

4.11 Mineral Resources

This section addresses potential impacts to mineral resources that may result from construction of the Fanita Ranch Project (proposed project). The following discussion addresses the existing conditions of the affected environment, identifies applicable regulations, and analyzes environmental impacts from implementation of the proposed project. This section is based on a review of the Aggregate Report prepared by Freeman Associates (2020), which is included as Appendix K.

4.11.1 Environmental Setting

Topography on the project site generally ranges from a broad, northwest trending valley in the center of the project site, to a series of generally north–south, and northeast–southwest trending ridges dissected by moderately steep-sided canyons and tributaries in the eastern area of the project site. As described in more detail in Section 4.6, Geology, Soils, and Paleontological Resources, the existing topography on the project site is characteristic of terrain underlain by granitic rock and the Stadium Conglomerate formation, which consists of dense to very dense sandy gravel, cobble, and boulders. As noted in the California Department of Conservation Update of Mineral Land Classification Report, these materials can be crushed to yield commonly used construction materials (DOC 1996). The crushed sand, gravel, and stone, referred to as “aggregate,” yield construction materials such as Portland Cement Concrete, Asphaltic Concrete (commonly called “black top”), plaster, and stucco. Aggregate is also used as street base, subbase, railroad ballast, and fill. Three mining operations have been located in the City and several have been located in the areas surrounding the project site (USGS 2020). These mines primarily harvested granite, sand, and gravel, and many of them are no longer operational. There are no active mining operations within the project site.

As mandated by the Surface Mining and Reclamation Act (SMARA) of 1975 (California Public Resources Code, Sections 2710–2796), the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source (e.g., products used in the production of cement). Within the City, valuable sand, gravel, and crushed rock resources exist, which are important to the construction industry. The Santee General Plan designates the City into two zones: MRZ-2 and MRZ-3. MRZ-2 designates areas where adequate information exists to indicate that significant mineral deposits are present or where it was judged that a high likelihood for their presence exists. MRZ-3 areas are those containing mineral deposits whose significance cannot be evaluated from available data. This classification also includes areas where both acceptable and unacceptable quality material are intermixed.

The project site’s mineral resource designations include MRZ-2 and MRZ-3 due to the presence of metamorphic rocks and alluvial sediment deposits, which when crushed to suitable sizes, could be considered for construction material in the form of aggregate materials. Figure 4.11-1, Mineral Resource Zones (MRZ), shows the locations of MRZs on the project site.

4.11.2 Regulatory Framework

Applicable state and local regulations pertaining to mineral resources are discussed below. No federal regulations are applicable.

4.11.2.1 State

Surface Mining and Reclamation Act of 1975

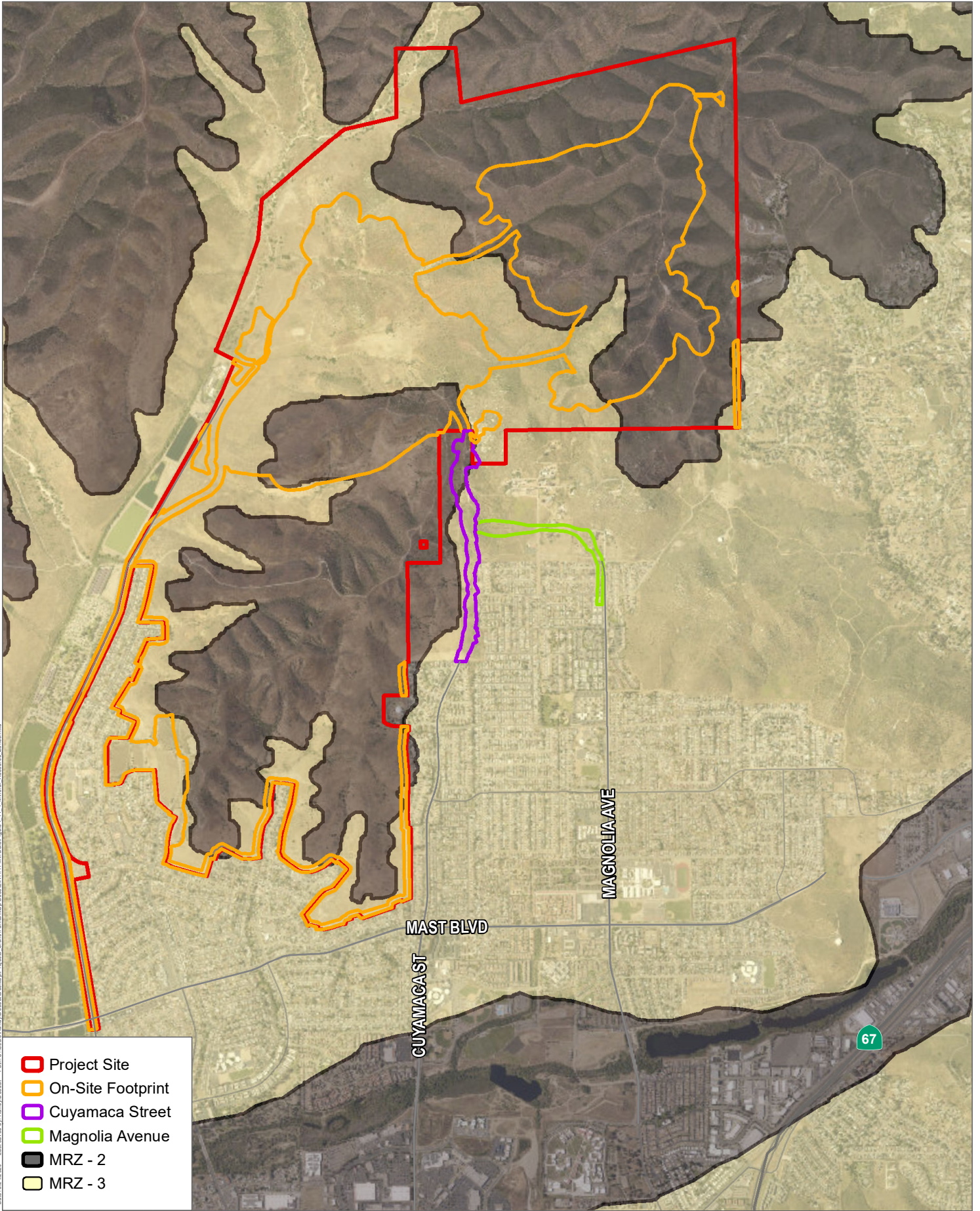
As mandated by SMARA, the California State Mining and Geology Board classifies the state's mineral resources with the MRZ system. This system includes identification of presence/absence conditions for meaningful sand and gravel deposits.

The classification system emphasizes Portland Cement Concrete aggregates, which are used in manufacturing strong, durable concrete and have stricter specifications than other aggregate materials.

Mineral land classification for the region is designated as follows (California Public Resources Code, Sections 2710–2796):

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence.
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MR zone.

Additionally, Sections 2762 and 2763 of SMARA require that jurisdictions issue a Statement of Reasons for projects that include the elimination of the potential for extraction in areas of regionally significant minerals resources. SMARA requires that the City decision makers consider this elimination of extraction potential in their decision on land use. The Statement of Reasons lists potential reasons to approve a proposed project and to include elimination of the potential for extraction of the resources; decision makers may adopt or modify any of these. The Statement of Reasons must be submitted to the State Geologist and California State Mining and Geology Board for their review for a period of 60 days in conjunction with the environmental review of a qualifying proposed project.



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Source: California Department of Conservation 2017; ESRI 2019.

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4.11.2.2 Local

Santee General Plan

Divided into nine elements, the Santee General Plan is a statement of intent by the City as to the future development of the community. This is accomplished through objectives and policies that serve as a long-term policy guide for physical, economic, and environmental growth.

The purpose of the Conservation Element of the Santee General Plan is to identify the community's natural and human-made resources and to encourage their wise management in order to assure their continued availability for use, appreciation, and enjoyment. The Conservation Element identifies areas in the City that contain valuable mineral resources, primarily sand and gravel, and notes the potential environmental and flooding problems associated with mining operations. The applicable Conservation Element objectives and policies are detailed below (City of Santee 2003):

- **Objective 5.0:** Conduct extraction of mineral deposits with a minimum amount of disturbance to adjacent properties.
 - **Policy 5.1:** The City shall require that all proposed mining operations are adequately reviewed during the project and environmental review processes to minimize to the greatest degree possible, all identified environmental impacts, especially water quality, habitat preservation, and bridge undermining.
- **Objective 6.0:** Reclaim all mined lands to usable conditions that are adaptable for alternative land uses.
 - **Policy 6.1:** The City shall require the planned reclamation of mined lands following extraction of mineral resources with consideration of the land's potential for recreational, wildlife habitat, and scenic uses, as well as for residential, industrial or commercial development.
- **Objective 10.0:** Preserve significant natural resources, such as mineral deposits, biological resources, watercourses, groundwater, hills, canyons, and major rock outcroppings, as part of a Citywide open space system.

4.11.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to mineral resources would be significant if the proposed project would:

- **Threshold 1:** Result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state.
- **Threshold 2:** Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

4.11.4 Method of Analysis

The analysis of mineral resources is based on the Aggregate Report (Appendix K). To determine impacts, the potential for the project site to produce aggregate was compared under the existing conditions versus buildout of the proposed project based on the information included in the Aggregate Report. In addition, the MRZ potential for the project site was evaluated by reviewing mineral land classification maps compiled by the California Department of Conservation's Division of Mine Reclamation (State of California 2020). The on-site MRZs are depicted on Figure 4.11-1. Regardless of the ultimate development on the proposed school site (school or residential), the impacts to mineral resources would be the same due to similar ground disturbance activities. Therefore, the analysis below adequately addresses the preferred land use plan with school and the land use plan without school.

4.11.5 Project Impacts and Mitigation Measures

4.11.5.1 Threshold 1: Loss of Known Mineral Resources

Would the proposed project result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state?

Impact: The proposed project would use on-site rock materials during project construction and preserve over 63 percent of the site as a Habitat Preserve. It would not result in the loss of availability of known mineral resources valuable to the region and state.

Mitigation: No mitigation is required.

Significance Before Mitigation: Less than significant.

Significance After Mitigation: Less than significant.

Impact Analysis

Construction of the proposed project has the potential to impact the mineral resources of both known and unknown significance in MRZ-2 and MRZ-3 on the project site (Figure 4.11-1). The proposed project would have the potential to impact MRZ-2 lands in the northeastern and central portions of the proposed project where the Vineyard and Orchard Villages would be developed (Figure 3-3, Conceptual Site Layout, and Figure 4.11-1). The development of Fanita Commons, the Farm, and surrounding roadways would have the potential to impact MRZ-3 lands. The MRZ-2 lands in the southern portion of the project site and the majority of the MRZ-3 lands throughout the rest of the project site would remain undeveloped in the proposed Habitat Preserve. Although there is the potential of mineral recovery from the MRZ-2 and MRZ-3 areas on the project site, in accordance with the Santee General Plan Conservation Element, economic, land use compatibility, and environmental protection factors must be considered when deciding on the appropriateness of mining in a particular area. Furthermore, the Santee General Plan designates the project site for Planned Development, not mineral resources extraction.

The majority of the project site is underlain with two major rock types, granitic rock and Stadium Conglomerate, with alluvial deposits made up of sand, gravel, and silt overlaying these basement rocks. These rock formations are commonly mined elsewhere in the County and the State of California for use as aggregate and are considered valuable to the region and the state. The proposed project would reuse on-site rock materials, such as large boulders, rock cobble, decomposed granite, and processed rock. There are large quantities of rock cobble existing on site. Rock cobble would be collected and used in the construction of water quality and landscape features. It is also anticipated that a relocatable, temporary aggregate plant would be permitted and set up on site during construction. The temporary aggregate plant would crush rock and produce roadway subbase and other aggregate materials for use on site. In addition to rock materials, there are large deposits of decomposed granite on site, which would be reused for trails and other landscape related purposes.

The processing and use of the on-site aggregate would reduce the need for mining and trucking aggregate materials from off-site sources for the infrastructure needs of the proposed project. The on-site aggregate plant would be capable of producing the materials required for roads, drain rock and backfill materials for wet and dry utilities, cobbles to line drainage channels and road medians, and a variety of landscaping materials for on-site and off-site road improvements (Appendix K). Construction of the proposed project would require on-site processing of approximately 937,500 tons of raw aggregate obtained from the project site. This equates to approximately 300,000 cubic yards of manufactured aggregate to be used for the building materials for the proposed project (Appendix K). Areas of high-grade Stadium Conglomerate or granite would be selected as the cut operation is ongoing and would be moved to the aggregate plant as aggregate is needed. There is a potential for a portion of the aggregate material to be crushed using jaw and cone crusher systems for use in construction of project infrastructure that may result in air quality and noise impacts (Appendix K). Potential air quality/health risk, greenhouse gas emissions, and noise impacts of the on-site aggregate plant are analyzed in Sections 4.2, Air Quality; 4.7, Greenhouse Gas Emissions; and 4.12, Noise, of this EIR. The on-site aggregate plant would be permitted by the City as a part of the overall project entitlement process. Rock-crushing activities would comply with the City's noise standards and regional air quality standards. The on-site aggregate plant would not be designed to produce materials for asphalt or ready-made concrete. These materials would be brought in from local off-site sources. The use of the on-site aggregate plant would terminate at project buildout.

In consideration of the Santee General Plan Conservation Element's Objective 5.0 and Policy 5.1, the project site's proximity to the Goodan Ranch/Sycamore Canyon County Preserve and the Santee Lakes Recreation Preserve would likely preclude the proposed project from eligibility for mineral extraction due to the potential habitat and water quality impacts to those preserve areas. Use of the on-site aggregate plant would allow for the mineral resources existing on the project site to be used as part of the proposed project and would not contribute to other environmental

impacts from transporting aggregate from off-site locations. Transitioning the on-site aggregate production areas to the proposed project uses would comply with the Santee General Plan Conservation Element's Objective 6.0 and Policy 6.1, which prioritize the reclamation of mined lands for the use of recreational, wildlife habitat, and residential uses. In addition, consistent with the Santee General Plan Conservation Element's Objective 10.0, over 60 percent of the project site would remain in open space, and the mineral resources like aggregate and sediment in the open space would not be lost to the region. Therefore, the proposed project would result in a less than significant impact associated with the loss of mineral resources that would be of value to the region and the state.

Mitigation Measures

The proposed project would not result in a significant impact. Therefore, no mitigation measures are required.

4.11.5.2 Threshold 2: Loss of Locally Important Mineral Resource Site

Would the proposed project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Impact: The proposed project would not result in the loss of a locally important mineral resource recovery site. **Mitigation:** No mitigation is required.

Significance Before Mitigation: Less than significant. **Significance After Mitigation:** Less than significant.

Impact Analysis

The Santee General Plan Conservation Element designates the project site as MRZ-2 and MRZ-3 lands containing mineral resources of known and unknown importance (see Figure 4.11-1). However, as discussed in Section 4.11.5.1, the proposed project would satisfy the Santee General Plan Conservation Element's Objectives 5.0, 6.0, and 10.0 and Policies 5.1 and 6.1 regarding consideration of environmental disturbance from mineral resources extraction; reclamation of mined lands for recreational, habitat, and residential uses; and the preservation of mineral resources. In addition, the Santee General Plan designates the project site as Planned Development, not mineral resource extraction, and does not consider the project site a potential significant local source of mineral resources. Therefore, the proposed project would result in a less than significant impact associated with the loss of availability of a locally important mineral resource recovery site.

Mitigation Measures

The proposed project would result in less than significant impact. Therefore, no mitigation measures are required.

4.11.6 Cumulative Impacts and Mitigation Measures

Would implementation of the proposed project have a cumulatively considerable contribution to a cumulative mineral resources impact considering past, present, and probable future projects?

Cumulative Impact	Significance	Proposed Project Contribution
Threshold 1: Loss of Known Mineral Resources	Less than significant	Not cumulatively considerable
Threshold 2: Loss of Locally Important Mineral Resource Site	Less than significant	Not cumulatively considerable

4.11.6.1 Cumulative Threshold 1: Loss of Known Mineral Resources

The geographic context for the analysis of cumulative impacts related to the potential loss of known mineral resources encompasses the County. As described in Section 4.11.2, Regulatory Framework, the state uses the MRZ system to identify presence/absence conditions for meaningful sand and gravel deposits. For cumulative projects that include lands designated as MRZ areas and have the potential to impact mineral resources, consideration of economic, land use compatibility, and environmental protection factors would be considered when deciding on the appropriateness of mining in those particular areas. Table 4-2, Cumulative Projects, in Chapter 4, Environmental Impacts Analysis, includes residential, institutional, and commercial projects that would have the potential to reduce the availability of a known mineral resource in the region. Cumulative projects identified in the City of Santee, the City of San Diego, and the County include the construction of residential, mixed-use, and civic properties that could contribute to the loss of availability of known mineral resources. New development northeast and southeast of the project site is within the County’s jurisdiction. Currently, most properties south of the project site in the City of Santee are built out. No further development is anticipated to occur west of the project site on Marine Corps Air Station Miramar or within City of San Diego open space, or north of the project site in Sycamore Canyon. Although sand, gravel, and rock mining operations exist north and east of the proposed project in Slaughterhouse Canyon, the areas where the cumulative projects are located in the City are planned for residential, commercial, and municipal development and, therefore, would not be available for mineral extraction. Cumulative projects would not contribute to the loss of availability of mineral resources. Thus, a significant cumulative impact associated with the loss of availability of known mineral resources would not occur. The proposed project’s contribution would not be cumulatively considerable.

4.11.6.2 Cumulative Threshold 2: Loss of Locally Important Mineral Resource Site

The geographic context for potential loss of locally important mineral resources delineated on a local general plan, specific plan, or other land use plan is projects within the City and adjacent communities. Cumulative projects in the City and the adjacent communities could contribute to

the loss of mineral resources if they contain areas delineated as locally important mineral resources on a local general, specific, or land use plan. These areas would not be zoned for other types of development that would allow them to lose their availability as locally important mineral resource sites. In addition, these types of projects would require additional approvals by the City and other jurisdictions to permit as mineral resource sites. Cumulative projects would not result in a significant cumulative impact. The project site is not designated as a locally important mineral resource recovery site in the Santee General Plan. Therefore, the proposed project's contribution would not be cumulatively considerable.

4.11.7 References

City of Santee. 2003. City of Santee General Plan. August 27.

DOC (California Department of Conservation). 1996. Update of Mineral Land Classification Report.

State of California. 2020. "DOC Maps: Mines and Mineral Resources." Accessed May 2020. <https://maps.conservation.ca.gov/mineralresources/>.

USGS (U.S. Geological Survey). 2020. Mineral Resources Online Spatial Data – Mineral Resources Data System. Accessed May 2020. <https://mrdata.usgs.gov/mrds/map-us.html>.