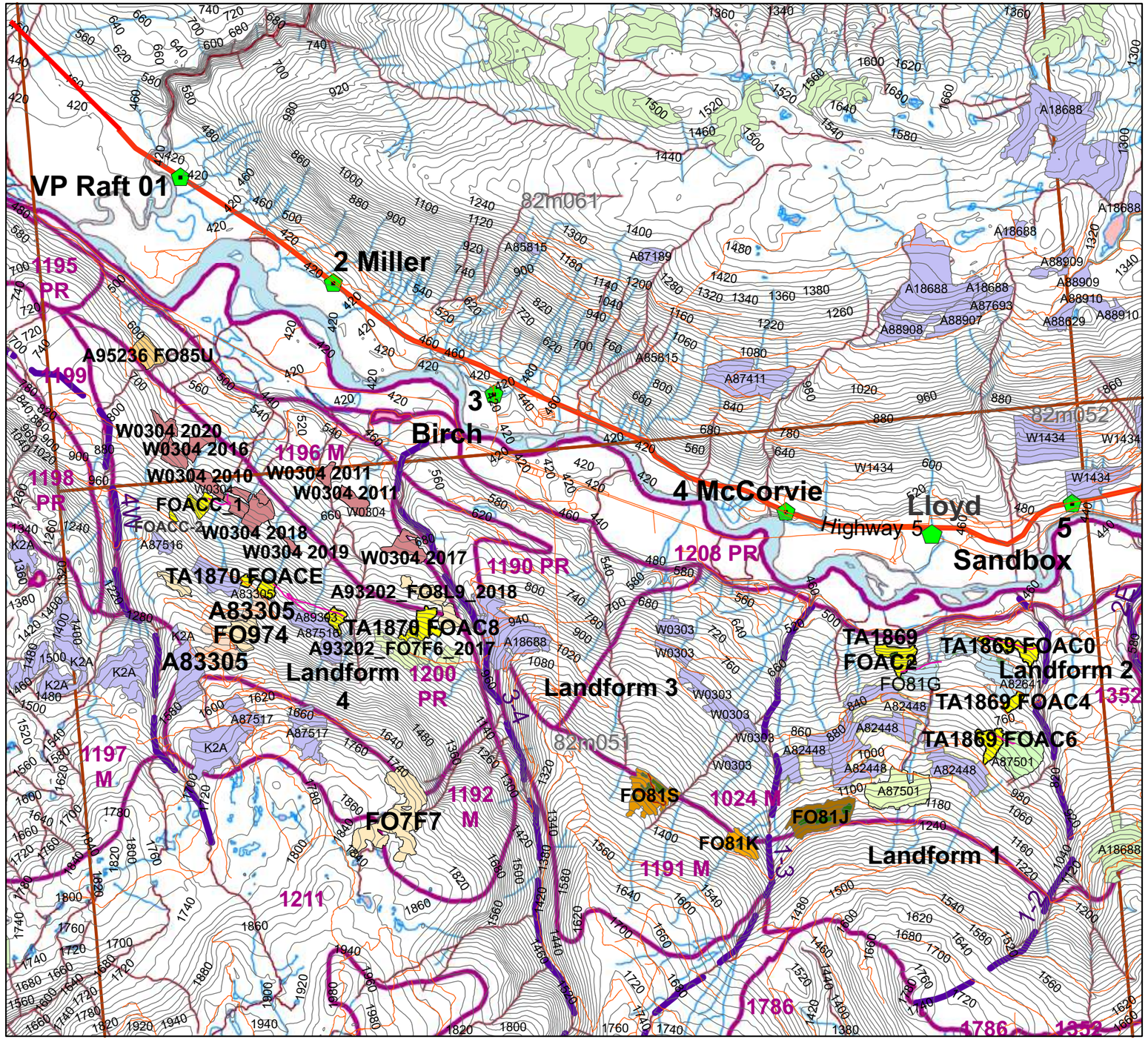


Foghorn Operating Area Key Map 2021

Foghorn Douglas-fir Beetle Blocks
BCTS Foghorn 2021 Visual Assessment
prepared by
RDI Resource Design Inc
November 2021

Beetle Block Update

- Road_Select
- TA1869_&_TA1870_New_Roads
- A95236_FO85U_Road
- FO81S_blk_Mar_15_2016
- FO81J_BLOCK_BOUNDARY
- Oct_25,_2021_FOACC_Updated_Shape
- A93202_FO8L9_2018
- A93202_FO7F6_2017
- October_20,_2021_Additional_Existing_Cutblocks
- TA1869_&_TA1870_WTRA

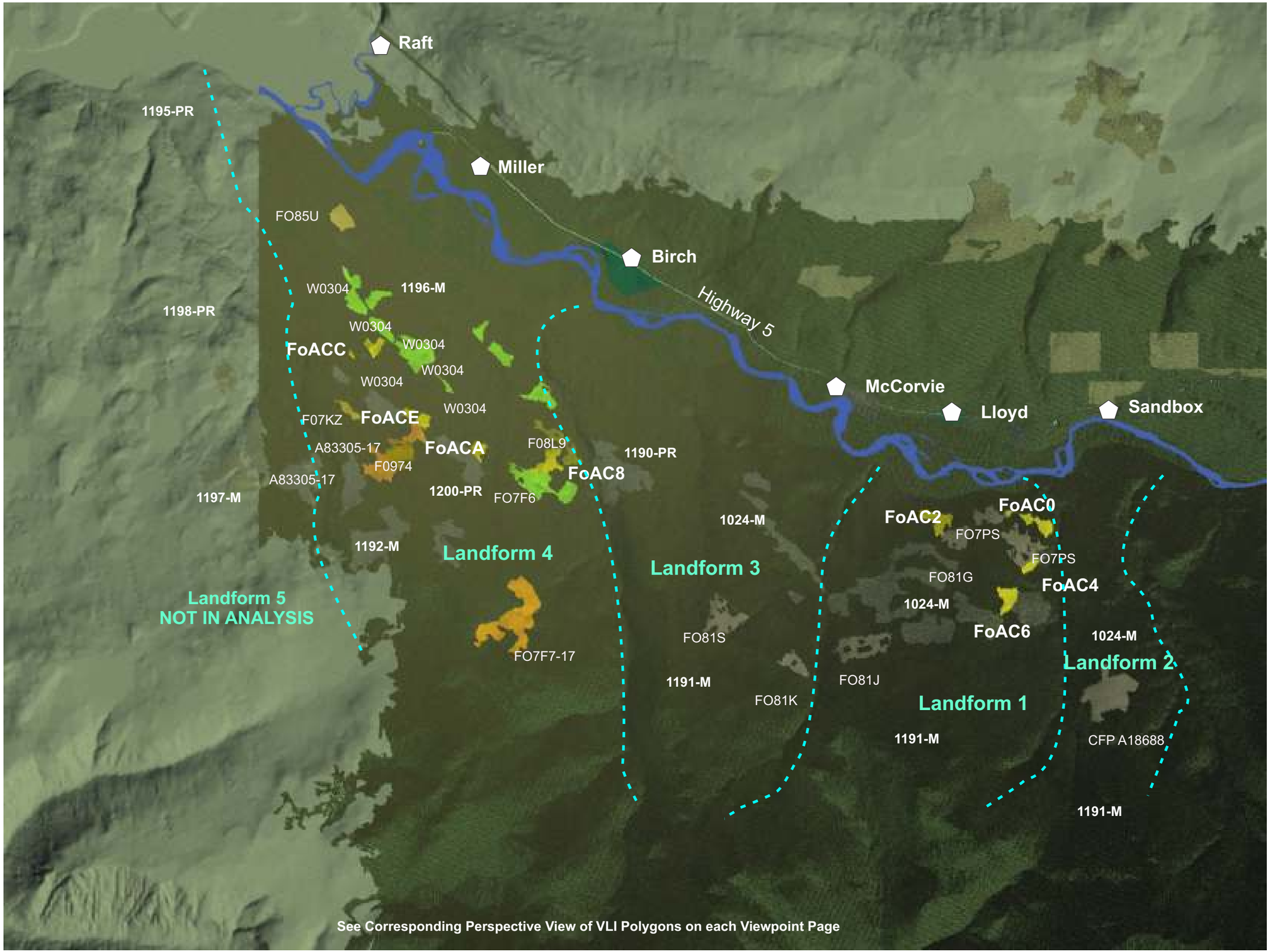
Landforms

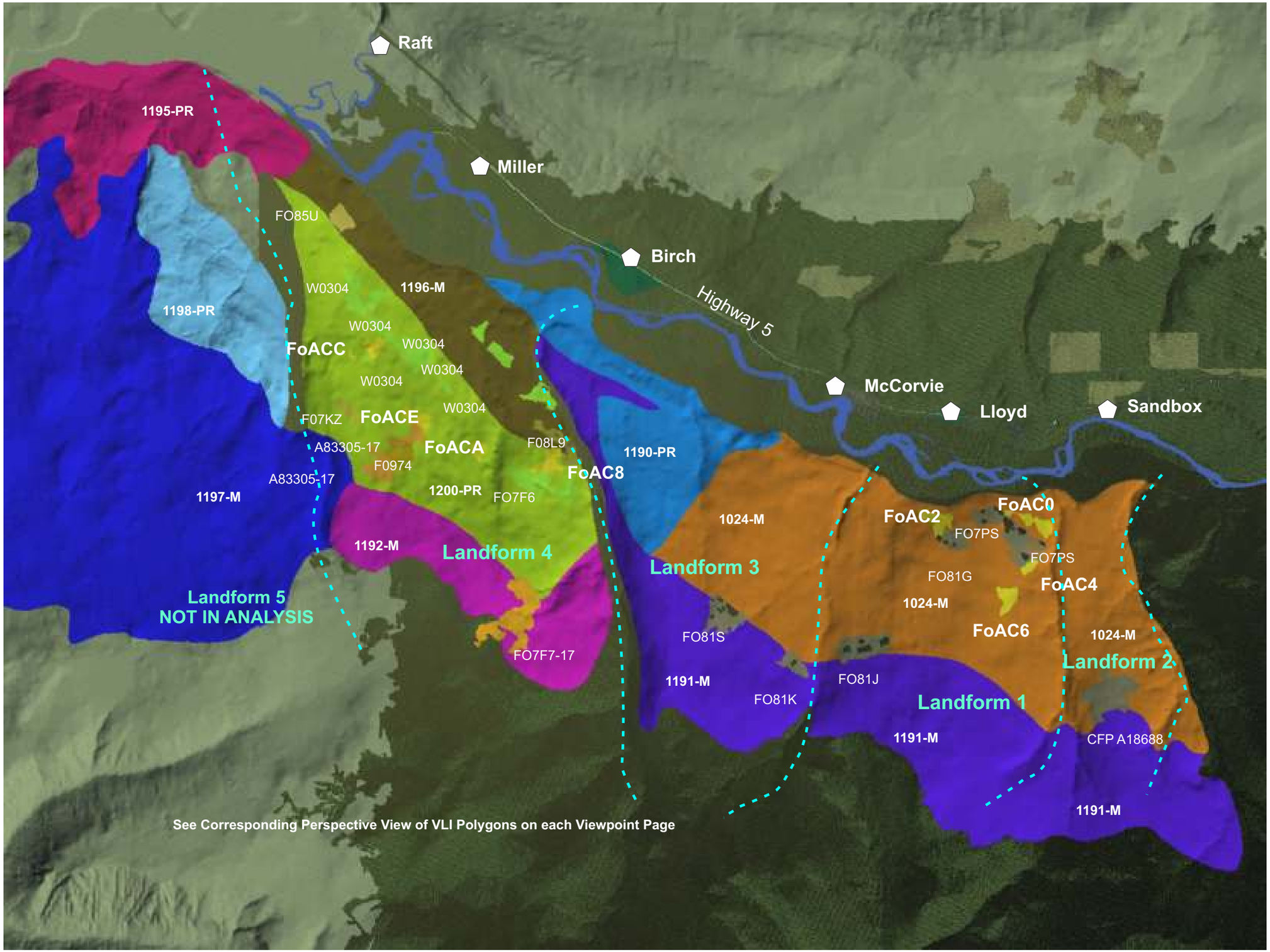
Beetle Blocks

- TA1869_&_TA1870_Blk_Shapes
- A95236_FO85U
- FO974
- B_n_A83305-1
- FO7KZ-17
- New_FO7F7_Oct_17_2017
- FO81K_BLOCK_BOUNDARY
- Contours_Clip
- FO81S_RD_Mar_15_2016
- Viewpoints
- FO81G_WTRAS
- A92773_KDC_reserves_Jan_7-2015
- FO81J_WTRA
- FO81S_WTRA
- FO81K_WTRA
- A92773_wtra
- FO7EM_H2014
- FO7EL-H2014
- Landform_Lines
- A92773_blk_boundaries_Jan7-2015
- Woodlot_new_blk_for_Ken
- 2008-2015completeclip
- Ften2008-2015completed
- MapGrid
- Harvested_blks_08-09
- CFP-2012-A18688
- N-Thompson

N

0 0.5 1 2 3 4 Kilometers


Raft
Miller
Birch
Highway 5
McCorvie
Lloyd
Sandbox
1195-PR
1198-PR
1197-M
1196-M
1190-PR
1200-PR
1024-M
1192-M
1191-M
FO85U
W0304
W0304
W0304
W0304
W0304
W0304
FoACC
FoACE
FoACA
FoAC8
F07KZ
A83305-17
F0974
A83305-17
F08L9
FO7F6
FoAC2
FoAC0
FO7PS
FO7PS
FO81G
FoAC4
FoAC6
FO81S
FO81J
FO81K
CFP A18688
FO7F7-17
Landform 4
Landform 3
Landform 5
NOT IN ANALYSIS
Landform 1
Landform 2
See Corresponding Perspective View of VLI Polygons on each Viewpoint Page


Raft
Miller
Birch
Highway 5
McCorvie
Lloyd
Sandbox
1195-PR
FO85U
W0304
1196-M
1198-PR
W0304
FoACC
W0304
W0304
W0304
F07KZ
FoACE
W0304
A83305-17
FoACA
F08L9
1190-PR
F0974
FoAC8
A83305-17
1200-PR
FO7F6
1197-M
1024-M
FoAC2
FoAC0
FO7PS
FO7PS
1192-M
Landform 4
Landform 3
FO81G
FoAC4
1024-M
Landform 5
NOT IN ANALYSIS
FoAC6
1024-M
FO81S
Landform 2
FO7F7-17
1191-M
FO81J
FO81K
Landform 1
1191-M
CFP A18688
1191-M
See Corresponding Perspective View of VLI Polygons on each Viewpoint Page

Contents

Table 3 - Foghorn Cutblocks - 2021 Visibility

	Landform 1 Modification								Landform 3 Partial Retention		Landform 4 Partial Retention											
Viewpoint	**FOAC0**	**FOAC2**	**F0AC4**	**F0AC6**	**FO7PS**	**FO81G**	**FO81J**	**H 08-15**	**FO81K**	**FO81S**	**FOACC***	**FOACE**	**FOACA**	**FOAC8**	**FO974**	**A83305-1**	**FO7KZ**	**F07F6**	**W0304**	**FO7F7**	**FO8L9**	**FO85U**
Sandbox	V	V	VS	V	V	V	VS	V	V	V				VS	V			VS	V	V		
Lloyd	Visibility in VNS will be determined if requested from this new viewpoint																					
McCorvie	VS	V			V	V	V	V		VS	V	VS	VS	VS	VS	VS		V	V	VS		
Birch							V	V			V	V	V	V	V	V	V - sliver	V	V		VS	V
Miller							V	V			V	V	V	V	V	V	V - sliver	V	V		V	V
Raft		VS				VS	V	V			V	VS	VS	VS	V	V	VS	VS	V		VS	V
Status	**P**	**P**	**P**	**P**	**C-2017**	**C-2017**	**C-2021**		**C-2021**	**C-2020**	**P**	**P**	**P**	**P**	**C-2018**	**C-2018?**	**F**	**VS**	**C**	**F**	**C-2018**	**C-CF**
VSU	**1024-M**	**1024-M**	**1024-M**	**1024-M**	**1024-M**	**1024-M**	**1024-M**	**1024-M**	**1191-M**	**1191-M**	**1200-PR**	**1200-PR**	**1200-PR**	**1200-PR**	**1200-PR**	**1200-PR**	**1200-PR**	**1200-PR**	**1200-PR**	**1192-M**	**1196-M**	**1196-M**
VSU Colour	**see VNS Validation Map (page 3)**																					

Status: P = Proposed 2021; C = Completed-Year; C-CF = Community Forest - likely completed - to be checked; F = Future - hopeful auction one day - First Nations permission required

W0304 openings prominent in Landform 4 in vli_Poly 1200 and 1196; Harvested 2008 to 2015 dominate Landform 1

***FOACC adjusted per 27 October shapefile. Mapsheet 82M051; Viewpoint Importance - Major - Highway 5 near Clearwater**

See also Table 4 on the next page for visibility by landform as seen in the photography. Landform 1 is not seen from Raft or Birch; Landform 3 is only partially seen from Raft, McCorvie and Lloyd; Landform 4 is not seen from McCorvie or Lloyd.
Percent alteration calculations for landforms can be ignored when NVS from a viewpoint, and considered to a lesser extent when only partially visible.

Introduction

On October 6, 2021, RDI was requested to conduct a Visual Impact Assessment for 4 cutblocks in TA1869 and 4 cutblocks in TA1870 in the Foghorn Operating Area along Highway 5 just east of Clearwater. The request came from Ches Clem, RPF, Planning Forester, BC Timber Sales, Clearwater Field Team, and Contract Administrator for "Professional Forestry Services Related to Visual Resource Management" under contract # PD18TEB007. According to Ches:

"...the 8 blocks in the Foghorn Operating Area are targeting patches of Douglas-fir trees that have been immpacted by the Douglas-fir beetle. Our goal is to help stop the spread of the beetle. Timber Sale Licence TA1870 is within a Partial Retention VQO. All four blocks are within Landform 4 from RDI's February 2018 analysis. TSL TA1869 is within a Modification VQO. All blocks are within Landform 1 from RDI's March 18, 2016 Analysis." Ches's email also included the following table (Table 1):

TSL	Block	Gross Area (ha's)	Landform	VQO
TA1869	FOAC0	11.3	1	M
	FOAC4	4.2	1	M
	FOAC6	10.5	1	M
	FOAC2	13.0	1	M
TA1870	FOAC8	12.9	4	PR
	FOACA	5.6	4	PR
	FOACE	7.2	4	PR
	FOACC	12.5	4	PR

Ches also took photos from the viewpoints located from the shapefiles provided to him by RDI. The photos provided a record of current conditions but were hampered by mid-landform clouds. An additional set was taken November 27 by Tyson Leudtke including an additional viewpoint named "Lloyd".

In the initial round, RDI updated its ArcMap and Visual Nature Studio projects from 2018 with the new information, and also deleted 2 cutblocks from the earlier proposal - FO8PY in Landform 1, a portion of which was overlaid by new cutblock FOAC2, and FO81R in Landform 3 which was no longer in any plan. Three small WTRAs were added in FOAC8 and one in FOAC2. The new cutblocks were assigned a bright yellow colour for ease of visibility in VNS, given the complexity of new, recently proposed (2017-2018) and regenerating openings. Viewpoint rendering cameras were set at 60º field of view, 30 mm lens. Individual images were auto-stitched together by VNS form panoramas in VNS. Full panoramas were rendered from each of five viewpoints established in earlier studies - Raft, Miller, Birch, McCorvie and Sandbox. These are indicated on the key map on page 1, and on the VNS landforms and validation maps on pages 2 and 3. Results are presented for each viewpoint on their respective pages (see Table of Contents, page 4).

RDI tracked a total of 19 cutblocks plus existing alteration considered nonVEG (not yet exhibiting visually effective green-up). Each were labelled, and measured for percent alteration from each of the five viewpoints. Table 3 on page 4 details the potential visibility of each cutblock from each viewpoint. The VSU indicates the Visual Sensitivity Unit (VLI Polygon) in which each cutblock is located in each landform. RDI amalgamated VSUs with non-distinct breaks in each landform where appropriate as shown in the VSU map on pages 2 and 3. When amalgamating units with differing VQOs such as for Landform 4, the most restrictive VQO is, by FLNRO convention, applied overall.

Landform 1 Findings - Initial and Final

The results in Landform 1 indicate the VQO of Modification is exceeded from 3 viewpoints. Two of the viewpoints, Miller and Birch are predicted to reveal no new alteration, while Raft is predicted to potentially reveal a single new opening - FOAC2 creating very minor (0.65%) added alteration. Landform 1 is in the background over 11km from Raft viewpoint, and visibility is unlikely and proven by photgraphy. Primary viewing for Landform 1 is from Sandbox and McCorvie viewpoints which importantly meet the VQO. Open coverage of Landform 1 was also shown to be available from the new Lloyd viewpoint (final location pending). No additional analysis was prepared from this viewpoint, but substantial VEG evident. Table 4 is a summary of landforms visible from each viewpoint in the photography:

Table 4 - Landform Visibility on Photos

Viewpoint	Landform 1	Landform 3	Landform 4
Raft	NVS	Partial	Full
Miller	Full	Full	Full
Birch	NVS	Full	Full
McCorvie	Full	Partial	NVS
Lloyd	Full	Partial	NVS
Sandbox	Full	Full	Full
NVS is non-visually sensitive (i.e., not seen)			

Landform 4 Findings - October 25 Revisions update

Upon review of the review draft, Ches Clem provided additional Woodlot 0304 openings, a reduced FO8L9, and an additional block - FO7F6 on October 21. These changes required updates of the key map, re-runs of all VNS imagery, updates of the CorelDraw project, re-calculation of percent alteration for Landform 4 only from each viewpoint, updates of the tables, and reconsideration of the ability of Landform 4 to meet the VQO. The changes raised the number of openings tracked in Landform 4 to 21. Together with the 2 openings in Landform 3 and 7 openings in Landform 1, the total requiring identification, tracking, assessment and lebelling in perspective view from each of the 5 viewpoints was 30 openings. A summary of the percent alteration in perspective view including the revised results for Landform 4 is presented in Table 2. The results in Landform 4 somewhat exceeded the upper limit of the VQO of Partial Retention (7%) from three viewpoints: Miller (7.14%), Birch (7.82%), and McCorvie (7.04%).

October 27 Update

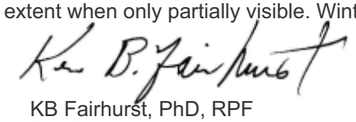
Upon being noticed by the Field Team, a revised configuration was provided for FOACC, resulting in the need for an additional full set of simulations and maps, and recalculation of Percent Alteration in Landform 4 only. The results are shown in Table 2. Only one viewpoint - Birch - exceeds the VQO limit in the final analysis for Landform .4, and that by just 0.5% which could reasonably considered to be within an allowable degree of error. in the measurement procedures. When visually effective green-up was considered by ocular assessment of the new photos by RDI, it was apparent that there appeared to be less visible amounts of nonVEG and new blocks present in the landform than predicted in the VNS projection, which should safely bring the Landform within the VQO limit from this viewpoint, all other positive attributes considered.

Table 2 - Summary of Percent Alteration Foghorn 2021, by Viewpoint

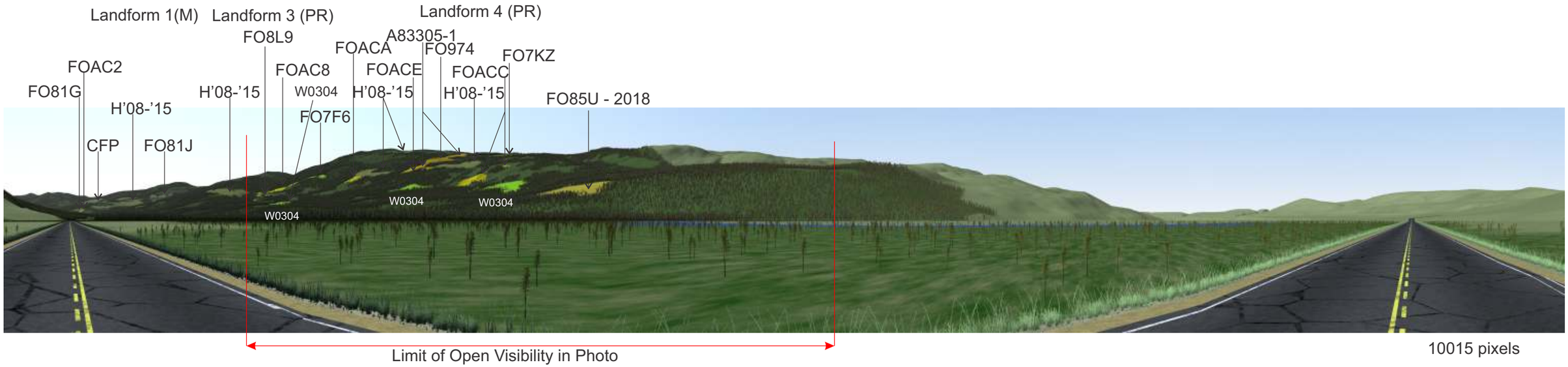
Viewpoint	Distance from L1	Landform 1	Landform 3	Distance from L4	Landform 4
Raft	11km+	19.99%	6.77%	2km+	3.77%
Miller	9km+	20.74%	5.16%	3km+	6.78%
Birch	6km+	21.10%	0.32%	4km+	7.50%
McCorvie	2km+	13.72%	0.87%	6km+	6.64%
Lloyd	Percent Alteration will be completed on request				
Sandbox	2km+	14.32%	4.08%	10km+	6.14%
	adjusted for FOACC October 27 configuration				

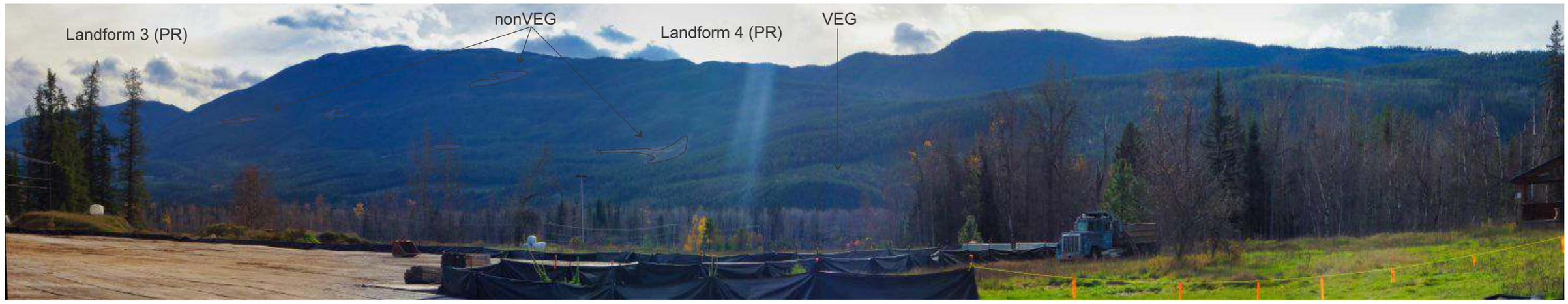
Conclusions and Recommendations

RDI finds the shapes, scale and pattern of the proposed Douglas-fir beetle blocks to be visually compatible in Landforms 1 and 4 which have high visual absorption capability (VAC) due to the existing alteration from the Woodlot W0304 openings and other older openings in relation to the proposed and already approved blocks. RDI encourages BCTS' intervention against the bark beetle while duly addressing visual concerns. New data presented to RDI for cutblock FOACC, following our initial and second reports, indicated VQO achievement in Landform 4 by shape, scale, pattern and distribution, while exceeding the percent alteration by 0.5% from a single viewpoint, which is within a 93% confidence interval around the target of 7%. Simulations and measurement of percent alteration have a number of both systematic and random effects in the VNS model, such as tree-cover image selection, VRI Stand Heights and density, see-through, and digitizing accuracy. The 5% overage could also be reasonably attributed to differences between simulations and actual conditions as revealed in the photography. An ocular assessment of the extent of visually effective green-up in Landforms 1 and 4 finds it to be more substantial than shown in the simulations, thereby bringing both landforms fairly within the limits of the VQOs, though actual percentages from photography were not calculated. In conclusion, the beetle blocks should proceed without need for adjustment for visual considerations. Overall the VQOs for each of the two landforms are considered by RDI to be well-met. Percent alteration calculations for specific landforms can be ignored when non-visually sensitive (NVS - not seen) from a viewpoint, and considered to a lesser extent when only partially visible. Winter conditions will increase visual contrasts with snow on the ground.

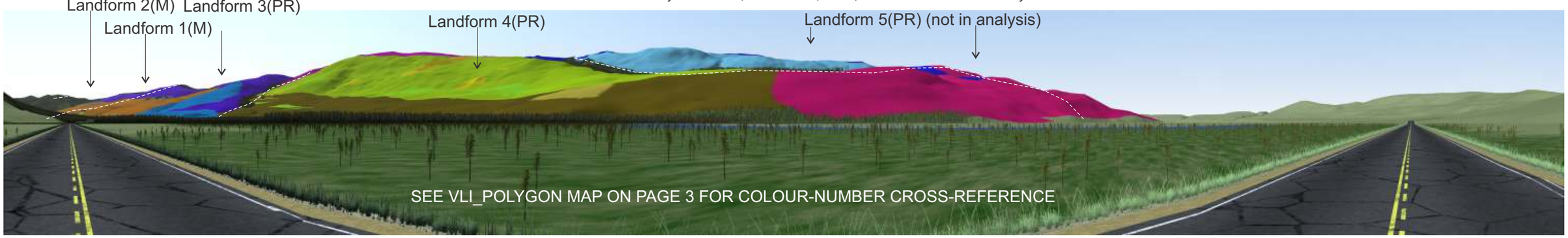


KB Fairhurst, PhD, RPF
RDI Resource Design Inc
November 9, 2021 revision





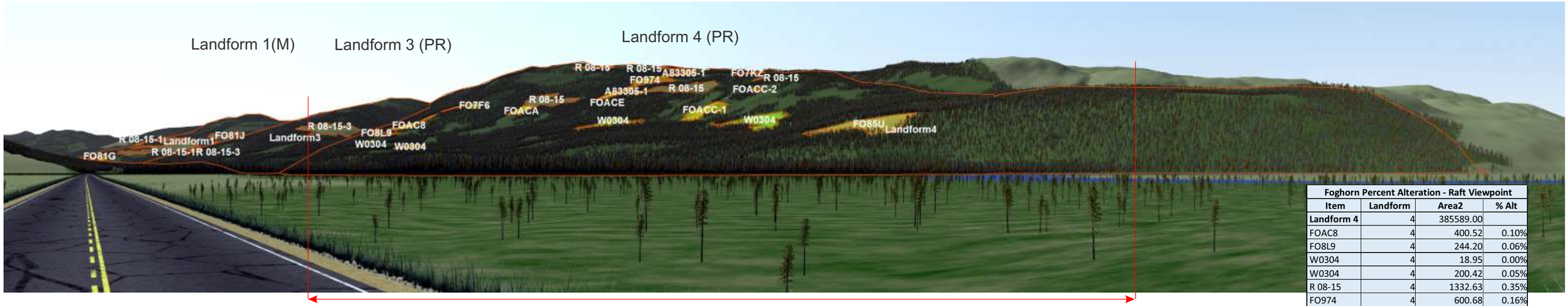
Photos by T. Luedtke, October 27, 2021, AI-Enhanced Panorama by RDI



10015

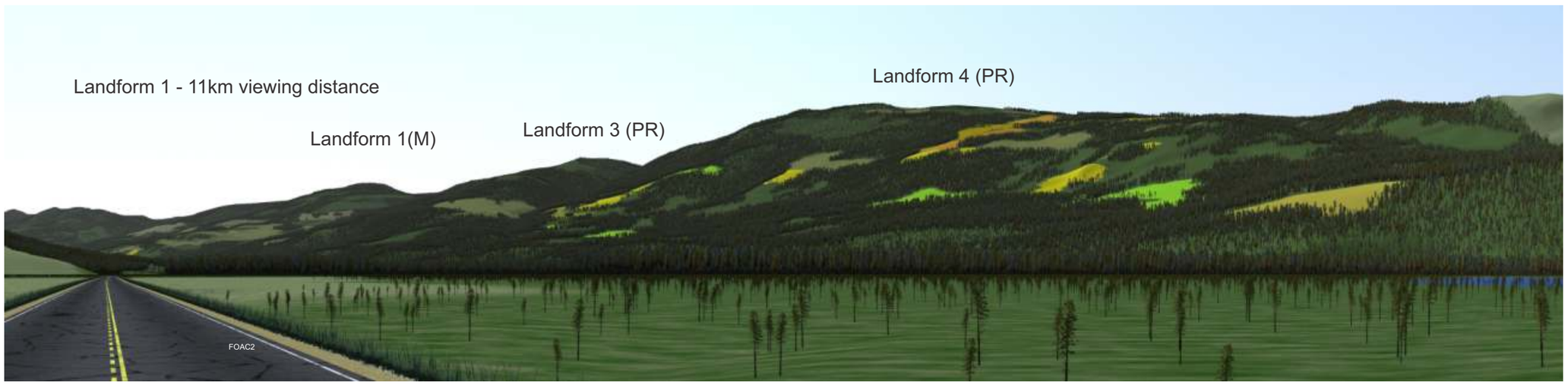
See Percent Alteration on next page.

Raft Viewpoint Photo, 2018 VNS Simulations with Visual Sensitivity Units



Limit of Open Visibility in Photo - Landform 1 not seen (NVS); Landform 3 partial, Landform 4 full (see next page)

Landform 4 from Raft Viewpoint meets Partial Retention Visual Quality Class by Shape, Pattern, Scale, Distribution and Percent Alteration of proposed, already approved, and existing nonVEG openings. Contrasts on north-facing slope will be greater with snow on ground.

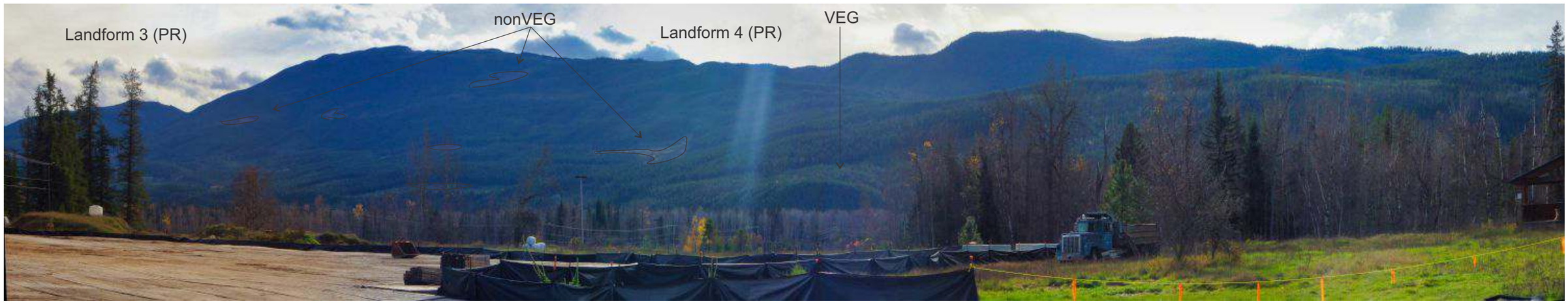


Foghorn Percent Alteration - Raft Viewpoint			
Item	**Landform**	**Area2**	**% Alt**
Landform 4	4	385589.00	
FOAC8	4	400.52	0.10%
FO8L9	4	244.20	0.06%
W0304	4	18.95	0.00%
W0304	4	200.42	0.05%
R 08-15	4	1332.63	0.35%
FO974	4	600.68	0.16%
R 08-15	4	1550.22	0.40%
FOACC-1	4	1413.94	0.37%
FOACC-2	4	80.63	0.02%
R 08-15	4	198.23	0.05%
R 08-15	4	125.38	0.03%
FO7KZ	4	138.25	0.04%
R 08-15	4	41.44	0.01%
FO85U	4	3531.85	0.92%
FOACA	4	399.56	0.10%
FOACE	4	207.41	0.05%
FOACE	4	92.73	0.02%
A83305-1	4	321.85	0.08%
A83305-1	4	236.94	0.06%
A83305-1	4	336.24	0.09%
FO7F6	4	292.54	0.08%
W0304	4	684.10	0.18%
W0304	4	1922.74	0.50%
R 08-15	4	163.61	0.04%
Sum Alt L4	4	14535.05	**3.77%**
Landform1	1	12828.60	
FOAC2	1	83.82	0.65%
FO81J	1	410.73	3.20%
FO81G	1	126.82	0.99%
R 08-15	1	1621.84	12.64%
R 08-15	1	261.12	2.04%
R 08-15	1	34.71	0.27%
R 08-15	1	25.63	0.20%
Sum Alt L1*	1	2564.67	**19.99%**
Landform3	3	28410.10	
R 08-15	3	1831.88	6.45%
R 08-15	3	91.55	0.32%
Sum Alt L1*	3	1923.43	**6.77%**

Partial Visibility Not seen from Viewpoint

Landform 4 adjusted for October 20 additions and October 27 FOACC correction

Raft Viewpoint Percent Alteration 2021

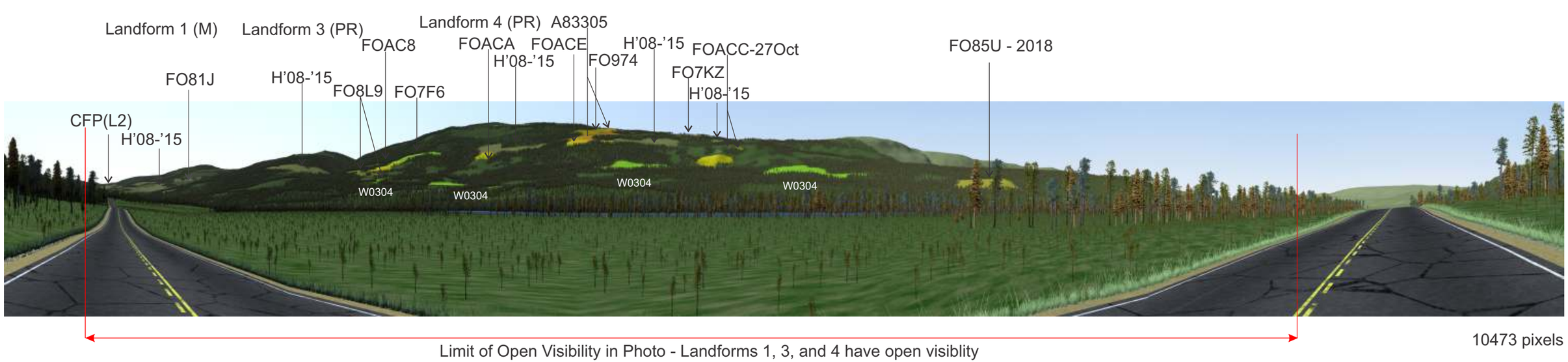


Photos by T. Luedtke, October 27, 2021, Luminar AI-Manipulated Panorama by RDI

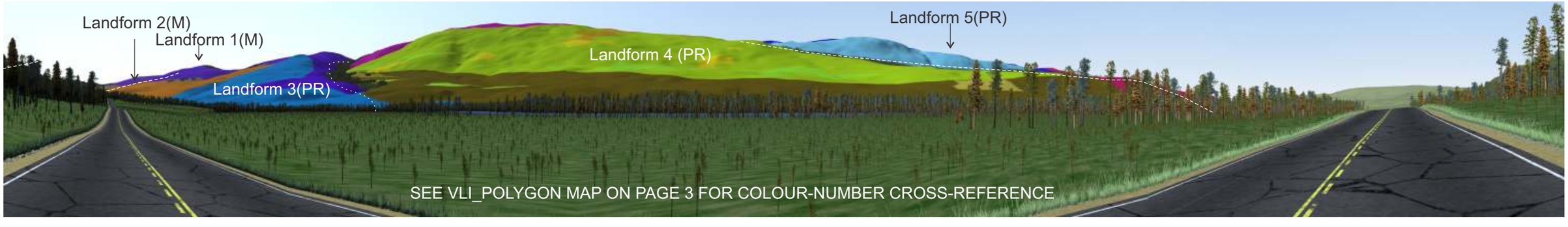
Raft Viewpoint Photo by C. Clem, October 14, 2021

photos 0040-0046

Raft Additional Photo

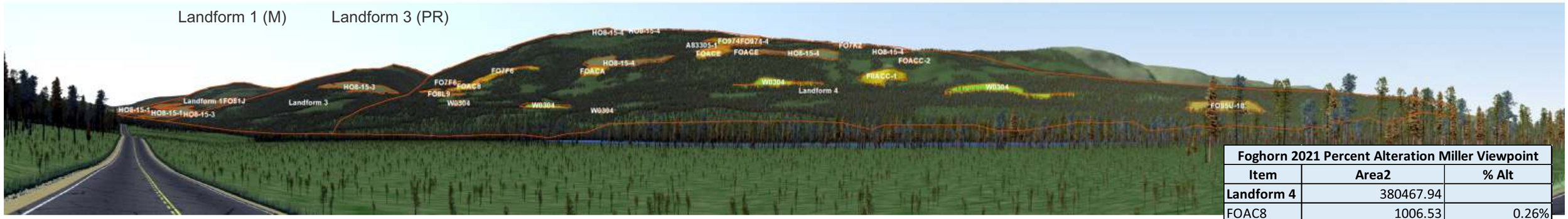


October 7, 2015 Photo



See Percent Alteration on next page.

Miller Viewpoint Photo, 2018 VNS Simulations with Visual Sensitivity Units and Photography



Landform 4 from Raft Viewpoint meets Partial Retention Visual Quality Class by Shape, Pattern, Scale, Distribution and Percent Alteration of proposed, already approved, and existing nonVEG openings. Contrasts on north-facing slope will be greater with snow on ground.

Miller Viewpoint Photo by C. Clem, October 14, 2021

photos 0049-0060

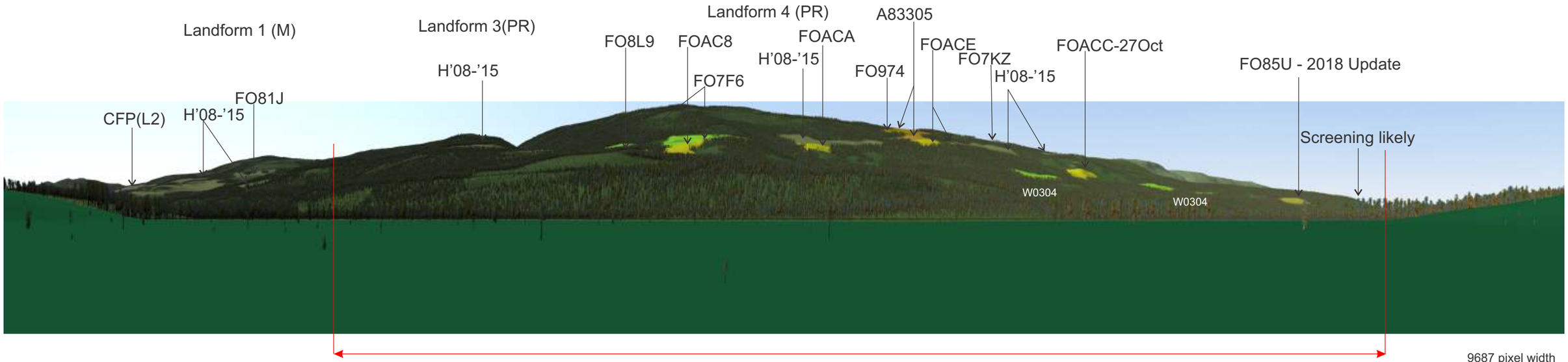
No new Miller Viewpoint Photo by T. Leudtke, October 27, 2021

Foghorn 2021 Percent Alteration Miller Viewpoint		
Item	**Area2**	**% Alt**
Landform 4	380467.94	
FOAC8	1006.53	0.26%
FOACA	802.25	0.21%
FOACE	709.85	0.19%
FOACE	175.15	0.05%
F0ACC-1	2701.15	0.71%
F0ACC-2	129.88	0.03%
FO8L9	597.04	0.16%
W0304	161.66	0.04%
FO974	1138.91	0.30%
FO974-4	930.96	0.24%
A83305-1	722.46	0.19%
FO85U-18	3955.88	1.04%
FO7KZ	142.09	0.04%
W0304	980.28	0.26%
W0304	138.78	0.04%
HO8-15-4	2500.54	0.66%
HO8-15-4	78.20	0.02%
HO8-15-4	163.44	0.04%
HO8-15-4	2712.24	0.71%
HO8-15-4	221.97	0.06%
F0756	781.37	0.21%
FO7F6	89.34	0.02%
W0304	1545.43	0.41%
W0304	3405.85	0.90%
Sum Alt L4	25791.23	**6.78%**
Landform 3	50139.84	
H08-15-3	132.90	0.27%
H08-15-3	2452.80	4.89%
Sum Alt L3	2585.70	**5.16%**
Landform 1	14290.51	
FO81J	559.19	3.91%
H08-15-1	2342.97	16.40%
H08-15-1	61.39	0.43%
Sum Alt L1	2963.55	**20.74%**

Landform 4 adjusted for October 20 additions and October 27 FOACC correction

Full Visibility - all Landforms

Miller Viewpoint Percent Alteration 2021



9687 pixel width

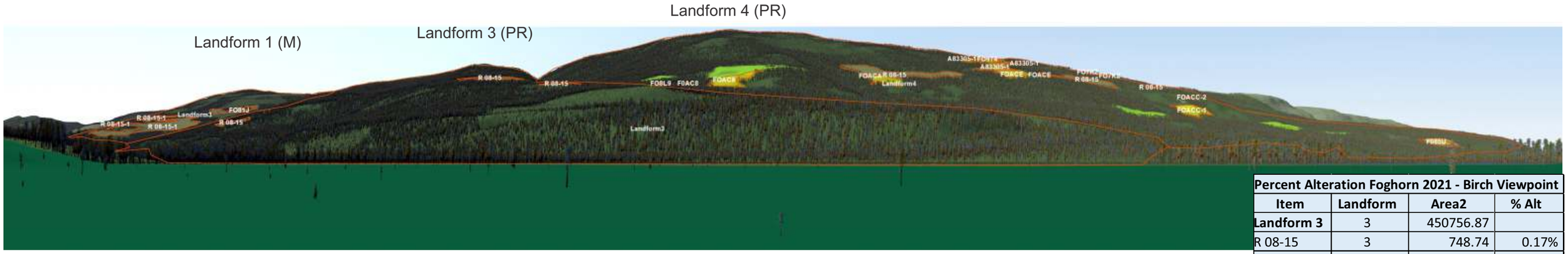
Limit of Open Visibility in Photo - Landform 1 not seen (NVS); Landforms 3 and 4 open visibility

2015 Photo

SEE VLI_POLYGON MAP ON PAGE 3 FOR COLOUR-NUMBER CROSS-REFERENCE

See Percent Alteration on next page.

Birch Viewpoint Photo, 2018 VNS Simulations with Visual Sensitivity Units



Landform 4 from Birch Viewpoint exceeds Partial Retention Visual Quality Class by 0.5% Percent Alteration
but meets PR by shape, pattern, scale, and distribution of proposed, already approved, and existing nonVEG openings.
Apparent total alteration in photo below is estimated to be less than predicted, and should easily meet PR. Landform 3 cuts off much of lower Landform 4.
Contrasts on north-facing slope will be greater with snow on ground.

Birch Viewpoint Photo by C. Clem, October 14, 2021

photos 0061-0073

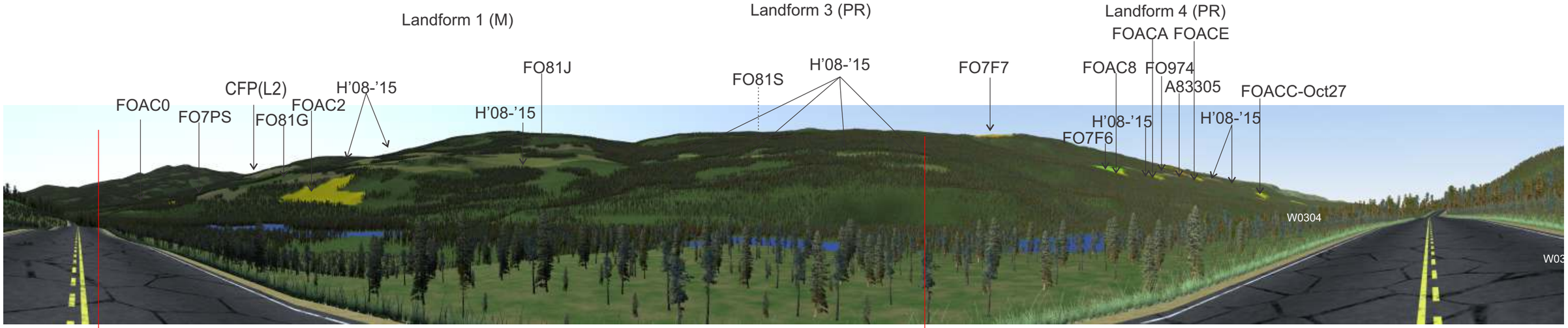
Photos by T. Luedtke, October 27, 2021, Luminar AI-Manipulated Panorama by RDI

Percent Alteration Foghorn 2021 - Birch Viewpoint			
Item	**Landform**	**Area2**	**% Alt**
Landform 3	3	450756.87	
R 08-15	3	748.74	0.17%
R 08-15	3	472.86	0.10%
R 08-15	3	200.61	0.04%
Sum Alt L3	3	1422.22	**0.32%**
Landform 4	4	293876.45	
FOAC8	4	2429.10	0.83%
F0AC8	4	48.00	0.02%
FOACA	4	1465.72	0.50%
FOACE	4	1031.85	0.35%
FOACE	4	54.82	0.02%
FOACC-1	4	1864.26	0.63%
FOACC-2	4	71.08	0.02%
F085U	4	1076.61	0.37%
FO7KZ	4	59.07	0.02%
FO8L9	4	79.72	0.03%
A83305-1	4	1341.74	0.46%
A83305-1	4	16.11	0.01%
A83305-1	4	207.12	0.07%
FO974	4	804.83	0.27%
R 08-15	4	4037.75	1.37%
R 08-15	4	1716.23	0.58%
R 08-15	4	176.56	0.06%
FO7F6	4	350.96	0.12%
FO7F6	4	3389.76	1.15%
W0304	4	920.98	0.31%
W0304	4	736.59	0.25%
W0304	4	153.03	0.05%
Sum Alt L4	4	22031.89	**7.50%**
Landform 1	1	31553.01	
FO81J	1	1117.09	3.54%
R 08-15	1	4860.50	15.40%
R 08-15	1	592.60	1.88%
R 08-15	1	88.90	0.28%
Sum Alt	1	6659.09	**21.10%**

Not seen from Viewpoint

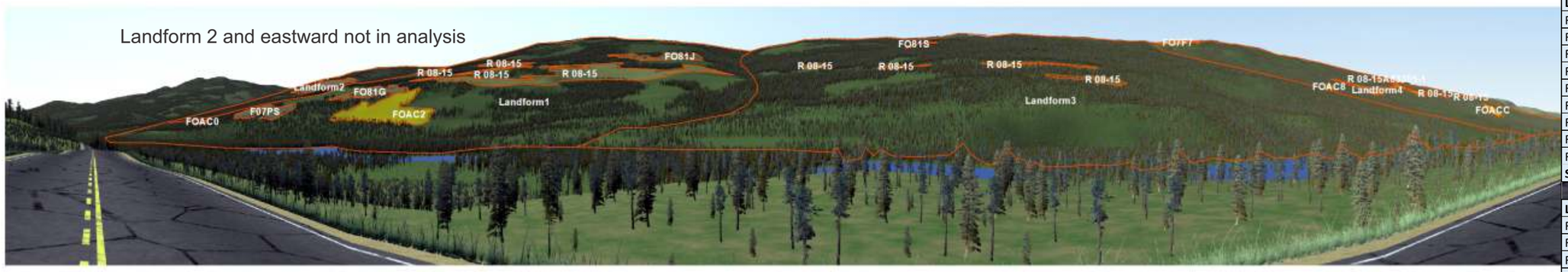
Landform 4 adjusted for October 20 additions and October 27 FOACC correction

Birch Viewpoint 2021 Percent Alteration



pixels 10276

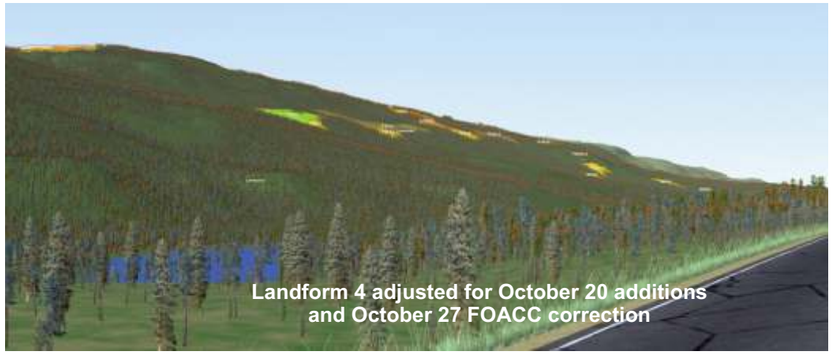
Limit of Open Visibility in Photo – see next page - Landform 1 open visibility, Landform 3 (PR) mainly screened in photos; Landform 4 not seen in photos

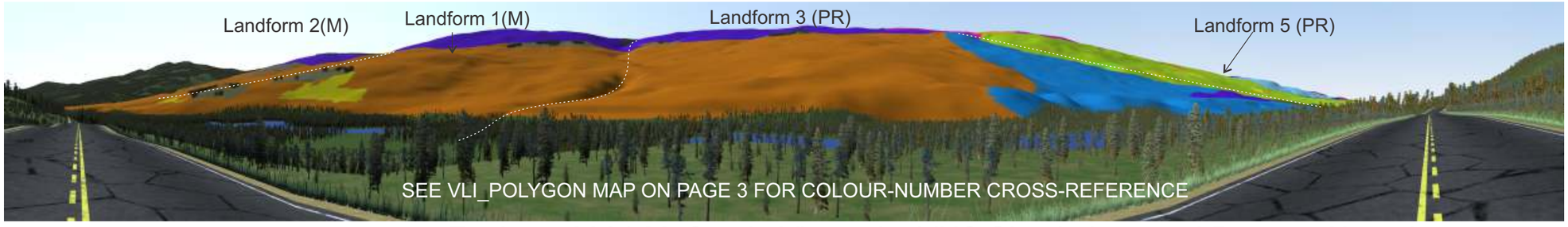


Landform 1 from McCorvie Viewpoint meets Modification at 13.72%, meeting M by shape, pattern, scale, and distribution of proposed, already approved, and existing nonVEG openings.

Calculated Percent Alteration for Landform 4 of 6.64% meets Partial Retention but should be ignored as photos show the landform is fully screened. Apparent total alteration in photos on next page is estimated to be less than predicted.

Contrasts on north-facing slope will be greater with snow on ground.





Foghorn 2021 VIA - Percent Alteration McCorvie Viewpoint			
Item	**Landform**	**Area2**	**% Alt**
Landform 1	1	298369.26	
FOAC0	1	158.35	0.05%
FOAC2	1	12152.95	4.07%
FO81G	1	3153.35	1.06%
F07PS	1	3471.25	1.16%
FO81J	1	2496.97	0.84%
R 08-15	1	16922.43	5.67%
R 08-15	1	781.93	0.26%
R 08-15	1	953.10	0.32%
R 08-15	1	852.60	0.29%
Sum Alt L1	1	40942.94	**13.72%**
Landform 3	3	522878.31	
FO81S	3	174.68	0.03%
R 08-15	3	540.07	0.10%
R 08-15	3	538.28	0.10%
R 08-15	3	1450.23	0.28%
R 08-15	3	1870.25	0.36%
Sum Alt L3	3	4573.51	**0.87%**
Landform 4	4	69132.73	
FOACA	4	327.04	0.47%
FOACE	4	236.47	0.34%
FOACC-1	4	346.38	0.50%
FOACC-2	4	13.20	0.02%
FO7F7	4	633.25	0.92%
FOAC8	4	178.33	0.26%
A83305-1	4	360.84	0.52%
FO974	4	175.37	0.25%
R 08-15	4	277.89	0.40%
R 08-15	4	63.28	0.09%
R 08-15	4	936.55	1.35%
FO7F6	4	871.09	1.26%
W0304	4	43.71	0.06%
W0304	4	115.37	0.17%
W0304	4	13.55	0.02%
Sum Alt L4	4	4592.32	**6.64%**
Landform 2		15970.88	
CFP	2	2102.38	13.16%
Sum Alt L2		2102.38	13.16%

L3 Partly Screened

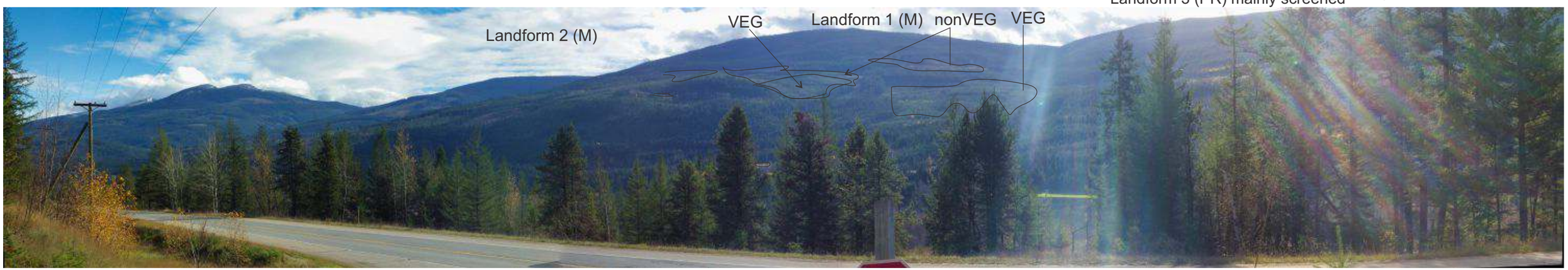
L4 Not seen from Viewpoint

Landform 4 adjusted for October 20 additions and October 27 FOACC correction

Foghorn 2021 McCorvie Viewpoint VNS Simulations and Percent Alteration

McCorvie Viewpoint Photos by C. Clem, October 14, 2021, Panorama by RDI

photos 0087-0098



Photos by T. Luedtke, October 27, 2021, Panorama by RDI

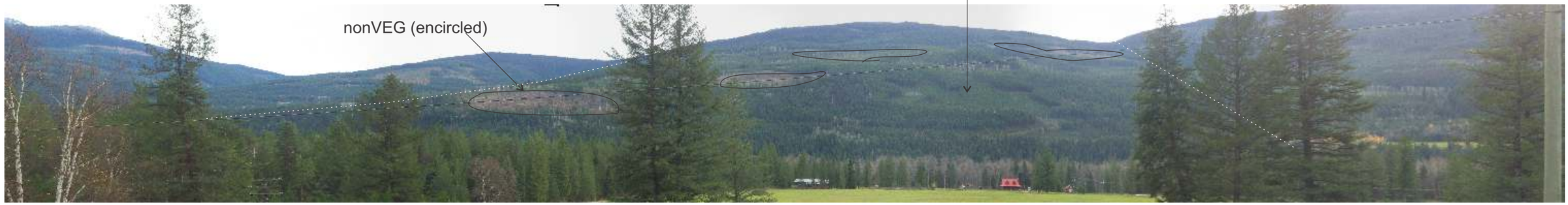
Landform 2 (M) and eastward not in analysis

Landform 1 (M)

Landform 3 (PR)

Visually Effective Green-up (VEG)

nonVEG (encircled)



Photos by T. Luedtke, October 27, 2021, Panorama by RDI

Landform 1 open visibility; Landform 3 (PR) mainly screened in photos; Landform 4 not seen in photos

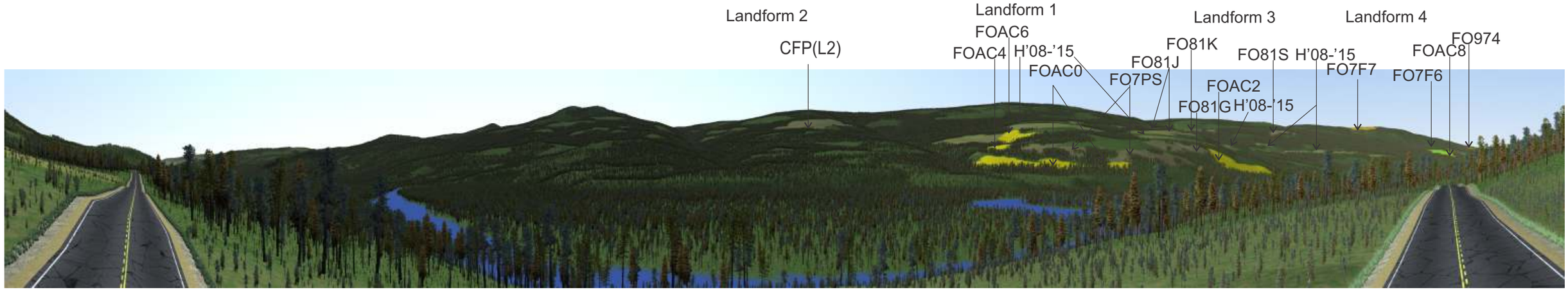
Lloyd 139-144

Google Maps Image, November 4, 2021.
Lloyd Road meets Highway 5 at both ends.
Viewpoint locatation requested.

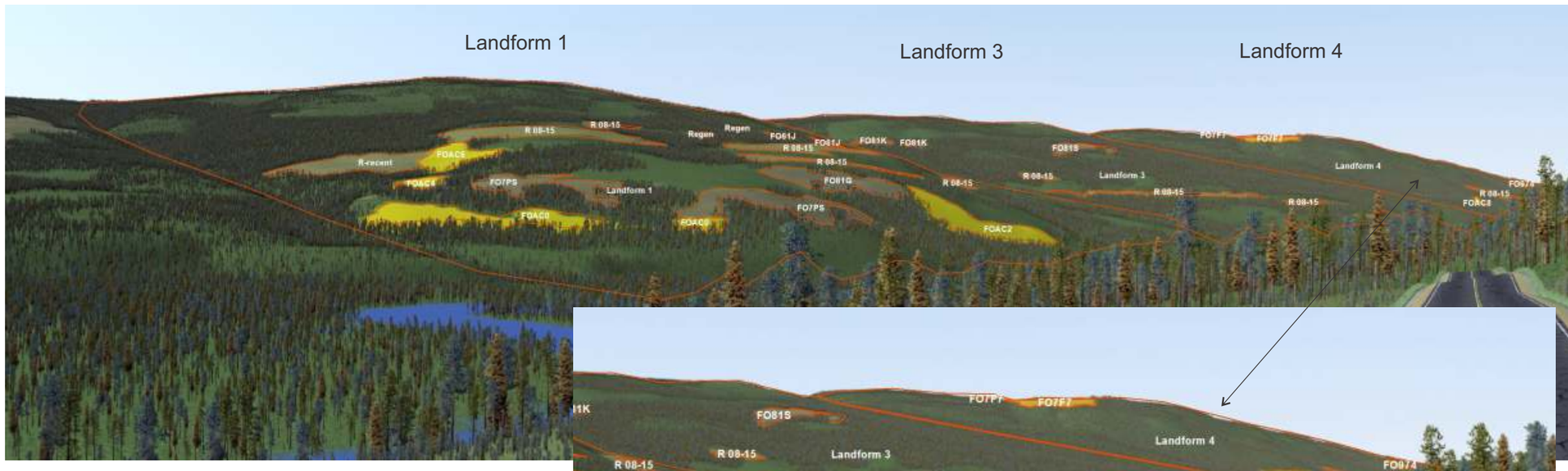
Landform 1 from Lloyd Viewpoint easily meets Modification by shape, pattern, scale, and distribution of proposed, already approved, and existing nonVEG openings. Percent Alteration not calculated for this added viewpoint. Substantial visually effective green-up noticeable.

Contrasts on north-facing slope will be greater with snow on ground.

Lloyd Viewpoint Photos



pixels 10276



Landform 1 from Sandbox Viewpoint meets Modification by shape, pattern, scale, distribution of proposed, already approved, and existing nonVEG openings, and by Percent Alteration (14.32%).

Landform 4 in distant view meets Partial Retention (6.14%) with no new contribution from the beetle blocks (NVS).

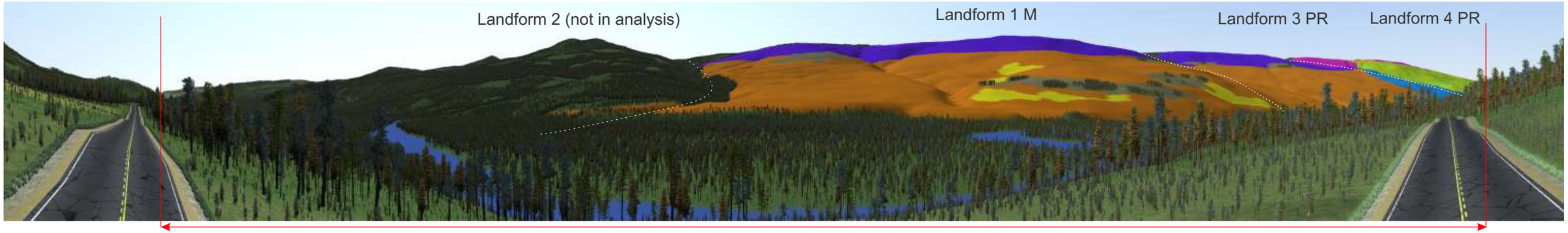
Contrasts on north-facing slope will be greater with snow on ground.

Landform 4 adjusted for October 20 additions

Foghorn 2021 Percent Alteration - Sandbox Viewpoint			
Item	**Landform**	**Area2**	**% Alt**
Landform 1	1	234040.85	
FOAC0	1	5363.83	2.29%
FOAC0	1	821.97	0.35%
FOAC4	1	597.39	0.26%
FOAC6	1	2017.20	0.86%
FOAC2	1	3742.74	1.60%
FO7PS	1	3090.47	1.32%
FO7PS	1	4658.45	1.99%
FO81G	1	3239.63	1.38%
FO81J	1	107.29	0.05%
FO81J	1	63.55	0.03%
R-recent	1	3689.00	1.58%
R 08-15	1	3203.90	1.37%
R 08-15	1	188.57	0.08%
R 08-15	1	341.42	0.15%
Regen	1	113.44	0.05%
R 08-15	1	1402.15	0.60%
Regen	1	37.94	0.02%
R 08-15	1	829.06	0.35%
Sum Alt L1	1	33508.01	**14.32%**
Landform 3	3	60899.23	
FO81K	3	188.97	0.31%
FO81K	3	142.34	0.23%
FO81S	3	591.04	0.97%
R 08-15	3	201.59	0.33%
R 08-15	3	1142.32	1.88%
R 08-15	3	219.82	0.36%
Sum Alt L3	3	2486.09	**4.08%**
Landform 4	4	25229.95	
FO7F7	4	511.78	2.03%
FOAC8	4	89.66	0.36%
FO974	4	98.82	0.39%
R 08-15	4	232.52	0.92%
FO7F7	4	11.08	0.04%
FO7F6	4	606.29	2.40%
Sum Alt L4	4	1550.16	**6.14%**

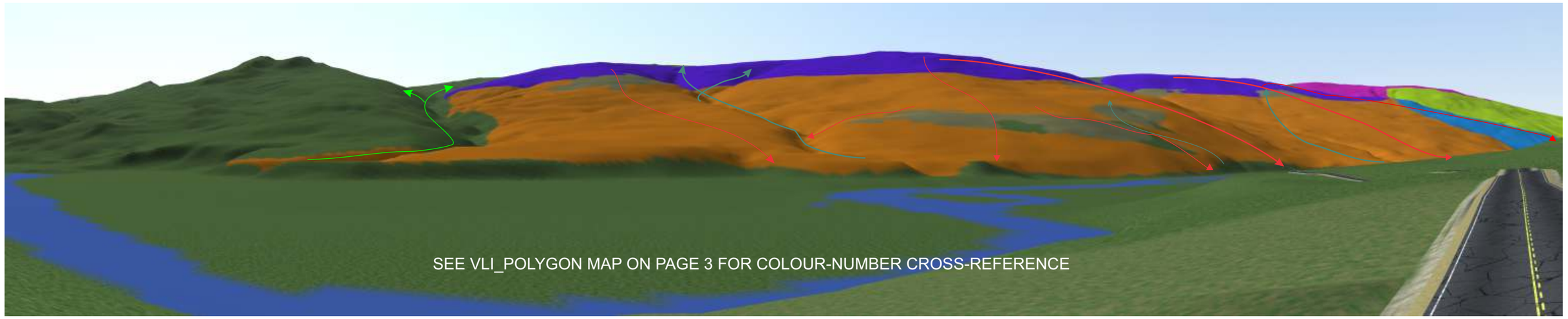
Landform 4 adjusted for October 20 additions
October 27 FOACC correction not applicable

Partial Visibility all Landforms



Limit of Open Visibility in Photo includes Landforms 1, 3, and 4

Sandbox Viewpoint Photo by T. Luedtke, October 27, 2021



Visual Force Convexity

Visual Force Concavity

Sandbox Viewpoint Visual Sensitivity Units, Landforms, and Lines of Force

Sandbox Viewpoint Photo by T. Luedtke, October 27, 2021

Sandbox Viewpoint Photo by C. Clem, October 14, 2021

photos 0074-0086