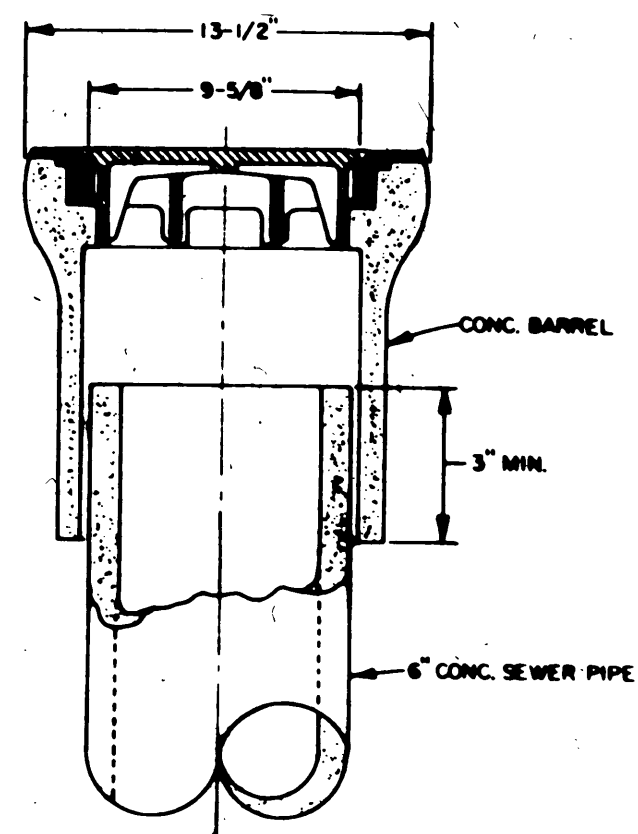
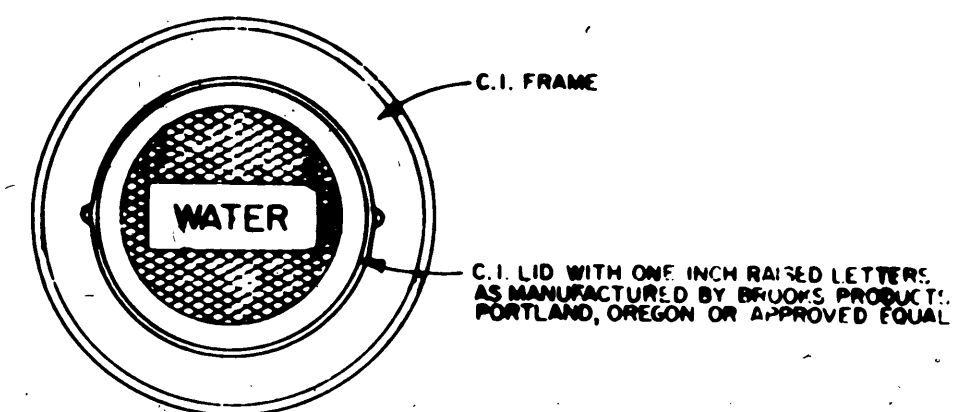
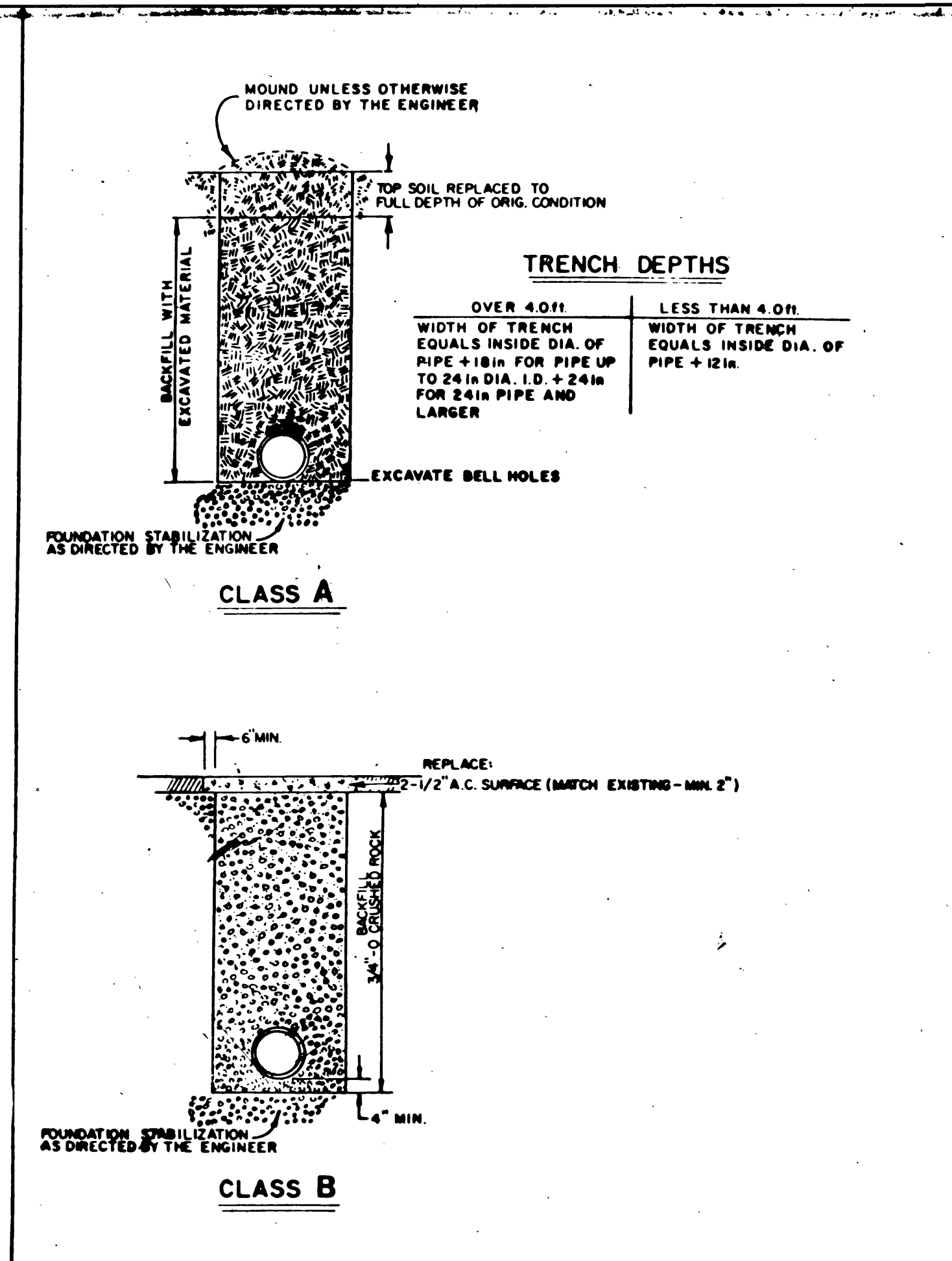


TYPICAL VALVE & VALVE BOX
NO SCALE

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PHONE: 249-1146

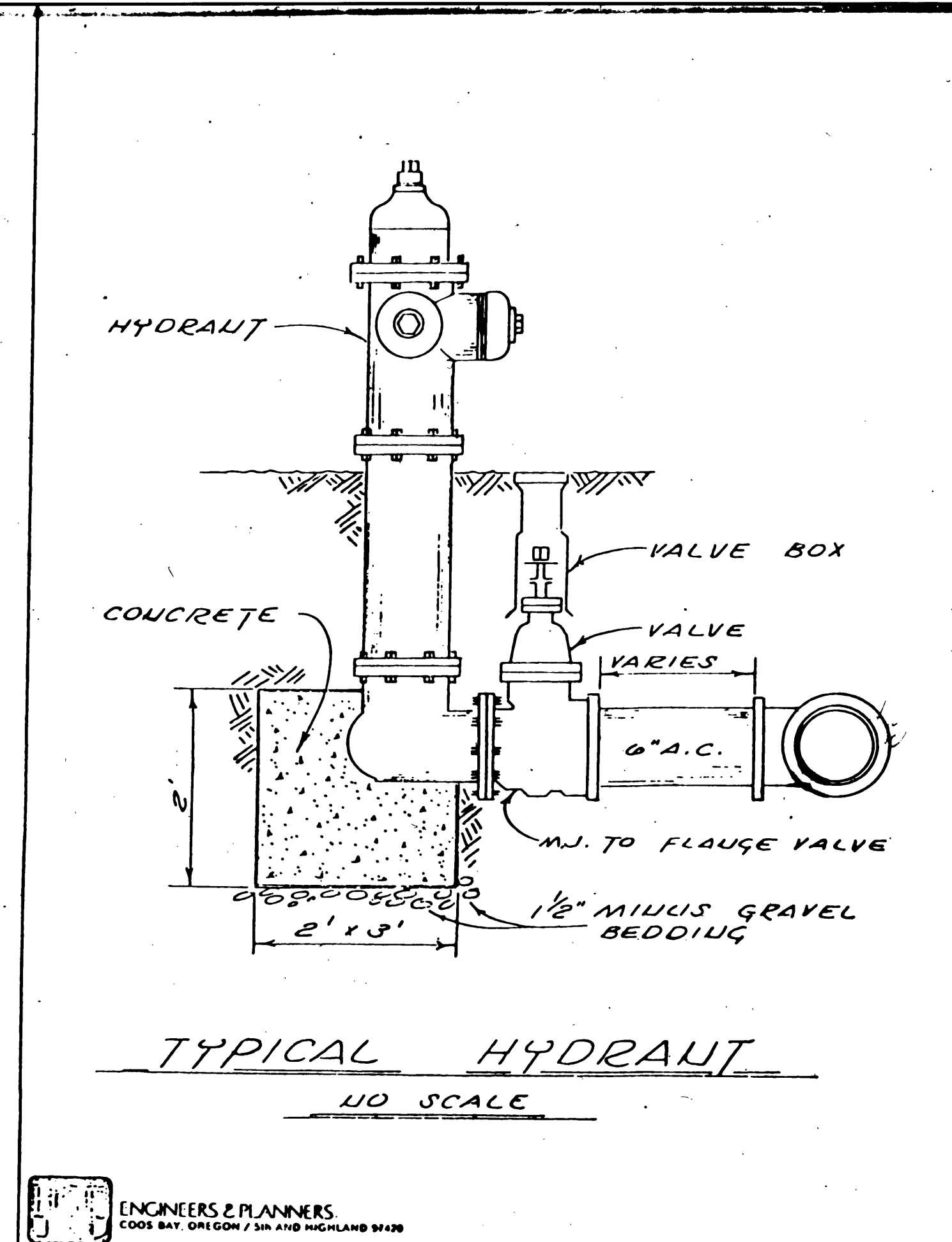


STANDARD VALVE BOX



CLASS A
CLASS B

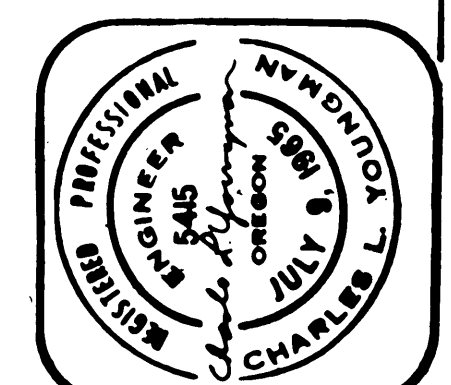
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TYPICAL HYDRANT
NO SCALE

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DOUGLAS COUNTY, ORE.



CHARLES L. YOUNGMAN
CIVIL & STRUCTURAL ENGINEERING
290 MCGIL CHRIST ST., S. SALEM, ORE. 97302
(503) 364-8207

THRUST BLOCK CONSTRUCTION

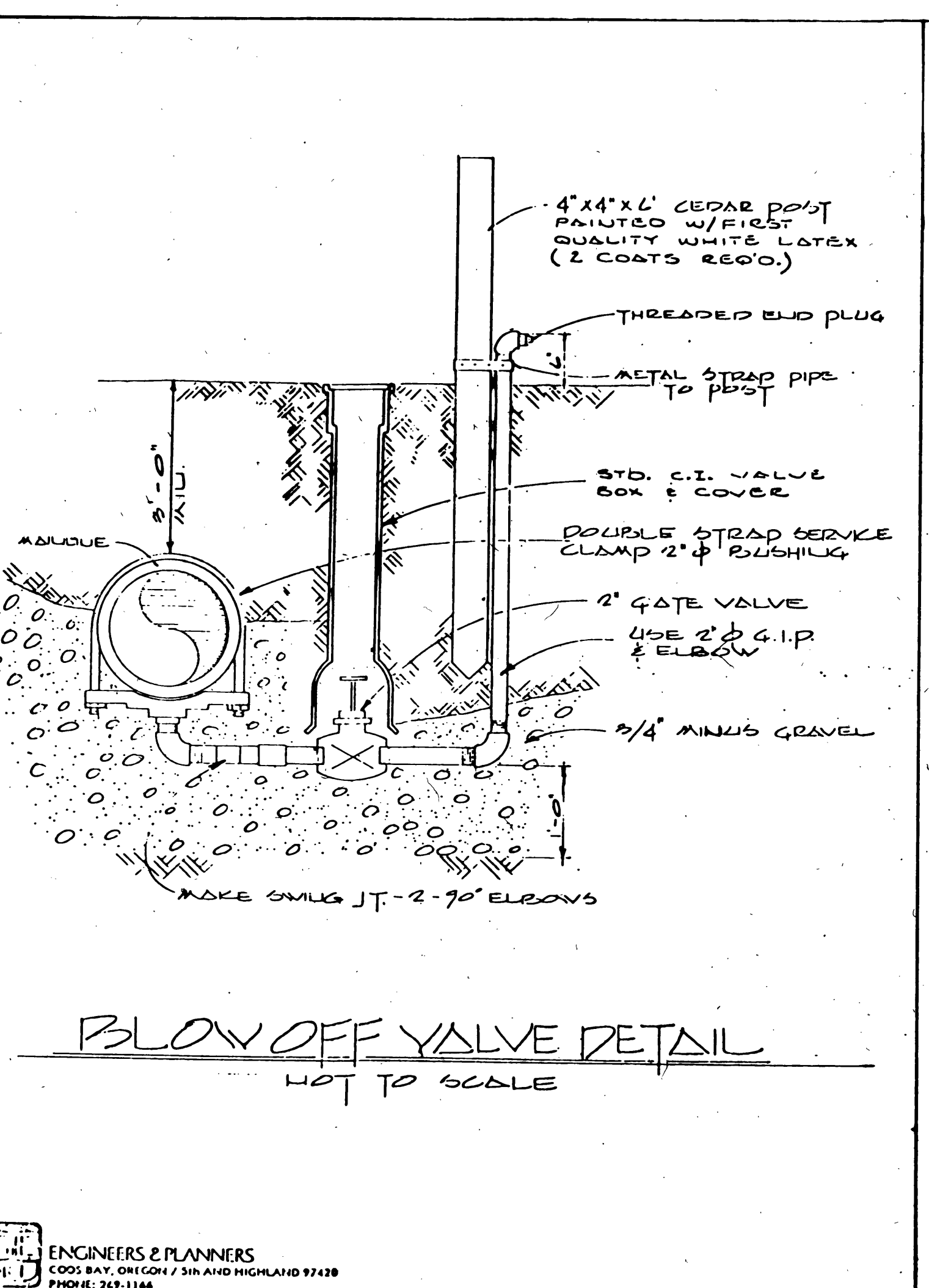
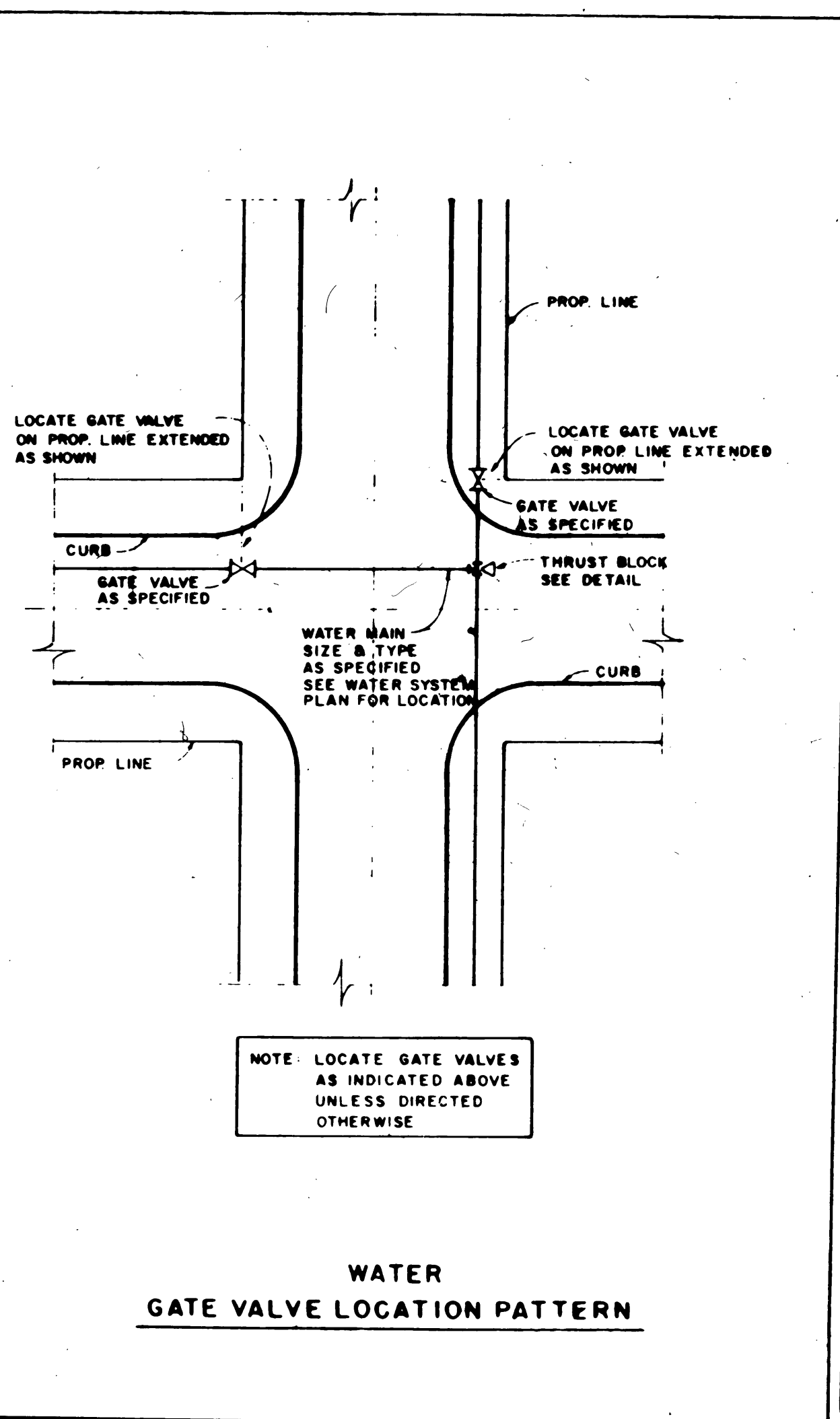
- Thrust block concrete strength 2000 P.S.I.
- Four required thrust block face area in approximately square shape against undisturbed soil.
- Thrust block face area required indicated in \bigcirc on plan block location.
- If block area is not shown on plan location, select required blocking face area from table below, adjusting for test pressure, allowable soil bearing pressure determined by engineer.
- Height of block must be equal to or less than one-half the depth from ground surface to block's base.
- Ground water assumed to be above thrust block.
- Use for horizontal or downward thrust only. Do not use for upward thrust.
- Special blocking details shown on plans take precedence over standard details.

BEARING AREA OF THRUST BLOCKS IN SQ. FT.*						
Fitting Size	Tee, Plug or Cap	90° Bend Plugged Cross	Tee Plug on Run	45° Bend	22-1/2° Bend	11-1/4° Bend
4	1.0	1.4	1.9	1.4	1.0	---
6	2.1	3.0	4.3	3.0	2.1	---
8	3.8	5.3	7.4	5.4	3.8	1.0
10	5.4	8.4	11.8	8.4	5.4	1.2
12	8.5	12.0	17.0	12.0	8.5	1.7
14	11.5	16.3	23.0	16.3	11.5	2.3
16	15.0	21.3	30.0	21.3	15.0	3.0
18	19.0	27.0	38.0	27.0	19.0	3.8
20	23.5	33.3	47.0	33.3	23.5	4.7
24	34.0	48.0	68.0	48.0	34.0	6.8

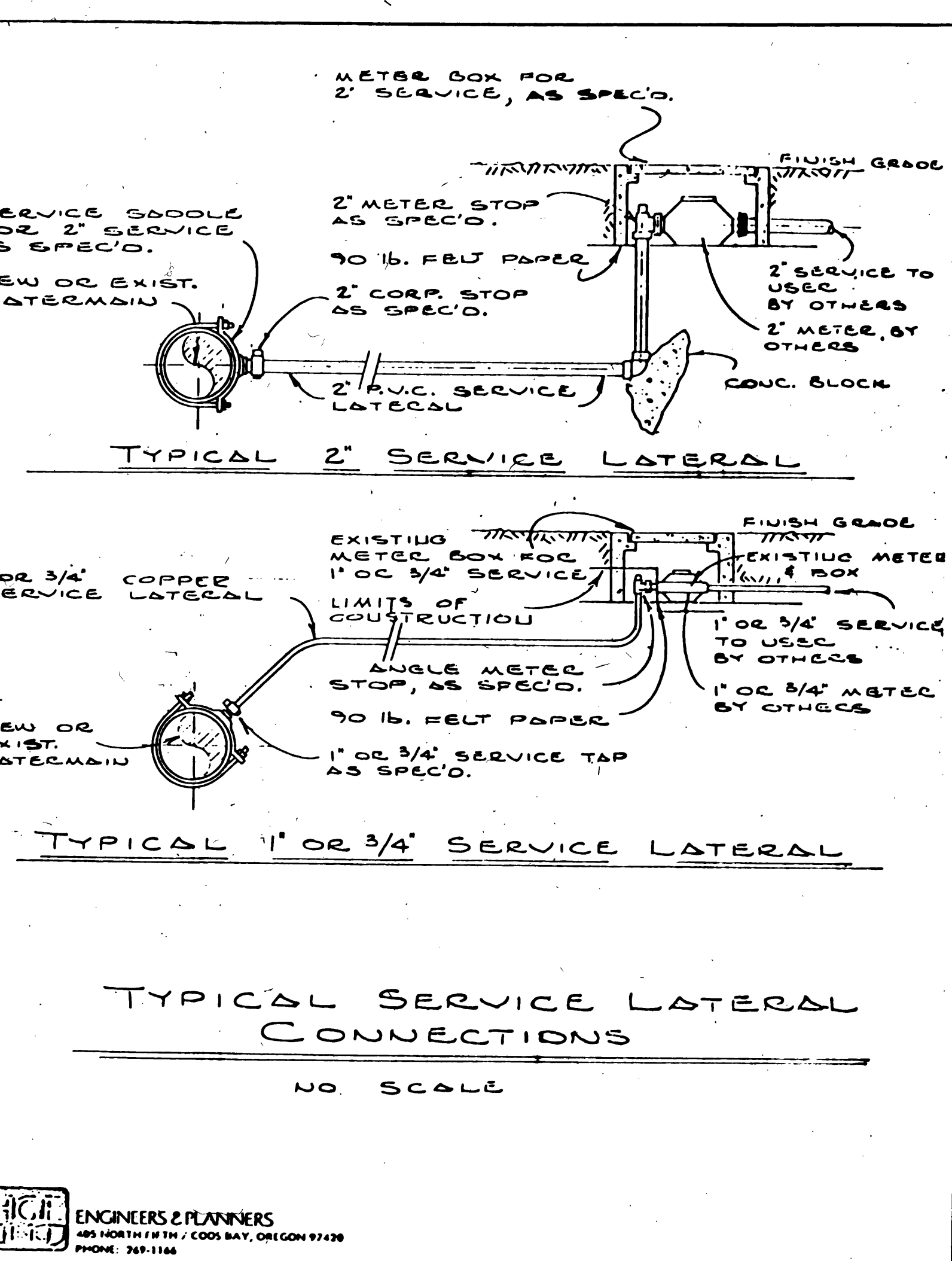
*Based on 2000 P.S.F. allowable soil bearing value, 150 P.S.I. test pressure.

Bearing Area = Table Value X Test Pressure / 150 X 2000 / Allowable Soil Bearing Value

STANDARD THRUST BLOCKING DETAILS



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A.K.A. ESTATES SUBD. DOUGLAS COUNTY
ANDERSON AND KUSLOW, SUBDIVISION
DOMESTIC WATER DETAILS

DATE: 4/4/79
Revisions:
Drawn: C.L.Y.