

Ministry of Public Works and Housing



**A REPORT ON SUITABILITY OF BUILDINGS
FOR THE NEEDS OF DISABLED IN
GAZA STRIP**

General Administration of Research ,Studies
and Development

By

Eng: Wedad Abu daia
Eng: Mohammed Aboud
Eng: Nermeen Zourob

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Introduction:

Palestinian community has a special case regarding disabled, specifically in Gaza strip. The increasing in injured people due to Israeli continuous aggressions led to an obvious increase in number of disabled. Siege has resulted in drastic deterioration in economical condition, notably in poverty and unemployment rates. Disabled, who are the weakest part of community, are the most negatively affected by any crises. As a result, the weakest part of community (disabled) faces much more crisis. Any development plans in the future must include participation of disabled in all stages, from starting point, through execution, until evaluation. This will achieve the equality and real cooperation between disabled and community.

Objectives:

1. Developing Palestinian community to achieve equality and justice for all people.
2. Highlighting problems which disabled persons suffer when they try to live their daily life, to behave normally in public and private buildings.
3. Adopting designing and planning specifications for disabled constructions.
4. Indicating interacted duties between different representatives which are needed for accessibility for disabled in public and private buildings.
5. Developing Palestinian Economy by developing buildings accessibility which is useful not only for them but also for others.

This report includes the followings:

First: Disabled situation in Gaza strip.

Second: Public and private buildings current situation.

Third: conclusions and recommendation.

First: Disabled Situation in Gaza Strip:

Palestinian central bureau of statistics, estimated disabled percentage in Gaza Strip in 2006 as 2.1 %. (See appendix 1). According to phone interview with Dr. Gamal Abu Al-khair from Ministry of Health, People with moving disabilities are the most cases (30.2%). A survey conducted by National Center of Community Rehabilitation in 2002, 2003 found that disabled statistics are (19,750) from a total sample (1,062,545) with 1.85%. The survey details are explained in table (1):

No.	Area	Total number of people	Number of disabled	percentage
1.	North Gaza Governorate	202,367	3452	1.71%
2.	Gaza Governorate	359,512	9091	2.53%
3.	Middle Governorate	155,498	2197	1.41%
4.	Khan Yonis Governorate	214,495	3187	1.47%
5.	Rafah Governorate	130,673	1836	1.41%
Total		1,062,545	19763	1.85%

Table (1): Number of disabled in Gaza strip (source: A survey of National Center of Community Rehabilitation in 2002, 2003)

Therefore there is an essential need to take care of disabled, and combine them with normal life of various society activities. This needs adaptation of public and private buildings for better use by disabled.

Disabled law which was issued in 1999 said that disabled have the right to have a life with freedom and dignity, with various utilities as others. They have the same rights and duties within their capabilities. Difficulties which they face should not be a reason for not obtaining their rights. furthermore the law said that disabled have the right to have equal chances in educational facilities, within the framework used in these facilities. It said also that Ministry of Education and Higher Education should give disabled a convenient environment in schools, colleges and universities.

Second: Public and Private Buildings Current Situation:

Case studies were conducted in educational facilities, rehabilitation centers, and hospitals. To evaluate current situation and find proper solutions as follows:

1- Educational Facilities Adaptation for Disabled in Gaza Strip:

A previous research was conducted by Dr. Nihad Al-Meghani who was assistant of head of Gaza Municipality for Urban Planning Affairs. He found the following conclusions regarding adaptation of educational facilities to solve their problem and give them their rights as mentioned in law the conclusions as follows:

- § Developing is required not only for educational methods but also for environment.
- § Developing educational environment include many factors such as approved Design specifications for disabled, enough lighting and color, and integration and good functional relations between Design elements.

- § Shortage of natural resources and lands with increasing in disabilities types and numbers leads to concentration on the most necessary elements for disabled accessibility.
- § Combination between disabled and others in educational facilities (schools, universities, and colleges) demands good control in obstacles which prevent disabled from his right to learn. Architectural design adjustment and space allocations are examples to achieve goals.
- § An exclusive plans and strategies placement to adopt existing educational facilities in all their levels for disabled use. This could be achieved by the followings:
 - i. Accessibility at least to library, and canteen by putting suitable ramps.
 - ii. A new bathroom for disabled or adopting an existing one with good accessibility.
 - iii. Adopting other elements such as: doors, windows, stairs, elevators...etc.
- § When applying these strategies and policies, the psychological pressure on disabled will be reduced as well as their families and society, as a result the social segregation will also be reduced.

2- Rehabilitation Centers for Disabled:

Previous research was conducted by Dr. Nader Al-Nimra about "Design specifications for Rehabilitation Centers". A survey on four centers in Gaza city (2 governmental, 2 private) had the following Results:

Center Name	Results of governmental rehabilitation centers for disabled		Results of private rehabilitation centers for disabled	
	Moving disabled center	Red crescent center	Al-wafa hospital center	Motric disabled center
First: Site plan	Good	Very good	Good	Very good
Second: outdoor spaces				
1. Parking	Good	Good	Unavailable	Poor
2. Horizontal Circulation (external roads) and pavements.	Very good	Good	Poor	Good
3. Vertical circulation				
a) Ramps	Very good	Very good	Poor	Poor
b) External stairs	Unavailable	Good	Unavailable	Unavailable
4. Open spaces (landscape)				
a) green Areas	Good	Very good	Poor	Poor
b) Play grounds.	Unavailable	Poor	Unavailable	Unavailable
5. Outdoor equipments				
a) signs	Unavailable	Poor	Unavailable	Unavailable
b) seats	Poor	Good	Poor	Poor
c) colors	Unavailable	Unavailable	Unavailable	Unavailable
d) telephones	Unavailable	poor	Unavailable	Unavailable
Third: indoor spaces				
1) Main Entrance	Very good	Very good	Good	Poor
2) horizontal circulations (paths)	Very good	Very good	Very good	Good
3) vertical circulations				
a) elevators	Unavailable	Very good	Very good	Unavailable
b) stairs	Good	Good	Very good	Unavailable
4) Bath rooms	Good	Good	Good	Unavailable
5) Openings				
a) Doors	Good	Good	Very good	Good
b) Windows	Good	Good	Good	poor
6) Finishing:				
a) floors	Good	Very good	Very good	Good
b) walls	poor	Very good	Very good	poor
c) lighting and power	Good	Good	Good	Good

3-A survey on Al- shifa Hospital (Outpatients):

Al-shifa hospital was selected as a case study to evaluate current situation of health facilities adaptation for disabled. Al- shifa hospital is the largest hospital in Gaza Strip with a large number of daily visitors and patients. The survey for the hospital was as follows:

First: Outdoor Environment

No.	Evaluation element	Design specification	Current situation	Result
1.	Parking	At least 1/50 car (380 x 480 cm)	unavailable	unavailable
2.	Pavements and paths	<ul style="list-style-type: none">- From a durable and unslipped materials- Path width ≥ 120 cm- Level difference ≤ 2 cm- Special texture for disabled.	<ul style="list-style-type: none">- cement tiles (60 x 60cm) fixed on sand in a good condition- path width ≥ 120 cm- level difference = 17cm- no special texture for disabled	Good
3.	Ramps	<ul style="list-style-type: none">- Using ramps when level difference > 2 cm- Slope $\leq (1:12)$ preferred (1:20)- Width ≥ 150 cm with landing (140x140 cm) for maneuvering.- Handrail with upper height ≤ 95 cm , lower ≤ 75 cm and extended ≥ 30 cm	<ul style="list-style-type: none">- No ramps in back entrance.- A ramp is existing in front entrance	poor

Second: Indoor Environment

No.	Evaluation element	Design specification	Current situation	Result
1.	Circulations	<ul style="list-style-type: none"> - From a durable and unslipped materials. - Total sum of two perpendicular paths ≥ 220 cm for maneuvering. 	<ul style="list-style-type: none"> - Tiles (30 x 30 cm) unslipped with width > 120 cm. - Total sum of two perpendicular paths ≥ 220 cm - handrails are adjacent to walls, unused, and in front of seats 	good
2.	Ramps	<ul style="list-style-type: none"> - use Ramps when level difference > 2 cm - Slope $\leq (1:12)$, preferred (1:20) - Width ≥ 150 cm with landing (140x140 cm) for maneuvering. - Handrail with upper height ≤ 75 cm, lower ≤ 75 cm and extended length ≥ 30 cm 	No levels to make ramps	good
3.	Stairs	<ul style="list-style-type: none"> - riser height ≤ 180 cm - enough lighting (natural/artificial) - Special texture at the beginning and in the end of stairs. - Handrails with upper height ≤ 90 cm and lower ≤ 75 cm (difference = 15cm) 	<ul style="list-style-type: none"> - riser height < 180 cm - Enough natural and artificial lighting. - No special texture in stairs. - No handrails. 	good
4.	Elevators	<ul style="list-style-type: none"> - An enough space (150 x 150 cm) in front of elevator for maneuvering. - Special equipments inside elevator for disabled 	- No elevators, one level floor.	Un available.
5.	Doors and handles	<ul style="list-style-type: none"> - Use sliding or hinged doors open outside with pure width ≥ 90 cm. - Door Jack takes (4-6 seconds) to be closed - Handles height ≥ 80 cm - Not use rounded handles. - Doors locks can be opened from inside and outside. - - Metal sheet to be fixed on door 40 cm height above ground, two sheets for swinging doors. - Additional handle to be fixed 80 cm height above ground for hinged doors. 	<ul style="list-style-type: none"> - hinged doors open inside with width ≥ 90 cm - No Door Jacks. - Handles are suitable - No locks - Unavailable - unavailable 	poor

6.	Windows	<ul style="list-style-type: none"> - lower height between 60-80 cm - handles height ≤ 130 cm - hinged and sliding windows are more suitable 	<ul style="list-style-type: none"> - lower height: 80cm. - handles height > 130cm - sliding windows 	poor
7.	Signs	<ul style="list-style-type: none"> - Fixed in clear places, readable and accessible. - Use suitable color and symbols. - (red \rightarrow emergency - yellow \rightarrow danger - Green \rightarrow safe) 	- small, black, and no symbols	poor
8.	Special baths	<ul style="list-style-type: none"> - door width ≥ 100 cm - Wash basin height ≤ 85cm. - Vertical & horizontal handrails inside. - Un slipped tiles 	- unavailable	unavailable



Handrails are adjacent to walls, unused, and in front of seats



South entrance: No parking places for disabled

Third: Conclusions and Recommendations

The previous researches in educational facilities, disabled centers, and hospitals indicated the importance of adaptation these facilities for disabled as soon as possible.

To achieve this goal properly we need to establish an Execution and Proceeding Unit of Building Adaptation for Disabled. This unit includes the specialists basically from:

- 1- Ministry of Public Works and Housing.
- 2- Ministry of Local Government.
- 3- Ministry of Social Affairs.
- 4- Ministry of Health.
- 5- Ministry of Education and Higher Education.

Each Ministry nominates a representative who will attend a periodical meeting for discussions and building developing process.

The execution and proceeding unit will evaluate the followings:

- 1- Existing buildings. (study drawings specifications)
- 2- Future buildings. (Survey to adopt buildings).

Building adaptation for disabled will be based on the following specifications of Engineers association (1977, part 1, 2, 3, 4, 5).

First: outdoor Environment:

- Parking areas
- Pavements and paths
- Ramps

Second: indoor Environment:

- Paths (corridors)
- Ramps
- Stairs
- Elevators
- Doors and handles
- Windows
- Signs
- Baths

References:

- 1- General Union of Palestinian disabled: disabled rights lower no. (4), 1999, 1st edition, Ramallah, Palestine.
- 2- Central Bureau of Palestinian statistics.
- 3- Building specifications for disabled, Engineers association, part 1, 2,3,4,5, 1997, Palestine.
- 4- National center for social adaptation: A survey on all Gaza governorates, 2004, Gaza, Palestine.
- 5- Dr. Nadir Gwad, Design specifications for disabled, Cairo, 2001.

Appendix (1):

Percentage of persons with health difficulties by type of difficulty and selected background characteristics, 2006

Background Characteristics	Type of Difficulty						
	Seeing	Hearing	Understanding & Communication	Moving	Self Care	Dealing with others	Total
Region							
Palestinian Territory							
West Bank	0.7	0.4	0.6	1.2	0.3	0.2	2.5
Gaza Strip	0.8	0.5	0.8	1.3	0.2	0.2	2.7
	0.4	0.3	0.8	1.1	0.3	0.2	2.1
Type of Locality							
Urban	0.8	0.3	0.5	1.2	0.3	0.2	2.3
Rural	0.7	0.5	0.7	1.1	0.3	0.3	2.7
Camp	0.7	0.4	0.8	1.5	0.3	0.3	2.9
Sex							
Males	0.7	0.4	0.7	1.4	0.3	0.3	2.8
Females	0.7	0.3	0.5	1.0	0.3	0.2	2.2
Age							
0-4	0.1	0.1	0.3	0.5	0.0	0.0	0.8
5-14	0.9	0.8	0.1	0.1	0.3	0.3	3.4
15-29	0.4	0.3	0.8	0.7	0.2	0.3	1.8
30-39	0.4	0.3	0.7	1.4	0.4	0.4	2.6
40-49	0.7	0.4	0.5	1.8	0.3	0.4	3.3
50-59	1.9	0.9	0.8	2.3	0.2	0.3	5.1
+60	5.3	2.9	0.8	8.1	1.9	0.5	14.8