AMEC GEOTECHNICAL AND CONSTRUCTION MATERIALS LABORATORY
5211 Linbar Drive, Suite 513, Nashville, Tennessee 37211 -
Telephone: 615-831-9202
Fax: 615-831-9516

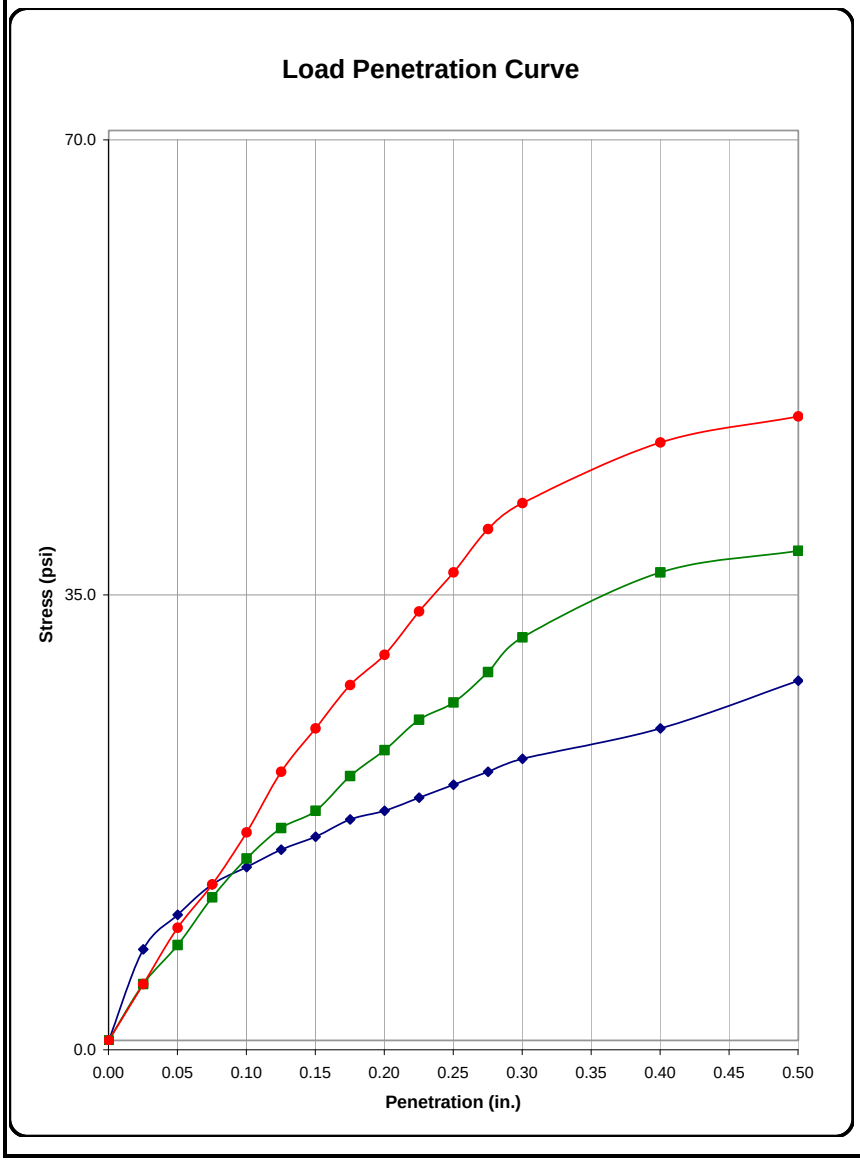
ASTM D1883 - STANDARD METHOD FOR CBR (CALIFORNIA BEARING RATIO) OF LABORATORY-COMPACTED SOILS

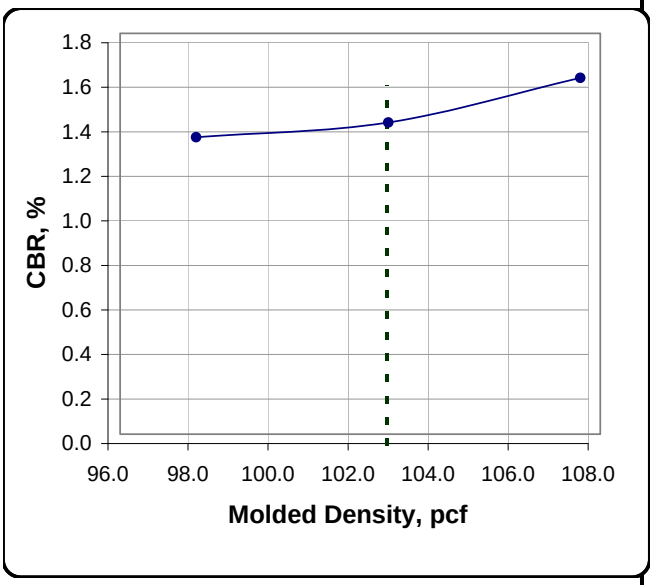
Project No: 3-7590-0000
Project: RSP \ FORT KNOX HOUSING \ GEO
Location: FORT KNOX, KENTUCKY
Date: June 12, 2003

Test Description/Remarks:
SAMPLES COMPACTED TO APPROXIMATELY 90, 95 & 100% COMPACTION AND NEAR OPTIMUM MOISTURE CONTENT

Specimen / Mark	PRE-TEST			POST-TEST			CBR, (%)		Line corr.		Swell (%)
	Density	% max	Moist. (%)	Density	% max	Moist. (%)	0.1"	0.2"			
1 ◆	97.9	90.3	17.4	90.9	83.9	25.7%	1.3	1.2	0.000	15.0	0.55
2 ■	102.7	94.7	17.4	97.2	89.7	22.3%	1.4	1.5	0.000	15.0	1.40
3 ●	107.5	99.2	17.4	103.2	95.2	20.4%	1.6	2.0	0.000	15.0	1.64

MATERIAL DESCRIPTION	USCS	MAX.DENS.	OPT. M%	LL	PI
Brown silty clay	CH	108.4	18	69	43





CBR @ 95.0% = 1.4
for 0.1 in. penetration

Amendment 4

Fig. No. ***B-2,S-1***

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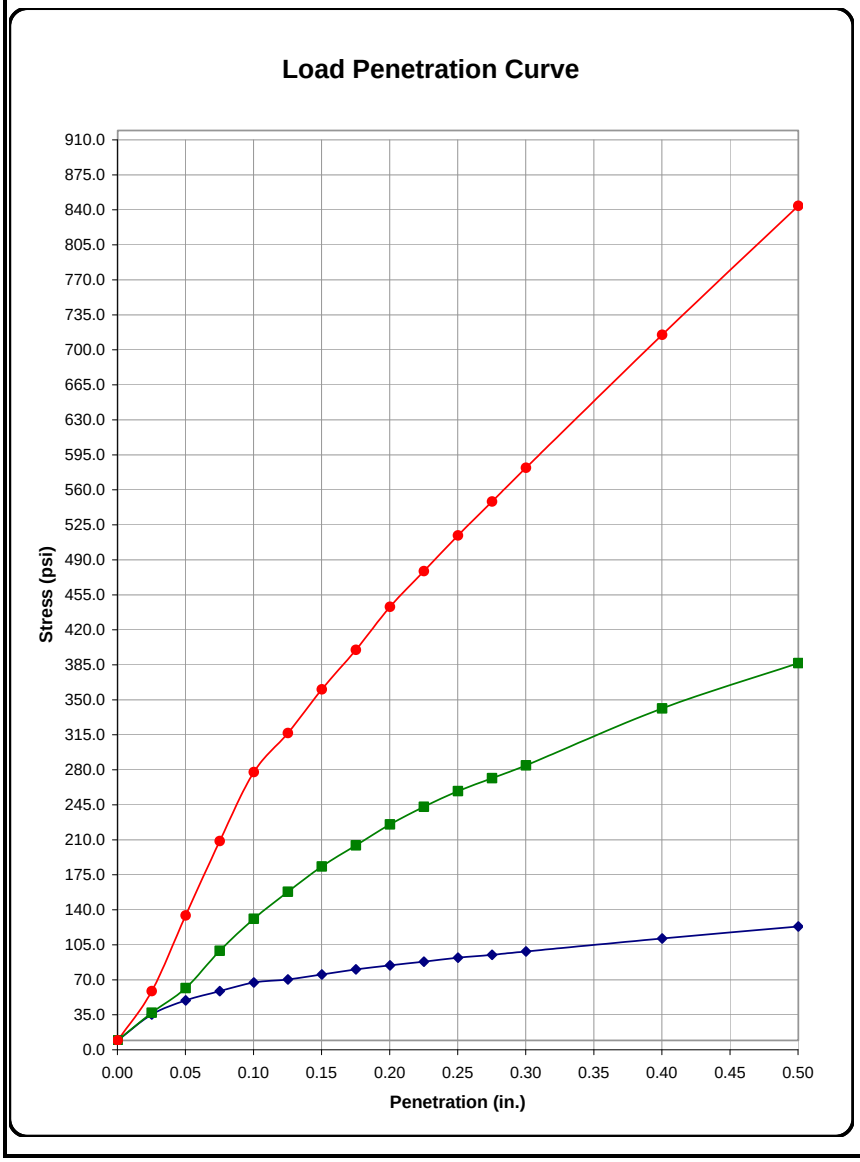
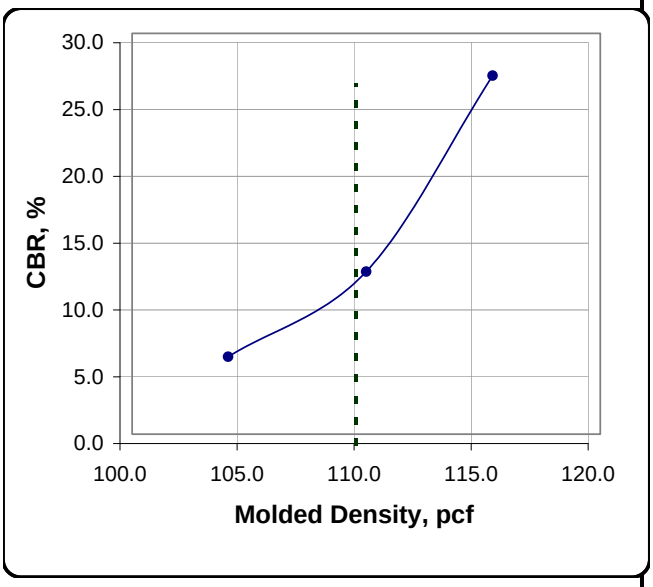
Specimen / Mark	PRE-TEST			POST-TEST			CBR, (%)		Line corr.		Swell (%)
	Density	% max	Moist. (%)	Density	% max	Moist. (%)	0.1"	0.2"			
1 ◆	104.1	89.8	13.2	97.3	84.0	20.4%	5.8	5.0	0.000	15.0	0.59
2 ■	110.0	94.9	13.2	104.8	90.4	17.7%	12.2	14.4	0.000	15.0	1.00
3 ●	115.4	99.6	13.2	111.6	96.3	16.1%	26.8	28.9	0.000	15.0	0.72

MATERIAL DESCRIPTION	USCS	MAX.DENS.	OPT. M%	LL	PI
Brown clay	CL	115.9	12.2	29	9





CBR @ 95.0% = 12.5
for 0.1 in. penetration

Amendment 4

Fig. No. ***B-6,S-1***

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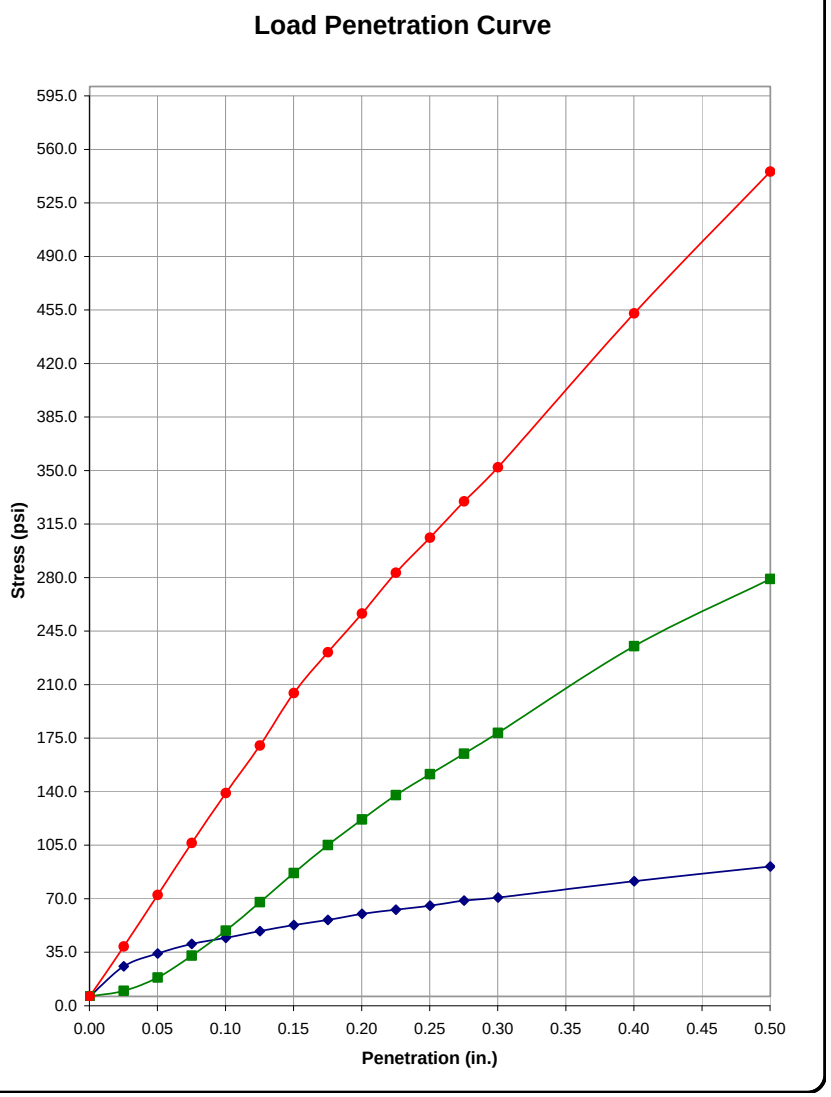
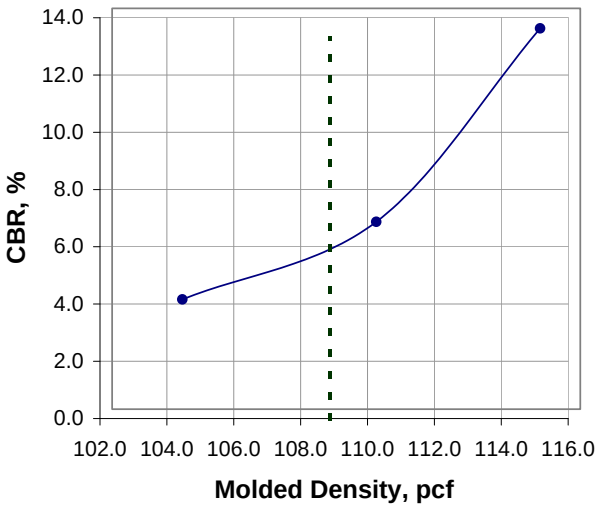
Date: June 12, 2003

Test Description/Remarks:
SAMPLES COMPACTED TO APPROXIMATELY 90, 95 & 100% COMPACTION AND NEAR OPTIMUM MOISTURE CONTENT

Specimen / Mark	PRE-TEST			POST-TEST			CBR, (%)		Line corr.		Swell (%)
	Density	% max	Moist. (%)	Density	% max	Moist. (%)	0.1"	0.2"			
1 ◆	104.1	90.8	15.1	99.2	86.6	20.4%	3.8	3.6	0.000	15.0	0.31
2 ■	109.9	95.9	15.1	106.9	93.3	17.8%	6.5	9.0	0.030	15.0	0.50
3 ●	114.8	100.2	15.1	113.8	99.3	15.7%	13.3	16.7	0.000	15.0	0.31

MATERIAL DESCRIPTION	USCS	MAX.DENS.	OPT. M%	LL	PI
Brown silty clay	CL	114.6	14.2	35	15





CBR @ 95.0% = 6.0
for 0.1 in. penetration

Amendment 4

Fig. No. ***B-19,S-1***

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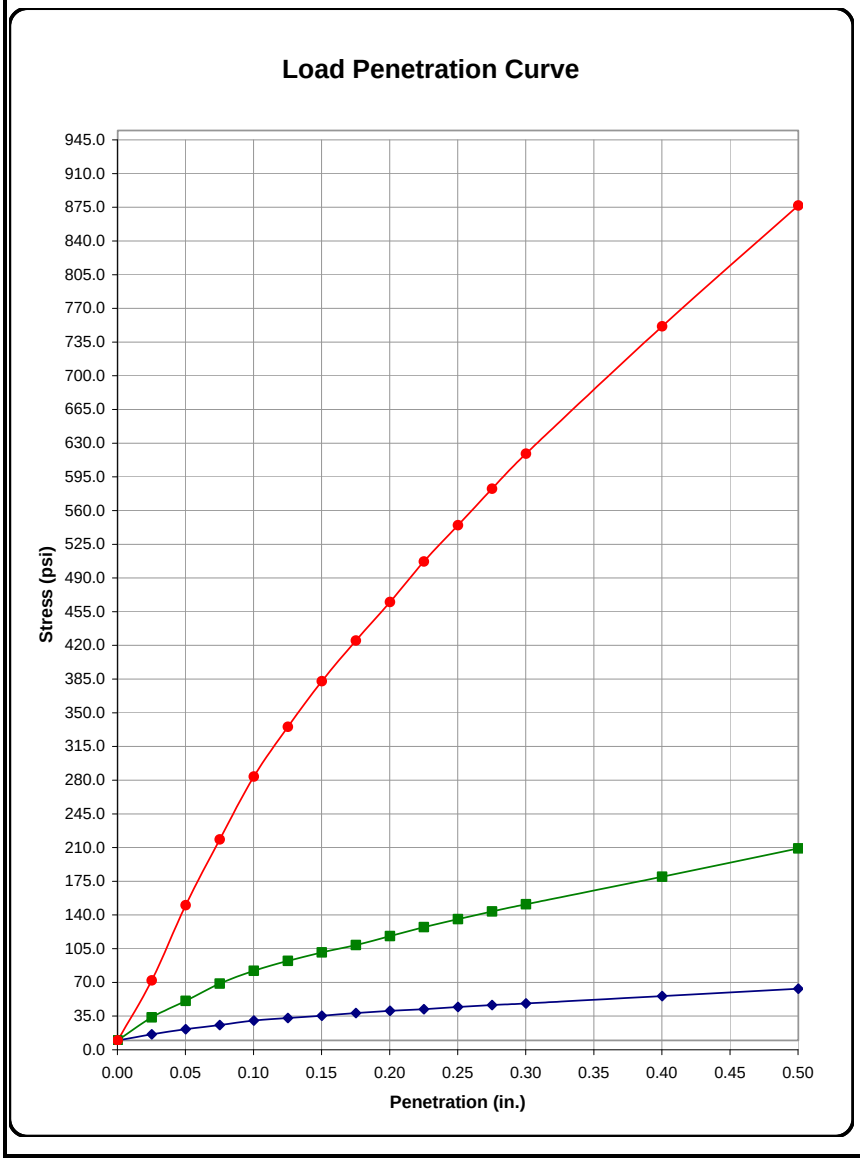
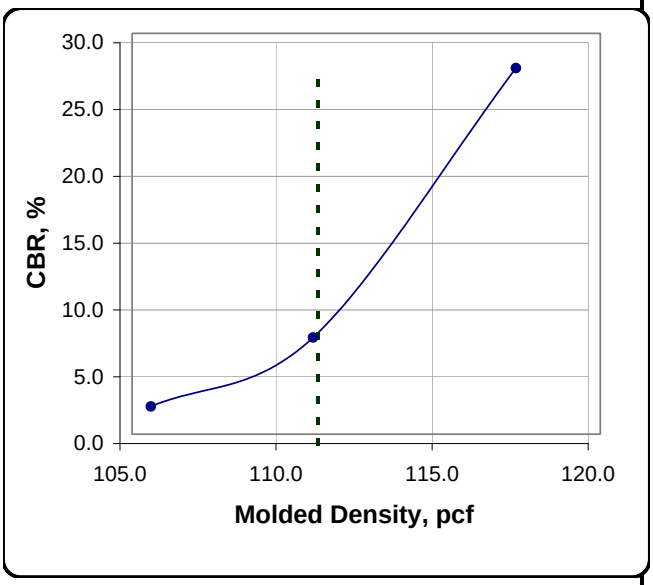
Test Description/Remarks:
SAMPLES COMPACTED TO APPROXIMATELY 90, 95 & 100% COMPACTION AND NEAR OPTIMUM MOISTURE CONTENT

Specimen / Mark	PRE-TEST			POST-TEST			CBR, (%)		Line corr.		Swell (%)
	Density	% max	Moist. (%)	Density	% max	Moist. (%)	0.1"	0.2"			
1 ◆	105.6	90.1	13.5	99.4	84.8	20.4%	2.1	2.0	0.000	15.0	0.15
2 ■	110.8	94.5	13.5	106.6	91.0	17.7%	7.2	7.2	0.000	15.0	0.20
3 ●	117.3	100.1	13.5	114.6	97.8	16.1%	27.4	30.4	0.000	15.0	0.11

MATERIAL DESCRIPTION	USCS	MAX.DENS.	OPT. M%	LL	PI
Brown silty clay	CL	117.2	13.9	35	16





CBR @ 95.0% = 8.9
for 0.1 in. penetration

Amendment 4

Fig. No. ***B-19,S-2***

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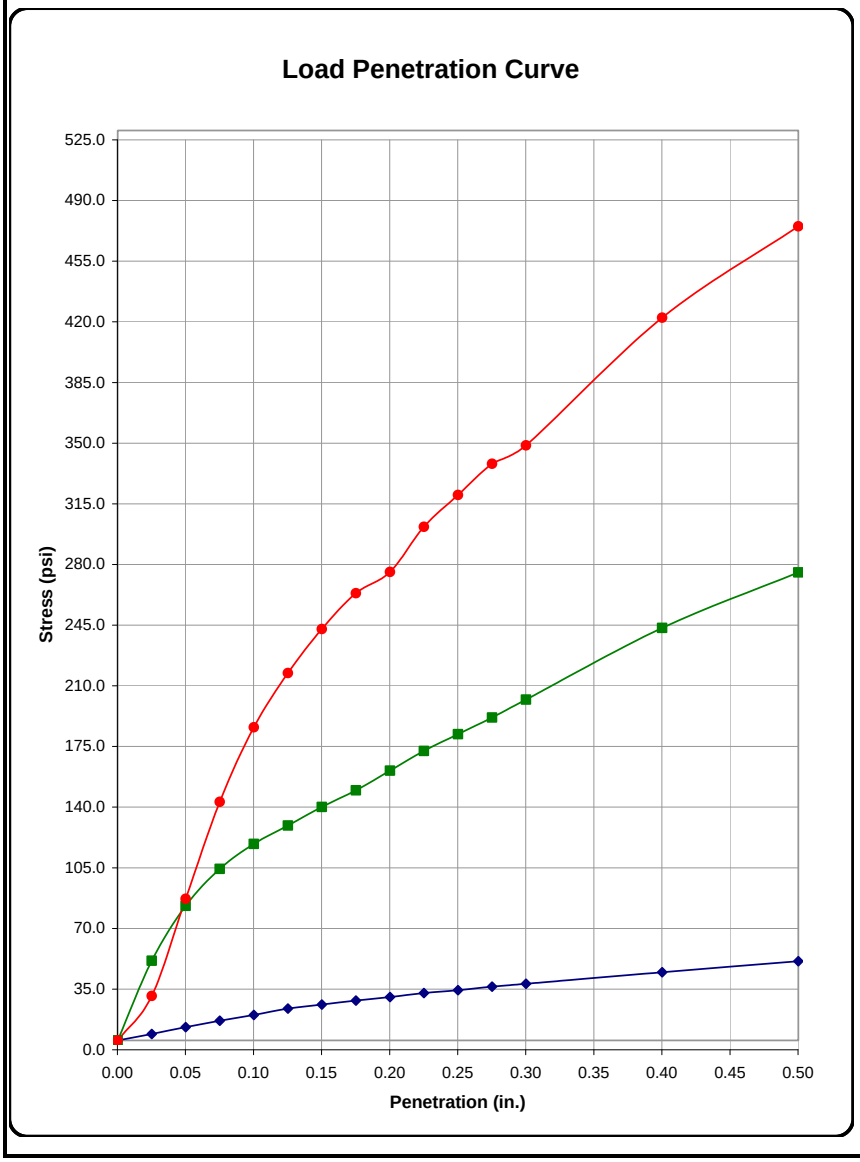
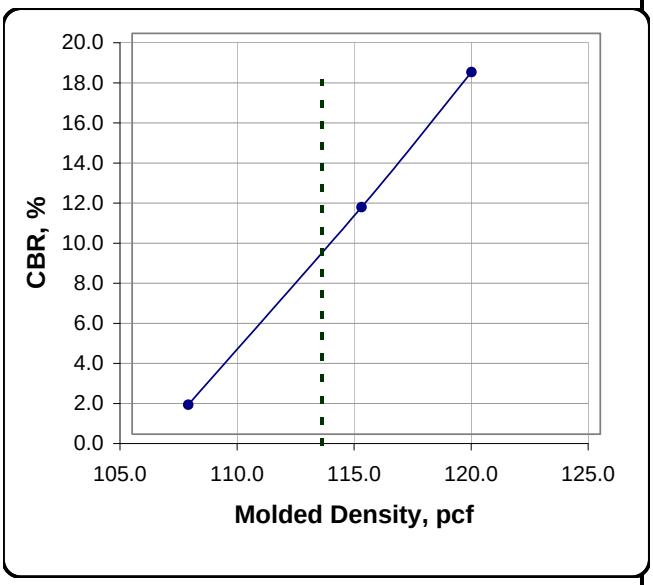
Specimen / Mark	PRE-TEST			POST-TEST			CBR, (%)		Line corr.		Swell (%)
	Density	% max	Moist. (%)	Density	% max	Moist. (%)	0.1"	0.2"			
1 ◆	107.4	89.8	12.3	100.5	84.0	19.5%	1.5	1.7	0.000	15.0	0.37
2 ■	114.8	96.0	12.3	108.3	90.6	18.4%	11.3	10.4	0.000	15.0	0.52
3 ●	119.5	99.9	12.3	116.3	97.2	15.0%	18.1	18.0	0.000	15.0	0.31

MATERIAL DESCRIPTION	USCS	MAX.DENS.	OPT. M%	LL	PI
Reddish-Brown silty clay	CL	119.6	13.1	35	18





CBR @ 95.0% = 9.7
for 0.1 in. penetration

Amendment 4

Fig. No. ***B-25***