A RECREATION CENTER

FOR

BLUEFIELD, VIRGINIA, WEST VIRGINIA

by

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I

INTRODUCTION
INTRODUCTION

Athletic and recreational facilities are an important and necessary part of any modern community, and they should be close at hand. In most communities recreational facilities are built simultaneously with educational plants, but in Bluefield this was not considered when the schools were designed and built.

It is the purpose of this thesis to investigate the existing recreational facilities, to determine what additional facilities are needed, and to design a Recreational Center with adequate facilities to fill the present and future needs of Greater Bluefield.
II

RECREATION IN GENERAL
RECREATION IN GENERAL

It is an accepted fact that plans for all communities should include provisions for open spaces to be used for sports and other recreational needs. Such areas are an indispensable component of our new communities. Without them our communities would not be complete.

"The program specifying the distribution of these facilities, their character, their capacity, as well as their most favorable locations, will vary considerably with the customs and tastes of the people, the percentages of different age groups in the population, the hours of labor, the climate, and circumstances. The urban population's need for recreational facilities as an integral part of the dwelling unit is nevertheless universal" (1)

The standards for park and playground needs vary with the community. They cannot be measured in acres or by a general formula; but climate, topography, age groups and their percentages, local customs, and other factors influence any recreational program, and must be considered in each particular case.

Recreation not only pertains to physical activities for children or viewing athletic events, but includes facilities for relaxation, participation in less strenuous activities, and the use of club rooms for organizational meetings by adults.

Areas for children's recreational needs fall into four

groups. They are:

(1) **Play lots**, which are small areas suitable for the play of children less than 5 years of age, and should be provided near their homes. (5000-10,000 sq. ft.)

(2) **Playgrounds**, which provide active recreation for children of grade and junior high school age (5-15 years), and should be 2 to 7 acres or more. The space required depends upon the density of population.

(3) **Playfields**, or athletic fields, which provide active recreation for older children and adults, usually between the ages of 15 and 24 years. The minimum size is 10 acres, but 20 acres is more desirable.

(4) **Neighborhood parks** are usually located to take advantage of some scenic opportunity. No standards in relation to population are possible, but these parks are counted in with the large parks, playgrounds, etc, in the over-all standards. They are frequently combined with one or more of the foregoing recreational facilities.

"The large park should provide for many people, but not be crowded by them. It may have areas where people congregate, but its essential parts are those where a person may get away from his kind, and enjoy

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something of the freedom of natural landscape."

Recreation facilities are necessary for all, but particular consideration should be given to the underprivileged areas. Proper placement and use of playgrounds and equipment will do much to raise the morals of the less fortunate and will help eliminate juvenile delinquency.

A general rule requires that the maximum distance to a recreation center, from any home, be not greater than one mile. Where the distance is necessarily greater, the presence of transportation facilities to the area will help.

The use of green areas to separate the different functions of the recreational area is recommended to isolate noises, and particular care should be given to screening all recreational facilities from traffic and parking grounds. It is also important to screen the noise of sporting events and traffic from the cultural buildings.

"In addition to the parks, playgrounds, fields for sports and other buildings required on the grounds, the recreation layout will include both open-air and enclosed places for intellectual pursuits; an auditorium for lectures and concerts, a theater or cinema, a library, or other installations, according to circumstances." (4)

It is important that other facilities, such as the

3. Parks and Playgrounds, Their Requirements and Distribution as Elements in the City Plan; R. V. Hubbard; Proceedings of the 14th National Conference on City Plans; Springfield, Massachusetts, 1922.
stadium, baseball park, and theaters be large enough to handle any crowd they might be called upon to serve. They should be considered as belonging to the whole district, not just to a small community.

There have been many mistakes made in planning and construction of athletic and recreation facilities in the past. In any future planning these mistakes should be studied and avoided.

Some of these mistakes are: (5)

1. Planning a building for its outside appearance rather than inside functional arrangement.

2. Failure to provide sufficient amount of spectator seating, where demanded, without over-emphasizing it.

3. Failure to provide good sight lines from the seats.

4. Failure to provide ventilation space below the gymnasium.

5. Failure to consider official rules as to size of courts and pools.

6. Construction of stairwells and stairways within the gymnasium and allowing other projections such as pipes, radiators, and airshafts.

7. Placing roof supporting members between seating and the playing floor.

8. Failure to provide suitable or sufficient facilities for use by girls and women.

9. Failure to provide usable or suitable office-dressing suites for physical education or recreation staff members.

10. Provision of insufficient, inaccessible, and poorly planned storage rooms and spaces.

11. Failure to provide vestibules for exits from gymnasium and dressing-locker rooms to playfields.

12. Failure to provide acoustical treatment for pool and gymnasium.

13. Failure to provide sufficient and appropriate electrical outlets in the gymnasium.

14. Failure to provide means of servicing pool and gymnasium lights.

15. Poor arrangement or lack of planning for installation of baffles between dressing-locker room entrance and general traffic lanes.

16. Failure to provide necessary zone ventilation in gymnasium activity, dressing, shower, and toilet rooms; with particular reference to removal of heat, moisture, and spectator smoke.

17. Failure to provide zone heating in gymnasium and pool wing, and the auditorium, music, and craft shops.

18. Inadequate provisions for lighting gymnasium, pools, showers, toweling, and dressing rooms.

19. Provision of suspended lighting fixtures in activity rooms, shower, toweling, and dressing rooms.

20. Failure to provide moisture proof or water resistant coved base under lockers in locker room.

21. Use of inappropriate and unsuitable floor and wall material in the gymnasium, showers, toilets, and dressing-locker rooms.
22. Failure to provide coved bases and bull nose corners for walls.

23. Provision of veneer doors in moist areas.

24. Provision of panel doors in areas of heavy usage.

25. Failure to provide mud scuffs and grills outside all entrances from the play area.

26. Failure to provide convenient access to field facilities.

ORIENTATION OF OUTDOOR FACILITIES:

In many cases topography, location, and shape may dictate the orientation. In orienting, first consideration should be given to the protection of the players.

Fields and courts should be placed so that the late afternoon or early morning sun rays will intersect the path of the flight of the ball at an angle of approximately 90 degrees. Otherwise the players in the easterly end of the court will have to face the afternoon sun.

On the baseball or softball field the batter, pitcher, and catcher are in the most hazardous positions so the field should be laid out so that the afternoon sun rays are at a 90 degree angle to the home-second base axis.
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<th>Activities</th>
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<td>0-2</td>
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</tr>
<tr>
<td>3-6</td>
<td>Dribbling, tea parties, simple games</td>
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<tr>
<td>7-14</td>
<td>Field games, soccer, badminton, etc.</td>
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<td>Jogging, cycling, tennis, etc.</td>
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<td>Baseball, golf, swimming, etc.</td>
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<td>50+</td>
<td>Walking, golf, swimming, etc.</td>
</tr>
</tbody>
</table>

RECREATIONAL NEEDS OF DIFFERENT AGE GROUPS
III

HISTORY
That adequate recreational facilities for young people are needed in Greater Bluefield is evidenced by the increasing interest in providing such facilities which is now being displayed by the city government. The City Recreation Program was originated in 1942 by the Chamber of Commerce, and carried on by this body, with the aid of contributions from wellwishers, until the city officially adopted the program in 1945.

A full-time Recreational Director was employed and additional land obtained in various sections of the community for playgrounds. Five playgrounds were set up; four for white and one for colored people. Since the colored population in Bluefield is 17.4% of the total population, this is a fairly just relation. Extra taxes were levied to obtain additional land and equipment.

A Recreational Center was set up in the Municipal Building and facilities for activities such as ping pong, shuffleboard, chinese checkers, darts, miniature bowling, dancing, and general visiting were included.

The city recreational program utilizes three baseball diamonds, four softball diamonds, and five school gyms.

The recreational program has grown steadily since 1942. In 1948 it served 2582 boys and girls, 1980 of which were
between the ages of 12-18. Of the 2582 boys and girls, 1944 resided in South Bluefield and 538 resided in the West End. These two areas bound the new recreational area.

The new recreational area includes 51 acres of land to be used as a municipal park area. It is to include a recreational and athletic center which will serve not just the community, but much of the Pocahontas Coal Field section.

The recreational center now includes: a municipal stadium which now seats 10,000 persons, and is to be expanded and improved; Bowen Field Baseball Park, one of the finest class D parks in the country; five recently completed clay-surfaced tennis courts; and a regulation sized practice football field. These facilities serve their purpose well, but additional are needed.

OBJECTIVES (6)

The primary purpose of a recreational area is to provide cultural and physical activities in a safe, healthful, and attractive manner. The uses it is to serve must be determined before planning can begin. A complete analysis of all parks, playgrounds, and recreational facilities, which it might be desirable or feasible to include in the area, is prerequisite.

A questionnaire, directed to the executives of 60 principal industries and businesses and their 3071 employees, to determine what unmet needs they felt exist for young adults 18-35 years of age in Bluefield, showed a demand for the following: (7)

- Municipal Auditorium
- Swimming Pool
- Parks
- Tennis Courts
- Dancing facilities
- Skating facilities
- Bowling alleys
- Band shell
- Camping facilities
- Golf Course
- Additional library facilities
- Adult recreation center
- Place for college games
- Volley ball
- Winter sports center

On the basis of this questionnaire and knowledge obtained through observation, talks with Bluefield's recreation director, study of a recent survey of the community and its needs, and research in the school libraries, the author has reached the plan presented in this paper. An endeavor has been made to integrate the different functions and buildings into a recreational center that will fill the needs and requirements of this community.

Several important factors considered in the planning were; slope of the playgrounds not to exceed 3 per cent, and

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7. Survey of Bluefield, West Virginia; C. J. Stoakes
Bluefield Community Chest, Bluefield, West Virginia, 1948.
still have good drainage; effective use of the site, being sure to include all the necessary areas and facilities; designing so as to obtain multiple use of facilities where ever possible.

The recreational facilities provided are so varied that anyone seeking recreation at any time may find something that attracts him and is within his means. Many of these facilities are included in the Recreational Building which is the main subject of this thesis. It is a building that provides both cultural and physical activities, and in order that these may function independently of one another, each is housed in a separate wing, connected by a covered walkway.

The building is designed to provide facilities consistent with and in relation to the size of the area it is to serve. Special consideration is being given to its relation to existing and potential outdoor facilities. The exterior of the building is important, but it is secondary to its function. (8) All parts of the building are designed to fill at least one function and where ever possible, more than one.

In addition to the park designed here, neighborhood playgrounds are necessary in or near each residential area. The standards for these, as to size and development, have

been worked out by the National Recreation Commission, and are generally accepted and followed as closely as possible by Bluefield. Therefore, aside from acknowledgement of their existence, they will not be included as part of this problem and solution.
IV

THE SITE
SITE SELECTION

The site used for Bluefield's Recreation Center was chosen in the late 1930's when the city council decided to discontinue the city airport and use its flat land and the surrounding hills for the Municipal Recreation Center.

Factors which were helpful in making the decision to use this site were:

(1) Accessibility from centers of population in the surrounding area.

(2) The existence of previously constructed recreation facilities, such as the stadium, baseball park and tennis courts.

(3) Good soil conditions, existing terrain, and vegetation. (9)

(4) Adequate spaces for present needs and adjoining inexpensive land for possible future expansion.

(5) The availability of existing transportation facilities to serve the area.

(6) Connection with existing highways to both parts of the city and nearby towns without cross-traffic.

(7) Shift in population toward this section in recent years.

(8) Adequate parking space.

SITE USE

The site plan, by its use of topography, vegetation, and buildings, should take advantage of all natural assets. By skillful use of existing features of the site and correct placement of projected elements, an efficiently integrated Recreation Center may be accomplished on this difficult site.

The size of the project determines the number of supervisory personnel which can be provided. This number in turn determines the location and equipment of the major play areas.

The proposed Recreation Building, which will be the center of all activity in the area, will be centrally located on the flat land near the College Avenue entrance. In this location it will be accessible to the bus stop, close to the tennis courts, practice field, and play lots. Thus the shower and locker rooms in the building may be used by those using the outdoor facilities. The building will be designed to obtain the best orientation for facilities that require it. There will be parking facilities nearby for staff and recreationists.

One parking lot will be east of the Recreation Building and will be directly in front of the stadium. This lot will serve both of these facilities. It will extend along the

roadway northeast toward the northeast entrance to the valley.

The stadium is placed in a valley, which, with the aid of excavation, formed a bowl. At present there is seating on both sides of the bowl. Behind the stadium, on a level space, is the local police pistol range. Firing is into the northeast bank.

Directly west of the Recreation Building will be a practice football field. This field will be used during the season by the local high school and sand lot teams. During the off season it will be used as an additional play and game area. It will be a turfed area, properly drained and of proper size for football. The area will be shielded from the surrounding areas by plants and trees. To the north of the lot will be a row of nine tennis courts and the swimming pool. To the west is a parking lot to serve the pool and baseball park. This lot parks 500 automobiles and there is another lot to the west of the ball park that will hold an additional 550.

Southwest of the baseball park, along the valley, will be softball diamonds, soccer fields, model airplane circles, and space for carnivals and circuses. There will be a small field house near the softball diamonds.

In the hills north of the game area will be a cleared area for picnickers with fireplaces, tables and benches, and water facilities. Picnickers will be able to relax in these scenic surroundings and enjoy the view below. Nearby in the valley
will be a band shell and an open-air theater.

TRAFFIC

Traffic may enter and leave the proposed recreational area by way of four different routes, with a minimum of congestion. All traffic routes will be on the south side of the recreational area, yet provide easy access to the centers of greatest use.

Northwest bound traffic to the coal fields around Welch, West Virginia may move out the northeast end of the valley to the Cherry Street cut-off to Route 52. This routing avoids the business districts and passes through only two blocks of residential area.

Northeast bound traffic to Princeton will move out the southeast gate, cross College Avenue, and take the Route 21 by pass, thus missing the business district and most of the residential area.

Tazewell and Bluefield, Virginia traffic may move out a proposed road to the southwest end of the valley to the back road to Bluefield, Virginia.

Local traffic may use the southeast entrances to College Avenue or the northeast entrance to Frederick or Augusta Street to town and the East End.
V

THE DESIGN
THE PROGRAM

The following outline of facilities is based in part on existing features which remain a part of the site plan, marked with asterisks. It consists mainly, however, of new facilities designed by the author and based on his research. These new facilities are discussed individually in detail on the pages following the outline.

OUTDOOR FACILITIES:

Baseball Park®

1. Business office
2. Concession stand
3. Locker and shower rooms
4. Storage room
5. Grandstands
6. Bleachers
7. Lighting
8. Ticket offices

Stadium®

1. Seating for 20,000
2. Two field houses
3. Ticket offices
4. Toilet facilities
5. Concessions
6. Running track
7. Lighting
Tennis Courts
Softball Diamonds
Soccer Fields
Swimming Pool
Dancing Facilities
Badminton Courts
Band Shell
Pistol Range
Horseshoe Pits
Shuffleboard
Picnic Grounds
Apparatus Lot
Tot Lot
Archery
Volleyball Courts
Handball Courts
Practice Football Field

INDOOR FACILITIES

Recreation Building
1. Gymnasium
2. Swimming Pool
3. Seating Facilities
4. Lockers and Dressing Rooms
5. Offices  
6. First Aid Room  
7. Bowling Alleys  
8. Billiards Room  
9. Maintenance Shop  
10. Observation Hall  
11. Filtration Room  
12. Transformer Room  
13. Boiler and Fuel Rooms  
14. Storage Rooms  
15. Toilet Rooms for Spectators and Participants

Cultural Wing  
1. Lobby and Foyer  
2. Office  
3. Waiting Room  
4. Library  
5. Lounge  
6. Ping Pong Room  
7. Snack Bar  
8. Kitchen  
9. Assembly and Game Room  
10. Check Room  
11. Music Room  
12. Craft and Handicraft Rooms
13. Toilets on Each Floor
14. Photography Room
15. Meeting Rooms (5-6)
16. Social Room

DISCUSSION OF ELEMENTS

Baseball Park

The existing Baseball Park is satisfactory, but at times, due to large crowds, there is a tendency to have congestion in the parking lot and at the gate. By adding parking lots and a gate to the west of the park, this congestion may be greatly relieved.

Stadium

The stadium, with the completion of the work now in progress, will be one of the finest in the section. It contains all the necessary facilities for football, track, spectators, and the press.

Tennis Courts

The National Recreation Commission standards call for one tennis court for each 2,000 population.

With the five recently completed courts, three existing at Bluefield College, four private courts at the country club, and several scattered ones in town, the addition of four more adjacent to those at the recreation area will more than meet
these requirements.

The courts will be surrounded by a 12 foot fence with sufficient gates for entry.

Softball Diamonds and Soccer Fields

These facilities will be separated from the road by plants and trees. Permanent seating facilities will be furnished for the spectators and players. A fieldhouse will be placed nearby for the use of the players and will include toilet facilities for the spectators.

Outdoor Swimming Pool

To provide adequately for a city of Bluefield's size there should be swimming facilities to handle 3% of the population at one time. If Greater Bluefield's white population is considered to be 25,000, facilities to handle 750 persons would be required. It is felt that several moderate sized pools, properly constructed, and strategically placed, may serve the community better than one large pool on this site.

The country club pool will handle approximately 50 of these people, leaving 700 to be cared for by public pools. Two pools, each to handle half of this load, would have to be from 8000 to 10,000 square feet in area each, allowing 27 square feet per person.

In addition to the swimming pool will be a wading pool for youngsters and beginners.
The pool for the Recreation Center will be located in the valley north of the practice field, close to the parking lot, and yet accessible without crossing the playfields. The site is slightly raised and may be properly drained, and in this location the pool may be easily emptied.

The bathhouse will be placed on the east side of the pool and will contain male and female locker-dressing rooms, toilets for swimmers and spectators, First Aid Room, office, concession booth, checking, drying and issuing, filtration, and tool rooms on the ground floors. On the second floor of the bathhouse will be a snack bar for swimmers, a dining and dancing area, and kitchen facilities. There will be a terrace which may be used for refreshments, sunning, and lounging by spectators.

Proper ventilation is of major importance, particularly in the dressing and shower rooms.

The deck surrounding the pool will be suitable for sunbathing and the area to the northeast will be a shady area where bathers may relax between swims.

Tot Lot

The tot lot will be west of the recreation building near the practice field. In this location it will be away from traffic and parking areas, yet close to the recreation building for control. It will be provided with adequate space for
the number of children to be accommodated, and will contain equipment such as sand box, wading pool, hard surface area, and shaded areas. The lot will be properly fenced or hedged in for protection.

Court Games

Court games, including such facilities as tennis, volleyball, badminton, and handball will be placed to the rear and west of the main building. This location is close enough so that players will be able to use the locker facilities of this building.

Shuffleboard and horseshoes, two games for adults not prone to strenuous exercise, will be placed together in a separate location.

Apparatus Lot

This lot will be placed adjacent to the tennis courts and near the tot lot. It should be extremely popular with the younger children and should do much toward building strong young bodies.

The lot will include such equipment as seesaws, slides, swings, climbing structures, balance beams, giant stride, and horizontal bars.

Band Shell

The band shell will be placed in the valley west of the
baseball park, so that the sloping floor of the valley will form a natural graded area for seating. Spectators at band concerts will use the nearby west parking lot.

The shell will be of an economical type with a flat back and a sloping roof designed to reflect sound to the audience efficiently. (11)

RECREATION BUILDING

Schemes

Several schemes for the design of the Recreation Building were considered before a final choice was made.

Scheme one placed all facilities in one building, connected by corridors.

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<th>Crafts</th>
<th>Physical Fitness</th>
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<td></td>
<td></td>
<td>Cultural</td>
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</table>

After considering the different activities taking place in the different sections, and the noise caused by each, this scheme was abandoned.

A second scheme combined the crafts with the cultural wing. The physical fitness wing was separate, with combined locker rooms for the gymnasium and pool.

This scheme was abandoned because the noise of the craft shop and music room would disturb the cultural wing, and circulation difficulties would arise from double use of the locker and shower rooms in the physical fitness wing.

Scheme three separates the activities into three wings, connected by covered walkways. In this manner the noisy areas are separated from the quiet areas.

This is the scheme used.

Administration Section

The Director of the Recreational Area will have the continual problems of scheduling the use of the different facil-
ities, distribution of supplies, supervision of activities, and the direction of maintenance, etc. Therefore the office for the director is placed in the recreation wing, adjoining the lobby, entrance, and entrances to the game and lounge rooms. In its location it will be accessible to the people using the building and to the general public. The office will have lavatory facilities, and a storage closet and cabinets in which to store equipment and supplies.

The physical fitness wing will have offices for instructors for both gymnasium and pool. These will be placed at the best points for control purposes. The offices will include storage space, private shower, toilet, and dressing room.

The instructors office in the boys section will adjoin a First Aid Room for injured recreationists.

Circulation

The passageways are adequate to permit easy and speedy circulation between various elements, yet do not occupy too much floor area.

Assembly Hall and Game Room

This room is the center of activity in the recreation wing. It is to be designed adaptable for various uses such as games, dances, dramatics, and meetings. The room will have folding doors and may be divided and used for several activities simultaneously. The floor area will be approx-
imately 4500 square feet with entrances at the south end, away from the stage. Sufficient exits to empty the room within two minutes will be provided. Part of the east wall will be of glass and will open into a green court between the recreation wing and craft shops.

The stage is 3 feet 6 inches high and will be constructed so as to furnish storage space for chairs underneath. The chairs will be placed on dollies and rolled under the stage. The proscenium opening will be two-thirds of the width of the room and will be 18 feet high, several feet lower than the ceiling. Above the opening will be space for scenery hoisting. The stage will be flanked on each side by a dressing room and a storage room. One of the storage rooms will open onto the stage and on into the main assembly room. Each dressing room will include a sink and mirror, and be close to toilet facilities.

There will be an outside door at the rear of the stage for removing and bringing in scenery and properties which may be constructed in the nearby craft shops.

There will be adjacent kitchen, lobby, checking facilities, and toilet facilities for the recreation wing, and there will be a balcony with a projection booth.

Lounge and Library

The lounge may be used as a meeting place, a place for
rest, or a place to participate in quiet games such as cards, checkers, and chess. The lounge will adjoin the lobby, close to an entrance, and reasonably close to the assembly hall and office. It will adjoin the library, thus giving comfortable lounging facilities for readers.

The library will supplement Bluefield's main library in the Municipal Building. It will be acoustically treated to minimize annoyance from the noise from the game rooms.

Meeting or Club Rooms

These rooms may be used frequently for club meetings for children or adults. Clubs of various kinds promote close and congenial friendship and in many cases, foster a stronger community feeling.

Due to the number of people to be served by the area, a minimum of 5 club rooms, and in this case 6, are felt to be necessary. As the sizes of the rooms needed may vary, the club rooms are provided with folding doors.

Each club room will contain sufficient storage space in the form of closets, cabinets, and files. At least one club room should have a sink with hot and cold water.

Snack Bar

The snack bar is primarily a space to serve soft drinks and sandwiches which are in demand after vigorous exercise. It is best placed in close proximity to the recreation and
game room and yet near to the physical fitness wing. It will
be connected to a small kitchen which will be used to pre-
pare snacks, or used in conjunction with the assembly hall.

Dark Room

As a dark room may appeal to only a few rabid camera
fans, it may be placed on the second floor. The persons who
do use such equipment are usually extremely interested in
photography. The room may be small and calls for a very
small outlay in cash for equipment.

Social Hall

A social hall or room will be placed on the second floor
and will be used for small parties and dances. It will have
a quiet area for those who would rather relax than partici-
pate.

Toilet Facilities

These facilities will be furnished on each floor for
both sexes. The women's toilet will have a powder room
adjoining in each case.

Craft Shop

One of the most popular features in any recreation cen-
ter is the craft shop, which affords people great pleasure
in discovering and developing creative skills.

This room will be a large one divided by sliding or
folding partitions to separate its functions. It should have ample exits for emergency and should be fireproof, accessible, and should include all necessary utilities and storage space for supplies, machinery, and partly finished products.

The craft shops and music room will be in a separate isolated wing to keep the noise away from the recreation wing.

Music Room

The music room will be used for choral and band practice, and will contain sufficient storage space for instruments and music. It will be large enough for a band of 50 persons, and will be acoustically treated.

Gymnasium

The practicability of having two gymnasiums, one for boys and one for girls, is a matter of question. Since the recreation center is to serve the whole area, and there is no suitable large gymnasium for the area tournaments, it was decided to provide a double gymnasium that may be opened into one large gym, with folding and portable bleachers. Additional entrances and exits are needed to facilitate circulation of spectators.

There will be a main entrance and ticket office connecting with the foyer. The secondary entrances are on the opposite side of the gym.

Folding bleachers will be used on the sides of the
main floor and additional bleachers may be installed at the ends when the need requires it. The bleachers will be six rows high and will be 10 feet 3 inches deep when open, and 2 feet 3½ inches deep when folded. The height will be 5 feet 3 inches open or closed. There are spectator balconies on either side of the gymnasium designed to provide excellent sight lines.

Separate entrances into the separate sections of the gym from the boys' and girls' locker and dressing rooms eliminate crossing traffic. The lower part of the gym may be divided into two parts by motor driven folding doors.

The gymnasium will have bi-lateral natural lighting, using prismatic glass block to obtain even daylighting without glare. The window area will be approximately 25% of the playing floor area.

The apparatus room and maintenance room will be placed off the gyms. The apparatus room will connect with both gyms; the maintenance room will be reached from the outside.

Showers and Locker Rooms

The shower and locker rooms will serve the gym and outdoor facilities and are therefore located so as to be accessible to both. These locker rooms will have 350 lockers (50 dressing and 300 storage) for boys, and 280 lockers (40 dressing and 240 storage) for girls. There will be 15 gang
showers for boys, and 6 shower booths and 10 gang showers for girls. There will also be dressing booths in the girls dressing room. The banks of lockers will be placed 11 feet on centers, allowing sufficient space for dressing.

Toilet facilities will have 2 toilets, 4 urinals, and 6 lavatories for boys, and 4 toilets and 6 lavatories for girls. Separate dressing and locker rooms will serve people using the pool, thus preventing cross-traffic.

Dressing booths will be provided in both male and female pool dressing rooms. Persons will receive locker keys from the control desk, go to a dressing booth, change clothes, and go barefooted to their storage locker. The booths are arranged to separate barefooted people from those with their shoes on, thus preventing outdoor dirt being tracked to the pool.

To eliminate any danger arising from slippery steps, both sets of locker rooms will be on the same level as the facilities they serve.

Each locker room will have sufficient toilet facilities, showers, mirrors and a built-in drinking fountain.

Swimming Pool

The pool will be rectangular, 75 feet long by 35 feet wide. This width allows for five racing lanes of the standard 7 feet width. The deck surrounding the pool will be a minimum of 10 feet wide to prevent accidents. The pool will be placed on the south side of the building for maximum sunlight, and
the south wall will consist of movable glass doors that open to a terrace for sunbathing. The terrace will be surrounded by a hedge backed with a wooden fence.

At the shallow end of the pool will be a wading pool for non-swimmers.

Underwater lighting will be used, and several underwater observation windows will be placed at the deep end of the pool. From this point the instructor may check the swimmers and divers' form. The underwater windows may be reached through the basement.

Spectators will be seated on the north side of the pool room, and will enter the pool room from the second floor foyer. This eliminates the possibility of spectator and swimmer traffic crossing. Tickets to sporting events will be sold at a small office at the entrance on the second floor.

The filtration plant and equipment for heating and preparation of the water for the pool will be in the basement under the seating and dressing rooms. Wide doors to the outside for installation and removal of large processing tanks will be provided.

Bowling Alleys

Six bowling alleys will be placed in the basement of the physical fitness wing. If fewer than six alleys were available, people would have to wait too long and would be-
come dissatisfied. As bowling is one of the better paying sports, it would not be economical to have less than six.

The alleys will be eighty two feet long with an additional 15 feet for the run. Behind this will be several rows of seats for players and spectators.

An office is included with storage space for bowling shoes, balls, and equipment used in the maintenance of the alleys.

Foyers to the Gym and Pool

The first floor foyer will be inside the main entrances to the physical fitness wing and will be large enough to allow proper circulation for any capacity crowd that might attend a sporting event. It will be adjacent to the playing floor of the gym, and will have checking facilities, toilets, telephones, ticket booth, bulletin board, and drinking fountain. At the entrance to the locker room hall will be a control gate to control circulation.

At either end of the foyer will be stairs to the second floor and the entrances to the spectators' balcony in the gym and the spectators' seats in the pool room. There will be additional toilet facilities on the floor for spectators, and ticket and storage space.

Below these stairs will be the stairs to the basement foyer that serves the maintenance facilities and the billiards and bowling alleys. This floor also has toilet facilities.
Billiard Room

The billiard room will be placed in the basement of the physical fitness wing and will contain 10 pool tables, lockers for equipment, and a small office with soft drinks and candy. It is placed in the physical fitness wing, as this is felt to be too noisy a facility for the recreation wing. It will have emergency exit doors into the utility hall, and to the utility exit.
TABLE I
NUMBER OF FACILITIES NEEDED
BASED ON 30,000 POPULATION

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>NUMBER NEEDED</th>
<th>NUMBER EXISTING</th>
<th>NUMBER PROPOSED IN THERIS</th>
<th>NUMBER STILL NEEDED</th>
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<tbody>
<tr>
<td>Recreation Building</td>
<td>2</td>
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<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Gymnasiums</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Assembly Hall with Removable Seats</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Social Hall</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Auditorium</td>
<td>2</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Reading Room</td>
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<td>1</td>
<td>1</td>
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<td>Game Room</td>
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<td>1</td>
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<td>Craft Shops</td>
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<td>Indoor Pool</td>
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<td>Outdoor Pool</td>
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<td>Softball Field</td>
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<td>7</td>
<td>2</td>
<td>1</td>
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<td>Tennis Courts</td>
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<td>3</td>
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<td>Club Rooms</td>
<td>8</td>
<td>1</td>
<td>6</td>
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</table>
DESIGN OF BLUEFIELD RECREATION CENTER
Perspective of Bluefield Recreation Center
VI

MECHANICAL EQUIPMENT
MECHANICAL EQUIPMENT

In all cases local codes for heating, lighting, and ventilation of public meeting places will be followed.

Heating and Ventilation

The cultural wing will use a hot water system for heating, with recessed radiators. The physical activities wing will use a combination hot water and forced air.

The pool and the floor of the pool room will have hot water pipes imbedded in the concrete. Forced air will be used in the spectator section, but particular care will be taken to avoid drafts on the swimmers.

The gymnasium will have a thermostatically controlled forced air system to circulate the air. This system will also be used to ventilate the gymnasium in the summer.

The locker room equipment will include ducts from the lockers to withdraw unpleasant fumes.

Lighting

The natatorium will have even lighting obtained by the use of indirect lighting that gives no glare or dark spots. All lights will be vapor-proofed and will be accessible and serviceable. Lights will be in banks for control of lighting.

The gymnasium will combine direct and indirect lighting.
It will be recessed lighting in the ceiling and coved lighting on the arches. All lighting will be protected by guards and will furnish 15-25 foot-candles of light.

The assembly room will use direct lighting with dual controls, one at the stage and one at the entrance.

Filters for Pools

The equipment necessary for pressure systems are three filters, a heater to heat the water, sterilizers, motor and pump, a hair catcher, and chemical feeds.
VII

STRUCTURAL CONSIDERATIONS
STRUCTURAL CONSIDERATIONS

Recreation Buildings are subjected to intensive year around use and should be built of durable and lasting materials. Selection of materials and methods of construction were made with ease and economy of maintenance and construction in mind.

Building Framing

Reinforced concrete framing will be used in the Bathhouse and Recreation Building with the exception of the gymnasium and assembly hall. These units, due to their widths, will be spanned with steel trusses and arches. The arches in the gymnasium and the pool room will be placed 13 feet on centers.

Gymnasium

The walls of the gymnasium will be 14 inch cavity walls faced with yellow brick and backed with 8 inch glazed tile.

The ceiling will be an acoustically treated hung ceiling. The roof will be a sloping 20 year bonded 5 ply composition roofing with proper insulation between the ceiling and roof.

The floor will have a resilient playing surface, and will be surfaced with maple over a sub-floor and joists 16 inches on centers. There will be an air space of 2 feet or more,
and all members will be treated to resist moisture and termites.

Swimming Pool Room

The walls will be the same as those of the gymnasium but will be acoustically treated above the five foot level. The lower wall and deck of the pool will be of face tile.

The ceiling will be hung with an air space. The outside roof will be insulated, and the inside ceiling will be insulated with impermeable insulating material.

The large glass area will be wind-braced by means of fabricated structural steel frames.

Shower Rooms

Walls will be of glazed brick with a coved base meeting a non-slip floor material. The floor will have a slope of 3/8 of an inch per foot for draining.

Cultural Wing

The remainder of the building will have brick cavity walls, concrete slab floors covered with asphalt tile, and 20 year bonded 5 ply composite roofing. Steel framed windows will be used throughout.

Playground Surfacing

A survey of recreation playgrounds shows the use of a great variety of surfacing materials. These include grass,
sand, clay, cinders, gravel, crushed stone, concrete, asphalt and bituminous products.

An all-purpose playground should be firm, resilient, non-abrasive, smooth but not slippery, clean and durable. In addition it should drain well, be pleasant to look at, have an anti-glare color and texture, yet not a color that will hold the sun's heat. It should be reasonably priced and economical to maintain.

For football, baseball, lawn bowling and many children's games, turf is best used.

Asphalt will be used for handball, badminton, volleyball, deck tennis, and basketball, but it often gets hot underfoot.

Concrete will be used for surfacing around wading pools, some children's game areas, and some adult activities.

The tennis courts will be cork aggregate in a bituminous top course. The base course is asphaltic concrete. This type of surface may be colored easily.
CONCLUSIONS
CONCLUSIONS

While the present City Recreation Center served 2582 young people during the year 1948, it fell far short of fulfilling the needs and accepted standards for a city the size of Bluefield.

The addition of the new facilities presented in this thesis through the further development of the Recreation Center will sufficiently improve the recreation program to attract a greater number of youths from areas of the city where the environs are not so good. More of the underprivileged will thus be served, resulting in a further upgrading of moral and physical standards of future citizens and a commensurate reduction in juvenile delinquency.

The income from the nominal charges made for facilities such as the use of the pool, bowling alleys, billiard tables, etc., will help to make the project self-supporting to a great extent if not completely so. Keeping the charges low will stimulate the greatest possible participation in the use of the Recreation Center and at the same time keep it from becoming a burden on the taxpayers.

A Recreation Center such as outlined in this thesis will be a definite asset to the community. The program to surround the youth of the community with a wholesome environment will make Bluefield the choice of families desiring to
locate somewhere in southern West Virginia or southwestern Virginia. Real estate values will thus be enhanced, today's youth will be guided into becoming good citizens of the future, and Greater Bluefield, "Nature's Air-Conditioned City", will continue to be outstanding in southern West Virginia. These, and other advantages gained, make the Recreation Center a sound investment for the community for the present and for years to come.
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