SHIMP ENGINEERING, P.C.
Design Focused Engineering

Project Narrative For: **Living Earth Sanctuary**

Parcel Description: **Tax Map 101, Parcels 19, 20, 20C**

Pre-App Meeting Date: **07/22/2024**

First Submission Date: **08/19/2024**
Revision Date: **11/18/2024**
02/27/2025

	ACREAGE	EXISTING ZONING	PROPOSED ZONING	COMP PLAN DESIGNATION
TMP 101-20C	**3.45**	**Rural Areas**	**SP – Boarding Camp**	**Rural Areas**
TMP 101-20	**100.68**			
TMP 101-19	**183.00**			
TOTAL	**287.13**			

Additional Zoning Considerations:

Floodplain, Steep Slopes

Location:

The property is located on Red Hill Road approximately .85 miles southeast of its intersection with Old Lynchburg Road. The property is bisected by White Oak Creek and its southern borders are the Hardware River and Walnut Creek Park.

Surrounding Uses:

The property shares a significant border with Walnut Creek Park. Other adjacent properties are largely wooded and are used for rural residential and forestry activities. There is also a nearby KOA campground on Red Hill Road.

Project Proposal:

Living Earth School (the "applicant" or "LES") seeks to establish an educational camp facility, Living Earth Sanctuary, on tax parcels 101-20C, 101-20, and 101-19 in Albemarle County (collectively, the "property"). The property is zoned Rural Areas (RA) and the applicant respectfully requests a special use permit for a boarding camp to establish their educational facility on the property.

The Living Earth School serves ages 4-99 through nature-based programs including year-round workshops, daytrips, and overnight camps. These programs have been operating in the Charlottesville area since 2002. Although currently operating at other locations, the school seeks to increase the stability of their organization by owning and stewarding their own property.

Living Earth Sanctuary Operations

Standard operations on camp property are currently approximately 50 to 75 people per day, with peak activity during eight weeks of overnight summer programs. With relocation to this property, it is the applicant's hope to have the ability to expand daily operations however, operations with 50-75 people on the property during weekdays, outside of eight weeks of summer camp, are likely to continue for some time. Year-round use of the property consists of field trips from school groups, home school groups that

meet regularly, and workshops for adults. Many of these field trips and workshops will be during the daytime only, with some overnight stays during the school year. Day campers typically arrive weekdays Monday through Friday at 9 am, and leave at 4pm. Overnight summer campers will generally arrive on a Sunday or Monday at the start of a session and depart on Friday or weekend afternoons. Overnight participants will camp primarily in primitive tent sites and there will be a maximum of 250 campers on the property for overnight camp. There will also be a few residences on site for some staff members to provide property management, safety and oversight. Living Earth School anticipates having as many as 20 full time staff and 40 part time staff on the property during the peak 8 weeks of summer programs.

In addition to typical daily operations and summer camp operations, the applicant requests to be able to have events with up to 500 people up to six times per year; the applicant seeks this flexibility to be able to host fundraisers and community events. These events may include fundraising, regional nature education school events, and events with organizations such as 1% for the Planet.

As is common for boarding camp facilities, the applicant will occasionally rent their facilities to private and partner groups looking to utilize the applicant's facilities for events such as corporate retreats, family reunions, and weddings. These retreats and events will provide an alternative income stream for the applicant and enable them to generate revenue from their facilities when not utilizing their facilities. Shuttle services will be encouraged for such events taking place on the property.

The following analysis is provided pursuant to Sec. 33.8 of the Albemarle County Zoning Ordinance, which sets forth factors to be considered when evaluating a special use permit request:

Public Need or Benefit

Living Earth Sanctuary will provide significant public benefit to the surrounding area. A main goal of the organization is to help people of all ages nurture healthy relationships with nature, self, and community. The school offers practical skills such as shelter building, toolmaking, plant/animal identification, and community building opportunities. These skills and practices are much needed in the context of increasing digital technology, screen use, and mental health challenges for people of all ages. There will be numerous opportunities for community members to attend this site as mentors, students, or part of special events.

No Substantial Detriment

LES will not be a substantial detriment to adjacent properties. The property's large size significantly helps to reduce impacts to neighboring properties. LES proposes minimal tree clearing on the property and proposes to concentrate clearing around site improvements, this will enable substantial tree cover to remain intact along the property's borders, maintaining buffers between the property and neighboring parcels. LES seeks to be a good neighbor and proposes intentional limitations on their operations to reduce impacts on adjacent properties; the concept plan proposed with this application depicts Activity Areas on the property, which are provided to limit locations and sizes of new structures on the property, these locations were selected to minimize visual impacts to adjacent properties and grading / clearing activity on the property. In addition, LES proposes to abide by amplified sound limitations that are applicable to wineries and breweries in the Rural Areas (Sec. 18-5.1.25(e)). LES proposes minimal site lighting, and only proposes lighting that is required for security, accessibility, and building code compliance purposes.

Character Remains Unchanged

The area surrounding the property is primarily characterized by forestry activity and forested property; just opposite the South Fork Hardware River from the property is Walnut Creek Park, a public park owned by Albemarle County. The character of the area is critical to the success of this use as it is necessary for LES to be located in a natural area with direct access to environmental resources for LES attendees to explore, study, and steward. It is the best interest of LES to not change the character of the area; this proposal will not compromise the character of the area especially since new structures proposed are predominantly concentrated towards the center of the property.

The intent of the Rural Areas District is "preservation of agricultural and forestal lands and activities; water supply protection; limited-service delivery to the rural areas; and conservation of natural, scenic, and historic resources." This proposal is consistent with the intent of the Rural Areas District as this proposal will not compromise future agricultural or forestal activities from taking place on the property. Limited agricultural activity is likely to take place on the LES property as they may plant a small orchard and garden on the property. The property is not within a water supply watershed and so water supply protection will not be compromised with this proposal. The site is nearly 300 acres and the Activity Areas are in localized areas on the site which will promote conservation of natural resources. The site improvements will not be visible from Red Hill Road and therefore the scenery along Red Hill Road will remain largely unchanged as a result of this proposal.

Harmonious Use

With the purpose and intent of the Zoning Ordinance
As previously stated, the proposed used is harmonious wit the intent of the Zoning Ordinance.

The uses permitted by right in the zoning district
This use is harmonious with the by right uses permitted in the zoning district and will not prohibit future use of the property for by right purposes.

The regulations provided in Section 5 of the zoning ordinance as applicable
The use will comply with the supplemental regulations for day camps and boarding camps included in Sec. 5.1.05 of the Albemarle County Zoning Ordinance.

The public health, safety, and general welfare
The proposed use will be harmonious with and not compromise public health, safety, and general welfare.

Consistency with the Comprehensive Plan:

The 2015 Comprehensive Plan designates the property as part of the Rural Areas. The purpose of the Rural Areas is to promote the agricultural and forestry industry, preserve natural resources, protect historic and cultural resources, and maintain a distinct boundary with the Development Areas.

The proposed camp promotes rural economic activity through its educational programs and special events, which can attract visitors and contribute to the local economy. Its nature-based curriculum and primitive camping align with the preservation of natural areas by emphasizing environmental stewardship and minimizing ecological impact. Additionally, the camp's design and operations are tailored to fit within the rural setting, ensuring that it enhances rather than disrupts the rural character of the County. By integrating educational and recreational activities into the landscape in a respectful and sustainable

manner, the camp supports the goals of protecting natural and cultural resources while fostering rural economic development. Living Earth School directly aligns with the specific objectives listed in the Comprehensive Plan in the following ways:

• *Objective 1: support a strong agricultural and forestal economy*

The agricultural and forestal economy of the rural areas includes fruit and orchard production, as well as managed forests and timber harvests. Living Earth School hopes to include small scale fruit and orchard production on some of the currently cleared portions of their site. The rest of the property currently contains a range of both pine and hardwood forests, which the applicant is dedicated to preserving while educating the public about their importance and wide-ranging benefits. As described in the Comprehensive Plan, "trees provide soil stabilization, water resource buffers, air filtering, and add to the beauty of the County." These are some of the core teachings of LES, and the applicant is interested in pursuing conservation easements and collaborating with the Virginia Department of Forestry in the future.

• *Objective 2: Protect and preserve natural resources, which include mountains, hills, valleys, rivers, streams, groundwater, and retain continuous and unfragmented land for agriculture, forestry, biodiversity, and natural resource protection.*

Protection and preservation of natural resources are critical to the Living Earth School's mission of helping young people engage with and understand nature through the camp's programs. LES aims to highlight low impact green design principles through their construction and will be a model that others can look to as an example of how to have a small footprint on the land while highlighting the beauty of the region and respecting resources for future generations of Virginians.

The camp's infrastructure is designed to have minimal permanent impact on the land, as the Living Earth School intends to limit site grading as much as possible. The facilities can be dismantled or removed without significant alteration to the site's natural state. The use of temporary and low-impact structures such as those with pier foundations, coupled with careful site planning, allows for the land to be restored to its original condition or repurposed for other rural activities such as agriculture or forestry. In addition, structures proposed on the site could always be repurposed for agricultural use and storage in the future. This approach ensures that the land remains adaptable and can revert to its previous uses with minimal effort if needed.

The use of central septic systems for the bathhouses and other facilities at the boarding camp aligns with the requirement to be sustainable with available groundwater. The septic systems will include drain fields located within the camp's activity areas. This means that the wastewater will be effectively absorbed and filtered by the soil, minimizing the risk of groundwater contamination, and supporting the sustainable use of local groundwater resources as the drain field recharges the groundwater supply and forms a closed loop for water resources on the property. Compost toilets in certain areas as specified in the concept plan layout will mitigate any potential groundwater impacts by complying with Virginia Administrative Code 12VAC5-610-980, and any associated standards of the National Sanitation Foundation.

As described in the Comprehensive Plan, "the single most important way to preserve continuous and unfragmented land for agriculture, forestry, biodiversity, and natural resource protection is to maintain rural uses and avoid residential development." Living Earth School will be a long term commitment to this limited scale of development, will reduce habitat fragmentation, and is consistent with the county's goals to limit subdivisions and promote conservation easements in the rural areas.

• *Objective 4: Promote rural and historic landscapes that enhance visitors' experience and give historic sites as authentic a setting as possible.*

The proposed boarding camp for The Living Earth Sanctuary aligns well with the goal for rural areas to complement the character of the region through its thoughtful scale and operations. Currently accommodating approximately 50-75 people at a time on a regular basis is a very low impact on a 287-acre property. Occasionally accommodating larger groups, and only six times per year up to 500 people is still a very minimal impact. As written in the Comprehensive Plan, "At places other than farms and farm wineries, the County has been fairly consistent in allowing groups larger than 150 persons on an occasional, but not regular basis. The County should continue to evaluate individual requests on a case-by-case basis with preference given to occasional rather than regular large events." Living Earth School's structured schedule, including weekday day camps, occasional overnight stays in primitive structures, and well-managed and limited special events with shuttle services, ensures minimal disruption. The focus on nature-based education and environmental stewardship integrates the camp harmoniously within its natural setting, while the inclusion of staff residences for on-site management further supports the property's integration and maintains the area's character.

• *Objective 7: Provide information to citizens so they are well-informed and understand the cultural, economic, and ecological aspects of the Rural Area.*

Living Earth School's mission is almost exactly the same as Objective 7. The cultural, economic, and ecological aspects unique to rural areas are the same ones that Living Earth School wants to teach students about in their nature-based programs. These programs are meant to take place in large tracts of undisturbed, unfragmented forests and ecosystems in order for students to most fully understand the natural world around them. For these reasons, it is essential that the school is located in a rural area, and Living Earth School could not have a more perfect home to contribute to the mission of education in the rural areas of Albemarle County.

Impact on Traffic:

LES's primary traffic impacts will be during off peak hours during the eight weeks of overnight summer camp; the majority of concentrated trips affiliated with this use will occur during drop off and pick up times for overnight camp. Drop off is typically on a Sunday or Monday and pick up from overnight camp typically occurs on Friday afternoon or over the weekend. The peak background traffic on Red Hill Road occurs during the week during morning and evening commute times; the overnight camps, where the greatest number of trips are coming and going from the site, do no conflict with the peak background traffic.

The only trips affiliated with Living Earth Sanctuary that will overlap with the background traffic are day campers who are typically dropped off in the summer months at 9 a.m. and picked up at 4 p.m. When day campers are on the property, school is not in session and so there won't be an overlap with school traffic.

Traffic for year-round programming is much more intermittent as school groups arrive and depart during school hours on buses or vans and small home school groups utilize the site just twice per week for programming.

ITE Trip Generation Manual 11th edition does not have a direct trip generation comparison for this user. The two closest options would be campground or private school, displayed here.

Table A. ITE Trip Generation Estimates for Campground / Recreational Park

Trip Generation Manual, 11th Edition			AM Peak hour			PM Peak hour			Total Daily Trips
Use Description	ITE	Qty (Campsites)	In	Out	Total	In	Out	total	
Campground/Recreational Vehicle Park	416	19	2	5	7	5	3	8	No data
		63	6	11	17	16	10	26	No data

The independent variable for campgrounds is number of sites occupied. Assuming an average of 4 people per site at a typical campground, 250 attendees would occupy 63 sites, and 75 attendees would occupy 19 sites. This trip generation data is provided for general comparative data purposes, daily trip generation data compiled from LES's current operations are provided later on in this analysis.

Table B. ITE Trip Generation Estimates for Private School Use

Trip Generation Manual, 11th Edition			AM Peak hour			PM Peak hour			Average Total Daily Trips
Use Description	ITE	Qty (Students)	In	Out	Total	In	Out	total	
Private School (K-12)	532	75	50	30	81	50	70	120	186
		250	135	79	214	80	11	191	620

The data above does not directly correlate to LES's operations but it provides a framework for the range of trips affiliated with standard operations. The trip generation data affiliated with a campground is likely a low estimate for LES's operations and the private school data is likely a high estimate for standard LES operations, the actual transportation impact is anticipated to be in between the projection for a private school and a campground. LES has collected data on their operations at other sites which is provided later on in this analysis.

Traffic Impact of By Right Development

When evaluating the potential traffic impact of a special use permit for Living Earth Sanctuary, it is also important to consider the potential traffic impact of by-right development on the site. The following table shows the potential resulting number of lots if the property were subdivided as currently allowed by right:

Table C. Development Rights Yield Estimate

	ACREAGE	LOTS BY DIVISION RIGHTS	ADDITIONAL 21 ACRE LOTS	TOTAL LOTS
TMP 101-20C	3.45	1		1
TMP 101-20	100.68	5	4	9
TMP 101-19	183.00	5	8	13
TOTAL	287.13			**23**

Based on this calculation, 23 single family detached houses could exist on the site. The Institution of Transportation Engineers (ITE) estimates the potential traffic impact of this level of development as shown in the tables below:

Table D. ITE Weekday Trip Generation Estimates for Single Family Detached Units

Use	ITE Code	Qty DUs	Daily Total Trips
Single Family Detached	210	23	261

Table E. ITE Sunday Trip Generation Estimates for Single Family Detached Units

Use	ITE Code	Qty DUs	Daily Total Trips
Single Family Detached	210	23	134

Projections Based on Traffic Data from LES

In recent years, LES has collected traffic data for their programs which currently operate on other sites in rural areas. The most likely average annualized daily attendance numbers are approximately 50-75 people. The charts below show that based on these attendance numbers, the typical daily operations at LES during the school year and over the summer would not create a traffic impact greater than the anticipated by-right residential lot yield on the property and that LES, at maximum enrollment, would not have a transportation impact that is significantly greater than the potential by-right impact.

Table F. Trip Generation Estimates Extrapolated from LES Trip Count for Current Operations

	LES Traffic Data - School Year Day Programs								
	Campers	Trips In	Trips Out	Total Trips	Total Daily Trips/Attendee				
	25	18	18	36	1.44				
	*LES Traffic Data - Overnight Programs**								
	Campers	Trips In	Trips Out	Total Trips	Total Daily Trips/Attendee				
	45	30	30	60	1.33				
					**trips attributable to overnight programs occur two days per week (Sunday and Friday)*				
	LES Traffic Data - Summer Day Programs								
	Campers	Trips In	Trips Out	Total Trips	Total Daily Trips/Attendee				
	60	19.5	19.5	39	1.54				
	Estimated Weekday Traffic Generation for LES Expansion - Extrapolated from LES Data for School Year Day Programs								
	# of Day Campers	**Daily Total Trips**							
Typ # of Campers	75	108							
Max # of Campers	100	144							
	Estimated Weekend Traffic Generation for LES Expansion - Extrapolated from LES Date for Summer Overnight Programs								
	# of Campers	**Daily Total Trips**							
Typ # of Campers	75	100							
Max # of Campers	250	333.33							
	Estimated Weekday Traffic Generation for LES Expansion - Extrapolated from LES Data for Summer Day Programs								
	# of Day Campers	**Daily Total Trips**							
Typ # of Campers	75	115.38							
Max # of Campers	250	384.615							

The numbers presented in Table F demonstrate the average anticipated impact and the peak anticipated impact for the various programs offered by LES (school year programming, summer day camp, and summer overnight camp). It should be noted that not more than 100 campers will be on the property at any given time during the school year and not more than 250 campers will be on the property at any given time during summer programming and so the maximum transportation impact will be from a combination of LES's programs. For example, in the summertime, both day campers and overnight campers will be on the property however, not more than 250 campers total will be on the property at any given time.

Impacts on Environmental Features:

Overall impacts on environmental features will be minimal. The current stream crossing does not meet standards and as such the newly constructed stream crossing will be designed in accordance with Albemarle County design standards for stream crossings. All proposed improvements are outside of critical slopes, stream buffers and flood plains.

In addition, the owner is exploring various options to preserve this 280+ acre parcel in its natural state in perpetuity, such as through a conservation easement or stewardship plan. Living Earth Sanctuary is collaborating with the Virginia Department of Forestry and the Nature Conservancy to develop a Forestry Plan that will ensure effective stewardship of this significant land.

Impact on Public School Facilities:

There is no impact anticipated on public school facilities.

Impact on Public Safety:

The property is located within the Police Blue Ridge District Sector 5, Beat 13 and North Garden Fire Station.

The camp will be designed with safety protocols in place, including fire safety measures, emergency response plans, and secure facilities. Staff will be trained to handle various emergencies, reducing the likelihood of incidents that would require outside intervention.

In case of an emergency, White Oak Creek will be a designated water supply source. White Oak Creek is a perennial creek which is less than one mile from all proposed structures on the property. Ingress and egress will be through a 20-foot road (compliant with county standards) with an entrance on Red Hill Rd. If it is determined during site plan that additional water supply is necessary, the applicant will provide adequate water storage tanks on site.

Public facilities required to support the establishment and maintenance of the boarding camp are anticipated to be minimal. The camp does not plan to use public water nor sewer as all water and sewer infrastructure will be served by on-site well and septic systems. The applicant plans to only add minimal lighting to the property, within existing County guidelines. They will abide by a Dark Sky commitment and encourage Albemarle County to become a Dark Sky community. Lighting may be provided along the access road in order to provide safety lighting in case of an emergency.

Many of the camp structures will likely be served by central water and sewer systems, the specifics of those requests will be pursued at site plan once the number of connections to each well and drain field are more defined. The drain fields for buildings will be within the activity area shown on the map. As shown in maps on page three of the concept plan, the existing soils in this area are loam which indicates there will be adequate percolation rates to support drain fields on this site, the slope of the site is adequate in many areas to support drain field installation and long term maintenance.