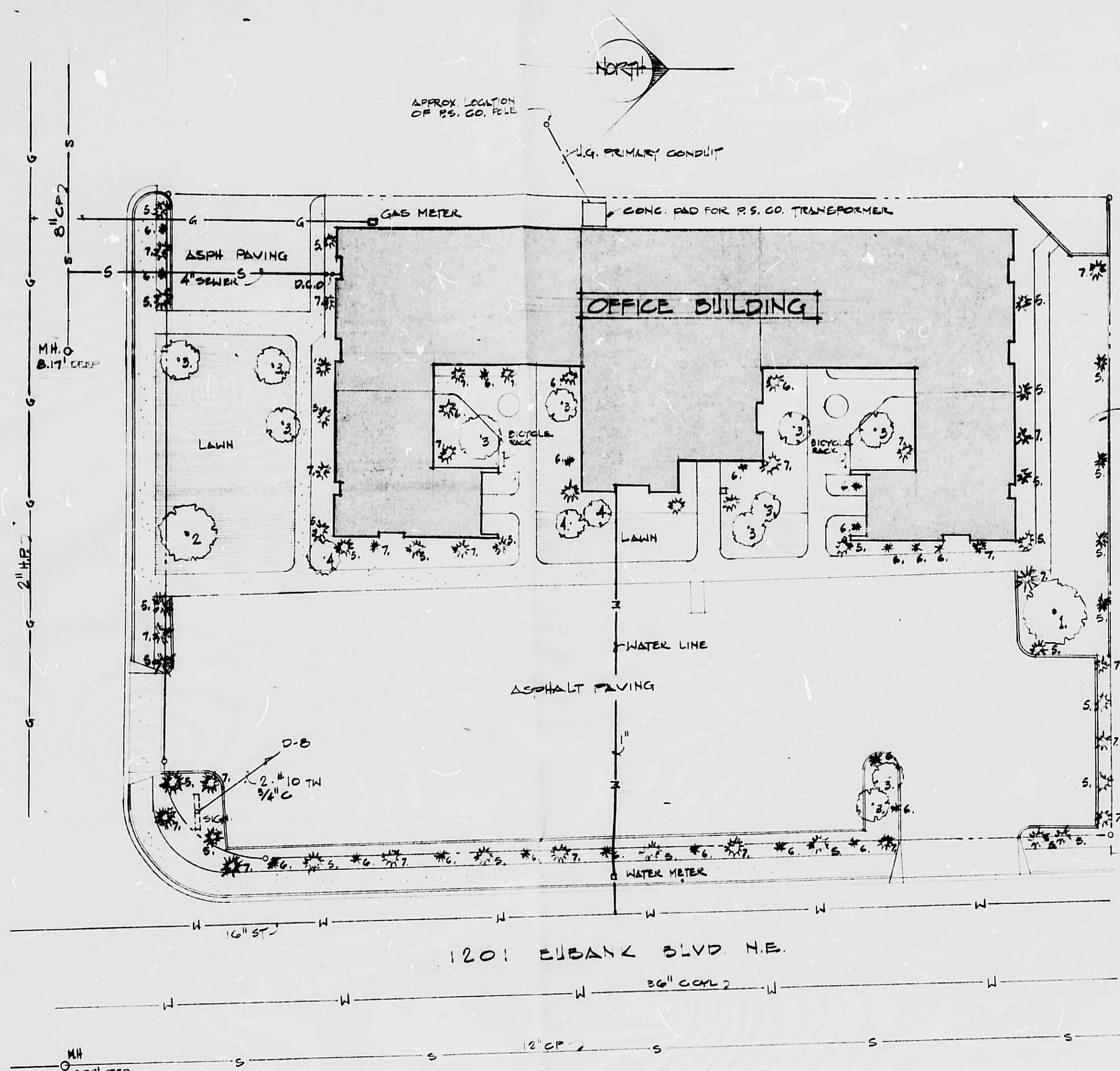
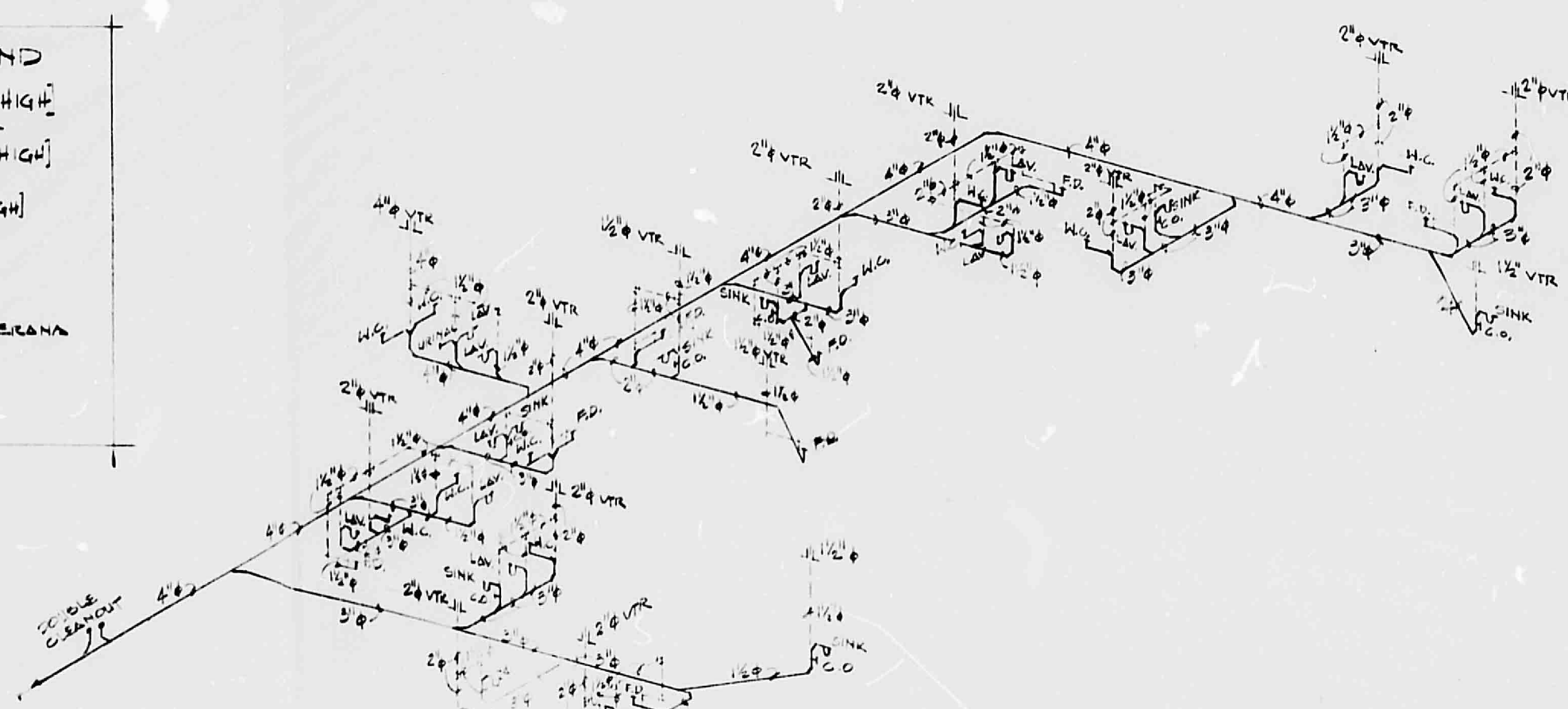


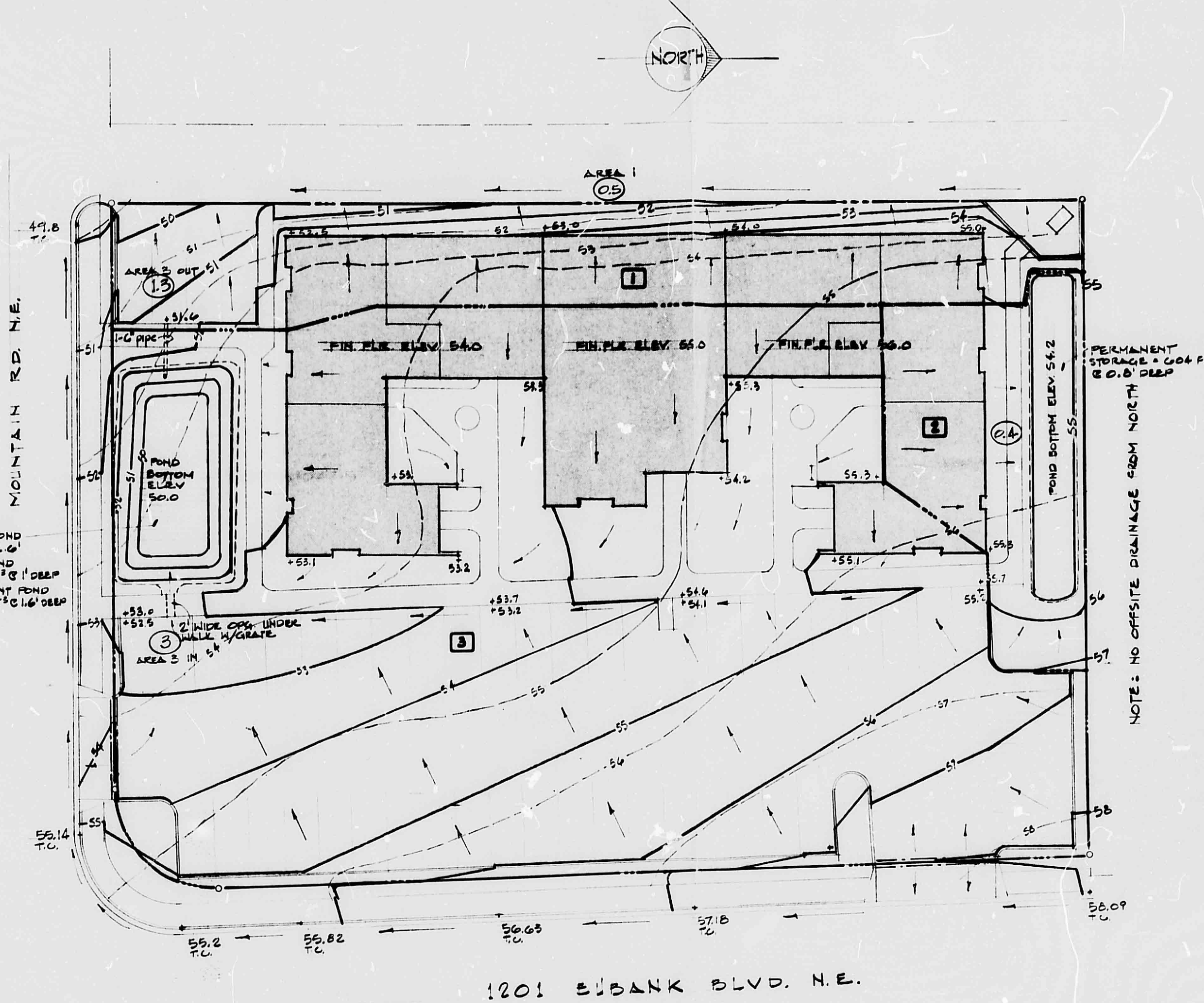


UTILITY SITE PLAN & LANDSCAPING PLAN
SCALE: 1" = 20'

- LANDSCAPING LEGEND**
1. MODERATE ASH TREE (10' HIGH)
 2. FRUITLESS MULBERRY (10' HIGH)
 3. PANDORA PINE (6'-8' HIGH)
 4. PINON PINE
 5. JUNIPER PRINCEPS (5 GAL.)
 6. NANO PINE (5 GAL.)
 7. TAM JUNIPER (5 GAL.)



WASTE & VENT PIPING ISOMETRIC



FINISH GRADING PLAN & DRAINAGE PLAN
SCALE: 1" = 20' NOTE: SEE ZONE ATLAS PAGE J-20-Z

DRAINAGE CALCULATIONS

AREA OF SITE = 0.94 AC. 40,800 SQ. FT.
AREA 1 = 0.13 AC. 5,600 SQ. FT.
AREA 2 = 0.11 AC. 4,800 SQ. FT.
AREA 3 = 0.70 AC. 30,400 SQ. FT.
I. DETERMINE FLOW CHARACTERISTICS FOR A 100-YR. G.H.R. STORM
A. UNDEVELOPED SITE
1. RUNOFF RATE, $Q = C/A$ (WHERE $C = 0.55$, $I = 5.4$ IN./HR., $A = 0.94$ AC.)
 $Q = (0.55)(5.4)(0.94)$
 $Q = 2.8$ CFS
2. RUNOFF VOLUME
FROM PRECIPITATION MAP OF ALBUQ. FOR A 100-YR. G.H.R. STORM,
RAINFALL FOR SITE = 2.5"
VOL. OF RUNOFF = (AREA)(COMP. "C" (RAINFALL))
= (40,800 SQ. FT.)(0.35)(2.5)
= 34,725 CU. FT.
II. DESIGN CRITERIA - DEVELOPED STORM RATE & VOLUME OF THE
SITE CANNOT EXCEED UNDEVELOPED FLOW CHARACTERISTICS.
REDUCTIONS WILL BE ACCOMPLISHED BY THE USE OF RETENTION
PONDS ON THE NORTH AND SIDE OF THE SITE. NO OFFSITE FLOWS
ENTER THE SITE BECAUSE OF EXISTING STREET CURBS AND GUTTER
ALONG THE EAST SIDE AND CONSTRUCTION OF A FAST ROAD
RESTAURANT ON THE NORTH SIDE.
B. DEVELOPED SITE
1. RUNOFF RATE, $Q = C/A$
 $Q = (0.75)(5.4)(0.94)$
 $Q = 3.8$ CFS
2. RUNOFF VOLUME VOL. = (34,725)(2.5)
= 86,812.5 CU. FT.
AREA 2 RUNOFF TO NORTH POND
1. RUNOFF RATE $Q = (0.65)(5.4)(0.11)$
= 3.8 CFS
2. RUNOFF VOLUME VOL. = (4,800)(0.65)(2.5)
= 7,650 CU. FT.
AREA 3 RETENTION DETENTION POND @ SOUTH SIDE
1. RUNOFF RATE $Q = (0.70)(5.4)(0.70)$
= 2.6 CFS INTO POND
2. RUNOFF VOLUME VOL. = (30,400)(0.70)(2.5)
= 49,600 CU. FT. INTO POND

ALLOWABLE VOL. RUNOFF = 29,750 CU. FT.
AREA 1 VOL. RUNOFF = 2,800 CU. FT. ALLOWABLE RUNOFF
2,800 CU. FT. FROM AREA 1
AREA 2 VOL. RUNOFF = 7,650 CU. FT.
ALLOWABLE VOL. RUNOFF = 2,800 CU. FT. PERMANENT POND
VOL. IN SOUTH POND
TOTAL RUNOFF RATE = 3.8 CFS
AREA 1 = 2.8 CFS
1.3 ALLOWABLE RATE FROM AREA 3
3. DETENTION POND SIZE
ALLOWABLE DISCHARGE = 1.3 CFS
AREA = 0.70 AC, $C = 0.70$
 $Q = 2.6$ CFS, AC IMP.
 $T = 24.6$ MINUTES
 $V_s = 33,200$ CU. FT. @ 1.3 CFS
 $V_s = 1.0$ FT. OF STORAGE REQUIRED FOR SURGE POND
SURGE POND DEPTH = 1.0'
PLUS 1.0' DEPTH FOR PERMANENT POND
TOTAL DEPTH OF POND = 2.0'
SELECT AN OUTSIDE PIPE, INVERT SET 1.0' ABOVE
BOTTOM OF POND TO YIELD ALLOWABLE OUTFLOW
OF 1.3 CFS UNDER A HEAD OF 11'.
 $Q = \frac{0.27}{12} = 0.0225$ (5.22)(1) = 0.20 CFS
SELECT 1.0' PIPE

- LEGEND**
- SUB-DRAINAGE BOUNDARY
 - AREA 3 OUT
 - (C) FLOW RATE AT PT. OF STUDY, CFS
 - ===== WATER BLOCK
 - (2) DRAINAGE SUB-AREA
 - 50--- FINISH GRADE CONTOUR
 - 51--- EXISTING GRADE CONTOUR
 - 50.0--- FINISH SPOT GRADE
 - 51.0--- TOP OF CURB ELEVATION



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