



March 9, 2022

Reference No.: 659528-003

To: City Council

From: Kent Snyder, Branch Manager

Subject: **Notice of Intention to Designate Hangar 11 as a Municipal  
Historic Resource**

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## SUMMARY

This memo initiates the process to designate a historic resource, Hangar 11, at the owner's request, as a Municipal Historic Resource in accordance with the *Historical Resources Act*. The City of Edmonton currently owns the building and is in the process of completing a sale of the property to a new owner, T3 Development LP By Its General Partner T3 Development GP Inc.

## CURRENT ACTIONS

*(Immediate)*

1. That a Notice of Intention to Designate a Municipal Historic Resource, as set out in Attachment 1, be served on the future owners of a portion of the property located at 101 Airport Road NW in accordance with Section 26 of the *Alberta Historical Resources Act*, RSA 2000, c H-9.<sup>1</sup>
2. That the City Manager be appointed to implement matters arising from the issuance of the Notice of Intention to Designate Hangar 11 as a Municipal Historic Resource, as set out in Attachment 1.

## FUTURE ACTIONS

*(At least 60 days after the Notice of Intention to Designate is served)*

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<sup>1</sup> On November 26, 2019, City Council passed amendments to the City Administration Bylaw, delegating approval of Notices of Intention to Designate (NOI) under the *Historical Resources Act* (HRA) to the City Manager, where the owner consents to the designation of their property. The NOI initiates the designation process under the *Historical Resources Act*; the final decision on designation remains with City Council by way of a bylaw.

1. Pursuant to the provisions of the Alberta *Historical Resources Act*, RSA 2000, c H-9, a Bylaw to Designate Hangar 11 as Municipal Historic Resource (the "Bylaw") will be brought forward to Council for their consideration.
2. If approved, the Bylaw and corresponding Rehabilitation Incentive and Maintenance Agreement will contemplate funding of up to \$5,000,000 to be provided over a ten-year period from the Heritage Resources Reserve to fund City-funded work on Hangar 11, as described in Attachment 5.

## **BACKGROUND**

Hangar 11 is on the Inventory of Historic Resources in Edmonton, and merits designation under City Policy C450B - Policy to Encourage the Designation and Rehabilitation of Municipal Historic Resources in Edmonton. The building was constructed in 1942 by the United States Army Air Force (predecessor to the modern US Air Force), and features International style influences. The building was one of four major hangars and several dozen other small buildings constructed on the Blatchford Field site as part of the Northwest Staging Route. This initiative, a cooperative partnership between the United States, United Kingdom and Canadian governments, channeled critical Lend-Lease aid and materials from the United States to the Soviet Union through Alberta and Alaska. Much of the aid was used by the Soviet Union on the Eastern Front, after the invasion of the Soviet Union by Germany through Operation Barbarossa in June 1941. It is estimated that between 7,000 to 10,000 aircraft and thousands of tons of other war materials were channeled through the Blatchford Field site between 1942 and 1944.

On February 1, 2021, Executive Committee directed Administration to negotiate a draft agreement for the sale of the Hangar 11 site to Architure Inc. (reference report [CR 6367](#)).

On June 28, 2021, City Council authorized the sale of the Hangar 11 building by the City to the applicant, Architure Inc. (reference report [FCS00411](#)).

A condition of the sale of the building was its designation as a Municipal Historic Resource and its rehabilitation. Architure Inc. has since created a new corporate entity for the purposes of the purchase of the land and building, known as T3 Development LP By Its General Partner T3 Development GP Inc. The final Designation Bylaw and the associated Rehabilitation Incentive and Maintenance Agreement will reference the new corporate entity.

A rezoning for the future Hangar 11 site was approved by City Council on September 8, 2021, under [Charter Bylaw 19837](#).

The future Hangar 11 site was approved for subdivision by the City of Edmonton Subdivision Authority on September 9, 2021. The future parcel is currently awaiting registration by Alberta Land Titles. The final Designation Bylaw and the associated Rehabilitation Incentive and Maintenance Agreement will reference the new legal description of the parcel.

On November 24, 2021, the owners completed the application requirements to have Hangar 11, located on a portion of the property at 101 Airport Road, designated as a Municipal Historic Resource under the provisions of City Policy C450B.

If designated, any future renovation of Hangar 11 will be required to meet the *Standards and Guidelines for the Conservation of Historic Places in Canada*.

The designation of this property will support its proper restoration and continued protection in the future.

## **BUDGET/FINANCIAL**

If the Bylaw is approved, and upon completion of the project phases as outlined in Attachment 5, the Heritage Resources Reserve will pay the owner up to \$5,000,000 for rehabilitation over a 10-year period, or up to a maximum of \$500,000 per year. This would be an exception to the current practice of the program, which currently limits non-residential properties to a maximum total grant of \$500,000 for rehabilitation work (up to 50 per cent of eligible costs) from the Reserve. Given the significant scale of the building and the associated rehabilitation costs, which vastly exceed what is typically seen in other non-residential properties, and the international-level significance of the building, Administration is supportive of the request from the future owner. Through the process to sell the property to the new owner, there was awareness that a potential grant request for this building could exceed the typical program limits. This type of approach was also utilized for the designation of the former Molson Brewery building in 2016, where a grant of \$4,175,000 was provided to the owner, spread over a 10-year period to limit the annual impact on the Heritage Resources Reserve. The grant Agreement for the former Molson Brewery building expires in 2025.

After a review of future projections for the Reserve with Finance, it has been determined that the current Reserve balance is generally sufficient to cover the committed funding, including Hangar 11. Depending on the nature of future applications for designation of other buildings, potential rehabilitation grants from the Reserve may need to be limited to ensure an appropriate balance in the Reserve is maintained.

The total estimated cost of the eligible heritage rehabilitation work for the project is \$12,649,162. The estimated cost of the overall project is \$62.5 million. Beyond the \$5,000,000 grant from the Heritage Resources Reserve, which is less than 50 per cent of eligible heritage rehabilitation costs, the owner is responsible for all costs of the heritage rehabilitation work and broader costs for the project.

The projections for the Reserve (using current commitments) anticipate a Reserve balance of \$3,579,954 at the end of 2022. Administration is considering a number of potential heritage designations for use of these funds, which will be brought forward for Council approval as required. Based on the current commitments, including the proposed annual allocation for Hangar 11, the Reserve balance is anticipated to decline to a balance of \$1,348,410 at the end of 2023. The Reserve is funded by the tax levy on an annual basis (\$2.3 million in 2022, including \$417,500 specifically for the Edmonton Brewing and Malting Company Ltd.).

## **PUBLIC ENGAGEMENT**

Public engagement was not undertaken as part of this process, as it is not required under the *Historical Resources Act*.



c: Executive Leadership Team

Aileen Giesbrecht, City Clerk, Office of the City Clerk

Michelle Plouffe, City Solicitor, Legal Services

Chris Hodgson, Branch Manager, Real Estate

Tom Lumsden, Development Manager, Blatchford Redevelopment Project

Attachments:

1. Notice of Intention to Designate Hangar 11 as a Municipal Historic Resource - *Historical Resources Act*
2. Location Map of Hangar 11
3. Photographs of Hangar 11
4. Heritage Officer's Statement of Significance
5. Description of City-Funded Work for Hangar 11

**Notice of Intention to Designate Hangar 11 as a Municipal Historic Resource**

HISTORICAL RESOURCES ACT  
R.S.A. 2000, cH.-9, as amended, Section 26

TO: T3 Development LP By Its General Partner T3 Development GP Inc.  
507, 9915 - 115 Street NW  
Edmonton AB T5K 1S5

City of Edmonton  
Office of the Deputy City Manager  
Financial and Corporate Services  
c/o Real Estate Branch  
1 Sir Winston Churchill Square NW  
Edmonton AB T5J 2R7

City of Edmonton  
Office of the Deputy City Manager  
Integrated Infrastructure Services  
c/o Blatchford Redevelopment Project  
1 Sir Winston Churchill Square NW  
Edmonton AB T5J 2R7

Notice is hereby given that sixty (60) days from the date of service of this Notice, The Municipal Council of The City of Edmonton intends to pass a Bylaw that the original 1942 structure known as Hangar 11 and the land on which such structure is located, legally described as:

DESCRIPTIVE PLAN 922 0135  
BLOCK 6A  
LOT 2

CONTAINING 216.54 HECTARES (535.08 ACRES) MORE OR LESS

EXCEPTING THEREOUT: HECTARES (ACRES) MORE OR LESS

- A) PLAN 9925701 - ROAD 0.003 (0.01)
- B) PLAN 1822441 - SUBDIVISION 6.72 (16.61)
- C) PLAN 2120299 - SUBDIVISION 5.24 (12.95)
- D) PLAN 2121198 - ROAD 5.634 (13.92)

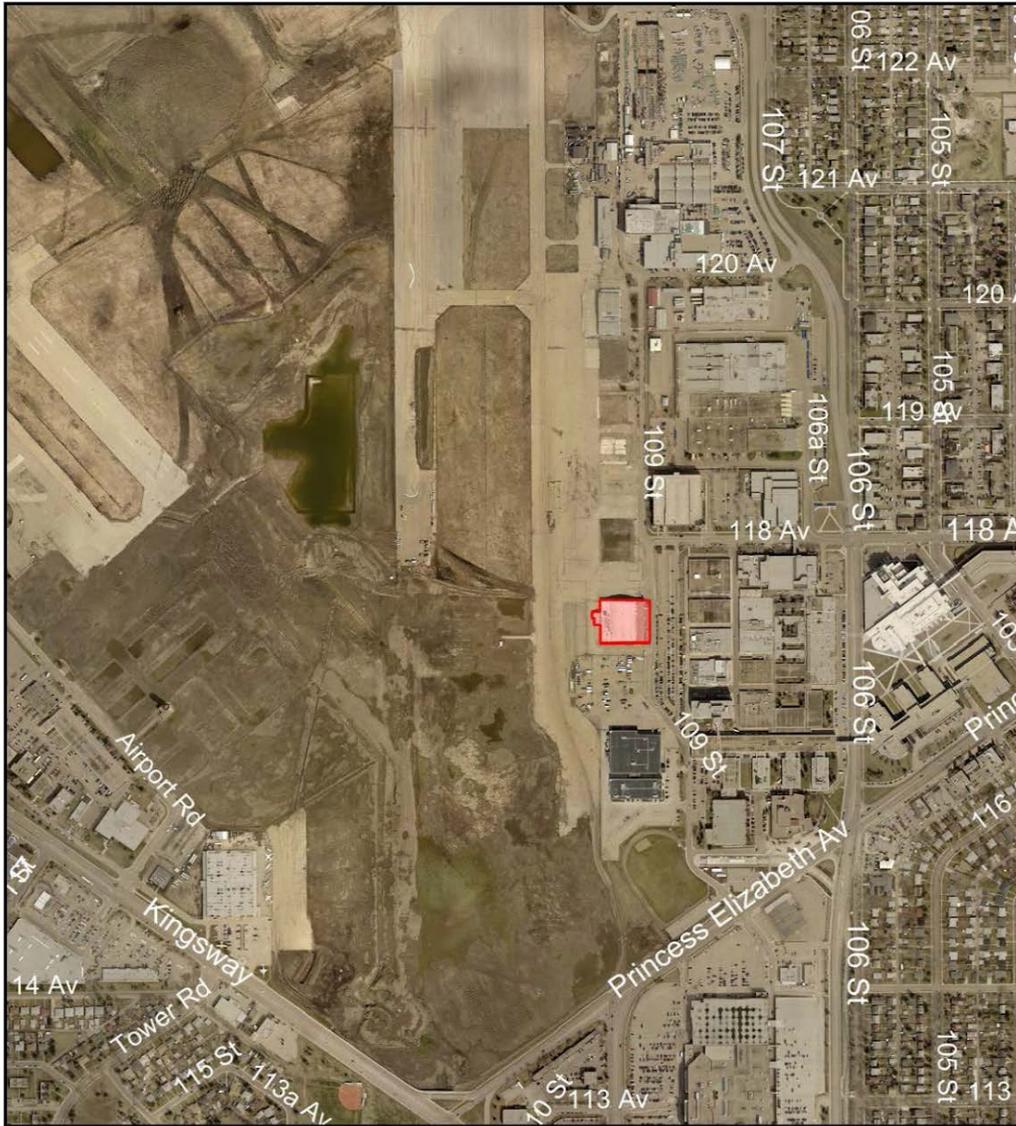
EXCEPTING THEREOUT ALL MINES AND MINERALS



## **Attachment 1**

After 120 days the Notice ceases to have any effect, unless the Council has revoked it sooner, or the court has shortened the period, or unless the Council has passed a Bylaw designating the resource permanently.

Location Map of Hangar 11



**101 Airport Road  
Hangar # 11**



Photographs of Hangar 11



Hangar 11, south and east elevations, looking northwest from 109 Street.



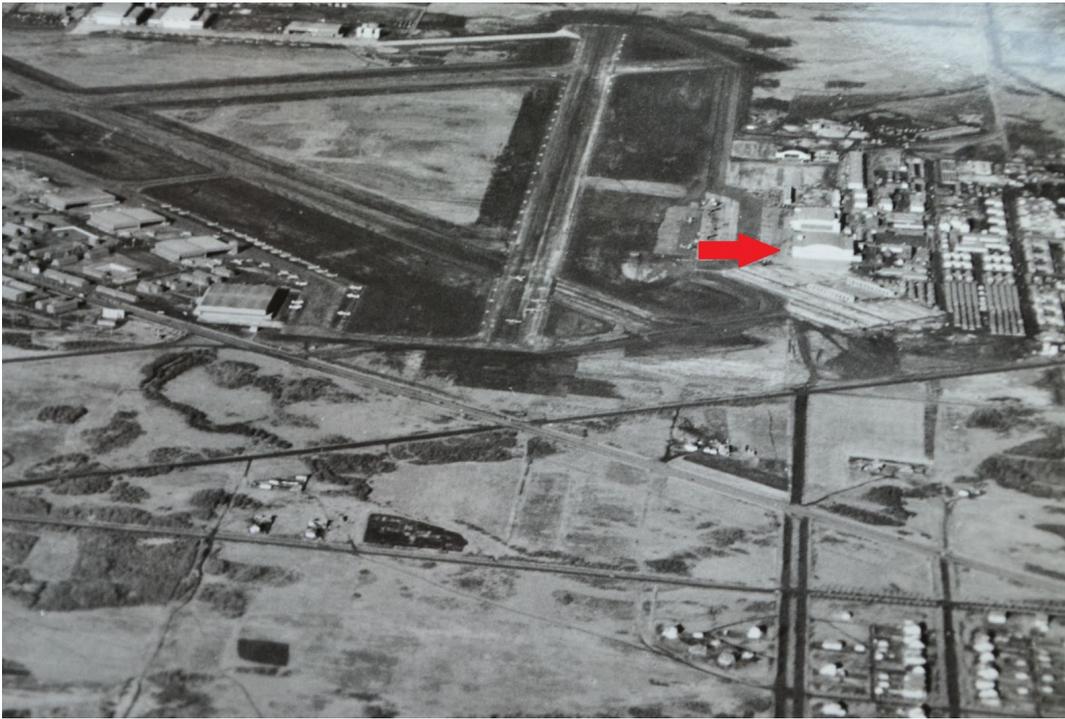
Hangar 11, north elevation, looking southeast from Blatchford site.



Hangar 11, south and west elevations, looking northeast from Blatchford site.



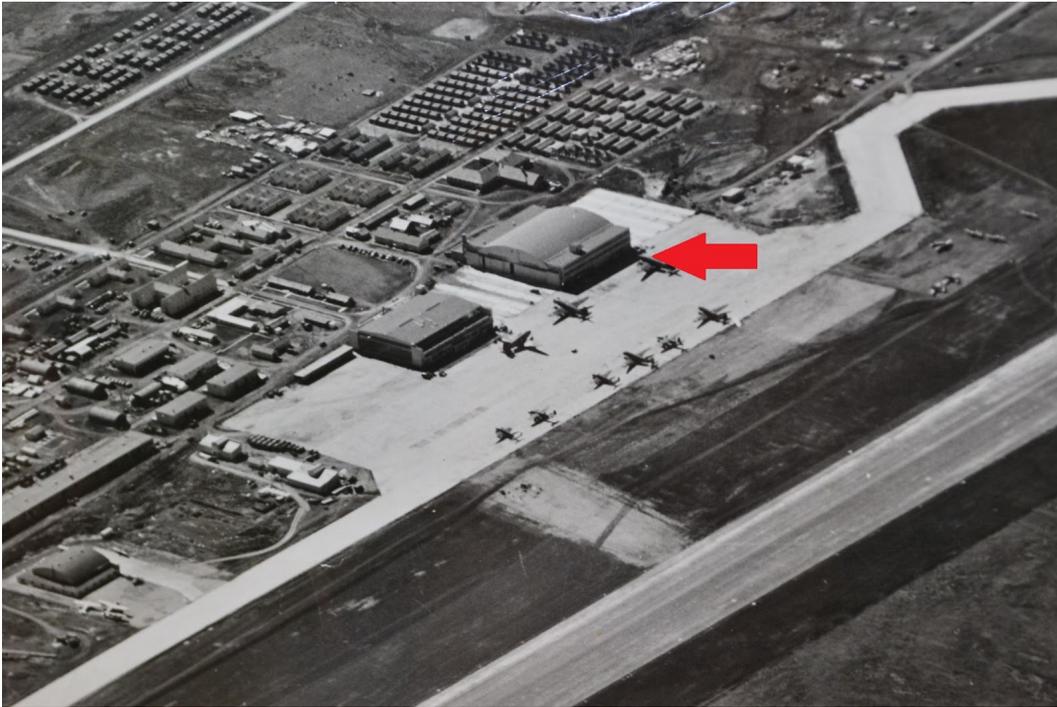
Detail of office wing on east elevation, looking northwest from 109 Street.



Hangar 11, shown with red arrow, in late 1942 or early 1943, looking north.



Hangar 11, shown with red arrow, 1943, looking northeast.



Hangar 11, shown with red arrow, 1943, looking southeast.



Hangar 11, 1943, looking northwest.



Hangar 11, shown with red arrow, 1945, looking south.



Hangar 11, 1956, looking northeast.

## Heritage Officer's Statement of Significance

### Description of Historic Place

Hangar 11 is an aircraft hangar constructed under the direction of the U.S. Army Air Force in 1942 at the former Blatchford Field, later known as the Edmonton Municipal Airport, during the Second World War. At the time of its construction, it was identified as Hangar T3; it was identified as Hangar 11 at some point after the end of the war. The hangar is constructed of wood, and consists of a central open hangar space covered by an arched roof, and three storeys of ancillary spaces on its east and west sides. The north and south elevations feature typical large openings to accommodate aircraft access and egress into the building. The site is located west of 109 Street, north of Princess Elizabeth Avenue, and east of the Northern Alberta Institute of Technology campus, in what is now known as the Blatchford neighbourhood.

Hangar 11 is listed on the Inventory of Historic Resources in Edmonton, and is the last remaining Second World War-era hangar structure on the Blatchford site. It is believed to be one of the last remaining buildings of its kind in western Canada, and its international associations make it one of the most significant historic structures in Edmonton.

Hangar 11's distinct form has made it a valued local landmark in the Blatchford neighbourhood, representing the field's historic use as an airfield. Hangar 11 carries the potential to yield information that the site once served as Blatchford Field, Canada's first municipal airport, and as one of the last remnants of the airport's former built character and military history in a neighbourhood that is evolving.

### Heritage Value

#### Lend-Lease Program and the Northwest Staging Route

Hangar 11 is directly associated with the Canadian/United States military operations during the Second World War at Blatchford Field that played a critical role in the outcome of this global conflict. Initiated in March 1941, the United States government's Lend-Lease program allowed the provision of military aid and equipment to its allies, prior to the United States formally entering the war in December 1941. In June of 1941, Germany initiated Operation Barbarossa, the formal invasion of the Soviet Union. With nearly 3,000,000 Axis powers troops involved over the course of the conflict, the invasion remains to this day the largest military operation ever undertaken. With the Axis forces penetrating into Soviet Union territory, the United States government decided to approve over \$1 billion in Lend-Lease aid to the Soviets in October of 1941.

To assist in significant portions of the Lend-Lease aid being provided to the Soviet Union, a network of airfields, known as the Northwest Staging Route, was formally

established in 1941 by the United States and Canadian governments. The United States-Canadian Joint Board of Defense had earlier agreed in the fall of 1940 that a highway (the Alaska Highway) and a series of airfields should be constructed between Edmonton and Fairbanks, Alaska, to provide a corridor for American military equipment to be stationed in Alaska. The initiation of Operation Barbarossa and the subsequent agreement to provide Lend-Lease aid to the Soviet Union placed an immediate priority in channeling aid to Alaska. Construction of the Alaska Highway, starting from Edmonton, could not happen quickly enough to facilitate timely movement of the aid for the Soviet Union, so a focus was placed on establishing the airfields network of the Northwest Staging Route.

Two main distribution hubs for the Lend-Lease aid were established in the United States at Great Falls, Montana, and Minneapolis, Minnesota. The need existed to create a central distribution centre in Canada, and Blatchford Field in Edmonton, with its long associations with aviation since 1926 and its northerly location, was identified as this Canadian hub. Edmonton subsequently became the headquarters of the Alaskan Wing, Air Transport Command, and approximately 60 buildings were constructed by the United States Army Air Force at Blatchford Field, starting in 1942, largely where the campus of the Northern Alberta Institute of Technology (NAIT) stands today. From the Edmonton base, airfields were established approximately every 160 kilometres on the way to Fairbanks. Aircraft and other material were manufactured and marked with Soviet insignia in the United States and Edmonton, inspected by the Soviet military upon their arrival in Alaska, and then transferred to the Soviet Union's forces across the Bering Strait for immediate deployment to the Eastern Front and other locations related to the war effort.

The airport site and its associated operations were significantly expanded during the Second World War in order to accommodate military flight operations of the Royal Canadian Air Force and the US Army Air Force under the Northwest Staging Route, while defending the west coast of North America from invasion. Hangar 11 (originally known as Hangar T3) was constructed as one of four main hangars for the newly-established American detachment at Blatchford Field during 1942-43. At times during 1943, Blatchford Field was the busiest airfield in the world, with nearly 900 flights a day arriving and departing, or roughly every 1.5 minutes over a 24 hour period. It is estimated that Blatchford Field supported the transfer of between 7,000 to 10,000 Lend-Lease aircraft from the United States to the Soviets for use against the Axis forces on the eastern front between 1943 and 1945. Its urgent construction employed readily-available construction resources, resulting in a hangar built predominantly of wood rather than the steel which would have otherwise been used at the time.

Hangar 11 exhibits design value as a 1930s-40s hangar building, a rare building typology in Edmonton and in Alberta. Like earlier small- to medium-scale hangar buildings at Blatchford Field and elsewhere in North America, Hangar 11 is characterized by a central open airplane hangar space with an arched roof, bordered by three-storey ancillary structures located on the east and west sides of the building. The

building also incorporates remnant features of the historic control tower on the building's west side, as well as single storey supplementary extensions, including a boiler room on the building's east side and loading bays on the west. Hangar 11 exhibits further design value through its wood Bowstring roof trusses, which represent a unique method of construction in service of the building's rare arched roof form.

The impact that the overall Lend-Lease program, which included the Northwest Staging Route component, had on the eventual outcome of the Second World War cannot be overstated. The Eastern Front saw some of the largest and most destructive battles in history, with horrific atrocities and massive numbers of casualties for the Soviet Union and the Axis powers alike, with military casualties alone being estimated at over 5,000,000. Without the critical materials being provided by the United States to the Soviet Union, victory in this portion of the overall conflict may have been doubtful. The ability of the Soviet military and its citizens to hold, and eventually reverse, the Axis invasion forces, with the support of the Lend-Lease aid, retained a two-front war for Germany. If Germany had been able to effectively remove the Soviet Union from the war, the ability of the Allied powers to launch Operation Overlord at the Battle of Normandy in June 1944 would have been seriously jeopardized. The delay or even outright inability of the Allies to land on D-Day would have had unknown repercussions on the outcome of the Second World War, and on the history of the 20th century. Hangar 11 is an excellent and rare remaining physical representation of this type of aviation facility in Edmonton and Alberta, and has direct associations with the historical narrative of the Second World War, and the critical role Edmonton played in these world-altering historic events through its involvement in the Northwest Staging Route.

### Associations with Blatchford Field

Hangar 11 carries additional historical value for its association with Blatchford Field, later known as the Edmonton Municipal Airport and, later, the Edmonton City Centre Airport. Blatchford Field was officially established in 1926 as Canada's first municipal airport. Its early years reflected a local engagement with aviation as a novel recreational activity. Edmonton's aviation pioneers used Blatchford Field as their base as they pursued commercial ventures delivering people and goods to isolated northern communities. Many of these original "bush pilots", several of whom were World War I pilots, would become famed pioneers of Canadian aviation, including Wilfrid Reid "Wop" May, Wilfred Leigh Brintnell, Grant McConachie, Clennell Haggerston "Punch" Dickins, Arthur Massey "Matt" Berry, and Cy Becker. Some of the most significant ventures from Blatchford Field represented Edmonton's emerging role as the "Gateway to the North", not only to northern Alberta, but all of northern Canada.

Blatchford Field became the main base for three major wartime programs, each located in its own section of the field: the British Commonwealth Air Training Plan schools at the south (including in the existing Hangar 14 building, a designated Provincial and Municipal Historic Resource), Leigh Brintnell's private Aircraft Repair Ltd. at the north,

and the U.S. Army Air Force's detachment and hangars at the east (including Hangar 11).

Edmonton was recognized as a leader in the new industry of aviation, and activities at Blatchford Field expanded over the next several decades to accommodate municipal administrative services, commercial firms, industrial works, passenger routes and, for a period, wartime training facilities. Hangar 11 served military and commercial uses at the Edmonton Municipal/City Centre Airport until its closure in 2013.

### Other Associations

Hangar 11's historical value extends further with its association to Northwest Industries Ltd., an Edmonton-based aircraft manufacturing and repair firm active from the late 1930s to the 1990s. Northwest Industries Ltd. began as a branch of Wilfred Leigh Brintnell's Mackenzie Air Service, a Blatchford Field-based bush pilot firm that established an aircraft repair branch in 1936. The firm was reorganized as Aircraft Repair Ltd. the following year, and was a prominent commercial aircraft service company that provided full maintenance, repair, overhaul, servicing, modification and conversion facilities during the Second World War for the military. In 1945, Aircraft Repair Ltd. was reorganized again as Northwest Industries Ltd., and continued to receive military contracts for aircraft manufacturing and modifications, as well as for civil operators whose base or port of call was Edmonton. Among the services provided were "airline terminal" lounge facilities and full weather and flight-planning information. Northwest Industries Ltd. employed 800 people at the Edmonton Municipal Airport during the mid-1950s. The Northwest Industries plant, located at Blatchford Field's north end, expanded into the former U.S. Army Air Force hangars at the airfield's east edge, including Hangar 11, in 1956. Thereafter, Northwest Industries expanded into related ventures like commercial air transport services under Albertan business mogul Francis G. Winspear. Hangar 11 hosted the firm's Commercial Air Service, among other uses, until Northwest Industries relocated to Edmonton International Airport in 1982.

Hangar 11 is associated with prominent Edmonton aviation pioneer Wilfred Leigh Brintnell, who was an owner and president of Aircraft Repair Ltd., which was the tenant during the Second World War. He remained in this position with Northwest Industries Ltd. until 1948. Brintnell, an early bush pilot and entrepreneur, is a significant individual in western Canada's aviation history, associated with Mackenzie Airlines, Northwest Industries, and Aircraft Repair Ltd. The Edmonton community Brintnell, in the Pilot Sound area, is named after him.

Hangar 11 is also associated with prominent Edmonton businessman and philanthropist, Francis G. Winspear, who was an owner and the president of Northwest Industries Ltd. after the departure of Leigh Brintnell in 1948. As a successful businessman, Dr. Winspear was generous to an array of culture, education and social service groups, and an exceptional patron of the arts. A gift from Dr. Winspear, the single largest by an individual to a Canadian arts organization, resulted in the

successful construction of Edmonton's opera hall, the Winspear Centre, in 1997. He contributed needed expertise to strengthen the boards of many organizations in Edmonton. He was one of the founders of the Edmonton Opera Company and, through the Winspear Foundation, established the Winspear Fund, which substantially supported the Edmonton Art Gallery and was the main source of funds for many Alberta and Western Canadian charities. Dr. Winspear was also an Officer of the Order of Canada.

Construction of Hangar 11 is indicated as including prominent Edmonton architect G.H. MacDonald, and contractor H.S. MacDonald, as noted on the "Assembly Plant Buildings" cited on the \$650,000 City of Edmonton building permit #1841, dated November 17, 1941. George Heath MacDonald was one of Edmonton's most prolific architects during the first half of the 20th century. His career spanned more than half a century and was high-lighted by buildings such as the Edmonton Public Library. He graduated from McGill's School of Architecture in 1911. He returned to Edmonton in time to profit from a period of building growth not equaled until the oil boom of the late 1970s and early 1980s. His continuing association with architect Magoon resulted in the long-term practice, MacDonald and Magoon, a noted firm in Edmonton. George Heath MacDonald retired in 1958, his career as a licensed architect spanning more than 40 years. Between 1911 and 1958, MacDonald was involved in more than 180 projects in Edmonton alone.

The value of utilitarian structures such as Hangar 11 rests in the expression of their function, reflecting the nature of the working processes they supported. They have value in demonstrating the nature of labour, economic drivers, processes and products important to Edmonton's development. Unlike many other hangars, Hangar 11 also accommodated a large office function, which flanked the main hangar space on the east and west sides, using functional design elements of the International Style, which was coming into fashion in Edmonton at the time.

### **Character-defining Elements**

Key character-defining elements of Hangar 11 (Hangar T3) are listed below. For interpretive purposes, it is understood that certain components of the building are original and will be rehabilitated, while other portions of the building are new components designed to match as closely as possible to the original.

#### Location

- Original location at the east side of the former Blatchford Field/City Centre Airport site

Building Exterior

- Form, scale and massing conveying the appearance of a 1930s-40s hangar building
- Form, scale and massing also as expressed by its central vaulted roof over the main hangar space, flanked on the east and the west by three-storey attached office wings, and a single storey boiler wing and chimney at the northeast corner
- 20th century Functional Style mixed with International Style elements
- Flat, outdoor open areas at the north and south sides of the building where aircraft historically entered and exited the building
- Arched roof of the hangar space
- Window and door openings throughout
- Tall, original rolling access doors on both the north and south elevations, clad in panelized painted wood veneer, including steel roller wheels and embedded steel tracks in the concrete floor, wood tracks embedded in the ceiling, wood drainage grilles, rolling door hardware and storage areas on either side of the door openings
- Openings above original rolling access doors that would have facilitated aircraft tail access
- The base of the former control tower, projecting as an overrun above the west office wing
- Large chimney from original boiler room on northeast corner of building

Building Interior

- Large, open-concept central main hangar hall, including:
  - Form and scale of the main hangar hall, with no columns
  - Arched main hangar roof supported by massive wood Bowstring trusses and timber columns on the east and west sides with diagonal bracing
  - Concrete flooring in the main hangar hall with wood drainage grilles across the rolling door openings
  - Wood 2x12 roof framing with diagonally placed 1x6 wood sheathing exposed on the interior of the truss space above the hangar hall, including suspended wood-framed ceiling
  - Expression of piers in the east and west walls within the hangar hall
  - Original painted single-hung wood windows on the second floor of both office wings within the hangar hall

*The list below is provided with an understanding that the original office wings on the east and west sides of the building are intended for demolition due to their deteriorated*

*condition, and will be replicated to match the originals to a significant extent. The items below are provided as a basis to help guide the replication of these portions of the buildings and retention of certain interior elements to the extent possible.*

- Configuration of the office wings on the east and west sides of the main hangar hall, including:
  - 1940s office features, original wood-panel office doors with wood trims, original single-hung wood windows and window openings overlooking the main hall from the office wings
  - Post and beam construction visible in portions of office wings
  - Original 1x4 clear fir flooring throughout the office wings
  - Many remnants of the original room layouts in the office wings
  - Wood stairs between floors in the office wings
  - Original washroom fixtures and painted wood privacy screens
- Freight elevator in the west office wing, including its counterbalanced, upward-sliding slatted wood gates
- Original radiators throughout the building
- Remnant features, fixtures or signage that may explicitly convey the building's construction for the U.S. Army Air Force and use as an aircraft hangar

## Description of City-Funded Work for Hangar 11

Scope	Description of City-Funded Work	Estimated Cost	Amount Allocated
1.	<b>Hangar Doors (north and south elevations):</b> re-build structural opening for original sliding doors; salvage, repair, refinish, installation of original hangar doors for use/display inside hangar	\$700,000	\$350,000
2.	<b>Chimney Rehabilitation:</b> disassemble historic chimney; rebuild in northeast corner of building	\$200,000	\$100,000
3.	<b>Windows:</b> new windows on all four elevations to match historic fenestration pattern	\$570,147	\$260,000
4.	<b>Vertical Beams (inside hangar):</b> restoration and/or replacement of vertical beams in main hangar space; application of fire-retardant coating	\$182,285	\$90,000
5.	<b>Bowstring Truss and Ceiling Rehabilitation (inside hangar):</b> rehabilitation/replacement of Bowstring trusses and ceiling components; application of fire-retardant coating	\$3,049,800	\$1,500,000
6.	<b>Structural Slab Rehabilitation (inside hangar):</b> rehabilitation of existing concrete structural slab/floor; refinishing and polishing	\$1,139,250	\$500,000
7.	<b>Roof Rehabilitation (hangar section only):</b> rehabilitation of existing hangar roof	\$1,407,780	\$700,000
8.	<b>Aircraft Tail Cut-out Rehabilitation (north and south elevations):</b> rehabilitation of aircraft tail openings above hangar doors	\$60,000	\$30,000
9.	<b>Exterior Cladding:</b> new exterior cladding to match appearance of historic application	\$1,211,775	\$400,000
10.	<b>Historic Signage:</b> replication of historic signage	\$60,000	\$30,000

**Attachment 5**

11.	<b>Interior Walls Rehabilitation (inside hangar):</b> rehabilitation to interior walls separating hangar from east and west wings	\$406,250	\$100,000
12.	<b>Temporary Building Services:</b> services required to facilitate rehabilitation work	\$82,000	\$40,000
13.	<b>Structural Shoring, Selective Demolition and Abatement (hangar section only):</b> selective demolition and material abatement to facilitate structural shoring of hangar space	\$142,375	\$50,000
14.	<b>Professional Services:</b> fees for architectural, engineering and heritage preservation consultancy services	\$937,500	\$350,000
15.	<b>General Contingency:</b> 10% contingency to address unforeseen rehabilitation-related requirements	\$1,250,000	\$250,000
16.	<b>Material and Labour Increase Contingency:</b> 10% contingency to address unforeseen material and labour increases through construction duration	\$1,250,000	\$250,000
	<b>TOTAL</b>	<b>\$12,649,162</b>	<b>\$5,000,000</b>