January 22, 2025

rosemann & ASSOCIATES P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

Joe Frogge
City of Lee's Summit Plans Examiner
220 SE Green Street
Lee's Summit, MO 64063
(816)-696-1241
Joe.Frogge@cityofls.net

Project Name: VILLAGE AT DISCOVERY PARK LOT 10
Project Address: 140 NE ALURA WAY, LEES SUMMIT, MO 64086
Permit Number: PRCOM20246113

This letter is in response to the Plan Review Conditions Report dated January 10, 2025. The plans have been revised to address the referenced comments. Our responses are below, **IN BOLD**, and follow the order as shown in the review comments.

Licensed Contractors

1. Lee's Summit Code of Ordinance, Section7-130.4 - Business License. (excerpt) No person, other than a licensed contractor or employees of a licensed contractor, shall engage in electrical, plumbing or mechanical business, construction, installation or maintenance unless duly licensed in accordance with this section.

Action required: MEP subcontractors are required to be listed on permit. Provide company names of licensed MEP contractors.

Noted – MEP Contractors will be selected and provided after bidding.

Building Plan Review

1. The building permit for this project cannot be issued until the Development Services Department has received, approved and processed the Final Development Plan.

Action required: Comment is informational.

Noted.

2. The project cost, which is used to establish the permit fee, has not been provided.

Action required: Comment is informational.

Noted.

3. A one-time impact fee in the form of a license tax must be collected before permit can be issued. Please be advised that additional application, review, and inspection fees do apply and additional information pertaining to this will be provided during that stage of your approval process.

Action required: Comment is for informational purposes. The fee will be $24,186.24.

Noted.

4. 2018 IBC 1704.2 Special inspections. Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more approved agencies to perform inspections during construction on the types of work listed under Section 1705. These inspections are in addition to the inspections identified in Lee's Summit Code of Ordinances Chapter 7. (see code section for exceptions)

Action required: Provide statement of special inspections / letter of responsibility from company contracted to perform special inspections.

Noted. Letter will be provided prior to construction when special inspector is selected.

5. Prior to the installation or construction of any elevator equipment, an elevator equipment permit shall be obtained from the Missouri Department of Public Safety or its authorized representative.

Action required: Comment is informational.

Noted.

6. Prior to the operation of any new elevator equipment or the issuance of the operating certificate, such elevator equipment shall be inspected by a licensed inspector. Testing must be performed in accordance with these rules and regulations. The testing must be witnessed by a licensed inspector.

Action required: Comment is informational.

Noted.

7. Elevator Safety Act and Rules 701.361 - Each privately owned or operated installation and each installation owned or operated by the state of Missouri or any political subdivision of the state shall have a certificate of inspection and meet the safety code promulgated pursuant to sections 701.350 to 701.380.

Action required: Comment is informational.

Noted.

8. 2018 IBC 1803.1 General. Geotechnical investigations shall be conducted in accordance with Section 1803.2 and reported in accordance with Section 1803.6. Where required by the building official or where geotechnical investigations involve in-situ testing, laboratory testing or engineering calculations, such investigations shall be conducted by a registered design professional.

Action required: Letter from structural engineer cited on sheet S001 not found. Provide letter to verify use of 6,000psf piers.

Response – The Geotech Report provides Rammed Aggregate Piers as an alternative to unimprovised ground in the event the proposed settlement is not acceptable (see underlined section of page 15). The owner has opted to use Rammed Aggregate Piers for this project. Attached is a letter from Ground Improvement Engineering by Vaughn Rupnow, PE dated May 31, 2024, confirming RAPS as a viable option with an allowable subgrade bearing pressure of 6,000 psf.

9. 2018 IBC 1207.1 Minimum room widths. Habitable spaces, other than a kitchen, shall be not less than 7 feet in any plan dimension. Kitchens shall have a clear passageway of not less than 3 feet between counter fronts and appliances or counter fronts and walls.

Action required: Modify Den in Hurley Corner units. (re: A1/A409)

Response – Den in Hurley Corner unit (sheet A-409) has been adjusted to reflect 7’-0” clear space.

Fire Plan Review

1. 2018 IFC 907.1.1- Construction documents. Construction documents for fire alarm systems shall be submitted for review and approval prior to system installation. Construction documents shall include, but not be limited to, all of the following: 1. A floor plan which indicates the use of all rooms. 2. Locations of alarm-initiating and notification appliances. 3. Alarm control and trouble signaling equipment. 4. Annunciation. 5. Power connection. 6. Battery calculations. 7. Conductor type and sizes. 8. Voltage drop calculations. 9. Manufacturers, model numbers and listing information for equipment, devices and materials. 10. Details of ceiling height and construction. 11. The interface of fire safety control functions.

Action Required: Provide deferred submittal for fire alarm system.

Noted – Fire Alarm System shop drawings will be provided as a deferred submittal.

2. 2018 IFC 901.2- Construction documents. The fire code official shall have the authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.

Action Required: Provide deferred submittal for protection system.

Noted – Sprinkler shop drawings will be provided as a deferred submittal.

3. Provide Single Station alarms in the small room of the “Conway III” apartments.

Response – A smoke detector has been added to the small bedroom of the “Conway III” apartment on sheet UMEP2.3.2.

4. 2018 IFC 906.5 – Conspicuous location. Portable fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. These locations shall be along normal paths of travel, unless the fire code official determines that the hazard posed indicates the need for placement away from normal paths of travel.

Action Required: Provide extinguishers in the parking garage.

Response – Fire extinguishers have been added to the parking garage.

Should you have any questions, please do not hesitate to call.

Sincerely yours,

ROSEMANN & ASSOCIATES, P.C.

816.472.1448.
Sarah Burdiek

May 31, 2024

Brian Maenner
Intrinsic Development
3622 Endeavor Avenue, Suite 101
Columbia, Missouri 65201

Leading. By Design.

Re: Foundation Support – Preliminary Budget
Geopier® Ground Improvement System
Village at Discovery Park
Lee's Summit, Missouri
GFC Project No. P24-PMO-0371

Dear Mr. Maenner:

We are pleased to submit this budget proposal to reinforce the subsurface soils for the support of foundations for the proposed building using the Geopier GP3® system. We have **extensive experience working on similar projects in the area** and believe we can offer both schedule and cost benefits compared to drilled piers. Our analysis and experience confirm that the Geopier System is a viable solution to provide support and settlement control for the proposed structure. The purpose of this document is to present the details of the Geopier design and construction approach and to provide a value engineering proposal. *We trust that our value engineered solution, if implemented, would be considered intellectual property and that we would be considered valued members of the project team.*

PROJECT DESCRIPTION

The proposed project consists of a new mixed-use development in Lee's Summit, Missouri. Abbreviated project details known or assumed are summarized in Table 1.

Table 1: Project Description

Structure	Maximum Column Loads	Maximum Wall Loads	Finished Floor Elevation (FFE)	Cut / Fill
Lot 3: Hotel	147 kips	5 klf (assumed)	967.0'	Up to +16 ft
Lot 4: 3-Story Mixed-Use	155 kips	5 klf (assumed)	962.0'	Up to +16 ft
Lot 5: Mixed-Use	120 kips	5 klf (assumed)	Unknown	Unknown
Lot 9A: Mixed-Use	128 kips	5 klf (assumed)	959.7' to 960.7'	Up to +30 ft
Lot 10A: Mixed-Use	128 kips	5 klf (assumed)	960.7' to 962.7'	Up to +12 ft

Multiple Geotechnical Engineering Reports have been completed for this development. We have reviewed the preliminary structural and geotechnical information to generate a solution using the Geopier System. This will allow normal spread footings with high bearing pressure. The current foundation plans for several lots are for drilled piers and would need to be redesigned for shallow footings by the project Structural Engineer; however, we expect that this would not be a significant undertaking. We will work collaboratively with the project Structural Engineer to develop an efficient foundation support design.

PRELIMINARY DESIGN

Our analysis and experience confirms that the Geopier System will provide suitable support and settlement control beneath the moderate to heavy loads planned for this project. Based on the provided soil boring information and on extensive Geopier modulus load testing and design experience with similar subsurface conditions, the following design value may be used to design Geopier-supported foundations at this site:

- Allowable bearing pressure on the Geopier-reinforced subgrade* = **6,000** psf.
  ** The allowable bearing pressure can be increased by 33% for transient loading conditions.*

The planned Geopier supported footing design is based on limiting total settlements to within typical design tolerances of 1-inch of total settlement. The majority of the settlements are anticipated to occur during building construction. Minimum footing depths and minimum dimensions for all footings should be consistent with those recommended by Geotechnical Engineer of Record (GEOR.

As part of our design-build services we will create an engineered shop drawing that details the Geopier layout relative to the foundation plans. We will work directly with the structural engineer to develop the most efficient solution for this project.

ADDITIONAL DESIGN & CONSTRUCTION CONSIDERATIONS

The Geopier installation is to be completed after the building pad is graded to the planned floor slab subgrade elevation. All earthwork within the building pad must be in accordance with the recommendations provided by the Geotechnical Engineer of Record (GEOR). ***We understand that mass grading of the site has already been completed.***

Floor slab support is not part of this scope and we are not responsible for floor slab performance. Please refer to the GEOR's report for recommendations for building pad preparation including a minimum thickness of low volume change fill where required below the building pad. The Geopier system is not intended to reduce the potential for soil shrink/swell and we are not responsible for vertical movements related to moisture-induced expansion or contraction of the subgrade.

SCOPE OF WORK & PRICING

Foundation Service Corp. (FSC) has prepared a lump sum budget proposal for the design-build Geopier system. The budget pricing from FSC is attached. FSC is a licensed Geopier installer for the region and will perform the installation. The design will be provided by Ground Improvement Engineering (GIE) and Geopier. The design-build budget includes the following:

- Geopier design calculations and preparation of construction drawings. As part of our design-build services we will create an engineered shop drawing and design package that details the Geopier layout relative to the foundation plans.

- One mobilization and demobilization from the site.
- Full-scale modulus testing program.
- Installation of a Geopier intermediate foundation system for support of the foundations based on our current understanding of the planned building scope from the Project Drawings and based on experience with similar projects.
- Full-time on-site Quality Control (QC) person to document the production pier installation and perform QC tests.

Items not included in this proposal include:

- Spoil removal from drilling operations, and
- Surveying/layout of the RAP elements in the field. We will provide a plan layout of the RAP locations.

EXPERIENCE

Geopier Foundation Company developed Rammed Aggregate Pier® (RAP) Systems as efficient and cost effective intermediate foundation solutions for the support of settlement sensitive structures. These systems have since become effective replacements for deep foundations, including driven piles, drilled shafts or augered cast-in-place piles. ***Thousands of structures*** are currently supported by RAP Systems - proven experience that ensures high levels of performance and reliability compared to traditional systems.

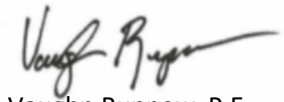
Furthermore, the Geopier System has a proven track record at similar sites throughout the United States including numerous similar developments underlain by fill and compressible soils similar to those found at this site. RAP soil reinforcement is often selected for these projects over conventional options as a result of cost and time-savings provided to the project. Please visit our website at www.groundimprovementeng.com and Geopier Foundation Company's website at www.geopier.com where a variety of information including client references and project case histories can be found.

CLOSING

Please contact us at (918) 313-4433 should you have any questions regarding this letter or if we can be of assistance in any way. We look forward to working with you on this project.

Sincerely,

GROUND IMPROVEMENT ENGINEERING



Vaughn Rupnow, P.E.
Project Engineer

Attachment: FSC's Budget Proposal (05/31/2024)

FOUNDATION SERVICE CORP.

ADDRESS REPLY TO:
220 WATERLOO ROAD
P.O. BOX 120
HUDSON, IA 50643

PHONE: (319) 988-9802

FAX: (319) 988-9839

Budget

To:	Vaughn Rupnow	**From:**	Tyler Gustafson
Re:	Village at Discover Park - Lees Summit, MO Geopier® Budget	**Date:**	Friday, May 31, 2024

The budget price, for the project referenced above, to install Geopier® foundation elements with a maximum overburden depth to the top of pier of 3 feet is:

$ 505,000.00/Budget Lump Sum
**Breakdown on next sheet*

FSC Assumes:

- One Mobilization included.
- One Modulus Load Test included.
- No Casing Included.
- No spoil handling included.
- No survey or layout included.
- Street cleaning and traffic control are provided by others.
- A stable working pad with a maximum slope of 2.5% is to be provided by others. Wheeled and tracked equipment shall be able to travel in and out from the daily work area under their own power.
- Soil Drilling Only. Obstructions removed by others.
- **FSC has not included any extraordinary COVID-19 (or other pandemics) contingencies, costs, or schedule in our bid. In addition, FSC did not include any contingency dollars for price escalations or subsequent impacts to time of performance in our price. As a result, any costs, delays or impacts which occur are not our responsibility and FSC will be entitled to change of conditions change order for such material changes.**

Description	Price
Mobilization	$ 25,000.00
Load Test	$ 15,000.00
Lot 3	$110,000.00
Lot 4	$ 90,000.00
Lot 5	$ 40,000.00
Lot 9A	$150,000.00
Lot 10A	$ 75,000.00
Total (Pricing Tied)	**$505,000.00**