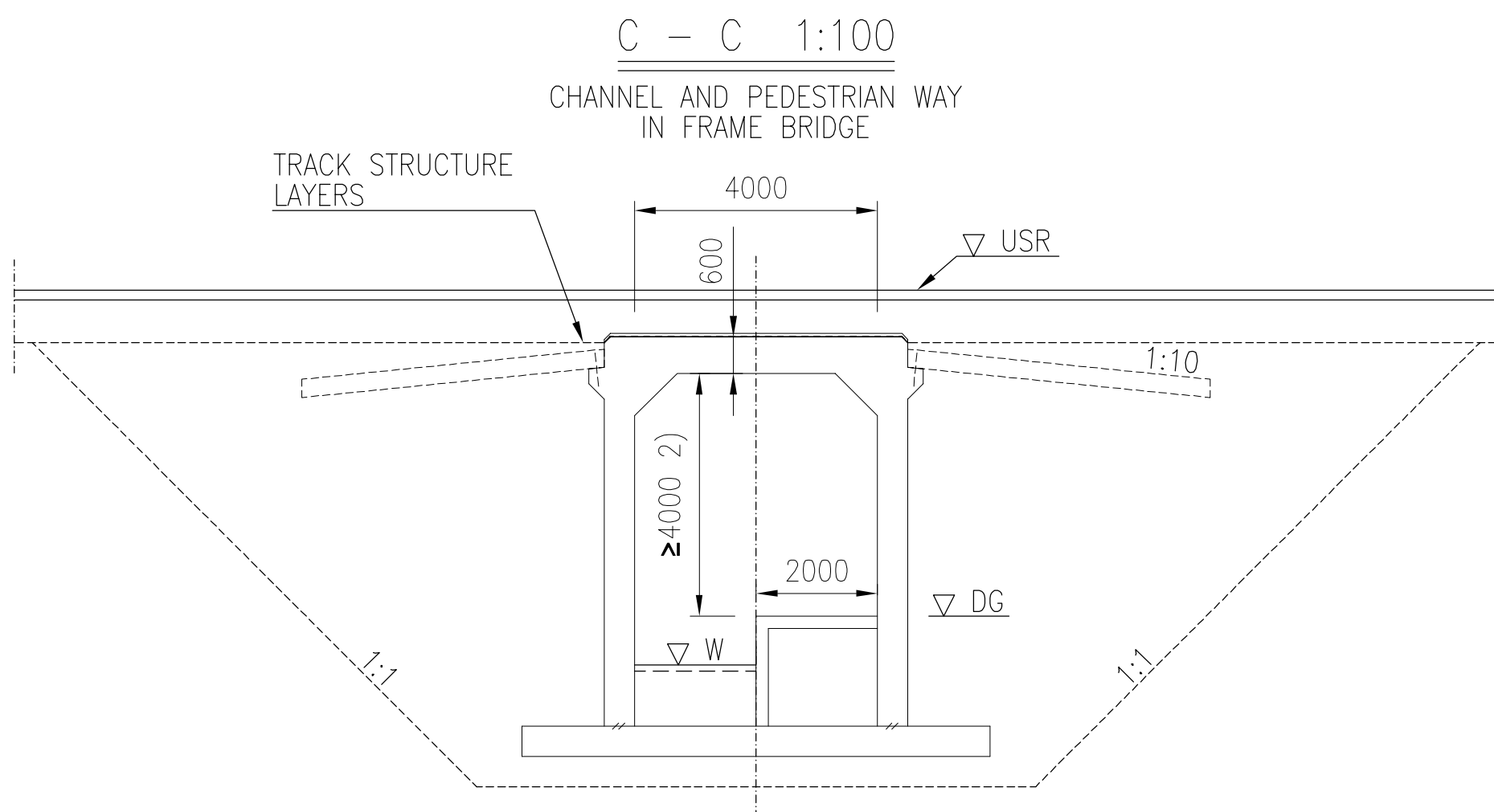
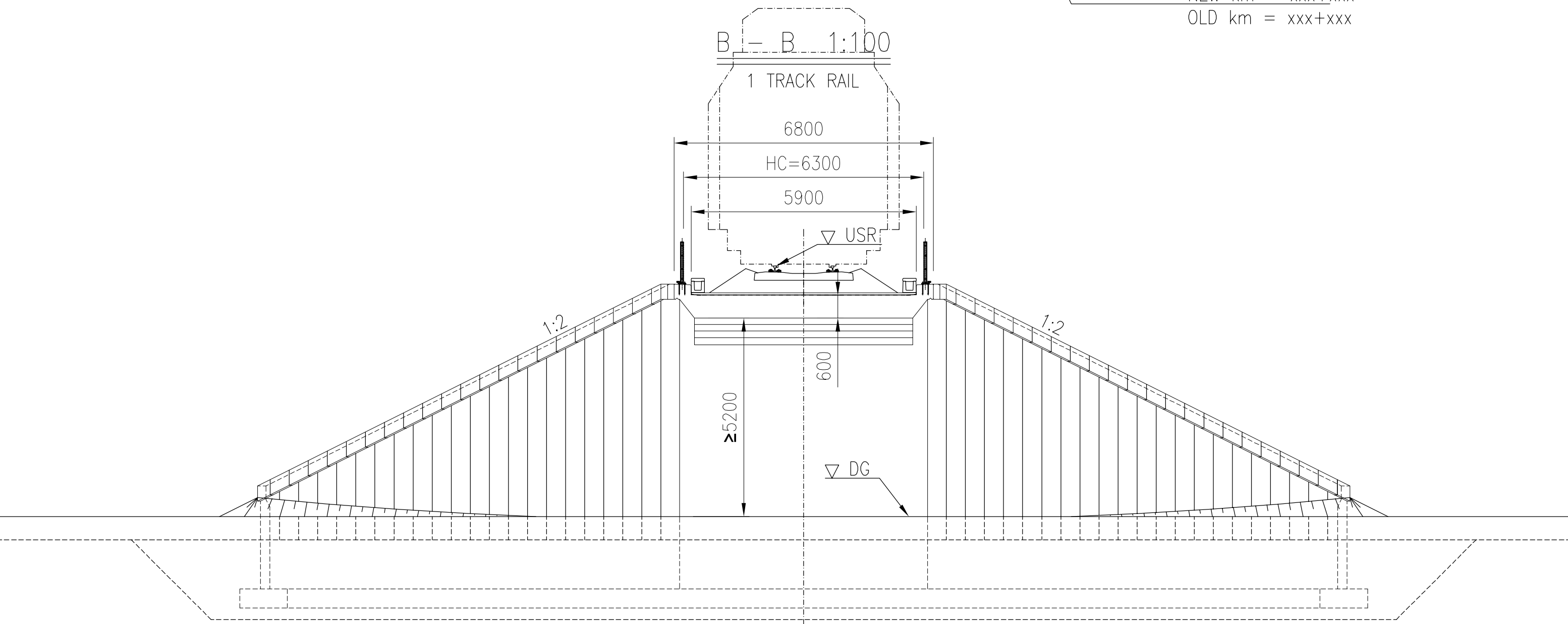
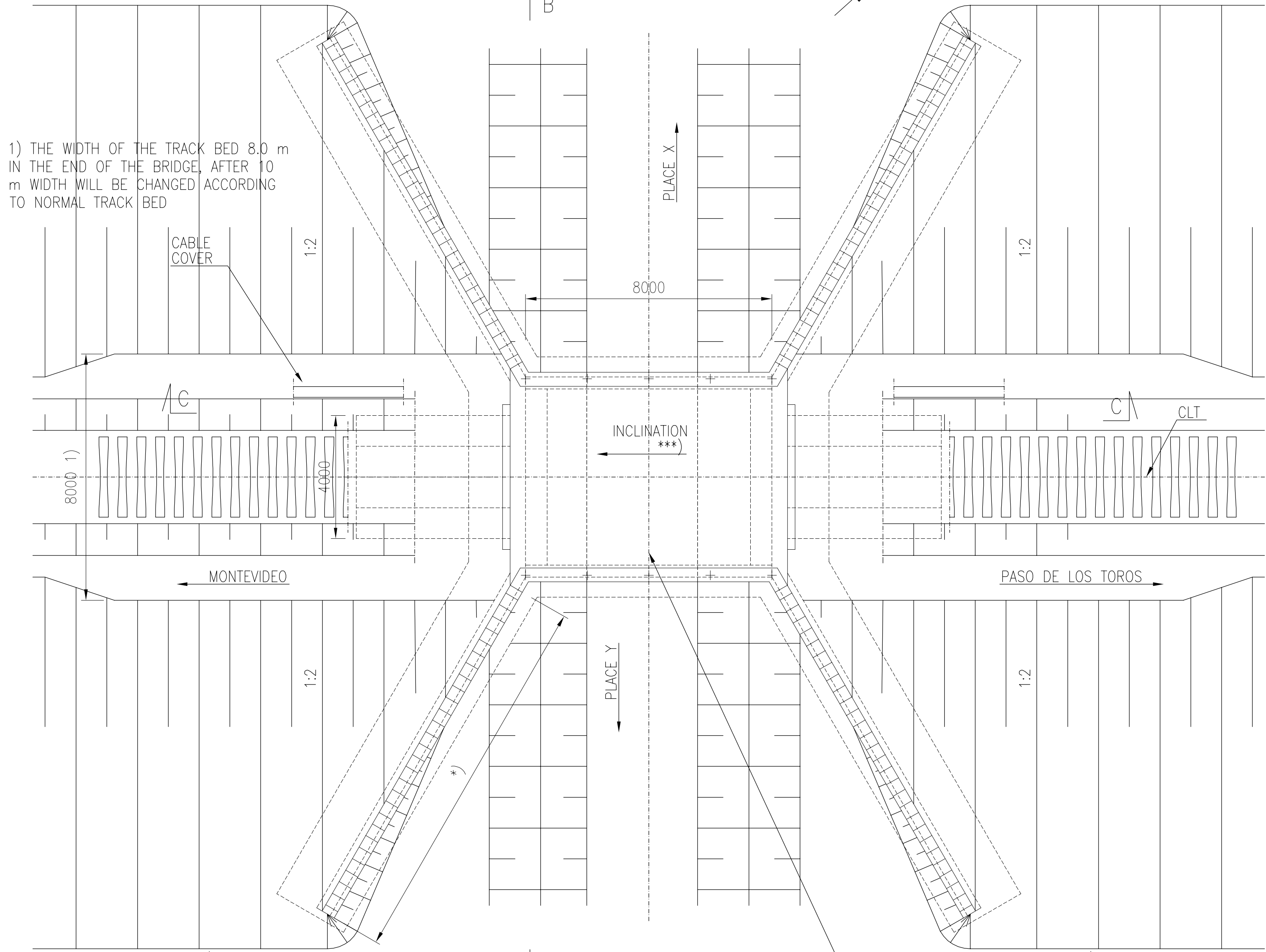


\*) THE LENGTH OF THE WING WALLS WILL BE  
VERIFIED IN DETAILED DESIGN PHASE

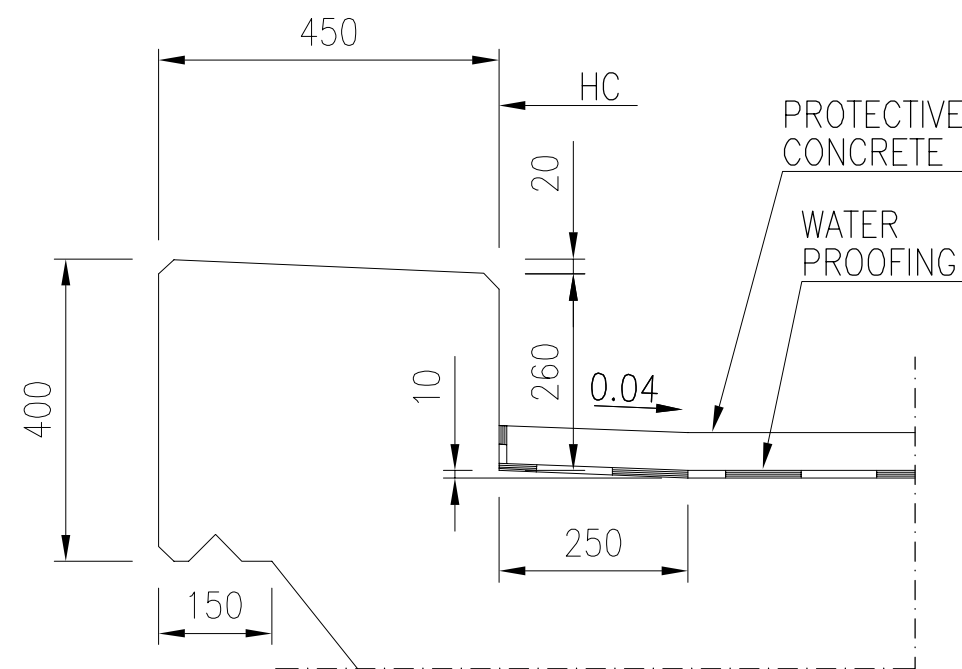
FRAME BRIDGE 8 m 1:100  
1 TRACK RAIL



ESTIMATED AMOUNT OF CONCRETE  
FOUNDATION SLAB: 106 m<sup>3</sup>  
FRAME: 220 m<sup>3</sup>  
  
ESTIMATED REINFORCING STEEL  
FOUNDATION SLAB: 100 kg  
FRAME: 190 kg/m<sup>3</sup> (CONCRETE)  
TRANSITION SLABS: 325 kg/m<sup>3</sup> (CONCRETE)

PROTECTIVE CONCRETE: 3 kg/m<sup>2</sup>

EDGE BEAM 1:10



CONCRETE: C35/45  
Cmin=40 mm

REINFORCING STEEL: B500B  
REINFORCING MESH: B500K

PILES / FOUNDATION: DRILLED PILES D610x14,2 S355J2H

TRANSITION SLABS: PREFABRICATED TRANSITION SLABS  
2 x 4 x 1.0 m x 5.0 m  
OR CAST IN SITU 2 x 4,0 m x 5,0 m  
CONCRETE C35/45

CONSTRUCTIONAL STEEL: S355 J2, HOT-DIP ZINC COATED

RAILING / FENCE: h = 1.1 m  
S355J2H  
HORIZONTAL LINE LOAD 1,0 KN/m  
VERTICAL POINT LOAD 1.0 KN

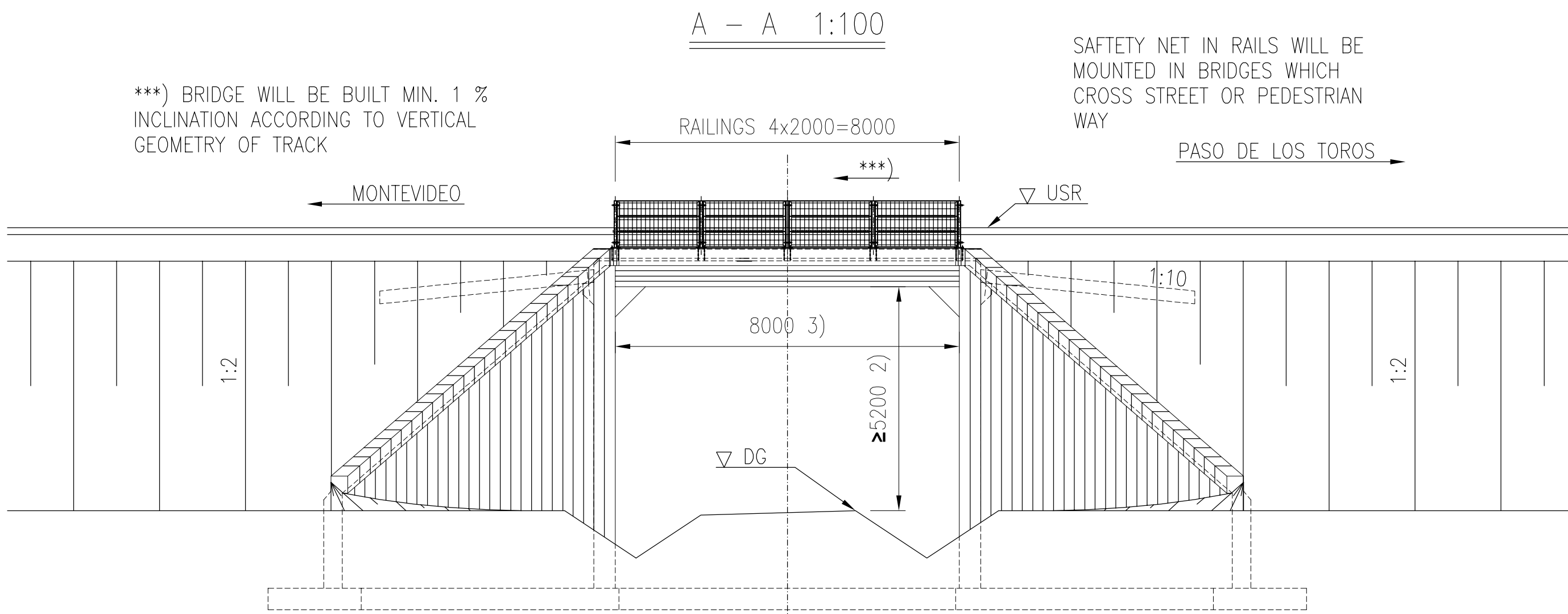
SURFACE STRUCTURE: WATER PROOFING MATERIAL 10 mm  
PROTECTIVE CONCRETE 50 mm  
BALLAST 550 mm

FILLING: REQUIREMENTS ACCORDING TO TRACK INTERMEDIATE LAYER

CLT = CENTER LINE of the TRACK  
HC = HORIZONTAL CLEARANCE  
LSD = LOWER SURFACE of the DECK  
USR = UPPER SURFACE of the RAIL

MAP

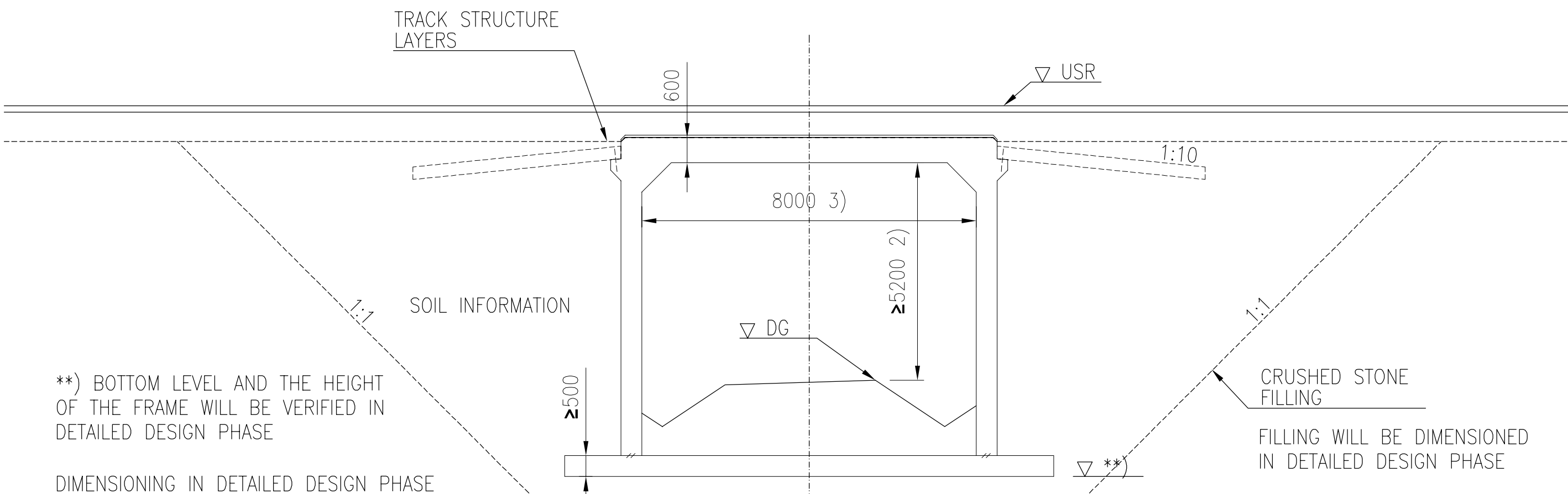
\*\*\*) BRIDGE WILL BE BUILT MIN. 1 %  
INCLINATION ACCORDING TO VERTICAL  
GEOMETRY OF TRACK



FRAME BRIDGE OVER CHANNEL  
EROSION PROTECTION IN EMBANKMENTS:  
CONCRETE REVETMENT 10 m OUTSIDE OF WING WALLS  
EROSION PROTECTION UNDER FOUNDATION:  
FLOW UNDER FOUNDATION SLAB IS PREVENTED BY BENTONITE FABRIC OR  
COATED PLATE

2) PEDESTRIAN WAY: 4.0 m  
3) PEDESTRIAN WAY: 4.0 m

C - C 1:100





\*\*) BOTTOM LEVEL AND THE HEIGHT  
OF THE FRAME WILL BE VERIFIED IN  
DETAILED DESIGN PHASE

DIMENSIONING IN DETAILED DESIGN PHASE  
ACCORDING TO SOIL INVESTIGATION

VERSION  
23.10.2017

BRIDGETYPE	FRAME BRIDGE
SPANS	4.0...8.0m
HORIZONTAL CLEAR SPAN	—
HORIZONTAL CLEARANCE	6.30 m

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	 MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS				
Project	Railway Project				
Design phase	Pre-engineering, Phase 2				
Supplier					
Content	Railway bridge Frame bridge 1 track Preliminary general drawing Km+m +-+				
Drawer	23.10.2017	Ilkka Tiito	Loading		
Designer	23.10.2017	Ilkka Tiito	Coordinate and elevation reference system		
Supervisor	23.10.2017	Reima Niklander	Railway line		
Accept.	-	-	Archive	Type	Number
Cust. acc.	-	-	UP	xxxx	1