
The Art Of Preparation Room Design

BY DUNCAN STUART TODD AND MARJORI TODD

Funeral home owners and directors face a challenge when it comes to building a new facility or renovating an existing structure. The challenge is how to incorporate the preparation room into the total project in a manner that is OSHA compliant, efficient and aesthetically pleasing. Fortunately, there are guidelines that predict a successful outcome.

First of all, OSHA criteria must be satisfied. After that, the preparation room must function within the entire operation, provide a comfortable work environment for the embalmer and make good business sense. All of these considerations meld into a need for proper ventilation, followed by other health and life safety considerations, environmental factors and ergonomic feasibility.

How does the funeral home operator assure that these requirements are

met, whether they are building a complete new funeral home or updating an existing one?

The solution is in the art of the design. There is more involved than installing some equipment and hoping that everything turns out all right.

Time and again it has been proven that professional design service can save costly and time-consuming errors. A testimonial to this wisdom comes from Rob Moore of Moore Funeral Home in Brazil, Ind. "We spent weeks trying to find plumbers, HVAC and construction personnel who could construct our new prep room to meet our needs and all OSHA regulations. One call to a preparation room specialist led us to a perfect prep room that we knew was built right from the start."

An advantage of working with a design professional, much appreciated by the funeral home owner and contractor alike, is the probability that construction will go smoothly,

often saving time, money and costly errors. We know that in most communities, the local building trades do not have the opportunity to gain experience in the specialized needs of the funeral industry as they are seldom called upon to do more than one project of this type. For instance, while a plumber is familiar with how to install a bathroom, he is usually less familiar with embalming room equipment, codes and construction techniques.

With a well-documented layout in hand, the various trades can perform their services more efficiently, and life becomes easier for everyone involved.

What should the funeral director expect from an integrated design?

Besides a dimensional room plan, a good design will include drawings and specifications to meet OSHA criteria and building codes, including the HVAC system, a ducting plan, plumbing and electrical plans, an elevation showing the foot end and a schedule of required safety equipment.

Air quality is, without a doubt, the highest priority in the building of a preparation room. For safety and comfort, the ventilation system must heat, cool, minimize exposure to contaminated elements, and prevent contaminated air from invading other parts of the funeral home. Adherence to OSHA standards will protect employees and all others from the effects of formaldehyde which range from irritation of the upper respiratory tract to skin irritation and difficulty in breathing depending on the level of concentration. In cases of overexposure, the possibility exists for respiratory cancer and even death.



P R E P A R A T I O N A R T S

OSHA Standard 1910-1048 states:

Permissible Exposure Limit

The employer shall assure that no employee is exposed to an airborne concentration of formaldehyde which exceeds 0.75 parts formaldehyde per million parts of air an eight-hour time-weighted average.

The employer shall assure that no employee is exposed to an airborne concentration of formaldehyde which exceeds two parts formaldehyde per million parts of air as a 15-minute short-term exposure.

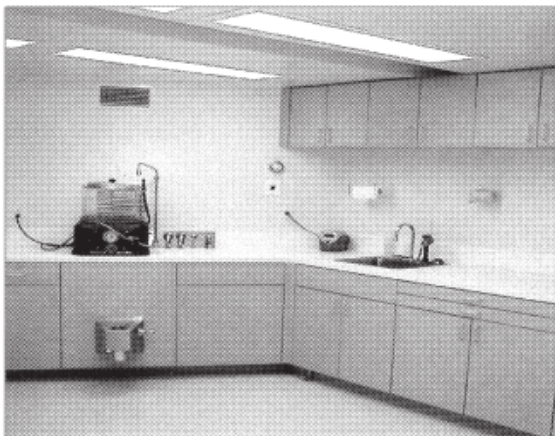
J. Stuart Todd, a funeral home architect, developed an energy efficient Heating, Ventilating and Air Conditioning (HVAC) system to meet the standard cited above and which has become an industry model. Building a full-sized preparation room to test and learn what was needed to comply with OSHA in an economical manner, he found that a specially designed heat recovery system met his criteria not only for OSHA requirements but also for an economical life cycle cost. The result was a system that requires only 1/6 as much cooling and heating capacity as does a traditional air conditioning and heating unit to maintain a comfortable work environment.

Regardless of the air system selected, the design should include critical consideration of the shape of the room and the location of the supply and exhaust registers, all of which contribute to the efficient removal of various weighted toxic gases.

Having formulated a plan to provide the desired air quality, the funeral director can turn attention to another paramount concern, that of protecting the embalmer from other sources of contamination in the work environment. A safe workplace for the embalmer would be one in which measures have been taken to reduce exposure to toxins, with safety equipment at hand for emergencies.

Modern and efficient tools for the foot end processes in the preparation room are aspirators, waste receptacles and table water devices. These items, too, have OSHA, cross-contamination and building code criteria.

Water control units that offer hydro-aspirators, machine fill and water to the table are among recently developed and market tested products for use by the embalmer.



They provide functionality but have special requirements for operation. For example, a steady supply of high water pressure and volume is needed to hydro-aspirate a body properly. As water pressure from the street can drop significantly going through pipes and backflow devices before reaching the aspirator, precautions must be taken to ensure the proper supply pressure.

Experienced embalmers can attest to emergencies caused by a sudden drop in water pressure, which in marginal pressure situations, can be caused by a toilet flush on the premises. In addition, safety from cross-contamination of the water from the prep room to the rest of the building demands attention that a preparation room specialist is qualified to furnish.

Several methods of collecting table waste are available although local codes may eliminate some of them. While most systems connect to public waste facilities, some funeral homes are on septic systems. As septic systems require special handling, contractors should always consult with local regulatory agencies.

Emergencies occur in the preparation room, just as they do in all other workplaces. To deal with emergency situations, the prep room should be equipped with an eyewash and ceiling shower. Again, these are code requirements meant for the safety and benefit of the embalmer.

A well thought out design plan will demonstrate an ergonomic awareness of the embalmers tasks so that he/she will be able to work with a minimum of movement at the table.

A design plan also minimizes cross-contamination and facilitates easy clean up. As sinks are a contamination issue, separate sinks for hands and instruments should be provided.

A source of contamination exists when hands are used at the sink to turn water on and off. Ideally, the prep

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room would be equipped with hands-free sinks that are operated with foot pedals, thereby eliminating one more possibility for exposure.

Protection for the embalmer and other employees is not a finished task until cleanup is accomplished. A seamless floor with integral base can be easily maintained and cleaned. An experienced planner will specify proper locations for floor drains and take care to slope the floor appropriately.

We suggest room designs without outside windows to provide privacy from the public and to allow for a more efficient use of interior wall space. Much of the work in the preparation room must be accomplished after dark and therefore the natural light provided by windows becomes less important. And, keeping the room void of window openings helps ensure that OSHA systems operate properly and that the room is secure, another code requirement.

Cabinetry in a well-finished room is detailed with finishes that are moisture and stain resistant. Ideally it is designed to accommodate instru-

ments, specialty equipment and supplies. In addition, cabinetry can be designed to house containers for soiled linen and hazardous waste. Custom cabinetry also offers the opportunity to introduce color into the room, which often helps create a calm atmosphere.

An organized workspace improves cleanliness, efficiency and lessens the stress level. Coordinated custom accessories, such as recessed trocar wells, glove holders, suture reel holders and similar products can help arrange the various implements the embalmer uses and at the same time keep the countertop from becoming cluttered.

Among the more "fine tuned" considerations which take the design to an even more artful level, is whether the embalmer is right or left handed, how cases are loaded in and out, access to lifts and coolers, relationship to dressing rooms and access to toilet facilities that are separate from those of the public.

Although the preparation room itself is the focal point of a plan, atten-

tion to related areas enhances the overall success of the design. It is advisable to remove the dressing room functions from the prep room. A separate dressing room reduces the staff's overall exposure to toxins and diseases. An added benefit is that hairdressers and other non-facility related personnel need not enter the restricted embalming room area to perform their services. As well, a separate dressing room doesn't require the expense of providing OSHA compliant air.

Provision should be made for the embalmer to access toilet facilities without having to walk through public areas. An ideal situation for the embalmer is an adjoining toilet/locker room that allows him/her to enter, remove contaminated clothing and put it directly into a washing machine, shower and change into street wear without having to re-enter the embalming room.

When the owner and/or funeral director properly take into account the considerations presented here and work with people and designers who understand their needs, the result will be a safe, efficient, economical and pleasing environment that will contribute to the overall profitability of the organization. That is success for everyone. And that is the art in preparation room design.

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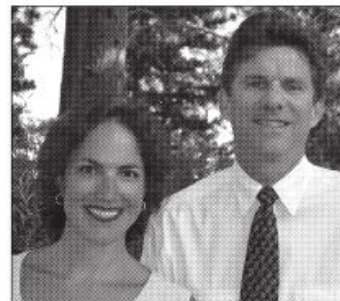
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