Sample Planning Package

AV and Low-Voltage Project Narrative and Budget Range

Restaurant, brewery and bowling venue, Middle Tennessee

Prepared by Black Box AVS

This is a real Planning Package we prepared for an architect. The client, architect and location details have been removed.

1. Project overview

The owner is building a new restaurant with a brewery and bowling, about 4,800 SF, with a dining room, a bar, four bowling lanes, a booth concourse along the lanes, a kitchen and an outdoor patio. The building goes up as a shell first, with the tenant finish work after it.

The AV and low-voltage systems have three jobs here. They set the mood in every room, they keep the bowling side feeling like an event, and they give the staff one simple way to run all of it. Because the owner is planning more locations, the design should also work as a standard that carries to the next building with as little rework as possible.

We understand the owner's existing location is the reference for the experience they want.

2. Design intent

Music should feel even and comfortable in the dining room, a little more energetic at the bar, and fuller in the bowling room, where the lanes are the loudest part of the building. Each area gets its own volume, so the staff can turn the bar up for a game without turning up dining.

The TVs are for entertainment. Staff can put any game or channel, or the restaurant's own content, on any screen from a tablet, without walking to a closet or hunting for a remote.

The lanes get show lighting for atmosphere rather than a theatrical system. A normal look for regular bowling, a glow-bowling look, and a party look are all recalled from the same tablet.

Behind the scenes, the building gets a business network that keeps the POS separate from guest Wi-Fi, Wi-Fi coverage planned room by room from the floor plan, and security cameras with recording on site.

3. High-level system approach

Audio. Pendant speakers hang from the exposed structure in the dining room, bar, lanes and booth concourse, with subwoofers at the bar and the lanes. In-ceiling speakers cover the kitchen and restrooms, and weather-rated speakers cover the patio. A central processor handles the zones, music sources and paging.

Microphones and inputs. A wireless handheld mic covers announcements and birthday parties, with its antennas placed out in the room so it works anywhere on the floor. A DJ input at the bar and a paging mic at the pick-up counter round it out.

Video. Entertainment TVs go in eight locations, each fed by a video distribution system so any source can reach any screen. A central signage player runs the restaurant's own content.

Show lighting. LED wash and effect fixtures hang over the lanes from a support grid under the roof structure, controlled by a lighting processor that stores the looks.

Control. A staff tablet and a wall panel at the bar control music, volume, paging, TV sources and lighting looks.

Security. Cameras cover the entrances, the registers, the bar, the dining room, the lanes, the kitchen and the office, with 30 days of recording on site.

Network and Wi-Fi. A business-class router and switches carry the POS, the guest and staff Wi-Fi, the cameras and the AV systems on separate networks. Access points are placed from a coverage plan for the dining room, bar, lanes, kitchen and patio.

Cabling and the equipment rack. We'd furnish the low-voltage cabling and the equipment rack in the back office, and we'd give the electrical engineer the circuit and cooling requirements for that room.

4. How it works day to day

At open, a manager picks the music and the TV lineup from the tablet. Dining, the bar and the lanes each come up at their own level, and the kitchen and restrooms follow the house music quietly.

During a game night, the bar TVs go to the game and the bar volume comes up, while dining stays where it was.

When an order is ready, the counter staff press the paging mic and the announcement plays through the house, with the music dipping under it.

For a birthday party on the lanes, a staff member switches the lanes to the party look, hands the host the wireless mic, and puts the party's own content on the lane TVs.

If the owner books a DJ, the DJ plugs into the input at the bar and plays through the whole system, with the staff still controlling the volume by area.

5. Coordination list

These are the items that need to land on the drawings, grouped by who carries them. They're the items that usually turn into RFIs or change orders when AV gets designed late.

Architect

- The equipment rack goes in the back office. That room needs space for the rack with working clearance front and back.
- We'll give you a mounting height and a blocking zone for each of the eight TV locations once the TV sizes are set. Any TV that faces a window should be confirmed before then.
- Speaker types follow the ceilings, so we need finished heights by area and the kitchen and restroom ceiling types.
- Whether the patio is covered decides how the patio speakers and TV are mounted.

- The bowling lane package should be coordinated with us, so scoring displays, lane audio and lane lighting don't get bought twice.

Structural engineer

- The lane lighting support grid hangs under the roof structure. We'll provide the loads and attachment points.
- The hung TVs and the subwoofers need an attachment method the structural engineer approves.
- If the building is leased, the lease may limit what can be attached to the structure.

Electrical engineer and contractor

- The rack room needs at least two dedicated 20 amp circuits.
- Every TV location, wall panel, camera and access point needs a box and pathway. Conduit, boxes, sleeves and firestopping belong to the electrical contractor. We'll provide the device callouts.
- The neon signs need power only.
- Tell us when the electrical contractor needs our device callouts, and we'll work back from that date.

Mechanical engineer

- The rack room needs its own cooling. We'll provide the heat load.

Owner's vendors

- We need the POS vendor's cabling and network requirements for each terminal and printer.
- The internet provider's equipment should land at the rack, so we need to know where service enters the building.
- Wi-Fi access point locations get confirmed with a survey once the building is closed in.

6. Items pending confirmation

These are owner decisions. We've made reasonable assumptions for the budget and listed them here.

- How many locations the standard needs to cover, over what timeframe, and how much the buildings will differ.
- The owner's intent for music, paging and the show lighting looks, which we've assumed from the concept rather than heard from the owner.
- The security level the owner actually wants, since cameras entered scope on your read rather than an owner request.
- The music streaming service, which decides the player.
- Whether "end of the year" is the TI start or the opening.

7. Next steps

If this narrative matches what you and the owner have in mind, the budget range in section 8 is the number to plan against at this stage. After that, the next step is a short call to settle how much design the owner needs from us, and to work through the coordination list in section 5 with your consultants.

8. Budget range

This range is an installed budget, equipment plus labor, at schematic design. It's built from room-by-room quantities rather than a cost per square foot, and it's accurate to plus or minus 20 to 25%. Final pricing needs a complete design and a competitive bid.

System, installed	Budget Low	Budget High
Music, paging and microphones	$63,000	$90,000
TVs, video distribution and signage	$47,000	$63,000
Show lighting over the lanes	$22,000	$30,000
Network, Wi-Fi, cameras, cabling and rack	$75,000	$80,000
Total installed budget	**$207,000**	**$263,000**

Each line includes its equipment, installation, programming and commissioning.

The low end uses commercial-grade speakers, HD video and standard show fixtures. The high end moves to architectural pendant speakers and larger subwoofers, bigger lane TVs, 4K video, more lighting effects over the lanes, a second music stream for the lanes, and higher-resolution cameras. Both are full commercial installs covering the same rooms.

What the range includes

- The lane lighting support grid is included. We'll give the structural engineer the loads and points, and if they require a different attachment that line gets repriced.
- The rack room needs at least two dedicated 20 amp circuits and its own cooling, which we'll provide to the electrical and mechanical engineers.
- Wi-Fi access point locations get confirmed with a survey once the building is closed in.

What the range doesn't include

- System design, which is priced separately once the depth is settled.
- Acoustic treatment, which is priced separately.
- POS hardware and the POS vendor's equipment.
- The bowling lane package, including scoring and lane displays.
- The neon signs, which need power only, by the electrician.
- Internet service, the provider's modem, the phone system and handsets.
- TV and streaming boxes, and all monthly service, including music licensing.
- Conduit, boxes, sleeves and firestopping, which belong to the electrical contractor.
- Structural engineering.
- The staff tablet.

This document is for planning purposes. It's not a proposal or a contract.