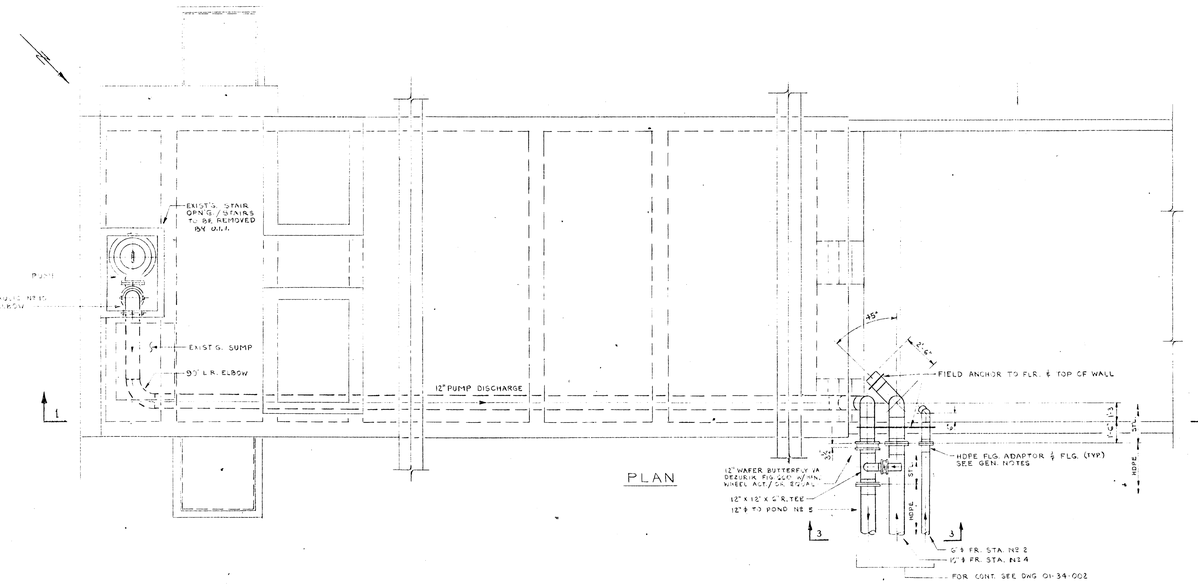
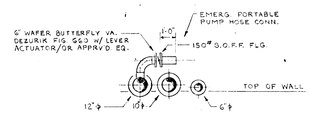
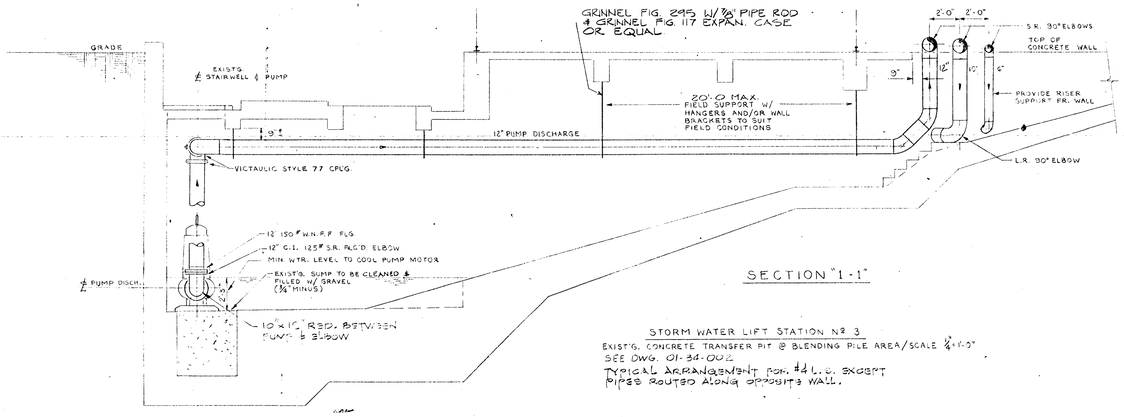


SEE DWG. 01-34-007 FOR SURFACE DRAINAGE TRENCH INLET



SECTION "3-3"



SECTION "1-1"

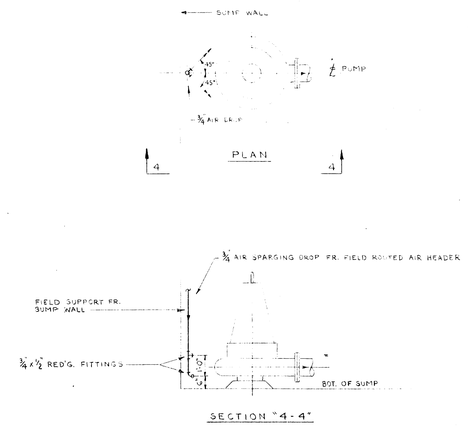
STORM WATER LIFT STATION Nº 3

EXIST'G. CONCRETE TRANSFER PIT @ BLENDING PILE AREA/SCALE 1/4"=1'-0"

SEE DWG. 01-34-002

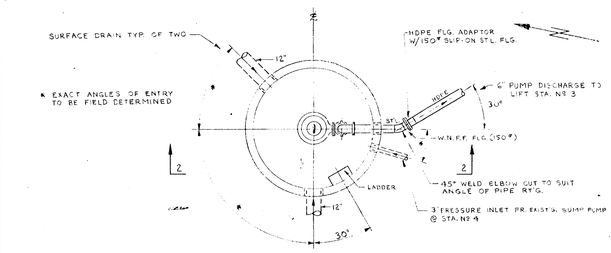
TYPICAL ARRANGEMENT FOR #4 L.S. EXCEPT PIPES ROUTED ALONG OPPOSITE WALL.

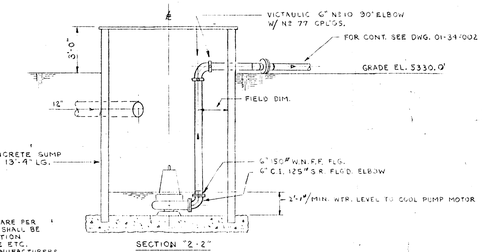
NOTE:
PIPE LENGTHS MAY BE SCALED FOR ESTIMATING. EXACT LENGTHS AND DIM'S. SHALL BE FIELD VERIFIED PRIOR TO FABRICATION & INSTALLATION. PIPING INSTALLATION SUBJECT TO FIELD ROUTING.



TYPICAL PUMP AIR SPARGING DETAIL
NO SCALE

OFFSET OF AIR OUTLETS TO BE 45° AS SHOWN ABV. @ STA. Nº3 @ STA. Nº2 & SET OFFSETS @ 30°. FOR ADDITIONAL AIR SPARGING DATA SEE DWG. 01-37-001





NOTE:
INDICATED PUMP DIM'S. ARE PER CATALOG DATA. DIM'S. SHALL BE CHECKED FOR INSTALLATION CLEARANCE, LINE SIZE ETC. AGAINST CERTIFIED MANUFACTURERS DWG'S./DISCH. RISER PIPE LENGTH SHALL BE DETERMINED IN FIELD.

STORM WATER LIFT STATION Nº 2
SCALE 1/4"=1'-0"

SEE DWG 01-34-002

I, Ron Van Valkenburg, hereby certify changes on this drawing since the previous certification are accurate to the best of my knowledge.

RON C. VAN VALKENBURG NEW MEXICO PROFESSIONAL ENGINEER 7-28-93

PUMP SPECIFICATIONS:

LIFT STATION Nº 1
"FLYGT" SUBMERSIBLE PUMP MODEL CS-3102-482
DISCHARGE, 20 HP, 2" SOLIDS HANDLING
CAPABILITY, 1450 GPM @ 21.3 TDH
60 Hz 3Ø, 460V, TEFC

LIFT STATION Nº 2
"FLYGT" SUBMERSIBLE PUMP MODEL CS-3152-402
6" DISCHARGE, 20 HP, 2" SOLIDS HANDLING
CAPABILITY, 1050 GPM @ 30.9 TDH
60 Hz 3Ø, 460V, TEFC

LIFT STATION Nº 3
"FLYGT" SUBMERSIBLE PUMP MODEL CS 3300-3.3
10" DISCHARGE, 77 HP, 2" SOLIDS HANDLING
CAPABILITY, 3020 GPM @ 54.5 TDH
60 Hz 3Ø, 460V, TEFC

LIFT STATION Nº 4
"FLYGT" SUBMERSIBLE PUMP MODEL CP-3153-490
DISCHARGE, 20 HP, 2" SOLIDS HANDLING
CAPABILITY, 1441 GPM @ 20.5 TDH
60 Hz 3Ø, 460V, TEFC

NOTE:
PUMPS SHALL BE AS SPECIFIED ABV, OR APPROVED EQUALS BY OTHER MANUFACTURERS. SUPPLIER SHALL FURNISH FOLLOWING ITEMS W/ PUMPS PURCHASE, SPARE PARTS KIT, THREE (3) COPIES OF OPERATING & MAINTENANCE MANUALS, START-UP & TESTING PROCEDURES & ONE (1) YEAR GUARANTEE FROM TIME OF FINAL ACCEPTANCE. STANDARD DISCH. ELBOWS SHALL BE EXCLUDED WHERE NORMALLY SUPPLIED W/ PUMPS. LIQUID LEVEL CONTROL SYSTEMS & AIR SPARGING SHALL BE AS OUTLINED ON DWG. 01-37-001. ALL PUMPS SHALL BE PROVIDED W/ SCREENS @ INTAKE.

STORM WATER LIFT STATION Nº 4

A NEW SUMP PUMP SHALL BE INSTALLED IN EXIST'G. 6'-0" DEEP SUMP LOCATED @ LIFT STA. Nº 4 DIRECTLY BELOW EXIST'G. ACCESS CUTOUT ABOVE SUMP, APPROX. 39" W. x 56" LG. EXIST'G. SUMP PUMP UTILIZED FOR DAILY WASHDOWN ACTIVITY SHALL REMAIN IN THE SAME SUMP. MOVING OF EXIST'G. PUMP & ASSOCIATED ITEMS TO ACCOMODATE NEW INSTALLATION SHALL BE PERFORMED BY U.I.I., INCLUDING PIPING FROM EXIST'G. PUMP TO LIFT STA. Nº 3.

NEW WORK SHALL INCLUDE INSTALLING NEW SUMP PUMP, LIQUID LEVEL CONTROL & PIPING FR. NEW PUMP TO LIFT STA. Nº 3. 3" PUMP DISCHARGE PIPE SHALL BE ROUTED ALONG STA. Nº 4 WALL SIMILAR TO SHOWN FOR L. STA. Nº 3 ON THIS DWG. DISCHARGE PIPE SHALL BE STL. UP TO BF VA. AS SHOWN @ L. STA. Nº 3 & HDPE MATERIAL FR. THIS POINT TO STA. Nº 3. BUTTERFLY VALVE & AUXILIARY HOSE CONN. MANIFOLD ARE NOT REQ'D @ L. STA. Nº 4. PROVIDE ANCHOR @ 10" DISCH. FR. L. STA. AS SHOWN FOR STA. Nº 3.

8x10 FLEX DISCH. PIPING SIZE TRANSITION SHALL BE TYP. AS SHOWN FOR STA. Nº 1; SEE DWG 01-34-002 FOR PIPING LAYOUT

GENERAL NOTES AND SPECIFICATIONS

STEEL PIPE & FITTINGS CALLED FOR @ LIFT STA'S. SHALL BE AS FOLLOWS:
PIPE - ALL SIZES ASTM A-53, GR A or B, SCH 40 OR STD. WT.
FITTINGS - SCH. 40, SMLS. STL., ASTM 234, WPB PER ANSI B16.9, BUTT-WELD
FLANGES - 150# W.N. OR S.O. R.F., ASTM A181, CL 60 PER ANSI B16.5 BORE TO MATCH PIPE
TRANSMISSION PIPING FR. LIFT STA'S. SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE & FITTINGS. 45 PSI, SDR 26, FUSION WELD JOINTS, FLG'D. WHERE NOTED OR AS MAY BE REQ'D./ USE FLG. ADAPTORS IN LIEU OF MOLDED STUB-ENDS. FLG'S. SHALL BE SLIP-ON AS SPECIFIED ABV. OR FABRICATED @ FLG'S.
SUBMERSIBLE PUMPS SHALL ALL HAVE S.R 125# FLG'D. 90° C.I. ELBOWS IN LIEU OF HOSE CONNECTOR TYPE DISCHARGE ELBOWS NORMALLY FURNISHED W/PUMPS.

PIPE SUPPORTS, HANGERS, ANCHORS & PIPE ROUTING GUIDES SHALL BE PROVIDED BY CONTRACTOR TO SUIT ACTUAL FIELD REQUIREMENTS.

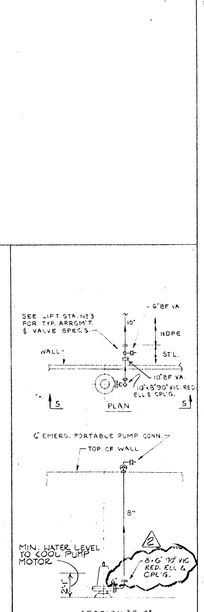
FOR TRANSMISSION PIPE ROUTING SEE DWG. 01-34-002

FOR SUMP DETAILS SEE DWG. 01-34-007

FOR PUMP CONTROL DATA & ELECT. DETAILS SEE DWG. 01-37-001

* MIN. WATER DEPTH IN SUMPS UNLESS PUMP MANUFACTURE'S REQUIRE DEEPER.

PUMP ON/OFF AND HIGH WATER ALARM ELEVATIONS FOR EA. SUMP SHALL BE SET BY U.I.I.



STORM LIFT STATION Nº1 SCHEMATIC
NO SCALE

SEE DWG. 01-34-007 FOR SUMP DETAILS AND 01-34-002 FOR PIPING

CONTINUATION.

DRAWING NO.	TITLE
01-34-001	LAYOUT
01-34-002	WASTE WTR. COLLECTION & TREATMT., PLOT, GRDS., & DRAINAGE PLAN SHT. 2
01-34-003	WASTE WTR. COLLECTION & TREATMT., MISC. STRUCT. DETS.
01-34-004	WASTE WTR. COLLECTION & TREATMT., ELECTRICAL FOR LIFT STA'S. 1 & 2
01-34-005	WASTE WTR. COLLECTION & TREATMT., PLOT, GRADING & DRAINAGE PLAN SHT. 3 & 4

REFERENCE DWGS

NO.	BY	DATE	CKD	DESCRIPTION
3	JVM	8/20/93		CHANGE EXHIBIT Nº 10 11-21 AND CHANGE CO. NAME
2	JVM	11-3-86	PB	AS BUILT REVISION BUL # D-008
1	JVM	10-13-86	PB	AS BUILT BUL # D-007
0	PB	4-07-86	PB	ISSUE FOR CONSTRUCTION BUL # D-001
B	JVM	2-12-86	PB	ISSUED FOR BIDS ONLY TL Nº
A	JVM	2-6-86	JVM	FOR OWNERS APPROVAL T.L. Nº 021

REVISIONS

NO.	BY	DATE	CKD	DESCRIPTION

REVISIONS

DEPT	REV	A	B	C	1	2
ARCH						
CIV/STRL		MLL		PB	PB	PB
MECH				JRM	JR	JR
ELECT		JMC		JMC	JMC	JMC
INSTM		MAR	MAR	MAR	MAR	MAR
PIPING		JVM	JVM	JVM	JR	JR
SAFETY						
DEPT MGR		JRM		JRM	JR	JRM
PROJECT		MLL		MLL	JR	JRM

APPROVALS

SCALE AS NOTED	DATE
DRAWN BY JVM	1-14-86
DESIGNED BY JVM	1-14-86
CHECKED BY MLL	2/86

CLIENT APPROVALS

REV	BY	DATE
2	Regis	11/3/86
B	Regis	2/13/86
0	Regis	4/7/86
1	Regis	10/10/86

MORRISON-KNUDSEN ENGINEERS, INC.
A MORRISON-KNUDSEN COMPANY

NAVAJO MINE PROJECT - AREA 1
FRUITLAND, NEW MEXICO
BHP MINERALS INTERNATIONAL

DRAWING TITLE
PHASE 2
WASTEWATER COLLECTION/ TREATMENT.
GENERAL ARRANGEMENT & MECHANICAL FOR
LIFT STATIONS Nº 1, 2, 3 & 4

EXHIBIT 11-21

CONTRACT NO. 1724-30

30 x 42

DRAWING NO. 01-36-001

REFERENCE NO. 01P-1

REV 2