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*FINAL*

**Building 121  
Receiving Warehouse**

**Historic American Buildings Survey  
Level I**

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

Prepared for

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

April 2010

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**CH2MHILL**

HISTORIC AMERICAN BUILDINGS SURVEY  
RYAN AERONAUTICAL COMPANY HISTORIC DISTRICT  
BUILDING 121 - RECEIVING WAREHOUSE

Location:	2701 North Harbor Drive, San Diego, CA 92101, USA
Present Owner/Occupant:	San Diego County Regional Airport Authority
Present Use:	Vacant
Significance:	<p>Building 121 is located within the boundaries of the Ryan Aeronautical Company Historic District, 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 121 is a contributing resource to the Ryan Aeronautical Company Historic District under NRHP Criterion C/CRHR Criterion 3 it retains architectural features that visually and physically connect this building to the Ryan Aeronautical Company Historic District. The building maintains architectural features that identify its specific use as a receiving warehouse/center within the larger facility during its period of significance, 1939 through 1969.</p>

Historian: Jessica Feldman

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1942, extension 1956
2. Architect: Frank L. Hope, Jr. & Associates, T.E. Miller (1956 extension)
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 121 is a two-story rectangular building originally measuring approximately 300 feet by 50 feet and consisting of wood bowstring trusses. The footing supports a 2-inch-by-8-inch wood-stud-framed wall with 6-inch-by-12-inch wood-beam posts providing additional reinforcement. These posts are alternately placed at 12- and 8-foot intervals. The trusses are 20 feet apart. The exterior of the building is covered with 1-inch-by-6-inch sheathing covered by stucco (San Diego County Regional Airport Authority, 2005).
5. Alterations and additions: In 1956, an 80 foot extension was construction on the east elevation of Building 121. This required the removal of the original east wall. This addition is supported by wood posts with the exterior covered with plywood and stucco. The metal trusses are 20 feet apart. The roof diaphragm is made up of plyscord sheathing (San Diego County Regional Airport Authority, 2005). The extension was designed to match the original exterior. A portion of the raised concrete dock on the south elevation was removed at this time as well.

B. Historical Context:

1. San Diego’s Aviation History:

During the first three decades of the 20<sup>th</sup> 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 121 is an industrial-style building located within an industrial facility. The building has retained its axial plan; lack of window fenestration; stringcourse; fiberglass; wood; and metal hanging and roll-up doors; barrel roof; and a shaped parapet wall atop the east and west elevations (URS Corporation, 2009). A concrete loading dock, rail siding area, and a spur rail line are located on the south elevation of Building 121.
2. Condition of Building Material: Building 121 is in good condition.

B. Description of Exterior:

1. Overall Dimensions: Building 121 is a two-story building with an open interior and a rectangular footprint, measuring approximately 50 feet by 380 feet. The interior clearance is 20 feet from the concrete flooring to the bottom of the trusses, and approximately 18 feet from the floor to the crane rail.
2. Foundations: Building 121 is built on a 5-inch concrete slab and perimeter foundation.
3. Walls: Building 121 is covered with 1-inch-by-6-inch sheathing covered with stucco. Both the original and extension have 4 foot, 6 inch-high stucco dados on the west, south, and east elevations. There is a crane rail located approximately 18 feet from the floor. There are paired louvered vents measuring 17 inches by 24 inches along the lower portion of the walls.
4. Structural System: The original portion of Building 121 is wood-framed with a wood truss. The eastern 80 feet of Building 121 is wood-framed with a steel truss.
5. Openings:
  - a. Doorways: Building 121 has five openings on the north elevation. One is a single-entry personnel door near the west elevation. The other four are sliding doors, measuring approximately 11 feet wide, 8 feet wide, 18 feet wide, and 13 feet wide. The last door is located on the addition. The plans for the 1956 addition called for a



metal rolling door measuring 18 feet by 15 feet on the east elevation. There is a single-entry door on the east elevation near the south elevation and a third single-entry door on the south elevation. The single-entry doors typically measure 3 feet, 6 inches wide.

b. Windows: Building 121 has no windows.

6. Roof: The roof of Building 121 is composed of rolled asphalt material. The original building has diagonally laid 1-foot-by-6-foot sheathing and the 80 foot extension has 3/8-inch plyscord sheeting. The east and west elevations reflect the curved roof structures of the bowstring trusses. Wood trusses are present on the original building and steel trusses were used in the 80-foot extension on the eastern portion.

C. Description of Interior:

Floor Plans: Building 121 is approximately two stories in height, with an open interior. It is a rectangular building measuring approximately 50 feet by 380 feet and sits on a concrete slab floor and perimeter foundation. Footing supports a 2-inch-by-8-inch wood-stud-framed wall with 6-inch-by-12-inch wood-beam posts used for additional reinforcement. The wood-beam posts are alternately placed at 12- to 8-foot intervals. The posts support 50-foot-wide arched wooden roof trusses that hold 2-inch-by-12-inch roof joists. Trusses are spaced 20 feet apart, except where the two buildings were connected. An overhead crane mounted on the walls below the roof trusses runs the length of the building. The east 80 feet of Building 121 is an addition to the original construction and is supported by wood 2-inch-by-8-inch boards. Two areas within Building 121 have been subdivided with partitions. In the southeast corner of the building, a small room has been partitioned with wood stud and plywood walls. Two restrooms have been partitioned in along the southern wall in the center of the building.

D. Site:

Historic Landscape Design: None

PART III. SOURCES OF INFORMATION

A. Early Views: N/A

B. Interviews: N/A

C. Bibliography

1. Primary and Unpublished Sources:

San Diego County Regional Airport Authority (SDCRAA). 2005. Teledyne Ryan Facility Study. January 1.

San Diego Unified Port District (SDUPD). 2009. 2701 North Harbor Drive Demolition Project Environmental Impact Report. April.

URS Corporation. 2008. Department of Parks and Recreation Primary Record form for the Ryan Aeronautical Company Historic District (P-37-028619, CA-SDI-18401H). January.

URS Corporation. 2009. *Appendix B. Cultural Resources Assessment Report. 2701 North Harbor Drive Demolition Project Draft EIR (UPD #83356-EIR-713)*. April.

Van Wormer, Stephen. 2005. Department of Parks and Recreation Primary Record form for the Ryan Aeronautical Company Historic District (P-37-028619, CA-SDI-18401H). Prepared by Walter Enterprises. December.

Van Wormer, Stephen, Mary Robbins-Wade. 2006. *Historic Architectural Survey Report: San Diego International Airport Master Plan*. Prepared for San Diego County Regional Airport Authority. May.

2. Secondary and Published Sources:

Leiser, Edward. 2000. "San Diego Flying Days." Copies of manuscripts on file at the San Diego Historical Society and San Diego Aerospace Museum, San Diego, CA.

Macaulay, Major T. 1928. "*The Story of Lindbergh Field, San Diego's 'Triple A' Municipal Airport Lindbergh Field.*" Dedication brochure, Lindbergh Field Vertical Files, San Diego Aerospace Museum Library, San Diego, CA.

Moomjian, Scott A. and Wendy L. Tinsley. 2001. *Historic Survey Report of the Former Teledyne-Ryan Aeronautical Complex, 2701 North Harbor Drive, San Diego, California, 92101*. Prepared by Office of Maria Burke Lia, Attorney at Law, 427 C Street, Suite 416, San Diego, CA 92101. Prepared for Jones Lang La Salle, 2701 North Harbor Drive, Building 100, San Diego, California 92101. Copy on file with the San Diego Regional Airport Authority.

Moore, Floyd Roscoe. 1960. San Diego Airport Development. Thesis, Political Science, San Diego State College, San Diego, CA.

National Aviation Hall of Fame. T. Claude Ryan- Biography. [http://nationalaviation.blade6.donet.com/components/content\\_manager\\_v02/view\\_nahf/htdocs/menu\\_ps.asp?NodeID=-2144693577&group\\_ID=1134656385&Parent\\_ID=-1](http://nationalaviation.blade6.donet.com/components/content_manager_v02/view_nahf/htdocs/menu_ps.asp?NodeID=-2144693577&group_ID=1134656385&Parent_ID=-1) (accessed November 5, 2009).

San Diego Unified Port District. 1966. *San Diego Unified District Annual Report: 1965-66*. Carl Reupsch Collection, San Diego Historical Society, San Diego, CA.

San Diego Union. Various Dates. Issues cited in text from Lindbergh Field Vertical Files, San Diego Historical Society, San Diego, CA.

San Diego Unified Port District. 1968. *San Diego Unified District Annual Report: 1967-68*. Carl Reupsch Collection, San Diego Historical Society, San Diego, CA.

San Diego Unified Port District. 1971. *San Diego Unified District Annual Report: 1970-71*. Carl Reupsch Collection, San Diego Historical Society, San Diego, CA.

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 121 - Receiving Warehouse, West Elevation, looking Southeast, San Diego, California, Date unknown.



Building 121 - Receiving Warehouse, Southwest Oblique, view of the South Elevation, San Diego, California, Date unknown.



Building 121 - Receiving Warehouse, Northwest Oblique, looking at the North and West Elevations, San Diego, California, Date unknown.



Building 121 - Receiving Warehouse, Interior looking West, San Diego, California, Date unknown.





Building 121 - Receiving Warehouse, Southwest Oblique, San Diego, California, October 2009.



Building 121 -Receiving Warehouse, East Elevation, San Diego, California, October 2009.



Building 121 - Receiving Warehouse, Southeast Oblique, San Diego, California, October 2009.



Building 121 -Receiving Warehouse, Northeast Oblique, San Diego, California, October 2009.



Building 121 - Receiving Warehouse, West Elevation, San Diego, California, October 2009.



Building 121 - Receiving Warehouse, South Elevation, loading dock and rail spur detail, facing Northeast, San Diego, California, October 2009.



Building 121 - Receiving Warehouse Interior, barrel trusses detail, facing Southwest, San Diego, California, October 2009.



Building 121 - Receiving Warehouse Interior, barrel trusses detail, facing Southwest, San Diego, California, October 2009.



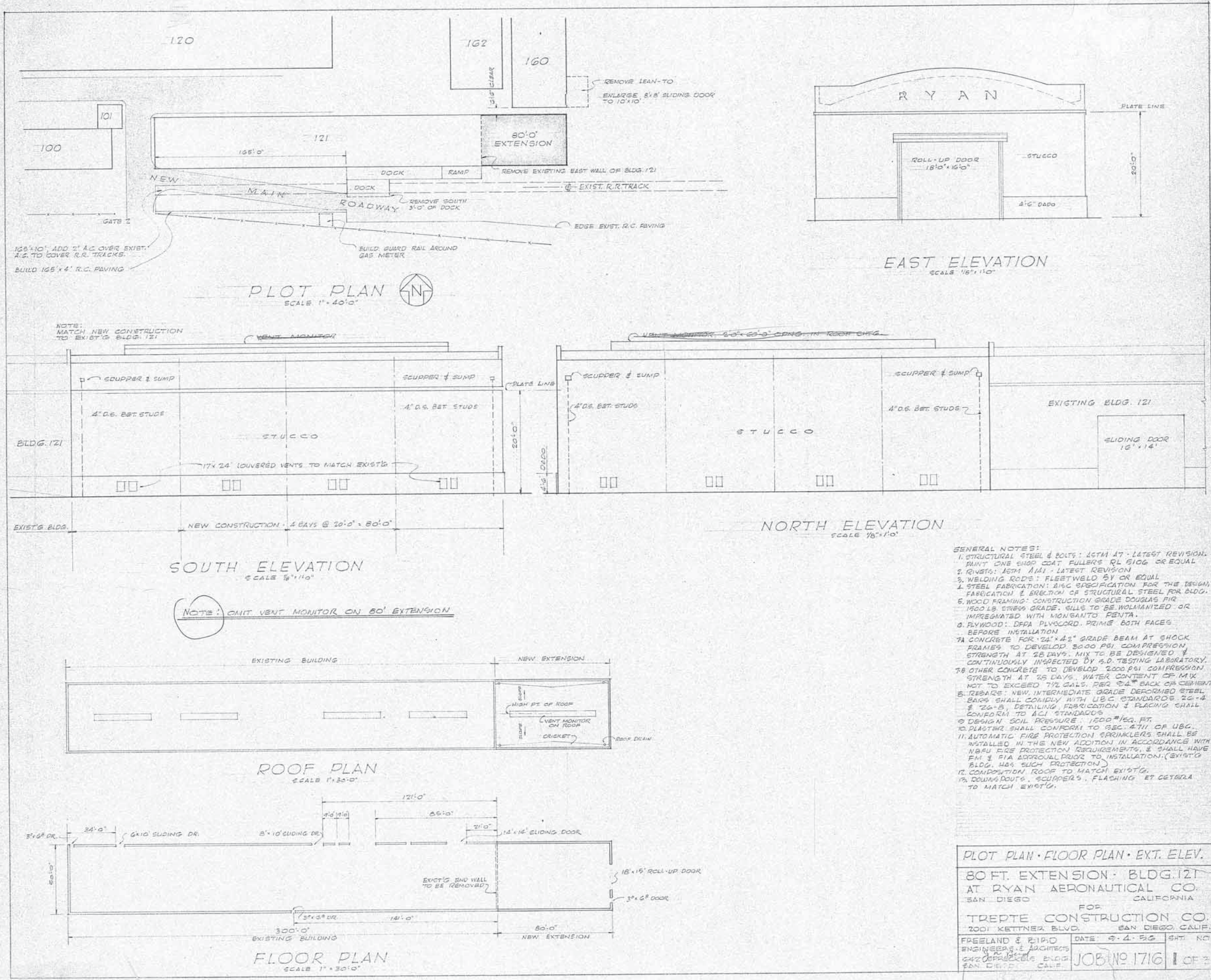


Building 121 - Receiving Warehouse Interior, door detail, facing North, San Diego, California, October 2009.

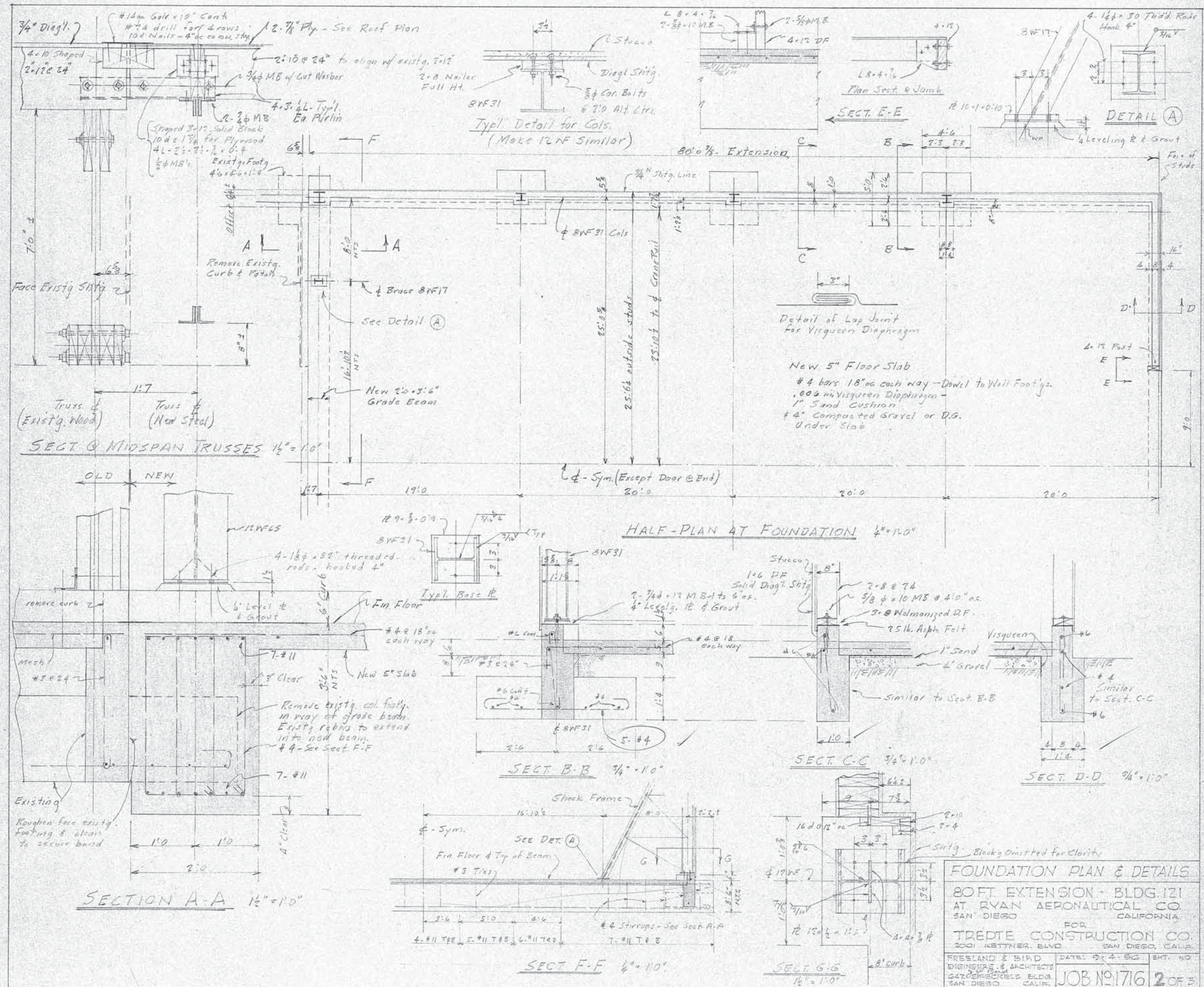


Building 121 - Receiving Warehouse, Context, looking Northwest, San Diego, California, October 2009.

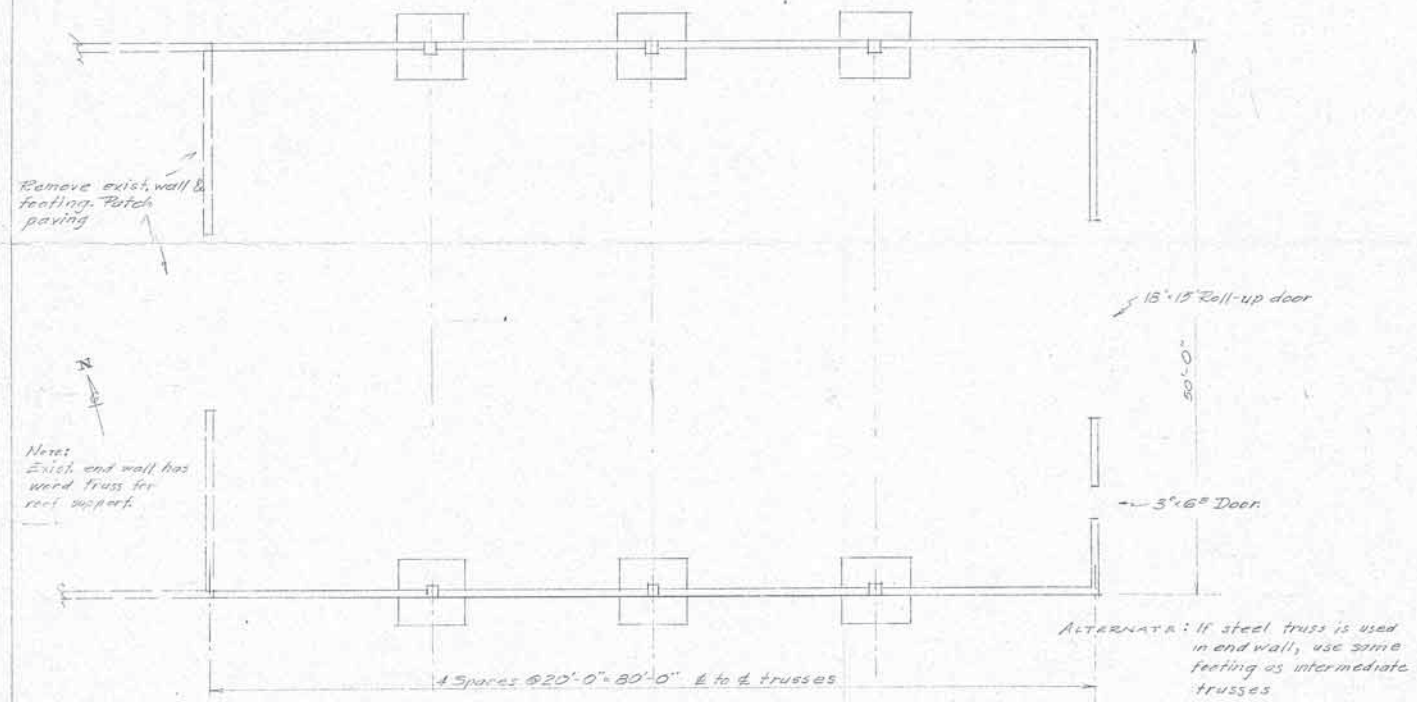






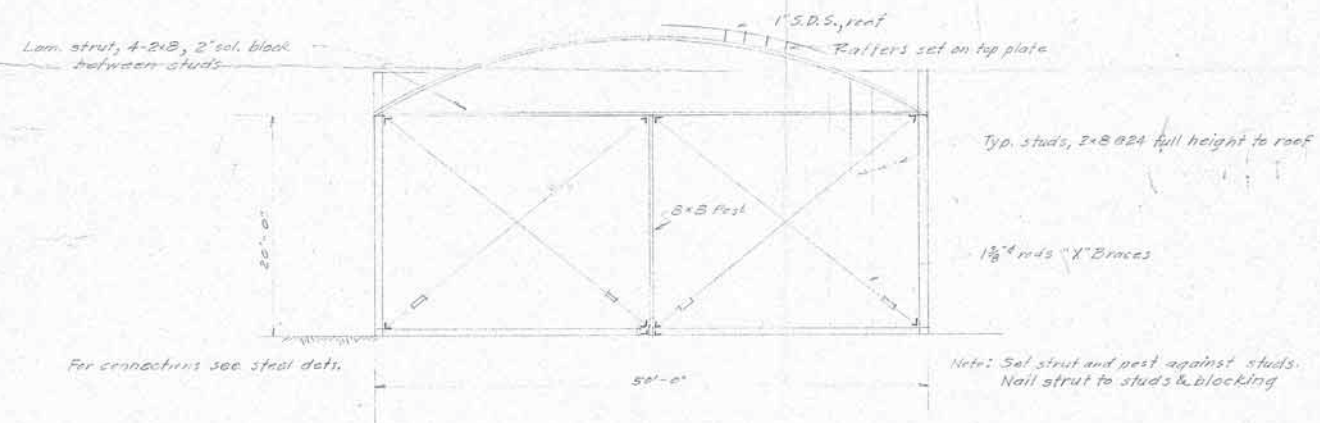






FOUNDATION PLAN

1/8" = 1' - 0"



WEST END WALL

Showing NEW BRACING

1/8" = 1' - 0"

APPROVED	DATE	RYAN AERONAUTICAL CO.	W/175
		PLANT & EQUIPMENT DEPARTMENT	
As Shown		As Proposed	3 13
		80 FT EXTENSION Y Bldg 121	5 D
		FNDR PLAN	1-2055





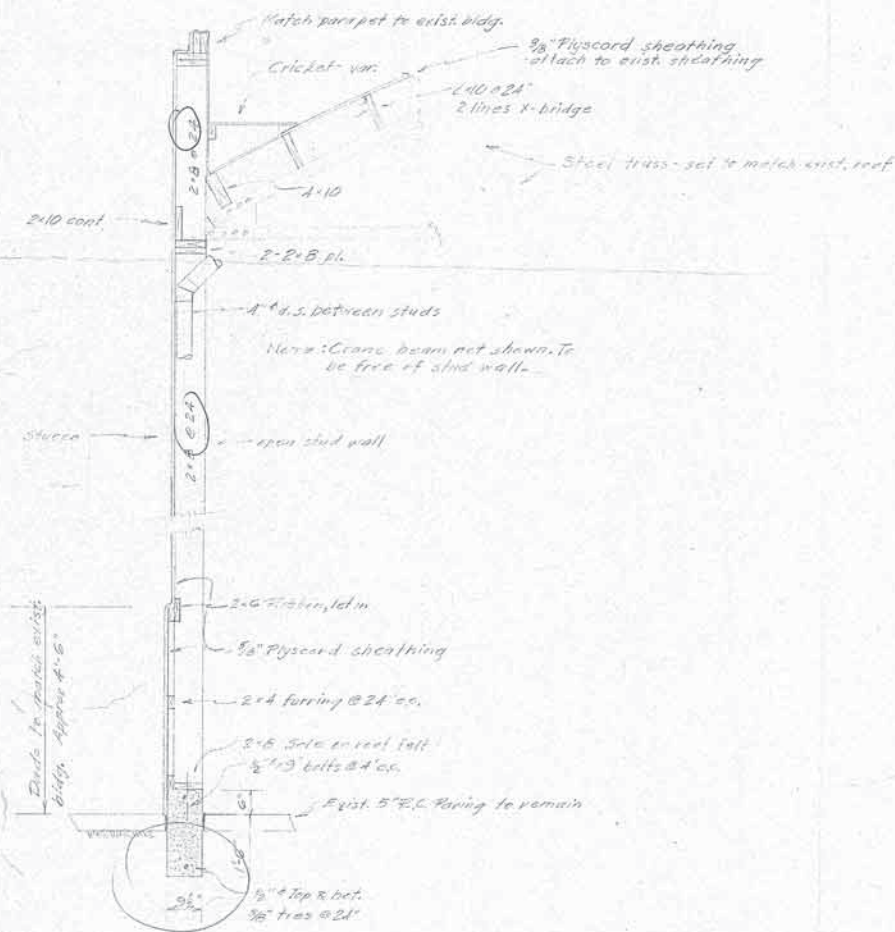




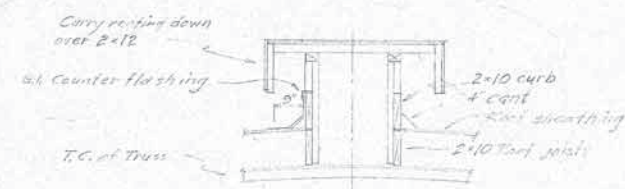




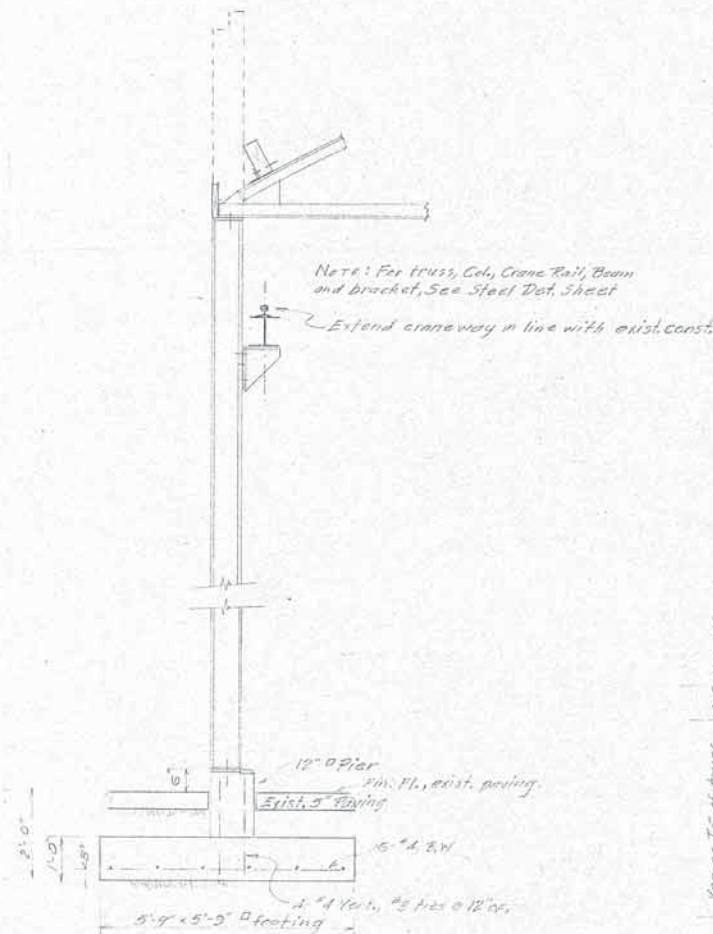




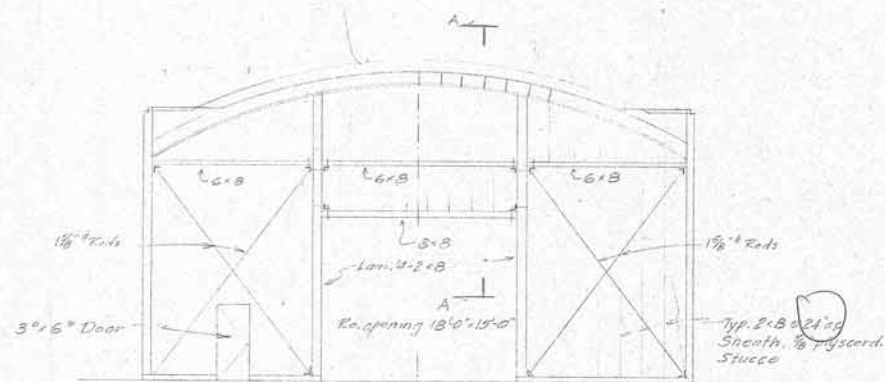
TYP. WALL SEC.  
SOUTH WALL AS SHOWN  
NORTH WALL OMIT DADO



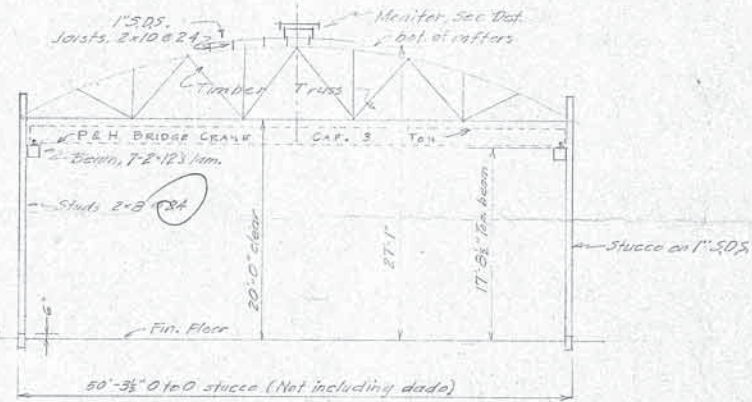
MONITOR SECTION  
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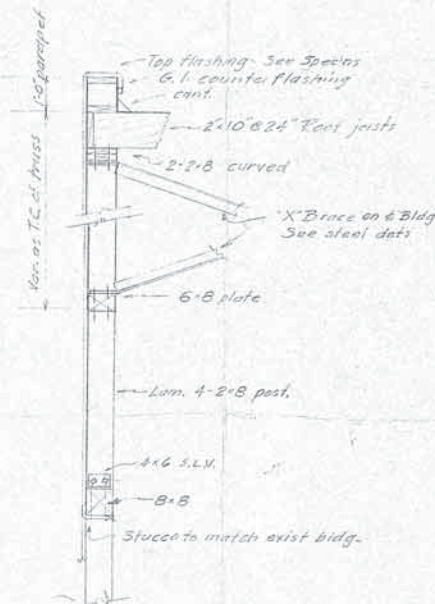
COL. & FOOTING DET.  
1/2" = 1' - 0"



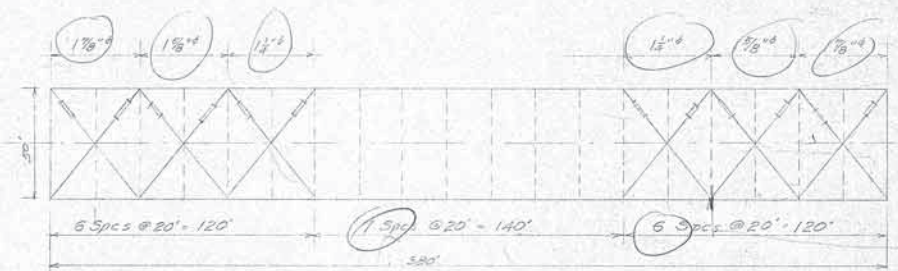
EAST END WALL FRAMING  
1/2" = 1' - 0"



TYP. SECT. PRES. BLDG.  
1/8" = 1' - 0"



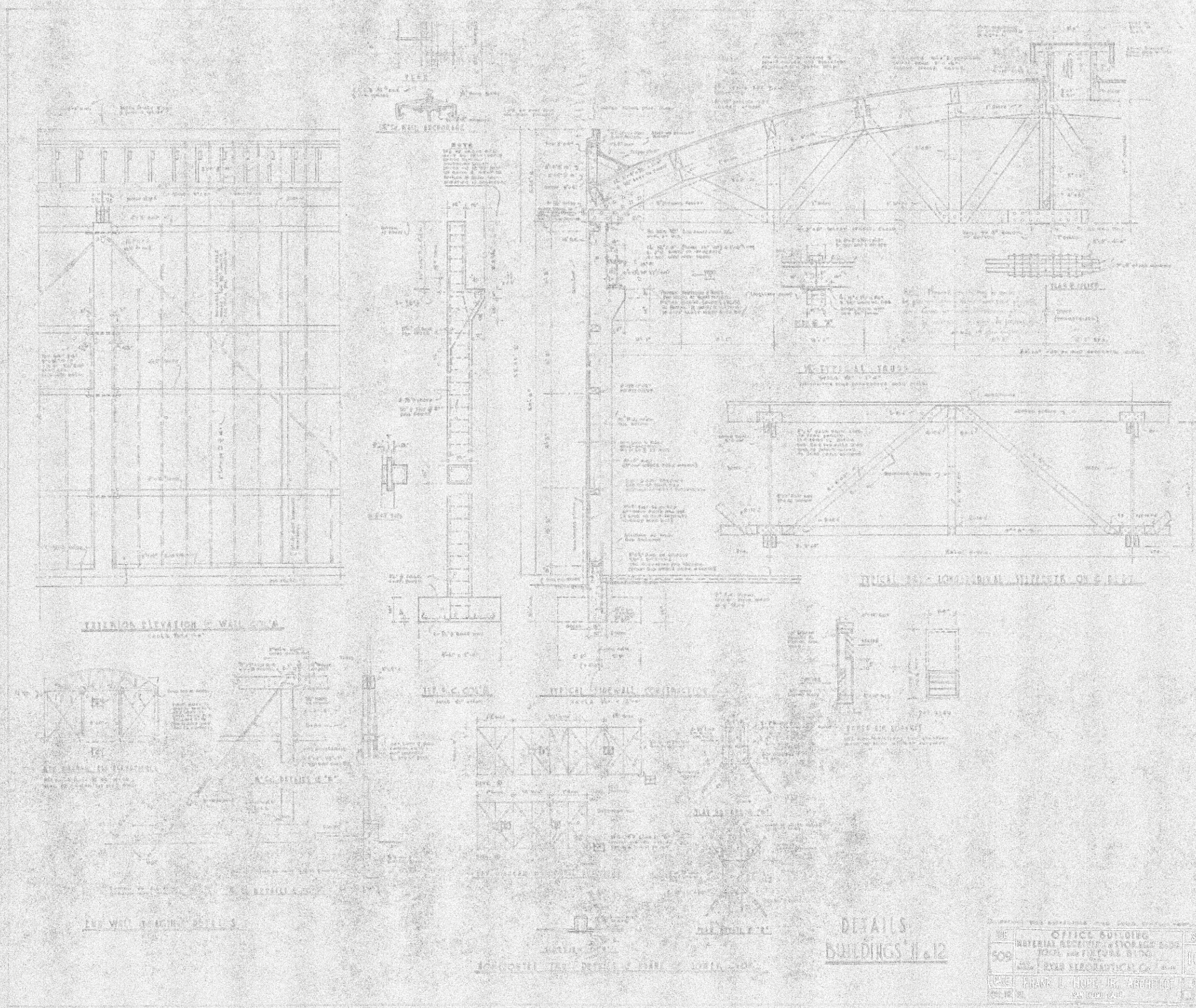
SEC A-A  
1/2" = 1' - 0"



DIAG. BRACING @ L.C. of TRUSSES  
1/8" = 1' - 0"

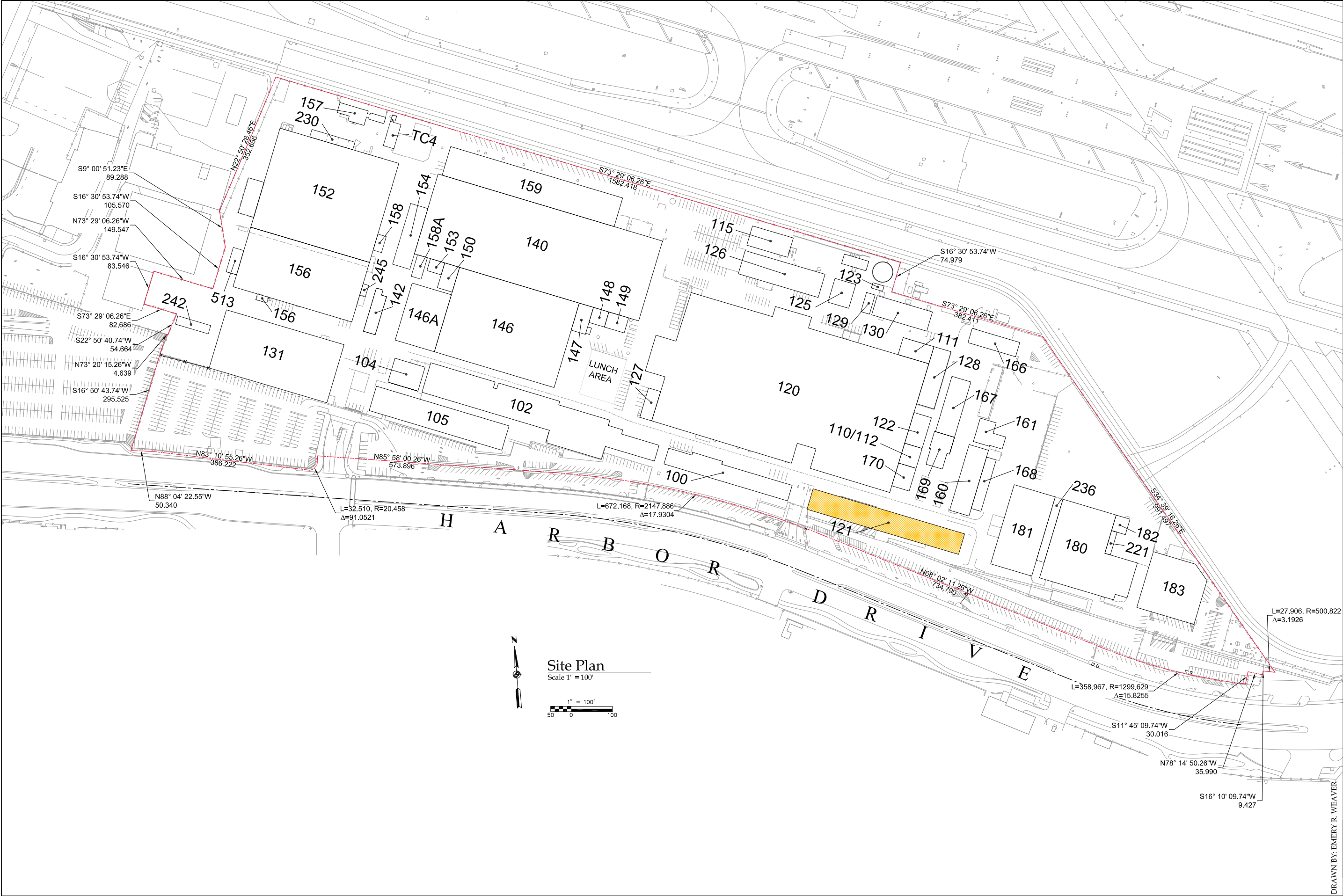
RYAN AERONAUTICAL CO.		7/5/16
DEPT. OF AERONAUTICS		
As Shown	Miller	2 3
80 FT. EXTENSION	BLDG 121	D
TYP.	SECTIONS	1-205





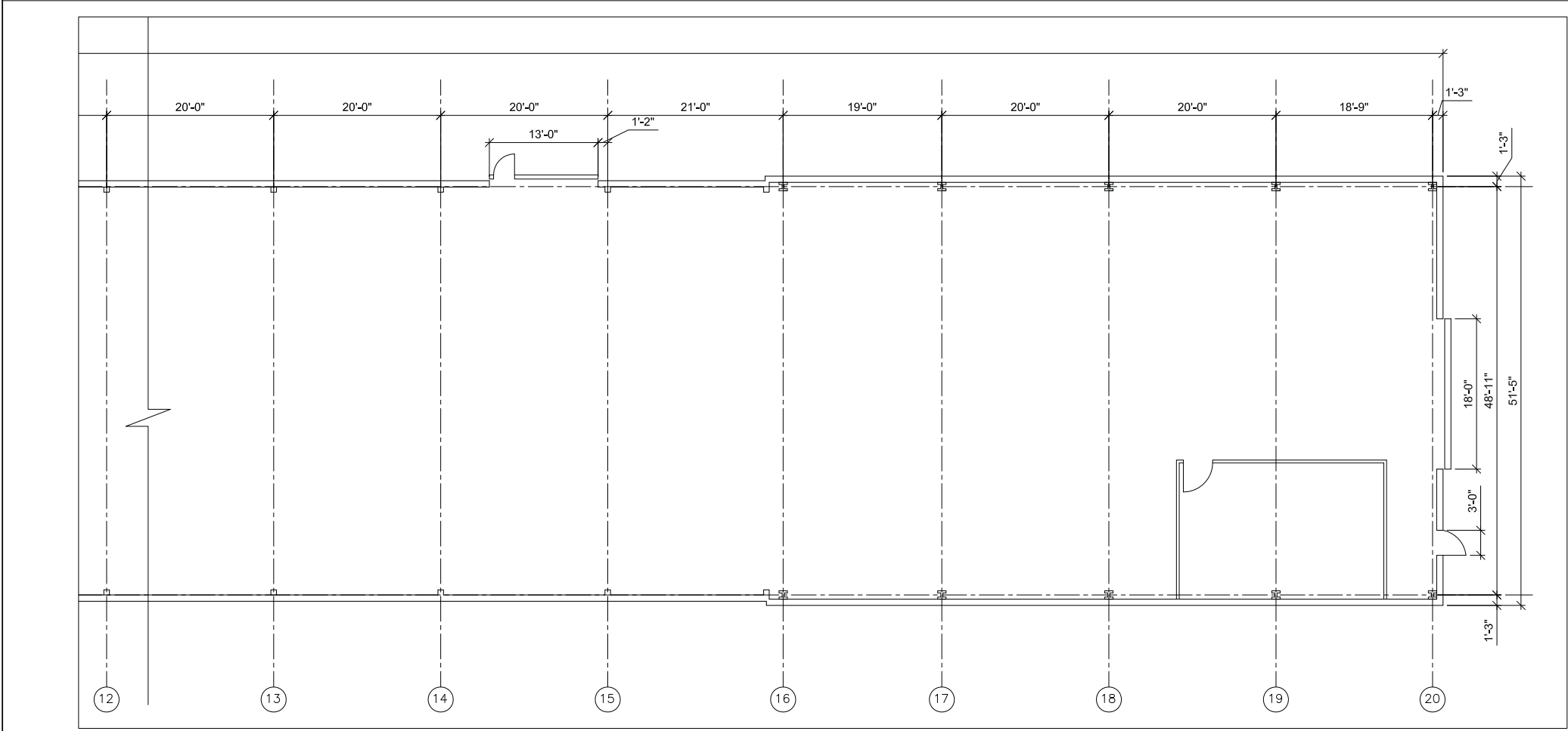
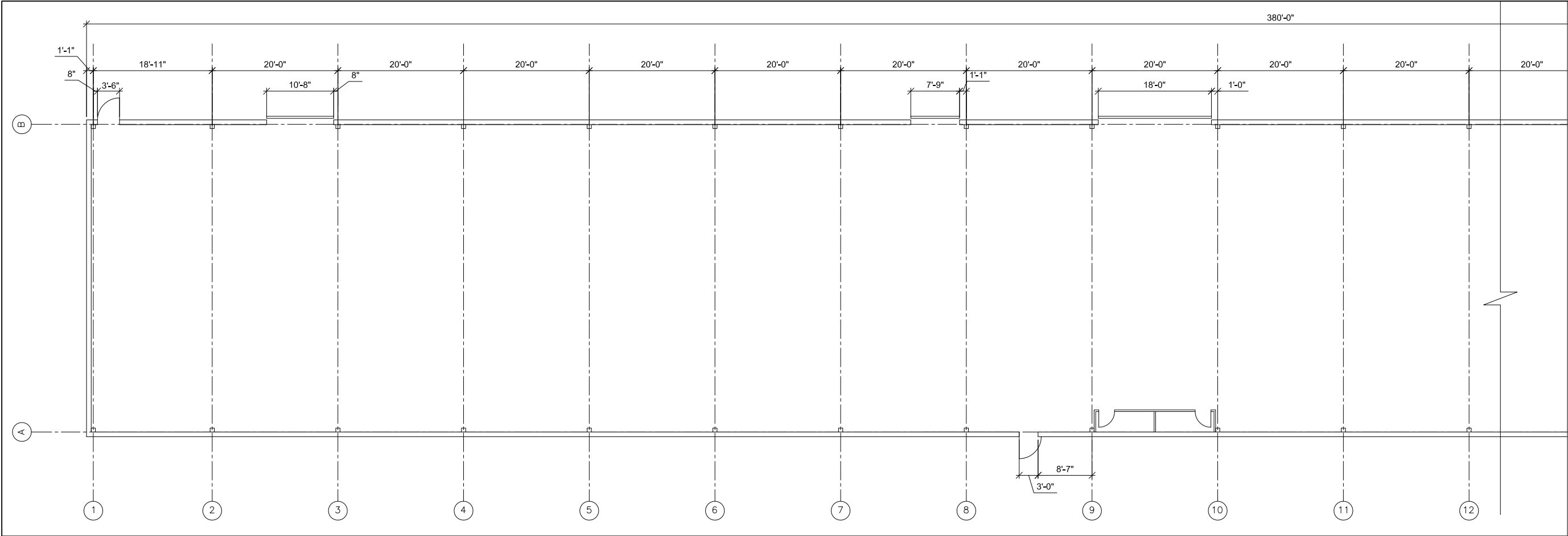
100	OFFICE BUILDING	81
509	MATERIAL RECEIVING & STORAGE BLDG	10
	1000 AND FUTURE BLDG.	
	BY RYAN AERONAUTICAL CO.	
	DESIGNED BY FRANK L. HOPE, JR., ARCHT.	
	DATE 12/1/41	





RYAN AERONAUTICAL COMPANY HISTORIC DISTRICT JANUARY 2010	NAME AND LOCATION OF STRUCTURE		HISTORIC AMERICAN BUILDINGS SURVEY	SURVEY NO.	SHEET 1 OF 4 SHEETS	Library of Congress Index Number
	BUILDING 121 - RECEIVING WAREHOUSE					
	SAN DIEGO, CALIFORNIA					
2701 N. HARBOR DRIVE		SAN DIEGO COUNTY				





Floor Plan  
Scale 1/8" = 1'-0"

DRAWN BY: EMERY R. WEAVER

RYAN AERONAUTICAL COMPANY  
HISTORIC DISTRICT  
JANUARY 2010

NAME AND LOCATION OF STRUCTURE

BUILDING 121 - RECEIVING WAREHOUSE

2701 N. HARBOR DRIVE

SAN DIEGO, CALIFORNIA

SAN DIEGO COUNTY

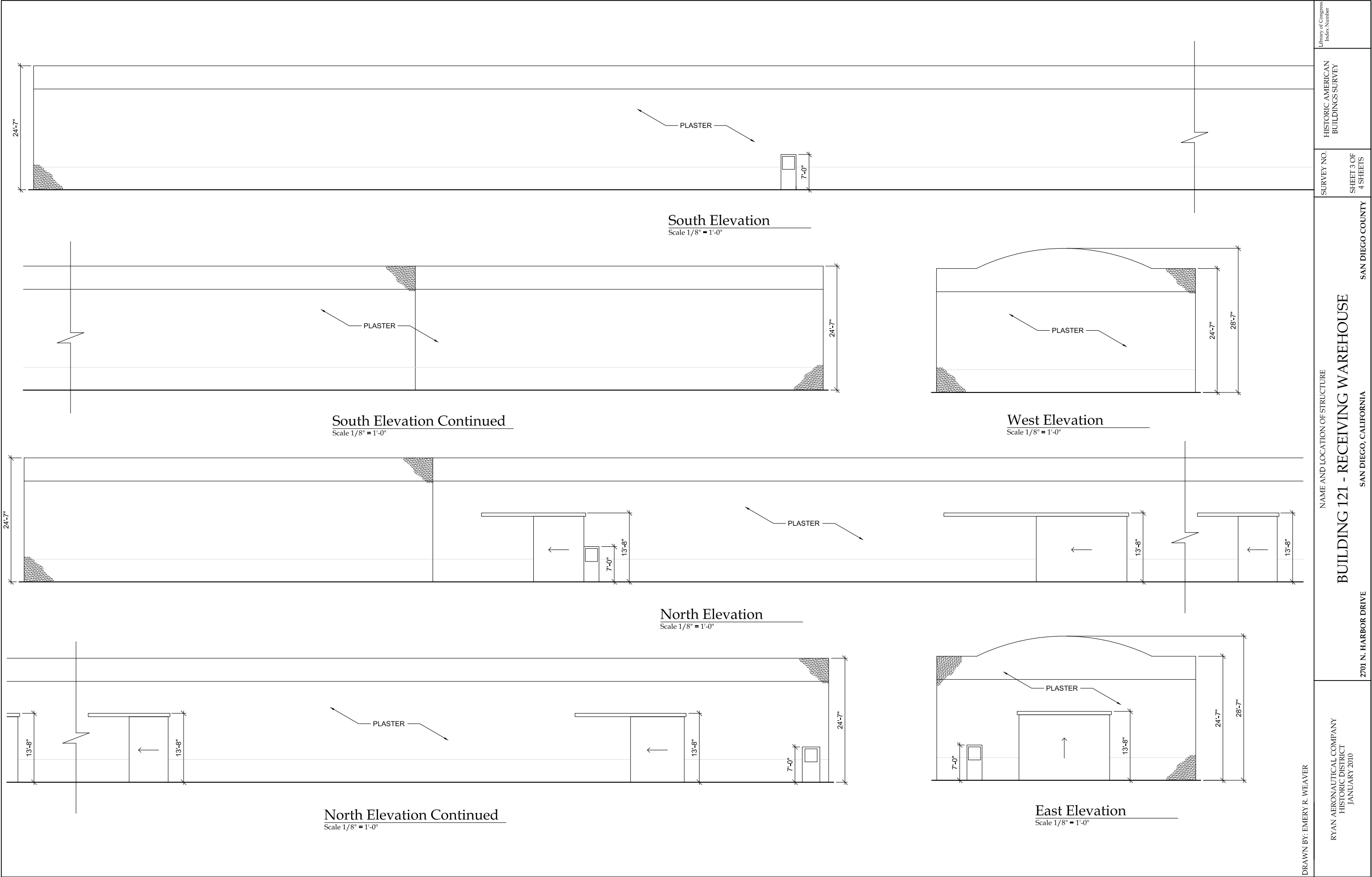
SURVEY NO.

SHEET 2 OF 4 SHEETS

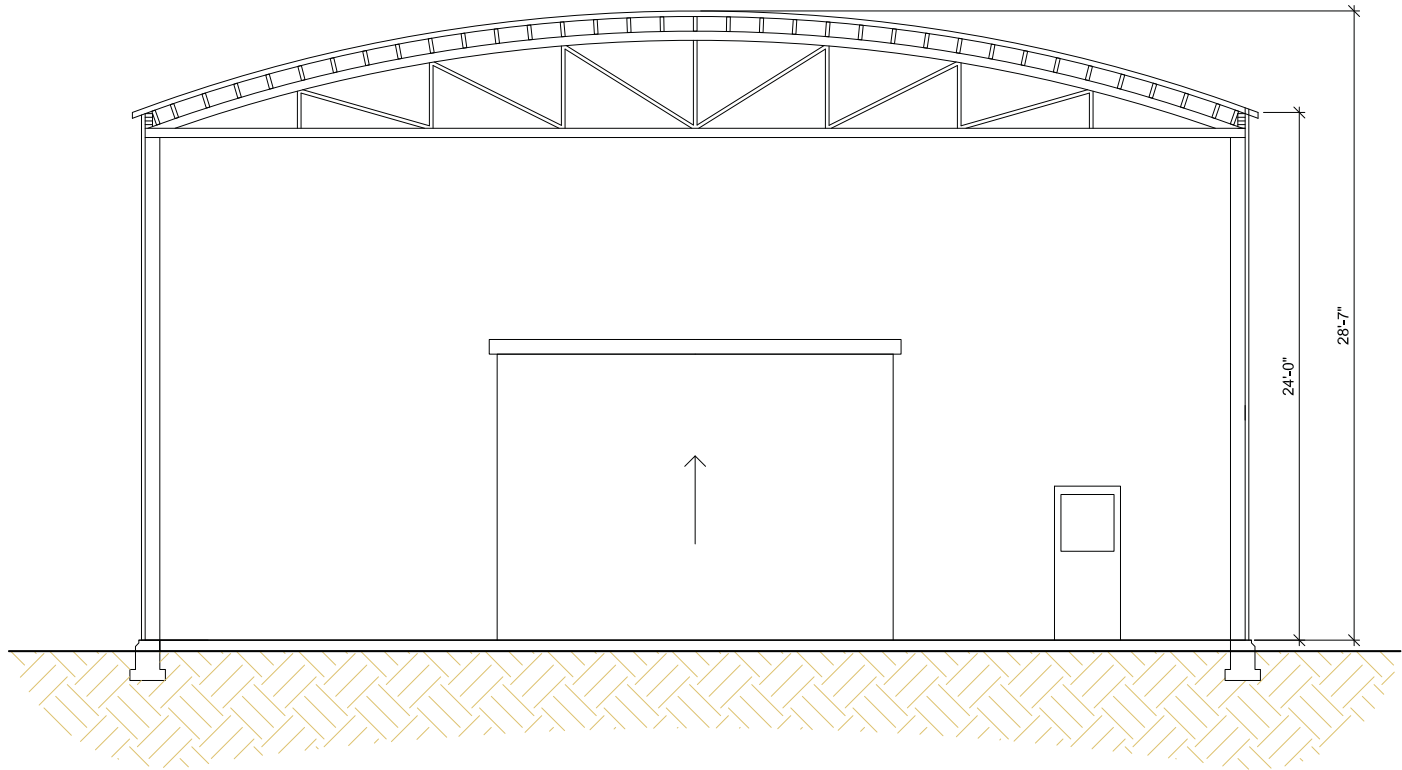
HISTORIC AMERICAN  
BUILDINGS SURVEY

Library of Congress  
Index Number









Section  
Scale 1/4" = 1'-0"

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RYAN AERONAUTICAL COMPANY  
HISTORIC DISTRICT  
JANUARY 2010

NAME AND LOCATION OF STRUCTURE  
**BUILDING 121 - RECEIVING WAREHOUSE**  
2701 N. HARBOR DRIVE      SAN DIEGO, CALIFORNIA      SAN DIEGO COUNTY

SURVEY NO.  
SHEET 4 OF  
4 SHEETS

HISTORIC AMERICAN  
BUILDINGS SURVEY

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Index Number