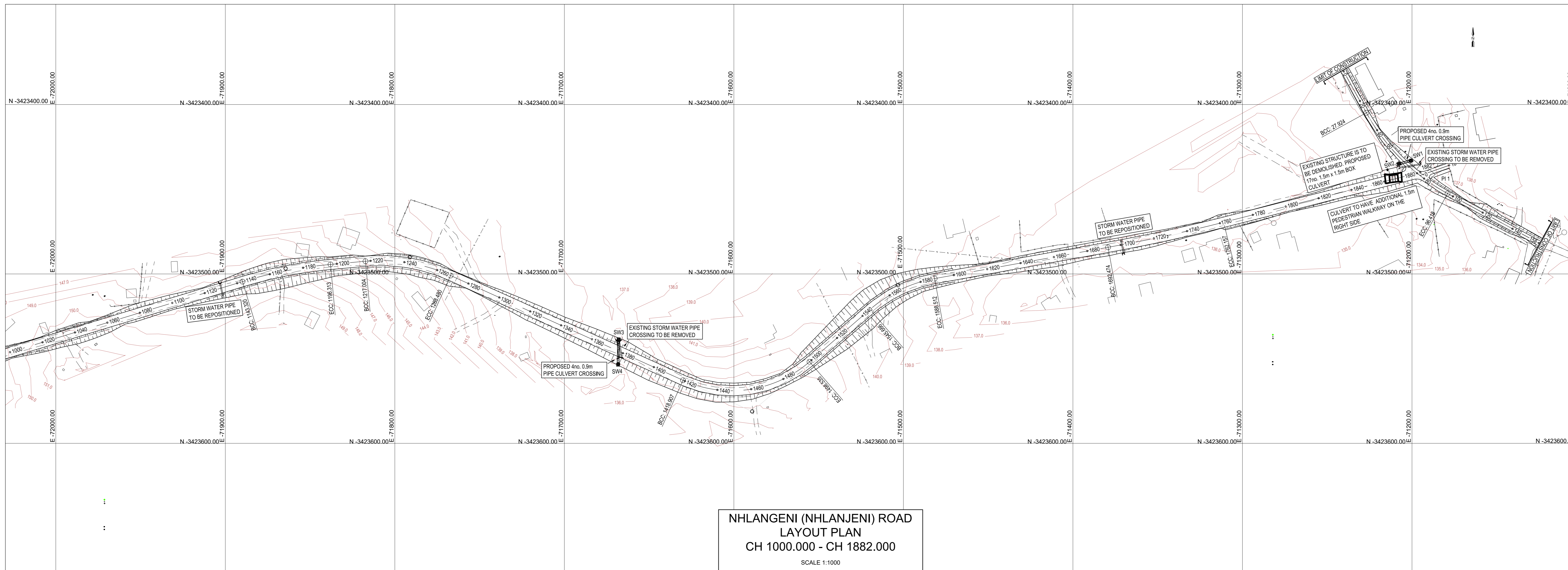


LEGEND

- FILL BANK 1:2
- CUT BANK 1:2
- EXISTING TELEPHONE POLE
- EXISTING WATER METER
- MAJOR POWER POLE
- EXISTING POWERLINE
- EXISTING ROADS
- EXISTING STORMWATER CROSSING
- PROPOSED STORMWATER CROSSING
- FENCE LINE
- EXISTING STRUCTURE
- CUT DRAIN
- EXISTING CONCRETE ROAD
- PROPOSED CONCRETE ROAD



SETTING OUT DATA-Nhlangeni

NAME	CH	Y	X	DETAILS
START	0.000	72 914.199	3 423 777.304	L 0.048m
BCC1	0.048	72 914.157	3 423 777.326	R 50.000m
PI1	72 986.822	3 423 782.726	3 423 774.107	DA 64°47'07"
ECC1	56.585	72 860.876	3 423 774.194	TL 31.723m
BCC2	109.484	72 817.742	3 423 743.290	R 55.000m
PI2	72 802.387	3 423 732.236	3 423 734.119	DA 41°27'10"
ECC2	145.658	72 783.561	3 423 734.119	TL 18.900m
BCC3	150.845	72 778.589	3 423 734.614	R 130.000m
PI3	72 755.345	3 423 736.936	3 423 731.017	DA 29°23'07"
ECC3	196.891	72 732.737	3 423 731.017	TL 23.370m
BCC4	222.706	72 707.765	3 423 724.477	R 80.000m
PI4	72 697.399	3 423 721.782	3 423 721.782	DA 19°15'30"
ECC4	244.010	72 688.684	3 423 721.671	TL 10.715m
BCC5	293.777	72 636.919	3 423 722.376	R 60.000m
PI5	72 624.824	3 423 722.501	3 423 722.501	DA 21°09'40"
ECC5	318.032	72 613.370	3 423 727.451	TL 12.295m
BCC6	411.878	72 527.487	3 423 765.238	R 120.000m
PI6	72 485.348	3 423 763.765	3 423 763.765	DA 41°57'30"
ECC6	499.755	72 441.640	3 423 769.382	TL 45.014m
BCC7	542.555	72 400.986	3 423 768.004	R 60.000m
PI7	72 376.684	3 423 747.809	3 423 747.809	DA 47°12'10"
ECC7	591.986	72 353.153	3 423 760.515	TL 46.433m
BCC8	595.787	72 349.828	3 423 762.356	R 45.000m
PI8	72 318.453	3 423 773.740	3 423 773.740	DA 61°46'00"
ECC8	654.287	72 297.766	3 423 750.438	TL 35.969m
BCC9	720.004	72 259.852	3 423 896.730	R 85.000m
PI9	72 252.531	3 423 885.799	3 423 885.799	DA 19°00'00"
ECC9	746.533	72 244.270	3 423 877.972	TL 13.388m
BCC10	917.145	72 102.653	3 423 578.226	R 160.000m
PI10	72 081.270	3 423 562.675	3 423 562.675	DA 19°52'30"
ECC10	969.969	72 055.616	3 423 554.940	TL 26.603m
BCC11	1143.320	71 889.852	3 423 504.526	R 260.000m
PI11	71 864.412	3 423 486.798	3 423 486.798	DA 11°42'40"
ECC11	1196.313	71 837.334	3 423 494.379	TL 26.588m
BCC12	1217.004	71 817.329	3 423 482.497	R 100.000m
PI12	71 791.116	3 423 480.103	3 423 480.103	DA 29°29'40"
ECC12	1268.480	71 767.121	3 423 500.924	TL 26.320m
BCC13	1418.907	71 629.995	3 423 582.788	R 70.000m
PI13	71 589.204	3 423 581.162	3 423 581.162	DA 67°12'40"
ECC13	1498.535	71 555.383	3 423 581.894	TL 44.747m
BCC14	1545.886	71 516.745	3 423 520.991	R 80.000m
PI14	71 503.182	3 423 506.626	3 423 506.626	DA 30°42'00"
ECC14	1588.512	71 481.572	3 423 502.729	TL 21.340m
BCC15	1662.474	71 379.263	3 423 484.269	R 100.000m
PI15	71 344.861	3 423 478.076	3 423 478.076	DA 3°59'30"
ECC15	1762.157	71 311.173	3 423 469.513	TL 34.856m
END	1881.950	71 195.052	3 423 440.081	L 119.763m

AS BUILT

Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

Supervising Authority

Supervising Engineer: _____ Date: _____

Continued from:-

Continued on:-

Cross Section No:-

Longitudinal Section No:-

Design Plan No:-

Designed by:- P. THAYER

Checked by:- P. DHANEE

Drawn by:- M. CELE

Checked by:- C. MOONSAMY

Date of approval:-



Designed by: **BMK GROUP**

Signed: _____ Date: _____

RAY NKONYENI MUNICIPALITY
CHIEF ENGINEER

HEAD: RAY NKONYENI MUNICIPALITY

NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE

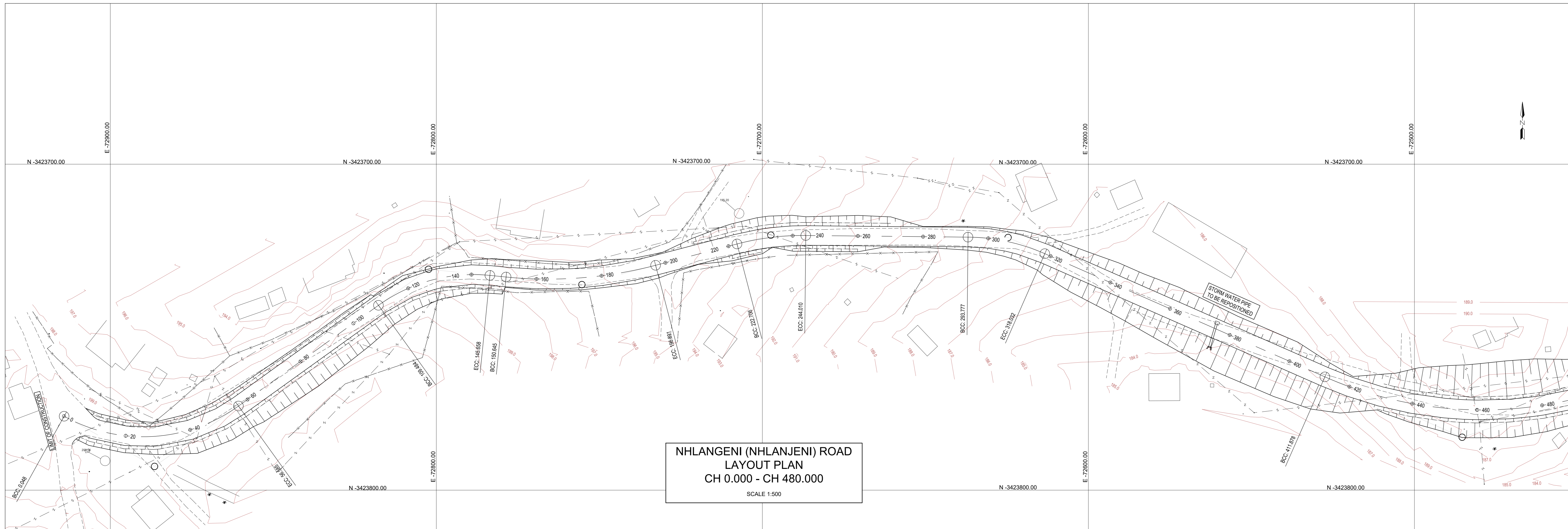
PORTION
NHLANGENI (NHLANJENI) ROAD DESIGN PLAN
CH 0.000 - CH 1000.000 & CH 1000.000 - CH 1882.000

Staked km distance AS SHOWN

Scale: **1:1000** AS SHOWN

Sheet: - 01 of: - 03

Plan No. :- **BMK-1753-01-001**

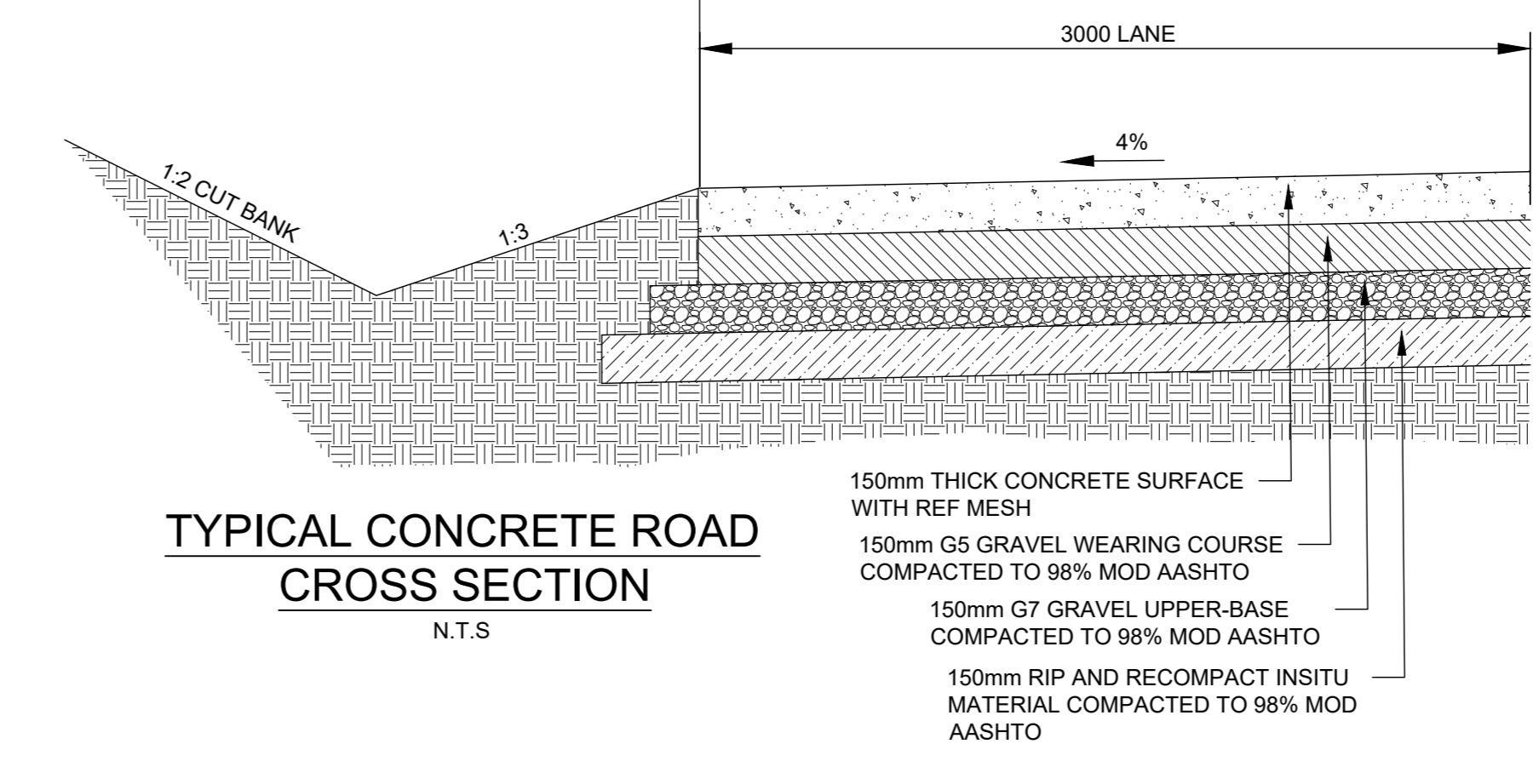
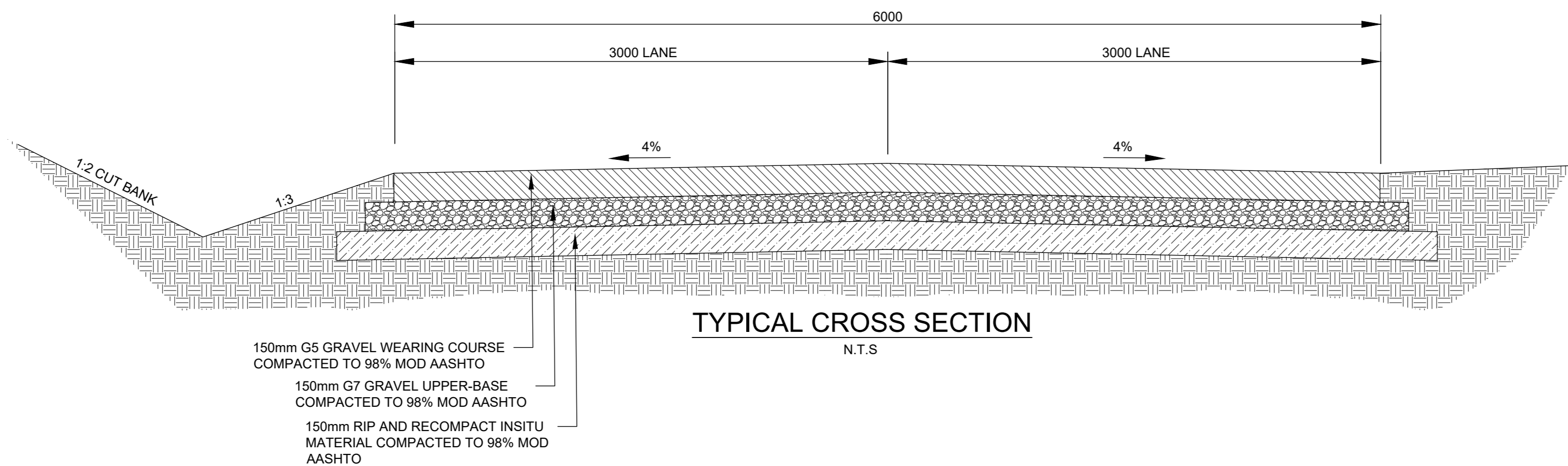
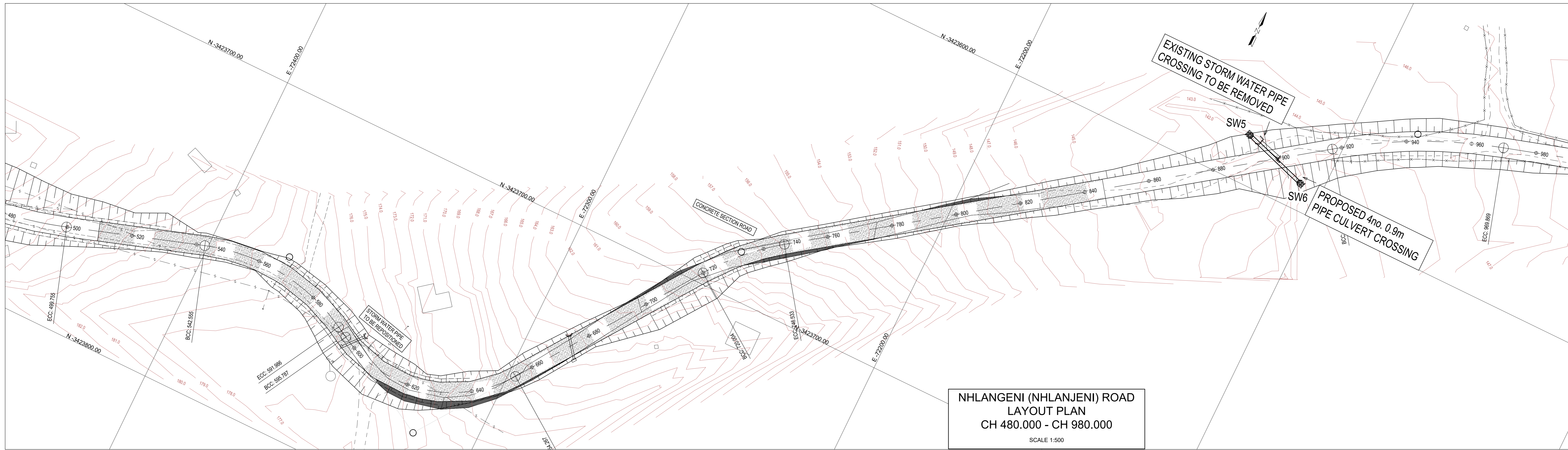


LEGEND

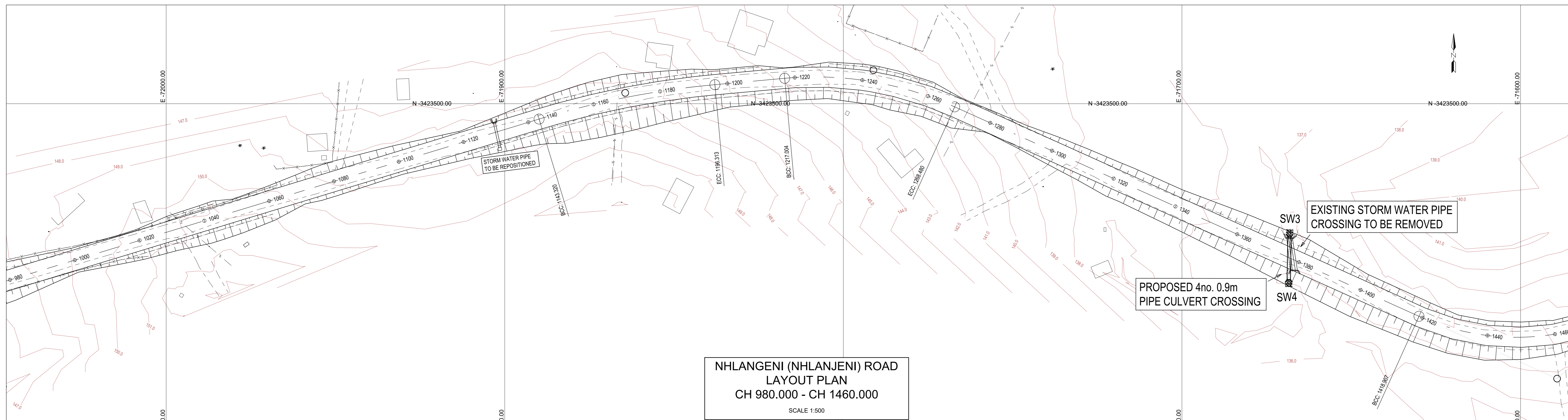
- FILL BANK 1:2
- CUT BANK 1:2
- EXISTING TELEPHONE POLE
- EXISTING WATER METER
- MAJOR POWER POLE
- EXISTING POWERLINE
- EXISTING ROADS
- EXISTING STORMWATER CROSSING
- PROPOSED STORMWATER CROSSING
- FENCE LINE
- EXISTING STRUCTURE
- CUT DRAIN
- EXISTING CONCRETE ROAD
- PROPOSED CONCRETE ROAD

SETTING OUT DATA-Nhlangeni

NAME	CH	Y	X	DETAILS
START	0.000	72 914.199	3 423 777.304	L 0.048m
BCC1	0.048	72 914.157	3 423 777.328	R 50.000m
PI1		72 886.822	3 423 782.728	DA 64°47'10"
ECC1	56.585	72 860.876	3 423 774.194	TL 31.722m
BCC2	109.484	72 817.742	3 423 743.290	R 50.000m
PI2		72 802.387	3 423 732.238	DA 41°27'10"
ECC2	145.658	72 783.561	3 423 734.119	TL 18.900m
BCC3	150.845	72 778.589	3 423 734.614	R 130.000m
PI3		72 755.345	3 423 736.936	DA 29°23'07"
ECC3	196.891	72 752.737	3 423 731.017	TL 23.370m
BCC4	222.706	72 707.765	3 423 724.477	R 80.000m
PI4		72 697.399	3 423 721.782	DA 19°15'30"
ECC4	244.010	72 688.684	3 423 721.671	TL 10.715m
BCC5	293.777	72 636.919	3 423 722.376	R 60.000m
PI5		72 624.824	3 423 722.501	DA 21°09'40"
ECC5	318.032	72 613.370	3 423 727.451	TL 12.295m
BCC6	411.878	72 527.847	3 423 765.238	R 120.000m
PI6		72 485.348	3 423 783.765	DA 47°57'30"
ECC6	499.755	72 441.640	3 423 769.382	TL 45.014m
BCC7	542.565	72 400.986	3 423 758.094	R 60.000m
PI7		72 376.884	3 423 747.809	DA 47°12'10"
ECC7	591.986	72 353.153	3 423 760.515	TL 26.216m
BCC8	595.787	72 349.828	3 423 762.356	R 40.000m
PI8		72 318.633	3 423 770.740	DA 61°46'00"
ECC8	654.287	72 297.766	3 423 750.438	TL 25.969m
BCC9	720.004	72 259.852	3 423 896.730	R 80.000m
PI9		72 252.531	3 423 885.799	DA 19°00'00"
ECC9	746.533	72 244.270	3 423 877.972	TL 13.388m
BCC10	917.145	72 102.853	3 423 578.226	R 160.000m
PI10		72 081.270	3 423 562.675	DA 18°12'30"
ECC10	969.869	72 055.816	3 423 554.940	TL 26.603m
BCC11	1143.320	71 889.852	3 423 504.526	R 260.000m
PI11		71 864.412	3 423 486.798	DA 11°40'30"
ECC11	1196.313	71 837.534	3 423 494.379	TL 26.588m
BCC12	1217.004	71 817.329	3 423 482.497	R 100.000m
PI12		71 791.116	3 423 490.103	DA 29°29'40"
ECC12	1268.480	71 767.121	3 423 500.924	TL 44.747m
BCC13	1418.907	71 620.995	3 423 582.786	R 70.000m
PI13		71 589.004	3 423 581.162	DA 67°12'40"
ECC13	1498.535	71 555.383	3 423 551.884	TL 44.747m
BCC14	1545.886	71 516.745	3 423 520.991	R 80.000m
PI14		71 503.182	3 423 506.626	DA 30°40'20"
ECC14	1588.512	71 481.572	3 423 502.729	TL 21.940m
BCC15	1692.474	71 379.263	3 423 484.269	R 1000.000m
PI15		71 344.961	3 423 478.076	DA 7°59'30"
ECC15	1762.157	71 311.173	3 423 469.513	TL 34.856m
END	1881.950	71 195.052	3 423 440.081	L 119.793m



<p>AS BUILT</p> <p>Supervising Authority</p>				<p>Continued from:-</p> <p>Continued on:-</p> <p>Cross Section No:-</p> <p>Longitudinal Section No:-</p> <p>Design Plan No:-</p>		<p>Designed by:- P. THAYER</p> <p>Checked by:- P. DHANEE</p> <p>Drawn by:- M. CELE</p> <p>Checked by:- C. MOONSAMY</p> <p>Date of approval:-</p>		<p>RAY NKONYENI MUNICIPALITY</p>		<p>BMK GROUP</p>		<p>RAY NKONYENI MUNICIPALITY CHIEF ENGINEER</p> <p>HEAD: RAY NKONYENI MUNICIPALITY</p>		<p>NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE</p> <p>PORTION</p> <p>NHLANGENI (NHLANJENI) ROAD DESIGN PLAN</p> <p>CH 0.000 - CH 480.000 & CH 480.000 - CH 980.000</p>		<p>Staked km distance</p> <p>AS SHOWN</p> <p>Scale</p> <p>1:500</p> <p>AS SHOWN</p>		<p>Sheet - 02 of - 03</p> <p>Plan No. :-</p> <p>BMK-1753-01-002</p>	
<p>A 03.2024 FOR TENDER PURPOSES</p> <p>Symbol Date Description Checked Signed</p> <p>AMENDMENTS</p>																			

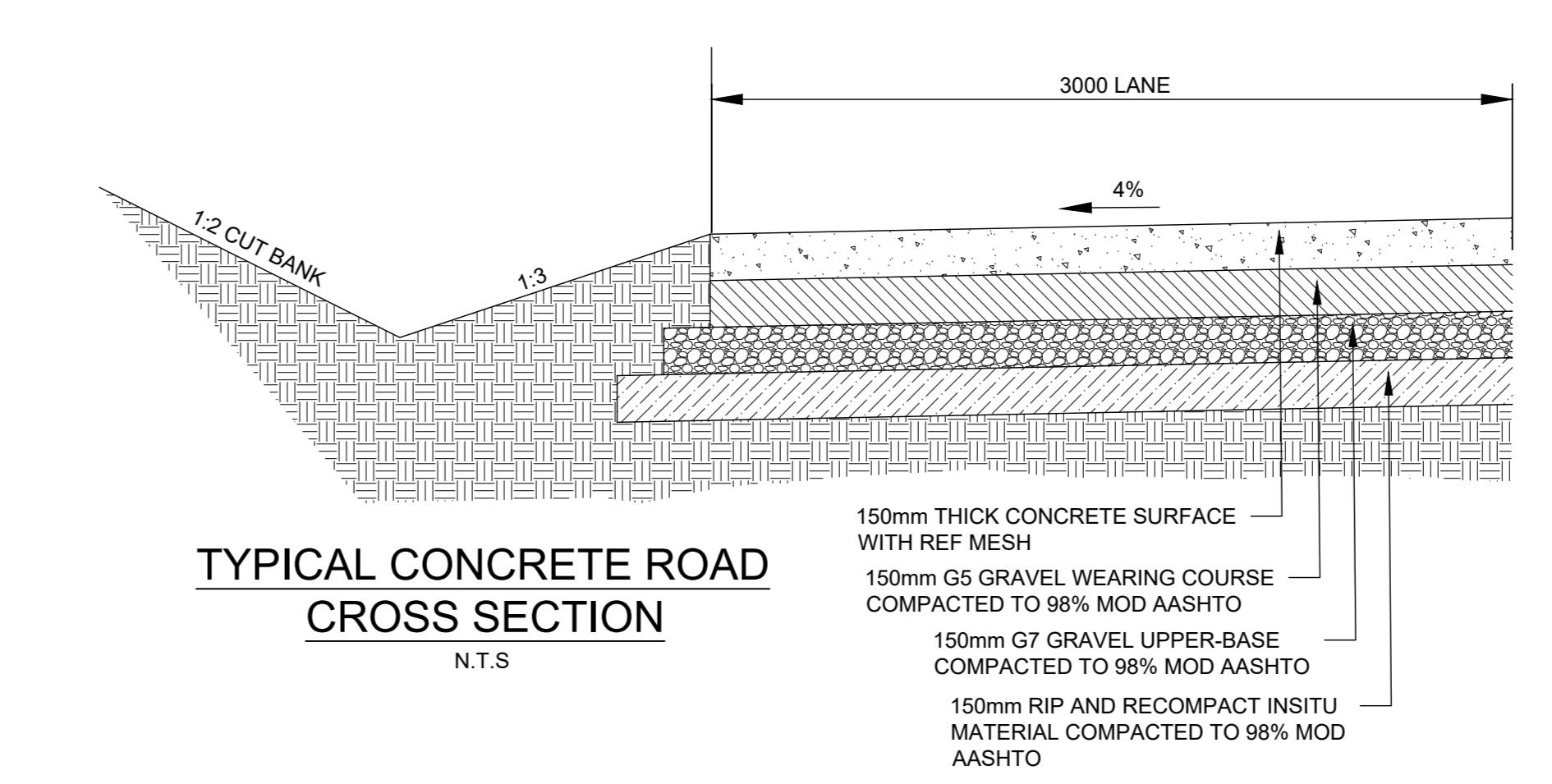
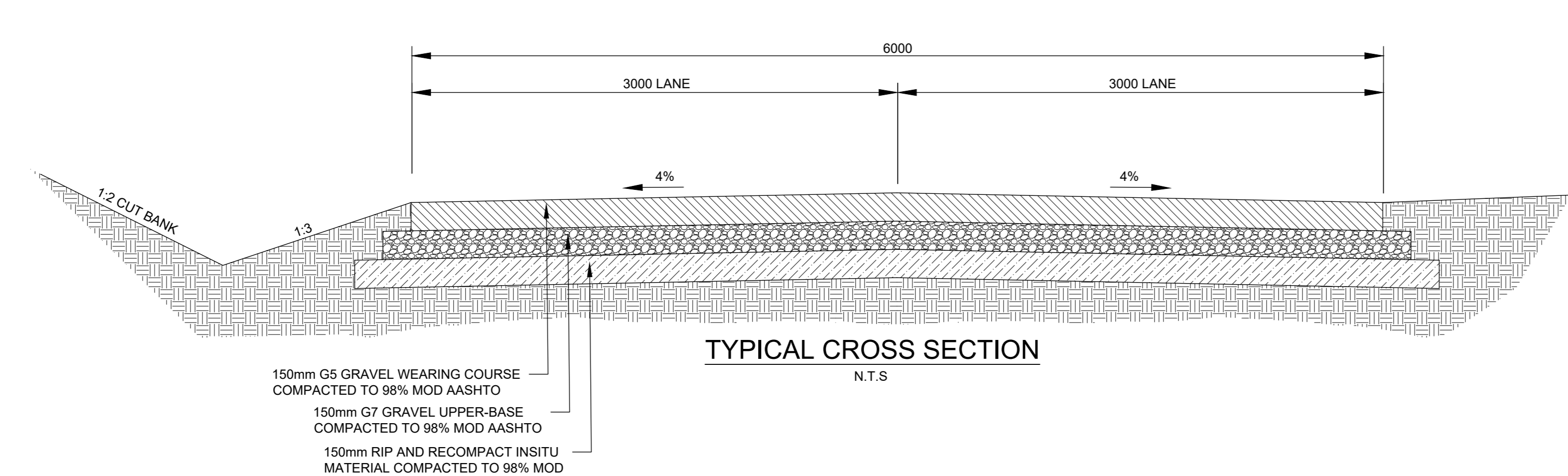
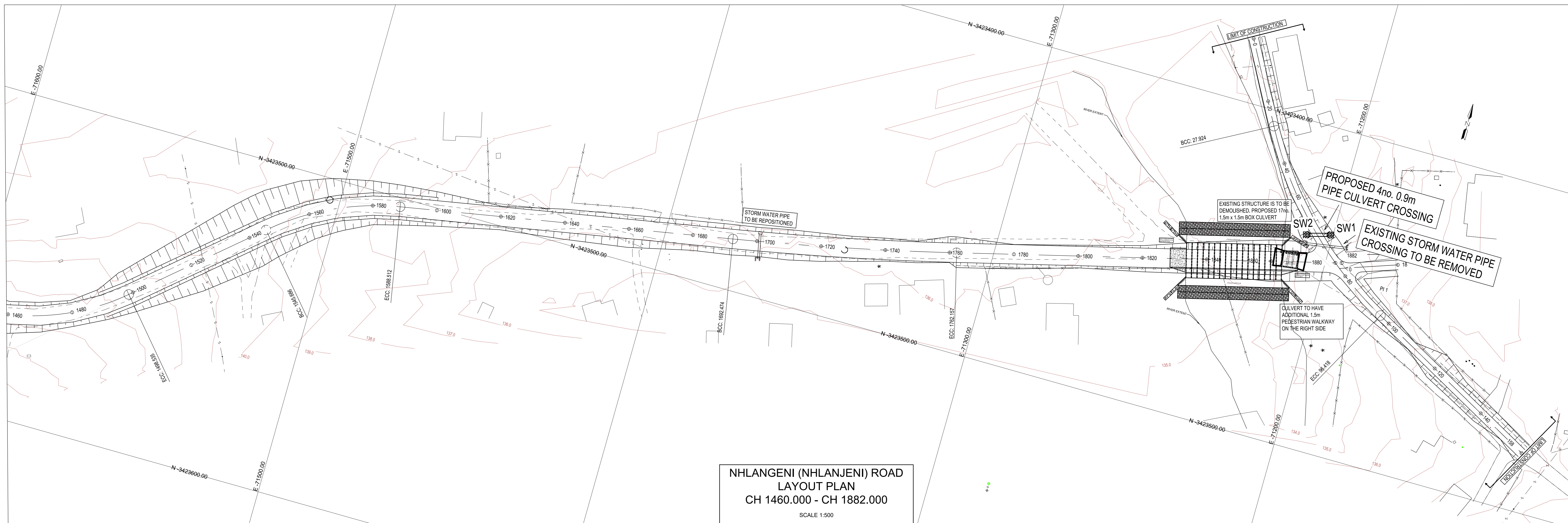


LEGEND

- FILL BANK 1:2
- CUT BANK 1:2
- EXISTING TELEPHONE POLE
- EXISTING WATER METER
- MAJOR POWER POLE
- EXISTING POWERLINE
- EXISTING ROADS
- EXISTING STORMWATER CROSSING
- PROPOSED STORMWATER CROSSING
- FENCE LINE
- EXISTING STRUCTURE
- CUT DRAIN
- EXISTING CONCRETE ROAD
- PROPOSED CONCRETE ROAD

SETTING OUT DATA-Nhlangeni

NAME	CH	Y	X	DETAILS
START	0.000	72914.199	3423777.304	L 0.048m
BCC1	0.048	72914.157	3423777.328	R 50.000m
P11		72986.622	3423778.726	DA 64°47'10"
ECC1	56.585	72860.676	3423774.194	TL 31.722m
BCC2	109.484	72817.742	3423743.290	R 50.000m
P12		72802.387	3423732.238	DA 41°27'10"
ECC2	145.658	72783.561	3423734.119	TL 18.900m
BCC3	150.845	72778.589	3423734.614	R 130.000m
P13		72755.345	3423736.935	DA 20°22'00"
ECC3	196.891	72732.737	3423731.017	TL 23.370m
BCC4	222.706	72707.765	3423724.477	R 80.000m
P14		72697.399	3423722.501	DA 19°15'30"
ECC4	244.010	72688.684	3423721.782	TL 10.715m
BCC5	293.777	72636.919	3423722.376	R 60.000m
P15		72624.624	3423722.501	DA 21°09'40"
ECC5	318.032	72613.370	3423727.451	TL 12.295m
BCC6	411.878	72527.487	3423765.238	R 120.000m
P16		72485.348	3423783.765	DA 41°57'30"
ECC6	499.755	72441.640	3423769.382	TL 45.014m
BCC7	542.555	72400.986	3423768.004	R 60.000m
P17		72376.684	3423747.800	DA 47°12'10"
ECC7	591.988	72353.153	3423760.515	TL 45.433m
BCC8	595.787	72349.828	3423762.356	R 40.000m
P18		72316.633	3423770.740	DA 51°46'00"
ECC8	654.287	72297.756	3423750.438	TL 35.969m
BCC9	720.004	72259.852	3423896.790	R 80.000m
P19		72252.531	3423885.799	DA 19°00'00"
ECC9	746.533	72244.270	3423877.972	TL 13.388m
BCC10	917.145	72102.853	3423578.226	R 160.000m
P110		72081.270	3423562.675	DA 18°52'30"
ECC10	969.869	72065.616	3423554.940	TL 26.603m
BCC11	1143.320	71889.652	3423504.526	R 260.000m
P111		71864.412	3423486.790	DA 11°40'40"
ECC11	1196.313	71837.334	3423494.379	TL 25.588m
BCC12	1217.004	71817.329	3423482.497	R 100.000m
P112		71791.116	3423480.103	DA 29°29'40"
ECC12	1268.480	71767.121	3423500.924	TL 25.320m
BCC13	1418.907	71629.995	3423582.786	R 70.000m
P113		71589.204	3423581.162	DA 67°10'40"
ECC13	1488.535	71565.383	3423581.884	TL 44.747m
BCC14	1545.886	71516.745	3423520.991	R 80.000m
P114		71503.182	3423566.626	DA 30°40'20"
ECC14	1588.512	71481.572	3423502.729	TL 21.340m
BCC15	1692.474	71379.263	3423484.269	R 100.000m
P115		71344.861	3423478.076	DA 3°59'30"
ECC15	1762.157	71311.173	3423469.513	TL 34.856m
END	1881.950	71195.052	3423440.081	L 119.793m



Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

AS BUILT

Supervising Authority

Continued from:-
Continued on:-
Cross Section No:-
Longitudinal Section No:-
Design Plan No:-

Designed by:- P. THAYER
Checked by:- P. DHANEE
Drawn by:- M. CELE
Checked by:- C. MOONSAMY
Date of approval:-



RAY NKONYENI MUNICIPALITY
CHIEF ENGINEER

HEAD: RAY NKONYENI MUNICIPALITY

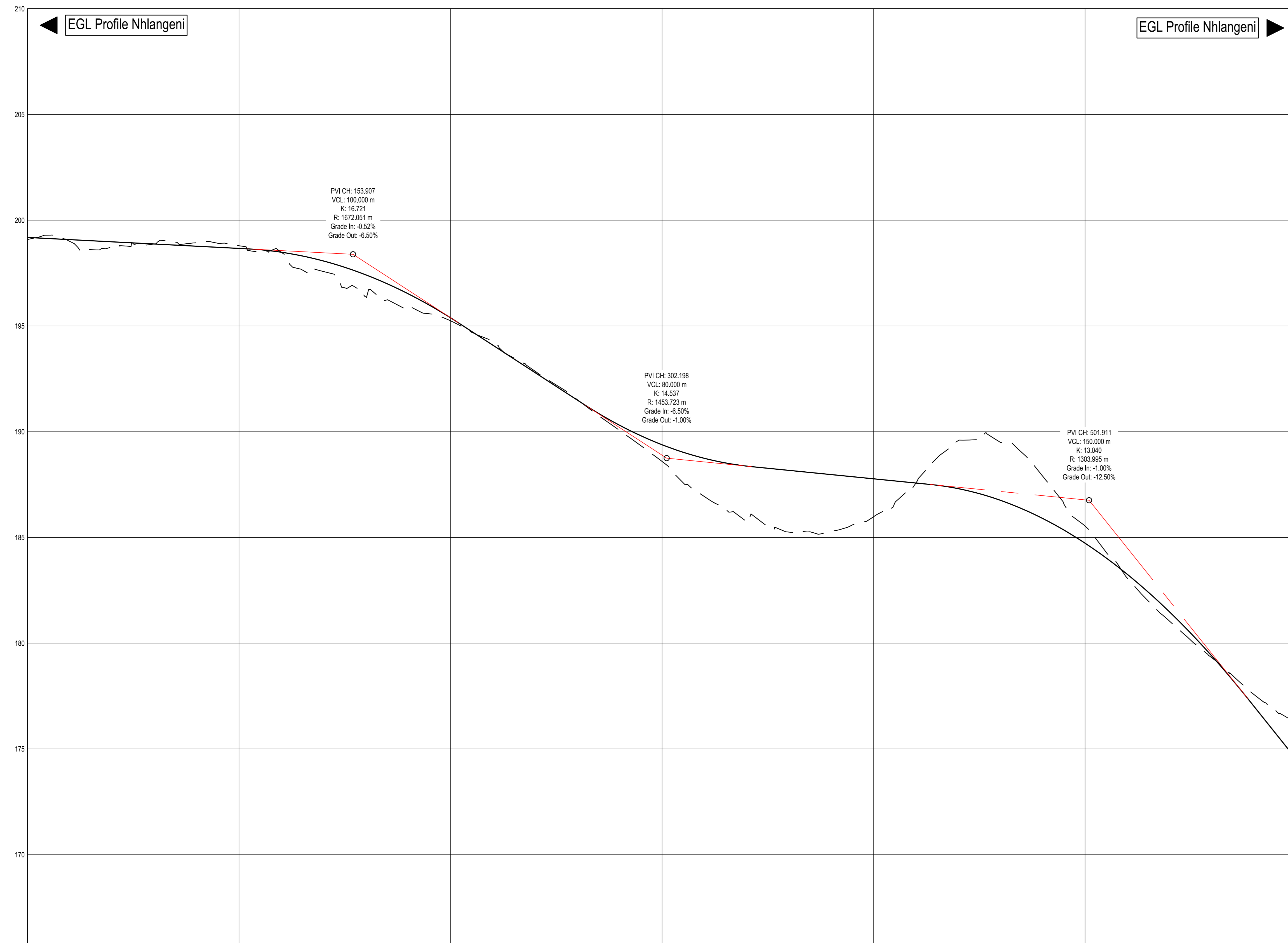
NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE

PORTION
NHLANGENI (NHLANJENI) ROAD DESIGN PLAN
CH 980.000 - CH 1460.000 & CH 1440.000 - CH 1882.000

Staked km distance
AS SHOWN

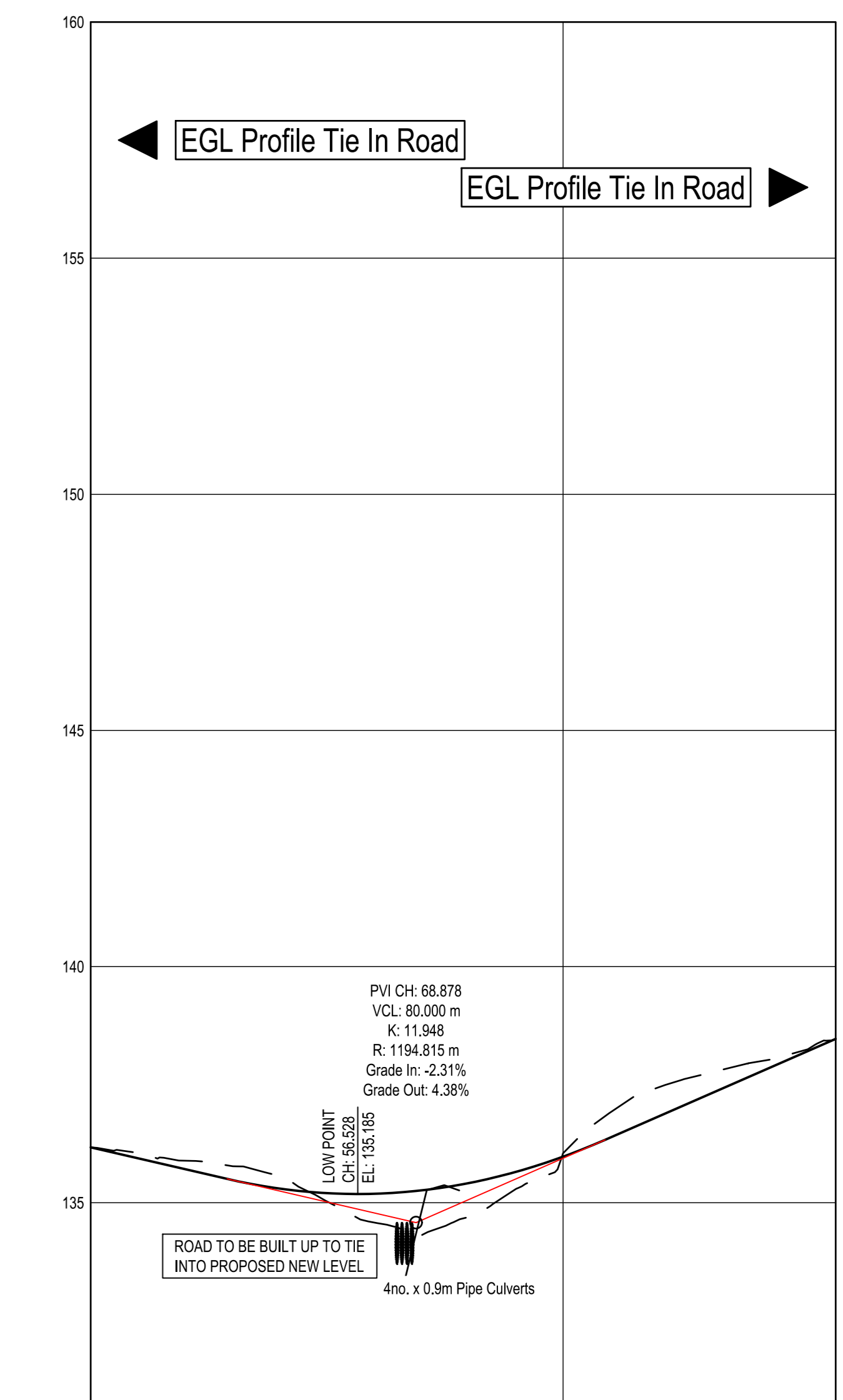
Scale
1:500
AS SHOWN

Sheet - 03 of - 03
Plan No. :-
BMK-1753-01-003



EARTHWORK QUANTITIES		Cut (m³)	Adj. Cut (m³)	Fill (m³)
FINISHED ROAD LEVELS	Left Edge	199.057	198.963	198.963
	Centre Line	199.197	199.083	199.083
	Right Edge	199.067	198.983	198.983
STAKED LINE GROUND LEVELS		199.089	198.997	198.979
GRADES %		-0.69%		
VERTICAL ALIGNMENT		[Diagram showing vertical alignment curves]		
SUPERELEVATION		LEFT RIGHT		
HORIZONTAL ALIGNMENT		[Diagram showing horizontal alignment curves]		
STAKED KILOMETER DISTANCE		0	20	40

LONGSECTION NHLANGENI (NHLANJENI)
FROM 0.000 TO 600.000



EARTHWORK QUANTITIES		Cut (m³)	Adj. Cut (m³)	Fill (m³)
FINISHED ROAD LEVELS	Left Edge	136.174	136.000	136.000
	Centre Line	136.174	136.111	136.111
	Right Edge	136.174	136.000	136.000
STAKED LINE GROUND LEVELS		136.174	136.000	136.000
GRADES %		-2.31%		
VERTICAL ALIGNMENT		[Diagram showing vertical alignment curve]		
SUPERELEVATION		LEFT RIGHT		
HORIZONTAL ALIGNMENT		[Diagram showing horizontal alignment curve]		
STAKED KILOMETER DISTANCE		0	20	40

LONGSECTION TIE IN ROAD
FROM 0.000 TO 157.682

Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

AS BUILT
Supervising Authority

Continued from:-
Continued on:-
Cross Section No:-
Longitudinal Section No:-
Design Plan No:-

Designed by:- P. THAYER
Checked by:- P. DHANEE
Drawn by:- M. CELE
Checked by:- C. MOONSAMY
Date of approval:-

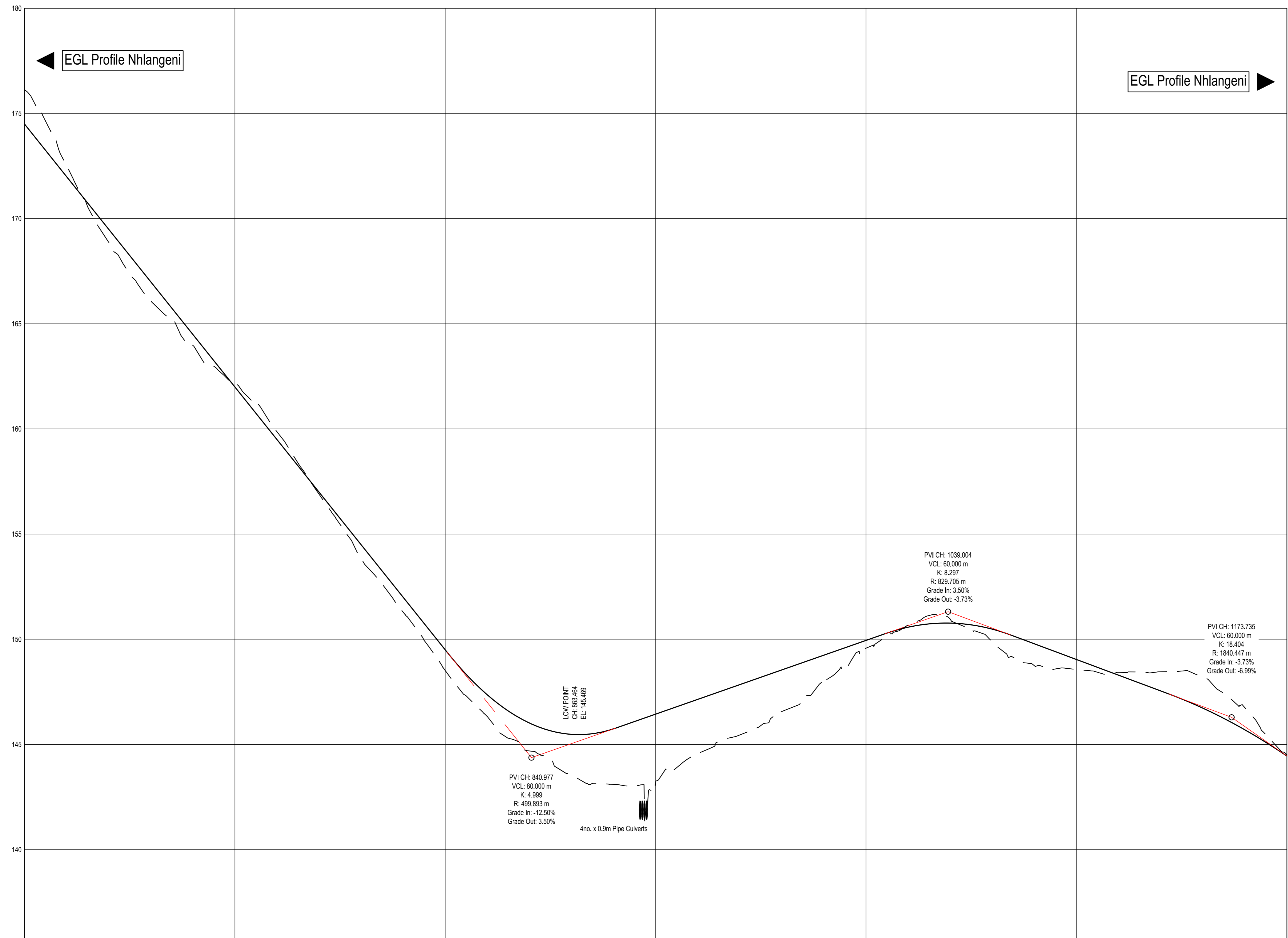


Designed by:
RAY NKONYENI MUNICIPALITY
CHIEF ENGINEER
HEAD: RAY NKONYENI MUNICIPALITY

NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE
PORTION
NHLANGENI (NHLANJENI)
LONG SECTION
CH 0.000 - CH 600.000

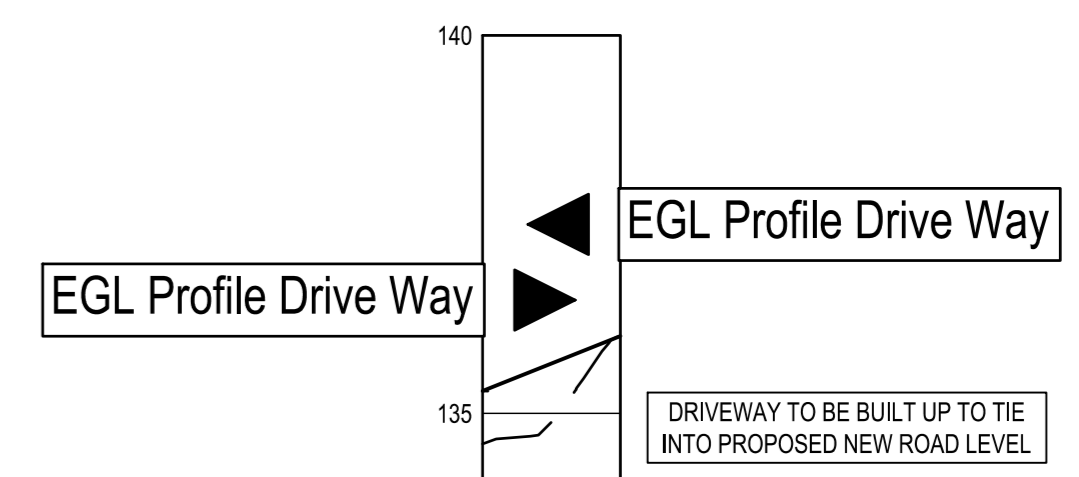
Staked km distance
AS SHOWN
Scale
1:1000
AS SHOWN

Sheet - 01
of - 03
Plan No. :-
BMK-1753-02-001



EARTHWORK QUANTITIES		Datum 135.000	
		Cut (m³)	Fill (m³)
FINISHED ROAD LEVELS	Left Edge	174.377	174.377
	Centre Line	174.497	174.497
	Right Edge	174.377	174.377
STAKED LINE GROUND LEVELS		176.132	176.132
GRADES %		-12.50%	3.50%
VERTICAL ALIGNMENT			
SUPERELEVATION		LEFT	RIGHT
HORIZONTAL ALIGNMENT		Curve 9 Radius=400.00m Angle=19°30'00"	Curve 10 Radius=600.00m Angle=18°12'40"
STAKED KILOMETER DISTANCE		600	1200

LONGSECTION NHLANGENI (NHLANJENI)
FROM 600.000 TO 1200.000



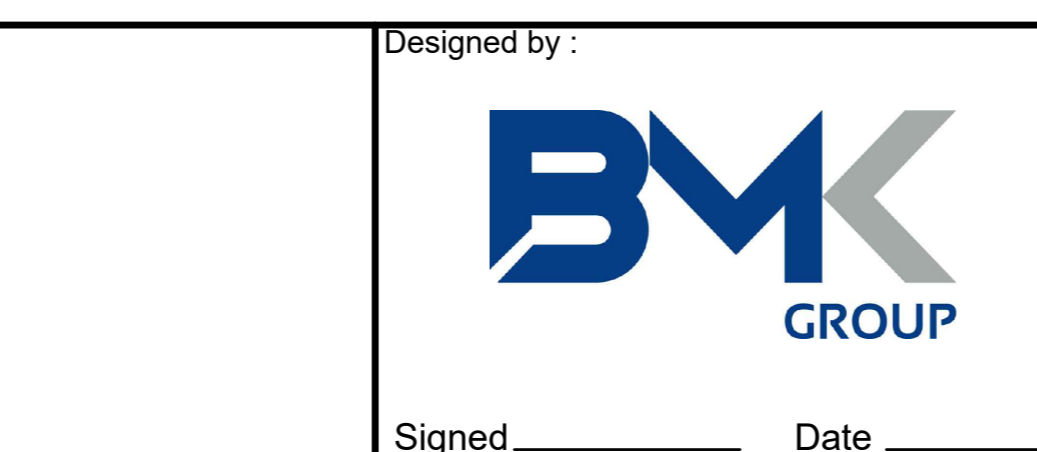
EARTHWORK QUANTITIES		Datum 130.000	
		Cut (m³)	Fill (m³)
FINISHED ROAD LEVELS	Left Edge	134.596	134.596
	Centre Line	134.596	134.596
	Right Edge	134.596	134.596
STAKED LINE GROUND LEVELS		134.596	134.596
GRADES %		-3.98%	
VERTICAL ALIGNMENT			
SUPERELEVATION		LEFT	RIGHT
HORIZONTAL ALIGNMENT		Station 230.747107	
STAKED KILOMETER DISTANCE		0	18

LONGSECTION DRIVE WAY
FROM 0.000 TO 18.229

Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

AS BUILT
Supervising Authority

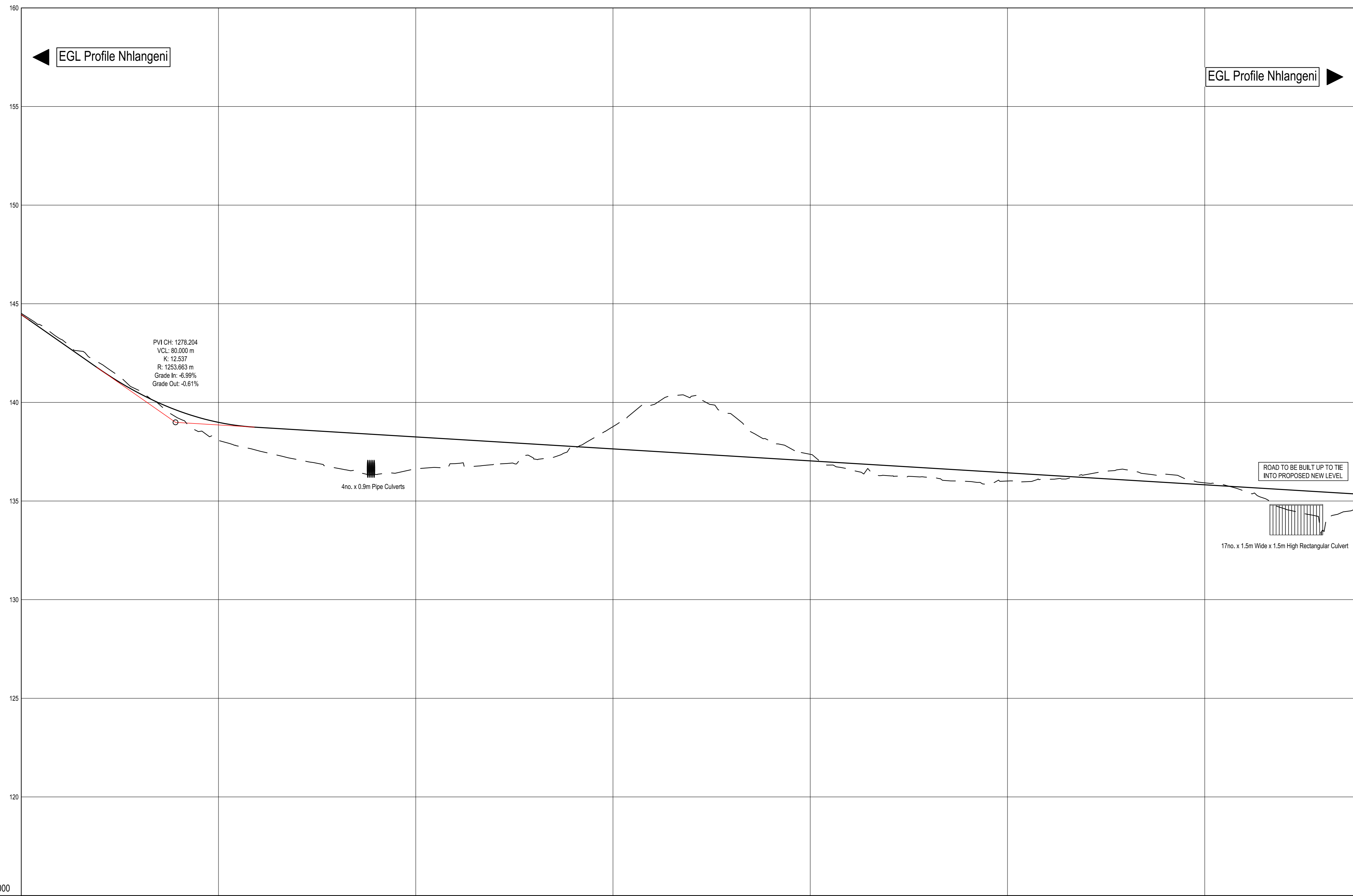
Continued from:-	Designed by:- P. THAVER
Continued on:-	Checked by:- P. DHANEE
Cross Section No:-	Drawn by:- M. CELE
Longitudinal Section No:-	Checked by:- C. MOONSAMY
Design Plan No:-	Date of approval:-



Designed by:
RAY NKONYENI MUNICIPALITY
CHIEF ENGINEER
HEAD: RAY NKONYENI MUNICIPALITY

NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE
PORTION
NHLANGENI (NHLANJENI)
LONG SECTION
CH 600.000 - CH 1200.000

Staked km distance	Sheet - 02 of - 03
AS SHOWN	Plan No. :-
Scale	BMK-1753-02-002
1:1000 AS SHOWN	



EARTHWORK QUANTITIES		Cut (m³)	Adj. Cut (m³)	Fill (m³)
FINISHED ROAD LEVELS	Left Edge	144.330	144.330	144.330
	Centre Line	144.450	144.026	144.540
	Right Edge	144.330	144.026	144.330
STAKED LINE GROUND LEVELS		144.516	143.206	141.670
GRADES %		-0.989%		
VERTICAL ALIGNMENT		Curve 12: Radius=1253.863m, Angle=12.537°		
SUPERELEVATION		LEFT: ---, RIGHT: ---		
HORIZONTAL ALIGNMENT		Curve 13: Radius=1253.863m, Angle=12.537°		
STAKED KILOMETER DISTANCE		1200	1220	1240

LONGSECTION NHLANGENI (NHLANJENI)
FROM 1200.000 TO 1876.000

Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

AS BUILT
Supervising Authority

Continued from:-
Continued on:-
Cross Section No:-
Longitudinal Section No:-
Design Plan No:-

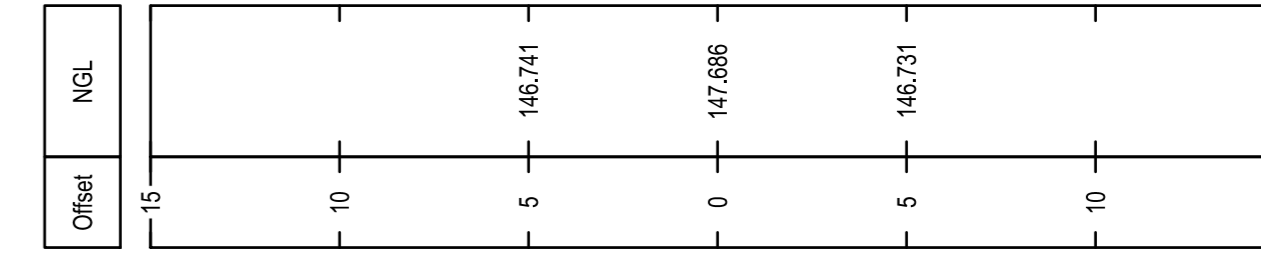
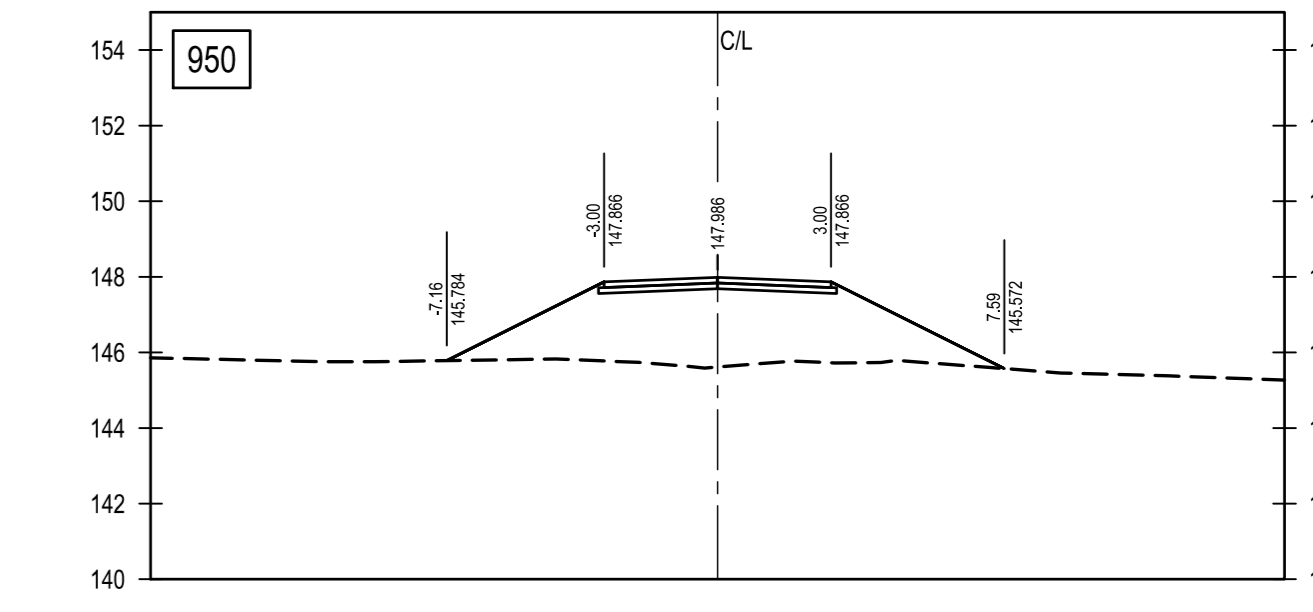
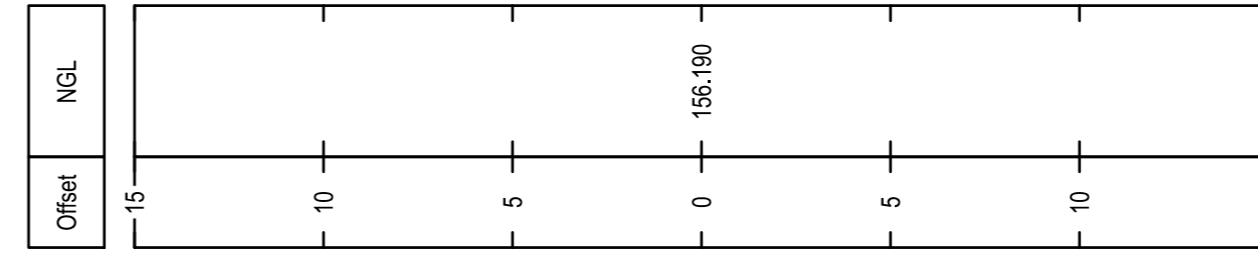
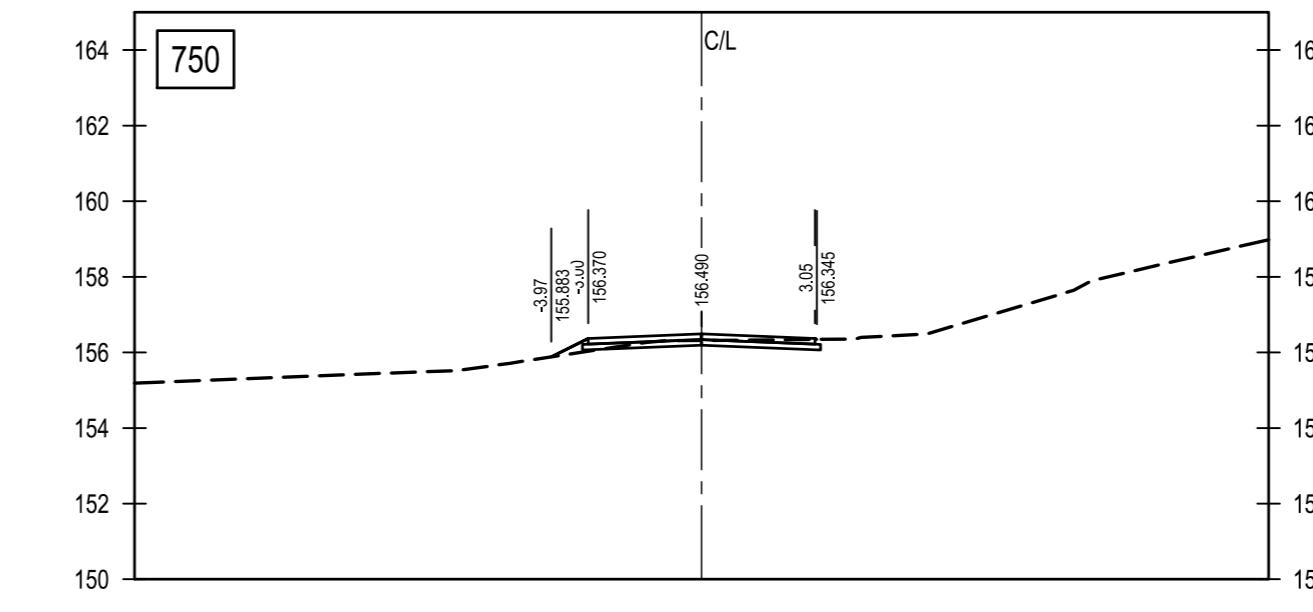
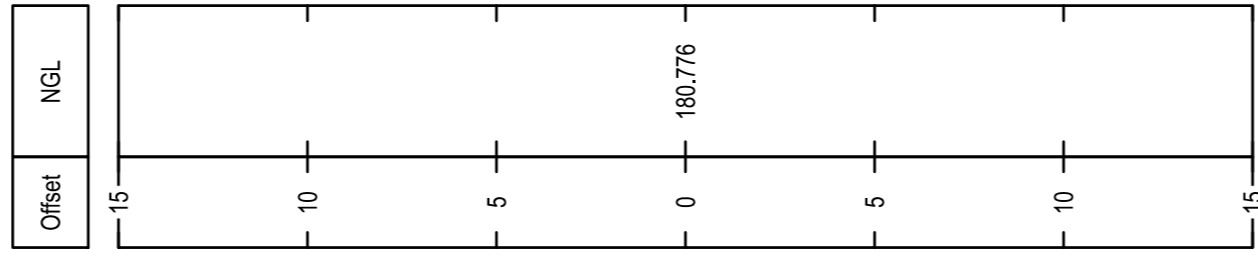
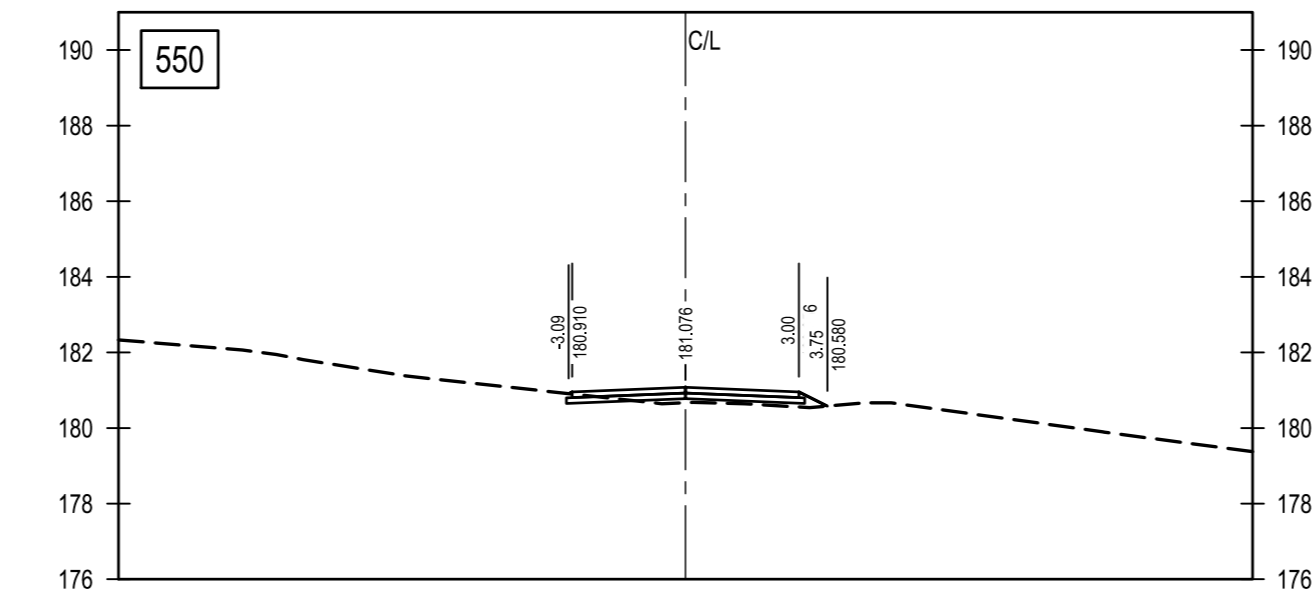
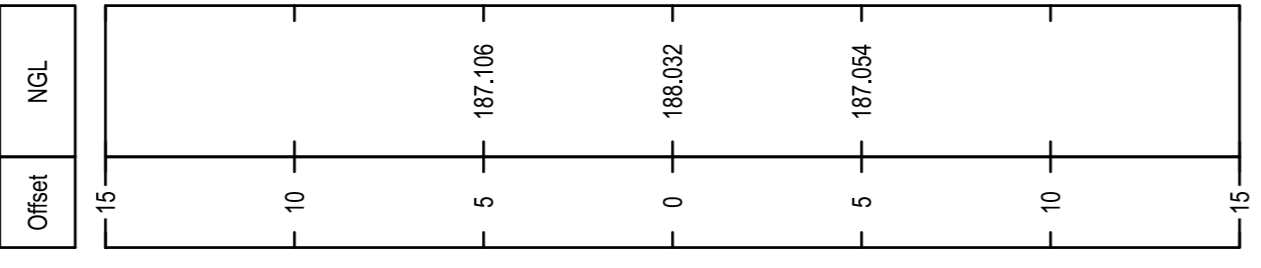
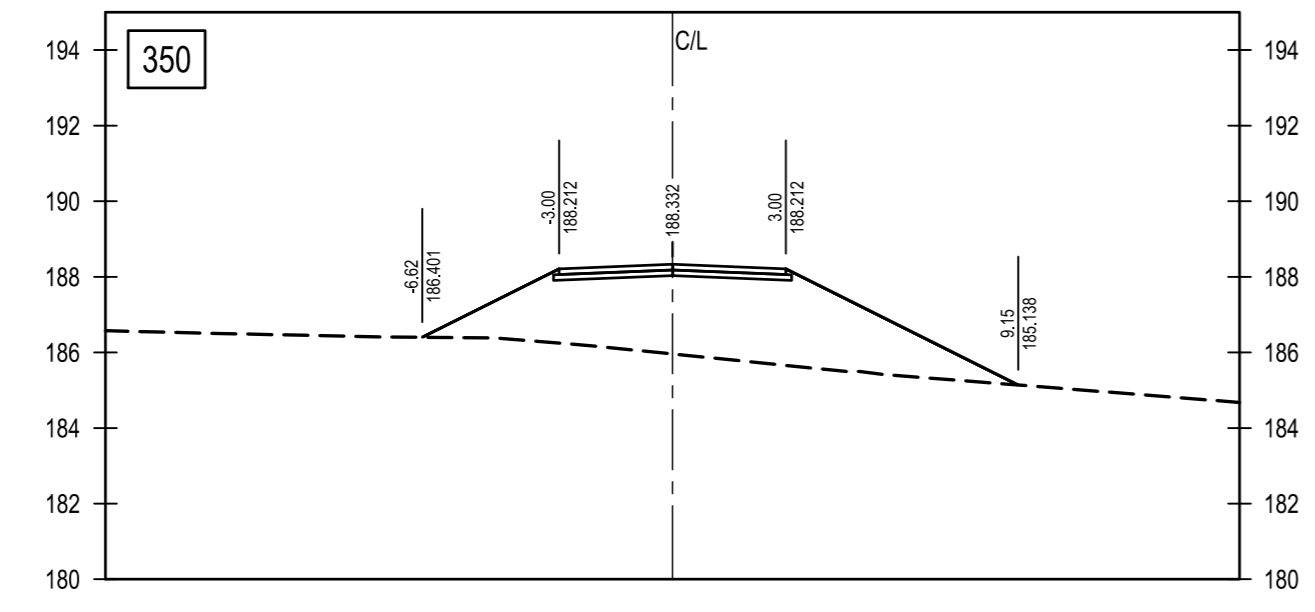
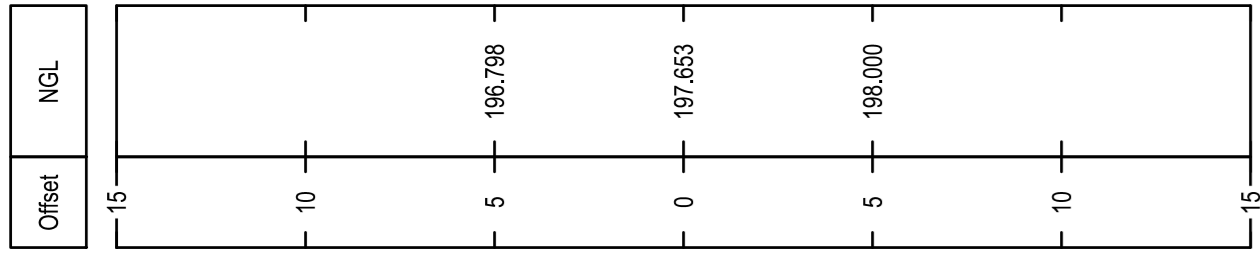
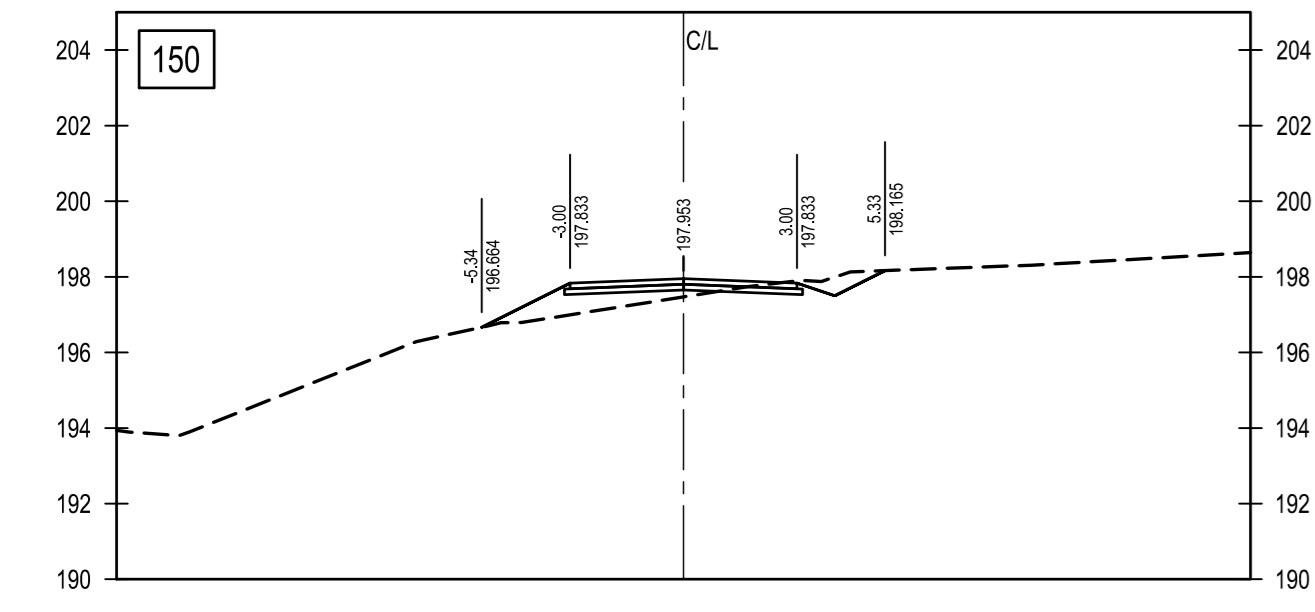
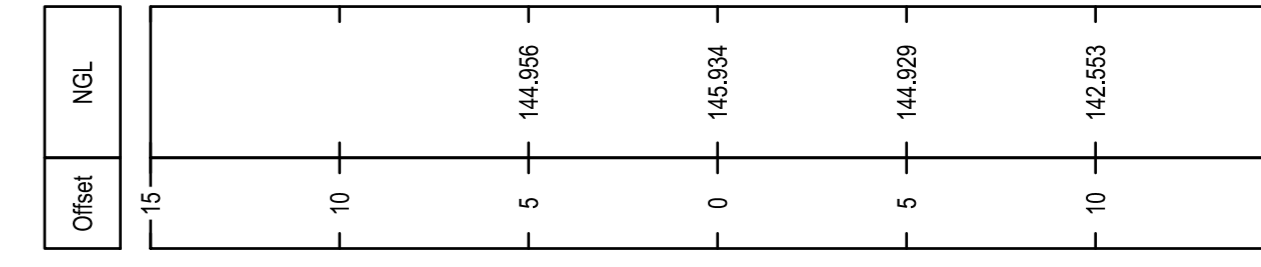
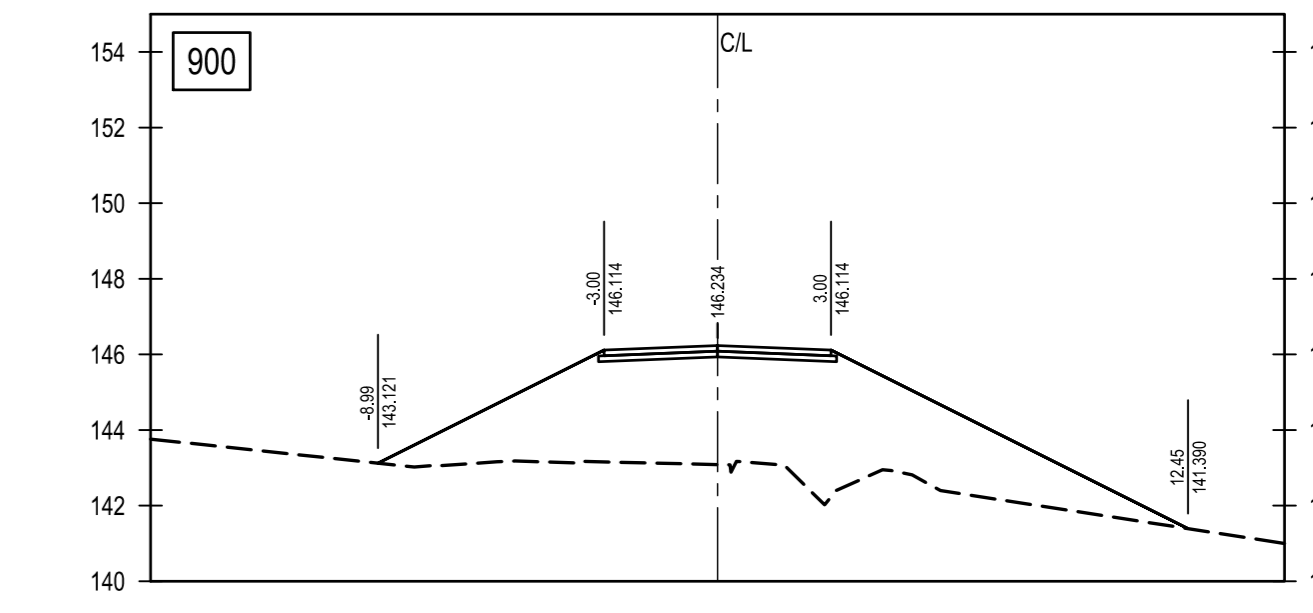
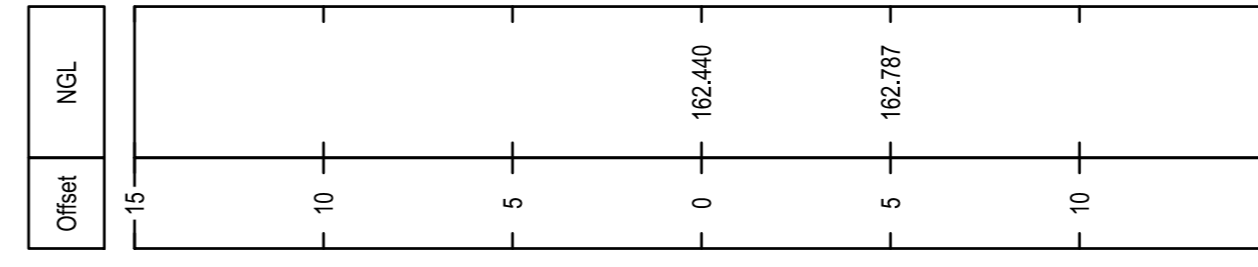
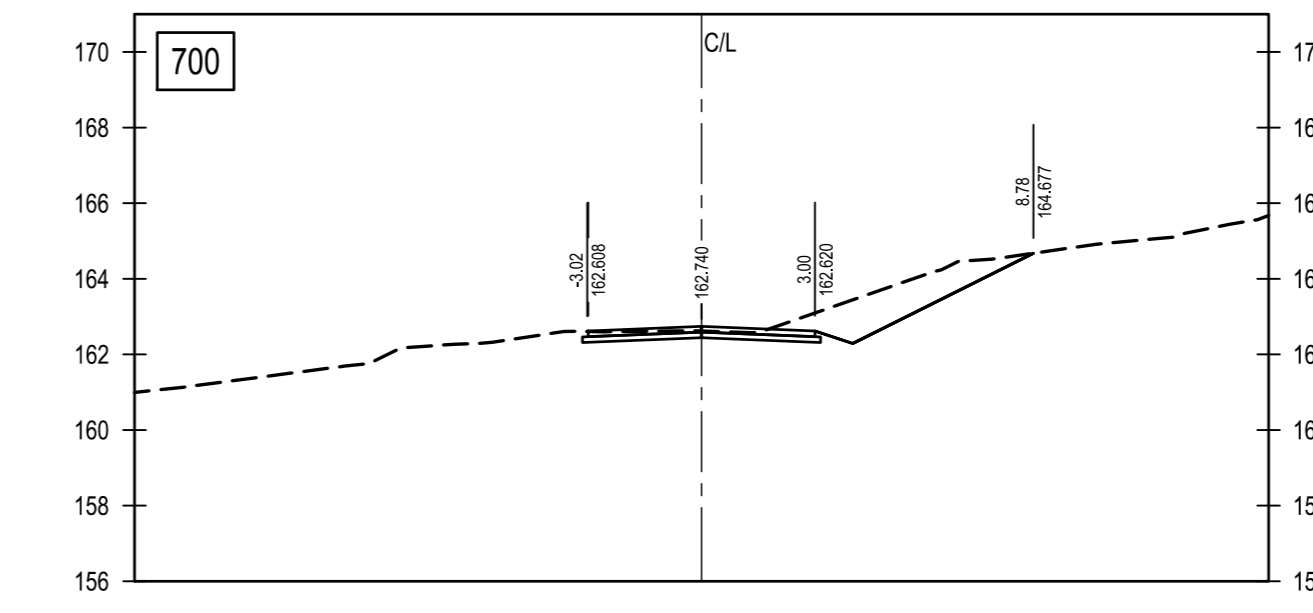
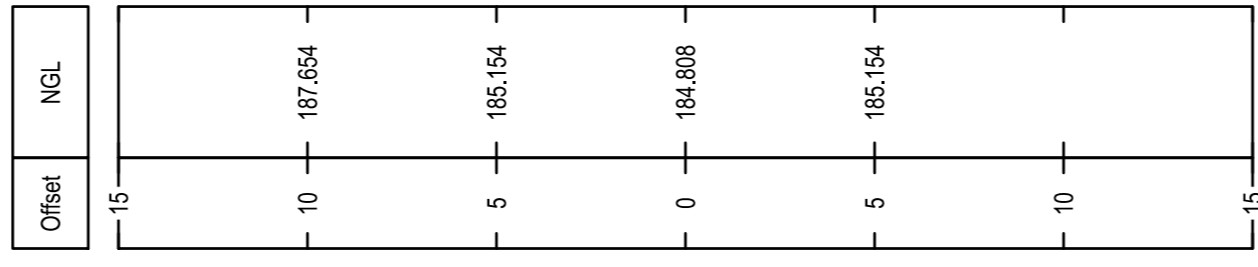
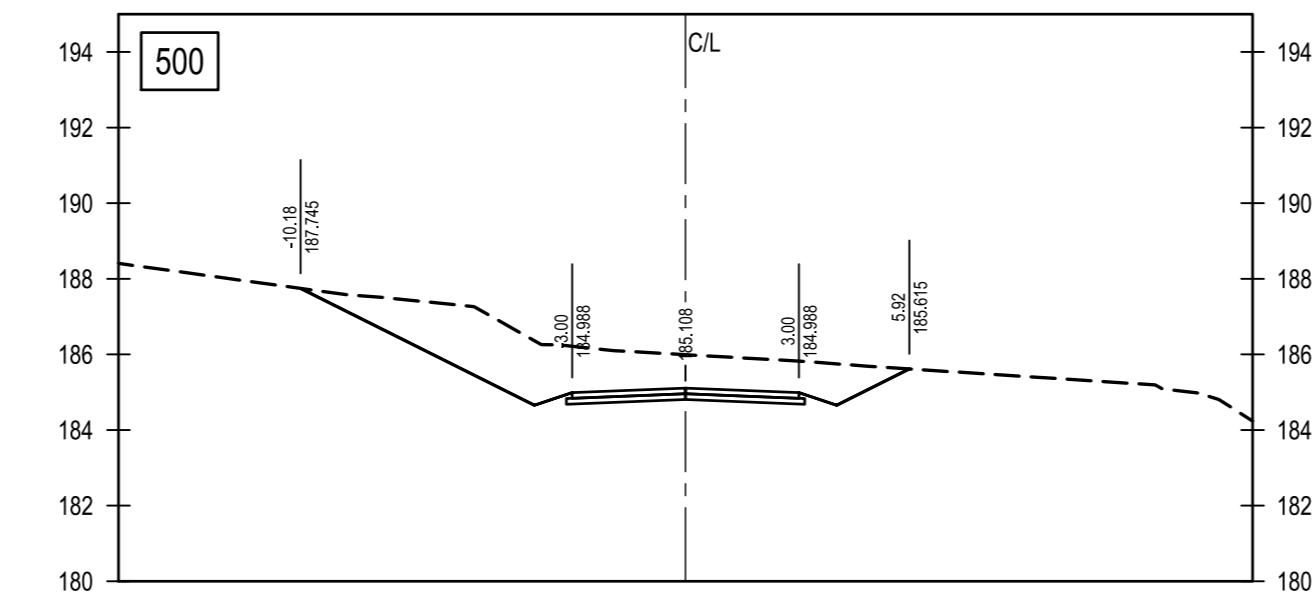
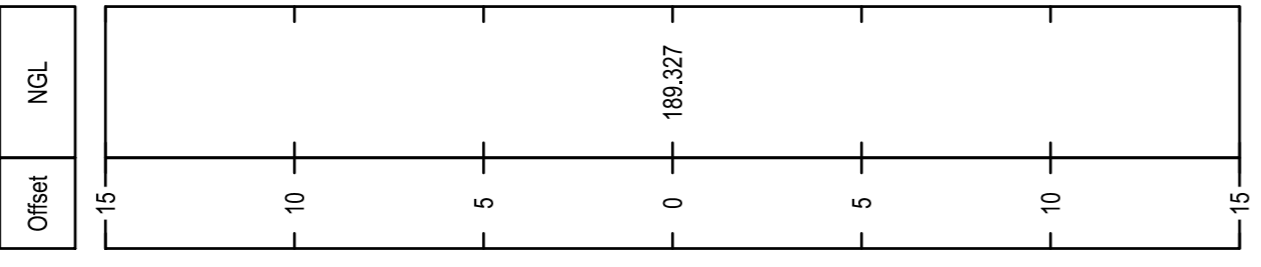
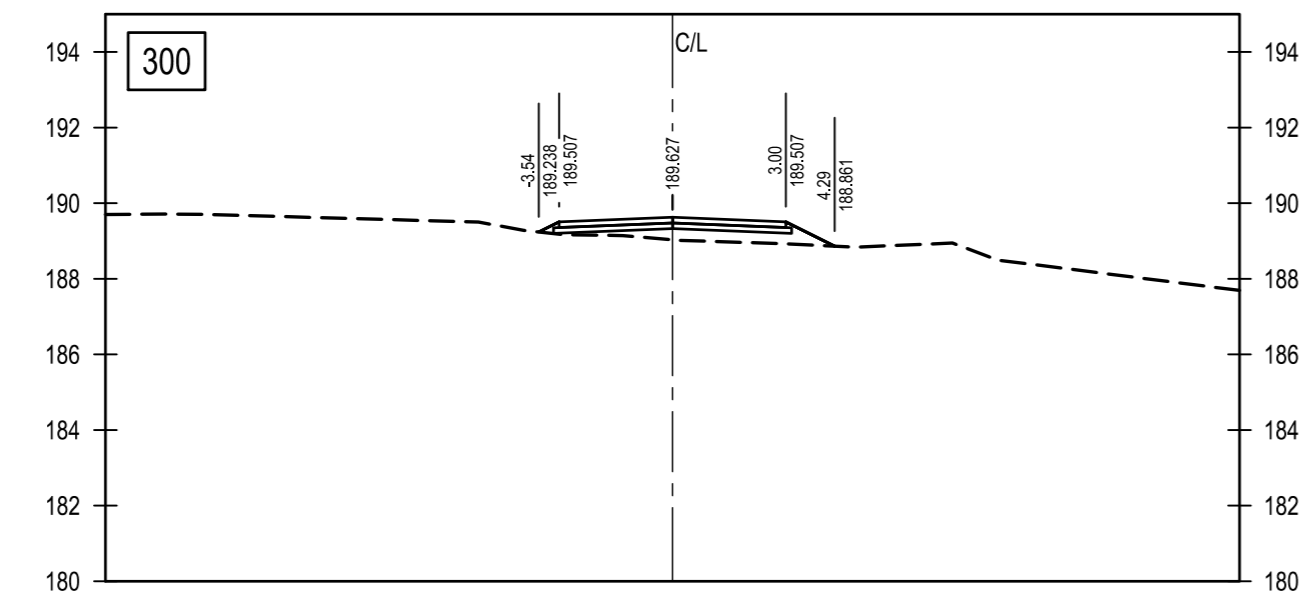
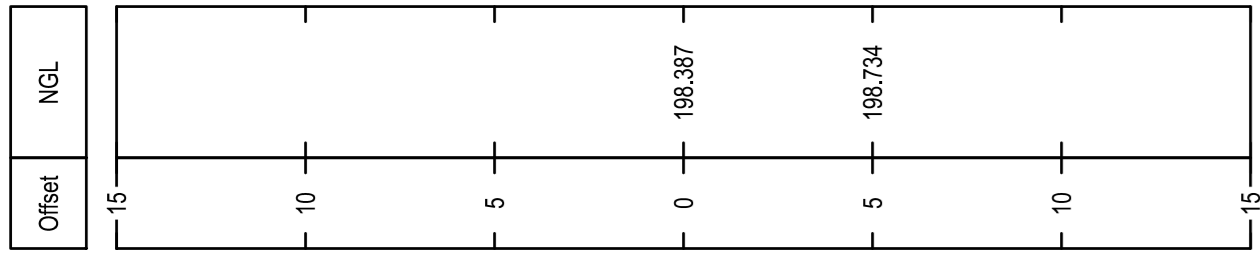
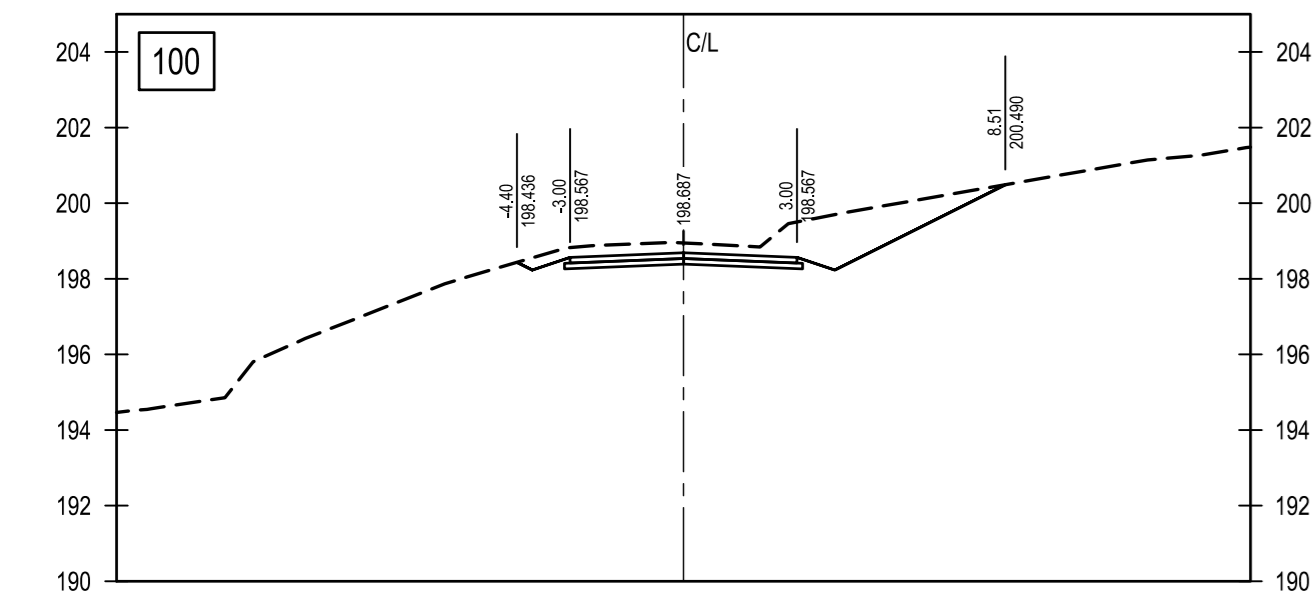
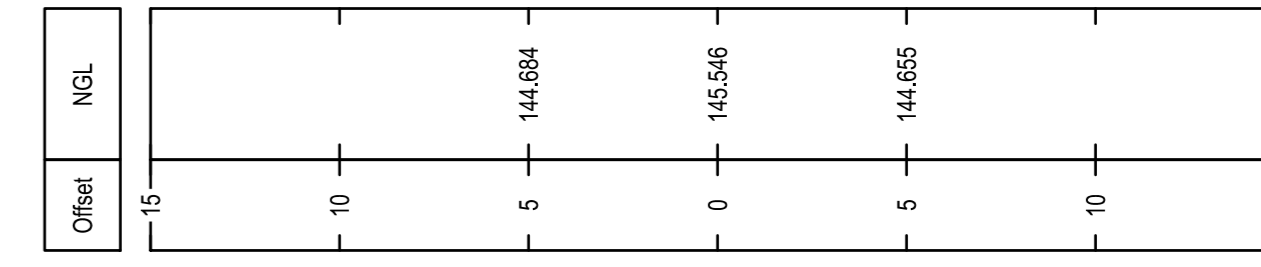
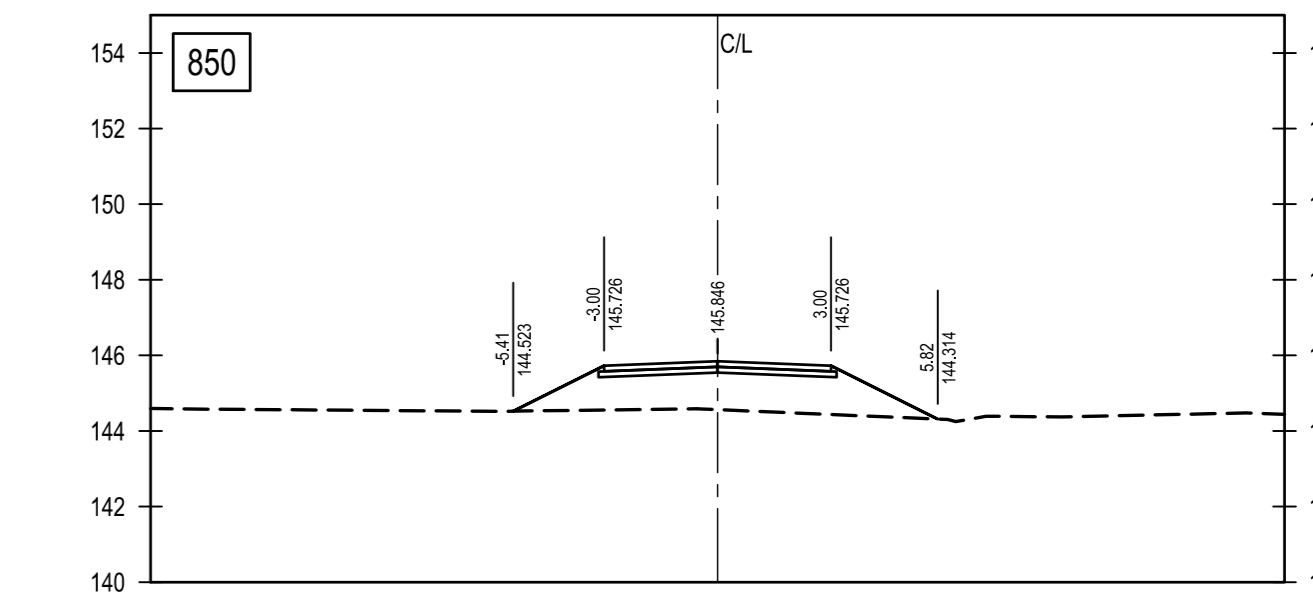
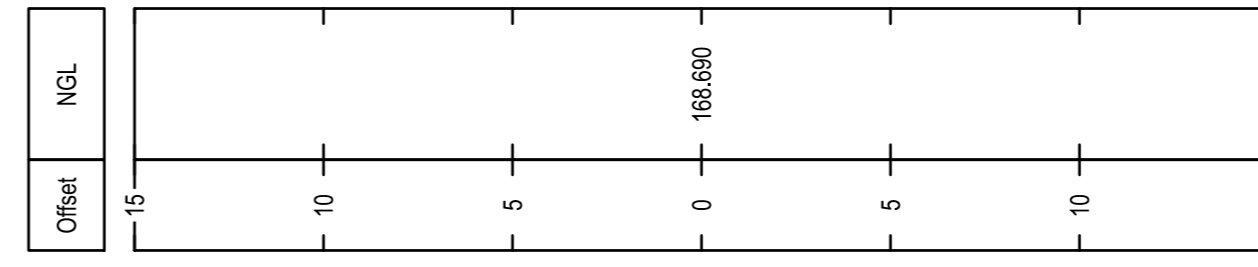
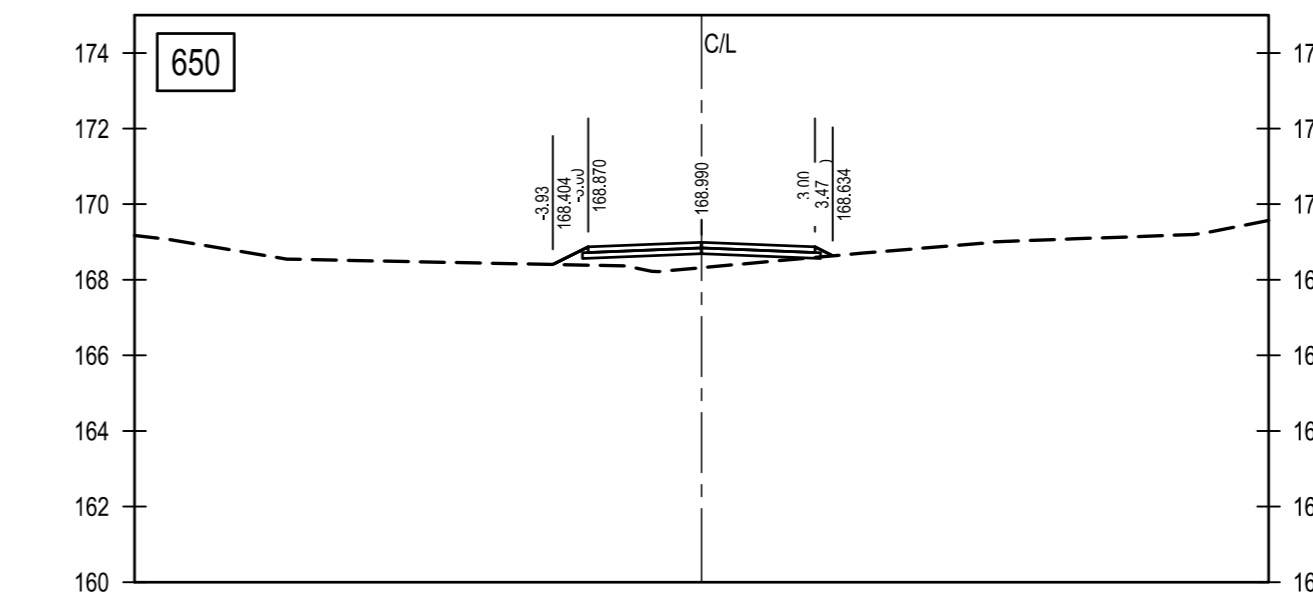
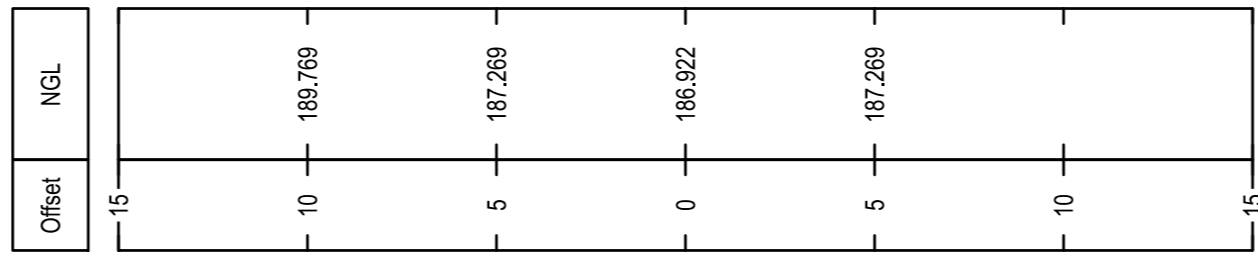
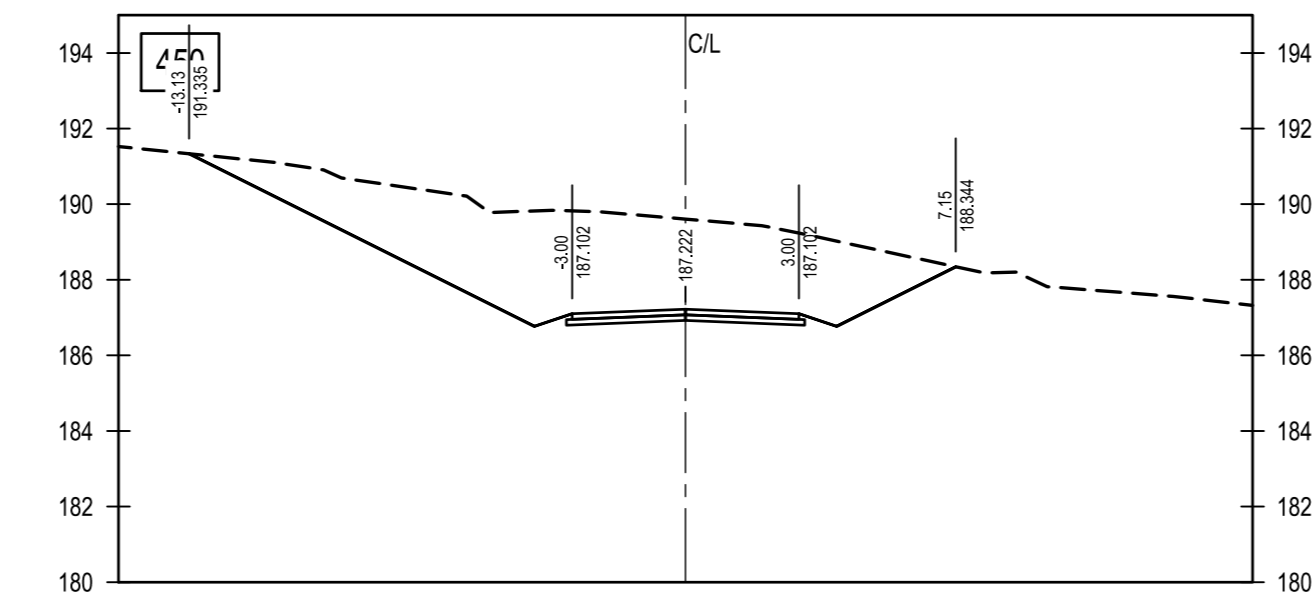
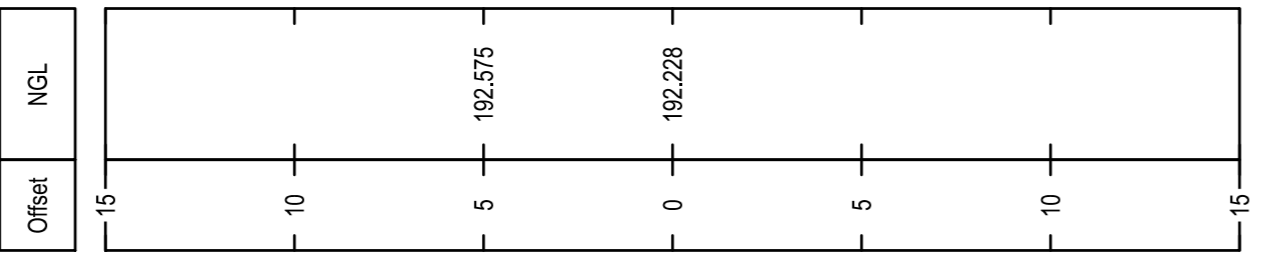
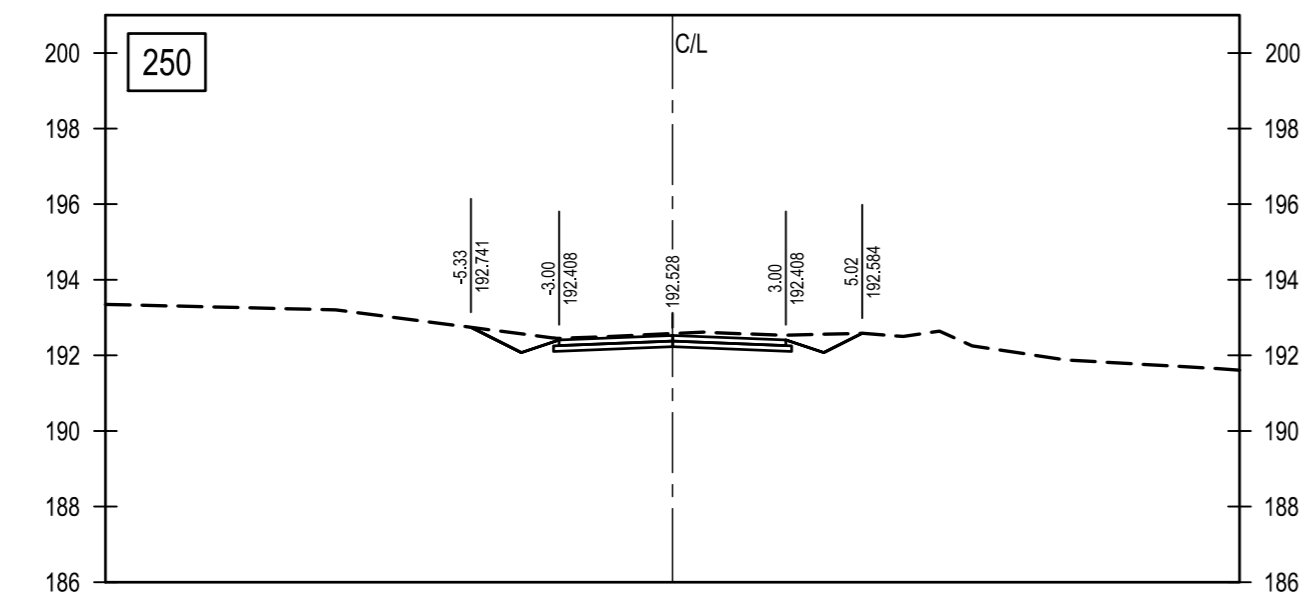
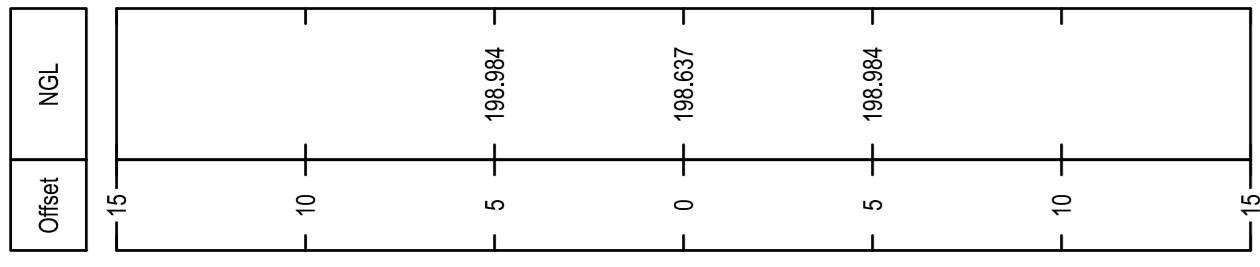
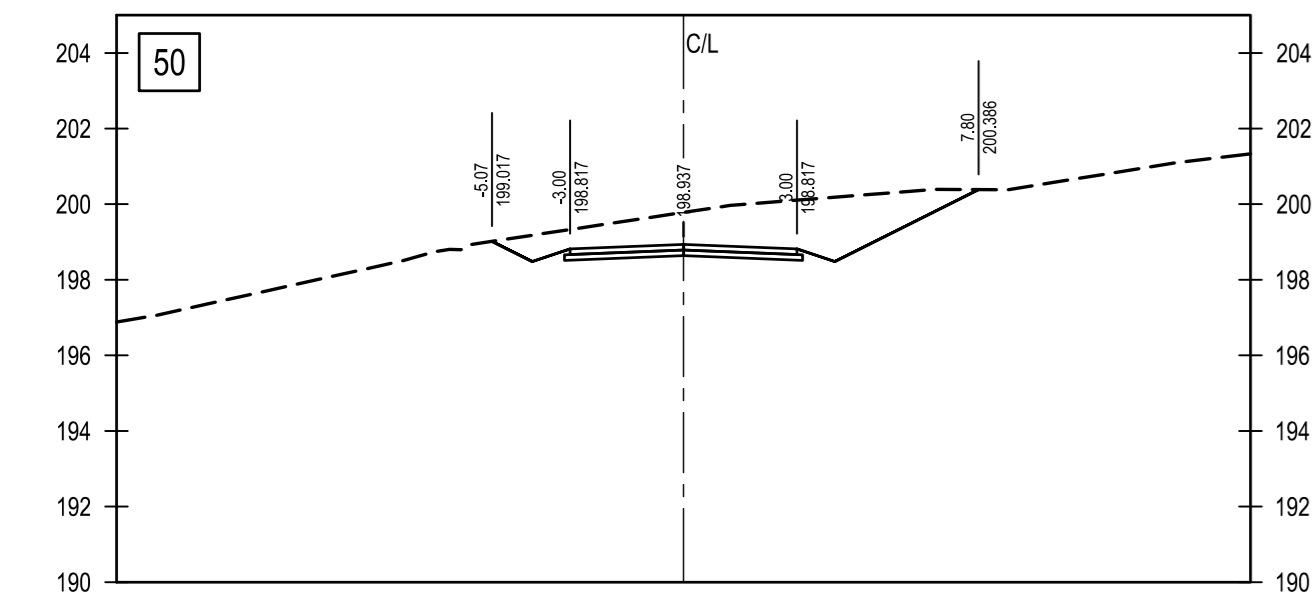
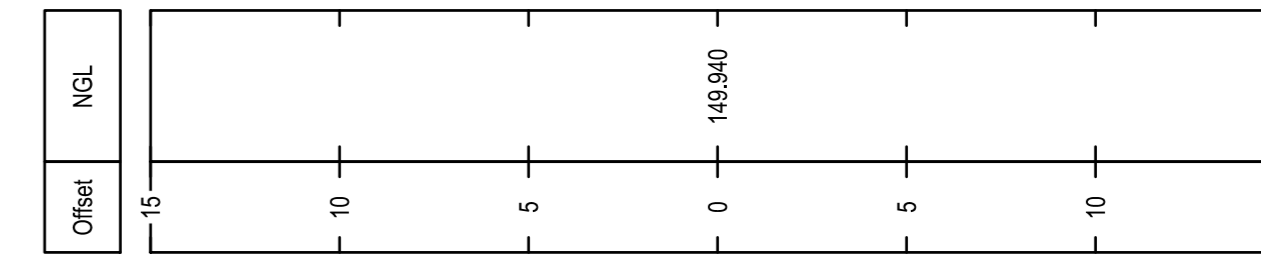
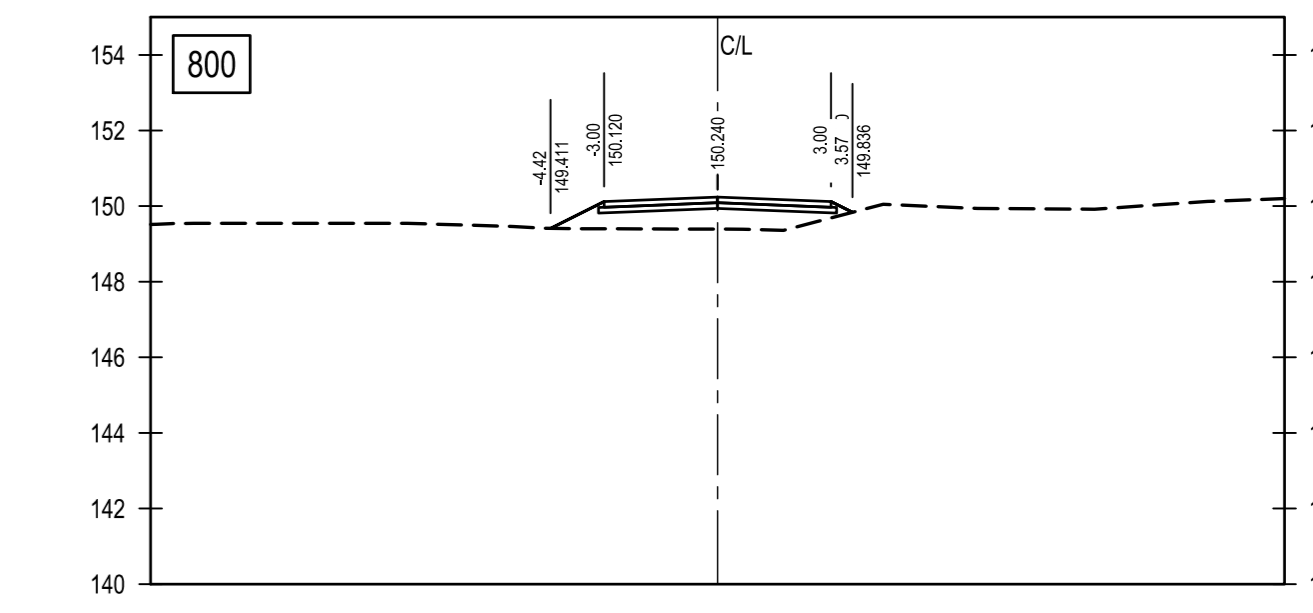
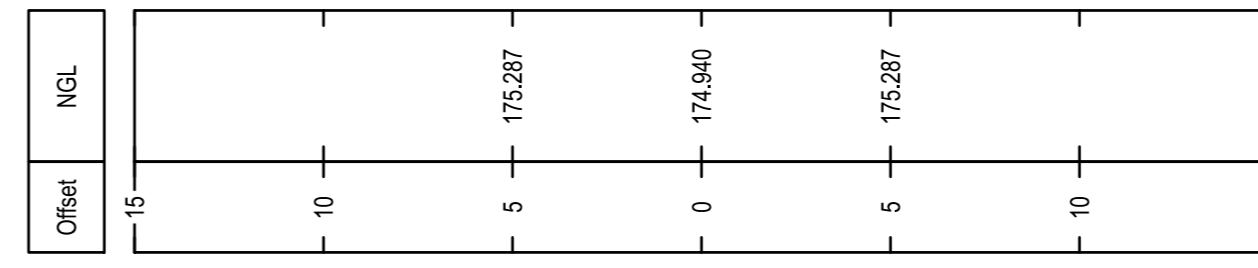
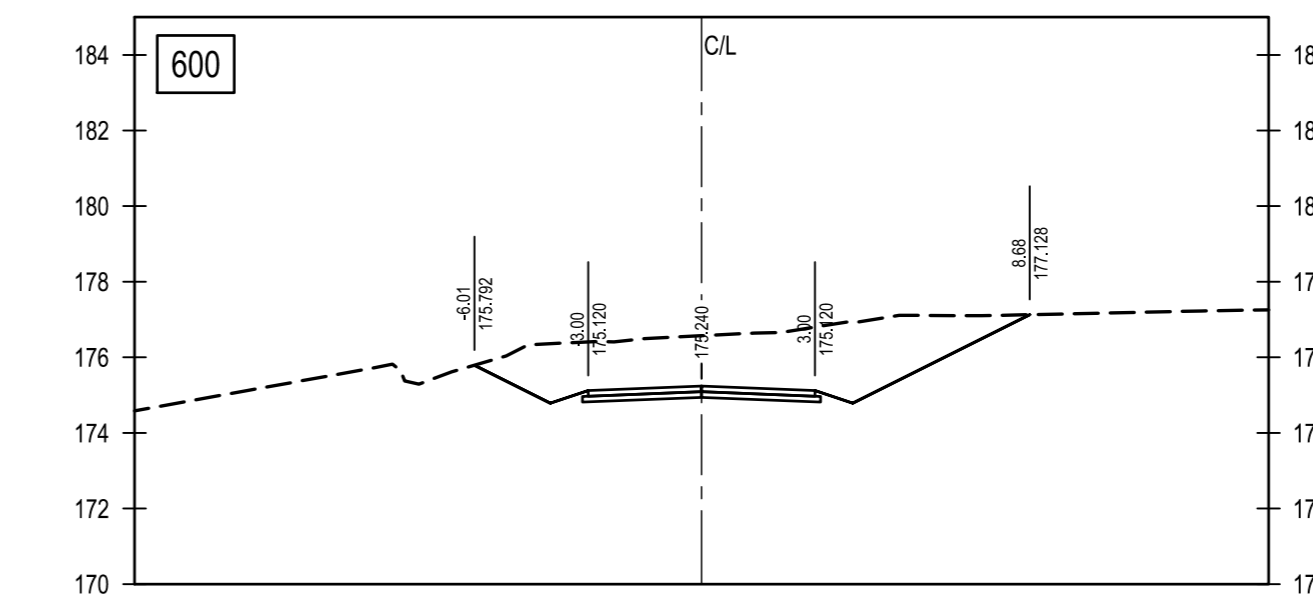
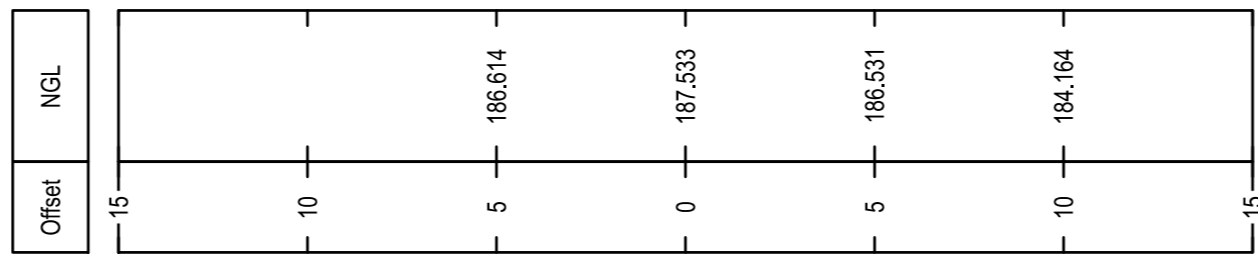
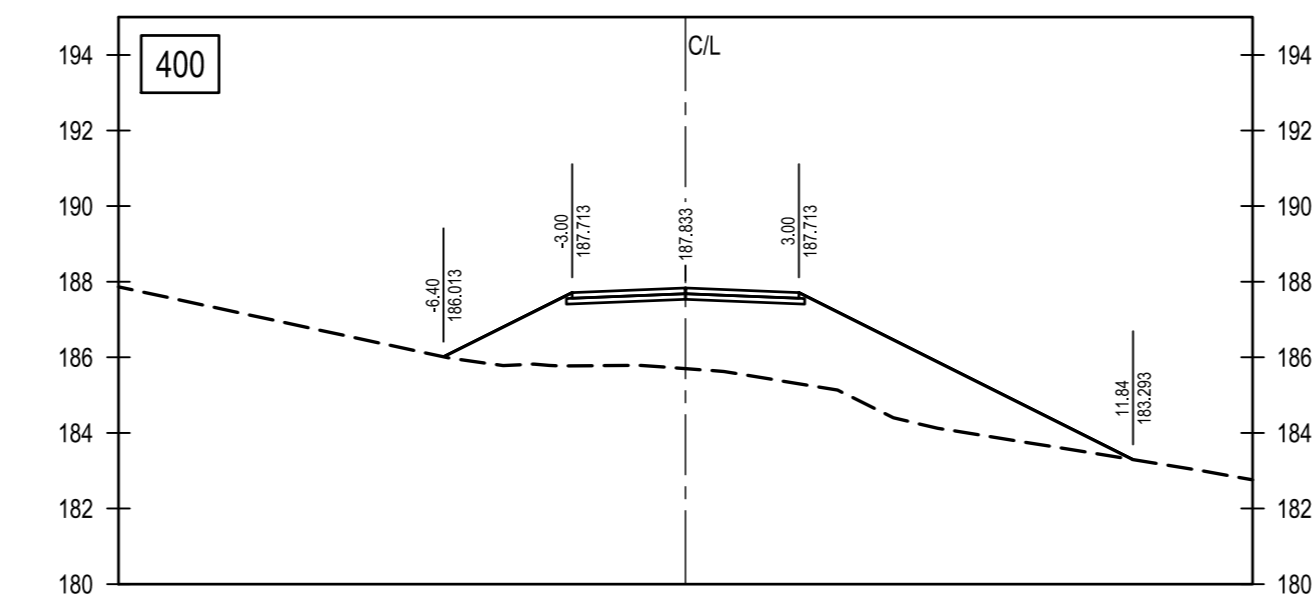
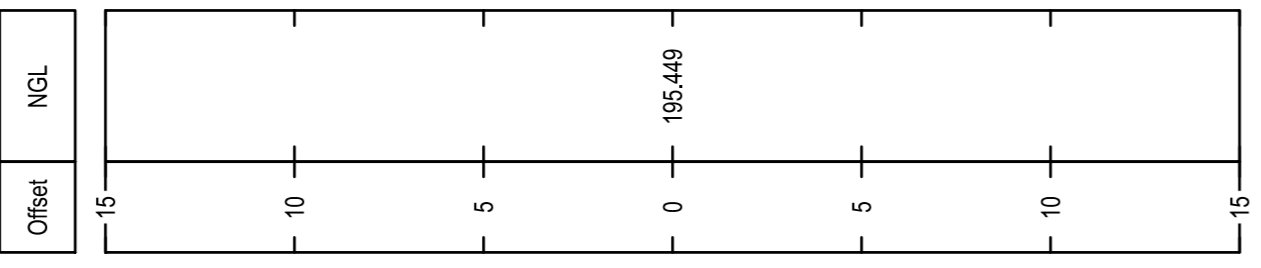
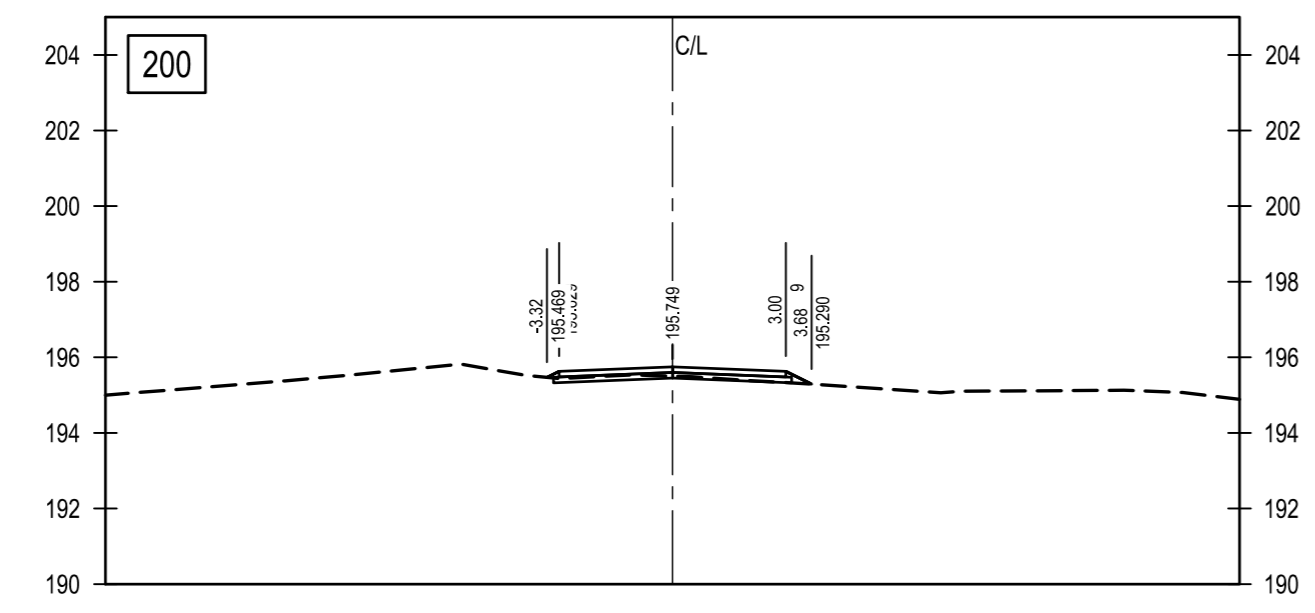
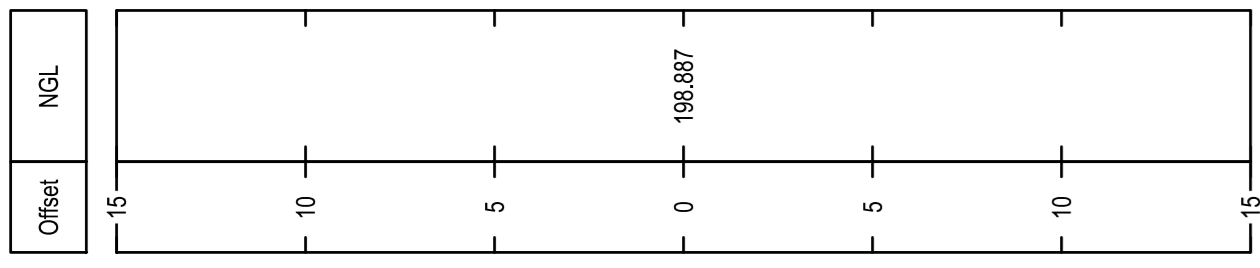
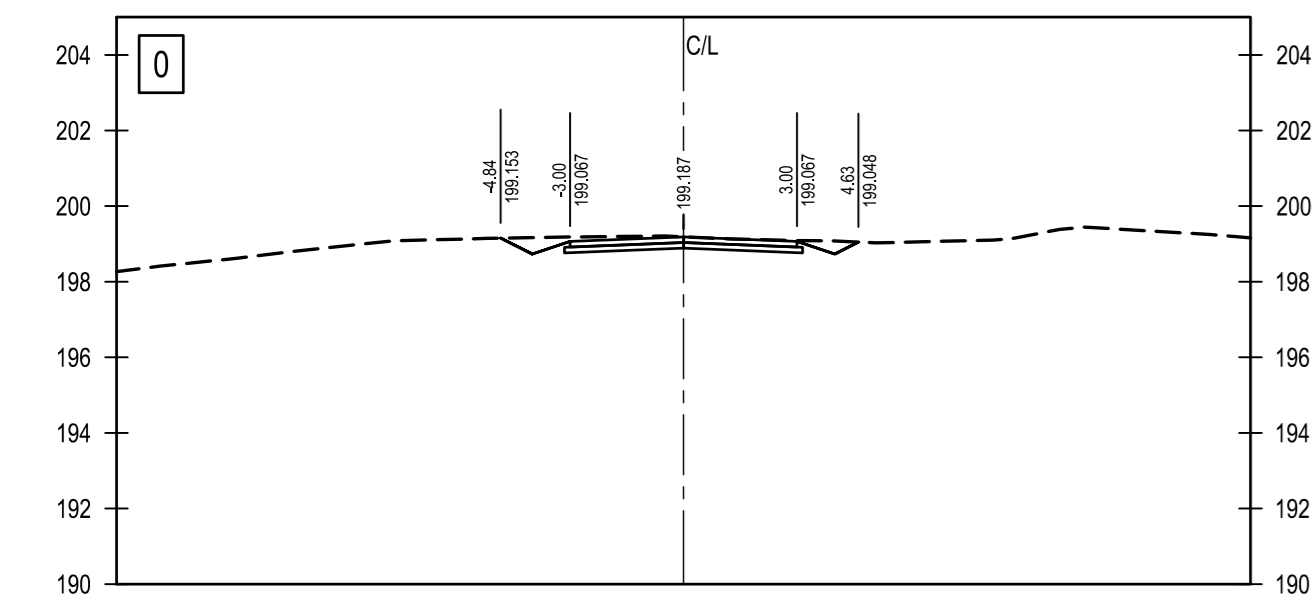
Designed by:- P. THAYER
Checked by:- P. DHANEE
M. CELE
Checked by:- C. MOONSAMY
Date of approval:-



RAY NKONYENI MUNICIPALITY
CHIEF ENGINEER
HEAD: RAY NKONYENI MUNICIPALITY

NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE
PORTION
NHLANGENI (NHLANJENI)
LONG SECTION
CH 1200.000 - CH 1876.000

Staked km distance AS SHOWN
Scale 1:1000 AS SHOWN
Sheet - 03 of - 03
Plan No. - BMK-1753-02-003



Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

AS BUILT
Supervising Engineer: _____ Date: _____
Supervising Authority

Continued from:-
Continued on:-
Cross Section No:-
Longitudinal Section No:-
Design Plan No:-

Designed by:- P. THAYER
Checked by:- P. DHANEE
Drawn by:- C. MOONSAMY
Checked by:- P. DHANEE
Date of approval:-



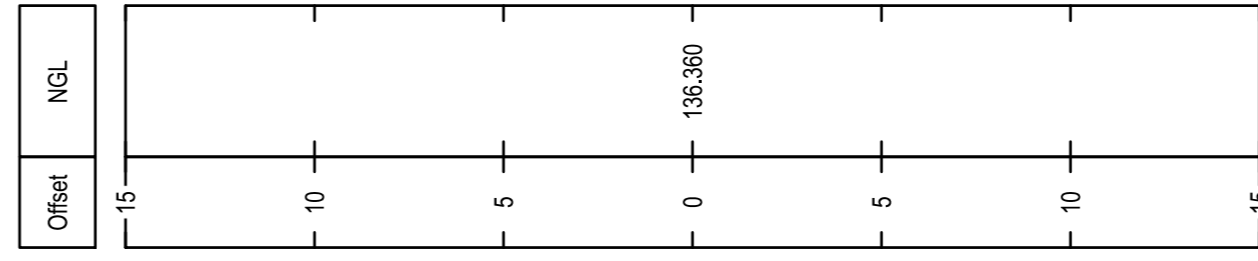
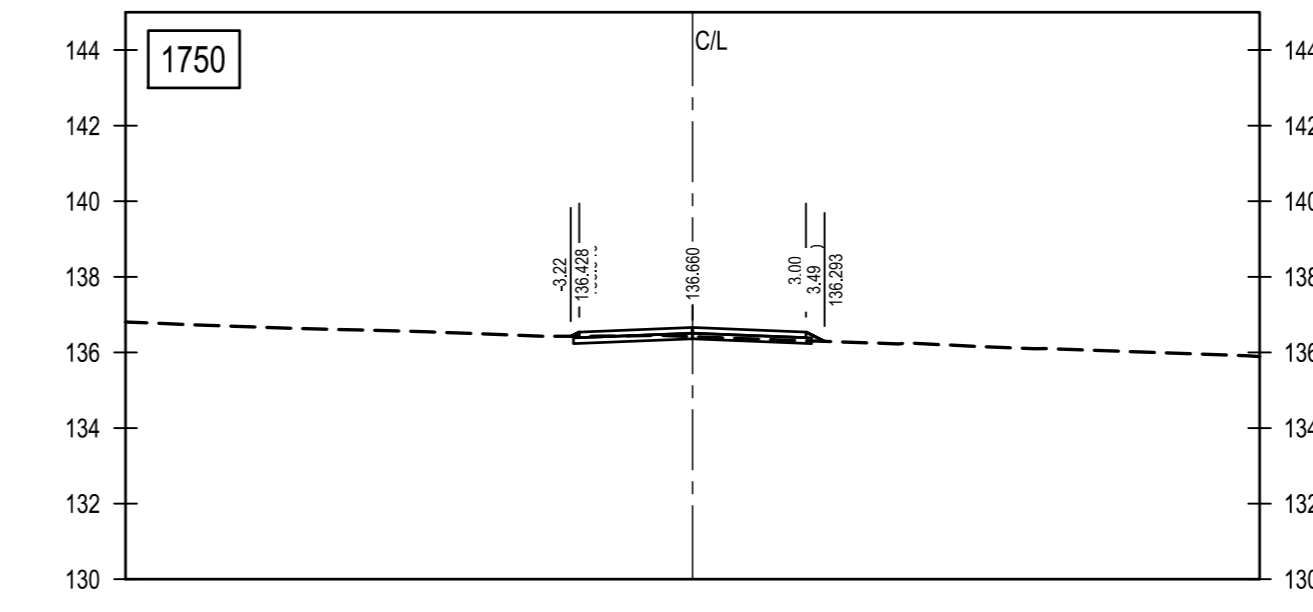
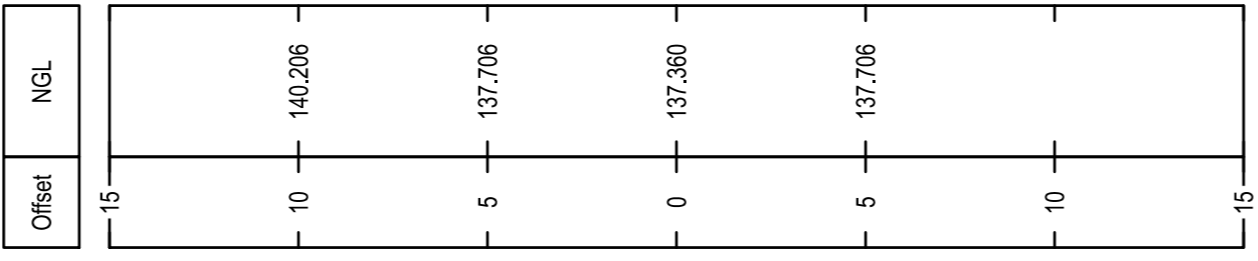
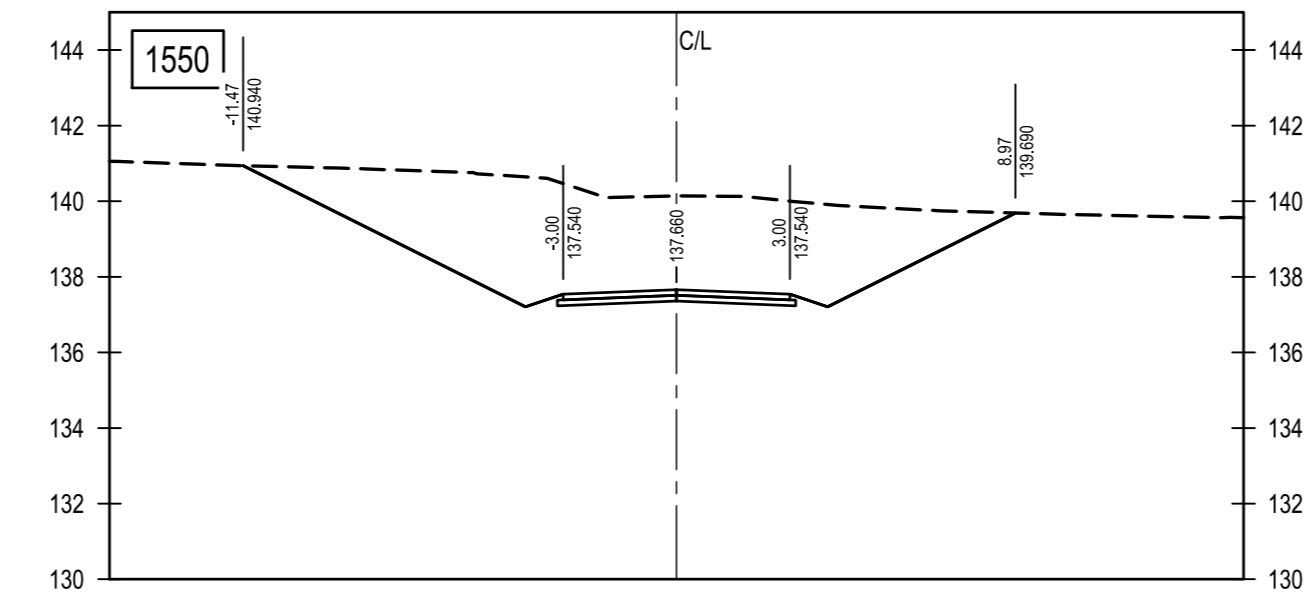
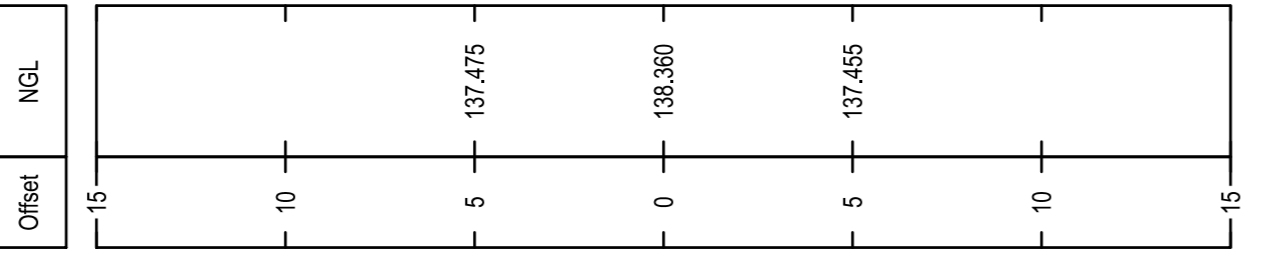
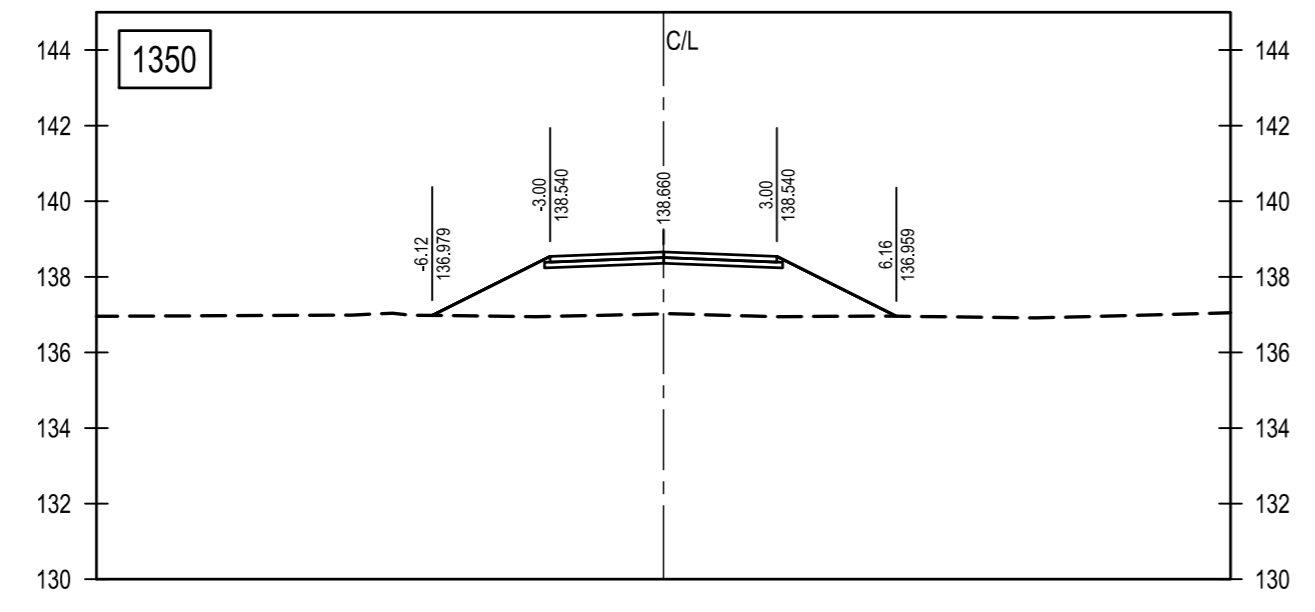
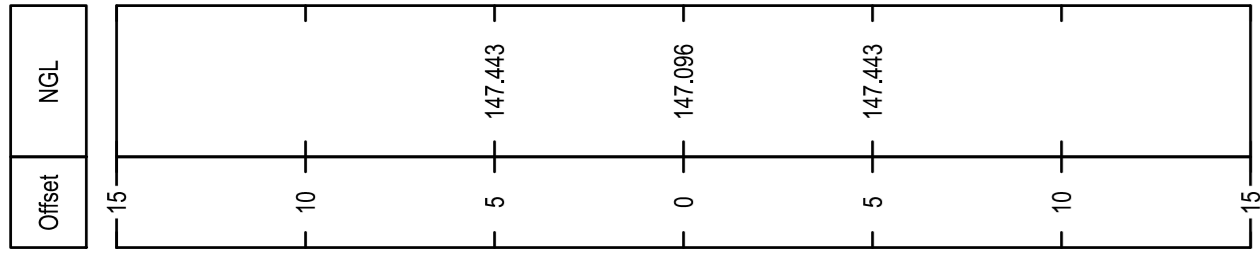
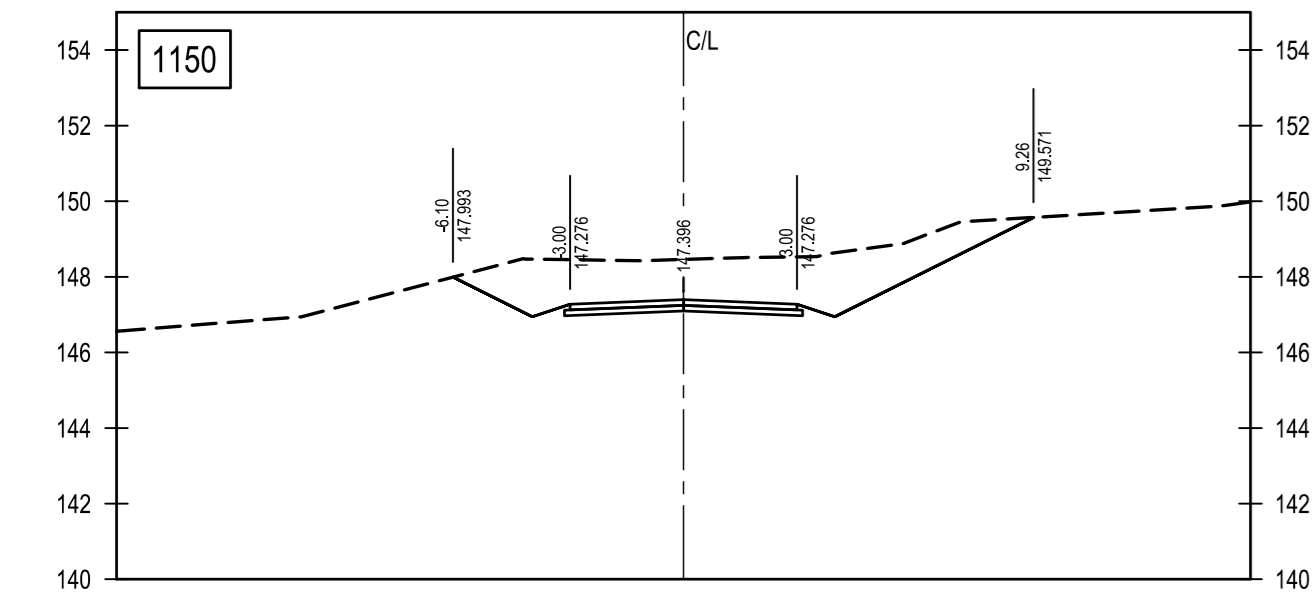
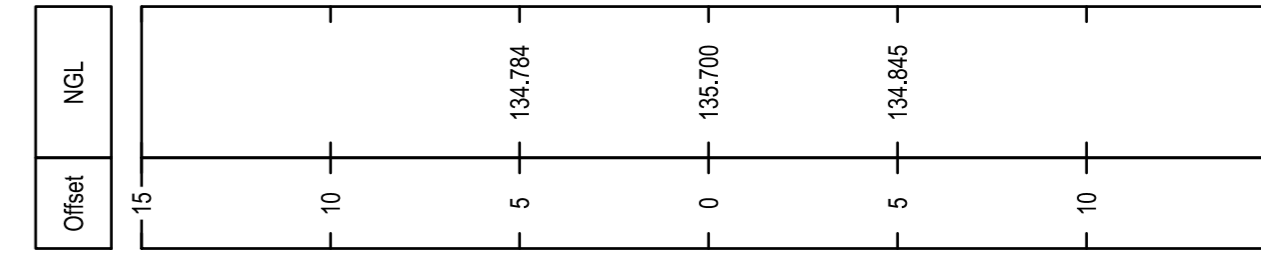
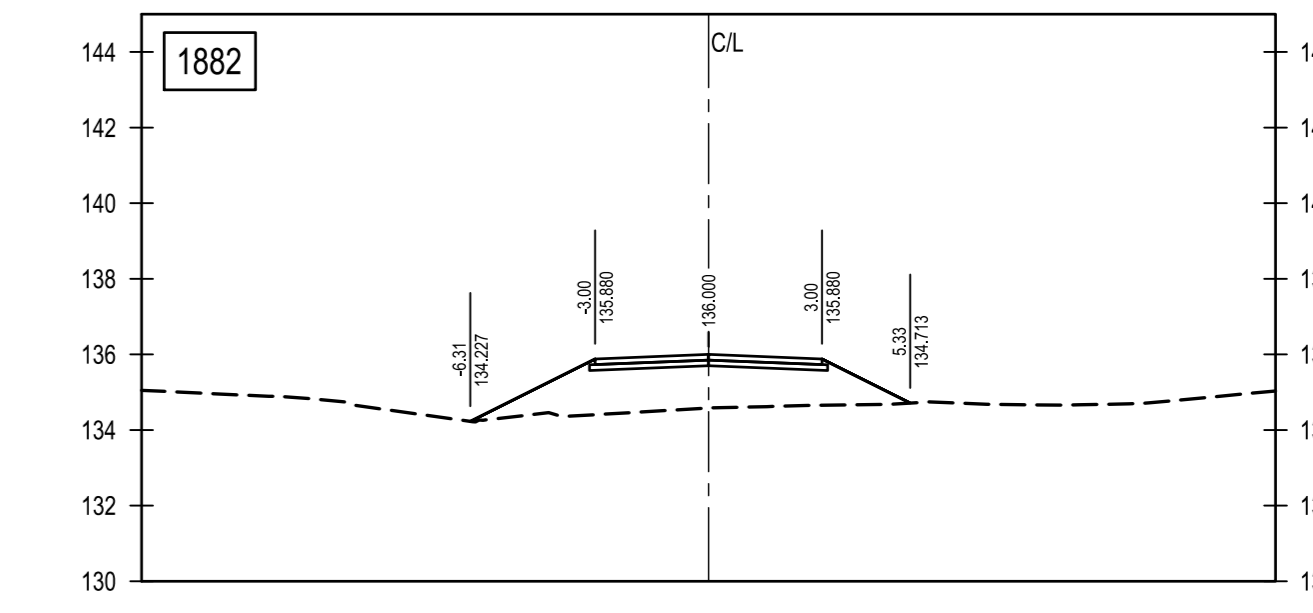
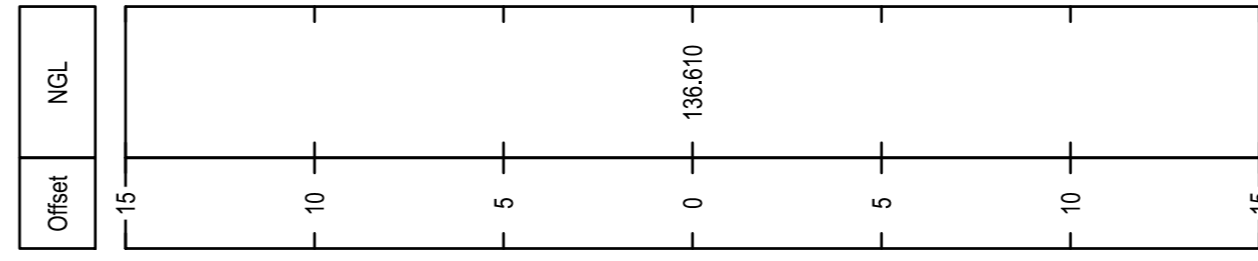
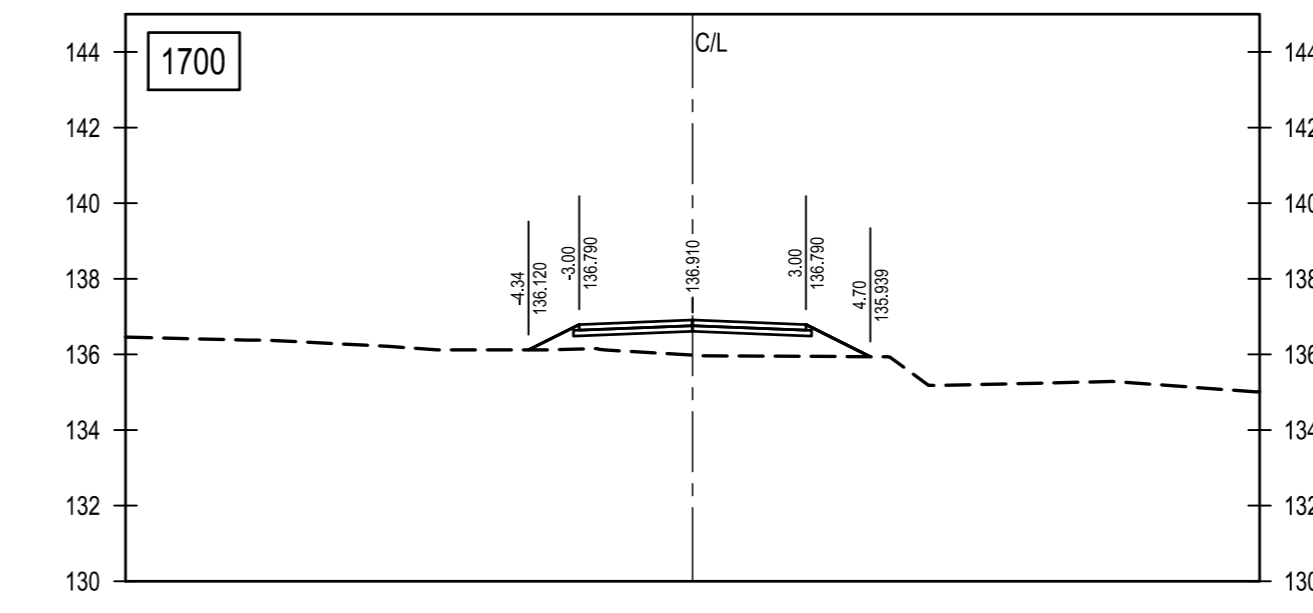
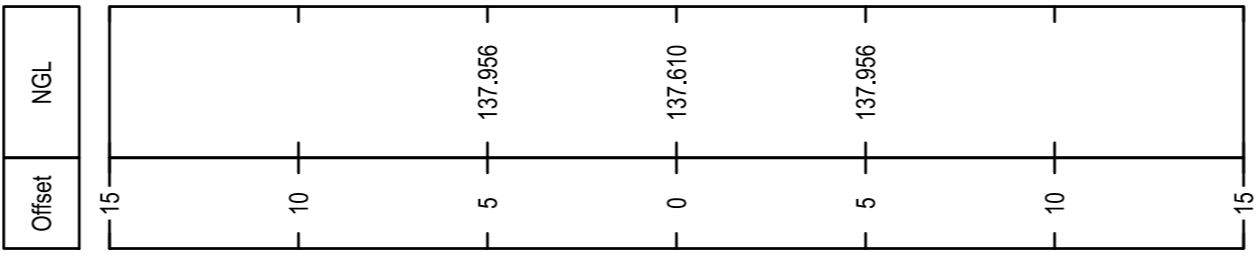
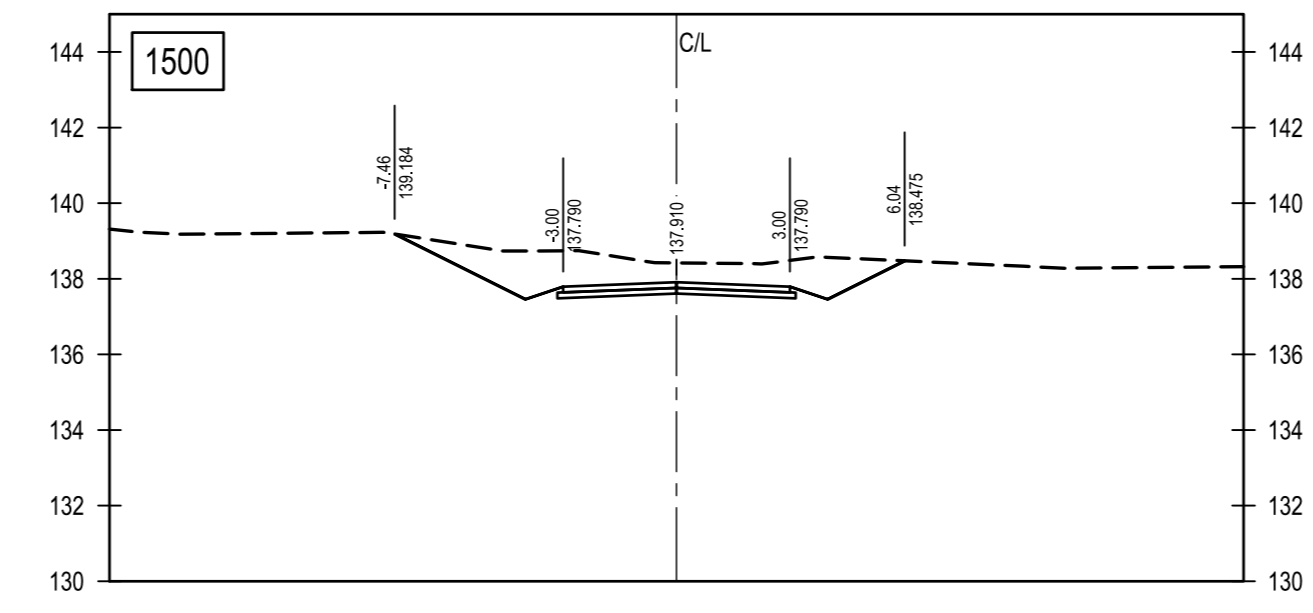
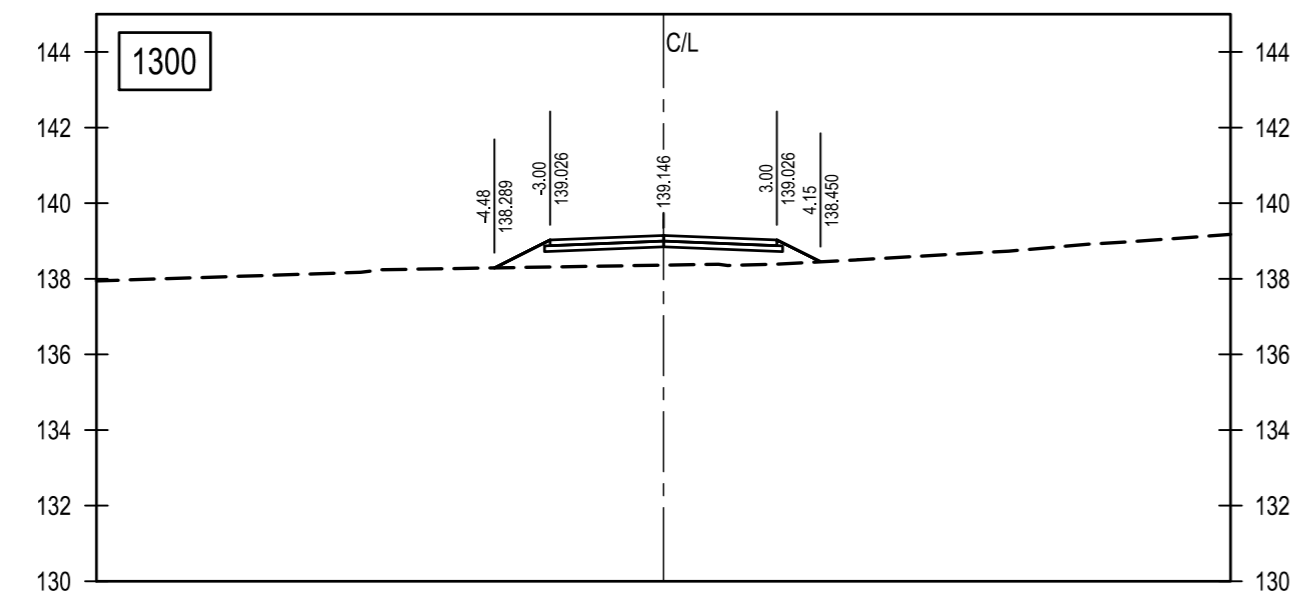
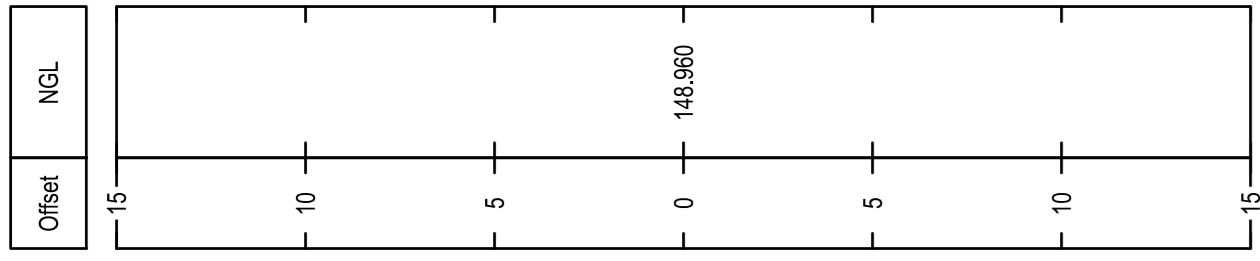
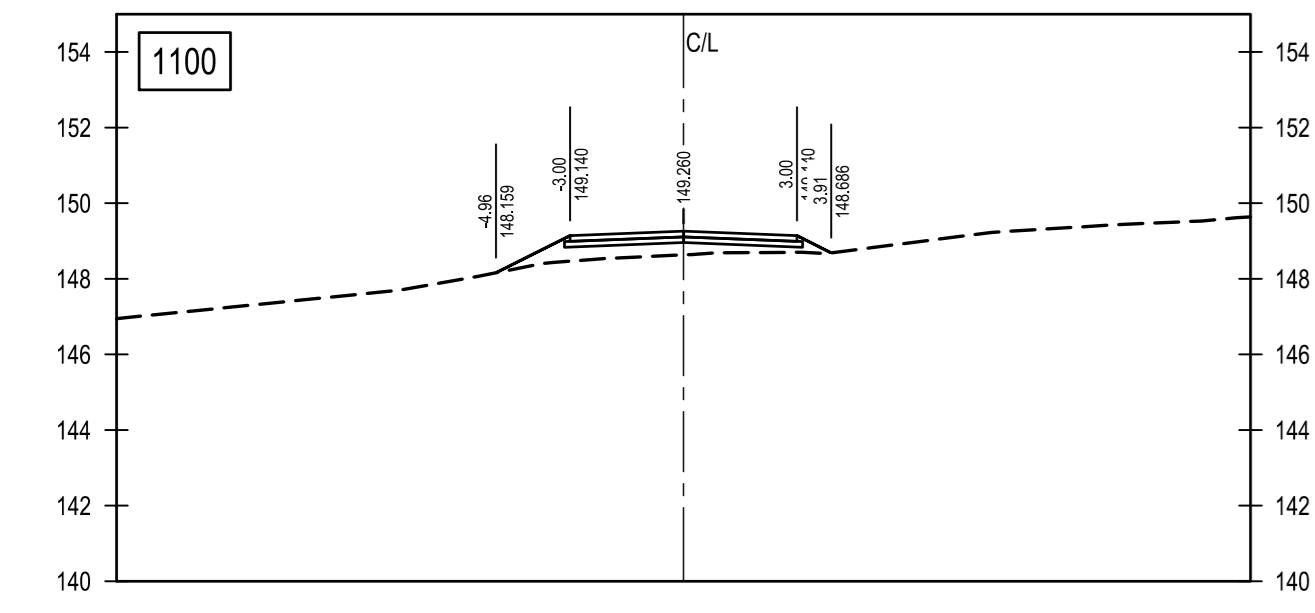
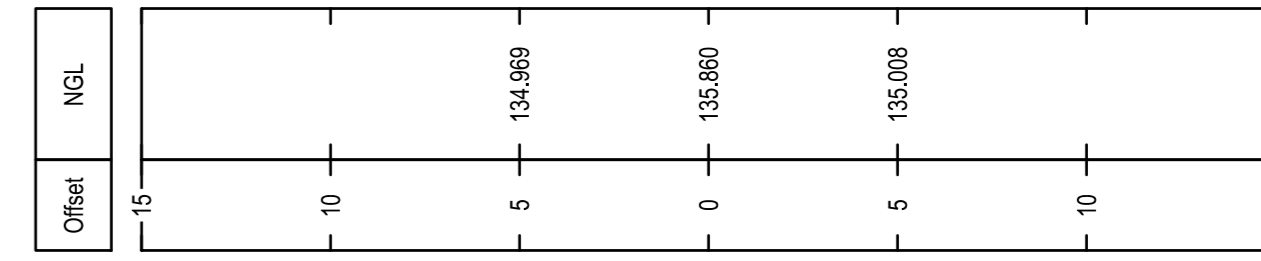
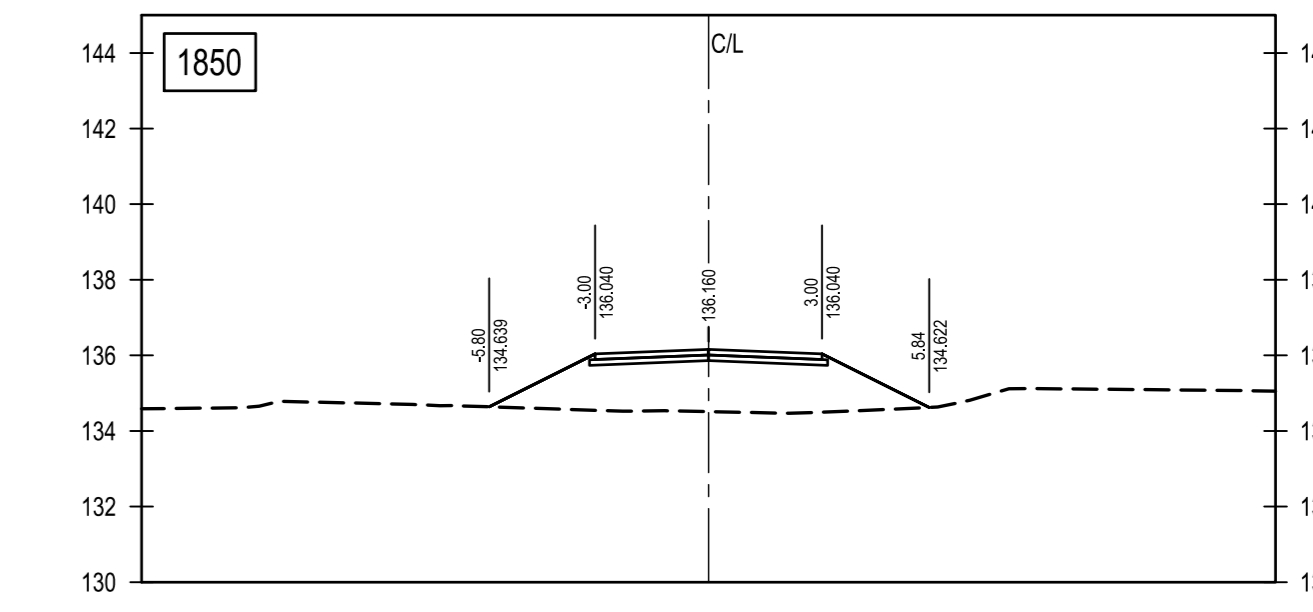
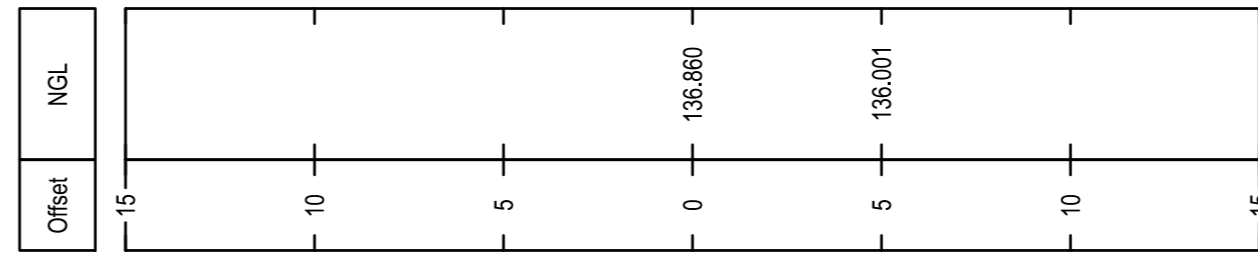
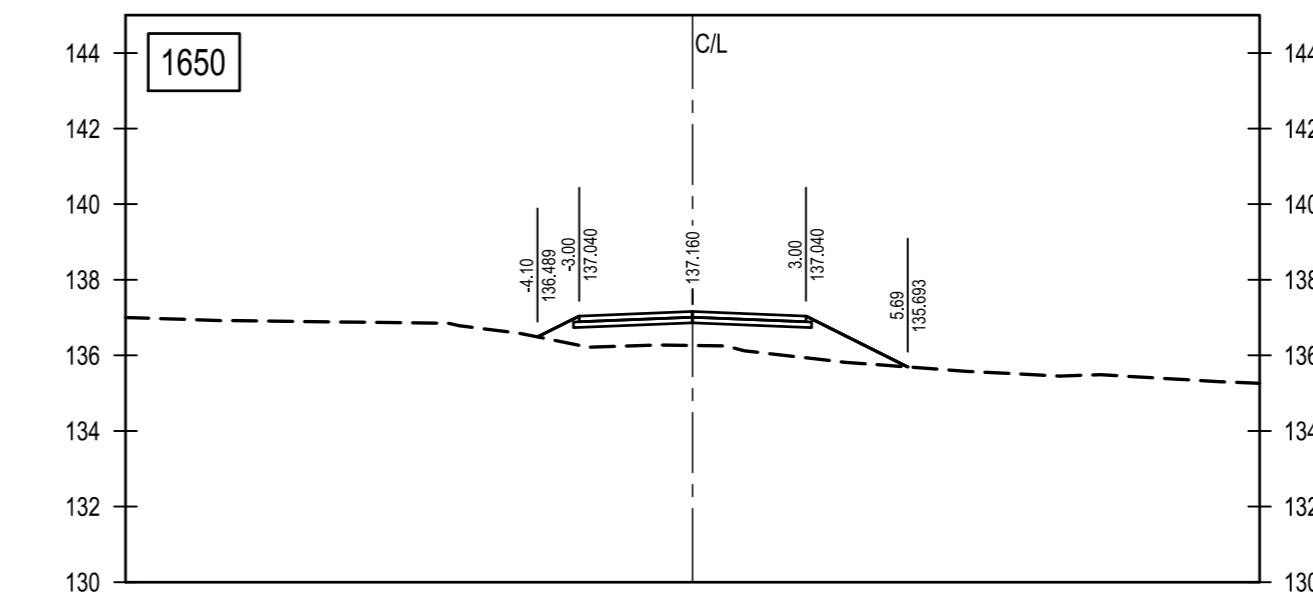
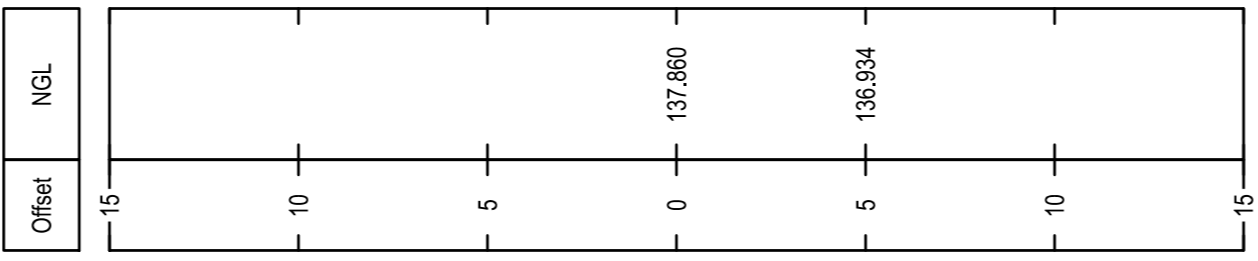
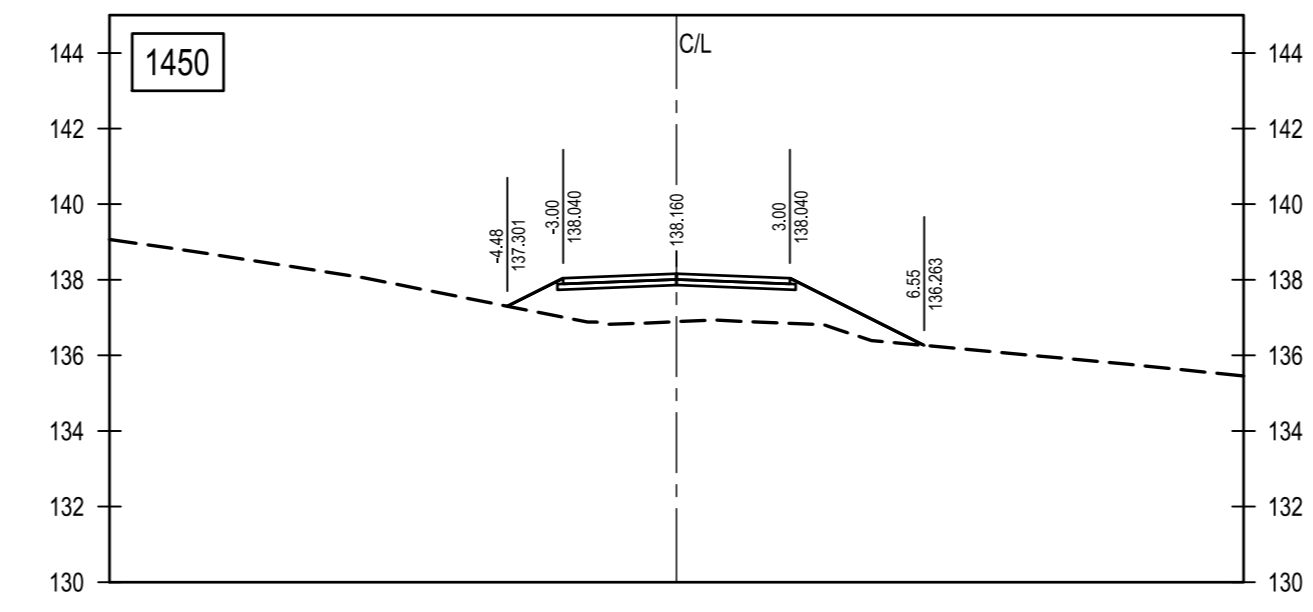
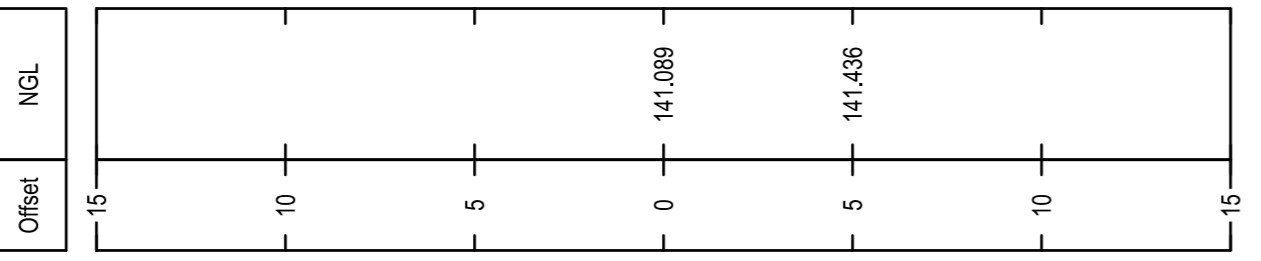
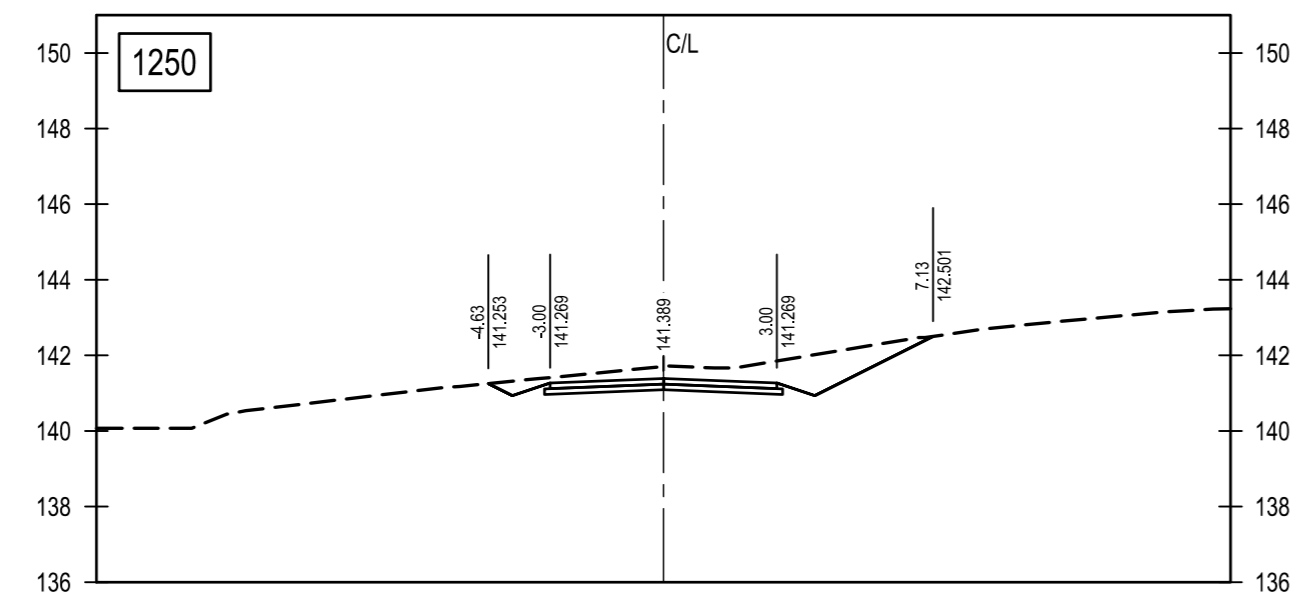
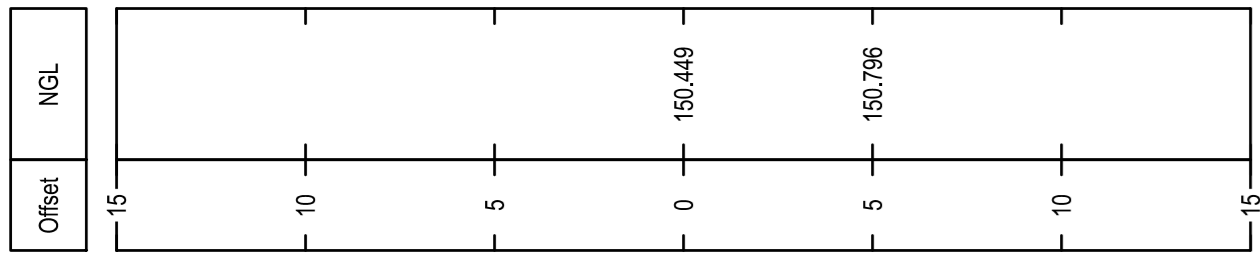
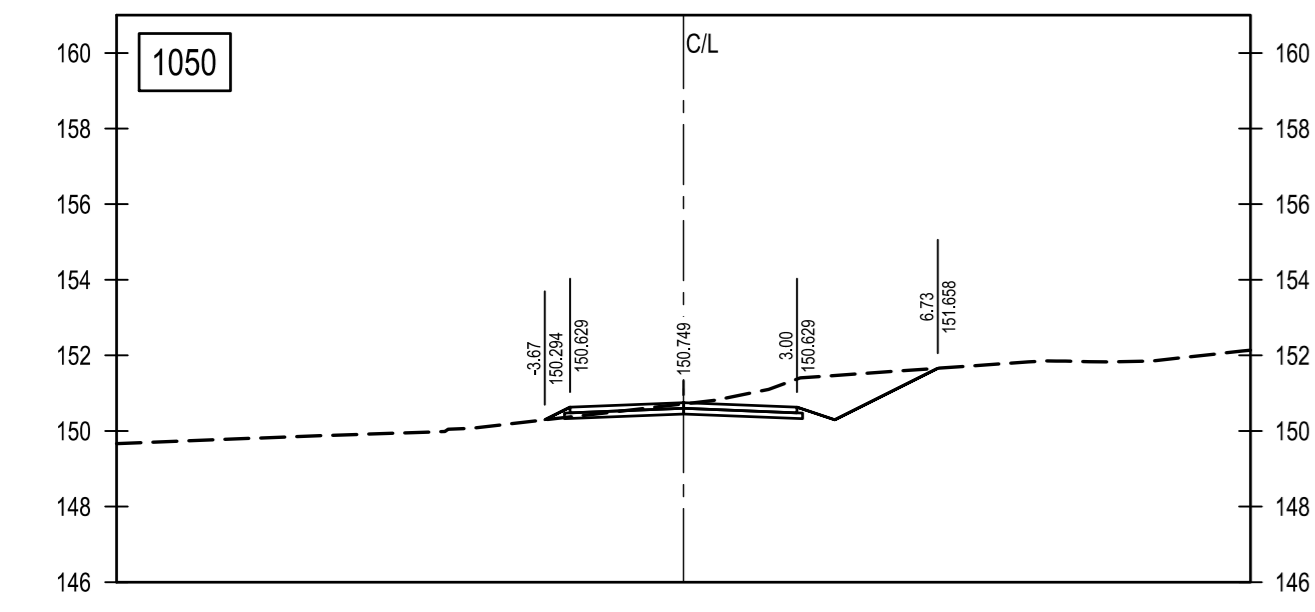
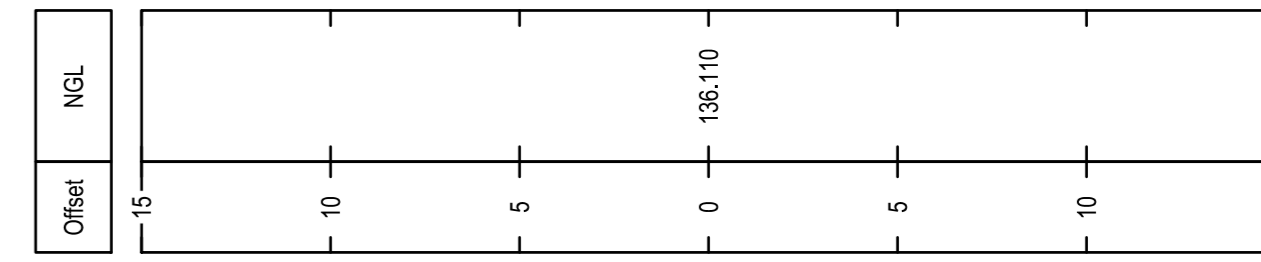
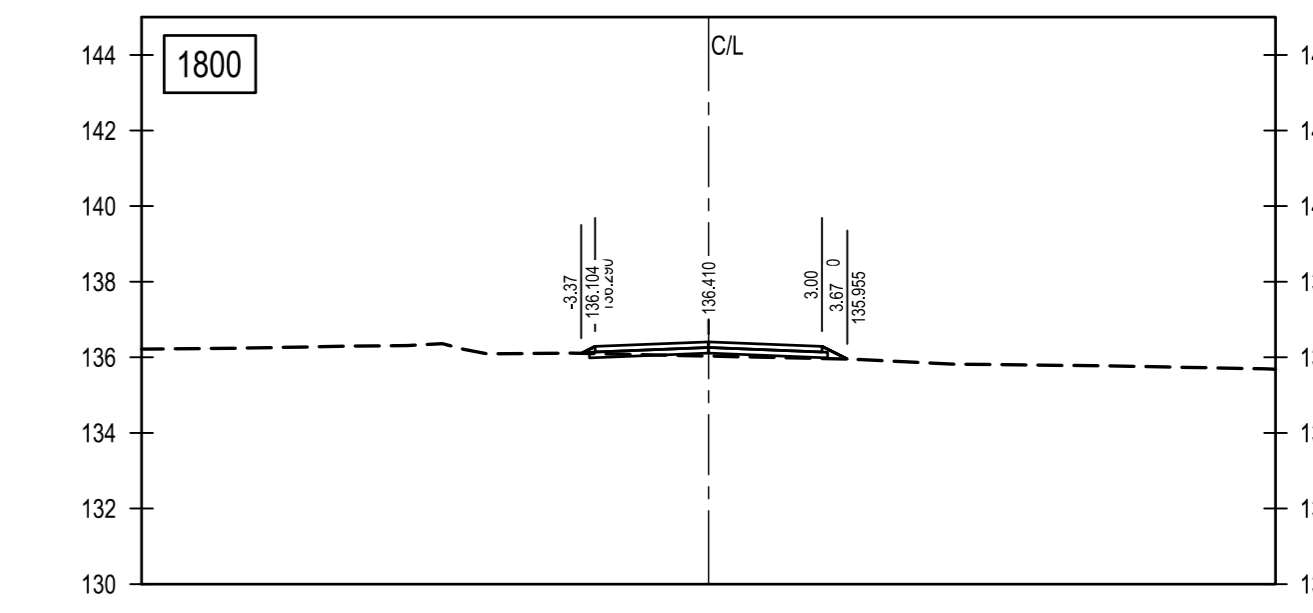
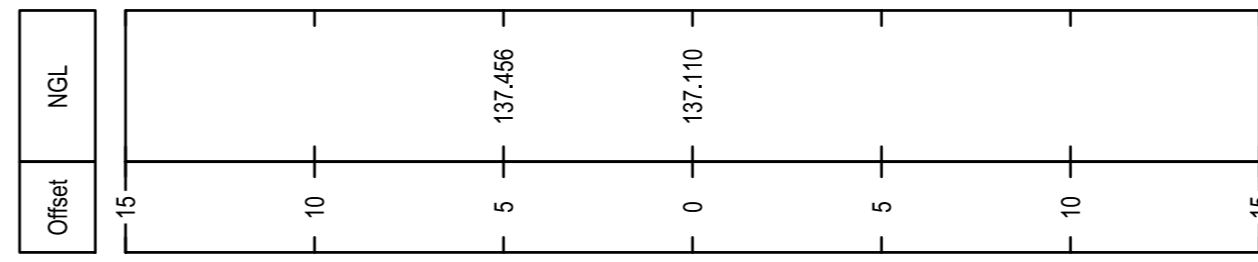
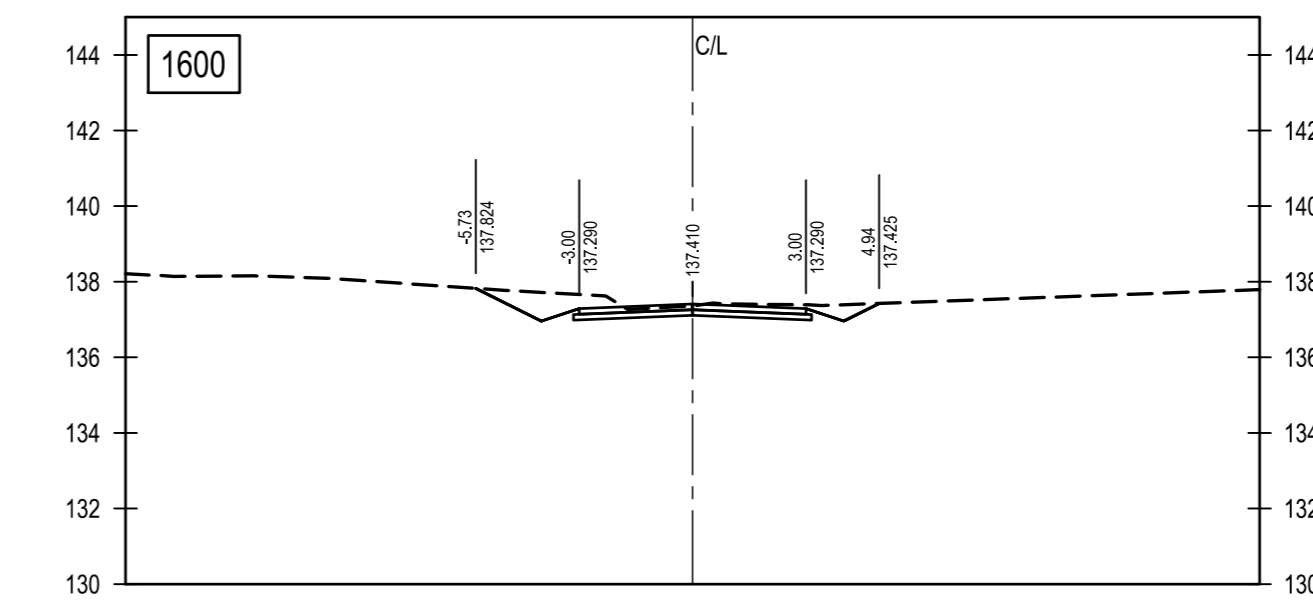
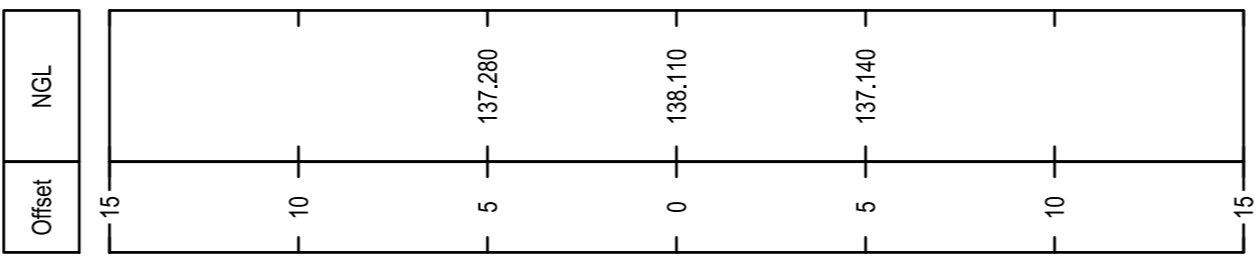
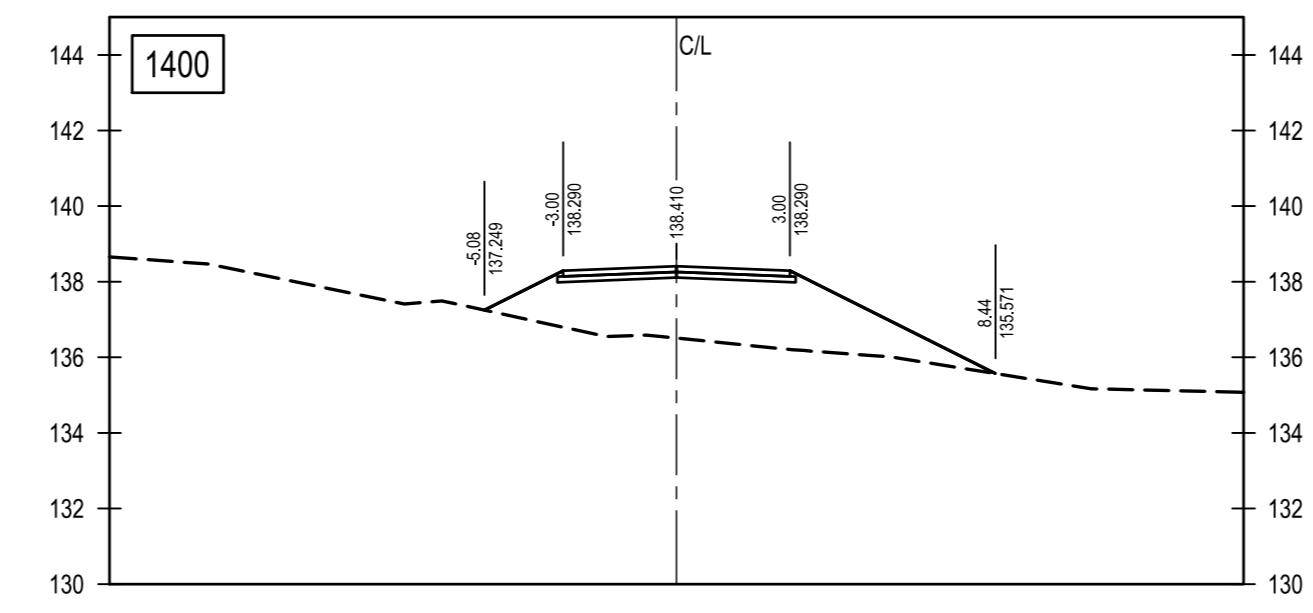
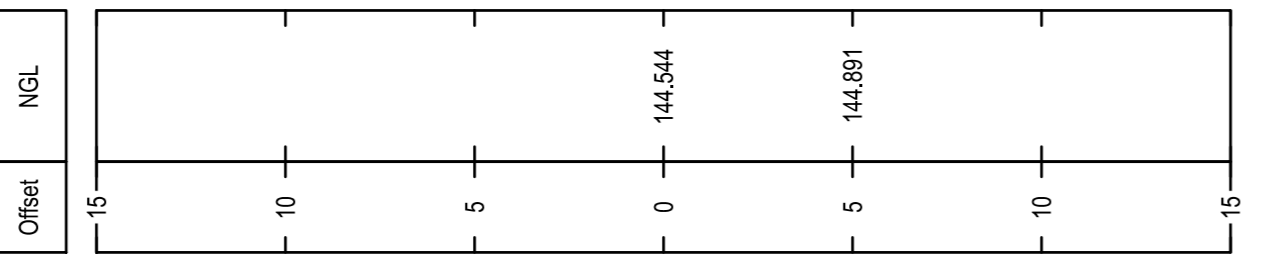
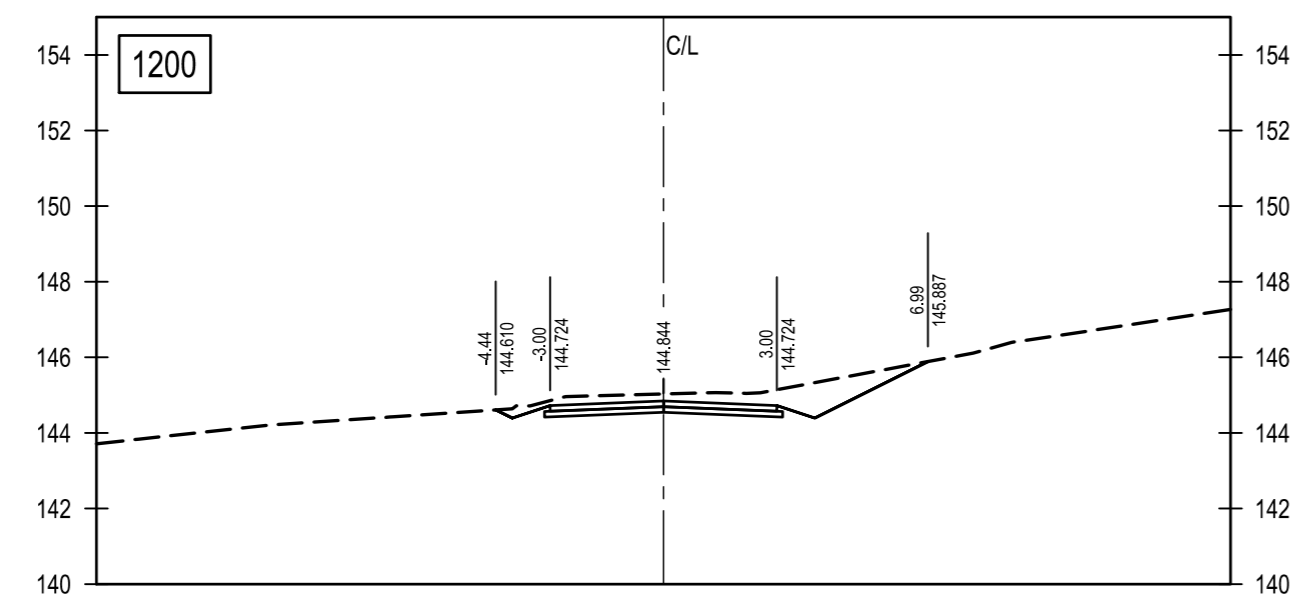
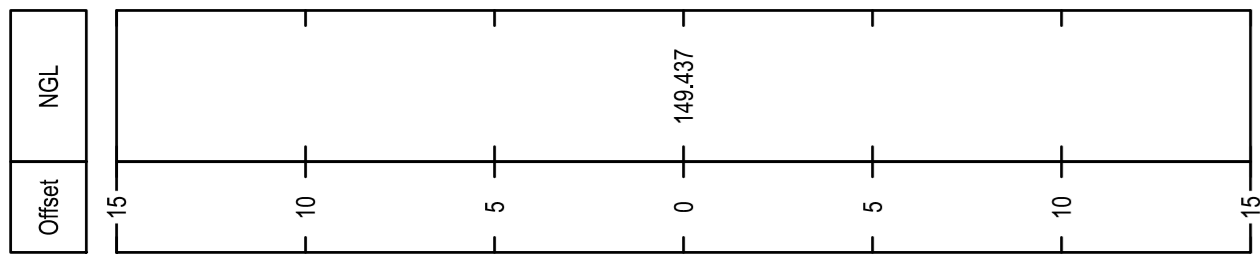
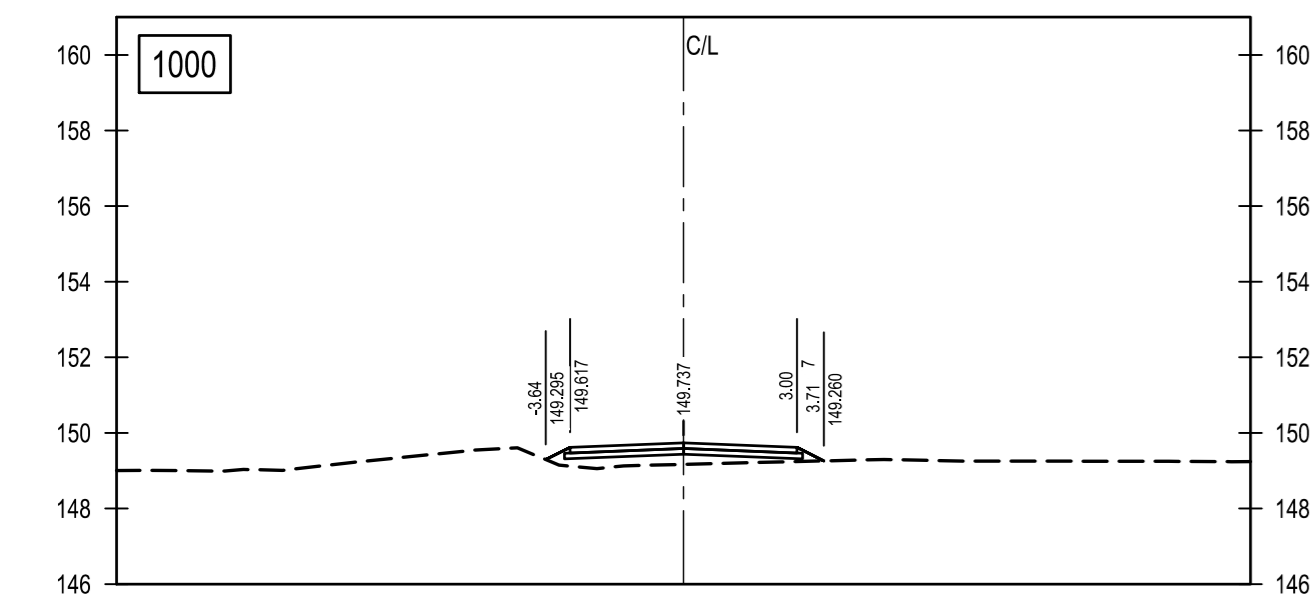
Designed by: **BMK GROUP**
Signed: _____ Date: _____

RAY NKONYENI MUNICIPALITY
CHIEF ENGINEER
HEAD: RAY NKONYENI MUNICIPALITY

NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE
PORTION
NHLANGENI (NHLANJENI)
CROSS SECTION
CH 0.000 - CH 950.000

Staked km distance
KM 0+000 TO KM 950+000
Scale
1:200
AS SHOWN

Sheet - 01
of - 02
Plan No. :-
BMK-1753-03-001



Symbol	Date	Description	Checked	Signed
A	03.2024	FOR TENDER PURPOSES		
AMENDMENTS				

AS BUILT
 Supervising Engineer: _____ Date: _____
 Supervising Authority

Continued from:-
 Continued on:-
 Cross Section No:-
 Longitudinal Section No:-
 Design Plan No:-

Designed by:- P. THAYER
 Checked by:- P. DHANEE
 Drawn by:- C. MOONSAMY
 Checked by:- P. DHANEE
 Date of approval:-



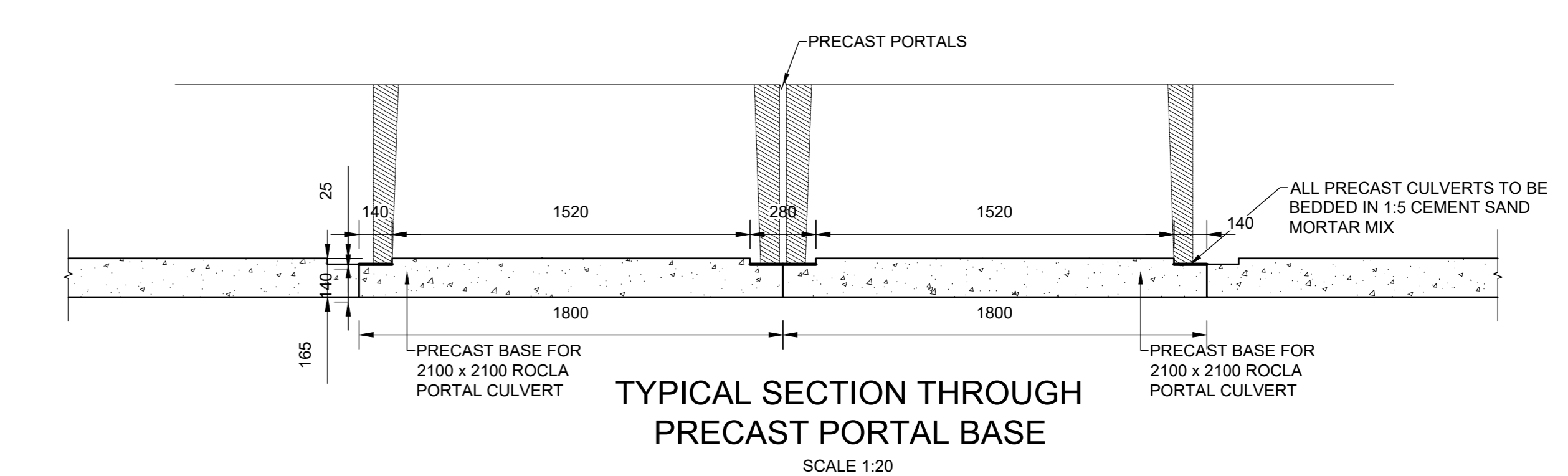
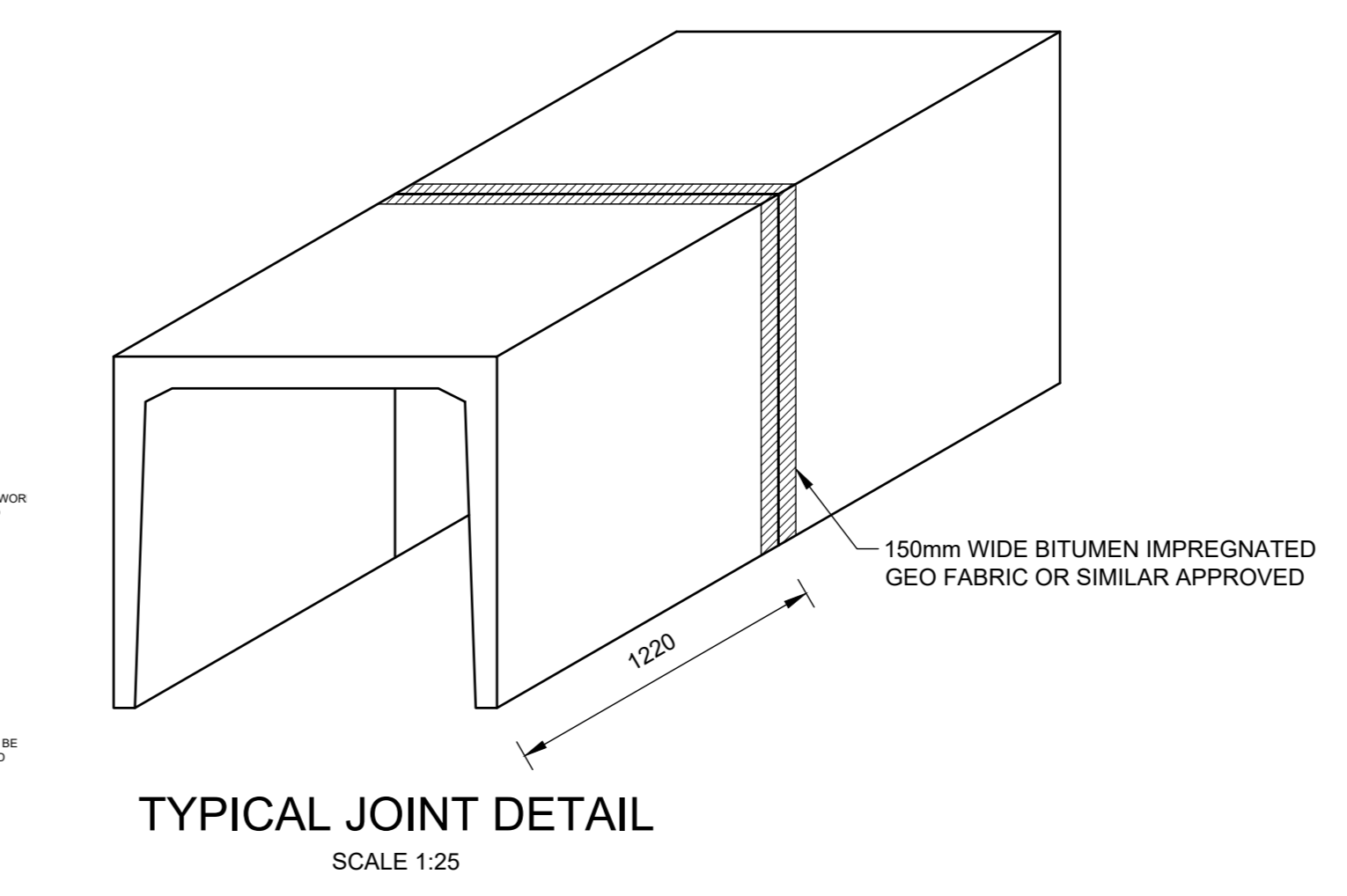
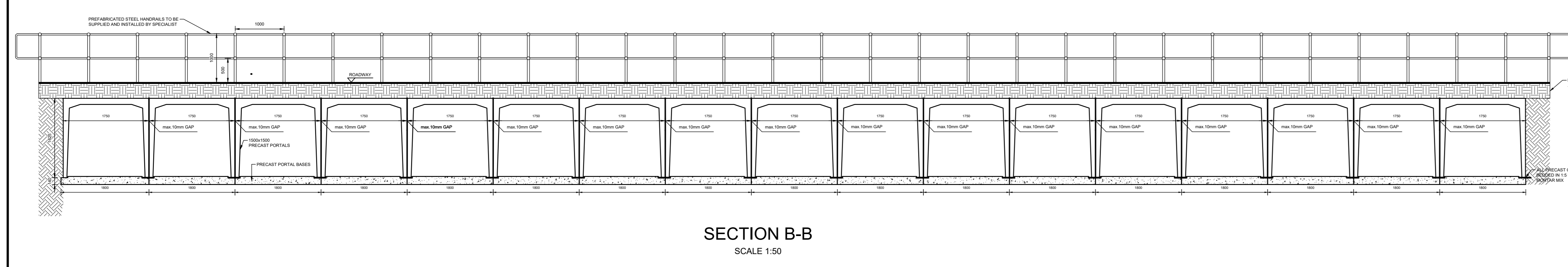
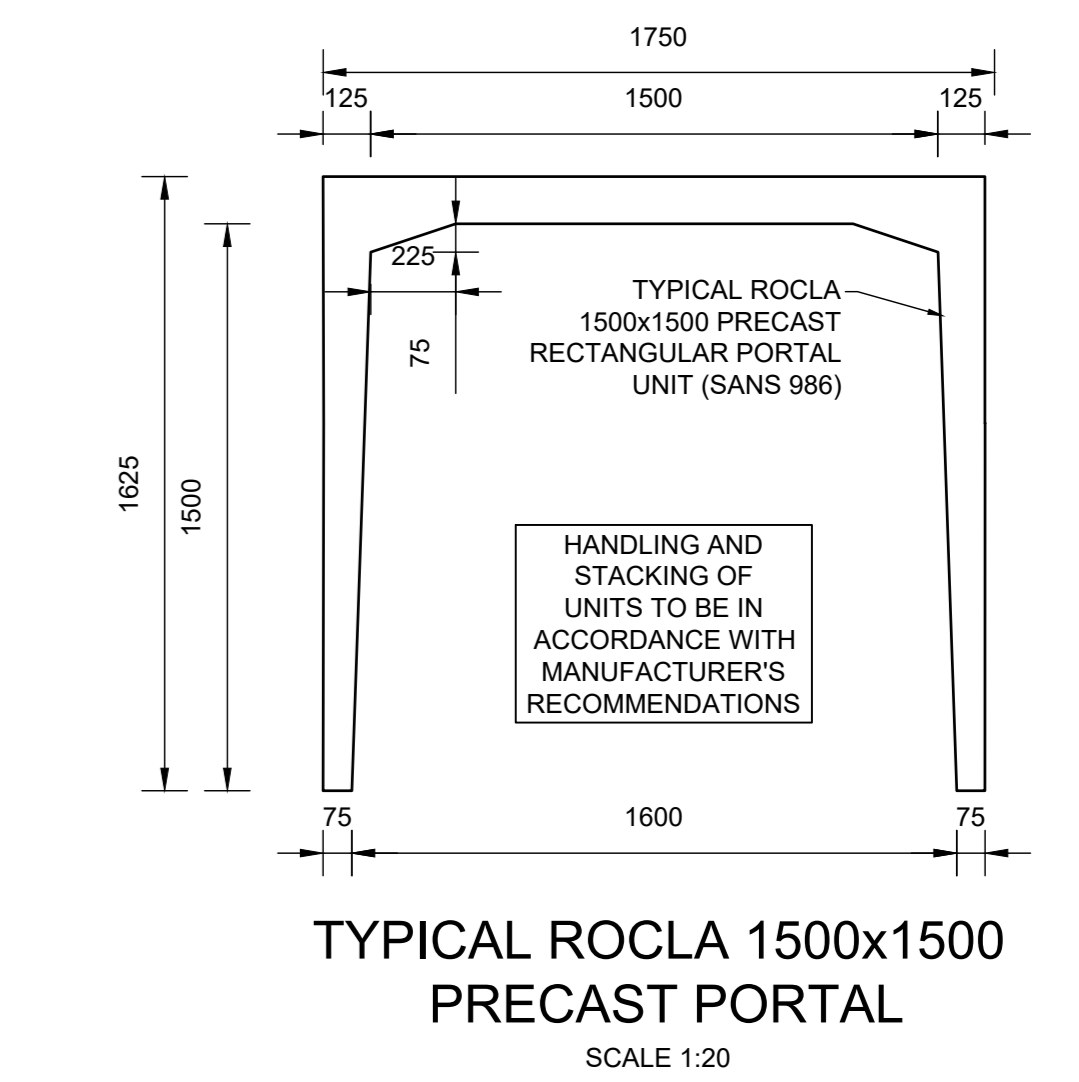
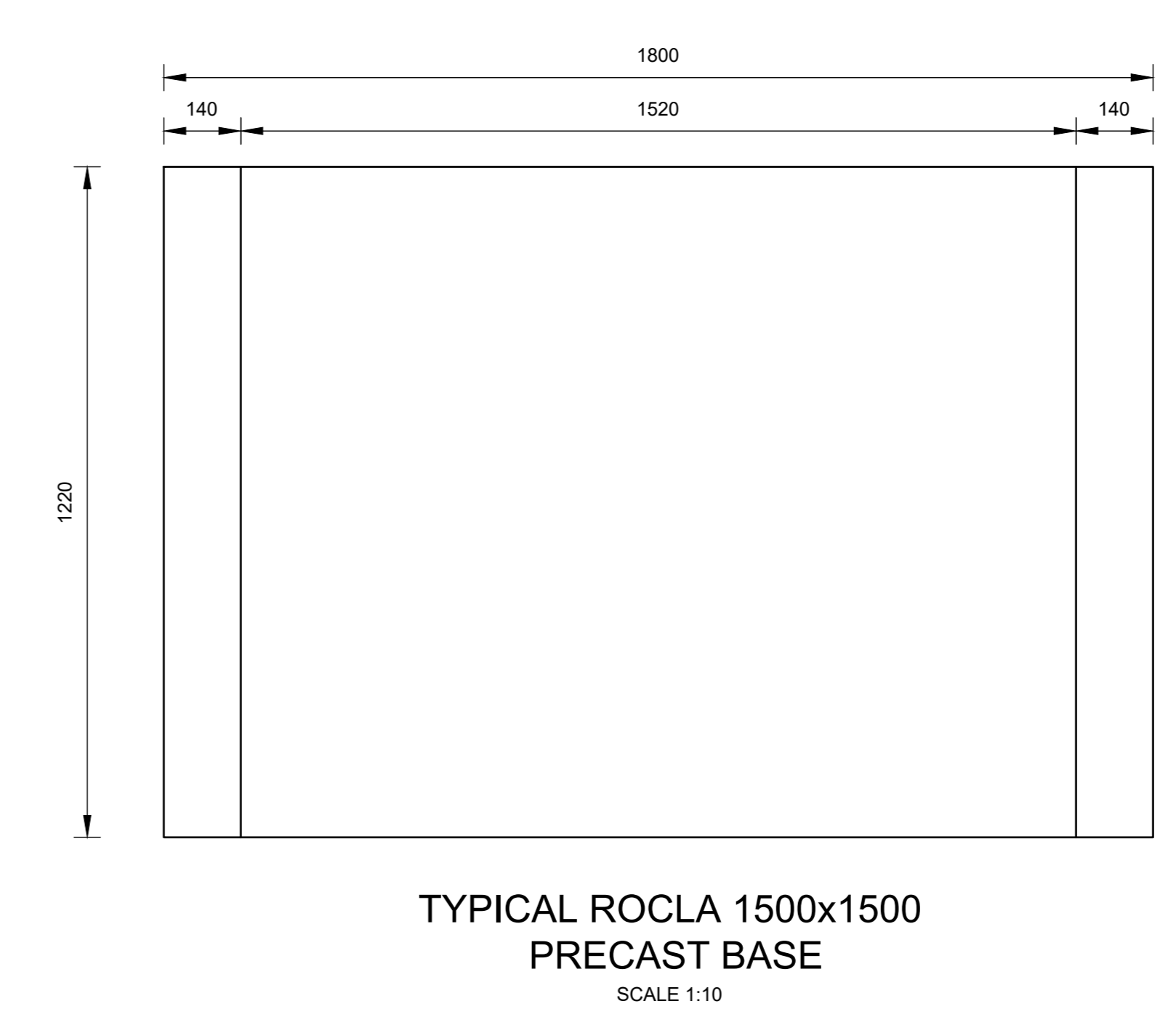
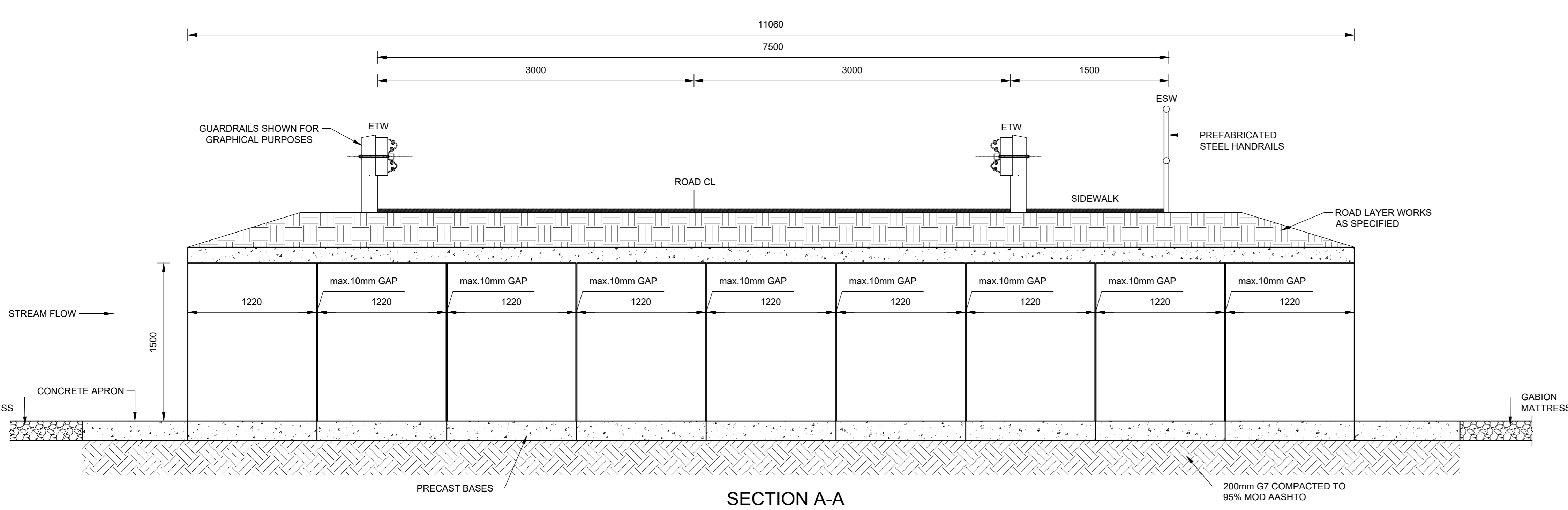
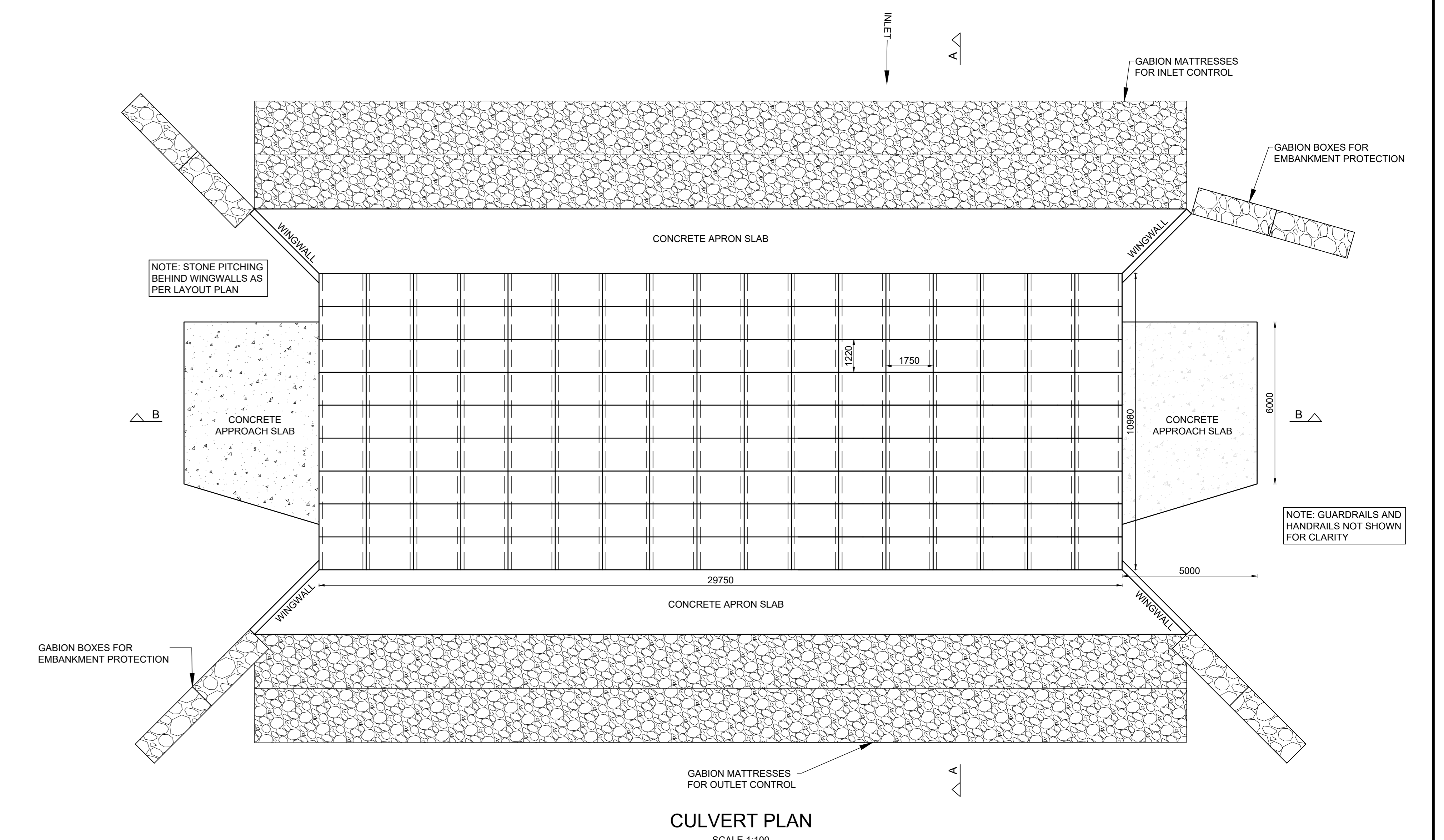
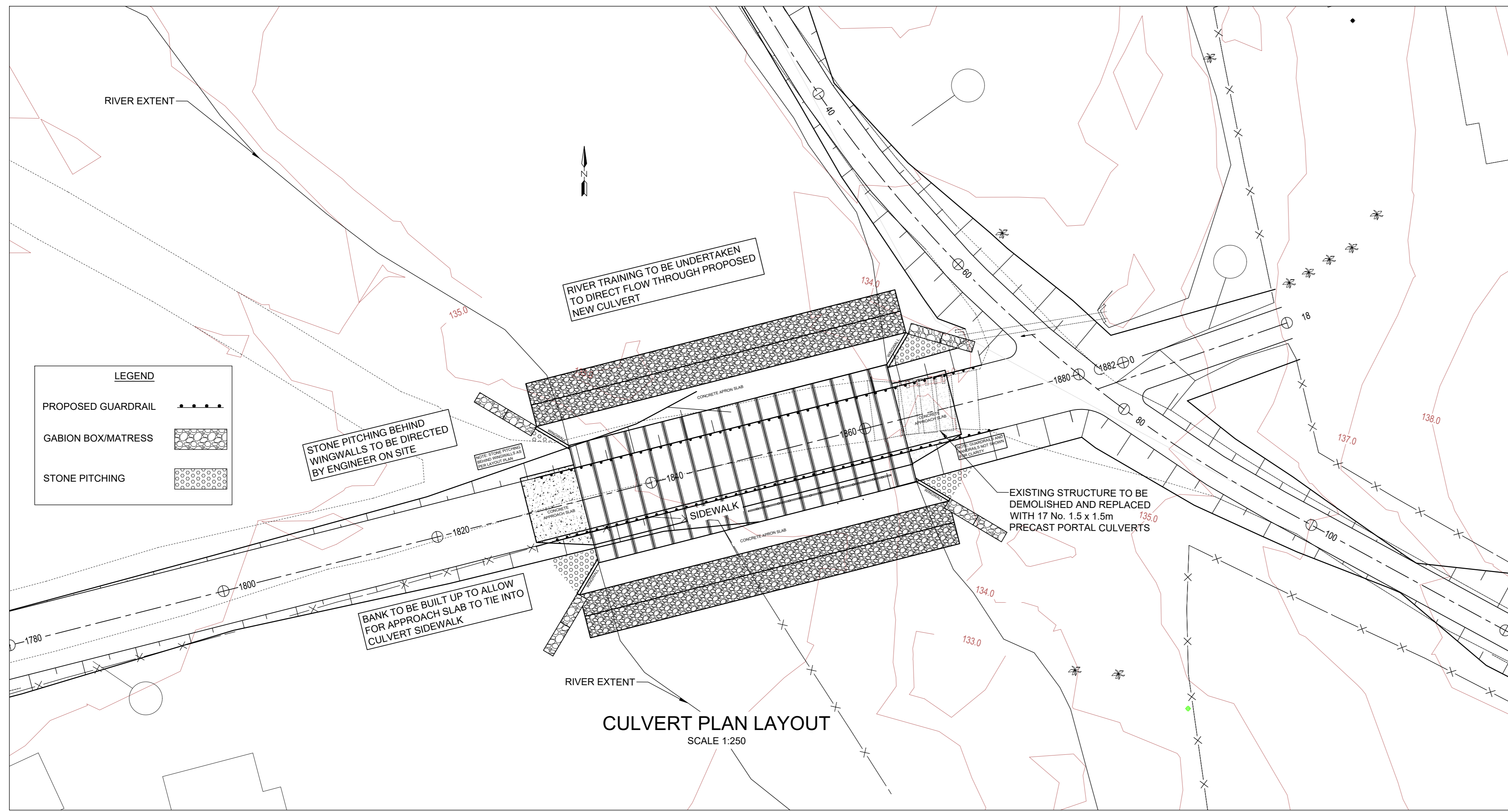
Designed by:
BMK GROUP
 Signed: _____ Date: _____

RAY NKONYENI MUNICIPALITY
 CHIEF ENGINEER
 HEAD: RAY NKONYENI MUNICIPALITY

NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE
 PORTION
 NHLANGENI (NHLANJENI)
 CROSS SECTION
 CH 950.000 - CH 1882.000

Staked km distance
 KM 950+000 TO KM 1882+000
 Scale
1:200
 AS SHOWN

Sheet - 02
 of - 02
 Plan No. :-
BMK-1753-03-002



Symbol	Date	Description	Checked	Signed
A	03/2024	FOR TENDER PURPOSES		

AS BUILT
Supervising Engineer: _____ Date: _____
Supervising Authority: _____

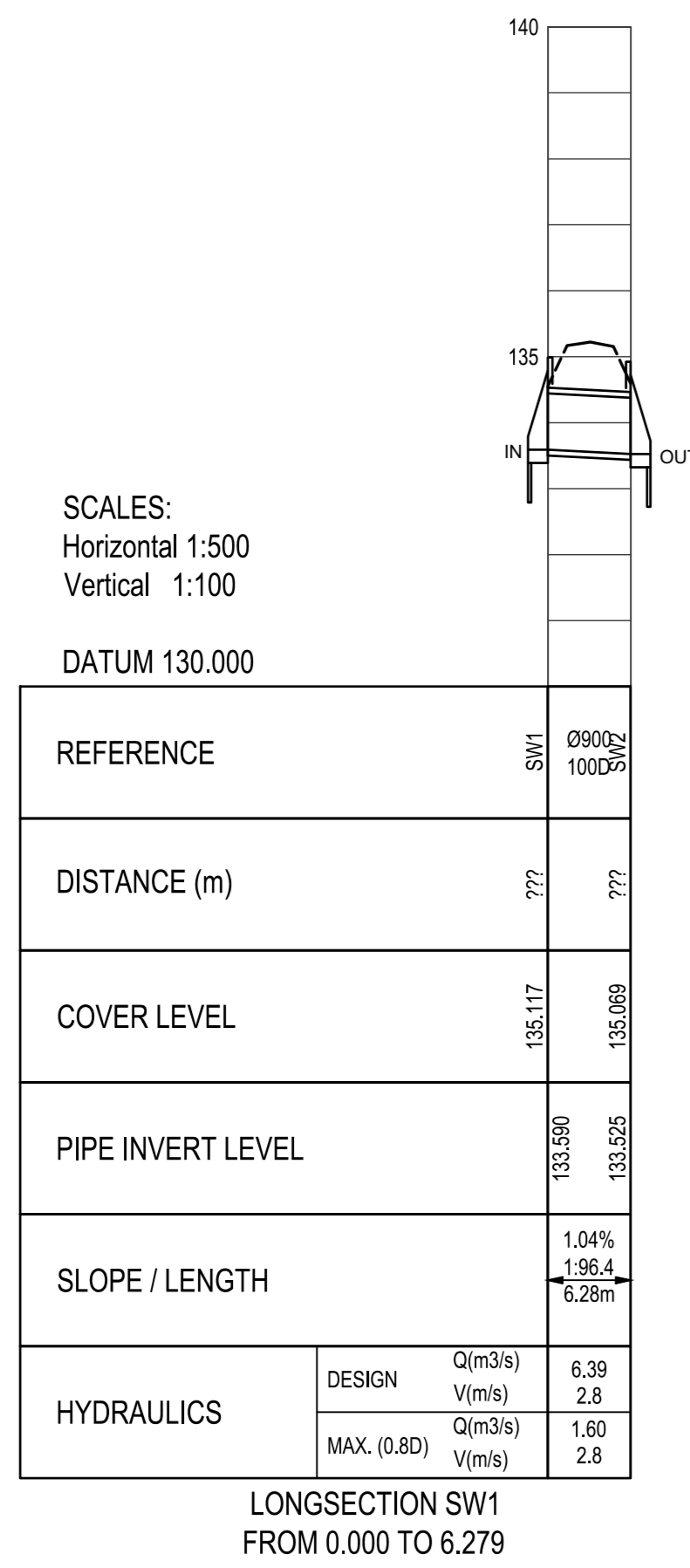
Continued from:-	Designed by:-	D. GOVENDER
Continued on:-	Checked by:-	P. DHANEE
Cross Section No:-	Drawn by:-	C. MOONSAMY
Longitudinal Section No:-	Checked by:-	D. GOVENDER
Design Plan No:-	Date of approval:-	

Designed by: **BMK GROUP**
Signed: _____ Date: _____

TRANSPORTATION ENGINEERING
CHIEF ENGINEER
HEAD: TRANSPORT

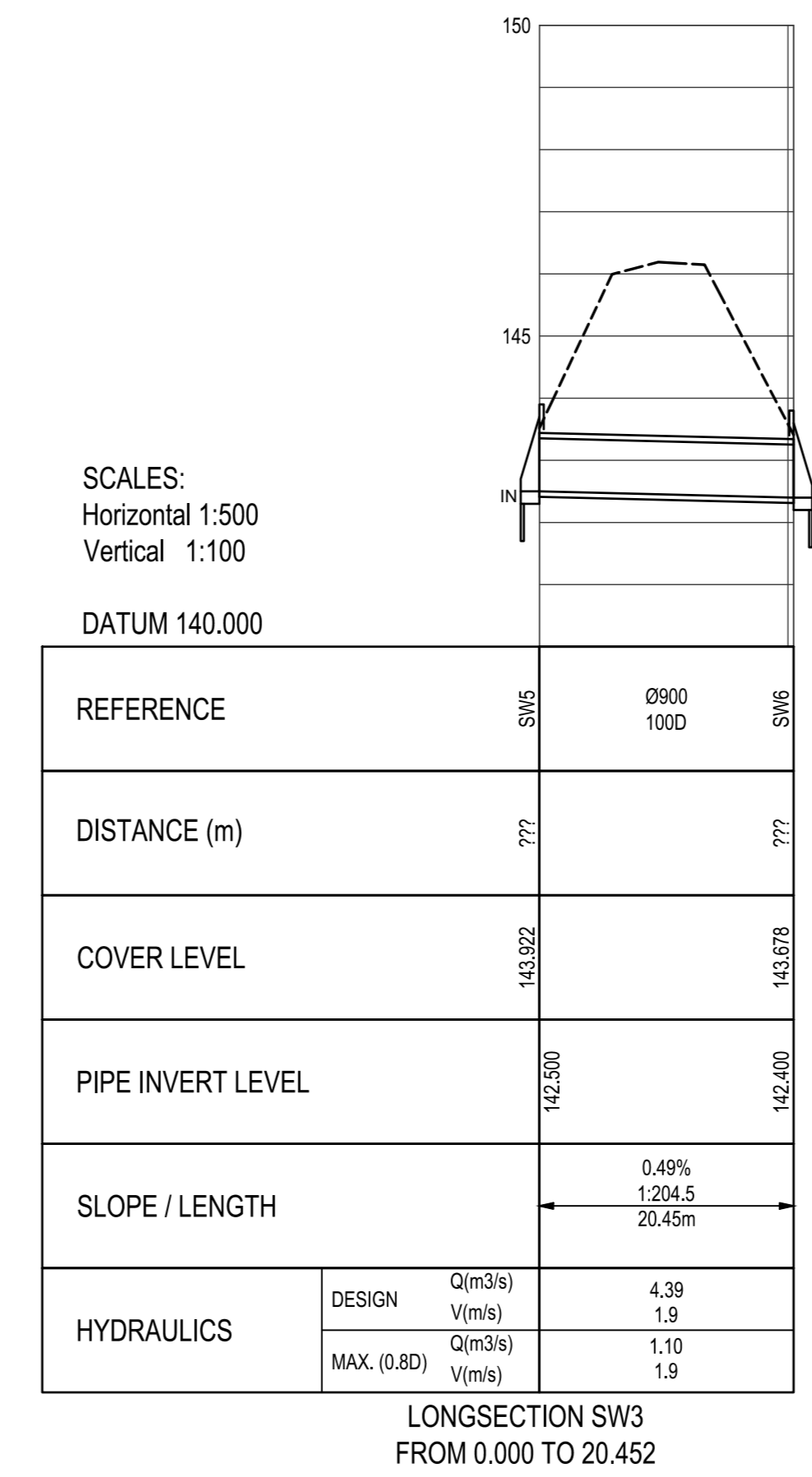
NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE
PORTION
NHLANGENI
17 x 1500mm x 1500mm PORTAL CULVERT GENERAL ARRANGEMENT

Staked km distance	Sheet - 01 of - 02
AS SHOWN	
Scale	Plan No. :-
AS SHOWN	BMK-1753-04-001



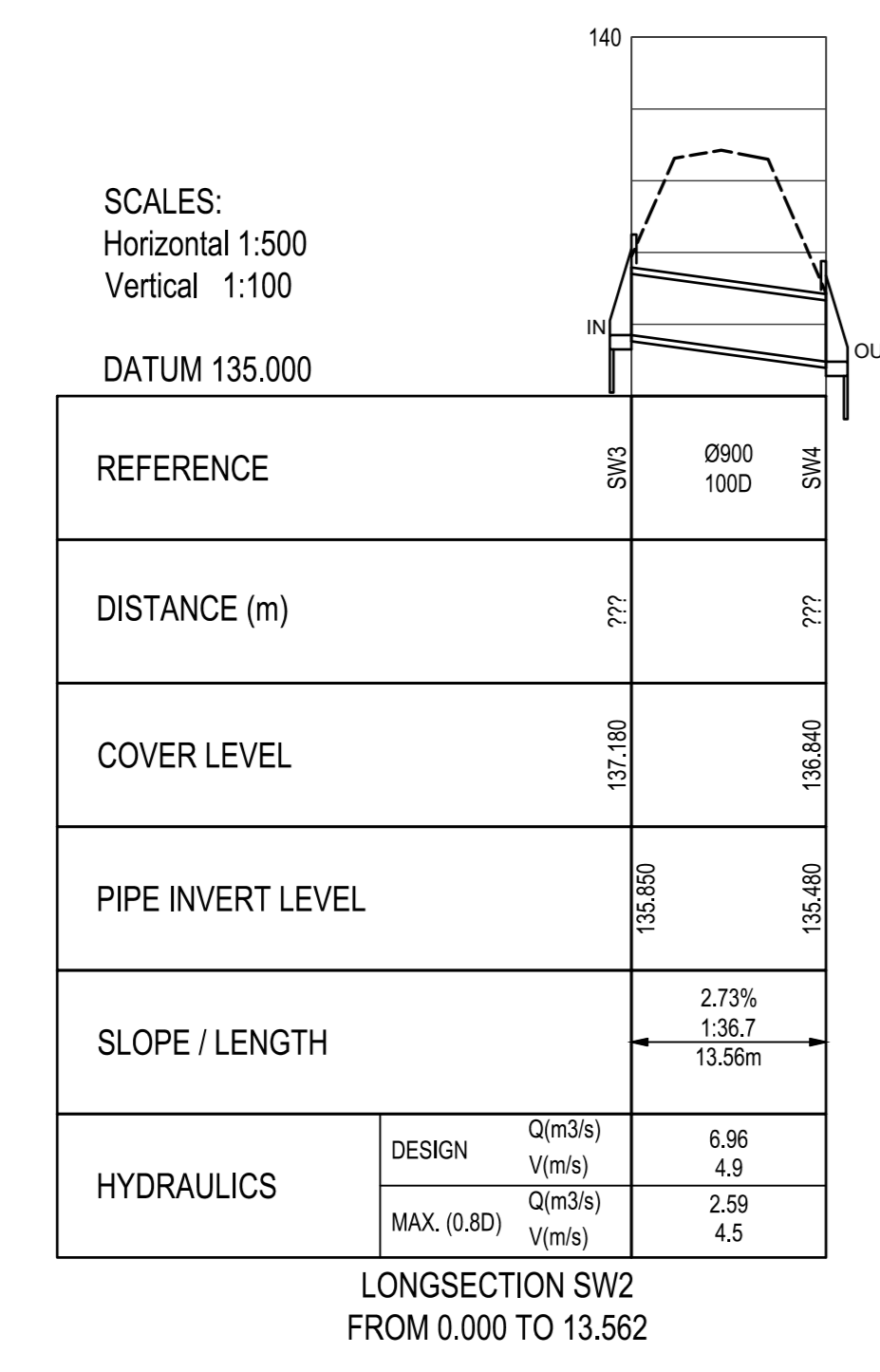
STRUCTURE TABLE-SW1									
STRUCTURE NAME	Y	X	COVER LEVEL	INVERT ELEVATION	DEPTH	PIPE LENGTH	PIPE SLOPE	PIPE MATERIAL	PIPE Ø AND CLASS
SW1	71 201.161	3 423 433.223	135.117	133.860	1.527	6.279	1.04%	CONCRETE	900mm Class 100
SW2	71 207.211	3 423 434.901	135.069	133.825	1.544	6.279	1.04%	CONCRETE	900mm Class 100

CULVERT DETAILS												
CHAINAGE	BARREL SHAPE	NUMBER OF BARRELS	DIAMETER OR HEIGHT X WIDTH	LENGTH	SLOPE	ANGLE	START INVERT Y	END INVERT Y	START INVERT X	END INVERT X	START INVERT Z	END INVERT Z
P1	PIPE	4	900mm Class 100D	6.279 m	1.04%	10.000°	71 201.161	71 207.211	3 423 433.223	3 423 434.901	133.860	133.825



STRUCTURE TABLE-SW3									
STRUCTURE NAME	Y	X	COVER LEVEL	INVERT ELEVATION	DEPTH	PIPE LENGTH	PIPE SLOPE	PIPE MATERIAL	PIPE Ø AND CLASS
SW3	72 126.871	3 423 586.028	143.922	142.500	1.422	20.452	0.49%	CONCRETE	900mm Class 100
SW6	72 107.412	3 423 592.328	143.878	142.400	1.278	20.452	0.49%	CONCRETE	900mm Class 100

CULVERT DETAILS												
CHAINAGE	BARREL SHAPE	NUMBER OF BARRELS	DIAMETER OR HEIGHT X WIDTH	LENGTH	SLOPE	ANGLE	START INVERT Y	END INVERT Y	START INVERT X	END INVERT X	START INVERT Z	END INVERT Z
P3	PIPE	4	900mm Class 100D	20.452 m	0.49%	10.000°	72 126.871	72 107.412	3 423 586.028	3 423 592.328	142.500	142.400



STRUCTURE TABLE-SW2									
STRUCTURE NAME	Y	X	COVER LEVEL	INVERT ELEVATION	DEPTH	PIPE LENGTH	PIPE SLOPE	PIPE MATERIAL	PIPE Ø AND CLASS
SW3	71 668.058	3 423 538.293	137.180	133.850	1.330	13.562	2.73%	CONCRETE	900mm Class 100
SW4	71 668.298	3 423 552.853	136.840	135.480	1.360	13.562	2.73%	CONCRETE	900mm Class 100

CULVERT DETAILS												
CHAINAGE	BARREL SHAPE	NUMBER OF BARRELS	DIAMETER OR HEIGHT X WIDTH	LENGTH	SLOPE	ANGLE	START INVERT Y	END INVERT Y	START INVERT X	END INVERT X	START INVERT Z	END INVERT Z
P2	PIPE	4	900mm Class 100D	13.562 m	2.73%	10.000°	71 668.058	71 668.298	3 423 538.293	3 423 552.853	135.850	135.480

<p>AS BUILT</p> <p>Supervising Engineer: Date:</p> <p>Supervising Authority:</p>				<p>Continued from:-</p> <p>Continued on:-</p> <p>Cross Section No:-</p> <p>Longitudinal Section No:-</p> <p>Design Plan No:-</p>		<p>Designed by:- D. GOVENDER</p> <p>Checked by:- P. DHANEE</p> <p>Drawn by:- C. MOONSAMY</p> <p>Checked by:- D. GOVENDER</p> <p>Date of approval:-</p>		 <p>RAY NKONYENI MUNICIPALITY</p> <p>The Game-changer of South Coast development</p>		 <p>BMK GROUP</p> <p>Signed: _____ Date: _____</p>		<p>TRANSPORTATION ENGINEERING CHIEF ENGINEER</p> <p>HEAD: TRANSPORT</p>		<p>NHLANGENI (NHLANJENI) GRAVEL ROAD AND VEHICULAR BRIDGE UPGRADE</p> <p>PORTION NHLANGENI PIPE CULVERT CROSSING LONG SECTIONS</p>		<p>Staked km distance AS SHOWN</p> <p>Scale AS SHOWN</p>		<p>Sheet - 01 of - 02</p> <p>Plan No. :- BMK-1753-04-002</p>									
<p>AMENDMENTS</p> <table border="1"> <thead> <tr> <th>Symbol</th> <th>Date</th> <th>Description</th> <th>Checked</th> <th>Signed</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>03.2024</td> <td>FOR TENDER PURPOSES</td> <td></td> <td></td> </tr> </tbody> </table>				Symbol	Date	Description	Checked	Signed	A	03.2024	FOR TENDER PURPOSES																
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