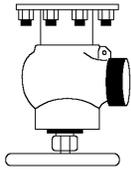
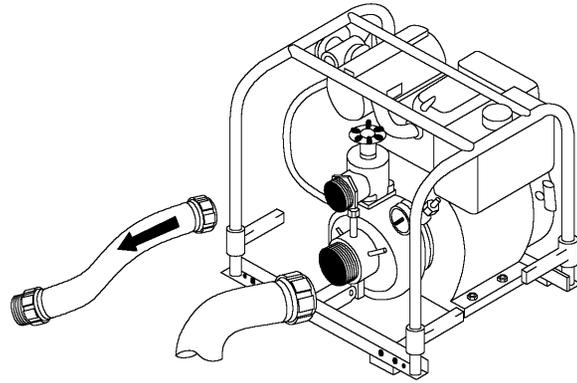


DAMAGE CONTROL LAYOUT SKETCHES
SECTION 4 - DEWATERING EVOLUTION

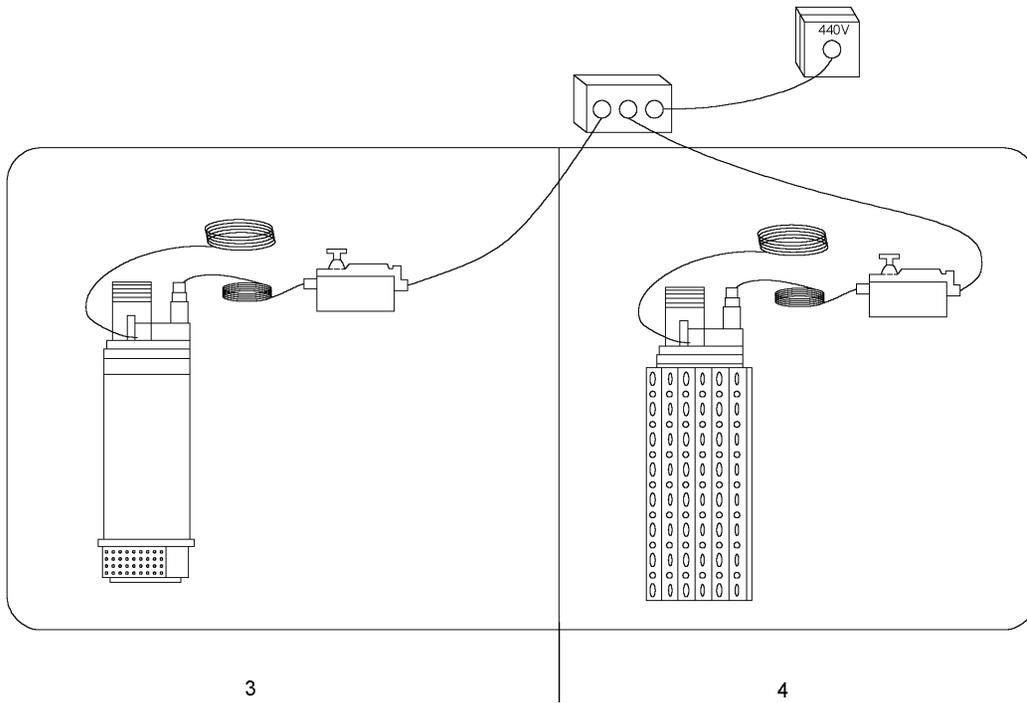
SKETCH NO.	TITLE OF SKETCH	SHEET NO.
001	Dewatering Equipment (Sheet 1 of 3)	4-2
	Dewatering Equipment (Sheet 2 of 3)	4-3
	Dewatering Equipment (Sheet 3 of 3)	4-4
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003	Using 2-1/2" Eductor or Peri Jet with or without Foot Valve Actuating from 2-1/2" Fireplug or P100 Pump	4-6
004	Suction Lifts Under 20 Feet	4-7
005	Using 1-1/2" Eductor and Peri Jet Eductor for Lifts Over 20 Feet	4-8
006	Using P-100 Pump and Eductor Pumping Contaminated Space	4-9
007	Using 1-1/2" Eductor Connected to a Standpipe	4-10
008	Using Peri Jet Eductor and 1-1/2" Fireplug	4-11
009	Using P-100 to Actuate Both the 1-1/2" Eductor and the Foot Valve Strainer for 10 Ft. Suction Lift	4-12
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014	Using Submersible Pumps Single or in Tandem- More than 50 Ft. Suction Lift	4-17
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016	Using Submersible Pump to Provide Actuating Water to Peri Jet Eductor	4-19
017	Electric Submersible Pump Discharge Actuating One or Two 1-1/2" S-Type Eductors and Corresponding Ram Fans	4-20
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1



2

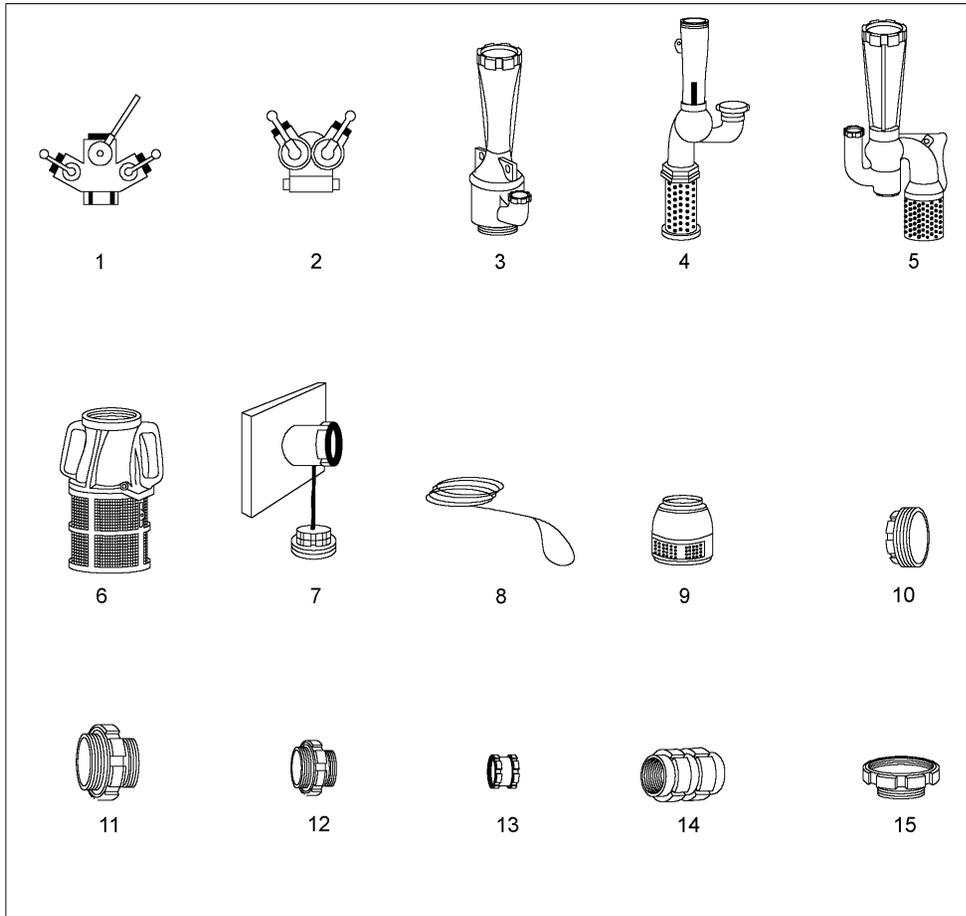


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4

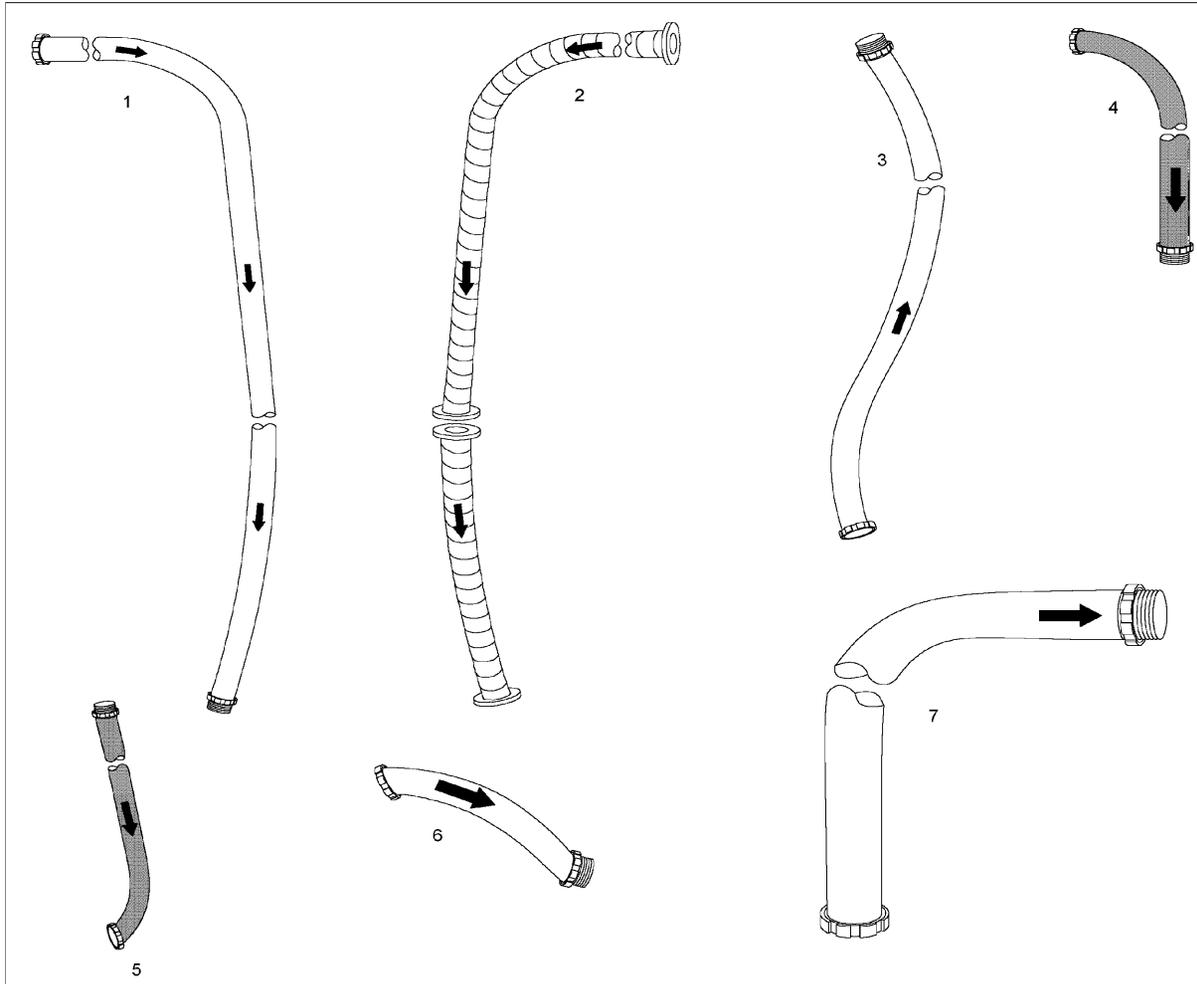
ITEM	EQUIPMENT
1	FIREPLUG
2	P-100 PUMP
3	SUBMERSIBLE PUMP W/O STRAINER
4	SUBMERSIBLE PUMP WITH STRAINER

DEWATERING EVOLUTION - SKETCH #001
Dewatering Equipment (Sheet 1 of 3)



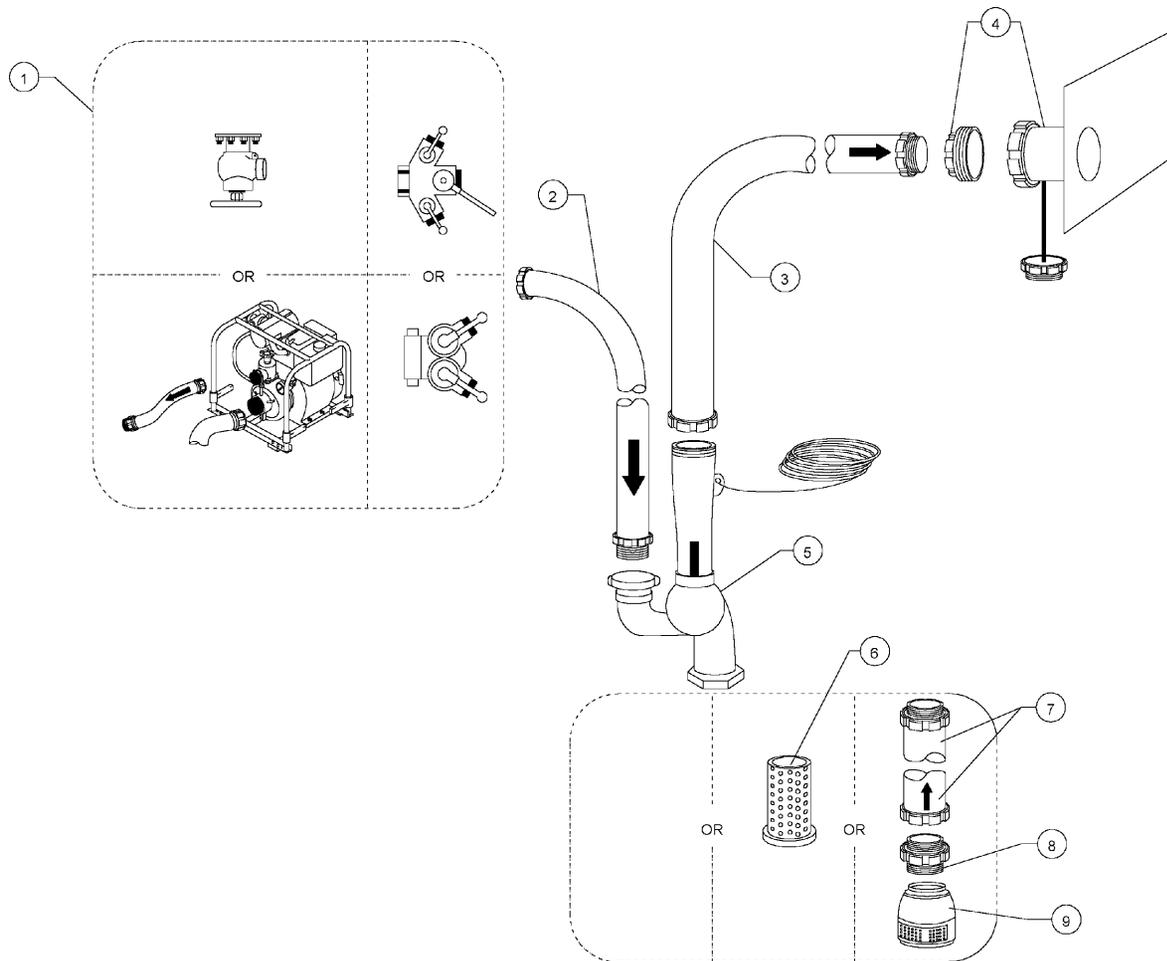
ITEM	EQUIPMENT
1	TRI GATE
2	WYE GATE
3	PERI JET EDUCTORT
4	1-1/2" EDUCTOR
5	S-TYPE EDUCTOR
6	FOOT VALVE WITH STRAINER
7	OVERBOARD DISCHARGE
8	TENDING LINE
9	FOOT VALVE STRAINER (SUB PUMP)
10	REDUCER 3" FEMALE - 4" MALE
11	ADAPTER 4" MALE - 3" MALE
12	ADAPTER 2-1/2" MALE - 1-1/2" MALE
13	ADAPTER 1-1/2" FEMALE - 1-1/2" FEMALE
14	ADAPTER 3" - 2-1/2" DOUBLE FEMALE
15	REDUCER 4" FEMALE - 3" MALE

DEWATERING EVOLUTION - SKETCH #001
Dewatering Equipment (Sheet 2 of 3)



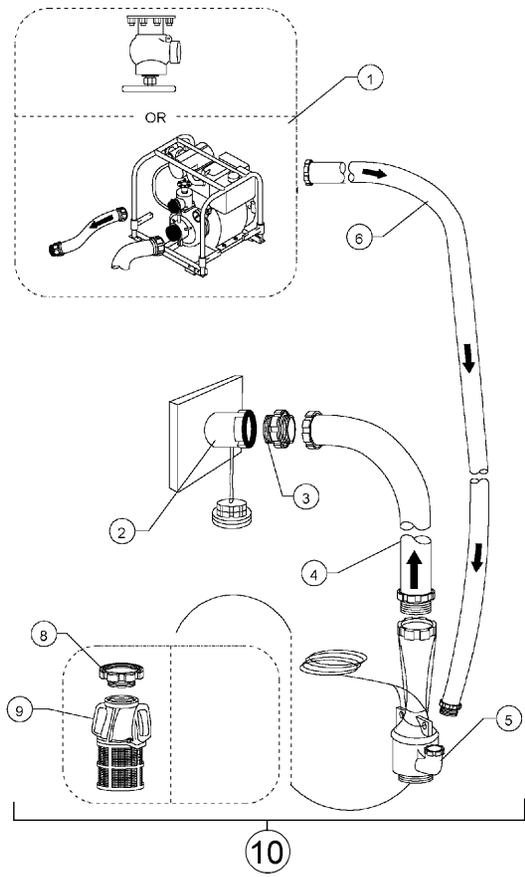
ITEM	EQUIPMENT
1	HOSE 2-1/2" X 50'
2	P-100 EXHAUST HOSE 2" X 10' (2 EACH) WITH FLANGED ADAPTERS
3	HOSE 1-1/2" X 50' OR 1-3/4" X 50'
4	HARD RUBBER HOSE 3" X 10'
5	HARD RUBBER HOSE 2-1/2" X 10'
6	HOSE JUMPER 2-1/2" X 18"
7	HOSE 4" X 50'

DEWATERING EVOLUTION - SKETCH #001
Dewatering Equipment (Sheet 3 of 3)

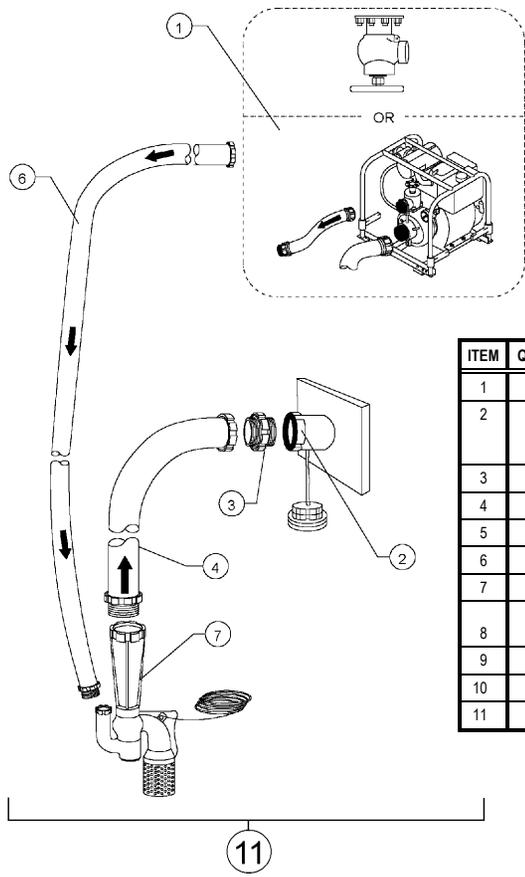


ITEM	QTY	EQUIPMENT
1	1	WATER SOURCE (P-100 OR FIRE PLUG CONNECTED TO TRI GATE OR WYE GATE)
2	1	1-1/2" X 50' FIREHOSE
3	1	2-1/2" X 50' FIREHOSE
4	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE CAP)
5	1	1-1/2" EDUCTOR WITH STRAINER AND HANDLING LINE
6	1	OPTIONAL 2-1/2" STRAINER
7	1	OR 2-1/2" X 10' HARD RUBBER SUCTION HOSE
8	1	ADAPTER (2-1/2" DOUBLE MALE FITTING)
9	1	2-1/2" STRAINER WITH FOOT VALVE

DEWATERING EVOLUTION - SKETCH #002
Using 1-1/2" Eductor with or without Strainer

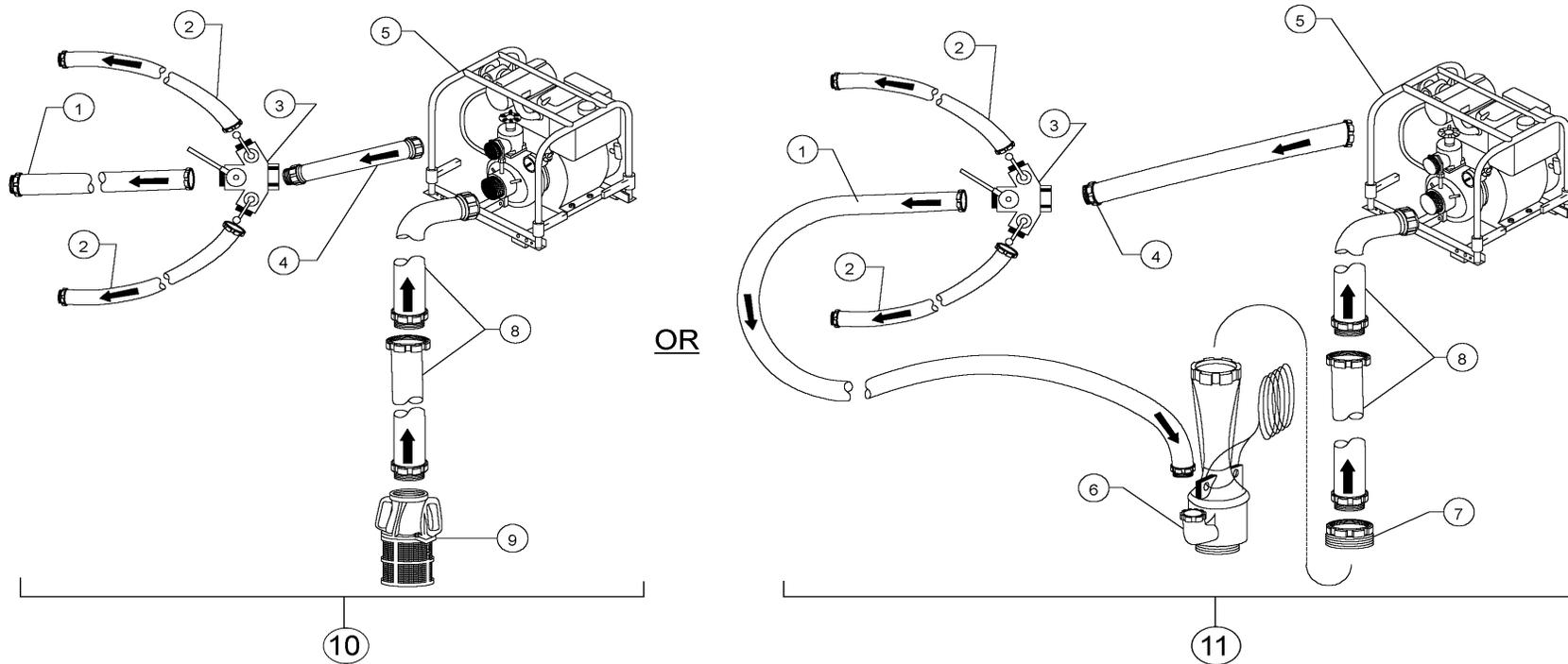


OR



ITEM	QTY	EQUIPMENT
1	1	2-1/2" WATER OUTLET (P-100 PUMP OR FIREPLUG)
2	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE AS UNIT)
3	1	ADAPTER - 4" DOUBLE MALE FITTING
4	1	4" X 50' FIREHOSE
5	1	2-1/2" PERI JET EDUCTOR WITH HANDLING LINE
6	1	2-1/2" FIREHOSE
7	1	2-1/2" S-TYPE EDUCTOR WITH HANDLING LINE
8	1	OPTIONAL ADAPTER - 4" FEMALE TO 3" MALE FITTING
9	1	VALVE, FOOT STRAINER WITH 1/2" X 56" RELEASE LINE
10	1	DEWATERING WITH PERI JET EDUCTOR
11	1	DEWATERING WITH 2-1/2" S-TYPE EDUCTOR

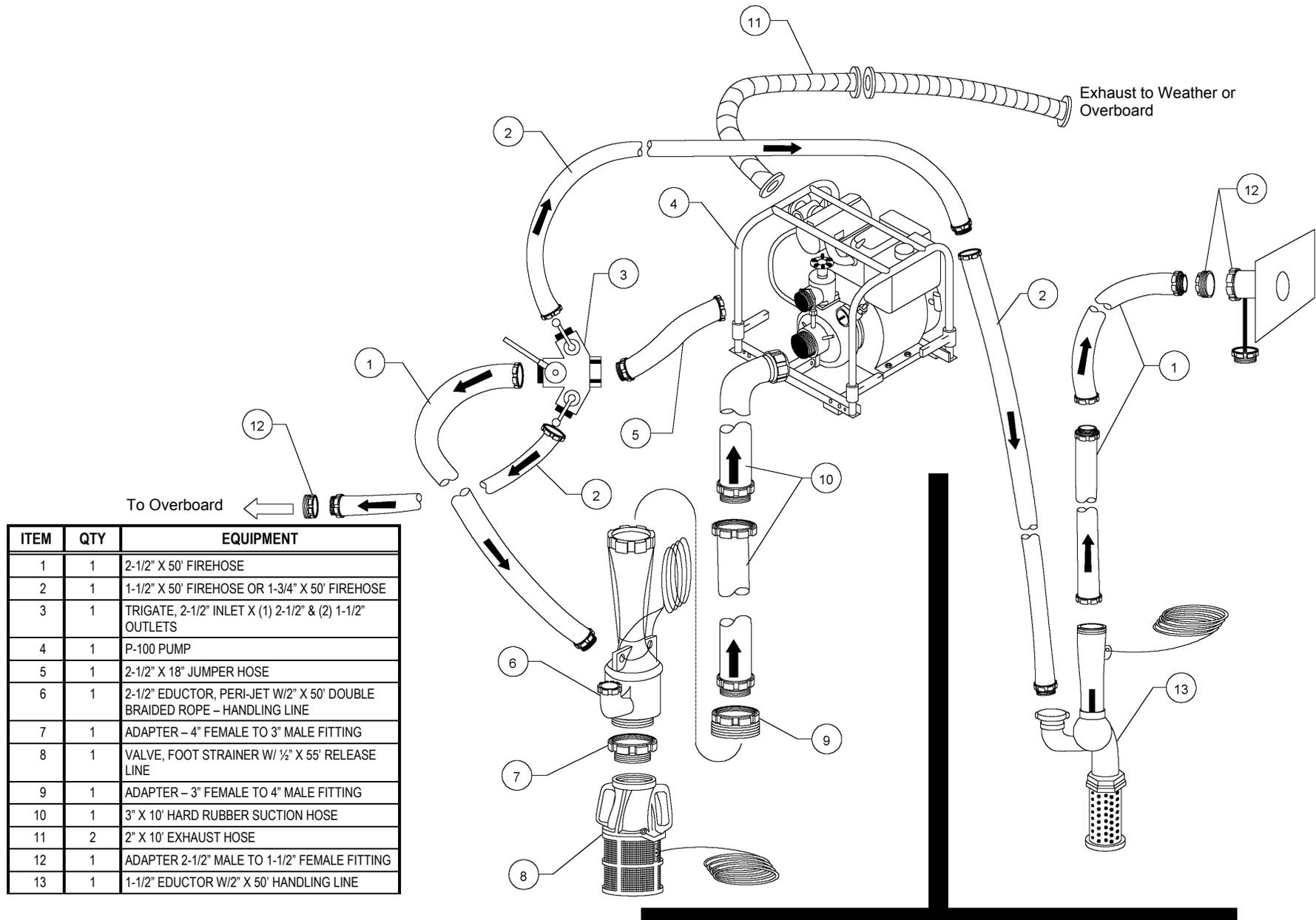
DEWATERING EVOLUTION - SKETCH #003
Using 2-1/2" Eductor or Peri Jet with or without Foot Valve Actuating from 2-1/2" Fireplug or P-100 Pump



ITEM	QTY	EQUIPMENT
1	1	2-1/2" X 50' FIREHOSE
2	2	1-1/2" X 50' FIREHOSE OR 1-3/4" X 50' FIREHOSE
3	1	TRIGATE, 2-1/2" INLET X (1) 2-1/2" & (2) 1-1/2" OUTLETS
4	1	2-1/2" X 18" JUMPER HOSE
5	1	P-100 PUMP
6	1	2-1/2" EDUCATOR, PERI JET WITH 2' X 50' HANDLING LINE
7	1	ADAPTER - 3" FEMALE TO 4" MALE FITTING
8	NOTE 1	3' X 10' HARD RUBBER SUCTION HOSE
9	1	FOOT VALVE/STRAINER
10	1	DEWATERING WITH P-100 PUMP
11	1	DEWATERING WITH COMBINATION OF EDUCATOR AND P-100 PUMP

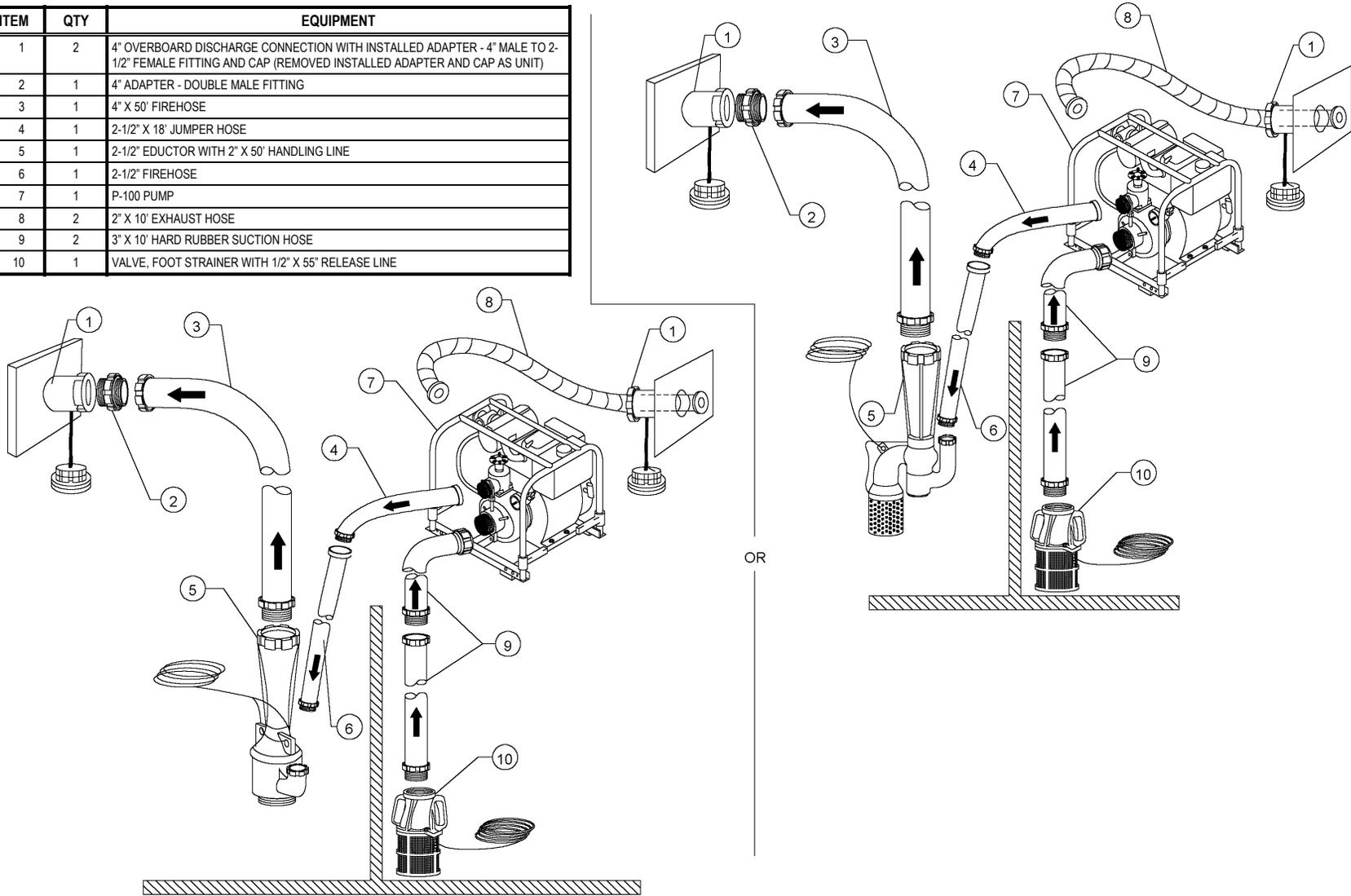
NOTE 1: THREE OR MORE LENGTHS OF SUCTION HOSE REQUIRED FOR LIFTS OVER 20'

DEWATERING EVOLUTION - SKETCH #004
Suction Lifts Under 20 Feet



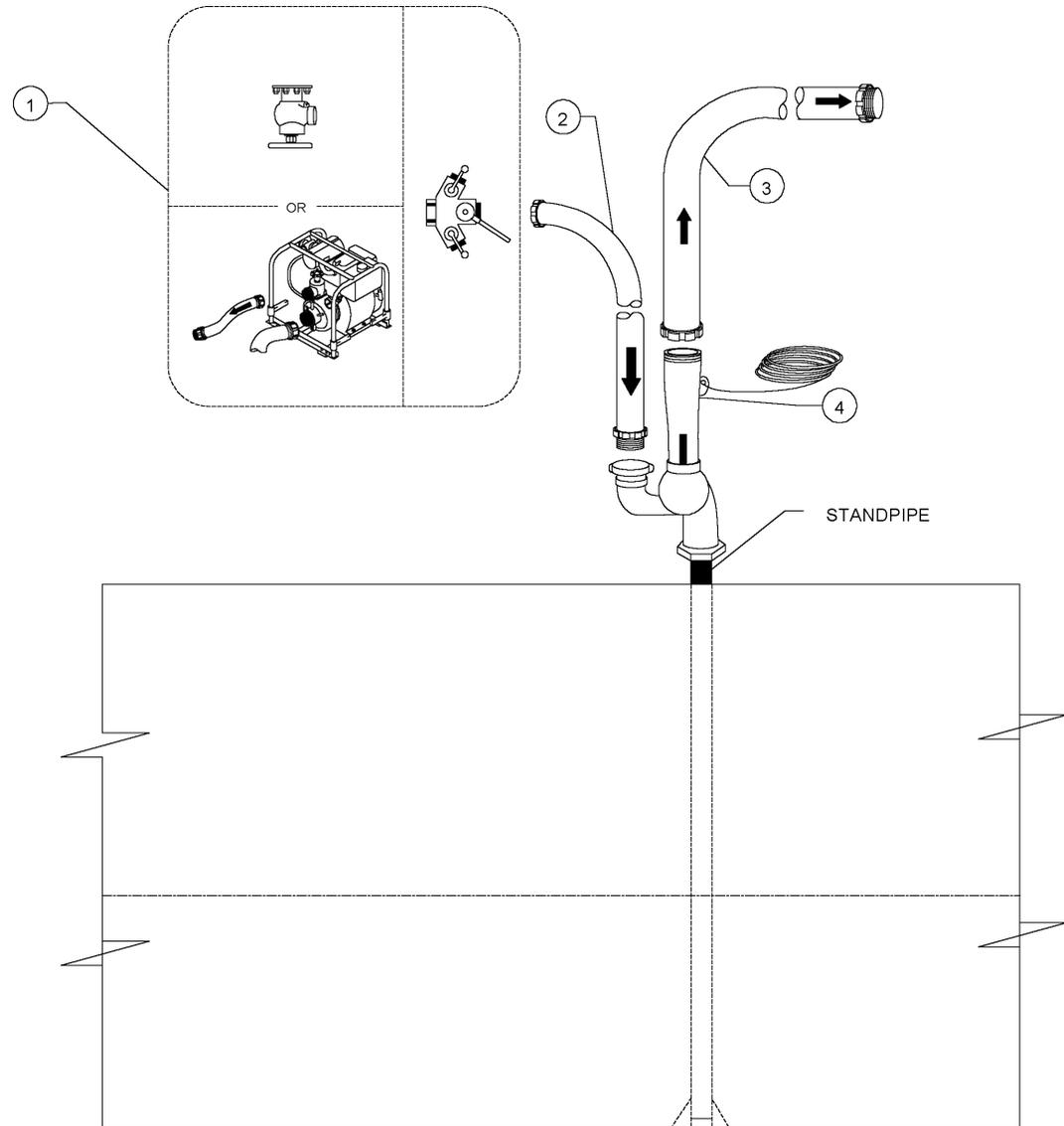
DEWATERING EVOLUTION - SKETCH #005
Using 1-1/2" Eductor and Peri Jet Eductor for Lifts Over 20 Feet

ITEM	QTY	EQUIPMENT
1	2	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVED INSTALLED ADAPTER AND CAP AS UNIT)
2	1	4" ADAPTER - DOUBLE MALE FITTING
3	1	4" X 50' FIREHOSE
4	1	2-1/2" X 18' JUMPER HOSE
5	1	2-1/2" EDUCTOR WITH 2" X 50' HANDLING LINE
6	1	2-1/2" FIREHOSE
7	1	P-100 PUMP
8	2	2" X 10' EXHAUST HOSE
9	2	3" X 10' HARD RUBBER SUCTION HOSE
10	1	VALVE, FOOT STRAINER WITH 1/2" X 55" RELEASE LINE

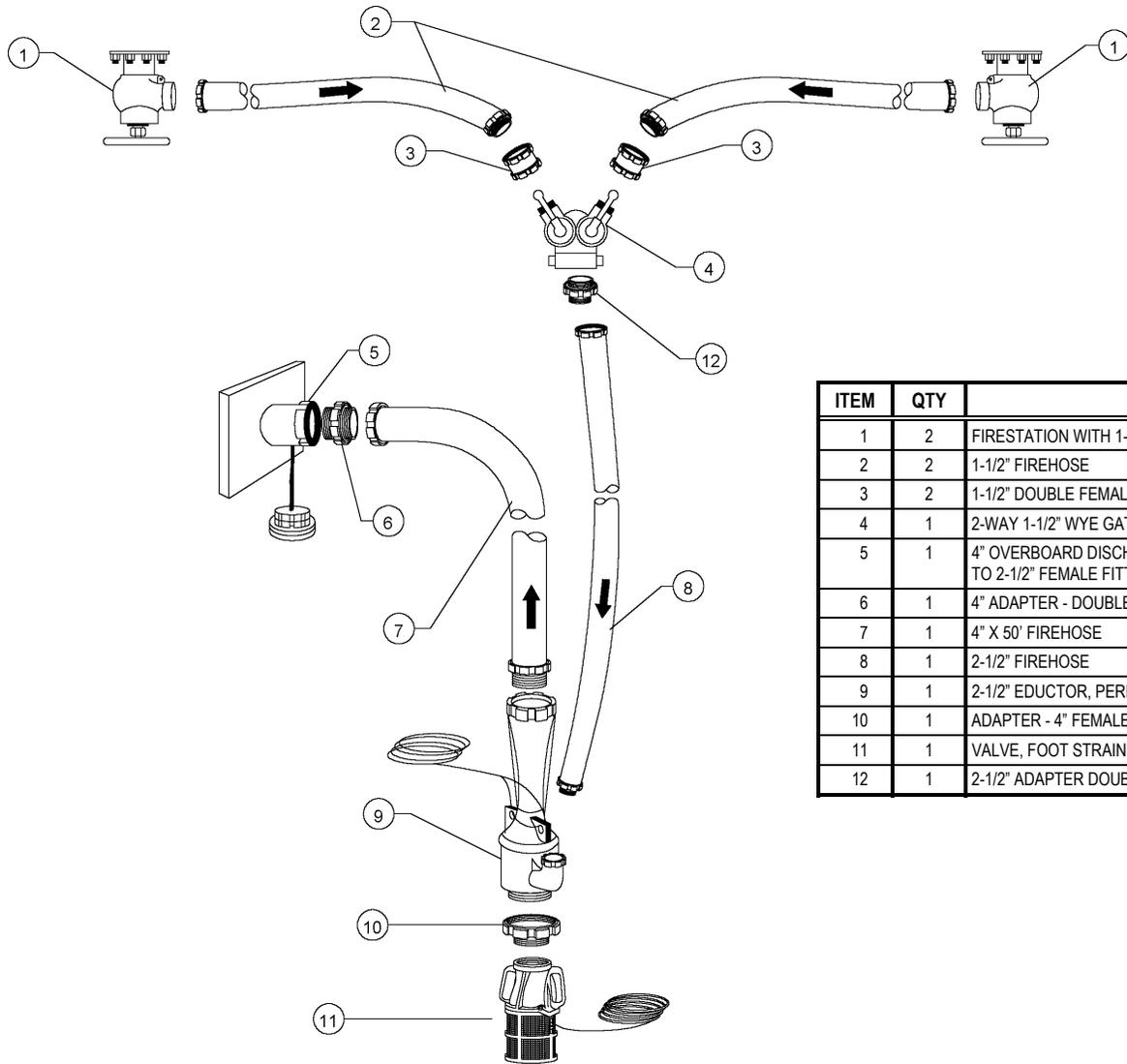


DEWATERING EVOLUTION - SKETCH #006
Using P-100 Pump and Eductor Pumping Contaminated Space

ITEM	QTY	EQUIPMENT
1	1	WATER SOURCE (FIREPLUG, P-100 CONNECT TO TRIGATE)
2	1	1-1/2" X 50' FIREHOSE
3	1	2-1/2" X 50' FIREHOSE
4	1	1-1/2" EDUCTOR WITH HANDLING LINE (REMOVE STRAINER FROM 1-1/2" EDUCTOR)

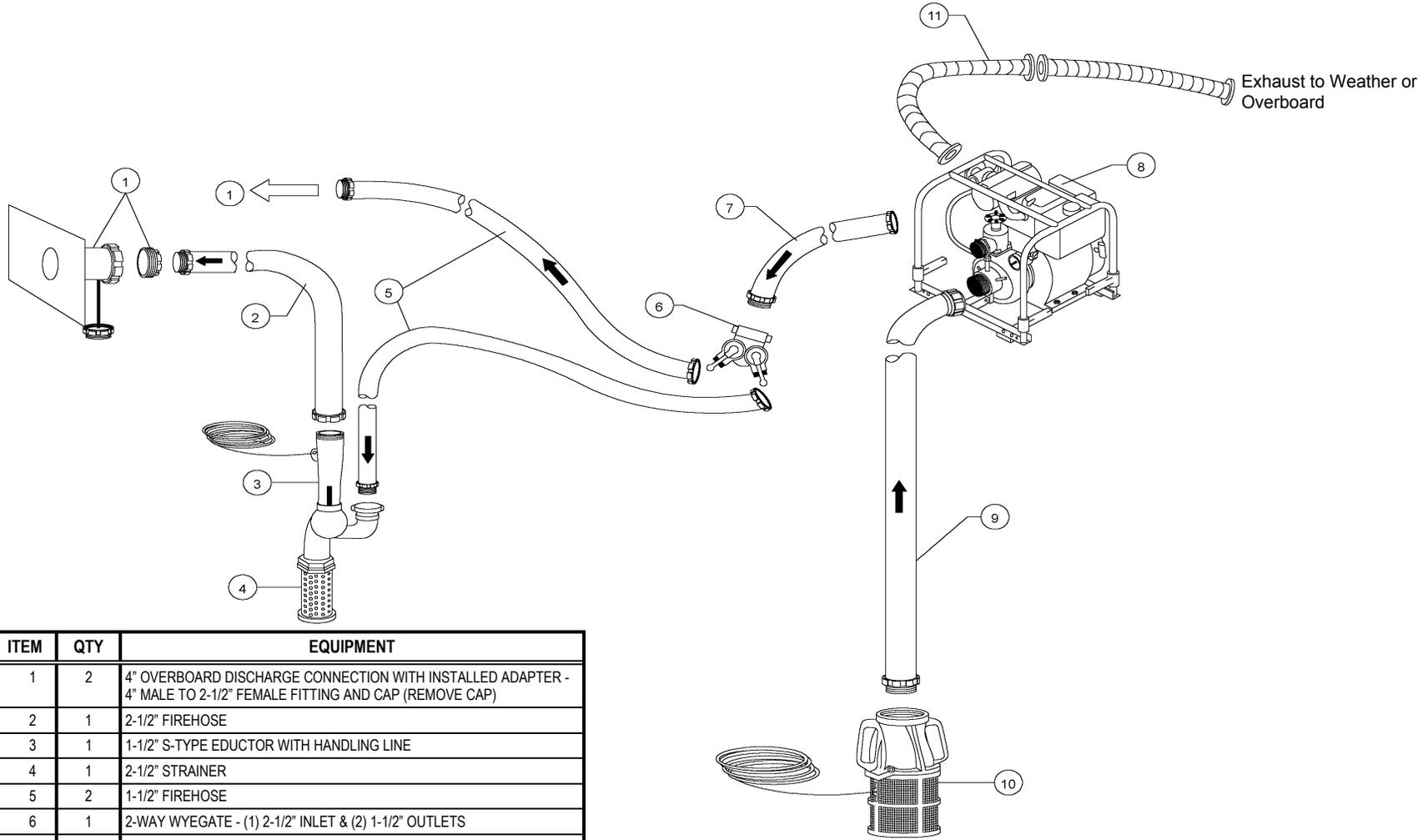


DEWATERING EVOLUTION - SKETCH #007
Using 1-1/2" Eductor Connected to a Standpipe



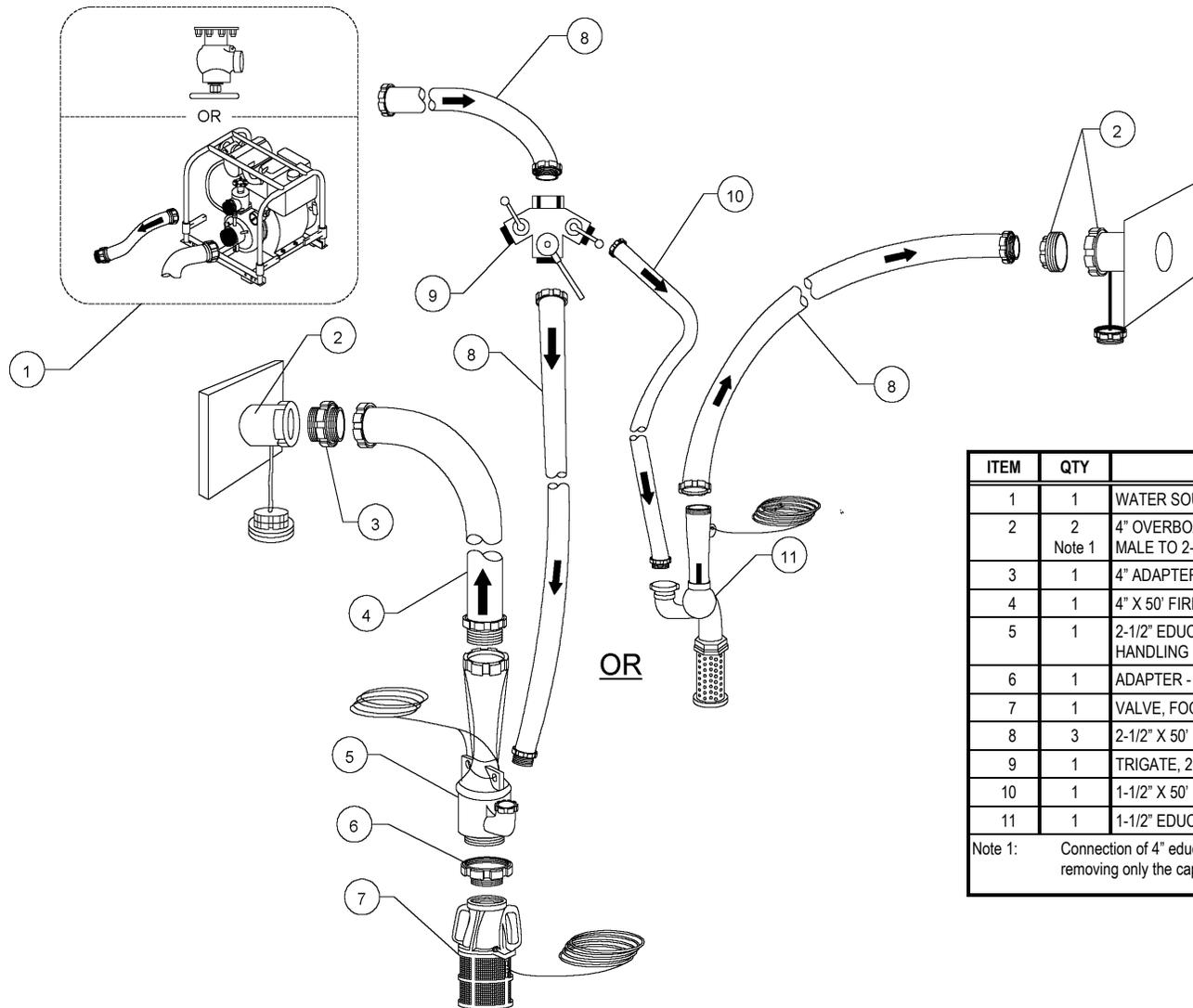
ITEM	QTY	EQUIPMENT
1	2	FIRESTATION WITH 1-1/2" FIREPLUG, (2) 1-1/2" FIREHOSES AND SPANNER WRENCH
2	2	1-1/2" FIREHOSE
3	2	1-1/2" DOUBLE FEMALE FITTING
4	1	2-WAY 1-1/2" WYE GATE
5	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE AS UNIT)
6	1	4" ADAPTER - DOUBLE MALE FITTING
7	1	4" X 50' FIREHOSE
8	1	2-1/2" FIREHOSE
9	1	2-1/2" EDUCTOR, PERI-JET WITH 2" X 50' DOUBLE-BRAIDED ROPE - HANDLING LINE
10	1	ADAPTER - 4" FEMALE TO 3" MALE FITTING
11	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE
12	1	2-1/2" ADAPTER DOUBLE MALE FITTING

DEWATERING EVOLUTION - SKETCH #008
Using Peri Jet Eductor and 1-1/2" Fireplug



ITEM	QTY	EQUIPMENT
1	2	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE CAP)
2	1	2-1/2" FIREHOSE
3	1	1-1/2" S-TYPE EDUCTOR WITH HANDLING LINE
4	1	2-1/2" STRAINER
5	2	1-1/2" FIREHOSE
6	1	2-WAY WYEGATE - (1) 2-1/2" INLET & (2) 1-1/2" OUTLETS
7	1	2-1/2" X 18' JUMPER DISCHARGE HOSE
8	1	P-100 PUMP
9	1	3" X 10' HARD RUBBER SUCTION HOSE
10	1	3' FOOT VALVE STRAINER WITH 1/2" X 55' RELEASE LINE
11	2	2" X 10' EXHAUST HOSE

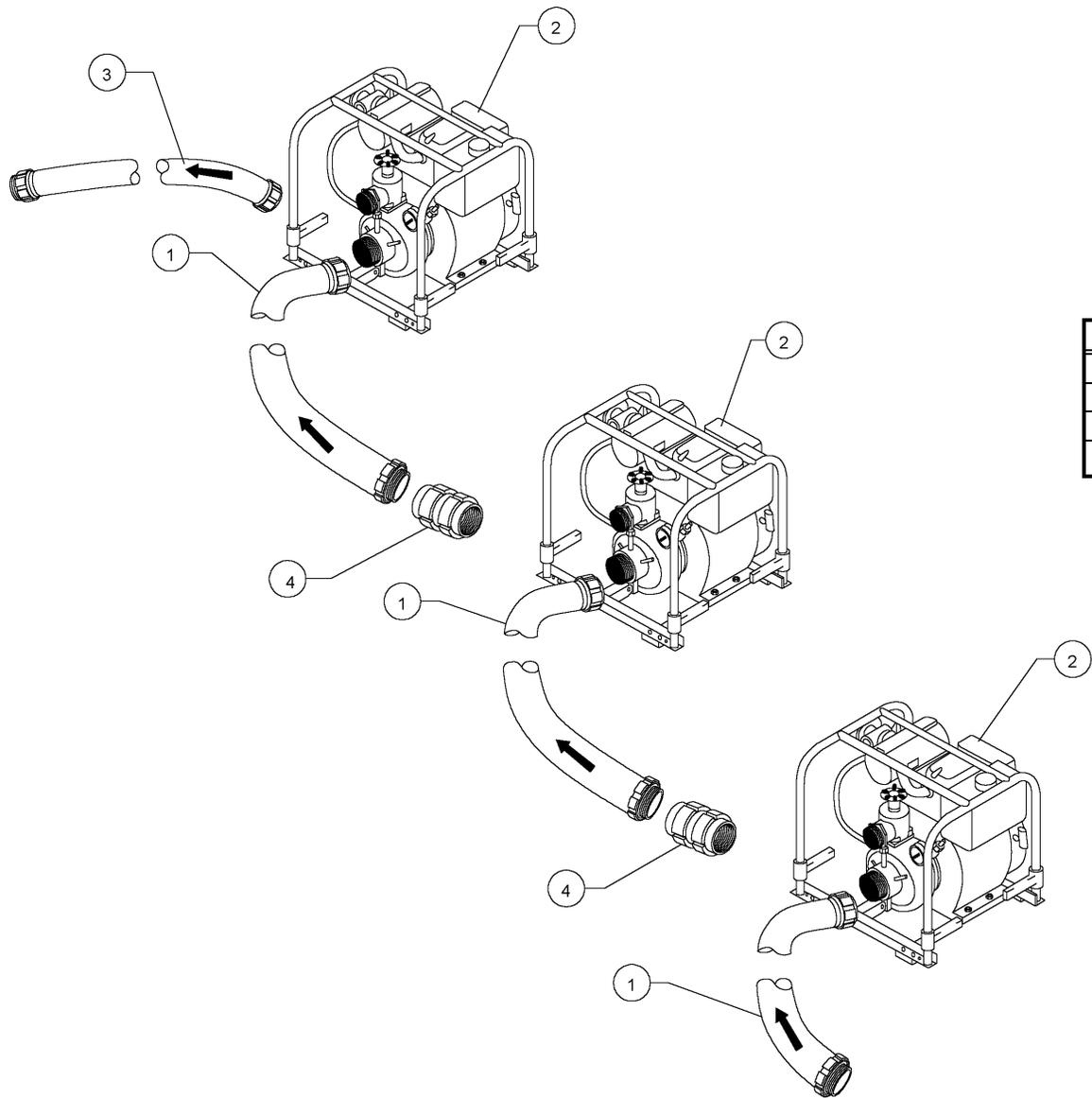
DEWATERING EVOLUTION - SKETCH #009
Using P-100 to Actuate Both the 1-1/2" Eductor and the Foot Valve Strainer for 10 Ft. Suction Lift



ITEM	QTY	EQUIPMENT
1	1	WATER SOURCE (FIRE PLUG CONNECTION, P100 PUMP)
2	2	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP
3	1	4" ADAPTER - DOUBLE MALE FITTING
4	1	4" X 50' FIREHOSE
5	1	2-1/2" EDUCTOR, PERI-JET WITH 2" X 50' DOUBLE-BRAIDED ROPE - HANDLING LINE
6	1	ADAPTER - 4" FEMALE TO 3" MALE FITTING
7	1	VALVE, FOOT STRAINER WITH 1/2" X 55' RELEASE LINE
8	3	2-1/2" X 50' FIREHOSE
9	1	TRIGATE, 2-1/2" INLET X (1) 2-1/2" & (2) 1-1/2" OUTLETS
10	1	1-1/2" X 50' FIREHOSE
11	1	1-1/2" EDUCTOR WITH 2-1/2" STRAINER (ATTACHED) AND HANDLING LINE

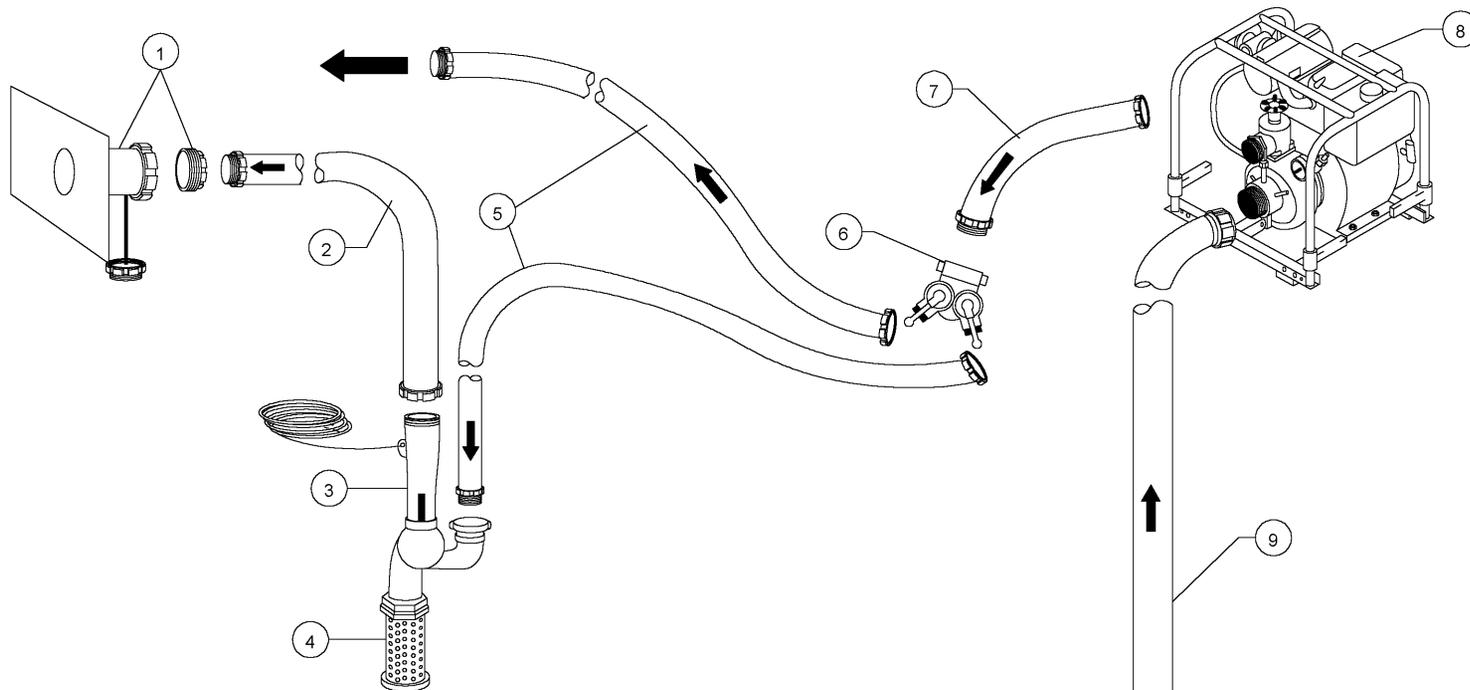
Note 1: Connection of 4" eductor requires removing installed reducer; 2-1/2" eductor requires removing only the cap

DEWATERING EVOLUTION - SKETCH #010
Using Peri Jet Eductor or 1-1/2" Eductor



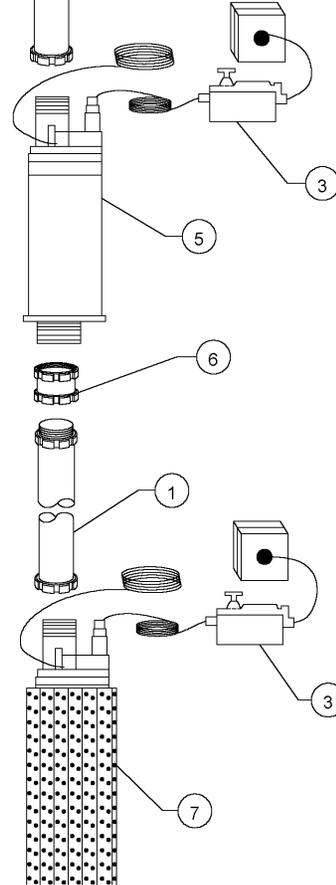
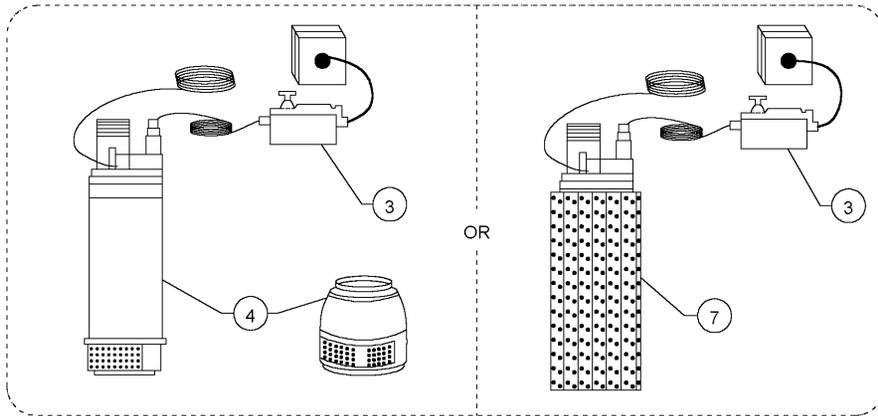
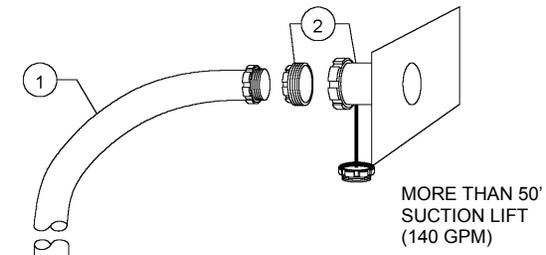
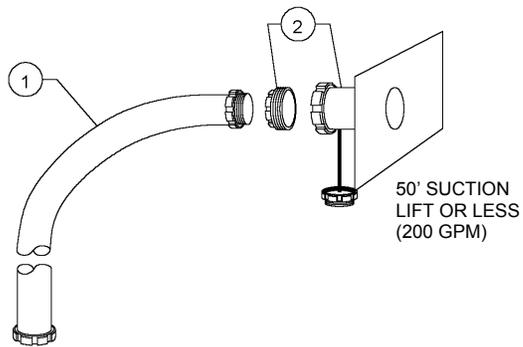
ITEM	QTY	EQUIPMENT
1	3	3" X 10' SUCTION HOSE
2	3	P-100 PUMP
3	1	2-1/2" X 50' FIREHOSE
4	2	ADAPTER - 3" TO 2-1/2" DOUBLE FEMALE

DEWATERING EVOLUTION - SKETCH #012
20 Foot-Plus Suction Lift Using Three P-100 Pumps in Tandem



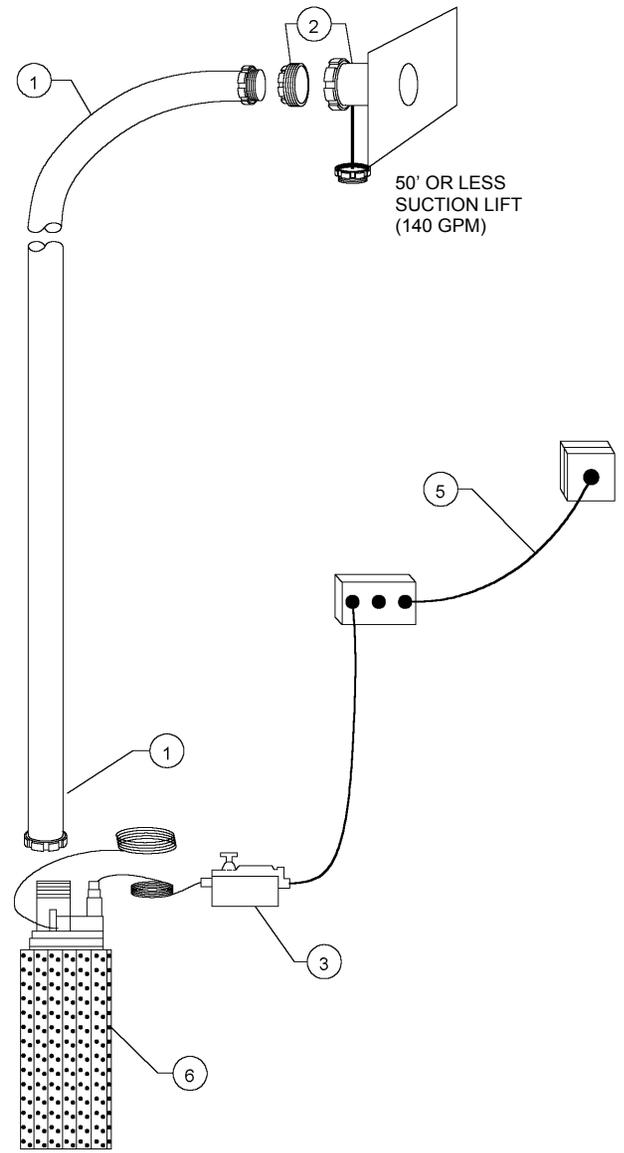
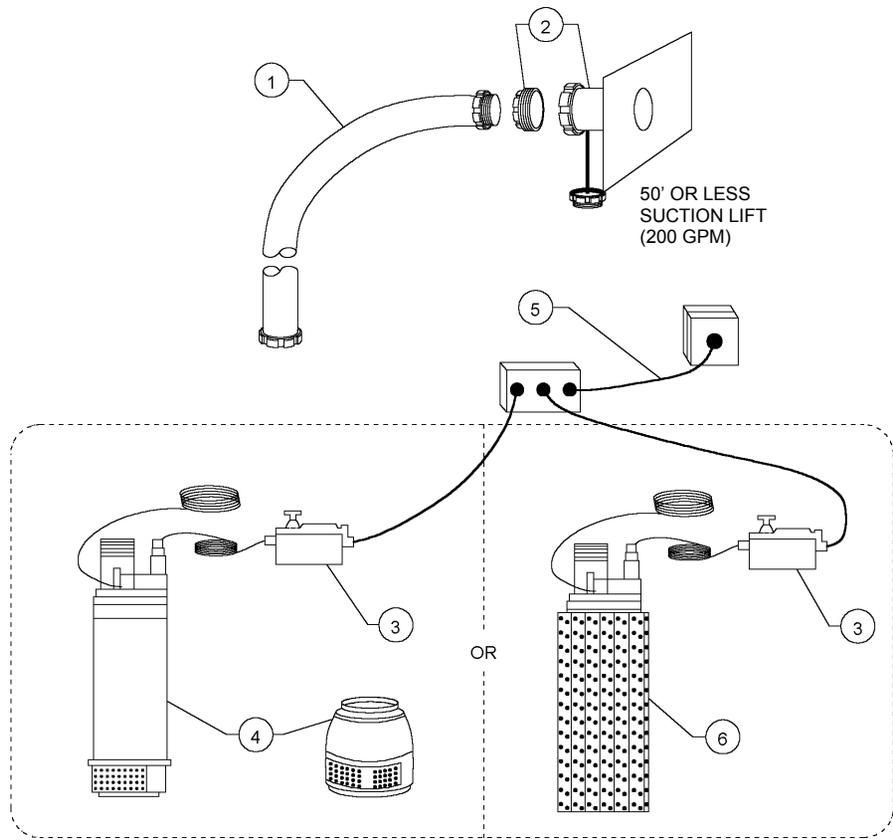
ITEM	QTY	EQUIPMENT
1	2	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE CAP)
2	1	2-1/2" FIREHOSE
3	1	1-1/2" S-TYPE EDUCTOR WITH HANDLING LINE
4	1	2-1/2" STRAINER
5	2	1-1/2" FIREHOSE
	Note 2:	
6	1	2-WAY WYEGATE - (1) 2-1/2" INLET & (2) 1-1/2" OUTLETS
7	1	2-1/2" X 18' JUMPER HOSE
8	1	P-100 PUMP
9	1	3" X 10' HARD RUBBER SUCTION HOSE
	Note 1:	
10	1	3' FOOT VALVE STRAINER WITH 1/2" X 55' RELEASE LINE
Note 1:		A second hose may be used if required up to 20 feet
Note 2:		Second hose to Alternate Overboard Discharge connection

DEWATERING EVOLUTION - SKETCH #013
Using P-100 Pump and 1-1/2" Eductor



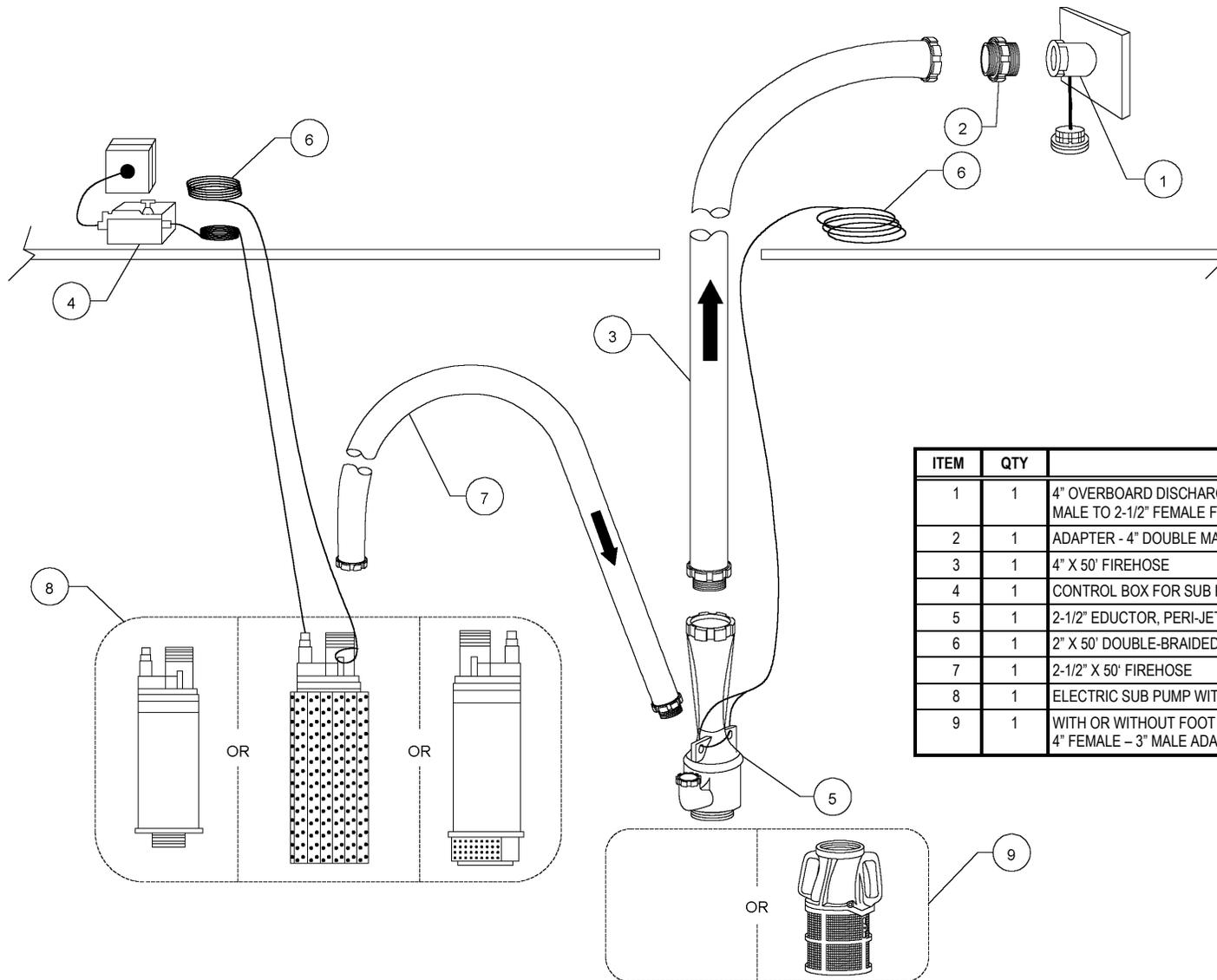
ITEM	QTY	EQUIPMENT
1	1 (2)	2-1/2" FIREHOSE
2	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE CAP ONLY)
3	1 (2)	CONTROL BOX FOR SUB PUMP PLUGGED INTO 440V OUTLET
4	1	ELECTRIC SUB PUMP WITH 2-1/2" FOOT VALVE, STRAINER AND HANDLING LINE
5	1	ELECTRIC SUB PUMP WITH HANDLING LINE
6	1	ADAPTER - 2-1/2" DOUBLE FEMALE FITTING
7	1	ELECTRIC SUB PUMP ENCASED IN STAR STRAINER WITH HANDLING LINE

DEWATERING EVOLUTION - SKETCH #014
Using Submersible Pumps Single or in Tandem- More than 50 Ft. Suction Lift



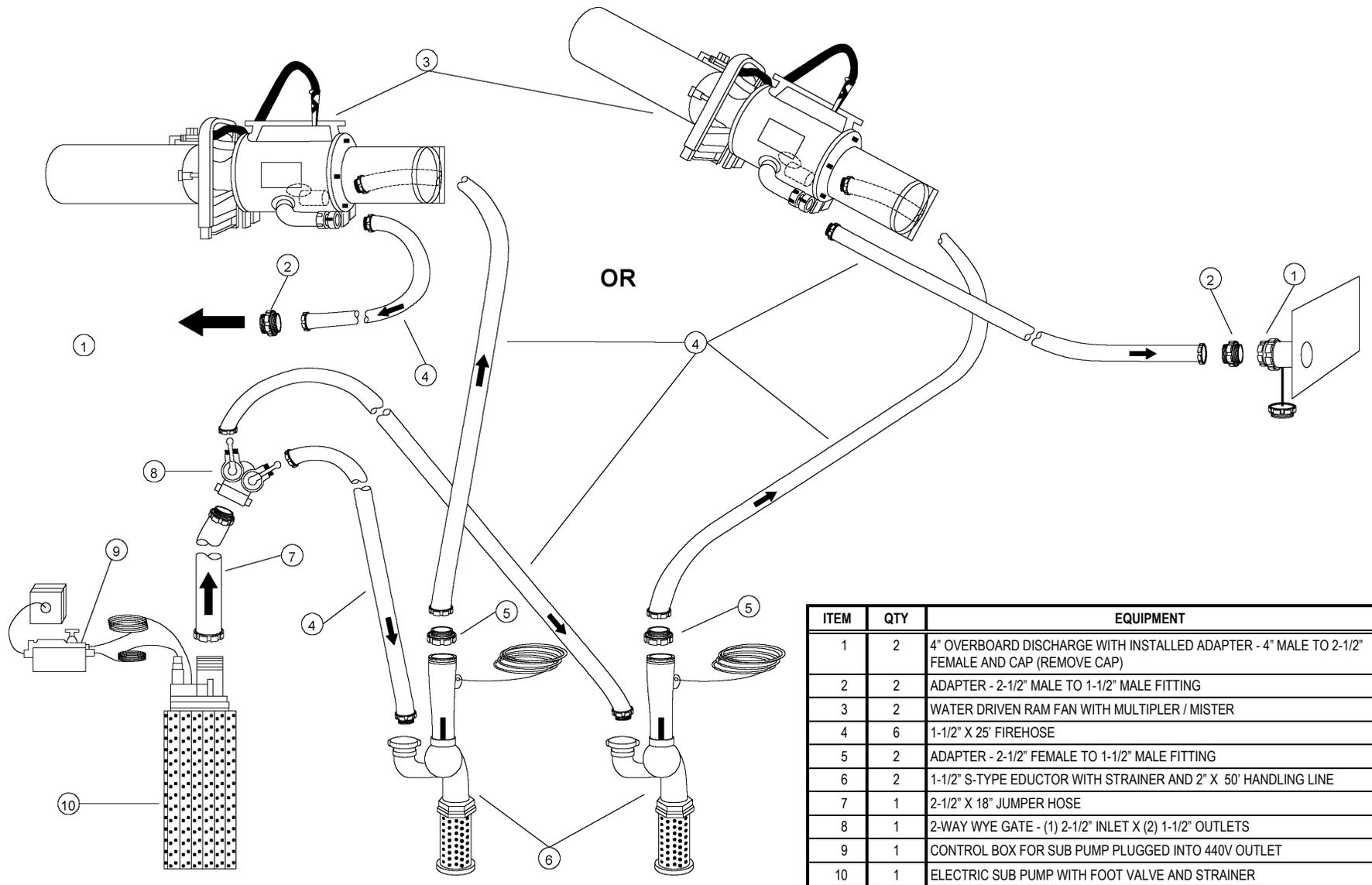
ITEM	QTY	EQUIPMENT
1	1(2)	2-1/2" FIREHOSE
2	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE CAP ONLY)
3	1(2)	CONTROL BOX FOR SUB PUMP PLUGGED INTO AN OUTLET BOW AND 440V OUTLET
4	1	ELECTRIC SUB PUMP WITH 2-1/2" FOOT VALVE STRAINER AND HANDLING LINE
5	1	440V EXTENSION CABLE
6	1	ELECTRIC SUB PUMP WITH HANDLING LINE

DEWATERING EVOLUTION - SKETCH #015
Using Submersible Pump - Up to 50 Ft. Suction Lift

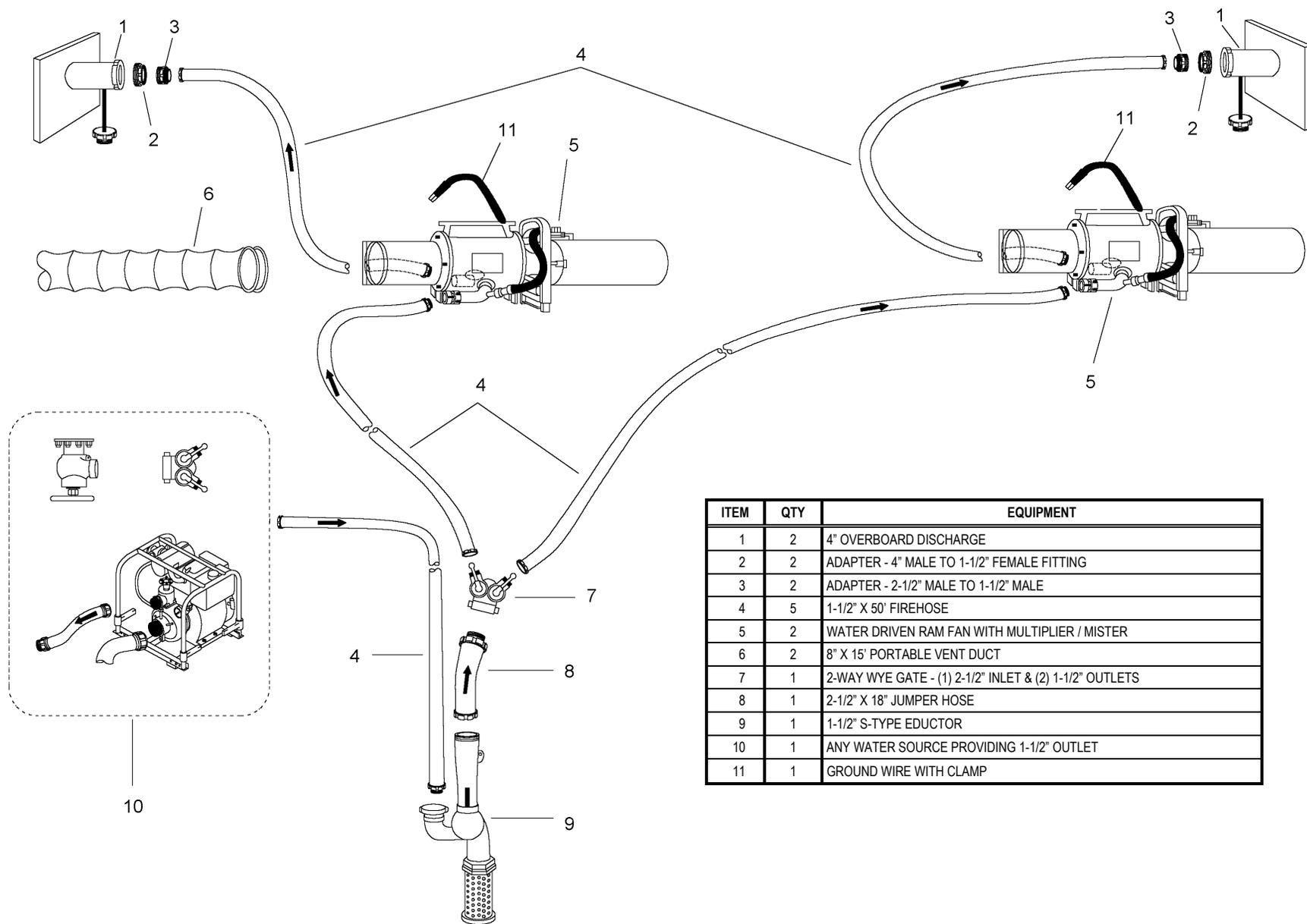


ITEM	QTY	EQUIPMENT
1	1	4" OVERBOARD DISCHARGE CONNECTION WITH INSTALLED ADAPTER - 4" MALE TO 2-1/2" FEMALE FITTING AND CAP (REMOVE AS UNIT)
2	1	ADAPTER - 4" DOUBLE MALE
3	1	4" X 50' FIREHOSE
4	1	CONTROL BOX FOR SUB PUMP PLUGGED INTO 440 VOLT OUTLET
5	1	2-1/2" EDUCTOR, PERI-JET
6	1	2" X 50' DOUBLE-BRAIDED ROPE-HANDLING LINE
7	1	2-1/2" X 50' FIREHOSE
8	1	ELECTRIC SUB PUMP WITH AND WITHOUT FOOT VALVE AND STRAINER
9	1	WITH OR WITHOUT FOOT VALVE STRAINER (OPTIONAL) INSTALLED, USE 4" FEMALE - 3" MALE ADAPTER

DEWATERING EVOLUTION - SKETCH #016
Using Submersible Pump to Provide Actuating Water to Peri Jet Eductor

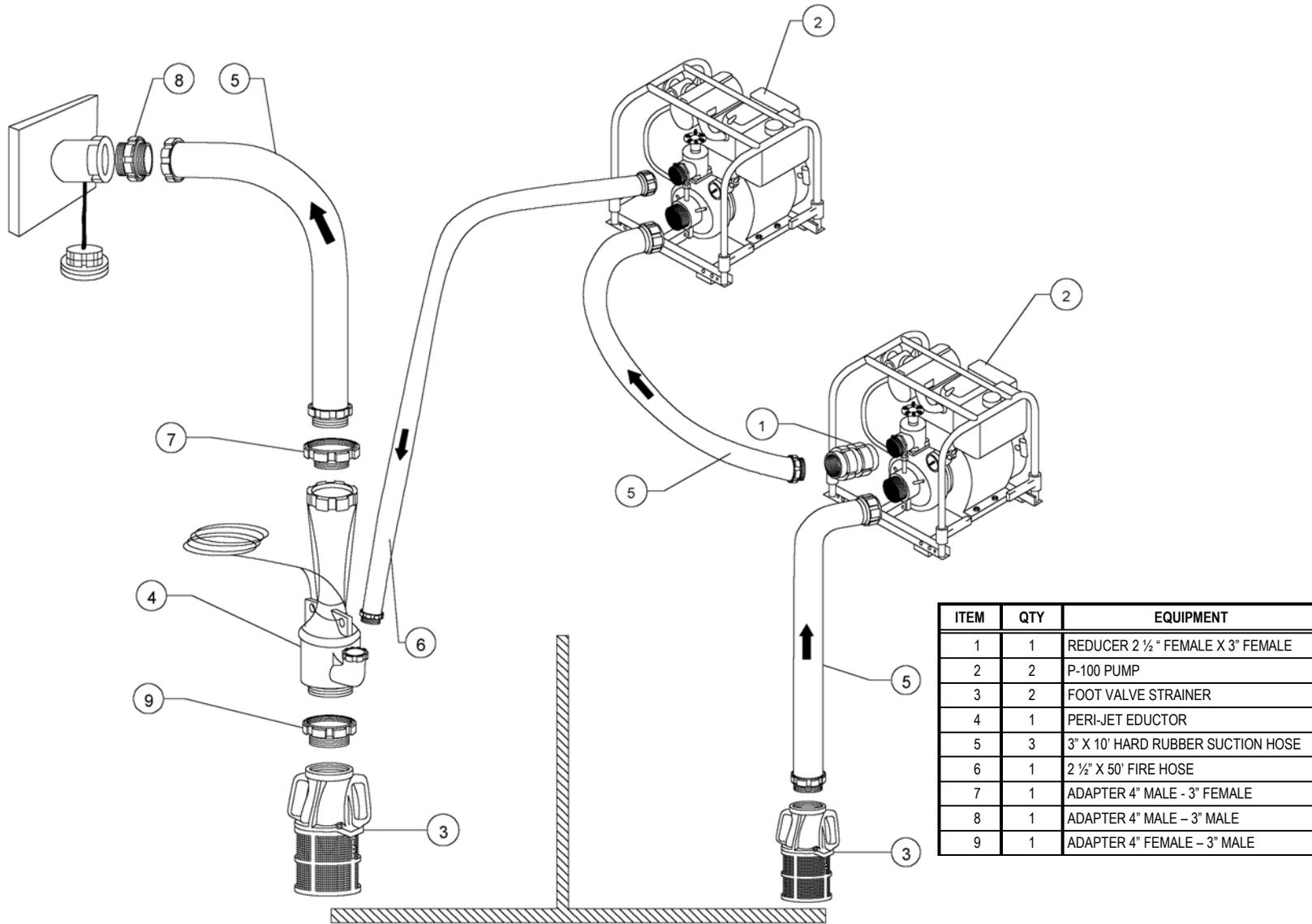


DEWATERING EVOLUTION - SKETCH #017
Electric Submersible Pump Discharge Actuating One or Two 1-1/2" S-Type Eductors and Corresponding Ram Fans

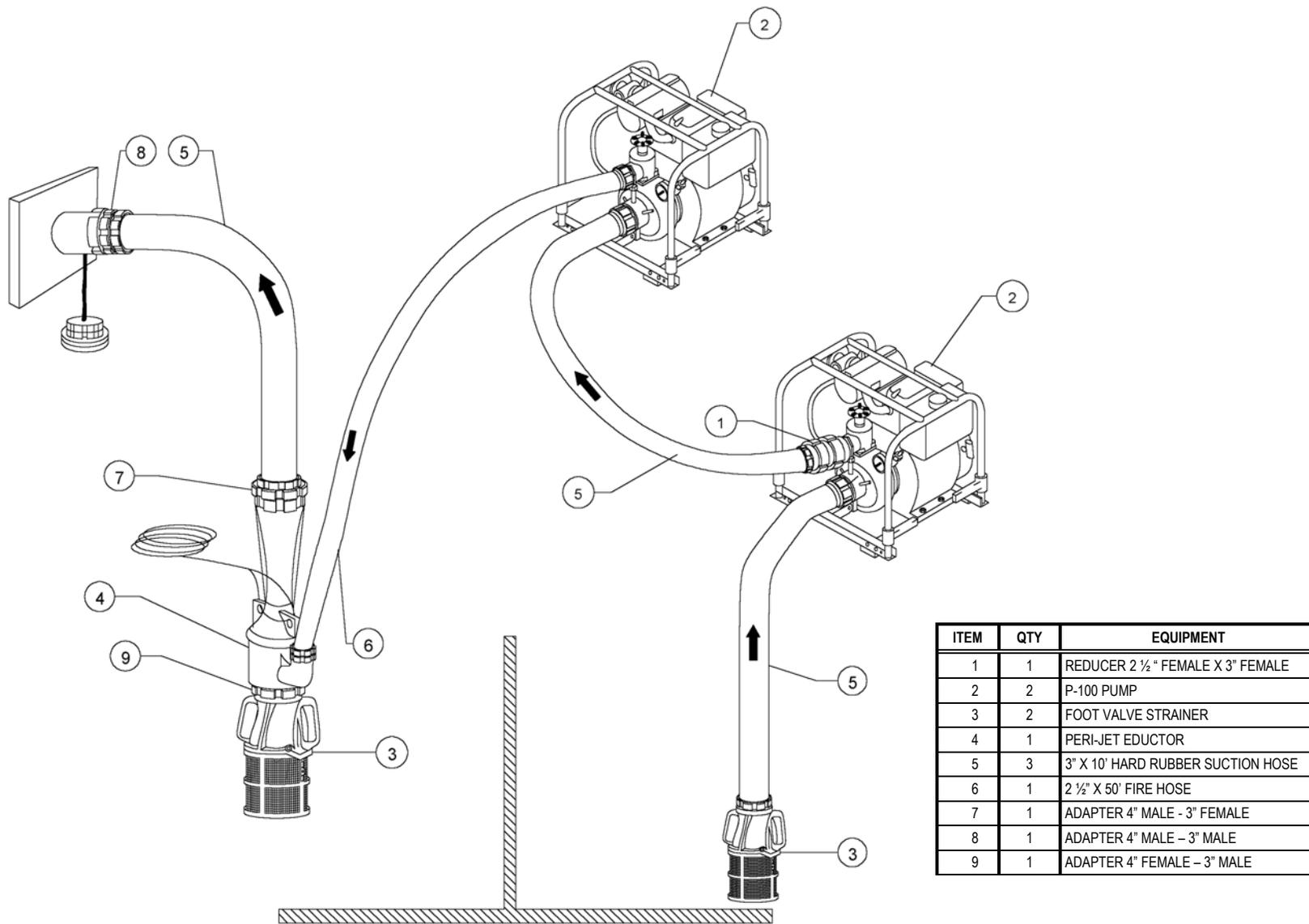


ITEM	QTY	EQUIPMENT
1	2	4" OVERBOARD DISCHARGE
2	2	ADAPTER - 4" MALE TO 1-1/2" FEMALE FITTING
3	2	ADAPTER - 2-1/2" MALE TO 1-1/2" MALE
4	5	1-1/2" X 50' FIREHOSE
5	2	WATER DRIVEN RAM FAN WITH MULTIPLIER / MISTER
6	2	8" X 15' PORTABLE VENT DUCT
7	1	2-WAY WYE GATE - (1) 2-1/2" INLET & (2) 1-1/2" OUTLETS
8	1	2-1/2" X 18" JUMPER HOSE
9	1	1-1/2" S-TYPE EDUCTOR
10	1	ANY WATER SOURCE PROVIDING 1-1/2" OUTLET
11	1	GROUND WIRE WITH CLAMP

DEWATERING EVOLUTION - SKETCH #018
1-1/2" S-Type Eductor Providing Actuating Water to Two Water Driven Ram Fans for Cooling/Desmoking



DEWATERING EVOLUTION - SKETCH #019 (SHEET 1 OF 2)
Dewatering Compartments Using Two P-100 Pumps in Tandem Actuating Eductor in Adjacent Space



DEWATERING EVOLUTION - SKETCH #019 (SHEET 2 OF 2)

Dewatering Compartments Using Two P-100 Pumps with Connections made in Tandem Actuating Eductor in Adjacent Space