# COMMISSION OF THE EUROPEAN COMMUNITIES

COM (75) 432 final

Brussels, 25 July 1975

<u>COMMUNICATION FROM THE COMMISSION TO THE COUNCIL</u> Rehabilitation of Handicapped Persons

-Elimination of Architectural Barriers to their Mobility

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## COMMISSION OF THE EUROPEAN COMMUNITIES

## COMMUNICATION TO THE COUNCIL

Subject: Rehabilitation of Handicapped Persons

- Elimination of Architectural Barriers to their Mobility

In its Resolution of 27 June 1974, establishing the initial Community action programme for the vocational rehabilitation of handicapped persons, the Council stresses the general aim of Community efforts on behalf of the handicapped, which must be to help these people to become capable of leading a normal life fully integrated into society.

Elimination of architectural barriers to their mobility appears to be an essential and preliminary condition for the successful implementation of this aim. The Commission, therefore, convoked a group of independent experts who, in less than one year's time, have worked out a framework of minimum standards regarding accessibility to and from and circulation space within their homes for wheelchair-users. A summary of the findings of that group is attached in Annex I to this communcation.

Further the Council and European Parliament approved on 12th December 1974 the insertion of a line 3051 into the 1975 Community budget, line providing for "contributions to the implementing of pilot operations designed to improve housing conditions of handicapped workers".

The objective of the present communication is:

(1) to inform the Council on the results of the work of the above-mentionned expert group and on the Commission's intention to bring together, as a next step, a group of governments experts, in order to explore the best ways and means for the implementing of the minimum standards proposed by the non-government expert group within the framework of national legislation;

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## v/767/75-B

(2) to ask the budgetary authorities at the same time to agree on the transfer of 450,000 u.a. from chapter 98 to the above-mentioned budget line 3051.

2

The contributions of the Community to the envisaged pilot operations would take the form of a financial intervention, in three cases, in support of actual building work done with a view to eliminating architectural barriers and in five cases, to support technical pilot studies motivated by the same aim. The 450,000 u.a. envisaged for this intervention will cover the pilot projects once and for all and the projects will be finished before the end of 1976. This programme of both applied and theoretical research is attached in Annex II to this Communication.

The Commission will keep the Council informed by regular progress reports of the work done by the government experts and the implementation of the envisaged pilot operations.

## ANNEX I

to communication to the Council

<u>Subject</u>: Elimination of architectural barriers to the mobility of handicapped persons. - findings of an independent expert group, convened by the Commission.

In response to the Social Action Programme submitted by the EC-Commission, the Council of Ministers in its Resolution of 21 January 1974 expressed the political will to adopt measures necessary for the vocational and social rehabilitation of handicapped persons.

The successful achievement of this aim, which cannot be divorced from social integration, is dependent on mobility. Unless the conditions in which the individual handicapped person lives and moves in society allow him to lead a life on his own, he will not be able to avail himself of opportunities of vocational training and new employment. All this is not as widely recognized as it should be, although efforts have been made in some member-states to remove barriers to integration.

The Commission, therefore, brought together a group of independent specialists to advise on the actual requirements necessary for the elimination of architectural barriers to mobility, taking full account of experience in the member-states of the Community. The group convened in 4 plenary sessions and several subgroup meetings between 15 February 1974 and 30 January 1975.

The experts started their work by stressing the fact that, although the percentage of people with physical handicaps within a given national population is higher than generally realised, quantitative considerations should not motivate action in this field. Since most of us at different stages of our lives might be at least temporarily disabled (old age, after accidents, pregnant mothers, etc.), our general concern should be to enable every citizen in such a situation to live as much a normal life as possible. A growing preference for more flexibility in adapting our surroundings to changing life patterns is an encouraging sign of our imagination in meeting different requirements as they come along. Adaptability of housing might indeed be the matchword for the meeting of special requirements which people with physical or mental handicaps might have, as the Recommendations made by the United nations suggest (1).

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On the other hand our present reality is still far from that ideal. For example the use of heavy concrete panels in new housing construction can make more difficult the task of future adaptation at reasonable costs. Immediate and vigorous action imposing minimum requirements of accessibility is therefore needed if we are to avoid the risk of building hundreds of thousands of subsidized housing units each year which are inaccessible to wheel-chair-users.

By designing all our housing so that it takes account of the special needs of the handicapped people we shall benefit everyone, not only those who are handicapped. In the long term our goal is new housing, in which all handicapped people, including those confined th wheelchairs, can live without special assistance. Aware of the problem of reconciling the ideal with the immediate practicable the group has come forward with a twofold approach which, however, should not be considered a merely tactical one.

- The level 2 standards set out in the guidelines below should ensure the design of dwellings suitable for permanent living by disabled people, including those using ordinary indoor wheelchairs. The observance of the guidelines will mean that it is possible for handicapped people to manage as independently as their disabilities allow, with the possibility of incorporating adaptions to fittings and equipment to enhance independence.
- the level 1 standards also suggested below would secure the strict minimum of accessibility that should be imposed on new dwellings, at least on those benefiting from public subsidy. Thus one could say that level 1 standards might be able to help in implementing the aim of social integration by making it possible for the disabled person to visit and to mingle with other people. At the same time level 1 standards would afford a temporary solution to housing problems for some handicapped people and a permanent solution to those with only a minor handicap.

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<sup>(1)</sup> Barrier free Design, Centre for Social Development and Humanitarian Affairs, United Nations, New York 1974. ./:

The implementation of level 1 and 2 standards is needed if we are to achieve in full the aim of genuine integration of the handicapped, aim adopted in the Council's Resolution of 21 January 1974. The standards are needed urgently if we are to avoid the continuance of large-scale construction of housing which will not even be accessible to the disabled.

3

The expert group examined the dimensional standards constituting the minimum requirements for both levels and assessed the approximate cost of implementing them. If provision for their implementation was made at planning stage or a new building, this cost was found to be negligible for level 1 and very modest for level 2. It is actually only adaptation of existing housing which will be more or less expensive depending on the nature of the structure.

The group was however aware of the fact, that implementation of these standards within the framework of national legislation might create some difficulties, in particular in member states with a federal structure. It was therefore suggested that the Commission should bring together as soon as possible, a group of government experts in order to explore the best ways and means for an early implementation of the standards. LEVEL 1 : All dwellings at this level must be accessible for visits by and temporary accommodation for physically disabled persons including those using ordinary indoor wheelchairs.

## SCOPE

Level I dwellings, designed in accordance with the instructions below, are suitable for visiting by disabled people and for permanent occupation by disabled people not confined to wheelchairs. For those who are confined to wheelchairs and who for convenient use and management need Level 2 dwellings, Level 1 dwellings will only be satisfactory as a temporary measure. Observance of the instructions will mean that disabled people can enter and move around principal rooms, within the dwelling, have access to at least one bedroom, and use kitchen, bathroom and WC facilities if help is available.

## DIRECTIONS (1)

- 1. The entrance to the building and welling must be accessible for people using ordinary wheelchairs;
- 2. The approach to the building and dwelling from the street and parking place serving the dwelling must be level, or by means of a ramp, in which case a gradient not steeper than 1 : 20 is desirable. In no case should the gradient be steeper than 1 : 12. If there is a threshold at the entrance door, it must be not higher than 0.025, with the possibity that it can be ramped if required.
- 3. Where a lift is installed, the nominal internal dimensions must be not less than 1.100 wide x 1.400 deep. The door to the lift must give a clear opening not less than 0.800, in accordance with the ISO standard.
- 4. Doors to principal rooms, i.e. living-rooms, dining area, kitchen, at least one bedroom, bathroom and W.C. if separate, must be sufficiently wide for standard wheelchairs to pass through. Doorsets 0.900 wide overall (modular size 9M) are satisfactory, giving a clear opening of approximately 0.785 when the door is in the open position at 90°.
- 5. Passage ways inside the dwelling must be not less than 0.900 wide. For guidelines for other circulation spaces, see table below.

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(1) all linear dimensions expressed in metres.

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#### RECOMMENDATION

- 6. Doorsets to rooms other than those itemised in paragraph 4 should be 0.900 wide overall where practicable.
- 7. Door and window ironmongery should be convenient to manipulate.
- 8. Controls for taps, heating appliances etc. should be easy to operate.
- 9. Threshold sills to doors should be avoided.

10. Windows should be placed so that a seated person can see out.

- 11. Flooring materials should be slip-resistant.
- 12. Electric socket outlets should be generously provided.
- 13. Light switches and socket outlets should be aligned horizontally at the height of door handles.
- 14. Kitchens should be planned to permit efficient and economic use, considering the needs of handicapped people.
- 15. Bathrooms and WC compartments should be planned considering the needs of handicapped people.

LEVEL 2. Dwelling suitable for permanent living by physical disabled people

SCOPE .

Level 2 dwellings, designed in accordance with the instructions below, are suitable for permanent living by disabled people, including those using ordinary indoor wheelchairs. Observance of the instructions will mean that it is possible for handicapped people to manage as independently as their disabilities allow, with the possibility of incorporating adaptations to fittings and equipment to enhance independence.

Directions (1)

1. All parts of the dwelling must be accessible.

- 2. The approach to the dwelling must be level, or by means of a ramp having a gradient not steeper tahn 1 : 20. Thresholds at entrance doors should be not higher than 0.025, with the possibility that they can be ramped.
- 3. Where a lift is installed, the nominal internal dimensions must be not less than 1.100 wide x 1.400 deep. The door to the lift must give a clear opening not less than 0.800. The lift landing should give a clear space not less than 1.500 x 1.500.
- 4. Doors to all rooms must be wide enough for wheelchairs to pass through. Doorsets should be 0.900 wide overall (modular size 9M). Side-hung doors must be planned to facilitate wheelchair manoeuvre, and threshold sills to internal doors should be avoided.
- 5. Passage-ways must be not less than 1.200 wide. For guidelines for other circulation spaces, see table below.
- 6. All rooms, bearing in mind particularly the kitchen and bathroom must be suitable for use by a person confined to a wheelchair, with suitable adaptations carried out where appropriate.

(1) all linear directions expressed in metres.

#### RECOMMENDATIONS

- 7. Door and window ironmongery should be convenient to manipulate.
- 8. Controls for taps, heating appliences, etc. should be easy to operate.
- 9. Windows should be placed so that a seated person can see out.
- 10. Flooring materials should be slip-resistant.
- 11. Electric socket outlets should be generously provided.
- 12. Light switches and socket outlets should be aligned horizontally at the height of door handles.
- 13. Parking space should be accessible under cover from the dwelling, and should give sufficient space for transfer from wheelchair to car.

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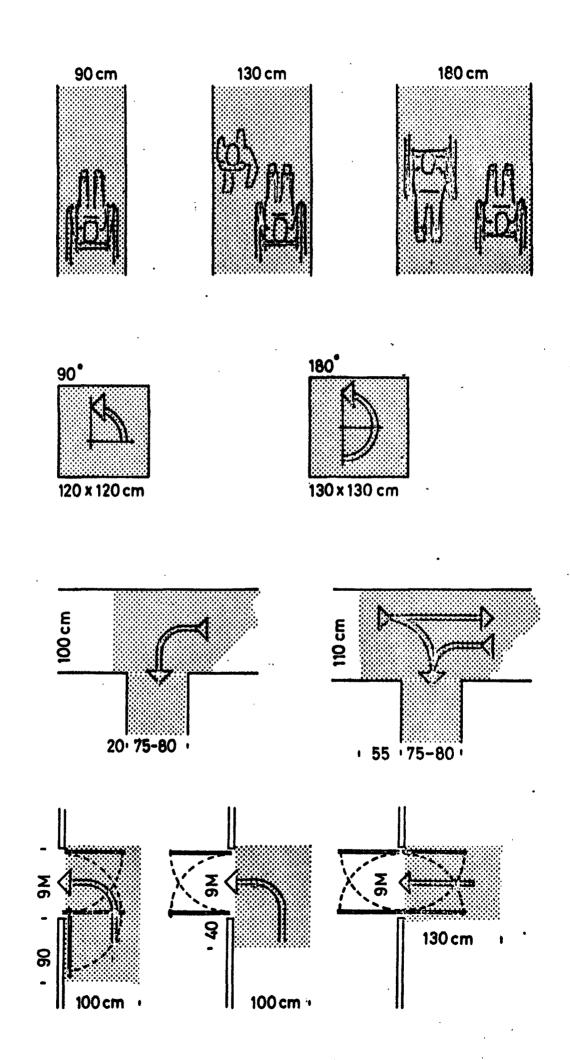
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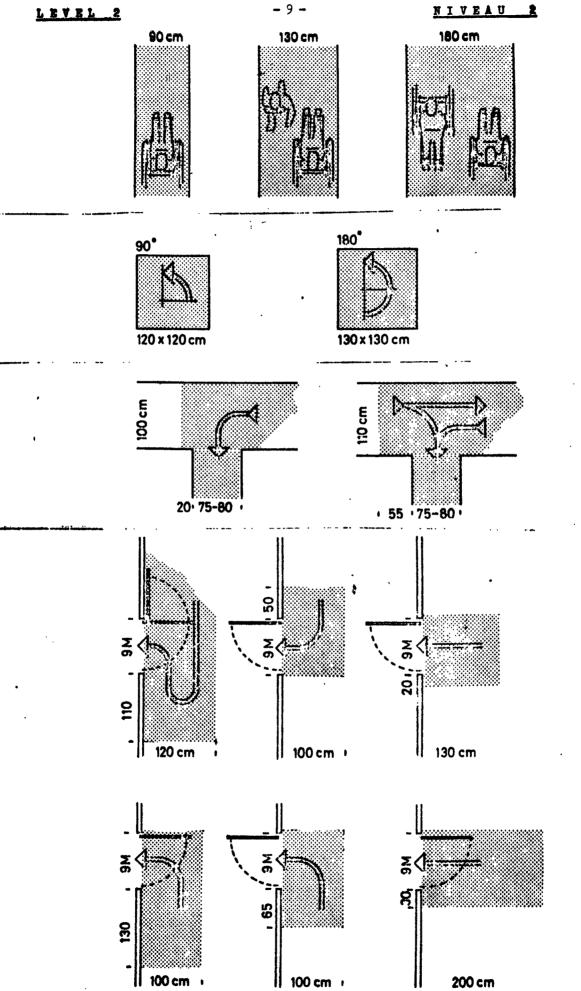
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- 9 -

#### ANNEX II

to the communication to the Council

Subject: Pilot schemes and studies designed to improve the mobility of the physically handicapped by the elimination of architectural barriers.

## PART I

#### INTRODUCTION

The Council, in its resolution of 21 January 1974 on a social action programme, gave a high priority to the professional readaptation and social reintegration of handicapped workers.

The Council, equally conscious, in this context, of the important contribution of housing adapted to the needs of the handicapped, approved the inclusion of an estimate (budget line 3051) in the 1975 Budget for a "contribution to the carrying out of pilot experiments relevant to the improvement of the housing conditions of handicapped workers". This budget was voted by the European Parliament on 12 December 1974.

When considering specific actions aimed at meeting the twin objectives of professional readaptation and social re-integration, it became apparent that there was a need for vigorous and co-ordinated action to eliminate architectural barriers to mobility in the home, just as much as in the outside world.

For this reason, the Commission called together a group of independent experts, fully conversant with the situation in the different member states. In the course of 1974, these experts drew up recommended standards of minimum dimensions on two levels, the first assuring a strict minimum of accessibility for wheelchairs, the second the necessary space for ease of circulation and the necessary arrangements within the dwelling.

While the work of the group was primarily related to the adapting of dwellings for the handicapped, it was underlined on many occasions that access to public buildings and public transport was also indispensable for the achievement of the two objectives already mentioned. The minimum standards adopted for dwellings have in any case provided a useful starting-point for further consideration of such questions. Three categories of pilot action are proposed.

The first type of action is related to the problems of making the normal housing stock accessible and usable for the physically handicapped. There are certain technical and economic implications which it is essential to study in practice. Further it is just as important that a usable dwelling functions in a satisfactory environment. Integration is not obtained through a suitable dwelling alone but requires accessibility to all outside facilities.

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13

Going beyond the need to impose minimum requirements of accessibility on newly-constructed housing - especially on housing subsidized by the taxpayer - there is evidence of a wide interest in studying, in well-defined case, the inter-relationship of housing adapted to the needs of the handicapped and the success of a programme of professional readaptation and social reintegration. Such a case-study is also proposed in the second part of this communication. In the same order of ideas, the Commission will, moreover, be identified with a demonstration project, which will throw into relief the problems of rehabilitating the handicapped and, in this context, the necessity of eliminating architectural barriers.

Lastly, a number of pilot studies of a technical character have been selected with a view to examining a greater depth such specific technical problems as access ramps, and adaptable facilities for the kitchen and bathroom. It is these facilities, which, taken together with the removal of architectural barriers, will, more than anything else, make the handicapped person mobile and, .up.to.a certain point, independent.

The proposed budget allocation of 450,000 u.a. will cover the pilot projects once and for all and the projects will be finished before the end of 1976.

To sum up, the three types of applied research described above

- (a) evaluation of the technical difficulties and cost of adapting a dwelling in its urban context to the needs of the handicapped;
- (b) evaluation of the impact of such adaptation on the success of measures of rehabilitation;
- (c) evaluation of elements of adaptation on the technical level

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are bound to be of assistance to the Council in appraising the recommendations, which the Commission will be submitting at a later date.

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The research projects will be carried out simultaneously in eight different member-states, Denmark, France, the German Federal Republic, Luxembourg, Netherlands, the United Kingdom, Ireland and Italy (1). The specific proposals for pilot actions are described in part IV of this annex.

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(1) For Belgium, see page 13.

## Part II

#### The Programme

In order to assess objectively the merits of individual pilot schemes, what is first needed is a framework of reference setting out the most appropriate guidelines and criteria for the selection of the schemes that could qualify for support. In the evolution of this programme the Commission was assisted by the advice of its consultative group of experts.

## Objective

The objective is to increase the handicapped persons' possibilities of professional and social reintegration by eliminating the architectural barriers. This is obtained by stimulating a limited number of projects to be part-financed by the Community. These schemes are selected to identify the main problems and indicate effective actions for their alleviation.

## Definitions

A <u>pilot scheme</u> is a limited experimental project which tests out certain actions to explore their effectiveness in meeting the needs of the handicapped persons.

A pilot study is an investigation of certain specific problems of a technical character.

## Criteria for selection of schemes

The first criteria for Community support will be that the schemes chosen shall be of an innovatory nature, whose results can be expected to have significant impact on the evolution of policies at national and other levels.

Second, the Commission will give priority to schemes having a particular Community interest. These will be schemes dealing with problems found in more than one member state, or potentially common to two or more member states.

## Provision for Community aid

Community participation varies according to the nature of the pilot-scheme. It varies from a financial assistance of 50 % of the additional costs of construction or adapting a dwelling to the needs of the handicapped to 20 % of the actual cost of construction. Each scheme will require regular progress reports for which financial provision is included in each case. As to the technical studies, the Community's contribution is limited to 50 % of the actual cost.

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#### Cooperation with member States

- 1) All applications to the Commission for financial assistance towards pilot scheme from agencies other than national government shall also be sent to the government of the member state concerned. The government shall have the opportunity to submit an opinion to the Commission before the Commission takes any action.
- 2) All applications must include a plan of the scheme, its objective, methods and timing, the person responsible for its operation, financing and any other useful information.
- 3) No scheme sponsored by the Commission will operate on the territory of a member State without the national government's agreement.
- 4) Representatives of the national governments and, where relevant, experts from other sectors will be consulted on all important questions arising from the operation of the programme.
- 5) All the national governments concerned shall be informed of all financial assistance given.

76

## Part III

## Implementation of Programme

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The following is a list of projects and studies which the Commission has in mind for support. At this stage some elements in this list must be tentative. More detailed information on each scheme is contained in annex I.

## Pilot schemes

- 1. Scheme for construction and adaptation of 72 dwellings to certain architectural requirements with the view to study
  - the technical difficulties of an "ex-post" solution compared with an "ex-ante" solution and its exact economic implications.
  - the interrelation between adaptation of the dwelling and adaptation of the surrounding environment. "EVRY", Paris region, France.
- 2. Scheme for construction of accommodations for 20 handicapped persons to a barrier-free design with the view to achieving rehabilitation through the breaking down of the psychological isolation of the handicapped. DAHLHEIM, Luxemburg
- 3. Scheme for the construction of accommodation of 20 student-flats and 35 flats for school-leavers specially designed for the physical handicapped interrelating medical and welfare services on the one hand and possibilities for university-education or vocational training on the other by breaking down architectural barriers to the handicapped. HAUS DER EXHINDERTEN, BONN

#### Pilot studies

- 1. Study on the establishing of living conditions in the context of overall urban development
- 2. Study on adjustable equipment
- 3. Study on access to public buildings and facilities
- 4. Study on apartment ground-plans
- 5. Study on remodelling of different house types.

## Financial means

The total expenditure envisaged for 1975 amounts to 450.000 u.a. The expenditure envisaged for 1976 is 500.000 u.a. The projects for 1976 will be based on the experience of the schemes carried out.

#### PART IV : The projects

A. The "EVRY"-project

The "EVRY" new town is situated in the Paris region and will, when it is completed have a population of 500.000. It is the intention to adapt the environment and some dwellings to be fully accessible for physical handicapped people. To make such an adaptation possible, it is best to concentrate on the town centre. This is intended to house 30.000 inhabitants with access to a sports and cultural centre, a regional commercial centre with offices offering 7.500 jobs, educational and research facilities, a SNCF-station, etc.

Work on the adaptation of the town centre to make the facilities accessible to the physically handicapped started in 1973 but some of the vital problems still need to be solved, viz. -

- accessibility of the urban transport station and the SNCF-station;
- the vertical connection between the different circulation levels and accessibility to public facilities and services
- accessibility and adaptability of dwellings.

It is important to note that the concepts of accessibility and adaptability of the dwelling are linked very strongly to the concepts of the circulation within the area of the town and accessibility to means of transport.

The "EVRY"-projet is perfectly suited to the purpose of finding answers to the following questions:

- The technical difficulties of an "ex post" adaptation compared with an "ex-ante" solution
- the exact economic implications
- the interrelation between the adaptation of the dwelling and an adaptation of the surrounding environment.

The town centre consists of 7.500 dwellings and at this stage it is the intention to adapt 1 % for the handicapped - a percentage which underlines the fact that it is a pilot study. In order to provide a valid comparison for the above mentioned "ex-post" and "ex-ante" analysis, it is intended to adapt 57 existing dwellings and to construct another 15 dwellings simultanously.

It is proposed that the Community contributes to the financing of the element of cost related to the adaptation of dwellings whether new or existing, to the needs of the handicapped.

As to the environmental problems, solutions will be financed by a contribution from the French government.

The following items need to be provided in making a dwelling suitable for a disabled person;

1) Entrance door wide enough to be passed by a wheelchair-user

2) Ramps with a specific gradient

3) Lifts big enough for a wheelchair-user

4) Doors inside the dwelling at least 0,900 m wide

5) Corridors wide enough for circulation

6) Special kitchen and bathroom equipment, etc.

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The best estimate of the cost("ex-post") of adapting an existing dwelling to meet the requirements is of the order of 40.000 FF. The additional cost ("ex-ante") of making a new dwelling usable for a physically handicapped is estimated at 10 % of the cost of the dwelling.

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The total cost of adapting 57 existing dwellings is therefore estimated at 2,280,000 FF. The additional cost of making 15 new dwellings suitable for occupation by handicapped persons is estimated at 225.000 FF. It is proposed to finance 40 % of the cost of adapting the existing dwellings - i.e. 912.000 FF or 164.200 u.a. - and 50 % of the additional cost of the new dwellings i.e. 112.500 FF or 20.300 u.a. In addition, the Commission would wish to finance a study, at a cost of 6.000 u.a., to report on and evaluate the results of the work.

To sum up, a Community contribution of 190.500 u.a. is is proposed: -

40 % of cost of adapting 57 dwellings		 164.200
50 % of additional	. cost of the new dwelling	20.300
cost of evaluation	study	6.000
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19

## - 9 -

## V/767/75-E

#### B. DAHLHEIM, Luxemburg

This project is to be carried out by ADIPH (Association pour la Défense des Intérêts des Personnes Physiquement Handicapées), the voluntary body representing the interests of the handicapped in Luxembourg. In pioneering this first project of its kind, in the hope that it will encourage other efforts, the association has enlisted the support of the State and the commune of Dahlheim where the houses will be build.

This imaginative scheme will house 20 disabled in various degrees in association with social and medical facilities. The basic objective of the scheme is seen as rehabilitation to be achieved through breaking down the psychological isolation of the handicapped. The removal of architectural barriers in housing and its surroundings is calculated to increase opportunities for work. The scheme while sufficiently small and self contained to encourage intimacy in social relationships will at the same time be integrated within a larger Community. Lastly the morale and self-confidence of the handicapped will be enhanced by giving them a real say in the administration of their housing and its related facilities.

It is estimated that total cost of the project will be 30 mio Flux. A Community contribution of 20 % - 6 mio Flux or 120.000 u.a. - is proposedand in addition it will be necessary to carry out an evaluation study costing 5.000 u.a.'s. To sum up, the Community contribution will be

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construction costs evaluation study 120.000 u.a. 5.000 u.a. 125.000 u.a. 20

## C. HAUS DER BEHINDERTEN, BONN

The "Haus der Behinderten" a voluntary association assisting the handicapped (under the chairmanship of Bundesminister Arendt) proposes to provide 20 flats for students of Bonn University and 35 apartments for schoolleavers in association with a centre for the handicapped.

Given the limited choice of livelihood open to young people with physical handicaps it is particulary important that those who have the ability should have the advantage of a university education. In the case of the handicapped, however, the normal housing problems of students in non-residential universities are exacerbated, and there is a special case for specific and sympathetic treatment.

The student-flats will be integrated with normal student accommodation. The scheme is supported by the federal government and the City and University of Bonn which will provide for external accessibility to make it possible for the handicapped to move easily to and from and within the university precints. The scheme has the double advantage of providing social integration within the student community, but with a maximum of self-reliance and physical independence. At the same time the nearby centre will offer a degree of psychological security, offering among other things medical and welfare services. The project, which can be regarded as experimental in nature, is of wide interest, providing possibilities for testing one approach to the solution of the housing, social, and psychological problems of handicapped students.

The "Haus der Behinderten" section dealing with vocational training it is to admit about 35 schoolleavers who are suffering from psychic disability or brain damage and who are not yet ready for a jobIt is intended to prepare these handicapped persons for vocational training by means of special courses lasting three months. It is also proposed to construct special apartments for these 35 schoolleavers in connection with the centre. By providing accommodation it will be possible to set up these courses which meet a special need for the Arbeitsverwaltung (Federal institution for labour), since considerable efforts are required to provide the appropriate voccational training for this category of disabled people. It is proposed to finance a proportion (50%) of the additional costs (400,000 DM or 109,200 u.a.) of making the housing accommodation suitable for the handicapped. In addition it is desirable to finance a study, evaluating the results of the project.

To sum up, the Community contribution will be 59.600 u.a.

50 % of additional cost of providing 55 flats54,600 u.a.Cost of study5,000 u.a.

59.600 u.a.

V/767/75-E

#### D. Pilot Studies of technical character

1) Study on the establishing of living conditions (Stad en Landskap, Rotterdam, Holland).

To achieve the objective of a full social and professional integration of the handicapped it is necessary to consider the problem on the widest basis. Up to now, there has not materialized a fundamental approach to integrate the handicapped in society in providing for urban expansion and reconstruction. Such plans should aim at establishing living conditions offering optimum opportunities for such integration.

This project involves the development of an urban plan creating a district of about 20,000 inhabitants. In order to ensure that all inhabitants are given optimum living conditions community facilities would have to take account of the needs of specific minority groups of the district's population i.e. not only the severely disabled but also, for instance, the elderly.

The study is estimated to cost as follows: -

Introduction and basic philosophy	fl. 20,000
Stock taking and problem analysis	fl. 50,000
List of desiderata and requirements	fl. 20,000
Execution of the work	
Model study and detailed analysis	fl.140,000
Study of financial impact	fl. 50,000
Justification, conclusions and recommendation	fl. 20,000
Total:	fl,300,000
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A 50 % contribution from the Community would cost Fl. 150,000 or 41,430 u.e.

2. Pilot-study on adjustable equipment: Central council for the Disabled (U,K.)

There has been discussion for some time the question of providing in housing kitchen and bathroom fittings which are adjusted to suit persons with varying disabilities.

The "feed-back" of information on the advantages or disadvantages of specifying adjustable equipment in scarce, and often the owners or the users are not in a position to relate the "capital input cost" to the eventual success or failure of such equipment. It is an important area of research because the conclusions will clarify whether it is necessary to provide a higher cost element in housing for such sophisticated equipment.

The total cost is estimated to be  $\pm$  9,200. A 50 % contribution from the Community would cost  $\pm$  4,600 or 10,400 u.a.

3. Study on the problems posed by access to public buildings and facilities (transport etc.) and on the solutions to be applied (Associazione Italiana per la Riabilitazione dei Minorati).

The object of the study is to put the accent on the problem of access to public buildings or facilities (transport etc.) for physically handicapped persons generally, and on the solutions applied.

The main orientation of the study will be the road and transport systems. Examples of current solutions will be analysed and studied, also new proposals in a number of Italian towns and proposals which may be carried into effect in other countries.

The plan of analysis will make clear the deficiences in the infrastructure, so that a series of specific problems can be defined and solutions put forward to change the situation, possibly in terms of a hierarchy of priorities.

The proposed programme is directed not only to the category of seriously handicapped persons, but also to the much larger category comprising children, the old and the sick, pregnant women, temporary invalids, in other words, virtually the whole population.

The total cost is estimated at 10,000,000 lira. A Community contribution of 50 % would, accordingly, correspond to 5.000,000 lira or P,000 ...a. 4. Research on apartment ground-plans (Boligudvalget for bevaegelseshaemmede, Denmark).

European minimum requirements mentioned in part 1 are only one aspect, though an essential one, of a well functioning dwelling for a handicapped person. A deep study and analysis of apartment ground-plans is also desirable.

This analysis should be combined with an adjustment of the existing groundplans to the requirements of disabled persons. This study would also comprise an economic evaluation.

Total cost is estimated to 100,000 Dkr. A 50 % contribution from the Community would cost 50,000 Dkr or 6,670 u.a.

5. Study on the remodelling of different house-types (Union of voluntary organisations for the handicapped, Dublin, Ireland).

This study would complete the EVRY programme which relates to the readaptation of recently built dwellings. Since the housing stock in Europe generally is to a very large extent more than 25 years old, a study on the readaptation of older houses is highly desirable. The study will cover 4 different types of houses :

1° A housing block, representative of an inner-city quarter, with ± 20 flats built in the late nineteenth century

2° A house in a residential area dating from around 1910 with 5-7 rooms 3° A typical rented local authority house built in the inter-war period. 4° A typical flat representative of immediate post-war construction.

In all these cases, the study will examine the best ways and means of making the dwelling generally suitable to disabled people. The study will also examine the cost as far as this is possible.

The total cost of the study is estimated at 7,000 5 and the cost to the Community, assuming a 50 % contribution, at 3.500 ± or 8.400 u.a.

The total cost of these pilot-studies can	be summarized as follows:
The "EVRY"-project, France	190,500 u.a.
The "Dahlheim"-project, Luxembourg	125,000 u.a.
"Haus der Behinderten", Germany	59,600 u.e.
Pilot-studies of technical character	74,900 u.a.
Total:	450.000 u.a.

## Supplementary note - Belgium

The range of action is completed for the nine member states, taking into account the project, supported by the Commission in 1974, for an exhibition house or "laboratory" dwelling in one of the first apartment blocks in Cité de l'Amitié at Woluwé-St-Lambert, Brussels.

This exhibition-house includes an ergo-therapeutic kitchen, automatic doors, specially equipped bathroom and toilet and other fittings specially designed to ensure the independence of the handicapped person.

The total amount contributed by the Commission was 976,000 FB or 19,520 u.a.