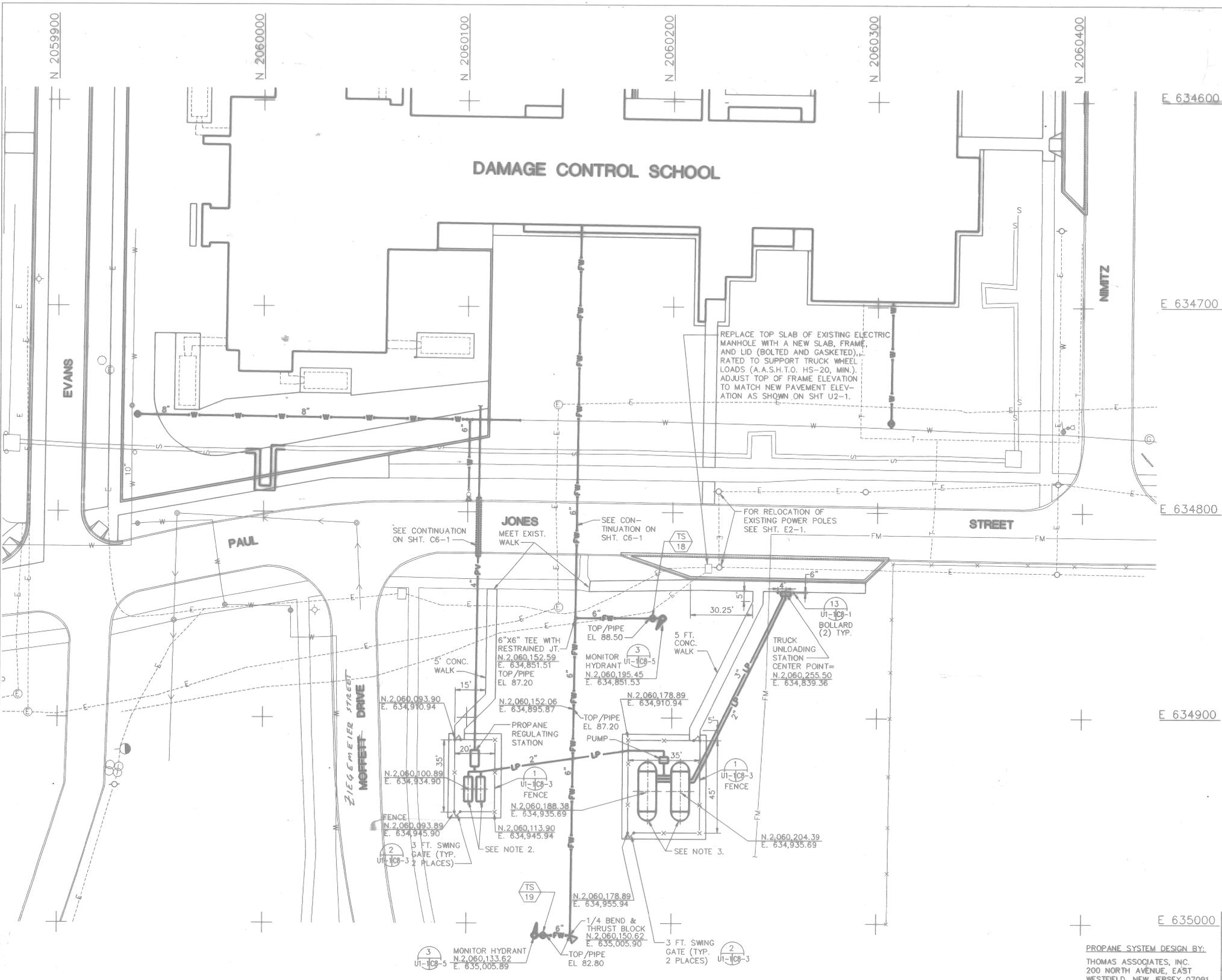


NOTES:

- FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET C1-1.
- TWO (2) 750 GPH PROPANE WATERBATH VAPORIZERS (REMOTE ALARM TO BE PROVIDED AT TRAINER DTO).
- TWO (2) 12,000 GALLON (W.C.) ASME CODE 250 PSIG PROPANE STORAGE TANKS WITH NATIONAL BOARD STAMP 9'-0" DIAMETER BY 28'-4" LONG. FOR TANK FOUNDATIONS, SEE SHT.'s U5-1 & U10-1.



E 634600

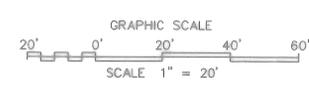
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E 634900

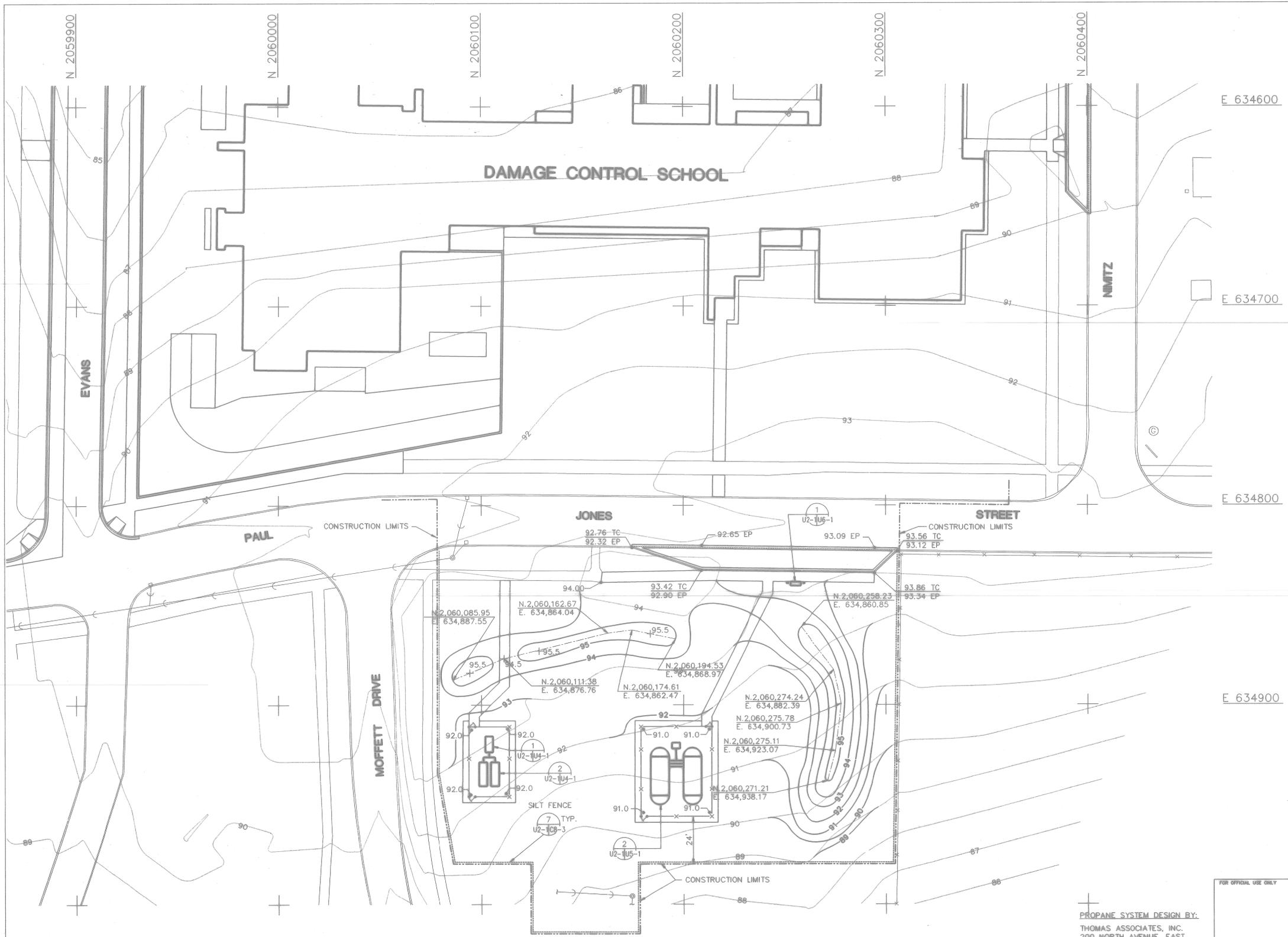
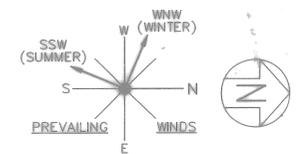
E 635000

PROPANE SYSTEM DESIGN BY:
THOMAS ASSOCIATES, INC.
200 NORTH AVENUE, EAST
WESTFIELD, NEW JERSEY 07091



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** <u>07-31-97</u> ** <u>AS-BUILT, NO CORRECTIONS</u>		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	
ENGINEER: <u>[Signature]</u> CHECKED: <u>[Signature]</u> DATE: <u>07-31-97</u>		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS DAMAGE CONTROL SCHOOL TANK YARD LAYOUT PLAN	
APPROVED: <u>[Signature]</u> DATE: <u>07/31/97</u>	SIZE: F CODE IDENT NO: 80091	NAVFAC DRAWING NO: 5276449 CONSTR CONTR NO: NO2467-93-C-1143	DRAWING NO: UT-1 SHEET 26 OF

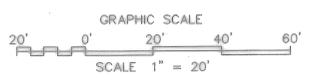
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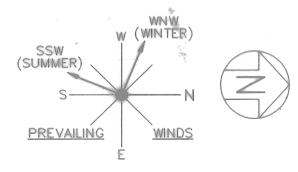
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E 634700
E 634800
E 634900

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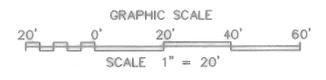
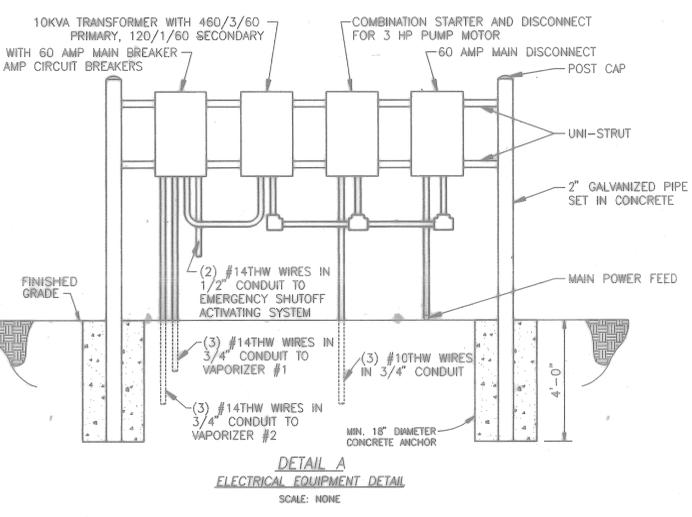
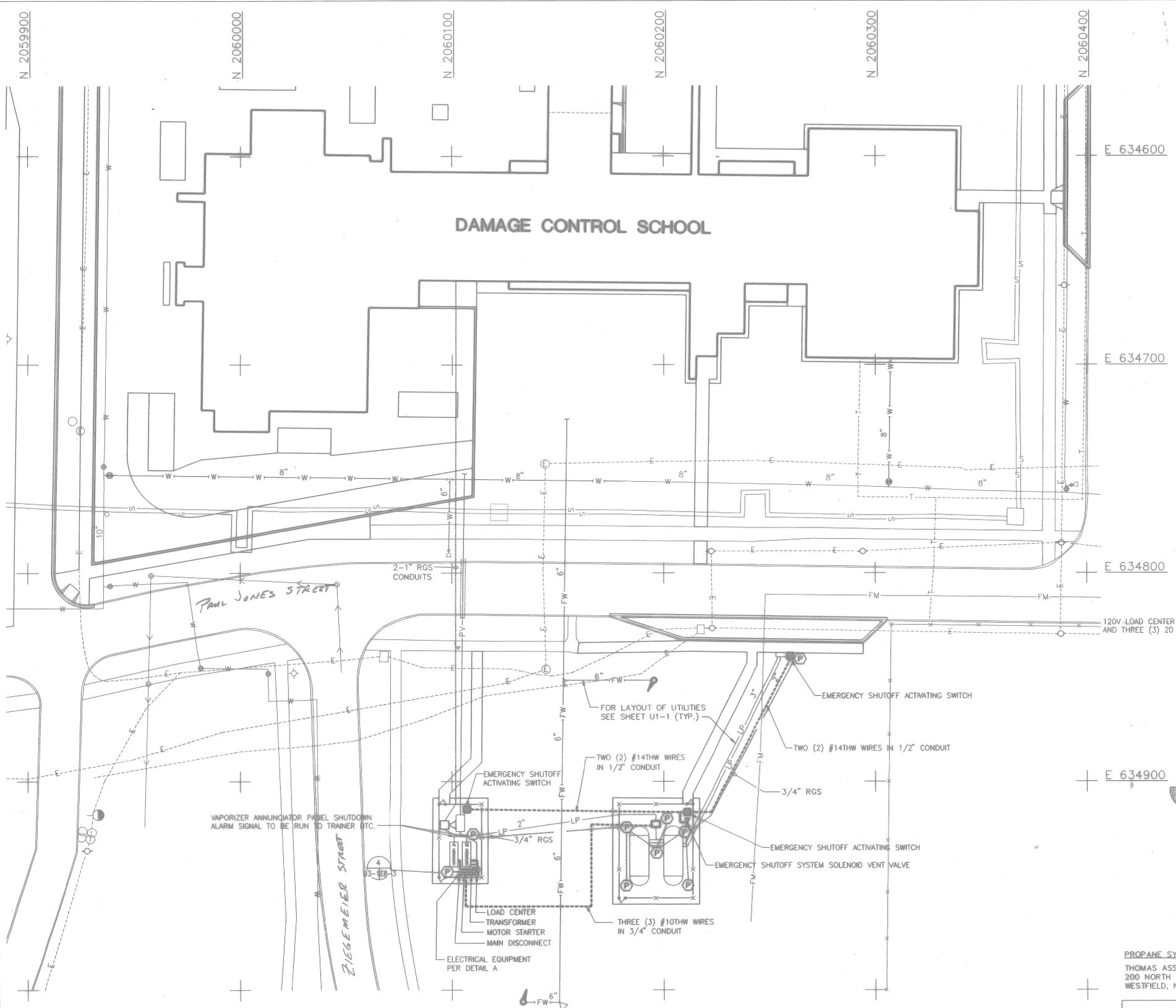
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200 NORTH AVENUE, EAST
WESTFIELD, NEW JERSEY 07091



FOR OFFICIAL USE ONLY		RECORD DRAWING DATE <u>06/08/98</u>	
<small> U.S. NAVY NAVAL FACILITIES ENGINEERING COMMAND CHARLESTON, S.C. </small>		<small> U.S. NAVY NAVAL FACILITIES ENGINEERING COMMAND CHARLESTON, S.C. </small>	
<small> PROJECT NO. 07-31-97 DRAWING NO. 5276450 SHEET NO. U2-1 </small>		<small> PROJECT NO. 07-31-97 DRAWING NO. 5276450 SHEET NO. U2-1 </small>	
<small> TITLE: DAMAGE CONTROL SCHOOL TANK YARD GRADING PLAN </small>		<small> TITLE: DAMAGE CONTROL SCHOOL TANK YARD GRADING PLAN </small>	
<small> DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 9/1/94 </small>		<small> DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 9/1/94 </small>	
<small> APPROVED: [Signature] DATE: 9/1/94 </small>		<small> APPROVED: [Signature] DATE: 9/1/94 </small>	
<small> ARCH. & ENGR. SEAL </small>		<small> ARCH. & ENGR. SEAL </small>	



DAMAGE CONTROL SCHOOL



PROPANE SYSTEM DESIGN BY:
 THOMAS ASSOCIATES, INC.
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 WESTFIELD, NEW JERSEY 07091

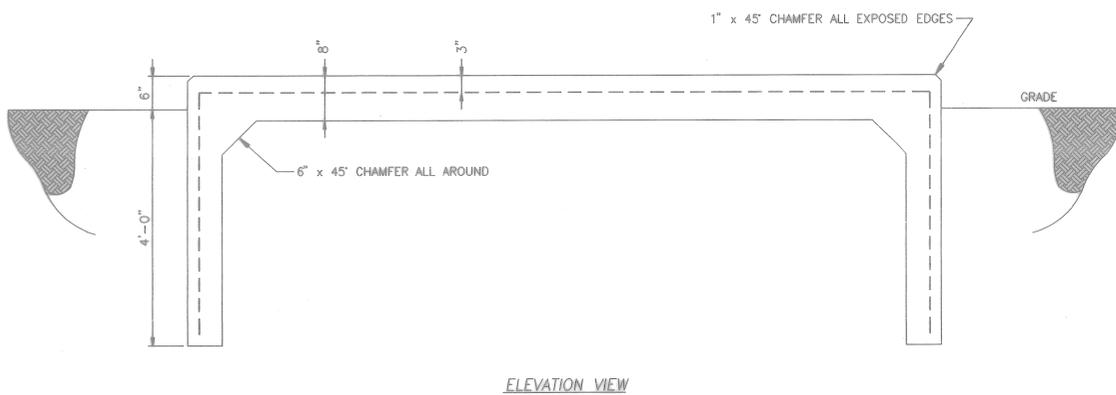


FOR OFFICIAL USE ONLY		RECORD DRAWING	
		DATE 06/08/99	
97-31-97 45-SUBS, NO CORRECTIONS 1/18/99		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	
8098 Andrews University, Florence, S.C. 245 West Roughton Street Florence, S.C. 29501 Prepared by: [Signature] Checked by: [Signature] Date: 1/18/99		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS DAMAGE CONTROL SCHOOL TANK YARD ELECTRICAL PLAN	
APPROVED: [Signature] OFFICER IN CHARGE DATE: 1/18/99	SIZE: F CODE BERT NO: 80091 NAVFAC DRAWING NO: 5276451 CONSTR CONTR NO: NS2467-93-C-1143	DRAWING NO: US-1 SCALE: 1" = 20' SPEC 06-93-1143	SHEET 26 OF

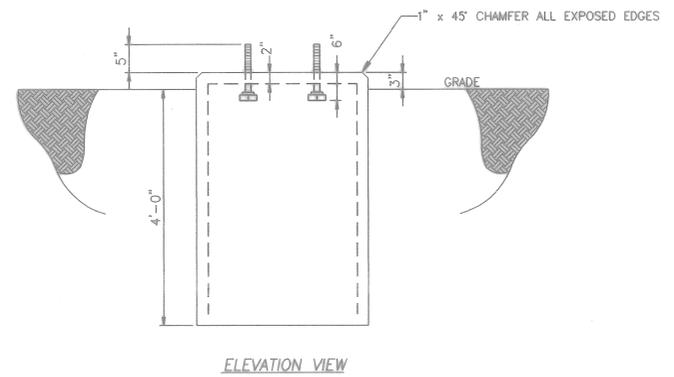
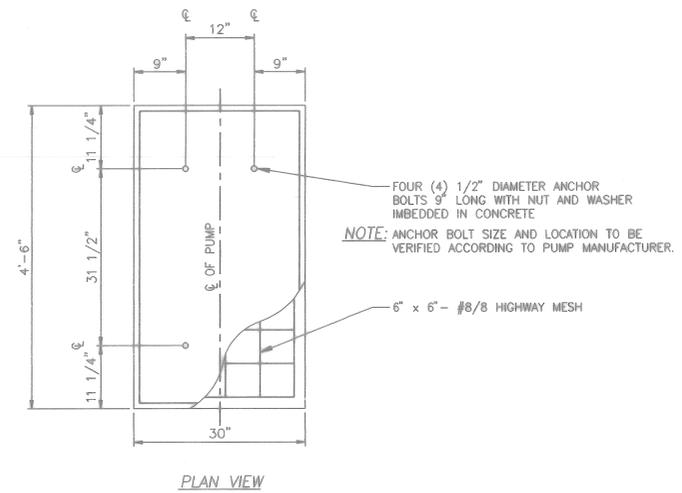
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NOTES:

- FOR CONCRETE SPECIFICATIONS SEE THOMAS ASSOCIATES SPECIFICATIONS SHEETS C1 AND C2.



1
U2-1U4-1 VAPORIZER FOUNDATION
SCALE: NONE



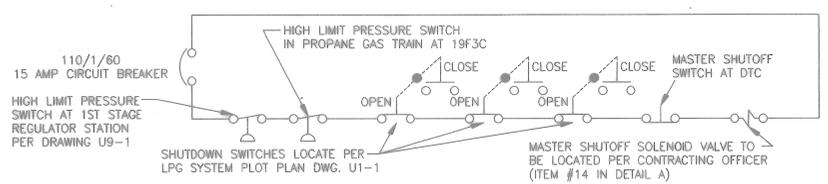
2
U2-1U4-1 PUMP FOUNDATION
SCALE: NONE

PROPANE SYSTEM DESIGN BY:
THOMAS ASSOCIATES, INC.
200 NORTH AVENUE, EAST
WESTFIELD, NEW JERSEY 07091

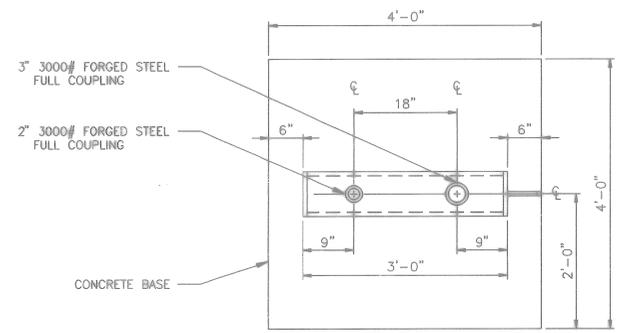
FOR OFFICIAL USE ONLY		RECORD DRAWING DATE: 06/18/98	
02-31-97 LOGS ARCHIVED 547 West Woodstock Street Chicago, IL 60611 Telephone: 312-461-1100 Fax: 312-461-1101 E-mail: info@thomas-inc.com		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	
DESIGNED BY: [Signature] CHECKED BY: [Signature] DATE: 8-21-97 EC: [Signature] OR NO: [Signature] FFE: [Signature]		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS DAMAGE CONTROL SCHOOL TANK YARD - VAPORIZER AND PUMP FOUNDATIONS	
APPROVED: [Signature]	DATE: 10/98	SIZE: F	CODE IDENT NO: 80091
OFFICIAL CHANGE: [Signature]	DATE: 10/98	NAVFAC DRAWING NO: 5276452	DRAWING NO: U4-1
FOR CONCRETE: [Signature]	DATE: 10/98	CONSTR CONTR NO: NS2467-93-C-1143	SCALE: NONE
ARCH. & ENGR. SEAL		SPEC 06-93-1143	SHEET 27 OF

Date/time: 08/31/94 13:42:02 User: DBE File: P:\PAPER\IGPS0401

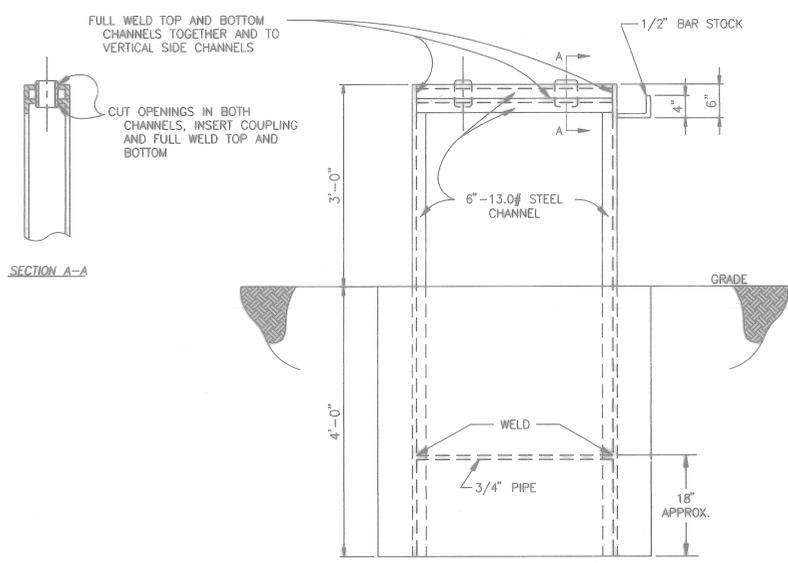
BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	3 1/4" ACME x 3" NPT ADAPTOR	1
2	3 1/4" ACME SEAL CAP	1
3	1/2" GLOBE VALVE	3
4	RAIN CAP FOR 1/2" PIPE	2
5	3" FLANGED GLOBE VALVE	1
6	3" SIGHT FLOW INDICATOR	1
7	3" BACK PRESSURE CHECK VALVE	1
8	3" FLANGED STRAINER	1
9	2 1/4" ACME x 2" NPT ADAPTOR	1
10	2 1/4" ACME SEAL CAP	1
11	2" GLOBE VALVE	1
12	2" EMERGENCY SHUTOFF VALVE	1
13	2"x2" EXCESS FLOW VALVE	1
14	1/4" 3-WAY QUICK EXHAUST SOLENOID VALVE (NORMALLY CLOSED)	1
15	1/4" NEEDLE VALVE	1
16	1/4" RESTRICTION ORIFICE	1
17	1/4" RESTRICTION ORIFICE	1
18	2 1/2" 0-100# PRESSURE GAUGE	1
19	1/4" NPT x 1/4" TUBING CONNECTOR	13
20	1/4" TUBING	A/R
21	EMERGENCY SHUTOFF VALVE SIGN (LOCATE PER ELECTRICAL LAYOUT)	3
22	1/4" TUBING UNION TEE	11



WIRING DIAGRAM
EMERGENCY SHUTOFF VALVE SYSTEM

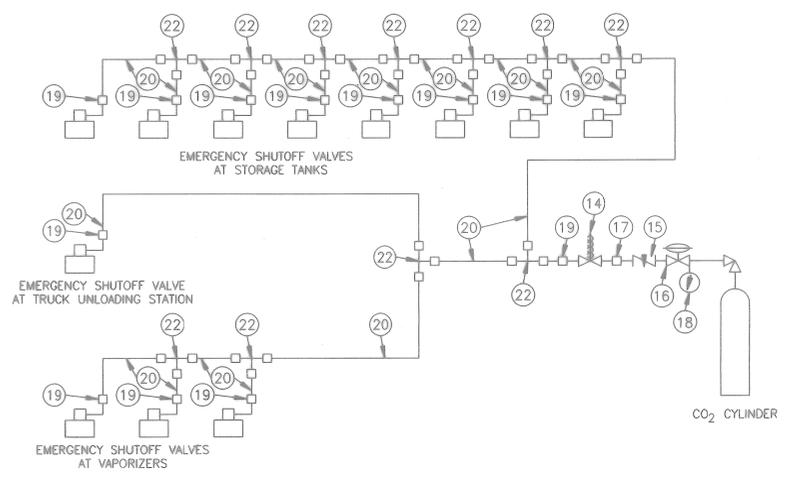


TOP VIEW



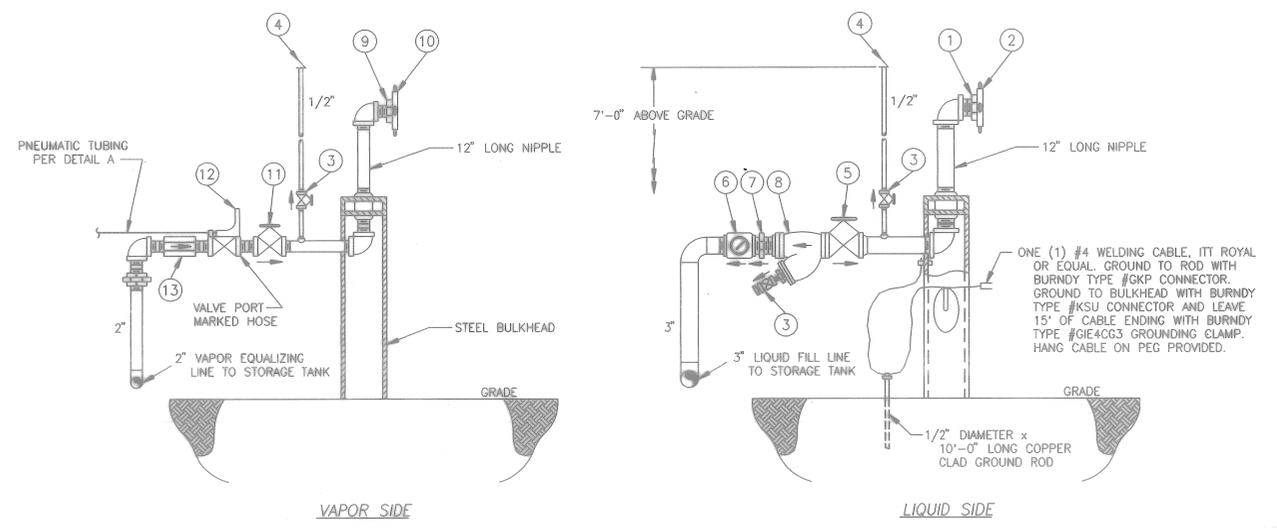
ELEVATION VIEW

1 BULKHEAD DETAILS
U2-1 U6-1 SCALE: NONE



DETAIL A
PNEUMATIC EMERGENCY SHUTOFF VALVE SYSTEM

NOTE:
1. AN ARROW HAS BEEN PLACED ON OR ADJACENT TO ALL VALVES. ALL VALVES MUST BE INSTALLED WITH THEIR DIRECTION OF FLOW ARROWS MATCHING THOSE INDICATED ON THIS DRAWING.



2 PIPING AND GROUNDING DETAILS
U6-1 U6-1 SCALE: NONE

PROPANE SYSTEM DESIGN BY:
THOMAS ASSOCIATES, INC.
200 NORTH AVENUE, EAST
WESTFIELD, NEW JERSEY 07091



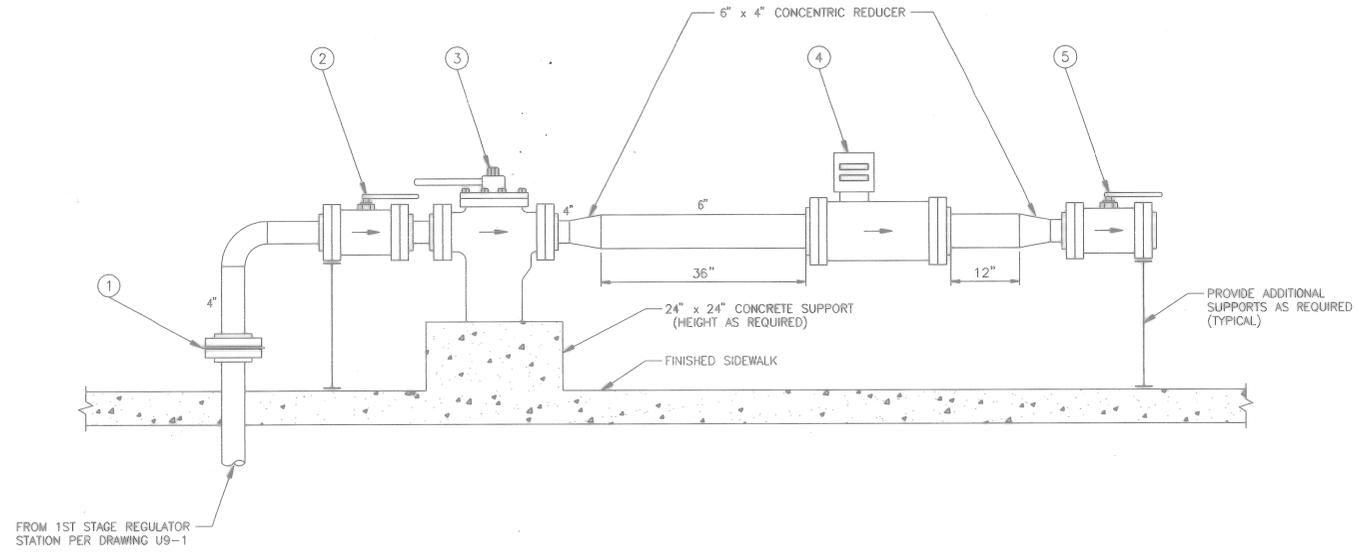
FOR OFFICIAL USE ONLY		RECORD DRAWING DATE: 06/05/98	
08-07-31-47 08-05-BUILT NO CORRECTIONS 08-05-BUILT NO CORRECTIONS		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	
08-05-BUILT NO CORRECTIONS 08-05-BUILT NO CORRECTIONS 08-05-BUILT NO CORRECTIONS		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS DAMAGE CONTROL SCHOOL TRUCK UNLOADING STATION DETAILS	
APPROVED: [Signature] DATE: 1/18/94	SIZE: F CODE IDENT NO: 80091 NAVFAC DRAWING NO: 5276454 CONSTRUCTION NO: N62467-93-C-1143	DRAWING NO: U6-1	SHEET 29 OF 30

Date/time: 08/31/94 13:44:56
 User: DBE
 File name: P:\PAPER\IGPS0601

BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	FLANGE INSULATING KIT	1
2	4" PLUG VALVE	1
3	4" DUPLEX BASKET TYPE STRAINER WITH 30 MICRON FILTER	1
4	6" TURBINE METER MINIMUM CAPACITY 47,040 CFH DIRECT READ WITH TEMPERATURE AND PRESSURE COMPENSATION	1
5	4" PLUG VALVE WITH BLIND FLANGE. SEE NOTE 2.	1

NOTES:

1. AN ARROW HAS BEEN PLACED ON OR ADJACENT TO ALL VALVES. ALL VALVES MUST BE INSTALLED WITH THEIR DIRECTION OF FLOW ARROWS MATCHING THOSE INDICATED ON THIS DRAWING.
2. A VENT ASSEMBLY INCLUDING A PRESSURE REGULATOR, MOTORIZED GAS SHUT-OFF VALVE, RELIEF VALVE, ETC. IS TO BE PROVIDED AND INSTALLED BY THE GOVERNMENT. THE 4" PLUG VALVE WITH BLIND FLANGE WILL BE RELOCATED, BY THE GOVERNMENT, TO THE DOWNSTREAM SIDE OF THE VENT ASSEMBLY.



1 GAS TRAIN ELEVATION
 C6-1UB-1 SCALE: NONE

Date/time: 06/31/94 14:13:46 User: DBE Filename: P:\PAPER\JP50801

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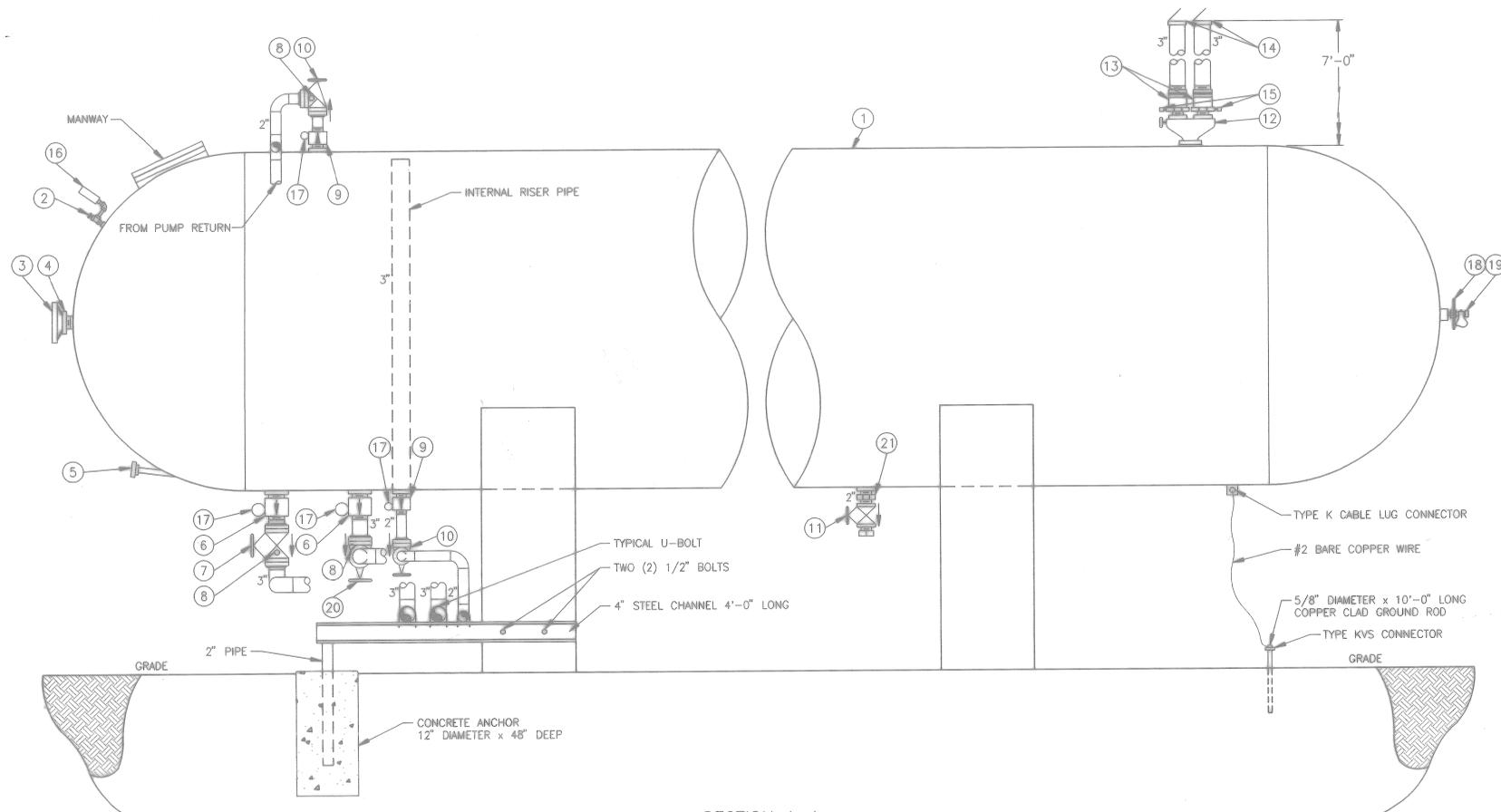


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RECORD DRAWING
 DATE 06/08/98

07-31-97		AS-BUILT, NO CORRECTIONS	
507 North W. 2000th Street Chesapeake, VA 23041 (703) 581-1111 FAX (703) 581-1112		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND CHARLESTON, S.C.	
SUPERVISOR: STOCKER DATE: 8/24/97		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS	
DRAWN BY: [Signature] DATE: 8/18/97		SOUTHERN DIVISION CHARLESTON, S.C.	
APPROVED: [Signature] DATE: 9/18/97		DAMAGE CONTROL SCHOOL TANK YARD - PROPANE GAS TRAIN AT 19F3C INTERFACE	
ARCH. & ENGR. SEAL	SIZE: F CODE: 80091	NAVFAC DRAWING NO.: 5276456	DRAWING NO.: UB-1
	CONSTRUCTION CONTROL NO.: N62467-93-C-1143	SCALE: NONE	SHEET 31 OF 31

BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
1	12,000 GALLON (W.C.) ASME CODE 250 PSIG PROPANE STORAGE TANKS WITH NATIONAL BOARD STAMP (9' DIA. x 28' LONG)	2
2	3/4" COMBINATION VALVE	2
3	8" DIAL LIQUID LEVEL GAUGE FOR 108" TANK DIAMETER	2
4	MOUNTING FLANGE FOR LIQUID LEVEL GAUGE	2
5	3" DIAL -40 TO 120° F THERMOMETER	2
6	3" INTERNAL VALVE	4
7	3" FLANGED GLOBE VALVE	2
8	1/4" HYDROSTATIC RELIEF VALVE SET @450 PSIG	3
9	2" INTERNAL VALVE	4
10	2" FLANGED ANGLE VALVE	4
11	2" GLOBE VALVE	2
12	RELIEF VALVE MANIFOLD	2
13	2 1/2" RELIEF VALVE @250 PSIG	6
14	RAIN CAP FOR 3" PIPE	6
15	1/4" WEEP HOLE DEFLECTOR	6
16	4 1/2" 0-300# PRESSURE GAUGE	2
17	CYLINDER ACTUATOR FOR PNEUMATIC OPERATION OF INTERNAL VALVE	8
18	ROTOGAGE DIAL	2
19	ROTOGAGE ASSEMBLY WITH TUBING	2
20	3" FLANGED ANGLE VALVE	2
21	2" EXCESS FLOW VALVE	2



TANK SAFETY RELIEF VALVE DATA
 STORAGE TANK SURFACE AREA 800 FT²
 REQUIRED RELIEF VALVE FLOW CAPACITY 12,880 CFM/AIR
 ACTUAL RELIEF VALVE FLOW CAPACITY 16,292 CFM/AIR

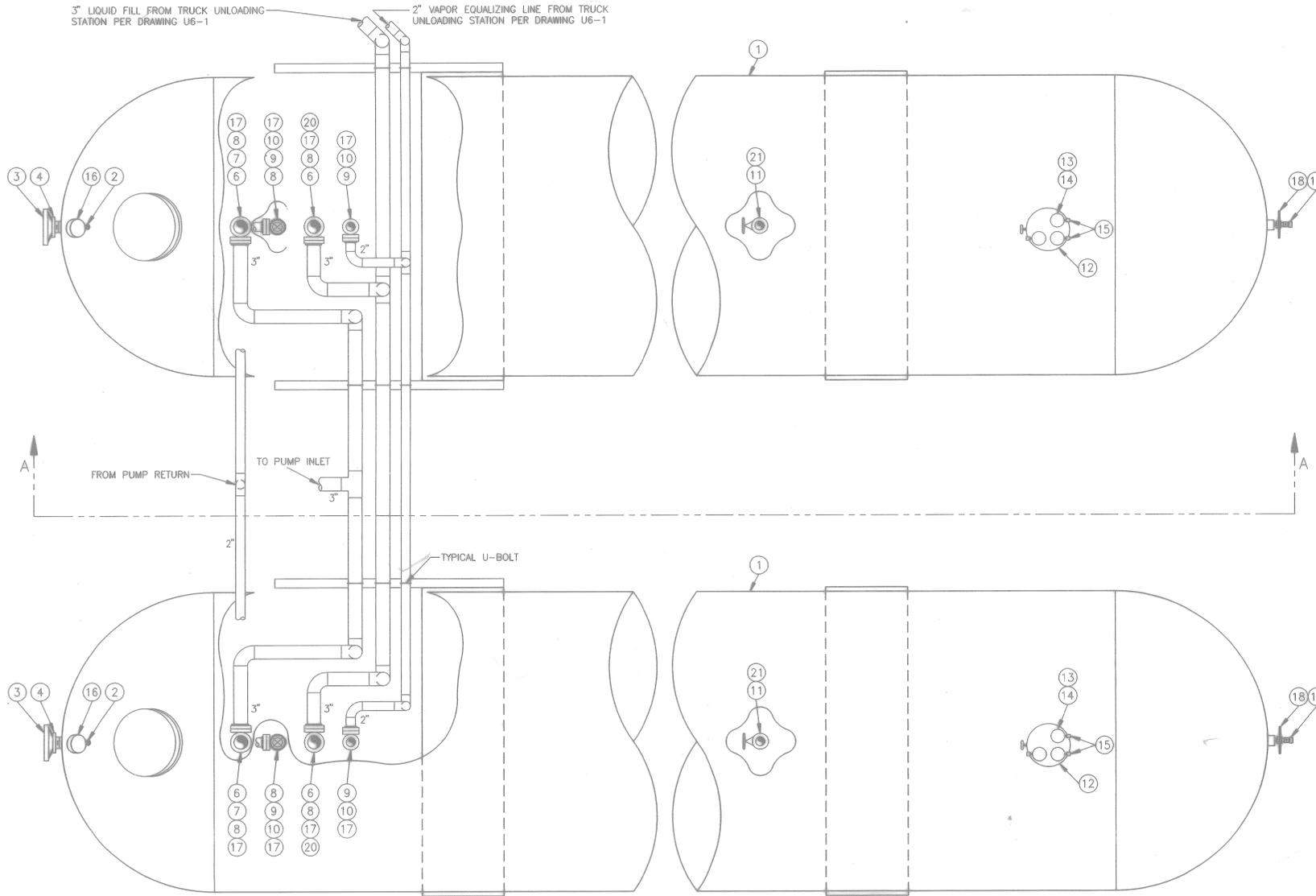
- NOTES:**
1. AN ARROW HAS BEEN PLACED ON OR ADJACENT TO EACH VALVE. ALL VALVES MUST BE INSTALLED WITH THEIR DIRECTION OF FLOW ARROWS MATCHING THOSE INDICATED ON THIS DRAWING.
 2. ANY AND ALL UNUSED TANK CONNECTIONS ARE TO BE PLUGGED.

PROPANE SYSTEM DESIGN BY:
 THOMAS ASSOCIATES, INC.
 200 NORTH AVENUE, EAST
 WESTFIELD, NEW JERSEY 07091



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02-31-97 AS-BUILT, NO CORRECTIONS		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	
SUBMITTED BY <i>[Signature]</i>		NAVAL TRAINING CENTER DAMAGE CONTROL SCHOOL TANK YARD - TANK PIPING DETAILS	
APPROVED <i>[Signature]</i>		SIZE F	NAVFAC DRAWING NO. 5276458
DATE 6/18/98		CONSTR CONTR NO. NB2467-93-C-1143	DRAWING NO. U10-1
SCALE NONE		SPEC 06-93-1143	SHEET 33 OF 33

Date/time: 08/29/94 16:16:18 User: DBE File name: P:\PAPER_VGFS1001



TOP VIEW

NOTES:

1. AN ARROW HAS BEEN PLACED ON OR ADJACENT TO EACH VALVE. ALL VALVES MUST BE INSTALLED WITH THEIR DIRECTION OF FLOW ARROWS MATCHING THOSE INDICATED ON THIS DRAWING.
2. ANY AND ALL UNUSED TANK CONNECTIONS ARE TO BE PLUGGED.

Date/time: 08/29/94 16:19:04 User: DBE File name: P:\PAPER\JOPS1002

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.		NAVY TRAINING CENTER GREAT LAKES, ILLINOIS	
DAMAGE CONTROL SCHOOL TANK YARD - TANK PIPING DETAILS			
ARCH. & ENGR. SEAL 	APPROVED: <i>[Signature]</i> DATE: 9/12/94	SPEC: NONE SHEET: 06-93-1143 OF: 34	DRAWING NO: U10-2 CONSTR CONTR NO: NS2467-93-C-1143