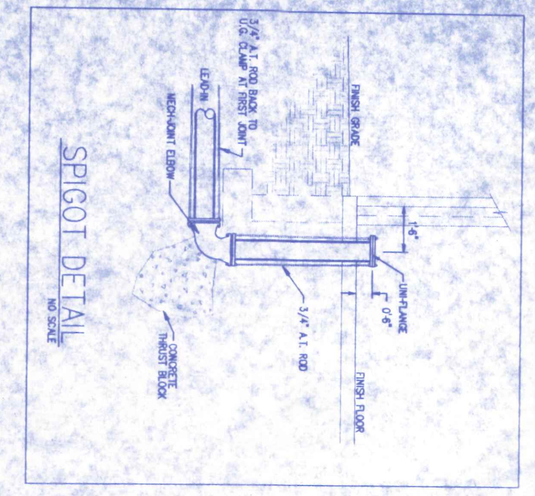


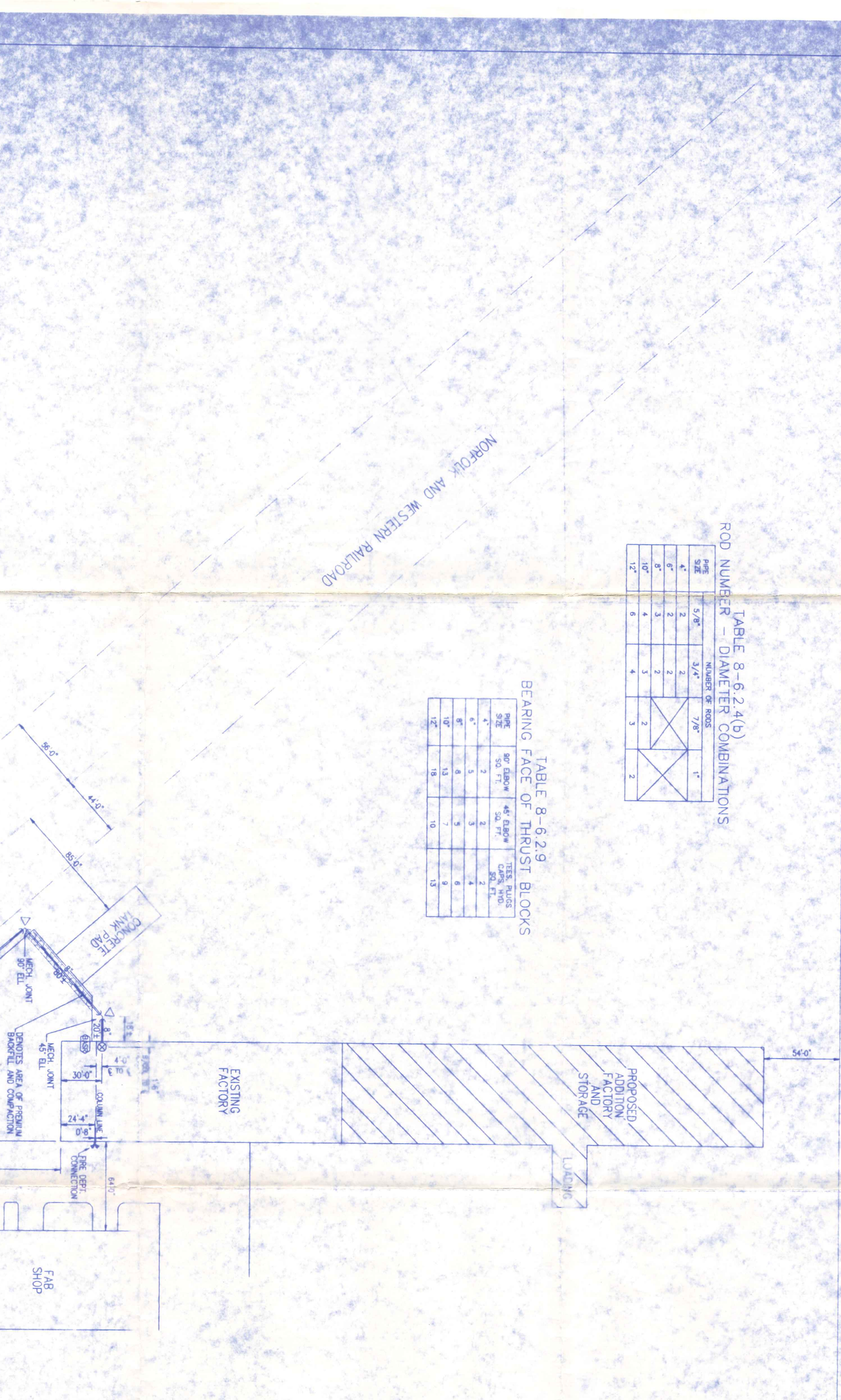
SPIGOT DETAIL
NO SCALE

TABLE 8-6.2.4(b)
ROD NUMBER - DIAMETER COMBINATIONS

PIPE SIZE	NUMBER OF RODS			
	5/8"	3/4"	7/8"	1"
4"	2	2		
6"	2	2		
8"	3	2		
10"	4	3	2	
12"	6	4	3	2

TABLE 8-6.2.9
BEARING FACE OF THRUST BLOCKS

PIPE SIZE	90° ELBOW SQ. FT.	45° ELBOW SQ. FT.	TEES, PLUGS CAPS, HYD. SQ. FT.
4"	2	2	2
6"	5	3	4
8"	8	5	6
10"	13	7	9
12"	18	10	13



SITE PLAN
SCALE 1"=40'

WATER FLOW INFO

DATE & TIME: 1993
WATER MAIN @ INDUSTRIAL DR
BY: CITY OF NAPOLEON
STATIC: 62 PSI
RESIDUAL: 50 PSI
FLOWING: 1319 GPM

UNDERGROUND INSTALLATION NOTES

ALL WORK AND MATERIAL SHALL CONFORM TO N.F.P.A. #24 1987, INSURANCE COMPANY REQUIREMENTS, AND ALL LOCAL AND STATE REGULATIONS. ALL MATERIALS SHALL BE U.L. LISTED FOR FIRE PROTECTION SERVICE.

PIPE SHALL BE DUCTILE IRON, CLASS 50, IN ACCORDANCE WITH ANSI/AWWA C151/A21.51. CEMENT-MORTAR LINED IN ACCORDANCE WITH ANSI/AWWA C104/A21.4. PIPE JOINTS SHALL BE "SLIP-JOINT" TYPE IN ACCORDANCE WITH ANSI/AWWA C111/A21.11, "MECHANICAL JOINT" TYPE IN ACCORDANCE WITH ANSI/AWWA C111/A21.11, OR "FLANGED" TYPE DUCTILE IRON OR CAST IRON (UNLESS SHALL BE OTHERWISE NOTED). FITTINGS SHALL CONFORM WITH ANSI/AWWA C110/A21.10 AND ANSI/AWWA C111/A21.11.

PIPE SHALL BE PROPERLY ANCHORED IN ACCORDANCE WITH N.F.P.A. #24 USING CONCRETE THRUST BLOCKS AND/OR RODDING. BEARING FACE OF CONCRETE THRUST BLOCKS TO BE IN ACCORDANCE WITH TABLE 8-6.2.9. OF N.F.P.A. #24. ALL BEARING SURFACES SHALL BE AGAINST UNDISTURBED EARTH. ROD SIZES AND QUANTITIES SHALL BE AS SHOWN ON THE ROD NUMBER - DIAMETER COMBINATIONS TABLE 8-6.2.4. AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS AND OTHER RESTRAINING DEVICES (EXCEPT THRUST BLOCKS) SHALL BE COATED AND THOROUGHLY COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION-RESISTING MATERIAL.

PIPE SHALL HAVE A MINIMUM 5'-0" OF COVER. PIPES SHALL BEAR THROUGHOUT THEIR ENTIRE LENGTH ON UNDISTURBED EARTH AND SHALL NOT BE [illegible] EXCEPT AT BELL HOLES. BACKFILL FOR [illegible] SHALL BE FREE FROM ORGANIC MATTER OR OTHER CORROSIVE MATERIALS. FROZEN EARTH SHALL NOT BE USED FOR BACKFILLING AROUND PIPE.

ALL NEW UNDERGROUND PIPE SHALL BE FLUSHED IN ACCORDANCE WITH N.F.P.A. #24 AT FLOW RATES NOT LESS THAN 1000 G.P.M. FLUSHING SHALL BE CONTINUED UNTIL WATER RUNS CLEAR. THE DURATION OF FLUSHING SHALL NOT BE LESS THAN THAT NECESSARY TO PROVIDE A VELOCITY OF 10 FEET PER SECOND, WHICHEVER IS GREATER. FLOW REQUIRED TO PRODUCE A VELOCITY OF 10 FEET PER SECOND IS AS FOLLOWS:

8" 1600 GPM

ALL NEW UNDERGROUND PIPE SHALL BE HYDROSTATICALLY TESTED AT 200 P.S.I. FOR TWO HOURS OR AT A SUITABLE PRESSURE IN EXCESS OF THE MAXIMUM STATIC PRESSURE WHEN THE MAXIMUM STATIC PRESSURE IS IN EXCESS OF 150 P.S.I. THE AMOUNT OF ALLOWABLE LEAKAGE SHALL NOT EXCEED TWO QUARTS/HOUR PER 100 GASKETS OR JOINTS.

PIPING SHALL BE STERILIZED IN ACCORDANCE WITH STATE BOARD OF HEALTH REQUIREMENTS, WITH A SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION AVAILABLE CHLORINE. ALL TEST SHALL BE CONDUCTED IN ACCORDANCE WITH LOCAL CITY REQUIREMENTS. AFTER STERILIZATION, WATER SHALL REMAIN IN THE PIPE UNTIL THE RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN 1.0 PARTS PER MILLION.

O.S.H.A. SAFETY REQUIREMENTS FOR TRENCHES

WHERE TRENCHES ARE MORE THAN 5 FEET IN DEPTH AND THERE MAY BE EXPOSURE TO MOVING GROUND OR CAVE-INS, PIPE SHALL BE SHORED. LAND BACK TO A STABLE SLOPE, OR SOME OTHER EQUIVALENT MEANS OF PROTECTION SHALL BE PROVIDED.

SIDES OF TRENCHES IN UNSTABLE OR SOFT MATERIAL MORE THAN 5 FEET IN DEPTH SHALL BE SHORED, SHEETED, BRACED, SLOPED, OR OTHERWISE SUPPORTED BY MEANS OF SUFFICIENT STRENGTH TO PROTECT WORKERS.

SIDES OF TRENCHES IN HARD OR COMPACT SOIL INCLUDING EMBANKMENTS, SHALL BE SHORED OR OTHERWISE SUPPORTED WHEN THE TRENCH IS MORE THAN 5 FEET IN DEPTH.

SUBMITTED FOR APPROVAL
Building Dept.

SHAMBAUGH & SON FIRE PROTECTION

SHAMBAUGH JOB # 231292

STATE OF OHIO
PHIL L. COOK
E-032767
REGISTERED PROFESSIONAL ENGINEER

1" = 40'
20' 40' 60' 80'

CAD DWG: 231292-1

PROJECT NAME:

VISION MOLDED PLASTICS, INC.

INDUSTRIAL DRIVE
NAPOLEON, OHIO

1675 Industrial

FIRE PROTECTION PLANS AND DETAILS

DRAWN BY: B. BOURAB
CHECKED BY:
SCALE: 1" = 40'
DATE: 02-24-95
SPKDR. THIS SHEET: N/A
TOTAL SPKDR. THIS JOB: 405
STATE PROJECT NUMBER:
APPROVAL AGENCIES: Factory Mutual, State Fire Marshal
JOB NO. 231292
SHEET NO. FP-1 OF 2

NO.	DATE	REVISION	BY
1.	4/20/95	RELOCATED UNDERGROUND	BSB
DWG. TITLE			

DESIGN: ☐ HYDRAULIC CALC ☐ PIPE SCHEDULE
DENSITY / AREA / HOSE ALLOW. — HAZARD CLASS / OCCUPANCY / RACK ALLOW.
WATER DEMAND: PSI / GPM / AT BASE OF RISER

SPRINKLERS

MAKE / MODEL	MAKE / MODEL
SIZE / TYPE	SIZE / TYPE
K-FACTOR / TEMP.	K-FACTOR / TEMP.
QTY. THIS SHT.	QTY. THIS SHT.

BUILDING CONSTRUCTION
TYPE: ☐ NON-COMBUSTIBLE ☐ COMBUSTIBLE
TOTAL SQUARE FEET _____ BUILDING HEIGHT _____

SYMBOLS
- CENTRAL "ELO-231" B.U.
- CONCEALED PENDENT HEAD
- UPRIGHT HEAD ON LINE
- HORIZONTAL SIDEWALL HEAD
- PENDENT HEAD ON DROP
- 1'-0 — ℄ OF PIPE BELOW DECK
- 20'-0 — ℄ OF PIPE ABOVE FLOOR
- HANGER W/ROD LENGTH
- TRAPEZE LOCATION
- HYDRAULIC REF. POINT

S&S FIRE PROTECTION DIVISION
SHAMBAUGH & SON, INC.
CONTRACTORS - ENGINEERS
7614 OPPORTUNITY DRIVE, FORT WAYNE INDIANA 46825
PHONE (219) 487-7777 FAX 487-7701