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PRELIMINARY STRUCTURAL REPORT

UPON

REDUNDANT BARNS

AT

THE HOLLIES FARMYARD

BACK BANK

WHAPLODE DROVE

LINCS

Mr & Mrs S.J. Grundy
c/o Longstaff & Co
5, New Road
Spalding
Lincs
PE11 1BS

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REFERENCE: 20706 **MAY 2006**

INTRODUCTION

At the request of Longstaff & Co, on behalf of Mr & Mrs S.J. Grundy, a visual inspection only of the property was undertaken on the 5th May 2006, the purpose being to comment upon the structural elements only.

The object of this report is to comment upon the likely causes of the structural movement now apparent and their longer term effects upon the property as a whole and consider the suitability of the property for renovation.

It confines itself to the basic building fabric and is not intended to comment upon non-structural items such as plumbing, electrics, heating, condition of window and door framing.

Please note, that no finishes were removed, footings exposed or drainage runs tested during our site visit.

General comments relating to ground conditions are based upon previous experience in the South Lincs Area and not precise information with respect to this particular plot.

LOCATION AND BRIEF DESCRIPTION OF THE PROPERTY

Situated on the East side of Back Bank, Whaplode Drove, approximate National Grid Reference TF 314 131, the range of old single storey agricultural buildings are of traditional construction, being pitched timber framed roofs, with load bearing masonry.

Please refer to Appendix 1 which shows the site layout, with the 3 No. detached barns marked A, B & C.

All structures stand remote from the roadway, beyond an open dyke.

COMMENTS "AS SEEN"

BARN A

When viewed externally, the walls of this structure appear relatively sound and true, with only slight undulation noted along the ridge line of the asbestos sheet clad roof, see photograph 1 & 2.

However, an internal inspection reveled a large crack was present in the front gable wall, see photograph 3. It was not possible to make an external inspection of this wall, however it appears the rear wall has moved outwards.

The timber roof framing appeared in good condition for its age, with rafters and purlins in place, supported by trusses at regular intervals, see photograph 4.

BARN B

This typical open fronted barn, shows signs of distress along the eaves line which undulates considerably, see photograph 5.

Both gable walls appear relatively sound and true, see photographs 6 & 7.

The East gable has had newer brickwork added to the adjoining front elevation and the Western gable has been repointed at low level.

The rear wall is in poor condition, with sloping mortar joints visible and repointing throughout, see photograph 8.

Although considerable movement has taken place to the roof structure, timber rafters appear in satisfactory condition, see photograph 9, however purlins and ties at eaves level are inadequate.

BARN C

This structure is the larger of the three and has a slightly raised eaves level towards the rear, see photograph 10.

The Western gable wall is in relatively good condition, but washed away mortar and missing bricks were noted at low level, see photographs 11 & 12.

The Northern wall of the low level area has had windows bricked up, but was in good condition. However, the Northern wall of the high eaves area shows signs of distress, with movement apparent, cracking and large areas of repointing, see photographs 13 & 14. The wall itself also leans outwards at the top and bows along its length, see photograph 15. General movement and repair was also noted at the rear Eastern corner, see photographs 16 & 17.

Large areas of the South facing elevation are open, with deflecting timber supports noted above all openings together with missing brickwork above a central doorway, see photograph 18 & 19.

Internally cracking was noted where the rear lean to abuts the higher building, see photograph 20.

Timber roof framing shows signs of some decay and distress, but rafters appear in reasonable condition, see photograph 21.

CONCLUSIONS

The range of old agricultural barns on this site are in a varying state of disrepair, generally due to the building techniques which have been used and years of neglect. However, the methods of construction are not uncommon for this type of property and their present condition is typical of many similar structures.

Barn A, appears to be in the most favorable condition, with more substantial timber roof framing, and sound masonry, with the exception of the rear / South wall. We are unable to confirm at this stage the likely cause of wall movements, however these appear to be localized to the South East corner.

Barns B and C are in a very similar condition. The roof structure undulates along both open elevations, due to inadequate timber support beams and foundations that have settled.

The walls that are present have not suffered from any significant movement, due mainly to the lightly boarded roof, nevertheless, localized damage has taken place at corners, particularly where gutters have leaked etc.

The timber roof framing to Barns B & C are generally in a poor condition, however timber rafters appear satisfactory and are supporting the light weight corrugated asbestos roof cladding without undue deflection.

We are of the opinion that considerable effort and expense is necessary to create habitable accommodation, however a large proportion of existing walls can remain, together with timber rafters.

It will be necessary to provide remedial foundations to Barn A together with enhanced support to existing rafters throughout.

However, by implementing the following basic structural recommendations we see no reason why restoration to provide habitable accommodation cannot be achieved.

RECOMMENDATIONS

In conjunction with an overall scheme to restore the buildings which should include all building regulation requirements, the following structural considerations should be implemented.

All existing walls to remain but rebuilt locally where excessive movement or decay has taken place.

A new reinforced concrete floor is required throughout. The design of the floor should incorporate needle beams below existing walls to create a raft type foundation to support all existing and new walls off the same foundation.

A new roof covering is required which will be heavier than existing. Consequently enhanced supports will be required to existing rafters which can remain. This should take the form of new purlins spanning between internal walls to reduce the span of existing rafters.

All remaining timber should be protected against insect attack and fungal decay, with excessively decayed timber replaced with new.

An injected DPC is required to all existing walls. It is essential that a new drainage system is provided to ensure all water is lead away from the base of foundations.

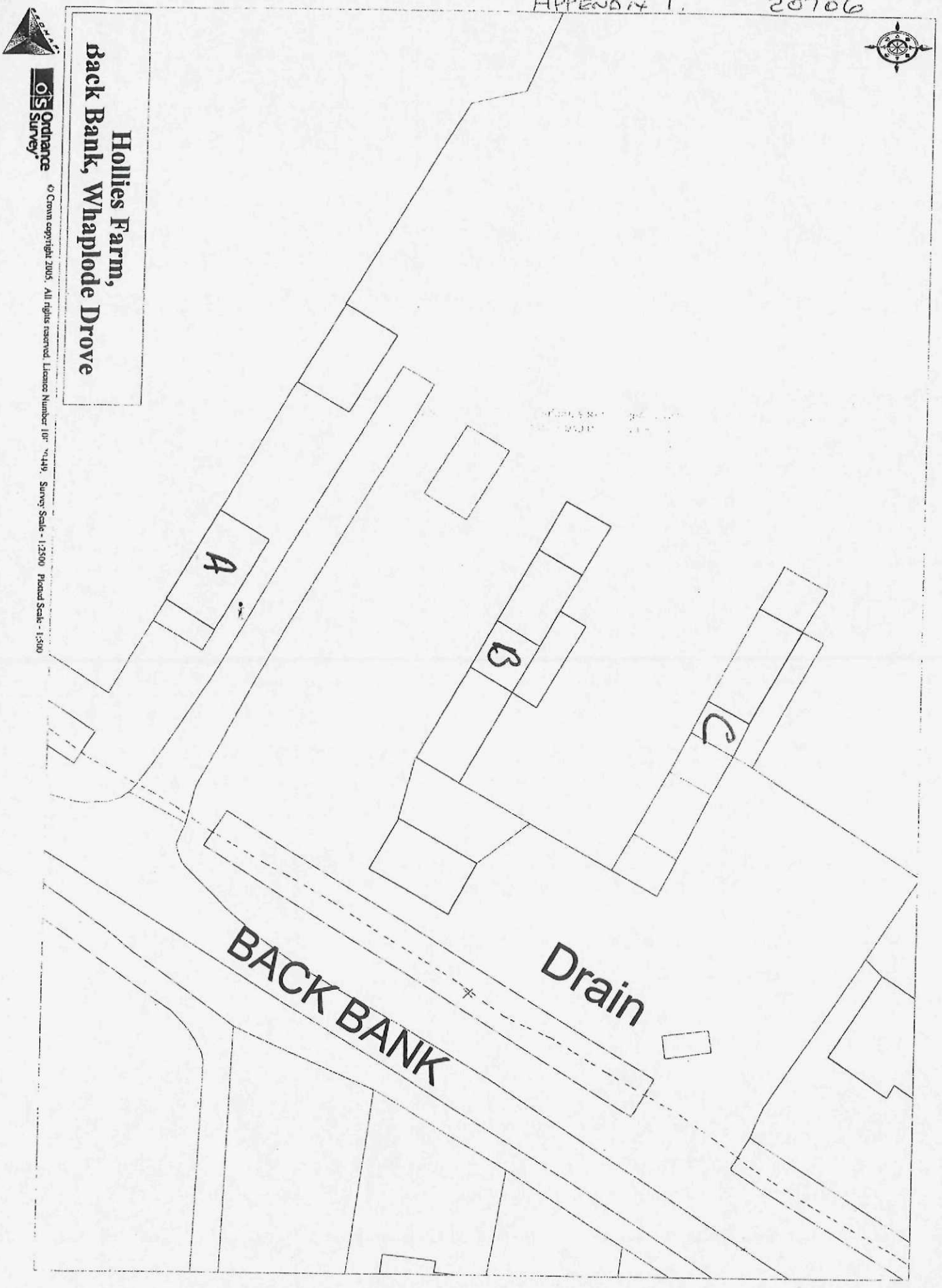
By implementing the above recommendations, we see no reason why this property cannot be renovated to provide suitable habitable accommodation.

It must be anticipated that considerable expense will be required and above average ongoing maintenance will be necessary to keep the property serviceable.

For and on behalf of **SIDEBOTTOM RICHARDSON CHENG LTD**

J.A. RICHARDSON I Eng. AMIStructE **23RD MAY 2006**

APPENDIX 1. 20706

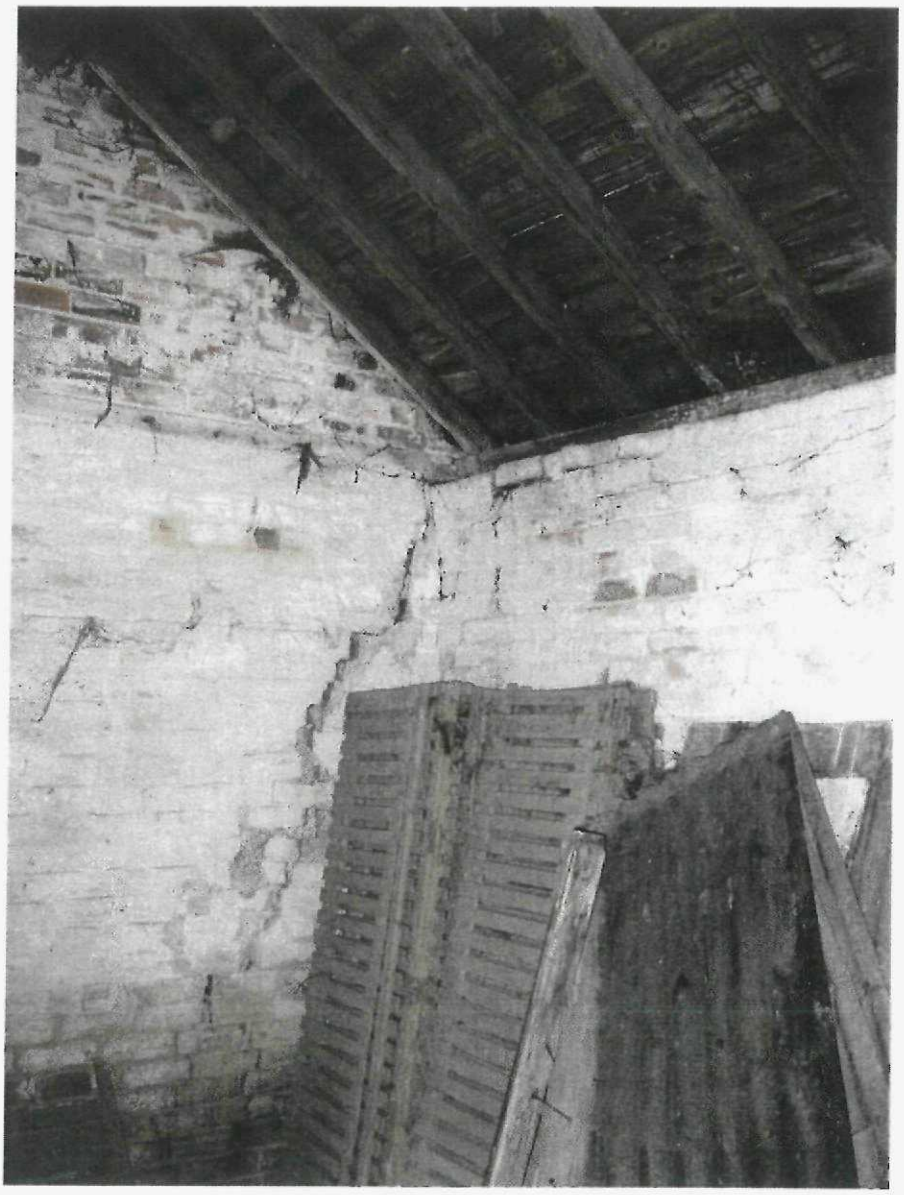




PHOTOGRAPH 1



PHOTOGRAPH 2



PHOTOGRAPH 3



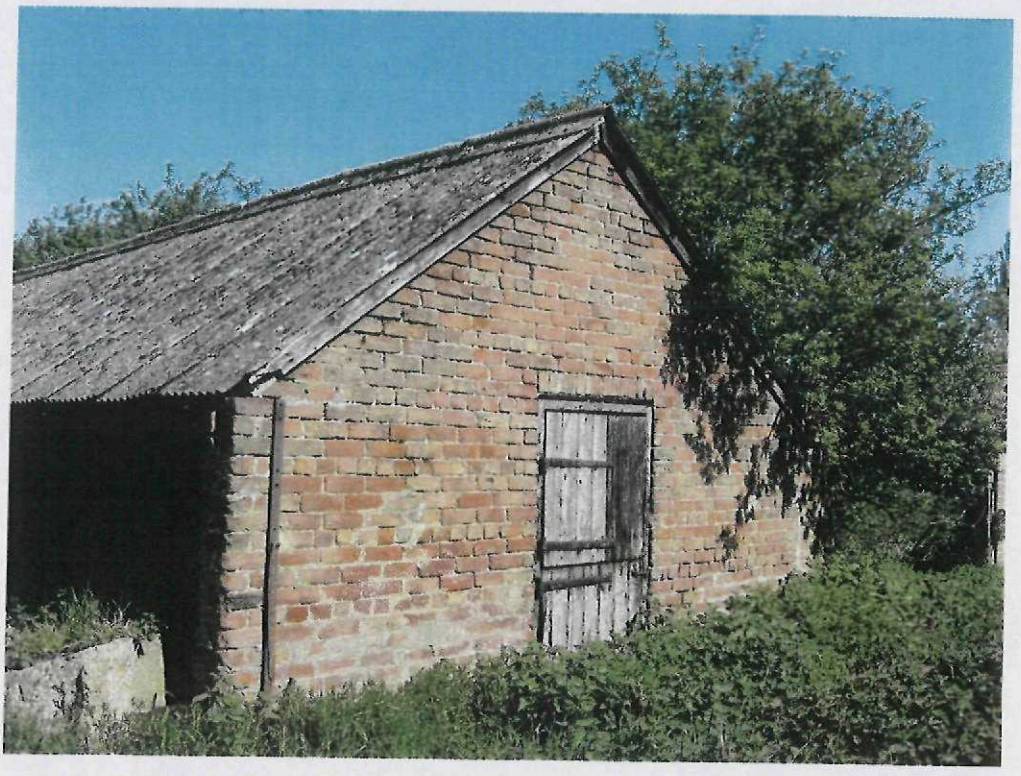
PHOTOGRAPH 4



PHOTOGRAPH 5



PHOTOGRAPH 6



PHOTOGRAPH 7



PHOTOGRAPH 8



PHOTOGRAPH 9



PHOTOGRAPH 10



PHOTOGRAPH 11



PHOTOGRAPH 12



PHOTOGRAPH 13



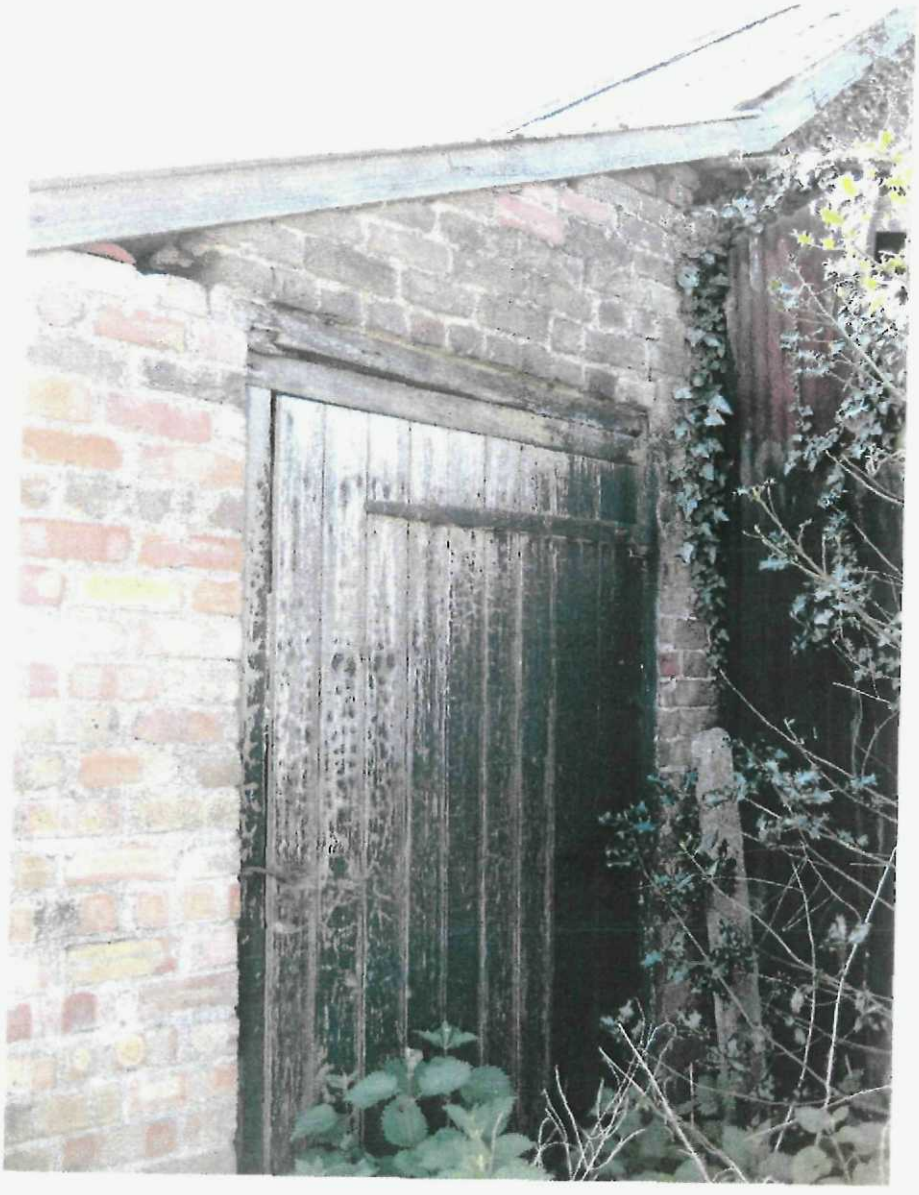
PHOTOGRAPH 14



PHOTOGRAPH 15



PHOTOGRAPH 16



PHOTOGRAPH 17



PHOTOGRAPH 18



PHOTOGRAPH 19



PHOTOGRAPH 20



PHOTOGRAPH 21