

FACILITY CONDITION REPORT

PREPARED FOR:

Strata Complex LMS 1978
2711 to 2733 East Kent
Vancouver, BC
V6G 2K5

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File No.: P06-106

July 31st, 2006



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Executive Summary

Trimstyle Consulting Inc. was retained by Strata LMS 1978 to conduct a field review of the 75 unit residential strata complex located at 2711 to 2733 East Kent Avenue in Vancouver. The site review was performed on Tuesday July 11th and the attic review Friday July 28th, 2006.

The following summary is presented for your consideration:

- The flat roofing perimeters are falling.
- Fascia boards on several buildings require urgent maintenance or will be compromised.
- Vent capping on numerous mechanical plumbing stacks require replacement due to improper sizing.
- Shingles are performing per manufacturers information.
- Venting and drainage are observed to be in working condition. The newly selected roofing contractor must verify adequate venting.
- Some drainage overflows on flat roofing portions are non-operational.
- Repairs and or rehabilitation would be not be overly extensive for this complex. Trimstyle recommends some immediate maintenance.
- Attic is dry with no observable signs of excess moisture or mildew.



Introduction

Terms of Reference

Trimstyle Consulting Inc. was retained by Strata LMS 1978 to conduct an assessment of the horizontal "Tar and Gravel" and sloped asphalt shingle roofs of the aforementioned Strata complex, located at 2711 to 2733 East Kent, B.C.

Trimstyle Consulting Inc. has prepared this report solely for the use of their Client.

Trimstyle Consulting Inc. accepts no responsibility for damages suffered by third parties as a result of decisions or actions based on this report.

Trimstyle Consulting Inc. does not claim to have uncovered every roofing deficiency as a part of this Condition Assessment.

The investigation was conducted as outlined in the proposal dated P06-106 dated April 27th, 2006. This filed evaluation was conducted on July 11th, 2006, by John Pitre.

The recommendations contained in this report are based upon an analysis of current conditions, the expected future shingle and tar and gravel performance, cost considerations, construction feasibility and long-term life cycle.

Building Description and Assembly

Riverside is a multi-unit, multi-storey (3) residential strata complex of gable roof profile. The roofing area reviewed is comprised of 75 individual units, spread over a total of 6 buildings. The common area "waterproofing" is not part of this review. From an inspection and reporting perspective, the complex is recorded as six (6) separate building areas.

All sloped areas are observed to be an asphalt shingle roof assembly, insulated at the bottom of the attic space. This sloped assembly is constructed over solid sheathing, the center of the sheathing (P. 078). All sloped roofing areas are observed to drain via gutters and downspouts.

One attic space was also reviewed. Unit 70 did not display any signs of mildew or mold.

All buildings (except building 2728) are observed to have flat horizontal tar and gravel sections and sloped asphalt shingle areas. In both assemblies the insulation is in the bottom of the attic or in the case of the flat roofing, the vented space.

Maintenance History

It is observed that minor shingle repairs were undertaken. These repairs were observed on unit 2733. The types of repairs were complete shingle reinsertments. Also observed were several membrane repairs at various scuppers located on the flat roofing sections of the complex.

No major repairs were observed.



2. Observations

As previously recorded, the roofing areas are segregated into 6 areas, each representing one building. These areas are subsequently divided into flat and sloped areas. Observations should be read in conjunction with Appendix C – Photographs.

Area 1 – units 23 thru 40

Pictures 001 thru 007 displays lower west corner of building unit 2723.

- Perimeter membrane openings. (P. 003,004,005,006)
- Ridging is observed. This should be monitored. (P. 007)

Pictures 008 thru 022 display the upper level flat roof area

- Asphalt blocked scupper. (P.010,011)
- Ridging, tenting, and openings of perimeter membrane flashing. (P. 012,013,014,017,018,024)
- Deficient securment of centre venting hood. (P.015)
- Improper sized vent cap ; sealed at pipe with caulking . Cap should fit "IN" pipe. (P. 019,020,021)

Pictures 022 thru 023 show front and rear sloped roof areas

- Shingles performing well.

Pictures 024 thru 031 display lower flat east corner of building 2733

- Tenting and membrane openings at building perimeter. (P. 025,028,029,030)
- Improper sized vent caps. (P. 026)
- Blister at North/ East corner. Must be monitored. (P. 027)
- Wood Siding at cap flashing detail requires repair. (P. 031)

Pictures 032 thru 036 display small frontal overhang roof areas.

- Small flat overhang roof area employs a two ply membrane. Is in relative shape to it's age.

Area 2 – units 12 thru 22

Picture 037 thru 058 display building unit 2713

- Reasonable shingle condition. (P. 037,038,039,040)
- Membrane flashing paper should have been extended from horizontal plane down the outside vertical plane (2"), so as overlap siding. (P. 041)



- Membrane repairs at perimeter of flat roof. (P. 042,044)
- Upper roof venting is also conducted at gable ends. (P. 047)
- Improper vent caps on flat roof areas. (P. 043)
- Loose and missing shingles on small doorway gables. (P. 049,055)
- Fascia board ends require maintenance. (P. 051,052)

Area 3 – units 1 thru 11

Pictures 059 thru 072 display building unit 2711

- Blocked overflow pipes, at both ends of flat roof. (P. 059,061,062)
- Perimeter venting at eaves. (P. 060)
- Missing water blocks at foot of downspouts (P.064,065)
- Improper vent caps sizing on flat roof area. (P. 066)
- Perimeter membrane openings. (P. 068)

Area 4 – units 56 thru 65

Pictures 073 thru 083 display building unit 2727

- Plywood substrate at shingle roof is observed to be buckling. (P. 074,075,076)
- Minor ponding on building 2727 and 2723. (P. 077)
- Repair to top of parapet flashing and membrane. This repair is incomplete. (P. 078)
- Membrane openings at perimeter scupper. (P. 080)
- Small blister on flat roof area. To be monitored. (P. 081)
- Improper sized vent caps. (P. 083)

Area 5– units 66 thru 75

Pictures 084 thru 091 display building unit 2733

- Perimeter membrane openings. (P. 086)
- Improper repair on perimeter cap flashing and membrane. (P.085)



- Repair of perimeter membrane at scupper location. (P. 087,088)
- Shingles with minor curling at eaves. (P. 089,090)

Area 6 – units 41 thru 55

Pictures 092 thru 108 display building unit 2728

- Reasonable shingle condition. (P. 092,093,094,095)
- Buckling of plywood substrate on rear (north) section of building. Immediate repair is required. (P. 096,100)
- Problematic valley detail. Should be redesigned when re-roofing occurs. (P. 097)
- Missing plumbing caps on sloped sections, (P. 098)
- Improper application of shingles. (P. 104,105,106)

Area 7 – entrance way roofs

Pictures 109 thru 111 display both entrance way roofs

- Tree trimming required at eastern entrance.

Area 8 – attic space of unit 70

- Insulation stops are observed. (P.112,116))
- Plywood substrate is employed. (P. 116,118)
- Venting at gable ends observed. (P.115)
- Exhaust pipe well insulated. (P.119)



Conclusion and Recommendations

FLAT ROOFING

From our physical observation of the flat roofing sections, we can conclude that the life cycle for this type of "tar and gravel" assembly is approximately 15 to 20 years (destructive testing would have to be undertaken to confirm this assessment). Given that the age of your building is approximately 10 years old, we estimate that these flat roof assemblies have 5 to 8 years of substantial performance remaining. Not many repairs are observed but a few should be undertaken within the next 6 months.

Our overall recommendation is that perimeter membrane flashings deficiencies be repaired and that plumbing caps replacement be undertaken as they on a whole are sized incorrectly. This improper sizing has allowed water to ingress between the pipe and sleeve. Two areas where perimeter cap metal has been repaired with peel and stick membrane should be addressed correctly and put back to original condition.

SLOPED ROOFING

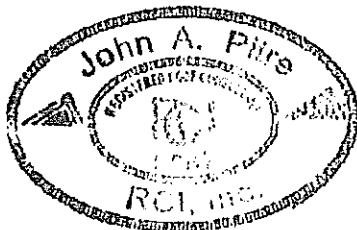
From our further physical observations, we can conclude that the life cycle for this type of shingle configuration is approximately 18 to 22 years. Given that your buildings approximate age is 10 years old, we estimate that this assembly has 8 to 10 years remaining. Not many shingle repairs or replacement are observed.

Our overall recommendations for the sloped section of the complex would be to repair all plywood substrate buckling, install deficient plumbing caps and repair with shingles or metal flashing, observed fascia boards where they overhang the building. Some painting will also be required at these locations.

When re-shingling does occur, the valley detail configuration observed on building 2728 should be revisited.

ATTIC SPACE

Attic space of unit 70 was observed to be dry in nature, with venting working properly.

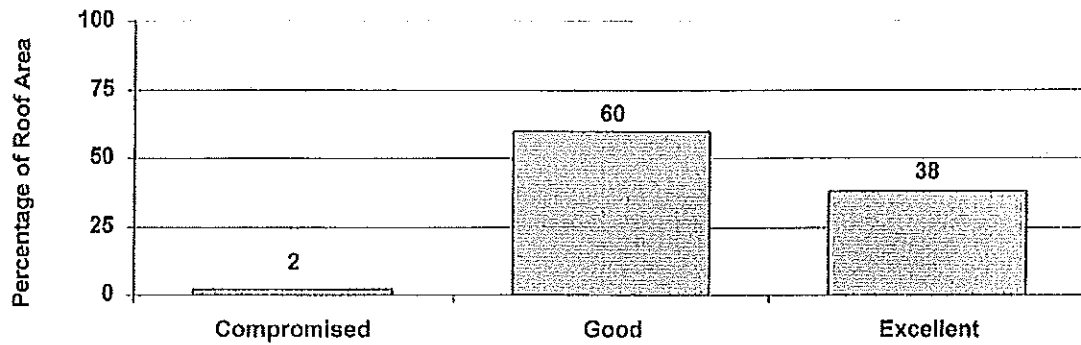




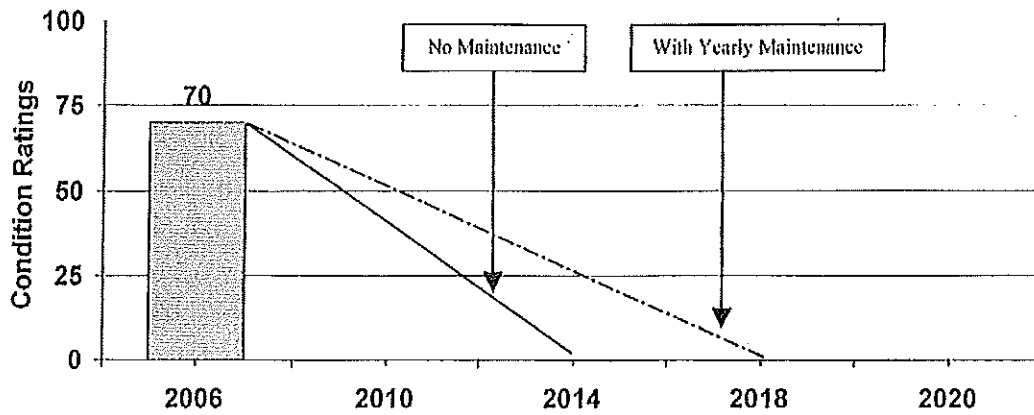
APPENDIX A

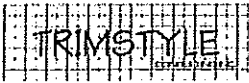
ROOF CONDITION & EXPECTANCY – SHINGLES

PRESENT ROOF CONDITION (2006)



ROOF EXPENTANCY

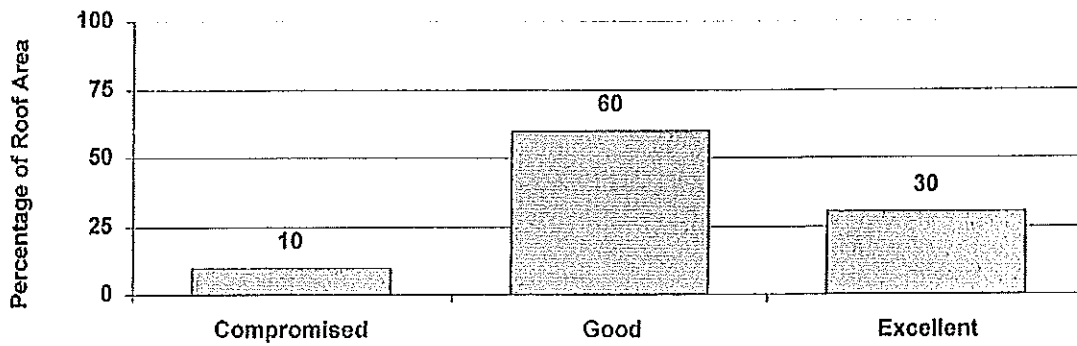




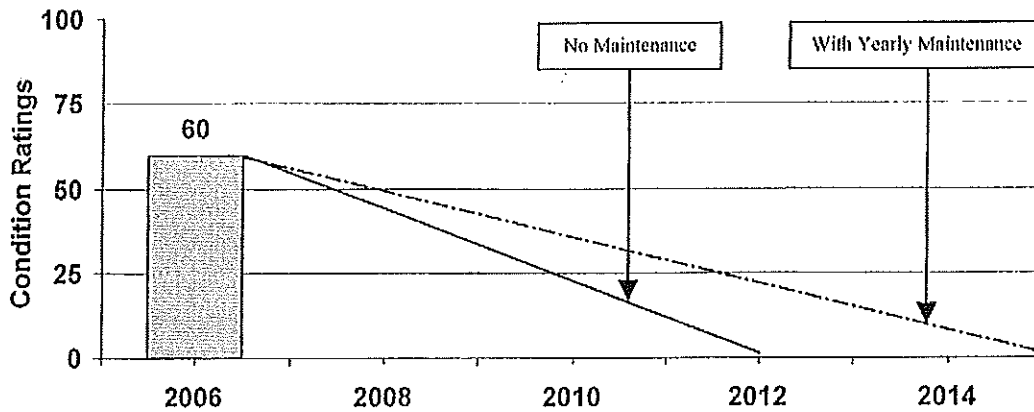
APPENDIX A

ROOF CONDITION & EXPECTANCY - FLAT ROOFING

PRESENT ROOF CONDITION (2006)



ROOF EXPENTANCY





APPENDIX B

RECOMMENDED REPAIRS AND MAINTENANCE

- | | | |
|----|--|-------------------|
| 1. | IMMEDIATE REPAIRS | \$10800.00 |
| | <ul style="list-style-type: none"> • PERIMETER MEMBRANE FLASHINGS (FLAT ROOFS) • NEW PLUMBING STACK CAPS • FACIA BOARD REPAIRS AND MAINTENANCE • NEW CAP METAL AT 2 PREVIOUSLY REPAIRED AREAS • PLYWOOD SUBSTRATE REPAIRS FOR SHINGLE ROOFS | |
| 2. | PRESENT AND YEARLY MAINTENANCE | \$700.00 |
| | <ul style="list-style-type: none"> • CAULKING • DRAIN CLEANING • GUTTER CLEANING | |

BUDGET NUMBERS (SHINGLES)				
YEAR	2006	2007	2008/2019	2020
URGENT REPAIRS AND MAINTENANCE	\$ 2,000.00			
YEARLY PREVENTATIVE MAINTENANCE	\$ 400.00	\$ 350.00	\$350.00 each	
TOTALS	\$ 2,400.00	\$ 350.00	\$ 4,900.00	
REPLACEMENT COST				\$420,000.00 to
				\$480,000.00
ROOF CONDITION %	70%	69%	65% to 5%	5%

BUDGET NUMBERS (FLAT)				
YEAR	2006	2007	2008/2015	2016
URGENT REPAIRS AND MAINTENANCE	\$ 8,000.00			
YEARLY PREVENTATIVE MAINTENANCE	\$ 400.00	\$ 350.00	\$350.00 each	
TOTALS	\$ 8,400.00	\$ 350.00	\$ 3,150.00	
REPLACEMENT COST				\$160,000.00 to
				\$240,000.00
ROOF CONDITION %	60%	59%	57% to 5%	0%

Dollar Amounts are present 2006 Dollar figures.

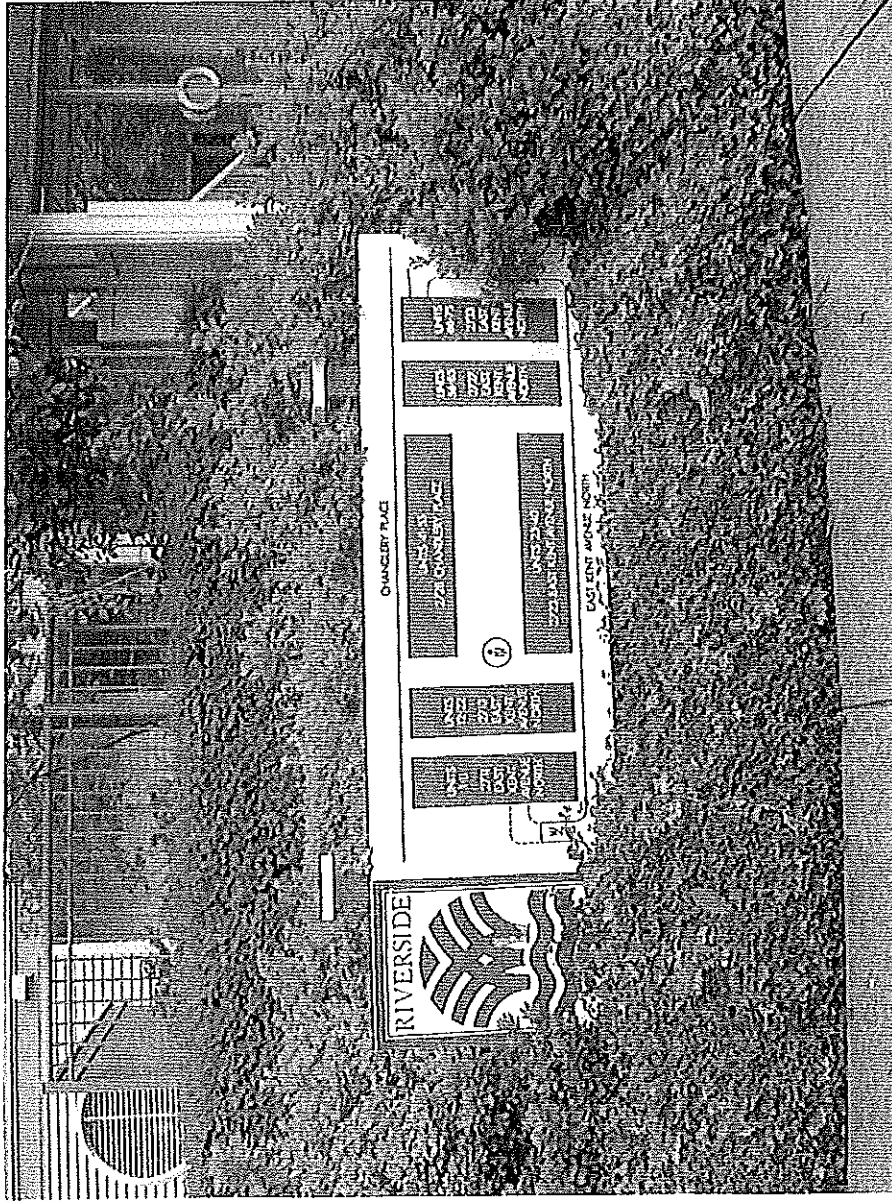


Roofing condition Assessment
Riverside
Vancouver, B.C.

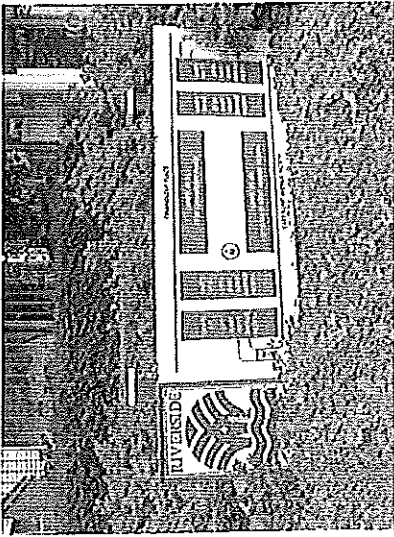
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APPENDIX C

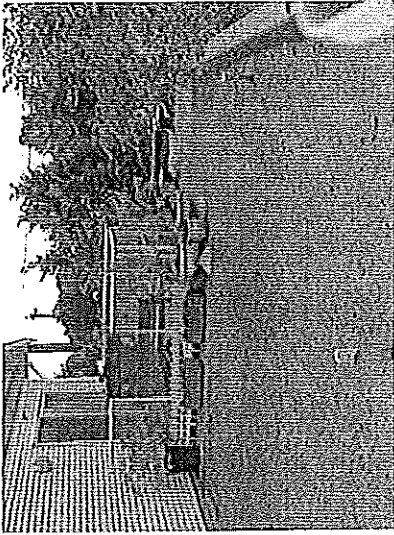
Photographs



Riverside



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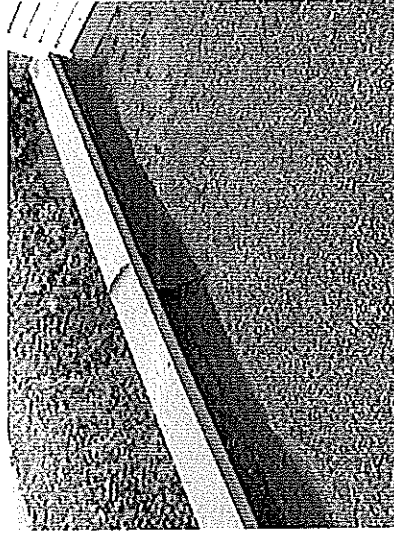
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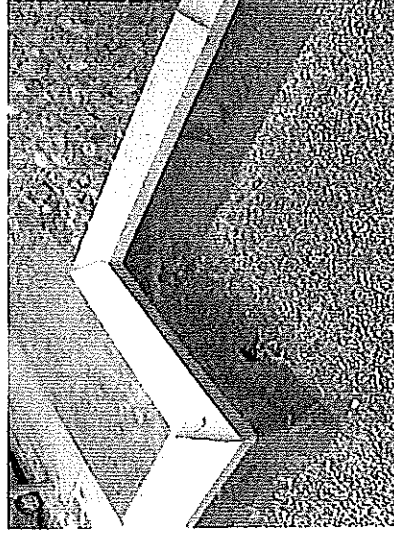
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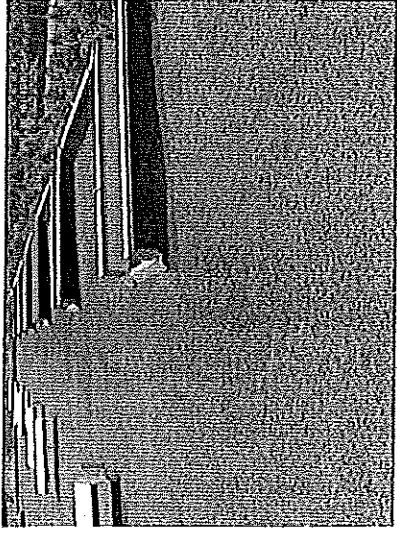
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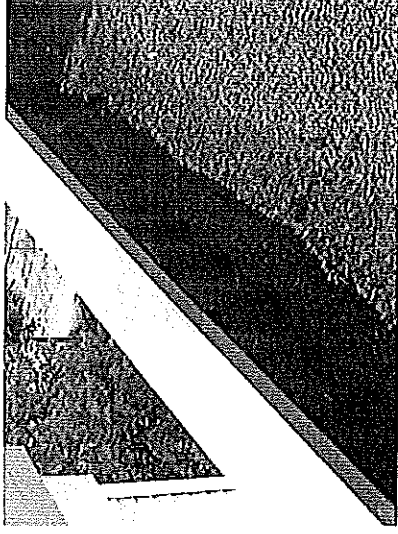
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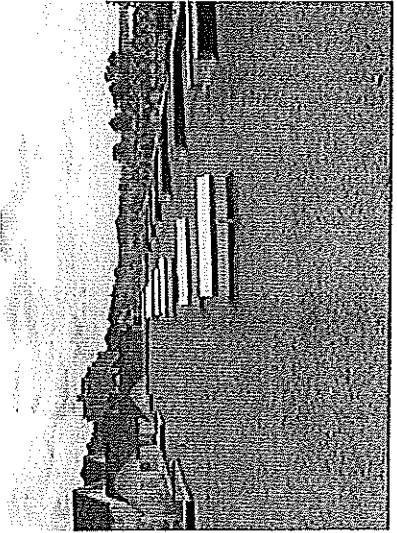
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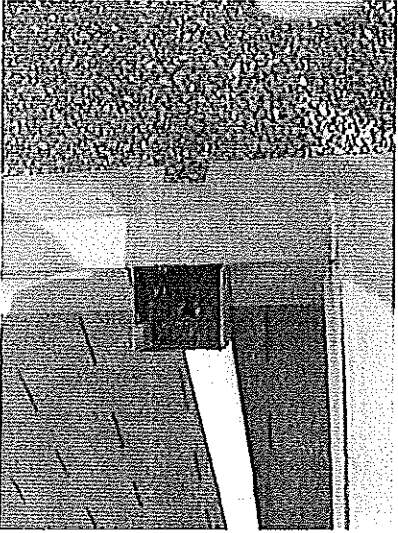
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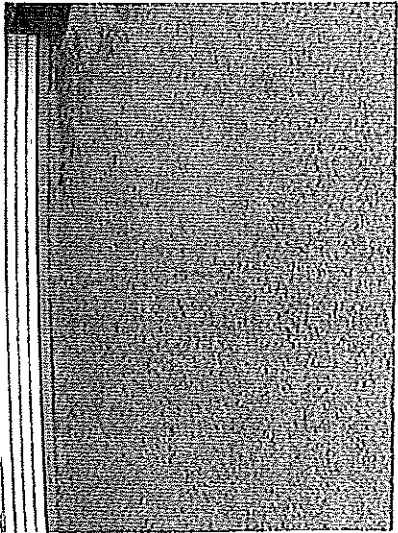
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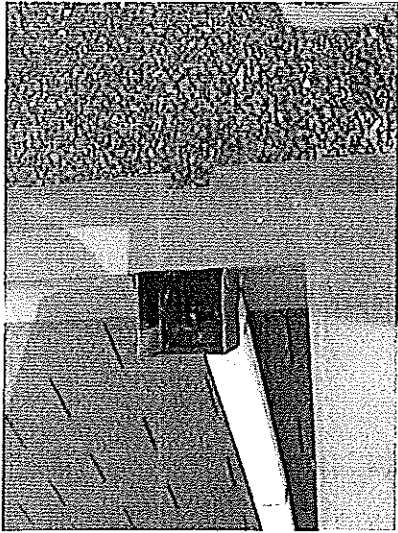
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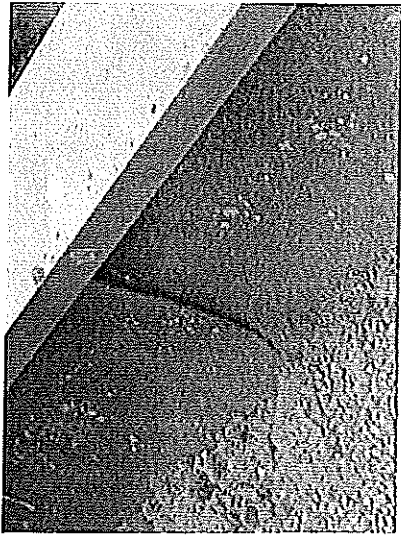
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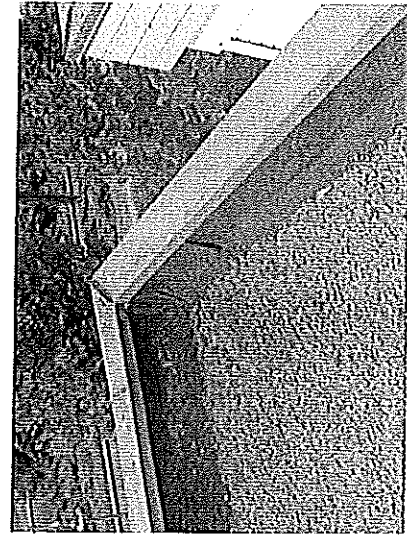
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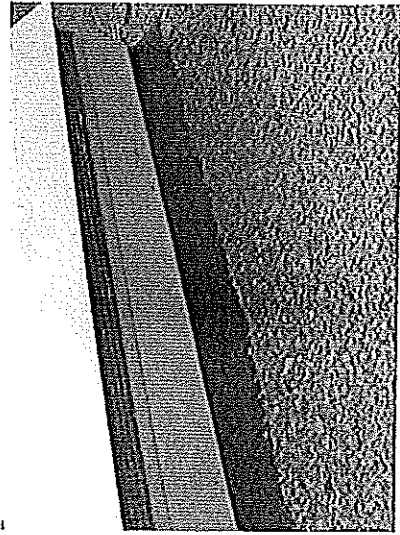
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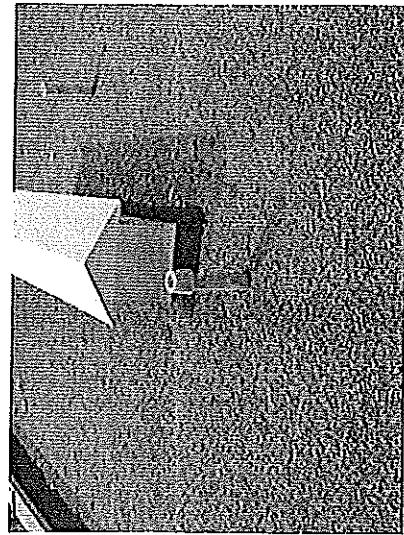
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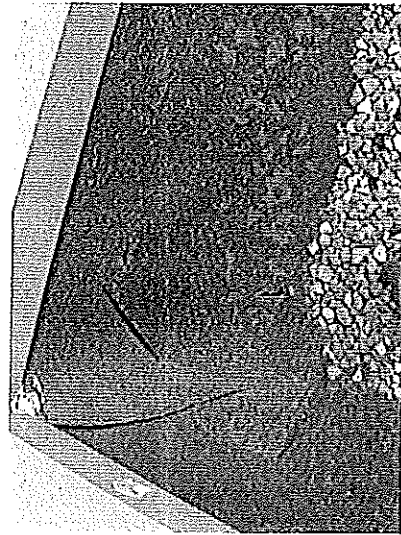
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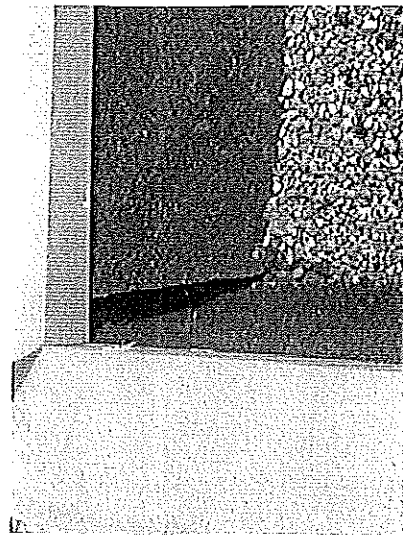
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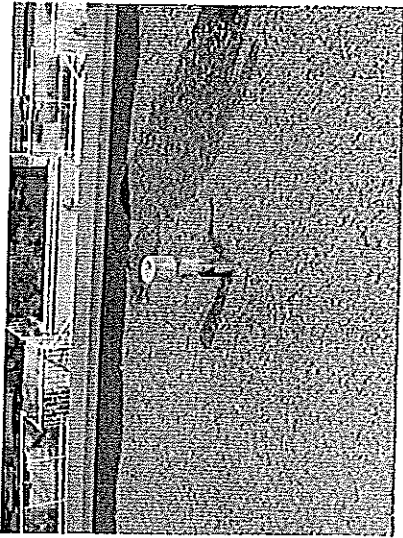
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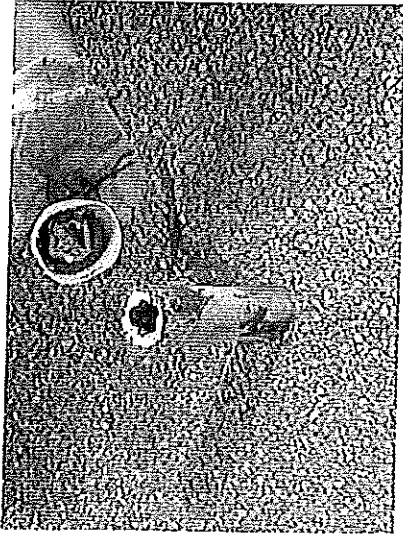
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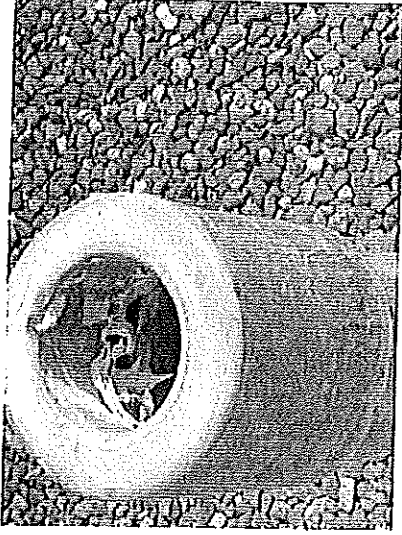
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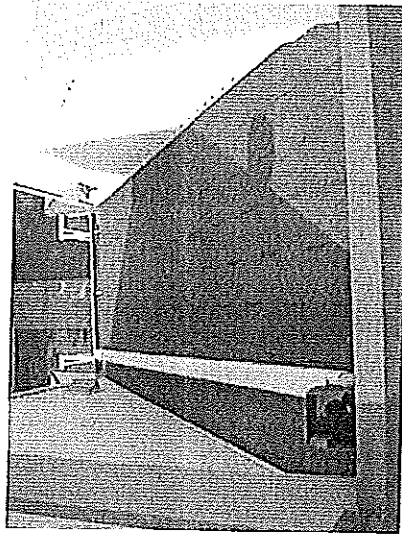
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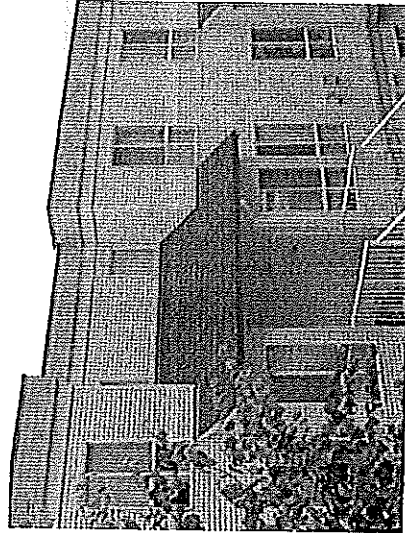
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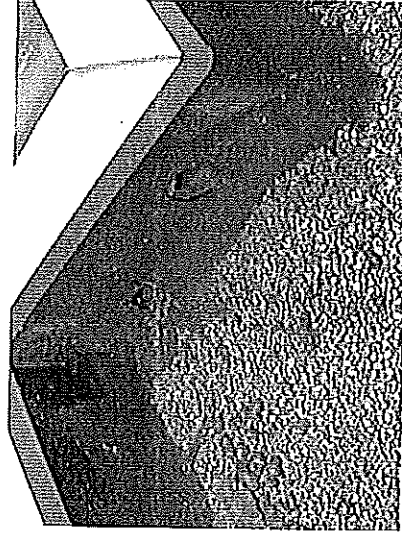
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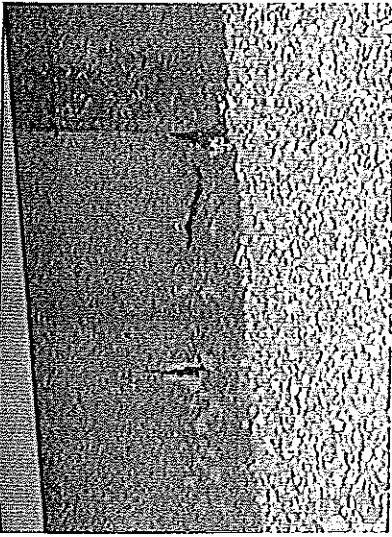
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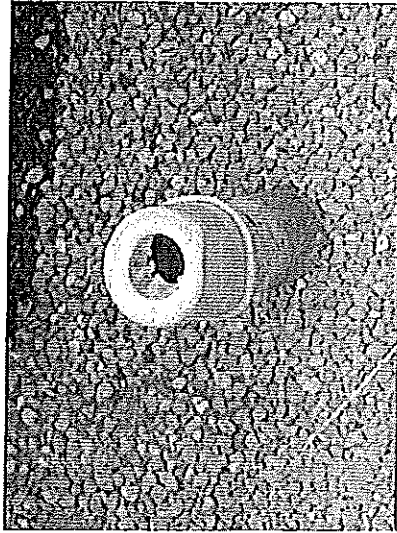
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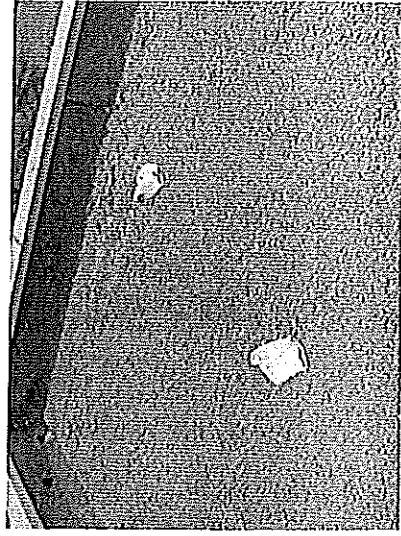
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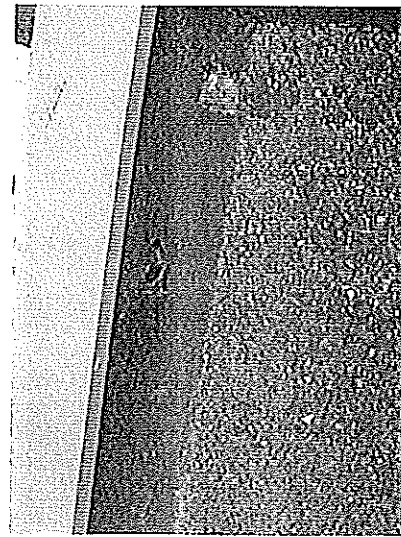
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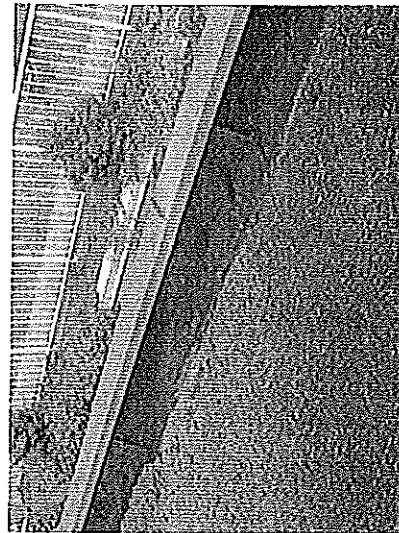
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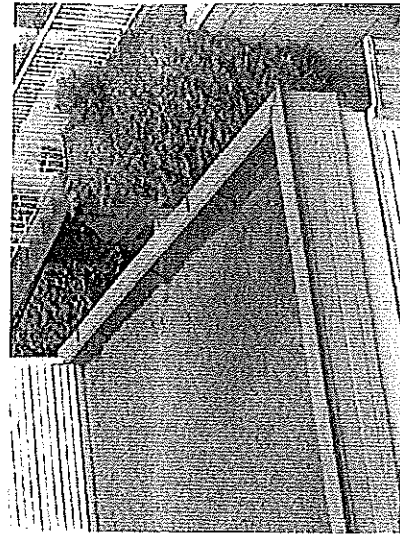
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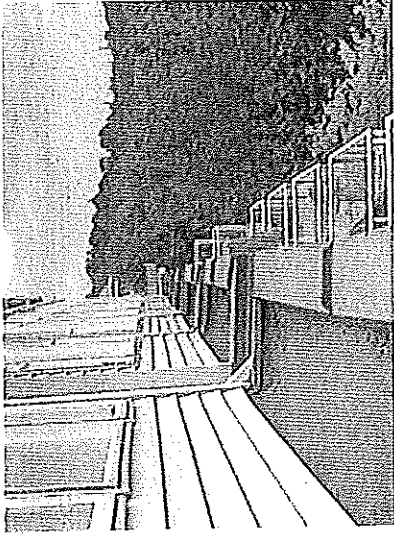
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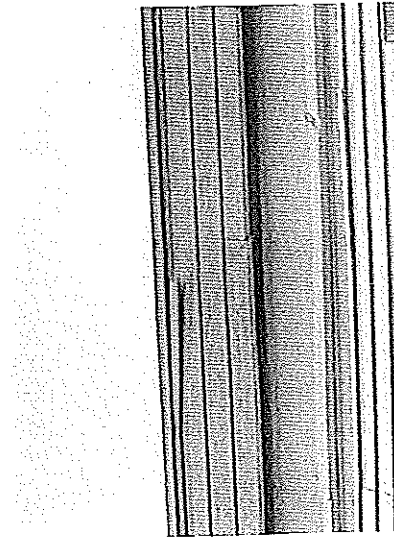
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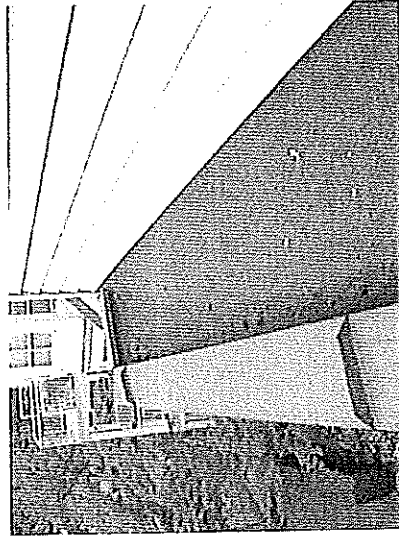
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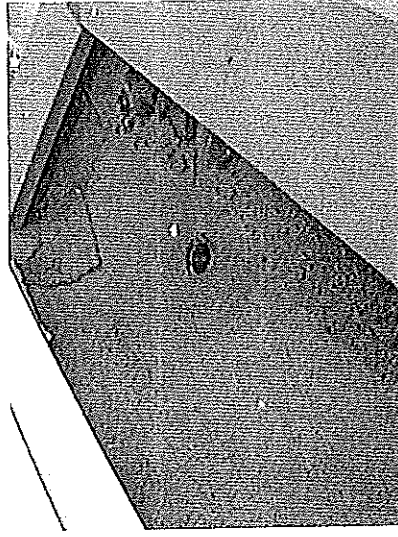
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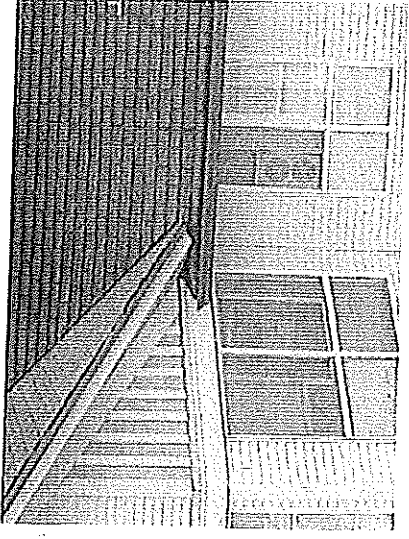
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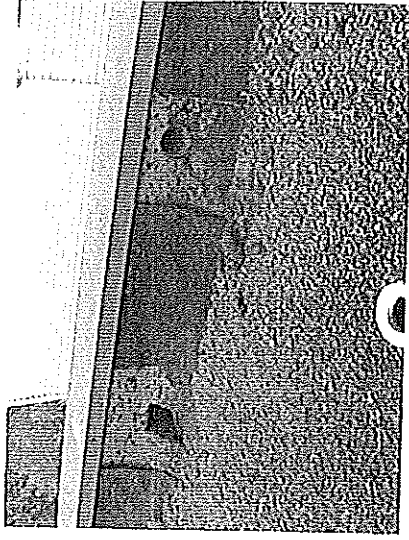
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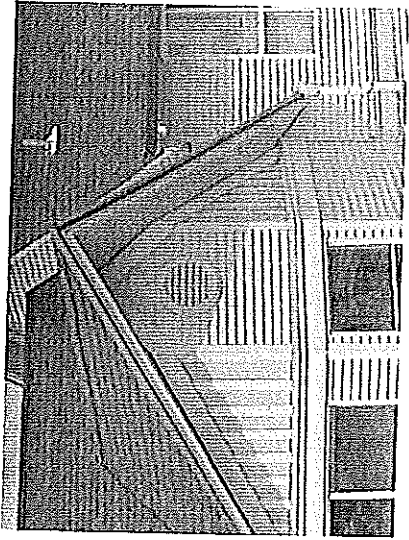
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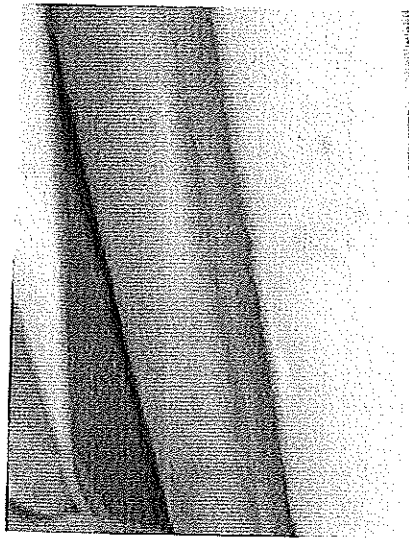
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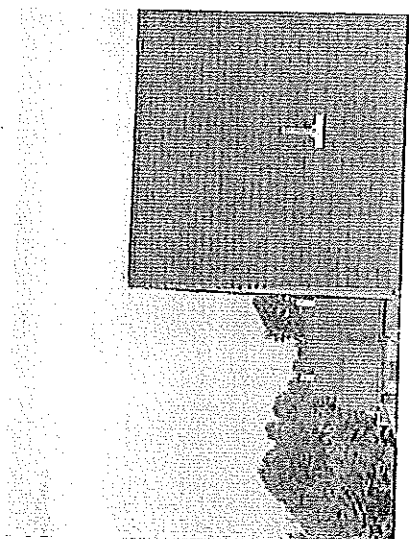
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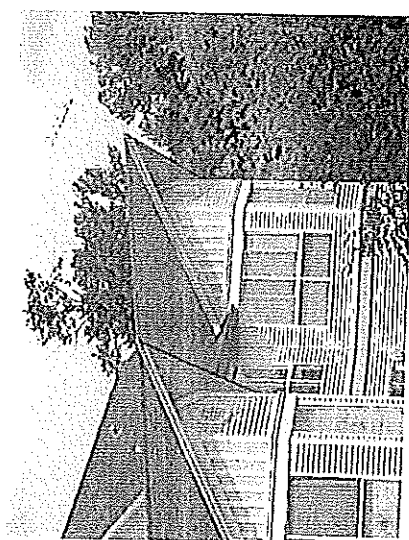
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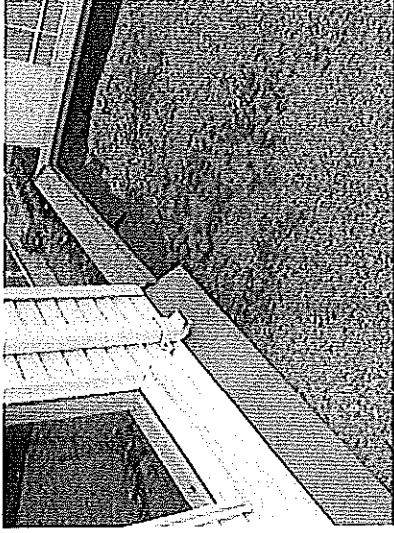
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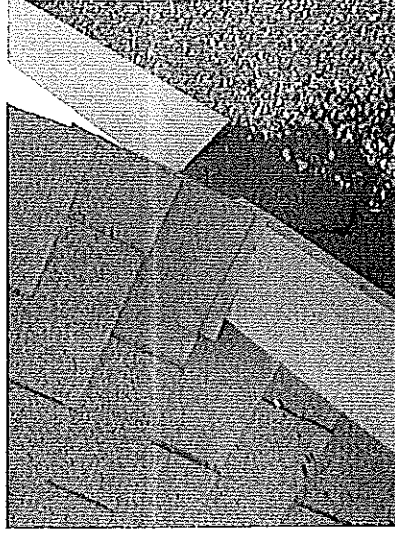
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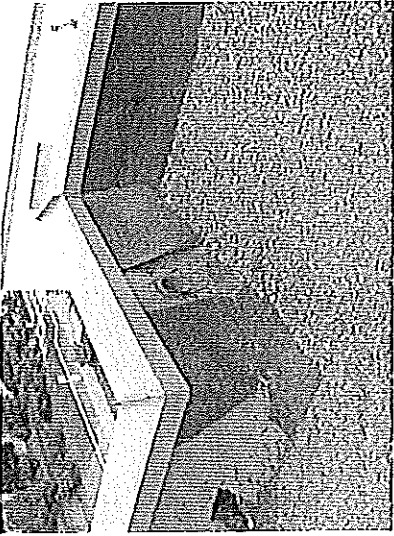
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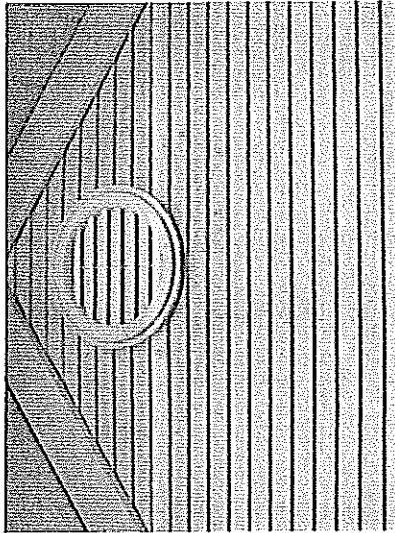
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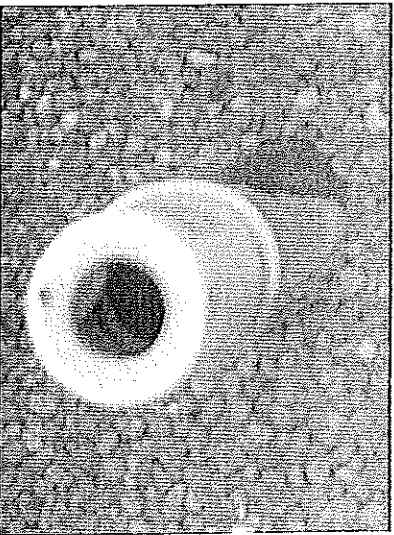
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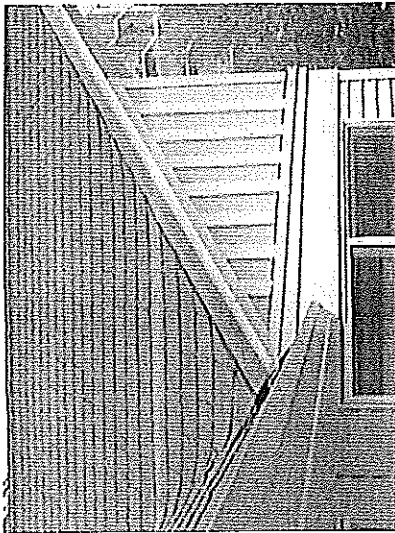
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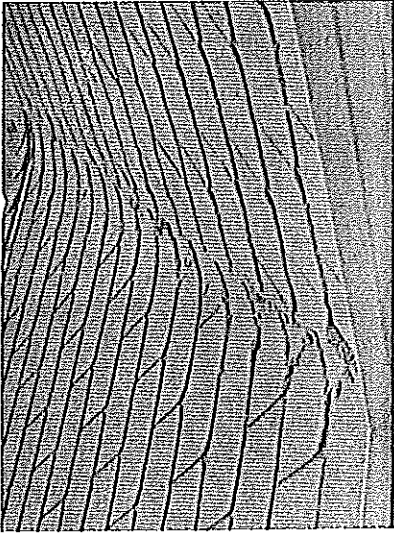
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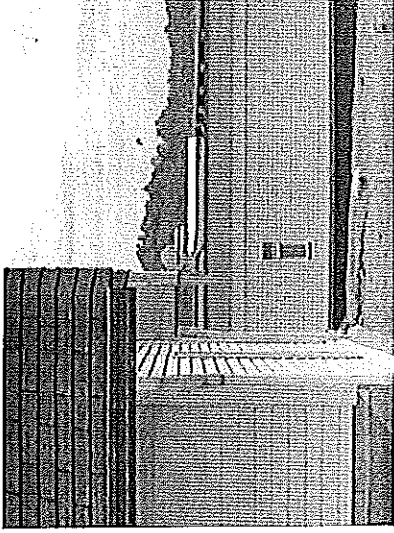
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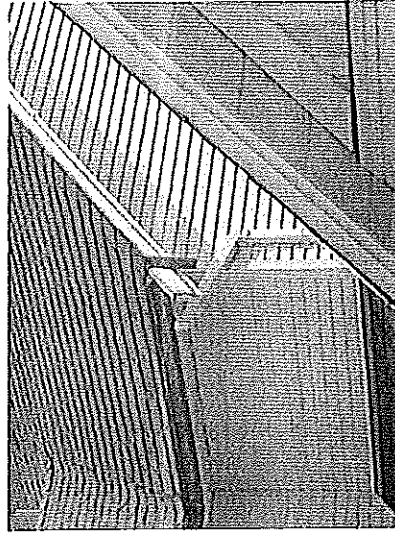
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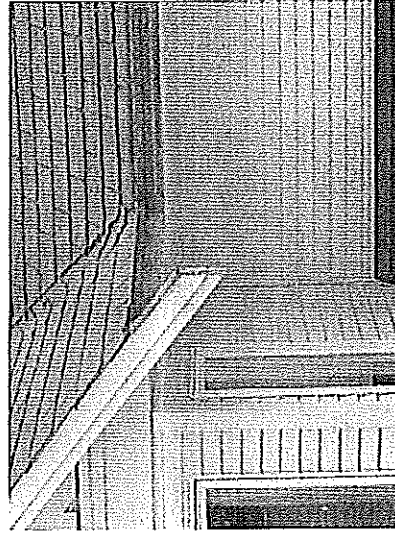
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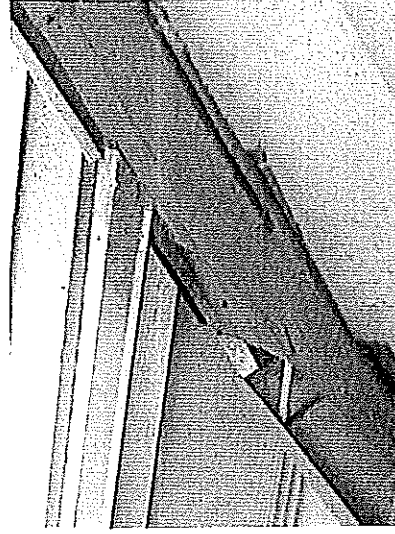
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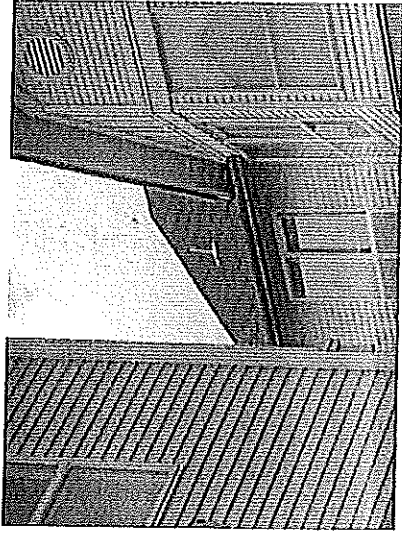
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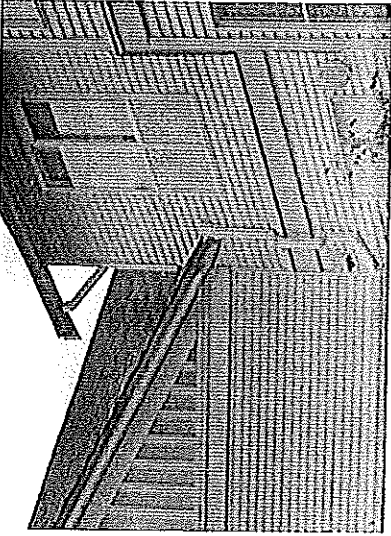
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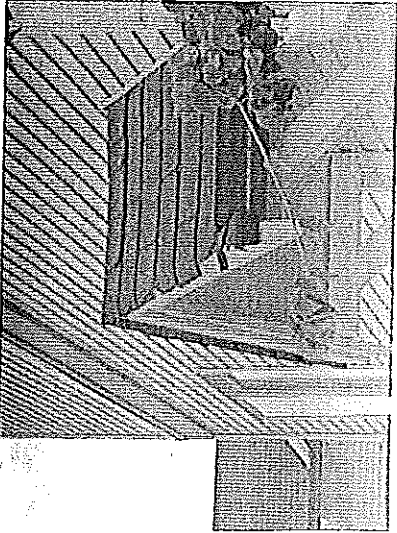
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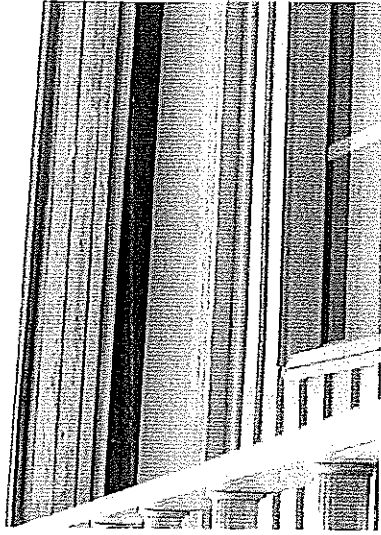
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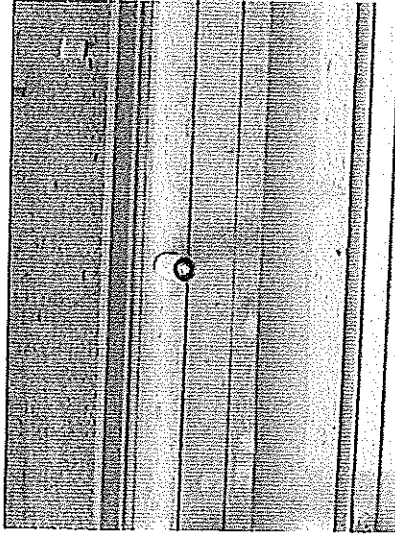
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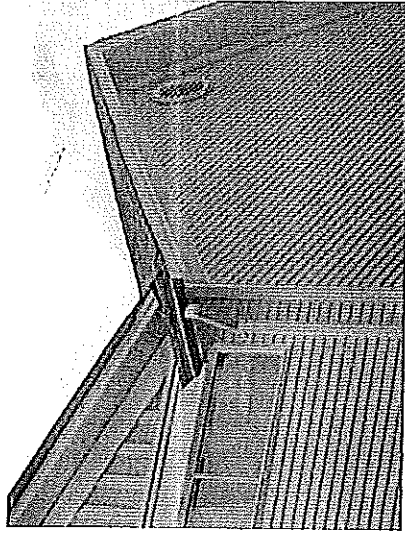
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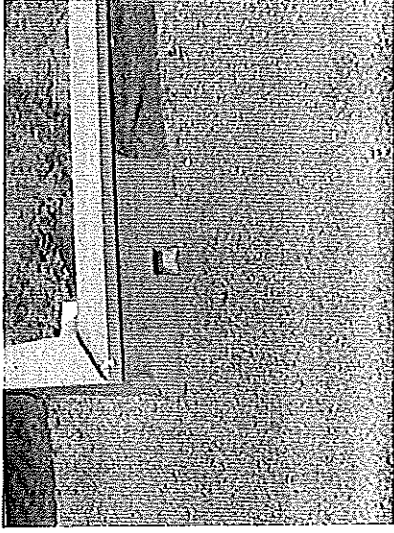
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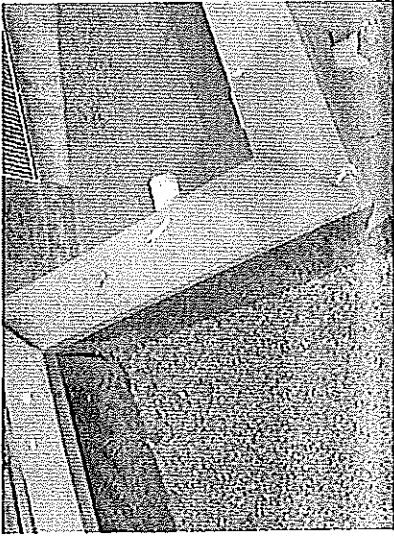
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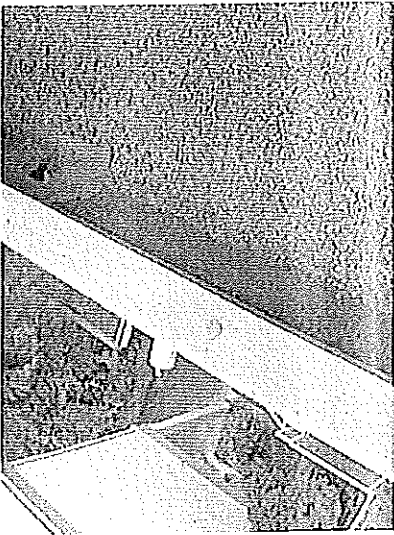
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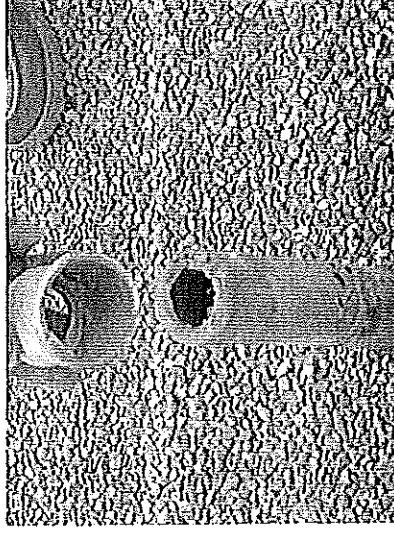
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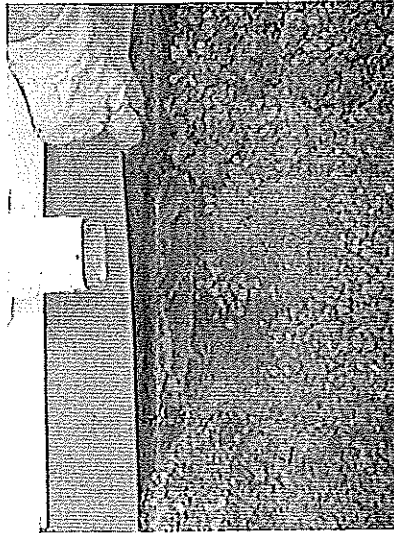
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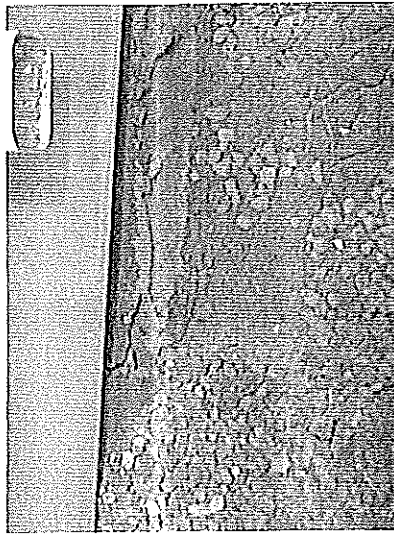
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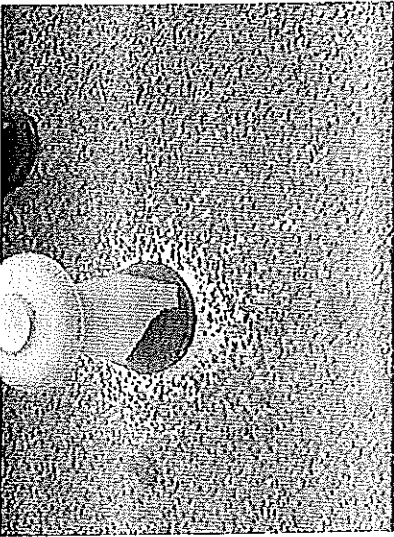
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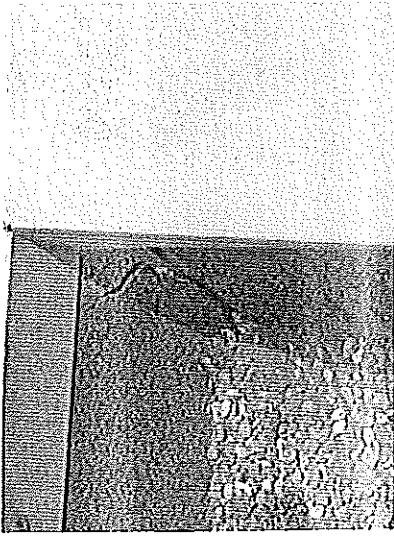
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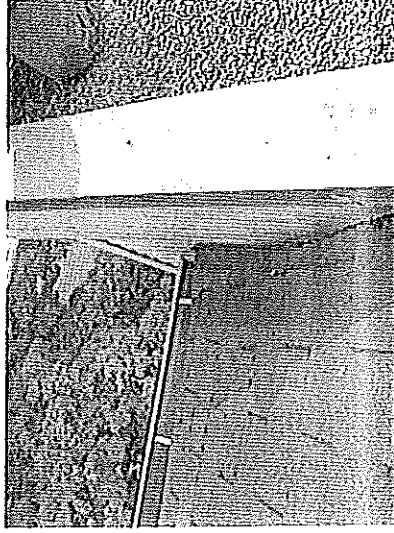
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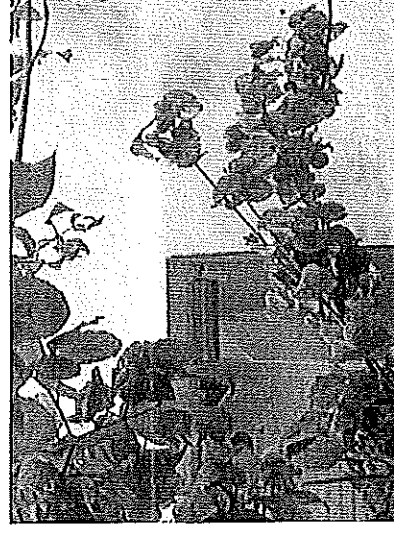
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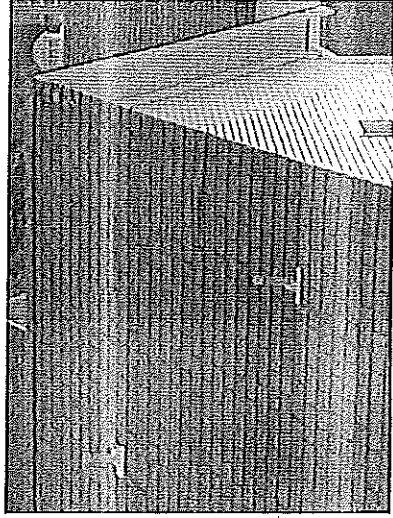
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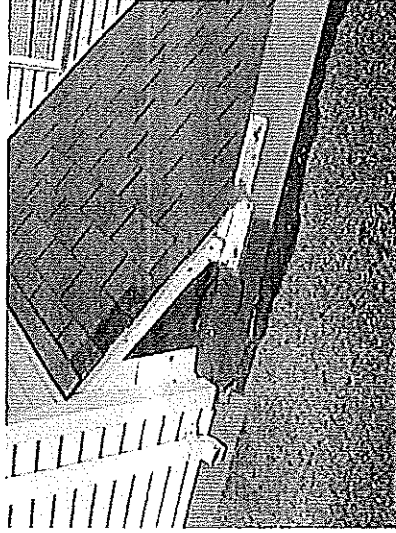
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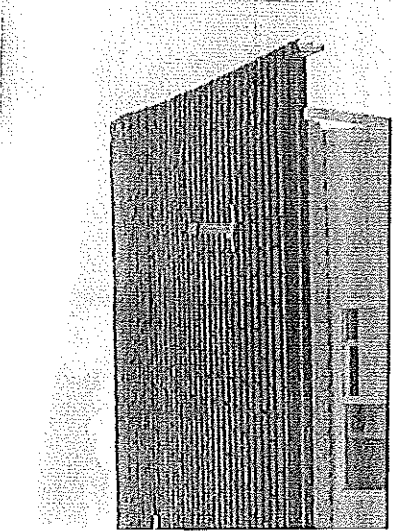
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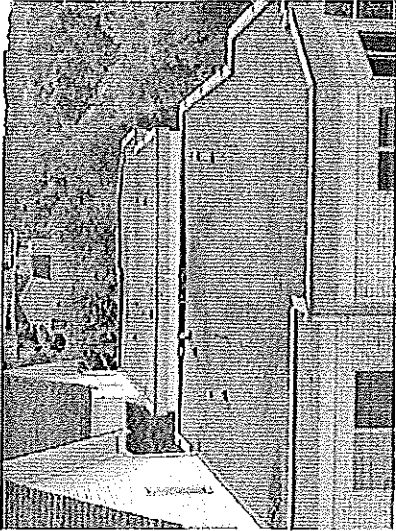
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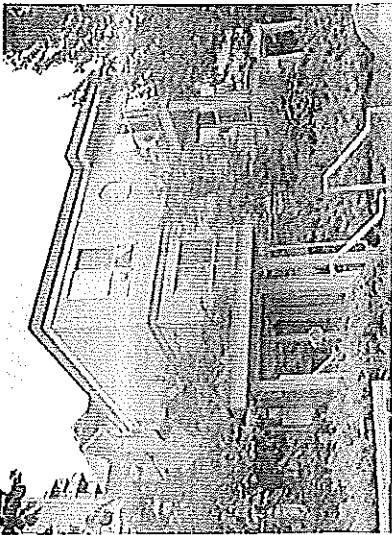
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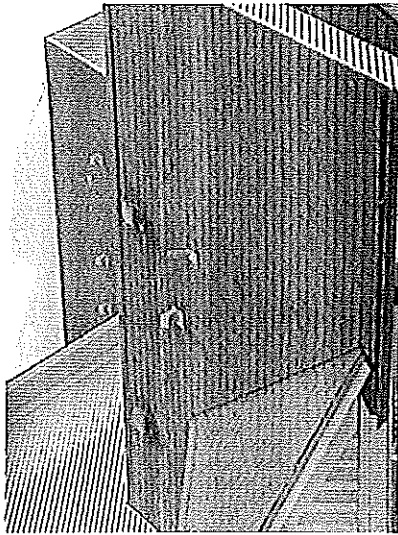
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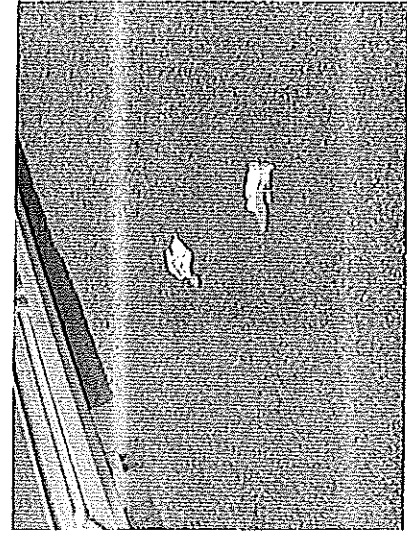
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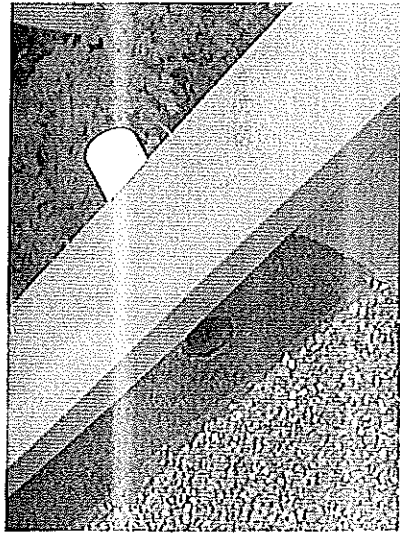
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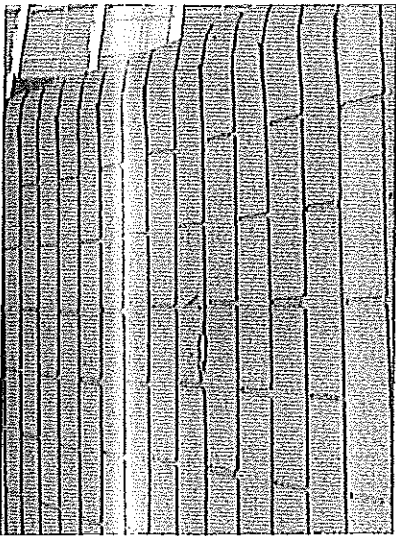
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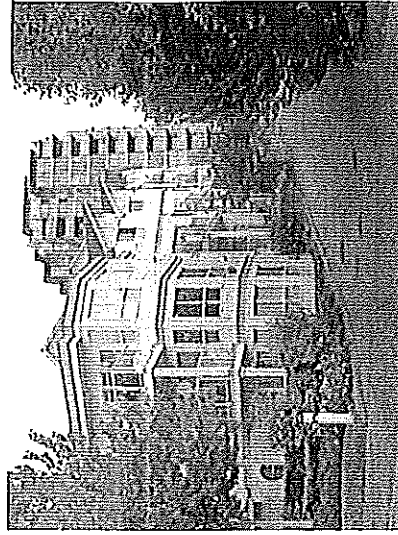
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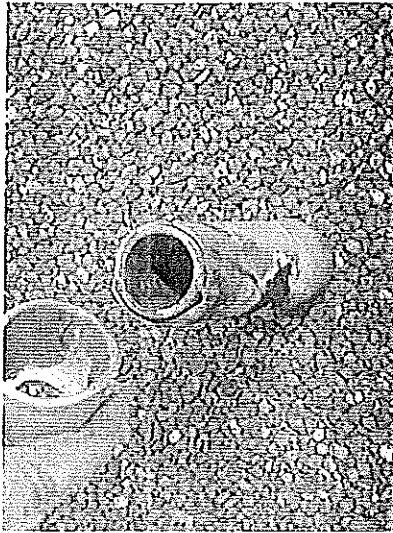
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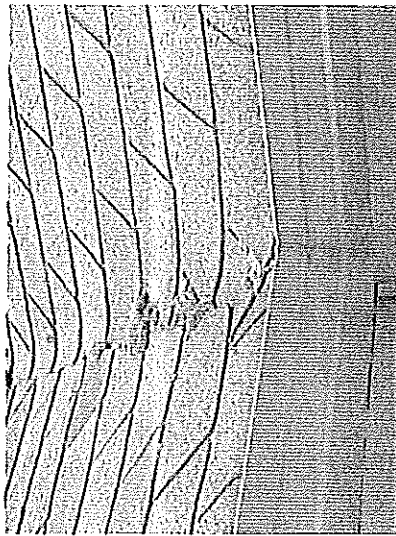
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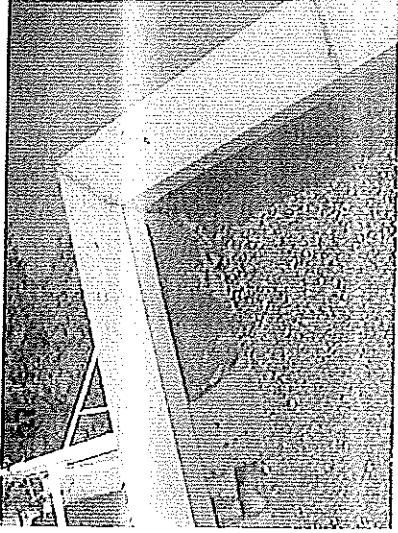
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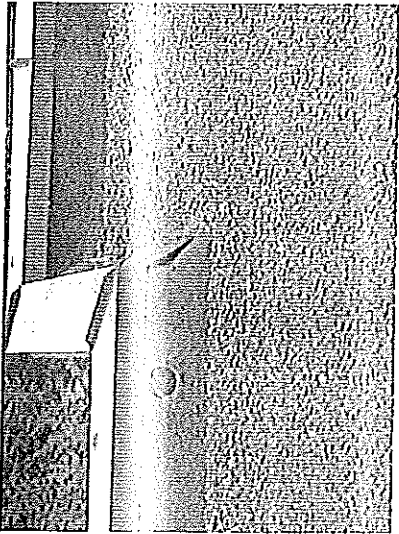
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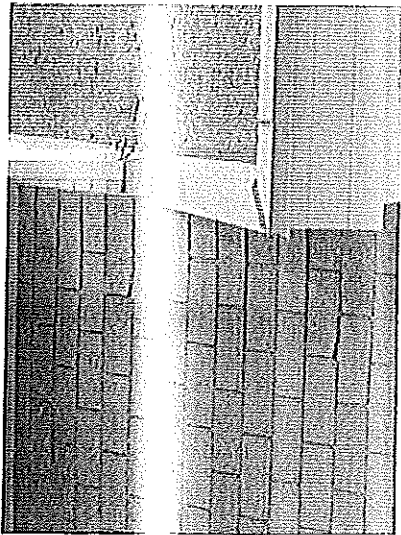
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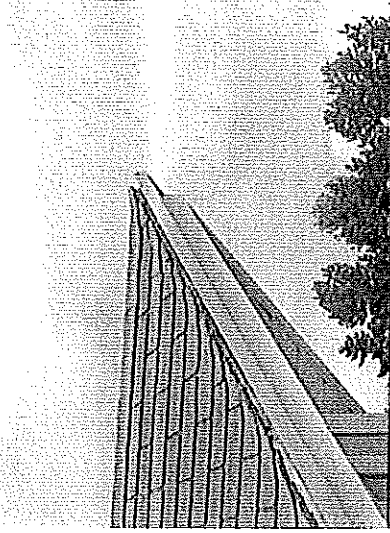
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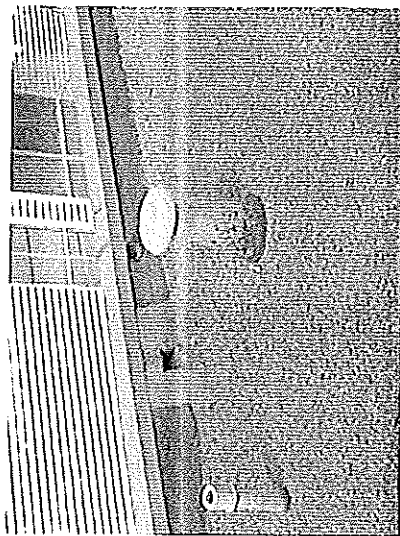
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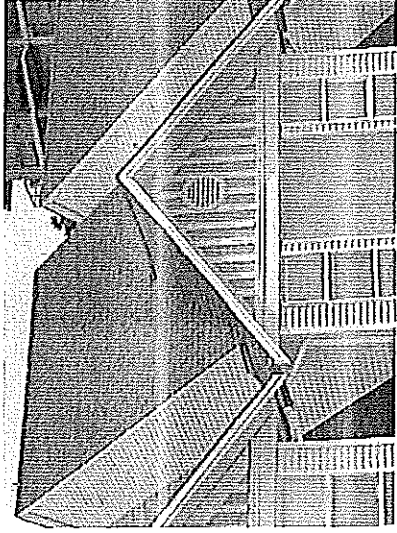
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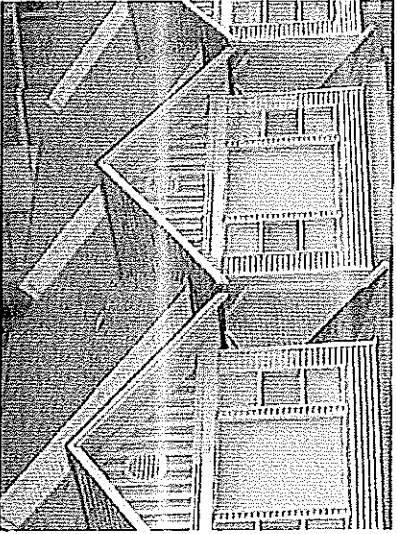
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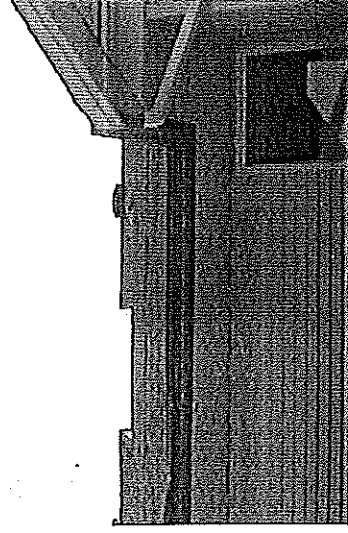
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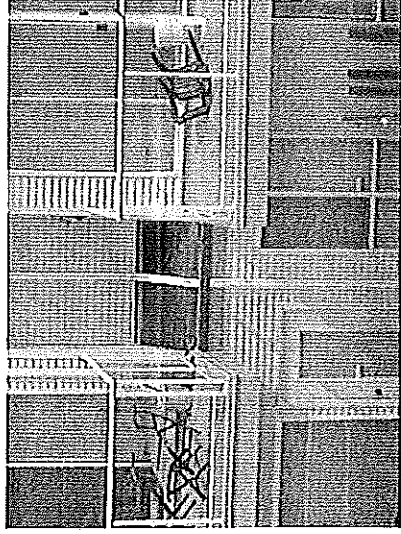
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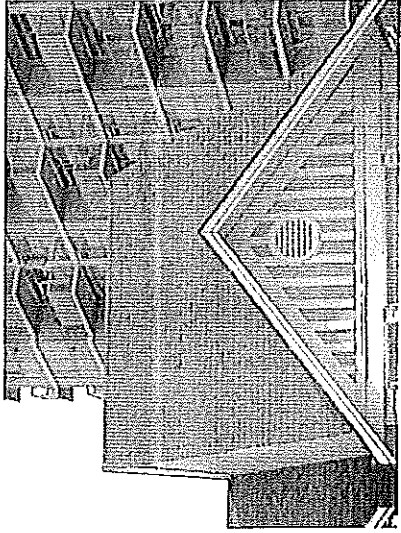
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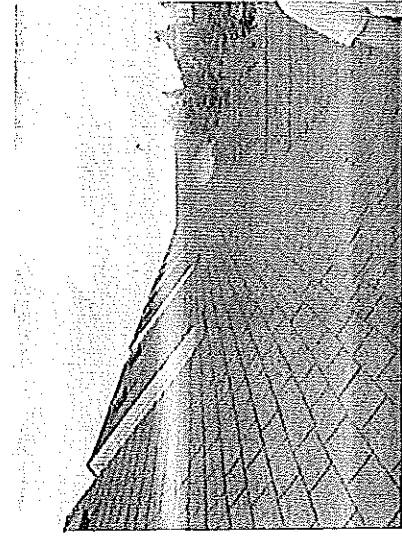
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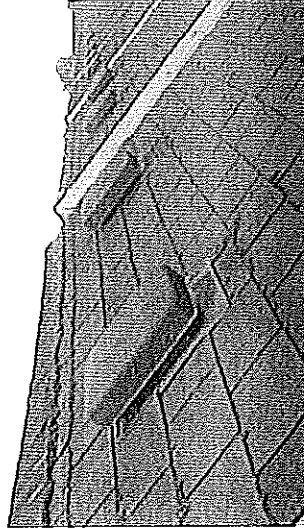
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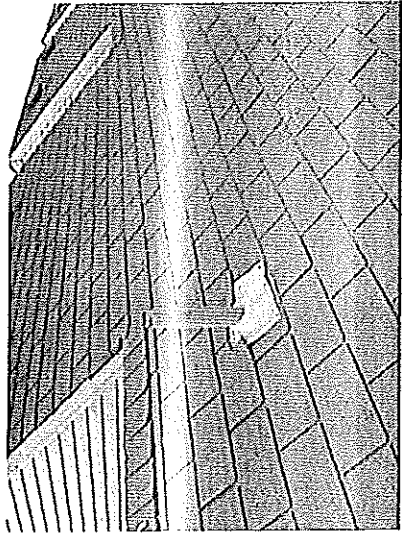
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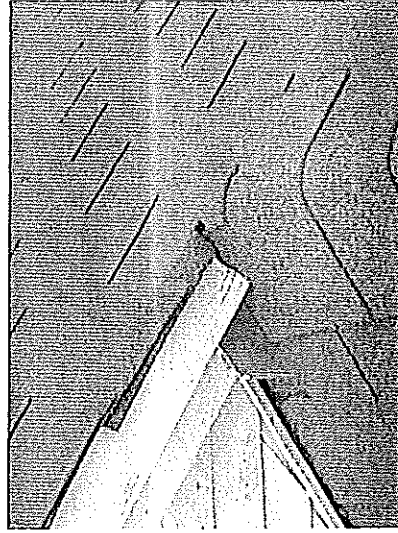
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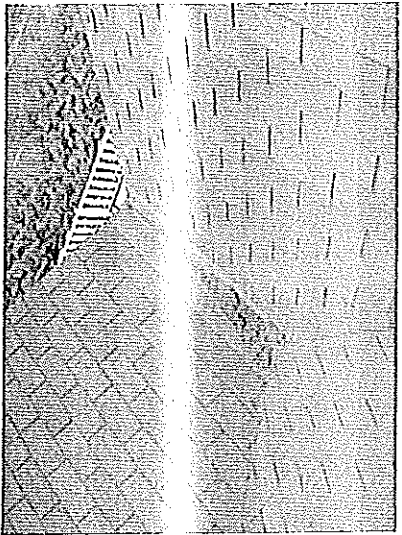
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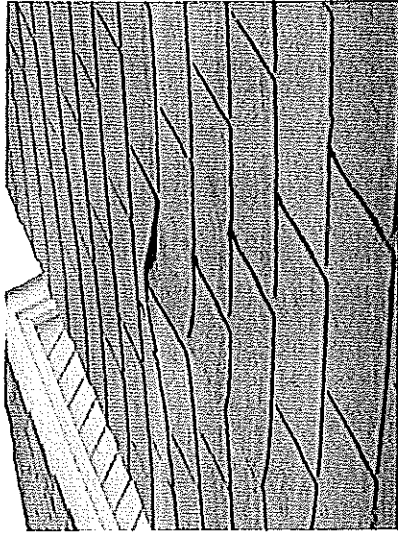
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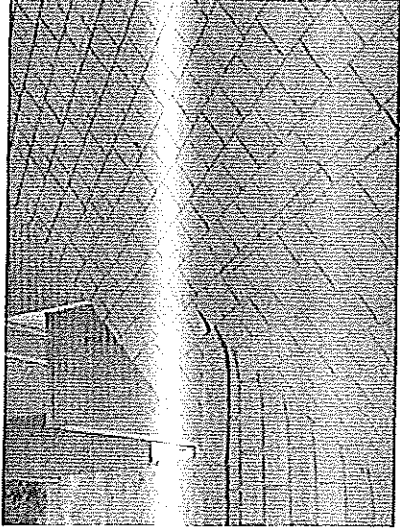
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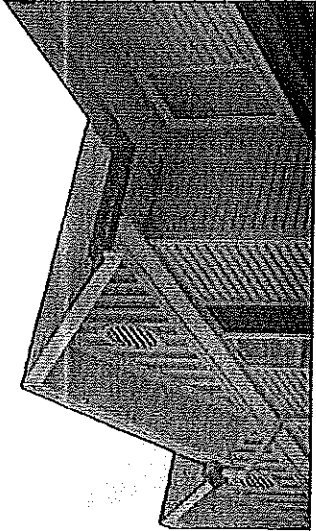
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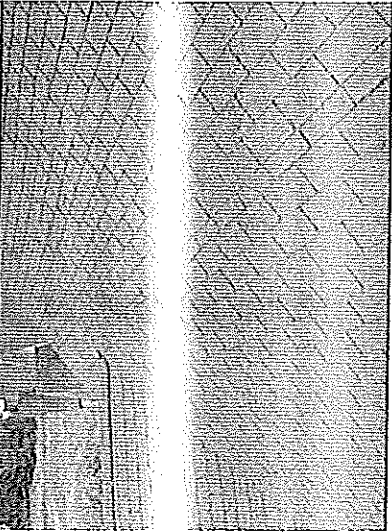
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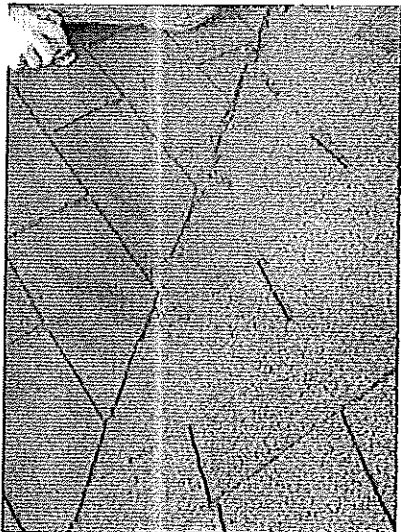
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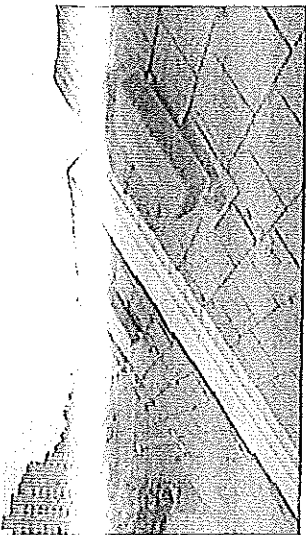
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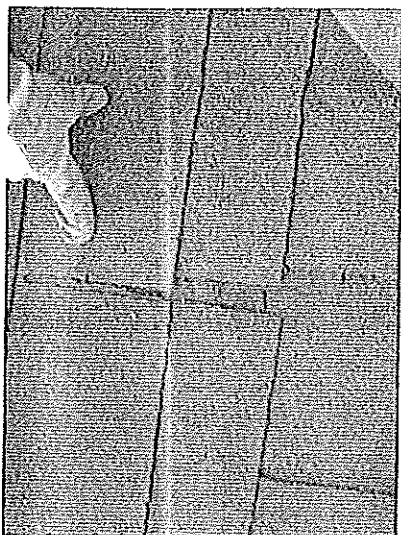
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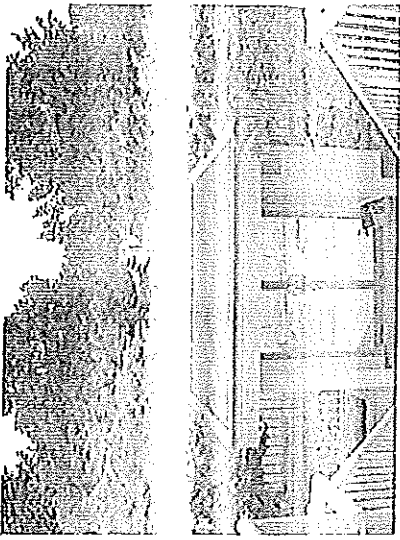
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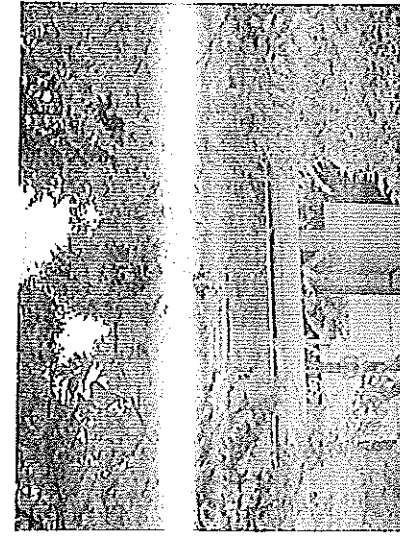
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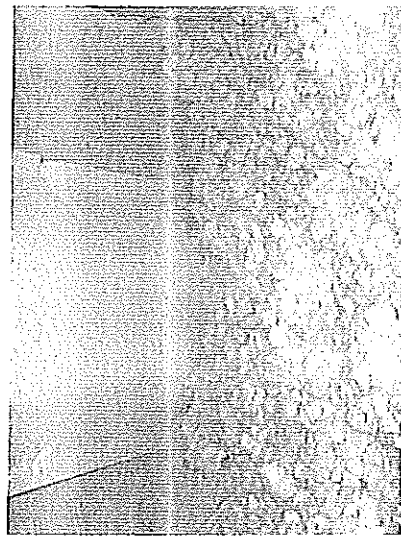
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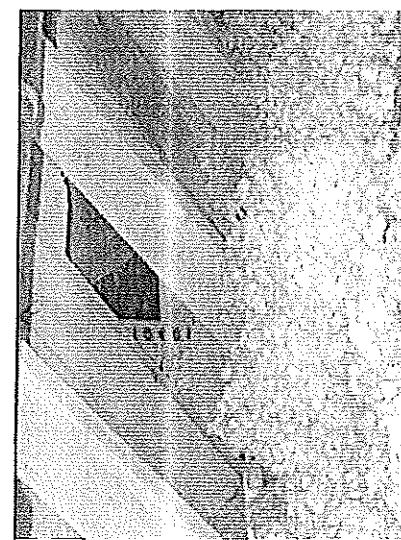
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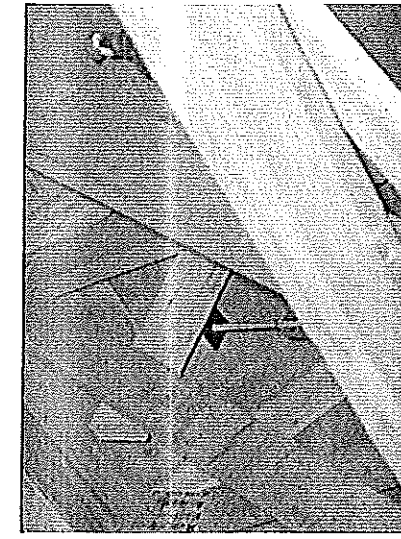
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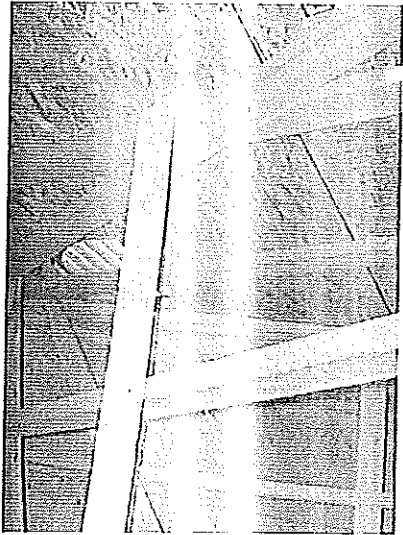
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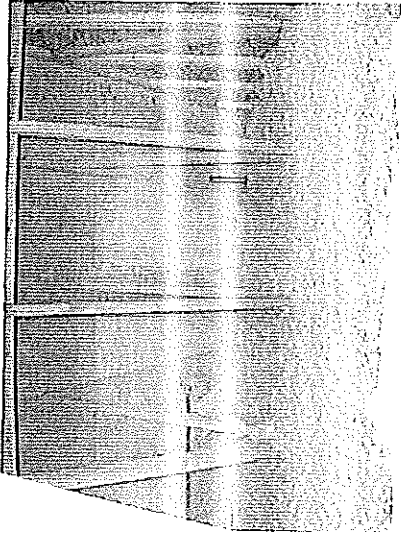
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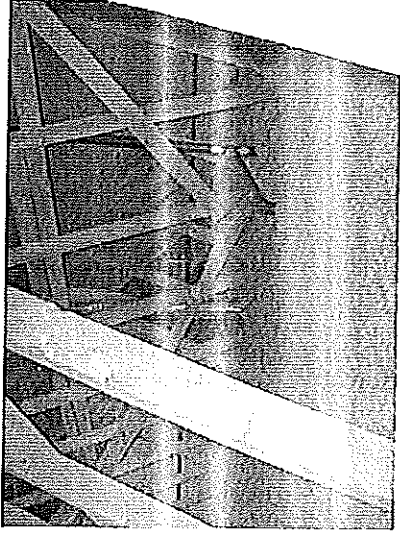
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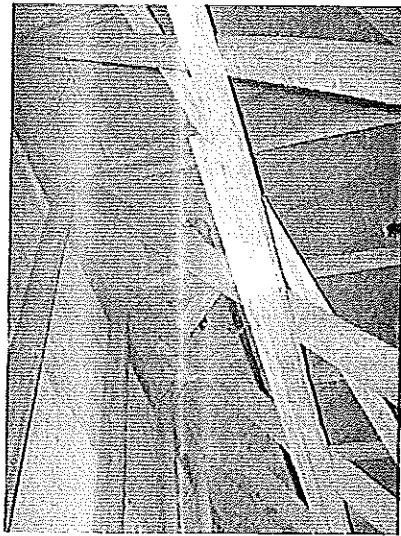
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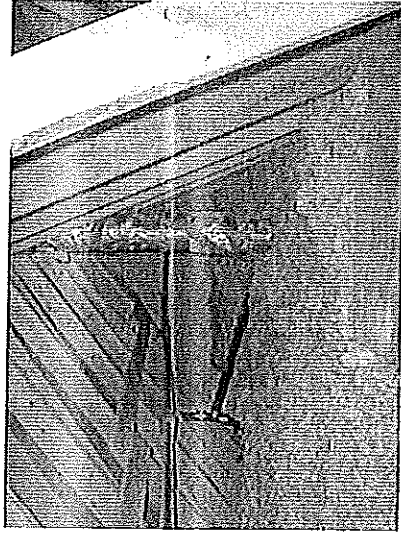
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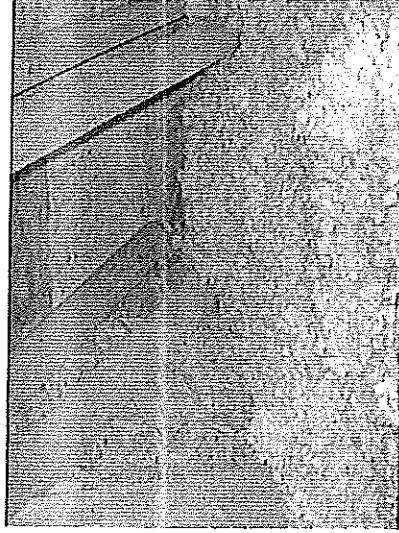
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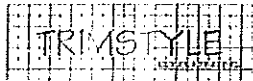
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APPENDIX D

GLOSSARY OF TERMS (SLOPED ROOFS)

Downspouts: A vertical pipe or conduit to carry runoff water from a scupper, conductor head or gutter of a building to a lower roof level or to the ground or storm water runoff system.

Edge Venting: The practice of providing regularly spaced or continuously protected (e.g. louvered) openings along an edge or perimeter. Used as part of a ventilation system to dissipate heat and moisture vapour.

Exhaust Ventilation: Air that is vented or exhausted from the roof cavity, typically through vents installed on the up-slope portion of the roof. For example, with most steep-slope roof assemblies, exhaust vents are typically located near the ridge.

Fascia: (1) In steep-sloped roofing, a board that is nailed to the ends of a roof rafter; sometime supports a gutter. (2) In low-sloped roofing the vertical or steeply sloped roof trim located at the perimeter of a building. Typically it is a border for the roof system.

Felt: A flexible sheet manufactured by the interlocking of fibers with a binder or through a combination of mechanical work, moisture and heat. Felts are manufactured principally from wood pulp and vegetable fibers (organic felts), glass fibers (glass fiber felts), or polyester fibers.

Intake ventilation: The fresh air that is drawn into a passive ventilation system through vents typically installed in the soffit or eave of a roof.

Mildew: A superficial growth produced on organic matter or living plants by fungi.

Ridge: Highest point on the roof, represented by a horizontal line where the two roof areas intersect, running the length of the area.

Ridge Cap: A material or covering applied over the ridge of a roof.

Shingle: (1) A small unit of prepared roofing designed for installation with similar units in overlapping rows or courses on inclines exceeding 3:12 slope (14 degrees). (2) To cover with shingles. (3) To apply any sheet material in succeeding overlapping rows like shingles.

Starter Course: The first layer of roofing applied along the line adjacent to the down slope perimeter of the roof area. With steep-sloped water shedding roof coverings, the starter course is covered by the first course.

Underlayment: An asphalt saturated felt or other sheet material (may be self-adhering), installed between the roof deck and the covering, is now required in a steep sloped roof assemblies. Underlayment is primarily used to separate the roof covering from the roof deck, to shed water and to provide secondary weather protection for the roof area of the building.

Vent: An opening designed to convey air, heat, water vapour or gas from the inside of a building or building components to the atmosphere.



APPENDIX D

GLOSSARY OF TERMS (FLAT ROOFS)

Blister: An enclosed pocket of air, which may be mixed with water or solvent vapour, trapped between impermeable layers of felt or membrane, or between the membrane and the substrate.

Buckle or Ridge: An upward, elongated displacement of a roof membrane frequently occurring over insulation or roof deck joints. A ridge may be an indication of movement within the roof assembly.

Built-up-roofs (B.U.R.): A continuous, semi-flexible roof membrane, consisting of multiple plies of saturated felts, fabrics or mats assembled in place with alternate layers of bitumen, surfaced with mineral aggregate, bituminous materials, a liquid applied coating or a granule-surfaced cap sheet.

Cap Flashing: (1) Usually composed of metal, used to cover or shield the upper edges of the membrane base flashing wall flashing. (2) A flashing used to cover the top of various building components, such as parapets or columns.

Coping: The covering piece on top of a wall exposed to the weather, usually made of metal, masonry, or stone and sloped to carry off water.

Core Sample: A sample from a low-slope roof system taken for the purpose of obtaining primarily qualitative information about its construction. Typically, core cut analysis can reveal the type of membrane surfacing; the type of membrane; the approximate numbers of plies; the type; the thickness and condition of the insulation (if any); and the type of deck used as a substrate for the roof system.

Counterflashing: Formed metal or elastomeric sheeting secured on the wall, curb, pipe, rooftop unit or other surface, to cover and protect the upper edge of a base flashing and its associated fasteners.

Embrittlement: The loss of flexibility or elasticity of a material.

Mineral Surfaced Sheet: A roofing sheet that is coated on one or both sides with asphalt and surfaced with mineral granules.

Ponding: The excessive accumulation of water at low-lying areas on a roof that remain after the 48hrs following the end of a rainfall under conditions conducive to drying.

Positive Drainage: The drainage condition in which consideration has been made during the design for all loading deflections of the deck and additional roof slope has been provided to ensure drainage of the roof area within 48hrs following rainfall during conditions conducive to drying.

Scupper: Drainage device in the form of an outlet through a wall, parapet wall or raised roof edge lined with a soldered sheet metal sleeve.

Split(ing): A membrane tear resulting from tensile stresses.

Substrate: A surface upon which the roofing or waterproofing membrane is applied.