

GENERAL NOTES

A. GENERAL:

- ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH RELEVANT ROADWAY, STRUCTURAL DRAWINGS AND SPECIFICATIONS. IN CASE OF ANY DISCREPANCY, REFER TO THE ENGINEER BEFORE COMMENCEMENT OF WORK.
- ALL DIMENSIONS IN INCH-FEET UNLESS OTHERWISE SPECIFIED.
- ALL EXPOSED CONCRETE CORNERS, EDGES AND ANGLES SHALL BE CHAMFERED OR FILLET 3/4"x3/4" UNLESS OTHERWISE SPECIFIED
- SULPHATE RESISTANT CEMENT SHALL BE USED WHERE SPECIFIED IN GEOTECHNICAL INVESTIGATION REPORT.
- SALT RICH SOILS SHALL NOT BE USED AS BACK FILL MATERIAL AROUND OR UNDER THE STRUCTURES.

B. DESIGN PARAMETERS:

- THE LIVE LOADS CONSIDERED IN DESIGNS:
TWO AXLE JEEP HAVING TOTAL LOAD = 3 TONS
- SEISMIC FORCES AS PER ZONE-4 ARE CONSIDERED.

C. CONSTRUCTION AND ERECTION

- PILE WORK SHALL BE EXECUTED BY USING THE METHOD APPROPRIATE TO SUB SOIL CONDITION AT THE SITE.
- FOR CONSTRUCTION OF SUPER STRUCTURE 4 STAGES ARE INDICATED AS FOLLOWS
STAGE-1
CONSTRUCTION OF THE MAIN PIERS ,PYLONS AND ANCHOR BLOCKS
STAGE-2
ERECTION OF THE MAIN CABLE USING ANY SUITABLE MATHOD
STAGE-3
START OF ERECTION OF THE TRANSOM & DECK FROM THE CENTER OF THE MAIN SPAN
STAGE-4
CLOSING OF ALL JOINTS IN THE WITH TRANSOM. ACTUALY THE CLOSING OF THESE THESE DRAWINGS WILL START DURING STAGE-3 AS SOON AS ADJOINING SECTION REACH THERE CORRECT POSITION

D. MATERIALS:

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE RELEVANT CLAUSES OF AASHTO AND ASTM STANDARDS EXCEPT WHERE MODIFIED BELOW.

a) CONCRETE:

- THE FOLLOWING TYPES OF CONCRETE SHALL BE USED FOR ALL STRUCTURAL WORKS.
 - ALL REINFORCED CONCRETE EXCEPT PILES SHALL HAVE MINIMUM 28 DAYS CYLINDER STRENGTH OF 21 N/mm (3000 psi)
 - LEAN CONCRETE SHALL HAVE MINIMUM NOMINAL MIX OF 1:4:8.
 - REINFORCED CONCRETE FOR PILES
CLASS A3. SHALL HAVE MINIMUM 28 DAYS CYLINDER STRENGTH OF 27.6 N/mm²(4000 psi)
- FOR WET AND/OR SOFT AREAS, LEAN CONCRETE THICKNESS SHALL BE INCREASED UP TO 100 mm UNDER APPROVAL OF RESIDENT ENGINEER.

b) REINFORCING STEEL:

REINFORCEMENT SHALL BE ONE OF THE FOLLOWING AS SPECIED FOR EACH STRUCTURE TYPE:

- GRADE-40 DEFORMED STEEL BARS,FOR SPIRALS CONFORMING TO ASTM A-615 HAVING MINIMUM STRENGTH OF 276 N/mm (40,000 psi) .
- GRADE 60 DEFORMED STEEL BARS FOR ALL MEMBERS EXCEPT SPIRALS CONFORMING TO ASTM A-615 HAVING YIELD STRENGTH OF 414 N/mm (60,000 psi) OR SHALL BE HIGH YIELD DEFORMED BARS COLD WORKED TO BS 4449 HAVING MINIMUM 0.2% PROOF STRESS OF 414 N/mm²(60,000 psi).

c) STEEL WIRE ROPES:

GALVANIZED WIRE ROPES 6X19(FC) DIAMETER AS SHOWN IN DRAWINGS HAVING 6 STRANDS PER ROPE AND 19 WIRES PER STRANDS WITH FIBER CORE. SHALL HAVE MINIMUM TENSILE STRANGTH OF WIRE AS 165 Kg/mm BREAKING LOAD 10.8m TONS OR 24 KIPS.

d) STRUCTURAL STEEL SHAPES:

ALL STRUCTURAL STEEL SHAPES, PLATES, ANGLES, TUBES ETC. SHALL CONFORM TO ASTM A-36 HAVING MINIMUM YIELD STRENGTH OF 248 N/mm (36,000 psi).

E. LAPS & SPLICES:

ALL LAPS AND SPLICES IN REINFORCING BARS SHALL BE AS UNDER UNLESS SPECIFIED OTHERWISE FOR TOP BARS AND CLASS C - LAPS.

BAR DIA. (mm)	SPICE LENGTH (mm)	
	G-60	G-40
10	450	375
12	600	475
16	800	640
20	1100	850
25	1350	1100
32	1600	1300

F. CONCRETE COVER:


MINIMUM CONCRETE COVER FOR BRIDGES SHALL BE AS FOLLOWING UNLESS OTHERWISE SPECIFIED.

STRUCTURE ELEMENT	CATEGORY	CONCRETE COVER (mm)
PILES	MAIN BARS	75
PILECAP & FOOTING	BOTTOM SIDE & TOP	75 50
PIER COLUMN	MAIN BARS TIES	50 40
PIER BEAM & BACK WALL	EARTH FACE STIRRUPS	50 40

d) PILE LENGTH

PILE LENGTH WILL BE CONFIRMED AFTER HAVING CONFIRMATORY BORING & PILE LOAD TEST RESULTS. HOWEVER TENTATIVE PILE LENGTH SHOULD BE FOLLOWED FROM GENERAL ARRANGEMENT DRAWINGS
MAXIMUM SERVICE LOAD ON PILES = 200 TON
PILE Ø = 2-6"

BUDG.6/D:/MY DOCUMENTS/AZAD & JAMMU & KASHMIR/BRIDGE-1/2-1225/ST/GN/01

Client:-	Project:-	Consultant:-	TITLE :-		Ed.No.	DATE	Deseri	Designed:-
ISLAMIC REPUBLIC OF PAKISTAN PUBLIC WORKS DEPARTMENT AZAD JAMMU AND KASHMIR	MULTI SECTOR REHABILITATION AND IMPROVEMENT PROJECT (MSRIP) FOR AZAD JAMMU AND KASHMIR	 Engineering Consultants Int. (Pvt) Ltd. ing Engineers, Architects & planners 29 Block 7/8 Darul Annan Housing Society, Shore Road, Karachi.	SUSPENSION BRIDGE AT MANDI KOTLY					Drawn:-
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								Scale:-