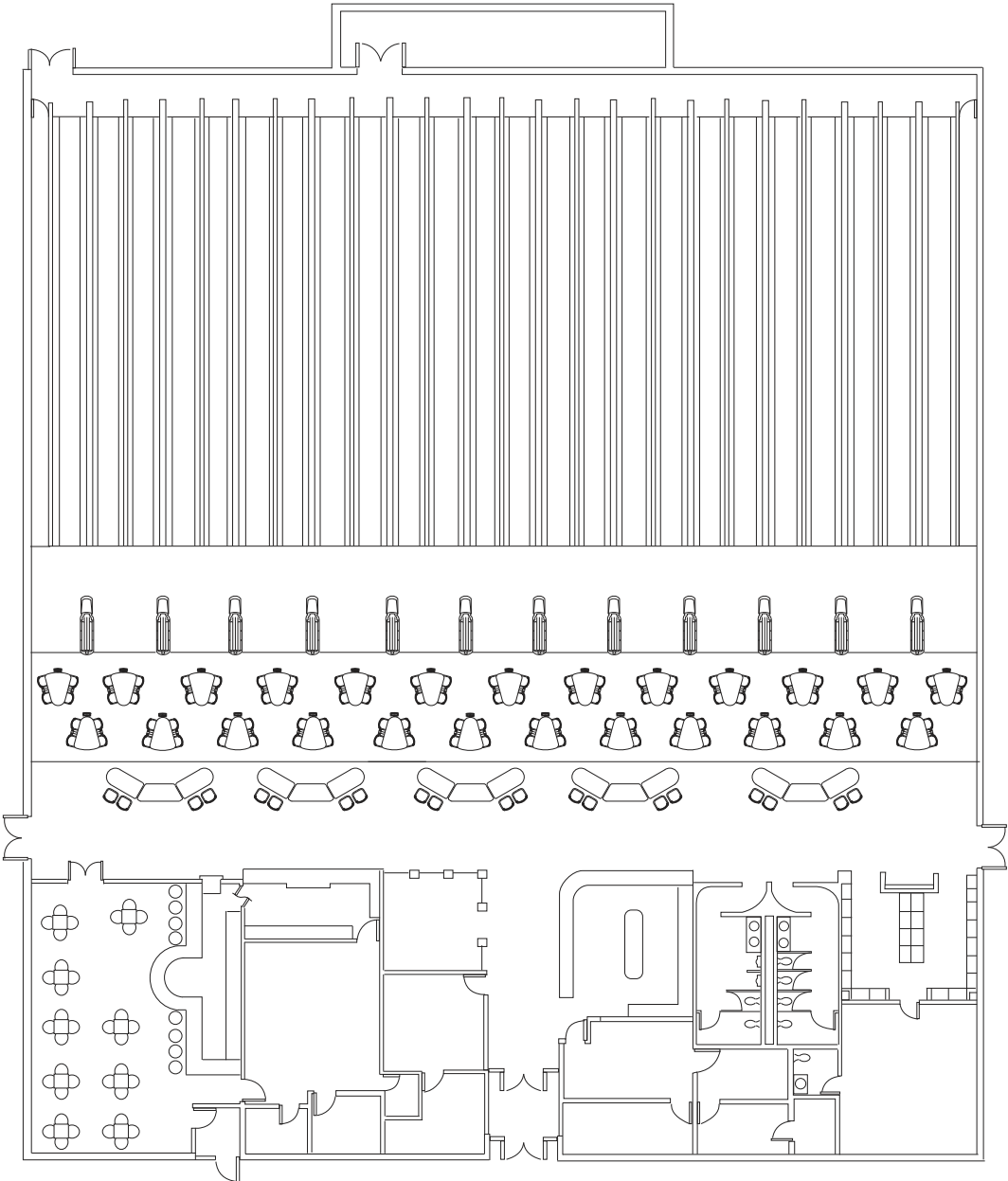


Section 1: Type of Business

BOWLING BUILDINGS. Almost any type of permanent building is adaptable to a bowling lane building if it is large enough and approved for such use under local building and public codes. Ideally, it should have a clear span in the bowling equipment area. Any type of construction should be considered in relation to the insurability of the structure and on the contents of the building. Check with your **insurance agent** before initiating construction plans.

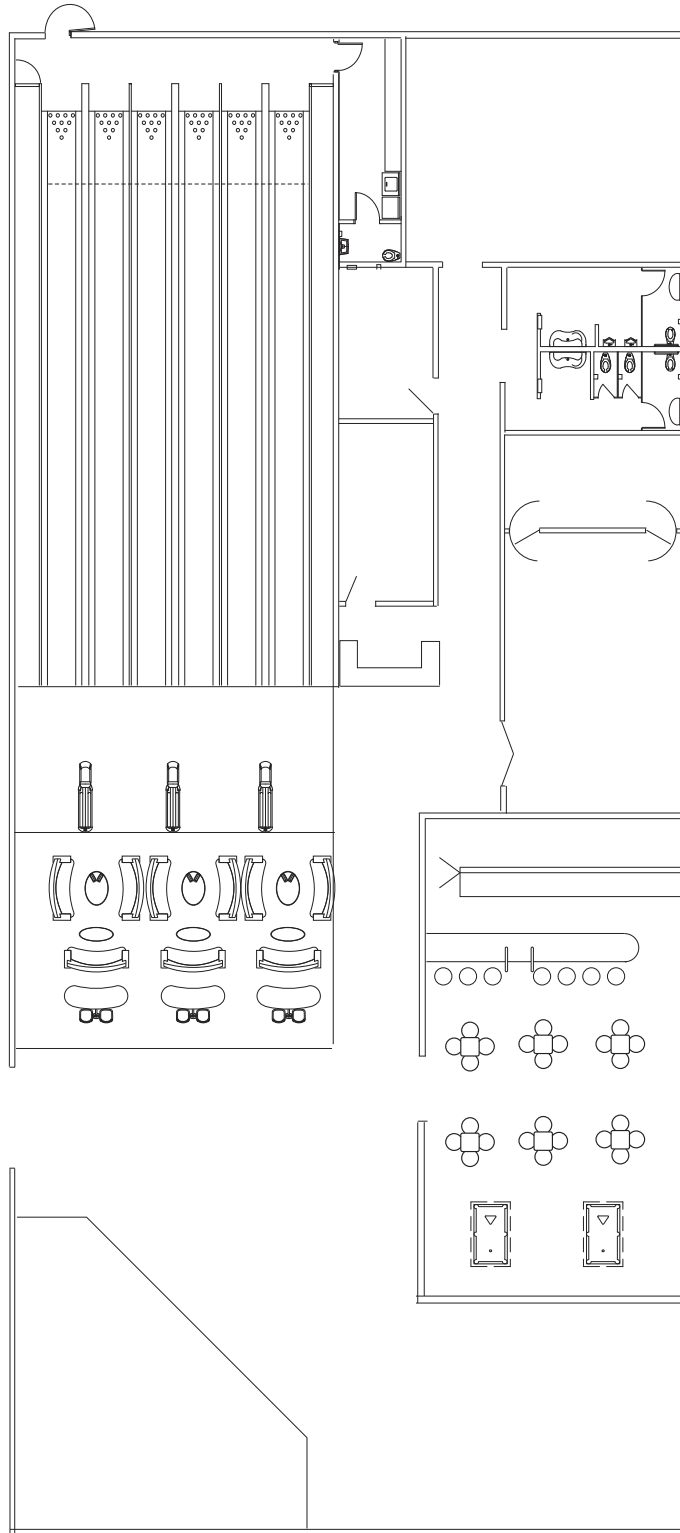
TRADITIONAL BOWLING CENTER

Traditional bowling centers are primarily focused on bowling and include a limited number of entertainment venues, typically featuring a game room and billiards area, pro shop and bar. Beverages play a strong role at traditional bowling centers and the food is usually limited to snack bar offerings.



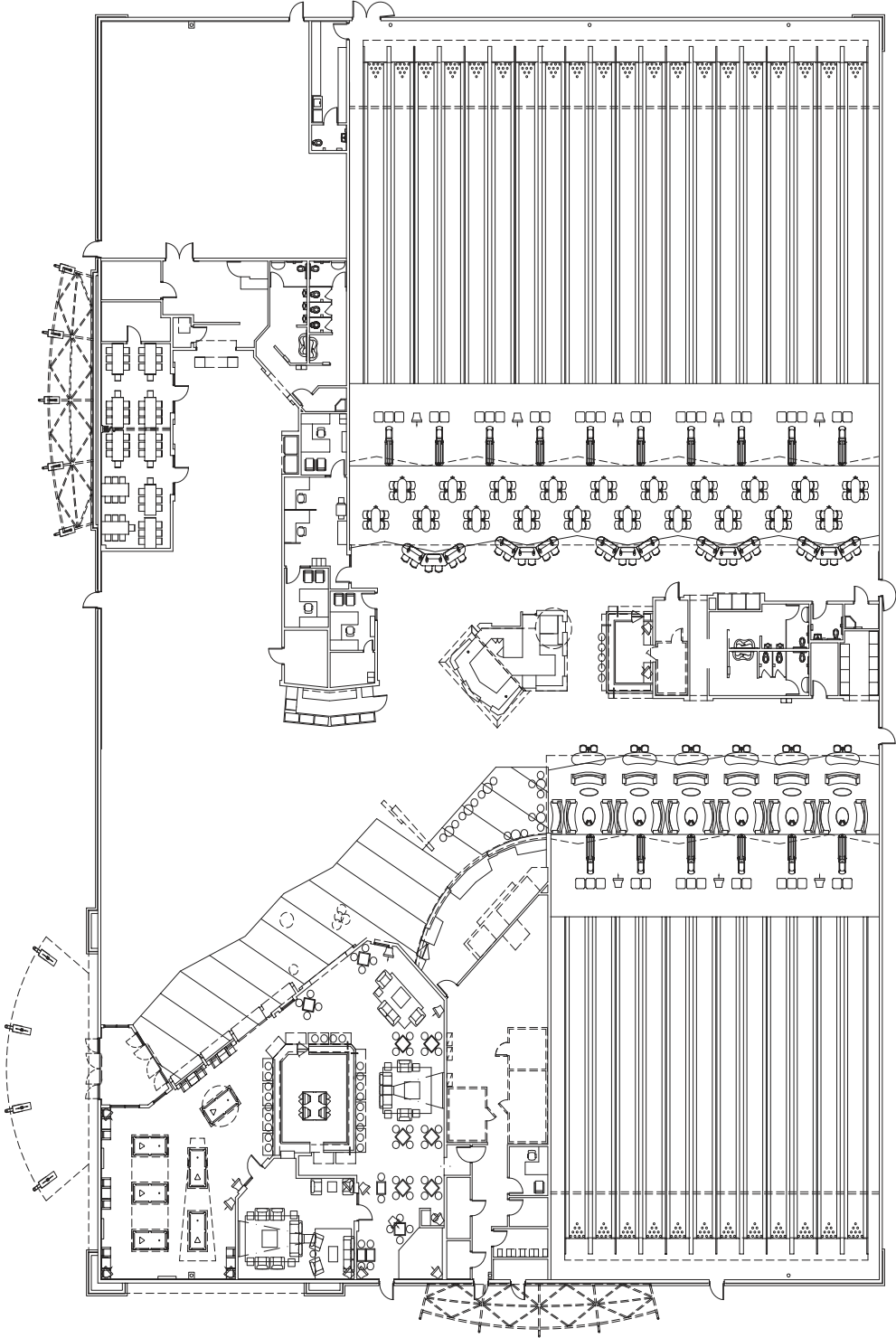
BOUTIQUE CENTER

Boutique centers are focused primarily on entertainment and socialization with full service, upscale food and beverage offerings. Bowling is the primary form of entertainment, but is a smaller component of the business and is set in a contemporary, social atmosphere. Boutique centers offer ancillary entertainment options such as live music, billiards, virtual/cyber gaming, and bocce as additional sources of revenue.



FAMILY ENTERTAINMENT CENTER

Family Entertainment Centers (FECs) are designed to provide entertainment in the form of bowling and various other venues. These venues may include arcades, laser tag, go carts, bumper cars and party rooms in addition to the venues found at traditional bowling centers. The food offerings at FECs is enhanced to match the atmosphere and beverage service plays a strong role. Typical options include snack bar, food court and branded concepts.



PROPERTY

Location

Locations containing restaurants, theaters, taverns, and other entertainment venues near residential areas are a good choice. Good visibility, easy access, and high traffic count all lend themselves to effective locations.

Zoning

Zoning can be a deciding factor in your bowling center location. Consider building expansion and additional services as well. Be aware of any ordinances that could affect your future plans

Property Size

Your desired center size (lane quantity) and supporting services will dictate the size of your property.

EXISTING BUILDING VERSUS NEW BUILDING CONSIDERATIONS

There may be existing structures that can be adapted to the needs of a bowling facility. Just be sure to consider the costs of bringing an existing building up to local regulations and compare those costs to new construction. For example, an existing building may require the following renovations: second floor facility elevator, handicap access, proper water pressure, proper sprinkler system, electrical power accommodating the building size, roof inspections for leaks and wear, HVAC operation, sufficient ceiling height, and sufficient spacing for lanes between post rows.

When designing a new building, the structure should have a clear span in the bowling equipment area and a ceiling height of at least 10' (3.05m). Bowling centers require specific heating, cooling, humidity, and electrical control systems. Discuss these requirements and their costs with the proper professionals before making your decision on an existing facility.

PROFIT OPPORTUNITIES CHECK LIST

- | | | | |
|--------------------------|------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Billiards | <input type="checkbox"/> | Rock Climbing Wall |
| <input type="checkbox"/> | Arcade/Game Room | <input type="checkbox"/> | Water Park |
| <input type="checkbox"/> | Laser Tag | <input type="checkbox"/> | Theater |
| <input type="checkbox"/> | Virtual Bowling | <input type="checkbox"/> | Restaurant/Cafe/ Snack Bar |
| <input type="checkbox"/> | Go Karts | <input type="checkbox"/> | Sports Bar/Night Club/Disco/Karaoke |
| <input type="checkbox"/> | Golf | <input type="checkbox"/> | Party Room |
| <input type="checkbox"/> | Tennis | <input type="checkbox"/> | Pro Shop |
| <input type="checkbox"/> | Volleyball | <input type="checkbox"/> | Nursery |
| <input type="checkbox"/> | Bumper Cars | <input type="checkbox"/> | Lockers |
| <input type="checkbox"/> | Skate Park | | |

Intentionally Blank

Section 2: Considerations

SITE PLANNING

Because a bowling center is a permanent building, its location on a parcel of property merits intensive study. The future long-range planning for the surrounding area, including zoning changes involving buildings, future road construction, or anything which could alter the present character of the property should be considered. Consider the following before buying land:

1. Zoning of land restricting commercial business or parking.
2. Nearby church or school building restricting the traffic or sale of alcoholic beverages.
3. Maximum future expansion.
4. Drainage requirements, location of sanitary and storm sewer lines, public utilities.
5. Maximum visibility of building from street, i.e., obstructing location of buildings, railroad overpasses, trees, signs, etc., in line of sight.
6. Observing local sound ordinances.
7. Sign location and local codes regarding size.
8. Availability of parking requirements for maximum number of lanes.
9. Distance from bulk of parking to entrance. (This often dictates location of lanes and layout of public area facilities, i.e., reception center, bar, etc., as they relate to traffic patterns within the building.)
10. Traffic flow restrictions to entrances and exits from property.
11. Certified test borings to determine if ground can support weight of a suitable building for bowling.

ACOUSTICS

All modern bowling centers are being designed with careful consideration given to acoustics.

Objectives

No sound is so inspiring as the triumphant shout of a bowler and no sound is so sweet to a bowler's ear as the *crash* of the pins when a strike is made. It is conceded that these noises give the necessary vitality to the game of bowling. However, in the interest of the bowler's comfort and to lessen the fatigue of employees, these noises must not be allowed to echo and reecho throughout the building.

It follows then that the principle goal is the rapid dissipation of noise itself. This conclusion indicates that special care must be taken to avoid "over-acousticizing" the lane area.

Generally, it appears the noise-reducing efficiency of most acoustic materials increases in direct proportion to the increased size of the space treated. This is due to lengthened reverberation time.

Acoustic Considerations

It may be necessary to hire an acoustical engineer when lanes are to be installed on a floor where the space below the lanes is to be occupied for any use that would be sensitive to sound, a careful study of the space should be made BEFORE the installation on the floor. The following facts are to be considered:

1. It is the responsibility of the building owner or the customer to provide a floor of the proper floor loading capacity to support the weight of the installation without undue vibration.
2. For acoustical treatment of the area below the bowling spaces, it should be remembered that solid mass prevents sound from penetrating through the floor.
3. There should be ample clearance between lanes and vertical structural members of the building to prevent transmission of noise through the building.
4. Pay particular attention to the location of pipes and ducts which will conduct noise unless they are properly isolated and insulated.
5. Take into consideration adjacent building areas that may be affected by sound, such as residential, restaurants, theaters and other such businesses.

Selection of Materials

Although they are not necessarily listed in order of their importance, the following considerations are offered to assist in the selection of finished ceiling materials.

1. The coefficient of noise reduction.
2. The flame resistant qualities of the materials as related to fire insurance and local ordinances governing places of public assembly.
3. The weight of the material and required method of erection as related to the structure of the roof or truss.
4. Ability to clean or refinish the material without impairing the acoustic quality of the material.
5. Ability to replace defective or damaged materials long after the original installation. Also, the ability to match the existing material at a later date if the lanes are expanded.
6. Resistance to vermin, fungus, mold, and dust.
7. Light reflecting ability.
8. Resistance to fallout over the lanes and machines.

Noise Reduction Coefficients

The general rule of thumb is for a noise reduction coefficient (NRC) of .70 to .85 in the pinsetter area and a NRC of .50 to .65 for the balance of the lane area. Hearing protection equipment is required in the pinsetter area. The bar and cocktail lounge is generally based on a NRC of .65 to .75.

Frequencies

The noise reduction coefficients of varying acoustical materials can be arrived at by considering 125 cycles as being the frequency for rolling bowling balls, 250 cycles for the frequency of human voices, and 500 cycles for the frequency of the pinsetter area, including machine noise and pin clatter. It is obvious, of course, that these evaluations are only approximated since noise often reaches across 2 or 3 frequencies for a brief moment.

Correlated Ceiling Plan

It is strongly recommended the architect prepare a study of the reflected ceiling plan of the lanes to correlate the location of light units, air conditioning grills or anemostats as well as communication systems, loud speakers, and curtain walls at the masking units.

HEATING AND VENTILATION CONSIDERATIONS

Costs of Air Handling

The selection of heating and air conditioning systems should be made in light of the three costs of each system. They are as follows:

Original Cost

The initial costs of equipment and installation involves supply and dispersal wells, machinery, controls, duct work, insulation, and installation. It also involves the cost of checking and balancing the entire system under load conditions so it functions as it was designed. Also, add the cost of any special structural requirements needed to accommodate the system.

Operating Cost

Operating costs involve fuel and power costs, water charges, licenses, or fees. Also consider the cost of chemicals, filter, etc., which would be required in the normal operation of the system. Some systems in some localities require the services of an operating engineer. Proper design of the system can frequently reduce operating cost.

Cost of Maintenance and Repairs

Cost of maintenance and repairs compute the labor and material charges to perform regular recommended maintenance procedures set forth by the manufacturer's guarantee or warranty. Consider the cost of labor and materials, and the availability of such materials at a later date, necessary to replace working parts of the system. Avoid selecting units containing nonstandard motors, controls, or compressors which cannot be replaced from stock or on short notice. Automatic dampers, etc., must be able to be operated manually for short times in the event of a failure of a control component.

Zoning

The engineer surveying the requirements for the system may decide to employ a zoned system since the activities in different parts of the building may vary from very heavy activity with heavy smoke load to light activity with light smoke load. Therefore, while there is a definite need for air change, the requirements for heating and cooling may not exist.

He must also anticipate sizeable shifts in occupancy within short periods of time during the day. For this