Jagger Enterprises, Inc. dba Buckeye Home Inspections 17204 Dorchester Drive Cleveland OH 44119-1302 (216) 486-4663 Fax (216) 486-9922

August 3, 2004

Name Deleted, Esq. address city & state

Your client: Name deleted

address city & state

Your File # deleted

At the request of **Name Deleted, Esq.**, UAW-Legal Services Plan, a limited visual inspection of the concrete driveway and access walk at the **name deleted** residence located at **address deleted** was conducted by Jagger Enterprises, Inc. dba Buckeye Home Inspections on July 17, 2004. The inspector was Jim Jagger. **Name deleted** was present at the time of the inspection.

Per name deleted, the referenced concrete was installed in 2002. Temperature at the time of the inspection was in the low 70° 's. Skies were overcast. A light rain had fallen recently.

Please assume that the residence faces East.



Observations-

Inspected concrete surfaces were in a state of accelerated deterioration. Spalling was clearly evident.

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 over large, wide ranging areas of the concrete.

Deterioration was not confined to any specific area not did it appear to follow any identifiable pattern.

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."

Summary -

- a) Defective condition of name deleted concrete is open, obvious and able to be evaluated by reasonable visual inspection.
- b) Cement contractor had full control over all labor and materials used in installation of name deleted concrete.
- b) name deleted concrete was not installed in a good and workmanlike manner according to local standards and practices.

Suggested Remedies -

1) Name deleted to be reimbursed all monies paid to contractor.

or

2) Remove and replace all recently installed concrete (labor+ materials)

Estimated Cost of Labor and Materials -

\$2418.00 plus tax and permits

N.B.

It is extremely difficult to secure the services of a qualified contractor who is willing to complete a project started by another contractor. Contractors are are commonly uninterested in becoming involved in a troubled project. It is the inspector's experience that qualified contractors who are willing to complete a troubled project "will bid the job very high" to make certain that their expenses are covered and profit margins are maintained.

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



Member #004590