



## CITY OF HAYWARD AGENDA REPORT

Meeting Date 10/5/06  
Agenda Item 2

**TO:** Planning Commission

**FROM:** Carl T. Emura, Associate Planner

**SUBJECT:** **Administrative Use Permit No. PL-2005-0510 – Gene Mattauch (Applicant) / MFG Holding LLC (Owner) - Request to Modify Use Permit 99-160-20 to Allow a Crematorium Within an Existing Mortuary**

The Property is Located at 22297 Mission Boulevard, at the Northeast Corner of Grace Street in the Central City - Commercial (CC-C) Zoning District

### **RECOMMENDATION:**

Staff recommends that the Planning Commission find that the project is exempt from CEQA Review and deny the Administrative Use Permit based on the attached findings.

### **DISCUSSION:**

#### Background

In 1999, the applicant received approval for a Conditional Use Permit to operate Mission Funeral Home. Aside from embalming and funeral services, the funeral home offers off-site cremations services through a crematorium located in the City of Livermore. The applicant requests to add a crematorium to the mortuary to provide the service on-site.

The Central City - Commercial Zoning District allows a mortuary, which may include a crematory with the approval of an Administrative Use Permit. As a crematory was not included in the earlier application, a modification of the Use Permit is required. The review of the Administrative Use Permit application requires staff to determine if the proposed use is compatible with other uses in the surrounding area.

The 19,200-square-foot parcel, located at the northeast corner of Mission Boulevard and Grace Street, is surrounded by commercial and residential developments. To the north is a three-story multi-family dwelling; to the south, across Grace Street, is a vacant commercial building (former gas station), a single-family dwelling and the Tiburicio Vasquez Health Center; to the west, across Pearce Street, are detached single-family dwellings; and to the east, across Mission Boulevard, is a multi-family dwelling and auto-

related commercial buildings. There are no schools in proximity to the site, however there are several elderly care facilities in the neighborhood.

The mortuary, comprised of two buildings connected by a breezeway, houses the funeral and office facilities in the front wood building and the embalming facilities in the rear concrete building where the crematory would be located. No additions would be made to accommodate the crematory.

### Crematory

The proposed Facultatieve Technologies FT-1 crematory measures 11'-6" (length) x 6'-4" (width) x 10'-0" (height) with a 22-inch diameter stack that would extend through the roof, 20'-6" above the floor and 6'-6" above the parapet wall. The stack would be disguised as a chimney to minimize the visual impact. The stack would be approximately 100 feet from the three-story multi-family dwelling to the north, approximately 100-150 feet from other single-family residential properties, approximately 250 feet from the Tiburicio Vasquez Health Center and approximately 500 feet from the nearest elderly care facility.

The crematory would operate from 9 am to 6 pm Monday through Friday. Mission Funeral Home's crematory would be for its sole use. They expect to cremate approximately 200 bodies a year (approximately 17 a month), which is approximately the number of off-site cremations they handle.

### Cremation Process

To get a clearer understanding of the impacts of the crematorium, the following information on the cremation process and its impacts are provided. During the cremation process, the body is laid in a rigid container and placed in a multiple-chamber incinerator consisting of a primary and secondary chamber. The secondary chamber is heated first by igniting the afterburner to an operating temperature of at or above 1500 degrees Fahrenheit. The rigid container is introduced in the primary chamber, which begins a controlled cycling range of 1750 to 1800 degrees Fahrenheit. The secondary chamber operates simultaneously and functions to minimize air contaminants. The cycling continues until the cremation process is complete and the remains are reduced to bone fragments. Approximate time for complete cremation is two hours, which may vary depending on body weight.

The crematory can produce emissions of ash, smoke, gases, and odor, which can be controlled by a good crematory design and regulation of operating temperature. Newer crematoriums provide a larger afterburner in the secondary chamber, which allows for reburning and scanning of the exhaust prior to discharge into the atmosphere which significantly reduces the visible emissions and odor, however it does not eliminate trace amount of emissions of toxic substances such as mercury, carbon monoxide, hydrogen chloride, sulfur dioxide and dioxins.

Of these substances, of chief concern is mercury, a persistent, bioaccumulative, toxic metal that readily enters the food web. The Bay Area Air Quality Management District (BAAQMD) estimates that the Bay Area crematoriums release 27 pounds of mercury per year from the dental amalgam fillings from the human remains. Though mercury emissions are expected to decline over a period of time due to the use of alternative restorative materials and improved oral hygiene, and cremation is only one source of mercury pollution, mercury concentrations in San Francisco Bay fish are high enough to threaten human health and sport fishing. The California Office of Environmental Health Hazard Assessment issued an interim fish consumption advisory for San Francisco Bay. In addition, mercury concentrations in some bird eggs harvested from the bay shoreline are high enough to account for high rates of eggs failing to hatch. In humans, mercury is particularly toxic for babies, pregnant women and nursing mothers, where it can permanently impair an infant's brain development.

The Bay Area Air Quality Management District requires issuance of an Air Permit for any equipment that emits pollutants into the atmosphere. Once an application is filed, BAAQMD conducts an engineering evaluation, which includes a Toxic Risk Assessment. The Toxic Risk Assessment analyzes the emissions and determines whether or not the crematorium would be in compliance with state and federal air quality standards and regulations. The applicant had the option to have BAAQMD prepare an engineering evaluation in advance of the public hearing, but decided not to incur the expense until a decision by the City would be made.

Staff contacted Air Quality Engineer, Dharam Singh, of BAAQMD regarding the potential for health risk, especially from the exposure to mercury. Mr. Singh indicated that a Toxic Risk Assessment would determine if the quantity of mercury and other toxic chemicals released during the cremation process would be within acceptable levels. If it exceeds acceptable levels, BAAQMD could attach conditions to bring it within the threshold requiring special equipment, limiting the number cremations performed, adjusting the temperature, increasing the stack height and/or modifying the operating procedures, depending on the particular circumstances. Regarding the proximity of residential development or the health center to the crematorium, he responded that modeling would have to be done to determine what ground level impacts the crematorium have on the surrounding area. They would include in their modeling sensitive receptors such as the elderly care facility. The Toxic Risk Assessment would have to show that the increased cancer risk to a maximally exposed individual is less than one in a million or less than ten in a million using Best Available Control Technology to reduce the cancer risk. If it is greater than ten in a million then an Air Permit would not be issued for the crematory. Mr. Singh noted that the new crematoriums are designed to comply with these requirements and that BAAQMD doesn't look at whether or not the crematorium is compatible with residential development or other land uses.

The manufacturer's representative states that, if properly operated and maintained, there are no smoke or odors discharged out of the stack and it can be operated while conducting visitations and other services. They state that the crematorium emissions are far below the Bay Area Air Quality Management's District's (BAAQMD) allowance.

They provided a letter from Custom Stack Analysis, LLC, an air emissions testing company, which states the crematory's average particulate emission of 97.07 mg/dscm (dry standard cubic meter) is significantly below the Bay Area Air Quality Management District's maximum allowed particulate emission of 343 mg/dscm. They also provided a report that stated that the operation of the crematory would generate less carbon monoxide, nitrogen oxide, and hydrocarbon than an idling car.

They also provided information indicating that mercury alloys from Silver amalgam tooth fillings have declined by 30 percent in the last 10 years due to the use of composite resins that blend better with the color and appearance of natural teeth. These changes in dental practices and consumer preferences have resulted in significantly less mercury entering the cremation stream and thereby reducing mercury emissions by reducing mercury input.

The one thing the manufacturer's representative indicates that they cannot control is the heat waves released from the cremation process. Because of the high operating temperatures the heat waves will be visible and cannot be avoided.

#### Crematorium in Hayward

Cremation services are offered at three funeral homes in Hayward; Mission Funeral Home, Sorensen Brothers Mortuary and Machado Hillside Mortuary. Only Machado Hillside Mortuary, located at 1051 Harder Road, offers it on-site. Both Mission Funeral Home and Sorensen Brothers Mortuary utilize an off-site crematory.

Like Mission Funeral Home, Machado Hillside Mortuary faced community opposition when it applied for a use permit to allow a mortuary and crematory in 1981. The Board of Adjustments approved the mortuary and crematory, however the decision was appealed. The residents to the north opposed the mortuary and crematory, citing traffic and health concerns. However, the City Council denied the appeal and approved the application.

Unlike Mission Funeral Home, the Machado Hillside Mortuary is on a much larger site (4.21 acres) adjacent to Holy Sepulchre Cemetery and buffered from other uses by a steep bank along Harder Road. The nearest residential property is approximately 350 feet from the crematory and approximately 1000 feet from commercial properties. Mission Funeral Home is on a small commercial parcel with residential properties located within 100 feet of the proposed crematory. It has no buffers between it and the residential properties and the stack would be below the height of the adjacent three-story multi-family dwelling located north of it.

#### Other Cities

In 2004, the San Leandro City Council adopted an interim urgency ordinance that prohibited the establishment of any new crematory in the City of San Leandro for 45 days to address community concerns related to the request to establish two crematories in the General Industrial Zoning District, where crematories were a permitted use and no

planning permits or public notice where required. The proposed crematory would operate 20 hours a day, 7 days a week and 50 weeks a year and cremate a maximum of 2080 bodies a year. Since the proposed crematory was within 1,000 feet of two school sites, state law required that BAAQMD send a public notice to all residents located within 1,000 feet of the project site and to the parents and guardians of the children attending those schools to notify them that the proposed crematoriums were in compliance with BAAQMD standards and an Air Permit would be issued to the applicant.

Residents questioned how school-aged children and the elderly might be affected from the emissions and odors. Planning staff presented the City Council with three options. First, to prohibit crematoriums city-wide; second to allow crematoriums as a Conditionally Permitted Use in limited areas with a minimum radius from schools, child care facilities, residences, hospitals and city parks; or thirdly to extend the Urgency Ordinance. The City Council chose to prohibit crematoriums citywide, despite that the crematorium complied with BAAQMD standards, because even minor amount of pollutants, including mercury and other chemicals, can settle into the ground and eventually drain into San Francisco Bay. In addition they were also concerned about land use incompatibilities with a crematorium in proximity to a residential neighborhood.

Similarly, in July 2006, in the City of Richmond, where crematoriums are allowed only in cemeteries, the City Council declined changing the zoning ordinance to allow crematoriums in nine other zoning districts when one neighborhood, already affected by pollutants from other industries, including the Chevron refinery, expressed concerns about further exposure to toxic chemicals.

Also, in the Town of Colma, where approximately 73 percent of the land area is comprised of cemeteries, town officials denied an application to locate a crematory that was 130 feet from the nearest residential district and only five feet from the El Camino Real right-of-way. Subsequent to this application, the town adopted the following regulation:

*"Buffering Regulations. A crematorium shall be located such that the retort (crematory) vents are no closer than 650 feet to the nearest residence and shall be sited, using topography and landscaping, so that the retort vents and delivery entrance cannot be seen from any public-right of-way. If the building can be seen from any public right-of-way, crematoriums shall be incorporated into the design of buildings such as chapels and mausoleums so that the cremation aspect is not apparent..."*

The 650-foot distance that a crematory would need to be from a residential property is to allow dispersal of the air emissions.

## **ENVIRONMENTAL REVIEW:**

A project that is denied does not require review under the California Environmental Quality Act (CEQA). Should the Planning Commission wish to approve their project, staff will have to prepare the appropriate environmental documents and conditions of approval for review at a later date.

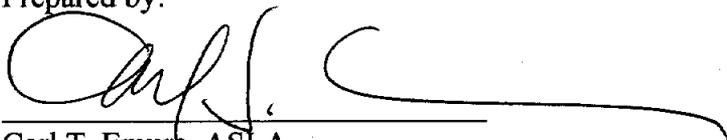
## **PUBLIC NOTICE:**

On September 23, 2005, an Official Notice was mailed to every property owner and occupant within 300 feet of the subject site, as noted on the latest assessor's records. In addition, the Hayward Area Planning Association, Prospect Neighborhood Association, North Hayward Neighborhood Task Force received an Official Notice. Staff received two phone calls, one email and one letter expressing concern about the crematory, three of them opposed the addition of a crematory. On September 28, 2006 a Notice of Public Hearing for the Planning Commission meeting was mailed to every property owner and occupant within 500 feet of the subject site and the organizations listed above. In addition, staff received four responses opposing the crematory after a news article was published in The Daily Review. They felt it was not an appropriate location for a crematory. They were concerned that every time a body is cremated, they would bare witness to the fumes and heat escaping from the smoke stack. They felt it would be unsightly and pose a health risk as there are several elderly care facilities in the vicinity. One expressed that they would loose their tenants if approved.

## **CONCLUSION:**

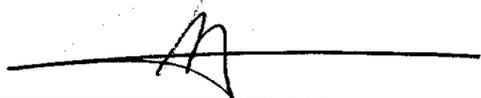
The crematory would emit trace amounts of toxic chemicals, which though quite low and within acceptable air emission levels, would be approximately 100 feet from the adjacent three-story multi-family dwelling. With the top of the crematory stack being 20'-6" above the floor, the third floor tenants could be put at a higher risk of exposure to the toxic emissions. And though use of mercury alloys from silver amalgam tooth filling is on the decline, mercury is particularly toxic for babies, pregnant women and nursing mothers. And though particulate matter would not be visible, the neighboring properties would bare witness to the heat waves every time a body is cremated. And unlike Machado Hillside Mortuary, Mission Funeral Home is on a smaller lot and lacks buffers separating the crematorium from surrounding residential properties, elderly care facilities and health center. Therefore, as in the case of other cities, staff believes a crematorium would not be compatible adjacent to a residential neighborhood and recommends denial of the application. Staff could have made a recommendation based on site specific information if the applicant would have had a BAAQMD Engineering Evaluation prepared in advance of this hearing.

Prepared by:



Carl T. Emura, ASLA  
Associate Planner

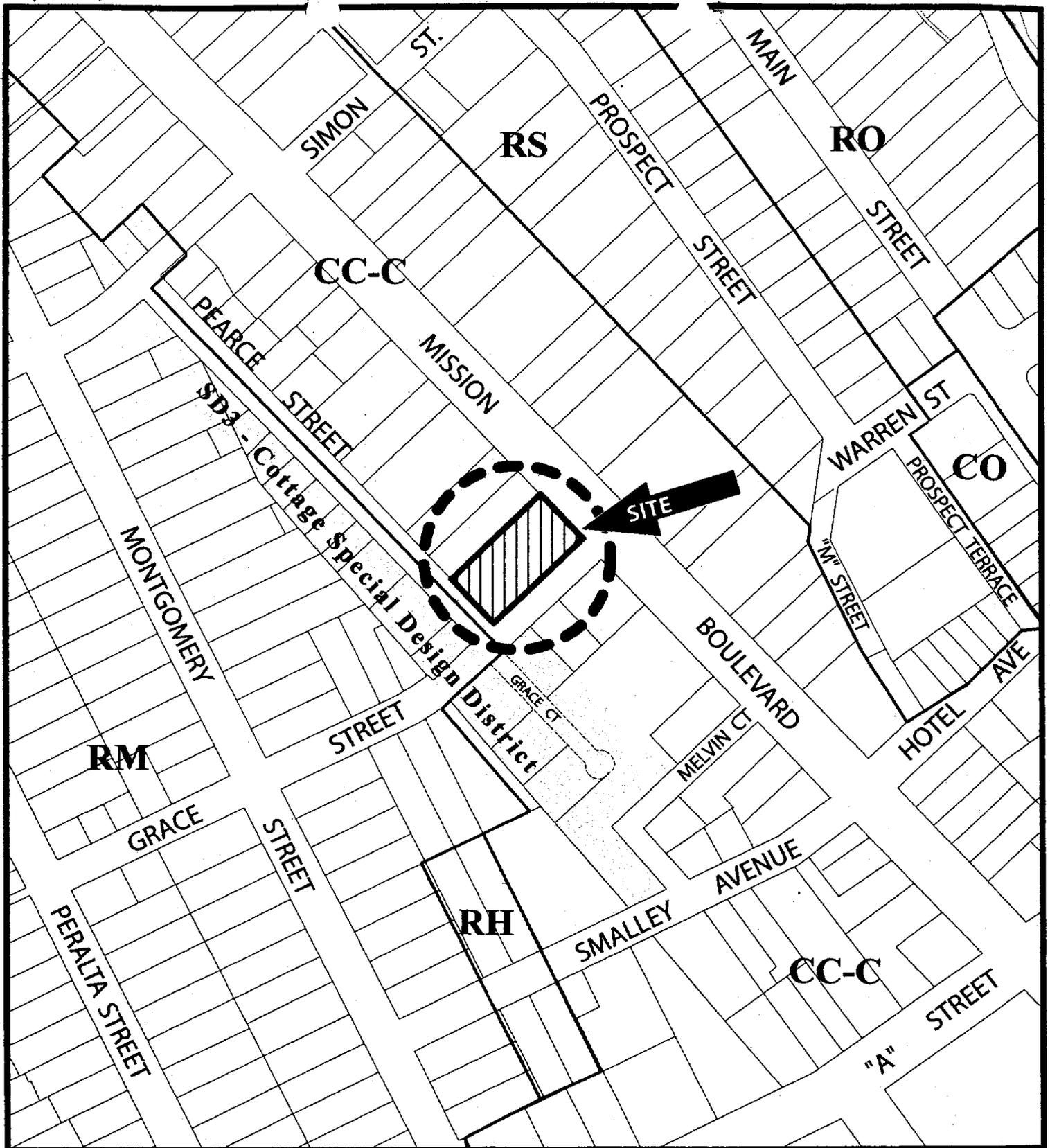
Recommended by:



Richard Patenaude, AICP  
Principal Planner

Attachments:

- A. Area Map
- B. Findings for Denial
- C. Letter from William and Renee Fontaine dated September 26, 2005
- D. Email from [SunJu008@aol.com](mailto:SunJu008@aol.com) dated October 5, 2005
- E. Letter from Mr. and Mrs. David L. Kolm dated August 16, 2006
- F. Letter from Ralph F. Herndon dated August 25, 2006
- G. Resolution From the Prospect Hill Neighborhood Association via President Frank Goulart
- H. Email from Stefanie and Otto Jagoda dated September 12, 2006  
Plans/Specifications



**Area & Zoning Map**

PL-2005-0510 Modification of AUP

Address: 22297 Mission Blvd.

Applicant: Mission Funeral Home

Owner: MFG Holding LLC

CC-C - Central City Commercial

CO - Commercial Office

RH - High Density Residential, min. lot size 1250 sq ft

RM - Medium Density Residential, min. lot size 2500 sq ft

RO - Residential Office

RS - Single-Family Residential, min. lot size 2500 sq ft

SD3 - Cottage Special Design District Overlay



**CITY OF HAYWARD  
PLANNING DIVISION  
ADMINISTRATIVE USE PERMIT  
October 5, 2006**

**ADMINISTRATIVE USE PERMIT APPLICATION NO. 2005-0510: Gene Mattauch (Applicant) /MFG Holding LLC (Owner) - Request to modify Use Permit 99-160-20 to allow a crematorium within an existing mortuary**

**The property is located at 22297 Mission Boulevard, located at the northeast corner of Grace Street in the Central City-Commercial (CC-C) Zoning District. (APN: 428-0036-064)**

**FINDINGS FOR DENIAL**

- A. Denial of Administrative Use Permit Application No. 2005-0510 to allow the offering of crematorium services in an existing mortuary in the Central City-Commercial Zoning District is exempt from the California Environmental Quality Act (CEQA) review, as a project that is denied.
- B. A crematorium located adjacent to a residential neighborhood is a use that is not desirable for the public convenience or welfare in that it exposes residents to unnecessary health risk and that cremation services can still be provided at an off-site location.
- C. A crematory will impair the character and integrity of the neighborhood in that the site does not provide a buffer between the crematory and the residential neighborhood and the stack would not be consistent with a residential neighborhood or commercial district.
- D. The proposed use will be detrimental to the public health, safety, or general welfare in that the crematorium emits trace amounts of toxic substances and it would be located in proximity to a residential neighborhood, elderly care facilities and health center.
- E. The offering of on-site cremation services in conjunction with other services offered at a mortuary is in not in harmony with applicable City policies as well as the intent and purpose of the zoning district in that it would not enhance the economic vitality of the neighborhood.

September 26, 2005

Carl Emura, ASLA  
Associate Planner  
Planning Division  
777 B Street  
Hayward, CA 94541

RE: PL-2005-0510 Mod of AUP  
Mission Funeral Home

Dear Mr. Emura:

We received the Official Notice today regarding the modification request (Permit 99-190-20) from Mission Funeral Home located at 22297 Mission Blvd. at Grace Street to add a crematorium within its mortuary.

Our concerns are:

We live on Prospect Street right above the mortuary overlooking the rooftop of the building. If the crematorium were to be allowed, this would mean that every time they started burning bodies we would bare witness to all of the fumes and heat escaping from the smoke stacks. Not knowing if there is any smell involved with this process, the winds do blow right across the mortuary over Mission Street right into our home.

Our other concerns are health issues. Since our home is right in the path of the fumes, has there been any research done about the health risk of breathing these kinds of fumes? What about the danger from the burning of mercury in fillings and embalming fluid? Is there any solid proof that there are no health problems from this? If we started experiencing respiratory and or health problems would the mortuary be responsible or would the City of Hayward be? Is the City of Hayward going to guarantee 100% in writing that there are no transmitted diseases or health risks from the burning of bodies? We know nothing of this process. Please send us literature on the health issues we are concern about.

How do we know that the crematorium will keep its facility clean and well maintained? Who is responsible for regulating the facility and how often? What if by chance there was a release of the toxic fumes who is liable for this, just like the oil companies is there an alarm that would goes off to let us know that toxic fumes have been released? How many bodies are estimated to be burned each year and what about the pollutants from the crematory?

I grew up in South San Francisco and pass through Colma on Hillside everyday after work where all the cemeteries are. At that location, they built an up-to-date facility and when I would drive by you would be able to tell when they were burning bodies. Fortunately, for the residents near the crematorium the fumes from that facility would dissipate across the cemetery out of the site of homes.

We can't emphasis it any more than to reiterate **AGAIN** that we are right above the mortuary, we are 100% certain that what ever comes out of those stacks will come right into our home. All you have to do is stand in front of the mortuary you will notice that the winds that blow over the mortuary, right across Mission Street blow right up the hill into our home. Right now at this time we smell barbeques, 4<sup>th</sup> of July fireworks and fumes from Mission street traffic.

ATTACHMENT C

This is totally unacceptable, we do not want to bare witness to bodies being burned. We purchased our home for the view and the beauty of the view. I don't think anyone would like it if you sat back to enjoy your view and looked out the window and seeing the heat from the stacks knowing that they were burning someone. Your home is the last place you should feel uncomfortable in.

You are more than welcome to come to our home to see what we are talking about. We understand that they have a business to run but this part of the business needs to be run in another location, out of the way of residential neighborhoods.

William and Renee Fontaine  
22263 Prospect Street

**Carl Emura**

---

**From:** SunJu008@aol.com  
**Sent:** Wednesday, October 05, 2005 9:54 AM  
**To:** Carl Emura  
**Subject:** PL-2005-0510 Mod of AUP

As a neighbor I don't want to see a cremation/mortuary next to my house. It will affect our property the most since it is right next to the Mission Funeral Home. Sometimes two properties look like one. Even if the city has a requirment to install a high chimney, there would still be lots of smoke that we would see and a certain type of odar that comes from the cremating process. It's all residents living next to and behind the funeral home. I don't think it's a comfrotable sight nor a RIGHT PLACE for a cremation sevice. It just doesn't fit into the whole neighborhood. The most concern I have is that it will make all the properties value decline because I don't think house buyers or investors will be attracted to a cremation/mortuary near. I've been living in Hayward for almost 20years and I don't discriminate any type of business, but I honestly think there are certain places for certain business. I hope the city of Hayward would look from the residents point of view. It's the residents who have to deal with the smoke, the odar and the sight.

**ATTACHMENT D**

**Mr. and Mrs. David L. Kolm**

22236 Montgomery Street  
Hayward, CA 94541  
Home Phone 510 881 -1553

**RECEIVED**

AUG 18 2006

PLANNING DIVISION

August 16, 2006

Mr. Carl Emura  
Planning Department the City of Hayward  
777 B St.  
Hayward CA 9454

Dear Sir:

This letter is in regard to the addition of a crematorium at Mission Funeral Home , 22297 Mission Blvd. in Hayward.

We are very much opposed to the idea ,and feel that this addition would not only be unsightly ,but poses some real health hazards.

We are also very alarmed that the proposal for this crematorium has been in the planning stages for a year. We live no more that half a block away, and had no idea that this was proposed ,until we read it in this morning's Daily Review.

We wish the planning department would bring something into our neighborhood that would benefit the neighborhood. We don't need a Second Chance facility and the problems it brought ,or the Society of St. Vincent De Paul 's transitional housing, and we have more than our fair share of residential care facilities.

Again we urge you to say no to the crematorium. This kind of a structure and use, can directly impact the quality of life in our neighborhood.

Sincerely,

Mr. and Mrs. David L. Kolm

ATTACHMENT E

HERNDON CHIROPRACTIC  
A Professional Chiropractic Corporation  
1044 C Street  
Hayward, CA 94541

Ralph F. Herndon, D.C.  
Qualified Medical Examiner  
Certified Disability Evaluator

Telephone (510) 537-3451  
Facsimile (510) 537-1661

Member of California Chiropractic  
Association, American Chiropractic  
Association, American Back Society,  
California Society of Industrial  
Medicine and Surgery  
American College of Chiropractic Orthopedists

**RECEIVED**

AUG 28 2006

PLANNING DIVISION

August 25, 2006

City of Hayward  
777 B Street  
Hayward, California 94541

**Attn:** Richard Patenaude, Principal Planner

**Re:** Construction of a crematorium on the grounds of the Mission Funeral Home

Dear Mr. Patenaude:

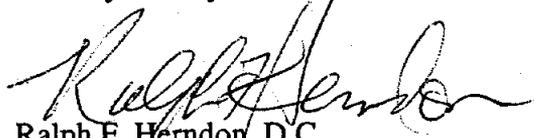
I am a Hayward resident since 1957. For the last 22 years I have been a homeowner on Prospect Hill. This letter is to cast a no vote for the above-described crematorium at the Mission Funeral Home on Grace Street and Mission Blvd.

I agree with Mr. Glen Stanton, a Pearce Street resident. He states: "To me, that's a service that should be done in an area that's less populated." The areas above and below Mission Boulevard around the Mission Funeral Home are densely populated with homes and apartment houses.

Even with air pollution control equipment to reduce visible emissions, there will still be significant emissions of hazardous air pollutants including sulfur oxides, nitric oxides, and carbon monoxide. There are known health effects associated with these pollutants. Locating a crematorium or any significant emission source near a residential area is not appropriate. This area is an established neighborhood with a high percent of elderly population and small children. Both of these groups are classified by EPA, CDC, and others as a "sensitive" population. Therefore, locating the crematorium or any emission source in this area is inappropriate.

In addition, the view of the smokestack could be objectionable to many people. Further concern is that the cities of San Leandro and Richmond both rejected the building of a crematorium in their city.

Thank you for your time and consideration in this matter.



Ralph F. Herndon, D.C.  
Prospect Hill Resident

ATTACHMENT F

**Carl Emura**

---

**From:** Frank Goulart [fgoulart@pacbell.net]  
**Sent:** Friday, September 01, 2006 11:07 AM  
**To:** Carl Emura  
**Subject:** Crematorium Project - Mission Blvd

Hi Carl,  
Here is the resolution passed by the Board.

**PROSPECT HILL NEIGHBORHOOD ASSOCIATION**  
22248 Main Street  
Hayward, CA 94541

**Prospect Hill Neighborhood Association Board of Directors**  
**RESOLUTION**  
**In Opposition to Proposed Crematorium**

**WHEREAS** there has been virtually no information available to our association on the proposed project, and

**WHEREAS** there has not been any kind of environmental study to assess potential impacts to the Environment, and

**WHEREAS** residents of our association who have common sense are concerned about the crematory adding to atmospheric pollution, and

**WHEREAS** residents of our association are concerned about the construction of tall chimneys obstructing our views, and

**WHEREAS** common sense dictates and land use planning suggests that the proposed use of the property will be incompatible with the residential neighborhoods which surround the property.

**RESOLVED** that the Prospect Hill Neighborhood Association urges the Planning Commission to reject the proposed project.

**Approved unanimously by the Board of Directors of the Prospect Hill Neighborhood Association at their regular meeting of August 26, 2006.**

**Frank Goulart**  
**President**

9/5/2006

**ATTACHMENT G**

-----Original Message-----

**From:** Terri4259@aol.com [mailto:Terri4259@aol.com]

**Sent:** Monday, September 11, 2006 9:09 PM

**To:** Carl Emura

**Subject:** reference; Mod of AUP PL-2005-0510

Dear Sir,

I am appealing the request to allow a crematorium. My property is right across the street-parcel #428-0031-065. We do not approve. It is bad for the environment . I stand to loose my tenants due to this. We are unable to attend the meeting due to the vision/driving problems.

Thank-you,

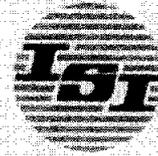
Stefanie and Otto Jagoda

9/12/2006

ATTACHMENT H

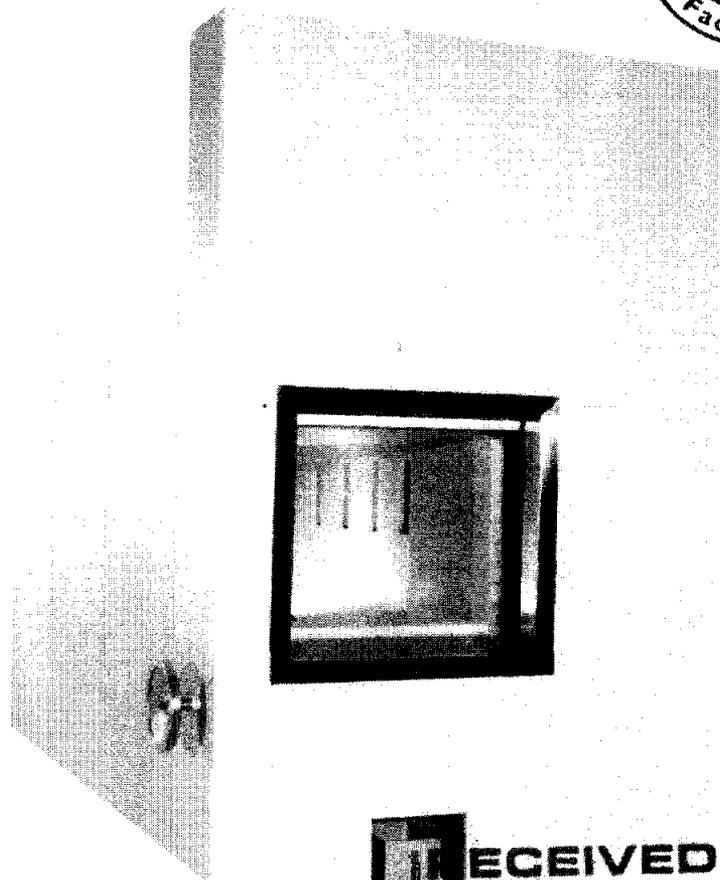
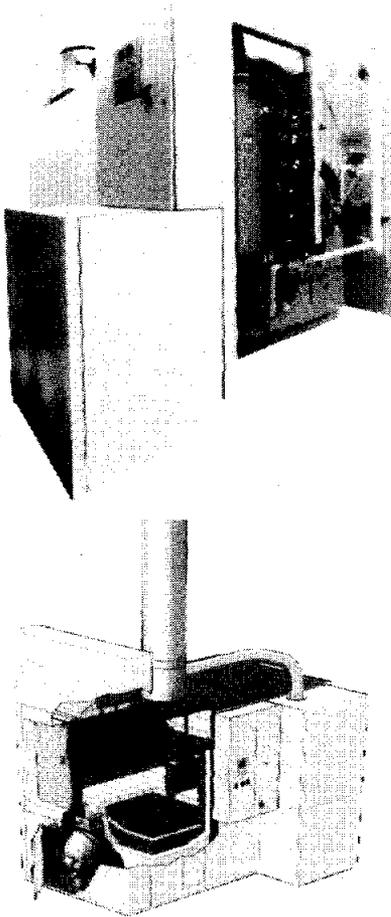
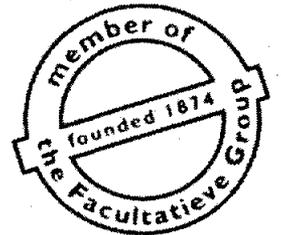


**Facultatieve Technologies**  
Cremation & Incineration Equipment



**Technical  
Information**

## FT I - CREMATOR



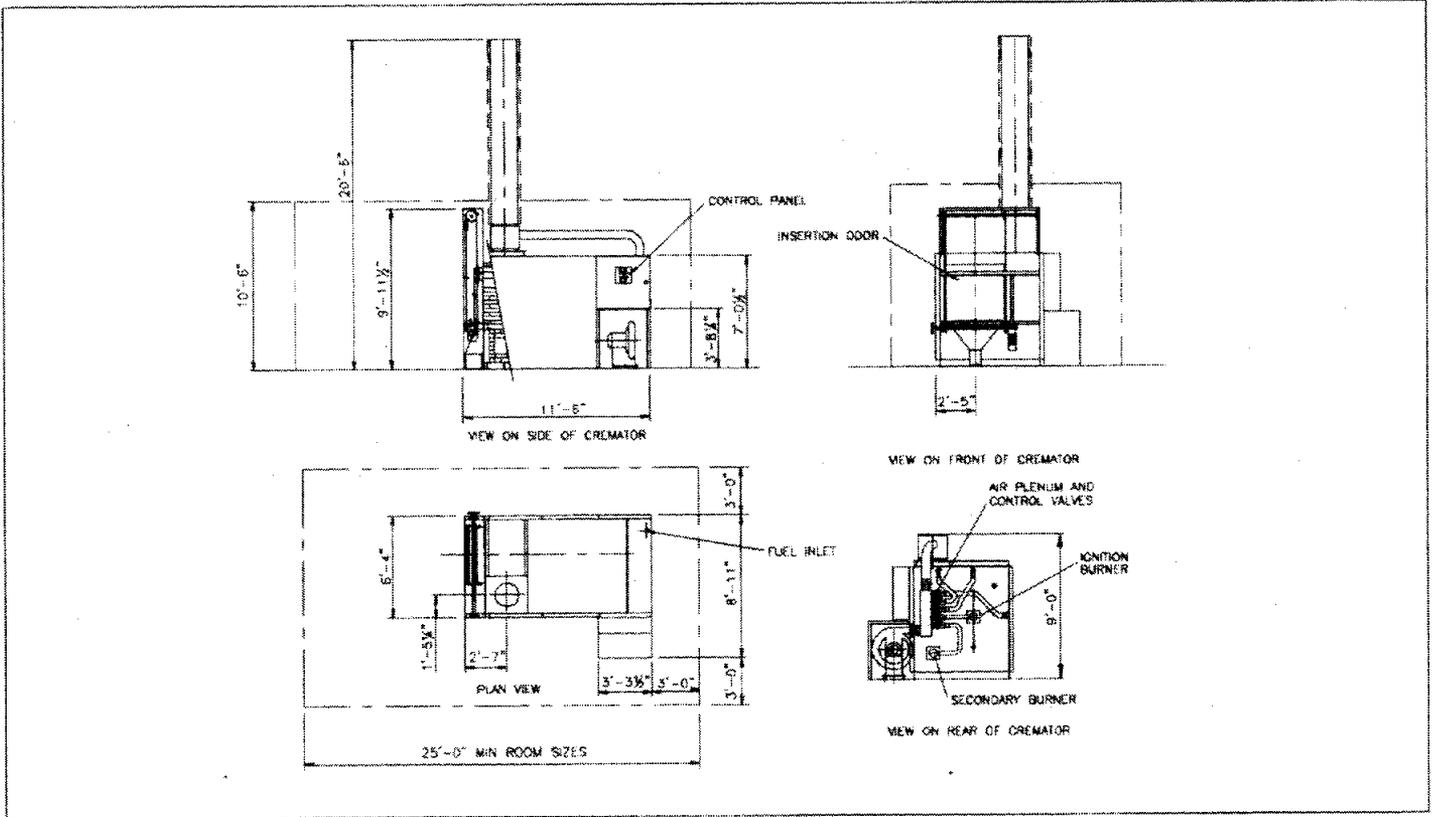
**RECEIVED**

MAR 30 2006

PLANNING DIVISION

- ✓ Best price, high quality
- ✓ Fast & easy installation
- ✓ Compact and quiet
- ✓ Fully automatic
- ✓ Excellent environmental performance
- ✓ Low maintenance, with easy access to components

Please refer to technical drawing for further details



**FT I CREMATOR**

**Specifications**

Height	9'-11 1/2" Over door frame
Width	6'-4"
Length	11'-6"
Weight	11 1/2 Tons
Fuel	Natural Gas / LPG
Opening for installation	8'-0" wide x 8'-0" high

**Electrical Characteristics**

Combustion Air Fan:	600 ft <sup>3</sup> /min at 68°, 0.75kW
Control System:	IKW

Electrical Supply:	40Amps (Motor rated) 3x220volt + neutral + earth - 60Hz
--------------------	--

**Fuel Consumption**

Burner Ratings:	
Primary Burner:	853,00 Btu/hr
Secondary Burner:	853,00 Btu/hr

Natural Gas usage typically: 12cu.ft/min at 8" Water gauge  
(excludes pre-heating of cremator)

LPG usage on request

Non-contractual document. Facultative Technologies reserves the right to modify its products in order to make technical improvements

07/04-FTI-USA

**List of offices of Facultative Technologies**

**Head Office**  
Van Stolkweg 29a  
PO. Box 80532  
2508 GM The Hague, The Netherlands  
Phone: +31 (0) 70 351 88 88  
Fax: +31 (0) 70 351 88 27  
info@facultative-technologies.com

**China**  
149 Qiaosong Rd. Sujatun District  
110101 Shenyang  
Phone: +86 248 981 90 85  
Fax: +86 248 981 90 85  
info@facultative-technologies.com

**France**  
Savipol 290a  
10302 Sainte Savine  
Tel: +33 (0) 325 49 55 00  
Fax: +33 (0) 325 49 54 49  
info@facultative-technologies.fr

**The Netherlands**  
Van Stolkweg 29a  
Postbus 80532  
2508 GM Den Haag  
Tel: +31 (0) 70 351 88 88  
Fax: +31 (0) 70 351 88 91  
info@facultative-technologies.nl

**The Americas**  
734 N. Progress Dr. Medina  
OH 44256, U.S.A.  
Phone: +1 330 723 63 39 /  
+1 888 883 28 76  
Fax: +1 330 723 58 41  
info.usa@facultative-technologies.com

**Czech Republic**  
Tylova 4  
772 00 Olomouc  
Tel: +420 58 522 69 26  
Fax: +420 58 522 78 42  
info@facultative-technologies.com

**Germany**  
Am Markt 9, 24955 Harnslee  
Postfach 1325  
24952 Harnslee  
Tel: +49 (0)461 77 33 30  
Fax: +49 (0)461 77 33 35  
info@facultative-technologies.de

**United Kingdom**  
Hoor Road  
Leeds LS10 2DD  
Phone: +44 (0) 113 276 88 88  
Fax: +44 (0) 113 271 81 88  
info@facultative-technologies.co.uk

[www.facultative-technologies.com](http://www.facultative-technologies.com)

Facultative Technologies is a member of The Facultative Group



## **BENEFITS OF THE FACULTATIEVE TECHNOLOGIES FT I, FTII AND FTIII CREMATORS**

There are **three** main benefits designed into the **FT** cremators enabling these products to be manufactured to a more competitive price while maintaining quality and performance.

### **1. Modular construction.**

The **FT I, II & III** cremator's modular construction enables the cremator to be fully assembled and tested under close supervision. Once tested, the cremator's refractory can be baked-in and commissioned before leaving the factory. **This both reduces time on site and offers client a cost saving on these high expense installation resources.** Once commissioned the cremator can be put on site, enabling the client to maximize his operating resource while minimizing down time for the crematorium.

### **2. High Technology insulation materials.**

The **FT I, II & III** cremator designs utilize the modern insulation materials to reduce heat radiation from the cremator's refractory shell, so optimizing the heat retention within the cremator.

These insulation materials reduce the overall content of the refractory brickwork, while maintaining the service life of the lining.

Reduced brickwork content means a lighter cremator with **faster preheat times and lower costs for future refractory repairs.**

### **3. User friendly computer system for operation and commissioning.**

The **FT I, II & III** cremators use a state of the art (up to date) control system from a recognized leading manufacturer, which provides for world wide support for spares and technical assistance. The PLC based control system is designed to provide instant access to the operator functions of the cremator without the need for expensive PC based computer systems and software. The control system also provides access for engineering staff to quickly, but effortlessly configure the **FT I, II & III** cremators to the specific needs of the client. Once configured, the parameters can easily be installed into the control system. The control system can also be configured for a variety of languages (including all European Languages) all pre-programmed and selectable with a few strokes of the Human Machine Interface keypad.



## FT I, II & III TECHNICAL ADVANTAGES

### 1. OPERATING SYSTEM - PLC Based Controls

The control system fitted to the *FT I, II and III* cremators is based upon the use of a **Programmable Logic Controller** – and not out dated electrical relays and electro mechanical timers as used by other manufacturers.

Facultatieve Technologies has utilized MITSUBISHI PLCs and as a result have in excess of ten years programming experience of these PLC control systems.

The use of such a control system enables infinite variability offered by the specialized “software PLC program”. Every *FT I, II & III* cremator is pre-installed with the dedicated PLC software. The special combustion PLC program is the result of more than forty years of Facultatieve Technologies experience.

Use of this technology, enables the cremator to be either operated in the fully automatic mode (considered as normal operation) or manual mode. Even in manual mode, the operator benefits from the **auto** control system monitoring the process thereby preventing dangerous situations. Safety is our number one priority.

Additional benefits of this PLC technology allow for high flexibility in the machine operator interface. As standard the *FT I, II & III* come with an HMI (Human Machine Interface) controller, providing a high degree of communication between the operator and the cremator. In this format, as an optional feature, the control system can be fitted with a **modem**, so enabling **Remote Engineering Support** by our dedicated support engineers. Such PC based operator interface systems can also offer high levels of data monitoring of the cremator's operation, and requires no computer skills by operators and are designed to make operation of the cremators as simple as possible.

The benefits of our combustion engineering and knowledge are wide ranging:

- fast and efficient cremation performance
- maximum energy efficiency – minimal fuel usage
- exceptional environmental performance
- high levels of automation – equipment requiring little or no manual intervention.
- utilizes Best Available Control Technology (BACT)
- equipment components meet both UL (Underwriter's Laboratory) and FM (Factory Mutual) standards



## **FT TECHNICAL ADVANTAGES**

**(Continued)**

### **2. ENERGY EFFICIENCY**

Energy efficiency isn't just about how well the **FT I, II & III** cremators are controlled, it has to be designed into the product on the drawing board. The selection of modern refractory and insulation materials make the **FT I, II & III** the most energy efficient products in their class. Use of high quality insulation materials ensures minimal heat loss from the cremator – thus enabling **faster preheat** times and reduced fuel usage during all modes of operation.

For improved energy efficiency the **FT I, II & III** cremators include Flue Gas Oxygen Monitoring equipment. This instrument constantly monitors the composition of the flue gases discharging from the cremation process, and takes "the guess work" out of how much post combustion air to add to ensure compliance with the emission regulations. However putting in too much post combustion air ensures good pollution control BUT cools the secondary chamber temperature REQUIRING large amounts of auxiliary fuel to heat the gases to the environmental requirements. Installation of Flue gas Oxygen analyzers is expensive – BUT eliminates the GUESS work involved in supply air to the cremator to ensure good environmental compliance, and guarantee **LOW AUXILIARY FUEL USAGE** and **ENVIRONMENTAL** compliance.

The **Average Fuel** consumption varies upon the number of cremations per day made by the cremator and we know a cremator will consume less gas (on average) the more cremations performed per day.

As way of illustration an **FT II** cremator performance:

- 5 cremations / day                      average fuel used per cremation: 210kWh  
or 20 m<sup>3</sup> of gas with CV 34,820kJ/m<sup>3</sup>  
or 716,520 btuh or 716.52 cfh (7.16 therms)

Note: this is approximately 75% less fuel consumption as compared to any other cremator on the market.

These figures **exclude** fuel necessary for preheating the cremator. The **FT I, II & III** cremators only require one preheat cycle per day since there is no cool down cycle between cremations. Immediately upon completion of the cremation cycle, the cremated remains are removed from the chamber and the next case can be loaded into the hot chamber.



## **FT TECHNICAL ADVANTAGES**

**(Continued)**

### **3. BURNER INFORMATION**

To ensure minimal fuel usage, the two burners fitted to the *FT I* cremator are configured for *on off control*. The *FT II & III* cremators are fitted with fully modulating burners. The burner systems are protected against flame failure, thereby complying with established gas regulations set forth by FM (Factory Mutual).

The main chamber burner has an operational rating of 250 KW (853,000 btu/hr), and this enables normal operating temperature in the range of 800°C (1,472 °F) to be achieved in the main chamber.

The secondary combustion zone burner has a maximum rating of 350 KW (1.2 mbtu/hr) which will enable temperatures of 850-1000°C (1,600-1,800 °F) to be achieved in the secondary chamber as required by Environmental Regulations.

#### **• Burner Data**

Burner manufacturer:	Eclipse Thermal Systems	
Burner type:	MVTA 104 Medium Velocity Tertiary Air Low NO <sub>x</sub> design	
Main chamber burner rating:	250 kW (853,000 btuh) 60 kW (204,720 btuh)	Max fire Min fire
Secondary chamber burner rating:	350 kW (1.2 mbtuh) 150 kW (511,800 btuh)	Max fire Min fire
Burner fuel:	Natural, Towns gas, Liquefied Petroleum gas (LPG), Propane	
Burner control:	On / Off firing rate for FT I Fully modulating for FT II & III	



## **FT TECHNICAL ADVANTAGES**

**(Continued)**

### **4. ENVIRONMENTAL COMPLIANCE**

The FT I, II & III cremators are designed to provide complete environmental compliance, for most cremation markets throughout the world. The *FTI* is designed to ensure a residence time in excess of one (1) second in the cremator's secondary chamber during all periods of operation while maintaining a minimum temperature of 850 deg C (1,600 °F) in the secondary combustion chamber, and thus **eliminating** visible emissions and odors.

The FT II & III cremators are designed to ensure a residence time in excess of two (2) seconds in the cremator's secondary chamber during all periods of operation while maintaining a minimum temperature of 850-1000 °C (1,600-1,800 °F) in the secondary combustion chamber, and thus **eliminating** visible emissions and odors.

### **5. CONTAINER LOADING**

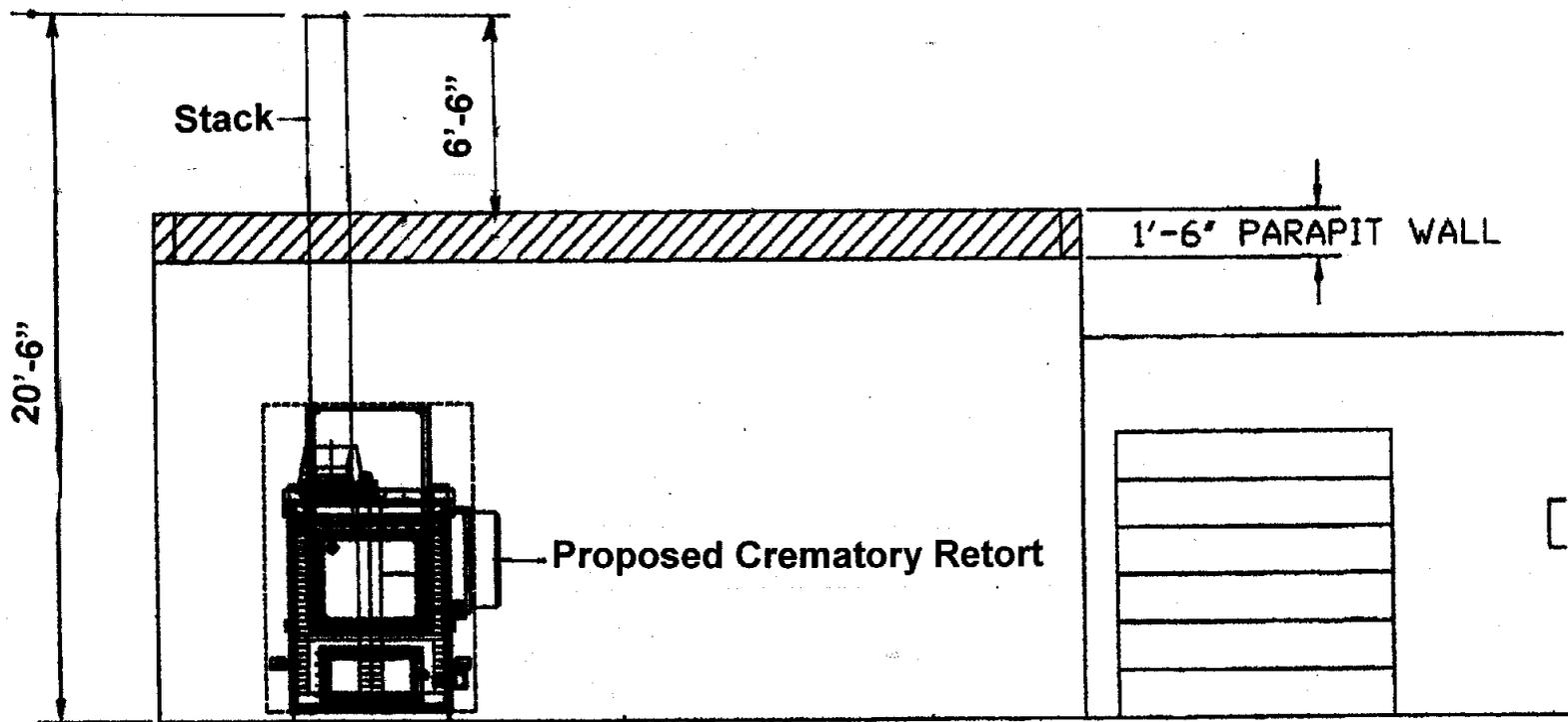
Container Loading is a simple task, assisted by the unique design of various type loaders. Numerous loading systems are available, and are dependent upon site layout and client preferences. Our solutions include automated loaders, to simple manual types.

### **6. CREMATED REMAINS REMOVAL**

The *FT I* is exclusively available in single end format (that is load front end and remove cremated remains from the same front end), such a format enables minimal facility space for an installation. The *FT II & III* are both available in single end and double end formats. The double end format allows loading of the body from the front of the cremator and removal of the cremated remains from the rear.

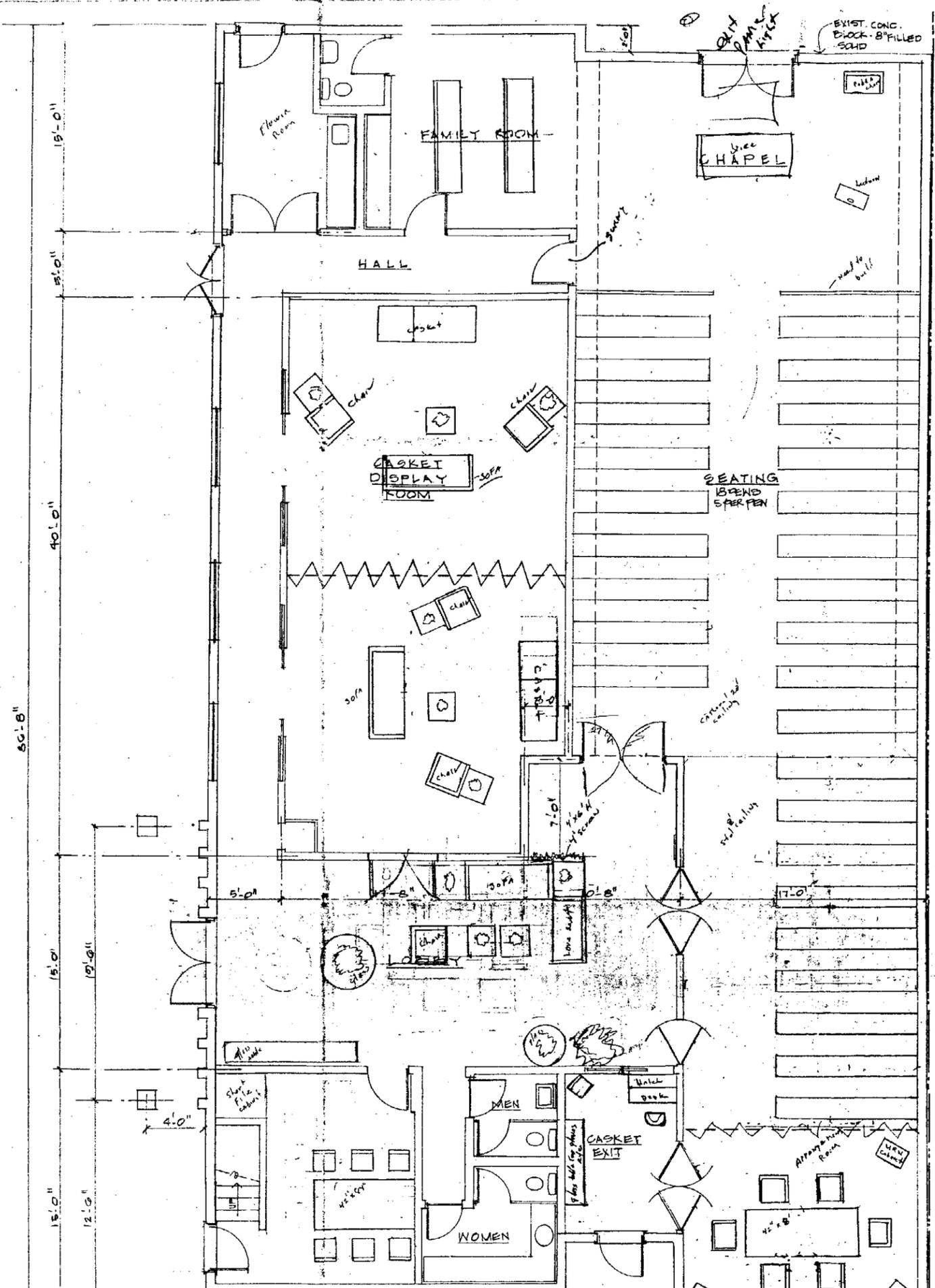
### **7. PERFORMANCE AND CAPACITY**

The *FTI* process routinely completes in 90 to 120 minutes. However, our engineers suggest even better performance may be achieved depending upon varying charge weights. Times of less than **70** minutes may be possible, while complying with the Environmental regulations. The *FT II & III* process routinely completes in **70** minutes when performing multiple cremations in the same day. The thermal design of the cremator, the use of specialized and highly advanced refractory and insulation materials ensures short preheat times and longer refractory lives contributing to lower operating costs.

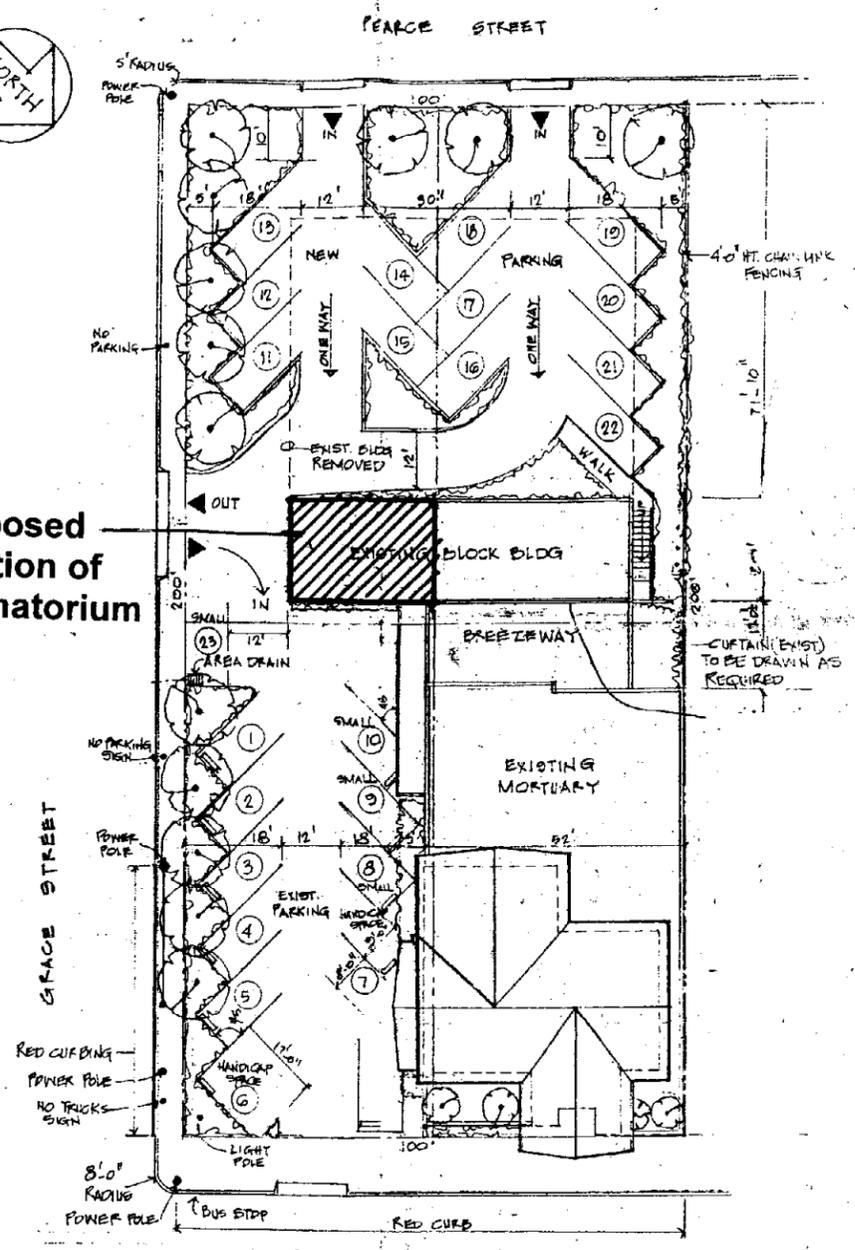


**View Looking South at Rear Building**

Project #  
PL-2005-0510 AUP



Proposed location of Crematorium



- ① PARKING SPACES - 45°  
9'-0" x 18'-0" EXCEPT
- SMALL CAR SPACES  
8'-0" x 16'-0"

MISSION BLVD (CASTRO STREET)

SITE PLAN 1/8"=1'-0"

NOTES:

1. LOTS 1 & 2 AND PORTIONS OF LOTS 29 & 30 - MAP OF THE PIERCE TRACT, HAYWARD, ALAMEDA CO. FEBRUARY 1885. BOOK G, PAGE 29
  2. PARKING FOR 50+ CARS AT ANY ONE FUNERAL -- 21 REQ'D.
  3. SEATING IN CHAPEL FOR 50+ FAMILY
  4. NO CREMATORIUM AT THIS CHAPEL
  5. PARKING SPACES SHOWN ARE 9'-0" x 18'-0" - 4 SMALL CAR SPACES.
  6. TOTAL LAND - 100' x 200' = 20,000 sq ft  
LAND COVER = 5,301 sq ft  
14,199 sq ft
- MORTUARY - A-3 TYPE 5-14 - 2 STORY 4501 sq ft  
STORAGE BLDG - H-4 TYPE 5N - 1 STORY 1400 sq ft

Project #

DESIGN GROUP - 1  
ARCHITECTS - PLANNERS  
445 17th St. SUITE 301  
OAKLAND, CALIFORNIA 94612  
TEL. 510-452-0185

EXISTING MORTUARY  
FOR  
MR. GENE MATTACH  
22201 MISSION BLVD, HAYWARD, CA.

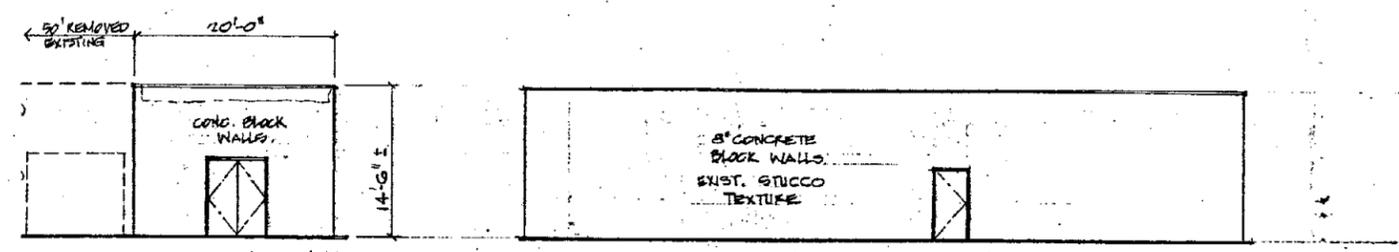
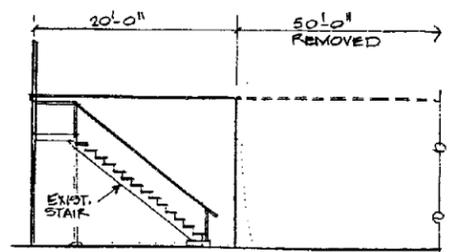
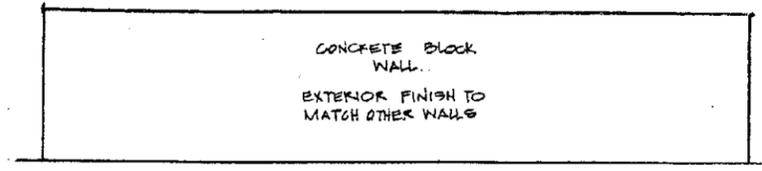
SITE & FLOOR PLAN  
EXISTING

DATE  
3-22-93  
REVISED

JOB NO.

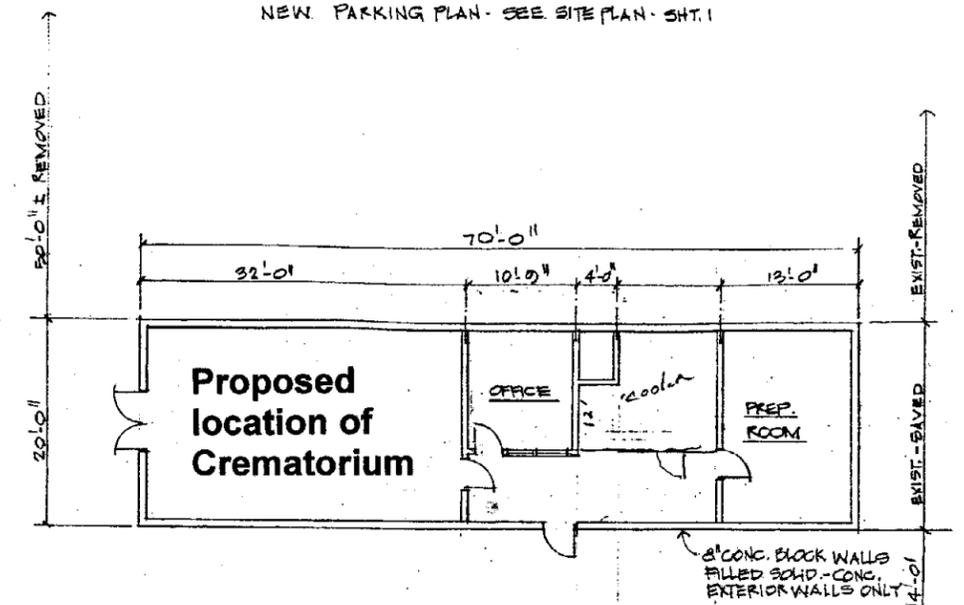
SHEET

1



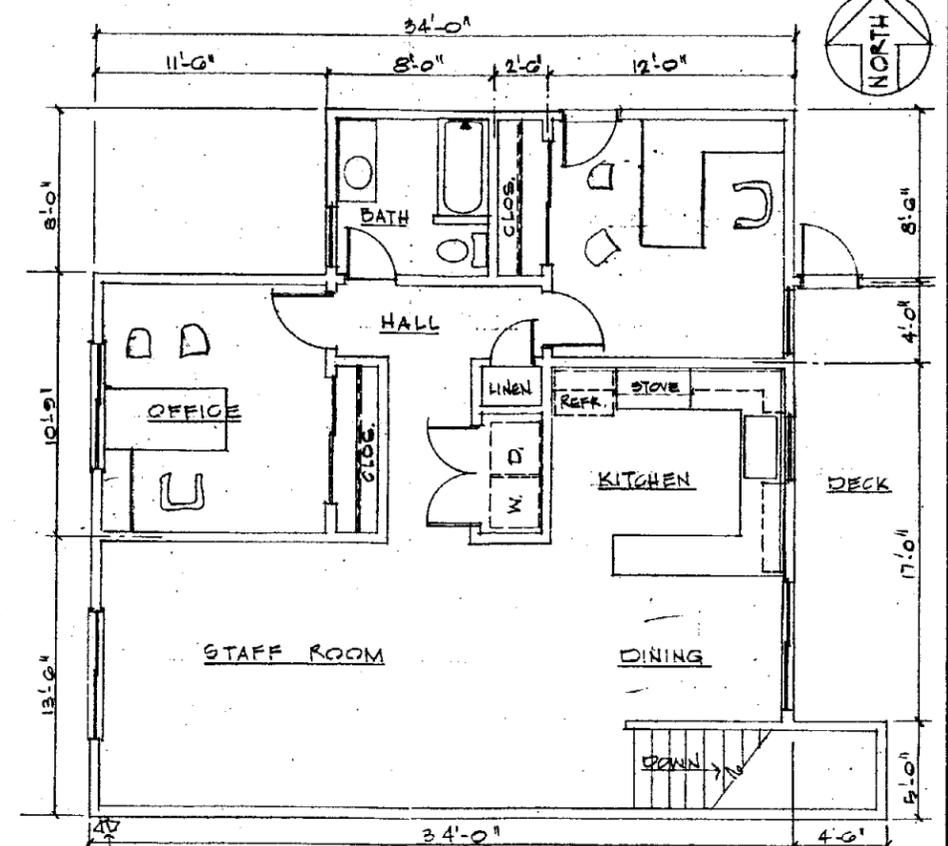
EXTERIOR ELEVATIONS - STORAGE AND PREPARATION AREA 1/8" = 1'-0"

NEW PARKING PLAN - SEE SITE PLAN - SHT. 1



STORAGE & PREPARATION AREA TO REMAIN. EXTERIOR ELEVATIONS TO THE LEFT - THIS SHEET. 1/8" = 1'-0"

MORTUARY WALL, 8" CONG. BLOCK WALL - FILLED SOLID W/ CONG. EXTERIOR WALLS



**DESIGN GROUP - 1**  
**ARCHITECTS - PLANNERS**  
 1117 BLAKE STREET  
 BERKELEY, CALIFORNIA 94702  
 TEL: 510-452-0155 or 510-385-1445  
 FAX: 510-705-8771

EXISTING MORTUARY FOR  
 MR. GENE MATTIACH  
 22297 MISSION BVD, HAYWARD, CA

SECOND FLOOR STAFF & OFFICE AREA, EXISTING BLDG. TO REMAIN - STORAGE & PREP. AREAS

DATE  
 REVISED  
 JOB NO.  
 SHEET