



THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

**CLIMATE ACTION COMMITTEE MEETING
OF THE VILLAGE OF LIONS BAY
HELD ON THURSDAY, APRIL 15, 2021 at 7:00 PM
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY
AND VIA ZOOM VIDEO CONFERENCE**

TO JOIN THE MEETING, CLICK HERE: <https://us02web.zoom.us/j/84655835954>
TO JOIN VIA PHONE, DIAL 778-907-2071 AND ENTER MEETING ID 846 5583 5954

AGENDA

1. **Call to Order**
2. **Appointment of Recorder**
3. **Approval of the Agenda**
THAT the agenda be adopted as submitted.
4. **Public Questions & Comments**
5. **Approval of Minutes**
 - A. Minutes from the March 31, 2021 Climate Action Committee Meeting (page 5)
THAT the March 31, 2021 Climate Action Committee Minutes be approved, as circulated.
6. **Business Arising from the Minutes**
 - A. Outcome of Committee Recommendations to Council from April 13, 2021 Regular Council Meeting – For Information
 - i) Terms of Reference Amendment
Moved/Seconded
THAT Council approves the amended Climate Action Committee Terms of Reference, as follows:
 - Amend the Purpose section to read: “The Village of Lions Bay Climate Action Advisory Committee’s mandate is to provide a technical and local perspective and advice to Council to aid in the advancement of targets, policies and actions for reducing Greenhouse Gas Emissions, and adapting to climate change, as noted in the Official Community Plan (OCP); and
 - Add “research, recommend and engage with sustainability partners outside our community” to the Committee Role and Responsibility section.

CARRIED

ii) Climate Emergency Declaration

Moved/Seconded

WHEREAS the Intergovernmental Panel on Climate Change has recommended emissions reduction targets of 45 percent below 2010 levels by 2030 and 100 percent below 2010 levels by 2050 in order to limit global warming to no more than 1.5 C above pre-industrial levels;

AND WHEREAS these emissions reduction targets are not being met at the national, provincial or local level in Canada and Canadians have some of the highest per capita emissions worldwide;

AND WHEREAS the most recent scientific evidence indicates that climate change is accelerating and increasing in severity and extent, including in Canada;

AND WHEREAS the impacts of climate change will continue to be felt in communities across Canada, including Lions Bay, and significant emission reductions are required to minimize these impacts;

AND WHEREAS Lions Bay is already facing significant costs to deal with the impacts of climate change, including sea-level rise, stormwater and water management, and forest fires;

AND WHEREAS District of West Vancouver, District of Squamish, Islands Trust, Bowen Island Municipality, District of North Vancouver, City of Vancouver, City of Richmond, City of New Westminster, City of Port Moody and the City of North Vancouver and many more jurisdictions around the world have recently declared or officially acknowledged the existence of a global climate emergency;

AND WHEREAS the oxford definition of climate emergency adopted in 2019 is a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.

AND WHEREAS Section 473(3) of the Local Government Act requires local governments to incorporate within their official community plans targets, policies, and actions for the reduction of greenhouse gas emissions;

AND WHEREAS the Council of the Village of Lions Bay adopted Official Community Plan Bylaw No. 408, 2008 and enacted Bylaw No. 408, 2008,

Amendment Bylaw No. 420, 2010 (the OCP as amended) committing to reduce Greenhouse Gas Emissions;

THEREFORE BE IT RESOLVED THAT:

- 1) Council recognizes that climate change constitutes an emergency for the Village of Lions Bay

CARRIED

iii) Staff Report

Moved/Seconded

THAT Staff be directed to report back at the May 25, 2021 regular Council meeting regarding:

- a. actions referred to in Section 9 of the OCP as amended that the Village is presently taking to reduce GHG emissions (corporate and community) and performance metrics regarding emission targets;
- b. actions the Village is presently taking to adapt to climate change.

CARRIED

7. Unfinished Business

- C. OCP Amendment and Associated Targets – review/update (Page 10)
- D. CARIP Report – define (Page 12)
- E. Resident Survey – CAC to draft
- F. Climate Action Plan – model off existing
- G. Natural Asset Inventory - define
- H. Climate Action Tool Kit - define
- I. Renewable Diesel for yard trucks – define (Page 31)
- J. Transfer Station – materials WCS won't pick up
- K. Solar panel on Municipal buildings – scope effort
- L. EV charger initiative and status – resolution in place, grant application pending, update
- M. Food truck power – scope effort
- N. Beach Event power – scope effort
- O. Baseline Village data – research, 2008 data review, current energy profile
- P. Village actions to date – define
- Q. Small community energy efficiency upgrade grant/loans – define
- R. Infrastructure improvements – define
- S. Communication/Education – scope effort
- T. Finance/Funding - define

8. New Business

9. Public Questions & Comments

10. Adjournment

11. Next Meeting - TBD



THE MUNICIPALITY OF THE VILLAGE OF LIONS BAY

**CLIMATE ACTION COMMITTEE MEETING
OF THE VILLAGE OF LIONS BAY
HELD ON WEDNESDAY, MARCH 31, 2021 at 7:00 PM
COUNCIL CHAMBERS, 400 CENTRE ROAD, LIONS BAY
AND VIA ZOOM VIDEO CONFERENCE**

MINUTES

In Attendance: Greg Weary, Ruth Simons, Norman Barmeier, Clara George, Christina Lee, Jaime Cunliffe, Rebecca Loyo Mayo, Jon Povill.

Committee Members: Greg Weary, Ruth Simons, Norman Barmeier, Clara George, Christina Lee, Jaime Cunliffe, Rebecca Loyo Mayo, Jon Povill

Staff: Peter DeJong

Public: Marek Sredzki

1. Call to Order

J. Cunliffe called the meeting to order at 7:04 p.m.

2. Appointment of Recorder – Norm Barmeier

3. Approval of the Agenda

Moved/Seconded

THAT the agenda be adopted as submitted

CARRIED

4. Appointment of the Co-Chair – Norm Barmeier

5. Public Questions & Comments

6. New Business

A. Terms of reference for CAC – review

a. Discussion ensued on the goals of the CAC as outlined in the TOR and the roles and responsibilities. Emphasis on public education and review, research, and analysis.

b. Discussion on lack of progress on climate action goals since 2008/2009.

c. CAO emphasized lack of staff capacity to move goals forward.

Question; RS how do we know when we're done? Oct 15, 2022.

Can we add local and technical perspective; change under Purpose.

What are the council strategic principles.

Could there be a dedicated section of the Village website, particularly interacting with the residents. Agenda from 2010 version of CAC, there were a whole bunch of items that were useful.....what was implemented, what was useful? Are any results available of any implemented initiatives. What assets are available to residents, and how would they find out about them. (Ruth can send reports to the group)

(GW) The purpose only captures half of what we do (GW); there is also the angle of adapting to climate change. Draft resolutions have 2 points, 1 to reduce GHGs, and 2 adapt to the reality of climate change. We will not reduce GHGs enough to address natural assets? Insert 5 words into the purpose.....and adapting to climate change. Wildfire is a big problem which will increase as a result of climate change. Changes to wildfire management should be discussed, GW will take this on.

CG suggests that in the bullet point section what is missing is that there is lack of alignment and partnership with bigger communities near by; add this.

JP under the context of purpose, would like to see outreach and communication, PD pointed out that it's covered off.

CG – add bullet point that reads “research, recommend and engage with sustainable partners outside our community.”

CAC recommends changes to the TOR to capture the above. Motion passed, PD captured recommendation to council.

B. Climate Emergency Declaration – request council resolution

- RLM feels the motions as drafted is concise accurate and provides adequate context.

- PD provided some context on other similar declarations and trying to define the word “emergency” It doesn't fit within the emergency act or within our emergency bylaw; so the declaration of an emergency needs definition and has implications in terms of resources thrown at the “emergency”

- JP feels it helps prioritize Village actions within the context of what the Village can do, water shortages is an example, will there be a supplemental water plan?

- RS response to PD suggests this resolution has been around for a long time, other communities have implemented this and the concerns around the word “emergency” should be considered in the past. It's an aspirational resolution to impart the message that climate change is real and poses a threat.

- CG feels that it is in fact an emergency, and the definition is already out there on a global level. We are looking to join a larger movement that recognizes climate change as an emergency.

- RLM seconds that we are beyond debate on the word definition.....so we could insert the Oxford dictionary definition; which is a formal definition....add in as AND WHEREAS the oxford definition of climate emergency adopted in 2019 is a situation

in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.

- Date change to May 25th – moved and passed motion to declare climate change with changes as noted above; ad definition of climate emergency; change of date to May 25th; and many metro communities. RS to provide list of communities to staff through the chair.

Moved/Seconded

THAT the Climate Action Committee recommends THAT Council declare a Climate Emergency through the following resolution:

WHEREAS the Intergovernmental Panel on Climate Change has recommended emissions reduction targets of 45 percent below 2010 levels by 2030 and 100 percent below 2010 levels by 2050 in order to limit global warming to no more than 1.5 C above pre-industrial levels;

AND WHEREAS these emissions reduction targets are not being met at the national, provincial or local level in Canada and Canadians have some of the highest per capita emissions worldwide;

AND WHEREAS the most recent scientific evidence indicates that climate change is accelerating and increasing in severity and extent, including in Canada;

AND WHEREAS the impacts of climate change will continue to be felt in communities across Canada, including Lions Bay, and significant emission reductions are required to minimize these impacts;

AND WHEREAS Lions Bay is already facing significant costs to deal with the impacts of climate change, including sea-level rise, stormwater and water management, and forest fires;

AND WHEREAS District of West Vancouver, District of Squamish, Islands Trust, Bowen Island Municipality, District of North Vancouver, City of Vancouver, City of Richmond, City of New Westminister, City of Port Moody and the City of North Vancouver and many more jurisdictions around the world have recently declared or officially acknowledged the existence of a global climate emergency;

AND WHEREAS the oxford definition of climate emergency adopted in 2019 is a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.

AND WHEREAS Section 473(3) of the Local Government Act requires local governments to incorporate within their official community plans targets, policies, and actions for the reduction of greenhouse gas emissions;

AND WHEREAS the Council of the Village of Lions Bay adopted Official Community Plan Bylaw No. 408, 2008 and enacted Bylaw No. 408, 2008, Amendment Bylaw No. 420, 2010 (the OCP as amended) committing to reduce Greenhouse Gas Emissions;

THEREFORE BE IT RESOLVED THAT:

- 1) Council recognizes that climate change constitutes an emergency for the Village of Lions Bay; AND
- 2) Staff be directed to report back at the May 25, 2021 regular Council meeting regarding:
 - a. actions referred to in Section 9 of the OCP as amended that the Village is presently taking to reduce GHG emissions (corporate and community) and performance metrics regarding emission targets;
 - b. actions the Village is presently taking to adapt to climate change.

CARRIED

Carry to unfinished business:

- C. OCP Amendment and associated targets – review/update
- D. CARIP Report – define
- E. Resident Survey – CAC to draft
- F. Climate Action Plan – model off existing
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- S. Communication/Education – scope effort
- T. Finance/Funding - define

7. Public Questions & Comments

8. Adjournment

Moved/Seconded

THAT the meeting be adjourned.

CARRIED

The meeting was adjourned at 8:10 p.m.

Chair

Recorder

9. Next Meeting – April 15th, 7pm

Date Approved by Climate Action Committee:	
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9.0 Greenhouse Gas Emission Reduction Strategy: Targets, Policies, and Actions

Pursuant to Section 877(3) of the Local Government Act, local governments are required to incorporate within their official community plans targets, policies, and actions for the reduction of greenhouse gas emissions.

9.1 Targets

The Village of Lions Bay is a semi-rural community at the periphery of the region's urban area yet within close proximity to communities with urban amenities. Although the *Community Energy and Emissions Inventory* (CEEI) produced by the Province reports that 92% of Greenhouse Gas (GHG) emissions in Lions Bay is due to transportation related activities and only 8% is allocated to buildings, the accuracy of the 2007 figures is not clear, and therefore these figures cannot be relied upon as a baseline. That being said, the primary contributors to GHG emissions within the Village are private vehicles and houses that are heated with oil. Focusing on the conversion of homes using fossil fuels has been identified as having the largest positive impact on the environment in Lions Bay and the most benefit to home owners financially over time.

On this basis, the following Greenhouse Gas (GHG) emission **reduction** targets to be achieved by **2020** have been established recognizing that new baseline information is needed. These targets that have been set on the basis of reducing the community's carbon footprint while respecting the community's vision of retaining its semi rural character:

Transportation

- 3% reduction due to increased transit use and ride-share; and
- 30% reduction due to change over of vehicles – smaller engine sizes

Buildings

- 11% reduction assuming oil heat users convert to an alternative renewable energy source and new buildings are constructed with greater energy efficiency; and
- an additional 3-4% reduction due to conservation measures

Solid Waste

- 50%

Overall Community

- 20%

The Village recognizes that it has a role to play in leading the community to meet these targets. That being said, the attainment of these targets is also conditional upon the Province pursuing various initiatives such as changing the BC Building Code to require the incorporation of green building technology for new buildings and renovations, and enabling the creation of new,

alternative, and renewable energy sources to power our vehicles and heat our homes. Without the provincial initiatives and advances in technology, the achievement of these targets will be challenging.

9.2 Policies

To work towards achieving these targets, the Village of Lions Bay will pursue the following **transportation and land use / building** policies:

Transportation

- a) Promote integrated public transportation in cooperation with the Sea-to-Sky communities to increase more efficient public transit options both north and south of Lions Bay.
- b) Promote a car pooling registry (now ride-share) and maintain and promote the park and ride facility in order to reduce dependency on the single occupant vehicle.
- c) Support new forms of low emission vehicular transportation.
- d) Provide ongoing education to residents to assist them in using transit and making choices.
- e) Provide safe and protected shelter at each bus stop location.
- f) Enhance the trail network within the Village in order to encourage pedestrian mobility.
- g) Support the maintenance and upgrading of safe bicycle lanes on and off Highway 99 and through the Village.

Land Use / Building

- h) Provide for secondary suites within single family dwellings through changes to the Zoning Bylaw pursuant to Policy 4.3(a).
- i) Explore options for new housing opportunities pursuant to Policy 4.3(b).
- j) Continue to support home based businesses pursuant to Policy 4.3(g).
- k) Support the development of an expanded or new community center in a central location to function as a community gathering point pursuant to Policy 4.4(a).
- l) Support the strengthening of the Village's central core by accommodating new commercial activities as market conditions permit.
- m) Support alternative energy sources such as solar and geothermal heating by providing incentives to builders when applying for building permits.

9.0 Greenhouse Gas Emission Reduction Strategy: Targets, Policies, and Actions

- n) Support the development of micro hydro electric energy production pursuant to Policy 4.7(l) to provide alternative power to the Village and in particular its municipal buildings.
- o) Provide incentives to builders and property owners to construct more energy efficient homes.
- p) Require new dwelling units that are the subject of rezoning applications, be they for new homes within new subdivisions or new multi family housing, to meet applicable green building standards such as LEED or Built Green.

Solid Waste

- q) Support Metro Vancouver's Zero Waste objectives.
- r) Examine options to reduce quantities of waste by providing incentives and alternatives to residents.

9.3 Actions

As a means of implementing these policies, the Village of Lions Bay will consider pursuing the following **specific actions**:

- a) Review the Zoning Bylaw and the Building Bylaw to identify any significant barriers to achieving GHG reduction and to explore the creation of incentives for the removal of oil furnaces.
- b) Develop and promote educational programs about climate change and a tool-kit for residents to promote energy-efficiency at home, especially for those homes using oil for heating.
- c) Continue to utilize the Climate Change Action Task Force as a means of spearheading climate change initiatives and providing recommendations to Council.
- d) Identify potential community garden sites on Village lands and raise awareness about the value of purchasing locally-produced food and supporting programs that build a robust local food network.
- e) Adopt and enforce an Anti – Idling Bylaw.
- f) Investigate measures for the Village to provide incentives for residents to conduct energy audits and to undertake energy retrofits.
- g) Continue to acquire trail corridors within new subdivisions to enhance pedestrian mobility and provide trail connections at the end of cul de sacs where possible to connect neighbouring subdivisions and to the hiking trail network.

- h) Provide information on village interconnecting trails to promote and encourage physical activity and walking within the Village.
- i) Develop a safe and accessible pathway connecting Brunswick Beach to Central Lions Bay to Kelvin Grove.
- j) Request the Province to update the Community Energy and Emissions Inventory (CEEI) to achieve a more accurate GHG emission baseline and to provide the Village with the tools and resources to monitor and measure the GHG reduction levels.
- k) Collaborate with TransLink to reduce the barriers to make transit a more desirable experience.
- l) Review bylaw enforcement and infraction penalties as a means of achieving waste reduction.
- m) Consider changes to the waste management contract in order to examine a more efficient approach with respect to transporting waste out of the Village
- n) Review the feasibility study and explore options for hydro electric energy production within the Village and then initiate a process to move the project forward if deemed economically viable.

Survey Template

For the 2018 CARIP Climate Action/Carbon Neutral Progress Survey

Local governments are required to submit the 2018 CARIP Climate Action/Carbon Neutral Progress Survey on or before June 1, 2019.

Use Template to Collect Information

This Survey Template has been provided to help local governments complete the survey and report its contents. The template can be used to:

- gather and record survey responses before inputting data into the survey; and/or
- create the public report.

Alternatively, a local government may choose to use a template or format of their own design.

Responses entered into this Survey Template can be cut and pasted into the online survey. The survey asks for up to five actions in each category, and there is a place in the survey to report additional actions if desired. In this Survey Template, simply add more lines to the tables to report more than five actions.

Public Reports:

Public reports must contain the same information as submitted in the 2018 Climate Action/Carbon Neutral Progress Survey. Because respondents are unable to generate a report of survey responses, Ministry staff will send each respondent a PDF version of their CARIP report once it has been completed online.

For purposes of the CARIP Survey, the following definitions apply:

COMMUNITY-WIDE ACTIONS

Actions undertaken to reduce GHG emissions in the community at-large (e.g. not related to corporate operations).

CORPORATE ACTIONS

Actions undertaken to reduce GHG emissions produced as a result of a local government's delivery of "traditional services", including fire protection, solid waste management, recreational/cultural services, road and traffic operations, water and wastewater management, and local government administration.

The Government of BC will not collect, use, or disclose personal information using SurveyMonkey®. Please be aware however that IP addresses are collected by SurveyMonkey® itself, and these IP addresses and other information collected will be stored on SurveyMonkey®'s servers located outside of Canada. Please do not provide any third-party information (e.g. refer to others) in your responses to the survey.



Climate Action Revenue Incentive (CARIP) Public Report for 2018

Local Government:

Optional box for image

Report Submitted by:

Name: Pamela Rooke

Role: Chief Financial Officer

Email: finance@lionsbay.ca

Phone: (604) 921-9333

Date: May 31, 2019

The [insert Local Government here] has completed the 2018 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2018 and proposed for 2019 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

2018 BROAD PLANNING ACTIONS

Broad Planning Actions

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, and centred) plays an especially important role in energy and GHG reduction.

Q 6 + Q 7 Community-Wide Broad Planning Actions Taken in 2018 + Additional Actions	
	Continued support of the Lions Bay Community Garden
	Member of Howe Sound Community Forum and supports the ongoing work of the Forum's Oceanwatch Taskforce
	Council supported the establishment of a Clean Air Roundtable for the Howe Sound Sea to Sky Region
	Council endorsed and contributed to the preparation of a Howe Sound Reference Guide
Q 8 Community-Wide Broad Planning Actions Proposed for 2019	

Q 9 + Q 10 Corporate Broad Planning Actions Taken in 2018 + Additional Actions	
	Asset Management Investment Plan completed (Phase 1)
	Submitted grant application for a Water System Efficiency Upgrade under the ICIP – Green Infrastructure – Environmental Quality stream
	Submitted grant application for the Lions Bay Beach Park Revitalization Project under the ICIP – Community, Culture and Recreation stream
Q 11 Corporate Broad Planning Actions Proposed for 2019	
	Completion of Phase 2 of the Asset Management Investment Plan

Broad Planning	
Q 12 What is (are) your current GHG reduction target(s)?	No targets at this time

Q 13 Are you familiar with your local government's community energy and emissions inventory (e.g. CEEI or another inventory)?	No
Q 14 What plans, policies or guidelines govern the implementation of climate mitigation in your community? <ul style="list-style-type: none"> • Community Energy and Emissions Plan • Integrated Community Sustainability Plan • Community- Wide Climate Action Plan • Official Community Plan • Regional Growth Strategy • Do not have a plan • Other: 	No No No Yes Yes
Q 15 Does your local government have a corporate GHG reduction plan?	No

2018 BUILDING AND LIGHTING ACTIONS

Building and Lighting Actions

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

Q 16 + Q 17 Community-Wide Building and Lighting Actions Taken in 2018 + Additional Actions	
Q 18 Community-Wide Building and Lighting Actions Proposed for 2019	

Q 19 + Q 20 Corporate Building and Lighting Actions Taken in 2018 + Additional Actions	
	Installed three energy efficient exterior doors in Council Chambers
Q 21 Corporate Building and Lighting Actions Proposed for 2019	

	Budgeted for new energy efficient windows for the Village Office and Council Chambers
	LED lights to be installed in the Community Hall

Building and Lighting	
The Province has committed to taking incremental steps to increase energy-efficiency requirements in the BC Building Code to make buildings net-zero energy ready by 2032. The BC Energy Step Code--a part of the BC Building Code--supports that effort	
Q 22 Is your local government aware of the BC Energy Step Code?	Yes
Q 23 Is your local government implementing the BC Energy Step Code?	No

P5 2018 ENERGY GENERATION ACTIONS

Energy Generation Actions

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

Q 24 + Q 25 Community-Wide Energy Generation Actions Taken in 2018 + Additional Actions	
Q 26 Community-Wide Energy Generation Actions Proposed for 2019	

Q 27 + Q 28 Corporate Energy Generation Actions Taken in 2018 + Additional Actions	
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Q 37 Community-Wide Greenspace Actions Proposed for 2019	

Q 38 + Q 39 Corporate Greenspace Actions Taken in 2018 + Additional Actions	
Q 40 Corporate Greenspace Actions Proposed for 2019	

Greenspace	
Q 41 Does your local government have urban forest policies, plans or programs?	No
Q 35. Does your local government have policies, plans or programs to support local food production?	No

2018 SOLID WASTE ACTIONS

Solid Waste Actions

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Q 42 + Q 43 Community-Wide Solid Waste Actions Taken in 2018 + Additional Actions	
	Executed the North Shore Recycling Depot Agreement with Metro Vancouver for a five year term

Q 44 Community-Wide Solid Waste Actions Proposed for 2019	

Q 45 + Q 46 Corporate Solid Waste Actions Taken in 2018 + Additional Actions	
	Continued household organic waste diversion
Q 47 Corporate Solid Waste Actions Proposed for 2019	

Solid Waste	
Q 48 Does your local government have construction and demolition waste reduction policies, plans or programs?	No
Q 49 Does your local government have organics reduction/diversion policies, plans or programs?	Yes

2018 TRANSPORTATION ACTIONS

Transportation Actions

Transportation actions that increase transportation system efficiency emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling and public transit, can contribute to reductions in GHG emissions and more livable communities.

Q 50 + Q 51 Community-Wide Transportation Actions Taken in 2018 + Additional Actions	
Q 52 Community-Wide Transportation Actions Proposed for 2019	

	Council has directed staff to investigate the best location for an electric vehicle DC fast charging station for the Village Budgeted for a preliminary design for a charging station

Q 53 + Q 54 Corporate Transportation Actions Taken in 2018 + Additional Actions	
Q 55 Corporate Transportation - Actions Proposed for 2019	

Transportation	
Q 56 Does your local government have policies, plans or programs to support: <ul style="list-style-type: none"> • Walking • Cycling • Transit Use • Electric Vehicle Use • Other (please specify) 	No Yes Yes No No
Q 57 Does your local government have a Transportation Demand Management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behaviour)?	No
Q 58 Does your local government integrate its transportation and land use planning?	No

2018 WATER AND WASTEWATER ACTIONS

Water and Wastewater Actions

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces GHG emissions.

Q 59 + Q 60 Community-Wide Water and Wastewater Actions Taken in 2018 + Additional Actions	

Other (please specify):	
Q 67 In 2018 has your local government addressed the impacts of a changing climate using any of the following?	
Risk and Vulnerability Assessments	No
Risk Reduction Strategies	No
Emergency Response Planning	No
Asset Management	No
Natural/Eco Asset Management Strategies	No
Infrastructure Upgrades (e.g. stormwater system upgrades)	No
Beach Nourishment Projects	No
Economic Diversification Initiatives	No
Strategic and Financial Planning	No
Cross-Department Working Groups	No
Official Community Plan Policy Changes	No
Changes to Zoning and other Bylaws and Regulations	No
Incentives for Property Owners (e.g. reducing storm water run-off)	No
Public Education and Awareness	Yes
Research	Yes
Mapping	No
Partnerships	Yes
Other (please specify):	

Q 68 Climate Change Adaptation Actions Taken in 2018	
Please elaborate on key actions and/or partnerships your local government has engaged in to prepare for, and adapt to a changing climate. Add links to key documents and information where appropriate.	
	The Village has entered into a partnership with the UBC Civic Engineering Dept. to study the impact of climate change on our local surface water supplies (an ongoing multi year project).
Q 69 Climate Change Adaptation Actions Proposed for 2019	
	As above

Q 70 For more information please contact	

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Other	
Q 74 Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC) ?	Yes
Q 75 Is your local government using the CLIC tool?	No

INNOVATION AND PEER-TO-PEER LEARNING

Innovation

This section provides the opportunity to showcase an innovative *Corporate and/or Community-Wide* GHG reduction and/or climate change adaptation activity that your local government has undertaken and that has had, or has the potential to have, a significant impact. You are welcome to highlight an action that has already been listed.

Projects included here may be featured as success stories on the [B.C. Climate Action Toolkit](#) and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible.

Communities that have conducted innovative initiatives may want to consider making applications to [CEA's Climate and Energy Action Awards](#), [FCM Sustainable Communities Awards](#) or to [FCM's National Measures Report](#).

Q 76 Community-Wide Innovation Action
Q 77 Corporate Innovation Action
Q 78 For more information on actions described above contact

Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below separated by a forward slash (e.g. program1/program2).

Mitigation

Q 79 Mitigation Programs, Partnerships and Funding

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Adaptation

Q 80 Adaptation Programs, Partnerships and Funding

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2018 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the [B.C. Climate Action Charter](#). Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this portion of the survey, please ensure that you are familiar with guidance available on the [B.C. Climate Action Toolkit website](#), especially the [Workbook](#) and [Becoming Carbon Neutral: A Guide for Local Governments in British Columbia](#).

Please note: As a result of the BC Recycling Regulation, local governments are no longer required to account for GHG emissions from vehicles, equipment and machinery required for the collection, transportation and diversion of packaging and printed paper, in their annual Climate Action Revenue Incentive Program (CARIP) reports.

Reporting Emissions

Q 81 Did your local government measure corporate GHG emissions for 2018?	No
Q 82 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from services delivered directly by your local government (in tonnes of carbon dioxide equivalent)	

Q 83 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from contracted services (in tonnes of carbon dioxide equivalent)	
Q 84 TOTAL A: CORPORATE GHG EMISSIONS FOR 2018 (Direct GHGs + Contracted GHGs)	tCO₂e

Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2018 by one or a combination of the following actions:

- undertake GCC-supported Option 1 Project(s)
- undertake GCC-supported Option 2 Project(s)
- purchase carbon offsets from a credible offset provider

For more information about options to balance or offset corporate GHG emissions please refer to [Becoming Carbon Neutral: A Guidebook for Local Governments in British Columbia](#).

If applicable, please report the 2018 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from any of the following Option 1 GHG Reduction Projects:

OPTION 1 PROJECTS	REDUCTIONS
Q 85 Energy Efficient Retrofits (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 86 Solar Thermal (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 87 Household Organic Waste Composting (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 88 Low Emission Vehicles (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 89 Avoided Forest Conversion (in tonnes of carbon dioxide equivalent (tCO₂e))	
Q 90 TOTAL B: REDUCTIONS FROM ALL OPTION 1 PROJECTS FOR 2018	tCO₂e

Q 91 If applicable, please report the names and 2018 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from Option 2 GHG Reduction Projects:

Option 2 Project Name	REDUCTIONS

Option 2 GHGs Reduced (tCO2e)	
Option 2 Project Name	
Option 2 GHGs Reduced (tCO2e)	
Option 2 Project Name	
Option 2 GHGs Reduced (tCO2e)	
Option 2 Project Name	
Option 2 GHGs Reduced (tCO2e)	
Q 92 TOTAL C: REDUCTIONS FROM ALL OPTION 2 PROJECTS FOR 2018	tCO2e

Offsets

Q 93 If applicable, please report the name of the offset provider, type of project and number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO2e)) from an offset provider for the 2018 reporting year:

NOTE: DO NOT INCLUDE ANY FUNDS THAT MAY BE SET ASIDE IN A CLIMATE ACTION RESERVE FUND.

Offset Provider Name	OFFSETS
Offsets (tCO2e)	
Offset Provider Name	
Offsets (tCO2e)	
Q 94 TOTAL D: OFFSETS PURCHASED FOR 2018	tCO2e

Q 95 TOTAL REDUCTIONS AND OFFSETS FOR 2018 (Total B+C+D) = _____ tCO2e

Corporate GHG Emissions Balance for 2018

Your local government's Corporate GHG Emissions Balance is the difference between total corporate offsettable GHG emissions (direct + contracted emissions) and the GHG emissions reduced through GCC Option 1 and Option 2 projects and/or the purchase of offsets.



Q 96 CORPORATE GHG EMISSIONS BALANCE FOR 2018 = (A – (B+C+D)) = _____ tCO₂e

**If your Corporate GHG Emissions Balance is negative or zero,
your local government is carbon neutral.
CONGRATULATIONS!**

Q 97 If your local government was carbon neutral in 2018, please record any emissions reductions you will be carrying over for future years and the source of the reductions, including the year they were earned (e.g. organics diversion, 2018 100 tCO₂e)

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS
Q 98 BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR	tCO₂e

Carbon Neutral Reporting	
Q 99 Does your local government set aside funds in a climate reserve fund or similar?	Yes

GCC CLIMATE ACTION RECOGNITION PROGRAM

Green Communities Committee Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

Level 1 – Demonstrating Progress on Charter Commitments: For local governments who demonstrate progress on fulfilling one or more of their Charter commitments.



Level 2 – Measuring GHG Emissions: For local governments that achieve Level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with their community’s energy and emissions inventory (i.e. CEEI)

Level 3 – Accelerating Progress on Charter Commitments: For those local governments who have achieved Level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (e.g. through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

Level 4 - Achievement of Carbon Neutrality: For local governments who achieve carbon neutrality in the reporting year.

Q 100 Based on your local government's 2018 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

<input checked="" type="checkbox"/>	Level 1 – Demonstrating Progress on Charter Commitments	X
<input type="checkbox"/>	Level 2 – Measuring GHG Emissions	
<input type="checkbox"/>	Level 3 – Accelerating Progress on Charter Commitments	
<input type="checkbox"/>	Level 4 - Achievement of Carbon Neutrality	
<input type="checkbox"/>	Not Sure	

Q 101 Related to Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time and/or financial resources and is intended to result in significant GHG reductions:

PROJECT NAME:



Renewable Hydrocarbon Diesel Certificate of Analysis



201910186023 COA

Lot Number:	750-191018-T6023	Product Type:	Renewable Hydrocarbon Diesel
--------------------	-------------------------	----------------------	-------------------------------------

Analysis of REG-9000/RHD					
Property	Value	ASTM D975 No. 2-D Limit	REG-9000® Limit*	Units	Test Method (current revision)
Cloud point:	-12	Report	Report	°C	D5771
Water & Sediment:	<0.05	0.05, max	0.05, max	% volume	D2709
Conductivity:	73	25, min	25, min	pS/m	D2624
Appearance:	Clear & Bright	Clear & Bright	Clear & Bright	N/A	D4176, Procedure 1
API Gravity @ 60°F:	49.2	N/A	Report	N/A	D4052
Specific gravity @ 60°F:	0.7829	N/A	Report	N/A	D4052
Flash point:	63.2	52, min	52, min	°C	D93A
Total Sulfur:	<1	15, max	2, max	ppm (mg/kg)	D5453
Ramsbottom Carbon:	0.04	0.35, max	0.35, max	% mass	D524
Ash:	<0.001	0.01	0.01	% mass	D482
Kinematic Viscosity at 40 °C:	3.2	1.9 – 4.1	1.9 – 4.1	mm ² /sec	D445
Copper Corrosion (3 hrs at 50 °C):	1a	No. 3	No. 1b	N/A	D130
Distillation Temperature, at 90%:	303	282 – 338	282 – 338	°C	D86
Cetane Index:	96	40, min	65, min	N/A	D4737, Procedure A

- Notes:
1. ASTM D1319 test detection limits for Aromatics is 5-99 % volume, since REG Geismar's renewable diesel is lower than 5 % volume, this testing was discontinued in the REG Geismar lab
 2. Based on a customer's purchase requirements, an optional lubricity additive may be injected into the RHD at the time of shipment to bring the lubricity to < 520 microns
 3. This product conforms to the most recent version of ASTM D975

Prepared by: Keith Gill Lab Chemist Geismar, LA 10/18/19
 Name Title Location Date

REG Renewable Diesel

Reduce emissions without sacrificing performance.

REG Renewable Diesel is an advanced biofuel that reduces greenhouse gas emissions while meeting the same ASTM D975 specification as petroleum diesel. It can be added to the existing pipeline system, making it easy to incorporate into the diesel stream.



Fuel Specifications

- ▶ Can be blended with biodiesel and petroleum diesel
- ▶ Blends can be used in any diesel engine without modifications
- ▶ Aids in self-ignition of fuel and allows for easier starting, smoother running engines and reliable operation because of increased Cetane



Fuel Benefits

- ▶ Included in the Energy Policy Act of 1992 (EPAct) standards to meet a portion of the annual alternative fuel vehicle acquisition requirements
- ▶ Tested by the EPA and passes their Clean Air Health Effects testing requirements
- ▶ Qualifies for various state biofuel tax incentives



Analysis of REG Renewable Diesel

Property	REG Limit	D975 ULSD Limit	Units
Cloud Point	Report	Report	°C
Water & Sediment	0.05	0.05	% volume
Conductivity	25, min	25, min	pS/m
Flash Point	52, min	52, min	°C
Ramsbottom Carbon	0.35	0.35	% mass
Ash	0.01	0.01	% mass
Kinematic Viscosity (40° C)	1.9 – 4.1	1.9 – 4.1	mm ² /sec
Distillation Temperature at 90%	282 – 338	282 – 338	°C
Copper Corrosion	No. 1	No. 3	N/A
Sulfur	2	15	ppm
Aromaticity	2	35	% volume
Cetane Number	65, min	40, min	N/A

Section 1 – Identification

Product identifier	REG 9000 Renewable Diesel
Other means of identification	
Synonyms	REG - 9000™ / RHD, Renewable Diesel, Renewable Synthetic Diesel Fuel, Renewable Diesel Fuel, Bio-Derived Diesel, Biomass-Based Diesel, Diesel Fuel No. 2, R98.9 Diesel Fuel, odorless mineral spirits, paraffinic middle distillate, RD975, REG RDB5, hydrotreated esters and fatty acids, HEFA, HVO, HDRD, HRD, R99.9, RD, paraffinic middle distillate, RHD, Renewable Hydrocarbon Diesel, R100
Recommended use	Fuel for use in compression ignition engines, in other combustion applications, a solvent, or an industrial blendstock
Restrictions on use	Not intended for direct human consumption
Supplier information	REG Marketing & Logistics Group, LLC 416 S. Bell Ave Ames, IA 50010 (888) 734-8686
Emergency phone number	For Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident call CHEMTREC Day or Night: Domestic: 1-800-424-9300 International: +1 703-741-5970

Section 2 – Hazard(s) Identification

Classification (in accordance with 29 CFR 1910.1200)

Hazard Class	Hazard Category	Route of Exposure
Skin Irritation	Category 2	Absorption / Dermal Contact
Eye Irritation	Category 2A	Absorption / Eye Contact
Aspiration Hazard	Category 1	Ingestion then aspiration
Flammable Liquid	Category 4	Physical Hazard

Signal word **DANGER**

Pictograms



Hazard Statements

H315 Causes skin irritation
 EUH066 Repeated contact may cause skin dryness or cracking
 H319 Causes serious eye irritation
 H304 May be fatal if swallowed and enters airways
 H227 Combustible liquid

Precautionary statements

Prevention

Wear appropriate protective gloves, protective garments, and eye protection. Avoid breathing mists and sprays. Wash all affected skin thoroughly after handling.

Keep container tightly closed. Keep away from heat, sparks, open flames, hot surfaces, and other potential ignition sources. Ground / bond container and receiving equipment and take precautionary measures against static discharge – including the use of non-sparking tools and explosion-proof equipment.



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Response Do NOT induce vomiting. If swallowed: Immediately call a poison control center or physician.
Take off contaminated clothing immediately and wash it before reuse. If on skin, wash thoroughly with soap and water. If skin irritation or rash occurs, get medical advice.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.
In case of fire, use dry chemical or foam extinguisher – NOT water stream

Storage Store in a tightly closed container in a cool well-ventilated area.

Disposal Dispose of contents/container in accordance with local, state, and federal regulations.

Hazards not otherwise specified Static Accumulator (50 picosiemens or less). This product can accumulate static charge by flow or agitation, and a static discharge could cause this product to ignite.

Section 3 – Composition / Information on Ingredients

Basic components This product is a complex combination of hydrocarbons obtained by the hydrodeoxygenation and catalytic hydroisomerization of animal fats and vegetable oils followed by distillative fractionation. It consists mostly of branched and linear paraffins having carbon numbers ranging from C₉ to C₁₈.

Chemical Name	Common Name & Synonyms	CAS number	% of product
Fuels, diesel, C9-18-alkane branched & linear	Renewable Hydrocarbon Diesel, RHD, Renewable Diesel	1159170-26-9	93 – 100%
Fatty acids, C14-18 and C16-18-unsatd., Me esters	Methyl Esters	67762-26-9	< 5.5%
Petroleum fuel oil	Diesel Fuel	68476-30-2	< 1%
Diesel Oil C9-20	Fuels, Diesel	68334-30-5	< 1%

Section 4 – First-Aid Measures

First-aid measures for exposure

Inhalation If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek medical attention.

Skin Take off contaminated clothing immediately and wash it before reuse. If on skin, wash thoroughly with soap and water. If skin irritation or rash occurs, get medical advice.

Eyes Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.

Ingestion Aspiration Hazard: Do NOT induce vomiting. If swallowed: Immediately call a poison control center or physician.

Most important symptoms / effects

Acute Aspiration into the lungs can cause fatal chemical pneumonitis. If ingestion has occurred, assume there is a risk of aspiration into the lungs – especially if nausea or irritation occurs.

Delayed / Chronic Repeated exposure may cause dryness and cracking of the skin.



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Indication of immediate medical attention

Aspiration into the lungs can cause fatal chemical pneumonitis. Treat symptomatically and supportively.

Special treatment needed, if necessary

No information available

Section 5 – Fire-Fighting Measures

Suitable extinguishing media

Firefighting foam, dry chemical, carbon dioxide, or other clean extinguishing agents (such as Halon or Halotron). Water mist may be effective for extinguishing soaked oily materials if applied by experienced fire-fighting personnel.

Unsuitable extinguishing media

Do not use a solid water stream, as it may scatter and spread the fire

Specific hazards arising from the chemical

Static accumulator (50 picosiemens or less), unless performance additive has been added to mitigate static accumulation. This product can accumulate static charge by flow or agitation, and a static discharge could cause this product to ignite. This product can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Heated liquid can release vapors that may readily form flammable mixtures at or above its flash point. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous combustion products include

Carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons

Protective equipment and precautions for firefighters

Incipient stage fires may be controlled with a portable fire extinguisher. For fires beyond the incipient stage, evacuate all unnecessary personnel. Emergency responders in the immediate area should wear standard firefighting protective equipment, including self-contained breathing apparatus (SCBA) and full bunker gear. In case of external fires in proximity to storage containers, use water spray to keep containers cool, if it can be done safely. Prevent runoff from entering streams, sewers, storm drains, or drinking water supply.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Keep all sources of ignition away from spill / release. The use of explosion-proof equipment is recommended. Wear protective garments, impervious oil resistant boots, protective nitrile gloves, and safety glasses. If product has been heated, wear appropriate thermal and chemical protective equipment. If splash is a risk, wear splash resistant goggles and face shield. Shut off source of spill, if safe to do so. Contain spill to the smallest area possible. Isolate immediate hazard area and remove all nonessential personnel. Prevent spilled product from entering streams, sewers, storm drains, unauthorized treatment drainage systems, and natural waterways. Place dikes far ahead of the spill for later recovery and disposal. Immediate cleanup of any spill is recommended. **If material spills into or upon any navigable waters and causes a film or sheen on the surface of the water, immediately notify the National Response Center at 1-800-424-8802.**

Methods for containment and clean-up

Small spill / incidental release

Small spills can be cleaned up with absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

Large spill / release

A spill remediation contractor with oil booms and skimmers may be needed for larger spills or spills that come into contact with a waterway or sensitive wetland. Recover as much product as possible by pumping it into totes or similar intermediate containers. Remove any remaining product with absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in



Safety Data Sheet (SDS)

ID: SDS 402-US

an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

Other information

Materials saturated with this product, such as oily rags, used oil dri, soaked insulation pads, etc., may spontaneously combust due to product decomposition in the presence of oxygen. Place all such materials into appropriate oily waste containers (such as metal cans with metal lids or oily waste dumpsters with lids), and dispose of according to local, state, and federal regulations.

Section 7 – Handling and Storage

Precautions for safe handling

Open container slowly to relieve any pressure. When transferring product, use pipes, hoses, and tanks that are electrically bonded and grounded to prevent the accumulation of static electricity. This product can accumulate static charge by flow or agitation, and a static discharge could cause ignition. Use explosion-proof electrical equipment (ventilation, lights, material handling, etc...). Wash thoroughly after handling and before eating, drinking or using toilet facilities. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

“Empty” containers can retain residue that may be ignitable. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other sources of ignition. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Conditions for safe storage, including incompatibilities

Use and store this material in cool, dry, well ventilated areas away from all sources of ignition. Storage tanks should have an appropriate ventilation and pressure relief system. Store only in approved containers, and keep them tightly closed. Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases. Open containers should be carefully resealed and kept upright to avoid leakage. Protect the container against physical damage.

Section 8 – Exposure Controls / Personal Protection

Precautions for safe handling

Component exposure limits

Component	CAS #	OSHA PEL	ACGIH TLV	Form	Weight %
Fuels, diesel, C ₉₋₁₈	1159170-26-9	None	None	Liquid, Vapor or Aerosol	98-100%
ULS Diesel	68476-30-2	None	100 mg/m ³ TWA	Vapor & Aerosol	<2%
Unsaturated methyl esters	67762-26-9	None	None	Liquid	<5.5%

Appropriate engineering controls

Keep product enclosed in primary containment (hoses, pipes, tanks, etc.) to avoid contact with skin. Handle in accordance with good industrial hygiene and safety practices.

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Eye

washes and showers should be available for emergency use. Firewater monitors and deluge systems are recommended. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual Protection Measures

Personal protective equipment

Eyes / face

Chemical splash goggles are recommended. However, if a local risk assessment determines that chemical splash goggles may not be required, safety glasses should be selected to provide adequate eye protection. If splash potential exists, add the use of a face shield.

Skin

Wear disposable nitrile gloves for incidental contact. For more substantial contact, wear thicker nitrile or other similar oil-resistant gloves. Wear protective garments, such as a chemical apron, chemical resistant coveralls, or chemical resistant coat and pants, along with impervious oil-resistant boots. Remove soaked protective equipment, decontaminate with soapy water, and rinse thoroughly before reuse. Note: product will cause natural rubbers to degrade at a very rapid rate. Such protective equipment will need to be carefully inspected after decontamination to see if it is still in serviceable condition. Any defective or worn out equipment should be immediately discarded.

Respiratory

No exposure limits are available for this product as a mixture, but appropriate organic vapor or supplied air respiratory protection may be worn if irritation or discomfort is experienced. Where required, respiratory protection must be provided and used in accordance with all local, state, and federal regulations.

Section 9 – Physical and Chemical Properties

Appearance - Physical State:	Liquid	Appearance - Color:	Clear to yellow/green tint (<i>May also be colored red – if sold for off road use</i>)
Odor:	Odorless to mild paraffin	Odor Threshold:	No information available
pH:	No information available	Melting/Freezing Point:	No information available
Boiling Point/Range:	150-315° C (300-600° F)	Flash Point:	>60° C (>140° F)
Evaporation Rate:	No information available	Flammability (solid/gas):	No information available
LFL:	0.6%	UFL:	4.7%
Vapor Pressure:	<0.3 mmHg @ 20° C	Vapor Density:	>1 (air=1)
Relative Density @ 15° C:	0.77 – 0.79 g/ml	VOC:	No information available
Solubility (H₂O):	Insoluble	Solubility (other):	No information available
Auto Ignition Temp.:	No information available	Decomposition Temp.:	No information available
Viscosity (at 40° C):	1.9 – 4.1 cP	Partition coefficient (n-octanol/water) :	No information available

Section 10 – Stability and Reactivity

Reactivity	When handled and stored appropriately, no dangerous reactions are known
Chemical stability	Stable in closed containers at room temperature under normal storage and handling conditions. Hazardous polymerization will not occur.
Possibility of hazardous reactions	When handled and stored appropriately, no dangerous reactions are known. If product is heated beyond its flash point, vapors can cause a flash fire. See Sections 5 and 6 regarding spontaneous combustion of product-saturated absorbent materials.
Conditions to avoid	Ignition sources, accumulation of static electricity, heating product to its flash point, or allowing the product to cool below its melting point (otherwise it may solidify and not be transferable until it is reheated).
Incompatible materials	Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases.
Hazardous decomposition products	Carbon monoxides, carbon dioxide, nitrogen oxides, hydrocarbons, water vapor

Section 11 – Toxicological Information

Likely routes of exposure	Absorption, ingestion, and inhalation
Symptoms	
Inhalation	Coughing or irritation (vapor, mist, or aerosols)
Ingestion	Nausea, vomiting, or feeling unwell
Skin contact	Redness, or irritation
Eye contact	Redness or irritation and tearing
Acute toxicity	
Oral	No information available
Dermal	No information available
Inhalation	No information available
Skin corrosion / irritation	No testing was available. However, prolonged or repeated skin contact may irritate the skin and produce dermatitis.
Serious eye damage / eye irritation	No testing was available. However, oil mist may irritate the eyes.
Sensitization (<i>Respiratory or Skin</i>)	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	No information available
Component carcinogenicity	No information was available for the listed components of this product. However, IARC, NTP, and NIOSH list diesel exhaust particulates as a possible carcinogen.



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Reproductive / developmental toxicity	No information available
Specific target organ toxicity	No information available
Single exposure	No information available
Repeated exposure	No information available
Aspiration hazard	Due to kinematic viscosity below 5.0 cSt, OSHA regulations state this product may be fatal if it is swallowed and then enters the airways.





Section 12 – Ecological Information

Acute ecotoxicity - short-term exposure	
Fish	No information available
Invertebrates	No information available
Algae	No information available
Persistence and degradability	Biodegradation at >44% (per ASTM D5864-05)
Bioaccumulative potential	No information available
Mobility in soil	No information available
Other adverse effects	No information available

Section 13 – Disposal Considerations

Disposal (<i>waste / unwanted product</i>)	If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, may be subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult federal, state and local regulations to ensure they are followed.
Disposal (<i>containers with residue</i>)	Container contents should be completely used and containers should be emptied prior to discarding. Containers must be disposed in compliance with federal, state, and local regulations. To assure proper disposal of empty containers, consult federal, state and local regulations and disposal authorities.

Section 14 – Transport Information

	International	Domestic
ID Number	UN1202	NA1993
Proper Shipping Name	Diesel fuel	Combustible liquid, n.o.s. (Renewable Diesel)
Transport Hazard Class	3	Comb liq
Packing Group	III	III
Placard	Flammable Liquid	Flammable Liquid
Marine Pollutant	No	No
Transport in Bulk Requirements	242 (see 49 CFR §173.242)	241 (see 49 CFR §173.241)
Special Transportation Precautions	No information available	No information available
Special Note	This material may be reclassified as a combustible liquid (49 CFR 173.120(b))	
Shipping Label		
Placard (Shipment by truck or rail in bulk)		

Section 15 – Regulatory Information

Inventory Listings

DSL Listed Exempt
 TSCA Listed Exempt

U.S. Federal Regulations

CERCLA: This material, as supplied, does contain some substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). Although there is a “petroleum exclusion” clause which exempts crude oil (along with fractions of crude oil and products – both finished and intermediate) from the CERCLA 103 reporting requirements, there may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.


Clean Water Act: This product contains chemical(s) regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

SARA 311/312 Hazard Categories:

Hazard Class	Hazard Category
Skin Irritation	Category 2
Eye Irritation	Category 2A
Aspiration Hazard	Category 1
Flammable Liquid	Category 4

U.S. State Regulations

California Proposition 65:

 This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Fuels, diesel, No 2 (diesel engine exhaust is listed as a possible carcinogen)

U.S. State Right-to-Know Regulations:

New Jersey
Component

US New Jersey Worker and Community Right-to-know Act (New Jersey Statute Annotated Section 34:5A-5)

CAS Number

Fuels, diesel, No 2	68476-34-8
---------------------	------------

Pennsylvania
Component

US Pennsylvania Worker and Community Right-to-know Law (34 PA. Code Chap. 301-323)

CAS Number

Fuels, diesel, No 2	68476-34-8
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Section 16 – Other Information

Issuing Date: Jan 20, 2014

Revision Date: March 9, 2020

Version #: 20200309

NFPA:

1	Health
2	Flammability
0	Reactivity

Revision Note: Modified the CAS number for methyl esters in Section 3.

WARNING: POTENTIALLY HAZARDOUS MATERIAL. IMPROPER USE OR MISHANDLING CAN RESULT IN SERIOUS INJURY OR DEATH. THIS PRODUCT CONTAINS SUBSTANCES WHICH, IF MODIFIED, MAY BE FLAMABLE AND MAY BURN OR EXPLODE IF HEATED OR EXPOSED TO FLAME OR OTHER IGNITION SOURCE OR WATER, OXIDIZING AGENTS, ACIDS OR OTHER CHEMICALS. AVOID INGESTION, INHALATION AND CONTACT WITH SKIN AND EYES.

Disclaimer:

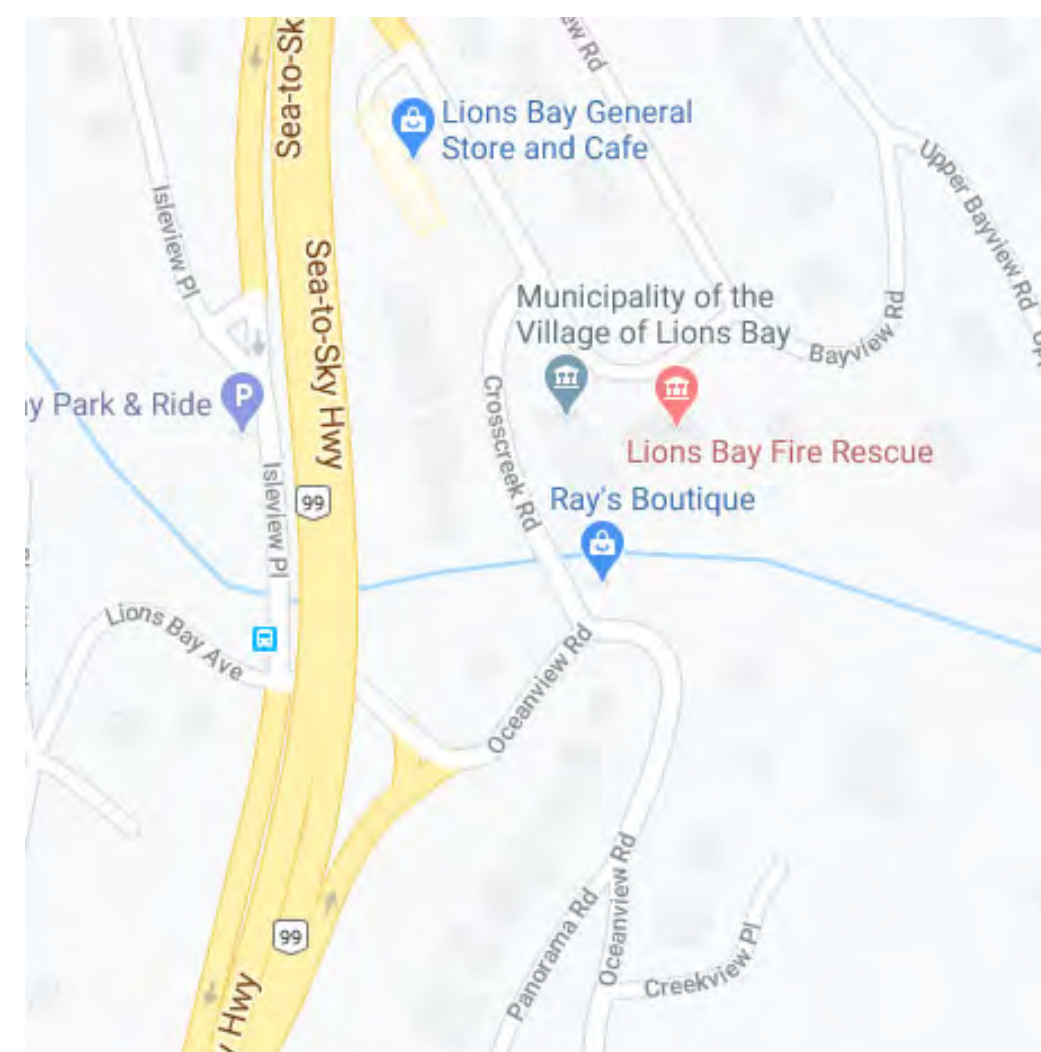
The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS



LIONS BAY ELECTRIC VEHICLE CHARGING STATION

concept design



1 location map
A0.0

- new transformer and charging station
- new Hydro pole and connections
- regrade to a maximum 5% cross slope at new parking spaces
- relocate existing no post concrete barriers
- replace culvert (may be separate contract)
- new retaining walls
- new shelter and board for existing Lions Bay map sign
- new planting beds and landscape

2 outline scope
A0.0



- A0.0 project information
- A0.1 site plan
- A0.2 perspective views
- A2.1 plans and elevations

3 drawing index
A0.0

Lions Bay DC Fast Charging Station
400 Centre Rd
Lions Bay, British Columbia

project number: 1914

no.	date	issue
01	16 feb 2021	review

project information

heather ljohnston architect ATBC
PLACE architect ltd.
6262 st georges avenue
west vancouver bc, v7w 1z7
778 386 6769
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A0.0
16 feb 2021



Lions Bay DC Fast Charging Station
400 Centre Rd
Lions Bay, British Columbia

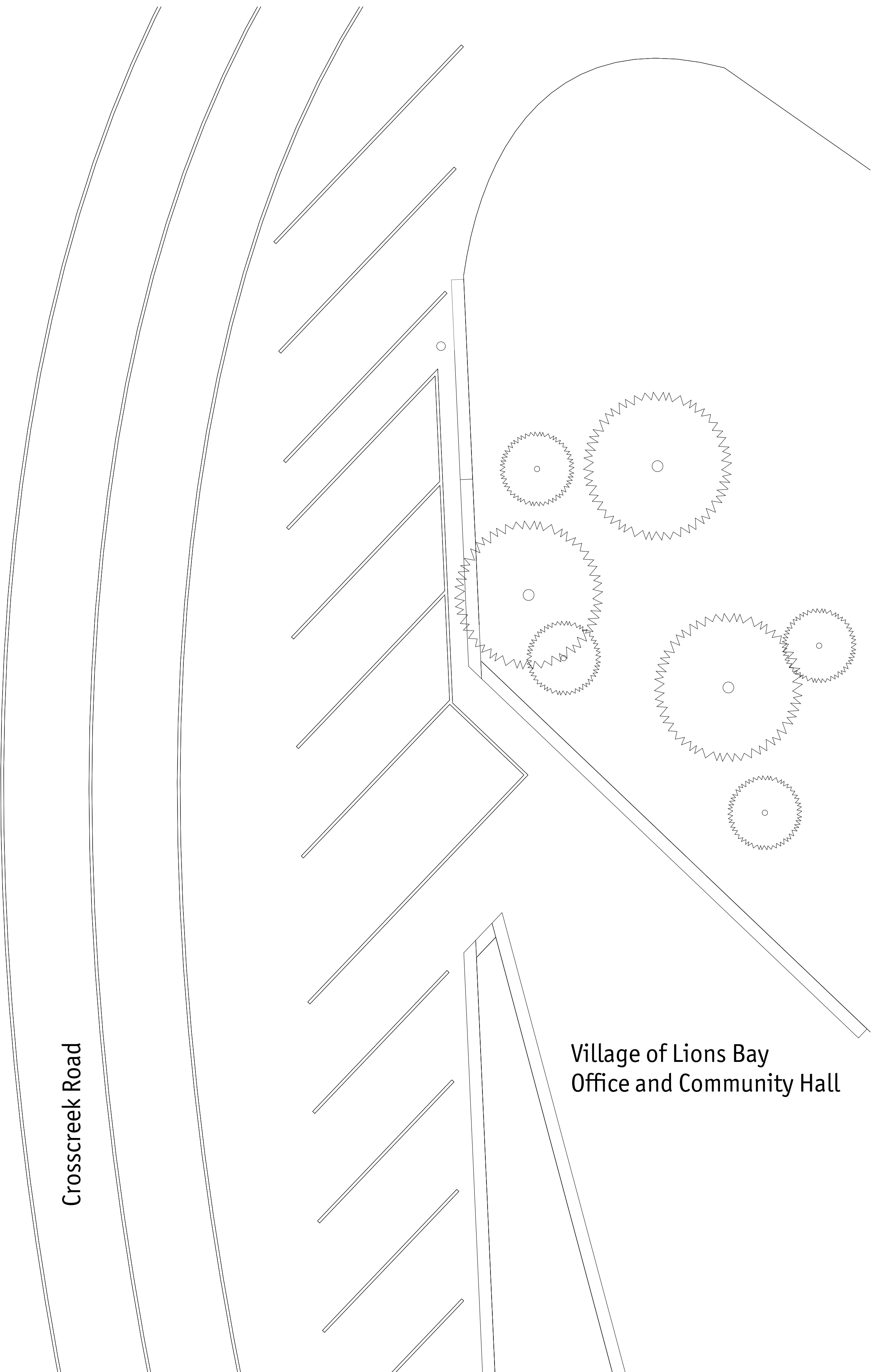
project number: 1914

no.	date	issue
01	16 feb 2021	review

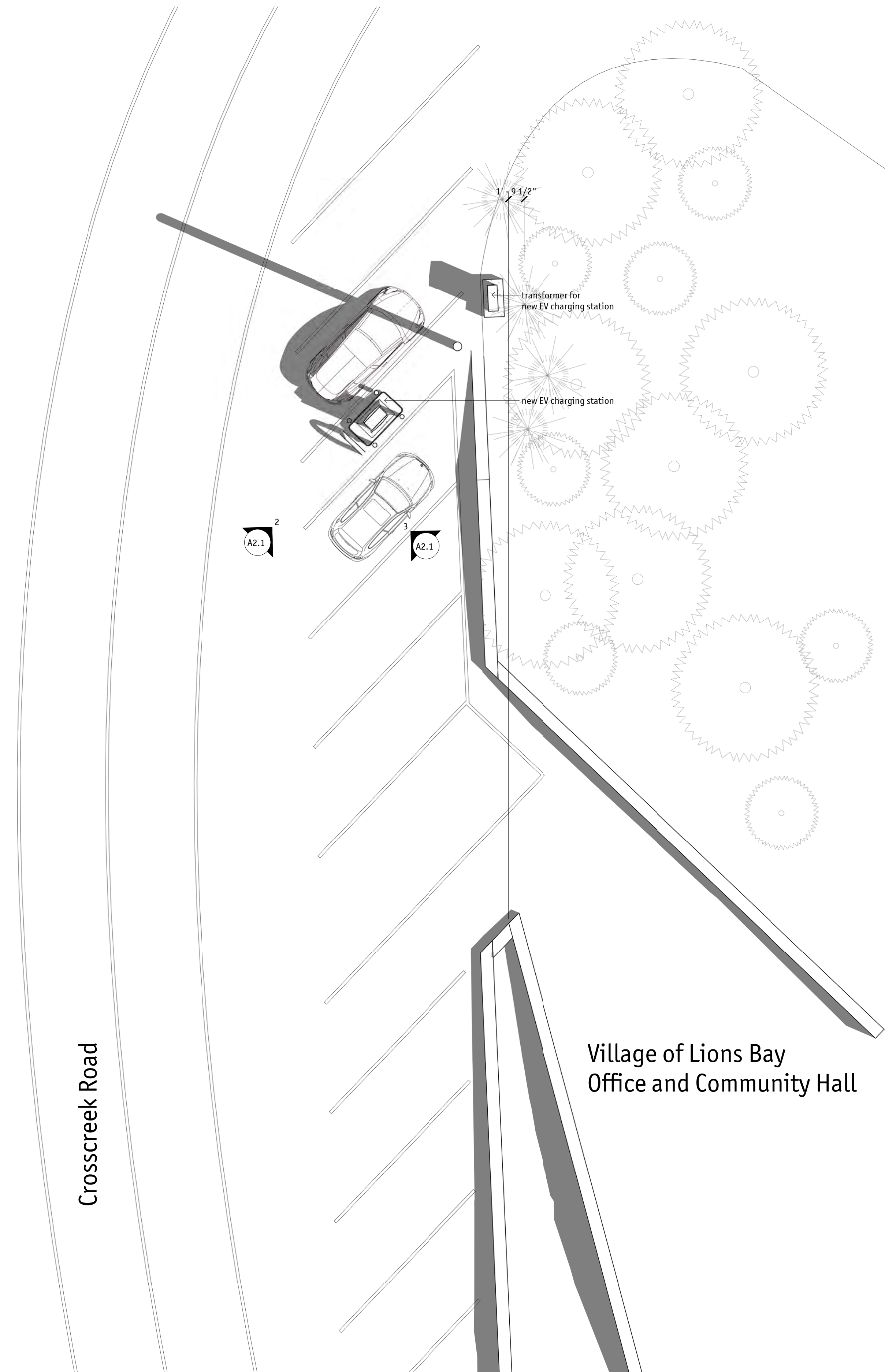
site plan

heather ljohnston architect AIBC
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A0.1
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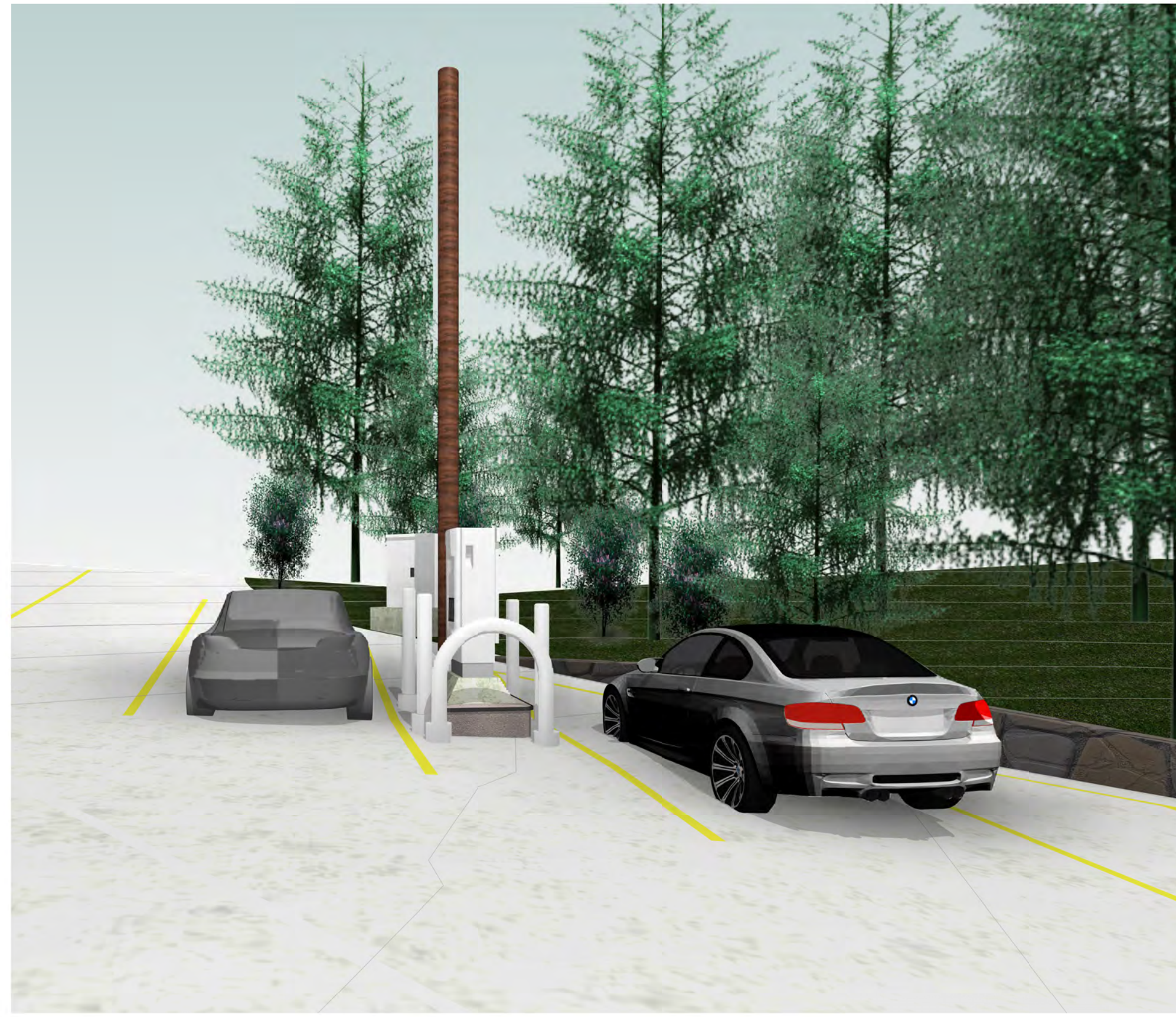
1 site plan - existing
A0.1 scale - 1/8" = 1'-0"



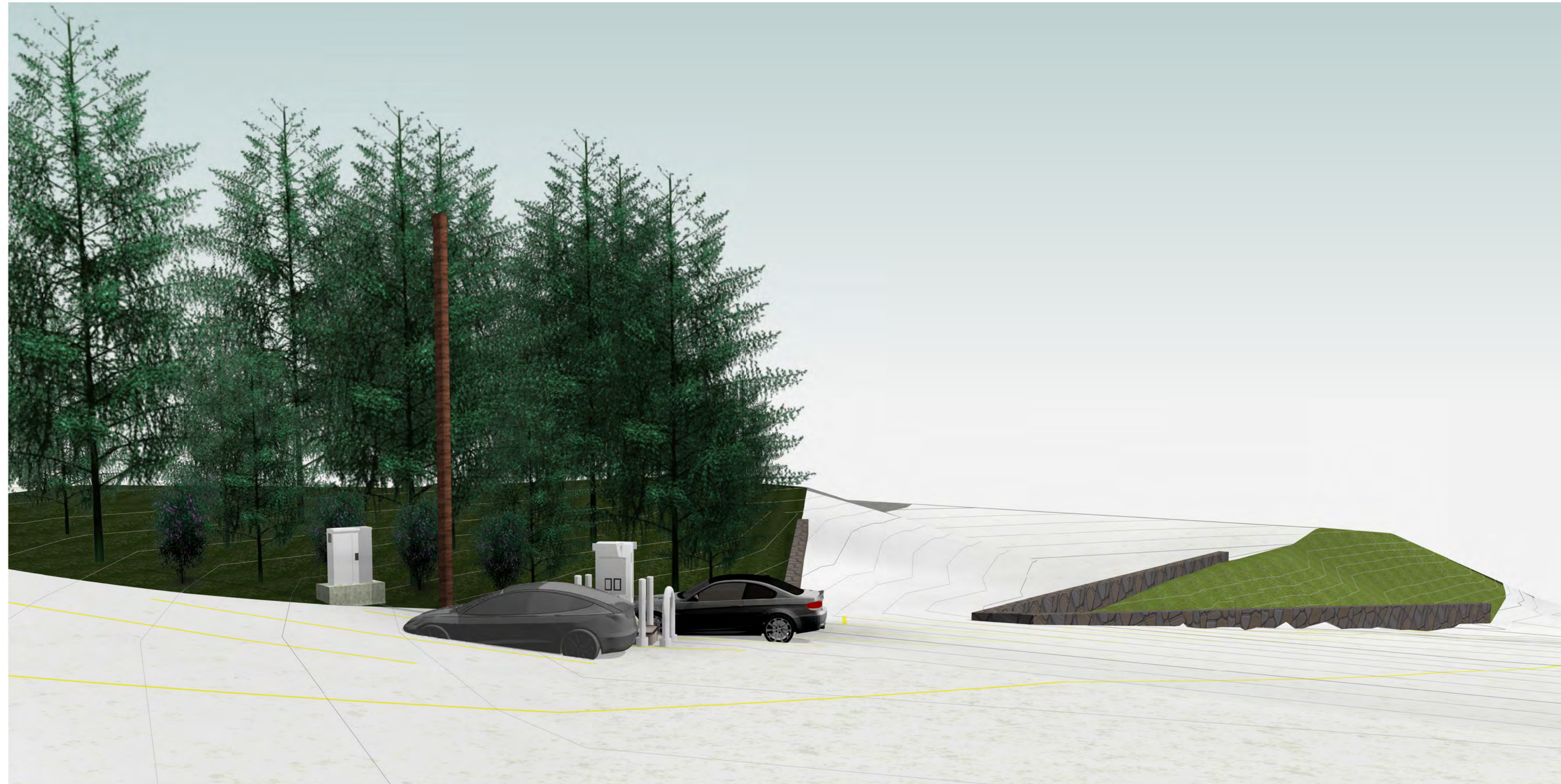
2 site plan - proposed
A0.1 scale - 1/8" = 1'-0"



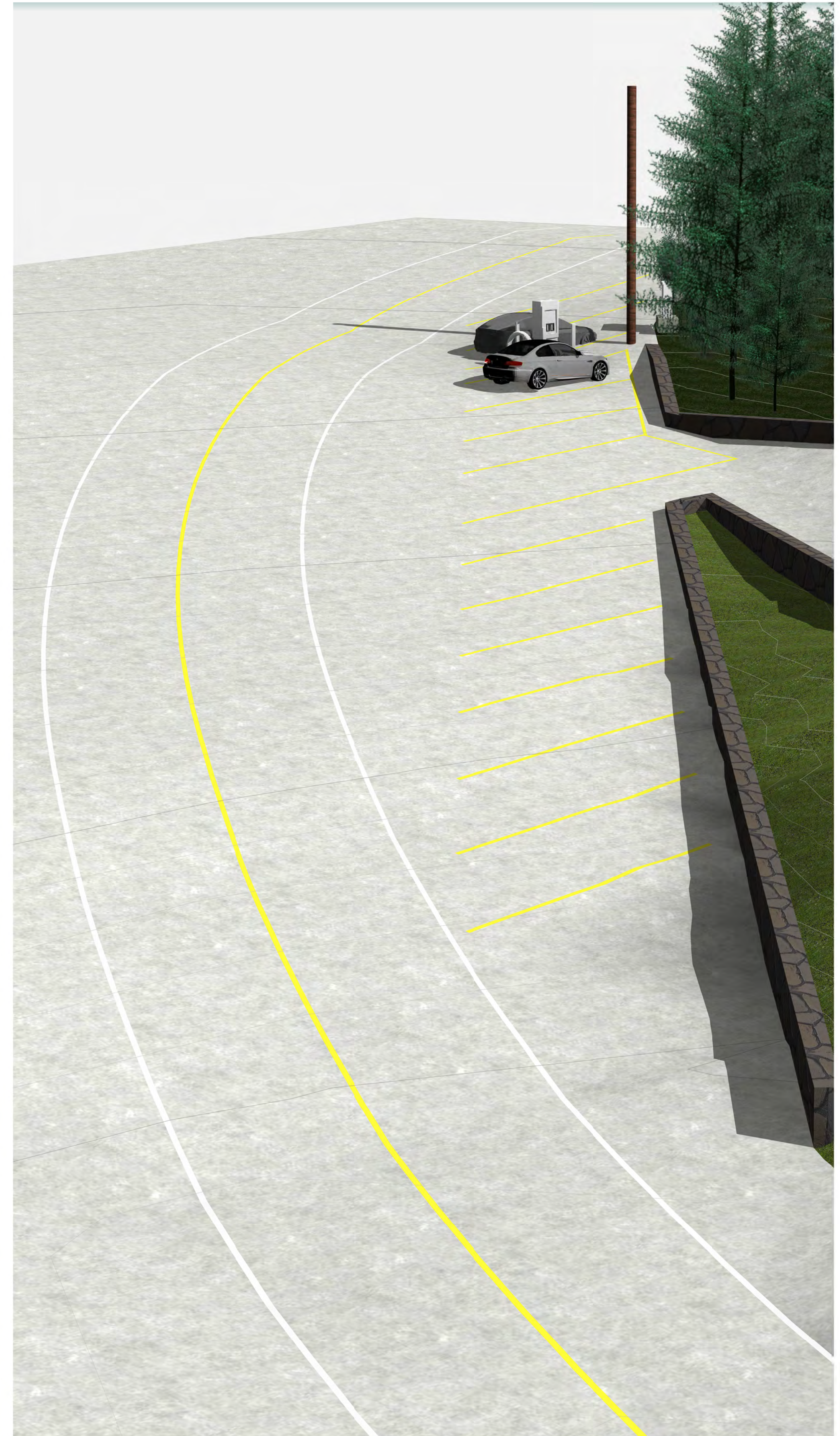
3 perspective 1
A0.2



4 perspective 2
A0.2



5 perspective 3
A0.2



6 perspective 4
A0.2



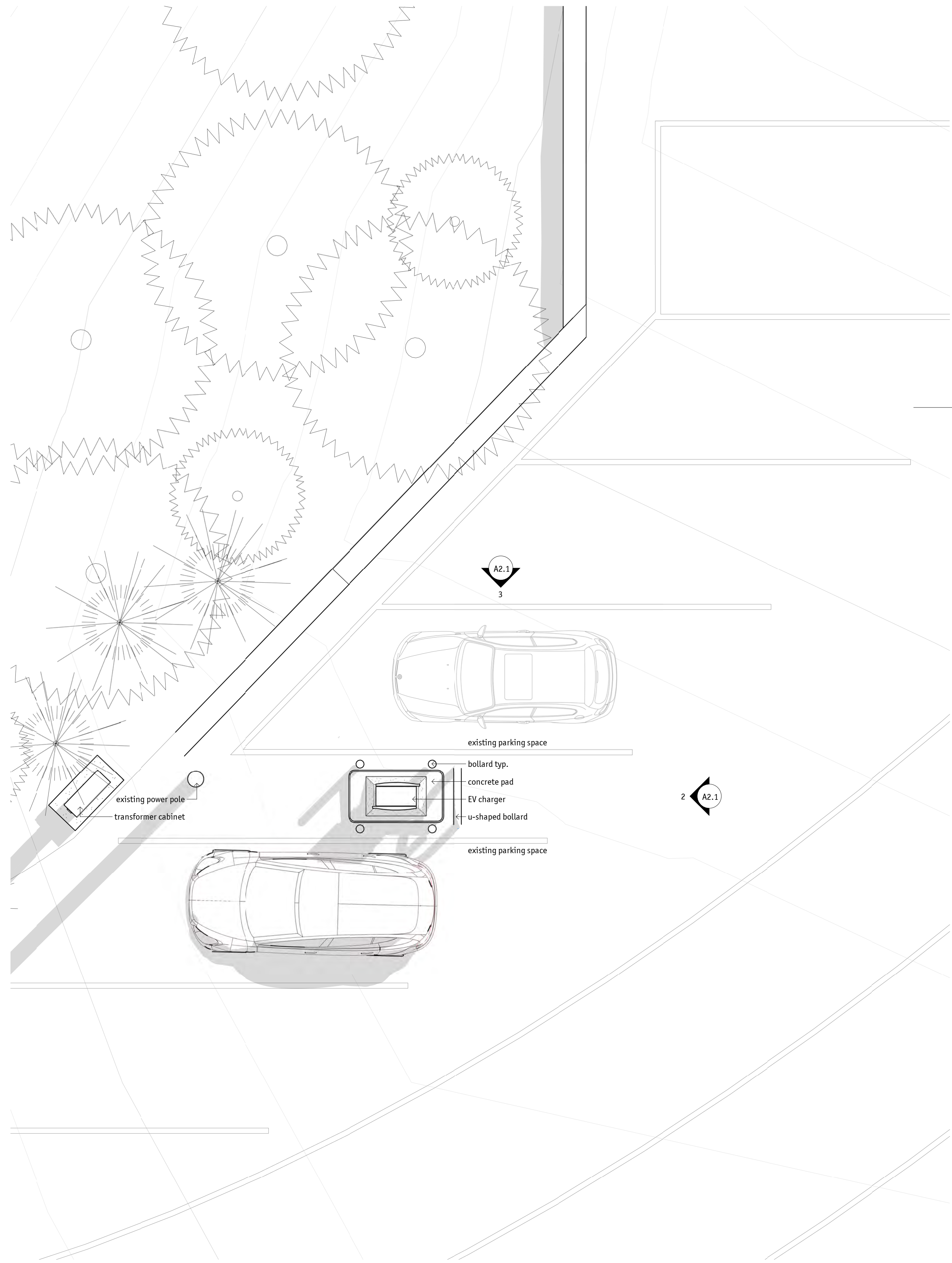
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perspective views

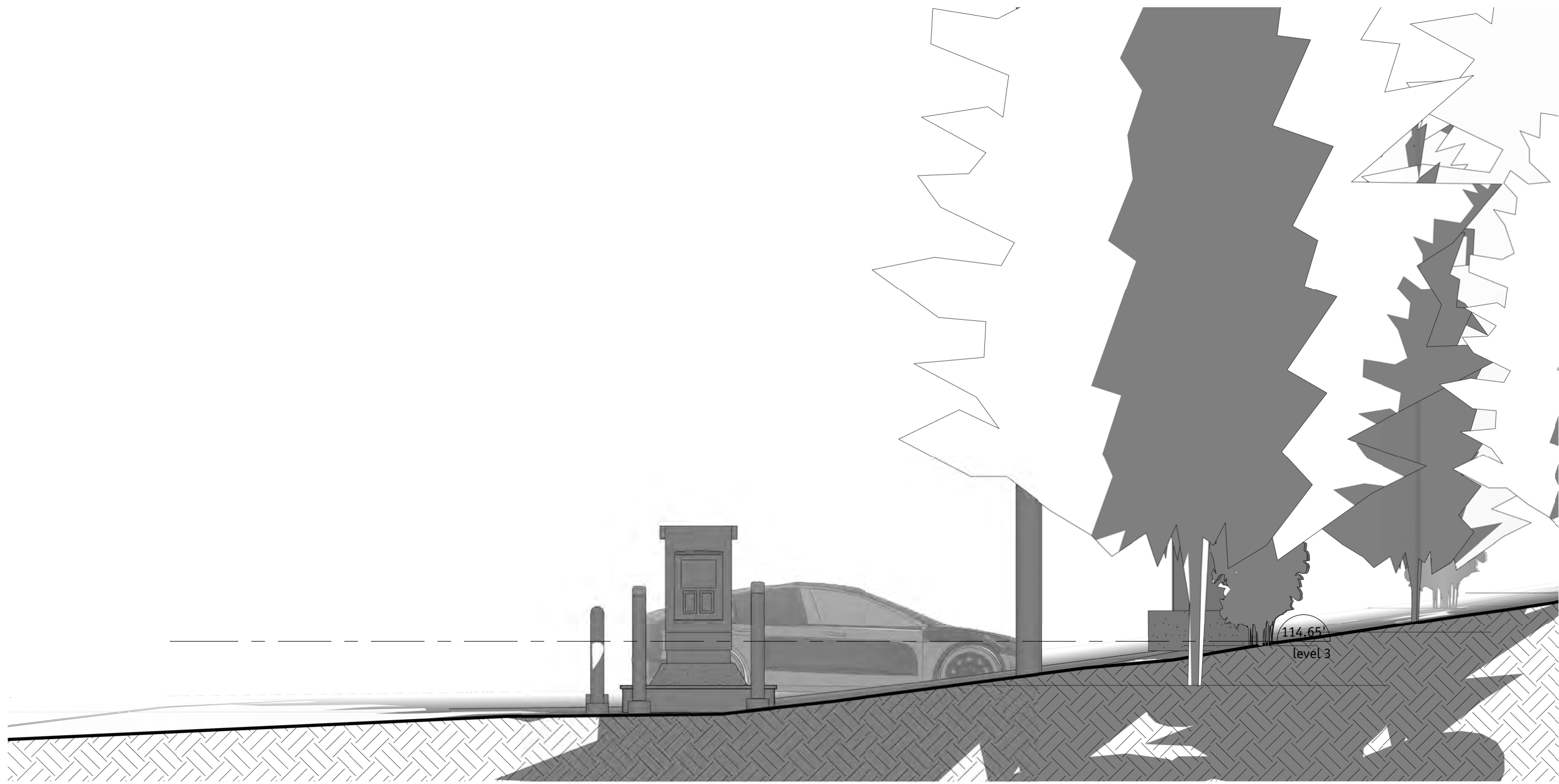
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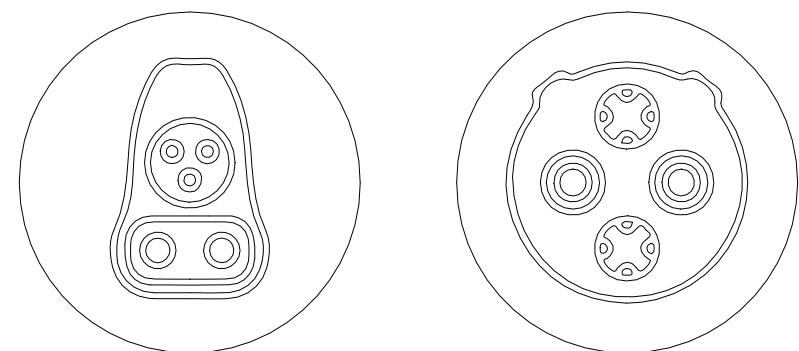
1 plan
A2.1 scale - 1/4" = 1'-0"



2 east elevation
A2.1 scale - 1/4" = 1'-0"



3 north elevation
A2.1 scale - 1/4" = 1'-0"



5 ev connector types
A2.1

Fast Charging Station Specifications	
vehicles served	2 at the same time
station output	up to 62.5 kW
battery voltage supported	200 to 1000 Volts
connectors supported	CHAdeMO, and SAE 31772 Combo

6 station specs
A2.1



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plans and elevations

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