

CAPE CANAVERAL AIR FORCE STATION,  
LAUNCH COMPLEX 39,  
HYPERGOL MAINTENANCE AND CHECKOUT AREA,  
HYPERGOL SUPPORT BUILDING  
John F. Kennedy Space Center  
Cape Canaveral  
Brevard County  
Florida

HAER No. FL 8-11-T-3

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
Department of the Interior  
100 Alabama St., SW  
Atlanta, GA 30303

HISTORIC AMERICAN ENGINEERING RECORD  
CAPE CANVERAL AIR FORCE STATION, LAUNCH COMPLEX 39  
HYPERGOL MAINTENANCE AND CHECKOUT AREA,  
(HMCA Complex)  
HYPERGOL SUPPORT BUILDING  
HAER No. FL-8-11-T-3

Location: John F. Kennedy Space Center, Industrial Area,  
Brevard County, Florida.

USGS Orsino, Florida, Quadrangle, Universal  
Transverse Mercator Coordinates: E 535125 3154203  
N Zone 17, NAD 1983

Date of Construction: 1964

Present Owner: National Aeronautics and Space Administration (NASA)

Present Use: Not in use

Significance: The Hypergol Support Building (M7-1061) is eligible to the National Register of Historic Places in the context of the U.S. Space Shuttle Program (SSP) (1969-2011) under Criterion A for its significant associations in the area of Space Exploration. Since it has achieved exceptional national significance in the last 50 years, Criteria Consideration G applies. The Hypergol Support Building's main function during the Space Shuttle era was to house computer remote control of the Forward Reaction Control System (FRCS) and Orbital Maneuvering System (OMS) pods located in the HMP North and HMP South buildings. In addition, the Hypergol Support Building housed other non-hazardous test operations of the HMCA Complex, including laboratory space, offices, a Self Contained Atmospheric Protective Ensemble (SCAPE) gear staging area, and shop space to process, clean, calibrate, and store spacecraft components.

Report Prepared By: New South Associates, Stone Mountain,  
Georgia

Date: March 13, 2013

Part I. HISTORICAL INFORMATION

List of Acronyms

CIF	Central Instrumentation Facility
EST	Environmental Systems Test Building
HAER	Historic American Engineering Record
He	Helium
HMCA	Hypergol Maintenance and Checkout Area
HMP	Hypergol Module Processing
KSC	Kennedy Space Center
LCC	Launch Control Center
LH <sub>2</sub>	Liquid Hydrogen
LO <sub>2</sub>	Liquid Oxygen
MMH	Monomethyl Hydrazine
NASA	National Aeronautics and Space Administration
GN <sub>2</sub>	Gaseous Nitrogen
N <sub>2</sub> O <sub>4</sub>	Nitrogen Tetroxide
O&C	Operations & Checkout
OMS	Orbital Maneuvering System
PRF	Parachute Refurbishment Facility
RCS	Reaction Control System
SCAPE	Self Contained Atmospheric Protective Ensemble
SSP	Space Shuttle Program
VAB	Vehicle Assembly Building

A. Physical History

1. Dates of Construction

1964

2. Architect/Engineer

Tampa Bay Engineering Company, St. Petersburg, Florida<sup>1</sup>

3. Builder/Contractor/Supplier

Unknown

4. Original Plan and Construction

When it was built in 1964, the Hypergol Support Building originally had a one-story rectangular floor plan and measured 51'-8" x 160'-0". The building had a reinforced concrete structure, concrete block walls, and a gently sloping built-up gable roof. The building had a central east-west corridor lined with a variety of support rooms, including offices, data processing rooms, two Reaction Control Systems (RCS) shops, two pre-installation acceptance laboratories, calibration/cleaning/quality assurance laboratory, general shop, and storage.<sup>2</sup>

5. Additions and Alterations

Immediately after its initial construction in 1964, the Hypergol Support Building received two additions. The first addition was a 50'-0" wide x 45'-0" long wing on the north elevation containing a laboratory, office/data processing room, and mechanical room.<sup>3</sup>

The second addition included a new wing on the south elevation and the adjacent construction of a new clean

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<sup>1</sup> Tampa Bay Engineering Company, "Fluid Test Complex, Fluid Test Support," construction drawings, March 5, 1963.

<sup>2</sup> Ibid.

<sup>3</sup> Tampa Bay Engineering Company, "Fluid Test Complex, Support Building Addition," construction drawings, February 14, 1964.

room on the interior. The new wing measured 32'-6" wide x 23'-0" long and contained an air handling room and mechanical room.<sup>4</sup>

In 1976, the Hypergol Support Building received changes to its floor plan, electrical, and mechanical systems. The original office and data processing room on the east end of the building was renovated into the current communications equipment room. Across the hall on the southeast corner of the building, the original storage, pre-installation acceptance, and production control rooms were joined into control rooms that operated the valves and other equipment in HMP North and HMP South. On the west end of the building, the original storage, laboratory, and office space was transformed into the life support areas, or SCAPE suit maintenance and storage areas. Additional rooms throughout the building were remodeled into new office or conference room spaces, and the entire building received new interior finish materials, electrical systems, and mechanical systems.<sup>5</sup>

The Hypergol Support Building received its third and final addition to its west elevation in 1985. The irregular L-shaped addition contained two payload control rooms, two engineering rooms, offices, and a mechanical room. It had insulated metal walls, a slightly pitched insulated metal roof, and a concrete foundation.<sup>6</sup>

## Part II. Structural/Design/Equipment Information

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<sup>4</sup> NASA, "MSC Fluid Test Complex, Support Building, Clean Room," construction drawings, August 19, 1964.

<sup>5</sup> Pan American Technical Services, Inc. "Fluid Test Complex, Modifications for Shuttle," construction drawings, January 2, 1976.

<sup>6</sup> Burns and Roe Industrial Services Corporation, "Addition to Building M7-1061 for Payload Control Rooms," construction drawings, September 3, 1985.

## A. General Statement

### 1. Character

The Hypergol Support Building is a one-story, concrete block building containing equipment that controls the hypergolic fuels processing activities in the adjacent HMP North and HMP South buildings. The building contains equipment control rooms, a video communications room, communication circuits rooms, a SCAPE suit storage room, SCAPE locker room, storage, and offices.

### 2. Condition of Fabric

The condition of the Hypergol Support Building's fabric is good. The building was regularly maintained throughout its lifespan.

### 3. Description of Interior and Exterior

The Hypergol Support Building is a one-story building with a concrete frame structure, painted 8" nominal concrete block walls, a reinforced concrete foundation, and a gently sloping gable built-up roof. The overall dimensions of the building are approximately 240' long (east-west) x 100' wide (north-south). The building has an irregular footprint that contains approximately 19,200 square feet.

There are four double-door pedestrian entrances on the original 1960s portion of the building, including one on the east elevation facing Avenue G, a second one on the north elevation facing 6<sup>th</sup> Street, and two on the south elevation. These entrances access the building's main interior corridors, but there are additional single pedestrian entrances throughout the building's exterior

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that enter into specific work areas. There are multiple single and double-door pedestrian entrances and oversized equipment entrances on the western payload control room annex.

There are few original windows remaining on the building. The original 1964 building had regularly spaced one-over-one metal frame windows on the north and south elevations, but subsequent additions and interior renovations either covered or enclosed them. Only four original windows remain on the south elevation. The 1964 addition on the north elevation features ribbons of translucent glass block windows on all three of its exterior elevations.

There is a metal communications tower next to the northeast corner of the building. The tower is connected to a cable tray that runs along the north elevation of the building and feeds data into the interior control and communications equipment rooms.

### Part III. Operations and Process

The Hypergol Support Building housed several non-hazardous activities that supported the overall function of the HMCA complex. During the Apollo era of the 1960s, the building housed laboratory, shop, and office space needed to process spacecraft components. These were component parts of hypergolic fuel systems that did not pose toxic or explosive hazards. The components entered the building through the original "production control" section, which was located where the operations control room is today. From there, the spacecraft components were delivered to the cleaning, quality assurance, inspection packaging, and storage areas. Items requiring calibration were calibrated after they were cleaned and inspected, and then they were packaged and stored.<sup>7</sup>

The 1976 modifications of the HMCA Complex removed the original control rooms from the second floors of HMP North and HMP South and moved those control room functions to the Hypergol Support Building. The new control room was located on the south side of the building in Room 105 with computer stations that control and monitor the FRCS and OMS valves and solenoids in HMP North and HMP South. Additional communications circuits were housed in Room 114, with video monitoring equipment in Room 110. The life support area of the building included Rooms 101 and 102 on the west end of the building. Room 101 contained the SCAPE suit maintenance and repair room, and Room 102 contained an employee locker room and changing area.

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<sup>7</sup> Pan American World Airways, Inc., "Analytical Report," 34.

Part IV. Sources of Information

A. Engineering Drawings and Plans

Burns and Roe Industrial Services Corp.

1985 "Industrial Area Addition to Building M7-1061 For  
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1976 "Fluid Test Complex, Modifications for Shuttle."  
Construction Drawings.

Tampa Bay Engineering Company

1963 "Fluid Test Complex, Fluid Test Support." Construction  
Drawings.

1964 "Fluid Test Complex, Support Building Addition."  
Construction Drawings.

National Aeronautics and Space Administration [NASA]

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Room." Construction Drawings.

U.S. Army Corps of Engineers

1964 "MSC Fluid Test Complex, Support Building Addition."  
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1964 "MSC Fluid Test Complex, Support Building, Clean  
Room." Construction Drawings.

B. Early Views

Kennedy Space Center. Photograph negative number LOC-63-  
7252, dated 1963. On file at Kennedy Space Center Archives.

Kennedy Space Center. Photograph negative number LOC-63-9100, dated 1963. On file at Kennedy Space Center Archives.

Kennedy Space Center. Photograph negative number 100-KSC-64C-2626, dated 1964. On file at Kennedy Space Center Archives.

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Kennedy Space Center. Photograph negative number 108-KSC-381C-1293-2, dated 1981. On file at Kennedy Space Center Archives.

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### C. Interviews

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2004 "Hypergol Maintenance Facility - North Area (HMP North) (M7-961), Kennedy Space Center, Florida, Solid Waste Management Unit (SWMU) Assessment Report, PRL #118 (Revision 0) [KSC-TA-7110]. J-BOSC Environmental Health and Services, Environmental Compliance and Public Health Section, Kennedy Space Center.

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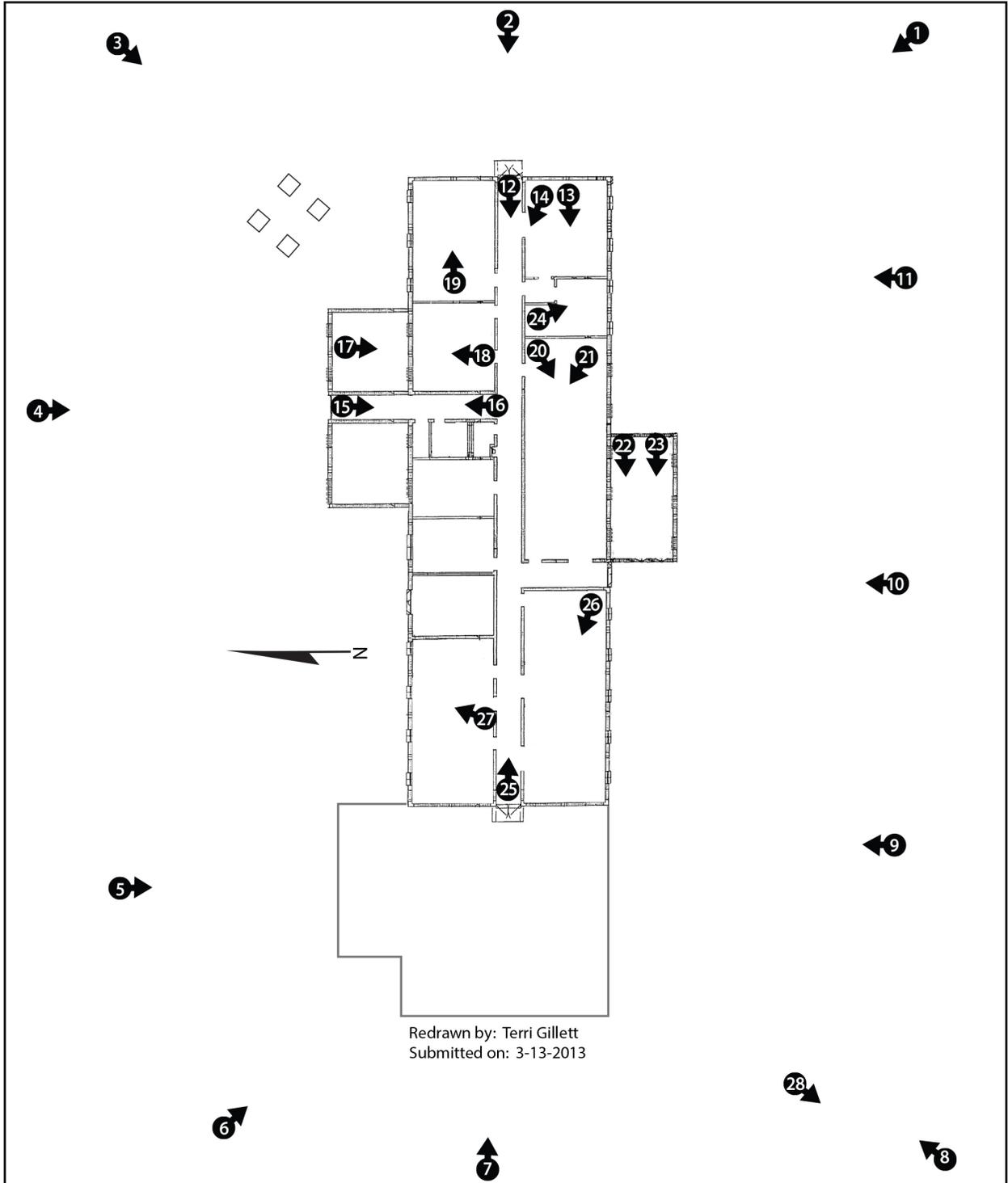


1981 photograph of an HMCA Complex technician in a SCAPE suit.  
(Courtesy KSC: Image 116-KSC-381C-1603-10)



1981 photograph of a technician conducting SCAPE suit repair operations in the HMCA Support Building. (Courtesy KSC: Image 108-KSC-381C-1293-2)

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HISTORIC AMERICAN ENGINEERING SURVEY

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David Diener, Photographer

April 2012

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FL-8-11-T-3-31 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; MARCH 5, 1963 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "FLUID TEST SUPPORT, SECTIONS & DETAILS"

FL-8-11-T-3-32 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; MARCH 5, 1963 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "FLUID TEST SUPPORT, FOUNDATION PLAN & DETAILS"

FL-8-11-T-3-33 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; MARCH 5, 1963 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "FLUID TEST SUPPORT, STRUCTURAL ROOF PLAN & DETAILS"

FL-8-11-T-3-34 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; MARCH 5, 1963 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "FLUID TEST SUPPORT, NITROGEN & HELIUM PIPING"

FL-8-11-T-3-35 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; MARCH 5, 1963 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "FLUID TEST SUPPORT, NORTH MECHANICAL ROOF, PIPING PLAN SECTIONS & DETAILS"

FL-8-11-T-3-36 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; FEBRUARY 24, 1964 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "FLUID TEST COMPLEX (SUPPORT BUILDING ADDITION) LOCATION PLAN & DRAINAGE INDEX"

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FL-8-11-T-3-38 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; FEBRUARY 24, 1964 BY TAMPA BAY ENGINEERING CO.; DRAWING IN POSSESSION OF KENNEDY

SPACE CENTER) "FLUID TEST SUPPORT, NORTH ELEVATION & DETAILS"

- FL-8-11-T-3-39 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; AUGUST 19, 1964 BY NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, LAUNCH OPERATIONS CENTER, COCOA BEACH, FL; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "MSC FLUID TEST COMPLEX, SUPPORT BUILDING, CLEAN ROOM, CIVIL"
- FL-8-11-T-3-40 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; AUGUST 19, 1964 BY NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, LAUNCH OPERATIONS CENTER, COCOA BEACH, FL; DRAWING IN POSSESSION OF KENNEDY SPACE CENTER) "MSC FLUID TEST COMPLEX, SUPPORT BUILDING, CLEAN ROOM, ARCHITECTURAL"
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- FL-8-11-T-3-43 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; OCTOBER 2, 1985 BY BURNS AND ROE INDUSTRIAL SERVICES CORP., COCOA BEACH, FL) "ADDITION TO BUILDING M7-1061 FOR PAYLOAD CONTROL ROOMS, FLOOR PLAN & ELEVATIONS"
- FL-8-11-T-3-44 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; OCTOBER 2, 1985 BY BURNS AND ROE INDUSTRIAL SERVICES CORP., COCOA BEACH, FL) "ADDITION TO BUILDING M7-1061 FOR PAYLOAD CONTROL ROOMS, REFLECTED CEIL. PLAN, ROOF PLAN"
- FL-8-11-T-3-45 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF SCANNED ORIGINAL; OCTOBER 2, 1985 BY BURNS AND ROE INDUSTRIAL SERVICES CORP., COCOA BEACH, FL) "ADDITION

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FL-8-11-T-3-46 PHOTOCOPY OF ENGINEERING DRAWINGS (8" X 10" PHOTO OF  
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FOUNDATION AND FIN. FLR. PLAN, SECTIONS AND DETAILS"



KODAK 100T MX



Kodak 100T MX





Kodak 100T MX



Kodak 100T MX



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KODAK 100T MX



KODAK 100TMY



Kodak 100T MX



Kodak 100T MX



PARKING  
IN 15 FT.  
BUILDING  
E LANE

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WARNING  
REMOVED SINCE 2002  
ONLY PERSONS AUTHORIZED  
BY THE FBI MAY ENTER  
LETTER - 65  
NUMBER - 65  
AFTER HOURS  
BEYOND THE POINT

DRINKS  
OKING  
THIS POINT

Area  
Entrance and  
Exit  
Persons Authorized  
to Proceed  
199





Kodak 100T MX



NO SMOKING



Kodak 100TMX







NO  
EXIT



KODAK 100TMAX





KODAK 100T MX















Kodak 100T MX

### ROOM FINISH SCHEDULE

AREA	FLOOR	WALLS	CEILING	BASE	REMARKS	AREA
OFFICE & DATA REDUCTION	VINYL ASB TILE	CONC. BLK OR GYP. BOARD	ACOUSTICAL TILE	VINYL	WOOD TRIM	2 @ 297 SQ FT. EACH
REACTION CONTROL SYSTEMS SHOP						2 @ 259 EACH
MECHANICAL ROOM	CONC.	CONC BLK	NONE	NONE		365
CONFERENCE ROOM	VINYL ASB TILE	CONC BLK OR GYP. BOARD	ACOUSTICAL TILE	VINYL		326
NASA OFFICE						333
TOILETS	CER TILE	CER TILE & GYP. BRD.	3/8" GYP. BOARD	4" TILE WAINSCOT		259
GENERAL SHOP	VINYL ASB TILE	CONC BLK OR GYP. BOARD	ACOUSTICAL TILE	VINYL		251
CORRIDOR						1441
STORAGE	SHEET VINYL		5/8" GYP. BOARD		WOOD TRIM - CLEAN RM.	2 @ 564 EA.
AIR LOCK						2 @ 49 EA.
PRE-INSTALLATION ACCEPTANCE						2 @ 287 EACH
LAB. EQUIP.						333
GAGE CALIBRATION						239
QUALITY ASSURANCE LAB						239
CLEANING						548
PRODUCTION CONTROL						234
JANITOR	CONC			WOOD		

### DOOR SCHEDULE

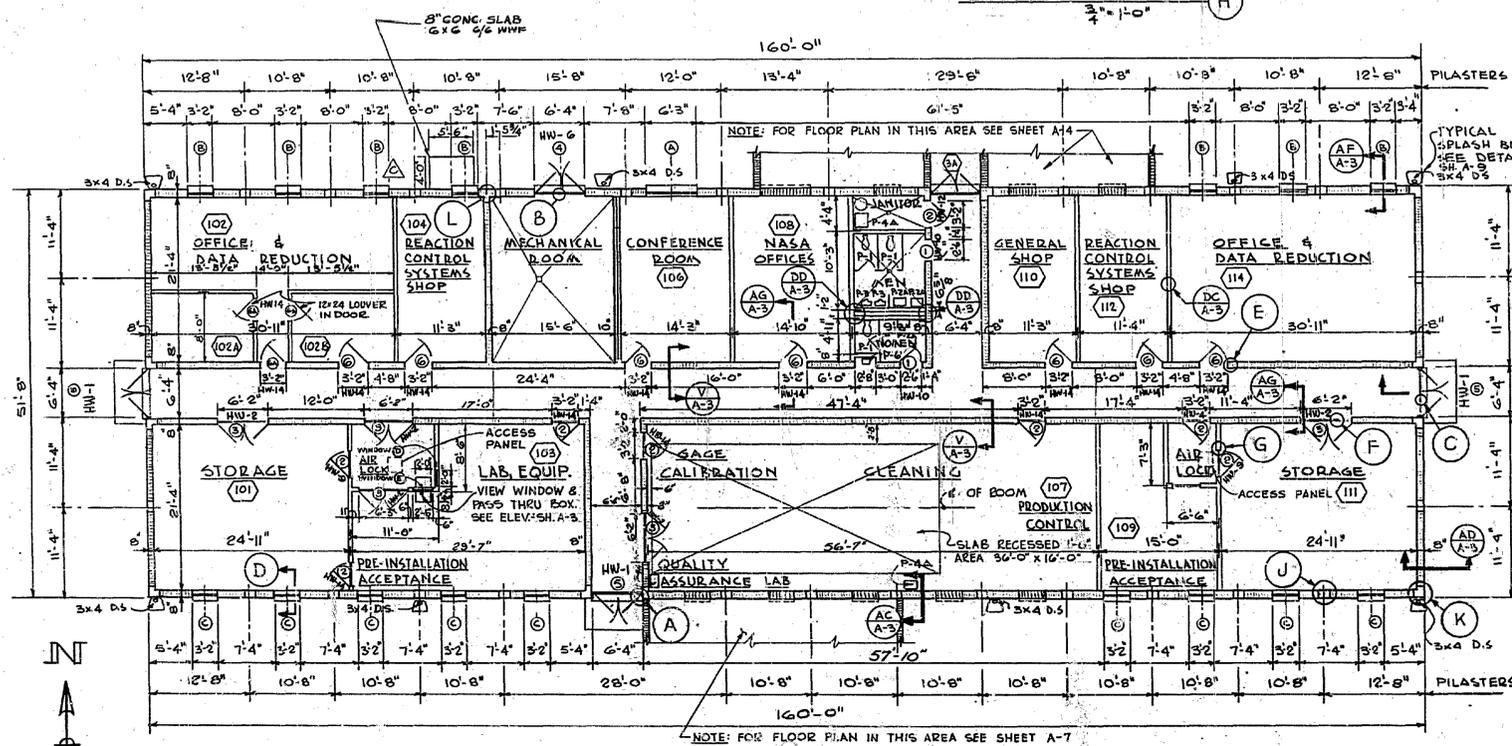
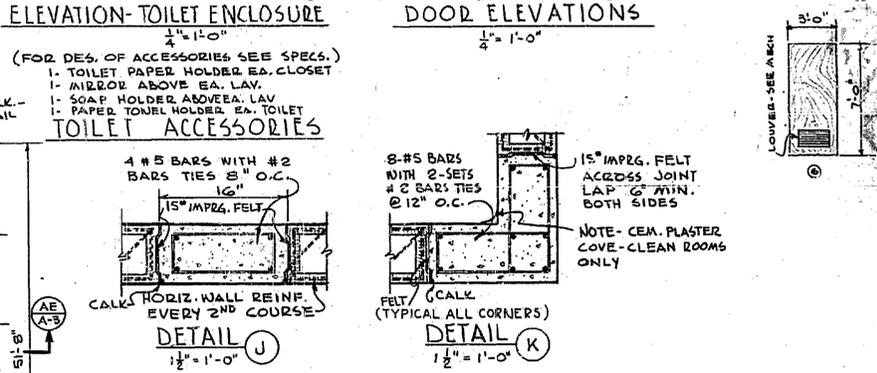
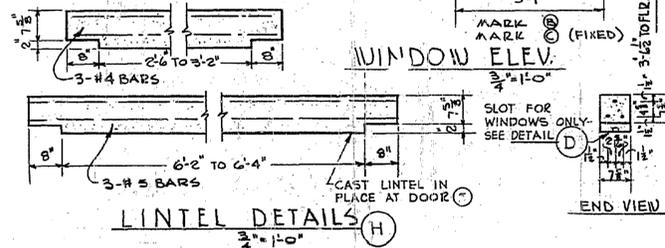
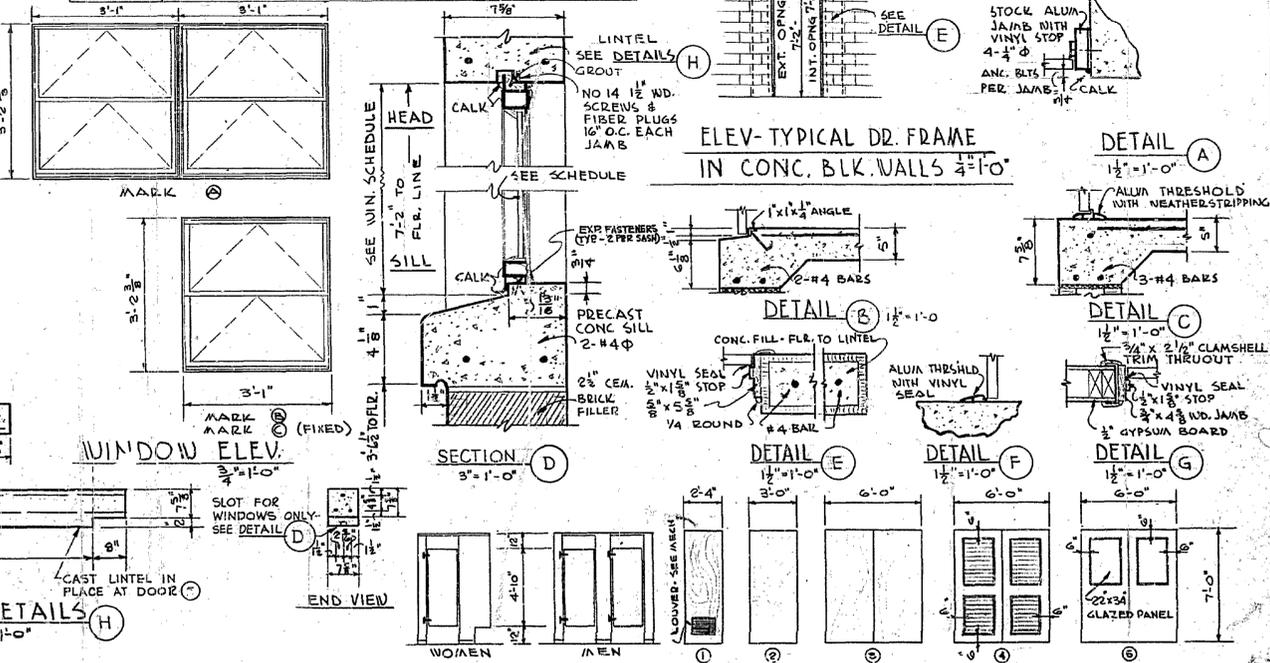
MARK	SIZE	TYPE	THRSH'D	CLOSER	REMARKS
①	24" x 7'-0" x 1 3/4"	FLUSH WD.	MARBLE	YES	LOUVERS - SEE MECH.
②	35" x 7'-0" x 1 3/4"		ALUM. WITH VINYL SEAL	YES, 1-ACTIVE LEAF	WEATHER STRIPPING SOUTH SIDE OF BLDG.
③	PR-35" x 7'-0" x 1 3/4"			NO	
④	PR-35" x 7'-0" x 1 3/4"	ALUM. HOLLOW CORE	NONE	NO	WEATHER STRIPPING & LOUVERS AS SHOWN
⑤	PR-35" x 7'-0" x 1 3/4"		1/2 GL. AS SHOWN	YES - EACH LEAF	1/4" P.P.G. UPPER PANEL
⑥ & ⑥A	35" x 7'-0" x 1 3/4"	FLUSH WD.		NO	LOUVERS - SEE MECH. VINYL SEAL ON STOPS

### WINDOW SCHEDULE

MARK	SIZE	REMARKS	GLASS
Ⓐ	2-23 ALUM AWNING	WITH SCREENS AND OPERATORS	D.S.B.
Ⓑ	23 ALUM AWNING		
Ⓒ		FIXED SASH	
Ⓓ	2'-0" x 2'-0"	IN WEST AIR LOCK - SEE DETAILS THIS SHT.	1/2" D.S.B.
Ⓔ	2'-6" x 2'-0"		

### REVISIONS

NO.	SYMBOL	ZONE	DESCRIPTION	DATE	APPROVED
1			REVISED PARTITIONS, DOOR SCHEDULES, WINDOW SCHEDULES TO REFLECT REVISIONS TO SHEET A-14	2/16/63	200
2			REVISED WINDOW SCHEDULES TO REFLECT REVISIONS TO SHEET A-14	2/16/63	200
3			REVISED PARTITIONS IN OFFICE & DATA ROOM TO REFLECT REVISIONS TO SHEET A-14	2/16/63	200
4			UP-DATED FOR "F.R.D"	2/16/63	200



### MATERIAL LEGEND

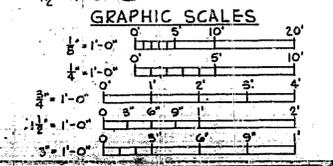
	2x4 STUDS @ 16" O.C.
	8x8 MASONRY UNITS
	8x16 POURED PILASTER

### FLOOR PLAN 1/8" = 1'-0"

(LOAD BEARING WALL CONSTRUCTION)  
NOTE - ALL MASONRY DIMENSIONS REFER TO NOMINAL SIZE

### FLOOR AREA

8267 SQ. FT. TOTAL



**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LAUNCH OPERATIONS CENTER**

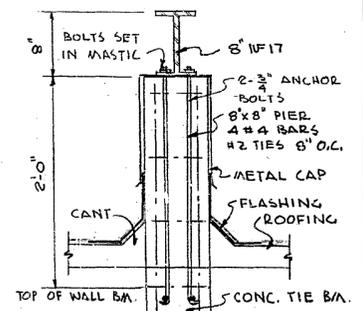
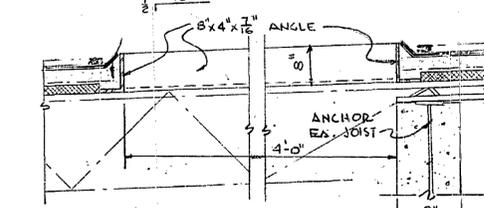
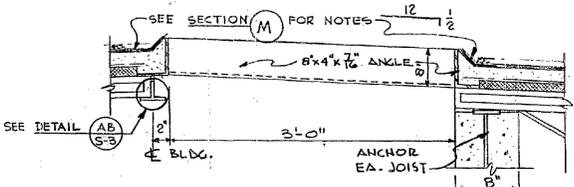
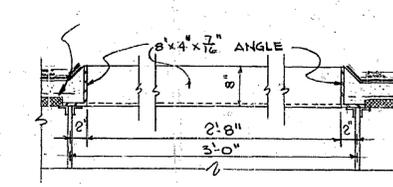
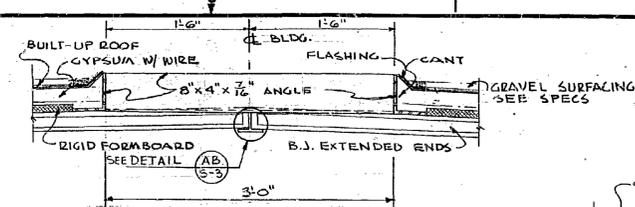
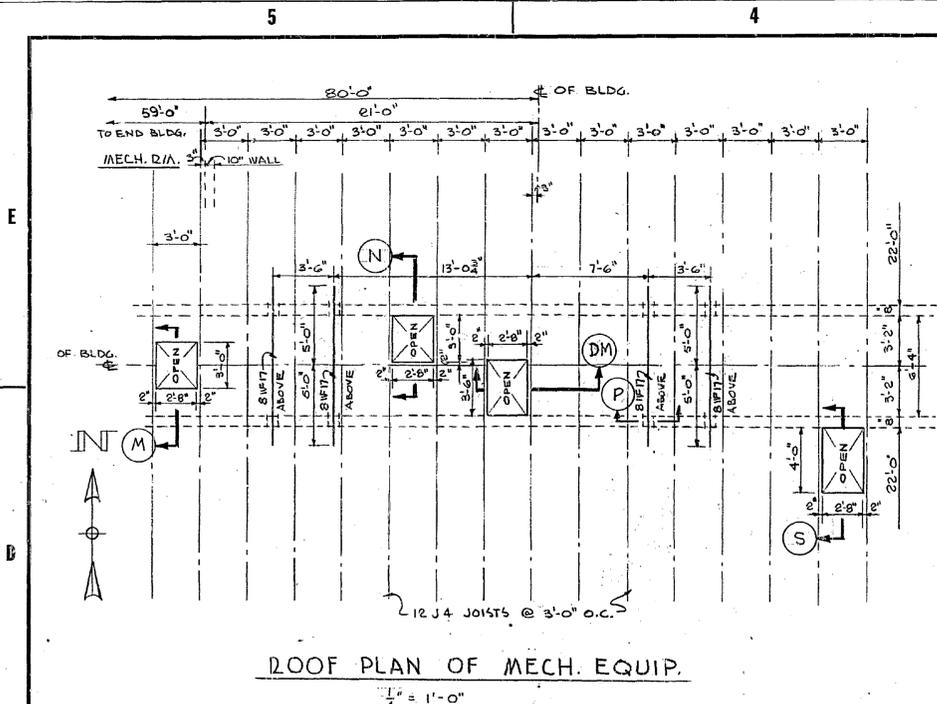
TAMPA BAY ENGINEERING CO. 151 TREASURE ISLAND CRY. ST. PETERSBURG 6, FLA. U. S. ARMY ENGINEER DISTRICT, JACKSONVILLE, FLA.

**NASA MERRITT ISLAND LAUNCH AREA MERRITT ISLAND, FLA.**

FLUID TEST SUPPORT ARCHITECTURAL FLOOR PLAN & DETAILS

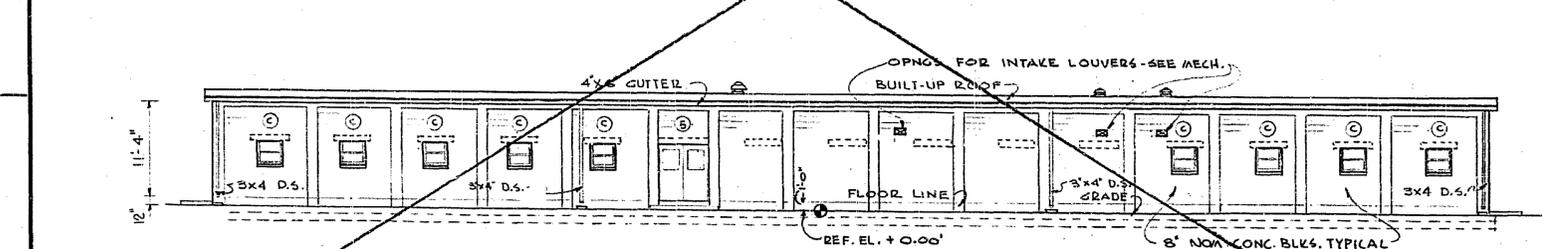
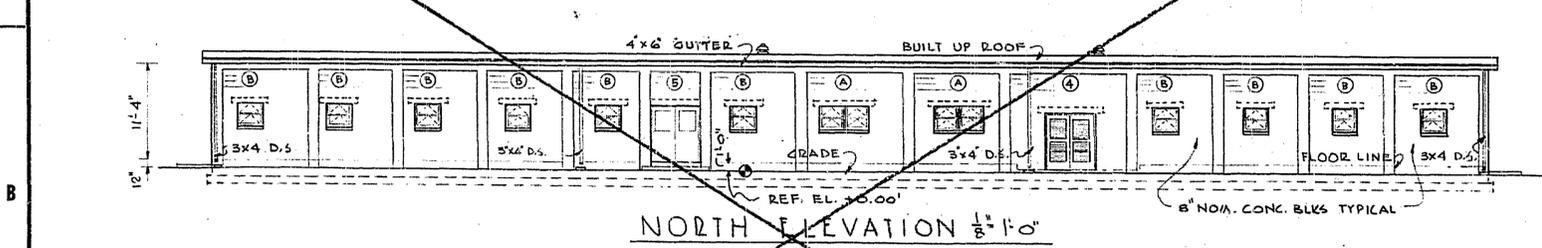
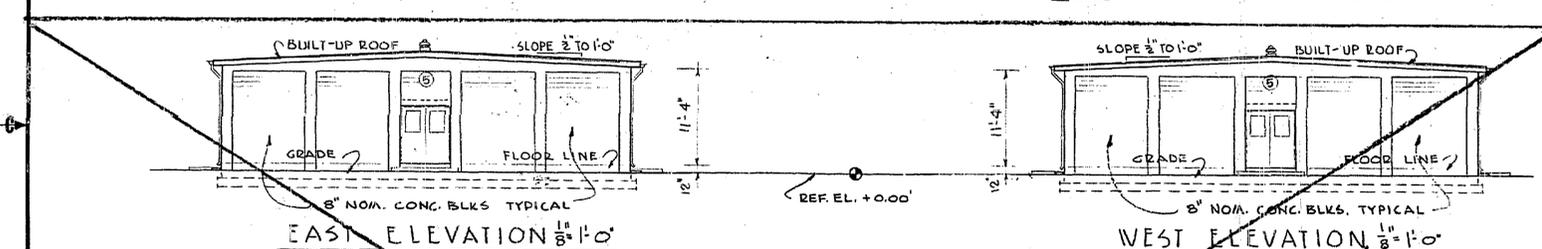
NASC FACILITY RECORD DRAWING

DRAWING NO. 203-28155-1000  
DATE: MARCH 1963 APPROVED: [Signature]  
SCALE: AS NOTED DATED: 2-15-63 SHEET 30 OF 30

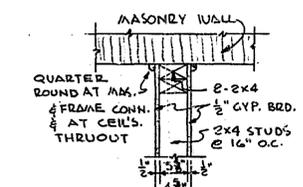
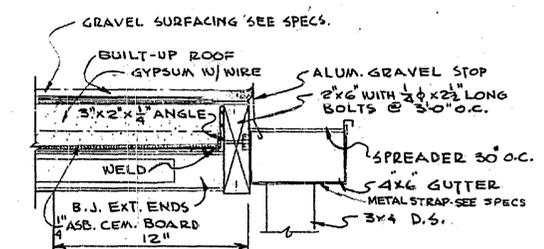
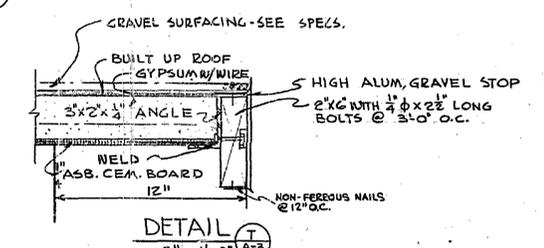


REVISIONS					
NO.	SYM.	ZONE	DESCRIPTION	DATE	APPROVED
1	A		UP-DATED FOR "F.R.D."	4/21/65	

NOTE: FOR ELEVATIONS SEE SHEET A-6 AND A-7



NOTE - SEE SHEET # 301 FOR DOOR & WINDOW SCHEDULES.



GRAPHIC SCALES

1/2" = 1'-0"  
1/4" = 1'-0"  
3/8" = 1'-0"

NASA-KSC  
FACILITY RECORD DRAWING  
DRAWING NO. 506.00.00.00A002.00  
DATE: APPROVED

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LAUNCH OPERATIONS CENTER

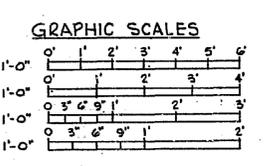
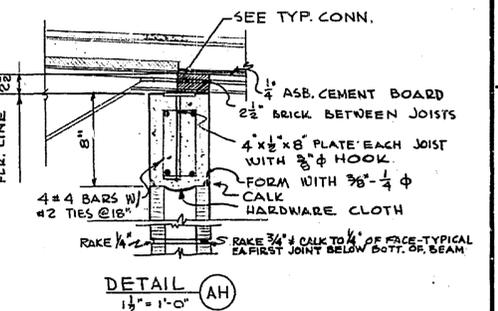
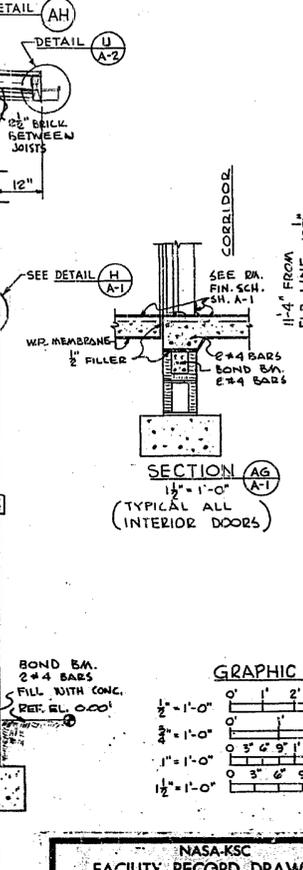
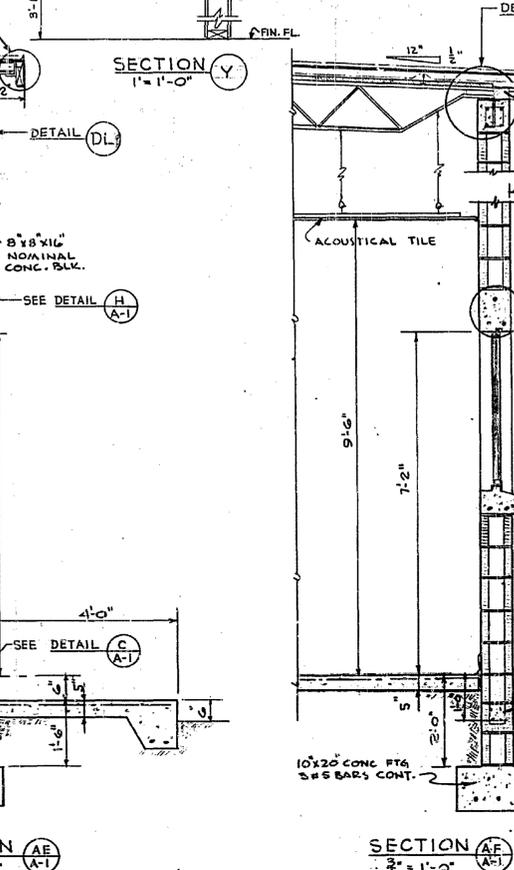
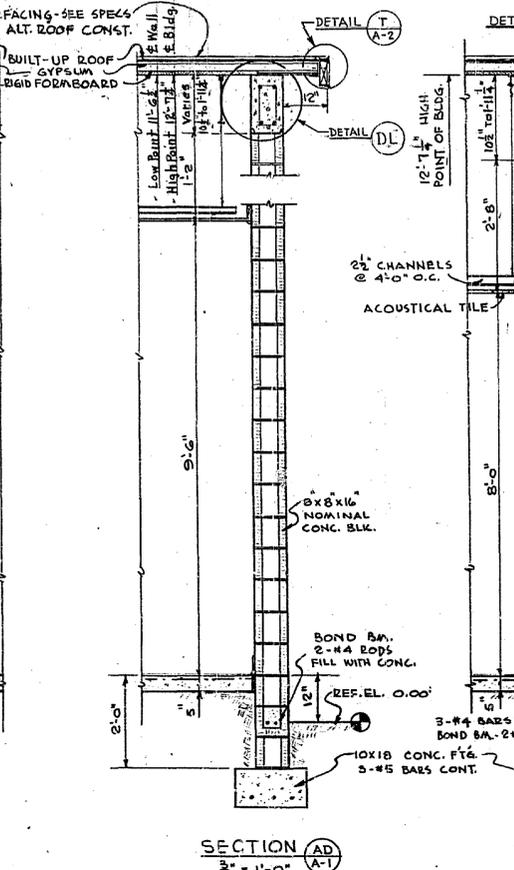
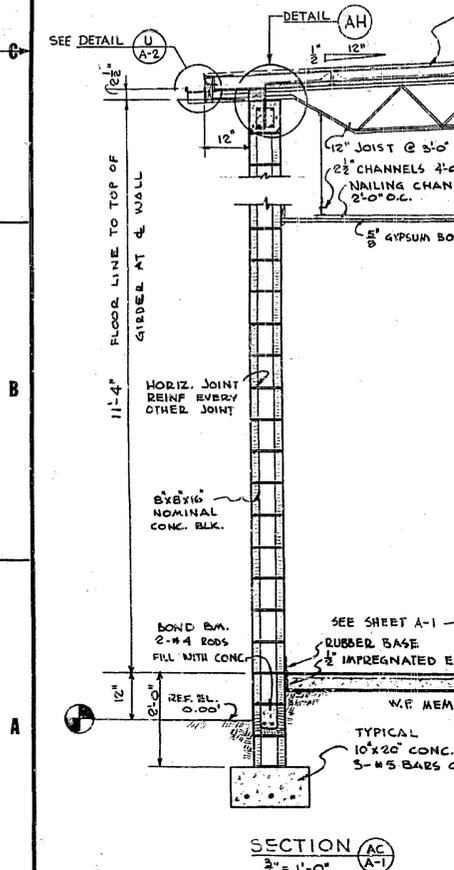
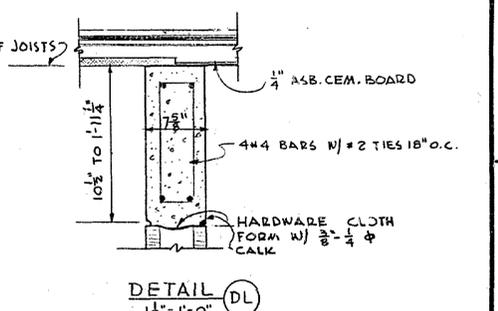
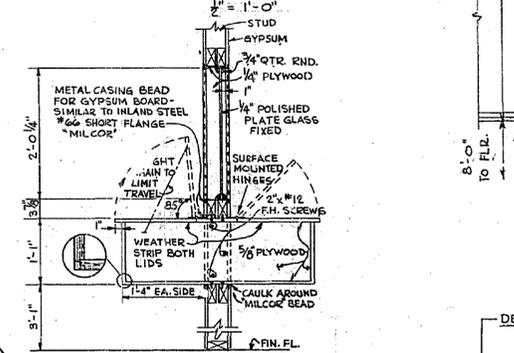
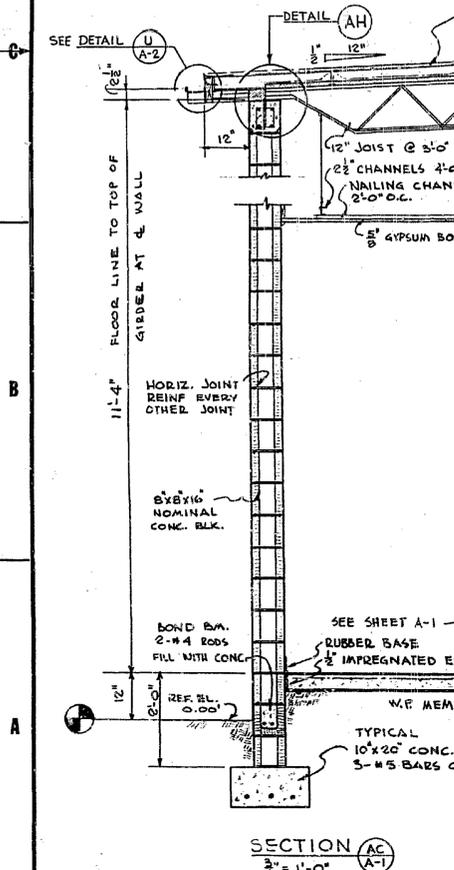
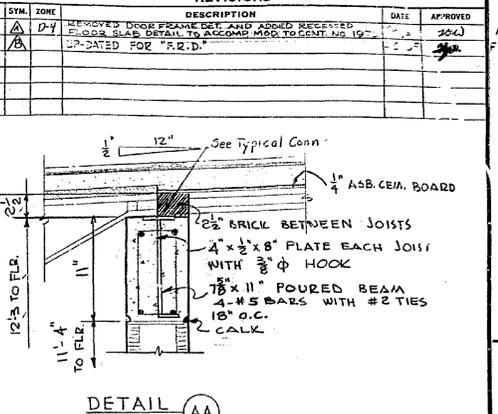
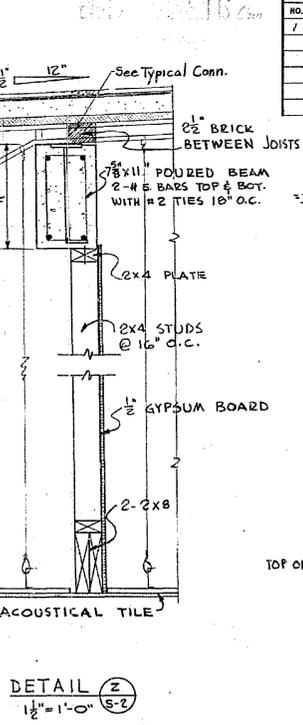
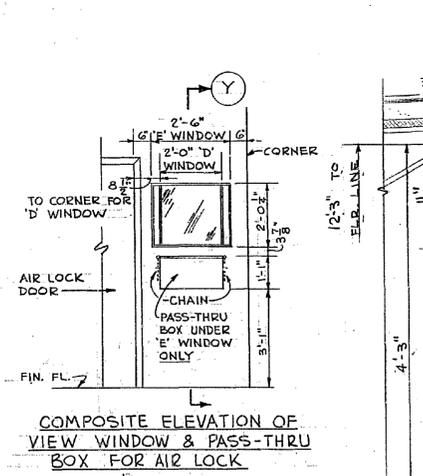
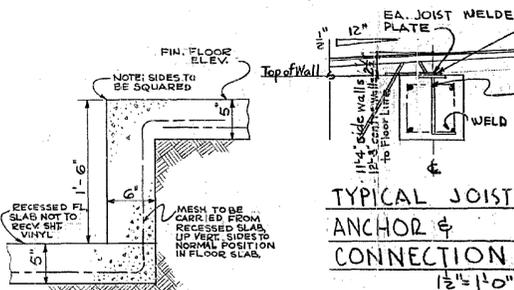
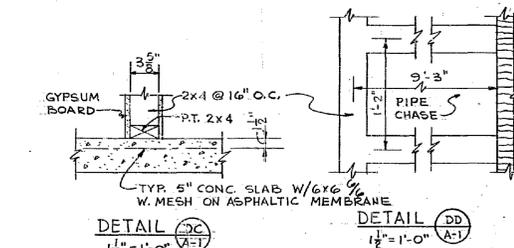
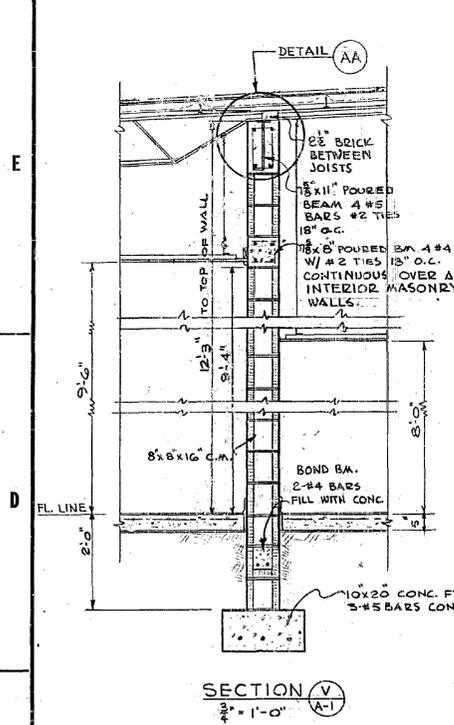
TAMPA BAY ENGINEERING CO. 151 TREASURE ISLAND CWT. ST. PETERSBURG 6, FLA.  
U. S. ARMY ENGINEER DISTRICT, JAX. CORPS OF ENGINEERS JACKSONVILLE, FLA.

NASA MERRITT ISLAND LAUNCH AREA MERRITT ISLAND, FLA.  
FLUID TEST SUPPORT  
PARTIAL ROOF PLAN, SECTIONS AND DETAILS

DATE: 5 MARCH 1963  
SCALE: AS NOTED  
DATE: 2-15-63 SHEET 302 OF

203-28155

REVISIONS				
NO.	SYM. ZONE	DESCRIPTION	DATE	APPROVED
1	D-4	REMOVED DOOR FRAME DET. AND ADDED RECEIVED FLOOR SLAB DETAIL TO ACCORD WITH CENT. NO. 197		(SCL)
2	A	UPDATED FOR "R.2.D."		



NASA-KSC  
 FACILITY RECORD DRAWING  
 DRAWING NO. 806.00.00.00.00.00.00  
 DATE: 2 MARCH 1963  
 APPROVED: [Signature]

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LAUNCH OPERATIONS CENTER**

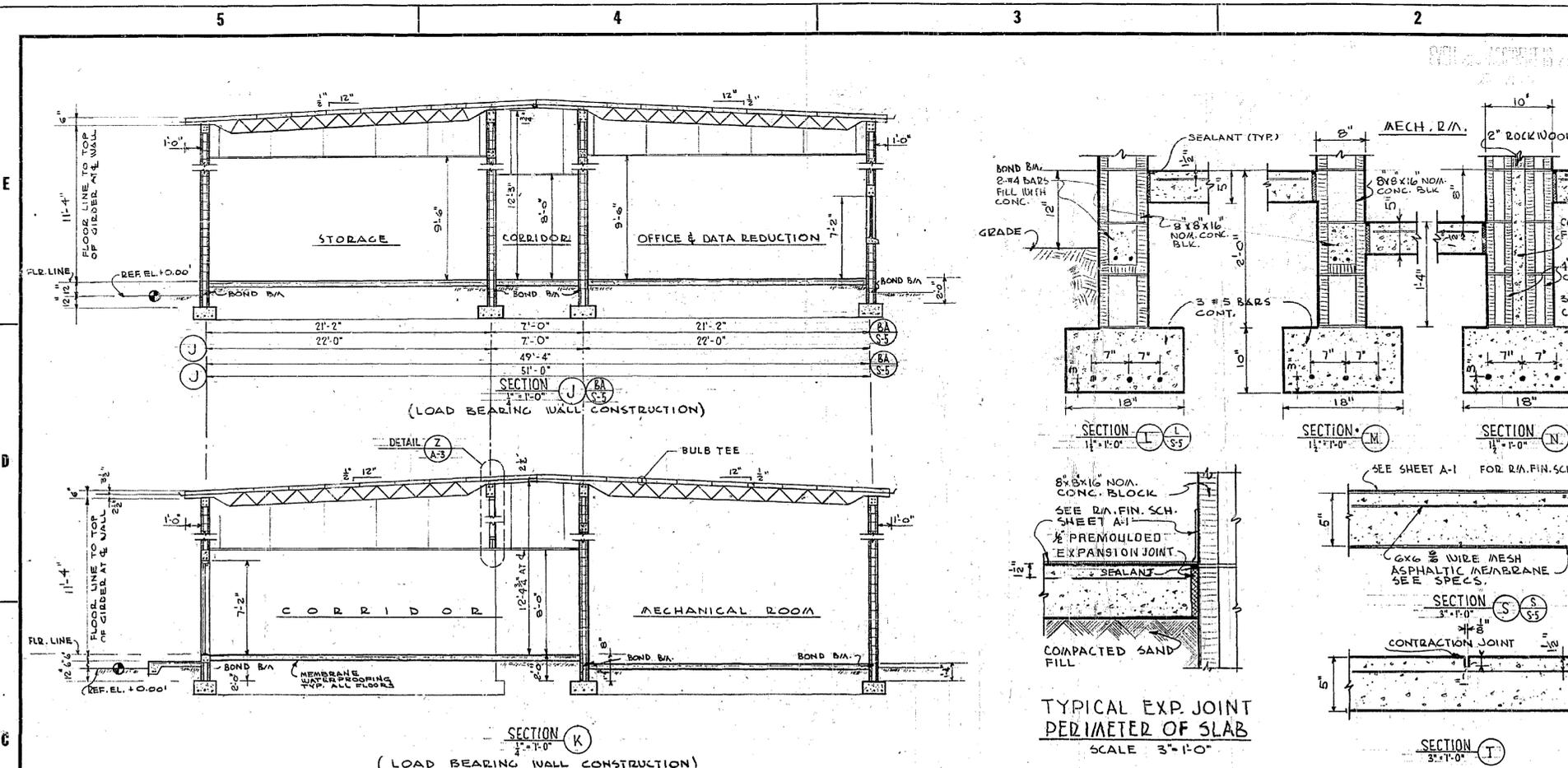
TAMPA BAY ENGINEERING CO. 131 TREASURE ISLAND CMT. ST. PETERSBURG, FLA.

U. S. ARMY ENGINEER DISTRICT, MAX. CORPS OF ENGINEERS JACKSONVILLE, FLA.

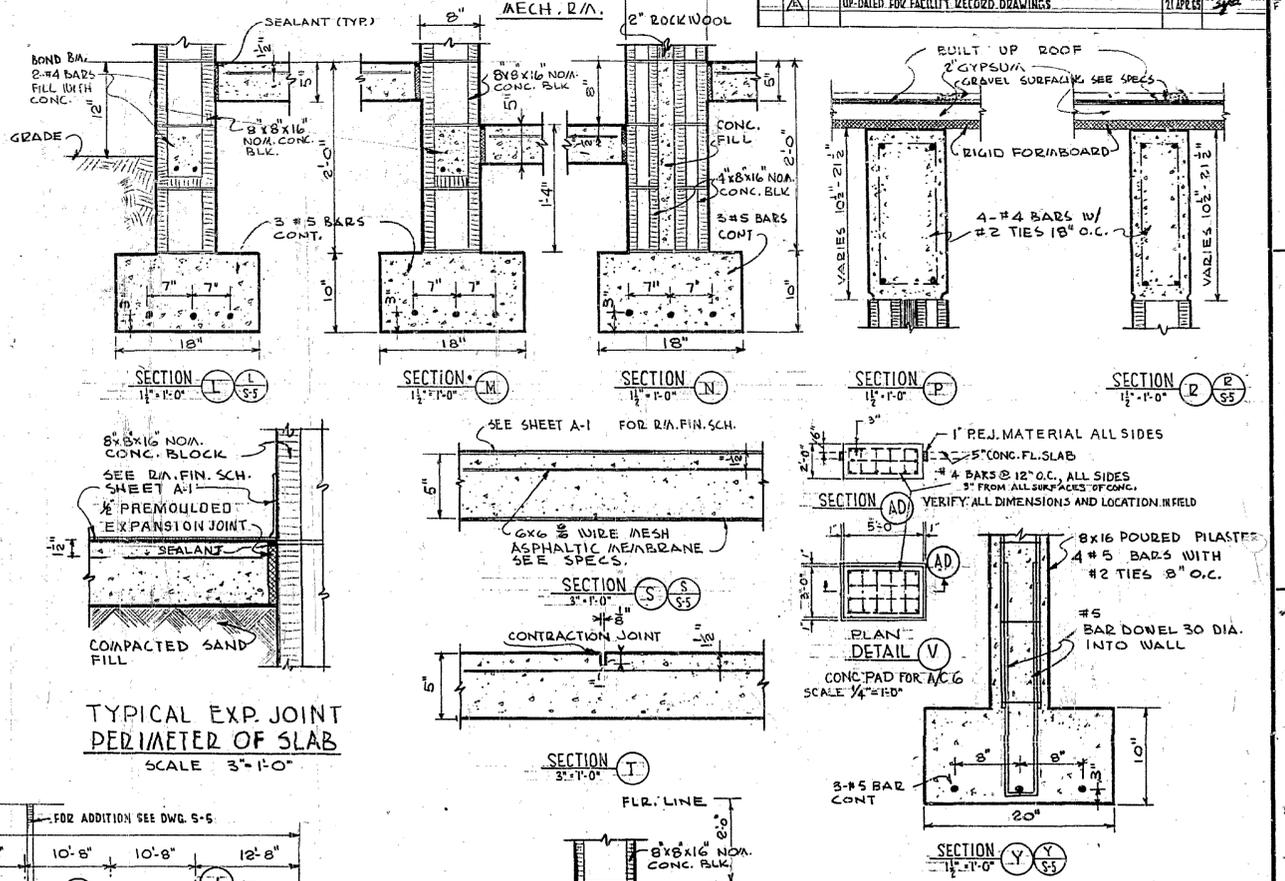
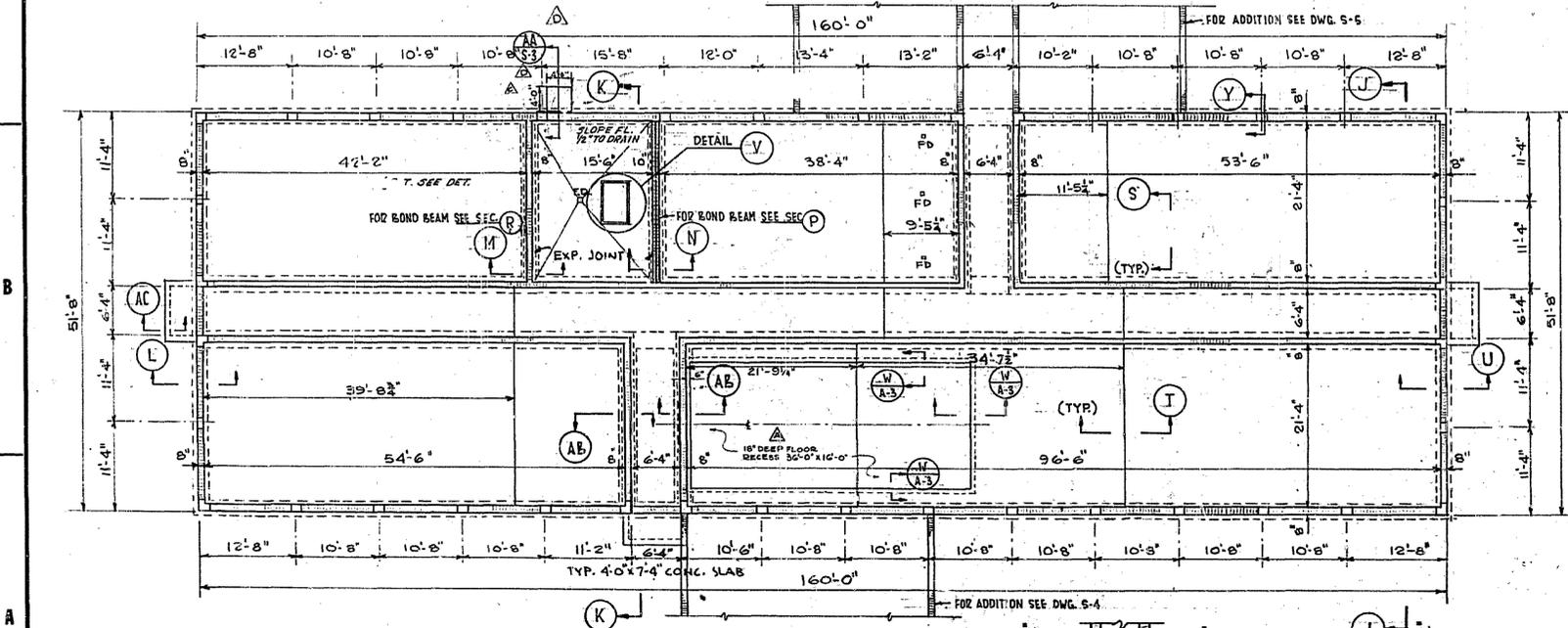
**NASA MERRITT ISLAND LAUNCH AREA MERRITT ISLAND, FLA.**  
 FLUID TEST SUPPORT SECTIONS & DETAILS

BY: D.L.J.  
 DATED: 2 MARCH 1963  
 SCALE: AS NOTED  
 DATE: 2-15-63  
 SHEET 34 OF 35

D. O. File No. 203-28,155



REVISIONS					
NO.	SYM.	ZONE	DESCRIPTION	DATE	APPROVED
1	Δ	B-4	PROVIDED RECESS IN FLOOR SLAB TO ACCOMMODATE TO CONTRACT NO. 107	7/7/63	JAL
2	Δ	A	ADDED DETAIL OF MECHANICAL ROOM TO ACCOMPANY W/ CONTRACT NO. 107	7/7/63	JAL
2	Δ	A	RELOCATE MECH. R/O AND ADD SECTION A-A	7/7/63	JAL
2	Δ	A	REVISED SECTION A-A & REVISED DIMENSIONS	7/7/63	JAL
2	Δ	A	UP-DATED FOR FACILITY RECORD DRAWINGS	2/12/65	JAL

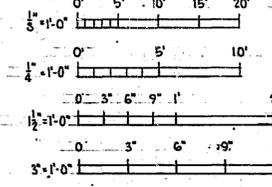


TYPICAL EXP. JOINT PERIMETER OF SLAB  
SCALE 3" = 1'-0"

STRUCTURAL DESIGN NOTES

- ALL CONCRETE SHALL DEVELOP 3000 PSI @ 28 DAYS.
- REINF. STEEL SHALL BE INTERMEDIATE GRADE #5 = 29000 PSI
- ALL WORK SHALL CONFORM TO A.C.I. BLDG. CODE (318-64).
- LIVE LOADS: ROOFS 20 PSF, FLOORS 100 PSF, HORIZ. WIND 30 PSF, ROOF UPLIFT = 37.5 PSF.
- MAX. SOIL PRESSURE UNDER FOOTINGS 3,000 PSF
- ALL FOOTING REINF. STEEL SHALL HAVE 3" BOTT. CLEARANCE.
- PROVIDE BAR SUPPORTS & SPACERS PER A.C.I. MANUAL.
- STRUCT. STEEL PER SPECIFICATIONS.

GRAPHIC SCALE



FOUNDATION PLAN 1/8" = 1'-0"  
(LOAD BEARING WALL CONSTRUCTION)

NOTE - ALL MASONRY DIMENSIONS REFER TO NOMINAL SIZE.

NASA-KSC  
FACILITY RECORD DRAWING  
DRAWING NO. 806.00.000AD500280  
DATE 2/15/65 APPROVED [Signature]

**AS BUILT**  
APPROVED BY [Signature]  
DATE 11 August 1965

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LAUNCH OPERATIONS CENTER

TAMPA BAY ENGINEERING CO.  
151 TREASURE ISLAND CRY.  
ST. PETERSBURG, FLA.

U. S. ARMY ENGINEER DISTRICT, JAX.  
CORPS OF ENGINEERS  
JACKSONVILLE, FLA.

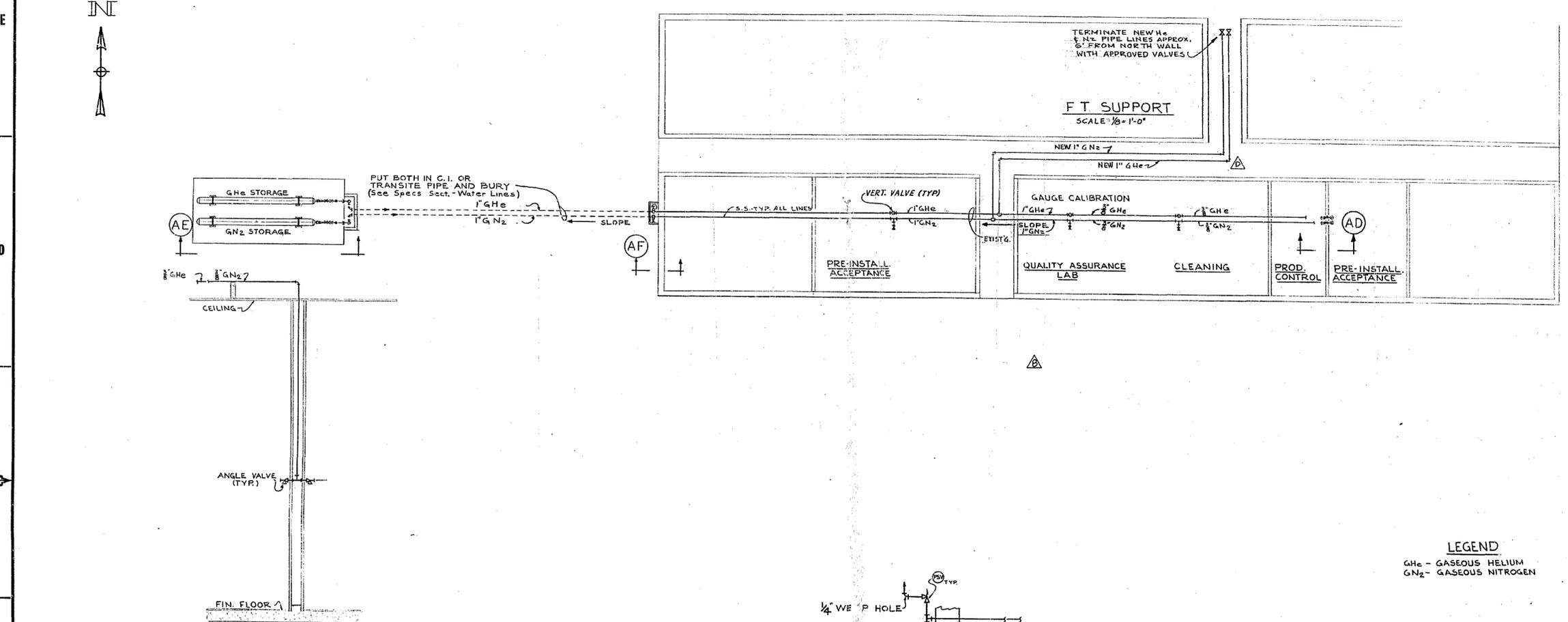
NASA MERRITT ISLAND LAUNCH AREA  
MERRITT ISLAND, FLA.  
FLUID TEST COMPLEX  
FLUID TEST SUPPORT  
FOUNDATION PLAN & DETAILS

INV. NO. ENG. (NASA) 08-123-63-35  
DATED: 5 MARCH 1963  
SCALE: NOTED

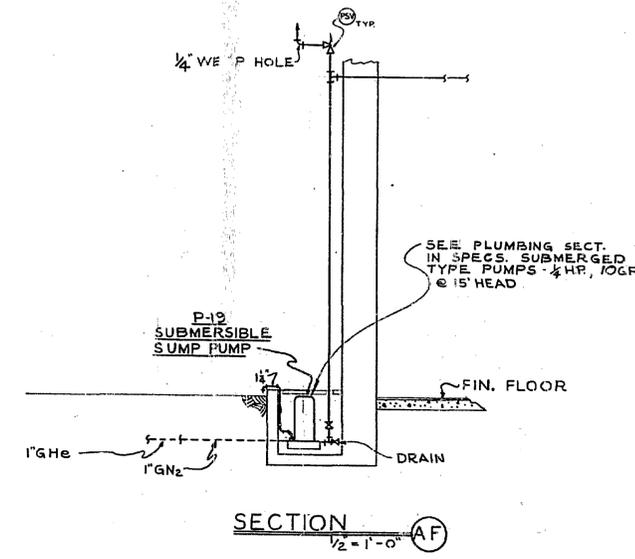
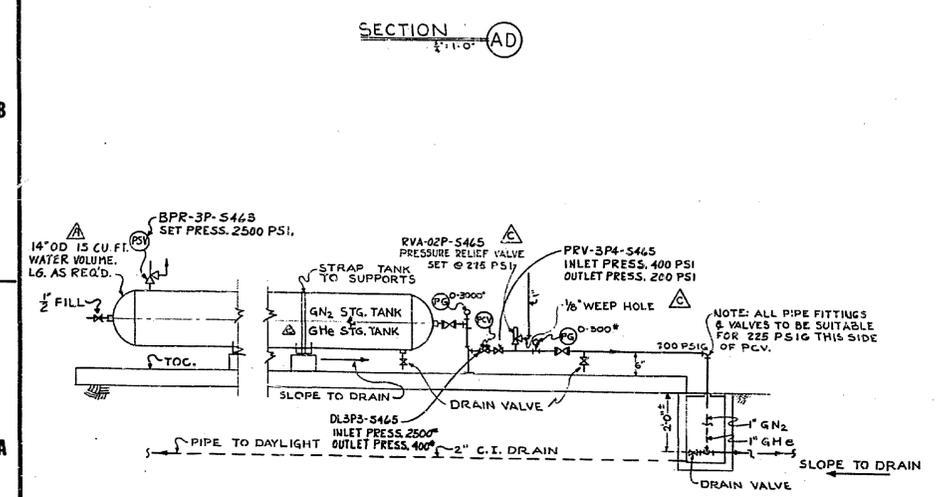
FILE NO. 203-28155  
DATE: 2-15-63 SHEET 3040P



REVISIONS					
NO.	SYM.	ZONE	DESCRIPTION	DATE	APPROVED
1	B-5		REVISED TO CONFORM TO AMMEND. NO. 4	5/14/73	JLH
2	D-2		ADDED NOTE TO ACC. MOD. TO CONT. NASA-1970	4/16/73	JLH
3			REVISED FROM 20 PSIG TO 225 PSIG TO ACCOMP. MOD. TO CONT. NASA 1970	4/26/73	JLH
4			ADDED NEW 1/2" PIPING TO ACCOMP. MOD. TO CONT. NASA 1970	4/16/73	JLH
5			UP-DATED FOR "F.R.D."	4/21/74	JLH

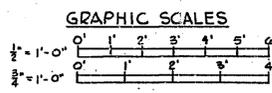


**LEGEND**  
 GHe - GASEOUS HELIUM  
 GN2 - GASEOUS NITROGEN



**RECORD DRAWING NOTE**  
 'Shall be,' 'Provide,' 'Install,' 'Remove,' etc. indicates work was accomplished under the contract.

**AS BUILT**  
 APPROVED BY: *[Signature]*  
 DATE: 11 August 1969



NASA-KSC  
 FACILITY RECORD DRAWING  
 DRAWING NO. 806.00000ADM01.00  
 DATE: APPROVED: *[Signature]*

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LAUNCH OPERATIONS CENTER**

TAMPA BAY ENGINEERING CO. 151 TREASURE ISLAND CRY. ST. PETERSBURG 6, FLA.  
 U. S. ARMY ENGINEERS DISTRICT, JACKSONVILLE, FLA. CORPS OF ENGINEERS

NASA MERRITT ISLAND LAUNCH AREA MERRITT ISLAND, FLA.  
 FLUID TEST SUPPORT  
 NITROGEN & HELIUM PIPING

REV. NO. ENG. ORASU 08-121-63-35 SHEET 307 OF 308  
 DATED: 2 MARCH 1963  
 DRAWN BY: FLB  
 CHECKED BY: SMD  
 SCALE: AS NOTED  
 DATE: 2-15-63  
 SHEET 307 OF 308

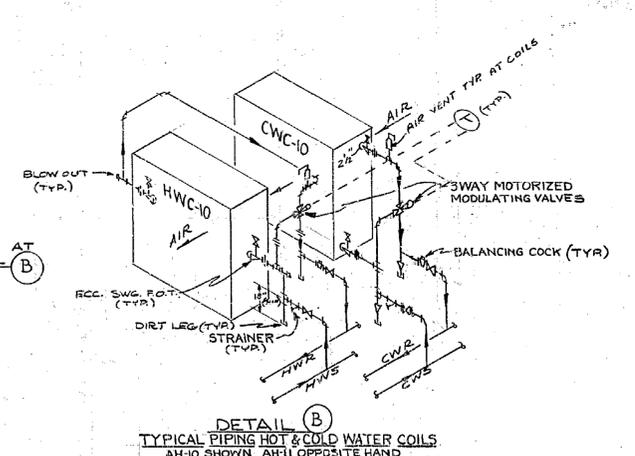
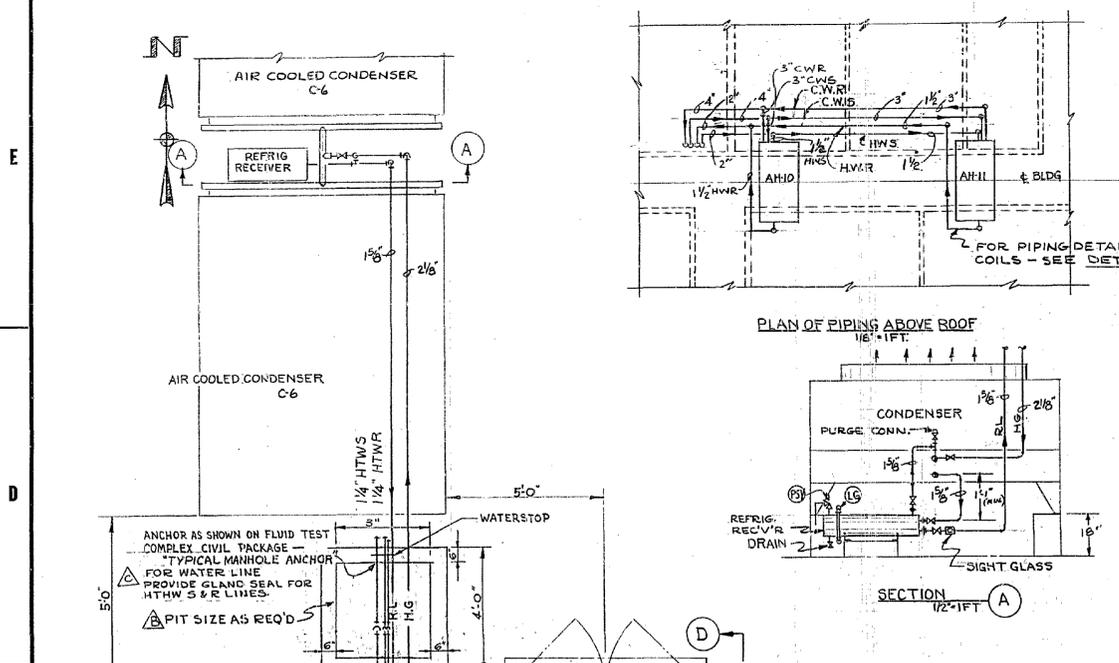
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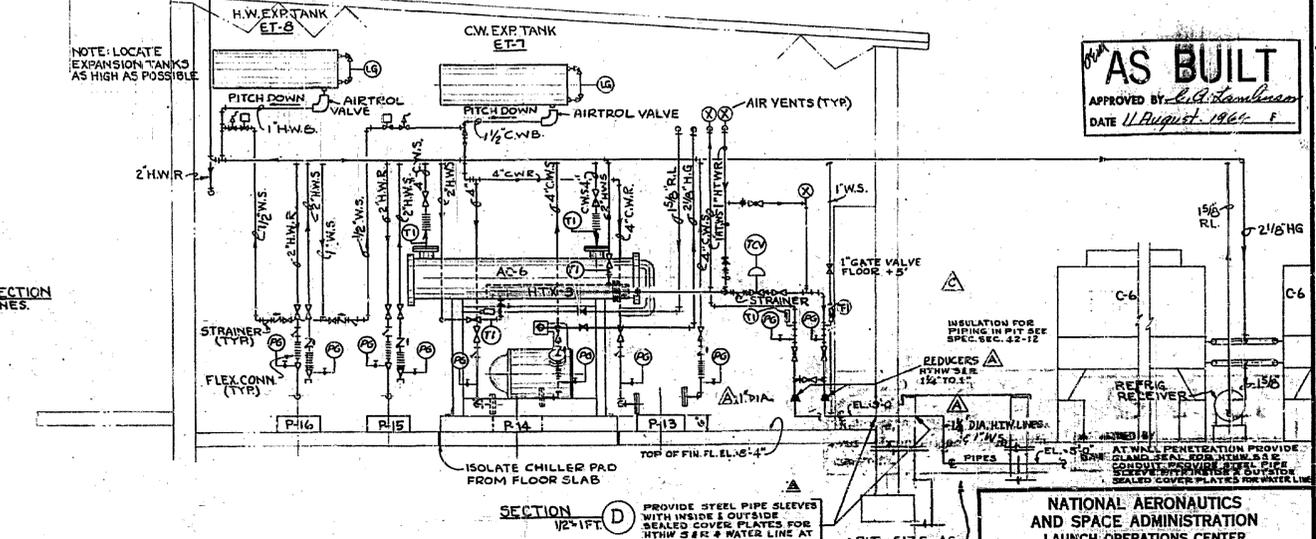
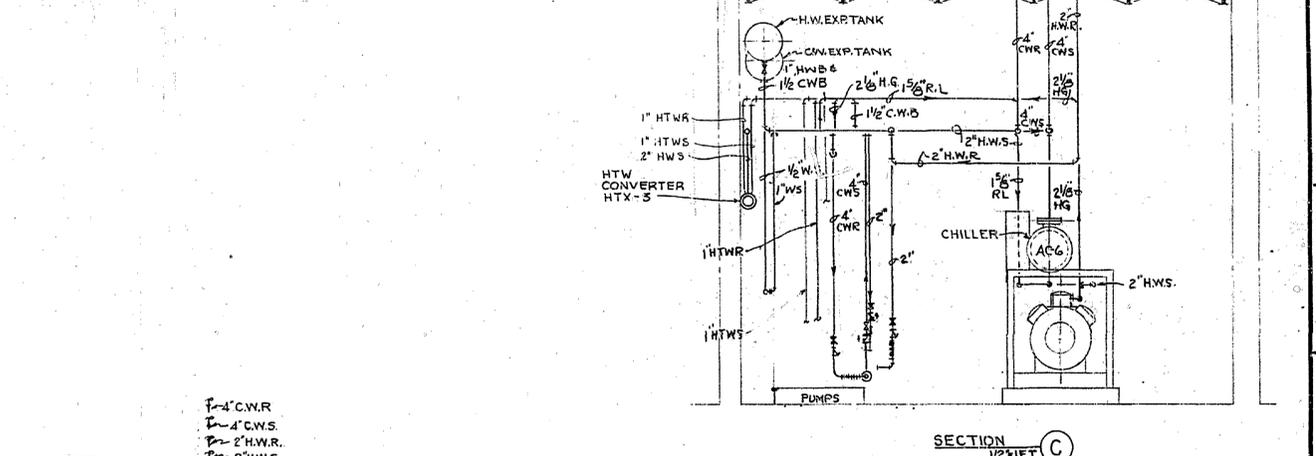
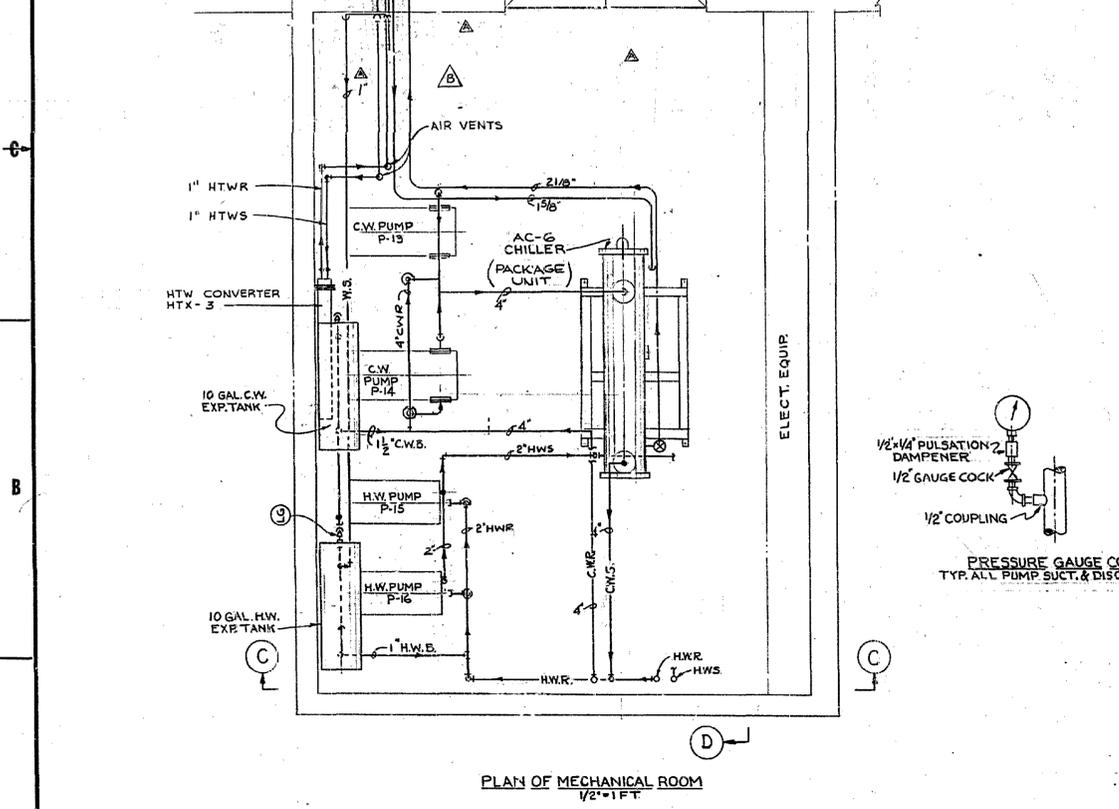
2

1

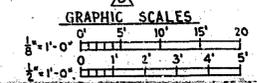
REVISIONS					
NO.	SYM.	ZONE	DESCRIPTION	DATE	APPROVED
7	Δ		RELOCATED PIPING TO ACCOMMODATE SUMP PUMP TO ACCOMMODATE MOD. TO SUMP. HALL 1372	8/23/63	2201
3	Δ		RELOCATED PIPING TO ACCOMMODATE SUMP PUMP TO ACCOMMODATE MOD. TO SUMP. HALL 1372	7/24/63	2201
3	Δ		REVISED SECTION A-A & HTW S&R LINES	7/24/63	2201
	Δ		UP-DATED FOR "F.R.D."	4-21-65	2201



- SYMBOLS**
- GV - GATE VALVE
  - GLV - GLOBE VALVE
  - PRV - PRESSURE RELIEF VALVE
  - PRV - PRESSURE REGULATING VALVE
  - CV - CHECK VALVE
  - ST - STRAINER
  - U - UNION
  - FC - FLEXIBLE CONNECTION
  - LG - LEVEL GAUGE
  - TCV - TEMPERATURE CONTROL VALVE
  - TI - TEMPERATURE INDICATOR
  - PG - PRESSURE GAUGE
  - PSV - PRESSURE SAFETY VALVE
- LEGEND**
- W.S. DOMESTIC WATER SUPPLY
  - HTW.S. HIGH TEMPERATURE WATER SUPPLY
  - HTW.R. HIGH TEMPERATURE WATER RETURN
  - H.W.S. HOT WATER SUPPLY
  - H.W.R. HOT WATER RETURN
  - H.W.B. HOT WATER BALANCING
  - C.W.S. COLD WATER SUPPLY
  - C.W.R. COLD WATER RETURN
  - C.W.B. COLD WATER BALANCING
  - R.L. REFRIGERANT LIQUID
  - H.G. HOT GAS



- REFERENCE DWGS.**
1. FOR SITE PLAN SEE FLUID TEST COMPLEX CIVIL PACKAGE
  2. FOR SCHEDULES & DETS. SEE SHEET M-4
  3. AIR COND. & HEATING PLAN & SECTIONS SH. M-11



NASA/KSC  
FACILITY RECORD DRAWING  
DRAWING NO. 203-28155-0300  
DATE: 2 MARCH 1963

**AS BUILT**  
APPROVED BY: [Signature]  
DATE: 11 August 1964

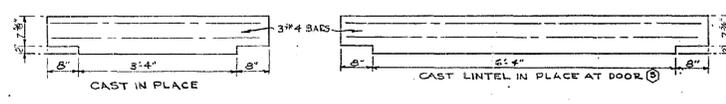
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LAUNCH OPERATIONS CENTER**  
NASA MERRITT ISLAND LAUNCH AREA MERRITT ISLAND, FLA.  
FLUID TEST SUPPORT NORTH MECHANICAL ROOM PIPING PLAN SECTIONS & DETAILS

INV. NO. ENG. 00550 01-15-63-55  
DATE: 2 MARCH 1963  
SCALE: AS NOTED  
DATE: 2-15-63  
SHEET: 306

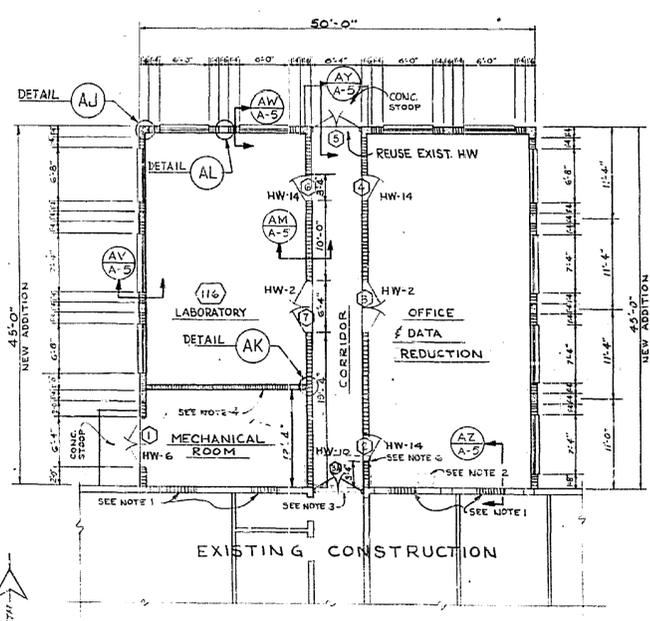


ROOM FINISH SCHEDULE					
AREA	FLOOR	WALL	CEILING	BASE	REMARKS
OFFICE & DATA REDUCTION	SHEET VINYL	CONC. BLK. GYR. BD.	9/8" GYR. BOARD	VINYL COVE	INTERIOR FACE OF WALLS TO RECEIVE GYR. BD.
LABORATORY	SHEET VINYL	CONC. BLK. GYR. BD.	9/8" GYR. BOARD	VINYL COVE	INTERIOR FACE OF WALLS TO RECEIVE GYR. BD.
MECHANICAL ROOM	CONC.	CONC. BLK.	UNDERSIDE OF ROOF DECK	NONE	
CORRIDOR	VINYL ASS. TILE	CONC. BLK.	ACOUSTICAL TILE	VINYL COVE	CONC. BLK. IN CORRIDOR WITH GYR. BD. FINISH ON OTHER SIDE OF WALL.

DOOR SCHEDULE				
MARK	SIZE	TYPE	THRESHOLD	REMARKS
1	PR 3'0"7'0" x 1'4"	FLUSH ALUM.	SEE DETAIL	FULL LOUVERED
2	3'0"7'0" x 1'4"	FLUSH WOOD SOLID CORE	BULB TYPE	LOUVERS AS REQ'D SEE MECHANICAL
3	PR 3'0"7'0" x 1'4"	FLUSH WOOD SOLID CORE	BULB TYPE	LOUVERS AS REQ'D NO LOUVER ON DR. (A)
4	3'0"7'0" x 1'4"	FLUSH WOOD SOLID CORE	BULB TYPE	LOUVERS AS REQ'D SEE MECHANICAL
5	PR 3'0"7'0" x 1'4"	FLUSH ALUM. 1/2" GL. AS SHOWN	ALUM. WITH VINYL SEAL	REUSE EXIST. DOOR 1/2" P.P.G. UPPER PANEL
6	3'0"7'0" x 1'4"	FLUSH WOOD SOLID CORE	BULB TYPE	LOUVERS AS REQ'D SEE MECHANICAL
7	PR 3'0"7'0" x 1'4"	FLUSH WOOD SOLID CORE	NONE	LOUVERS AS REQ'D SEE MECHANICAL



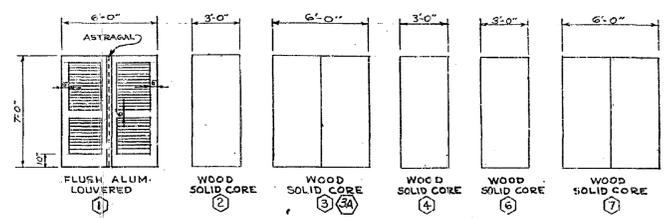
LINTEL DETAILS  
1/2" = 1'-0"



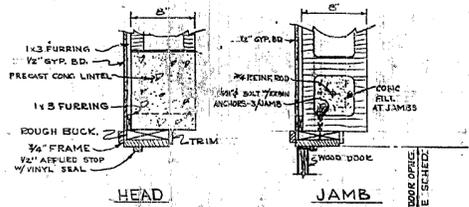
FLOOR PLAN  
1/8" = 1'-0"

MATERIAL LEGEND	
	8x8 MASONRY UNITS
	8x16 POURED PILASTER
	8x18 POURED PILASTER

FLOOR AREA	
2250	SQ. FT. TOTAL



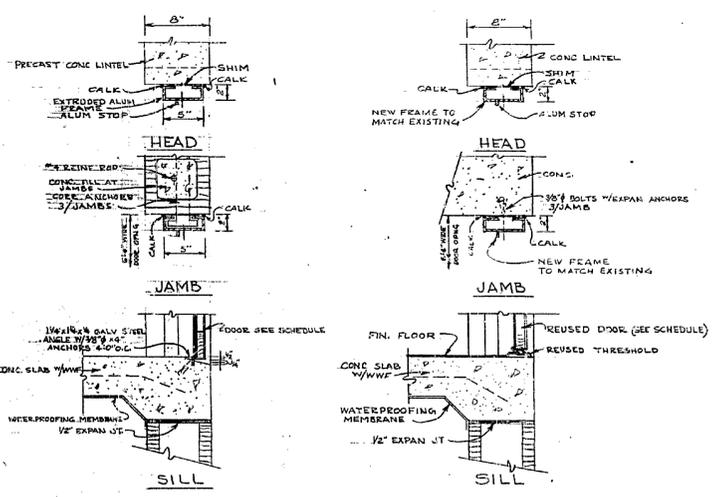
DOOR SCHEDULE  
1/4" = 1'-0"



INTERIOR DOOR DETAILS  
1/4" = 1'-0"

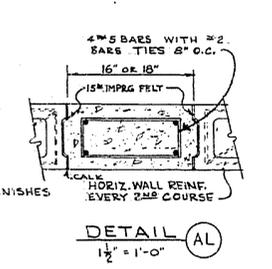
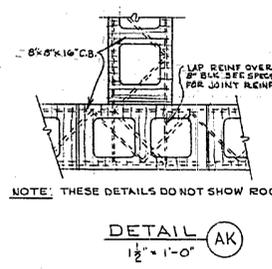
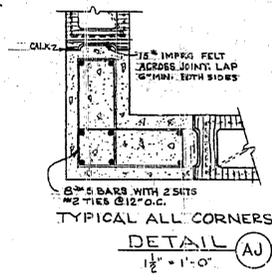
ELEV. TYPICAL DR. FRAME IN CONC. BLK. WALLS  
1/4" = 1'-0"

NOTE: EXISTING ALUM. FRAME SHALL BE USED FOR NEW DOOR #3 IN CORRIDOR SEPARATING ADDITION FROM EXISTING CONSTRUCTION.



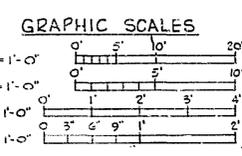
EXTERIOR DOOR #1 DETAILS  
1/2" = 1'-0"

EXTERIOR DOOR #5 DETAILS  
1/2" = 1'-0"



GENERAL NOTES

- REMOVE EXISTING WINDOWS AND PATCH OPENINGS TO MATCH EXISTING CONSTRUCTION. SEE FINISH SCHEDULE FOR NEW ROOF FINISH.
- REMOVE EXISTING DOWNSPOUT AND CONC. SPLASH BLOCK.
- REMOVE AND REUSE EXISTING DOOR AND HARDWARE. EXISTING FRAME TO REMAIN TO RECEIVE NEW DOORS.
- WALLS AROUND MECHANICAL ROOM SHALL BE CARRIED TO UNDERSIDE OF ROOF DECK.
- EXISTING GUTTER & DOWNSPOUTS REMOVED SHALL BE REUSED IF NOT DAMAGED. (SEE ELEVATION FOR NEW LOCATION)
- REMOVE EXISTING CONC. STOOD.
- NEW ROOFING & ROOF DECK ON ADDITION SHALL MATCH EXISTING.

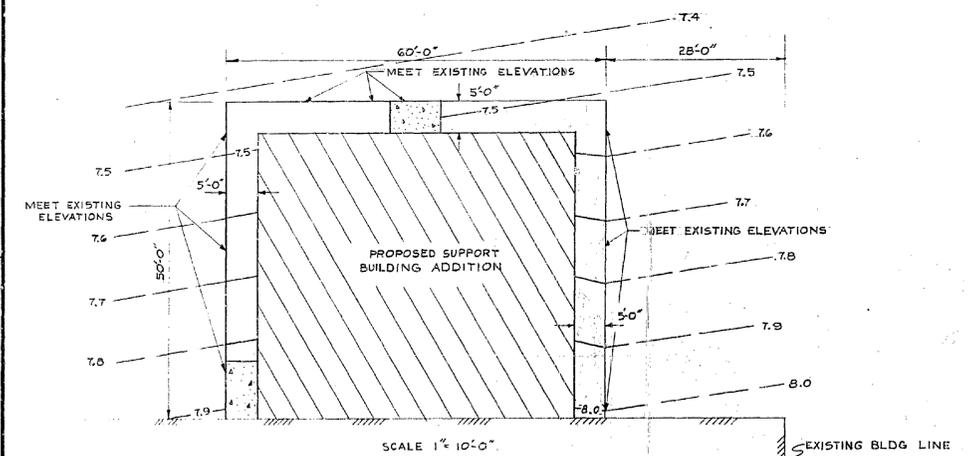


NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LAUNCH OPERATIONS CENTER  
U. S. ARMY ENGINEER DISTRICT, CANAVERAL CORPS OF ENGINEERS  
MERRITT ISLAND, FLORIDA  
NASA MERRITT ISLAND LAUNCH AREA  
MERRITT ISLAND, FLA.  
FLUID TEST SUPPORT  
PARTIAL FLOOR PLAN & DETAILS

NASA-KSC  
FACILITY RECORD DRAWING  
DRAWING NO. 806.00.00.00ADACC400  
DATE: APPROVED: [Signature]  
CHK BY: [Signature]

TO ACC. WORK TO CONTRACT: 203-154  
DATE: 2/2/64  
SCALE: AS NOTED  
DATED: FEB 14  
SHEET 2 OF 7

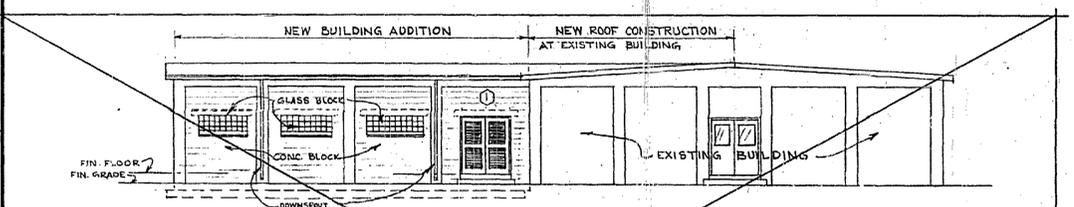
REVISIONS				
NO.	DATE	ZONE	DESCRIPTION	APPROVED
1	4/21/65	A	UP-DATED FOR "R.D."	[Signature]



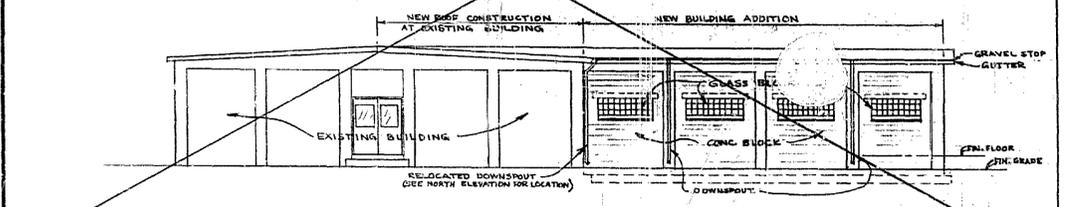
**LEGEND**

EXISTING CONTOURS ——— 7.5  
 NEW CONTOURS ——— 8.0  
 NEW PAVEMENT [Hatched Pattern]  
 NEW CONCRETE PAD [Stippled Pattern]

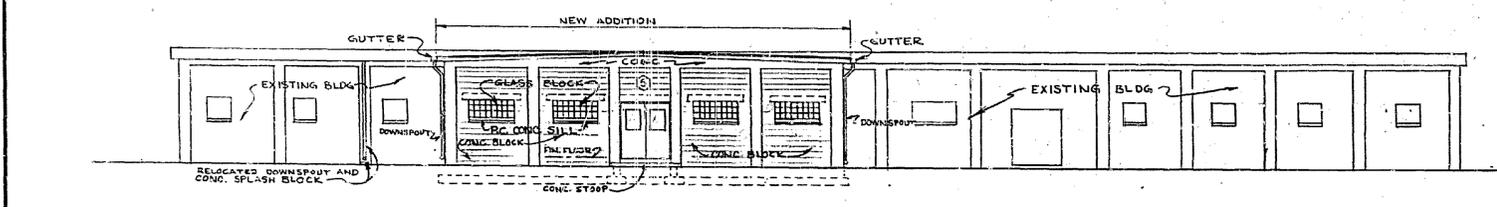
**PAVEMENT AND GRADING DETAILS**



**WEST ELEVATION**  
SCALE: 1/8" = 1'-0"

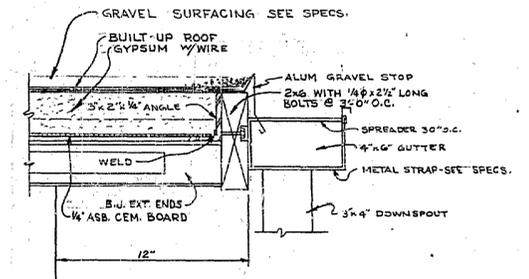


**EAST ELEVATION**  
SCALE: 1/8" = 1'-0"

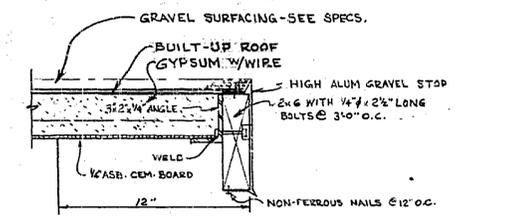


**NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"

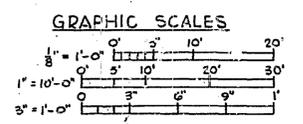
**NOTE:**  
 EAST AND WEST ELEVATIONS SHOWN ON THIS SHEET NOT APPLICABLE TO FIELD CONDITIONS AS OF 4/21/65. SEE SHEET A-7.



**DETAIL BA**  
SCALE: 3" = 1'-0"



**DETAIL BB**  
SCALE: 3" = 1'-0"



NASA-KSC  
 FACILITY RECORD DRAWING  
 DRAWING NO. 806.00.000.0000.000  
 DATE APPROVED [Signature]

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 MERRITT ISLAND, FLORIDA  
 NASA MERRITT ISLAND LAUNCH AREA  
 MERRITT ISLAND, FLA.  
 FLUID TEST SUPPORT  
 NORTH ELEVATION & DETAILS

TO ACC. W/O CONTRACT NO. 12-112-12-1  
 DATE: 7/6 FEB. 1964  
 SCALE: AS NOTED  
 DATE: FEB. 64  
 SHEET 3 OF 7



FLUID TEST AREA

6TH STREET S.E.

OF ROAD

OF ROAD

10' AVENUE S.E.

EXIST. PAVEMENT

160'-0"

EXISTING BLDG.

SUPPORT BUILDING

NEW WORK AREA (ROOF ONLY)

NEW WORK AREA (CLEAN RM.)

NEW AIR HANDLING RM.

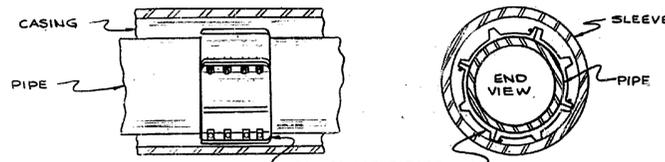
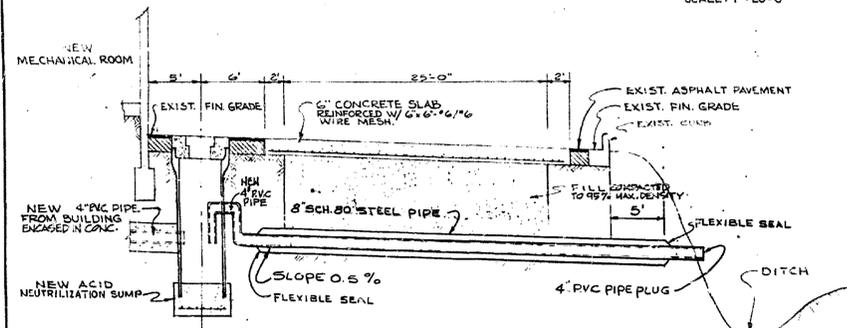
NEW MECHANICAL RM.

REMOVE EXIST. ASPHALT PAVEMENT AS REQUIRED AND REPLACE TO MATCH EXISTING.

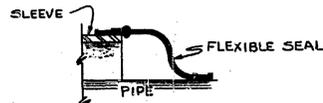
NEW ACID NEUTRALIZATION SUMP

DITCH

PLOT PLAN  
SCALE: 1" = 20'-0"

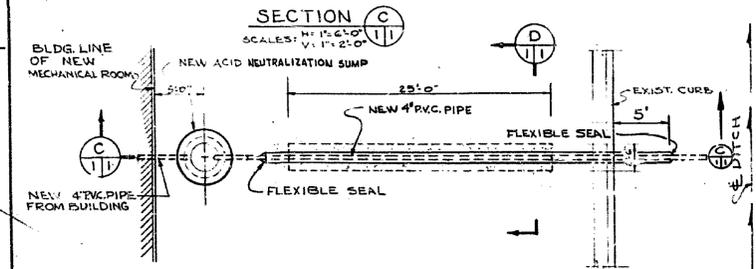


CUTAWAY VIEW OF PIPE LINE INSIDE OF SLEEVE  
N.T.S.



CUTAWAY VIEW FLEXIBLE SEAL FOR CASED CROSSINGS  
N.T.S.

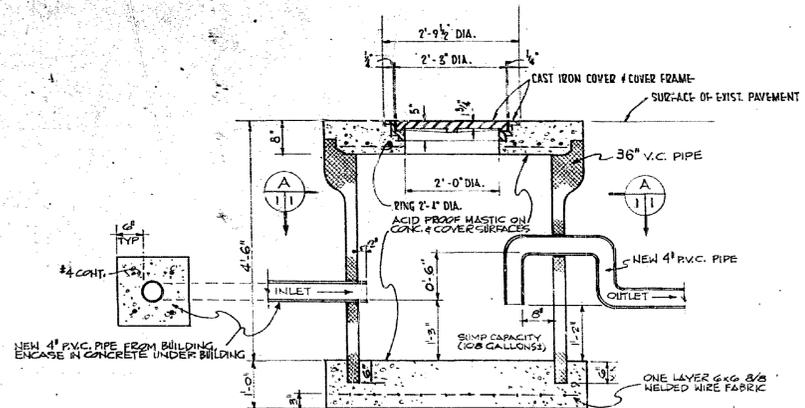
NOTE: FOR BUILDING REFERENCE DATUM REFER TO ASSUMED BENCH SHOWN ON FLOOR PLAN SHEET 2.



SECTION C  
SCALE: 1/4" = 6'-0"



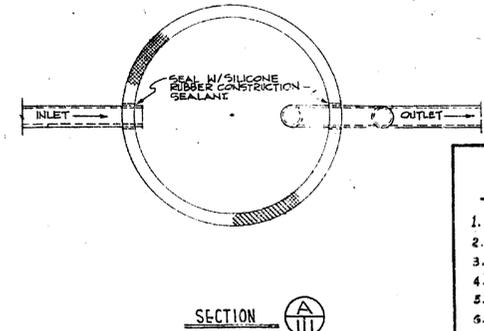
PLOT PLAN  
SCALE: 1" = 6'-0"  
DETAIL B



TYPICAL SECTION

RECORD DRAWING NOTE  
'Shall be,' 'Provide,' 'Install,' 'Remove,' etc. indicates work was accomplished under the contract.

AS BUILT  
APPROVED BY [Signature]  
DATE 9-8-65

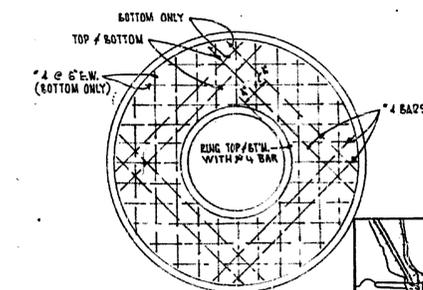


SECTION A

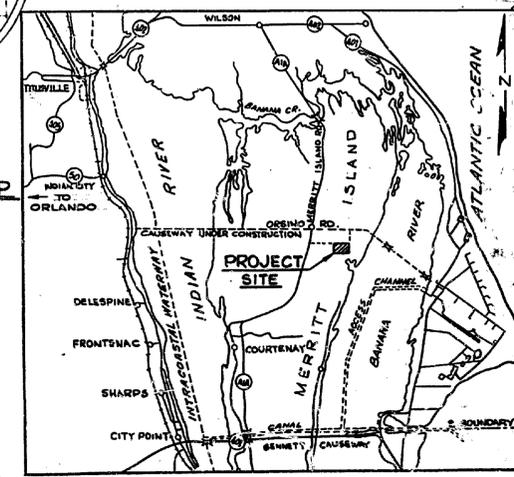
INDEX  
PACKAGE TD-1061-3

- CIVIL
- ARCHITECTURAL
- ARCHITECTURAL
- ARCHITECTURAL
- STRUCTURAL
- AIR CONDITIONING
- AIR CONDITIONING
- AIR CONDITIONING
- AIR CONDITIONING
- PLUMBING & VACUUM
- ELECTRICAL
- ELECTRICAL

SEE ALSO D.O. FILE NO. 201-312



TOP SLAB REINFORCING  
ACID NEUTRALIZATION SUMP  
NO SCALE

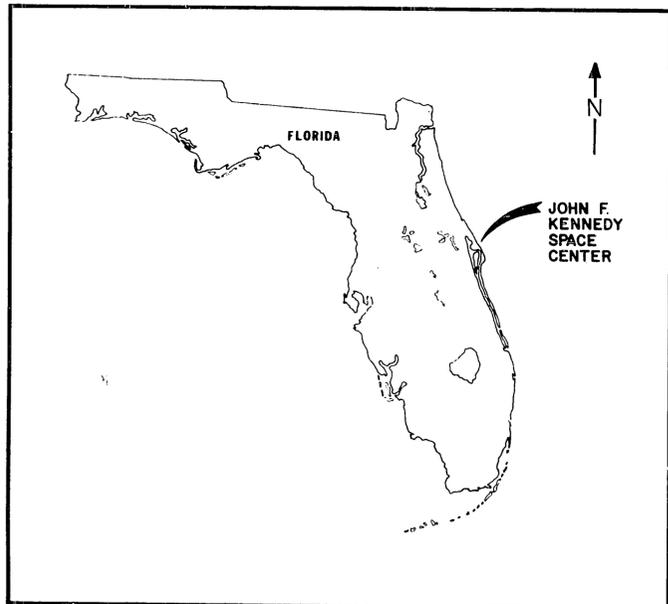


CONTRACT SUPERVISION & ADMINISTRATION  
BY  
U. S. ARMY ENGINEER DISTRICT, CANAVERAL  
MERRITT ISLAND, FLORIDA

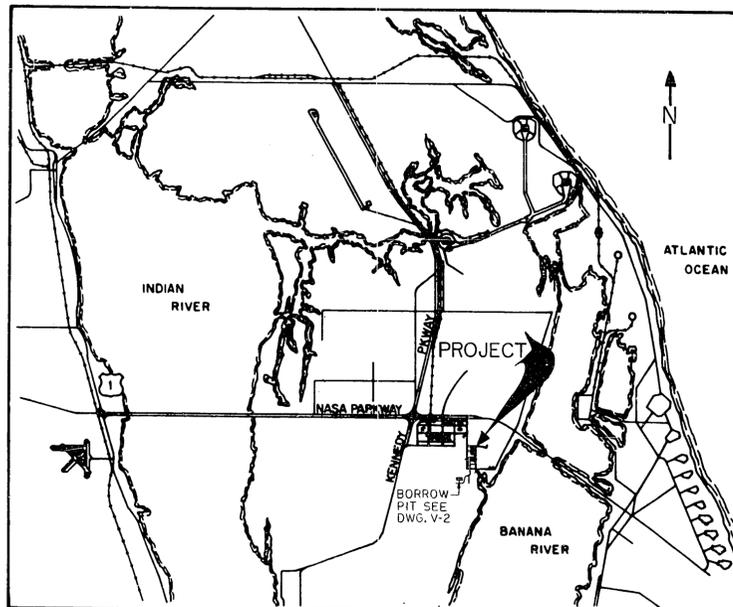
ADDED NOTE TO ACCOMP. WORK TO ACID NEUTRALIZATION SUMP	3/18/65	[Signature]	
ADAPTED FOR INV. NO. 1061-3	1/18/65	[Signature]	
ENG (NASA)-00-1176-65-45			
SYM	DESCRIPTION	DATE	APPROVED
REVISIONS			
CONCURRENCE			
ORIGINAL DATE OF DRAWING 19 AUG 64			
PREPARED BY BECO			
MERRITT ISLAND INDUSTRIAL AREA			
MSC FLUID TEST COMPLEX			
SUPPORT BUILDING			
CLEAN ROOM			
CIVIL			
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LAUNCH OPERATIONS CENTER			
COCOA BEACH, FLA.			
SCALE AS SHOWN			
FR			
SHEET 1 OF 12			



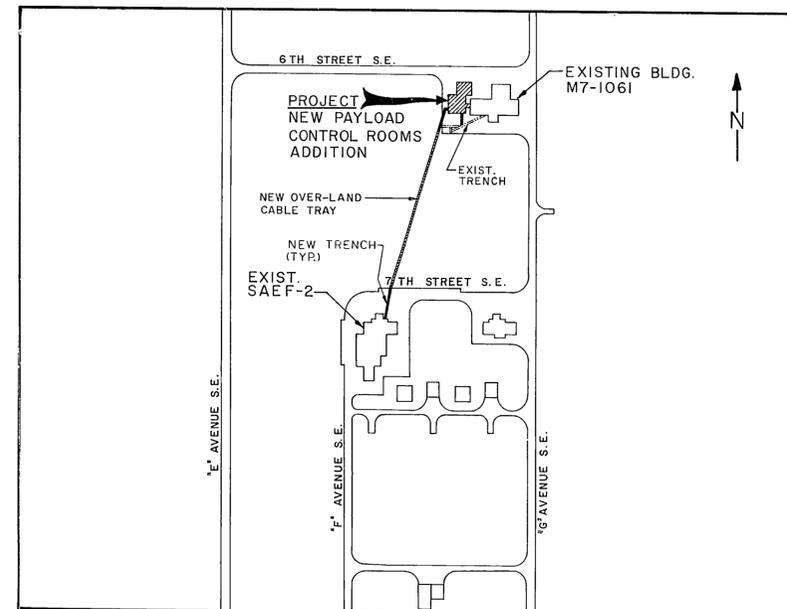
# JOHN F. KENNEDY SPACE CENTER, FLORIDA INDUSTRIAL AREA ADDITION TO BUILDING M7-1061 FOR PAYLOAD CONTROL ROOMS



AREA MAP



VICINITY MAP



LOCATION PLAN

SHEET NO.	FUNCTIONAL CODE	TITLE	REV.
1	V-1	COVER SHEET & DRAWING INDEX	
2	V-2	BORROW PIT LOCATION	
3	C-1	SITE & UTILITY PLAN	
4	A-1	FLOOR PLAN & ELEVATIONS	
5	A-2	REFLECTED CEILING PLAN & ROOF PLAN	
6	A-3	DOOR SCHEDULE & DETAILS	
7	S-1	FDN. & FIN. FLR. PLAN SECTS. & DETS.	
8	M-1	FLOOR PLAN PLUMBING & FIRE PROTECT.	
9	M-2	FLOOR PLAN & DETAILS AND HVAC	
10	M-3	FLOW DIAGRAMS	
11	E-1	POWER AND LIGHTING LAYOUTS	
12	E-2	GROUNDING & POWER PLANS & DETAILS	
13	E-3	FIRE DETECTION PLAN	
14	E-4	ESS & COMMUNICATION PLAN	
15	E-5	SINGLE LINE, PNL.-BDS. & FIXT. SCHED.	
16	E-6	SITE PLAN & TRAY DETAILS	
17	E-7	INST. CABLE SINGLE LINE DIAGRAM	
18	E-8	INSTRUMENTATION CABLE SCHEDULE	

SHEET NO.	FUNCTIONAL CODE	TITLE (CONT.)	REV.
19	E-9	INSTRUMENTATION CABLE SCHED.	
20	E-10	CABLE PLAN	
21	E-11	EXISTING SAEF-2 M7-1210	
22	E-12	TD - 14000 PANEL DETAILS	
23	E-13	TD - 14001 PANEL DETAILS	
24	E-14	TD - 14002 PANEL DETAILS	
25	E-15	SAEF-2 M7-1210 TD CABINET DET.	
26	E-16	EQUIPMENT RACK FRAME ASSY.	
27	E-17	INSTRUMENTATION DETAILS	
28	E-18	'TD' PANEL SUPPORT DETAILS	
29	E-19	CCS WIRING DIAGRAMS	

DRAWING INDEX



SPECIFICATION NO. 79K29003

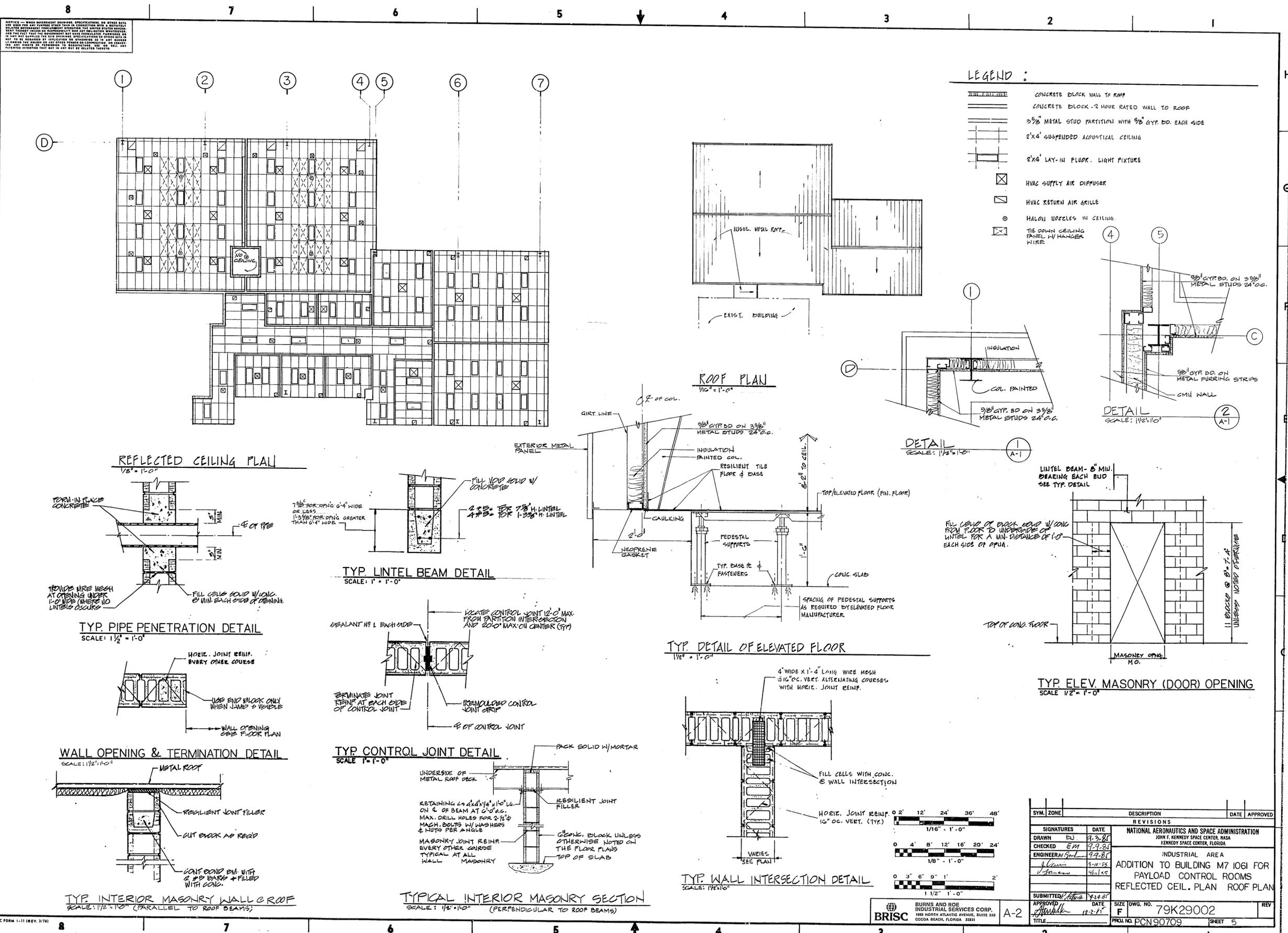
BURNS AND ROE INDUSTRIAL SERVICES CORP.  
180 NORTH ATLANTIC AVENUE, SUITE 330  
COCONA BEACH, FLORIDA, 32931

C-B REVISED SH. E-1, E-2, E-3.		DATE APPROVED
REVISIONS		
SIGNATURES	DATE	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION JOHN F. KENNEDY SPACE CENTER, FLORIDA INDUSTRIAL AREA ADDITION TO BUILDING M7-1061 FOR PAYLOAD CONTROL ROOMS COVER SHEET & DRAWING INDEX
DRAWN <i>D. Brown</i>	5/10/65	
CHECKED <i>T. Utter</i>	7/9/65	
ENGINEER <i>T. Utter</i>	7/9/65	
APPROVED <i>C. Adams</i>	7/21/65	SIZE DWG. NO. <b>79K29002</b>
APPROVED <i>M. L. Brown</i>	10/6/65	PROJ. NO. PCN 90709
TITLE		SHEET 1 OF 29

DOCUMENT RELEASE AUTHORIZATION		KENNEDY SPACE CENTER, NASA		PAGE 1 OF 1	
REV. LETTER	DATE	APPROVAL	SYSTEM	EXPIRES	REASON
			A-015001-1005		
			Payload Control Rooms for SAEF-2		
			FTS/SR000		
			90709		
			N/A		
			N/A		B/L 497.01







SYM.	ZONE	DESCRIPTION	DATE	APPROVED
REVISIONS				
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION				
JOHN F. KENNEDY SPACE CENTER, NASA				
KENNEDY SPACE CENTER, FLORIDA				
INDUSTRIAL AREA A				
ADDITION TO BUILDING M7 1061 FOR				
PAYLOAD CONTROL ROOMS				
REFLECTED CEIL. PLAN ROOF PLAN				
SIGNATURES	DATE			
DRAWN	9-2-85			
CHECKED	EM			
ENGINEER	9-9-85			
9-11-85				
4/1/85				
SUBMITTED	9-2-85			
APPROVED	DATE	SIZE	DWG. NO.	REV
	12-2-85	F	79K29002	
TITLE	PRCL. NO. PCN90709		SHEET 5	

BRISCO  
BURNS AND ROE  
INDUSTRIAL SERVICES CORP.  
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COCONA BEACH, FLORIDA 33531

DOCUMENT RELEASE AUTHORIZATION		KENNEDY SPACE CENTER, NASA	
REV. LETTER	DATE	APPROVAL	BY
DRA REVISION		DIA NO.	
		A-01SC01-275	
		SHOW	
		PAYLOAD CONTROL ROOMS FOR SMT-2	
		SIC	
		ETC SR PROOD	
		PCN	
		50/09	
		EFFECTIVITY	
		N/A	
		MODEL NO.	
		N/A	

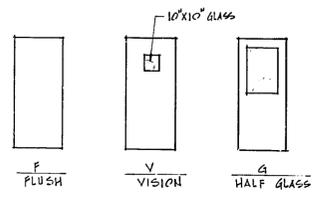
NOTICE: THIS DOCUMENT CONTAINS SPECIFICATIONS OF WORK WHICH ARE THE PROPERTY OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. IT IS TO BE USED ONLY FOR THE PROJECT AND AT THE LOCATION SPECIFIED HEREIN. IT IS TO BE KEPT IN THE PROJECT OFFICE AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. ANY UNAUTHORIZED REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT IS PROHIBITED AND WILL BE SUBJECT TO PROSECUTION UNDER THE APPLICABLE LAWS OF THE UNITED STATES OF AMERICA.

DOOR SCHEDULE												
DOOR NO.	SIZE W X H	DOOR		FRAME		DETAILS			GLASS	LABEL	HDW SET	REMARKS
		THK	TYPE	MATL	TYPE	MATL	HEAD	JAMB				
1	3'-0" X 7'-0"	1 3/4"	A	HM	A	HM	-	-	1/4" WIRE	-	2	
2			F				H-1	J-1	S-1	C	1	
3			V				H-1	J-1	1/4" WIRE	B	1	
4			V				H-1	J-1		B	1	
5			A				H-2	J-2		C	1	
6												
7												
8												
9												
10							H-2	J-2	S-1	C	1	
11												
12							H-2	J-2	S-1	C	1	
13							H-2	J-2	S-1	C	1	
14	3'-0" X 7'-0"	1 3/4"	F				H-2	J-2	1/4" WIRE	C	1	
15	PK. 3'-0" X 7'-0"	1 3/4"	FL								3	24" X 24" LOUVER
16	PK. 3'-0" X 7'-0"	1 3/4"	F	HM	A	HM					3	
17	PK. 5'-0" X 8'-0"		F	STL.	B	STL.					SEE SPEC.	
18	3'-0" X 7'-0"	1 3/4"	F	HM	A	HM					2	
19	3'-0" X 7'-0"	1 3/4"	F	HM	A	HM					2	
20	20'-0" X 5'-2"		KU	STL.	B	STL.	H-3	J-3	S-2			POWER OPERATED-NONINSULATED DR.
21	PK. 2'-6" X 7'-0"	1 3/4"	F	HM	A	HM	H-1	J-1	S-1		4	
22	PK. 2'-6" X 7'-0"	1 3/4"	F	HM	A	HM	H-1	J-1	S-1		4	
23	PK. 5'-0" X 8'-0"		F	STL.	B	STL.					SEE SPEC.	
24	PK. 3'-0" X 7'-0"	1 3/4"	F	HM	A	HM					3	
25	PK. 3'-0" X 7'-0"	1 3/4"	F	HM	A	HM					3	

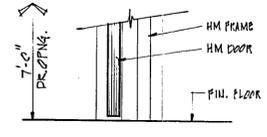
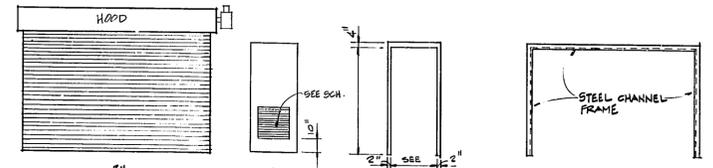
NOTE: NO BLOCK WALL REQUIRED UNDER FLOOR  
C DOORS Nos. 20, 21 & 22

ROOM FINISH SCHEDULE											
ROOM NO.	ROOM NAME	FLOOR		BASE	WALLS				CEILING		REMARKS
		MATL	COLOR		NORTH	SOUTH	EAST	WEST	TYPE	HEIGHT	
130	VESTIBULE	RESIL. TILE	#52111	4 VINYL	PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	SUSP. ACQUS.	8'-0"	
131	KORRIDOR				PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	SUSP. ACQUS.	8'-0"	
132	TERMINAL ROOM				PAINTED CONC. BLK.	PAINTED CONC. BLK.	PAINTED CONC. BLK.	PAINTED CONC. BLK.	EXPOSED		ELEVATED FLOOR
133	TERMIN. CLOSET				CONC. BLK.	PAINTED CONC. BLK.	PAINTED CONC. BLK.	PAINTED CONC. BLK.	EXPOSED		FLOOR
134	PAYLOAD CONTROL RM. # 1				PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	SUSP. ACQUS.	8'-2"	FLOOR
135	PAYLOAD CONTROL RM. # 2	RESIL. TILE	#52111		PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	SUSP. ACQUS.	8'-2"	FLOOR
136	OFFICE									8'-0"	
137	OFFICE									8'-0"	
138	OFFICE										
139	ENGINEERING RM.										
140	ENGINEERING RM.										
141	OFFICE										
142	OFFICE										
143	OFFICE										
144	OFFICE	CARPET		4" VINYL	PAINTED GYP. BD.	PAINTED GYP. BD.	PAINTED GYP. BD.	SUSP. ACQUS.	8'-0"		
145	MECHANICAL ROOM	CONC.			PAINTED CONC. BLK.	METAL LINER PANEL	METAL LINER PANEL	PAINTED CONC. BLK.	EXPOSED		CLEAR SEALER ON FLOOR

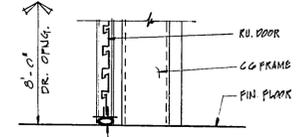
DOOR TYPES



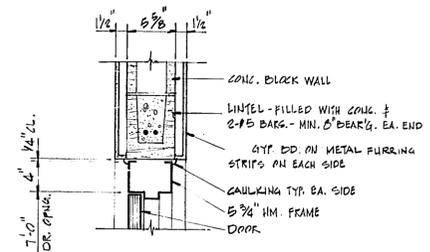
FRAME TYPES



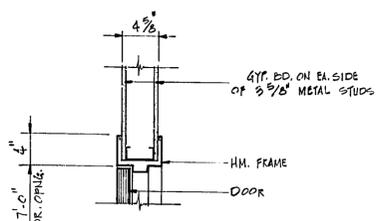
SILL S-1  
1 1/2" = 1'-0"



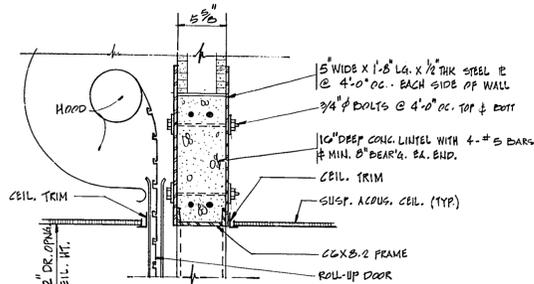
SILL S-2  
1 1/2" = 1'-0"



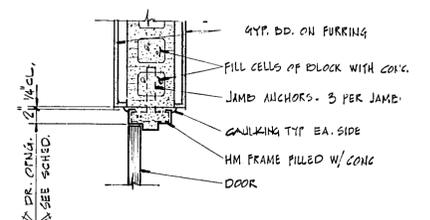
HEAD H-1  
1 1/2" = 1'-0"



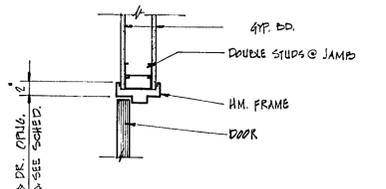
HEAD H-2  
1 1/2" = 1'-0"



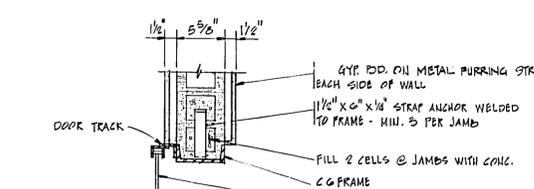
HEAD H-3  
1 1/2" = 1'-0"



JAMB J-1  
1 1/2" = 1'-0"



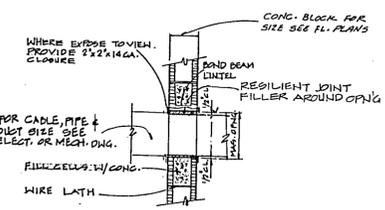
JAMB J-2  
1 1/2" = 1'-0"



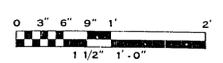
JAMB J-3  
1 1/2" = 1'-0"

NOTES:

1. RESILIENT FLOOR TILE - ARMSTRONG EXCELON VINYL TILE # 52111 "CREAM"
2. ALL INTERIOR FINISHES SHALL BE NONCOMBUSTIBLE HAVING A FLAME SPREAD RATING OF 25 OR LESS (CLASS A).
3. INTERIOR WALLS TO BE PAINTED SHALL BE FINISHED IN FED. STD. 595 COLOR # 7880.
4. INTERIOR METAL DOORS & METAL FRAMES SHALL BE FINISH PAINTED IN FED. STD. 595 COLOR # 0122.
5. VINYL BASE COLOR SHALL BE BROWN.



TYP. CABLE, PIPE & DUCT PENETRATION DETAIL  
SCALE: 1/2" = 1'-0"



SYM. ZONE	DESCRIPTION	DATE	APPROVED
SIGNATURES			
DRAWN	EM	9.3.85	
CHECKED	EM	9.5.85	
ENGINEER	J. L. ...	9.5.85	
SUBMITTED LETTER 9.28.85			
APPROVED	H. ...	10.2.85	
DATE			
SIZE	DWG. NO.	79K29002	REV

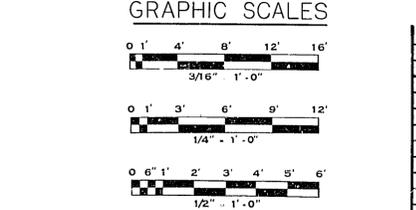
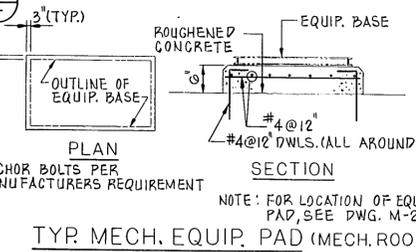
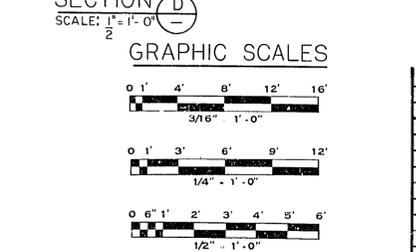
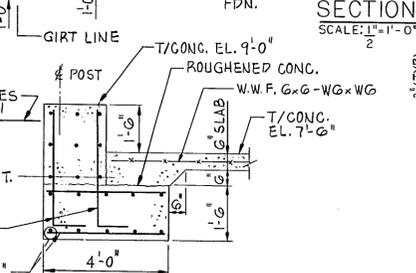
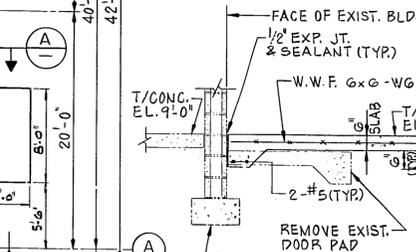
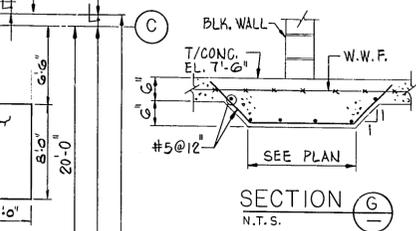
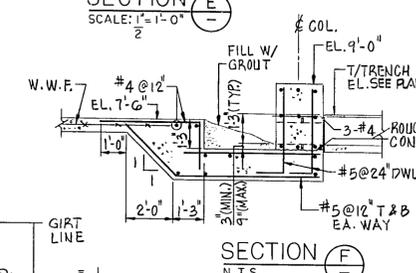
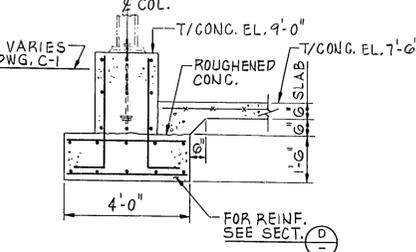
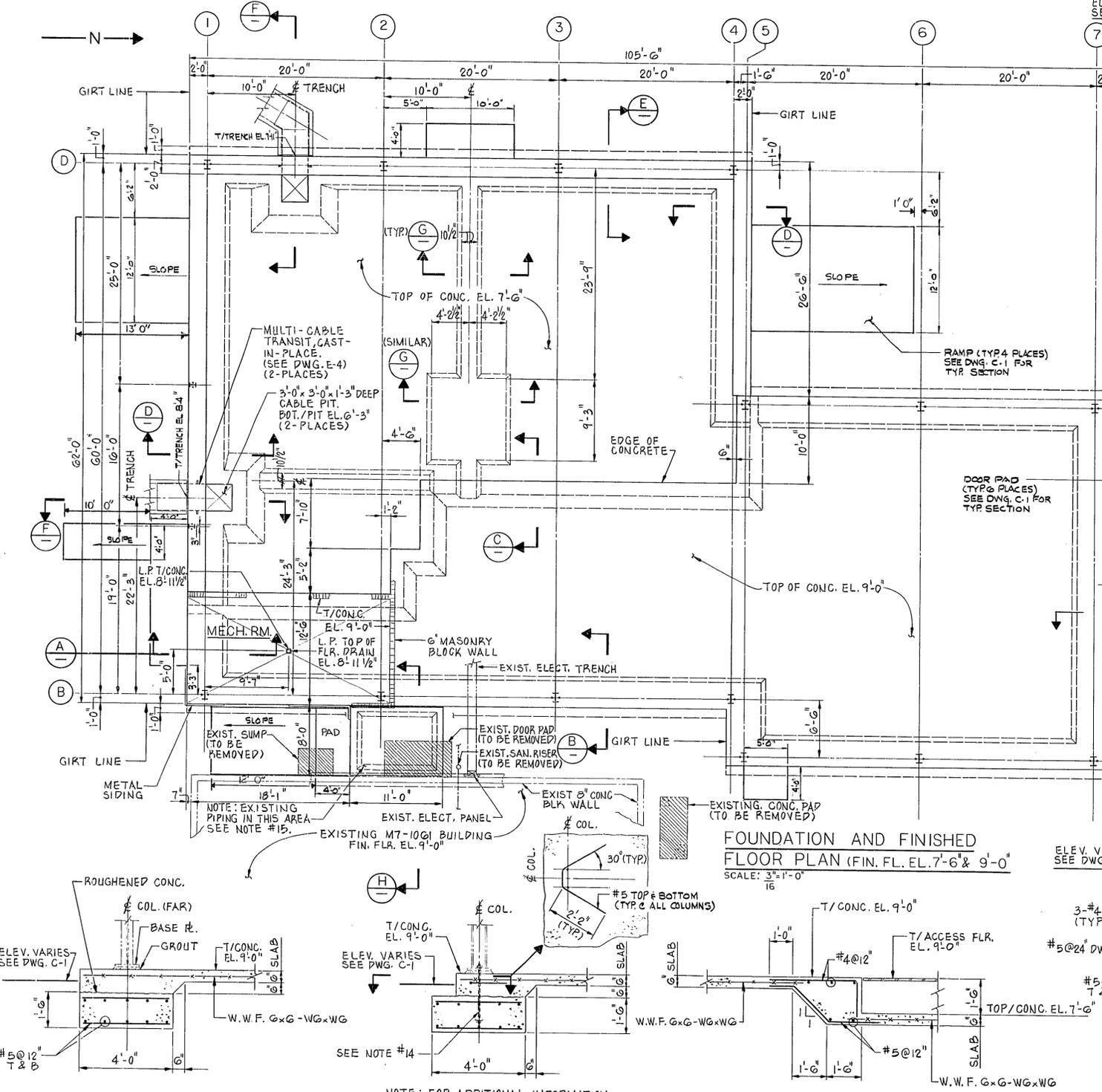
BRISCO  
BURNS AND ROE INDUSTRIAL SERVICES CORP.  
180 NORTH ATLANTIC AVENUE, SUITE 300  
COCOA BEACH, FLORIDA 32931

REV. LETTER	DATE	APPROVAL	DESCRIPTION

NOTICE: THIS DOCUMENT CONTAINS SPECIFICATIONS AND NOTES WHICH ARE SUBJECT TO CHANGE WITHOUT NOTICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF ALL CODES AND STANDARDS REFERRED TO IN THIS DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF ALL CODES AND STANDARDS REFERRED TO IN THIS DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE LATEST EDITION OF ALL CODES AND STANDARDS REFERRED TO IN THIS DRAWING.

**NOTES**

- DESIGN AND CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACT 318, LATEST EDITION.
- ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 5000 PSI.
- REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, LATEST EDITION, GRADE 60.
- WELDED WIRE FABRIC SHALL BE FLAT SHEETS CONFORMING TO ASTM A185.
- ALL REINFORCEMENT SHALL HAVE MINIMUM COVER AS PER ACI 318, LATEST EDITION.
- SPICES OF REINFORCEMENT SHALL BE CLASS C OR CLASS B IF STAGGERED, PER ACI 318.
- CONCRETE CONTACT SURFACES SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED PRIOR TO PLACING OF NEW CONCRETE.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ONE INCH.
- WATER VAPOR BARRIER TO BE INSTALLED UNDER ALL SLABS PLACED ON SOIL.
- SEE ARCHITECTURAL DRAWINGS FOR DOOR LOCATIONS.
- SEE CIVIL DRAWINGS FOR SITE DRAINAGE AND FINISH GRADE ELEVATIONS.
- ALL SLABS ON GRADE AND FOUNDATIONS SHALL BE PLACED ON 12" COMPACTED GRANULAR MATERIAL. MATERIAL SHALL BE A GRANULAR SOIL HAVING A MAXIMUM OF 20 PERCENT BY WEIGHT PASSING THROUGH #100 SIEVE DETERMINED IN ACCORDANCE WITH ASTM D1490. MAXIMUM PARTICLE SIZE SHALL NOT EXCEED 3/8 INCH. MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% THE MAXIMUM DENSITY BASED ON AASHTO T180.
- ALL CONCRETE SLABS AND TOP SURFACES OF EQUIPMENT PADS SHALL HAVE A TROWEL FINISH.
- ANCHOR BOLTS AND SHEAR ANGLES SHALL BE PER PRE-ENGINEERED BUILDING MANUFACTURER'S STANDARD REQUIREMENT AND SHALL SATISFY LOADING CRITERIA AND ALL SPECIFIED CODES.
- SEE SHEET M-1 FOR REMOVAL OF EXISTING WATER AND SEWER PIPING.



SYM. ZONE	DESCRIPTION	DATE	APPROVED
REVISIONS			
SIGNATURES	DATE	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	
DRAWN	10/24/85	JOHN F. KENNEDY SPACE CENTER, NASA	
CHECKED	11/19/85	KENNEDY SPACE CENTER, FLORIDA	
ENGINEER	12/11/85	INDUSTRIAL AREA	
ADDITION TO BUILDING M7-1061 FOR PAYLOAD CONTROL ROOMS FOUNDATION AND FIN. FLR. PLAN SECTIONS AND DETAILS			
SUBMITTED	12/11/85	DATE	SIZE DWG. NO.
APPROVED	12/11/85	DATE	F 79K29002
TITLE	PRJCL NO. PCN 90709		SHEET 7

BRISCO  
180 NORTH ATLANTIC AVENUE, SUITE 330  
COCOA BEACH, FLORIDA 32931

REV. LETTER	DATE	APPROVAL	DESCRIPTION
1	10/24/85	J. L. CROOK	ADDITION TO BUILDING M7-1061 FOR PAYLOAD CONTROL ROOMS FOUNDATION AND FIN. FLR. PLAN SECTIONS AND DETAILS