

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

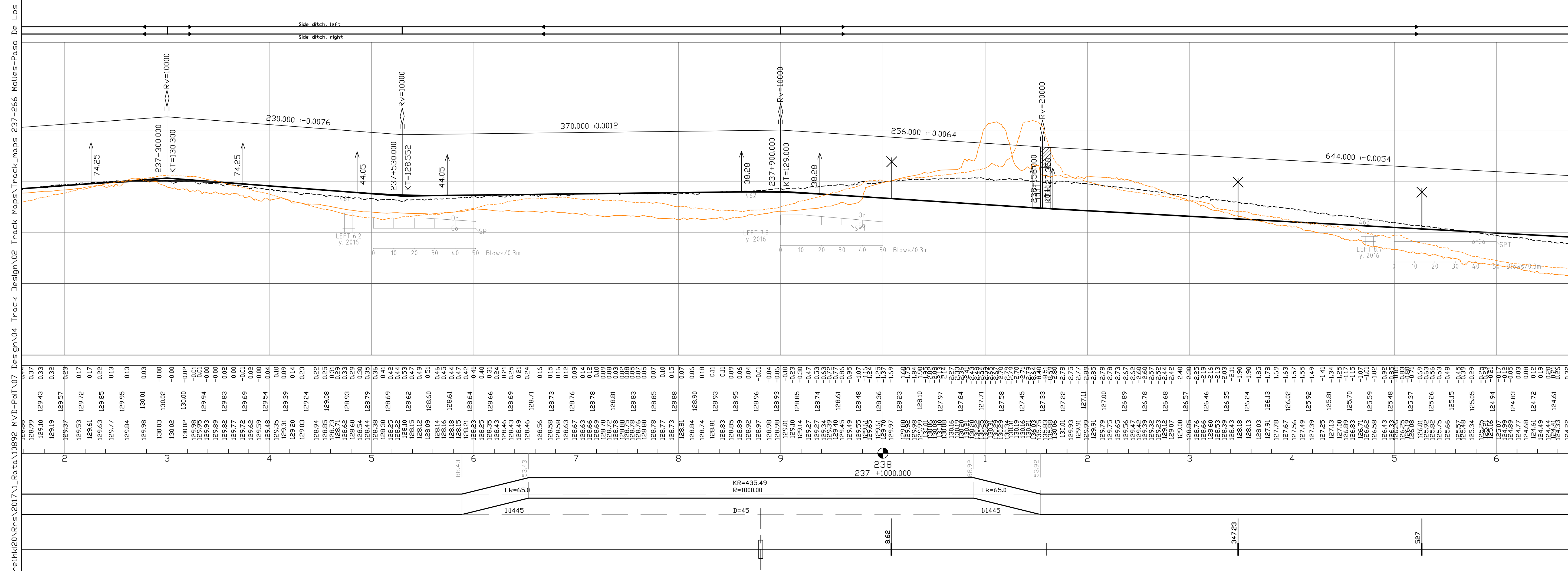
- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

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

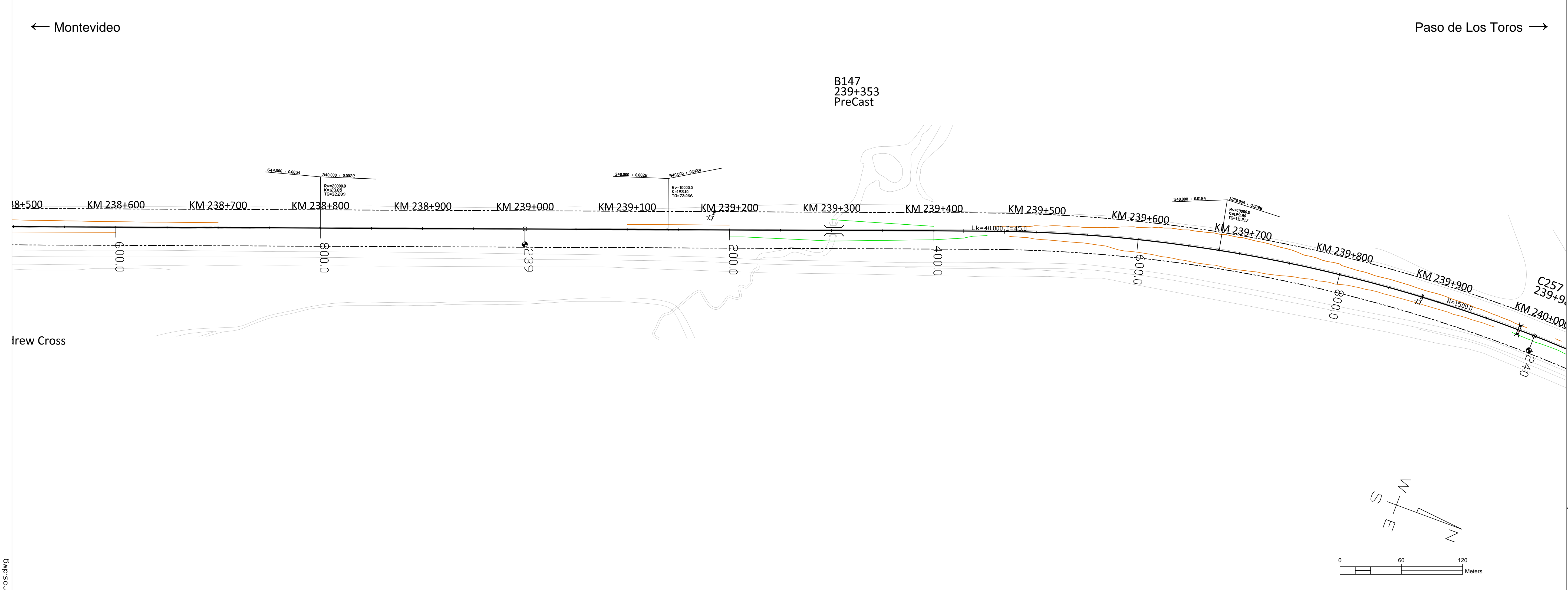
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor
1					

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

\\net\h20\Nrs\2017\1\Rate\10892_MVD-Pat\07_Design\04_Track Maps\Track_maps_237-266_Malles-Paso De Los Toros.dwg



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

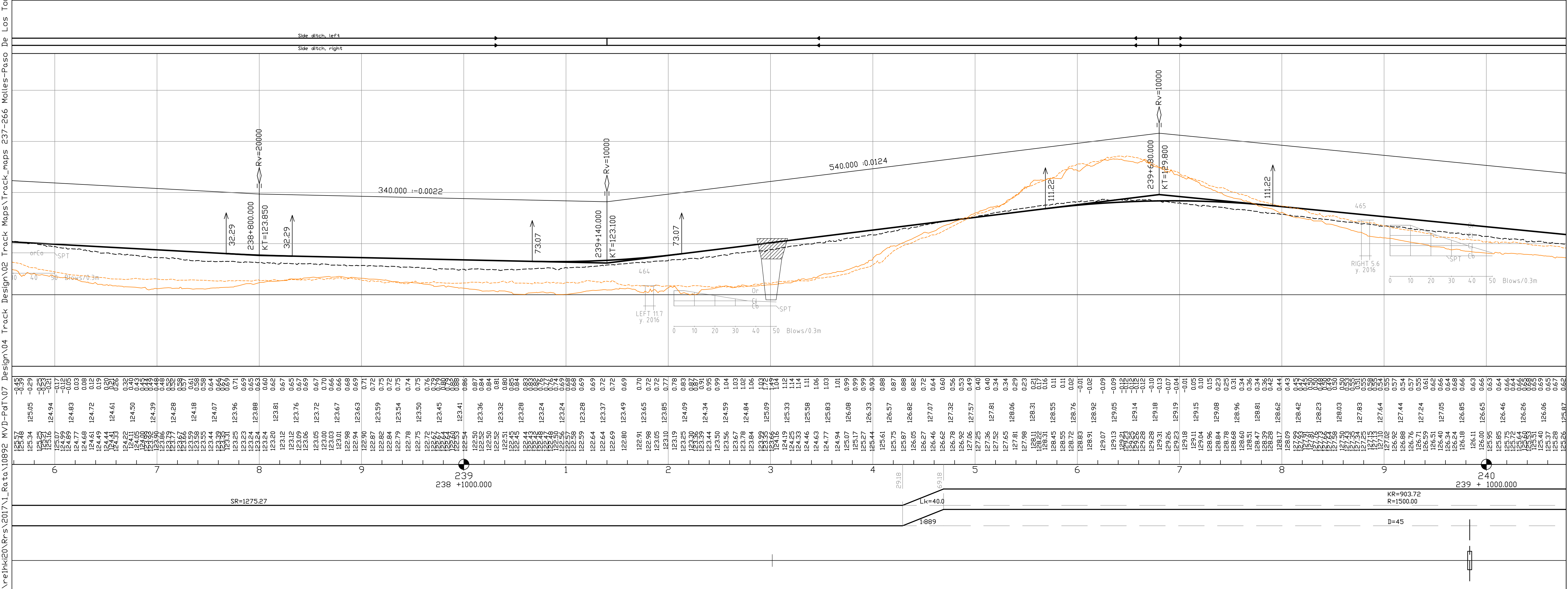
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

LEGEND, 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

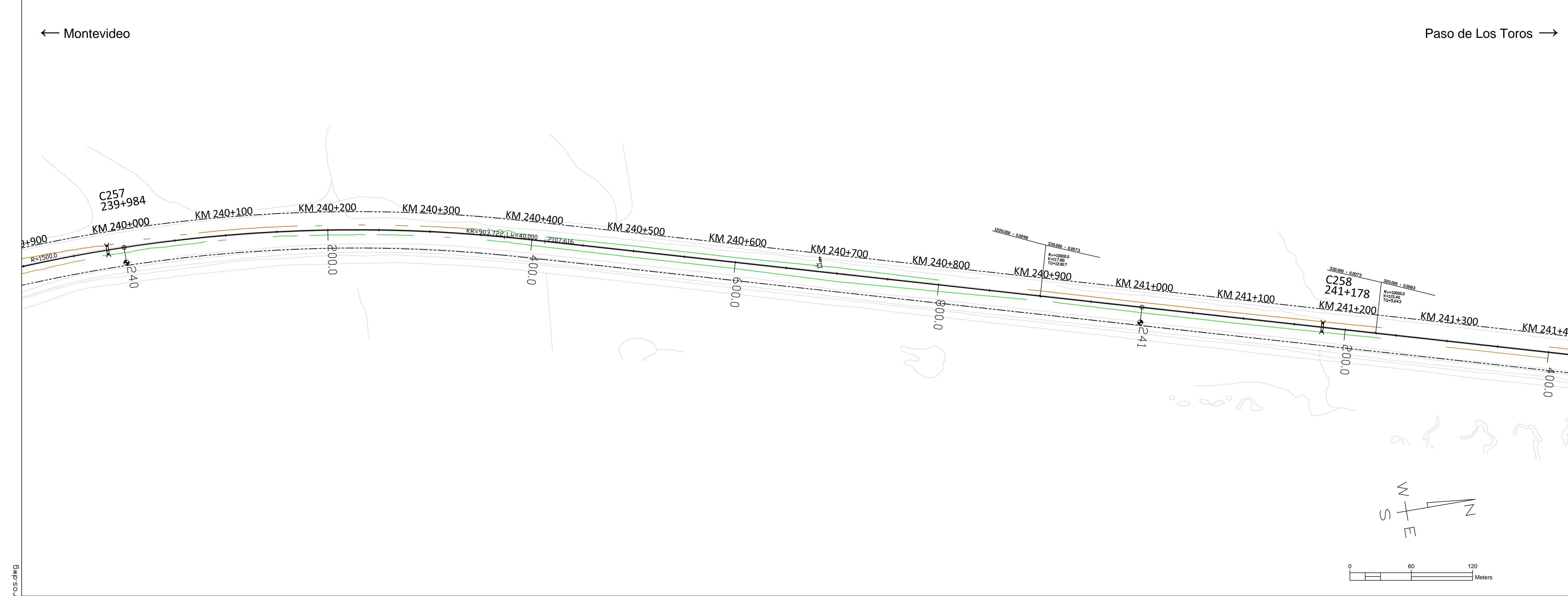
Revision	Explanation	Date	Designer	Date	Acceptor
1					

MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier

Customer		Project	
Railway Project		Pre-engineering, Phase 2	
Content		Track map and profile	
Supplier		Km 238+0600 - 240+0000	

Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HM/MLo	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.				171, 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)

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

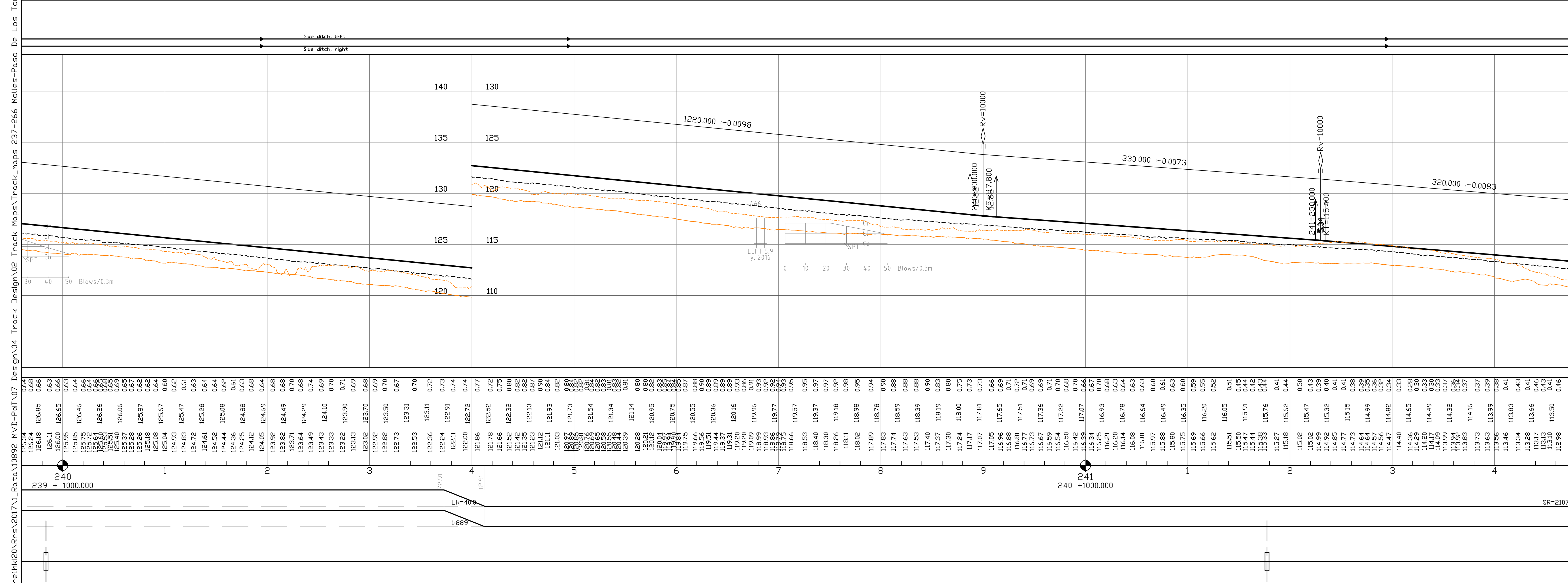
- y. 2017= year of investigation
- TR02= point number

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)

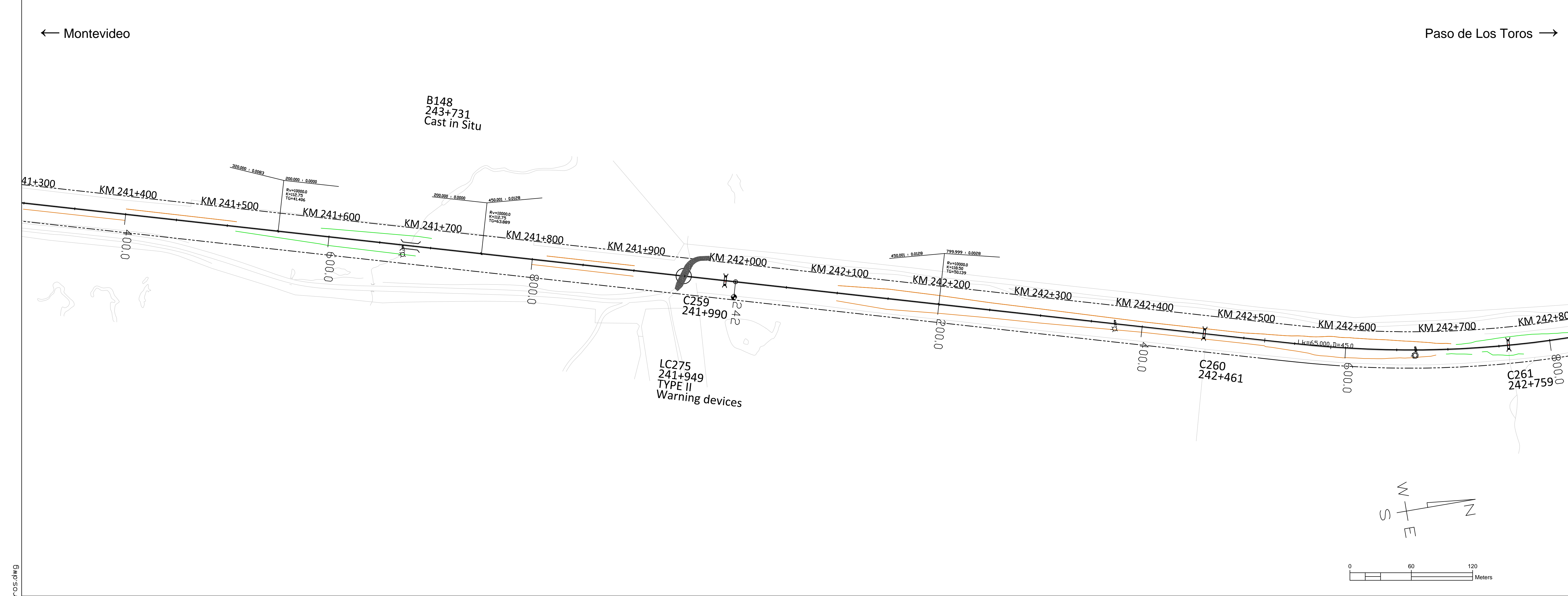


Version 15.12.2017

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	Content	Km 240+0000 - 241+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	
Accept.			Railway line	Montevideo - Paso de Los Toros
Owner acc.			Archive	Type Number Rev. Sheet Sheets total



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

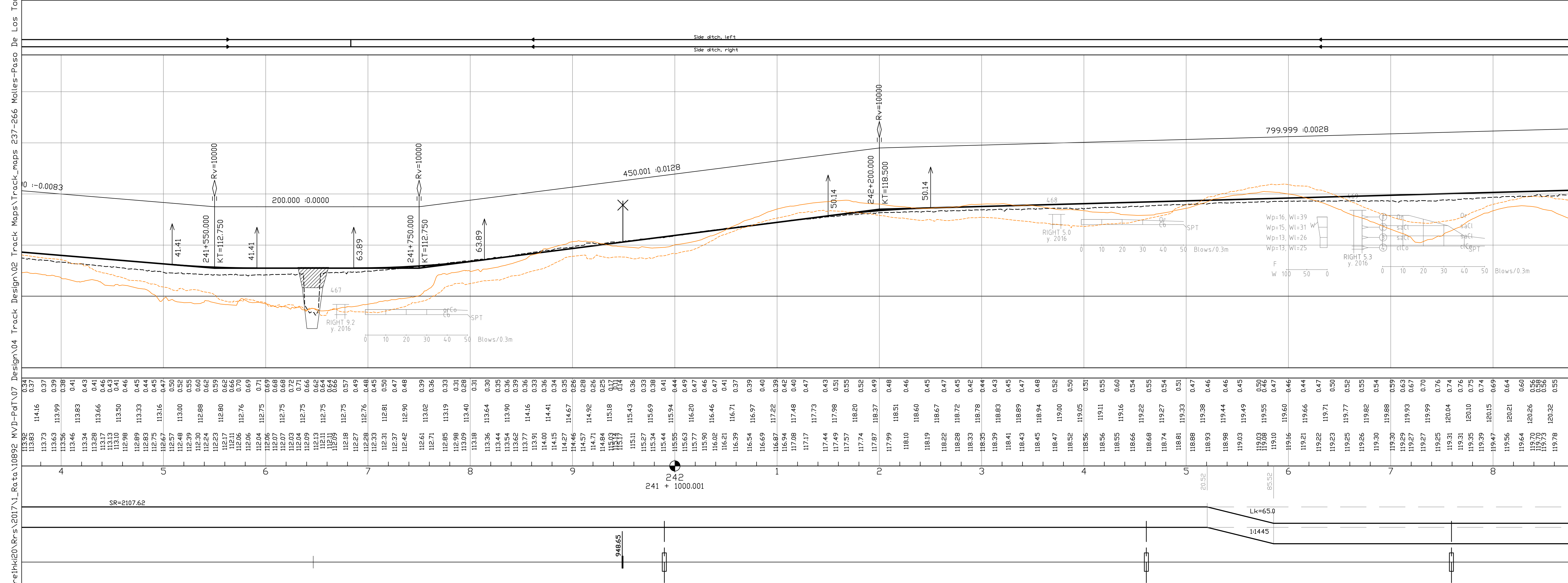
- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

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

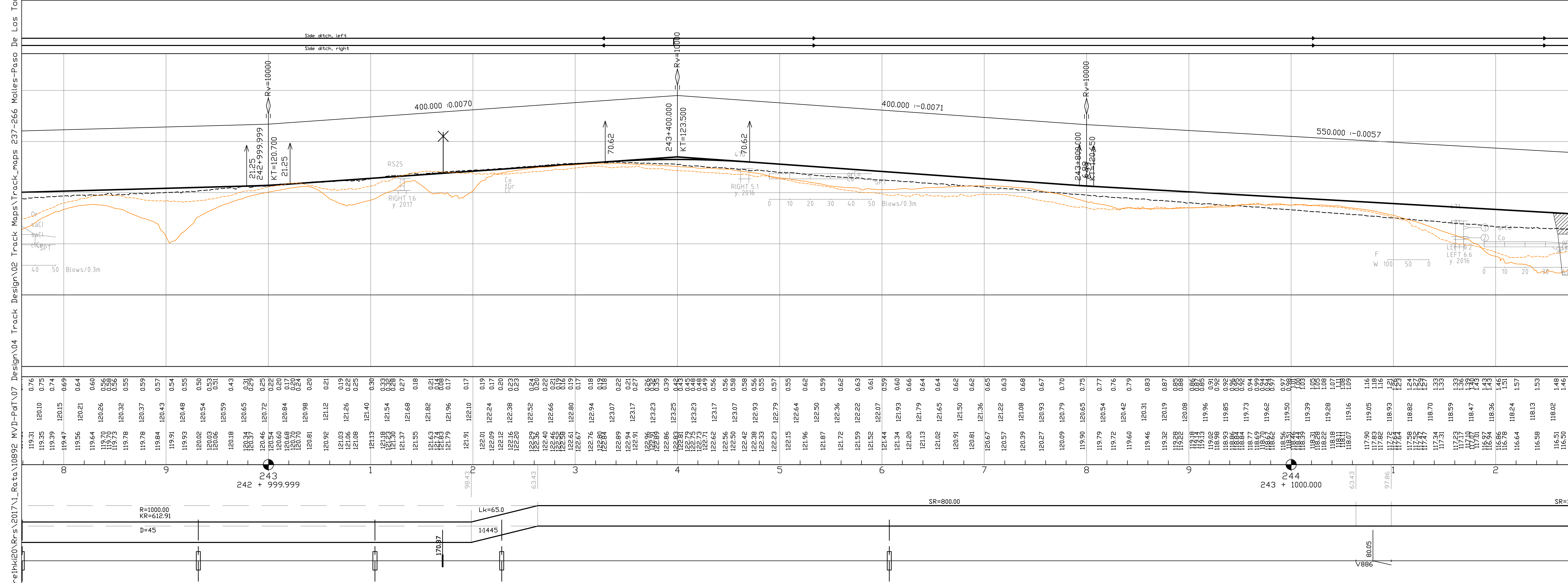
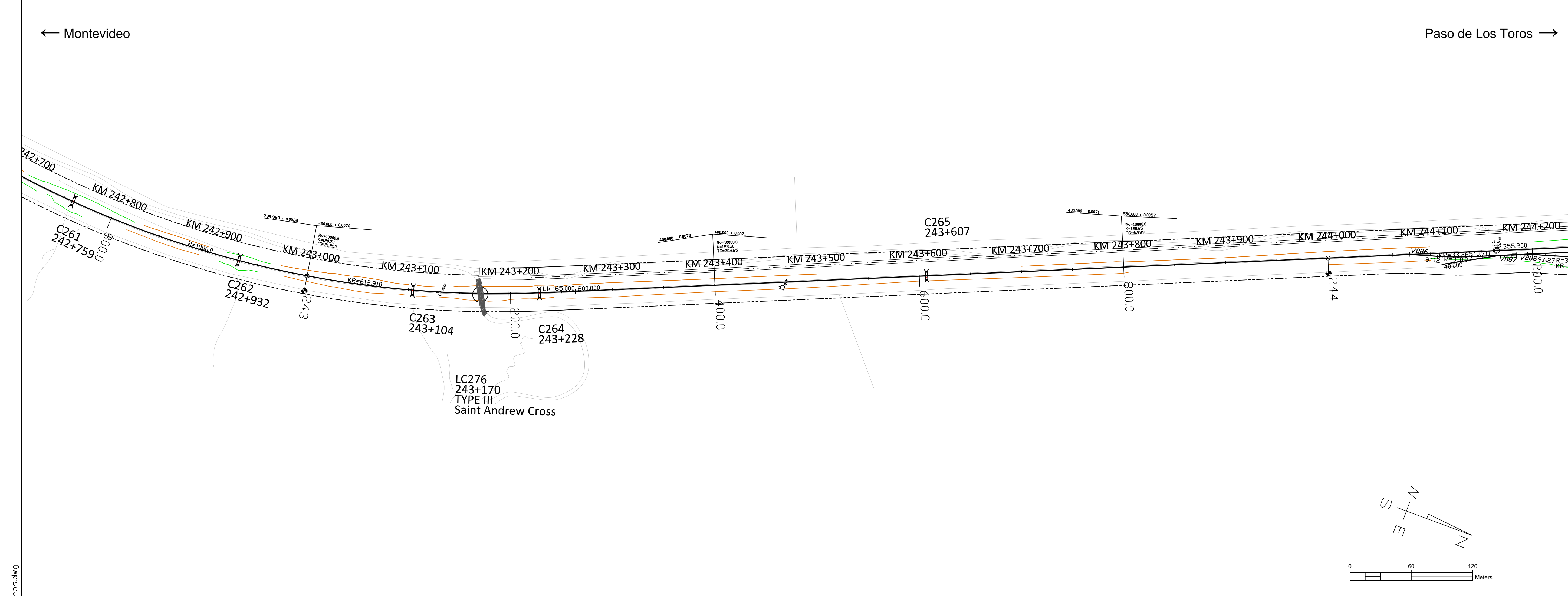
SR= length of straight line (m)
 R= curve radius (m)
 KR= length of curve (m)
 D= track cant (mm)
 Lk= length of transition curve (m)

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	VR TRACK		
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
Owner acc.		Archive	Type Number Rev. Sheet Sheets total
			173, 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)

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: V TRACK

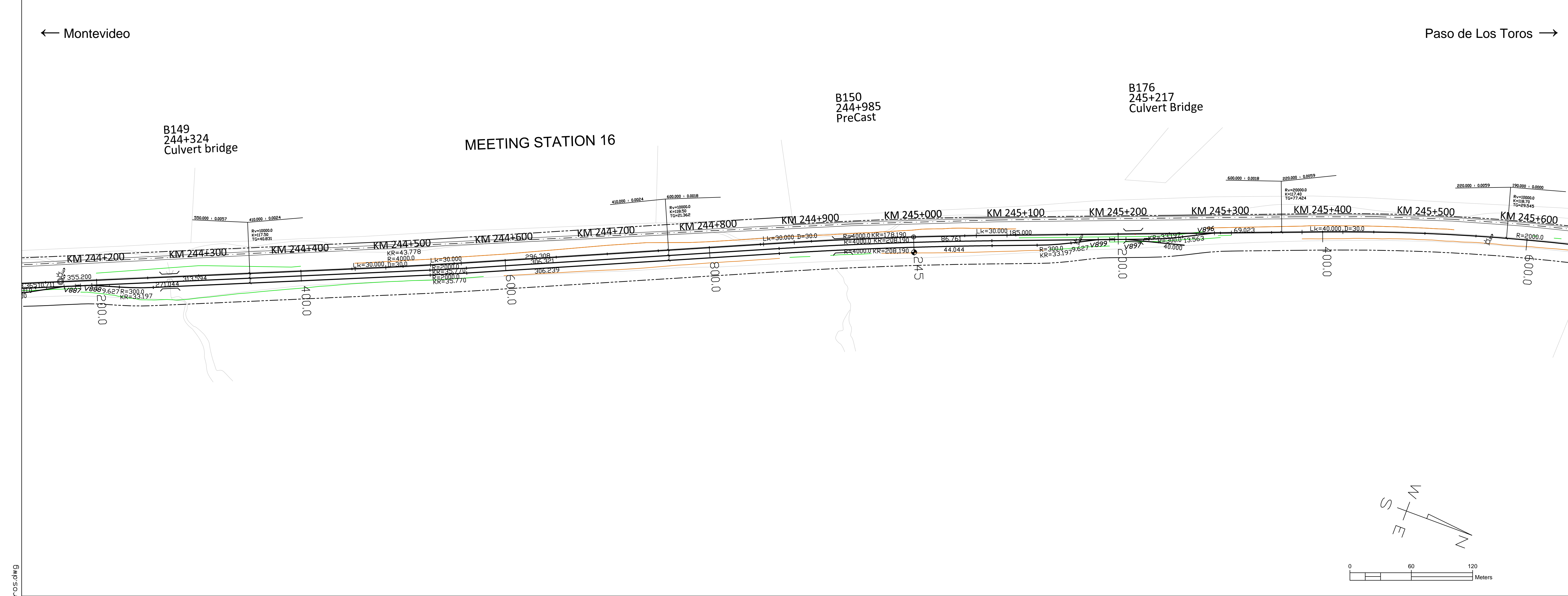
Project Name: Km 242+0800 - 244+0200

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

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

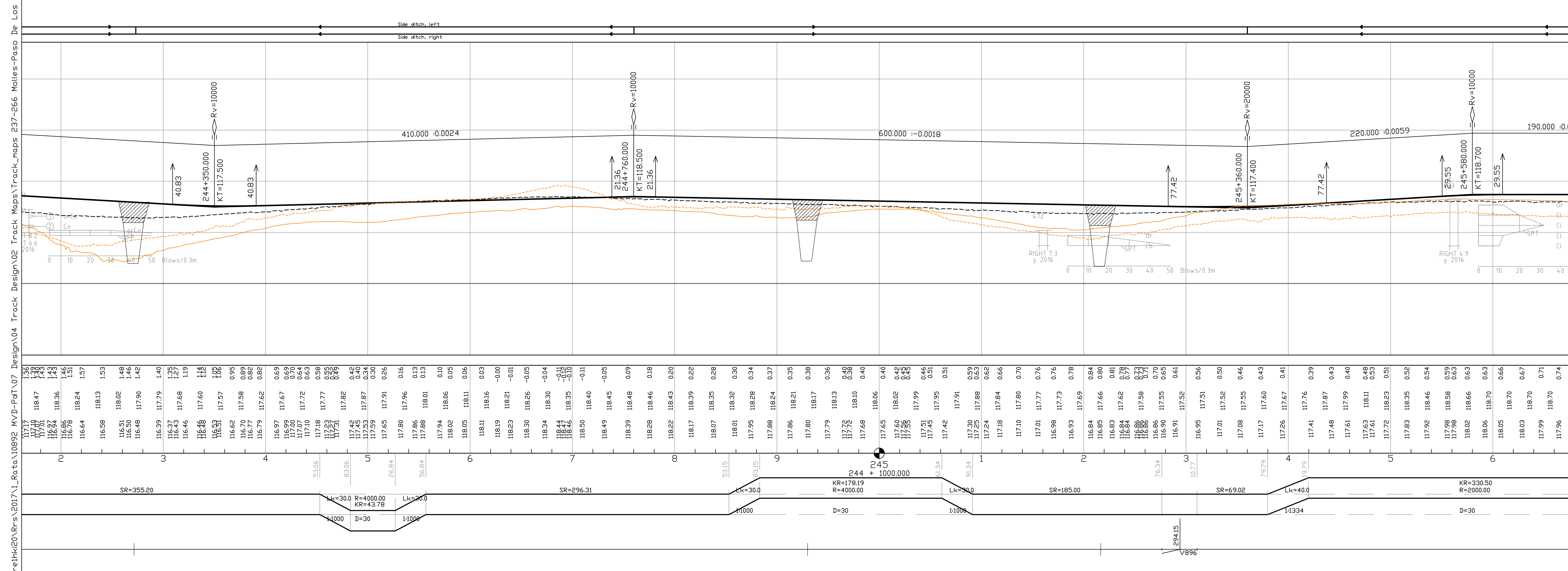
Supervisor	Date	Author	Railway line
SVI	15.12.2017	SVI	Montevideo - Paso de Los Toros

Accept.	Rev.	Sheet	Sheets total
		174	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)
- Red dashed line: 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	Issue for approval	15.12.2017	UPa		

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 244+0200 - 245+0600**

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

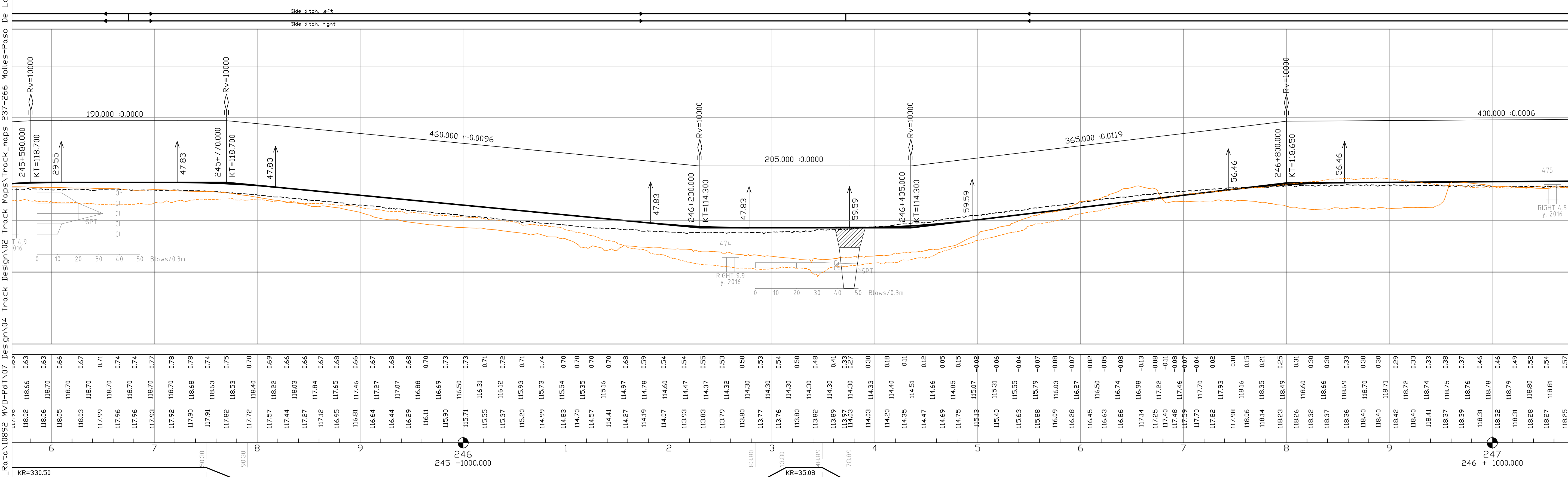
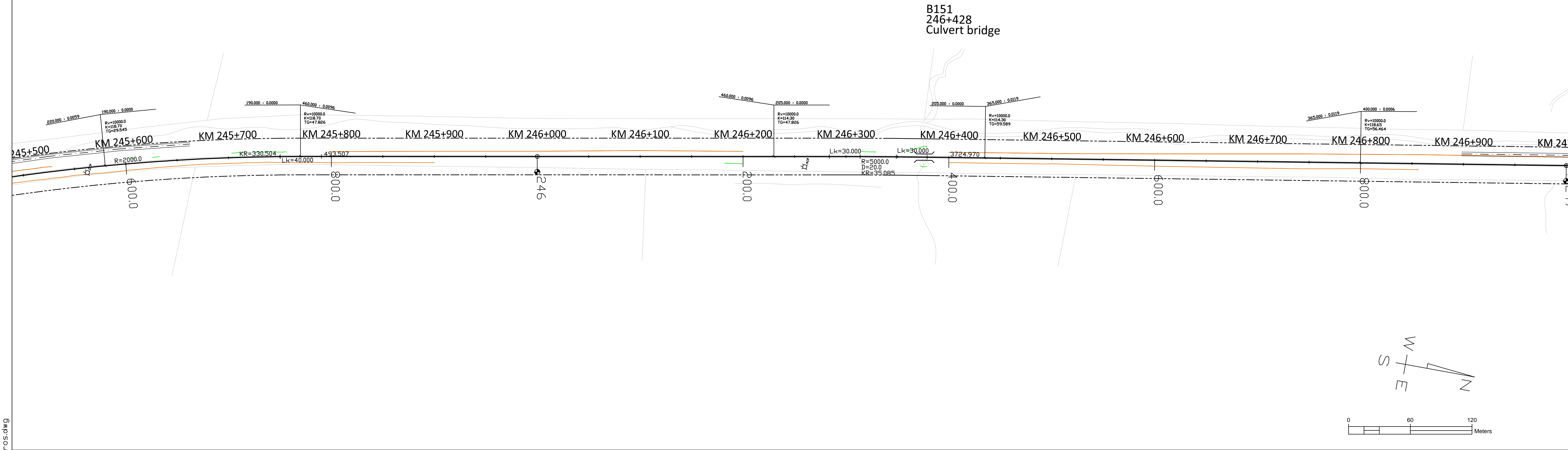
Designer	Date	Coordinate system
HMa / MLe	15.12.2017	WGS 84 UTM 21 S, Local orthometric height

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

Accept.	Archive	Type	Number	Rev.	Sheet	Sheets total
					175	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
 - 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					

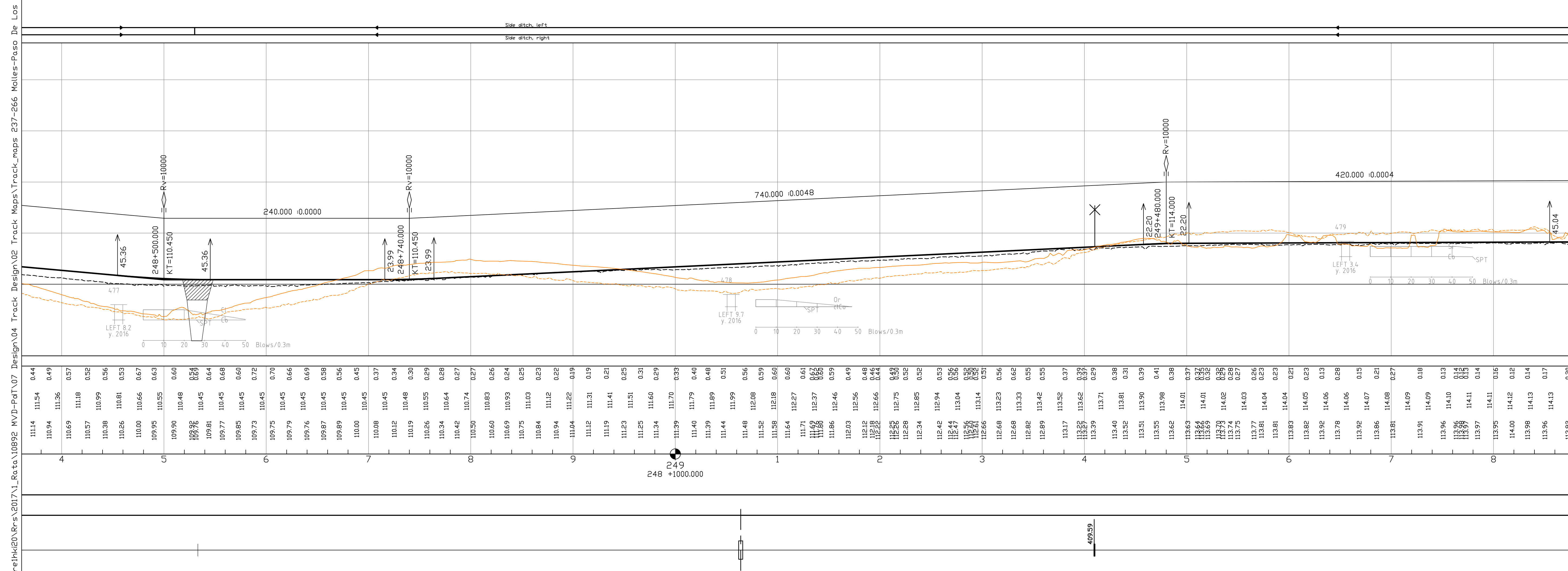
Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Design phase	Pre-engineering, Phase 2	Content	Track map and profile
Supplier	VR TRACK	Scale	Km 245+0600 - 247+0000

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

\\nre\hki20\Nrs\2017\1\Rate\10892_MVD-PaT\07_Design\04_Track Maps\Track_maps_237-266_Molles-Paso De Los Toros.dwg



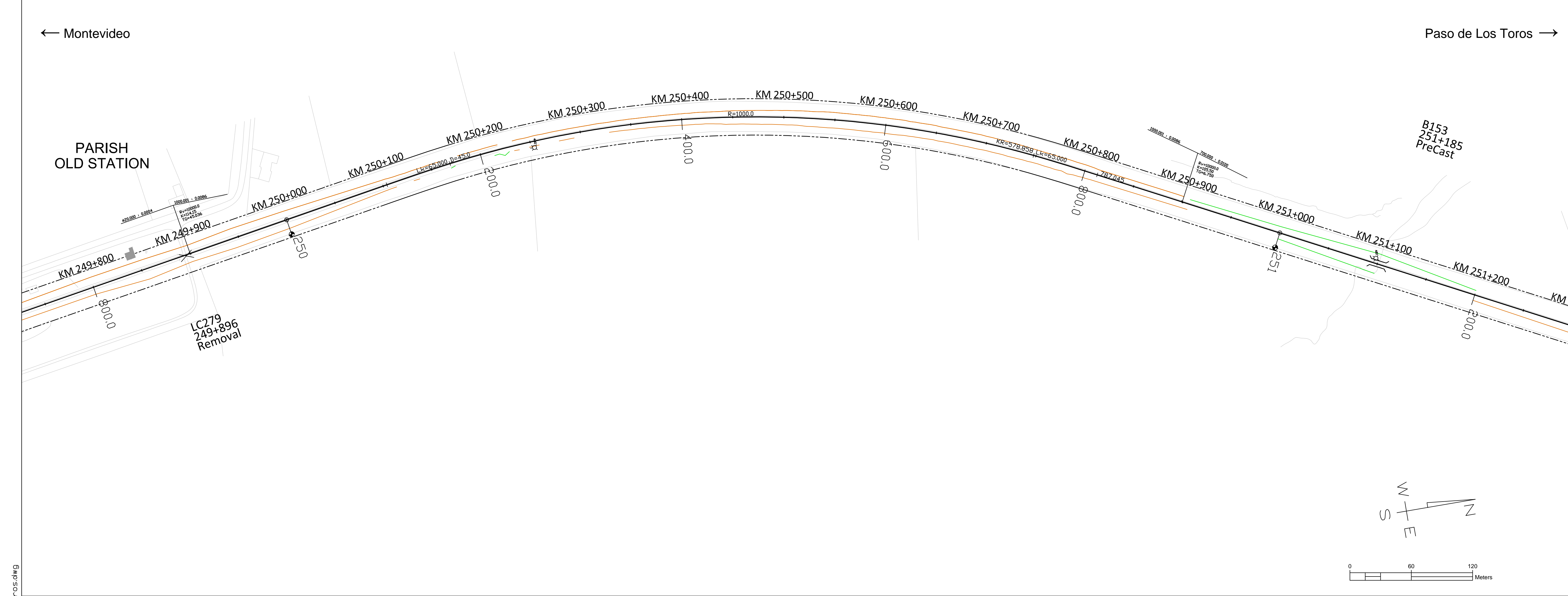
- LEGEND, MAP**
- New railway alignment
 - Existing railway alignment (not in the Railway Project scope)
 - Railway Area borderline
 - Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
 - Removal track
 - 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
Customer	 MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS				
Project	Railway Project				
Design phase	Pre-engineering, Phase 2				
Content	Track map and profile				
Supplier	 V TRACK				
Content	Km 248+0400 - 249+0800				
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
				178	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

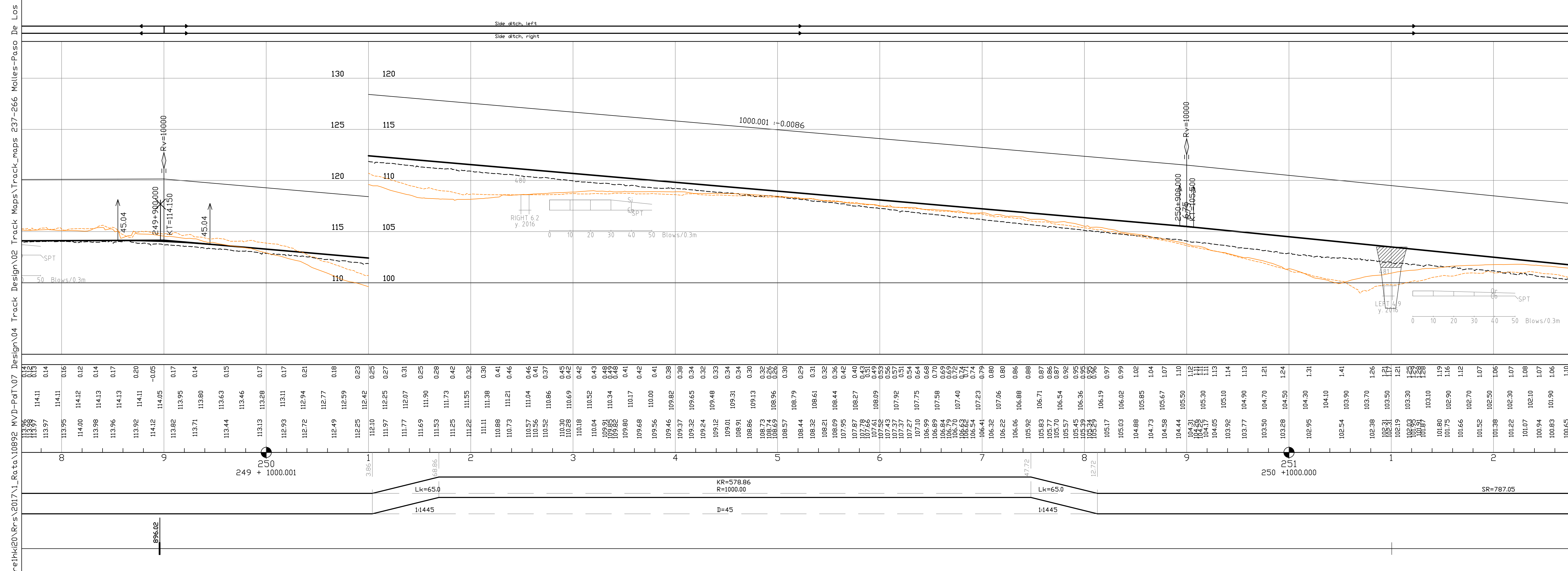
Symbols

- 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)

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

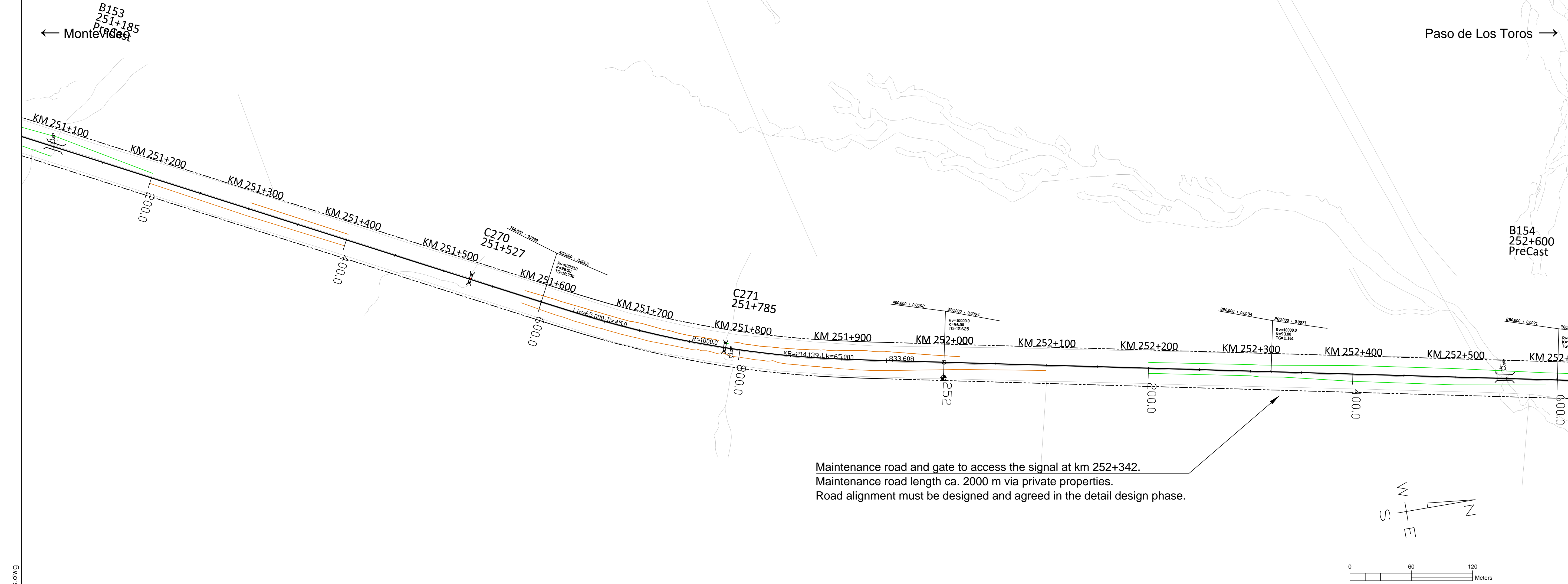
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

Revision	Explanation	Date	Designer	Date	Acceptor
1					

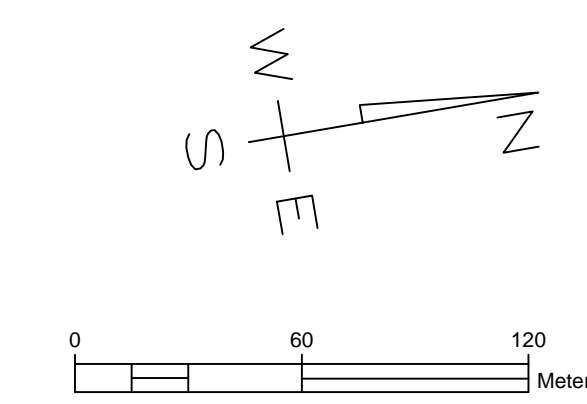
Version 15.12.2017

MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS		Railway Project Design phase: Pre-engineering, Phase 2 Content: Track map and profile	
Supplier 		Km 249+0800 - 251+0200	
Drawer: 15.12.2017 Designer: 15.12.2017 Supervisor: 15.12.2017 Accept.: Owner acc.:	UPa HMa / MLe SVI	Scale: map 1:2000, profile 1:2000 / 1:200 Coordinate system: WGS 84 UTM 21 S, Local orthometric height Elevation reference system:	Archive Type Number Rev. Sheet Sheets total 179 195

\\net\h2k0\rrs\2017\1_Rata\10892 MVD-Pat\07_Design\04 Track Maps\Track_maps 237-266 Malles-Paso De Los Toros.dwg



Maintenance road and gate to access the signal at km 252+342.
 Maintenance road length ca. 2000 m via private properties.
 Road alignment must be designed and agreed in the detail design phase.

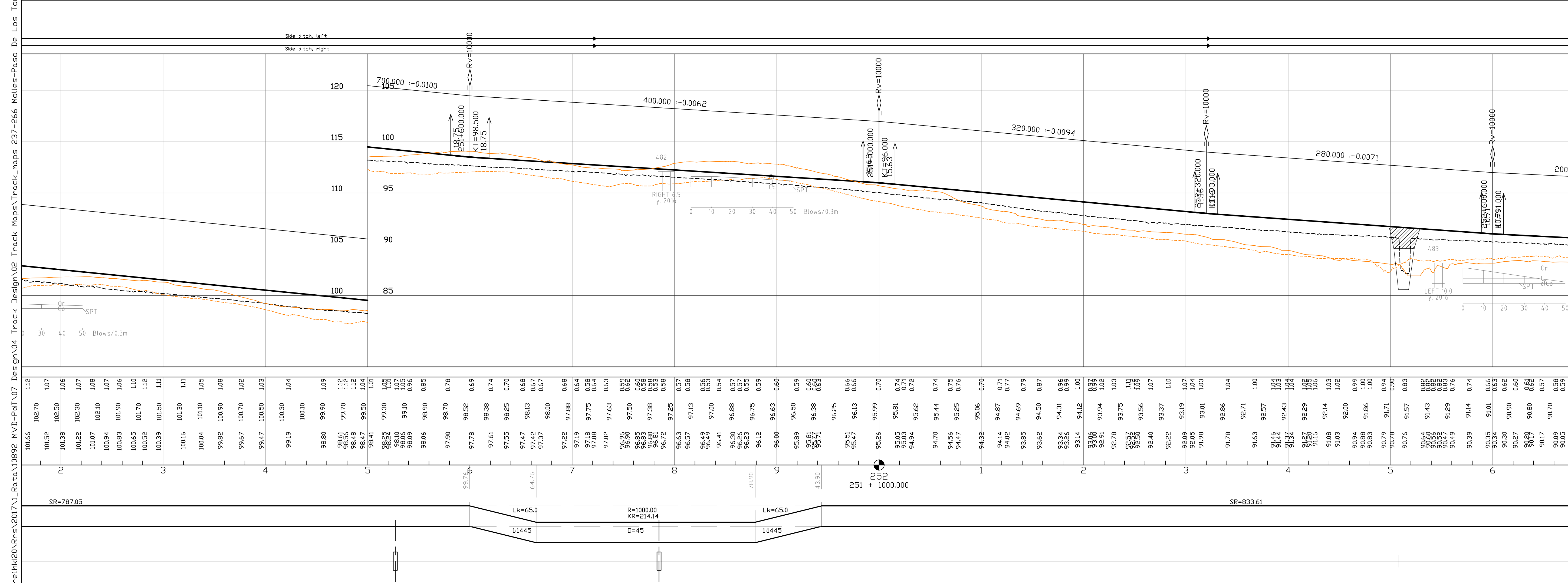


LEGEND, MAP

- 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 = 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					

MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS
VR TRACK

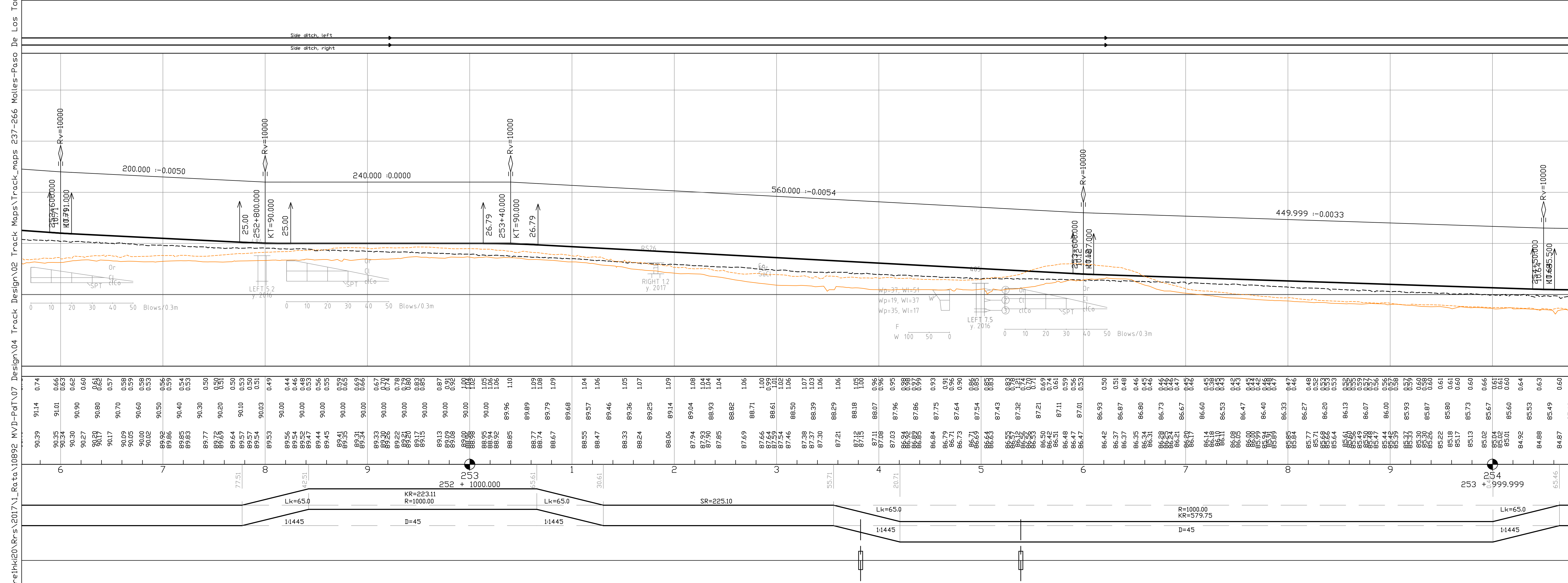
Project: Railway Project
 Design phase: Pre-engineering, Phase 2
 Content: Track map and profile
 Supplier: Km 251+0200 - 252+0600

Drawer	Designer	Supervisor	Accept.	Owner acc.	Scale	Coordinate system	Railway line	Archive	Type	Number	Rev.	Sheet	Sheets total
UPa	HMa / MLo	SVI			map 1:2000, profile 1:2000 / 1:200	WGS 84 UTM 21 S, Local orthometric height	Montevideo - Paso de Los Toros					180	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)
- 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)

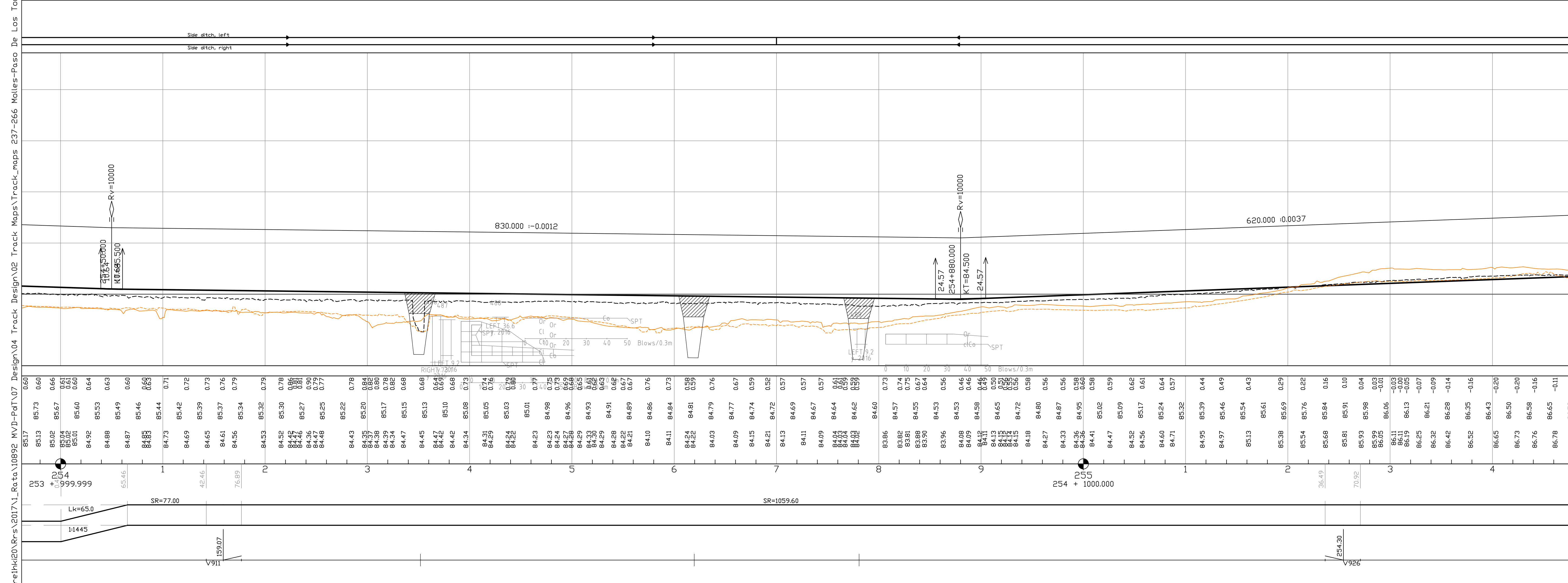
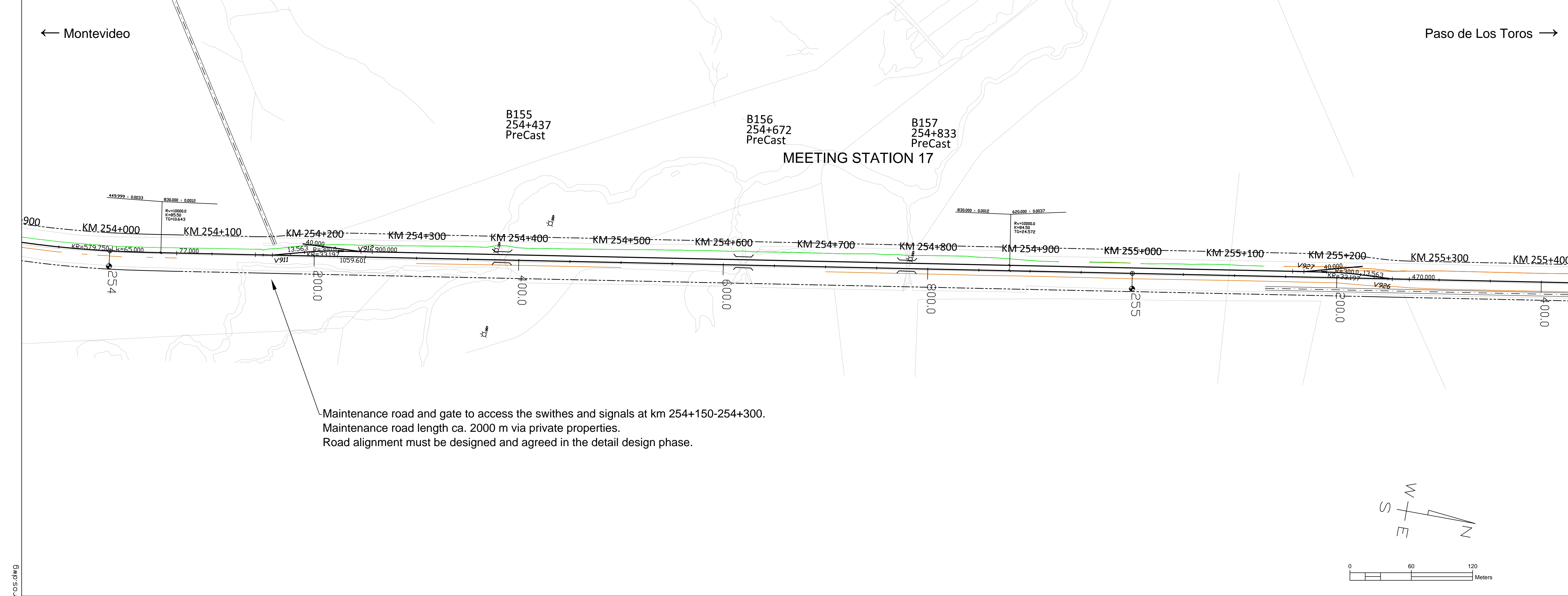
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor
1					

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Supplier	VR TRACK	Design phase	Pre-engineering, Phase 2
Content	Track map and profile	Content	Km 252+0600 - 254+0000

Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLo	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

\\net\h20\Nrs\2017\1\Rate\10892_MVD-PaT\07_Design\04_Track Maps\Track_maps_237-266_Malles-Paso De Los Toros.dwg



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: TRACK

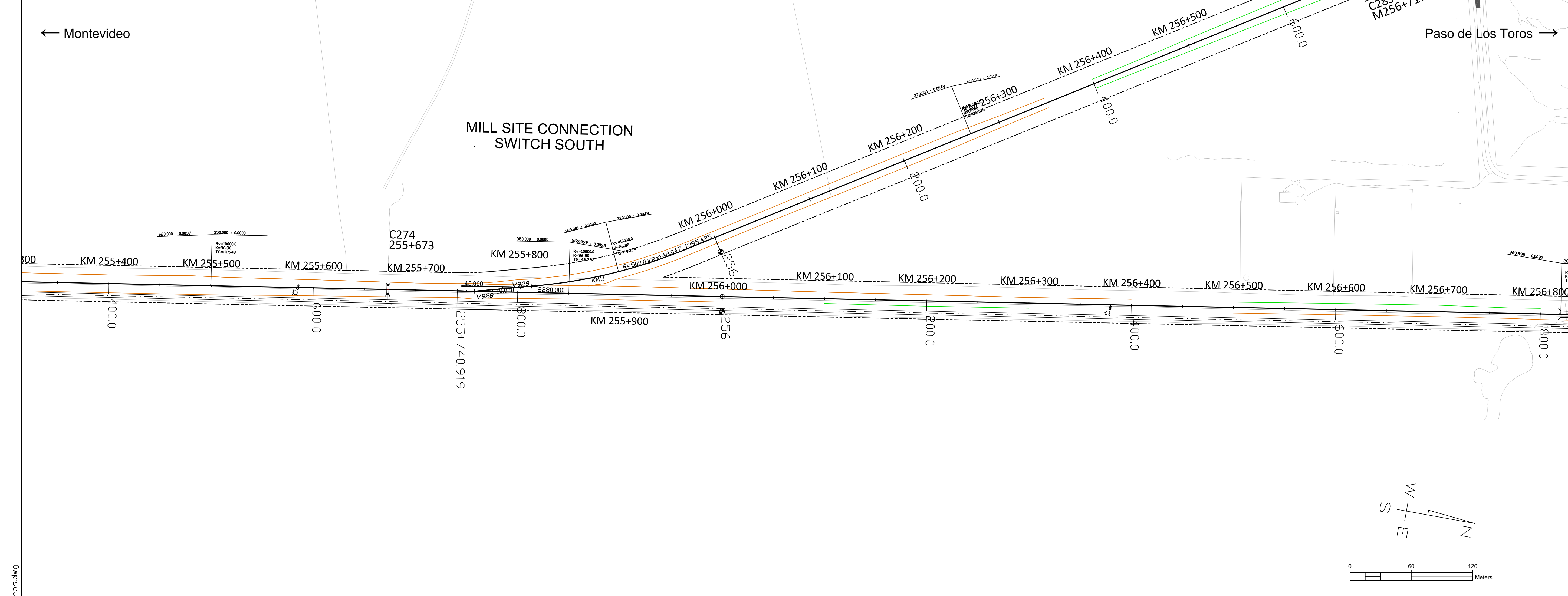
Project: Km 254+0000 - 255+0400

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

Designer	Date	Author	Coordinate system
HM/a / MLe	15.12.2017	HM/a / 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 total
		182	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

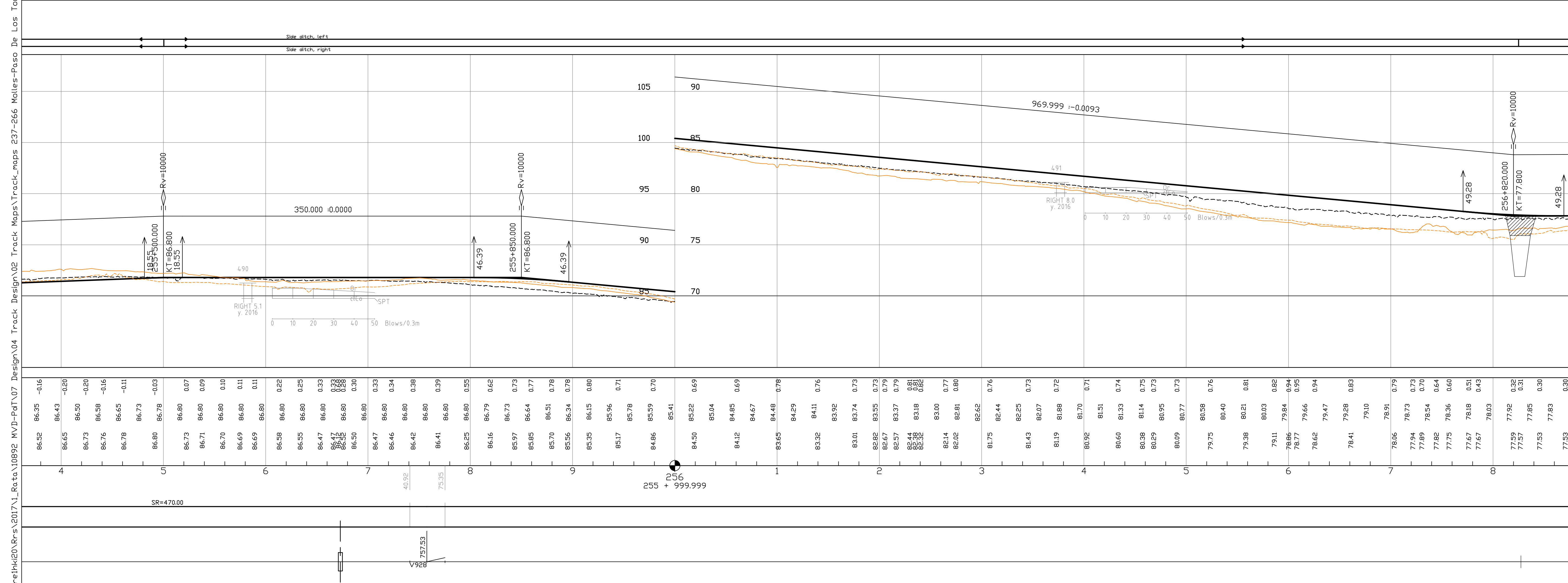
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- RV= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

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



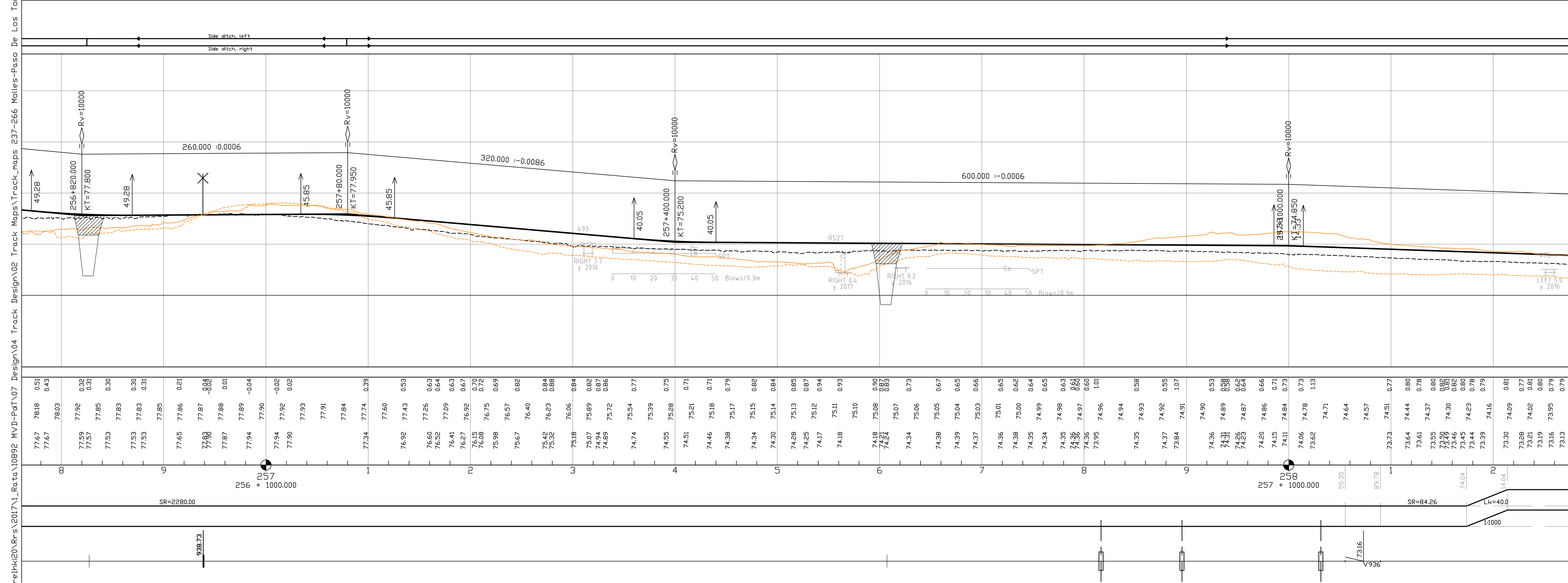
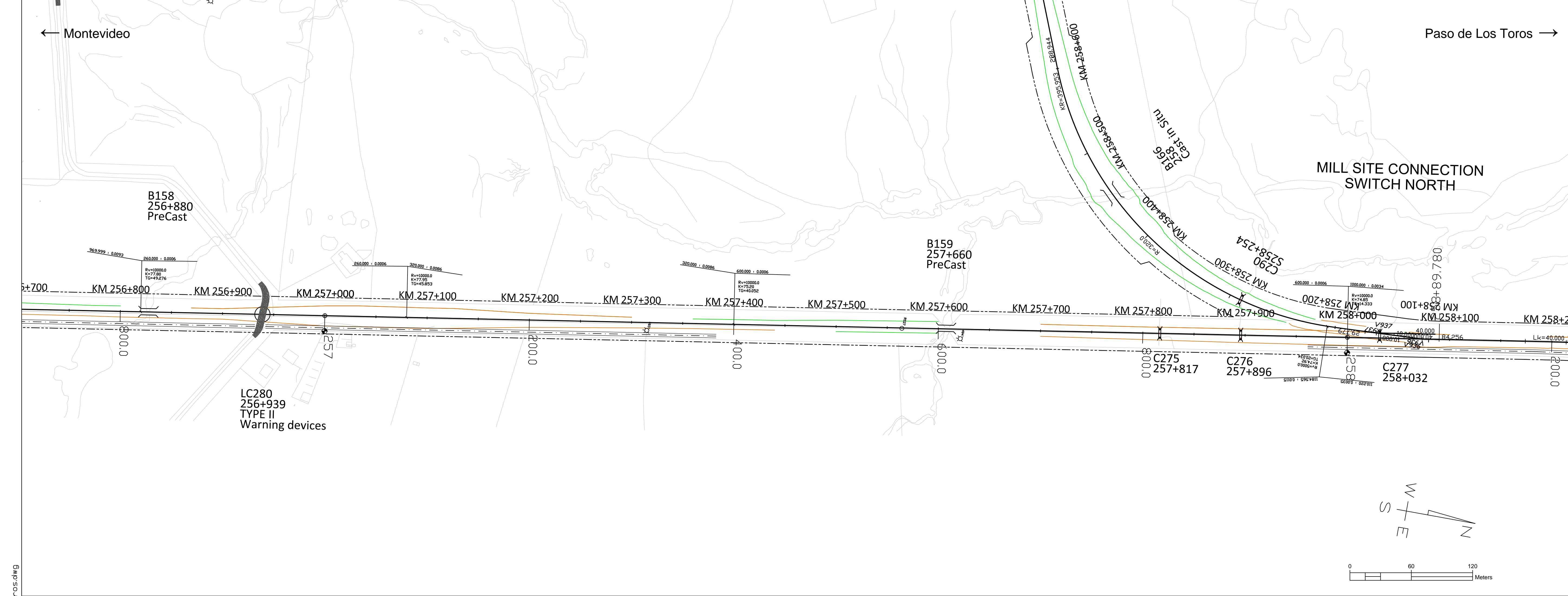
LEGEND, PROFILE

- 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
Customer	Railway Project				
Supplier	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS				
Design phase	Pre-engineering, Phase 2				
Content	Track map and profile				
Supplier	VR TRACK				
Content	Km 255+0400 - 256+0800				
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				
Rev. Sheet	Archive	Type	Number	Rev. Sheet	Sheets total
183					195

\\netfki20\rrs\2017\1_Rata\10892_MVD-Pd1\07_Design\04_Track Maps\Track_maps_237-266_Malles-Paso De Los Toros.dwg



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= 217 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**

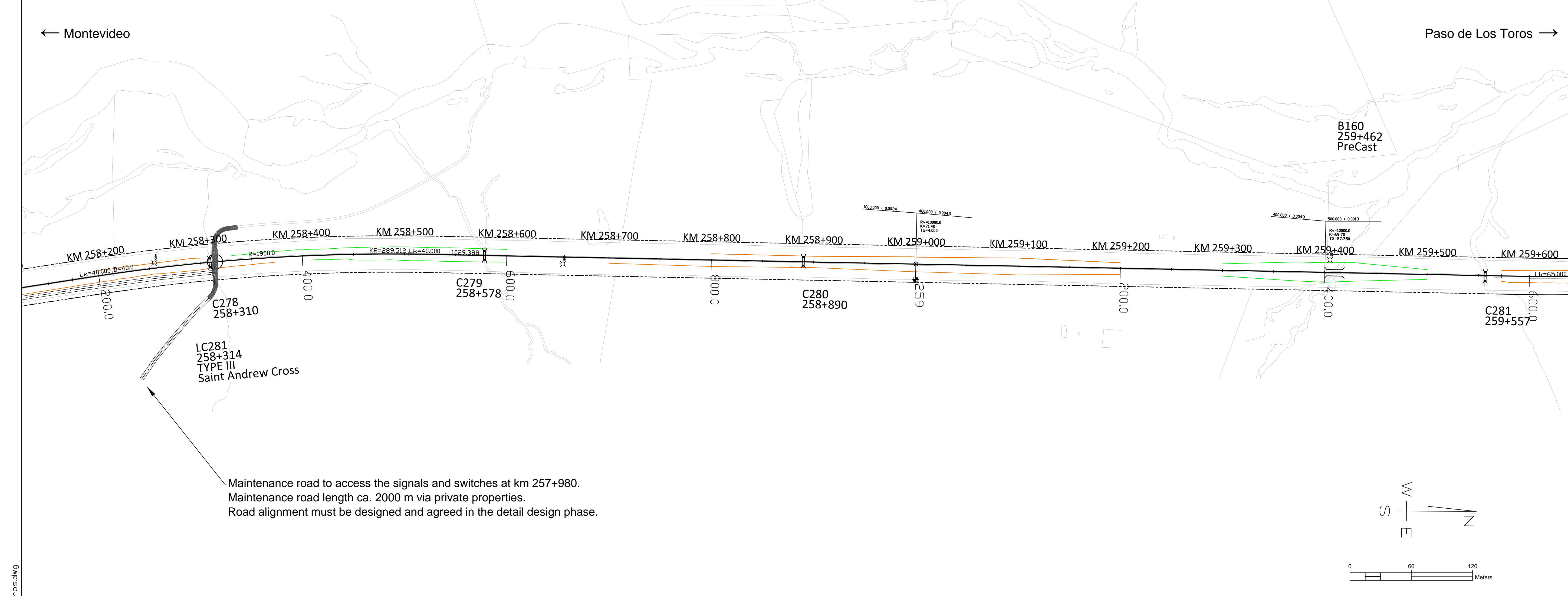
Project: **Km 256+0800 - 258+0200**

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

Designer	Date	Author	Coordinate system
HMa / MLe	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
					184	195



Maintenance road to access the signals and switches at km 257+980.
Maintenance road length ca. 2000 m via private properties.
Road alignment must be designed and agreed in the detail design phase.

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

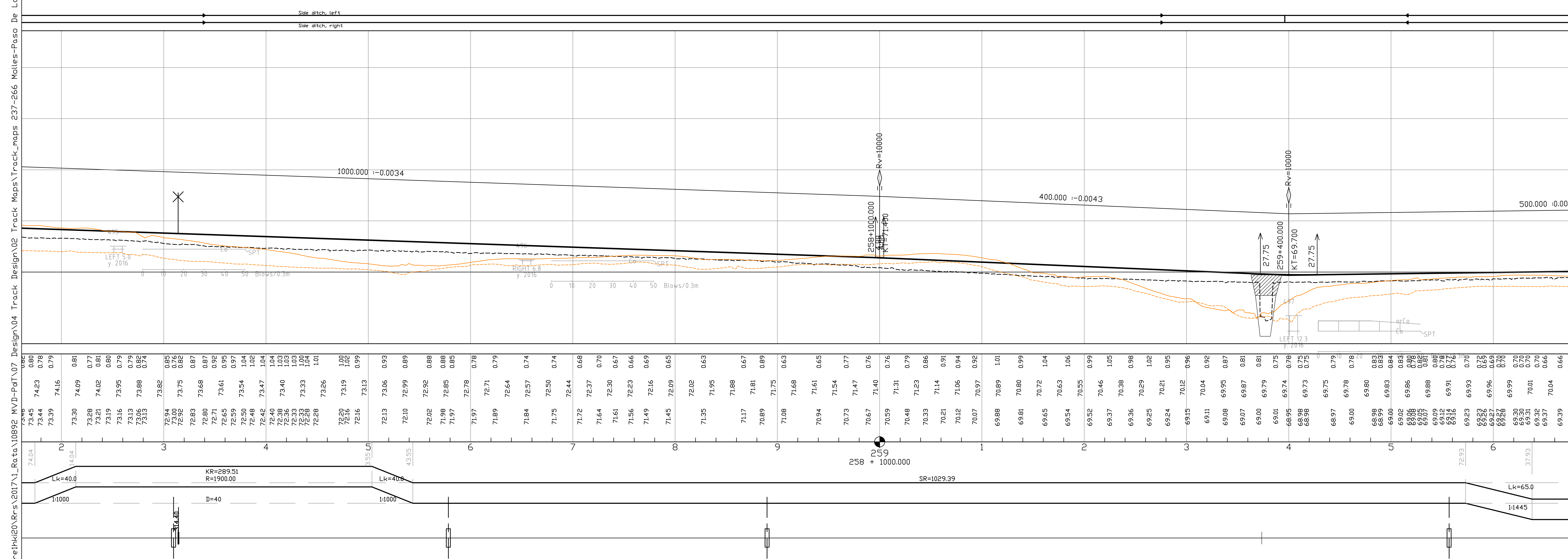
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

Legend, 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)



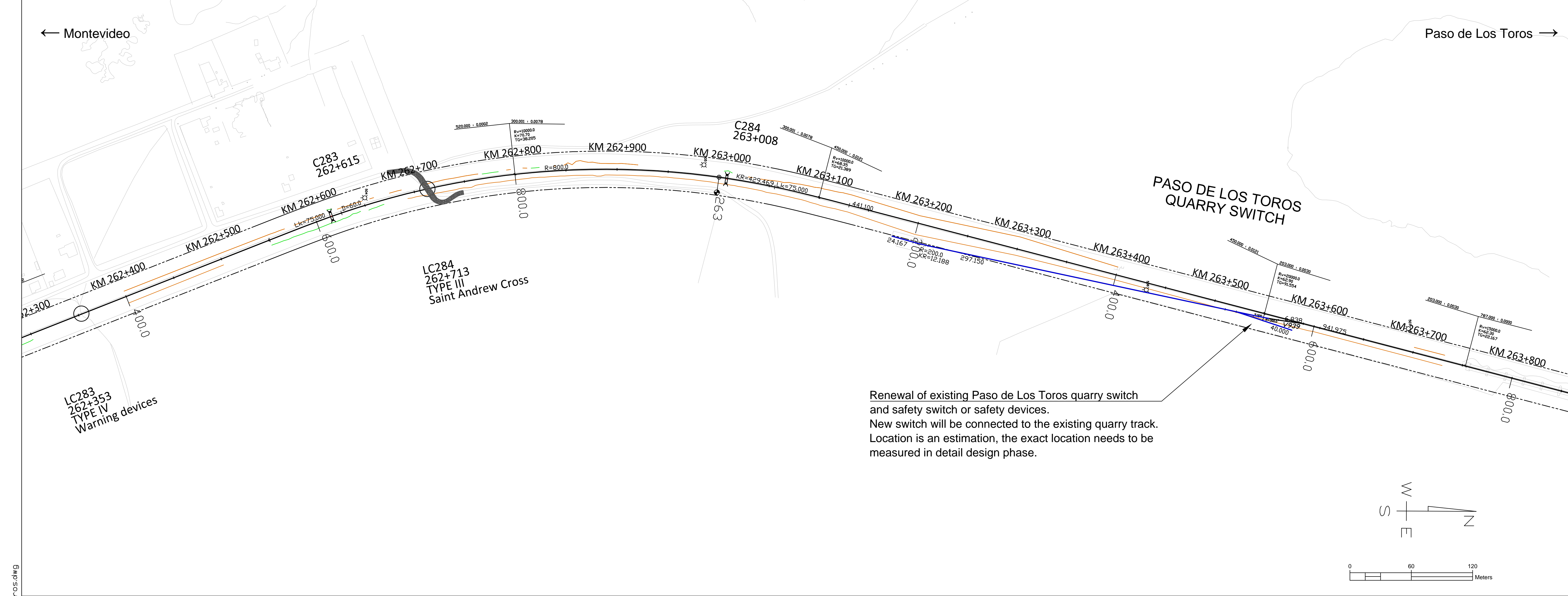
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Accepter
1					

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project	Railway Project
Supplier	VR TRACK	Design phase	Pre-engineering, Phase 2
Content	Track map and profile	Content	Km 258+0200 - 259+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	
Accept.			Railway line	Montevideo - Paso de Los Toros
Owner acc.			Archive	Type Number Rev. Sheet Sheets total

\\net\h20\Arqs\2017\L_Rato_10892_MVD-PaT-017_Design\04 Track Maps\Track_maps\237-266 Molles-Paso de Los Toros.dwg



Renewal of existing Paso de Los Toros quarry switch and safety switch or safety devices. New switch will be connected to the existing quarry track. Location is an estimation, the exact location needs to be measured in detail design phase.

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

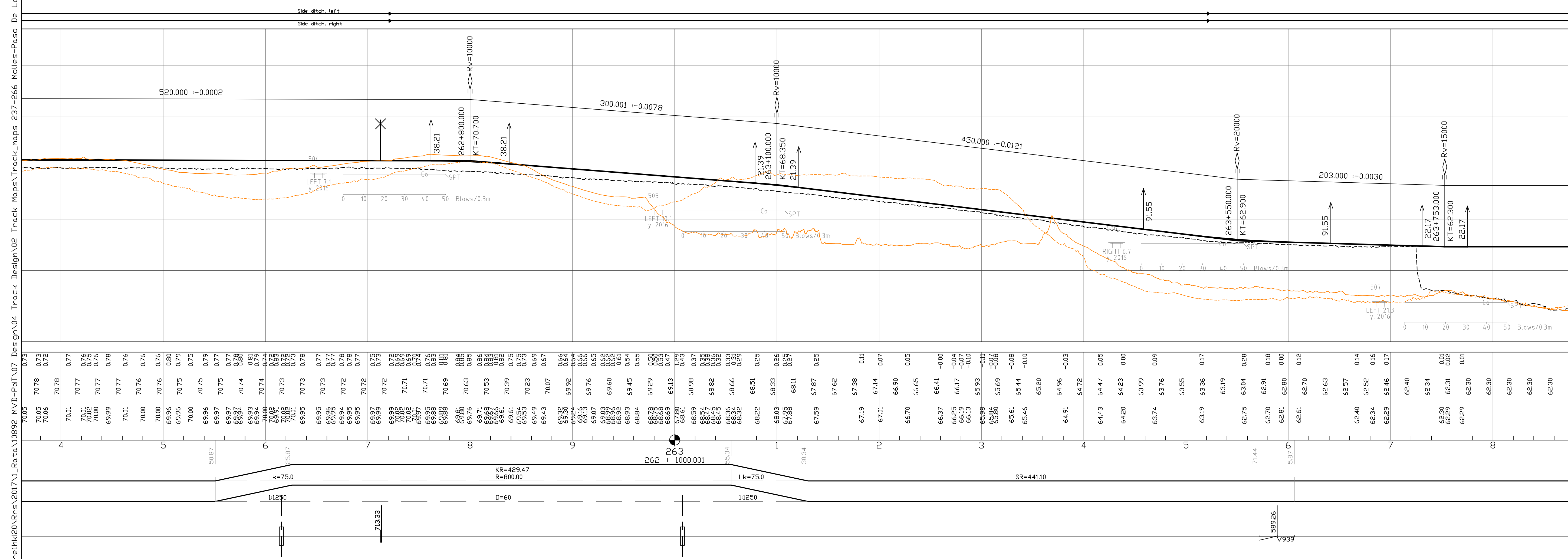
- BXXX BXXX: Railway bridge or underpass, Flyover
- CXXX: Culvert
- LCXXX: Level crossing

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)

Sounding Symbols

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

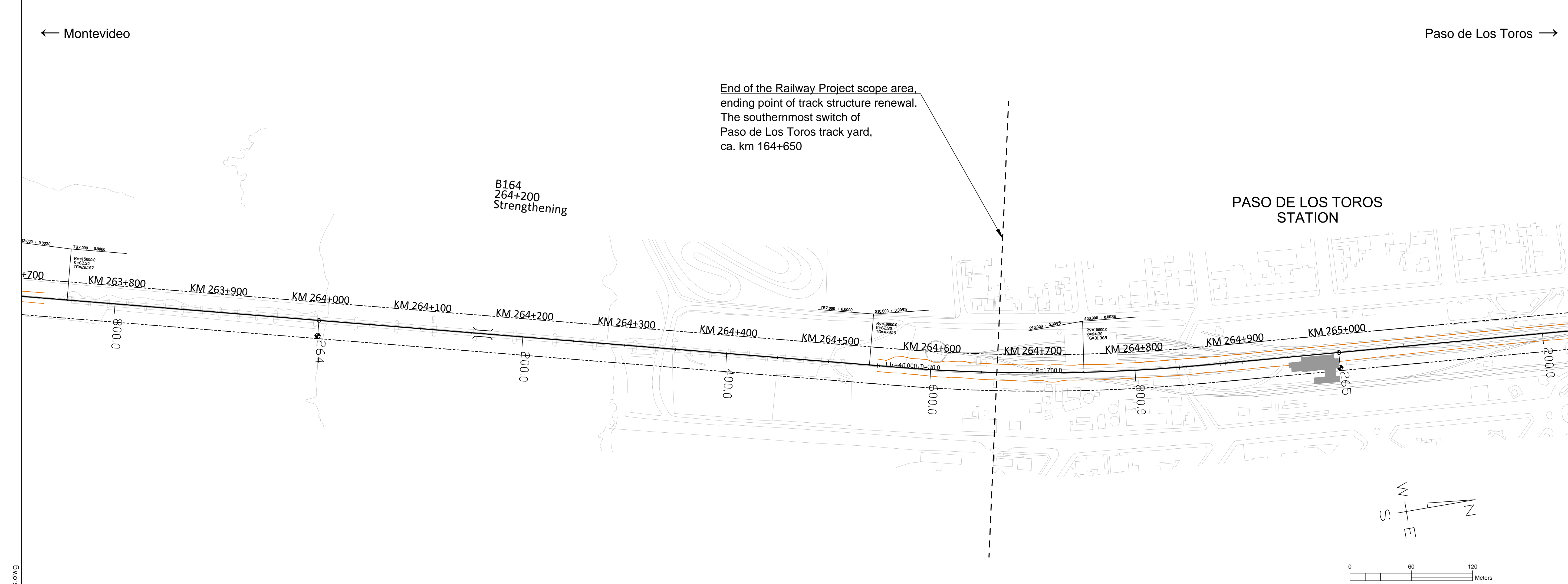
Horizontal alignment, schematic

- 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)

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	Content	Km 262+0400 - 263+0800
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
			188 195



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

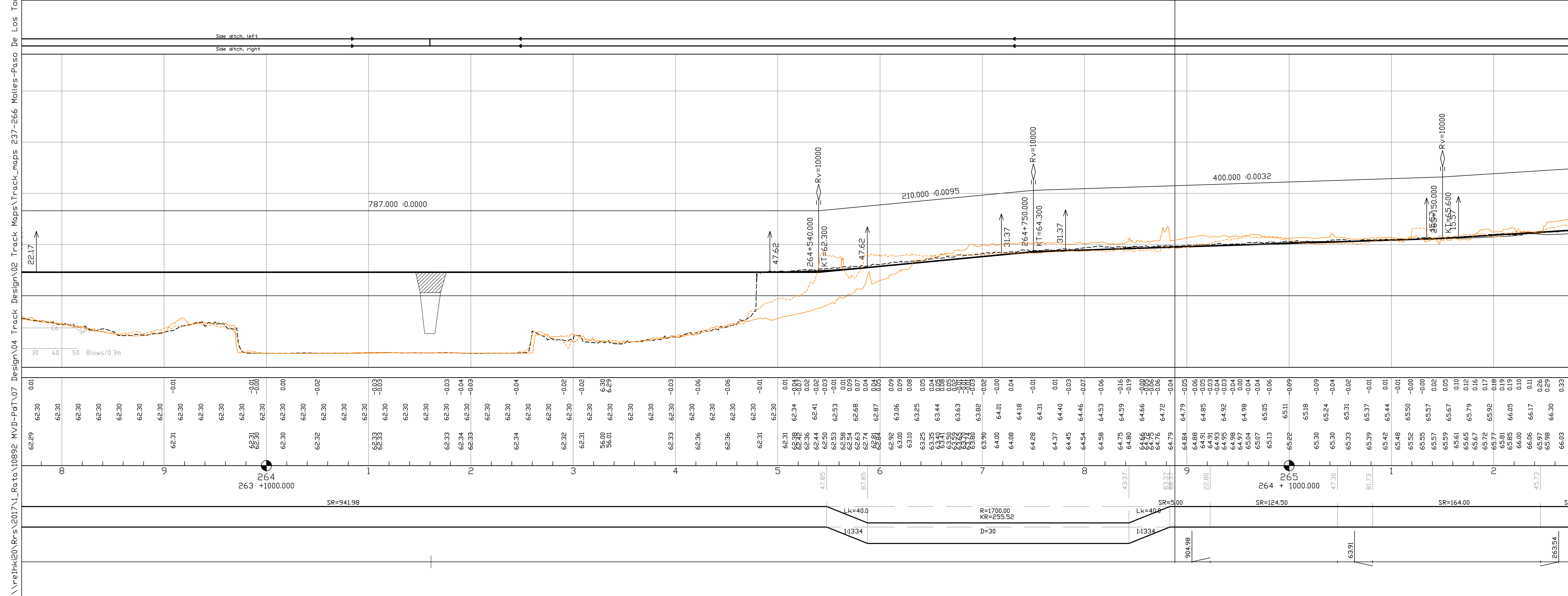
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- RV= radius of vertical curve
- K= elevation
- TG= length of tangent
- 123.345= length of straight line (m)

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)

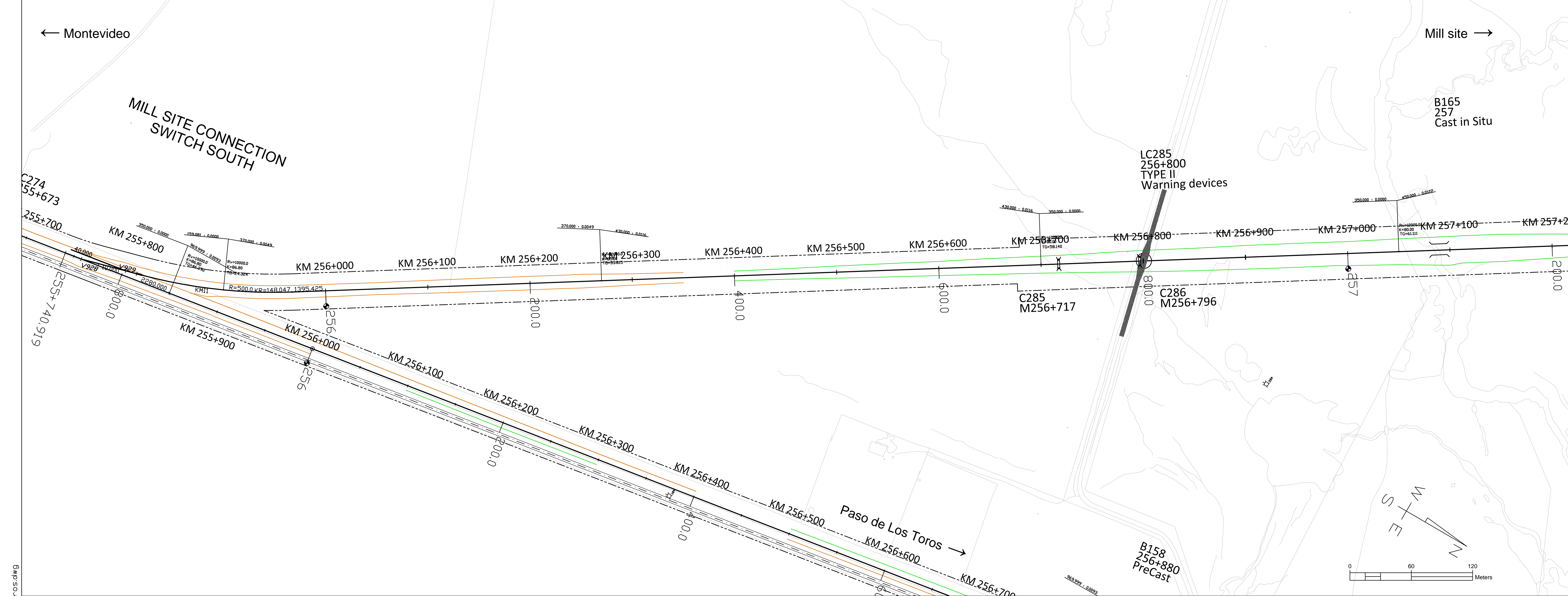
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS		Railway Project	
Pre-engineering, Phase 2		Track map and profile	
VR TRACK		Km 263+0800 - 265+0200	

Drawer: 15.12.2017 Designer: 15.12.2017 Supervisor: 15.12.2017 Accept: Owner acc:	UPa HMa / MLe SVI	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	Rev. Sheet Sheets Total: 189, 195
---	-------------------------	--	--------------------------------------

\\nrethk20\Nrs\2017\1_Rata\10892_MVD-Pd1\07_Design\04_Track_Design\02_Track_Maps\Track_maps_237-266_Malles-Paso De Los Toros.dwg

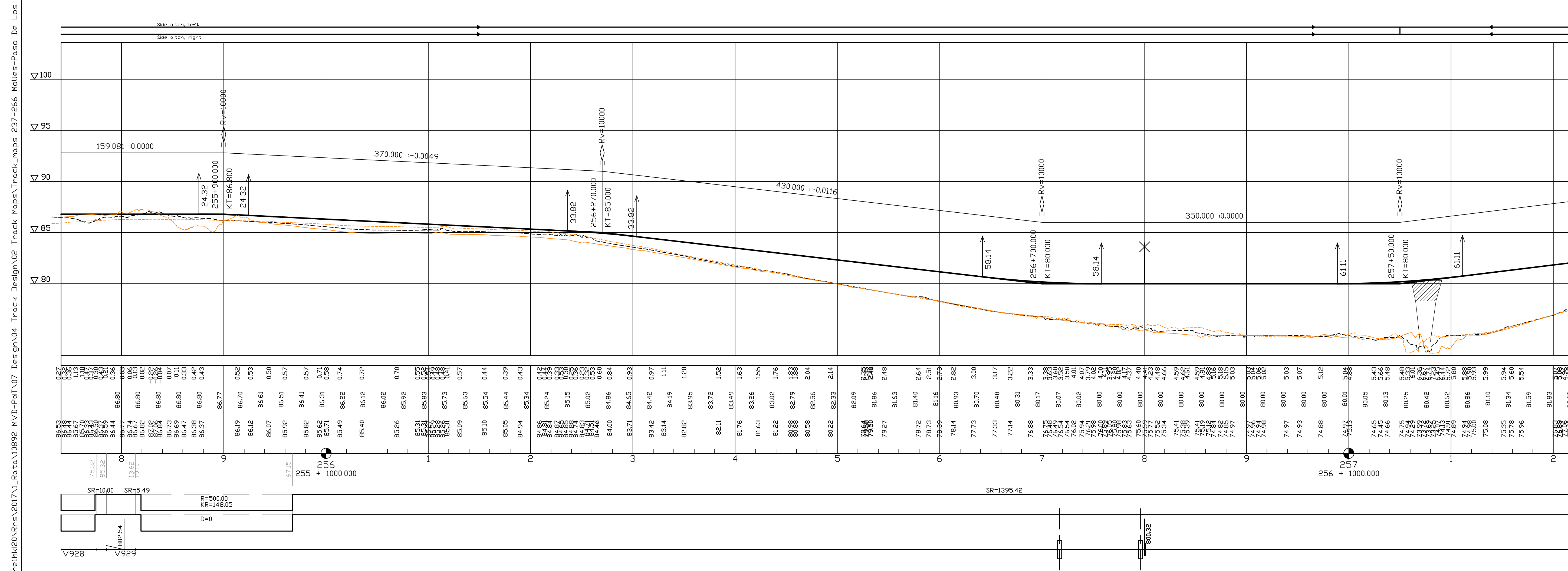


LEGEND, MAP

- 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 = 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)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor
1					

MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Railway Project

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

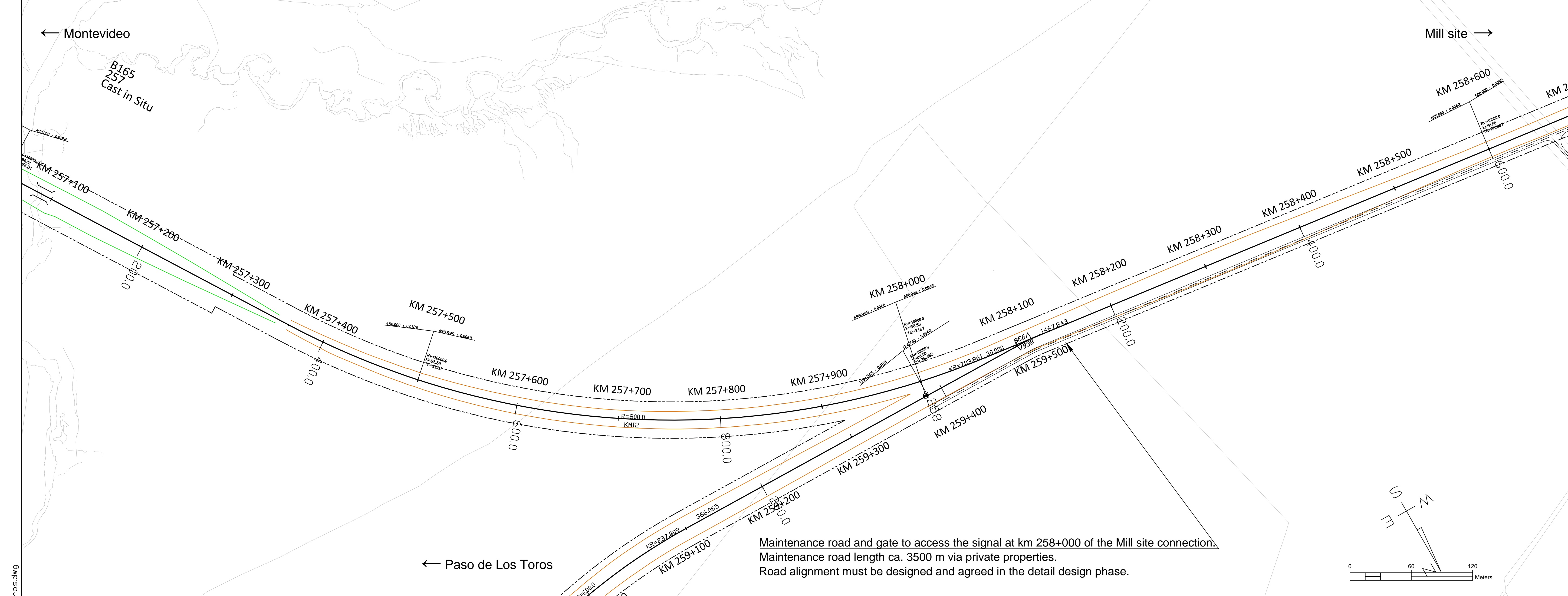
Content: **Track map and profile**

Km 255+0740.919 - 257+0200

Mill connection south

Drawer	15.12.2017	UPa	Scale	map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLo	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	
Owner acc.			Archive	Type Number Rev. Sheet Sheets total

190, 195



Maintenance road and gate to access the signal at km 258+000 of the Mill site connection.
 Maintenance road length ca. 3500 m via private properties.
 Road alignment must be designed and agreed in the detail design phase.

LEGEND, MAP

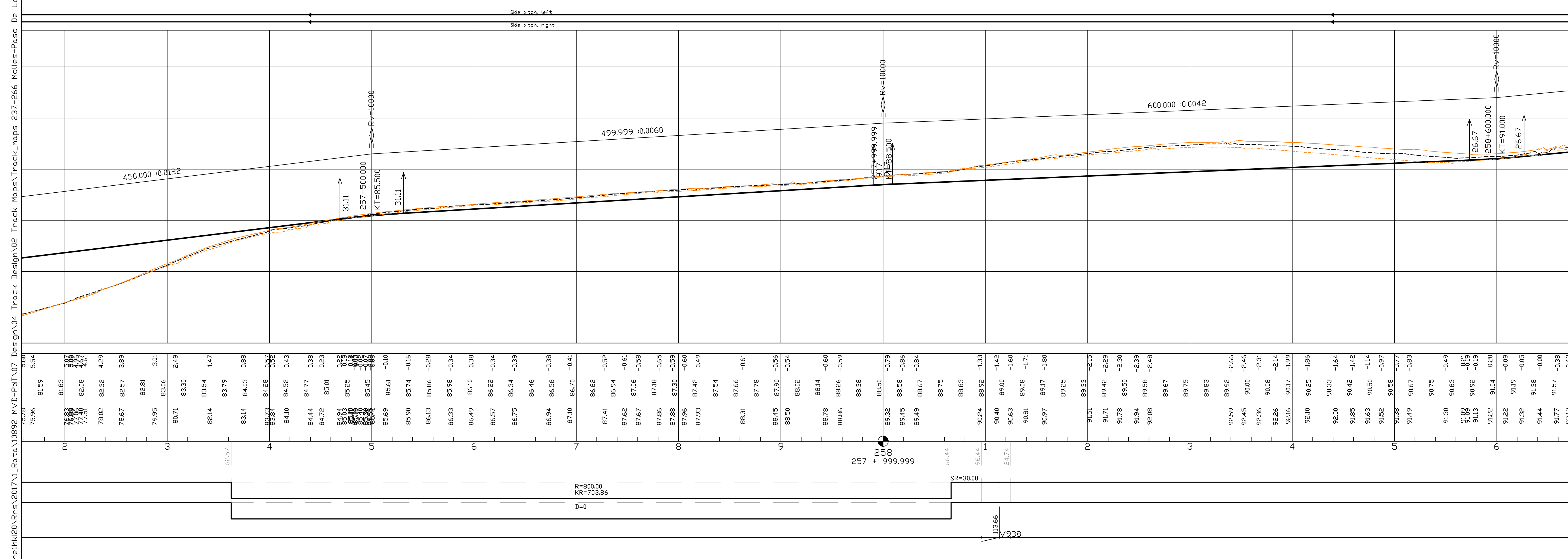
- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- - - Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or 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
- 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

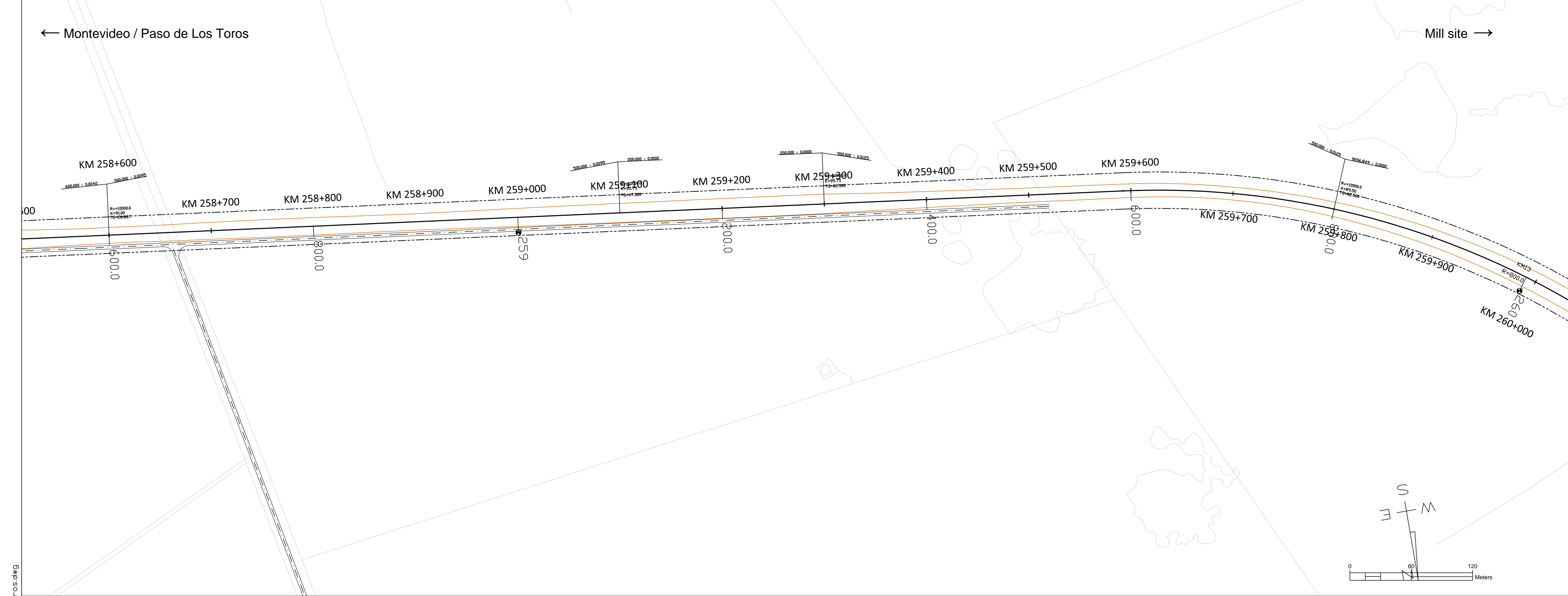
Horizontal alignment, schematic

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	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 257+0200 - 258+0600 Mill connection south
Drawer	15.12.2017 UPa	Coordinate system	map 1:2000, profile 1:2000
Designer	15.12.2017 HMa / MLo	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.			191, 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

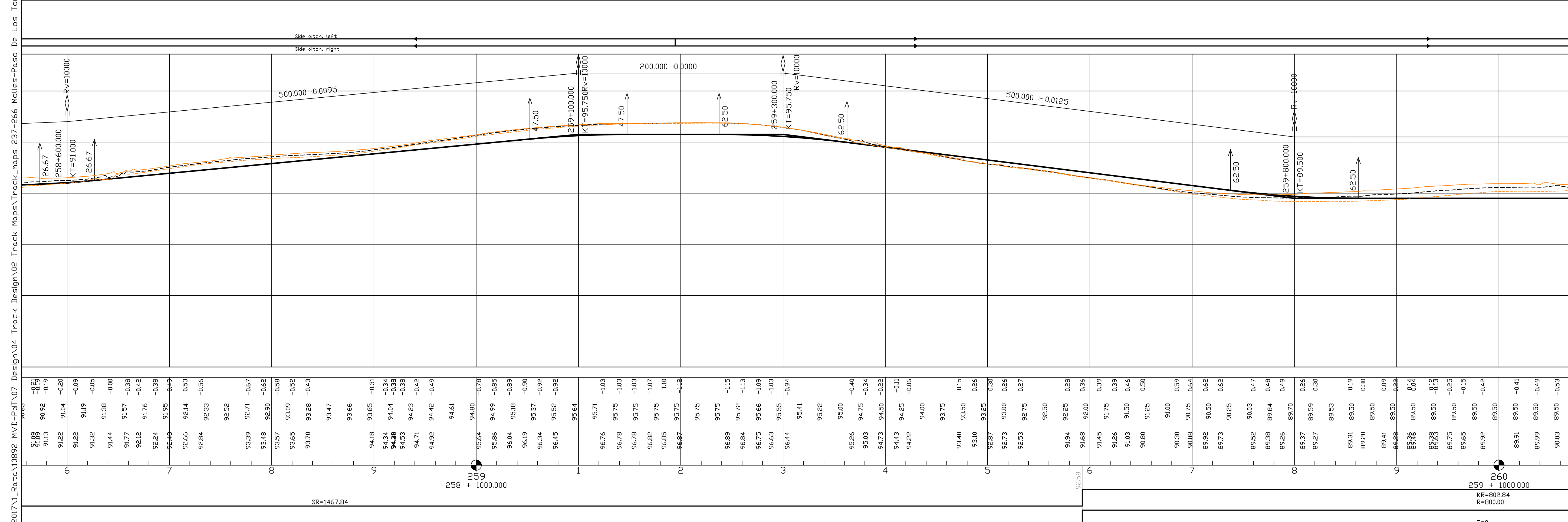
Symbols

- 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.
 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)

Stationing	Elevation (m)	Ground Elevation (m)	Track Elevation (m)	Running Surface (m)
258+000	91.00	91.00	91.00	91.00
258+100	91.05	91.05	91.05	91.05
258+200	91.10	91.10	91.10	91.10
258+300	91.15	91.15	91.15	91.15
258+400	91.20	91.20	91.20	91.20
258+500	91.25	91.25	91.25	91.25
258+600	91.30	91.30	91.30	91.30
258+700	91.35	91.35	91.35	91.35
258+800	91.40	91.40	91.40	91.40
258+900	91.45	91.45	91.45	91.45
259+000	91.50	91.50	91.50	91.50
259+100	91.55	91.55	91.55	91.55
259+200	91.60	91.60	91.60	91.60
259+300	91.65	91.65	91.65	91.65
259+400	91.70	91.70	91.70	91.70
259+500	91.75	91.75	91.75	91.75
259+600	91.80	91.80	91.80	91.80
259+700	91.85	91.85	91.85	91.85
259+800	91.90	91.90	91.90	91.90
259+900	91.95	91.95	91.95	91.95
260+000	92.00	92.00	92.00	92.00

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 258+0600 - 260+0000 Mill connection south

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

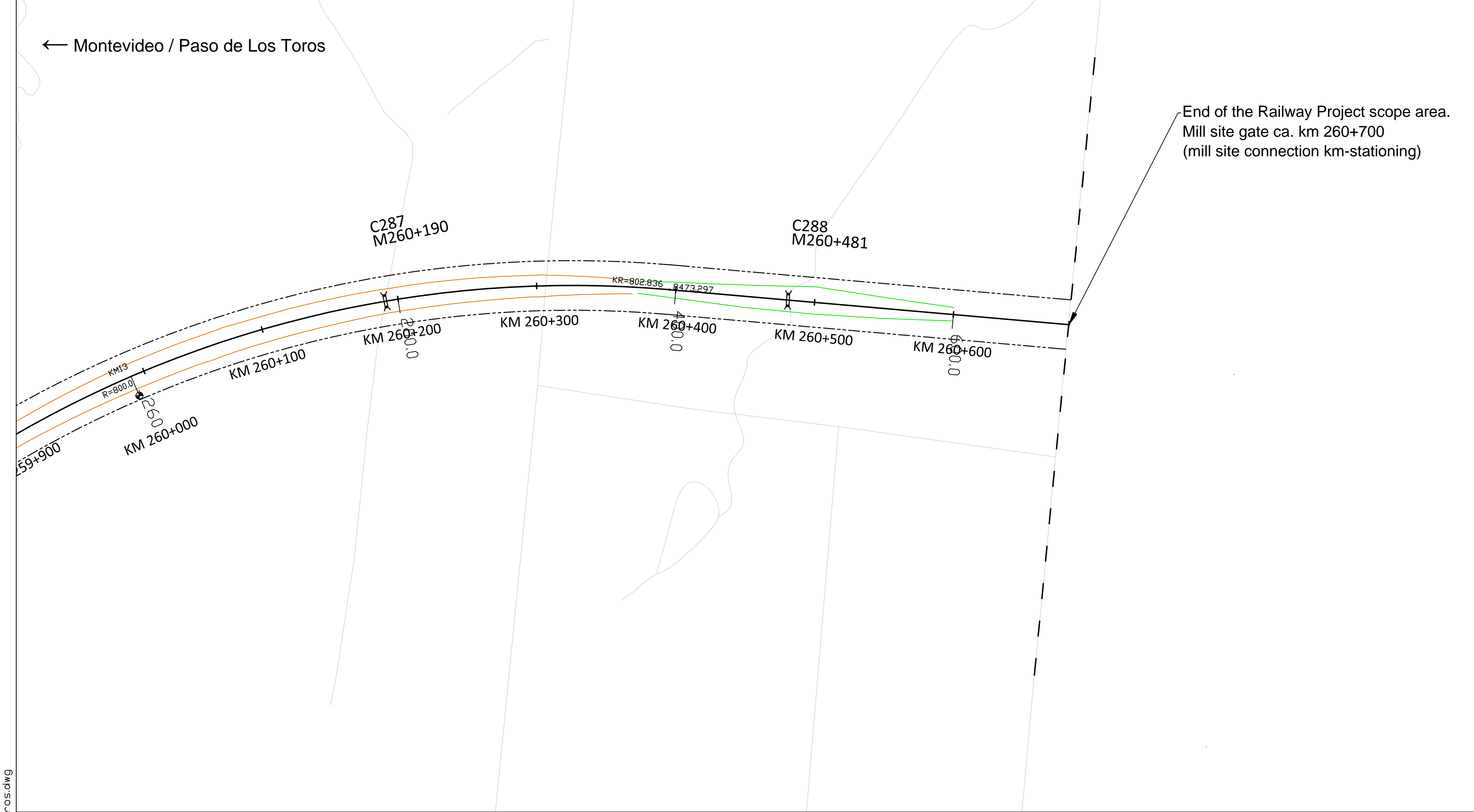
Designer	Date	Coordinate system
HMa / MLe	15.12.2017	WGS 84 UTM 21 S, Local orthometric height

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

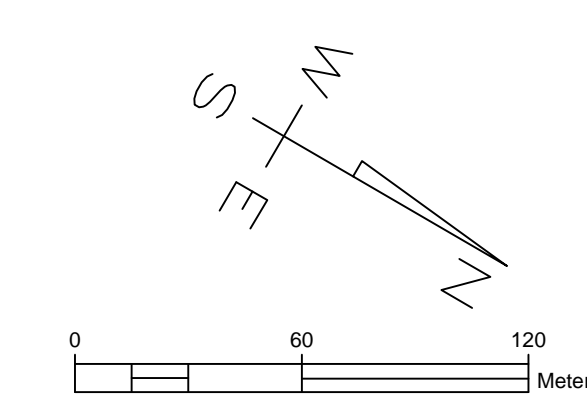
Archiv	Type	Number	Rev.	Sheet	Sheets total
				192	195

← Montevideo / Paso de Los Toros

End of the Railway Project scope area.
Mill site gate ca. km 260+700
(mill site connection km-stationing)



Mill site



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

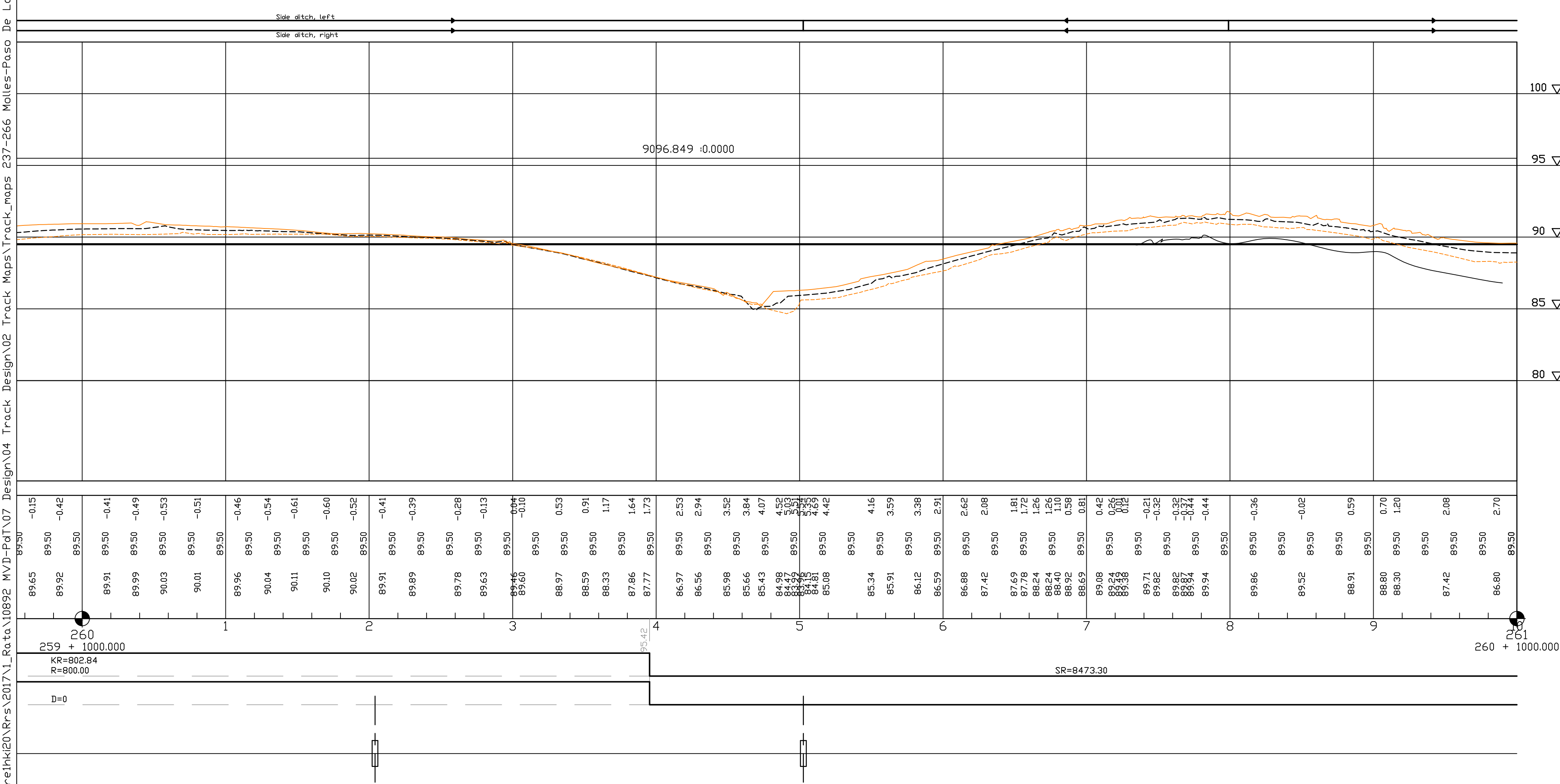
Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

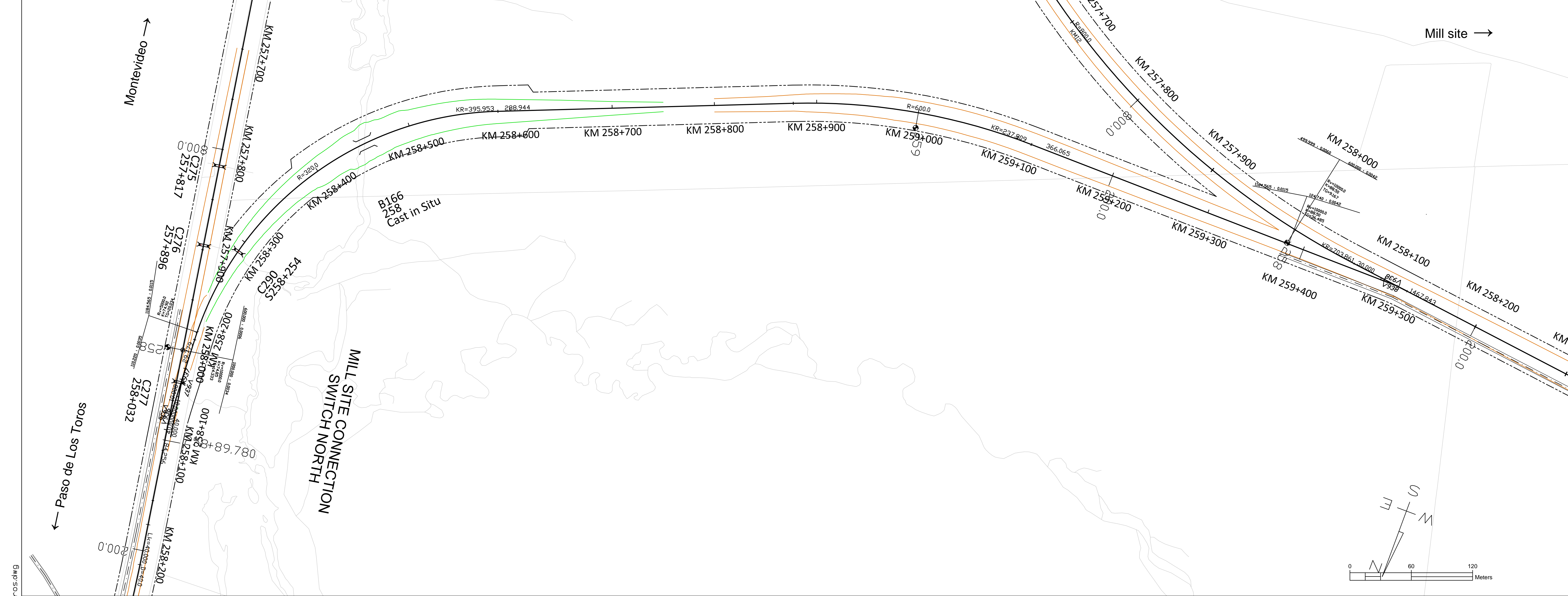
Horizontal alignment, schematic

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					
Project	Km 260+0000 - 261+411.124 Mill connection south				
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				
Drawer	15.12.2017	UPa			
Designer	15.12.2017	HMa / MLo			
Supervisor	15.12.2017	SVI			
Accept.					
Owner acc.					
Archive	Type	Number	Rev.	Sheet	Sheets total
					193, 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
- LXXXX: 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 217: year of investigation, location of 2016 soundings not accurate
- 1, 217=: point number

Disturbed Sample

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

