

ALLEN C. WYTENBACH
A MENTAL RETARDATION CENTER
FOR BOZEMAN

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A MENTAL RETARDATION CENTER FOR BOZEMAN, MONTANA

Part I of a
Terminal Project in Architecture

by
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John F. Kennedy, President

February 5, 1962

Referred to the Senate March 14, 1962

"Cultural and educational deprivation resulting in mental retardation can also be prevented. Studies have demonstrated that large numbers of children in urban and rural slums, including pre-school children, lack the stimulus necessary for proper development in their intelligence. Even when there is no organic impairment, prolonged neglect and the lack of stimulus and opportunity for learning can result in the failure of young minds to develop. Other studies have shown that, if proper opportunities for learning are provided early enough, many of these deprived children can and will learn and achieve as much as children from more favored neighborhoods. This self-perpetuating intellectual blight should not be allowed to continue."

John F. Kennedy, President
February 5, 1963

Message to the Eighty-eighth Congress

SCOPE:

Society is a cruel master. It judges ability by accomplishment, and accomplishment is initiated by education. If competent, an educated person can become the manipulator of society. If inadequate, he is doomed to a dark corner in society's house, a corner from which escape is impossible.

"... a young child was calling, 'Come, come play with me. Touch me.' I walked to the door. On the other side were 40 or more unkept infants crawling around a bare floor in a bare room. One of the children had managed to squeeze his hand under the doorway and push his face through the side of the latched door and was crying for attention."

Burton Blatt
Massachusetts Department of Health
Description of an institution, 1966

Every human being has the right to be treated as a human being and the evils that result from the condition called "mental retardation" must be perged from the conscience of society. The mentally retarded child is first and foremost, a child. This thought must guide all thinking when we, as a society, right the wrongs we have wrought upon these human beings.

PROBLEM:

Mental retardation can be defined as an impairment in a person's ability to learn and to adapt to the demands of society. These demands are highly complex and often vary with the age of the individual. A pre-school child has very few demands placed upon him and as a result, society does little to assess the intellectual and social accomplishments of the child. During the school years, society suddenly places great demands upon the child and critically evaluates all social and academic progress. In the later years, intellectual inadequacy may be less apparent if the person's social graces meet the minimal demands of society. This indicates that the problem of mental retardation is most evident during the school years. Numerous surveys indicate that less than 1/5 as many of the number of individuals reported in the age group 0-4 as mentally retarded were reported in the age group 10-14. Similarly, only $\frac{1}{4}$ as many persons in the age group 20 and over were identified as mentally retarded as in the age group 10-14.

The prevalence of mental retardation from 10-14 is due primarily to the recognition of intellectual deficiency within the school systems while the low number of infants from 0-1 year is due to the fact that their retardation is not yet apparent. Again, as the pressure of social demands and academic achievement increase, the mentally retarded child

finds it harder and harder to keep up with children his own age and as he falls farther behind, his mental retardation becomes more apparent.

Virtually all children with I.Q.'s below 70 have significant difficulties in learning and in adapting adequately to their environment. About 3% of the school age population score below this I.Q. level. This means that there are about 5.6 million people in the United States who are mentally retarded.

The estimated retarded population in Montana is 10,971. Of this figure, 1,273 range in age from 1-5 years, 5,277 range in age from 6-19 years, and 4,421 range in age from 20 years and over. Currently, only 839 of the 10,971 mentally retarded people are receiving care and education. This means that only 7.7% of Montana's retarded population is receiving help.

Montana is divided into 5 basic regions or service areas, with Bozeman located in Region 3. This region alone contains 2,437 retarded people. 283 are pre-school children, ages 1-5 years, 1,172 are school age children, ages 6-19, and 982 are adults, ages 20 and over. Only 179 people of this 2,437 are receiving care. 7.34% of the mentally retarded population in Region 3 are being served. These figures are frightening and become even more ominous when you realize that the current facilities within the state are now completely full.*

*figures from: Montana State Plan for Mental Retardation Facilities Construction, 1969-70, pp. 48, 52, 72.

The growing need for programs to serve the mentally retarded is obvious. A sense of urgency prevails, for only through care and education can a retarded child ever hope to regain his place in society. The need is evident. The problem is obvious. The solution must begin now.

Mental retardation is a condition characterized by delayed or abnormal intellectual development. This is usually accompanied by an impairment in general adaptation to surroundings, schoolwork, social activities, etc. The mentally retarded child is characterized by a less than normal rate of intellectual development and is usually unable to learn from his experiences. He is slow to acquire social and practical skills. As a result, the retarded has an inherent inability to manage his affairs and/or to progress in employment.

Mental retardation has been defined in many ways. The one definition that is currently accepted by the American Association on Mental Retardation is "an average general intellectual functioning which is below the normal range, mental retardation is associated with impairment in adaptive behavior. Mental retardation encompasses a broad spectrum of mental deviance from the mild to the most profound. The distinction between mild and the most severe of mental retardation has been arbitrarily defined as an I.Q. level of less than 70. A mildly retarded child is more comparable to a child his own age than is a child who is

DEFINITION:

"Mental retardation" is not a disease and the retarded child should not be looked upon as a diseased entity. It is a syndrome which can and is produced by many agents acting singly or in combination. Symptomatically, mental retardation is characterized by delayed or atypical developmental patterns. This is usually accompanied by an impairment in general adaptation to surroundings, schoolwork, social activities, etc. The mentally retarded child is characterized by a less than normal intellect which prevents him from responding efficiently to the usual patterns of classroom instruction. The retarded child is slower in maturing and takes a much longer time in acquiring social and practical skills. As an adult, the retardate has an impaired ability to manage his affairs and/or to progress in employment.

Mental retardation has been defined in many ways. The one definition that is currently accepted by the American Association on Mental Deficiency is: "subaverage general intellectual functioning which originated during the developmental period and is associated with impairment in adaptive behavior." "Mental retardation" encompasses a broad spectrum of mental deviance from the very minimal to the most profound. The distinction between normality and the mildest degree of mental retardation has been arbitrarily defined as an I.Q. level of less than 70. The mildly retarded child is more comparable to a child his own age than is a child who is

profoundly retarded. For this reason, along with the fact that there are more mildly retarded than profoundly retarded, fewer specialized services and facilities are required for the mildly retarded.

The services required by the mentally retarded child are based on the level of functioning ability and age, rather than on the cause of retardation. Distinctions must be based on the extent of the impairment, taking into account all of the various factors which contribute to the intellectual and social functioning of the child. As the child ages, these functioning levels change, so a constant re-evaluation of each child's ability must be made periodically. Table #7 gives a general idea in qualitative form, of a mentally retarded child's developmental characteristics.

The mentally retarded child requires special educational services in order to develop to his maximum capacity. These educational services, represented by the field called "special education", provided schoolroom training over and above the regular classroom and provided for the individual differences among the retarded children. Special education teachers are trained in skills that the regular classroom teachers are not and are therefore much more competent in developing the potential of each child to his maximum.

The following characteristics are typical of the mildly and moderately retarded child and it is these characteristics that the special education teacher is trained to handle.

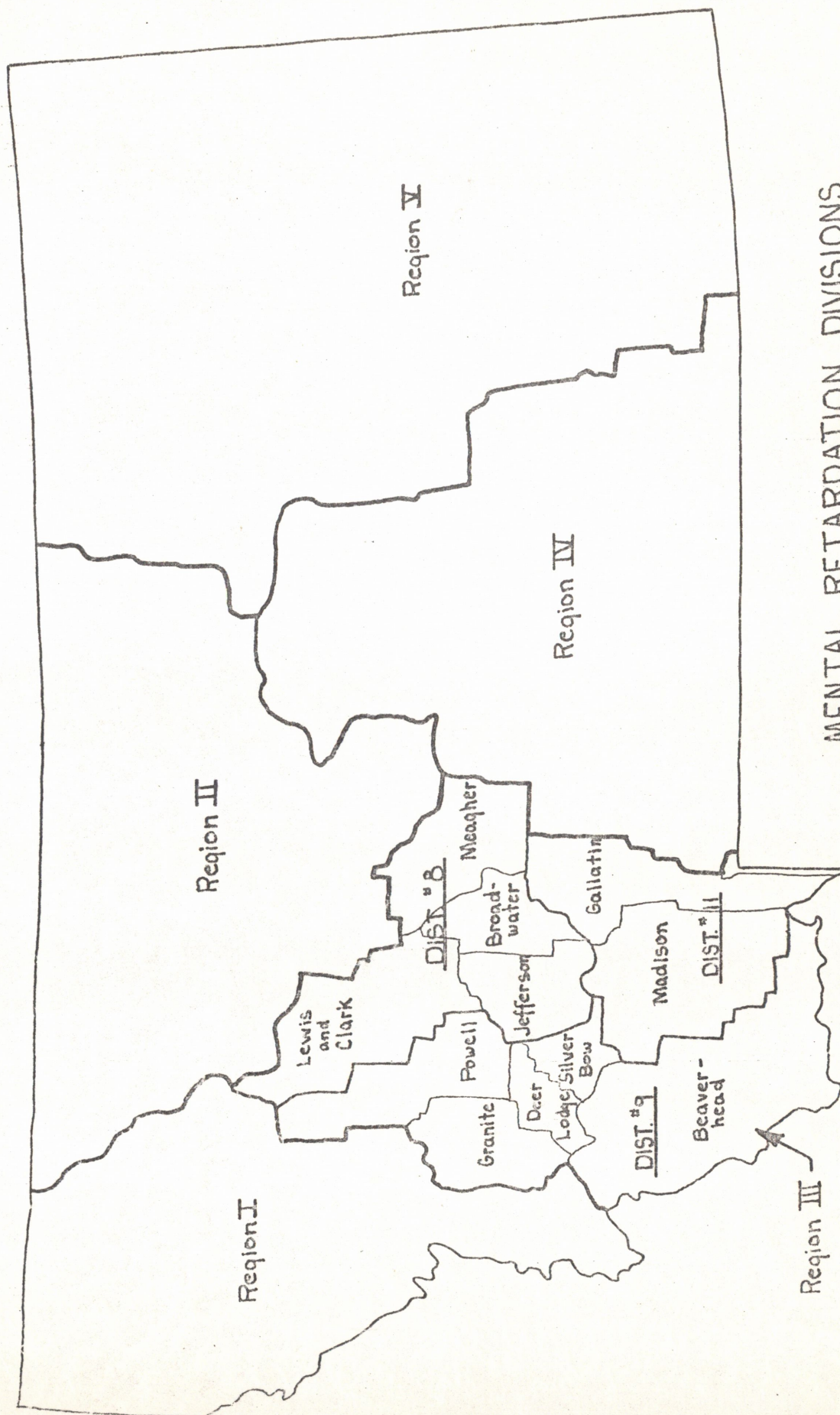
- 1.) Child is unable to think abstractly or to handle symbolic materials.
- 2.) Child is unable to understand and carry through your directions for assignments.
- 3.) Child lacks the so-called "common sense" and reasoning level of group.
- 4.) Child is unable to understand complex rules of games.
- 5.) Child is slow in all areas: academic, social, emotional and physical.
- 6.) Child breaks rules of conduct or of games and is often unaware of it.
- 7.) Child is unable to work independently.
- 8.) Child is easily confused.
- 9.) Child has a short interest and attention span.
- 10.) Child is unable voluntarily to concentrate.
- 11.) Child finds it extremely difficult, if not impossible, to keep up with the class in academic work.
- 12.) Child is behind normal grade achievement in school.

As can be seen from this list, the special education teacher must develop individual contact with each student so as to provide the child the maximum opportunity to learn. The teaching of the mentally retarded child is very similar to that of the normal child with the basic exception of the amount of time required to teach the retarded child. The retarded child is taught by repeating a subject over and over until the child is able to grasp and retain its meaning, and then a new subject is presented which builds upon the previous information that the child has gained. In this way, old information is constantly added to and repeated so that the child will not lose previous concepts. This process of

repetition takes much more time than does the normal teaching process, but yields a much more permanent type of education for the mentally retarded than does the "normal" educational process. The concept of individual attention to each student by the teacher can not be over emphasized. Each retarded child requires an individualized educational program to find his needs and the teacher must be able to present this program on a scheduled basis to the student. Without this personal contact, the retarded child becomes disillusioned with learning and simply refuses to concentrate on presented lessons. Variety of activities within the lesson plan, coupled with appropriate, clear, and suitable material for the child, help in retaining the child's attention and interest. The role of the special education teacher is one of constant challenge for the retarded child is a demanding student.

DEVELOPMENTAL CHARACTERISTICS FOR MENTALLY RETARDED *1

DEGREES OF M.R.	PRESCHOOL AGE 0-5 MATURATION & DEV.	SCHOOL AGE 6-20 TRAINING & EDUC.	ADULT 21- SOCIAL & VOCATIONAL
PROFOUND IQ 20-	GROSS RETARDATION; MIN. CAPACITY FOR FUNCTIONING IN SEN- SORI-MOTOR AREAS; NEEDS NURSING CARE.	SOME MOTOR DEVELOPMENT PRESENT; MAY RESPOND TO MINIMAL OR LIMITED TRAINING IN SELF- HELP.	SOME MOTOR AND SPEECH DEVELOP- MENT; MAY GAIN VERY LIMITED SELF-CARE; NEEDS NURSING CARE.
SEVERE IQ 20-35	POOR MOTOR DEVELOP- MENT; SPEECH IS MINIMAL; GENERALLY UNABLE TO PROFIT FROM TRAINING IN SELF-HELP; LITTLE OR NO COMMUNICA- TION SKILLS.	CAN TALK OR LEARN TO COMM.; CAN BE TRAINED IN BASIC HEALTH; PROFITS FROM HABIT TRAIN- ING.	CONTRIBUTE TO SELF-MAINTENANCE UNDER COMPLETE SUPERVISION; MIN. SELF-PROTECTION SKILLS IN CONTROL ENVIRONMENT.
MODERATE IQ 35-50	CAN LEARN TO TALK OR COMM.; POOR SOCIAL AWARENESS; FAIR MOTOR DEV.; PROFITS FROM SELF- HELP TRAINING; CAN MANAGE WITH MOD. SUPERVISION.	CAN PROFIT FROM SOCIAL AND OCCUPA- TIONAL TRAINING; ACADEMIC LEVEL IS SECOND GRADE; LEARN TO TRAVEL TO FAMILIAR PLACES	ACHIEVE UNSKILLED OR SEMISKILLED WORK TRAINING IN SHELTERED WORK- SHOP; GUIDANCE NEEDED WHEN UNDER STRESS.
MILD IQ 50-70	DEV. SOCIAL & COMM. SKILLS; MINIMAL RETARDATION IN SENSORIMOTOR AREAS; OFTEN NOT DISTIN- GUISHED FROM NORMAL UNTIL OLDER.	ACADEMIC LEVEL IS SIXTH GRADE; CAN LEARN SOCIAL CONFORMITY.	MINIMUM SELF- SUPPORT CAN BE LEARNED BUT NEEDS GUIDANCE WHEN UNDER STRESS.



MENTAL RETARDATION DIVISIONS

INVENTORY OF FACILITIES & PROGRAMS
(CODE FOR CHART) *3

TYPE OF FACILITY

- C- D&E CLINIC, RESIDENTIAL FACILITY
- F- DAY FACILITY
- G- RESIDENTIAL FACILITY

OWNERSHIP

- B- PUBLIC
- C- NONPROFIT

OTHER SERVICES PROVIDED

- A- HEARING
- B- VISION
- C- SPEECH
- D- LANGUAGE
- E- CONVULSIVE DISORDER
- F- MOTOR IMPAIRMENT
- G- BEHAVIOR DISORDER
- H- OTHER : SPECIAL TRAINING
- I- EMOTIONALLY DISTURBED
- J- GENETIC

INVENTORY OF FACILITIES & PROGRAMS

LOCATION		NAME of FACILITY	TYPE OF FACILITY (CODE)	OWNERSHIP (CODE)	NUMBER SERVED	MENTALLY RETARDED SERVED IN FACILITY										OTHER SERVICES (CODE)	
CITY or TOWN	COUNTY					RETARDATION LEVEL				AGE GROUPING							
						10-68--83	10-50--67	10-35--49	10-20--34	10 BELOW 20	0-5	6-12	13-20	21-44	45-64		65-
		TOTAL			839	19	179	261	202	178	-	62	279	404	90	4	A, B, C, D, E, F, G, H, I, J
BOULDER	JEFF.	BOULDER RIVER SCHOOL & HOSPITAL	C	B	839	7	4	3	-	-	7	-	-	-	-	-	-
BUTTE	SIL. BOW	NURSERY SCHOOL FOR MENT. RETARD.	F	B	7	21	14	5	1	-	-	-	4	16	1	-	E, F, G
BUTTE	SIL. BOW	SHELTERED WORKSHOP	F	B	21	1	14	5	1	-	-	-	-	4	16	1	-
GALEN	DEER LODGE	GALEN STATE HOSP.	G	B	270	100	10	55	35	-	-	-	-	20	70	10	-
WARM SPRINGS	DEER LODGE	WARM SPGS. STATE HOSPITAL	G	B	1400	170	10	30	60	60	27	73	39	23	8	-	E, G
BOZEMAN	GALL.	M.R. INFORMATION CENTER	F	A	(COMMUNITY EDUCATION PROGRAM ONLY)												
AREA TOTAL			6	6	2537	1157	30	217	354	228	230	34	135	322	463	169	14

SPECIAL EDUCATION CLASSES IN
PUBLIC SCHOOLS 1968-1969 *4

AREA	CITY OR TOWN	COUNTY	EDUCABLE	TRAINABLE	SPEECH	HEARING	TOTAL
DIST. 8	HELENA	LEWIS & CLARK	74	—	65	—	139
DIST. 9	ANACONDA	DEER LODGE	30	4	—	—	34
	DILLION	BEAVERHEAD	9	—	—	—	9
	BUTTE	SILVER BOW	70	7	—	—	77
	PHILLIPSBURG	GRANITE	8	—	20	—	28
DIST. II	BOZEMAN	GALLATIN	42	6	48	—	96
	MANHATTAN	GALLATIN	—	—	13	—	13
	THREE FORKS	GALLATIN	—	—	—	—	—
			233	17	146	—	396

POPULATION ANALYSIS *6

TOTAL POPULATION: III	163,900	TOTAL M.R. SEGMENT	2,437
PRE-SCHOOL POP. (1-5 inc)	18,849	TOTAL M.R. SEGMENT	283
SCHOOL AGE POP. (6-19 inc)	46,875	TOTAL M.R. SEGMENT	1,172
ADULT POP. (20 and over)	98,176	TOTAL M.R. SEGMENT	982

LINE	SEGMENT	1	2	3	4	RESIDENT CARE CASES COL. 3-4 LINE A-B-C	DAY CARE CASES COL. 1-2 LN. A COL. 2 LINE B	SHELTERED WORKSHOP 1/1000 ADULT POP.	D.&E. CLINIC CASES 600 / MILLION TOTAL POP.
A	PRE-SCH. MILD	(4) 246	(6) 28	6	3	19	264		
B	SCH. AGE	(15) 1020	(23) 117	27	8	73	94		
C	ADULTS	(13) 854	(20) 98	20	10	63		98	
	TOTALS	2120	243	53	21	155	358	98	98

CONSTRUCTION PROGRAM 1969/70
(CODE FOR CHART) *7

TYPE OF FACILITY

F- DAY CARE ONLY

TYPE OF CONSTRUCTION

I- NEW

OTHER SERVICES

A- HEARING

B- VISION

C- SPEECH

D- LANGUAGE

CONSTRUCTION PROGRAM 1969/70

LOCATION		CITY OR TOWN	COUNTY	TYPE OF FACILITY (CODE)	TYPE OF CONST. (CODE)	SERVICES TO BE OFFERED (CHECK)						RETARDATION LEVEL(CHECK)						AGE GROUP (CHECK)						TOTAL NUMBER OF ADD. M.R. TO BE SERVED	NUMBER TO BE SERVED	OTHER SERVICES
						DIAG. & EVALUATION	TREATMENT	TRAINING	PERSONAL CARE	EDUCATION	SHELTERED WORKSP.	IQ: 68-83	IQ: 50-67	IQ: 35 - 49	IQ: 20-34	IQ: 20 (BELOW)	0-5	6-12	13-20	21-44	45-64	65-OVER				
III	BOZEMAN		GALL.	F	I		X	X	X	X	X			X	X	X					40	40	ABCD			
	BUTTE		SIL. BOW	F	I	X	X	X	X	X	X	X			X	X	X				100	100	ABCD			
	HELENA		LEW. & CL	F	I	X	X	X	X	X	X	X			X	X	X				40	40	ABCD			
	AREA TOTAL			3	3																180	180	A-3 B-3 C-3 D-3			

MENTAL RETARDATION RESOURCES *8

REGION	RETARDATION SEGMENT	RETARDATE SERVED	PERCENT NEED MET	RANK
I	2,071	158	7.62	3
II	2,533	178	7.02	1
III	2,437	179	7.34	2
IV	2,381	194	8.14	4
V	1,549	130	8.39	5

NOTE: SMALLEST NUMBER REPRESENTS GREATEST
NEED.

EXISTING FACILITIES FOR REGION III:

The Boulder River School and Hospital at Boulder provides comprehensive services for the entire state of Montana. As of 1969, this facility housed 839 mentally deficient people. Of this number, only 341 (table #1) were children aged 6-20 years old. The total capacity for this institution is 900. No additions are planned, but instead, new facilities housing a smaller number of patients are planned for throughout the entire state. These facilities will house not only mentally deficient people from region III, but also from throughout the state.

Diagnostic and evaluation centers are spread throughout the state. Presently, the only clinics are at Billings, Boulder, Glasgow, and Glendive. These four clinics serve as the only places where mentally retarded children can go to be evaluated and placed in educational programs that best meet their needs.

Residential units are as scarce as diagnostic and evaluation centers. There are only 4 towns that provide such services and they are Boulder, Galen, Warm Springs, and Glendive. Boulder already houses 839 residential patients, Galen provides a residential setting for adults age 21 and up (table #4), Glendive has only a very small residential project at the Eastmont Training Center, and Warm Springs just transferred 150 patients to Boulder because of lack of space. Warm Springs, like Boulder, is a state hospital and must take all age groups from all over the state.

Educational and training facilities in Region III are also lacking. Butte has a program designed for pre-school children age 0-5 years and also a sheltered workshop (work for mentally retarded adults) for adults aged 13-64. Both of these programs are very small and are designed mainly to satisfy local needs. The facilities at Boulder and Warm Springs offer comprehensive training, but again, these are state facilities and have to provide services for the entire state. This means that they have to be very selective because space is at such a premium. Bozeman has a community program for mentally retarded children, ages 4-19, but this too is grossly inadequate, not only in teaching quality but in lack of space. A new day care facility is projected by the state for Bozeman, Butte, and Helena, but this will only just begin to make a dent in the needs of the mentally retarded children in Montana.

The future holds no relief from the growing problem of needed facilities for the mentally retarded child. In Region III alone, 92 children will need residential care and an additional 358 will need day care facilities for education and training. These demands will over tax the already full institutions in this area and the result will be that children who need help now must wait until space is available. Time is one commodity that the mentally retarded child has very little of.

Nationally, there are 100,000 mentally retarded children and this number increases each year. The current capacity for all mental facilities, both private and public, is 191,587 patients. Currently, 199,694 people "live" in these institutions and for every bed in these facilities, there are 2.5 people waiting to get in. Not very pleasant figures and what is worse, the average waiting period for admission is from 2-5 years!

For the 1,455 mentally retarded children in Montana, there is no relief in state or out of state. Something must be done. In Region III, Bozeman, Butte, and Helena have established goals that if accomplished, will help to relieve some of the problem the state now faces. Table #5 shows a breakdown of the program projected for the next four years, starting in 1969.

EXISTING FACILITIES FOR THE MENTALLY RETARDED IN BOZEMAN

Montana suffers a tremendous need for facilities designed to house and educate the mentally retarded child. Bozeman is no exception. The current mental retardation facilities consist of regular classrooms designed to educate the normal child. The special education program is split between two schools in the Bozeman area. The "younger" children are taught in 3 classrooms at the Emerson School while the Junior High School has 2 classrooms for the older children. The education program at the Emerson School, which is an elementary school, consists of the following breakdown.

<u>*</u>	<u>CLASS</u>	<u>AGE</u>	<u>NUMBER</u>	<u>I.Q. RANGE</u>
1.)	Pre-Primary	4-5 yr.	7	35-70 (Mild-Mod.)
2.)	Primary	6-10 yr.	10	50-70 (Mild)
3.)	Trainable	6-18 yr.	9	35-50 (Mod.)

The Junior High School program consists of the following breakdown.

<u>*</u>	<u>CLASS</u>	<u>AGE</u>	<u>NUMBER</u>	<u>I.Q. RANGE</u>
1.)	Intermediate	10-14	10	50-70 (Mild)
2.)	Pre-Vocational	14-16	8	50-70 (Mild)

*Figures from Mrs. Beatrice Herringer, Director of the Mental Retardation Center in Bozeman.

The five classrooms are completely filled now with the 44 mentally retarded children. Not only are they full, but the trainable class at Emerson has a special problem. As can be seen from the chart, the teacher has to deal with students who range in age from 6-18 years. To make it worse, these children are the more severely retarded and require much more individual attention than do the mildly retarded. The teacher is faced with the ominous problem of presenting material to students whose ages vary dramatically and whose interests vary as much as their ages. Also, the problem of personal contact becomes more apparent, for the teacher has to take more time in presenting instructional material to the group and is thereby limited in the amount of time that she can spend with each student. Present plans are to split this class into two different classes consisting of one age group from 6-10 years and another of students from 11-18 years. This division will produce classes that are more comfortable for the children. This plan has not been implimented due to the lack of classroom space.

Full classrooms and lack of space for expansion of already established teaching areas have restricted the number of mentally retarded children who could enroll in the Bozeman Program. There are 6 children in Bozeman waiting for a chance to get into the special education program. These children will have to wait a long time for space opens very slowly in an education program for the mentally retarded. The program in Bozeman serves only the town of Bozeman. No children from the surrounding Madison and Gallatin counties use the Bozeman facilities due to the lack of space in the Bozeman facility. Mrs. Beatrice Herringer, Director of the Mental Retardation Center in Bozeman estimated that an additional 30 children, including the 6 who are presently waiting in Bozeman, could be enrolled if the facilities were adequate for education and for housing. The remaining 24 children would be provided with residential facilities within the complex. These children will come from the surrounding area of District II. This facility will help relieve the growing list of mentally retarded children who are waiting for space to open up in the existing facilities in Montana.

Of the many problems that exist in the Bozeman facilities, perhaps one of the biggest is the split in resources and teaching talent that exists between Emerson and the Junior High School. There are inherent problems associated with the split schools such as effect administration of any mental retardation program and the lack of teacher contact with other teachers and the lack of any discussion

about a child or new teaching methods or concepts. Also, the child is not presented a unified program of study for separate facilities means that the child will be forced to make a complete break with his old environment at the crucial point in his education. This complete change from a friendly, warm area to a new and unknown area often leaves a child unsure of his own situation and can often cause damaging effects in any knowlege learned previously.

Because the classrooms were designed for "normal" children and not for the mentally retarded, many elements that are essential to the educational program of the mentally retarded were not included in the classroom design. During a young child's early school years, large play areas within the classroom are required. These areas provide the child with a chance to interest and develop a social sense with respect to the other children in the group. These large areas were not provided for in the existing classrooms and the result is that the children are forced to play wherever they can find room, and there is not much open space within the classroom. Another of the many problems is that there is no area provided for private or isolated study carrels. The retarded children need these areas both for private, individual teacher contact and undisturbed study. These study areas help the child keep his attention focused on the subject matter of material being taught. These areas also are used for the presentation of material by the use of a tape recorder or some other

audio-visual device. Currently, classrooms have the tape recorder and no private study areas. Many teachers have tried to separate a small area from the main classroom in an effort to provide this private area but these areas do little to provide the isolated, individual areas that the child needs.

Before any spacial education program can be truly effective, the child must feel comfortable within the teaching area. Individual areas for storage and for coats and boots help to provide a sense of belonging by providing areas that the child can consider his own. These areas represent a peice of the classroom that is controlled totally by the child and provides him with an opportunity to display his individual competence and social responsibility. These two points are stressed in all special education programs. Individual clothes closets and storage areas are lacking in all of the special education classrooms and instruction areas. This is very unfortunate due to their importance in a child's education program.

Another area that should be directly adjacent to or very close to the classroom is the toilet area. Classes in toilet training and sexual hygiene play an important part in the special education program of younger children and more severely retarded. The toilet area becomes a unique area to each classroom space and can therefore be used as another training area in educating the retarded. The existing classrooms make no provisions for such individual areas and

and group the needed toilet facilities together and place them in an area that is not very convenient to each classroom used by the retarded. By removing this space from the special education classroom and by not providing a space that is to be used only by the retarded children, the personal hygiene class has had to be sharply curtailed in both the Emerson School and the Junior High School.

Education and training in the domestic demands of housekeeping is a very important phase in the education of the mentally retarded. It is through this education that the child can develop the necessary skills to allow him to take care of himself in his own home or apartment. Usually, these skills are taught in an area that contains a living room, a bedroom, a kitchen, and a bathroom. This permanent space allows the child the opportunity to learn, under supervision, the responsibilities and duties of each space in a house. Lack of space has made this very important area non-existent in both the Emerson and Junior High School. Teachers have been forced into "making up" areas in the classroom that crudely represent the spaces in a house in order to teach the child the important lesson of house care and home management.

Lack of space within the classroom has reduced the amount of space needed for storage to a minimum. The large amount of visual aids and toys required by the mentally retarded demand a large area for storage. Improvised shelves and counters have further reduced the already

cramped teaching areas and have only added to the space problem of the small classrooms. Any new facility must recognize the need for ample storage areas in conjunction with the classroom.

The older children must share the shop area and paint rooms with the other children in the Junior High School. Emerson School has no provisions for such a work area. Within the Junior High School shop there are many machines that the retarded child cannot operate and all of the machines within the space were not designed for the maximum in safety that is required for the mentally retarded. This not only limits the activities of the child within the area, but also adds to the idea that he is "different" than other people because he can't use certain equipment. The constant reminder of being different from the normal children is also constantly reinforced by the child's constant exposure to the other children within the two schools. Although the mentally retarded children keep different class schedules than do the normal children, the retarded are still exposed to the normal children. Also, the scheduling of the class periods that differ from the balance of the school also adds to the segregation of the retarded from the other children.

The field of special education is still relatively young and new methods of teaching and communication with the mentally retarded child are constantly being developed. There can be no substitute for personal observation of these methods and the observation of behavioral patterns of

certain groups of children under classroom situations. Being a college area, Bozeman has the unique opportunity to teach the theory and then to show it in action. However, there is little chance for observation for there is no area where the child can be seen without him knowing that he is being observed. Only through undetected observation can a child or a class be seen as it really is. The retarded child is taught according to an established routine and an observer who simply sits in the classroom can provide a serious break in the educational routine. Rooms for observation have not been provided because the classrooms were not designed for mentally retarded children. This is too bad for teachers, professional people, and students are robbed of the opportunity to see the educational process in action. It is very important for the psychologist to be able to see how the child reacts to the group within the classroom. As it is now, the special education teacher must convey her observations to the psychologist who then must convert the information into a workable program for the child. This second hand information does not yield the best possible program of education for the child.

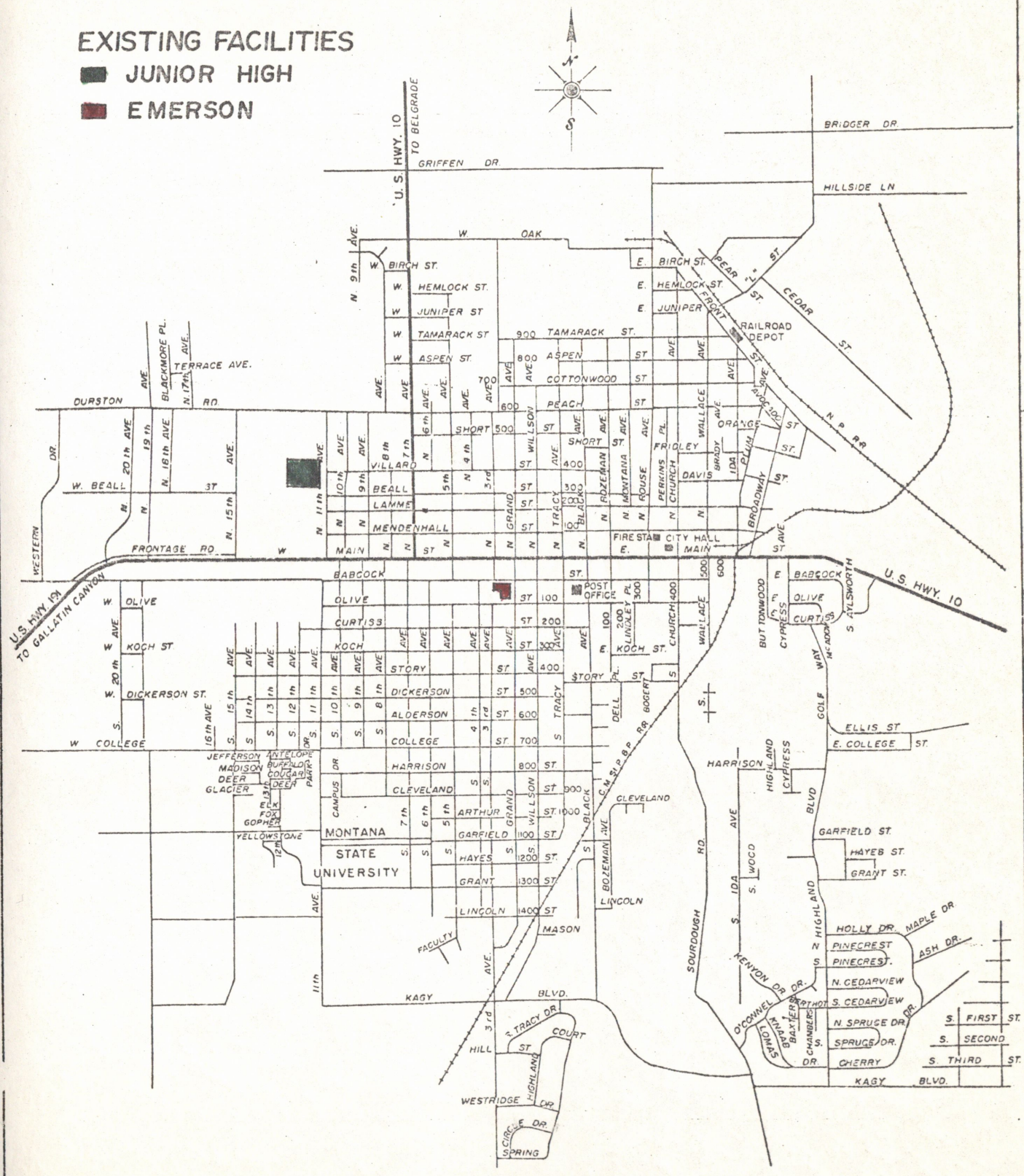
The mentally retarded child needs educational opportunities geared to meet his needs. Shared facilities and split classrooms that are not designed to meet these needs provide a very minimal educational opportunity for the mentally retarded. Many times, such "make-shift" areas do little to provide the learning opportunity demanded by the child.

Bozeman has the great advantage of having dedicated teachers who truly believe in the need for educating the mentally retarded child, but these professionals need facilities that truly provide the maximum opportunity for the individual to learn and grow to his fullest possible extent.

MAP OF BOZEMAN MONTANA

EXISTING FACILITIES

-  JUNIOR HIGH
-  EMERSON



A MENTAL RETARDATION CENTER FOR BOZEMAN, MONTANA

The challenge of a modern facility for the mentally retarded is how to replace the old concept of custodial care with modern programs of therapy, education, training, rehabilitation and research. The archaic institutional model has over-extended itself to the point that individual care and treatment has been lost in mass, impersonal service. The result is that the institution prepares a mentally retarded child for only one thing, institutional living. The goal of returning the individual to the community as a "normal" human being has been abandoned. The institution has become a place of misery, tragic happenings, and unattractive settings. Is it any wonder that the public treat such places with over-whelming disinterest and look upon them with distain?

An institution need not and can not be a place for caging the mentally retarded individuals of our society. It should be so inviting, interesting, and progressive that citizens will be willing to take an active interest in understanding and promoting its goals and functions. The creation of both an attractive and a functionally efficient structure is fundamental for the operation of a progressive program to deucate and return to the community the mentally retarded child.

The facility for the mentally retarded at Bozeman will be structured with these basic goals as the guidlines for

the specialized services required for the mentally retarded child:

- 1.) Services for the mentally retarded will provide the wide range of life experiences that are essential in developing any potential to its maximum.
- 2.) The most favorable environment for the growth and development for most mentally retarded children is a normal family setting. The personal responsibilities that come with living within a family setting develop in the retarded child the personal respect that he so often lacks in himself.
- 3.) Mentally retarded will use to the fullest extent possible, all appropriate services and facilities that are already located within the city of Bozeman. Isolation is a danger that faces any inward oriented organization and the mentally retarded child has been isolated far too long.
- 4.) Services provided for the mentally retarded child will be planned for the specific needs of Bozeman and for both District 11 and the State of Montana. All functions should permit close integration and interchange with other related community services and activities.
- 5.) Basic services such as family counseling, social services, day care, individual and group homes, religious guidance, and recreational opportunities. Basic diagnostic and evaluation services, education and training, and residential units will also be provided to meet the comprehensive needs of the child.
- 6.) The traditional institutional character should be avoided and the new facility should be small enough to afford all opportunities for its residents.
- 7.) The complex will provide specialized observation opportunities in special education classrooms and therapy programs for college students, student nurses, and therapists in training programs.

TYPES OF PHYSICAL FACILITIES PROVIDED:

Comprehensive services provided by many types of specialists, who participate as a team are required to

produce a program that can truly benefit a mentally retarded child. A "continuum of care" must be provided for the child so that he can make the best of any and all potential that he may have. The proposed center will provide this continuum of care by providing a:

- 1.) Diagnostic and Evaluation Center
- 2.) Education and Training Center
- 3.) Residential Unit; 24-hour care

The resulting complex will provide: 1.) identification and diagnosis, 2.) treatment, 3.) education, 4.) training, 5.) personal care, and 6.) protective supervision. A truly all-encompassing project that will not only help but improve all who attend and participate in its program.

DIAGNOSTIC AND EVALUATION CENTER:

This facility will provide the coordinated medical, psychological, and social services needed to diagnose 75 new cases with 175 follow-up cases each year. This is in addition to servicing the balance of the retardation complex. The services provided by this center will include a full range of the necessary disciplines and specialists needed to handle the cases of mentally disturbed children. By centralizing these specialists, referrals to other sources of needed services can be greatly minimized. Also, all specialists work as a team, supplying their own information about the child so that when all the pieces are put together, an overall program can be developed to meet his special needs. This center would not only help the child, but would reach out beyond the traditional to assist the

family of the retarded child. Diagnosis and evaluation represent the beginning of planning by both parents and professionals.

The clinical director arranges for all appropriate referrals and consultations for the patients who must go outside of the center for services offered in the community. Such services might include: a.) pediatrics, b.) electroencephalography, c.) neurology, d.) dietetics, e.) radiology, f.) pathology, etc. which require special equipment and added space that would only be used occasionally. The evaluation team holds case conferences in the clinical facility to analyze the various diagnoses, assessments, and reports made by the individual specialists both within the clinic and from the community.

Three basic services are essential and must be provided for: 1.) Medical screening, 2.) Psychological investigation, and 3.) Social workers who will provide case history. These three basic services are required in some degree by all retarded children, regardless of the degree of retardation. The basic data and information collected from the initial meetings with the child are essential in determining the specific course of action that is to be taken.

Facilities required in the diagnostic and evaluation center are: 1.) Medical examination, 2.) Psychological investigation, 3.) Social work investigation, 4.) Public health nurse, 5.) Speech examination, 6.) Hearing examination,

7.) Staff conferences and group counseling for educational and vocational evaluation.

EDUCATION AND TRAINING CENTER:

The variety of services that follow the diagnostic and evaluation phase may be offered by this facility. These services are essential in providing the continual care and treatment necessary to carry out the plans made by the diagnostic team.

The ultimate goal of this facility is to elevate to a status of productivity and independent community functioning the mentally retarded who partake of its program. The student will have the opportunity to strive for intellectual development and academic proficiency while developing much needed emotional stability. The goal of this center is to:

- 1.) Develop good habits of health and personal hygiene.
- 2.) Development of personal and social adequacy.
- 3.) Development of attitudes, interests, and skills leading to the constructive use of leisure time.
- 4.) Development of self-help skills, safety, social and intra-personal relationships, speech and language, etc.

The education center would do far more than just to educate. It would provide family counseling and home care, and recreational opportunities which would otherwise not be provided for the mentally deficient child. With these services available, the majority of the retardates will benefit from one or more programs offered.

The education and training functions must be considered in the broadest possible context, for many programs for the

mentally retarded provide a wide variety of learning experiences which would not be identified as instruction in a normal curriculum. These experiences may range from the rudiments of daily self-care and simple routines of daily living to the highly complex and complicated level of social and intellectual performance. These programs are all offered at a personal level so that the child can learn at his own rate and progress accordingly.

Children who do not meet the entrance requirements for normal schooling, or who require a period of evaluation to determine a suitable course of action for their future, are often brought to a facility of this nature. Also, pre-school classes containing children with varying degrees of mental retardation will be held in this complex. Again, the underlying theme of a continuum of care must be carried out at all levels, even for the very young.

RESIDENTIAL UNIT - 24 HOUR CARE:

Institutional conditions have been most detrimental on the child's verbal and abstract abilities. Improvement must be made in the traditional institutional model before any improvement in verbal expression can be expected. The traditional institution offered little, if any, visual relief on excitement. Cold grey walls, floors, and ceilings broken by an occasional window was the only environment many retarded children knew. How can any truly effective educational work be done under these kind of circumstances?

The residential unit must make every effort not to become institutionalized. Instead, the residential unit

must become an "extended family", offering every chance to develop inter-personal relationships that characterize family life. Large dormitory areas housing 30 or more people must not become a part of the residence. Small, cottage type units housing no more than 6 children per unit will be used in this complex. This means that less regimentation will have to be employed and there will be a greater chance to develop social skills through the parental guidance of the adult couple who will serve as the "head" of the "family". Warm interactions between child and parents do more to hasten development than any type of educational process known.

An emphasis is placed on the responsibility of the individual rather than upon the external control by the staff members. Children are free to roam about the house and even about the grounds because there are no locked doors and no security force.

Within the residential unit, children will be able to develop concepts of personal and social responsibility, personal hygiene, home management, and self-direction. The result is that the home becomes the focal point for all the many diversified activities and therapies that the child learns in school. In this way, the home becomes the center and much of the child's training is carried out in this space.

Each unit must provide safety and stimulation for the retardates, but it must not over-protect the child. He should have access to homelike "controls" such as switches,

and thermostats and stairs. The idea being that potential problem areas can be modified by the house parents rather than isolating the child from any possible danger. Priority must be included with doors between rooms and curtains or doors for baths and showers. The internal environment must be colorful, light, bright, and provide a variety of sensory impressions.

Each unit will be completely self-contained, with six children living in each unit along with a married couple who serve as house parents. Two children will share a bedroom and adequate storage for each child will be provided. The total number of children to be housed will be 24.

Each one of the four units will provide an atmosphere as much like a typical home as possible. Use of open and informal interiors will all combine to make each home a truly pleasant place in which to live.

and socialization techniques. A program that repeatedly exposes these children to appropriate situations is also explored. Finally, the program will have the potential for truly interesting living.

AGE	NUMBER	NO. OF CLASSROOMS
1.) 6-10	10	2
2.) 11-13	10	2
3.) 14-16	10	1
total	30	5

Along with this age group division will be a group of nine young children 4 and 5. This was found very difficult to handle and the category of children or retardation in this class will contain both groups of children.

STUDENT POPULATION OF THE PROPOSED BOZEMAN COMPLEX:

I.Q. 35-50: Moderately Retarded

Three individuals have the potential for return to the community on a limited and supervised basis. The educational program emphasizes socialization, self-help, and simple vocational skills, recreation and very simple classroom situations.

<u>AGES</u>	<u>NUMBER</u>	<u>NO. OF CLASSROOMS</u>
1.) 6-10	9	1
2.) 11-13	4	1 (ages 11-16 in
3.) 14-16	4	one classroom)
total	17	2

I.Q. 50-70: Mildly Retarded

These children have an excellent potential for rehabilitation. Again, emphasis is places on normal living, modified academic education, vocational skills, and socialization techniques. A program that repeatedly exposes these children to community situations is also employed. Mildly retarded children have the potential for truly independent living.

<u>AGES</u>	<u>NUMBER</u>	<u>NO. OF CLASSROOMS</u>
1.) 6-10	20	2
2.) 11-13	18	2
3.) 14-16	10	1
total	48	5

Along with this age break down, there will be a group of nine younger children ages 4-5. At this age it is very difficult to establish the the catagories of mild or moderately retarded so this class will contain both groups of children.

The Bozeman complex will provide services for a total of 74 mentally retarded children. This means that a comprehensive program for training and educating the mentally retarded child in District 11 will be provided in Bozeman and that these children will be housed and taught in facilities specifically designed for the mentally retarded.

ARCHITECTURAL CHARACTER OF THE STRUCTURE:

The physical design of the complex is very important for if it gives the feeling of a highly institutionalized setting, the children's performance within its walls will not be what it should. The design should create an environment that meets both the function and the sensory needs of the mentally retarded child. The functional requirements must be made to fit an atmosphere of informality and intimacy for if they don't, the facility will become an institution.

The environment of all the facilities that constitute the total complex must be as exciting as it is warm. It must be a truly good place to be in for there is no child more sensitive to his surrounding environment as a mentally retarded child. The child must have every opportunity to experiment with his surroundings, to try out new ideas, to be exposed to colorful, rewarding, and exciting sensory changes. Light and shadow are also very important for they should blend, as do colors, to create their own special effect.

The physical environment must make constant demands on the children who live within its influence. These demands constantly challenge the child to make decisions and to constantly adjust to new situations. The child has to think to make decisions and to constantly adjust to new situations. The child has to think to make decisions and if the environment can cause the child to think, then it has fulfilled its function as a teaching device.

Structures that provide easy access from one part to another, without having to travel a great distance to get anywhere provides the intimacy so necessary for the mentally retarded child. The exterior character of the structure is externally, for it should be warm and friendly and should not appear stark and sterile. The child must truly feel welcome when he enters the structure and the first impressions formed by the exterior appearance are most important. The natural must blend naturally with the man-made. They should be comfortable and complimentary in their scope.

Rigid uniformity in planning should be avoided. This not only confuses the child as to where he is, but also does little to create an intimate, unique atmosphere to each area. Skilled use of form, materials, and color will all help to create the desired feeling of warmth.

Attractive outdoor spaces for supervised play should also be provided. These spaces can also flow naturally into interior spaces which will allow easy access both to and from.

The aesthetic appearance must be truly acceptable to community standards. If it isn't, the building will become an isolated island within the community and be ignored by its citizenry. This is the last thing that can happen, so the building serves not only as an education center, but also as a public relation tool. A tool that will produce the best of results if correctly handles.

BASIC PLANNING CONSIDERATIONS:

The Bozeman Mental retardation Center will place a great deal of emphasis on creating stimuli that is conducive for both growth and development of the mentally retarded child. General considerations should be:

- 1.) The site location should avoid areas involving an undue amount of traffic and areas containing distractions of any type. The site should be located near the community which it serves so as not to isolate it from the people that it will serve.
- 2.) The site should be large enough to permit attractive unlimited landscaping and plenty of play and relaxation areas. Well planned interior and exterior spaces are a must, and room for future expansion should not be neglected.
- 3.) Drive ways and parking spaces should be so designed and arranged so as to eliminate any danger to the children. Covered entries are desirable, preferably with heated walkways to avoid a slippery surface. Provisions should be made to assure ramps for unloading buses and vehicles are available.
- 4.) The interior of the buildings must be designed carefully since the children will spend the majority of their time there. Spaces should be large, warm, friendly and diversified to avoid confusion by the children. It is preferable to have multi-uses for the rooms while retaining the stimulating factors and intimate scale so important in the learning process.
- 5.) An 8' minimum width is recommended for corridors.
- 6.) Minimum door width should be 3'8" to permit easy entering and traffic flow. Doors, jambs, and exterior doors protected from banging by wheeled toys, vehicles and equipment.
- 7.) Exterior windows will provide adequate light (by day) as well as a good visual stimulation. Consideration should be given to proper orientation and controls to avoid excessive exposure or objectionable distraction, however. Protection from direct sunlight may be desirable. Window heights should be below eye level, especially in

areas containing small children. One-way glass is required where observation windows are needed. Open vent sections or windows should be placed where they will not create a hazard. In areas housing emotionally disturbed children or areas of possible excessive breakage, shatter-proof glass or safety glass should be installed. Glazing exit passageways must conform to building and fire safety codes.

- 8.) Ample spaces should be provided for all areas. Some activities will require more space than normally for other activities because of added training, etc. More assigned and general storage space is also necessary for retardates.

BUILDING CONSTRUCTION AND FINISHES:

The mentally retarded may not be as alert and responsive to danger and may not be able to read signs or follow directions in case of an emergency. For this reason it is imperative that every design feature will assure the safety of the children.

Finishes should be appropriate to the functions of the areas involved. These finishes may be of similar types used in buildings for the average person. Special attention should be given to color and texture to assure the creation of a warm and friendly atmosphere.

Many areas will be subject to excessive abuse and soiling so finishes that are both durable and easily cleaned and maintained should be used. These finishes should always be colorful and provide a stimulating appearance to the wall area which they cover. Wood finishes are generally difficult to maintain and should be used in areas that are not subjected to rough play or hard use. Finishes that create an "institutionalized" effect should be avoided at

all times. Any type of resilient flooring that offers the maximum resistance to indentation and heavy abuse should be considered in most areas used by the mentally retarded. Irritating surfaces should be avoided in areas where there may be young children who crawl or play on the floor. Rough textured hall finishes should also be avoided. Impervious materials must be used in all wet areas and when incontinency is prevalent. Accoustical ceilings are recommended in the corridors, multi-purpose rooms, and all activity areas, as well as other locations where excessive noise is objectionable or where the control of accoustics is desirable. All surfaces, including ceilings, walls, and floors, should be made of non-combustible materials or of materials that have a low flamespread rating.

FIRE SAFETY:

All exits from the building should be designed so as to discharge as near to the ground level as is possible to minimize the number of steps required.

If a fire did occur, it should be confined to its source of origin and its spread should be kept to a minimum. All rooms should be provided with a solid-type door and the ventilation system should be arranged to preclude the use of corridors as plenum chambers.

ELECTRICAL SERVICE:

Special features must be added when they are necessary for the training techniques adapted and for the safety of the mentally retarded who come in contact with electrical

devices which may cause them injury. More than ordinary care must be taken to provide maximum safety from electrical shock or burns for the mentally retarded child.

There will be areas of the facility which will require special electrical devices or arrangements, but the balance of the complex should contain electrical outlets and switches that are of a conventional nature so that these facilities will be comparable to those in homes, apartments, and stores where retardates will have to live and work.

In the training areas, especially in the shop area where power tools are used, all circuits to the outlets and the equipment should be provided with dual controls. This allows the instructor to turn off any circuit when a hazard exists or appears to be developing. The switches should be located such that they are easily accessible to the instructor.

Plugs that minimize the possibility of children inserting foreign objects should be used in all sections of the building. Lighting fixtures should also be selected with an emphasis on safety and resistance to breakage and abuse.

When flammable vapors are present, especially in and around the paint spray areas, explosion-proof wiring and equipment must be provided for safety.

All wiring for the electrical systems, including that for electric power distribution, inter-communication, public address, radio, and television should be in metal raceways so as to protect retardates from shock or burns

due to their inadvertant actions, as well as to protect the system's wiring.

In the personal training and observation booths, a public address system and an intercom system is recommended for the observation of and the communication with the retarded children. A system that would allow inter-staff emergency calls for assistance should be placed in strategic locations. A closed-circuit television system is desirable for remote observation and filming of retarded classes.

The lighting levels and effects of color and reflections of interior finishes should be considered for they play an important part in creating a visual environment that is cheerful, pleasant, and stimulating.

MECHANICAL SYSTEMS AND EQUIPMENT:

Exposed piping, valves, controls, and other related items should be avoided whenever possible and when exposed mechanical equipment is necessary, it should be kept out of the reach of the children to reduce the chance of injury.

All areas in the facility should be air conditioned for the benefit of the children and personnel. Many times the children will crawl on the floor during training and during observation periods, such as with the psychologist, so the floor area should be warmed. A radiant heating panel system in combination with a forced air or hot water system should provide the necessary heating and cooling capacity for the entire facility. Radiant floor systems are not recommended due to the difficulty in maintaining an even

temperature under varying outdoor conditions. Also, there exists the possibility of intensifying odors if anything is spilled on the floor. Large window areas require a system that will pass air over the glazed area to reduce the transmissal of cold air into the space. This can be accomplished by a system that can be placed in the ceiling or in the floor.

Good ventilation and suitable relative humidity play a large part in reducing the incidence of upper respiratory and other diseases and also provide a means for odor control. Shop, paint, and spray booths require special ventilation considerations.

Recommended temperature and humidity levels for some of the areas in the facility are:

- 1.) Medical Examination Room: To accomodate patients in varying stages of undress, temperature of 80° F and a relative humidity of 40% with a ventilation of 2 air changes per hour of outdoor air.
- 2.) Observation Playroom: Temperature of 75° F and 40% relative humidity with warmed floors and a ventilation rate of 2 air changes per hour.
- 3.) Speech and Hearing Examining Area: Temperature of 75° F. and 40% relative humidity and 2 to 3 air changes per hour.
- 5.) Individual Booths: 75° F. temperature with 40% relative humidity with 3 air changes per hour if the space is totally enclosed.
- 6.) Living Unit and Bedrooms: 75° F. temperature and 40% humidity with 4 air changes per hour.

PLUMBING:

Plumbing fixtures should be, for the most part, of a standard design and their numbers and types will depend

upon the number of bathrooms, toilets, etc. Standard fixtures like those used in houses and shops, are used so that the child will be able to use them in the complex as well as in the community. In certain training areas, junior-type fixtures may be needed for smaller children. These fixtures must be of such a type that they can be easily installed in a location that is easily accessible to the children in the facility. Like the standard fixtures, they become another teaching aid in the education process of the retarded child. Lavatories and other hand washing fixtures, located in the examining rooms and treatment areas, should be equipped with wrist, knee, or foot operated valves. Wall mounted fixtures are recommended to reduce the amount of exposed piping and to simplify the cleaning process.

Domestic water temperature to the plumbing fixtures should not exceed 110° F. and the drinking fountains should be conveniently located and installed so that they can be easily used by the retardates.

Floor drains should not be used. If they are needed, provisions should be made for preventing any chance of back-siphonage through the supplementing water line. Large size drain lines and adequate clean outs for easy removal of foreign objects must be included in the plumbing design.

ELEMENTS OF THE PHYSICAL FACILITY:

Diagnostic and Evaluation Center:

Director's Office:

The director has the responsibility for coordinating and directing all the disciplines and personnel engaged in the operation of the diagnostic and evaluation center. Office should be located close to the public areas for easy access to visitors, but preferably, it should also provide privacy and be free from undue distractions. Director will have many conferences with both staff and parents in this office so it should have some accoustical treatment.

Medical Personnel Office:

To be used by the full-time staff physician as his office. The space must be close to the examining rooms and must provide a measure of privacy for the doctor. Used for conferences with both students and parents so it must have some accoustical treatment.

Psychologist's Office:

Space used to interview and test the retardates and often his family as well. It is the psychologist's job to ascertain the various factors that will effect future rehabilitation and educational potential for the disabled individual. The psychologist must also determine the mental level of the child to evaluate his emotional stability and social behavior. An evaluation of the personality of

the mentally retarded child is also essential in the overall knowledge needed by the psychologist. His office should afford complete privacy and should be accoustically treated because of the interviewing and the testing. There will, at times, be many people in his office at one time, so it should be significantly large to accomodate four people besides himself. The office should be adjacent to the observation-playroom and individual testing room to permit observation into these areas. Also, an intercom should be installed in his office so that he can get audio as well as visual views. Office should be equipped with storage cabinet for storing test equipment and supplies, along with a chalkboard and a bulletin board.

Psychologist's Testing Room:

This area is where evaluation and testing can be carried out without distraction. This area should be accoustically treated to reduce sound transmission. The observation-playroom is used for group therapy and testing. It should be placed adjacent to the psychologist's office and conference room so that the child could be observed through one way windows. An intercom will permit audio-visual observation not only by the psychologist but also by the people in the conference room. Accoustical treatment for this room is desirable to reduce any possible noise transmission. There must be a storage area complete with toys and games. Tables and play equipment needed for this area. An adjacent outdoor play area used for observation should also be employed.

Medical Examining Rooms:

These two rooms must be located convenient to the medical consultant's office, but must be separated from the traffic pattern and main activity areas. Contain examining tables and small writing table along with an area to undress in.

Small Laboratory:

This area is to be used for specimen collection and should be located adjacent to the examing rooms. It should also be located in the same area as the balance of the medical offices. It should be equipped with a large counter-top and sink and should provide adequate storage space for other equipment used in the space. There should also be a small toilet area located adjacent to this room for urine collection.

Social Worker's Office:

It is the social worker's job to investigate all aspects of the retardate's background and environment, and to also serve as the liason between the family and the other agencies and disciplines in the clinic and the community. The social worker also helps to create a climate that makes emotional adjustment possible and minimizes situational problems with which a child cannot cope with. Provides the diagnostic team with the broader aspects of the problem; overall family situation, economic status, community implications, and cultural or ethnic factors that might influence the families' attitude toward the child. Social worker also

has the responsibility of keeping the parents of the child informed as to his progress and adjustment. The office space should be large enough to permit interviews with two people at the same time, such as the parents of a child. Because the social worker helps the parents apply general recommendations or rearing and guidance, frequent counseling with the parents takes place. Also, the social worker has the responsibility of keeping the community informed as to the programs of the clinic and the retardation center, so frequent interviews with groups are also necessary. Sound transmission must be kept to a minimum so this office must be accoustically treated.

Public Health Nurse:

Her role in the diagnostic center is to keep in contact with parents and encourage the best possible care and management at home. She also provides an assessment of the home management of the parents and assists parents in carrying through the recommendations of the clinic. This space should be convenient for visitors and also provide the privacy necessary for interviewing purposes.

Office (unassigned):

This space will be used as a general purpose area. May be used by students for observation, as a convenient area for interviewing, as a office space for a special consultant for the community, or for storage and filing. Space also provides room for an additional staff member if needed and means that no new addition will be necessary.

Speech and Hearing Facilities:

Separate office for the speech therapist and the hearing therapist are required. Each office must be adjacent to a testing room where evaluation of the student's particular problem can be made privately. There should also be a larger testing room, shared by both disciplines, that will accommodate six to eight students for group therapy. There should also be a special, audiometric room used by the hearing therapist. This sound proof room should be equipped with a special control booth and intercom. The testing room should be carefully treated acoustically and requires mirrors, chalk boards, bulletin board, table and chairs. These rooms should also contain one-way view windows and intercoms so as to permit observation and viewing by staff or college students.

Case Records Room:

This small space affords an area for file cabinets, storage, and also a private area where staff can review necessary files.

Secretary's Office:

Secretary will provide assistance to all the disciplines in the facility. There will be two secretaries in this space, with one directly responsible to the director. Space should be adjacent to waiting and lobby because one secretary will also be the receptionist. Also, this space should be located near waiting areas to allow for observation and control of these areas. Space for an intercom and limited records and card file space are to be provided.

Lobby and Waiting:

These areas are used by visitors and patients. The waiting area will be used by parents and visitors and the children's waiting area will be used as a controlled play area to hold the attention of young children while they are waiting for their parents. Space will also be used to observe parent-child relationships. Area must be located near secretary's area to permit constant observation.

The design of the lobby and waiting area must be open and spacious while conveying a feeling of warmth and presenting an inviting atmosphere. Separated waiting allows patients to wait for children in an area separated from the lobby space.

Public toilets, public telephone and drinking fountain should be conveniently located. Bulletin boards and display areas for handiwork by children should also be provided.

Conference Room:

This space is required for evaluation of a child's medical tests and for group counseling and staff conferences. Area should be large enough to hold ten people along with bookcases and shelves, one large table and chairs. Room should be sound proofed and located close to director's office and accessible to public areas. Room could employ movable partitions so that it can be separated into a conference area and a reading area or library. Provisions for a chalk board, bulletin board, and a cabinet or closet for coat storage. Provisions should be made for an area to make coffee in.

General Considerations for Office Areas:

Each office should provide enough area for counseling, necessary office equipment, like a desk, chair, etc., and movement about the space for a minimum of four people. Office areas that will be used for testing must have an increased floor area to allow for adequate testing space. Storage for coats and supplies and equipment must be provided for in each office. Psychologist's office must have storage space for testing equipment and office material.

Activities must be planned by other functions, particularly for the group, and must be planned in order to maintain the child's attention span. These activities all require space and must be planned in a regular classroom, but they must be planned in a room ranging from 8-11 students. The very small classroom size is 8000' for a class of 10-12 students.

Versatility is a very important feature in the design of the instructional room as well as in all other elements of the facility. Space is space, or so it is desirable in a center for the mentally retarded. The program needs are highly diversified and the functions are subject to frequent change. Different curriculums of instruction are required for the various categories and age groups, so the classroom must be faced with having to adapt to the subject area being taught. For this reason, most equipment and furnishings must be mobile but maintain the maximum in stability. Movable desks, work tables, and chairs can be arranged to allow a large floor area for group activities and play.

TEACHING AND EDUCATION:

Instruction Room:

This is probably the most important room in the educating of the mentally retarded child. This area becomes the center or the "home room" for all basic training and should provide a wide variety of learning experience. These activities must be supplemented by other functions, particularly for the younger school-age groups in order to maintain the child's limited attention span. These activities all require more space per student than in a regular classroom, but each class is much smaller, usually ranging from 8-11 students. The very minimum classroom size is 9000' for a class of about 9 students.

Versatility is a very important feature in the design of the instruction room area as well as in all other elements of the facility. Adequate space is so highly desirable in a center for the mentally retarded. The program needs are highly diversified and the room functions are subject to frequent change. Different curriculums of instruction are required for the various categories and age groups, so the classroom may be faced with having to adapt to the subject area being taught. For this reason, most equipment and furnishings should be mobile but maintain the maximum in stability. Moveable desks, work tables, and chairs can be arranged to allow an open indoor play area for group activities and play.

Generous areas of display boards and tack boards must be provided and these areas also should be within the reach of the youngest child. Chalk boards at eye-level must also be provided for class instruction. Tack boards may be either mobile or fixed to the wall, but if fixed, they should be adjustable in height. Wall mirrors are also important items in the classroom because they provide important training elements in any teaching program. Large storage areas are needed within the classroom or in combination with an adjoining storeroom. These areas will contain the instruction aids and materials, books, toys, and the like. Storage also must be provided for the child's clothing and personal effects. Some storage can be provided in movable cabinets for ease in transporting with locks and an individual storage area for the teacher must be provided. Below-the-window or counter high shelving will provide the needed storage and display area and is also within the reach of the children.

A work counter complete with a sink is a must in each classroom. Individual lockers for each student will provide the necessary private storage area for coats, wraps, toilet articles and personal effects that each child will have. These lockers will also enter into the training process by providing an area in which the child is totally responsible for. Each locker must contain a means of individual identification for easy acknowledgement of each area by each child.

Toilet areas must be adjacent to each classroom for training in personal hygiene and bathroom procedures. This area must be slightly larger than normal to provide easy movement within the space.

Observation Booth:

This room should be adjacent to the instruction rooms and activity areas and will provide a viewing space for staff, parents, and trainees. One-way mirrors will be used to view the children without them knowing that they are under observation. Fixed counter area under the window may be desirable for convenience in taking notes. The window area should be placed so as to allow as much of the instruction area, activity, etc. to be viewed as possible and should be placed where the distraction of those observed would be kept to a minimum. The space must be sound proofed and equipped with an intercom for audio as well as video observation.

These areas provide private spaces for individual study in conjunction to the educational program assigned to each student. Each space should be easily observed by the teacher from the classroom and should be easily observable from any part of the instruction area. A table and one chair and a bulletin board should be included along with a storage area for teaching aids and materials.

Outdoor Play Area:

An outdoor landscaped enclosure adjoining and accessible from each instruction room provides the essential exclusion

of inside instructional and activity areas necessary in the education of the mentally retarded, especially younger children. The minimum size of the space should be the same as the instructional room and should provide some protection from the sun and weather. A drinking fountain should be provided along with easy accessibility to toilets.

The area should be provided with usual and corrective play equipment like merry-go-round, jungle gym, see-saws, etc. Some or all equipment can be placed in a larger, joint play area. All play areas should be arranged so that they can be observed and will provide a measure of safety for the individual child.

Multi-purpose Room:

This room is used for many purposes such as group activities and socialization, recreational programs, corrective physical therapy with mobile exercise equipment, etc. The space should be equipped for sub-division into smaller areas for different age groups with diverse activities.

An area adjacent to the multi-purpose room should be provided for the storage of chairs, tables, etc. Also provide a storage area for bulky equipment like instructional aids, portable bulletin boards, display areas, audio and visual aids, a small piano, and musical instruments and stands.

The multi-purpose room should be located for convenient access by the public. An adjoining outdoor play area should also be provided for outdoor activities and group play.

Arts and Crafts:

This area is generally used by the older age groups while the younger children's activities are usually done as a part of the education program in the instruction room. This space includes graphic art work, clay modeling and handicrafts. The nature of the work done in this space is programmed according to the needs of the individual class. Counter space, either fixed or movable, must be provided and be of adequate size to provide enough work space for the assigned project. The supply and storage cabinets and bins may be movable for ease in transporting materials to the work areas. A teacher's desk, chair and file cabinet should be incorporated in the space for the instructor. For fired ceramics and pottery, a kiln is required and a separate room will be needed to house the kiln for safety.

Storage for supplies and tools must be provided in this area. Also, storage for coats and wraps must be provided for. Many of the features that apply to instructional room will also apply to the ceramics area.

Specialized Training Areas:

This area will provide a more convenient and effective setting than a instruction room for certain types of specialized training, particularly for the school age retarded. The space will be used for training in domestic skills, personal grooming, woodworking and finishing, shopping, travel, and activities for which a special setting or special equipment may be required. A sink should be provided in all of the special training areas.

A special area must be provided for the teaching of domestic skills. A complete living unit is required to permit training in preparation and serving of food; bed making, house cleaning, laundering, and sewing. Such a unit would permit training in social habits and graces. Personal grooming requires a bathing area with a shower or a tub and an adequate dressing room for teaching more than one child at a time how to properly dress themselves, shave, or apply cosmetics, and how to comb and fix their hair.

Woodworking requires the proper tools and equipment and a proper space to house them. Worktables or benches will provide the necessary working space and standard power tools needed to shape and finish wood will all be contained in the shop area. A separate finishing room and a spray booth should be provided and woodworking should be housed in a separate area to control dust and litter. Proper ventilation and fire proofing is essential and every precaution should be taken for the safety of the students. The power equipment in the shop requires special safety measures and strict control by the instructor. A special enclosure is often used to separate the power equipment areas from the rest of the special training area.

A room should be provided adjacent to the special training area for the instructor so that he may escape from noise and dust and provide a measure of privacy. This area should allow for observation and control of the specialized training activities. Observation of these areas by one-way

windows will permit the family , staff, or other interested persons to view all activities.

There must be adequate space provided for circulation and movement within these areas and around the equipment and furnishings for safety and convenience.

Ample storage must be provided for materials and supplies and for various types and pieces of equipment. Woodworking and finishing area and storage for large tools, should be provided adjacent to the office for control. The material room, except for paints, provide areas from the outside for delivery of lumber, pipe, etc.

Auditorium:

This area will be used to show movies, entertainment, meetings, personnel training, and other related activities. Provisions for projection facilities, movie screen, and a fixed or mobile stage should be provided. The minimum seating area is 12-15 square feet per person. Accoustical treatment must be provided for the auditorium. Toilet spaces must be adjacent to the auditorium.

First Aid Room:

In case of accidents or other emergencies, this space will provide the necessary isolation and medication needed to treat such cases. This area will be equipped with a sink and a counter and small work area, examining table or cot, locker or cabinet for medication and supplies, small desk and file cabinet, and chairs. A small under-the-counter refridgerator is also required.

Resource and Instructional Aid Center:

This space has a dual use. It will provide the necessary space needed for storage of portable teaching materials and equipment that may be used interchangeably by different classes. This space is also to be used by the instructors as an area for creating and building new teaching aids to help the class. A smaller area, accoustically treated, will be provided for making special tape recordings and for reviewing film strips and tapes when necessary.

Dining Room:

This space must be arranged for ease of serving both students and guests. The area must be able to be broken down into smaller spaces for different age groups and functions. The approximate size should be 20 square feet per person.

Kitchen:

The usual equipment is required for this space and should be adequate to prepare food and serve the number expected. For most children, the kitchen will serve lunch, but for the residents, breakfast and dinner will also be served.

Refrigerator storage is required as well as a well-vented dish washing room of adequate size to permit proper handling of clean and soiled dishes. This area should allow for observation by students so a larger than normal area is needed. A hand-washing area must also be provided. Space for garbage storage and trash area should also be provided at the service entrance.

Each of the residential units will contain a small kitchen for serving night snacks and will supplement the normal activities of the kitchen.

Staff Lounge:

An area must be provided for the teachers. This space will provide a place to relax during rest periods. Located such that it is easily accessible to all rooms but away from the main traffic flow. Should provide the proper atmosphere for relaxation and furnished accordingly. Private toilet space should be adjacent to this area and a small section provided for the making of coffee. Closets or a storage area for coats and other items must also be provided.

Toilets:

The public toilets should be adjacent to but not opening into the waiting area. All private toilets used by the staff should be near the staff offices and staff areas. The toilets adjacent to the instruction rooms are for training and convenience purposes. Much counter space is required for training in these areas.

Stall enclosures are required for all water closets to insure privacy. Mirrors should be the proper length and of adequate size to permit use by all the children in the facility.

Audio-Visual Room:

This space will contain the equipment that is necessary for recording the action as seen by the closed circuit cameras located in each training room. In this manner, all films can be replayed for teacher training and new programs and techniques can be discussed. Also, it provides a

means for observing the activities of an individual child and his reactions to group situations.

Films can also be used as an important training source for the college students. All too often they are educated in a "vacuum" and have no idea what the classroom is really like. Instead of being taught how the children act, they will be able to see how they act and how the teacher trains them.

This room will also be equipped with a small studio so that a teacher can prepare instructional aids on tape so that it can be presented to the class.

Repetition plays an important part in the educating process of the mentally retarded child. Approximately 10 repetitions of each material is needed before the child is able to master the concepts that are presented to him. The teacher always emphasizes the major points and excludes material that might be distracting. Programmed learning allows the teacher to control the length of the study period in relation to each child. The child receives an immediate response to whether or not his answer was correct. In normal teacher-learner classes, the child would have to wait as long as three days to get an answer. This delay is often very costly in the training program for mentally retarded children. The teaching machine provides both a visual and an auditory signal that informs the child whether the answer is right. The machine also allows the child to see both a picture and hear a description of the concept.

Learning Approach:

Programmed Instruction:

The mentally retarded child progresses through a pre-determined sequence of learning materials at his own rate of study. Each program is arrived at after careful evaluation of the child's ability to handle certain phases of a work block. The teacher assigns instructional units to the child, encourages him to work at his own pace, and reviews the progress of the child. Each program is designed so that certain objectives have to be achieved before the child can progress further.

Repetition plays an important part in the educating process of the mentally retarded child. Approximately 40 repetitions of the same material is needed before the child is able to master the concepts that are presented to him. The teacher always emphasizes the major points and excludes material that might be distracting. Programmed learning allows the teacher to control the length of the study period in relation to each child. The child receives an immediate response as to whether or not his answer was correct. In normal teacher-lecturer classes, the child would have to wait as long as three days to get an answer. This delay is often very costly in the training program for mentally retarded children. The teaching machine provides both a visual and an auditory signal that informs the child whether the answer is right. The machine also allows the child to see both a picture and hear a description of the concept.

The individual study booths are used as an area of isolation from the rest of the class. In these booths, the student progresses through the program that the teacher has given to him. A typical curriculum includes word drills, readings, and arithmetic. The teacher records all programs and supplements the program with other tapes and all provide variety of group activities.

The teacher is now free to supervise each child's progress through his lessons. The teacher becomes more than just a teacher; she is now a human being who can add a more personal contact to each of her students.

Toilets and Bathing:

Design will be dependent upon contents of the area. One toilet area in each block will be reserved for younger children who cannot use the unattended. This area will include a shower stall at least four feet square to accommodate a student and an attendant. The other toilet area will contain a standard tub and shower and a conventional water closet and lavatories. Each bathing fixture and water closet should have a separate enclosure to insure privacy. Ample space must be provided in this area for easy maneuverability when dressing. A minimum of two bathing fixtures, two water closets and two lavatories should be provided for every ten residents.

LIVING UNITS

Elements of the Physical Facility:

Bedrooms:

Each room will accomodate two children and will provide ample storage for personal goods. Dormitory type sleeping arrangements would only detract from the home-like atmosphere of each unit. Each child will have his own bed, storage area, small desk and chair. This area will provide the child with a place of his own, somewhere he can go when he has to be alone. Each living unit will have three such rooms, housing a total of six students. The atmosphere of this area, like that of the rest of the house, must be warm and friendly and must provide a truly intimate feeling.

Toilets and Baths:

Design will be dependent upon occupants of the area. One toilet area in each house will be provided for younger children who cannot bathe unattended. This area will include a shower stall at least four feet square to accomodate a student and an attendant. The other toilet area will contain a standard tub and shower and a conventional water closet and lavatories. Each bathing fixture and water closet should have a separate enclosure to insure privacy. Ample space must be provided in this space for easy maneuverability when dressing. A minimum of two bathing fixtures, two water closets, and two lavatories should be provided for every ten residents.

Visitor's Room:

This area must have toilet facilities separate from those used by the children. This area will be used by visiting parents so it probably won't be occupied all of the time.

Living Room:

Each living unit will have a living room that is easily accessible to all children living within that unit. This space must be warm and intimate and be furnished like any living room in a regular home. Each living room will contain a fireplace. The emphasis is on normal family living and this room should function as the center of the house.

Laundry Room:

This area will be used primarily to wash small items in case of an emergency and for training some of the children in the use of a washer and a dryer. Space provided for storage of iron, ironing board, laundry soap, and the like.

Apartment for Parent-Teams:Living Room:

This space should provide parents an area where they can get away from the activities of the children. It will also provide an area for entertaining friends. Should be intimate and warm and a truly pleasant place to be in.

Kitchenette:

This small kitchen will be used to provide snacks and small meals when the dining areas are closed. It should

be equipped with a refrigerator, stove and over, and a double sink. Also, ample storage areas and counter space are necessary.

Two Bedrooms:

One bedroom would be the master bedroom and contain ample closet space and room for storage. The second bedroom could be used for visiting friends or possibly for visiting parents. Closet space and storage space also provided in this room.

Private Bath:

This bath would be used only by the parent-team. Space should be properly vented and equipped with a tub, shower, water closet, lavitory and medicine cabinet.

Storage Room:

This area will be needed to store off-season clothing and large bulky items that a child might need or have.

THE SITE:

Selection of a proper site is essential to the development of an acceptable program for mental retardation center. The Bozeman Complex will be located at 11th and Durston. This site was selected due to many factors.

Isolation from community activities and programs is one of the most damaging elements to a mental retardation center. If the complex is placed too far away from the center of community life, the center will be neglected and ignored by the very people that the center was designed to serve. The average citizen knows very little about the problems associated with mental retardation and for the most part, tends to ignore any idea associated with retardation. Fear of the unknown prompts many people turn their backs on the problem and to completely ignore it. In the past, mental retardation facilities were placed outside the sphere of the community so as to purposely isolate the people that it housed. The thinking behind the isolation was that only by completely making the mental retardate dependent upon the institution could he be taught anything. This thinking has been replaced, but the stigma related to a mental retardation facility still exists. People tend to picture such an institution as a place housing strange, abnormal creatures and indeed, at one time this was the case, but today nothing could be farther from the truth.

The Bozeman center is located on a site that is located in one of the new growth areas of Bozeman. By placing it in such a location, the facility will be handy to anyone interested in the mentally retarded and hopefully the structure will be interesting enough so as to cause people to want to understand the problems of the mentally retarded child. By interesting the local citizens, the facility will grow and expand with the blessings of the community. If the community ignores the facility, the children who are trying to become active members of town will suffer. Again, the site at 11th and Durston does not isolate the complex but puts it in the heart of the growing town of Bozeman.

On this same piece of land is located the Bozeman Junior High School and the Bozeman Senior High School. The land will become, with the addition of the mental retardation complex, an education center unexcelled in any part of the state. The retarded child requires much special education that the public school system does not supply; however, there are many classes that the retarded child is able to take. For this reason this site was chosen. Because if the Junior High and the Senior High, the retarded child will be able to take all classes that he can possibly handle in the public system along with his normally scheduled classes at the retardation center. This will allow the child the opportunity to fit into the society that he is learning to become a member of. By integrating with the normal children, in the "normal" world, the retardate may begin to understand what he is being taught in the

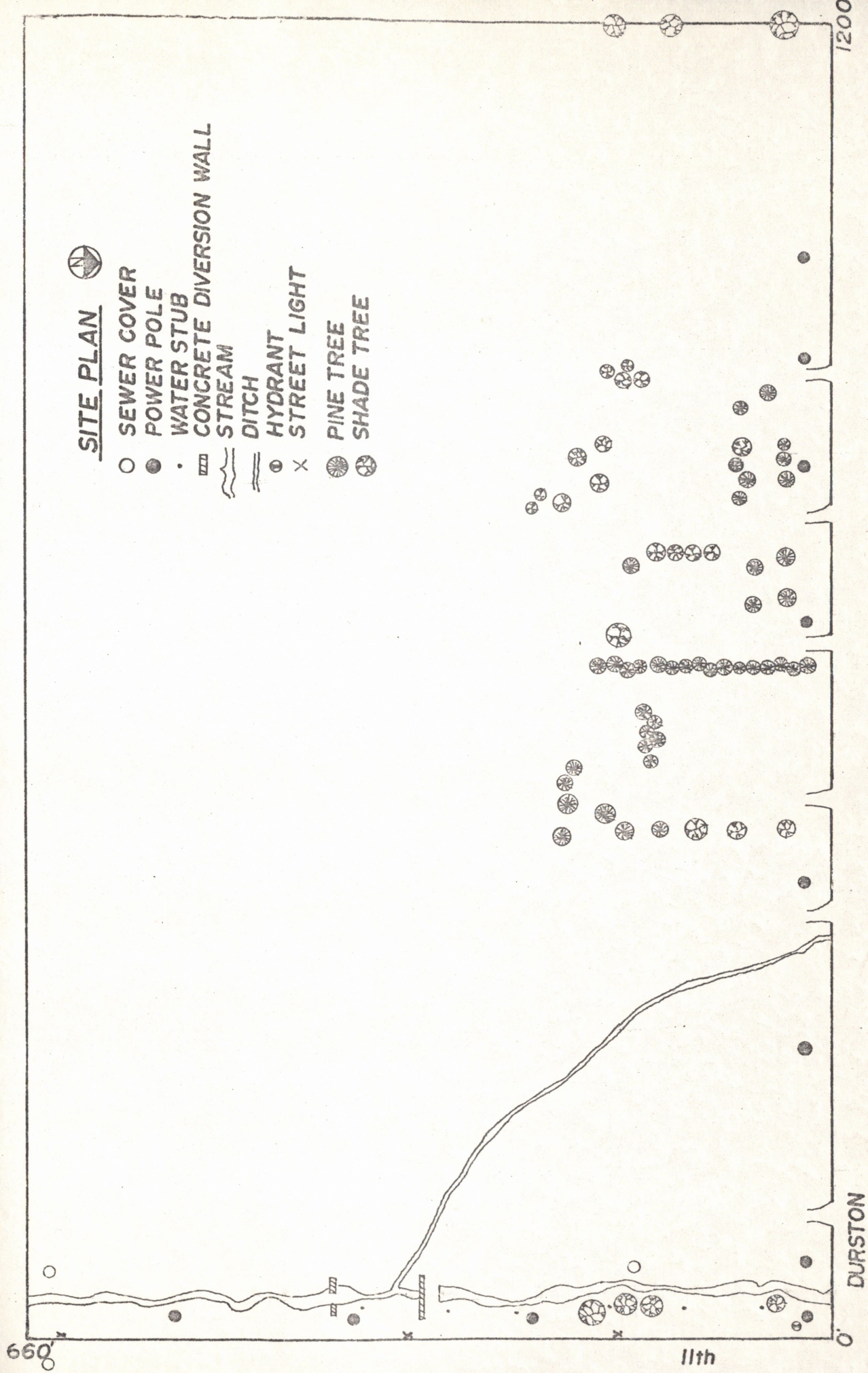
"living" classes at the center. Isolation of a facility is bad, but isolation of the child is worse. The proximity of the other two schools will allow as much interaction as is possible and is feasible.

The site has the major advantage of being in a relatively low traffic area. The only major traffic comes from the people who live around the site. This residential traffic has its peak hours at 7:30-7:50 a.m. 12:00-1:00, and 5:00-5:30 p.m.. During the rest of the day, 11th street receives very little traffic flow and Durston has a minimal traffic pressure. This lack of traffic pressure has the obvious advantage of safety to the retarded children who will be playing outside of the complex. The complex is located close enough to the main street which will carry the majority of the traffic as the town expands. This is especially important for as the town grows, so will the complex and the more students it contains, the greater will be the chance of accidents.

The Bozeman Complex will house children from the whole of District 11 and some will even come from around the state. Accessibility to the complex plays an important part in the selection of a site. The two main highways that enter Bozeman are U.S. Highway 10 and U.S. Highway 191. It is these two main arteries that the majority of the children from District 11 will enter Bozeman. U.S. 10 leads to Belgrade which contains the airport of the area. Western, Northwest and Frontier Airlines will bring many of

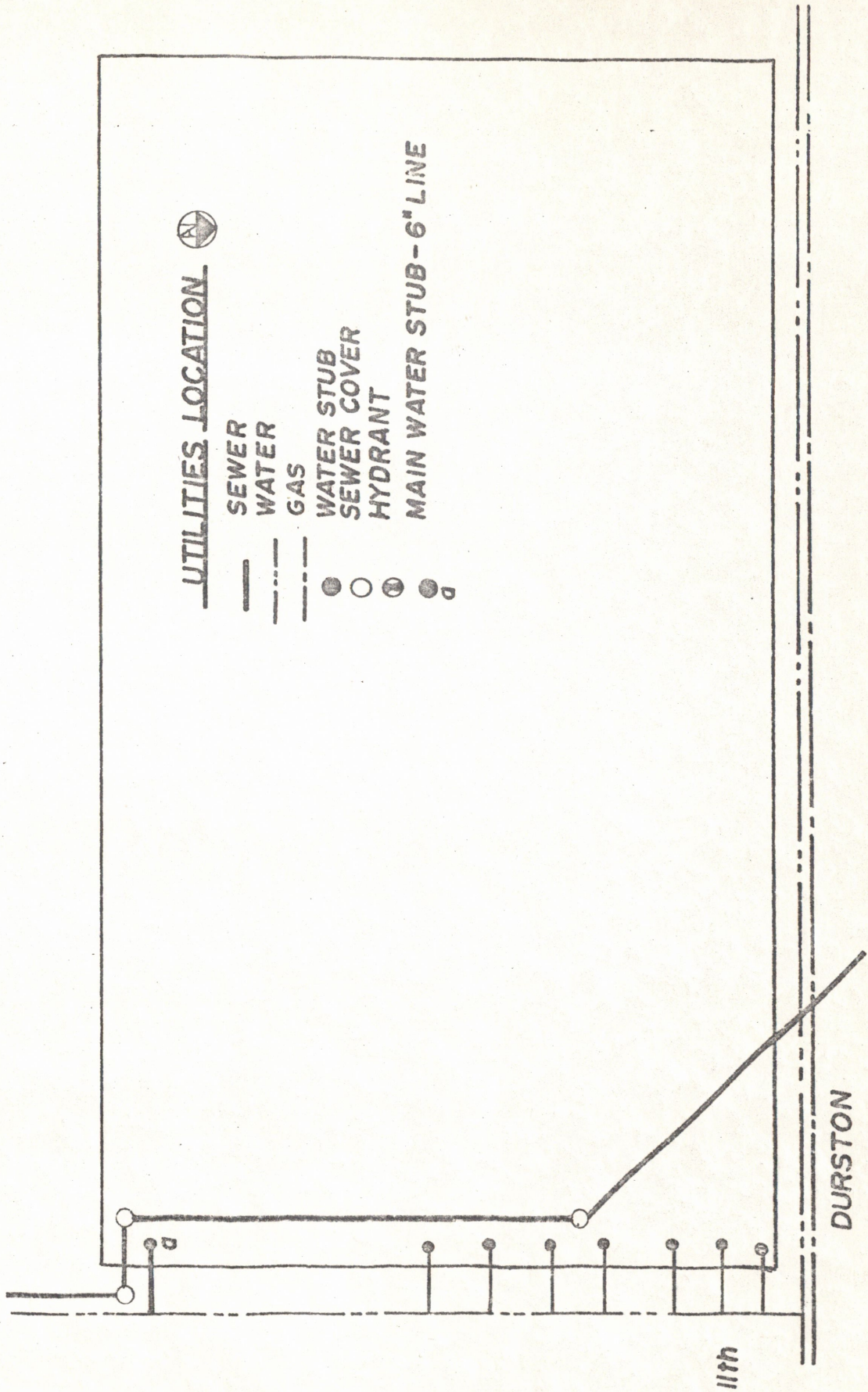
the children from greated distances to Bozeman. As can be seen from diagram #1 (location of Bozeman Mental Retardation Center) the complex is very close to both Highway 10 and 191 which means very easy access to and from the complex. Ease of access further relieves the isolation of the facility and will invite people to visit the complex and to find out how it functions.

Currently, the site is not being used for anything; it is nothing more than just a field. The Bozeman School Board bought this section of ground so that they might use it as a potential site for another new school building or for additional playground space for the Junior High and Senior High Complexes. The site is also very flat which is one of the major reasons for selecting it as a potential site for development by the school board. The flat site means little cut and filling for any future construction and therefore the cost of a new building would be greatly reduced.



11th

DURSTON



Soils:

The soil type that makes up the majority of the soil on the site at 11th and Durston is called Huffine Silt loam. This Huffine soil is almost exclusively west and south of Bozeman and comprises almost 4 per cent of the area. The normal annual precipitation associated with this type of soil is from 16 to 24 inches. The soil is poorly drained and very dark in color. It has a moderately thick silt loam surface layer and a clay loam subsoil which becomes calcareous and contains calcium carbonate with some limestone inter-mixed within the lower layer. At a depth of between 20 and 40 inches, the subsoil is underlain by loose sand and gravel.

The dark colored silt loam surface layer is about 8 inches thick with the soil usually being on terraces that slope from 0 to 5%. The silt loam layer is approximately 8 to 14 inches thick. The calcarious layer is from 16 to 22 inches deep.

The following table, developed by the U.S. Dept. of Agriculture, Soil Conservation Service, and published in The Land Use Planning and Development in the Gallatin Valley Area, 1970, explains the possibilities for development related to this type of soil. The soils are rated as follows:

- 1.) Slight: relatively free of limitations or have limitations that are easily overcome.

- 2.) Moderate: have limitations that need to be recognized but can be overcome with good management and careful design.
- 3.) Severe: Indicates limitations that are difficult or costly to overcome. This does not mean that the soil cannot be used for a specific use, but it means that careful planning and design are needed.

HUFFINE SILT LOAM *9

SOIL USES	RATING
ROAD AND STREET LOCATIONS	MODERATE 2
URBAN DEVELOPMENT FOUNDATIONS - LOW BLDG. WITH BASEMENT LAWNS AND LANDSCAPING PARKING AREAS	MOD. TO SEVERE 1,2 SLIGHT TO MOD. 1 MODERATE 2, 3b
PLAYGROUNDS	SLIGHT TO MOD. 3b
WASTE DISPOSAL SEPTIC TANK	SEVERE 2,4
ACCEPTIBLE AS SOURCE OF FILL MATERIAL TOP SOIL	POOR 5,6 GOOD

1) FREQ. FLOODING OR PONDING

2) WATER TABLE 3 FEET

3) SLOPE PERCENTAGE

a 2 - LESS

b 2 - 5

c 5 - 9

4) GROUND WATER POLLUTION

5) HIGH ORGANIC POTENTIAL

6) FROST ACTION

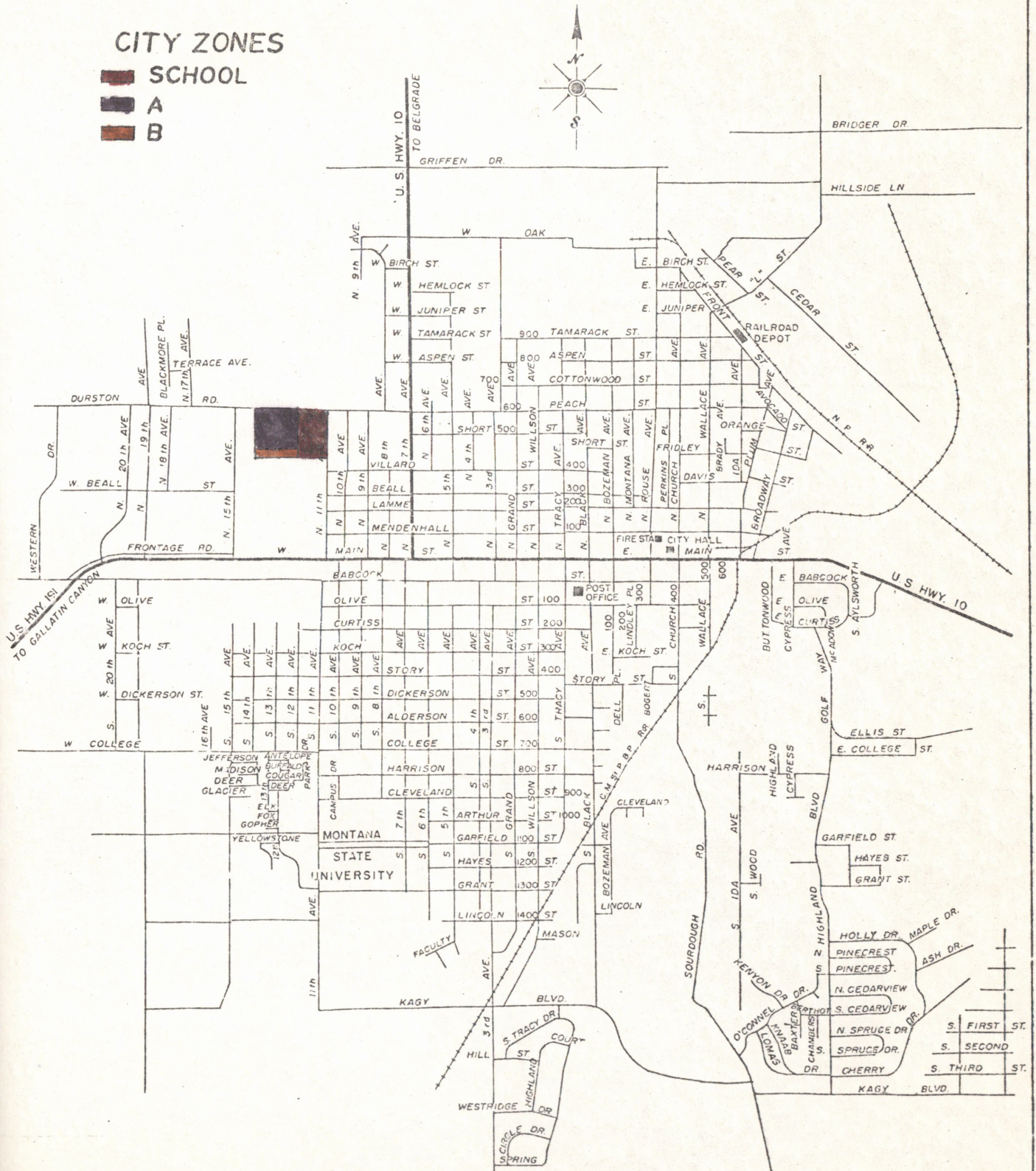
a MODERATE

b HIGH

MAP OF BOZEMAN MONTANA

CITY ZONES

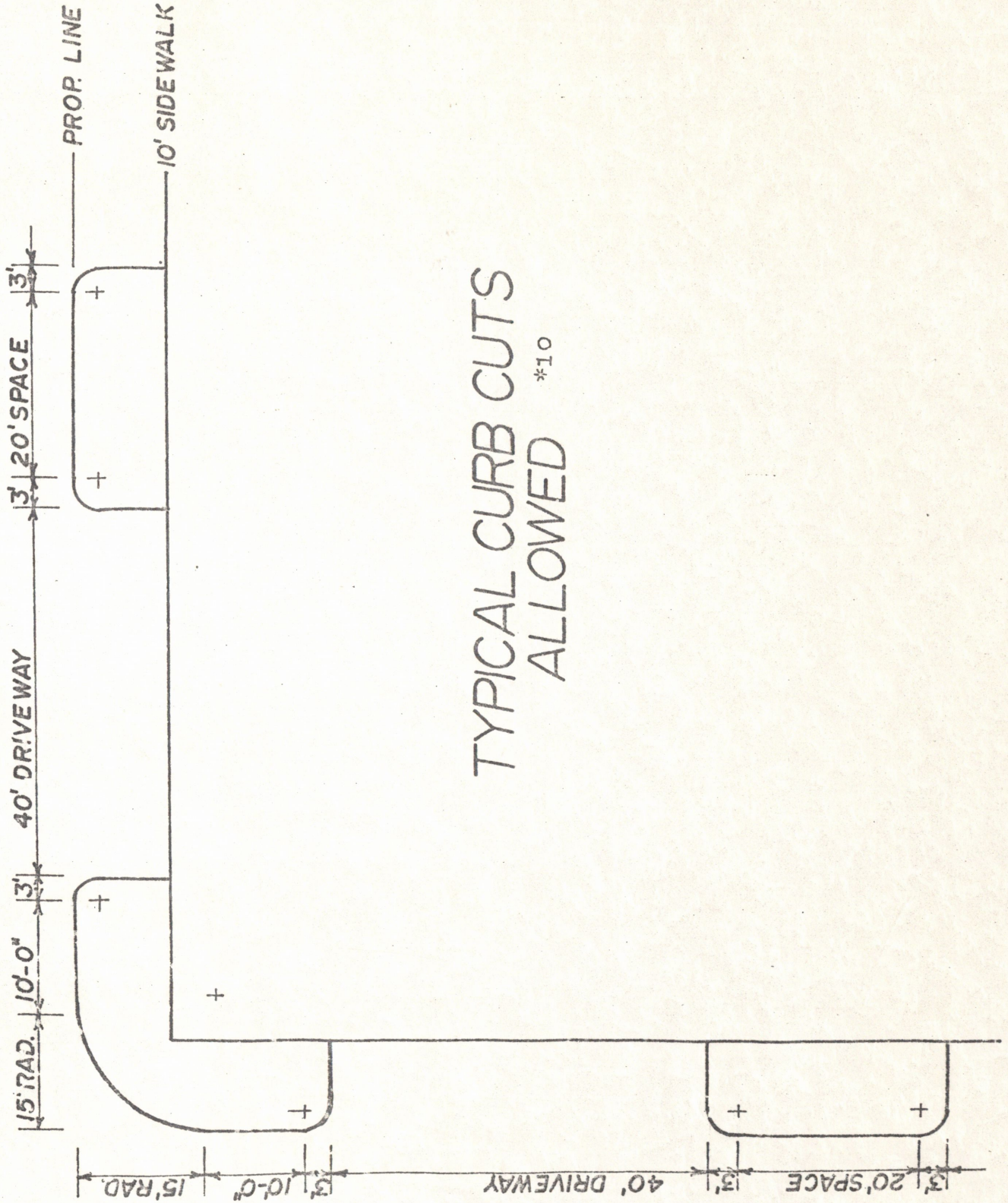
- SCHOOL
- A
- B



ZONE REQUIREMENT CHART

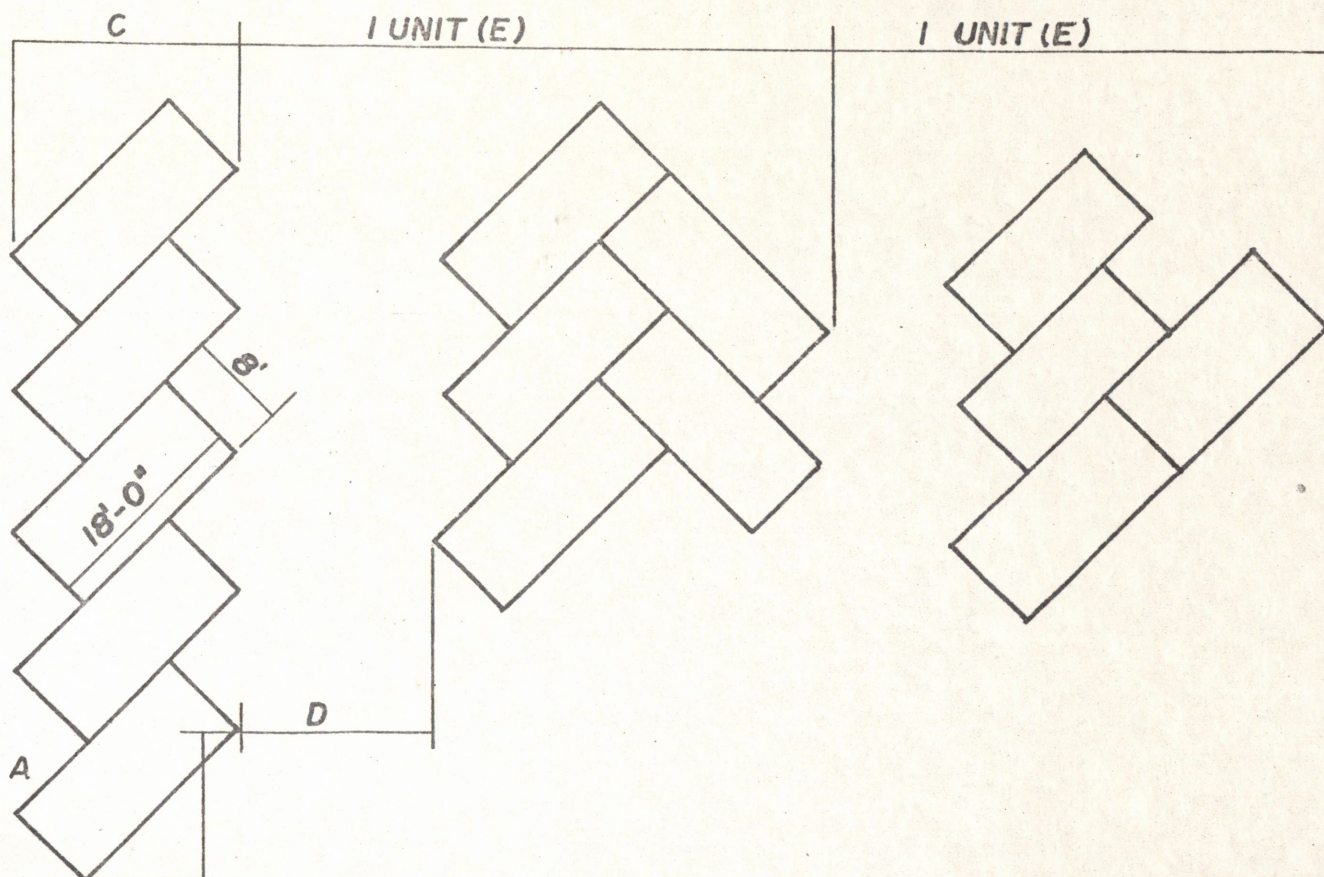
Revised February 6, 1970

COLUMN 1 ZONE	COLUMN 2 Permitted Uses	COLUMN 3 Exceptions to, and Limitations on Permitted Uses	COLUMN 4 Minimum Floor Area Required	COLUMN 5 Minimum Lot Area Required	COLUMN 6 Minimum Property Frontage at Building Line	COLUMN 7 Minimum Distance Between Main Buildings and/or Wings	COLUMN 8 Minimum Front Yard	COLUMN 9 Minimum Side Yard	COLUMN 10 Minimum Rear Yard	COLUMN 11 Minimum Street Side Yard, Corner Lot	COLUMN 12 Required Yards for Accessory Buildings	COLUMN 13 Other Provisions
AAA	CLASS 1 Single Family detached residences, and cus- tomary accessory residential uses.		1250 sq. ft. on the main living floor above grade.	10,000 sq. ft.	90 ft. Corner 80 ft. Inside Lots	24 ft.	30' - may vary in in- crements of not more than 5' from ad- joining building but shall not be more than 40'.	12 ft.	25 ft.	25 ft.	10 ft.	Vacant lots shall be used for gardening, tennis courts, playground or other recreational facili- ties only, and shall be kept free of all rubbish and/or garbage at all times; provided, that other uses of vacant lots may be permitted by written consent of the Director of Public Safe- ty with the continuing consent of the owners of 80% of the property within 300 ft. of the vacant lot or lots.
	CLASS 2 Public educational insti- tutions, Churches, Libraries, Museums and Parks Recreation uses..... Child Nurseries.....	publicly owned, must provide 100 sq. ft. of outdoor play area per child, screened from view of adjacent properties.		Same as above except where noted otherwise.	90 ft.	37 ft.	60 ft.	25 ft.	35 ft.	25 ft.	20 ft.	Written consent of the Director of Public Safety with the continuing consent of the owners of 80% of the property within 300 ft. of the vacant lot or lots.
	Hospitals, Rest Homes and Welfare Institutions	must provide minimum lot area of 1/10 acre per bed.										Trash shall be provided for in a clean and sanitary condition in containers totally screened in an attractive manner, or buried so as to be out of sight of adjacent properties.
	Golf and Country Clubs	must provide minimum lot area of 40 acres.										To side yard requirement add an additional 4 of side yard for each story over 2 stories.
	Agriculture and Horticulture	use of land only, no buildings.										Accessory buildings not to exceed 14' in height
AA	CLASS 1: All in Class 1 above (AAA) CLASS 2: All in Class 2 above (AAA)	Same as Class 1 and 2 above (AAA)	1100 sq. ft. with a minimum of 800 sq. ft. on the main living floor above grade and 300 sq. ft. elsewhere above grade.	7500 sq. ft. for Class 1 Class 2, Same as Class 2, AAA	70 ft. 60 ft.	20 ft. 34 ft.	25 ft. 35 ft.	8 ft.	20 ft.	15 ft.	8 ft. side 10 ft. rear*	Same as AAA. *8' when garage is entered from the side.
A	CLASS 1 All in Class above, plus: Multi-dwellings and Rooming Houses	maximum of 5 rooming units plus family quarters allowed. Same as Class 2 above.	1000 sq. ft./dwelling unit with a minimum of 800 sq. ft. on the main living floor above grade and 200 sq. ft. elsewhere above grade, plus 100 sq. ft./room- ing unit with a mini- mum of 60 sq. ft./ roomer.	7000 sq. ft., plus 1500 sq. ft./each additional dwell- ing unit and/or apt. and/or plus 800 sq. ft./ rooming unit.	60 ft. **	16 ft.	25 ft.	8 ft.	20 ft.	15 ft.	8 ft. side 10 ft. rear*	Same as AAA. *8' when garage is entered from the side. **Every lot or tract of land shall have a lot frontage of not less than sixty feet except that if a lot or tract has less width than herein required and its boundary lines along there entire length touched lands under other ownership on the 4th day of June, 1960 and have not since been changed, such parcel of land may be used for a single-family dwell- ing. But in no case shall said lot or tract have less than a fifty foot frontage.
	CLASS 2 All in Class 2 above, plus: Fraternity and Sorority Houses			Same as above except where noted otherwise.	60 ft.	33 ft.	35 ft.	25 ft.	30 ft.	25 ft.	10 ft.	
B	CLASS 1 All in Class 1 above CLASS 2 All in Class 2 above, plus: Apartment Houses Philanthropic and Eleemosynary Uses	Same as Class 1 above. Same as Class 2 above.	Apartment Houses limited to two (2) stories. 900 sq. ft./dwelling unit with a minimum of 900 sq. ft. on the main living floor above grade, plus 100 sq. ft./ rooming unit with a minimum of 60 sq. ft./roomer. Apts. 3 bedroom—900 sq. ft. 2 bedroom—850 sq. ft. 1 bedroom—700 sq. ft. Efficiency—550 sq. ft.	6000 sq. ft., plus 1500 sq. ft./each additional dwell- ing unit and/or apt. and/or plus 640 sq. ft./ rooming unit. Same as above except where noted otherwise.	60 ft. ** 60 ft.	16 ft. 33 ft.	25 ft. 35 ft.	8 ft.	20 ft.	15 ft.	8 ft. side 10 ft. rear*	Same as AAA. *8' when garage is entered from the side. **Same as A above



PARKING DIMENSIONS

*11



A	DIRECTION PARKING	B	C	D	E	NUMBER OF STALLS IN LENGTH	AREA OF CAR
90	BACK-IN	8'	18'-0"	22'-0"	58'-0"	X LENGTH 8	232
60	BACK-IN	8'	18'-0"	17'-4"	55'-0"	X-11 9.25	254
45	DRIVE-IN	8'	17'-2"	12'-8"	47'-0"	X-17 11.3	266
90	BACK-IN	8'-6"	18'-0"	22'-0"	58'-0"	X 8.5	247
60	BACK-IN	8'-6"	18'-10"	18'-4"	56'-0"	X-11 9.8	270
45	DRIVE-IN	8'-6"	17'-2"	12'-8"	47'-0"	X-17 12	282

Program

MENTAL RETARDATION CENTER

Bozeman

Diagnostic and Evaluation Center:

space name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
1. director's office	space for the coordinator and evaluation operations by the director. 1 desk & chair, card file & sm. closet, 3 easy chairs, 2 sm. tables.	1	160'	50
2. medical personnel office	space provided for the office area of the doctor & used for inter-viewing of children & parents. 1 desk & chair, sm. file cab., 2 easy chairs, closet.	1	120'	50
3. psychologist's office	space for the testing and inter-viewing of children & parents. 1 desk & chair, 1 sm. file, 3 easy chairs, 1 sm. writing table & chair, storage cab. for test materials.	1	160'	50
4. psychologist's testing room	space for private testing & evaluation. 1 table & 2 chairs, 1 sm. cab. for test materials storage.	1	60'	75

space name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
5. observation room	space for children to play and be observed. 1 lg. table w/ 4 chairs, storage cabinet for toys and games	1	150'	50
6. medical examining room	space for exam- ining children by medical doctor. 1 exam. table, stool, 1 sm. writing table and 2 chairs, 1 sm. room to undress in, mirror	2	60'	100
7. small laboratory	space used for specimen collection and urine samples. 1 lg. cabinet, 1 lg. counter top, 1 double sink, 1 chair,	1	100'	100
a. toilet	space for collect- tion of urine. 1 water closet, 1 sink	1	20'	10
8. social worker's office	space used for social worker's evaluation and personal inter- views. 1 desk & chair, 3 easy chairs, 1 sm. file, coat storage.	1	120'	50
9. public health nurse	space used for evaluation and personal inter- views. 1 desk & chair, 3 easy chairs, file & coat storage	1	120'	50

space name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
10. office (unassigned)	space for future staff members and used by visiting special- ists. 1 desk & chair, 2 easy chairs, 1 file, coat storage.	1	120'	50
11. speech therapist	space for test, evaluating & personal inter- views by s.t. 1 desk & chair, 3 easy chairs, 1 sm. cabinet for material storage, 1 sm. file, coat storage.	1	140'	50
a. test room	space for private testing and evalu- ation. 1 table, small, 1 chair, 1 cab. for test materials storage.	1	60'	75
12 hearing therapist	space for testing, 1 evaluation, & personal inter- views. 1 desk & chair, 3 easy chairs, 1 sm. writing table, 1 sm. file & coat storage.	1	140'	50
a. test room	space for private testing & evalu- ation. 1 sm. cabinet for test mat. storage, 1 table & chair.	1	60'	75
b. audiometric room	sound proof room for evaluation of hearing problem. 1 sm. table & chair.	1	60'	50

space name	description (furniture & function)	quantity	area size (sq. ft.)	ft. candles
13. joint testing room	used by both speech & hearing for group therapy sessions. 1 lg. table, 4 chairs, stor. for toys & testing mat.	1	100'	50
14. case records room	used by all staff as room for storage of case records. 15 files, 1 desk & chair.	1	90'	75
15. secretary's office	space for sect'y & reception. 2 sect'y, 2 desks & chairs, 1 file, coat & equip. storage.	1	150'	100
16. lobby	space to function as a waiting area and reception area. 1 couch, 4 easy chairs, mag. rack, 2 tables, coat stor.	1	150'	30
17. parent waiting room	space for waiting for parents of children being tested. 3 easy chairs, 1 table, 1 couch, coat storage.	1	80'	30
18. children's waiting room	area for observation and used to hold child's interest. table & 4 chairs, stor. for toys & games.	1	140'	30

space name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
19. conference room/ library	area for conf. meeting and reading area. 1 lg. table, 10 chairs, bookcase & shelves, move- able partition.	1	300'	50
20. utility room	area for storage of general clean- ing materials. double sink & shelving area.	1	50'	30
21. storage- observation- playroom	area needed to hide toys and games from sight when open area needed	1	60'	20
22. janitor	area for janitor storage; shelving and cabinet area.	1	40'	10
23. general storage	area for all lg. equipment and test material, & toys needed in entire complex. Also office supplies. Shelving & cab. area.	1	90'	30
24. outdoor play area	areas used for obser- vation of children by staff.		anywhere needed	
	area for pottery and ceramics work. 4 tables, 1 lg. store. cab., 8 stools, lg. work top counter.	1	900'	75
	needed for store. clay and ceramics materials.	1	60'	30

Education and Training Center:

area name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
1. instruction rooms	basic education and training area. Furniture needed listed pages 11-12.	8	900'	50
2. individual training booth	area for program- med learning and teaching machines. 1 sm. table & 1 chair, storage for teach. machines.	3	60'	50
3. observation booth	area used for observation by students & staff. writting table, chairs, one-way window.	10	80'	20
4. outdoor play area	area used to expand learning process. general play. equipment.		anywhere needed	
5. multi-purpose room	space used for music, dancing, social activities, etc. Folding chairs, tables, movie projector, & storage areas.	1	2,200'	75
a. storage	area needed to store all equip. used in multi- purpose room	1	200'	30
6. arts & crafts	space for pottery and ceramics work. 6 tables, 1 lg. store. cab., 8 stools, lg. work top counter.	1	900'	75
a. storage	needed for store. clay and ceramics materials.	1	80'	30

area name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
b. kiln	used to fire pottery & ceramics.	1	60'	50
7. specialized training area	used in training and educating boys in use of equip. and mat. 12 movable tables, and chairs,	1	1200'	75
a. tool storage	cabinets and shelves for storing lg. equip.	1	80'	30
b. wood working	used to acquaint student with hand tools, power equipment. lg. bench, power saws, drill press, lathe, 4 moveable benches & stools.	1	400'	75
c. painting	used for painting of projects. lg. work table w/ store. for paint.	1	180'	75
d. materials storage	needed for storing wood & paint. shelving for store.	1	180'	30
e. outdoor work	used to expand work area during good weather.	1	anywhere needed	
f. supervisor's office	area for the office of the supervisor of the work area.	1	120'	50
8. auditorium	area for films & meetings for 100 people. Seating in theater type seats, Stage for projection equipment	1	3800'	30
9. first aid room	space used for admin. 1 med. to cuts & bruises. 1 cot, 1 sink, 1 table, 2 chairs, 1 med. cab.	1	120'	30

area name	description (furniture & function)	quantity	area size (sq. ft.)	ft. candles
10. resource & training aids	space used in the production of instructional aids for training classes. 1 lg. work surface, cab. store., 1 sink, 1 table, 3 chairs.	1	200'	50
11. dining room	area to be used to feed center meals. 25 tables, 100 chairs.	1	250'	30
a. dish washing	area adjacent to dining rm. space contains washing machine, double sink cabinet store. & shelving.	1	140'	50
b. food store.	area complete w/ shelves to hold canned goods for kitchen & also a refrig. unit.	1	80'	30
c. garbage & trash area	storage area for garbage w/ access to outside.	1	40'	10
12. kitchen	provide meals for students, staff & residents in complex. 2 layer over w/ 6 burners, exhaust hood, lg. counter area, lg. cab. for store.	1	400'	70
13. staff lounge	area to be private & allow relaxation to staff. 1 couch, 4 easy chairs, 2 tables, coat & cab. store.	1	170'	30
14. toilet space	area used in relation to inst. rooms as a grooming/ personal hygiene area. 1 water closet, 1 lav., lg. mirror, counter, hand dryer.	8	70'	50

space name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
a. staff toilets	areas adjacent to staff lounge & located for easy access. 1 water closet, 1 lav., mirror, sink.	2	50'	20
15. director's office	used for confer- ences, evaluations, and interviews. 1 desk & chair, 3 easy chairs, 1 table, sm. file, coat storage.	1	160'	50
16. secretary's office	space for typing, short hand, etc. perform duties req. of the sect'y of such a center. 1 desk & chair, 2 files, storage, coat storage.	1	120'	100
17. waiting	area for visitors waiting to see director or staff or student. display cabinet, 1 couch, 3 easy chairs, 1 table, coat storage.	1	150'	30
18. conference, library	used for staff meetings & evalu- ation & conferences. 1 lg. table, 10 chairs, storage for coats, bulletin or chalk board.	1	250'	50
19 janitor/storage	area for storing janitor's equipment. cab., shelves.	1	40'	20
20. general storage	area for store. office supplies & mat. lg. shelving & cab.	1	150'	30

space name	discription (furniture & function)	quantity	area size (sq. ft.)	ft. candles
21. girl's training area	space used in training & educating girls in domestic services. 12 sewing mach- ines, stools, 4 tables, 8 chairs, storage.	1	1200'	75
22. apartment	used by both boys and girls			
a. bathroom	space included in training area for education of duties related to a bathroom in a house	1	70'	30
b. kitchen	space provided for training of requirements needed in kitchen	1	200'	50
c. bedroom	space provided to train in require- ments of bedroom in a house.	1	200'	30
d. living room	space provided to train in require- ments of a living room in a house.	1	400'	30
e. outdoor training area	space so that students can train outside in good weather.	anywhere needed		
f. utility room	area provided for students to learn how to operate washing machine & dryer. washing machine & dryer, sink, cab.	1	100'	30
g. general storage	area provided for store. of luggage, clothes, furniture, excess equipment.	2	100'	20

space name	description (furniture & function)	quantity	area size (sq. ft.)	ft. candles
23. audio-visual room	space for record- ing activities from closed circuit cameras in classrooms. audio-vis. equip., lg. work table, store. space, 2 chairs, 1 table, chair in small recording booth.	1	300'	30

LIVING UNITS

1. bedroom	space for two children to sleep & play. 2 beds, 2 chairs, 2 writing desks, storage space, closet space.	12	200'	30
2. toilets & baths	space for per- sonal grooming & training. 1 tub, 1 shower, 1 water closet, 1 lav., 1 counter, storage space.	8	60'	30
3. living room	normal family functions to be carried on in this area. 2 couches, 2 easy chairs, 2 tables, fireplace, book case, t.v., stereo equip.	4	300'	20
4. special bath	used by children not able to bathe unattended. 4 x 4 minimum shower, water closet, sink, counter.	4	60'	30

space name	discription (furniture & function)	quantity	area size	ft. candles
5. laundry room	space provided for cleaning clothes in an emergency. 1 washer, 1 dryer, sink, storage.	4	80'	30
6. storage room	space provided for storing clothes & equipment. shelving & cab.	4	100'	30
7. parent-team apt.				
a. living room	space for enter- taining guests. 1 couch, 2 chairs, 2 tables, 1 lg. table.	4	280'	30
b. kitchenette	space for fixing snacks & simple hot meals. 1 refrig., 1 stove & oven, double sink, counter top.	4	150'	30
c. master bedroom	space for king- sized bed, lg. closet, 2 dressers, 2 nightstands, store., book case.	4	180'	30
d. second bedroom	space for visitors. 1 double bed, dresser, night stand, closet, storage.	4	150'	30
e. bath	private bath for houseparents & guests. 1 water closet, 1 tub & shower, 1 lav., med. cab., storage, counter space.	4	50	20

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COMPUTER PROGRAMS AND CHARTS

- *1 U.S. Department of Health, Education, and Welfare:
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- *2 Montana State Plan for Mental Retardation Facilities
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- *3 ibid; page 30, 37.
- *4 ibid; page 41.
- *5 ibid; page 46.
- *6 ibid; page 47.

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- *7 ibid; page 39.
- *8 ibid; page 32.
- *9 U.S. Department of Agriculture Soil Conservation
Service; Land Use Planning and Development in the
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- *10 Roman Fagan, City Engineer, Bozeman, Montana.
- *11 Architectural Record: Time-Saver Standards, New York,
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- *3 ibid; pages 36, 37.
- *4 ibid: page 41.
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- *6 ibid; page 52.
- *7 ibid; page 59.
- *8 ibid; page 72.
- *9 U.S. Department of Agriculture Soil Conservation
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