Permit Card

Garfield County Building and Planning Department 108 8th Street, Suite 401 Glenwood Springs, CO 81601 Phone: (970)945-8212 Fax: (970)384-3470

POST ON SITE

Permit NO. BLRE-4-11-1983 Permit Type: Residential Building

Work Classification: Addition

Expires: 01/01/2999

AGREEMENT

Issue Date: Not Issued

In consideration of the issuance of the permit, the applicant hereby agrees to comply with all laws and regulations related to the zoning, location; construction and erection of the proposed structured for which this permit is granted, and further agrees that if the above said regulations are not fully complied with in the zoning, location, erection and construction of the above described structure, the permit may then be revoked by notice from the County Building department and IMMEDIATELY BECOME NULL AND VOID.

Residential Building

Parcel #:239129205034

CLEV

Owner's Name:	Alex Loeffler			Owner's Phone:	310-817-1655
Job Address:	91 Schooner LANE CARBONDALE, CO	17 N. 18 18 18 18 18 18 18 18 18 18 18 18 18	Total Square Feet:	684	
Contractor(s	5)	Phone	Primary Contractor	Work Description: Attach ga	rage addition
Koru		(970)963-0577	Yes		

	Inspection Schedul			Dete
Inspection	IVR	Comments	Pass	Date
Footers	105		Gel.	5-9-11
Foundation Walls	110		1.Wes	5-11-11
Framing	115		210.	6-28-11
Drywall	120	1	19W.	7-6-11
Final	125			
Misc	135	LATH	Sa.	7-6-1
Insulation	160		C.W.	6.30.1
Grout	175			
Mechanical	405			
UG Plumbing	605			
Rough Plumbing	610			
Gas	620	RE-CONNECT 5-4-11 9 C-0 DETEC	In S.W	5-3-11

ELE. FINAL OK BE 8/9/11

ADDITIONAL INSPECTIONS MAY BE REQUIRED POST THIS IN CONSPICUOUS PLACE WHEN CONSTRUCTION IS STARTED For Inspections Call: 1-888-868-5306

Brutsaert Engineering LLC

320 Main St., Suite 203 Carbondale, CO 81623 Phone (970) 379-8310 Fax (970) 963-9395

June 8, 2011

Re: Loeffler Residence 0091 Schooner Ln Carbondale CO, 81623

Twime Garfield County Building Dept:

This letter is in regards to changes to the structural plans dated 4-19-11 by Brutsaert Engineering. The following framing elements have been changed:

1. The header over a 6'-0" door opening along the North facing wall shall be $(3) - 1.75 \times 7.25 \text{ LVL}$.

2. The roof framing rafters Shall be 11 7/8" TJI/560 @ 12" O.C.

3. The new ladder framing at the roof shall be supported by (4) - 11 7/8" LVL bolted together with two rows of 1/2"Ø bolts @ 24" O.C.

4. The marriage line between old an new construction at the roof shall be (3) - 11 7/8" LVL. Further attachment per detail 5/S2.

5. The ledger at the Garage door opening shall be a 3×12 with rafters let in $1 \frac{1}{4}$ ". Hangers specified in structural plans can be omitted. The ledger shall be attached per note 5.

Sincerely,

Hein Brutsaert P.E.

Kopu, LTD-417 MAIN ST. SUITE Y CARGONDALE, CO SIG3 970)963-0577

NE, KORN LTD., HEREBY ARE PRESENTING WITH THIS LETTER A CHANGE TO STRUCTURAL PLANS TO WORK ON THE LDEFFLER RESIDENCE, DOGI SCHOONER LANE, CARBONDALE, COLORADO, RERMIT # BLDE-1983

FOR PROPOSED CHANGES, SEE ROOF FRAMING AND FOLWDATION PLAN DATED (ON STAMP) 4-28-11 FROM BRUTSHERT ENGINEERING, LLC.

CHANGES INCLUDE REMOVAL OF ONE BUILDING - ATTACHED IZETAINING WALL AND CHANGES TO THE LOCATIONS OF ALL NEW DOORS & WINDOWS.

Inserted into plans 5/6/11 NB

THANK YOU Justal

MIKE CHMURA PROJECT MANAGER 970 618 2383

Loeffler, Alex BP amendment @ 91 Schooner Ln, Carbondale Stirling Ranch PUD, Lot 34



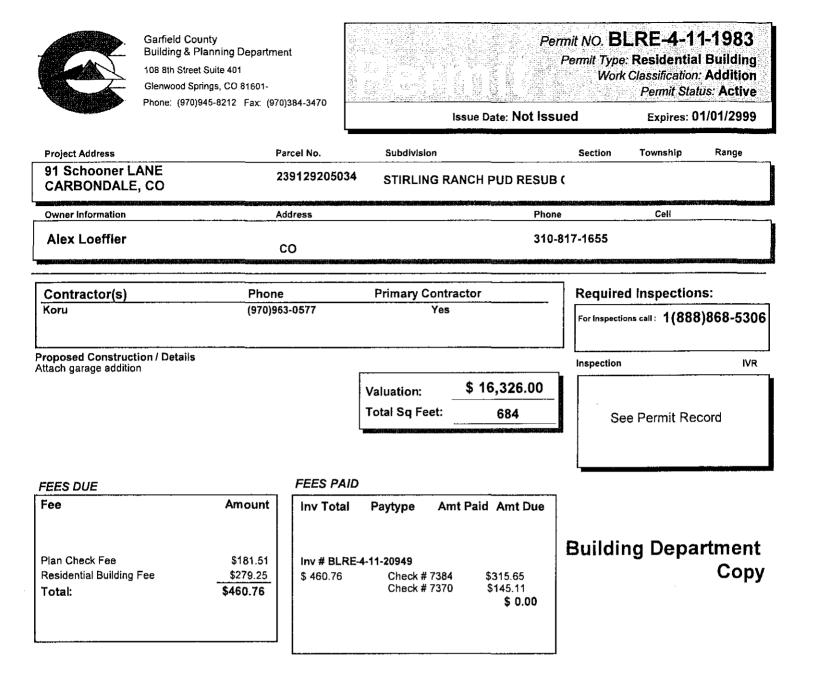
Koru, Ltd. 417 Main St. Carbondale, Co 81623 P: 970.963.0577 F: 970.963.9389

ţ

LOEFFLER ADDITION 0091 SCHOONER LANE CARBONDALE, COLORADO GARFIELD COUNTY

PROJECT INFORMATION

PROJECT NAME	LOEFFLER ADDITION
PROJECT ADDRESS	0091 SCHOONER LANE CARBONDALE, COLORADO 81623
CLIENT NAME	ALEX & KJERSTEN LOEFFLER
BILLING ADDRESS	0091 SCHOONER LANE CARBONDALE, COLORADO 81623
CONTACT INFORMATION	ALEX - (310) 817-1655
PARCEL I.D.	2391-292-05-034
PERMIT NUMBER	
PROJECT ARCHITECT	JESS PEDERSEN
STRUCTURAL ENGINEER	HEIN BRUTSAERT
HOA	STIRLING RANCH JERRY (970) 948-7324



Garfield County

108 8th Street, Suite 401, Glenwood Springs, CO 81601 Ph:970-945-8212 Fx:970-384-3440 Inspection Line:888-868-5306 www.garfield-county.com

6

BUILDING PERMIT APPLICATION

1	Parcel No: (this infor	mation is available at $292 - 0$	and Alberton	sors office 970-945-9134)	Lot No: 28	Block	No: 🤇	Subd DExe		NG RA	Nell
2			issigned, p ANE	elease provide CR, HWY or Sti ARBONDAL		City) or and	l legal descri	ption 3		5	
3	Owner: (property own	EFFIED	F	Mailing Address: DO91 SCHOON	1	N(t)	(310)8	17-16	55	Alt Ph: MIKE	
4	Contractor: KORI	1, LTD		Mailing Address: 417 MAIN ST, SUITE		ie	Ph: 963	3-057	17	Alt Ph: 618-	2383
5	Manufactured hom	e installer:		Mailing Address:			Ph:	~~		Lic #:	
6	Architect: JESS	PEDERSEA	J	Mailing Address:	CDAL	Ē	Ph: 70	4-024	13	Alt Ph:	
7	Engineer: HEIN BR	NTSAERT	3	Mailing Address: DO MAIN ST., SUIT	E 203,	Ci)ALE	Ph: 37	19 - 8:	310	Alt Ph:	
8	Sq. Ft. of Building:	684	1	Sq. Ft. or Acres of Lot:	3.26		Height:	25'		No. of Floor	's:
9	Use of Building:	Residential Co	ommerci		of Work:	DNew [Alteration	Addit	ion [∃Repair □D	emo 🗆 Move
10	Describe Work!	ARAGE	AD	DITION							
11	Garage: Attached Driveway Permit:	Detached	Septic	ISDS Community	Type of	Heat: ^	JONE Vat. Gas	IN GI □Propa		GE DElectric	□Other
12	Driveway Permit:	V/A			Owners	valuation		\$45,			
Legal Act Other Per Void Pern I hereby c and specif Assuming the submi In conside Code, ISE construct I hereby g Building C of County Review of or discrep limitation I HEREB	letter of authority, signed cess. A Building Permit ca rmits. Multiple separate py County Highway/F mit. A Building Permit bed days after commencen ertify that I have read this A fications and other data sub completeness of the submit tals reviewed by the Build ration of the issuance of th S regulations and applicab on or use of the structure(s rant permission to the Buil Dificial from: (1) requiring Regulation(s) or any other f this Application, including ancies. As the Owner, I ac my architect designer, eng	d by the Owner, must be not be issued without ; ermits may be required: toad Access or a State V comes null and void if t ent. Application and that the mitted by me or on my ittals and approval of th ing Department. e Building Permit, I ag le land use regulations i) and facility(ies), descr ding Department to ent the correction of errors applicable law. g submittals, and inspec knowledge that respons ineer and/or builder.	e provided proof of leg (1) State E Wastewater he work au informatic behalf (sub is Applicat ree that I ar (County Re ibed above er the prop- in the sub ctions of the ibility for o	gal and adequate access to the pr Electrical Permit, (2) County ISE	roperty for pu DS Permit, (3) in 180 days o ATTION orrect. I unde ation as to ac- isued granting provisions of a at the Building unty Regulation the work. I f ssuance; or (2 ent do not con d local laws a RTIFICATIO	rposes of ins another per f the date of rstand that the curacy. g permission any federal, s g Permit may on(s) or any o wither ackno stopping co nstitute an ac and County F	pections by th nit required for issuance and it as Building Da- to me, as Owr tate or local la be suspender other applicab wiedge that th onstruction or ceptance of re Regulations re	e Building De or use on the p if work is susp epartment acco her, to constru- tw regulating l or revoked, to le law. le issuance of use of the stru- sponsibility o	epartmen property pended o epts the act the str the work upon not 'the Buil- ucture(s) or liabilit	nt. identified above, or abandoned for a Application, along ructure(s) and faci k and the Garfield tice from the Coun Iding Permit does 1) or facility(ies) if ty by the County o	e.g. State or period of 180 g with the plans lities detailed on County Building ty, if the location, not prevent the such is in violation f errors, omissions
CK	7370 \$1	45.11		STAFE	USE C	<u>DNLY</u>					
Special	Conditions:										
	ed Valuation:	Plan Check Fee	:	Permit Fee:		Manu ho	me Fee:		I	Misc Fees:	
L	326.00	181.5	1	279.25		-					
Total F	0.76	Fees Paid:		Balance Due: 315.65		-198	Issue Date:		1.1	ISDS No & Is	sued Date:
Setback	1 1		C Grouf		Const T	ype:	zc		Zonin		
BLDG.	1110-100	forment	4/23	5/11		PLNG D	Sitt	tofor	mu	4/251	11
APPRO	DVAL /	DATE	/			APPRO	VAL.	1	,	DATE	

Building Plan Review

Description of Work: Attach garage addition **Bin #:**

Location Address: 91 Schooner LANE CARBONDALE, CO

General Information

Case Manager: David Bartholomew Plan Case Number: BLDG-4-11-6813 Parcel: 239129205034 Application Date: 04/12/2011

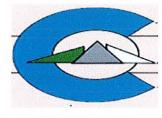
Soils Report

Contacts

Owner: Alex Loeffle	er
Applicant: Alex Loe	ffler
Applicant Phone:	310-817-1655

Email:

Building	Planning/Zoning
Engineered Foundation	Property Line Setbacks
Driveway Permit	30ft Stream Setbacks
Surveyed Site Plan	Flood Plain
Septic Permit and Setbacks	Building height
Grade/Topography 30%	Zoning Sign-off
Attach Residential Plan Review List	Road Impact Fees
Minimum Application Questionnare	HOA/DRC Approval
Subdivision Plat Notes	Grade/Topography 40%
<u> </u>	Planning Issues
Valuation Determination/Fees	Subdivision Plat
Red Line Plans/Stamps/Sticker	General Comments:
Attach Conditions	
Application Signed	
Plan Reviewer To Sign Application	
Parcel/Schedule No.	
40# Snowload Letter - Manu. Homes	
Soils Report	



VALUATION FEE DETERMINATION

	Alex Loeffler		bdivision	Stirling Ranch	the state of the s
Address	91 schooner Ln, Carbond		t/Block	Lot # 28	
Date	4/25/2011	Co	ntractor	Koru, LTD	
Finished (L	<u>ivable Area):</u>				
Main		sq.f	t		
Upper		sq.f	t		
Lower		sq.f	t	3	
Other		sq.f	tX \$74.68		
Fotal	Square Feet	0 sq.f	t		
Fotal	Valuation			0.00	
Basement:					
Unfinished		en fi	X \$41.00		
	Unfinished to Finished		X \$33.68		
Other	Chambalou to I mishou	sq.ft			
Total	Valuation	Jac. 1		0.00	
Garage/Storag	e (wood framed)	635 sq.ft	X \$18.00		
Conversion of	garage to finished living	sq.ft	X \$56.68		
Carport		sq.ft	X \$12.00		
Other	26°	sq.ft	X		
Fotal	Valuation			11,430.00	
3 10			¥ 60.00		
Crawl Space		sq.n	X \$9.00	0.00	
Fotal	Valuation			0.00	
Decks/ Patios/	Porches				
	Covered	204 sq.ft	X \$24.00		
	Open	sq.ft	X \$12.00		
	Other	sq.ft			
Fotal	Valuation	2		4,896.00	
		<u>Commercial</u>			
Fype of Const	truction:	<u></u>			
Occupancy:					
		sf			
Fotal	Valuation	sf	λ	0.00	



GARFIELD COUNTY Building & Planning Department 108 8th Street, Suite 401 Glenwood Springs, Colorado 81601 Telephone: 970.945.8212 Facsimile: 970.384.3470 www.garfield-county.com

SINGLE FAMILY OR DUPLEX BUILDING PERMIT

NOTE: In order to understand the scope of work intended and to expedite the issuance of a permit, it is important that complete information be provided. Please review this document to determine if you have adequate information to design your project and to facilitate a plan review.

SINGLE FAMILY OR DUPLEX BUILDING PERMIT APPLICATION CHECKLIST

This checklist is to be used with all single family dwelling construction.

APPLICATION FORM: Please make sure the following information is provided on the application.

- · Parcel number obtained from the County Assessor's Office.
- Job address (assigned physical address)
- Legal Description: lot, block, filing, subdivision or tract, section, township and range.
- Owners name, mailing address, phone, fax, or cell.
- · Contactors name, mailing address, phone, fax, or cell.
- Architect/Engineer's name, mailing address, phone, fax or cell.
- Building size, height, number of stories, lot size.
- Use of building (residential)
- Class of Work (new, addition, alteration, repair, demo, move, other)
- Description of work.
- Type of heating (natural gas, propane, electric, other).
- Sewer system (Community or ISDS), also see other items below.
- Garage (attached or detached).
- Driveway permit (please see other items below)
- · Valuation (labor and materials) see attached worksheet.

OTHER ITEMS:

- If you anticipate obtaining a water-tap from the City of Rifle, please provide a letter indicating that the City will provide water service. (Required to submit building permit application).
- ISDS requires a septic permit application to be submitted with the building permit application.
- A separate electrical permit must be obtained from the State of Colorado Electrical Board.
- Prior to submittal of a building permit, you are required to show proof of legal and adequate access to the site. This may include proof of right to use a private easement, County Road & Bridge permit, or Colorado Department of Highway permit, including a Notice to Proceed. The County Road & Bridge Department can be reached at 970-625-8601.
- If you anticipate excavating or grading prior to issuance of a building permit, you will be required to obtain a separate grading permit.
- If you belong to a Homeowners Association (HOA), it is your responsibility to obtain written approval, if required.
- Provide copies of any Resolutions and/or Land Use Permits associated with this property.
- Additional Dwelling Units may require Administrative Review.
- Minimum dwelling dimension is 20 ft wide x 20 feet long.
- A Colorado State Licensed Electrician and Plumber must perform installation and hook-ups, unless the homeowner is performing the work.

BUILDING PLANS: Two (2) sets of plans must be submitted. Plans must be 18"x24" minimum size, complete, identical, legible, and to scale. All plans will be checked at the counter for completeness. If any of the required information is missing, the building permit application cannot be accepted.

SITE PLAN: Please make sure the following information is provided on the site plan.

- Property address/legal description.
- North Arrow and Scale on each page.
- Show all property lines, building envelopes, flood plain, and easements.
- Provide setback distances from boundaries, buildings, septic, well, and waterways.
- Location and direction of the county or private road and driveway accessing the property.
- Proposed and existing structures include sheds, barns, decks, patios, and any other buildings.
- Existing and proposed grade, positive drainage around structure (to be contained on site).
- Streams, rivers, creeks, springs, ponds and ditches.
- Existing and proposed wells, septic tanks, leach fields, and other systems. (if applicable)
- Retaining walls (engineer stamped detail required for walls over four (4) ft, measured from bottom
 of footing to top of wall).

NOTE: Any site plan depicting the placement of any portion of the structure within fifty (50) feet of a property line or not within an established building envelope shall be prepared, stamped, and signed by a licensed surveyor. For structures to be built within a building envelope, provide a copy of the recorded subdivision final plat with the proposed structure located in the building envelope.

ARCHITECTURAL PLANS: Please provide the following information on the architectural plans.

- Minimum four (4) elevations (N,S,E,W) Indicate height of building measured from existing grade to the midpoint between the ridge and eave of a gable or shed roof or to the top of a flat roof.
- Floor plans for each level including dimensions and scale noted.
- Clearly label each room or space (bedroom, bath, kitchen, closet, etc).
- Show the location of the mechanical equipment.
- Building cross sections with construction details.
- Window sizes, types, and operation noted on the floor plans or elevations.
- Specify roof slope/pitch, roof covering, and siding materials.
- Stair and guard details specifying rise, run, height and spacing.
- Attic, roof, and crawlspace ventilation details. Indicate size and location of ventilation openings.
- Minimum insulation shown for walls, floors, roofs/ceilings, slabs, basements and crawlspaces.
- Provide stove and fireplace make, model, EPA or Colorado Phase II Certification. Masonry fireplaces shall be designed to the International Residential Code (IRC) requirements.

STRUCTURAL PLANS: Please provide the following information on the structural plans.

- Design specifications to include roof and deck snow load, wind and seismic design, frost depth.
- Foundation plan showing complete footing and foundation dimensions.
- Footing and foundation details specifying reinforcement and referenced on plans.
- Framing plans for each floor level and roof. All beams, columns, joists, rafters, and trusses specified. Pre-manufactured structures require the engineers stamp, signature, and date.
- Framing /connection details, braced wall lines, shear wall schedule, location and hold downs.

NOTE: If any required information is missing, delays in issuing the permit are to be expected. If determined by the Building Official that additional information is necessary to review the application and/or plans for compliance, the application may be placed on hold until the required information is provided. Work may not proceed without the issuance of a permit.

The building department will collect a Plan Review fee at time of application submittal. The permit fee, as well as any Septic or Road Impact fees will be collected when the permit is issued.

The permit application must be signed by the owner or by person having written authority from the owner to act as their representative.

Building cannot be occupied until a Certificate of Occupancy (CO) is issued. Using the building without a CO will be considered an illegal occupancy and may be grounds for vacating the premises. (Final/CO inspection requirements will be attached to your approved field set of plans.)

I hereby acknowledge I have read, understand, and will abide by the requirements of this checklist.

Date

Garfield County Building & Planning 108 8th Street, Suite 401 Glenwood Springs, CO 81601 Phone: 970-945-8212 Fax: 970-384-3470 www.garfield-county.com

GARFIELD COUNTY BUILDING REQUIREMENTS

Codes: 2009 IRC, IBC, IFGC, IMC, IPC, 2009 IECC.

Setbacks: Check subdivisions and zone district for setback requirements.

Snowload (measured at the roof! Not ground): 40PSF up to 7000ft. elevation. 50PSF 7001ft to 8000ft.

75PSF 8001ft to 9000ft. 100PSF 9001 to 10000ft.

Seismic design category: B

Weathering probability for concrete: Severe.

Termite infestation probability: None to slight.

Wind speed: 90mph.

Decay probability: None

Wind Exposure: B or C (see section R301.2.1.4)

Frost Depth: 36in. to 8000ft. elevation. 42in. 8001 and above.

Winter Design Temperature: Minus 2 to 7000ft.; minus 16over 7000ft. elevation.

Air Freezing Index: 2500deg F-days to 7000ft.; over 7000ft. to be determined by Building official

Ice shield under-layment required.

Mean Annual temp: Variable

Insulation: Windows/doors U=.35, Skylights U=.6, TBL 402.1.1, 2009 IECC.

Minimum R-Values:

- Ceilings/roofs R values are R-38 stick built structures. R38 log construction and steel rafter construction.
- Walls R values are R-20 wood frame. See Table 402.2.5 2009 IECC for steel framing
- Floors R-values are R-30 or enough to fill cavity.
- Basement wall R-values are R-10/13.
- Slab perimeter R-values and depth is R-10/24in.
- Crawl space wall R-value are R10/13.

If floors over crawl space are not insulated, the crawl space walls must be insulated. Basement wall must be insulated to frost depth. Common walls garage to house must have R-20 insulation. Common ceiling/floor garage to house must have R-20. Take precautions to protect plumbing in these areas.

BOARD OF COUNTY COMMISSIONERS OF GARFIELD COUNTY CERTIFICATION AND AFFIDAVIT REGARDING ILLEGAL ALIENS

The Contractor, whose name and signature appears below, certifies and agrees as follows:

The Contractor shall comply with the provisions of C.R.S. 8-17.5-101 et 1. seq. The Contractor shall not knowingly employ or contract with an illegal alien to perform work for the Board of County Commissioners of Garfield County, Colorado ("BOCC") or enter into a contract with a subcontractor that knowingly employs or contracts with an illegal alien.

2, The Contractor represents, warrants, and agrees that it has verified that it does not employ any illegal aliens; that it has participated or attempted to participate in the Basic Pilot Employment Verification Program administered by the Social Security Administration and Department of Homeland Security; and otherwise shall comply with the requirements of C.R.S. 8-17.5-102(2)(b).

3. The Contractor shall comply with all reasonable requests made in the course of an investigation under C.R.S. 8-17.5-102 by the Colorado Department of Labor and Employment. If the Contractor fails to comply with any requirement of this provision or C.R.S. 8-17.5-101 et seq., the BOCC may terminate work for breach and the Contractor shall be liable for actual and consequential damages to the State.

4. If the Contractor is a sole proprietor, the undersigned hereby swears or affirms under penalty of perjury under the laws of the State of Colorado that (check one):

I am a United States citizen, or

I am a Permanent Resident of the United States, or

I am lawfully present in the United States pursuant to Federal law.

I understand that this sworn statement is required by law because I am a sole proprietor entering into a contract to perform work for the BOCC. I understand that state law requires me to provide proof that I am lawfully present in the United States prior to starting work for the BOCC. I further acknowledge that I will comply with the requirements of C.R.S. 24-76.5-101 et seq. and will produce the required form of identification prior to starting work.

I acknowledge that making a false, fictitious, or fraudulent statement or representation in this sworn affidavit is punishable under the criminal laws of Colorado as perjury in the second degree under C.R.S. 18-8-503.

CERTIFIED and AGREED to this It day of April , 2011.

CONTRACTOR:

(Contractor Full Legal Name)

20-3717321 FEIN or Social Security Number

Signature of Authorized Rep

PRESIDENT

Immigration Affidavit (08/06) Final

EXHIBIT

Loeffler Garage Addition Review

Stirling Ranch D.R.B. Meeting Notes: 0091 Schooner Ln. Lot 28 3.17.2011 5:30 pm Weather: Snowing.

Present:

Lindsay Harris Stirling Ranch Drb Kjeraten Loffler- Owner Jeff Bier- Realtor Ants Culwick- Contractor Jess Pederson- Project Architect Glenn Rappaport- DRB Review Architect



03 -24

Discussed:

1. General Visual Impact: None

2. Neighbor Concerns: None

3. Materials: Proposed light colored stucco and dark soffit are generally consistent with the design intent of the existing structure.

4. Shed roof and scale are compatible with existing project garage structure.

5. Overhang on expansion mimics overhang on existing garage.

6. Project Architect (Jess Pedersen) has stated that there are no dimensional or zoning issues with this proposal.

Approval:

Garage addition design approval is granted based on the drawing set dated 3.15. 2011 and the color zerox renderings handed out at the meeting.

Submitted by:

a:

Glenn H. Rappaport AIA Principal Black Shack Architects

black shack office

post office box 1847 basalt colorado 81621 blackshackoffice.com ph 970 927 0635 fx 970 927 0654



June 15, 2006

Dave Cardiff Construction Attn: Dave Cardiff 506 Mesa Verde Carbondale, Colorado 81623 Hepworth-Pawlak Geotechnical, Inc. 5020 County Road 154 Glenwood Springs, Colorado 81601 Phone: 970-945-7988

Fax: 970-945-8454 email: hpgeo@hpgeotech.com

Job No. 106 0517

Subject: Observation of Excavation, Proposed Residence, Lot 28, Sterling Ranch, 0091 Schooner Lane, Missouri Hights, Garfield County, Colorado.

Dear Mr. Cardiff:

As requested, a representative of Hepworth-Pawlak Geotechnical, Inc. observed the excavation at the subject site on June 2, 2006 to evaluate the soils exposed for foundation support. The findings of our observations and recommendations for the foundation design are presented in this report. The services were performed in accordance with our agreement for professional engineering services to Dave Cardiff Construction, dated May 31, 2006. Hepworth-Pawlak Geotechnical, Inc. previously conducted a subsoil study on the lot for construction of a proposed spa building and presented our findings in a report dated March 13, 2002.

The proposed residence will be a two story wood frame structure over a basement level. The attached garage and basement floors will be slab-on-grade.

At the time of our visit to the site, the foundation excavation had been cut in one level from 2 to 6 feet below the adjacent ground surface. The footings were in-place and we understand that it was constructed about 2 years ago and has been exposed to the weather since. The footings are about 20 inches in width. The exterior of the vertical reinforcement for the foundation walls appears rusted. The soils exposed in the bottom of the excavation adjacent the footings consisted of sandy silty clay. The soil between the footings was loose from weathering to a depth of about 3 to 4 inches. There are weeds growing in the bottom of the excavation. Results of swell-consolidation testing performed on samples of the clay taken from the site, shown on Figure 1, indicate the soils have low to moderate compressibility under conditions of loading and wetting. One

Dave Cardiff Construction June 15, 2006 Page 2

sample showed a low expansion potential when wetted under a constant light surcharge. No free water was encountered in the excavation and the soils were slightly moist.

Considering the conditions exposed in the excavation and the nature of the proposed construction, spread footings placed on the undisturbed natural soil designed for an allowable soil bearing pressure of 2,000 psf, as recommended in our previous report, should be adequate for support of the proposed residence. The existing foundation should be surveyed to determine if any differential movement has occurred from frost heave, thawing and wetting of the bearing soils from precipitation. The exposed steel reinforcement should be evaluated for integrity and the rust removed. The clay soils tend to have variable settlement/heave potential when wetted and there could be some postconstruction movement of the foundation if the bearing soils become wet. Exterior footings should be provided with adequate soil cover above their bearing elevations for frost protection. Continuous foundation walls should be reinforced top and bottom to span local anomalies such as by assuming an unsupported length of at least 12 feet. Foundation walls acting as retaining structures should also be designed to resist a lateral earth pressure based on an equivalent fluid unit weight of at least 55 pcf for on-site soil as backfill. A perimeter foundation drain should be provided to prevent temporary buildup of hydrostatic pressure behind the basement walls and prevent wetting of the lower level. An impervious membrane, such as 20 mil PVC, should be provided below the drain gravel in a trough shape and attached to the foundation wall with mastic to prevent wetting of the bearing soils. Structural fill placed within floor slab areas can consist of the on-site soils compacted to at least 95% of standard Proctor density at a moisture. content near optimum. Backfill placed around the structure should be compacted and the surface graded to prevent ponding within at least 10 feet of the building. Irrigation sprinkler heads and landscaping which requires regular heavy irrigation, such as sod, should be located at least 5 feet from foundation walls.

The recommendations submitted in this letter are based on our observation of the soils exposed within the foundation excavation and do not include subsurface exploration to evaluate the subsurface conditions within the loaded depth of foundation influence. This study is based on the assumption that soils beneath the footings have equal or better support than those exposed. The risk of foundation movement may be greater than

Gebtech

Dave Cardiff Construction June 15, 2006 Page 3

indicated in this report because of possible variations in the subsurface conditions. In order to reveal the nature and extent of variations in the subsurface conditions below the excavation, drilling would be required. It is possible the data obtained by subsurface exploration could change the recommendations contained in this letter. Our services do not include determining the presence, prevention or possibility of mold or other biological contaminants (MOBC) developing in the future. If the client is concerned about MOBC, then a professional in this special field of practice should be consulted.

If you have any questions or need further assistance, please call our office.

Sincerely,

HEPWORTH - PAWLAK GEOTECHNICAL, INC.

Jordy Z. Adamson, Jr., P.E.

Rev. by: DEH

JZA/kmm

attachment Figure 1 – Swell-Consolidation Test Results

cc: Timberline Engineering - Attn: Dave Powell



