

interview by ICCFA

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ICCFA Magazine subject spotlight

■ **Duncan Todd, AIA**, is vice president of Duncan Stuart Todd Ltd., Incline Village, Nevada. He has designed more than 100 preparation rooms.

► He received his bachelor's degree in architecture from the University of Texas at Arlington, and is a member of the American Institute of Architects. He is president of T-Squared Architecture, with more than 30 years of experience in architectural design, including funeral home design.

■ **Marjori Todd** is president of Duncan Stuart Todd Ltd. She had more than 14 years of engineering experience before joining DST.

► She received a bachelor of science degree from Evergreen College, Olympia, Washington.

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► DST was founded by J. Stuart Todd in 1993. His son and daughter-in-law, Duncan and Marjori Todd, took over the company in 1999.

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Large or small, urban or rural, modern or traditional, funeral homes all need a prep room, a place where the embalmer's art takes place, where human remains are prepared for viewing by the family. What are the most important elements of a modern prep room?

The art and science of designing a modern preparation room

Many funeral homes have open houses and other functions to which the public is invited, but how often does the tour include the prep room? Maybe the funeral director figures people really don't want to hear about embalming. Or maybe the prep room doesn't live up to the look of the lobby, chapel, visitation room, reception area and merchandise room.

Funeral educator and speaker Todd Van Beck encourages funeral homes to bring the public into the prep room and showcase the science and art of embalming. Would you feel good about showing a family your prep room?

How about showing it to an OSHA inspector? You don't get a choice in that case, but some funeral homes aren't prepared for a visit from OSHA, either.

ICCFA Magazine talked to Duncan and Marjori Todd of Duncan Stuart Todd Ltd., who specialize in prep room design, about what's involved in a state-of-the-art prep room, what often gets overlooked and how things are changing.

When funeral directors or embalmers are talking about designing a prep room, what do they tend to be the most concerned about?

Duncan: Budget, cost. I'm not being facetious, they are very concerned about cost.

But the costs are fairly set—you have to have a certain array of items. It's like in your kitchen at home, where you have to have a stove, a dishwasher, a sink and a refrigerator. There's not a whole lot of variance in the costs.

Once we get past the cost issue, what they're really most concerned about is getting expert advice. There are a lot of multigenerational companies that have been passed down many years and have prep

rooms that go back to the '30s, '40s, '50s and '60s. Back then there weren't any set rules, and probably there was no such thing as "prep room design." You just kind of did what you needed to do.

Since then, funeral directors have become more aware of the fact that there really is a science to prep room design, and most of them don't have an extensive background in that rather new science. That's a longwinded way of saying they're looking for expert advice. Probably their number one concern is air quality, because that's OSHA's biggest concern.

Marjori: And there are all kinds of code requirements associated with the prep room. So you've got code requirements, ergonomics, the way the prep room interfaces with the rest of the facility to think about. A funeral director already has to know a million things, and this is one very complicated and specific thing they don't have experience with day-to-day, so having expert advice really helps.

When you say code requirements, are you talking about things such as the material safety data sheets?

Marjori: And safety equipment. They have to have a certain complement of safety equipment, such as eye washes, some kind of an emergency shower system. Those are OSHA-mandated as well, but some codes are not very clear. The ventilation standards are not very clear. The way OSHA specifies air quality is in terms of exposure level as parts per million, and that doesn't translate to "I need this kind of air system."

When you talk about interfacing with the rest of the building, do you mean in terms of how people bring bodies in and take them out?

Marjori: Yes.

Duncan: There's an operational flow



A prep room designed by DST.

to every room in a building. In some of the older, circa 1900 funeral homes—which were really just modified residential homes—some of the operational flows are very awkward, and you can't necessarily get from point A to point B easily.

In new facilities, the prime architect, the person designing the entire building, has a responsibility to consider that operational work flow and properly locate the prep room. We do get involved in that decision, acting as a consultant to the prime architect or to the funeral director.

In that role, we often receive a floor plan of the entire facility. It's not unusual for us to see a prep room situated in perhaps not the most efficient location or configuration. So in those instances, we advise the owner regarding the overall plan. If the prep room can't be accessed from point A or point B, we certainly point that out.

I asked you what funeral directors and embalmers are most concerned about in prep room design. What do you think their top concerns should be?

Duncan: Number one should be the health and safety of their workers. Ergonomics. A pleasant work environment.

There's also a critical business aspect to the design of a preparation room in terms of proper physical size in relation to case load, and in relation to the entire building. It's like if you're building a new home: every square foot costs you money. So maybe you'd like to have a six-car garage, but that's not going to work, because you're going to have to pay for it.

The size of that preparation room is going to have a direct impact on your building budget. If it's too large, you're wasting space that maybe could be better used in the chapel or visitation area. If it's too small, you're going to have operational problems, because it might be hard for the embalmers to do a good job in a cramped space.

Is it possible to do phasing with prep rooms, the way cemeteries do sometimes with building projects when budget is a concern?

Duncan: We very often do that. The number of embalming stations is based on the annual estimated case load, and fairly often we have clients who have projected an increase in the future. This is particularly true of newer facilities just getting into a marketplace.

Let's say you're doing 150 cases a year, which calls for a single station within a preparation room, but your five-year business plan says you're going to double that to 300. There is some phasing we can do.

Marjori: Not a huge amount, but some, which is helpful.

Duncan: You do have to allocate the space, but you don't have to include all the equipment for the future station. So we rough in the plumbing and prepare everything so that the day you decide to expand to a second completely operational embalming station, it's ready once you bring in the equipment. That can save some money on the initial building.

Marjori: These days there are projections of increased deaths as the baby

boomers age, so companies are considering those projections.

But are people preparing for bigger embalming caseloads or are they afraid that with the rise in cremation there will be less embalming?

Duncan: I think it varies by region. Particularly on the West Coast, those cremation numbers are high, while they're lower in the traditional South. If someone tells us they're doing 300 cases a year, that calls for a double prep room. But our next question is what percentage of that is cremation, because that number can drop you down to a single station.

Marjori: On the other hand, there are plenty of cases where the deceased is embalmed before cremation.

Duncan: Where there's visitation prior to cremation.

Marjori: So even though the cremation rates are higher, it doesn't necessarily negate the use of embalming.

Duncan: Most states require a funeral home to have a functioning embalming room whether you use it or not. It's part of licensing. In some states, even if you have multiple locations, you have to have an embalming room in every location. So those are also all design issues.

If you're in a state that requires a functioning embalming room in all six of your locations but you do all your embalming in one, then your approach to designing the one where the work is actually going to be done is going to be very different from your approach to designing the other five.

Are you finding that more people who own multiple funeral homes close together want to do all their embalming in one location?

Duncan: If they have the choice, yes.

Marjori: That's been happening for years; it's pretty standard.

Duncan: If you're just going to have one embalmer, you don't want him or her running all over from one location to another. If it works geographically and the law will allow it, more often than not they are going to do almost all of their embalming in one facility. In those cases, they may do a two- or three-station embalming room in their main facility.

Is the storage facility for the bodies designed as part of the embalming room?

Marjori: It could be. Often, if we don't actually allocate space for coolers or

We talk to people who say they have 10 to 12 cases waiting in various stages, and it takes a lot of room to accommodate that—both cooler and non-cooler space.

Whereas we have other clients whose practice is basically in and out, one deceased at a time, and they don't have a cooler, at all. —Duncan Todd

dressing rooms and bathrooms that service the embalming room, we offer our expertise and guidance. We basically try to accommodate our clients' needs, share our expertise with them. Because once it's constructed, the building is very unlikely to change.

Duncan: The question about whether to include coolers in the embalming room is part of what we call programming. We ask our clients about coolers specifically. People put them in the garage, the dressing room, the prep room. There are pros and cons to each location, and the coolers may not wind up in the prep room.

It's an operational issue. Who needs access to the coolers, when? What location best serves that individual funeral home's way of doing business?

And, of course, if you have a large cremation caseload, that will affect where you put the cooler. In that case, it probably won't be in the embalming room.

Marjori: If you have a relatively large business and a high cremation rate, you might want a walk-in cooler instead of just a prefabricated one. That's another factor that goes into determining where you locate it.

Duncan: We talk to people who say they have 10 to 12 cases waiting in various stages, and it takes a lot of room to accommodate that—both cooler and non-cooler space. Whereas we have other clients whose practice is basically in and out, one deceased at a time, and they don't have a cooler at all.

I realize this is just starting, but there's been a lot of talk about "green" services, green embalming, non-toxic chemicals. Would that have any impact on how you would design the prep room, or is it simply a matter of stocking different products?

Duncan: If you were 100 percent green, presumably some of the OSHA requirements would go away, but we don't really know at this point.

Marjori: The reality is there are chemicals other than formaldehyde-based embalming fluids that are toxic. There's more than one potential health and safety

issue in the preparation room. And you have to remember that some of the bodies that embalmers are working with are diseased, and there are precautionary steps that need to be taken. I can't imagine that changing, at this point.

Duncan: There are what are called "decomps" in the business, decomposition cases where you get highly noxious odors and gasses. Whether or not they affect your health, they certainly don't make for a pleasant working environment, so you'd want proper ventilation.

To answer your question, the bottom line is it would make no difference whatsoever in the design. It could potentially someday make a difference in the equipment. But even if this kind of change does come, there will be a long transition stage. And if you designed a prep room that didn't meet all OSHA standards for standard embalming you would never be able to do a non-green embalming—not one.

Marjori: And there are still a lot of health and safety issues, regardless.

Duncan: You might not have to have an eye wash or a drench shower, so you'd need less equipment, but it wouldn't change the design.

To get back to the kitchen analogy, you don't design your kitchen differently if you're a vegetarian, do you? You still want to be able to get from the sink to the refrigerator and the trash can in some ergonomic, reasonable manner.

Marjori: And the reality is you're dealing with medical issues. You have to look at the prep room the same way you would a hospital operating room. I don't see the need for cleanliness and using sterilization products, the health and safety component, ever going away.

Even though the bodies may ultimately have fewer chemicals in them if a funeral home chooses to go green, I don't see the need to protect the embalmer and maintain the cleanliness level of the prep room ever changing.

Duncan: Your square footage needs wouldn't change—your countertops,

floors and surfaces. You've got to have an embalming table, an embalming machine, tools and chemicals. Just because you've bought a new all-electric car, you're not going to do away with your garage, right?

When funeral directors do design their own prep rooms—and obviously you must see some old prep rooms when you handle a retrofit job—what are some of the common mistakes they make?

Marjori: They didn't install a sufficient ventilation system, and they got tagged for it by OSHA. They didn't include the required safety equipment, and they were tagged by OSHA. They didn't plumb their safety equipment correctly and they were tagged by the plumbing inspector.

This is a good one: They built the room without realizing the kind of dimensions necessary for moving the table in and out, so now they can't get the table in the room.

Duncan: Or, just the opposite: They made the prep room so big they could hold a service in it.

Again, going back to what I said at the beginning of the interview, many funeral directors have had a building for generations, so often when they design a prep room, they model it on what they had in the past.

Marjori: Also, it's not easy to get the right equipment. It isn't like going down to the hardware store or the Home Depot and picking up what you need for the prep room. It uses some special equipment that needs to be installed in very specific ways.

Another problem is that a funeral director will hire a local contractor to execute the design—even one we've done—and the contractor has *no* experience with preparation rooms, has *never* done a single one. It's not like hiring a plumber to install a bathroom at your home who's putting in his 3,000th bathroom.

I get calls from plumbers saying, "I don't really want to go in that room. I don't know what I'm doing in there." My response is, "We're here to help."

We understand that if a plumber handles one preparation room in a career, that's a

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than not, they aren't.

You talk about offering design of a “state-of-the-art” prep room. What are the most important elements of a “state-of-the-art” prep room?

Marjori: What we've talked about as far as taking care of health and safety issues, code requirements. That's part of it.

And our approach also is to use state-of-the-art materials for the surfaces. But they don't have to be the most expensive, top-of-the-line materials. We want to make sure you have the right materials at a moderate cost—value. You want to make sure your surfaces are correct for a hospital-like environment.

We're designing for durability and cleanability. There are certain materials that harbor bacteria and are not appropriate for a preparation room. You could actually get tagged for having the wrong kind of building material in your preparation room.

You mean something porous?

Marjori: Yes, porous materials you can buy at Home Depot.

So state-of-the-art means encompassing health and safety and ergonomics so that you can work well in the room. The room provides you with what you need.

I was interested in the discussion of color palettes on your Web site. I wonder how much thought funeral directors give to color when it comes to the prep room, as opposed to the more public areas.

Marjori: That's why this is a great service, because we make it easy for them to pick a color scheme they have an affinity for. We've had an interior designer pick palettes that work together for a soothing environment, so the funeral home owner doesn't have to spend a lot of time on it.

Duncan: It does allow for a more pleasant work environment, something that's become more important over the last 20 to 30 years. I'm not talking about funeral homes alone—look at office spaces in 1960 vs. today. In any nice office, there's a huge emphasis on having an environment that's conducive to worker productivity.

We still want rooms that are compatible with a surgery-type environment, so the colors are compatible with that.

Does that mean there are certain colors you wouldn't use in a prep room?

Marjori: Yes. We keep it fairly light in the room.

Duncan: We don't want colors that will hide spills, emanations and dirt. All the colors were preselected with an interior designer but are also compatible with a prep room.

I did see some deep blue cabinet doors.

Duncan: Just the faces—not the tops. Horizontal surfaces are rather critical.

In other words, calming and easy to see where it needs to be cleaned?

Duncan: Correct.

Marjori: It's important to have something soothing and coordinated. Once in a while I have fun with someone who does want to get really involved in choosing colors, wants to select their own or mix and match what we have. It's a fairly new program, but so far, most of the time, people just point to what they want and say thanks.

The prep rooms I've seen were white or off-white.

Duncan: That gets back to your sterile operating environment.

Marjori: There are some people who still like white.

Duncan: Using a color palette that helps provide you with a comfortable environment is a change, but we're getting positive feedback on it. We introduced it about a year ago.

In some funeral homes, the prep room is becoming a public place; the families want to see it. Not in every case—it's up to the individual owner's business plan.

Marjori: You're not really supposed to have people in a preparation room, though people do go in them. We're talking about people using it as a marketing tool. When our clients finish their preparation room and have an open house they are proud to show it to the public.

For some people, it's important for families to see where their grandma is being taken care of. They want that room to be a nice room.

Duncan: Even if it's subconscious, I think families take an impression away from what they see. This is a new thing, bringing the prep room into the forefront. And I've been told by a few funeral directors that the families are asking to see it.

I guess that goes along with the fact that more funeral directors are making sure



A new prep room using one of the color palettes offering an alternative to an all-white room.

lot. It goes back to what we offer: expert assistance. In construction, you can never get rid of all the problems, but you can try to minimize them.

Do you conduct site visits to oversee the work?

Duncan: We don't fly to all these locations, but we do site visits via the Internet. People e-mail us photographs, and it's not unusual at all for us to flag improper installations. We encourage all of our clients to e-mail us progress photos. The ones who do come out ahead.

Do you ever Skype with a plumber?

Marjori: No, but that's a great idea! I like that.

Duncan: I'm not sure what the percentage is of people who follow up, but with almost every single customer, when we send them the drawings, we strongly encourage a pre-construction conference. We can save everybody a ton of headaches through a little education with the builder so that things get installed correctly.

Marjori: A lot of times the builder isn't confident and is looking for help.

Duncan: They're usually extremely appreciative of some guidance. This goes back to that question of budget, though. Some people would rather take the drawings and try to do it their own way. And depending on their knowledge base, they might be successful. But more often

Sometimes I'll talk to a client from a few years back who will call and ask me what filters to use with the mechanical system—one that's been in place six or seven years. I'll say, "Have you changed the filters since you installed it?" And the answer is often "No." —Marjori Todd

their crematories are places they can show families.

Marjori: Yes, some of them have viewing rooms at the crematory. I know because we've designed a couple.

I think in this day and age, and with the competition that's out there, you want to be proud of what you're offering families. You want to feel good about it.

Duncan: An embalming room is no longer back-of-house. It really has become just as important as the chapel, visitation areas, the lounge. Which I think is great. It's where the funeral directors do their art.

How much retrofit work do you do vs. new design?

Duncan: Probably 70/30 retrofit to new.

Marjori: There are a lot of facilities that need to be retrofitted.

What are the challenges when you're working with an existing building as opposed to designing from scratch?

Duncan: It ranges all across the board, but the biggest obstacles we overcome are plumbing and air systems.

A lot of the existing facilities literally can be, as I mentioned earlier, old homes. There are problems with the plumbing, the accessibility of the plumbing. In going from ancient to modern, the plumbing needs have gone from slight or non-existent up to an incredibly large part of the prep room.

There are also operational flow issues. We move doors around a lot. Sometimes we can flip-flop a room and solve some problems.

Marjori: The good news is that we've never not done it. It's our job—Duncan's an architect and I'm an engineer and we've dealt with these problems for years.

Duncan: Educating the client is probably part of every retrofit job.

Educating them about OSHA rules?

Duncan: Yes, and trying to get them to see that they're going to spend a certain amount of money, regardless, and they're going to end up with a room that's either the most efficient it could be, or not.

Once the prep room is done, what kind of maintenance or upkeep do people need to

do? Do you find that people take care of the maintenance as they should?

Marjori: I can answer that. Back to the analogy of people and their homes: How many people get their mechanical system tuned up, or change their filters or clean out their plumbing?

It's so often the case that people do not do the maintenance that needs to be done to maintain their systems for a long and healthy life. And there are quite a number of pieces of equipment in the prep room that actually have code-mandated testing requirements.

Theoretically, if an inspector came into your prep room, you might be asked to show the documents with your test results, like you have to do for your fire extinguishers.

Sometimes I'll talk to a client from a few years back who will call and ask me what filters to use with the mechanical system—one that's been in place six or seven years. I'll say, "Have you changed the filters since you installed it?" And the answer is often "No." Nobody's done any maintenance on the mechanical system for six or eight years. Of course, this is not a problem that's specific to preparation rooms.

Life involves maintenance. You wouldn't wait eight years to change the oil in your car, right? Some of the systems need to be regularly tested to meet codes. Some simply need to be tested or maintained to make sure they're functioning properly. And your systems are going to last a lot longer if you maintain them.

I'm working on an article to remind people in the industry that yes, unfortunately, this is something they need to add to their long to-do list.

Duncan: At the end of a design project, we give the client a complete manual of maintenance instructions, operation instructions and test procedures for every product we put in the room, which does include the maintenance requirements. But often it just gets put on a shelf somewhere.

Something that's on our to-do list is to figure out how to get the issue of maintenance up front in a user-friendly way.

Marjori: One thing I'm considering is creating a checklist for people to use. Even if you have a maintenance person you expect to handle this stuff, maybe it would help if they had a tool to use to keep track of the many things on their to-do list.

Are there any ways you foresee prep rooms changing over the next few years? Any trends you see starting? What about ergonomics? Americans' increasing size is creating a demand for larger caskets. I imagine this affects the prep room, as well.

Marjori: It is a trend, but it's been around a while. We've already incorporated that consideration into our designs. You can't have small doors anymore. These oversized caskets are so huge you have to have doors sized for them.

Duncan: I see a lot more awareness within the entire industry toward improving safety and air quality for workers. It's becoming a primary focus.

Marjori: Younger people today are much more interested in the environment and maintaining their health. They're growing up that way and it's an important part of their lives. When they go into the prep room, they want to be in an environment that's healthy and safe and comfortable. People in earlier generations maybe had an attitude of "I'm going to do what I have to do." Younger people today are more demanding.

Accredited mortuary colleges are requiring either a fully operational prep room or a prep room that has everything in it, even if it's not operational.

Duncan: We're doing quite a few college projects now, so when these new funeral directors leave school and enter the workplace, they have certain expectations about what the prep room is going to be like.

I think embalming is becoming more respected. There are all of these shows like CSI. I think the career choice has become more acceptable, and people are expecting, if not demanding, suitable working conditions. If you want to retain good people, you're going to have to have a good prep room. □