#### **CITY OF DARIEN**

# PLANNING AND ZONING COMMISSION

Wednesday, December 4, 2019 7:00 PM City Hall Council Chambers 1702 Plainfield Road

# **AGENDA**

- 1. Call to Order
- 2. Roll Call
- 3. Regular Meeting

# A. Public Hearing PZC 2019-03

Case: PZC 2019-03 7710 South Cass Avenue (Modell - Crematory)
Petitioner Modell Funeral Home, as owner of property at 7710 South Cass Avenue, seeks approval of a special use amendment for the construction of a building addition to operate a crematory as a secondary use.

- 4. Correspondence
- 5. Old Business
- 6. New Business
- 7. Approval of Minutes November 6, 2019
- 8. Next Meeting December 18, 2019
- 9. Public Comments [On any topic related to planning and zoning]
- 10. Adjournment

# AGENDA MEMO PLANNING AND ZONING COMMISSION December 4, 2019

Case

PZC 2019-03 7710 South Cass Avenue (Modell Funeral Home - Crematory)

#### **Issue Statement**

**7710 Cass Avenue, Modell Funeral Home:** Requests an amendment to the existing special use for the construction of a building addition to operate a crematory as a secondary use in the R-3 Multi-Family Residential zoning district.

#### **General Information**

Petitioners / Owners: Modell Funeral Home / Frank Modelski, Jr.

Property Location / PIN#: 7710 S. Cass Avenue / 09-28-410-014/5, 09-28-410-044 Zoning / Land Use: 7710 S. Cass Avenue / 09-28-410-014/5, 09-28-410-044

North: B-1 / Office

South: R-3 and O Office / Office, Multi-Family residential

East: R-2 / Single-Family residential West: R-2 and R-3 / former Medical Clinic

Comprehensive Plan: Future Land Use: Commercial Size of Subject Lot: 141,925 square feet, 3.25 acres

Natural Features: none

Transportation: Frontage to Cass Avenue (352') and Plainfield Road (169')

#### **Zoning Provisions**

Section 5A-2-2-6(G): Special Use Standards

Section 5A-7-3-3(D): R-3 Multi-Family Residence District; Special Uses

Ordinances O-3-77 and O-30-04

## **Development History and Proposal**

The petitioner proposes to construct an addition to the existing funeral home to house a crematory, garage space, viewing area and additional storage. The addition would be located on the southwest corner of the building, with a setback to the rear property line of 156' and the south property line of 81'. The proposed addition is 1,902 square feet, and would expand the current facilities from 11,690 to 13,592 square feet. The addition would match the existing construction of brick and stone for a seamless transition to the original building. The crematory would require a chimney stack that would rise to approximately 25' in height, yet have minimal impact as seen from Cass Avenue. All other code requirements of setback, building coverage, total lot coverage, height and site development have been met with the design.

A special use was granted to allow for the funeral home in 1977 (O-3-77). The special use was subsequently amended in 2003 (O-30-04) for an extensive expansion, plat of subdivision (consolidation) and other site improvements, but construction was delayed and substantially scaled back by the time construction occurred in 2013.

The approved Plat of Subdivision failed to be recorded in 2004; however, would now be required to be recorded prior to any additional planned improvements.

The approved special use was granted for an "Undertaking Establishment" in the R-3 Multi-Family Residence District, and although a crematory use is not specifically prohibited or permitted by definition, can be requested as a secondary or ancillary use to the original approval. An enlargement or increase in intensity of a special use requires amending the special use.

For reference, staff has compiled data from neighboring communities to illustrate how each would consider a similar request, as noted below:

Community	Defined As:	Permitted or Special Use
Bolingbrook	Not specifically addressed - likely considered under "Mortuaries and Funeral Homes"	Permitted in O-1 Limited Office District
Burr Ridge	Prohibited in Manufacturing, silent in other code	
Clarendon Hills	Prohibits cremation	
Darien	Not specifically defined, and considered as a function of "Undertaking Establishments"	Special Use in R-3 and B-1, Permitted in B-2 - Crematories specifically prohibited in Office and Industrial districts
Downers Grove	Funeral or Mortuary Service Uses that provide services related to the death of humans or companion animals, including funeral homes, mortuaries, crematoriums and similar uses	Special Use in the B1, B2, B3
DuPage County	Defined as a permissible activity of a cemetery	Special use in all residential districts, subject to 50' separation from building to residential lot line
Hinsdale	Formally defined	Special Use in the Open Space District
Lemont	Formally defined	Special use in B1 and B3
Westmont	Not specifically addressed - likely considered under "Undertaking Establishments and Funeral Parlors"	Special Use in B1, Permitted use in B2
Willowbrook	Not specifically addressed	
Woodridge	Prohibited in industrial districts -not explicitly allowed in other districts; therefore prohibited	

## **<u>Petitioner Documents</u>** (attached to this memo)

- 1. Petition
- 2. Crematory Power-Pak 1 Information
- 3. Equipment Emissions Calculation & Actual Test Results
- 4. State of Illinois ROSS Program
- 5. State of Illinois Administrative Code for the ROSS Program
- 6. Narrative addressing Special Use Standards
- 7. Narrative addressing Chemical Uses
- 8. FAQs
- 9. Plat of Survey
- 10. Zoning / Google Maps
- 11. Site Plan
- 12. Building Photos
- 13. Existing Building and Addition Floor Plan
- 14. Existing Building and Addition Elevations
- 15. Colored Building Elevations

## **Staff Documents** (attached to this memo)

- 16. Location Map aerial of neighborhood
- 17. Chapter 12 Performance Standards
- 18. Special Use Standards
- 19. Zoning Review Worksheet
- 20. Received Public Comments

#### **Staff Plan Review**

#### Zoning Review Summary

As previously discussed, no additional variations are requested or required for the proposed site improvements and building addition. A summary is noted below, and a full zoning analysis has been attached:

Bulk Standard	Required	Proposed
Building Height	35'	25'
Rear Yard Setback	~156'	50'
Side Yard Setback	~81'	15'
Principal Building Coverage	40%	11%
Impervious Surface Coverage	60%	48%
Parking		_
4 spaces per 1,000 square feet of gross floor		
area	54	
AND 2 spaces per dwelling unit	4	
Total	58	77

Staff also notes that the immediate proximity of the building addition to adjacent residential property lines is 92' to the south and 156' to the west.

To permit construction, the previously approved Plat of Subdivision would be required to consolidate all underlying lots. Additionally, a condition from the 2004 approval had required the single-family home adjacent Plainfield Road be removed once vacated by the owner's family. Now currently vacant, the petitioner acknowledges the condition and would demolish the house with construction.

#### Chapter 12 Performance Standards and Tier II Chemical Uses

In April of 2019, City Council approved revisions to the Zoning Ordinance to further regulate businesses in the in O, ORI, and I-1 districts to prohibit any businesses that would involve the storage, utilization or manufacture of hazardous chemicals that would be subject to the Tier II Reporting requirements as defined by USEPA. Although this code section does not apply to any businesses located outside of the O, ORI and I-1 districts, the petitioner has provided information that the crematory use would be compliant with this provision.

Additionally, Chapter 12 of the Zoning Ordinance addresses performance standards for all businesses, and includes regulation parameters for noise, odors, and emissions (smoke, and particulate matter, gasses, toxic or noxious matter). The business must comply with these local amendments in addition to any state or federal requirements. Staff has advised the petitioner that these standards should be discussed and addressed throughout the public hearing process.

#### **Recommended Conditions**

In the event that the Planning and Zoning Commission make a motion recommending approval, staff recommends the following conditions or provisions be required by ordinance:

- 1. The Plat of Subdivision (lot consolidation) as approved in 2004 with Ordinance O-30-04 be submitted for recordation with DuPage County prior to the issuance of any building permits.
- 2. The single-family home located on Plainfield Road be demolished as required by O-30-04 prior to the issuance of any Certificate of Occupancy for the addition.

#### **Pending Meeting Schedule**

Planning and Zoning Commission: December 4, 2019
Municipal Services Committee: December 23, 2019
City Council: January 6, 2019

# PUBLIC NOTICE CITY OF DARIEN PLANNING AND ZONING COMMISSION

Notice is hereby given that the Planning and Zoning Commission of the City of Darien will hold a public hearing on December 4, 2019 at 7:00 p.m. in the Council Chambers at City Hall, 1702 Plainfield Road, Darien, IL 60561.

The purpose of the public hearing will be to hear testimony from interested persons and make a recommendation on Case #2019-03. This case involves a petition from Modell Funeral Home to request an amendment to the existing special use for the construction of a building addition to operate a crematory as a secondary use.

Said property is legally described as follows:

PARCEL 1: THAT PART OF LOT 1 OF DALLNER'S ASSESSMENT PLAT OF THE EAST 521.0 FEET OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE CENTER LINE OF PLAINFIELD ROAD (EXCEPT THE EAST 50 FEET THEREOF) ALSO (EXCEPT THE SOUTH 689.10 FEET OF THE WEST 242.4 FEET OF THE EAST 292.4 FEET THEREOF), ACCORDING TO THE PLAT THEREOF RECORDED MAY 14, 1952 AS DOCUMENT NO. 651573, DESCRIBED AS FOLLOWS: BEGINNING AT A NORTHEAST CORNER OF LOT 1 AFORESAID, (BEING ALSO THE SOUTHEAST CORNER OF LOT 3); THENCE SOUTH ALONG THE EAST LINE OF LOT 1 AFORESAID, FOR A DISTANCE OF 171.85 FEET TO THE NORTHEAST CORNER OF LOT 1 IN DALLNER'S SUBDIVISION, RECORDED FEBRUARY 27 1961 AS DOCUMENT NO. 998052; THENCE WEST ALONG THE NORTH LINE OF LOT 1 IN DALLNER'S SUBDIVISION, AFORESAID, FOR A DISTANCE OF 253.48 FEET TO THE NORTHWEST CORNER OF LOT 1 IN DALLNER'S SUBDIVISION AFORESAID; THENCE NORTH PARALLEL WITH THE EAST LINE OF LOT 1 OF DALLNER'S ASSESSMENT PLAT AFORESAID, FOR A DISTNACE OF 171.85 FEET; THENCE EAST ALONG THE NORTH LINE OF SAID LOT 1 AND SAID NORTH LINE EXTENDED WEST, FOR A DISTANCE OF 253.48 FEET TO POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PARCEL 2: THAT PART OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT A POINT 1376.49 FEET NORTH OF THE SOUTH LINE OF SAID SOUTHEAST QUARTER AND 50 FEET WEST OF THE EAST LINE OF SAID SOUTHEAST QUARTER; THENCE WEST AT AN ANGLE 90 DEGREES TO THE EAST LINE OF SAID SECTION 242.4 FEET; THENCE NORTH PARALLEL TO THE EAST LINE OF SAID SECTION 179.7 FEET; THENCE EAST 242.4 FEET; THENCE SOUTH 179.7 FEET TO THE PLACE OF BEGINNING, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF LOT 1 IN DALLNER'S ASSESSMENT PLAT OF THE EAST 521.0 FEET OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE CENTER LINE OF PLAINFIELD

ROAD (EXCEPT THE EAST 50 FEET THEREOF) ALSO (EXCEPT THE SOUTH 689.10 FEET OF THE WEST 242.4 FEET OF THE EAST 292.4 FEET THEREOF), ACCORDING TO THE PLAT THEREOF RECORDED MAY 14, 1952 AS DOCUMENT NO. 651673, DESCRIBED AS FOLLOWS: BEGINNING AT A NORTHEAST CORNER OF LOT 1 AFORESAID, (BEING ALSO THE NORTHWEST CORNER OF LOT 2 IN DALLNER'S ASSESSMENT PLAT AFORESAID), THENCE SOUTH ALONG AN EAST LINE OF LOT 1 AFORESAID, 303.49 FEET TO THE SOUTHWEST CORNER OF LOT 3 IN DALLNER'S ASSESSMENT PLAT, THENCE WEST ALONG THE WESTERLY EXTENSION OF THE SOUTH LINE OF LOT 3 AFORESAID, A DISTANCE OF 11.08 FEET TO THE NORTHERLY EXTENSION OF THE WEST LINE OF LOT 1 IN DALLNER'S SUBDIVISION, RECORDED FEBRUARY 27, 1961 IN BOOK 41 OF PLATS, PAGE 4 AS DOCUMENT NO. 998052; THENCE SOUTH ALONG SAID NORTHERLY EXTENSION, A DISTANCE OF 158.91 FEET OF THE NORTH LINE OF THE SOUTH 1220.99 FEET OF THE SOUTHEAST QUARTER OF SECTION 28 AFORESAID; THENCE WEST 142.5 FEET TO THE EAST LINE OF THE WEST 75.0 FEET OF THE EAST 527.0 FEET OF THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 28 AFORESAID, THENCE NORTH ALONG SAID EAST LINE A DISTANCE OF 391.54 FEET TO THE NORTHERLY LINE OF LOT 1, AFORESAID; THENCE NORTHEASTERLY ALONG SAID NORTHERLY LINE OF LOT 1, A DISTANCE OF 169.15 FEET TO THE POINT OF BEGINNING IN DUPAGE COUNTY, ILLINOIS.

PINs: 09-28-410-014; 09-28-410-015; 09-28-410-044

The property is located at 7710 Cass Avenue, Darien, Illinois 60561.

Said petition, plan and plat with legal description and PIN# of property may be viewed at City Hall and on the City website: <a href="www.darien.il.us">www.darien.il.us</a> starting on November 29, 2019. Verbal and written questions, comments, and testimony prior to the hearing may be directed to the City Planner at City Hall, 630-353-8113, <a href="mailto:jhennerfeind@darienil.gov">jhennerfeind@darienil.gov</a>. For questions on disability access, contact the City ADA Coordinator at (630) 852-5000.

JoAnne E. Ragona, City Clerk Published in the DuPage Chronicle on November 20, 2019

November 12, 2019

# MODELL FUNERAL HOME ADDITION PROJECT

# 7710 SOUTH CASS AVENUE DARIEN, ILLINOIS

## PROJECT CONTACTS:

Owner Representative,
Andrew Brunsen, 630.852.3595
andrew@modelldarien.com

° Architect, Richard Willich, 630.986.9119 rktectw@hotmail.com

#### PROJECT MANUSCRIPT INDEX:

A.	Zoning & Development Application	2 pages
B.	Crematory Power-Pak l Information	19 pages
C.	Equipment Emissions Calculation	F0-0
	& Actual Test Results	9 pages
D.	State of Illinois ROSS Program	2 pages
E.	State of Illinois Administrative Code	- 1-0-0
	for the ROSS Program	8 pages
F.	Final List of Property Owners	1-0
	within 250' of the Project Property	1 page
G.	City of Darien Review Requests	1 page
	1. Narrative addressing Special	1 .5.
	Use Section 5A-2-2-6(G)	2 pages
	2. Narrative addressing City	1.0.
	Ordinance O-13-10	2 pages

## PROJECT DRAWING INDEX:

Partial Zoning Map & Google Earth Location Plan
Site/Building Position Plan
Building & Perimeter Photographs
Existing Building & Addition Floor Plan
Existing Building & Addition Elevations
Colored Building Elevations

Manuscript No.



# **ZONING APPLICATION**

# CITY OF DARIEN 1702 Plainfield Road, Darien, IL 60561 www.darienil.us 630-852-5000

COLA I SACT HARMACHE WIND RING LINE	CONTACT	<b>INFORMATION</b>
-------------------------------------	---------	--------------------

MODELL FLWERAL HOME	FRANK A. Modelski, Je
Applicant's Name	Owner's Name
7710 5 6000 400 0 5 7 1	70
Address, City, State, Zip Code 60561	1710 S. CASS ANE. Darley, IL 60541
30361	Address, City, State, Zip Code
630-832-3595	630-852-3595
Telephone	Telephone
andrew e modell darien, com	
Email	andrew e modelldation, com,
en de la companya de	Email
PROPERTY INFORMATION	
75. 6 6 1	
7710 S. Cass Avenue Parien, IL	0928410044
Property address (60 56)	PIN Number(s)
	SPECZAL USE
Zoning District	Current Land Use(s)
	Carett Lotte Ose(s)
(Attach additional information per the Submittal Checklist.)	
Th E-0.1 second	
REQUEST	
Brief description of the zoning approval requested. (Contact ti	he City Planner for guidance.)
Reguestence Approval to Expans	d PUERCAL ELAPON III
	CHILCH LIMBERT HOME
STEUCTURE to Include a crev	matoN. GARAGE SPACE
viewing AREA and Additional	storage.
As Notes, Bublished Francisco	
As Notary Public, in and for DuPage County in Illinois, I do hereby certified that	tify For office use only
by me to be the same person whose name is subscribed above and his	
appeared before me this day in person and acknowledged that they h	
signed this document as their own free and voluntary act, for the	
purposes therein set forth.	Hearing Date:
	P.
L. Wan Roan QOa	
	RI L MARRELLA
Notary Bu	Official Seal oblic - State of Illinois
	on Expires Sep 21, 2022

# 1702 Plainfield Road, Darien, Illinois 60561 DEVELOPMENT APPLICATIONS

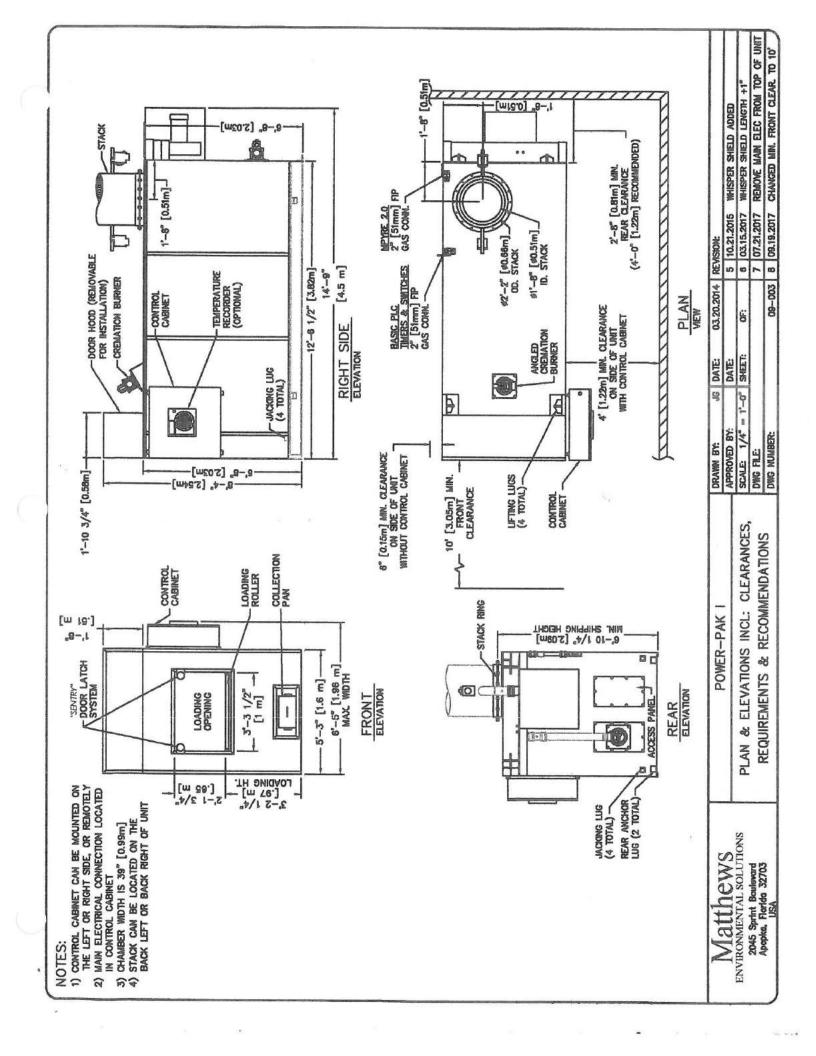
# REIMBURSEMENT AGREEMENT

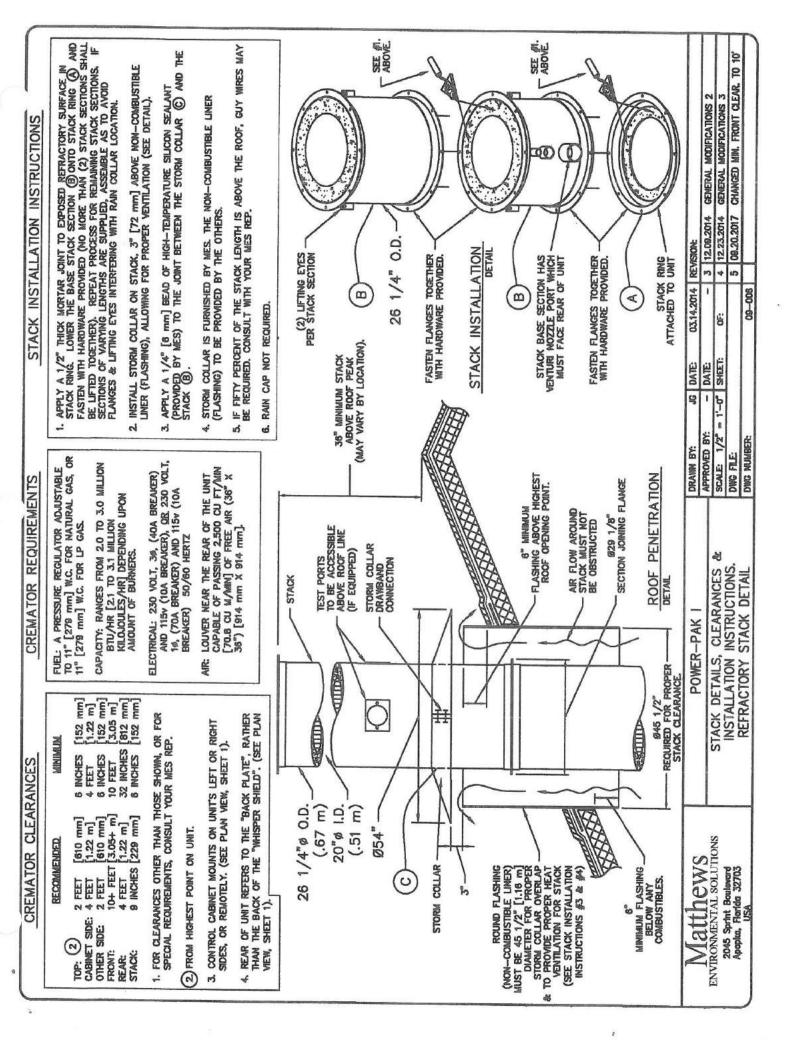
The undersigned applicant for development approval acknowledges that the City of Darien may seek advice and council from professional sources outside the employee staff of the City of Darien. The purpose of such consultation would be for traffic impact analysis, engineering, stormwater, legal, or other such reviews related to variation, special use, rezoning, subdivision, site plan, permits, or other proposals submitted to the City of Darien by the applicant. The City of Darien may also incur expenses as part of the development review and approval process, such as copying, mailing, publication, recording, inspecting, or other such activities.

As an express condition in submitting said application and the consideration thereof by the City of Darien, the applicant both personally and on behalf of the property owner(s), agrees to reimburse the City of Darien forthwith for all costs and expenses that may be incurred by the City of Darien for such consultation and activities.

The applicant hereby accepts and acknowledges that if at any time the application falls to pay for such consultation and activity costs in accordance with the direction of the City of Darien, the no further action will be taken by the City of Darien in relation to the application until such time as said payment is paid in full.

FRANK A. Modelski, JR.	
Applicant's Name (print)	
Frankle Modelski, Jr. Applicant's Name (signature)	
Applicant's Address	
Applicant 3 Address	
10/15/19	
Date	







# PowerPak I

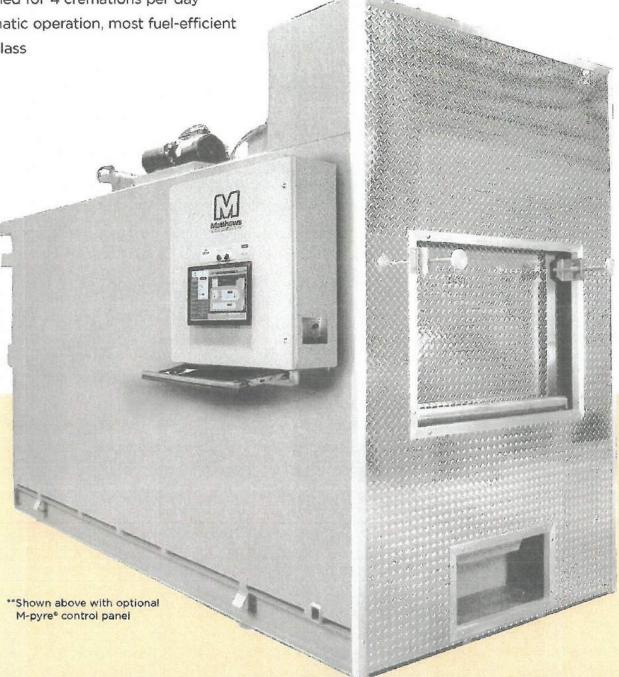
# The Basic Essential













# Just Right for Your Business

The PowerPak I Cremation System is designed to meet the needs of low-volume cremation businesses that perform four or less cremations each day. Whether you're just starting out, or you're adding cremation as a new service for the families you serve, you want reliable equipment from a manufacturer you can trust. That's why we've taken our decades of field-proven innovation and experience and engineered them into every detail of the PowerPak I.

The PowerPak I is just right for your business. It's fully automated, and can be modified to work with our advanced M-pyre 2.0 remote operating and monitoring system. And because it's the fastest and most fuel-efficient cremator in its class, you'll save time and money that you can use to build your business for the future.

# Ready To Go

The PowerPak I arrives at your doorstep ready to go. It comes pre-wired, pre-piped, and pre-tested. All you have to do is off-load your cremator, provide one connection for gas and one for electricity, and be prepared to accommodate the exhaust stack. That's it: as simple as one, two, three.

# **Automatic Operation**

The self-monitoring control system simplifies the cremation process and allows your cremator to shut itself off upon completion of the cycle.

# **Operator Safety**

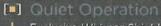
We're serious about safety. That's why our cremators are tested and listed by Underwriter's Laboratories (UL).



# The Future Of Cremation: Matthews Gives You More

Matthews is redefining the future of cremation. We offer a powerful partnership that gives you access to our global resources and combines all of our engineering talents. With more than 100 of years of experience and 4,500 installations in over 50 countries, we are the most trusted brand in cremation technology and service. Count on Matthews to help build your business for both today's challenges and tomorrow's opportunities.

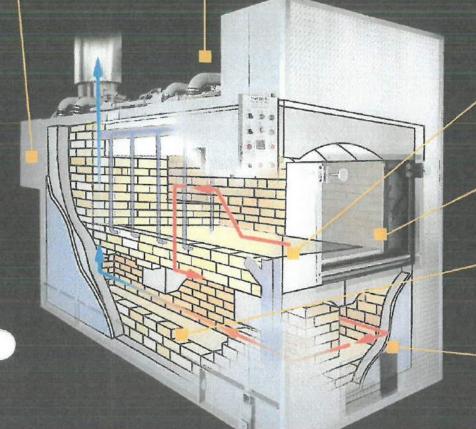
Visit us at MatthewsCremation.com.



Exclusive Whisper Shield allows operation without disturbing other services.

## Angled Burners

Innovative burner design improves productivity and saves fuel.



## [ ] Cremation Chamber Floor

Unique *Hot Hearth* design eliminates fluid runoff and minimizes fuel consumption.

# [•] Automatic Loading | Door

Heavy-duty door opens and closes at the touch of a button.

# [II] Smoke Buster" System

Advanced chamber airflow for complete combustion of smoke and odor.

# [ ] Added Insulation

A full 12" of multi-component material to increase operator safety and reduce heat loss & maintenance costs.



\*\*Configuration above shown with basic control panel. Upgraded control panels are available

# The Power of Partnership

- Financial ROI Analysis
- Zoning and Permitting Support
- Operator Training and Certification
- 24/7 Customer Service and Support
- Custom Engineering and Design
- Facility Layout and Design
- Crematory Accessories and Supplies
- Leasing and Financing Options
- Turn-Key Installation

# PowerPak I Specifications

Overall Height: 8' 4" (2.54 m)

Overall Width: 6' 5" (1.98 m)

Overall Length: 14' 8" (4.47 m)

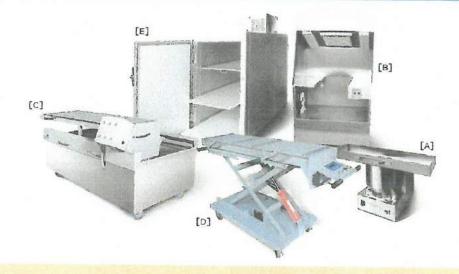
Weight: 23,400 lb. (10,614.1 kg)

Fuel: Natural or L.P. Gas (Oil available)

Electrical: 230 volts, 1-phase/3-phase

Control panel can be located right, left or remote

# Get the Most from Your Matthews Cremator



# System Accessories

# [A] ECP-200 Electric Cremated Remains Processor

- Reduces cremated remains to fit standard-sized urns
- Average processing time ≤ 30 seconds
- Quiet and dust-proof

# [B] VPS-1 Processing Station

- Recovers dust when transferring cremated remains for operator safety
- Ventless design eliminates wall or ceiling openings
- Built-in overhead lighting adds convenience and safety
- Steel frame construction, finished with heavy-gauge stainless steel

# [c] Auto-Loader

- Increases production and enhances operator safety
- Extends the cremation chamber floor life.
- Offers a professional presentation during family viewing

# [D] Hydraulic Lift Table - LT1BS

· Includes battery and scale

# [E] Three-Body Cooler

- Safe storage until final disposition
- Thermostatically controlled system maintains constant temperature
- Removable shelves accommodate a mortuary cart or caskets

# [\*] M-pyre\* 2.0

- Most advanced cremation technology through our M-pyre<sup>8</sup>2.0 system with intuitive logic control (ILC).
- Allows internet connection to enjoy the ability to remote preheat, monitor the cremator activity, view performance reports, track maintenance and communicate directly to your Matthews team.



# Installation Scope and Instructions Model: Power-Pak I

Section I:	Basic Scope of Installation		
		1-page summary of your responsibilities	
Section II:	Insta	allation Instructions	
		Detailed installation specifications and requirements	
		Give a copy of this section to your contractor(s)	
Attachment:	Pre-	Construction Checklist	
		Complete this with your contractor(s)/architect and return to Matthews	



# I. Basic Scope of Installation

This is a summary of your key responsibilities to arrange and complete prior to the delivery and installation of your cremation equipment ("cremator"). Please make sure to read the remaining document as well (Section II) in its entirety.

	Complete Pre-Construction Checklist included in this packet and return to our Production department (Seth) along with your approved environmental permit.
	Arrange with a local crane/rigging company to offload and set the cremator as well as the stack. Weight Requirement = 23,400 lbs or 12 tons
	Engage a roofing company to cut an opening in the roof and install a non-combustible flashing per specifications included in Section II. Flashing is not provided by Matthews.
	Roof penetration and flashing must be completed <u>before the date of installation</u> , not day of or after delivery.
	Ensure a $36" \times 36"$ air make-up louver is installed into an outside wall (2,500 cfm).
	A plumber licensed to run gas lines must install a gas line from the meter to the cremator per specifications included in Section II.
1	Must include a second stage gas regulator, see page 8 for details.
	A licensed electrician must provide required electrical service for the cremator and accessories per specifications included in Section II.
	Cremators with M-pyre 2.0 Only: Have your local network provider install an internet connection via a hard-wired ethernet cable to the unit control panel computer, with 6 feet extra. Minimum internet speed of 128 kps is required.

# Questions or Concerns Regarding the Installation Scope and Instructions?

Please contact your Matthews Installation Specialist:



Seth Calhoun

Phone: 800-327-2831 ext. 6165

Email: scalhoun@matw.com



# II. Installation Instructions: Power-Pak I

The following installation instructions and pre-construction checklist are provided to assist you with the installation of your new cremator. Please review these instructions in detail with your contractor(s) involved in the installation (crane, plumbing/gas, roofing, electrical etc).

All local, state and national codes as well as MES requirements must be adhered to for the safe installation and operation of this equipment. In cases where the recommendations of MES are more stringent than the local, state or national codes, the MES recommendations should be followed.

Don't forget to complete the Pre-construction Checklist attached to this document. This must be completed and returned to us before we can begin fabrication of your new cremator.

Rev 11.13.18



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# 1. The Arrival, Unloading and Setting of Your Cremator

#### A. Arrival Schedule

Your new cremator will arrive at your facility at a pre-arranged date and time. The truck driver will call you 24 hours prior to delivery to confirm the schedule.

# B. Tarp Removal

The cremator will arrive on a flatbed trailer, covered with a tarp to protect it against the weather. The tarp will be removed before unloading the unit, but extra care should be taken not to step on any of the components located on the top and rear of the cremator.

# C. Crane Requirements

A crane will be needed to unload the cremator from the flatbed trailer. Ensure your crane service company is aware of the date and time of the delivery to avoid delays and to coordinate the unloading.

The crane service company will also need to know the approximate weight of the cremator (listed below) and might possibly need to survey the installation site before selecting the correct size of crane for the job.

Cremator Model	Weight	
Power-Pak I	23,400 lbs (10,614 kg) or 12 tons	

Note: See specific equipment drawings given to you during the Technical Review for details.

#### D. Connect the Cremator to the Crane

The cremator has four lifting lugs on the top near the four corners, as well as four jacking lugs located at the bottom four corners. The crane must be connected to each lifting lug with a lifting cable approximately 15 ft in length. Once secured, the cremator may now be slowly lifted and moved over to the opening in the building.

# E. Lower Cremator Through Roof

When the cremator is over its intended location, slowly lower it onto the floor. If rollers are used, you may lower the cremator by jacking up the front using the provided jacking bars and remove the front rollers. Repeat this procedure to remove the rear rollers.

# F. Roll Cremator Through Side Opening

If the cremator is to be rolled into the building through an opening in the side, have the crane move the cremator as far into the building as possible. It should then be lowered onto rollers placed under the steel channels running the full length of the sides of the machine.

If the cremator is already on the floor and you now need to place over rollers, you should use the jacking lugs. These lugs are the 2"x 2" square steel pieces shipped in the cremator's control panel and should be inserted in the square slots at the bottom corners to provide lift points. Place strips of metal under the rollers to protect your driveway or floor from damage by the rollers. If the crane company does not provide rollers, 12-inch long pieces of 1-inch diameter cold rolled steel round stock may be used.

Do not attempt to drag the cremator into place without the use of rollers.

# G. Check the Leveling and Clearance

Once the cremator is in place, it must be leveled to ensure proper operation. Use a 4' level and verify the cremator is level within 1/8" front to back and side to side. If shims are required, use steel shims and place them under the bottom side channels by jacking up the necessary corner.

The cremator must have at least 6 inches of clearance from the top and sides to combustibles materials, 32 inches from the rear bottom corner and 10 feet from the front of the unit. 4 feet of clearance is also needed on the panel side of the unit.

# H. Utility Connections and Secure to Floor

After the cremator is leveled, the jacking bars may be removed, and the stack and utility connections made.

Secure the cremator to the floor using provided concrete anchors and lag bolts located in the control panel of the cremator. The cremator has two (2) lugs at the back corners of the base.

# 2. Stack Installation

# A. Roof Opening Requirements and Stack Diameter

The hole cut in the roof for the stack must be at least 12" larger in diameter than the outside diameter of the stack and roof flashing must also be installed (not supplied by Matthews). The table below details the stack diameters and the roof opening requirements for this model:

Cremator Model (Stack Type)	Stack Diameters (O.D.)	Roof Opening
Power-Pak I (Refractory Lined)	26-inch	45-inch (114 cm)

Note: See specific stack drawings given to you during your Technical Review for details.

It is critical that there is a minimum of 6" clearance on all sides of the stack from any non-combustible materials. The entire area where the stack passes through the roof

Rev 11.13.18 Page 6 of 12

must be lined with a non-combustible material to prevent long-term exposure to the stack heat (refer to drawing). If these guidelines are not followed, it will result in a fire hazard.

#### B. Crane for Stack Installation

The stack sections are heavy sections of steel and insulation to be attached to the cremator. Therefore, the crane utilized to unload the cremator should also be used to install the stack section in the appropriate location on top of the cremator.

The weight of the stack sections depends on the type of stack (3.0 or 4.5 Refractory Lined) and on the length of the stack section (stack length adjusted to site-specific roof heights). The Refractory Lined Stack weighs approximately 300 lbs/ft (450 kg/m).

To verify the length of your stack, please contact your Matthews Installation Specialist.

# C. Proper Installation to Prevent Fire Hazard

These stack assembly instructions must be carefully executed for proper installation and all applicable codes must be adhered to. If MES recommendations are more stringent, these should be followed. Any deviations may create unsafe operating conditions for the cremator and/or a fire hazard.

# 3. Fresh Air Requirements

## A. Air Inlet or Louver

Fresh air is required for draft, combustion and cooling.

It is important that you have an air inlet or louver large enough to pass 2,500 cubic feet/minute of fresh air (approximately 36" x 36"). For the selection and installation of this louver, contact a local heating and air conditioning company, your architect, or your building contractor.

#### B. Cross Ventilation Recommended

Cross ventilation to eliminate heat accumulation is optional. If desired, we recommend the installation of two 10" non-motorized self-propelled turbines in the roof, locating one towards the rear area of the cremator and the other towards the front.

# C. Direct Ducting

If using direct ducting a  $18'' \times 18''$  louver needs to be installed. For installation please contact a local heating and air conditioning company, your architect, or your building contractor.

# 4. Gas Connections

# A. Manual Shut-off Valve Location

All gas connections are made to the 2" manual shutoff valve located on top of the cremator.

A manual safety shut-off valve should be located within the room in an easily accessible location, in case of emergency.

# B. Maxitrol RV81 Regulator

The Maxitrol RV81 regulator along with any other regulator used inside the building should be vented to the outside.

The Maxitrol RV81 regulator on top of the unit cannot be used as the second stage regulating valve for high pressure installations.

# C. Second Stage Regulator

The second stage regulator (provided by contractor) must be as close to the cremator as possible to ensure minimum fluctuations in gas flow and pressure.

#### D. Gas Pressure

Gas pressure requirements for all models are:

Natural Gas or LP Gas: 11" w.c. running pressure at the cremator

#### E. Gas Flow

Gas flow requirements are based on the number of burners on the cremator. The Pre-Heat Burner is an add-on burner required for some states.

Please contact the Production Department to inquire whether your unit will require a Pre-Heat Burner. The table below details the gas flow requirement necessary per unit for proper operation.

Cremator Model	Gas Flow Requirement for Natural Gas	Gas Flow Requirement for LP Gas			
Power-Pak I with Timers & Switches or Basic PLC System	2700 ft³/hr (76.5 m³/hr)	1080 ft <sup>3</sup> /hr (30.5 m <sup>3</sup> /hr)			
Power-Pak I with M-pyre System or Operating Temp > 1600°F	3000 ft <sup>3</sup> /hr (85 m <sup>3</sup> /hr)	1200 ft <sup>3</sup> /hr (34 m <sup>3</sup> /hr)			

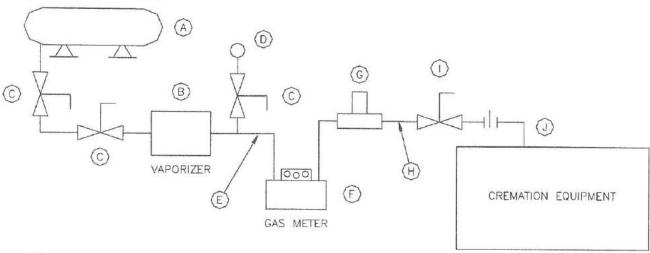
Note: See specific equipment drawings given to you during the Technical Review for details.

#### F. LP Gas Schematic Illustration

The following schematic illustrates the configuration for an LP Gas System Installation.

NOTE: An LP gas vaporizer is recommended for locations where daytime high temperatures are often below 40° F.

1,000 GALLON L.P. TANK

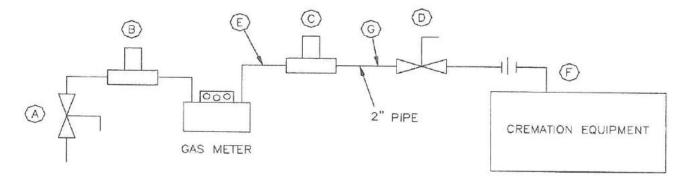


## Schematic Legend

- A 1,000 gallon minimum L.P. storage tank (supplied by your contractor) is recommended for each cremator. Install the tank, vaporizer, and piping in accordance with local codes. Vaporizer in locations where daytime high temperatures are often below 40° F (supplied B by your contractor). C Manual gas shut-off valves (supplied by your contractor). O to 10 psi gauge, pressure to be set at 8 psig with isolation valve (supplied by your D contractor). E Pressure at this point should be adjusted to 8 psig. F Vapor meter American #AL425-10 (supplied by your contractor). These meters are also available from Matthews. Second stage regulator (supplied by your contractor). Install as close as possible to gas connection on the cremator. RV-81 Maxitrol regulator located on top of the unit cannot be used as the second stage regulator. Pressure at this point to be adjusted to 11" water column running pressure. H 1 Manual gas shut-off valve in room (supplied by your contractor). J 2" female iron pipe (FIP) connection on cremator.
  - MPORTANT: Do not connect any other gas lines for other uses between the regulator (labeled G above) and the cremator.

## G. Natural Gas Schematic Illustration

The following schematic illustrates the configuration for a Natural Gas System Installation:



## Schematic Legend:

Manual gas shut-off valves supplied by your local gas company.
High pressure regulator supplied by your local gas company (high pressure installations only).
Second stage regulator (supplied by your contractor). Install as close as possible to gas connection on cremator. RV-81 Maxitrol regulator located on top of the unit cannot be used as the second stage regulator.
Manual gas shut-off valve inside room (supplied by your contractor).
Pressure between meter outlet and regulator.
2" female iron pipe (FIP) connection on cremator.
Pressure after regulator to be adjusted to 11" water column running pressure.

IMPORTANT: Do not connect any other gas lines for other uses between the regulator (labeled C above) and the cremator.

# 5. Electrical Connections

# A. Factory Wiring and Voltage

Matthews cremators are factory wired with 10ga wire for three phase, and 8ga wire for single phase electrical power.

The incoming power electrical connections for the high voltage (230V or 208V or 460V) are to be made to the power distribution block inside the control panel of the unit. The control voltage (115V) is to be made directly to the top of the 5A fuse located in the panel. All these connections are labeled accordingly.



# **B.** Necessary Breaker Sizes

The following table states the necessary recommended breaker sizes per cremator model:

Cremator Model	230V/1Phase	208V/3Phase	230V/3Phase	460V/3Phase	
	& 115V	& 115V	& 115V	& 115V	
Power-Pak I	70 Amp & 10 Amp	50 Amp & 10 Amp	40 Amp & 10 Amp	25 Amp & 10 Amp	

Note: See specific equipment drawings given to you during the Technical Review for details.

## C. Cremator Electrical Circuits

Motor rotation and all other aspects of the electrical circuits of the cremator will be checked by the startup technician when he arrives for start-up.

IMPORTANT: Do not operate the equipment before technician arrives to start-up your cremator, as it may cause damage and void your warranty.

# D. ECP & VPS Accessories' Electrical Specifications

The ECP (Electric Cremains Processor) and VPS (Ventless Processing Station) both come with a NEMA L5-30P plug. A 30 Amp NEMA L5-30R receptacle with a 30 Amp minimum breaker is needed for the 120 V, 60 HZ power requirement per accessory.

# 6. Internet Requirements: M-pyre 2.0 Units Only

If your cremator is equipped with our M-Pyre 2.0 Operating System you will need to provide the following prior to start-up:

- Active Internet through a hard-wired Ethernet connection from your network to the computer of the cremator to ensure constant connectivity. Ethernet cable should reach the control panel with 6 ft extra.
- 2) Minimum internet speed 128Kbps (typical DSL).
- 3) M-Pyre will fit into the standard network configuration without additional configuration needed. If you have a complex network design (ie DHCP, routing or firewalls) instead of a simple network design, please contact us to discuss.
- 4) Internet connection must be completed prior to technician arrival for startup of the unit.

If you do not know whether your cremator has M-Pyre 2.0 capabilities, please contact your Sales Representative or your Installation Specialist.

# 7. Next Steps After Delivery and Installation

# A. Notice of Start-up Checklist

Shortly after the arrival of your cremator, you will receive a Pre-Startup Checklist from our Technology Manager, Jason Wamhoff.

When your cremator has been installed and the utility (and internet if applicable) connections are made, complete the Pre-Startup Checklist and send it to Jason as soon as possible. We will then contact you to schedule a start-up date.

# B. Cremation Case Required for Start-up

A cremation will be necessary for our technician to start-up the cremator. You will need to coordinate the availability of a cremation with Jason to set the start-up date.

This first cremation should not be over 250 lbs and should not be in a casket.

# C. Submit Compliance Checklist After Start-up

During the start-up, the Matthews technician will complete a start-up checklist to ensure compliance with all our installation instructions.

If there are any areas of non-compliance, our technician will note them on the checklist and advise you of these area(s) of non-compliance.

The technician may require these items to be corrected prior to proceeding with the start-up. Any additional time required due to improper installation by your contractor(s) will be charged to you at our standard hourly rate.

Questions or Concerns Regarding Start-up?

Please contact our Technology Manager:

Jason Wamhoff

Phone: 800-327-2831 ext. 6143

Email: jwamhoff@matw.com

## **Calculation Of Emissions**

#### **Estimated Emission Calculation**

Matthews Environmental Solutions Crematory Incinerator Model IE43-PPI

lotal Inc	enerator	Burn	C	apacity	
Flue gas	flow rate	=		1100	dscfm
	(	100	%	Excess	Air)

150 lb/hr of remains (type 4) and associated containers (type 0)

12 Hours/Day X 6 Days/Week X 52 Weeks/Year

= 3744 Hours/Year

# Total Emission Rate = Incinerator Burn Rate X Emission Factor

#### Sulfer Dioxide (SO<sub>2</sub>)

150	lb/hr X	2.17	lb/ton X	2000	lbs	-	=	0.163 lb/hr 0.304668 TPY
0.16275	lb/hr X	4.54E+05	mg/lb X	1	ppmv		=	15.16 ppmv
1100	dscfm X	60	mln/hr X	0.0283	$m^3/f^3 X$	2.61 mg/m <sup>3</sup>		record Process

#### Nitrogen Oxide (NOx - as Nitrogen Dioxide)

	150 lb/hr X	3.56 lb/ton X	1 ton		=	0.267 lb/hr
			2000 lbs		=	0.499824 TPY
_	0.267 lb/hr X	4.54E+05 mg/lb X	1 ppmy		=	34.89 ppmv
	1100 dscfm X	60 min/hr X	0.028 m3/f3 X	1.88 mg/m3		PPIIII

# Hydrocarbons (TOC/VOC - methane)

150 lb/hr X	2.99E-01 lb/ton X	1 ton 2000 lbs	-	=	0.022425 lb/hr 0.04198 TPY
0.022425 lb/hr X	4.54E+05 mg/lb X	1 ppmv		=	8.39 ppmv
1100 dscfm X	60 min/hr X	0.0283 m <sup>3</sup> /f <sup>3</sup> X	0.65 mg/m <sup>3</sup>		oloc ppiiii

## Particulates (PM & PM10)

150 lb/hr X	4.\$7 lb/ton X	1 ton 2000 lbs	=	0.35025 lb/hr 0.655668 TPY
0.35025 lb/hr X	7.00E+03 gr/lb X		=	0.04 gr/dscf
1100 dscfm X	60 min/hr			and i girdoor

#### Carbon Monoxide (CO)

150 lb/hr X	2.95 lb/ton X	1 ton	=	0.22125 lb/hr
		2000 lbs	=	0.41418 TPY
0.22125 lb/hr X	4.54E+05 mg/lb X	1 ppmv	=	47.68 ppmv
1100 dscfm X	60 min/hr X	0.028 m <sup>3</sup> /f <sup>3</sup> X 1.14 mg/m <sup>3</sup>		

#### Notes

- 1. Incinerator Emissions based on EPA emissions from Table 2.3-1 and 2.3-2 of AP-42 (5th Edition)
- 2. All conversion factors from AP-42 Appendix A.



# TEST REPORT

# **EMISSIONS COMPLIANCE TEST PROGRAM**

# BLUE HILL CEMETERY BRAINTREE, MA

**AUGUST 26, 2015** 

PREPARED FOR:

Matthews International Cremation Division 2045 Sprint Blvd Apopka, Florida 32703

CONCERNING:

Blue Hill Cemetery 700 West Street Braintree, MA 02184

**Emissions Compliance Testing** 

Crematory Retort – EU 1 Transmittal No. X227136 Application No. 4110027

PREPARED BY:

CK Environmental, Inc.

1020 Turnpike Street, Suite 8

Canton, MA 02021

CK Project No. 4877



# TEST REPORT REVIEW CERTIFICATION

We, the undersigned, hereby certify that we have personally reviewed and are knowledgeable of the information presented in the Test Report. We believe that all submitted information and calculations contained here in are true, accurate, and complete. CK has accreditation by the Stack Testing Accreditation Council (STAC) and operates in conformance with the ASTM D7036-04 requirements.

Prepared by:

Ale Kuncaitis, Project Engineer

Reviewed by:

Kevin Kelley, Project Manager, QSTI



# TEST SUMMARY

Facility Name:

Blue Hill Cemetery

700 West Street

Braintree, MA 02184

Facility Contact:

Joe Walker, Operations

jbwalker@bluehillcemetery.com

781-843-4000

Consultant Name:

Matthews International

Cremation Division

2045 Sprint Blvd

Apopka, Florida 32703

Consultant Contact:

Michael Tricoche, Engineer

mtricoche@matthewsintl.com 407-886-5533 ext. 206-6149

Regulatory Agency:

Massachusetts Department of Environmental Protection

MassDEP Southeast Region

John Paino

20 Riverside Drive Lakeville, MA 02347 John.paino@state.ma.us

508-946-2744

Testing Organization:

CK Environmental

1020 Turnpike Street, Suite 8

Canton, MA 02021 781-828-5200

Project Manager:

Kevin J. Kelley, Project Manager

Kkelley@ckenvironmental.com

339-237-2267

Sources tested:

Crematory Retort EU 1 (IE43-PPI)

Pollutant(s) measured:

PM (PM<sub>10</sub>/PM<sub>2.5</sub>), NO<sub>x</sub>, CO and Opacity

Method(s) used:

1, 2, 3A, 4, 5/202, 7E, 10 and 9

Test Date:

June 30, 2015



#### 1.0 INTRODUCTION

CK Environmental, Inc. (CK) was retained by Matthews International Cremation to conduct a compliance emission test program at the Blue Hill Cemetery located in Braintree, Massachusetts. The facility houses four crematory retorts. Three of the retorts (EU 2 – EU 4) are identical units and compliance with permitted emission limits was demonstrated by submittal of a recent test report from another facility. This test program was performed to ensure that the crematory retort (EU 1) is operating at or below the emission limits as established in the facilities Air Pollution Control Permit (Transmittal No. X227136, Application No. 4110027) set forth by the Southeast Region, Massachusetts Department of Environmental Protection (MassDEP).

The test program determined the emission levels for particulate matter (PM/PM<sub>10</sub>), condensible particulate matter (CPM/PM<sub>2.5</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and Opacity. The sampling and analytical procedures described in this document were conducted using procedures deemed acceptable by the MassDEP and the United States Environmental Protection Agency (USEPA).

Section 2.0 of this report contains a process description. Section 3.0 describes the test program. Section 4.0 describes the test locations. The test methodologies are described in Section 5.0. The CK quality assurance procedures are detailed in Section 6.0.

Kevin Kelley is the CK project manager for this test program. He was accompanied by a qualified staff of environmental engineers and technicians. Table 1-1 provides the contact information for all individuals responsible for this test program.

Table 1-1
Project Contacts

Company Name	Role	Contact	Telephone		
CK Environmental, Inc.	Testing Firm Project Manager	Kevin Kelley	(781) 828-5200		
Blue Hill Cemetery	Facility Contact	Joe Walker	(781)-843-4000		
Matthews International Cremation Division	Engineer	Michael Tricoche	(407)-886-5533 x149		
Mass DEP	Regulator Contact	John Paino	(508)-946-2744		



#### 3.4 Presentation of Results

Table 3-2 Test Matrix

Test Run No. Average Run 1 Run 2 Run 3 Date 06/30/15 06/30/15 06/30/15 Time Start 8:33 11:22 14:01 Stop 9:38 12:27 15:05 Process Information Batch Weight bs 142 174 140 152 Sample Conditions Volume (dscf)2 72.605 69.878 76.718 73.067 Volume (dscm)b 2.056 1.979 2.173 2.069 Isokinetics (° o) 98.8 948 94.3 95.99 Stack Conditions Flow Rate (dscfm) 610 611 675 632 Temperanue (°F) 969 4 1007.8 1022.8 1000.0 Mosshure (00) 15.4 13.6 12.2 13.7 Oxygen (00) 9.6 9.8 10.1 9.8 Carbon Dioxide (° 0) 7.3 77 7.8 7.6 Oxides of Narogen (PPM) 60.5 52.6 49.7 54.3 Oxides of Nitrogen PPM@150 0: 31.6 28.0 27.2 28.9 Carbon Monoxide (PPMD 53 77 2.7 5.2 PPM@15% O2 Carbon Monoxide 2.8 4.1 1.5 2.8 Particulate Matter Emissions Total PM Catch (mg) 87 1 203.2 141.7 144 Emission Rate - Front Half (Grains dscf) 0 018 0 045 0.028 0.031 lb lu 0.10 0.23 0.16 0.17 tons yr 0.73 0.1092 Emission Rate - Front & Back (Graus/dscf) 0.021 0.050 0.030 0.034 lb/hr 0.108 0.260 0.175 0.18 tons yr 0.79 Opacity (° 0) 00 00 0.0 00

a) dry standard cubic feet

b) day standard cubic meters

c) dry standard cubic feet per minue

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## Registration of Smaller Sources (ROSS) Program

#### What is the Registration of Smaller Sources Program?

As required by Public Act 097-0095, the Illinois Environmental Protection Agency (Agency) has created a new ROSS Program that is believed to apply to more than 3,000 permitted sources which combined produce less than 1% of the air pollution in the State of Illinois.

The program is intended to simplify air regulatory requirements by requiring sources with low emissions to register with the Agency rather than acquiring an air permit. It is important to note that although the source may no longer be subject to permitting requirements, the source must still comply with all applicable environmental laws and regulations. The ROSS regulation can be found at 35 III. Adm. Code 201.175.

Under the ROSS program, smaller sources eligible for registration will avoid several potentially burdensome regulatory obligations and their associated costs. For example, qualifying small air emission sources will no longer be required to:

- Apply for air construction or annual air operating permits;
- Wait for the Illinois EPA to complete an air application review and issue an air permit before commencement of construction of a project;
- Pay both air construction permit application and air operating permit fees;
- Submit Annual Emission Reports.

How do I determine if I am ROSS eligible and must register with the Agency under the ROSS Program? Sources meeting the following ROSS eligibility criteria must register:

- Not required to get a Title V or Clean Air Act Permit Program (CAAPP) permit
- Not required to get a Federally Enforceable State Operating Permit (FESOP)
- Not required to get a permit under the New Source Performance Standards (NSPS) or under the National Emission Standards for Hazardous Air Pollutants (NESHAP) or by USEPA.
- Actual emissions from the source's emission units are less than the following limits for the prior calendar year\*:
  - 5.0 Tons/yr of combined pollutants (particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and volatile organic material)
  - 0.50 Tons/yr of combined Hazardous Air Pollutants (HAPs)\*\*

- o 0.05 Tons/yr of mercury air emissions
- o 0.05 Tons/yr of lead air emissions
- \* Do not include emission units that are exempt from the permitting requirements by 35 III. Adm. Code 201.146 in your actual emissions calculations (a list of these exemptions can also be found in the publication "Does My Business Need An Air Pollution Control Permit?")
- \*\* A list of HAPs can be found at:

https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications

- If a new source, the sum of the anticipated estimated actual annual emissions from all non-exempt emission units associated with the source must meet the limits as stated above. If the source has been operating less than one calendar year, projected emissions may be used for all of the remaining months in the prior calendar year.
- Emission units or source is not subject to maximum achievable control technology under 40 CFR Part 61 or the NESHAP under 40 CFR Part 63 unless it is categorized as an area source.
- Emission units at the source are not used as thermal desorption systems pursuant to 35 III. Adm. Code 728 Table F or as an incinerator system.
- The source is not subject to local siting review under Section 39.2 of the Act.

#### Is there a fee and is there a deadline to register?

Yes, the annual registration fee is \$235 and there are registration deadlines. Payment of the annual air pollution control site fee will serve as the owner or operator's verification that the source continues to meet the eligibility criteria each year. The registration deadlines are as follows:

- Sources holding a permit must register no later than their annual fee payment date. The registration fee is due by this date also.
- The owner or operator of a qualifying small air emission source not holding a permit shall register immediately and payment of the fee is due at the time of registration.
- The owner or operator of a new source shall register at least 10 days before commencing construction or operation and may commence construction or operation 10 days after submittal to the Agency. Fee payment is due at the time of registration.

#### How do I register under the ROSS Program?

If your source meets the above eligibility criteria, complete the ROSS Registration Form and return it to the Illinois EPA Bureau of Air address on the form. Currently, permitted sources may submit the registration form without fee payment, however, ROSS registration fees must be paid by your annual site fee due date.

For your convenience, the Illinois EPA offers online registration and fee payment. Electronic payment methods include: electronic check, Mastercard, VISA, Discover, and American Express. Credit card payments will incur a convenience fee to cover expenses r elating to this payment option. There is no fee for electronic check transactions.

For links to the ROSS Registration form, online registration and fee payment visit: www.ildceo.net/enviro

### What are my regulatory requirements under the ROSS Program?

ROSS sources are required to keep the following records and make them available for inspection by the Agency:

- A description of the emission units associated with the source and their associated control devices;
- A description of the control efficiency or emission rates of any control devices that are relied upon to meet the ROSS eligibility criteria;
- Documentation of the source's actual emissions and calculations demonstrating that the source is eligible for ROSS. This documentation may include, but is not limited to, annual material usage, emission factors, operating time or emission rates;
- · A copy of the source's initial registration; and
- A copy of the source's annual fee payment for at least the most recent 5 calendar years.

The Illinois EPA must also be notified in writing within 45 days if there is a change in the name, address, or telephone number of the source or if the person responsible for submitting and retaining copies of the registration information and the records has changed per 35 Ill. Adm. Code 201.175(f). Visit www.ildceo.net/enviro for additional information.

Payment of the annual fee will serve as the owner or operator's verification that the source continues to meet the eligibility criteria and will automatically renew the source's registration under ROSS.

Many state and federal environmental requirements may apply to sources regardless of permit status. Many times these requirements are reinforced as permit terms or conditions. It is important to note that sources must still comply with all applicable environmental laws and regulations regardless if they are a permitted or registered ROSS source. These requirements may include but are not limited to best management practices, use of certain materials or equipment, record keeping, reporting and monitoring requirements. If you

have questions regarding your compliance requirements, you may contact the Small Business Environmental Assistance Program at 800/252-3998 or visit www.ildceo.net/enviro for additional guidance materials.

# What happens to my existing state lifetime operating permit if I meet the ROSS Program eligibility criteria and have to register?

Existing state lifetime operating permits for ROSS eligible sources will be kept in the source's file at the Illinois EPA. While the source is registered under ROSS, the source no longer has to comply with the terms and conditions of the permit. Should the source's eligibility for the ROSS program change, the source must notify the Agency within 90 days of the source's annual fee payment date that it will comply with the terms of its permit and the source's status will be changed from a ROSS eligible source to a permitted source. Visit www.ildceo.net/enviro for more information. If your operation has changed since the issuance of the lifetime operating permit and now includes activities, equipment or emissions that are not consistent with the terms of your permit, you may be required to obtain a new or revised permit per 35 Ill. Adm. Code 201.175(g).

If the source was not constructed or operated at the time of initial registration and has actual emissions in excess of the eligibility levels during the first or second year of operations, the owner or operator must apply for an operating permit and pay applicable construction permit application fees per 35 III. Adm. Code 201.175(g).

The owner or operator of a source that did not have a permit prior to registration must apply for a permit within 90 days of the source's annual fee payment date if they fail to meet the eligibility criteria per 35 Ill. Adm. Code 201.175(g).

# Am I required to re-enter the ROSS Program after I triggered permit requirements the previous calendar year but emissions from the current calendar year again meet ROSS eligibility criteria?

Yes, re-entry into the ROSS program is required if a source determines that the sum of the actual emissions associated with the source meet the ROSS eligibility criteria for the prior calendar year per 35 III. Adm. Code 201.175(h).

#### For More Information:

The State of Illinois provides free assistance to Illinois small businesses in understanding and complying with their environmental requirements. If you have questions or would like more information regarding the ROSS Program or other state or federal environmental requirements, contact the Illinois Small Business Environmental Assistance Program at 800-252-3998, visit www.ildceo.net/enviro, or email dceo.sbeap@illinois.gov

# ADMINISTRATIVE CODE

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER a: PERMITS AND GENERAL PROVISIONS
PART 201 PERMITS AND GENERAL PROVISIONS
SECTION 201.175 REGISTRATION OF SMALLER SOURCES (ROSS)

#### Section 201.175 Registration of Smaller Sources (ROSS)

- An owner or operator of an eligible source shall annually register with the Agency instead of complying with the requirement to obtain an air pollution construction or operating permit under the Act or complying with a permit issued under Section 201.169. The owner and operator of a ROSS source are still subject to all applicable environmental statutes and regulations. The source must meet all of the following criteria to be an eligible source:
  - 1) Pursuant to Section 9.14 of the Act:
    - A) The source must not be required to obtain a permit pursuant to the Clean Air Act Permit Program, or federally enforceable State operating permit program, or under regulations promulgated pursuant to Section 111 or 112 of the Clean Air Act;
    - B) USEPA has not otherwise determined that a permit is required;
    - C) The source emits less than an actual 5 tons per year of combined particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic material air pollutant emissions;
    - D) The source emits less than an actual 0.5 tons per year of combined hazardous air pollutant emissions;
    - E) The source emits less than an actual 0.05 tons per year of lead air emissions;

- F) The source emits less than an actual 0.05 tons per year of mercury air emissions; and
- G) The source does not have an emission unit or source subject to a standard pursuant to 40 CFR 61 (Maximum Achievable Control Technology) or 40 CFR 63 (National Emissions Standards for Hazardous Air Pollutants), other than those regulations that USEPA has categorized as "area source."
- Emission units at the source are not used as thermal desorption systems pursuant to 35 Adm. Code 728. Table F or as incinerator systems.
- 3) The source or its emission units must not be subject to local siting under Section 39.2 of the Act.
- b) For the purposes of determining whether the actual emissions from the source meet the criteria of subsections (a)(1)(C), (a)(1)(D), (a)(1)(E), and (a)(1)(F) of this Section, the owner or operator of a source shall only use emissions from units that are not exempt from the requirement to obtain a permit pursuant to Section 201.146, as follows:
  - Initial registration or reentry into ROSS: the owner or operator must sum the actual emissions from all units associated with the source for the prior calendar year. If the source is new, or has been operating less than one calendar year, projected estimated emissions may be used for all of the remaining months in the prior calendar year, respectively.
  - 2) Annual renewal of registration:
    - A) For the purposes of determining compliance with subsection (a)(1)
       (C) of this Section, the owner or operator must:
      - i) Verify that the source still meets the eligibility criteria in subsection (a)(1)(C); or
      - ii) Calculate emissions by summing all actual emissions of combined particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic material air pollutant emissions from all units associated with the source for the prior calendar year. The total sum of actual emissions of combined particulate matter, carbon monoxide, nitrogen

oxides, sulfur dioxide, and volatile organic material air pollutant emissions for the prior calendar year must be less than or equal to 7 tons, or the total sum of actual emissions of combined particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic material air pollutant emissions from the prior two calendar years must be less than or equal to 10 tons.

- B) For the purposes of determining compliance with subsections (a)(1) (D), (a)(1)(E) and (a)(1)(F) of this Section, the owner or operator must:
  - Verify that the source still meets the eligibility criteria in subsections (a)(1)(D), (a)(1)(E), and (a)(1)(F) of this Section; or
  - ii) Calculate emissions by summing all actual emissions from all units at the source for the prior calendar year. Summed emissions of HAPs, mercury or lead must be less than or equal to 0.5 tons per year, 0.05 tons per year, or 0.05 tons per year, for the prior calendar year, respectively.
- c) The following must be included in each initial registration and each re-entry registration:
  - The name, address, and telephone number of the source and of the person responsible for submitting and retaining copies of the registration information and the records;
  - A statement that the source meets the requirements of this Section;
  - A certification that the information submitted in subsections (c)(1) and (c) (2) of this Section is correct or a correction of the information; and
  - The applicable fee pursuant to Section 9.14 of the Act.
- d) The owner or operator of an eligible source shall submit the registration required by subsection (c) of this Section as follows:
  - 1) Initial registration:
    - A) The owner or operator of a source holding a permit may register after

the effective date of this Section and no later than their annual fee payment date in fiscal year 2013 (July 1, 2012 through June 30, 2013). The terms and conditions of a permit issued pursuant to Section 201.169 do not apply during the period the source is registered. The owner and operator of a ROSS source are still subject to all applicable environmental statutes and regulations.

- B) The owner or operator of an operating source not holding a permit shall register no later than July 1, 2012.
- C) The owner or operator of a new source shall register at least 10 days before commencing construction or operation and may commence construction or operation 10 days after submittal to the Agency.
- Annual registration. The owner or operator of a ROSS source must pay an annual fee on or before their annual fee payment date. Annual payment of the fee is verification by the owner or operator that the source continues to meet the criteria in subsection (a), as determined by subsection (b)(2), as applicable.
- Re-entry into ROSS under subsection (h). The owner or operator of a source that re-enters ROSS based on the criteria in subsection (a), as determined by subsection (b)(1), must register and pay an annual fee on or before their annual fee payment date.
- e) The owner or operator shall keep the following records and make them available for inspection by the Agency:
  - A description of the emission units associated with the source and their associated control devices;
  - A description of control efficiency or emission rates of any control devices that are relied upon to meet the criteria for ROSS in subsection (a), as determined by subsection (b)(1) or (b)(2), as applicable;
  - Documentation of the source's actual emissions and calculations demonstrating that the source is eligible for ROSS pursuant to the criteria in subsections (a), as determined by subsection (b)(1) or (b)(2), as applicable. This documentation may include, but is not limited to, annual material usage or emission rates;
  - 4) A copy of the source's initial registration; and

- 5) A copy of the owner's or operator's annual fee payment for at least the most recent 5 calendar years.
- f) Changes to a ROSS source requiring notification: The owner or operator of the source must notify the Agency in writing within 45 days after the change to the source, if the information provided in subsection (c)(1) of this Section changes.
- g) Changes requiring a new or modified construction or operating permit, or compliance with conditions in an existing permit issued pursuant to Section 201.169:
  - The owner or operator must apply for a permit by the date required by the new regulation or statute if there is a change in a regulation or statutory requirement or a new regulation or statutory requirement that makes a source ineligible for ROSS under the criteria in subsection (a), as determined in subsection (b)(2), as applicable.
  - 2) If the source no longer meets the criteria in subsection (a), as determined by subsection (b)(2), as applicable:
    - A) The owner or operator of a source that did not have a permit under Section 201.169 prior to registration must apply and comply with the applicable requirements of the Act and 35 Ill. Adm. Code Parts 201 and 203, as follows:
      - If the source is eligible for a permit under Section 201.169, the owner or operator must apply for a permit within 90 days of the source's annual fee payment date.
      - If the source is not eligible under Section 201.169, the owner or operator must apply for a permit as provided for under the Act and 35 Ill. Adm. Code Parts 201 and 203.
      - iii) If the source was not constructed or operated at the time of initial registration and has actual emissions in excess of the eligibility levels during the first or second year of operations as determined in subsection (b)(2), the owner or operator must apply for an operating permit and pay construction permit application fees.
    - B) The owner or operator of a source that had a permit under Section

#### 201.169 prior to registration:

- i) If the source is in compliance with the terms and conditions of the permit, the owner or operator shall notify the Agency no later than the source's annual fee payment date of the calendar year following the change in status from a ROSS eligible source to a permitted source.
- ii) If the source is not in compliance with the terms and conditions of the permit, but is still eligible for a permit pursuant to Section 201.169, the owner or operator must apply for a new or revised permit within 90 days of the source's annual fee payment date.
- iii) If the source is not eligible for a permit pursuant to Section 201.169, the owner or operator must comply with the applicable permitting requirements under the Act and 35 Ill. Adm. Code Parts 201 and 203.
- h) Reentry into ROSS: the owner or operator of a source that changed status to become a permitted source pursuant to subsection (g) of this Section shall submit a registration for ROSS if the source meets the criteria in subsections (a), as determined in subsection (b)(1), in the prior calendar year.

(Source: Added at 36 Ill. Reg. 19790, effective December 5, 2011)



October 23, 2019

Darien City Hall
Attn: Darien Zoning and Planning Commission
1702 Plainfield Road
Darien, Illinois 60561

#### To Whom It May Concern:

The purpose of this communication is to provide clarification for the special use permit request for Modell Funeral Home, Ltd. located at 7710 S. Cass Avenue, Darien. The information provided below follows the guidelines set forth in the Sterling Codifier 5A-2-2-6(G):

1.) Modell Funeral Home is seeking a special use permit to expand the current funeral home building. The major component of this expansion is the installation of a crematory at the current location for the betterment of the families we serve. Currently, approximately 43% of the families we serve will choose cremation for their loved one. CANA (Cremation Association of North America) predicts by 2023 that the national cremation rate will be 59.4%.

Our current process requires us to transfer decedents who wish to be cremated out of our care to a facility in Justice, Illinois. At that point, we and the decedent's family are at the mercy of the schedule of the crematory in Justice, Illinois. We do not have any control over the timing and delivery of the cremated remains back to us at Modell Funeral Home.

By having a crematory on our property, we will be able to provide better service to the families we serve in the following ways:

- A.) Their loved one will never leave the care of our staff. Many families would find peace of mind knowing that their loved one is not being transported to another facility for cremation.
- B.) Families will be better able to schedule their services and interments at the cemetery because Modell Funeral Home will have complete control over the cremation process and its timing once we have secured the state mandated permits.
- C.) As more families choose cremation, having a crematory on our property will allow Modell Funeral Home to continue to provide dignified and quality care to the changing consumer in our community.
- The environmental and health impact on the community that we serve and live in can be found on the attached documentation from Matthews Cremation Equipment.

- 3.) Modell Funeral Home has been an established and well-respected business in the Darien Community. There have never been any concerns voiced by the general public regarding the original special use permit that was awarded by the city allowing for the construction of the funeral home in 1983. Equally as important, there has been no indication of adverse effects on property values in the area because of the existence of the funeral home. The addition of a crematory does not change the type of business that will be conducted at this location, but only further enhances the funeral home's ability to better serve the families in our area.
- 4.) The proposed expansion will be attached to the southwest corner of the existing building and will not impact the development of any surrounding property.
- 5.) The exterior design of the addition will match the current design of the building. The goal of the expansion is to have it appear as though it was part of the original plans when the funeral home was built in 1983.
- 6.) We will continue to use the existing utilities that have been in place since 1983. Any drainage issues will be addressed in the design phase and in the preparation of the construction documents.
- 7.) Entry into the property from Plainfield Road and Cass Avenue are currently in place and will not be affected by this special use.
- 8.) This addition and its special use shall conform to the applicable regulations of the district as brought forth in this review process and subsequent recommendations of the Planning Commission and Planning & Development Committee.

Sincerely,

Frank A. Modelski, Jr.

President - Modell Funeral Home

Frank a. Modelski, Jr.



October 25, 2019

Darien City Hall

Attn: Darien Zoning and Planning Commission

Andrew O. Brusen

1702 Plainfield Road Darien, Illinois 60561

#### To whom it may concern:

The cremation unit that we would be using under our special use permit operates using natural gas and electricity. There are no chemicals that are required for the operation of the crematory. The only chemicals that would be present are those that are used during the embalming process. Modell Funeral Home has no control of any additional chemicals that could have been used by a hospital or other facility. All MSDS safety sheets for embalming fluids stored at the funeral home will be made available upon request.

Sincerely,

Andrew A. Brunsen

Owner - Modell Funeral Home



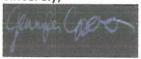
October 25, 2019

Mr. Andrew Brunsen Modell Funeral Home 7710 S. Cass Ave. Darien, IL 60561

#### Dear Andrew,

Cremation units do not use chemicals to operate and Matthews does not provide any chemicals with the unit. Also, we do not control what type of chemicals, if any, the body to be cremated would have (ie. embalming fluid, any type of medical chemical, etc.).

Sincerely,



Jennifer Copas Representative

Enclosures



#### November 22, 2019

In response to our recent conversation, the following are FAQ's that could arise as it relates to the installation of a cremation system:

#### Will there be smoke and odor?

Under normal operating conditions there will not be any smoke or odor. Our equipment protects against this by a large internal secondary chamber whereby the products of combustion are re-burned or cleansed prior to their discharge into the environment. It is equipped with a proactive opacity (visual) monitor. The opacity monitor is continuously scanning the existing gases and takes automatic action by turning off the cremation burner if the opacity reaches a level of 10%. Lastly, the equipment has a M-pyre 2.0 PC Based Intuitive Logic Operating System. This web based, state of the art technology continuously monitors the operation 24/7. In the unlikely event an occurrence happens, our service department is immediately notified as well as the client. Our technicians can therefore identify the issue and adjust as necessary to resolve the issue.

#### Is the equipment environmentally safe?

Yes. Matthews Environmental Solutions currently have over 4,500 installations globally and over 85 units operating within North Carolina alone. Each, has been approved by North Carolina's Department of Environment and Natural Resources. The emission levels are well below permissible levels. (See attached independent emissions source test summary).

#### Will the facility be operating 24/7?

It will not. The average cycle time is 2 hours or less. Ex: 8,760 hours per year. Based on 200 cremations annually, this means 95.5% of the time the unit will not be in operation.

#### Will it be loud?

It will not. The noise emitted is similar, to an air conditioner running. Attached is a Report on Noise Emissions performed by an independent testing laboratory. Also attached is a listing of decibels emitted and their source. As you will see, other sources we are surrounded by in our daily lives emit more noise emissions than the cremation equipment.

#### Will it decrease property values?

This argument has never been authenticated. Funeral Homes are typically located is residential or light commercially zoned areas as that is where they are to serve their community. Funeral Homes are typically the best maintained property. Attached are some property value assessments from several years ago when property values were higher than today. The properties are located near downtown Orlando, next to a funeral home with a crematory. In thirty (30) years of operation there was never a complaint. As one will see, the values increased.

#### **Matthews Environmental Solutions**

2045 Sprint Boulevard | Apopka, Florida 32703
O: 407-886-5533 | F: 407-886-5990 | www.matthewsenvironmentalsolutions.com



#### What about Mercury?

The subject of Mercury arises on occasion. The USEPA defines Mercury as a natural occurring element. The reality is, Mercury from the cremation process is an insignificant source of Mercury emissions. Attached is information from the USEPA and other sources. As one will see, the amount of mercury emissions, are much greater than from cremation.

Unfortunately, there is so much inaccurate information on the Internet some people will believe it to be true.

Sincerely,

Jennifer Copas
Sales Representative

**Enclosures** 

#### **Matthews Environmental Solutions**

2045 Sprint Boulevard | Apopka, Florida 32703 O: 407-886-5533 | F: 407-886-5990 | www.matthewsenvironmentalsolutions.com



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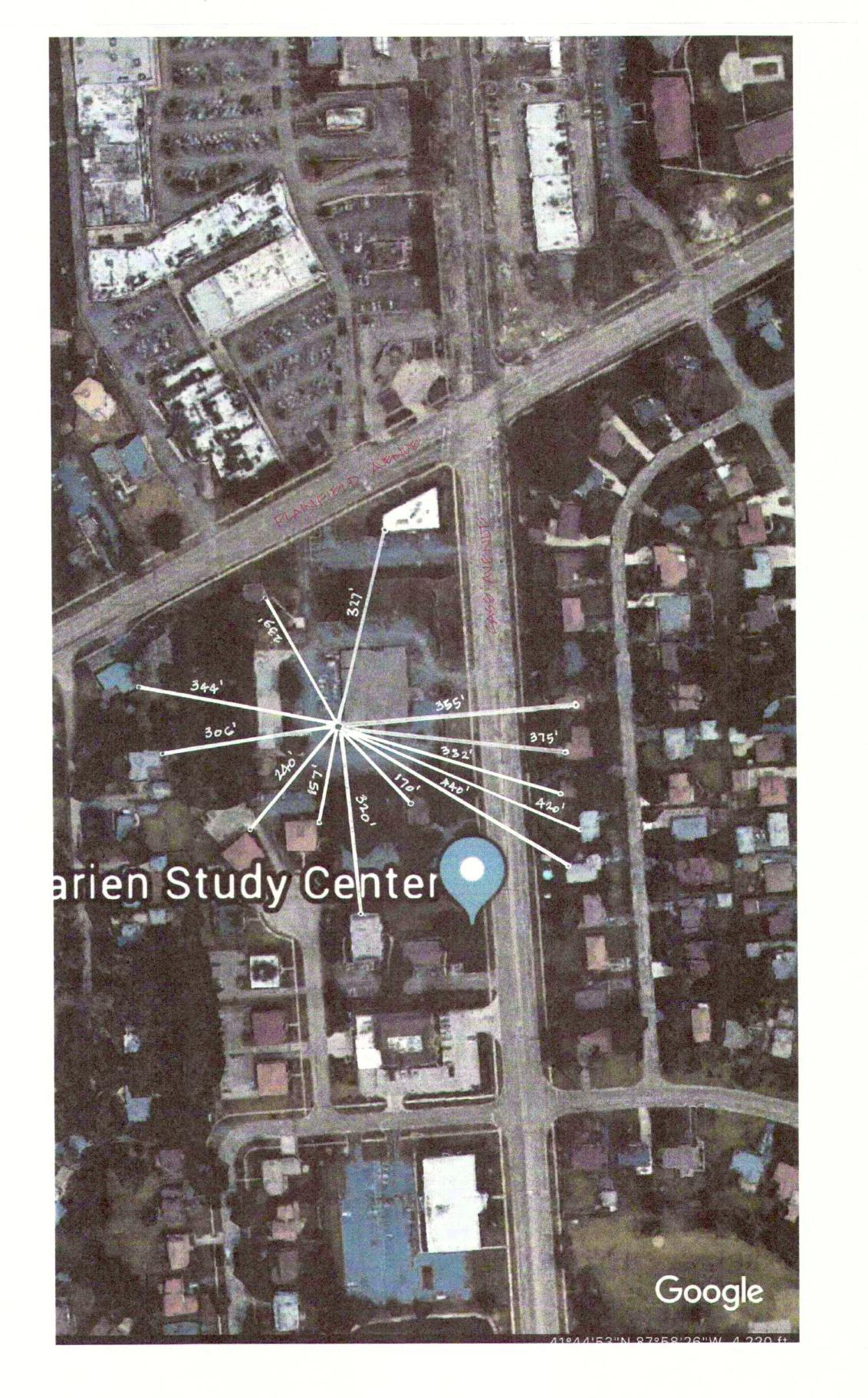
AVENUE

STATE OF ILLINOIS) COUNTY OF COOK ) S.S.

PROJECT NO: 13-020 RAWING FILE: SURVEY R1. DWG 1 OF 1

MODELL FUNERAL HOME
7710 SOUTH CASS AVENUE, DARIEN, ILLINOIS

hbe Hoefferle-Butler Engineering, Inc.



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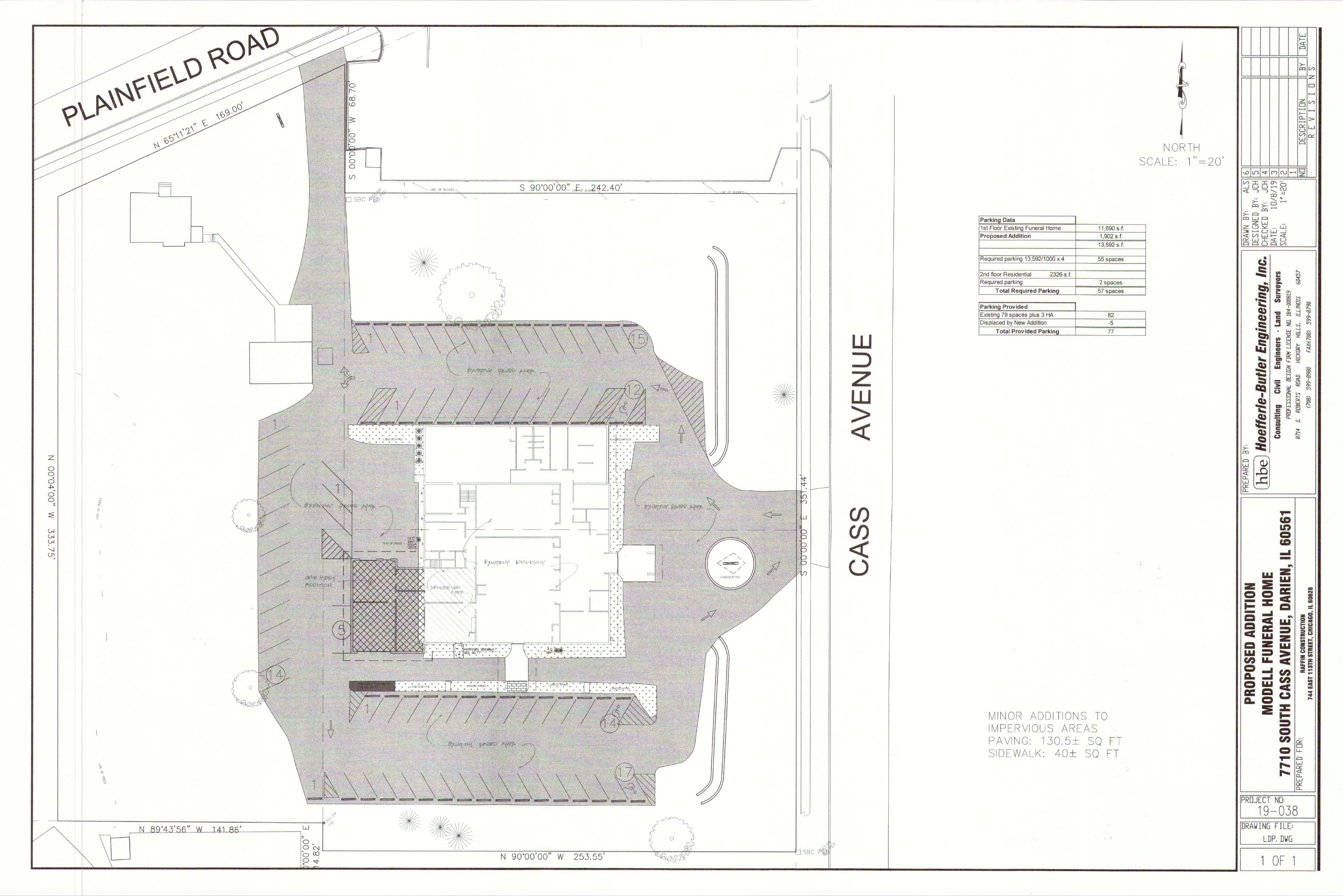
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Of 5 Sheets

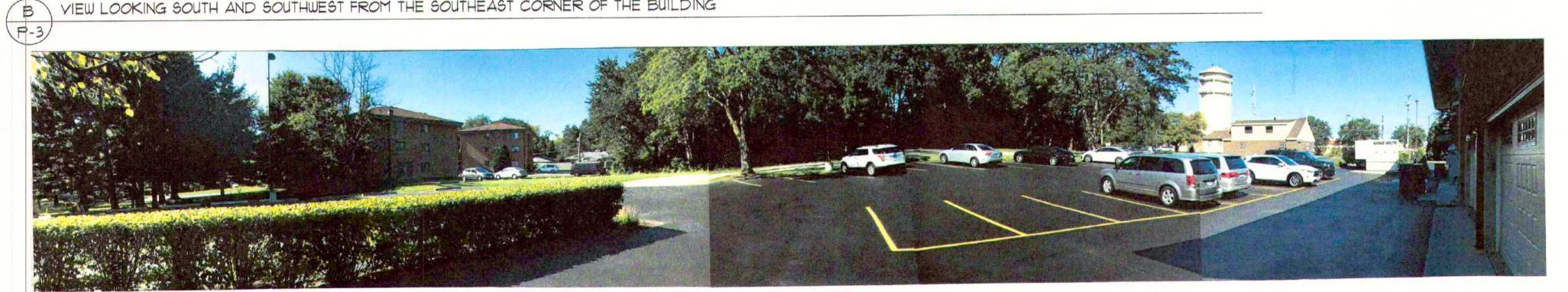




VIEW LOOKING EAST FROM BUILDING ENTRANCE



VIEW LOOKING SOUTH AND SOUTHWEST FROM THE SOUTHEAST CORNER OF THE BUILDING

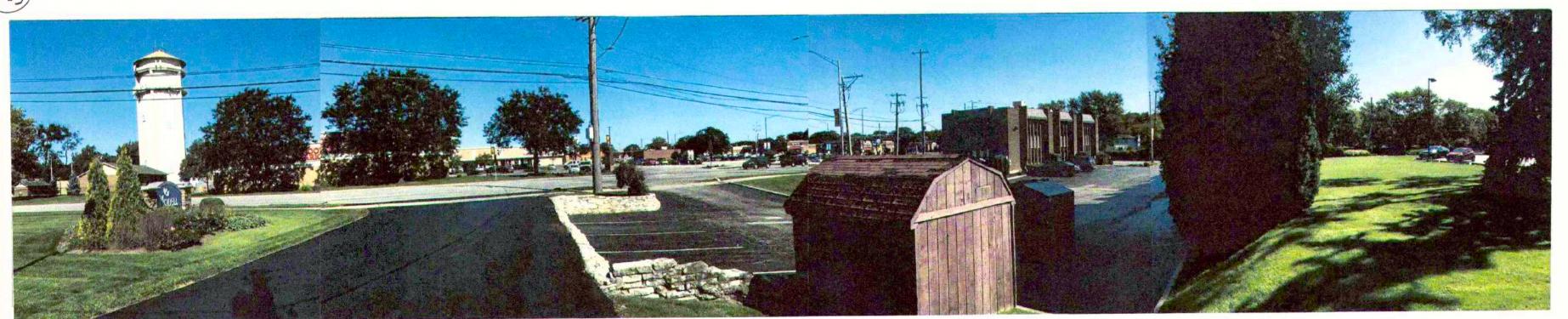


VIEW LOOKING SOUTHWEST AND WEST FROM THE SOUTHWEST CORNER OF THE BUILDING

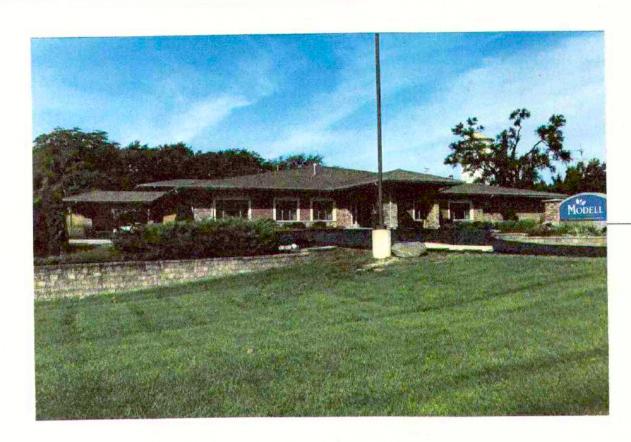


VIEW LOOKING WEST AND NORTHWEST FROM THE NORTHWEST CORNER OF THE BUILDING P-3

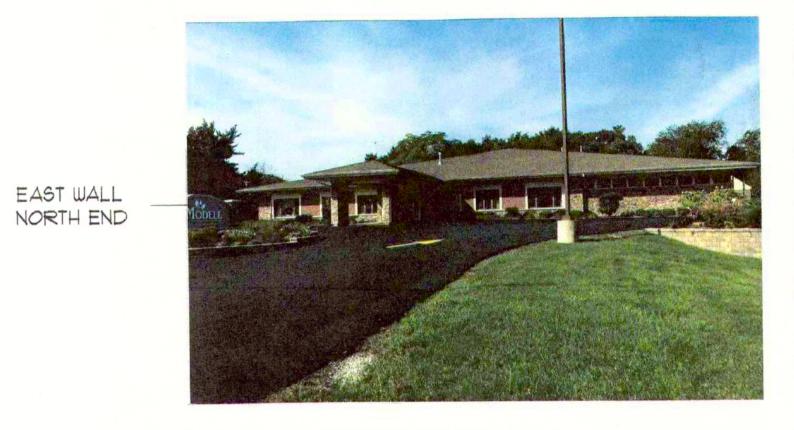
P-3



VIEW LOOKING NORTH AND NORTHEAST FROM THE PLAINFIELD AVENUE STREET ENTRANCE AT THE NORTHEAST CORNER PROPERTY LINE



EAST WALL SOUTH END

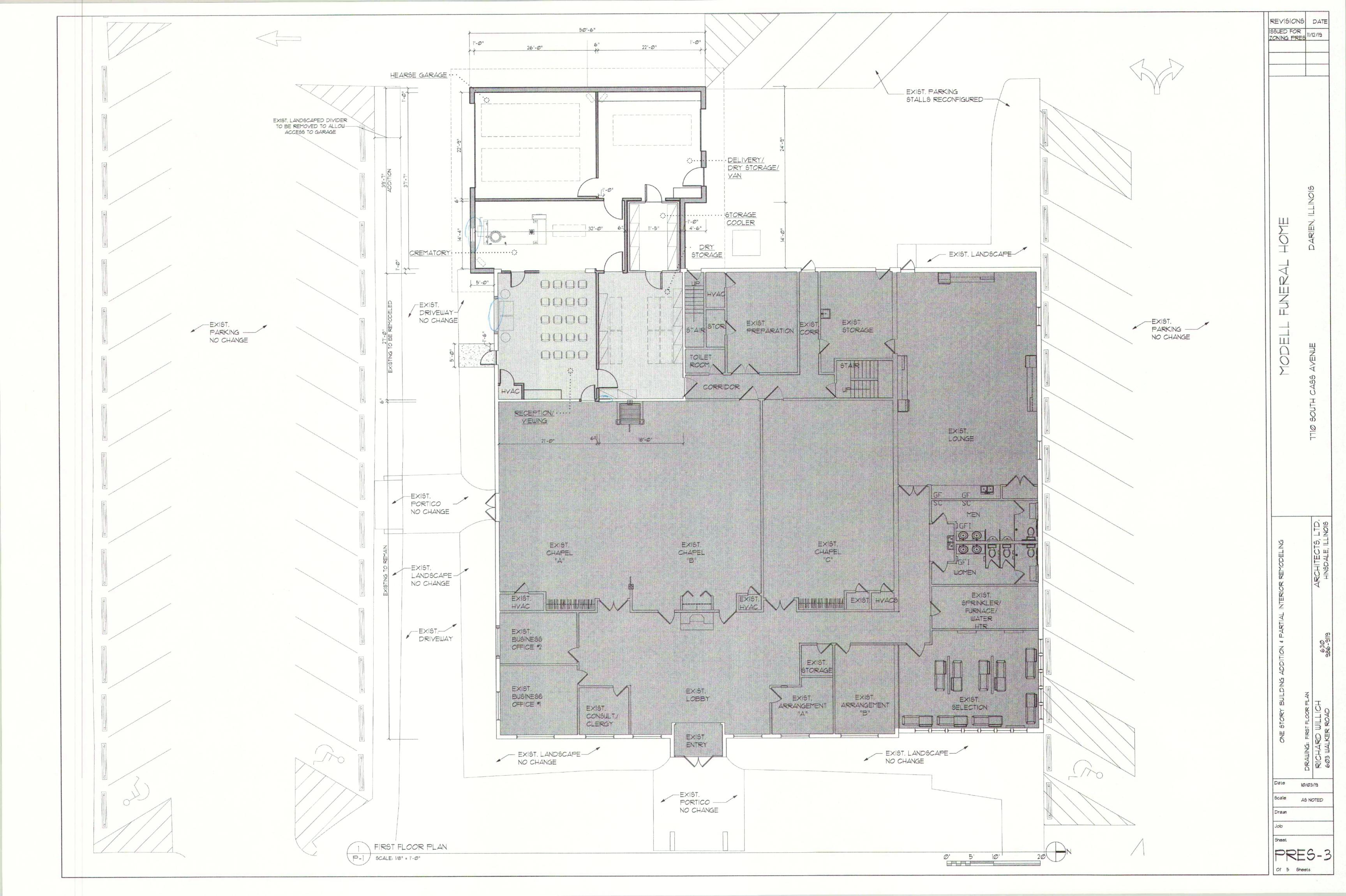


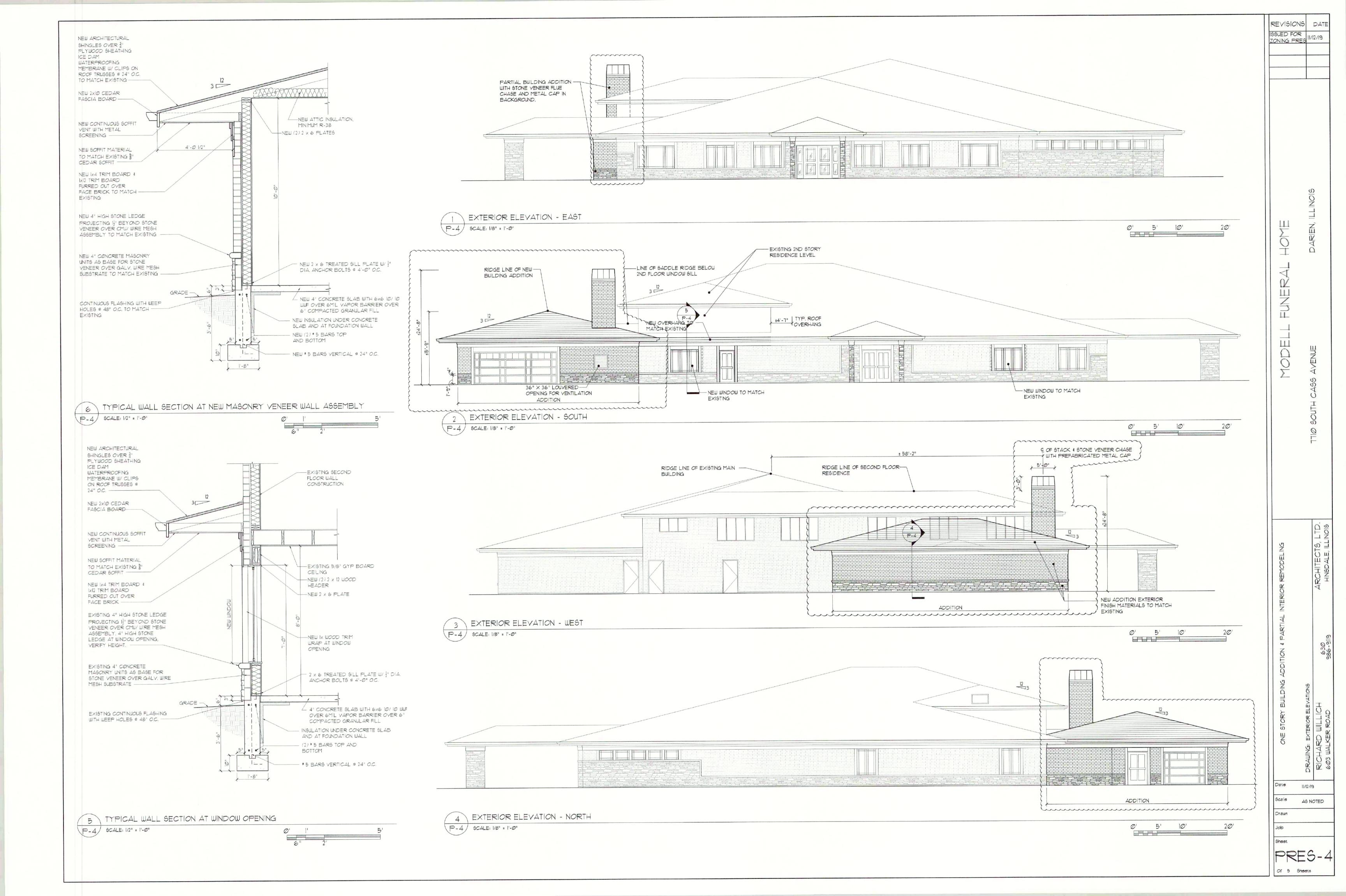


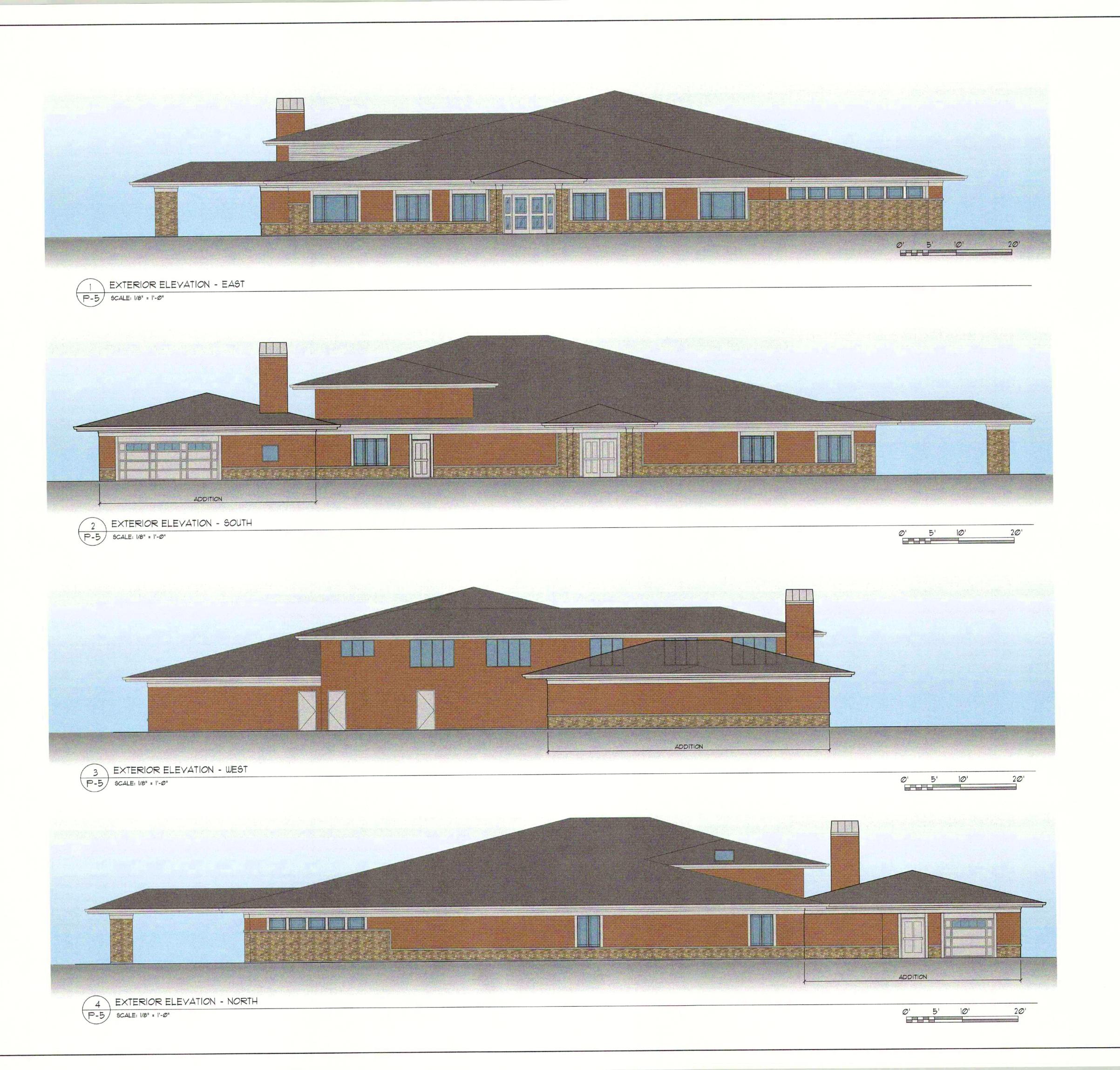
NORTH WALL

F EXISTING BUILDING ELEVATIONS PHOTOGRAPHS

ISSUED FOR ZONING PRES 11/12/19







REVISIONS DATE ISSUED FOR ZONING PRES 11/12/19

ARCHITECTS, LTD. HINSDALE, ILLINOIS

AS NOTED



# Chapter 12 PERFORMANCE STANDARDS

#### 5A-12-1: INTENT:

It is the intent of this chapter to provide that commercial, research and related activities, and industrial activities shall be established and maintained with proper appearance from streets and adjoining properties and to provide that each such permitted use shall be a good neighbor to adjoining properties by the control of emission of noise, odor, glare, vibration, smoke, dust, liquid wastes, and other nuisances.

The architectural and engineering plans shall bear the signature and seal of the appropriate qualified professional and the certification that all performance standards will be complied with based upon the submitted plans and documents. The city reserves the right to conduct its own investigation to determine compliance with the performance standards. (Ord. 0-03-00, 4-3-2000)

#### 5A-12-2: COMPLIANCE:

The performance standards set forth in section <u>5A-12-4</u> of this chapter shall be complied with and any use which fails to comply with these standards shall be in violation of this code and be subject to penalties provided for such violation. It shall be deemed a violation of this chapter for any qualified professional to falsely certify as to the compliance of submitted plans and documents with the performance standards specified herein. (Ord. 0-03-00, 4-3-2000)

#### **5A-12-3: MEASUREMENT:**

Each measurable standard shall be measured at the appropriate indicated location. (Ord. 0-03-00, 4-3-2000)

#### **5A-12-4: STANDARDS:**

#### 5A-12-4-1: NOISE:

At no point on the property line on which the operation is located shall the sound intensity level of any individual operation or plant (other than the operation of motor vehicles or other transportation vehicles) exceed the decibel levels in the designated octave bands as hereinafter shown in the following table:

#### MAXIMUM PERMITTED SOUND LEVEL (DECIBELS)

Octave Bank	Industrial Or	Industrial,
(Frequency)	Commercial Adjoining	Commercial Or Residence Adjoining

Cycles Per Sound	Nonresidential District	Residence Properties
0 to 75	79	72
75 to 150	74	67
150 to 300	66	59
300 to 600	59	52
600 to 1,200	53	46
1,200 to 2,400	47	42
2,400 to 4,800	41	38
Above 4,800	39	38

Noise testing is to be accomplished at the property line of the noise emitting source, with an octave band analyzer operated by an independently employed person, trained, and skilled in the operation of this equipment. (Ord. 0-35-13, 12-2-2013)

#### 5A-12-4-2: ODORS:

The emission of odorous matter in such quantities as to be readily detectable at any point along a property line or which is unwholesome, offensive, harmful, or injurious to the public health, comfort, or welfare is prohibited. The measurement of the threshold odor shall be in accordance with the American Society for Testing and Materials Method D1391-57 "Standard Method for Measurement of Odor in Atmosphere (Dilution Method)" (Philadelphia: American Society of Testing and Materials, 1957). Detailed plans for the prevention of odors crossing property lines may be required before the issuance of a building permit. A minimum of seven (7) persons shall serve on the panel involved in this testing. (Ord. 0-03-00, 4-3-2000)

#### **5A-12-4-3: GLARE OR HEAT:**

Any operation producing intense glare or heat shall be performed within a completely enclosed building in such manner as not to create a public nuisance or hazard along any property line. Exposed sources of light shall be controlled so that direct or indirect illumination from any source within the property line shall not cause illumination in excess of three (3) foot-candles in residential areas. The measurement of glare or light shall be made at the property line using a light meter operated by a trained operator through an independent testing agency. Any lights used for exterior illumination shall be planned, erected, and maintained to direct light away from adjoining properties or public rights of way.

(A) Lighting: Exterior lighting proposed for use on the site shall be planned, erected, and maintained so the light is confined to the property and will not cast direct glare or light upon adjacent properties or public rights of way. (Ord. 0-03-00, 4-3-2000)

#### 5A-12-4-4: VIBRATION:

Any operation or activity shall not cause earthborne vibrations in excess of the values stipulated below. Column A shall apply at or beyond the property line; column B shall apply at or beyond a residence district boundary line. Vibration shall be expressed as displacement in inches and shall be measured with a three (3) component measuring system:

	А	В
Frequency (Cycles Per Second)	Displacement (Inches)	Displacement (Inches)
0 to 10	0.0008	0.0004
10 to 20	0.0005	0.0002
20 to 30	0.0002	0.0001
30 to 40	0.0002	0.0001
40 and over	0.0001	0.0001

Impact vibrations, that are discrete pulses that do not exceed one hundred (100) impulses per minute, shall not cause in excess of twice the displacement values above.

Any use or portion thereof creating intense earth-shakingvibrations such as are caused by heavy drop forges or heavy hydraulic surges, shall be set back at least five hundred feet (500') from all property lines. (Ord. 0-03-00, 4-3-2000)

#### **5A-12-4-5: SMOKE AND PARTICULATE MATTER:**

In addition to the performance standards specified herein, the emission of smoke or particulate matter in such manner or quantity as to endanger or be detrimental to the public health, safety, comfort, or welfare is hereby declared to be a public nuisance.

For the purpose of grading the density of smoke, the Ringelmann Chart, published and used by the United States Bureau of Mines, shall be employed. The evaluation of smoke by the Ringelmann Chart must be accomplished by a State of Illinois Certified Smoke Reader. Particulate matter size shall be determined by measurement through a 325-mesh sieve which will, in fact, accumulate all +44 micron particles and prove helpful in the measurement process. The emission of smoke or particulate matter of a density greater than No. 2 on the Ringelmann Chart is prohibited, except as otherwise provided herein.

The emission from all sources within any property of particulate matter containing more than ten percent (10%) by weight of particles having a particulate diameter larger than forty four (44) microns is prohibited. Dust and other types of air pollution, borne by the wind from such sources as storage areas, yards, roads and the like within property boundaries, shall be kept to a minimum by appropriate landscaping, paving, oiling, fencing, or other acceptable means. Emission of particulate matter from such sources in excess of the weight limitation herein specified is hereby prohibited.

The emission of more than ten (10) smoke units per hour per stack is prohibited, including smoke of a density in excess of Ringelmann No. 2. However, during one 1-hour period in each day, each stack

may emit up to twenty (20) smoke units when blowing soot or cleaning fires. Only during fire cleaning periods, however, shall smoke of Ringelmann No. 3 be permitted, and then for not more than four (4) minutes.

The rate of emission of particulate matter from all sources within the boundaries of any property shall not exceed a net figure of one pound per acre during any one hour, after deducting from the gross hourly emission per acre the corrective factors set forth in the following tables for height, velocity and temperature of emission, respectively.

Determination of the total net rate of emission of particulate matter within the boundaries of any property shall be made as follows:

- (A) Determine the maximum emission in pounds per hour from each source of emission and divide this figure by the number of acresof property area, thereby obtaining the gross hourly rate of emission in pounds per acre.
- (B) From each gross hourly rate of emission derived in subsection (A) of this Section, deduct the appropriate correction factor (interpolating as required) for height, velocity and temperature of emission set forth in the following corresponding tables, thereby obtaining the net rate of emission from all sources of emission within the boundaries of the property. Such total shall not exceed one pound per acre of property area during any one hour:

ALLOWANCE FOR HEIGHT OF EMISSION<sup>1</sup>

Height Of Emission	Correction		
Above Grade (Feet)	Pounds/Hours/Acre		
50	0.01		
100	0.06		
150	0.10		
200	0.16		
300	0.30		
400	0.50		

#### ALLOWANCE FOR VELOCITY OF EMISSION<sup>1</sup>

Exit Velocity	Correction		
(Feet Per Second)	Pounds/Hours/Acre		
0	0.00		
20	0.03		
40	0.09		

60	0.16
80	0.24
100	0.50

#### ALLOWANCE FOR TEMPERATURES OF EMISSION<sup>1</sup>

Temperature Of Emission	Correction		
( <u>Degrees Fahrenheit</u> )	Pounds/Hours/Acre		
200	0.000		
300	0.001		
400	0.002		
500	0.003		
1,000	0.01		
1,500	0.04		
2,000	0.10		

#### NOTE TO TABLES:

1. Interpolate for intermediate value not shown in table.

(Ord. 0-03-00, 4-3-2000)

#### **5A-12-4-6: GASES, TOXIC OR NOXIOUS MATTER:**

No use shall, for any period of time, discharge across the boundaries of the property wherein it is located gases, toxic or noxious matter in such concentrations as to endanger or be detrimental to the public health, safety, comfort or welfare or cause injury or damage to property or business. Detailed plans for the elimination of fumes or gases shall be required before the issuance of a building permit. (Ord. 0-03-00, 4-3-2000)

#### 5A-12-4-7: FIRE AND EXPLOSION HAZARD:

The manufacture, storage, processing, and use in any manner of all materials shall be done in accordance with the Darien building code and in conformity with the National Fire Protection Association's National Fire Codes; the Building Officials and Code Administrators International, Inc.'s Building, Mechanical, and Fire Prevention Codes; State and Federal Departments of Transportation; and all other applicable local, State, and Federal standards.

The manufacture, storage, processing, and use in any manner of a material that exceeds any or all of the following criteria as determined by Standard 325M Fire Hazard Properties of Flammable Liquids.

Gases, and Volatile Solids of the National Fire Protection Association's National Fire Codes is prohibited:

- (A) If the degree of health hazard is rated greater than three (3).
- (B) If the degree or reactivity is rated greater than one.
- (C) If the sum of the health hazard, flammability, and reactivity classifications is greater than seven (7).

If a material is not evaluated by the above standard, it shall not be assumed that it is approved. The material in question shall be evaluated on the basis of its physical and chemical properties. Certification by an independent testing laboratory may be required. (Ord. 0-03-00, 4-3-2000)

#### **5A-12-4-8: REGISTER OF POLLUTANTS:**

It shall be unlawful for any person to install, erect, construct, reconstruct, alter or add to, or cause to be installed, erected, constructed, reconstructed, altered or added to, any fuel burning, combustion or process equipment or device or any equipment pertaining thereto, or any stack or chimney connected therewith, within the City excepting domestic heating plants, domestic refuse-burning equipment, locomotives and internal combustion engines, in the City, until there has been filed in duplicate by the owner, contractor, installer or other person, or his agent with the City, an application for a permit accompanied by a complete listing of emissions into the atmosphere that result from the operation of the aforesaid equipment or processes, both as to kind and quantity and, in addition thereto a listing of the type and capacity of the equipment used for the collection, absorption, or suppression of each and an estimate of its efficiency, and until a permit therefor has been granted by the Corporate Authorities of the City. Said submitted register of pollutants shall be accompanied by an affidavit of a qualified person stating that it is complete and correct and that the proper operation of the plant or process, as designed, will not result in any violation of this title. Businesses in the O, OR&I, and I-1 Districts that apply for a business license shall certify that they will not store, utilize, process, or manufacture hazardous chemicals in quantities subject to the tier II reporting requirements as defined by USEPA, except for the utilization of lead-acid batteries to power heavy duty equipment such as forklifts. Any business that has a hazardous chemical release or violation of Federal, State, or local regulations shall notify the City immediately. (Ord. 0-13-19, 4-1-2019)

#### 5A-12-4-9: WASTE:

All sewage and industrial wastes shall be treated and disposed of in such manner as to comply with the water quality standards applicable to the classification assigned to the receiving waters by the City, the State of Illinois, and the United States Environmental Protection Agency. Approval by the Illinois Environmental Protection Agency of all plans for waste disposal facilities shall be required before issuance of any building permit. (Ord. 0-03-00, 4-3-2000)



## CITY OF DARIEN

In the County of DuPage and the State of Illinois
Incorporated 1969

#### SPECIAL USE STANDARDS

Zoning Code Section 5A-2-2-6(G)

No special use shall be recommended to the City Council by the Plan Commission, nor approved by the City Council, unless findings of fact have been made on those of the following factors which relate to the special use being sought:

- 1. That the special use is deemed necessary for the public convenience at the location specified.
- 2. That the establishment, maintenance, or operation of the special use will not be detrimental to, or endanger the public health, safety, or general welfare.
- 3. That the special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish or impair property values within the neighborhood.
- 4. That the establishment of the special use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.
- 5. That the exterior architectural design, landscape treatment, and functional plan of any proposed structure will not be at variation with either the exterior architectural design, landscape treatment, and functional plan of structures already constructed or in the course of construction in the immediate neighborhood or the character of the applicable district, as to cause a substantial depreciation in the property values within the neighborhood.
- 6. That adequate utilities, access roads, drainage, and/or necessary facilities have been or are being provided.
- 7. That adequate measures have been or will be taken to provide ingress and egress so designed to minimize traffic congestion in the public streets.
- 8. That the special use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified by the City Council pursuant to the recommendations of the Plan Commission and the Planning and Development Committee.

#### **ZONING REVIEW WORKSHEET**

Date: November 15, 2019

Re: City of Darien

Permit #

Modell Funeral Home - Commercial Addition

7710 S. Cass Ave. Darien, IL 60561

	Ordinance	<u>Actual</u>	Remarks
Zoning District:	R-3 (Special Use)	Undertaking	In Compliance
Building Height:	3 Stories / 35' max.	1 story / 25' (1.)	In Compliance
Lot Width:	90' min.	351.44'	In Compliance
Lot Depth:	No Requirement	N/A	Not Applicable
Lot Area:	No Requirement	141,925 s.f.	In Compliance
Setbacks:			
Front Yard (Cass Ave.)	30' min.	100'	In Compliance
Side Yard (north)	15' min.	195'	In Compliance
Side Yard (south)	15' min.	100'	In Compliance
Rear Yard (west)	30' min.	156'	In Compliance
Principal Building Coverage:	40% (56,770 s.f.) max.	9.5% (13,592 s.f.)	In Compliance
Impervious Surface:	60% max.	N/A - No new impervious surface.	In Compliance
No. Of Parking Spaces	57 min.	77	In Compliance
Permitted Use	Undertaking	Single Family Residence / Commercial Crematorium	COMMENT ON REVIEW.

#### NOTE:

1. Measured to top of chimney.

From: <u>Julia Krumplis</u>
To: <u>Joseph Hennerfeind</u>

Subject: Safe Air is Critical to a Nice Place to Live Date: Tuesday, November 26, 2019 6:15:53 AM

#### Dear Mr. Hennerfeind and Darien Planning Committee,

I am writing to ask that you deny the special use permit to allow a crematorium in Darien. The people of Darien have suffered and been poisoning by toxic air for over 3 decades. For over 30 years we have been poisoned by cancer causing ethylene oxide by Sterigenics. We have had enough toxic dangerous air. Please do allow any additional commercial sources of air toxins. Please do not allow the proposed crematory.

In order to be a nice place to live, a place must first be safe. Safe air is a fundamental and foundational part of safe!

Gaseous emissions are by far the greatest source of cremation pollution and thus far the only crematorium waste that is regulated. In addition to harmless compounds such as water vapor (H2O), emissions include the green house gas carbon dioxide (CO2); pollutants and carcinogens carbon monoxide (CO), nitrogen oxide (NO2), and sulfur oxide (SO2); volatile acids such as hydrogen chloride (HCI) and hydrogen fluoride (HF), both of which form during vaporization of plastics or insulation; and mercury (often from dental fillings). Organic compounds such as benzenes, furans and acetone are also emitted and react with HCI and HF under combustion conditions to form polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), both of which are carcinogens. Hg, PCDDs, and PCDFs are of special concern because they are susceptible to bioaccumulation. A study by the Cremation Association of North America has found that filtering crematorium fumes has little effect on the toxins released.'

#### http://faculty.virginia.edu/metals/cases/huffman1.html

I and many of my neighbors just spent over a year protesting and fighting Sterigenics so the poisoning of our kids would stop. I very seriously considered leaving Darien because of Sterigenics' toxic air. I love my house and my community and did not want to go. Please do not introduce another source of toxic air. Please keep Darien the awesome place it is.

Very Truly Yours, Julia

Julia Krumplis

From: Mary Sullivan
To: Jeanne

Cc:

Subject: Re: Modell Crematory

**Date:** Sunday, November 24, 2019 10:49:07 AM

Thank you for taking the time to reach out and voice your concerns. I highly recommend attending the December 4th Planning and Zoning Meeting @7pm in the Darien City Hall where this will be discussed. You can hear the information first hand and voice your concerns in the open forum. I will share your email with Mayor Joe Marchese, City Administrator Bryon Vana and City Planner Joe Hennerfeind.

Regards -

Mary Coyle Sullivan City of Darien Alderwoman Ward 5

On Nov 24, 2019, at 10:22 AM, Jeanne

wrote:

I have worked and lived in Darien since 1972 in various neighborhoods and now reside in The Preserves of Waterfall Glen.

I just want to voice my opposition to the crematory proposed by Modell. I believe my family has been affected by Sterigenics and cannot support more pollutants being released into the air.

Six of my family members (who all lived in Darien) have been diagnosed with cancer. Two of us, very rare unrelated cancers with one being myself. (I am fine now). I do not feel this is a coincidence.

At the time of the Sterigenics news, I attended the town hall at Ashton Place. Mayor Weaver did not even stay for the whole meeting and I sent an e-mail with no response. I hope the new mayor cares more about the residents than she did.

I am copying my sister who is also a long time resident of Darien.

Thank you.

Jeanne Peterson

Darien

Sent from Xfinity Connect Application