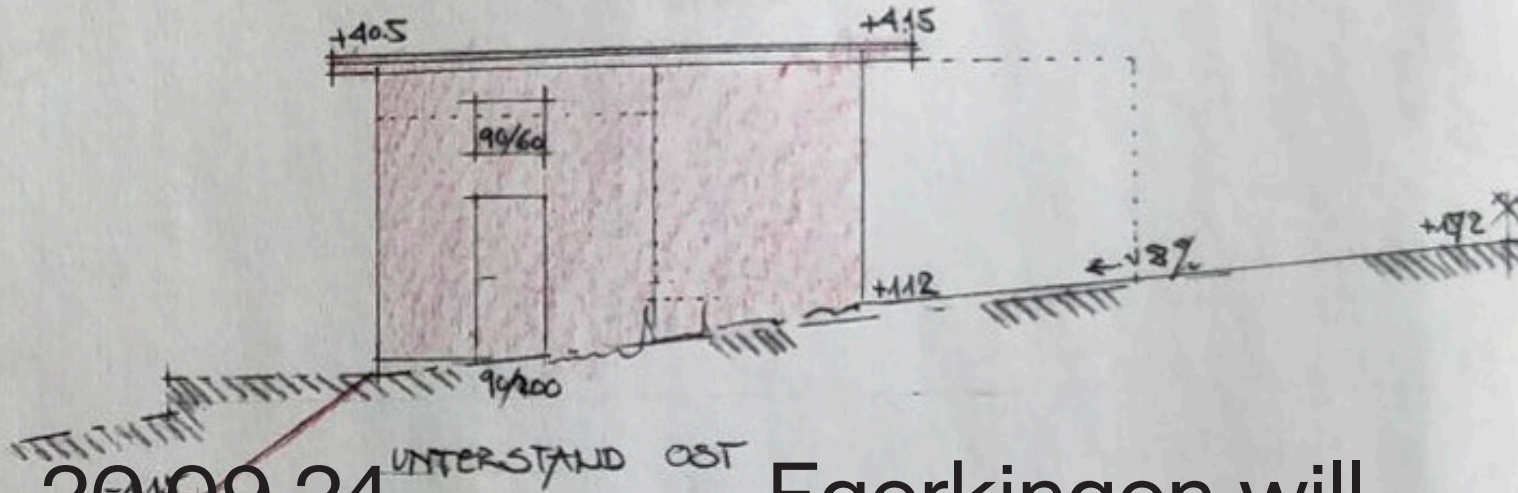
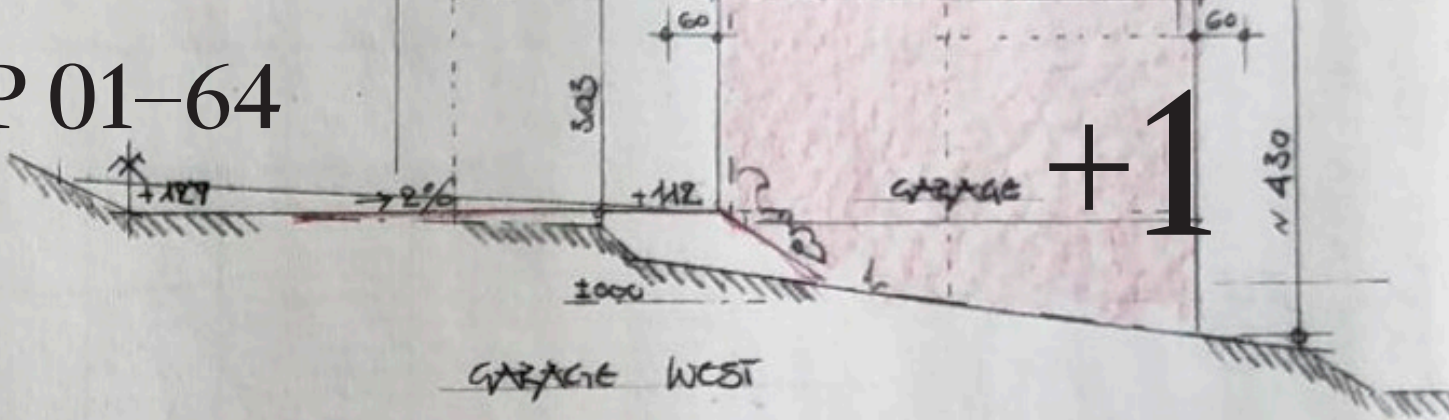


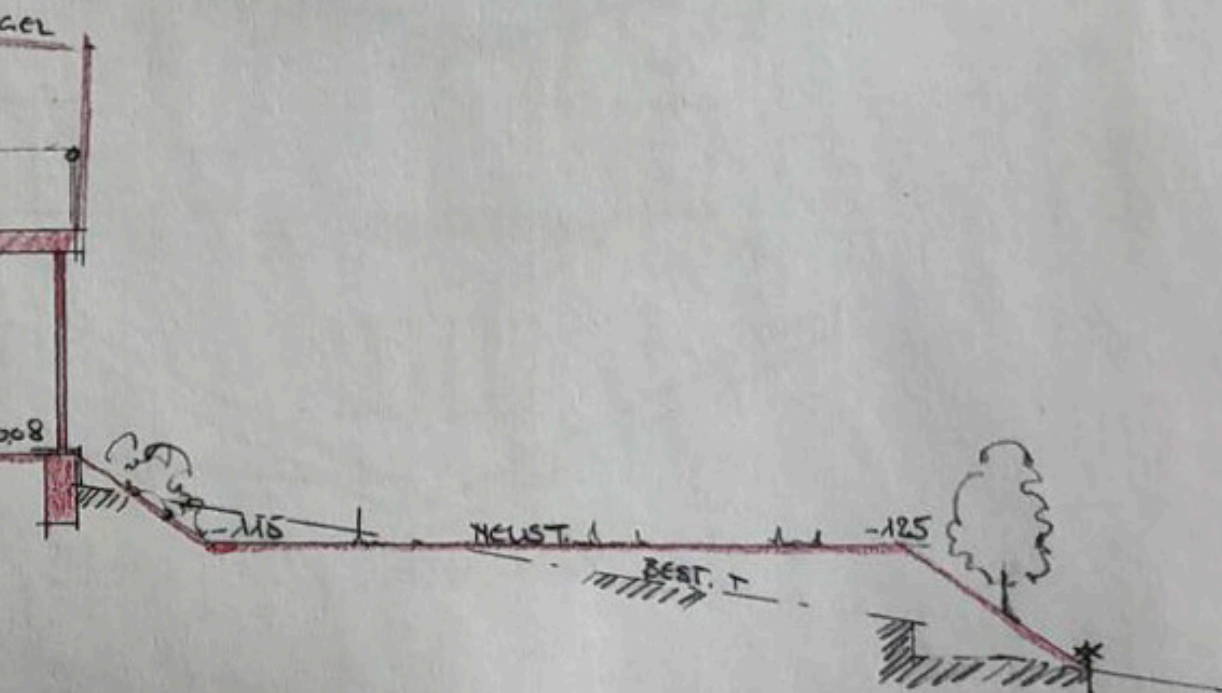
P 01-64

+1



20.09.24-
15.10.24

Egerkingen will
grow without
having any plots
left



P 05–08

Numbers of
Egerkigen

P 09–12

House owners

P 13–18

Building stock
in Egerkingen
Bühl

P 19–42

The Potential

P 43–58

How to do?



P 05–08

Numbers of
Egerkingen

2023–2050

+1

2023

1. Gemeinde Egerkingen.
15.12.2024. <https://www.egerkingen.ch/egerkingeninzahlen>
2. Kanton Solothurn, GINES GmbH, 2024. 15.12.2024.
<https://solothurn.gines.ch/embed/chart/74?locale=de%22%20width=%22500%22%20height=%22350%22%20frameborder=%220%22%20style=%22border:0>
3. Bundesamt für Statistik.
Leer Stehende Wohnungen.
2023. Egerkingen. 15.12.2024.
https://www.egerkingen.ch/_docn/5145961/Leerwohnungsstatistik_2024.PDF
4. Schweizer Eidgenossenschaft. 2024. Wohnungen nach Gemeinde, Anzahl Zimmer und Flächenklassen, 2000.
15.012.2024. https://www.pxweb.bfs.admin.ch/pxweb/de/px-x-0902020100_135/px-x-0902020100_135/px-x-0902020100_135.px/

4311 residents
1830 housing units

2,35 residents/
housing unit

60% of people are living in
single family homes in Egerkingen.
(only 2 empty houses)
Every plot is built.
No zoning is planed.

Housing units by rooms:
1 room - 45x, 2 rooms - 100x, 3 rooms -
260x, 4 rooms - 398x, 5 rooms - 252x,
6 rooms - 98x, 7 rooms - 29x, 8 rooms
- 15x, 9 rooms - 3x, 10 rooms - 2x

→ Can we house 907 housing units in all the single family homes?

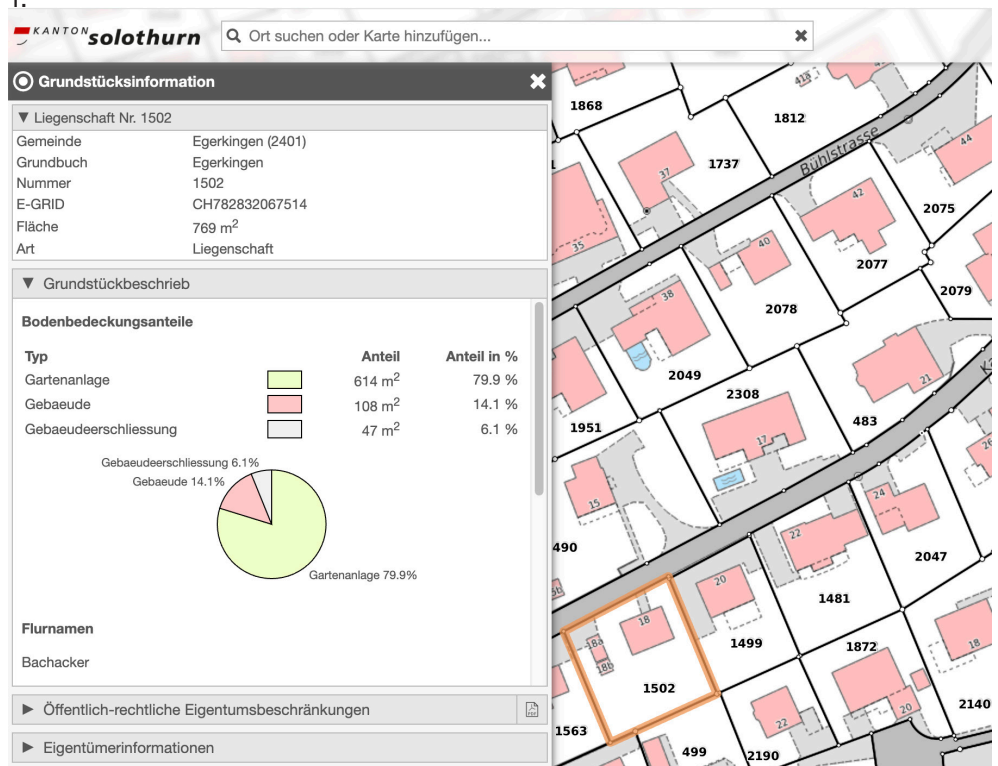
That would mean that every single family house would need an extra housing unit, for at least 2 people by 2050.

→ 2050

6295 residents (+1984)
→ 2679 housing units (+907)

+50%

1.



How to get ready
for extra
housing units?

Empty nester

The majority of home owners are so called empty nesters. Most of the time it is a couple over the age of 55. Their children already moved out. The houses were designed and build to accomodate 4 to 5 people. Their houses are underoccupied.

What empty nesters want

Studies show that about 50% of empty nesters are willed to change their housing situation to enable a more efficient room usage.

With increasing age they encounter that the load of work to maintain a whole house alone or as a couple is too much, heating cost are unnecce-cary high or they start feeling lonely when single. But they also name different challenges and fears that keep them from moving.

They can not find something affordable, something in or close to their neighbourhood and where they can use a garden. Also they still want to have a guest room so that their children can come and visit them. They imagine adapting to a new housing situation can be challenging for them.

They believe a transformation of their own house is allways connected to big costs and a lot of stress. They can imagine having less space by square meter but don't want to loose seperate spatial functions: kitchen, bathroom, sleeping room, living room, office. Also storage room gains importance.

People have the feeling that the older they get, the less space they need, but the less likely they are to move.

1. Geoportal Kanton Solothurn. 15.12.2024. https://geo.so.ch/map/?realty=&t=default&l=ch.so.agi.av.grundstuecke&bl=hintergrundkarte_farbig&c=2627373%2C1241509&s=945
2. FHNW Institut Architektur. Alternde Einfamilienhausgebiete in der Nordwestschweiz. 2017. PDF. 15.12.2024. https://www.metro-basel.org/images/Archiv/2016/HUK_Arbeitsbericht_final_HQ-comprimido1.pdf

More housing units can only be created when the following points are considered:

House owners can stay in their house or in their neighbourhood.

Elderly people don't have to change their lifestyle too much.

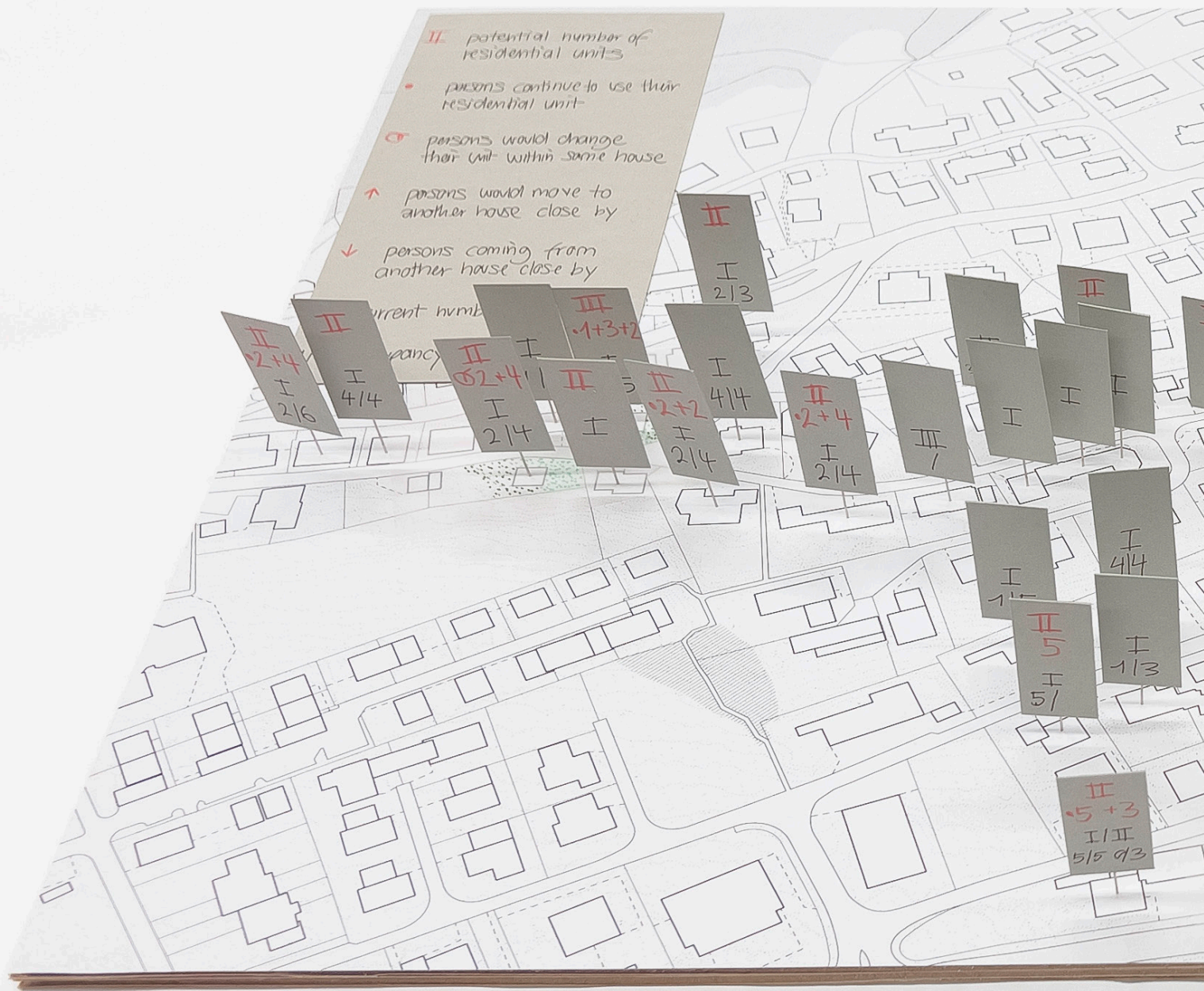
Necessary transformation has to be as easy and affordable as possible.

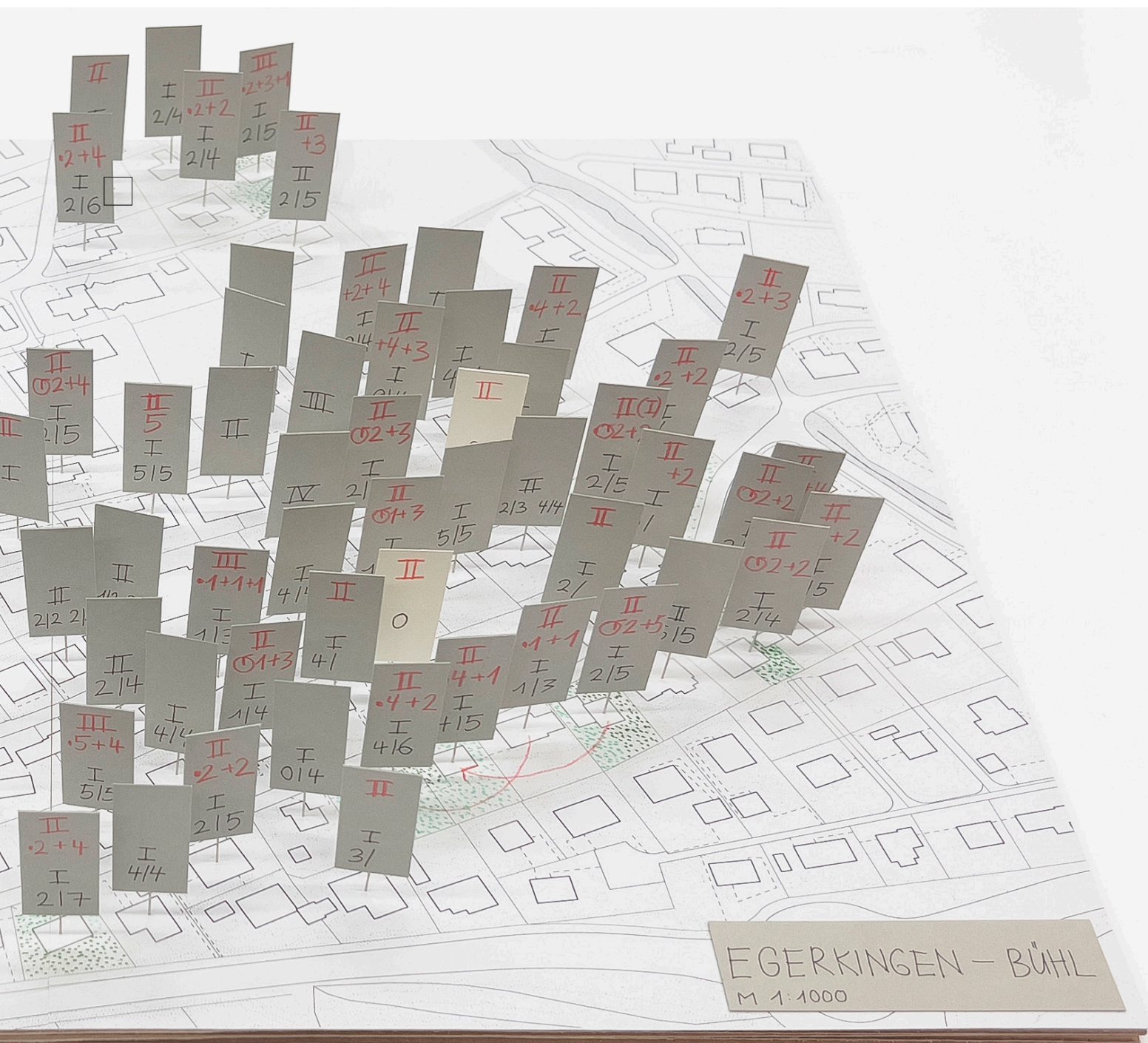


P 13–18

Building stock in Egerkingen Bühl

Where to find
the additional
housing units?





Egerkingen Bühl

The neighbourhood of Egerkingen Bühl has a lot of potential for densification. The most houses can be transformed with little interventions to create a second housing unit.

Many elderly people grew up with maintenance and craft as a daily work. So they have a lot of knowledge about construction, building and maintaining.

Young people on the other hand can save a lot of money by doing work on their own, when they renovate or transform a house they just bought.

Who is responsible for the transformation of the single family home situation?

The single family home situation can only be solved when owners, municipalities and planners are working together.

Municipality

Municipalities can loosen up regulation and permission processes for densification. By setting good example of transformation and maintenance residents will follow. A mediator role can be positive to be a first contact for residents which will be then provided with information, ideas and contacts. Creating incentives.

House owners

It all starts with the willingness of the house owners, to question their housing situation. They must understand the situation as a task executed house by house but also as community task to achieve a bigger goal within the neighbourhood and village. They will be the people who have to do the investment.

Planers

It is very important to look at the very specific situations in every house to design specific and logical. Also connect single potentials to enhance the built stock as a whole system. Traditional ways of transformation may not be appropriate. Alternative ways of transforming and living has to be offered. Planers can also carry out educational work, by teaming up with experts to give people the abilities and skills they need to transform by themselves. By showing good examples people get inspired and may see their situation in different eyes. All ideas have to be feasible.

How can house owners and municipalities start densification and transformation of the single family houses?

Design examples of transformations that can be done by the people themselves.

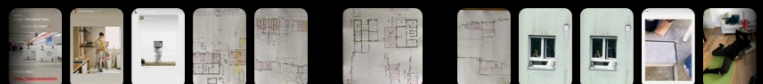
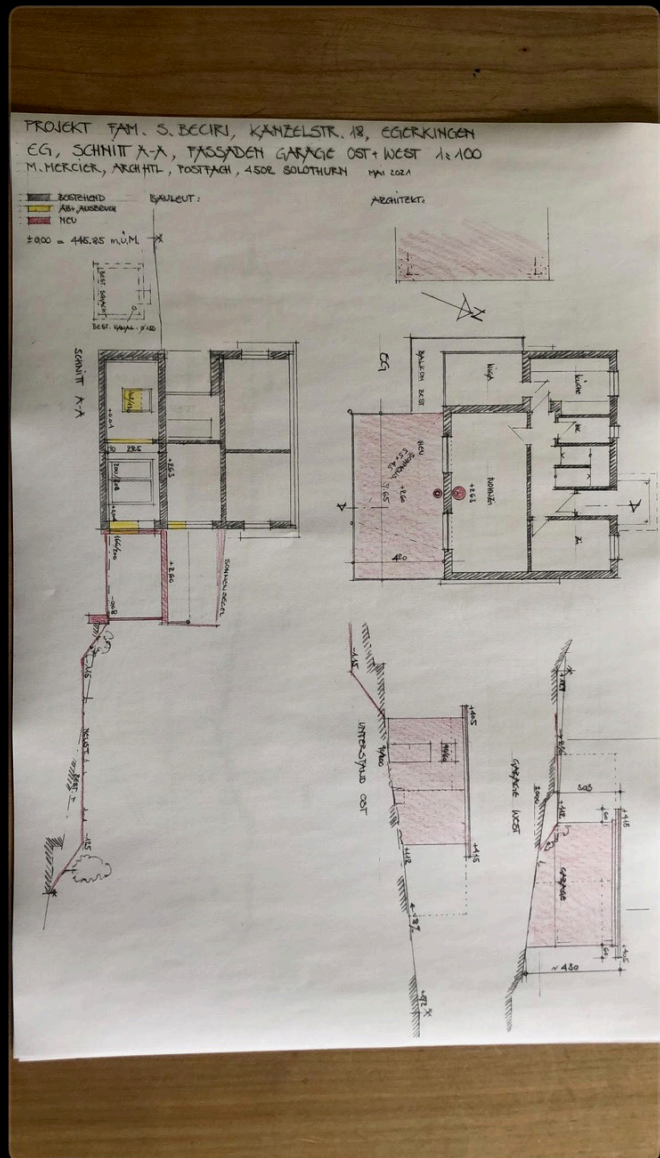
Provide manuals, provide knowledge, provide tools.

11:54

5G 70

20. Mai 2021

12:10



P 19–42

The Potential

1:100
1:50

Have a closer
look



Kanzelstrasse 38

The retired couple bought this semi-detached house in 2020 as a catalogue house which was built 6 times. Before the construction process they could design the interior to their needs. They said that the space in the first floor is not needed anymore. Due to its slope position the basement works as a second main entrance and a central staircase connects basement, groundfloor and first floor.

Intervention

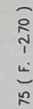
By capsuling the staircase in the groundfloor the basement and the first floor can be connected. The new housing unit reaches round the original housing unit in the groundfloor. the interior intervention also results in a garden situation where the housing unit have their own space behind the house and a shared space facing the street.

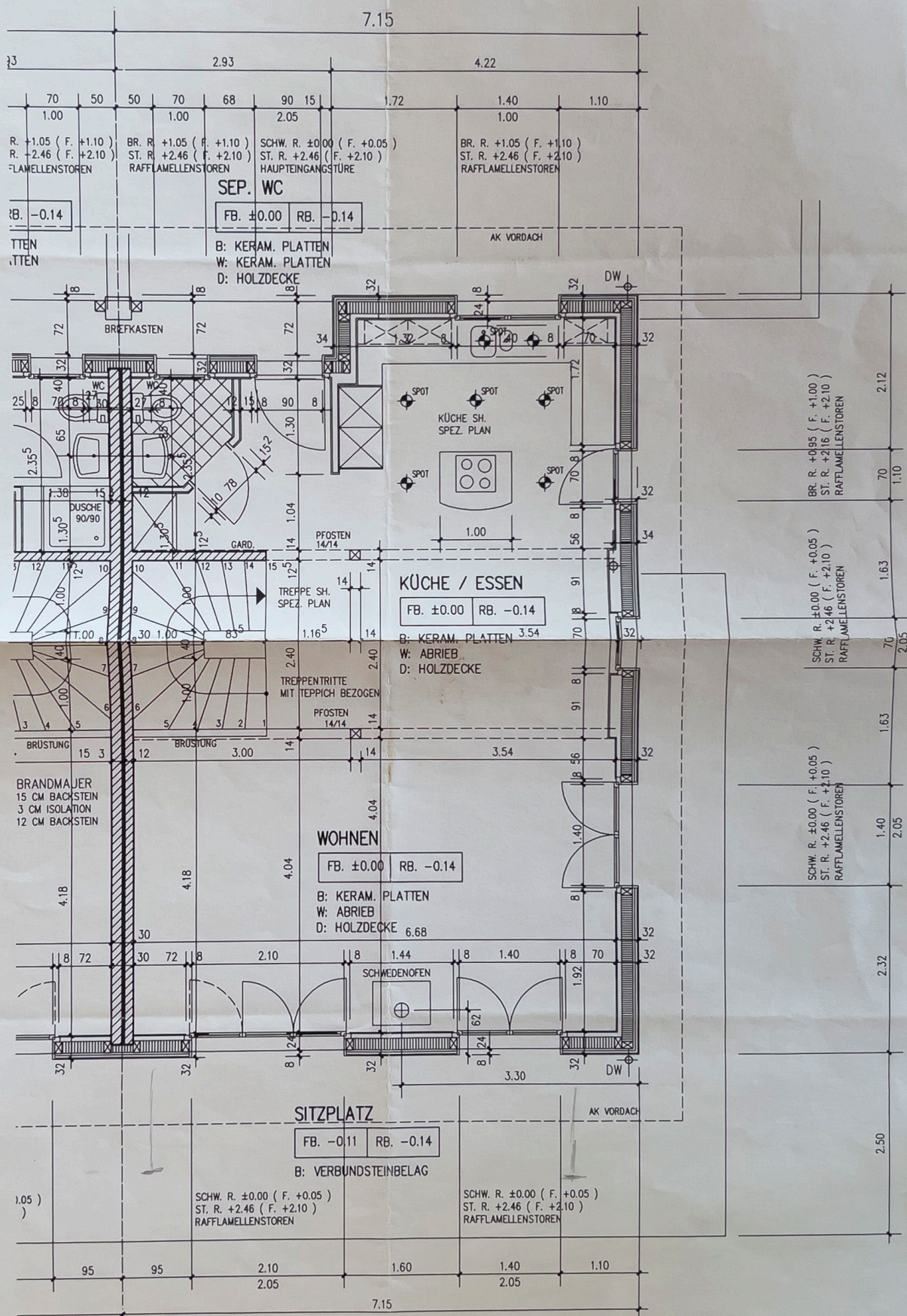


North east view



South view from Kanzelstrasse side arm







3 DOPPEL-EFH BAUKONSORTIUM BACHMATT KANZELSTRASSE 4622 EGERKINGEN

SNITT B-B (HAUS 1 UND 2)

MSST. 1:100

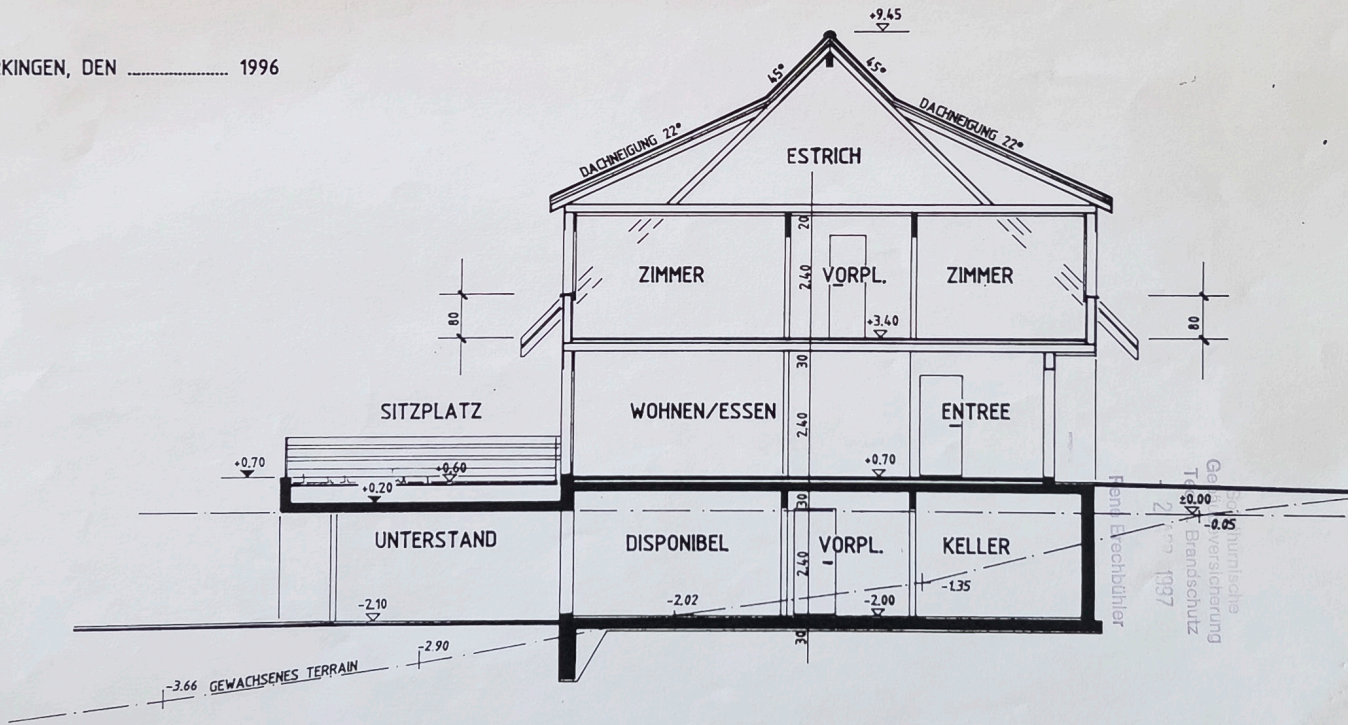
Dan.

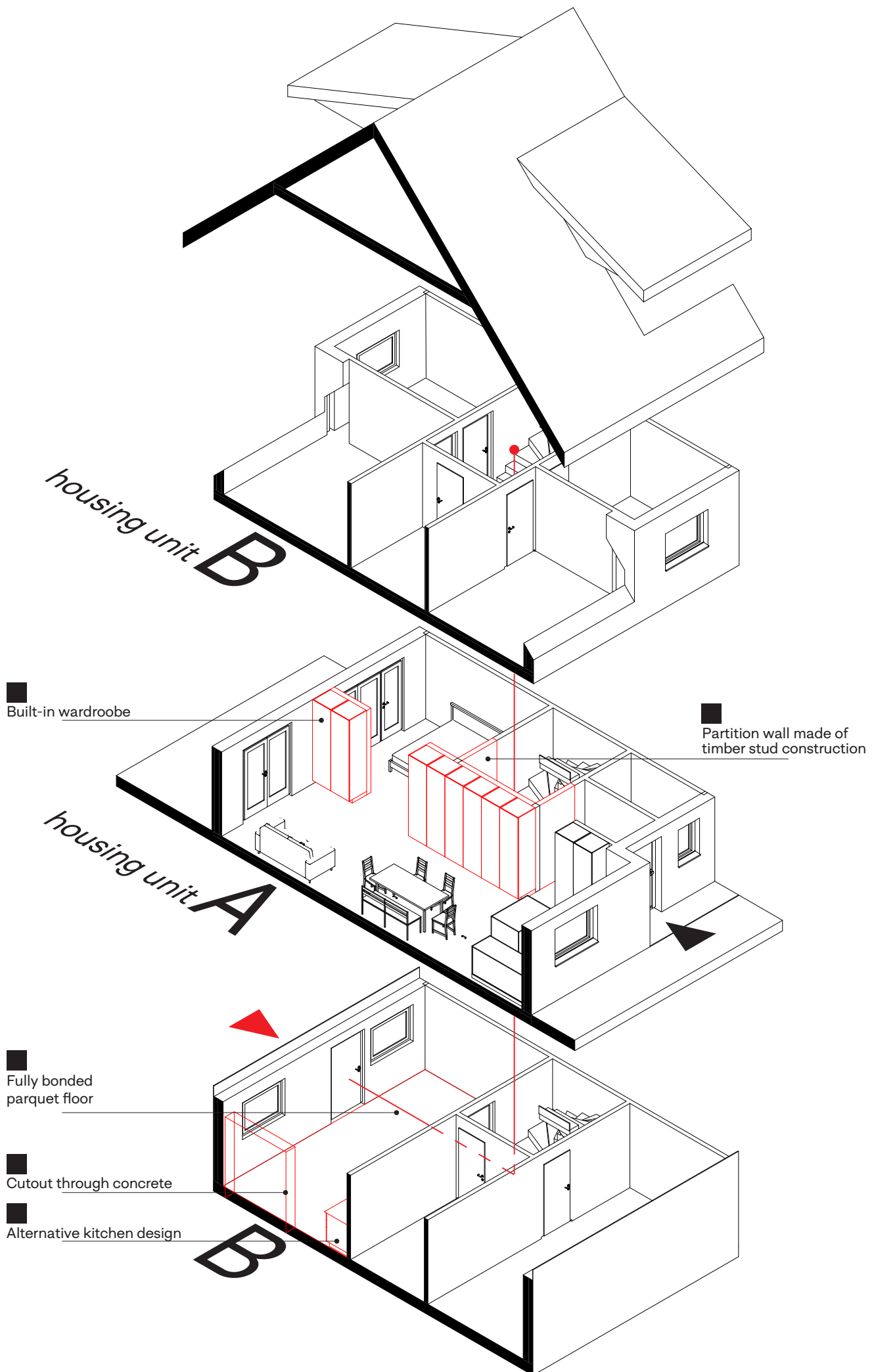
ARCHITEKTURBÜRO E. GÖGGL AM STALDEN 112 4622 EGERKINGEN 062/398'17'14 16.02.96

DIE BAUHERRSCHAFT :

DER ARCHITEKT :

EGERKINGEN, DEN 1996







Kanzelstrasse 18

The young couple bought the house from an old woman for 750000CHF. They reorganized the layout to their needs and added an extra apartment in the basement, which was an garage for the previous house owners. Except from electrical, water and heating work the family did everything by themselves. Otherwise they wouldn't have been able to buy and renovate the house. They were also leveling the garden behind their house. The garden in front of their house is not used and appears more as a stone garden.

Idea

The interesting situation here is the kind of neglected space between their house and the house of the neighbour at Kanzelstrasse 20 who has almost the same layout of the young couple. Before the renovations of the houses two garages were facing each other. Now there is two apartments facing each other, separated by a fence, connected by a neglected garden with a big potential.



The space between the two houses



Kanzelstrasse 18

PROJEKT FAM S. BECIRI, KANZELSTR. 18, EGERKINGEN

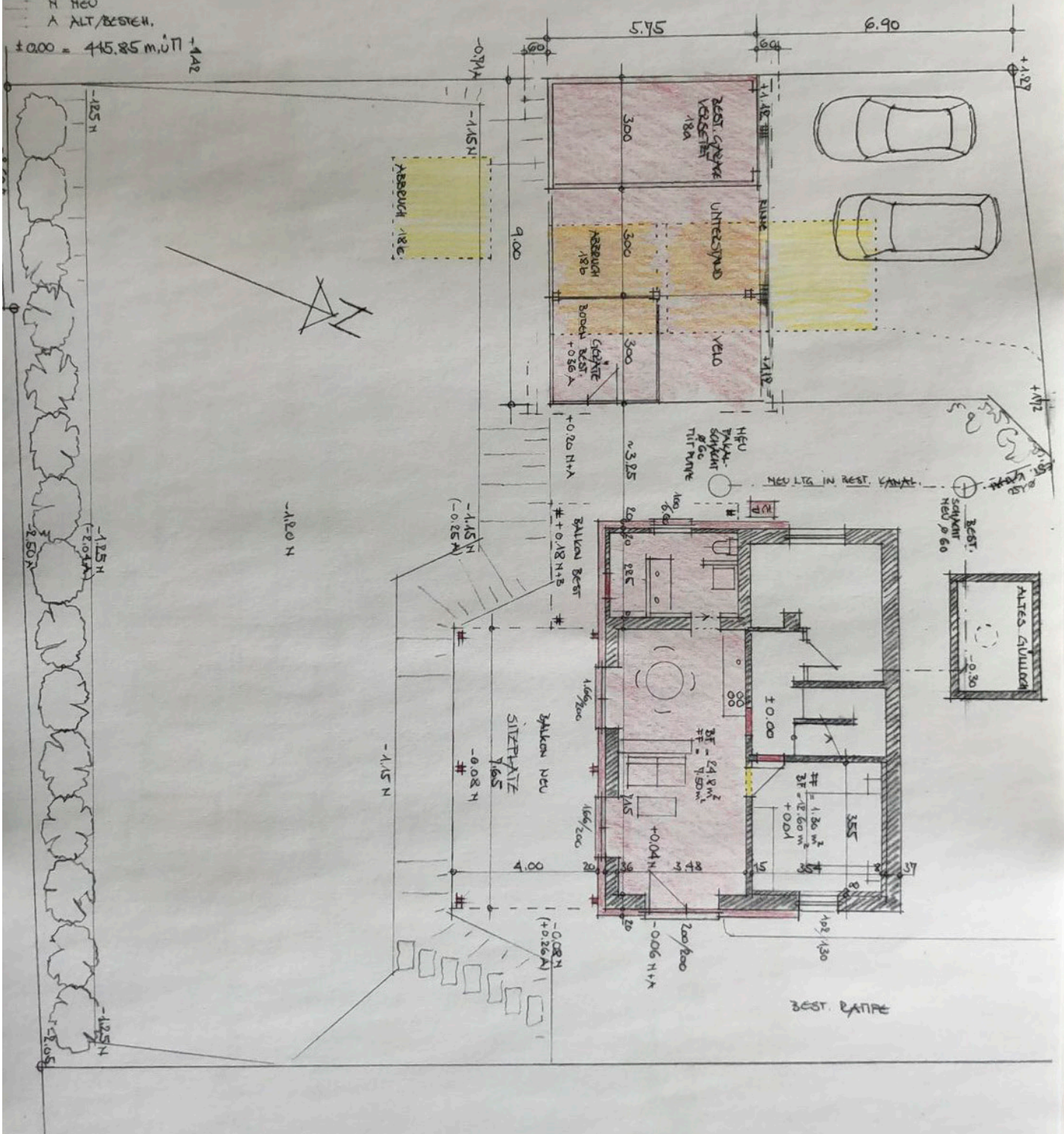
UNTERGESCHOSS UND UMGEBUNG 1:100

M. MERCIER, ARCH HTL, POSTFACH, 4502 SOLOTHURN MAI 2021




■ BESTEHEND
 ■ AUSBRUCH
 ■ NEU
 ■ NEU
 ■ ALT/BESTEH.

BAULEUT:

ARCHITEKT:



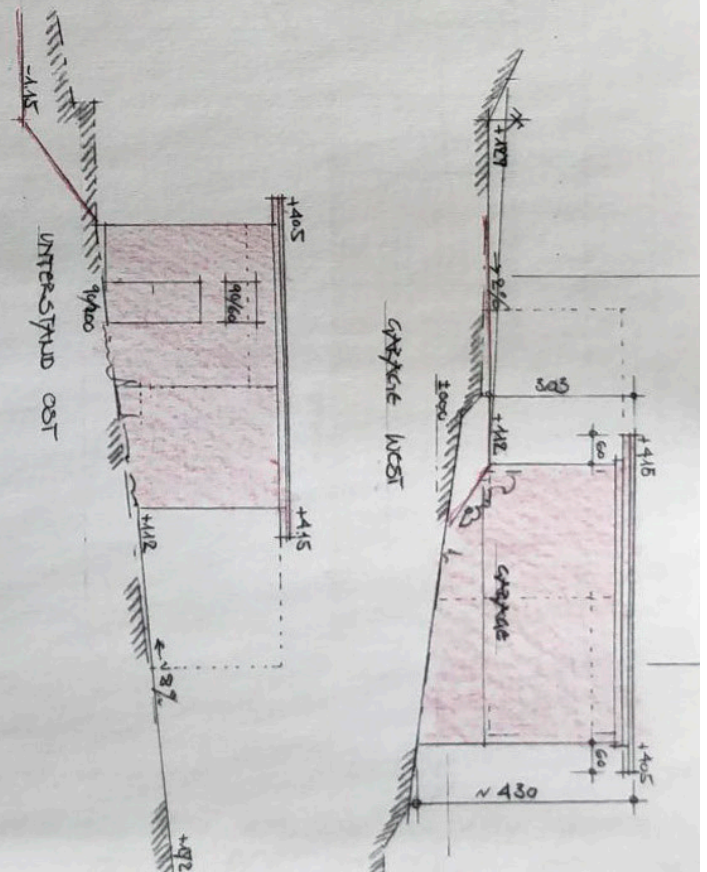
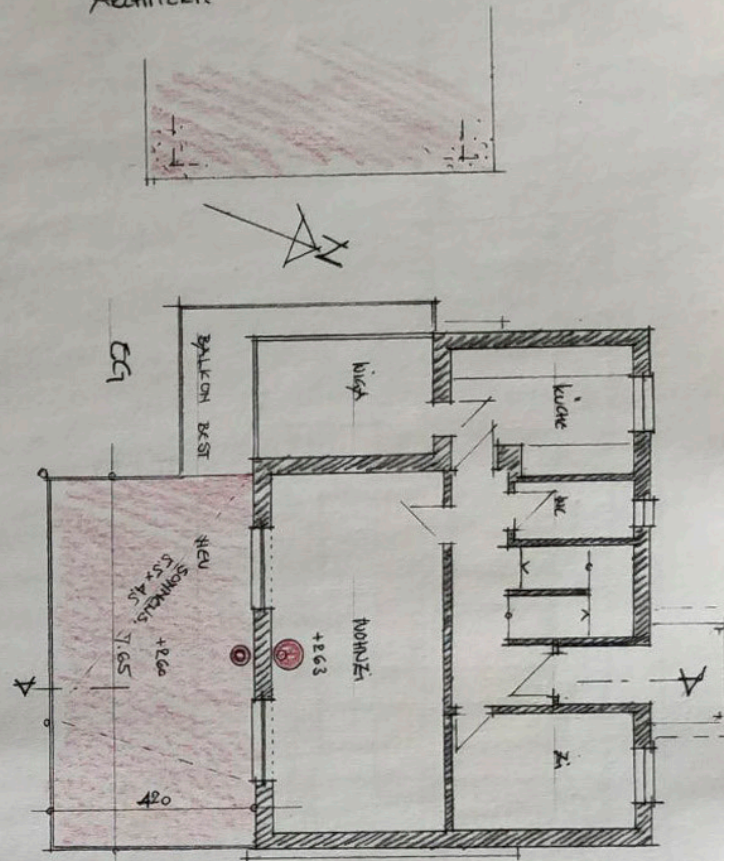
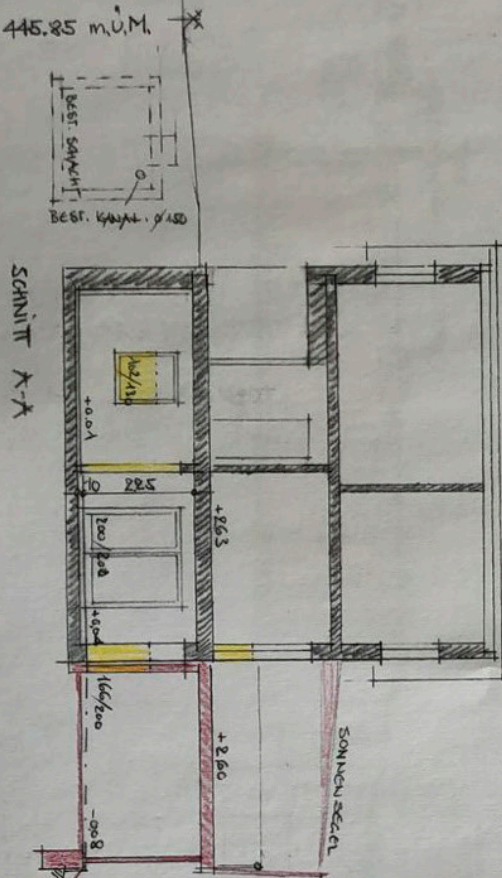
PROJEKT FAM. S. BECIRI, KÄNZELSTR. 18, EGGERKINGEN
EG, SCHNITT A-A, FASSADEN GARAGE OST + WEST 1:100
M. MERCIER, ARCHITEL, POSTFACH, 4502 SOLOTHURN mai 2021

 BESTEHEND
 AB+ AUSBEUCH
 NCU

$$\pm 0.00 = 445.85 \text{ m.u.M.}$$

BYXULEUT:

ARCHITEKT:



Section

PROJEKT FAM S. BECIRI, KANZELSTR. 18, EGGERKINGEN

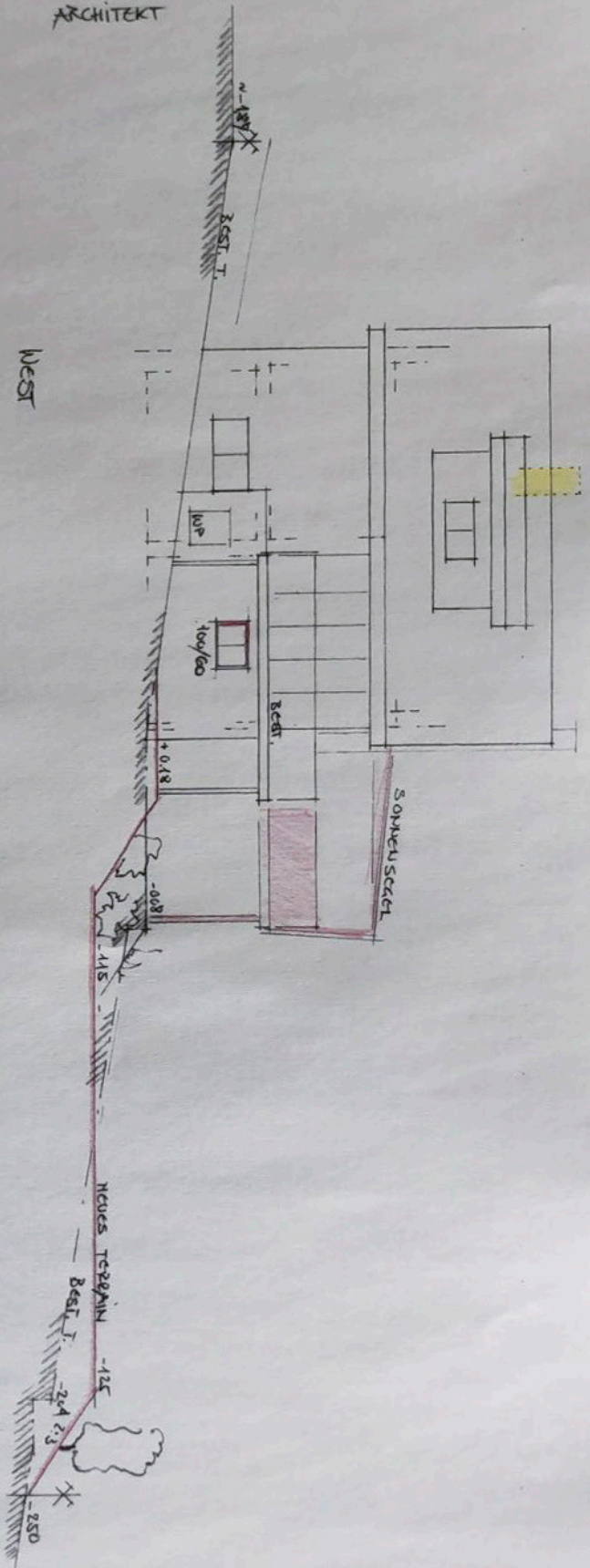
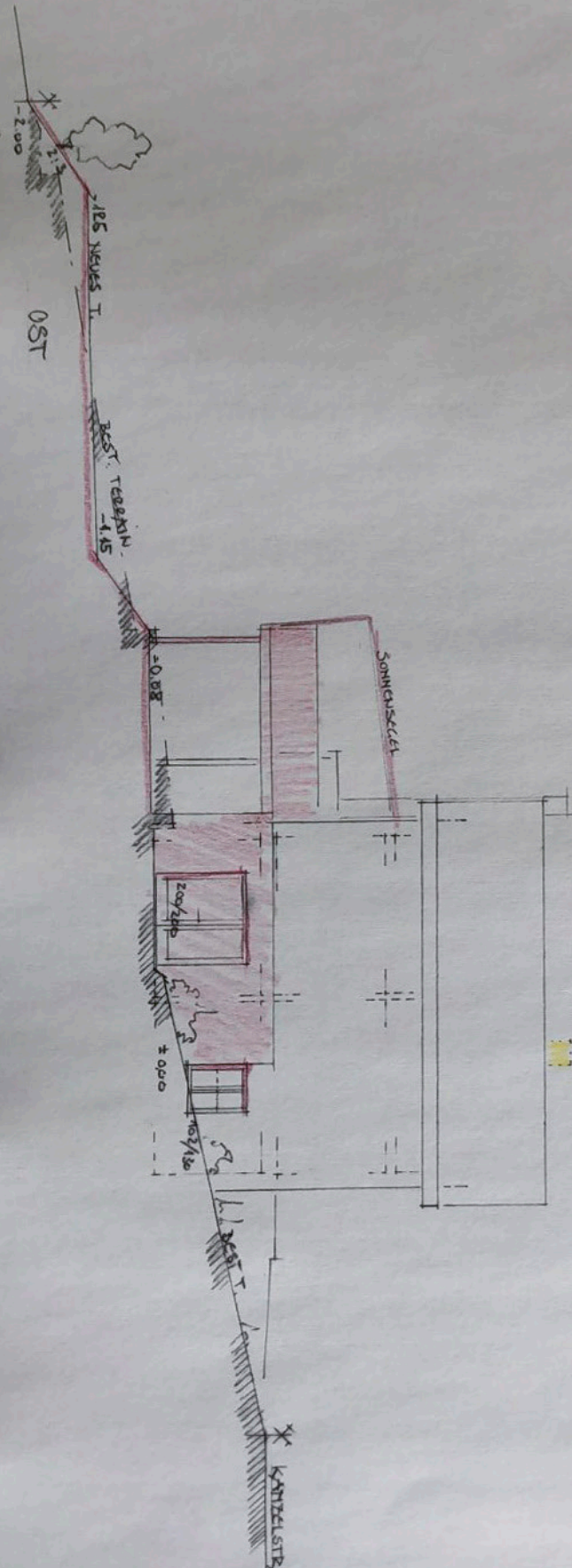
FASSADEN WEST UND OST 1:100

M. MERCIER, ARCH HTL, POSTFACH, 4502 SOLOTHURN

MAI 2021

BAULEUT:

ARCHITEKT



Elevation west, east

PROJEKT FAM. S. BECIRI, KANZELSTR. 18, EGGERKINGEN

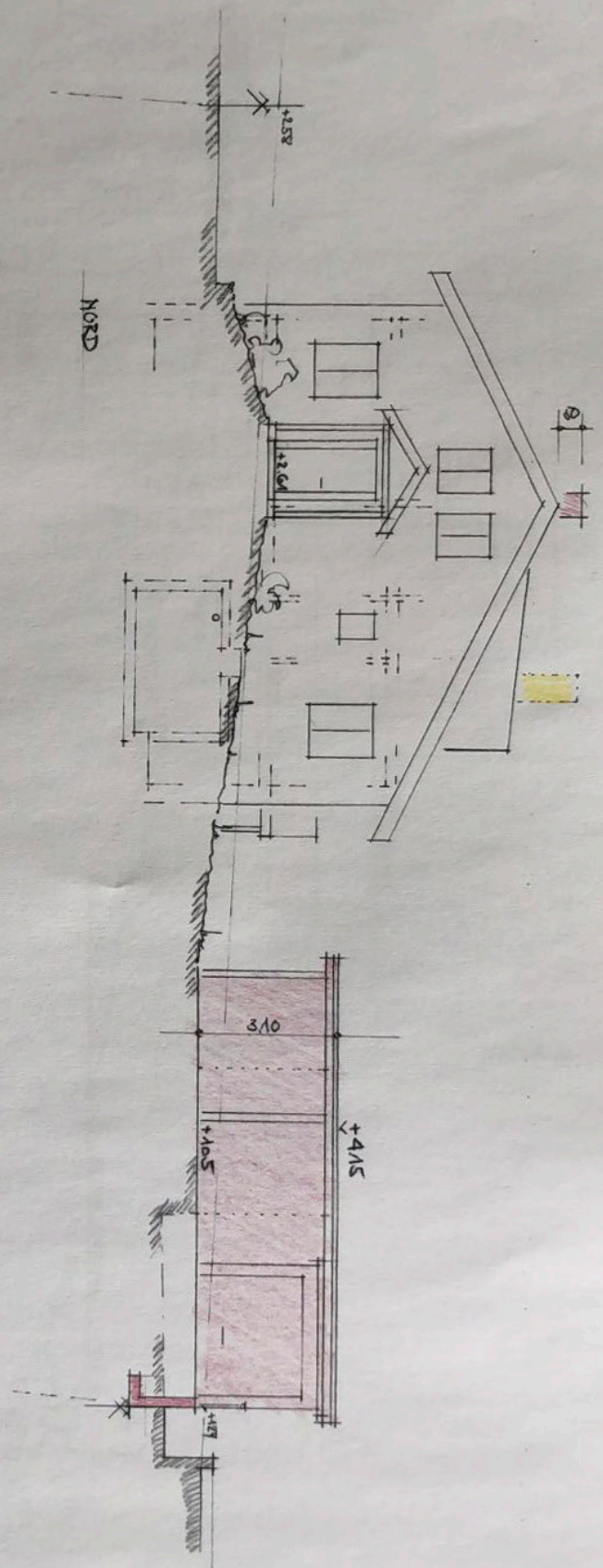
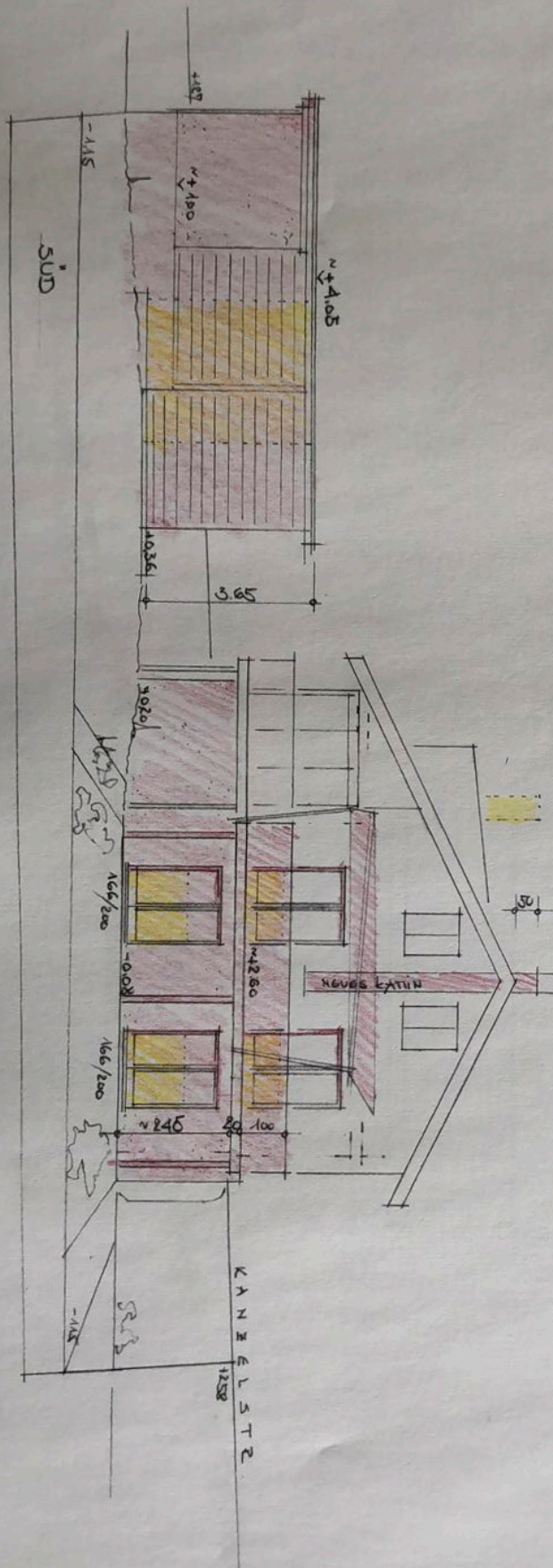
FASSADEN NORD UND SÜD 1:100

M. MERCIER, ARCH HTL, POSTFACH, 4502 SOLOTHURN

Mai 2021

BAULEUT:

ARCHITEKT



Elevation north, south







Kanzelstrasse 24

An old couple is living in their alone since their children moved out. While they were four people they added an conservatory to the back of the garage. Due to zoning laws they have 3 parking lots on their plot, plus an extra double garage which was used as an little workshop.

Idea

The first idea is to add an external staircase to give access to the first floor and therefore creating a second housing unit without disturbing the groundfloor layout. But this will only result in two small living untis.

The easiest way of creating a new housing unit so that more people than before can use the existing structures, is to combine the conservatory with the barely used garage and transform it into a small apartment for two people. The existing house will not be touched and can be inhabited by four people again. The big garden can be divided into private and shared parts for both housing units with only minor interventions.



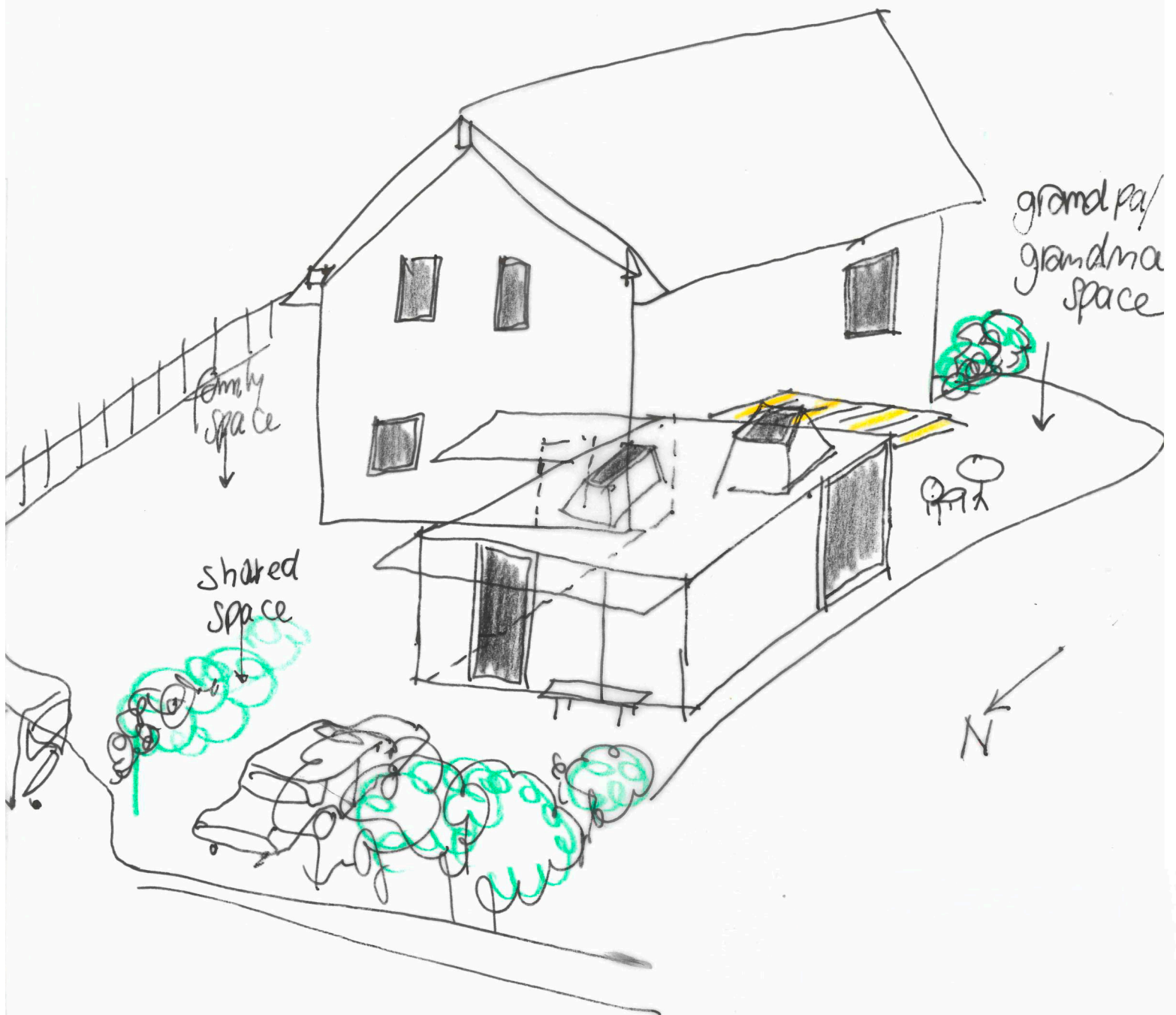
View from Kanzelstrasse



Side view of garage and conservatory



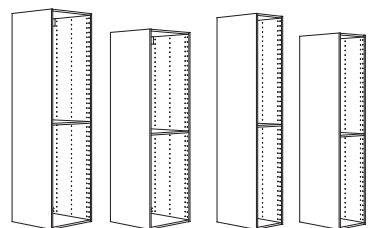
Idea 1: External staircase to the canopy as an entrance



Idea 2: Zoning of the garden and adding light to the „garage“

The potential lies in the existing frabric and has to be unlocked.

METOD



P 43–58

How to do?

1:1

Manuals

WHOLE EARTH CATALOG

Today one find thousands of manuals and tutorials online and in printed form. The hard part is to sort out which information will give you the knowledge and the ability to really do the work.

“The WHOLE EARTH CATALOG functions as an evaluation and access device. With it the user should know better what it worth getting and where and how to do the getting.”¹ The WHOLE EARTH CATALOG was a quarterly catalogue of manuals, tools, gear, and educational work. The content was selected and evaluated by the catalogues team. Everything featured in the catalogue was listed with order information or could be ordered directly at the WHOLE EARTH CATALOG company.

The aim was to empower people to do things themselves so that they can continue their education independently and realise their own projects without major financial outlay.

Now you can download the whole collection online.



1. Whole earth catalog - access to tools, Spring 1970, Portola Institute, Inc. 1970, p. 2.

WHOLE EARTH CATALOG

access to tools



Spring 1970
\$3.

Cover WHOLE EARTH CATALOG Spring 1970

Dear Dr. Hippocrates

Long-hairs are doing new stuff with their bodies and nervous systems that occasionally needs medical attention or perspective. Communication was blocked, however, by the social understanding that they aren't supposed to be doing that stuff. Dr. Schoenfeld and his medical advice column in the underground press cut through the blockage, and here came a spout of information as weird as it was useful. Good answers made the questions good.



Tell us about "speed." What happens to the body and brain when "meth" (crystals and tabs) is taken in small and large doses?

"Meth" (methamphetamine) is used in medicine for appetite control, mood elevation, and to raise blood pressure when indicated. The drug is usually ingested in five-milligram tablets one to three times a day. Medical reasons for injecting methamphetamine are specific and few.

Tolerance to the amphetamines develops rapidly and increasingly large amounts must be used to achieve the same results. When large amounts are used, blood-pressure may be raised sufficiently high to blow out a blood vessel in the brain, thus causing a stroke.

True addiction, as well, seems to occur. Recently a patient in a drug-abuse clinic stated that it was harder for him to kick the 'meth' habit than it was to get off heroin. At the time he was shooting up two hundred milligrams of 'crystals' every two hours. He was found dead a few weeks later, apparently from an overdose.

An eighteen-year-old boy on methamphetamine climbed out of a third-story window in Berkeley not long ago. He is now confined to a neurological institute, completely paralyzed from the effects of a broken back.

Both general and student hospitals are seeing increasingly greater numbers of sixteen-to-twenty-five-year-old people who have caught hepatitis from a needle used to inject methamphetamine. Neither boiling water nor soaking in alcohol will necessarily kill the hepatitis virus found in too many spikes.

Speed kills.

For cosmetic reasons and sex appeal, I have been interested for some time in removing my pubic hair. I initially tried scissors which left stubbles; a safety razor leaves red marks and bumps which are both unattractive and painful. An electric razor is better but still unsatisfactory. I called an electrologist who removes hair, but she found my request most peculiar and refused to undertake the work.

Can you suggest a solution to the problem? Is there any reason to believe removal of pubic hair would be either unhealthful or dangerous?

Cautious use of a depilatory or one of the newer electric razors would seem the best solution to your problem. I would advise against permanent removal since you might someday move to a colder climate.

(Note: Judging from the volume of mail received in response to the preceding question and answer, shaving pubic hair is definitely not confined to the Middle East. Excerpts from three letters follow.)

A leading manufacturer of safety razors (Gillette) recently placed on the market something called a 'Scairdy Kit.' The ad dealt with the problem of very brief bathing suits but the letter from the girl who shaves made me wonder. Perhaps she needs instruction in the use of lather or brushless cream.

She will have far better results if she uses an electric hair clipper such as the ones barbers use. The OOOO blade is the finest one and will not leave unsightly stubble, irritate the skin or cause abrasions.

For shaving, use alcohol—it eliminates abrasions and little bumps. This was told to me by a psychiatrist.

Have you ever heard of something called a 'hum' job? During fellatio or cunnilingus one vigorously hums a tune such as 'Jingle Bells.' What do you think of this?

Hmmm. Merry Christmas.

Can infectious hepatitis be contracted through cunnilingus?

This is an excellent way—if the recipient of your affection has the disease.



Dear Doctor Hippocrates
Eugene Schoenfeld, M.D.
1968; 112 pp.

\$.95 postpaid

from:
Grove Press, Inc.
315 Hudson Street
New York, N. Y. 10013
or
WHOLE EARTH CATALOG

There's been a lot of talk lately about a new drug called MDA. What are its effects? Do the initials MDA mean anything or are they another put-on like the STP initials?

MDA is methylenedioxymphetamine, a mind-altering drug derived from amphetamine. Both drugs were first synthesized (amphetamine in 1933) by Gordon Alles, who died recently in California.

MDA is an example of a mind-altering drug apparently specific to certain functions of the brain. If the LSD experience can be described as one including both perceptual or sensory changes and inner experiences such as insight, the effects of MDA could be said to be similar to LSD with few of the sensory changes. In other words, illusions and other changes in perceiving 'reality' are infrequent or absent with the use of MDA. The drug is said to promote harmonious interpersonal relationships.

MDA has not been extensively tested in humans and may have unrecognized harmful effects, as with any unproven drug. Moreover the MDA available on the black market may contain impurities.

Some men find that the application of an anesthetic ointment to the head and shaft of the penis half an hour or so prior to intercourse allows them to prolong their coital experience. Nupercainal is one such anesthetic ointment available without a prescription.

The Merck Manual

In 1850 type-packed pages this book covers most of the possible illness and injuries that can occur to human beings. Each difficulty is described, symptoms are discussed and suggested treatments are indicated.

The writing is extremely technical and is designed as a ready reference for practicing nurses and physicians. Unless you are at ease with the unusually colorful language of modern medicine you will need a medical dictionary to fully understand this book.

While a considerable portion of the advice given is sensible and does not require a doctor's presence, much of the book will not be of use to persons who do not have access to medical supplies. This book is not intended in any sense for primitive or simple living conditions; it does not describe alternatives if medical treatment is not available nor does it suggest folk treatments in lieu of hospitalization. However, if you want to understand what is going on when a member of your family or community is seriously ill, this volume can be helpful. There is an excellent index as well as a special section devoted to specific prescriptions and special therapies. The excerpts given below illustrate both the common-sense and the technical aspects of this volume.

[Reviewed by James Fadiman]

[Innovator reports that many prescription drugs can be obtained without a prescription and at low cost from veterinary supply houses. —SB]

DYSPEPSIA ("indigestion")

Treatment

General: The patient should eat a balanced diet (see DIETS, Normal Diet). At least 1 hr/meal should be allowed. Food should be chewed thoroughly without haste and not constantly "swallowed down" with liquids. When possible meals should be taken in a pleasant, quiet, relaxing environment. Smoking immediately before meals should be prohibited. Food should be properly cooked, appetizing and eaten in moderate amounts. Following a meal, the patient should avoid excitement.

HEAT HYPERPYREXIA (sunstroke, heatstroke, thermic fever, siriasis)

Etiology: prolonged exposure to excessively high temperature or the direct rays of the hot sun, combined with exercise and lack of air circulation are the responsible factors.

Symptoms and Signs: Onset may be sudden or may follow complaints of weakness, headache, vertigo, anorexia, nausea and precordial distress.

The temperature rises rapidly to 105° or 106° F. or higher. Convulsions and projectile vomiting may develop and are of serious import.

Treatment: heroic measures are indicated and must be instituted immediately. If the rectal temperature is 106° F. or over, an ice water tub bath or a blanket soaked in water is indicated, and the skin should be rubbed vigorously until the temperature falls.

DISTURBANCES IN ELECTROLYTE (Mineral) METABOLISM

Dilutional hyponatremia will occur when excessive water is given to a patient in whom antidiuretic hormone activity (postoperatively, or in bronchogenic carcinoma, head injuries, or porphyria) or a low glomerular filtration rate is present. Movement of the water from cells in E.C.F. with a high glucose concentration may produce a temporary hyponatremia.

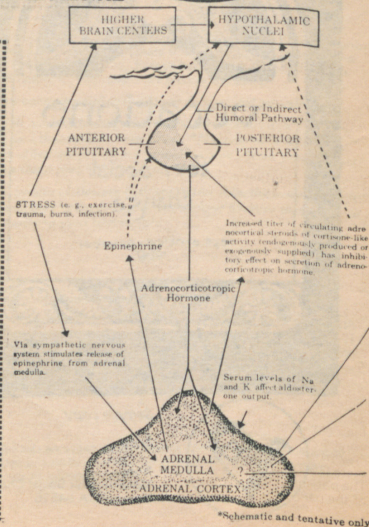


The Merck Manual
11th Edition 1966; 1850 pp.

\$7.50 postpaid

from:
WHOLE EARTH CATALOG

PITUITARY-ADRENAL



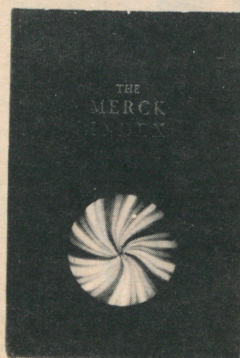
The Merck Index
1968; 1713 pp.

\$15.00 postpaid

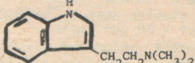
from:
WHOLE EARTH CATALOG

We've been told that the Merck Index can be even more useful than the Merck Manual. The Index is an encyclopedia of chemicals and drugs, now in its 8th edition since 1889.

[Suggested by William Bonner]



N,N-Dimethyltryptamine. DMT; 3-[2-(dimethylamino)ethyl]indole. $C_{12}H_{16}N_2$; mol wt 188.26; C 76.55%, H 8.57%, N 14.88%. Occurs naturally in plants with hallucinogenic properties. Isolated from the leaves of *Prestonia amazonica* (Benth.) Macbride (*Haemadictyon amazonicum* Spruce & Benth.) *Apocynaceae*: Hockstein, *Paradies, J. Am. Chem. Soc.* 79, 5735 (1957). Synthesis: Szára, *Experientia* 12, 441 (1956) using the method of Speeter, Anthony, *J. Am. Chem. Soc.* 76, 6209 (1954). Relationship between hallucinogenic activity and electronic configuration: Snyder, Merrill, *Proc. Natl. Acad. Sci. U.S.A.* 54, 258 (1965).



Crystals, mp 44.6-46.8°. pK_a 8.68 (ethanol-water). Freely sol in dil acetic and dil mineral acids. Picrate, mp 169.5-170°. Methiodide, mp 216-217°.

90

Emergency Medical Guide

No book can substitute for a physician's care. Self-treatment of disease can be worse than no treatment at all. But the proper use of a home health manual may be invaluable in recognizing serious diseases and emergencies, rendering first aid, and treating common medical problems which do not require a physician's assistance. Outdoorsmen and members of isolated farms and communes, especially, should have on hand as much medical information as possible.

Henderson's *Emergency Medical Guide* is a useful book, including illustrated sections on bandaging techniques, mouth to mouth resuscitation, injuries to extremities, poisoning, snake bites, emergencies of infancy and childhood, and home care of the ill. Emphasis is placed on the prevention of accidents and disease. Some situations are covered which are not generally considered emergencies (except by the patient) such as painful menstruation. A chapter on normal human anatomy and physiology is included in order to make the rest of the book more intelligible to those giving first aid.

[Suggested and reviewed by Eugene Schoenfeld]

Emergency Medical Guide

John Henderson, M. D.
1963, 1969; 556 pp.

\$3.95 postpaid from:

McGraw-Hill Book Co.
Princeton Road
Hightstown, N. J. 08520
Manchester Road
Manchester, MO 63062
8171 Redwood Highway
Novato, CA 94947

or WHOLE EARTH CATALOG

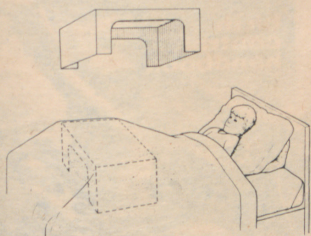


Fig. 15-1. A cradle to keep bedclothes off legs and feet, made from a cardboard carton.

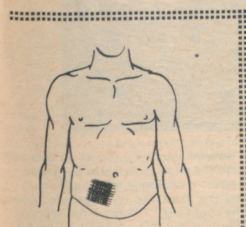
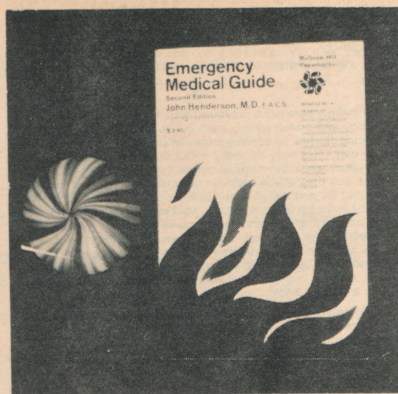


Fig. 111.



Fig. 8-9. Procedure for reducing a simple dislocation of a finger, applying pull on each side of the affected joint.

Thumb. Do not attempt to set a dislocation of a thumb. Because of its complicated anatomy, reduction may require a minor operation. Cover the thumb with a protective compress, support the hand in a sling, and seek medical aid.



SUMMARY AND CHECK LIST OF IMMEDIATE MEASURES

Always treat the most dangerous and urgent condition first. Remember the four B's: breathing, bleeding, broken bones, and burns.

A summary and check list of the fundamental general procedures follow:

- Whether or not the injured person is conscious:
1. Make sure that he is breathing. If he is not, begin artificial respiration immediately.
2. If breathing is satisfactory, see whether he is bleeding. If the bleeding is profuse, take measures to control it immediately.
3. When breathing is satisfactory and there is no evidence of bleeding, look for signs of shock and fractured bones.
4. Obtain medical aid quickly—phone a doctor, get someone else to phone him, or get the injured person to a doctor or hospital.
5. Work quickly, but carefully.
6. Loosen tight clothing—collar, waistband, or belt.
7. If the victim vomits, lower his head and turn it gently to one side so that the vomitus will not be aspirated.
8. Remove any loose objects, such as artificial dentures, from the mouth of an unconscious person.
9. Keep the victim quiet and warm. Do not over-heat.
10. Don't give an unconscious person anything to drink.
11. Don't aggravate an injury by unnecessary movements.
12. Don't allow a person with a fracture or suspected fracture to be moved until splints have been applied or he has been fixed to an adequate back board in the case of possible spinal injury.
13. Never urge an injured person to sit up, stand up, or walk until you are sure he can safely do so.

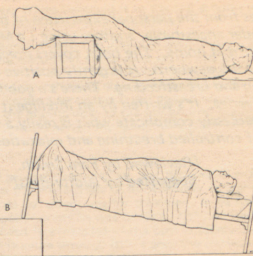


Fig. 6-1. Two methods of placing a victim in the shock position. A. Under emergency conditions, use a box or other device to elevate the legs. B. Under hospital or home conditions, use 'shock blocks' under foot of bed.

It is important to keep the victim of the attack from aspirating or choking on vomited matter, but since most attacks will terminate harmlessly by themselves, regardless of what you do or do not do, just protect the victim from injury and bide your time. When he recovers, do not be unduly sympathetic—you may only embarrass him. Give him a drink of water or tea, protect him from curious onlookers, and be sure that he is well enough to go on his way or that he is taken home. If the condition is more serious, see that he gets to a hospital.

Those who are accustomed to handling epileptic seizures make little of the convulsions and do not become excited.

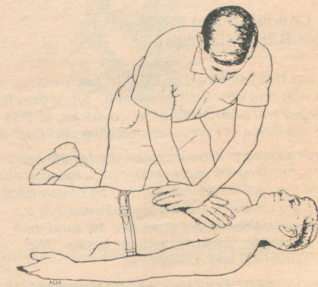


Fig. 4-11. Correct position of hands for external cardiac massage, using the heel of the hand to exert pressure on the breastbone.



Fig. 4-1. Ejecting a foreign body stuck in child's windpipe by a sharp blow between the shoulder blades.

DIAGNOSTIC SIGNS IN UNCONSCIOUSNESS

	1. Fainting	2. Brain Contusion	3. Brain Compression	4. Epilepsy	5. Hysteria	6. Stroke (Apoplexy)	7. Alcohol	8. Opium and Morphine	9. Barbiturate (Sedative tablets)	10. Uraemic Coma	11. Sunstroke and Heatstroke	12. Electric Shock	13. Cyanide (Prussic Acid)	14. Diabetic Coma	15. Shock
Onset	Usually sudden	Sudden	Usually gradual	Sudden	Sudden as a rule	Sudden as a rule	Gradual	Gradual	Gradual	Gradual	Gradual or sudden	Sudden	Very rapid	Gradual	Gradual
Mental condition	Complete unconsciousness	Unconsciousness with some times, just confused	Unconsciousness with some times, just confused	Complete unconsciousness	Often theatrical	Complete unconsciousness	Unconsciousness with some times, just confused	Unconsciousness with some times, just confused	Unconsciousness with some times, just confused	Very drowsy, later unconsciousness	Delirium or unconsciousness	Confused, later unconsciousness	Confused, later unconsciousness	Very drowsy, later unconsciousness	Liable, later unconsciousness
Pulse	Feeble and fast	Feeble and irregular	Gradually slower	Fast	Normal or exaggerated	Slow and full	Full and fast, later fast and feeble	Feeble and slow	Feeble and fast	Full	Fast and feeble	Fast and feeble	Fast and feeble	Fast and feeble	Fast and very feeble
Respiration	Quick and shallow	Shallow and irregular	Slow and noisy	Noisy, later deep and slow	Normal or exaggerated	Slow and noisy	Deep, slow and noisy	Slow, may be deep	Slow, noisy and irregular	Noisy and difficult	Shallow and noisy	Shallow and noisy	Slow, gasping and spasmodic	Deep and sighing	Rapid and shallow with occasional deep sigh
Skin	Pale, cold and clammy	Pale and cold	Hot and flushed	Livid, later pale	Normal	Hot and flushed	Flushed, later cold and clammy	Pale, cold and clammy	Cold and clammy	Sallow, cold and dry	Very hot and dry	Pale, may be burnt	Cold	Livid, later pale	Pale, cold and clammy
Pupils	Equal and dilated	Variable size but equal	Unequal	Equal and dilated	Equal	Unequal	Dilated, later may contract	Equal, very contracted	Equal, somewhat contracted	Equal and contracted	Equal	Eyes may be burnt	Equal, staring eyes	Equal	Equal, dilated
Paralysis	None	None	Present, of leg or arm	None	None	Present, legs, arms or face, at all times, on one side	None	None	None	None	None	May be present	None	None	None
Convulsions	None	None	Present, in some cases	Tonic, later clonic	Irregular and varied limb movements	Present, in some cases	None	None	None	Present in some cases	Present in some cases	Present in some cases	Present	None	None
Breath	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Special points	Often giddiness and vertigo before collapse	Often signs of head injury. Vomiting on recovery	Often signs of head injury. Vomiting on recovery	Tongue often bitten. Urine or faeces may be voided. Often injury in falling	Graceful collapse. No injury in falling. No or slight loss of consciousness. Often laughing and crying	Over middle age. If eye may look to one side. Some times loss of speech on recovery	Absence of the smell of alcohol. Excludes it as a cause, but its presence does not prove that alcohol is the cause	Look for source of supply	Look for source of supply	Look for source of supply	Vomiting in some cases	Vomiting in some cases	Muscular spasms often cause tight gripping of the electrified object	Rapid deterioration. Breathing may stop	In early stages headache, restlessness and nausea. Third and frequent urination

The Ship Captain's Medical Guide

I doubt if there is a more complete book of paramedical information. It assumes there is no doctor within days or weeks of your situation. Bargain price.

The Ship Captain's Medical Guide

20th Edition, 1967; 356 pp.

\$3.60 (30 shillings)

from:
Government Bookshop
P. O. Box 569
London S.E. 1, ENGLAND

or Blackwell's (see p. 79)

Appendicitis is by far the most common inflammatory condition in the abdomen and it occurs particularly in men under 30. It is not usually difficult to diagnose, but the abdominal pains must be distinguished from ordinary intestinal colic. Always suspect appendicitis with abdominal pains. An acute attack of appendicitis commences with pain which is vague in situation to begin with (though generally around the navel), but which after a few hours settles in the right side of the lower part of the abdomen. The pain is usually continuous, and it may or may not be very severe. There may be a loose stool at the beginning of the attack, but after that there is no desire to pass any motion again and constipation exists. The patient usually vomits once or twice during the first few hours of the pain.

Nomadics

The Complete Walker

Some of them old boys are into making houses out of chicken wire and condoms. Some of them can gather you a salad right off the forest floor. Some can make you a computer out of old Stromberg-Carlson radio parts and have enough wire and tubes left over for two laser death rays and a UFO. But Colin is into walking. His two previous books are mainly about walks: In *THE THOUSAND MILE SUMMER* he tells about one he took up the entire Sierra range, and in *THE MAN WHO WALKED THRU TIME*, he walks the whole Grand Canyon. This one is about walking, not walks. It's not full of lore and woodiness. It doesn't tell you how to get back to nature, or cast civilization from your back and wander out with a bowie knife and a jock-strap. It gives a little walk philosophy, and then proceeds to discuss, in just the right detail, how to put a nice little well-equipped house and its fittings on your back, how to be able to go out and walk for a long time without having to come back for more stuff.

Besides just the stuff, what to take and what to leave behind, it also takes you on a trip through Colin Fletcher, which is quite an outing all by itself. It's hard to imagine a book on backpacking technique that will make you laugh out loud all the way through, but he does it. He really loves poking fun at himself. He gets completely hung up describing some gadget or technique which he then admits he's never tried. He'll spend a whole page defending what seemed at first an impossibly fussy personal idiosyncrasy, and at the end you'll be dying to go out and try it for yourself. He actually has a sizable section on how to urinate and defecate in the outdoors, and it's a fine description. He includes a very complete appendix on suppliers, a list of walking organizations, and even a series of inspiring quotations to read while walking or thinking about walking.

Most important, though, it's the only backpacking book I've ever seen which, if read carefully, will actually tell you how to do it in great enough detail to enable you to just go out and do it. It's also the only one that will really make you want to go out and walk for absolutely no ulterior motive.

Be sure to dig pages 45-52, 123-132, 182-186, 213-218, the whole Furniture and Appliances section, and all the illustrations.

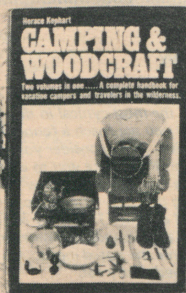
The only adverse comment I would make is that his food preferences seem pretty sanpaku. But he also quotes the old proverb about hell being a place where the politicians are French, the police German, and the cooks English.

[Reviewed by Roland Jacopetti]

First remove any obvious and rectifiable local irritant, such as a fragment of stone or a rucked sock. Then cover the tender place. Cover it even if you can see nothing more than a faint redness. Cover it, in fact, if you can see nothing at all. Being a 'hero' is being a bloody fool. The covering may only be needed for a few hours; if you take it off at night and let the air get at the skin you may not even need to replace it next morning. But if you do nothing at the first warning you may find yourself inside the hour with a blister that will last a week.

Camping and Woodcraft

How could anything written in 1916 still be so useful? One, it is a masterwork. Two, in Kephart's day when you went camping you really disappeared, so there's a valid nostalgia factor. But the main thing is, the book survives on its wealth of specific practical lore. Game: find the information that is outdated, sort it from the information that is correct and available nowhere else.



Camping and Woodcraft
Horace Kephart
1917, 1921, 1967; 479 pp.

\$6.95 postpaid

from:
The Macmillan Company
Front and Brown Streets
Riverside, Brown County
New Jersey 08075
or WHOLE EARTH CATALOG

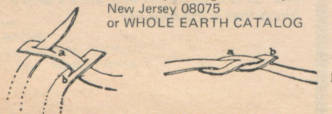
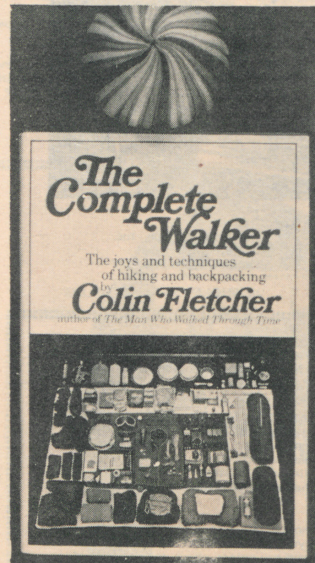


Fig. 185—Splicing thongs

One of the surest ways to tell an experienced walker from a beginner is the speed at which he starts walking. The beginner tends to tear away in the morning as if he meant to break every record in sight. By contrast, your experienced man seems to amble. But before long, and certainly by evening, their positions have reversed. The beginner is dragging. The expert, still swinging along at the same easy pace, is now the one who looks as though he has records in mind. One friend of mine, a real expert, says, 'If you can't carry on a conversation, you're going too fast.'



The Complete Walker
Colin Fletcher
1969; 353 pp.

\$8.18 postpaid from:
Alfred A. Knopf, Inc.
33 West 60th Street
New York, N. Y. 10023

or \$7.95 postpaid from WHOLE EARTH CATALOG

There is a cardinal rule of travel, all too often overlooked, that I call the Law of Inverse Appreciation.

It states: "The less there is between you and the environment, the more you appreciate that environment."

Men working hard in the open, and exposed to the vicissitudes of wilderness life, need a diet rich in protein, fats (especially in cold weather), and sweets. This may not agree with theories of dieticians, but it is the experience of millions of campaigners who know what their work demands. A low-protein diet may be good for men leading soft lives, and for an occasional freak outdoorsman, but try it on an army in the field, or on a crew of lumberjacks, and you will face stark mutiny.

Rabbits are unfit to eat in late summer, as their backs are then infested with warbles, which are the larvae of the rabbit bot-fly.

Green Corn.—If you happen to camp near a farm in the "Roasting-ear" season, you are in great luck. The quickest way to roast an ear of corn is to cut off the butt of the ear closely, so that the pith of the cob is exposed, ream it out a little, impale the cob lengthwise on the end of a long hardwood stick, and turn over the coals.

Skillicegale.—The best thing in a fixed camp is the stock-pot. A large covered pot or enameled pail is reserved for this and nothing else. Into it go all the fag-ends of game—heads, tails, wings, feet, giblets, large bones—also the left-overs of fish, flesh and fowl, of any and all sorts of vegetables, rice, or other cereals, macaroni, stale bread, everything edible except fat. This pot is always kept hot. Its flavors are forever changing, but ever welcome. It is always ready, day or night, for the hungry varlet who missed connections or who wants a bite between meals. No cook who values his peace of mind will fail to have a skillicegale at all hours.

A woodsman, on the contrary, walks with a rolling motion, his hips swaying an inch or more to the stepping side, and his pace is correspondingly long. This hip action may be noticed to an exaggerated degree in the stride of a professional pedestrian; but the latter walks with a heel-and-toe step, whereas an Indian's or sailor's step is more nearly flat-footed. In the latter case the center of gravity is covered by the whole foot. The poise is as secure as that of a rope-walker.

It is not nearly so much the "make" of rifle as the load it takes that determines the gun's shooting qualities. So, choose first a cartridge, then a gun to handle it.

BENDING WOOD.—Small pieces of green wood can be bent to a required form by merely soaking the



Fig. 54.—Spanish Windlass (for bending wood)

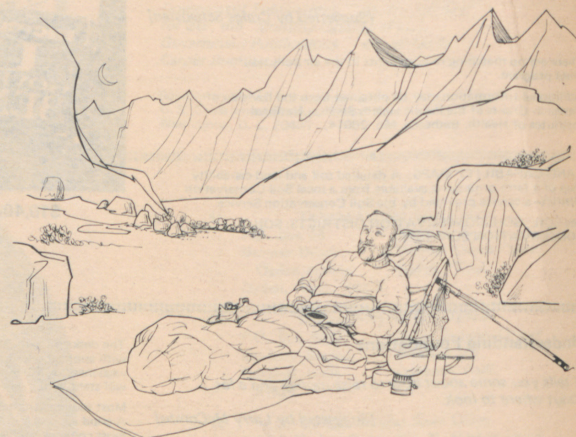
pieces for two or three days in water, but if it is desired that they should retain their new shape, they should be steamed.

When crowds assemble in Trafalgar Square to cheer to the echo the announcement that the government has decided to have them killed, they would not do so if they had all walked 25 miles that day.

Bertrand Russell
Nobel Prize Acceptance Speech

And the Lord said unto Satan, Whence comest thou? Then Satan answered the Lord, and said, From going to and fro in the earth, and from walking up and down in it.

JOB I, 7

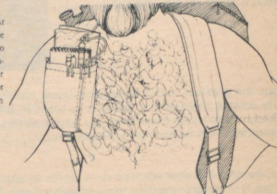


At this point, steam issues from the stew pot. You reduce the heat to dead-low or thereabouts (taking care not to turn the stove off in the process), stir the compound a couple of times, inhale appreciatively and replace the cover. While dinner simmers toward fruition you empty two ounces of dehydrated peaches and a little water into the small cooking pot and put it ready for breakfast, up alongside the pack. Then you jot down a few thoughts in your notebook, stir the stew and sample it, find the beans are not quite soft yet. So you study the map and worry a bit about the morning's route, put map and pen and pencil and eyeglasses and thermometer into the bedside boots, take off your shorts and slide halfway down into the mummy bag out of the wind, and stir the stew again and find all ready. You pour-and-spoon out a cupful, leaving the balance on the stove because the wind is blowing distinctly cool now. And then, leaning comfortably back against the pack and watching the sky and the black peaks melt, you eat, cupful by cupful, your dinner. You finish it—just. Then you spoon-scoop out every last possible fragment and polish-clean the pot and cup and spoon with a piece of toilet paper. You put the paper under the stove so that you can burn it in the morning. Then you put cup and spoon into the break-fast-ready small pot, pour the morning tea water into the big pot, set the big pot alongside the small one and the sugar and milk containers alongside them both, put the current day's ration bag into the pack (where it is moderately safe from mice and their night allies) and ...

Office-on-the-yoke

Because I so often walk without a shirt and therefore without a front pocket, I have had a five- by six-inch pocket sewn onto the front of my yoke strap, roughly where the shirt pocket comes. Into it go notebook and map, and sunglasses when not in use. Pen, pencil, camel-hair lens brush (page 233), and metal-cased thermometer (page 259) clip onto the front of it. I cannot imagine how I ever got along without such a pocket. Mine is made of ordinary blue-jean material, but anything stout will do.

For which side to put your office, see page 64.



In Alaska, all animals leave for the snow-line as soon as the mosquito pest appears, but the enemy follows them even to the mountain tops above timber-line. Deer and Moose are killed by mosquitoes, which settle upon them in such amazing swarms that the unfortunate beasts succumb from literally having the blood sucked out of their bodies. Bears are driven frantic, are totally blinded, mire in the mud, and starve to death. Animals that survive have their flesh discolored all through, and even their marrow is reduced to the consistency of blood and water. The men who penetrate such regions are not the kind that would allow toil or privation to break their spirit, but they become so unstrung from days and nights of infinite torment inflicted by enemies insignificant in size but infinite in number, that they become savage, desperate, and sometimes even weep in sheer helpless anger.

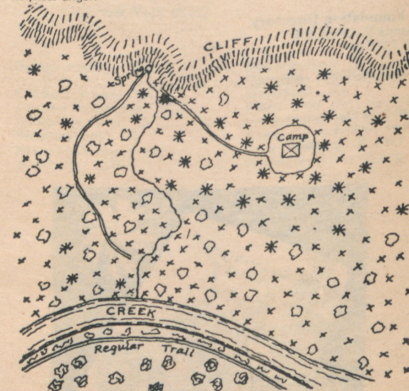


Fig. 68.—A Masked Camp

Trees and Lightning.—I have never seen, nor heard of, a beech tree that had been struck by lightning, although beeches are plentiful on many battle-scarred mountains where stricken trees of other species can be noted by the score.

One glance at a camper's fire tells what kind of a woodsman he is. It is quite impossible to prepare a good meal over a heap of smoking chunks, a fierce blaze, or a great bed of coals that will warp iron and melt everything else.

Mountaineering: The Freedom of the Hills

By far the most complete and sensitive treatment of mountaineering available. Oriented around Pacific Northwest mountaineering, where trails often end miles before the peaks begin, it is particularly relevant to wilderness camping and travel. It is much more than a book on how to climb. Reflects several generations of respectful relationship with mountains. If you move (or sit) where there are trees, rocks, snow, and brush, it speaks to your terrain. One limitation: little about dry, arid areas—glaciers are the local functional equivalent of deserts.

[Reviewed by Michael Templeton.
Suggested by everybody.]

**Mountaineering:
The Freedom of the Hills**
ed. Harvey Manning
1960, 1967; 485 pp.

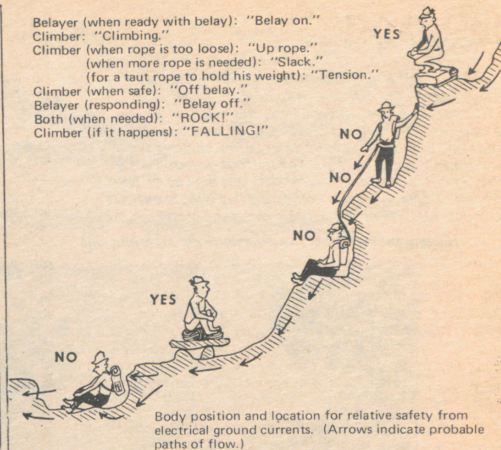
\$7.50 postpaid

from:
The Mountaineers
P. O. Box 122
Seattle, Wash. 98111

or **WHOLE EARTH
CATALOG**



Belayer (when ready with belay): "Belay on."
Climber: "Climbing."
Climber (when rope is too loose): "Up rope."
(when more rope is needed): "Slack."
(for a taut rope to hold his weight): "Tension."
Climber (when safe): "Off belay."
Belayer (responding): "Belay off."
Both (when needed): "ROCK!"
Climber (if it happens): "FALLING!"



Body position and location for relative safety from electrical ground currents. (Arrows indicate probable paths of flow.)

Matresses often give a chill sleep on snow due to interior convection currents, and with age they develop leaks that let the sleeper down in the middle of the night. Convection can be reduced by inserting a few ounces of down; in this case a filter is needed on the inlet and the mattress must not be blown up by mouth because of the moisture thus introduced. Sheets of foam plastic are superior in every respect except their incompressibility and consequent bulkiness.

In recent years many a mountaineer has developed the habit or hobby of not only making his own passage invisible but of spending extra effort to obliterate evidence of his predecessors—most of whom were just ignorant and thoughtless.

If a skirmish with brush must be accepted there is no technique at all. Brushfighting is not a diversion for civilized, gentle folk. One cannot afford charity toward slide alder or devil's club; one must hate and punish and kill when possible.

The irregularity of a mountain range tends to break up a front, especially the narrow turbulence zone of a cold one. Instead of advancing in a solid line it may surge forward up a deep valley while held stationary by a high massif, this bulge perhaps being attacked by flanking air—little squalls breaking off and wandering about apparently at random. A party on one peak may experience lightning, hail, driving snow, pouring rain, and calm sunshine all within the space of an hour. On a nearby peak another party may spend the entire day undisturbed by so much as a drop of rain, using up all their camera film shooting the superb cloud structures.

COOKING AND EATING UTENSILS

The least-expensive cooking utensils are tin cans in various sizes, junked (at home, not in the mountains) when rusty. Aluminum utensils cost a little more but are more durable. Bails are desirable for suspending pots over the fire, and lids to keep ashes out and steam in. Aluminum foil is versatile beyond description, under adept manipulation becoming a frying pan, oven for baking foods in a bed of coals, reflector oven for biscuits, and if need be even a cup or a pot.

With a poly bottle, or a canteen of anodized aluminum, a climber can enjoy fruit juices untainted by the toxic metal salts generated in containers of steel or untreated aluminum.

BREAKFAST

If the climb begins in the middle of the night, breakfast is merely the first installment of lunch. A tiny can of fruit cocktail, or a doughnut and a swallow of milk, are typical menus. Some climbers are convinced their legs won't work without hot food; their neurosis can be quickly pampered with instant cereal or cocoa cooked by chemical fire.

LUNCH

As soon as breakfast is completed the climber commences lunch, which he continues to eat as long as he is awake, stopping briefly for supper. He has food in his rucksack and knick-knacks in his pockets, main courses for the summit lunch, nibbles for rest-stops, and sweets to suck while walking.



The quest of the mountaineer, in simplest terms, is for the freedom of the hills, to be fully at home in the high wilderness with no barriers he cannot pass, no dangers he cannot avoid.

* The Sierra Club Wilderness Handbook

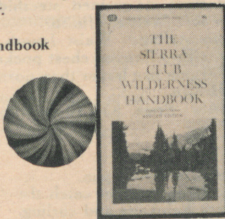
Practical information distilled through years and years of Sierra Club outings. Covers a wider range (women, burros, rivers . . .) than Colin Fletcher.

The Sierra Club Wilderness Handbook
David Brower, ed.
1951, 1968; 317 pp.

\$.95 postpaid

from:
Ballantine Books
101 Fifth Avenue
New York, N. Y. 10003

or **WHOLE EARTH CATALOG**



Fortunately the sources of streams in our wilderness areas are usually uncontaminated, and one need not sterilize the drinking and cooking water. However, if one is traveling in a semipopulated area or in a foreign country, it is safer to take the precaution of using Halazone tablets in the drinking water and of boiling the cooking water. One Halazone tablet is dissolved in one quart of water and allowed to stand thirty minutes. The iodine tablet "Bursoline" is considered superior to Halazone; one in one quart of water renders it potable in fifteen minutes.

Under the heading of "strictly feminine and personal" comes some advice regarding your menstrual period. Whatever your individual peculiarities may be ordinarily, they may be quite different on a mountain hiking trip. You may be thrown off schedule and you may need lots more or lots fewer sanitary napkins than usual. Tampons worn internally may be more comfortable for hiking and will prevent the chafing that may be your lot with externally worn napkins (but for your first trip by all means have a supply of the kind you are used to). And don't forget, there are no rest rooms with vending machines where you are going.

In addition to standard equipment, it will be wise with preschool-age children to take along some portion of the home environment whose value is purely emotional, even at the expense of inconvenience and irreparable damage to the articles; these might be, for example, teddy bears, toys, books, familiar clothes, or eating utensils.

Good pack horses and mules can carry a pay load of 200 pounds when expertly packed. One hundred and seventy-five pounds should be considered a maximum load on one's first trip. The pack train can be counted on for 15 miles a day on good trails if it keeps pushing. These animals walk at a good clip and, unless their handlers are fast hikers, all personnel should be mounted. This becomes more important as the size of the party increases. Mules are led singly by pedestrians or are tied in groups of not more than five animals and are then led by a man on horseback. This is the "string" of the professional packer.

* Manual of Ski Mountaineering

If you want the wilderness to yourself, go where it's high when it's cold. This book is a fine compendium of the technical knowledge you will need to make it.

Manual of Ski Mountaineering
David Brower, ed.
1962, 1969; 232 pp.

\$4.75 postpaid

from:
Sierra Club
Mills Tower
San Francisco, CA 90013

or **WHOLE EARTH CATALOG**



It is best to allow the snow to melt in the mouth before swallowing. A fruit drop or piece of fruit candy adds both flavor and sugar and dissolving it in the mouth with snow while traveling is a popular habit among experienced ski tourists.

Two-step.—One of the most useful maneuvers for attainment of speed on the level or on slight downhill gradients is the two-step, which uses the gliding ability of skis. If the two-step is to be used for long, it must be deliberate and rhythmic, slow enough to let the skier relax during the glide between thrusts.

Take a short step for propulsion, lean well forward from the waist, placing the poles well ahead, and lunge into a glide on the opposite ski by shifting the propelling thrust smoothly from the driving ski to a strong followthrough with the poles. Slowly bring the driving ski alongside the gliding ski in preparation for the next short step.

Occasionally two consecutive short steps are taken to change the glide from one ski to another (this constitutes the three-step), and to tire out a new set of muscles.

Lightning and the mountain.—The urge to know more concerning the effects of lightning becomes stronger when one is on a peak with the static charge beginning to make its power felt. When every projection in the vicinity, and finally the climber himself, begins to spark and the air is filled with ominous hissing, the desire to be in camp becomes overwhelming. Since this desire cannot always be satisfied, it is well to know what to do at this time.

The reasons behind the classical warning to be off the summit and ridges in a lightning storm can be seen when the mechanics of the lightning discharge are studied.

What can one do?

Also important is to question what can be done by people themselves. Some transformation works come with risks for health and possible damage of the structure when executed wrong. The planner must think the transformation the least complex as possible. Professional ways of working have to be questioned and translated in something feasible with no professional training.

Bauleistung	Das kann oder darf in der Regel			Hinweise		
	fast jeder	ein begabter Laie	nur der Hand- werker	Genehmi- gung o. Abnahme	Architekt einschal- ten	Erhöhte Unfall- gefahr
Abbruch						
• Tragende Wände, Treppen			x	(x)	x	x
• Nichttragende Wände		⇒			(x)	x
• Deckenkonstruktionen (tragend)		x	(x)	x	x	
Durchbrüche, Öffnungen						
• Tragende Innenwände			x	(x)	x	x
• Decken		(x)	x	(x)	x	x
• Nichttragende Wände		(x)	x			
Entfernen, Ausbauen						
• Fenster, Türen	x					
• Heizung, Sanitär-Installation	(x)	x		(x)		
• Elektro-Installation		(x)	x	x	(x)	x
• Fußboden		x			(x)	(x)
• Wand- und Deckenbekleidung	x				(x)	(x)
• Bodenplatte (auf Erdreich)		x		(x)	x	(x)
Maurerarbeiten						
• Erdarbeiten	x				x	(x)
• Tragende u. nichttragende Wände		x		(x)	(x)	(x)
• Betondecken u. -böden		x		(x)	(x)	x
• Wände unterfangen		(x)	x	x	x	x
• Hohlkörperdecken verlegen		x		(x)	x	(x)
• Treppen bauen		x		(x)	(x)	
• Mauerwerk ausbessern		x				
Feuchtigkeitsschutz						
• Erdarbeiten	x				x	(x)
• Isolierputz		x				
• Drainage		x			x	(x)
• Innenwände, Böden		(x)	x		x	
Installationen						
• Sanitär, Wasser, Abwasser		(x)	x		x	
• Gasversorgung			x	x	(x)	
• Heizung und Lüftung		(x)	x	(x)	(x)	
• Elektro-Installation		(x)	x	x	(x)	x

Tabelle 1.2
Welche Bauleistungen sind für's
Selbermachen geeignet?

(x) Die Klammer symbolisiert eine Einschränkung; die Aussage gilt unter Umständen nur bedingt, im Einzelfall wird eine genaue Prüfung empfohlen.

1.

Bauleistung	Das kann /darf in der Regel			Hinweise		
	fast jeder	ein begabter Laie	nur der Hand- werker	Genehmi- gung o. Abnahme	Architekt ein- schalten	Erhöhte Unfall- gefahr
Oberflächen						
• Außenputz, -anstrich		x				(x)
• Innenputz, Wandfliesen		x				(x)
• Innenanstrich, Tapezieren	x					
• Türen, Fenster		x				
• Abgehängte Decken		x				(x)
• Holzböden erneuern		x				
Zimmerarbeiten						
• Holzbalken reparieren, austauschen		(x)	x	(x)	(x)	(x)
• Holzterasse reparieren, austauschen		(x)	x	(x)	(x)	
• Fachwerk wieder ausrichten			x	x	x	x
• Dachaufbauten		(x)	x	x	x	x
Sonstige Arbeiten						
• Fenster und Türen instandsetzen		(x)	x		(x)	
• Dielenboden, Parkett erneuern		x				
• Rollläden, Klappläden,						
• Markisen einbauen		(x)	x			
• Schlosserarbeiten		(x)	x		(x)	
• Dacheindeckung erneuern		(x)	x	(x)	(x)	x
• Bodenfliesen, Teppich verlegen	x					
• Wärmedämmung Kellerdecke	x					
• Wärmedämmung Dachboden		x				
• Wärmed.: Wände u. Dach innen		x			(x)	
• Wärmedämmung Fassaden		(x)		(x)	x	x
• Wasser- o. Kompostbehälter aufst.		x				
• Brunnen bohren			x	x	x	(x)
Gerüstbau						
• bis 2 m Höhe		x				
• 2 bis 7 m Höhe			x			x
• über 7 m Höhe			x	x		x
Außenanlagen						
• Erdarbeiten	x					
• Garten, Pflanzung	x					
• Wege, Treppen, Terrassenbelag		(x)	x			
• Einfriedungen	x			(x)		
• Wasser- u. Versickerungsflächen		x		x	(x)	
• Pergola, Rankgerüst	x			(x)		

Walter Segal

Walter Segal, born 1907 was german-british architect which invented a self build system for single family houses. Everybody should be able to build their own homes. His intentions were never political. He wanted to demystify architecture. The reduction of a single family house to its core elements also became interesting for the council building idea in England until the 1990s when political changes made his system uninteresting for the widespread use.

The wood frame structure of the house were based and designed from assessable tools and materials.¹

1. Kühnlein, Andreas. „Build it yourself! Mit dem Ansatz von Walter Segal kann jeder ein Haus bauen „, 2023. AD MAGAZIN. 15.12.2024. <https://www.ad-magazin.de/artikel/build-it-yourself-mit-dem-ansatz-von-walter-kann-jeder-ein-haus-bauen>

2. Walter Segal self-built architect,; Grahame, McKean; Lund Humphries, 2021



Segal felt increasingly stimulated by his work with self-builders, which utterly changed his own area of control. When a self-builder told him: 'Walter, you couldn't do a thing without me – you may be able to draw things but you need me to carry them out', he repeated the story with evident enjoyment, adding 'It's dead true, isn't it?'

Perhaps in a sense it is true that he had moved from control in the material world, assembling it into building, to control of self-builders, who were his hands which came to life within his architecture. So battles with builders and confrontations with clients were long past. Segal always loved his material, 'seeing through' it to reveal unexplored potential. Now the self-builders were his material, and he delighted in their improvisation and adaptation, made possible by his precise rules. 'We have freed ourselves from the architect-designed facade at last', he would say, as the inventor of a game marvels at those who master and exploit it. He loved to describe how Lewisham self-builders developed the system, how Bill Gosbee devised a way of building the walls of his two-storey house without scaffolding, and so on.

'His concept,' said one self-builder, 'is that if he makes you sit down and think about the drawings,

you will understand what to do.' Another added: 'He taught us to think for ourselves and gave us such confidence when we finished our houses we felt we could go on to do anything we set our minds to – he literally changed our lives.'

The first to start at Lewisham, Ken Atkins, a floor layer by trade, became a dynamic and central force in the success of the project. Having built his own, he began to travel with Segal and Broome to talk about the project. He helped others with their structures and was employed as a consultant by builders using the 'Segal Method'. While we were erecting frames for the Segal memorial exhibition in the Royal Festival Hall, London, in May 1988, Atkins took a break and said to the author:

I still miss him very much. So often. He taught me so much. I want to ring him up and just chat,



Walter Segal and Jon Broome talk with Ken Atkins in front of his newly erected frame and they climb onto it, Broome holding the ladder steady for Segal

11 The Timber Frame Decades

Timber framing as a 'natural' form for the small dwelling was always with Segal, and in 1957, some years before developing his 'method', he made two timber frame houses, each with Swiss connections.

The first was a ski house, high in the Swiss mountains near Fideris, built for himself and shared with another family. It typified Segal. Simple yet appropriate, it stood with precision, 12 m by 4 m under the overhanging flat roof, on ten double stilts above the snow, its verandah floating within the frame of an almost immaterial handrail.

Unconnected to any service, it centred on a log-burning stove. Typically – like the much earlier La Casa Piccola and the slightly later Little House – it modelled in miniature a carefully arranged convivial home. The central space, with its thresholds to the

outside in one direction, gave to two cabins in the other direction, each with two upper and lower bunks. Beside each of the eight pillows is a tiny opening window; in the hub were two huge glass panes, costing as much as the rest of the house, which celebrated the magnificent view.

'As all the kids are now grown up', said Segal two decades later, 'we have removed the partition and made one bedroom with eight little windows. It is an astonishing experience to be in bed (on eight mattresses) in a room with eight windows in three directions, each framing light so that you really notice it.' As Moran Segal said, 'It was rather like magnificent camping. We talked a lot, Walter and I, about comfort and striking the balance. He wasn't frugal or puritan, no; but simple. He had clear, simple requirements from life.'



Walter Segal, Skihaus, Switzerland, 1957 in its summer context

The Original Segal Formation Process

Before briefly describing that assembly process, a caveat about the word 'system'. In 1976, alongside Cedric Price, Buckminster Fuller and two others, Walter Segal's work was first used, in a special issue of *Architectural Design*, to exemplify 'the systems approach'. It was percipient that, amidst this very high-tech context in the mid-1970s, Andrew Rabanek's editorial ended:

Surely the systems approach can only be effective once the designer has emerged out of the labyrinth of intellectualism with a new common-sense method that, as with Walter's, can be used creatively by the architect and be understood and controlled by the users – all in a relaxed, unself-conscious manner.

The accompanying study of Segal, by the present author, right at the beginning quoted his subject as saying: 'I now have a form; not a system, but a method of building, of assembly. And this gives me the task, the duty to explore it . . .'

We focus here on this assembly, the process or – as Jon Broome always says – the Segal Method.

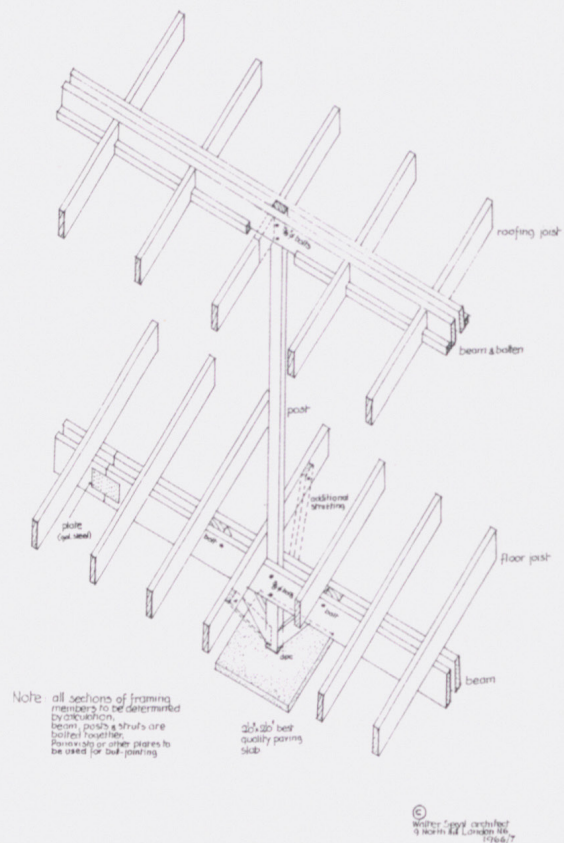
First, the house was planned. With building blocks of 600 mm panels and 50 mm-wide posts, the 'tartan' grid allowed unpractised clients to develop layouts easily. As no walls bore loads, doors and windows could be placed anywhere – indeed their location changed during construction. In contrast to the standard trope of deciding the frame and filling it with the plan, this neatly reversed the *plan libre* of Le Corbusier with a plan which really is free. In Segal's words: 'You design a plan on a modular basis; and then I design a frame support structure. I look for beam lines, append supports to the beam lines, and then begin to calculate it and it sorts itself out.'

In contrast to most timber building in Britain of stud and panel, the Segal frame was an expensive structure in material – usually stress-graded, knot-free Siberian or Canadian Douglas Fir, calculated to use minimum section. But it was a flexible tool,

easily adaptable to the chosen plan, with very low foundation costs, and a clear span of six modules (3.85 m) without deflection or, when used most economically, with an additional cantilevered module each end, a possible clear space of over 5 m. Other than with Segal's preferred cantilevers which implied freestanding posts, columns projected beyond the grid, either slightly outside the building or into corridors (as seen on page 123).

The simple portal frames were bolted together and, when two-storey, joined by St Andrew's crosses. Importantly, the floor beam, tying each frame together, eliminated horizontal reactions at the base. This is essential as the whole frames just stood, on a lead pad which closed the end-grain,

Standard Framing System



Walter Segal's base drawing, dated 1966–7, introducing what he calls his 'Standard Framing System'

Gartentechnik

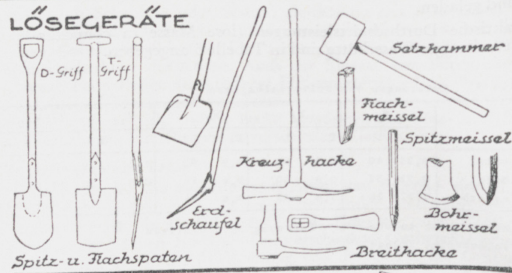
The Gärtnnerische Berufspraxis book series by Schatz and Niesel contains instructions for realising technical and design ideas for gardening and landscaping. Illustrated tools and step-by-step instructions help the reader in a very detailed way. The book series is from 1968, so many of the tools and techniques are no longer up to date. However, it offers a good insight into how instructions can be structured.

1. 2. Gartentechnik, Anleitung für die Ausführung landschaftsgärtnerischer Arbeiten; Niesel; Paul Parey, 1968.

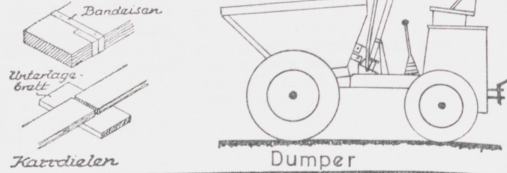
TAFEL 2

ERDBAU 2

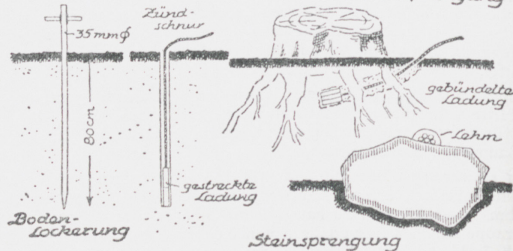
LÖSEGERÄTE



FÖRDERGERÄTE



SPRENGEN



die Ausrüstung mit Ketten können diese Geräte auch bei schwierigen Bodenverhältnissen eingesetzt werden. Ein Frontlader an einem Raupenschlepper mit 65 PS Motorleistung kann bei 10 m Förderweite in einer Stunde rund 90 cbm loses Schüttgut, rund 78 cbm leichten Boden oder rund 63 cbm mittelschweren Boden lösen und laden.

Bei guten Bodenverhältnissen lassen sich auch mit Erfolg luftbereifte Schauffellader einsetzen, bei feuchten bindigen Böden sind sie jedoch kaum zu gebrauchen. Die Stundenleistung des Jodich Schauffelladers DM 301 ist bei einer Transportweite von 10 m wie folgt angegeben: Sand 95 cbm, Splitt 72 cbm, Steine 52 cbm, Aushub mittlerer Böden 42 cbm, Aushub fester Tonböden 28 cbm und Aushub schwerer Böden 18 cbm. Die luftbereiften Frontlader von Ferguson können, um den Schlupf der Räder zu begegnen, mit einer Halbraupe, einer um die Antriebsräder und ein Zusatzrad gelegten Kette, versehen werden.

e) Bodenlockerung durch Sprengung (vergleiche Tafel 2)

Der Boden soll hart und trocken sein. Die Sprengung versagt in weichem oder nassem Boden. Die Sprenglöcher werden mit einem Trockenbohrer in einem Abstand von 2—5 m etwa 1 m tief in den Boden getrieben. In die Bohrlöcher kommt die Ladung (eine oder mehrere Patronen, z. B. Romperit C) hintereinander, also als „gestreckte“ Ladung mit Sprengkapsel und Zündschnur (vergleiche Tafel 2). Dann wird das Bohrloch vorsichtig zugetreten und die aus dem Boden herausragende Zündschnur angebrannt. Gefahrenzone ungefähr 50 m.

Stubbensprengung: Unter den Stubben wird bis möglichst zur Mitte ein Loch vorgetrieben und dort eine „gebündelte“ Ladung von 2—6 Patronen eingebracht. Dann verstopfen wir den Gang vorsichtig mit steinfreier Erde und überdecken die Sprengstelle mit dichtem Reisig und Ästen. Gefahrenzone bis 200 m.

Steinsprengung: Bei Findlingen, freiliegenden Steinblöcken usw. wird die „gebündelte“ Ladung auf den Stein aufgelegt und mit feuchtem, kiesfreiem Lehm oder lehmiger Erde abgedeckt. Gesamtabdeckung wie vorstehend beschrieben erforderlich. Gefahrenzone 200 bis 300 m.

Für Ausführung aller Sprengungen ist das Bestehen der Sprengmeisterprüfung nötig. Alle Sprengvorschriften sind aufs genaueste zu beachten.

2. Bodentransport (vergleiche Tafel 3)

Die Förderung des Bodens erfolgt durch:

a) Schaufelwurf

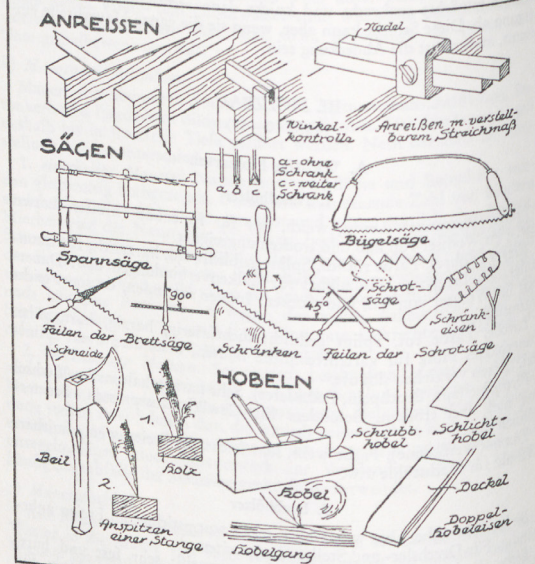
Kommt nur für kurze Entfernungen, bei Ausschachtung von Wegekoffern, bei Erdbewegungen an der Grenze zwischen Auf- und Abtrag usw. in Frage. Ein Wurf = 3—4 m; Doppelwurf = 6 m; Wurfhöhe = 1,5—2 m.

2*

1.

TAFEL 10

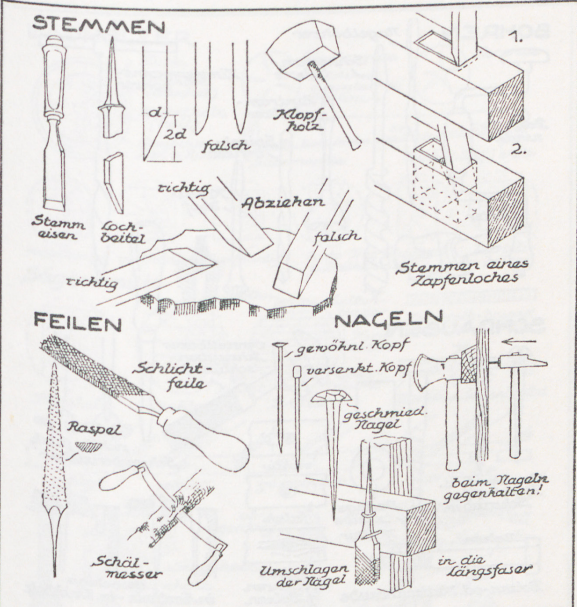
HOLZBAU 1



Anreissen: Winkel genau anlegen, Streichmaße gut andrücken, die Nadel nur leicht in das Holz eindringen. Sägen: Spannsägen nach Gebrauch immer entspannen; Schrank: (Zähne wechselnd nach links und rechts drehen), der Schrotsäge mit Schrankreisen; feilen mit der Sägefeile, 2—3 Züge je Zahn. Bei Brettsäge Feile waagrecht und rechtswinklig zum Sägeblatt führen; bei Schrotsäge schräg und wechselseitig geneigt führen, damit jeder Zahn eine Schneide erhält. Hobeln: für Grobarbeit den Schrubbhobel, für Feinarbeit den Schlichthobel, für feinste Arbeit den Doppelhobel verwenden. Über Äste und Gegenfaser Hobelisen feiner stellen und rasch darübergehen. Stimholz von 2 Seiten gegen den Holzkörper hobeln, sonst Ausreißen der Endflächen.

TAFEL 11

HOLZBAU 2



Stemmen: genau anreissen. Stemmeisen erst senkrecht halten, dann mit Schräglage die Holzfaser herausnehmen. Stemmeisen nie mit Gewalt tief eintreiben. Bei Durchbruch von der Gegenseite entgegenstemmen. **Schleifen:** Schleifstein mit Wasser netzen, Schleifrichtung gegen das Eisen. **Abziehen:** mit kreisender Bewegung auf öl- oder wassergetränktem Stein, flach aufliegen. **Nagel:** Nagel im „Zuge“ nageln (feste Auflage oder an der Gegenseite mit Beil u. dgl. verhalten). Bei Ästen oder Hartholz mit Nagelbohrer, Nagel mit Seife, Öl oder Wasser netzen. Gegen Sprengen des Holzes Nagelspitze abkneifen oder flachschlagen. Durchgehende Nägel durch Umschlagen verklammern oder Spitze in die Längsrichtung des Holzes einschlagen.

2.

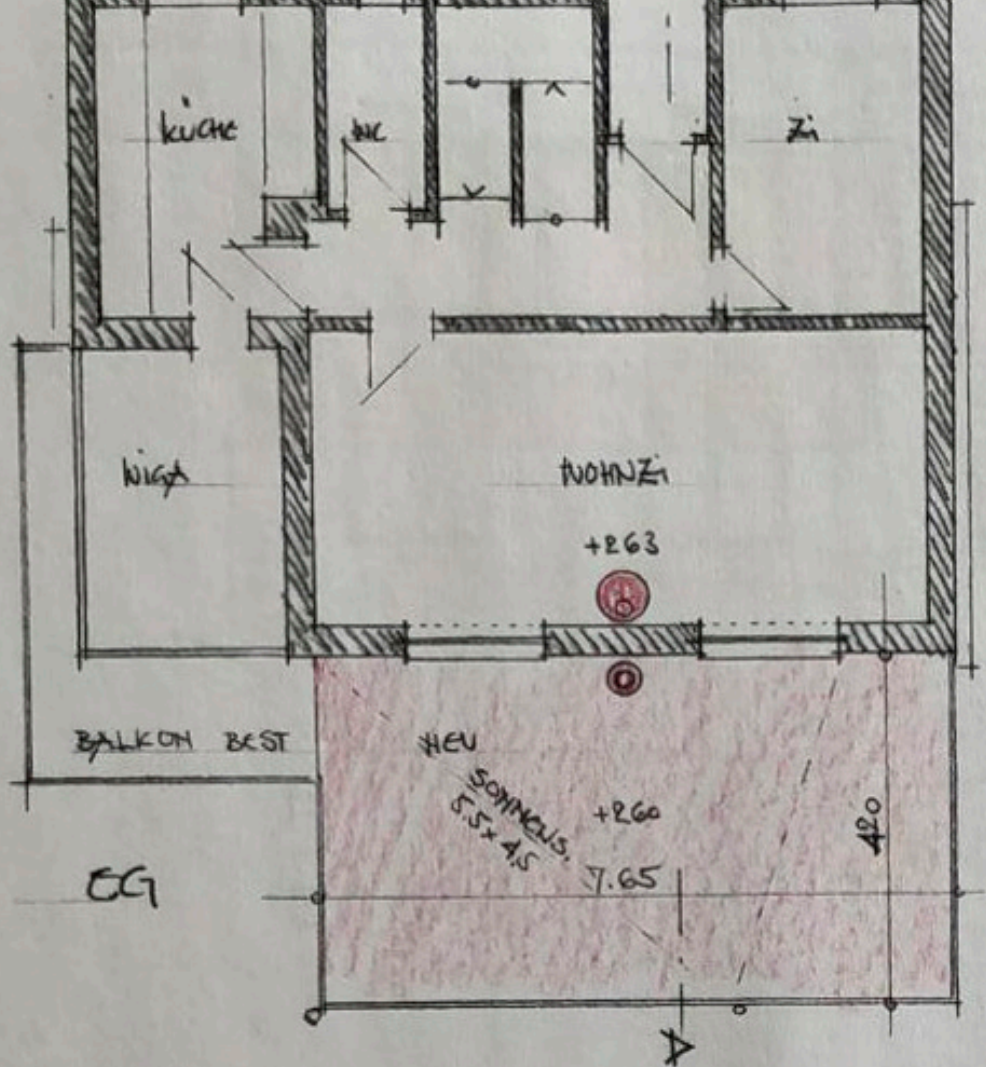
Which tools does Egerkingen need to start the transformation?

Can a transformation form a community?




How will the transformation reveal itself?

Master Thesis
ETH Zürich
Studio Tom Emerson /
Martina Voser
WS 2024
Honey I shrunk the house
Nikola Philip Endres

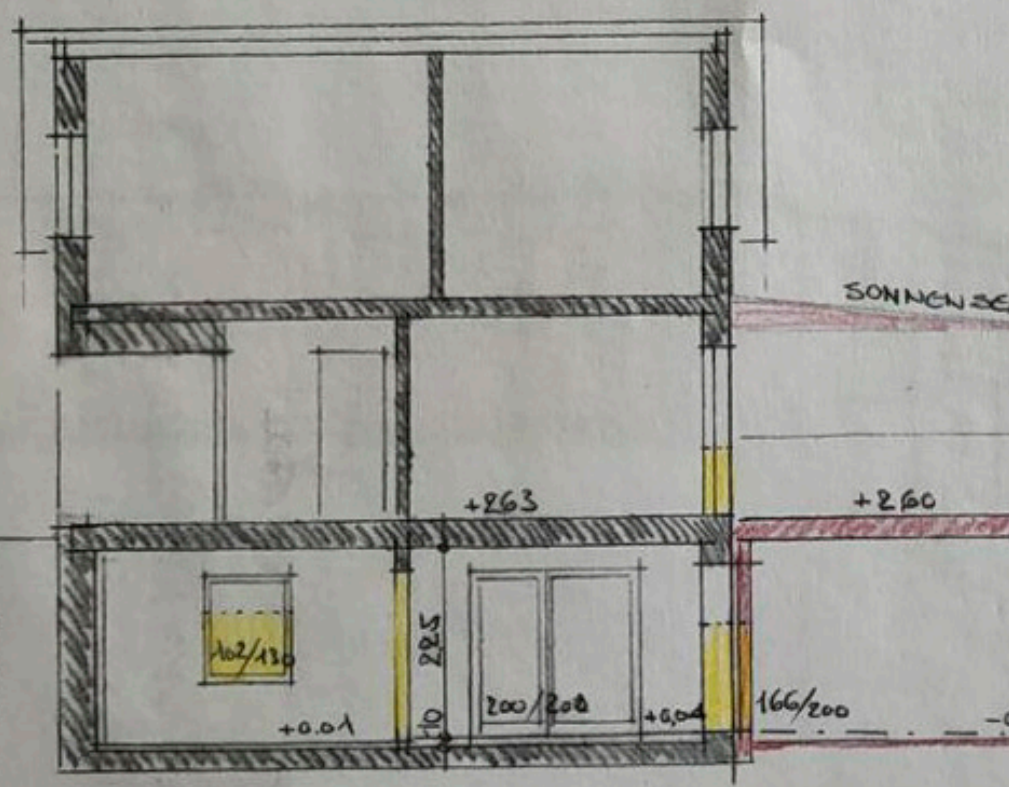
ARCHITEKT:



BAULEUT:

-  BESTEHEND
-  AB+ AUSBEBAU
-  HCU

±0.00 = 445.85 m.ü.M.



SCHNITT A-A