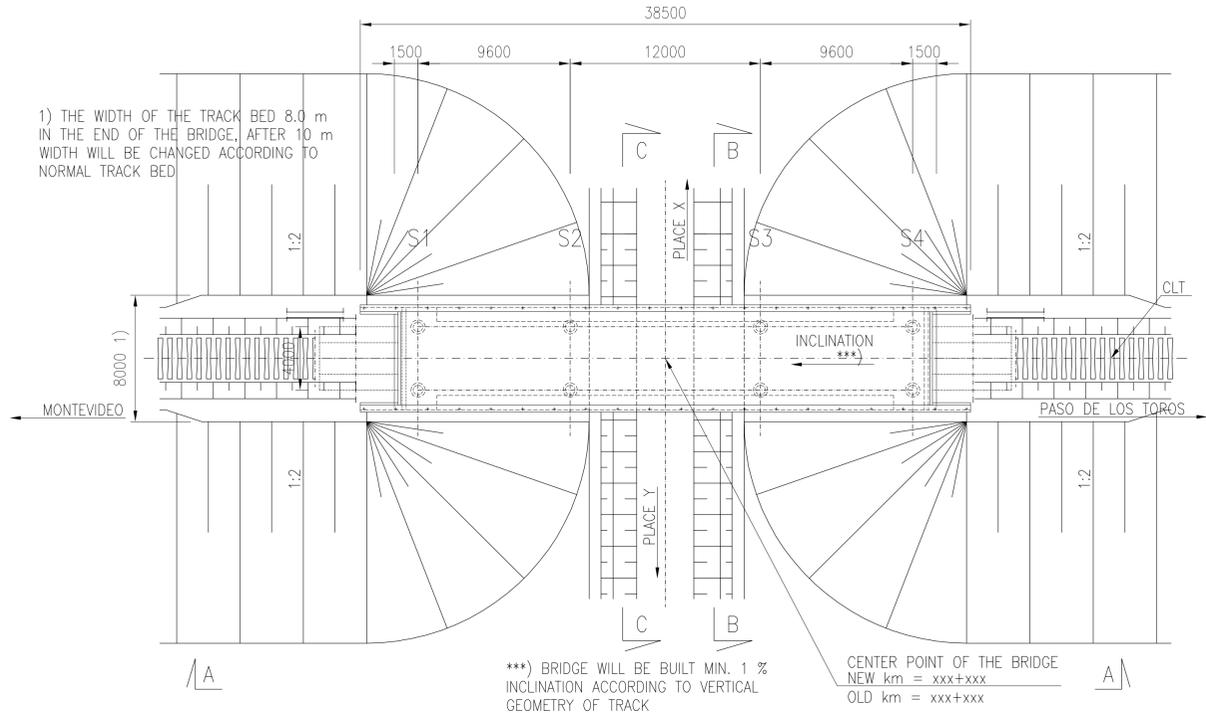


UNDERPASS BRIDGE 1:200

CIS 31 m

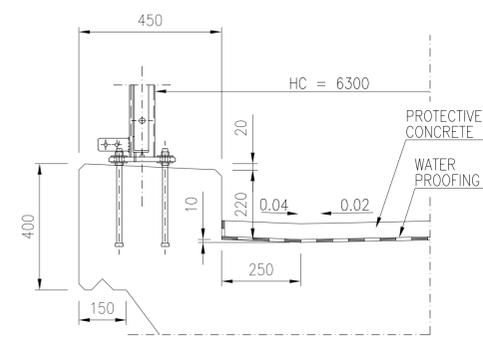


1) THE WIDTH OF THE TRACK BED 8.0 m IN THE END OF THE BRIDGE, AFTER 10 m WIDTH WILL BE CHANGED ACCORDING TO NORMAL TRACK BED

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

CENTER POINT OF THE BRIDGE
NEW km = xxx+xxx
OLD km = xxx+xxx

EDGE BEAM 1:10



ESTIMATED AMOUNT OF CONCRETE
PILES: 21 m³
COLUMNS: 38 m³
SUPERSTRUCTURE: 204 m³

ESTIMATED REINFORCING STEEL
PILES: 2400 kg
COLUMNS: 260 kg/m³ (CONCRETE)
SUPERSTRUCTURE: 180 kg/m³ (CONCRETE)
TRANSITION SLABS: 325 kg/m³ (CONCRETE)

PROTECTIVE CONCRETE: 3 kg/m²

CONCRETE: C35/45
C_{min}=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

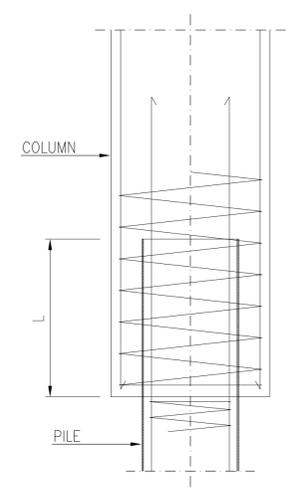
SURFACE STRUCTURE: WATER PROOFING MATERIAL 10 mm
PROTECTIVE CONCRETE 50 mm
BALLAST 550 mm

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

DET 2 1:20

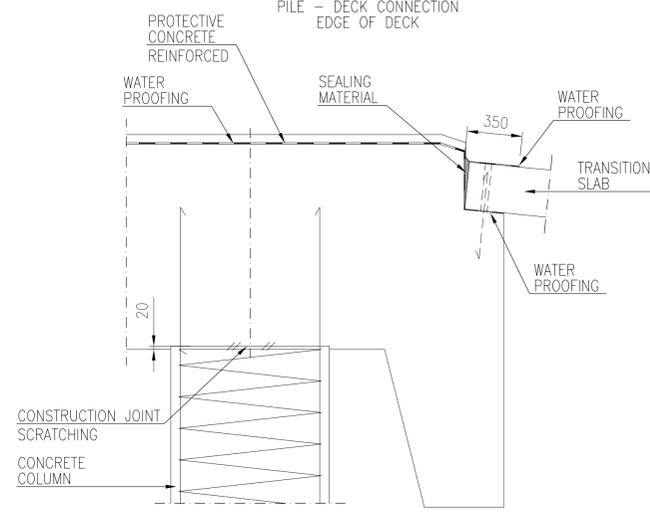
JONTS PILE - COLUMN



POSSIBLE REINFORCING AND L (LENGTH OF SPLICE) WILL BE DIMENSIONED IN DETAILED DESIGN PHASE

DET 1 1:20

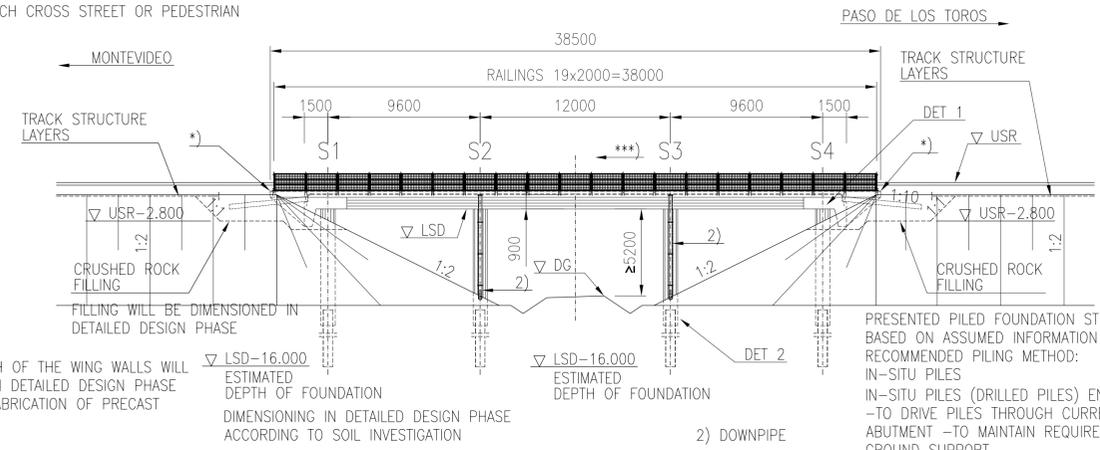
PILE - DECK CONNECTION
EDGE OF DECK



REINFORCING IN DECK AND PILES WILL BE DIMENSIONED IN DETAILED DESIGN PHASE

A - A 1:200

SAFETY NET IN RAILS WILL BE MOUNTED IN BRIDGES WHICH CROSS STREET OR PEDESTRIAN WAY

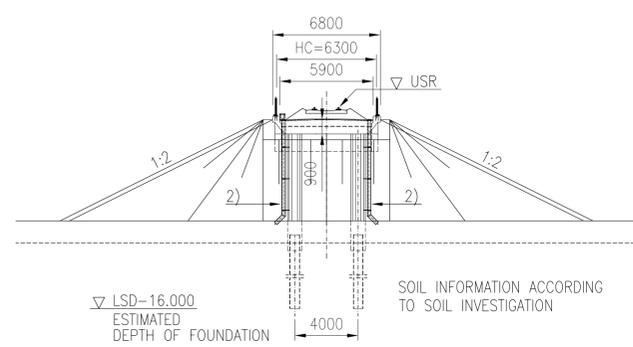


*) THE LENGTH OF THE WING WALLS WILL BE VERIFIED IN DETAILED DESIGN PHASE OR BEFORE FABRICATION OF PRECAST UNITS

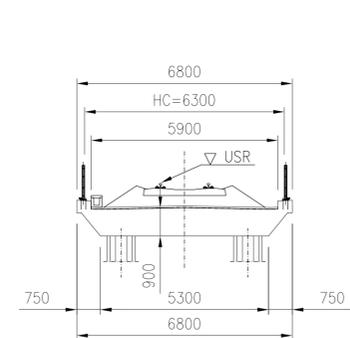
FOUNDATIONS AND SUBSTRUCTURE TYPE WILL BE DEFINED IN DETAIL DESIGN PHASE

PRESENTED PILED FOUNDATION STRUCTURE IS BASED ON ASSUMED INFORMATION OF SOIL. RECOMMENDED PILING METHOD: IN-SITU PILES
IN-SITU PILES (DRILLED PILES) ENABLE
-TO DRIVE PILES THROUGH CURRENT STONE ABUTMENT -TO MAINTAIN REQUIRED PART OF GROUND SUPPORT
-TO MINIMIZE EXCAVATION AND FILLING IN THE END OF THE BRIDGE
-TO SHORTEN THE NEEDED CONSTRUCTION TIME

B - B 1:200



C - C 1:100



BRIDGE TYPE	REINFORCED CONCRETE BRIDGE
	CONTINUOUS CANTILEVER PLATE
SPANS	1.50m + 9.60m + 12.00m + 9.60m + 1.50m
HORIZONTAL CLEAR SPAN	—
VERTICAL CLEARANCE	—
HORIZONTAL CLEARANCE	6.30 m

VERSION
23.10.2017

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	Project Railway Project				
Supplier	Design phase Pre-engineering, Phase 2				
Drawer	Content Underpass bridge CIS 31 m Preliminary general drawing Km+km +-+				
Designer	23.10.2017	Ilkka Tiiro	Loading LM71-25		
Supervisor	23.10.2017	Reima Niklander	Coordinate and elevation reference system WGS 84 UTM 21		
Accept.	-	-	Archive	Type	Number
Cust. acc.	-	-	UP	xxxx	1