

STAFF REPORT

Date: February 6, 2019

To: Reno City Planning Commission

Thru: Sabra Newby, City Manager

Subject: **6.1. Staff Report (For Possible Action - Recommendation to City Council):**
Case No. LDC19-00022 (Steamboat Repower Project) - A request has been made for: 1) special use permits for a) development of a major utility; b) hillside development; c) cuts of 20 feet or greater in depth and fills greater than 10 feet in height; and d) a facility that manufactures, processes, transfers, or stores hazardous substances (normal pentane, technical grade); and 2) a variance to eliminate required landscape areas to facilitate construction of a geothermal power generation facility and substation. This request is also considered a Project of Regional Significance for: 1) a facility that generates electricity greater than five megawatts; 2) an electrical substation; and 3) a geothermal gathering system and power generation facility on land within 20 miles of Truckee Meadows Service Areas. The ±112.54 acre site is located ±2,000 feet southeast of the intersection of Wedge Parkway and Mount Rose Highway. The site is located within the Mixed Use/Redfield Regional Center/Transitional Mixed Use (MU/RRC/TMU) zone and has a Master Plan land use designation of Suburban Mixed-Use (SMU). The site is also located within the Cooperative Planning Area (CPA) overlay district. If approved, this request will result in a Truckee Meadows Regional Plan amendment to establish a utility site in association with a substation. bjo

From: Brook Oswald, Associate Planner

Ward #: 2

Case No.: LDC19-00022 (Steamboat Repower Project)

Applicant: ORNI 14 LLC

APN Number: 049-450-58

Request: A request has been made for: 1) special use permits for a) development of a major utility; b) hillside development; c) cuts of 20 feet or greater in depth and fills greater than 10 feet in height; and d) a facility that manufactures, processes, transfers, or stores hazardous substances (normal pentane, technical grade); and 2) a variance to eliminate required landscape areas to facilitate construction of a geothermal power

generation facility and substation. This request is also considered a Project of Regional Significance for: 1) a facility that generates electricity greater than five megawatts; 2) an electrical substation; and 3) a geothermal gathering system and power generation facility on land within 20 miles of Truckee Meadows Service Areas.

Location: The ±112.54 acre site is located ±2,000 feet southeast of the intersection of Wedge Parkway and Mount Rose Highway. The site is located within the Mixed Use/Redfield Regional Center/Transitional Mixed Use (MU/RRC/TMU) zone and has a Master Plan land use designation of Suburban Mixed-Use (SMU). The site is also located within the Cooperative Planning Area (CPA) overlay district. If approved, this request will result in a Truckee Meadows Regional Plan amendment to establish a utility site in association with a substation.

Proposed Motion: Based upon compliance with the applicable special use permit and variance findings, and the recommended conditions of approval, I move to approve the special use permits for a) development of a major utility; b) hillside development; c) cuts of 20 feet or greater in depth and fills greater than 10 feet in height, and (d) a variance for removal of formal landscape and that Planning Commission recommend City Council approve the special use permit for a facility that manufactures, processes, transfers, or stores hazardous substances as they meet all applicable statutory and code requirements, subject to the review by the Regional Planning Agency for a Project of Regional Significance and if approved, will result in a Truckee Meadows Regional Plan amendment to establish a utility site in association with a substation.

Recommended Conditions of Approval:

All conditions shall be met to the satisfaction of Community Development Department staff, unless otherwise noted.

1. The project shall comply with all applicable City codes, plans, reports, materials, etc., as submitted. In the event of a conflict between said plans, reports, materials and City codes, City codes in effect at the time the application is submitted, shall prevail.
2. The applicant shall apply for all building permits for the project within 18 months from the date of final approval, and continuously maintain the validity of those permits, or this approval shall be null and void.

3. Prior to the issuance of any building permit, the applicant shall attach a copy of the final approval letter. The approval letter shall accompany a narrative provided by the applicant that describes how the requested permit addresses each of the approved conditions of approval.
4. Hours of construction, including grading, shall be limited to between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, and between 8:00 a.m. and 6:00 p.m. on Saturday. There shall be no construction on Sundays. Idling of vehicles shall be prohibited outside of the allowable hours of construction. This condition shall not apply to dust control and storm water management operations. Extended hours may be allowed with authorization of The City of Reno Public Works Department.
5. Prior to the issuance of each permit, the applicant shall have an approved construction management and access plan. This plan shall address project phasing, including utilities, site improvements and infrastructure, and shall demonstrate adequate access to adjacent properties will be perpetuated and maintained during construction. An all-weather road maintenance plan for the overall facility shall be provided to ensure on-going emergency access to the project site.
6. All onsite storm water management facilities and appurtenances shall be privately owned and maintained.
7. Prior to the approval of any permit, the applicant shall demonstrate adequate capacities and easements exist for all storm water management facilities serving and/or traversing the project in accordance with the requirements of the Public Works Design Manual. Adequate maintenance access shall be provided for all proposed on-site storm water improvements per the Public Works Design Manual.
8. Prior to any building permit, the applicant shall work with the City Public Works and Community Development Departments to provide plans demonstrating improvements to the trail and sidewalk network along Mount Rose Highway and in the general vicinity of the project. Additionally, the applicant shall work with the Community Development Department and the State Historic Preservation office to create plans that detail historic markers and interpretive panels to be incorporated into the trail network and public spaces in the general area.
9. If human remains, human burials, or burial cairns are disturbed or identified during any construction, all work in the immediate vicinity must cease, the discovery must be secured, and the party responsible for the construction must immediately contact both the appropriate law enforcement and the State Historic Preservation Office per NRS 383.170.1(a). If bones are uncovered while digging, there shall be

no attempt to excavate the materials but the site shall be secured with immediate contact of both the appropriate law enforcement and the State Historic Preservation Office.

Failure to provide notice to the State Historic Preservation Office of a discovery of an Indian burial is a violation of state law and can result in criminal penalties under NRS 383.180.2.

10. Prior to the issuance of a building permit, the applicant shall have plans approved demonstrating that all exterior site lighting will utilize state of the art LED and certified dark skies lighting techniques; and will comply with the lighting standards in the residential adjacency portion of code [Reno Municipal Code (RMC) 18.12.304(e)] regarding pole height, fixture shielding, directing light downward, light spill containment and provision of an updated site lighting photometric plan. Plans shall demonstrate all site lighting have the ability to remotely be turned off or reduced by a minimum 50% during the hours of 8:00 p.m. to 7:00 a.m. Only the lighting to properly provide safety to the site shall be allowed.
11. Prior to the issuance of a building permit the applicant shall provide an acoustical analysis that demonstrates the facility will be in compliance with City of Reno Land Development Code standards.
12. Prior to the issuance of a building permit the applicant shall work with the City of Reno Urban Forester and the Community Development Department to create a mitigation strategy for the loss of mature pines (Jeffery and Pinon) due to the construction and development. Mitigation could include relocation of the smaller trees, establishing a fund for future native restoration projects or other mechanism as determined appropriate by City staff.
13. Prior to the issuance of a building permit the applicant shall demonstrate that all rip rap and slope stabilization methods are of the color of existing soils and natural rock of the area, and that appropriate native plant material is used. The use of Permeon or similar products should be used to substantially blend cut native material and imported material to reduce negative visual impacts. Methods to ensure slope stabilization including but not limited to; irrigation, over seeding, crimping, stabilization matting, or other methods may be required to effectively establish native vegetation and stabilize the soil.
14. Prior to the issuance of any building permit, the applicant shall provide a remediation plan for any mercury found on site and reviewed by the Nevada

Division of Environmental Protection (NDEP) and/or any other applicable regulating agency.

15. Prior to the issuance of any building permit, the applicant shall work with a qualified botanist to survey the site, map endangered and/or protected species and provide the results and appropriate submittals to Nevada Department of Forestry.

Background: The site is located within the Steamboat Hills area of southern Reno. The overall Steamboat Hills Geothermal Power Plant complex is located approximately one mile south of Mount Rose Highway and one-half mile west of US 395/1-580. The existing facilities and proposed project are part of the Steamboat Hills Geothermal Complex, which is owned and operated by Ormat Nevada Inc., and consists of five operational facilities with a net annual average output of 70 MWs.

Ormat Nevada Inc. obtained special use permits from Washoe County (SW05-021- Steamboat Hills Geothermal Expansion Project) to construct two Geothermal plants located in the Steamboat Hills Geothermal area, south of Mt. Rose Highway and west of US 395. In 2007, the applicant acquired a building permit, (LDP07-06328) from the City of Reno for construction of their third Geothermal Power Plant since the property was then located within the City's Sphere of Influence (SOI). Development of that site was subject to the conditions placed on the site by Washoe County. On May 7, 2008, the Planning Commission approved a request for a variance (LDC08-00021 Galena III Power Plant Road) to eliminate the ±32,596 square feet of required landscaping on the ±6.79 acre site (APN 049-450-80).

The proposed project is located on ±26.2 acres (Project Area) of the larger ±112.5-acre parcel. The project site is surrounded by moderately to steep sloping terrain that generally slopes to the north and east. A significant portion of the project site was previously disturbed from mining activities including a pit area associated with the historical Steamboat Springs Mine. Site vegetation includes sagebrush, grasses and non natives as well and a well establish population of Jeffery and/or Pinon pines.

The existing 10 Megawatt (MW) Steamboat Hills facility is proposed to be retired and to be replaced with the more efficient 30 MW air cooled binary facility. The existing 10 MW facility can be identified by the steam cloud that is generated. As part of the project, the unused portions of the old Steamboat Hills facility will be removed. This equipment includes the water-cooling tower, the piping systems and separators, and the structural steel on site.

The proposed facility (RePower) is similar to other existing facilities in the complex. The binary system uses the geothermal water to heat a secondary gas/fluid that it used to generate

power and no steam cloud is produced. The secondary component used is the hazardous material normal-pentane.

Existing geothermal wells will be used for the new facility, with the exception of two new production wells that will be drilled from an existing well pad on land leased by Ormat from the U.S. Forest Service. These wells will replace existing wells that have cooler temperatures. Existing geothermal pipelines will be used to transport the fluids to the new facility.

A related electrical substation is proposed to be built and triggers a Major Utility special use permit (SUP). The Steamboat Hills Repower project will connect directly from the proposed on-site substation into the existing 120 kV transmission line that runs north/south adjacent to the project site and connects to the NV Energy-owned Steamboat 120 kV Switching Station. A 12 foot by 30 foot tall enclosed electrical room will be constructed to protect the electrical equipment. No new overhead transmission lines are proposed to be constructed. The proposed cooling towers and associated equipment are approximately 30 to 40 feet in height.

The project proposes development on the existing mine site and steep hillside requiring a SUP for cuts over 20 feet in height and fill greater than ten feet in depth. The major fill portion of the permit is to fill an existing brine reservoir area and mine activities and the cuts are to enable the facility to be sited into the hillside. An SUP for Hillside Development is required for the project due to the existing steep slopes that are proposed to be impacted.

The project is of Regional Significance for: 1) a facility that generates electricity greater than five megawatts; 2) an electrical substation; and 3) a geothermal gathering system and power generation facility on land within 20 miles of Truckee Meadows Service Areas. If the project is approved by the Planning Commission and City Council it will be reviewed by the Truckee Meadows Regional Planning Agency for compliance to regional policy.

The site is located within the Mixed Use/Redfield Regional Center/Transitional Mixed Use (MU/RRC/TMU) zone and has a Master Plan land use designation of Suburban Mixed-Use (SMU). The site is also located within the Cooperative Planning Area (CPA) overlay district.

Key Issues:

- Environmental, visual and noise concerns and impacts.
- Hazardous materials

Analysis: Per Reno Municipal Code (RMC), all special use permit (SUP) general findings a through h, Hillside Development, Cuts 20 feet in depth and Fills greater than ten feet in height and Hazardous Materials must be made in order to approve this request. A Variance for deletion

of the required formal landscape is also required for approval. The following is an analysis of each of the required SUP and Variance findings as they relate to the request.

General SUP Findings:

a. The proposed use is compatible with existing surrounding land uses and development.

The area of the Redfield Regional Center (RRC) that is generally located south of Mt. Rose Highway includes a mix of Industrial and Transitional Mixed-Use land uses and is predominately occupied by the Ormat Geothermal complex. The project parcel is located within the areas identified as Transitional Mixed Use (TMU) and Open Space in the RCC, which acknowledges existing and future development of geothermal facilities within the area. Future geothermal energy exploration and development in the area will include drilling and testing of wells from new or existing well pads in the area. Transmission lines will be constructed in the plan area to interconnect future geothermal energy exploration and development facilities with the existing Sierra Pacific substation in the area. Geothermal facilities, wells and surface transmission pipelines currently exist in many portions of the regional center. Additional environmental and development compatibility standards are outlined in the RRC Plan to reduce overall impacts. The RRC plan is an element of the City of Reno Master Plan prepared in accordance with Nevada Revised Statutes (NRS 278.150 through 278.170). The project will be subject to applicable policies of the plan.

The location for the new facility was specifically chosen to take advantage of a previously disturbed area which includes an existing well pad and an old mining pit. In addition to limiting the amount of new disturbance, the site location reduces the visibility of the facility from neighboring properties by locating the facility in a natural depression in the landscape and previously disturbed site. The natural terrain features of the mountainside shield much of the project site from the surrounding area. The nearest residential development is approximately one mile away and no direct impacts are anticipated. The Truckee Meadows Community College Redfield Campus is located to the north of the project site and may be impacted by construction and operation related to the facility, but should have minimal impacts once the facility is completed. Federal and County Land surround the project to the south and west. These currently are vacant land and are expected not to change in the near future. Ormat currently has geothermal well site leases in the surrounding area with the Federal government.

The hazardous material pentane is proposed to be used at the site and impacts and procedures are analyzed under the related SUP findings in this staff report.

The Cooperative Planning Area Overlay District (CPA) provides consistent development standards for areas within the Truckee Meadows where more than one jurisdiction has an interest in the density, intensity, or character of development. Adjacency standards have

been established to minimize impacts of development on surrounding properties. The CPA outlines that wherever, in the opinion of the administrator, a natural barrier (e.g., ridgeline, river, open space, or natural terrain change) buffers the existing built environment or platted lots from the proposed new development, these compatibility and adjacency standards shall not apply. The analysis, in this staff report, for the proposed project supports the ability of the administrator to make the decision that impacts to surroundings will be minimized by the site location and natural features and thus should not be subject to the compatibility and adjacency standards of the CPA.

Uses surrounding the site include:

| AREA DESCRIPTION | | | |
|-------------------------|--|--|---------------|
| | LAND USE | MASTER PLAN DESIGNATION | ZONING |
| NORTH | Vacant private land UNR: Redfield Campus | Suburban Mixed-Use Public/ Quasi-Public | MU/RRC |
| SOUTH | Federal public land | Parks, Greenways, and Open Space | SOI |
| EAST | Vacant private land Interstate 580 | Suburban Mixed-Use Parks, Greenways, and Open Space | MU/RRC |
| WEST | Vacant private land Federal public land County public land | Suburban Mixed-Use Parks, Greenways, and Open Space | MU/RRC |

Once constructed the facility will be unmanned and controlled by computer from an existing facility. The plant has the ability to be in remote operation 24 hours a day. No increased traffic is expected and it is anticipated that there will be minor activity on site directly related to maintenance. Construction will have an impact on surrounding roadways and uses and should be performed between standard specified hours (**Condition 4**). A construction management plan will be provided to insure that any significant impact to surrounding properties or residences will be minimized. The Nevada Department of Wildlife had initially requested that the allowable construction period be limited to April 1 through December 1 to reduce the negative impacts on mule deer populations during the winter months. The applicant has discussed the proposed development and construction schedule with representatives from the Nevada Department of Wildlife and a second email was received from the Department that states there are no negative impacts expected from the development and recommends waiving the previous time restriction (**Exhibit D**).

b. The project is in substantial conformance with the master plan.

This request is located within an area that contains a Suburban Mixed-Use (SMU) Master Plan land use designation and has been analyzed utilizing the City Wide and Area Specific Master Plan policies. The SMU provides for a diverse mix of commercial and residential uses. Although the MP land use designation does not address industrial uses the Redfield Regional Center specifically identifies geothermal facilities as allowed in specific areas of the plan. As proposed the project site is in line with the RRC Plan and has been analyzed per the MP area specific policies related to Design Principles for Sustainable Development.

SD.1 Natural Features- Disturbance should be minimized to only areas needed and should be mitigated in such a way as to replicate natural features; SD.3 Wildlife- new development should protect and conserve significant wildlife habitat and other environmentally significant lands and facilitate movement; SD.4 Tree Preservation-mature healthy trees should be maintained and criteria for replacement followed when not feasible; SD.6 Endangered Species- efforts should be made to support the protection of habitat related to sensitive, threatened or endangered species; SD.10 Energy Facilities- infrastructure and design considerations should support incorporation of renewable energy; SD.14 Site Balancing-discourage import and export of fill material; SD.15 Low Impact Development- minimize impervious surfaces on site; SD.16 Outdoor Water Use- use of best practices; SD.17 Invasive and Noxious Plant Species- should not be introduced to site and existing plants should be removed; SD.18 Historic and Cultural Resources- resources should be preserved or incorporated; SD.19 Light Pollution- techniques should be used to reduce light pollution.

As proposed and with recommended conditions, the project appears to be in conformance with the following applicable Master Plan goals and policies:

GP1.2C Existing Businesses- support and encourage expansion; 2.2B Underutilized Properties- support strategies to revitalize underutilized properties; 2.3D Public Safety Services- meet level of service targets; 2.4G Regional Utility Corridors – preserve the viability of utility sites and promote efficient use; 2.4H Electrical Transmission Infrastructure- locate in existing corridors; 2.5C Drought Tolerant Landscaping- low water usage practices; 2.5J Greenhouse Gases- support practices that improve air quality and reduce the emission of greenhouse gases; 2.5K Design Principles for Sustainable Development- see area specific policies; 5.1A Balanced Modes- strive to balance safety needs of transportation modes; 6.2C Wildland Urban Interface- ensure compliance with State standards; 6.2D Wildfire Risk Reduction; 6.2G Hazardous Materials- minimize potential risks; 6.2I Emergency Preparedness- improve awareness of man-made hazards in high risk locations; 6.2J Resiliency of Infrastructure and Facilities- work with utilities to ensure protection.

c. There are or will be adequate services and infrastructure to support the proposed development.

Public Safety: Reno Fire Department commented that the closest fire station to this project would be Station 12 located at 1190 Steamboat Parkway with a current response time of ten minutes. The second closest fire station is Station 6 located at 3970 Mira Loma Drive with a response time of 18 minutes.

As presented, all development in this area, including residential housing, would require the installation of fire sprinkler systems to mitigate the fire response time in excess of eight minutes. The facility is largely constructed of non-combustible materials and a fire suppression system is proposed to mitigate potential negative impacts due to the combustible hazardous material used in the process. Additional analysis is provided in the hazardous material findings of this staff report.

It should be noted that fire sprinklers would not mitigate the response time for medical emergencies. Medical response to this area will have a higher response time as compared to the rest of the city. This delay in response will not align with the “First Due Response Objective” noted above for medical emergencies. As the density in future development increases, the need for a fire station in this area will also increase.

This project is located in a district with a high call volume for the Fire Department. There is currently a significant burden on staff resources within the City based on limited Fire Department staffing and equipment. As growth occurs, additional resources will be necessary to accommodate that growth. Therefore, the Fire Department is concerned about the ability to provide adequate long term service city-wide as new growth occurs.

All other requirements must follow the International Building Code and Fire Code as adopted at the time of building plan submittal. This includes water supply, hydrant locations and fire access requirements, as well as any requirements for fire sprinklers and fire alarms.

The project was reviewed by Reno City Police who commented that there no noted concerns at this time regarding the proposed plans. RFP noted that the site is tucked into the hills south of Mount Rose Highway and natural surveillance of passerby’s is not encouraged. Formal surveillance exists for legitimate users and the safety of the facility. Access is granted through secured gates with access control and has formal surveillance to deter unwanted subjects. Adequate fencing exists around perimeter with formal surveillance being provided. Perimeter fencing and security features should be adequately maintained to deter unwanted subjects.

Infrastructure Improvements: This is an existing site with all necessary improvements in place. There are no additional private or public improvements associated with this request. Based on the application materials, there is no indication that the requested Special Use Permit will have any adverse effect/impact to City infrastructure facilities beyond existing use. Any future improvements to the site would be analyzed through the building permit process.

The proposed project will replace the existing Steamboat Hills plant. The Steamboat Hills Repower project will be unmanned and will be operated from the existing Galena 3 control room. As such, the project does not require an office or bathroom facilities for operations; therefore, construction and/or connection of sewer and water improvements are not required.

A preliminary hydrology report was submitted with the application materials which adequately addresses on and off site storm water flows per the Public Works Design Manual (PWDM). The site is located in a minimal flood hazard zone. The project site slopes from southwest to northeast at an average of 10%. The proposed onsite storm drain system consists of a drainage channel that will intercept runoff from drainage areas and direct the flows that currently are going into the existing pit to a retention basin and the remaining flows to a detention facility that will meter out and return the flows to natural drainage patterns. With any building permit the applicant will be required to provide plans and a final hydrology report that addresses all storm water flows in accordance with the PWDM and the Truckee Meadows Regional Drainage Manual (TMRDM). The approved final hydrology report shall depict the overall on-site and off-site contributing drainage basins and addresses on-site and off-site storm water flows, detention, and facility capacities for the pre-development and post-development site conditions. All onsite storm water management facilities and appurtenances shall be privately owned and maintained (**Condition 6**). Per the TMRDM, any retention basin must be capable of infiltrating at the rate of one inch per hour, and capable of infiltrating the retained water within seven days after any given storm event. The applicant will be required to complete infiltration tests to confirm that the water in the retention ponds will infiltrate in the required time period. Adequate access will need to be provided for all public and private storm water management facilities for maintenance and operations.

The applicant will be required to demonstrate that all existing and necessary on-site and off-site easements, including; site access, public use, utility access, sewer lines, surface drainage, storm drains, and utilities are in place. Prior to the issuance of each permit, the applicant shall ensure that all easements which encumber the project site are relinquished or relocated appropriately (**Condition 7**).

d. The proposal adequately mitigates the project's traffic impacts and provides a safe pedestrian environment.

Traffic, Access and Circulation: The project is not expected to generate any traffic, except during construction and/or for regular maintenance to the plant. The project will not have an impact on the adjacent street network. City Code requires a Traffic Impact Analysis (TIA) for projects generating 200 or more peak hour trips. City Code also indicates that a Traffic Entry and Access Study shall be required for all developments that increase traffic by 100 PHT. As such, neither a TIA or a Traffic Entry and Access Study are required for the project.

The main access to the project is located off of Wedge Parkway near the intersection of Mount Rose Highway and Wedge Parkway. An existing paved roadway network meanders through neighboring parcels to provide access to the project site. A secondary access (exit only) is provided off of Mount Rose Highway, approximately 2,000 feet southwest of the intersection of Mount Rose Highway and South Virginia Street. Both access points meet City of Reno Access Management Standards. The applicant shall provide a construction management and access plan for the project prior to the beginning of any construction activities (**Condition 5**). The applicant will be required to coordinate with the Nevada Department of Transportation (NDOT) Permit Office for any required occupancy permit (access management, hydraulic design and drainage facilities, intersection control evaluation, leases, etc.). Any non-permanent activities or temporary traffic control such as placement of cones, static signs, and portable electronic signs within the Department right-of-way will require a temporary occupancy permit. Any truck haul operations that access the state highway system will require a temporary permit and coordination with Permit Office as well.

All the properties surrounding the site are undeveloped and pedestrian connectivity has not been established or extended to the area. Staff recommends that the inclusion of sidewalk be waived for this project since the site has restricted access to the public due to sensitivity in nature of the site. The site is subject to the Mixed Use Pedestrian amenities requirements of 1% of the project cost. Staff recommends that these funds are used to increase the connectivity and trail system in the surrounding area at the time of construction (**Condition 8**).

Site circulation design, traffic control devices, and operational characteristics of the common use driveways, on-site drive aisles, emergency accesses, fire access lanes, and parking areas are designed in accordance with the PWD. Final plans and improvements shall be to the approval and satisfaction of the City of Reno Fire and Community Development Departments.

- e. **The proposed site location and scale, intensity, density, height, layout, setbacks, architectural and overall design of the development and the uses proposed, contribute to and enhance the character of the area in which it is located.**

The project site is proposed in a previously disturbed area of the larger parcel. The project site is remote and part of the overall complex of geothermal facilities which reduces the undesirable impacts on neighboring properties. The architecture of the facility follows the function of the industrial process and RMC architectural standards are not applied. The use of appropriate color of materials and proper site planning is a more suitable method to blend the facility to the natural environment and reduce its overall impact. Highly-reflective wall surfaces are discouraged. Earth tones and warm, dark colors are preferable for the primary surface color. Colors should be complementary with the surrounding natural colors. The project as proposed will use natural colors to blend the facility to the natural area.

A total of 14.8 acres of the project area is proposed as open space and landscaping. Hillside development requires a minimum of ± 8.5 acres of open space and an additional 2.6 acres of open space is required to account for development on slopes over 30 percent. The Mixed Use zoning requires that a minimum of 20% of the site be landscaped. However, per RMC Section 18.12.1205(d)(2) land that will remain undisturbed can be deleted from the total acreage used to calculate the landscape requirement. As designed, approximately 9.52 acres will be disturbed in construction of the project. Based on the area of disturbance, the project requires 1.9 acres of formal landscaping. The applicant has applied for a variance for removal of the formal landscape requirement of which staff is supportive. This topic is discussed further in the variance finding section of the staff report.

The proposed project includes ± 14.8 acres (56% of the project site) of open space area which will be retained or established as native vegetation. Disturbed slopes will be revegetated and stabilized with an appropriate native seed mix. Landscape screening and restoration should be used to minimize the visual impact of new development (**Exhibit A**).

Once constructed, the site is anticipated to have no permanent workers onsite except for maintenance purposes, as such no parking is proposed with the project. Sufficient stabilized access is provided in and around the site to accommodate maintenance and emergency vehicles. All areas which are not paved with an all weather surface or covered by buildings should be retained with existing vegetation or revegetated.

A rich historic resource exists in the general area due to the geothermal activity. The State Historic Preservation Office (SHPO) has been contacted for guidance to address concerns related to artifacts and potential impacts during construction. Awareness is a key component in preservation and the conservation of these historic resources. Staff recommends the applicant work with the City and SHPO to create appropriate interpretive displays and signs.

The Mixed Use Pedestrian Amenity requirement of 1% of project cost could be applied to the construction of the signs. (**Exhibit D and Conditions 8 and 9**)

- f. The project does not create adverse environmental impacts such as smoke, noise, glare, dust, vibrations, fumes, pollution or odor which would be detrimental to, or constitute a nuisance to area properties.**

Glare and unnecessary up lighting should be eliminated and the other adverse effects of poor quality lighting should be minimized. All exterior perimeter lighting within the Steamboat Hills Repower site will be minimized and comply with Dark Skies and will be pointed downwards and shielded to minimize off site glare. Motion sensors will also be used so that lights are only on as-needed (**Condition 10**). Staff acknowledges that periodic maintenance activities may be required at the facility and the use of additional lighting for these activities should not be subject to the dark skies condition.

The large cooling fans used in the operation do have the ability to cause noise and vibration impacts on surrounding properties and uses. The applicant has stated that previous analysis has been conducted on similar facilities specifically related to potential impacts on wildlife. No acoustical survey has been provided for the proposed project. Staff anticipates minimal impacts due to overall distances to uses, proximity and noise from Highway 395, elevation differences and natural buffering provided by the hillside. Staff does recommend an acoustic analysis be performed prior to a building permit to ensure that the following Reno Municipal Codes are met (**Condition 11**). The nighttime noise levels shall not exceed 49 db or 49 db for a single event occurring on a re-occurring basis at a residentially zoned property line between 10:00 p.m. and 6:00 a.m. Daytime noise levels shall not exceed 65 db or 65 db for a single event on a reoccurring basis at a residentially zoned property line. Noise associated with temporary construction activity is exempt from the standards from 6:00 a.m. to 7:00 p.m. Additional design considerations and mitigation may need to occur depending on the results of the acoustic analysis.

- g. Project signage is in character with project architecture and is compatible with or complementary to surrounding uses.**

No permanent project signs are proposed.

- h. The structure has been designed such that the window placement and height do not adversely affect the privacy of existing residential uses.**

The finding is not applicable to the proposed project.

Hillside Development SUP findings:

a. The proposed project mitigates environmental degradation, including slope failure, erosion, sedimentation, and stormwater run-off;

The Redfield Regional Plan states: Development should demonstrate an effort to retain significant existing natural features characteristic of the surrounding area. Where possible, the Steamboat Ditch, Steamboat Buckwheat, Altered Andesite Buckwheat, geothermal fumaroles and geysers, major ravines and existing mature Ponderosa Pine trees should be protected, preserved, and integrated into the project. The project area has many mature, well established, Ponderosa and Jeffery Pine trees. Although these trees are not a protected species, they are one of the last stands remaining in the Truckee Meadows area and should be protected as a natural resource. Therefore, it is desirable to preserve existing trees.

The proposed impacted mature trees have been identified as 151 Jeffery Pines and two Pinon Pines (**Exhibit A**). Although, Jeffery Pines are not specifically required to have a tree survey per the RRC Plan, it is staff’s educated opinion that these pines were initially mis-identified and thus wrongly identified in the RRC Plan. Understanding the intent of the plan, the applicant should work with the City Urban Forester and Community Development Department to determine appropriate preservation and mitigation of the removed trees (**Condition 12**).

Refer to general finding (e) for discussion on storm water and sedimentation.

b. The proposed project utilizes grading practices that are appropriate for hillsides and designed to minimize the visibility of unsightly scarring;

The proposed project has been designed to minimize grading and preserve existing steeper slopes. Based on the previously disturbed topography, the project requires large fills and cuts. The majority of fill material will occur in the existing 30-foot deep pit, which is a remnant from the historic mine. The disturbed slopes will be re-vegetated and stabilized in accordance to City of Reno requirements and the geotechnical engineer recommendations. For slopes steeper than 2:1, the Community Development Department shall decide upon the stabilization method. If a slope between 3:1 and 2:1 is to be stabilized by any means other than rip-rap, stability calculations shall be provided and reviewed by the Community Development Department. Temporary irrigation, over seeding, crimping structural matting or other methods may be required to effectively establish native vegetation and stabilize the soil on slopes (**Condition 13**).

c. The proposed project provides open space based on hillside constraints;

| Required Open Space | | | | |
|---------------------|--------------|--------------------|---------------------|-------------------------------|
| | Minimum Open | Acres within Slope | Required Open Space | Developable Area within Range |
| | | | | |

| | Space | Range | | |
|----------------|-------|-------------|------------|--------------|
| Disturbed Area | 0 | 9.3 | 0 | 9.3 |
| 0-15% | 0% | 4.8 | 0 | 4.8 |
| 15.1-20% | 25% | 2.8 | 0.7 | 2.1 |
| 20.1-25% | 50% | 2.3 | 1.15 | 1.15 |
| 25.1-30% | 75% | 1.6 | 1.2 | 0.4 |
| >30% | 100% | 5.5 | 5.4 | 0 |
| | | 26.2 | 8.5 | 17.75 |

Based on the open space calculations above, the minimum open space has been determined to be 8.5± acres. Because the proposed project also impacts slopes over 30 percent, an additional 2:1 mitigation for impacts on slopes over 30 percent is required. As a result, an additional 2.6 acres of open space must be provided. As designed, the project area includes approximately 14.8 acres of previously disturbed and undisturbed open space to remain natural vegetation. Where open space areas are disturbed due to construction, they will be re-vegetated with a native vegetation to reestablish a natural appearance.

d. The proposed project adheres to applicable hillside development design standards and to master plan provisions related to development in sloped areas; and

The project as proposed adheres to the hillside development standards and related Master Plan goals and policies. Although the project site is relatively steep with slopes 15% or greater on 46% of the site, the proposed project has been designed to minimize grading and preserve existing steeper slopes (**Exhibit A**). The disturbed slopes will be re-vegetated and stabilized in accordance to City of Reno requirements and the geotechnical engineer recommendations. For slopes steeper than 2:1, the Community Development Department shall decide upon the stabilization method. If a slope between 3:1 and 2:1 is to be stabilized by any means other than rip-rap, stability calculations shall be provided and reviewed by the Community Development Department.

e. The proposed project's site layout and design features adequately mitigate potential visual impacts of development near prominent ridgelines and within other visually prominent areas.

The proposed disturbed acreage will be limited to improving the area necessary for the proposed facility. Most of the required fill will be placed over the existing pit, which is a remnant from the historic mine. There will be no negative visual impacts and structural fill

shall be placed in areas that will support infrastructure. Application materials demonstrate that a portion of the project area was previously disturbed as a result of mining activities and many of the significant slopes on the site were man-made. Cuts greater than 20 feet are proposed to take place on the west and south sides of the project limits to accommodate for an all-weather access road that will loop around the proposed plant. The grading will allow for the relocation of an access road to connect the plant to an existing well site and allow for the construction of on-site storm water retention and detention facilities. The majority of the cuts will be located between the hillside and the facility. The cuts are not anticipated to be visible from surrounding properties. The remaining fills and cuts will be revegetated with native plant material and/or the use of rip rap. All rock and rip rap used will be of existing color to the native rock and soil in the area. The project has been sited to minimize impacts on ridgelines and maintain area viewsheds (**Exhibit C**).

Cut slopes of 20 feet or greater in depth or fill slopes ten feet or greater in height SUP findings:

a. The slopes can be treated in a manner which does not create negative visual impacts.

Refer to finding e of the Hillside Development findings above.

b. The grading is necessary to provide safe and adequate access to the development.

Although the Project site is relatively steep with slopes 15% or greater on 46% of the site, the proposed project has been designed to minimize grading and preserve existing steeper slopes (**Exhibit A**). Based on the previously disturbed topography, the project requires fills over ten feet and cuts over 20 feet. The majority of fill material over ten feet will occur in the existing 30-foot deep pit, which is a remnant from the historic mine. The disturbed slopes will be re-vegetated and stabilized in accordance to City of Reno requirements and the geotechnical engineer recommendations.

Facilities that manufacture, process, transfer or store explosives or hazardous substances SUP findings:

a. The health and safety of the residents of the city, and

The proposed project is similar to the other geothermal energy production facilities owned and operated by Ormat in the area. These existing facilities utilize pentane gas as the binary fluid that is heated by the geothermal fluid and vaporized to turn the turbine and generate power. The pentane gas is considered a highly hazardous and explosive material. The use of this material requires advanced permitting through the State and City. The project site

will store approximately 600,000 pounds of pentane on site. There will be no disposal of pentane as it is used completely in the process. The level of potentially hazardous materials on-site requires increased safety and monitoring protocols. The company is required to follow all Local, State, and Federal regulations. All employees will be trained to properly handle, store, and dispose of hazardous waste in accordance with EPA regulations 49CFR and 40CFR.

These protocols are currently being utilized at the existing operational geothermal energy production facilities in the area. A copy of the safety and monitoring standards has been provided by the applicant (**Exhibit B**). In addition to the safety and monitoring protocols, a fire suppression system is incorporated into the design of the plant. Formal surveillance exists for legitimate users and the safety of the facility. Access is granted through secured gates with access control and has formal surveillance to deter unwanted subjects. Adequate fencing exists around the perimeter with formal surveillance being provided. Perimeter fencing and security features should be adequately maintained to deter unwanted subjects.

Staff has met with Reno Fire Department (RFD), and RFD is familiar with the existing sites and hazardous materials. The RFD conducted a project site tour to provide an opportunity to analyze the proposal, determine access and determine the ability to navigate emergency vehicles through the site. RFD stated that there were no noted concerns with the project as proposed and requested that a road maintenance protocol be established to ensure all-weather roads were maintained for access (**Condition 5**).

The project site is proposed to be located on a decommissioned mining area and the presence of mercury is known to exist. The applicant shall work with the Nevada Division of Environmental Protection to ensure that proper methods are used and provide appropriate confirmation and mitigation (**Condition 14**).

b. The safety and security of any military installation in the city.

Military officials have been notified and no comment has been received. Staff does not anticipate any negative impacts from the use of normal-pentane at the proposed facility.

Variance

a. The property is characterized by an extraordinary or exceptional situation or condition, such as exceptional narrowness, shallowness or shape, or it has exceptional topographic conditions at the time of enactment of the regulations;

The variance is requested because the existing soil conditions are not suitable for cultivation of formal landscaping. A soil analysis demonstrates below average pH levels (more acidic), elevated sulfur levels and low available water capacity that are

consistent with the geothermal activity in the area. In order to ensure that formal landscaping can survive, a significant amount of soil amendments would be required to adjust the pH levels and neutralize the sulfur. The previous landscape variance approval in the complex stated that the Nevada Department of Conservation and Natural Resources (NDCNR) provided comment that "the harsh soils in the area would require a significant amount of irrigation for the nonnative landscaping with minimal success" and that "the installation of nonnative plant materials to the area has a high likelihood of introducing invasive species which could move down hill with irrigation water or natural runoff into the Steamboat Buckwheat habitat east of the project site".

The Steamboat Hills Geothermal area contains a rare species of Steamboat Buckwheat (*Eriogonum ovalifolium* Nutt. *Var. williamsiae* Reveal). The rare species was listed as "Endangered" by the federal government in 1986 and placed on the Nevada's list of Critically Endangered Plants. Its natural occurrence is limited to approximately 50 acres at Steamboat Hot Springs in Washoe County. Staff has communicated with the Federal Wildlife Service and the Nevada Division of Forestry (NDF) and has verified the species is predominately located on the lower portion of the overall complex and is not expected to be located on the proposed project site (**Exhibit D**). The applicant will hire a qualified botanist to survey the site, map and endangered or protected plants and provide the results to NDF. The correspondence should provide verification that identified species do not exist on the project site or if present that the regulatory process usually in the form of an application for an Incidental Take Permit is followed (**Condition 15**).

The buckwheat is fully protected by the Nevada State Forester and the Nevada Department of Conservation and Natural Resources. It is recommended that the area be revegetated with a local native seed mix instead of formal landscaping to ensure that the area is restored to the native conditions and does not have a potential negative impact on the rare and endangered species from invasive or non native plants that could be imported through soil amendments or non-native seed mixes.

- b. The strict application of the regulation would result in peculiar and exceptional practical difficulties to, or exceptional and undue hardships upon, the owner of the property;**

Requiring formal landscape would require the applicant to highly modify existing soil structures to be able to maintain plant life and also to provide suitable access to water. Soil amendments and the cost to provide a permanent water line or to irrigate by other methods would be a large effort and cost to the applicant with no noticeable improvement to the area. Formal landscape is not appropriate at the site and its ability to be properly maintained is minimal due to site condition. The effort and ongoing maintenance required to establish the

required landscape that will have no impact and could cause potential harm to native species is a burden to the applicant and staff analysis supports that the variance in that it is appropriate and supportive to the City's, State's and Federal's goals and policies.

c. Granting of the variance will not be materially detrimental to the public health, safety, of welfare, or injurious to property or improvements in the vicinity; and

Requiring the applicant to install formal landscaping which has a minimal chance of survival will not benefit surrounding properties because the areas required to be landscaped are noticeably visible from surrounding properties. Application of a native seed mix will help to visually blend the area with the surrounding high desert vegetation and ensure reestablishment of vegetation in an area which has already adapted to the harsh soil conditions. The surrounding areas contain the endangered Steamboat Buckwheat, protecting the rare species remains a priority, consistent with Federal, State and City regulations as adopted within the RRC.

Approval of the variance request would allow the applicant to utilize rip rap and a native seed mix to stabilize slopes instead of the required ornamental landscaping. All rock utilized to create the new rip rap slopes would be required to be of a color to blend into the native surroundings and/or should be treated with Permeon or equivalent to reduce the visual impact from surrounding properties (**Condition 13**). In accordance with code, the applicant will reapply existing topsoil retained during construction to the revegetation areas. This soil contains native seed from this site which has adapted to the existing soil conditions.

In lieu of the strict formal landscape requirements the applicant should apply additional native revegetation, relocation of existing trees when possible, an established watering period to establish vegetation and enhanced stabilization efforts.

d. The proposed variance is consistent with the intent and purpose of this title.

The primary purpose of the formal landscape application for an industrial development is for screening from adjacent uses and view shed into the site. This is contemplated and discussed in the RRC standards (see RMC 18.08.405(h)(2)(a)(3)). Under this section, the Administrator is given the ability to determine appropriate screening levels based upon adjacent developments. In the case of this development within this particular project area, there is (1) no adjacent development to screen and (2) the site has minimal visual impact on surrounding developed areas, as demonstrated in the view shed analysis (**Exhibit C**).

Master Plan: This request is located within an area that contains a Suburban Mixed-Use Master Plan designation and has been analyzed utilizing the Master Plan policies. A full Master Plan analysis is provided in the SUP general findings of this report.

General Code Compliance: As proposed and with recommended conditions of approval, the project is consistent with the standards contained in RMC.

Other Agency Comments (Exhibit D): Comments received from Reno Police Department and SHPO have been referenced in the SUP general finding section of this report.

Public Input: One phone call was received requesting additional information about the project.

Neighborhood Advisory Board (NAB): This project was reviewed by the Ward 2 NAB on December 19, 2018. Comments included concerns related to archeological resources, noise, loss of trees, view shed and onsite mercury. These concerns have been addressed in previous sections of this report and/or by recommended Conditions of Approval. A copy of their comments is attached to this report (**Exhibit E**).

Legal Requirements:

| | |
|---------------------|--|
| RMC 18.06.405(e)(1) | Special Use Permit |
| RMC 18.06.405(e)(2) | Special Use Permits for Hillside Development |
| RMC 18.06.405(e)(3) | Special Use Permits for Cut Slopes of 20 Feet or Greater in Depth or Fill Slopes Ten Feet or Greater in Depth. |
| RMC 18.06.405(e)(9) | Special Use Permits for Facilities that Manufacture, Process, Transfer or Store Explosives or Hazardous Substance. |
| RMC 18.06.408 | Variance |

Findings:

Special Use Permit: General special use permit findings. Except where specifically noted, all special use permit applications shall require that all of the following general findings be met, as applicable.

- a. The proposed use is compatible with existing surrounding land uses and development.
- b. The project is in substantial conformance with the master plan.

- c. There are or will be adequate services and infrastructure to support the proposed development.
- d. The proposal adequately mitigates traffic impacts of the project and provides a safe pedestrian environment.
- e. The proposed site location and scale, intensity, density, height, layout, setbacks, and architectural and overall design of the development and the uses proposed, is appropriate to the area in which it is located.
- f. The project does not create adverse environmental impacts such as smoke, noise, glare, dust, vibrations, fumes, pollution or odor which would be detrimental to, or constitute a nuisance to area properties.
- g. Project signage is in character with project architecture and is compatible with or complementary to surrounding uses.
- h. The structure has been designed such that the window placement and height do not adversely affect the privacy of existing residential uses.

Special Use Permit: Special use permits for hillside development. In order to approve a special use permit for hillside development according to Article XVI (Hillside Development) of Chapter 18.12, the decision-making body shall make the general special use permit findings and the following additional findings:

- a. The proposed project mitigates environmental degradation, including slope failure, erosion, sedimentation, and stormwater run-off;
- b. The proposed project utilizes grading practices that are appropriate for hillsides and designed to minimize the visibility of unsightly scarring;
- c. The proposed project provides open space based on hillside constraints;
- d. The proposed project adheres to applicable hillside development design standards and to master plan provisions related to development in sloped areas; and
- e. The proposed project's site layout and design features adequately mitigate potential visual impacts of development near prominent ridgelines and within other visually prominent areas.

Special Use Permit: Special use permits for cut slopes of 20 feet or greater in depth or fill slopes ten feet or greater in height. In addition to the general findings in subsection (1) above, special use permits for cut slopes of 20 feet or greater in depth or fill slopes ten feet or greater in height, the following findings shall apply:

- a. The slopes can be treated in a manner which does not create negative visual impacts.
- b. The grading is necessary to provide safe and adequate access to the development.

Special Use Permit: Special Use Permits for facilities that manufacture, process, transfer or store explosives or hazardous substances. If recommending approval of a special use permit under this subsection, the planning commission must make the general findings required for a special use permit and shall consider and discuss as a part of the record:

- (i) the health and safety of the residents of the city, and
- (ii) the safety and security of any military installation in the city.

In approving the special use permit, the city council shall affirm the findings and discussions of the planning commission.

Variance:

- (1) In order to approve a variance, the recommending or deciding body shall make the following findings:
 - a. The property is characterized by an extraordinary or exceptional situation or condition, such as exceptional narrowness, shallowness or shape, or it has exceptional topographic conditions at the time of enactment of the regulations;
 - b. The strict application of the regulation would result in peculiar and exceptional practical difficulties to, or exceptional and undue hardships upon, the owner of the property;
 - c. Granting of the variance will not be materially detrimental to the public health, safety, or welfare, or injurious to property or improvements in the vicinity; and
 - d. The proposed variance is consistent with the intent and purpose of this title.

Proposed Motion(s):

In the case of LDC19-00022 (Steamboat Repower) based on compliance with the applicable findings and considerations, I move to approve the special use permits for a) development of a major utility; b) hillside development; c) cuts of 20 feet or greater in depth and fills greater than 10 feet in height

In the case of LDC19-00022 (Steamboat Repower) based on compliance with the applicable findings and considerations, I move to approve the variance for removal of the requirement for a formal landscape area.

In the case of LDC19-00022 (Steamboat Repower) based on compliance with the applicable findings and considerations, I move to recommend that the City Council approve the special use permit for a facility that manufactures, processes, transfers, or stores hazardous substances.

Attachments:

- Case Maps (PDF)
- Exhibit A- Site, Grading and Landscape Plans (PDF)
- Exhibit B- Hazardous Material Procedures (PDF)
- Exhibit C- Viewshed Analysis (PDF)
- Exhibit D- Agency Comments (PDF)
- Exhibit E- NAB Comments (PDF)