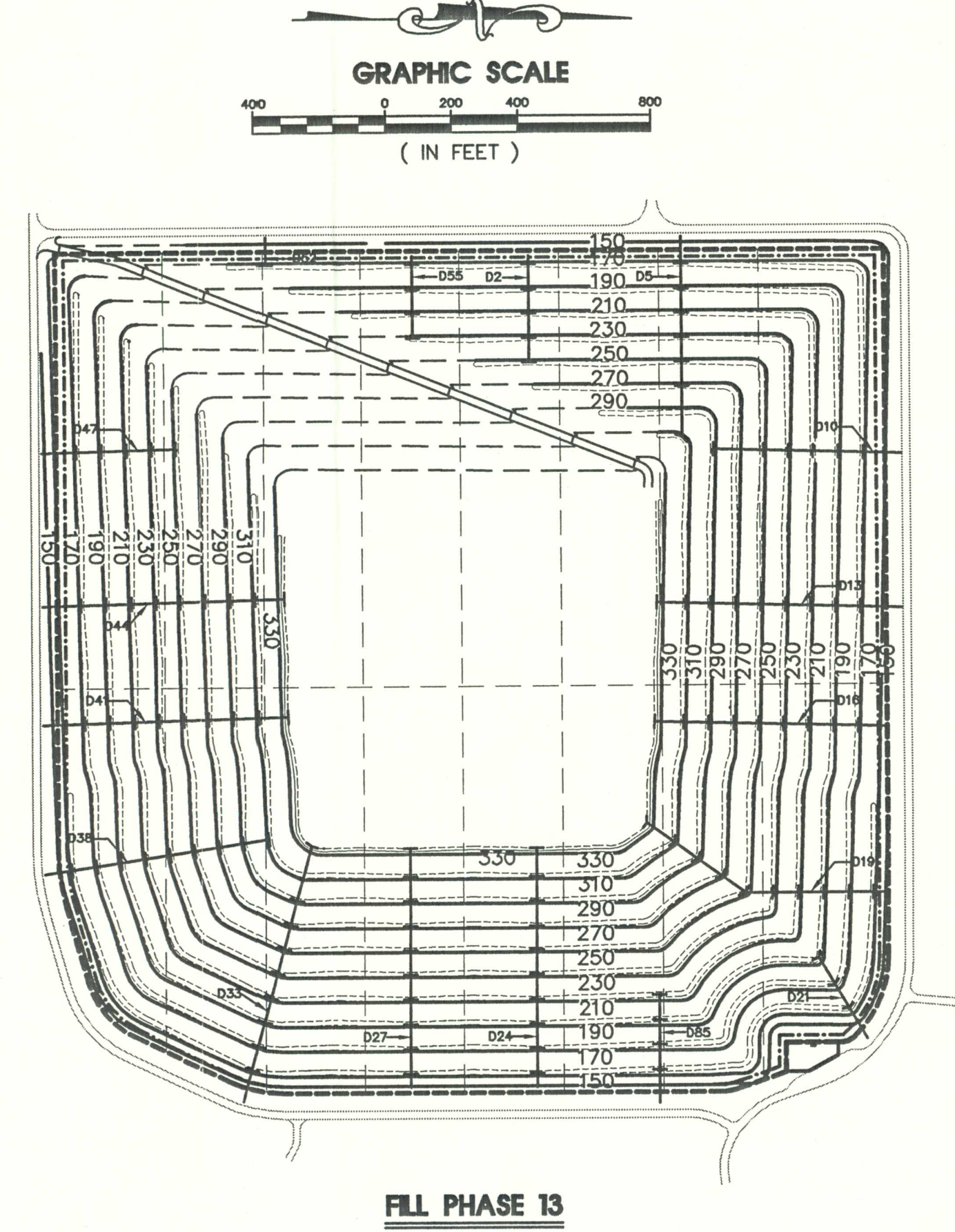
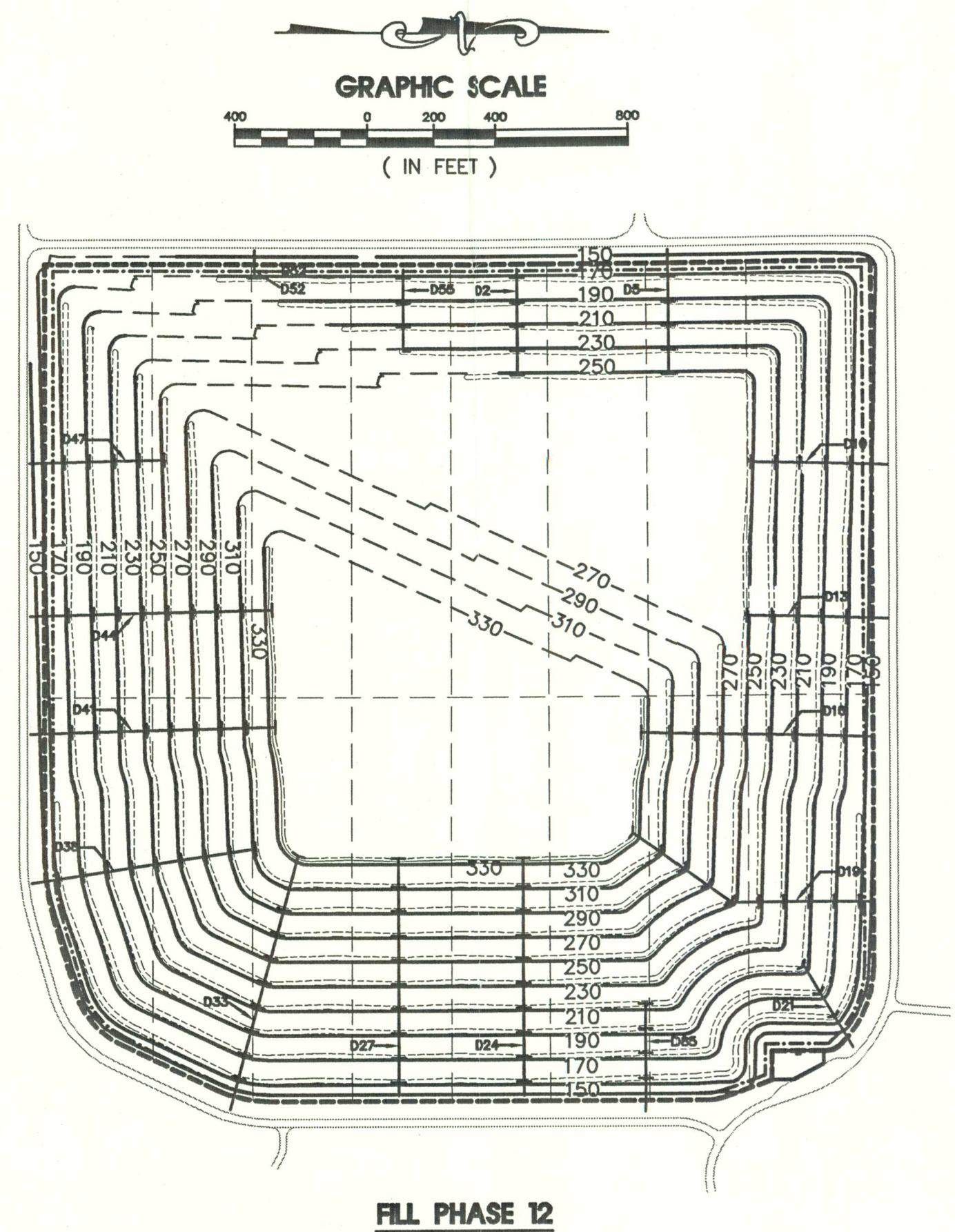
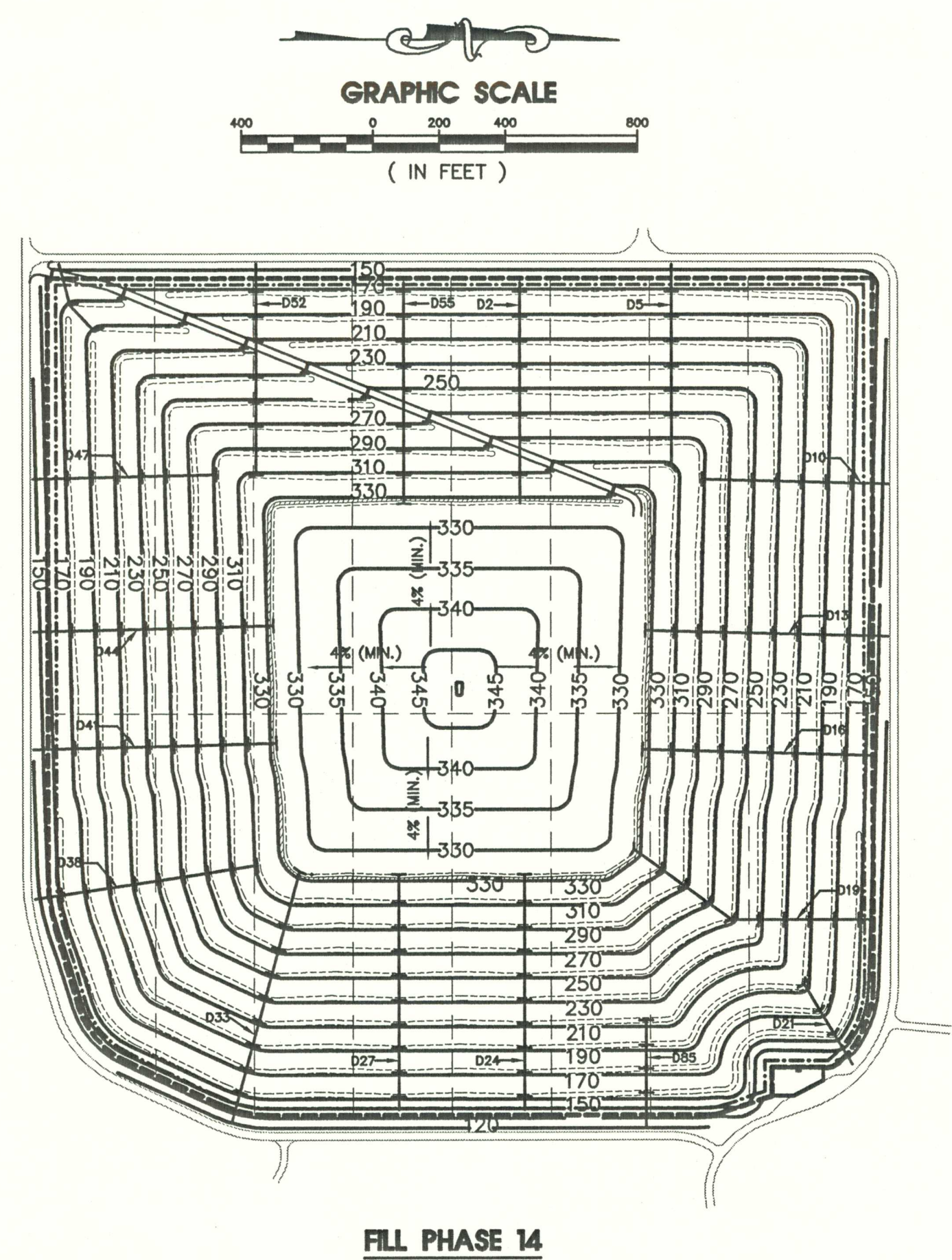
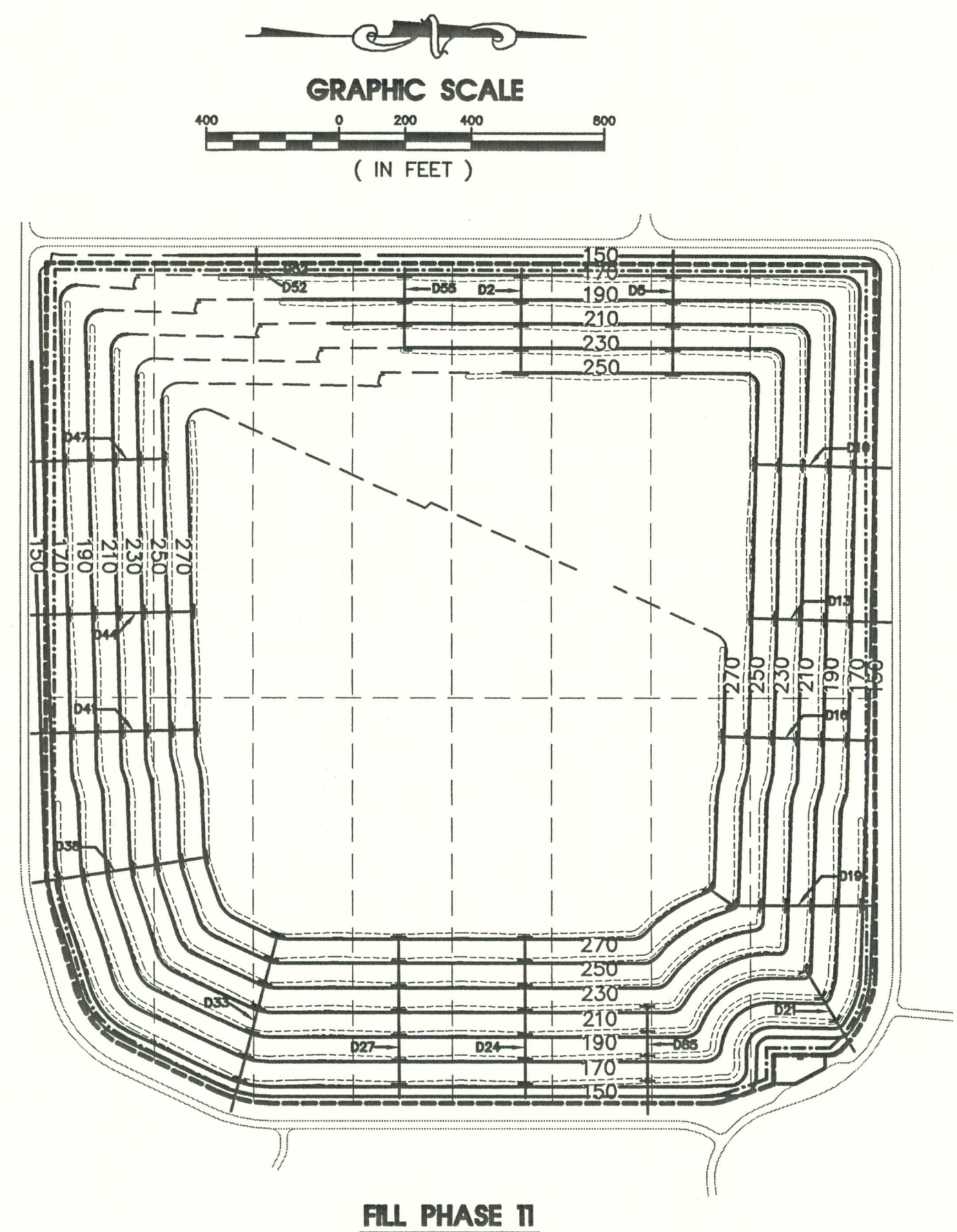
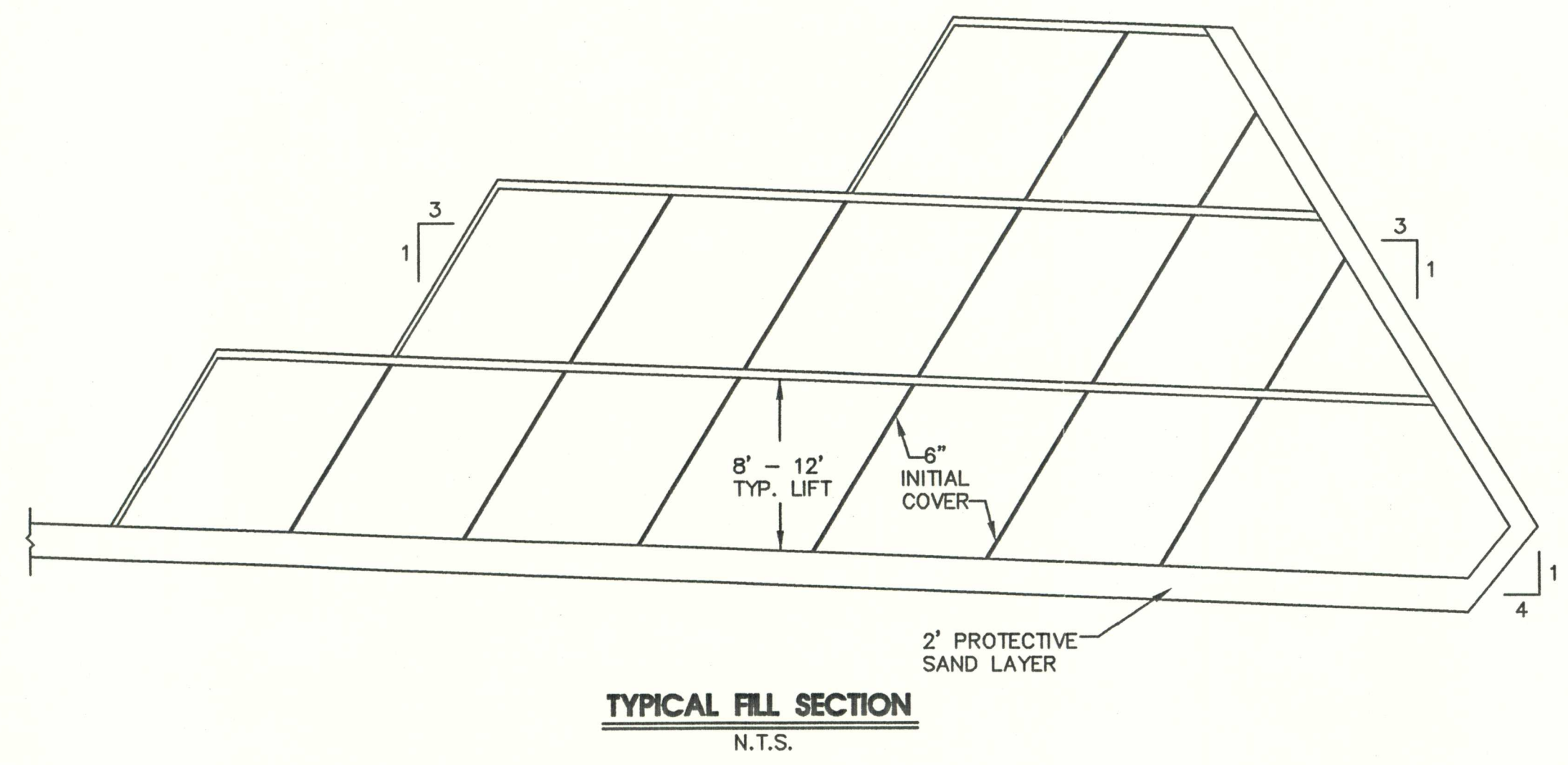




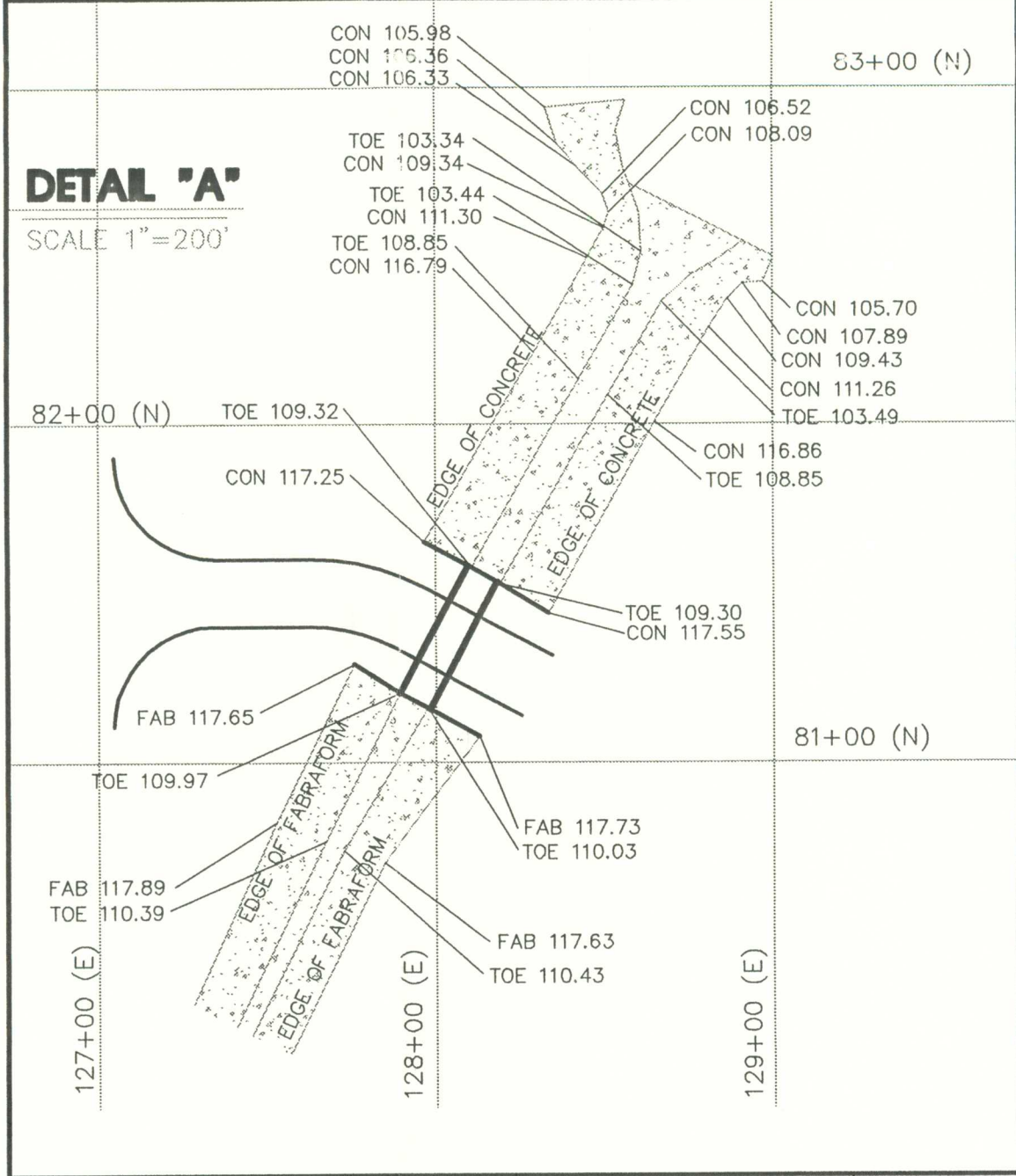
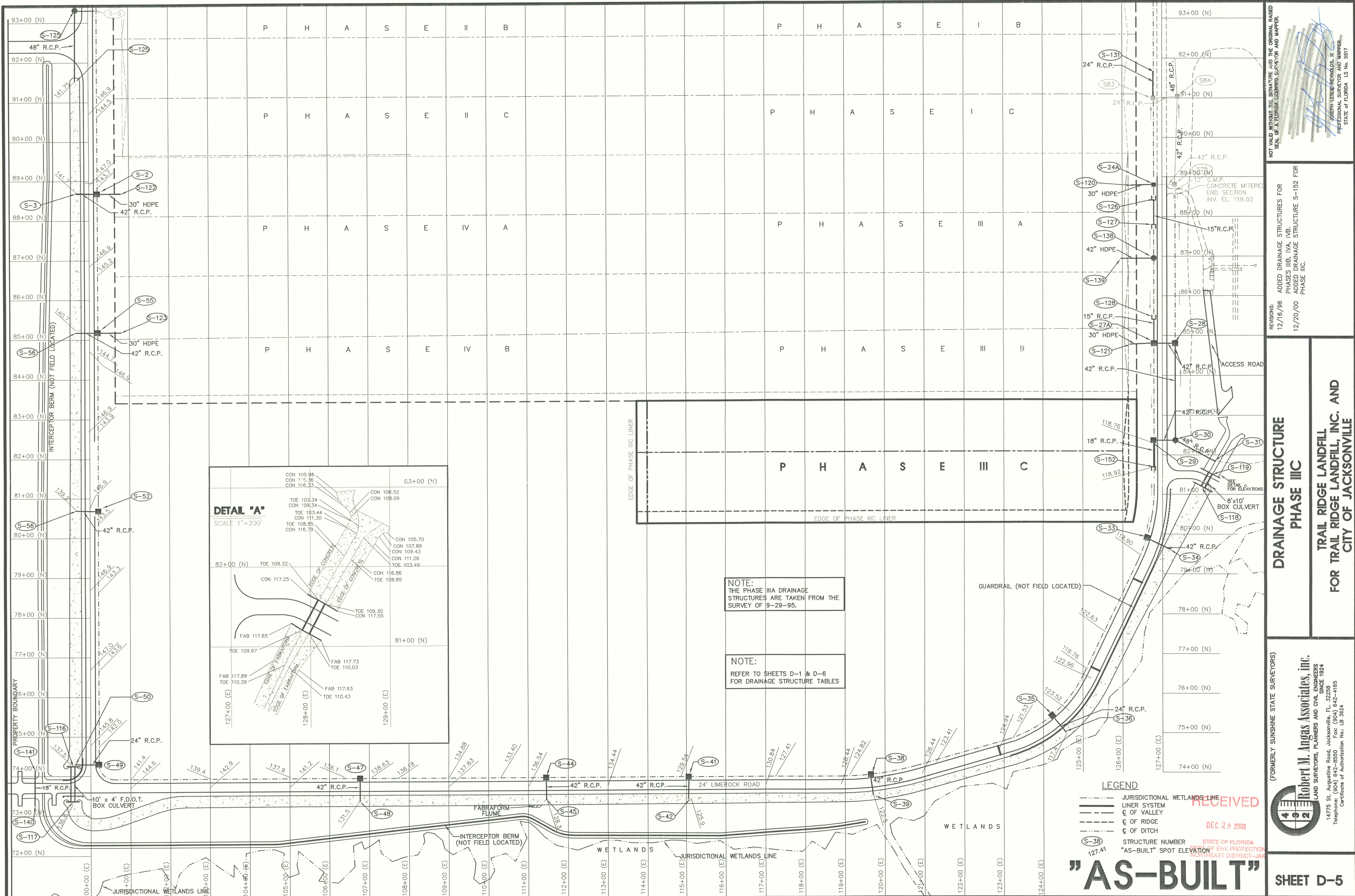
NOTE
FILL PHASING MAY BE CHANGED
DUE TO OPERATIONAL NEEDS.

LEGEND

- 150— FINAL CONTOUR
- LIMITS OF LINER
- - - LINER PHASE LINE
- - - - LIMITS OF FILL
- ==== ACCESS ROAD
- ==== ROADWAY
- TERRACE
- ++++ DOWNCOMER PIPE
- //// 10' BERM



SUBMITTED TO DEP: 10-28-96	
REVISIONS: 2-25-00 REVISED FILL PHASES 7-12 TO INCLUDE EL. 230 & 250 12-6-00 REVISED FILL PHASES 10 TO INCLUDE EL. 230 & 250 11-15-01 MOVED FILL PHASES 11 AND 12 TO THIS SHEET.	
ETM. NO. E 98-49	DRAWN BY: J.B.C.
DESIGNED BY: J.B.C.	CHECKED BY: D.C.M.
DATE: OCTOBER 28, 1996	
PERMIT DOCUMENT	
FILL PHASING PLAN	
TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.	
England-Thims & Miller, Inc. ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS 14776 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258 CERTIFICATE OF AUTHORIZATION NUMBER 2684 PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485	
DRAWING NO.	
13	



NOTE:
THE PHASE IIIA DRAINAGE
STRUCTURES ARE TAKEN FROM THE
SURVEY OF 9-29-95.

NOTE:
REFER TO SHEETS D-1 & D-6
FOR DRAINAGE STRUCTURE TABLES

LEGEND

- JURISDICTIONAL WETLANDS LINE
- LINER SYSTEM
- OF VALLEY
- OF RIDGE
- OF DITCH
- STRUCTURE NUMBER
- "AS-BUILT" SPOT ELEVATION

"AS-BUILT"

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED
SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

JOSEPH LESLIE REYNOLDS, II
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA, L.S. No. 5517

REVISIONS:
12/16/96
12/20/00

ADDED DRAINAGE STRUCTURES FOR
PHASES IIIB, IVA, IVB.
ADDED DRAINAGE STRUCTURE S-152 FOR
PHASE IIIC.

**DRAINAGE STRUCTURE
PHASE IIIC**

**TRAIL RIDGE LANDFILL
FOR TRAIL RIDGE LANDFILL, INC. AND
CITY OF JACKSONVILLE**

(FORMERLY SUNSHINE STATE SURVEYORS)

Robert M. Angas Associates, Inc.
LAND SURVEYORS, PLANNERS AND CIVIL ENGINEERS
14775 St. Augustine Road, Jacksonville, FL 32258
Telephone: (904) 642-8550 Fax: (904) 642-4165
Certificate of Authorization No. LB 3824

SHEET D-5

DRAINAGE STRUCTURE TABLE					
STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP EL.	SLOT EL.	INVERT ELEVATION	STATION
S-2	MOD. FDOT TYPE "E" INLET (DETAIL B)	146.50	143.76 (N&S)	141.26 (30" HDPE E) 141.26 (42" R.C.P. W)	88+67.00 (N) 100+21.00 (E)
S-3	CONST. MITERED END INTO DITCH PAVING	—	—	141.26 (42" R.C.P. E)	88+67.00 (N) 99+68.00 (E)
S-24A	MOD. FDOT TYPE "E" INLET (DETAIL A)	121.50	118.76 (N&S)	116.87 (30" HDPE W) 116.87 (42" R.C.P. E)	88+80.00 (N) 126+78.77 (E)
S-27	MOD. FDOT TYPE "E" INLET (DETAIL A)	121.50	118.76 (S)	115.26 (30" HDPE W) 115.26 (42" R.C.P. E) 118.76 (15" R.C.P. N)	84+80.00 (N) 126+78.77 (E)
S-28	FDOT TYPE "E" INLET W/ 7" TYPE J BOTTOM (ALTERNATE A)	121.50	119.50 (N&S)	115.26 (42" R.C.P. W) 113.00 (42" R.C.P. S)	84+80.00 (N) 127+32.27 (E)
S-29	FDOT TYPE "E" INLET	121.50	118.76 (N&S)	116.26 (42" R.C.P. E) 116.26 (42" C.M.P. W)	82+37.00 (N) 126+77.27 (E)
S-30	FDOT TYPE "E" INLET W/ 7" TYPE J BOTTOM (ALTERNATE A)	121.50	120.00 (S)	116.26 (42" R.C.P. W) 110.96 (42" R.C.P. N) 110.46 (48" R.C.P. SE)	82+37.00 (N) 127+32.27 (E)
S-31	CONST. 48" MITERED END INTO DITCH PAVING	—	—	109.10 (48" R.C.P. NW)	81+84.60 (N) 128+30.89 (E)
S-33	MOD. FDOT TYPE "E" INLET (DETAIL A)	121.75	118.76 (N&S)	115.00 (FUTURE 30" HDPE NW) 111.85 (42" R.C.P. SE)	79+91.26 (N) 126+60.49 (E)
S-34	CONST. MITERED END INTO DITCH PAVING	—	—	111.85 (42" R.C.P. NW)	79+91.26 (N) 127+19.07 (E)
S-35	FDOT TYPE "E" INLET	123.00	120.48 (SW)	117.20 (24" R.C.P. SE)	75+43.59 (N) 124+21.39 (E)
S-36	CONST. MITERED END INTO DITCH PAVING	—	—	117.20 (24" R.C.P. NW)	75+01.85 (N) 124+56.65 (E)
S-38	MOD. FDOT TYPE "E" INLET (DETAIL B) (SEE DETAIL S-38)	126.80	124.26 (W)	122.36 (FUTURE 30" HDPE N) 122.36 (42" R.C.P. S)	73+95.00 (N) 119+84.40 (E)
S-39	CONST. MITERED END INTO DITCH PAVING	—	—	122.36 (42" R.C.P. N)	73+43.30 (N) 119+70.00 (E)
S-41	MOD. FDOT TYPE "E" INLET (DETAIL B)	132.00	129.31 (W)	125.80 (FUTURE 30" HDPE N) 125.80 (42" R.C.P. S)	73+91.00 (N) 115+06.00 (E)
S-42	CONST. MITERED END INTO DITCH PAVING	—	—	125.80 (42" R.C.P. N)	73+36.09 (N) 115+06.00 (E)
S-44	MOD. FDOT TYPE "E" INLET (DETAIL B) (SEE DETAIL S-44)	135.00	132.30 (W)	128.27 (FUTURE 30" HDPE N) 128.27 (42" R.C.P. S)	73+91.00 (N) 111+45.00 (E)
S-45	CONST. MITERED END INTO DITCH PAVING	—	—	128.27 (42" R.C.P. N)	73+34.65 (N) 111+45.00 (E)
S-47	MOD. FDOT TYPE "E" INLET (DETAIL B) (SEE DETAIL S-47)	139.00	136.35 (W)	131.46 (FUTURE 30" HDPE N) 131.46 (42" R.C.P. S)	73+91.00 (N) 106+77.00 (E)
S-48	CONST. MITERED END INTO DITCH PAVING	—	—	131.46 (42" R.C.P. N)	73+33.35 (N) 105+77.00 (E)
S-49	FDOT TYPE "E" INLET (SEE DETAIL S-47)	145.00	142.36 (N)	136.73 (24" R.C.P. W)	74+30.00 (N) 100+21.00 (E)
S-50	CONST. MITERED END INTO DITCH PAVING	—	—	136.73 (24" R.C.P. E)	74+30.00 (N) 99+60.00 (E)

AS-BUILT STORM DRAINAGE DATA FOR PHASE IIIA

STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP ELEVATION		SLOT ELEVATION		INVERT ELEVATION		STATION	
		DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT
S-27	MOD. FDOT TYPE "E" INLET (DETAIL A)	121.50	121.48	118.76 (S)	118.65 (S)	115.26 (30" HDPE W) 115.26 (42" R.C.P. E) 118.76 (15" R.C.P. N)	FUTURE 30" HDPE W 115.26 (42" R.C.P. E) 118.76 (15" R.C.P. N)	84+80.00 (N) 126+78.77 (E)	84+80.18 (N) 100+21.00 (E)
S-28	FDOT TYPE "E" INLET W/ 7" TYPE J BOTTOM (ALTERNATE A)	121.50	121.57	119.50 (N&S)	118.48 (N&S)	115.26 (42" R.C.P. W) 113.00 (42" R.C.P. S)	115.17 (42" R.C.P. W) 112.90 (42" R.C.P. S)	84+80.00 (N) 127+32.27 (E)	84+81.14 (N) 127+33.57 (E)
S-29	FDOT TYPE "E" INLET	121.50	121.52	118.76 (N&S)	118.77 (N&S)	116.26 (42" R.C.P. E) 116.26 (42" C.M.P. W)	116.46 (42" R.C.P. E) 116.50 (42" C.M.P. W)	82+37.00 (N) 126+77.27 (E)	82+37.03 (N) 126+78.89 (E)
S-30	FDOT TYPE "E" INLET W/ 7" TYPE J BOTTOM (ALTERNATE A)	121.50	121.53	120.00 (S)	120.09 (S)	116.26 (42" R.C.P. W) 110.96 (42" R.C.P. N) 110.46 (48" R.C.P. SE)	115.80 (42" R.C.P. W) 110.85 (42" R.C.P. N) 110.50 (48" R.C.P. SE)	82+37.00 (N) 127+32.27 (E)	82+45.61 (N) 127+32.12 (E)
S-31	CONST. 48" MITERED END INTO DITCH PAVING	—	—	—	—	109.10 (48" R.C.P. NW)	108.92 (48" R.C.P. NW)	81+84.60 (N) 128+30.89 (E)	81+84.78 (N) 128+31.13 (E)
S-33	MOD. FDOT TYPE "E" INLET (DETAIL A)	121.75	121.74	118.76 (N&S)	118.68 (N)	115.00 (30" HDPE NW) 111.85 (42" R.C.P. SE)	FUTURE 30" HDPE NW 111.85 (42" R.C.P. SE)	79+91.26 (N) 126+60.49 (E)	80+03.41 (N) 126+60.38 (E)
S-34	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	111.85 (42" R.C.P. NW)	111.84 (42" R.C.P. NW)	79+91.26 (N) 127+19.07 (E)	82+51.82 (N) 127+17.66 (E)
S-111	18" C.M.P.	—	—	—	—	143.70 (18" C.M.P. E)	143.64 (18" C.M.P. E)	82+52.50 (N) 102+37.50 (E)	82+51.82 (N) 102+37.63 (E)
S-112	18" C.M.P.	—	—	—	—	142.70 (18" C.M.P. W)	142.64 (18" C.M.P. W)	82+52.50 (N) 103+81.00 (E)	82+52.54 (N) 103+82.61 (E)
S-113	42" C.M.P.	—	—	—	—	123.80 (42" C.M.P. E)	123.76 (42" C.M.P. E)	82+52.50 (N) 123+39.00 (E)	82+52.55 (N) 123+38.09 (E)
S-114	42" C.M.P.	—	—	—	—	122.40 (42" C.M.P. W)	122.32 (42" C.M.P. W)	82+52.50 (N) 124+62.50 (E)	82+52.55 (N) 124+62.44 (E)
S-115	42" C.M.P.	—	—	—	—	121.00 (42" C.M.P. E)	120.95 (42" C.M.P. E)	82+52.50 (N) 125+87.00 (E)	82+52.57 (N) 125+87.11 (E)
S-118	10' X 8' BOX CULVERT BOX CULVERT WITH 9.75' X 54' ENDWALL	—	—	—	—	110.00	110.07	81+84.60 (N) 128+30.27 (E)	81+84.88 (N) 128+31.85 (E)
S-119	10' X 8' BOX CULVERT BOX CULVERT WITH 9.75' X 54' ENDWALL	—	—	—	—	109.30	109.36	81+54.02 (N) 128+20.27 (E)	81+54.02 (N) 128+21.85 (E)
S-126	15" FDOT MITERED END SECTION	—	—	—	—	118.80 (15" R.C.P. S)	118.77 (15" R.C.P. S)	88+40.50 (N) 126+78.77 (E)	88+40.74 (N) 126+79.37 (E)
S-127	15" FDOT MITERED END SECTION	—	—	—	—	119.00 (15" R.C.P. N)	118.94 (15" R.C.P. N)	87+79.50 (N) 126+78.77 (E)	87+79.50 (N) 126+79.47 (E)
S-128	15" FDOT MITERED END SECTION	—	—	—	—	119.00 (15" R.C.P. N)	118.89 (15" R.C.P. N)	85+40.50 (N) 126+78.77 (E)	85+40.50 (N) 126+78.48 (E)

AS-BUILT STORM DRAINAGE DATA FOR PHASE IIIC

STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP ELEVATION		SLOT ELEVATION		INVERT ELEVATION		STATION	
		DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT
S-152	18" FDOT MITERED END SECTION	—	—	—	—	118.9 (18" R.C.P.)	118.9 (18" R.C.P.)	81+70.62 (N) 126+78.77 (E)	81+70.63 (N) 126+78.48 (E)

DRAINAGE STRUCTURE TABLE					
STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP EL.	SLOT EL.	INVERT ELEVATION	STATION
S-52	MOD. FDOT TYPE "E" INLET (DETAIL B)	146.50	143.76 (N&S)	138.74 (FUTURE 30" HDPE E) 138.74 (42" R.C.P. W)	80+68.00 (N) 100+21.00 (E)
S-53	CONST. MITERED END INTO DITCH PAVING	—	—	138.74 (42" R.C.P. E)	80+68.00 (N) 99+63.00 (E)
S-55	MOD. FDOT TYPE "E" INLET (DETAIL B)	146.50	143.76 (N&S)	140.13 (30" HDPE E) 140.13 (42" R.C.P. W)	85+17.00 (N) 100+21.00 (E)
S-56	CONST. MITERED END INTO DITCH PAVING	—	—	140.13 (42" R.C.P. E)	85+17.00 (N) 99+63.00 (E)
S-105	J-1-C MANHOLE	127.50	—	118.76 (42" C.M.P. W) 118.76 (42" C.M.P. S)	89+94.61 (N) 126+78.77 (E)
S-106	42" C.M.P.	—	—	135.00 (42" C.M.P. E)	89+94.61 (N) 126+00.00 (E)
S-107	36" C.M.P.	—	—	145.50 (36" C.M.P. S)	89+71.00 (N) 113+27.50 (E)
S-108	36" C.M.P.	—	—	145.50 (36" C.M.P. N)	89+71.00 (N) 113+27.50 (E)
S-109	42" C.M.P.	—	—	135.10 (42" C.M.P. S)	83+35.00 (N) 113+27.50 (E)
S-110	42" C.M.P.	—	—	135.00 (42" C.M.P. N)	82+55.00 (N) 113+27.50 (E)
S-111	18" C.M.P.	—	—	143.70 (18" C.M.P. E)	82+52.50 (N) 102+37.50 (E)
S-112	18" C.M.P.	—	—	142.70 (18" C.M.P. W)	82+52.50 (N) 103+81.00 (E)
S-113	42" C.M.P.	—	—	123.80 (42" C.M.P. E)	82+52.50 (N) 123+39.00 (E)
S-114	42" C.M.P.	—	—	122.40 (42" C.M.P. W)	82+52.50 (N) 124+62.50 (E)
S-115	42" C.M.P.	—	—	121.00 (42" C.M.P. E)	82+52.50 (N) 125+87.00 (E)
S-116	10' X 4' FDOT BOX CULVERT WITH 5.75' X 46' ENDWALL	—	—	136.71	74+24.15 (N) 99+55.00 (E)
S-117	10' X 4' FDOT BOX CULVERT WITH 5.75' X 46' ENDWALL	—	—	136.42	73+36.15 (N) 99+55.00 (E)
S-118	10' X 8' BOX CULVERT BOX CULVERT WITH 9.75' X 54' ENDWALL	—	—	110.00	81+18.72 (N) 128+01.47 (E)
S-119	10' X 8' BOX CULVERT BOX CULVERT WITH 9.75' X 54' ENDWALL	—	—	109.30	81+54.02 (N) 128+20.27 (E)
S-120	30" HDPE PIPE	—	—	134.28 (30" HDPE E)	88+80.00 (N) 126+19.57 (E)
S-121	30" HDPE PIPE	—	—	134.28 (30" HDPE E)	88+80.00 (N) 126+19.57 (E)
S-122	30" HDPE PIPE	—	—	159.00 (30" HDPE W)	88+67.00 (N) 100+79.40 (E)

DRAINAGE STRUCTURE TABLE					
STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP EL.	SLOT EL.	INVERT ELEVATION	STATION
S-123	30" HDPE PIPE	—	—	159.00 (30" HDPE W)	85+17.00 (N) 100+79.40 (E)
S-124	J-1-D MANHOLE	146.50	—	141.42 EXIST 42" C.M.P. 141.42 (48" R.C.P. S)	93+31.00 (N) 99+67.00 (E)
S-125	CONST. MITERED END INTO DITCH PAVING	—	—	141.30 (48" R.C.P. N)	91+49.00 (N) 99+67.00 (E)
S-126	15" FDOT MITERED END SECTION	—	—	118.80 (15" R.C.P. S)	88+40.50 (N) 126+78.77 (E)
S-127	15" FDOT MITERED END SECTION	—	—	119.00 (15" R.C.P. N)	87+79.50 (N) 126+78.77 (E)
S-128	15" FDOT MITERED END SECTION	—	—	119.00 (15" R.C.P. N)	85+40.50 (N) 126+78.77 (E)
*S-129	QUADRUPLE 54" R.C.P. S W/ CITY STANDARD ENDWALL	—	—	140.50 (54" R.C.P. S)	*
*S-130	QUADRUPLE 54" R.C.P. S W/ CITY STANDARD ENDWALL	—	—	140.50 (54" R.C.P. S)	*
S-131	15" FDOT MITERED END SECTION	—	—	118.75 (15" R.C.P. S)	91+60.00 (N) 126+78.77 (E)
S-132	15" FDOT MITERED END SECTION	—	—	118.40 (15" R.C.P. S)	94+40.00 (N) 126+78.77 (E)
S-133	15" FDOT MITERED END SECTION	—	—	118.15 (15" R.C.P. N)	93+80.00 (N) 126+78.77 (E)
S-134	30" HDPE PIPE	—	—	184.00 (30" HDPE S)	113+27.50 (N) 91+20.58 (E)
S-135	30" HDPE PIPE	—	—	145.7 (30" HDPE N)	113+27.50 (N) 89+75.00 (E)
S-136	30" HDPE PIPE	—	—	171.80 (30" HDPE S)	124+95.15 (N) 91+20.58 (E)
S-137	30" HDPE PIPE	—	—	135.00 (30" HDPE N)	85+17.00 (N) 99+63.00 (E)
S-138	J-1-C MANHOLE	127.50	—	118.76 (42" C.M.P. W) 118.76 (42" C.M.P. S)	88+84.61 (N) 126+78.77 (E)
S-139	42" C.M.P.	—	—	135.00 (42" C.M.P. E)	88+84.61 (N) 126+00.00 (E)
S-140	18" FDOT MITERED END SECTION	—	—	144.40 (18" R.C.P. N)	73+34.00 (N) 98+60.00 (E)
S-141	18" FDOT MITERED END SECTION	—	—	144.80 (18" R.C.P. S)	74+06.00 (N) 98+60.00 (E)
*S-142	DOUBLE 36" R.C.P.	—	—	144.40 (36" R.C.P. S)	*
*S-143	DOUBLE 36" R.C.P.	—	—	144.80 (36" R.C.P. S)	*

AS-BUILT DRAINAGE STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP ELEVATION		SLOT ELEVATION		INVERT ELEVATION		STATION	
		DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT
S-2	MOD. FDOT TYPE "E" INLET (DETAIL B)	146.50	146.68	143.76 (N&S)	143.89 (N&S)	141.26 (30" HDPE E) 141.26 (42" R.C.P. W)	141.26 (42" R.C.P. W)	88+67.00 (N) 100+21.00 (E)	88+67.08 (N) 100+20.88 (E)
S-3	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	141.26 (42" R.C.P. E)	141.37 (42" R.C.P. E)	88+67.00 (N) 99+68.00 (E)	88+68.68 (N) 99+68.45 (E)
S-24A	MOD. FDOT TYPE "E" INLET (DETAIL A)	121.50	121.45	118.76 (N&S) 118.71 (N) 118.67 (S)	118.71 (N) 118.67 (S)	116.87 (30" HDPE W) 116.87 (42" R.C.P. E)	116.78 (30" HDPE W) 116.78 (42" R.C.P. E)	88+80.00 (N) 126+78.77 (E)	15701.7482 (N) 22530.5721 (E)
S-35	FDOT TYPE "E" INLET	123.00	122.83	120.48 (SW)	120.81 (SW)	117.20 (24" R.C.P. SE)	117.19 (24" R.C.P. SE)	75+43.59 (N) 124+21.39 (E)	75+47.14 (N) 12418.7858 (E)
S-36	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	117.20 (24" R.C.P. NW)	117.26 (24" R.C.P. NW)	75+01.85 (N) 124+56.65 (E)	75+01.83 (N) 12456.4795 (E)
S-38	MOD. FDOT TYPE "E" INLET (DETAIL B) (SEE DETAIL S-38)	126.80	127.04	124.26 (W)	124.39 (W)	122.36 (FUTURE 30" HDPE N) 122.36 (42" R.C.P. S)	122.31 (42" R.C.P. S)	73+95.00 (N) 119+84.40 (E)	73+94.27 (N) 119+82.94 (E)
S-39	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	122.36 (42" R.C.P. N)	122.46 (42" R.C.P. N)	73+43.30 (N) 119+70.00 (E)	73+42.84 (N) 119+70.35 (E)
S-41	MOD. FDOT TYPE "E" INLET (DETAIL B)	132.00	132.19	129.31 (W)	129.57 (W)	125.80 (FUTURE 30" HDPE N) 125.80 (42" R.C.P. S)	125.59 (42" R.C.P. S)	73+91.00 (N) 115+06.00 (E)	73+91.32 (N) 115+06.72 (E)
S-42	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	125.80 (42" R.C.P. N)	125.85 (42" R.C.P. N)	73+36.08 (N) 115+06.00 (E)	73+35.39 (N) 115+05.96 (E)
S-44	MOD. FDOT TYPE "E" INLET (DETAIL B) (SEE DETAIL S-44)	135.00	135.34	132.30 (W)	132.49 (W)	128.27 (FUTURE 30" HDPE N) 128.27 (42" R.C.P. S)	128.22 (42" R.C.P. S)	73+91.00 (N) 111+45.00 (E)	73+91.04 (N) 111+45.22 (E)
S-45	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	128.27 (42" R.C.P. N)	128.33 (42" R.C.P. N)	73+34.65 (N) 111+45.00 (E)	73+34.77 (N) 111+45.64 (E)
S-47	MOD. FDOT TYPE "E" INLET (DETAIL B) (SEE DETAIL S-47)	139.00	139.07	136.35 (W)	136.42 (W)	131.46 (FUTURE 30" HDPE N) 131.46 (42" R.C.P. S)	130.73 (42" R.C.P. S)	73+91.00 (N) 106+77.00 (E)	73+90.92 (N) 106+77.11 (E)
S-48	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	131.46 (42" R.C.P. N)	131.54 (42" R.C.P. N)	73+33.35 (N) 106+77.00 (E)	73+33.46 (N) 106+76.98 (E)
S-49	FDOT TYPE "E" INLET (SEE DETAIL S-47)	145.00	145.02	142.38 (N)	142.41 (N)	136.73 (24" R.C.P. N)	136.09 (24" R.C.P. BOTTOM OF BOX)	74+30.00 (N) 100+21.00 (E)	74+29.17 (N) 100+20.10 (E)
S-50	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	136.73 (24" R.C.P. E)	136.74 (24" R.C.P. E)	74+30.00 (N) 99+68.00 (E)	74+29.62 (N) 99+60.30 (E)
S-52	MOD. FDOT TYPE "E" INLET (DETAIL B)	146.50	146.59	143.78 (N&S) 143.63 (N) 143.80 (S)	143.63 (N) 143.80 (S)	138.74 (FUTURE 30" HDPE E) 138.74 (42" R.C.P. W)	138.13 (42" R.C.P. W)	80+68.00 (N) 100+21.00 (E)	80+67.27 (N) 100+20.88 (E)
S-53	CONST. MITERED END INTO DITCH PAVING	—	—	—	—	138.74 (42" R.C.P. E)	138.70 (42" R.C.P. E)	80+68.00 (N) 99+63.00 (E)	80+69.06 (N) 99+64.83 (E)

TRAIL RIDGE LANDFILL, INC.

PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL

LIST OF DRAWINGS

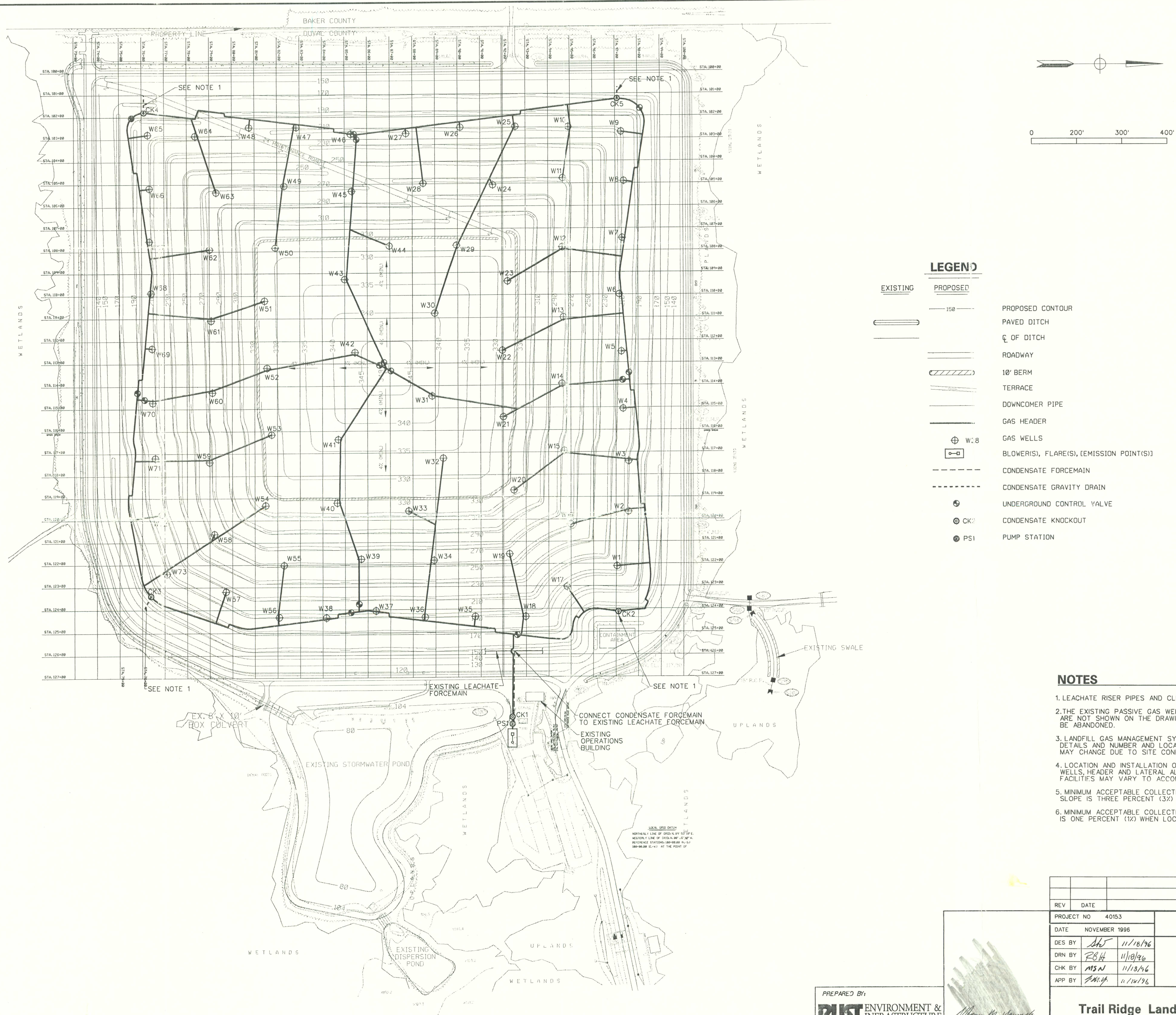
<u>SHEET NO.</u>	<u>TITLE</u>
1	GAS MANAGEMENT PLAN
2	LANDFILL GAS MANAGEMENT SYSTEM DETAILS
3	LANDFILL GAS /CONDENSATE MANAGEMENT SYSTEM DETAILS
4	FLARE STATION DETAILS
5	CONCEPTUAL GAS COLLECTION SYSTEM DETAILS
6	PASSIVE FLARE DETAIL

PREPARED FOR:
TRAIL RIDGE LANDFILL, INC.
5110 U.S. HWY. 301
BALDWIN, FL 32234
(904) 289-9100

RUST ENVIRONMENT &
INFRASTRUCTURE

PREPARED BY:
RUST ENVIRONMENT & INFRASTRUCTURE
15 BRENDAN WAY
GREENVILLE, SOUTH CAROLINA 29615
(864) 234-3000

Blair W. Spence
11/18/96



NOTES

1. LEACHATE RISER PIPES AND CLEANOUTS TO BE FIELD LOCATED.
2. THE EXISTING PASSIVE GAS WELLS WITHIN THE LANDFILL ARE NOT SHOWN ON THE DRAWING AND WILL ULTIMATELY BE ABANDONED.
3. LANDFILL GAS MANAGEMENT SYSTEM ALIGNMENT, LOCATION, DETAILS AND NUMBER AND LOCATIONS OF EXTRACTION WELLS MAY CHANGE DUE TO SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
4. LOCATION AND INSTALLATION OF THE PROPOSED GAS EXTRACTION WELLS, HEADER AND LATERAL ALIGNMENT, AND LIQUID MANAGEMENT FACILITIES MAY VARY TO ACCOMMODATE LANDFILL FIELD SLOPE.
5. MINIMUM ACCEPTABLE COLLECTION HEADER AND LATERAL PIPELINE SLOPE IS THREE PERCENT (3%) WHEN LOCATED IN WASTE DISPOSAL AREAS.
6. MINIMUM ACCEPTABLE COLLECTION HEADER AND LATERAL PIPELINE SLOPE IS ONE PERCENT (1%) WHEN LOCATED OUT OF WASTE DISPOSAL AREAS.

[illegible]

1. BENTONITE MAT IS TO BE INSTALLED WITH THE THICKER (NON-WOVEN) SIDE DOWN, AND THE THINNER (WOVEN) SIDE UP
2. CONTRACTOR SHALL THOROUGHLY COVER ANY CUT MADE TO THE BENTONITE MAT WITH BENTONITE CHIPS.
3. BENTONITE MAT AND BENTONITE CHIPS SHALL BE WATER SATURATED PRIOR TO BACKFILLING.

1. BENTONITE MAT IS TO BE INSTALLED WITH THE THICKER (NON-WOVEN) SIDE DOWN, AND THE THINNER (WOVEN) SIDE UP
2. CONTRACTOR SHALL THOROUGHLY COVER ANY CUT MADE TO THE BENTONITE MAT WITH BENTONITE CHIPS.
3. BENTONITE MAT AND BENTONITE CHIPS SHALL BE WATER SATURATED PRIOR TO BACKFILLING.

1. VALVE TO BE CYCLED BEFORE BACKFILLING AND
INSTALLED CLOSED.

- P2**

- P2

- P2

- P2

- P2

NOTES

1. CLEAN BACKFILL SHALL BE COMPACTED IN MAXIMUM LIFTS OF 9". SAND BEDDING FOR HEADER PIPE SHALL BE COMPACTED 6" BELOW THE PIPE AND MOUND 6" ABOVE THE PIPE.
2. LANDFILL GAS MANAGEMENT SYSTEM DETAILS AND DIMENSIONS MAY CHANGE DUE TO SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
3. ALL DIMENSIONS ARE APPROXIMATE

SECTION

PLAN

- ## 6 ANTI-SEEP COLLAR

NOTE:

1. ANTI-SEEP COLLAR IS TO BE LOCATED AT ALL POINTS WHERE THE PIPELINE EXITS THE LIMITS OF REFUSE AND WILL BE FIELD LOCATED. THE CLAY SURROUNDING THE ANTI-SEEP COLLAR WILL BE HAND COMPACTED TO ADEQUATELY TIE INTO THE EXISTING FINAL COVER SYSTEM. A MINIMUM OF ONE FOOT OUTSIDE OF ALL EDGES IS RECOMMENDED.

PREPARED BY:

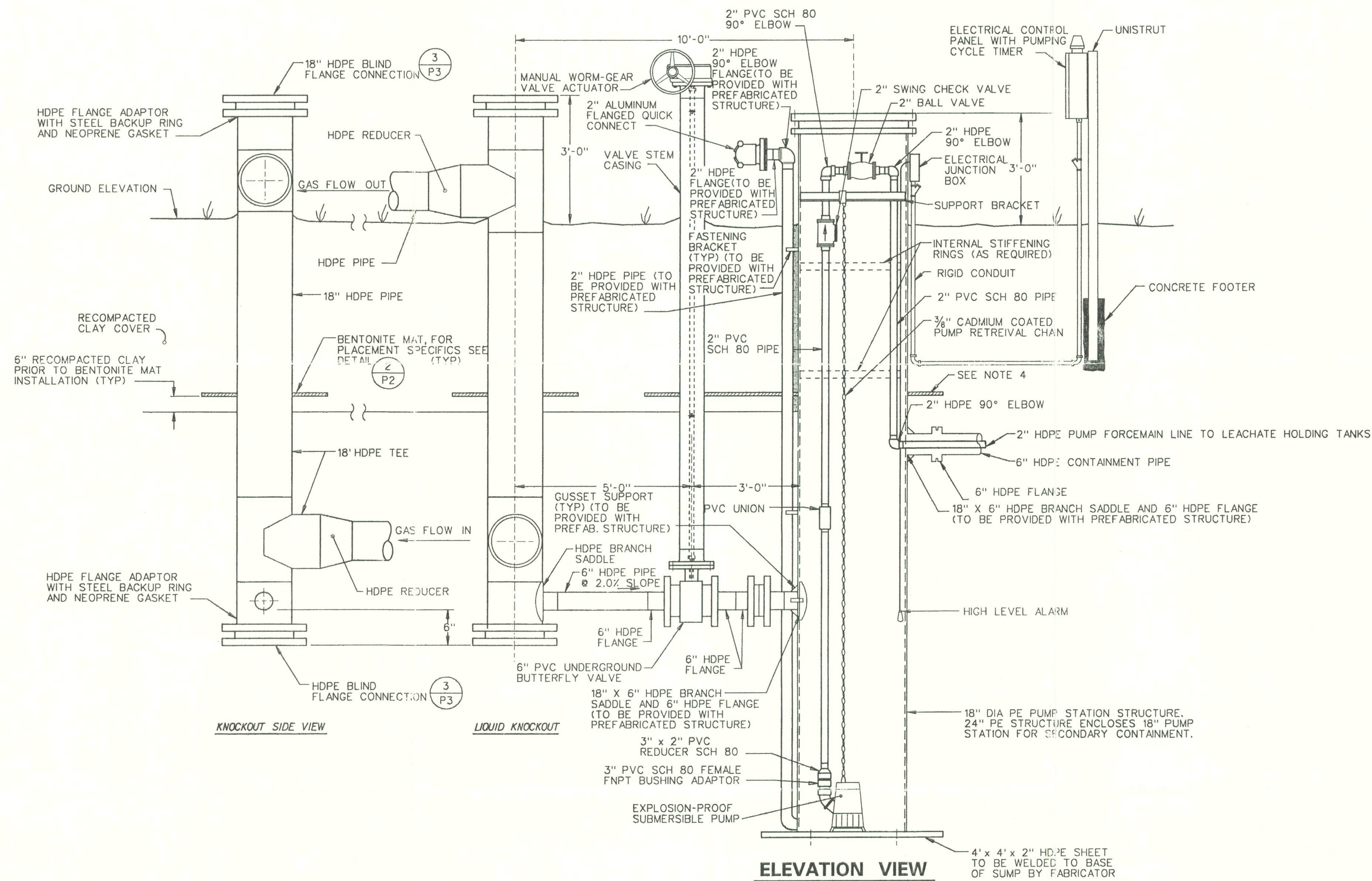
RUST ENVIRONMENT & INFRASTRUCTURE

Trail Ridge Landfill, Inc.

SHEET 2 OF 6
DRAWING NO

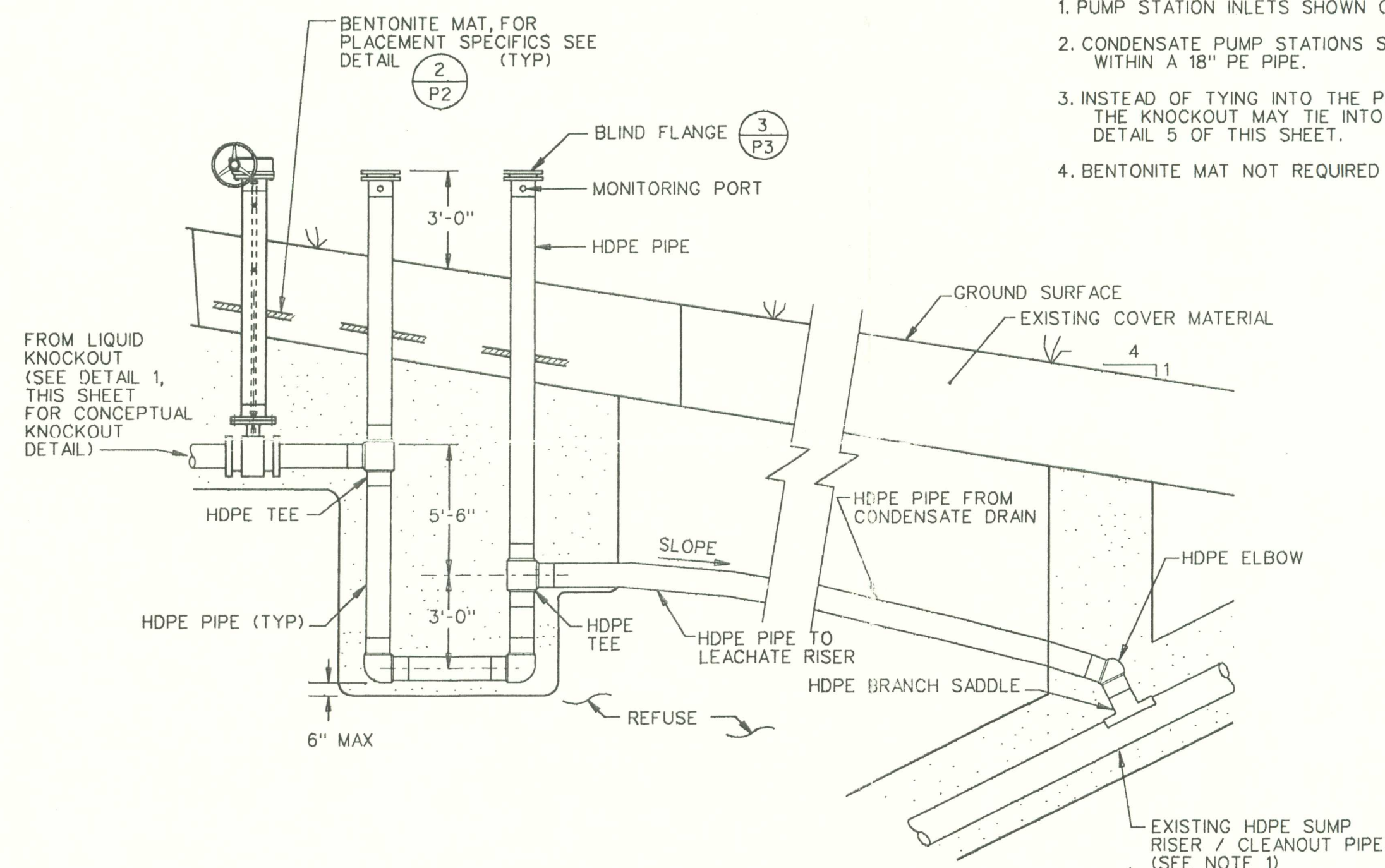
P2

0153P2GS.DGN



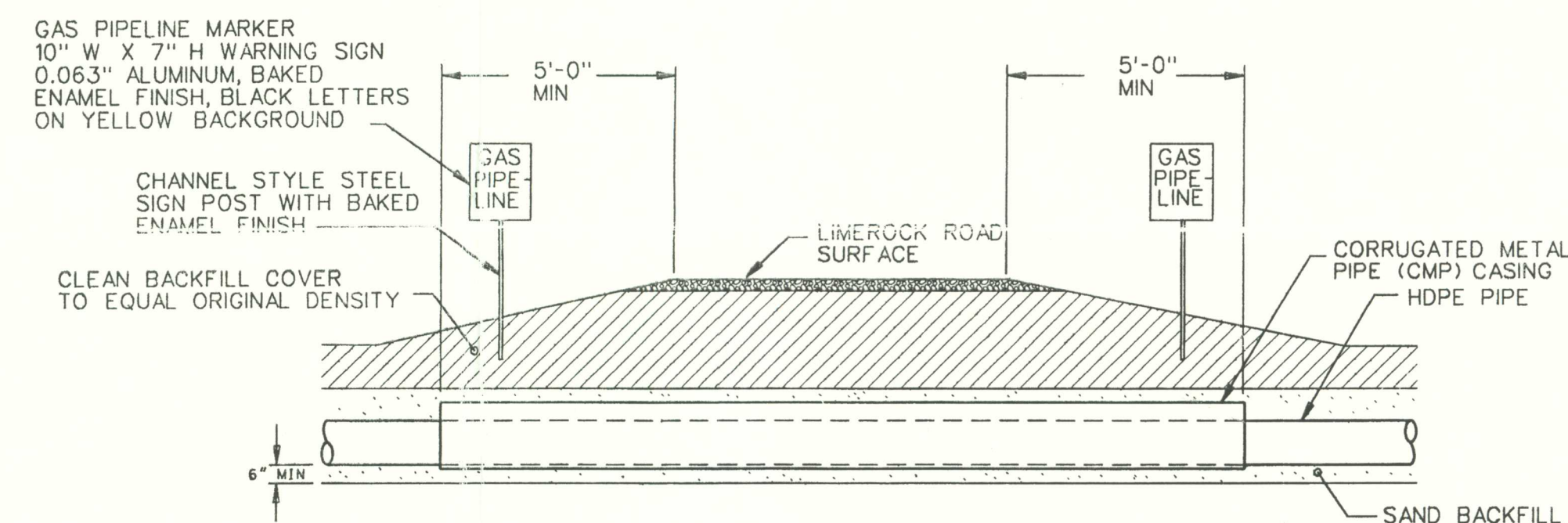
1 LIQUID KNOCKOUT AND PUMP STATION CONCEPTUAL DETAIL

- NOTES:
1. PUMP STATION INLETS SHOWN OUT OF ORIENTATION FOR DETAIL CLARITY.
 2. CONDENSATE PUMP STATIONS SHALL BE DOUBLE CONTAINED WITHIN A 18" PE PIPE.
 3. INSTEAD OF TYING INTO THE PUMP STATION AS SHOWN ON THIS DETAIL, THE KNOCKOUT MAY TIE INTO A CONDENSATE DRIP LEG AS SHOWN ON DETAIL 5 OF THIS SHEET.
 4. BENTONITE MAT NOT REQUIRED OUTSIDE OF LINED AREA.



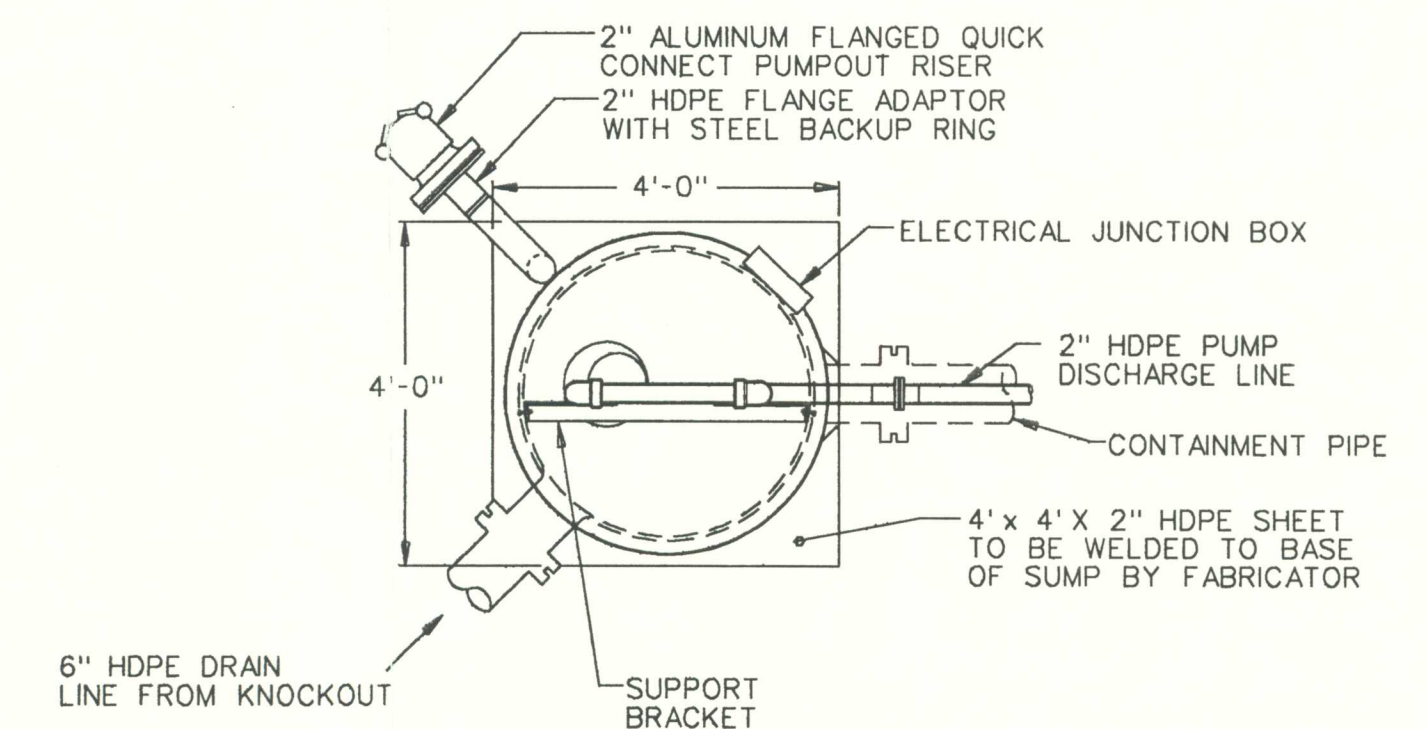
5 CONDENSATE DRIPLEG DL-3

- NOTES:
1. CK-1 AND CK-2 WILL CONNECT TO PRIMARY HDPE SUMP RISER PIPE. CK-3 AND CK-4 WILL CONNECT TO HDPE CLEANOUT RISER PIPE.



6 TYPICAL HEADER CASING

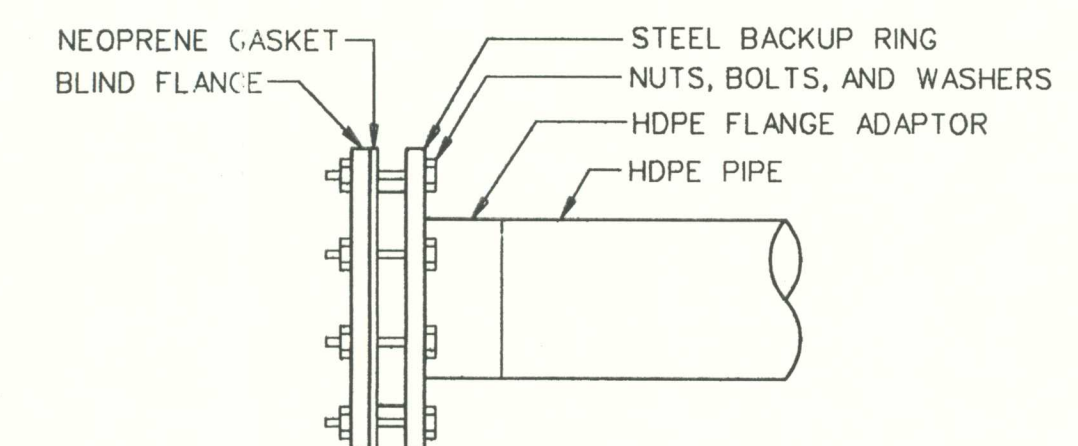
- NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR ROADWAY REPAIR TO ORIGINAL CONDITION AFTER CONSTRUCTION.
- IN AREAS WHERE ROAD CASING IS REQUIRED, USE 16 GAUGE X 2'-2/3\"/>



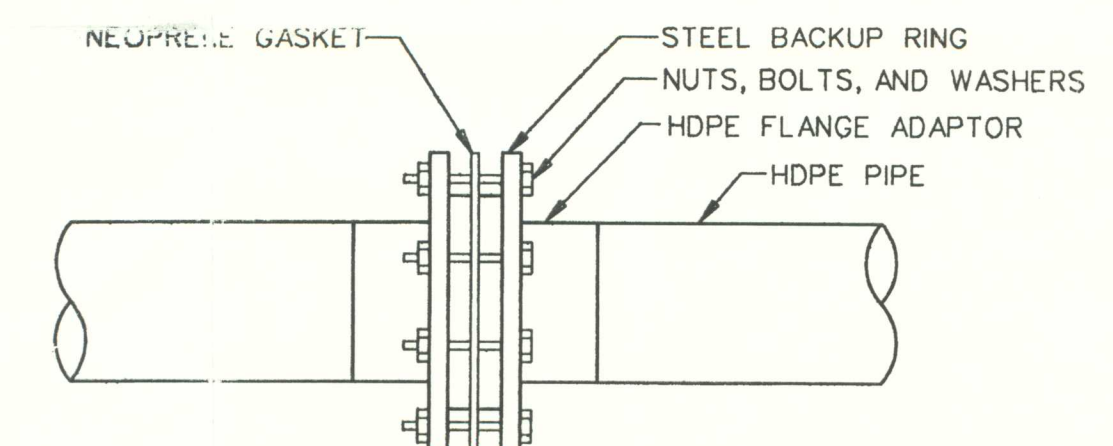
PLAN VIEW

2 PUMP STATION

- NOTE:
1. ACTUAL INLET ORIENTATION WILL BE DETERMINED DURING VESSEL FABRICATION AT TIME OF CONSTRUCTION.



3 BLIND FLANGE (TYP)



4 FLANGE CONNECTION (TYP)

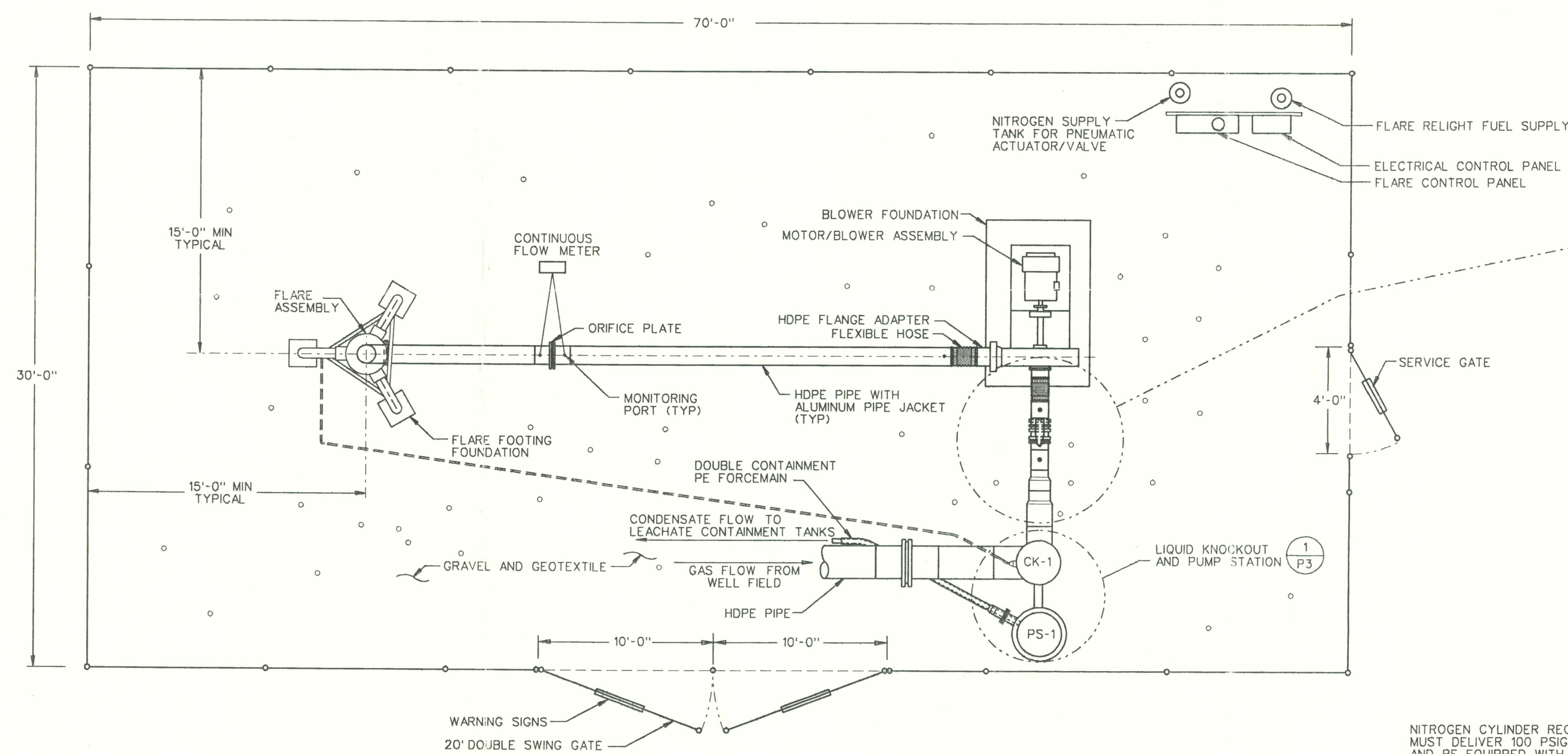
NOTES

1. LANDFILL GAS AND LEACHATE SYSTEM DETAILS ARE CONCEPTUAL AND MAY CHANGE DUE TO SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
2. ONLY ONE PUMP STATION IS REQUIRED IN PLANS. THE PUMP STATION IS LOCATED OUTSIDE OF THE LINED AREA BEFORE THE FLARE STATION (SEE SHEET P1).

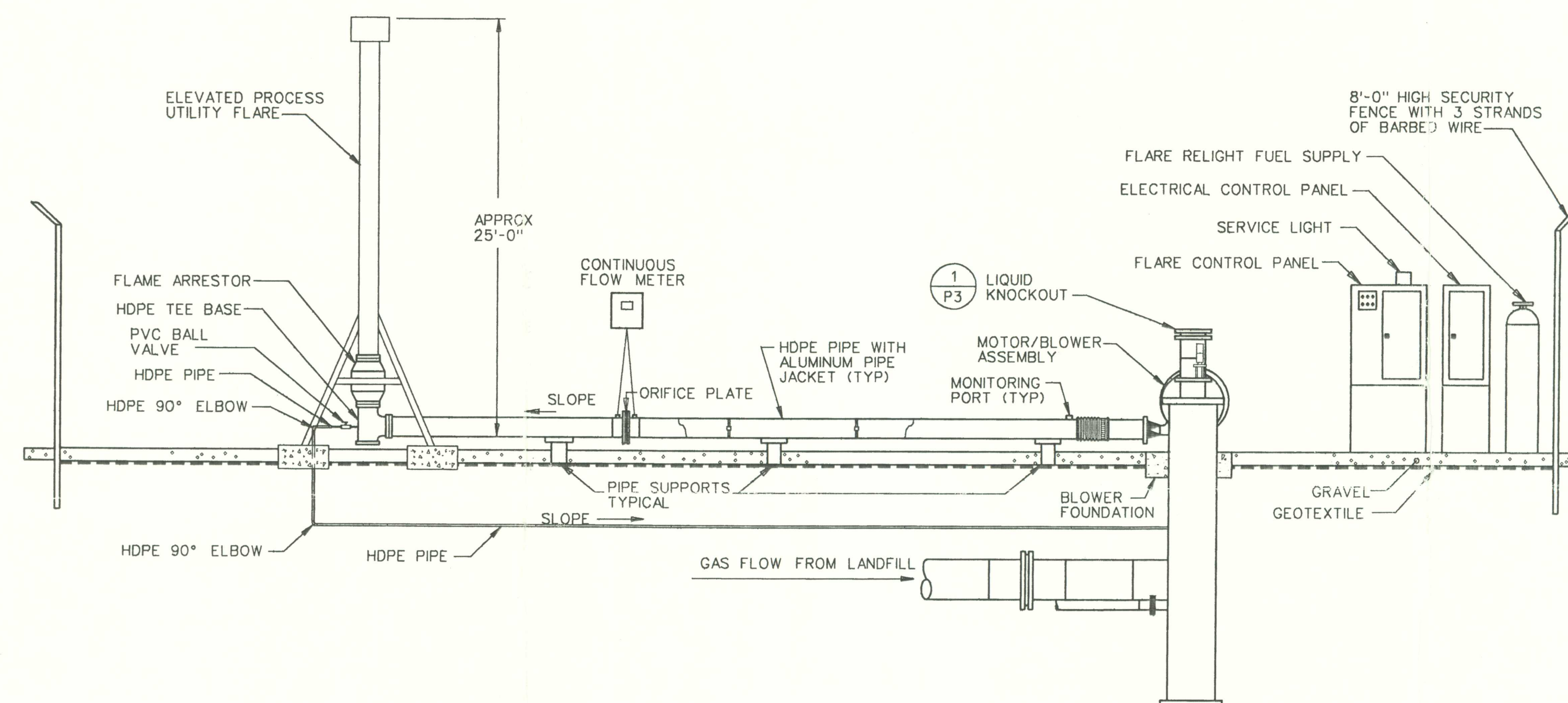
REV	DATE	DESCRIPTION	DES BY	APP BY
PROJECT NO	40153	TRAIL RIDGE LANDFILL - PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.		
DATE	NOVEMBER 1996			
DES BY	RBH	11/18/96		
DRN BY	RBH	11/18/96		
CHK BY	MSN	11/18/96		
APP BY	MSN	11/18/96		
LANDFILL GAS / CONDENSATE MANAGEMENT SYSTEM DETAILS				
Trail Ridge Landfill, Inc.				
SHEET 3 OF 6				
DRAWING NO				
P3				

PREPARED BY:
RUST ENVIRONMENT & INFRASTRUCTURE

William M. Grogan
11/18/96

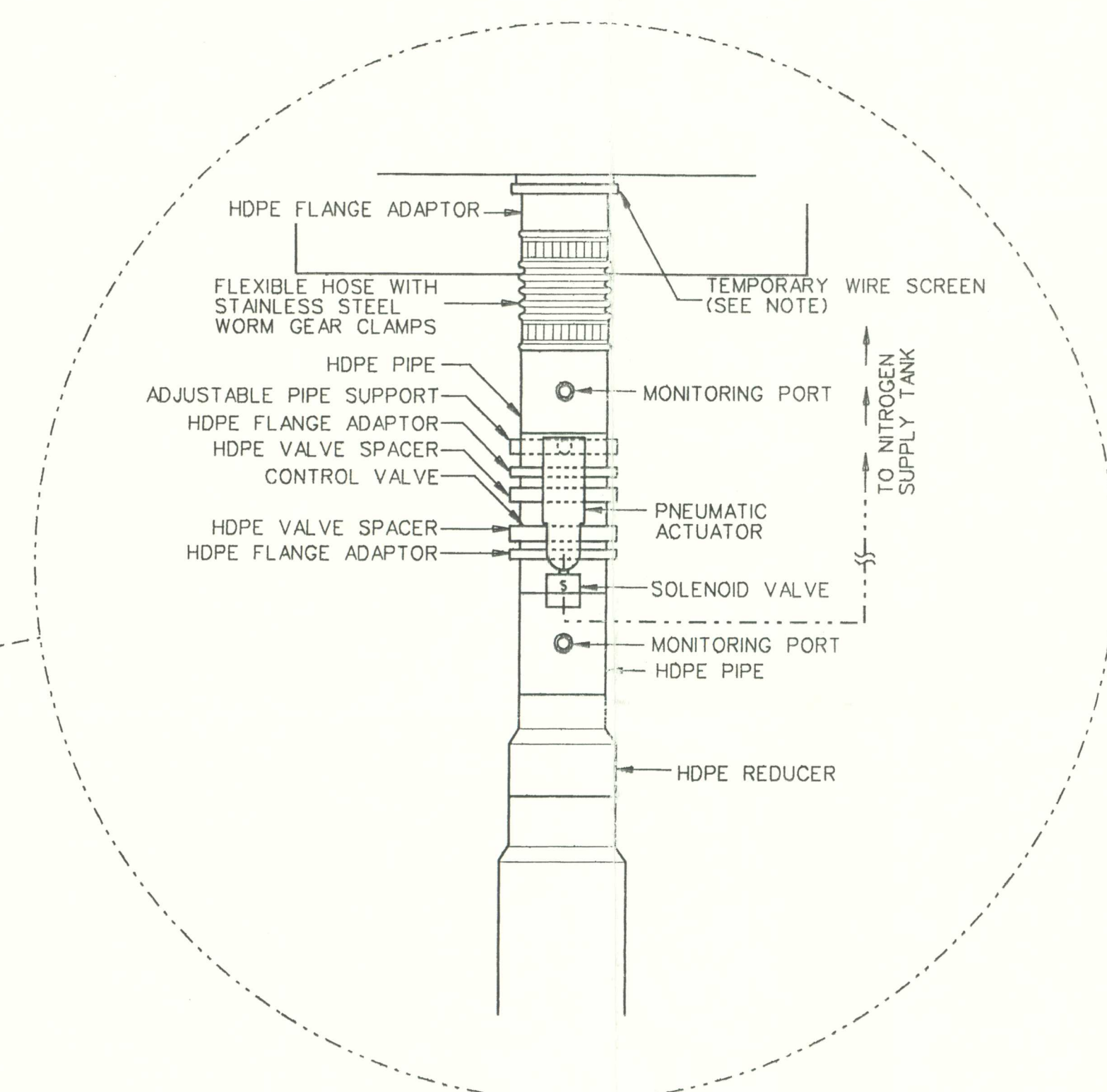


PLAN



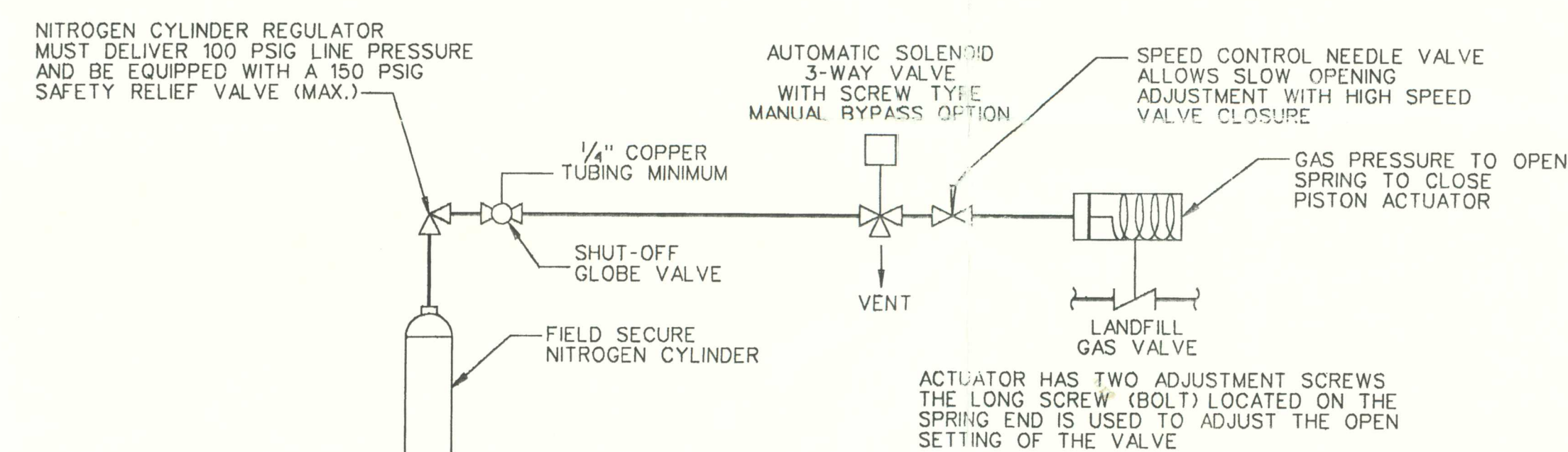
PROFILE

1 BLOWER / FLARE STATION
 NOTE: PROPOSED FLARE STATION LAYOUT MAY VARY BASED ON FIELD CONDITIONS ENCOUNTERED.



BLOW UP OF BLOWER INLET CONNECTION

NOTE: CONTRACTOR SHALL INSTALL WIRE SCREEN BEFORE START UP TO PREVENT DEBRIS FROM ENTERING INTO BLOWER. SCREEN WILL BE REMOVED AT A LATER DATE BY SITE LANDFILL GAS WELL TECHNICIAN.



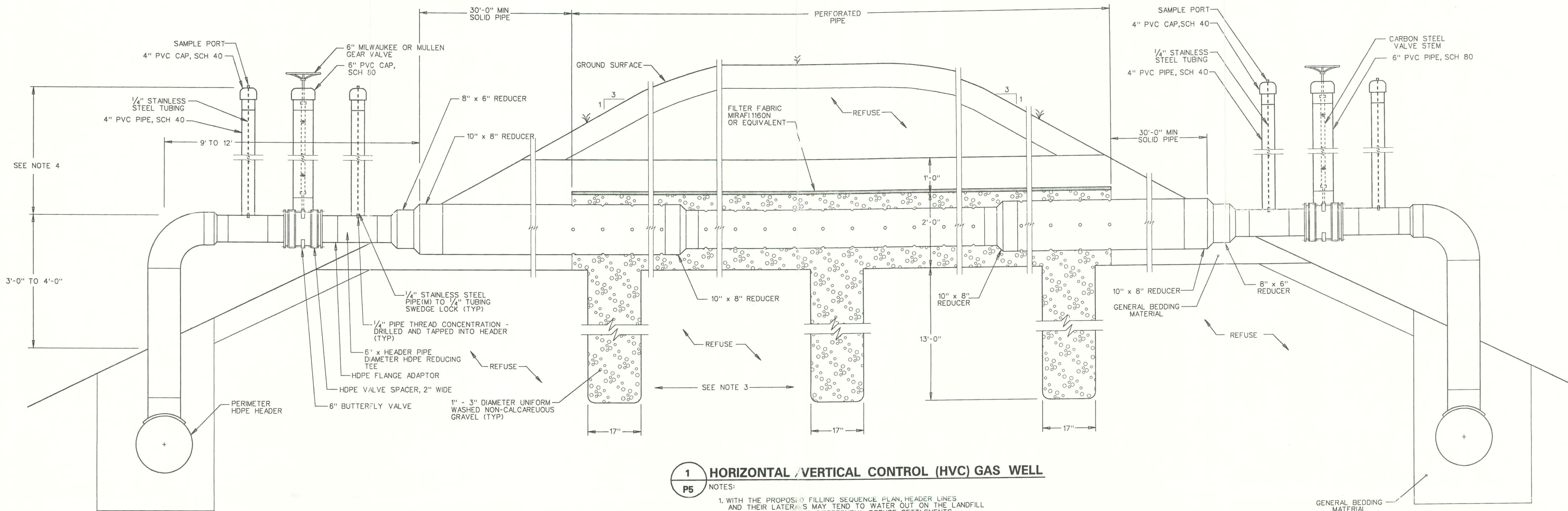
2 PNEUMATIC ACTUATOR SYSTEM DETAIL

- NOTES:
- SOLENOID VALVE MAY BE FACTORY MOUNTED ON ACTUATOR.
 - SOLENOID VALVE HAS 1/4" NPT. SPEED CONTROL VALVE MOUNTED ON ACTUATOR MOUNT 1/4" OR 3/8" NPT DEPENDING ON ACTUATOR SIZE.
 - SOLENOID VALVE REQUIRES 110V POWER TO ENERGIZE (PRESSURE ON ACTUATOR).
 - CONTRACTOR TO PROVIDE ALL TUBING, TEES, FITTINGS AND ALL CONDUIT, WIRE, ETC. FOR PNEUMATIC ACTUATOR SYSTEM INSTALLATION.

REV	DATE	DESCRIPTION	DES BY	APP BY
PROJECT NO 40153		TRAIL RIDGE LANDFILL - PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.		
DATE	NOVEMBER 1996			
DES BY	SW	11/18/96		
DRN BY	RBL	11/18/96		
CHK BY	MSN	11/18/96		
APP BY	MSW	11/18/96		
FLARE STATION DETAILS				
Trail Ridge Landfill, Inc.			SHEET 4 OF 6	
			DRAWING NO	
				P4

PREPARED BY:
RUST ENVIRONMENT & INFRASTRUCTURE

John J. Hunsicker
 11/18/96



1 HORIZONTAL / VERTICAL CONTROL (HVC) GAS WELL **P5** NOTES:

1. WITH THE PROPOSED FILLING SEQUENCE, PLAN, HEADER LINES AND THEIR LATERALS MAY TEND TO WATER OUT ON THE LANDFILL PLATEAU DUE TO THE DIFFERENTIAL REFUSE SETTLEMENTS. THIS TEMPORARY COLLECTION SYSTEM MAY BE USED AS AN ALTERNATIVE TO DETAIL 8 SHEET P2 FOR FILL AREAS NOT FILLED TO FINAL GRADE.
2. ELEVATION OF SIDE SLOPE VARIES FROM EXPOSED CONTROL VALVE TO BURIED CONTROL VALVE. LENGTH OF SAMPLE PORT AND VALVE EXTENSIONS SHOULD BE ADJUSTED AS APPROPRIATE.
3. VERTICAL BORE SPACING MINIMUM EVERY 50 FEET ALONG PERFORATED PIPE SECTION.
4. VALVE EXTENSION AND SAMPLE PORT RISERS MAY NOT BE NECESSARY IF PIPE IS ABOVE GRADE.

GENERAL NOTES

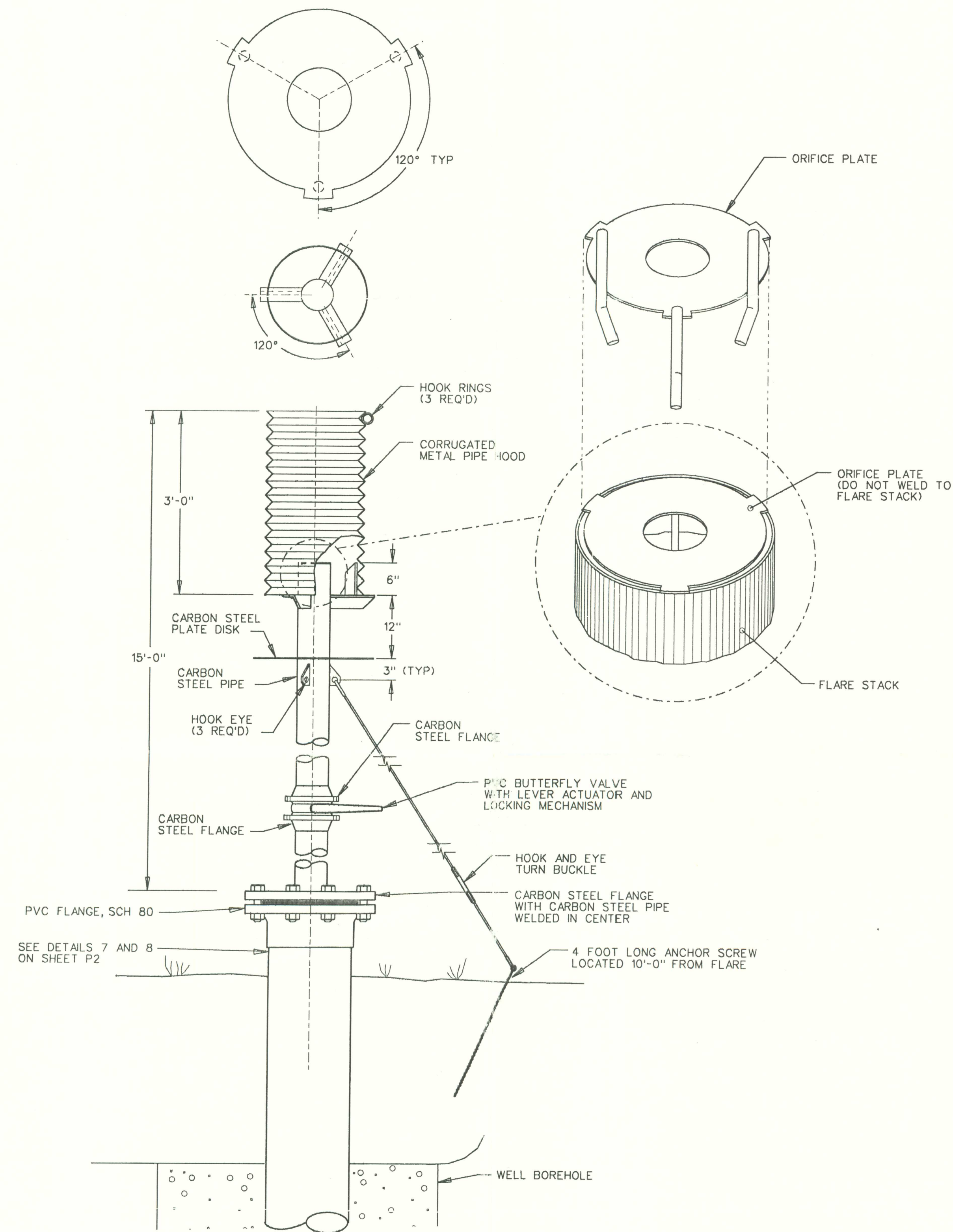
1. PERFORATED PIPE SIZES SHOULD BE EQUAL IN TOTAL LENGTH. (e.g. 25' - 50' - 25' 10' - 8' - 10')
2. FABRIC TO BE PLACED BETWEEN STONE AND BACKFILL MATERIAL ABOVE PERFORATED PIPE.
3. LENGTH OF PERFORATED PIPE IS SUBJECT TO WASTE DIMENSION AT INSTALLATION ELEVATION.
4. HVC GAS WELLS ARE TO BE INSTALLED AT COMPLETION OF APPROPRIATE REFUSE LIFTS AND SHOULD BE COORDINATED WITH LANDFILLING OPERATIONS.

PREPARED BY:
RUST ENVIRONMENT & INFRASTRUCTURE

Thomas M. Sporendler
 11/18/96

REV	DATE	DESCRIPTION		DES BY APP BY
PROJECT NO 40153		TRAIL RIDGE LANDFILL - PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.		
DATE NOVEMBER 1996				
DES BY	<i>AW</i>	11/18/96	CONCEPTUAL GAS COLLECTION SYSTEM DETAILS	
DRN BY	<i>RBH</i>	11/18/96		
CHK BY	<i>MSN</i>	11/18/96		
APP BY	<i>J.M.G.</i>	11/18/96		
Trail Ridge Landfill, Inc.			SHEET 5 OF 5	
			DRAWING NO	
			P5	

0153P5GS.DGN



1 STANDARD PASSIVE FLARE
P6

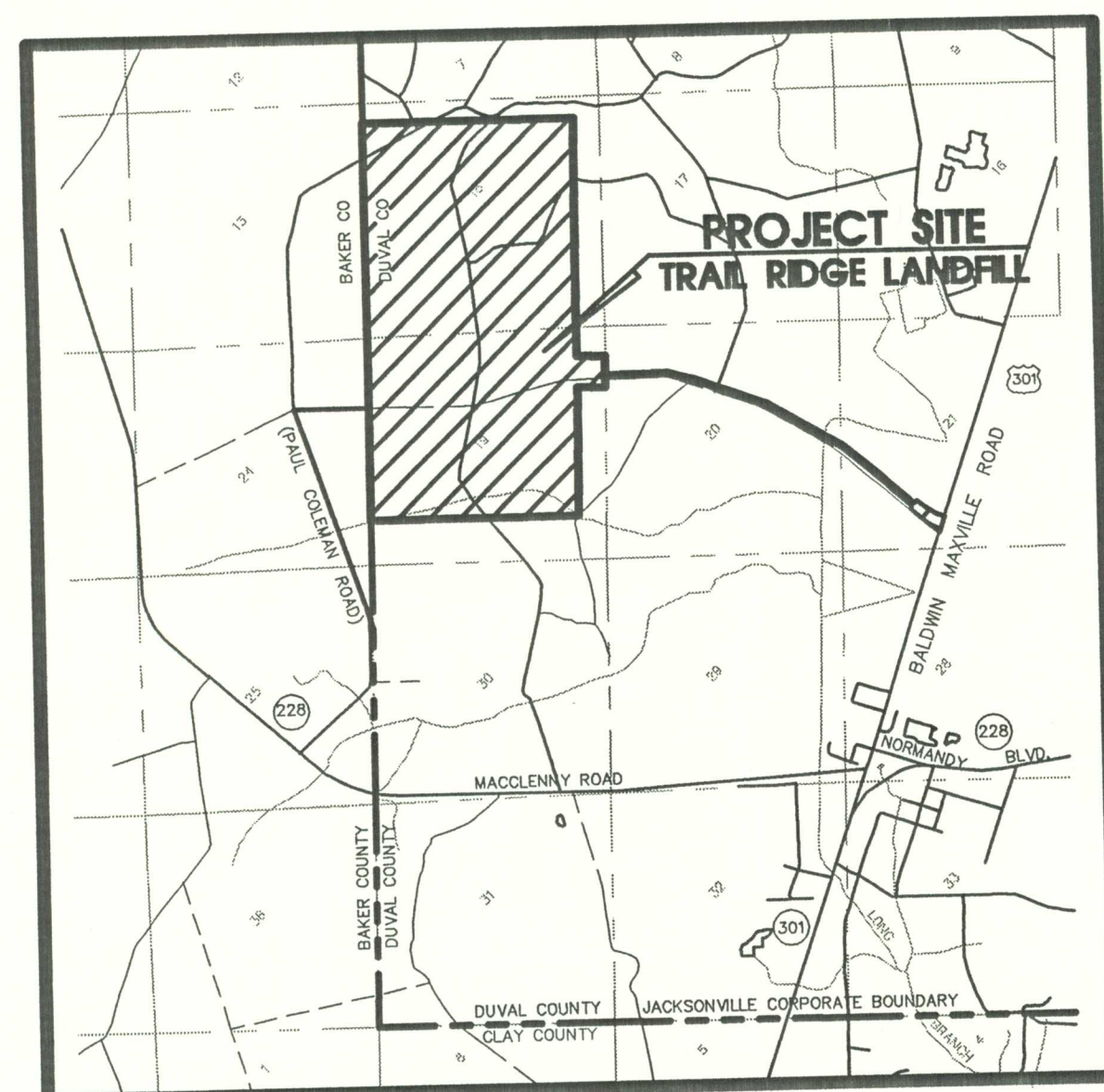
- NOTES:
1. ALL DIMENSIONS ARE APPROXIMATE.
2. PASSIVE FLARES MAY BE INSTALLED OVER PROPOSED AND EXISTING GAS WELLS PRIOR TO START UP OF ACTIVE GAS COLLECTION SYSTEM.

PREPARED BY:
RUST ENVIRONMENT & INFRASTRUCTURE

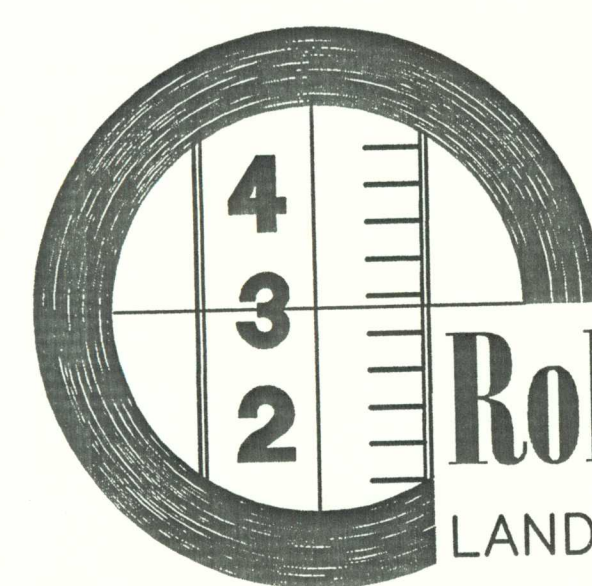
John M. Spawell
11/18/96

REV	DATE	DESCRIPTION	DES BY	APP BY
PROJECT NO	40153	TRAIL RIDGE LANDFILL - PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.		
DATE	NOVEMBER 1996			
DES BY	<i>DB</i>	11/18/96	PASSIVE FLARE DETAIL	
DRN BY	<i>DB</i>	11/18/96		
CHK BY	<i>MSN</i>	11/18/96		
APP BY	<i>MSN</i>	11/18/96		
Trail Ridge Landfill, Inc.			SHEET <u>6</u> OF <u>6</u>	
			DRAWING NO	
			P6	

“AS - BUILTS” OF TRAIL RIDGE LANDFILL PHASES I, II, III, IV AND V FOR TRAIL RIDGE LANDFILL, INC. AND CITY OF JACKSONVILLE, FLORIDA



VICINITY MAP



Robert M. Angas Associates, inc.

LAND SURVEYORS, PLANNERS AND CIVIL ENGINEERS
SINCE 1924

14775 St. Augustine Road, Jacksonville, FL. 32258
Telephone: (904) 642-8550 Fax: (904) 642-4165

Certificate of Authorization No.: LB 3624

(FORMERLY SUNSHINE STATE SURVEYORS)

UPDATED: JULY, 2001
UPDATED: JANUARY, 2001
UPDATED: DECEMBER, 2000
UPDATED: DECEMBER, 1996
UPDATED: SEPTEMBER, 1995
UPDATED: JANUARY, 1993
UPDATED: DECEMBER, 1992
DATE: SEPTEMBER, 1992

INDEX OF DRAWINGS

SHEET NO. DESCRIPTION

COVER SHEET NUMBER 1 COVER SHEET

GROUNDWATER WELLS

GW-1 GROUNDWATER MONITORING WELLS

LINER SYSTEM

LS-1 LINER SYSTEM - PHASES I AND II
LS-2 LINER SYSTEM - PHASES I AND II
LS-3 LINER SYSTEM - PHASES I AND II
LS-4 LINER SUBGRADE - PHASES IIIA, IIIB, IVA, IVB
LS-5 LINER SYSTEM - PHASES IIIA, IIIB, IVA, IVB
LS-6 LINER SYSTEM LOCATION - PHASES IIIA, IIIB, IVA, IVB
LS-7 LINER SYSTEM - PHASES IIIC, IVC, VA, VB, VC AND VD
LS-8 LINER SYSTEM - PHASES IIIC, IVC, VA, VB, VC AND VD
LS-9 LINER SYSTEM LOCATION - PHASES IIIC, IVC, VA, VB, VC AND VD

LEACHATE SYSTEM

LE-1 LEACHATE FORCE MAIN
LE-2 LEACHATE FORCE MAIN - PHASES IIIC, VA AND VB

ELECTRICAL SYSTEM

E-1 ELECTRICAL SYSTEM
E-2 ELECTRICAL SYSTEM
E-3 ELECTRICAL SYSTEM - PHASES IIIC, VA AND VB

DRAINAGE PLANS

D-1 DRAINAGE STRUCTURE AND SPREADER PIPE DATA SHEET
D-2 PHASES I AND II DRAINAGE STRUCTURES
D-3 DETENTION LAKE
D-4 FILTER BED AREA
D-5 DRAINAGE STRUCTURES - PHASES IIIA, IIIB, IVA AND IVB
D-5A DRAINAGE STRUCTURES - PHASES IIIC, IVC, VA AND VB
D-6 DRAINAGE STRUCTURE TABLE - PHASES IIIA, IIIB, IVA AND IVB
D-7 DRAINAGE STRUCTURE TABLE - PHASES IIIC, IVC, VA AND VB

ANCILLARY FACILITIES

A-1 ANCILLARY AREA FORCE MAIN,
WATER MAIN AND STORM DRAINAGE
A-2 ANCILLARY AREA FORCE MAIN,
WATER MAIN AND STORM DRAINAGE

ENTRANCE ROAD

ER-1 ENTRANCE ROAD STORM DRAINAGE
ER-2 ENTRANCE ROAD STORM DRAINAGE
ER-3 ENTRANCE ROAD STORM DRAINAGE
ER-4 ENTRANCE ROAD STORM DRAINAGE
ER-5 ENTRANCE ROAD STORM DRAINAGE
ER-6 ENTRANCE ROAD STORM DRAINAGE
ER-7 ENTRANCE ROAD STORM DRAINAGE

FIRE PUMP

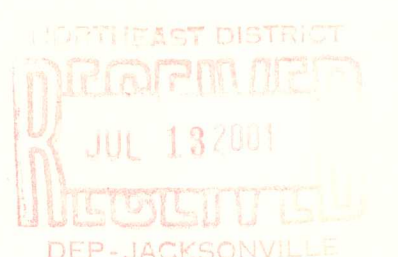
P-1 CLASS I FIRE PUMP / HYDROTANK STORMWATER

WATER TREATMENT FACILITIES

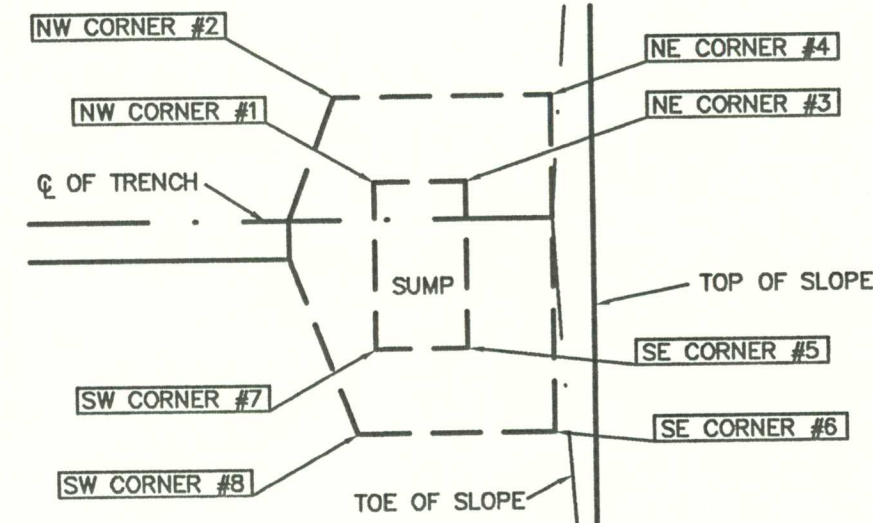
WT-1 WATER TREATMENT FACILITY
WT-2 WATER TREATMENT FACILITY
WT-3 WATER TREATMENT FACILITY
WT-4 WATER TREATMENT PLANT

ANCILLARY FACILITIES BUILDINGS

201-711 ANCILLARY FACILITIES BUILDINGS
PROVIDED BY THE HASKELL COMPANY
L-1 THRU L-4 ANCILLARY FACILITIES BUILDINGS
PROVIDED BY THE HASKELL COMPANY



COVER SHEET NO. 1



SUMP DETAIL

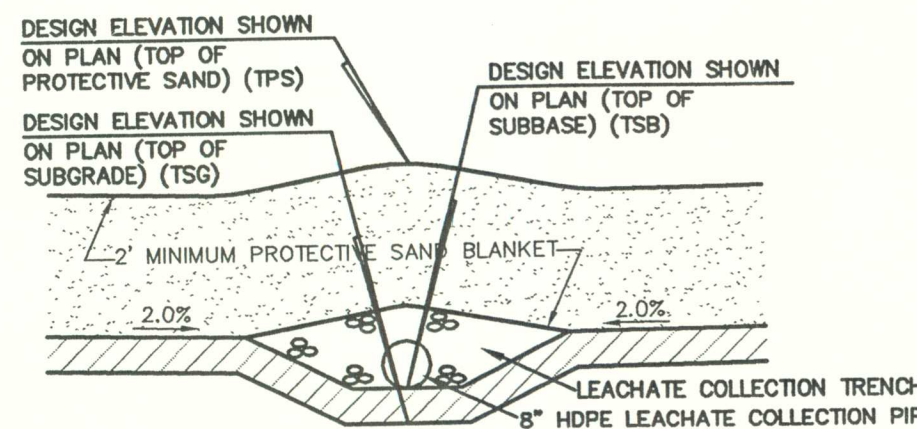
NOT TO SCALE

LEGEND

TOP OF SUBGRADE ELEVATION TSG TSG AS/TSB
DESIGN EL. "AS-BUILT" EL.

"AS-BUILT" SUMP TABLE

PHASE	LOCATION	TSG DESIGN EL.	TSG "AS-BUILT" EL.
III C	N.W. #1	122.3	119.5
III C	N.W. #2	125.1	123.4
III C	N.E. #3	123.7	120.1
III C	N.E. #4	124.7	123.5
III C	S.E. #5	123.3	120.1
III C	S.E. #6	124.7	123.5
III C	S.W. #7	122.5	119.9
III C	S.W. #8	125.1	124.0
VA	N.W. #1	121.1	120.7
VA	N.W. #2	124.6	123.7
VA	N.E. #3	121.1	120.5
VA	N.E. #4	124.1	123.5
VA	S.E. #5	121.1	120.7
VA	S.E. #6	124.9	124.1
VA	S.W. #7	121.1	120.8
VA	S.W. #8	124.9	123.8
VB	N.W. #1	121.7	121.1
VB	N.W. #2	125.4	122.9
VB	N.E. #3	121.7	120.9
VB	N.E. #4	124.5	124.4
VB	S.E. #5	121.7	120.9
VB	S.E. #6	125.8	125.0
VB	S.W. #7	121.7	121.2
VB	S.W. #8	125.5	122.6

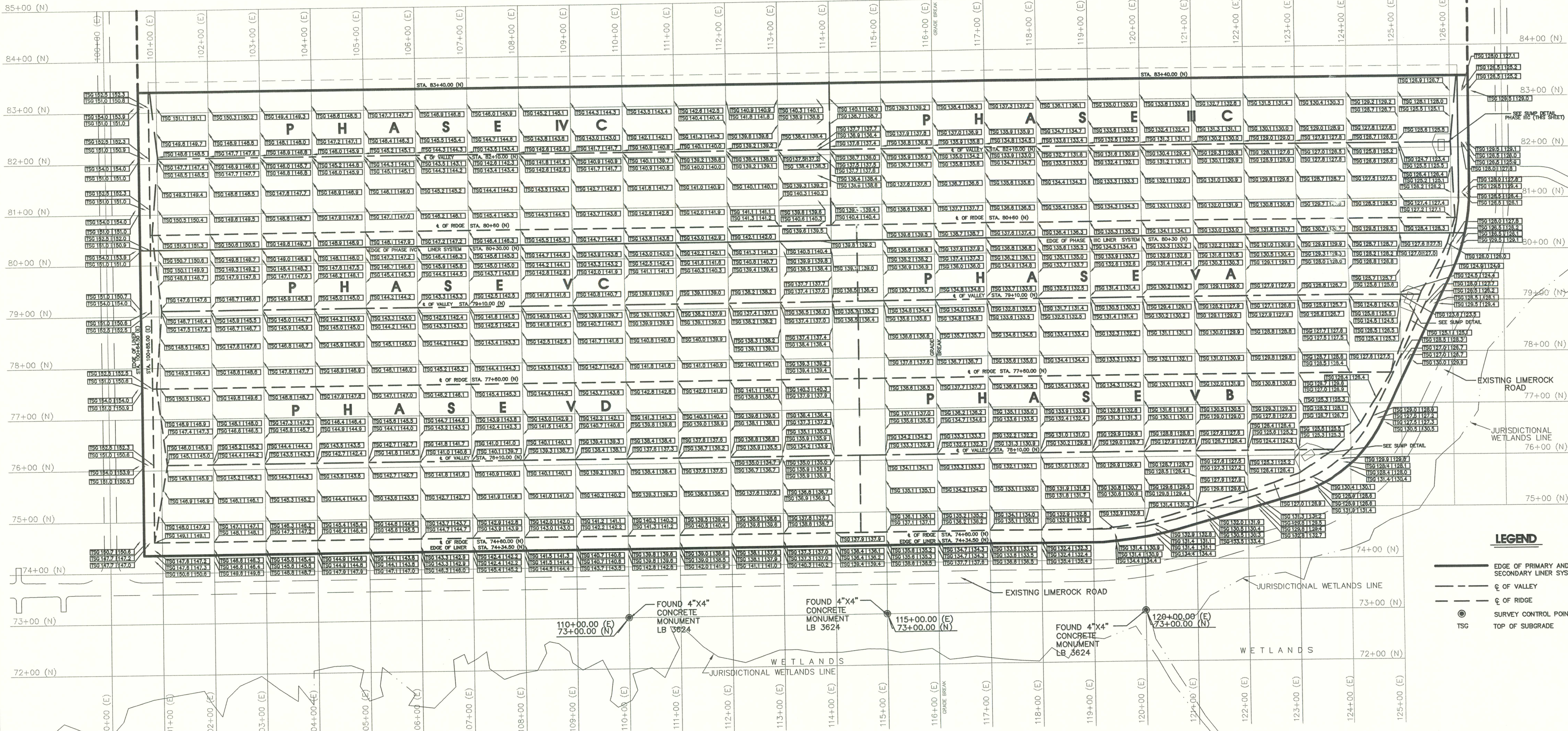
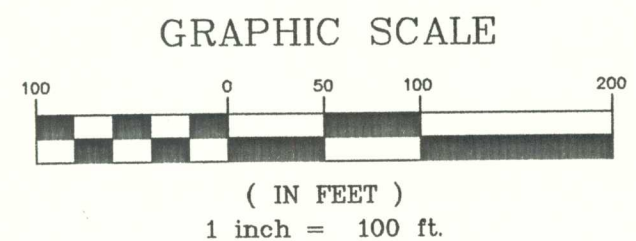


REFERENCE POINT FOR SPOT ELEVATIONS

NOT TO SCALE

NOTES:

1. THE SUBGRADE HAS BEEN AS-BUILT FROM THE SOUTHERN ANCHOR BERM/TRENCH TO STA. 83+40 (N) AND FROM THE WESTERN ANCHOR BERM/TRENCH TO THE EASTERN ANCHOR BERM/TRENCH.
2. ALL DESIGN ELEVATIONS WERE PROVIDED BY ENGLAND, THIMS & MILLER, INC.
3. LOCAL GRID COORDINATES DERIVED FROM GRID ESTABLISHED IN ENGINEERING PLANS FOR TRAIL RIDGE LANDFILL BY ENGLAND, THIMS & MILLER, INC.
4. ELEVATIONS BASED ON U.S.C. & G. BENCH MARK AJ-59, LOCATED NEAR INTERSECTION OF U.S. HWY. NO. 301 AND STATE ROAD NO. 228. BENCH MARK ELEVATION: 88.412' (NGVD 1929)
5. JURISDICTIONAL WETLANDS LINE DEPICTED HEREON FROM PREVIOUS SURVEY BY SUNSHINE STATE SURVEYORS, INC., FILE NO. E900-3774, DATED 3-22-90.
6. DATE OF LAST FIELD WORK: 6-22-01



LEGEND

— EDGE OF PRIMARY AND SECONDARY LINER SYSTEM
--- C. OF VALLEY
--- C. OF RIDGE
● SURVEY CONTROL POINT
○ TOP OF SUBGRADE

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

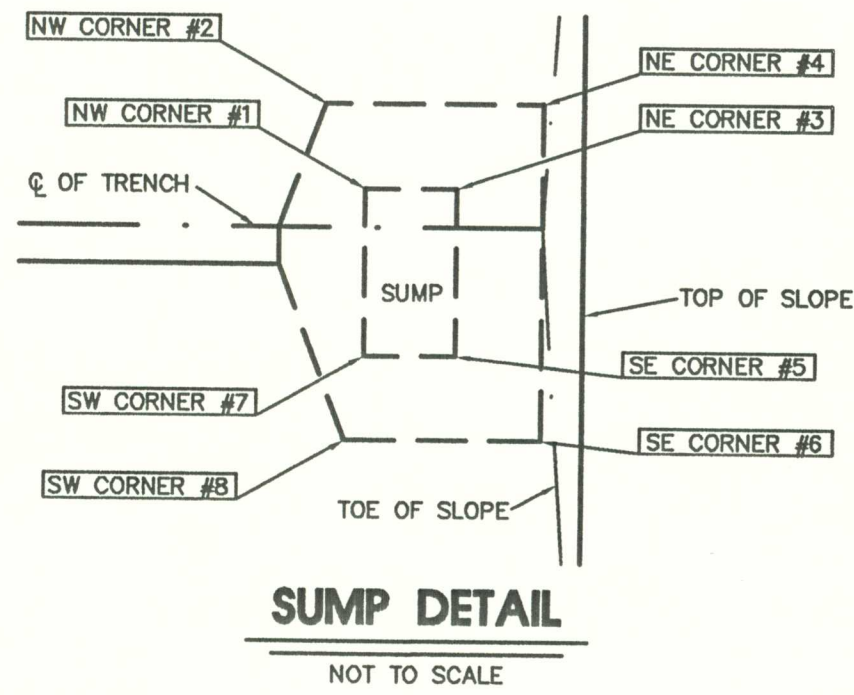
REVISIONS:
1-02-01 ADDED PHASE IVC AND UPDATED SURVEY NOTES.
7-13-01 ADDED PHASES VA, VB, VC AND VD AND UPDATED SURVEY NOTES.

LINER SYSTEM - SUBGRADE
PHASES III C, IV C, VA, VB, VC & VD
FOR TRAIL RIDGE LANDFILL, INC. AND CITY OF JACKSONVILLE

(FORMERLY SUNSHINE STATE SURVEYORS)
Robert M. Angas Associates, Inc.
LAND SURVEYORS, PLANNERS AND CIVIL ENGINEERS
14775 St. Augustine Road, Jacksonville, FL 32259
Telephone: (904) 642-8850 Fax: (904) 642-4165
Certificate of Authorization No. LB 3824



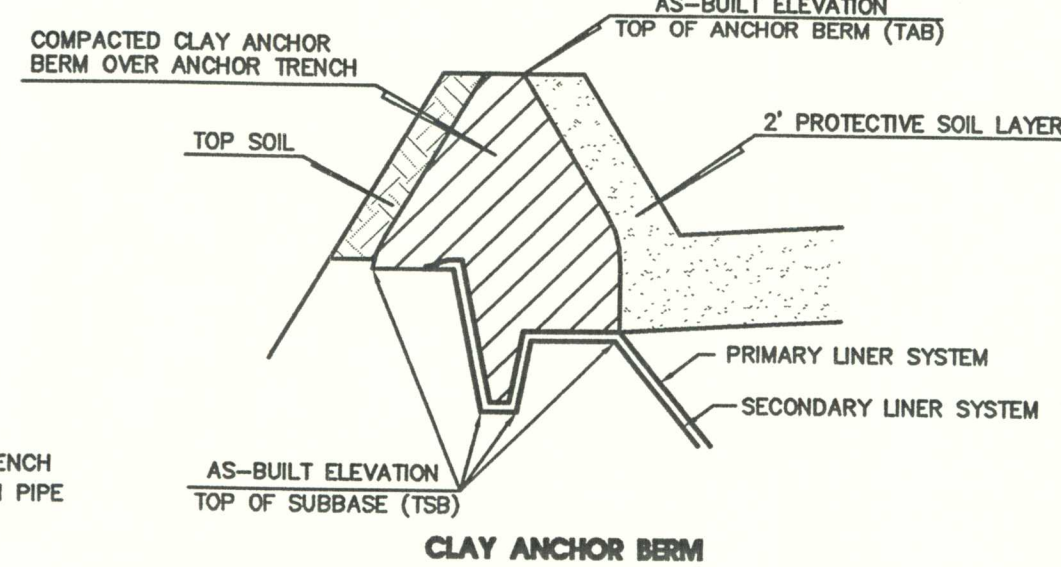
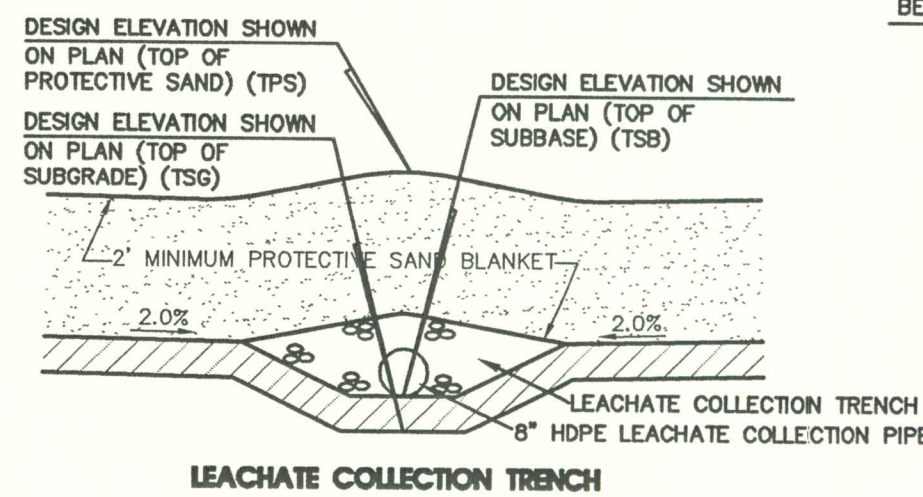
"AS-BUILT" SHEET LS-7



LEGEND

TOP OF SUBBASE ELEVATION TSB TSB ASTAB
DESIGN EL. "AS-BUILT" EL.

PHASE	LOCATION	TSB DESIGN EL.	TSB AS-BUILT EL.
IIIC	N.W. #1	121.8	121.9
IIIC	N.W. #2	125.6	125.7
IIIC	N.E. #3	121.8	121.9
IIIC	N.E. #4	125.2	125.3
IIIC	S.E. #5	121.8	121.9
IIIC	S.E. #6	125.2	125.3
IIIC	S.W. #7	121.8	121.9
IIIC	S.W. #8	125.6	125.7
VA	N.W. #1	121.6	121.7
VA	N.W. #2	125.1	125.2
VA	N.E. #3	121.6	121.7
VA	N.E. #4	124.6	124.7
VA	S.E. #5	121.6	121.7
VA	S.E. #6	125.4	125.5
VA	S.W. #7	121.6	121.7
VA	S.W. #8	125.4	125.5
VB	N.W. #1	122.2	122.3
VB	N.W. #2	125.9	126.0
VB	N.E. #3	122.2	122.3
VB	N.E. #4	125.0	125.0
VB	S.E. #5	122.2	122.3
VB	S.E. #6	126.3	126.4
VB	S.W. #7	122.2	122.3
VB	S.W. #8	126.0	126.0



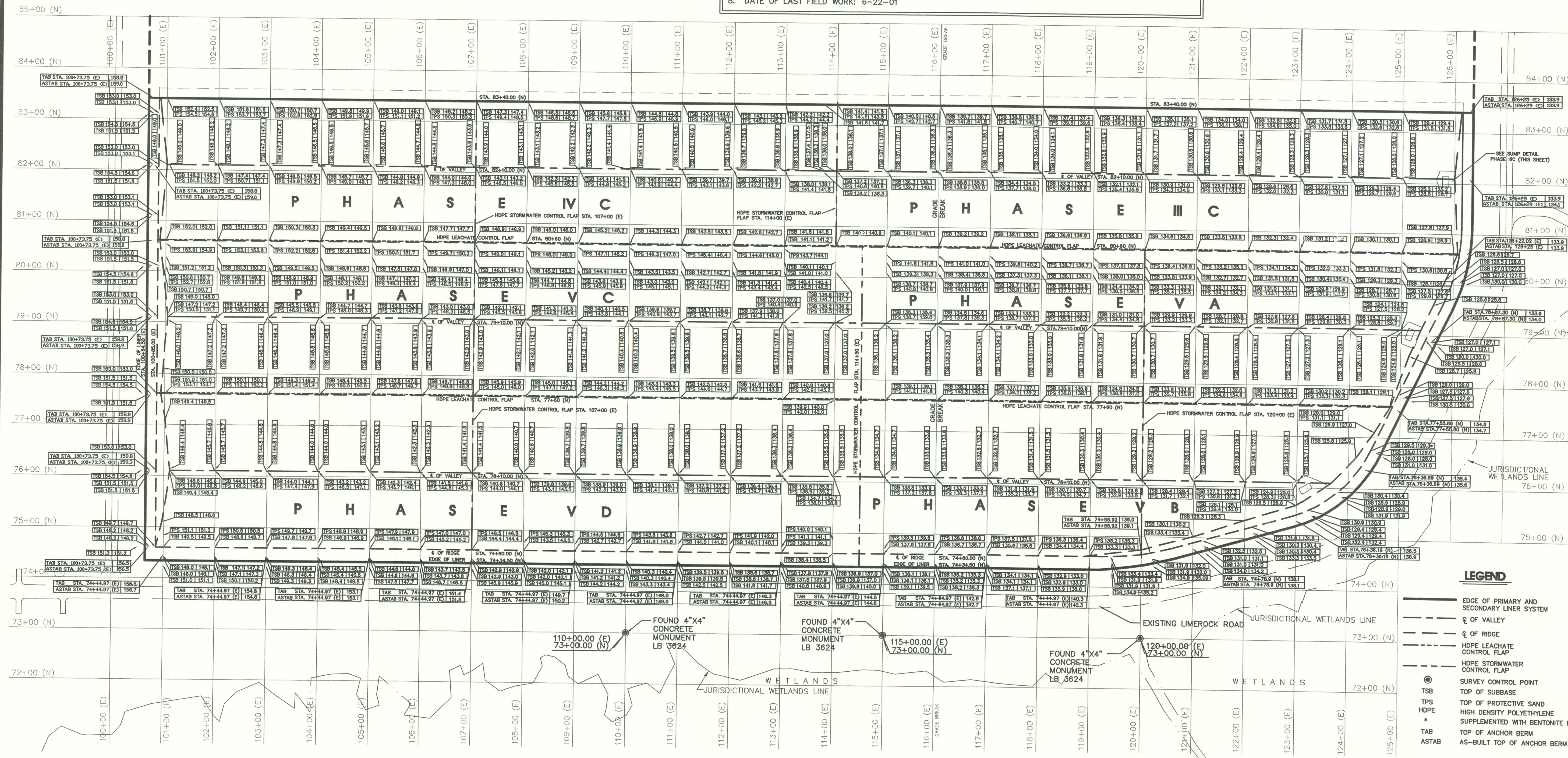
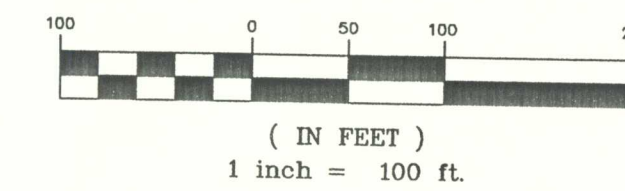
REFERENCE POINT FOR SPOT ELEVATIONS

NOT TO SCALE

NOTES:

1. THE CLAY LAYER HAS BEEN AS-BUILT FROM THE SOUTHERN ANCHOR TRENCH TO STA. 83+40 (N) AND FROM THE WESTERN ANCHOR TRENCH TO THE EASTERN ANCHOR BERM.
2. THE PROTECTIVE SAND LAYER HAS BEEN AS-BUILT FROM STA. 74+60 (N) TO STA. 83+40 (N) AND FROM THE WESTERN ANCHOR BERM TO THE EASTERN ANCHOR BERM.
3. ALL DESIGN ELEVATIONS WERE PROVIDED BY ENGLAND, THIMS & MILLER, INC.
4. LOCAL GRID COORDINATES DERIVED FROM GRID ESTABLISHED IN ENGINEERING PLANS FOR TRAIL RIDGE LANDFILL BY ENGLAND, THIMS & MILLER, INC.
5. ELEVATIONS BASED ON U.S.C. & G. BENCH MARK AJ-59, LOCATED NEAR INTERSECTION OF U.S. HWY. 301 AND STATE ROAD NO. 228. BENCH MARK ELEVATION: 88.412' (NGVD 1929)
6. THE OUTSIDE EDGE OF THE ANCHOR BERM WAS THE LOCATION OF THE AS-BUILT.
7. JURISDICTIONAL WETLANDS LINE DEPICTED HEREON FROM PREVIOUS SURVEY BY SUNSHINE STATE SURVEYORS, INC., FILE NO. E900-3774, DATED 3-22-90.
8. DATE OF LAST FIELD WORK: 6-22-01

GRAPHIC SCALE



LEGEND

- EDGE OF PRIMARY AND SECONDARY LINER SYSTEM
- OF VALLEY
- OF RIDGE
- HOPE LEACHATE CONTROL FLAP
- HOPE STORMWATER CONTROL FLAP
- SURVEY CONTROL POINT
- TOP OF SUBBASE
- TOP OF PROTECTIVE SAND
- HIGH DENSITY POLYETHYLENE SUPPLEMENTED WITH BENTONITE MAT
- TOP OF ANCHOR BERM
- AS-BUILT TOP OF ANCHOR BERM

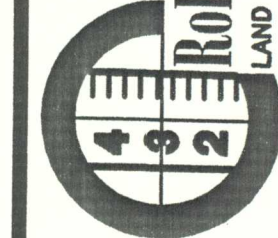
NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

JOSEPH LESLIE REYNOLDS, II
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA LS No. 5517

REVISIONS:
1-02-01 ADDED PHASE IVC AND UPDATED SURVEY NOTES.
7-13-01 ADDED PHASES VA, VB, VC AND VD AND UPDATED SURVEY NOTES.

LINER SYSTEM - CLAY & SAND
PHASES IIIC, IVC, VA, VB, VC & VD
FOR TRAIL RIDGE LANDFILL, INC. AND CITY OF JACKSONVILLE

Robert M. Angas Associates, Inc.
LAND SURVEYORS, PLANNERS AND CIVIL ENGINEERS
14775 St. Augustine Road, Jacksonville, FL 32258
Telephone: (904) 642-8550 Fax: (904) 642-4165
Certificate of Authorization No. LB 3524



"AS-BUILT" SHEET LS-8

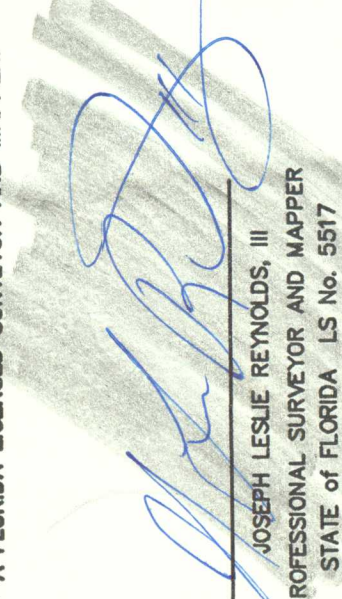
"AS-BUILT" SUBGRADE LOCATION TABLE		
PHASE	DATE:	LOCATION:
IIIC	07-11-00	STA. 80+60.00 TO STA. 81+60.00 (NORTH) STA. 114+00.00 TO STA. 115+00.00 (EAST)
IIIC	07-17-00	STA. 80+60.00 TO STA. 82+10.00 (NORTH) STA. 115+50.00 TO STA. 121+00.00 (EAST)
IIIC	07-21-00	STA. 80+30.00 TO STA. 82+10.00 (NORTH) STA. 114+00.00 TO STA. 125+50.00 (EAST)
IIIC	07-31-00	STA. 82+02.50 TO STA. 82+17.50 (NORTH) STA. 114+00.00 TO STA. 125+50.00 (EAST)
IIIC	08-01-00	STA. 82+00.50 TO STA. 82+16.50 (NORTH) STA. 114+24.00 TO STA. 125+50.00 (EAST)
IIIC	08-04-00	STA. 82+15.50 TO STA. 83+10.00 (NORTH) STA. 114+00.00 TO STA. 120+00.00 (EAST)
IIIC	08-08-00	STA. 82+15.50 TO STA. 83+39.00 (NORTH) STA. 114+00.00 TO STA. 125+50.00 (EAST)
IIIC	08-10-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 113+60.00 TO STA. 126+01.73 (EAST)
IIIC	08-14-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 126+00.00 TO STA. 126+40.77 (EAST)
IIIC	08-15-00	STA. 80+30.00 TO STA. 82+60.00 (NORTH) STA. 126+00.00 TO STA. 126+34.77 (EAST)
IIIC	08-18-00	STA. 79+75.00 TO STA. 80+22.00 (NORTH) STA. 119+00.00 TO STA. 123+50.00 (EAST)
IVC	09-01-00	STA. 80+60.00 TO STA. 82+60.00 (NORTH) STA. 101+00.00 TO STA. 104+00.00 (EAST)
IVC	09-05-00	STA. 80+30.00 TO STA. 83+35.00 (NORTH) STA. 101+00.00 TO STA. 108+00.00 (EAST)
IVC	09-06-00	STA. 80+30.00 TO STA. 83+35.00 (NORTH) STA. 104+50.00 TO STA. 108+50.00 (EAST)
IVC	09-12-00	STA. 82+05.10 TO STA. 82+14.60 (NORTH) STA. 109+00.00 TO STA. 113+00.00 (EAST)
IVC	09-13-00	STA. 80+30.00 TO STA. 83+35.00 (NORTH) STA. 100+57.00 TO STA. 100+99.00 (EAST)
IVC	09-15-00	STA. 80+30.00 TO STA. 83+35.00 (NORTH) STA. 107+50.00 TO STA. 112+50.00 (EAST)
IVC	09-15-00	STA. 80+30.00 TO STA. 83+35.00 (NORTH) STA. 107+50.00 TO STA. 112+50.00 (EAST)
IVC	10-19-00	STA. 82+10.00 TO STA. 83+37.00 (NORTH) STA. 112+70.60 TO STA. 113+54.90 (EAST)
IVC	11-28-00	STA. 80+30.00 TO STA. 82+16.00 (NORTH) STA. 113+00.00 TO STA. 113+50.00 (EAST)
VA	10-16-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 114+00.00 TO STA. 119+50.00 (EAST)
VA	10-16-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 120+00.00 TO STA. 125+50.00 (EAST)
VA	10-18-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 120+00.00 TO STA. 125+50.00 (EAST)
VA	10-19-00	STA. 79+04.30 TO STA. 79+15.90 (NORTH) STA. 114+50.00 TO STA. 119+50.00 (EAST)
VA	10-23-00	STA. 79+03.80 TO STA. 79+15.00 (NORTH) STA. 120+00.00 TO STA. 125+00.00 (EAST)
VA	10-25-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 118+50.00 TO STA. 125+99.00 (EAST)
VB	12-18-00	STA. 76+04.80 TO STA. 77+10.00 (NORTH) STA. 114+50.00 TO STA. 123+68.30 (EAST)
VB	12-19-00	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 116+00.00 TO STA. 123+00.00 (EAST)
VB	12-20-00	STA. 74+64.30 TO STA. 77+10.00 (NORTH) STA. 119+50.00 TO STA. 124+50.00 (EAST)
VB	12-21-00	STA. 74+24.50 TO STA. 74+47.00 (NORTH) STA. 114+50.00 TO STA. 118+90.05 (EAST)
VB	02-08-01	STA. 75+50.30 TO STA. 77+10.00 (NORTH) STA. 122+50.00 TO STA. 124+50.00 (EAST)
VB	02-26-01	STA. 75+56.94 TO STA. 75+92.47 (NORTH) STA. 123+24.38 TO STA. 123+80.08 (EAST)

"AS-BUILT" SUBGRADE LOCATION TABLE		
PHASE	DATE:	LOCATION:
VC	11-15-00	STA. 77+25.00 TO STA. 78+10.00 (NORTH) STA. 100+99.50 TO STA. 100+57.00 (EAST)
VC	11-16-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 100+57.00 TO STA. 106+00.00 (EAST)
VC	11-17-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 106+50.00 TO STA. 108+00.00 (EAST)
VC	11-20-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 106+00.00 TO STA. 112+50.00 (EAST)
VC	11-21-00	STA. 79+04.80 TO STA. 79+15.00 (NORTH) STA. 110+00.00 TO STA. 111+50.00 (EAST)
VC	12-01-00	STA. 79+04.60 TO STA. 79+13.60 (NORTH) STA. 112+00.00 (EAST)
VC	12-01-00	STA. 79+04.60 TO STA. 79+13.60 (NORTH) STA. 112+00.00 (EAST)
VC	12-12-00	STA. 79+04.50 TO STA. 80+10.00 (NORTH) STA. 111+00.00 TO STA. 113+00.00 (EAST)
VC	12-13-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 112+00.00 TO STA. 112+50.00 (EAST)
VC	02-07-01	STA. 79+10.00 TO STA. 80+10.00 (NORTH) STA. 113+07.80 TO STA. 114+24.10 (EAST)
VC	02-16-01	STA. 77+25.00 TO STA. 79+15.80 (NORTH) STA. 113+00.00 TO STA. 114+24.10 (EAST)
VD	01-26-01	STA. 74+60.00 TO STA. 75+60.00 (NORTH) STA. 100+86.20 TO STA. 104+00.00 (EAST)
VD	01-29-01	STA. 74+24.50 TO STA. 75+60.00 (NORTH) STA. 100+85.00 TO STA. 109+50.00 (EAST)
VD	01-30-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 100+85.00 TO STA. 109+50.00 (EAST)
VD	01-31-01	STA. 76+05.40 TO STA. 76+14.80 (NORTH) STA. 106+00.00 TO STA. 109+00.00 (EAST)
VD	02-01-01	STA. 76+05.50 TO STA. 76+14.70 (NORTH) STA. 101+11.18 TO STA. 105+50.00 (EAST)
VD	02-06-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 100+57.00 TO STA. 101+05.00 (EAST)
VD	02-07-01	STA. 75+10.00 TO STA. 77+10.00 (NORTH) STA. 104+50.00 TO STA. 110+00.00 (EAST)
VD	02-08-01	STA. 74+24.50 TO STA. 77+10.00 (NORTH) STA. 110+00.00 (EAST)
VD	02-20-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 101+01.40 TO STA. 109+00.00 (EAST)
VD	02-21-01	STA. 74+24.50 TO STA. 74+47.80 (NORTH) STA. 110+50.00 TO STA. 113+00.00 (EAST)
VD	03-02-01	STA. 76+60.00 TO STA. 77+10.00 (NORTH) STA. 113+50.00 TO STA. 114+29.50 (EAST)
VD	04-04-01	STA. 74+24.50 TO STA. 76+10.00 (NORTH) STA. 113+50.00 TO STA. 114+00.00 (EAST)

"AS-BUILT" SUBBASE LOCATION TABLE		
PHASE	DATE:	LOCATION:
IIIC	08-17-00	STA. 82+06.40 TO STA. 83+40.00 (NORTH) STA. 113+75.00 TO STA. 116+00.00 (EAST)
IIIC	08-18-00	STA. 80+30.00 TO STA. 82+12.50 (NORTH) STA. 113+75.00 TO STA. 116+00.00 (EAST)
IIIC	08-22-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 113+75.00 TO STA. 117+00.00 (EAST)
IIIC	08-23-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 116+50.00 TO STA. 120+00.00 (EAST)
IIIC	08-25-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 120+00.00 TO STA. 121+00.00 (EAST)
IIIC	08-26-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 121+50.00 TO STA. 125+00.00 (EAST)
IIIC	09-26-00	STA. 82+06.50 TO STA. 83+40.00 (NORTH) STA. 124+60.00 TO STA. 125+50.00 (EAST)
IIIC	09-27-00	STA. 82+60.00 TO STA. 83+40.00 (NORTH) STA. 126+00.00 TO STA. 126+37.27 (EAST)
IIIC	09-28-00	STA. 80+60.00 TO STA. 82+32.41 (NORTH) STA. 125+62.96 TO STA. 126+34.77(EAST)
IIIC	10-04-00	STA. 80+30.00 TO STA. 81+60.00 (NORTH) STA. 126+04.31 TO STA. 126+35.75 (EAST)
IIIC	11-10-00	STA. 80+60.00 TO STA. 83+40.00 (NORTH) STA. 126+21.00 TO STA. 126+25.00 (EAST)
IIIC	11-28-00	STA. 80+60.00 TO STA. 83+40.00 (NORTH) STA. 126+25.00 TO STA. 126+29.00 (EAST)
IVC	10-06-00	STA. 80+60.00 TO STA. 83+40.00 (NORTH) STA. 101+00.00 TO STA. 106+00.00 (EAST)
IVC	10-09-00	STA. 80+60.00 TO STA. 80+30.00 (NORTH) STA. 106+50.00 TO STA. 109+00.00 (EAST)
IVC	10-10-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 100+63.40 TO STA. 112+00.00 (EAST)
IVC	12-01-00	STA. 80+30.00 TO STA. 83+40.00 (NORTH) STA. 112+50.00 TO STA. 113+50.00 (EAST)
VA	11-03-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 114+30.00 TO STA. 116+00.00 (EAST)
VA	11-06-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 114+30.00 TO STA. 120+00.00 (EAST)
VA	11-08-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 116+50.00 TO STA. 125+50.00 (EAST)
VA	01-05-01	STA. 78+71.56 TO STA. 79+17.05 (NORTH) STA. 124+97.18 TO STA. 125+42.14 (EAST)
VA	02-21-01	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 113+00.00 TO STA. 114+00.00 (EAST)
VB	01-19-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 114+50.00 TO STA. 119+50.00 (EAST)
VB	01-22-01	STA. 74+73.80 TO STA. 77+10.00 (NORTH) STA. 120+00.00 TO STA. 122+00.00 (EAST)
VB	03-07-01	STA. 75+70.79 TO STA. 77+29.28 (NORTH) STA. 122+99.43 TO STA. 124+69.67 (EAST)
VB	03-08-01	STA. 75+56.94 TO STA. 75+92.47 (NORTH) STA. 123+24.38 TO STA. 123+80.08 (EAST)
VC	12-07-00	STA. 77+25.00 TO STA. 79+12.60 (NORTH) STA. 103+00.00 TO STA. 105+50.00 (EAST)
VC	12-08-00	STA. 77+25.00 TO STA. 80+10.00 (NORTH) STA. 100+57.00 TO STA. 102+50.00 (EAST)
VC	12-12-00	STA. 77+30.00 TO STA. 80+10.00 (NORTH) STA. 106+00.00 TO STA. 109+50.00 (EAST)
VC	01-11-01	STA. 77+30.00 TO STA. 80+10.00 (NORTH) STA. 109+50.00 TO STA. 112+75.00 (EAST)
VC	01-18-01	STA. 77+60.00 TO STA. 80+30.00 (NORTH) STA. 100+73.75 (EAST)
VD	02-14-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 100+96.70 TO STA. 106+00.00 (EAST)
VD	02-15-01	STA. 74+24.50 TO STA. 77+10.00 (NORTH) STA. 100+06.50 TO STA. 100+49.60 (EAST)
VD	02-26-01	STA. 74+24.50 TO STA. 74+44.60 (NORTH) 105+00.00 TO STA. 106+00.00 (EAST)
VD	02-28-01	STA. 74+24.50 TO STA. 76+12.70 (NORTH) STA. 100+96.70 TO STA. 106+00.00 (EAST)
VD	04-03-01	STA. 74+24.50 TO STA. 77+10.00 (NORTH) STA. 110+50.00 TO STA. 112+50.00 (EAST)
VD	04-04-01	STA. 76+60.00 TO STA. 77+10.00 (NORTH) STA. 113+50.00 TO STA. 114+00.00 (EAST)
VD	04-06-01	STA. 74+24.50 TO STA. 76+13.00 (NORTH) STA. 113+00.00 TO STA. 114+00.00 (EAST)
VD	04-30-01	STA. 74+45.00 TO STA. 77+60.00 (NORTH) STA. 100+70.50 TO STA. 100+73.75 (EAST)
VD	05-21-01	STA. 74+44.97 TO STA. 74+45.00 (NORTH) STA. 100+70.50 TO STA. 114+00.00 (EAST)
VD	06-05-01	STA. 74+44.97 (NORTH) STA. 114+00.00 TO STA. 113+00.00 (EAST)

"AS-BUILT" PROTECTIVE SAND LOCATION TABLE		
PHASE	DATE:	LOCATION:
IIIC	11-13-00	STA. 81+10.00 TO STA. 83+40.00 (NORTH) STA. 115+00.00 TO STA. 117+50.00 (EAST)
IIIC	11-14-00	STA. 80+45.00 TO STA. 83+40.00 (NORTH) STA. 118+00.00 TO STA. 123+50.00 (EAST)
IIIC	11-15-00	STA. 80+45.00 TO STA. 83+40.00 (NORTH) STA. 124+00.00 TO STA. 125+50.00 (EAST)
IIIC	11-20-00	STA. 80+68.00 TO STA. 83+40.00 (NORTH) STA. 114+00.00 (EAST)
IIIC	12-01-00	STA. 80+05.00 TO STA. 82+15.00 (NORTH) STA. 114+00.00 (EAST)
IVC	12-06-00	STA. 80+55.00 TO STA. 80+65.00 (NORTH) STA. 101+00.00 TO STA. 110+00.00 (EAST)
IVC	12-13-00	STA. 80+60.00 TO STA. 83+40.00 (NORTH) STA. 100+73.75 (EAST)
IVC	01-03-01	STA. 80+55.00 TO STA. 80+65.00 (NORTH) STA. 110+00.00 TO STA. 113+00.00 (EAST)
IVC	01-04-01	STA. 81+10.00 TO STA. 83+40.00 (NORTH) STA. 100+86.50 TO STA. 106+50.00 (EAST)
IVC	01-08-01	STA. 80+55.00 TO STA. 83+40.00 (NORTH) STA. 100+87.60 TO STA. 113+50.00 (EAST)
IVC	01-15-01	STA. 81+10.00 TO STA. 83+40.00 (NORTH) STA. 107+50.00 TO STA. 110+00.00 (EAST)
IVC	01-16-01	STA. 81+10.00 TO STA. 83+40.00 (NORTH) STA. 110+50.00 TO STA. 113+50.00 (EAST)
VA	02-01-01	STA. 79+05.00 TO STA. 80+30.00 (NORTH) 120+00.00 (EAST)
VA	05-02-01	STA. 77+60.00 (NORTH) 115+50.00 TO STA. 124+69.50 (EAST)
VA	05-03-01	STA. 79+60.00 TO STA. 80+30.00 (NORTH) STA. 115+50.00 TO STA. 120+00.00 (EAST)
VA	05-04-01	STA. 79+60.00 TO STA. 80+30.00 (NORTH) STA. 120+50.00 TO STA. 123+50.00 (EAST)
VA	05-14-01	STA. 80+10.00 TO STA. 80+30.00 (NORTH) STA. 124+50.00 TO STA. 125+94.20 (EAST)
VA	05-30-01	STA. 77+30.00 TO STA. 79+15.00 (NORTH) STA. 115+00.00 TO STA. 119+50.00 (EAST)
VA	06-11-01	STA. 77+30.00 TO STA. 79+15.00 (NORTH) STA. 120+50.00 TO STA. 124+91.00 (EAST)
VA	06-19-01	STA. 78+60.00 TO STA. 79+15.00 (NORTH) STA. 120+50.00 TO STA. 124+91.00 (EAST)
VB	05-23-01	STA. 74+65.50 TO STA. 77+10.00 (NORTH) STA. 107+00.00 (EAST)
VB	06-16-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 123+00.00 TO STA. 125+09.00 (EAST)
VB	06-18-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 119+00.00 TO STA. 124+43.00 (EAST)
VC	05-01-01	STA. 79+05.00 TO STA. 80+30.00 (NORTH) STA. 101+05.00 TO STA. 106+00.00 (EAST)
VC	05-03-01	STA. 77+30.00 TO STA. 80+30.00 (NORTH) STA. 101+00.00 TO STA. 107+00.00 (EAST)
VC	05-04-01	STA. 77+30.00 TO STA. 78+60.00 (NORTH) STA. 100+98.40 TO STA. 106+00.00 (EAST)
VC	05-14-01	STA. 77+60.00 (NORTH) STA. 106+50.00 TO STA. 115+00.00 (EAST)
VC	05-21-01	STA. 77+30.00 TO STA. 80+30.00 (NORTH) STA. 106+50.00 TO STA. 108+00.00 (EAST)
VC	05-23-01	STA. 77+30.00 TO STA. 80+30.00 (NORTH) STA. 108+50.00 TO STA. 112+00.00 (EAST)
VC	05-24-01	STA. 77+30.00 TO STA. 80+30.00 (NORTH) STA. 112+50.00 TO STA. 114+00.00 (EAST)
VC	06-15-01	STA. 77+30.00 (NORTH) STA. 101+00.00 TO STA. 101+03.00 (EAST)
VD	06-13-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 101+00.00 TO STA. 105+00.00 (EAST)
VD	06-14-01	STA. 74+60.00 TO STA. 77+10.00 (NORTH) STA. 105+50.00 TO STA. 114+00.00 (EAST)
VD	06-22-01	STA. 74+60.00 TO STA. 75+10.00 (NORTH) STA. 113+75.00 TO STA. 114+00.00 (EAST)

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

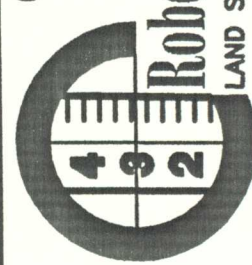

JOSEPH LESLIE REYNOLDS III
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA LS No. 5517

REVISIONS:
1-03-01 ADDED PHASE IVC.
7-13-01 ADDED PHASES VA, VB, VC AND VD.

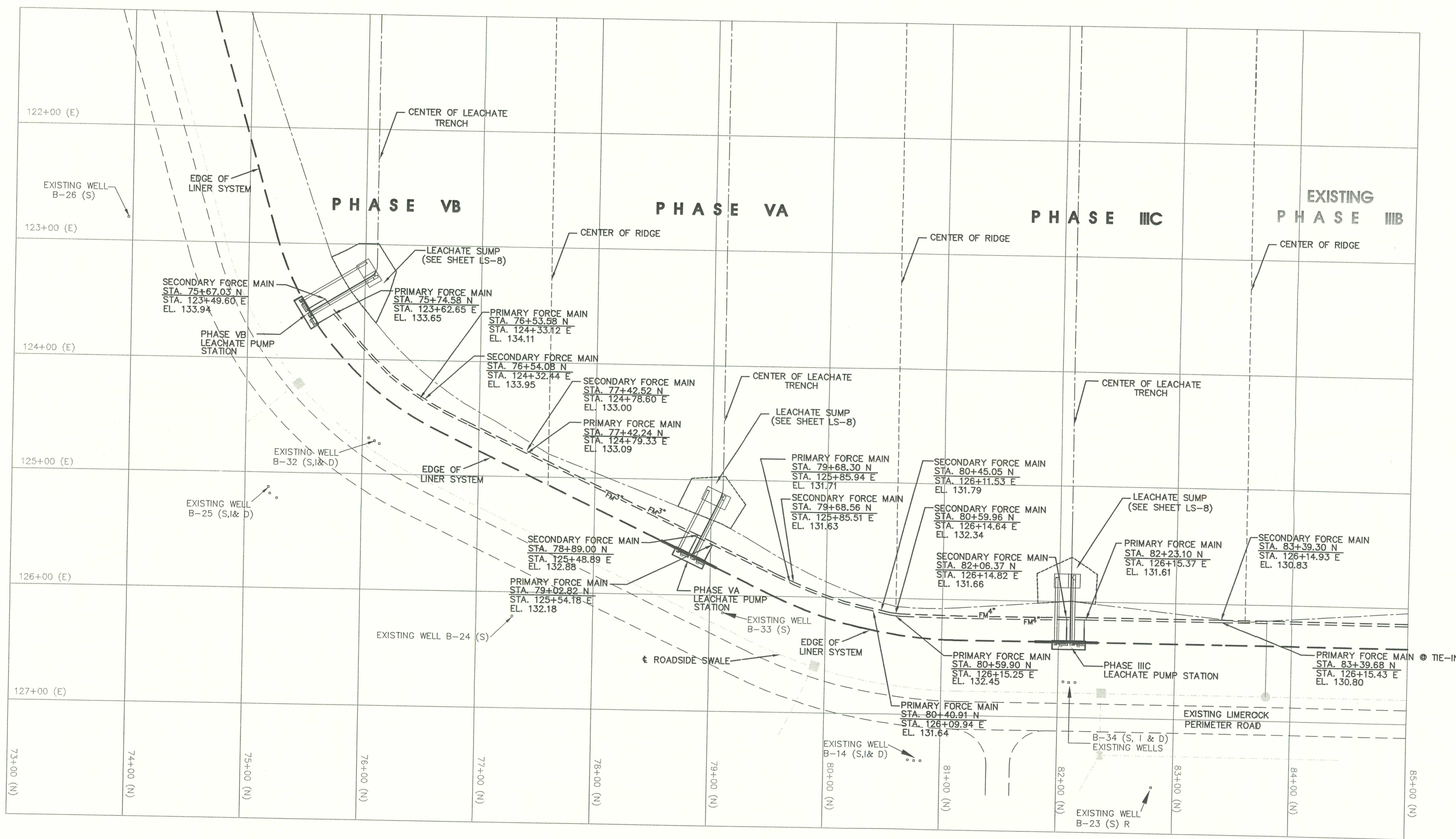
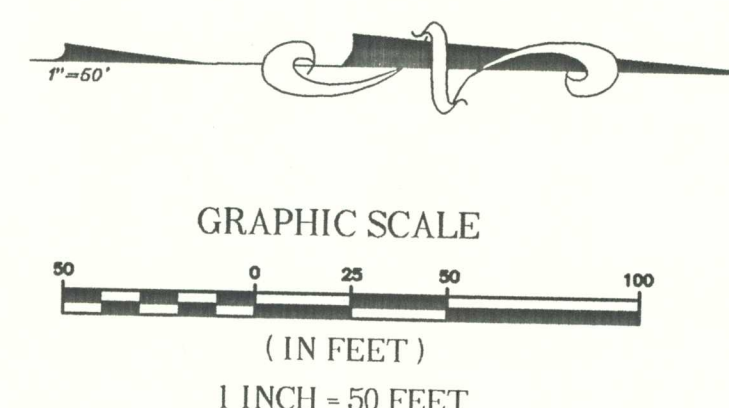
LINER SYSTEM LOCATION
PHASES IIIC, IVC, VA, VB, VC AND VD

TRAIL RIDGE LANDFILL
FOR TRAIL RIDGE LANDFILL, INC. AND
CITY OF JACKSONVILLE

(FORMERLY SUNSHINE STATE SURVEYORS)


Robert M. Angus Associates, Inc.
LAND SURVEYORS, PLANNERS AND CIVIL ENGINEERS SINCE 1924
14775 St. Augustine Road, Jacksonville, FL 32258
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Certificate of Authorization No.: LB 3624

"AS-BUILT" SHEET LS-9



- NOTES:
1. HORIZONTAL SEPARATION BETWEEN THE PRIMARY FORCE MAIN AND SECONDARY FORCE MAIN HAS BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY. (NOT TO SCALE)
 2. LOCAL GRID COORDINATES DERIVED FROM GRID ESTABLISHED IN ENGINEERING PLANS FOR TRAIL RIDGE LANDFILL BY ENGLAND, THIMS AND MILLER, INC.
 3. ELEVATIONS BASED ON U.S.C. & G. BENCH MARK AJ-59, LOCATED NEAR INTERSECTION OF U.S. HWY. NO. 301 AND STATE RD. NO. 228. BENCH MARK ELEVATION: 88.412' (NGVD 1929)
 4. ELEVATIONS ARE AT TOP OF PIPE.
 5. DATE OF LAST FIELD WORK: 6-22-01

LEGEND	
— FM —	LEACHATE FORCE MAIN
---	LIMITS OF LINER SYSTEM
- - -	¢ OF VALLEY
- - -	¢ OF RIDGE

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Joseph Leslie Reynolds, III

JOSEPH LESLIE REYNOLDS, III
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA LS No. 0517

REVISIONS:
7-13-01 REVISED TO INCLUDE PHASES VA AND VB.

**LEACHATE FORCE MAIN
PHASES IIC, VA AND VB**

**TRAIL RIDGE LANDFILL
FOR TRAIL RIDGE LANDFILL, INC. AND
CITY OF JACKSONVILLE, FLORIDA**

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JOSEPH LESLIE REYNOLDS, III
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA LS No. 5517

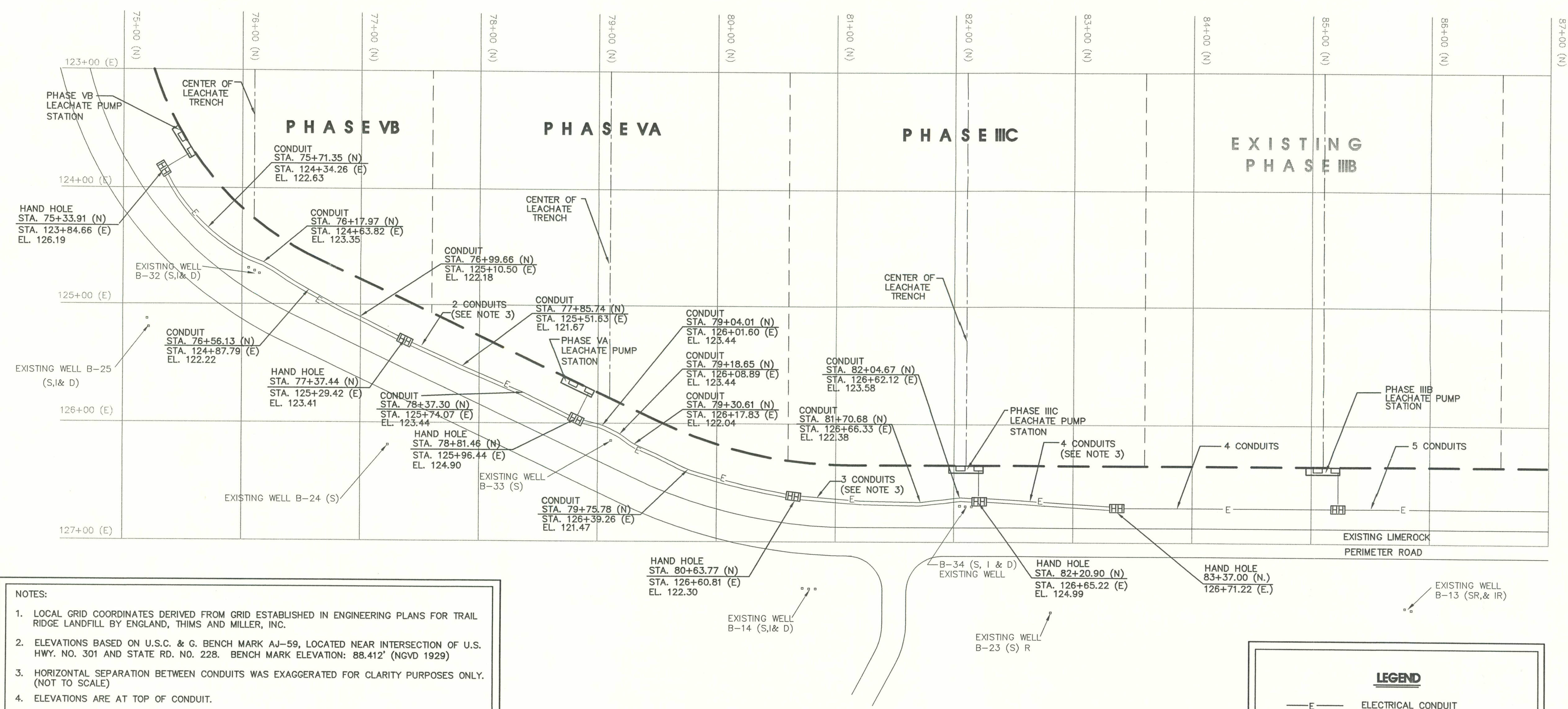
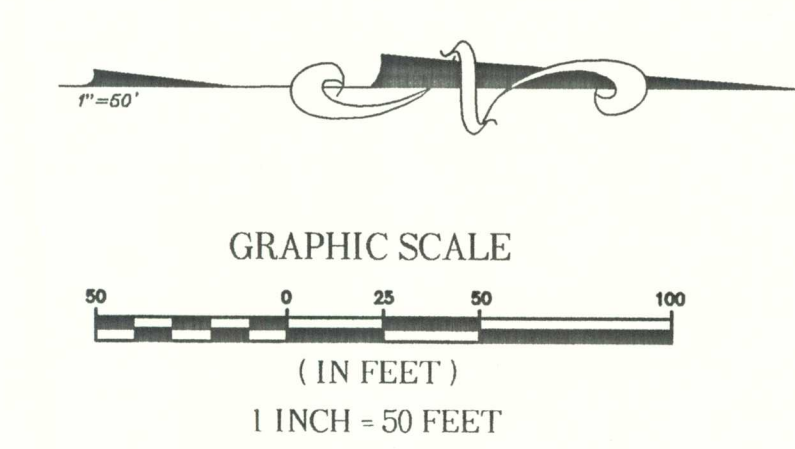
REVISIONS:
7-13-01 REVISED TO INCLUDE PHASES VA AND VB.

**ELECTRICAL
PHASES IIIC, VA AND VB**

**TRAIL RIDGE LANDFILL
FOR TRAIL RIDGE LANDFILL, INC. AND
CITY OF JACKSONVILLE**

(FORMERLY SUNSHINE STATE SURVEYORS)

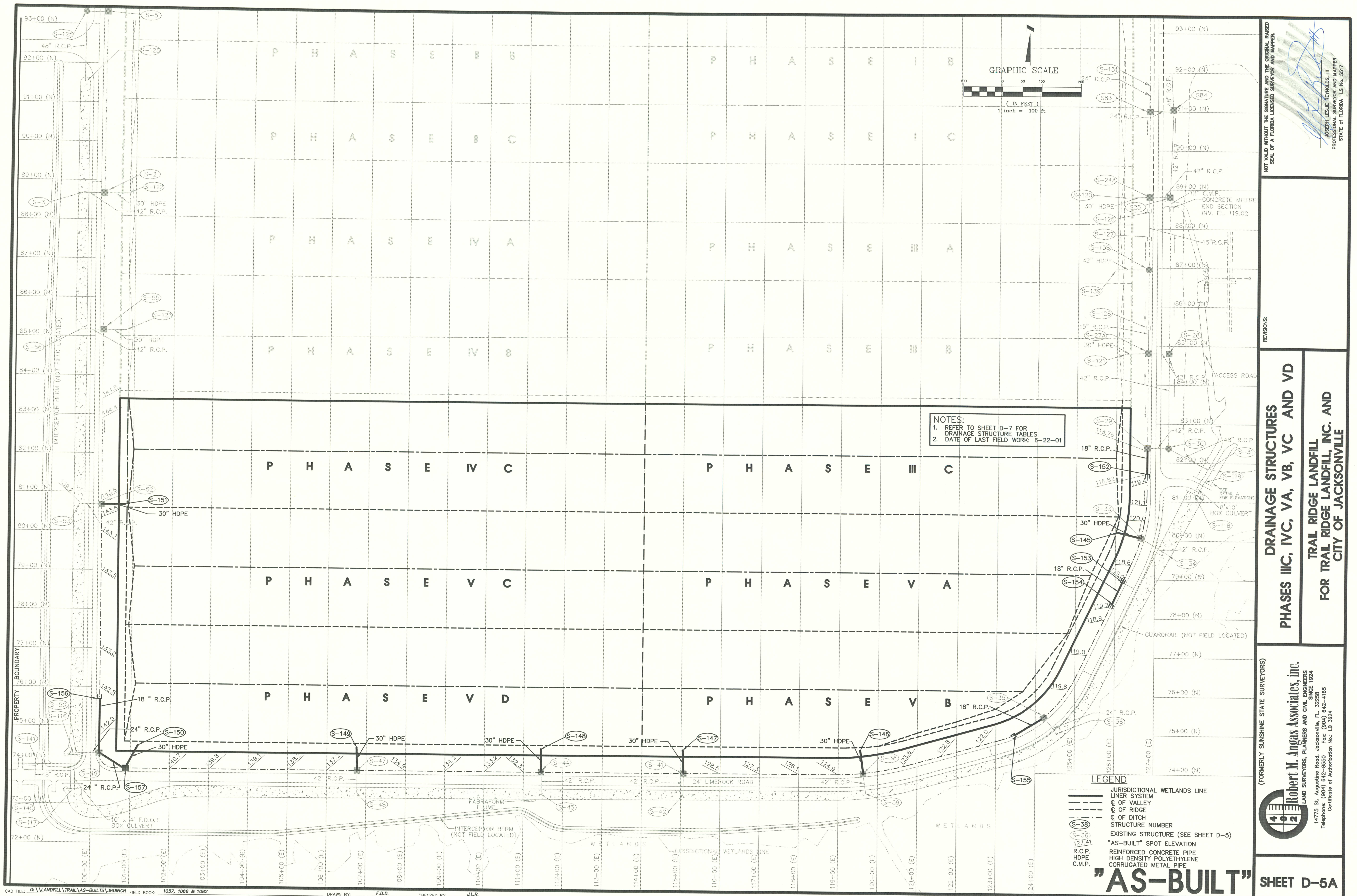
Robert M. Angas Associates, Inc.
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- NOTES:
1. LOCAL GRID COORDINATES DERIVED FROM GRID ESTABLISHED IN ENGINEERING PLANS FOR TRAIL RIDGE LANDFILL BY ENGLAND, THIMS AND MILLER, INC.
 2. ELEVATIONS BASED ON U.S.C. & G. BENCH MARK AJ-59, LOCATED NEAR INTERSECTION OF U.S. HWY. NO. 301 AND STATE RD. NO. 228. BENCH MARK ELEVATION: 88.412' (NGVD 1929)
 3. HORIZONTAL SEPARATION BETWEEN CONDUITS WAS EXAGGERATED FOR CLARITY PURPOSES ONLY. (NOT TO SCALE)
 4. ELEVATIONS ARE AT TOP OF CONDUIT.
 5. DATE OF LAST FIELD WORK: 6-22-01

LEGEND

- E— ELECTRICAL CONDUIT
- HANDHOLE
- LIMITS OF LINER SYSTEM
- OF VALLEY
- OF RIDGE



AS-BUILT DRAINAGE STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE DESCRIPTION	TOP ELEVATION		SLOT ELEVATION		INVERT ELEVATION		STATION	
		DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT	DESIGN	ASBUILT
S-145	30" HDPE PIPE	-	-	-	-	134.2 (30" HDPE SE)	134.1 (30" HDPE SE)	80+18.07 (N) 128+06.80 (E)	80+18.15 (N) 128+05.81 (E)
S-146	30" HDPE PIPE	-	-	-	-	139.9 (30" HDPE SE)	140.0 (30" HDPE SE)	74+53.51 (N) 119+55.52 (E)	74+53.16 (N) 119+55.84 (E)
S-147	30" HDPE PIPE	-	-	-	-	144.8 (30" HDPE S)	144.9 (30" HDPE S)	74+50.20 (N) 115+04.50 (E)	74+51.40 (N) 115+04.88 (E)
S-148	30" HDPE PIPE	-	-	-	-	147.9 (30" HDPE S)	147.5 (30" HDPE S)	74+50.20 (N) 111+43.83 (E)	74+50.75 (N) 111+44.01 (E)
S-149	30" HDPE PIPE	-	-	-	-	151.8 (30" HDPE S)	152.0 (30" HDPE S)	74+50.20 (N) 106+75.46 (E)	74+50.31 (N) 106+75.70 (E)
S-150	30" HDPE PIPE	-	-	-	-	156.7 (30" HDPE S)	156.7 (30" HDPE S)	74+50.20 (N) 101+18.55 (E)	74+50.82 (N) 101+18.59 (E)
S-151	30" HDPE PIPE	-	-	-	-	159.0 (30" HDPE W)	159.1 (30" HDPE W)	80+68.00 (N) 100+78.40 (E)	80+68.90 (N) 100+78.80 (E)
S-152	18" FDOT MITERED END SECTION	-	-	-	-	118.9 (18" HDPE N)	118.9 (18" HDPE N)	81+70.82 (N) 128+78.77 (E)	81+70.82 (N) 128+78.77 (E)
S-153	18" FDOT MITERED END SECTION	-	-	-	-	118.98 (18" R.C.P. SW)	118.98 (18" R.C.P. SW)	78+91.72 (N) 128+18.49 (E)	78+91.72 (N) 128+18.99 (E)
S-154	18" FDOT MITERED END SECTION	-	-	-	-	119.12 (18" R.C.P. NE)	119.15 (18" R.C.P. NE)	78+38.10 (N) 125+92.83 (E)	78+38.10 (N) 125+92.83 (E)
S-155	18" FDOT MITERED END SECTION	-	-	-	-	121.31 (18" R.C.P. NE)	121.34 (18" R.C.P. NE)	74+97.90 (N) 123+49.45 (E)	74+98.63 (N) 123+53.14 (E)
S-156	18" FDOT MITERED END SECTION	-	-	-	-	142.77 (18" R.C.P. S)	142.82 (18" R.C.P. S)	75+68.40 (N) 100+21.00 (E)	75+70.88 (N) 100+21.06 (E)
S-157	MOD. FDOT TYPE "B" INLET (WITH TYPE "C" MANHOLE)	144.0	144.0	142.25	142.18	137.47 (30" HDPE NE) 137.47 (36" R.C.P. NW)	137.51 (30" HDPE NE) 137.49 (24" R.C.P. NW)	73+91.00 (N) 100+91.00 (E)	73+92.64 (N) 100+92.51 (E)
S-158	12" HDPE PIPE	-	-	-	-	132.8 (12" HDPE W)	132.8 (12" HDPE W)	73+91.01 (N) 111+65.00 (E)	73+91.05 (N) 111+67.92 (E)

NOTE:
1. DATE OF LAST FIELD WORK: 6-22-01

DRAINAGE STRUCTURE TABLES
PHASES III C, IVC, VA, VB, VC AND VD
FOR TRAIL RIDGE LANDFILL, INC. AND
CITY OF JACKSONVILLE

4

3

2

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JOSEPH LESLIE REYNOLDS, III
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STATE OF FLORIDA, L.S. No. 5507