FORT POINT DISTRICT BOAT YARD, PATTERN WAREHOUSE
(Galveston District Annex Building No. 2)
2000 Fort Point Road
Galveston
Galveston County
Texas

HABS No. TX-3401-A

HABS
TEX
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of the Interior
1849 C St. NW
Washington, DC 20240

HISTORIC AMERICAN BUILDINGS SURVEY

FORT POINT DISTRICT BOAT YARD, PATTERN WAREHOUSE

(Galveston District Annex Building No. 2)

HABS NO. TX 3401-A

IDENTIFICATION INFORMATION

LOCATION

2000 Fort Point Road, City of Galveston, Galveston County, Texas 77550

(Located on a bearing 70 degrees east of north, 800 feet from the State Highway 87 (Bolivar to Galveston) Ferry Landing and adjacent to the U.S. Marine Corps Reserve Training Center in the Old Fort San Jacinto Military Reservation on the east end of Galveston Island)

QUAD/UTM

United States Geological Survey (USGS) Galveston, Texas 7.5′ Quadrangle, Universal Transverse Mercator Zone 15; 328,020 meters east, 3,245,410 meters north

OCCUPATION AND CURRENT USE DATA

The COE has been the owner of the Pattern Warehouse since its original construction in 1944, with the Galveston District COE occupying the building since that time. At present, the warehouse serves as a general storage facility for Galveston District COE's archival records and surplus supplies, although

only a few old machinery patterns continue to be stored in the warehouse. These remaining machinery patterns are important components of two flood control gates designed and built by the Galveston District COE concurrently with the erection of the warehouse (McClennan 1994). All dredge machinery patterns originally stored in the building have been disposed of since the Galveston District COE's discontinuance of dredging operations in the 1980s. Since that time, a portion of the Pattern Warehouse's second floor has also housed Galveston District COE's Emergency Operation Center (EOC) for command and control of Galveston District resources during emergencies, such as hurricanes (Wittig 1994).

## SIGNIFICANCE STATEMENT

Designed by the U.S. Engineer Office of Galveston, Texas in 1943 and constructed the following year by the Esslinger-Misch Company of Texas City, Texas for approximately $100,500, the Fort Point District Boat Yard, Pattern Warehouse was built to store wooden patterns used in casting parts for dredge machinery. Dredge machinery operated by the Galveston District COE and repaired with parts cast from patterns stored at the Pattern Warehouse were instrumental in the opening of the Gulf Intracoastal Waterway, as well as other important navigation channels in Galveston Bay and along Texas' rivers and coast. Casting of the dredge machinery parts was conducted by commercial foundries in and around the Galveston area.

Although modifications to the building have occurred since the Galveston District COE discontinued operation and maintenance of dredging machinery, the warehouse has retained its original form and character to a significant extent. As the last remaining example of a World War II era construction program undertaken at the Fort Point (Old Fort San Jacinto) Military Reservation, the building's architectural integrity contributes to its eligibility for listing in the National Register of Historic Places.

HISTORICAL INFORMATION

PHYSICAL HISTORY

Although no specific date of construction is inscribed on the building's exterior, the Fort Point Boat Yard District, Pattern Warehouse was constructed after December 1943, when the U.S. Engineer Office in Galveston awarded a contract for construction to the Esslinger-Misch Company of Texas City, Texas. A line item entry in a 1943-1945 Galveston District COE ledger of contract expenditures (on file at the GD-COE Headquarters Building, Contracting Division, Fort Point, Galveston, Texas) indicates that the contract for construction was let on December 3, 1943 with a period of completion specified as 180 days. A completion date of July or August 1944 would have been in accordance with the terms of the contract, although design change notes appearing on the working drawings indicated that construction was probably still in progress in late 1944. No official correspondence or contract documents appear to have survived to indicate whether the period of construction was extended beyond the 180 day period, but construction was probably completed sometime early in 1945.

Credit for design of the building must be attributed generally to the U.S. Engineers Office, within which a team of engineers worked together to create the set of working drawings used to construct the building. The diversity of specialized functions within the U.S. Engineer's offices (e.g. civil engineering, electrical engineering, etc.) created a situation where multiple individuals contributed integrally to the overall design of the building. Direct supervisory responsibility for building design appears to have

rested with W. Z. Lidieker, Chief Engineer of the Design Section, whose approval is indicated on each of the original working drawing sheets. Lidieker's plans were recommended for approval by Major Henry R. Norman, also of the Galveston District COE Engineering Division, and finally approved by Lt. Colonel Frank H. Newman, Acting District Engineer. Although responsibility for the proper design and completion of the building ultimately rested with these individuals, it is likely that other less senior engineers, identified on the working drawings only by their own initials, played a significant role in the building's design.

The Galveston District COE has occupied the Pattern Warehouse since its original construction, and has continuously used it for a variety of warehousing needs. While the building was used by Galveston District COE to support its ongoing dredging operations until the 1980s, after 1981 it was increasingly used for general archival and materials storage needs. This change in function was facilitated by Galveston District COE's discontinuance of in-house dredging and maintenance operations, and the transfer of all dredging equipment to other COE districts (Wittig 1994). An EOC was also created at that time within the upper floor of the building. Improvement of the building's suitability for archival storage and the EOC is currently planned and provides the impetus for its preservation through HABS/HAER documentation.

The Esslinger-Misch Company of Texas City, Texas served as the general contractor for construction of the Pattern Warehouse. Little is currently known about this contracting firm which was not listed in the City Directories for Galveston or Texas City from 1940 to 1950 (Green 1994; Bazzoon

1994). The Esslinger-Misch Company was also awarded a concurrent, but much smaller contract, by Galveston District COE for constructing a Soils Lab Warehouse at Fort Point (1943-45 Galveston District COE contract ledger).

It is unclear whether the contract for construction of the Pattern Warehouse required the general contractor to provide materials to be used in construction, but the Galveston District COE's historical ledgers of contract expenditures in the 1938-1943 period indicate that substantial amounts of portland cement were purchased in 1943 from several large manufacturers in Texas, including Trinity Portland Cement Co. and Gulf Portland Cement Co. of Houston and Lone Star Portland Cement Co. of Dallas. Included among other types of building supplies purchased by Galveston District COE in 1943 were an unspecified number of ball joints cast by the Galveston firm of McDonough Iron Works, possibly for use in hand railings at the Pattern Warehouse.

At the time of this documentation, the original architectural design and construction characteristics of the Pattern Warehouse at Fort Point, Galveston Island, Texas were still apparent by viewing the building itself. Architecturally, the building is an elongated, open-plan industrial warehouse with an exposed concrete framework, extensive banks of wooden windows and unit masonry tile panels. Stylistically, the Pattern Warehouse presents sparse architectural detailing related to the streamlined forms of modernistic industrial design of the mid-twentieth century. The most prominent architectural feature is a low concrete pediment that rises above the central bay of the northeast front facade. Otherwise, the

principal corners of the building at the parapet level are faceted and feature a tapered chamfer descending to the ground floor from the parapet.

Detailed evidence of the building's original design and construction is depicted in reproduced sets of working blueprints retained by Galveston District COE. Although incomplete, the original working drawings and all subsequent drawings are permanently archived within the Engineering Division and serve as a useful basis from which to understand details of the building's construction and alteration. The working drawings have been relied upon by Galveston District COE's engineers's to plan a series of alteration and modification projects undertaken at the Pattern Warehouse since 1950. The complete set of working drawings includes over 76 individual sheets developed between October 1943 and October 1993, of which 14 sheets date to the building's original design in 1943. The original 1943 working drawings have been reproduced for inclusion in the accompanying photographic documentation along with working drawings from subsequent phases of alteration/renovation between 1950 and 1980-81.

Galveston District COE's collection of working drawing for the Pattern Warehouse (see Photo-Data Set, photos 23-48, and Additional Architectural/Engineering Drawings (Appendix A)) indicate that the building has undergone at least four phases of alteration, and that an additional phase is currently planned to occur in the near future. The earliest alteration to the Pattern Warehouse occurred about 1950, following the redesign of the building's first floor loading platform
Apparently, the wooden platform originally designed and constructed along the building's northeast and northwest walls was unsuitable and was completely replaced by a reinforced concrete platform.

Concurrent with the reconstruction of the loading dock, the original wooden steps and handrails at the ends of the loading dock were replaced with concrete steps and welded pipe handrails. Following the 1950 reconstruction of the loading dock, another phase of alteration occurred in 1955-56 when plans were made to provide an air-conditioned office within the northeast corner of the building's first floor and a toilet facility adjacent to the rear central service bay.

It is likely that the first floor was partitioned soon after the third phase of alteration to the Pattern Warehouse in 1980-81, , which planned for compartmentalized storage areas across most rear bays of the second floor. Evidence for the partitioning of the first floor at that time consists primarily of a drawing done in 1986 which shows a partition wall in the northeast corner of the first floor that extends beyond the limits of the 1955-56 office space. A circa 1981 partitioning date for the ground floor is further supported by the similarity of construction between the lower level partition walls and those erected at that time on the second floor.

Partitioning of both the upper and lower floors in 1980-81 left much of the building's internal space open as originally designed. In conjunction with the partitioning work, closure and insulation of many rear window bays also occurred to facilitate temperature and humidity control by means of window-mounted air conditioniong-heat pumps. The provision of temperature and humidity controlled areas also necessitated an upgrading of the building's electrical service. It is notable that the 1980-81 drawings

show a pair of doors in the rear service bay which are similar in appearance to those depicted in the original 1943 working drawings.

Shortly after the 1980-81 alterations, a fourth phase of alteration was planned in 1986 to provide an EOC in the north quadrant of the second floor. Generally this phase of alteration required provisions for electronic communications and temporary occupation of the building during severe hurricane threats. Meeting the needs of the EOC required further upgrade and expansion the building's electrical service, accommodation of an independent electrical generation system, addition of suspended acoustical ceilings and insulated gypsum board wall surfaces in the new office, dorm and work areas, creation of men's and women's shower and toilet facilities, weatherproofing of the tile wall panels at the EOC, and extensive repair of the roof.

Apparently all original doors had been replaced by metal overhead doors prior to 1986, although no specification for their removal or replacement appears in the prior working drawings. Other alterations completed as a result of the 1986 designs included the addition of a metal staircase to provide access to the second floor loading platform on the building's northeast side; the addition of exterior passage doors into the EOC from locations on the second floor loading platform, at the first floor loading platform near the west corner, and at the rear wall of the first floor near the rear service door; and the addition of a landing to the base of the stair in the southwest corner of the building. The creation of the EOC left open only three original storage bays and the stairwell bay in the southeast corner of the second

floor. By the time of recordation by the HABS documentation team, all but one bay of the second story storage bays had also been enclosed by partition walls.

Through the course of these four phases of alteration, all but the southeast end facade of the building have been affected by the closure of original window bays, removal of original doors and introduction of non-original materials, equipment and fixtures. Aside from the loss of all original doors, it is notable that none of the originally specified ball-and-socket type hand-railings remain in the building. All existing handrails are of welded steel pipe construction, although no physical evidence was observed to indicate that the handrails had ever been removed or replaced. It is also notable that a portion of the originally specified chain railing at the second story loading platform was observed laying in the second floor hallway. The existing railing at the second story loading platform had clearly been replaced by a railing of the same welded tubular steel type as those observed at all other stairways in the building.

## HISTORICAL CONTEXT

In the broadest sense, the development of the Pattern Warehouse at the Galveston District-COE's Fort Point Boat Yard District relates to the COE's long-standing responsibility, as a civil engineering branch of the U.S. Army, for the development and maintenance of navigable inland and coastal waterways. That responsibility within the southwestern portion of the U.S. extends back to 1873 when the first surveys of the Texas and Louisiana coastline were authorized by the U.S. Congress and carried out by the Galveston Engineers. Those surveys formed the basis for the first plan to connect the

Mississippi River to the Rio Grande by means of a series of navigation cuts between existing natural rivers and bays along the coast. Ultimately that plan was realized, after many subsequent years of planning and dredging, with the opening of the Gulf Intracoastal Waterway in 1949 (Alperin 1977).

Before that accomplishment was fully achieved, the erection of the Pattern Warehouse occurred at a time when the exigencies of World War II provided additional impetus and funding for Galveston District COE's completion and expansion of the intracoastal waterway (Alperin 1977). Although not actually part of Galveston District COE's military mission, the navigable waterway system was vital to the movement of men and material involved in the wartime period. Included in the scope of Galveston District COE's navigation work at the time was the design and construction of floodgates and locks at the Brazos and Colorado rivers, for which machinery patterns are still stored in the Pattern Warehouse.

Located strategically at the head of the best natural deepwater port on the Texas coast, Fort Point had long provided an ideal vantage point for the Galveston District COE to operate a complete shipyard for servicing and repairing dredges used across the Galveston District. Referred to as the Fort Point District Boatyard, a 1947 site map of the Fort Point District Boat Yard (see Field Notes) reflects the extent and arrangement of buildings and facilities which existed there just after the end of World War II. Notable for its size and remote location within shipyard, the Pattern Warehouse was probably the last major building erected within the shipyard until the COE erected a major office building in about 1990.

Today, the Pattern Warehouse is one of last buildings remaining from the World War II period of the shipyard's operation. In the decades following World War II, Galveston District COE's active involvement in ownership, operation and repair of ships gradually decreased until the early 1980s when the last dredge and the remainder of the parts and patterns warehoused were transferred to other COE districts across the country (Wittig 1994). With the exception of the Pattern Warehouse and the adjacent military-owned garage, only the boat house, the northern dock and a group of buildings comprising the U.S. Coast Guard Station still exist from the World War II period. All other industrial buildings, typically austere metal-clad industrial plant buildings, were demolished after the Galveston District COE ceased conducting its own dredging and shipyard activities.

## II. ARCHITECTURAL INFORMATION

### GENERAL STATEMENT

The Fort Point District Boat Yard, Pattern Warehouse is one of very few buildings remaining at Fort Point to reflect the architectural ad engineering qualities of World War II era industrial construction designed by the U.S. Army Corps of Engineers. Two stories in height and rigidly built of steel-reinforced concrete, the Pattern Warehouse was designed to carry heavy loads associated with storage of maritime industrial machinery patterns and handling equipment, and to withstand exposure to severe forces of water and wind that can occur at the extreme east end of Galveston Island. Because of its durability and utility for sheltering plant materiel and personnel, the Pattern Warehouse has been readily adapted to serve the COE long after the disestablishment of the industrial shipyard that formerly existed at this location. The Pattern Warehouse remains in good condition structurally, despite problems with water infiltration through the original wooden sash windows, roof and tile panels. Although alterations in the past, and those which are currently planned, detract from the building's continued architectural appreciation, the Pattern Warehouse will likely retain structural and functional integrity for many decades to come.

DESCRIPTION OF EXTERIOR

The exterior of the Pattern Warehouse is organized into a repetitive system of 20′ wide bays that are divided by an exposed skeletal frame of plain, unpainted concrete. The front (northeast) and rear (southwest) facades are divided into eleven such bays to achieve an overall length of 220′[1]. The end walls are similarly divided into three bays of the same basic dimensions to achieve an overall width of 60′ to which the main loading dock adds an additional 9′-10" in width. All exterior walls rise two full stories above the elevated loading dock and are surmounted by a parapet. From a grade that is approximately level across the building site, the average height of the building to the top of the parapet is 26′-4", except where a low pediment rises an additional 3′-1" over the front-center bay (northeast facade). The elevation of the loading dock is typically 3′ above grade. The grade elevation appears to be very close to that originally depicted on the 1943 working drawings, as evidenced by the building's actual height, the presence of a concrete slab at grade dating to the building's original period of service and evidence of an abandoned railway siding that formerly provided transportation linkage between the warehouse and the remainder of the shipyard complex.

Foundation materials consist steel-reinforced concrete cast into three identical types of pilings typically 32′ in length which were arranged into three types of multi-pile groupings, depending upon their placement beneath the building's side walls, interior columns or corners. In the working drawings these

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[1] This overall building length reflects an increase of 40′ specified in the original 1943 working drawings, and excludes the additional width of the northwest end wall loading dock and stair.

three different piling arrangements are specified according to three corresponding types of steel-reinforced concrete caps. Type A caps bear on a rectangular arrangement of six pilings and serve to support the exterior side and end walls of the building via a concrete footing (below grade) and curtain wall that rises above grade to create a low crawl space beneath the first floor. Type C caps are similar except that they bear on a square arrangement of four pilings and are positioned to support the corners of the building. Type B caps bear on a square arrangement of nine pilings and are each positioned to support an internal column. The type B cap and piling assemblies extend above grade within the crawl space below the first floor. A fourth type of piling supported a horizontal concrete beam to support the original wooden loading platform at the first floor level. This foundation for the perimeter of the loading dock was incorporated into an 8" concrete bulkhead that served as well to contain compacted sand fill upon which the new concrete platform was poured in about 1950.

The buildings walls are constructed of a load-bearing, steel-reinforced concrete framework 9-1/4" thick. Horizontal concrete beams were formed where portions of the walls were poured integrally with the floor and roof slabs to span between exterior columns. At the first and second floor levels, the horizontal beams rise above the level of the floor slab to create a low curb (6-3/4" above the finished floor level). Except for the central bay on the northeast front facade, the beams spanning first floor doorways feature curbs that are poured an additional 1" higher than the curbs spanning all other bays. It is apparent that the forms for casting the concrete framework were lined with yellow pine lumber (typically 5-3/4" wide), as evidenced by the surface texture and wood-grain pattern still apparent on all wall and ceiling surfaces.

Within the exposed skeletal framework, a slightly recessed panel of hollow unit masonry tiles, each unit measuring 5" x 8" x 12", were laid in a common bond pattern as infilling below the fenestration. The base of each tile panel is locked into the concrete framework by a keyway formed into the top of the supporting curb. Forming a cap across the top of each tile panel is a concrete sill member that is grooved on the exterior undersurface to form a drip-edge. The unit masonry tiles are buff-yellow in color and feature a coarsely textured, vertically striated surface.

Architectural details incorporated into the concrete framework include a low, stepped pediment over the central front bay (northeast facade) and faceted surfaces at the parapet corners. These corner facets at the parapet level focus downward into a tapered chamfer that extends from the parapet to the level of the first floor. A shallow recessed groove is also formed across the front surface of the parapet to create a shadow line suggestive of an entablature extending between the principal corner columns and the pedimented central bay on the northeast (front) facade. The same parapet detail is used on the rear of the building, extending uninterrupted from corner to corner.

The large service doors on the northeast (front), northwest (side) and southwest (rear) walls are emphasized by a broad surrounding panel of concrete, thickened to integrate with the adjacent exterior columns. Each doorway surround spans the entire bay in which it is located and features broad bevels forming a recess into which the doorway openings are set. As indicated above, the secondary service doors located on the front, side and rear walls are emphasized by a 1" vertical extension of the drainage curb at the second floor level. All accessible edges of the concrete frame are also chamfered.

Integrated with the rigid concrete framework of the building are the first floor, second floor and roof level deck slabs. These slabs vary in thickness from 9" (first floor) to 7-1/2" (second floor) to 6" (roof), except where the thickness is reduced to form an internal gutter system just inside each exterior wall. The floor and roof slabs are supported by two rows of internal columns placed according to a 20' grid system that corresponds with the exterior columns and bays. The internal columns are circular in cross-section (1'-8" first floor column diameter; 1'-0" second floor column diameter), and are notable for their flared "mushroom" capitols (4'-6" maximum diameter). Where the flared portion of each capitol terminates at a maximum diameter of 4'-6", it rises an additional 1-1/2" before spreading to form an 8'-6" square concrete cap or pad (3-1/2" thick at second floor level and 3" thick at the roof deck).

This system of a flared capitol beneath a thickened concrete pad is used as well atop the external columns where they support the edges of the second floor and roof level decks. The columns and capitols along the external walls are square or rectangular in cross-section rather than round. A notable element of the roof deck is a similar thickening of the concrete to a beam supporting an overhead monorail system used to transport heavy objects within the second floor space.

Reinforcement steel in the principal corners of the building range from eight 1" diameter vertical bars with 1/2" horizontal ties below the first floor slab to 3/4" diameter vertical bars with 1/4" horizontal ties above the first floor slab. In general the building is heavily reinforced in order to support the heavy industrial machinery patterns, parts and handling equipment, as well as to withstand the occasionally

extreme forces of wind and water which can occur at the building's exposed site on the east end of Galveston Island.

Briefly referred to above in the Physical History discussion, an extensive first floor loading dock spans the entire northeast (main front) facade of the building and continues across the entire northeast end. This dock is a simple concrete platform with no overhead shelter except where a much smaller second story loading platform provides some shelter over the central bay of the lower dock. Interestingly, no doorway was originally specified at the central bay of the first floor loading dock, and a revised doorway planned for this location in the 1950 reconstruction of the first floor loading dock was never completed. A railway siding which originally paralleled the northeast dock has been abandoned and is no longer visible except where it still remains evident embedded in the paved roadway passing the north corner of the building.

The foundation for the first floor loading dock, as described above, incorporates the original concrete pier and beam foundation of the original wooden dock within a concrete bulkhead. The bulkhead serves to contain compacted sand upon which the main loading dock was rebuilt according to the 1950 platform reconstruction plans. The upper edge of the platform has attached a heavy wooden bumper that was also reconstructed in 1950. The original wooden hand railings attached to the stairs were replaced with welded steel handrails attached to the stair treads during the 1950 platform reconstruction. Access onto the first floor loading dock has always been by means of stairs wide enough for passage of one person. The surviving loading dock stair locations are near the corners of the

northwest end wall loading dock. One original stair location at the southeast end of the main (northeast) loading dock no longer exists, having been omitted during the 1950 platform reconstruction plans.

A second story loading platform is located centrally on the northeast (main front) facade of the building and provides the only access for large machinery and parts into the second story storage space. This loading dock was probably poured integrally with the second floor platform in 1943. The loading dock platform remains largely unaltered from its original construction, although its associated door, chain railing and overhead I-beam monorail have been removed. Since 1986 a set of metal stairs, a metal handrail, a metal overhead door and a metal passage door have been provided for improved access, security and weather resistance. The exterior dimensions of the dock, excluding the adjoining metal landing and stair added in 1986, are consistent with the 1943 specifications (21'-11" wide x 10'-3" deep). The platform is carried on a pair of simple round concrete columns, each of which is 1'-6" in diameter and penetrates through the first floor dock to bear upon a Type C concrete cap and four concrete pilings, like those used beneath the exterior corners of the main building.

Since the 1986 plans for creation of the EOC, a small wooden porch with steps has been added to facilitate pedestrian access through the main rear doorway centered on the southwest facade of the building.

Originally the building's openings were organized in a strictly symmetrical manner to provide maximum lighting and accessibility for movement of industrial equipment and storage of heavy machinery

patterns. The principal service doors through which such equipment and material were moved are located on the northeast (main front) facade of the building at the first and second floor loading platforms. At the first floor level, two major service doors are positioned three bays equilaterally from the central bay. As noted above, the central bay of the first floor loading platform has always been filled with a clay tile panel instead of a service door which might be expected at that location. A third major service door is located at the central bay of the northeast facade, but it is located at the level of the second floor loading platform. Presumably this arrangement of openings facilitated maximum movement of men, equipment and material from the railway siding into the entire building during periods of intense activity. Access into the central portion of the first floor was provided instead through a central service bay on the rear (southwest) facade of the building.

Since 1986 all original wooden frame-and-panel doors have been replaced by metal overhead doors, and several small metal passage doors have been added at the second floor loading platform, at the end wall loading dock and at the rear wall. The only other type of doorway is a small access door leading to the crawlspace beneath the first floor, two of which are located at the base of the southeast end wall near the corners. Another is located near the central service bay of southwest (rear) facade. These access doors are of simple wooden frame (cypress was originally specified) construction with a hardware cloth panel. These access doors extend slightly below grade and are set within an shallow excavated area lined with concrete curbs.

While the northeast facade served as the main one for purposes of conveying machinery patterns into and out of the building, the northwest end wall served as the primary entrance through which personnel entered and exited the building. Accordingly, the first floor of this facade features a central doorway with appropriate signage marking the name and number of the building. Additional doors have been provided since 1986 at the rear wall, first floor and adjacent to the second floor loading dock and service bay to improve access into the compartmentalized storage areas and the EOC.

The building's fenestration consists of three basic types of wooden windows that span each bay of the building's first and second floors. These banks or bays of windows are separated from each other only by the exposed skeletal frame of the building which divides one bay from another. Within each bay the window assembly is the uppermost architectural element infilling the building framework, and is supported on a concrete sill that rests in turn on a unit masonry tile panel.

The window type used most frequently in the building features an overall arrangement of forty-eight individual glass lights (three lights vertical and sixteen lights horizontal). The overall array of lights is divided into a tripartite configuration with two pairs of pivoted six-light sashes, each pair of pivoted sashes flanking a central bank of fixed lights (3 lights vertically and four lights horizontally) (see Photo-Data, photo 13). Each individual pivoted sash is placed over a fixed horizontal row of three lights that corresponds in width to the width of the pivoted sash. This particular type of combination casement window with four pivoted sashes occurs primarily across the northeast (main front) and southwest (rear) facades, except at the corner bays where a second type of window occurs. The four-sash window type

also occurs centrally on the southeast end wall and probably would have been used over the central entrance of the northwest end wall, where the original window is now occluded.

The second most frequently used type of window used in the building is similar to the type described above, except that its width has been reduced by one vertical column of lights to accommodate the increased horizontal dimension of the building's massive corner columns. Thus the overall array of lights includes three lights vertically and fifteen lights horizontally. Within this overall array of lights is a tripartite arrangement of three pivoted sashes (see Photo-Data, photo 14). The central pivoted sash is four lights wide and three lights tall, whereas the two lateral sashes are each three lights wide and two lights tall. Below and beside each pivoted sashes are fixed lights. This second type of window was used primarily at the corner bays of the building except in the northwest and southeast corners where internal stairways preclude the operation of sashes.

At the locations affected by the internal stairways, a third type of window is used, which is a fixed-light casement window consisting of three lights vertically and twelve lights horizontally. The window is also divided into a tripartite arrangement of three adjoining panels (see Photo-Data, photo 15). Each of the lateral panels contains with three lights vertically and five lights horizontally, whereas the center panel is only four lights wide. In general, the southeast end wall of the building (see Photo-Data, photo 12) retains a complete and unaltered array of all three types of windows, and thus is the facade retaining the greatest degree of historic architectural integrity.

The roof of the building is generally flat in appearance as a result of the low parapet that surmounts all exterior walls. Along the edge of the northeast parapet are a series of communications antennae linked to the EOC. The original construction of the roof, as verified from subsequent building alteration plans, consists of a concrete slab covered with a layer of gypsum insulation (maximum thickness 7" along the long axis centerline of the building), metal flashings and built-up layers of gravel and impervious roofing material. As originally designed, the thickness of the insulation layer diminished toward all edges of the roof, creating a low-pitched hip configuration. With the 1986 roof repairs, the roof configuration was changed to a low gable configuration that drained primarily to the northeast and southwest walls.

The parapet around the edge of the roof has a concrete cant at its base to create a shallow channel or gutter for channeling rainwater toward four roof drains, one at each corner, that are set into the roof and penetrate the roof slab below. Water channeled into the drains is transferred into the building's original plumbing system. Other than the four corner drains, the roof is penetrated by two plumbing vents and a series of small diameter vent pipes to facilitate removal of water vapor trapped within the roof itself.

Exterior fixtures and hardware on the building include original storm-proof electric lamps flanking exterior doorways. Some of these original fixtures are still in place and functional. Access to the roof is provided by a pair of exterior wall mounted ladders located one on each end wall near the north and south corners of the building. Welded metal pipe handrails are also provided at the loading dock stairs

and around the second story loading platform. An I-beam monorail formerly extending over the second story loading platform has been removed.

INTERIOR DESCRIPTION

Each floor of the building was originally divided internally into a simple grid of open bays that corresponded with the building's external organization, three bays in width and eleven bays in length. The internal system of bays was organized into two rows of external bays with a central hallway that extends the length of the building. The divisions between the front and rear wall storage bays and the central hallway are defined by two rows of freestanding columns aligned parallel with the exterior walls of the building. On each floor the storage bays were assigned code numbers 1 through 22 beginning at the west corner of the building and proceeding along the southwest (rear) wall, and then resuming with bay number 12 at the north corner of the building and completing the sequence with bay 22 at the east corner of the building.

As a result of periodic efforts since 1956 to subdivide the building into compartmentalized storage, work, living and mechanical spaces, the building's original interior plan has been substantially altered, leaving open only the central hallway and individual storage and passage bays on each floor (see Existing Conditions Floor Plan illustration in Field Notes). The bays located in the east and west corners contain the stairways leading from one floor to the other. Handrails at the stairs are of welded steel pipe, and probably replace original ball-and-socket type handrails specified in the original 1943 working

drawings. A 180 degree landing was added to the base of the stairway in the west corner of the building during the 1986 enclosure of this stairwell.

All interior floor surfaces are of smooth finished concrete, typically with no paint or ornamentation. All original wall surfaces are plain unfinished concrete or hollow masonry units, except where plastered and painted in the west stairway bay. All accessible corners and edges of the original interior wall surfaces are chamfered. Original ceilings, like the walls, are unfinished concrete that retains the pattern and texture of lumber used in the concrete forms, except where obscured after 1980-81 by sprayed acoustical texture or suspended acoustical ceiling tiles.

Partition walls constructed between 1956 and 1992 are typically of standard dimensional 2" x 4" lumber framing attached to the exterior walls and interior columns. The partition wall surfaces are usually either plywood or gypsum board, and are either painted or unpainted, except where selected partition walls were covered with screen wire mesh. The 1956 partitioning of an office space in the north corner of the first floor did include installation of large plate glass window panels into an otherwise conventional lumber and plywood partition wall.

All door surrounds are plain unfinished concrete, except for conventional modern trim around doorways added during the 1986 EOC alterations.

The interior aspect of the windows feature no ornamental trim, although the remaining original window lights are notable for their transparent blue tint. All subsequent replacement window lights are of conventional clear glass. The pivoting sash windows can be held open by a simple suspended chain and fastener system attached to the window frame and sash.

There are no decorative features or trim in the building's interior. The most notable hardware item still remaining from the building's original period of construction and use is a series of steel suspension brackets for supporting the overhead monorail that formerly existed in the second floor space. The monorail system begins at the second floor loading platform and extends inward to the center of the second floor hallway and there branches in two, with the branches extending to the last set of bays inside the building's end walls. It is unclear when the monorail system was dismantled, although it probably occurred with the discontinuance of storage for large machinery patterns in the 1980s.

In its original condition, the building did not include any mechanical equipment for heating, cooling or ventilation. However, by 1956 plans for creation of an office space in the north corner of the first floor included the first of many window-mounted air conditioning units that would eventually be installed in selected bays on both floors of the building. Beginning with the 1980-81 alteration plans, heat pumps were installed rather than conventional A/C units. With the design of the EOC in the north corner of the second floor in 1986, exhaust ventilation systems for bathroom and toilet facilities as well as intake and exhaust vents for an electrical generator were also added to the building.

A single sheet of the original working drawings indicates the variety of electrical lighting fixtures which were specified and probably installed in the building. Although of poor quality, this drawing verifies that several remaining storm-proof lamps located outside of the main service doors are original fixtures that have survived since the period of original construction. The only other original lighting fixture observed during the documentation effort features a concial metal shade that appears to correspond to an originally specified Dome or Glass Reflector lamp. This light fixture is located in Bay 19, the last open bay remaining on the second floor (see Photo-Data, photo 18).

The original plumbing system of the building was limited to a storm-water collection and drainage system that included internal downspouts extending from the roof through both floors. This drainage system is still functional, with a downspout located inside each corner of the building. Associated with each downspout where it penetrates the floors is an adjacent floor drain to gather water channeled along the internal gutter system (see Photo-Data, photo 20).

The only remaining original items stored within the building are a collection of heavy wooden crates containing wooden machinery patterns for the Colorado and Brazos River Flood Gates which were designed and built by the Galveston District-COE concurrently with the design and construction of the building (see Photo-Data, photo 18). These crates are stored within Bay 19 on the second floor of the building, and are still considered necessary elements of the plant facilities.

The character of the original industrial shipyard site associated with the Pattern Warehouse must have been remarkably different than the site appears today. At the time of this recordation, the site included only one industrial building dating to the period of the warehouse's construction and use as originally designed; this building is an adjacent metal-clad garage that appears on the original 1943 Location Plan for the warehouse. At the time of its construction, the Pattern Warehouse was one of many industrial buildings comprising the Fort Point District Boat Yard, all of which were positioned along a system of railway tracks according to the shipyard's industrial process needs. The railway transportation system linked the warehouse with both shipyard docks, and ultimately linked the entire shipyard with the Port of Galveston via a branch line that entered the shipyard near the original front gateway.

It seems unlikely that there would have been many, if any, plantings or other landscape treatments for aesthetic purposes, with the possible exception of the area around the Fort Point Area Office Building. The office area was accessed by a circular drive and faced toward a flagpole. Otherwise the entire shipyard area appears to have been austere, with ground surfaces either of natural coastal grass or compacted shell. There were no outbuildings specifically associated with the Pattern Warehouse, which was itself an outbuilding within the overall Fort Point District Boat Yard.

## III. SOURCES OF INFORMATION

At the time of this recordation, the building itself served as the most readily available source of information for examining and photographically recording its architectural character and construction. Aside from the building itself, reproductions of original working architectural drawings comprise the most significant source of information about the Pattern Warehouse's construction characteristics. Although somewhat incomplete, the available set of original and subsequent drawings still used by the Galveston District COE engineers is relatively extensive, including more than 76 individual sheets ranging in time from 1943 to 1993, and serves as an invaluable source of insight into the building's original character and details of construction. The Galveston District COE's collection of drawings consists primarily of working bluelines, with some microfilm copies of original drawings, collected by the Engineering Division for purposes of planning ongoing modifications. This source of data was relied upon most extensively as a basis for documenting the building's existing conditions and understanding its many phases of alteration.

### EARLY VIEWS

No early photographic views of the Pattern Warehouse during its construction or period of original service are known to exist in either the Galveston COE's own historical photo files, or those of the principal archival repositories for federal governmental agencies. Photographic collections still maintained by the Galveston District COE and the Fort Worth Branch of the National Archives both

contain significant collections of Galveston District COE project photos, but include virtually nothing related to the Fort Point plant itself. Although the complete lack of historic photography of the building seems unlikely, the most plausible factor contributing to this situation has been the periodic destruction and transference of old files and photos as they were deemed out-of-date and insignificant. Other possible sources of photos investigated during the historical research phase include indices and collections held by the Rosenberg Library of Galveston, the Galveston Daily News, the Moore Memorial Library of Texas City, Texas, and the Houston Metropolitan Research Center.

ORAL INFORMANTS

A number of knowledgeable informants within the COE itself were very important sources of contextual information concerning the layout and operation of the Fort Point shipyard, the Galveston District COE's operational missions and accomplishments, as well as the locations of historical records not yet transferred to federal records centers for curation. Most notably, information identifying the original building contractor, date of contracting, period of performance and construction cost were all obtained through a lead provided by Mr. John Brigance, former Chief of Contracting for the Galveston District COE. Mr. Brigance is currently assigned to the Fort Worth District COE. Mr. Ernie Wittig, Engineer, of the Galveston District COE for more than forty years, provided particular insight into plant operations and organization since the period of World War II. Mrs. Carol Nelson, the current Galveston District COE Records Manager, also provided information concerning locations of little known historic project and contracting files.

## HISTORICAL RECORDS AND ACCOUNTS

Very little written information is known to exist regarding the Pattern Warehouse itself, aside from a single line-item entry in the Galveston District's historic contracting account ledgers. Unfortunately, all original contract and correspondence files concerning the building appear to be irretrievably lost. The most comprehensive historical synthesis of contextual information concerning the Galveston District COE is Lynn Alperin's 1977 historical publication, *Custodians of the Coast*. Providing no additional detail or insight beyond Ms. Alperin's publication, but providing an early view of the Fort Point shipyard (prior to the construction of the Pattern Warehouse) is a special Galveston Daily News article dated June 15, 1929 and entitled "United States Engineering Department Maintains Extensive Repair Plant at Fort Point to Keep Dredges of the Texas District in Good Order" (on file at the Rosenberg Library, Galveston, Texas). Although of poor quality for reproduction, the news photo appearing in that article is notable for its depiction of the extensive array of industrial buildings which comprised the Fort Point Boat Yard in the period prior to World War II.

## POSSIBLE ADDITIONAL SOURCES

A potentially important collection of maps and drawings which could provide insight into details of the Fort Point shipyard's development over time is available at the Fort Worth branch of the National Archives, more specifically referred to as the Federal Records Center, Southwest Region (FRC-SWR) in Fort Worth, Texas. Consisting of hundreds of original and duplicate maps and engineering drawings,

the historical research potential of this collection is as yet unexplored because it is not adequately indexed to facilitate retrieval of specific items. Other significant collections of original and duplicate records and photos pertaining to the U.S. Army Corps of Engineers, but not specific to the Pattern Warehouse building, also exist at FRC-SWR and at the Galveston District COE headquarters building, Records Management Division.

## SUPPLEMENTARY MATERIALS

Supplementary materials documenting original (1944) and existing (1994) conditions of the Pattern Warehouse include measured drawings and photographic data that were prepared and compiled by the HABS documentation team. The measured drawings depict historic building conditions based on details identified from the original working drawings of the building. The photographic data include reproductions of all available working drawings prepared by the Galveston District COE engineers between 1943 and 1981. In addition to the photo-data and measured drawings, a list has been compiled of additional working drawings that are on file at the Galveston District COE, Engineering Division. These additional architectural and engineering drawings identify changes to the building, either completed or planned since 1986, and are provided to facilitate the work of future researchers. Original field records and notes produced during the HABS documentation effort are also compiled separately from the historic building documentation described above.

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## IV. PROJECT STATEMENT

This HABS/HAER documentation of the Fort Point Boat Yard District, Pattern Warehouse has been sponsored by the Galveston District, Corps of Engineers as part of the Corps' ongoing responsibility for preservation and management of important cultural resources within their control. The documentation effort was deemed necessary in order to mitigate the effects of a building renovation program planned by the Corps. Coordination of the documentation effort has involved a range of preservation agencies and authorities, including the Advisory Council on Historic Preservation; the National Parks Service Rocky Mountain Regional Office; and the Texas Historical Commission.

The documentation effort was organized and conducted by Eugene R. Foster, Jr. of Espey, Huston & Associates, Inc., Austin, Texas with the assistance of David Watson, Architects of Galveston, Texas. Mr. Foster provided historical research, writing, and photographic services. Architects David Watson and Frank Connally conducted all phases of architectural measurement and drawing. The project was conducted in April and May 1994.

# APPENDIX A

## ADDITIONAL ARCHITECTURAL/ENGINEERING DRAWINGS

ADDITIONAL ARCHITECTURAL AND ENGINEERING DRAWINGS

| Drawing No. | Description | Date |
|---|---|---|
| A-4 | Emergency Operations Center, Elevations | May 1986 |
| A-5 | Emergency Operations Center, Building Sections | May 1986 |
| A-7 | Emergency Operations Center, Wall Sections | May 1986 |
| A-8 | Emergency Operations Center, Wall Sections and Stair Elevations & Details | May 1986 |
| A-10 | Emergency Operations Center, Reflected Ceiling Plan and Cabinet Elevations & Sections | May 1986 |
| A-11 | Emergency Operations Center, Plan Details | May 1986 |
| S-2 | Emergency Operations Center, Exterior Metal Stair Details | May 1986 |
| S-3 | Emergency Operations Center, Exterior and Interior Metal Stairs: Elevation, Sections and Details | May 1986 |
| E-1 | Emergency Operations Center, Electrical - Misc. Details | May 1986 |
| E-2 | Emergency Operations Center, Electrical Plan - 1st Floor | May 1986 |
| E-3 | Emergency Operations Center, Electrical Plan - 2nd Floor | May 1986 |
| M/E-1 | Emergency Operations Center, Mechanical/Electrical Details | May 1986 |
| M-1 | Emergency Operations Center, Plumbing Layout | May 1986 |

ADDITIONAL ARCHITECTURAL AND ENGINEERING DRAWINGS

| Drawing No. | Description | Date |
|---|---|---|
| M-2 | Emergency Operations Center, Plumbing Details | May 1986 |
| M-3 | Emergency Operations Center, Heating and Cooling System | May 1986 |
| M-4 | Emergency Operations Center, Generator Installation | May 1986 |
| SP-1 | Improvements to the District Annex (Building No. 2) Area Site Plan, Index to Drawings | September 1992 |
| C-1 | Improvements to the District Annex (Building No. 2) Topographic Survey | April 1992 |
| C-2 | Improvements to the District Annex (Building No. 2) Grading and Drainage | October 1993 |
| C-3 | Improvements to the District Annex (Building No. 2) Sections and Details | October 1993 |
| C-4 | Improvements to the District Annex (Building No. 2) Site Utilities Plan | April 1992 |
| A-1 | Improvements to the District Annex (Building No. 2) Demolition Plans | January 1992 |
| A-2 | Improvements to the District Annex (Building No. 2) Floor Plans | August 1991 |
| A-3 | Improvements to the District Annex (Building No. 2) Reflected Ceiling Plans | January 1992 |

ADDITIONAL ARCHITECTURAL AND ENGINEERING DRAWINGS

| Drawing No. | Description | Date |
|---|---|---|
| A-4 | Improvements to the District Annex (Building No. 2) Roof Plans & Details | April 1992 |
| A-5 | Improvements to the District Annex (Building No. 2) Building Elevations | April 1992 |
| A-6 | Improvements to the District Annex (Building No. 2) Sections and Details | August 1991 |
| A-7 | Improvements to the District Annex (Building No. 2) Schedules | August 1991 |
| A-8 | Improvements to the District Annex (Building No. 2) Details | August 1991 |
| A-9 | Improvements to the District Annex (Building No. 2) Toilet Plan and Miscellaneous Details | October 1993 |
| M-1 | Improvements to the District Annex (Building No. 2) Symbols & Abbreviations | February 1992 |
| M-2 | Improvements to the District Annex (Building No. 2) Mechanical and Plumbing Demolition Plans | February 1992 |
| M-3 | Improvements to the District Annex (Building No. 2) Floor Plans - HVAC | February 1992 |
| M-4 | Improvements to the District Annex (Building No. 2) H.V.A.C. Details | February 1992 |
| M-5 | Improvements to the District Annex (Building No. 2) Control Symbols & Abbreviations | October 1993 |

ADDITIONAL ARCHITECTURAL AND ENGINEERING DRAWINGS

| Drawing No. | Description | Date |
|---|---|---|
| M-6 | Improvements to the District Annex (Building No. 2) Control Diagrams | February 1992 |
| M-7 | Improvements to the District Annex (Building No. 2) Control Diagrams | February 1992 |
| M-8 | Improvements to the District Annex (Building No. 2) Control Diagrams | January 1992 |
| M-9 | Improvements to the District Annex (Building No. 2) Schedules | February 1992 |
| P-1 | Improvements to the District Annex (Building No. 2) Plumbing Floor Plans | February 1992 |
| P-2 | Improvements to the District Annex (Building No. 2) Riser Diagrams | February 1992 |
| EU-1 | Improvements to the District Annex (Building No. 2) Electrical Utilities Plan | April 1992 |
| EU-2 | Improvements to the District Annex (Building No. 2) Electrical Utilities Plan | April 1992 |
| E-1 | Improvements to the District Annex (Building No. 2) Electrical Demolition Plans | no date |
| E-2 | Improvements to the District Annex (Building No. 2) Electrical Floor Plans | February 1991 |

ADDITIONAL ARCHITECTURAL AND ENGINEERING DRAWINGS

| Drawing No. | Description | Date |
|---|---|---|
| E-3 | Improvements to the District Annex (Building No. 2) Riser Diagrams | February 1991 |
| E-4 | Improvements to the District Annex (Building No. 2) Lightning Protection Plans | February 1991 |
| E-5 | Improvements to the District Annex (Building No. 2) Panel Schedules | February 1991 |