CITY OF ALBUQUERQUE
DEPARTMENT OF PUBLIC WORKS

PLANS
FOR
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

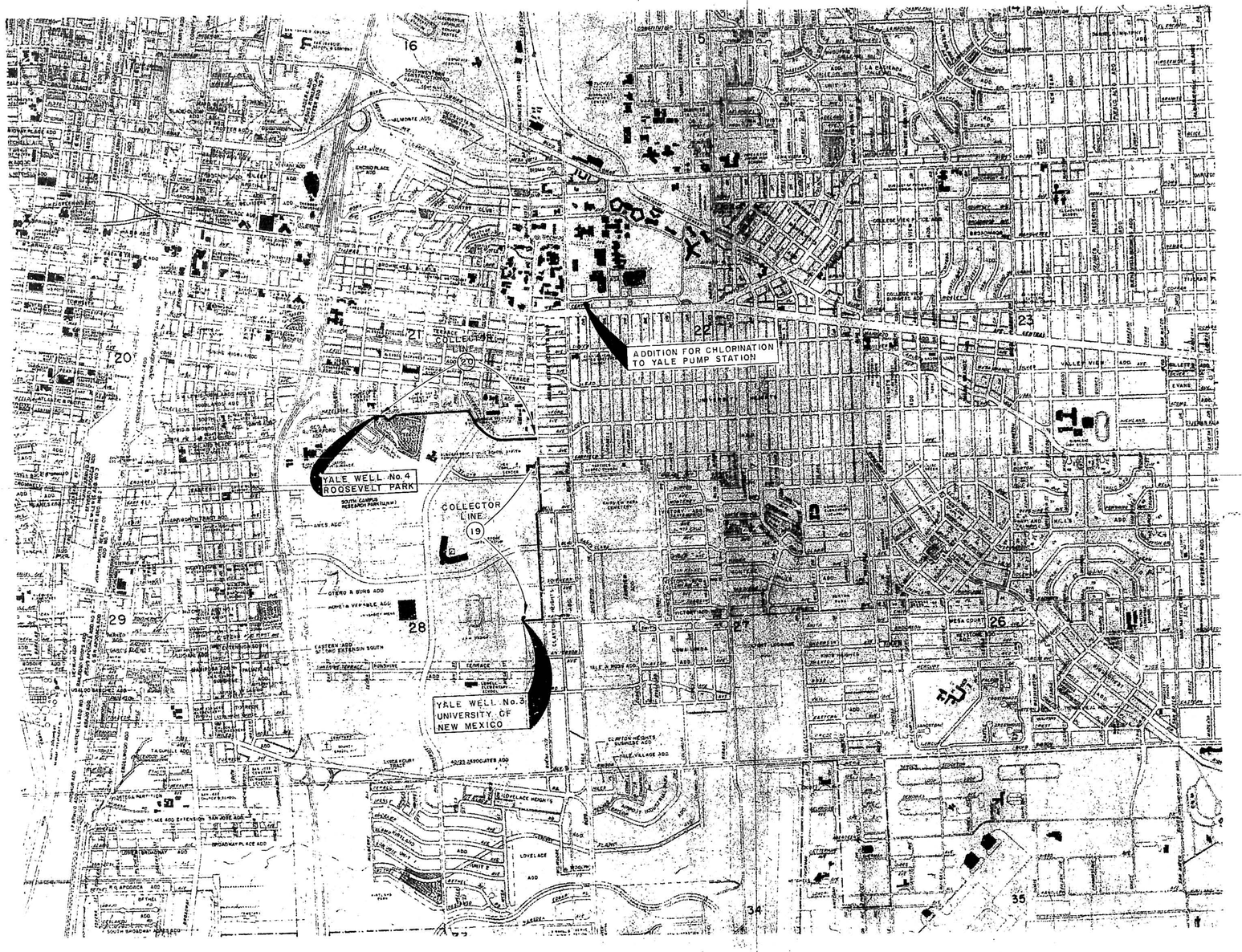
09 001 0175 20

CITY OF ALBUQUERQUE
CONTRACTOR

GORDON HERKENHOFF AND ASSOCIATES
ENGINEERS · PLANNERS

AS CONSTRUCTED

SHEET 1 OF 20



N

09 001 0275 21

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR No. 243 NEW MEXICO G. E. HERKENHOFF

Gordon Herkenhoff

ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

LOCATION MAP

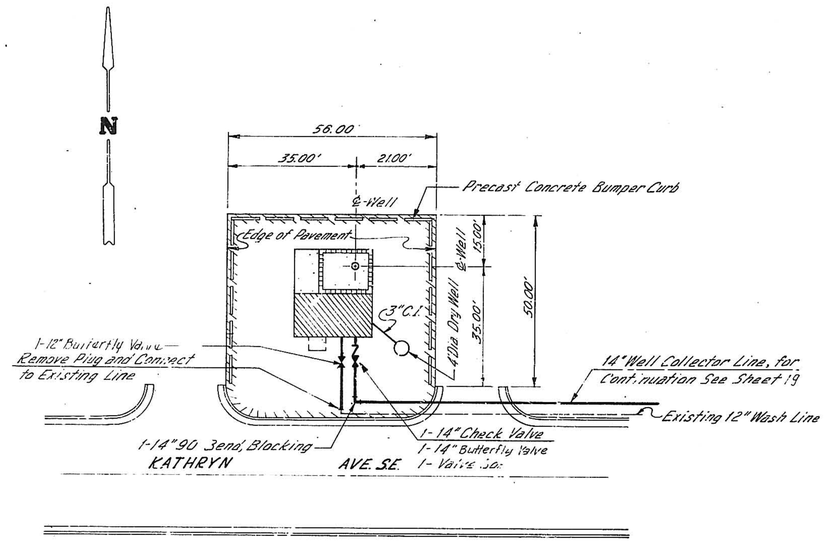
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: D.L.	SHEET 2
1"=1000'	JAN. 1973	CHECKED: C.A.J.	OF 20

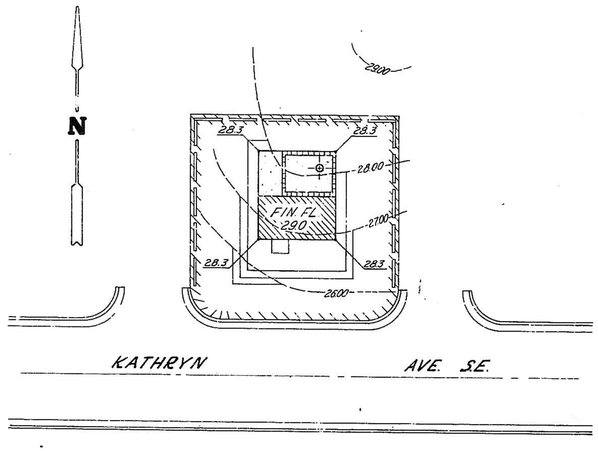
CITY OF ALBUQUERQUE

CONTRACTOR Robert A. Wellington

AS CONSTRUCTED



LAYOUT PLAN

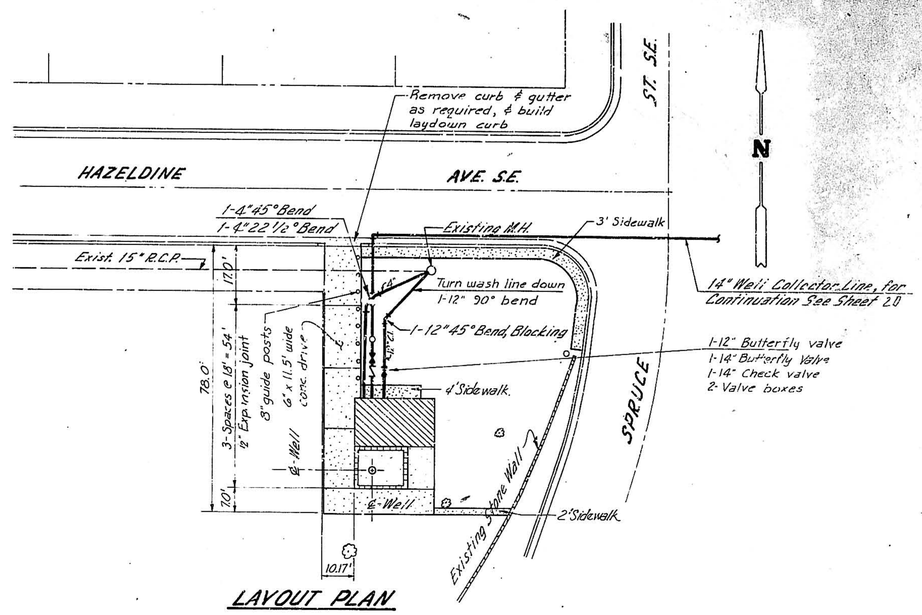


GRADING PLAN

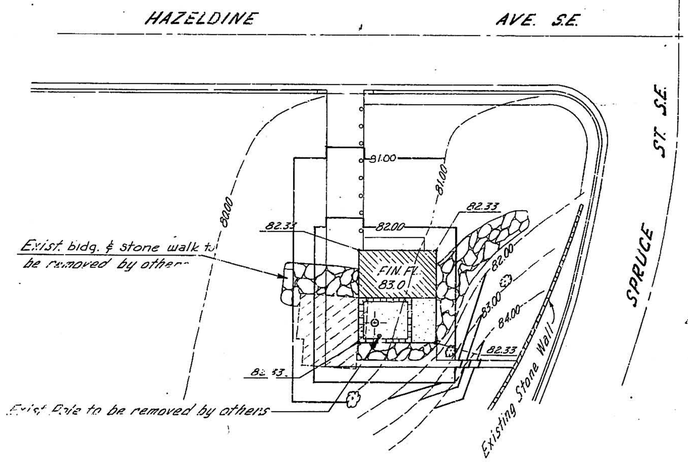
YALE WELL No 3

Scale: 1"=20'

Bench Mark: Chiseled □ 5' West of S.W. Curb Return Buena Vista & Kathryn El.=5136.65



LAYOUT PLAN



GRADING PLAN

YALE WELL No 4

Scale: 1"=20'

Bench Mark: Chiseled □, West end of N.W. Curb Return Hazeldine and Spruce. El=5087.36

AS CONSTRUCTED

09 001 0375

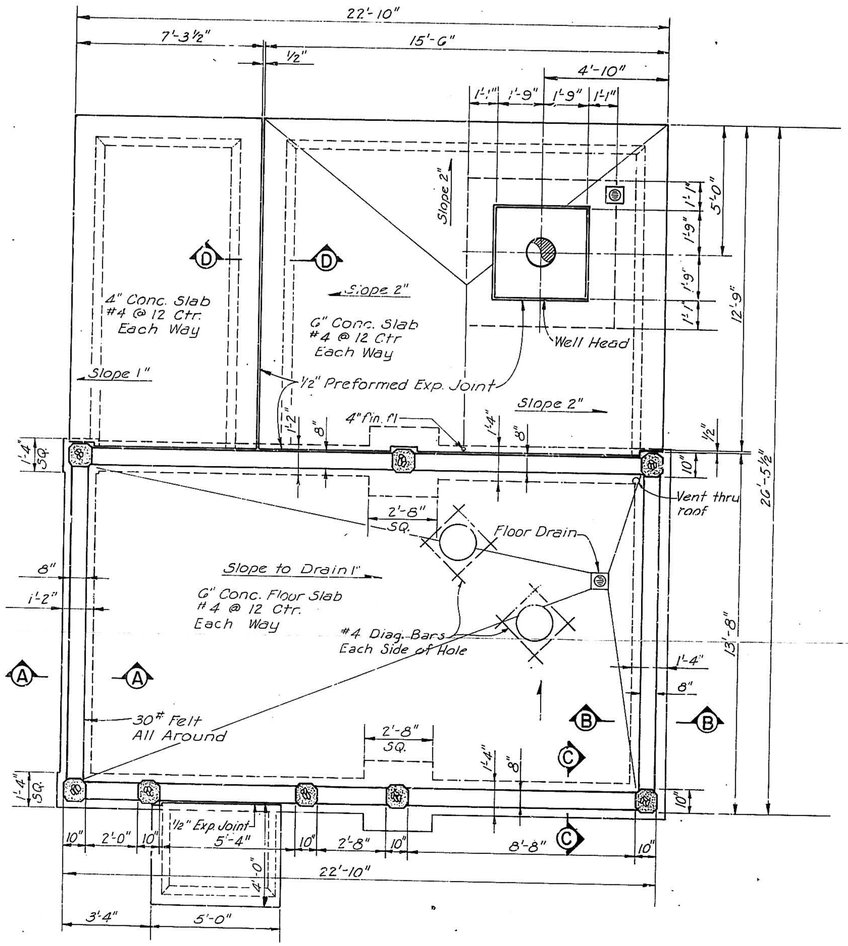
ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT – 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4

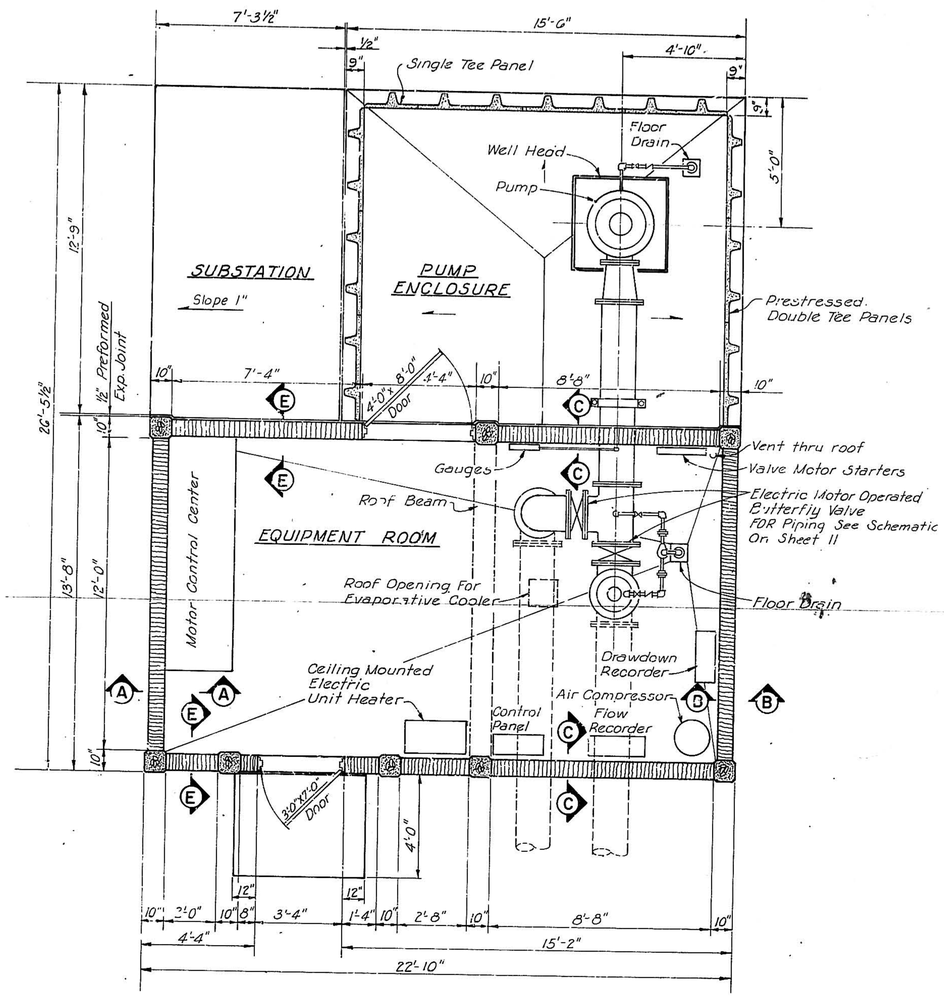
LAYOUT PLANS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: M.F.	SHEET 3
AS SHOWN	FEB. 1973	CHECKED: G.A.J.	OF 20



FOUNDATION PLAN



FLOOR PLAN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
0	9	0	0	1	0	4	7	5							1	2					0	2						3

AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO

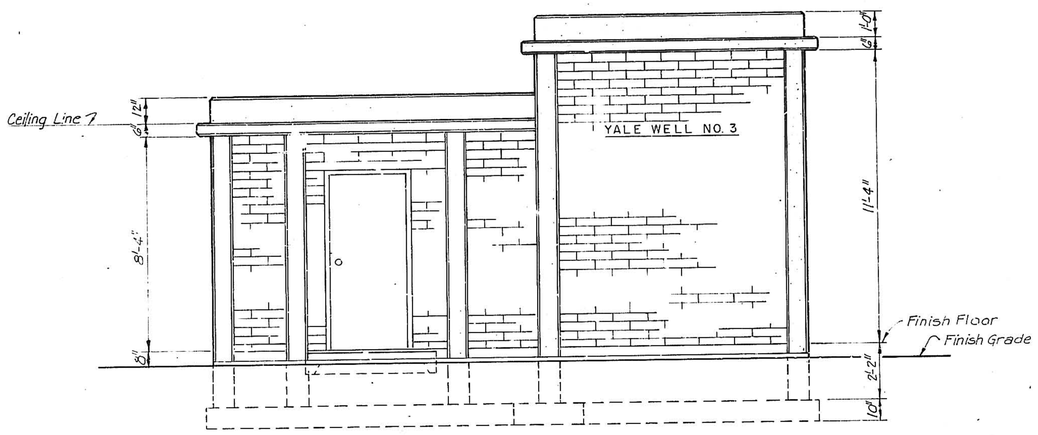
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

YALE WELLS NOS. 3 & 4

FLOOR AND FOUNDATION PLANS

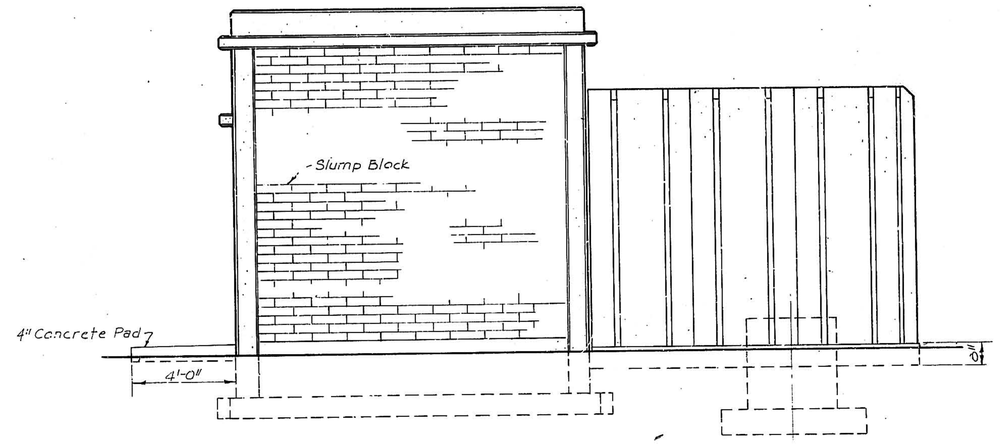
GORDON HERKENKOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: J.R.J.	SHEET 4
3/8" = 1'-0"	APRIL 73	CHECKED: G.A.J.	OF 20



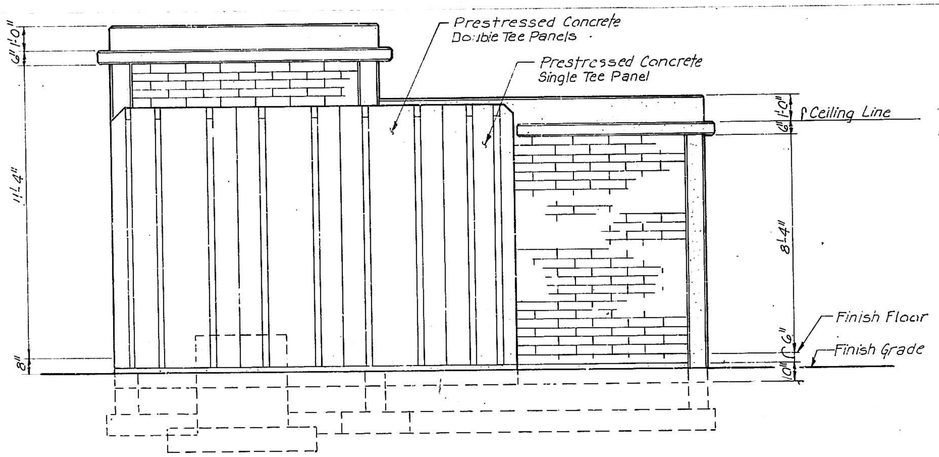
FRONT ELEVATION

Scale 3/8"=1'-0"



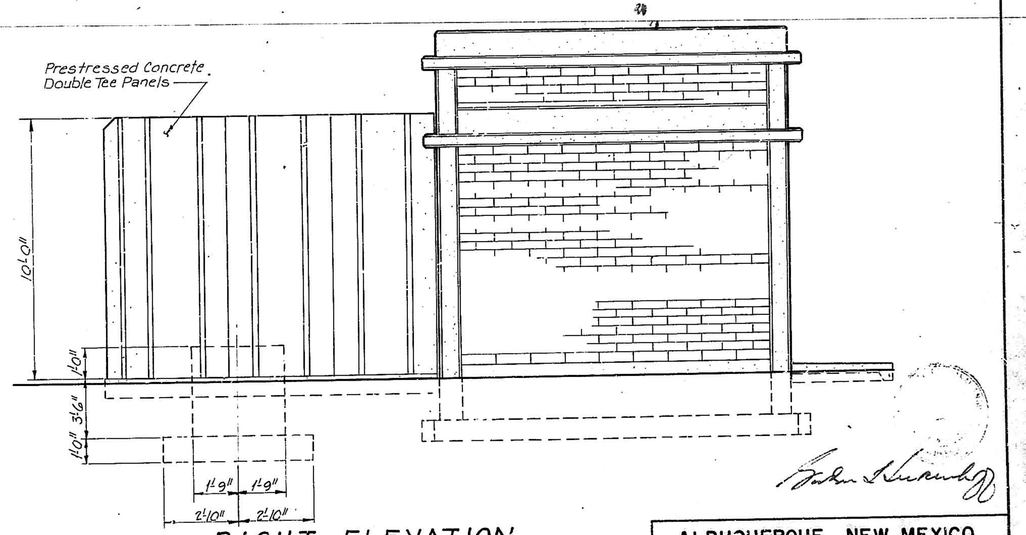
LEFT ELEVATION

Scale 3/8"=1'-0"



REAR ELEVATION

Scale: 3/8"=1'-0"



RIGHT ELEVATION

Scale 3/8"=1'-0"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

0 9 0 0 1 0 5 7 5 1 2 0 2 3

OF 7

CONTRACTOR AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4

ELEVATIONS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: J.F.B.	SHEET 5
3/8"=1'-0"	APRIL 73	CHECKED: G.A.J.	OF 20

CHENEY TYPE C Snap Lock Concrete Reglet 26 GA. Galv. Steel or Approved Equal.

Caulk
Lead Wool
Galv Steel Cap Flashing

CHENEY TYPE B Snap Lock Masonry Reglet Galv. Steel or Approved Equal.

9" 6"
12"
6"
Eave Beam See Sec. A-A

Flashing
Wood Cant
Build-up Roof
1" Rigid Insulation
3" Steel Decking
Rubber Closure
L 4x4x½ Cont.
½"x4½" Bolt @ 1'-4" O.C. ½" Projection
½"x8" Bolt @ 1'-4" O.C. 1½" Projection
5-#4 Cont. with #3 Ties @ 12" O.C.
4"x16" Concrete Beam w/2 #5 Cont. w/#3 Ties @ 12" O.C.
Horizontal Reinforcing "Durwall" or 8 Ga. Reinf. @ 1'-4" O.C.
4x8x16 Concrete Slump Block
Vertical #4 @ 2'-0" O.C. in Wall. Extend to Top of Eave Beam Fill Cell w/Conc.
Extend Every Other #5 Dowel 1'-3" into Wall
30# Felt
6" Concrete Floor Slab w/#4 @ 12 Eachway
3" Gravel
#4@10
#5@12
Keyed Joint
Alternate Bends
2-#4 CONT
8'-4"
2'-2"
10"
3" 8" 3"
1'-2"
4" 8" 4"
1'-4"

SECTION A-A

8'-8"
11'-4"
2'-2"
10"

SECTION B-B

2" Spacer
L 4X4X ½ w/ ¾" Anchor Bolts @ 3'-6" O.C.
See Enclosure Details Sect C-C' Only
Finish Grade See Grading Plan
½" Preformed Expansion Jt.
Concrete Slab Section C-C' Only
Keyed Joint

SECTION C-C & C'-C'

9" 6"
1"
12"
6"
1"
4"
2"
1"
11'-4"
8'-4"
2'-2"
10"
4" 8" 4"
1'-4"

SECTION E-E & E'-E'

WALL SECTIONS
Scale 1"=1'-0"

SEE SECTION B-B
½" Φ x 1'-0" Stud Bolt @ 1'-4" O.C. 2" Proj. Each End Thread Ends
2½"
8"-8" To Floor
8'-0" To Floor
1'-4"
8"

Eave Beam
Extend #6 To Top of Eave Beam
#3 Ties @ 12 O.C.
SYMM. About ℄
Masonry Wall
2-#6
2½"
#3 Ties @ 12 O.C.
10"
C" C"
2½" 2½"

1"TYP
1C"
4 #6
1"TYP
2½"
10"
#3 Ties @ 12
2½"
ELEV. A
4-#6
2'-0"
#6
9"
10"
4-#4 Ea. Way
11" 11"
2'-8"

SECTION

Horiz. #4@10
#4-#6
#3 Ties @ 12
Vert #5 @12
4-#6
10"
4-#4 Ea. Way
2-#4 CONT.

ELEVATION A

ROOF BEAM AND COLUMN DETAIL
Scale 1"=1'-0"

½" Preformed Expansion Jt.
#4 @ 12 Ea. Way Centered
Double Tee
#4@12 Ea. Way Centered
2-#4 CONT.
2-#4 CONT.
3" Gravel
4" 8" 10" 4"

SECTION D-D
Scale 1"=1'-0"

AS CONSTRUCTE

ALBUQUERQUE, NEW MEXICO
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4
WALL SECTIONS AND BEAM DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: J.R.J.	SHEET 6
AS SHOWN	APRIL 73	CHECKED: G.A.J.	OF 20

CHENEY TYPE C Snap Lock
Concrete Reglet 26 GA. Galv.
Steel or Approved Equal.

CHENEY TYPE B Snap Lock
Masonry Reglet Galv. Steel
or Approved Equal.

Caulk
Lead Wool
Galv Steel Cap Flashing

Eave Beam
See Sec. A-A

Flashing
Wood Cant
Build-up Roof
1" Rigid Insulation
3" Steel Decking

Rubber Closure
L 4×4×½ Cont.
½"×4½" Bolt @ 1'-4" O.C. 1½" Projection
½"×6" Bolt @ 1'-4" O.C. 1½" Projection
5-#4 Cont. with #3 Ties @ 12" O.C.
4"×16" Concrete Beam w/ 2 #5 Cont. w/ #3 Ties @ 12" O.C.

Horizontal Reinforcing "Durwall" or 8 Ga. Reinf. @ 1'-4" O.C.
4×8×16 Concrete Stump Block
Vertical #5 @ 2'-0" O.C. in Wall. Extend to Top of Eave Beam Fill Cell w/Conc.
Extend Every Other #5 Bar 1'-3" into Wall
30# Felt
6" Concrete Floor Slab w/ #4 @ 12 Eachway
3" Gravel
#4 @ 10
#5 @ 12
Keyed Joint
2-#4 CONT
Alternate Bends

Finish Grade
See Grading Plan

2" Spacer
L 4×4×¼ w/ ¾" Anchor Bolts @ 3'-6" O.C.
See Enclosure Details Sect C-C' Only

½" Preformed Expansion Jt.
Concrete Slab Section C'-C' Only

Substation Slab Section E'-E' Only

Keyed Joint

SECTION A-A

SECTION B-B

SECTION C-C & C'-C'

SECTION E-E & E'-E'

WALL SECTIONS
Scale 1"=1'-0"

SEE SECTION B-B

½" Φ x 1'-0" Stud Bolt @ 1'-4" O.C. 2" Proj. Each End Thread Ends

Eave Beam
Extend #6 To Top of Eave Beam
#3 Ties @ 12 O.C.
SYMM. About ℄
Masonry Wall
2-#6
#3 Ties @ 12 O.C.
8'-10" To Floor
1'-4"
8'-8" To Floor

1" TYP.
4 #6
#3 Ties @ 12

#4-#6
Horiz. #4 @ 10
#3 Ties @ 12
Vert. #5 @ 12
4-#6
4-#4 Ea. Way
2-#4 CONT.

ELEV. A
4-#4 Ea. Way
#6
#3 Ties @ 12

ELEVATION A

SECTION

ROOF BEAM AND COLUMN DETAIL
Scale 1"=1'-0"

½" Preformed Expansion Jt.
#4 @ 12 Ea. Way Centered
Double Tee
#4 @ 12 Ea. Way Centered
2-#4 CONT.
2-#4 CONT
3" Gravel

SECTION D-D
Scale 1"=1'-0"

AS CONSTRUCTED

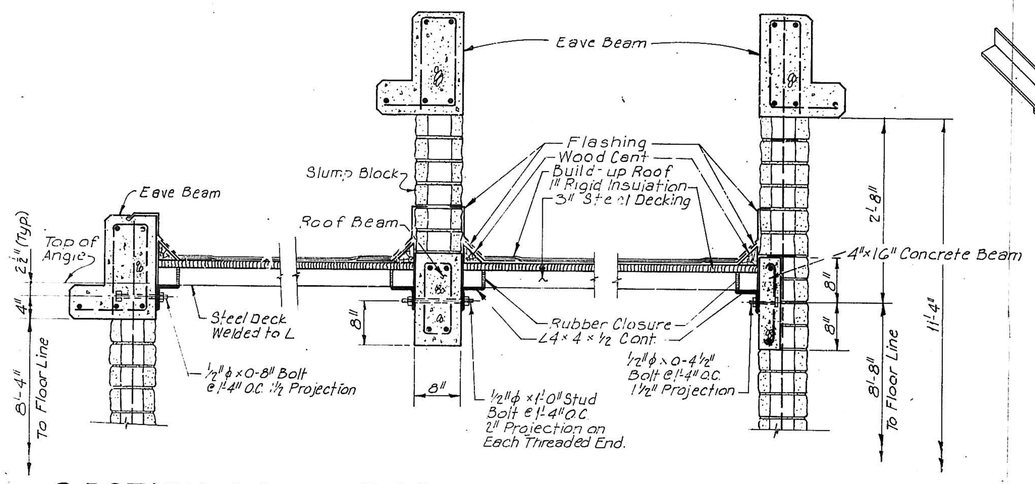
ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4

WALL SECTIONS AND BEAM DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

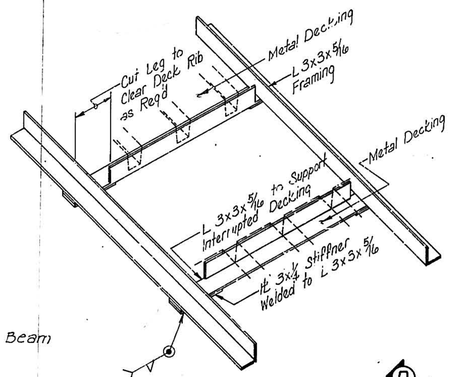
SCALE	DATE	DRAWN: J.R.J.	SHEET 6
AS SHOWN	APRIL 73	CHECKED: G.A.J.	OF 20

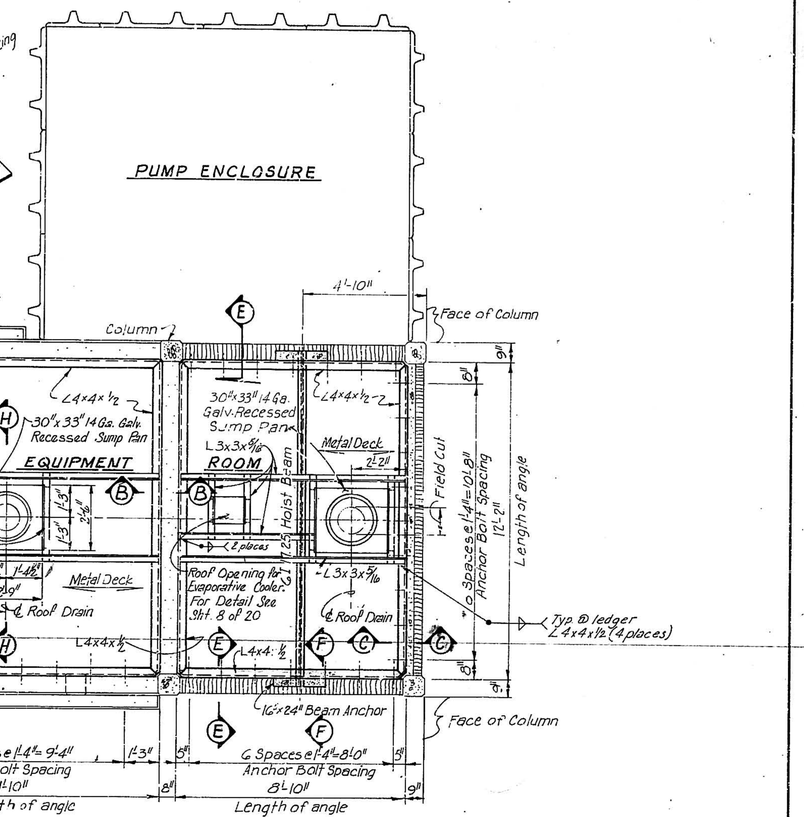


SECTION A-A
Scale 1"=1'-0"

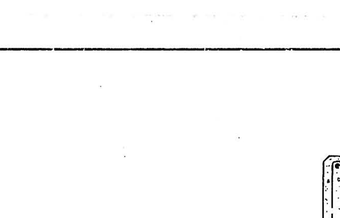
SECTION B-B
Scale 1"=1'-0"

SECTION C-C
Scale 1"=1'-0"

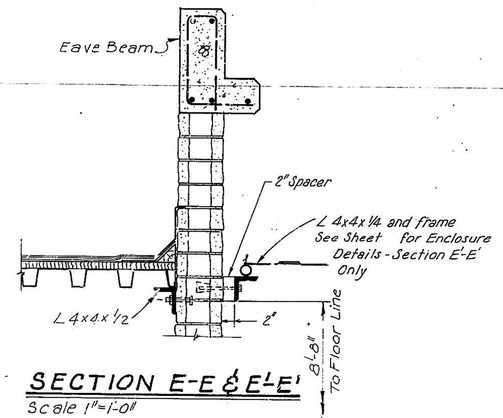




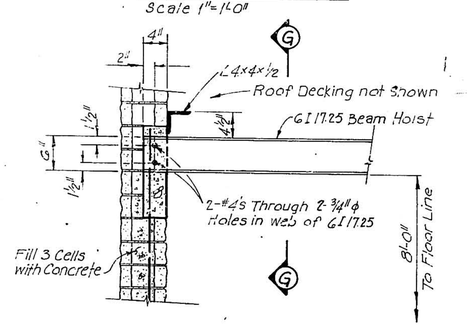
ROOF FRAMING PLAN
Scale: 3/8"=1'-0"



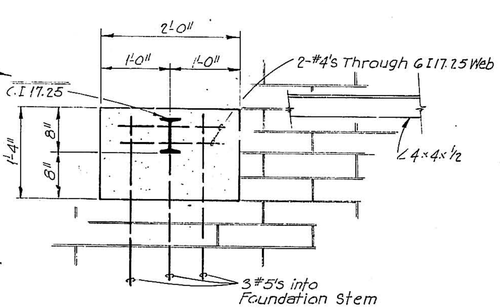
SECTION D-D
Scale 1"=1'-0"



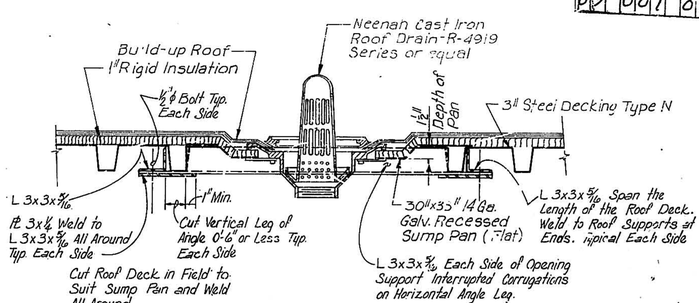
SECTION E-E & E'-E'
Scale 1"=1'-0"



SECTION F-F
Scale 1"=1'-0"

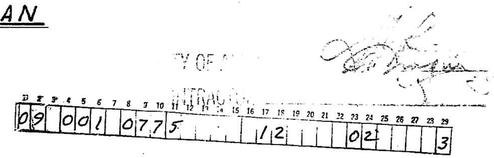


ELEVATION G-G
Scale: 1"=1'-0"



SECTION H-H
ROOF DRAIN DETAIL
Scale: 1½"=1'-0"

Revised: 7/17/14
Added Angles to Roof Decking.



AS CONSTRUCTED

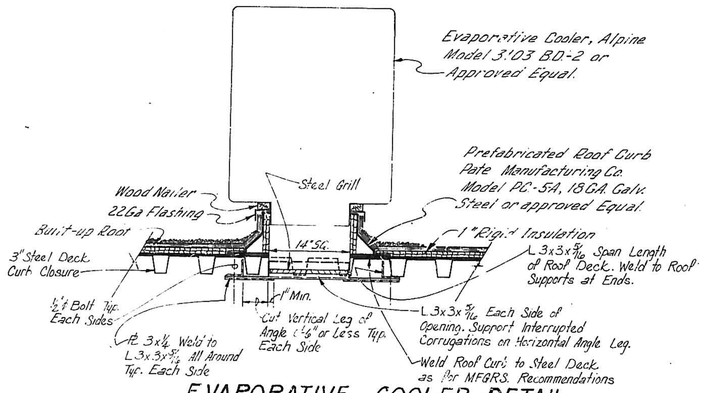
ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4

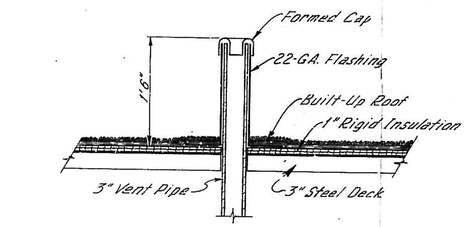
ROOF FRAMING PLAN

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

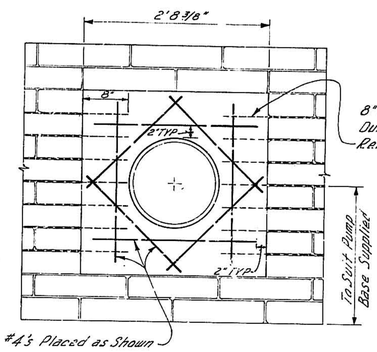
SCALE	DATE	DRAWN: J.F.B.	SHEET 7
AS SHOWN	FEB. 1973	CHECKED: G.A.J.	OF 20



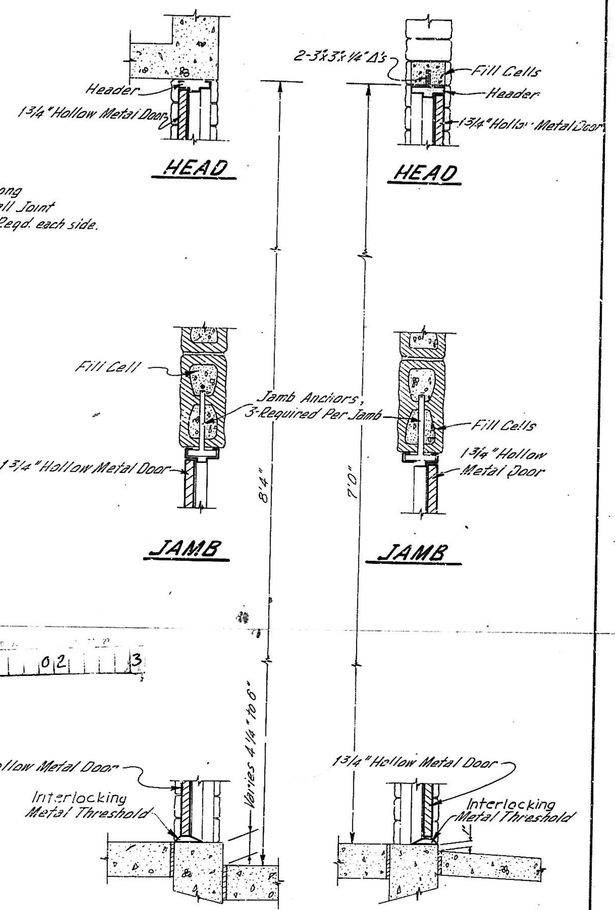
EVAPORATIVE COOLER DETAIL



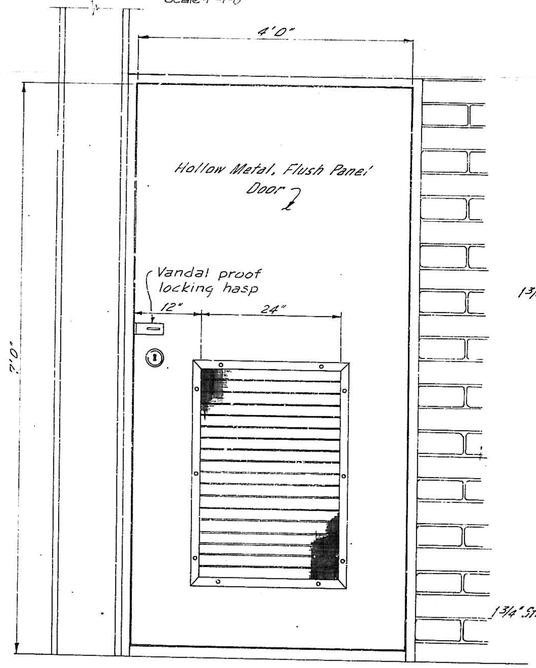
PLUMBING VENT DETAIL



ELEVATION



DOOR DETAILS



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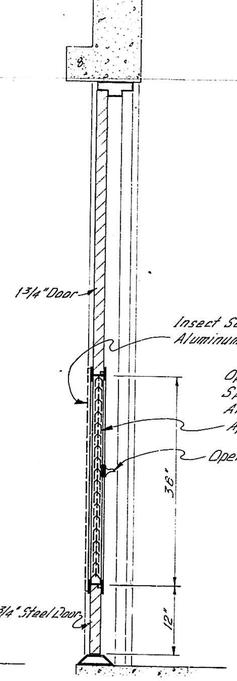
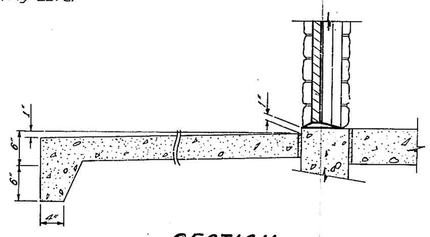


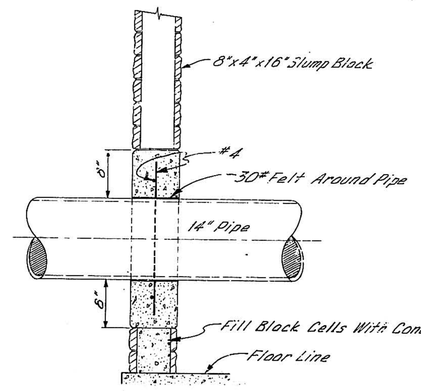
SECTION

PUMP ENCLOSURE DOOR LOUVERS



SECTION

DOOR PAD DETAIL



SECTION

PIPE WALL OPENING DETAIL

AS CONSTRUCTED

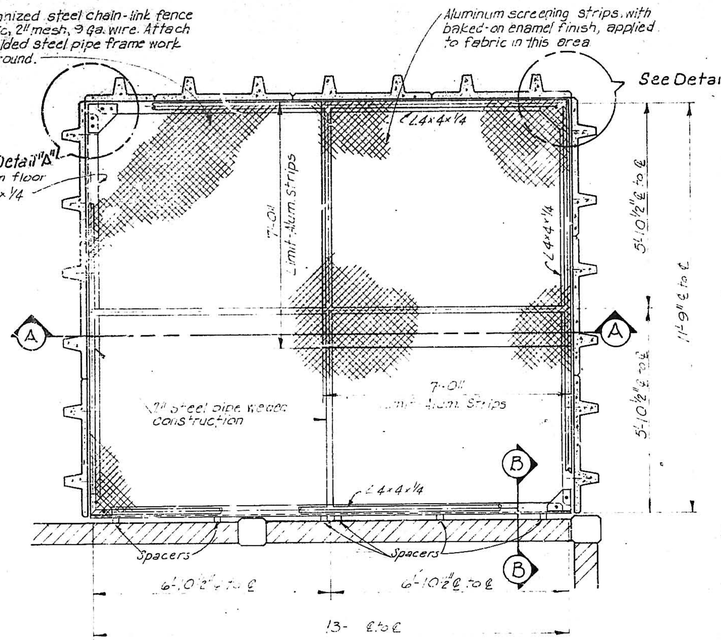
CONTRACTOR

Revised: 7/17/74
Added Angles to Roof Decking.

ALBUQUERQUE, NEW MEXICO
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4
WALL OPENING, VENTILATION AND DOOR DETAILS

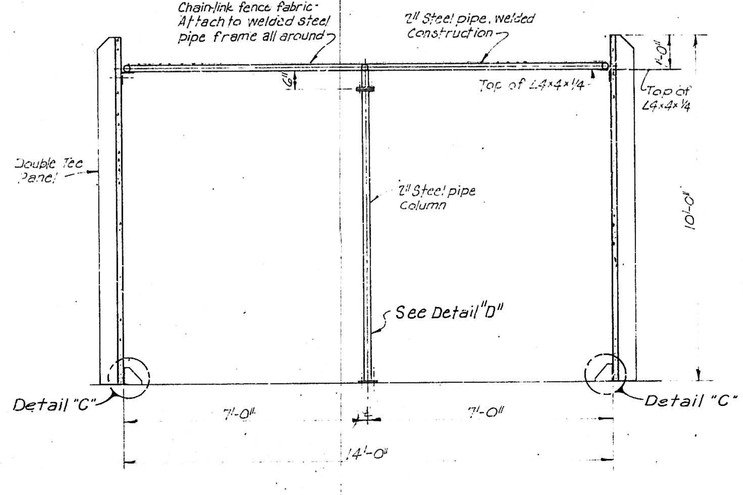
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN: M.F.	SHEET 8
AS SHOWN	FEB. 1973	CHECKED: G.A.J.	OF 20



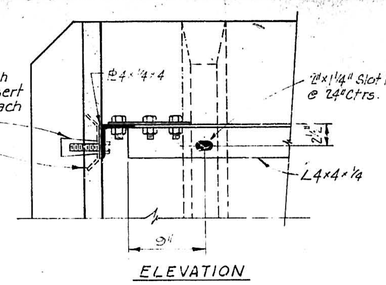
PLAN OF FABRIC

Scale: 1/2" = 1'-0"

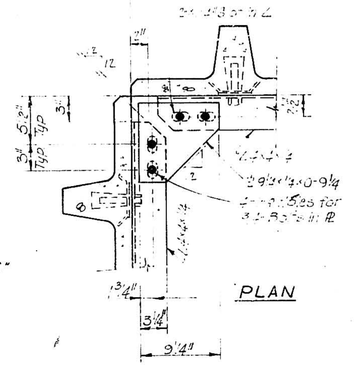


SECTION "A-A"

Scale: 1/2" = 1'-0"



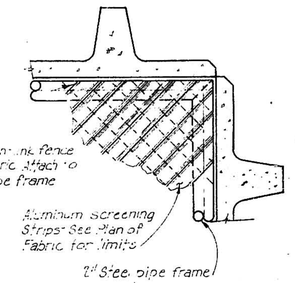
ELEVATION



PLAN

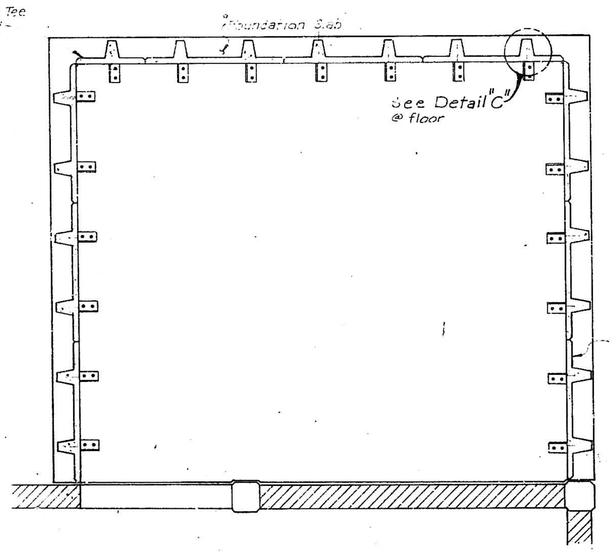
DETAIL "A"

Scale: 1½" = 1'-0"



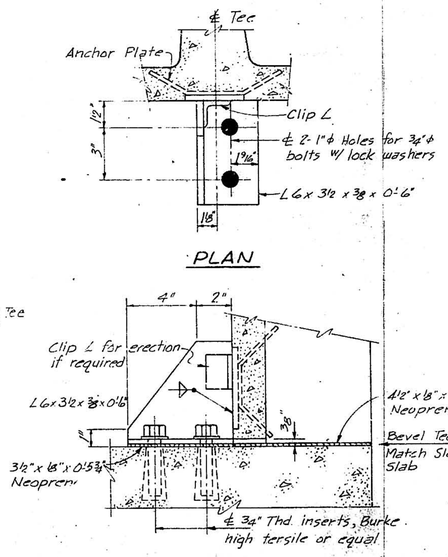
DETAIL "B"

Scale: 1½" = 1'-0"



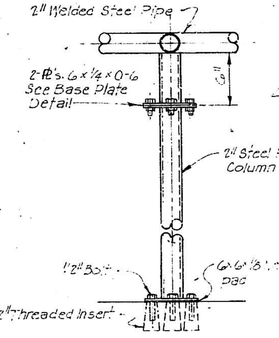
FLOOR PLAN OF ENCLOSURE

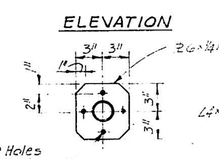
Scale: 1/2" = 1'-0"



DETAIL "C"

Scale: 3"=1'-0"

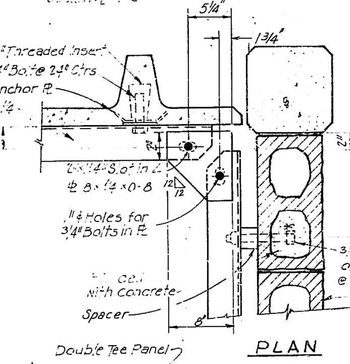


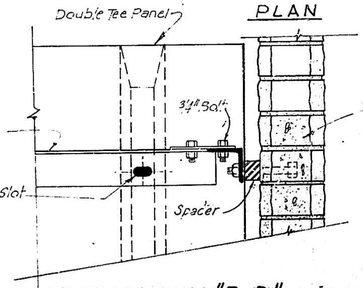


BASE PLATE

DETAIL "D"

Scale: 1½" = 1'-0"





ELEVATION "B-B"

Scale: 1½" = 1'-0"

CITY OF ALBUQUERQUE

CONTRACTOR Robert D. Wells

ALBUQUERQUE, NEW MEXICO

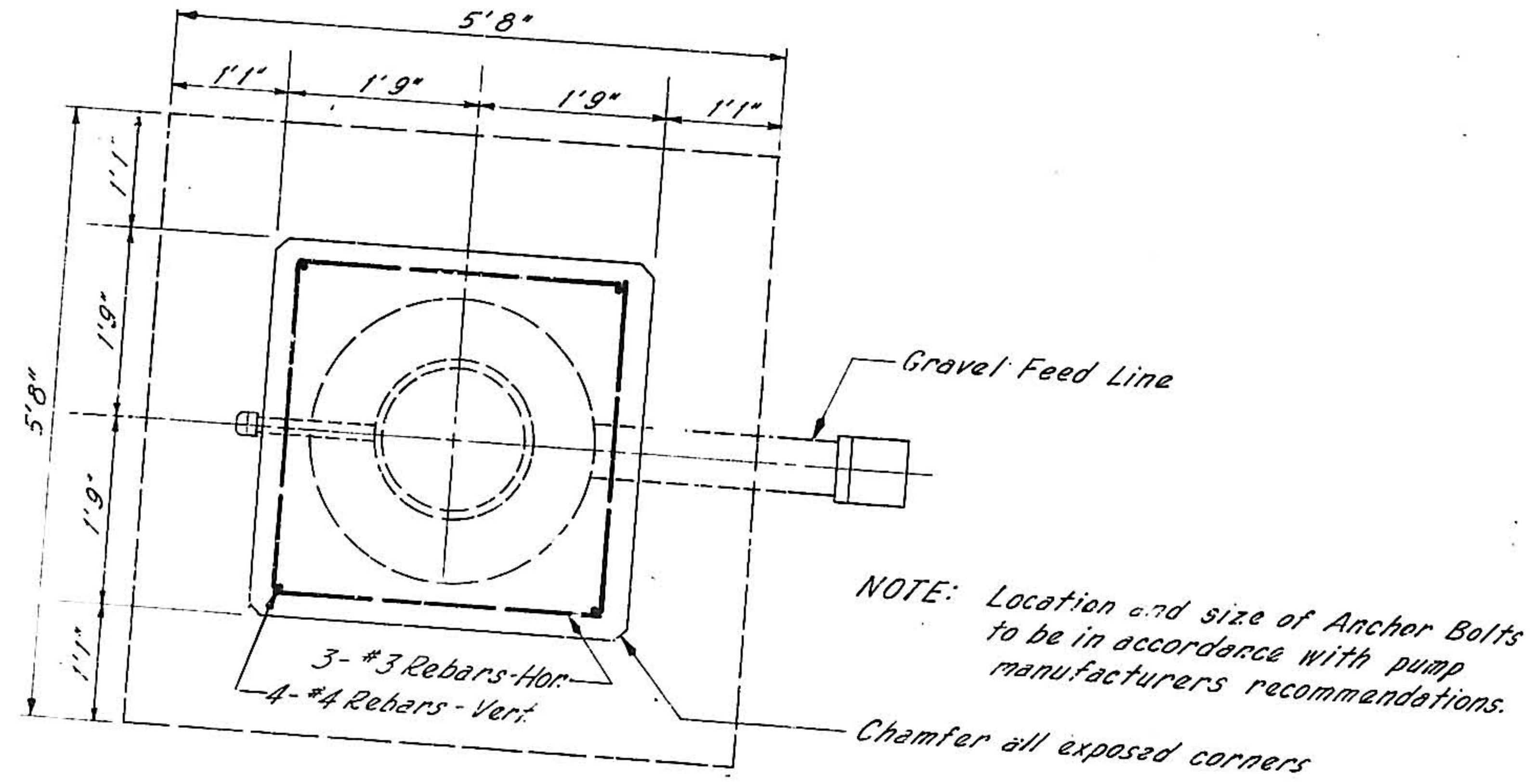
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4

ENCLOSURE DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

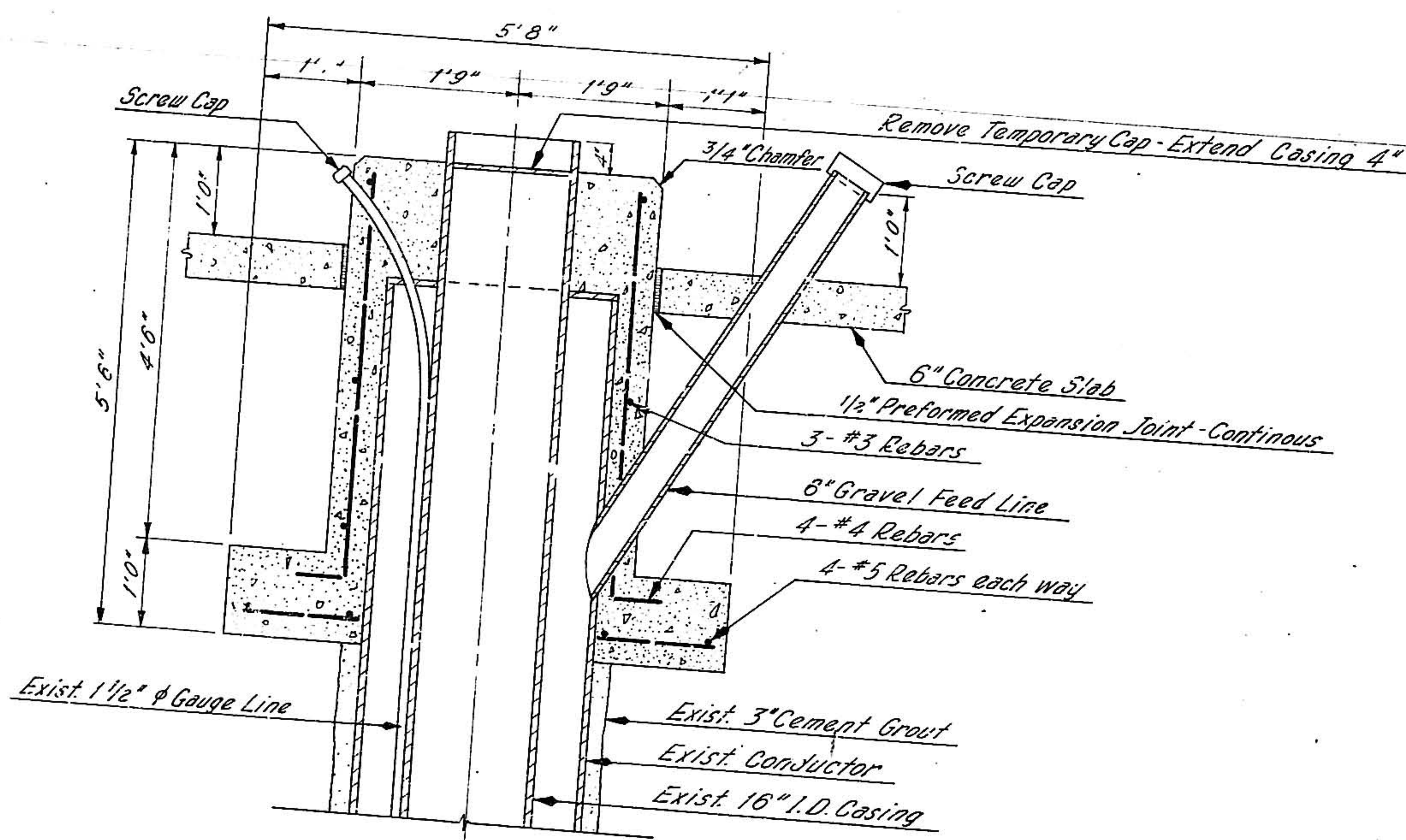
SCALE	DATE	DRAWN: J.F.B.	SHEET 9
AS NOTED	FEB. 1973	CHECKED: G.A.J.	OF 20

AS CONSTRUCTED



PLAN

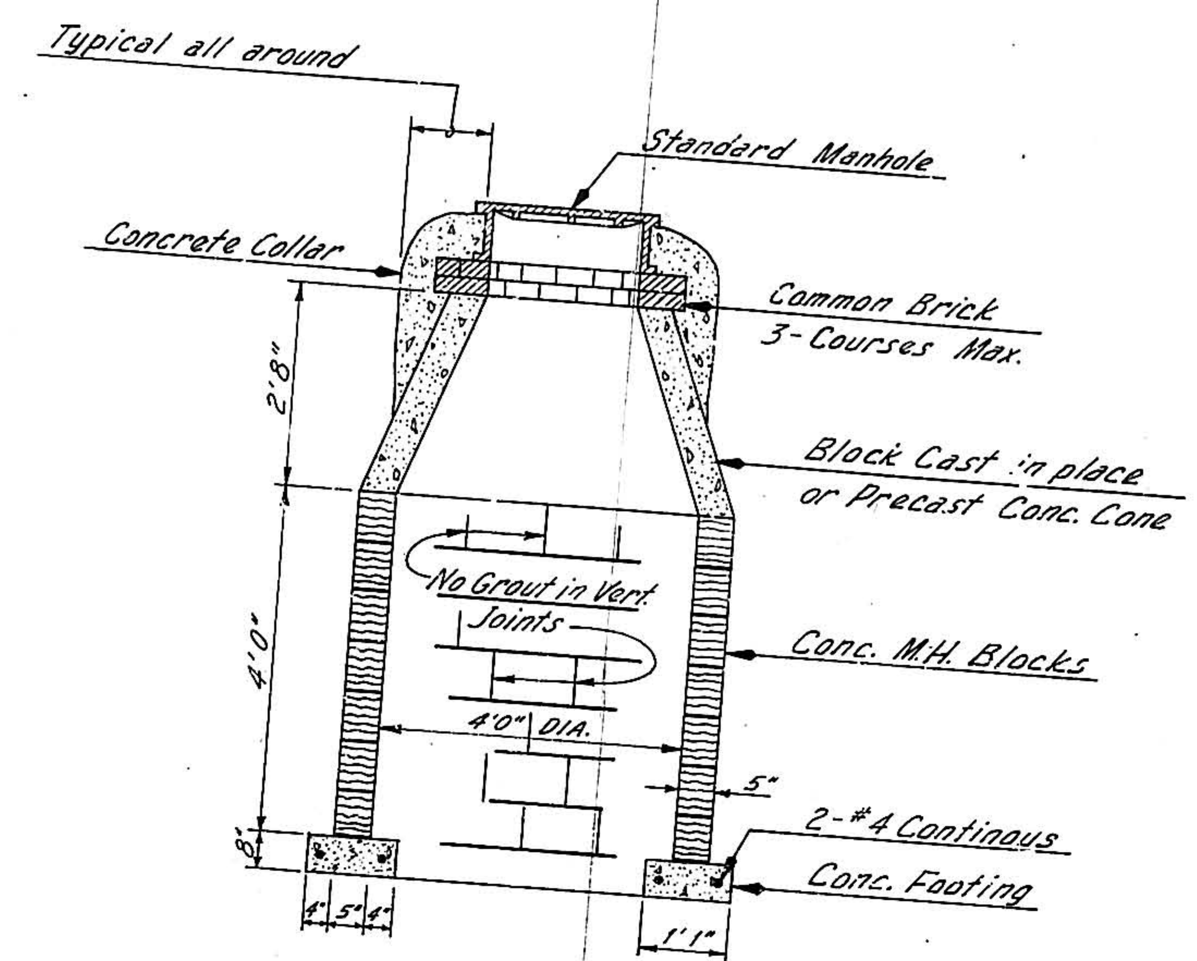
Note: Connect air line from draw down recorder



SECTION

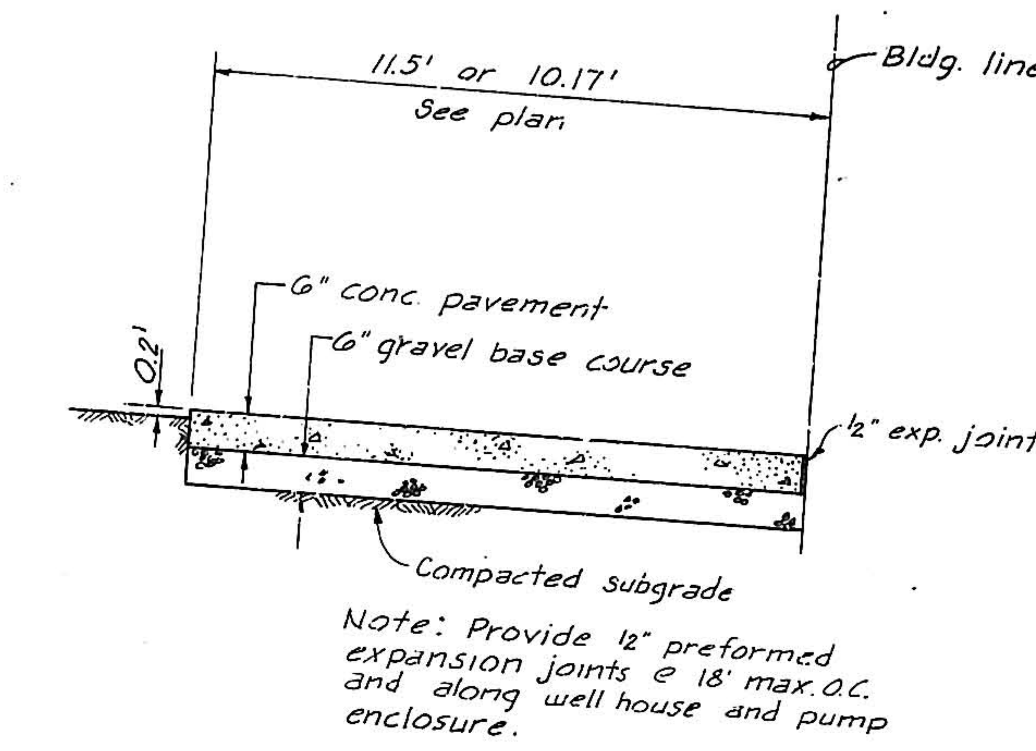
PUMP FOUNDATION DETAILS

Scale 3/4" = 1'

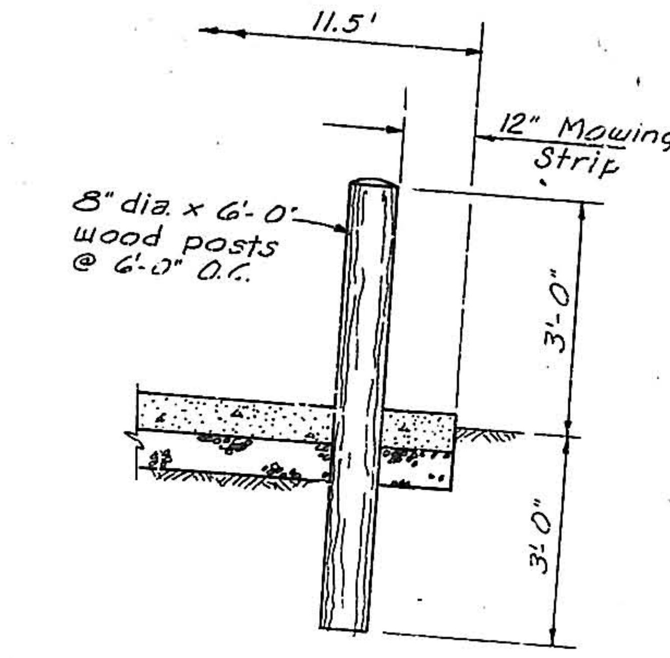


DRY WELL DETAIL

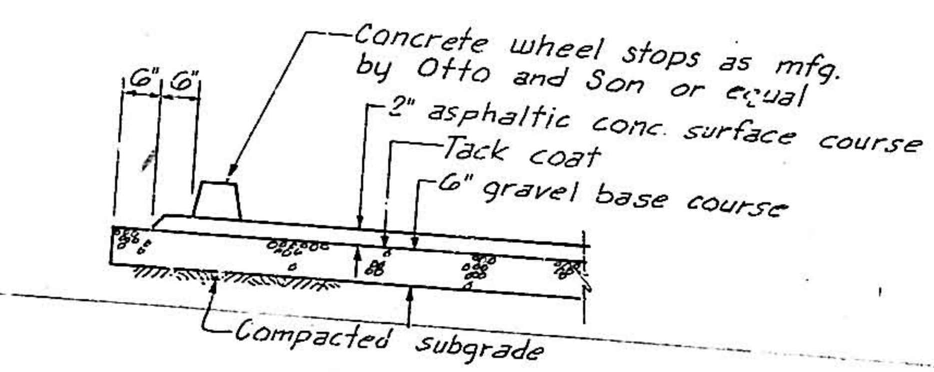
Not to Scale



CONCRETE PAVEMENT



GUIDE POST



BITUMINOUS PAVEMENT

PAVEMENT DETAILS

09 001 1075 12 02 3

AS CONSTRUCTED

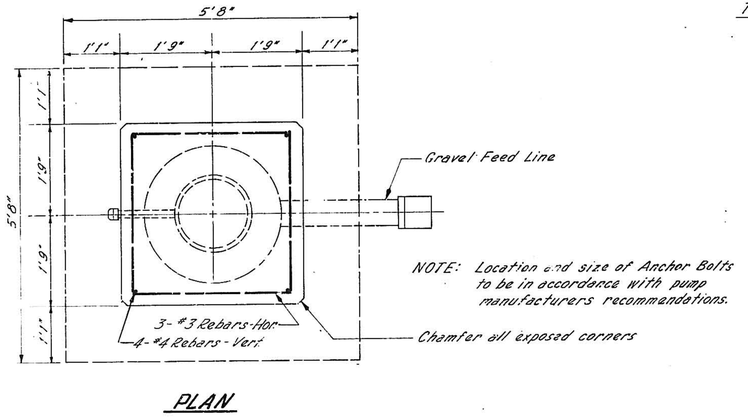
ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

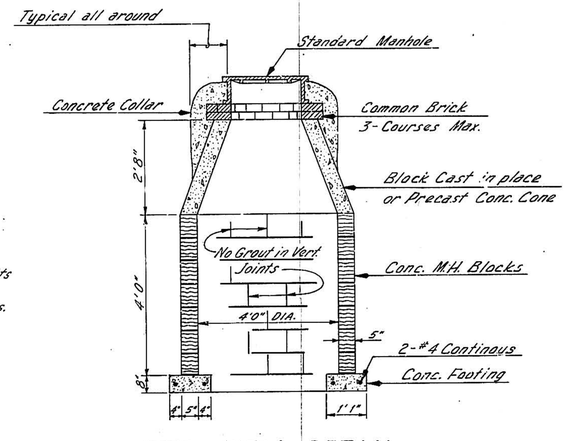
YALE WELLS NOS. 3 & 4
PUMP FOUNDATION
DRY WELL AND PAVEMENT DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE DATE

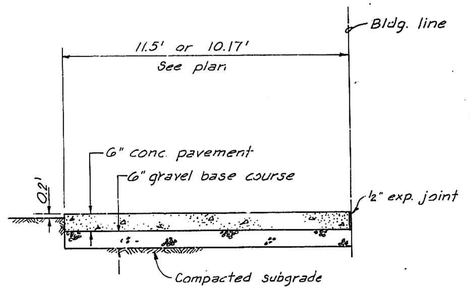


PLAN



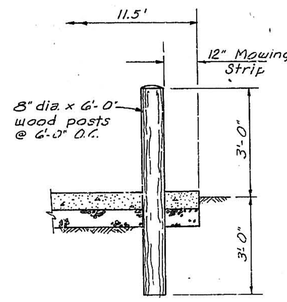
DRY WELL DETAIL

Not to Scale

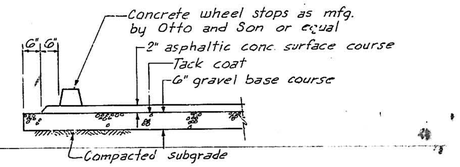


Note: Provide ½" preformed expansion joints @ 18' max. O.C. and along well house and pump enclosure.

CONCRETE PAVEMENT



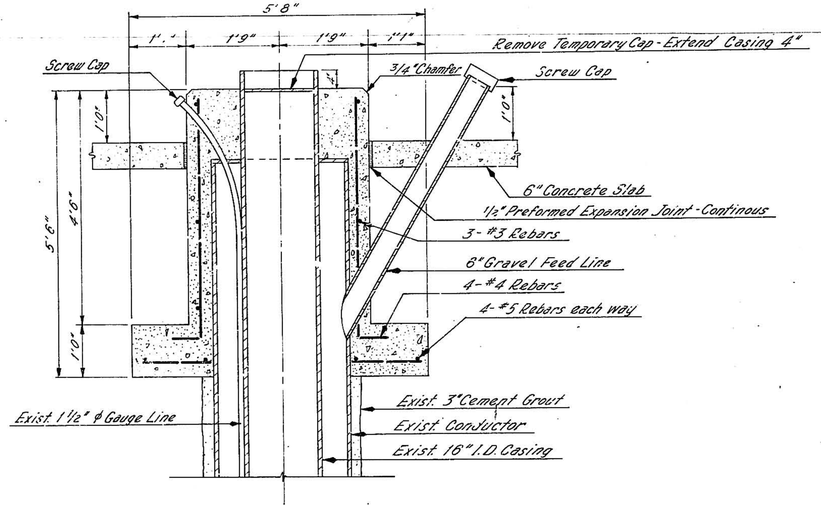
GUIDE POST



BITUMINOUS PAVEMENT

PAVEMENT DETAILS

Note: Connect air line from draw down recorder



SECTION

PUMP FOUNDATION DETAILS

Scale 3/4" = 1'

AS CONSTRUCTED

09 00 1 10 75 12 02 3

ALBUQUERQUE, NEW MEXICO

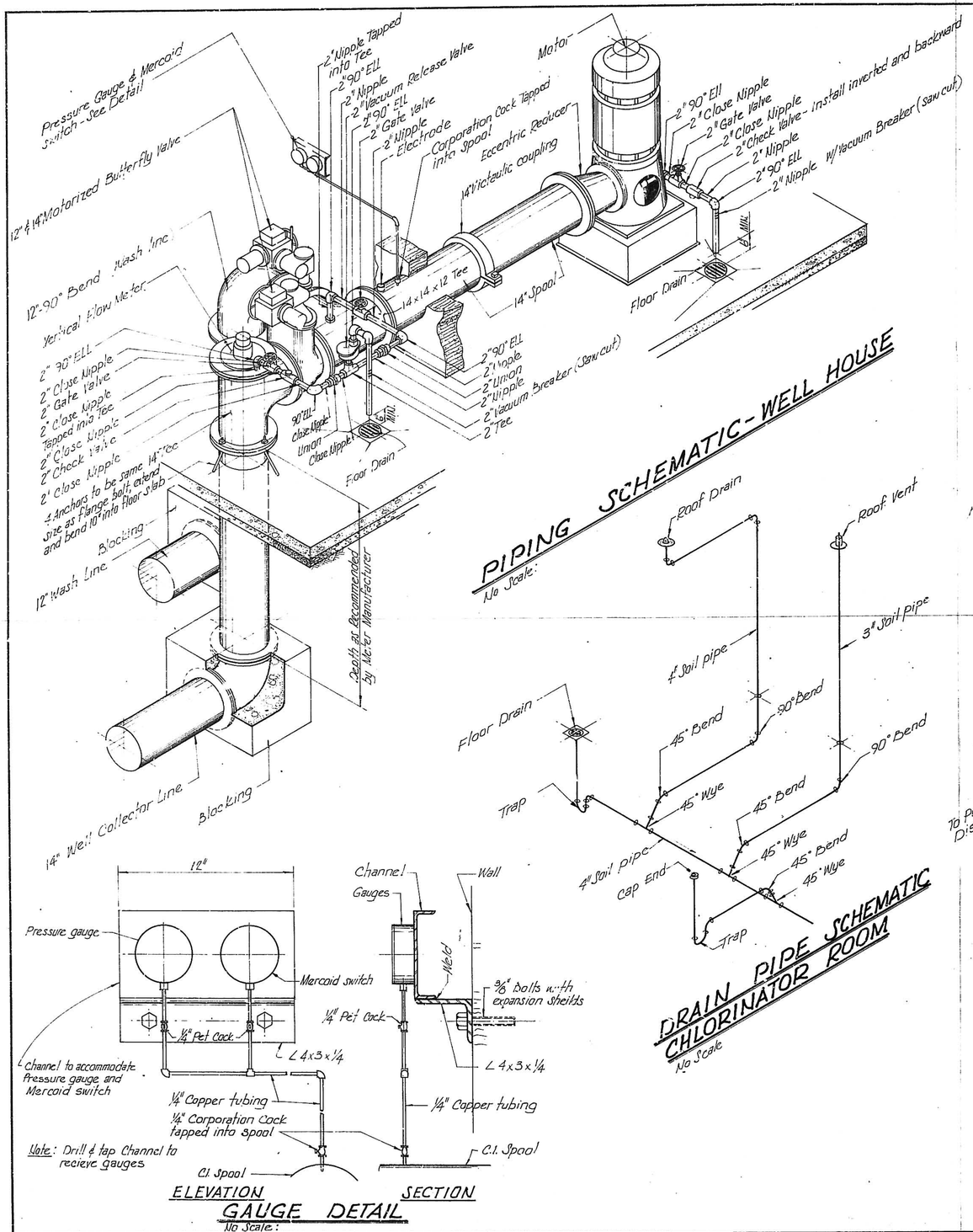
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

YALE WELLS NOS. 3 & 4
PUMP FOUNDATION

DRY WELL AND PAVEMENT DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: M.F.	SHEET 10
AS SHOWN	FEB. 1973	CHECKED: G.A.J.	OF 20

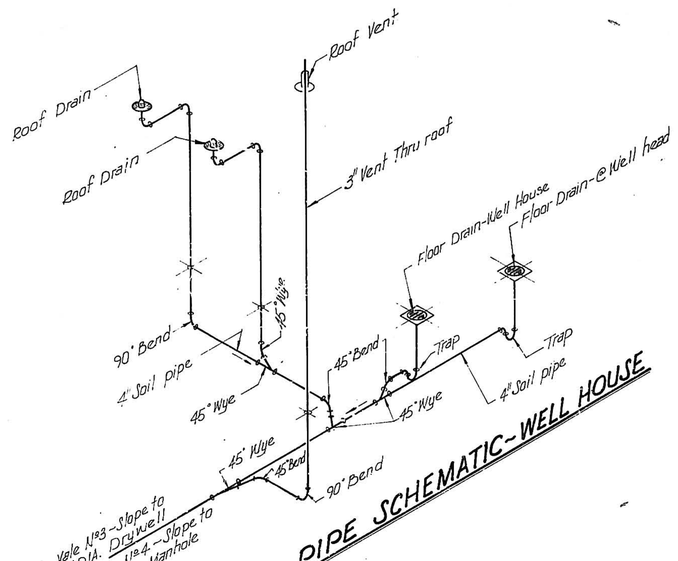


PIPING SCHEMATIC - WELL HOUSE

No Scale:

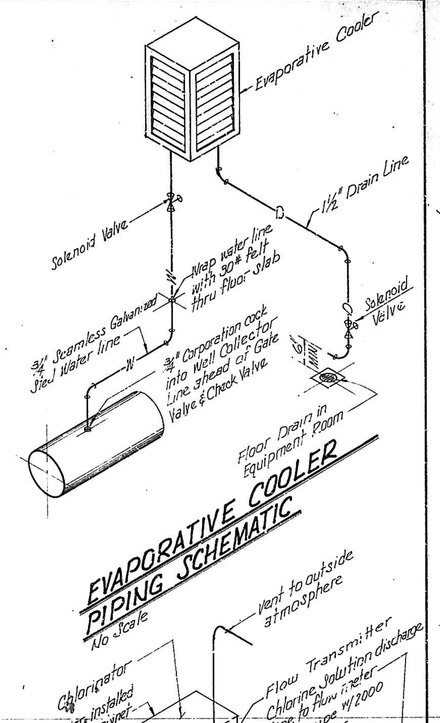
DRAIN PIPE SCHEMATIC
CHLORINATOR ROOM

No Scale



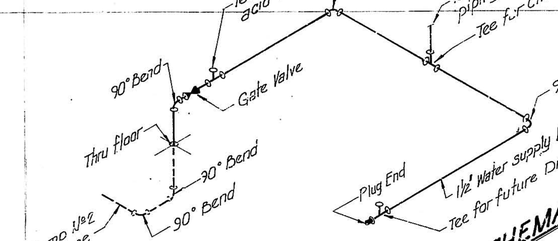
DRAIN PIPE SCHEMATIC - WELL HOUSE

No Scale:



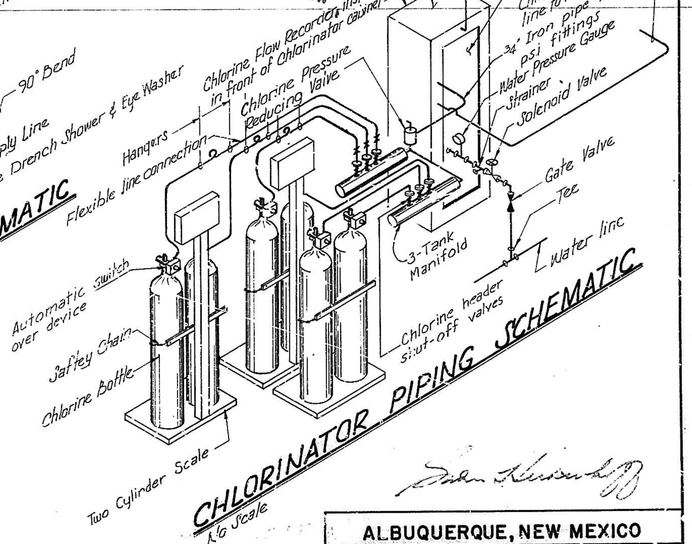
EVAPORATIVE COOLER
PIPING SCHEMATIC

No Scale



WATER SUPPLY SCHEMATIC
CHLORINATOR ROOM

No Scale



CHLORINATOR PIPING SCHEMATIC

No Scale

GAUGE DETAIL

No Scale:

3 33 63 93 123 153 183 213 243 273 303 333 363 393 423 453 483 513 543 573 603 633 663 693 723 753 783 813 843 873 903 933 963 993 1023 1053 1083 1113 1143 1173 1203 1233 1263 1293 1323 1353 1383 1413 1443 1473 1503 1533 1563 1593 1623 1653 1683 1713 1743 1773 1803 1833 1863 1893 1923 1953 1983 2013 2043 2073 2103 2133 2163 2193 2223 2253 2283 2313 2343 2373 2403 2433 2463 2493 2523 2553 2583 2613 2643 2673 2703 2733 2763 2793 2823 2853 2883 2913 2943 2973 3003

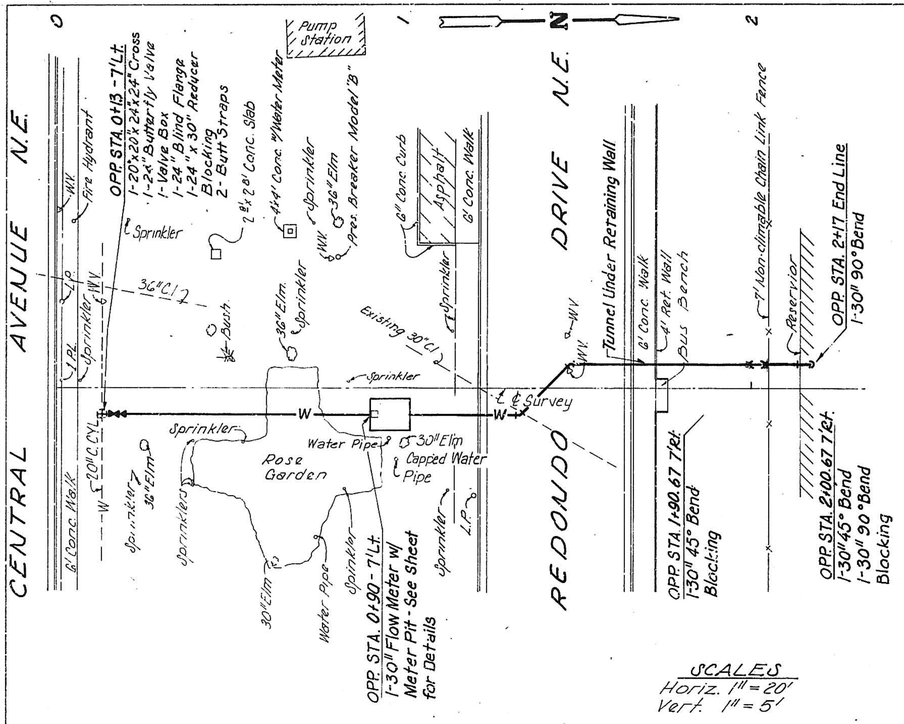
AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
YALE WELLS NOS. 3 & 4

PIPING SCHEMATICS

GURDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: M.C.	SHEET 11
AS SHOWN	APRIL 73	CHECKED: G.A.J.	OF 20

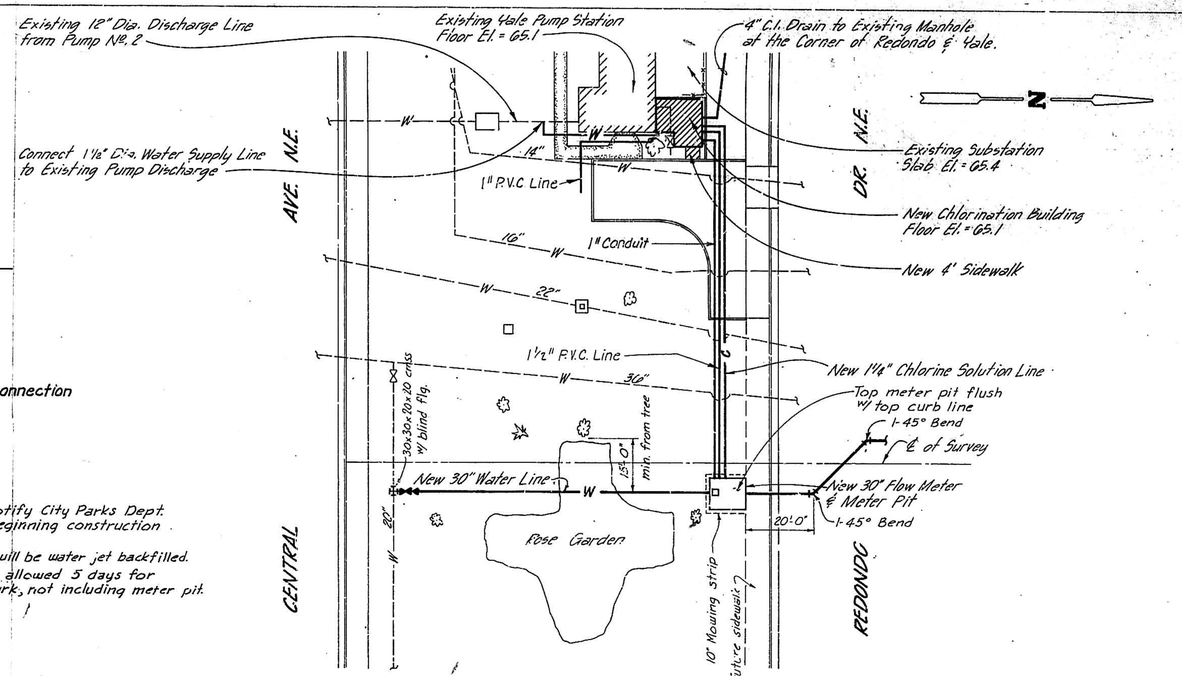


YALE RESERVOIR

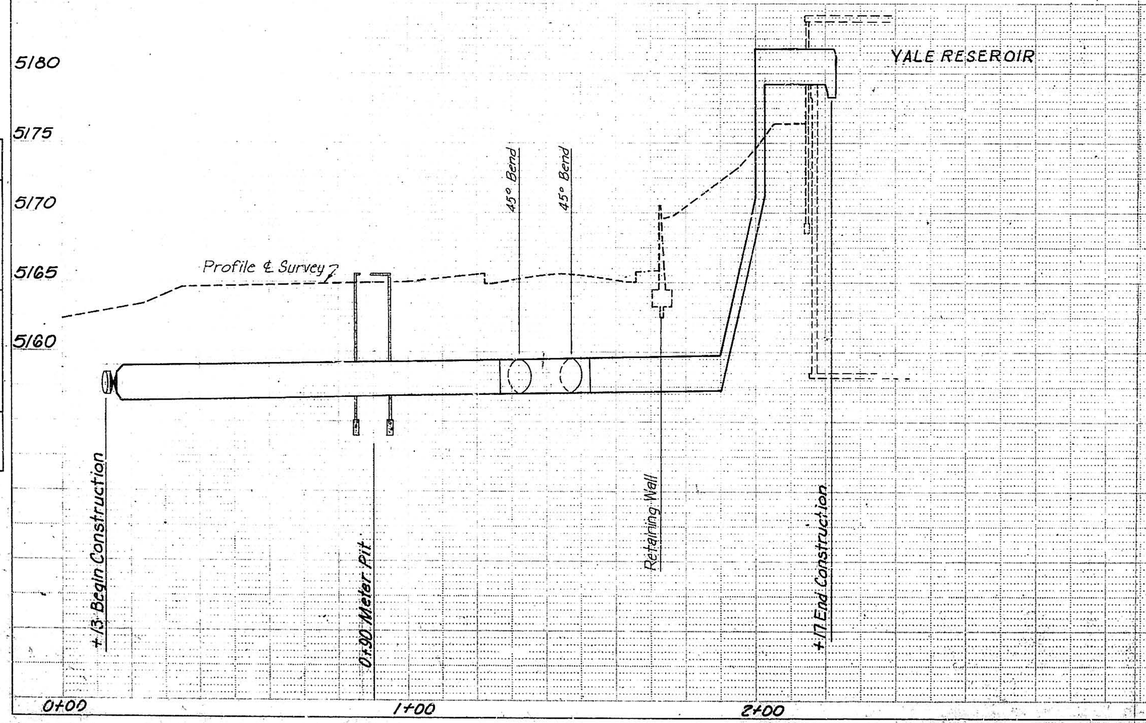
Note: See Sheet 16 for connection to Yale Reservoir.

NOTES:
1- Contractor will notify City Parks Dept. 14 days prior to beginning construction in park.
2- Trenching in park will be water jet backfilled.
3- Contractor will be allowed 5 days for construction in park, not including meter pit.

SCALES
Horiz. 1" = 20'
Vert. 1" = 5'



SITE PLAN for
YALE RESERVOIR CHLORINATION
Scale: 1" = 20'



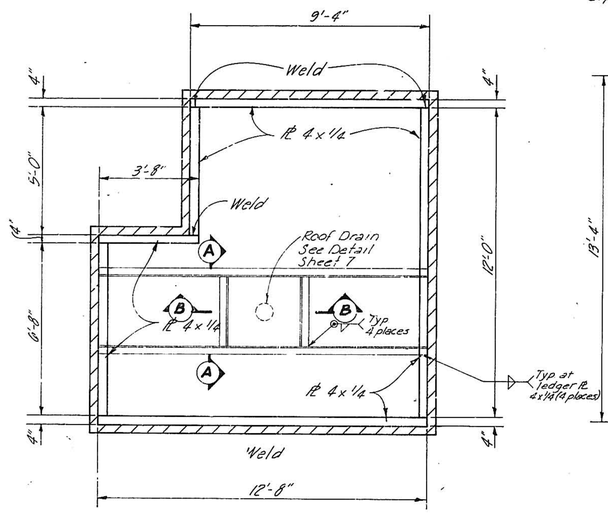
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
09 001 1275 057162

CITY OF ALBUQUERQUE
CONTRACTOR

AS CONSTRUCTED

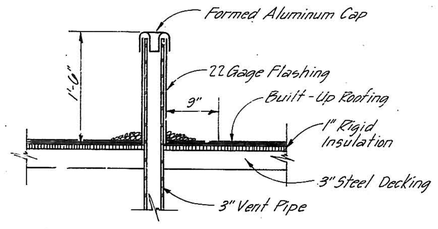
PLATE 1 SINGLE-PLAN - PROFILE - DOTTED CHARLES BRUNING COMPANY MADE IN U.S.A.

REVISED OCTOBER 19, 1973



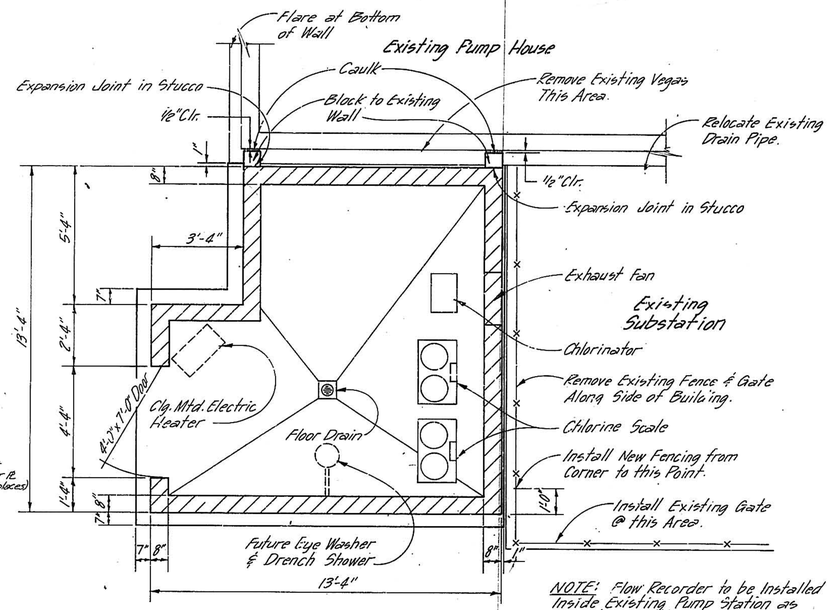
ROOF FRAMING PLAN

Scale: 3/16" = 1'-0"



PLUMBING VENT DETAIL

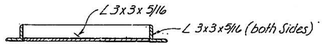
Scale: 1" = 1'-0"



NOTE: Flow Recorder to be Installed Inside Existing Pump Station as Directed by the Engineer.

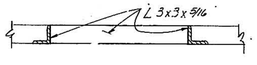
FLOOR PLAN

Scale: 3/8" = 1'-0"



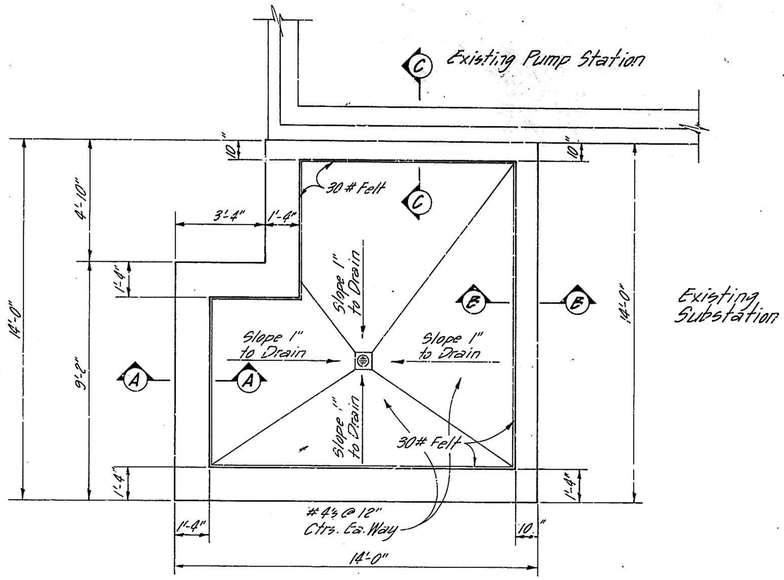
SECTION A-A

No Scale



SECTION B-B

No Scale



FOUNDATION PLAN

Scale: 3/8" = 1'-0"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

0 9 0 0 0 1 1 3 7 5 0 6 0 2 5 7 1 6 2

AS CONSTRUCTED

CITY OF ALBUQUERQUE

CONTRACTOR

ALBUQUERQUE, NEW MEXICO

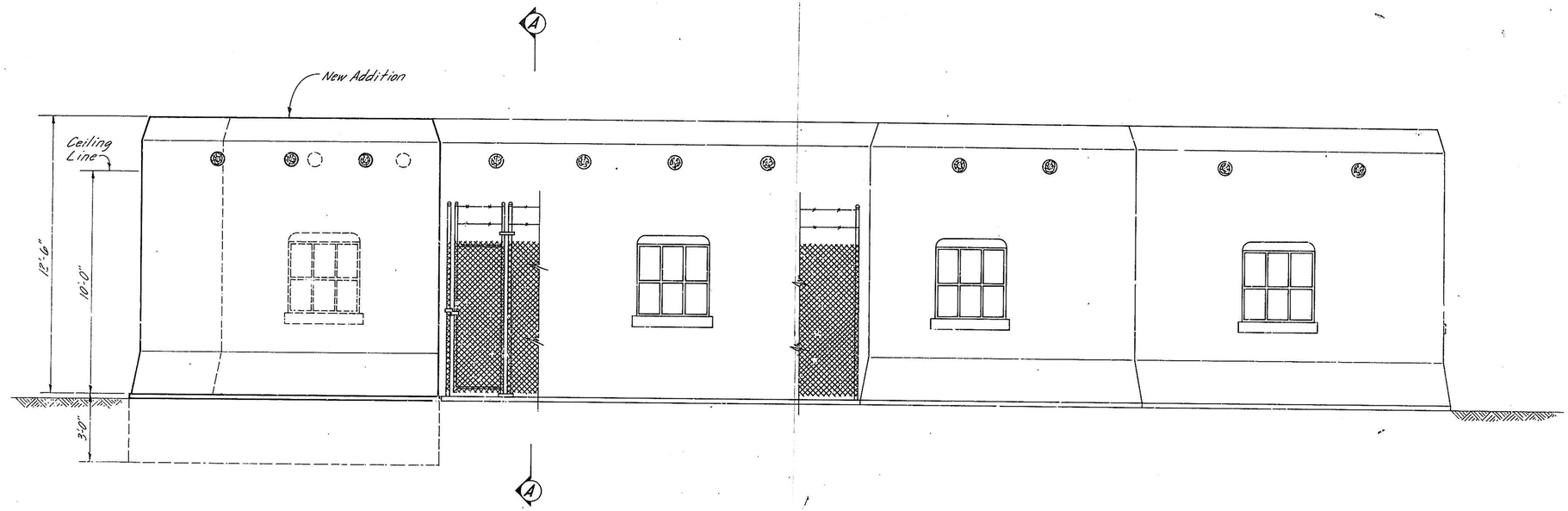
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

CHLORINATOR BUILDING

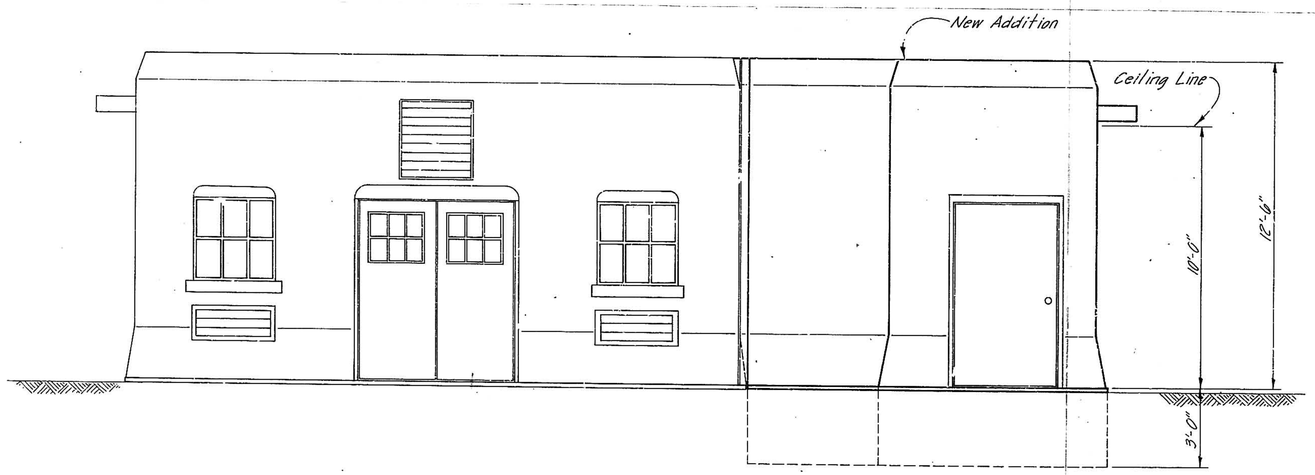
FLOOR, FOUNDATION AND
ROOF FRAMING PLANS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

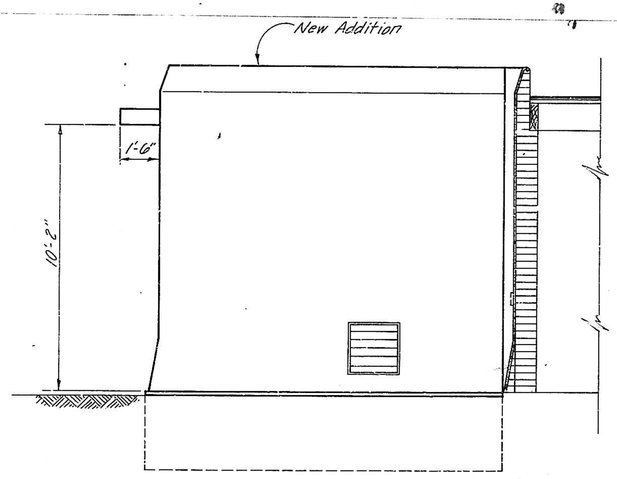
SCALE	DATE	DRAWN: B.M.	SHEET 13
AS SHOWN	APRIL 73	CHECKED: G.A.J.	OF 20



NORTH ELEVATION
Scale: 3/8"=1'-0"



EAST ELEVATION
Scale: 3/8"=1'-0"



SECTION A-A
Scale: 3/8"=1'-0"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
09 00 1 1475 06 02571628

Y OF
CONTRACTOR

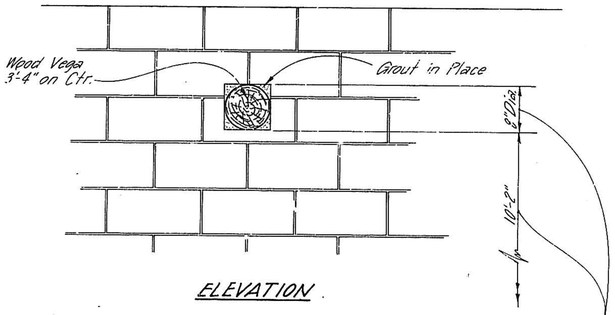
AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
CHLORINATOR BUILDING

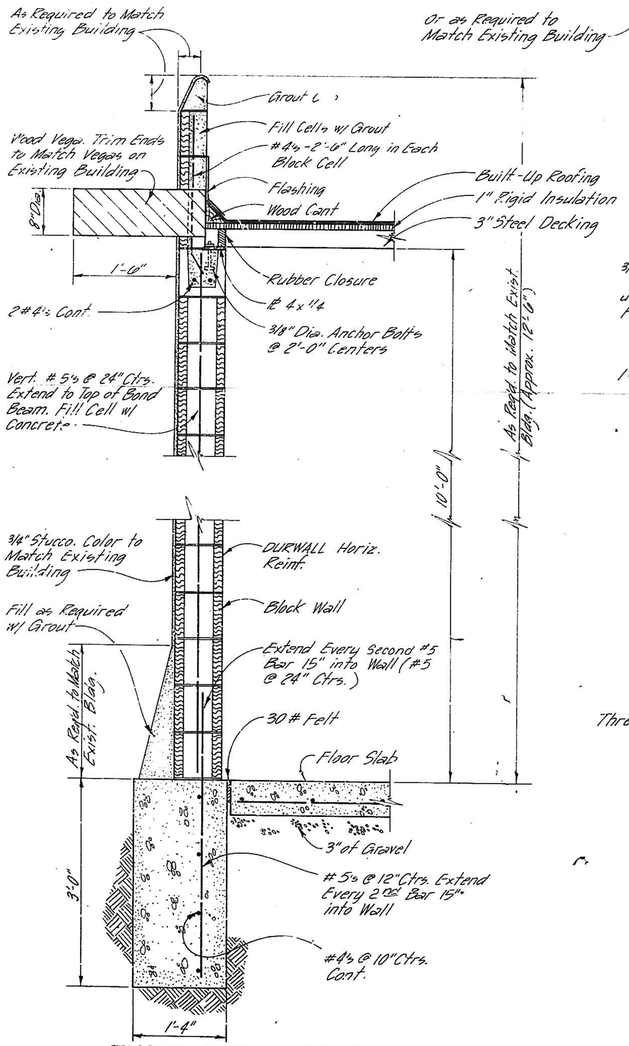
ELEVATIONS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE, NEW MEXICO

SCALE	DATE	DRAWN: B.M.	SHEET 14
AS SHOWN	APRIL 73	CHECKED: G.A.J	OF 20

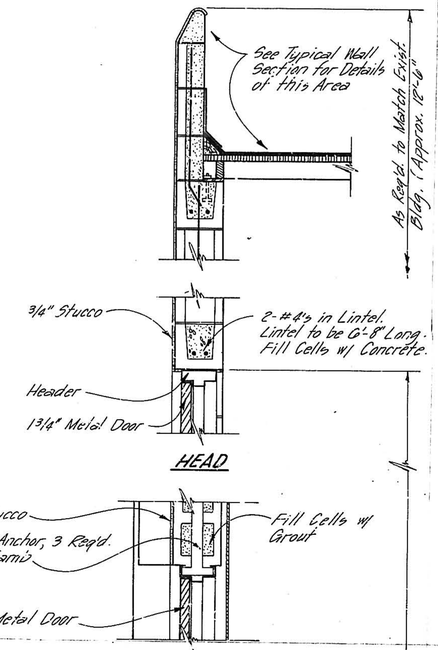


ELEVATION

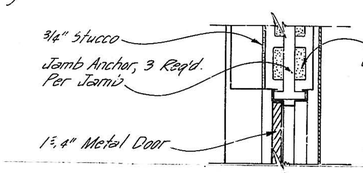


TYPICAL WALL SECTION WITH VEGAS

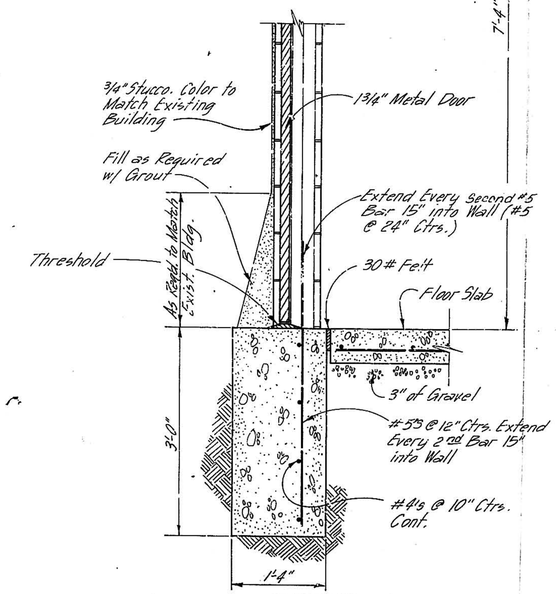
Scale: 1" = 1'-0"



HEAD

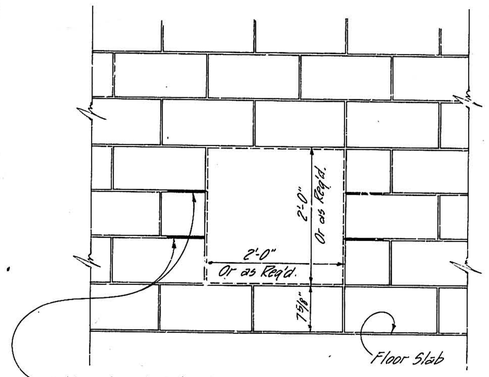


JAMB

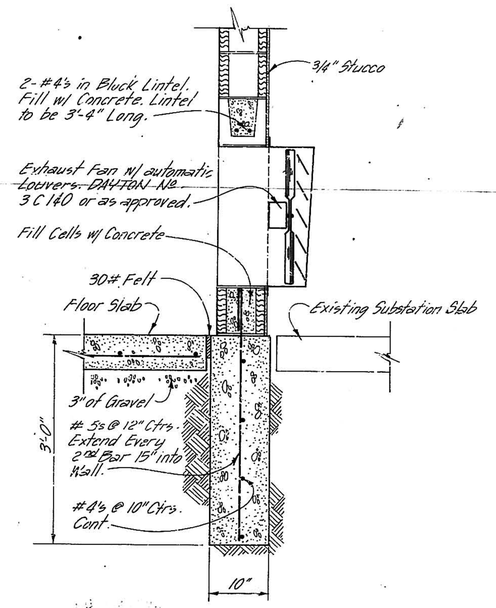


SECTION A-A & DOOR DETAILS

Scale: 1" = 1'-0"

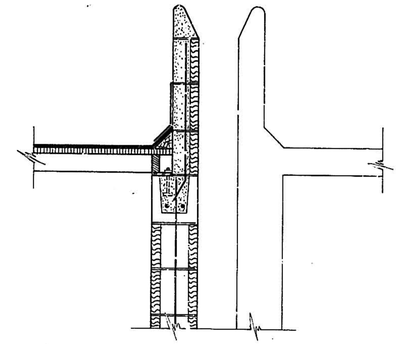


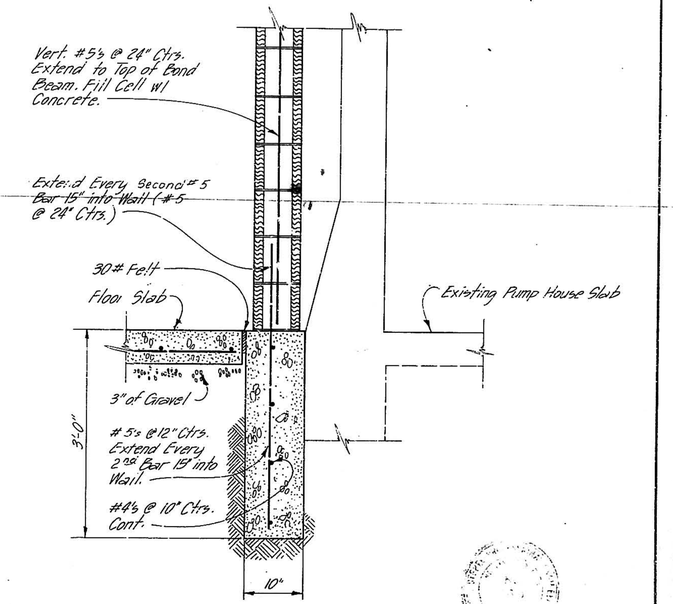
ELEVATION



SECTION B-B & EXHAUST FAN DETAILS

Scale: 1" = 1'-0"





SECTION C-C

Scale: 1" = 1'-0"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
09 001 1575 06 02571612

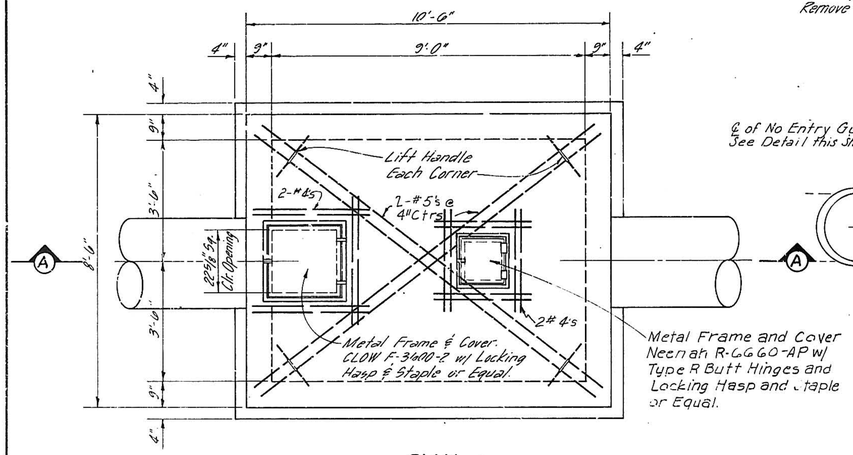
CITY OF ALBUQUERQUE
CONTRACTOR

AS CONSTRUCTED

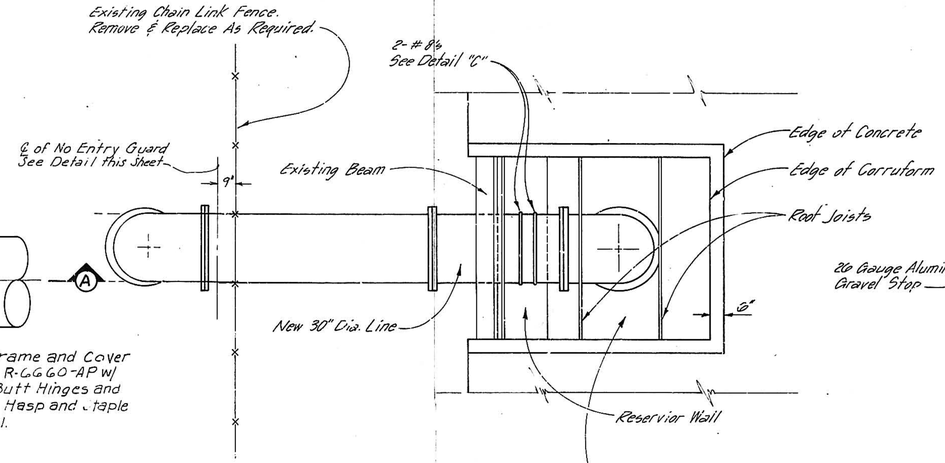
ALBUQUERQUE, NEW MEXICO
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)
CHLORINATOR BUILDING
WALL SECTIONS AND DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

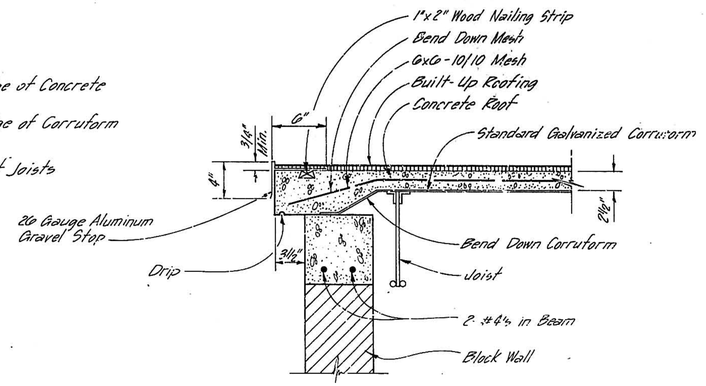
SCALE	DATE	DRAWN: B.M.	SHEET 15
AS SHOWN	APRIL 73	CHECKED: G.A.J.	OF 20



PLAN



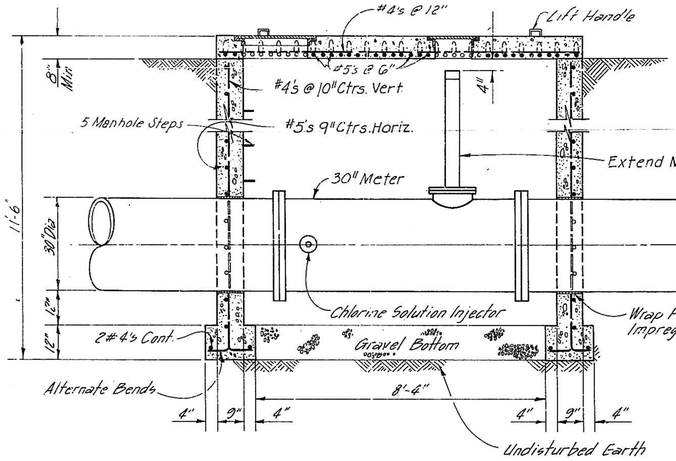
PLAN



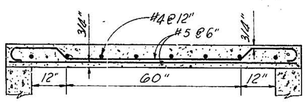
DETAIL "A"

Scale: 1½" = 1'-0"

Remove & Replace Reservoir Roof as Required to Install New Line. Break Back Concrete 6" From Edge of Corruform. Install New Standard Galvanized Corruform & Concrete. Roof Reinforced with 6x6-10/10 Mesh Where Existing Roof Removed. Install Built-Up Roofing as Per Original. See Detail "A".



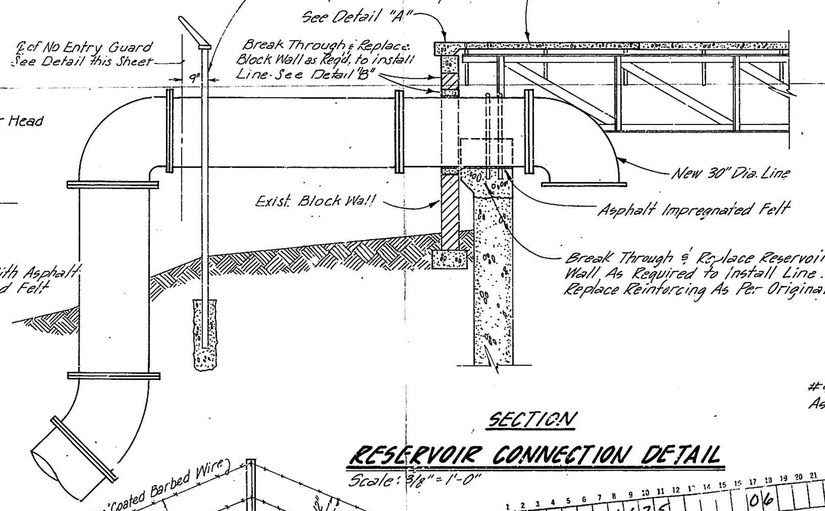
SECTION A-A



TRANSVERSE SLAB SECTION

METER PIT DETAILS

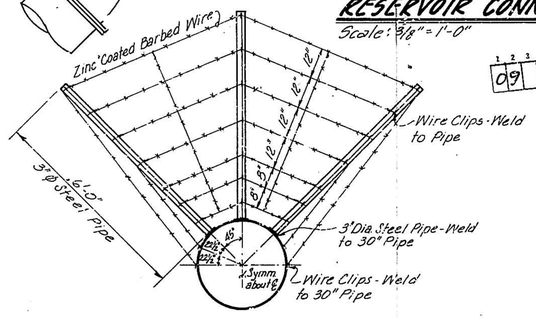
Scale: 1½" = 1'-0"



SECTION

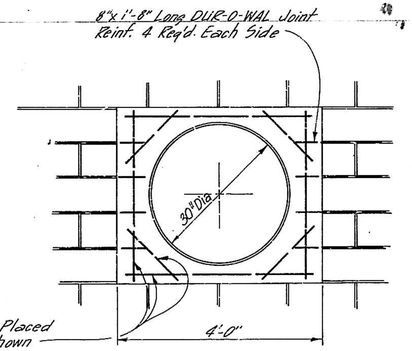
RESERVOIR CONNECTION DETAIL

Scale: 3/8" = 1'-0"

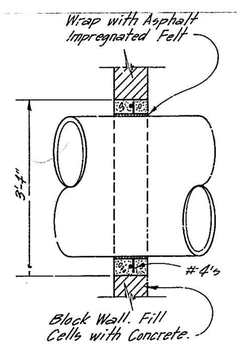


NO ENTRY GUARD DETAIL

Not to Scale.



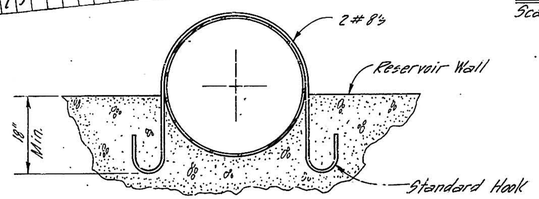
ELEVATION



SECTION

DETAIL "B"

Scale: 3/4" = 1'-0"



DETAIL "C"

Scale: 3/4" = 1'-0"

CONTRACTOR

AS CONSTRUCTED

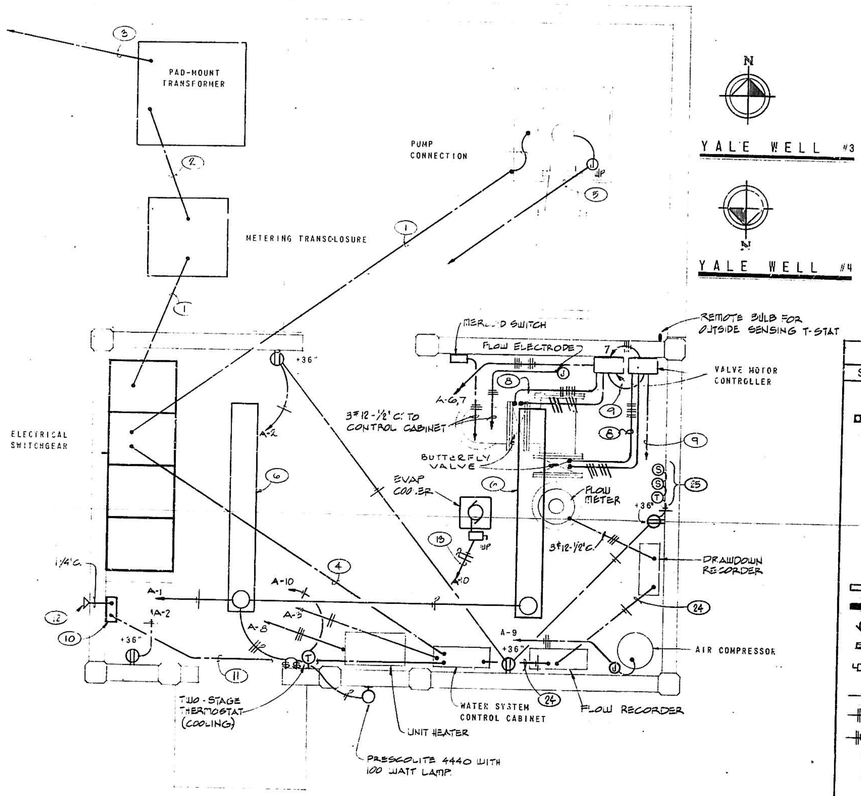
ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

METER PIT & YALE RESERVOIR INLET

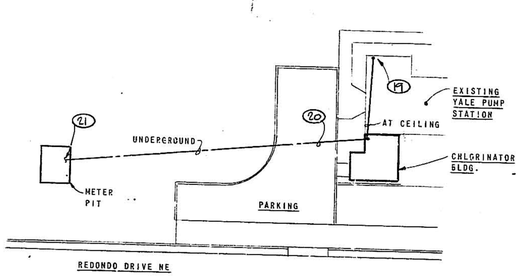
GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: B.D.M.	SHEET 16
AS SHOWN	JAN. 1973	CHECKED: G.A.J.	OF 20



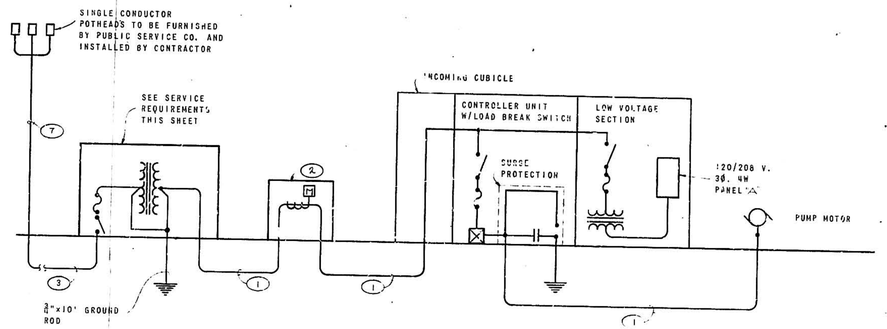
WELL EQUIPMENT BLDG - ELECTRICAL PLAN

SCALE: 3/8" = 1'-0" (TYPICAL FOR TWO BUILDINGS)



CHLORINATOR BUILDING - ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"



ONE LINE RISER DIAGRAM

NO SCALE

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	BRACKET OUTLET AND FIXTURE. INCANDESCENT. TYPE AS INDICATED.
	FLUORESCENT OUTLET AND FIXTURE.
	EVAPORATIVE COOLER SWITCHES. ONE "HI-OFF-LO" FOR FAN AND ONE "ON-OFF" FOR PUMP.. UP 52"
	SINGLE POLE WALL SWITCH.
	THERMAL SWITCH. WEATHERPROOF IF INSTALLED OUTSIDE.
	JUNCTION BOX FLUSH IN WALL - HEIGHT AS NOTED OR REQUIRED WITH CONNECTION TO EQUIPMENT.
	DUPLEX CONVENIENCE OUTLET. UP 12" OR AS NOTED. WP DENOTES WEATHERPROOF.
	THERMOSTAT, UP 5'-6".
	SPECIAL CABINET. TELEPHONE TYPE OR AS NOTED.
	ELECTRIC PANEL - SEE SCHEDULE.
	MOTOR CONNECTION WITH H.P. INDICATED.
	MOTOR CONTROLLER. SIZE AND POLES FOR MOTOR FURNISHED.
	SAFETY SWITCH. SWITCH TO HAVE POLES AND RATING REQUIRED. SWITCH TO BE NEMA 3R IF INSTALLED OUTDOORS.
	BRANCH CIRCUIT IN WALLS OR CEILING WITH CONDUCTORS INDICATED.
	BRANCH CIRCUIT IN WALLS OR UNDER FLOOR WITH CONDUCTORS INDICATED.
A-1,3	HOME RUN TO PANEL. WITH BRANCH CIRCUIT NUMBERS INDICATED.
	CEILING OUTLET & FIXTURE, INCANDESCENT.
J-C	JUNCTION BOX AT CEILING.
	WEATHERHEAD

PANEL SCHEDULES

PANEL "A" - 120/208 VOLT, 3 Ø, 4 WIRE, 100 AMP. W/MAIN C/B MOUNTED IN SWITCHGEAR

CIRCUIT Nº	WIRE SIZE	CCT. BKR.	LOAD
1.2.3	#12	20A/1P	BRANCH CIRCUITS
4.5	---	20A/1P	SPARES
6.7	#12	20A/3P	VALVE MOTOR
8	#8	30A/3P	UNIT HEATER
9	#12	20A/3P	COMPRESSOR MTR
10	#12	20A/1P	BLOWER MOTOR

PANEL "B" - 120/240 VOLT, 1 PHASE, 3 WIRE, 100 AMP MLO SURFACE MOUNTED

1	#12	20A/1P	LIGHTING & RECPTACLES
2	#12	20A/1P	METERING PUMP - FUTURE
3	#12	20A/1P	EXH. FAN & CHLORINATOR
4	#8	40A/2P	UNIT HEATER
5	---	20A/1P	SPARE
---	---	6 POLES	SPACE FOR FUTURE

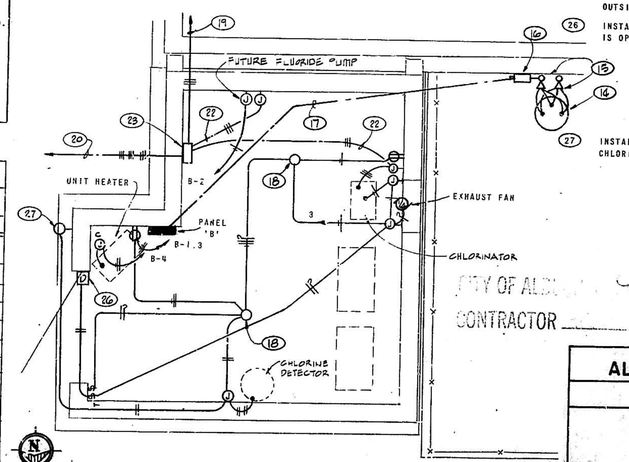
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

09 001 1 7 7 5 02 3

SERVICE REQUIREMENTS

YALE WELL #3: SERVICE TO BE INSTALLED PER PUBLIC SERVICE COMPANY DWG. #DS-20-6.3 FOR STEEL SERVICE POLE, 12470 VOLT TO 4160 VOLT Y-Y TRANSFORMER TO BE PROVIDED PER ONE LINE DIAGRAM.

YALE WELL #4: SERVICE TO BE INSTALLED PER PUBLIC SERVICE COMPANY DWG. #DS-10-6. FOR WOOD RISER POLE. PROVIDE TRANSFORMER WITH DUAL RATED PRIMARY VOLTAGE-12,470/4160 VOLT. TRANSFORMER IS TO BE CONNECTED 4160 TO 4160. LATER CHANGE-OVER WILL REQUIRE CUT-OVER TO 12,470 VOLT.



CHLORINATOR BUILDING - ELECTRICAL PLAN

SCALE: 3/8" = 1'-0"

KEYED NOTES

1. 3#2-5KV IN 4" R.S. CONDUIT.
2. METERING TRANSOLOSURE PER PUBLIC SERVICE CO. REQUIREMENTS.
3. 3#2-15KV SHIELDED CABLE AND 1#4 BARE COPPER IN 4" N.M. DUCT, CONCRETE EXCASED.
4. 2" CONTROL CONDUIT FROM H.V. STARTER COMPARTMENT TO CONTROL CABINET.
5. 1"C FROM MOTOR TO H.V. STARTER COMPARTMENT FOR MOTOR SAFETY CONTROLS AND INTERLOCKS.
6. INSTALL INDUSTRIAL FLUORESCENT FIXTURE COMPLETE WITH LAMPS AND LAMP GUARD, BENJAMIN #LB-1121-BU.
7. INSTALL PRIMARY POLE RISER IN COMPLIANCE WITH REQUIREMENTS OF PUBLIC SERVICE CO. OF NEW MEXICO.
8. CONTROL CIRCUIT CONDUIT FOR CONNECTION OF LIMIT SWITCHES, TORQUE O.L. INDICATORS, ETC. VERIFY EXACT CONDUCTOR AND CONDUIT REQUIREMENTS FROM VALVE SHOP DRAWINGS.
9. EXTEND 1" MINIMUM SIZE CONTROL CONDUIT FOR VALVE CONTROL AND INDICATION WIRING. INSTALL & CONNECT #12 WIRES.
10. 12"x12"x6" TELEPHONE TYPE CABINET FOR TELEPHONE CABLE ENTRANCE.
11. 1"C FROM TELEPHONE CABINET TO WATER SYSTEM CONTROL CABINET.
12. TELEPHONE SERVICE DROP. INSTALL 1" WEATHERHEAD.
13. EXTEND TO CIRCUIT SHOWN THRU TWO-STAGE COOLING THERMOSTAT AT DOOR.
14. DISCONNECT AND REMOVE EXISTING 5 KVA TRANSFORMER REPLACE WITH A 10 KVA TRANSFORMER OF SIMILAR DESIGN AND CHARACTERISTICS. PRIMARY VOLTAGE: 4160/2400: SECONDARY: 120/240 VOLTS, SINGLE PHASE, THREE WIRE.
15. RECONNECT EXISTING 3#8TW AND DOUBLE LUG NEW 3#8TW TO NEW TRANSFORMER SECONDARY CONNECTIONS.
16. 60 AMPERE, DOUBLE POLE, 3 WIRE DISCONNECT SWITCH, FUSED AT 50 AMPERES, NEMA-3R ENCLOSURE.
17. 3#8TW-CU IN 1" CONDUIT TO NEW PANEL.
18. INCANDESCENT FIXTURES, CEILING MOUNT, BENJAMIN #V9642 WITH 150 WATT I.F. ROUGH SERVICE LAMP.
19. 3#12-3/4"C. TO FLOW RECORDER. CONNECT WIRES AS REQUIRED FROM TRANSMITTER IN METER PIT.
20. 9#12-1" CONDUIT. RUN IN SAME TRENCH BUT ABOVE AND TO ONE SIDE (AT LEAST 12" BOTH WAYS) OF CHLORINE SOLUTION LINE.
21. CONNECT WIRING TO TRANSMITTER IN METER PIT.
22. 3#12-3/4" CONDUIT. EXTEND TO EQUIPMENT INDICATED AND CONNECT AS REQUIRED. LEAVE TAGGED CONDUCTORS IN J-BOX FOR FUTURE FLUORIDE METERING PUMP CONTROLS.
23. 8"x8"x6" S.C. J-BOX. PROVIDE WIRING TERMINAL STRIP FOR ALL SPLICES.
24. EXTEND CIRCUIT A-3 (CONTROL CIRCUIT) TO ALL CONTROL AND RECORDING EQUIPMENT. TERMINATE ON TAGGED TERMINAL STRIP IN EACH EQUIPMENT CABINET.
25. INSTALL THERMOSTAT AND CONNECT SOLENOID VALVES IN SUPPLY AND DRAIN LINE OF EVAP. COOLER SO THAT COOLER DRAINS IF OUTSIDE TEMP IS BELOW 45°.
26. INSTALL DOOR SWITCH OVER-RIDE SO THAT FAN RUNS IF DOOR IS OPEN.
27. INSTALL PRESCOLITE 4022 FIXTURE WITH 50W RED LAMP FOR CHLORINE GAS INDICATOR LAMP.

CITY OF ALBUQUERQUE

CONTRACTOR

AS CONSTRUCTED

ALBUQUERQUE, NEW MEXICO

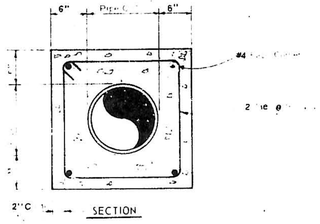
YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

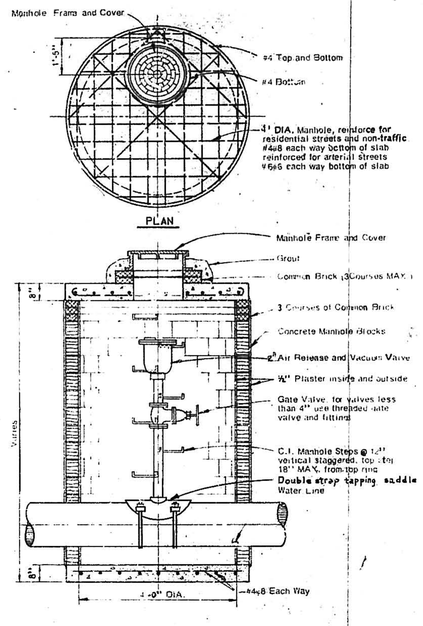
YALE WELLS NOS. 3 & 4 AND CHLORINATOR BUILDING

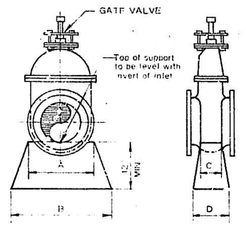
ELECTRICAL PLANS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

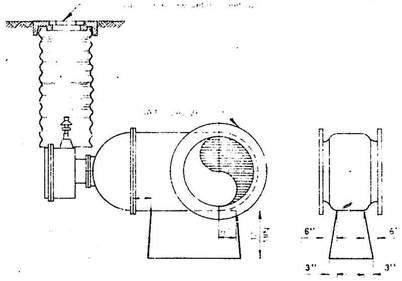
SCALE	DATE	DRAWN:	SHEET 17
AS SHOWN	APRIL 73	CHECKED: G.A.J.	OF 20

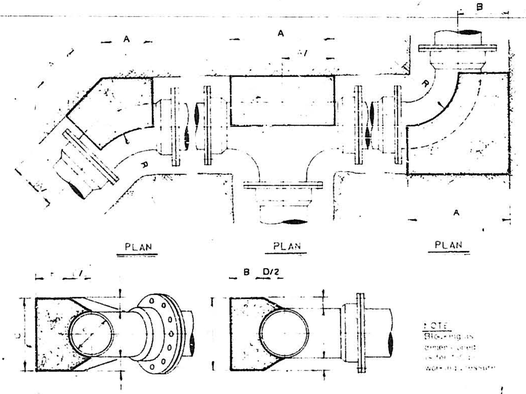






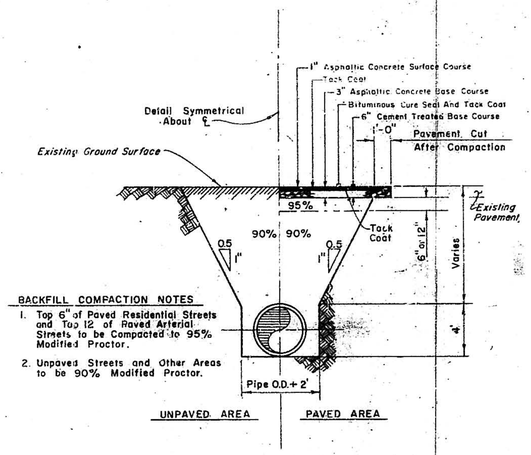
VALVE SUPPORT TABLE				
VALVE SIZE	A	B	C	D
6	12"	22"	4"	8"
8	14"	24"	4"	8"
12	21"	33"	6"	12"
24	32"	44"	12"	18"
30	38"	50	12"	18"
36	45"	52"	12"	18"



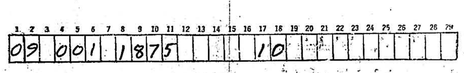


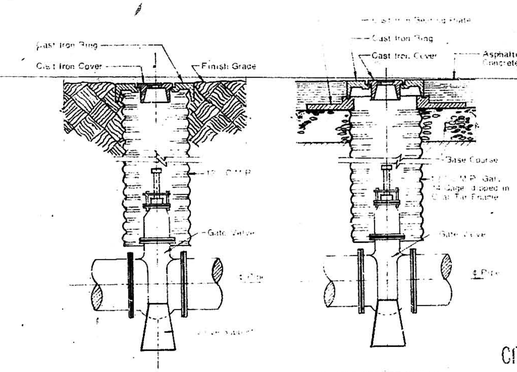
CONCRETE BLOCKING TABLE FOR TEES AND BENDS													
PIPE DIA.	11¼°			22½°			45°			90° TEE			R RADIUS
	A	B	C	A	B	C	A	B	C	A	B	C	
4"	2.5	12	10	4	12	10	5	12	16	10	12	28	Function of Type of Pipe Supplied
6"	3.5	12	12	5	12	16	5	12	3	13	12	36	
8"	5.5	12	16	6	12	21	11	12	24	26	12	38	
10"	6.5	12	20	8	12	25	12	12	33	37	15	48	
12"	7.5	12	24	10	18	28	15	18	37	34	18	51	
14"	10	18	28	12	18	31	15	12	48	43	24	65	

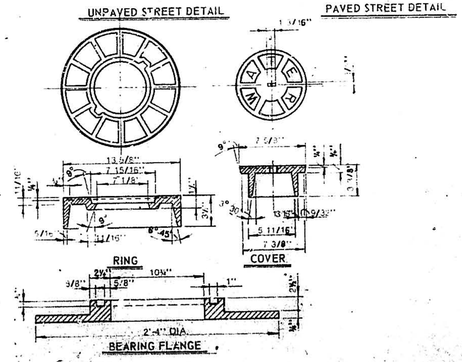
TABLE OF RIGID PIPE LENGTHS						
PIPE DIA.	LENGTH REQUIRED					
	Dead End	60 to 90	30 to 60	15 to 30	15 & less	Tees
16"	103'	52'	22'	7'	2'	46'
18"	112'	60'	24'	10'	5'	52'
20"	115'	69'	27'	12'	7'	59'
24"	170'	86'	48'	32'	15'	86'



TYPICAL TRENCHING DETAIL







AS CONSTRUCTED

CITY OF ALBUQUERQUE

CONTRACTOR

ALBUQUERQUE, NEW MEXICO

YALE WELL EQUIPMENT 1973
(NORTH VALLEY WATER SYSTEM)

PIPING DETAILS

GORDON HERKENHOFF & ASSOCIATES, INC.
CONSULTING ENGINEERS
ALBUQUERQUE NEW MEXICO

SCALE	DATE	DRAWN: C.L.H.	SHEET 16
NOT TO SCALE	FEB. 1973	CHECKED: G.A.J.	OF 120

PLAN — SURVEYED — PLOTTED — NOTE BOOK — NO. — DATE — BY

PROFILE — SURVEYED — PLOTTED — NOTE BOOK — NO. — DATE — BY — CHKD. — CURVES CHECKED — ALIGNMENT CHECKED — RT. OF WAY CHECKED — R.R.'s NOTED — STRUCTURE NOTATIONS CHKD.

MANHOLE DATA

S.D.M.H. #1
Rim El. 5136.09
30" E. El. 31.31
30" W. El. 31.29

S.M.H. #1
Rim El. 5137.07
10" N. El. 31.27
10" S. El. 31.31

S.M.H. #2
Rim El. 5137.16
48" N. El. 26.01
48" S. El. 25.96

MANHOLE DATA

S.D.M.H. #3
Rim El. 5138.27
48" N. El. 26.95
48" S. El. 26.00
18" E. El. 33.97
18" W. El. 32.57

S.M.H. #2
Rim El. 5138.25
15" N. El. 30.42
10" S. El. 30.45

S.M.H. #3
Rim El. 5138.25
10" N. El. 30.42
15" S. El. 30.45

MANHOLE DATA

S.D.M.H. #4
Rim EL. 5137.07
14" E. El. 33.57
48" S. El. 27.92
48" N. El. 27.93
Top 18" pipe El. 30.53
14" S.E. El. 33.37
14" N.E. El. 32.47

MANHOLE DATA

S.D.M.H. #5
Rim El. 5138.41
48" S. El. 29.17
48" N. El. 29.46
14" E. El. 34.31
14" W. El. 32.81

S.M.H. #4
Rim El. 5136.76
15" S. El. 24.38
21" N El. 24.04
21" W. El. 24.04

MANHOLE DATA

S.D.M.H. #6
Rim El. 5145.64
48" S. El. 32.19
48" N. El. 32.24

S.M.H. #5
Rim El. 5145.67
21" S. El. 27.72
21" N. El. 27.82

S.D.M.H. #7
Rim El. 5146.10
48" N. El. 32.70
48" S. El. 32.60
24" E. El. 38.70
14" N.E. El. 40.60

MANHOLE DATA

S.M.H. #7
Rim EL. 5150.83
18" N. El. 39.80
18" S. El. 39.75
8" E. El. 42.32

S.M.H. #8
Rim El. 5153.98
8" W. El. 44.78
18" S. El. 38.12
18" E. El. 38.40

S.D.M.H. #10
Rim El. 5155.74
24" S. El. 45.66
48" N. El. 43.32
48" E. El. 44.34

S.M.H. #9
Rim El. 5155.99
10" E. El. 45.31
10" N. El. 45.22
8" S. El. 49.51

S.D.M.H. #10
Rim El. 5157.86
10" S. El. 44.81
10" N. El. 44.76
10" E. El. 44.80

MANHOLE DATA

S.D.M.H. #8
Rim EL. 5146.33
36" N. El. 33.78
48" S. El. 33.42
14" W. El. 41.43
14" E. El. 41.73

S.D.M.H. #9
Rim El. 5147.79
36" E. El. 37.84
36" S. El. 36.99
14" NE El. 43.59
14" SE. El. 43.89
14" NW. El. 43.19

S.M.H. #6
Rim El. 5147.69
18" N. El. 33.33
18" S. El. 33.22

MATCH LINE STA. 4+00

MATCH LINE STA. 16+00

Existing O.H. Line

Sta. 0+00 Tag

Exist Wash line

Service Pole

℄ Survey and Back of curb

YALE WELL NO 3

P.T. STA. 2+64.28
Δ = 0°15'10" LT.

STATION EQUATION
Sta. 2+58 Back =
Sta. 2+70 Ahead

KATHRYN AVE. S.E.

Sta. 0+06
1-14" 90° Bend Blocking

Sta. 2+58 14" 90° Bend
Deflect 1 Joint Blocking

Sta. 4+25
1-2" Air Release and Vacuum Valve and Box

Single "C" Inlet

Sta. 7+92
Deflect 3 Joints

SOUTHERN AVE. S.E.

Sta. 8+82
Deflect 3 Joints

Sta. 12+06
Deflect 3 Joints

Block Bldg.

Conc. S.W.

Light P.

STADIUM BLVD S.E.

BUENA VISTA DR. S.E.

Inlet

Sta. 18+18
Deflect 3 Joints

Sta. 19+62
Deflect 4 Joints

Sta. 20+88
Deflect 4 Joints

Sta. 21+90
1-14" 45° Bend Blocking

Sta. 22+80
1-14" 45° Bend Blocking

Sta. 27+78
Deflect 4 Joints

Sta. 30+25
1-2" Air Release and Vacuum Valve and Box

Sta. 32+25
1-20"x14" Reducer
1-14" Butterfly Valve
1-Valve Box
Connect to Exist. 20"x20"x12" Tee.
Connect New Control Cable to Exist. Control Cable

Telephone Cable Marker Post

6' Concrete Sidewalk

Single "C" Inlet

End of Asphalt

P.I. Sta. 22+46.78 H.A.T.
Δ = 44°54'36" LT.

2-4" Steel Poles

6' Non-Climable Chain Link Fence

Concrete Driveway Pad

Power & Tele. Pole

3½ Concrete walk

18" Cut Trench

14" Collector Line with Control Cable and Identification Tape

14" Collector Line

12" Sewer

2-58 Back EQUATION 2+70 Ahead

4+25 Air Release Valve

4+25 Connect to exist. 20"x20"x12" Tee

7+00 Match Line

16+00 Match Line

5140
5130
5120
5160
5150
5140

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

AS CONSTRUCTED

09 001 11775 16 5.6.51

CITY OF ALBUQUERQUE

CONTRACTOR

PLATE 2 - DOUBLE PLAN - PROFILE - DOTTED
CHARLES BRUNING COMPANY
MADE IN U.S.A.

REVISED OCTOBER 19, 1973

YALE WELL EQUIPMENT 1973 - NORTH VALLEY WATER SYSTEM

SHEET 19 OF 21

Bench Mark: Chiseled "□" W. return N/W Corner Hazeldine and Spruce Elev. 5081.06

Ex. 12" Gate Sta. 7+20.09 Well Drain Line Surv.

1-14" 90° Bend Blocking

STA. 0+00 AHD. STA. 0+88.24 BK.

SPRUCE ST S.E.

1-1" Air Release and Vacuum Valve

ROOSEVELT PARK

Riser Pole Elig → Yale Well 4

P.I. STA. 0+83.65 Δ=33°00' Rt. 1-14" Gate Valve 1-14" 22½° Bend 1-14" Check Valve 1-14" 11¼° Bend 1-Valve Box Blocking

P.I. STA 1+76.12 Δ=50°55'28" Lt. 1-14" 45° Bend Blocking-Deflect 2 Joints

P.I. STA. 3+60.00 Δ=18°24'25" Rt. 1-14" 22½° Bend Blocking-Deflect 2 Joints

Single "c" Inlet

Steel Barricade

Gas line patch

Bench Mark: Chiseled "□" Top of Inlet N. Curb of Hazeldine El. = 5088.56

P.I. STA. 8+02.53 Δ=44°56' Rt. 1-14" 45° Bend Blocking

P.I. STA. 8+42.00 Δ=45°00'00" 1-14" 45° Bend Blocking

Sta. 9+90 Deflect 6 Joints

Sta. 11+34 Deflect 6 Joints

HAZELDINE AVE. S.E.

Bench Mark: Chiseled "X" S. Curb-Hazeldine opposite Sta 16+00 Elev. 5132.08

SYCAMORE ST S.E.

MAPLE ST. S.E.

ASH ST. S.E.

PINE ST. S.E.

MATCH LINE STA. 16+00

MANHOLE DATA

SMH #1
Rim Elev. 5096.43
8" S. Inv. El. 88.13
8" W. Inv. El. 88.05
6" N. Inv. El. 88.14
8" E. Inv. El. 88.11

SMH #2
Rim Elev. 5113.63
8" W. Inv. El. 03.45
8" E. Inv. El. 03.47
8" N. Inv. El. 08.78

MANHOLE DATA

SMH #3
Rim Elev. 5128.36
8" W Inv. El. 18.90
8" E. Inv. El. 18.94
8" N. Inv. El. 19.94

SMH #4
Rim Elev. 5143.70
48"-Flow Line El. 31.40

SMH #5
Rim Elev. 5156.59
Inv. El. 43.09

MANHOLE DATA

SMH #6
Rim Elev. 5156.86
42"-Flow Line El. 48.61

SMH #8
Rim Elev. 5157.82
8" S. Inv. El. 44.04
8" N. Inv. El. 43.99

SMH #7
Rim Elev. 5156.87
Inv. El. 45.07

Profile ℄ Survey

14" Collector Line

8" Sanitary

Water

Sta. 9+90 Deflect 6 Joints

Sta. 11+34 Deflect 6 Joints

Profile ℄ Survey

14" Collector Line

+25 1-1" Air Release and Vacuum Valve

0+00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16+00

5100 5090 5080 5070 5110 5100 5130 5120 5110 5100 5140

Bench Mark: Chiseled "X" S. Curb-Hazeldine opposite Sta 16+00 Elev. 5132.08

P.I. Sta. 19+31.92 Δ=10°39'50" Lt. Blocking Deflect 1 Joint

Sta. 21+92 Blocking

Sta. 21+92 to Sta. 24+08 Deflect 18 Joints

Sta. 24+08 BK. = EQUATION Sta. 25+30

Sta. 16+25 1-1" Air Release and Vacuum Valve w/ Box

P.I. Sta. 16+40.47 Δ=37°32'41" Rt. 1-14" 45° Bend 1-14" 22½° Bend Blocking Deflect 1 Joint

P.I. Sta. 23+06.61 Δ=56°48'04"

Concrete Encased 42" Sanitary Sewer-50' Long

UNIVERSITY PL. S.E.

UNIVERSITY BLVD S.E.

COAL AVE. S.E.

MATCH LINE STA. 16+00

MATCH LINE STA. 26+00

Curb and Gutter W/ 4'-2" Sidewalk

MANHOLE DATA

SMH #1
Rim Elev. 5097.29
36" E. Inv. El. 91.41
36" N. Inv. El. 91.45
Bottom El. 89.69

SMH #2
Rim Elev. 5114.35
36" E. Inv. El. 05.90
36" W. Inv. El. 05.10
Bottom El. 04.75

SMH #3
Rim Elev. 5128.95
12" N. Inv. Elev. 23.50
48" E. Inv. El. 20.33
36" W. Inv. El. 20.08

Sta. 30+96 1-14" 45° Bend Blocking

Tele MH #1
Rim Elev. 5112.93
5 Ducts S.-2 Cables El. 07.83
2 Ducts E.-2 Cables
5 Ducts N. 1 Cables El. 07.83
Bottom El. 03.13

Sta. 32+50 1-20"x20"x20 Tee 2-20" Butt Straps 1-20" Butterfly Valve 1-14" Butterfly Valve 2-Valve Boxes Blocking

SMH #5 SMH #7 SMH #6

Sta. 30+82 1-14" 45° Bend Blocking

Sta. 32+25 1-2" Air Release and Vacuum Valve

Sta. 32+50 Connect New Control Cable to Exist. Cont. Cable

COAL AVE. S.E.

BUENA VISTA DR. S.E.

ASPHALT PARKING AREA (With Concrete Bumpers)

Bench Mark: Chiseled "X" S.E. return Buena Vista and Coal S.E. El. 5158.27

Profile ℄ Survey

14" Collector Line

+25 1-1" Air Release and Vacuum Valve

8" Sanitary

6" Water

12" Water

SCALE 1" = 50' Horiz. 1" = 10' Vert.

5160 5150 5140 5130 5120

16+00 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 32+50

AS CONSTRUCTED

CITY OF ALBUQUERQUE

CONTRACTOR

09 001 2075 16 57152

PLAN — SURVEYED, PLOTTED, ELEVATIONS CHECKED, NOTE BOOK, ALIGNMENT CHECKED, NO., RT. OF WAY CHECKED, BY, DATE

PROFILE — SURVEYED, PLOTTED, ELEVATIONS CHECKED, NOTE BOOK, R. M. NOTED, NO., STRUCTURE NOTATIONS CHECKED, BY, DATE

PLATE 2 - DOUBLE PLAN - PROFILE - DOTTED CHARLES BRUNING COMPANY MADE IN U. S. A.

REVISED OCTOBER 19, 1973

YALE WELL EQUIPMENT 1973—NORTH VALLEY WATER SYSTEM SHEET [illegible] OF