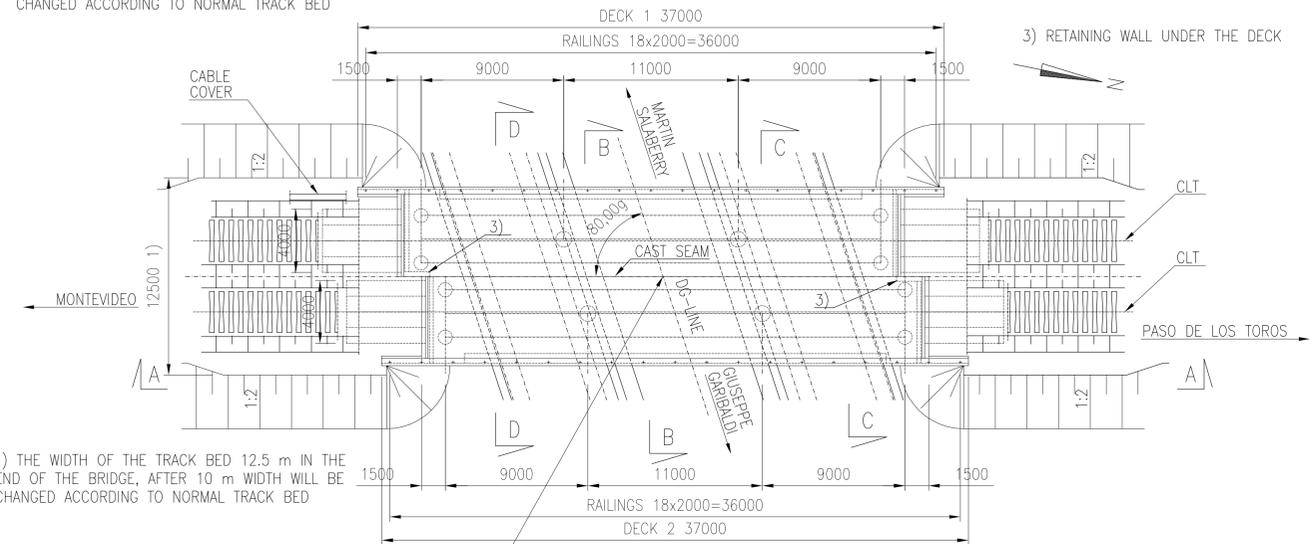


UNDERPASS BRIDGE 1:200

ZORILLA de SAN MARTIN

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

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

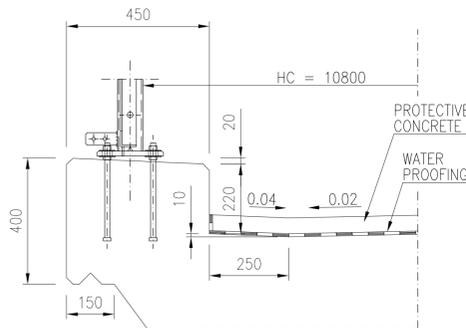


1) THE WIDTH OF THE TRACK BED 12.5 m IN THE
END OF THE BRIDGE, AFTER 10 m WIDTH WILL BE
CHANGED ACCORDING TO NORMAL TRACK BED

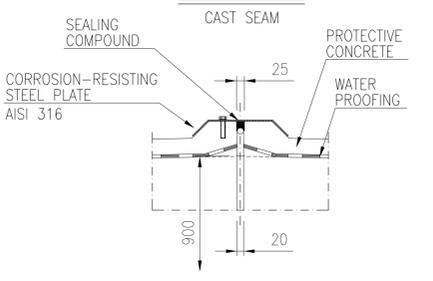
CENTER POINT OF THE BRIDGE
NEW km = 196+990
OLD km = 205+430

- ESTIMATED AMOUNT OF CONCRETE
- PILES: 34 m³
 - COLUMNS: 26 m³
 - SUPERSTRUCTURE: 313 m³
- ESTIMATED REINFORCING STEEL
- PILES: 3600 kg
 - COLUMNS: 260 kg/m³ (CONCRETE)
 - SUPERSTRUCTURE: 180 kg/m³ (CONCRETE)
 - TRANSITION SLABS: 325 kg/m³ (CONCRETE)
- PROTECTIVE CONCRETE: 3 kg/m²

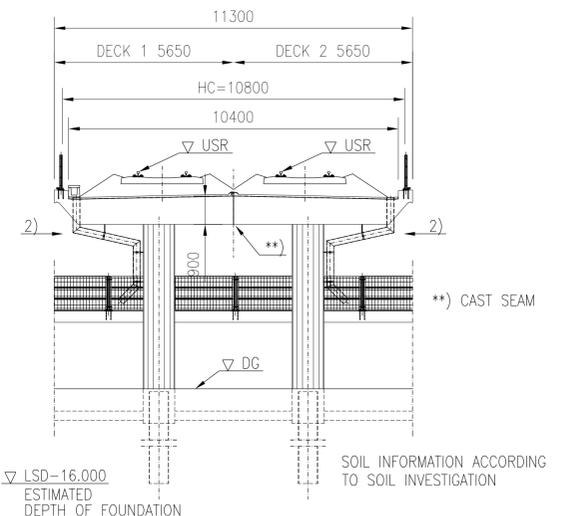
EDGE BEAM 1:10



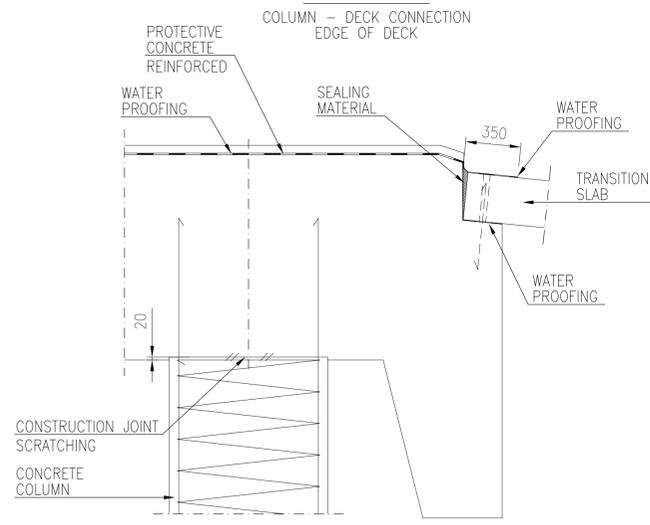
DET 3 1:10



B - B 1:100

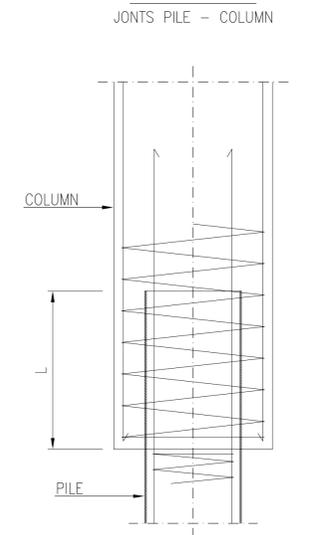


DET 1 1:20



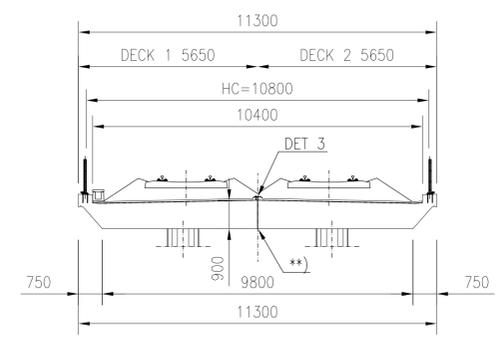
REINFORCING IN DECK AND PILES
WILL BE DIMENSIONED IN DETAILED
DESIGN PHASE

DET 2 1:20

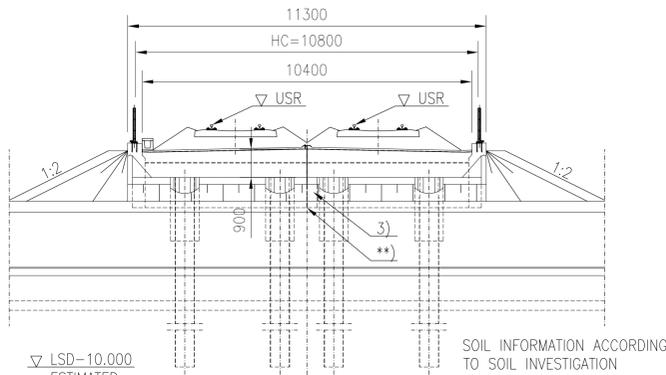


REINFORCING AND L (LENGTH OF
SPLICE) WILL BE DIMENSIONED IN
DETAILED DESIGN PHASE

D - D 1:100



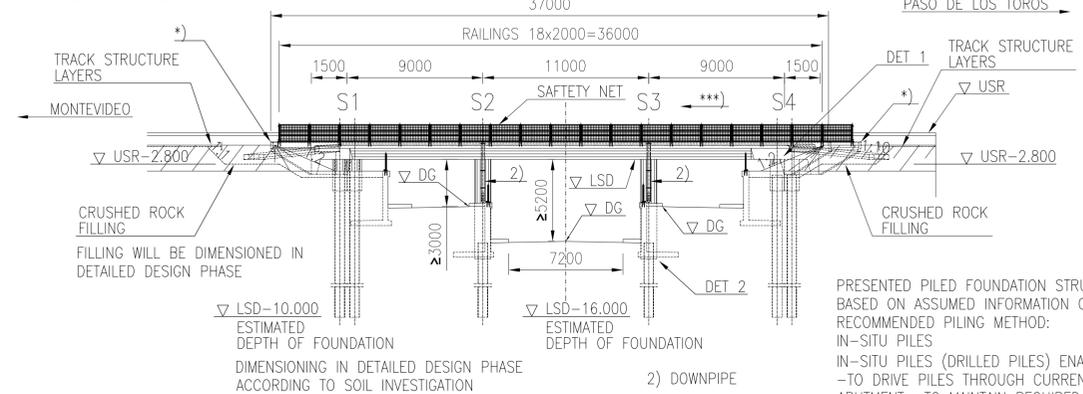
C - C 1:100



A - A 1:200

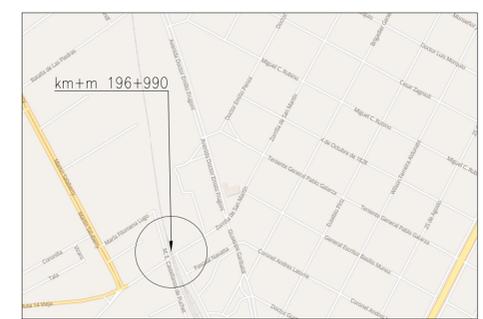
***) BRIDGE WILL BE BUILT MIN. 1 % INCLINATION
ACCORDING TO VERTICAL GEOMETRY OF TRACK

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

- 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



BRIDGE TYPE	REINFORCED CONCRETE BRIDGE
	CANTILEVER PLATE
SPANS	1.50m + 9.00m + 11.00m + 9.00m + 1.50m
HORIZONTAL CLEAR SPAN	10.80 m
HORIZONTAL CLEARANCE	10.80 m

VERSION
23.10.2017

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	<p>MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS</p>	Project: Railway Project			
Supplier		Design phase: Pre-engineering, Phase 2 Content: Underpass bridge Zorilla de San Martin, Durazno Preliminary general drawing Km+m +-			
Drawer	23.10.2017	Ilkka Tiito	Loading: LM71-25		
Designer	23.10.2017	Ilkka Tiito	Coordinate and elevation reference system: WGS 84 UTM 21		
Supervisor	23.10.2017	Reima Niklander	Railway line		
Accept.	-	-	Archive	Type	Number
Cust. acc.	-	-	UP	xxxx	1