



MADSEN, FARKAS & POWEN, L.L.C.  
Attorneys at Law

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**VIA HAND DELIVERY**

Ellen Schanzle-Haskins  
Chief Counsel  
Illinois Department of Transportation  
State of Illinois Center  
100 West Randolph, 6<sup>th</sup> Floor  
Chicago, Illinois 60601

RE: CMH Helipad  
Our File No: 25-805

Dear Ms. Schanzle-Haskins:

On behalf of the Children's Memorial Hospital, I am responding to your request dated August 5, 2009. We apologize for our delays, and we greatly appreciate your patience.

In response to your request, we have provided the following:

- Correspondence from Robert D. McKenna which provides a point by point narrative response to your request (tab A);
- A narrative description of the helipad fire extinguishing system (tab B);
- Certification of the structural capacity of the helipad (tab C);
- An index of the engineer drawings provided (tab D);
- And two copies of the following materials in both printed and electronic format:
  - Engineering drawings;
  - September 28, 2009 report from RWDI, with attachments;
  - Helipad Operations Powerpoint; and
  - Helipad Policies and Procedures Guide

Please note the operations policies and training materials are presented in draft form. We expect to greatly expand these materials, but we have endeavored to provide significant additional detail of our current plans. We invite the Department of Transportation to grant our pending application subject to satisfactory completion of these materials.

Ms. Schanzle-Haskins

October 5, 2009

Page 2 of 2

Finally, please permit me to express our deep appreciation for the dedication that you and the many individuals involved in this project have demonstrated. Please do not hesitate to contact me with any remaining questions or concerns.

Yours truly,

MADSEN, FARKAS & POWEN, LLC



Alan L. Farkas

ALF/jk

Enclosures

cc: John J. George (w/out enclosures)  
Nancy M. Borders (w/out enclosures)  
Robert D. McKenna (w/out enclosures)

Children's Memorial Hospital  
2300 Children's Plaza, Chicago, Illinois 60614-3394  
773.880.4000  
www.childrensmemorial.org

New Hospital Development Office  
155 E. Superior Street, Chicago, Illinois 60611  
312.440.5300



Children's Memorial  
Foundation

Children's Memorial  
Research Center

Pediatric Faculty  
Foundation



NORTHWESTERN  
UNIVERSITY

Faculty of  
Northwestern University's  
Feinberg School of Medicine

October 2, 2009

Madsen, Farkas & Powen, L.L.C.  
20 S. Clark Street  
Suite 1050  
Chicago, IL 60603  
Attn: Alan Farkas

**Subject: Lurie Children's Heliport**

Dear Alan:

Response to IDOT letter dated August 5, 2009 requesting materials for Ray Syms to complete his evaluation and issue his recommendations relative to our Heliport Certificate of Approval Application.

Bullet Point #1

Enclosed are 2 sets (full size) of the requested plans and details, and an electronic version (pdf format).

Bullet Point #2

Enclosed are 2 copies of drawing SK-209 r.1-enlarged Heliport Plan showing the TLOF, FATO, and Safety Area boundaries. We have used the TLOF (66'x66') and FATO (132'x132') values shown in our permit application (FAA form 7480 and IDOT form AER2060), and have used the FAA AC150/5390-2B, Figure 4-2 form to calculate the safety area.

Bullet Point #3

The plans submitted include the final design for the roof and Heliport levels, and reflect compliance with the FAA Heliport Advisory Circular, paragraph 412 C(2) recommendation. Our design locates the Heliport 6 feet above the top of the screen wall, and 21 feet above the building roof surface. We have included building sections (drawing H-1) in the plan submittal package which shows the condition at the roof and Heliport levels. We have asked RWDI to review this final design and to evaluate the mitigating effect which providing the 6' clearance above the screen wall and 21 foot clearance above the roof will have in lieu of perforating the screen wall. RWDI's report is enclosed with this submittal.

Bullet Point #4

A review of the plans (mechanical, piping, fire protection and electrical) should illustrate our full compliance with the FAA design guide as well as NFPA 418 Guidelines. With reference to design elements of the foam system, we have enclosed a description of the "Helipad Foam Fire Extinguishing System" prepared by the MEP Engineer, AEI in response to this specific inquiry.

Bullet Point #5

This item is addressed by Rex Alexander and is enclosed with this submittal.

Bullet Points #6 & 7

The RWDI exhibit referenced in Point 6 (Figure 1 dated June 6, 2007) has been updated to reflect the final design. In addition, we have asked RWDI to resurvey and verify the original information relative to surrounding buildings and structures which might penetrate the 8:1 cone, starting from the FATO edge of the final design, as you have requested.

With regard to presenting this information in a plan view (point 7), we have asked RWDI to develop that document, reflecting the requested information. RWDI's drawings and report are included with this submittal.

Bullet Point #8

This item is addressed by Rex Alexander and is enclosed with this submittal.

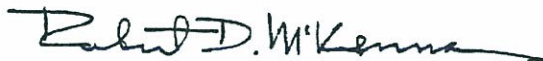
Bullet Point #9

The design helicopter used for our application is the Dauphin 2 which is the one flown by UCAN, who is the predominant carrier used by Children's Memorial Hospital. The current markings indicated on the plans show weight and rotor size to accommodate this design helicopter: however, the structural design of the Helipad was calculated based on a helicopter weight of 24,500 pounds plus a 50% impact load. Attached is a letter from the structural engineer of record, attesting to the actual characteristics used in the design.

While the maximum weight and rotor diameter design values based on FAA criteria could be 24 (weight) and 66 (rotor diameter or TLOF size), we felt the actual markings should more closely reflect the values of our carrier's aircraft as opposed to the optimum allowed by actual design and pad (TLOF) size. We realize, after consideration of additional input from this process, that we should adjust the weight and rotor diameter values as shown on the helipad to reflect actual structural capacity used in the design.

Our rationale in "over-designing" the structure for a higher weight capacity was to accommodate, under a major emergency situation, heavier aircraft with the ability to safely land on this heliport.

Sincerely,



Robert D. McKenna, AIA  
Administrator  
New Hospital Development

## HELIPAD FOAM FIRE EXTINGUISHING SYSTEM

The sprinkler contractor will be expected to comply with the following codes and standards:

- A. NFPA 13, Installation of Sprinkler Systems, 1999 edition; (See Sections 250.2490 and 250.2670)
- B. NFPA 16, Installation of Foam-Water Sprinkler and Foam-Water Spray Systems, 2003 edition.
- C. NFPA 418, Standard for Heliports, 2006 edition (applicable to fire protection section of Chapter 5, Rooftop Landing Facilities).
- D. Federal Aviation Administration, FAA AC 150-2B.
- E. Illinois Department of Transportation Safety Rules.
- F. City of Chicago Heliport Ordinance, Article III, 10-36-380 through 10-36-540.
- G. Underwriters Laboratories (UL) Fire Protection Equipment Directory.

## SYSTEM DESCRIPTION

The helipad foam extinguishing system consists of fixed foam nozzles around the perimeter of the landing pad. All components installed in the area of helipad are required to not penetrate the approach takeoff surface, transitional surfaces, and the safety area as defined in FAA A/C 150/5390-2B, Heliport Design Advisory Circular. The foam is directed at the helipad's landing surface. The extinguishing foam is aqueous film forming foam (AFFF). There will be 3 dedicated manual pull stations that will activate the foam extinguishing system. One of the pull stations is located at the penthouse exit leading to the helipad and the remaining two are located at the bottom of the helipad stairs. Each manual pull station will be provided with a sign identifying its purpose. The National Fire Protection Association requires a minimum design density of 1/10<sup>th</sup> of a gallon per minute per square foot applied over the entire landing pad surface for at least 5 minutes.

There will be a dry-pipe sprinkler system installed under the helipad. This system will use water to control any fire that occurs under the helipad. The dry-pipe sprinkler system is automatically activated when a sprinkler head is activated by the heat from a fire.

Standpipes, which are vertical fire protection pipes with hose connections for firefighter use, will be available at the roof level.

MAGNUSSON  
KLEMENCIC  
ASSOCIATES

August 19, 2009

Robert D. Anderson, P.E., S.E.  
Principal

Mr. Stuart Baur  
Zimmer Gunsul Frasca Architects LLP  
515 South Flower, Suite 3700  
Los Angeles, California 90071

Subject: **Ann & Robert H. Lurie Children's Hospital  
Chicago, Illinois**

Re: Heliport Design

Dear Stuart:

This letter confirms that the structural support for the proposed heliport on top of the Lurie Children's Hospital of Chicago is designed for a helicopter weight of 24,500 pounds plus a 50% impact load. Magnusson Klemencic Associates (MKA) is the Structural Engineer of Record for the building and has completed the structural design of the building up to the underside of the heliport. Our design includes the design of the columns extending above the roof of the building to support the heliport as well as the lateral bracing. The heliport deck and deck framing will be designed and provided by the Design/Build Specialty Contractor. Once the Design/Build Contractor is selected, MKA will coordinate with the Contractor to develop the interface and connection details between the heliport deck framing and the supporting columns.

If you have any further questions, please notify us at your convenience.

Sincerely,

Magnusson Klemencic Associates, Inc.



Robert D. Anderson  
randerson@mka.com

RDA/dah

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