REPORT OF GEOTECHNICAL INVESTIGATION

SEDONA LOFTS

220 SUNSET DRIVE
SEDONA, ARIZONA 86336
APN 408-26-030C
ACS PROJECT NO. 2101624

PREPARED FOR:

Mr. Keith Holben
SUNSET LOFTS, LLC
15010 North 78th Way, Suite 109
Scottsdale, AZ. 85260

PREPARED BY:

ACS Services LLC
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September 8, 2021

September 8, 2021
Project 2101624 – Sedona Lofts
220 Sunset Drive
Sedona, Arizona 86336
APN 408-26-030C

ACS

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September 8, 2021 Project 2101624

Mr. Keith Holben
Sunset Lofts, LLC
15010 North 78th Way, Suite 109
Scottsdale, AZ 85260

RE: GEOTECHNICAL INVESTIGATION REPORT
SEDONA LOFTS
220 SUNSET DRIVE
SEDONA, ARIZONA 86336
APN 408-26-030C

Dear Keith:

Transmitted herewith is a copy of the final report of the subsurface soil and foundation investigation on the above-mentioned project. The services performed provide an evaluation at the selected locations of the subsurface soil conditions throughout the zone of significant foundation influence. As an additional service, this firm may review the project plans and structural notes for conformance to the intent of this report.

This firm possesses the capability to provide testing and inspection services during the course of construction. Such quality control/assurance activities may include, but are not limited to, compaction testing as related to fill control, foundation inspection, and concrete sampling. Please notify this firm if a proposal for such services is desired.

Should any questions arise concerning the content of this report, please feel free to contact this office at your earliest convenience.

Respectfully submitted,

ACS SERVICES LLC

Andrew Jamrogiewicz, P.E.
Engineering Department Manager

cc: (1) Addressee via email (pdf copy)

SCOPE

This report is submitted following a geotechnical investigation conducted by this firm for the proposed **SEDONA LOFTS**, proposed 4 separate 2-story buildings and associated parking and driveways, to be located at 220 Sunset Drive, in Sedona, Arizona 86336, APN 408-26-030C. The objectives of the investigation were to determine the physical characteristics of the soil underlying the site and to provide final recommendations for safe and economical foundation design and slab support. For purposes of foundation design, the maximum column and wall loads have been assumed to be as summarized below.

	Maximum Column Load (KIPS)	Maximum Wall Load (KLF)
Shallow Spread Foundations	123	7.5

Anticipated structural loads in excess of those stated above will need to be addressed in an addendum, i.e. they are not covered under the scope of work involved with this effort. The recommendations for site grading contained in this report do not address the presence or removal of contaminants from the site soils.

FIELD INVESTIGATION

On July 21, 2021, this firm advanced ten (10) exploratory test borings (6.625-inch hollow stem auger) for examination of the subsurface profile to depths ranging from 4.0 to 15.5 feet below the existing site grade. The soils encountered were examined, visually classified and wherever applicable, sampled. Refer to the Boring Logs in Appendix B for a detailed description of the subsurface soil conditions at the boring locations. Refer to Figure 2 in Appendix A for the approximate locations of the borings.

LABORATORY TESTING

Representative samples obtained during the field investigation were subjected to the following laboratory analyses:

Test	Sample(s)	Purpose
Consolidation	Undisturbed native soils (6)	Allowable soil bearing capacity and settlement analysis
Sieve Analysis and Atterberg Limits	Native subgrade soils (9)	Soil classification
Proctor	Native subgrade soils (1)	Moisture-Density Relationship

Refer to Appendix C of this report for the results of the laboratory testing.

SITE CONDITIONS

General Notes:

(1) Topographic relief	The site is generally flat.
(2) Fill	No fill was encountered at the locations of the borings.
(3) Evidence of surface disturbance	The surface of the site has been disturbed since the site has been previously graded and is generally free of vegetation.
(4) Site use	The site is a currently vacant lot in an existing commercial development.

GEOLOGIC HAZARDS

The following list represents a general summary of the on-site soil characteristics relative to engineering applications:

Depth to groundwater	- No groundwater was encountered
Potential for soil expansion	- Low based on the plasticity index test data for the upper native site soils
Potential for soil consolidation	- Low to moderate based on the field penetration blow counts and laboratory consolidation test data for the site soils at foundation level
Existence of loose soil at foundation bearing elevation	- Possible
Potential for excessive differential soil movement	- Low to moderate due to the potential for soil collapse
Potential for earth subsidence fissures	- Not applicable
Frost depth	- 12 inches
Presence of caliche, bedrock or other hard stratum	- Very dense silty sand soils were encountered below depths ranging from 8.0 to 15.5 feet at the locations of the borings.
IBC Site Class	- D, stiff soil profile

RECOMMENDATIONS

The recommendations contained herein are based upon the properties of the surface and subsurface soils as described by the field and laboratory testing, the results of which are presented and discussed in this report. Alternate recommendations may be possible and will be considered upon request.

Conventional Spread Foundations

Based on the low to moderate collapse potential of the native sandy clay to silt soils at foundation level, it is recommended that all foundations be embedded a minimum of 1.5 feet and bear on a minimum of 0.5 feet of controlled compacted fill to achieve an allowable soil bearing pressure of 1500 PSF.

For all construction, 2.0 feet and 1.33 feet are recommended as the minimum width of spread and continuous footings, respectively.

The following tabulation may be used in the design of spread (column) and continuous (wall) foundations for the proposed structures. The column labeled Bearing stratum refers to the soil layer that the footing pad rests on, and does not imply that the foundation be fully embedded into that particular stratum.

Surface Level Foundations Bearing on Controlled Compacted Fill:

			Allowable Load	
Foundation Depth (ft)	**Bearing Stratum**	**Allowable Soil Bearing Pressure**	**Wall (KLF)**	**Column (KIP)**
1.5	0.5 feet of controlled compacted fill*	1500 PSF	4.5	74
1.5	1.0 feet of controlled compacted fill*	1750 PSF	5.3	86
1.5	1.5 feet of controlled compacted fill*	2000 PSF	6.0	98
1.5	2.0 feet of controlled compacted fill*	2250 PSF	6.8	110
1.5	2.5 feet of controlled compacted fill*	2500 PSF	7.5	123

***It is necessary that the thickness of controlled compacted fill required to achieve the design soil bearing pressure stated in the project plans lies beneath all foundations for the structures. The design soil bearing pressure is usually stated in the General Structural Notes (GSN) in the project structural plans. The over-excavation and re-compaction to achieve the required thickness of controlled compacted fill beneath foundations shall extend across the entire building pad area and to a minimum lateral distance of five feet beyond exterior foundation edges.**

Explanations

Foundation Embedment Depth - i.e.,

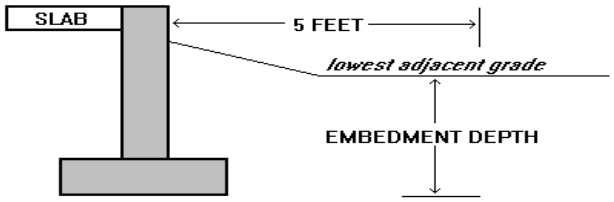
A) The depth below the lowest adjacent exterior pad grade within 5.0 feet of proposed exterior walls;

B) The depth below finish compacted pad grade provided that a sufficient pad blow-up (the lateral extent to which the building pad is constructed beyond the limits of the exterior walls or other structural elements, inclusive of exterior column foundations) has been incorporated into the grading and drainage design (5.0 feet or greater);

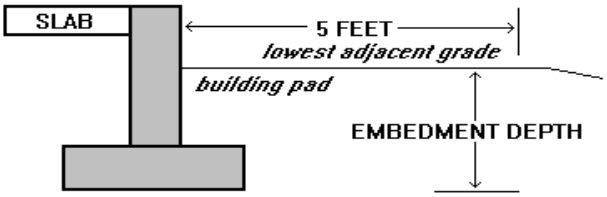
C) The depth below finish floor level for interior foundations.

FOUNDATION EMBEDMENT

Condition A



Condition B



The previously tabulated bearing value and the allowable wall and column loads associated with it are based on a total settlement of 1/2 inch. **It is anticipated that the magnitude of differential settlement will be roughly 1/4 inch** if construction is performed in accordance with locally accepted standards and the recommendations contained herein.

The allowable loads are based on maximum footing sizes of 3.0 and 7.0 feet for continuous and spread footings, respectively. Greater loads and larger footings may be accommodated by the listed bearing values, if there is toleration for increased settlements. This office should be contacted if this situation should arise.

The weight of the foundation below grade may be neglected in dead load computations.

The previously tabulated allowable soil bearing pressures should be considered allowable maximums for dead plus design live loads and may be increased by one-third when considering total loads, including wind or seismic forces or other transient loading conditions.

Retaining wall or building foundations to be constructed in close proximity to retention basins (within 5.0 feet) should be embedded 1.0 feet deeper than the stated depths in the preceding bearing capacity tables.

Shallow foundations that are adjacent to lower foundation areas must be stepped down so that their base is below the lower backfill materials, and below a line projected upward from the nearest lower foundation edge at a 45 degree angle. In no case should ancillary structures be designed or constructed, whose foundations will bear into deeper, non-verified backfills.

This firm recommends that continuous footings and stem walls be reinforced, and bearing walls be constructed with frequent joints to better distribute stresses in the event of localized foundation movements. Similarly, all masonry walls should be constructed with both vertical and horizontal reinforcement.
It is strongly recommended that all foundation excavations be inspected (prior to the placement of reinforcing steel) by a representative of the project geotechnical engineer, **ACS Services LLC**, to ensure that they are free of loose soil which may have blown or sloughed into the excavations, the embedment depth is adequate, and the dimensions are in accordance with the project requirements. **It will also be necessary for the geotechnical engineer to verify that conventional spread footings with a minimum foundation embedment depth of 1.5 feet will bear upon the required thickness of controlled compacted fill to achieve the design soil bearing pressure as stated in the project structural plans.**

A minimum of MAG A (3000 PSI), or equivalent, concrete with Type II cement should be used for footings, stem walls and floor slabs.

Lateral Stability Analyses

The following tabulation presents recommendations for lateral stability analyses for native undisturbed soil and controlled compacted fill:

[a]Foundation Toe Pressures.....1.33 x max. allowable

	Native Undisturbed Soils	Controlled Compacted Fill
[b]Lateral Backfill Pressures:		
Unrestrained walls	38 psf/ft.	34 psf/ft.
Restrained walls[c]	56 psf/ft.	52 psf/ft.
Lateral Passive Pressures For Surficial Soils:		
Continuous walls/footings	195 psf/ft.	240 psf/ft.
Spread columns/footings	291 psf/ft.	358 psf/ft.
Coefficient of Base Friction For Surficial Soils:		
Independent of passive resistance	0.53	0.62
In conjunction with passive resistance	0.36	0.42

Superscript Explanations

[a]Increase in allowable foundation bearing pressure (previously stated) for foundation toe pressures due to eccentric or lateral loading.

[b]Equivalent fluid pressures for vertical walls and horizontal backfill surfaces (maximum 12.0 feet in height). Pressures do not include temporary forces during compaction of the backfill, expansion pressures developed by overcompacted clayey backfill, hydrostatic pressures from inundation of backfill, or surcharge loads. Walls should be suitably braced during backfilling to prevent damage and excessive deflection.

[c]The backfill pressure can be reduced to the unrestrained value if the backfill zone between the wall and cut slope is a narrow wedge (width less than one-half height).

Drainage

In unpaved areas, it is suggested that finished slopes extend a minimum of 5.0 feet horizontally from building walls and have a minimum vertical fall of 3.0 inches. Minimum grades of 2 percent should be maintained where the horizontal slope distance exceeds 5.0 feet. **In no case should long-term ponding be allowed near structures.** Backfill against footings, exterior walls, retaining walls, and in utility trenches should be well compacted to minimize the possibility of moisture infiltration through loose soil.

Conventional Slab Support

Site grading within the building areas should be accomplished as recommended herein. A minimum of 4.0 inches of aggregate base course (ABC) floor fill should immediately underlie interior grade floor slabs with a minimum thickness of 4.0 inches or as otherwise specified by the project structural engineer for a reinforced structural slab. The aggregate base material should conform to the requirements of Section 702 under Sub-section 702.2 "Crushed Aggregate" of the "Uniform Standard Specifications for Public Works Construction" sponsored by the Maricopa Association of Governments and all supplements.

Building pads for conventional systems should be constructed with sufficient lateral pad “blow-up” to accommodate the entire perimeter slab width.

To further reduce the potential for slab related damage in conjunction with conventional systems, we recommend the following:

1. Placement of effective control joints on relatively close centers.
2. Proper moisture and density control during placement of subgrade fills.
3. Provision for adequate drainage in areas adjoining the slabs.
4. Use of designs which allow for the differential vertical movement described herein between the slabs and adjoining structural elements, i.e. ½ inch.

The use of vapor retarders may be considered for any slab-on-grade where the floor will be covered by products using water based adhesives, wood, vinyl backed carpet, vinyl tile, impermeable floor coatings (urethane, epoxy, or acrylic terrazzo),and moisture-sensitive rock tile products. When used, the design and installation should be in accordance with the recommendations given in ACI 302.1R-04, Section 3.2.3 Moisture protection.

Fill Slope Stability

The maximum fill slopes may conform to a 3:1 (horizontal:vertical) ratio if fill is placed in accordance with the recommendations contained herein.

Pavement Design

Site grading within pavement areas should provide requisite subgrade support for flexible pavements. A compacted subgrade of on-site soils or soils with comparable properties is assumed. The stability of compacted pavement subgrade soils is reduced under conditions of increased soil moisture. Therefore, base course or pavement materials should not be placed when the surface is in a wet condition. Adequate surface drainage should be provided away from the edge of paved areas to minimize lateral moisture transmission into the subgrade.

The following presents the recommended pavement sections for on-site pavements:

Light Vehicles or Low Volume Traffic Areas (Parking Areas)

Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)	Concrete Pavement (Inches)
A[a]	8	5	2	
B[a]	8		4	
C[b]	8			5.0*

Heavy Vehicle or Medium Volume Traffic Areas (Drive Areas)

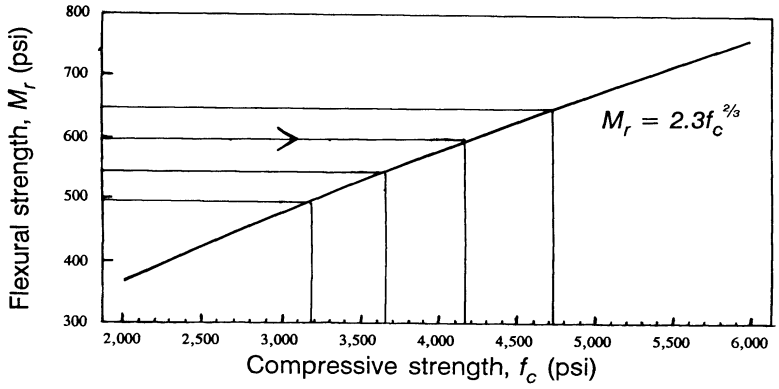
Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)	Concrete Pavement (Inches)
A[a]	8	5	3	
B[a]	8		5	
C[b]	8			6.0*

Very Heavy Vehicle or Heavy Traffic Volume Areas (Paths of Heavy Trucks)

Alternate	Prepared Subgrade (Inches)	ABC (Inches)	Asphaltic Concrete (Inches)	Concrete Pavement (Inches)
A[a]	8	5	4	
B[a]	8		6	
C[b]	8			7.0*

[a] – 10 to 15 year design life, with typical maintenance
[b] – 20 year design life, with typical maintenance

***The above thicknesses for Portland Cement concrete pavement are based on a modulus of rupture of 600 PSI. The recommended concrete thicknesses should be increased in increments of 0.5 inch for every 50 PSI decrease in the modulus of rupture. The following chart relates rupture modulus to compressive strength.**



All 8.0 inches of the prepared subgrade may be comprised of the native site soils.

Specifications for ABC should be as previously stated under "Slab Support". Compaction of subbase fill and base course materials should be accomplished to the density criteria listed under "Compaction and Moisture Content Recommendations". Compaction of asphalt should be accomplished to the following density criteria:

Material	Percent Compaction 75-blow method
Asphaltic Concrete	95 minimum

The asphaltic concrete material shall conform to all requirements as established in MAG Section 710 for Asphaltic Concrete Mix Designations 1/2” or 3/4" Marshall mix.

EARTHWORK

The following final earthwork recommendations are presented as a guide in the compilation of construction specifications. The final recommendations are not comprehensive contract documents and should not be utilized as such.

Site Preparation

It is recommended that all vegetation and any other deleterious material be removed from proposed structure and pavement areas at the commencement of site grading activities.

Special note for conventional spread foundations: In order to utilize the allowable soil bearing capacity assigned to controlled compacted fill for design of foundation width for conventional spread footings with a minimum embedment depth of 1.5 feet, it shall be necessary to sub-excavate the site soils to depths ranging from 0.5 to 2.5 feet below the bottom of the proposed foundations (2.0 to 4.0 feet below finish pad grade), depending on the specified design soil bearing pressure listed in the project plans. The over-excavation and re-compaction to achieve

the required thickness of controlled compacted fill beneath foundations shall extend across the entire building pad area and to a minimum lateral distance of five feet beyond exterior foundation edges. **The proper depth of over-excavation must be verified by the project geotechnical engineer, ACS Services LLC, prior to scarification and placement of controlled compacted fill for the building pad.**

All removed native soils are considered by this firm to be suitable for use as engineered fill for the building pads provided they are free of trash or debris, vegetation, roots, and oversized rock particles (greater than 3 inches).

Following the removal of the above-listed items and over-excavation required for placement of the specified thickness of controlled compacted fill below foundations, the uppermost 6.0 inches of the exposed native soils should be scarified, moisture processed and properly compacted in accordance with the section on compaction and moisture content recommendations in all areas (i.e. slab support areas and proposed pavement areas), prior to the placement of structural fill or resultant in a cut situation.

Complete removal and cleaning of any undesirable materials and proper backfilling of removal excavations will be necessary to develop support for the proposed facilities. Widen all removal excavations as necessary to accommodate compaction equipment and provide a level base for placing any fill. All fill shall be properly moistened and compacted as specified in the section on compaction and moisture content recommendations.

All subbase fill required to bring the structure areas up to subgrade elevation should be placed in horizontal lifts not exceeding 6.0 inches compacted thickness or in horizontal lifts with thicknesses compatible with the compaction equipment utilized. Fill placement in removal excavations should involve horizontal layers placed in 6.0-inch lifts, such that each successive lift is benched into the native soils a minimum lateral distance of 5.0 feet.

It is very important that a sufficient pad blow-up (the lateral extent to which the building pad is constructed beyond the limits of the exterior walls or other structural elements, inclusive of exterior column foundations) be incorporated into the site grading (5.0 feet or greater).

It is the understanding of this firm that various utility trenches may traverse the completed pad. The backfill of all utility trenches, if not in conformance with this report, may adversely impact the integrity of the completed pad. This firm recommends that all utility trench backfill crossing the pad be inspected and tested to ensure full conformance with this report. Untested utility trench backfill will nullify any as-built grading report regarding the existence of controlled compacted fill beneath the proposed building foundations and place the owner at greater risk in terms of potential unwanted foundation and floor slab movement.

Compaction and Moisture Content Recommendations

Compaction of backfill, subgrade soil, subbase fill, and base course materials should be accomplished to the following density criteria:

Material	Percent Compaction (ASTM D698)
On-site native soils:	
Building areas below foundation level	95 min.
Building areas above foundation level	95 min.
Below asphalt pavements	95 min.
Imported fill material:	
Building areas below foundation level	95 min.
Building areas above foundation level	95 min.
Below asphalt pavements	95 min.
Base course:	
Below asphalt pavements	100 min.
Below interior concrete slabs	95 min.

Increase the required degree of compaction to a minimum of 98 percent for fill materials greater than 5.0 feet below final grade.

During construction and prior to concrete placement, moisture contents should be controlled as follows:

Material	Compaction Moisture Content Range
On-site native soils:	
Building areas below foundation level	optimum -2 to optimum +2%
Building areas above foundation level	optimum -2 to optimum +2%
Below asphalt pavements	optimum -2 to optimum +2%
Imported fill material:	
Building areas below foundation level	optimum -2 to optimum +2%
Building areas above foundation level	optimum -2 to optimum +2%
Below asphalt pavements	optimum -2 to optimum +2%

Note: The recommendations previously tabulated under the heading entitled "Above Foundation Level" also apply to the subgrade in exterior slab, sidewalk, curb, and gutter areas except as otherwise noted.

Any soil disturbed during construction shall be compacted to the applicable percent compaction as specified herein.

Natural undisturbed soils or compacted soils subsequently disturbed or removed by construction operations should be replaced with materials compacted as specified above.

All imported fill material to be used as structural-supporting fill, should be free of vegetation, debris, and other deleterious material and meet the following requirements:

Maximum Particle Size	3 inches
Maximum Plasticity Index	14
Maximum Passing #200 Sieve	60 percent
Maximum Expansion	1.5 %*

* - Performed on a sample remolded to 95 percent of the maximum ASTM D698 density at roughly 2.0 percent below the optimum moisture content, under a 100 psf surcharge.

Water settling and/or slurry shall not be used, in any case, to compact or settle surface soils, fill material, or trench backfill within 10.0 feet of any proposed structure.

Shrinkage

Assuming the average degree of compaction will approximate 95 percent of the standard maximum density, the approximate shrinkage of the reworked site soils should be 10 to 15 percent based on the laboratory test data. This may result in a vertical elevation change of approximately 0.10 to 0.15 feet following the precompaction effort.

Excavating Conditions

Excavations into the site subsurface soils, extending to depths ranging from 8.0 to 15.5 feet, should be possible with conventional excavating equipment. Heavier excavating equipment may be required below depths ranging from 8.0 to 15.5 feet due to the presence of very dense silty sand and gravel soils.

Excavations greater than 4.0 feet should be sloped or braced as required to provide personnel safety and satisfy local safety code regulations.

CONSTRUCTION OBSERVATION

ACS Services LLC should be retained to provide documentation that the recommendations set forth are met. These include but are not limited to documentation of site clearing activities, verification of fill suitability and compaction, and inspection of footing excavations. Relative to field density testing, a minimum of 1 field density test should be taken for every 2500 square feet of building area, per 6.0-inch layer of compacted fill.

Prior to construction, we recommend the following:

1. Consultation with the design team in all areas that concern soils and rocks to ensure a clear understanding of all key elements contained within this report.
2. Review of the General Structural Notes to confirm compliance to this report and determination of which allowable soil bearing capacity has been selected by the project structural engineer (this directly affects the extent of earthwork and foundation preparation at the site).

3. This firm be notified of all specific areas to be treated as special inspection items (designated by the architect, structural engineer or governmental agency).

Relative to the involvement of **ACS Services LLC** with the project during the course of construction, we offer the following recommendations:

1. The site or development owner should be directly responsible for the selection of the geotechnical consultant to provide testing and observation services during the course of construction.
2. **ACS Services LLC** should be contracted by the owner to provide the course of construction testing and observation services for this project, as we are most familiar with the interpretation of the methodology followed herein.
3. All parties concerned should understand that there exists a priority surrounding the testing and observation services completed at the site. From a geotechnical perspective, it is imperative to understand the following priority list, presented in order of decreasing priority.

    A. Fill control for building pads (verification of overexcavation depths and lateral extents, compaction testing, and the general monitoring of fill placement).
    B. Foundation observations (compliance with the General Structural Notes, depths, bearing strata, etc.).
    C. Basement, structural or retaining wall backfill testing.
    D. Utility trench backfill
    E. Special inspections as dictated by the local municipality.
    F. Concrete sampling and testing for footings, stem walls and floor slabs.
    G. Subgrade testing for proposed pavement areas.
    H. ABC testing for proposed pavement areas.
    I. Asphaltic concrete testing for proposed pavement areas.
    J. Subgrade preparation for on-site sidewalk areas
    K. Grout sampling and testing, where applicable.
    L. Mortar sampling and testing, where applicable.
    M. Off-site subgrade, ABC, asphalt, curb, gutter and sidewalk testing.

Please understand that Item A above is the only area where ACS Services LLC has control on-site (once it has started) to verify or deny compliance with applicable standards, without the need for any entity to schedule testing activities with this office. Other than Item A, it shall be another entity's responsibility to schedule all testing and observation services, to coincide with the progress of construction. Since this firm is not a contributor to the construction schedule, we do not possess an inherent knowledge as to when our services shall be needed or required.

LIMITATIONS

Since our investigation is based upon review of background data, the site materials observed, selected laboratory testing and engineering analysis, the conclusions and recommendations are professional opinions. Our professional services have been performed using that degree and skill

ordinarily exercised, under similar circumstances, by reputable geotechnical engineers practicing in this or similar localities. These opinions have been derived in accordance with current standards of practice and no other warranty, express or implied, is made.

This report is not intended as a bidding document, and any contractor reviewing this report must draw his own conclusions regarding specific construction techniques to be used on this project.

The scope of services carried out by **ACS Services LLC** does not include an evaluation pertaining to environmental issues. If these services are required by the lender, we would be most pleased to discuss the varying degrees of environmental site assessments.

The materials encountered on the subject site and utilized in our laboratory analysis are believed to be representative of the total area; however, soil and rock materials do vary in character between points of investigation. The recommendations contained in this report are based on the assumption that the soil conditions do not deviate appreciably from those disclosed by the investigation. Should unusual material or conditions be encountered during construction, the soil engineer must be notified so that he may make supplemental recommendations if they should be required.

This report is issued with the understanding that it is the responsibility of the owner to see that its provisions are carried out or brought to the attention of those concerned. In the event that any changes of the proposed project are planned, the conclusions and recommendations contained in this report shall be reviewed and the report shall be modified or supplemented as necessary.

September 8, 2021
Project 2101624 – Sedona Lofts
220 Sunset Drive
Sedona, Arizona 86336
APN 408-26-030C

DEFINITION OF TERMINOLOGY

Allowable Soil Bearing Capacity	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
Aggregate Base Course (ABC)	A sand and gravel mixture of specified gradation, used for slab and pavement support.
Backfill	A specified material placed and compacted in a confined area.
Base Course	A layer of specified material placed on a subgrade or subbase.
Base Course Grade	Top of base course.
Bench	A horizontal surface in a sloped deposit.
Caisson	A concrete foundation element cased in a circular excavation, which may have an enlarged base. Sometimes referred to as a cast-in-place pier.
Concrete Slabs-on-Grade	A concrete surface layer cast directly upon a base, subbase, or subgrade.
Controlled Compacted Fill	Engineered Fill. Specific material placed and compacted to specified density and/or moisture conditions under observation of a representative of a soil engineer.
Differential Settlement	Unequal settlement between or within foundation elements of a structure.
Existing Fill	Materials deposited through the action of man prior to exploration of the site.
Expansive Potential	The potential of a soil to increase in volume due to the absorption of moisture.
Fill	Materials deposited by the action of man.
Finish Grade	The final grade created as a part of the project.
Heave	Upward movement due to expansion or frost action.
Native Grade	The naturally occurring ground surface.
Native Soil	Naturally occurring on-site soil.
Overexcavate	Lateral extent of subexcavation.
Rock	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting, or other methods of extraordinary force for excavation.
Scarify	To mechanically loosen soil or break down the existing soil structure.
Settlement	Downward movement of the soil mass and structure due to vertical loading.
Soil	Any unconsolidated material composed of disintegrated vegetable or mineral matter, which can be separated by gentle mechanical means, such as agitation in water.
Strip	To remove from present location.
Subbase	A layer of specified material between the subgrade and base course.
Subexcavate	Vertical zone of soil removal and recompaction required for adequate foundation or slab support
Subgrade	Prepared native soil surface.

APPENDIX A

NORTH
N.T.S.

PROJECT NUMBER: 2101624

FIGURE 1

ACS SERVICES LLC
2235 W BROADWAY RD
MESA, ARIZONA 85202
(480) 968-0190
(480) 968-0156 FAX
WWW.ACSSERVICESLLC.COM

VICINITY MAP

Sedona Lofts
220 Sunset Drive
Sedona, AZ. 86336

NORTH
N.T.S.

PROJECT NUMBER: 2101624

FIGURE 2

ACS SERVICES LLC

2235 W BROADWAY RD
MESA, ARIZONA 85202
(480) 968-0190
(480) 968-0156 FAX
WWW.ACSSERVICESLLC.COM

SITE PLAN & APPROXIMATE BORING LOCATIONS

Sedona Lofts
220 Sunset Drive
Sedona, AZ. 86336

APPENDIX B

ACS Services LLC

BORING B-1

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Remarks: Ring sample obtained at 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
1	2 8			SM	Red silty SAND some clay, damp, loose, low PI
2	8 4	1.0	99.8	SM	Red silty SAND some clay, damp, loose, low PI
3	10 4				
4	6 6				
5	10 20	2.0		SM	Red silty SAND, slightly damp, dense, NP
6	24				
7					
8					
9					
10	16 24			SM	Red silty SAND with clay, damp, dense, low PI
11	21				
12					
13					Got harder around 13 feet
14					
15	22 29			SM	Red and White sandy GRAVEL with silt, damp, very dense, low PI
16	29				
17					Terminated boring at 15.5 feet

ACS Services LLC

BORING B-2

For: 2101624 **Date:** 7/21/2021 **Project No.** 2101624
Project: Sedona Lofts **Type of Boring:** 6.625-inch HS Auger
Location: 220 Sunset Drive **Field Engineer:** Gabriel McKenney, EIT
Sedona, AZ **Location:** See Site Plan

Remarks: Ring sample obtained at 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
1	2 4			SM	Red silty SAND some clay, slightly damp to damp, loose, low PI
2	5 4	1.5	101.5	SM	Red silty SAND some clay, slightly damp to damp, medium dense, low PI
3	8 4				
4	4 5				
5	11 12	2.0		SM	Red silty SAND, slightly damp to damp, medium dense, NP
6	15				
7					
8					
9					
10	10 12			SM	Red silty SAND with clay, slightly damp, medium dense, low PI
11	17				
12					Got harder around 12 feet
13					
14					
15	10 19			SM	Red and White gravelly SAND with silt, slightly damp, dense, low PI
16	23				
17					Terminated boring at 15.5 feet

ACS Services LLC

BORING B-3

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Remarks: Ring sample obtained at 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
1	1 7			SM	Red silty SAND some clay, slightly damp, loose, low PI
2	9 10	0.5	100.4	SM	Red silty SAND, slightly damp, medium dense, NP
3	5 5				
4	8 8				
5	32 36	2.7		SM	Red silty SAND, slightly damp, very dense, NP
6	50/5				
7					
8					
9					
10	9 10			SM	Red silty SAND, damp, medium dense, low PI
11	14				
12					
13					Terminated drilling at 12.0 feet due to refusal
14					
15					
16					
17					

ACS Services LLC

BORING B-4

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Remarks: Ring sample obtained at 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
1	3 10	1.1		SM	Red silty SAND some gravel, slightly damp, medium dense, NP
2	10 2	2.6	90.8	SM	Red silty SAND with gravel some clay, slightly damp, medium dense, low PI
3	5 4				
4	5 12				
5	16 26			SM	Red sandy GRAVEL with silty some clay, slightly damp, very dense, low PI
6	32				
7					
8					
9					
10	20 28			SM	Red clayey SAND with gravel some silt, slightly damp, very dense, low to medium PI
11	37				
12					
13					Terminated drilling at 12.0 feet due to refusal
14					
15					
16					
17					

ACS Services LLC

BORING B-5

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Remarks: Ring sample obtained at 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
	1			SM	Red silty SAND with gravel some clay, slightly damp, very loose, low PI
1	1				
	2				
2	50/6	0.3	102.8	SM	Red silty SAND some clay, slightly damp, very loose, low PI
	4				
3	8				
	18				
4	27				
	25	2.7		SM	Red silty SAND, damp, very dense, NP
5	25				
	23				Got harder around 5 feet, likely hit cobbles or boulder
6					
7					
8					
9					Terminated drilling at 8.0 feet due to refusal
10					
11					
12					
13					
14					
15					
16					
17					

ACS Services LLC

BORING B-6

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Remarks: Ring sample obtained at 1.5 to 2.5 feet

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
1	1 2			SC	Red clayey SAND some silt, slightly damp, very loose, low PI
2	5 36	1.5		SM	Red silty SAND, slightly damp, loose, NP
3	50/5"	2.2	107.1		
4	8 7 12				
5	4			SC	Red clayey SAND some silt, slightly damp, medium dense, low to medium PI
6	6 7				
7					
8					
9					
10	12 35			SC	Red clayey SAND some silt, slightly damp, very dense, low PI
11	30				
12					
13					Got harder around 13 feet, likely hit sandstone cobbles
14					
15	50/4"			SM	Red clayey SAND with sandstone gravel, slighlty damp, very dense, low to medium PI
16					Terminated boring at 14.3 feet
17					

ACS Services LLC

BORING B-7

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Remarks: Bulk sample 0'-4' / Description of Subsurface Conditions
	2	1.5		SM	Red silty SAND, slightly damp, medium dense, NP
1	9				
	5				
2	4				
	4				
3	13				
	25				
4	38				
	42				Terminated drilling at 4.0 feet
5	40				
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

ACS Services LLC

BORING B-8

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Remarks: Bulk sample 0'-4' / Description of Subsurface Conditions
1	2 5	1.5		SM	Red silty SAND, slightly damp, loose, NP
2	4 3				
3	4 6				
4	13 22				
5	29 34				Terminated drilling at 4.0 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

ACS Services LLC

BORING B-9

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

Remarks: Bulk sample 0'-4'

Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Description of Subsurface Conditions
	3	1.8		SM	Red silty SAND, slightly damp, medium dense, NP
1	6				
	16				
2	23				
	30				
3	29				
	26				
4	25				
	28				Terminated drilling at 4.0 feet
5	29				
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

ACS Services LLC

BORING B-10

For: 2101624
Project: Sedona Lofts
Location: 220 Sunset Drive
Sedona, AZ

Date: 7/21/2021 **Project No.** 2101624
Type of Boring: 6.625-inch HS Auger
Field Engineer: Gabriel McKenney, EIT
Location: See Site Plan

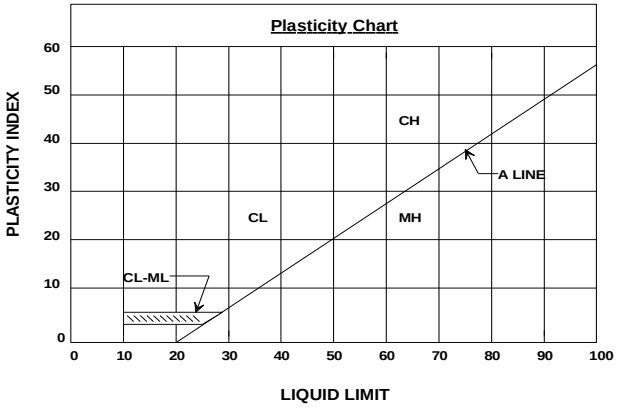
Depth (Feet)	Blows per 6"	Moisture %	Dry Density (PCF)	USCS Soil Class	Remarks: Bulk sample 0'-4' / Description of Subsurface Conditions
1	1 4	1.5		SM	Red silty SAND, slightly damp, loose, NP
2	3 2				
3	1 8				Got harder around 3 feet, likely hit cobbles or boulder
4	23 50/6				
5					Terminated drilling at 4.0 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

September 8, 2021
Project 2101624 – Sedona Lofts
220 Sunset Drive
Sedona, Arizona 86336
APN 408-26-030C

LEGEND

Major Divisions				Group Symbol	Typical Names
Coarse-Grained Soils (Less than 50% passes No. 200 sieve)	Gravels (50% or less or coarse fraction passes No. 4 sieve)	Clean Gravels (Less than 5% passes No. 200 sieve)		GW	Well graded gravels, gravel-sand mixtures, or sand-gravel-cobble mixtures.
				GP	Poorly graded gravels, gravel-sand mixtures, or sand-gravel-cobble mixtures.
		Gravels with Fines (More than 12% passes No. 200 sieve)	Limits plot below "A" line & hatched zone on Plasticity Chart.	GM	Silty gravels, gravel-sand-silt mixtures.
			Limits plots above "A" line & hatched zone on Plasticity Chart.	GC	Clayey gravels, gravel-sand-clay mixtures.
	Sands (More than 50% of coarse fraction passes No. 4 sieve)	Clean Sands (Less than 5% passes No. 200 sieve)		SW	Well graded sands, gravelly sands.
				SP	Poorly graded sands, gravelly sands.
		Sands with Fines (More than 12% passes No. 200 sieve)	Limits plots below "A" line & hatched zone on Plasticity Chart.	SM	Silty sands, sand-silt mixtures.
			Limits plots above "A" line & hatched zone on Plasticity Chart.	SC	Clayey sands, sand-clay mixtures.
Fine-Grained Soils (50% or more passes No. 200 sieve)	Silts-Plot below "A" line & hatched zone on Plasticity Chart	Silts of Low Plasticity (Liquid Limit Less Than 50)		ML	Inorganic silts, clayey silts with slight plasticity.
		Silts of High Plasticity (Liquid Limit More Than 50)		MH	Inorganic silts, micaceous or diatomaceous silty soils, elastic silts.
	Clays-Plot above "A" line & hatched zone on Plasticity Chart	Clays of Low Plasticity (Liquid Limit Less Than 50)		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		Clays of High Plasticity (Liquid Limit More Than 50)		CH	Inorganic clays of high plasticity, fat clays, sandy clays of high plasticity.

Note: Coarse grained soils with between 5% & 12% passing the No. 200 sieve and fine grained soils with limits plotting in the hatched zone on the Plasticity Chart to have double symbol.



DEFINITIONS OF SOIL FRACTIONS

SOIL COMPONENT	PARTICLE SIZE RANGE
Cobbles	Above 3 in.
Gravel	3 in. to No. 4 sieve
Coarse gravel	3 in. to 3/4 in.
Fine gravel	3/4 in. to No. 4 sieve
Sand	No. 4 to No. 200
Coarse	No. 4 to No. 10
Medium	No. 10 to No. 40
Fine	No. 40 to No. 200
Fines (silt or clay)	Below No. 200 sieve

September 8, 2021
Project 2101624 – Sedona Lofts
220 Sunset Drive
Sedona, Arizona 86336
APN 408-26-030C

TEST DRILLING EQUIPMENT & PROCEDURES

Drilling Equipment

ACS SERVICES LLC uses a CME-45 drill-rig capable of auger drilling to depths of 50 feet in southwestern soils. The drill is truck-mounted for rapid, low cost mobilization to the jobsite and on the jobsite. Drilling through soil or softer rock is performed with 6.625 inch O.D. hollow-stem auger. Carbide insert teeth are normally used on the auger bits so they can often penetrate rock or very strongly cemented soils that require blasting or very heavy equipment for excavation. The operation of well-maintained equipment by an experienced crew allows **ACS SERVICES LLC** to complete drilling jobs to a depth of 50 feet with minimum downtime and maximum efficiency.

Sampling Procedures

Dynamically driven tube samples are usually obtained at selected intervals in the borings by the ASTM D1586 procedure. In many cases, 2 inch O.D., $1^{3}/_{8}$-inch I.D. samplers are used to obtain the standard penetration resistance. Undisturbed" samples of firmer soils are often obtained with 3 inch O.D. samplers lined with 2.42 inch I.D. brass rings. The driving energy is generally recorded as a number of blows of a 140-pound hammer, utilizing a 30-inch free fall drop, per six inches of penetration. However, in stratified soils, driving resistance is sometimes recorded in 2 or 3-inch increments so that soil changes and the presence of scattered gravel or cemented layers can be readily detected and the realistic penetration values obtained for consideration in design. These values are expressed in blows per six inches on the logs. Undisturbed sampling of softer soils is sometimes performed with thin-walled Shelby tubes (ASTM D1587). Tube samples are labeled and placed in watertight containers to maintain field moisture contents for testing from auger cuttings.

Continuous Penetration Tests

Continuous penetration tests are performed by driving a 2-inch O.D. bull-nose penetrometer adjacent to or in the bottom of test borings. The penetrometer is attached to $1^{5}/_{8}$-inch O.D. drill rods to provide clearance and thus minimize side friction so that penetration values are as nearly as possible a measure of end resistance. Penetration values are recorded as the number of blows of a 140 pound hammer, utilizing a 30 inch drop required to advance the penetrometer in six-inch increments or less.

Boring Records

Drilling operations are directed by our field engineer or geologist who examines soil recovery and prepares boring logs. Soils are visually classified in accordance with the Unified Soil Classification System (ASTM D2487) with appropriate group symbols being shown on the logs.

APPENDIX C

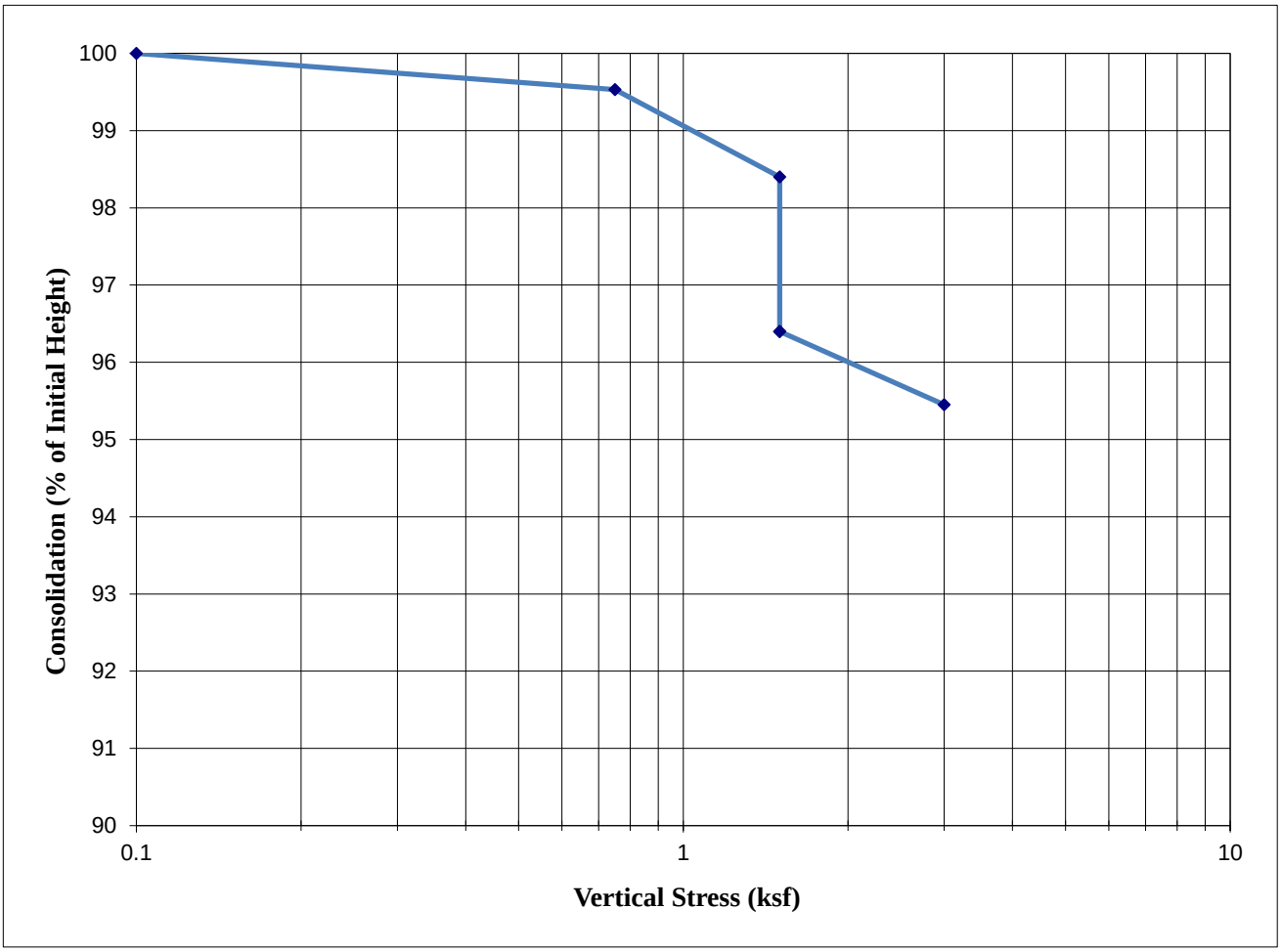
ACS Services LLC

ENGINEERING DESIGN • MATERIAL TESTING • CONSTRUCTION INSPECTION

* ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS (ASTM D2435)

ACS Project No.:	**2101624**		
Lab No.:	21-3451-6	Material Type:	Native
Client:	Sedona Lofts, LLC	Date of Extraction:	7/21/2021
Project Name:	Sedona Lofts	Extracted By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date of Lab Test:	7/29/2021
Project City:	Sedona, AZ	Lab Tested By:	Brett Rotenberger
Sample Location:	B - 1 @ 1.5' - 2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

INITIAL VOLUME (cu.in)	4.60	FINAL VOLUME (cu.in)	4.39
INITIAL MOISTURE CONTENT	1.0%	FINAL MOISTURE CONTENT	17.5%
INITIAL DRY DENSITY(pcf)	99.8	FINAL DRY DENSITY(pcf)	104.5
INITIAL DEGREE OF SATURATION	4%	FINAL DEGREE OF SATURATION	80%
INITIAL VOID RATIO	0.7	FINAL VOID RATIO	0.6
ESTIMATED SPECIFIC GRAVITY	2.65	SATURATED AT	1.5 ksf



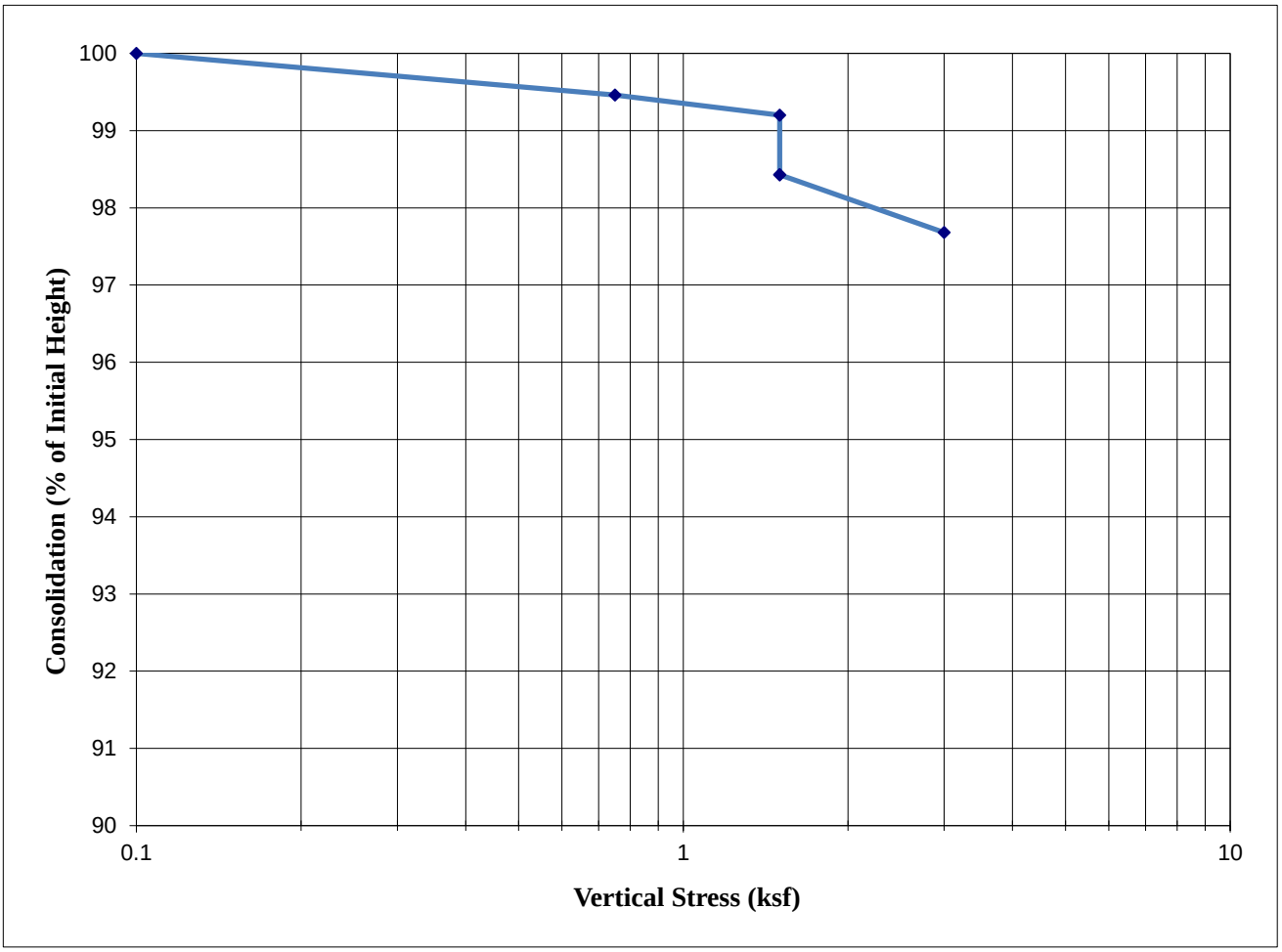
ACS Services LLC

ENGINEERING DESIGN • MATERIAL TESTING • CONSTRUCTION INSPECTION

* ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS (ASTM D2435)

ACS Project No.:	**2101624**		
Lab No.:	21-3451-7	Material Type:	Native
Client:	Sedona Lofts, LLC	Date of Extraction:	7/21/2021
Project Name:	Sedona Lofts	Extracted By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date of Lab Test:	7/29/2021
Project City:	Sedona, AZ	Lab Tested By:	Brett Rotenberger
Sample Location:	B - 2 @ 1.5' - 2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

INITIAL VOLUME (cu.in)	4.60	FINAL VOLUME (cu.in)	4.50
INITIAL MOISTURE CONTENT	1.5%	FINAL MOISTURE CONTENT	17.1%
INITIAL DRY DENSITY(pcf)	101.5	FINAL DRY DENSITY(pcf)	103.9
INITIAL DEGREE OF SATURATION	6%	FINAL DEGREE OF SATURATION	77%
INITIAL VOID RATIO	0.6	FINAL VOID RATIO	0.6
ESTIMATED SPECIFIC GRAVITY	2.65	SATURATED AT	1.5 ksf



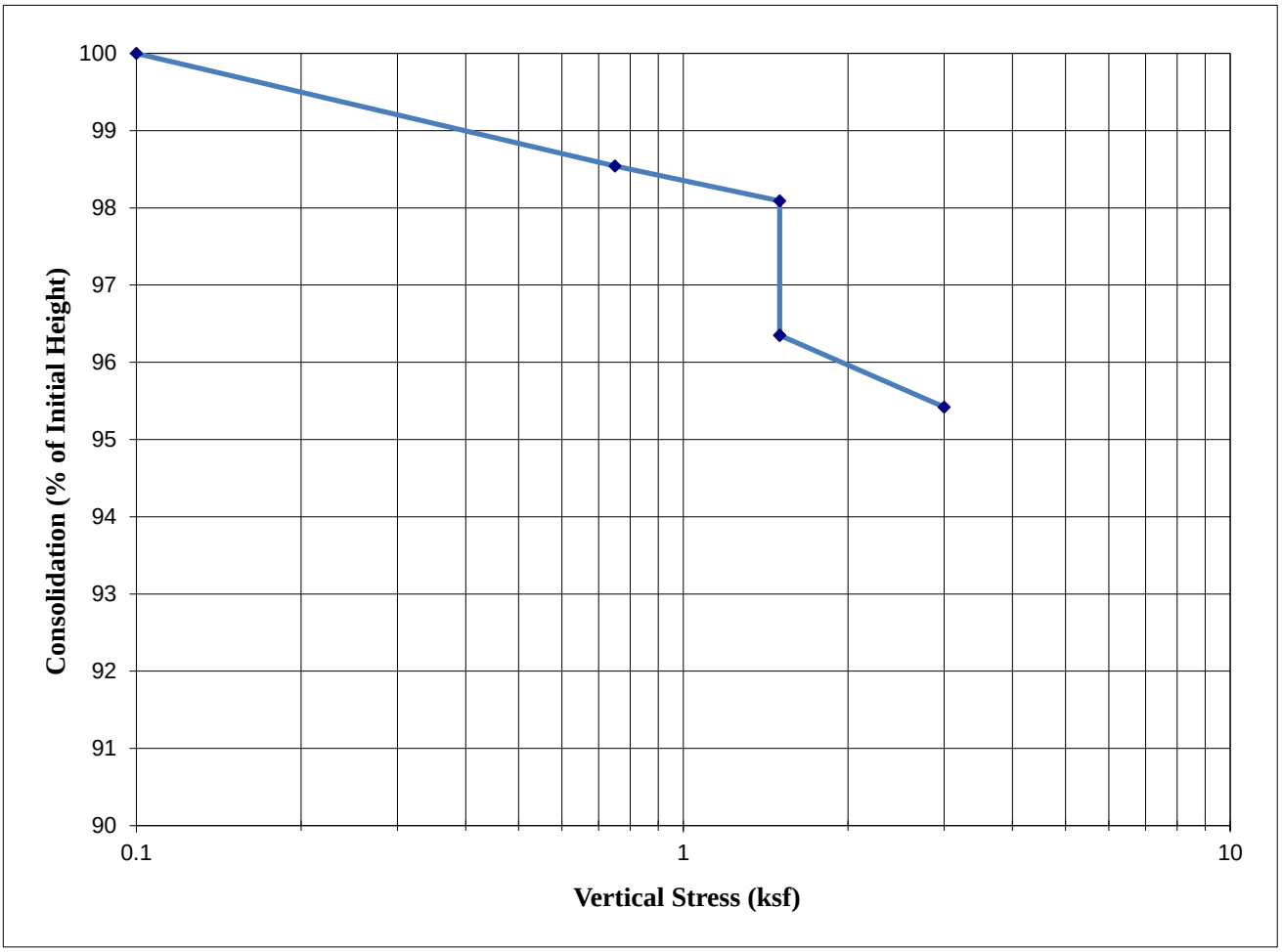
ACS Services LLC

ENGINEERING DESIGN • MATERIAL TESTING • CONSTRUCTION INSPECTION

* ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS (ASTM D2435)

ACS Project No.:	**2101627**		
Lab No.:	21-3451-8	Material Type:	Native
Client:	Sedona Lofts, LLC	Date of Extraction:	7/21/2021
Project Name:	Sedona Lofts	Extracted By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date of Lab Test:	8/9/2021
Project City:	Sedona, AZ	Lab Tested By:	Fernando Montero
Sample Location:	B - 3 @ 1.5' - 2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

INITIAL VOLUME (cu.in)	4.60	FINAL VOLUME (cu.in)	4.39
INITIAL MOISTURE CONTENT	0.5%	FINAL MOISTURE CONTENT	18.0%
INITIAL DRY DENSITY(pcf)	100.4	FINAL DRY DENSITY(pcf)	105.1
INITIAL DEGREE OF SATURATION	2%	FINAL DEGREE OF SATURATION	83%
INITIAL VOID RATIO	0.6	FINAL VOID RATIO	0.6
ESTIMATED SPECIFIC GRAVITY	2.65	SATURATED AT	1.5 ksf



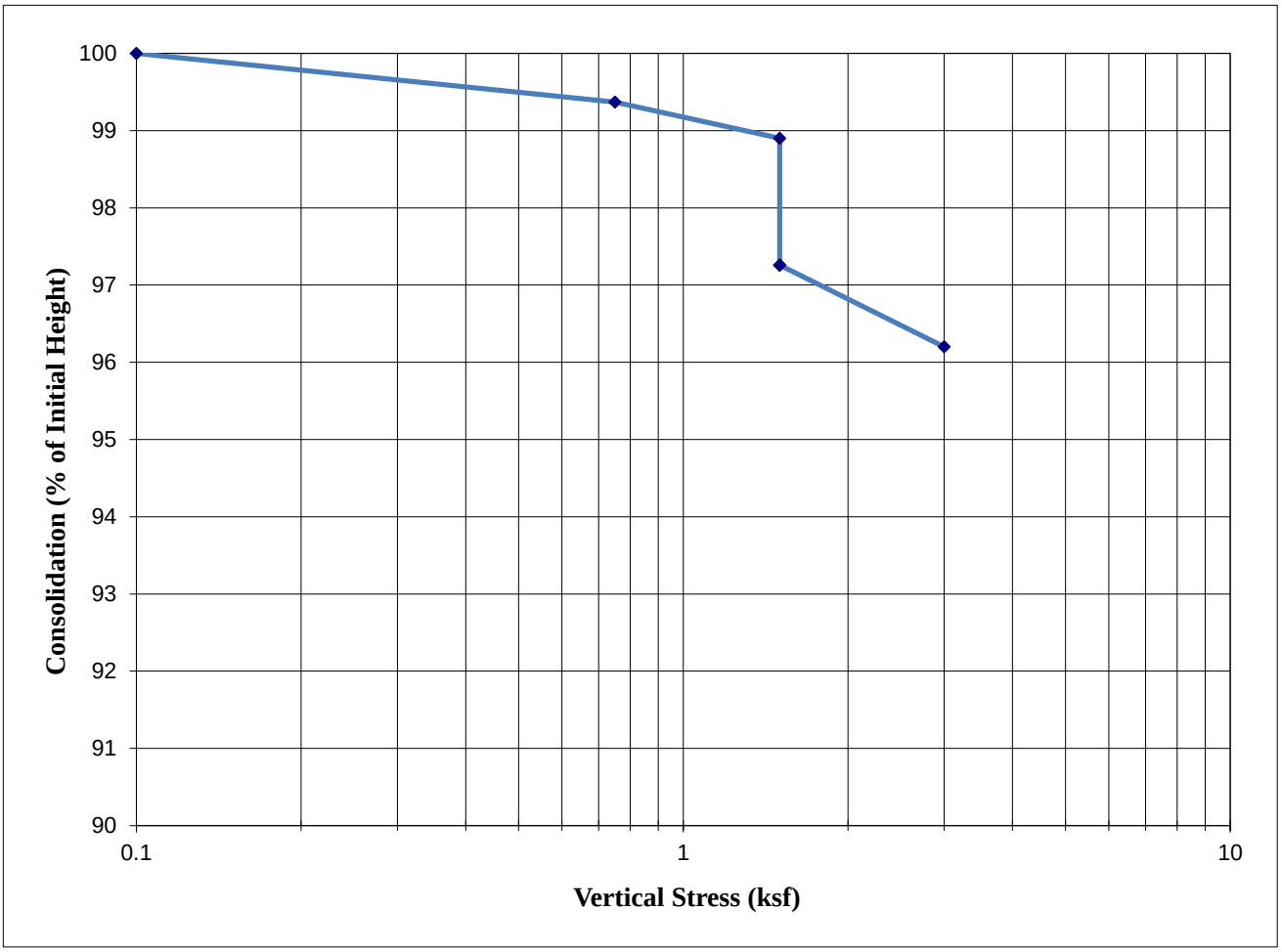
ACS Services LLC

ENGINEERING DESIGN • MATERIAL TESTING • CONSTRUCTION INSPECTION

* ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS (ASTM D2435)

ACS Project No.:	**2101624**		
Lab No.:	21-3451-9	Material Type:	Native
Client:	Sedona Lofts, LLC	Date of Extraction:	7/21/2021
Project Name:	Sedona Lofts	Extracted By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date of Lab Test:	8/10/2021
Project City:	Sedona, AZ	Lab Tested By:	Fernando Montero
Sample Location:	B - 4 @ 1.5' - 2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

INITIAL VOLUME (cu.in)	4.60	FINAL VOLUME (cu.in)	4.43
INITIAL MOISTURE CONTENT	2.6%	FINAL MOISTURE CONTENT	24.7%
INITIAL DRY DENSITY(pcf)	90.8	FINAL DRY DENSITY(pcf)	94.4
INITIAL DEGREE OF SATURATION	8%	FINAL DEGREE OF SATURATION	87%
INITIAL VOID RATIO	0.8	FINAL VOID RATIO	0.8
ESTIMATED SPECIFIC GRAVITY	2.65	SATURATED AT	1.5 ksf



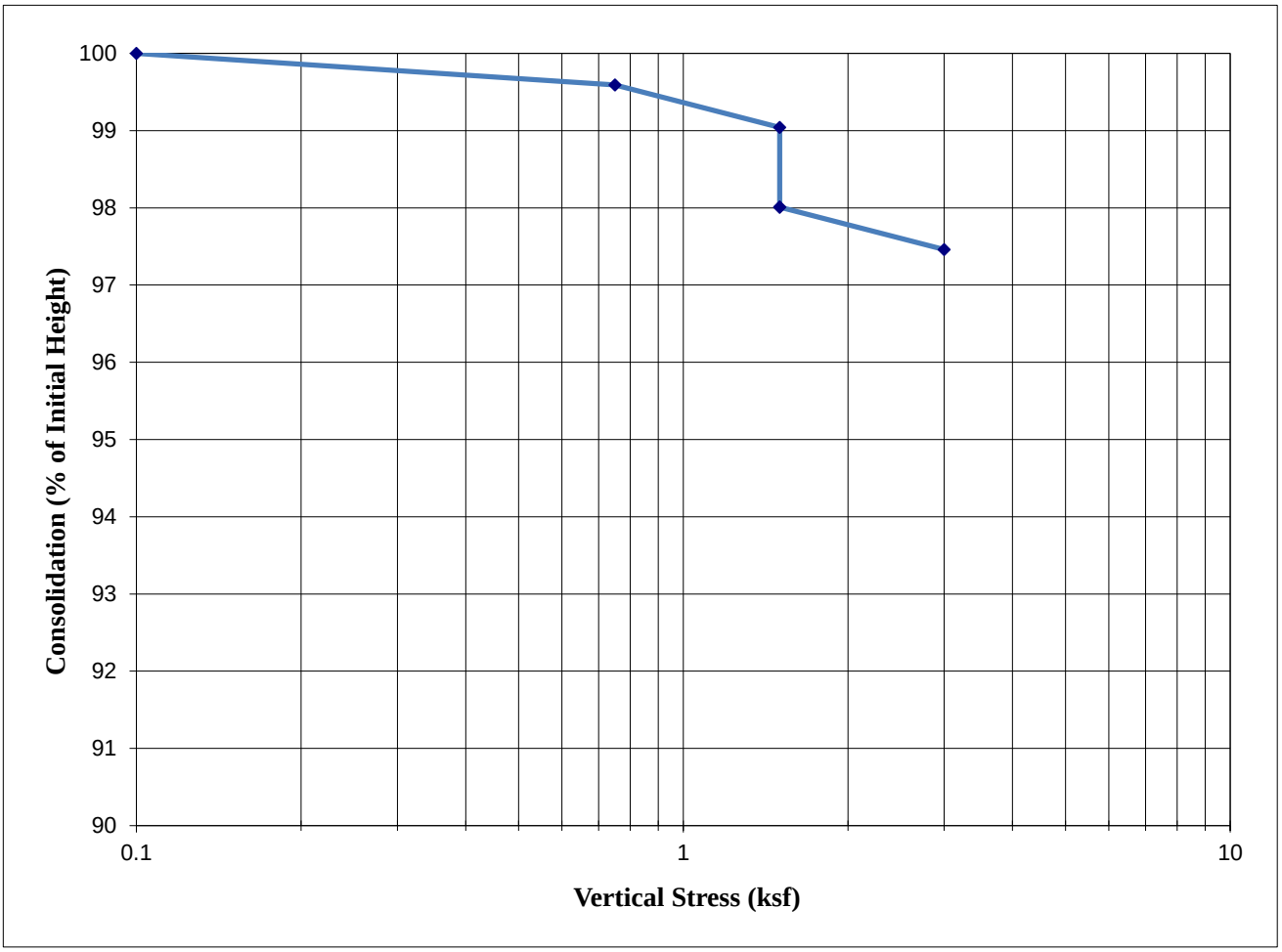
ACS Services LLC

ENGINEERING DESIGN • MATERIAL TESTING • CONSTRUCTION INSPECTION

* ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS (ASTM D2435)

ACS Project No.:	**2101624**		
Lab No.:	21-3451-10	Material Type:	Native
Client:	Sedona Lofts, LLC	Date of Extraction:	7/21/2021
Project Name:	Sedona Lofts	Extracted By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date of Lab Test:	8/10/2021
Project City:	Sedona, AZ	Lab Tested By:	Fernando Montero
Sample Location:	B - 5 @ 1.5' - 2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

INITIAL VOLUME (cu.in)	4.60	FINAL VOLUME (cu.in)	4.49
INITIAL MOISTURE CONTENT	0.3%	FINAL MOISTURE CONTENT	17.1%
INITIAL DRY DENSITY(pcf)	102.8	FINAL DRY DENSITY(pcf)	105.5
INITIAL DEGREE OF SATURATION	1%	FINAL DEGREE OF SATURATION	80%
INITIAL VOID RATIO	0.6	FINAL VOID RATIO	0.6
ESTIMATED SPECIFIC GRAVITY	2.65	SATURATED AT	1.5 ksf



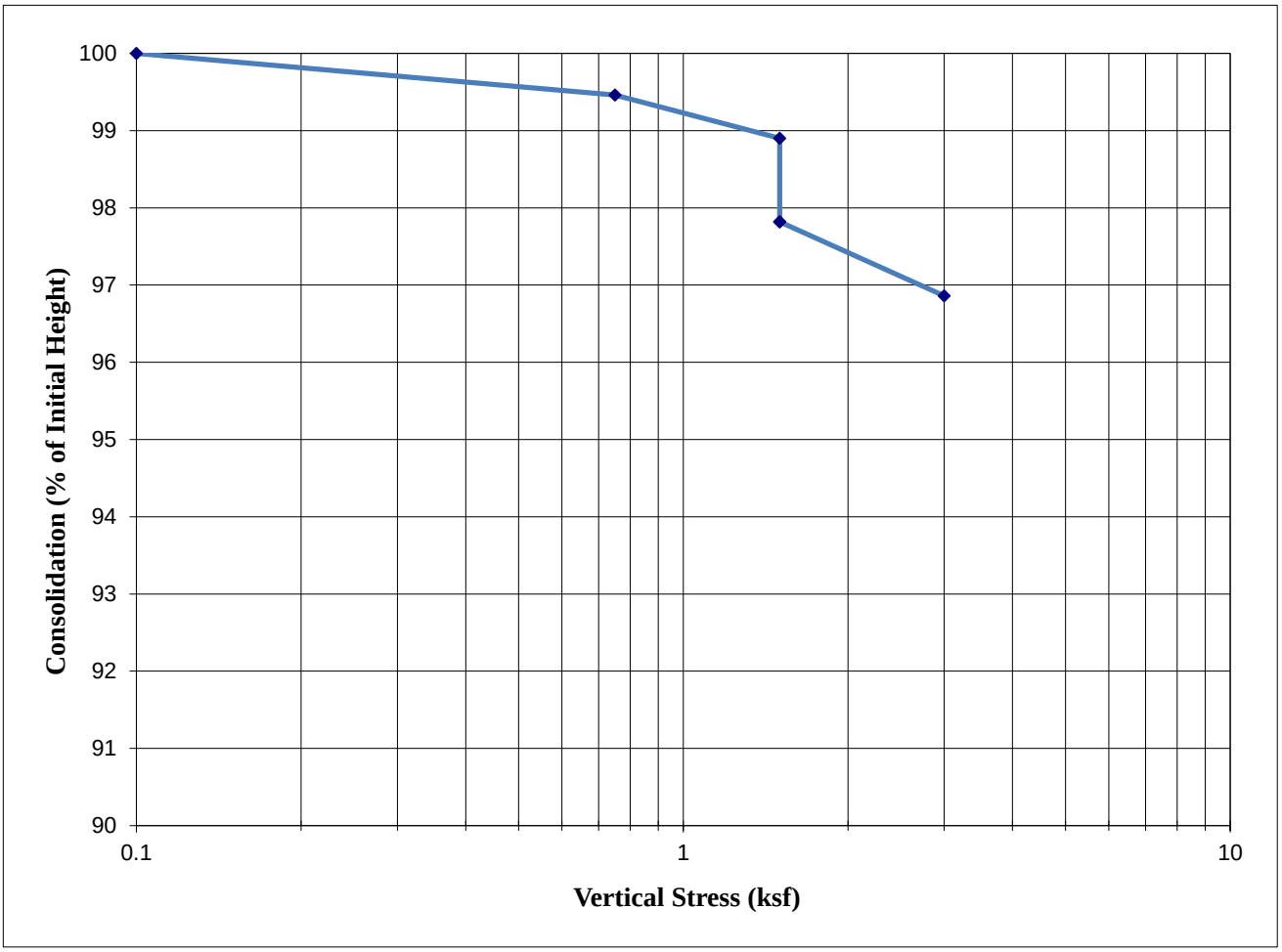
ACS Services LLC

ENGINEERING DESIGN • MATERIAL TESTING • CONSTRUCTION INSPECTION

* ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF SOILS (ASTM D2435)

ACS Project No.:	**2101624**		
Lab No.:	21-3451-11	Material Type:	Native
Client:	Sedona Lofts, LLC	Date of Extraction:	7/21/2021
Project Name:	Sedona Lofts	Extracted By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date of Lab Test:	8/10/2021
Project City:	Sedona, AZ	Lab Tested By:	Fernando Montero
Sample Location:	B - 6 @ 1.5' - 2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

INITIAL VOLUME (cu.in)	4.60	FINAL VOLUME (cu.in)	4.46
INITIAL MOISTURE CONTENT	2.2%	FINAL MOISTURE CONTENT	14.5%
INITIAL DRY DENSITY(pcf)	107.1	FINAL DRY DENSITY(pcf)	110.5
INITIAL DEGREE OF SATURATION	11%	FINAL DEGREE OF SATURATION	77%
INITIAL VOID RATIO	0.5	FINAL VOID RATIO	0.5
ESTIMATED SPECIFIC GRAVITY	2.65	SATURATED AT	1.5 ksf



ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-1	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	7/23/2021
Project City	Sedona, AZ	Tested By:	Keagen Mayfield
Sample Location:	B - 4 @ 0.0'-1.5'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	1	99	
1/2"	3	97	
3/8"	2	94	
1/4"	4	91	
#4	2	89	
#8	3	85	
#10	1	85	
#16	1	83	
#30	1	82	
#40	1	81	
#50	3	78	
#100	20	58	
#200	36	21.7	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	1.1
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-2	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	7/27/2021
Project City	Sedona, AZ	Tested By:	Archan Panda
Sample Location:	B - 7 @ 0.0'-4.0'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	100	
1/4"	0	100	
#4	0	100	
#8	0	100	
#10	0	100	
#16	0	100	
#30	0	100	
#40	0	99	
#50	1	99	
#100	14	85	
#200	45	39.7	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	1.6
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-3	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	7/27/2021
Project City	Sedona, AZ	Tested By:	Keagen Mayfield
Sample Location:	B - 8 @ 0.0'-4.0'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	100	
1/4"	0	100	
#4	0	100	
#8	0	100	
#10	0	100	
#16	0	100	
#30	0	100	
#40	0	100	
#50	1	99	
#100	15	84	
#200	46	37.9	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	1.5
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-4	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	7/27/2021
Project City	Sedona, AZ	Tested By:	Keagen Mayfield
Sample Location:	B - 9 @ 0.0'-4.0'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	100	
1/4"	0	100	
#4	1	99	
#8	3	96	
#10	1	96	
#16	1	95	
#30	1	95	
#40	0	94	
#50	1	93	
#100	16	77	
#200	44	32.9	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	1.8
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-5	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney,EIT
Project Address:	220 Sunset Drive	Test Date:	7/27/2021
Project City	Sedona, AZ	Tested By:	Archan Panda
Sample Location:	B - 10 @ 0.0'-4.0'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	99	
1/4"	1	98	
#4	1	97	
#8	1	96	
#10	0	96	
#16	1	95	
#30	1	94	
#40	1	92	
#50	3	90	
#100	23	67	
#200	39	28.2	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	1.5
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-8	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	8/6/2021
Project City	Sedona, AZ	Tested By:	Keagen Mayfield
Sample Location:	B - 3 @ 1.5'-2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	100	
1/4"	0	100	
#4	0	100	
#8	0	100	
#10	0	100	
#16	0	100	
#30	0	100	
#40	0	100	
#50	1	99	
#100	15	83	
#200	47	36.0	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	0.5
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-11	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	8/9/2021
Project City	Sedona, AZ	Tested By:	Keagen Mayfield
Sample Location:	B - 6 @ 1.5'-2.5'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	100	
1/4"	0	100	
#4	0	100	
#8	0	100	
#10	0	100	
#16	0	100	
#30	0	100	
#40	0	100	
#50	1	99	
#100	13	86	
#200	44	42.2	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	1.5
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-12	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	7/29/2021
Project City	Sedona, AZ	Tested By:	Archan Panda
Sample Location:	B - 1, B-2 @ 4.0'-5.5'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	0	100	
3/8"	0	100	
1/4"	0	100	
#4	0	100	
#8	0	100	
#10	0	100	
#16	0	100	
#30	0	100	
#40	0	100	
#50	1	99	
#100	12	87	
#200	41	45.4	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	2.0
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Laboratory Soil Test Results

ACS PROJECT #	2101624	Material Type:	Native
ACS Lab #	21-3451-13	Supplier:	-
Client:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Test Date:	7/29/2021
Project City	Sedona, AZ	Tested By:	Archan Panda
Sample Location:	B - 3, B - 5 @ 4.0'-5.5'	Reviewed By:	Andrew Jamrogiewicz, PE

Sieve Analysis (ASTM C-139 / AASHTO T-27)

Sieve Size	% Retained	% Passed	Specs
6"	0	100	
3"	0	100	
2 1/2"	0	100	
2"	0	100	
1 1/2"	0	100	
1"	0	100	
3/4"	0	100	
1/2"	3	97	
3/8"	3	93	
1/4"	3	91	
#4	2	89	
#8	3	86	
#10	1	86	
#16	1	85	
#30	1	84	
#40	1	84	
#50	2	82	
#100	14	68	
#200	33	35.0	

Liquid Limit (AASHTO T-89)	
Plastic Limit (AASHTO T-90)	
Plasticity Index (AASHTO T-90)	NP
Moisture Content (AASHTO T-255)	2.7
Fractured Faces (ARIZ 212)	
Soluble Salts (ARIZ 237)	
USCS Soil Classification	SM

Andrew Jamrogiewicz
Project Manager

Andrew Jamrogiewicz
Signature

ACS Services LLC

Maximum Dry Density & Optimum Moisture

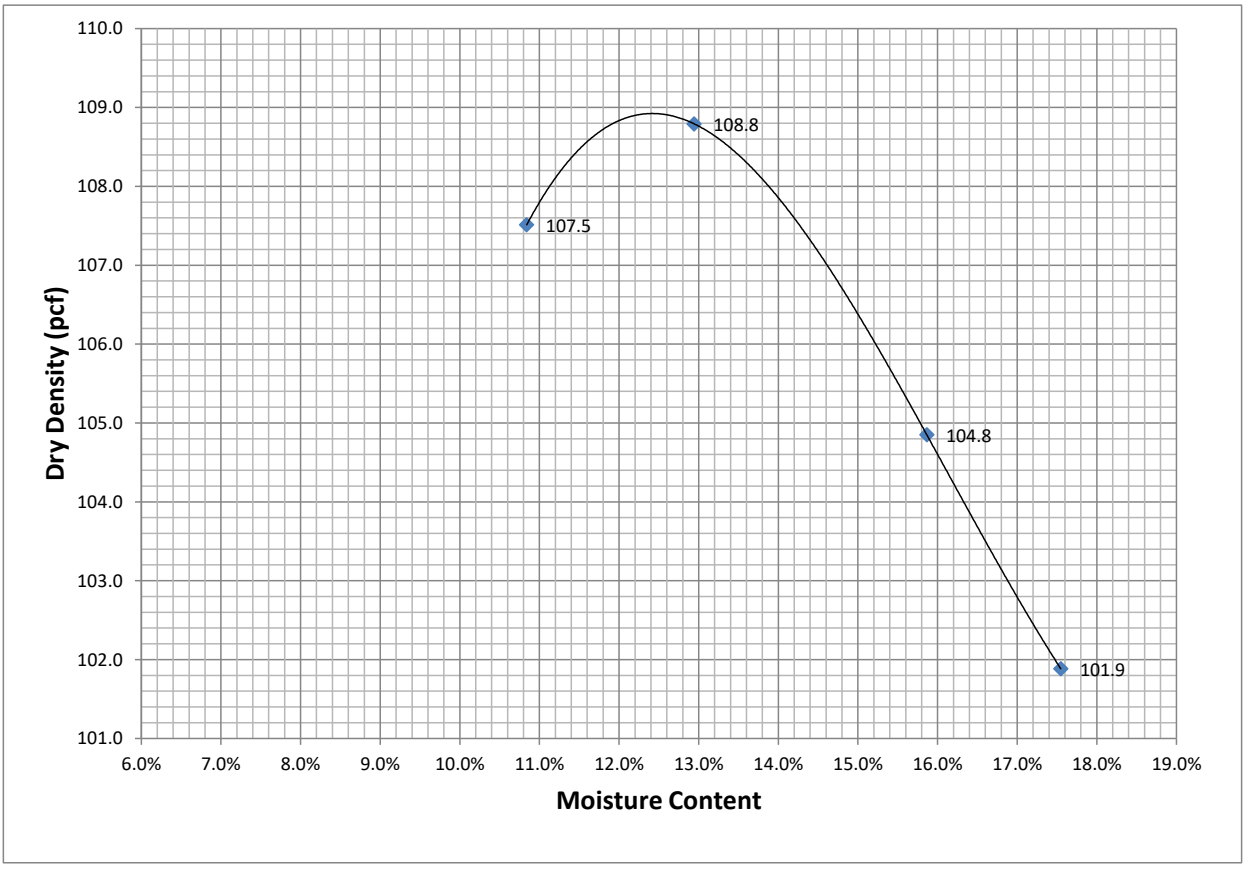
☑ AASHTO T-99 / ☐ AASHTO T-180

ACS Project #	2101624	Material Type:	Native
ACS Lab #	21-3451-1	Material Supplier:	-
Client Name:	Sedona Lofts, LLC	Sample Date:	7/21/2021
Project Name:	Sedona Lofts	Sampled By:	Gabriel McKenney, EIT
Project Address:	220 Sunset Drive	Date Tested:	7/28/2021
Project City:	Sedona, AZ	Tested By:	Keagen Mayfield
		Reviewed By:	Andrew Jamrogiewicz, PE

Sample Location: B - 4 @ 0.0' - 1.5'

Dry Density	104.8	101.9	107.5	108.8
Moisture Content	15.9%	17.5%	10.8%	12.9%

Uncorrected Dry Density	108.9	Uncorrected Moisture Content	12.5
% Rock	13	% Passing	87
Rock Corrected Dry Density	**114.1**	Rock Corrected Moisture Content	**11.1**



Andrew Jamrogiewicz

Project Manager

2020-0064231

EAGLE CLIFF CONDOMINIUMS
BK. 61 MAPS, PG. 66

S 89°52'21" E 25.00'
(S 89°25'34" E 25.00')

OVER HEAD ELECTRIC LINES TYPICAL

STORM INLET 36" C.M.P.

S 89°36'38" E 297.36'
(S 89°25'34" E 296.67')
[S 89°25'56" E 297.21']

CONCRETE CURB

12" BLOCK WALL TYPICAL

5' UTILITY EASEMENT
BK. 3147 O.R., PG. 351

0.5'

0.9'

36" C.M.P.

EDGE OF DECORATIVE ROCK

A FOUND 1/2 INCH REBAR WITH ALUMINUM TAG "LS 32224" BEARS N13°13'41"E, 0.97' FROM ACCEPTED MONUMENT

LAT:34°51'45.13742"
LON:111°47'39.94217"
N:151366.34
E:141683.04

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION, DURING THE MONTH OF AUGUST 2020, IN CONFORMANCE WITH THE ARIZONA BOUNDARY SURVEY MINIMUM STANDARDS ADOPTED IN FEBRUARY OF 2002.

STAN DICKEY
LS 32224

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
32224
STAN DICKEY
Date Signed
ARIZONA U.S.A.

DATE OF SURVEY: 08/14/2020

N

SCALE 1" = 20'
0' 20' 40' 80'

The Basis of Bearings for this survey is Geodetic North as determined from GPS observations. See Surveyor's Note 4 right.

SYMBOL LEGEND

◒	FOUND 1/2 INCH REBAR WITH PLASTIC CAP STAMPED "LS 26925"
•	CALCULATED POINT NOTHING FOUND OR SET
◒	BRASS CAP COS #49 PER BOOK 183 OF LAND SURVEYS, PAGE 94
◎	FOUND 1/2 INCH REBAR WITH PLASTIC CAP STAMPED "LS 5357"
○	FOUND 1\2 INCH REBAR WITH AFFIXED BRASS TAG "FND MON LS 32224"
⊗	FOUND 1/2 INCH REBAR IN BRUSH PILE ILLEGIBLE
//	INDICATES LINE NOT TO SCALE
( )	INDICATES RECORD DIMENSIONS PER BOOK 3281 OF RECORDS, PAGE 935
[ ]	INDICATES RECORD DIMENSIONS PER BOOK 61 OF MAPS & PLATS, PAGE 66
* *	INDICATES RECORD DIMENSIONS PER BOOK 23 OF MAPS & PLATS, PAGE 48
□T	INDICATES TELEPHONE RISER
W	INDICATES WATER VALVE
P	INDICATES WATER PUMP STATION
□W	INDICATES WATER METER
	INDICATES SPEED LIMIT SIGN
P	INDICATES POWER POLE
	INDICATES POWER POLE GUY ANCHOR

SUNSET DRIVE

N 00°14'04" W 325.60'
(N 00°00'19" W 325.60')

N 00°10'21" W 325.67'

LINETYPE INDICATES CENTERLINE OF WASH
SEE BOOK 3281 OF OFFICIAL RECORDS, PAGE 940, EASEMENT 1.3 DRAINAGE EASEMENT
ALSO SEE SURVEYOR'S NOTE 2.

MCINNS FAMILY TRUST
BK. 4510 O.R.,PG. 762

N 00°11'56" W 325.24'

280.68'

END FENCE

WIRE FENCE

VILLAGE BIBLE CHURCH.
BK. 1372 O.R.,PG. 488

1.5'

END FENCE

APPROXIMATE TOE OF BANK

TOP OF FILL BANK

44.65'

FERCHOFF SEDONA, LLC.
BK. 4866 O.R.,PG. 275

50' R.O.W. OF SUNSET DRIVE
BK.12 L.S. PG.34

25'

25'

SOUTHWEST CORNER OF SECTION 12
FOUND CITY OF SEDONA BRASS CAP
IN A HAND HOLE IN THE CENTERLINE
OF SUNSET MARKED "NO. 49"

LAT:34°51'41.94461"
LON:111°47'43.80161"
N:151042.82'
E:141362.02'

11 12 *25"* 24.65'
14 13

ROCK LANDSCAPE BORDER TYPICAL

6' CHAIN LINK FENCE

2.2'

5.1'

297.51'

4' WOOD FENCE FOR DUMPSTER

EDGE OF DECORATIVE ROCK

2.8'

48" C.M.P.

48" C.M.P.

WATER VAULT

S 89°41'41" E 322.16'
S 89°38'15"E 321.96'

GRASSHOPPER FLATS
BK. 23 MAPS, PG. 48

FERCHOFF SEDONA, LLC.
BK. 4866 O.R.,PG. 275

24X36

Surveyor's Notes

(1) This plat was prepared for the sole benefit of McInnis Family Trust. It was prepared for a specific user and for a specific purpose pursuant to an agreement with the client and as such its purpose may be misleading to others. For these reasons, use by others is forbidden without the express written consent of the certifier signed hereon.

(2) All easements disclosed in Schedule B, Part 2 of Pioneer Title Agency's ALTA Commitment for Title Insurance, Issuing Office File No: 72303201-023-JGM, Dated 7/17/2020 at 7:30am, have been shown hereon except for a drainage easement recorded in Book 3281 of Official Records, Page 940 which is shown as a centerline only as the width and volume of the burdened area is undefined and not mappable, and except for a Joint Ownership Agreement which affects Lot 94 Foothills South Unit Two Amended and does not impact the subject parcel APN 408-26-030C.

(3) The Surveyors Certification is subject to a limitation of liability. The General Public are on notice that this Results of Survey is subject to a limitation of liability not to exceed the price of the original proposal dated 7/30/2020 between Cornerstone Surveying and Engineering, Inc., an Arizona Corporation and McInnis Family Trust. By reliance the acceptance of these terms is effectuated. Copies of the terms and conditions are available upon request.

(4) All measured bearings and distances shown hereon are grid values based upon the projection definition shown hereon. The projection was defined such that grid distances are nearly equivalent to ground distances in the project area. The basis of bearings is Geodetic North. However, measured grid bearings shown hereon (or implied by grid coordinates) do not equal geodetic bearings due to meridian convergence.

(5) Only visible above ground utilities are shown hereon. No attempt was made to determine the location of all underground utilities.

ABBREVIATION LEGEND

N: – NORTHING COORDINATE
E: – EASTING COORDINATE
LAT: – LATITUDE – NORTH
LON: – LONGITUDE – WEST
STOR. – STORAGE
ADDN. – ADDITION
ID. – IDENTIFICATION
LS – LAND SURVEYOR
APN – ACCESSOR'S PARCEL NUMBER

2020-0064231
10/23/2020 08:37:01 AM LS Page: 1 of 1
Leslie M. Hoffman
OFFICIAL RECORDS OF YAVAPAI COUNTY $24.00
CORNERSTONE SURVEYING & ENGINEERING INC

COORDINATE SYSTEM DEFINITION

LINEAR UNIT : INTERNATIONAL FEET
GEODETIC DATUM : NAD83 (2011)
VERTICAL DATUM : N/A
SYSTEM : CAPSTONE-VVLDP
ZONE: VERDE VALLEY

PROJECTION:

TRANSVERSE MERCATOR

LATITUDE OF GRID ORIGIN :	34°40'N
LONGITUDE OF CENTRAL MERIDIAN:	112°00'W
NORTHING AT GRID ORIGIN:	80,000.00 FT
EASTING AT CENTRAL MERIDIAN:	80,000.00 FT
CENTRAL MERIDIAN SCALE FACTOR:	1.000185 EXACT

	NAME	DATE
DESIGN	N/A	N/A
DRAWN	S. DICKEY	8-15-2020
CHECKED	S. DICKEY	8-15-2020
REVISED		
DWG. NAME	12008031-EAGLE CLIFF	

RESULTS OF SURVEY

of the Southwest Quarter of Southwest Quater of the Southwest Quarter of the Southwest Quarter of Section 12, Township 17, Range 5 East, Yavapai County, Arizona

CORNERSTONE surveying & engineering, inc
1010 N. Main Street
Cottonwood, Az. 86326
PH: 928-649-0949
Fax: 928-639-3801

JOB NUMBER: 12008031 APN: 408-26-030C

CLIENT	SHEET	SECTION	TOWNSHIP	RANGE
MCINNIS	1 of 1	12	17N	5E
	Gila & Salt River Base & Meridian			

Exterior Lighting Application
Commercial and Multi-Family
See LDC Section 5.8: Exterior Lighting

City Of Sedona
Community Development Department
102 Roadrunner Drive Sedona, AZ 86336
(928) 282-1154 · www.sedonaaz.gov/cd

Applicant and Permit Information

Applicant Name:	Sunset Lofts, LLC	Permit #:	
Phone:	602.390.9402	Date Rec'd:	
Email Address:	kh@mkcompany.com	Initials:	
Action/Staff Initials:	☐ Approved ☐ Denied	Date:	

Site Identification

Property Address/Location:	220 Sunset Drive, Sedona, AZ 86336
Parcel Number	408-26-030C
Business Name (If applicable):	

Lumen Information

Gross acres of entire site:	2.22	Acres for Public Right-of-Way:	0.19
Net Acreage of Site:	2.03	x 70,000 = Total initial lumens permitted*	175,000

**Total outdoor light output shall not exceed 70,000 initial lumens per net acre for all development except single-family residential uses. This cap is not intended to be achieved in all cases or as a design goal. Design goals should be the lowest level of lumens necessary to meet the lighting requirements of the site. Partially shielded light fixtures are limited to a maximum of 3,850 initial lumens per net acre and are counted towards the 70,000 initial lumens per net acre cap.*

Type of Shielding and Lumens Proposed (See Lumen Calculation Table – page 2)

Lumens: Fully Shielded Fixtures:	247,260
Lumens: Partially Shielded Fixtures:	0
Total Lumens Proposed:	247,260

Applicant Signature

Signature:	M. Cabo	Date:	2/3/2022

Exterior Lighting Application

Commercial and Multi-Family

See LDC Section 5.8: Exterior Lighting

Lighting Inventory and Lumen Calculation Table

- Include a Site Plan identifying all lighting fixtures, keyed to the inventory table.
- Include all new/proposed lighting and all existing lighting.
- Include any lighting proposed for external illumination of signs.
- Attach cut sheets or manufacturer's product description for all lights. If not available for existing fixtures, include photographs of the fixtures and any additional information to demonstrate compliance with code requirements.
- Attach additional sheets if necessary

Lighting Classes (See LDC Section 5.8.D(1) for a complete explanation):

- Class 1: High Activity Areas
- Class 2: Security and Public Safety
- Class 3: Decorative and Accent

Correlated Color Temperature(CCT)/Kelvin Rating: A maximum of 4,000K is permitted for all lighting; Class 2 Lighting is limited to a maximum of 2,700K

Shielding:

- F: Fully Shielded: Required for most lighting
- P: Partially Shielded: Limited to 3,850 lumens per acre
- U: Unshielded: Only permitted for existing, legal nonconforming lighting

Site Plan: ☐ Attached ☐ Provided with plans (Sheet _____)

Plan Key (ID)*	New or Existing (N or E)	Lighting Class (1, 2, or 3)	CCT/Kelvin Rating	Shielding (F, P, or U)	Initial Lumens	No. of Units	Total Lumens
S1	N	2	2,700K	F	8597	9	77,373
S2	N	2	2,700K	F	3,000	11	33,000
S3	N	2	2,700K	F	4,724	9	42,516
S4	N	2	2,700K	F	4,724	11	51,964
S5	N	2	2,700K	F	85	3	255
S6	N	2	2,700K	F	2,000	7	14,000
						Total Lumens Proposed:	247,260

**Plan key identification in first column must correspond to labeling on site plan*