

**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

**Symbols**

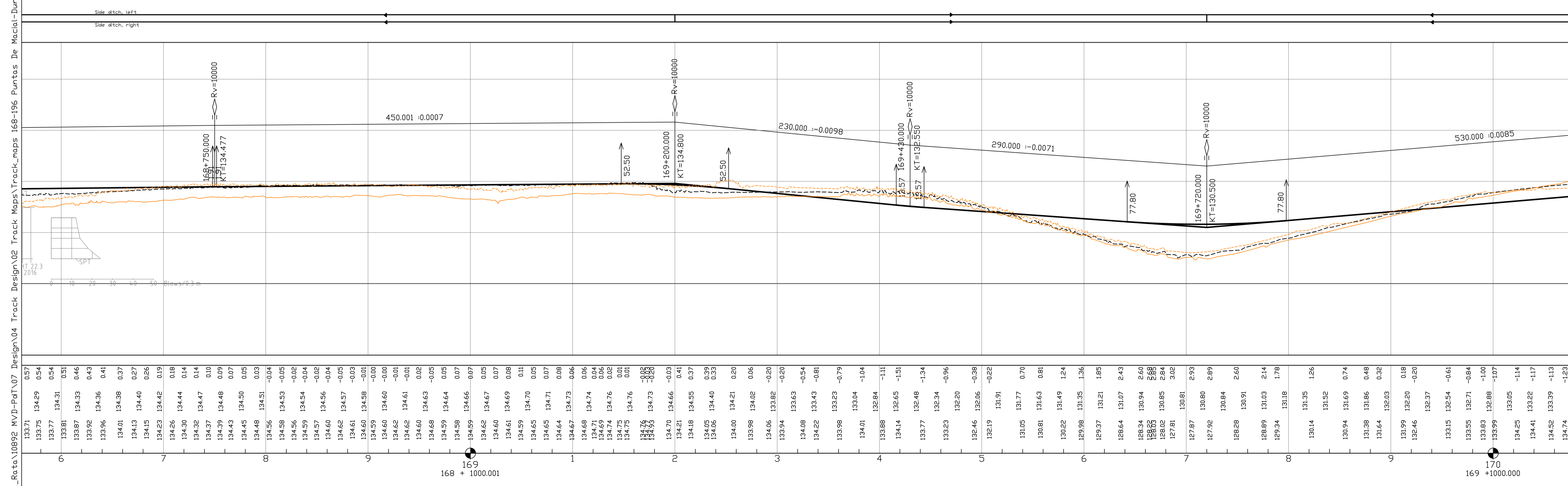
- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

**Track alignment with design geometry figures**

- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

**SPT-sounding, terminated at cobble, boulder, or bedrock contact.**  
 y. 2016= year of investigation, location of 2016 soundings not accurate  
 1, 217= point number

**Disturbed Sample**  
 y. 2017= year of investigation  
 TR02= point number



**LEGEND, PROFILE**

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

**Horizontal alignment, schematic**

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

133.71	0.57	133.75	134.29	0.54	133.77	134.31	0.54	133.81	134.31	0.51	133.87	134.33	0.46	133.92	134.33	0.43	133.96	134.36	0.41	134.01	134.38	0.37	134.13	134.40	0.27	134.15	134.40	0.26	134.23	134.42	0.19	134.26	134.44	0.14	134.30	134.44	0.14	134.32	134.47	0.14	134.37	134.47	0.10	134.39	134.48	0.09	134.43	134.50	0.05	134.45	134.50	0.05	134.48	134.51	0.03	134.56	134.51	-0.04	134.58	134.53	-0.05	134.58	134.53	-0.05	134.56	134.54	-0.02	134.59	134.54	-0.04	134.57	134.54	-0.02	134.60	134.56	-0.04	134.62	134.57	-0.05	134.61	134.58	-0.01	134.60	134.58	-0.01	134.60	134.60	-0.00	134.62	134.61	-0.01	134.62	134.61	-0.01	134.60	134.63	0.02	134.68	134.63	-0.05	134.68	134.63	-0.05	134.59	134.64	0.05	134.58	134.64	0.07	134.59	134.66	0.07	134.59	134.66	0.07	134.62	134.67	0.05	134.60	134.67	0.07	134.61	134.69	0.08	134.61	134.70	0.05	134.65	134.70	0.05	134.65	134.71	0.07	134.64	134.71	0.07	134.64	134.73	0.06	134.67	134.73	0.06	134.68	134.74	0.06	134.71	134.74	0.04	134.69	134.76	0.06	134.74	134.76	0.02	134.74	134.76	0.02	134.75	134.76	0.01	134.75	134.76	0.01	134.76	134.76	0.00	134.76	134.73	-0.02	134.75	134.73	-0.02	134.70	134.66	-0.03	134.70	134.66	-0.03	134.21	134.61	0.41	134.18	134.55	0.37	134.05	134.40	0.33	134.00	134.21	0.20	134.06	134.02	0.06	134.06	133.82	-0.20	133.94	133.63	-0.20	134.08	133.43	-0.54	134.22	133.43	-0.81	133.98	133.23	-0.79	134.01	133.04	-1.04	133.88	132.84	-1.11	134.14	132.65	-1.51	133.77	132.48	-1.34	133.23	132.34	-0.96	132.46	132.20	-0.26	132.46	132.06	-0.38	132.19	131.91	-0.22	131.05	131.77	0.70	130.81	131.63	0.81	130.22	131.49	1.24	129.98	131.35	1.36	129.37	131.21	1.85	128.64	131.07	2.43	128.34	130.94	2.60	128.22	130.85	2.68	128.02	130.85	2.84	127.81	130.81	3.02	127.87	130.81	2.93	127.92	130.84	2.89	128.28	130.91	2.60	128.89	131.03	2.14	129.34	131.18	1.78	130.14	131.35	1.26	131.52	131.52	0.00	130.94	131.69	0.74	131.38	131.86	0.48	131.64	132.03	0.32	131.99	132.20	0.18	132.46	132.37	-0.09	133.15	132.54	-0.61	133.55	132.71	-0.84	133.63	132.88	-1.00	133.99	133.05	-1.07	134.25	133.05	-1.14	134.41	133.22	-1.17	134.52	133.39	-1.13	134.74	133.56	-1.23
--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	------	--------	--------	-------	--------	--------	-------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------	--------	--------	-------

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: **MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS**

Project: **Railway Project**

Design phase: **Pre-engineering, Phase 2**

Content: **Track map and profile**

Supplier: **VR TRACK**

Project: **Km 168+0600 - 170+0000**

Drawer	Date	Author	Scale
UPa	15.12.2017	UPa	map 1:2000, profile 1:2000 / 1:200
Designer	Date	Author	Coordinate system
HMa / MLo	15.12.2017	HMa / MLo	WGS 84 UTM 21 S, Local orthometric height
Supervisor	Date	Author	Elevation reference system
SVI	15.12.2017	SVI	Montevideo - Paso de Los Toros
Accept.	Date	Author	Railway line
			Montevideo - Paso de Los Toros
Owner acc.	Date	Author	Archive
			Type
			Number
			Rev. Sheet
			Sheets
			Total

121, 195



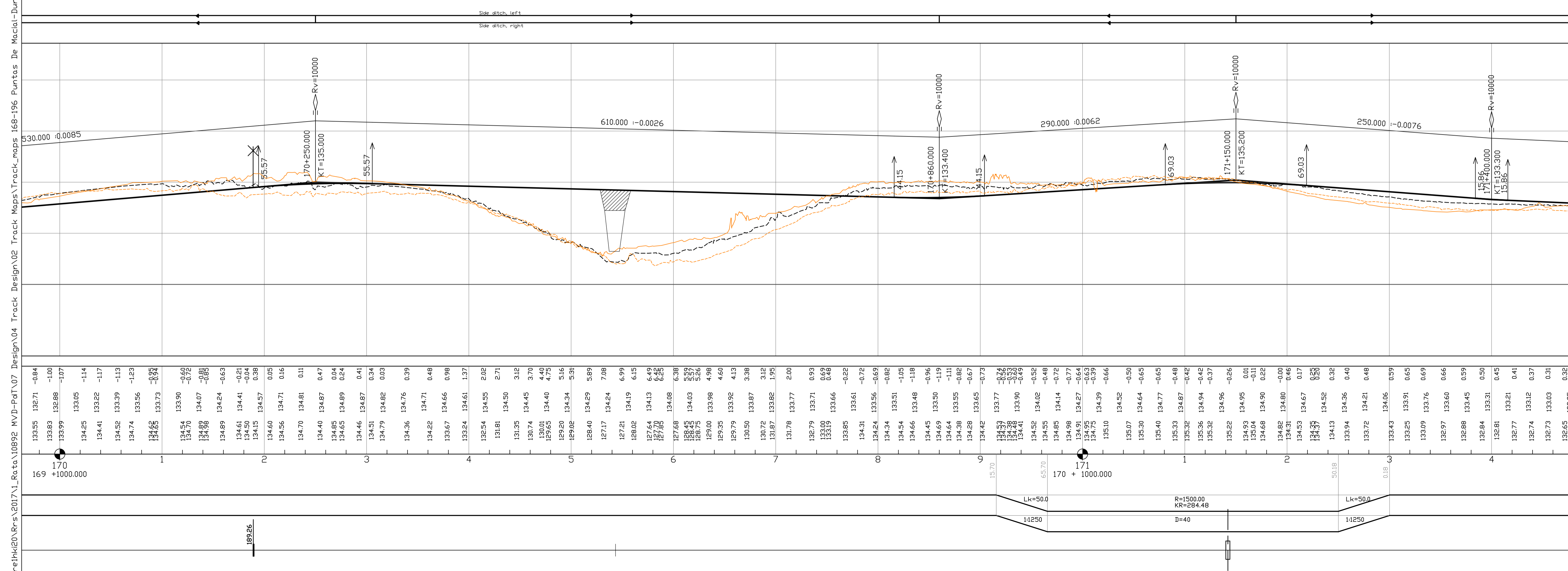
### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing
- Track alignment with design geometry figures

$R=$  curve radius (m)  
 $KR=$  length of curve (m)  
 $D=$  track cant (mm)  
 $Lk=$  length of transition curve (m)  
 $Rv=$  radius of vertical curve  
 $K=$  elevation  
 $TG=$  length of tangent  
 $123.345=$  length of straight line (m)

y. 2016  
 1, 217= SPT-sounding, terminated at cobble, boulder, or bedrock contact. year of investigation, location of 2016 soundings not accurate point number

y. 2017  
 TR02= Disturbed Sample year of investigation point number



### LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing
- Horizontal alignment, schematic

$SR=$  length of straight line (m)  
 $R=$  curve radius (m)  
 $KR=$  length of curve (m)  
 $D=$  track cant (mm)  
 $Lk=$  length of transition curve (m)

0 +1000.000

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

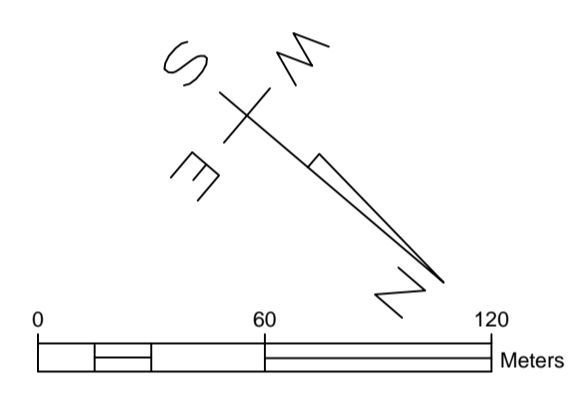
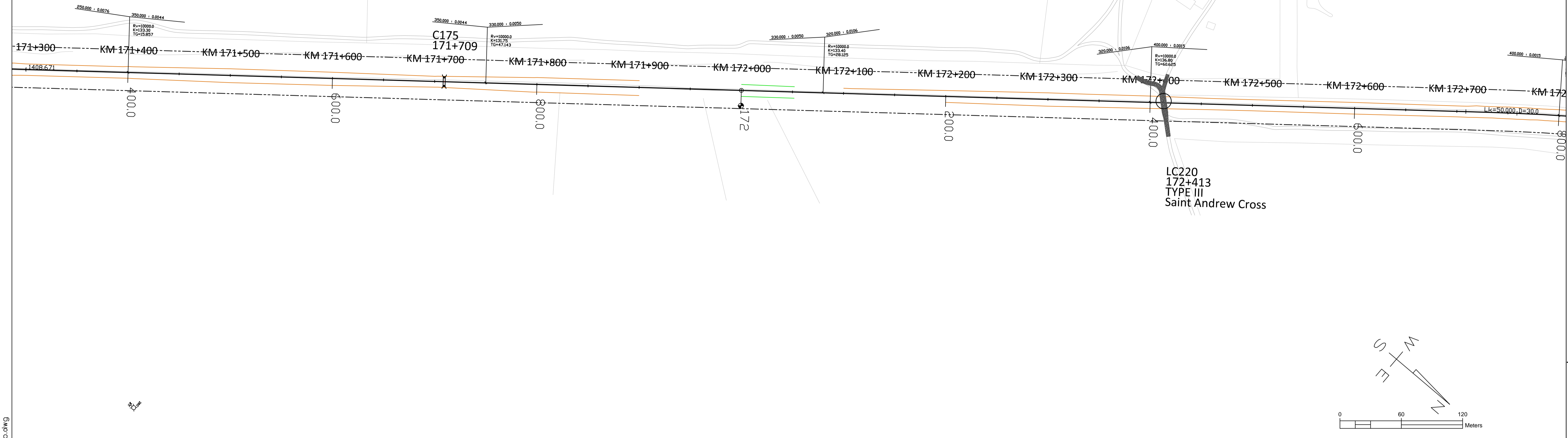
**Customer:** MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS  
**Project:** Railway Project  
**Design phase:** Pre-engineering, Phase 2  
**Content:** Track map and profile  
**Supplier:** V TRACK  
**Scale:** map 1:2000, profile 1:2000 / 1:200  
**Coordinate system:** WGS 84 UTM 21 S, Local orthometric height  
**Elevation reference system:**  
**Railway line:** Montevideo - Paso de Los Toros

Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLe	Coordinate system	WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017	SVI	Elevation reference system	
Accept.			Railway line	Montevideo - Paso de Los Toros
Owner acc.			Archive	Type Number Rev. Sheet Sheets total

122, 195

← Montevideo

Paso de Los Toros →



### LEGEND, MAP

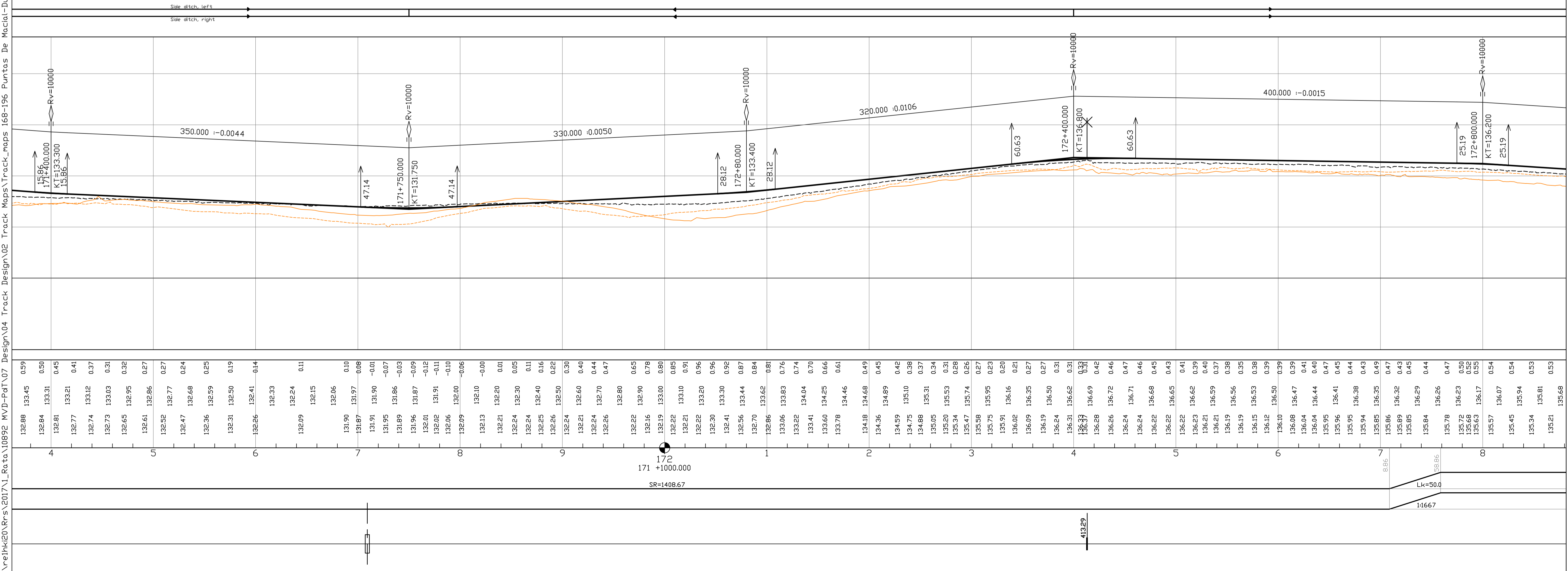
- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing

### Track alignment with design geometry figures

R= curve radius (m)  
 KR= length of curve (m)  
 D= track cant (mm)  
 Lk= length of transition curve (m)  
 Rv= radius of vertical curve  
 K= elevation  
 TG= length of tangent  
 123.345= length of straight line (m)

SPT-sounding, terminated at cobble, boulder, or bedrock contact.  
 y. 2016= year of investigation, location of 2016 soundings not accurate  
 1, 217= point number

Disturbed Sample  
 y. 2017= year of investigation  
 TR02= point number



### LEGEND, PROFILE

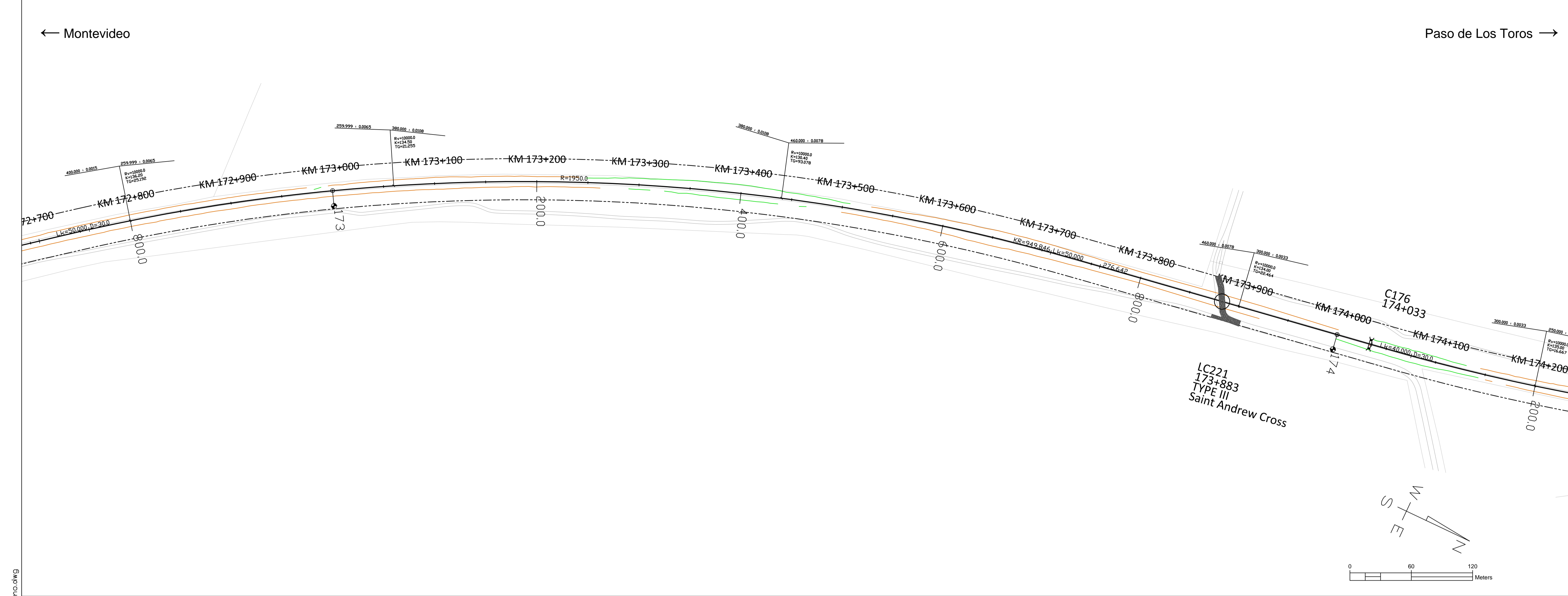
- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

### Horizontal alignment, schematic

SR= length of straight line (m)  
 R= curve radius (m)  
 KR= length of curve (m)  
 D= track cant (mm)  
 Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor
Customer	Railway Project				
Design phase	Pre-engineering, Phase 2				
Content	Track map and profile				
Supplier					
Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200	
Designer	15.12.2017	HMa / MLe	Coordinate system	WGS 84 UTM 21 S, Local orthometric height	
Supervisor	15.12.2017	SVI	Elevation reference system	Railway line	
Accept.			Railway line	Montevideo - Paso de Los Toros	
Owner acc.			Archive	Type	Number
			Rev.	Sheet	Sheets total
				123	195

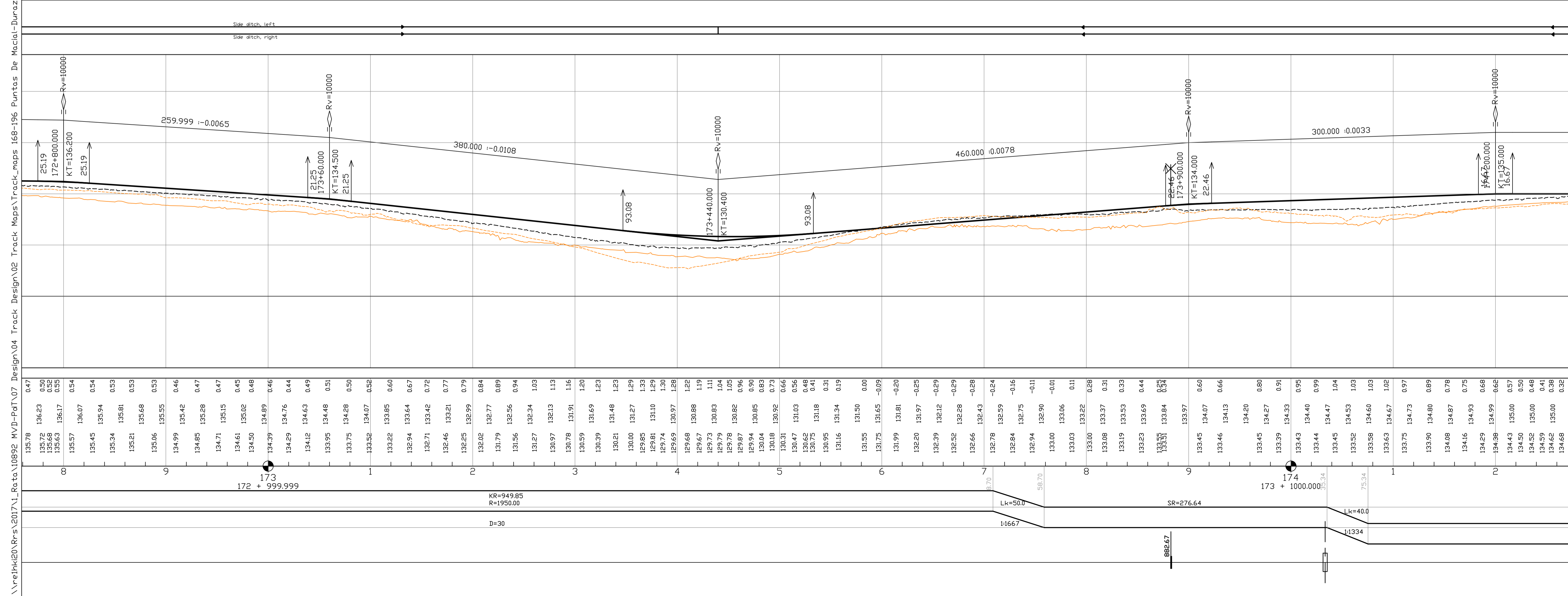


**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing
- Track alignment with design geometry figures
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - Rv= radius of vertical curve
  - K= elevation
  - TG= length of tangent
  - 123.345= length of straight line (m)

**LEGEND, PROFILE**

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)



**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer: **MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS**

Project: **Railway Project**

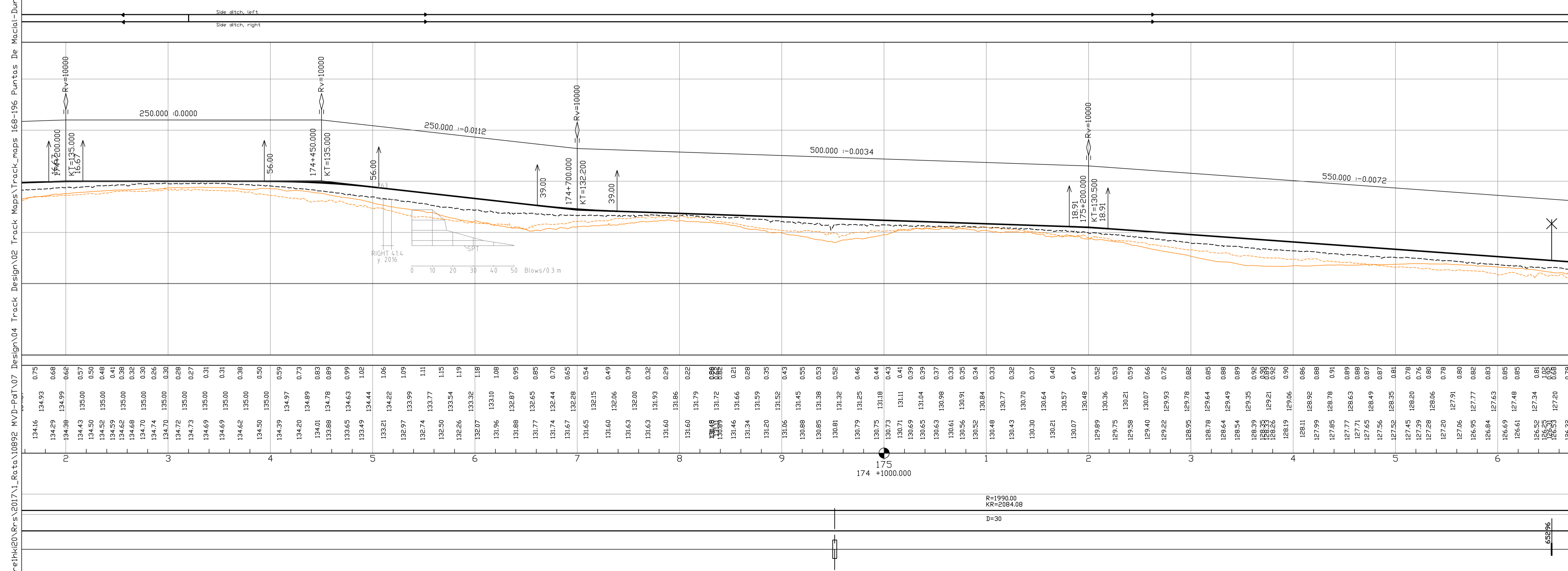
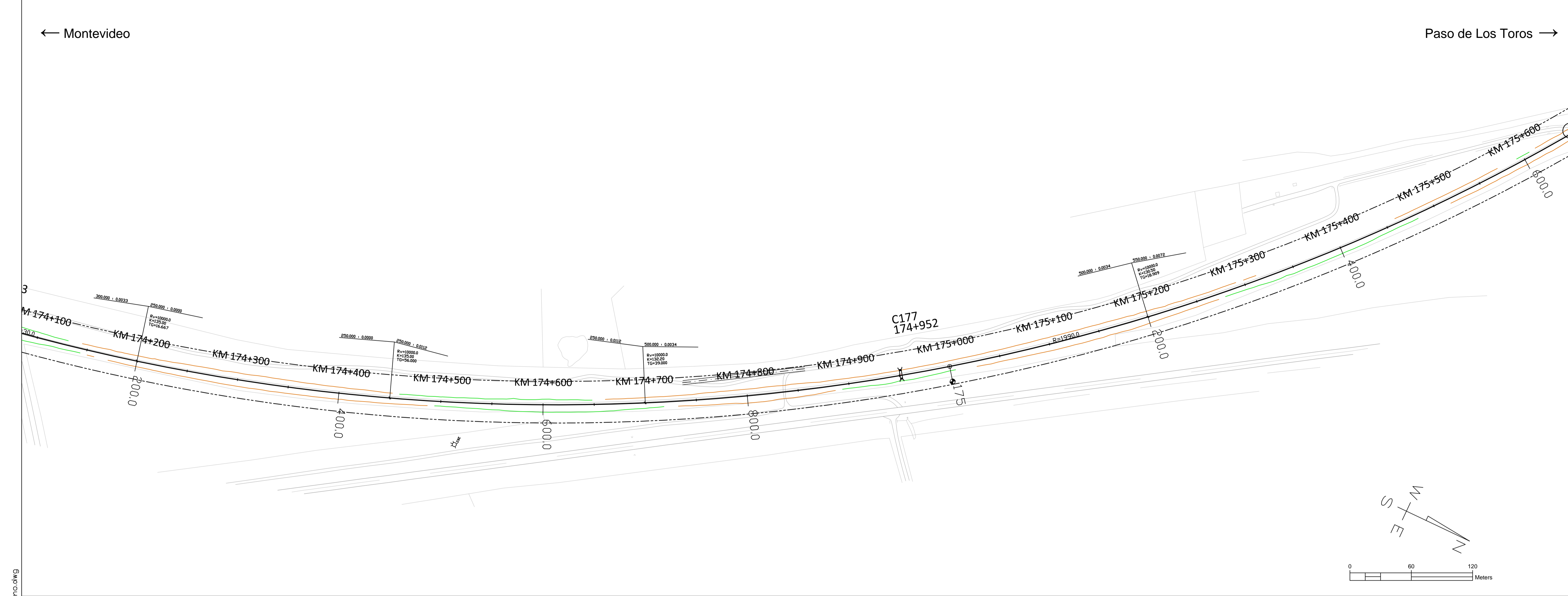
Design phase: **Pre-engineering, Phase 2**

Content: **Track map and profile**

Supplier: **VR TRACK**

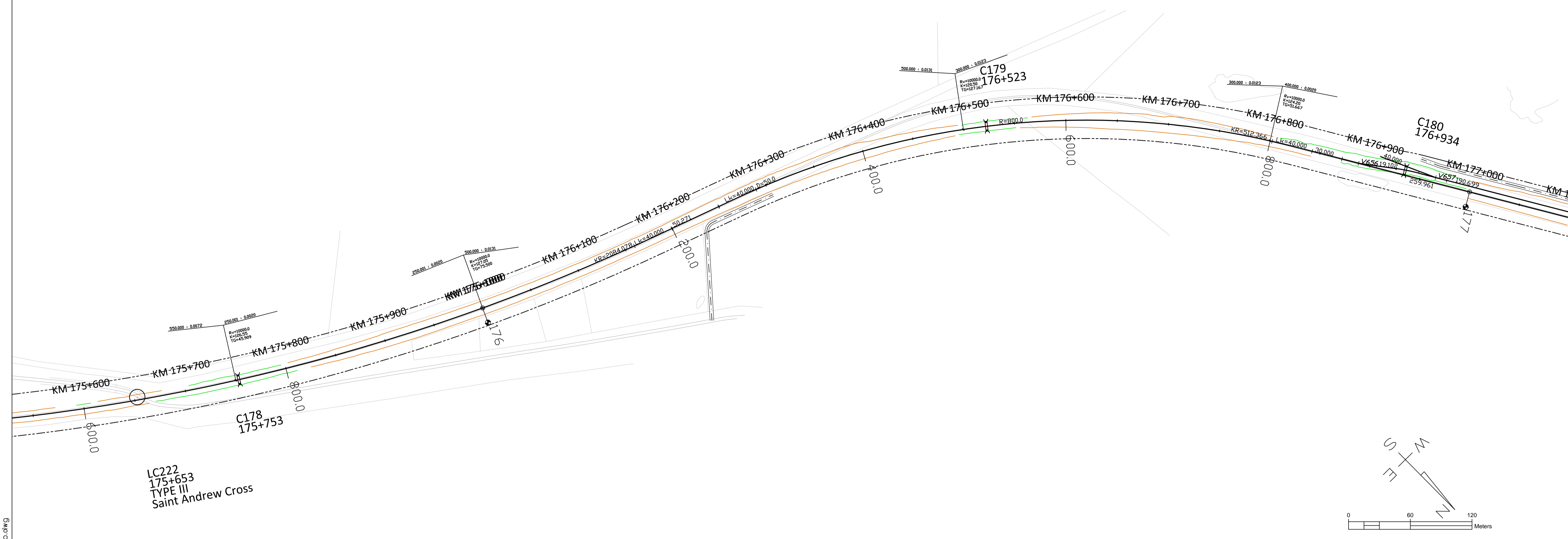
Project description: **Km 172+0800 - 174+0200**

Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLe	Coordinate system	WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017	SVI	Elevation reference system	Railway line
Accept.			Montevideo - Paso de Los Toros	Archive Type Number Rev. Sheet Sheets total
Owner acc.				124, 195



← Montevideo

Paso de Los Toros →



**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

**Symbols**

- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

**Track alignment with design geometry figures**

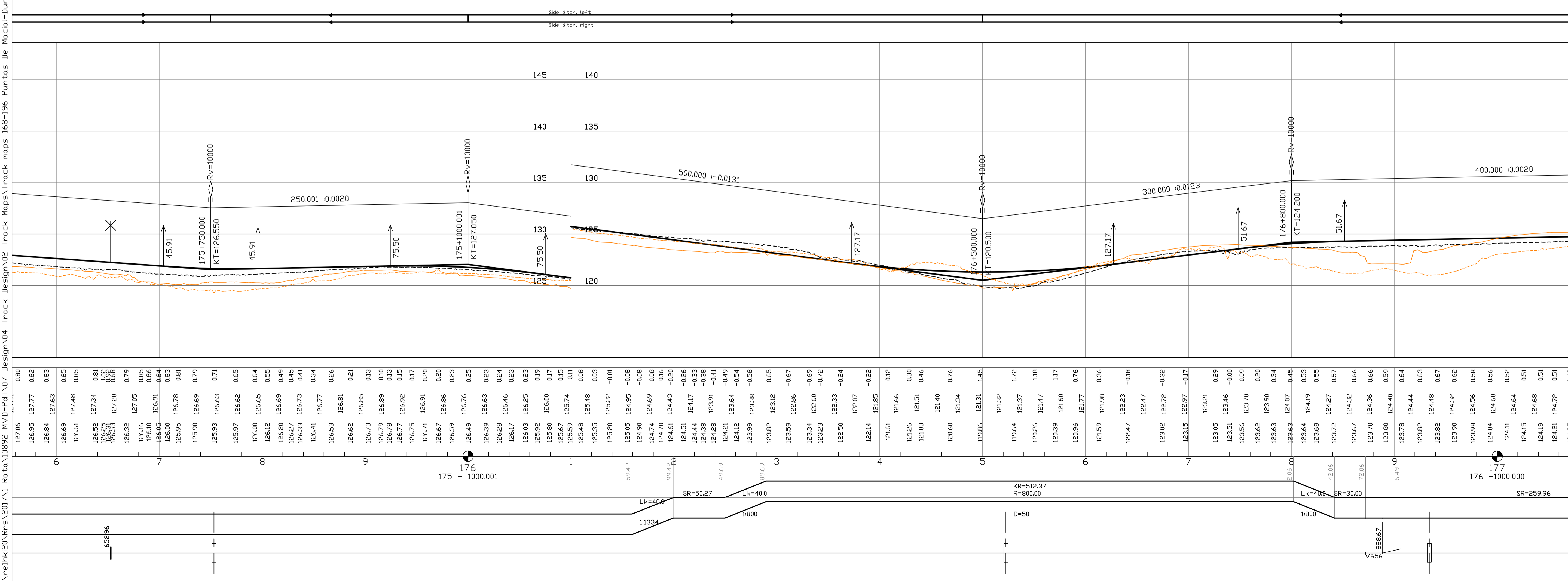
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

**SPT-sounding, terminated at cobble, boulder, or bedrock contact.**

- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

**Disturbed Sample**

- y. 2017= year of investigation
- TR02= point number



**LEGEND, PROFILE**

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

**Horizontal alignment, schematic**

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

**Customer**  
**MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS**

**Project**  
**Railway Project**

**Design phase**  
**Pre-engineering, Phase 2**

**Content**  
**Track map and profile**

**Supplier**  
**VR TRACK**

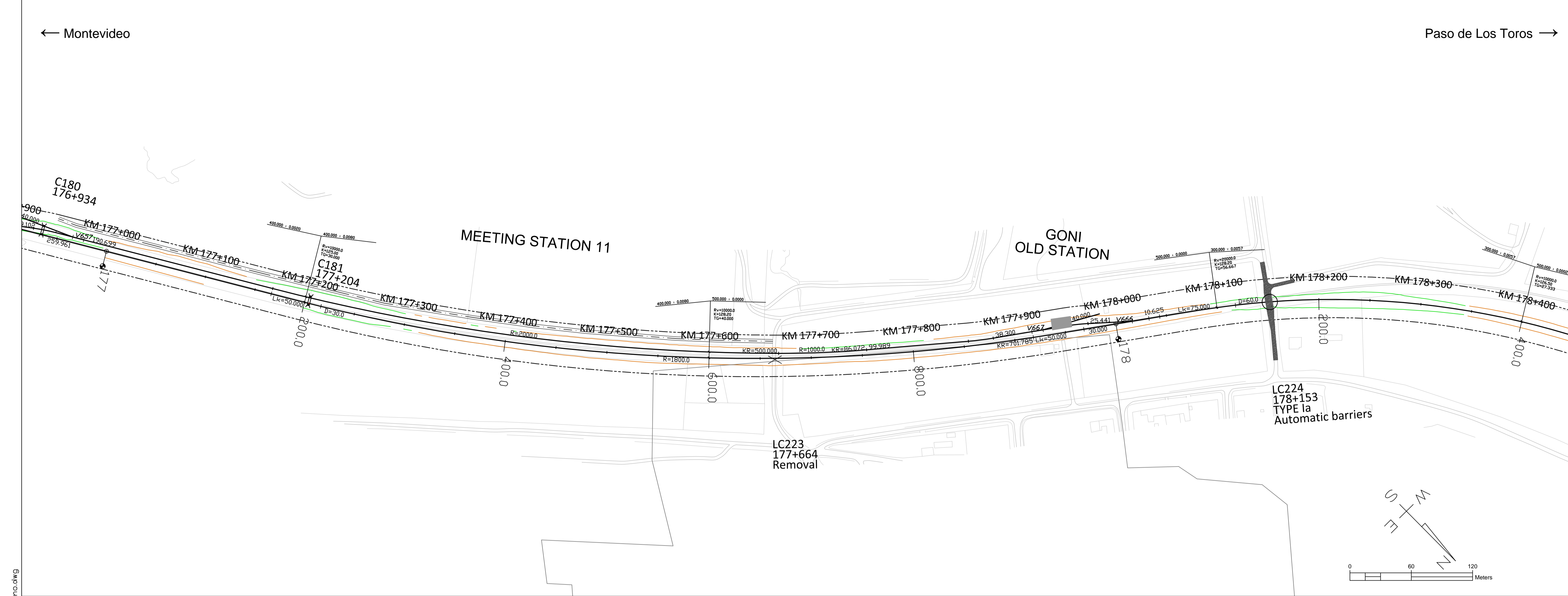
**Project Name**  
**Km 175+0600 - 177+0000**

Drawer	Date	Author	Scale
UPa	15.12.2017		map 1:2000, profile 1:2000 / 1:200

Designer	Date	Author	Coordinate system
HM/a / MLo	15.12.2017		WGS 84 UTM 21 S, Local orthometric height

Supervisor	Date	Author	Railway line
SVI	15.12.2017		Montevideo - Paso de Los Toros

Accept.	Archive	Type	Number	Rev.	Sheet	Sheets total
					126	195



**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing
- Track alignment with design geometry figures

**LEGEND, PROFILE**

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing
- Horizontal alignment, schematic

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

**Customer:** MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

**Project:** Railway Project

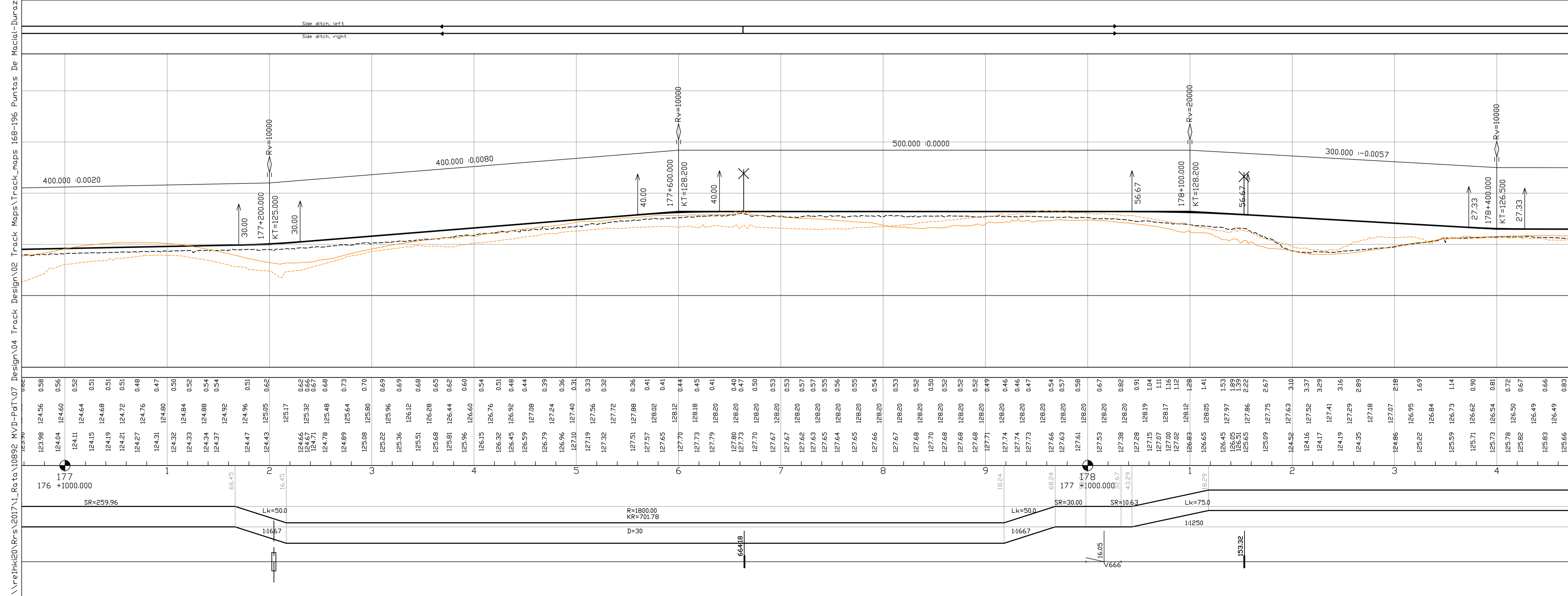
**Design phase:** Pre-engineering, Phase 2

**Content:** Track map and profile

**Supplier:** V TRACK

**Project Name:** Km 177+0000 - 178+0400

Drawer	Designer	Supervisor	Accept.	Owner acc.	Scale	Coordinate system	Elevation reference system	Railway line	Archive	Type	Number	Rev.	Sheet	Sheets total
	15.12.2017	15.12.2017	15.12.2017		map 1:2000, profile 1:2000 / 1:200	WGS 84 UTM 21 S	Local orthometric height	Montevideo - Paso de Los Toros					127	195



**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

**Customer:** MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

**Project:** Railway Project

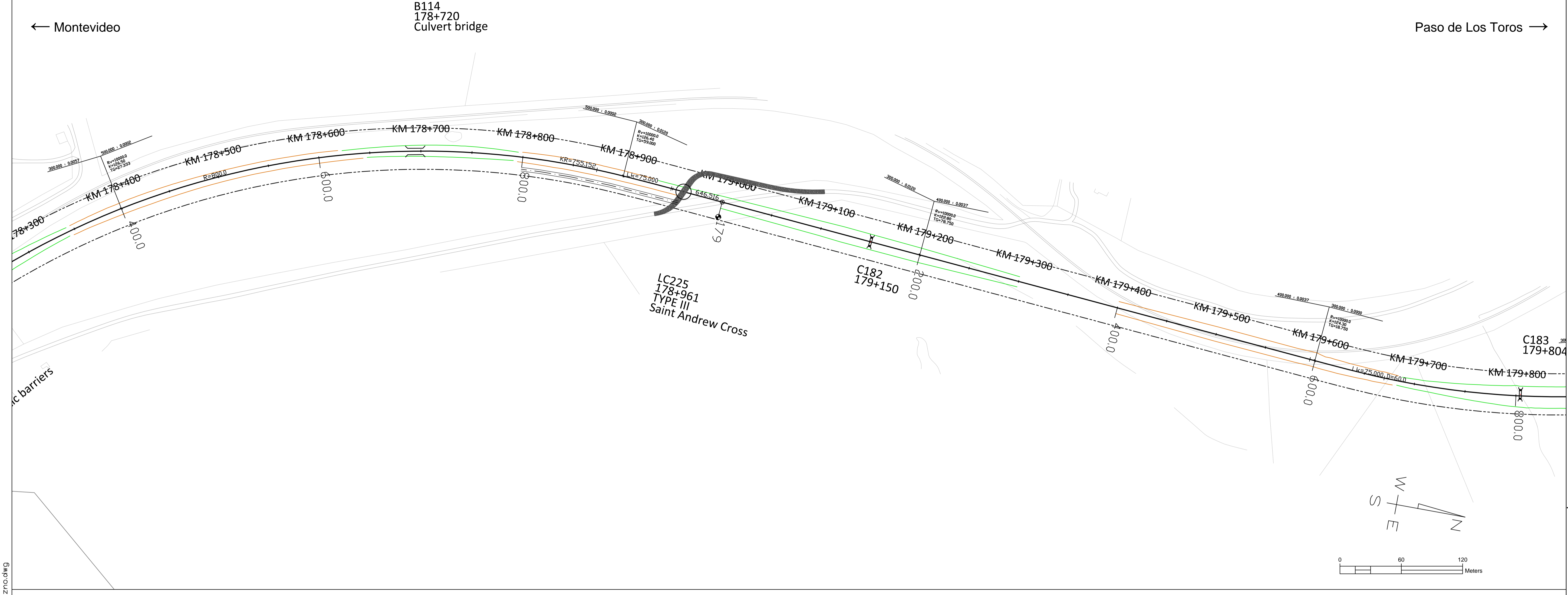
**Design phase:** Pre-engineering, Phase 2

**Content:** Track map and profile

**Supplier:** V TRACK

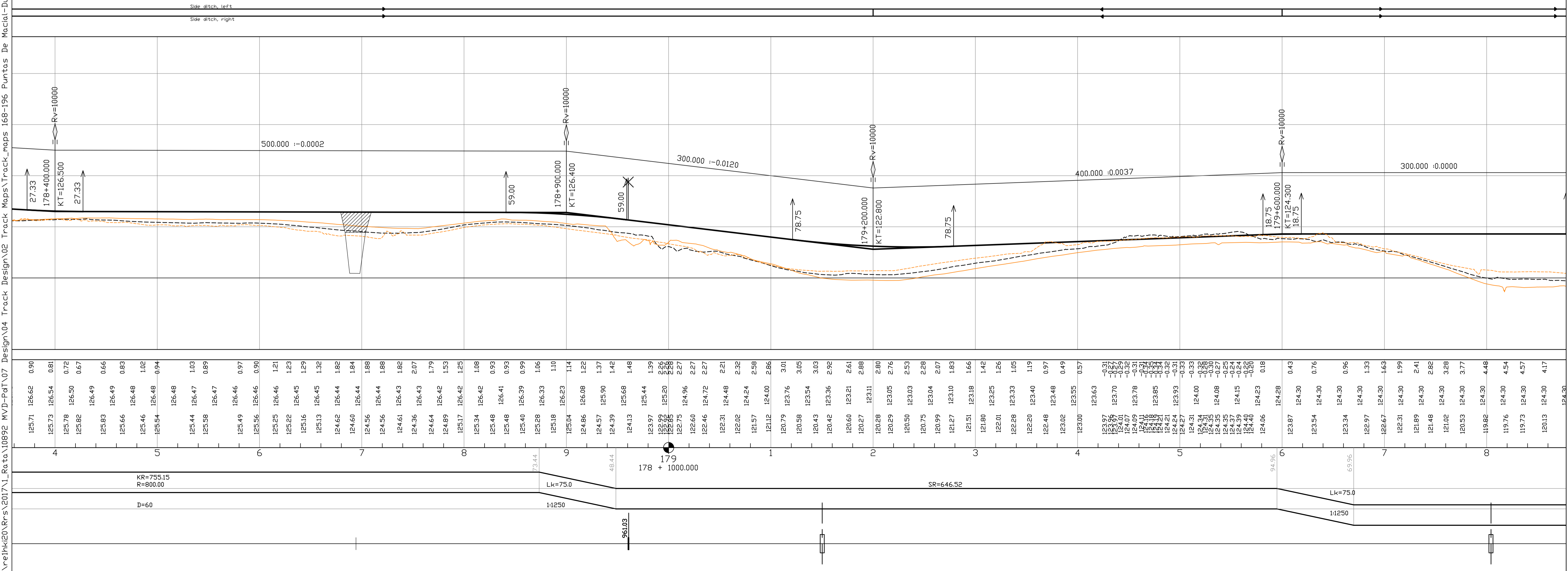
**Project Name:** Km 177+0000 - 178+0400

Drawer	Designer	Supervisor	Accept.	Owner acc.	Scale	Coordinate system	Elevation reference system	Railway line	Archive	Type	Number	Rev.	Sheet	Sheets total
	15.12.2017	15.12.2017	15.12.2017		map 1:2000, profile 1:2000 / 1:200	WGS 84 UTM 21 S	Local orthometric height	Montevideo - Paso de Los Toros					127	195



**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- - - Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- ⊗ Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- BXXX BXXX Railway bridge or underpass, Flyover
- CXXX Culvert
- Level crossing
- LCXXX
- Track alignment with design geometry figures
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)
- y. 2016 SPT-sounding, terminated at cobble, boulder, or bedrock contact.
- 217 y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number
- y. 2017 Disturbed Sample
- TR02 y. 2017= year of investigation
- TR02= point number



**LEGEND, PROFILE**

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing
- Horizontal alignment, schematic
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1	Pre-engineering, Phase 2				

Customer: **MT OP** MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Project: **Railway Project**

Design phase: **Pre-engineering, Phase 2**

Content: **Track map and profile**

Supplier: **VR TRACK**

Project: **Km 178+0400 - 179+0800**

Drawer	Date	Scale
UPa	15.12.2017	map 1:2000, profile 1:2000 / 1:200

Designer	Supervisor	Accept.	Owner acc.
HM/MLe	SVI		

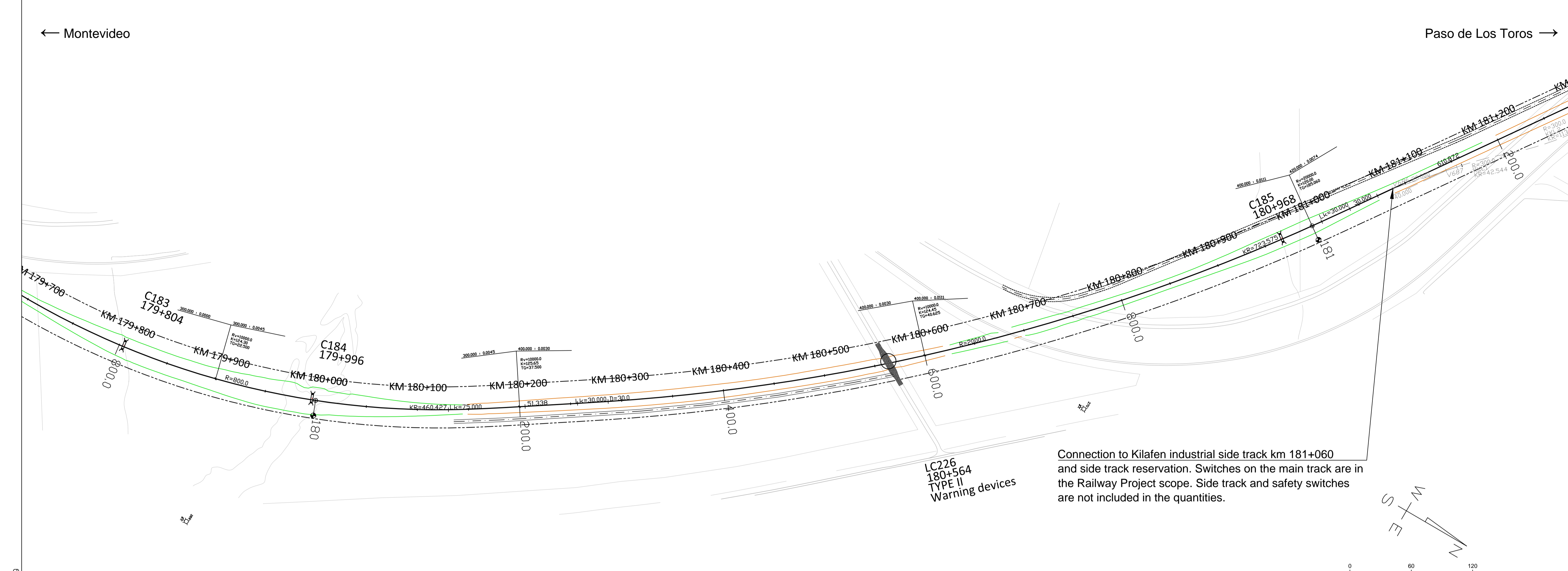
Coordinate system: WGS 84 UTM 21 S, Local orthometric height

Railway line: **Montevideo - Paso de Los Toros**

Archive	Type	Number	Rev.	Sheet	Sheets
				128	195

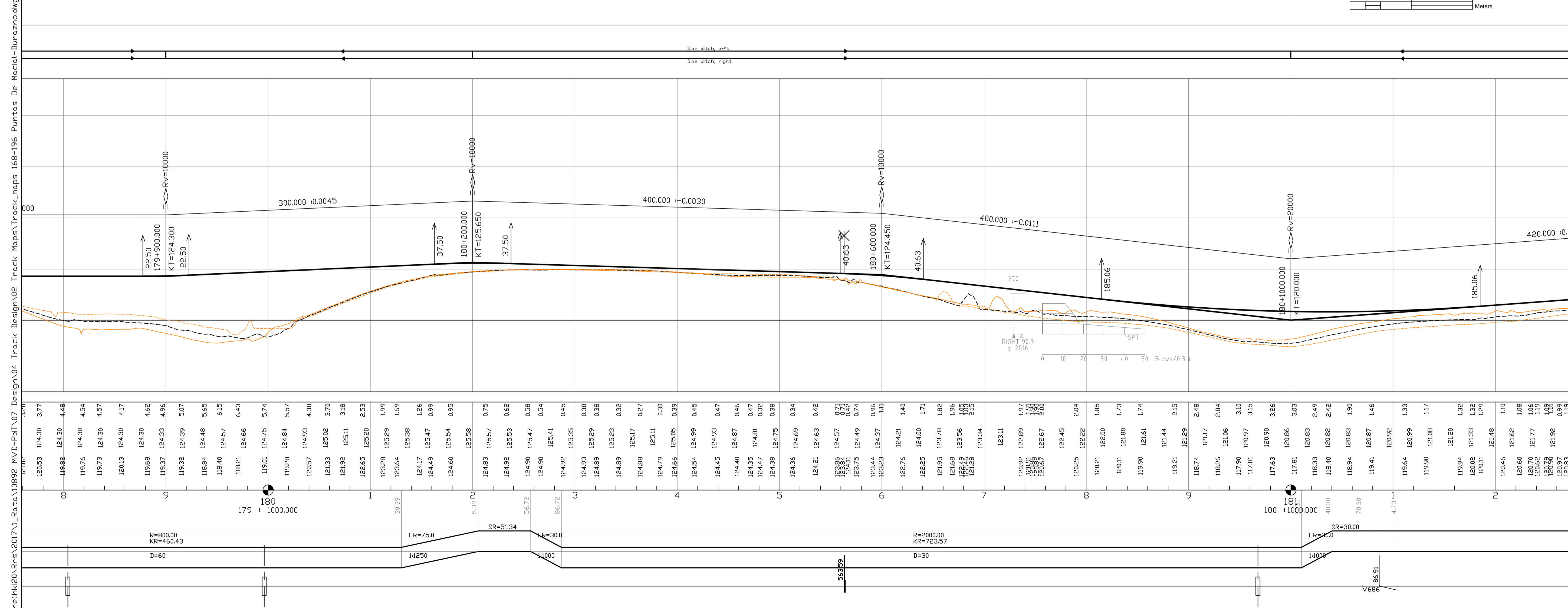
\\nrefh20\Nrs\2017\L\_Rata\10892\_MVD-PaT\07\_Design\04\_Track Maps\Track\_maps\_168-196\_Puntas\_De\_Maciel-Duraznodwg





Connection to Kilafen industrial side track km 181+060 and side track reservation. Switches on the main track are in the Railway Project scope. Side track and safety switches are not included in the quantities.

- ### LEGEND, MAP
- New railway alignment
  - Existing railway alignment (not in the Railway Project scope)
  - - - Railway Area borderline
  - Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
  - Removal track
  - █ Street or road modification area in level crossings or underpasses/flyovers
  - Modification needed to the property access
  - Affected parallel roads and streets and maintenance roads
  - Road closing down
  - Limit of designed soil cut (open cut or cut with a retaining wall)
  - Limit of designed embankment fill, not including possible ditch
  - █ Existing stations or passenger platforms
  - █ New passenger platforms
  - █ Symbols
  - BXXX BXXX Railway bridge or underpass, Flyover
  - CXXX Culvert
  - Level crossing
  - LCXXX
- Track alignment with design geometry figures
- R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - RV= radius of vertical curve
  - K= elevation
  - TG= length of tangent
  - 123.345= length of straight line (m)
- SPT= sounding, terminated at cobble, boulder, or bedrock contact.  
 y. 2016= year of investigation, location of 2016 soundings not accurate  
 1, 217= point number
- Disturbed Sample  
 y. 2017= year of investigation  
 TR02= point number



- ### LEGEND, PROFILE
- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
  - Ground surface
  - Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
  - Culvert location (elevation will be designed in detailed design phase)
  - Level crossing
  - Overpass bridge, railway or underpass bridge
  - Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
  - Km stationing
- Horizontal alignment, schematic
- SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

**Version 15.12.2017**

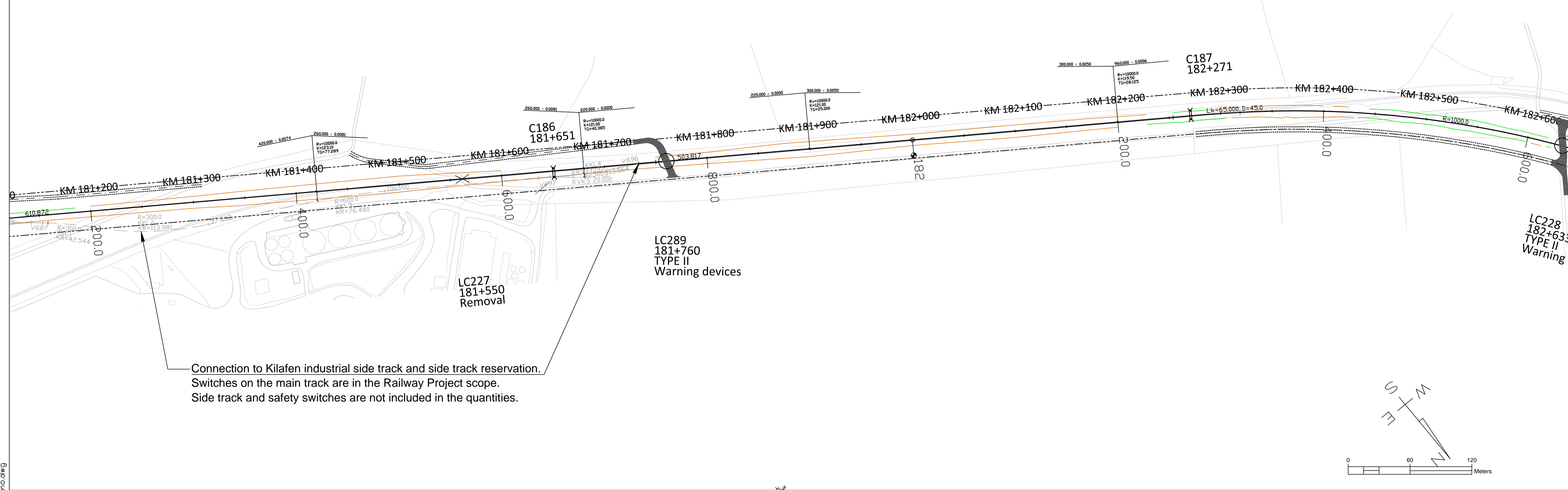
Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer	Railway Project	
Design phase	Pre-engineering, Phase 2	
Contract	Track map and profile	
Supplier		
Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLo
Supervisor	15.12.2017	SVI
Accept.		
Owner acc.		

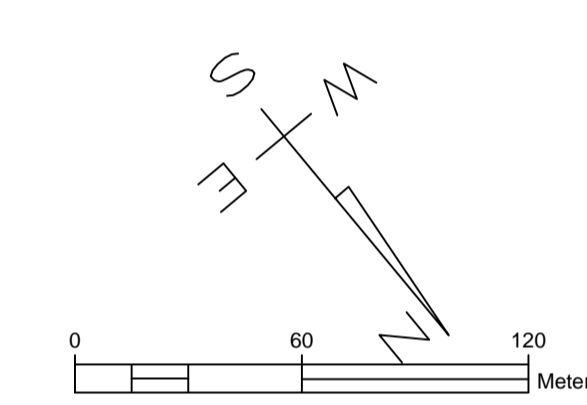
Project	Railway Project	
Design phase	Pre-engineering, Phase 2	
Contract	Track map and profile	
Supplier		
Scale	map 1:2000, profile 1:2000 / 1:200	
Coordinate system	WGS 84 UTM 21 S, Local orthometric height	
Elevation reference system	Railway line	
Railway line	Montevideo - Paso de Los Toros	
Archive	Type	Number
Rev.	Sheet	Sheets total
		129 / 195

← Montevideo

Paso de Los Toros →



Connection to Kilfen industrial side track and side track reservation.  
Switches on the main track are in the Railway Project scope.  
Side track and safety switches are not included in the quantities.

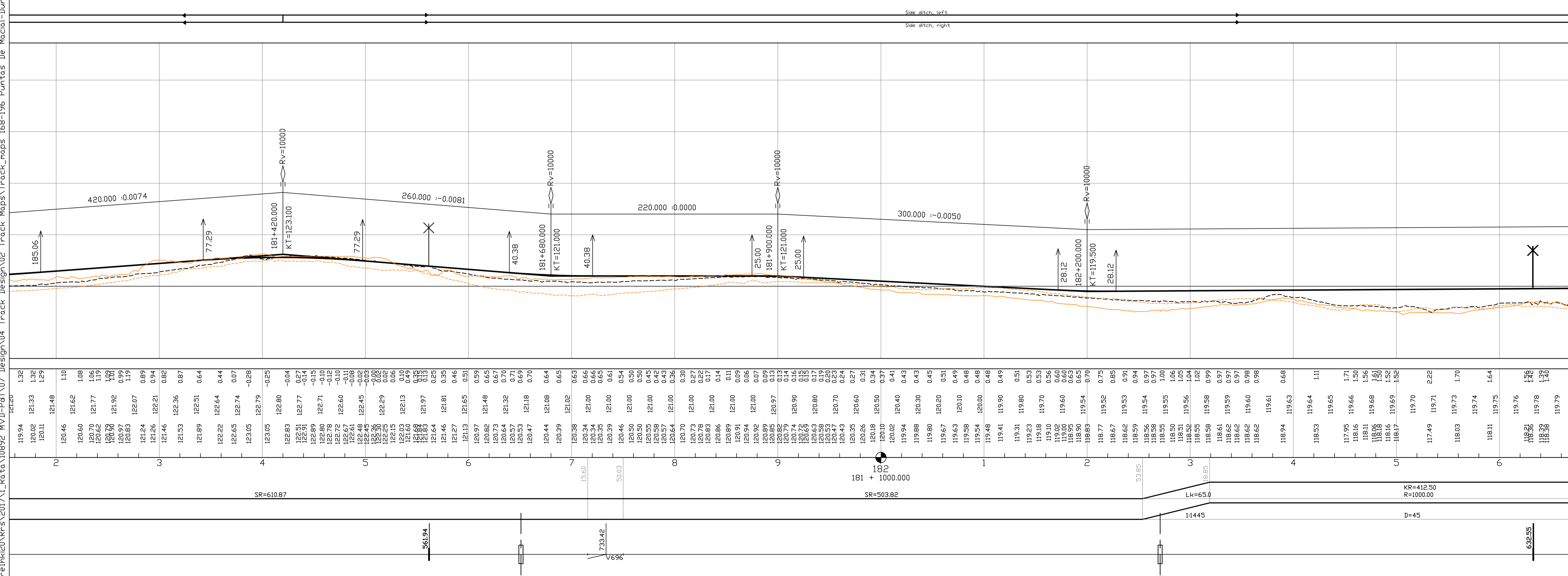


LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- - - Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- BXXX BXXX Railway bridge or underpass, Flyover
- CXXX Culvert
- Level crossing
- LCXXX
- Track alignment with design geometry figures
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - Rv= radius of vertical curve
  - K= elevation
  - TG= length of tangent
  - 123.345= length of straight line (m)
- SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)



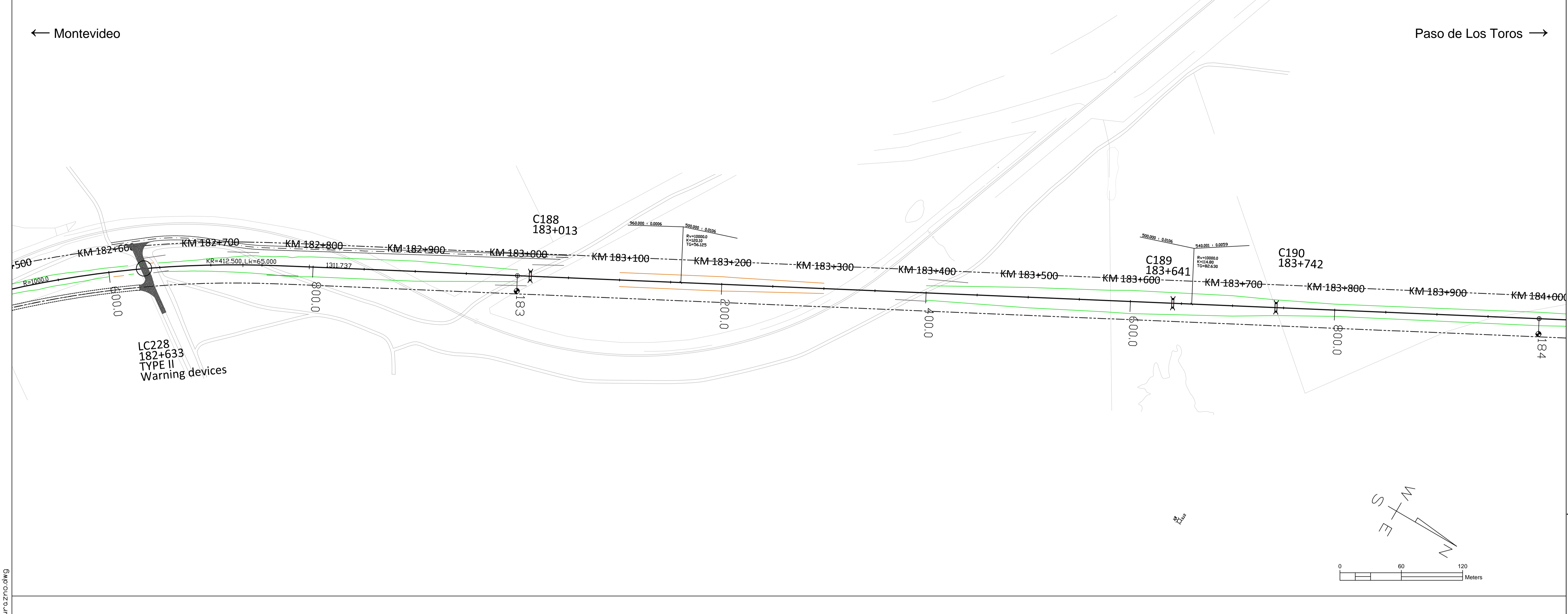
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					

\\net\h20\rrs\2017\1\lata\10892 MVD-Pat\07 Design\04 Track Maps\Track\_maps 168-196 Puntas De Macial-Duraznodwg

← Montevideo

Paso de Los Toros →



**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing

**Track alignment with design geometry figures**

R= curve radius (m)  
 KR= length of curve (m)  
 D= track cant (mm)  
 Lk= length of transition curve (m)  
 RV= radius of vertical curve  
 K= elevation  
 TG= length of tangent  
 123.345= length of straight line (m)

**LEGEND, PROFILE**

Vertical railway alignment  
 (S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

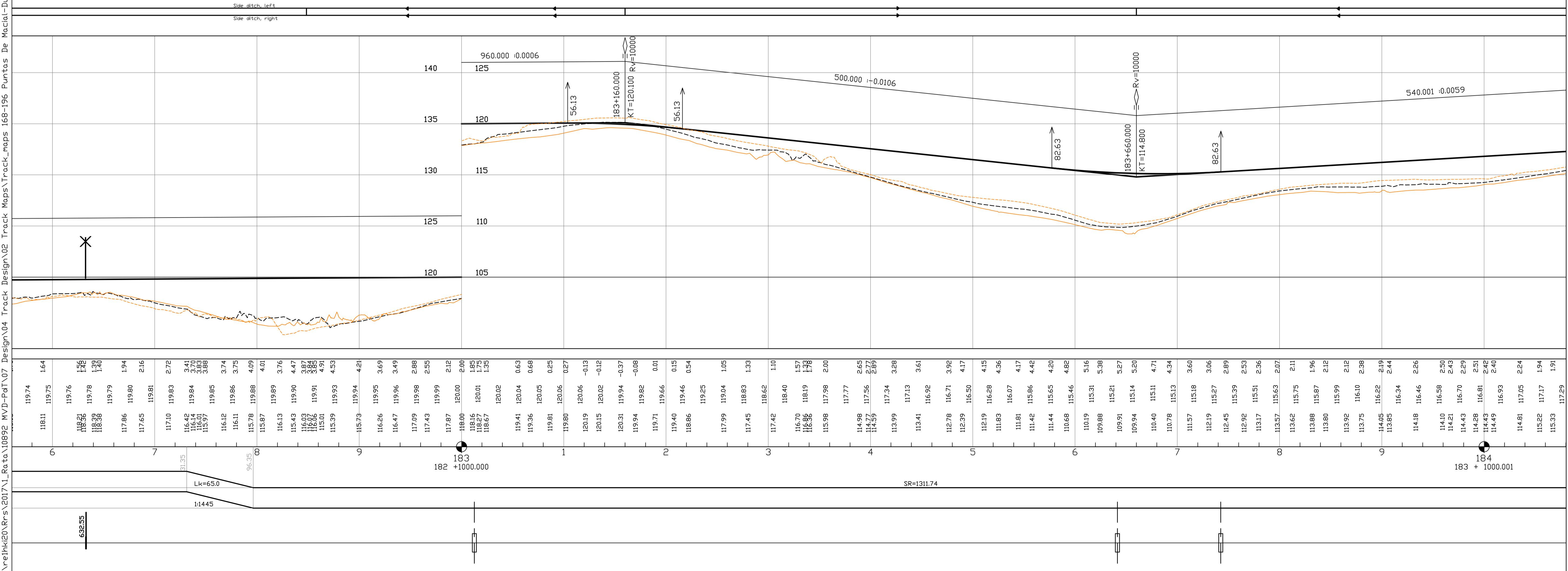
Elevation figures

Difference between existing ground and designed track elevation  
 Designed track elevation (the running surface of the rail)  
 Existing ground elevation

Km stationing

Horizontal alignment, schematic

SR= length of straight line (m)  
 R= curve radius (m)  
 KR= length of curve (m)  
 D= track cant (mm)  
 Lk= length of transition curve (m)



**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer: **MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS**

Project: **Railway Project**

Design phase: **Pre-engineering, Phase 2**

Content: **Track map and profile**

Supplier: **VR TRACK**

Project: **Km 182+0600 - 184+0000**

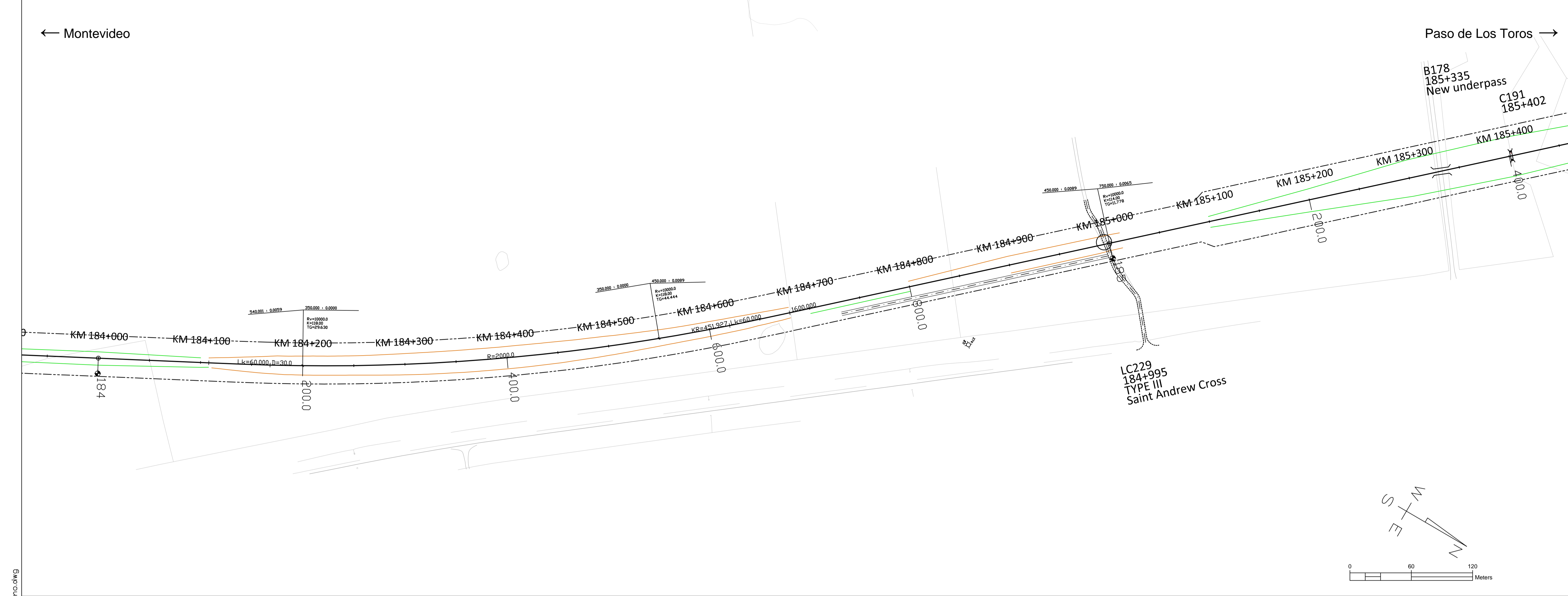
Drawer	Date	Author	Scale
UPa	15.12.2017	UPa	map 1:2000, profile 1:2000 / 1:200

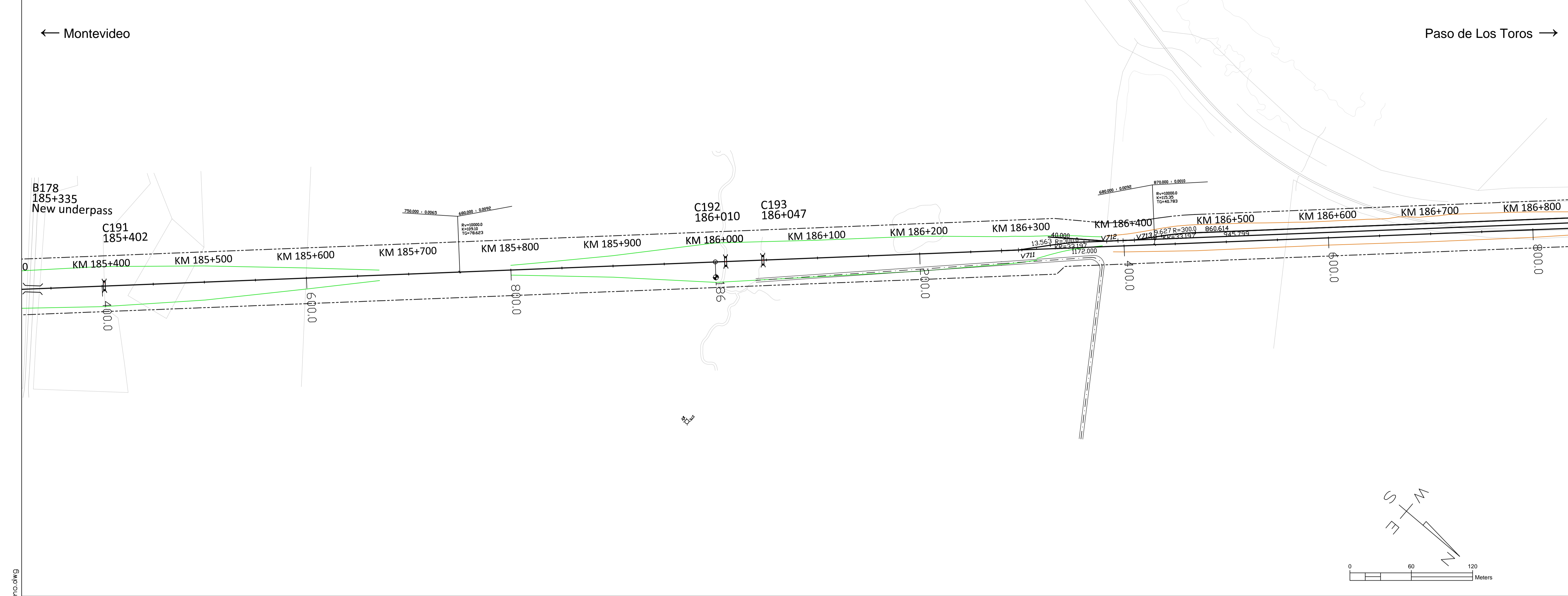
Designer	Date	Author	Coordinate system
HMa / MLe	15.12.2017	HMa / MLe	WGS 84 UTM 21 S, Local orthometric height

Supervisor	Date	Author	Railway line
SVI	15.12.2017	SVI	Montevideo - Paso de Los Toros

Accept.	Rev.	Sheet	Sheets

Owner acc. **131, 195**





### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

### Symbols

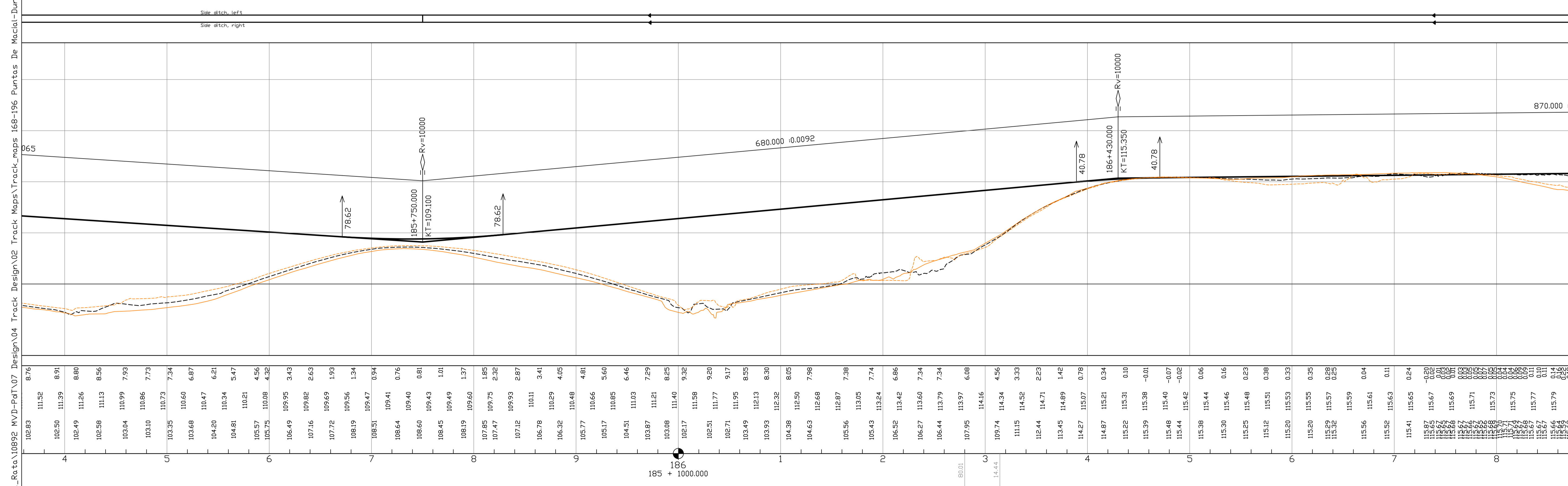
- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

### Track alignment with design geometry figures

- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- RV= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

### Legend for Profile

- y. 2016: SPT-sounding, terminated at cobble, boulder, or bedrock contact.
- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number
- y. 2017: Disturbed Sample
- TR02= year of investigation
- TR02= point number



### LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

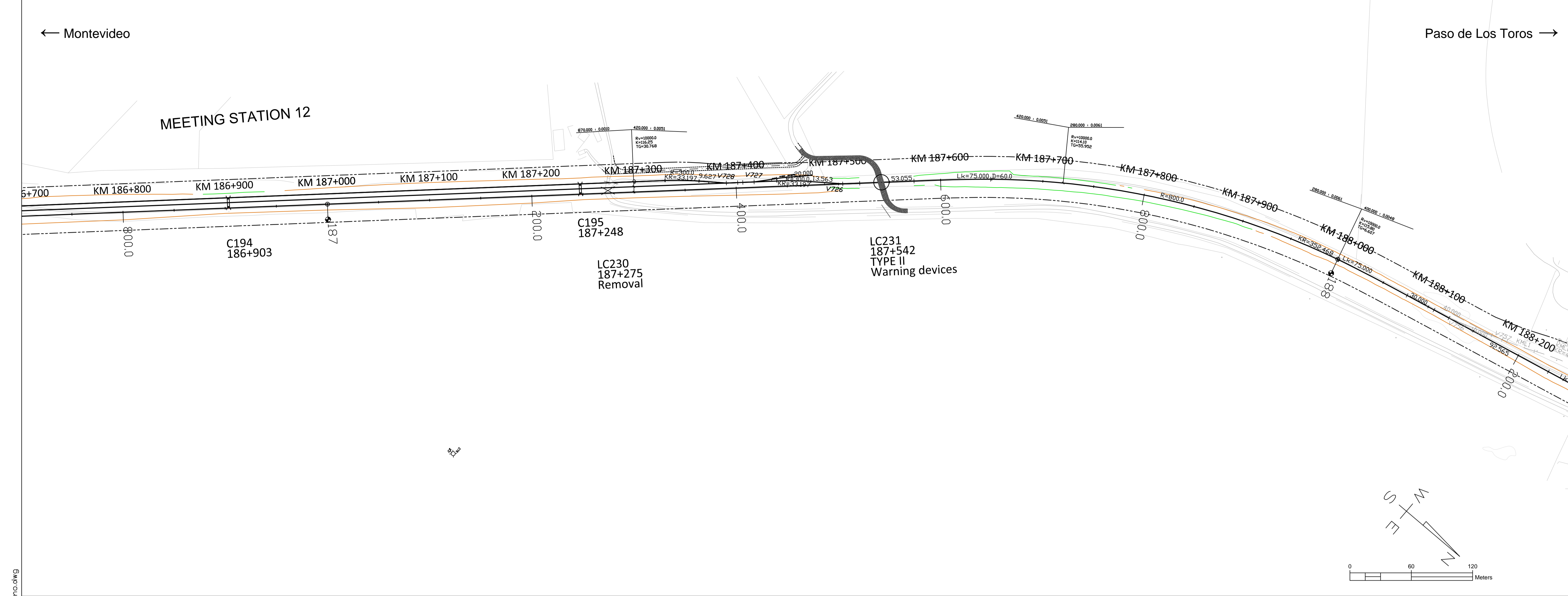
### Horizontal alignment, schematic

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

Revision	Explanation	Date	Designer	Date	Acceptor
1	15.12.2017	UPa			
2	15.12.2017	HMa / MLe			
3	15.12.2017	SVI			

**Version 15.12.2017**

<b>MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS</b>		<b>Railway Project</b>	
<b>Supplier</b> 		Design phase <b>Pre-engineering, Phase 2</b>	
Content <b>Track map and profile</b>		Km 185+0400 - 186+0800	
Scale map 1:2000, profile 1:2000	Coordinate system WGS 84 UTM 21 S, Local orthometric height	Railway line Montevideo - Paso de Los Toros	Rev. Sheet Sheets total 133, 195



### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

### Symbols

- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

### Track alignment with design geometry figures

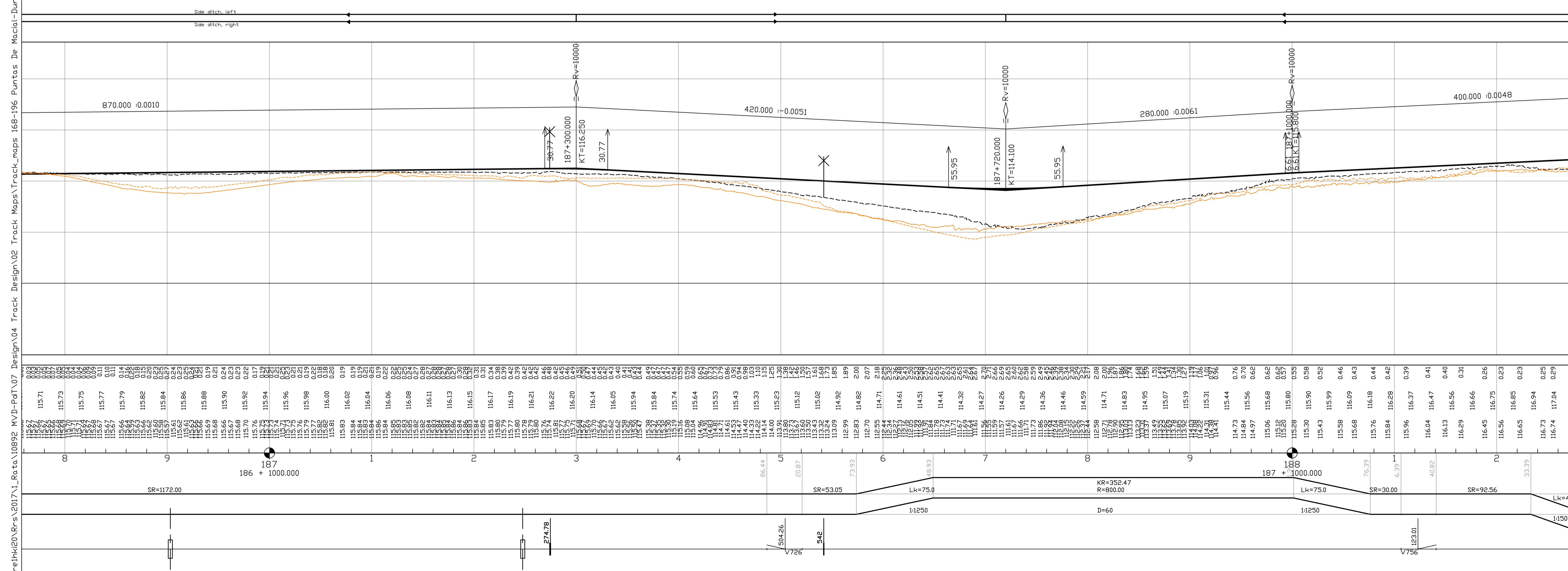
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

### SPT-sounding, terminated at cobble, boulder, or bedrock contact.

- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

### Disturbed Sample

- y. 2017= year of investigation
- TR02= point number



### LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

### Horizontal alignment, schematic

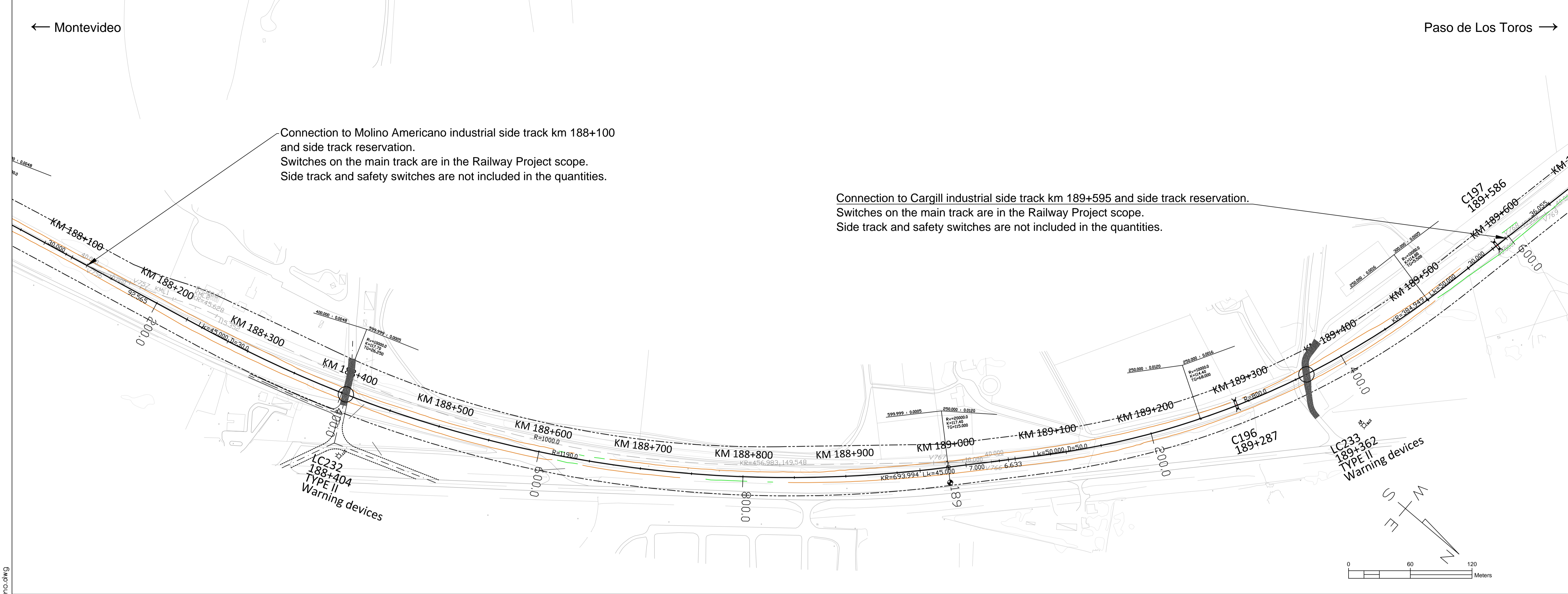
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Design phase	Pre-engineering, Phase 2	Contract	Track map and profile
Supplier	VR TRACK	Contract	Km 186+0800 - 188+0200

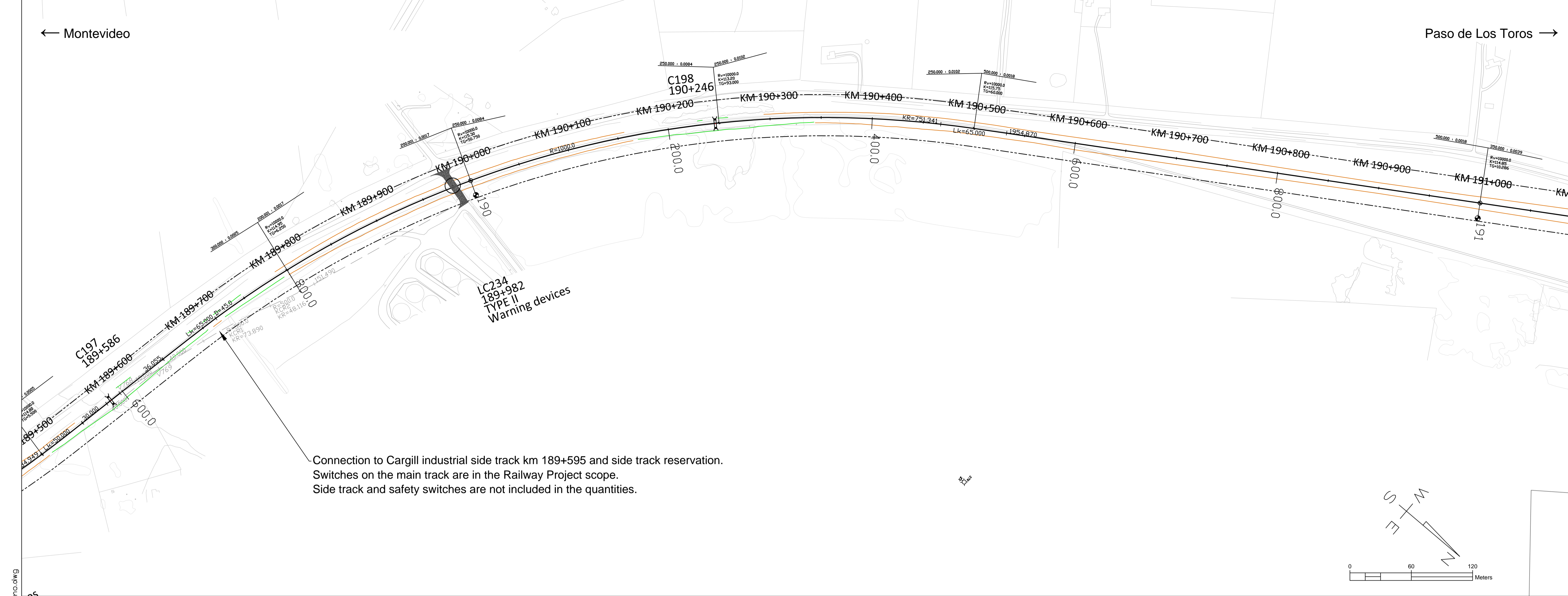
Drawer	Designer	Supervisor	Accept.	Owner acc.	Scale	Coordinate system	Railway line	Archive	Type	Number	Rev.	Sheet	Sheets total
UPa	HMa / MLe	SVI			map 1:2000, profile 1:2000 / 1:200	WGS 84 UTM 21 S, Local orthometric height elevation reference system	Montevideo - Paso de Los Toros					134	195



**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Design phase	Pre-engineering, Phase 2	Content	Track map and profile
Supplier	<b>VR TRACK</b>	Project	Km 188+0200 - 189+0600
Drawer	15.12.2017 UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017 HMa / MLe	Coordinate system	WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017 SVI	Elevation reference system	Railway line
Accept.		Railway line	Montevideo - Paso de Los Toros
Owner acc.		Archive	Type Number Rev. Sheet Sheets total
			135 195



Connection to Cargill industrial side track km 189+595 and side track reservation. Switches on the main track are in the Railway Project scope. Side track and safety switches are not included in the quantities.

### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

### Symbols

- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- Level crossing
- LCXXX: Level crossing

### Track alignment with design geometry figures

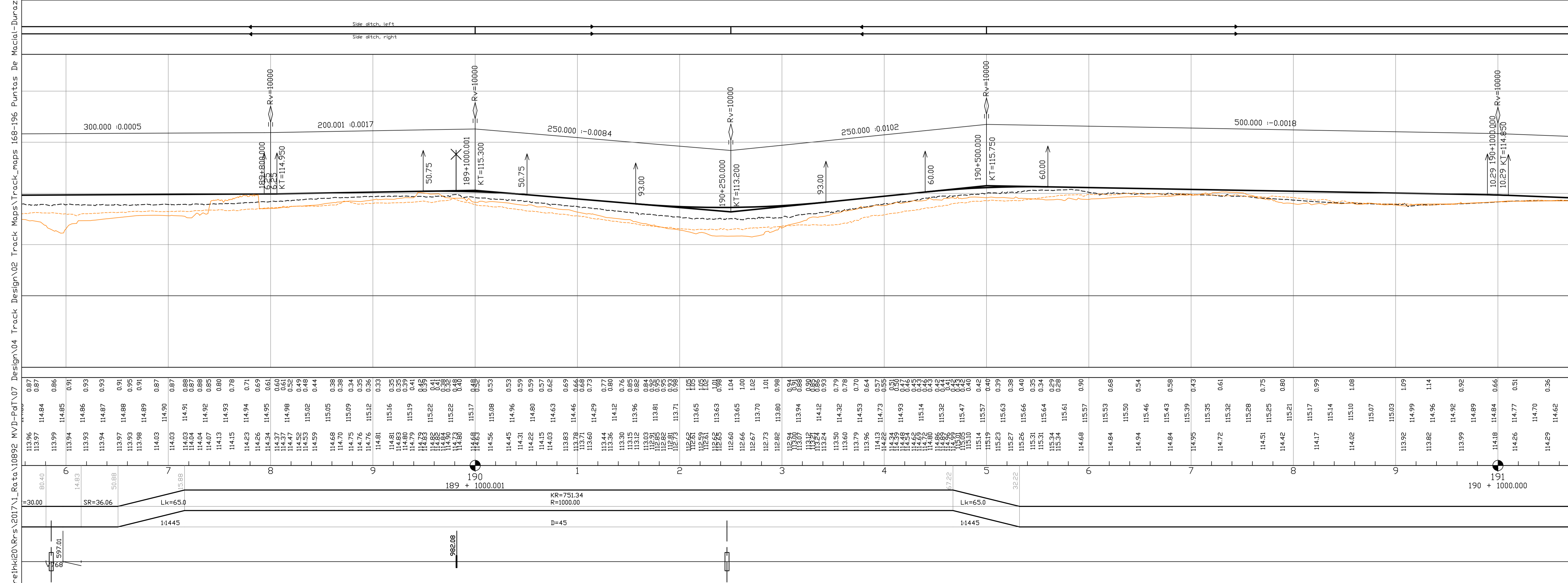
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

### SPT-sounding, terminated at cobble, boulder, or bedrock contact.

- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

### Disturbed Sample

- y. 2017= year of investigation
- TR02= point number



### LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

### Horizontal alignment, schematic

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

**Version 15.12.2017**

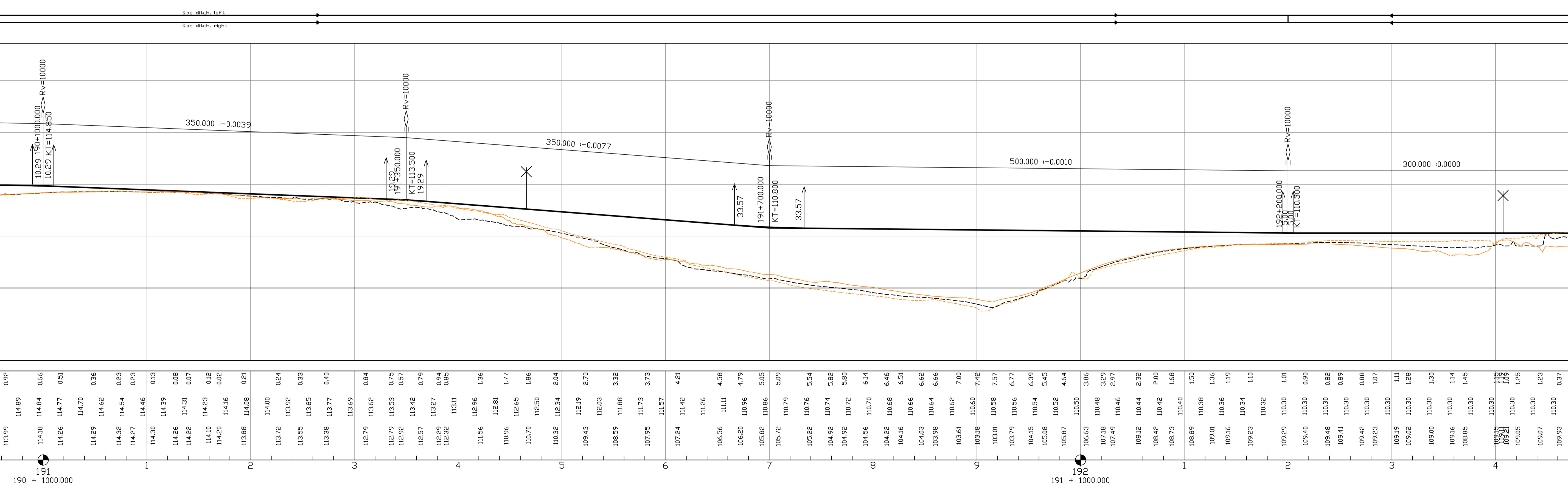
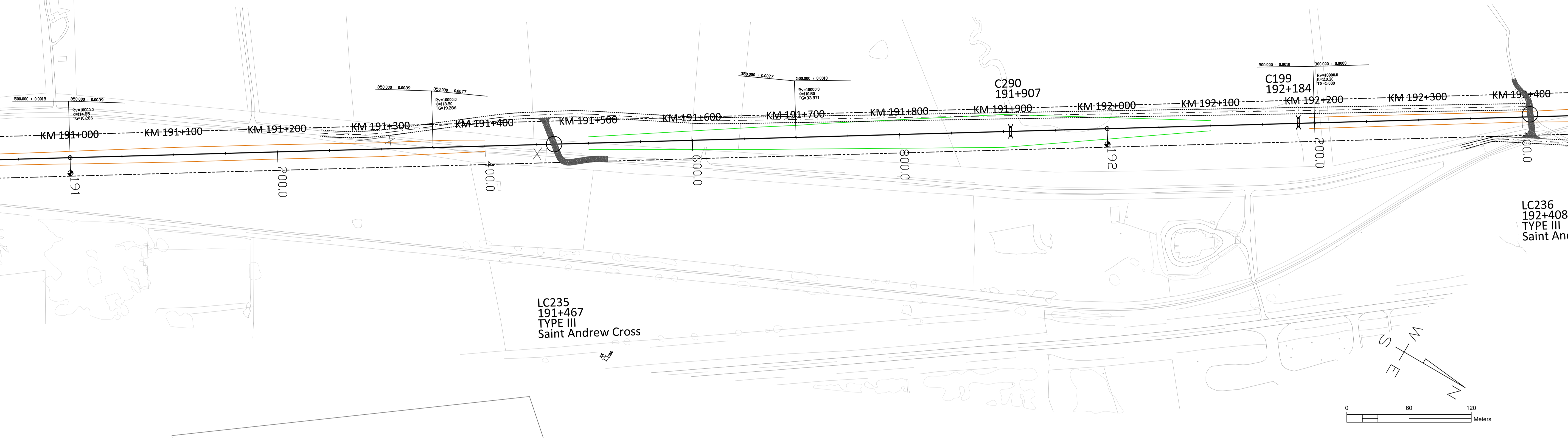
Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Design phase	Pre-engineering, Phase 2	Content	Track map and profile
Supplier	VR TRACK	Scale	Km 189+0600 - 191+0000
Drawer	15.12.2017 UPA	Coordinate system	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017 HMa / MLe	Elevation reference system	WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017 SVI	Railway line	Montevideo - Paso de Los Toros
Accept.		Archive	Type Number Rev. Sheet Sheets total
Owner acc.			136 195



← Montevideo

Paso de Los Toros →



113.99	114.89	114.18	114.84	0.66	0.92	114.89	114.77	0.51	114.70	0.36	114.62	0.23	114.54	0.23	114.46	0.13	114.39	0.08	114.26	0.07	114.22	0.12	114.20	0.02	114.16	0.21	113.88	114.08	0.21	114.00	0.24	113.72	113.92	0.33	113.55	113.85	0.40	113.38	113.77	0.40	113.69	0.84	112.79	113.62	0.75	112.79	113.53	0.37	112.92	113.42	0.79	112.57	113.27	0.94	112.29	112.82	0.85	112.32	113.11	1.36	111.56	112.81	1.77	110.96	112.65	1.86	110.70	112.50	2.04	110.32	112.34	2.70	109.43	112.03	3.32	108.59	111.88	3.73	107.95	111.73	4.21	107.24	111.42	4.58	106.56	111.11	4.79	106.20	110.96	5.05	105.82	110.86	5.09	105.72	110.79	5.54	105.22	110.76	5.82	104.92	110.74	5.80	104.92	110.72	6.14	104.56	110.70	6.46	104.22	110.68	6.51	104.16	110.66	6.62	104.03	110.64	6.66	103.98	110.64	7.00	103.61	110.62	7.42	103.01	110.58	7.57	103.79	110.56	6.77	103.79	110.54	6.39	104.15	110.54	5.45	105.08	110.52	4.64	105.87	110.50	3.86	106.63	110.48	3.29	107.18	110.48	2.97	107.49	110.46	2.32	108.42	110.44	2.00	108.42	110.42	1.68	108.73	110.40	1.50	108.89	110.38	1.36	109.01	110.36	1.19	109.16	110.34	1.10	109.23	110.32	1.01	109.29	110.30	0.90	109.40	110.30	0.82	109.48	110.30	0.89	109.41	110.30	1.30	109.00	110.30	1.14	109.16	110.30	1.45	108.85	110.30	1.13	108.95	110.30	1.25	109.05	110.30	1.23	109.07	110.30	0.37	109.93	110.30	0.37	109.92	110.30	0.38
--------	--------	--------	--------	------	------	--------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	--------	------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------	--------	--------	------

**LEGEND, MAP**

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing
- Track alignment with design geometry figures

**LEGEND, PROFILE**

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing
- Horizontal alignment, schematic

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: **MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS**

Project: **Railway Project**

Design phase: **Pre-engineering, Phase 2**

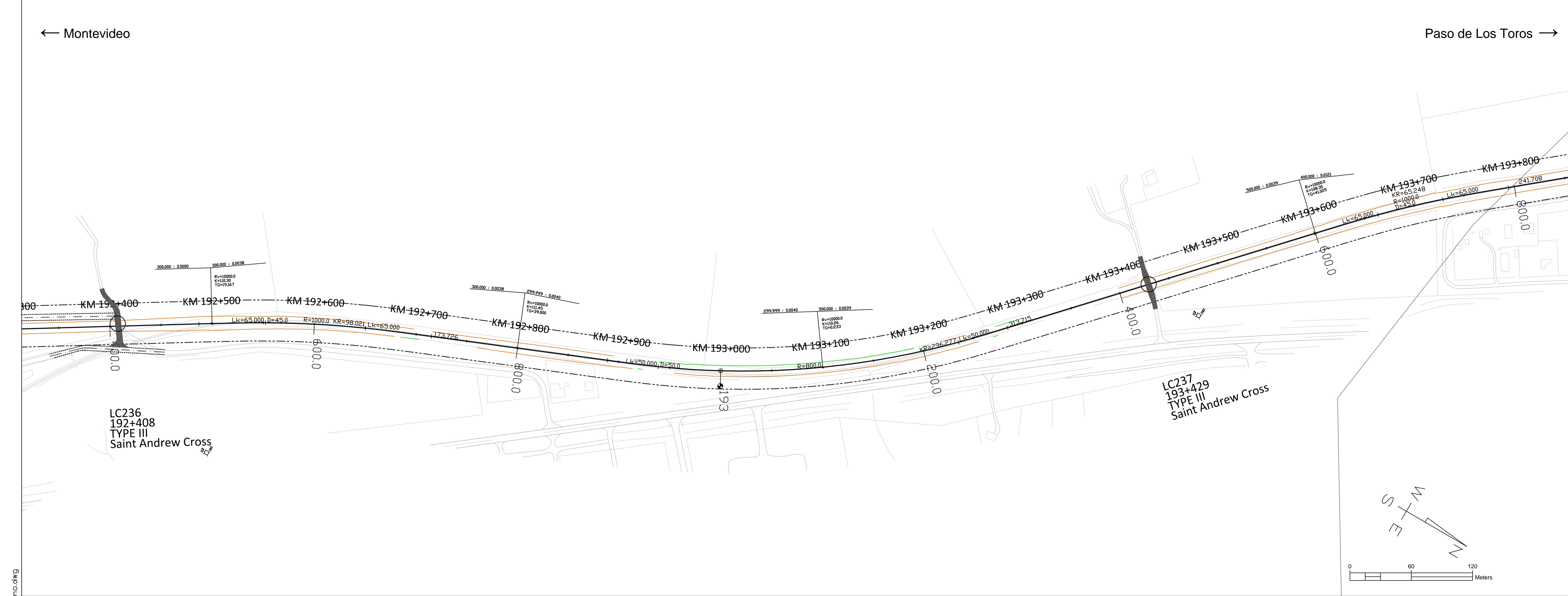
Content: **Track map and profile**

Supplier: **VR TRACK**

Project: **Km 191+0000 - 192+0400**

Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLe	Coordinate system	WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017	SVI	Elevation reference system	Railway line
Accept.			Railway line	Montevideo - Paso de Los Toros
Owner acc.			Archive	Type Number Rev. Sheet Sheets total

137 / 195



### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- - - Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

### Symbols

- BXXX BXXX Railway bridge or underpass, Flyover
- CXXX Culvert
- LCXXX Level crossing

### Track alignment with design geometry figures

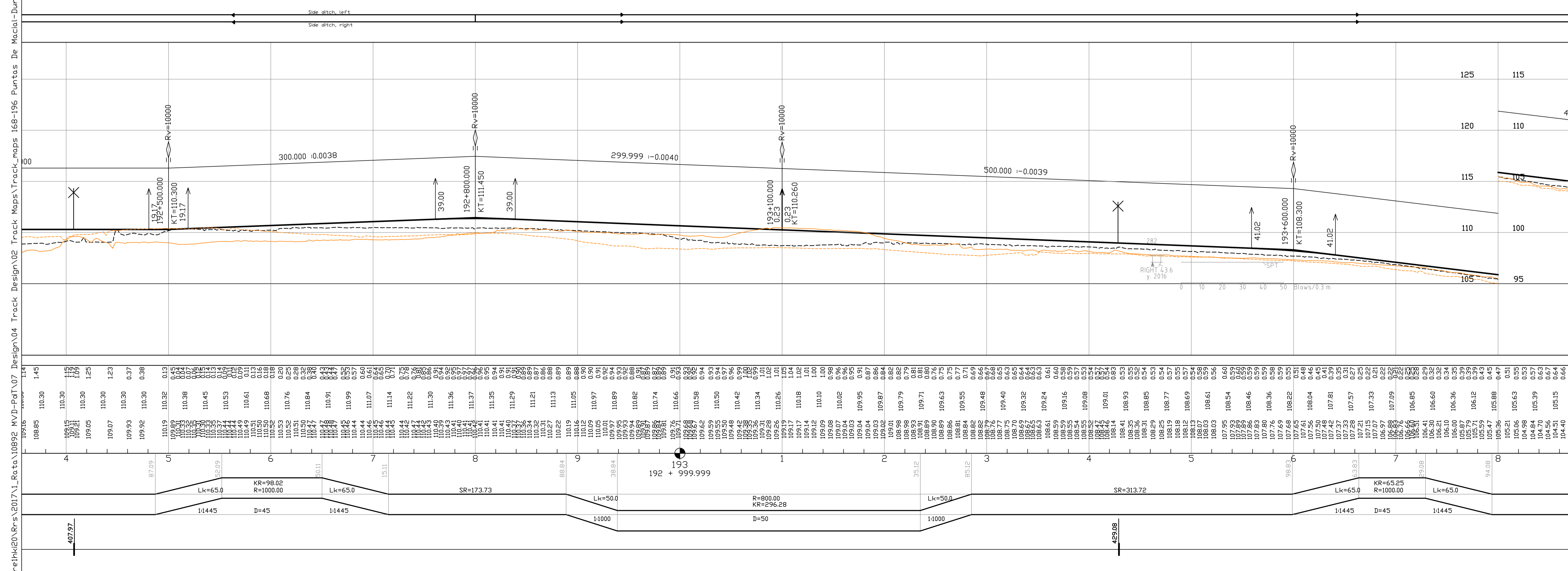
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

### SPT-sounding, terminated at cobble, boulder, or bedrock contact.

- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

### Disturbed Sample

- y. 2017= year of investigation
- TR02= point number



### LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

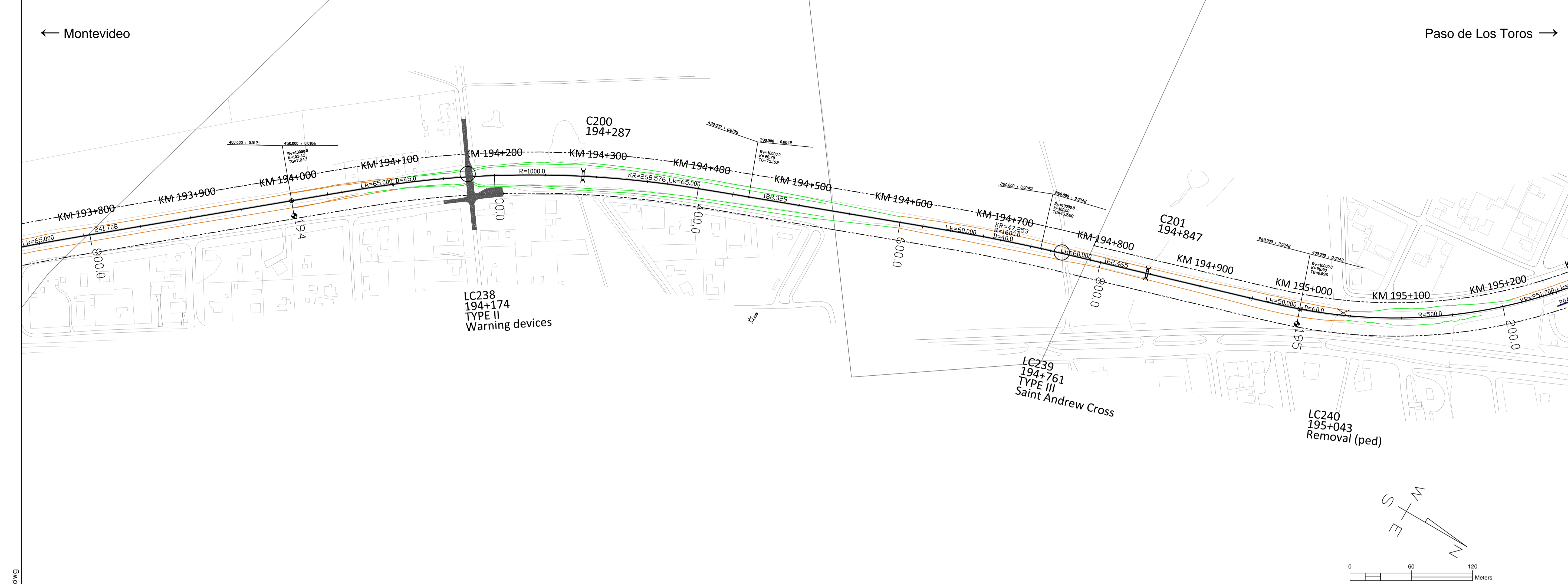
### Horizontal alignment, schematic

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer		Project	
MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS		Railway Project	
Design phase		Pre-engineering, Phase 2	
Content		Track map and profile	
Supplier		Km 192+0400 - 193+0800	
DRAWER		SCALE	
15.12.2017 UPA		map 1:2000, profile 1:2000 / 1:200	
DESIGNER		COORDINATE SYSTEM	
15.12.2017 HMa / MLe		WGS 84 UTM 21 S, Local orthometric height	
SUPERVISOR		RAILWAY LINE	
15.12.2017 SVI		Montevideo - Paso de Los Toros	
ACCEPT.		ARCHIVE TYPE NUMBER	
		Rev. Sheet Sheets total	
OWNER ACC.		138 195	



### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

### Symbols

- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- Level crossing
- LCXXX: Level crossing

### Track alignment with design geometry figures

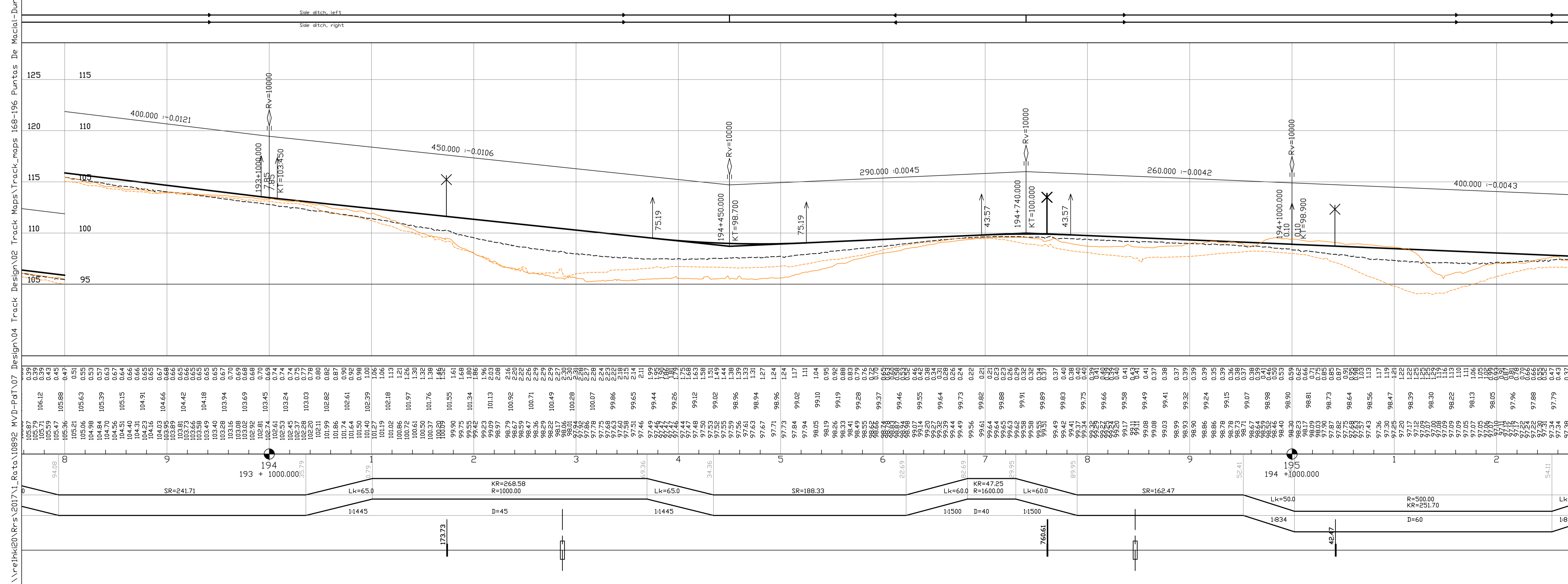
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

### Legend, Profile

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

### Horizontal alignment, schematic

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

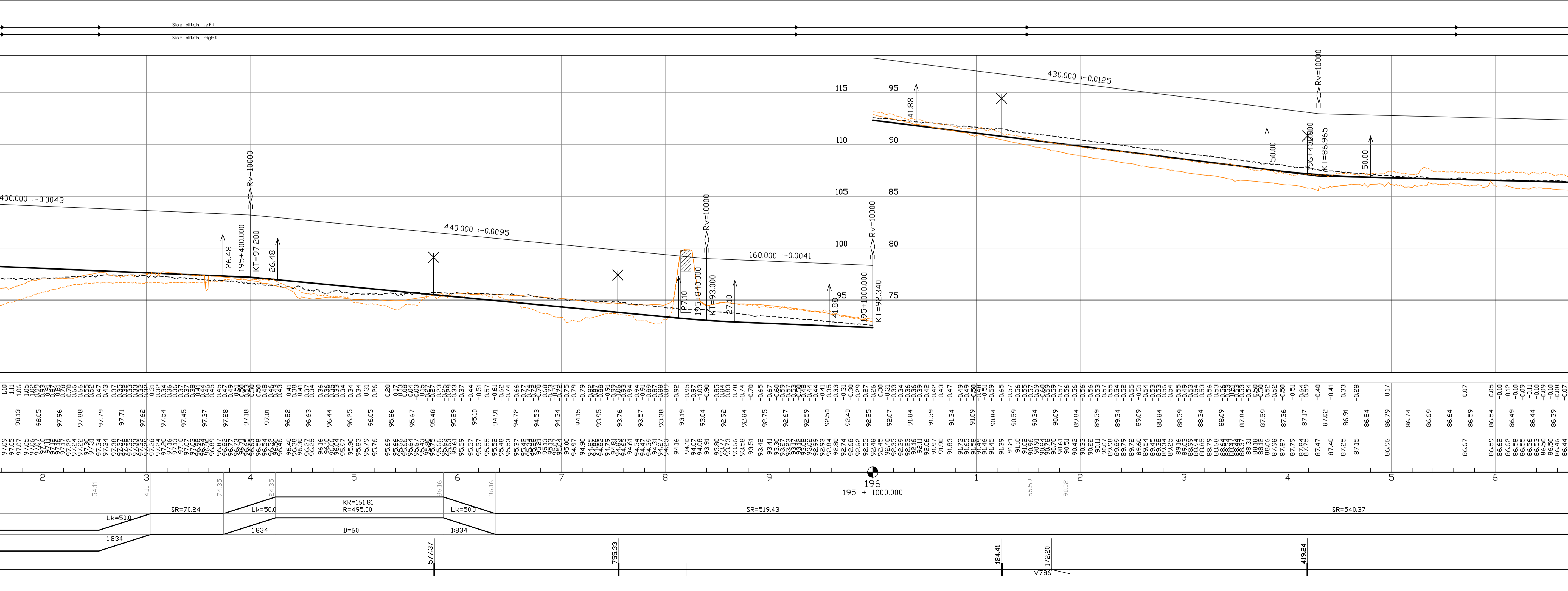
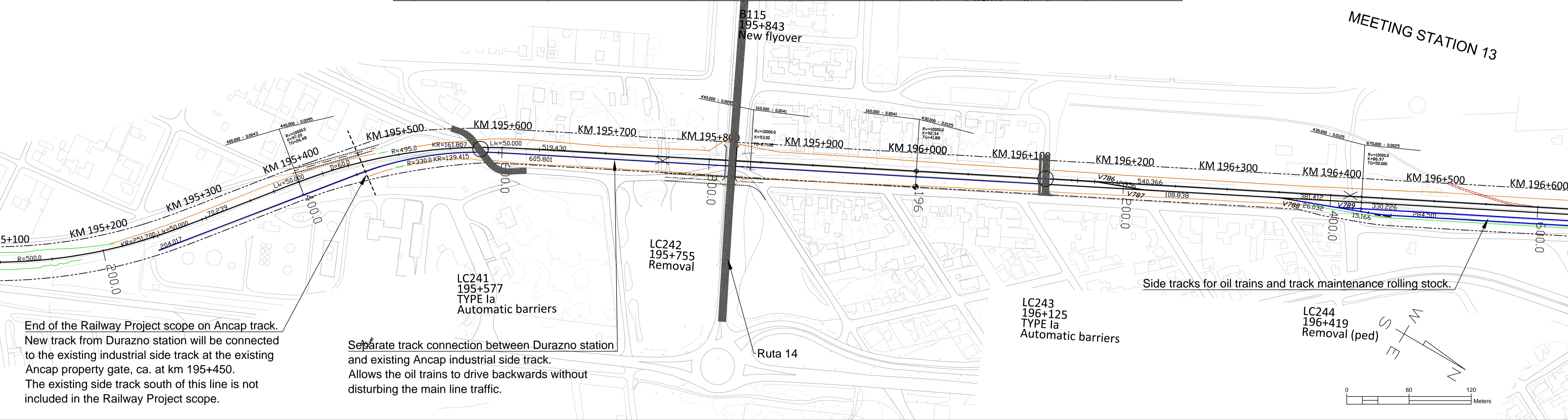
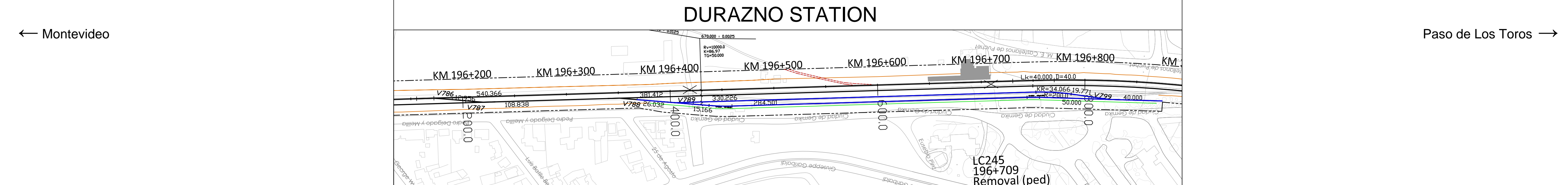


### Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
101					
102					
103					
104					
105					
106					
107					
108					
109					
110					
111					
112					
113					
114					
115					
116					
117					
118					
119					
120					
121					
122					
123					
124					
125					

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Supplier	VR TRACK	Design phase	Pre-engineering, Phase 2
Content		Track map and profile	
Scale	map 1:2000, profile 1:2000 / 1:200	Coordinate system	WGS 84 UTM 21 S, Local orthometric height
Designer	SVI	Railway line	Montevideo - Paso de Los Toros
Supervisor		Archive	Type Number Rev. Sheet Sheets total
Accept.			
Owner acc.			

\\net\h20\Nrs\2017\L\_Rato\_10892\_MVD-Pat\_07\_Design\04\_Track Maps\Track\_maps\_168-196\_Puntas De Macial-Duraznodwg



### LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- Railway bridge or underpass, Flyover
- Culvert
- Level crossing
- Track alignment with design geometry figures
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - Rv= radius of vertical curve
  - K= elevation
  - TG= length of tangent
  - 123.345= length of straight line (m)
- SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

### LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

**Version 15.12.2017**

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer	Railway Project	
Design phase	Pre-engineering, Phase 2	
Content	Track map and profile	
Supplier		
Scale	map 1:2000, profile 1:2000 / 1:200	
Coordinate system	WGS 84 UTM 21 S, Local orthometric height	
Railway line	Montevideo - Paso de Los Toros	
Drawer	15.12.2017	UPa
Designer	15.12.2017	HM/a / MLe
Supervisor	15.12.2017	SVI
Accept.		
Owner acc.		
Archive	Type	Number
Rev.	Sheet	Sheets total
		140, 195