

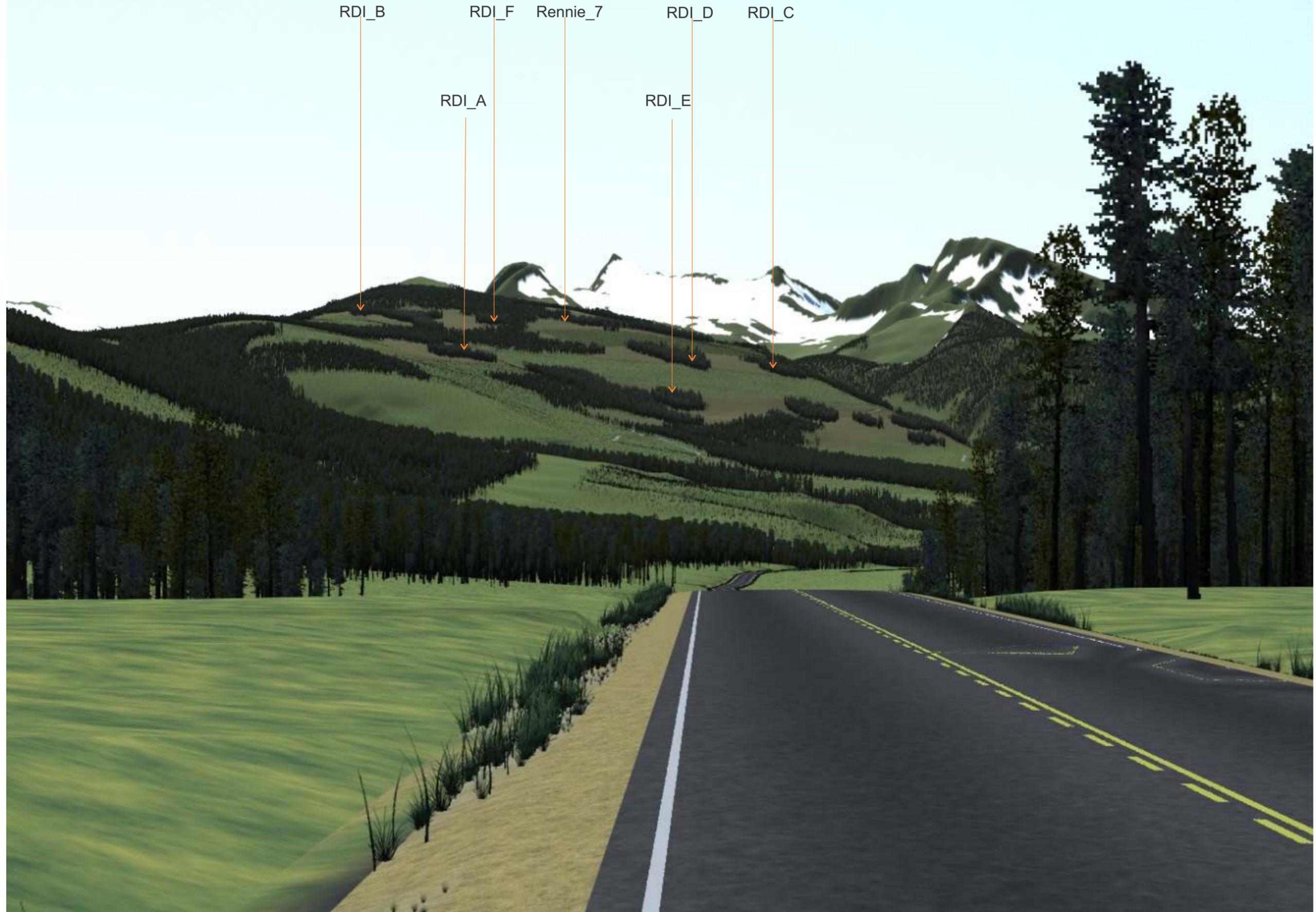
2015 Configuration with RDI Leave Addition Comparison with Rennie's Suggestions

-  Rennie's Suggested Cut and Leave Areas (also outlined in red on aerial photo)
-  BCTS Planned Leave Areas
-  RDI Recommended Leave Areas



Comparison of Final Design with Rennie Suggestions		
Rennie's Numbers (Old Cutovers)	Rennie's Suggested cut and leave (numbered by RDI)	Comparative Results
1	8 - cut	No comparable in BCTS - no operations
2	9 - cut	same as BCTS 87597-9 new block; leave patch in AL7VP between Areas 2 and 5
3	1 - cut	same as BCTS 87597-7 new block
	2 - cut	same as BCTS 87597-6 new block
	3 - cut	same as BCTS AL7VN plus leave
4	7 - cut	no comparable in BCTS - covers leave area (reverse of suggestion). BCTS leave area screens upper road in AL7VQ
4-5 gap	5 & 6 leave areas	leave areas same as BCTS leave areas in BCTS AL7VR. RDI recommended tiny additional patch at base of central leave patch to tie into Area 5
5	4 - cut	same as BCTS 87597-8 new block
5-6 gap	none defined	Rennie's suggested lower boundary of Areas 5 could be more irregular. BCTS responded with 4 leave patches in DO76F. RDI recommended 1 more (2ha) for more continuity through the block
6	none defined	BCTS and RDI leave areas provide greater tie-in between existing cutovers

Viewpoint 1730.3 with RDI Leave Areas 150720 and Rennie Area 7



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Introduction to VIA Report

FL A87597 will lay on a landform previously impacted by large, angular cutovers. An initial plan of rehabilitation of the cutovers was prepared in 2013 and 2014 by BCTS. RDI prepared a VIA based on that plan. The plan had the objective to reduce the amount of forest between the cutovers at an early enough stage so that old and new cutovers would merge to reduce the horizontal line effect, and to allow re-growth together into a single-aged large pattern of openings.

The initial plan was reviewed by Peter Rennie, Landscape Specialist, MFLNRO Southern Interior Forest Region during a meeting with BCTS on February 27, 2015. Mr. Rennie concluded in subsequent email communication between himself and Frank Kohlberger, BCTS, that the plan was too aggressive and would not achieve the objective of reducing angularity. He provided a sketch on an aerial photo to provide clarity to what he considered might be an improvement, by expanding the edges of the existing cutovers and providing substantial leave areas between which would enhance the flow of visual forces through the new development. The BCTS 2015 cutblock and retention area plan is a second generation evolution incorporating many of the Rennie suggestions while maintaining adequate operational flexibility and opportunity. RDI suggested an additional small design suggestion for two small leave patches.

As described by Frank Kohlberger in his email to Peter Rennie on March 13, 2015, the Dora plan has two objectives: "1.) viably harvest timber from the area (so as to contribute to the BCTS primary objective of providing reliable market pricing data across the timber profile); and 2.) to improve the currently unacceptable visual impact (not to meet specific aspects of the VQO, but rather to make it visually less distasteful than it currently is, and to help it move to even better visual impact quicker)". He continued in that note: "I should also note that one of our thoughts is that if we go in there, we will do what we can in one entry, then put things to bed and leave it alone to repair itself, as opposed to making multiple entries with ongoing new harvest and roads, disturbance, etc. The last point to mention is that we hope to harvest so as to reduce the ongoing impact of the balsam bark beetle that exists there."

Mr. Rennie responded on March 18 stating that his sketches were "aimed more at meeting the visual rehab objective than the viable harvest objective, but it might point to a final solution." and that he is "reluctant to suggest any more harvesting given the scale of impact that already exists on the slopes".

Mr. Rennie's sketches were interpreted by RDI and added to the base map of the final design. Both the sketches and RDI's interpretation of his sketches are placed onto a single page in the RDI report for ease of comparison. The final iteration of proposed cutblocks with retention areas by BCTS, in consideration of Mr. Rennie's ideas, were provided to RDI on May 25, 2015 and were used by RDI in the preparation of visual simulations and percent alteration calculations. The final layout appears to have implemented the majority of Mr. Rennie's design considerations (Table 1).

The cutovers have substantially greened-up. Green-up in the lower cutovers was reaching 7m to 10m heights in 2014, and 2.5m to 3m in the upper areas in 2014, and showing leader growth of 50cm per year on average.

Findings

The close comparisons between the final BCTS layout design and the Rennie suggestions are summarized in Table 1. Visibility by viewpoint is presented in Table 2. RDI prepared simulations of the proposed development using Visual Nature Studio. Simulations were prepared from each viewpoint and are presented in the VIA document. Blocks are labelled in each simulation.

Percent alteration for the proposed development was calculated by RDI from 3 viewpoints, providing a range of viewing opportunities, and are summarized in Table 4. The 2015 findings for percent alteration are compared with 2014 findings as recalculated from the same viewpoints. The findings from the original 2014 VIA are also shown in the table for viewpoint 1730 (without a roadside screen), and for viewpoint 1730.4 which was located close to viewpoint 1734.

The 2015 plan results in a net reduction of 5.2% from viewpoint 1730, 4.2% from viewpoint 1730.3, and 6.3% reduction from viewpoint 1734. The percent alteration of the Rennie areas not already incorporated already into the 2015 plan would add an additional 4% to the 2015 plan as seen from viewpoint 1730.3 (page 18).

Table 1 Comparison of Final Design with Rennie Suggestions

Old Openings (Rennie Numbers)	Rennie Suggestion Cut / Leave	Achievement of Rennie Suggestions	Comments
Area 6	make link through block DO76F	Achieved	DO76F above works to weaken Area 6. Rennie recommended linkage through block; BCTS Leave patches and RDI additional leave area provides increased linkage through block.
Area 5	4	Achieved	BCTS 87597-8 same as Rennie 4 - weakens upper line of Area 5. DO76F below and AL7VR above work to break up straight lines of Area 5.
	5	Achieved	Rennie recommended linkage through block; BCTS Leave patches and RDI additional leave area provides significant, well-designed linkage through block. RDI patch added to improve flow with lines of force.
	6	Achieved	Minor angularity from viewpoints. R6 covered by BCTS leave area.
Area 4	7	not Recommended by RDI	Rennie 7 would eliminate much a BCTS leave area below AL7VQ. Larger Rennie 7 opening would introduce 0.7% additional alteration. Not recommended by RDI except perhaps a small opening to reduce corner of Area 4. Leave areas in AL7VR including small additional RDI patch provide some linkage with good design. BCTS leave area partly overlaps Rennie 7.
	12	achieved	BCTS Leave covers similar area as Rennie opening 7. Rennie 12 is actually a BCTS leave area. BCTS AL7VN, 87597-6, and 87597-7 cover most of Rennie openings around Area 4.
Area 3	3	not recommended by RDI	Rennie 3 would enlarge opening around Area R3 and eliminate a BCTS leave area (adding 0.7% to total percent alteration). Areas R1 and R2 were already identified as leave areas by BCTS.
	2	achieved	Replicates Rennie's suggested block 2 to weaken Area 3.
	1	achieved	Replicates Rennie's suggested block 1 to weaken Area 3 (but not seen).
Area 2	9	achieved	BCTS 87597-9 same as Rennie 9 small sliver associated with AL7VP.
			Small leave area breaks AL7VP; provides flow-through connected to stronger force line above. Perhaps make larger to be fully effective. No BCTS block to address Rennie 8; Advanced Regen. Rennie 8 would weaken strong forest band above, and would add 2.5% to total percent alteration. Hold on to most of the limited forest above Area 1 - good shape. Total alteration already large enough. For example, from Viewpoint 1730.3, it is 10% without the Rennie additions 3, 7, and 8. These additions would add another 3.9% to bring it to a total of 13.8%. Overall percent alteration will have to be reduced to meet PR, but not necessarily if rehab is the approved management decision. No greater incursions should be contemplated until the area is restored visually.
Area 1	8	not recommended by RDI	

	Table 2 Visibility by Viewpoint				
	1730	1730.1	1730.2	1730.3	1734
BCTS					
DO76F					
DO76F	B	B	B	B	S (screened)
87597-8	S	S	S	S	S
AL7VR	B	B	B	B	B
AL7VQ	NVS	NVS	S	S	OK
AL7VN	S	OK	OK	OK	OK
87597-6	NVS	S	OK	OK	OK
87597-7	NVS	NVS	NVS	NVS	NVS
87597-9	S	NVS	NVS	S	S
AL7VP	B	B	B	B	B
Percent Alteration	7.2%	not calculated	not calculated	10.0%	8.9%

B = Broken up by leave areas; good shape if not noted otherwise

S = Sliver only, good shape

OK = Good shape

Table 4 Summary of Percent Alteration, comparing 2015 with 2014 (newly calculated) and 2014 VIA

Viewpoint	2015 with RDI leave	2014 (newly calculated)	2014 VIA Calculation
1730	7.2 % with roadside screen; 5% (open, no screen)	12.40%	6.4% (no screen)
1730.3	10%	14.20%	n/a
1734	8.90%	15.20%	n/a
1730.4	n/a	n/a	14%

2014 VIA figures for 1730 (no screen) compares with 2015 (no screen)

2014 VIA figures for 1730.4 compares with 2015 (close viewpoint)

**Percent Alteration Calculations based on Landform Component of VSU 1143
from Viewpoints (in perspective view)**

Viewpoint 1730 Percent Alteration with Roadside Screening

Percent Alteration VP 1730 Wide		
Name	Area	%Alt.
VSU	513564.7	
87597-9	802.5	0.2%
AL7VP	2504.6	0.5%
87597-8	558.8	0.1%
AL7VR-2	2900.6	0.6%
AL7VR-1	3504.2	0.7%
D076F-2	9724.4	1.9%
D076F-3	2120.7	0.4%
D076F-1	11742.6	2.3%
D076F-4	1127.1	0.2%
D076F-5	1599.6	0.3%
AL7VN	265.8	0.1%
AL7VR-3	195.1	0.0%
Sum	37046.0	7.2%

Viewpoint 1730.3 Percent Alteration

Name	Area	%Alt.
VSU	219955.8	
87597-6	724.8	0.3%
AL7VN	85.9	0.0%
AL7VN	1677.5	0.8%
AL7VP	1973.6	0.9%
87597-8	514.9	0.2%
AL7VQ	32.1	0.0%
AL7VQ	176.8	0.1%
AL7VR	1514.5	0.7%
AL7VR	1821.0	0.8%
DO76F	6320.9	2.9%
DO76F	5636.7	2.6%
DO76F	331.4	0.2%
DO76F	984.8	0.4%
87597-9	138.0	0.1%
Sum	21932.8	10.0%

Percent Alteration VP 1734

Name	Area	%Alt
VSU	101943.41	
87597-6	667.26	0.7%
AL7VN	119.29	0.1%
AL7VN	1426.42	1.4%
87597-9	259.75	0.3%
AL7VP	2318.25	2.3%
AL7VQ	506.29	0.5%
AL7VR	1316.91	1.3%
AL7VR	1699.44	1.7%
DO76F	237.96	0.2%
DO76F	491.23	0.5%
Sum	9042.79	8.9%

FOREGROUND ALTERATIONS AND SCREEN DESIGN

Is the proposed alteration within 1 kilometre of the viewing locations? yes no

Does vegetative or landform screening exist? YES NO

If yes, what type: Deciduous Coniferous Mixed Forest Landform

Would the screen hide proposed operations? YES some X

Is vegetative screen designed properly ie responds to lines of force, shape & scale and remains a viable unit for future removal? YES NO N/A

Is vegetative screen expected to be windfirm? YES NO N/A

If alteration would not be screened or only partially screened, describe the actions proposed to reduce the visual impact in the immediate foreground (e.g. landing location, roadside clean-up, etc.)
N/A

ADDITIONAL CONSIDERATIONS

Does the EVC in adjacent units exceed the established VQO for those units and how would this affect the management of the present unit proposed for alteration? YES NO

Comments: EVC in VSU 1225 is reaching PR, though inventory shows it as MM

Has this VIA submission incorporated all known alterations proposed within the Visual Sensitivity Unit for the next 5 years? (i.e. all blocks proposed by the same or different licensees) YES NO

Comments:

Conclusions

The BCTS plan for Dora A87957 has many elements of good design and has responded significantly to the Rennie recommendations. With a core objective of rehabilitation of the older geometric cutovers, percent alteration ranges from 7.2% to 10.0% as seen from the 4 viewpoints used in the calculations.

Of the 10 Units suggested by Rennie for additional cut or leave, all but 3 were fully incorporated by BCTS. Two areas suggested for expansion in the Rennie analysis (Units 7, and 8) were not incorporated in the BCTS plan and are not recommended by RDI as they would further enlarge the degree of visible alteration. Rennie Unit #3 is partly covered by a leave area in the plan, and by a portion of cutblock AL7VN. RDI added two small leave areas to further enhance the structure and continuity of retention through the blocks, further weakening the horizontal effect of the old cutovers. For example, the three additional cuts would create an additional 3.9% alteration from viewpoint 1730.3, as compared to 10% in the current plan from that viewpoint.

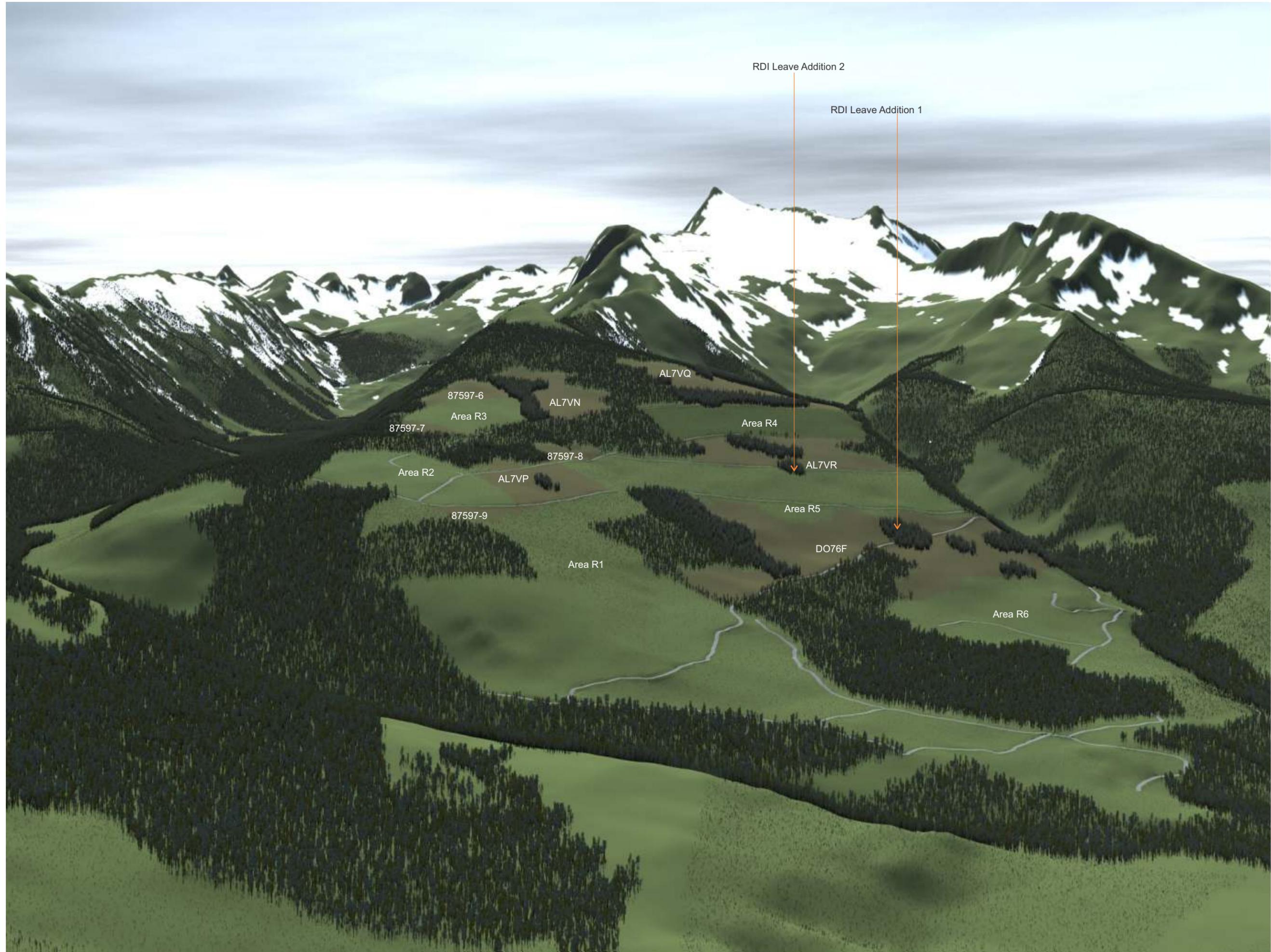
Some angularity, namely in the northeast corner of cutover area #4 may still be adjusted with some more limited harvesting in Rennie7 if operationally appropriate. The Rennie suggested areas are presented on the second key map at the front of the VIA document, and simulated on the final page.

RDI has left the older cutovers out of the percent alteration calculations in the landform, as the substantial regrowth is now reaching and achieving visually effective green-up.



Completed by: Ken B. Fairhurst, R.P.F.

Date Completed: June 26, 2015



RDI Leave Addition 2

RDI Leave Addition 1

AL7VQ

87597-6

AL7VN

Area R3

Area R4

87597-7

87597-8

AL7VR

Area R2

AL7VP

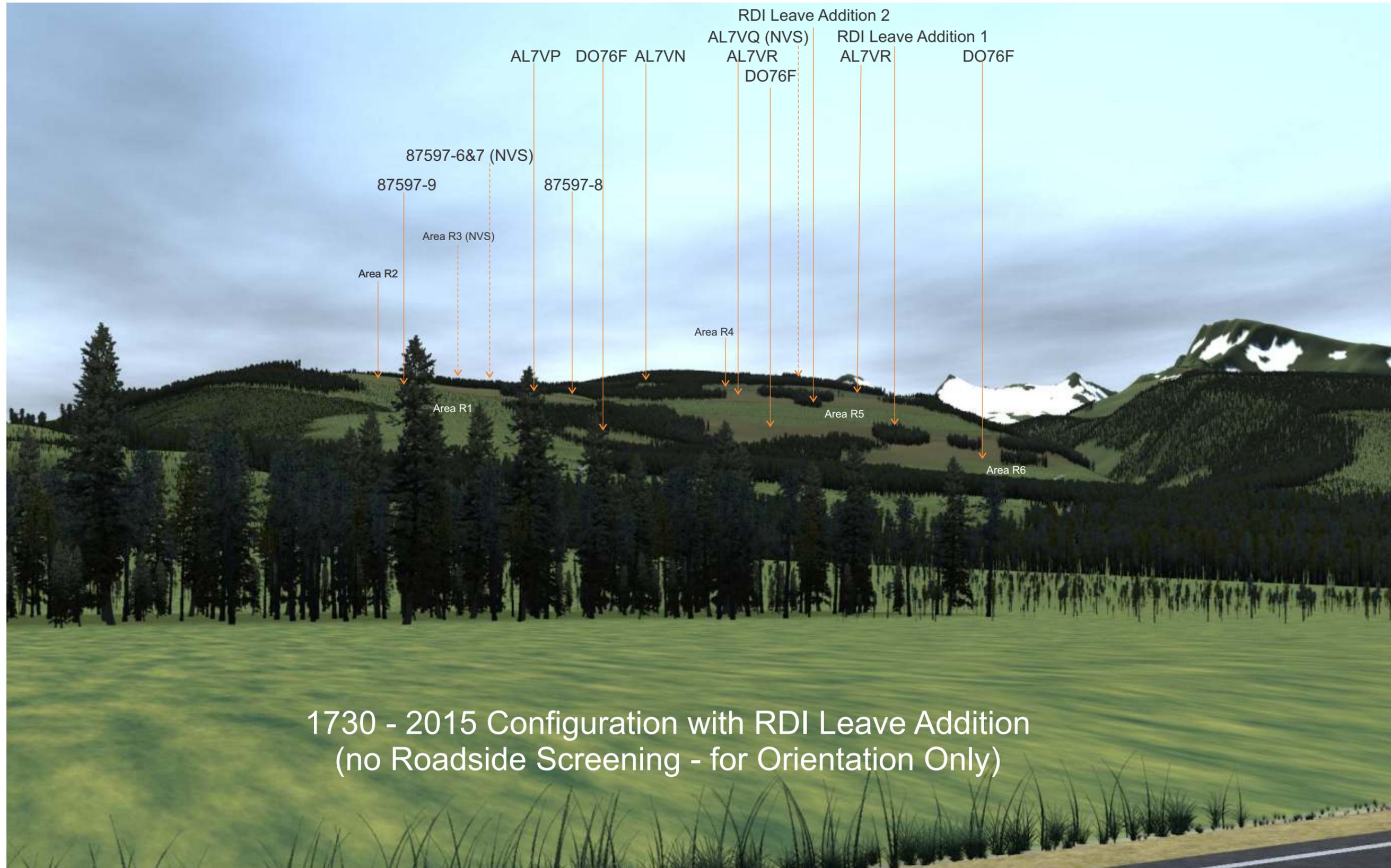
Area R5

87597-9

DO76F

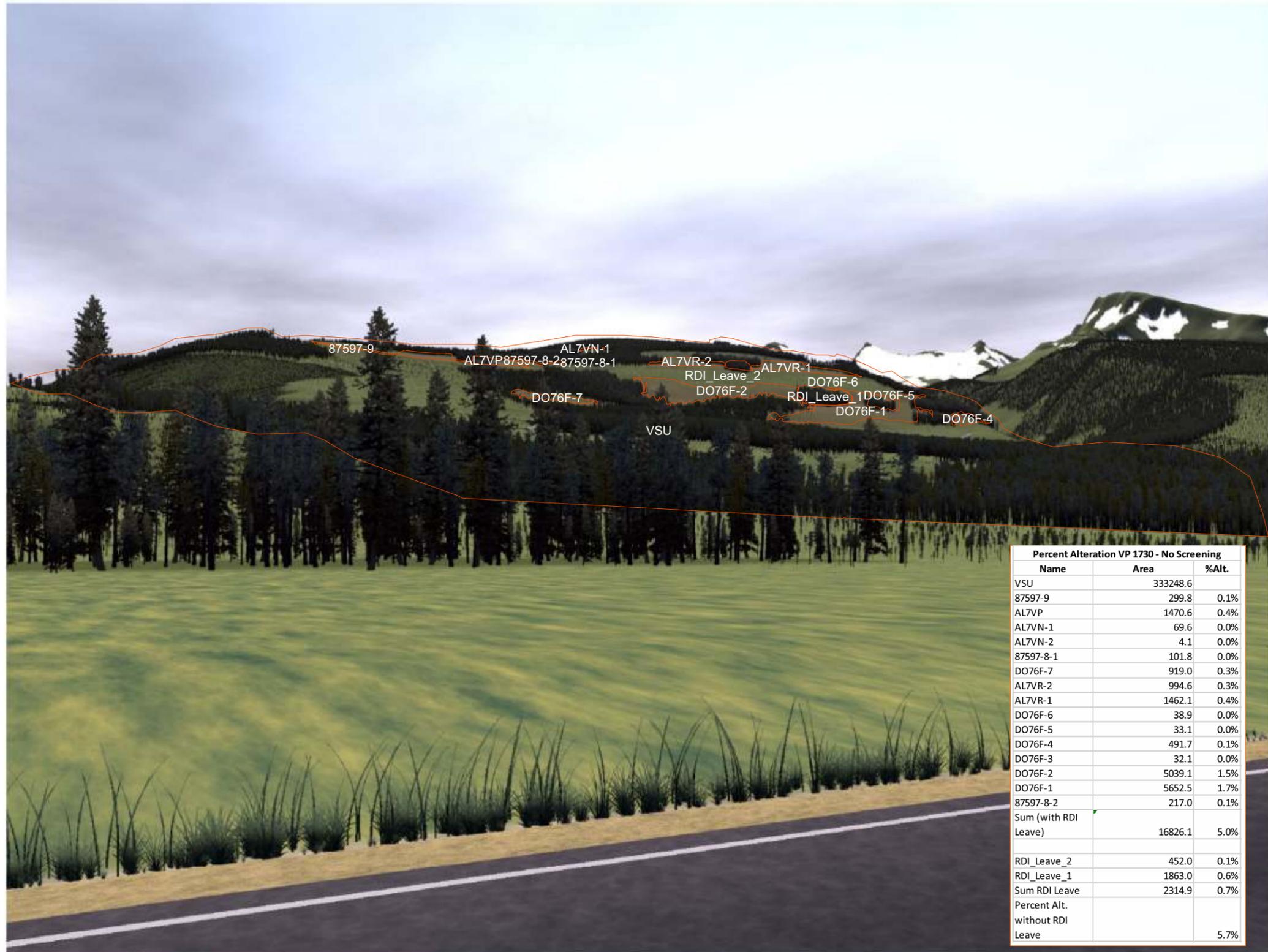
Area R1

Area R6

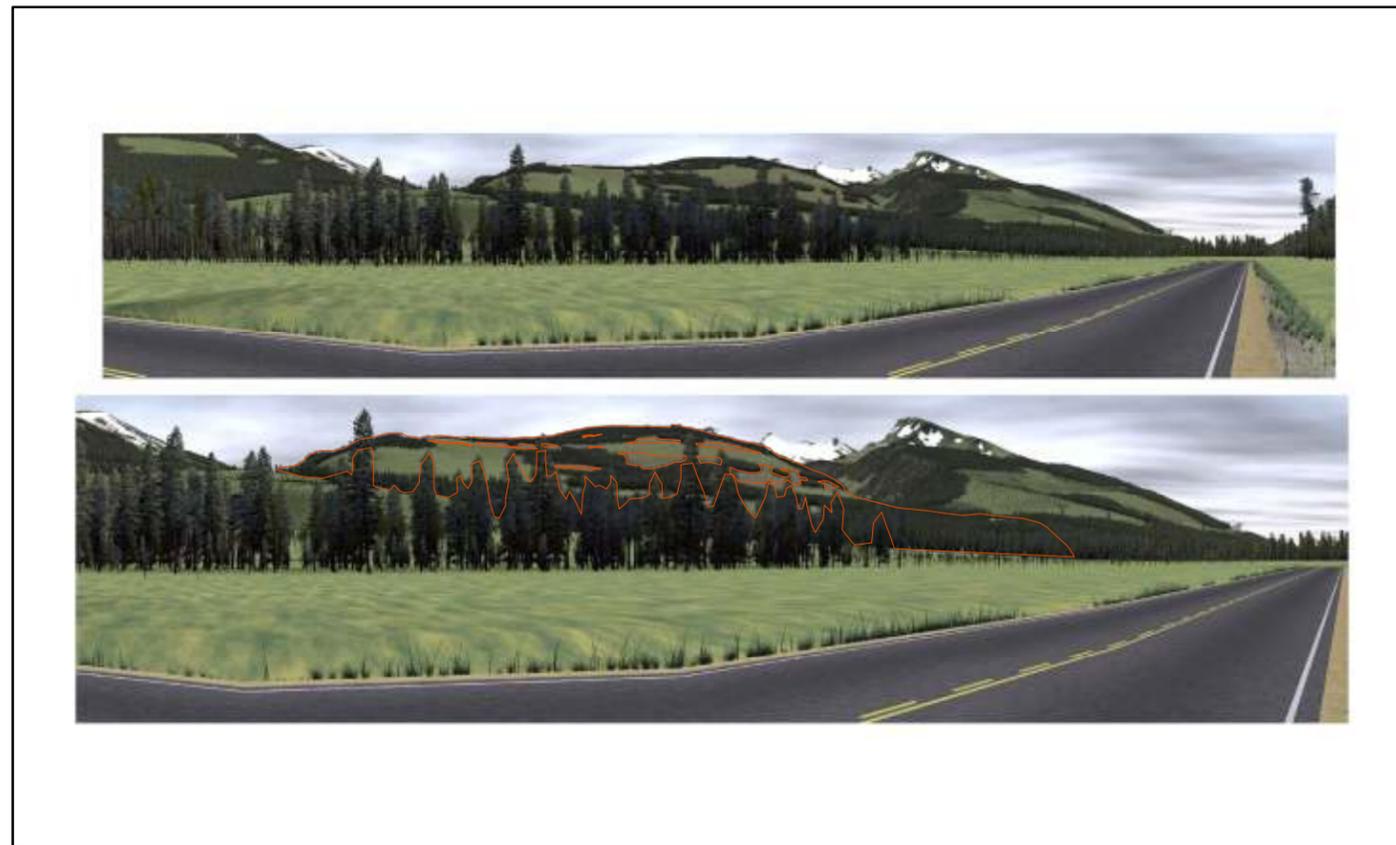
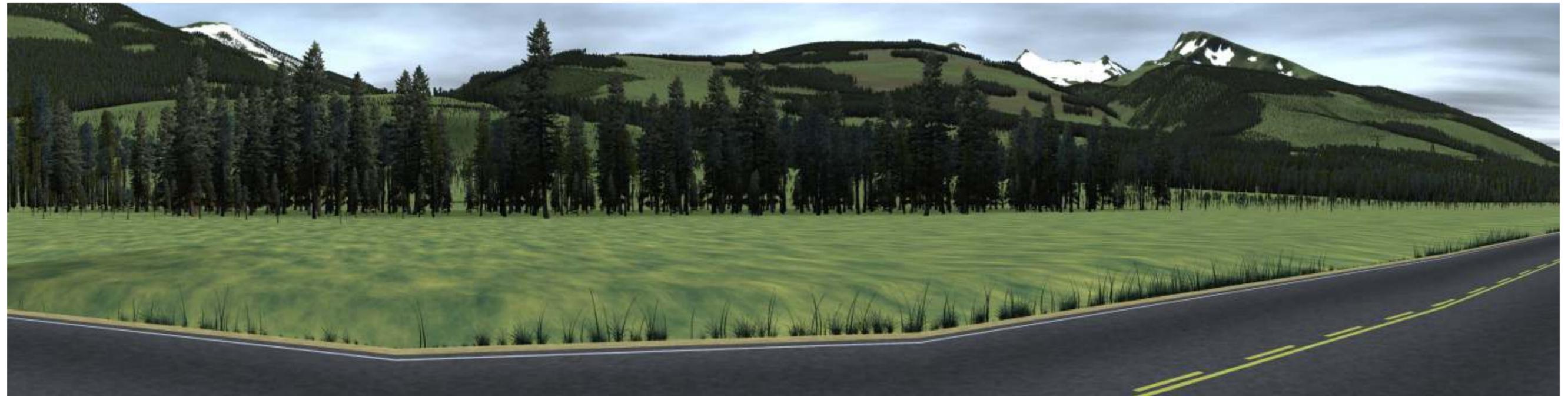


1730 - 2015 Configuration with RDI Leave Addition
(no Roadside Screening - for Orientation Only)





1730 - 2015 Configuration with RDI Leave Addition (no roadside screening - not a true view)
 Percent Alteration with RDI Leave - 5.0% - Without RDI Leave - 5.7%
 Use for Orientation Only



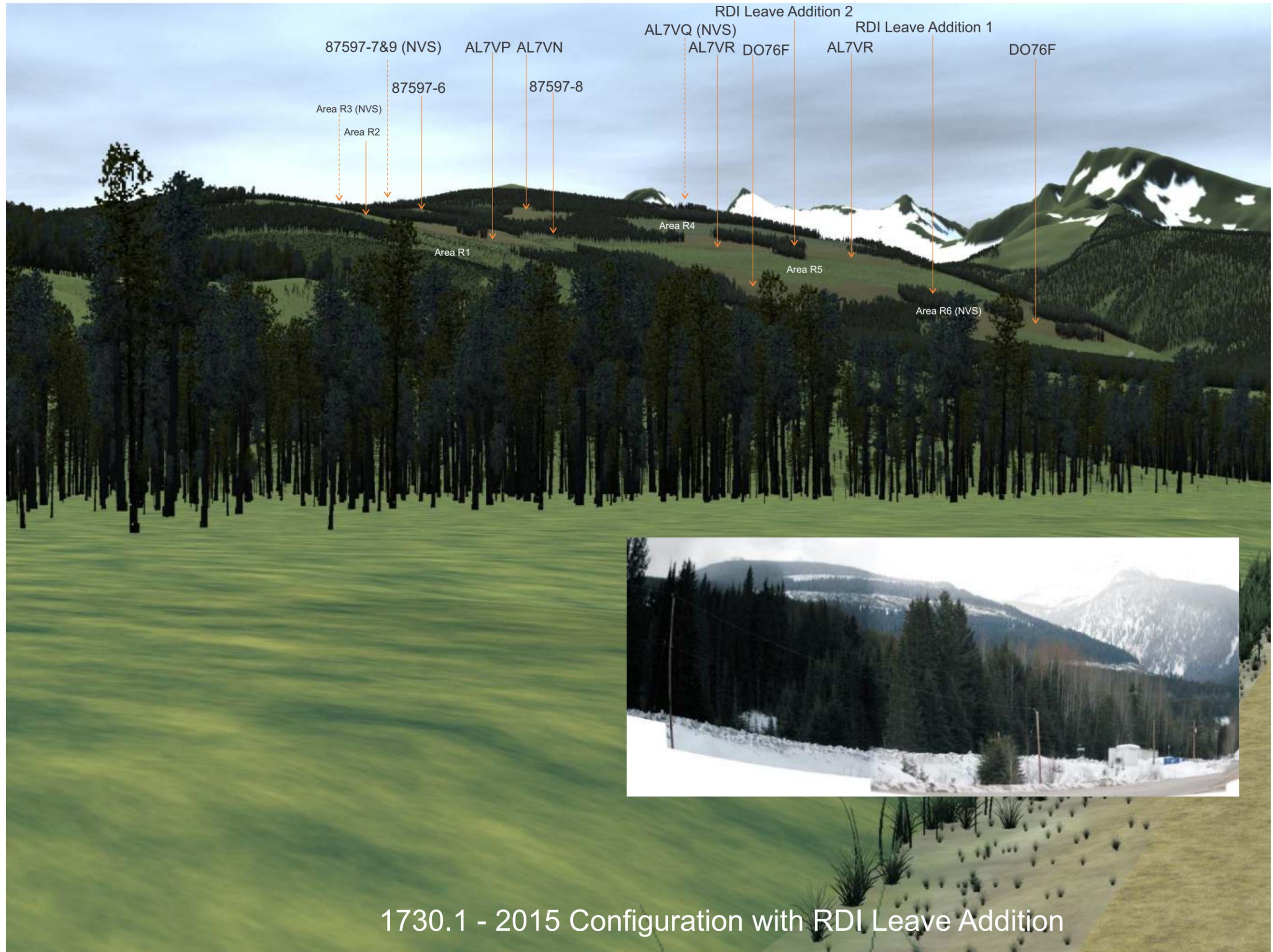
Percent Alteration VP 1730 Wide		
Name	Area	%Alt.
VSU	513564.7	
87597-9	802.5	0.2%
AL7VP	2504.6	0.5%
87597-8	558.8	0.1%
AL7VR-2	2900.6	0.6%
AL7VR-1	3504.2	0.7%
D076F-2	9724.4	1.9%
D076F-3	2120.7	0.4%
D076F-1	11742.6	2.3%
D076F-4	1127.1	0.2%
D076F-5	1599.6	0.3%
AL7VN	265.8	0.1%
AL7VR-3	195.1	0.0%
Sum	37046.0	7.2%

1730 - 2015 Configuration with RDI Leave Addition
 Percent Alteration in Perspective View - 7.2% of Landform (partly screened - as outlined)

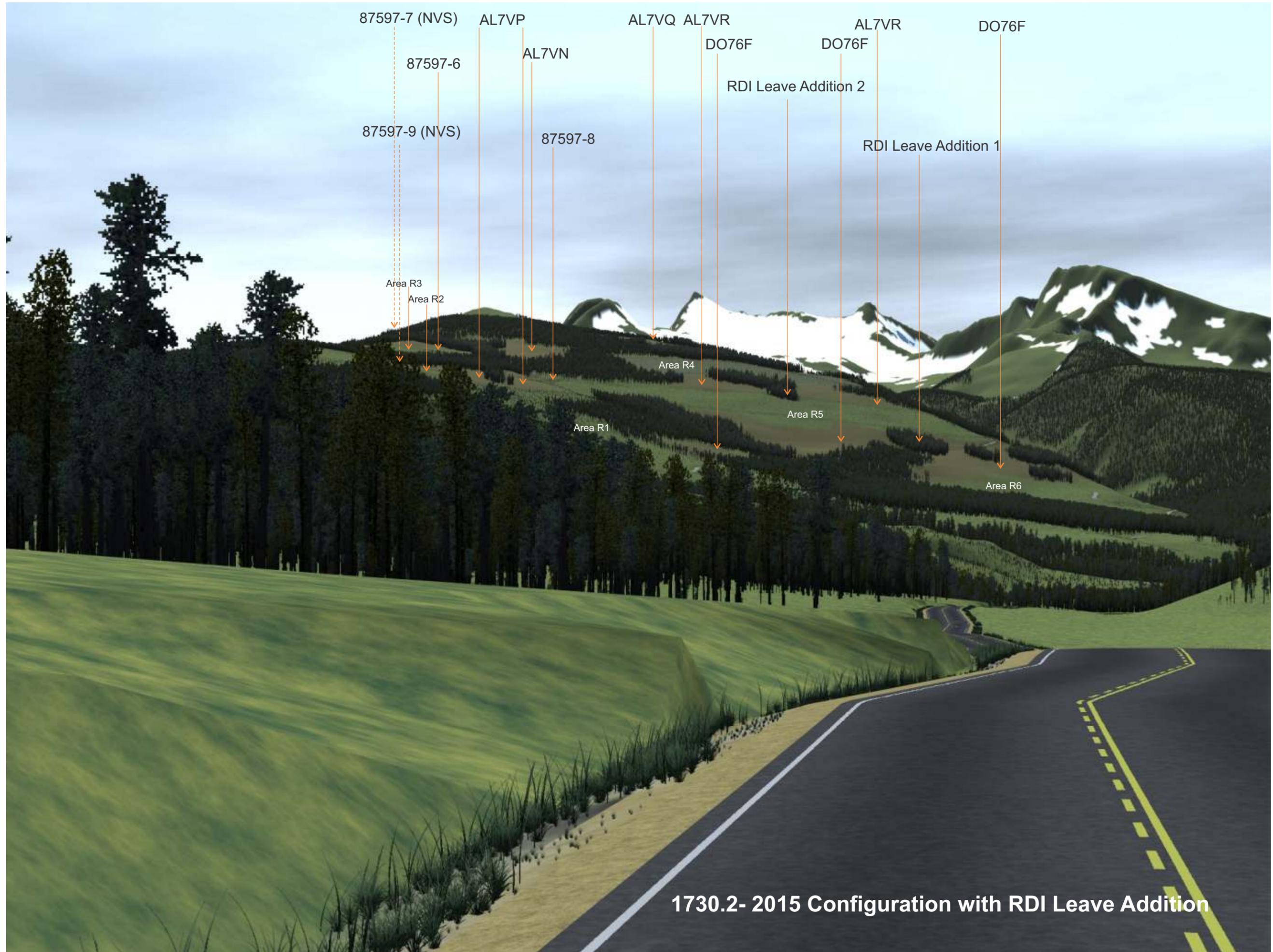


Name	Area	%Alt. VSU
VSU	1285297.39	
AL7VQ	6793.89	0.53%
AL7VR	16364.29	1.27%
DO76F	134895.14	10.50%
AL7VN	1823.98	0.14%
Sum	159877.30	12.44%

1730 - 2014 Configuration Percent Alteration in Perspective View
 12.4% of Landform (partly screened - as outlined)



1730.1 - 2015 Configuration with RDI Leave Addition



87597-7 (NVS)

AL7VP

AL7VQ AL7VR

AL7VR

DO76F

87597-6

AL7VN

DO76F

DO76F

RDI Leave Addition 2

87597-9 (NVS)

87597-8

RDI Leave Addition 1

Area R3

Area R2

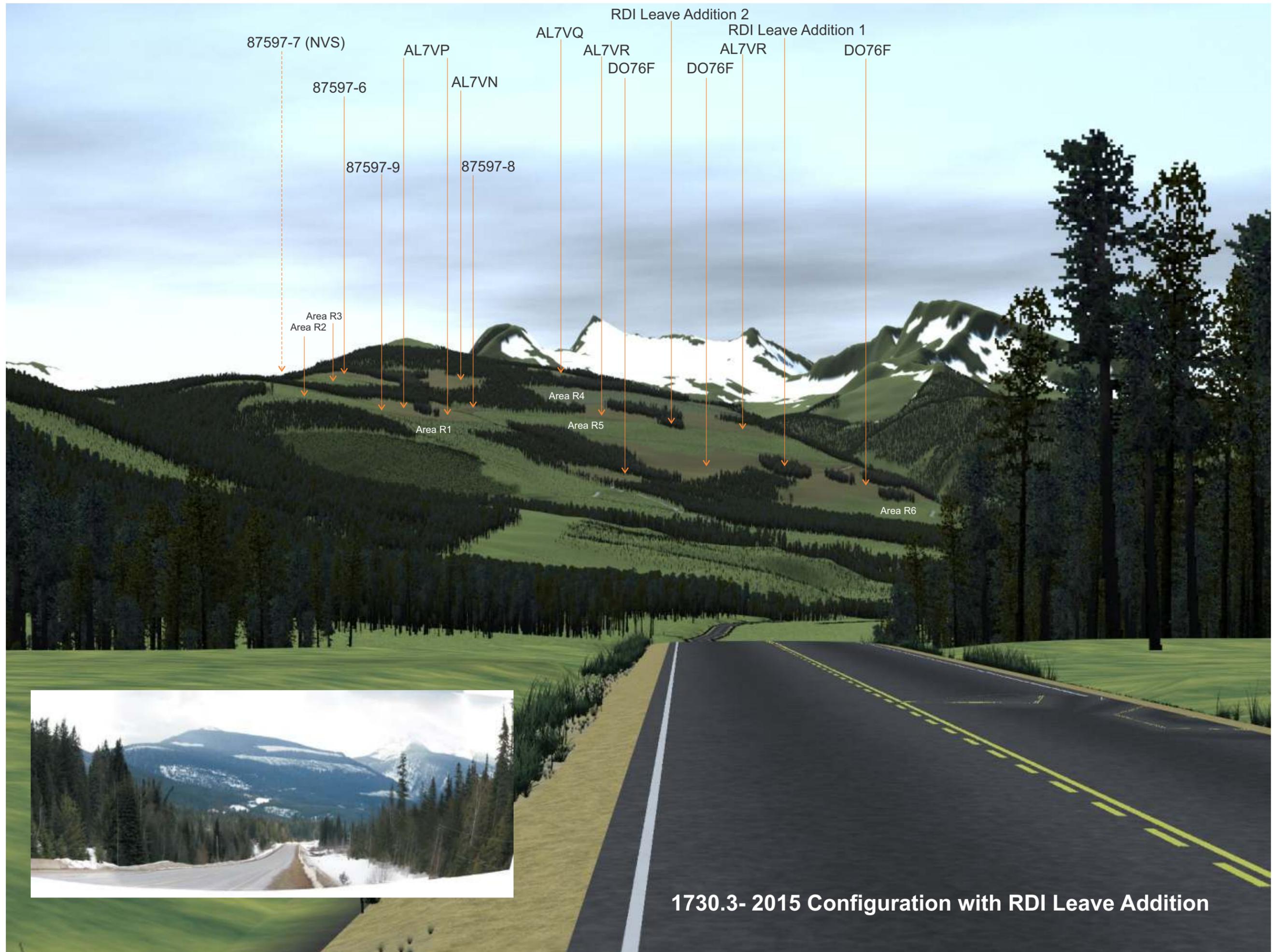
Area R4

Area R1

Area R5

Area R6

1730.2- 2015 Configuration with RDI Leave Addition



87597-7 (NVS)

87597-6

87597-9

AL7VN

87597-8

Area R3
Area R2

Area R1

Area R4

Area R5

Area R6

AL7VQ

AL7VR

DO76F

AL7VR

DO76F

RDI Leave Addition 2

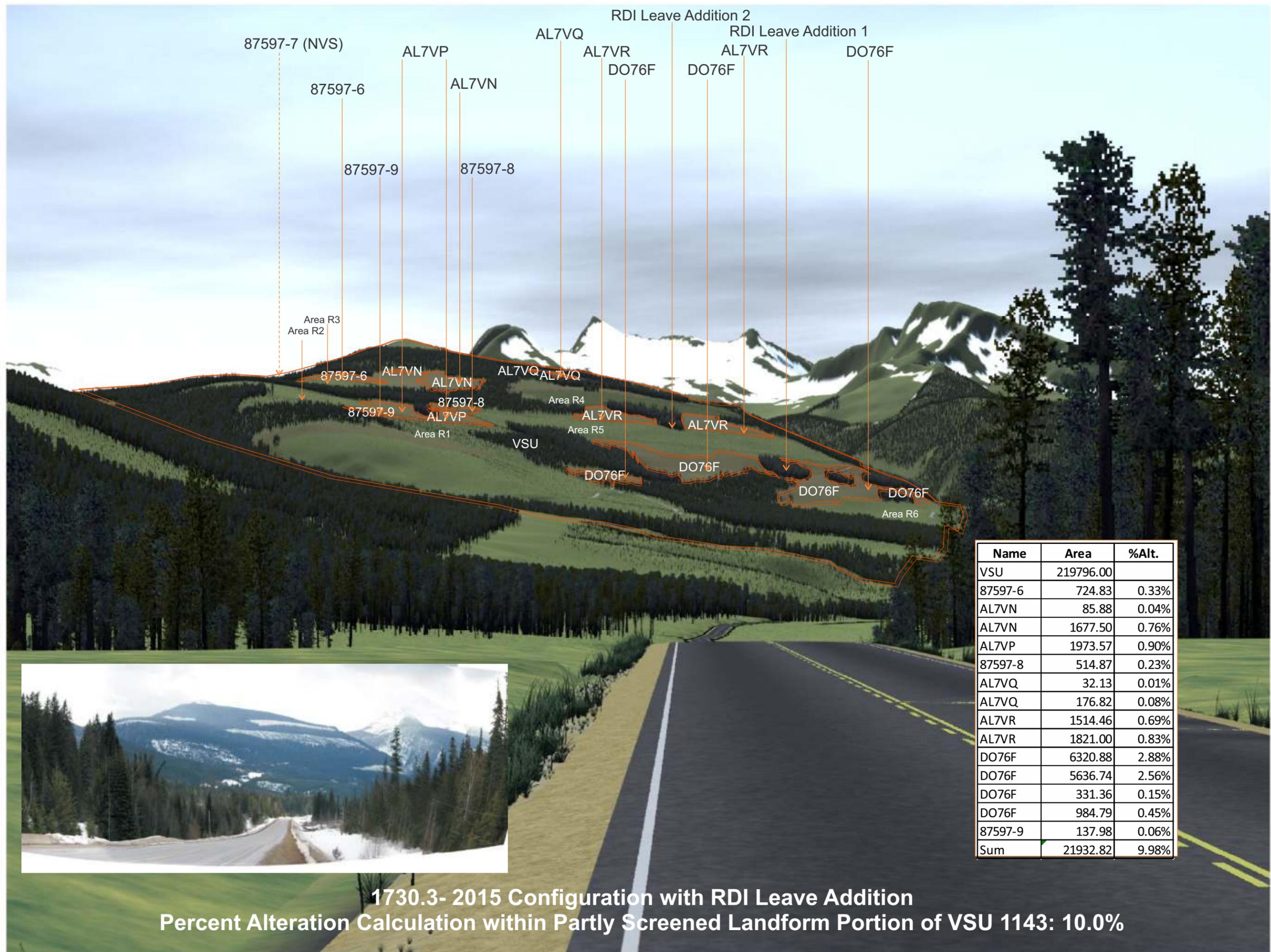
RDI Leave Addition 1

AL7VR

DO76F



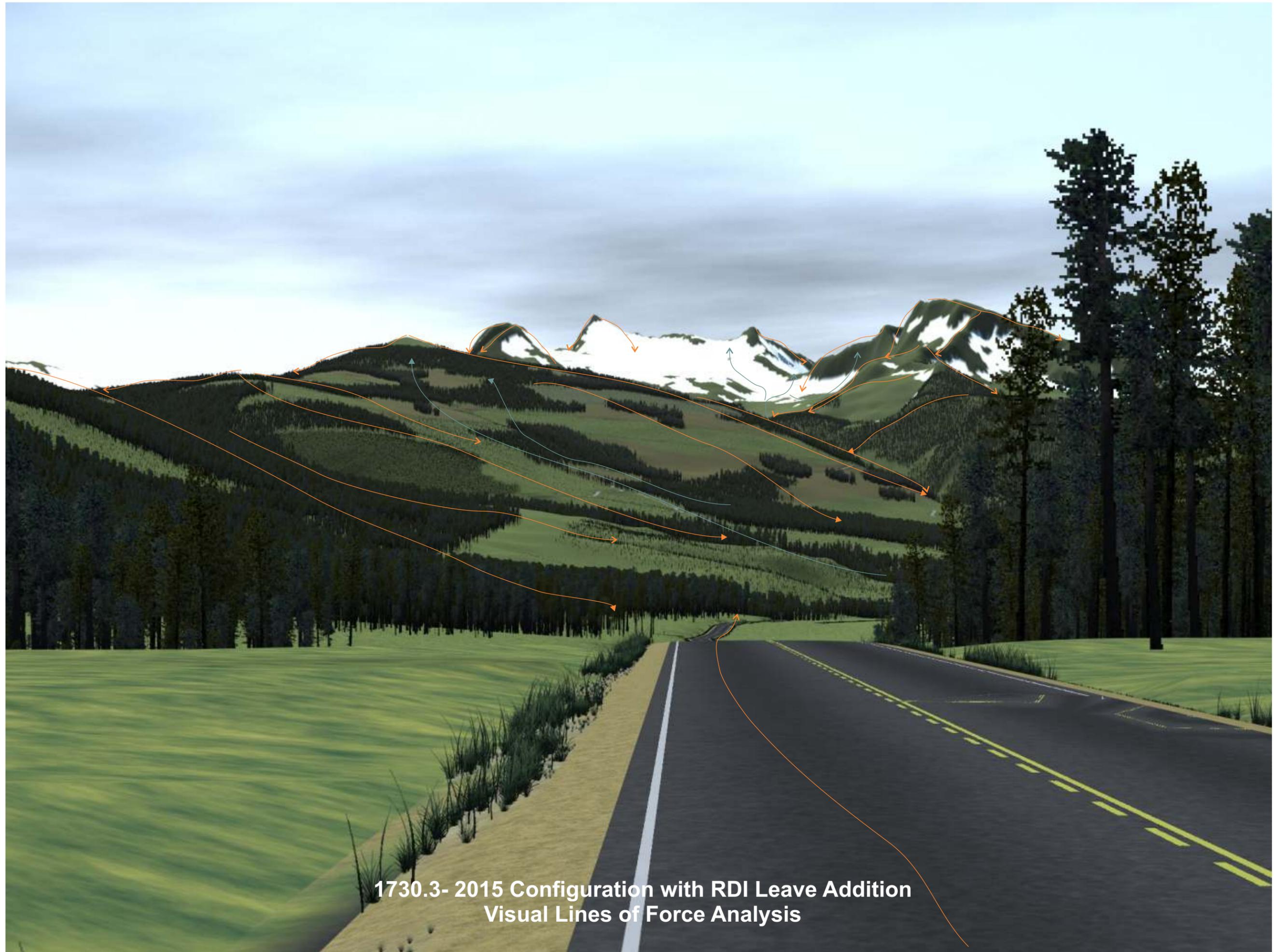
1730.3- 2015 Configuration with RDI Leave Addition



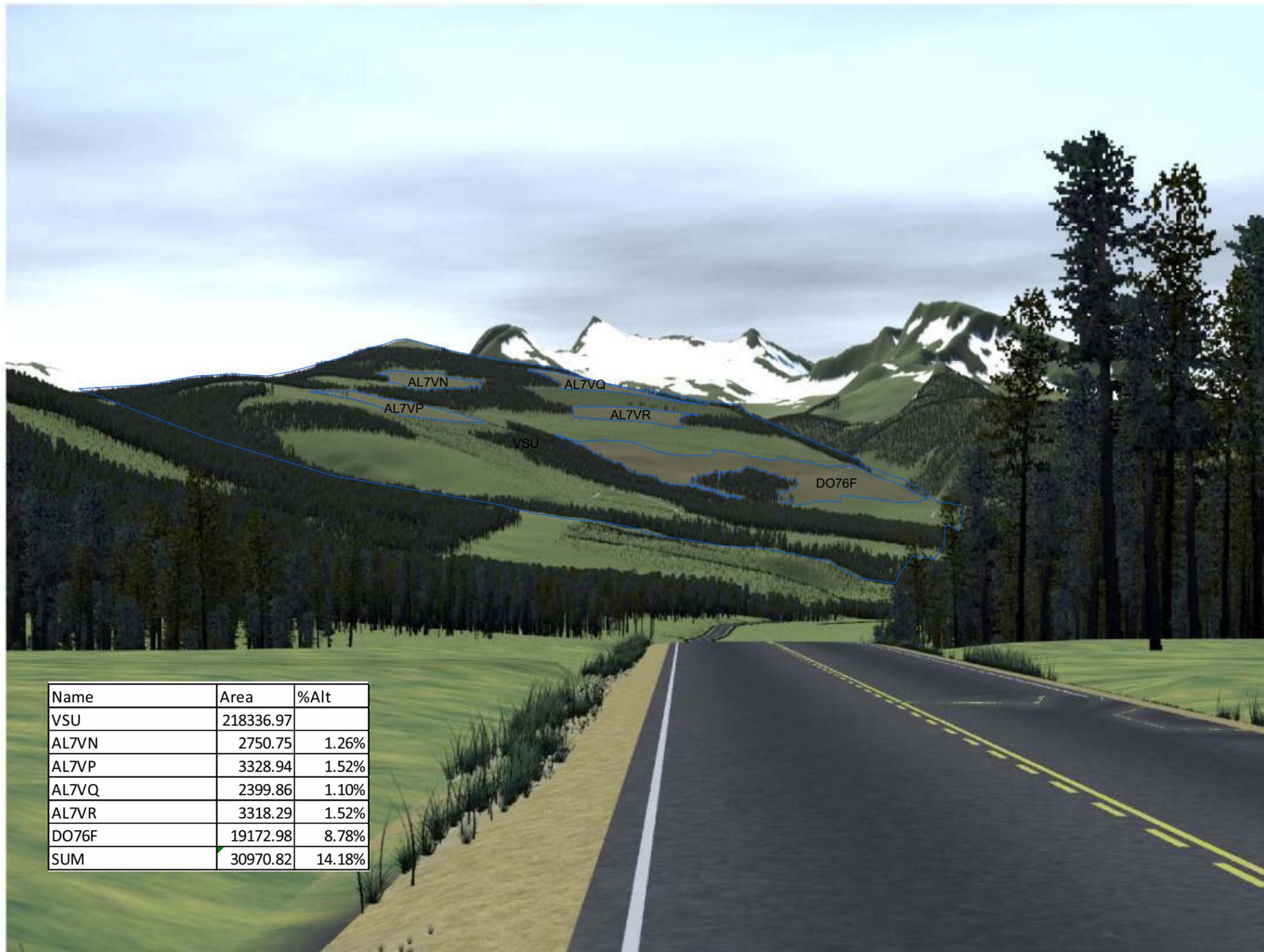
Name	Area	%Alt.
VSU	219796.00	
87597-6	724.83	0.33%
AL7VN	85.88	0.04%
AL7VN	1677.50	0.76%
AL7VP	1973.57	0.90%
87597-8	514.87	0.23%
AL7VQ	32.13	0.01%
AL7VQ	176.82	0.08%
AL7VR	1514.46	0.69%
AL7VR	1821.00	0.83%
DO76F	6320.88	2.88%
DO76F	5636.74	2.56%
DO76F	331.36	0.15%
DO76F	984.79	0.45%
87597-9	137.98	0.06%
Sum	21932.82	9.98%



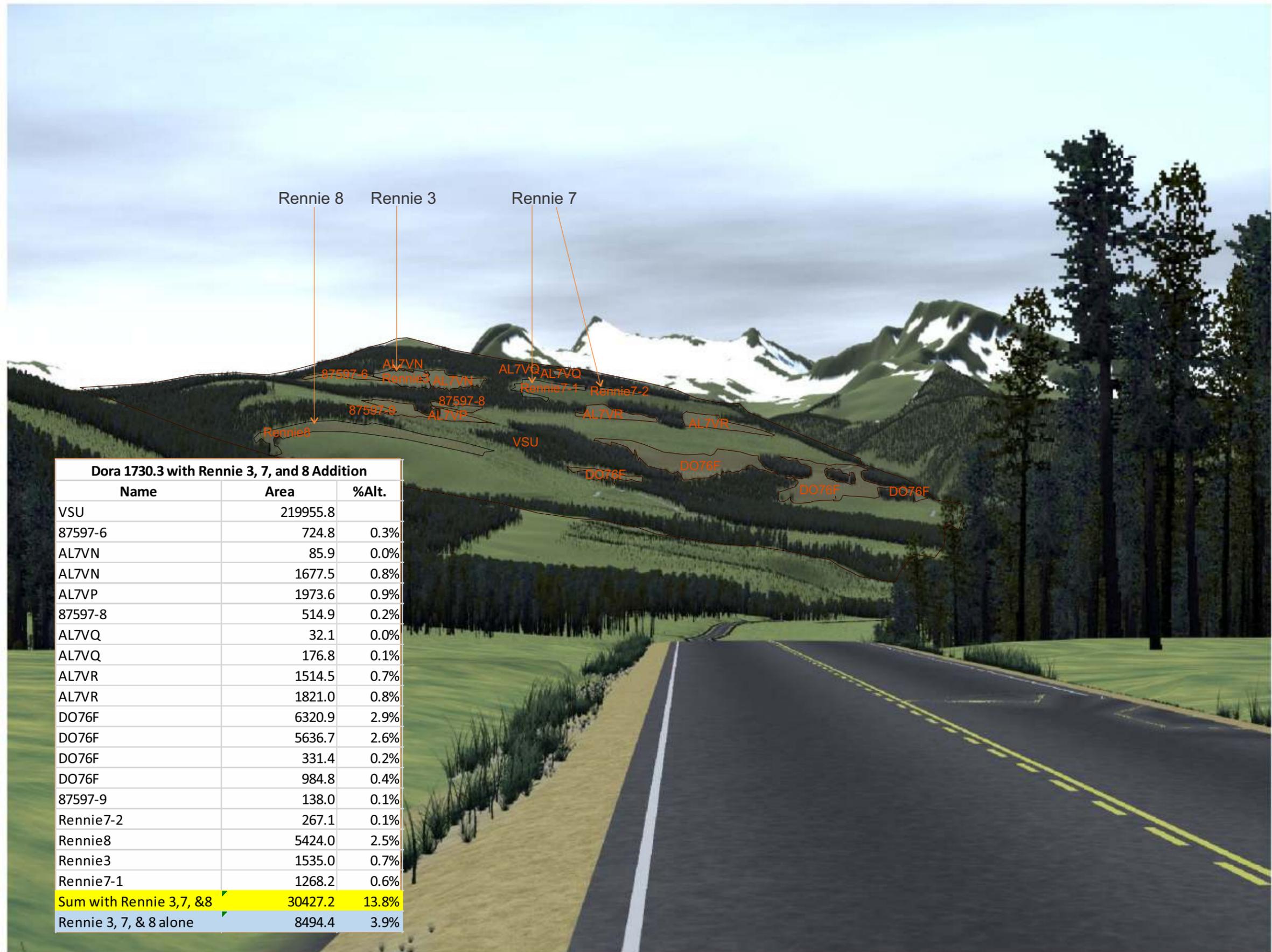
1730.3- 2015 Configuration with RDI Leave Addition
Percent Alteration Calculation within Partly Screened Landform Portion of VSU 1143: 10.0%



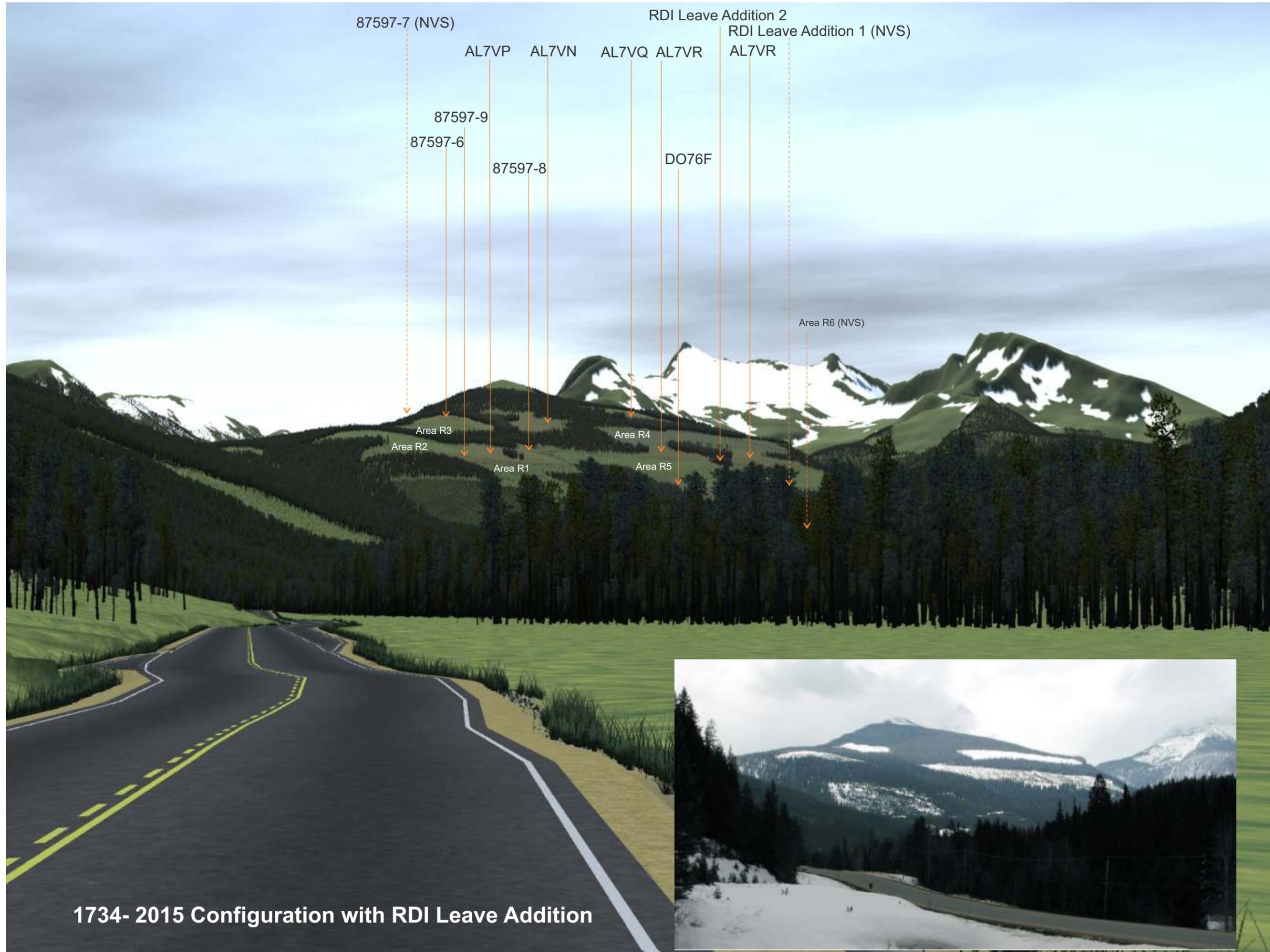
1730.3- 2015 Configuration with RDI Leave Addition
Visual Lines of Force Analysis



**1730.3- 2014 Configuration Percent Alteration Calculation
within Partly Screened Landform Portion of VSU 1143: 14.2%**



**1730.3- 2015 Configuration with RDI Leave Addition plus Rennie Units 3,7 and 8
Percent Alteration Calculation within Partly Screened Landform Portion of VSU 1143: 13.8%**



87597-7 (NVS)

RDI Leave Addition 2
RDI Leave Addition 1 (NVS)

AL7VP AL7VN AL7VQ AL7VR AL7VR

87597-9

87597-6

87597-8

DO76F

Area R6 (NVS)

Area R3

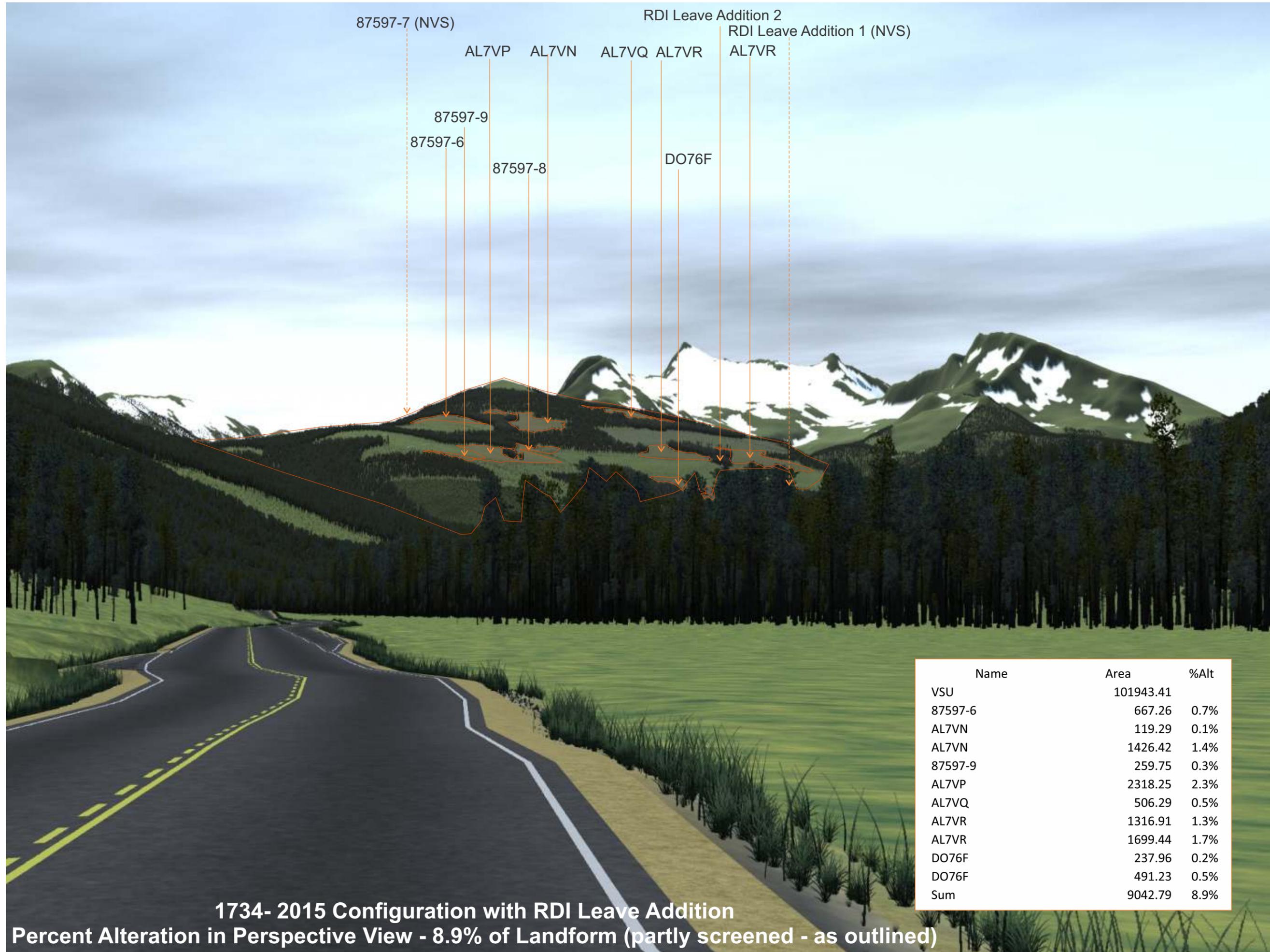
Area R2

Area R1

Area R4

Area R5

1734- 2015 Configuration with RDI Leave Addition



87597-7 (NVS)

RDI Leave Addition 2

RDI Leave Addition 1 (NVS)

AL7VP

AL7VN

AL7VQ

AL7VR

AL7VR

87597-9

87597-6

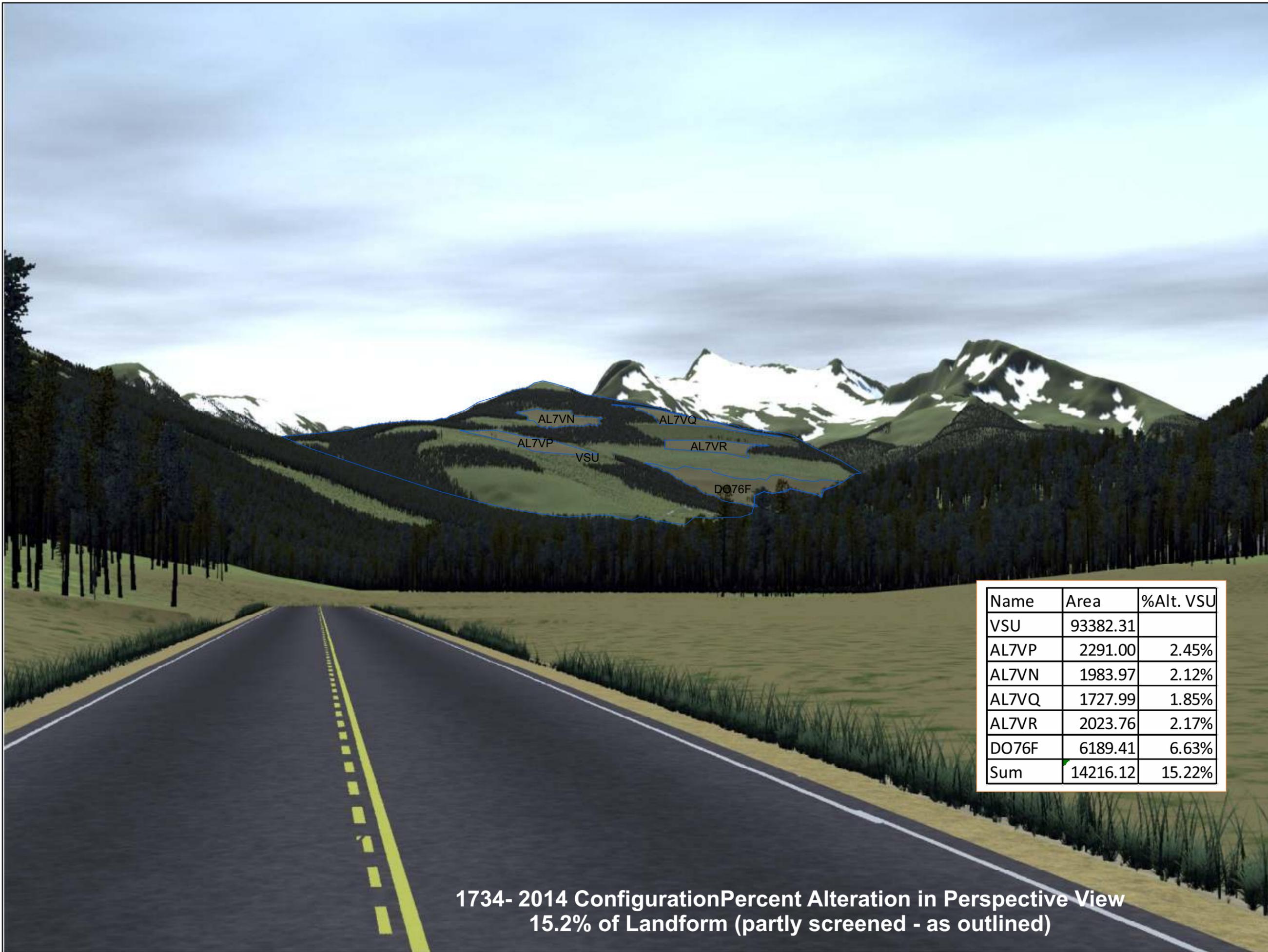
87597-8

DO76F

1734- 2015 Configuration with RDI Leave Addition

Percent Alteration in Perspective View - 8.9% of Landform (partly screened - as outlined)

Name	Area	%Alt
VSU	101943.41	
87597-6	667.26	0.7%
AL7VN	119.29	0.1%
AL7VN	1426.42	1.4%
87597-9	259.75	0.3%
AL7VP	2318.25	2.3%
AL7VQ	506.29	0.5%
AL7VR	1316.91	1.3%
AL7VR	1699.44	1.7%
DO76F	237.96	0.2%
DO76F	491.23	0.5%
Sum	9042.79	8.9%



Name	Area	%Alt. VSU
VSU	93382.31	
AL7VP	2291.00	2.45%
AL7VN	1983.97	2.12%
AL7VQ	1727.99	1.85%
AL7VR	2023.76	2.17%
DO76F	6189.41	6.63%
Sum	14216.12	15.22%

1734- 2014 Configuration Percent Alteration in Perspective View
 15.2% of Landform (partly screened - as outlined)