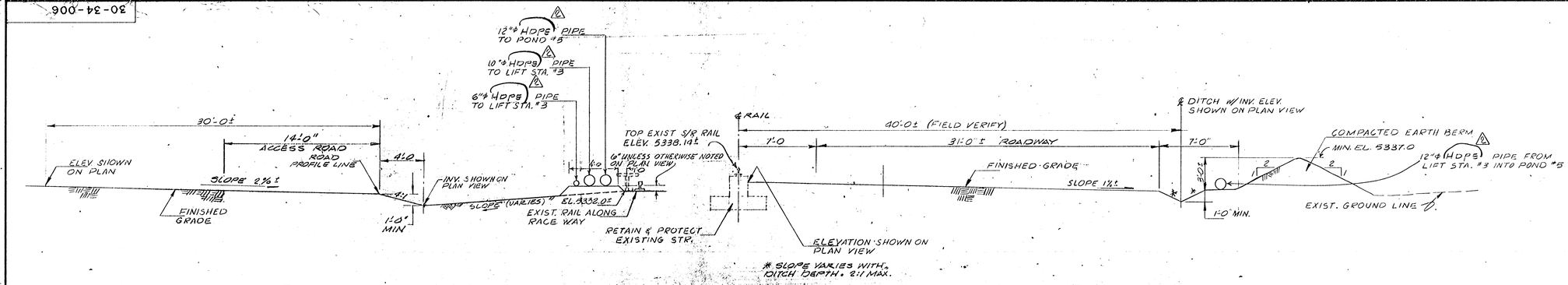
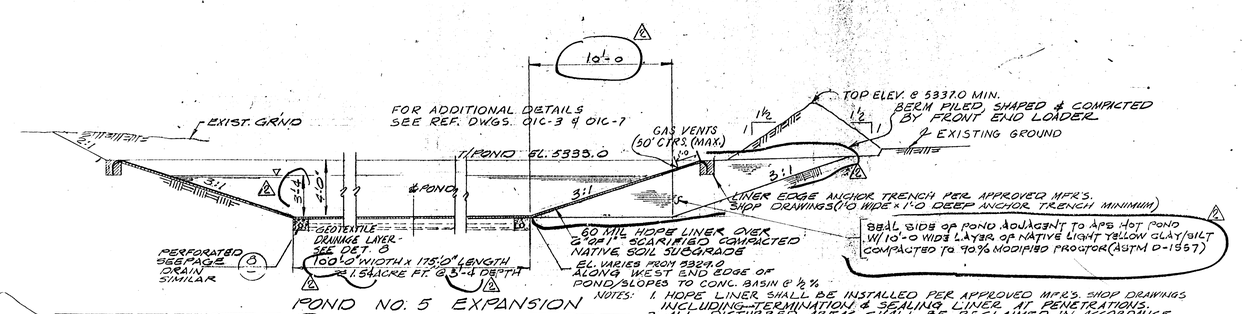
30-34-006



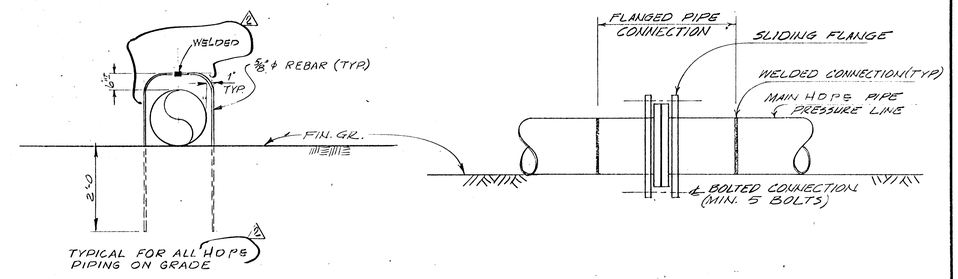
A SECTION
01C-2
SCALE: 1/4"=1'-0

B SECTION
01C-2
SCALE: 1/4"=1'-0



POND NO. 5 EXPANSION

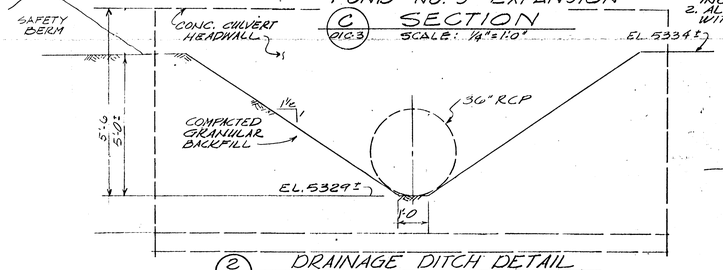
NOTES:
1. HDPE LINER SHALL BE INSTALLED PER APPROVED MFR'S. SHOP DRAWINGS INCLUDING TERMINATION & SEALING LINER AT PENETRATIONS.
2. ALL DISTURBED AREAS SHALL BE RECLAIMED IN ACCORDANCE WITH OSM APPROVED STD. NAVAJO MINE PROCEDURES.



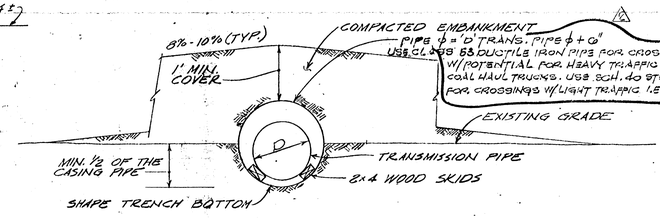
TYPICAL FOR ALL HDPE PIPING ON GRADE

FLANGED PIPE CONNECTION

C SECTION
01C-3
SCALE: 1/4"=1'-0"

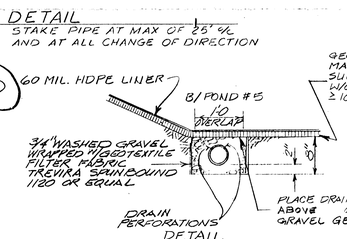


2 DRAINAGE DITCH DETAIL
01C-3 & 01C-3
N.T.S.
NOTE: LINE THE ENTIRE TRENCH DOWNSTREAM OF THE CULVERT FROM THE CONC. HEAD WALL TO THE LINER COLLAR SHOWN IN DETAIL 9



TYPICAL PIPE CASING (VEHICLE CROSSING)
3 DETAIL
01C-2 & 01C-3
N.T.S.

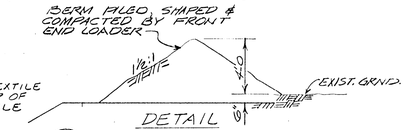
1 DETAIL
01C-2
STAKE PIPE AT MAX OF 25' O/C AND AT ALL CHANGE OF DIRECTION



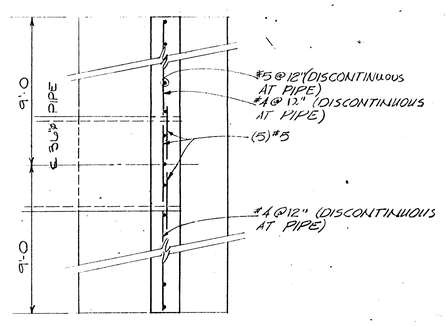
DETAIL
8 SEEPAGE DRAIN
SCALE: 1"=1'-0

4 DETAIL
01C-2 & 01C-3
NTS

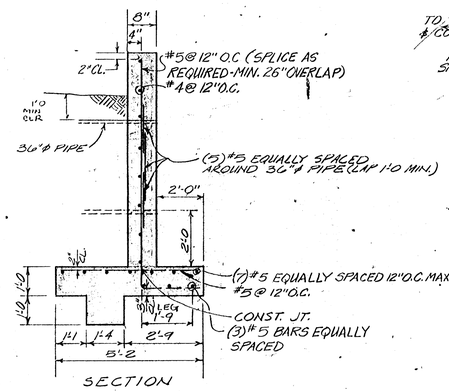
GEOTEXTILE DRAINAGE LAYER MATERIAL UNAFFECTED BY SULFURIC ACID & TRANSMISSIVITY W/O NORMAL PRESSURE $2 \cdot 10^{-8}$ m^2/sec. TREVIRA 1120 (ANCHOR EDGE IN LINER ANCHOR TRENCH)



DETAIL
6 TYPICAL SAFETY BERM
01C-2/01C-3 SCALE: 1/4"=1'-0

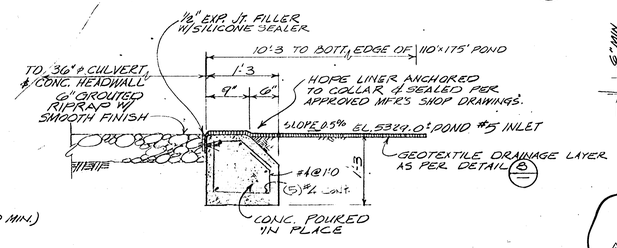


PLAN

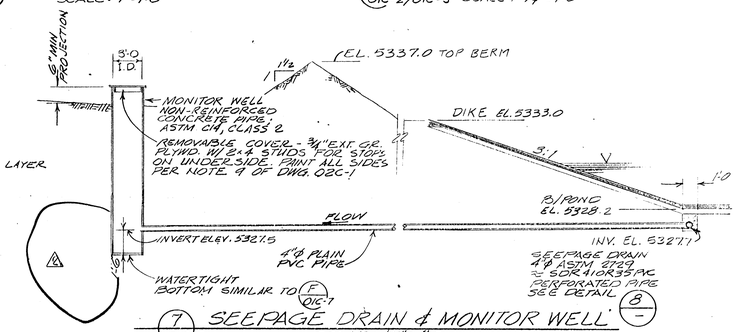


SECTION

CONCRETE CULVERT HEADWALL
3
01C-2 & 01C-3
N.T.S.



DETAIL
9 LINER COLLAR DETAIL
01C-3
SCALE: 1"=1'-0
LINER COLLAR AROUND PERIMETER OF ENTIRE INLET POND #5



7 SEEPAGE DRAIN & MONITOR WELL
01C-3
SCALE: 1/4"=1'-0

NOTE: SEE NOTES ON SHEET 01C-2

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

RON VAN VALKENBURG NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 9-27-93

REFERENCE DWGS		
01-31-001	01C-2	PLOT GRADINGS DRAINAGE PLAN SHT. #1
01-31-002	01C-3	" " " SHT. #2
01-31-007	01C-7	MISC. STRUCTURAL DETAILS
36-001	C-1	GAGEMEUM FOR LIFT STA. #1, 2, 3 & 4
DRAWING NO.	REF. NO.	TITLE

REVISIONS					
3	JG	8/19/93			CHANGE EXHIBIT NO. TO II-19 AND CHANGE CO. NAME
2	JB	10-15-86	PB		AS BUILT BUL. # D-007
1	GM	4/11/86	PSB		REDESIGNED CULVERT REBAR CONST. BUL. # D-002
0	GM	9/17/86	PSB		ISSUE FOR CONST. BUL. # D-001
B	DL	2/13/86	MLK		FOR BIDS ONLY TL # 022
A	C.F.	2/6/86	MLK		FOR OWNER APPROVAL TL # 001
NO.	BY	DATE	CKD		DESCRIPTION

REVISIONS				
NO.	BY	DATE	CKD	DESCRIPTION

APPROVALS: DEPT \ REV	A	B	0	1	2
ARCH					
CIV/STRL	MLK	MLK	PSB	PSB	PSB
MECH			JMM		
ELECT			JMC		
INSTM			VAR		
PIPING			JVM		
SAFETY					
MINING					
DEPT MGR	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PROJECT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SCALE AS SHOWN	DATE
DRAWN BY C. FELTS	2/86
DESIGNED BY M. Thorne	2/86
CHECKED BY M. Thorne	2/86
CLIENT APPROVALS	
REV / BY	DATE
2 [illegible]	10/10/86
B [illegible]	2/13/86
0 [illegible]	2/1/86
1 [illegible]	4/11/86

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

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

DRAWING TITLE: PHASE 2 WASTEWATER COLLECTION/TREATMENT SYSTEM
MISC. CIVIL DETAILS

EXHIBIT II-19
CONTRACT NO. 1724-30
30 X 42
DRAWING NO. 01-34-006
REFERENCE NO. 01C-6
REV ?