

**MARYLAND HISTORICAL TRUST  
DETERMINATION OF ELIGIBILITY FORM**

NR Eligible: yes   
no

Property Name: Building 786, Nitration House Inventory Number: CH-815  
 Address: 101 Strauss Ave, Building 786 City: Indian Head Zip Code: 20640  
 County: Charles USGS Topographic Map: Indian Head  
 Owner: Department of the Navy Is the property being evaluated a district?  yes  
 Tax Parcel Number: N/A Tax Map Number: N/A Tax Account ID Number: N/A  
 Project: N/A Agency: Department of the Navy  
 Site visit by MHT Staff:  no  yes Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Is the property located within a historic district?  yes  no

*If the property is within a district* District Inventory Number: \_\_\_\_\_  
 NR-listed district  yes Eligible district  yes District Name: \_\_\_\_\_  
 Preparer's Recommendation: Contributing resource  yes  no Non-contributing but eligible in another context

*If the property is not within a district (or the property is a district)*  
 Preparer's Recommendation: Eligible  yes  no

Criteria:  A  B  C  D Considerations:  A  B  C  D  E  F  G  None

Documentation on the property/district is presented in: *Historical and Architectural Investigation of 1950's-ERA Industrial Areas and Miscellaneous Buildings Indian Head Division, Naval Surface Warfare Center, Indian Head, Charles County, MD.*  
 Prepared by R. Christopher Goodwin & Associates, Inc., March 2005

**Description of Property and Eligibility Determination:** *(Use continuation sheet if necessary and attach map and photo)*

The Nitration House, Building 786, was constructed in 1953 and housed the Biazzi process. The Biazzi process is significant as the first modern nitroglycerine process used by the Navy (Criterion C). The facility was only the third Biazzi plant built in North America. Named after its Swiss inventor, Mario Biazzi, the Biazzi process was a continuous process and is considered one of the safest since only small quantities of nitroglycerine are preset at one time (Atkins 1959:41; Manufacture of Nitroglycerin n.d.; Biazzi Nitroglycerin Plant n.d.; Ordnance Technology 1976:3-2). Although there are no existing programs that require nitroglycerine to be manufactured, the Navy is maintaining this capability at Indian Head for existing and future weapon programs.

Building 786 is a one-story, rectangular, 43' by 26', reinforced-concrete building with a flat concrete roof covered with earth. Modifications to the facility have included process modifications to produce Otto Fuel in 1963, replacement of the production facility in 1968, replacement of troughs in the building in ca. 1968, and the replacement of 3000 gal. tanks in ca. 2000. These modifications have not changed the building function and Building 786 has retained the overall integrity of design and

<b>MARYLAND HISTORICAL TRUST REVIEW</b>	
Eligibility recommended <input checked="" type="checkbox"/>	Eligibility not recommended <input type="checkbox"/>
Criteria: <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D	Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> None
Comments: _____	
_____ Reviewer, Office of Preservation Services	_____ Date 12/19/06
_____ Reviewer, NR Program	_____ Date 12/19/06

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MARYLAND HISTORICAL TRUST  
NR-ELIBILITY REVIEW FORM

Continuation Sheet No. 1

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association with the industrial process. Building 786, which houses the Biazzi process of producing nitroglycerine, has the significance and the integrity necessary for individual listing on the National Register of Historic Places under Criterion C.

George Buffkin, Community  
Planner NAVFAC Washington

(Reviewed by: Jeffrey C. Bossart,  
Director Environmental Program,  
Naval Support Activity South  
Potomac)

Prepared by:

Date Prepared: September 26, 2006

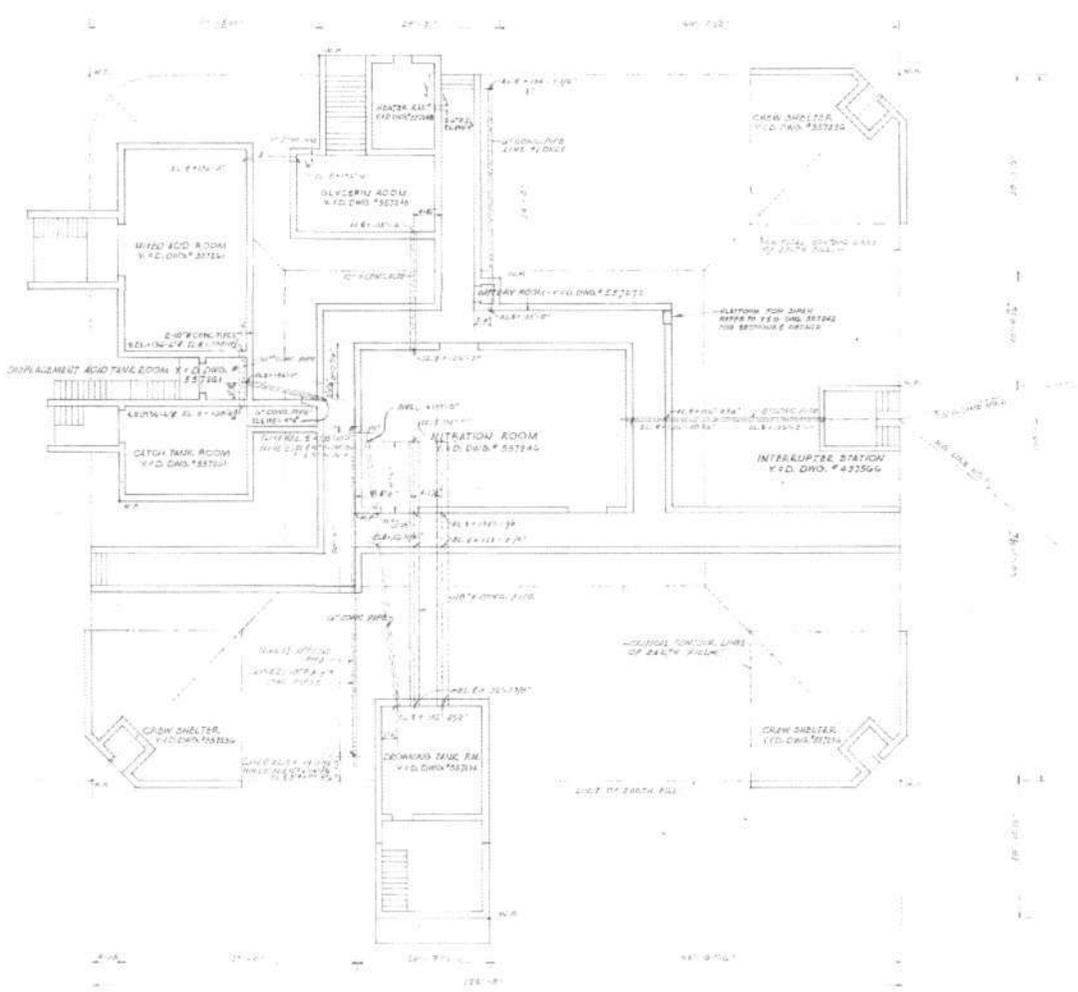
CH-815

P-161 DRAWINGS REFERENCE LIST  
MAY 11, 2006

Page Number	Building	Title on Drawing	Subtitle	Drawing Date	Drawing ID	Closest Standard Drawing Dimensions (inches)
2	786	NITROGLYCERIN PLANT NITRATION BLDGS #786 & #788	MECHANICAL GLYCERIN & MIXED ACID EQPT ARR	01/1952	00497563	42 x 30
3	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL KEY PL	01/1952	00497565	42 x 30
4	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL INTERRUPTER STATION - PLAN & DETAILS	01/1952	00497566	42 x 30
5	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL MIXED ACID RM	01/1952	00497619	42 x 30
6	786	NITROGLYCERIN PLANT NITRATION BLDG #786	MECHANICAL EQPT & PIPING SECTS	01/1952	00557200	42 x 30
7	786	NITROGLYCERIN PLANT NITRATION BLDG #786	ARCHITECTURAL ROOF PL, ELS & DETS	01/1952	00557225	42 x 30
8	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL DROWNING TANK ROOM	01/1952	00557234	42 x 30
9	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL CREW SHELTER	01/1952	00557236	42 x 30
10	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL BARRICADE SECTS & DETS	01/1952	00557242	42 x 30
11	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL FDN PL, SECTS & DETS	01/1952	00557246	42 x 30
12	786	NITROGLYCERIN PLANT GLYCERIN & HEATER RMS - NITRATION BLDG 786	STRUCTURAL PLANS, ELEVATIONS, & SECTIONS	01/1952	00557248	42 x 30
13	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL-NITRATION PANEL & GRATING - DETAILS	01/1952	00557252	42 x 30
14	786	NITROGLYCERIN PLANT NITRATION BLDG #786	MECHANICAL-N.G. INTERRUPTER & JET REEMULSIFIER	01/1952	00557257	42 x 30
15	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL, MIXED ACID ROOM, CATCH TANK ROOM & DISPLACEMENT ACID TANK ROOM FLOOR & ROOF PLANS	01/1952	00557261	42 x 30
16	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL, SECTIONS & DETAILS OF CATCH TANK ROOM	01/1952	00557262	42 x 30
17	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL, DISPLACEMENT ACID TANK ROOM SECTIONS & DETAILS	01/1952	00557271	42 x 30
18	786	NITROGLYCERIN PLANT NITRATION BLDG #786	STRUCTURAL BARRICADE SECTS & DETS	01/1952	00557273	42 x 30
19	786	NG PLANT	NITRATION EQPT OPERATION DESCRIPTION	01/1953	00580719	42 x 30
20	786	NG PLANT	NITRATION PANEL ARRGMNT	01/1953	00580735	42 x 30
21	786	NITRATION BLDGS NITROGEN SYSTEM	PRP	01/1953	00619835	42 x 30
22	786	ALTER CONNECTION TO EMULSIFIER	PLAN SECTIONS & DETAILS	01/1954	00028004	42 x 30
23	786	OTTO FUEL II FACIL	FPL, ADD TO BLDG	01/1963	00028043	42 x 30
24	786	OTTO FUEL II FACIL	FLOW DIAG	01/1963	00028044	42 x 30
25	786	OTTO FUEL II FACIL	PRP	01/1963	00028046	42 x 30
26	786	NITROGLYCERIN PLANT	DROWNING TANK SUPPORT	11/1965	OSK-6093	17 x 11
27	786	REPLACEMENT OF PROCESSING FACILITIES, NITRATOR BUILDING 786	CIVIL & UTILITIES	01/1968	01282806	42 x 30
28	786	REPLACEMENT OF PROCESSING FACILITIES, NITRATOR BUILDING 786	MISCELLANEOUS DETAILS - STRUCTURAL	01/1968	01282813	42 x 30
29	786	REPLACEMENT OF PROCESSING FACILITIES, NITRATOR BUILDING 786	PROCESS PIPING - MECHANICAL	01/1968	01282823	42 x 30
30	786	REPLACEMENT OF PROCESSING FACILITIES, NITRATOR BUILDING 786	PROCESS INSTRUMENTATION	01/1968	01282830	42 x 30
31	786	REPLACEMENT OF PROCESSING FACILITIES, NG CONTROL PANEL BUILDING 786, PNEUMATIC SCHEMATIC	PROCESS INSTRUMENTATION	01/1968	01282831	42 x 30
32	786	REPLACEMENT OF PROCESSING FACILITIES, PGDN CONTROL PANEL BUILDING 786, PNEUMATIC SCHEMATIC	PROCESS INSTRUMENTATION	01/1968	01282832	42 x 30
33	786	REPLACEMENT OF PROCESSING FACILITIES, NG CONTROL PANEL BUILDING 786, PNEUMATIC SCHEMATIC	PROCESS INSTRUMENTATION	01/1968	01282833	42 x 30
34	786	REPLACEMENT OF PROCESSING FACILITIES, PGDN CONTROL PANEL BUILDING 786, PNEUMATIC SCHEMATIC	PROCESS INSTRUMENTATION	01/1968	01282834	42 x 30
35	786	PROCESS VENTILATION	SECTS & DETS	01/1969	00028067	42 x 30
36	786	PROCESS VENTILATION	DETS	01/1969	00028068	42 x 30
37	786	REPL. PROCESSING FACIL.	EDUCTOR TUBE ASSY	01/1970	00028070	42 x 30
38	786	REPL. PROCESSING FACIL.	EDUCTOR VENT RETURN FLANGE	01/1970	00028071	42 x 30
39	786	REPL. PROCESSING FACIL.	MOD NITRATOR VENT SYSTEM	01/1970	00028079	42 x 30
40	786	BIAZZI PLANT TROUGH REPLACEMENT	SPLS, DETS, GEN NOTES	06/1978	078-2044	42 x 30
41	786	BIAZZI PLANT TROUGH REPLACEMENT	TROUGH DETS	06/1978	078-2046	42 x 30
42	786	OTTO FUEL FACILITIES	VENTILATION SYSTEM MODIFICATIONS	08/1978	03112063	42 x 30
43	786	OTTO FUEL PLANT ADDITION	FL PL & DETS	01/1979	03021539	42 x 30
44	786	OTTO FUEL PLANT ADDITION	FL PL	01/1979	03021541	42 x 30
45	786	ALTER VARIOUS INDUSTRIAL FAC	NEUTRALIZING TANK PL & DETS	08/1983	03124448	42 x 30
46	786	SPILL CONTAINMENT, 4TH PHASE	PLANS	03/1992	03151260	42 x 30
47	786	SPILL CONTAINMENT, 4TH PHASE	DETAILS	03/1992	03151262	42 x 30
48	786	BUBBLER & OVERFLOW TANKS	BUBBLER PLANS, SECTION & DETAILS OVERFLOW TANK PLANS, SECTION & DETAILS		03178104	11 x 8.5
49	786	BUBBLER & OVERFLOW TANKS			03178105	11 x 8.5
50	786	REPLACE 3,000 GAL TANKS	CIVIL STRUCTURAL DETAILS		03178179	11 x 8.5
51	786	REPLACE 3,000 GAL TANKS	DEMO AND NEW FL PLANS & DETAILS		03178180	11 x 8.5
52	786	REPLACE 3,000 GAL TANKS	EXISTING PLANS & NOTES BLDG 786		03178181	11 x 8.5
53	786	REPLACE 3,000 GAL TANKS	NEW PLANS & NOTES BLDG 786		03178182	11 x 8.5
54	786	REPLACE 3,000 GAL TANKS	PLAN, NOTES & SCHEM BLDG 790		03178183	11 x 8.5
55	786	REPLACE 3,000 GAL TANKS	NEW PIPING SCHMATIC & NOTES		03178184	11 x 8.5



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PLAN (SCALE 1/4" = 1'-0")

GENERAL NOTES

REFERENCE DWGS.

- 1. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 2. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 3. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 4. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 5. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 6. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 7. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 8. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 9. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940
- 10. ALL WORK TO BE ACCORDING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
  - A. S. I. C. - 1940
  - B. S. I. C. - 1940
  - C. S. I. C. - 1940
  - D. S. I. C. - 1940



1	DATE	DESCRIPTION	BY
2	DATE	DESCRIPTION	BY
3	DATE	DESCRIPTION	BY
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11	DATE	DESCRIPTION	BY
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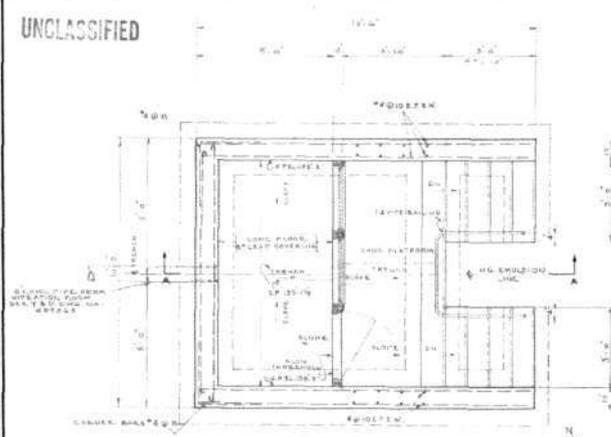
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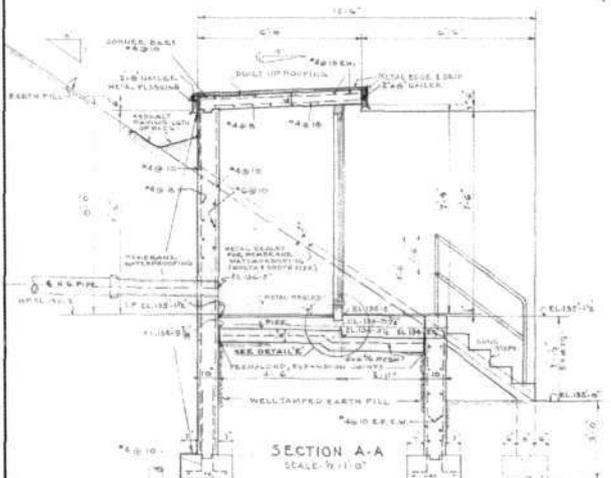
CONFIDENTIAL

CH-815

UNCLASSIFIED



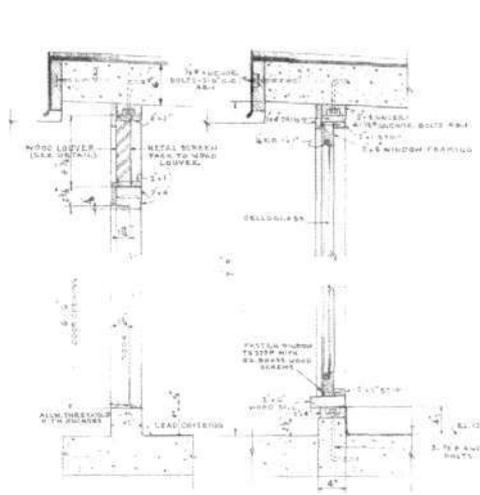
FLOOR PLAN  
SCALE: 1/4" = 1'-0"



SECTION A-A  
SCALE: 1/4" = 1'-0"

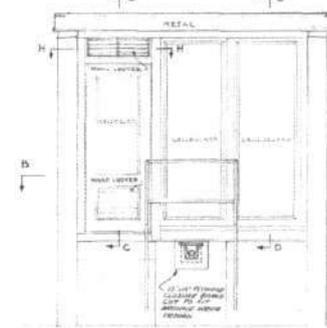


DETAIL OF CONC. STEPS  
SCALE: 1/4" = 1'-0"

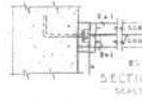


SECTION C-C  
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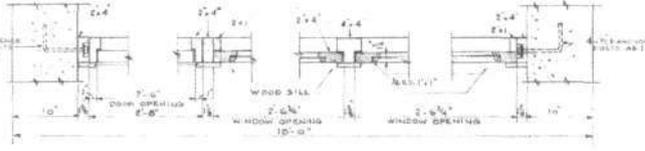
SECTION D-D  
SCALE: 1/4" = 1'-0"



EAST ELEVATION  
SCALE: 1/4" = 1'-0"

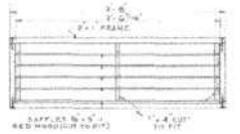


SECTION H-H  
SCALE: 1/4" = 1'-0"



SECTION B-B  
SCALE: 1/4" = 1'-0"

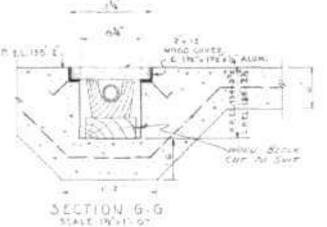
NOTE:  
ANGLE CELLULOSE WINDOW FRAMES 2 1/2" WIDER 1/2" HIGH  
TRIM TO FIT OPENINGS



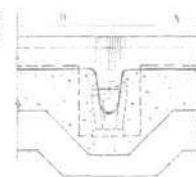
DETAIL OF WOOD LOUVER  
ABOVE DOOR  
PARTIAL FRAME TOGETHER WITH 2 1/2" WIDE  
BRASS WOOD SCREWS AT EACH JOINT  
SCALE: 1/4" = 1'-0"



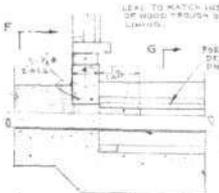
DETAIL OF ANCHOR BOLT  
A-B-1  
SCALE: 1/4" = 1'-0"



SECTION G-G  
SCALE: 1/4" = 1'-0"



SECTION F-F  
SCALE: 1/4" = 1'-0"



DETAIL E  
SCALE: 1/4" = 1'-0"

DIMENSIONS OF OPENING THRU CURB  
SCALE: 1/4" = 1'-0"



REFERENCE DWGS.	DATE	BY
YARD		
BUILDING STARTOUT	4-27-07	
GRADING & DRAINAGE	5-27-08	
ELECTRICAL	5-27-08	
KEY PLAN	4-27-08	
MECHANICAL	5-27-08	
WOOD THROUGH DETAIL	4-27-08	

NO.	DATE	DESCRIPTION
1	4-27-07	ISSUED FOR PERMITS
2	5-27-08	ISSUED FOR PERMITS
3	5-27-08	ISSUED FOR PERMITS
4	5-27-08	ISSUED FOR PERMITS
5	5-27-08	ISSUED FOR PERMITS
6	5-27-08	ISSUED FOR PERMITS
7	5-27-08	ISSUED FOR PERMITS
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9	5-27-08	ISSUED FOR PERMITS
10	5-27-08	ISSUED FOR PERMITS

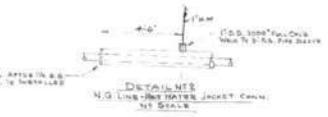
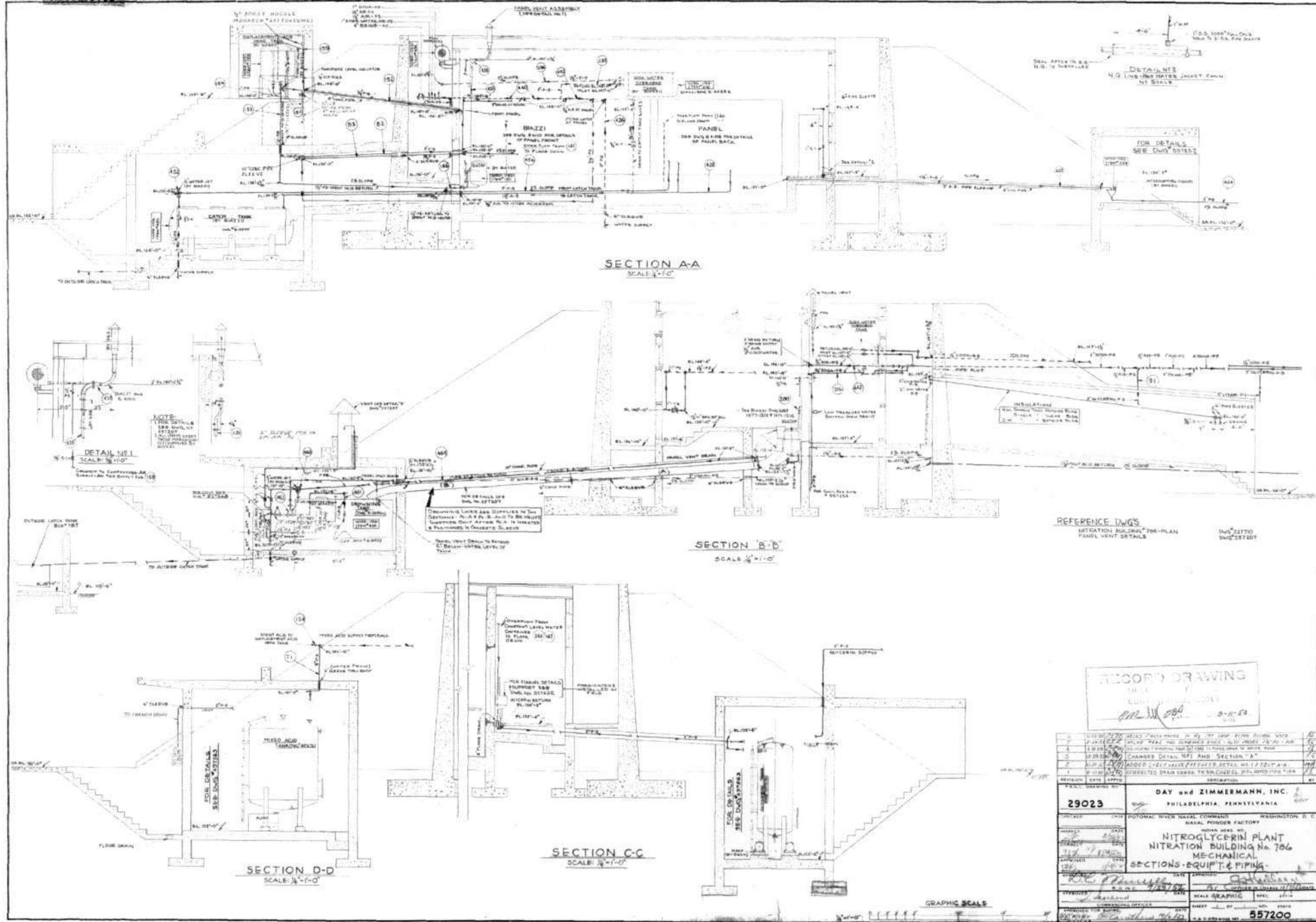
  

PROJECT NUMBER	27081
DESIGNED BY	DAY and ZIMMERMANN, INC.
PHILADELPHIA, PENNSYLVANIA	
CLIENT	POTOMAC RIVER NAVAL COMMAND WASHINGTON, D.C.
PROJECT	NAVAL POWDER FACTORY
LOCATION	NEWARK, MARYLAND
CONTRACT	NITROGLYCERIN PLANT
NO. OF SHEETS	NITRATION B. 065, H2786
DATE	STRUCTURAL
PROJECT	INTER-PTER STATION PLAN & DETAILS
DATE	4-27-08
APPROVED BY	[Signature]
DATE	4-27-08
REVISIONS	AS NOTED
DATE	5-27-08
APPROVED FOR SUBMITTAL	[Signature]
DATE	5-27-08
SHEET	1 OF 1
PROJECT NUMBER	497566

UNCLASSIFIED

GH-815





NOTE:  
FOR DETAILS SEE DWG 20121  
CHECK FOR CORRECTNESS AS SHOWN ON THE DRAWING FOR (12)

FOR DETAILS SEE DWG 20121  
CHECK FOR CORRECTNESS AS SHOWN ON THE DRAWING FOR (12)

REFERENCE DWGS  
NITRATION BUILDING 706-PLAN  
PANEL VENT DETAILS  
DWG 201270  
DWG 201271

RECORD DRAWING  
DATE 3-11-54  
BY [Signature]

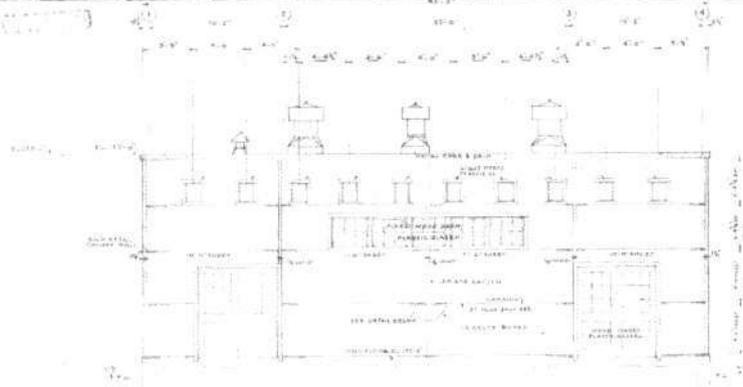
NO.	DATE	DESCRIPTION
1	10/20/53	ISSUED FOR REVIEW IN W.D. BY LOW ENGINEERING UNIT
2	11/10/53	FOR REVIEW BY LOW ENGINEERING UNIT AND PHILADELPHIA NAVAL POWDER FACTORY
3	12/23/53	CHANGED DETAIL 941 AND SECTION "A"
4	1/15/54	ISSUED FOR REVIEW BY THE DETAIL AND SECTION "A"
5	3/11/54	ISSUED FOR REVIEW BY THE DETAIL AND SECTION "A"

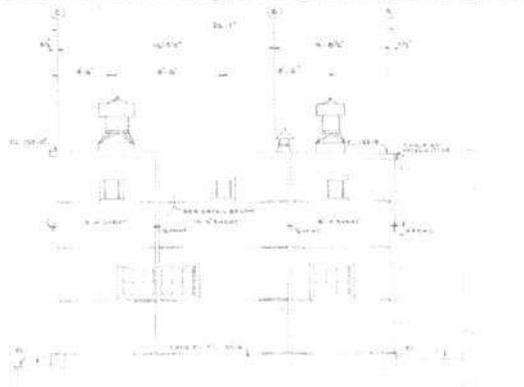
DESIGNED BY	DAY and ZIMMERMANN, INC.
PHILADELPHIA, PENNSYLVANIA	
PROJECT NO.	29023
CLIENT	POTENTIAL INHER NAVAL COMMAND WASHINGTON D.C.
LOCATION	NAVAL POWDER FACTORY
NITROGLYCERIN PLANT NITRATION BUILDING No. 706	
MECHANICAL SECTIONS - EQUIPMENT PIPING	
DATE	3-11-54
SCALE	GRAPHIC
PROJECT NO.	29023
REVISION NO.	557200

24-815

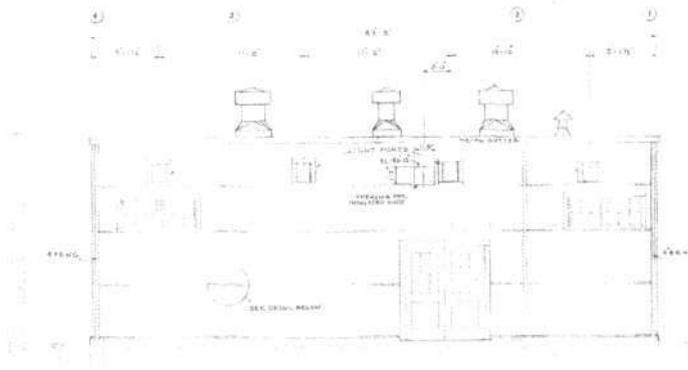
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 PLANS WALL SECTIONS & DETAILS Y&D DWG NO. 55724  
 SECTION & DETAILS Y&D DWG NO. 55726



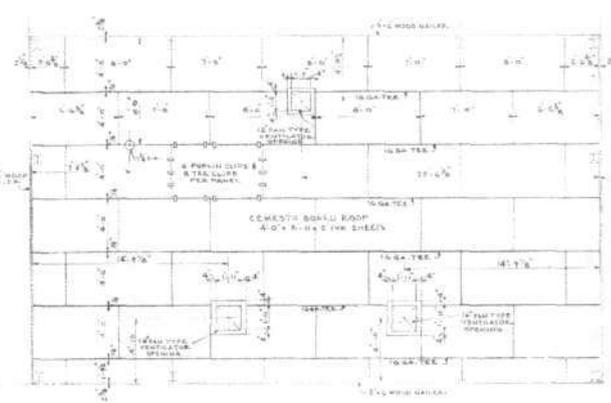
SOUTH ELEVATION  
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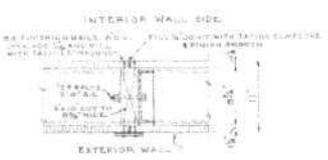
EAST ELEVATION  
 SCALE: 1/4" = 1'-0"  
 WEST ELEVATION SIMILAR



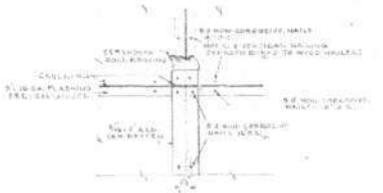
NORTH ELEVATION  
 SCALE: 1/4" = 1'-0"



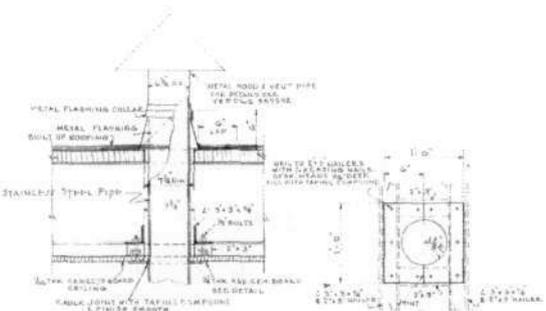
ROOF PLAN  
 BUILT UP ROOFING MATERIALS REMOVED FOR CLARITY  
 SCALE: 1/4" = 1'-0"



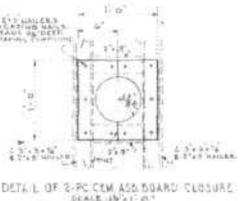
INTERIOR WALL SIDE  
 EXTERIOR WALL



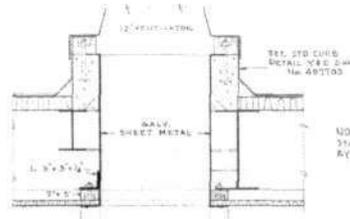
TYPICAL NAILING DETAIL  
 FOR 1/2" THK. CEMENT BOARD  
 SCALE: 1/4" = 1'-0"



DETAIL OF 1/2" DIA. FUME VENT THRU  
 ROOF OF MOTOR ROOM  
 SCALE: 1/4" = 1'-0"



DETAIL OF 2-PC CMU BOARD CLOSURE  
 SCALE: 1/4" = 1'-0"



DETAIL OF VENT OPENING IN MOTOR ROOM  
 SCALE: 1/4" = 1'-0"

NOTE:  
 3/8" DIA. STEEL BOLTS FOR 2" DIA. VENT OPENING CONTACTS

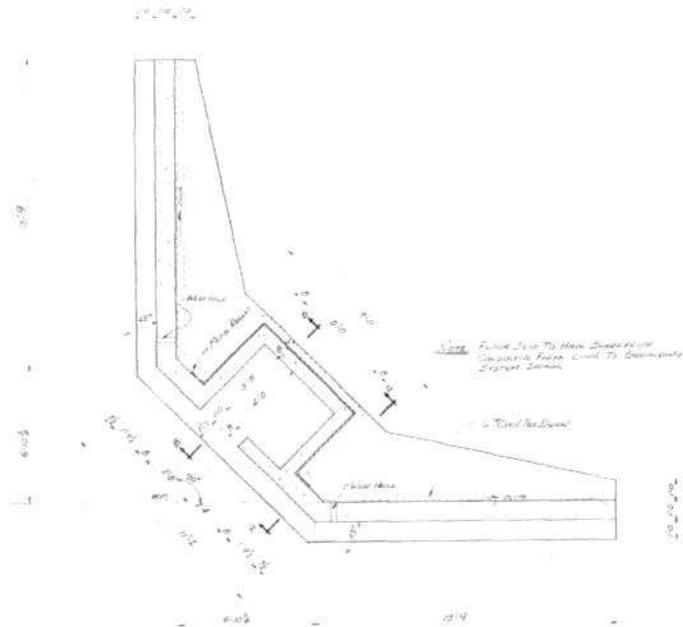
ROOF DRAWING  
 5-17-23

PROJECT NO.	29048	DATE	5-17-23
CLIENT	NAVY	ARCHITECT	DAY and ZIMMERMANN, INC.
LOCATION	POTOMAC RIVER NAVAL CORDON	PHILADELPHIA, PENNSYLVANIA	
DESCRIPTION	NAVAL POWDER FACTORY	WASHINGTON, D. C.	
PROJECT NO.	29048	DATE	5-17-23
CLIENT	NAVY	ARCHITECT	DAY and ZIMMERMANN, INC.
LOCATION	POTOMAC RIVER NAVAL CORDON	PHILADELPHIA, PENNSYLVANIA	
DESCRIPTION	NAVAL POWDER FACTORY	WASHINGTON, D. C.	
PROJECT NO.	29048	DATE	5-17-23
CLIENT	NAVY	ARCHITECT	DAY and ZIMMERMANN, INC.
LOCATION	POTOMAC RIVER NAVAL CORDON	PHILADELPHIA, PENNSYLVANIA	
DESCRIPTION	NAVAL POWDER FACTORY	WASHINGTON, D. C.	
PROJECT NO.	29048	DATE	5-17-23
CLIENT	NAVY	ARCHITECT	DAY and ZIMMERMANN, INC.
LOCATION	POTOMAC RIVER NAVAL CORDON	PHILADELPHIA, PENNSYLVANIA	
DESCRIPTION	NAVAL POWDER FACTORY	WASHINGTON, D. C.	

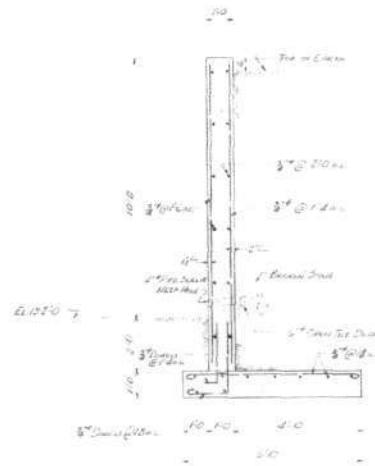
CH-815



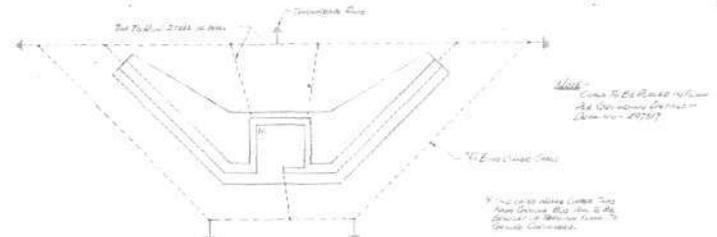
UNCLASSIFIED



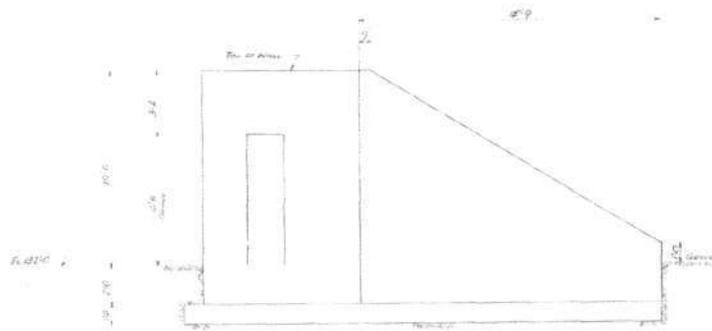
Plan for H.C. Tunnel Room  
Scale 3/10



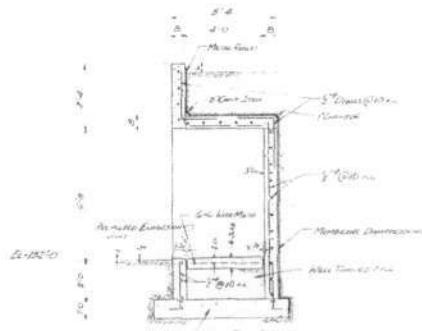
Section AA  
Scale 3/10



Section BB  
Scale 3/10



Elevation  
Scale 3/10



Section BB  
Scale 3/10

General Notes

For General Notes, See: 1. 10-0-0, 10-0-1, 10-0-2, 10-0-3, 10-0-4, 10-0-5, 10-0-6, 10-0-7, 10-0-8, 10-0-9, 10-0-10, 10-0-11, 10-0-12, 10-0-13, 10-0-14, 10-0-15, 10-0-16, 10-0-17, 10-0-18, 10-0-19, 10-0-20, 10-0-21, 10-0-22, 10-0-23, 10-0-24, 10-0-25, 10-0-26, 10-0-27, 10-0-28, 10-0-29, 10-0-30, 10-0-31, 10-0-32, 10-0-33, 10-0-34, 10-0-35, 10-0-36, 10-0-37, 10-0-38, 10-0-39, 10-0-40, 10-0-41, 10-0-42, 10-0-43, 10-0-44, 10-0-45, 10-0-46, 10-0-47, 10-0-48, 10-0-49, 10-0-50, 10-0-51, 10-0-52, 10-0-53, 10-0-54, 10-0-55, 10-0-56, 10-0-57, 10-0-58, 10-0-59, 10-0-60, 10-0-61, 10-0-62, 10-0-63, 10-0-64, 10-0-65, 10-0-66, 10-0-67, 10-0-68, 10-0-69, 10-0-70, 10-0-71, 10-0-72, 10-0-73, 10-0-74, 10-0-75, 10-0-76, 10-0-77, 10-0-78, 10-0-79, 10-0-80, 10-0-81, 10-0-82, 10-0-83, 10-0-84, 10-0-85, 10-0-86, 10-0-87, 10-0-88, 10-0-89, 10-0-90, 10-0-91, 10-0-92, 10-0-93, 10-0-94, 10-0-95, 10-0-96, 10-0-97, 10-0-98, 10-0-99, 10-0-100.

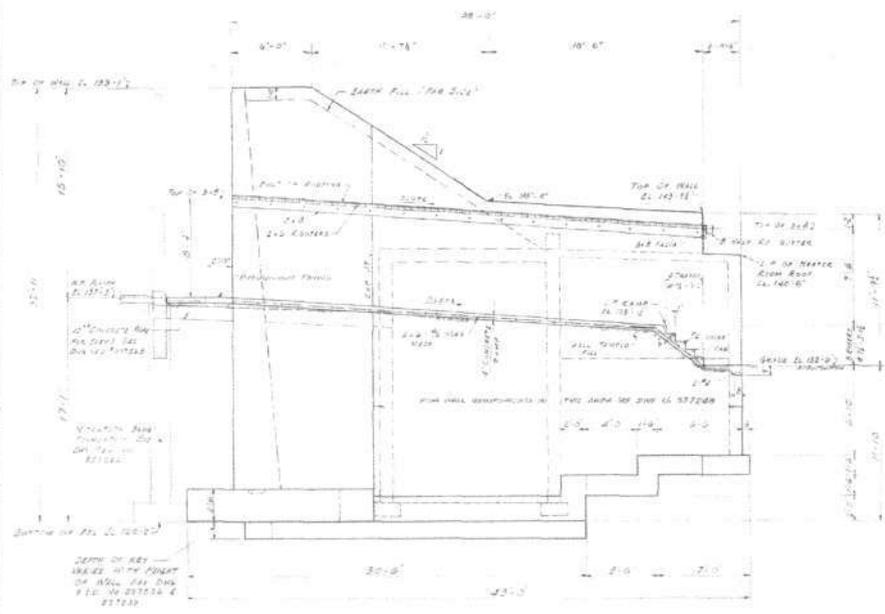


FOR P.L.S. DRAWING  
DATE: 3-11-53  
P.M. [Signature]

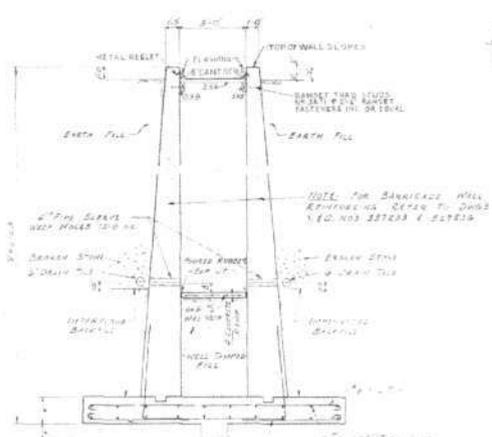
NO.	DATE	BY	DESCRIPTION
29058	3-11-53	[Signature]	DAY and ZIMMERMANN, INC. PHILADELPHIA, PENNSYLVANIA
PROJECT	DATE	BY	DESCRIPTION
NITROGLYCERIN PLANT	3-11-53	[Signature]	NITROGLYCERIN PLANT NITRATION BUILDING Nos. 756 & 758 STRUCTURAL CREW SHELTER PLING ELEVATION & SECTIONS
DESIGNED BY	DATE	BY	DESCRIPTION
[Signature]	3-11-53	[Signature]	[Signature]
CHECKED BY	DATE	BY	DESCRIPTION
[Signature]	3-11-53	[Signature]	[Signature]
APPROVED BY	DATE	BY	DESCRIPTION
[Signature]	3-11-53	[Signature]	[Signature]
DATE	BY	DESCRIPTION	
3-11-53	[Signature]	[Signature]	557236

UNCLASSIFIED

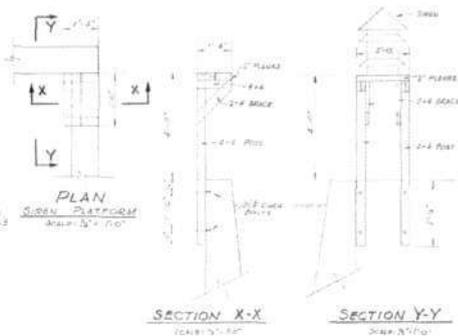
CA-815



SECTION A-A  
SCALE 1/4" = 1'-0"



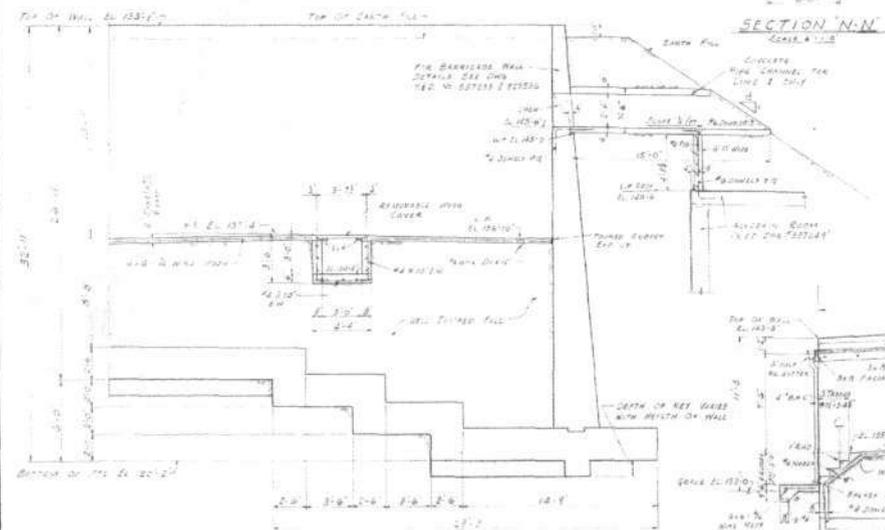
SECTION C-C  
SCALE 1/4" = 1'-0"



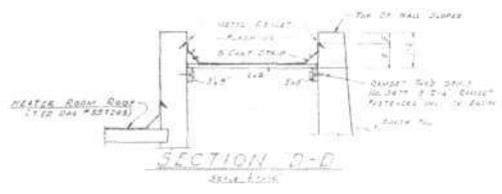
Notes - 1. ALL WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND SPECIFICATIONS FOR CONCRETE AND STEEL DECKING.

GENERAL NOTES  
FOR GENERAL NOTES REFER TO DWG NO. 492274  
1. MAX. WIND PRESSURE 44.50 PSF  
2. THE BARRICADE WALL CONSTRUCTION SEE TECHNICAL BARRICADE WALL DETAILS, REF. DWG. NO. 492536 AND 492537  
NOTE THIS DWG. WITH REF. DWG. NO. 492274

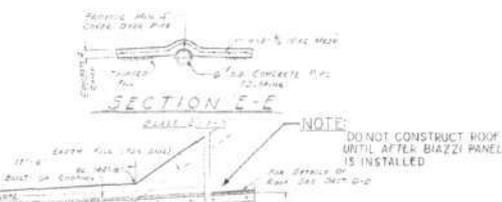
REFERENCE DWG.  
FOR LIST OF REFERENCE DWGS SEE DWG. NO. 492565



SECTION B-B  
SCALE 1/4" = 1'-0"



SECTION D-D  
SCALE 1/4" = 1'-0"



SECTION E-E  
SCALE 1/4" = 1'-0"

NOTE: DO NOT CONSTRUCT ROOF UNTIL AFTER BIAZZI PANEL IS INSTALLED

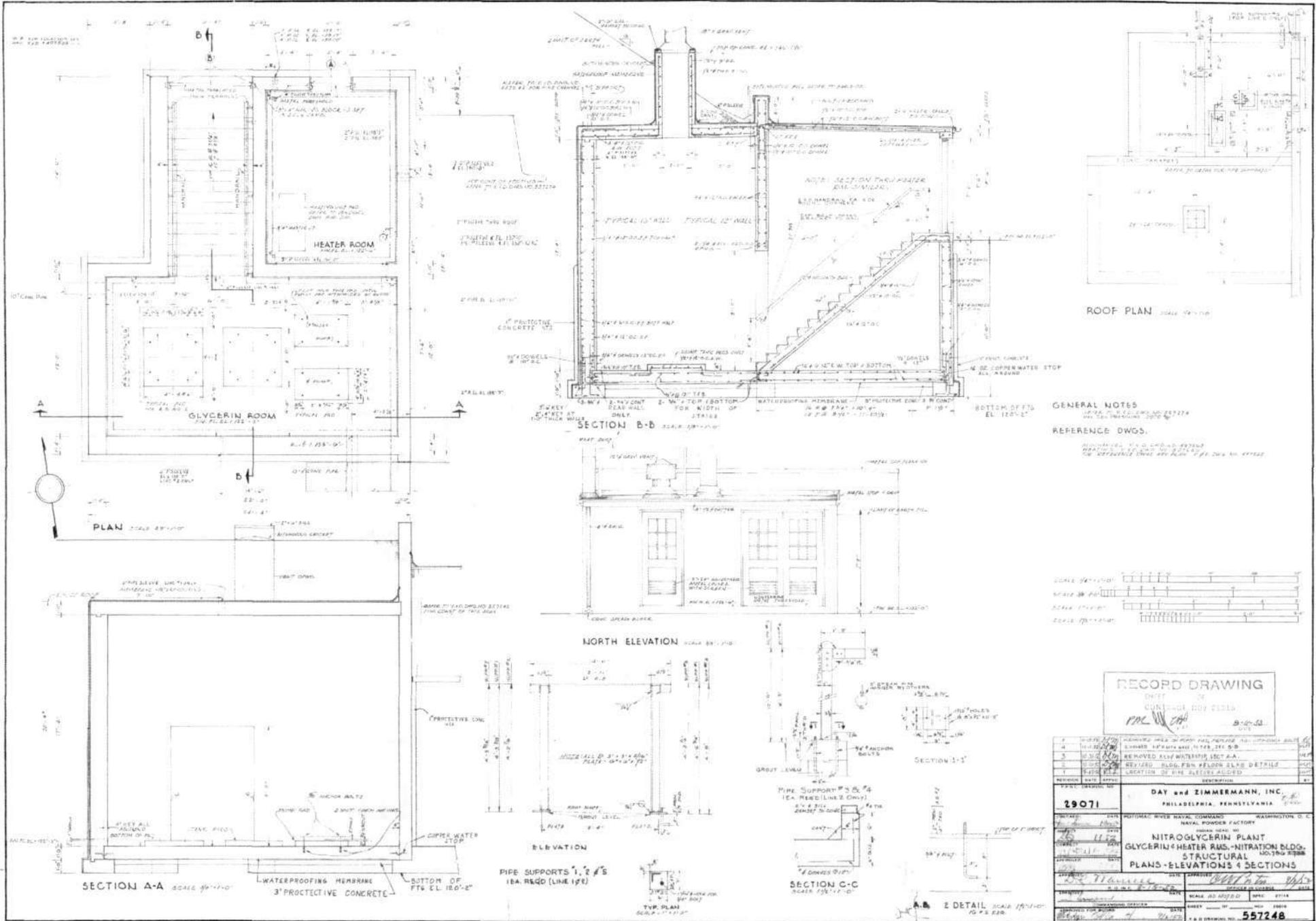


SECTION F-F SHOWN SECTION 3-3 OPPOSITE HAND  
SCALE 1/4" = 1'-0"

RECORD DRAWING			
SHEET NO. 101			
DATE: 3-1-53			
DESIGNED BY: [Signature]	CHECKED BY: [Signature]	DATE: 3-1-53	SCALE: AS SHOWN
PROJECT NO. 29065	PROJECT NAME: DAY and ZIMMERMANN, INC. PHILADELPHIA, PENNSYLVANIA	CLIENT: AUTOMATIC RIVER NAVAL COMMAND	LOCATION: NAVAL POWER FACTORY WASHINGTON, D.C.
DATE: 1-1-53	INDIAN HEAD NO. 40	NITROGLYCERIN PLANT	
STRUCTURAL BARRICADE SECTIONS & DETAILS			
APPROVED BY: [Signature]	DATE: 1-1-53	APPROVED BY: [Signature]	DATE: 1-1-53
PROJECT NO. 29065	SHEET NO. 101	OF 101	557242

CH-815





**GENERAL NOTES**  
 1. SEE PLAN FOR DIMENSIONS AND LOCATIONS.  
 2. ALL CONCRETE SHALL BE 3000 PSI.  
 3. ALL STEEL SHALL BE A36.  
 4. ALL WELDS SHALL BE AS SHOWN.  
 5. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.  
 6. ALL FINISHES SHALL BE AS SHOWN.  
 7. ALL MATERIALS SHALL BE AS SHOWN.  
 8. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.  
 9. ALL WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARCHITECT.

**REFERENCE DWGS.**  
 1. SEE PLAN FOR DIMENSIONS AND LOCATIONS.  
 2. ALL CONCRETE SHALL BE 3000 PSI.  
 3. ALL STEEL SHALL BE A36.  
 4. ALL WELDS SHALL BE AS SHOWN.  
 5. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.  
 6. ALL FINISHES SHALL BE AS SHOWN.  
 7. ALL MATERIALS SHALL BE AS SHOWN.  
 8. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.  
 9. ALL WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARCHITECT.

**RECORD DRAWING**  
 SHEET NO. 1  
 OF  
 CONSTRUCTION OF  
 THE  
 NITRO GLYCERIN PLANT  
 PHILADELPHIA, PENNSYLVANIA

NO.	DATE	DESCRIPTION	BY	CHECKED
1	11/10/20	ISSUED FOR CONSTRUCTION	J. H. [Signature]	[Signature]
2	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
3	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
4	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
5	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
6	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
7	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
8	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
9	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]
10	11/10/20	REMOVED 1/2" DIA. PIPE FROM FLOOR	[Signature]	[Signature]

**DAY and ZIMMERMANN, INC.**  
 PHILADELPHIA, PENNSYLVANIA

**NITRO GLYCERIN PLANT**  
 PHILADELPHIA, PENNSYLVANIA  
 NITRO GLYCERIN PLANT  
 HEATER ROOM-NITRATION BLDG.  
 STRUCTURAL  
 PLANS-ELEVATIONS & SECTIONS

**29071**

**PHILADELPHIA NAVAL COMMAND** WASHINGTON D. C.  
 NAVAL POWDER FACTORY  
 11700 11th St.  
 PHILADELPHIA, PA. 19115

**SCALE:** 1/4" = 1'-0"

**DATE:** 11/10/20

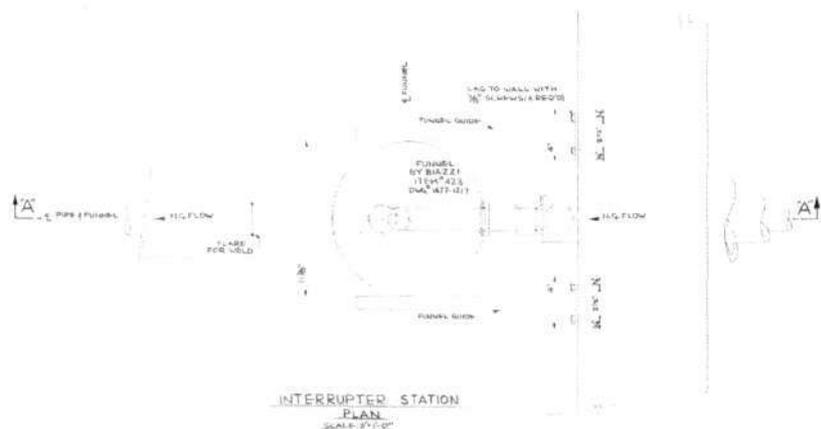
**BY:** J. H. [Signature]

**CHECKED:** [Signature]

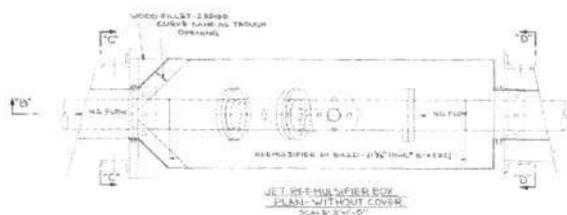
**NO. 557248**

11/10/20





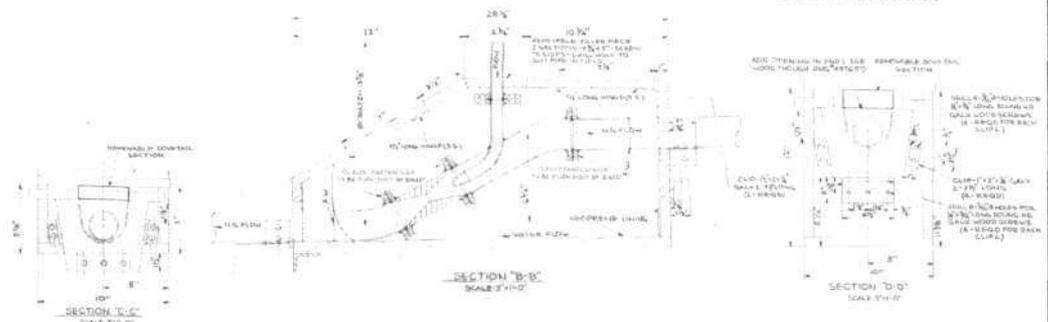
INTERRUPTER STATION  
PLAN  
SCALE 3/4"=1'-0"



JET REEMULSIFIER BOX  
PLAN - WITHOUT COVER  
SCALE 3/4"=1'-0"

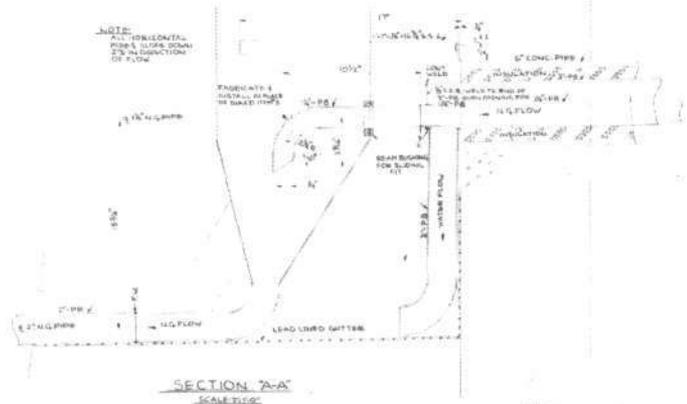
MATERIAL NOTE:  
TO BE CONSTRUCTION OF 3/4" GYPSUM

INSTALLATION INSTRUCTIONS:  
1. OUTER SURFACE MUST BE REINFORCED WITH RIBS FROM BALLETS.  
2. SURFACE REINFORCED TO FORM 1 PART TO TROUGH.  
3. SURFACE TO WATERPROOFING 1 KATALIN COVER.  
4. RIBS TO BE CONSTRUCTION OF 3/4" GYPSUM.

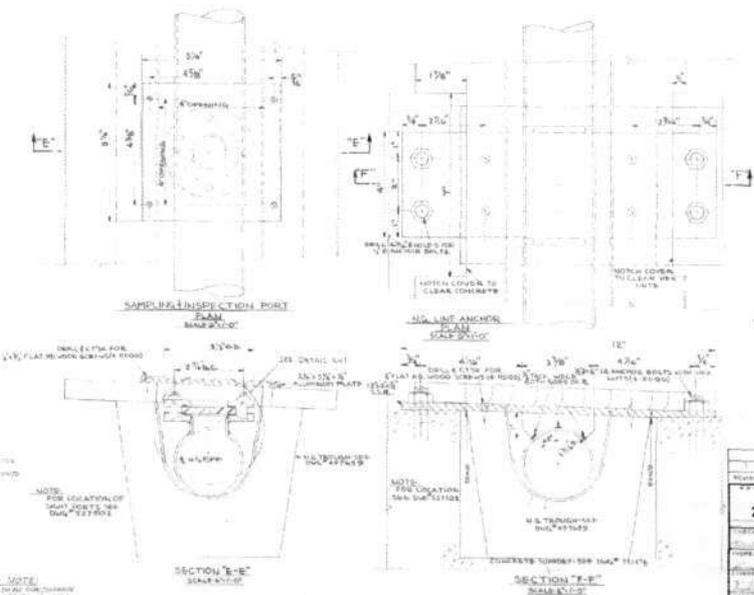


SECTION B-B  
SCALE 3/4"=1'-0"

SECTION D-D  
SCALE 3/4"=1'-0"



SECTION A-A  
SCALE 3/4"=1'-0"

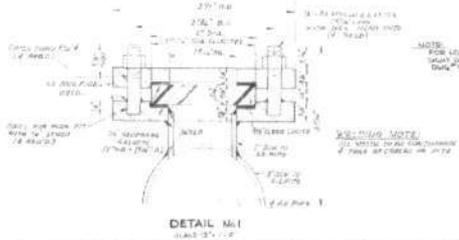


SECTION E-E  
SCALE 3/4"=1'-0"

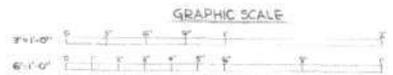
SECTION F-F  
SCALE 3/4"=1'-0"

REFERENCE DWGS:  
N.G. WALKWAYS DWG # 497559  
HOLDING HOUSE AREA - BRING DWG # 527502  
NITRATION BLDG # 786 - BRING DWG # 527710  
NITRATION BLDG # 786 - BRING DWG # 527719

200 W. BIRWING  
P. H. W. CO.  
0-10-53



DETAIL No. 1  
SCALE 3/4"=1'-0"



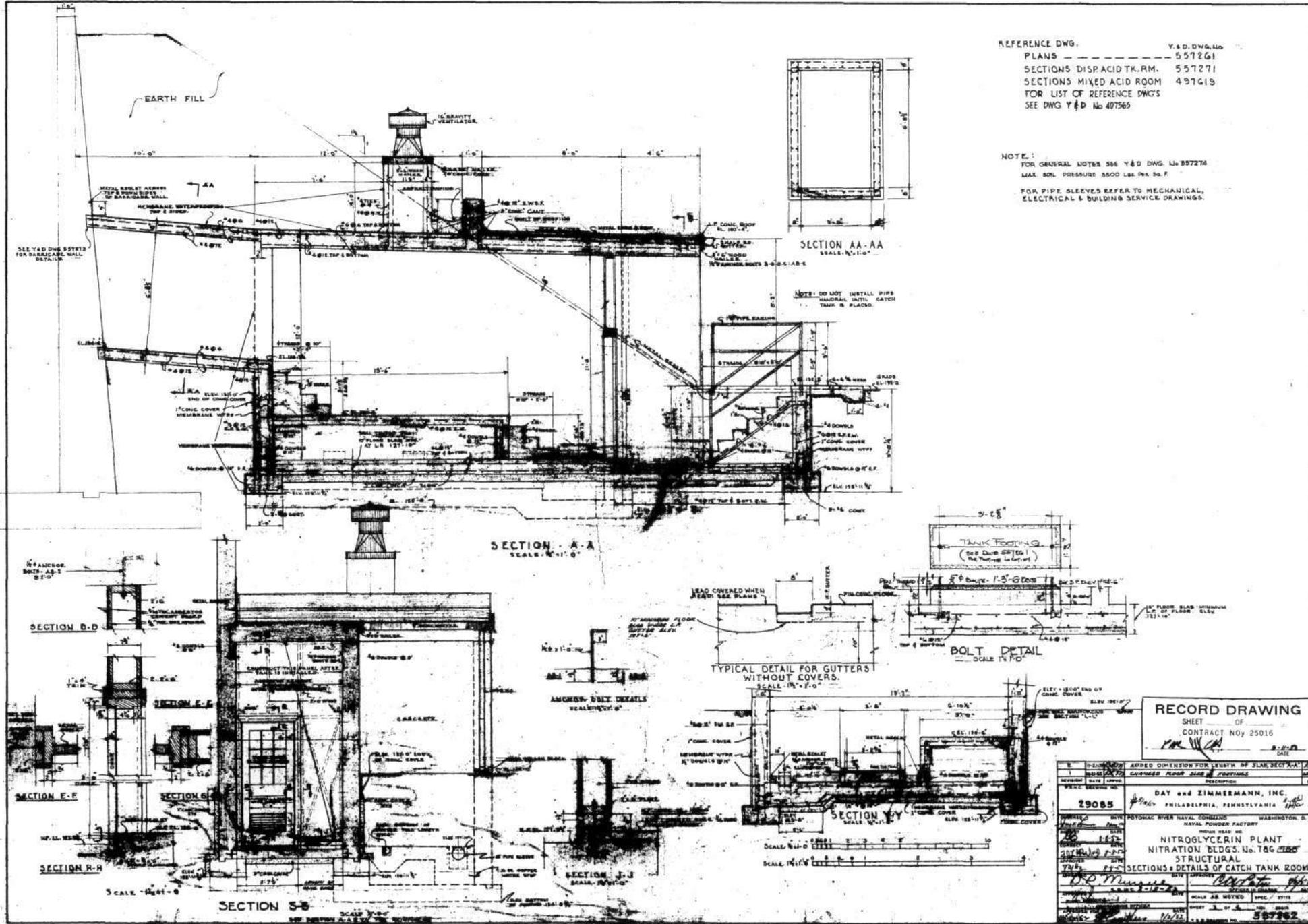
GRAPHIC SCALE

DATE	2/1/53	PROJECT	NITROGLYCERIN PLANT
DRAWN	W. J. W.	CHECKED	W. J. W.
SCALE	AS SHOWN	APPROVED	W. J. W.
29080		DAY and ZIMMERMANN, INC.	
		PHILADELPHIA, PENNSYLVANIA	
NITROGLYCERIN PLANT NITRATION BLDGS # 786 MECHANICAL N.G. INTERRUPTER + JET REEMULSIFIER			
DATE	2/1/53	PROJECT	NITROGLYCERIN PLANT
DRAWN	W. J. W.	CHECKED	W. J. W.
SCALE	AS SHOWN	APPROVED	W. J. W.
29080		DAY and ZIMMERMANN, INC.	
		PHILADELPHIA, PENNSYLVANIA	
NITROGLYCERIN PLANT NITRATION BLDGS # 786 MECHANICAL N.G. INTERRUPTER + JET REEMULSIFIER			
DATE	2/1/53	PROJECT	NITROGLYCERIN PLANT
DRAWN	W. J. W.	CHECKED	W. J. W.
SCALE	AS SHOWN	APPROVED	W. J. W.
29080		DAY and ZIMMERMANN, INC.	
		PHILADELPHIA, PENNSYLVANIA	
NITROGLYCERIN PLANT NITRATION BLDGS # 786 MECHANICAL N.G. INTERRUPTER + JET REEMULSIFIER			
DATE	2/1/53	PROJECT	NITROGLYCERIN PLANT
DRAWN	W. J. W.	CHECKED	W. J. W.
SCALE	AS SHOWN	APPROVED	W. J. W.
29080		DAY and ZIMMERMANN, INC.	
		PHILADELPHIA, PENNSYLVANIA	
NITROGLYCERIN PLANT NITRATION BLDGS # 786 MECHANICAL N.G. INTERRUPTER + JET REEMULSIFIER			
DATE	2/1/53	PROJECT	NITROGLYCERIN PLANT
DRAWN	W. J. W.	CHECKED	W. J. W.
SCALE	AS SHOWN	APPROVED	W. J. W.
29080		DAY and ZIMMERMANN, INC.	
		PHILADELPHIA, PENNSYLVANIA	
NITROGLYCERIN PLANT NITRATION BLDGS # 786 MECHANICAL N.G. INTERRUPTER + JET REEMULSIFIER			

CAB 15



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REFERENCE DWG. Y&D DWG. No. 557261  
 PLANS 557261  
 SECTIONS DISPACID TK. RM. 557271  
 SECTIONS MIXED ACID ROOM 497419  
 FOR LIST OF REFERENCE DWG'S SEE DWG Y&D No. 497565

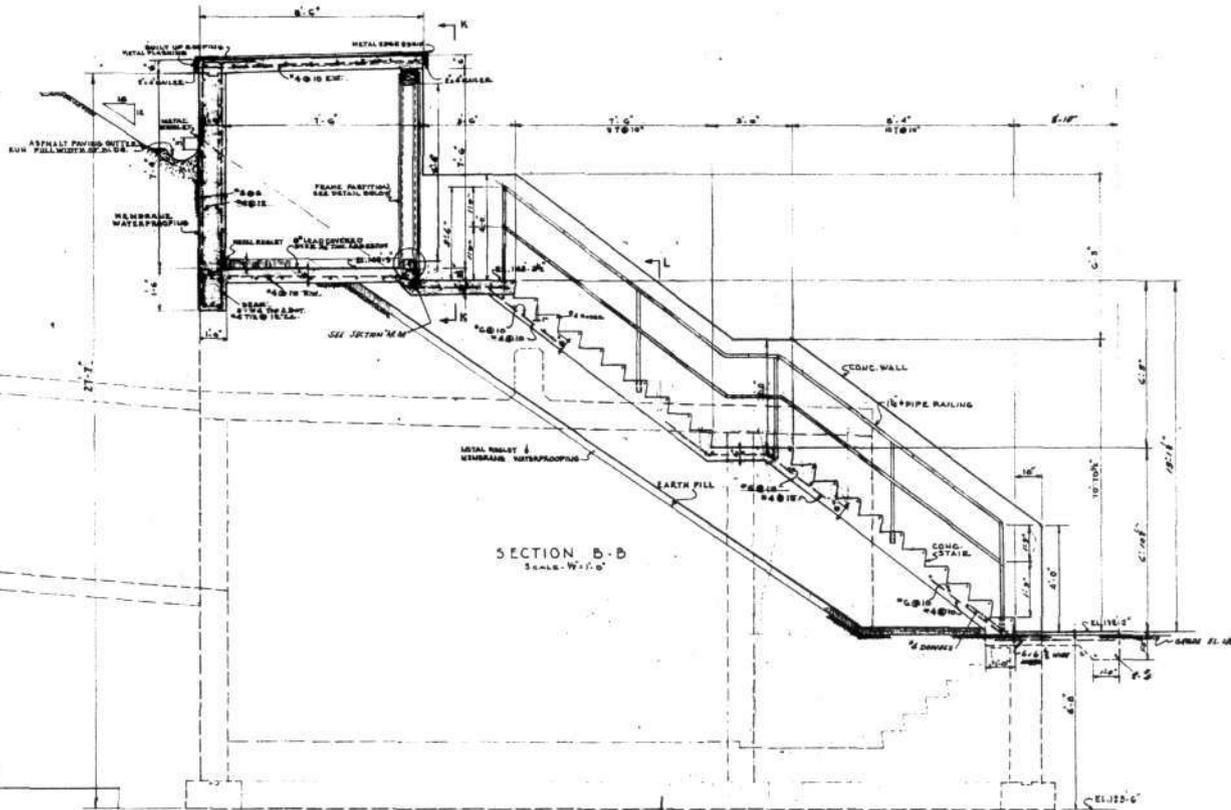
NOTE:  
 FOR GENERAL NOTES SEE Y&D DWG. NO. 557274  
 MAX. SOIL PRESSURE 5800 LBS. PER SQ. FT.  
 FOR PIPE SLEEVES REFER TO MECHANICAL,  
 ELECTRICAL & BUILDING SERVICE DRAWINGS.

RECORD DRAWING  
 SHEET OF  
 CONTRACT NO. 25016  
 DATE

NO.	29085	APPROVED DIMENSION FOR LENGTH OF SLAB, SECTION A-A
REVISION	1	CHANGED FLOOR SLAB & PARTITION
DATE	1/27/42	
DESIGNED BY	DAY and ZIMMERMANN, INC.	
DRAWN BY	PHILADELPHIA, PENNSYLVANIA	
CHECKED BY	NAVY POWDER FACTORY	WASHINGTON, D. C.
DATE	1/27/42	
PROJECT	NITROGLYCERIN PLANT	
DESCRIPTION	NITRATION BLDGS. NO. 78C	
SCALE	STRUCTURAL	
SECTION	SECTIONS & DETAILS OF CATCH TANK ROOM	
BY	DAY and ZIMMERMANN, INC.	
CHECKED BY	DAY and ZIMMERMANN, INC.	
DATE	1/27/42	
NO.	557262	

CA-815

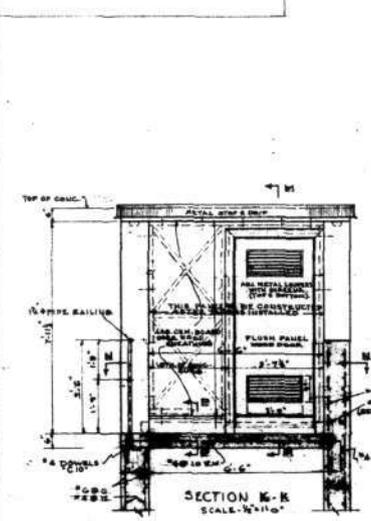
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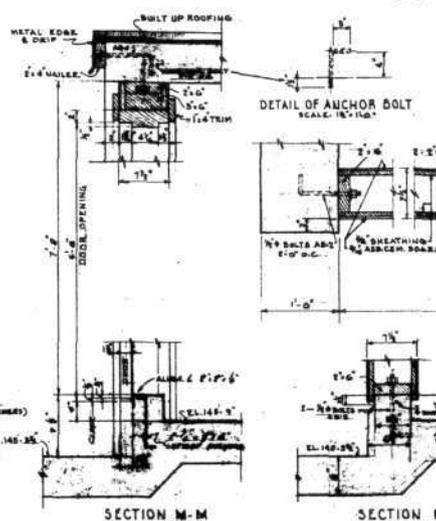
REFERENCE DWGS. Y & D DWG. No.  
 PLANS 5572G1  
 CATCH TANK ROOM 5572G2  
 MIXED ACID ROOM 497G19  
 FOR LIST OF REFERENCE DWG'S  
 SEE DWG. Y & D NO. 4975G9

NOTE:  
 FOR PIPE SLEEVES SEE MECHANICAL, ELECTRICAL  
 AND BUILDING SERVICE DRAWINGS.  
 INSTALL SLEEVES FOR PIPE, RAILING & INSERT PLUGS  
 UNTIL TANK HAS BEEN TAKEN INTO BUILDING.  
 FOR GENERAL NOTES SEE DWG. Y & D NO. 49774  
 MAX. SOIL PRESSURE 3000%

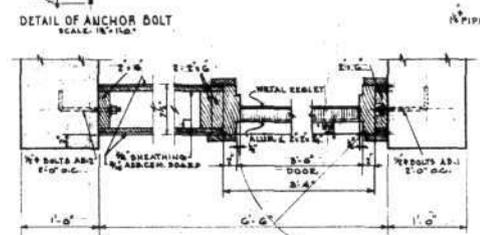
SECTION B-D  
 SCALE: 1/4" = 1'-0"



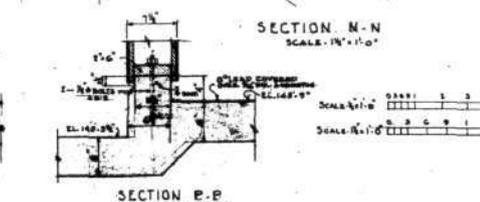
SECTION K-K  
 SCALE: 1/4" = 1'-0"



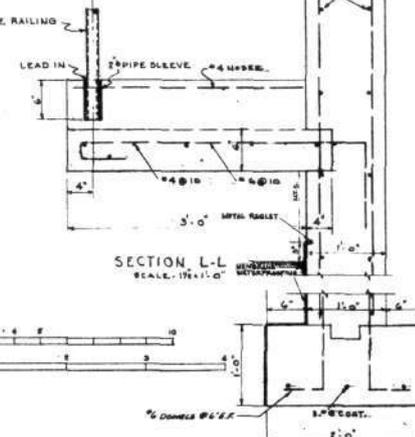
SECTION M-M  
 SCALE: 1/4" = 1'-0"



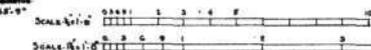
DETAIL OF ANCHOR BOLT  
 SCALE: 1/4" = 1'-0"



SECTION M-N  
 SCALE: 1/4" = 1'-0"



SECTION L-L  
 SCALE: 1/4" = 1'-0"



SCALE: 1/4" = 1'-0"

RECORD DRAWING  
 SHEET OF  
 CONTRACT NO. 25016  
 DATE 3-11-52

1	2	3	4	5	6	7	8	9	10
REVISION	DATE	APPROVED	BY	DESCRIPTION					
29094				DAY and ZIMMERMANN, INC.					
PROJECT				POTOMAC RIVER NAVAL COMBUSTION	WASHINGTON, D. C.				
CLIENT				NAVY	INDIAN HEAD				
CONTRACT				25016					
DRAWING				NITROGLYCERIN PLANT					
TITLE				NITRATION BLDGS. No. 78G					
SUBJECT				STRUCTURAL					
SECTION				DISPLACEMENT ACID TK. ROOM SECTIONS & DETAILS					
DATE				3-11-52					
APPROVED				[Signature]					
SCALE				AS NOTED					
SHEET				3 OF 4					
DWG. NO.				29094					
DATE				3-11-52					
DRAWING NO.				557271					

41-916



ELECTRIC PROCESS CONTROL WIRING FOR EXTRACTION UNITRY  
AS SHOWN ON SHEET ELECTRICAL WIRING DIAGRAM NO. 56071-C

For purposes of analysis, the wiring diagram has been broken up into four main (A) to (D) sections and one (1) s.c. schematic circuit. Drawing 56071B should be used with this description.

Circuit No. 1 - Spent Acid Diluter Motor No. 135

Purpose

To control the spent acid diluter motor No. 135, and to provide alarm indication of high temperature in the diluter.

Description

Closing mercury switch No. 135 on the nitration panel starts the spent acid diluter stirrer motor No. 135.

Provided the motor has been started, if high temperature, 100°F, occurs in the diluter, a contact in dial thermometer No. 137 closes, lighting red light No. 138 on the nitration panel. The red light is extinguished when the temperature in the diluter is normal, or when mercury switch No. 135 is opened, stopping the motor.

Circuit No. 2 - Nitrotator Stirrer Motor No. 4

Purpose

To control nitrotator stirrer motor No. 4.

Description

Closing mercury switch No. 8 on the nitration panel will start the nitrotator stirrer motor No. 4; opening the mercury switch will stop motor.

Circuit No. 3 - First Soda Washer Stirrer Motor No. 184

Purpose

To control the first soda washer stirrer motor No. 184, and to provide alarm indication of low and high temperature in the first soda washer.

Description

Closing the double soda mercury switch No. 187 on the nitration panel starts the first soda washer stirrer motor No. 184. Provided the motor has been started: (a) If low soda water occurs in the overhead tank, pneumatic level switch No. 214 closes, lighting red light No. 217 on the nitration panel; (b) If low temperature, 80°F, occurs in the first soda washer, a contact in dial thermometer No. 189 closes, lighting green light No. 198 on the nitration panel; (c) If high temperature, 95°F, occurs in the first soda washer a contact in dial thermometer No. 187 closes, lighting red light No. 196 on the nitration panel. The two red lights and the green light mentioned above will be extinguished by opening mercury switch No. 187 or when normal conditions occur again. Opening mercury switch No. 187 also stops the stirrer motor.

Circuit No. 4 - Second Soda Washer Stirrer Motor No. 254

Purpose

To control the second soda washer stirrer motor No. 254.

Description

Closing mercury switch No. 257 on the nitration panel starts the second soda washer stirrer motor No. 254; opening the mercury switch stops the motor.

Circuit No. 5 - Third Soda Washer Stirrer Motor No. 264

Purpose

To control the third soda washer stirrer motor No. 264.

Description

Closing mercury switch No. 267 starts the third soda washer stirrer motor No. 264; opening the mercury switch stops the motor.

Circuit No. 6 - First Water Washer Stirrer Motor No. 314

Purpose

To control the first water washer stirrer motor No. 314, and to provide alarm indication of high and low temperature in the first water washer.

Description

Closing mercury switch No. 317 on the nitration panel starts the first water washer stirrer motor No. 314. If the motor has been started and low temperature, 100°F, occurs in the first water washer, a contact in dial thermometer No. 313 closes, lighting green light No. 316 on the nitration panel. If high temperature, 105°F, occurs in the first water washer, a contact in dial thermometer No. 312 closes, lighting red light No. 315 on the nitration panel. The lights are extinguished when the temperature returns to normal, or if mercury switch No. 317 is opened, stopping the motor.

Circuit No. 7 - Second Water Washer Stirrer Motor No. 364

Purpose

To control the second water washer stirrer motor No. 364.

Description

Closing mercury switch No. 367 on the nitration panel starts the second water washer stirrer motor No. 364; opening the switch stops the motor.

Circuit No. 8 - Third Water Washer Stirrer Motor No. 394

Purpose

To control the third water washer stirrer motor No. 394 and to provide alarm indication of high and low temperature in the third water washer.

Description

Closing mercury switch No. 397 on the nitration panel starts the third water washer stirrer motor No. 394. Provided the motor has been started, if low temperature, 100°F, occurs in the third water washer, a contact in dial thermometer No. 403 closes, lighting green light No. 405 on the nitration panel. If high temperature, 110°F, occurs in the third water washer a contact in dial thermometer No. 402 closes, lighting red light No. 404 on the nitration panel. The lights are extinguished when the temperature returns to normal, or if mercury switch No. 397 is opened, stopping the motor.

Circuit No. 9 - Exhaust Fan No. 436

Purpose

To control exhaust fan No. 436 for section of fumes.

Description

Closing mercury switch No. 439 on the nitration panel starts the fan motor No. 436; opening the mercury switch stops the fan.

Circuit No. 10 - Spent Acid Pump No. 155

Purpose

To control spent acid pump motor No. 155 located in spent acid building No. 700.

Description

Closing mercury switch No. 488 on the nitration panel starts the spent acid pump No. 155 in building No. 700; opening the mercury switch stops the pump.

Circuit No. 11 - Brine Circulation Pumps No. 441A and 441B

Purpose

To control the brine circulation pumps No. 441A and 441B, located in building No. 775.

Description

- 1. When the selector switch is in the "OFF" position, providing mercury switch No. 491 on the nitration panel has been closed, either or both brine pumps building No. 775 may be started by pressing the appropriate selector switch on building No. 775. Opening mercury switch No. 491 will stop either or both brine pumps if running. The brine pumps may also be stopped by pressing the appropriate stop push buttons in building No. 775.
- 2. When the selector switch is in "Position 1", closing mercury switch No. 491 on the nitration panel starts brine pump No. 441-A. Opening the mercury switch stops the pump. The pump may also be stopped by pressing and locking the stop button in building No. 775 in the "off" position.
- 3. When the selector switch is in "Position 2", closing mercury switch No. 491 on the nitration panel starts brine pump No. 441-B. Opening the mercury switch stops the pump. The pump may also be stopped by pressing and locking the stop button in building No. 775 in the "off" position.

Circuit No. 12 - Soda Water Pump No. 730

Purpose

To control the soda water pump motor No. 730 in building No. 775.

Description

Closing mercury switch No. 459 on the nitration panel starts the soda water pump motor No. 730 in building No. 775; opening the switch stops the motor.

Circuit No. 13 - Soda Dissolver agitator Motor No. 221

Purpose

To control the soda dissolver agitator motor No. 221.

Description

Closing a manual starter located in the dissolver building No. 775 starts the soda dissolver agitator motor No. 221 located in building No. 775; opening the manual switch stops the motor.

Circuit No. 14 - Miscellaneous DC Control

Purpose

To provide various control functions as listed below.

Description

- 1. When either drawing valve is operated, a contact on switch No. 46 or No. 176, mechanically connected to the valves, closes, sounding the drawing alarm No. 448.
- 2. Closing mercury switch No. 485 on the nitration panel starts the selected acid pump No. 77 or 76 provided the DC security circuit is energized and provided the abnormal conditions listed later herein (Cir. 14, Par. 3, Par. 4) have not occurred. Opening the switch stops the motor. When the acid pump has been started and providing at least one of the brine pumps No. 441-A or 441-B is running, the selected glycerin pump No. 97 or 98 may be started by closing mercury switch No. 486. The glycerin pump will stop when mercury switch No. 486 is opened, when the brine pump stops, or if the acid pump stops for any reason other than overload. If it is desired to check the flow of the glycerin pump, provide three-way valve No. 34 has been set in the proper position closing mercury switch No. 37 and opening switch No. 31; closing mercury switch No. 487 on the nitration panel will start the pump.
- 3. Whenever relay No. 8 on the DC security circuit is energized, the selected acid pump No. 77 or 76, and the selected glycerin pump No. 97 or 98 are stopped automatically if running, and blinking light No. 485 on the nitration board starts to operate. For positioning energizing relay No. 8 on the DC security circuit, circuit No. 15, below.

- 4. Operation of either of the drawing valves opens a contact on switch No. 46 or No. 176, mechanically connected to the valves, and stops the glycerin and acid pumps.
- 5. If spent acid diluter motor No. 135 has been started, and the motor loses speed, centrifugal switch No. 145 closes, lighting "Motor Stop" light No. 495 on the notice board to operate and lighting of the sign "Diluter Stopping".

Circuit No. 15 - 24 Volt DC Security Circuit

Purpose

To provide the various functions as listed below.

Description

- 1. Closing mercury switch No. 483 on the nitration panel energizes the 24 volt DC security circuit and lights white light No. 484. In order for all of the following actions to take place the DC security circuit must be energized.
- 2. Low temperature in the nitrotator, 100°F, closes a contact in dial thermometer No. 40 and seals in relay No. 1, lighting green light No. 45 on the nitration panel, and lighting a sign, "Nitrotator Minimum Temperature", on the notice board. Pressing push button No. 492 on the nitration panel will deenergize relay No. 1, the light, and the sign, but they will only remain deenergized when the push button is released if the temperature condition has returned to normal.
- 3. High temperature in the nitrotator, 80°F, closes a contact in dial thermometer No. 40, energizing relay No. 8 (see effects of energizing relay No. 8 above, Cir. 14, Par. 3) and lighting a sign, "Nitrotator Maximum Temperature", on the notice board. Pressing push button No. 492 on the nitration panel will deenergize relay No. 8 and the sign, but they will only remain deenergized when the push button is released if the temperature condition has returned to normal.
- 4. Maximum temperature in the nitrotator, 90°F, closes a contact in dial thermometer No. 40 and seals in relay No. 2, energizing solenoid valve No. 444 which admits air to operate the drawing valves and the valve admitting water to the drawing tank. (For effects of operating the drawing valves, see above Cir. 14, Par. 3) and lighting a sign, "Nitrotator Maximum Temperature", on the notice board. Pressing push button No. 492 on the nitration panel will deenergize relay No. 2, the solenoid valve, but they will only remain deenergized when the push button is released if the temperature condition has returned to normal.
- 5. If the drawing valves are operated mechanically, normally open contacts No. 46 and No. 176 on the solenoid valve No. 444, sealing in relay No. 4, assuring that the valve admitting water to the drawing tank is operated.
- 6. If the first soda washer stirrer has been started, high temperature in the acid separator, 90°F, closes a contact in dial thermometer No. 174, energizing relay No. 8 and lighting a sign, "Separator Minimum Temperature", on the notice board. Pressing push button No. 492 on the nitration panel will deenergize relay No. 8 and the sign, but they will only remain deenergized when the push button is released if the temperature condition has returned to normal.
- 7. If the first soda washer stirrer has been started high temperature in the acid separator, 90°F, closes a contact in dial thermometer No. 174, energizing solenoid valve No. 444 (effects of energizing the drawing solenoid valve No. 444 given above, Cir. 14, Par. 4).
- 8. Provided the first soda washer stirrer has been started, if low soda water level occurs in the soda water container, float switch No. 194 closes, sounding alarm horn No. 395 and lighting a sign, "Control of Soda Water", on the notice board. The alarm will be silenced and the light extinguished if the soda water level rises again, or if the first soda washer stirrer motor is stopped, or if the DC security circuit is deenergized.
- 9. Provided the first soda washer stirrer has been started, if the first washer stirrer loses speed, centrifugal switch No. 189 closes, energizing relay No. 8, and lighting a sign, "First Washer Stirrer", on the notice board. The sign will remain lit until the first soda washer stirrer gains speed again, when it will be extinguished automatically. Pressing push button No. 492 will deenergize relay No. 8, but it will only remain deenergized when the push button is released if the stirrer is up to speed again.
- 10. When the selected acid pump, Nos. 77 or 76, has been started, if low acid level occurs in the acid flow meter, mercury switch No. 17 closes sounding alarm horn No. 395, energizing relay No. 8, and lighting a sign, "Control of Acid Flow", on the notice board. The alarm horn will be silenced and the sign extinguished if acid level rises again. Pressing push button No. 492 will deenergize relay No. 8, the horn, and the sign, but they will only remain deenergized when the push button is released if the acid level is normal again.
- 11. If low speed on the nitrotator stirrer occurs, a sign "Nitrotator Stopping", on the notice board lights red light No. 495, and solenoid lock No. 30 is deenergized, locking the arm in the "up" position. Pressing push button No. 492 will deenergize relay No. 8, but the relay will only remain deenergized when the push button is released if the stirrer is up to speed again. The sign will remain lit until the stirrer is up to speed.
- 12. The glycerin arm is held in the "up" position by a weight and latched in the "up" position by solenoid lock No. 30 when deenergized.

When:

- (a) The selected acid pump, Nos. 77 or 76, has been started.

- (b) The nitrotator stirrer is up to speed.
- (c) The DC safety bus is energized.

When the glycerin arm lock solenoid No. 30 is energized releasing the glycerin arm. The glycerin arm may then be manually pushed down. When in the full "down" position, glycerin arm solenoid lock No. 37 is energized, holding the arm down against the force of the counterweight. The glycerin arm may be unlocked from the "down" position by depressing push button No. 36, whereupon latch solenoid No. 32 is deenergized, allowing the counterweight to pull the arm to the "up" position. If for any reason the acid pump stops or the DC security circuit becomes deenergized, the glycerin arm will be automatically unlatched and return to the "up" position.

NOTE: Momentary push button No. 492 is provided as a means of conveniently resetting sealed in relays without completely deenergizing the DC security circuit and should only be pressed momentarily.

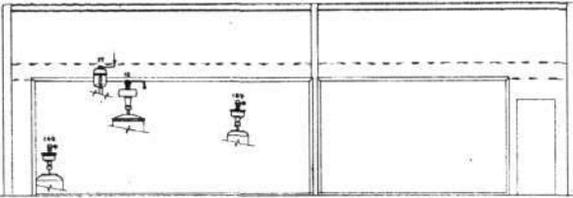
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56071-C  
30181

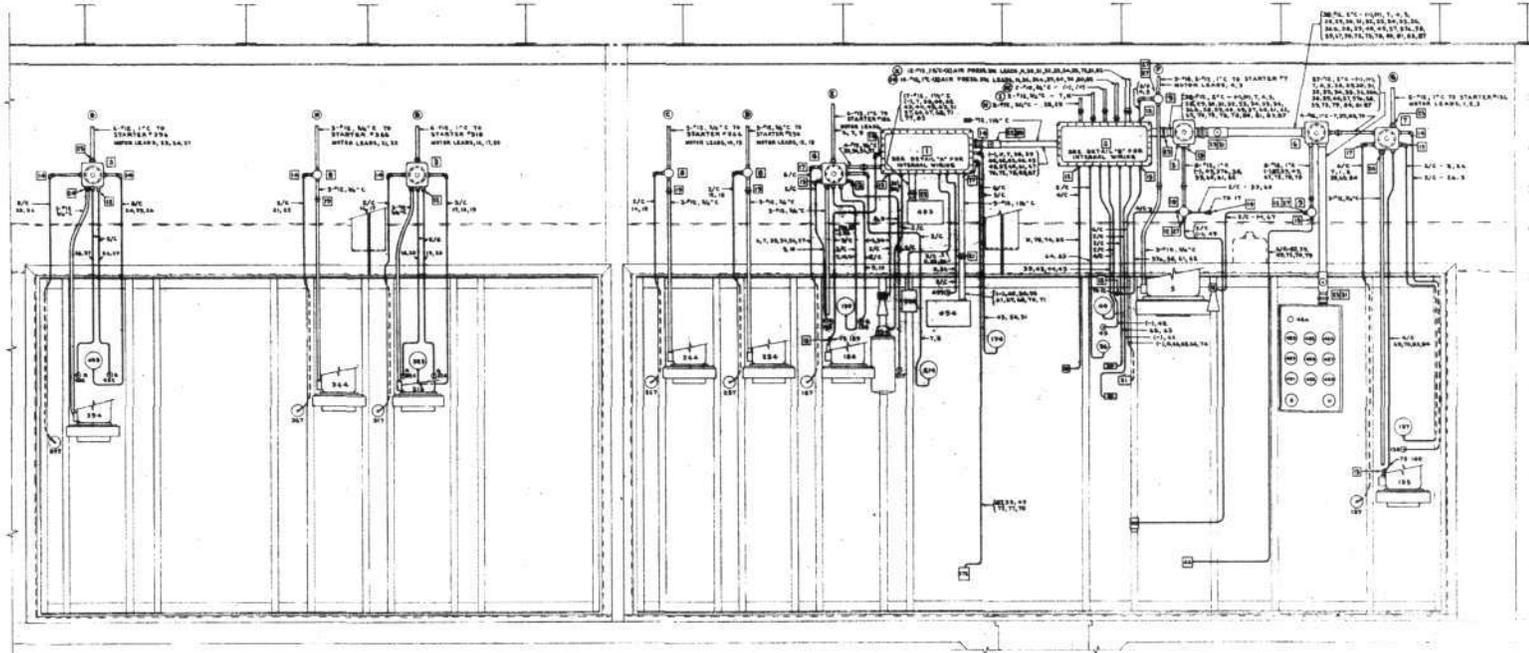
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DATE: 11/15/50  
BY: [Signature]  
CHECKED BY: [Signature]  
PHILADELPHIA, PENNSYLVANIA  
DAY AND ZIMMERMANN, INC.  
NITROGLYCERIN PLANT  
GENERAL  
ELECTRICAL  
DESCRIPTION OF OPERATION  
560719

24-815

FOR OFFICIAL USE ONLY



NITRATION PANEL  
FRONT ELEVATION - SCALE: 1/4"=1'-0"



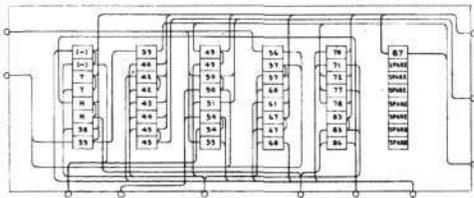
NITRATION PANEL  
REAR ELEVATION - SCALE: 1/4"=1'-0"

REFERENCE DRAWINGS

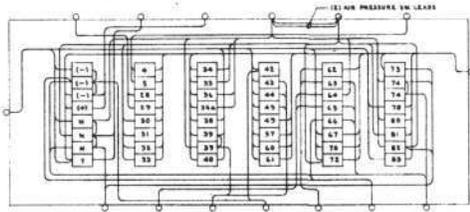
SCHEMATIC DIAGRAM Y&D DWG# 580718  
POWER & LIGHTING PLAN Y&D DWG# 537859

NOTES

- 1- WIRE NUMBERS INDICATED REFER TO THOSE SHOWN ON THE SCHEMATIC DIAGRAM, DWG# 580718
- 2- CONDUITS MARKED WITH A LETTER, AS (A), ARE CONTAINED ON THE POWER & LIGHTING PLAN, DWG# 537859
- 3- NUMBERS SHOWN ON (OR ADJACENT TO) PANEL DEVICES ARE BAKER'S EQUIPMENT NUMBERS
- 4- NUMBERS PLACED IN A SQUARE, AS (A), ARE SHOWN ADJACENT TO A DEVICE REFER TO THE BILL OF MATERIAL ITEM NUMBER
- 5- CONDUITS, BUSES, & CABLE RUNS ARE NOT DIMENSIONED, TO PERMIT FIELD TO DETERMINE EXACT LOCATIONS IN ORDER TO PRECLUDE INTERFERENCE WITH PROCESS PIPING
- 6- SUITABLE SUPPORTS OR WIRE HOLDERS SHALL BE USED TO PREVENT FLEXIBLE CABLES FROM TOUCHING PROCESS PIPING
- 7- WHERE CONNECTORS WHICH ARE FURNISHED BY BAKER ARE NOT SUITABLE FOR ACTUAL CABLE SIZE, TO BE USED, FIELD TO SUBSTITUTE CABLE WINDS TYPE, ESB (SUCH AS THOSE USED AT JUNCTION BOXES)



DETAIL "A"



DETAIL "B"

SCALE: 1/4"=1'-0"

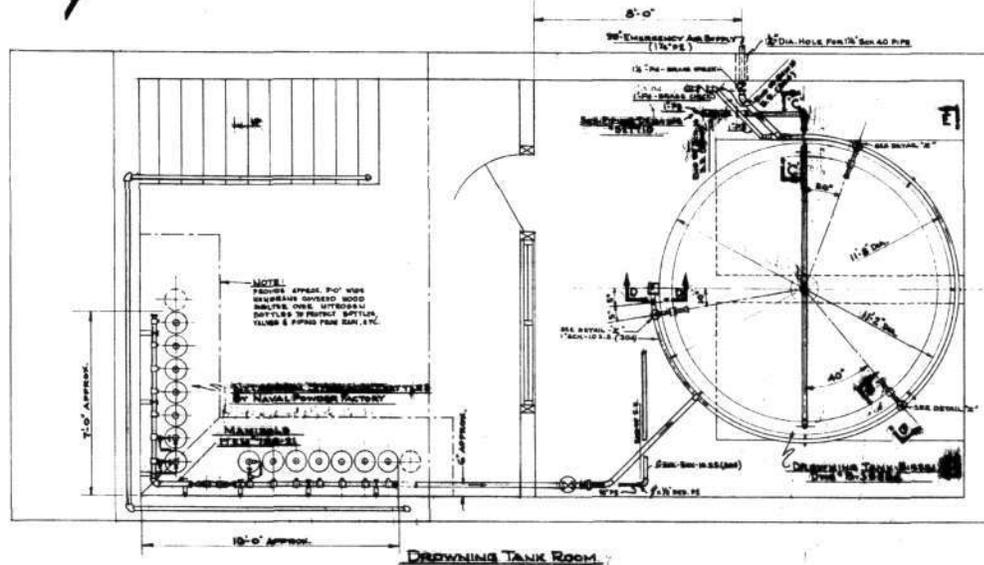
RECORD DRAWING

SHEET OF  
CONTRACT NOY 25016  
DATE 5-11-52

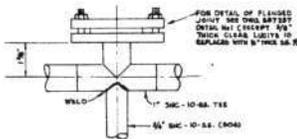
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DAY and ZIMMERMANN, INC. PHILADELPHIA, PENNSYLVANIA			
POTOMAC RIVER NAVAL COMMAND WASHINGTON, D. C. NAVAL POWDER FACTORY			
NITROGLYCERIN PLANT NITRATION BUILDINGS 786 ELECTRICAL NITRATION PANEL ARRANGEMENT			
DATE	BY	CHECKED	DATE
5-11-52			
SHEET 1 OF 1 580735			

FOR OFFICIAL USE ONLY

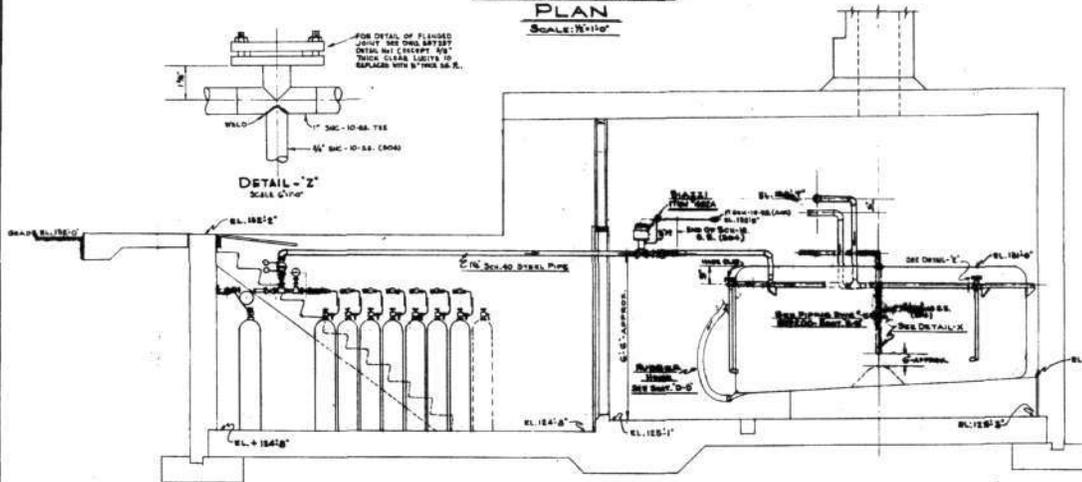
CH-815



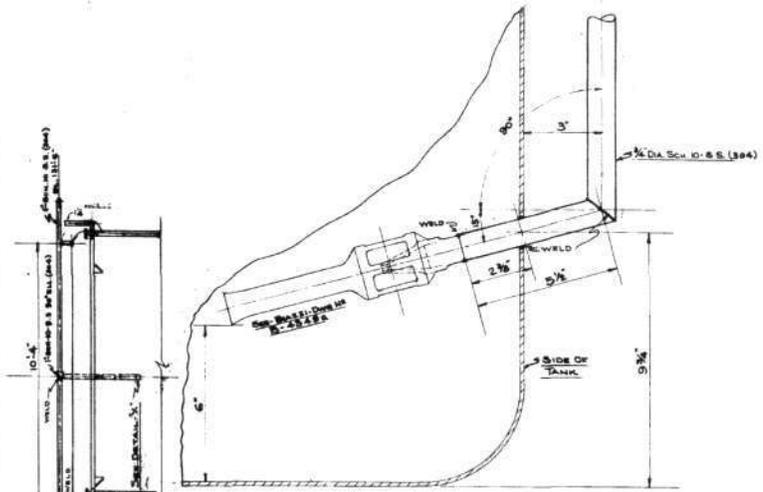
**DROWNING TANK ROOM**  
**PLAN**  
 SCALE: 1/8"=1'-0"



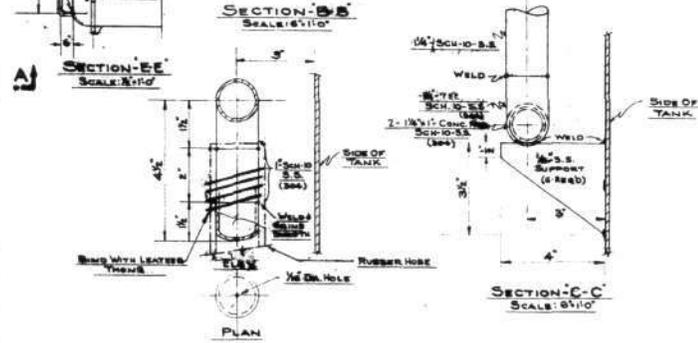
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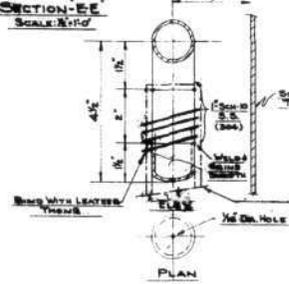
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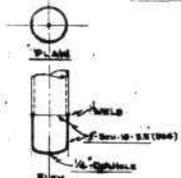
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**SECTION-C-C**  
 SCALE: 1/8"=1'-0"



**SECTION-D-D**  
 SCALE: 1/8"=1'-0"



**DETAIL-X**  
 SCALE: 1/8"=1'-0"

- REFERENCE DRAWINGS**
- NITRATION BLDG. 786-PLAN DWG. 527710
  - NITRATION BLDG. 786-SECTIONS DWG. 527200
  - NITRATION BLDG. 786-PLAN DWG. 527195
  - NITRATION BLDG. 786-SECTIONS DWG. 527227

**NOTE:**  
 INSTALLATIONS SHOWN BY DWG. 786  
 INSTALLATION OF BLDG. 786 SHOWN

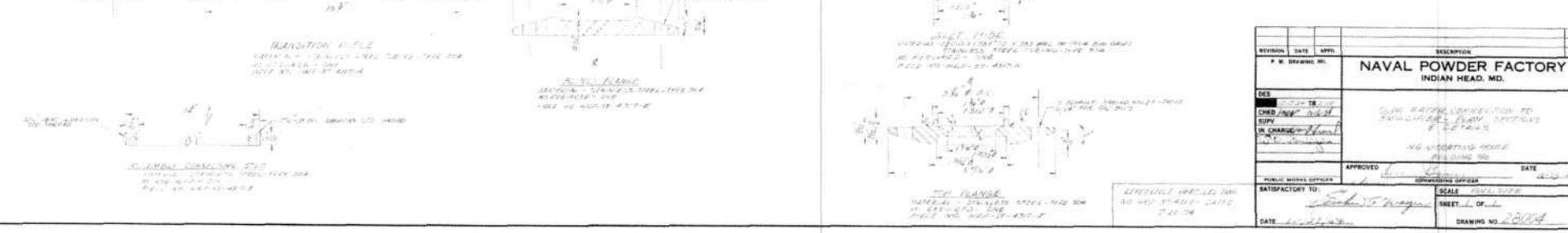
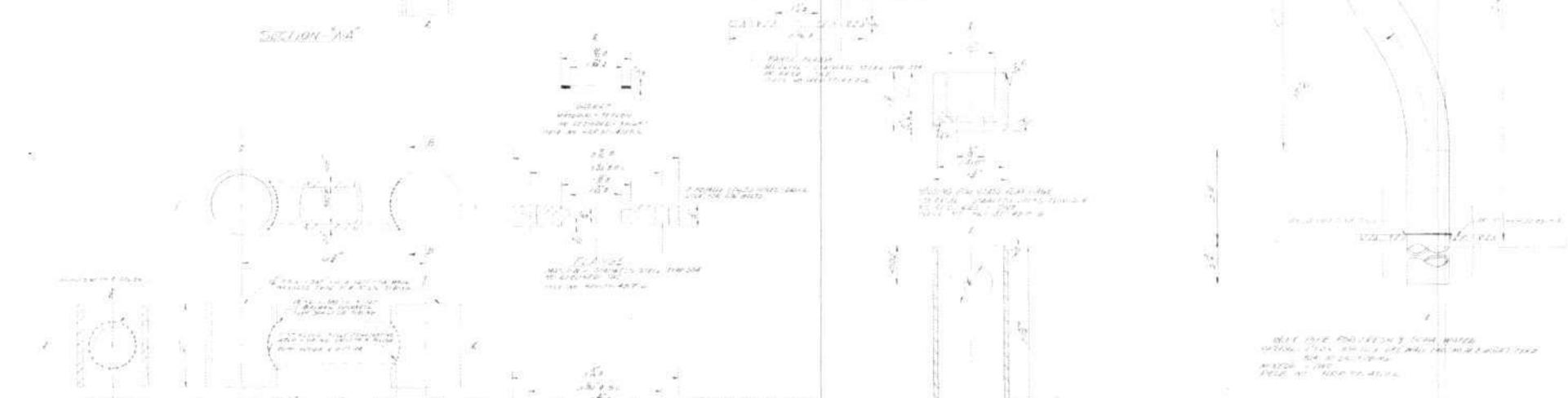
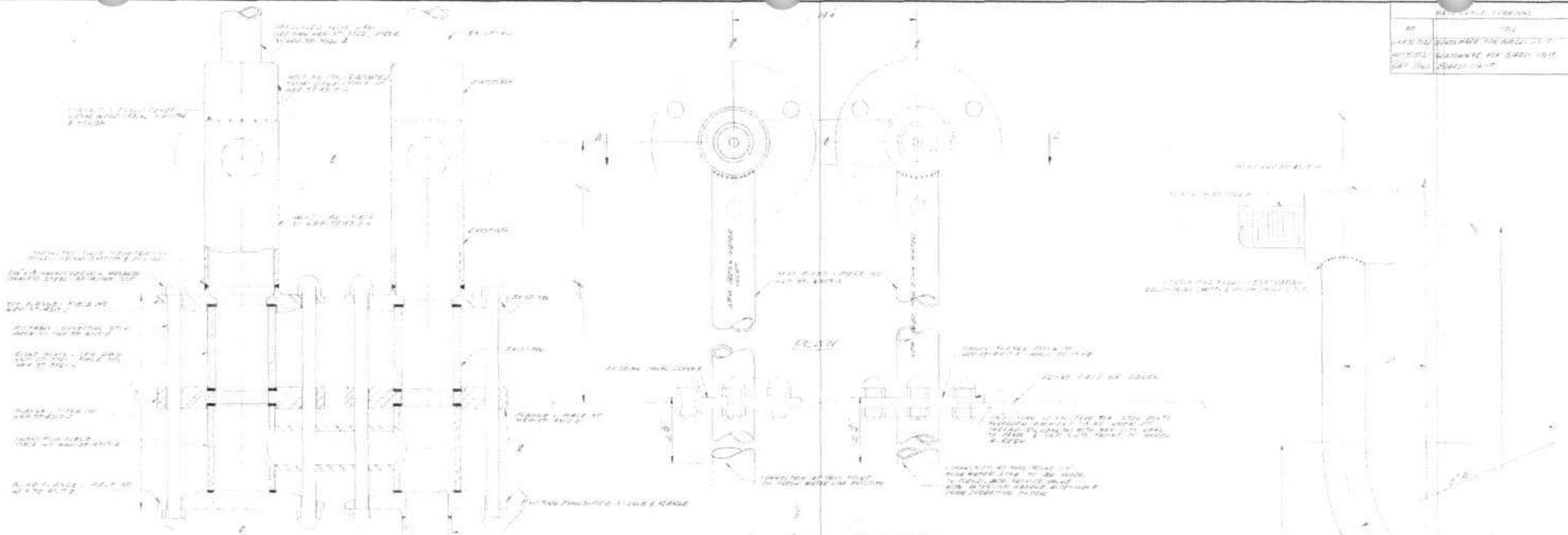
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SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 CONTRACT NOY 25016

DATE: 11/27/52	BY: [Signature]	FOR: [Signature]
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DAY and ZIMMERMANN, INC.		
PHILADELPHIA, PENNSYLVANIA		
PROJECT: NITROGLYCERIN PLANT, MECHANICAL EQUIPMENT	LOCATION: POTOMAC RIVER NAVAL COMMAND, WASHINGTON, D. C.	NO. 31526
DATE: 11/27/52	BY: [Signature]	FOR: [Signature]
SCALE: GRAPHIC	SHEET: 1 OF 1	DATE: 11/27/52

44-815

REVISIONS	
NO.	DESCRIPTION
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2	REVISED FOR CONSTRUCTION
3	REVISED FOR CONSTRUCTION

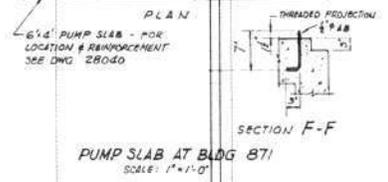
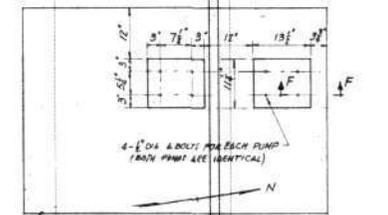
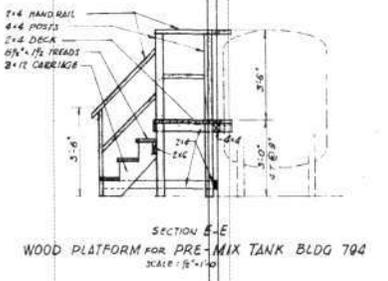
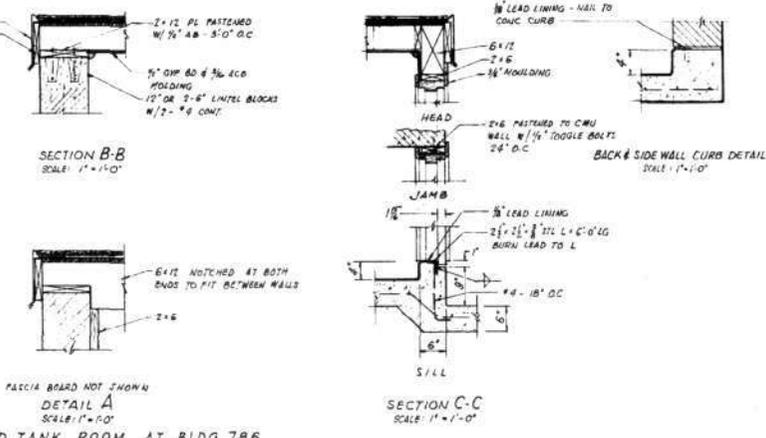
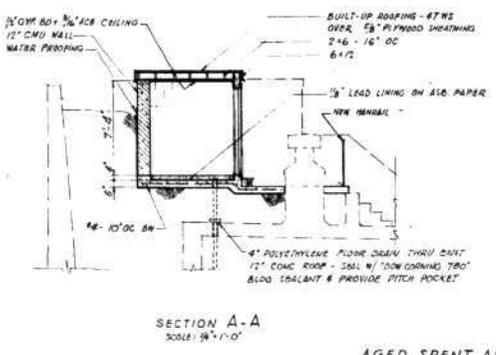
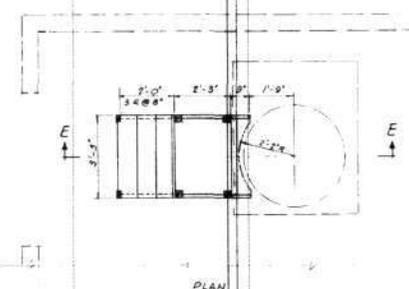
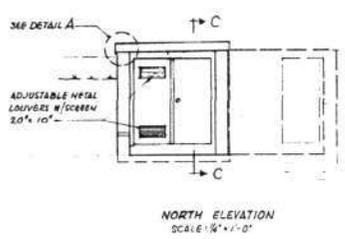
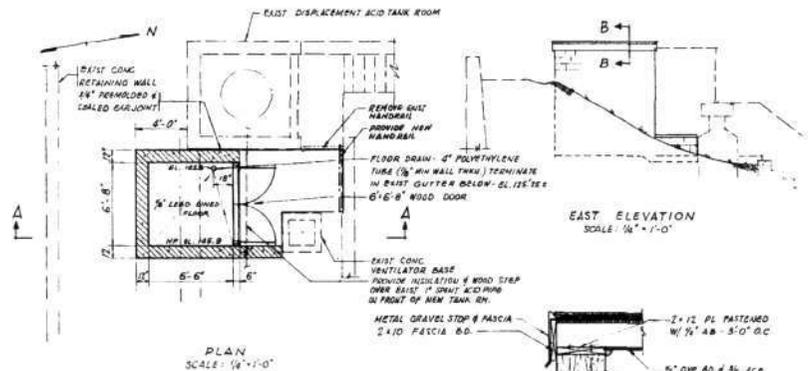


REVISION	DATE	APPROVED	DESCRIPTION
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2			
3			

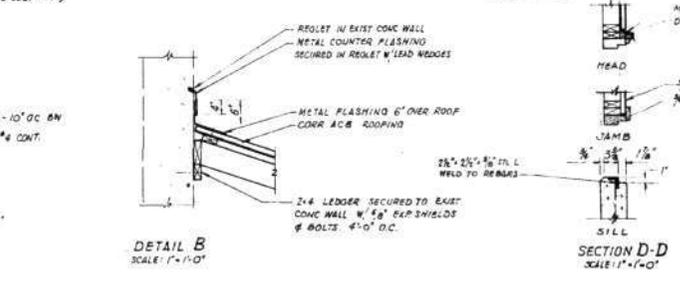
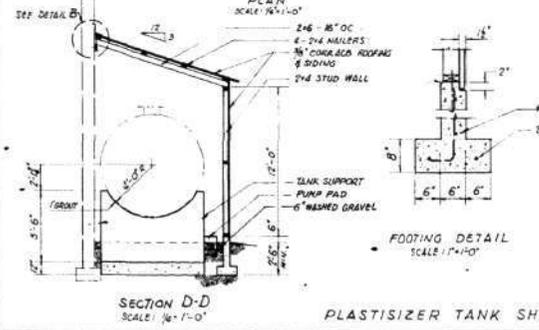
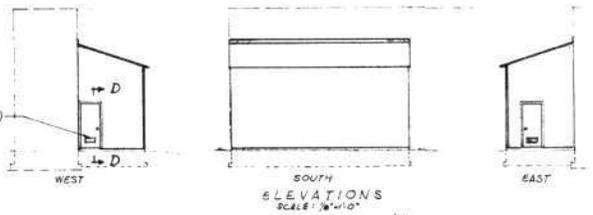
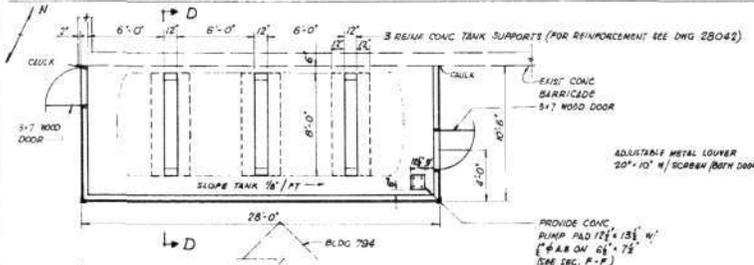
P. W. DRAWING NO. **NAVAL POWDER FACTORY**  
**INDIAN HEAD, MD.**  
 DESIGNED BY **W. H. HARRIS**  
 CHECKED BY **W. H. HARRIS**  
 IN CHARGE **W. H. HARRIS**  
 APPROVED **W. H. HARRIS** DATE **11/21/43**  
 PUBLIC WORKS OFFICER **W. H. HARRIS**  
 SATISFACTORY TO **W. H. HARRIS** SCALE **AS SHOWN**  
 DATE **11/21/43** SHEET **1** OF **1**  
 DRAWING NO. **22004**

CH-815

FOR GENERAL NOTES SEE DWG 28042



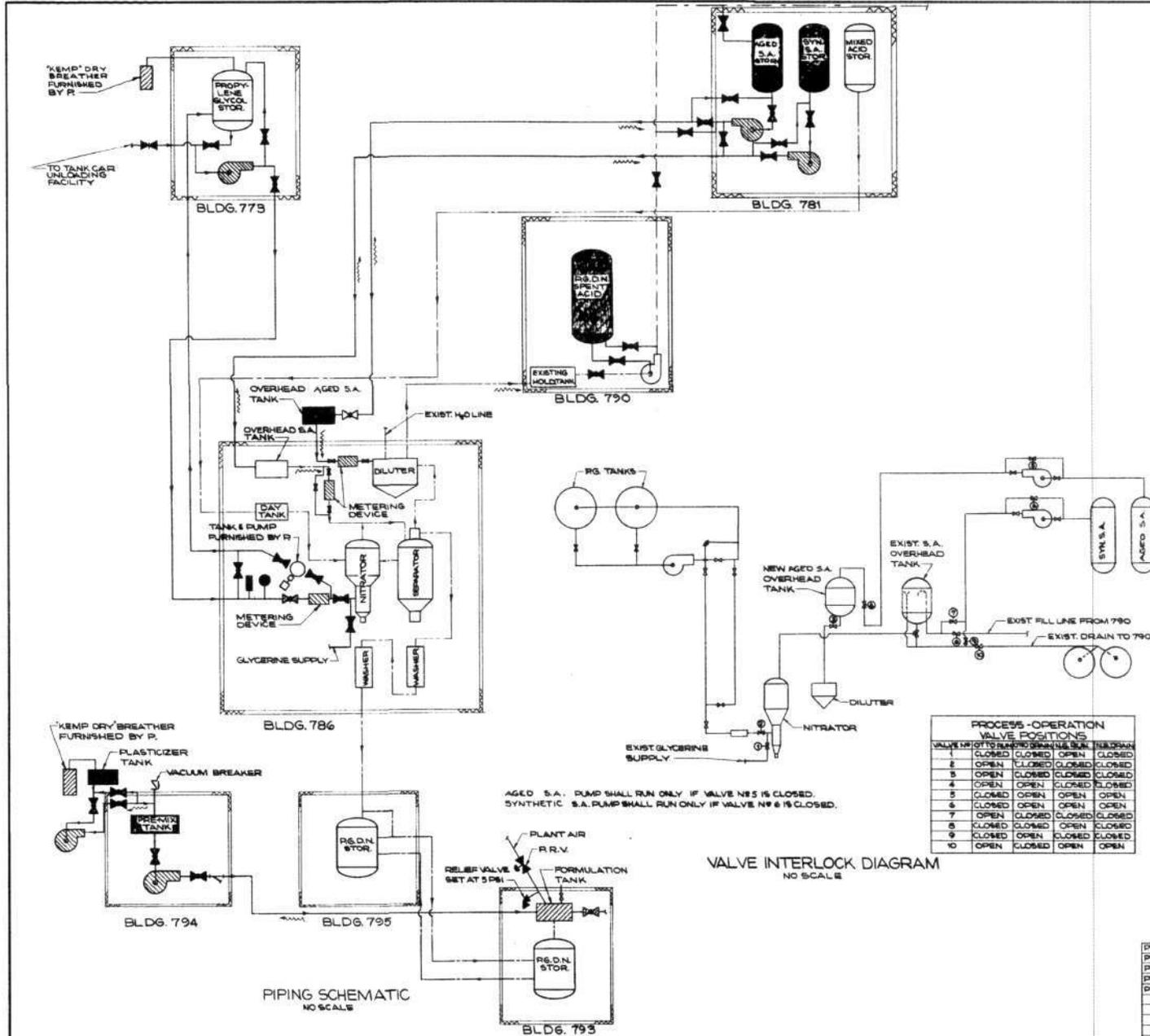
AGED SPENT ACID TANK ROOM AT BLDG 786



SYMBOL	DESCRIPTION	DATE	APPROVAL
DEPARTMENT OF THE NAVY U.S. NAVAL PROPELLANT PLANT INDIAN HEAD, MD.			
OTTO FUEL II AGED SPENT ACID TANK ROOM: 806786 PLASTISIZER TANK SHELTER: 806794 MISCELLANEOUS DETAILS STRUCTURAL			
DESIGNED BY	DATE	SCALE	DATE
CHECKED BY			
IN CHARGE			
APPROVED BY			
DATE			

CH-815

28043



PIPING SCHEMATIC  
NO SCALE

VALVE INTERLOCK DIAGRAM  
NO SCALE

PROCESS-OPERATION  
VALVE POSITIONS

VALVE #	PHOTO	INSTRUMENT	DRINKING	DRUM	TRUCK
1	CLOSED	CLOSED	OPEN	CLOSED	CLOSED
2	OPEN	CLOSED	CLOSED	CLOSED	CLOSED
3	OPEN	OPEN	CLOSED	CLOSED	CLOSED
4	OPEN	OPEN	OPEN	OPEN	OPEN
5	CLOSED	OPEN	OPEN	OPEN	OPEN
6	CLOSED	OPEN	OPEN	OPEN	OPEN
7	OPEN	CLOSED	CLOSED	CLOSED	CLOSED
8	CLOSED	CLOSED	OPEN	CLOSED	CLOSED
9	CLOSED	OPEN	CLOSED	CLOSED	CLOSED
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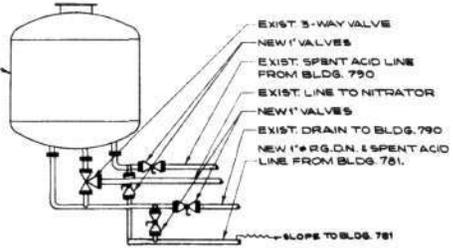
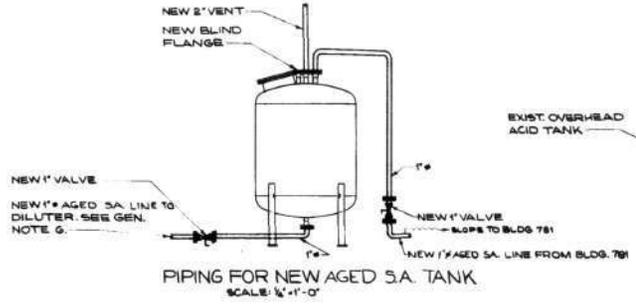
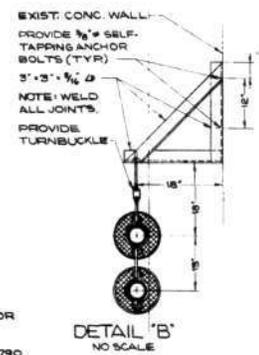
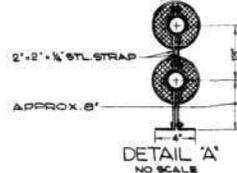
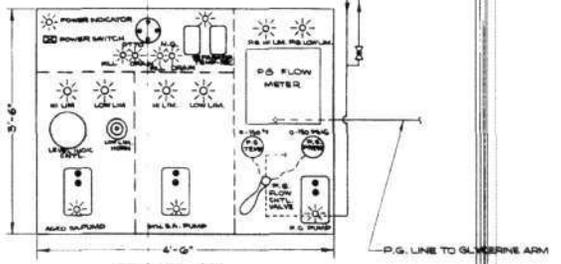
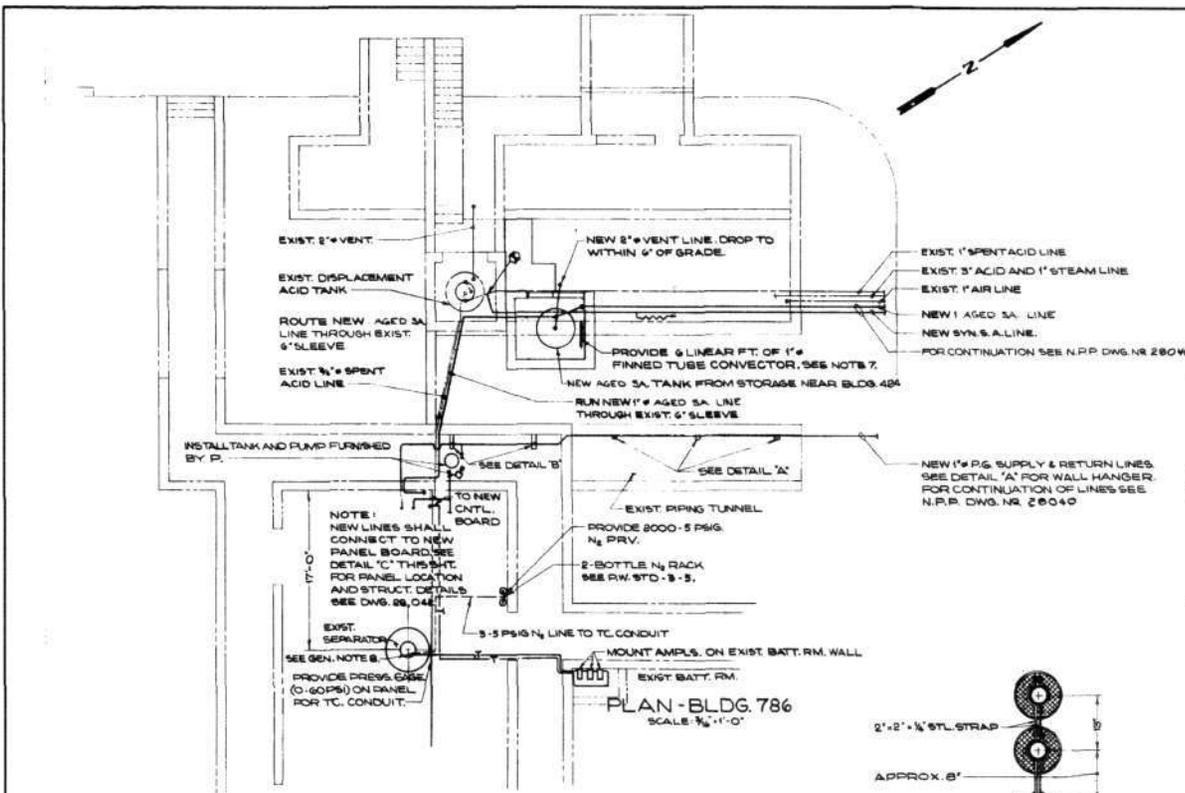
AGED S.A. PUMP SHALL RUN ONLY IF VALVE #5 IS CLOSED.  
 SYNTHETIC S.A. PUMP SHALL RUN ONLY IF VALVE #6 IS CLOSED.

LEGEND

- EXISTING TANKS RELOCATED FROM ACID PLANT
- EXISTING EQUIPMENT
- PRODUCTION FURNISHED EQUIPMENT
- PUBLIC WORKS SUPPLIED EQUIPMENT
- BALL VALVE
- BALL VALVE W/ PNEU. OPERATOR
- GATE VALVE
- THERMOMETER
- PRESSURE GAGE
- NEW WORK
- EXIST. CONSTRUCTION
- DIRECTION OF SLOPE

SYMBOL	DESCRIPTION	DATE	APPROVAL
DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS U.S. NAVAL PROPELLANT PLANT INDIAN HEAD, MD.			
<b>OTTO FUEL II FACILITY</b> FLOW DIAGRAM <b>MECHANICAL</b>			
DWG. NO. <i>100-100-100</i> PWD. <i>100-100-100</i> DWG. DATE <i>10/1/54</i> DWG. BY <i>J. J. Kelly</i> IN CHARGE <i>J. J. Kelly</i>	DR. <i>J. J. Kelly</i> APPROVE DATE	SCALE AS SHOWN SHEET <i>6</i> OF <i>10</i>	DRAWING NO. <b>28,044</b>

44-815

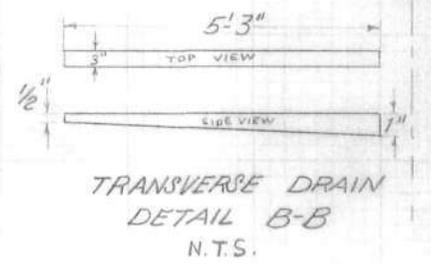
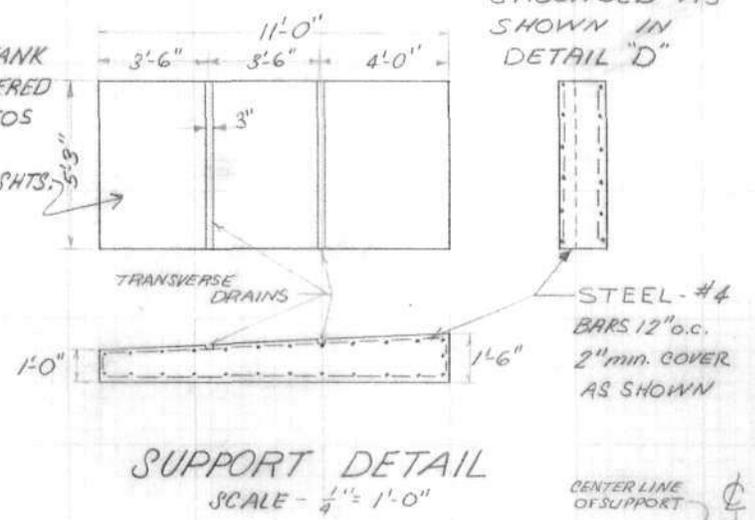
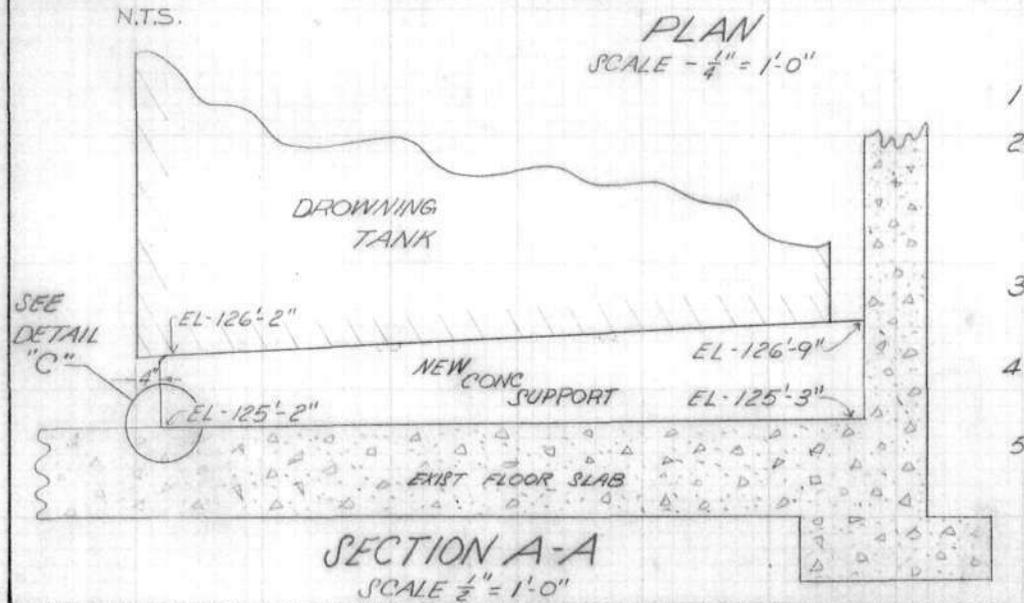
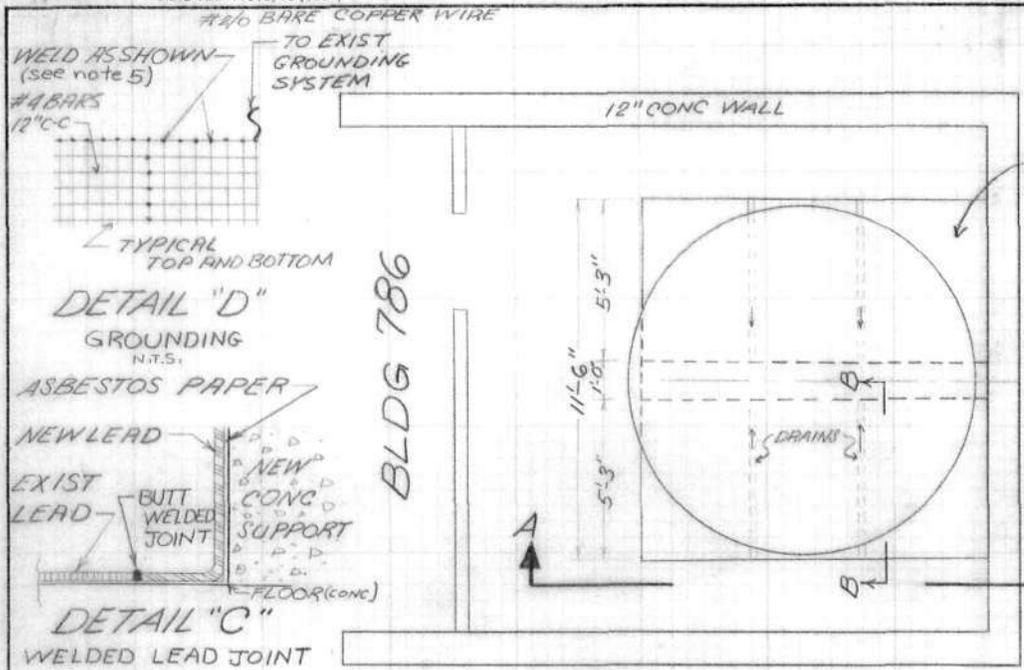


- ### GENERAL NOTES
1. ALL NEW PIPING SHALL BE 70% OR 150% SST.
  2. ALL NEW PIPE JOINTS SHALL BE WELDED EXCEPT THOSE AT VALVES & TANKS WHICH SHALL BE FLANGED.
  3. PROVIDE 1/4\"/>

- ### LEGEND
- BALL VALVE
  - BALL VALVE W/ PNEU. OPER.
  - THERMOCOUPLE CONDUIT

SYMBOL	DESCRIPTION	DATE	APPROVAL
DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS U.S. NAVAL PROPELLANT PLANT INDIAN HEAD, MD.			
<b>OTTO FUEL II FACILITY</b> MECHANICAL P.G. 1 1/2 501 PIPING BLDG. 786			
PW DWS DWS DWS DWS DWS	MR GALLAHER SERGE LONG MR S. S. G. S. MR S. S. G. S. MR S. S. G. S. MR S. S. G. S.		
APPROVED	DATE	SCALE AS SHOWN	SHEET 8 OF 10
DRAWING NO. 28046			

CH-815



**NOTES**

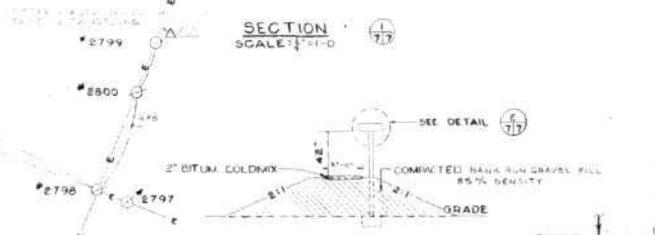
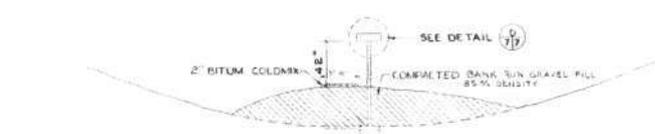
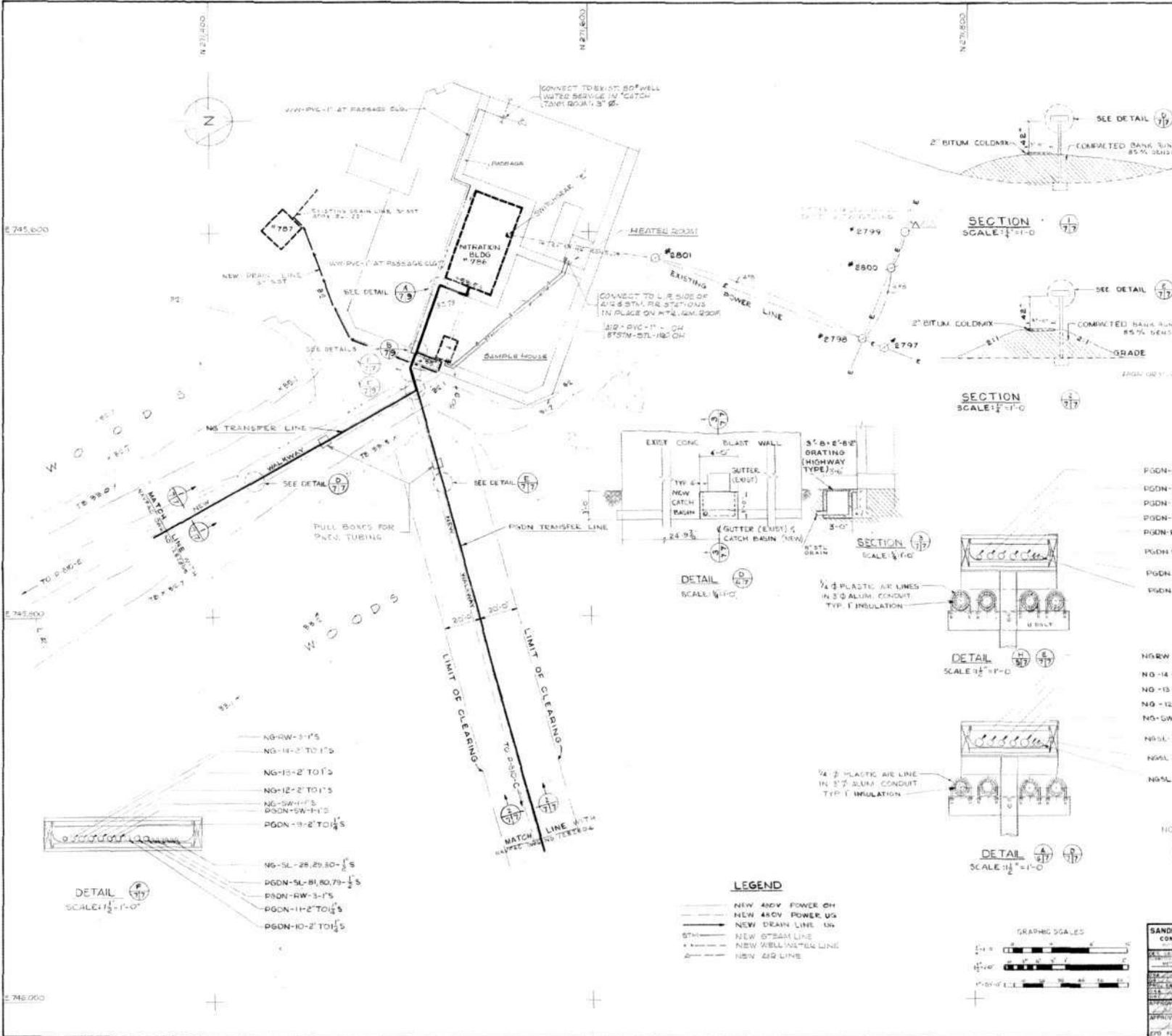
- 1- Steel to be #4 bars 12" o.c. as shown.
- 2- Tank must be jacked or hoisted AS SHOWN IN SKETCH ALLOW MAXIMUM WORKING SPACE.
- 3- High early strength Type III Portland cement concrete will be used.
- 4- Construction time shall not exceed four working days.
- 5 All steel will be tied together by electric arc welding and connected to existing grounding system. (detail D).

SEE SK-1113A - FOR HOISTING

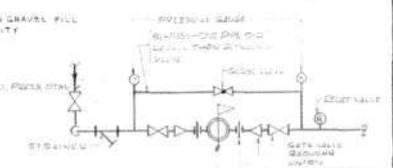
<b>NAVAL PROPELLANT PLANT</b> INDIAN HEAD, MARYLAND		
<b>DROWNING TANK SUPPORT</b> BLDG 786		
PWE <i>A.E. Wilson</i>	DATE 5-NOV-1965	SCALE AS SHOWN
PNC <i>L.M. 2/11/1965</i>	DRAWN <i>W. QUADE</i>	DRAWING NO. (P.W.)
SAFETY <i>C.L.V. 1-27-66</i>	SUPV. <i>CT Barrett</i>	<b>SK. 6093</b>
APPROVED <i>BOX 11/5/65</i>		

GH-815

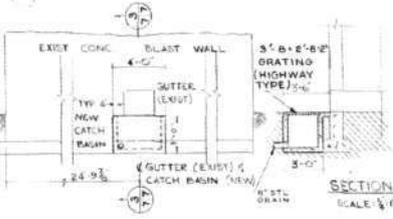
REVISIONS				
LTR	DESCRIPTION	PREP'D BY	DATE	APPROVED



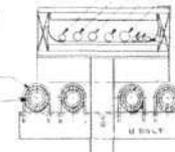
SECTION SCALE: 1/2" = 1'-0"



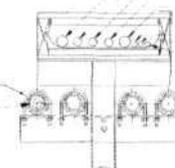
STANDARD STEAM PIPING ON DECKING STATION DETAIL SCALE: 1/2" = 1'-0"



DETAIL SCALE: 1/2" = 1'-0"



DETAIL SCALE: 1/2" = 1'-0"



DETAIL SCALE: 1/2" = 1'-0"

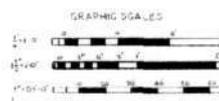
PGDN	SIZE	TYPE	LENGTH	NO. OF	EST. COST
PGDN-SW-1	1" S	W	10	1	100
PGDN-9	2" TO 1 1/2" S	W	10	1	100
PGDN-10	2" TO 1 1/2" S	W	10	1	100
PGDN-11	2" TO 1 1/2" S	W	10	1	100
PGDN-RW-3	1" S	W	10	1	100
PGDN-SL-81	1/2" S	W	10	1	100
PGDN-SL-80	1/2" S	W	10	1	100
PGDN-SL-79	1/2" S	W	10	1	100

- NGRW-3-1'S
- NG-14-2" TO 1" S
- NG-13-2" TO 1" S
- NG-12-2" TO 1" S
- NG-11-2" TO 1" S
- NG-10-2" TO 1" S
- NG-9-2" TO 1" S
- NG-5L-28, 29, 30-1/2" S
- PGDN-SL-81, 80, 79-1/2" S
- PGDN-RW-3-1'S
- PGDN-11-2" TO 1 1/2" S
- PGDN-10-2" TO 1 1/2" S

NOTE: SEE STD. DETAIL 11/7 FOR OVER-HEAD SUPPORT FOR STEAM AND AIR PIPING.

**LEGEND**

- NEW 480V POWER OH
- NEW 480V POWER UG
- NEW DRAIN LINE UG
- NEW STEAM LINE
- NEW WELLSITE LINE
- NEW SIG LINE

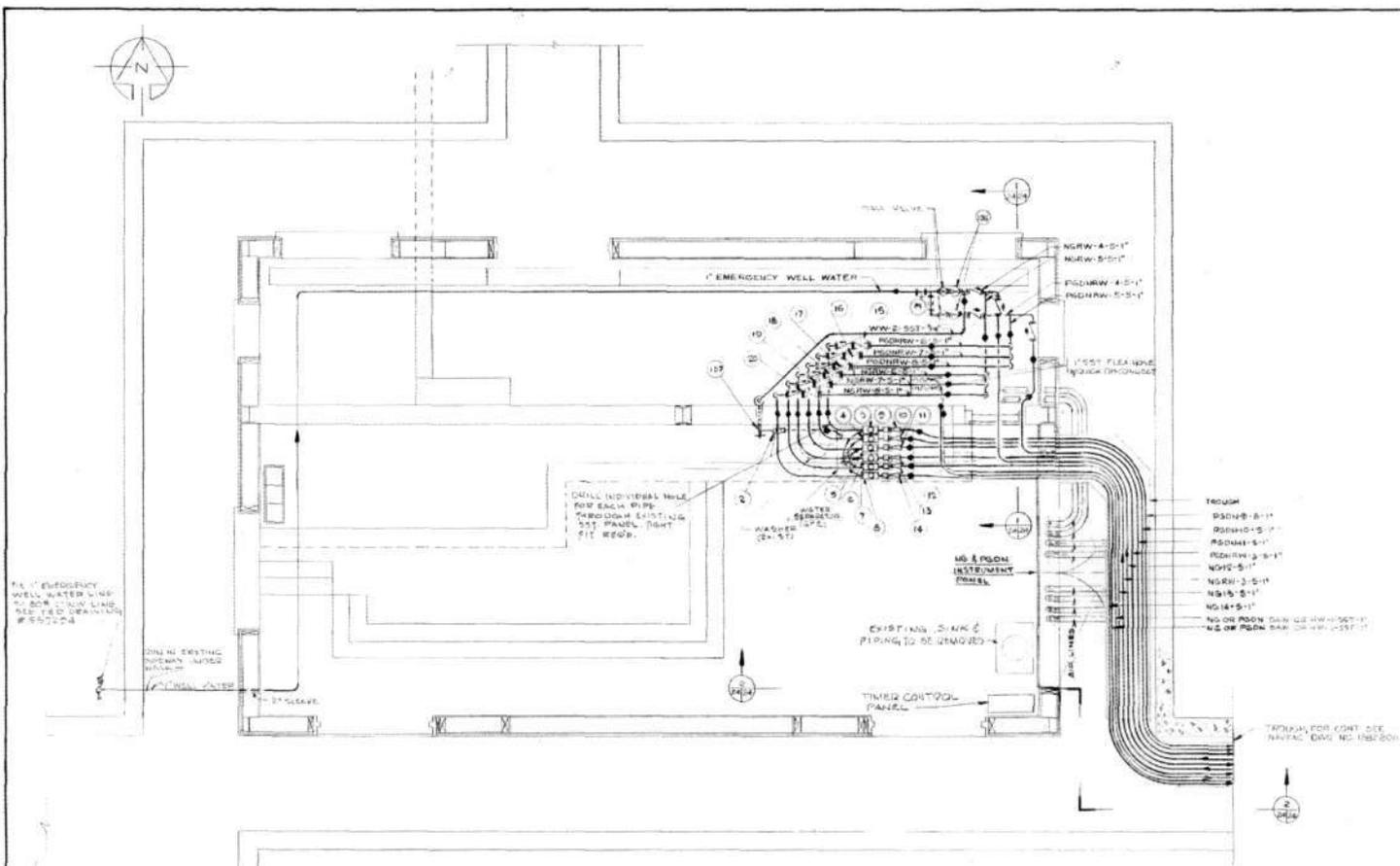


<b>SANDERS &amp; THOMAS INC.</b> CONSULTING ENGINEERS		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND CHESAPEAKE DIVISION WASHINGTON, D.C.	
PROJECT NO. 116100		U.S. NAVAL ORDNANCE STATION - INDIAN HEAD, MARYLAND	
DRAWING NO. 80091		REPLACEMENT OF PROCESSING FACILITIES NITRATOR AREA - BLDG 786 CIVIL & UTILITIES	
DATE: 11/15/59	SCALE: AS SHOWN	PROJECT NO. 1282806	CONTRACT NO. N61477-68-B-0840
APPROVED: [Signature]	DATE: 11/15/59	DESIGNER: [Signature]	DATE: 11/15/59

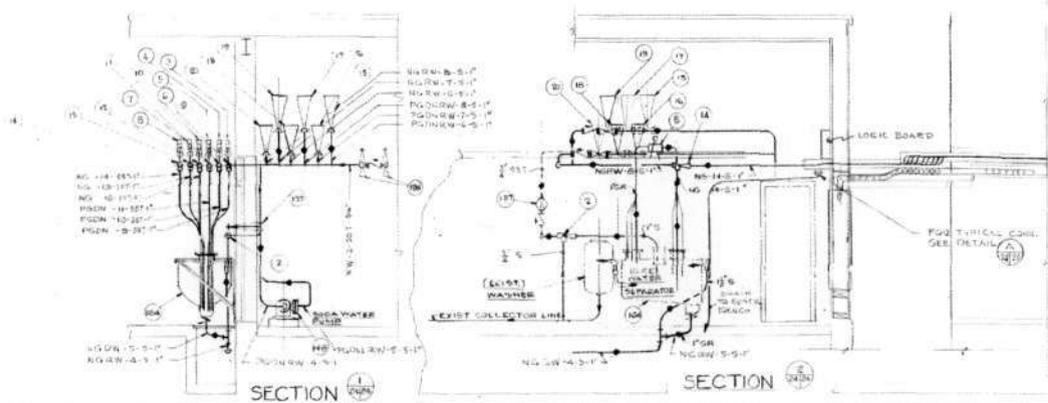
CH-815



REVISIONS				
LT#	DESCRIPTION	PREP'D BY	DATE	APPROVED



NITRATOR BLDG 786  
SCALE 3/4" = 1'-0"



- TRUSS
- PSDNB-8-11
- PSDNW-5-11
- PSDNW-8-11
- PSDNW-3-5-11
- NS10-5-11
- NSRN-3-5-11
- NS18-8-11
- NS14-5-11
- NS OR PDM BAR OR NSRN-5-11
- NS OR PDM BAR OR NSRN-1-5-11

NOTES:  
 1. FOR TYPICAL SURFIN IN-LINE CONN. SEE DETAIL 'A'.  
 2. FOR INSTRUMENTATION, SEE NAVAL DWS INCL 0828.  
 3. PROVIDE TROUGH TYPE CONTINUOUS SUPPORT OF ALUMINUM 6069-2 ALUM. EXPANDED METAL JOI HANGERS FOR SUPPLY LINES.

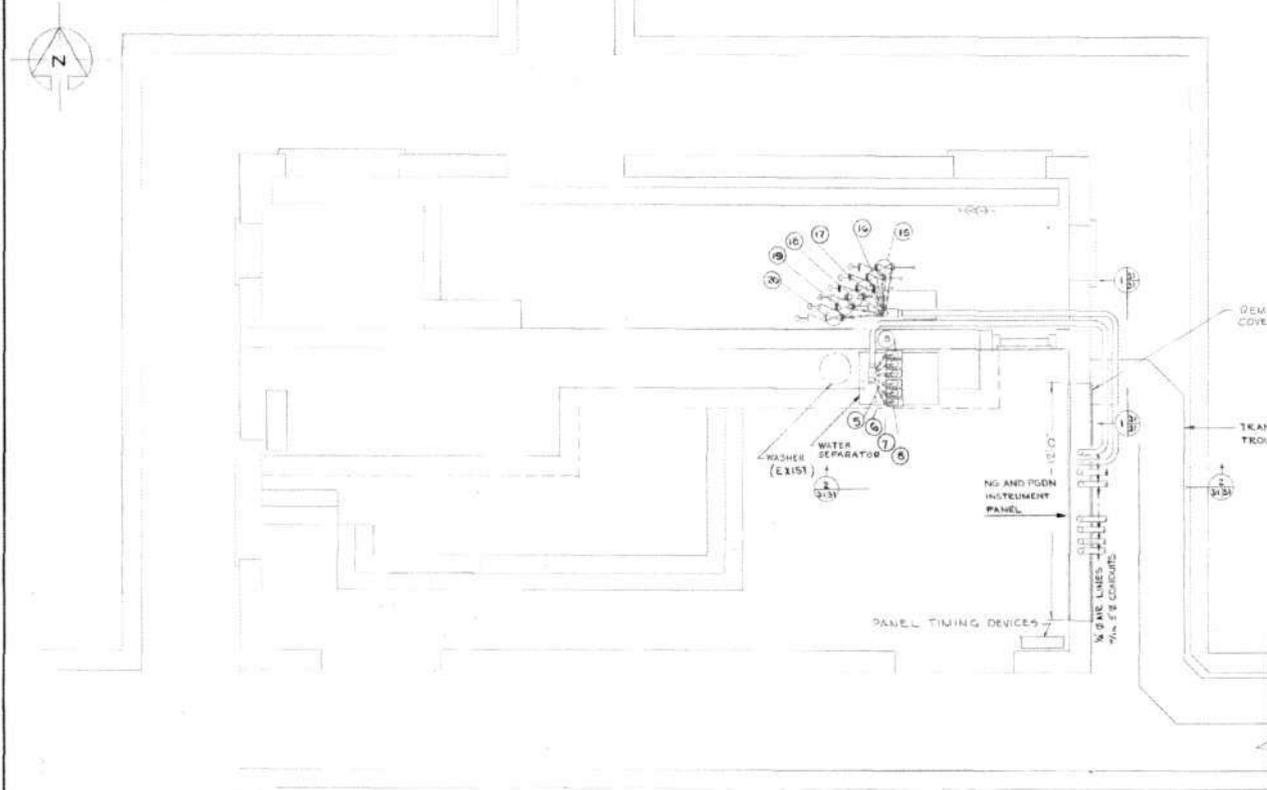
RECORD DRAWING  
DATE 12/19/77

GRAPHIC SCALE  
0 1 2 3 4 5 6 7 8 9 10

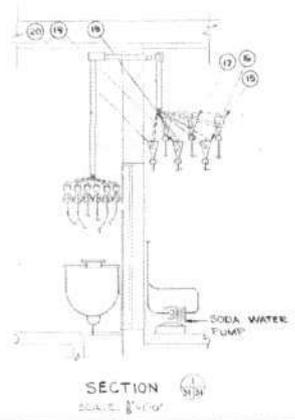
SANDERS & THOMAS INC. CONSULTING ENGINEERS		DEPARTMENT OF THE NAVY - NAVAL FACILITIES ENGINEERING COMMAND CHESAPEAKE DIVISION WASHINGTON, D.C.	
U.S. NAVAL ORDNANCE STATION - INDIAN HEAD, MARYLAND		REPLACEMENT OF PROCESSING FACILITIES NITRATOR BUILDING 786 PROCESS PIPING - MECHANICAL	
DATE: 12/19/77	SCALE: AS SHOWN	DATE: 12/19/77	SCALE: AS SHOWN
APPROVED: [Signature]	DATE: 12/19/77	DATE: 12/19/77	DATE: 12/19/77
APPROVED: [Signature]	DATE: 12/19/77	APPROVED: [Signature]	DATE: 12/19/77
FOR COMMANDER, NAVYAC	SCALE: AS SHOWN	FOR COMMANDER, NAVYAC	SCALE: AS SHOWN

CH-816

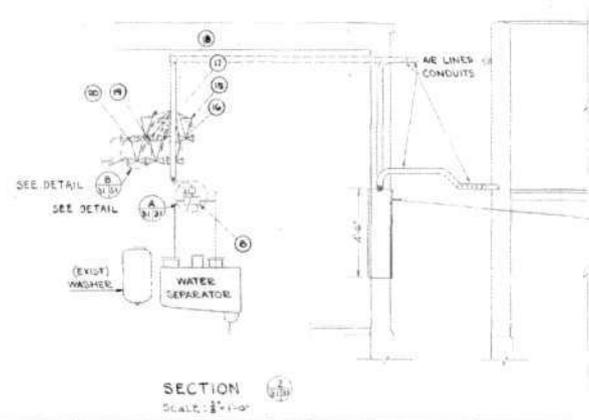
REVISIONS				
LTN	DESCRIPTION	PREP BY	DATE	APPROVED



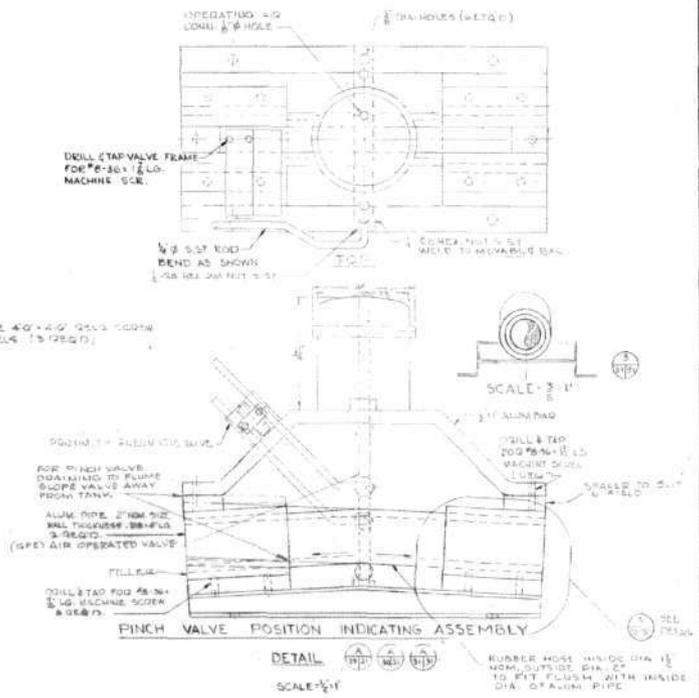
PLAN NITRATOR HOUSE  
PNEUMATIC INSTRUMENTATION CONTROL VALVES AND PANEL  
SCALE: 1/8" = 1'-0"



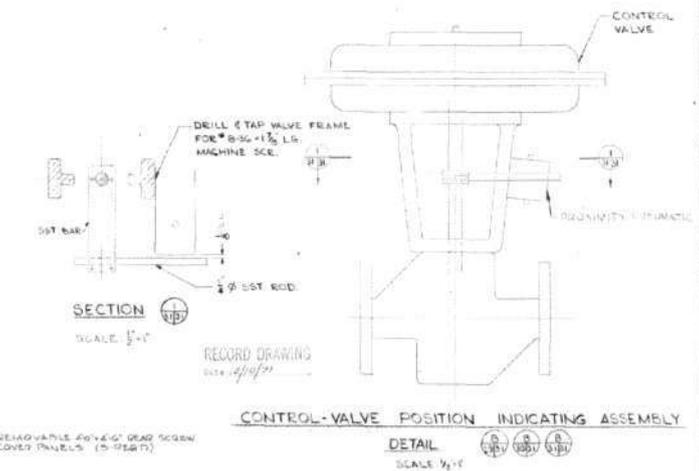
SECTION 1  
SCALE: 1/8" = 1'-0"



SECTION 2  
SCALE: 1/8" = 1'-0"



DETAIL A, B, C  
SCALE: 1/2" = 1'-0"



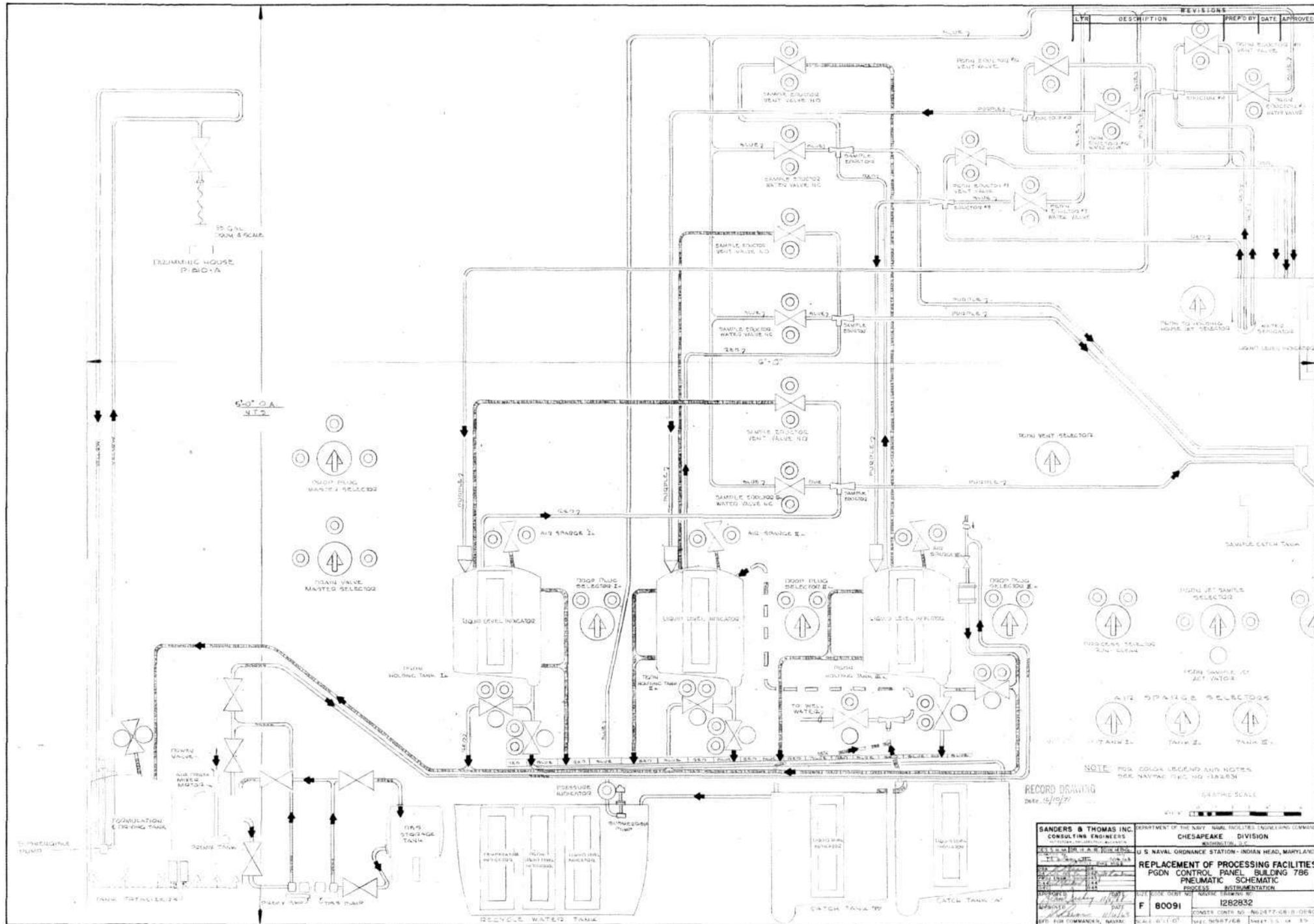
CONTROL-VALVE POSITION INDICATING ASSEMBLY  
DETAIL D, E, F  
SCALE: 1/2" = 1'-0"



<b>SANDERS &amp; THOMAS INC.</b> CONSULTING ENGINEERS		DEPARTMENT OF THE NAVY - NAVAL FACILITIES ENGINEERING COMMAND CHESAPEAKE DIVISION WASHINGTON, D.C.		
REPLACEMENT OF PROCESSING FACILITIES NITRATOR BUILDING 786		U.S. NAVAL ORDNANCE STATION - INDIAN HEAD, MARYLAND		
PROCESS INSTRUMENTATION		REVISIONS		
DATE: 11/17/54	SCALE: 1/8" = 1'-0"	DATE: 11/17/54	SCALE: 1/8" = 1'-0"	DATE: 11/17/54
APPROVED: [Signature]	DATE: 11/17/54	APPROVED: [Signature]	DATE: 11/17/54	APPROVED: [Signature]
NO. 80091	1282830	CONTR. CORN. NO. NS2477-68-B-0840	SPEC. 9-907-208 SHEET 31 OF 33	

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REV	DESCRIPTION	PREP BY	DATE	APPROVED
1	INITIAL ISSUE			
2	REVISIONS			
3				
4				
5				
6				
7				
8				
9				
10				

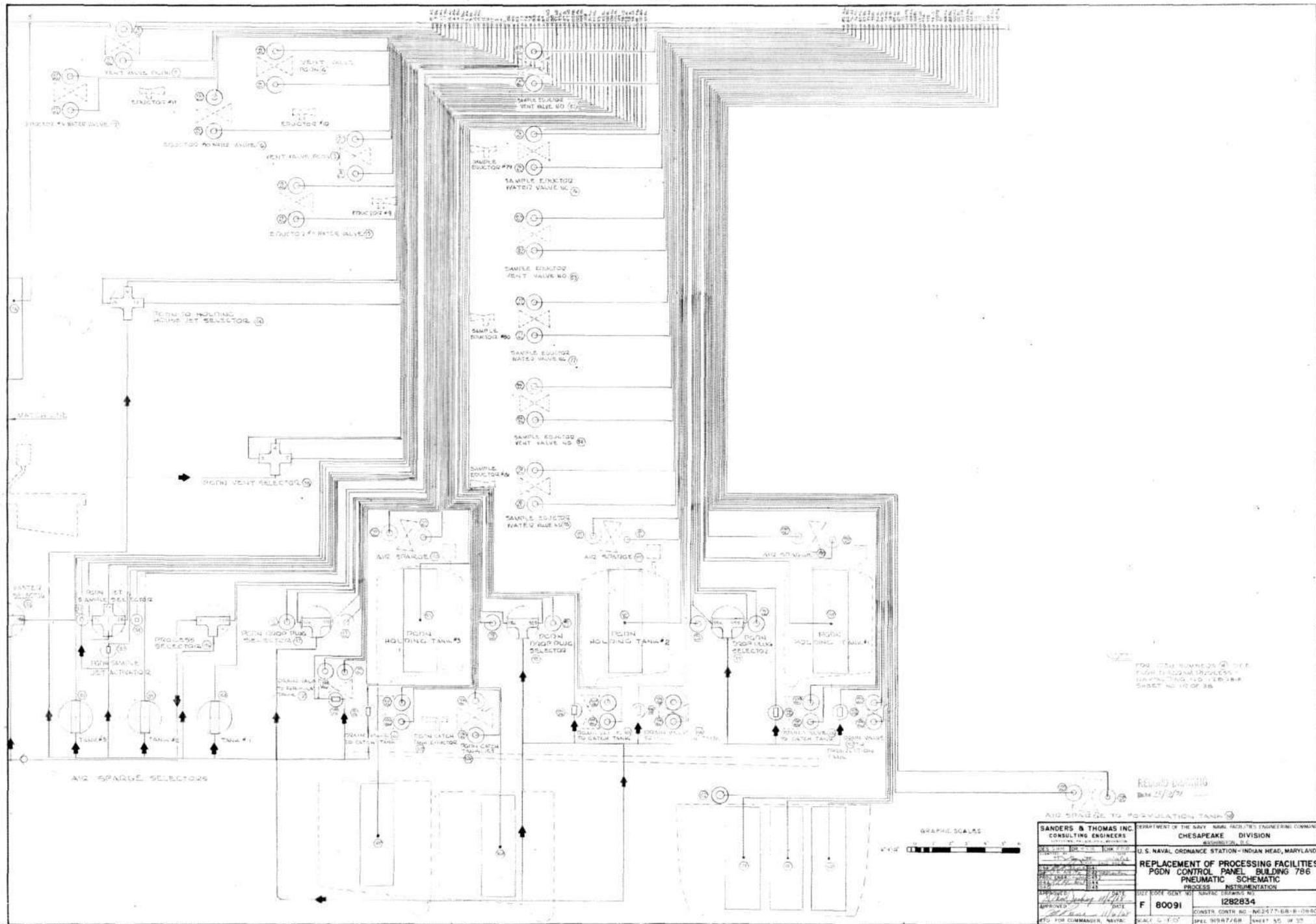
**RECORD DRAWING**  
DATE: 5/10/71

GRAPHIC SCALE  
1" = 10'

<b>SANDERS &amp; THOMAS INC.</b> CONSULTING ENGINEERS 1115 W. 14th St. Norfolk, VA 23502	DEPARTMENT OF THE NAVY - NAVAL FACILITIES ENGINEERING COMMAND <b>CHESAPEAKE DIVISION</b> ROOM 1111-1112
	U.S. NAVAL ORDNANCE STATION - INDIAN HEAD, MARYLAND <b>REPLACEMENT OF PROCESSING FACILITIES          PGDN CONTROL PANEL BUILDING 786          PNEUMATIC SCHEMATIC</b> PROCESS INSTRUMENTATION
PROJECT NO. 60091 DRAWING NO. 60091-100 SHEET NO. 10 OF 10	DRAWING NO. 1282832 CONTRACT NO. N00477-68-B-0860 DATE: 11/19/68

CH-815





FOR USE ONLY BY THE  
 PGDN TRACKING PROCESS  
 INSTRUMENTATION  
 SHEET NO. 15 OF 25

RECORD DRAWING  
 Date 11/2/54

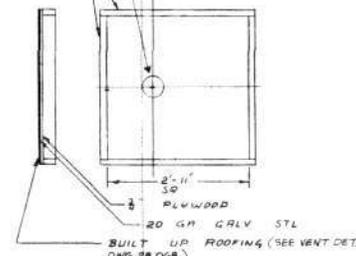
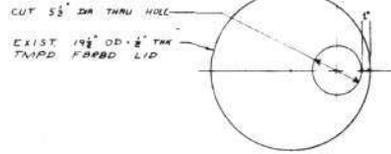
GRAPHIC SCALE  
 1" = 10'

SANDERS & THOMAS INC. CONSULTING ENGINEERS 1000 W. BROAD ST. WASHINGTON, D.C.		DEPARTMENT OF THE NAVY - NAVAL FACILITIES ENGINEERING COMMAND CHESAPEAKE DIVISION CHESAPEAKE, VA.	
U.S. NAVAL ORDNANCE STATION - INDIAN HEAD, MARYLAND		PROJECT NO. 1282834	
REPLACEMENT OF PROCESSING FACILITIES PGDN CONTROL PANEL BUILDING 786		PROCESS INSTRUMENTATION	
DESIGNED BY: [Signature]	DATE: 11/2/54	APP. CODE: 80091	CONSTR. CONTR. NO. NS2477-68-B-0840
APPROVED BY: [Signature]	DATE: 11/2/54	SCALE: 1" = 10'	SPEC. 9087/68 SHEET 15 OF 25
FOR COMMANDER, NAVY		SPEC. 9087/68 SHEET 15 OF 25	

CH-815

GENERAL NOTES  
FOR GEN. NOTES SEE N.O.S. DWG. NO. 28,056

HOLE FOR 4" PIPE - DETN. LOCATION AT ASSY  
2" x 4" WOOD FRAME



DETAIL  
SCALE: 1" = 1'-0"  
ASSEMBLY IN FIELD

SEE NOS DWG 28048 FOR  
STACK & ASSOC DETAILS

REMOVE EXIST 16" GRAVITY VENT

PROVIDE 1/2" DIA STRAND GUY  
CABLES (CAD-PLATED STL OR 90T)  
SPACED 18" APART.

DETAIL  
SCALE: 2" = 1'-0"  
(1) REQD

3/4" FLEX HOSE - 6' LG.  
SECURE WITH DUAL  
HOSE CLAMPS

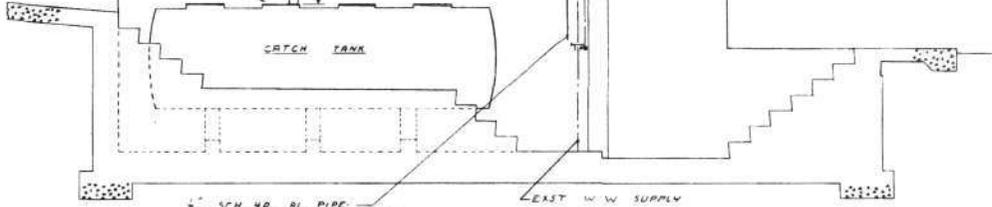
1" ID FLEX HOSE - 6' LG.  
SECURE WITH DUAL  
HOSE CLAMPS

PROVIDE  
DI-ELECTRIC UNION

4" ID GUM RBR HOSE (REF)

PROVIDE 1/2" DIA SCH 40  
GALV STL PIPE - FOR  
CONTINUATION SEE  
NOS DWG 28051

PROVIDE 1/2" DIA  
SCH 40 AL PIPE



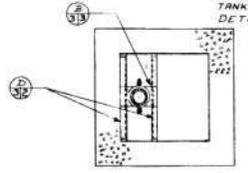
PARTIAL ELEVATION  
CATCH TANK ROOM  
SCALE: 3/4" = 1'-0"

LEGEND

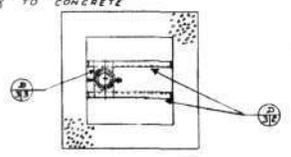
HIDDEN	VISIBLE	DESCRIPTION
---	---	EXIST HOSE B/B
---	---	EXIST W/W
---	---	NEW W/W
---	---	NEW AIR
---	---	GLOBE VALVE

- DETAIL OR SECTION
- SHT WHERE TAKEN
- △ SHT WHERE SHOWN

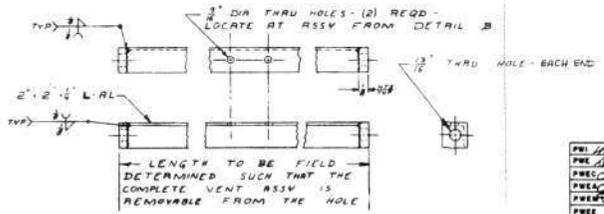
NOTE: SECTIONS 2 & 3 - SEE CATCH  
TANK VENT DETAIL FOR CONNECTION OF  
DETAIL D TO DETAIL B & TO CONCRETE



SECTION 2  
SUPPORT DETAIL  
SCALE: 1" = 1'-0"



SECTION 3  
SUPPORT DETAIL  
SCALE: 1" = 1'-0"

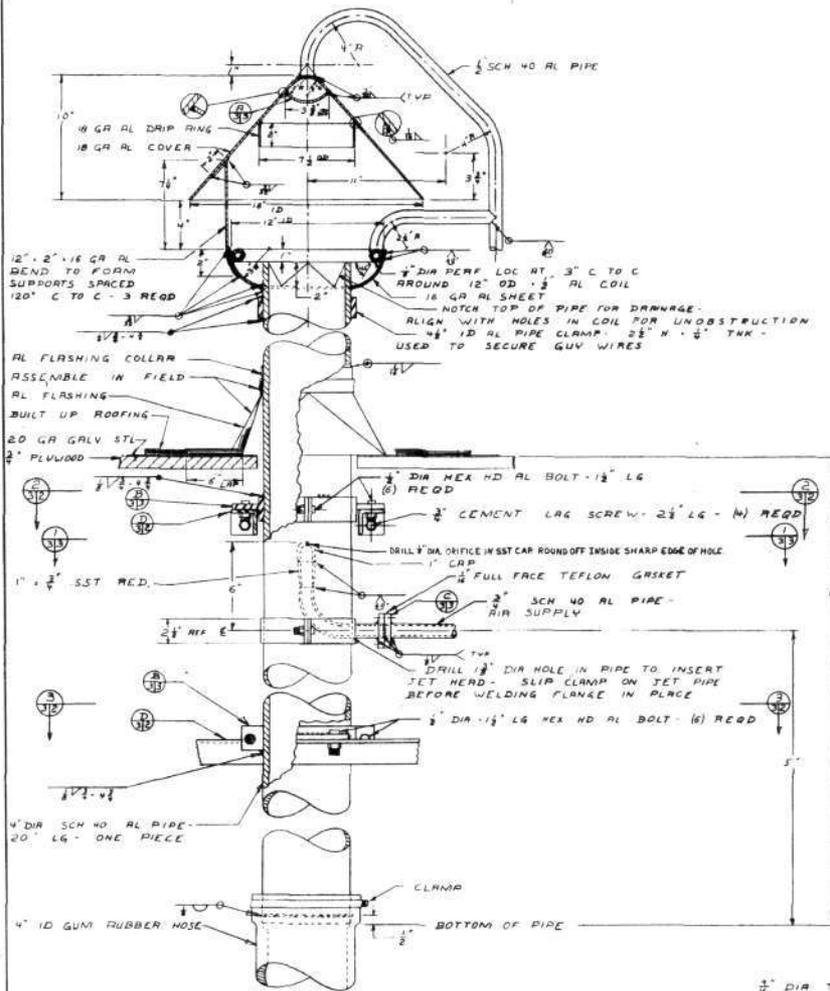


DETAIL  
SCALE: 1/2" = 1'-0"  
(4) REQD

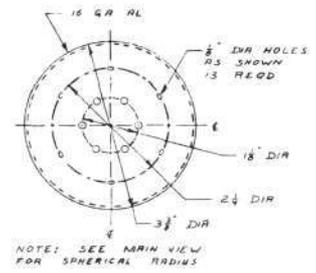
SYMBOL	DESCRIPTION	DATE	APPROVAL
REVISIONS			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND INDIAN HEAD, MD			
BLDG 786			
PROCESS VENTILATION			
ELEVATION, SECTIONS & DETAILS			
DESIGNED BY PWC	DATE 11-14-67	DRAWN BY T.N. DALL	DATE 11-14-67
CHECKED BY PWC	DATE 11-14-67	IN CHARGE PWC	DATE 11-14-67
APPROVED BY PWC	DATE 11-14-67	DATE 11-14-67	DATE 11-14-67
DRAWING NO. 28067		SHEET 2 OF 3	

CH-815

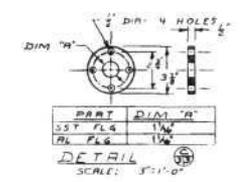
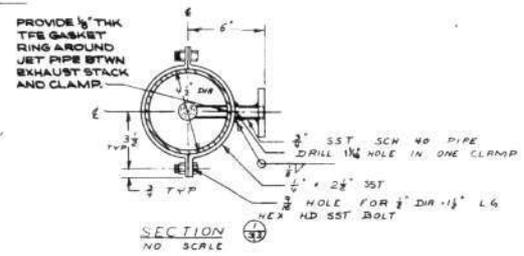
GENERAL NOTES  
SEE NOS DWG 28064



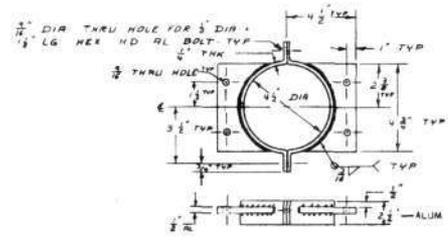
CATCH TANK VENT  
NO SCALE



DETAIL A  
FULL SCALE



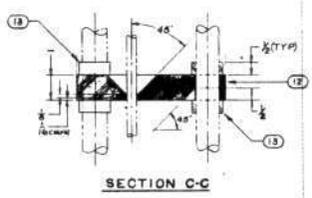
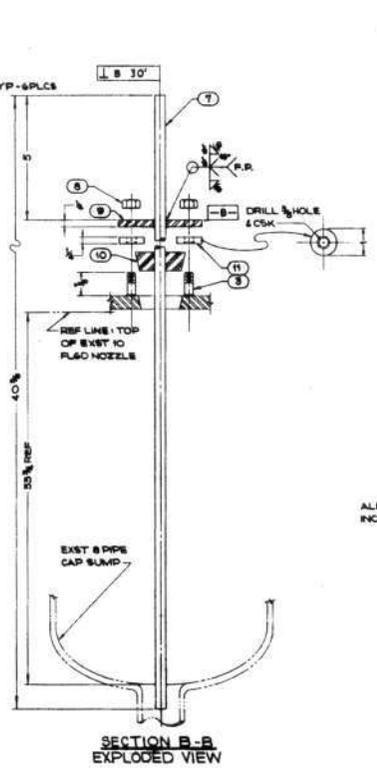
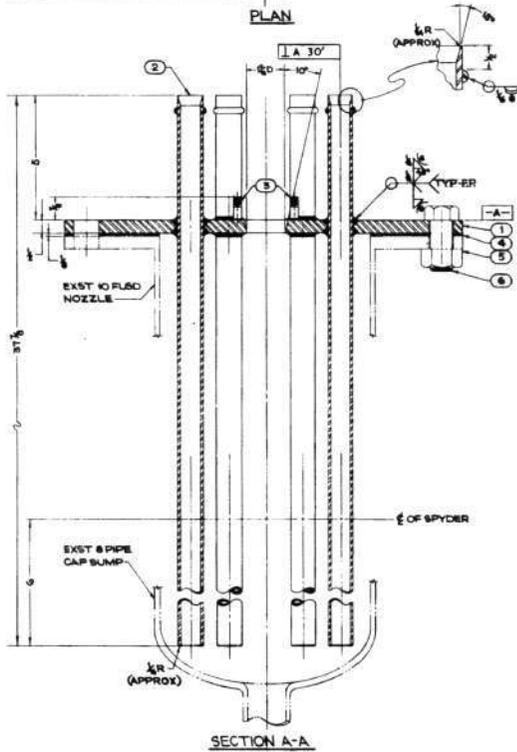
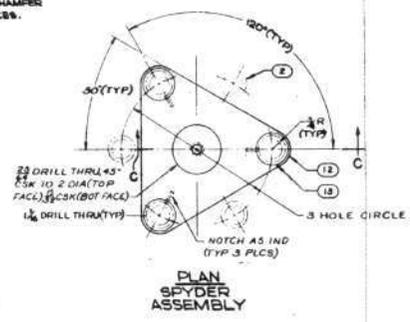
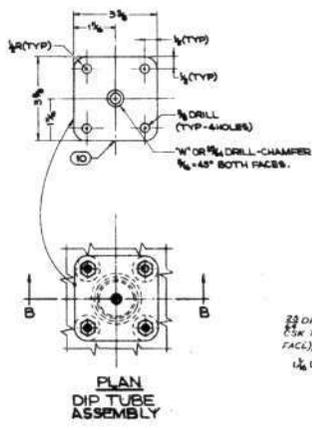
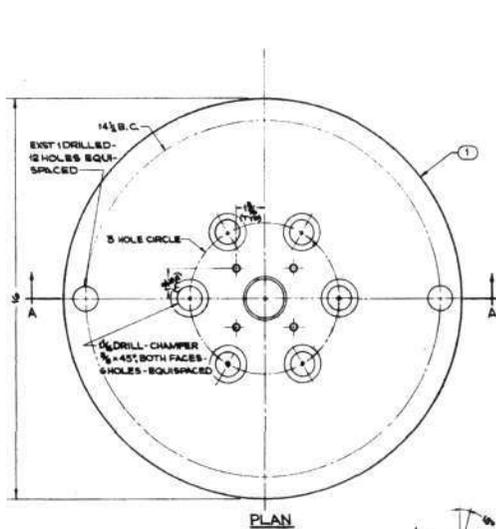
DETAIL B  
SCALE: 3"=1"



DETAIL C  
NO SCALE

SYMBOL	DESCRIPTION	DATE	APPROVAL
REVISION			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
NAVAL ORDONANCE STATION			
INDIAN HEAD, MD.			
BLDG 786		PROCESS VENTILATION	
MECHANICAL DETAILS			
DESIGNER	DATE	APPROVED	DATE
DRAWN	DATE	DATE	DATE
PREPARED BY	DATE	DATE	DATE
CHECKED BY	DATE	DATE	DATE
SCALE: AS NOTED		SHEET 3 OF 3	
DRAWING NO. 28068			

04-915



**LEGEND**

	WELD (S08 S67)
	STAINLESS STEEL (S04 OR B16)
	NEOPRENE
	POLYETHYLENE
	NEW WORK
	EXISTING MATING OR PROXIMATE PARTS
	FULL PENETRATION

**TOLERANCES**  
 ALL DIMENSIONS, LOCATIONS, ETC ARE IN INCHES UNLESS OTHERWISE INDICATED.  
 INCHES — ± 1/64 UDS  
 ANGLES — 130/0DS

**BILL OF MATERIALS**

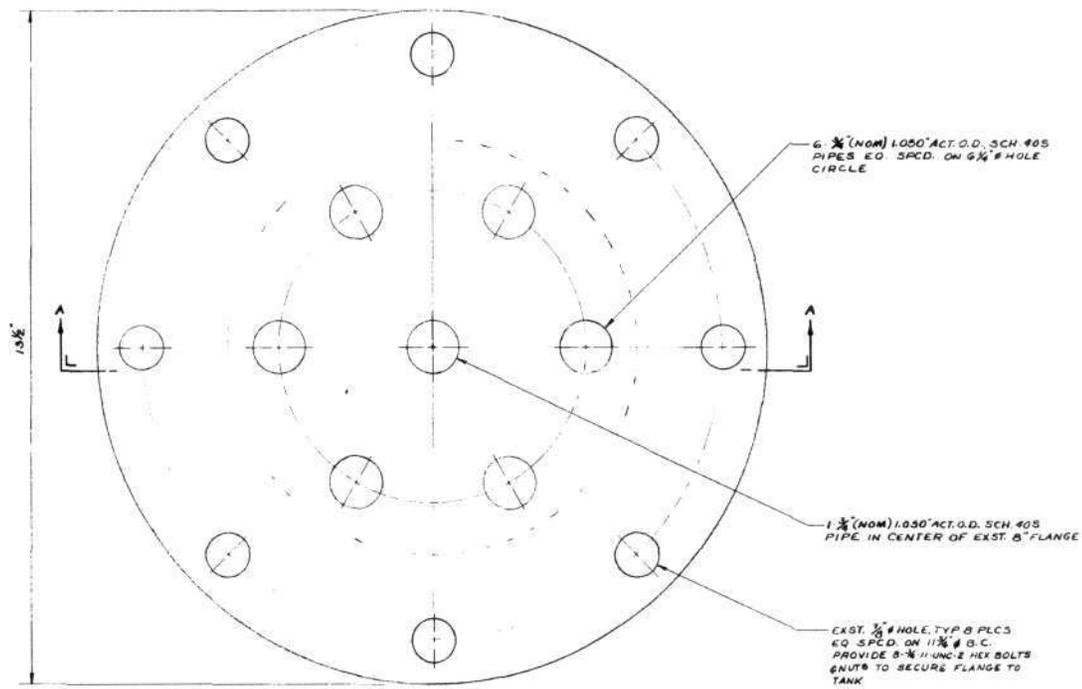
ITEM NO	QUANTITY	DESCRIPTION	MAT'L	REMARKS
1	1	FLANGE	SST	CUST. FURN.
2	6	SUCTION PIPES: 1/2" DIA (NOM), SEAMLESS, SCH 40.	SST	PREP AS IND
3	4	STUD: 1/2" UNF-2A	SST	
4	1	GASKET	TFE	
5	12	NUT: 1/2" UNF-2B, HEX, FULL BEARINGS, UNFINISHED.	SST	
6	12	BOLT: 1/2" UNF-2A, HEX-HEAD, FULL BEARING, UNFINISHED.	SST	
7	1	TUBE: 1/2" O.D., 0.049 WALL THICKNESS, SEAMLESS	SST	PREP AS IND
8	4	NUT: 1/2" UNF-2B, HEX, FULL BEARINGS, UNFINISHED.	SST	
9	1	FLANGE	SST	PREP AS IND
10	1	STOPPER: 1/2" DIA	NPRN	BORE FOR FORCE FIT OVER 1/2" TUBE
11	4	SPACER	POLYTH	PREP AS IND
12	1	SPYDER	POLYTH	PREP AS IND
13	6	RING, RETAINER	NPRN	CUT FROM 1/2" I.D. 30" FT TUBING

- GENERAL NOTES**
- ALL WELDS SHALL BE HOMOGENEOUS; FREE OF CRACKS, PITS, SLAG INCLUSIONS, OR OTHER IMPERFECTIONS.
  - ALL WELDS (EXCEPT BEADS) SHALL BE FULL PENETRATION.
  - ALL WELDS SHALL BE DYE PENETRANT TESTED; ANY FAULT SHALL BE CORRECTED IN ACCORDANCE WITH GEN NOTE #3, DWG #28,075.
  - BREAK ALL OUTSIDE EDGES.
  - FINISH: 1/4 MICRONS OR BETTER ON ALL INSIDE SURFACES.  
 1/2 MICRONS OR BETTER ON ALL OUTSIDE SURFACES.
  - INTERPRET DRAWINGS IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-1000.

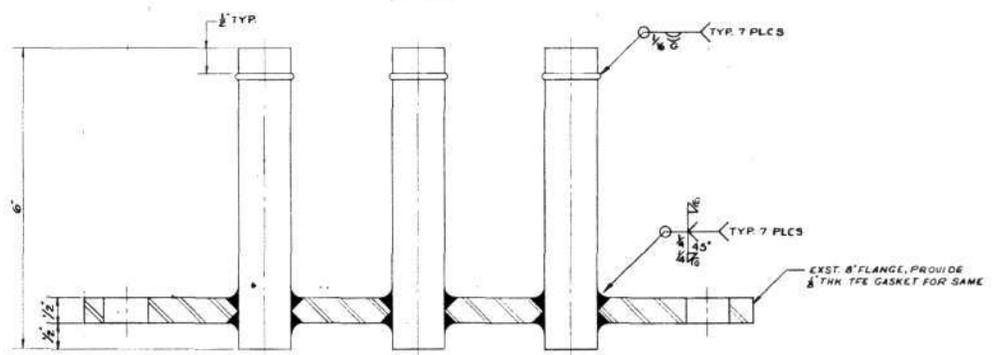
DESIGNED BY LONG	DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
DRAWN BY WELLS	NAVAL ORDNANCE STATION	INDIAN HEAD, MD
CHKD BY [Signature]	REPLACEMENT OF PROCESSING FACILITIES	BUILDING NO 786
APP'D BY [Signature]	DUCTOR SUCTION TUBE & DIP TUBE ASSEMBLY	PLANS SECTIONS & DETAILS
APPROVED [Signature]	DATE 11-20-67	DRAWING NO 28,070
		NUMBER CONTY NO 91287
		SCALE 6"-1" = 1'-0"
		DATE 11/20/67

04815

REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVAL



**PLAN**



**SECTION A-A**

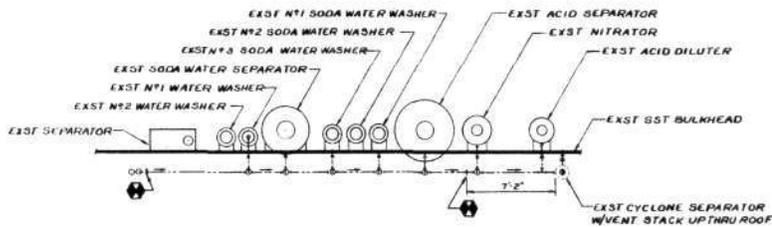
FOR GENERAL NOTES, LEGEND & TOLERANCES  
SEE DWG. NO. 28,075

DES. HELLAMS	ORIGINATOR	DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
DRW. AMW	ORIGINATOR	NAVAL ORDNANCE STATION	
CHK. LOWE	REVISOR	LINDAN HEAD, MD	
PRG. [Signature]	DATE	NAVY FACILITIES ENGINEERING COMMAND	
PRJ. [Signature]	DATE	BUILDING NY 706	
PRV. [Signature]	DATE	EDUCTOR VENT RETURN FLANGE	
PRV. [Signature]	DATE	FOR WATER SEPARATOR TANK	
APPROVED: [Signature]	DATE	DRAWING NO.	28,071
		CONSTR. CONTR. NO.	91987
		SCALE	FULL
		SPEC	91987/70 SHEET 2 OF 8

CH-915

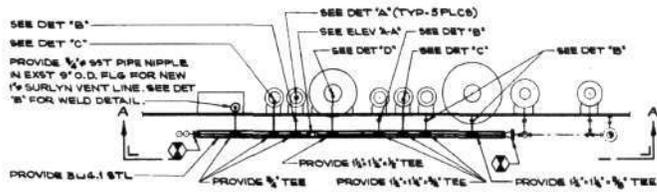
**GENERAL NOTES**

1. ALL DIMENSIONS AND LOCATIONS SHALL BE VERIFIED ON THE JOB SITE PRIOR TO FABRICATION OR CONSTRUCTION.
2. THE EXST VENT SYSTEM SHALL BE DECONTAMINATED BY THE CUSTOMER AND SHALL BE REMOVED UNDER THEIR DIRECTION.
3. ALL FITTINGS AND TUBE SIZES ARE GIVEN IN NOM PIPE SIZES. FITTINGS SHALL BE "PREELINE" (DR 80) EXTRA-LENGTH SCH 5 S04 OR S16 SST. NIPPLES SHALL BE SEAMLESS SCH 5 S04 SST PIPE EXCEPT CONN NIPPLE IN 9" DIA SEPARATOR FLG WHICH SHALL BE SCH 40.
4. SURLYN AND GUM RUBBER TUBING SHALL BE FURNISHED BY CUSTOMER.
5. TUBING SHALL BE CLAMPED TO FITTINGS W/ SST WORM-DRIVE BAND TYPE CLAMPS.
6. ALL WELDS SHALL BE HOMOGENOUS, FREE OF CRACKS, PITS, SLAG INCLUSIONS, OR OTHER IMPERFECTIONS.
7. ALL WELDS (EXCEPT BEADS) SHALL BE FULL PENETRATION.
8. ALL WELDS SHALL BE DYE PENETRANT TESTED. ANY AND ALL FAULTS SHALL BE CORRECTED.
9. FINISH: 1/8" MICRONCHES OR BETTER INSIDE SURFACES. 1/8" MICRONCHES OR BETTER OUTSIDE SURFACES.



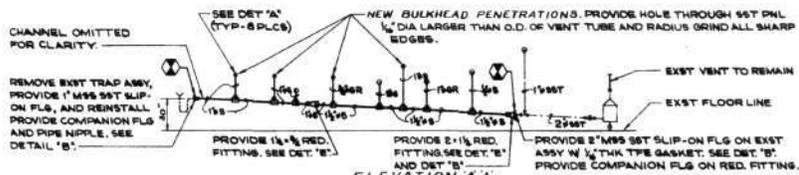
**REMOVAL PLAN**

SCALE: 1/4"=1'-0"



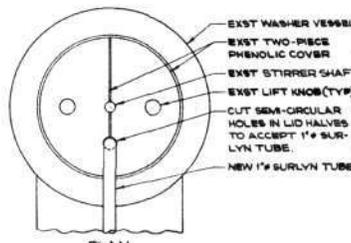
**INSTALLATION PLAN**

SCALE: 1/4"=1'-0"



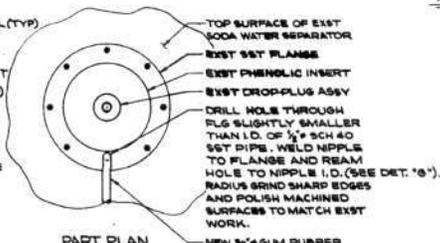
**ELEVATION A-A**

SCALE: 1/4"=1'-0"



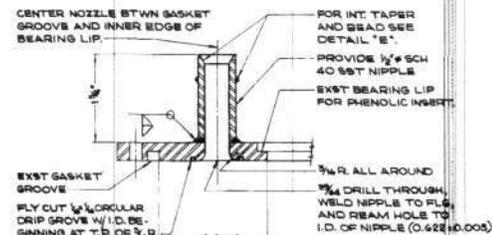
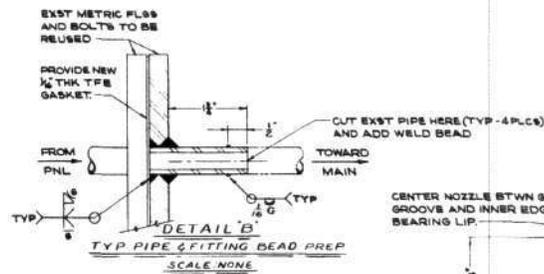
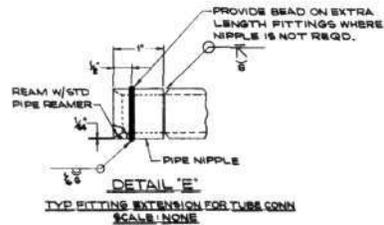
**PLAN DETAIL 'C' WASHER CONNECTION**

SCALE: NONE



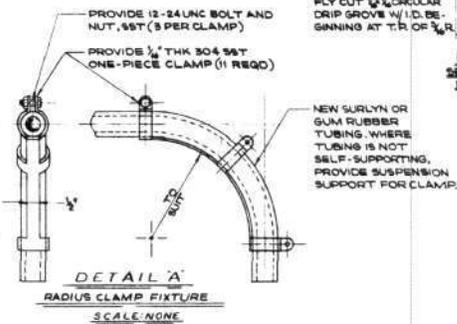
**PART PLAN DETAIL 'D' SEPARATOR CONNECTION**

SCALE: NONE



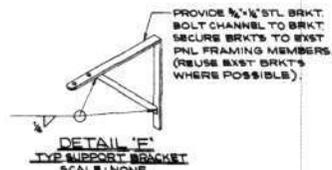
**DETAIL 'G' SECTION VIEW OF FLANGE & NOZZLE**

SCALE: NONE



**DETAIL 'A'**

SCALE: NONE



**DETAIL 'F'**

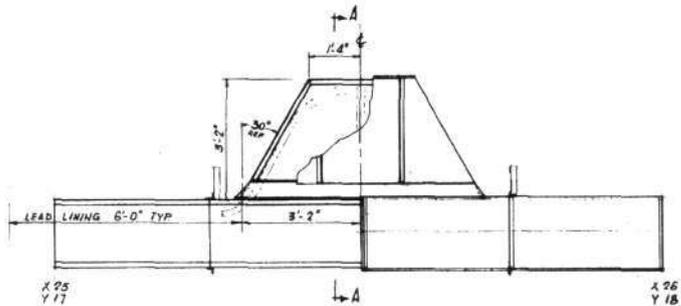
SCALE: NONE

**LEGEND**

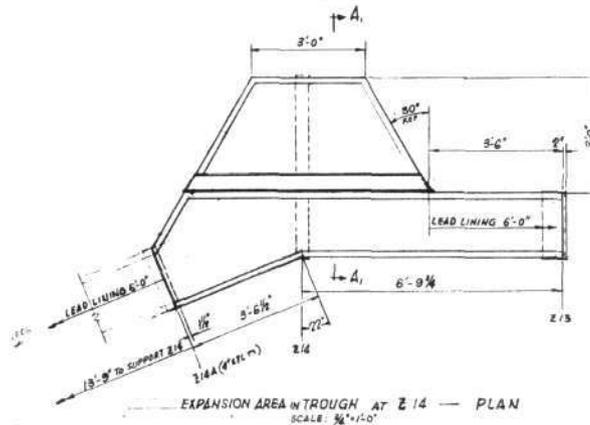
- EXST PIPING AND/OR FITTINGS TO BE REMOVED / DISCARDED.
- - - EXST PIPING AND/OR FITTINGS TO BE REMOVED, MODIFIED, / REINSTALLED.
- EXST WORK TO REMAIN
- NEW WORK
- S SURLYN TUBING
- GR GUM RUBBER TUBING
- NEW WORK
- BEEN NEW WORK
- ✂ CUT HERE

DESIGNED BY: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	DEPARTMENT OF THE ARMY	ARMY ENGINEERING CENTER
DRAWN BY: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
CHECKED BY: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>REPLACEMENT OF PROCESSING FACILITIES</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>MODIFICATIONS TO NITRATOR VENT SYSTEM</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>MODIFICATIONS TO NITRATOR VENT SYSTEM</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>MODIFICATIONS TO NITRATOR VENT SYSTEM</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>MODIFICATIONS TO NITRATOR VENT SYSTEM</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>MODIFICATIONS TO NITRATOR VENT SYSTEM</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
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APPROVED: <b>W.D.S.</b>	DATE: <b>11/12/88</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER
PROJECT: <b>MODIFICATIONS TO NITRATOR VENT SYSTEM</b>	PROJECT NO: <b>1186</b>	ARMY ENGINEERING CENTER	ARMY ENGINEERING CENTER



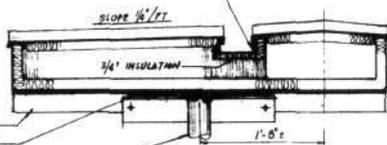


EXPANSION AREA IN TROUGH — PLAN  
SCALE:  $\frac{1}{8}$ " = 1'-0"



EXPANSION AREA IN TROUGH AT E 14 — PLAN  
SCALE:  $\frac{1}{8}$ " = 1'-0"

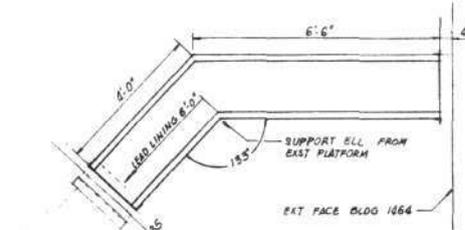
04 x 1.85 CH2 FLANGE ON TROUGH SIDE TO CLEAR HINGES



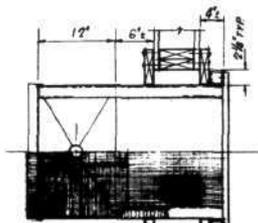
FOR SEC. A-A ONLY:

3 x 7 x 1/4 L. 4'-10" LG  
SPACERS (AS NECESSARY)  
3/4" STL PIPE W/ 1/4" x 3/4" STL 24" LG  
# 10" SQ x 30" CONC PTG,  
(X 28A & Y 17A)

SECTION A-A + A-A  
SCALE:  $\frac{1}{2}$ " = 1'-0"

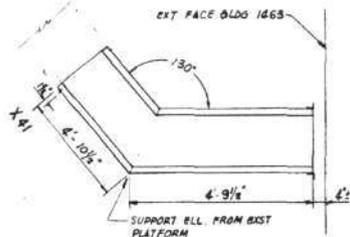


TROUGH AT BLDG 1464 — PLAN  
SCALE:  $\frac{1}{4}$ " = 1'-0"

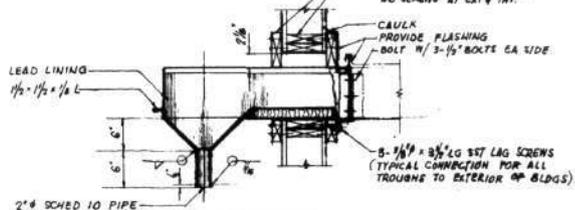


TOP VIEW

2 x 2 x 1/4 L ON BOTH SIDES &  
3 x 2 x 1/4 L ON BOTTOM (WELDED)  
PROVIDE FRAMED OPNG IN WALL FOR  
INSTALLATION OF TERMINAL PIECE (FROM INSIDE);  
SECURE TROUGH IN OPNG W/ 2 x 2'S & # 10 x 3/4"  
WD SCRW'S AT EXT & INT.



TROUGH AT BLDG 1463 — PLAN  
SCALE:  $\frac{1}{8}$ " = 1'-0"



SECTION  
TROUGH TERMINATION IN BLDGS 1463 & 1464 (2)  
SCALE:  $\frac{1}{2}$ " = 1'-0"

CAULK  
PROVIDE FLASHING  
BOLT W/ 3-1/2" BOLTS EA SIDE  
3-1/2" x 3/8" LG SET LAG SCREWS  
(TYPICAL CONNECTION FOR ALL  
TROUGH TO EXTERIOR OF BLDGS)

STAB	DESCRIPTION	DATE	APPROVAL
REVISIONS			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL ORDNANCE STATION INDIAN HEAD, MD.			
DES: <i>[Signature]</i>	INS: J.E.P. & L.P.	BIAZZI PLANT TROUGH REPLACEMENT TROUGH DETAILS	
CHK: <i>[Signature]</i>	SEVEN I. SPOZASIS		
DATE: 6-12-78	ONE R. S. S. S. S.		
CHK: <i>[Signature]</i>	ONE R. S. S. S. S.		
STRUCTURAL		SCALE: AS SHOWN	
APPROVED (S): <i>[Signature]</i>		DATE: 7/1/78	
DRAWN BY: <i>[Signature]</i>		DRAWING NO. 78-7046	

NSN 31-002-78

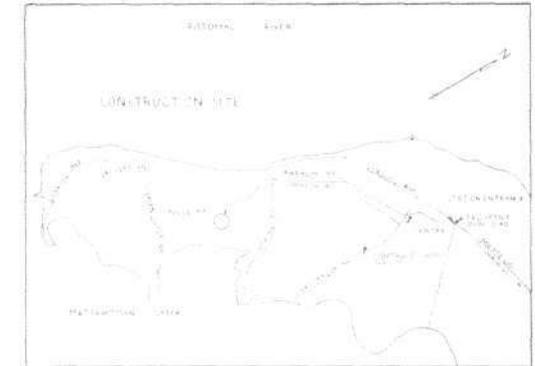
CH-815-

# OTTO FUEL FACILITIES

## INDIAN HEAD MARYLAND

### VENTILATION SYSTEM MODIFICATIONS

REVISIONS		
SYMBOL	DESCRIPTION	DATE



LOCATION PLAN

SCALE: 1" = 1/4 MILE

INDEX OF DRAWINGS

<u>NAVFAC DWG. NO.</u>	<u>TITLE</u>	<u>SHEET NO.</u>
3-112-063	TITLE SHEET	1 OF 6
3-112-096	HEATING AND VENTILATING	2 OF 6
3-112-097	HEATING AND VENTILATING	3 OF 6
3-112-098	HEATING AND VENTILATING, PLANS, DETAILS, LEGENDS	4 OF 6
3-112-099	BLDG. 786 ELECTRICAL PLANS AND DETAILS	5 OF 6
3-112-100	BLDGS. 787 ELECTRICAL PLANS AND DETAILS	6 OF 6



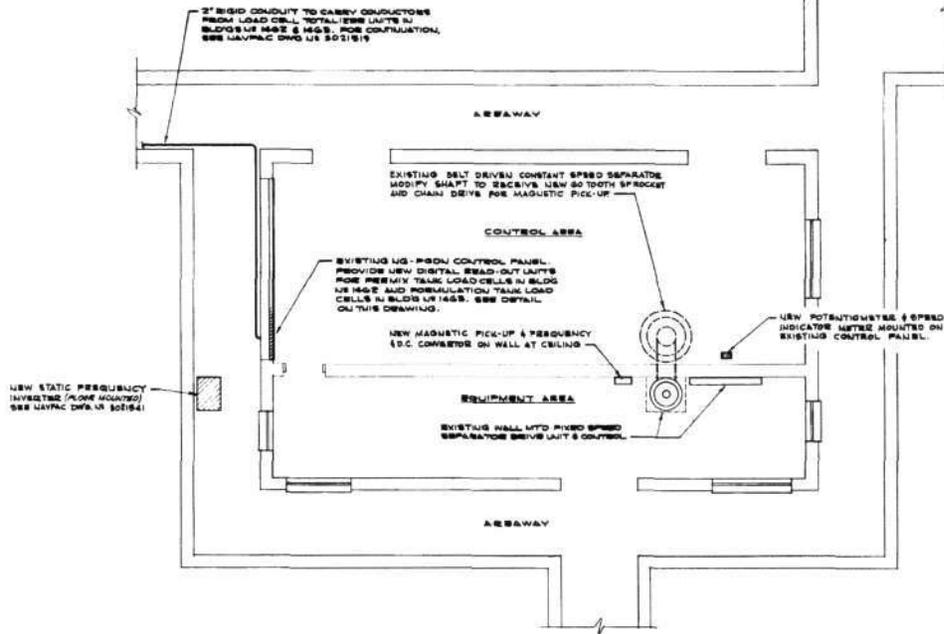
VICINITY MAP

SCALE: 1" = 7 MILES

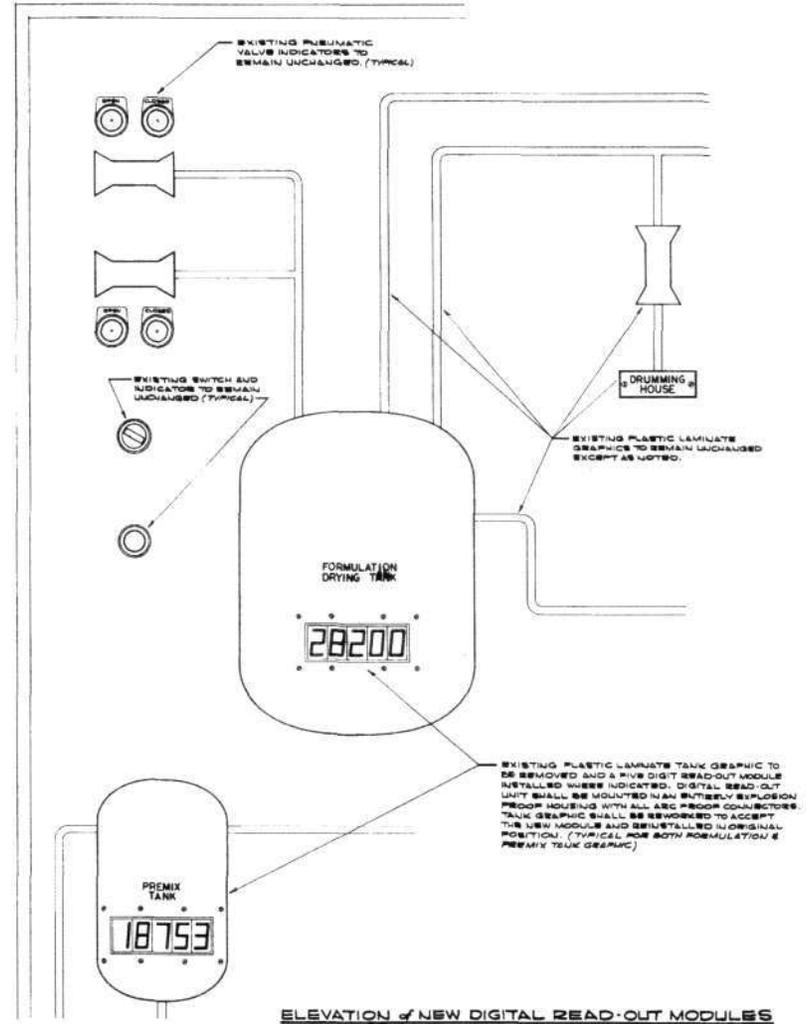
NAVAL ORDNANCE STATION VENTILATION SYSTEM MODIFICATIONS OTTO FUEL FACILITIES TITLE SHEET	
PROJECT NO. F 80091 DRAWN BY: [Signature] CHECKED BY: [Signature]	DRAWING NO. 3112063 SHEET NO. 1 OF 6

CH-815

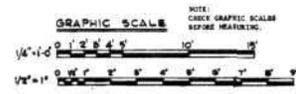
REVISIONS			
NO.	DESCRIPTION	BY	APPROVED



FLOOR PLAN - BUILDING No 786  
SCALE: 1/4" = 1'-0"



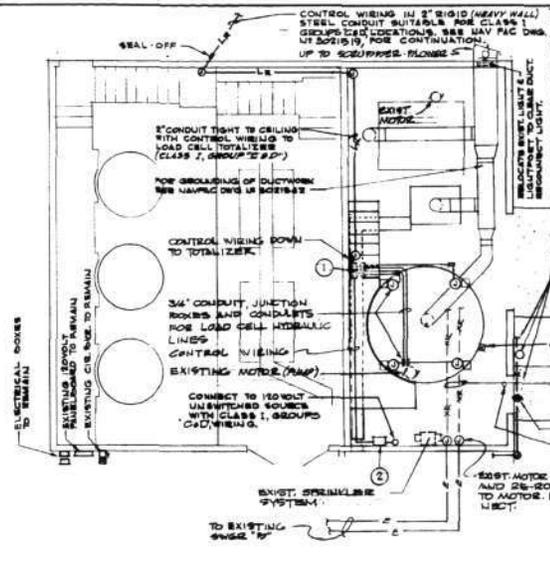
ELEVATION of NEW DIGITAL READ-OUT MODULES  
SCALE: 1/8" = 1"



JAMES B. SULLIVAN JR., P.E. 8883 DAIRY STREET SILVER SPRING, MARYLAND		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND CHESAPEAKE DIVISION WASHINGTON, D.C.	
DATE: 12/15/78 BY: JBS CHECKED: [Signature] DATE: [ ] SCALE: 1/8\"/>			
PROJECT: OTTO FUEL PLANT ADDITION		DRAWING NO.: 3021539	
SHEET: F 80091		TOTAL SHEETS: 10	
SCALE: GRAPHIC		SHEET 21 OF 26	

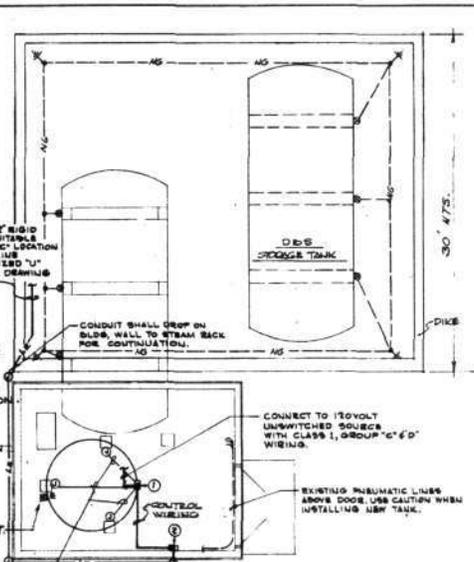
DH-815

REVISION			
NO.	DESCRIPTION	DATE	APPROVED



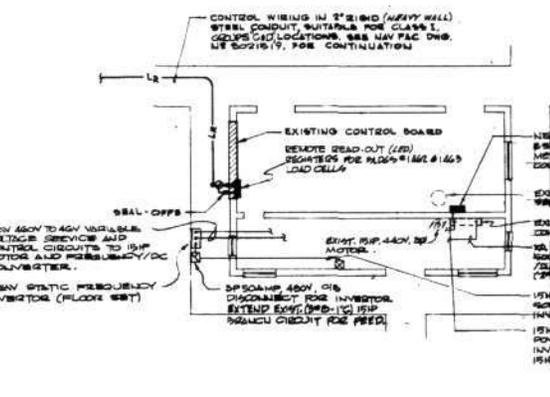
- ① LOAD CELL TOTALIZER 4'-0" ABOVE FLOOR
- ② READ-OUT RESISTOR FOR LOAD CELL 8'-0" ABOVE PLATFORM.

**BUILDING No 1463**  
SCALE: 1/4" = 1'-0"

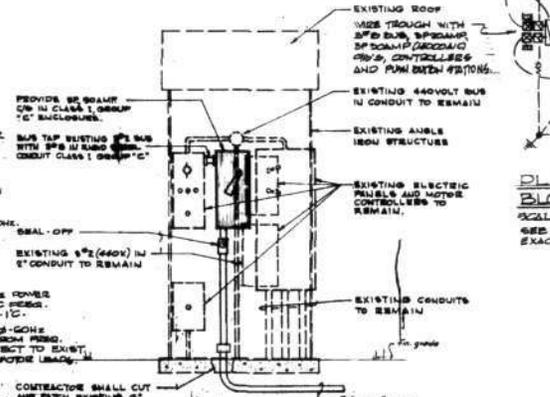


- ① LOAD CELL TOTALIZER 8'-0" ABOVE FLOOR
- ② READ-OUT RESISTOR FOR LOAD CELL 11'-0" ABOVE FLOOR

**BUILDING No 1462**  
SCALE: 1/4" = 1'-0"

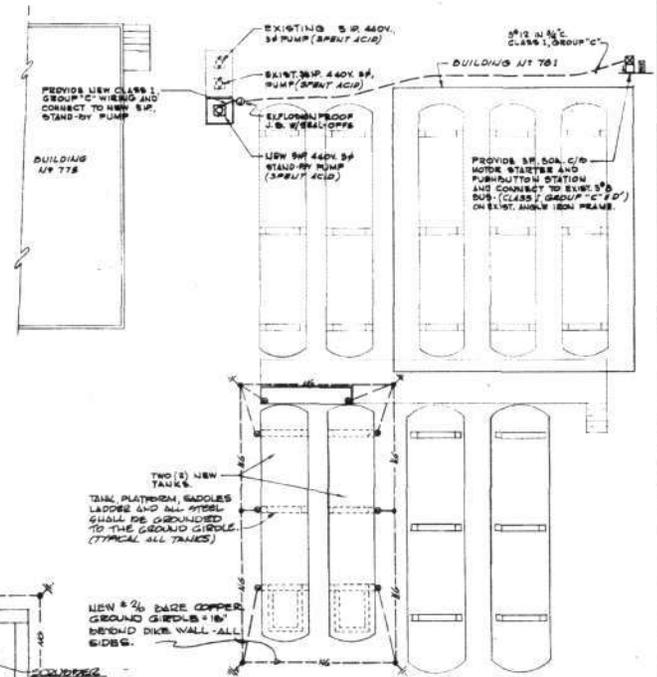


**BUILDING No 786**  
SCALE: 1/8" = 1'-0"



**DETAIL of EXISTING SWITCHGEAR 'B'**  
NO SCALE

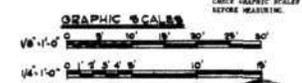
NOTE: SEE NAV PAC DWS. NO. 3021542, FOR EXACT LOCATION OF SWITCHGEAR 'B'.



**BUILDING No 781**  
SCALE: 1/8" = 1'-0"

**PLAN of SCRUBBER BLOWER UNIT, (1463)**  
SCALE: 1/4" = 1'-0"  
SEE DWS. NO. 3021542 FOR EXACT LOCATION WITH BLDG #1463.

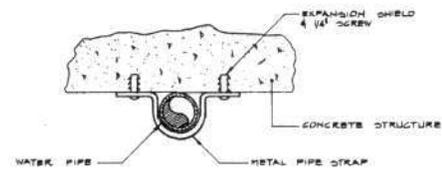
NOTE: MATERIAL, WIRING AND INSTALLATION SHALL CONFORM TO ARTICLE 145.500, HAZARDOUS LOCATION & MORE CLASS I, DIV. I GROUP C & D FOR ALL BLDG'S SHOWN ON THIS DRAWING. SEE NAV PAC DWS. NO. 3021542 AND 3021543 FOR GROUNDING DETAILS.



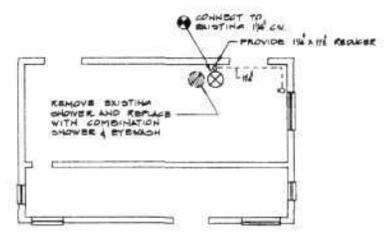
JAMES B. SULLIVAN JR., P.E. 6925 14TH STREET SILVER SPRING, MARYLAND		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND CHEESAPEAKE DIVISION WASHINGTON, D.C.	
PROJECT NO. 80091 DATE: 10/1/78		NAVAL ORDNANCE STATION INDIAN HEAD, MD. <b>OTTO FUEL PLANT ADDITION</b> BUILDING NOS 781, 786, 1462 & 1463 FLOOR PLANS. ELECTRICAL	
DRAWN BY: [Signature] CHECKED BY: [Signature]	DATE: 10/1/78	SHEET NO.: 3021541	DRAWING NO.: N62477-78-C-0042
SCALE: GRAPHIC		SHEET 24 OF 25	

047915

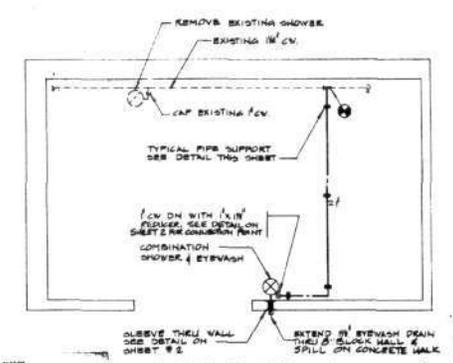
REVISIONS		
SYMBOL	DESCRIPTION	DATE APPROVAL



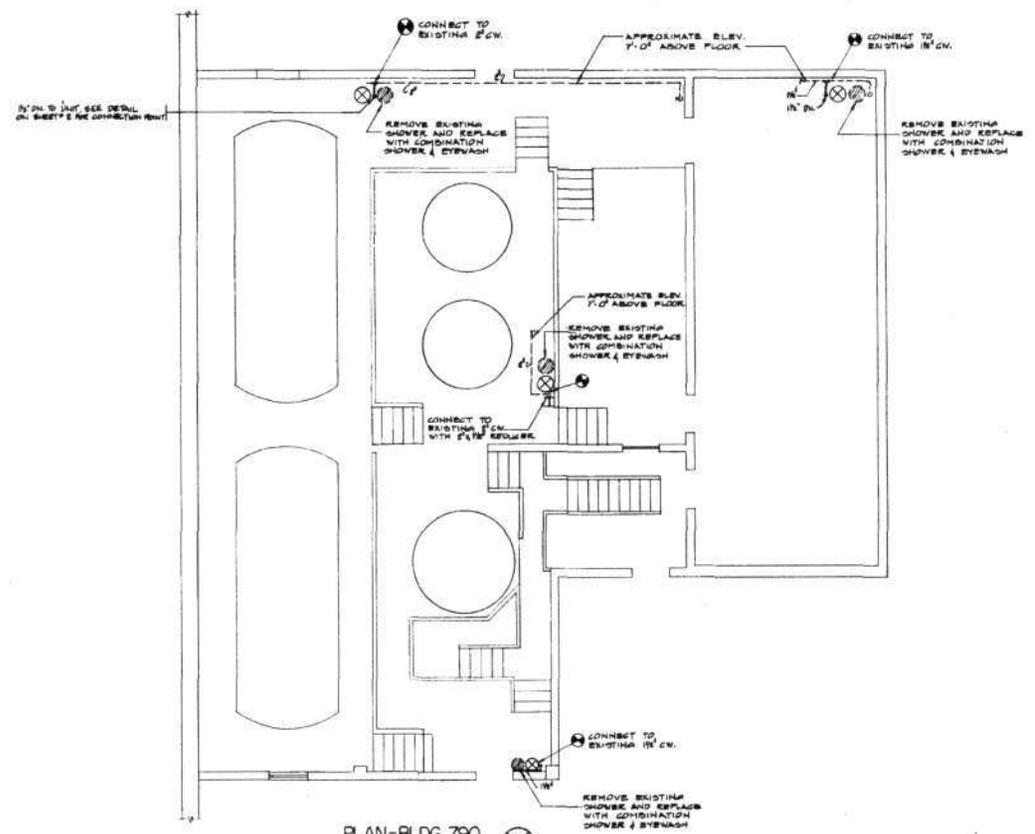
PIPE SUPPORT DETAIL  
NOT TO SCALE



PLAN-BLDG 786  
SCALE: 1/8" = 1'-0"



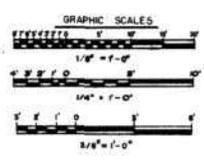
PLAN-BLDG 1461  
SCALE: 3/8" = 1'-0"



PLAN-BLDG 790  
SCALE: 1/8" = 1'-0"

BY PL 5 JAV, SEE DETAIL ON SHEET 2 FOR CONNECTION POINT

- NOTES:
- IF DRAWING IS A REDUCTION USE GRAPHIC SCALE.
  - SEE GENERAL NOTES AND DETAILS ON SHEET # 1.



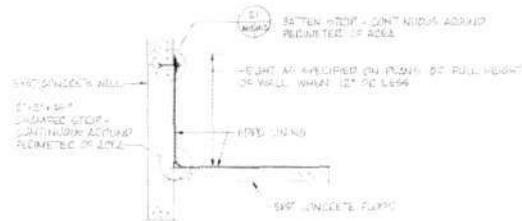
PROPERTY OF U.S. NAVY  
OFFICE IN CHARGE OF CONSTRUCTION  
NAVAL ORDNANCE STATION  
INDIAN HEAD, MARYLAND  
TO BE RETURNED NOT LATER THAN 90 DAYS  
AFTER BID OPENING.

<b>GAUTHIER ALVARADO &amp; ASSOCIATES</b>		DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
ARCHITECTURE ENGINEERING PLANNING		INDIAN HEAD, M.D.		NAVAL ORDNANCE STATION	
BUILDING 790, 786 & 1461		INDIAN HEAD, M.D.		ALTER VARIOUS INDUSTRIAL FACILITIES	
DES: JF	CHK: JH	DATE: 05/85	SIZE: 11x17	NAVY: 80091	DRAWING NO: 3124.448
SATISFACTORY TO: JF	DATE: 05/85	SCALE AS SHOWN	SPEC: 21-83-7064	SHEET 12 OF 14	

CH-815



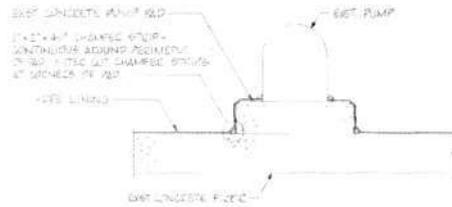
SYMBOL	DESCRIPTION	DATE	APPROVAL



**TYPICAL DETAIL - HIGH DENSITY POLYETHYLENE (HDPE) LINING AT VERTICAL WALL/DIKE/CURB**

NOT TO SCALE

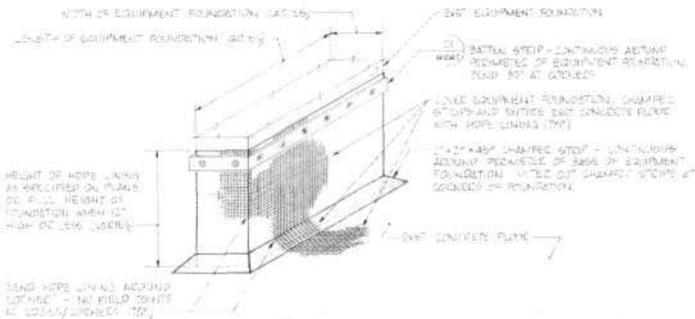
NOTE: AT CORNERS, TOP AND BOTTOM, HDPE FLASHING (STRIPS) AND EXTENSION WELDS TO ENSURE WEATHTIGHT SEAL AT ALL JOINTS, CORNERS AND EDGES.



**TYPICAL DETAIL - HIGH DENSITY POLYETHYLENE (HDPE) LINING AT EXISTING PUMP PAD**

NOT TO SCALE

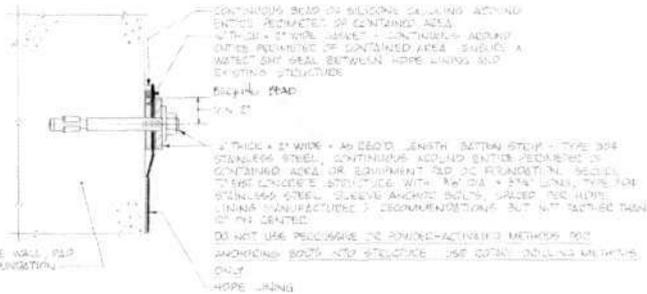
NOTE: AT CORNERS OR TOP AND BOTTOM CORNERS, HDPE FLASHING (STRIPS) AND EXTENSION WELDS TO ENSURE WEATHTIGHT SEAL AT ALL JOINTS, CORNERS AND EDGES.



**TYPICAL DETAIL - HIGH DENSITY POLYETHYLENE (HDPE) LINING AT EXISTING EQUIPMENT FOUNDATION**

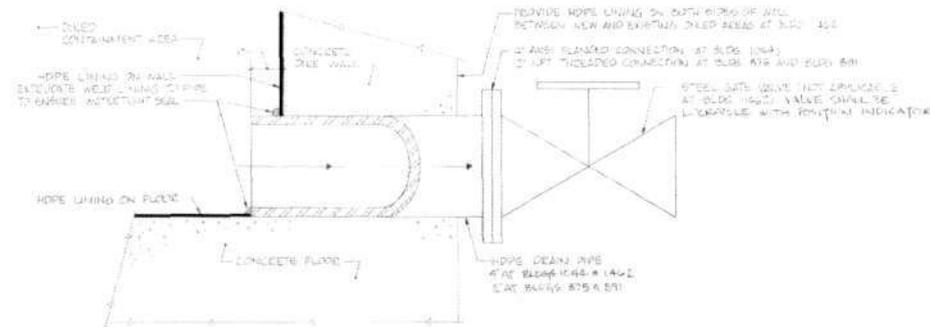
NOT TO SCALE

NOTE: AT CORNERS, PROVIDE CORNERS, HDPE FLASHING (STRIPS) AND EXTENSION WELDS TO ENSURE WEATHTIGHT SEAL AT ALL JOINTS, CORNERS AND EDGES.



**DETAIL - BATTEN STRIP INSTALLATION**

NOT TO SCALE



**DETAIL - HIGH DENSITY POLYETHYLENE (HDPE) LINING INSTALLATION AT PIPE PENETRATIONS**

NOT TO SCALE

NOTE: PROVIDE OVERLAP, HDPE FLASHING (STRIPS) AND EXTENSION WELDS TO ENSURE WEATHTIGHT SEAL AT ALL JOINTS.

**DRAWING NOTES :**

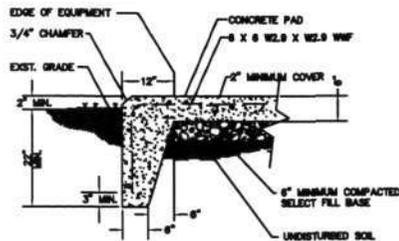
1. HDPE LINING SHALL BE INSTALLED AS SHOWN ON THESE PLANS UNLESS OTHERWISE SPECIFIED. ALL HDPE LINING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE TESTING OF HDPE LINING SHALL BE IN ACCORDANCE WITH THE TESTING PROCEDURES AND METHODS OF THE MANUFACTURER.

EA MILLER Consulting Engineers 1015 - 13th Street Redwood City, CA 94063		<b>EA</b>	<b>M-12</b>
DESIGNED BY: PFC DRAWN BY: BRW DATE: 3-28-92 REVISION: 8-12-92	PROJECT NO: 88217-01-C-2025 SHEET NO: 3,151,262 TOTAL SHEETS: 12 OF 15		
NAVAL ORDNANCE STATION <b>SPILL CONTAINMENT AT VARIOUS FACILITIES - 4TH PHASE DETAILS - MECHANICAL</b>			
F 80091		NONE	

24-815







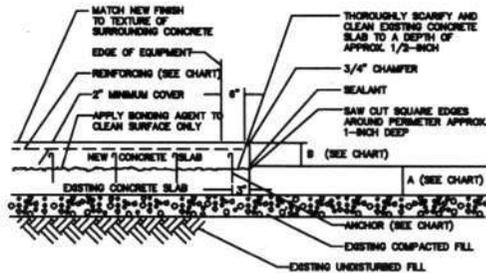
**NOTES:**

1. SLOPE PAD TOWARD EXISTING DRAINAGE PATTERN.
2. CONCRETE TO BE AIR ENTRAINED 3,000 PSI WITH A STEEL TROWELLED FINISH.
3. COMPACT SUBGRADE AND BASE TO 98% OF ASTM D-1557.
4. PROVIDE LINSEED OIL EMULSION TREATMENT FOR ALL EXPOSED CONCRETE SURFACES.
5. SEED DISTURBED AREAS (SECTION 701 MSHA SPECIFICATION).

**MECHANICAL EQUIPMENT PAD**

SCALE: NONE

1  
C/C/C



**EQUIPMENT PAD ON EXISTING CONCRETE SLAB**

SCALE: NONE

A	B	REINFORCING	ANCHORAGE
8" - 12"	8"	#4 BARS @ 12" OC SW	8" ANCHOR @ 18" OC SW

2  
C/C/C

**NOTES**

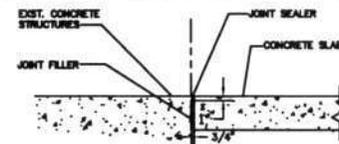
FOLLOWING MECHANICAL SCARIFICATION, HYDROCHLORIC (MURATIC) ACID ETCHING IS REQUIRED WITH VIGOROUS BRUSHING AND COMPLETED BY WASHING WITH WATER.

USE BONDING AGENTS FOR ADHERING NEW CONCRETE TO EXISTING CONCRETE - ASTM C-881-90.

3000 PSI AIR ENTRAINED CONCRETE SHALL BE USED IN THE OVERLAY. THE MIX SHOULD BE DRY WITH APPROXIMATELY A 1-INCH SLUMP.

BENT ANCHOR SHALL BE SAME DIAMETER OF REINFORCING WITH 1/2 ANCHOR IN EXISTING CONCRETE 1/2 ANCHOR IN NEW CONCRETE.

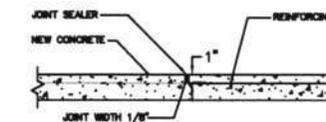
PROVIDE HOLE 3 BAR DIAMETERS OF REINFORCING USED. USE NON-SHRINK GROUT TO SET THE ANCHOR.



**3/4" EXPANSION JOINT**

SCALE: NONE

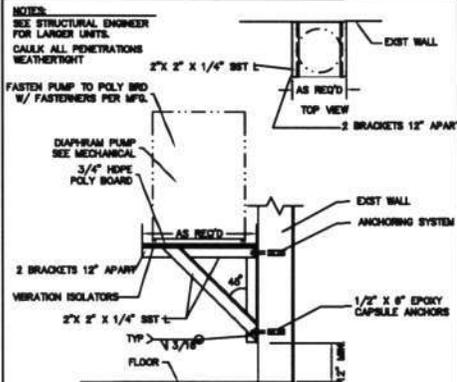
3  
C/C/C



**CONTROL JOINT**

SCALE: NONE

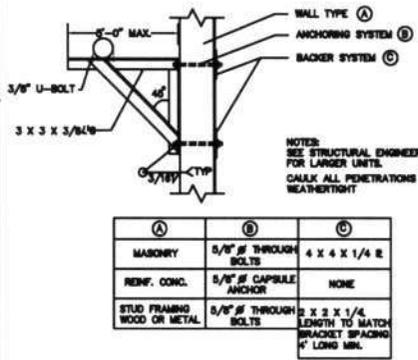
4  
C/C/C



**DIAPHRAM PUMP AND SODA TANK SUPPORT/BACKET**

SCALE: NONE

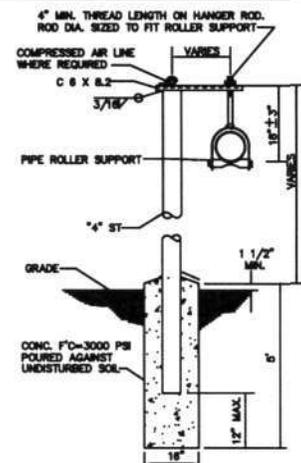
5  
C/C/C



**WALL BRACKET**

SCALE: NONE

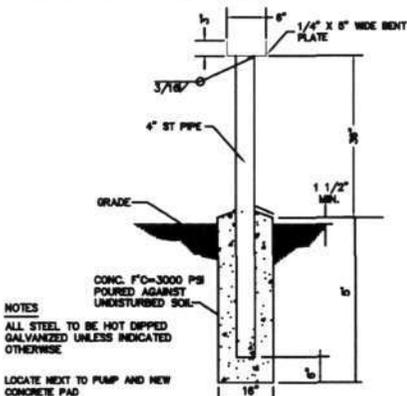
6  
C/C/C



**PIPE SUPPORT**

SCALE: NONE

7  
C/C/C



**ACID HOSE BRACKET**

SCALE: NONE

9  
C/C/C

REVISION	DATE	APPROVAL

GRAPHIC SCALES MUST BE USED IF DRAWING IS REDUCED

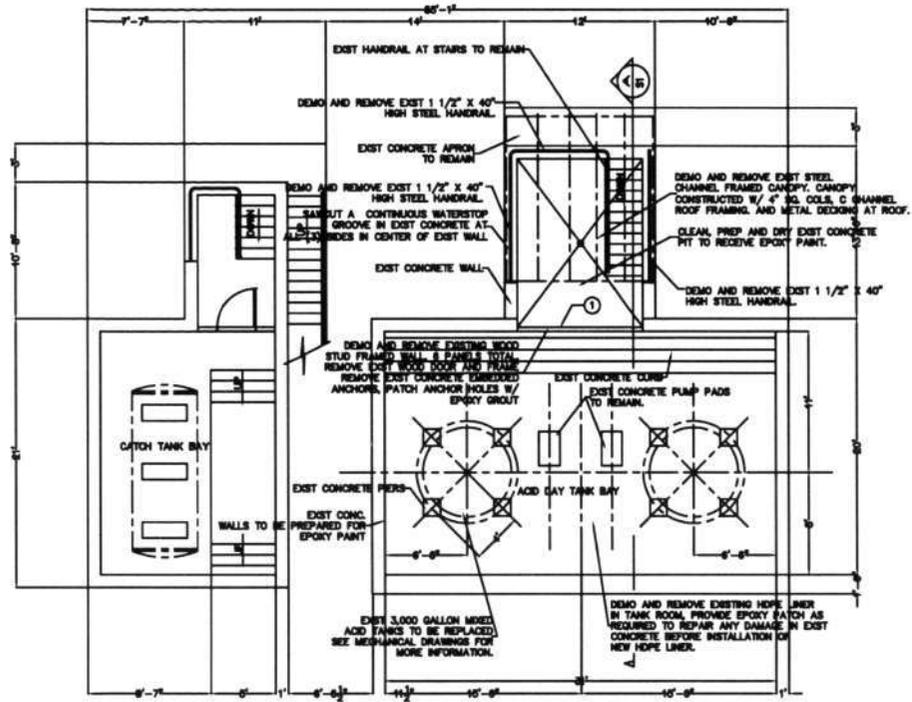
Engineer: S.E. BEHN  
Title: "E" REGISTERED

INDIAN HEAD DIVISION  
NAVAL AIRSPACE WARFARE CENTER  
**REPLACE 3,000 GALLON TANKS AT BUILDING 786**  
CIVIL ARCHITECTURAL SERIALS

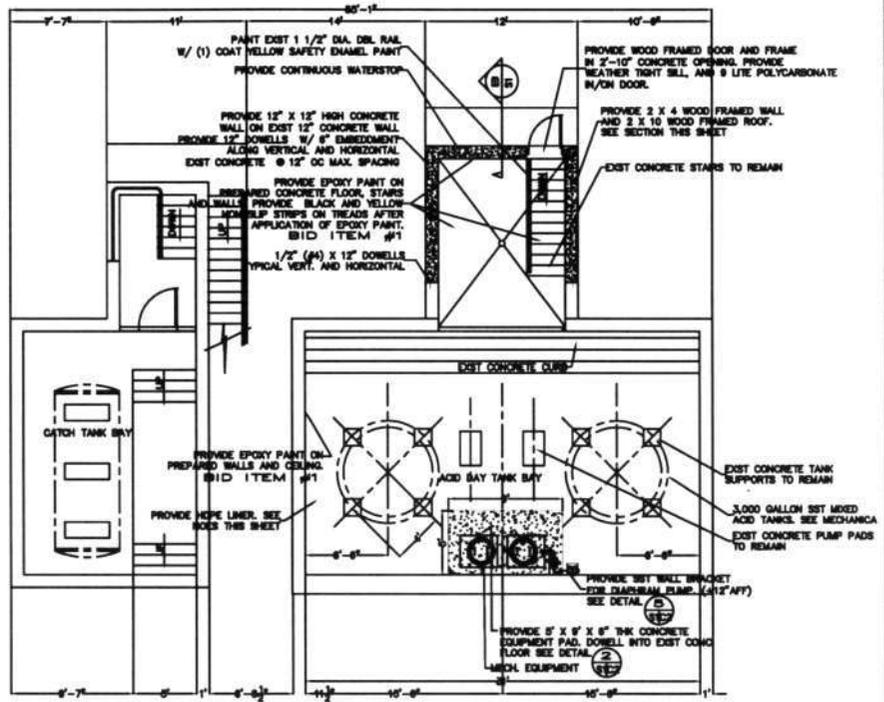
CONE. NO. 00001  
DRAWING NO. 7  
CONTR. COSTS. NO. 00000000-00-00000  
SPEC. 01-00-0010  
SCALE: GRAPHIC  
MAYPAC DRAWING NO. 3,178,179  
SHEET 8 OF 18

C2

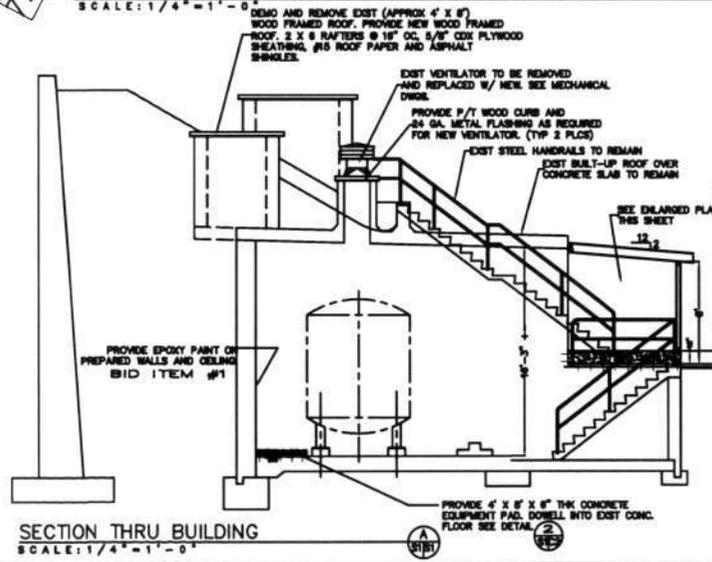
04-815



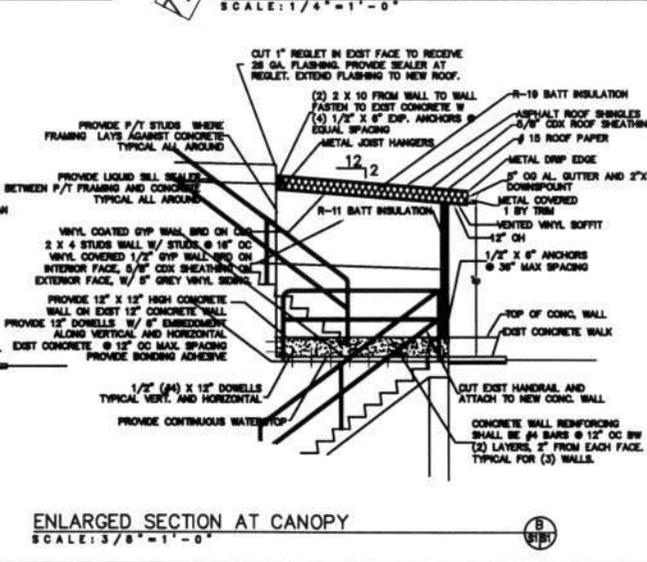
**DEMOLITION FLOOR PLAN - BUILDING 786 PARTIAL PLAN**  
SCALE: 1/4" = 1'-0"



**NEW WORK FLOOR PLAN - BUILDING 786 PARTIAL PLAN**  
SCALE: 1/4" = 1'-0"



**SECTION THRU BUILDING**  
SCALE: 1/4" = 1'-0"



**ENLARGED SECTION AT CANOPY**  
SCALE: 3/8" = 1'-0"

**GENERAL NOTES**

- CONTRACTOR SHALL REMOVE PAINT ON EXISTING CONCRETE WALLS AND CEILING. PRESSURE WASH ALL CONCRETE SURFACES. BID ITEM #1 - CONTRACTOR SHALL DESTROY CONCRETE WALLS AND CEILING WITH (2) COATS OF EPOXY PAINT.
  - CONTRACTOR SHALL PROVIDE .125 THK HOPE LINER IN TANK ROOM ONLY. EXTEND UP WALLS 12" MIN. EXTEND LINER OVER CONCRETE CURBS, AND PADS.
  - ASBESTOS NOTE:** REMOVE ASBESTOS CEMENT BOARD SHEATHING ON EXIST STUD WALL IN ACCORDANCE W/ SPEC SECTION 13281.
  - BOLT 3,000 GALLON TANKS TO EXISTING CONCRETE TANK SUPPORTS.
  - INSPECT TANK SUPPORTS AND REPAIR AS NECESSARY PRIOR TO SETTING NEW ACID TANKS.
- DESIGN LOADS**  
WIND LOAD - 20 PSF  
SNOW LOAD - 20 PSF

NO.	REVISIONS	DATE	APPROVAL



INDIAN HEAD DIVISION  
METAL FABRICATING CENTER

**REPLACE 3,000 GALLON TANKS AT BUILDING 786**

PROJECT NO. AND NEW PL. PLANS AND DETAILS

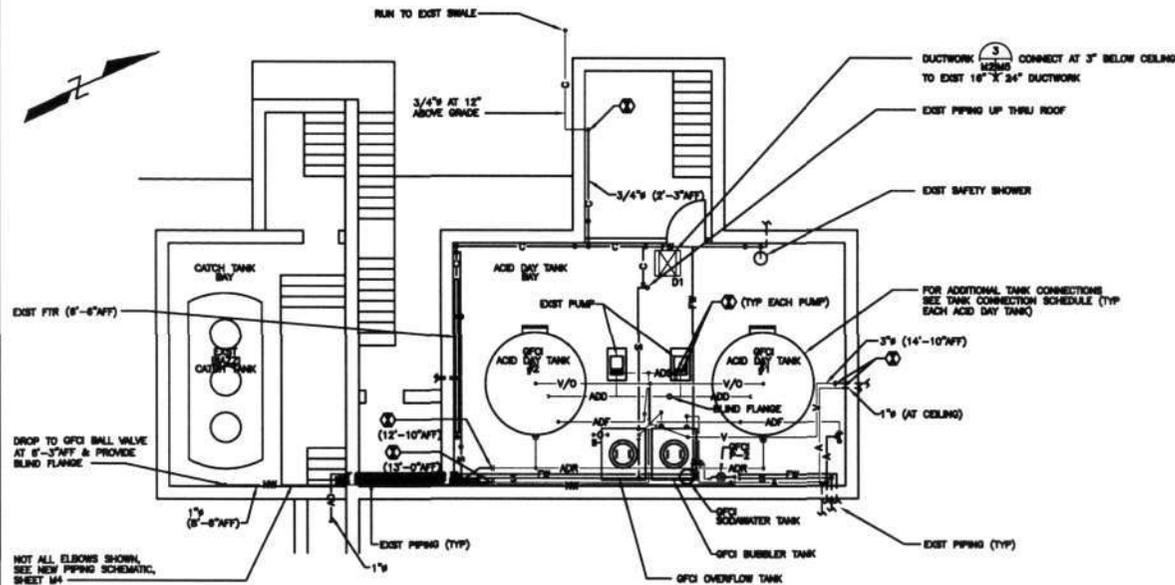
CORE ID. NO. 80991  
DRAWING NO. 7  
CONTR. CONTROL NO. 100077-49-C-0010  
SPEC. 11-00-0010  
SCALE GRAPHIC  
METRIC DRAWING NO. 3,178,180  
SHEET 4 OF 18

S1

GRAPHIC SCALES MUST BE USED IF DRAWING IS REDUCED

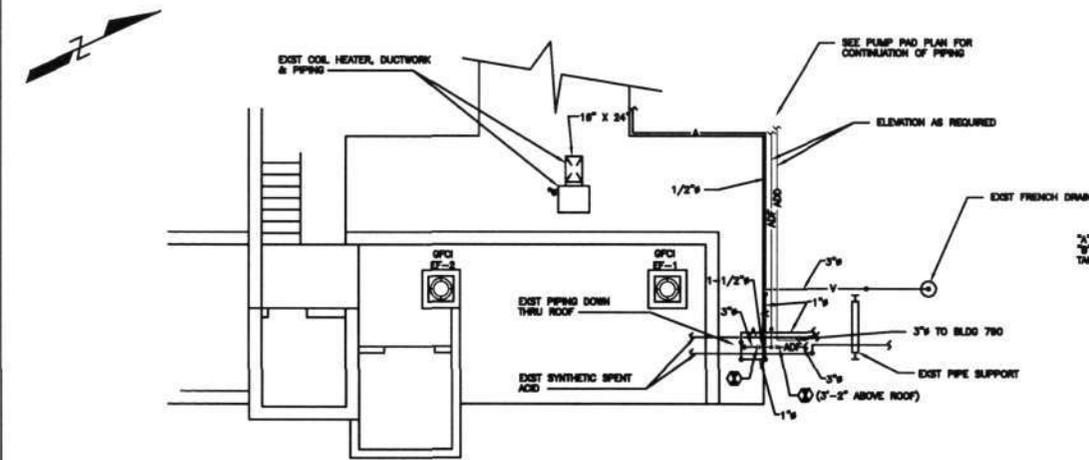
04-815





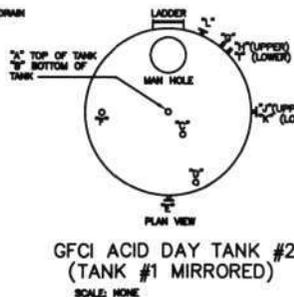
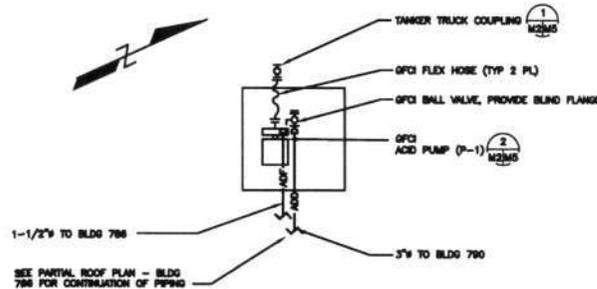
**GENERAL NOTES:**

- \* ALL WORK SHOWN BOLD SHALL BE PROVIDED UNLESS OTHERWISE INDICATED.
- \* ALL ACID SUPPLY, ACID FILL, ACID RETURN, ACID DRAIN, NEUTRALIZED WATER, VENT, OVERFLOW, OVERFLOW AND SODAWATER PIPING, FITTINGS AND FLANGES SHALL BE SCHEDULE 40 TYPE 316L STAINLESS STEEL WITH WELDED CONNECTIONS UNLESS OTHERWISE INDICATED.
- \* ALL INTERIOR COMPRESSED AIR PIPING SHALL BE SCH 40 TYPE 316L STAINLESS STEEL.
- \* ALL FLANGED FITTINGS SHALL BE 150 LBS UNLESS OTHERWISE INDICATED.
- \* SEE BUILDING 786 NEW PIPING SCHEMATIC (SHEET M3) FOR PIPING SIZES, ELEVATIONS, FLANGE LOCATIONS & CONNECTIONS.
- \* ALL BALL VALVES ARE FLANGED UNLESS OTHERWISE INDICATED.
- \* ALL PIPING ELEVATIONS ABOVE FINISHED FLOOR ARE APPROPRIATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO START OF WORK TO ALLOW PROPER INSTALLATION.
- \* ALL PIPE SIZES ARE CONTINUOUS THRU FITTINGS UNLESS OTHERWISE INDICATED.
- \* ALL CONDENSATE PIPING SHALL BE SCHEDULE 80 BLACK STEEL.
- \* ALL STEAM PIPING SHALL BE SCHEDULE 40 BLACK STEEL.
- \* INSULATE ALL FRESHWATER, STEAM & STEAM CONDENSATE PIPING WITH 2" THICK FIBERGLASS INSULATION & COVER WITH STAINLESS STEEL JACKET.
- \* ALL FLANGES SHALL BE COVERED WITH HOPE FLANGE SHIELDS.
- \* ALL GASKETS SHALL BE TEFLO, DONUT TYPE, 1/8" THICK.
- \* SEE SECTION 15200 "PROCESS PIPING SYSTEMS" FOR WELDING REQUIREMENTS OF PROCESS PIPING.



PARTIAL ROOF PLAN - BUILDING 786  
SCALE: 1/4" = 1'-0"

\* ALL NEW ADF PIPING SHOWN IN PARTIAL ROOF PLAN SHALL BE SCH 10 SST THRU TO END OF LINE OR TO CONNECTION TO EQUIPMENT OR EXISTING PIPE.



**TANK CONNECTION SCHEDULE**

DESK.	EXIST TANK CONNECTION	CONNECTION REQUIRED
"A"	2" 300LB FLANGE	SEE FLOOR PLAN
"B"	3" 300LB FLANGE	SEE FLOOR PLAN
"C"	2" 300LB FLANGE	SEE FLOOR PLAN
"D"	3" 300LB FLANGE	SEE FLOOR PLAN
"E"	1-1/2" 300LB FLANGE	SEE FLOOR PLAN
"F"	3" 150LB FLANGE	3" 150LB BLIND FLANGE
"G"	1" FNPT COUPLING	1" PIPE PLUG
"H"	3/4" FNPT COUPLING	3/4" PIPE PLUG
"I"	3/4" FNPT COUPLING	3/4" PIPE PLUG
"J"	1" 150LB FLANGE	1" 300LB BLIND FLANGE
"K"	1" 150LB FLANGE	1" 300LB BLIND FLANGE
"L"	3" 300LB FLANGE	3" 300LB BLIND FLANGE

INDIAN HEAD DIVISION  
NAVAL STORES & SUPPLY CENTER  
REPLACE 3,000 GALLON TANKS  
AT BUILDING 786  
DRAWING NO. 3,178,182  
SHEET 1 OF 2

REVISIONS

DATE: 11-20-2008  
BY: [Signature]  
CHECKED: [Signature]  
SCALE: NONE

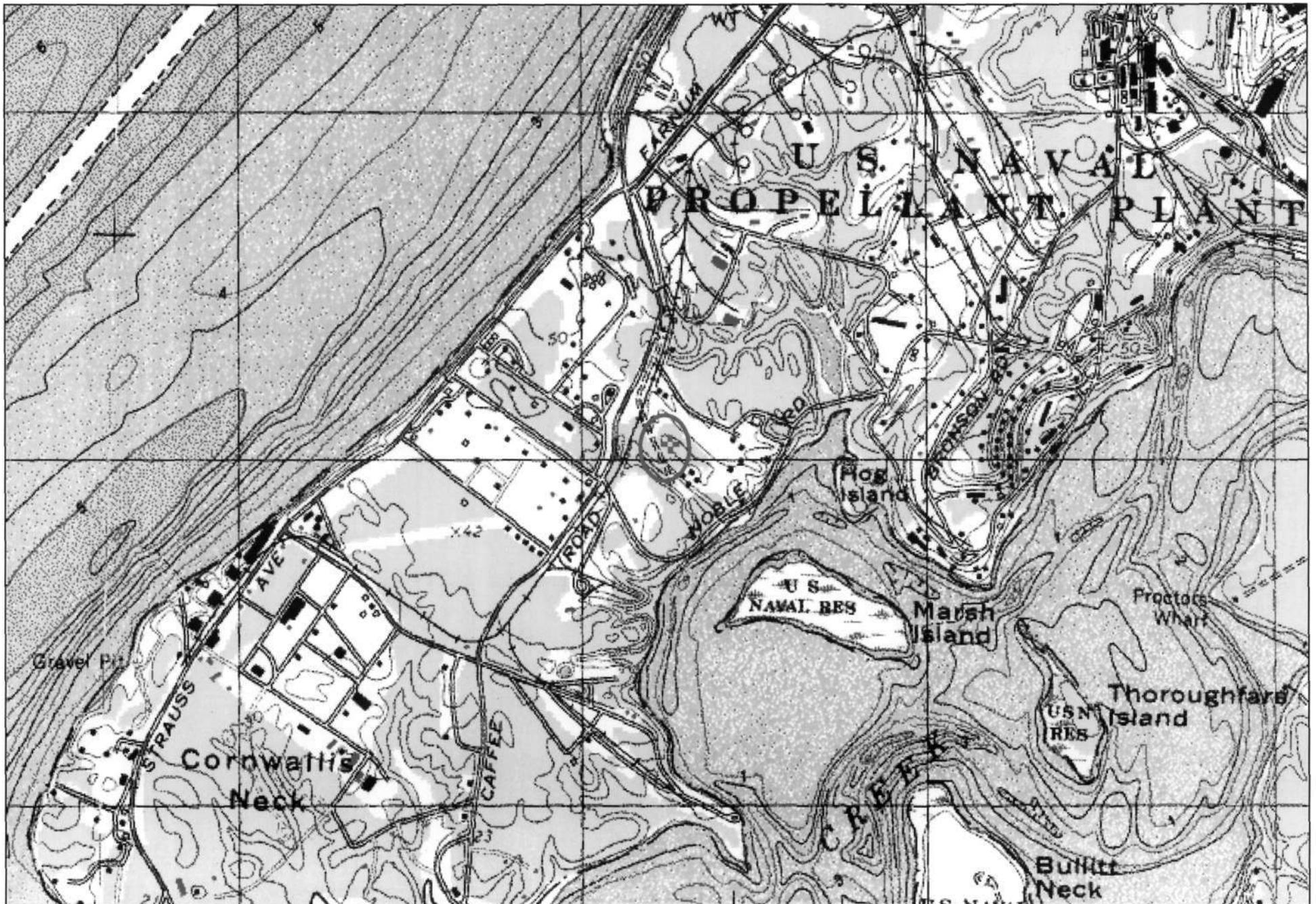
CODE ID: NO. 00991  
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REVISION: 00-0-000  
DATE: 11-20-2008  
SCALE: NONE  
NAVPAC DRAWING NO.  
3,178,182  
SHEET 1 OF 2  
M2

04-815





Building 786, Nitration House  
CH-815  
Naval Support Facility, Indian Head  
Charles County  
Indian Head Quadrangle





MIHP# CH-815

Building 786, Biazzi Nitrator, NAVA I  
Support Facility Indian Head  
Charles County, MARYLAND

Photographer: Lisa Biddle (ERG)

MAY 12, 2006

Location of Negatives: MD SHPO

Subject: Building 786, B786, North Facade

# 1/28



MHP# CH-815

Building 786, Biazzi Nitrator, Naval Support  
Facility Indian Head

Charles County, MARYLAND

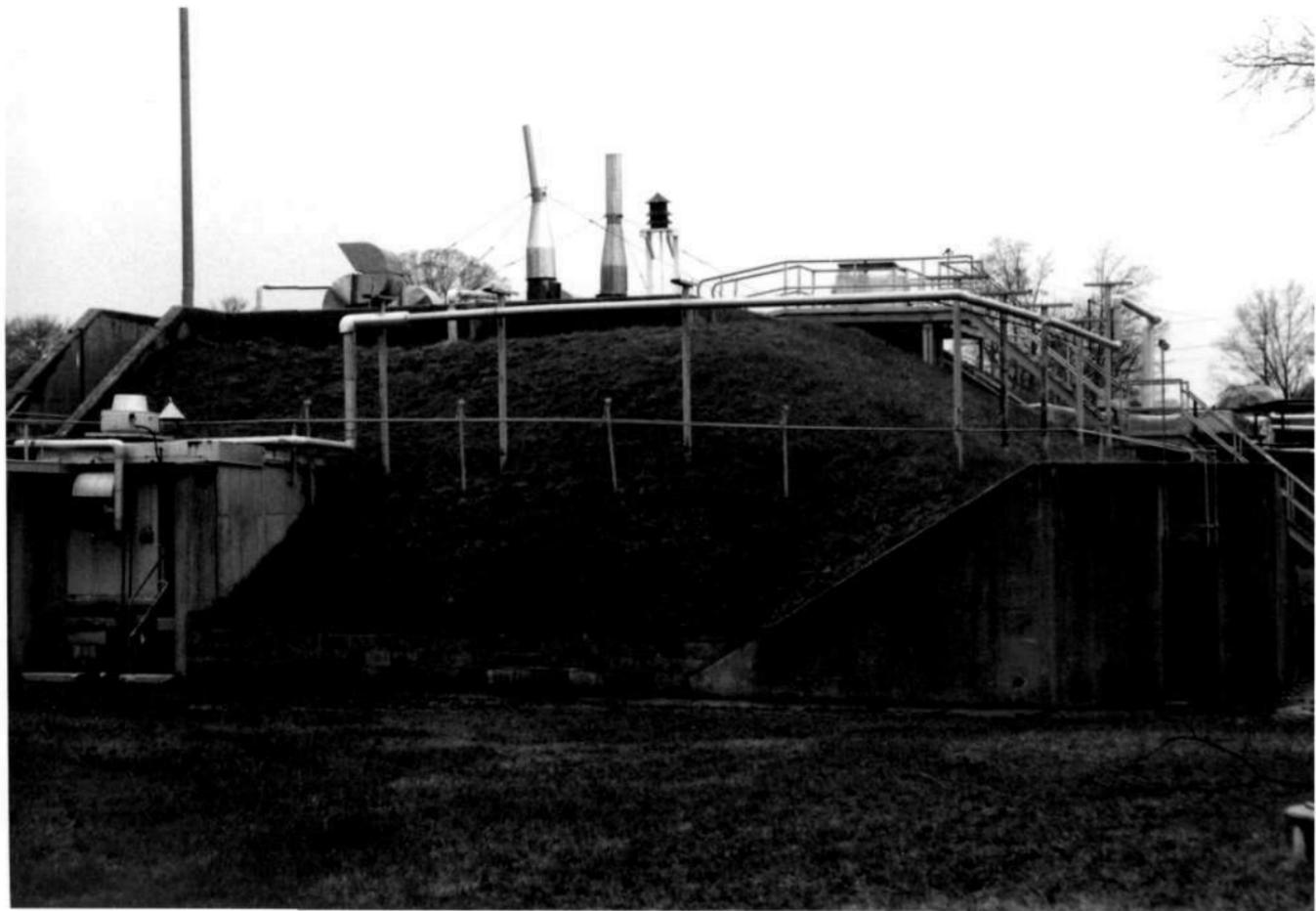
Photographer: Lisa Biddle (ERG)

April 7, 2006

Location of negatives: MD SHPO

Subject: Building 786, Northeast Facade

#2/28



MIHP# CH-815

Building 786, Biazzi Nitrator, NAVAL  
Support Facility INDIAN HEAD

Charles County, MARYLAND

Photographer: LISA BIDDLE (ERG)

April 7, 2006

Location of negatives: MD SHPO

Subject: Building 786, East Facade

#3/29



MHP# CH-815

Building 786, BIAZZI Nitration, NAVAL  
Support Facility/Indian Head

Charles County, Maryland

Photographer: Lisa Biddle (ERG)

April 7, 2006

Location of negatives: MD S4P0

Subject: Building 786, Southeast Facade

#4/29



MHP# CH-815

Building 786, Biazzi Nitrator, Naval  
Support Facility Indian Head

Charles County, Maryland

Photographer: Lisa Riddle (ERG)

April 17, 2006

Location of negatives: MD SHPO

Subject: Building 786, Southwest Facade

#5/28



MIT# CH 815

Building 786, Biazzi Nitrator, Naval  
Support Facility Indian Head  
Charles County, Maryland

Photographer: Lisa Biddle (ERG)

April 7, 2006

Location of negatives: MD SHPO

Subject: Building 786, West Facade (1)

# 6/28



MIHP# C11-815

Building 1786, Biazzi Nitrator, NAVA  
Support Facility, Indian Head  
Charles County, Maryland

Photographer: Lisa Biddle (ERG)

April 7, 2006

Location of negatives: MS SHPO

Subject: Building 1786, West Facade (2)

#17/28



MHP# CH-815

Building 786, Biazzi Wrecker, Naval Support  
Facility Indian Head

Charles County, Maryland

Photographer: Lisa Biddie (ERG)

April 7, 2006

Location of negatives: MD SHDO

Subject: Building 786, West Facade (3)

#8/28



MHP# CH-815

Building 786, Biazzi Nitrator, Naval Support  
Facility Indian Head

Charles County, Maryland

Photographer: Lisa Biddle (ERG)

April 7, 2006

Location of negatives: MD 5130

Subject: Building 786, West Facade (4)

#9/28



MHP# CH-815

Building 786 BIAZZI, Nitrator, NAVAL Support  
Facility, Ind. Av. - end

Charles County, Maryland

Photographer: Lisa Biddle (ERA)

April 7, 2006

Location of negatives: MD SHPO

Subject: Building 786, west facade(s)

#10/28



MIHP#CH 815

Building 786, BIAZZI NITRATOR,  
NAVAL Support Facility INDIAN  
HEAD

Charles County, MARYLAND

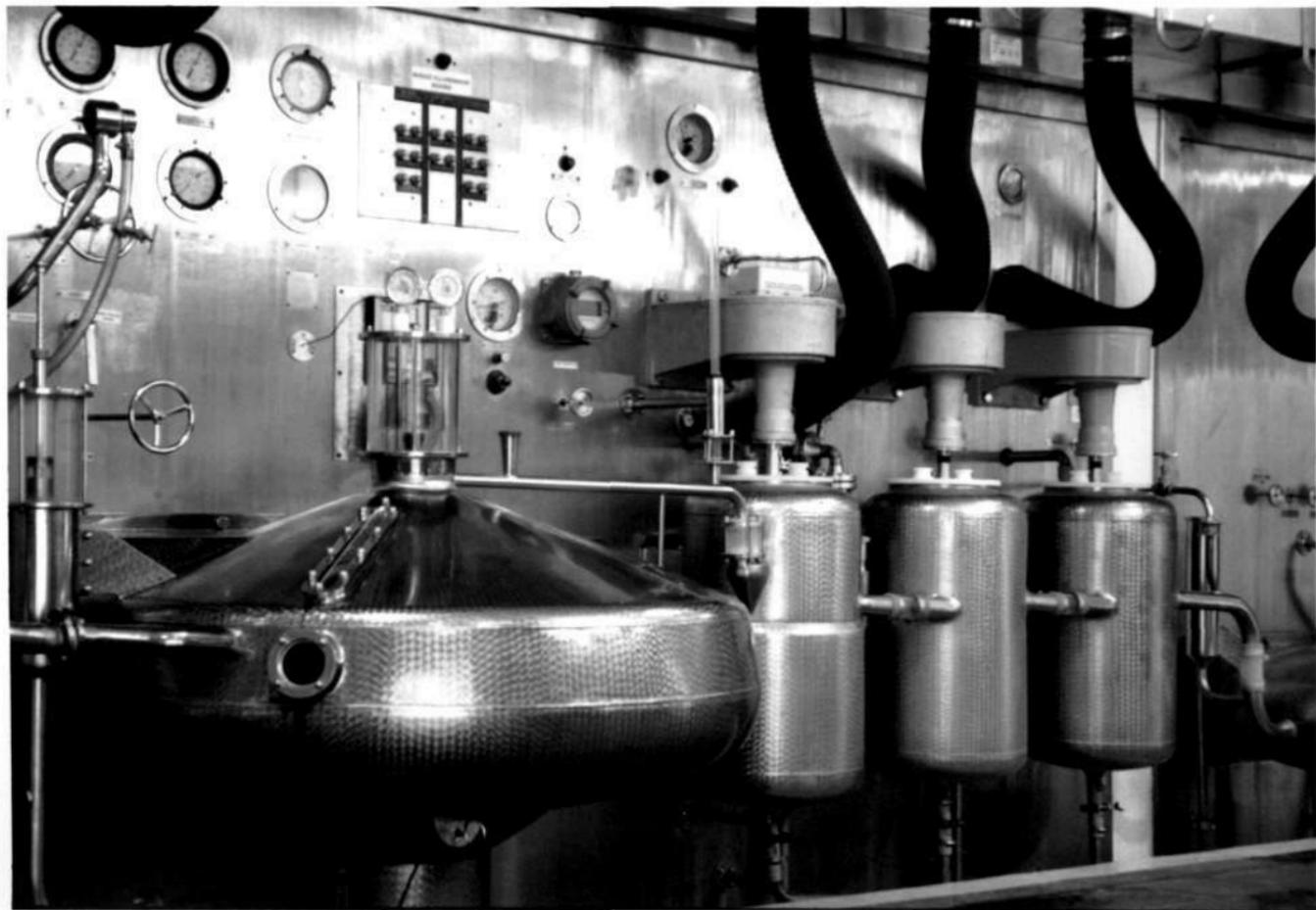
Photographer: LISA BIDDLE (ERG)

MAY 12, 2006

Location of negatives: MDSHPD

Subject: Building 786, Interior,  
Process Equipment (1)

# 11/28



MIHP# CH-815

Building 786, BIAZZI Nitration, NAVAL  
Support Facility Indian Head  
Charles County, MARYLAND

Photographer: LISA BIDDLE (ERG)

MAY 2, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior, Process  
Equipment (2)

# 12/28



MIHP# CH-815

Building 786, BIAZZI Nitration, NAVAL  
Support Facility - INDIAN HEAD  
Charles County, MARYLAND

Photographer: LISA BIDDLE (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior, Process  
Equipment (3)

#13/29



MHP# CH-815

Building 786, Biazzi Nitration,  
NAVAL Support Facility  
Indian Head

Charles County, Maryland

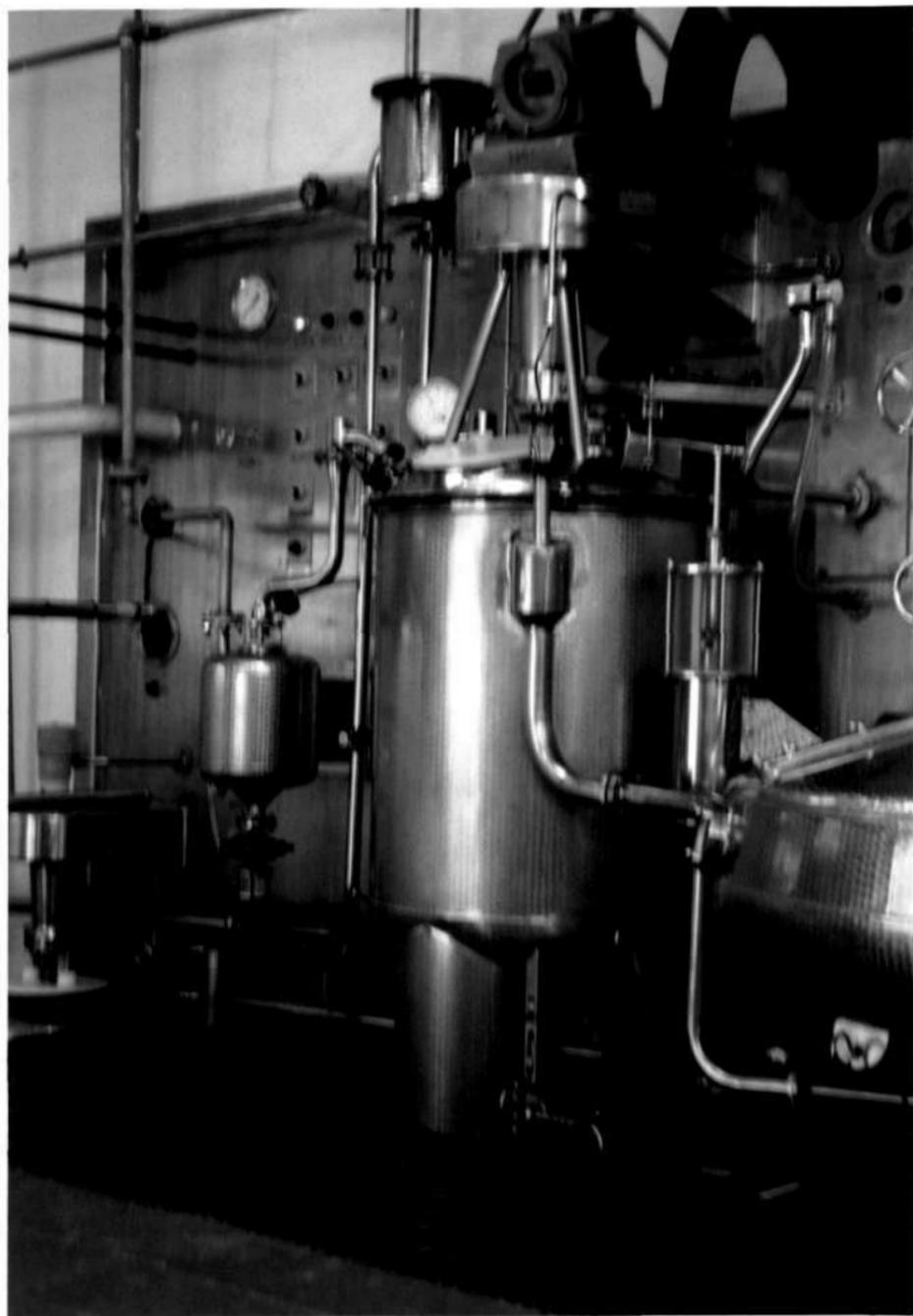
Photographer: LISA Biddle (ERF)

MAY 12, 2006

Location of negatives: MDSHPD

Subject: Building 786, Interior,  
Process Equipment (4)

#14/28



MHP# CH-815

Building 786, Biazzi Nitrator,  
NAVA Support Facility Indian  
Head

Charles County, Maryland

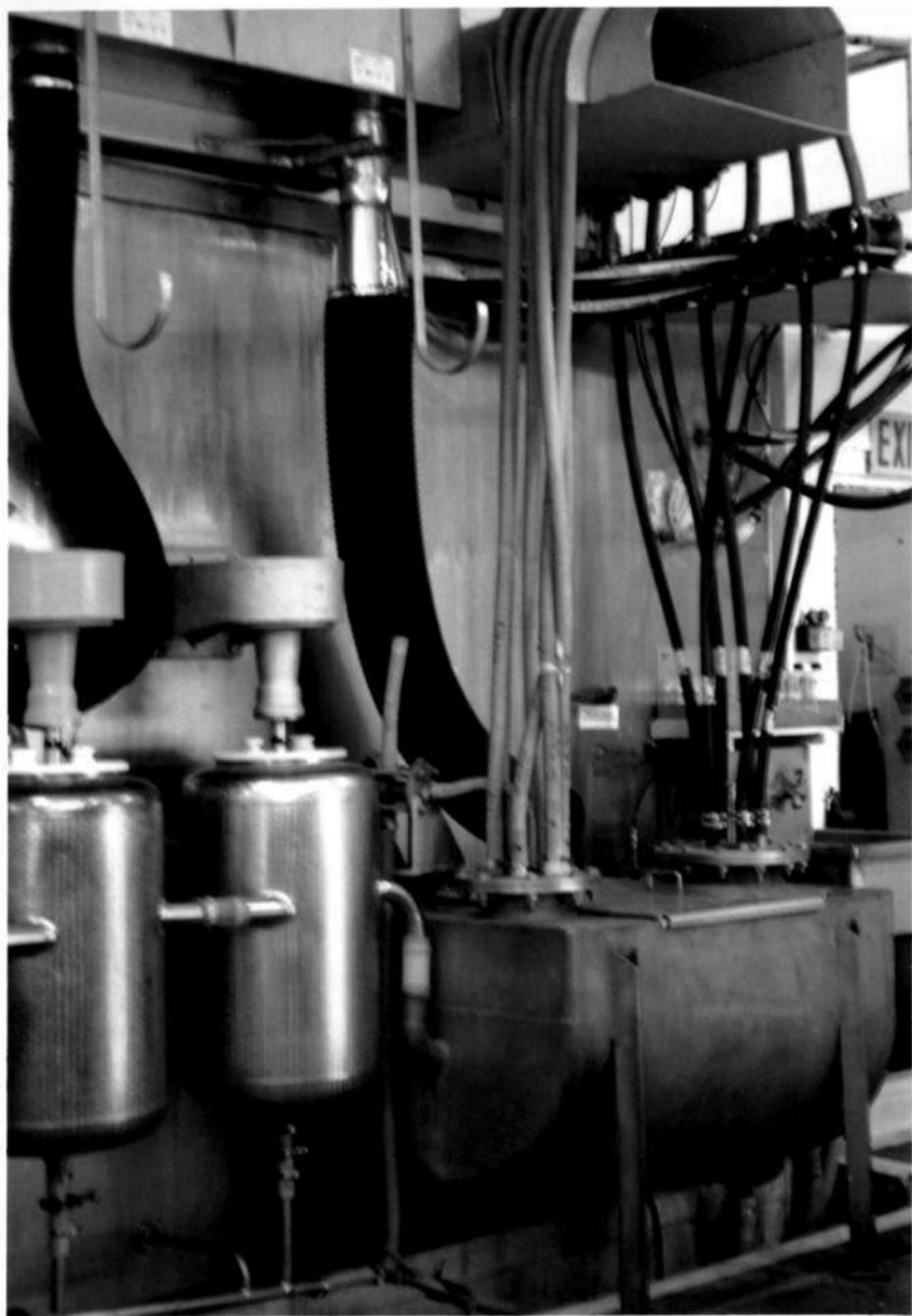
Photographer: Lisa Biddle (ERS)

MAY 12, 2006

Location of negatives: MDSHPO

Subject: Building 786, Interior,  
Process Equipment(s)

#15/28



MIHP# CH-815

Building 986, Biazzi Nitrator,  
NAVAL Support Facility Indian  
Head

Charles County, MARYLAND

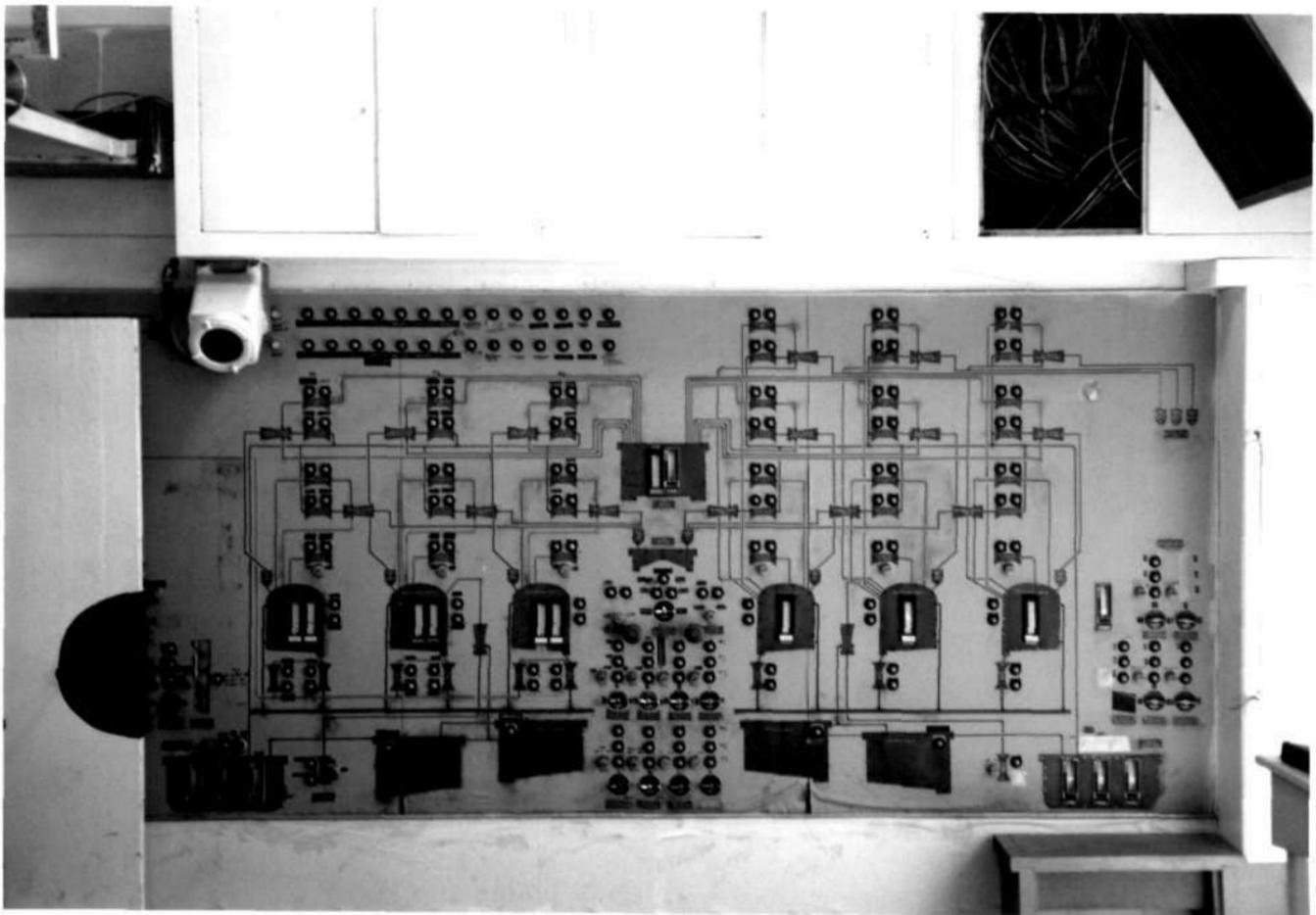
Photographer: LISA Biddle (ERG)

MAY 12, 2006

LOCATION of negatives: MS SHPO

Subject: Building 986, Interior,  
Process Equipment (6)

# 16/28



MHP# CH-815

Building 786, BIAZZI Nitration, NAVAL Support  
Facility, Indian Head

Charles County, Maryland

Photographer: LISA BIDDLE (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior, Control  
Panel (1)

#17/28



MIHP# CH-815

Building 786, BIAZZI Nitrator,  
NAVAL Support Facility  
INDIA HEAD

CHARLES COUNTY, MARYLAND

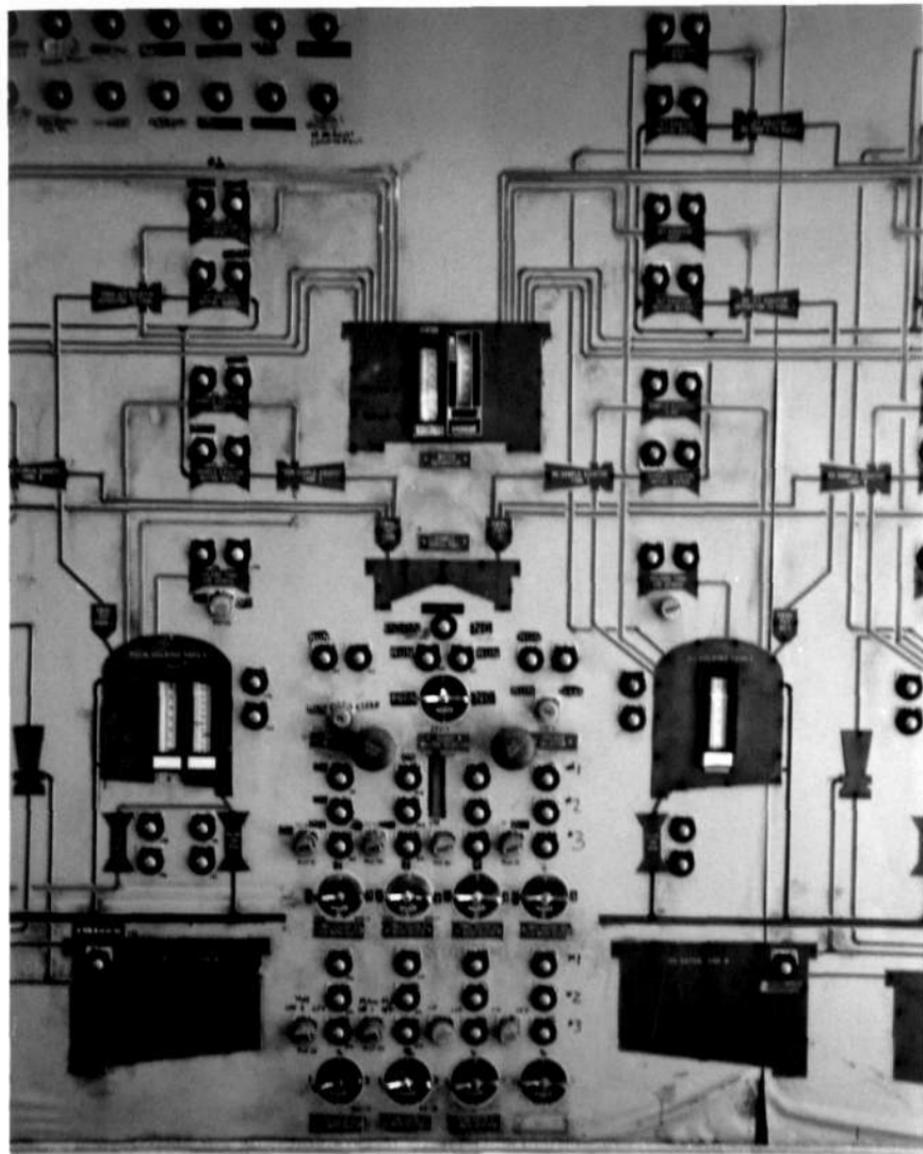
Photographer: LISA BIDDLE (ER4)

MAY 12, 2006

LOCATION OF NEGATIVES: MD SHPO

SUBJECT: Building 786, Interior,  
Control Panel (2)

#18/28



MIHP# CH-815

Building 786, Biazzini Nitator,  
NAVAL Support Facility Indian  
Head

Charles County, Maryland

Photographer: Lisa Biddle (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior,  
Control Panel (3)

# 19/28



MIHP# CH815

Building 786, Biazzi Nitrator,  
NAVAL Support Facility Indian  
Head

Charles County, Maryland

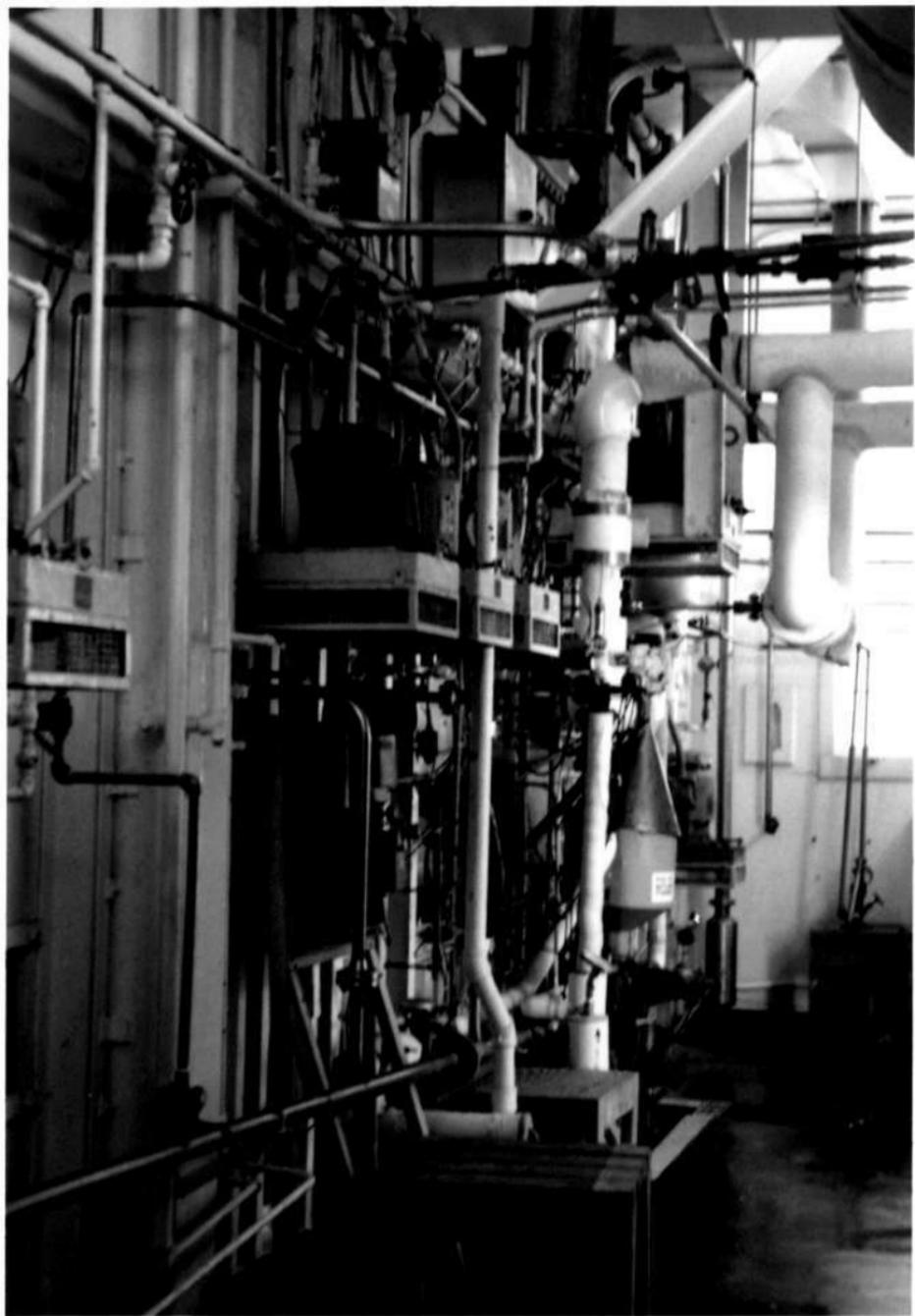
Photographer: Lisa Biddle (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior,  
Back of Control Panel

# 20/28



MHP# CH 815

Building 786, Biazzi Nitrator,  
NAVAL Support Facility Indian  
Head

Charles County, Maryland

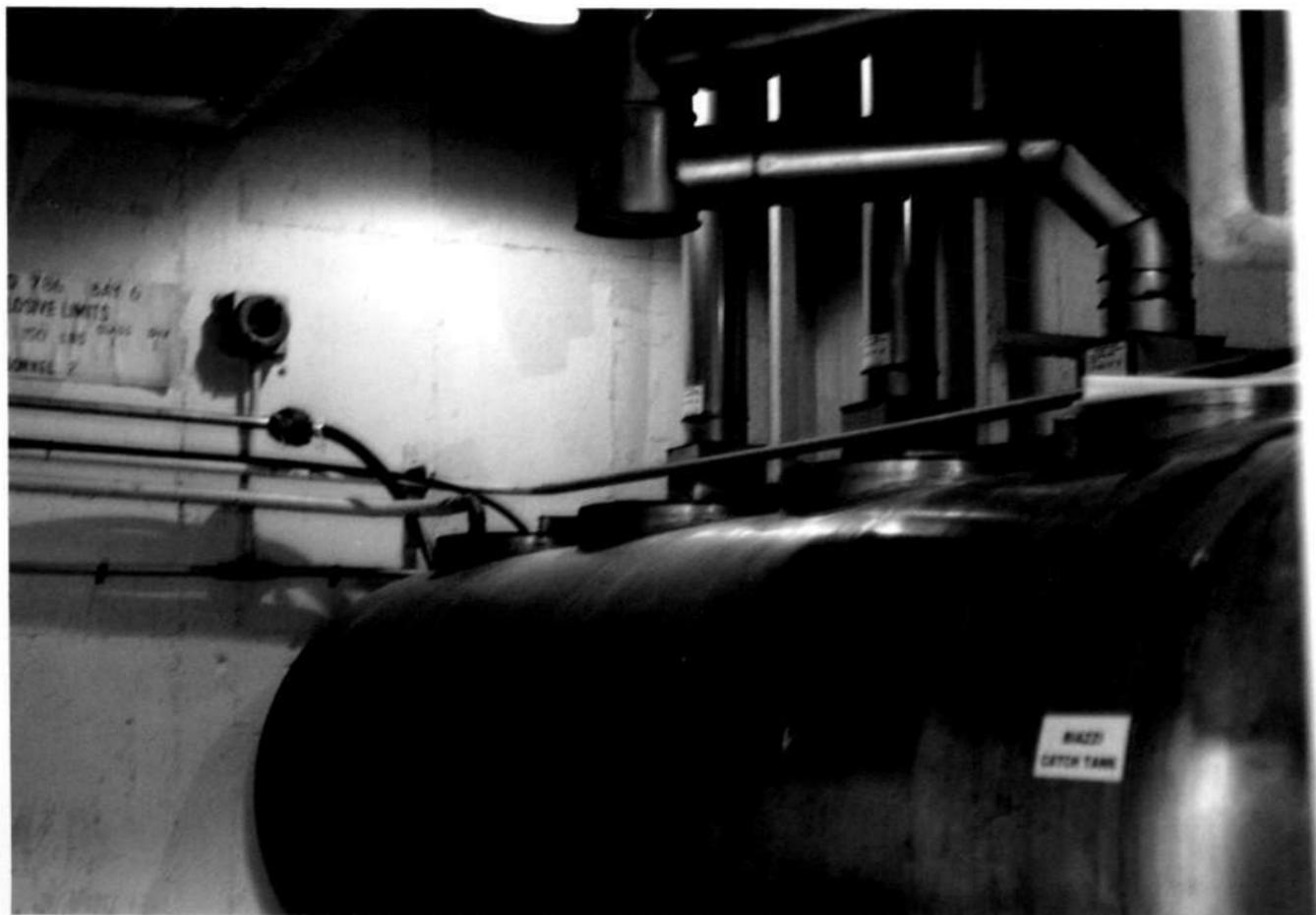
Photographer: Lisa Bidole (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior,  
Motor Room

# 21/28



MHP# CH 815

Building 786, Brazzi Nitration, NAVAL  
Support Facility Indian Head  
Charles County, Maryland

Photographer: LISA Biddle (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior, Catch  
Tank Room

#22/28

**SYNTHETIC  
SPENT ACID  
OVERHEAD TANK**

**HAZARDOUS WASTE IDENTIFICATION LABEL**

1. Name of waste: Synthetic Spent Acid

2. EPA ID: 01-000-0000

3. Date of waste: 10/10/00

4. Quantity: 1000 (liters/gallons)

5. Location: Overhead Tank

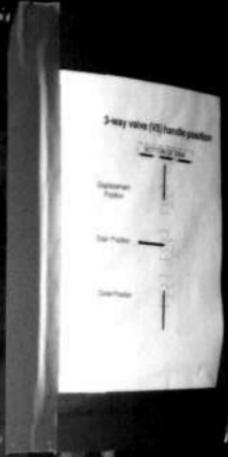
6. Description: Colorless, odorless liquid

7. Hazardous Waste Code: D001

8. Other: None

9. Signature: [Signature]

10. Date: 10/10/00



MIHP# CH-815

Building 786, Biazzi Nitrator,  
NAVAL Support Facility  
Indian Head

Charles County, Maryland  
Photographer: Lisa Biddle (ERA)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior,  
Acid Head TANK ROOM

# 23/28



MIHP# CH-815

Building 786, Biazzì Nitrator, NAVAL  
Support Facility Indian Head  
Charles County, Maryland

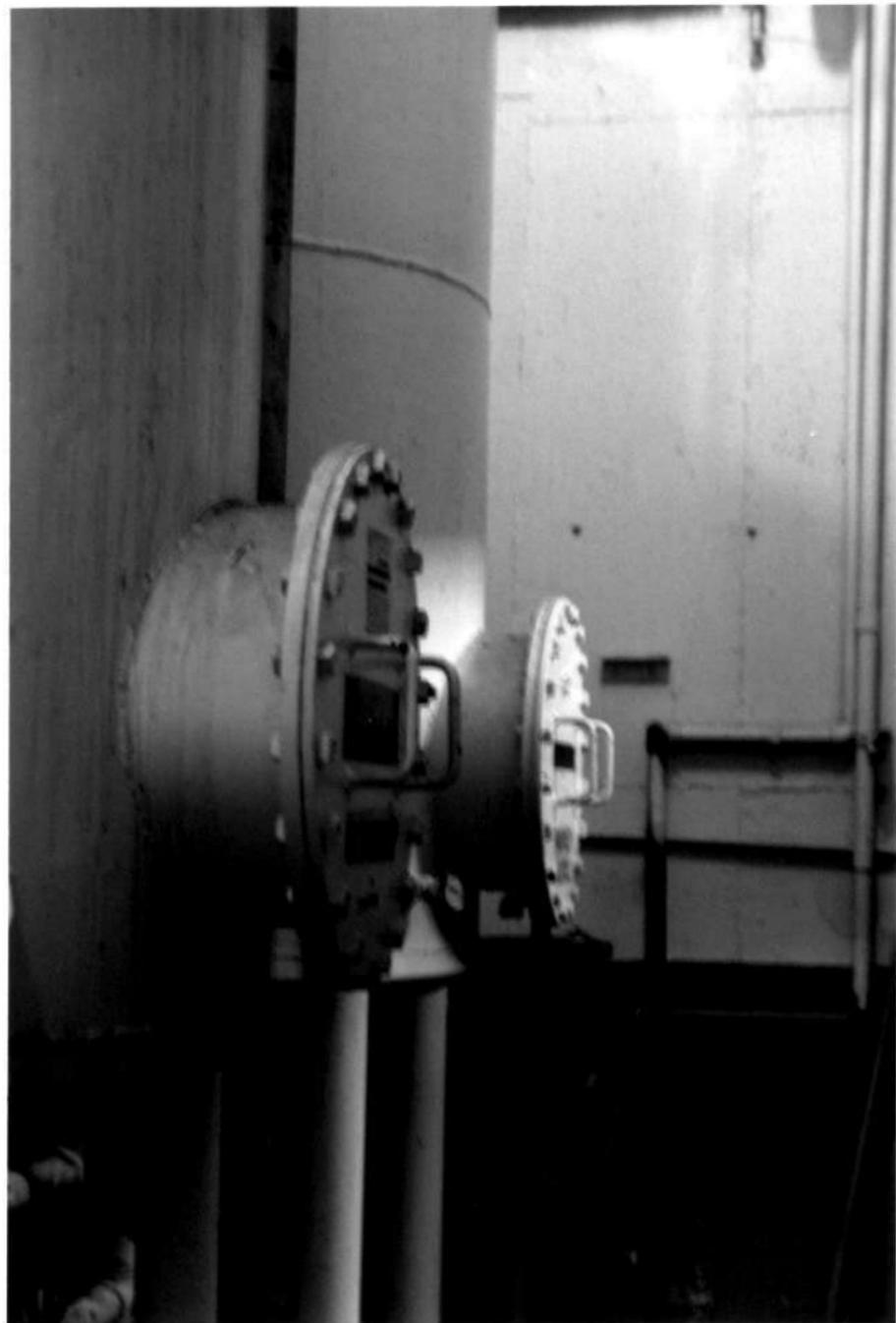
Photographer: Lisa Biddle (ERG)

MAY 12, 2006

LOCATION of negatives; MD SHPO

Subject: Building 786, Interior, Glycol  
DAY TANK ROOM

# 24/29



MIHP# CH-815

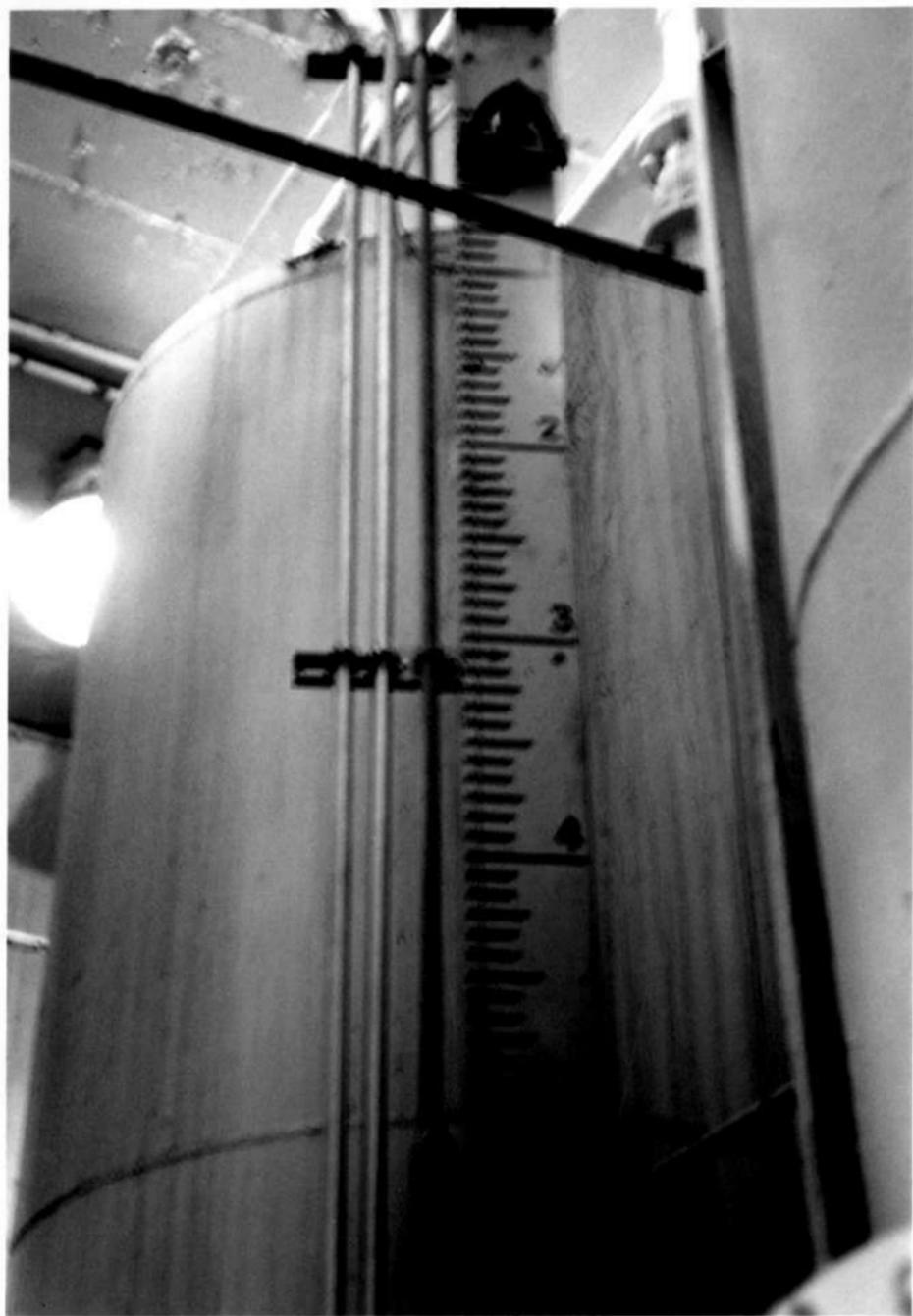
Building 786, BiaZZi Nitrator,  
NAVAL Support Facility  
Indian Head

Charles County, Maryland  
Photographer: Lisa Biddle (ERF)

MAY 12, 2006

Location of negatives: MC SHPO  
Subject: Building 786, Interior,  
Glycol Tank Room

# 25/29



MHP# CH 815

Building 786, BiAZzi Nitrator,  
NAVAL Support Facility Indian  
Head

Charles County, Maryland

Photographer: Lisa Biddle (ERG)

MAY 12, 2006

Location of negatives: MD SHAD

Subject: Building 786, Interior,  
Glyco/Tank Room

# 26/28



MI+P# CH-815

Building 786, Biazzi Nitrator, NAVA  
Support Facility Indian Head  
Charles County, Maryland

Photographer: Lisa Bidelle (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior, Glycol  
Talk Room

#27/28



DROWNING  
CATCH TANK

1101

MIHP# CH 815

Building 786, Biazzi Nitrator,  
NAVAL Support Facility  
Indian Head

Charles County, Maryland

Photographer: Lisa Biddle (ERG)

MAY 12, 2006

Location of negatives: MD SHPO

Subject: Building 786, Interior,  
Drowning Tank Room

#28 / 20