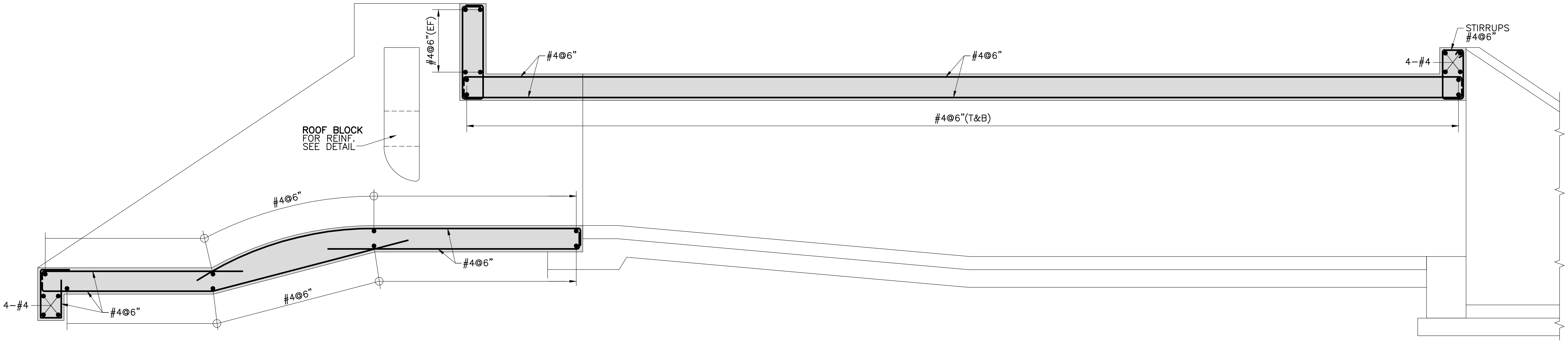
REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM IN PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

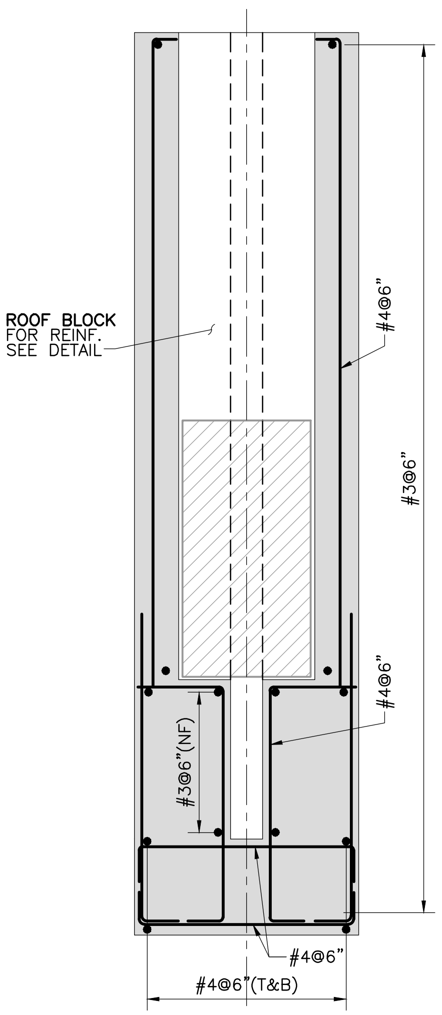
DRAWN	Ishtiaq
CHECKED	
RECOMMENDED	
APPROVED	

REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
TABLE OF ELEVATIONS AND DIMENSIONS

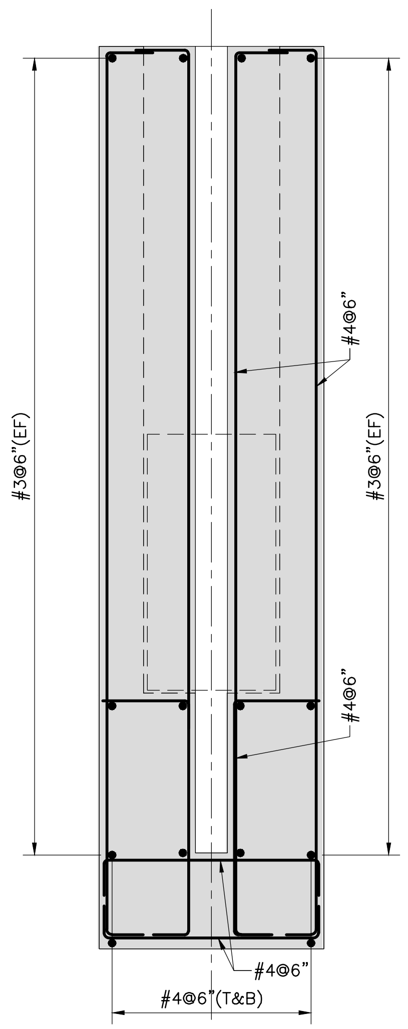
DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/20	0



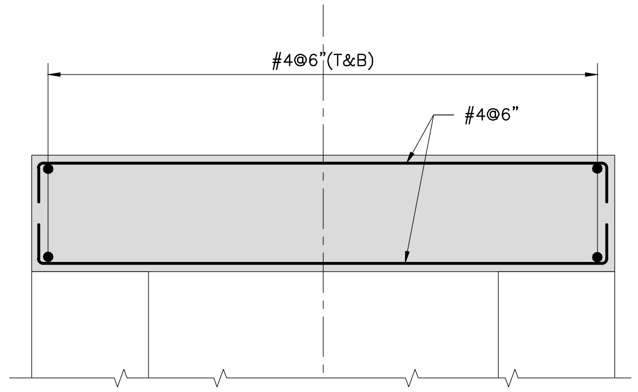
SECTION A-A



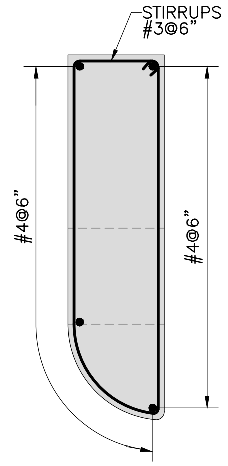
SECTION B-B



SECTION E-E



SECTION C-C



ROOF BLOCK

TENDER DRAWING

NOTE
FOR LIST OF REFERENCE DRAWINGS AND NOTES REFER DWG. NO. RWCS-13/TD/WCP/WCO/01.

CLIENT

IRRIGATION DEPARTMENT

GOVERNMENT OF THE KHYBER PAKHTUNKHWA,
PMU - REMODELING OF WARSAK CANALS PROJECT
PESHAWAR

CONSULTANT - A JOINT VENTURE OF
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED LAHORE
ELECTRA CONSULTANTS PESHAWAR
INTEGRATED CONSULTING SERVICES (PVT.) LIMITED LAHORE

REMODELING OF WARSAK CANAL SYSTEM PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION OF REMODELING OF WARSAK CANAL SYSTEM
IN
PESHAWAR AND NOWSHERA DISTRICTS

REV.	DATE	DESCRIPTION	BY	CKD.	APPR.

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REMODELLING OF WARSAK CANAL SYSTEM
CONTRACT RWCS-13
BALANCE WORK OF REMODELING OF WARSAK CANAL PROJECT
TYPICAL WATERCOURSE OUTLET
REINFORCEMENT DETAILS

DATE	DWG. NO.	REV.
AUG., 2021	RWCS-13/TD/WCP/WCO/21	0