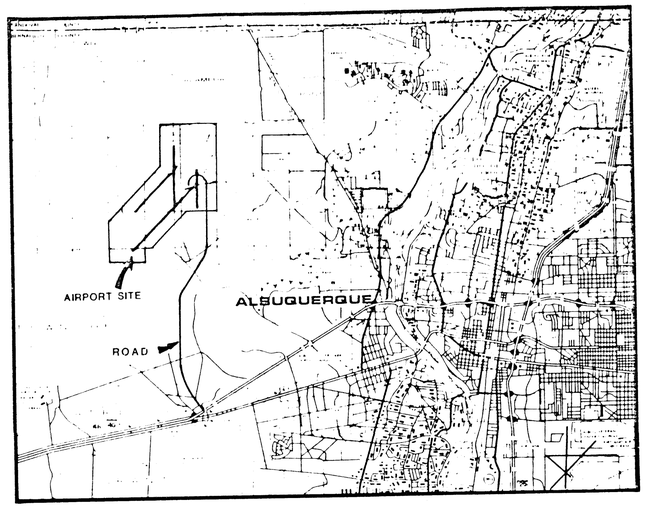


VICINITY MAP
SCALE : 1" = 2 MILES

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION
PLANS FOR CONSTRUCTION OF

DOUBLE EAGLE II AIRPORT
WATER PUMPING FACILITIES

PROJECT NO. 3667

SHEET

1	
2	PIPING
3	PIPING ELEVATION
4	NEW SLAB & PEDESTAL PLAN
5	DETAILS
6	ELECTRICAL PLAN, LIGHNING PROTECTION SYSTEM AND WELL PUMP INTERLOCK
7	REMOVALS
8	REMOVALS

APPROVAL OF AIR SAFETY DESIGNS
CHIEF CONSTRUCTION ENGINEER
DATE 3-10-89

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPT.	DATE	USER DEPT.	DATE

APPROVAL OF REVISIONS

NOTE: AS-BUILT CHANGES ON THESE PLANS WERE DRAFTED BY BOHANNAN-HUSTON, INC. FROM MARK-UPS PROVIDED BY THE CITY OF ALBUQUERQUE.

APPROVED FOR CONSTRUCTION
CITY ENGINEER 3/31/89 DATE

26 36670190

BHI JOB # 88283.20

CONSTRUCTION NOTES:

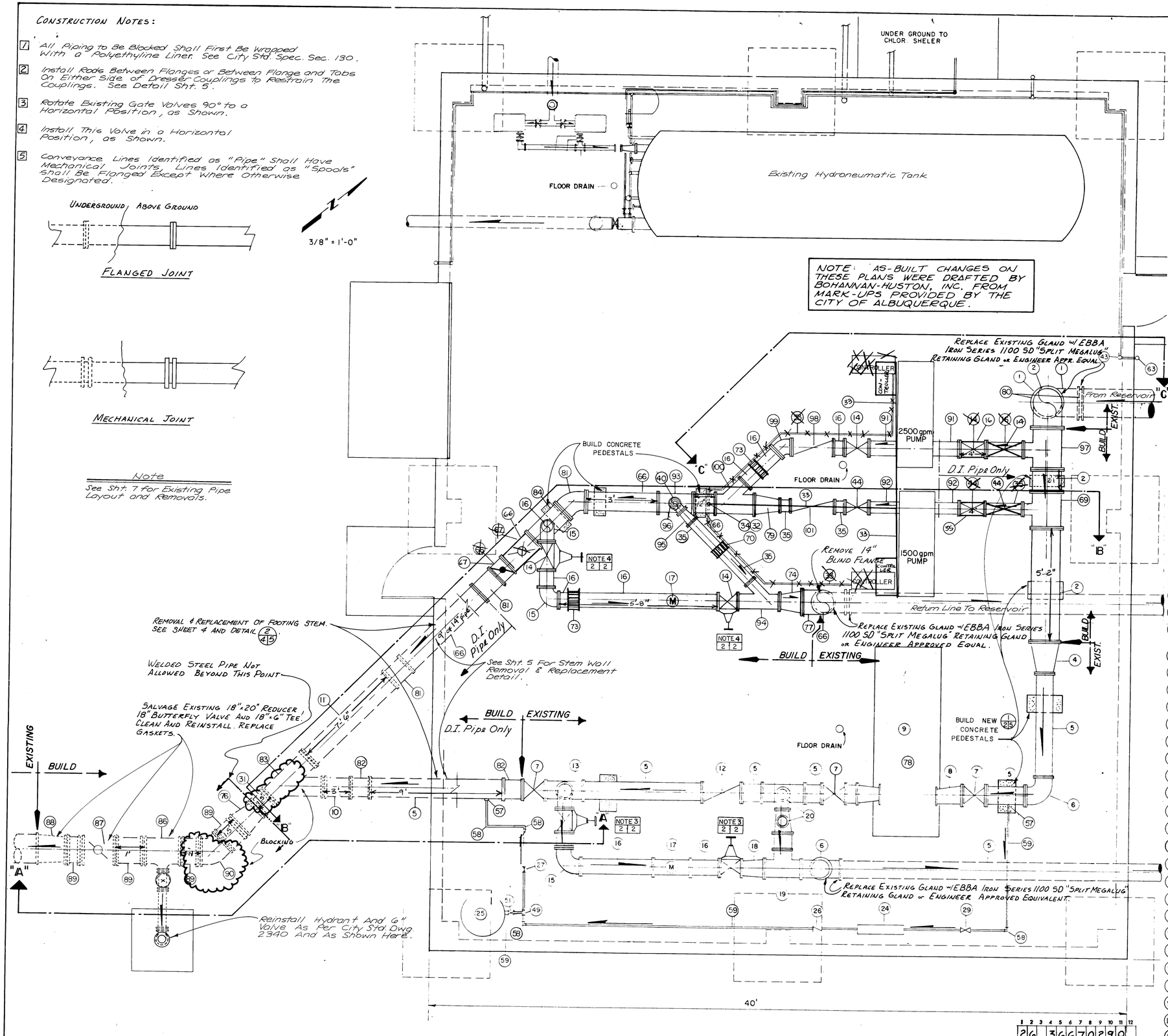
1. All Piping to Be Blocked Shall First Be Wrapped With a 8 Mil Polyethyline Liner. See City Std. Spec. Sec. 130.
2. Install Rods Between Flanges or Between Flange and Tabs On Either Side of Dresser Couplings to Restrain The Couplings. See Detail Sht. 5.
3. Rotate Existing Gate Valves 90° to a Horizontal Position, as Shown.
4. Install This Valve in a Horizontal Position, as Shown.
5. Conveyance Lines Identified as "Pipe" Shall Have Mechanical Joints, Lines Identified as "Spools" Shall Be Flanged Except Where Otherwise Designated.

FLANGED JOINT

MECHANICAL JOINT

Note
See Sht. 7 for Existing Pipe Layout and Removals.

3/8" = 1'-0"



46	3/4" TAP
47	3/4" PVC BALL VALVE
48	3/4" PVC WATER LINE TO CHLORINATION EQUIPMENT
49	2" TEE
50	1" X 2" REDUCER
51	2" BALL VALVE
52	8" 90° BEND
53	2 1/2" PVC CONDUIT FOR POWER
54	6"X3" TEE WITH 6" BLIND FLANGE
55	3" 90° BEND
56	3"X 3" TEE
57	2" TAP
58	2" - 90° ELBOW
59	2" PIPE
60	2" PVC POWER CONDUIT TO WELL
61	1 1/4" TAP
62	1" TAP
63	FROST PROOF HOSE BIB
64	2" DRAIN WITH 2" VALVE
65	3" X 6" REDUCER
66	14" SPOOL
67	14" BUTTERFLY VALVE
68	14" FLEXIBLE COUPLING
69	20" x 8" TEE
70	8" RESTRAINED DRESSER COUPLING
71	14" CHECK VALVE
72	14" RETAINER GLAND
73	10" RESTRAINED DRESSER COUPLING
74	10" x 14" ECCENTRIC REDUCER
75	14" x 14" TEE
76	14" x 18" REDUCER
77	14"- 90° BEND
78	4000 GPM HORIZONTAL FIRE PUMP WITH MOTOR DRIVE
79	8" x 14" REDUCER
80	18" RETAINER GLAND
81	14" - 45° BEND
82	12" - 45° BEND
83	14" x 12" WYE
84	14" x 10" TEE
85	NOT USED
86	18" x 6" TEE
87	18" BUTTERFLY VALVE
88	18" x 20" REDUCER
89	18" PIPE
90	18" - 45° BEND
91	10" FLEX COUPLING
92	8" FLEX COUPLING
93	14" x 6" TEE
94	10" x 8" WYE
95	6"x8" WASTE CONE REDUCER
96	PRESSURE RELIEF VALVE-6"
97	20" x 10" TEE
98	10" CHECK VALVE (TILTED DISC)
99	10" - 45° BEND
100	14" x 10" WYE
101	8" CHECK VALVE (TILTED DISC)

FITTING SCHEDULE

1	20" 90° BEND
2	20" SPOOL
3	20" X 14" TEE
4	20" X 12" REDUCER
5	12" SPOOL
6	12" 90° BEND
7	12" GATE VALVE
8	ECCENTRIC REDUCER (AS REQRD)
9	3500 GPM HORIZONTAL FIRE PUMP WITH MOTOR DRIVE
10	12" MJ/FLNG. PIPE
11	14" MJ/FLNG. PIPE
12	12" CHECK VALVE
13	12"X10" TEE
14	10" GATE VALVE
15	10" 90° BEND
16	10" SPOOL
17	10" FLOW METER
18	10"X12" REDUCER
19	12"X12" TEE
20	PRESSURE RELIEF VALVE WITH 8"X12" CLOSED WASTE CONE
21	18"X12" TEE
22	18" SPOOL
23	18" 90° BEND
24	JOCKEY PUMP
25	HYDROPNEUMATIC TANK
26	2" CHECK VALVE
27	2" GATE VALVE
28	1" PIPE
29	2" GATE VALVE
30	1 1/4" PIPE
31	14" PIPE
32	3/8" COPPER TEE
33	3/8" COPPER TUBING
34	3/8" TAP
35	8" SPOOL
36	60 GPM BOOSTER PUMPS
37	3" SPOOL
38	3" CHECK VALVE
39	3" GATE VALVE
40	6" SPOOL
41	AIR COMPRESSOR
42	3" PVC CONDUIT, SCHEDULE 40
43	INTERIOR HOSE BIB
44	8" GATE VALVE
45	PIPE SUPPORTS

EXISTING FACILITIES DESIGNED BY
BOVAY ENGINEERS, INC.
ALBUQUERQUE
HOUSTON • SPOKANE • AUSTIN • BATON ROUGE

AS BUILT INFORMATION
CONTRACTOR STERLING BROS.
WORK STARTED BY N/A DATE
WORK ACCEPTED BY RAY BACA DATE
FIELD DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION DATE
RECORDED BY
NO

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY DATE
NO.

ENGINEER'S SEAL
GERBRANDT HERALD NEW MEXICO REGISTERED 5241 PROFESSIONAL ENGINEER

NO	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	HBG
		DRAWN BY	DHG
		CHECKED BY	

DESIGNED BY HBG DATE 2/10/89
DRAWN BY DHG DATE 2/10/89
CHECKED BY DATE

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

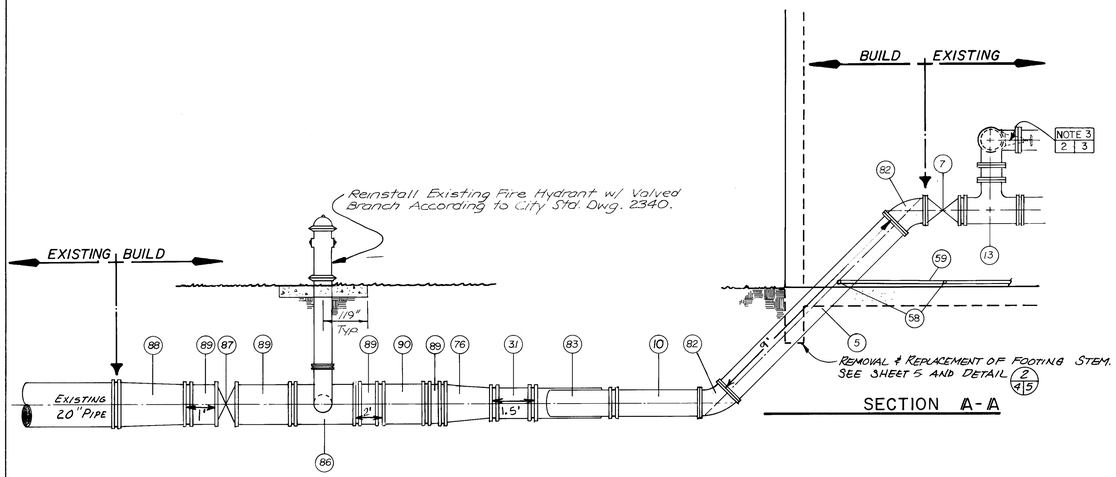
TITLE: PIPING PLAN

DOUBLE EAGLE II AIRPORT BHI JOB # 88283.20

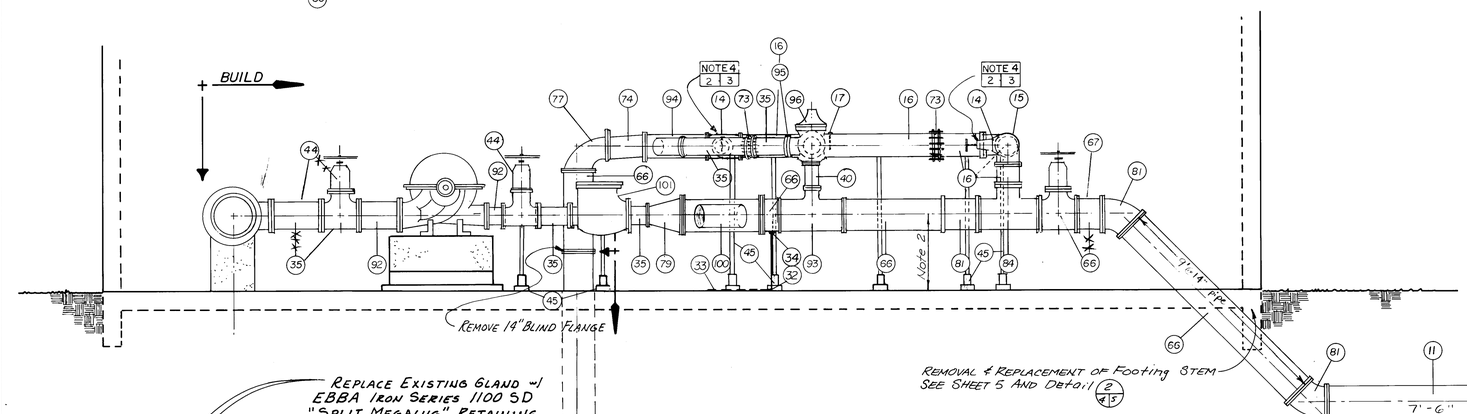
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/89	Liquid Waste	N/A	
A.C.E.-Design		5-31-89	Traffic	N/A	
A.C.E.-Hydrology	N/A		Water	N/A	
Aviation		5-31-89			

DRAWING NO 3667 MAP NO D6 SHEET 2 OF 8

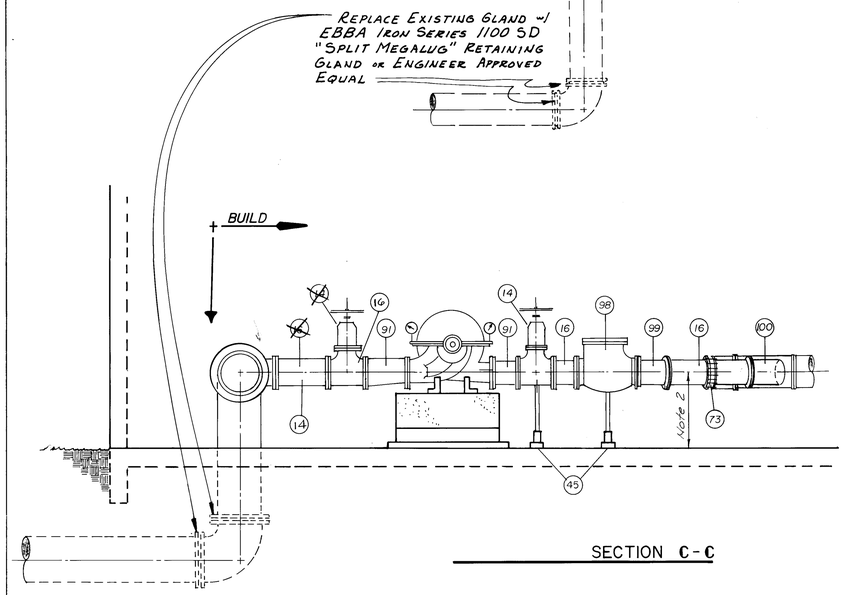
1 2 3 4 5 6 7 8 9 10 11 12
2 6 3 6 6 7 0 2 9 0



SECTION A-A



SECTION B-B



SECTION C-C

NOTE: AS-BUILT CHANGES ON THESE PLANS WERE DRAFTED BY BOHANNAN-HUSTON, INC. FROM MARK-UPS PROVIDED BY THE CITY OF ALBUQUERQUE.

1 2 3 4 5 6 7 8 9 10 11 12
2 6 3 6 6 7 0 3 9 0

Notes

1. See Sht. 2 for Keyed Notes
2. Height of Piping Center Line Above Floor Shall Conform to The Height of The Existing Section Header Center Line.
3. Where the Drawings and Contract Documents Call for a Specific Brand or Material or Equipment and The Contractor Installs a Different Brand, Even with Engineer's Approval, the Contractor Shall Be Responsible for Any Additional Cost in Purchase and/or Installation of the Item.

FHWA Region No.			SHEET NO.	TOTAL SHEETS
6	NEW MEXICO			

AS-BUILT INFORMATION
CONTRACTOR Steelman Bros.
WORK STARTED BY JA DATE
INSPECTOR'S ACCEPTANCE BY Ray Ca DATE
FIELD VERIFICATION BY DATE
CORRECTED BY DATE 1/90

MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
DEREK JOHNSON NEW MEXICO 7719 REGISTERED PROFESSIONAL ENGINEER
Derek Johnson 2-21-89

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN
DESIGNED BY HBG DATE 10-88
DRAWN BY DHG DATE 11-88
CHECKED BY DATE

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

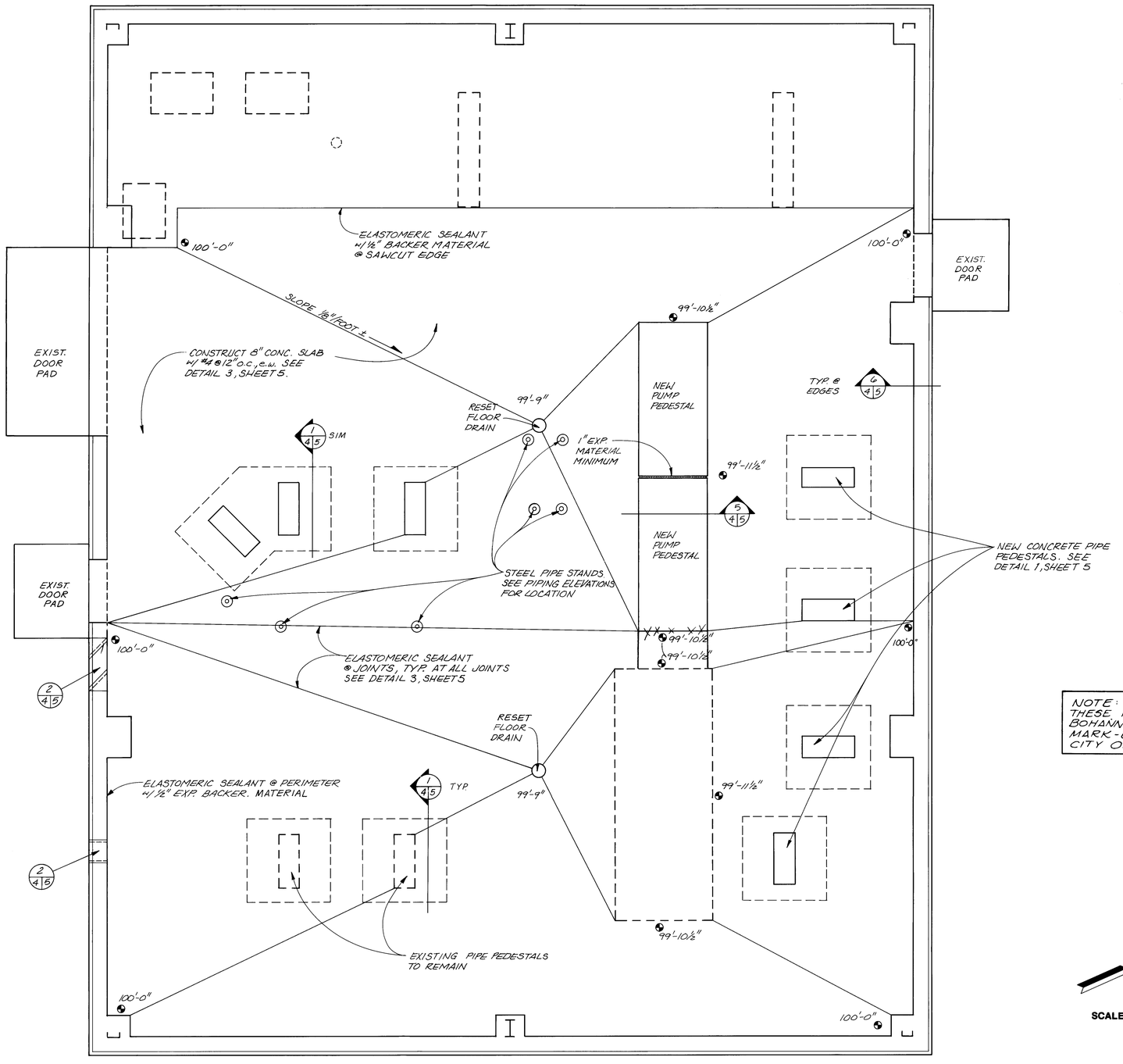
TITLE: PIPING ELEVATIONS

DOUBLE EAGLE II AIRPORT — BHI JOB # 88283.20

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/89	Liquid Waste	N/A	
A C E - Design		5-31-89	Traffic	N/A	
A C E - Hydrology	N/A		Water	N/A	
Aviation		5-31-89			

DRAWING NO. 3667 | MAP NO. D 6 | SHEET 3 OF 8

BRUNING



CONSTRUCTION NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND QUANTITIES.
2. CONTRACTOR SHALL LOCATE, ISOLATE AND PROTECT ALL PLUMBING AND ELECTRICAL LINES DURING DEMOLITION AND RECONSTRUCTION.
3. SLAB SAWING SHALL BE DONE PER THE SPECIFICATIONS.
4. PRIOR TO PLACEMENT OF THE NEW SLAB, THE SOIL SUBGRADE SHALL BE TESTED FOR EXCESSIVE MOISTURE CONTENT USING ASTM D-2216 (OPTIMUM MOISTURE + 3%) TO A DEPTH OF NOT LESS THAN 3 FEET. IF EXCESSIVE MOISTURE IS FOUND, THE SOIL SHALL BE REMOVED TO A DEPTH OF 3 FEET WITHIN THE AFFECTED AREA, DRIED TO OPTIMUM MOISTURE, REPLACED, AND COMPACTED TO A MINIMUM OF 95% OPTIMUM DENSITY. IF NO EXCESSIVE MOISTURE IS FOUND, THE TOP 1 FOOT SHALL BE SCARIFIED, WETTED TO OPTIMUM MOISTURE, AND COMPACTED TO A MINIMUM OF 95% OPTIMUM DENSITY (ASTM D-1557).
5. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, BRACING, SUPPORTS, AND FOUNDATIONS FOR ALL PIPING, PUMPS, MACHINERY, EQUIPMENT AND TRENCHING DURING ALL EXCAVATION, PIPING, BACKFILLING AND CONCRETE CASTING.
6. PIPE STANDS SHALL BE NEENAH A-7510 TYPE A WITH A MINIMUM OF FOUR 5/8" DIA. X 6" LONG ANCHORS, OR APPROVED EQUAL.
7. CONCRETE SHALL BE PER CITY OF ALBUQUERQUE STANDARD SPECIFICATION SECTION 101 WITH A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
8. REINFORCING STEEL SHALL BE PER CITY OF ALBUQUERQUE STANDARD SPECIFICATION SECTION 102, WITH AN Fy=60 KSI.
9. ELASTOMERIC SEALANT SHALL BE PER CITY OF ALBUQUERQUE STANDARD SPECIFICATION SECTION 107.4.2. BACKER MATERIAL SHALL BE PER MANUFACTURERS RECOMMENDATIONS.
10. REPLACEMENT OF THE BUILDING PANELS SHALL BE DONE BY THE CITY OF ALBUQUERQUE UPON COMPLETION OF THE RECONSTRUCTION. IT IS NOT INCLUDED IN THIS CONTRACT.
11. CONTRACTOR SHALL RESET ALL DRAINS TO MATCH FINISH FLOORS OF THE NEWLY CONSTRUCTED SLAB.
12. FOR JOINT DETAILS, SEE SHEET 5.

NOTE: AS-BUILT CHANGES ON THESE PLANS WERE DRAFTED BY BOHANNAN-HUSTON, INC. FROM MARK-UPS PROVIDED BY THE CITY OF ALBUQUERQUE.

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

F.H.W.A. Region No.			SHEET NO.	TOTAL SHEETS
6	NEW MEXICO			

AS-BUILT INFORMATION
CONTRACTOR Sterling Oaks
WORK STARTED BY n/a DATE
INSPECTOR'S ACCEPTANCE BY Ray Baca DATE
FIELD VERIFICATION BY DATE
DRAWINGS POSTED BY DATE /10
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
GORDON A. WALLWORK, JR. NEW MEXICO No. 7968 REGISTERED PROFESSIONAL ENGINEER
10-31-89

NO.	DATE	REMARKS
		REVISIONS
		DESIGN

DESIGNED BY GAW DATE 2-10-89
DRAWN BY AAG DATE 1-89
CHECKED BY HBG DATE 2-10-89

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

TITLE:
NEW SLAB & PEDESTAL PLAN

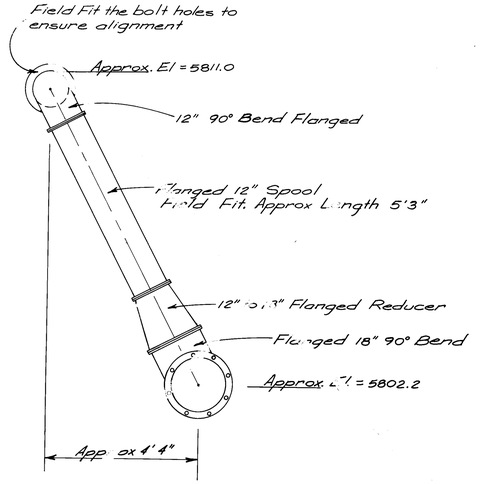
DOUBLE EAGLE II AIRPORT — BHI JOB # 88283.20

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/89	Liquid Waste	N/A	
A C E - Design		5-31-89	Traffic	N/A	
A C E - Hydrology	N/A		Water	N/A	
Aviation		5-31-89			

DRAWING NO. 3667 | MAP NO. D6 | SHEET 4 OF 8

1 2 3 4 5 6 7 8 9 10 11 12
2 6 3 6 6 7 0 4 9 0

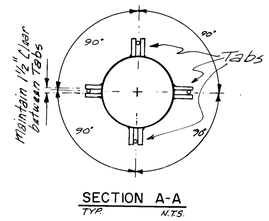
NOTE: AS-BUILT CHANGES ON THESE PLANS WERE DRAFTED BY BOHANNAN-HUSTON, INC. FROM MARK-UPS PROVIDED BY THE CITY OF ALBUQUERQUE.



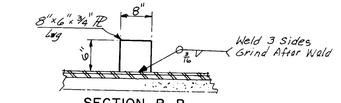
No Scale:

SECTION

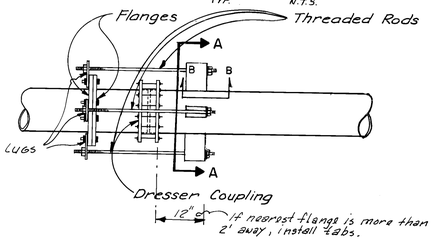
(4/2)



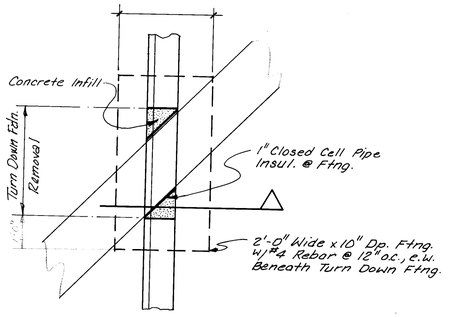
SECTION A-A
TYP. N.T.S.



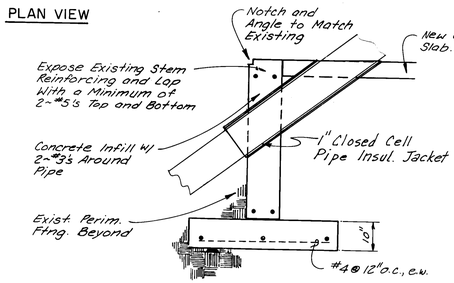
SECTION B-B
TYP. N.T.S.



(4/5) COUPLING RESTRAINT DETAILS

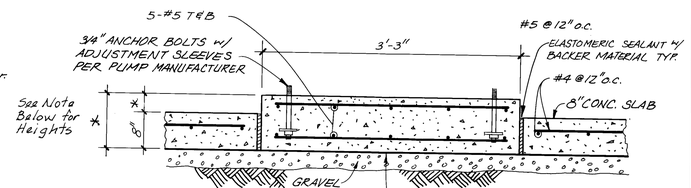


PLAN VIEW



SECTION VIEW

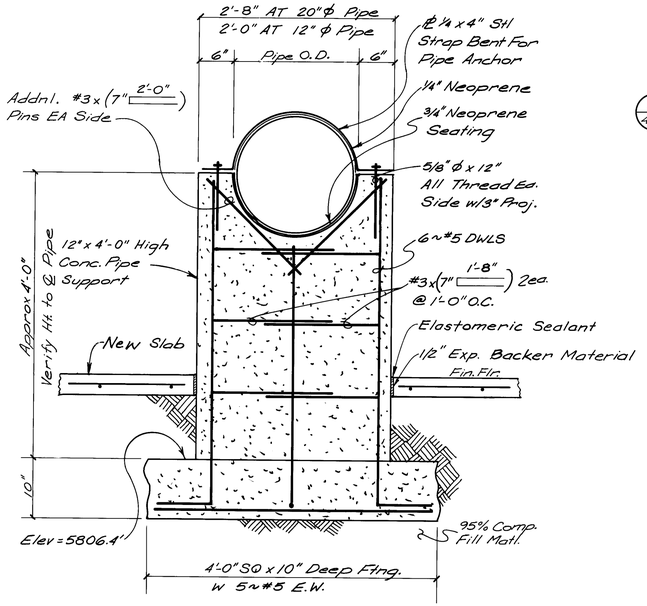
(2/4/5) STEM WALL REMOVAL/REPLACEMENT DETAIL



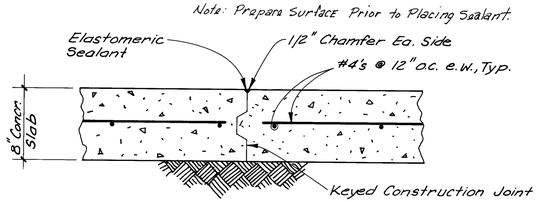
(5/4/5) TYPICAL PUMP PEDESTAL SECTION

The Height of the Pump Pedestal Shall be Determined According to the Following Formula:

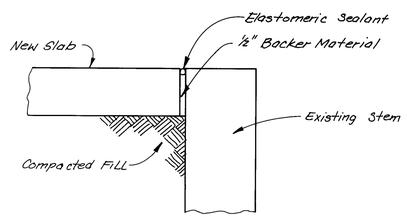
Intake Pipe Height Measured from Floor to Pipe ℄ Minus Height of Pump and Sled Measured from Bottom of Sled to Intake ℄ Minus Thickness of Grout as Recommended by Pump Manufacturer.



(1/4/5) NEW PIPE PEDESTAL



(3/4/5) CONSTRUCTION JOINT DETAIL



(6/4/5) JOINT SEALANT @ EXISTING STEM

GENERAL STRUCTURAL NOTES

1. Materials and workmanship shall conform to City of Albuquerque Standard Specifications for Public Works Construction, Latest Edition.
2. Concrete shall have a 28 day compressive strength of 3000 psi.
3. Reinforcing steel shall be 60 ksi, complying with ASTM 615. Minimum lap splice length shall be 30 bar diameters.
4. Contractor shall be responsible for designing and constructing any temporary pipe supports required during replacement of the existing pipe pedestals.
5. Contractor may submit a plan for City of Albuquerque approval, providing continuous reinforcing through joints located at warped slab lines.

F.H.W.A. Region No.			SHEET NO.	TOTAL SHEETS
6	NEW MEXICO			

AS-BUILT INFORMATION
CONTRACTOR Sterling Bros.
WORK STAKED BY N/A
INSPECTED WORKS ACCEPTANCE BY Ray Baca DATE
FIELD VERIFICATION BY DATE 1/16
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
ROGER A. WALSHOOD, JR. NEW MEXICO No. 7968 REGISTERED

REVISIONS	BY	DATE
DESIGN		DATE 1-89
DESIGNED BY GAW		DATE 1-89
DRAWN BY JAG		DATE 2-10-89
CHECKED BY HBG		

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

TITLE: DETAILS

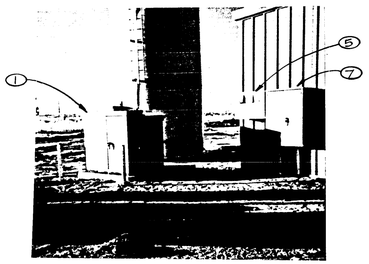
DOUBLE EAGLE II AIRPORT BHI JOB # 88283.20

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/89	Liquid Waste	N/A	
A C E - Design		5-31-89	Traffic	N/A	
A C E - Hydrology	N/A		Water	N/A	
Aviation		5-31-89			

DRAWING NO. 3667 MAP NO. D 6 SHEET 5 OF 8

1 2 3 4 5 6 7 8 9 10 11 12
2 6 3 6 6 7 0 5 9 0

JOB # 88283.20



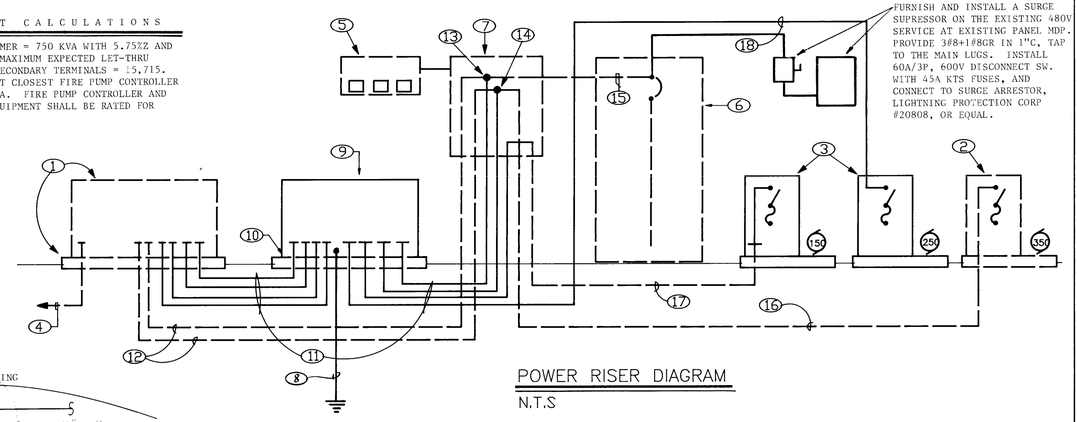
1 PHOTOGRAPH DETAIL

LOAD SUMMARY - 480V THREE PHASE		
EXISTING PANEL "MDP"	-	125 KW
EXISTING FIRE PUMP #3 (350 HP)	-	303 KW
NEW FIRE PUMP #1 (150 HP)	-	130 KW
NEW FIRE PUMP #2 (250 HP)	-	217 KW
TOTAL ESTIMATED CONNECTED LOAD	-	775 KW
TOTAL ESTIMATED DEMAND LOAD ASSUMING THAT ALL THREE FIRE PUMPS AND WELL PUMP COULD BE RUNNING SIMULTANEOUSLY. ONLY ONE FIRE PUMP WILL BE ENERGIZED AT A TIME (FIRE PUMPS WILL NOT BE STARTED SIMULTANEOUSLY, BUT COULD BE RUNNING SIMULTANEOUSLY SHOULD THERE BE A NEED)	-	775 KW

SHORT CIRCUIT CALCULATIONS

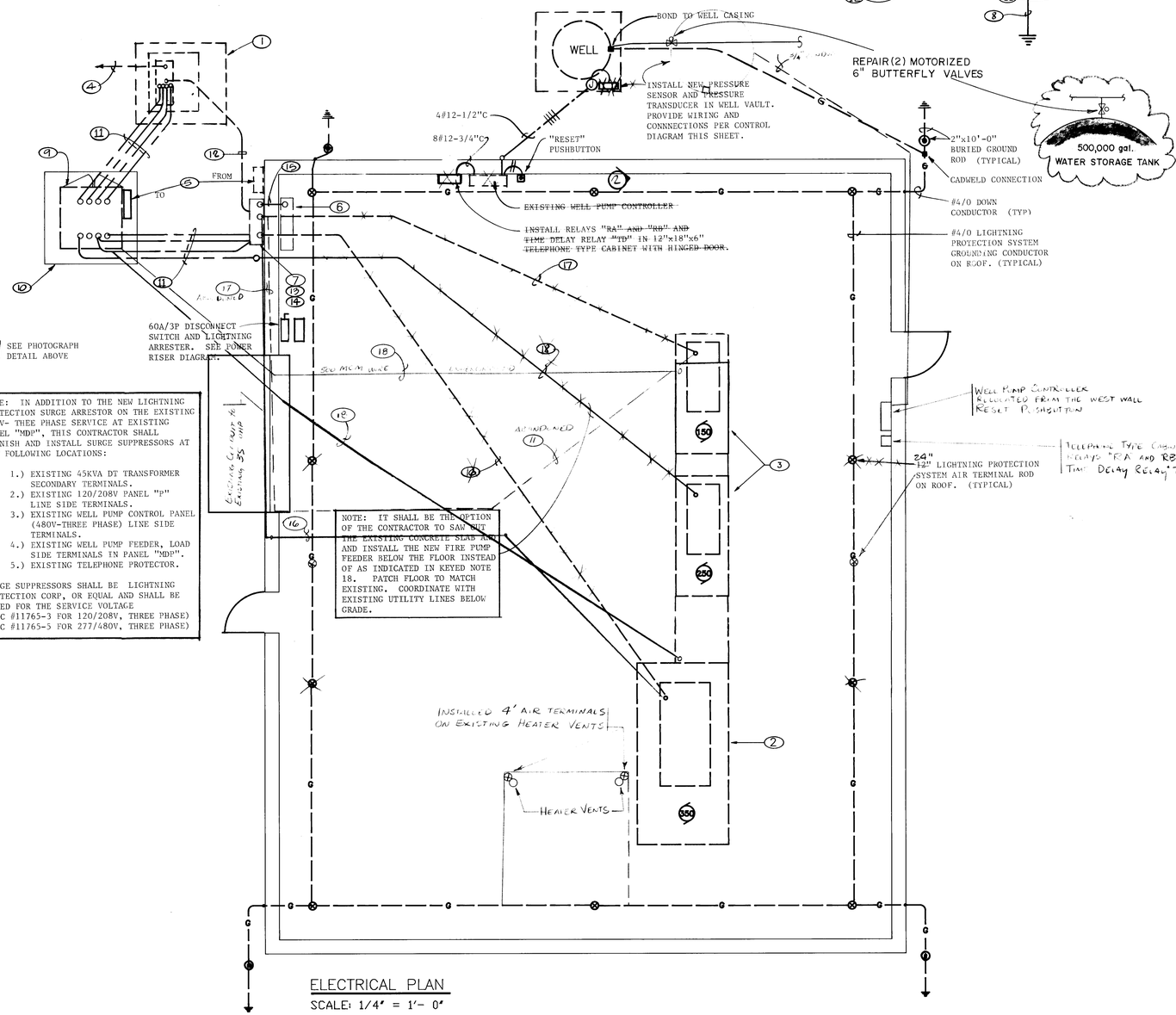
ASSUME BUILDING TRANSFORMER = 750 KVA WITH 5.75%Z AND UNLIMITED PRIMARY SCA. MAXIMUM EXPECTED LET-THRU CURRENT AT TRANSFORMER SECONDARY TERMINALS = 15,715. MAXIMUM EXPECTED FAULT AT CLOSEST FIRE PUMP CONTROLLER WILL BE LESS THAN 14,000A. FIRE PUMP CONTROLLER AND ASSOCIATED ELECTRICAL EQUIPMENT SHALL BE RATED FOR MINIMUM 14,000AIC.

NOTE: AS-BUILT CHANGES ON THESE PLANS WERE DRAFTED BY BOHANNAN-HUSTON, INC. FROM MARK-UPS PROVIDED BY THE CITY OF ALBUQUERQUE.



POWER RISER DIAGRAM

N.T.S



1 SEE PHOTOGRAPH DETAIL ABOVE

NOTE: IN ADDITION TO THE NEW LIGHTNING PROTECTION SURGE ARRESTOR ON THE EXISTING 480V- THEE PHASE SERVICE AT EXISTING PANEL "MDP", THIS CONTRACTOR SHALL FURNISH AND INSTALL SURGE SUPPRESSORS AT THE FOLLOWING LOCATIONS:

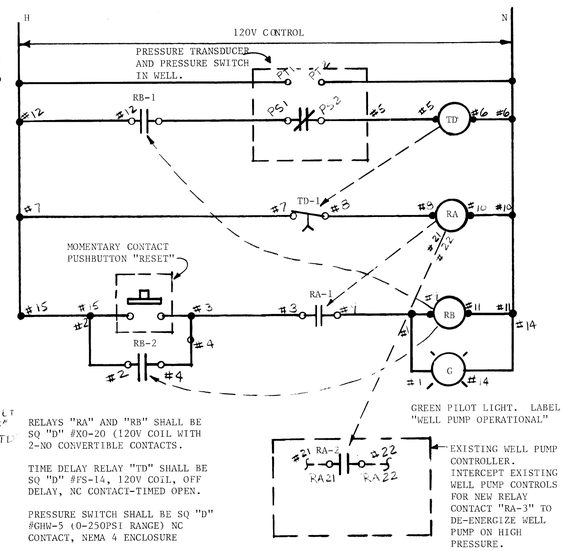
1.) EXISTING 45KVA DT TRANSFORMER SECONDARY TERMINALS.
2.) EXISTING 120/208V PANEL "P" LINE SIDE TERMINALS.
3.) EXISTING WELL PUMP CONTROL PANEL (480V-THREE PHASE) LINE SIDE TERMINALS.
4.) EXISTING WELL PUMP FEEDER, LOAD SIDE TERMINALS IN PANEL "MDP".
5.) EXISTING TELEPHONE PROTECTOR.

SURGE SUPPRESSORS SHALL BE LIGHTNING PROTECTION CORP, OR EQUAL AND SHALL BE RATED FOR THE SERVICE VOLTAGE (LPC #11765-3 FOR 120/208V, THREE PHASE) (LPC #11765-5 FOR 277/480V, THREE PHASE)

NOTE: IT SHALL BE THE OPTION OF THE CONTRACTOR TO SAW CUT THE EXISTING CONCRETE SLAB AND AND INSTALL THE NEW FIRE PUMP FEEDER BELOW THE FLOOR INSTEAD OF AS INDICATED IN KEYED NOTE 18. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH EXISTING UTILITY LINES BELOW GRADE.

ELECTRICAL PLAN

SCALE: 1/4" = 1'- 0"



RELAYS "RA" AND "RB" SHALL BE SQ "D" #X0-20 (120V COIL WITH 2-NO CONVERTIBLE CONTACTS.

TIME DELAY RELAY "TD" SHALL BE SQ "D" #PS-14, 120V COIL, OFF DELAY, NC CONTACT-TIMED OPEN.

PRESSURE SWITCH SHALL BE SQ "D" #GHW-5 (0-250PSI RANGE) NC CONTACT, NEMA 4 ENCLOSURE

GREEN PILOT LIGHT. LABEL "WELL PUMP OPERATIONAL"

EXISTING WELL PUMP CONTROLLER. INTERCEPT EXISTING WELL PUMP CONTROLS FOR NEW RELAY CONTACT "RA-3" TO DE-ENERGIZE WELL PUMP ON HIGH PRESSURE.

WELL PUMP INTERLOCK CONTROL DIAGRAM

SEQUENCE OF OPERATION - WELL PUMP CONTROL

THE EXISTING WELL PUMP WILL HAVE A NEW PRESSURE SWITCH AND PRESSURE TRANSDUCER INSTALLED AT THE WELL PUMP. THE FUNCTION OF THE NEW PRESSURE SWITCH AND PRESSURE TRANSDUCER IS TO DE-ENERGIZING THE WELL PUMP, SHOULD THE PUMP PRESSURE EXCEED ~~220~~ 175 PSI FOR A PERIOD OF ~~5 MINUTES~~ 3 SECONDS (FIELD ADJUSTABLE) ~~OR MORE.~~

UNDER THE NORMAL CONDITION, TIME DELAY RELAY CONTACT "TD-1" IS NORMALLY CLOSED AND RELAY "RA" IS ENERGIZED AND BOTH CONTACTS "RA-1" AND "RA-2" WILL CLOSE. THE "RESET" PUSHBUTTON WILL HAVE TO BE DEPRESSED TO INITIATE THE "WELL PUMP HIGH PRESSURE INTERLOCK" PERMISSIVE CIRCUIT AND TO ALLOW THE PUMP TO CYCLE THRU ITS NORMAL PUMPING SCHEME. DEPRESSING THE "RESET" PUSHBUTTON WILL ENERGIZE RELAY "RB" CLOSING BOTH CONTACTS "RB-1" AND "RB-2" SIMULTANEOUSLY. CONTACT "RB-1" WILL MAINTAIN THE "WELL INTERLOCK" PERMISSIVE CIRCUIT. CONTACT "RB-2" WILL "SEAL-IN" THE "RESET" MOMENTARY CONTACT PUSHBUTTON.

SHOULD THE PRESSURE EXCEED 220 PSI, PRESSURE SWITCH PT-1 WILL OPEN, DE-ENERGIZING TIME DELAY RELAY "TD". IF THE PRESSURE RETURNS TO NORMAL WITHIN 5 MINUTES (ADJUSTABLE), TIME DELAY RELAY "TD" WILL BE ENERGIZED AND IT'S TIMING SEQUENCE RE-INTIATED. HOWEVER, IF THE PRESSURE REMAINS ABOVE 220 PSI, TIME DELAY RELAY WILL COMPLETE ITS TIMING CYCLE (TIME DELAY ON DE-ENERGIZATION) AND CONTACT "TD-1" WILL OPEN, DE-ENERGIZING RELAY "RA", AND SIMULTANEOUSLY CONTACTS "RA-1" AND "RA-2" WILL OPEN. CONTACT "RA-1" WHEN OPENED WILL DE-ENERGIZE RELAY "RB", AND CONTACT "RB-1" WILL OPEN, PREVENTING THE WELL PUMP FROM BEING ENERGIZED. CONTACT "RB-1" WHEN OPENED WILL DE-ENERGIZE THE WELL PUMP. IN ORDER TO RESTART THE WELL PUMP, THE "RESET" PUSHBUTTON WILL HAVE TO BE DEPRESSED.

1 2 3 4 5 6 7 8 9 10 11 12
2G 3G 6G 7G 0G 9G 0

BHI JOB # 88283.20

FHWA Region No.			SHEET NO.	TOTAL SHEETS
6	NEW MEXICO			

KEYED NOTES

1. EXISTING 500 KVA PNM OWNED PAD MOUNTED TRANSFORMER. COORDINATE REMOVAL OF EXISTING 500 KVA TRANSFORMER WITH PNM AND INSTALLATION OF NEW 750 KVA TRANSFORMER AND COMPLY AS REQUIRED. COORDINATE DOWNTIME WITH THE CITY AVIATION DEPARTMENT.
2. EXISTING 350HP FIRE PUMP REMAINS.
3. NEW 150HP AND 250HP FIRE PUMPS RESPECTIVELY. PROVIDE CONNECTIONS TO LINE SIDE TERMINAL OF FIRE PUMP CONTROLLER.
4. EXISTING PRIMARY UNDERGROUND PNM FEEDER REMAINS.
5. REMOVE EXISTING TRIPLEX METER CAN. COORDINATE REMOVAL WITH PNM. PATCH HOLES IN METAL BUILDING.
6. EXISTING 480V, THREE PHASE, THREE WIRE, 400A DISTRIBUTION PANELBOARD REMAINS.
7. EXISTING CT CABINET. COORDINATE REMOVAL OF CT'S WITH PNM. REUSE EXISTING CT CABINET AS SPLICE BOX.
8. PROVIDE NEW SERVICE GROUNDING CONDUCTOR, 1#4/0 BSD (CU) PER NEC AND THE SPECIFICATIONS.
9. PROVIDE AND INSTALL NEW METERING CT/PT PAD MOUNTED ENCLOSURE PER PNM DWG #DS-19-76.0 AND REINSTALL TRIPLEX METER CAN, PREVIOUSLY REMOVED BUILDING ON SIDE OF ENCLOSURE.
10. PROVIDE AND INSTALL CONCRETE PAD FOR CT/PT PAD MOUNTED ENCLOSURE PER PNM DWG #DS-19.76.3, AND GUARD POSTS AT EACH CORNER OF PAD.
11. PROVIDE AND INSTALL NEW SERVICE ENTRANCE CONDUCTORS FROM PAD MOUNT TRANSFORMER, THRU CT/PT PAD MOUNTED ENCLOSURE, TO EXISTING OR NEW SERVICE EQUIPMENT AS FOLLOWS: 3-700MCM + 1#4/0 GR IN 4"C (EXISTING FIRE PUMP #3 - 350HP), 3-500MCM + 1#4/0 GR IN 4"C (NEW FIRE PUMP #2 - 250HP), 3-500MCM + 1#4/0 GR IN 4"C (EXISTING MDP), AND 3#4/0 + 1#4/0 GR IN 2 1/2"C (NEW FIRE PUMP #1 - 150HP).
12. REMOVE EXISTING SERVICE ENTRANCE CONDUCTORS (3-700MCM - EXISTING FIRE PUMP #3 - 350HP AND 3-500MCM - EXISTING MDP) AND ABANDON CONDUITS.
13. SPLICE NEW SERVICE ENTRANCE CONDUCTORS TO EXISTING SERVICE CONDUCTORS FOR EXISTING PANEL "MDP", 3-500 + 1#4/0 GR, IN EXISTING CT ENCLOSURE.
14. SPLICE NEW SERVICE ENTRANCE CONDUCTORS TO EXISTING SERVICE ENTRANCE CONDUCTORS FOR EXISTING 350HP FIRE PUMP, 3-700MCM + 1#4/0 GR, IN EXISTING CT ENCLOSURE.
15. EXISTING 3-500MCM + 1#1/0 GR IN EXISTING 3"C REMAINS.
16. EXISTING 3-700MCM + 1#4/0 GR IN EXISTING 3"C REMAINS.
17. INSTALL NEW 3#4/0 + 1#4/0 GR IN EXISTING 3"C BELOW GRADE.
18. INSTALL NEW 3-500MCM + 1#4/0 GR IN NEW 3"C. SERVICE ENTRANCE FEEDER SHALL BE INSTALLED IN RIGID GALVANIZED STEEL CONDUIT AND SHALL BE INSTALLED OVERHEAD AND SUPPORTED EVERY 2'-0" ON CENTER WITH UNISTRUT AND HANGERS TO EXISTING STRUCTURE.

AS-BUILT INFORMATION
CONTRACTOR STERLING PAVING CONST. DATE
WORK STAKED BY N/A DATE
INSPECTORS FIELD MARKUP BY Ray Baca DATE
VERIFICATION BY DATE
CORRECTED BY DATE 1/12
MICRO-FILM INFORMATION
RECORDED BY DATE
NO

BENCH MARKS
NO. DATE BY

SURVEY INFORMATION
FIELD NOTES DATE
NO. BY

ENGINEER'S SEAL

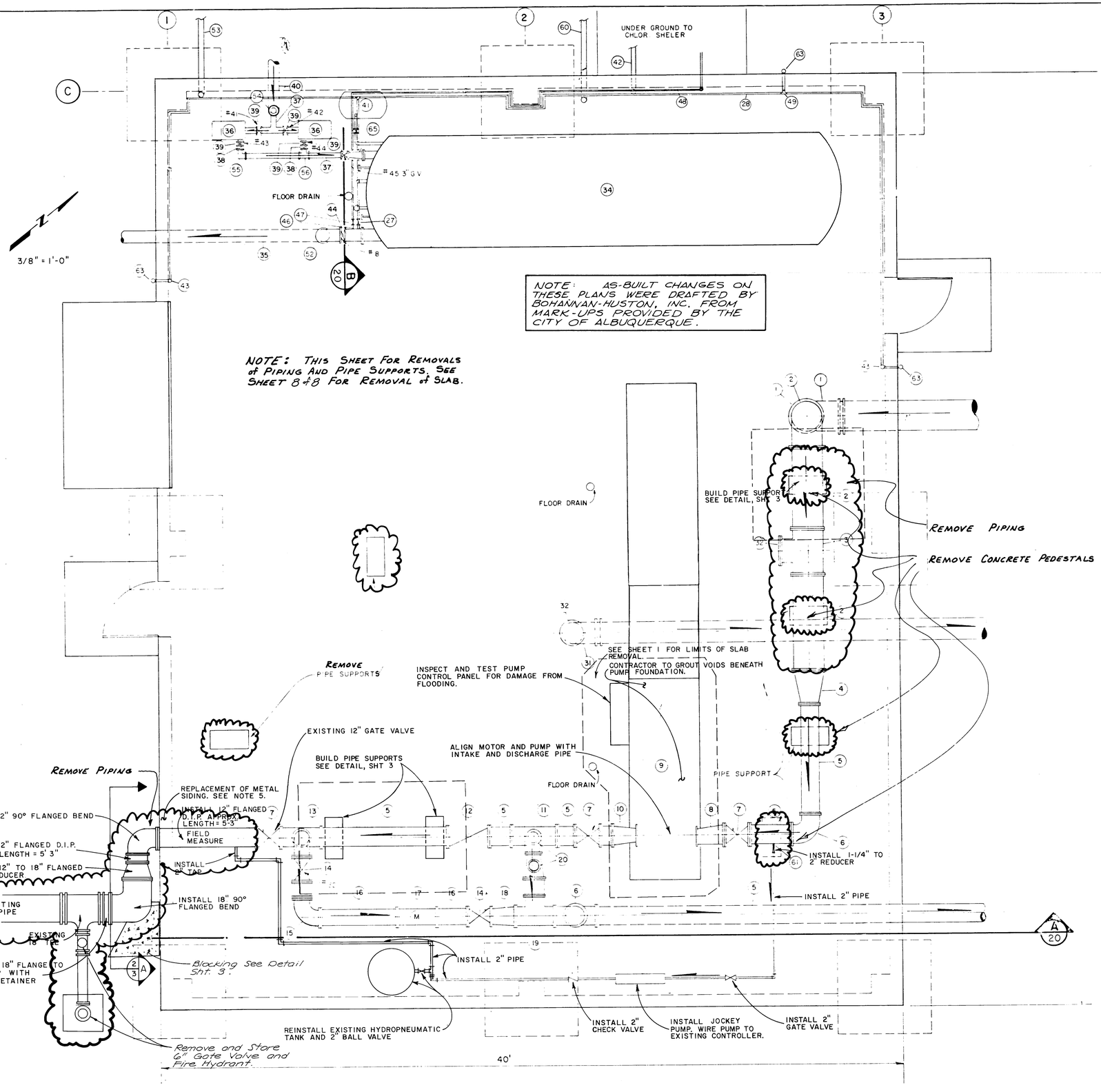
NO.	REMARKS	DATE	BY
	REVISIONS		
	DESIGN	2-17-89	FJT
	DESIGNED BY FJT	DATE 2-17-89	
	DRAWN BY TEI	DATE 2-17-89	
	CHECKED BY FJT		

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

TITLE: ELECTRICAL PLAN, LIGHTNING PROTECTION SYSTEM & WELL PUMP INTERLOCK DOUBLE EAGLE II AIRPORT

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/89	Liquid Waste	N/A	
A C E - Design		5-31-89	Traffic	N/A	
A C E - Hydrology	N/A		Water	N/A	
		5-31-89			

DRAWING NO. 3667 | MAP NO. D6 | SHEET 6 OF 8



(46)	3/4" TAP
(47)	3/4" PVC BALL VALVE
(48)	3/4" PVC WATER LINE TO CHLORINATION EQUIPMENT
(49)	1" TEE
(50)	1" X 2" REDUCER
(51)	2" BALL VALVE
(52)	8" 90° BEND
(53)	2½" PVC CONDUIT FOR POWER
(54)	6"X3" TEE WITH 6" BLIND FLANGE
(55)	3" 90° BEND
(56)	3"X 3" TEE
(57)	1" 90° ELBOW
(58)	1¼" 90° ELBOW
(59)	2" PIPE
(60)	2" PVC POWER CONDUIT TO WELL
(61)	1¼" TAP
(62)	1" TAP
(63)	FROST PROOF HOSE BIB
(64)	2" DRAIN WITH 2" VALVE
(65)	3" X 6" REDUCER

CONSTRUCTION NOTES

1.) ELBOWS FOR 2" PIPE SHALL BE INCIDENTAL TO COST OF PIPE.

2.) CONTRACTOR TO FURNISH PIPE HANGERS, AND SUPPORT FOR SMALL DIA. PIPES (3" AND UNDER) FOR PROPER ALIGNMENT AND SUPPORT OF THE PIPES.

3.) ALL PIPING INSIDE FOUNDATION AND WALLS SHALL BE FLANGED EXCEPT FOR PIPES 2" DIA. OR SMALLER.

4.) INSTALLATION OF HYDROPHNEMATIC TANK AND ALL 2" BENDS AND TEES SHALL BE SUBSIDIARY TO BID ITEM '2" PIPE'.

5.) METAL SIDING TO BE REPLACED BY OTHERS.

6.) FLANGED DUCTILE IRON PIPE SHALL BE CLASS 53.

7.) 2" PIPE SHALL BE CLASS 40 GALVANIZED.

8.) ESTIMATED QUANTITY OF GROUT REQUIRED TO FILL VOIDS UNDER PUMP FOUNDATION IS LESS THAN ONE CUBIC YARD.

9.) FITTINGS FOR 2" PIPE SHALL BE CAST IRON THREADED, GALVANIZED, CLASS 125.

10.) CONTRACTOR MUST FIELD MEASURE SPOOL LENGTHS PRIOR TO ORDERING EXACT LENGTHS.

FITTING SCHEDULE

FOR SHEETS 19 & 20

(1)	20" 90° BEND
(2)	20" SPOOL
(3)	20" X 14" TEE
(4)	20" X 12" REDUCER
(5)	12" SPOOL
(6)	12" 90° BEND
(7)	12" GATE VALVE
(8)	ECCENTRIC REDUCER (AS REQRD)
(9)	3500 GPM HORIZONTAL FIRE PUMP WITH MOTOR DRIVE
(10)	CONCENTRIC REDUCER (AS REQRD)
(11)	12" X 8" TEE
(12)	12" CHECK VALVE
(13)	12" X 10" TEE
(14)	10" GATE VALVE
(15)	10" 90° BEND
(16)	10" SPOOL
(17)	10" FLOW METER
(18)	10" X 12" REDUCER
(19)	12" X 12" TEE
(20)	MAIN RELIEF VALVE WITH 8" X 12" CLOSED WASTE CONE
(21)	18" X 12" TEE
(22)	18" SPOOL
(23)	18" 90° BEND
(24)	JOCKEY PUMP
(25)	HYDROPNEUMATIC TANK
(26)	1" CHECK VALVE
(27)	1" GATE VALVE
(28)	1" PIPE
(29)	1¼" GATE VALVE
(30)	1¼" PIPE
(31)	14" PIPE
(32)	14" BLIND FLANGE
(33)	18" BLIND FLANGE
(34)	5,000 GAL. HYDROPNEUMATIC TANK 80/50 PSI PRESSURE RANGE
(35)	8" SPOOL
(36)	60 GPM BOOSTER PUMPS
(37)	3" SPOOL
(38)	3" CHECK VALVE
(39)	3" GATE VALVE
(40)	6" SPOOL
(41)	AIR COMPRESSOR
(42)	3" PVC CONDUIT, SCHEDULE 40
(43)	INTERIOR HOSE BIB
(44)	8" GATE VALVE
(45)	PIPE SUPPORTS

EXISTING FACILITIES DESIGNED BY
BOVAY ENGINEERS, INC.
ALBUQUERQUE
LAS VEGAS • SCOTTSDALE • AUSTIN • BATON ROUGE

BOHANNAN HUSTON INC.

1 2 3 4 5 6 7 8 9 10 11 12
26 36 67 07 90

BHI JOB # 88283.20

AS BUILT INFORMATION
CONTRACTOR STERLING Bros. Constr.
DATE N/A
MODIFICATIONS NOTED BY
CLIENT
INSPECTIONS & CHANGES BY Ray Baca DATE
AS-BUILT MARKS BY
FIELD VERIFICATION BY DATE 1/90
AS-BUILT DRAWINGS CORRECTED BY
MICRO-FILM INFORMATION
RECORDED BY DATE
MD

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY DATE
NO.

ENGINEER'S SEAL
Harold J. Gerhardt
4-12-88

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY HBG	DATE 4/11/88
		DRAWN BY AJW	DATE 4/11/88
		CHECKED BY HCS	DATE 4/11/88

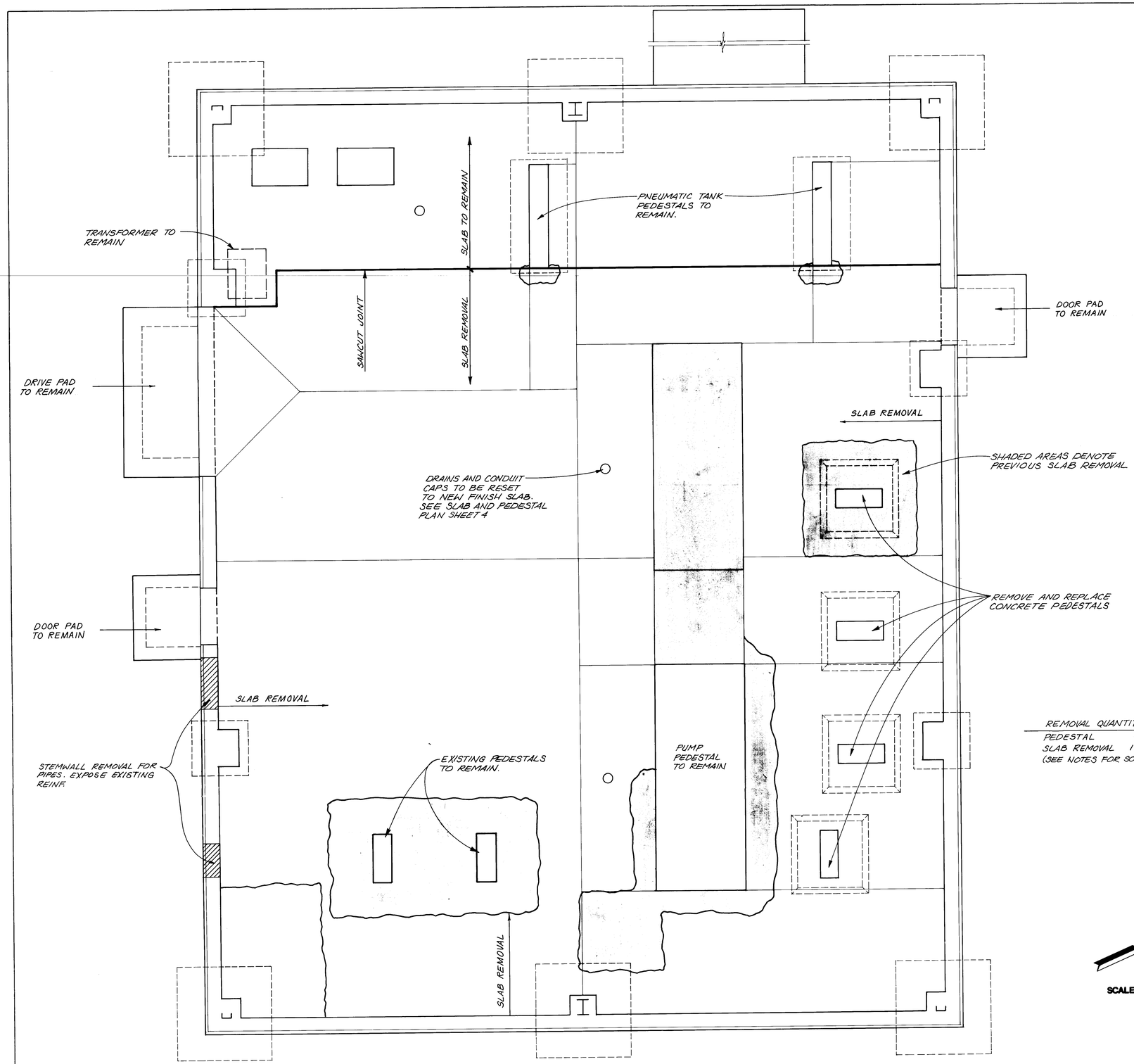
CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

TITLE
REMOVALS

DOUBLE EAGLE II AIRPORT BHI JOB # 88283.20

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/88	Liquid Waste	N/A	
A.C.E.-Design		5-27-88	Traffic	N/A	
A.C.E.-Hydrology	N/A		Water	N/A	
Aviation		5-31-88			

DRAWING NO. 3667 MAP NO. D6 SHEET 7 OF 8



CONSTRUCTION NOTES

1. PROIR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND QUANTITIES.

2. CONTRACTOR SHALL LOCATE ,ISOLATE AND PROTECT ALL PLUMBING AND ELECTRICAL LINES DURING DEMOLITION AND RECONSTRUCTION.

3. SLAB SAWING SHALL BE DONE PER THE SUPPLEMENTAL TECHNICAL SPECIFICATIONS.

4. PRIOR TO PLACEMENT OF THE NEW SLAB, THE SOIL SUBGRADE SHALL BE TESTED FOR EXCESSIVE MOISTURE CONTENT USING ASTM D-2216 (OPTIMUM MOISTURE ± 3%)TO A DEPTH OF NOT LESS THAN 3 FEET. IF EXCESSIVE MOISTURE IS FOUND, THE SOIL SHALL BE REMOVED TO A DEPTH OF 3 FEET WITHIN THE AFFFECTED AREA, DRIED TO OPTIMUM MOISTURE, REPLACED, AND COMPACTED TO A MINIMUM OF 95% OPTIMUM DENSITY.
IF NO EXCESSIVE MOISTURE IS FOUND, THE TOP 1 FOOT SHALL BE SCARIFIED,WETTED TO OPTIMUM MOISTURE, AND COMPACTED TO A MINIMUM OF 95% OPTIMUM DENSITY(ASTM D-1557).

5. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, BRACING,SUPPORTS, AND FOUNDATIONS FOR ALL PIPING, PUMPS, MACHINERY, EQUIPMENT AND TRENCHING DURING ALL EXCAVATION, PIPING,BACKFILLING AND CONCRETE CASTING.

6. PIPE STANDS SHALL BE NEENAH A-7510 TYPE A WITH A MINIMUM OF FOUR 5/8" DIA. X 6" LONG ANCHORS, OR APPROVED EQUAL.

7. CONCRETE SHALL BE PER CITY OF ALBUQUERQUE STANDARD SPECIFICATION SECTION101 WITH A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.

8. REINFORCING STEEL SHALL BE PER CITY OF ALBUQUERQUE STANDARD SPECIFICATION SECTION102, WITH AN Fy=60 KSI.

9. ELASTOMERIC SEALANT SHALL BE PER CITY OF ALBUQUERQUE STANDARD SPECIFICATION SECTION107.4.2: BACKER MATERIAL SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

10. REPLACEMENT OF THE BUILDING PANELS SHALL BE DONE BY THE CITY OF ALBUQUERQUE UPON COMPLETION OF THE RECONSTRUCTION. IT IS NOT INCLUDED IN THIS CONTRACT.

11. CONTRACTOR SHALL RESET ALL DRAINS TO MATCH FINISH FLOORS OF THE NEWLY CONSTRUCTED SLAB.

NOTE: AS-BUILT CHANGES ON THESE PLANS WERE DRAFTED BY BOHANNAN-HUSTON, INC. FROM MARK-UPS PROVIDED BY THE CITY OF ALBUQUERQUE.

REMOVAL QUANTITIES

PEDESTAL	4 EACH
SLAB REMOVAL	12.31 SQ. FT.

(SEE NOTES FOR SOIL REMOVAL)

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

F.H.W.A. Region No.			SHEET NO.	TOTAL SHEETS
6	NEW MEXICO			

AS-BUILT INFORMATION
CONTRACTOR Stelling Bros Constr.
WORK STARTED BY N/A DATE
INSPECTOR'S ACCEPTANCE BY Ray Baca DATE
AS-BUILT VERIFICATION BY DATE
COMPLETED BY DATE 11/90

BENCH MARKS

SURVEY INFORMATION
FIELD NOTES BY DATE

MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

ENGINEER'S SEAL
GORDON A. WAKEFIELD JR. NEW MEXICO No. 7968 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY GAW DATE 2-9-89
DRAWN BY AAG DATE 2-9-89
CHECKED BY HBG DATE 2-10-89

CITY OF ALBUQUERQUE
DEPARTMENT OF AVIATION

TITLE:
SLAB & PEDESTAL REMOVAL PLAN

DOUBLE EAGLE II AIRPORT BHI JOB # 88283.20

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer		5/31/89	Liquid Waste	N/A	
A C E - Design		5-31-89	Traffic	N/A	
A C E - Hydrology	N/A		Water	N/A	
Aviation		5-31-89			

DRAWING NO. 3667 MAP NO. D6 SHEET 8 OF 8

1 2 3 4 5 6 7 8 9 10 11 12
2 6 3 6 6 7 0 8 9 0

BRUNING