

Appendix I

Visual Quality and Aesthetics Supplemental Technical Memorandum (2020) and Addendum (2021)

CEDAR HILLS REGIONAL LANDFILL 2020 SITE DEVELOPMENT PLAN

Draft Environmental Impact Statement

APPENDIX I

Visual Quality and Aesthetics Supplemental Technical Memorandum



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CEDAR HILLS REGIONAL LANDFILL 2020 SITE DEVELOPMENT PLAN

Draft Environmental Impact Statement

Visual Quality and Aesthetics Supplemental Technical Memorandum

Prepared for

King County Solid Waste Division

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Acronyms and Abbreviations

BEW	Bio Energy-Washington Landfill Gas Processing Facility
BMP	Best Management Practice
CHRLF	Cedar Hills Regional Landfill
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
HHW	Household Waste
KCSWD	King County Solid Waste Division
LEP	Leachate Effluent Pump Station
MRE	Mechanically Reinforced Earth
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SVRA	Supplemental Visual Resource Assessment
VP	Viewpoint
VRA	Visual Resource Assessment
WAC	Washington Administrative Code

1 Introduction and Summary

1.1 Introduction

Preparation of a Scenic Resources, Aesthetics, Light and Glare Technical Memorandum (Visual Resource Assessment (VRA)) for the Site Development Alternatives for Cedar Hills Regional Landfill was originally completed in June 2017. Since its completion, revised alternatives and additional project improvements/refinements have been developed for the Cedar Hills Regional Landfill 2020 Site Development Plan. The revised project alternatives and these additional improvements are discussed in detail in the following sections.

The purpose of the original VRA was to: 1) describe the appearance of the possible visible components of potential project alternatives, 2) define the visual character of the project study area, 3) inventory and evaluate existing visual resources and viewer groups, 4) evaluate potential project visibility within the study area, 5) identify key views for visual assessment, and 6) assess the visual impacts associated with the potential alternatives. The purpose of the Supplemental VRA (SVRA) Technical Memorandum is to provide supplemental analysis of project visibility, appearance, and visual impact of the revised proposed project action alternatives. The SVRA is a supplement to the original VRA and only addresses project changes and information not presented in the original VRA. **It does not reiterate information and findings from the original VRA that remain accurate and unchanged.** This SVRA is consistent with the policies, procedures, and guidelines contained in established visual impact assessment methodologies and described in the VRA.

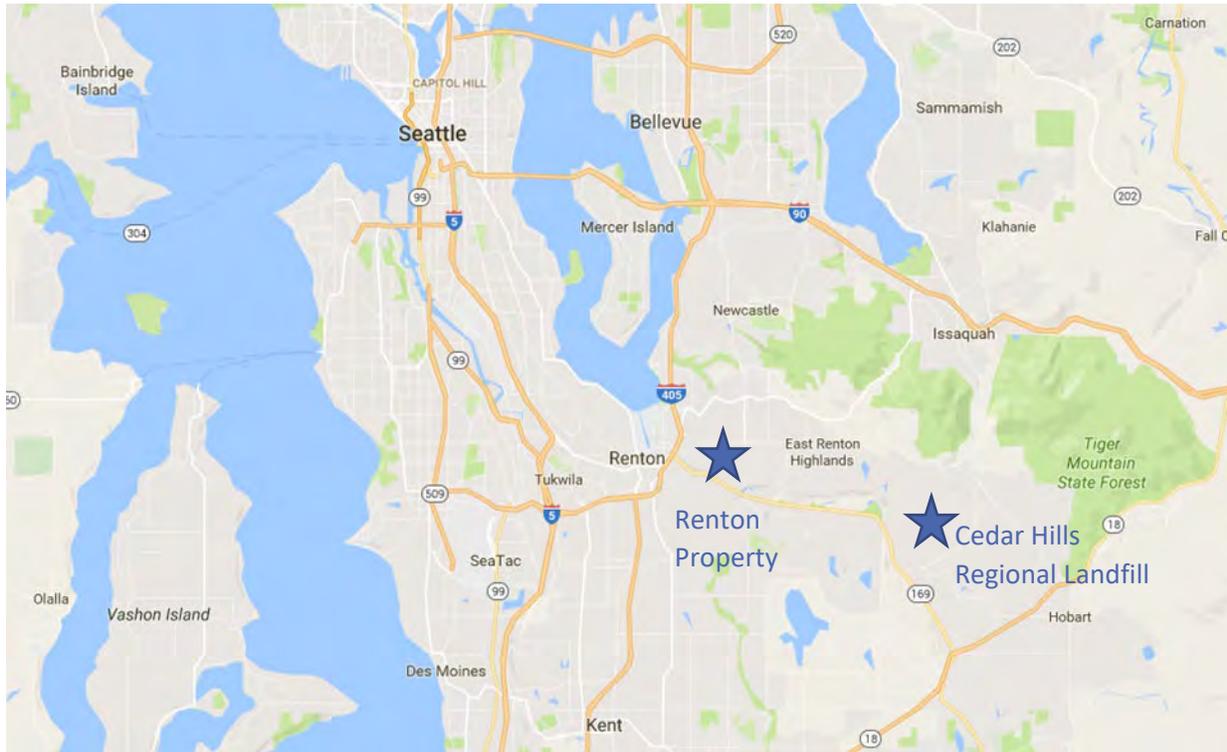
1.2 The Project Sites

The King County Solid Waste Division (KCSWD) owns and operates the Cedar Hills Regional Landfill (CHRLF) in eastern King County for the disposal of municipal solid waste generated in the County, exclusive of the cities of Seattle and Milton. It is a 920-acre site located at 16645 228th Avenue SE, off Cedar Grove Road, three miles north of Maple Valley, six miles east of the City of Renton, and about four miles south of the City of Issaquah. This site is the subject of proposed landfill development and facilities relocation options. (See Section 1.4.)

The Renton site located at 3004 NE 4th Street in Renton, is in the King County Roads complex and is northwest of the existing Renton Transfer Station. This 8-acre undeveloped property is owned by King County. In addition, 0.76 acres along the east side of the site must be acquired from the King County Roads Department. Access to the site is from Jefferson Avenue NE on the east side; the same road currently used to access the transfer station. This site is the subject of proposed facilities relocation options only. (See Section 1.4.) See Figure 1.

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Figure 1. Vicinity Map



1.3 Current Operations

Beginning in 1963, incremental development phases partitioned the landfill into multiple refuse areas with ancillary support facilities. Past and current waste disposal areas and the landfill support facilities, including maintenance and administration buildings, stormwater ponds, leachate collection lagoons, siltation ponds, and the BEW landfill gas-to-energy facility are shown in Figure 2. Also depicted are a flare station for landfill gas located at the northern end of the solid waste disposal areas and a vegetated 1,000-foot-wide perimeter buffer that separates the landfill activities from surrounding properties. This buffer consists primarily of a mixed conifer and deciduous forest. The density of the vegetation varies, with the greatest density in the buffer along the northern and western property lines.

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Figure 2. Waste Disposal Areas, Buffer, Easements, and Other Facilities



1.4 The Proposed Project - Overview of Action Alternatives

During 2018 and 2019, King County identified and evaluated several alternatives to expand the capacity at the CHRLF. In addition to the No Action Alternative described in the VRA, there are three new action alternatives to expand landfill capacity. Each of these action alternatives also include three options concerning landfill support facilities relocation. Descriptions of these action alternatives and options are summarized below:

1.4.1 Action Alternative 1

In Action Alternative 1 there would be no additional landfilling in the Main Hill, Southeast Pit, Central Pit, and Areas 2/3 and 4. Landfilling would occur in Areas 5, 6, 7, 8, and a new Area 9. See Table 1 and Figure 3.

Table 1. Action Alternative 1

AREA	APPROXIMATE FILL HIGH POINT (2020)	ELEVATION EVALUATED IN 2010 FEIS AND PER EXISTING PERMITS	PROPOSED ELEVATION UNDER THIS ACTION ALTERNATIVE
Areas 2/3	768'	No additional landfilling	No additional landfilling
Area 4	766'	No additional landfilling	No additional landfilling
Main Hill	771'	No additional landfilling	No additional landfilling
Southeast Pit	627'	No additional landfilling	No additional landfilling
Central Pit	756' ¹	No additional landfilling	No additional landfilling
Area 5	768'	800' ²	Up to 788'
Area 6	758' ³	800' ⁴	Up to 788'
Area 7	797' ⁵	800' ⁶	Up to 788'
Area 8	594'	800'	Up to 800'
Area 9			Up to 800'
Land Use Permits	Pursue a Special Use Permit to place the new facilities within the existing northern or southern buffer zone. This permit is only needed if an on-site facilities relocation option is chosen.		

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¹ This elevation does not include the 40-foot temporary soil stockpile that is currently evident.

² Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

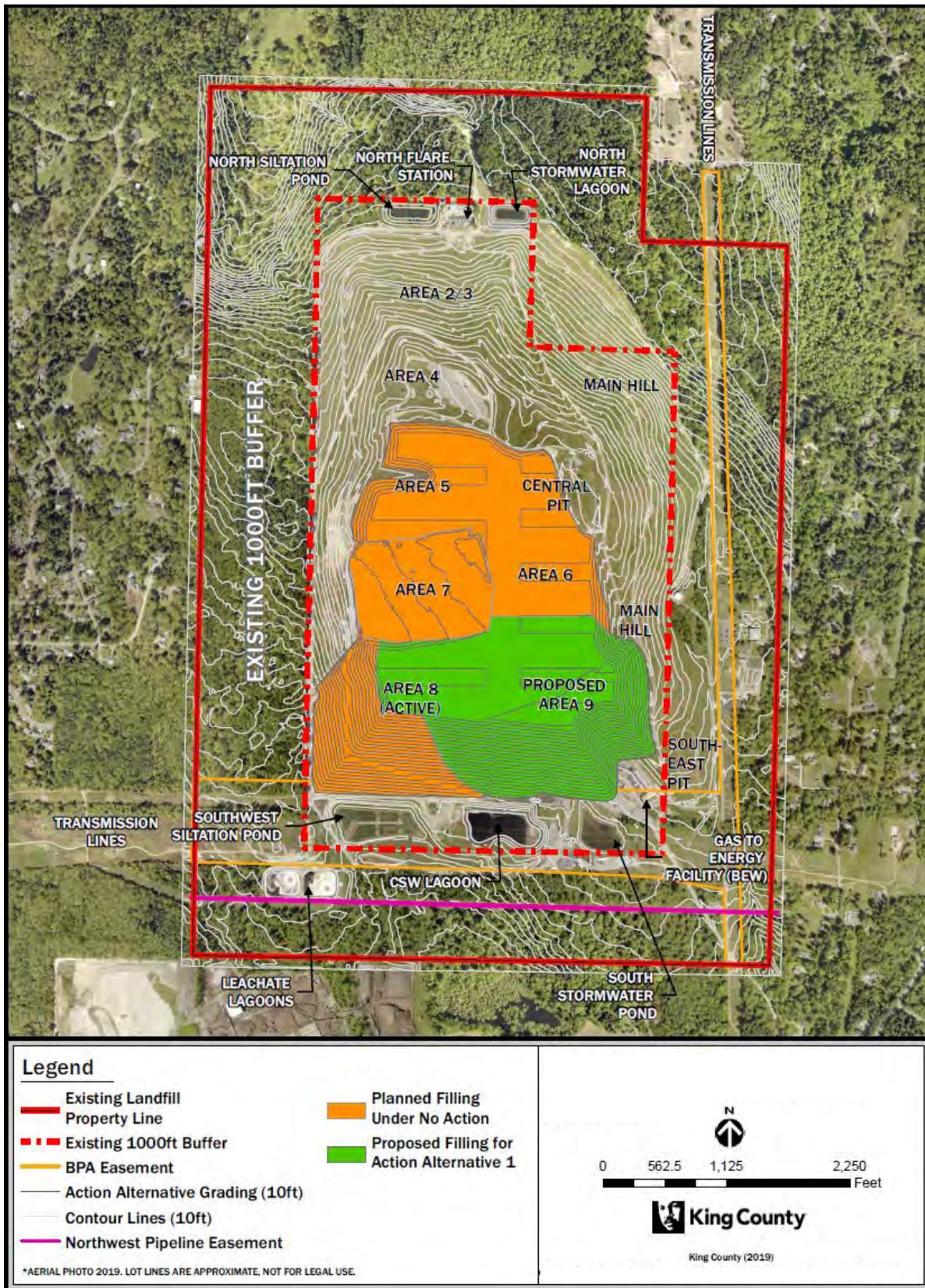
³ This elevation does not include the 40-foot temporary soil stockpile that is currently evident.

⁴ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

⁵ Area 7 was overfilled and through settlement is expected to have a final elevation below 788'.

⁶ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

Figure 3. Action Alternative 1 Landfill Development



1.4.2 Action Alternative 2

In Action Alternative 2, there would be no additional landfilling in the Main Hill and Southeast Pit areas. Landfilling would occur in areas or portions of Areas 2/3, 4, Central Pit, 5, 6, 7, 8, and a new Area 9. See Table 2 and Figure 4.

Table 2. Action Alternative 2

AREA	APPROXIMATE HIGH POINT (2020)	ELEVATION EVALUATED IN 2010 FEIS AND PER EXISTING PERMITS	PROPOSED ELEVATION UNDER THIS ACTION ALTERNATIVE
Areas 2/3	768'	No additional landfilling	Landfilling in southern portion up to 788'
Area 4	766'	No additional landfilling	Landfilling in southern portion up to 788'
Main Hill	771'	No additional landfilling	Landfilling in southern portion up to 788'
Southeast Pit	627'	No additional landfilling	No additional landfilling
Central Pit	756' ⁷	No additional landfilling	No additional landfilling
Area 5	768'	800' ⁸	Up to 788'
Area 6	758' ⁹	800' ¹⁰	Up to 788'
Area 7	797' ¹¹	800' ¹²	Up to 788'
Area 8	594'	800'	No more than 830'
Area 9			No more than 830'
Land Use Permits	Pursue a Special Use Permit to place the new facilities within the existing northern or southern buffer zone. This permit is only needed if an on-site facilities relocation option is chosen.		

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⁷ This elevation does not include the 40-foot temporary soil stockpile that is currently evident.

⁸ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

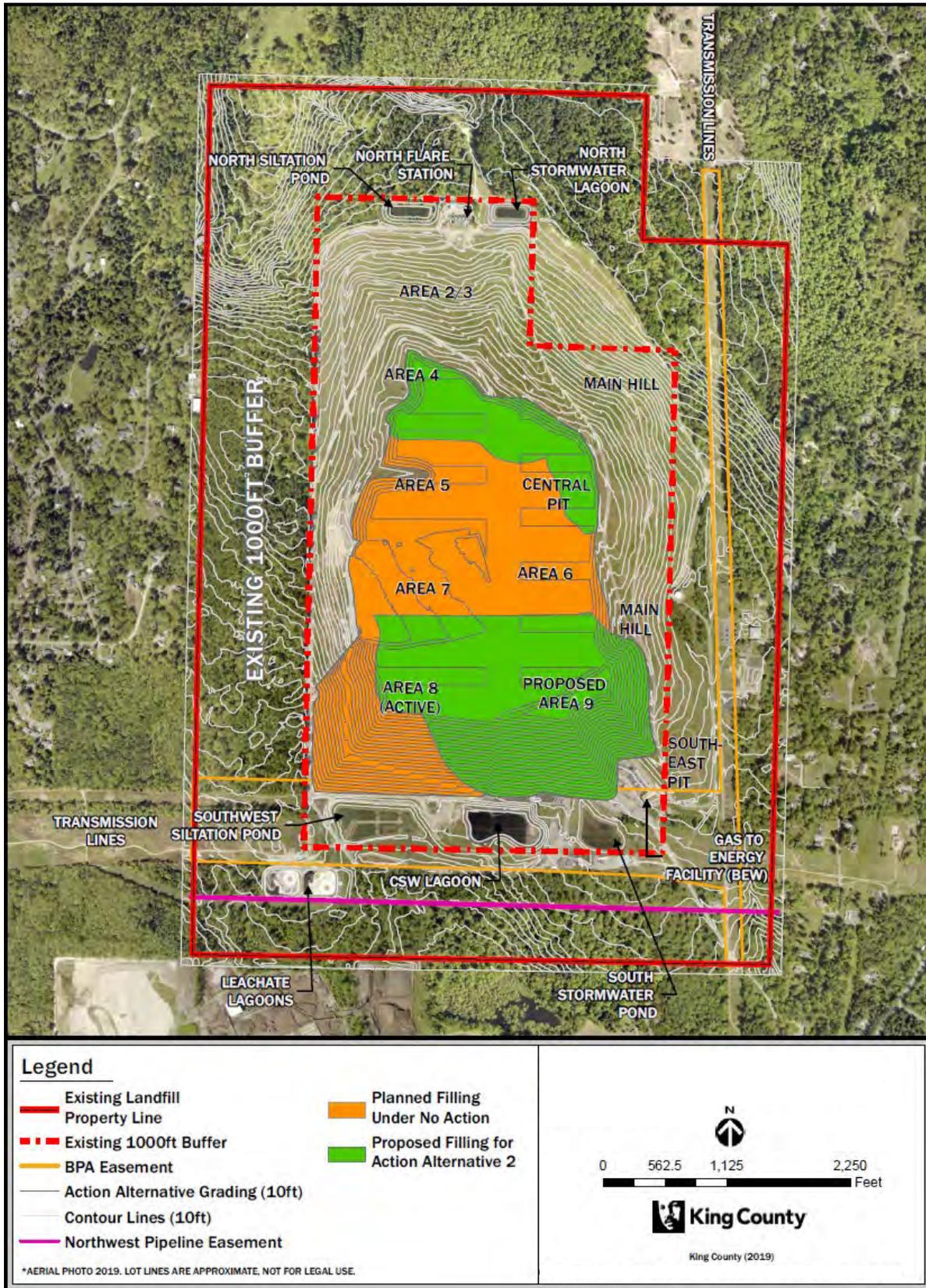
⁹ This elevation does not include the 40-foot temporary soil stockpile that is currently evident.

¹⁰ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

¹¹ Area 7 was overfilled and through settlement is expected to have a final elevation below 788'.

¹² Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

Figure 4. Action Alternative 2 Landfill Development



1.4.3 Action Alternative 3

In Action Alternative 3, there would be no additional landfilling in the Southeast Pit area. Landfilling would occur in areas or portions of Areas 2/3, 4, Main Hill, Central Pit, 5, 6, 7, 8, and a new Area 9. See Table 3 and Figure 5.

Table 3. Action Alternative 3

AREA	APPROXIMATE HIGH POINT (2020)	ELEVATION EVALUATED IN 2010 FEIS AND PER EXISTING PERMITS	PROPOSED ELEVATION UNDER THIS ACTION ALTERNATIVE
Areas 2/3	768'	No additional landfilling	Landfilling in northwest portion to no more than 830'
Area 4	766'	No additional landfilling	Landfilling in northwest portion to no more than 830'
Main Hill	771'	No additional landfilling	Landfilling in northeast portion to no more than 830'
Southeast Pit	627'	No additional landfilling	No additional landfilling
Central Pit	756' ¹³	No additional landfilling	Landfilling in northeast portion to no more than 830'
Area 5	768'	800' ¹⁴	Up to 788'
Area 6	758' ¹⁵	800' ¹⁶	Up to 788'
Area 7	797' ¹⁷	800' ¹⁸	Up to 788'
Area 8	594'	800'	No more than 830'
Area 9			No more than 830'
Land Use Permits	Pursue a Special Use Permit to place the new facilities within the existing northern or southern buffer zone. This permit is only needed if an on-site facilities relocation option is chosen.		
Site Boundary Revision	Incorporation of King County owned property at the northeast corner into the site, thus revising the site boundary and maintaining 1,000-foot buffer from the revised site boundary.		

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¹³ This elevation does not include the 40-foot temporary soil stockpile that is currently evident.

¹⁴ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

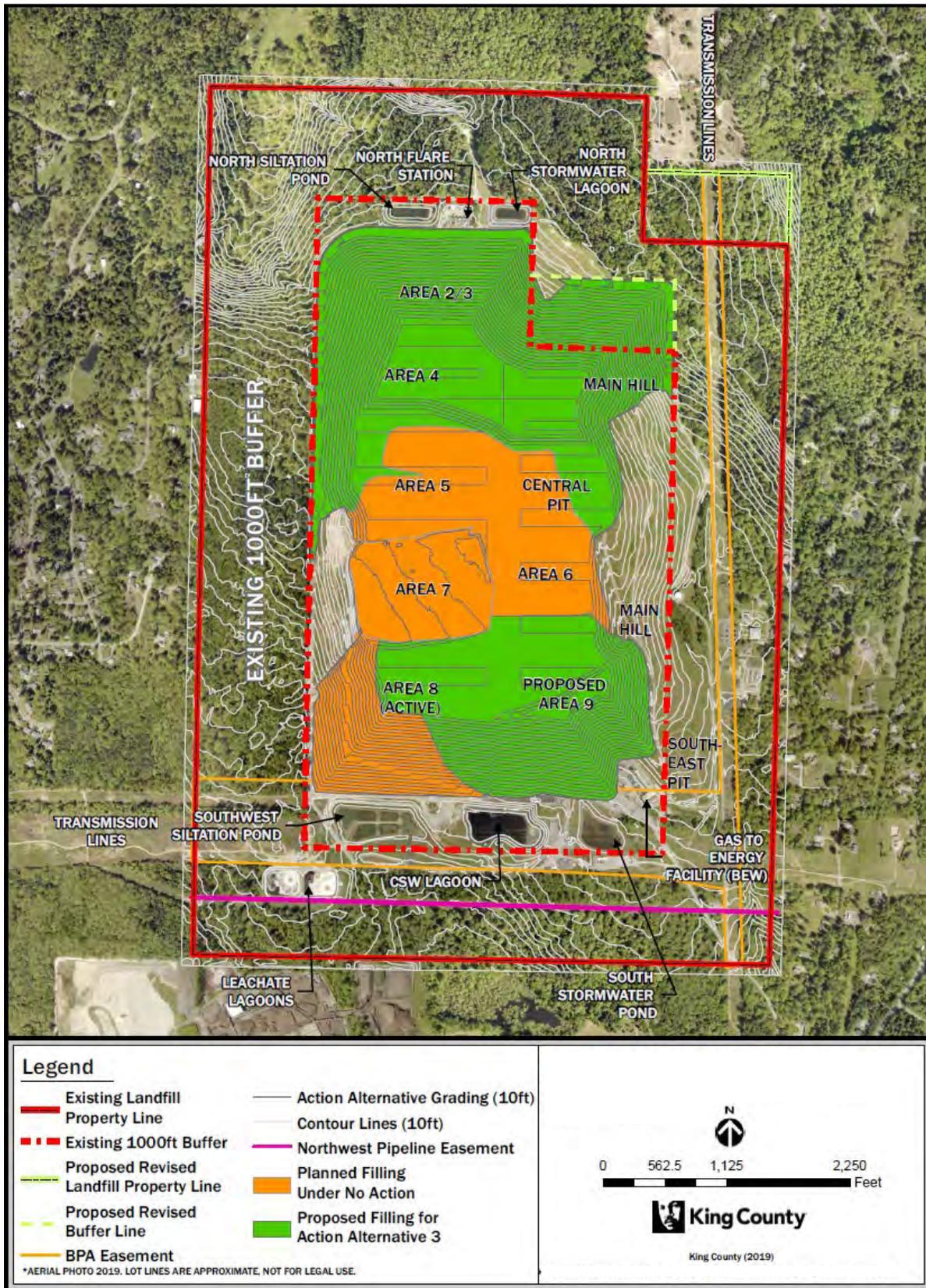
¹⁵ This elevation does not include the 40-foot temporary soil stockpile that is currently evident.

¹⁶ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

¹⁷ Area 7 was overfilled and through settlement is expected to have a final elevation below 788'.

¹⁸ Heights of 780'-800' to accommodate soil surcharging and storage were evaluated in the FEIS.

Figure 5. Action Alternative 3 Landfill Development



1.4.4 Options – Landfill Support Facilities Relocation and Buffer Use
Options 1-3 are common to each of the three action alternatives.

<i>Landfill Support Facilities Relocation</i>	
Option 1	a. If a Special Use Permit is approved, then relocate and build main landfill support facilities in the south (including, but not limited to the scale/scalehouse, truck wash, heavy equipment maintenance facility (cat shack), some tractor and trailer parking, the truck maintenance building, employee parking, office space, and laboratory space)
Option 2	a. If a Special Use Permit is approved, then relocate and build main landfill support facilities in the north (including, but not limited to the truck maintenance building, parking, office space, and laboratory space)
	b. Relocate and build some landfill support facilities in the south, but not within the buffer, including, but not limited to the scale/scalehouse, truck wash, cat shack and some tractor and trailer parking
Option 3	a. Relocate and build landfill support facilities at an off-site location at 3005 NE 4th Street in Renton, adjacent to King County’s Renton Transfer Station. The facilities to be relocated include a portion of the vehicle maintenance shop (for repairing tractors, trailers, operations vehicles, and passenger vehicles), employee offices, and parking for employees, tractors, trailers, and operations vehicles.
	b. Relocate and build some landfill support facilities in the north or south (except the scale/scalehouse, truck wash, cat shack and some tractor and trailer parking relocated in the south), none of which will be located in the buffer.

Option 1a identifies buffer uses in the south to provide space for relocating and constructing landfill support facilities. The proposed site plan is shown in Figure 6.

Option 2a identifies buffer uses in the north to provide space for relocating and constructing landfill support facilities. The proposed site plan is shown in Figure 7.

Options 3a proposes locating landfill support facilities at a site in Renton. The proposed site plan is shown in Figure 8.

Figure 6. South Landfill Support Facilities Site Plan

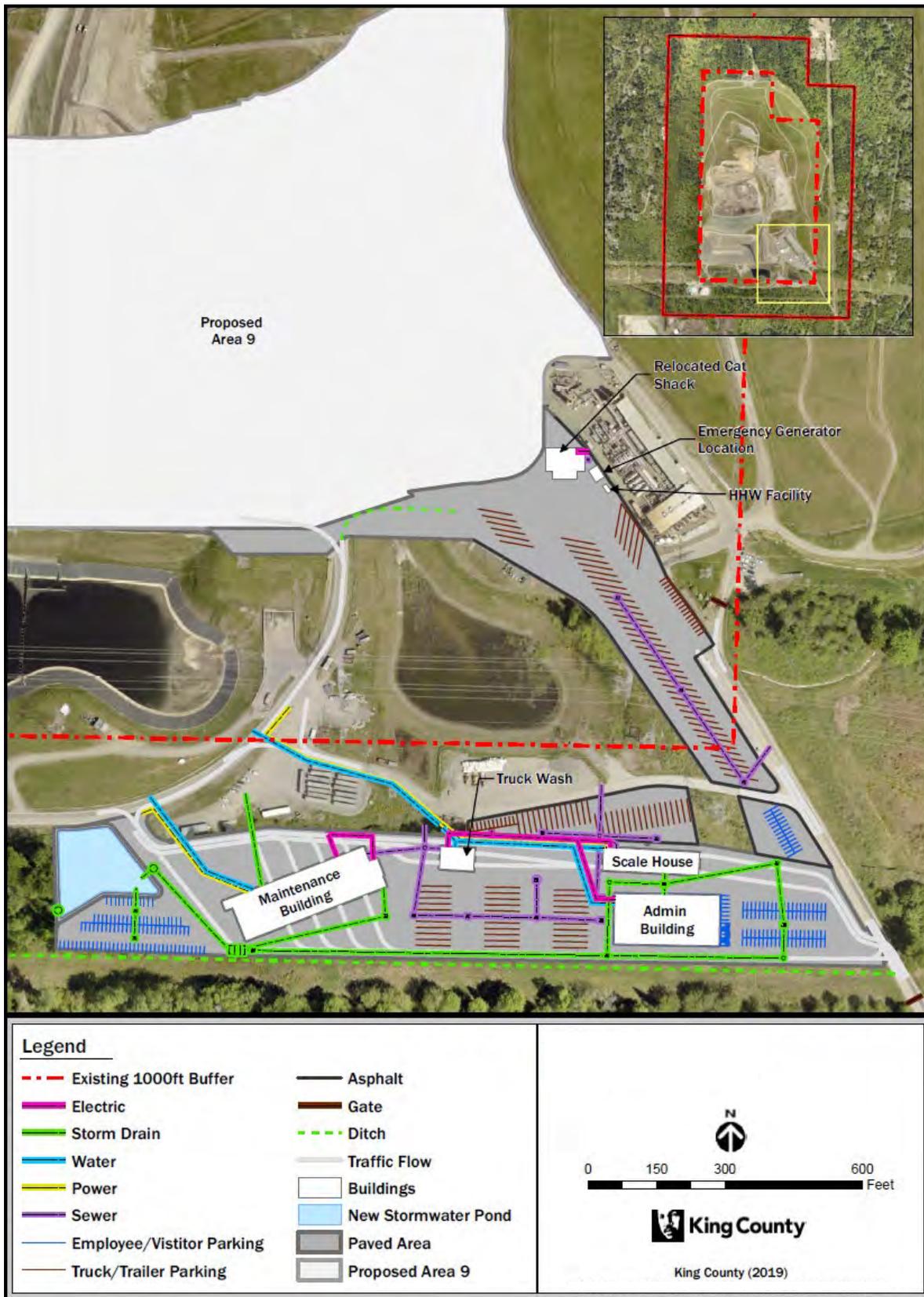


Figure 7. North Landfill Support Facilities Site Plan

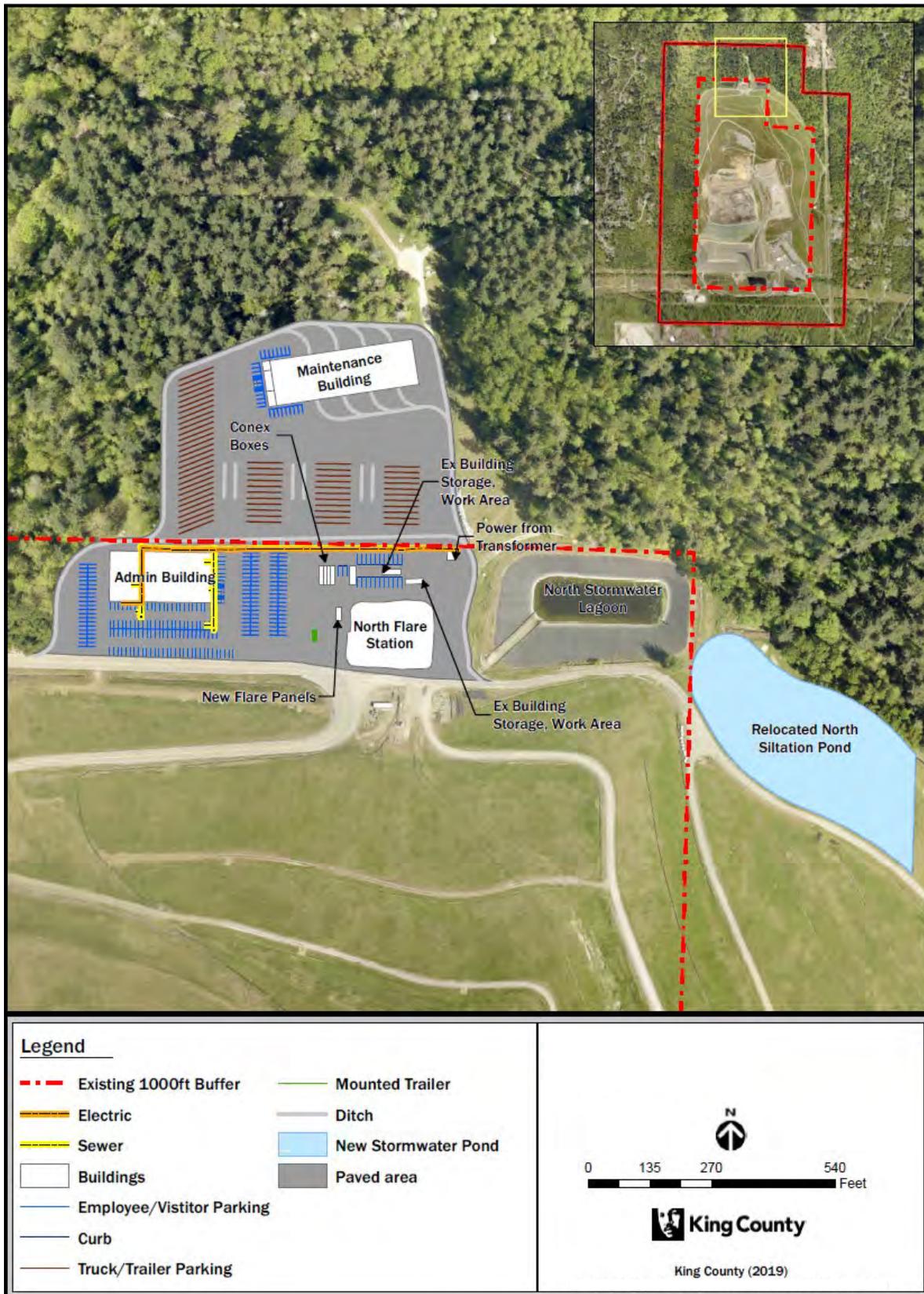


Figure 8. Renton Site Support Facilities Site Plan



1.5 No Action Alternative

The No Action Alternative completes the work currently in progress based on existing permits. This includes:

- No additional landfilling in Main Hill, Southeast Pit, Central Pit, and Areas 2/3 and 4
- Landfilling in Areas 5, 6, 7, and 8 up to 788 feet
- Main landfill support facilities remain in current location
- No new or revised Land Use permits necessary.

See Figure 2.

1.6 Summary of Visual Effects

1.6.1 Action Alternatives

Significant aesthetic impacts are those that diminish the public enjoyment and appreciation of an inventoried resource or that impair the character or quality of such a place. **Mere visibility or detectability is not an adverse impact.** CHRLF is visibly distinct from the natural landscape due to the disturbed nature of the landfill's surface areas. This landfill is an existing facility; it has become an established and acknowledged part of the landscape since the 1960s. The action alternatives introduce intrusions into the vertical and overhead planes in the landscape within the project site. The variations in elevations between the No Action Alternative and the Action Alternatives are generally minimal as shown in Table 4. The addition of Area 9 is contiguous with other areas and the proposed filling does not exceed 830 where it adjoins Areas 6, 7, and 8. The surrounding landscape would retain its integrity because the open sky, topography, and existing patterns of land use would remain dominant.

Table 4. Approximate Changes in Elevation

AREA	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3
Areas 2/3	0'	Southern portion: up to +38'	Northwest portion: up to +80'
Area 4	0'	Southern portion: up to +20'	Northwest portion: up to +62'
Main Hill	0'	Southern portion: up to +17'	Northeast portion: up to +59'
Southeast Pit	0'	0'	0'
Central Pit	Eventual settlement and reduction of soil cover -8'	Eventual settlement and reduction of soil cover -8'	Northeast portion: up to +34'
Area 5	+20'	+20'	+20'
Area 6	Eventual settlement and reduction of soil cover -10'	Eventual settlement and reduction of soil cover -10'	Eventual settlement and reduction of soil cover -10'
Area 7	Eventual settlement and reduction of soil cover -9'	Eventual settlement and reduction of soil cover -9'	Eventual settlement and reduction of soil cover -9'
Area 8	Up to +206'	Up to +236'	Up to +236'
Area 9	Up to +215'	Up to +245'	Up to +245'

The site boundary revision in the northeast corner under Action Alternative 3 retains a 1,000-foot buffer comprised of both the original site and the acquired property. This buffer is vegetated with a mature mixed deciduous and coniferous forest. Any visual impacts as a result of the site boundary revision are considered a less than significant impact because perceptible changes are unlikely from any of the viewpoints.

Landfill Support Facilities Relocation

Options 1, 2, and 3 each provide for the relocation of landfill support facilities; Options 1 and 2 provide for changes to buffer use if a Special Use permit is approved. Identified changes in buffer use are for the relocation of landfill support facilities and would result in the loss of approximately 10.5 acres of mature deciduous and coniferous forest and understory in Option 1 and approximately 6.5 acres of similar vegetation in Option 2. Views of the buffer use modifications and facilities relocations are limited by terrain and existing off-site and remaining buffer vegetation.

Renton Site: The profiles of the Administration and Maintenance Buildings are similar to other neighboring buildings adjacent to the Renton site. These two additional rooflines and associated drives and parking will blend in with the myriad of rooflines, roads, and parking in this neighborhood. While some vegetation clearing will be evident, no significant adverse impacts were identified.

Any visual impacts as a result of implementing Alternatives 1, 2, or 3 and Options 1, 2, and 3 are considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obstructed by the current landfill.

1.6.2 No Action Alternative

Under the No Action Alternative, changes to the visual quality are as identified in the 2010 approved site development plan and FEIS. Landfilling in Area 8 would continue as currently permitted to 788 feet. Landfill support facilities would remain in their current location and there would be no change in buffer uses.

1.6.3 Light and Glare

1.6.3.1 Action Alternatives

The excessive use of artificial light and reflected light contribute to light and glare impacts. To determine the impacts of light and glare from the proposed landfill alternatives and landfill support facilities relocations, typical sensitive uses such as residences in the vicinity of the sites were identified. The sources and amounts of light and glare that occur on the landfill site as currently permitted were compared with the amount of light and glare that would occur at the proposed fill areas and the sites of the landfill support facilities. New sources of light and glare would be evident at the north landfill support facility location. However, it was determined that the location would likely not be viewed from off-site due to terrain and existing vegetation. The additional capacity in the proposed action alternatives would not result in increased light and glare that is substantially different than those identified in the 2010 FEIS and 2017 VRA. Additional sources of artificial light will be present at the Renton site. Because artificial lighting is common throughout this area, this additional lighting would be difficult to perceive.

1.6.3.2 No Action Alternative

Under the No Action Alternative, the applicant would continue to operate its existing facility and any changes in lighting and glare would result from approved actions identified in the 2010 FEIS and as described in the 2017 VRA.

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2 Methodology

2.1 Visual Assessment Methodology

The visual assessment procedures used for this supplemental TM are the same as those utilized in the original VRA. In the original VRA, a total of 13 viewpoints were selected to illustrate typical views of the project alternatives and the range of visual change that would occur with the proposed project alternatives at the CHRLF. Two of these viewpoints were identified for the development of simulations. As indicated in that document, viewpoints were selected based on the following criteria:

1. They provide clear, unobstructed views of the project.
2. They illustrate project visibility from sensitive sites/resources within the visual study area.
3. They illustrate typical views of the proposed project that would be available to representative viewer/user groups within the visual study area.
4. They illustrate typical views of the landfill and facilities from a variety of viewer distances and under different lighting conditions to illustrate the range of visual change that would occur with the project in place.

These same viewpoints were used to assess the revised proposed action alternatives at the CHRLF.

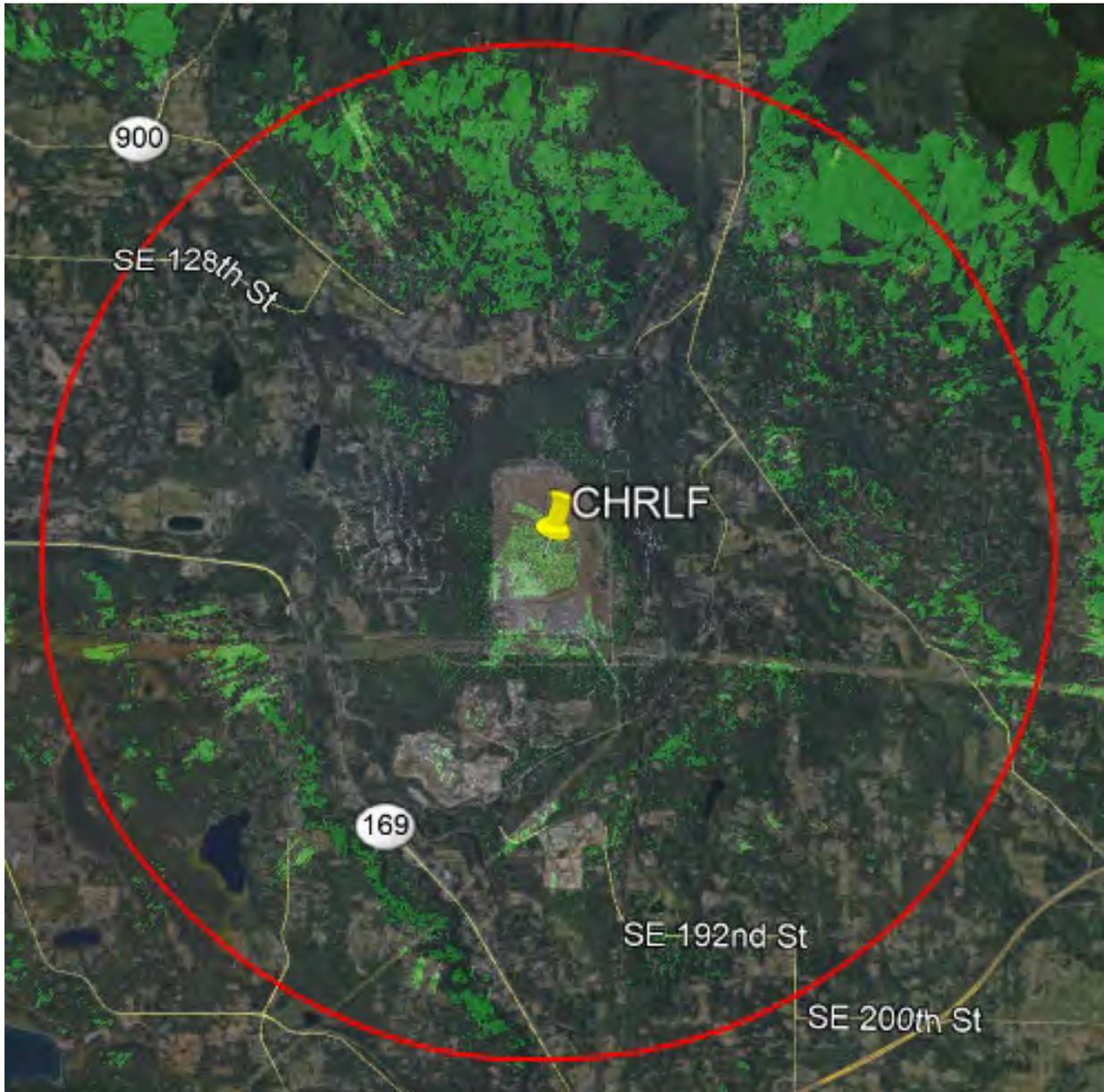
2.1.1 Study Area, Landscape Character, and Viewer/User Groups

The study area is a 3-mile radius around the CHRLF, as described in the original VRA. The revised project action alternatives do not change the size or location of this study area, illustrated in Figure 9. The red circle represents the 3-mile radius study area. The viewshed analysis¹⁹ is calculated from an elevation of 830' at the CHRLF. The areas shown in green indicate where there are potential views of the project site. This analysis is based on topography and does not consider trees and dense vegetation that may block such views.

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¹⁹ Defined as “viewing areas” in the Final Environmental Impact Statement, Cedar Hills Regional Landfill, 2010 Site Development Plan.

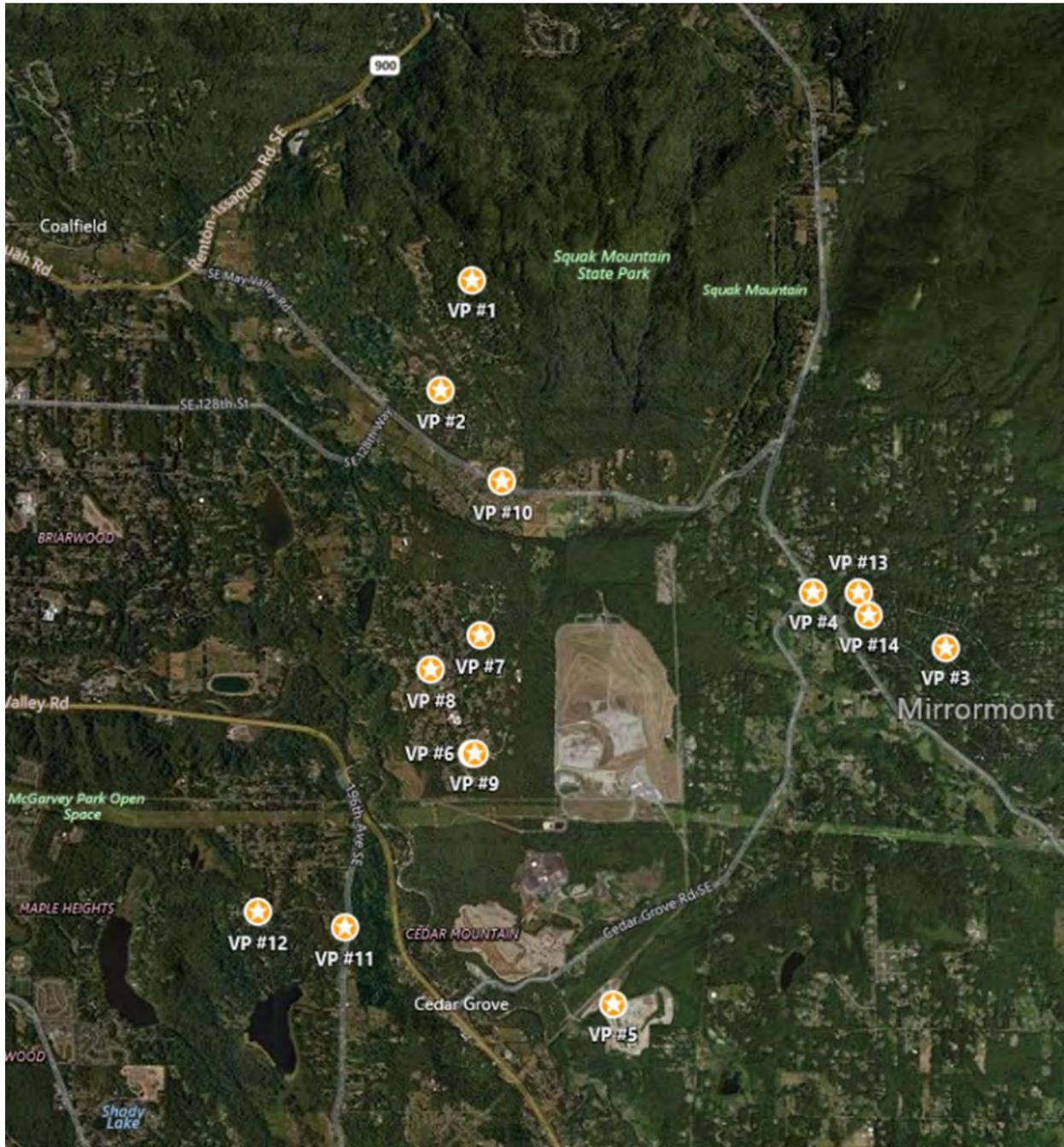
Figure 9. Study Area and Viewshed Analysis



The physiographic/visual setting surrounding the CHRLF is as described in the original VRA. Landform, vegetation, and land use within the study area are as described in that document.

The viewer/user groups described in the original VRA (local residents, commuters, people engaged in recreation or visiting the area, employees, cyclists, pedestrians, and motorists) are still considered to represent the major groups that would have views of the project. See Figure 10 for key viewpoints.

Figure 10. Key Viewpoints-CHRLF



2.2 Visual Assessment Methodology for Off-Site Proposed Option

The visual resource methodology used to inventory and assess the potential impacts of the proposed project option at the Renton site includes the following:

- Define the viewshed. The viewshed determination is a screening-level assessment that accounts only for topography in determining which locations may have views of the project area. The selection of the viewpoints themselves accounts for vegetation and the built environment.

- Determine viewer sensitivity. Viewer sensitivity is the measure of the concern for visual quality and the response to changes to the elements of the natural and constructed environments the viewer experiences through sight. Viewer sensitivity is related to changes in the available views of the landscape and buildings, the construction and demolition of structures, operational equipment, and emissions. The effects of these changes on viewers depend on the types of users, the amount of use (number of viewers and view frequency), and adjacent land uses.
- Assess the visual impacts.
- Recommend mitigation measures, if necessary.

2.2.1 Study Area

The Renton project site is surrounded by mixed land uses, including:

- Single family residential uses which are concentrated immediately west and south of the site and are approximately 85 feet below the proposed building area.
- At the northwest corner of the site are single story self-storage units. This complex is at a similar elevation as the proposed building site.
- Adjacent to the project site on the north and east sides are industrial uses including a King County-owned transfer and recycling station, auction yard, maintenance facilities, and a multi-acre borrow pit.
- Beyond the immediate surroundings of the site are mixed land uses, including multi-family residences, neighborhood businesses, and the Renton Technical College.

Viewer groups will likely consist of motorists moving into and out of the residential neighborhoods, customers accessing the self-storage units, and motorists accessing the transfer and recycling station.

Figures 11 and 12 illustrate an analysis of areas with views to the Renton site. The site is centrally located in Figure 11 and the red circle represents the study area – a one-mile radius from the center of the project site. The areas shown in green indicate where there are potential views of the project site.

Figure 11. Viewshed Analysis for Renton Site

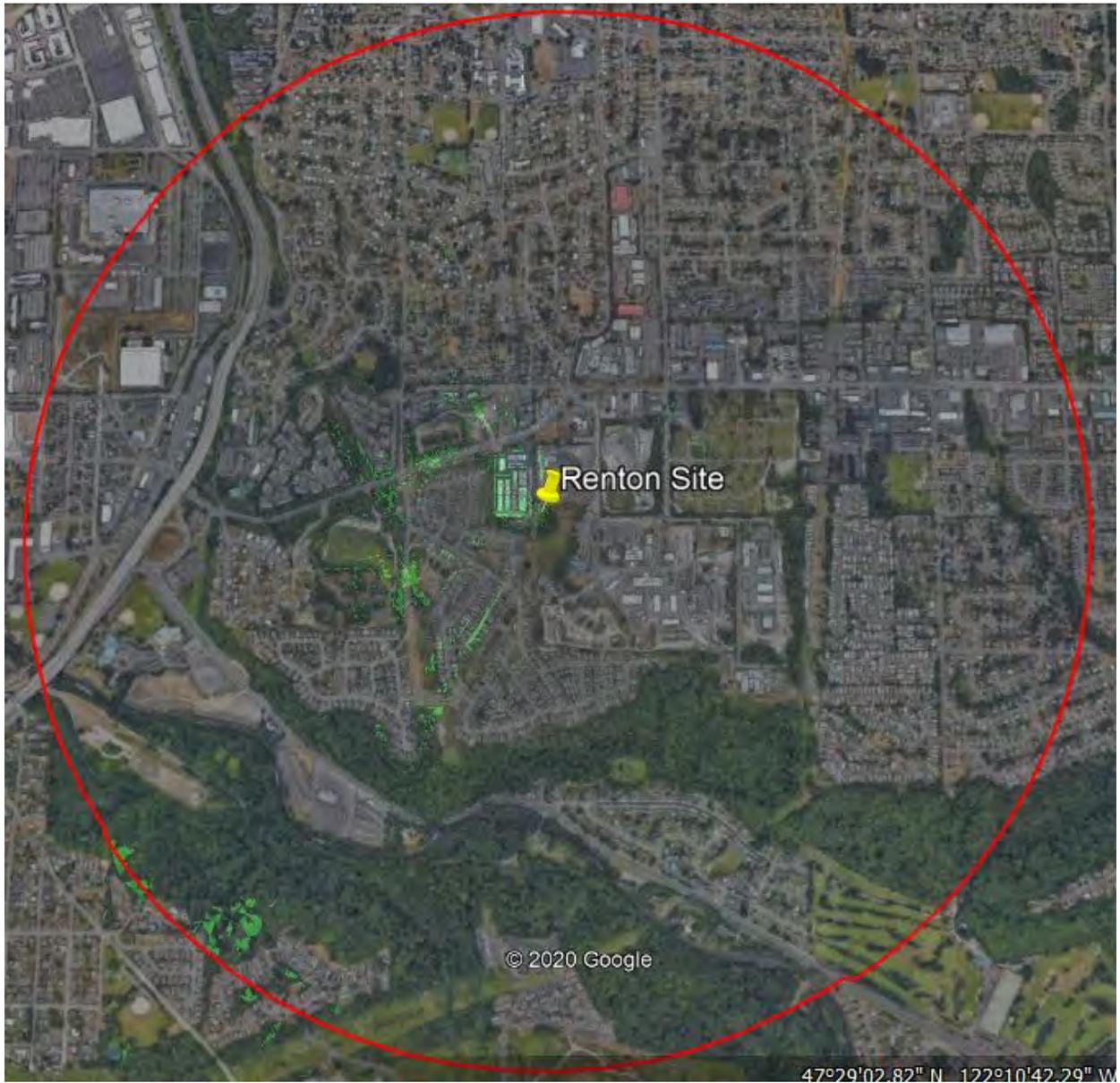


Figure 12. Enlargement, Viewshed Analysis for Renton Site



As shown in the aerial photo, there are very few unobstructed views of the site due to topography, vegetation, or other structures. Beyond the one-mile radius, the landscape appears as a collage of rooflines with no discernable or distinct features in the vicinity of the project site.

2.2.2 Key Viewpoints

During this evaluation, three key viewpoints (see Figure 13) with the greatest potential for visual impacts were selected by the following methods:

- Observing the surrounding areas from the Renton site to identify those residences and roads where there may be a view of the site.
- Determining whether the view is typical of the project area and is a public location with sensitive viewers nearby and can be seen by major viewer groups.
- Cross-checking the results with the aerial viewshed analysis.
- Determining whether people will be able to see significant visual change from the viewpoint.

Figure 13. Key Viewpoints-Renton Site



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3 Affected Environment

3.1 Proposed Elevations

For each action alternative, the proposed approximate highest elevation in the landfill areas depicted in Figure 2 are compared with the proposed approximate highest elevation in these areas analyzed in the 2017 VRA. Elevation 830' represents the highest fill elevation assessed for potential visual impacts in the 2017 VRA. Table 5 illustrates these comparisons.

Table 5. Proposed Area Elevations

AREA	CURRENT APPROXIMATE HIGHEST ELEVATION (2020) ²⁰	PROPOSED ELEVATION ALTERNATIVE 1	PROPOSED ELEVATION ALTERNATIVE 2	PROPOSED ELEVATION ALTERNATIVE 3	HIGHEST ELEVATION EVALUATED IN 2017 VRA
2/3	750'	No add'l. fill	Fill in southern portion to 788'	Fill in northwest portion to 830'	830'
4	768'	No add'l. fill	Fill in southern portion to 788'	Fill in northwest portion to 830'	830'
Main Hill	771'	No add'l. fill	Fill in southern portion to 788'	Fill in northeast portion to 830'	
Southeast Pit	627'	No add'l. fill	No add'l. fill	No add'l. fill	
Central Pit	796'	No add'l. fill	No add'l. fill	Fill in northeast portion to 830'	830'
5	768'	788'	788'	788'	830'
6	798'	788'	788'	788'	830'
7	797'	788'	788'	788'	830'
8	594'	800'	800'-830'	800'-830'	830'
9	585' ²¹	800'	830'	830'	830'

²⁰ Height including fill plus soil.

²¹ 0' of fill

3.2 CHRLF Viewpoints

3.2.1 Viewpoint #1

Viewpoint #1, located on 207th Avenue SE, is at El. 1,166' (about 350' above the elevation of the current landfill) and is perched on the southwest side of Squak Mountain in a heavily forested area. Views of the landfill are mostly obscured by existing foreground and middle ground vegetation. This community is sparsely populated; the predominant views are static views from private residences. The landfill is approximately 2.5 miles south-southeast. Due to the existing vegetation, the field of view is limited to the single sightline as shown in Figures 14, 15, and 16.

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Figure 14. Alternative 1 As Seen from Viewpoint #1

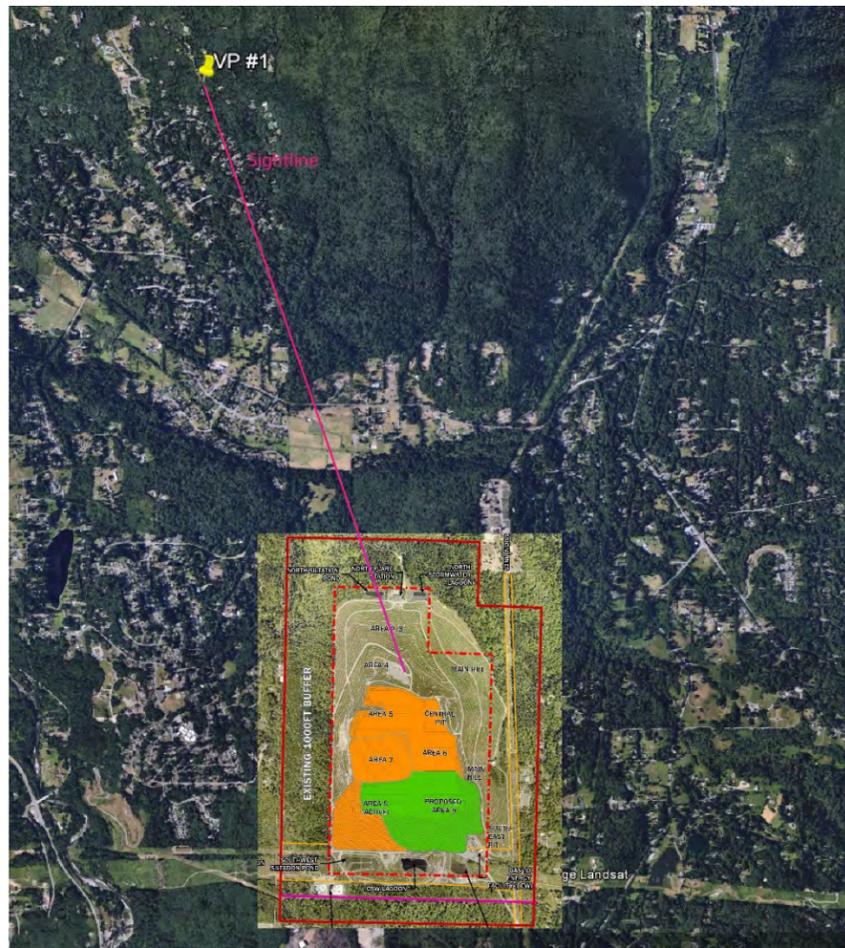


Figure 15. Alternative 2 As Seen from Viewpoint #1

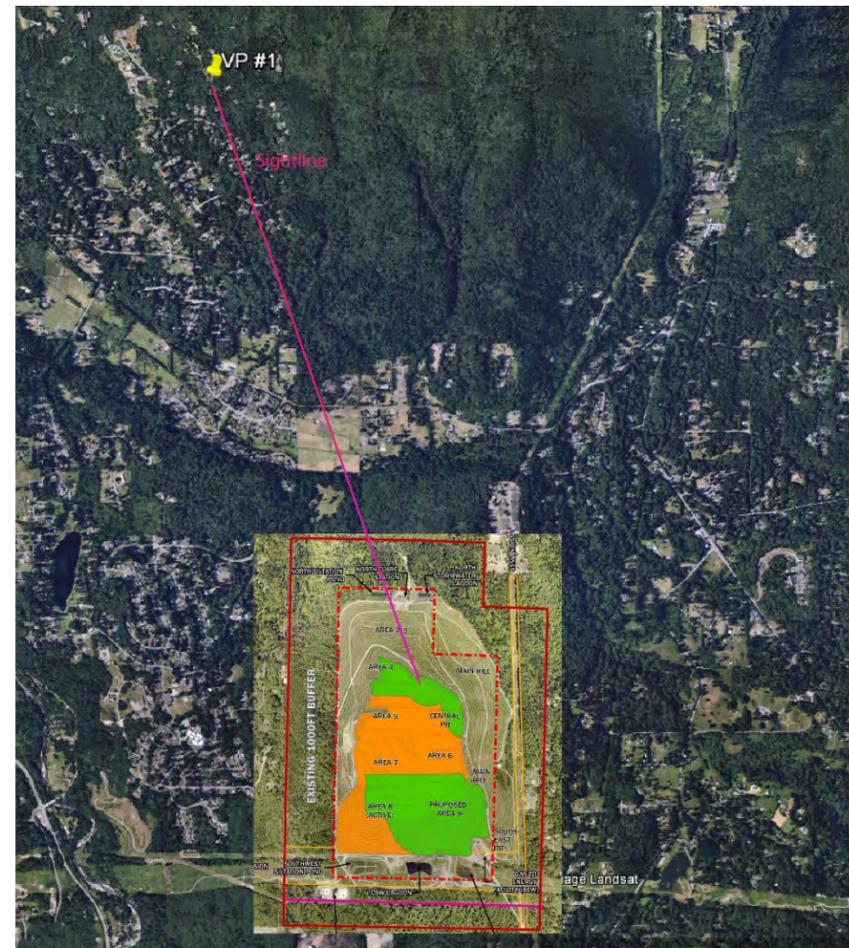
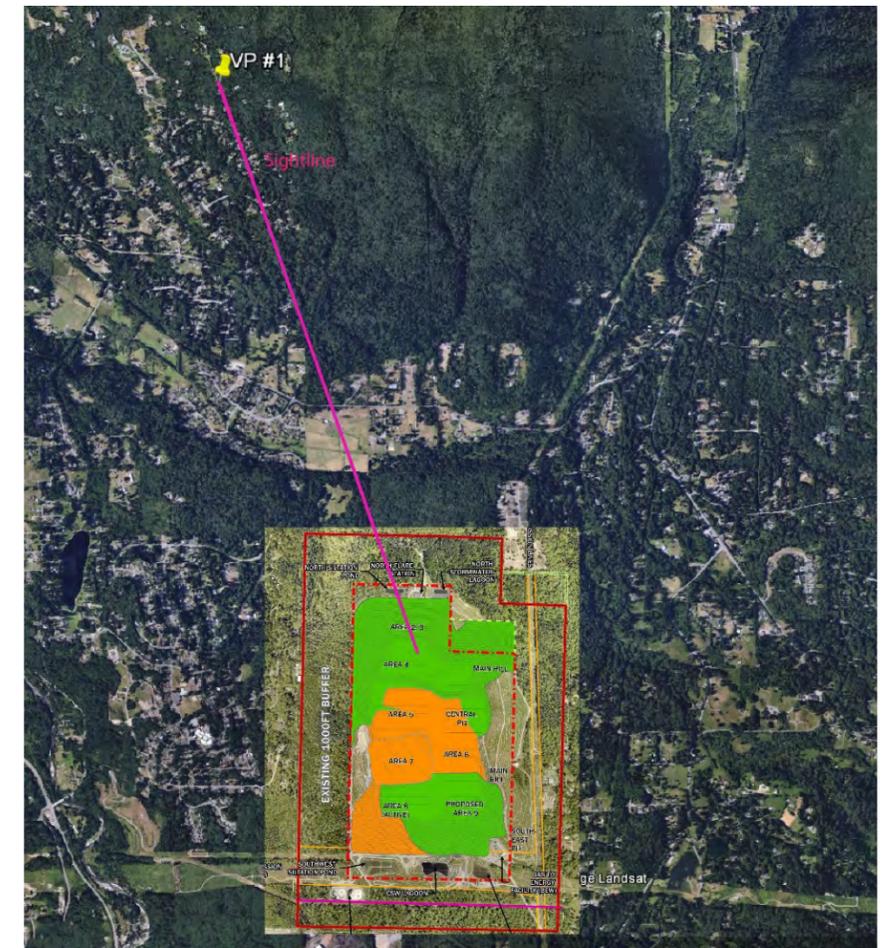


Figure 16. Alternative 3 As Seen from Viewpoint #1



3.2.1.1 Visual Effects

The visual changes would be limited to the visible northwestern face and summit of the landfill as described in the 2017 VRA, Alternative E. The proposed additional vertical fill in Area 4 in Alternatives 1 and 2 and in Area 2/3 in Alternative 3 would be slightly more obvious when compared with surrounding landforms because of the flat-topped, manufactured shape of the landfill. The proposed additional vertical fill may block some of the distant horizon. This is considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obstructed by existing vegetation and the current landfill. The existing view of Mount Rainier, 50 miles to the south, will be unobstructed by the proposed vertical addition to the landfill. The North Landfill Support Facilities in Option 2 would not be visible from this viewpoint and it is unlikely that the support facilities would be visible to other residents on the southwest side of Squak Mountain due to the obstructions by existing vegetation that exist in the intervening 2.5 miles.

3.2.2 Viewpoint #2

This viewpoint is also located on the southwest side of Squak Mountain on SE 127th Street just east of its intersection with 202nd Place SE. It is approximately 1.9 miles from the longitudinal center of the landfill and 1.4 miles from the northwest edge of the buffer. The elevation at Viewpoint #2 is 579' and the view is generally to the southeast. The landfill is largely obscured by vegetation in the foreground; however, when there are breaks in the vegetation, one can view the northwest corner of the landfill. Views of the landfill may be more prominent from some individual homes in this community. The fields of view and sightlines are shown in Figure 17, 18, and 19.

Figure 17. Alternative 1 As Seen from Viewpoint #2

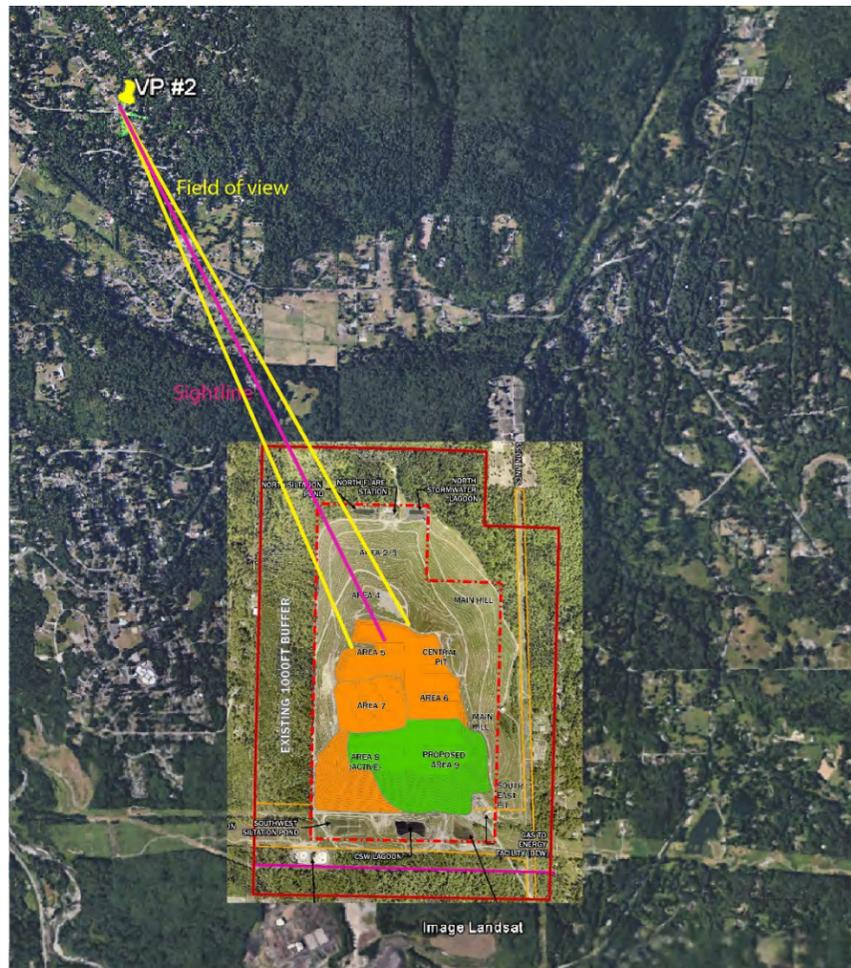


Figure 18. Alternative 2 As Seen from Viewpoint #2

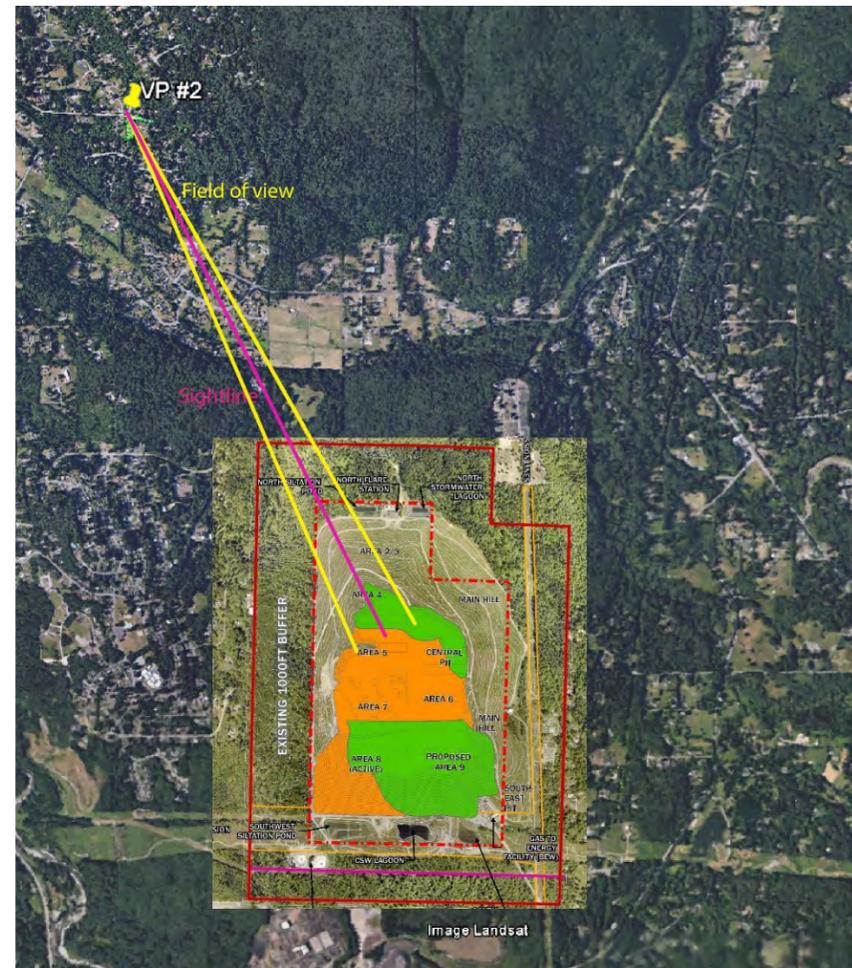
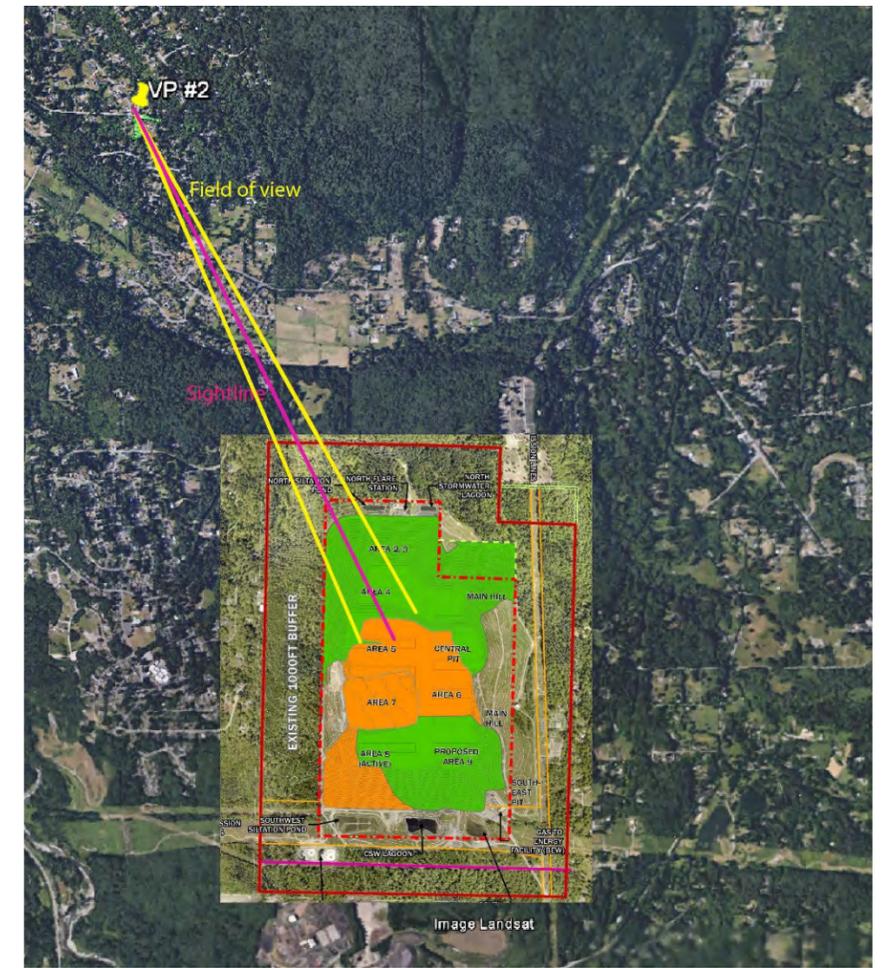


Figure 19. Alternative 3 As Seen from Viewpoint #2



3.2.2.1 Visual Effects

Distant views of landfill operations from Viewpoint #2 are generally obscured by existing landforms and vegetation. Residents and motorists have a partial view of the landfill's northwestern face and summit. Viewers may see some soil surcharging activity and an increase in landfill bulk in Areas 2/3, 4, and 5 with Alternatives 2 and 3. The proposed additional vertical fill in these alternatives would be obvious because of the flat-topped manufactured shape of the landfill. The proposed additional vertical fill may block some of the distant horizon. This is considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obstructed by existing vegetation and the current landfill. The existing view of Mount Rainier, 50 miles to the south, will be unobstructed by the proposed vertical addition to the landfill. See Figure 20. The North Landfill Support Facilities in Option 2 would not be visible from this viewpoint.

3.2.3 Viewpoint #10

The landfill and its buffer are revealed in fleeting glimpses along SE May Valley Road between 218th Avenue SE and 208th Avenue SE. Viewpoint #10 affords a distant view of landfill operations, while other views of the landfill buffer occur only across broad stretches of pastureland where roadside vegetation is sparse. This viewpoint is at the base

of Squak Mountain, approximately 0.7 miles from the buffer, and 1.3 miles from the longitudinal center of the landfill. This viewpoint is at El. 357'. The fields of view and sightlines are shown in Figures 21, 22, and 23.

Figure 20. Sightline, Viewpoint #2 to Mt. Rainier

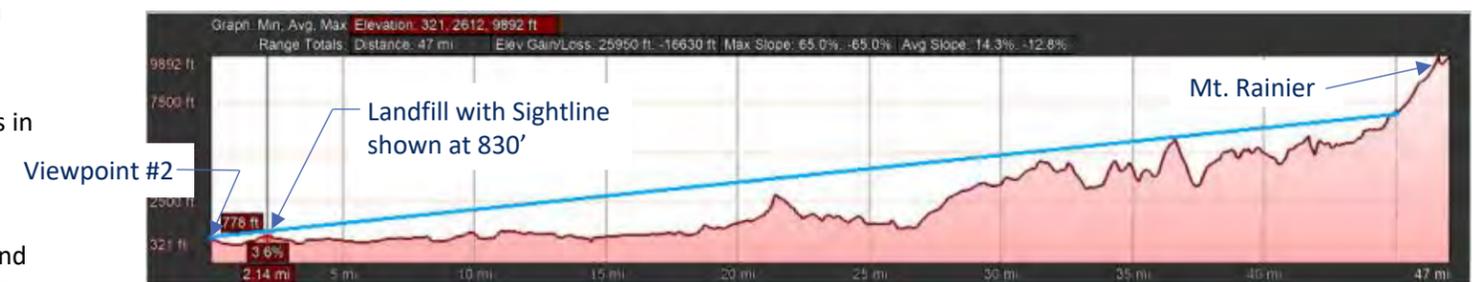


Figure 21. Alternative 1 As Seen from Viewpoint #10



Figure 22. Alternative 2 As Seen from Viewpoint #10

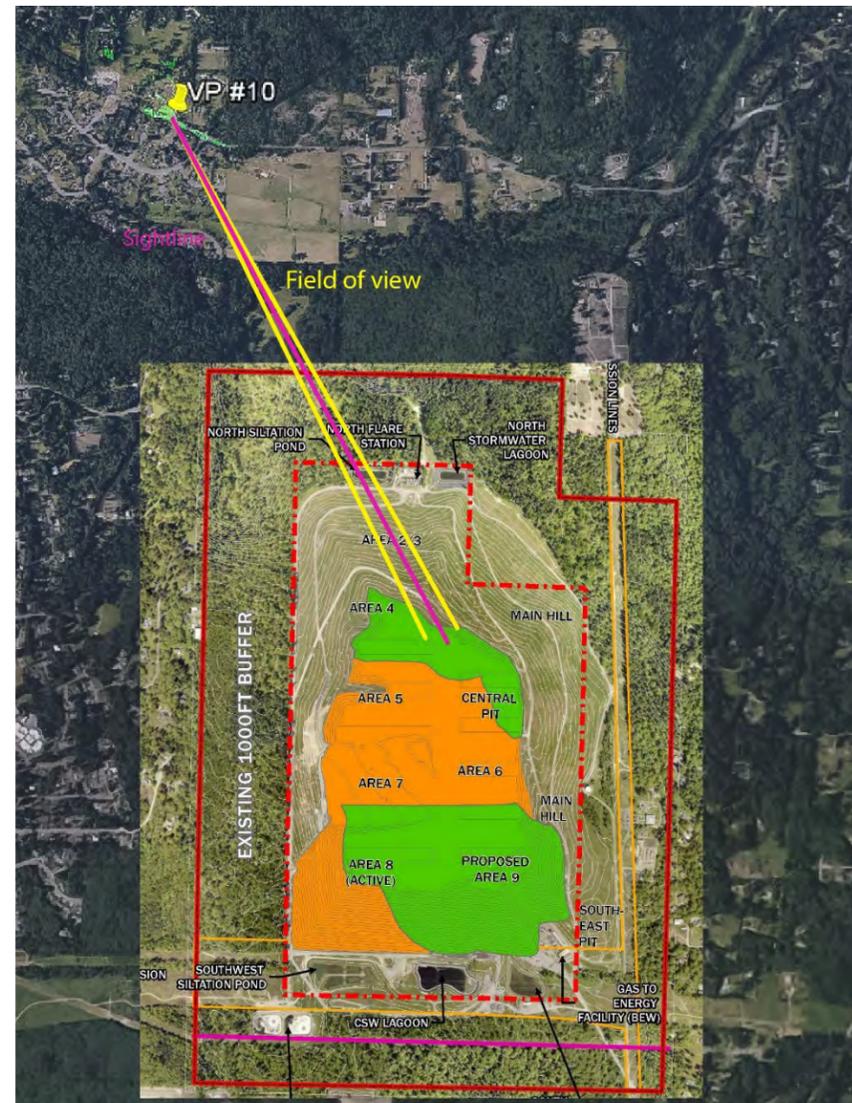
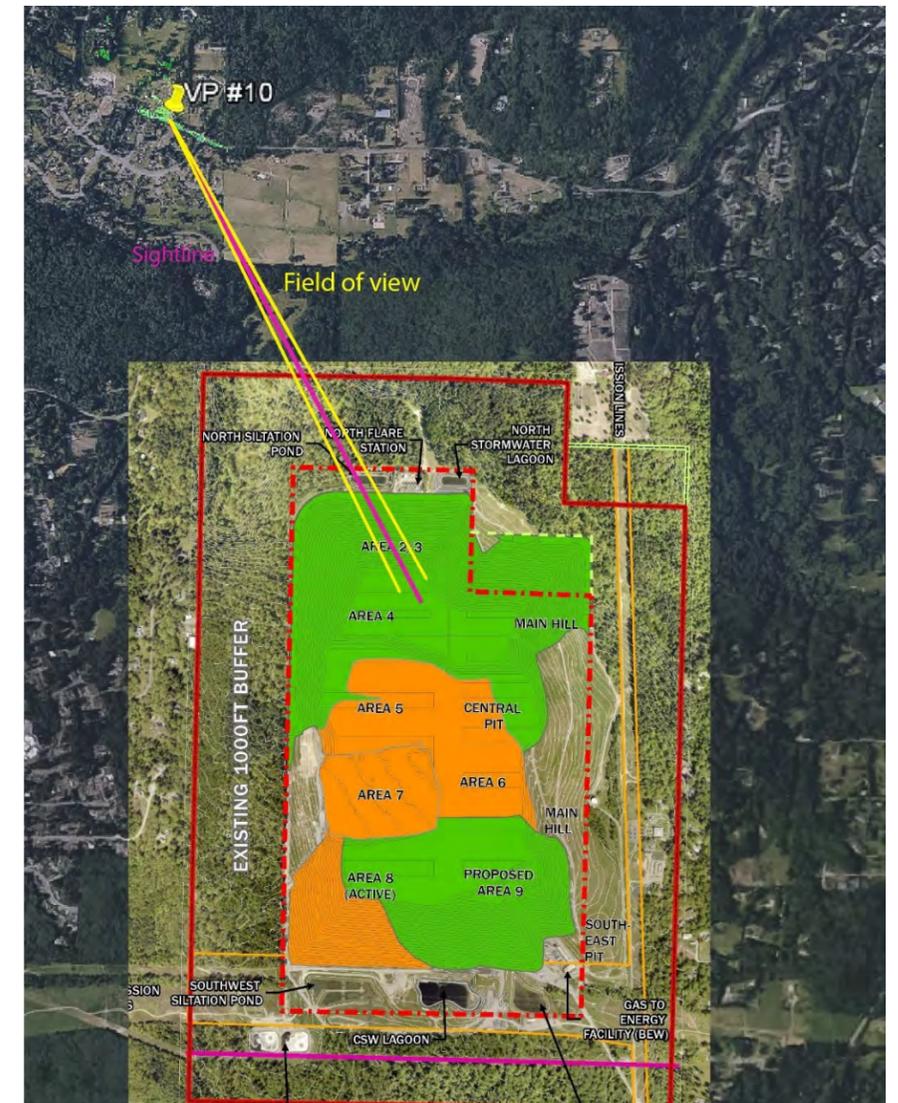


Figure 23. Alternative 3 As Seen from Viewpoint #10



3.2.3.1 Visual Effects

Filling activity and possible increase in landfill bulk in Areas 2/3 and 4 in Alternative 3 may be apparent along May Valley Road. Because of the middle ground vegetation, the landfill would continue to appear as a grass-vegetated ridgeline in the distance. The increase in height would largely be obscured by the perimeter buffer. The proposed North Landfill Support Facilities in Option 2 would not be visible from this viewpoint.

3.2.4 Viewpoint #4

This viewpoint is in the southwest corner of the intersection of Issaquah-Hobart Road SE and Cedar Grove Road SE and is looking West-South-West toward the northeast corner of the landfill buffer. This vantage point is approximately 0.9 miles from the buffer and approximately 1.28 miles from the longitudinal center of the landfill. The field of view is limited by existing vegetation and topography. The viewpoint is at El. 358'. The elevation of the ground plane for the buffer rises from El. 510' to El. 564' along the sight line. The buffer here is heavily vegetated with mixed conifers and deciduous trees and generally precludes a view of the landfill. The fields of view and sightlines are shown in Figures 24, 25, and 26.

Figure 25. Alternative 1 As Seen from Viewpoint #4

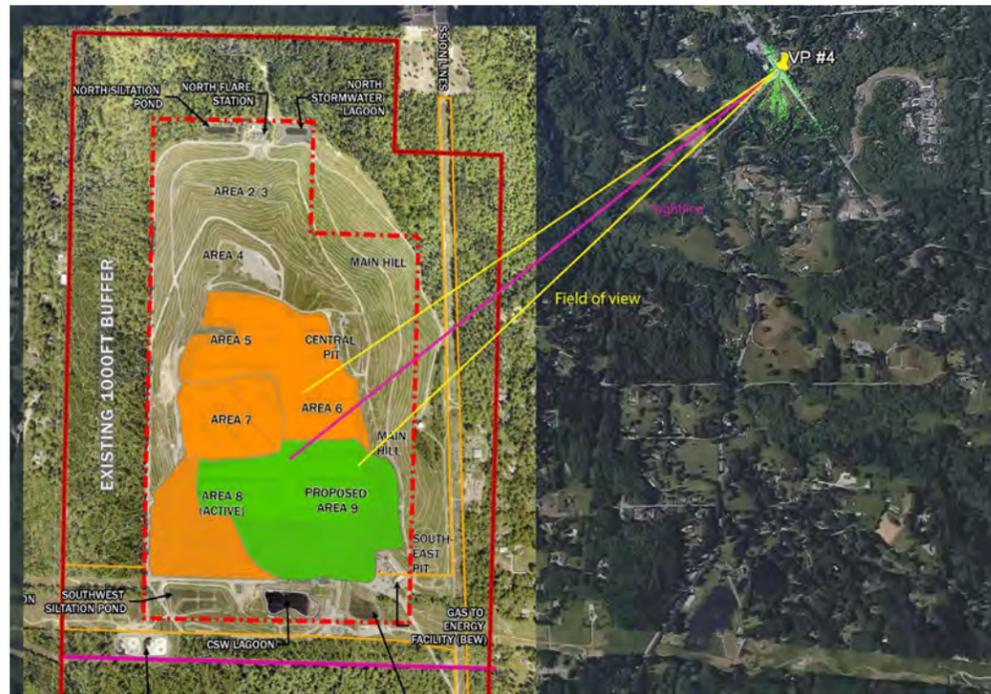


Figure 24. Alternative 2 As Seen from Viewpoint #4

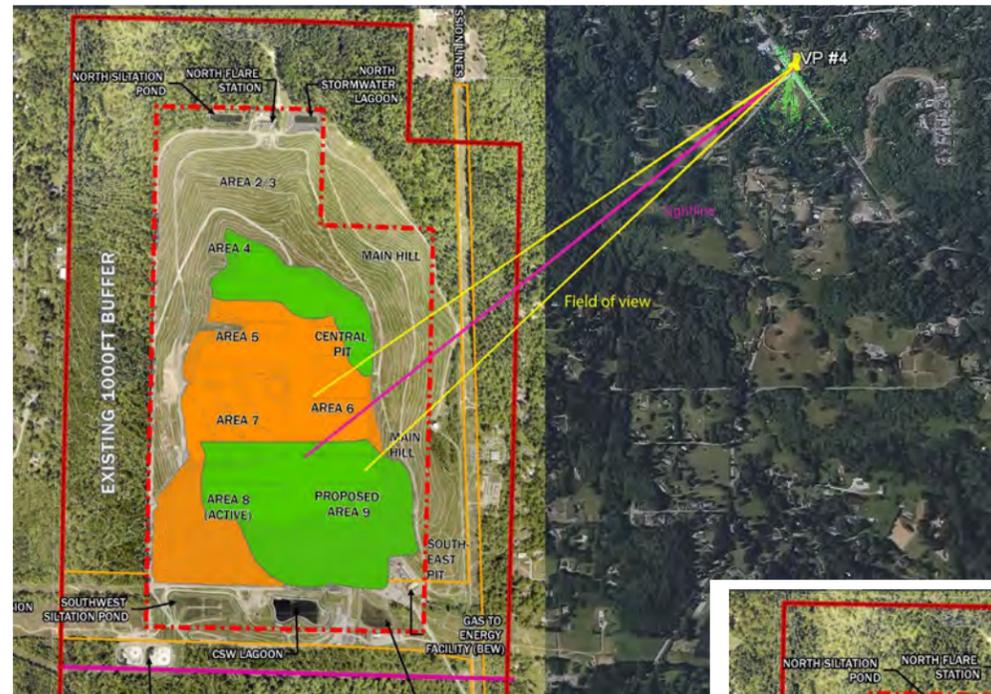
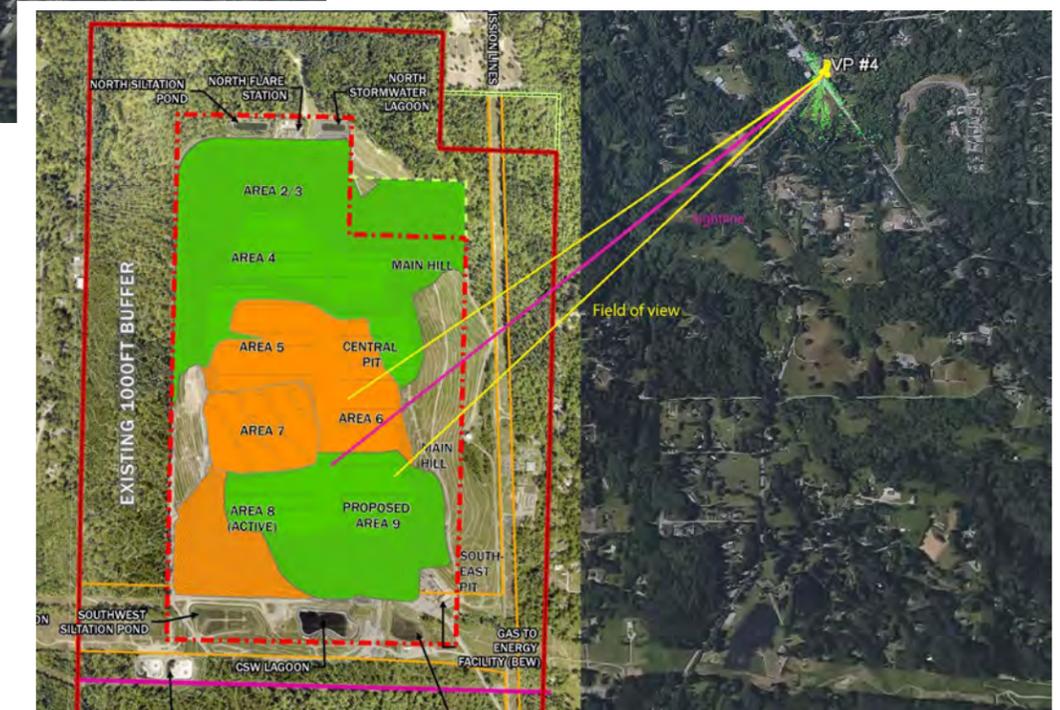


Figure 26. Alternative 3 As Seen from Viewpoint #4



3.2.4.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA. The ridgeline would rise up to 830' or approximately 42 feet above the permitted elevation in Area 8. Existing vegetation in the foreground and landforms in the middle ground would continue to obstruct views of the landfill from this viewpoint.

3.2.5 Viewpoint #13

When traveling westbound on SE 147th Place, the landfill is a dominant feature on the skyline. This viewpoint is approximately 1.5 miles from the longitudinal center of the landfill and is at El. 526'. The heavily vegetated landfill buffer is also visible from this viewpoint. Located immediately north and west of the Mirrormont Subdivision, this road provides access to a newer development that currently consists of approximately fourteen residences, either constructed or now under construction. The fields of view and sightlines are shown in Figures 27, 28, and 29.

Figure 27. Alternative 1 As Seen from Viewpoint #13

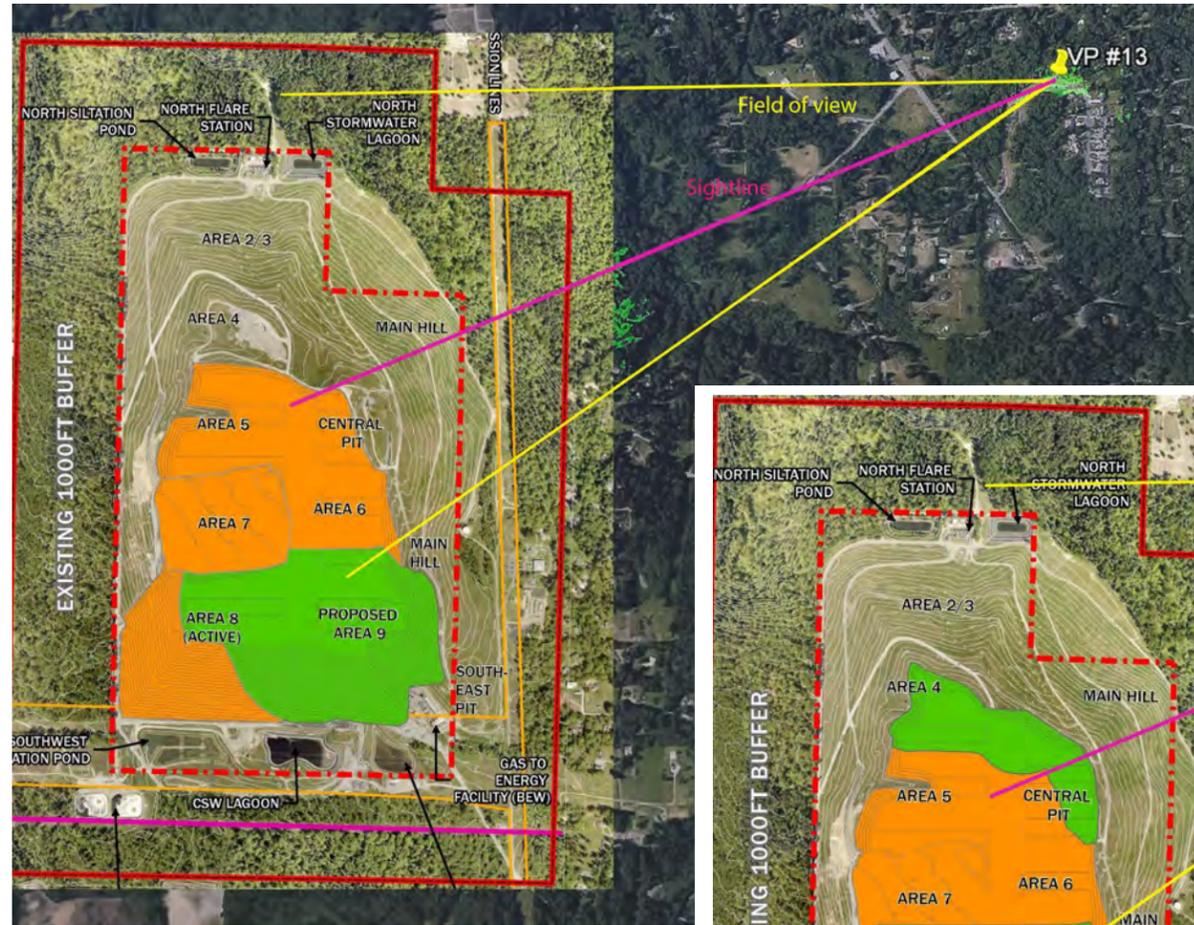


Figure 28. Alternative 2 As Seen from Viewpoint #13

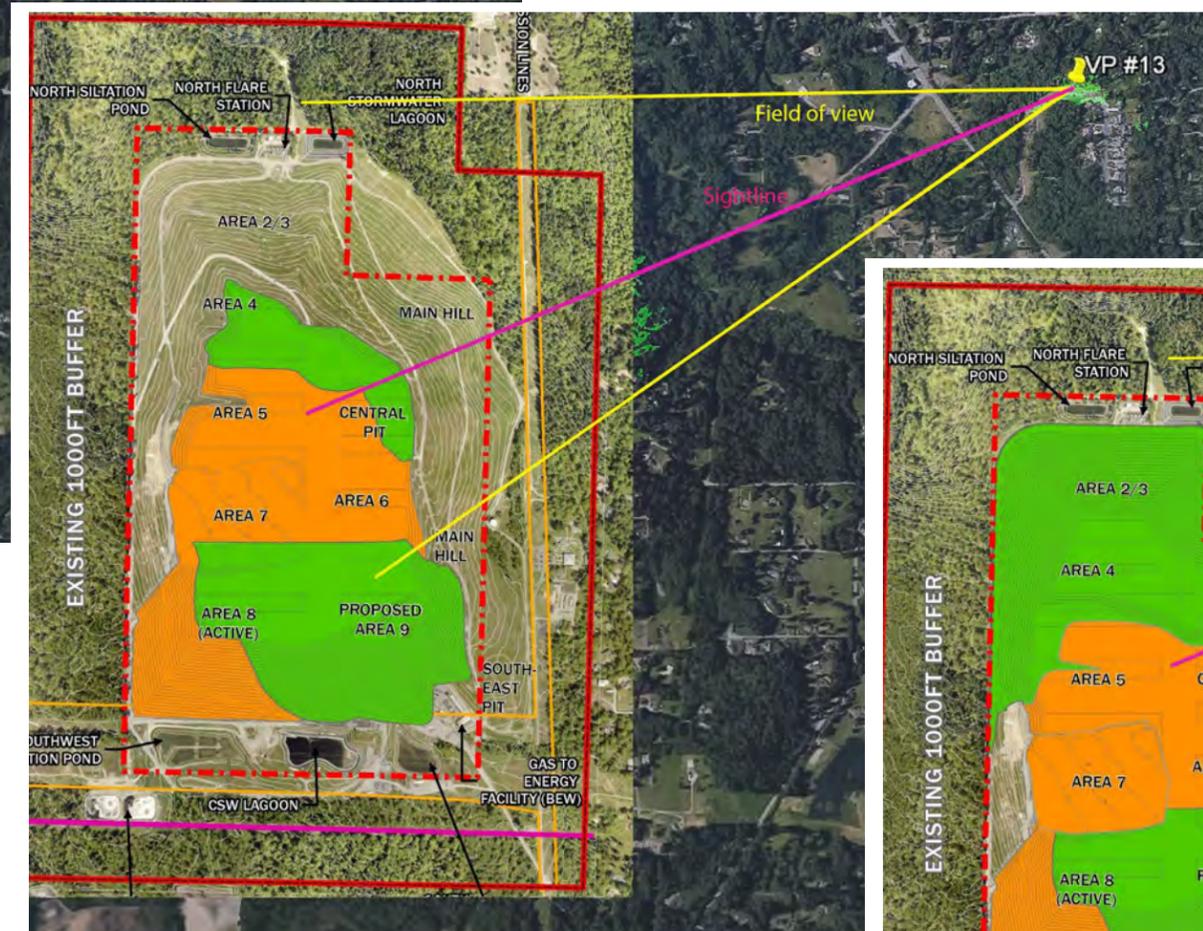
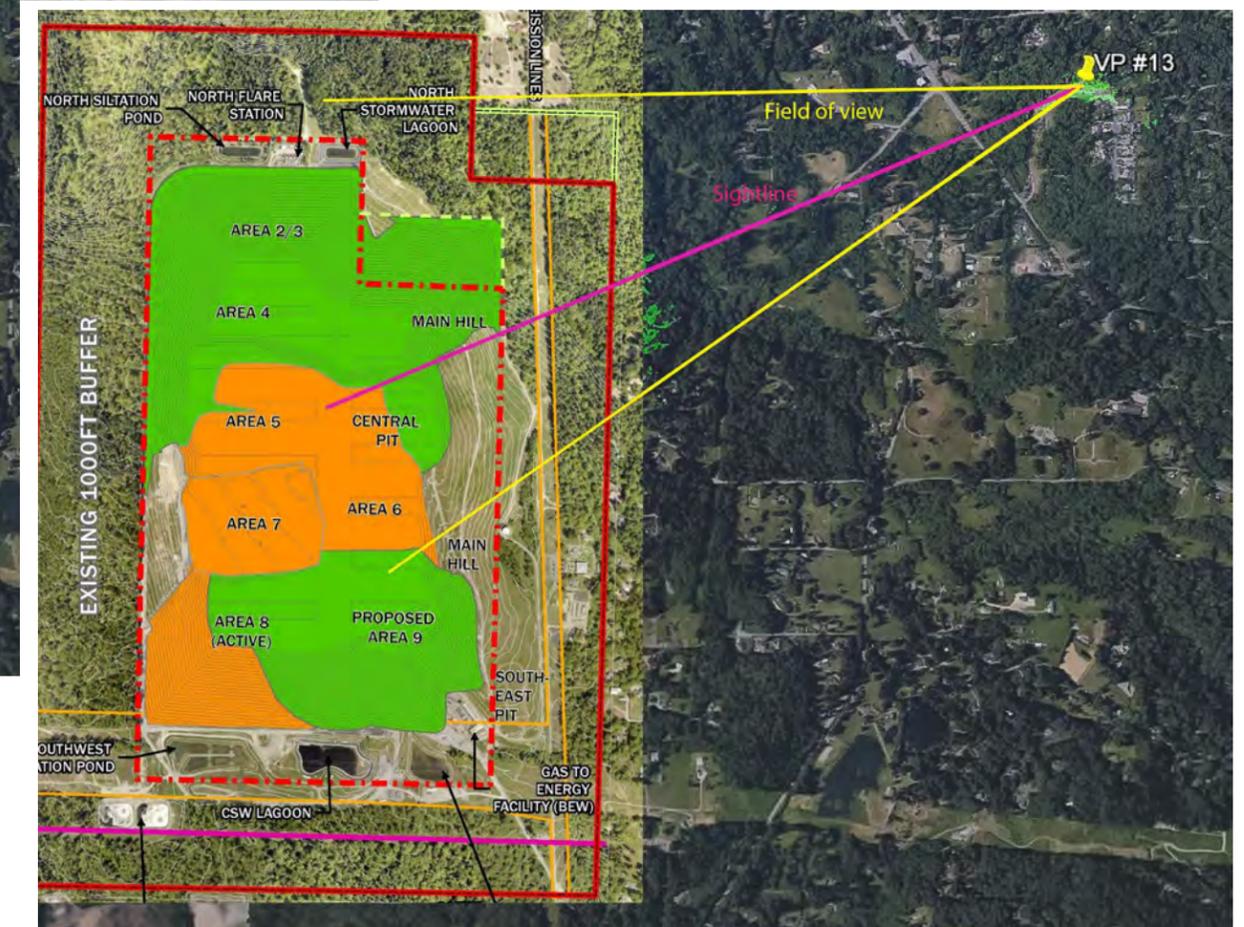


Figure 29. Alternative 3 As Seen from Viewpoint #13



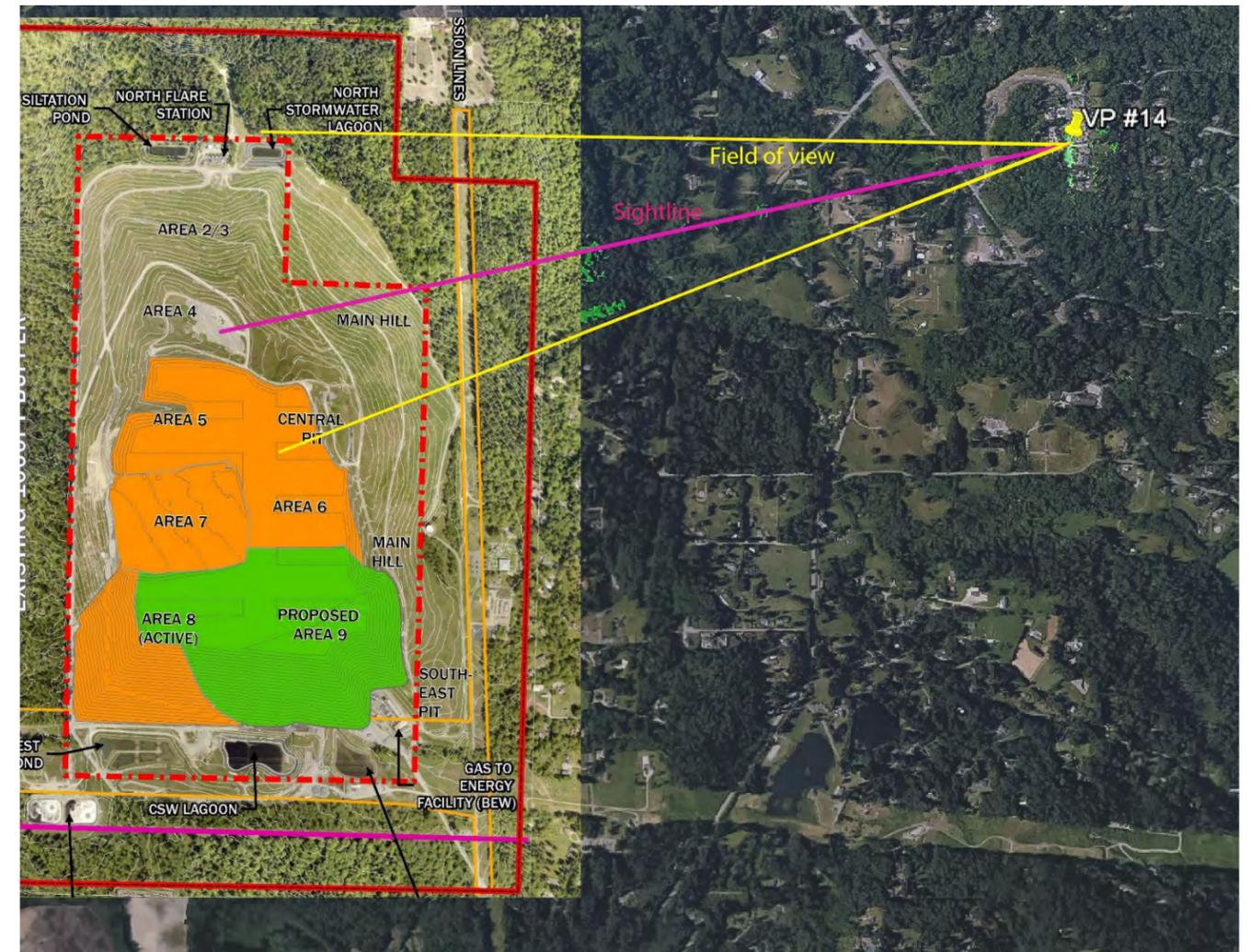
3.2.5.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA. The North Landfill Support Facilities in Option 2 likely would not be visible from this viewpoint. The rooflines on both the proposed Administration and Maintenance Buildings in Option 2 are approximately 26 feet above existing grade. From 1.5 miles, these buildings, would likely not be discernable. See Figure 30.

Figure 30. Existing Conditions As Seen from Viewpoint #13



Figure 31. Alternative 1 As Seen from Viewpoint #14



3.2.6 Viewpoint #14

Approximately five to seven of the twelve homes along SE 147th Place have a west-facing view of the landfill and landfill buffer. This community is sited on a steep hillside. Much of the native vegetation was cleared to reveal panoramic views of the skyline. The elevation from this viewpoint is 602 feet. However, some of the homes are situated approximately 30 feet above this viewpoint and have unobstructed views of the landfill. As the young landscape in this community matures, the views to the landfill would become more constricted. This viewpoint is approximately 1.5 miles from the longitudinal center of the landfill. The fields of view and sightlines are shown in Figures 31, 32, and 33.

Figure 32. Alternative 2 As Seen from Viewpoint #14

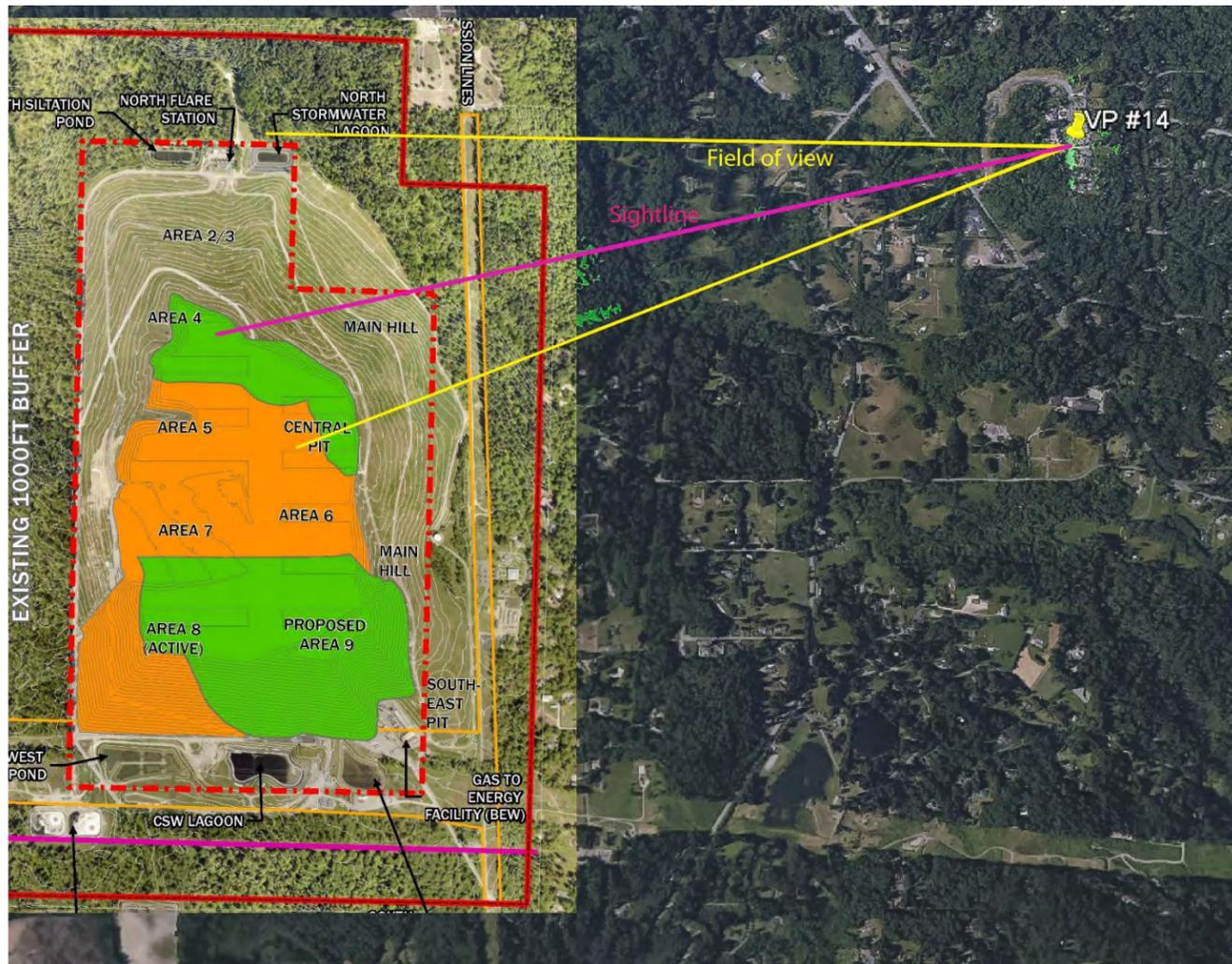
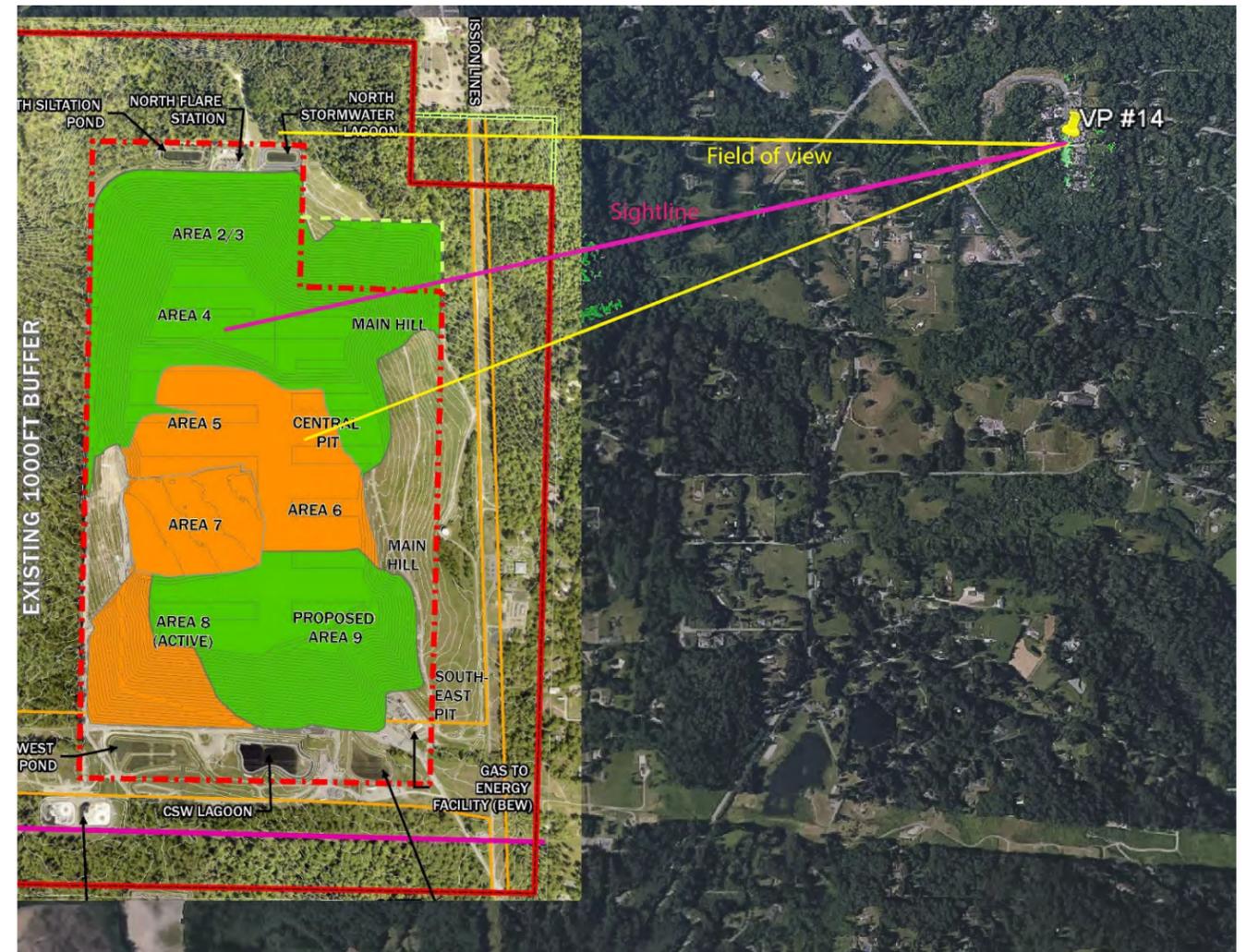


Figure 33. Alternative 3 As Seen from Viewpoint #14



3.2.6.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA. The North Landfill Support Facilities in Option 2 likely would not be visible from this viewpoint.

3.2.7 Viewpoint #3

The Mirrormont residential community is sited on a steep, forested hillside where much of the existing mature Douglas fir forest cover has been maintained. If the landfill is visible from residents in this area, it would appear as a grass-covered ridgeline to the west. Based on the study team’s reconnaissance along SE Mirrormont Drive, SE Mirrormont Place, and SE Mirrormont Way, views to the landfill were obscured by dense existing vegetation.

3.2.7.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA.

3.2.8 Viewpoint #5

Viewpoint #5 is located on SE Lake Francis Road. This viewpoint affords a view of the upper south face of the landfill. From this industrial area, the landfill appears in the middle ground where active filling is occurring under the 2010 approved activity. Other visible areas of the landfill appear as a low, grass-covered ridge. Squak Mountain is in the background. This viewpoint is at El. 454 and is 1.6 miles from the longitudinal center of the landfill. The buffer slope along the sightline is quite steep at about 8.5% and is vegetated with conifers and deciduous trees. From the viewpoint, the buffer is about 0.8 miles north. The fields of view and sightlines are shown in Figures 34, 35, and 36.

Figure 34. Alternative 1 As Seen from Viewpoint #5

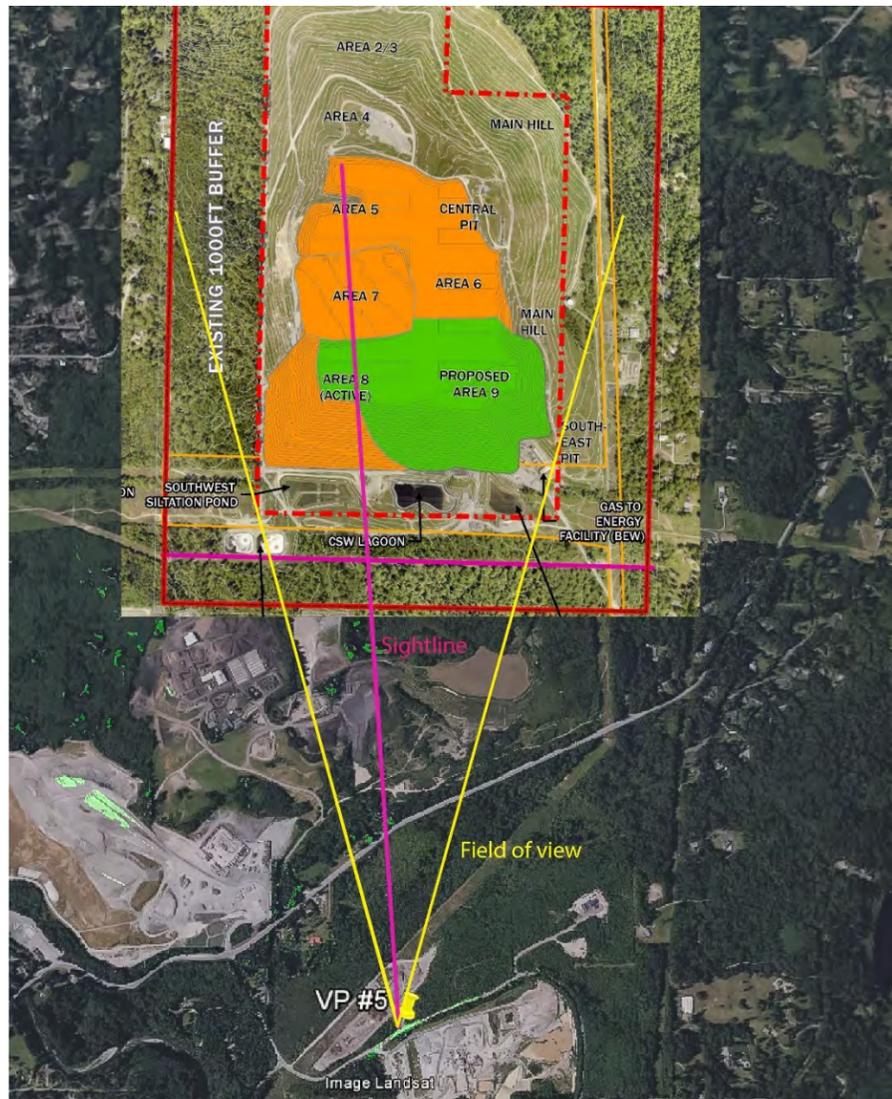


Figure 35. Alternative 2 As Seen from Viewpoint #5

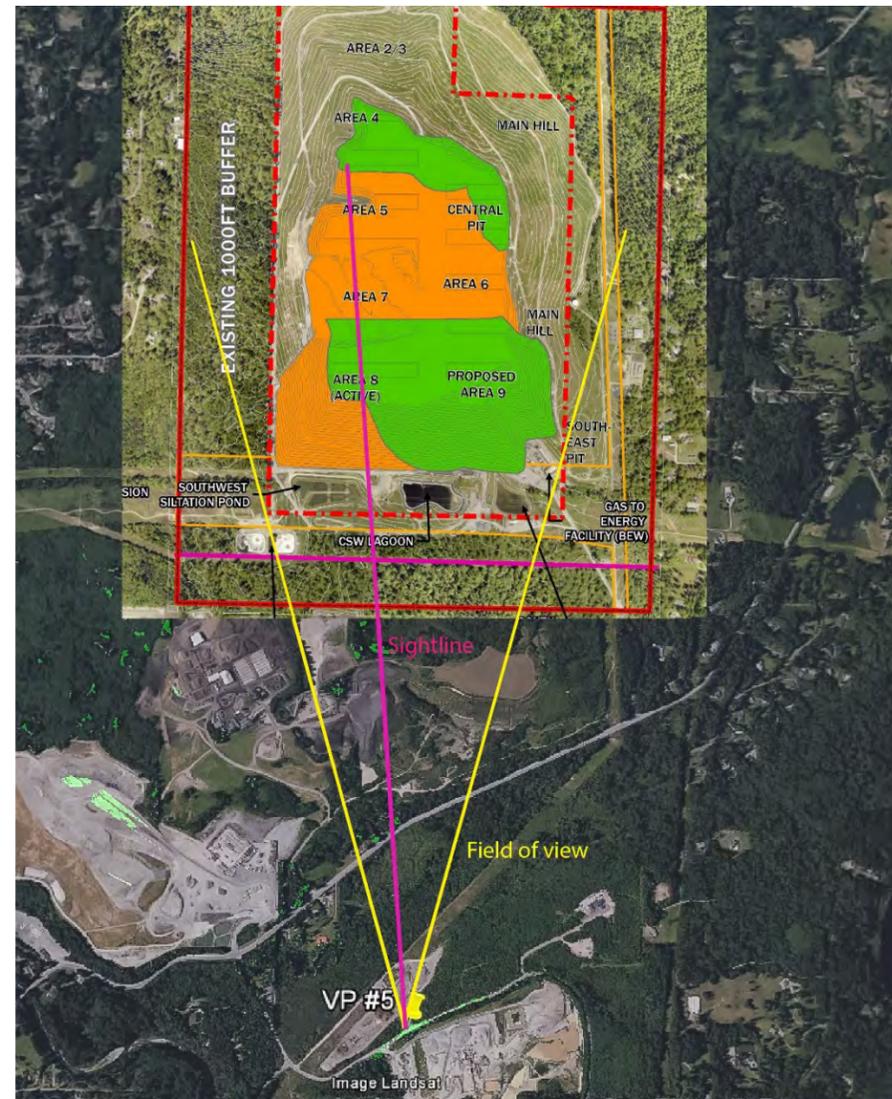
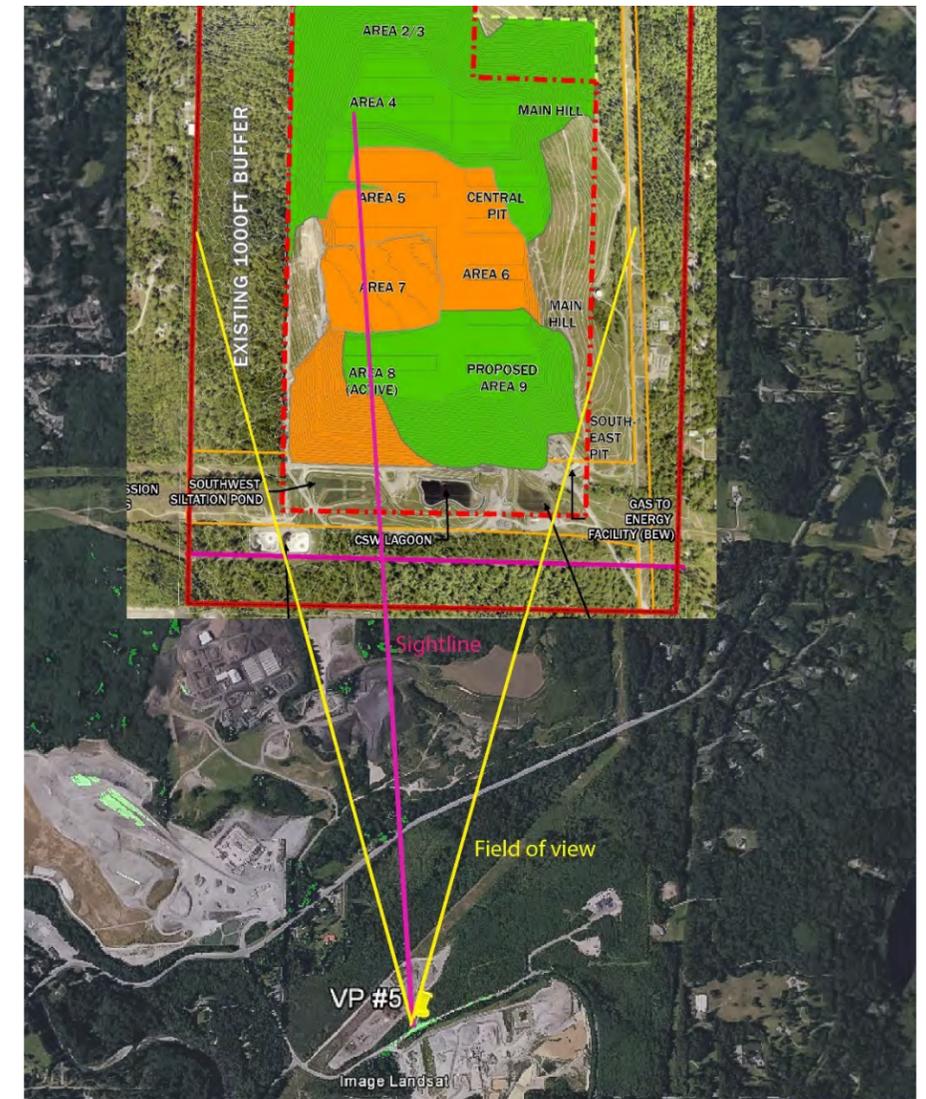


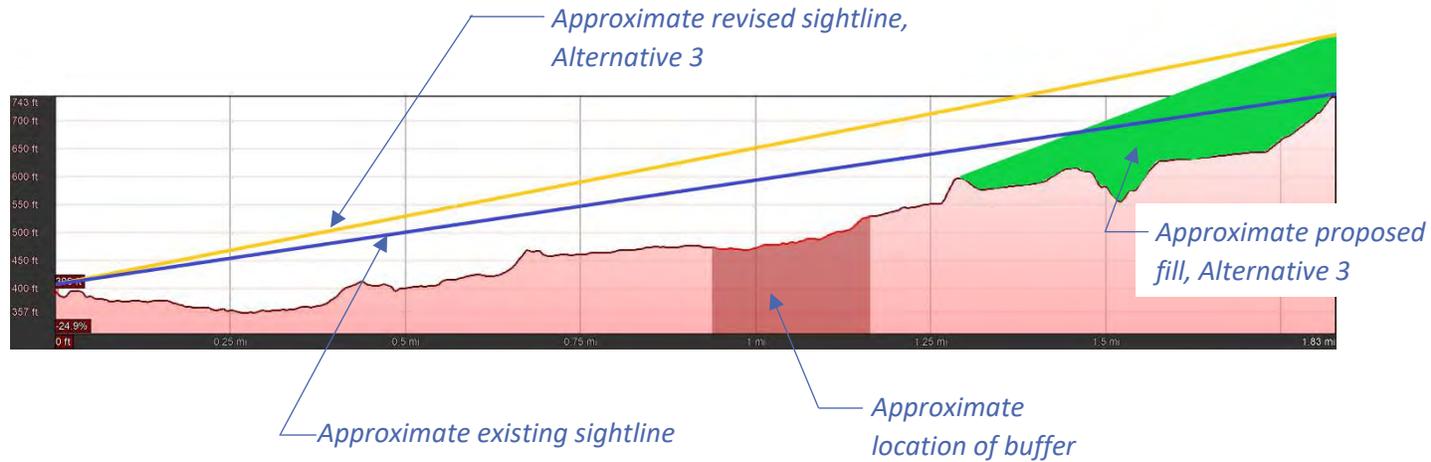
Figure 36. Alternative 3 As Seen from Viewpoint #5



3.2.8.1 Visual Effects

While this viewpoint affords visual access to Areas 4, 5, 6, 7, 8, and 9, there are no changes in visual effects previously described in the 2017 VRA concerning the maximum elevation in each area, and the presence of landfilling operations and earth-moving equipment. Upon completion of the landfill operations, a grass vegetative cover would dominate the view. Existing vegetation and landforms in the middle ground completely obscure views of the South Landfill Facilities identified in Options 1 and 2. The diagram in Figure 37 illustrates how the current view of the landfill would be altered by the proposed fill in Areas 8 and 9 under Alternative 3.

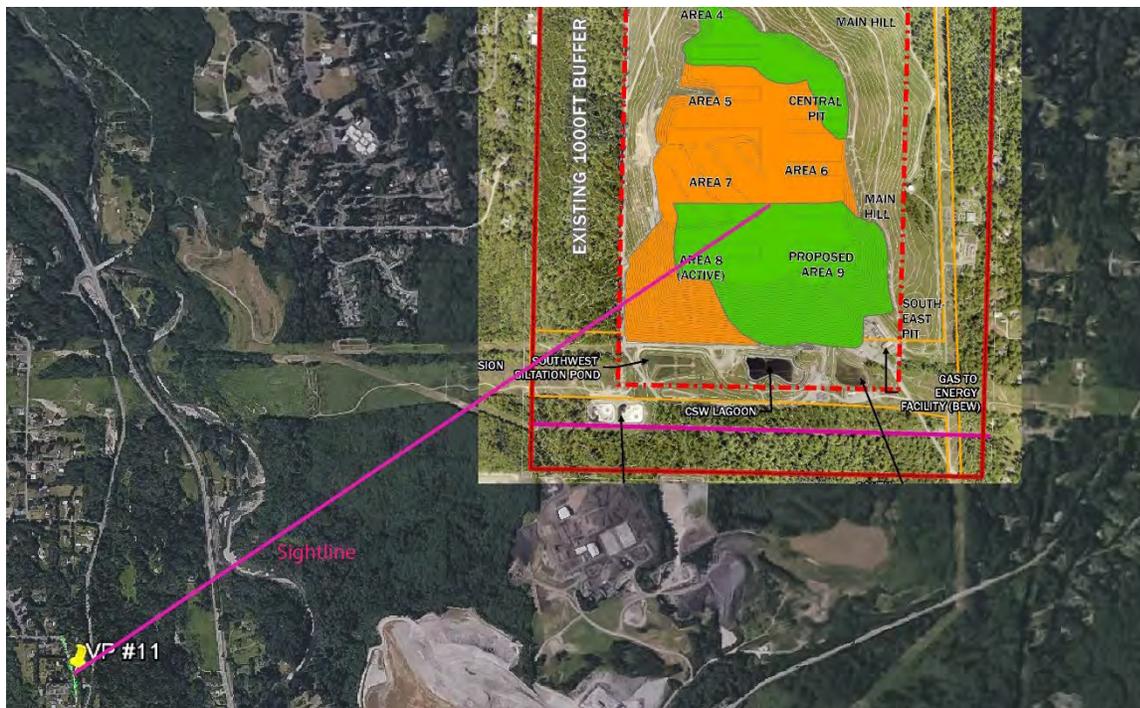
Figure 37. Viewpoint #5 Sightline Analysis



3.2.9 Viewpoint #11

Winter-time glimpses of the landfill are fleeting along 195th Place SE between SE 174th Street and SE 176th Street. Dense roadside vegetation effectively screens views of the landfill. This viewpoint is approximately 1.75 miles from the longitudinal center of the landfill and is essentially at the same elevation as the landfill. Vegetation in the perimeter buffer also effectively screens views of the landfill. The field of view is limited to the sightline due to existing vegetation at Viewpoint #11. See Figure 38.

Figure 38. Alternative 2 As Seen from Viewpoint #11²²



²² Sightline to proposed fill is limited and views of the landfill will be the same under all alternatives and options.

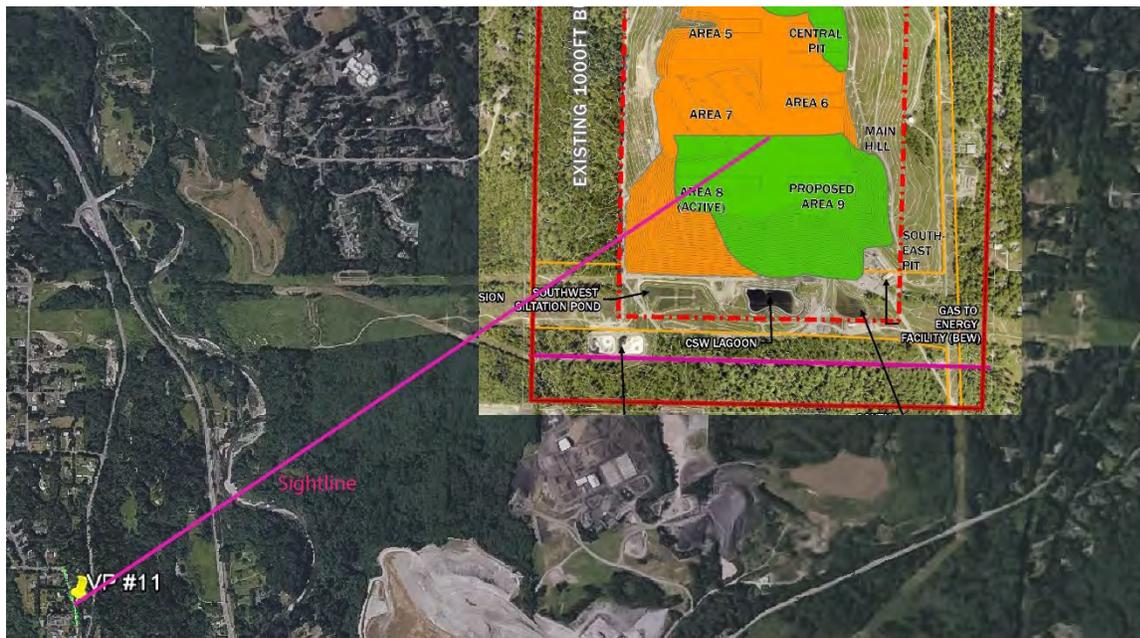
3.2.9.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA.

3.2.10 Viewpoint #12

This viewpoint at SE 174th Way and 187th Place SE is in a well-established single-family neighborhood in the Maple Heights community and is presently approximately at the same elevation as the landfill. Native stands of vegetation are not as much of a factor for obstructing views to the landfill. Instead, steep topography, some ornamental landscaping, and rooflines on multi-story homes obstruct views to the landfill. The field of view is limited to the sightline due to existing vegetation at Viewpoint #12. See Figure 39.

Figure 39. Alternative 2 As Seen from Viewpoint #12²³



3.2.10.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA.

3.2.11 Viewpoints #6, #7, and #8

These viewpoints are located in a dense residential neighborhood at the base of the perimeter buffer. The perimeter buffer effectively obstructs all views to the landfill from these viewpoints.

3.2.11.1 Visual Effects

There are no changes to the visual effects described in the 2017 VRA.

²³ Ibid.

3.3 Renton Site

3.3.1 RR Viewpoint #1

South from the intersection of NE 3rd Street and Edmonds Avenue SE, Edmonds Avenue SE is the only access to Liberty Ridge, a residential community with 569 single family homes and approximately 1,650 people. As such, the avenue's primary function is a commuter route used principally by residents, delivery and service trucks, and emergency response vehicles. RR Viewpoint #1 is approximately one-quarter mile southwest of the Renton site and is located on a two-lane road with sidewalk. The posted speed limit along this road is 25 mph. This viewpoint is at El. 285', approximately 50 feet below the building site. The homes in Figures 40 and 41 are approximately 85 feet below the Renton (Option 3) site.

Figure 40. RR VP #1



Figure 41. Sightline and Section Elevation: RR VP #1



3.3.1.1 Visual Effects

The construction of the Administration and Maintenance Buildings will add two more rooflines among the myriad of rooflines evidenced in Figures 40 and 41. The profile of the Administration Building will be approximately 26 feet above the site elevation and will be less than the new construction occurring during the summer 2019 at the self-storage units. Views of the Maintenance Building, also 26 feet above site elevation, will be insignificant from RR VP #1 because of its proposed siting at a lower site elevation and 100 feet east of the west property line. Vegetation clearing will be evident.

3.3.1.2 Summary – RR VP #1

Viewpoint Location	47°29'0.05"N, 122°11'7.03"W
Approximate Street Location	Edmonds Avenue SE
Viewpoint Elevation	285'
Visible Site Elevation	334'
Relation between Viewpoint and Site Elevations	Viewpoint below site: 49'
Distance to Site	1,540 feet
Primary Viewer Group	Residents
Viewer Sensitivity	Low
Vividness ²⁴	Low
Unity	Low
Intactness	Low

3.3.2 RR Viewpoint #2

RR Viewpoint #2 is located on NE 3rd Street between Downtown Renton, I-405, and the East Renton Highlands. See Figure 42. This busy arterial is a major transportation route for commuters, commercial traffic, and students attending the neighboring Renton Technical College. The average daily traffic at this viewpoint is approximately 33,000²⁵ vehicles.

Figure 42. RR VP #2



²⁴ Vividness, unity, and intactness are defined in the 2017 VRA

²⁵ City of Renton, Department of Public Works

Figure 43. Sightline and Section Elevation: RR VP #2



The construction of the Administration and Maintenance Buildings will add two more rooflines among the myriad of rooflines evidenced in Figure 43. The profile of the Administration Building will be approximately 26 feet above the site elevation and will be less than the new construction occurring during the summer 2019 at the self-storage units. Views of the Maintenance Building, also 26 feet above site elevation, will be insignificant from RR VP #1 because of its proposed siting at a lower site elevation and 100 feet east of the west property line. Vegetation clearing will be evident.

3.3.2.1 Summary –RR Viewpoint #2

Viewpoint Location	47°29'11.50"N, 122°11'1.54"W
Approximate Street Location	NE 3 rd Street
Viewpoint Elevation	300'
Visible Site Elevation	334'
Relation between Viewpoint and Site Elevations	Viewpoint below site: 34'
Distance to Landfill	1,148 feet
Primary Viewer Group	Commuters, Commercial Traffic
Viewer Sensitivity	Low
Vividness	Low
Unity	Low
Intactness	Low

3.3.3 RR Viewpoint #3

This viewpoint is situated on Jefferson Avenue NE. This road serves the King County Renton Recycling and Transfer Station, King County Roads Maintenance Facilities, City of Renton Public Works Department, and a borrow pit. It is about 680 feet from the proposed Administration Building site and there is no appreciable elevation difference between the viewpoint and the site. The primary viewers are commuters, haulers, and transfer station customers. See Figures 44 and 45.

Figure 44. RR VP #3



Figure 45. Sightline and Section Elevation: RR VP #3



3.3.3.1 Visual Effects

The absence of mature native vegetation will be apparent at the building site for the Landfill Support Facilities. Proposed landscaping along the entire north perimeter of the site will eventually create a visual buffer between the viewpoint and the site. This landscaping will also partially obscure the presence of the Administration Building, which will be approximately 26 feet above the current elevation. The Maintenance Building, if evident, will appear as another roofline in the myriad of rooflines in the area. Because the proposed construction is at a lower elevation than the Administration Building, the Maintenance Building will likely not be very prominent.

3.3.3.2 Summary –RR Viewpoint #3

Viewpoint Location	47°29'10.24"N, 122°10'39.61"W
Approximate Street Location	NE 3 rd Street
Viewpoint Elevation	335'
Visible Site Elevation	334'
Relation between Viewpoint and Site Elevations	Viewpoint above site: 1'
Distance to Landfill	682 feet
Primary Viewer Group	Commuters, Commercial Traffic, Customers
Viewer Sensitivity	Low
Vividness	Low
Unity	Low
Intactness	Low

3.4 Options – Landfill Support Facilities Relocation

3.4.1.1 Option 1a

Option 1a identifies relocating and building landfill support facilities within the southern buffer zone. In this option, approximately 10.5 acres of mixed evergreen and deciduous forest and understory would be removed. Grading to accommodate the construction of the support facilities would result in minor alterations to the topography. Neither the vegetation removal or topographic alterations would likely be visible to off-site viewers because of the topographic relief and existing vegetation in the remaining 500-foot buffer.

3.4.1.2 Option 2a

Option 2a identifies relocating and building landfill support facilities within the northern buffer area. In this option, approximately 6.5 acres of mixed evergreen and deciduous forest and understory would be removed. Grading to accommodate the construction of the support facilities would result in minor alterations to the topography. Neither the vegetation removal or topographic alterations would likely be visible to off-site viewers because of the topographic relief and existing vegetation in the remaining 500-foot buffer.

3.4.1.3 Option 3a

Option 3a locates the Administration Building, Maintenance Building and most tractor and trailer parking at the Renton site. See Section 3.3 for a discussion of visual effects.

3.4.1.4 Options 2b and 3b

Options 2b and 3b reposition existing facilities in the area south of the waste disposal area. These facilities will not be located within the buffer. The relocation of these existing facilities would not have any effect on the overall visual resources in these areas.

3.5 No Action Alternative

Under the No Action Alternative, changes to the visual quality are as identified in the 2010 approved site development plan and FEIS. Landfilling in Area 8 would continue as currently permitted to 788 feet. Landfill support facilities would remain in their current location and there would be no new or revised land use permits.

4 Mitigation

The design features and Best Management Practices (BMPs) the Applicant proposes to avoid or minimize environmental impacts during construction and operations and those required by agency standards or permits are assumed to be part of the Project and have been considered in assessing the environmental impacts to aesthetics and visual resources. While no specific significant visual impacts as a result of the action alternatives have been identified, it is important to maintain mitigation efforts currently in place to preclude unforeseen compromises in visual quality. These mitigation measures include:

4.1 Screening

Due to the height of the landfill, screening with earthen berms, fences, or planted vegetation will not completely eliminate project visibility. The current perimeter buffer has been successful in providing a visual screen for properties in close proximity to the project site. This buffer should be maintained, particularly along the roadways immediately adjacent to the landfill property. Infilling with additional younger trees and shrubs would ensure longevity as some of the older vegetation begins to decline. Where uses in the buffer occur on the north and/or south sides, infilling with additional younger trees and shrubs, especially concentrated in the buffer closest to new construction, would provide enhanced screening.

The buffer along the west edge of the landfill is largely comprised of deciduous trees. Infilling with evergreen trees will strengthen the visual screening during winter months.

Introducing native, fast-growing evergreen trees along the interface of the buffer and the landfill will eventually maximize the benefit derived from vegetative screening. Trees such as Douglas Fir, Western Hemlock, Western Red Cedar, Sitka Spruce, Grand Fir, and Noble Fir are examples of trees that grow in excess of 135 feet; many of these species will typically grow to 200 feet.

New trees should be planted in "uneven aged" clusters which will reduce the "front-end" cost and ensure that the resulting buffer will appear more "natural."

4.2 Other Mitigation

- Use motion- and/or user-controlled light systems to minimize the amount of nighttime artificial lighting where practicable and safe.
- Use neutral colors for non-safety-related structures and equipment to reduce the visual impact of bright colors.
- Use non-reflecting materials and finishes to reduce glare where practical.
- Continue to use typical landfill covers such as seeding.
- Continue to use uniform design grades, colors, and heights across the landfill site. At the conclusion of operations, consider manipulating design grades to conform with surrounding natural terrain.
- Do not place any advertising appurtenances on the landfill.

5 References

CH2M Hill, Inc. *Cedar Hills Regional Landfill Support Facilities Evaluation – Phase 2*. January 2019.

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Herrera Environmental Consultants, Inc., HDR, Inc., and BHC Consultants, LLC. *Volume 1: Final Technical Report, Site Development Alternatives for Cedar Hills Regional Landfill*. November 2017.

CEDAR HILLS REGIONAL LANDFILL 2020 SITE DEVELOPMENT PLAN

Final Environmental Impact Statement

Visual Quality and Aesthetics Addendum: Supplemental Technical Memorandum



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Herrera Inc.

Prepared by:
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November 15, 2021

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1 Introduction and Summary

1.1 Introduction

The preparation of a Scenic Resources, Aesthetics, Light and Glare Technical Memorandum (Visual Resource Assessment) and Supplemental Visual Resource Assessment analyzed project visibility, appearance, and visual impacts of proposed project action alternatives for the Site Development Alternatives at Cedar Hills Regional Landfill. While no significant adverse visual impacts were identified, these memoranda also identified mitigation measures that likely would reduce visual effects of the proposed actions at the CHRLF and at the Landfill Support Facilities.

A site located at 3004 NE 4th Street in Renton was proposed as one option for constructing Landfill Support Facilities. Because this option is not contiguous or within the bounds of CHRLF, the SVRA established the visual assessment methodology for this off-site location, including, defining the viewshed, determining viewer sensitivity, identifying key viewpoints, and assessing visual impacts.

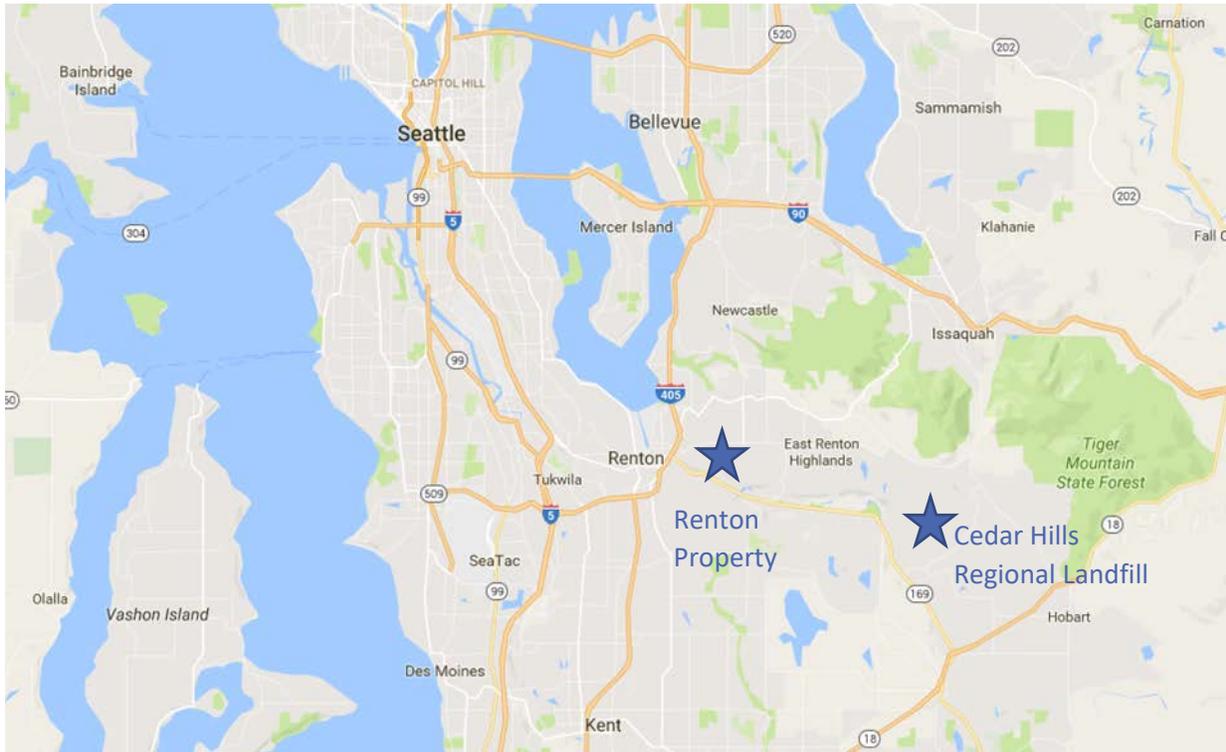
After issuing the DEIS, additional site development details became available for constructing landfill support facilities at the Renton site. The proposed presence of noise and retaining walls triggered a re-evaluation at this site to ascertain whether the proposed construction resulted in any adverse visual effects. This re-evaluation also afforded an opportunity to address additional mitigation measures that include aesthetic considerations for minimizing views to these walls.

1.2 The Project Site

The Renton site located at 3004 NE 4th Street in Renton, is in the King County Roads complex and is northwest of the existing Renton Transfer Station. This 8-acre undeveloped property is owned by King County. In addition, 0.76 acres along the east side of the site would be acquired from the King County Roads Department. Access to the site is from Jefferson Avenue NE on the east side; the same road currently used to access the transfer station. This site is the subject of proposed facilities relocation Option 3a only (i.e., no landfill development is proposed for this location). See Figure 1.

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Figure 1. Vicinity Map

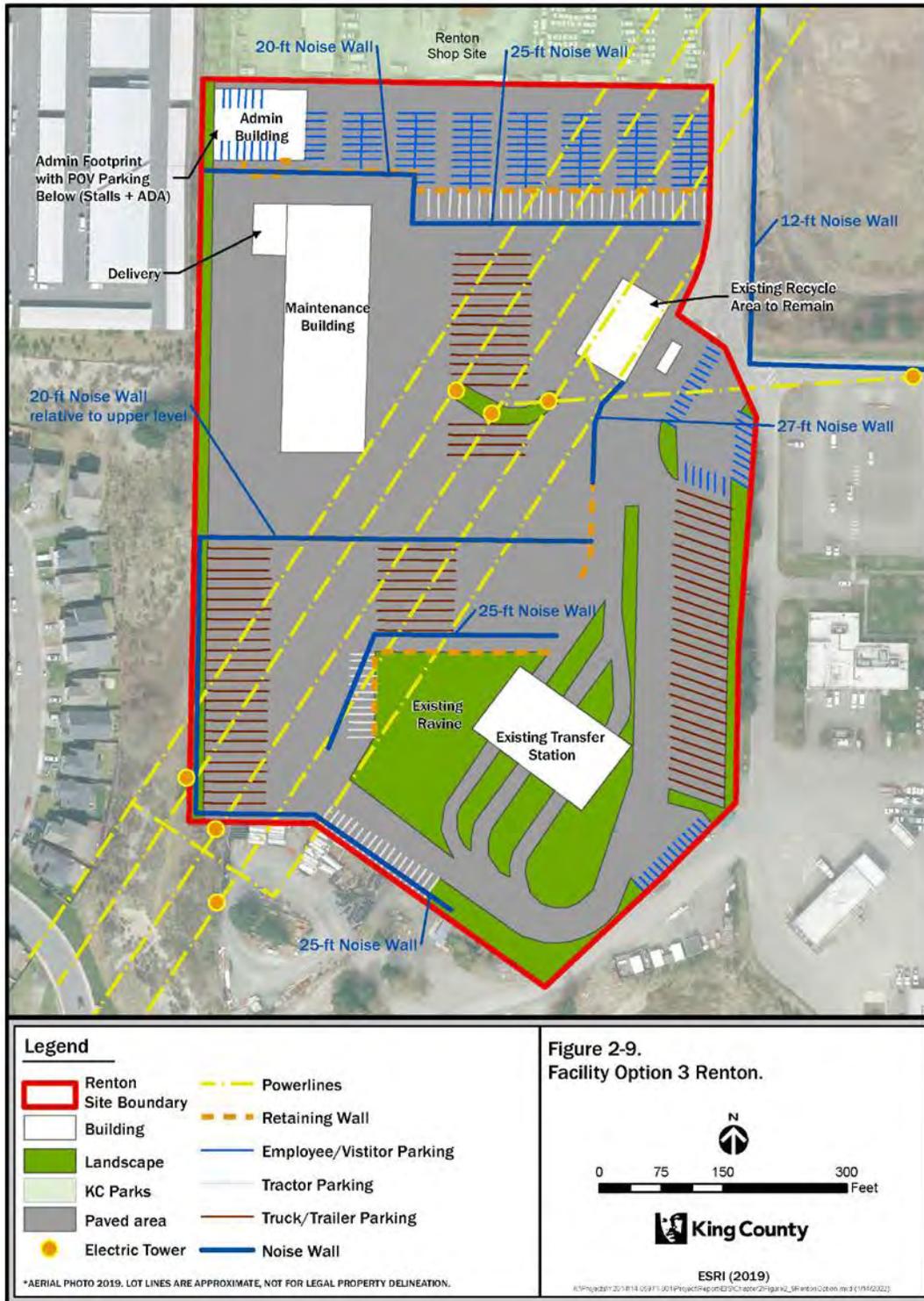


1.3 Overview of Proposed Landfill Support Facilities, Renton

During 2018 and 2019, King County identified and evaluated several alternatives to expand the capacity at the CHRLF and three options for relocating the Landfill Support Facilities. Option 3a identifies relocating and building landfill support facilities at an off-site location at 3004 NE 4th Street in Renton, adjacent to King County’s Renton Transfer Station. The facilities that would be relocated include a portion of the vehicle maintenance shop (for repairing tractors, trailers, operations vehicles, and passenger vehicles), employee offices, and parking for employees, tractors, trailers, and operations vehicles. See Figure 2.

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Figure 2. Site Plan, Landfill Support Facilities-Renton



1.4 Summary of Visual Effects

1.4.1 Landfill Support Facilities Relocation

Renton Site: The profiles of the Administration and Maintenance Buildings are similar to other neighboring buildings adjacent to the Renton site. These two additional rooflines and associated drives, parking, and retaining walls will blend in with the myriad of rooflines, roads, and parking in this neighborhood. While some vegetation clearing will be evident, no significant adverse impacts were identified.

Any visual impacts resulting from implementing Option 3a are considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obscured by current development in the area.

1.4.2 Light and Glare

The excessive uses of artificial light and reflected light contribute to light and glare impacts. To determine the impacts of light and glare from the landfill support facilities relocation, typical sensitive uses such as residences in the vicinity of the site were identified. New sources of artificial light will be present at the Renton site. Because artificial lighting is common throughout this area, this additional lighting would be difficult to perceive.

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2 Affected Environment

2.1 RR Viewpoint #1

Within a one-mile radius of the Renton Site, there are very few unobstructed views to the site due to topography, vegetation, or other structures. Beyond the one-mile radius, the landscape appears as a collage of rooflines with no discernable or distinct features in the vicinity of the project site. Additional analysis of RR Viewpoint #1 was completed to identify views to the noise and retaining walls as well as the buildings.

Figure 3, showing the location of Viewpoint #1, is updated with a superimposed conceptual site plan for Option 3a Development at the Renton site. This viewpoint is approximately one-quarter mile southwest of the Renton site and is located on a two-lane road with sidewalk. As stated in the SVRA, this viewpoint is approximately 50 feet below the elevation of the proposed site and the homes within the Liberty Ridge development are approximately 85 feet below the site. The self-storage buildings immediately adjacent to the proposed project site are approximately the same mass and size as the proposed buildings. See Figure 4.



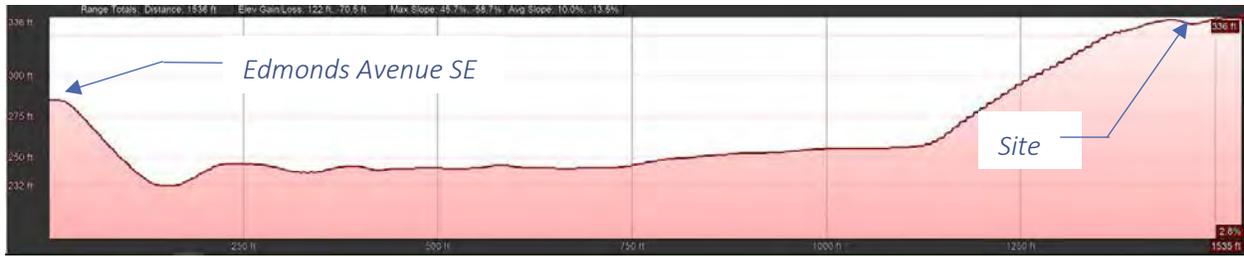
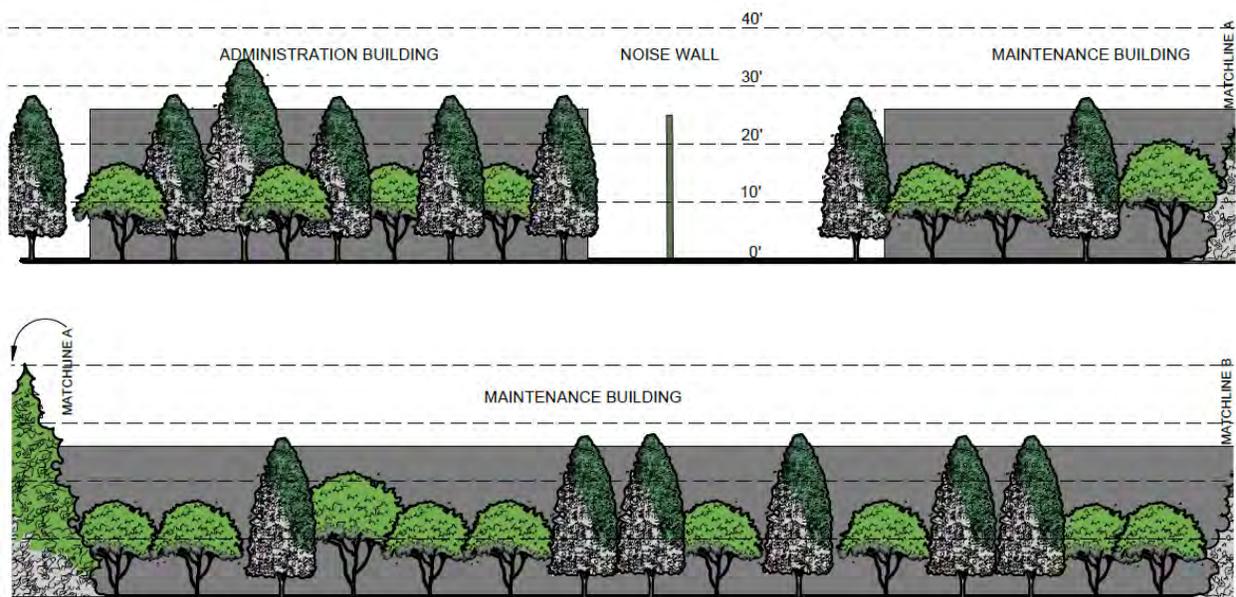


Figure 4. View to Site



Figure 5 represents an at-scale section-elevation along the west property line of the proposed site. The enlargement is for clarity only. The actual height of the various elements from 0.25 miles would appear much smaller. The self-storage units would obscure views of a portion of the maintenance building and administration building from the actual location at the viewpoint. In Figures 3 and 4, proposed trees are graphically represented at maturity.

Figure 5. Elevation along West Property Line



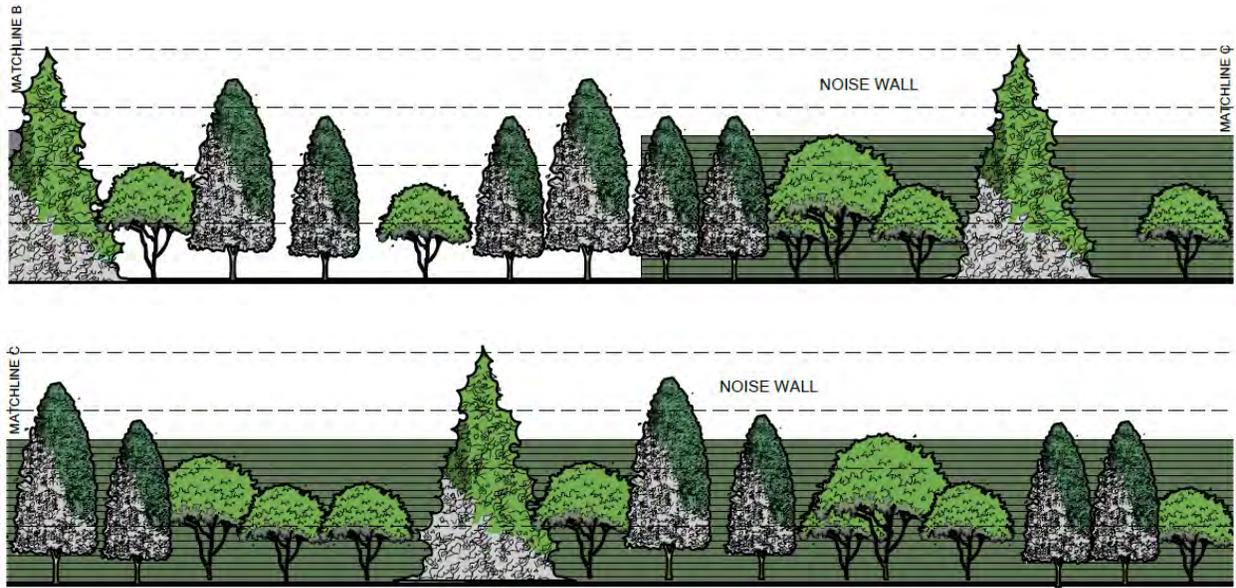
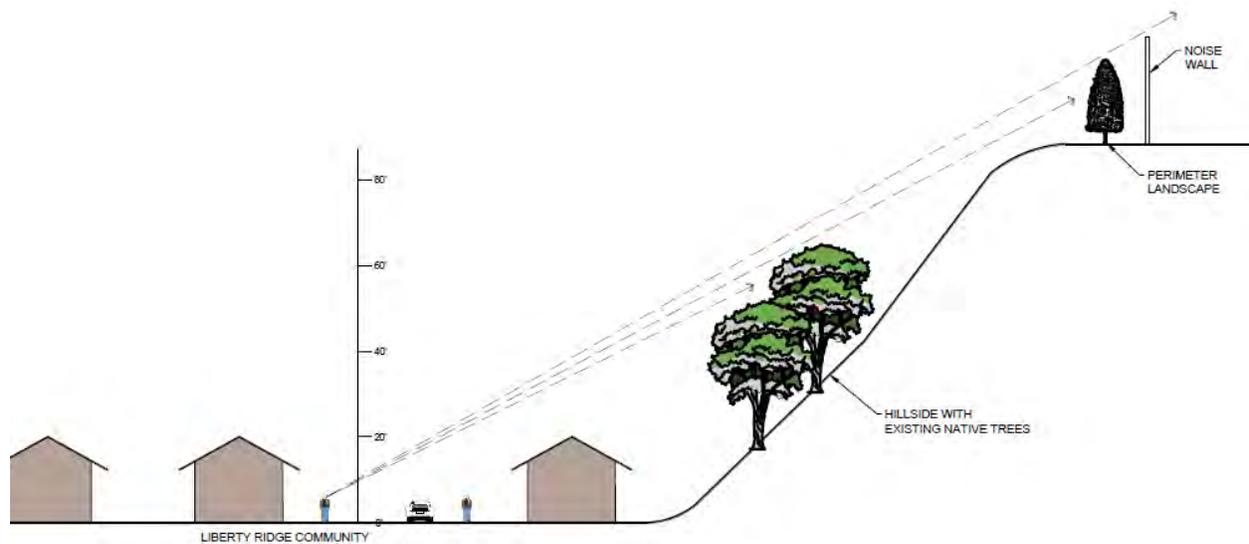


Figure 6 illustrates potential views of the site from within the Liberty Ridge Development. As noted in the SVRA, views to the site from Liberty Ridge are very limited due to the topographic relief between the proposed site and the Liberty Ridge Community.

Figure 6. Potential Views from Liberty Ridge Community



2.1.1 Visual Effects

The construction of the Administration and Maintenance Buildings would add two more rooflines among the myriad of rooflines evident in Figures 3 and 4. The profile of the Administration Building would be approximately 26 feet above the site elevation. There may be intermittent views of the Administration Building from Edmonds Avenue, but from the viewpoint, the line of sight to the Administration building would be obscured by the buildings in the Self-Storage complex. Views of the

Maintenance Building, also 26 feet above site elevation, would be less visible from RR VP #1 because of its proposed siting 100 feet east of the west property line. The visible noise walls from this viewpoint would also be about 25 feet above the site elevation. Refer to Figure 5.

Multiple walls would be constructed to reduce the impacts associated with noise and for retaining soil. The final design, including heights, materials, and type of barrier would be determined during the final design and when the locations of noise sources relative to impacted residences are finalized. To minimize visual impacts, aesthetic considerations would include constructing with material that would soften the verticality of the wall face by providing visual texture and reducing the amount of smooth surface that can reflect light. Earth-toned colors for the wall surface would be less distracting to viewers and would help the wall blend with planted vegetation as it matures. Studies indicate that structures colored to complement the general surrounding area and yet are slightly darker, create less of a visual impact than matching or using lighter hues (U.S. Bureau of Land Management, 2008). In general, very light buff/tan, brown, or gray colors stand out more than darker colors such as deep browns, deep red-browns, and deep warm grays. These darker colors would complement the surrounding vegetation. A landscaped buffer consisting of evergreen and deciduous trees along the site perimeter and immediately adjacent to the walls would partially obscure their presence. Views into the site would diminish as plantings in the landscaped buffer mature.

The introduction of nighttime lighting on the site where all such lighting is currently absent will blend with the smattering of lights from commercial signs, streetlights, and passing vehicles. Onsite lighting would largely be obstructed by topography, structures, and vegetation. Any nighttime lighting would be directed down and away from any potentially sensitive receptors such as residences.

Shadows and shading would not affect offsite properties on the north, west, and south sides of the project site due to topographic relief. Afternoon shadows may shade the entrance/exit road to the existing transfer station and is not considered an impact.

Construction impacts: The presence of construction equipment would result in temporary construction impacts by altering the composition of the view available from and to the project site. Residents would have construction occurring in close proximity to them; however, residents would not have views of the construction activities because nearby homes are significantly downslope from the project site. During construction, the contractor would minimize project-related light and glare to the maximum extent feasible given safety considerations. Portable lights would be operated at the lowest allowable wattage and at a height no greater than 20 feet. All lights would be screened and directed downward toward work activities and away from the night sky.

2.2 RR Viewpoint #2

The visual effects from Viewpoint #2 are largely the same as described for Viewpoint #1 above.

2.3 RR Viewpoint #3

This viewpoint is situated on Jefferson Avenue NE. This road serves the King County Renton Recycling and Transfer Station, King County Roads Maintenance Facilities, City of Renton Public Works Department, and a borrow pit. It is about 680 feet from the proposed Administration Building site and there is no appreciable elevation difference between the viewpoint and the site. The primary viewers are commuters, haulers, and transfer station customers. Figure 7 showing the location of Viewpoint #3 is updated with a superimposed conceptual site plan for Option 3a development.

Figure 7. Sightline and Section Elevation: RR Viewpoint #3



2.3.1 Visual Effects

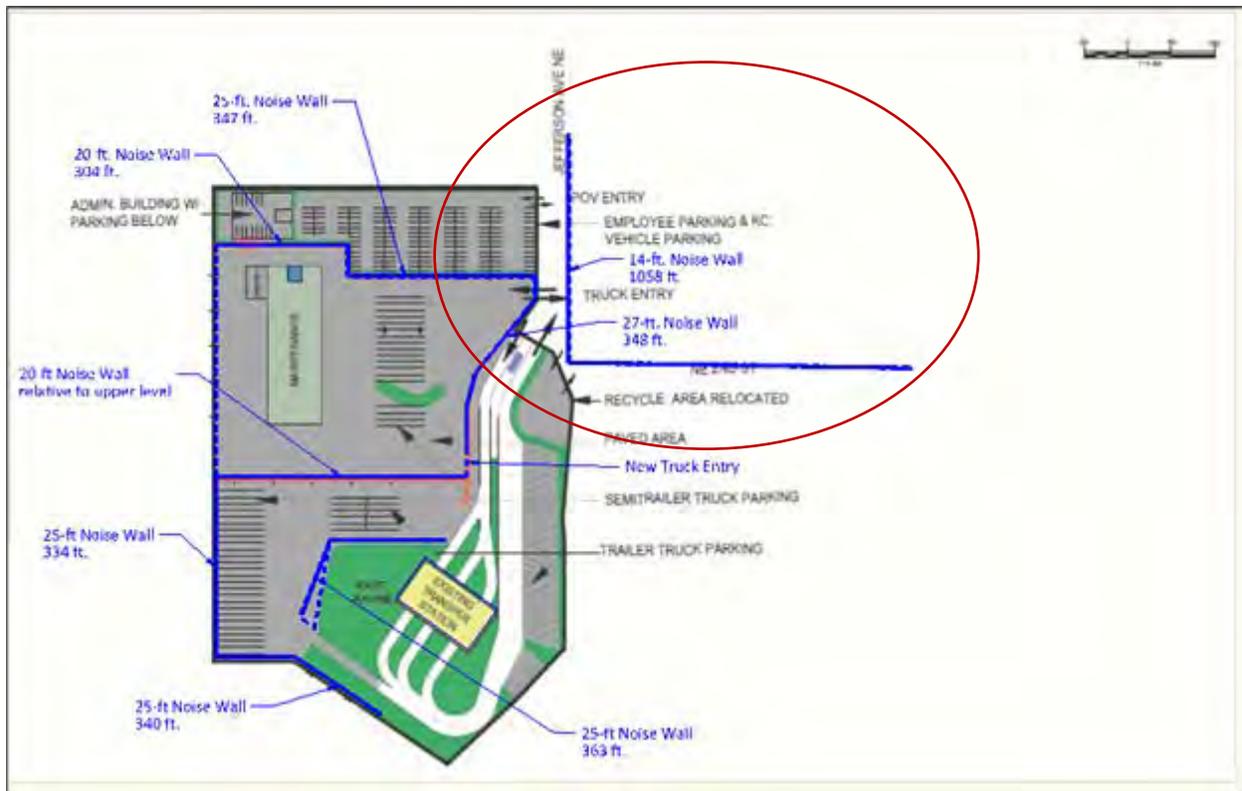
This viewpoint is situated on Jefferson Avenue NE. As stated in the SVRA, this road serves the King County Renton Recycling and Transfer Station, King County Roads Maintenance Facilities, City of Renton Public Works Department, and a borrow pit. It is about 680 feet from the proposed Administration Building site and there is no appreciable elevation difference between the viewpoint and the site. The absence of mature native vegetation would be apparent at the building site. The Administration Building, which would sit approximately 26 feet above the current elevation; a parking lot for privately-owned vehicles along the north side of the site; and the proposed noise wall, located approximately 200 feet south of the north property line, would be visible from this viewpoint. Proposed landscaping consisting of evergreen and deciduous trees along the entire north perimeter of the site will eventually create a visual buffer between the viewpoint and the site.

As previously discussed in Section 2.1.1, Viewpoint #1 Visual Effects, aesthetic considerations would include designing and constructing the buildings and walls with materials and textures that introduce horizontal patterns and would soften the verticality of the structures. Color and texture would also be selected to eliminate reflective surfaces, and thereby reduce glare. New plantings would improve aesthetics of the proposed project and provide visual screening. As these plantings continue to mature, they would increasingly obstruct views into the site. Nighttime lighting and construction effects are as previously discussed.

The property immediately east of Jefferson Avenue NE and north of NE 2nd Street is currently occupied by an active City of Renton gravel mining operation (borrow pit). Jefferson Avenue NE separates this property from the entrance to the Renton Transfer and Recycling Station and the proposed entrance to the landfill support facilities. When mining operations cease, it is likely this site will be developed pursuant the City of Renton Zoning Code. This entire property is zoned Residential R-10 (10 DU/Acre).

As part of the Cedar Hills Regional Landfill 2020 Site Development Plan EIS, a noise assessment was conducted to measure existing and projected community noise levels at positions around the landfill support facilities site. The zoning of a property determines the applicable noise limits rather than the current use of the property. To respond to the future likely land use change to residential use, the noise assessment concluded that noise walls would be necessary to ameliorate noise levels. A 14-foot noise wall would extend along the east side of Jefferson Avenue NE and the north side of NE 2nd Street for approximately 1,060 feet. See Figure 8. Another noise wall would extend through the current recycle area adjacent to the transfer station entrance road.

Figure 8. Proposed Noise Wall along Jefferson Avenue NE and NE 2nd Street



Recognizing that the gravel mining operation significantly altered the topography in the area zoned for future residential use, it is likely that the future residential community would be constructed at grades lower than the existing street elevation of Jefferson Avenue NE. Views into the landfill support facilities from residences closest to Jefferson Avenue NE would be visually blocked by the topographic relief and the presence of the noise walls. Views from residences farther from Jefferson Avenue NE would likely be similar to the views experienced by residents in the Liberty Ridge Community. Lines of sight to the facilities and walls would be non-existent or intermittent; obstructed by topography, walls, and vegetation. As the distance from the support facilities site increases, discernable views would also diminish. Figure 10 is a cross section that illustrates one possible scenario of the visual relationship between the future residential community, the walls, Jefferson Avenue NE, and the support facilities site.

Figure 9. Plan Showing Location of Cross Section

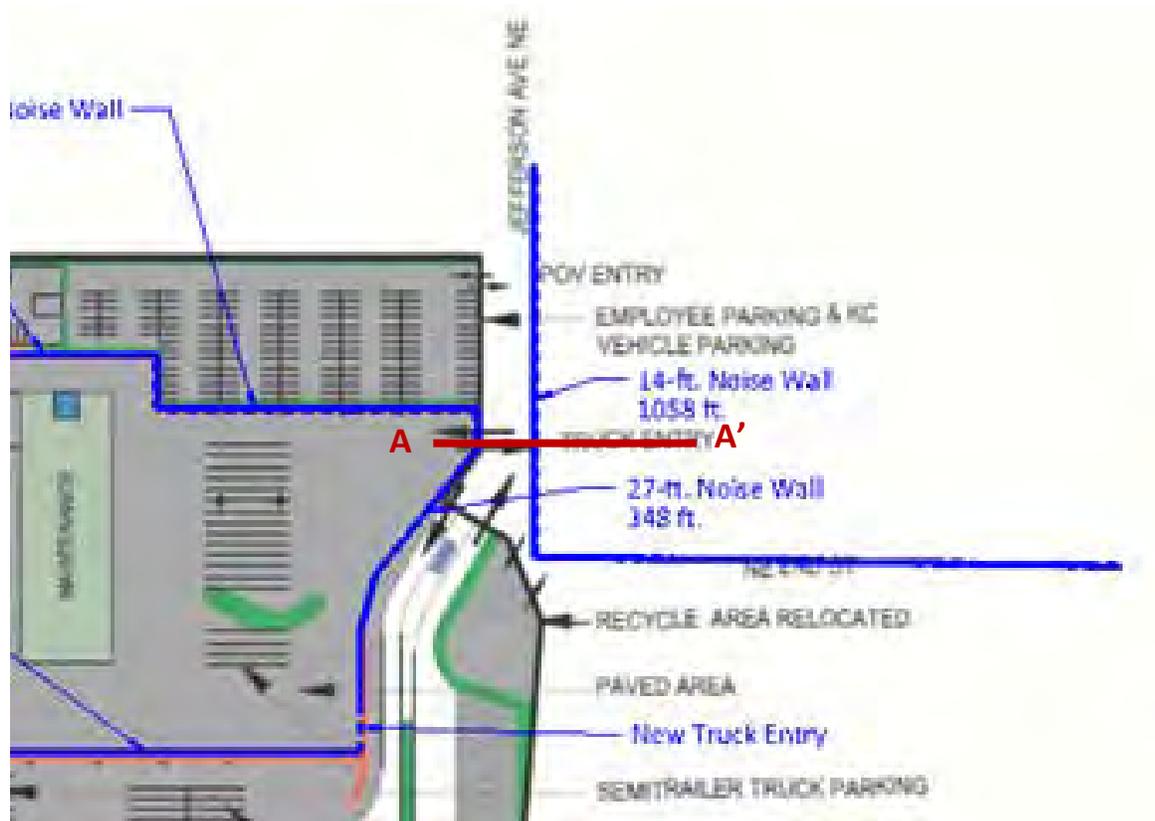
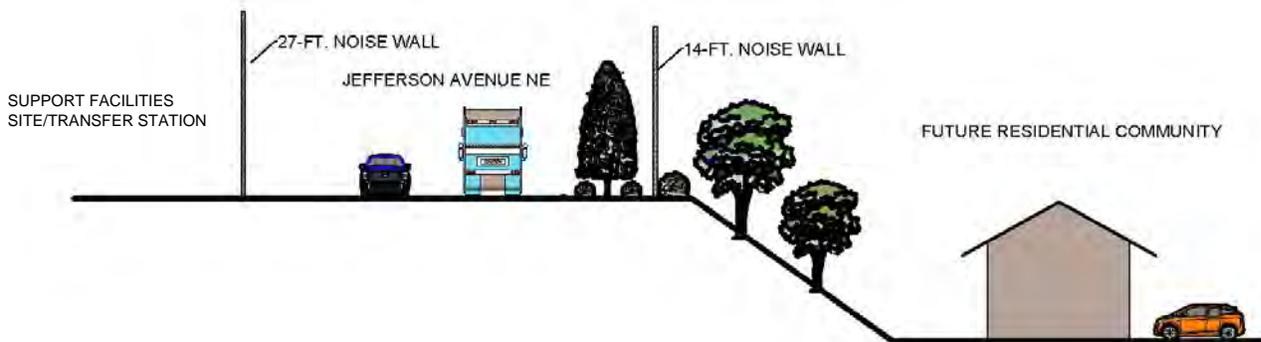


Figure 10. Cross Section A-A': Future Residential Community and Walls

(One possible scenario depicting a future residential community constructed at an elevation lower than that on Jefferson Avenue NE.)



2.3.2 Visual Effects – Proposed Walls Along Jefferson Avenue NE

The addition of a noise wall on the east side of Jefferson Avenue NE and the north side of NE 2nd Street would be visible to commuters, haulers, and transfer station customers. The wall would be 14 feet above street level and set back from the road for safety and to allow for the planting of vegetation-obscuring landscape along the wall perimeter. The 27-foot high noise wall on the west side of Jefferson Avenue NE would be visible to all travelers on the road and particularly to those visiting or working at the transfer station site.

As previously discussed, aesthetic considerations would include designing and constructing the walls with materials and textures that introduce horizontal patterns and would soften the verticality of the structures. Color and texture would also be selected to eliminate reflective surfaces, and thereby reduce glare.

Other than the period between May and August and depending upon the final site topography, residential yards immediately adjacent to the wall would be shaded. The entrance drive to the transfer station would be shaded.

3 Mitigation Measures

3.1 Mitigation Measures at Renton Site

While no specific significant visual impacts resulting from the proposed development under Option 3a at the Renton site have been identified, it is important to institute mitigation efforts to preclude unforeseen compromises in visual quality. These mitigation measures would include:

- Incorporate Best Management Practices to avoid or minimize environmental impacts during construction and operations.
- Establish landscaping comprised of evergreen and deciduous trees and shrubs around the perimeter of the site. The minimum width of the perimeter landscaping would be five feet. To maximize the visual impact of the landscape in the narrow-width planting beds, a variety of tree species, shrubs, and vines would be planted in clusters to begin to simulate a more naturalistic landscape instead of a hedge row of trees. At initial planting, trees would also be specified with variable sizes and seasonal color would be considered.
- Install wire grid panels randomly along walls. Planted vines on these wire grids would eventually climb and disrupt the visual continuity along the wall.
- Utilize materials and textures on vertical surfaces to soften the verticality of wall faces and reduce the amount of smooth surface that can reflect light and cause glare.
- Use earth-toned colors to complement the general surrounding area.
- Direct nighttime lighting down and away from any potentially sensitive receptors.
- Minimize fugitive light and glare during construction. Screen lights and direct lighting toward work activities to the maximum extent possible.

[End, SVRA Addendum]