

**INTERPRETATION IC 90.1-2007-13 OF
ANSI/ASHRAE/IESNA STANDARD 90.1-2007
Energy Standard for Buildings Except Low-Rise Residential Buildings**

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IESNA Standard 90.1-2007, Sections 9.5 and 9.6, Tables 9.5.1 and 9.6.1, regarding Baseline Lighting Power Density in Retail Banks.

Background: This request for official interpretation is to determine the proper lighting power density for a retail bank using the “Building Area Method of Calculating Interior Lighting Power Allowance” referenced in section 9.5.1. Further, it is to determine the applicability of the “Additional Interior Lighting Power Allowance” referenced in section 9.6.2 in a retail bank when using the “Space-by-Space Method of Calculating Interior Lighting Power Allowance”.

ASHRAE/IESNA 90.1-2007 does not provide a specific “Building Area Type” (Table 9.5.1) for a retail banks.

The primary purpose of a modern retail bank is to sell services such as loans, credit cards, and safety deposit box rental directly to customers (a mercantile function) while conducting financial transactions with customers. In this retail atmosphere, all interactions between bank employees and customers are structured to allow the retail bank to sell value-added products and services to the customers, from the initial greeting upon entering the bank to the final interaction with a bank employee.

In attempting to sell banking services, a retail bank uses retail display lighting “specifically designed and directed to highlight merchandise” to highlight advertising for certain retail and banking products. The lighting used here is similar to that which is used in a general store. For instance, illuminated signage may indicate a sale that is currently available on an automobile loan in partnership with an automobile dealer. In agreeing to a loan within the aforementioned example, a customer is agreeing to the purchase of merchandise (in this case, an automobile). Numerous similar examples exist in any given retail bank.

Further, retail banks frequently include display windows that are illuminated solely to highlight advertising for banking products and services, analogous to those used in many clothing stores. These display windows may or may not be enclosed with ceiling height partitions. Finally, banks often include indoor vending machines that sell coin counting services and indoor ATMs that also require display lighting to highlight their available services (indoor ATMs also are frequently required by code to maintain certain illuminance levels).

While there is typically limited office space within a retail bank (such as a room used for settling transactions in the back of the bank), this space is limited and would appear to meet the intent of the following quote from the ASHRAE 90.1-2007 User’s Manual – page 9-13: “Office space is common to just about all the building types listed in Table 9.5.1, but this supplemental space was accounted for when the power allowances for the building types were developed.”

Interpretation No.1: Retail banks are not specifically listed in Table 9.5.1. As such, Section 9.5.1.a applies: “For building area types not listed, selection of a reasonably equivalent type shall be permitted”. Given the aforementioned goal of selling banking products and services to customers, the need to display lighting to highlight available products and services, and the ability of customers to directly purchase products and services without leaving the building, a retail bank constitutes “Retail” occupancy under ASHRAE 90.1-2007.

Question No.1: Is this interpretation correct?

Answer No.1: No.

Comments: The intended rationale for “...selection of a reasonable equivalent type...” is to be based on how a space is lighted to meet the space needs. A typical bank environment, (based on the ratio of office area to retail function area) however, is commonly designed just like a typical office because most task activity is similar to a typical office (reading, writing, filing, computer use, etc.). If the retail function area is significant, then the space-by-space method may be used instead.

Interpretation No.2: If using the “Space-by-Space Method of Calculating Interior Lighting Power Allowance”, a retail bank is further eligible for an Additional Interior Lighting Power Allowance under Section 9.6.2 for general lighting used for “highlighting art and exhibits” (if applicable art and exhibits are displayed within that particular retail bank) and/or “For lighting equipment installed in sales areas and specifically designed and directed to highlight merchandise”. The additional allowance for lighting “specifically designed and directed to highlight merchandise” would be calculated using Retail Area 1, as referenced in Section 9.6.2.b.

Question No.2: Is this interpretation correct?

Answer No.2: Yes, if the “art and exhibits” and/or “merchandise” are present.

Comments: Art and similar objects may receive additional allowance based on 9.6.2(a) while display lighting on ‘merchandise’ may receive additional allowance under 9.6.2(b).