
FINAL

**Building 127
Office and Photo Lab**

**Historic American Buildings Survey
Level II/III**

**2701 North Harbor Drive,
San Diego, California 92101**

Prepared for

**San Diego Unified Port District (SDUPD)
San Diego County Regional Airport Authority**

April 2010

CH2MHILL

HISTORIC AMERICAN BUILDINGS SURVEY
 RYAN AERONAUTICAL OFFICE AND PHOTO LAB
 BUILDING 127

<u>Location:</u>	2701 North Harbor Drive, San Diego, CA 92101, USA
<u>Present Owner/Occupant:</u>	San Diego County Regional Airport Authority
<u>Present Use:</u>	Vacant
<u>Significance:</u>	<p>Building 127 is located within the boundaries of the Ryan Aeronautical Company Historic District (HD), a 46-acre complex containing 17 contributing resources and 30 non-contributing resources. The district is eligible on the local and national levels for the National Register of Historic Places (NRHP) under Criteria A, B, and C and for the California Register of Historical Resources (CRHR) under Criteria 1, 2 and 3. The historic district is eligible under NRHP Criterion A (CRHR 1) for its association with the contribution of aircraft manufacturers at Lindbergh Field to World War II defense production. It is also eligible for its association with Cold War research, development projects, and defense manufacturing. Under Criterion NRHP B (CRHR 2) the district is eligible for its association with aviation pioneer T. Claude Ryan and his aircraft aerospace manufacturing businesses. Ryan Aeronautical Company, under Mr. Ryan's leadership, made significant contributions to national defense production during World War II, as well as important developments in aerospace research and development in the 1950s and 1960s. The historic district is eligible under NRHP Criterion C (CRHR 3) for its representation of industrial architecture associated with the 1930s and World War II. The district embodies the distinctive architectural characteristics of aircraft manufacturing buildings of the period in Southern California. The building and structures in the district illustrate the design fabrication concepts common to aircraft manufacturing plants from the 1930s to the 1960s. During this period, the aerospace industry played a dominant role in the economy of the region (URS Corporation, 2008).</p> <p>Building 127 is a non-contributing resource to the Ryan Aeronautical Company Historic District.</p>

Historian: Megan Venno

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: c. 1945
2. Architect: Frank L. Hope, Jr.

3. Original and subsequent owners: Ryan Aeronautical Company signed a 50-year lease in 1939. Ryan Aeronautical Company sold to Teledyne Inc. in 1969, and the combined company became Teledyne-Ryan Aeronautical Company (TDY Industries). TDY Industries merged with Allegheny Ludlum Corporation in 1996, and Northrop Grumman Corporation acquired TDY Industries from Allegheny in 1999. Presently, the property is leased by the San Diego County Regional Airport and is under the Jurisdiction of the San Diego Unified Port District.

4. Original plans and construction: Building 127 is a two-story, rectangular building measuring 4,914 square feet. The floor plan is approximately 30 feet by 75 feet. It is constructed of concrete block and has a flat roof. The building has a common wall with Building 120.

5. Alterations and additions: A non-historic mural was painted onto the outside of the east elevation of Building 127 at an unknown date (San Diego County Regional Airport Authority, 2005).

B. Historical Context:

1. San Diego's Aviation History:

During the first three decades of the 20th century, the aviation industry was established in San Diego and it became a focal point of San Diego's activities and reputation. In 1912, the Army founded an air base and the first year-round military aviation school at Rockwell Field on Naval Air Station North Island, San Diego (Macaulay, 1928; Moore, 1960). The creation of the military air bases helped establish aviation in the region during the industry's pioneering years. In 1928, the Army and Navy had invested \$5,500,000 in the air bases at North Island (Macaulay, 1928). The high profile attained by aviation in the local community during these years resulted in an awareness of the potential future of the industry by the inhabitants of the region. San Diego became the first U.S. city to establish a Municipal Board of Air Control in 1926, and was also the first to issue a complete set of air ordinances (Macaulay, 1928).

In 1922, T. Claude Ryan, an aviation pioneer who began his career as an Army pilot, left the Army and moved to San Diego, where he began giving airplane rides and flying instructions. He soon established the Ryan Flying Company at the Dutch Flats Airfield in San Diego, which later became Ryan Airport. Dutch Flats Airfield was located at present-day Barnett Avenue and Midway Drive, off the current San Diego airport site and not within the current historic district boundaries. In the 1920s, Ryan Airport was the focal point for Ryan's expanding aeronautical enterprises (flying school, flying service, and an airplane manufacturing company). In the late 1920s, the use of the airport expanded as civil aviation came of age with other companies using Ryan's field to operate air services. With the help of T. Claude Ryan, civilian aviation flourished in San Diego County during these decades.

In the mid-1920s, the Chamber of Commerce promoted San Diego as the "Air Capital of the West." The development of what is now Lindbergh Field would be the central effort in this campaign. The committee realized that in order to maintain a leadership role in aviation, San Diego must have an adequate municipal airport. They wanted the location of the airport to be a place that would combine facilities for the operation of land and seaplanes, and be as near to the city of San Diego as possible. They selected an area at the north end of San Diego Bay on City-owned tideland; however, this area did not contain enough area to meet government requirements. Negotiations were made with the United States Navy to provide portions of the Marine Corps-owned tidelands for the airport expansion (URS Corporation, 2009).

Ryan was instrumental in the development of Lindbergh Field, San Diego's nascent municipal airport, which was established in 1928. In 1929, 4,755 planes and over 20,000 passengers arrived or departed from the Dutch Flats Airfield (Leiser, 2000). Within a few years, the majority of these activities would move to Lindbergh Field. In 1939, Ryan established a manufacturing site on airport grounds, which is the location of the historic district.

2. Ryan Aeronautical Company:

T. Claude Ryan was born in Parsons, Kansas in 1898, but moved with his family to Orange, California in 1912. Ryan began a lifelong relationship with the aviation industry when, around the age of 19, he enrolled at the American School of Aviation in Los Angeles. In 1919, Ryan began studying mechanical engineering at Oregon State College. While in school, he applied to the Army for aviation cadet training and was accepted, but left the Army by January 1922 in hopes of flying as a civilian (National Aviation Hall of Fame, 2009). Ryan moved to San Diego to establish the Ryan Flying Company. The Ryan Flying Company changed its name to Ryan Airlines, Inc. when it was reorganized in 1924 to begin operating the first year-round, scheduled airline service in the United States from Dutch Flats (URS Corporation, 2009). Around the same time, in the mid-1920s, Ryan entered the aircraft manufacturing business with partner Frank Mahoney and created the Ryan M-1 Monoplane, which became one of the best-known air mail carriers in the country. A modified Ryan Monoplane became the *Spirit of St. Louis*, the plane Charles Lindbergh flew from New York to Paris in May 1927 on the first solo flight across the Atlantic Ocean. Ryan sold the company to Mahoney in 1926 and established the Ryan Aeronautical Corporation for the sale and manufacture of aircraft engines. The company changed its name to the Ryan Aeronautical Company in 1934.

Ryan Aeronautical Company signed a 50-year lease, starting in 1939, on land at the southeastern edge of Lindbergh Field along North Harbor Drive. Three buildings from the site of the previous company were relocated to this new location. The Ryan plant was one of several aircraft manufacturers located at Lindbergh Field that contributed to the nation's war effort in the 1940s. At peak wartime production, the Ryan plant had 8,500 employees and annual production exceeded \$55 million. Following the war, workforce was reduced to 1,200 and annual production to \$8 million (URS Corporation, 2009).

The Korean conflict provided the Ryan Aeronautical Company the opportunity to work with electronics for aerospace applications. The role in aerospace electronics led to the development of a variety of aircraft navigation and positioning equipment, including helicopter hovering devices, altimeters, and remote sensors (URS Corporation, 2009).

In 1947, the United States Navy awarded Ryan a contract to research the feasibility of reaction controls for jet aircraft. With jet engines and reaction controls handled by remote control, a Ryan vertical test rig lifted itself off the ground for the first time in 1950. In 1953, the Air Force awarded Ryan a contract to design and build two manned vertical takeoff jet research planes and 2 years later, the Ryan X-13 Vertijet was constructed. In the 1960s, Ryan continued target drone and electronic systems production and vertical takeoff and landing research (URS Corporation, 2009).

In 1969, the company was sold for \$128 million to Teledyne Inc. and became known as Teledyne-Ryan Aeronautical Company (TDY Industries). T. Claude Ryan remained with the company as chairman until his death in 1982. In 1996, TDY Industries merged with Allegheny

Ludlum Corporation, and then later became a subsidiary of that company. In 1999, Northrop Grumman Corporation acquired TDY Industries from Allegheny and relocated the plant to a site in Ranch Bernardo, California, leaving the former plant site vacant. The site continues to be mostly vacant, with only a small portion of Building 100 used for administrative offices and several other buildings used for storage.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: Building 127 is a two-story rectangular building that shares its east wall with Building 120. It is sheathed in cast-in-place concrete and has a non-historic mural on its west elevation. Building 127 lacks distinctive features and characteristics (San Diego County Regional Airport Authority, 2005; URS Corporation, 2009).
2. Condition of Building Material: Building 127 is in fair condition.

B. Description of Exterior:

1. Overall Dimensions: Building 127 is 2,500 square feet and measures 30 feet by 75 feet.
2. Foundations: Building 127 sits on a concrete slab.
3. Walls: The walls are board-formed cast-in-place concrete. The east elevation shares a common wall with Building 120 (San Diego County Regional Airport Authority, 2005).
4. Structural System: Building 127 is of concrete block construction (URS Corporation, 2009). The concrete walls are approximately 6 inches wide by 12 inches deep roof and floor beams at 24 inches on center. There are two 12-inch-by-12-inch concrete columns on the first floor reduce the span to 15 feet. There is a two-story elevator vault in the middle of the building that connects with a second floor dark room (San Diego County Regional Airport Authority, 2005).
5. Openings:
 - a. Doorways: Building 127 has an exterior metal personnel door along the west elevation and an overhead sliding door along the north elevation. There is a 3-foot gap between Buildings 127 and 120, but they are joined by a concrete passageway with overhead sliding doors. There are several interior wood personnel doors and metal sliding doors (URS Corporation, 2009; San Diego County Regional Airport Authority, 2005).
 - b. Windows: Building 127 has no windows.
6. Roof: The roof is flat, approximately 2,500 square feet in size, and consists of built-up roofing over structural concrete.

C. Description of Interior:

Floor Plans: Building 127 is a rectangular two-story building. The flooring throughout the building is concrete. All walls on the first floor are cast-in-place concrete. The second floor, accessible by stairs located in the southwest corner of the building, is divided in half by a cast-in-place concrete wall. The north half of the space is open with plaster walls partitioning the rooms on the north and south sides.

The south half contains a cast-in-place concrete vault along the west side and a dark room in the southeast corner, partitioned by plaster and wood walls (San Diego County Regional Airport Authority, 2005). An elevator shaft is located in the center of the building and connects with a dark room on the second floor (San Diego County Regional Airport Authority, 2005).

D. Site:

Historic Landscape Design: Building 127 is oriented around an informal courtyard. It forms the courtyard border with Buildings 120, 140, and 146/146A. There are plantings along the southern border of Building 127, primarily consisting of eucalyptus (URS Corporation, 2009).

PART III. SOURCES OF INFORMATION

A. Early Views: N/A

B. Interviews: N/A

C. Bibliography

1. Primary and Unpublished Sources:

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San Diego Unified Port District. 1977. *San Diego Unified District Annual Report: 1976-77*. Carl Reupsch Collection, San Diego Historical Society, San Diego, CA.



Building 127 - Office and Photo Lab, West Elevation, San Diego, California, October 2009.



Building 127 - Office and Photo Lab, Southeast Oblique, San Diego, California, October 2009.



Building 127 - Office and Photo Lab, Southwest Oblique, San Diego, California, October 2009.



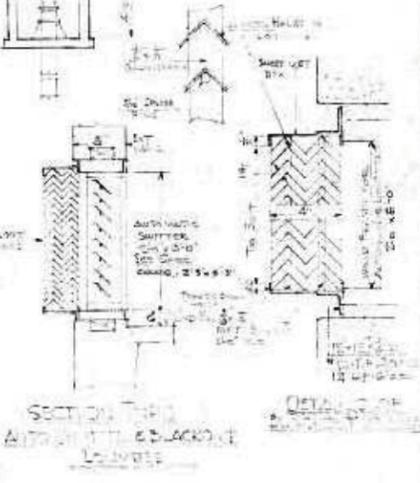
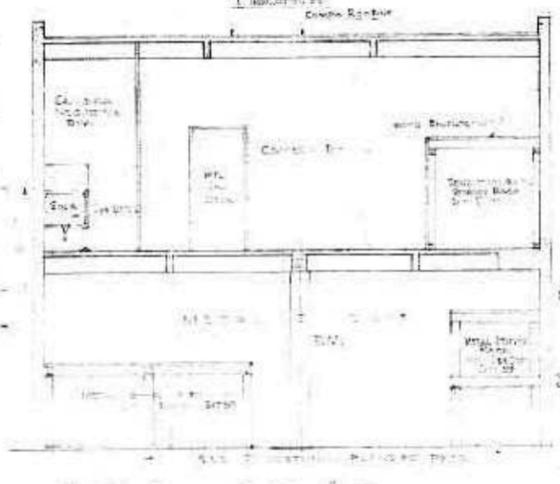
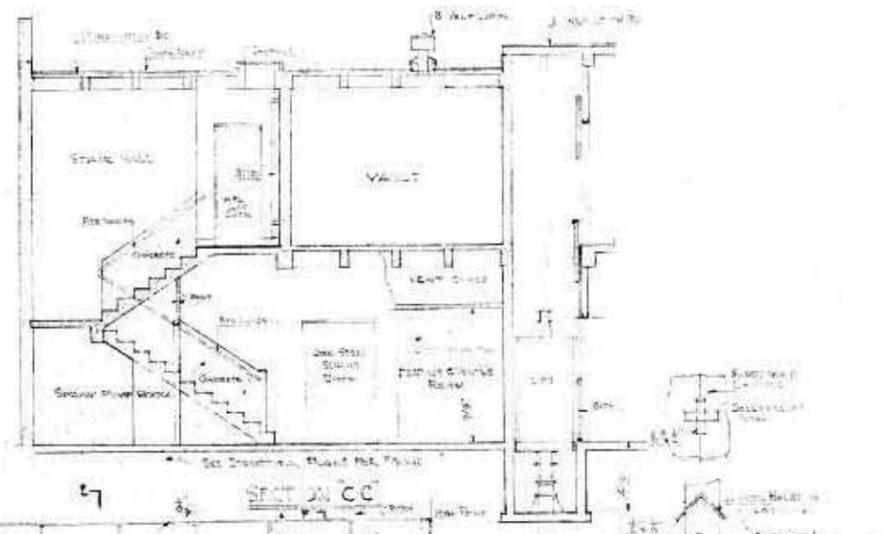
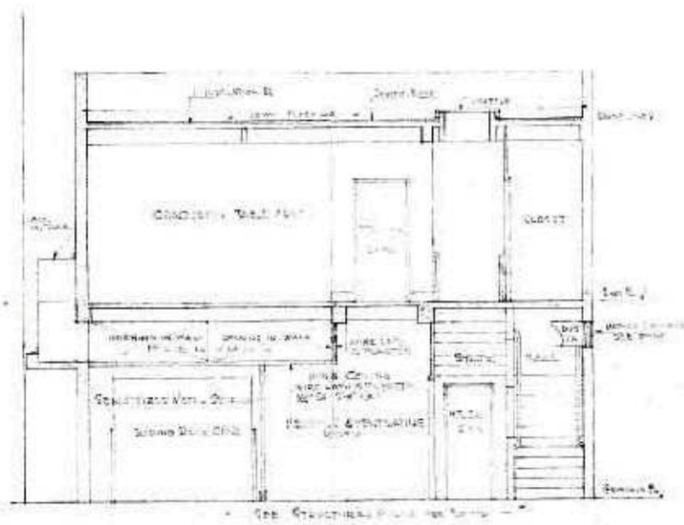
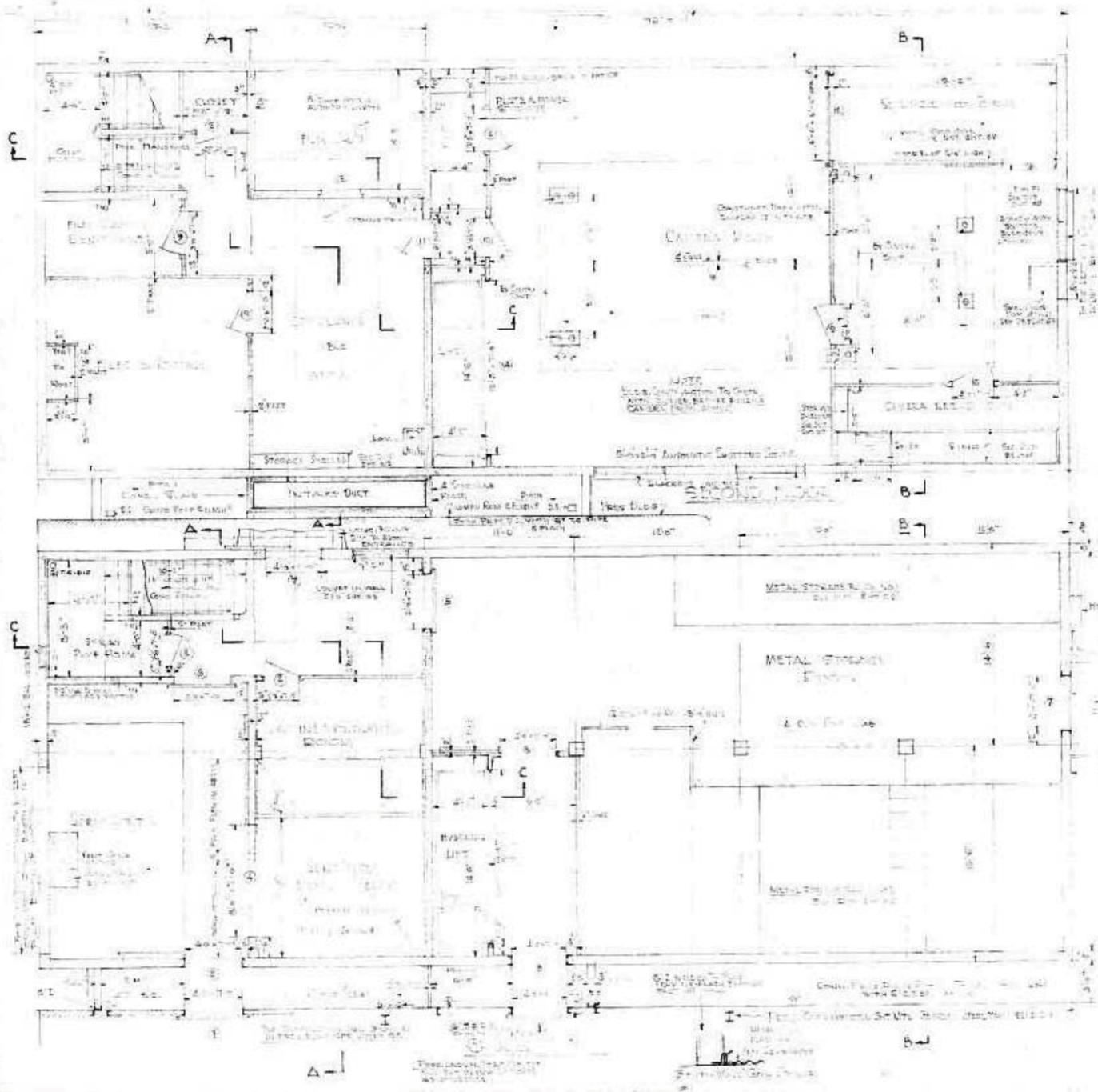
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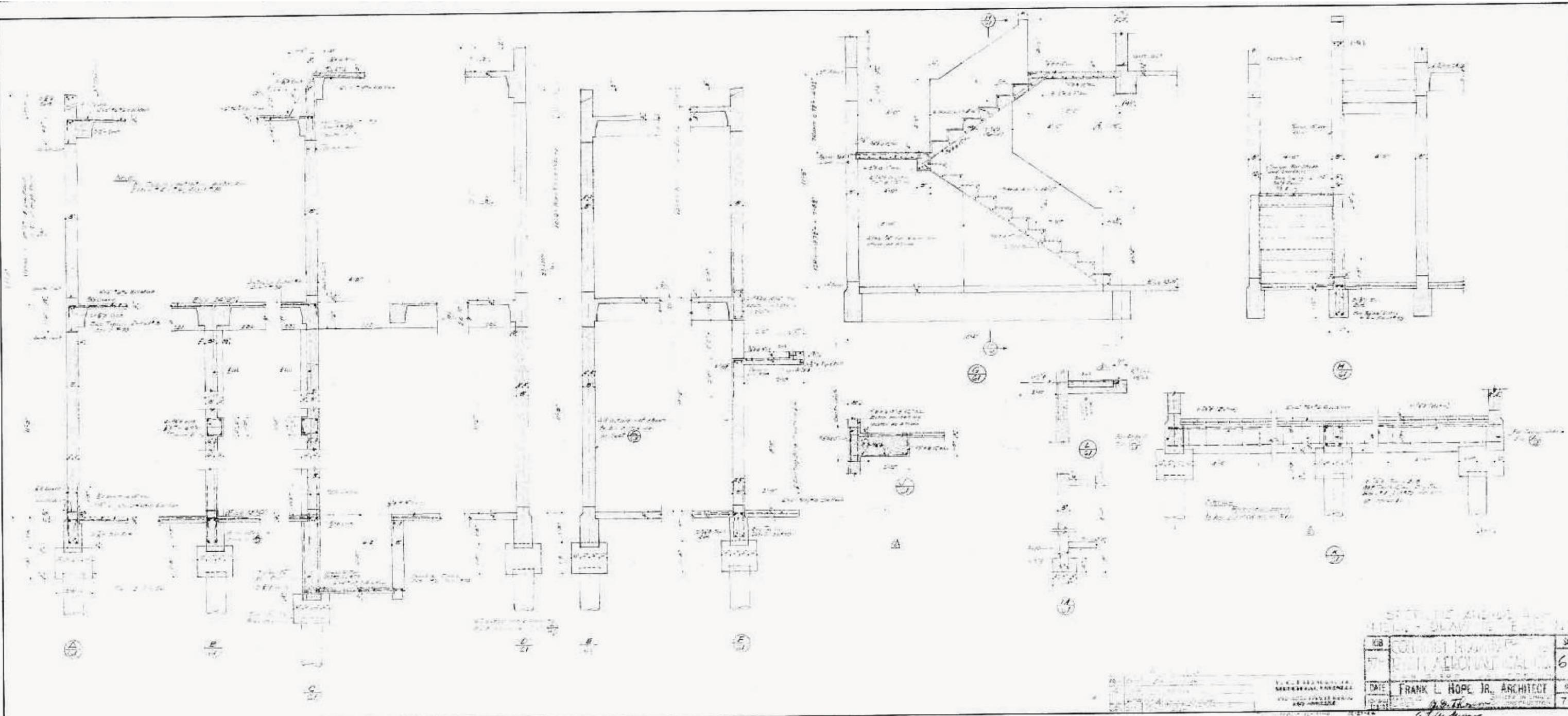
Building 127 - Office and Photo Lab, Northwest Oblique, San Diego, California, October 2009.



Building 127 - Office and Photo Lab Interior, facing Southeast, San Diego, California, October 2009.



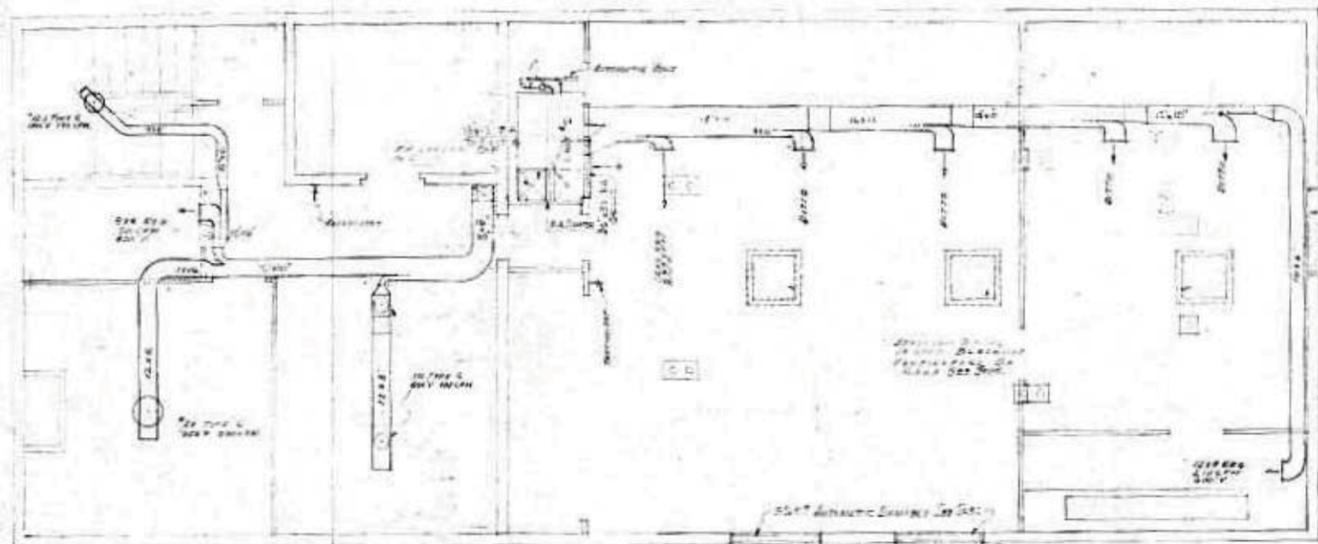
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		<i>F. L. Hope, Jr.</i>	76



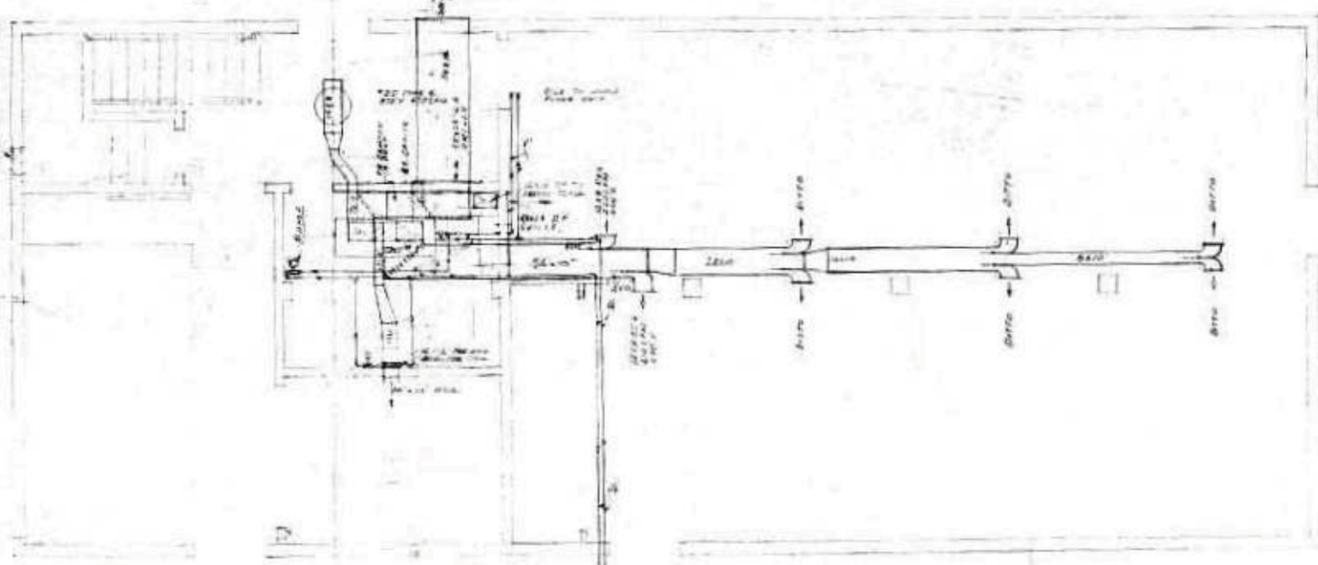
SITE PLAN AND GENERAL
 PLAN - SLAB & ELEVATIONS

NO.	CONCRETE WORK	61
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V. C. E. HOPE JR., ARCHITECT
 4700 10TH AVENUE, NEW YORK, N. Y.



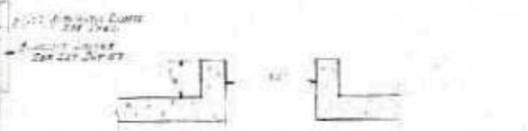
SECOND FLOOR PLAN



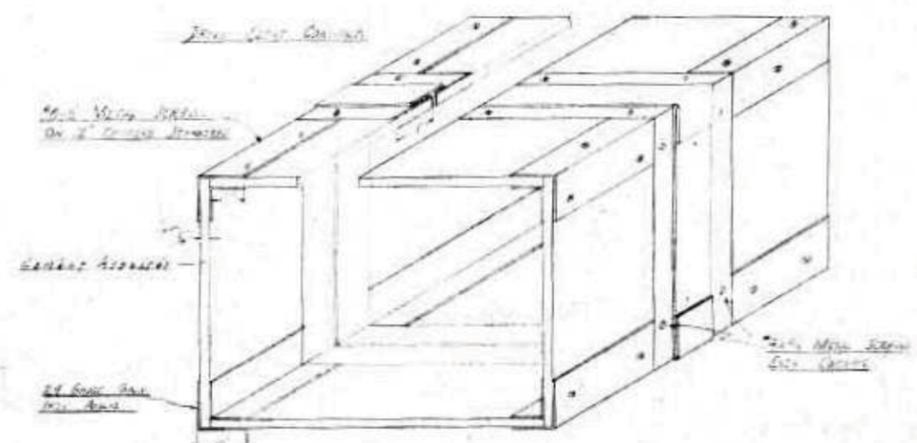
FIRST FLOOR PLAN



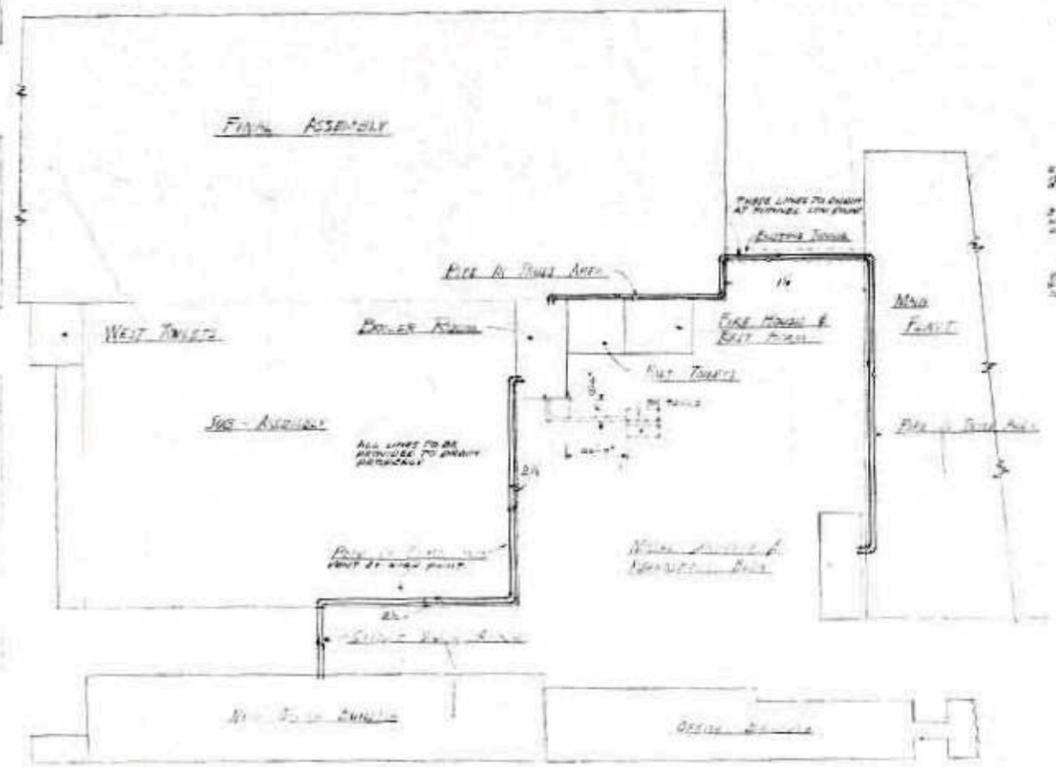
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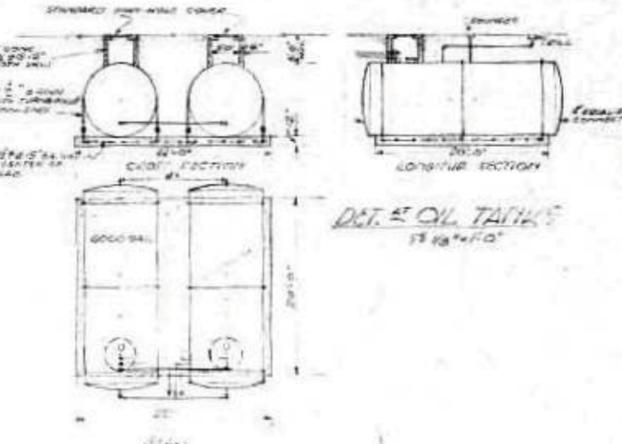
DETAIL OF DOOR AND THRESHOLD



TYPE C WINDOW DETAIL

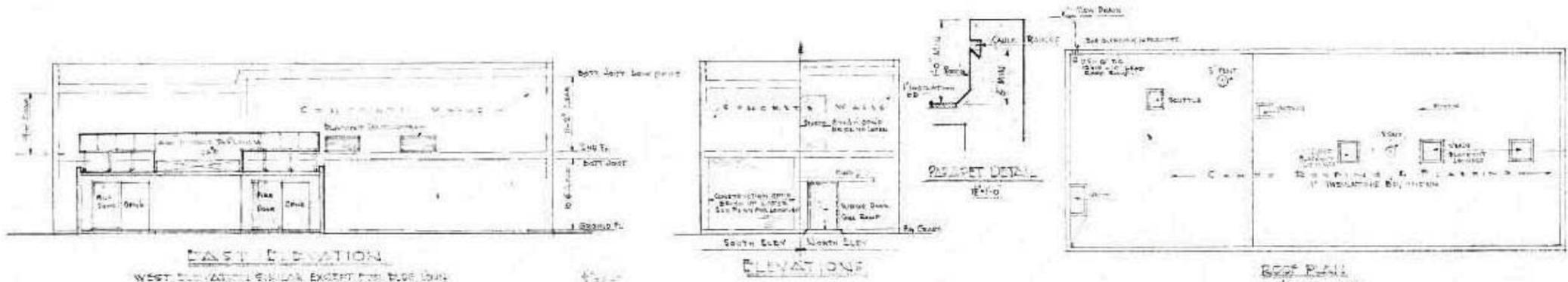


FIXTURE ASSEMBLY

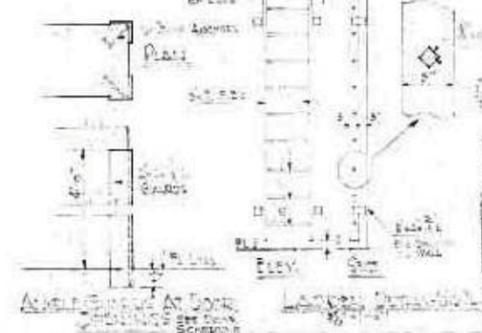
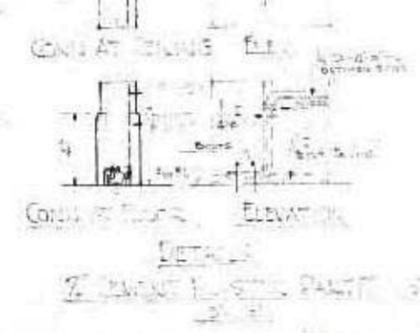
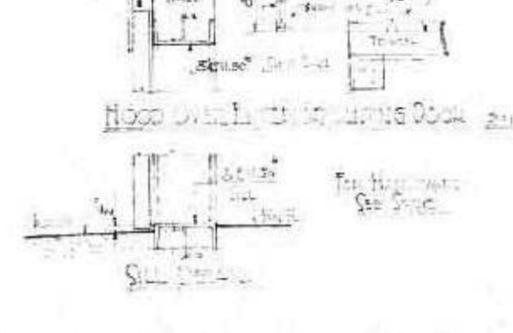
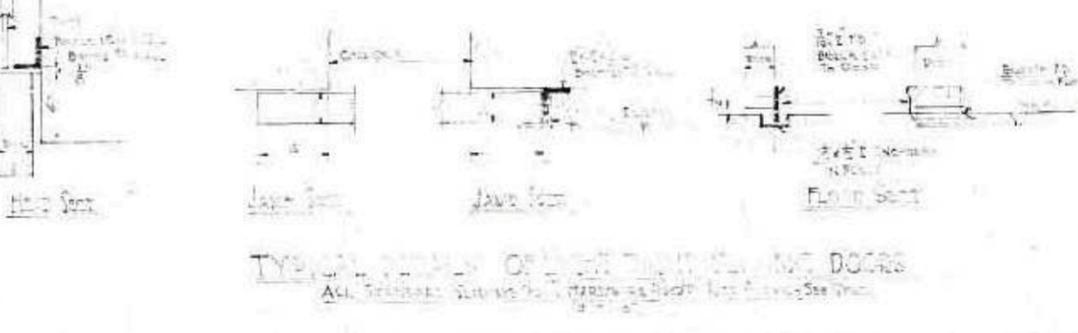
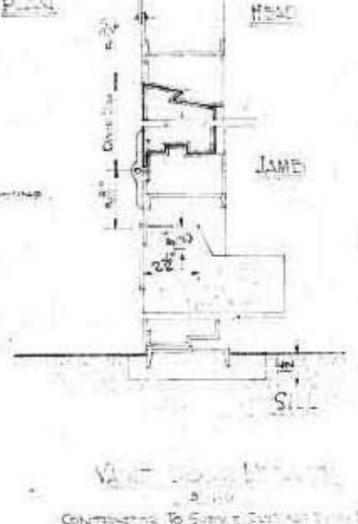
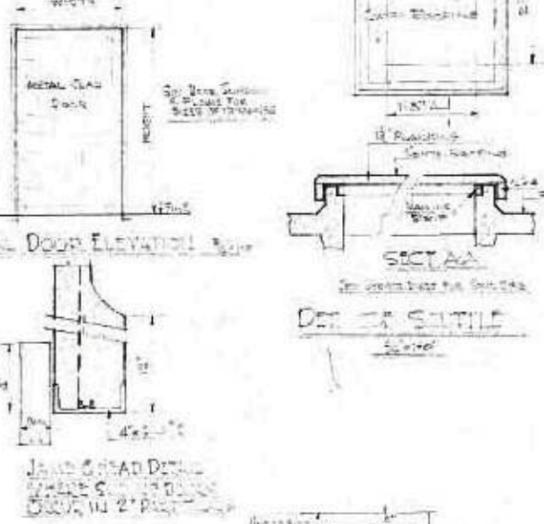
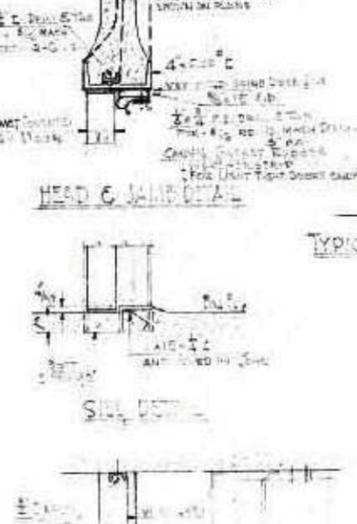
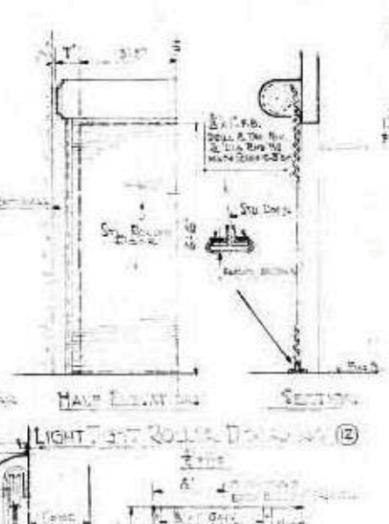
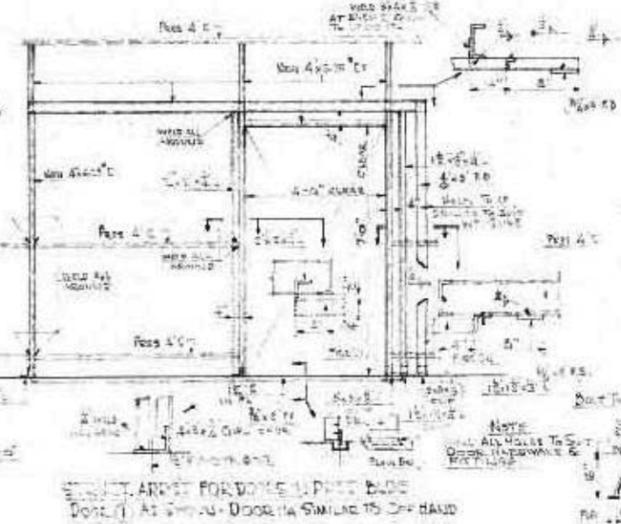
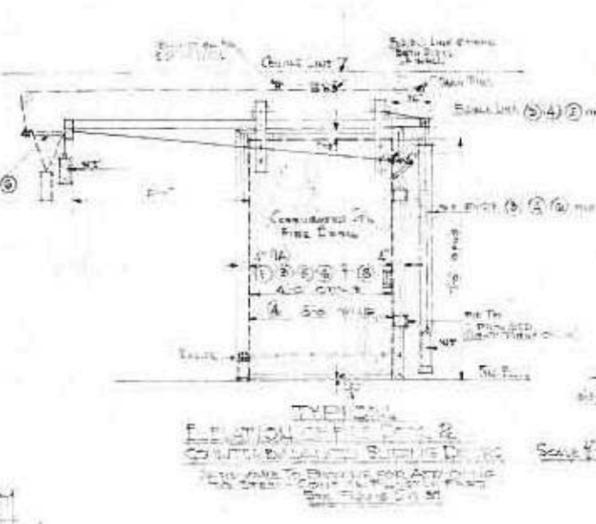


DET. OF OIL TANKS

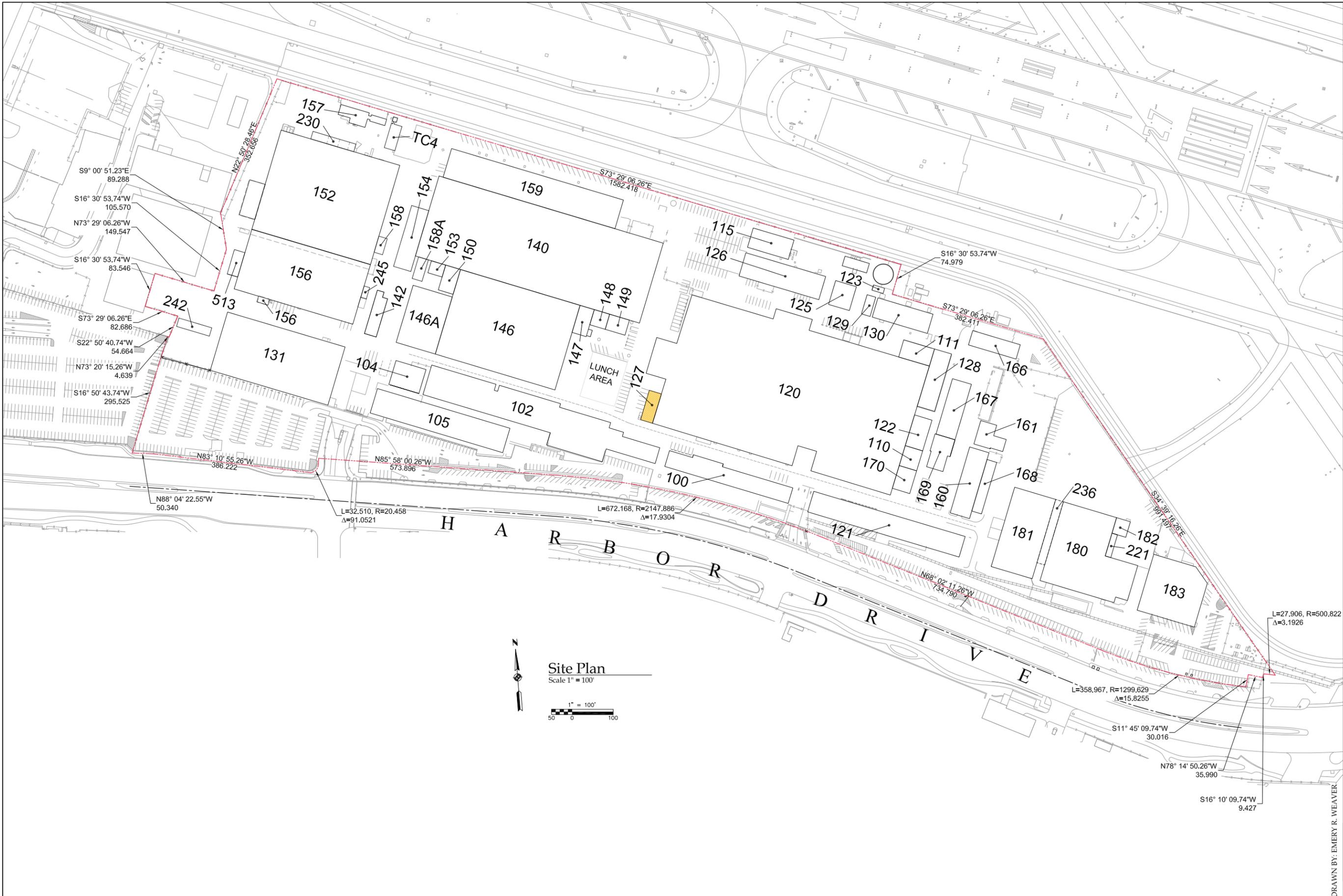
CONTRACT NO. 1049
 1579 RYAN AERONAUTICAL CO.
 SAN DIEGO, CALIFORNIA
 FRANK L. HOPE, JR., ARCHITECT
 1122 CONANT ST. SAN DIEGO, CALIF.



DOOR SCHEDULE					
NO.	TYPE	SIZE	FINISH	HARDWARE	REMARKS
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2	SLIDING	4'-0" x 7'-0"	WOOD	NO HARDWARE	SEE PLAN
3	SLIDING	4'-0" x 7'-0"	WOOD	NO HARDWARE	SEE PLAN
4	SLIDING	4'-0" x 7'-0"	WOOD	NO HARDWARE	SEE PLAN
5	SLIDING	4'-0" x 7'-0"	WOOD	NO HARDWARE	SEE PLAN
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579 RYAN AERONAUTICAL CO.			58
DATE FRANK L. HOPE, JR., ARCHITECT			16



Site Plan
Scale 1" = 100'



Library of Congress Index Number	HISTORIC AMERICAN BUILDINGS SURVEY	SURVEY NO.	SHEET 1 OF 4 SHEETS
NAME AND LOCATION OF STRUCTURE		SAN DIEGO COUNTY	
BUILDING 127 - OFFICE AND PHOTO LAB		SAN DIEGO, CALIFORNIA	
2701 N. HARBOR DRIVE		DRAWN BY: EMERY R. WEAVER	
RYAN AERONAUTICAL COMPANY HISTORIC DISTRICT JANUARY 2010			