

**Jagger Enterprises, Inc. dba Buckeye Home Inspections  
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August 17, 2004

**Name Deleted, Esq.**  
address deleted

Your client: **Mr. & Mrs. Name deleted**  
address deleted

**Your File #**

At the request of **Name Deleted, Esq.**, a limited visual inspection of the front porch floor, access walk, concrete driveway, sidewalk, driveway apron and garage floor pad located at **address deleted** was conducted by Jagger Enterprises, Inc. dba Buckeye Home Inspections on Thursday, August 05, 2004. The inspector was Jim Jagger. **Mr. & Mrs. Name deleted** were present at the time of the inspection.

Temperature at the time of the inspection was in the mid 60<sup>0</sup>'s. Skies were partly cloudy.



**Notes-**

- 1) Per Mr. and Mrs. name deleted, the inspected concrete installation is approximately three (3) years old.
- 2) Exterior of name deleted residence is neatly maintained.

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## Observations-

### 1) Front porch concrete floor

a) Front porch concrete floor (size approximately 4' x 8.5', 4" thick) was installed in a somewhat unusual manner. Steel reinforcing rods were installed in an exposed manner to support the temporary plywood (a.k.a. "form") provided to support the concrete until it has hardened. Customarily reinforcing rods are buried in the concrete and are not visible.

b) Porch floor was free of fractures and displayed no evidence of leaking. Inspector was unable to determine if reinforcing rods had been imbedded in the porch floor.

#### Suggested Remedy -

Appearance of porch floor was satisfactory at the time of the inspection. Monitoring of porch floor recommended. If significant fractures or water leaks develop, repairs may be necessary in the future.

### 2) Access Walk

a) Concrete access walk between front porch and driveway appears to have been installed in a satisfactory manner.

### 3) Public Sidewalk

a) Substantial fracturing was noted in block of concrete between apron and driveway. No evidences suggests that these fractures are shrinkage cracks. Sidewalk in this area is required to be 6" thick and typically will not fracture in the noted manner.

#### 4) Driveway + Parking area (in front of garage)

Numerous defects were noted to including but not limited to widespread spalling:

**A) Spalling** - breaking away or lifting off of relatively large, thin layers of the surface. Spalling is related to a weakness in concrete which may extend to full depth of the slab. Possible causes of spalling include 1) a weak mixture caused by improper proportions of sand, water and cement, 2) improper use of admixtures (plasticizers. If inappropriate admixtures are used, concrete may require excessive water which will weaken the concrete, 3) lack of proper air entrainment, 4) improper finishing or 5) improper curing.

Spalling was visible in widely divergent area to include locations where normal vehicular traffic would and would not be anticipated.

**B) Scaling** - Local flaking or peeling away of the near-surface portion of the concrete.

**Please Note - Very Important**

Although scaling and deterioration of this type is commonly associated with application of ice melting compounds to include salt dripping off parked cars. Deterioration of this type can is reasonably be prevented.

*N.B. 2) Most scaling caused by freezing and thawing of concrete exposed to deicers can be prevented by entrained air incorporated in the mix in the proper amount. On driveways, sidewalks, or patios where this has not been done, scaling may occur. Even where deicing salts have not been purposely spread, they may be carried by automobiles and drip onto garage floors and driveways. Slabs may also scale when no salt has been applied if the top surface has had water applied to it during floating or troweling, has had bleed water worked into the surface during various finishing operations, or was floated to early. \**

**\*This quote taken from AMERICAN CONCRETE INSTITUTE 332R-84 "Guide to Residential Cast-in-Place Concrete Construction" Reported by ACI Committee 332. Published 1984 by American Concrete Institute.**

Item 2) above indicates that if proper "air entrainment" - defined as 'the intentional incorporation of minute air bubbles in concrete to improve durability to freezing and thawing exposures or to improve workability is achieved, then most scaling can be prevented.

**A prudent workman (contractor) should request a certified copy of the mix proportions from the concrete vendor if there is any potential for failure of concrete due to bad mixture or lack of proper "entrained air."**

**C) Popouts** - Conical holes in the surface of the concrete ranging from 1/4" to 2" in diameter. Popouts are caused by the inclusion of highly porous aggregates or contaminants in the concrete mixture. Referenced highly porous aggregates or contaminants absorb water, freeze and swell. Great internal pressures are created by the freezing which ruptures the surface of the concrete.

**Please Note - Very Important**

Contaminants (which resemble a slate-shale material) were visible in the popouts.

It is the inspector's understanding that the cement contractor supplied all materials for the name deleted concrete installation. **It appears that cement contractor provided contaminated materials.**

**Also, per Mr. name deleted, cement contractor stated that they owned and operated their own concrete plant.**

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**D) Improper grading** - Concrete was graded (sloped) in such a

*name deleted report -this is page 4 of 7*

manner as to divert water into the attached garage and against the foundation of the residence. Diversion of water into garage and against the foundation is not an acceptable practice. Accumulation of water in garage is detrimental to the structure and use of garage and also facilitates the development of **slip and fall hazard** in freezing weather. Diversion of water towards name deleted's foundation encourages deterioration of and water penetration into referenced foundation.

Per Mr. name deleted, the water which accumulates by foundation freezes in the winter and presents a **slip and fall hazard** as a person walks down the stairs which connect the rear deck to name deleted residence to the driveway.

**E) Shrinkage cracks** - Numerous shrinkage cracks were noted. Cracks of this type are usual, expected and do not constitute a significant defect.

## **5) Garage floor pad**

a) Garage floor pad was installed in a substandard manner. Area by garage door was incorrectly poured and garage. A large depression is clearly visible in garage floor by the man door (side door) of garage.

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## **Summary -**

**a) Defective conditions of name deleted's concrete installation are open, obvious and able to be evaluated by reasonable visual inspection. Although frequently demanded by cement contractors, core drilling and lab testing (which cost \$1200.00 to \$1500.00) is an unreasonable, unnecessary, unfair and restrictive burden on the homeowner.**

**b) Cement contractor had full control over all labor and materials used**

in installation of name deleted concrete. Insinuations that homeowner somehow damaged the concrete are specious.

c) name deleted concrete installation is unsightly, incorrectly installed and in a state of accelerated deterioration - in other words, the driveway is ugly and falling apart.

e) name deleted concrete was not installed in a good and workmanlike manner according to local standards and practices.

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### **Suggested Remedy-**

Remove and replace all components of name deleted concrete installation (labor+ materials) with exception of front porch pad and access walk

**Estimated Cost of Labor and Materials -**

**\$6840.00 plus permits**

Please note that latent or concealed deficiencies may exist. Only non-destructive testing was conducted. Portions of the mechanical and structural systems were not able to be fully examined. This inspection is not intended to be nor is it represented as technically exhaustive. This report is not intended to be nor is it represented as an Engineer's survey. We suggested consulting all local, state, federal or other regulatory agencies to determine if facilities are in compliance with appropriate regulations. This report does not constitute an offer to perform above suggested repairs. We do not perform contracting or repair work nor do we make referrals to those who do. Contractors set their own prices and prices among contractors vary widely. We suggest acquiring three (3) competing bids from qualified contractors before making final decisions or hiring and/or employing contractors or tradespersons.

This report prepared and respectfully submitted by,

James Jagger  
President

photos accompany this report



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