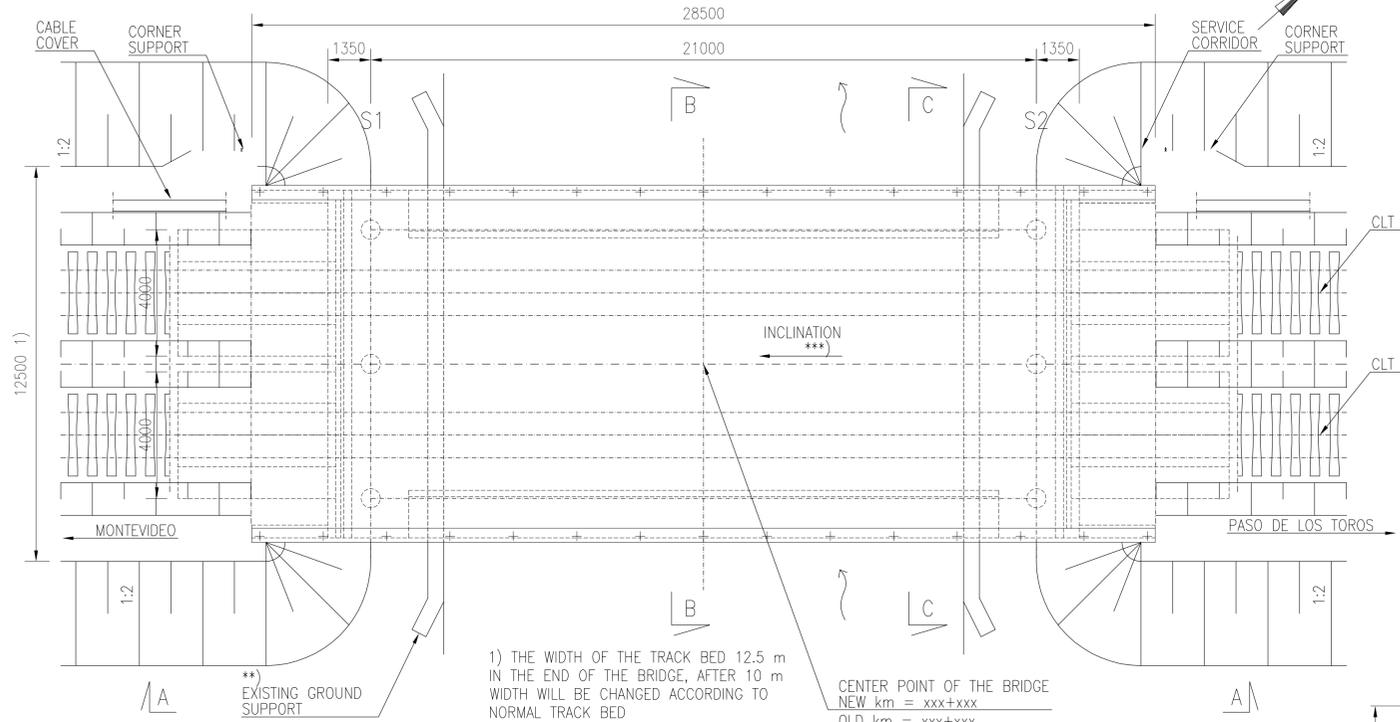


PRESTRESSED CONCRETE BRIDGE 2Tr 21 m 1:100

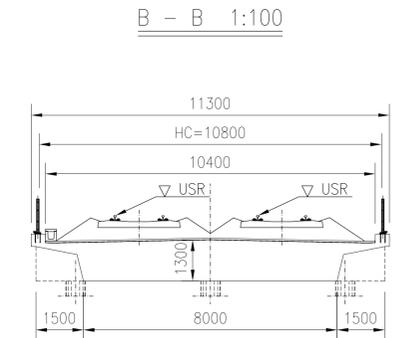


ESTIMATED AMOUNT OF CONCRETE
PILES: 17 m³
SUPERSTRUCTURE: 302 m³

ESTIMATED PRESTRESSING STEEL
SUPERSTRUCTURE: 23 kg/m³ (CONCRETE)

ESTIMATED REINFORCING STEEL
PILES: 1800 kg
SUPERSTRUCTURE: 90 kg/m³ (CONCRETE)
TRANSITION SLABS: 325 kg/m³ (CONCRETE)

PROTECTIVE CONCRETE: 3 kg/m²



CONCRETE: C35/45
C_{min}=40 mm

PRESTRESSING STEEL: St 1570 / 1770
REINFORCING STEEL: B500B
REINFORCING MESH: B500K

PILES / FOUNDATION: DRILLED PILES D610x14,2 S355J2H

TRANSITION SLABS: PREFABRICATED TRANSITION SLABS
2 x 2 x 4 x 1.0 m x 5,0 m
OR CAST IN SITU 2 x 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

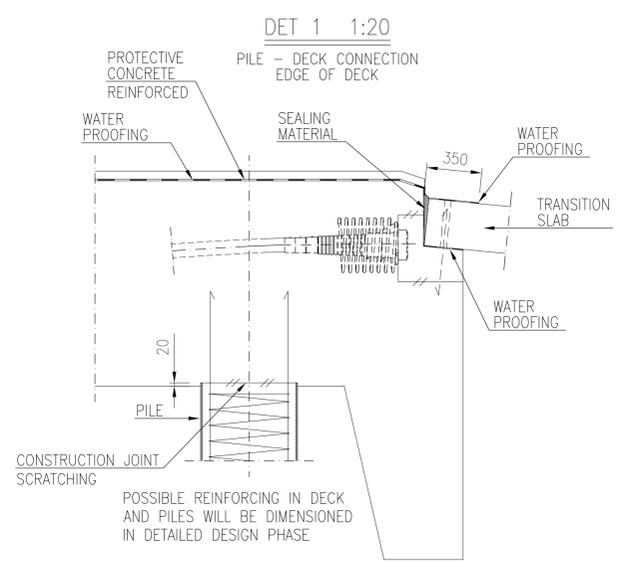
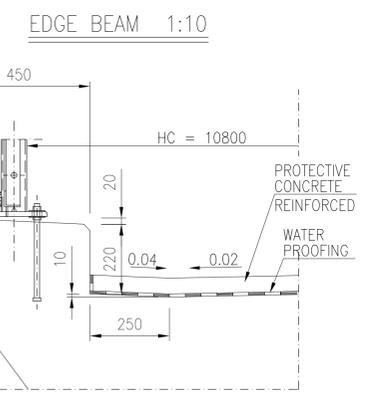
FILLING: REQUIREMENTS ACCORDING TO TRACK INTERMEDIATE LAYER

1) THE WIDTH OF THE TRACK BED 12.5 m IN THE END OF THE BRIDGE, AFTER 10 m WIDTH WILL BE CHANGED ACCORDING TO NORMAL TRACK BED

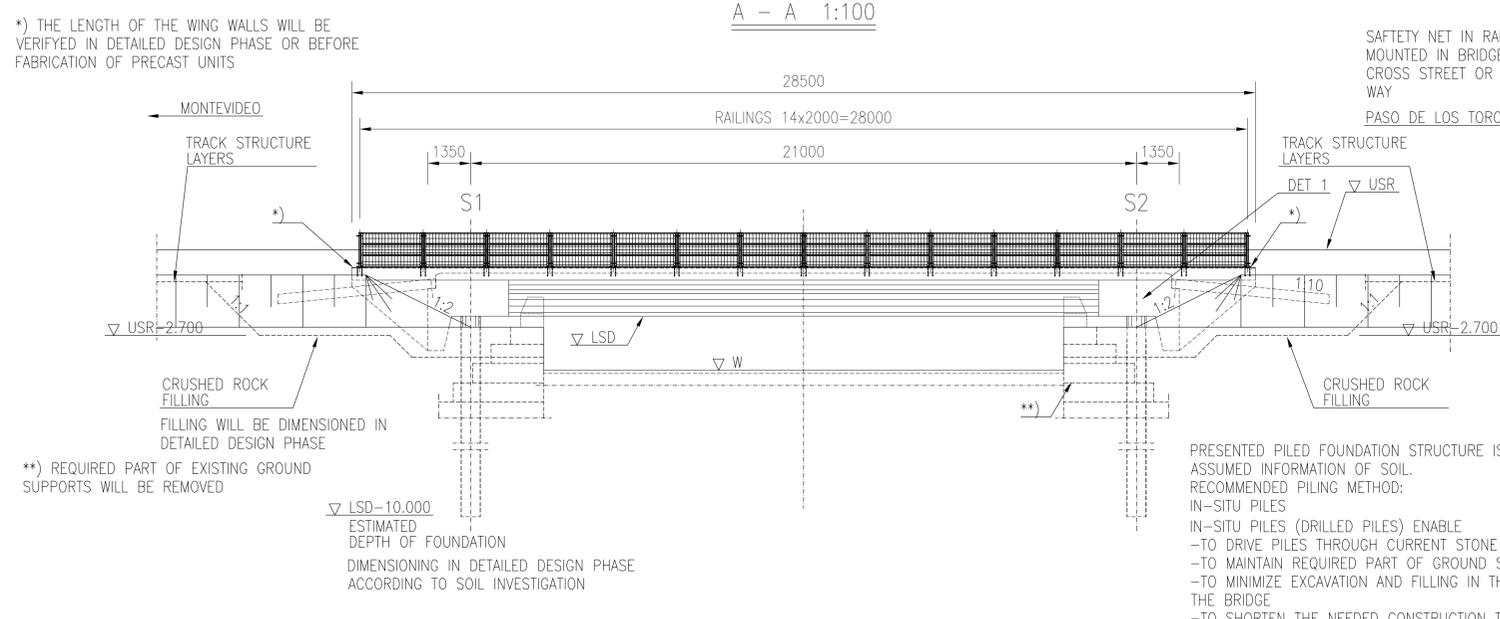
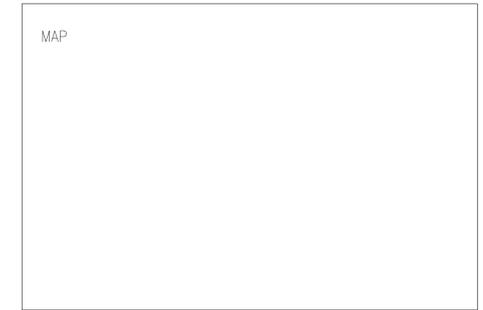
CENTER POINT OF THE BRIDGE
NEW km = xxx+xxx
OLD km = xxx+xxx

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

** EXISTING GROUND SUPPORT

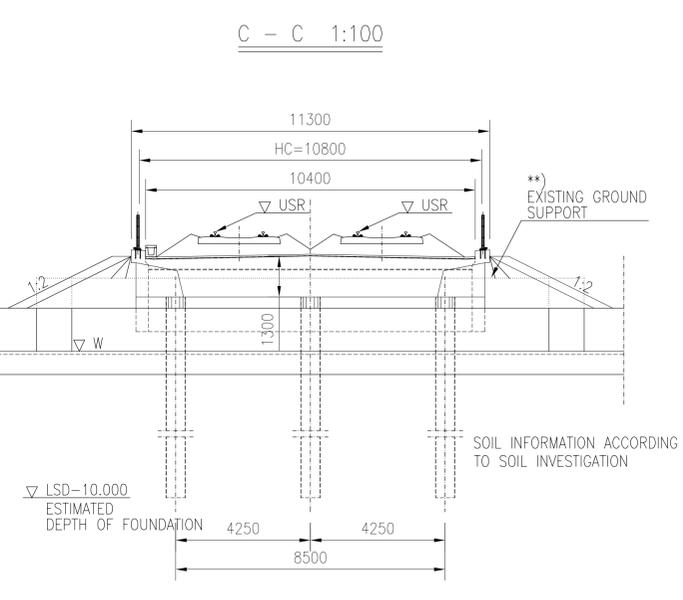


CLT = CENTER LINE of the TRACK
HC = HORIZONTAL CLEARANCE
LSD = LOWER SURFACE of the DECK
USR = UPPER SURFACE of the RAIL



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

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



BRIDGE TYPE	PRESTRESSED CONCRETE BRIDGE
	CANTILEVER PLATE
SPANS	1.35 m + 21.00 m + 1.35 m
HORIZONTAL CLEAR SPAN	—
VERTICAL CLEARANCE	—
HORIZONTAL CLEARANCE	10.80 m

VERSION
23.10.2017

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS		Project Railway Project		
Supplier	VR TRACK		Design phase Pre-engineering, Phase 2		
Drawer	23.10.2017	Ilkka Tiito	Content Prestressed concrete bridge 21 m Double track Preliminary general drawing Km+ +-		
Designer	23.10.2017	Ilkka Tiito	Loading		
Supervisor	23.10.2017	Reima Niklander	Coordinate and elevation reference system WGS 84 UTM 21		
Accept.	-	-	Railway line		
Cust. acc.	-	-	Archive Type Number Rev. Sheet		
			RB - 1		