SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:
   Crown Castle Tower Relocation: Redmond Velodrome 831442

2. Name of applicant: **Crown Castle**

3. Address and phone number of applicant and contact person:

Contact: Jennifer Taylor with Lynx Consulting, Inc.
17311 135th Ave NE, Suite A-100
Woodinville, WA 98072
206-228-2127
jtaylor@lynxconsulting.org

Applicant: CROWN CASTLE USA, INC.
2055 S Stearman Dr
Chandler, AZ 85286

4. Date checklist prepared: **7/30/2020**

5. Agency requesting checklist: **King County Department of Permitting**

6. Proposed timing or schedule (including phasing, if applicable):

This project is a required relocation of an existing facility to be removed for Sound Transit expansion. Construction wil commence as soon as applicable approvals are in place. Target is early 2021.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

There are no specific plans at this time to expand the facility. It has been designed for multiple collocators.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

An archaeology/cultural resources report was completed.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no applications pending governmental approval for other proposals affecting this property to our knowledge.

10. List any government approvals or permits that will be needed for your proposal, if known.

King County DPER Conditional Use Permit, SEPA Decision, and Building Permit approval are required for this project as well as a King County Parks Special Use Permit.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Crown Castle proposes to construct a new 120' monopole within a 50'x50' fenced equipment compound. Four wireless carriers (Verizon, T-mobile, AT&T, and Sprint) will be collocated on the tower and in the compound. The compound will be landscaped ten feet around the exterior of the fence. An access road will be extended from an adjacent paved area. This project is due to removal of an existing communication facility on an adjacent property due to the Sound Transit expansion project.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Parcel: 1525059037
Address: 16300 NE Marymoor Way, Redmond
Legal: See attached
Specific location onsite: NW corner of the velodrome near State Route 520.
Plans submitted with CUP package include site plans, elevation plans, landscaping plan, vicinity map, and survey.

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): **Flat**, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

2% approximate slope in the project area

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Soils found are Sand, Peat, Clay, and Gravel.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No, none that we are aware of.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Earthwork is limited to the tower foundation, utility installation, and grading for the site access and equipment area. Approximately 11,160 square feet of grading is necessary to prepare the equipment area and access driveway area. 100 cubic yards of cut are estimate and 30 cubic yards of fill.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

As the site is generally flat erosion is unlikely to occur. However, best management practices will be used to

prevent erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The wireless facility compound and 12' wide access road will add 4,270 sq. ft. of impervious surface (permeable pavement) which is 0.05% of the parcel. The parcel is more than 179 acres.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Due to the flat topography of the site and the small size of the project, erosion is not likely to occur. However, best management practices will be used to prevent erosion including silt fencing, construction fencing, seeding of disturbed areas, and other methods.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Other than minor emissions associated with construction vehicles this proposal will not result in air emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no off-site sources of emissions or odor that would affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

No measures are proposed as no impacts are expected.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The nearest water body according to King County maps is Bear Creek located 390' north of the project site on the opposite side of SR_520. There is an unnamed stream more than 2000' to the South, the Sammamish River approximately 3250' feet to the West and South, Lake Sammamish approximately 5320' to the South. Wetlands are approximately 4500' from the project site.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No – as mentioned in the prior statement the nearest water body is in excess of 200 feet from the proposed project.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredge material will be placed in or removed from wetlands.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

This project will not require surface water withdrawals or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No it does not. Please see FEMA map in the Exhibits.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

This project does not involve discharge of waste materials to surface waters.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No ground water will be withdrawn from a well or water discharge to the groundwater as part of this project. For monopole construction, depending on the time of year, dewatering may be required for the drilled pier construction.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No septic system is included in this project. This type of facility does not generate waste materials.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Due to the small size of the site disturbance and the flat topography there is little expected impact to surface, ground, or runoff water. There are no roofs proposed and the impermeable surfaces include permeable pavement of clean crushed rock. A drainage report is submitted with the CUP application discussing flow of water.

2) Could waste materials enter ground or surface waters? If so, generally describe.

This type of facility does not generate waste materials.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The small scale of this project will not alter drainage patterns on the site.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The selected impervous surface for access road and equipment compound include permeable pavement (clean crushed rock). Minimal grading is necessary due to the generally flat topography. and this project is not expected to affect drainage patterns.

4. Plants [help]

a. Check the types of vegetation found on the site:

_**X**_deciduous tree: alder, maple, aspen, other
_**X**_evergreen tree: fir, cedar, pine, other
_**X**_shrubs
_**X**_grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

No vegetation other than grass will be removed for this project.

c. List threatened and endangered species known to be on or near the site.

There are no threatened or endangered species known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Landscaping is proposed around the exterior of the fence. See landscape plan in the plan set for details on amount and type of plantings.

e. List all noxious weeds and invasive species known to be on or near the site.

There are no noxious weeds or invasive species known to be on or near the site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, **songbirds**, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

There are no threatened or endangered species known to be on or near the site.

c. Is the site part of a migration route? If so, explain.

All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal. This is a relocation of an existing tower facility approximately 480 feet to the East.

d. Proposed measures to preserve or enhance wildlife, if any:

No impacts are expected therefore no measures are proposed at this time.

e. List any invasive animal species known to be on or near the site.

To our knowledge there are no invasive animal species known to be on or near the site.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electric power would be utilized to operate equipment at the site. Power will be provided from a nearby PSE transformer south of the proposed compound by an new underground route to the proposed site location.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No adjacent properties would be impacted due to the placement of the tower adjacent to the SR-520 corridor and the narrow profile of the installation.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None proposed.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

None are expected. All construction activities will be per code. If any toxic or hazardous chemical spill occurs, or if past contamination is discovered, the Department of Ecology will be notified. Back up power generators will be installed and follow code for fuel containment and alarm.

1) Describe any known or possible contamination at the site from present or past uses.

None that are known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None that are known.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Other than backup battery systems which will have secondary containment systems, no other chemicals or similar are expected to be used or stored at the site.

4) Describe special emergency services that might be required.

No special emergency services will be required.

5) Proposed measures to reduce or control environmental health hazards, if any:

Back up power systems (battery and generators) will have secondary containment system and monitored closely.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There is no noise in the vicinity that will impact this project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

There will be minor short-term noise associated with construction of the facility. During facility operation there may be minor amounts of noise from radio equipment located within the compound which will not exceed allowed noise levels according to the noise report submitted with the CUP application.

3) Proposed measures to reduce or control noise impacts, if any:

None proposed. Any generated noise will meet the local zoning requirements.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

This property is park with multiple recreational facilities. The proposed site for the project is an unused grassy area near the edge of the property and a state highway. The installation will not remove any recreational uses on the property nor affect uses on adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No, this parcel is not a working farmland or forest land.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

The proposal will have no impact.

c. Describe any structures on the site.

In the area of the project is a velodrome which includes seating and lighting structures.

d. Will any structures be demolished? If so, what?

No structures will be demolished for the installation of this facility.

e. What is the current zoning classification of the site?

R1- Residential

f. What is the current comprehensive plan designation of the site?

Open Space Area

g. If applicable, what is the current shoreline master program designation of the site?

N/A.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The parcel does have seismic hazards and a 100 year flood plain that is not near the project area.

i. Approximately how many people would reside or work in the completed project?

None – this will be an unmanned facility.

j. Approximately how many people would the completed project displace?
None – this will be an unmanned facility.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None – this will be an unmanned facility.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposed wireless facility has been located in an area not designated for a recreational use and is adjacent to a state highway. This facility does not generate waste, traffic, or significant noise and should not impact land uses in the area other than to provide wireless service to the area. This location is proposed due to the required removal of an existing wireless facility on an adjacent property due to Sound Transit relocation. It does not introduce a new use to the area as there is currently is a wireless facility near the proposed new location.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None - This project will not have a measurable impact to agricultural or forest lands in the area.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

N/A

c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

120' steel tower.

b. What views in the immediate vicinity would be altered or obstructed?

There will be altered views as the proposed replacement tower is apprixmately 480 feet west of the current location. There will not be significant view changes as no trees are to be removed as part of this project and there are existing tall stadium lights at the park.

b. Proposed measures to reduce or control aesthetic impacts, if any:

The proposed tower will be painted and landscaping is proposed around the fence.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The proposal will not produce light or glare.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

As no lights are proposed and no glare expected there will be no impacts from these items.

c. What existing off-site sources of light or glare may affect your proposal?

There are no existing off-site sources of light or glare that would affect this proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

None proposed.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

This is a park with multiple recreational areas. The velodrome is the closest designated recreational item. There is a also a general recreation area and event pad nearby.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No, the location chosen for the site is not used for any particular purpose and the project would not displace existing recreational uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Applicant will work with Park to ensure construction schedule limits impacts on recreation uses.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

The James Clise House is listed on the national register of historic places and is located on another parcel within Marymoor Park. Redmond City Park is also listed and located nearly 0.5 miles to the north.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

A cultural resources study was completed for this project and is submitted with the SEPA Checklist. The report lists cultural resources within 0.5 miles of the project area and notes that no previously-identified archaeological sites are located within the project area.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

A cultural resources study was completed for this project. Their methods include research, pedestrian survey, and subsurface sampling.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Any cultural resources identified during operations will be protected. Should archaeological materials or cultural items be discovered during the course of operations, all work in the vicinity will be stopped and Park and DAHP will be contacted.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The proposed site will be accessed from NW Marymoor Parkway and existing driveways and parking lots. The final extension to the facility compound will come from the paved event pad to the west of the site.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

This proposal will not affect or require use of public transit.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Existing parking spots would be available near the site. No parking will be eliminated.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No new or improved public roads are necessary.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

1-2 Vehicle trips per month would occur by a passenger vehicle (after the construction period occurs).

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No

h. Proposed measures to reduce or control transportation impacts, if any:

None proposed given the limited scope of impacts.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

This type of facility will not create an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No impacts are expected therefore no measures are proposed.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _**fiber**___

c. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electric service and fiber/broadband services will be installed to the wireless facility location.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: ___ *Jennifer Taylor*_____
Name of signee _____Jennifer Taylor_____
Position and Agency/Organization _Agent for Applicant Crown Castle_____
Date Submitted: ___8/4/2020_____

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LEGAL DESCRIPTION

Abbreviated Legal Description:

SW 1/4 OF SD SEC LESS ST HWY LESS POR LY NLY OF ST HWY ALSO SW 1/4 OF SE 1/4 LESS E 30 AC ALSO S 1/2 OF SE 1/4 OF SE 1/4 TGW POR OF E 30 AC OF SW 1/4 OF SE 1/4 LY SLY & ELY OF LN DAF - BEG PT ON W LN OF SD E 30 AC 200 FT NLY FR SW COR TH S 87-50-18 E PL W S LN OF SD E 30 AC 600 FT TH N 47-09-42 E 276.19 FT TH N 01-07-26 E 845.97 FT M/L TO PT 60 FT S OF N LN OF SD E 30 AC TH ELY 200 FT M/L PLW N LN OF SD E 30 AC TO E LN OF SD E 30 AC & TERM OF OF SD LN LESS RD

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e) Embodied	Energy	Transportation	**Lifespan Emissions (MTCO2e)**
Single-Family Home	0		98	672	792	**0**
Multi-Family Unit in Large Building	0		33	357	766	**0**
Multi-Family Unit in Small Building	0		54	681	766	**0**
Mobile Home	0		41	475	709	**0**
Education		0.0	39	646	361	**0**
Food Sales		0.0	39	1,541	282	**0**
Food Service		0.0	39	1,994	561	**0**
Health Care Inpatient		0.0	39	1,938	582	**0**
Health Care Outpatient		0.0	39	737	571	**0**
Lodging		0.0	39	777	117	**0**
Retail (Other Than Mall)		0.0	39	577	247	**0**
Office		0.0	39	723	588	**0**
Public Assembly		0.0	39	733	150	**0**
Public Order and Safety		0.0	39	899	374	**0**
Religious Worship		0.0	39	339	129	**0**
Service		0.0	39	599	266	**0**
Warehouse and Storage		0.0	39	352	181	**0**
Other		0.0	39	1,278	257	**0**
Vacant		0.0	39	162	47	**0**

Section II: Pavement

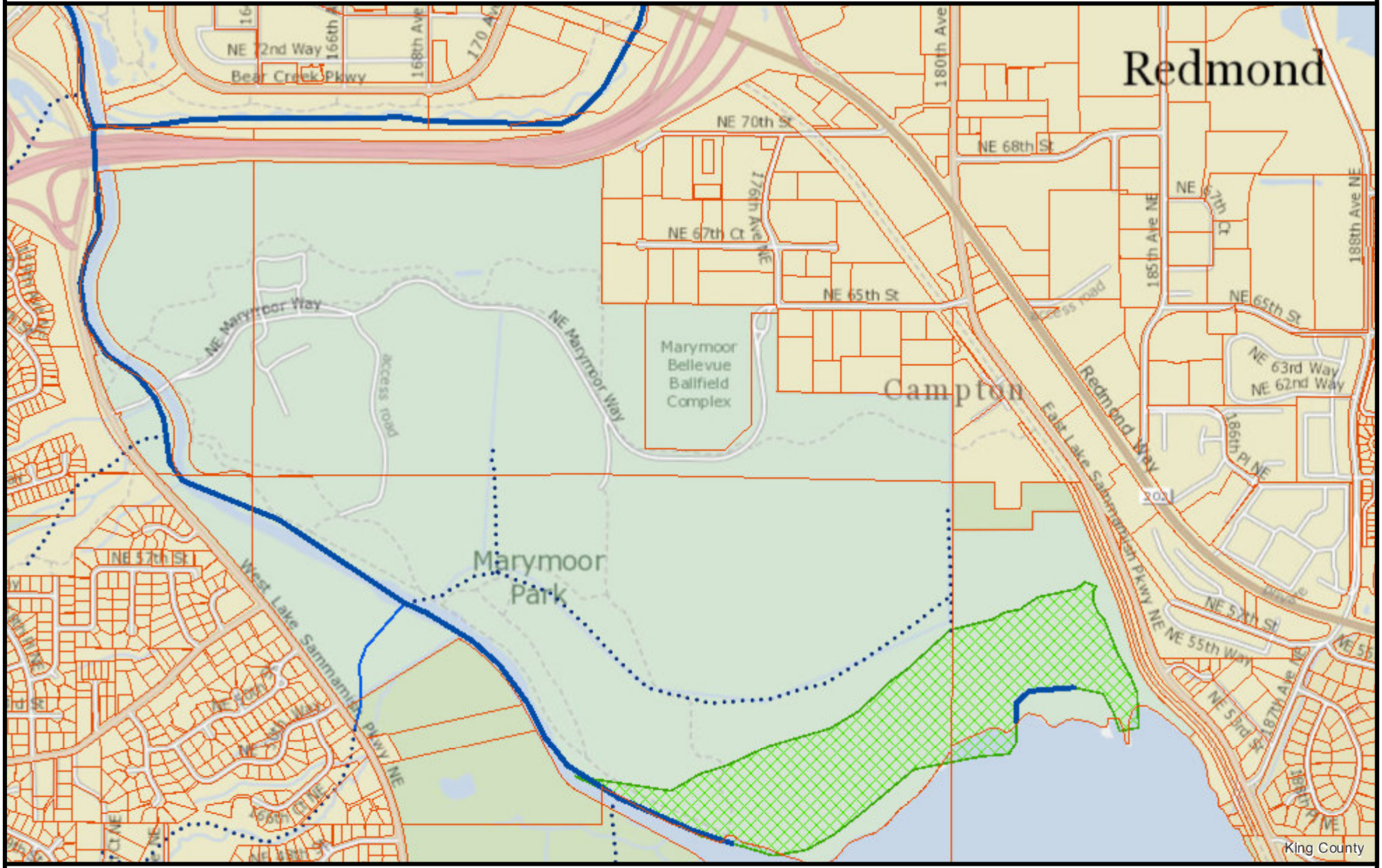
Pavement		0.00				**0**

Total Project Emissions: **0**

Data entry fields

NO BUILDINGS PROPOSED, NO OCCUPIED SPACES

King County iMap - Streams and Water Bodies

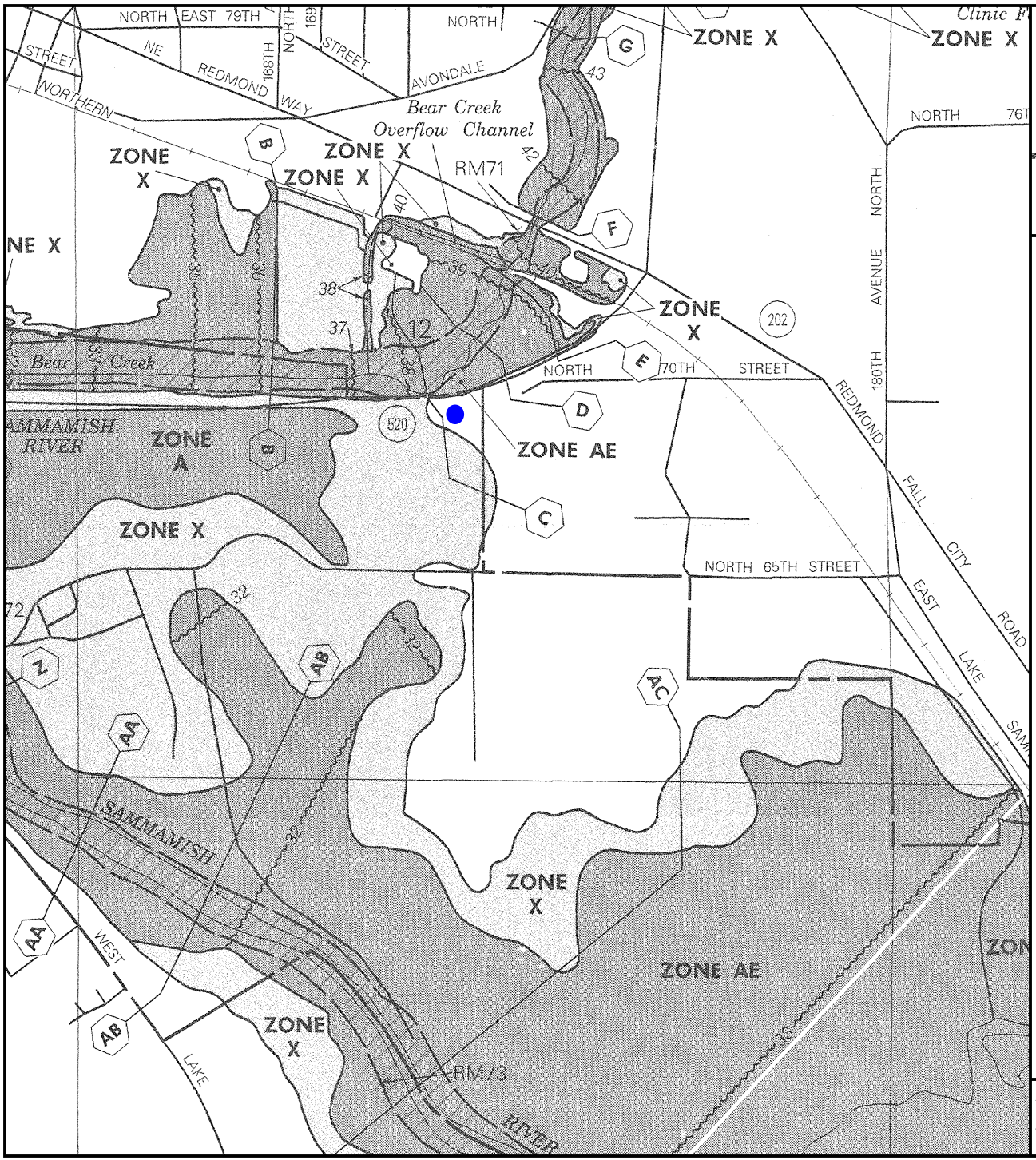


The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 5/21/2020 Notes:

N

King County



APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

KING COUNTY, WASHINGTON AND INCORPORATED AREAS

PANEL 390 OF 1725

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY	NUMBER	PANEL	SUFFIX
KING COUNTY, UNINCORPORATED AREAS	530071	0390	G
REDMOND, CITY OF	530087	0390	G

MAP NUMBER
53033C0390 G

MAP REVISED:
MARCH 30, 1998

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

OUTSIDE AREAS OF 100 YEAR FLOOD PLAIN

CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: _____ (Please contact the lead agency for the project number. If associated to SEPA, please contact SEPA@dahp.wa.gov to obtain the project number before creating a new project.)

Author: Julie Wilt, Amiee Finley, and Bill R. Roulette

Title of Report: Results of a Cultural Resources Study of the Redmond Velodrome Cellular Communications Facility Construction Site (Trileaf # 667059), King County, Washington Applied Archaeological Research, Inc., Report No. 2342

Date of Report: June 12, 2020

County(ies): King Sections: 12 Township: 25N Range: 5E

Quad: 1973 Redmond, WA (Provisional Edition) Acres: 0.48

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? ☐Yes ☒No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐Yes ☒No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

Were Human Remains Found? ☐ Yes DAHP Case # ☒ No

DAHP Archaeological Site #:

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- Submission of PDFs is required.
- Please be sure that any PDF submitted to DAHP has its cover sheet, figures, graphics, appendices, attachments, correspondence, etc., compiled into one single PDF file.
- Please check that the PDF displays correctly when opened.

RESULTS OF A CULTURAL RESOURCES STUDY OF THE REDMOND VELODROME CELLULAR COMMUNICATIONS FACILITY CONSTRUCTION SITE (TRILEAF # 667059), KING COUNTY, WASHINGTON

By
Julie Wilt, M.S.,
Aimee Finley, M.S.,
and
Bill R. Roulette, M.A., RPA

Prepared for
Trileaf Corporation
Chandler, Arizona

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APPLIED ARCHAEOLOGICAL RESEARCH, INC. REPORT NO. 2342

APPLIED
ARCHAEOLOGICAL
RESEARCH, INC.
Cultural Resource Management and Historic Preservation

4001 NE Halsey Street, Suite 3
Portland, OR 97232
Phone (503) 281-9451

INTRODUCTION

This report describes the result of Applied Archaeological Research, Inc.'s (AAR's) cultural resources study of the proposed Redmond Velodrome cellular communications facility construction site (Trileaf #665548), that is located in Redmond, King County, Washington (Figure 1). AAR's study was completed to assist Trileaf Environmental and Property, the engineering firm overseeing the design and siting requirements for the facility, in completing Form 620 as it relates to the Nationwide Programmatic Agreement and in complying with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800.

AAR personnel for the project included Lead Archaeologist Julie Wilt, M.S., who conducted a record and literature search, Aimee Finley, M.S., AAR's Architectural Historian, Andrew Bastier, B.A., who completed the fieldwork, and Bill R. Roulette, M.A., RPA, who served as the Principal Investigator. Ms. Wilt, Ms. Finley, and Mr. Roulette are professional archaeologists meeting all of the requirements of the Secretary of the Interior's professional qualification standards.

Project Description

The proposed Redmond Velodrome cellular communications facility project would involve the construction of a new unmanned telecommunications facility in Marymoor Park on property owned by King County Parks at 16300 NE Marymoor Way, Redmond (Figure 2). The construction site is in the southwest quarter of Section 12, Township 25 North, Range 5 East, Willamette Meridian (WM), at an elevation of 43 feet above mean sea level. It is in a level, grass-covered field between the Marymoor Velodrome and a paved parking lot and basketball field. A channelized portion of Bear Creek is about 330 feet to the north and the Sammamish River is about 0.6 mile to the west. State Route 520 is adjacent to north side of the site.

As part of the project, Crown Castle proposes to install a new 120-foot-tall monopole within a 40-by-35-foot fenced equipment compound. An antenna at the top of the monopole would increase its height to 124 feet. The depth of excavation for setting the monopole is estimated to be 17 feet below the ground surface. The equipment compounds will be sub-leased to four carriers, which will each install their own equipment, including concrete pads, cabinets, and H-frames.

A 20-foot-wide, 870-foot long access easement would extend from the northeast corner of the compound, curve around the north end of the velodrome, and continue along its eastern side to connect with an existing parking lot (Figure 2). A five-foot-wide wide utility easement would extend approximately 420 feet south from the compound to an existing telco pedestal and electrical transformer. Maximum depth of excavation related to constructing the compound is estimated to be two feet. Excavations for burying utility lines are expected to be three feet deep.

The area of potential effects (APE) for direct project impacts includes the access and utility easements, and the compound. Combined, those areas encompass 0.48 acre. Photographs of the APE for direct project effects and the area surrounding it are included in Appendix A of this report.

Conventions

In this report, measurements for common distances, elevations, areas, and those provided for historical archaeological objects and sites are in English units. Measurements that describe archaeological excavation units are in metric units. Numbers in the thousands used to express ages and distances feature commas to denote thousands. Calendar dates and dates used to express years before present (BP) do not use commas to denote the thousands place but do use commas to denote the ten thousands place.

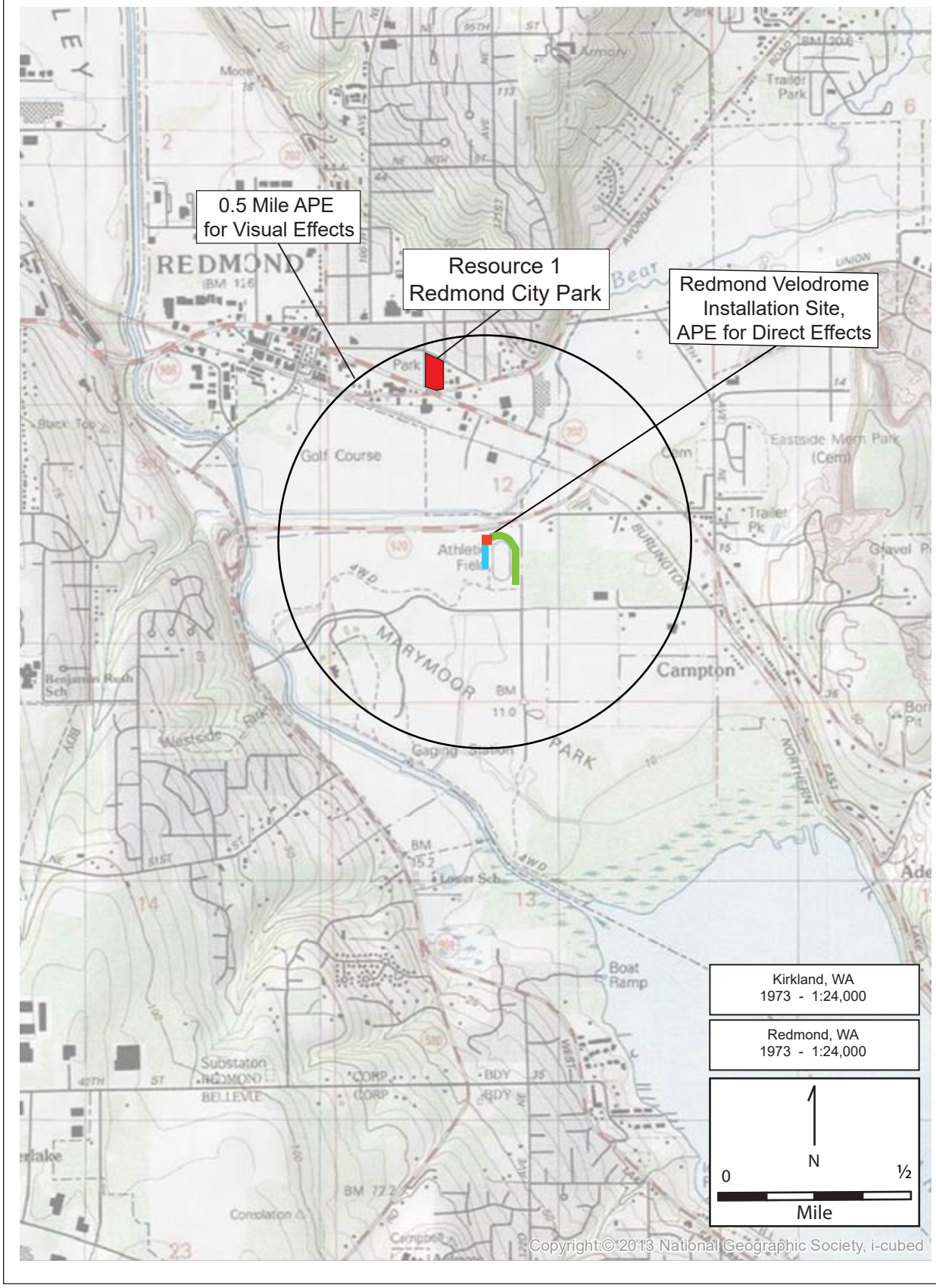

Figure 1. Location of the proposed Redmond Velodrome installation site, APE for visual effects, and of Resource 1, Redmond City Park.

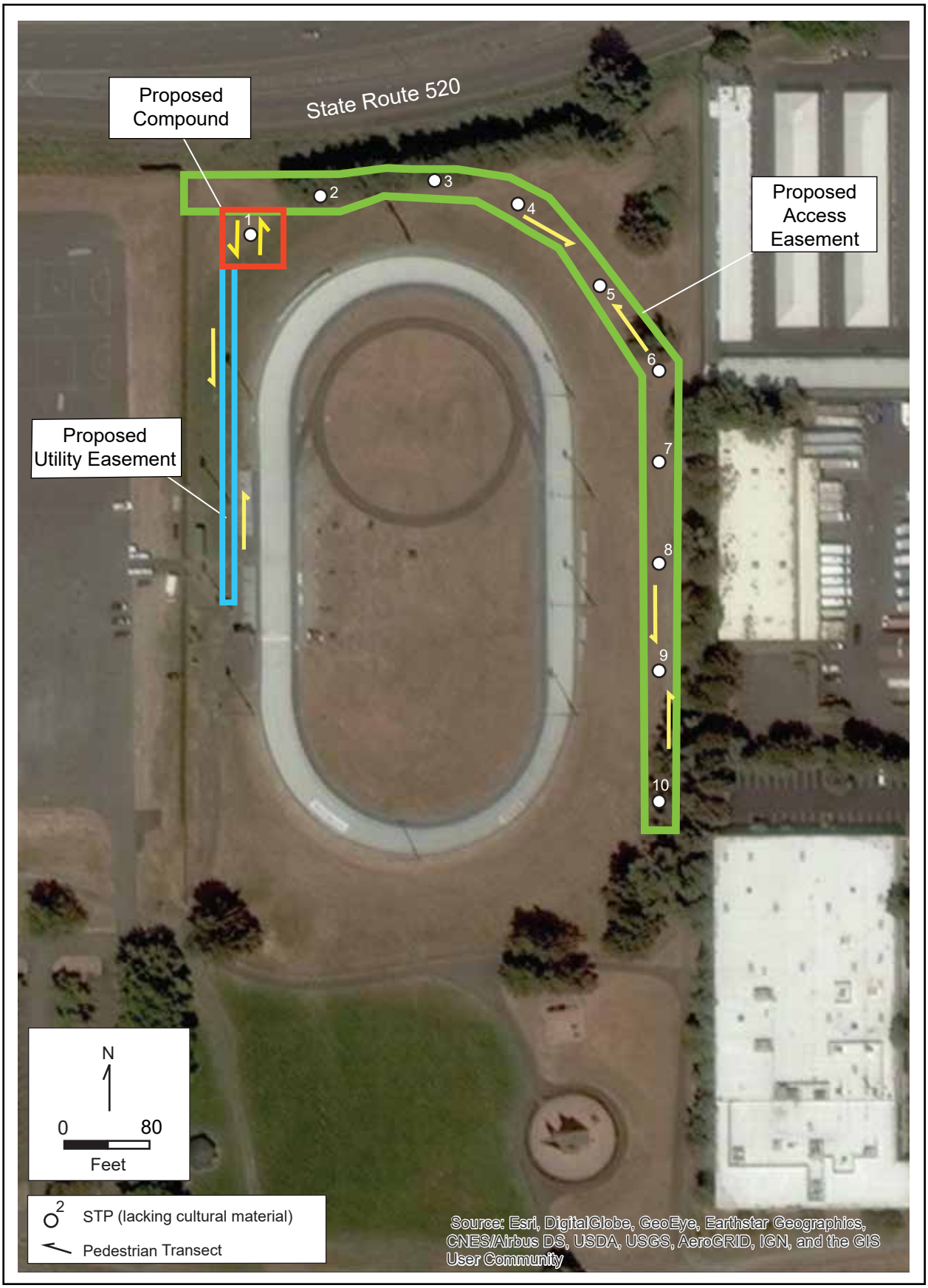

Figure 2. Configuration of the Redmond Velodrome APE for direct effects showing the location of the proposed compound, utility and access easements, STPs, and pedestrian transects.

Coordination and Consultation

The fieldwork for the project was done under Special Use Permit SUPS20-0048 issued to Crown Castle by the King County Facilities Management Division, Real Estate Services Section. Requirements for the project fieldwork were provided to AAR by Brandy Rinck, Archaeologist / Cultural Resources Coordinator, King County Department of Natural Resources and Parks, Parks and Recreation Division, and Philippe D. LeTourneau, Ph.D., Archaeologist, King County Historic Preservation Program, Department of Natural Resources and Parks. Prior to the fieldwork, AAR provided the work schedule via email to the Muckleshoot, Puyallup, Snoqualmie, Stillaguamish, Suquamish, and Tulalip Indian Tribes along with an invitation to join AAR staff in the field.

ENVIRONMENTAL OVERVIEW

Physical Environment

The APE and vicinity are in the Puget Sound Lowland physiographic province, a structural trough that extends from the Canadian border south to the Willamette Valley in Oregon. Elevation in the province is typically less than 500 feet above mean sea level. Topographic relief is characteristically subdued with most topographic features having resulted from Pleistocene glacial deposition and erosion. During that epoch, the Cordilleran ice sheet covered all or part of the province between about 18,000 and 13,000 years ago. The final stage of glaciation, the Vashon stade, advanced to a point near Tenino, about 65 miles southwest of the proposed project area (Easterbrook and Rahm 1970:51). The retreat of the Vashon stade at the end of the Pleistocene resulted in the deposition of large amounts of glacial till, sand, and gravel. The entire Puget Lowland, including the APE, was covered by recessional outwash sands and gravels.

The APE is in the valley of the Sammamish River, slough-like waterway that connects Lake Sammamish to Lake Washington. At present, it is about 13.5 miles long. Historically, it was longer. The river and its valley have been heavily impacted by logging, channel straightening, and draining. Much of the valley floor formerly was swampy. The swampland was largely drained in the 1910s by farmers and by the opening of the Chittenden Locks (better known as the Ballard Locks), which lowered the elevation of Lake Washington by about nine feet and change the hydrology of the river system. Channel straightening also began in the 1910s. These efforts shortened the river channel and reduced its ability to store water during seasonal freshets. Dredging of the river channel by the U. S. Army Corps of Engineers began in the 1960s. As a result, the channel depth was increased by five feet which further increased valley drainage and at the same time decreased the river's connection to its floodplain (Hodges et al. 2009:6; King County 2020). Bear Creek is tributary to the Sammamish River. It has been affected by many of the same impacts as the river including channel straightening and the draining of its floodplain (Hodges and Kopperl 2016:15).

The soil mapped in the APE is Indianola loamy sand, 0 to 5 percent slopes (Snyder et al. 1973:16). Members of the Indianola soil series are moderately deep and somewhat excessively well drained. They occur on eskers, kames, and terraces. The soils formed in sandy glacial outwash in forested settings. In a typical profile, the upper ca. 30 inches consist of brown to yellowish or olive brown loamy fine sand, underlain by olive sand to 60 inches (Snyder et al. 1973:16).

Flora and Fauna

The APE vicinity is within the Westside Lowlands Conifer-Hardwood Forest (Johnson and O'Neill 2001), or the Western Hemlock Zone as define by Franklin and Dyrness (1973). The forests were heavily logged in the late nineteenth and twentieth centuries and at present century and remnant forest patches often occur in a mosaic with the low-density zone of the Urban and Mixed Environment. The

Urban and Mixed Environment represents anthropogenic overlays of modern housing, road construction, utilities, and commercial and agricultural developments.

In its natural state, the forests are dominated by western hemlock and Douglas-fir interspersed with red alder, western redcedar, and bigleaf maple (Johnson and O'Neill 2001:24). Understory species include salal, dwarf Oregon grape, vine maple, salmonberry, and trailing blackberry. Swordfern, bracken fern, Oregon oxalis, and vanillaleaf are also common.

The Puget Lowlands provided habitat for a wide variety of mammals that resided or seasonally occupied the vicinity. Chief among the large mammals were (and are) elk, black-tailed deer, black bear, cougar, and coyote. Smaller mammals include beaver, porcupine, bobcat, rabbits, and squirrels (Kruckeberg 1991). These fur-bearing mammals were important to the prehistoric occupants of the region for their furs as well as for meat.

The Sammamish River and its tributaries, including Bear Creek, support contemporary fall chinook runs. Sockeye spawn in the Sammamish River and Bear Creek, and most tributaries of Lake Washington also support sockeye. The present-day Bear Creek basin is also known to have runs of chinook, coho, kokanee, coastal cutthroat, and steelhead (Kopperl et al. 2016:51).

CULTURAL CONTEXT

Archaeological Overview

The following present a brief overview of a cultural chronology developed by Kopperl et al. (2016) that describes cultural change through time in five broad chronological analytical periods. Kopperl et al. (2016) base their periods on an analysis of geological and paleobotanical data, as well as archaeological chronologies for Western Washington.

Analytical Period 1: 14,000 to 12,000 BP

Post-glacial hunter-gatherers entered Western Washington during this analytical period. Archaeological evidence for the initial appearance into the region remains sparse and open to debate. The artifacts most widely recognized as associated with this time period are related to the Clovis culture, which occurs throughout North America. Clovis sites date to ca. 12,500 BP and are characterized by the eponymous projectile point, which is large, fluted, and unique to the period. While isolated finds of surficial Clovis points are recorded across the Pacific Northwest, sites containing Clovis materials are quite rare. The only such site recorded in King County consists of a fluted projectile point from the Hamilton Bog site (45KI215), although similar artifacts have been documented on Whidbey Island (Kopperl et al. 2016:112-113). The few sites or isolated finds that date to this period were found on old land surfaces that are composed of glacial drift, with little deposition since the Pleistocene (Kopperl et al. 2016:114).

Analytical Period 2: 12,000 to 8000 BP

This analytical period spans the initial period of maximum post-glacial warming and coincides with changes in vegetation patterns that occurred throughout Western Washington. Culturally it is signaled by increasingly sophisticated land use strategies within local environments.

Few components in the Western Washington lowlands have been dated to this time period. Among these are the Manis Mastodon site (45CA218) near Sequim, the Cedar River Outlet site (45KI25) at Chester Morse Lake, and the Bear Creek site (45KI839) in the Sammamish River Valley, which is within the 0.5-mile-radius of the proposed Redmond Velodrome APE.

The Bear Creek site is one of the oldest chronometrically dated sites in the area and is situated at a lower-elevation compared with contemporary sites in the region. It contains a relatively low-density but horizontally extensive component with lithic artifacts between underlying glacial outwash sediments and an overlying peat deposit. The organic peat deposits were radiocarbon and luminescence dated to about 12,500 to 10,000 BP (Hodges et al. 2009; Kopperl et al. 2010, Kopperl et al. 2016). It remains unclear if the site represents a base camp or a more limited procurement or processing activity area (Kopperl et al. 2016:114-115).

Analytical Period 3: 8000 to 5000 BP

The third analytical period encompasses the later half of the period of maximum post-glacial warming and the transition to cooler, moister conditions that followed it. During the period are recognized important changes in hunter-gatherer subsistence strategies and technology.

A much larger sample of sites is available from this period than from earlier periods. Consequently, artifact assemblages recovered from these sites represent a greater diversity of site types and are found on a wider range of landforms. Many of these sites found on older inland river terraces are distinguished by technological and stylistic attributes of Olcott or Old Cordilleran assemblages. Attributes of the Olcott phase include an emphasis on the upland, non-marine terraces of higher secondary streams; a lack of domestic or architectural features such as hearths; little organic material such as bone or shell; few groundstone items; numerous scrapers and choppers; Cascade-style points; and use of coarse-grained lithic raw materials such as basalt and argillite for toolstone (Morgan et al. 1998:3.4; Nelson 1990:483).

The Marymoor Site (45KI9), located about 0.56 mile southwest of the current project area in Marymoor Park, dates to this period. It is listed on the NRHP and is a probable field camp that yielded evidence of food processing, stone tool manufacturing, and other activities (Kopperl et al. 2016:116; Lockwood 2016). Residential field and base camps may occur beneath recent alluvium on the lower reaches of other major river systems in King County as well.

Analytical Period 4: 5000 to 2500 BP

This analytical period is marked by shifts in hunter-gatherer economic and technological organization. Evidence for such shifts includes shell middens which make their first appearance along shores of Puget Sound during this period. Environmentally, it was during this period that the modern (native) vegetation patterns in the Pacific Northwest became established.

The increased number of archaeological sites dating to this period on lowland landforms is related to an increase in population, the diversification of land use strategies, and greater preservation of archaeological sites. Base camps, including resource acquisition sites from hunting, quarrying, and shellfish gathering are all represented in this period (Kopperl et al. 2016:117).

Analytical Period 5: 2500 BP through Euroamerican contact

Archaeological evidence from this period reflects changes in hunter-gatherer economic and social patterns suggestive of adaptive responses to environmental changes caused by the 1100 BP earthquake on the Seattle Fault as well as to Euroamerican contact. The initial appearance of village sites along the coastal shoreline, as well as at least one inland riverine village site is interpreted as reflecting a shift from residential resource acquisition camps to a winter village pattern (Kopperl et al. 2016:118).

The latter part of this period represents the full development of the ethnographic culture type including winter villages, a salmon-based economy, extensive use of storage techniques, and ascribed social status (Morgan et al. 1998:3.11). Storage and increased technological efficiency may have resulted

in increased population growth (Morgan et al. 1998:3.10). Regional differences appear in artifact types and art, which may relate to both functional needs as well as to cultural/ethnic differences among the groups of the Northwest Coast area.

Local Archaeological/Historic Property Overview

A review of archaeological records on file at the Washington State Department of Archaeology and Preservation (DAHP) obtained using its Washington Information System for Architectural and Archaeological Records Data (WISAARD) web portal indicates that the APE has not been surveyed and that no archaeological sites have been recorded within it. The DAHP state-wide predictive model shows it as having a very high risk for cultural resources. At least 19 archaeological projects have been carried out within 0.5 mile of the Redmond Velodrome site, including eight within the park boundaries. Table 1 provides a list of the projects by type and citation.

Six cultural resources are recorded that are within 0.5 mile of the project APE. They include the aforementioned and extensively studied Bear Creek site, 45KI839, which has been determined to be eligible for listing on the National Register of Historic Places (NRHP) (Hodges et al. 2009; Kenmotsu 2014; Kopperl et al. 2010; Kopperl, ed. 2016). The site has been the subject of testing, data recovery, and site damage assessment work. The combined cultural assemblage from all of the studies, inclusive of pieces of fire-cracked rock (FCR) and manuports, contains 4,250 items. However, only 3,692 of the objects were found *in situ* in the securely dated late Pleistocene-Holocene cultural level, referred to as Stratum Vc. The Stratum Vc assemblage mainly consists of pieces of debitage of fine-grained volcanic rock. It also includes formal tools such as bifaces, projectile points, scrapers, retouched flakes, pointed tools and denticulates and expedient tools classified as drills, edge-modified cobbles, and used flakes. Several diagnostic projectile points recovered from Stratum Vc appear to represent a regional variant of the Western Stemmed Tradition (Taylor and Beck 2016:149).

The other cultural resources located within 0.5 mile of the project APE include 45KL451, part of the grade of the historic-era Seattle, Lake Shore & Eastern Railroad, which was determined not eligible for the NRHP (Sterner 2010) and pre-contact site 45KI266 that was recorded in 1984 and described as containing fire pits and stone tools, but which subsequently was destroyed by bulldozing (Elridge 1984). No report associated with site 45KI266 is available in the WISAARD database.

Archaeological resource 45KI492 is located in Marymoor Park. As recorded it consisted of a fire pit, pieces of FCR, and lithic debitage that were exposed during the excavation of a utility trench (Nelson 2000a, 2000b). The site has not been formally evaluated for listing on the NRHP.

Site 45KI941 was recorded in Marymoor Park in 2009 (Hoyt and Johnson 2009). It was originally described as consisting of five pieces of lithic debitage and one small piece of mammal bone (Hoyt and Johnson 2009). Subsequent investigations at it revealed that the debitage was non-cultural and the piece of bone non-archaeological (Rinck 2019). Based on those results, the site was recommended as not eligible for the NRHP (Rinck 2019). The DAHP has not yet concurred with this finding.

Pre-contact site 45KI1269 is also located in Marymoor Park. As recorded it consists of three pieces of lithic debitage and several pieces of FCR (LeTourneau 2016). It has not been evaluated for listing on the NRHP. Although the site is shown on WISAARD, the database includes no associated report.

The WISAARD database includes one historic property listed on or eligible for inclusion in the NRHP located within 0.5 mile of the Redmond Velodrome cell site. It is the Redmond City Park located at 7802 168th Avenue in Redmond (Figure 3). The park was established in 1938 and is listed on the NRHP. Its DAHP identification number is 187658. It location is plotted on Figure 1.

Table 1. List of Previous Cultural Resource Studies Conducted within 0.5 Mile of the Project Area

Author(s) of Report/Year	Type of Investigation	Size of Project Area (in Acres)	Comments
Kassa-Kleinschmidt 2019	Reconnaissance survey	4.89	No archaeological resources identified
Punke et al. 2018	Formal survey	Not listed	Identified historical artifacts within the berm of site 45KI451
Fruge and Compas 2018	Monitoring	1 acre	No archaeological resources identified within 0.5 mile of the Redmond Velodrome APE
Hays and Kopperl 2017	Monitoring	0.1 acre	No archaeological resources identified
Kopperl, ed. 2016	Data recovery	2 acres	Additional study of 45KI839, the Bear Creek site
Lockwood and Hoyt 2016	Monitoring	<1 acre	No archaeological resources identified
Lockwood and Ostrander	Formal survey	<1	Artifacts associated with 45KI9 identified and recorded
Kenmotsu 2014	Damage assessment	2 acres	Damage assessment of impacts to archaeological site 45KI839, the Bear Creek site
Hoyt and Lockwood 2010	Formal survey	>1 acre	No archaeological resources identified
Kopperl et al. 2010	Evaluative test excavations	2 acres	Additional study of 45KI839, the Bear Creek site
Shong and Miss 2010	Monitoring	0.15	No archaeological resources identified
Hodges et al. 2009	Formal survey	15.8 acres	45KI839 identified and documented
Hoyt and Johnson 2009	Formal survey	1.25 acres	45KI941 identified and documented
Chobot and Harrison 2008	Formal survey	8.5	No archaeological resources identified within 0.5 mile of the Redmond Velodrome APE
CH2MHILL 2006	Formal survey	2.3 acres	No archaeological resources identified
Boersema 2005	Formal survey	1 acre	No archaeological resources identified
Earley 2005	Predetermination survey	0.8 acre	No archaeological resources identified
Johnson 2000	Reconnaissance survey	Not listed	No archaeological resources identified
Lewarch et al. 2000	Formal survey	14 acres	No archaeological resources identified
Nelson 2000a	Examined a previously excavated utility trench and monitored subsequent trenching	1.74 acres	45KI492 identified and documented

Figure 3. View southeast from Redmond City Park toward the Redmond Velodrome APE.

Ethnographic Context

The project area is located within the territory ascribed to the Southern Coast Salish people. Prior to Euroamerican settlement of the region, speakers of the Southern Coast Salish language occupied the Puget Sound area from Hood Canal on the west, Samish Bay on the north, the area around present-day Olympia on the south, and the foothills of the Cascade Mountains on the east. The Southern Coast Salish peoples are distinguished by their linguistic affiliations with the Coast Salish group of dialects: Twana speakers in the Hood Canal region, and Lushootseed in the Puget Sound area. The Sammamish Indians occupied the APE and its vicinity and spoke the southern version of the Lushootseed dialect (Ames et al. (2016:31).

The Southern Coast Salish Lushootseed recognized geographical variations among themselves. There were salt water people, river people, prairie people, and inland people. Salt water people were those whose home villages were located along or near Puget Sound and who navigated on open water. River people occupied villages on the lower courses of streams tributary to Puget Sound, while prairie people also lived on rivers but in proximity to the inland prairies, with much greater use of the horse for transportation than the river and salt water people. Inland people resided on the upper reaches of the major drainages. These characterizations not only reflected simple distribution up and down drainages but recognized local access to resources and variability among individual villages. For example, some "river" villages were closer to Puget Sound than some "salt water" villages (Smith 1940:29-31). Most Sammamish villages were located on the northern shore of Lake Washington, along the Sammamish River, and on Lake Sammamish.

Houses of the Southern Coast Salish were constructed of cedar planks forming the walls and roof, supported by cedar posts and rafters. Most of the houses in the region containing the current project area were gable-roofed although shed- or flat-roofed and gambrel houses were also known. The larger houses were intended for perhaps as many as four to eight families, while smaller houses were occupied by only

one or two families. At summer camps, small mat shelters were set up. These were used primarily for sleeping, storage, and smoking of fish (Smith 1940:279-286; Suttles and Lane 1990:491).

Southern Coast Salish groups, including the Sammamish, maintained ties of marriage and exchange with neighboring groups. These ties were primarily with other Southern Coast Salish/Lushootseed speaking groups, but also included the Upper Chehalis to the south and Sahaptin-speaking people from east of the Cascade Mountains (Smith 1940:15-20; Suttles and Lane 1990:488). Contact with Sahaptin groups took place regularly in the passes of the Cascade Mountains, where both eastside and westside groups met while foraging for various resources. Groups traveled to the high mountain valleys each summer and fall to gather berries and hunt deer, goats, elk, and bear.

Like most other Coast Salish groups, the Samammish traditionally followed a seasonal round that was linked to available resources. Villages were occupied through the winter rainy season, at which time people relied primarily on foods gathered and processed for storage during the summer months, although some hunting and fishing took place through the winter. Winter was also a time for establishing and maintaining social relationships. Heads of households held events marking changes in status such as naming, puberty, marriage, or death and demonstrated the household's status by hosting feasts (Ames et al. 2016:32).

In the spring, the winter houses began to be abandoned as families or task groups moved out to resource locations. During the spring (and fall) salmon runs, almost all other subsistence activity would halt to harvest the fish. Spring was also the key season for collecting young sprouts, roots, and some species of clams. Accomplished hunters would also undertake hunting trips into the foothills to the east during the spring. The other peak season for food resources was late summer and fall, with berries and nuts supplementing fish, game, and roots. The most important resources were camas bulbs, bracken fern roots, various types of berries, as well as salmon and other fish, deer, elk, and black bear. Salt water and river people tended to be more dependent on fish and shellfish than the inland and prairie people. The latter, in turn, relied more heavily on land mammals and plant resources (Smith 1940:248-251; Suttles and Lane 1990:488-489).

Regional Historical Overview

Personnel of the Hudson's Bay Company (HBC) were the earliest Euroamerican to have a regular presence in the southern Puget Sound region, establishing Fort Nisqually in 1833 near what is today the town of DuPont, Washington, approximately 45 miles southwest of the project APE. Former HBC employees subsequently became the earliest Euroamerican settlers in the region. In response to Indian struggles with Euroamerican incursions throughout the Pacific Northwest, the United States Army built Fort Steilacoom in 1849 to bolster the U.S. presence in the region. The passage of the Donation Land Act of 1850 resulted in large scale immigration of white settlers into the region, with the first large wave arriving in 1853 over Naches Pass (Ficken and LaWarne 1988:22). In that same year, Washington became a territory with Isaac Stevens the first territorial governor, and Steilacoom became the first incorporated town in the territory.

Governor Stevens held a treaty-making session at Point Elliott near present-day Mukilteo in 1855. Stevens and his aides met with Native peoples of the northeast Puget Sound region, including representatives of the Duwamish, Snohomish, Snoqualmie, Stillaguamish, Kikiallus, Skagit, Lummi, Suquamish, Sauk-Suiattle, but the Sammamish people were not explicitly represented (Boswell 2017:12). The Point Elliot treaty promised the Tribes that they would receive payment and retain their hunting, fishing, and shellfish-gathering rights in exchange for their lands. The treaty also proposed several reservations, and by 1856 Governor Stevens recommended the establishment of the Muckleshoot Reservation, which was officially approved in 1857 (Boswell 2017:12). Some of the Sammamish relocated to this and other reservations. Others moved to the logging community of Monohon on Lake Sammamish, or continued to live in traditional locations.

Settlement of the area again intensified following the passage of the Homestead Act of 1862, which granted 160 acres to individual United States citizens if they lived on and improved the property for five years. The land could also be purchased for $1.25 an acre after six months of residency. In that year settlers filed 61 homestead claims in Township 25 North, Range 5 East, WM (which contains the project APE), the largest number in what is today King County. Settlement of lands in the township grew steadily in the later decades of the nineteenth century especially after steamboat service was introduced in the late 1880s between the Seattle area and lands to the east of Lake Washington, providing far easier access than making a long journey around the lake. Access to the Sammamish Lake/River area was further improved by construction of the Seattle, Lakeshore and Eastern (SLS&E) that reached eastern King County in 1888 (Boswell 2017:41). Although most settlers were Euroamericans, some who filed claims along Lake Sammamish were Native peoples.

Local History Overview

Luke McRedmond and Warren Perrigo were the first Euroamerican to settle in the area where the community of Redmond developed. McRedmond was an Irish immigrant who brought his family to the area in 1872, while Perrigo, a Canadian, had lived in the United States since the 1860s. McRedmond and several family members served as the first postmasters of what eventually became the town of Redmond. Perrigo and his wife filed their land claim next to the McRedmonds, and started the Melrose House inn, which took in travelers who came to the Puget Sound region over the Snoqualmie Pass. Perrigo's younger brother William homesteaded nearby, and established the Perrigo Trading Company, the first of its kind in the area. After the death of Warren's wife, he moved to Seattle (Boswell 2017:43).

Lands comprising Marymoor Park were homesteaded in 1876 by Irish immigrants John and Adam Tosh. The brothers farmed their land for nearly 30 years before James Clise purchased 78 acres of Adam Tosh's property. Clise built a small, rustic hunting lodge for his family as their summer retreat (Stein 2002; Chobot and Harrison 2008:6), and eventually the family moved there. Clise ended up owning almost 400 acres and made the lodge into a large, formal home in the Arts and Crafts style (Stein 2002).

Clise named his farm Willowmoor and made it into a modern farm with many outbuildings, such as barns, a large henhouse, a greenhouse, and a dovecote, among others. The farm was quite profitable, and Clise expanded it over the years as it became famous for Clise's "progressive farming methods" (Stein 2002).

Following a decline in their health, the Clise and his wife Anna spent less time at the farm. In 1921 Clise sold the property to the Allen and Nelson Mill Company. After that the farm was sold and resold several times between 1941 and the early 1960s, and its name was changed to Marymoor. King County voters passed a bond in 1962 to buy the Marymoor property, which became the county's first park (Stein 2002).

Historical Maps Research

As part of the background research, a General Land Office (GLO) cadastral survey map (GLO 1871) and maps prepared by the United States Geological Survey (USGS 1895, 1950, 1968, and 1973), were reviewed to determine if historic-era structures or features were present in the Redmond Velodrome project area. No fire insurance maps like those produced by the Sanborn Map and Publishing Company were found that include the project area.

The earliest cartographic depiction of Township 25 North, Range 5 East, WM, was reviewed was produced by the GLO in 1871. This map shows no developments and no land claims in or near the project area. The earliest USGS map showing this same area was a 30-minute (1:125,000) map published by the USGS in 1895 (USGS 1895). The relatively new town of Redmond is depicted, as is the Northern Pacific

Rail Line, both about half a mile northwest of the Redmond Velodrome project APE. A large wetland is shown along the Sammamish River north of Lake Sammamish, and Bear Creek is depicted flowing from northeast to southwest near the APE.

The next USGS map dates to 1950. It shows that significant development had occurred in the vicinity in 50-plus years that had passed since the earlier map. It shows a substantially larger city of Redmond and several major roadways, including Highway 2 (now SR 202), present-day SR 520, and Union Hill Road. What are likely structures on the former Marymoor Farm are shown a little over half a mile to the southwest of the project APE, which is depicted on the map as vacant land. Later USGS maps also show the project APE as undeveloped (USGS 1968, 1973).

FIELD METHODS AND RESULTS

Archaeological Fieldwork Methods

The project APE for direct project impacts was investigated to locate archaeological resources on June 5, 2020. Fieldwork began with a pedestrian survey during which the ground surface of the APE was inspected using transects spaced no more than two meters apart.

Subsurface sampling of the APE followed the surface survey. At the direction of staff at the King County Historic Preservation Program, 10 shovel test probes (STPs) were excavated in the ca. 0.48-acre APE for direct impacts. One STP was placed in the area where the proposed compound would be sited and nine others were excavated within the access easement (Figure 2). Because of the presence of buried utilities, as indicated by the existing telco pedestal and electrical transformer, no STPS were placed in the proposed utility easement.

The STPs were 30 cm in diameter and were excavated in 10-cm levels to depths that ranged between 50 and 100 cm below surface (cmbs). Ideally, the depth of excavation extended to two 10-cm levels below the depth of anticipated project-related disturbance. This was not possible in the area where the monopole will be erected where ground disturbance is expected to reach 5-plus meters below surface. It also was not possible in STP-5 where excavations below 50 cmbs were prohibited by a layer of compacted gravels.

All sediments removed from the probes were screened through one-quarter-inch mesh hardware cloth. Afterward, the STPs were completely backfilled and their locations were recorded using a handheld Trimble Geo7X global positioning system (GPS) device. GPS data were then corrected and exported to a graphics program for final editing and formatting.

Results of the Archaeological Field Investigations

As observed at the time of the survey, the ground surface throughout the APE appeared artificially level. It was covered with lawn grass with a few small exposures of gravel or asphalt pavement that were noted in the access easement. The route of the access easement follows an existing dirt two-track road. In places, the bed of the tracks had better than 50 percent ground surface visibility. Ground surface visibility was less than 50 percent elsewhere in the APE. No artifacts were observed on the ground surface in the APE for direct effects.

Photographs of soil profiles observed in STPs are included in Appendix B and summary data for the STPs are provided in Table 2. The profiles did not conform to the typic pedon for Indianola loamy sand, 0 to 5 percent slopes, which is mapped in the APE (National Resources Conservation Service 2020). Profiles in STPs 1 through 5 resembled, but do not strictly conform to the sequence of soil horizons described by Punke et al. (2018:5-6-5-7) that were observed in mechanically and hand-excavated

Table 2. Summary of Results of Shovel Test Probe Excavations

STP No.	Depth (cmbs)	Soil Description	Result
1	100	0-20 cmbs, 10YR 3/3, dark brown silty sand with modern plastic candy wrappers throughout 20-30 cmbs, 10YR 4/3 dark brown silty sand with increased sand content 30-50 cmbs, 5Y 4/3 olive fine-grained sand with iron oxide mottles 50-100 cmbs, greenish gray fine sand	No artifacts
2	80	0-20 cmbs, 10YR 3/3, dark brown silty sand 20-30 cmbs, 10YR 4/3 dark brown silty sand with increased sand content 30-80 cmbs, greenish gray fine sand	No artifacts
3	80	0-30 cmbs, 0YR 3/3, dark brown silty sand with 50 percent gravels, likely from a road or trail 30-80 cmbs, 5Y 4/3 olive fine-grained sand with iron oxide mottles	No artifacts
4	80	0-20 cmbs, 10YR 3/3, dark brown silty sand 20-80 cmbs, 5Y 4/3 olive fine-grained sand with iron oxide mottles	No artifacts
5	50	0-25 cmbs, 10YR 3/3, dark brown silty sand, a few small gravels 25-50 cmbs, very dark grayish brown to yellowish brown coarse sand in a layer of compacted rounded gravels	No artifacts
6	80	0-40 cmbs, 10YR 3/3, dark brown coarse gravelly sand with less than 20 percent small gravels 40-80 cmbs, 10YR 4/6, dark yellowish brown coarse sand, few gravels	No artifacts
7	80	0-20 cmbs, 10YR 3/3, dark brown coarse gravelly sand with less than 20 percent small gravels 20-30 cmbs, 10YR 4/6, dark yellowish brown coarse sand, few gravels 30-80 cmbs, dark yellowish brown to grayish brown coarse sand with olive mottles, a few small pebbles	No artifacts
8	80	0-5 cmbs,10YR 3/3, dark brown silty sand 5-10 cmbs, 10YR 4/6, dark yellowish brown coarse sand, few gravels 10-80 cmbs, dark yellowish brown to grayish brown coarse sand with olive mottles, a few small pebbles	No artifacts
9	80	0-10 cmbs, 10YR 3/4, dark brown coarse gravelly sand with some smooth subrounded gravels 10-15 cmbs, 10YP 4/6, dark yellowish brown coarse sand 15-80 cmbs, mottled dark yellowish brown coarse sand with smooth subrounded gravels	No artifacts
10	80	0-20 cmbs, 10YR 3/3, dark brown silty sand 20-40 cmbs, 10YP 4/6, dark yellowish brown coarse sand with tree root 40-80 cmbs, mottled dark yellowish brown coarse sand with smooth subrounded gravels	No artifacts

auger probes in Marymoor Park. However, if compared to their soil profile descriptions, the profiles exposed in STPs 1-5 excavated in the APE appeared truncated and to contain a larger sand fraction and to have less common gravel.

Punke et al (2018:5-6) characterize the soils they encountered as having formed in thick layers of alluvium and slack-water deposits. On the basis of texture, the same general observation probably holds true for the soils observed in STPs 1-5. In profiles described by Punke et al. (2018:5-6-5-7), the uppermost stratum, their Stratum 1, corresponds to the modern and historic A horizon and was in excess of 50 cm thick without discernible subdivision. In probes 1-5 it was no more than 30 cm thick and could be subdivided on the basis of color and sand content. Also, in STP 1 the upper later contained modern refuse and in STP 3 it contained imported angular gravels. A lower horizon observed in STPs 1, 3, and 4 may correspond to Stratum 2 described by Punke et al. (2018:5-7), which has been interpreted by Hodges et al. (2016:89-90) as having formed in late Holocene slack-water deposits.

A second layer in STP 5, exposed at 25 cmbs, and sediments throughout STPs 6, 7, 9, and 10, and STP 9 below 5 cmbs, likely consist of outwash material. It is predominantly coarse sand that contains varying amounts of rounded to subangular gravel.

No artifacts were found in the STPs.

Methods and Results of the Viewshed Analysis

AAR's study was also designed to assess indirect viewshed impacts to historic properties listed on or eligible for inclusion in the NRHP that would result from the proposed project. The standard APE for indirect effects for an installation with an overall height of less than 200 feet covers the area within a 0.5-mile radius around the site (Figure 1). Prior to the fieldwork it was determined that one historic property eligible for inclusion in the NRHP was located within 0.5 mile of the Redmond Velodrome installation. It is the Redmond City Park that was established in 1938 and which is listed on the NRHP. To assess effects of the proposed project on the resource, it was visited and visual observations were made regarding the degree to which the proposed construction site was visible. Photographs from the resource back to the proposed construction site were taken from various points. Figure 3, above, provides one view from the park looking toward the proposed construction site. As seen in Figure 3, and as observed during the viewshed analysis fieldwork, the proposed construction site inclusive of the airspace above it to a height of 200 feet could not be observed from the park due to a moderately dense tree cover and buildings that are located between it and the park.

SUMMARY AND RECOMMENDATIONS

Based on the information gathered, no previously-identified archaeological sites are located within the APE for direct effects and no artifacts or new cultural resources were identified within the APE for direct effects. Because of no line-of-sight, the proposed Redmond Velodrome project would have no effect on Resource 1, the Redmond City Park. The proposed installation would not indirectly or cumulatively alter the features or the characteristics that make it eligible for inclusion on the NRHP. A finding of No Historic Properties is considered appropriate regarding both direct and visual effects. No additional cultural resources work is recommended.

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APPENDIX A

Photographs of the APE for direct project effects and the area surrounding it

Figure A1. View facing north from the proposed compound.

Figure A2. View facing south from the proposed compound.

Figure A3. View facing east from the proposed compound.

Figure A4. View facing west from the proposed compound.

Figure A5. View west of proposed access easement.

Figure A6. View southeast of the proposed access easement.

Figure A7. Overview of the proposed access easement facing south. The Velodrome is on the right.

Figure A8. View south of the proposed utility easement. The Velodrome is on the left and the basketball facility is on the right.

APPENDIX B

Photographs of Shovel Test Profiles

Figure B1. STP-1 profile.

Figure B2. STP-2 profile.

Figure B3. STP-3 profile.

Figure B4. STP-4 profile.

Figure B5. STP-5 profile. Note rounded gravel at the base.

Figure B6. STP-6 profile.

Figure B7. STP-7 profile.

Figure B8. STP-8 profile.

Figure B9. STP-9 profile.

Figure B10. STP-10 profile.