

LIGHT HORSE SQUADRON ARMORY COMPLEX
(Blacksmith Shop & Forage Building)
4108 N. Richards Street
City of Milwaukee
Milwaukee County
Wisconsin

HABS No. WI-378-C

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY

National Park Service
Midwest Regional Office
601 Riverfront Drive
Omaha, Nebraska

HISTORIC AMERICAN BUILDINGS SURVEY

LIGHT HORSE SQUADRON ARMORY COMPLEX
(BLACKSMITH SHOP & FORAGE BUILDING)

- Location: 4108 N. Richards Street
City of Milwaukee, Milwaukee County, Wisconsin
- Significance: The Blacksmith Shop & Forage Building was one of the original components of the Light Horse Squadron Armory complex, which was built between 1930 and 1931. The dual-use structure served the horse-mounted, 105th Cavalry Regiment as a shoeing facility, as well as a place to store forage.
- History: Part of the armory complex's original development, the Blacksmith Shop & Forage Building was designed by Lieutenant Colonel Henry C. Hengels, a native of McHenry, Illinois. He was born in 1876 and studied architecture at Chicago's Armour Institute, as well as abroad. Hengels eventually located in Milwaukee, where he became known as a specialist in reinforced concrete construction. He enlisted in the Wisconsin Army National Guard in 1917 and was appointed State Military Architect and Engineer by Governor Emmanuel Philipp. Hengels held the position until his death in 1943. Utilizing a variety of styles during his tenure, he designed virtually all armories and other National Guard buildings constructed in Wisconsin between World War I and World War II. Three of his armory designs are listed in the National Register of Historic Places: the Mission-style Oconomowoc Armory (1922), the Twentieth-Century Revivalist Janesville Armory (1925) and the Late Gothic Revival-style Whitefish Bay Armory (1928), which is no longer extant.¹
- The subject structure is one of the complex's original buildings. It was used by the 105th Cavalry prior to World War II as a place to shoe horses and store forage. After the war, the building was employed as a storage facility.

Description:

- A. General Statement:
1. Architectural character: The blacksmith shop and forage building of the

¹"Hengels Rites to the Military," *Milwaukee Journal*, 25 November 1943; "Colonel Hengels Dead at 67," *Milwaukee Sentinel*, 25 November 1943; "127th Regiment Infantry Company G, Oconomowoc National Guard Armory," National Register of Historic Places Nomination, Prepared by Jean Lindsay Johnson and Elizabeth L. Miller (1984), Copy on file at the Division of Historic Preservation, Wisconsin Historical Society, Madison, WI; National Register of Historic Places Inventory, Material online at www.wisconsinhistory.org. None of the Hengels-designed armories listed in the National Register remain in use by the Wisconsin National Guard. The Whitefish Bay Armory was listed on the National Register in 2002 (after it was sold by the WIARNG) and razed in 2004.

LIGHT HORSE SQUADRON ARMORY COMPLEX
BLACKSMITH SHOP & FORAGE BUILDING
HABS No. WI-378-C
Page 2

Light Horse Squadron Armory complex is an astylistic utilitarian structure completed in 1931. It is a one-story, ell-shaped fabrication constructed of brick. Its gabled roof is covered with asphalt shingles and claims two chimneys. The building is oriented on an east-west axis with all doorways facing north. Vehicle entryways include two with replacement, overhead, wood-panel doors. Two others are original, board, sliding examples. The windows are original, multi-pane, metal-framed affairs located in wall bays formed by three-quarter height brick piers.²

2. Condition of Fabric: The exterior condition is very good. The only notable alterations are limited to a small concrete block addition on the south side and the replacement of two vehicle doorways and one pedestrian door. The interior originally consisted of a blacksmith shop, as well as a storage area for grain and hay. The original masonry partition walls remain intact. Some spaces have been subdivided by additional wood frame walls. The building currently is used for general storage. No blacksmith equipment remains.

B. Exterior Description:

1. General Description: The blacksmith shop and forage building of the Light Horse Squadron Armory complex is an astylistic building completed in 1931. It is a one-story, ell-shaped structure constructed of common brick with red brick accents. Its gabled roof is sheathed with asphalt shingles and punctuated by two chimneys. Ornamentation includes red brick accents around doors and windows, and at the corners of wall piers. Corbeled brick gables and a fieldstone wall chimney base also embellish the building, which is situated on an east-west axis with all doors facing north. The ell section projects south and is located at the building's west end. A small, circa-1950s, concrete-block, shed-roof addition is at the southeast corner of the south side. The windows are original and multi-pane, with metal-frames. Vehicle entryways include two replacement, overhead, wood-panel doors and two that are original and open to the side. A pedestrian door is a replacement and constructed of wood and plate glass.
2. Overall Dimensions: The building is 110' x 32' 6". The ell section on the building's west end projects 16' to the south and is 32' wide. A circa-1950s, shed-roof, concrete-block addition at the southeast corner projects 15' to the

²All measurements used in the Description section are a combination of on-site measurements, visual examination and project plans. On-site measurements largely were limited to what was reachable without use of ladders and other devices.

LIGHT HORSE SQUADRON ARMORY COMPLEX
BLACKSMITH SHOP & FORAGE BUILDING
HABS No. WI-378-C
Page 3

south and is 17'-11½" wide.

3. Foundations: The foundation is of poured concrete and rises to the point that it creates a very nominal watertable that is ell-shaped and carries the 4" thick reinforced concrete floor.³
4. Walls: The tan common brick walls are laid in a five stretcher to one header course ratio. Three-quarter height wall piers accented at the corners with red brick rise between 9'-6" and 11'-6". They are symmetrically arranged with respect to corners and fenestration and are situated at intervals varying between 15'-3" and 12'-2". Gabled endwalls are adorned with a stepped cornice of red, corbeled brick. The east endwall employs a substantial brick wall chimney, the base of which is constructed with fieldstone.
5. Openings:

A. Windows: Windows are symmetrically placed and generally consist of six-light, industrial examples outfitted with wire-mesh security glass and thin metal muntins. Each opening is underscored by a 5" thick concrete sill and has red brick accents on its sides. The north facade has two windows, one near the northeast corner and one on the north endwall of the ell wing. Each opening is 39½" tall x 38" wide. Each pane of glass in the windows is 16½" tall x 11" wide. The windows are topped with soldier brick lintels with red brick accents. The south side carries four window openings along the main block. Each is 41" tall x 44" wide. One opening is filled with plate glass, while the other three retain the original six-light windows where each pane of glass is 13½" wide x 18½" tall. A fifth window of this size and composition pierces the gabled peak of the ell's south endwall. It is topped with an endbrick pattern that forms a round arch decoration. The west wall is fitted at the center by a solitary window of that same size and composition. The east facade has two windows. A 44" wide x 82" tall, fixed industrial window is positioned to the south of the wall chimney. It contains twelve panes of wired security glass that measure 13½" x 8½" and are set with metal muntins. A 6' wide x 6'-10" tall, fixed, industrial window with a 36" high round-arched transom is to the north of the wall chimney. The lower portion carries twenty panes of glass, each of which measures 13½" x 19½", while the transom features eight panes. The round arch consists of alternating tan

³"Blacksmith Shop, Forage & Garage Building," Architectural plans prepared by Henry C. Hengels (1 November 1930), Located in the Richards Street Armory Plan Files, Facilities Management Office, Wisconsin Department of Military Affairs, Madison, WI. Henceforth cited as RSA Plans-Blacksmith Shop.

LIGHT HORSE SQUADRON ARMORY COMPLEX
BLACKSMITH SHOP & FORAGE BUILDING
HABS No. WI-378-C
Page 4

and red soldier brick.

B. Doorways: Four doorways pierce the north side of the building. From east to west, a wood-and-glass door in a 31" x 78½" opening is near the northeast corner adjacent to a wall pier, while a 10' x 10' vehicle door is located immediately to the west. This overhead door consists of a four-by-five arrangement of 18" x 16" wooden panels and a top row of windows. A pair of original, interior-sliding doors are in openings that measure 13' wide x 11'-3" tall. The doors are 2½" thick and constructed of 6" wide vertical boards reinforced with 6" crossed diagonals. Four, two-pane glass windows that measure 27" x 26" line the top of each door. The final vehicle door serves the ell section at the building's west end. This replacement overhead, wood-paneled door is 14'-1" tall x 11'-11½" wide. The panels are set in a seven by four arrangement and measure 30¾" x 19¼".

7. Chimneys: A three-flue, brick chimney pierces the roof ridge near the center of the main block. A second chimney rises adjacent to the center of the east endwall. Its fieldstone base rises 45" and measures 6'-6" x 21". A 9½" tapered concrete band facilitates the transition from fieldstone to brick. The remainder of the chimney is 6' x 17¼". It terminates above the roof peak and is highlighted at the corners with red brick and at its top by five courses of header brick. It is crowned with a concrete cap containing three tile flues protected by a wire cage.

C. Interior Description:

- A. General Description: The original function of this building was threefold. The eastern third was occupied by a blacksmith shop, saddler shop, two supply rooms and two coal bins. The center third featured a vehicle garage (marked by the original sliding doors) and a grain room. The western third, which coincided with the ell, was for forage. These rooms were separated by hollow tile walls, most of which remain intact. Several of these spaces have been further partitioned with wooden walls or wire caging. The interior now serves as general storage and no blacksmith equipment remains. The exposed roof trusses are constructed of metal.

D. Setting:

The Blacksmith Shop & Forage Building is set on the south side of the Light Horse Squadron Armory complex, of which it is a component along with the Armory & Riding Hall (HABS WI-378-A), Regimental Commander's House (HABS WI-378-

LIGHT HORSE SQUADRON ARMORY COMPLEX
BLACKSMITH SHOP & FORAGE BUILDING
HABS No. WI-378-C
Page 5

B), Equipment Storage Building #4 (HABS WI-378-D), Equipment Storage Building #5 (HABS WI-378-E), Organizational Maintenance Shop #3 (HABS WI-378-F) and Equipment Storage Building #6 (HABS WI-378-G).

Sources: Citations for all sources are provided in the “Sources” section of the Complex’s overview document (HABS No. WI-378). Two additional sources were used and are cited below:

“Blacksmith Shop, Forage & Garage Building.” Architectural plans prepared by Henry C. Hengels (1 November 1930). Located in the Richards Street Armory Plan Files, Facilities Management Office, Wisconsin Department of Military Affairs, Madison, WI.

www.wisconsinhistory.org

Historians: Brian J. Faltinson, M.A., Principal Investigator, and John N. Vogel, Ph.D., Project Director, Heritage Research, Ltd.