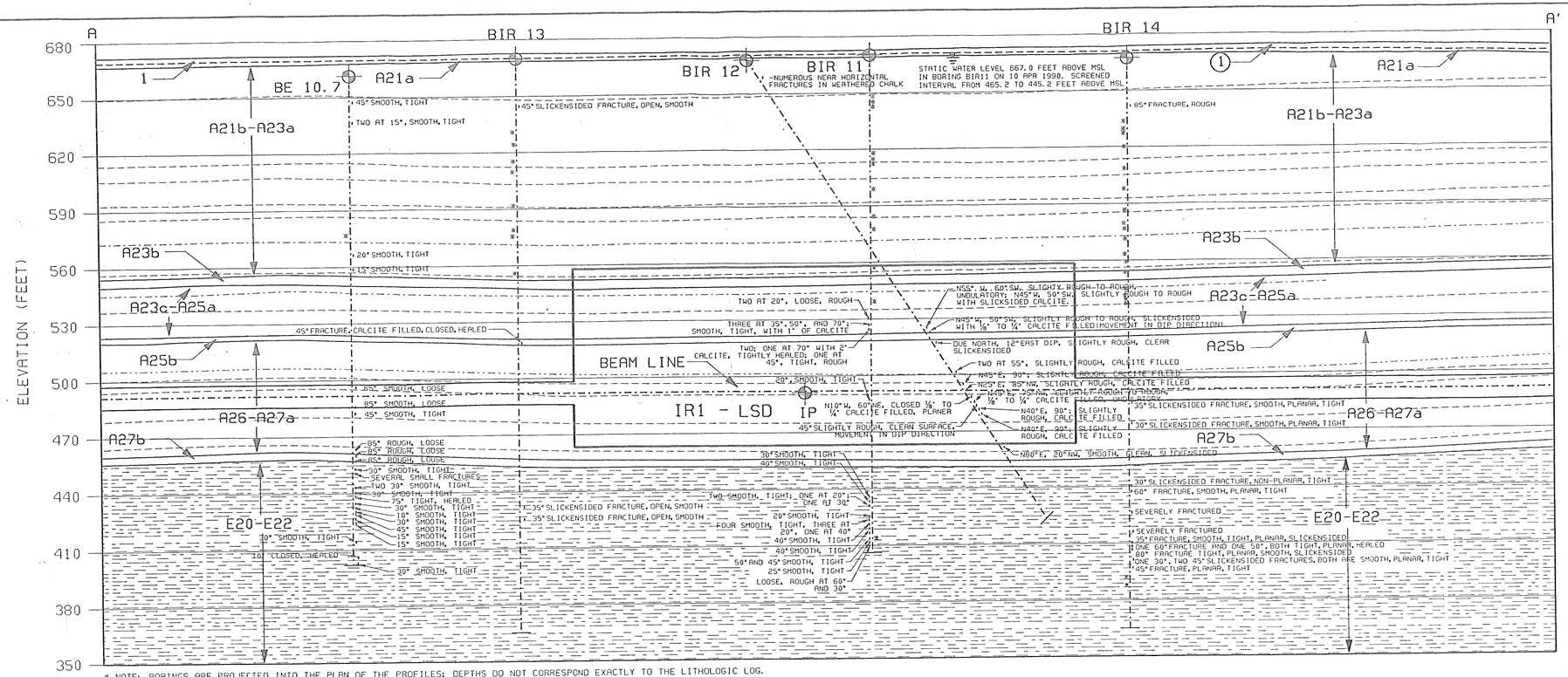
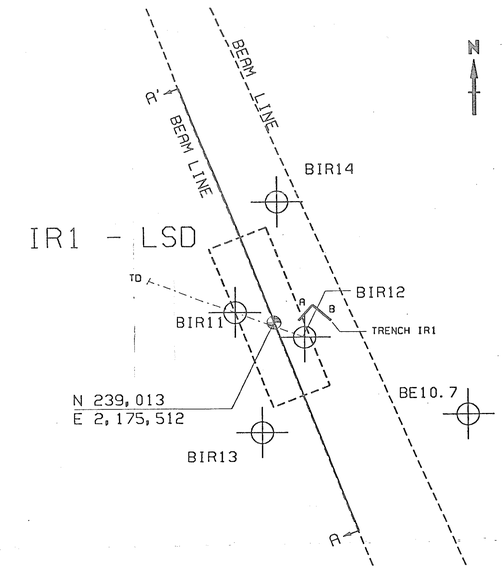


* NOTE: BORINGS ARE PROJECTED INTO THE PLAN OF THE PROFILES; DEPTHS DO NOT CORRESPOND EXACTLY TO THE LITHOLOGIC LOG.



PROFILE LOCATION

GRAPHIC SCALE

100 0 100 200 300 400

SYMBOL	LITHOLOGY
1	SOIL, DARK BROWN TO BLACK CLAYEY SAND TO SILTY CLAY, 0.8 TO 1.8 FEET THICK; FINE FRACTION HAS LOW TO MEDIUM PLASITICITY.
A21a	WEATHERED LIMESTONE (AUSTIN CHALK), MODERATELY TO SEVERELY WEATHERED, WHITE TO DARK GRAY, SOFT TO MEDIUM HARD LIMESTONE WITH OCCASIONAL DARK GRAY TO LIGHT BLUISH-GRAY, THIN-BEDDED, HIGHLY ARGILLACEOUS LIMESTONE LAYERS. WEATHERED ZONE RANGES FROM 2.0 TO 5.1 FEET THICK. CORRESPONDS TO WIRE-LINE UNIT A21.
A21b-A23a	LIMESTONE (AUSTIN CHALK), MEDIUM HARD, SLIGHTLY FOSSILIFEROUS, LIGHT GRAY TO DARK GRAY, CHALK INTERBEDDED WITH MODERATELY TO VERY ARGILLACEOUS LIMESTONE BEDS 0.2 TO 3.2 FEET THICK WITH THE MAJORITY OF THE BEDS APPROXIMATELY 0.8 FOOT THICK. CHALK BEDS RANGE FROM 0.3 TO 5.0 FEET THICK WITH THE MAJORITY OF THE BEDS SLIGHTLY GREATER THAN 1 FOOT THICK. THE ARGILLACEOUS LIMESTONE AND OCCASIONAL BENTONITE BEDS BECOME MORE COMMON AND THICKER (AVERAGE APPROXIMATELY 1.0 FOOT) TOWARD THE BASE. CORRESPONDS TO WIRELINE UNITS A21 TO A23.
A23b	SHALE (INTERBED OF AUSTIN CHALK), SOFT, SLIGHTLY FOSSILIFEROUS, DARK GRAY, 2.0 TO ABOUT 5.0 FEET THICK. CORRESPONDS TO WIRELINE UNIT A
A23c-A25a	LIMESTONE (AUSTIN CHALK), MEDIUM HARD, SLIGHTLY FOSSILIFEROUS, LIGHT GRAY TO DARK GRAY CHALK INTERBEDDED WITH MODERATE TO VERY ARGILLACEOUS LIMESTONE BEDS 0.4 TO 4.1 FEET THICK AND AVERAGING APPROXIMATELY 1 FOOT THICK. IN GENERAL, THIS UNIT IS LESS ARGILLACEOUS THAN THE LIMESTONE UNITS ABOVE AND BELOW. CORRESPONDS TO WIRELINE UNITS A23 TO A25 .
A25b	BENTONITE (MARKER BED IN AUSTIN CHALK); SOFT, LIGHT GRAY TO BLUISH GRAY, WAXY, NON-LAMINATED, 1.1 TO 1.7 FEET THICK. CORRESPONDS TO WIRELINE UNIT A25.
A26-A27a	LIMESTONE (AUSTIN CHALK), MEDIUM HARD, SLIGHTLY FOSSILIFEROUS, LIGHT GRAY TO DARK GRAY, CHALK WITH INTERBEDDED ARGILLACEOUS LIMESTONE BEDS 0.2 TO 2.3 FEET THICK WITH THE MAJORITY OF THE INTERBEDS APPROXIMATELY 0.9 FOOT THICK. CHALK BEDS RANGE FROM 0.4 TO GREATER THAN 5 FEET THICK WITH THE MAJORITY OF THE BEDS GREATER THAN 3 FEET THICK. THE ARGILLACEOUS LIMESTONE BEDS BECOME MORE COMMON TOWARD THE BASE. IN GENERAL, THIS UNIT IS MORE ARGILLACEOUS THAN UNIT 5. CORRESPONDS TO WIRELINE UNITS A26 AND A27.
A27b	TRANSITION ZONE (AUSTIN CHALK), VERY ARGILLACEOUS TO VERY ARENACEOUS LIMESTONE, MEDIUM HARD, HIGHLY FOSSILIFEROUS (FISH BONES, FISH TEETH, AND OTHER FOSSIL DEBRIS), MEDIUM TO DARK GRAY WITH OCCASIONAL PYRITE NODULES. THICKNESS RANGES FROM 0.8 TO 2.6 FEET. CORRESPONDS TO WIRELINE UNIT A27 (BASE).
E20-E22	SHALE (EAGLE FORD), SOFT TO MEDIUM HARD, SLIGHTLY CALCAREOUS, SLIGHTLY FOSSILIFEROUS, DARK GRAY TO BLACK, OCCASIONAL PYRITE NODULES AND CALCAREOUS CONCRETIONS. OCCASIONAL THIN LIMESTONE AND CALCAREOUS SILTSTONE BEDS 0.1 TO 0.6 FOOT THICK 25 TO 35 FEET BELOW THE AUSTIN CHALK/EAGLE FORD SHALE CONTACT. CORRESPONDS TO WIRE-LINE UNITS E20-E22

GEOMECHANICAL CHARACTERISTICS

	IR1	MOIST. CONT. %	DRY DEN. (PCF)	SPEC. GRAV.	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	$CaCO_3$ CONTENT	UNIAXIAL COMP. STRENGTH (PSI)	TANGENT MODULUS E 50 (PSI)x10E5	POISSON'S RATIO	BRAZIL TENSILE STRENGTH (PSI)	SLAKE DURB. INDEX (%)	TABER ABRAS. HARD. INDEX	SWELL PRES. INDEX (PSI)
1	MINIMUM	22.8	90.3		42	24								3.6
	AVERAGE	24.4	92.9		44	26								4.5
	MAXIMUM	26.6	97.3		46	28								7.2
A21a	MINIMUM	12.6												
	AVERAGE	12.9	123.4					2365.0	8.33		205.0		0.464	
	MAXIMUM	13.1												
A21b-A23a	MINIMUM	9.9	112.1	2.68				1095.0	1.71	0.07	146.0		0.402	
	AVERAGE	14.4	119.8	2.69				1955.0	4.90	0.15	221.0	96.9	0.645	
	MAXIMUM	17.6	129.3	2.71				2392.0	8.78	0.26	274.0		1.091	
A23b	MINIMUM	12.4												
	AVERAGE	12.5	122.5					1970.0	1.50		279.0			
	MAXIMUM	12.6												
A23c-A25a	MINIMUM	12.5	114.0	2.68				419.0	0.27		184.0		0.503	
	AVERAGE	13.8	118.0	2.68				2008.0	5.22		252.0		0.531	
	MAXIMUM	17.1	123.6	2.68				2979.0	14.00		339.0		0.559	
A25b	MINIMUM	18.0	81.3	2.32	106	56	4.9							9.5
	AVERAGE	36.0	88.6	2.50	121	79	7.9	170**						9.5
	MAXIMUM	40.3	106.1	2.68	132	93	10.4							9.5
A26-A27a	MINIMUM	9.4	116.2					1317.0	1.70	0.12	197.0		0.39	
	AVERAGE	13.2	124.1	2.69**				2377.0	5.14	0.14	240.0	97.3	0.48	
	MAXIMUM	16.3	132.0					2940.0	7.90	0.15	267.0		0.56	
A27b	MINIMUM	11.3							0.05		238.0			
	AVERAGE	11.6	127.9					73.0	0.05		254.0			
	MAXIMUM	11.8							0.05		267.0			
E20-E22	MINIMUM	9	111.3	2.57	59	34	5.0	98.0	0.11	0.04		4.9	0.575**	16.0
	AVERAGE	15.8	117.8	2.71	85	52	8.6	260.0	0.88	0.31		28.3	0.636**	44.2
	MAXIMUM	17.8	130.3	2.76	106	71	28.5	542.0	2.00	0.47		51.9	0.697**	86.9

THESE DATA ARE AVERAGES FROM THE BORINGS: BIR 11, BIR 12, BIR 13, AND BIR 14.

* : DOES NOT INCLUDE DATA FROM INCLINED BOREHOLE BIR12

**: THIS INTERVAL WAS NOT SAMPLED FOR THIS TEST IN ANY IR1 BORINGS. HOWEVER, THIS INTERVAL WAS SAMPLED IN IR2 BORINGS 400 TO 800 FEET SOUTH.

PRELIMINARY

Note: Some values in this table may be revised based on reviews of test procedures and individual test results. The reader should refer to the latest revision of the gINT geotechnical data base (geotechnical report GR-70).

ASSUMED LATTICE
STATE PLANE
CENTER COORDINATES (NAD 27):
Y(N)- 252,561.3010
X(E)- 2,213,072.3336

STRIKE:
N 13.70° E (GRID NORTH)

TILT: 0.17°

OBLIQUITY:
N 18°.77' W (GRID NORTH)

LEGEND

- - - - - - - - - ARGILLACEOUS BEDS 0.1 TO 0.4 FEET THICK

-·-·-·-·-·- BENTONITE AND BENTONITIC SHALE BEDS 0.1 TO 0.2 FEET THICK, CONTINUOUS FROM ONE BORING TO ANOTHER.

* FOSSILIFEROUS ZONES IDENTIFIED IN INDIVIDUAL BORINGS

SHEARS AND FRACTURES NOTED IN BORING LOGS.
FRACTURES ARE PROJECTED TO PLANE OF CROSS SECTION FROM THE BORINGS.

GRAPHIC SCALE

30 0 30 60 90 120

NO	DATE	REVISION	BY CHK	APP	APP	D BASE UPDATE
2	8/27/90	GENERAL REVISION				
1	5/31/90	GENERAL REVISION				

U. S. DEPARTMENT OF ENERGY
SUPERCONDUCTING SUPER COLLIDER

GEOLOGIC PROFILE
IR1 - LSD

RTK a joint venture — Kaiser Engineers Inc. / Tudor Engineering Company / Keller & Gannon/Knight

SSC-SR-1124 FINAL VERSION SEPT '90 6 of 11

CONTRACT DE-AC02-85ER40230 — PROJECT 85122

DRAWING GS-3A — DATE 2/27/90 — REV 2 DATE 8/27/90 — SHEET ____

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