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February 12, 2013 (Revised February 13, 2013)
Project No. 04.62120197

AECOM
1220 Avenida Acaso
Camarillo, California 93012

Attention: Mr. John Coffman

Subject: Preliminary Geotechnical Engineering Input to Pipe Support Foundations, Westlake Dam and 5-Million-Gallon Water Storage Tank, Las Virgenes Municipal Water District, Westlake Village, California

Dear Mr. Coffman:

This letter-report presents preliminary geotechnical engineering input to the design of proposed pipe support foundations for inlet and outlet piping that will cross the upstream face of the West Embankment of Westlake Reservoir in Westlake Village, California. We understand the proposed pipeline project is in the conceptual design phase and is part of the Las Virgenes Municipal Water District's (LVMWD) proposed 5-Million-Gallon water storage tank project.

AECOM is developing the conceptual design plans for the pipeline and pipe supports. Based on preliminary information provided to us, we understand that separate 36-inch-diameter inlet and outlet piping is proposed. For this concept, the inlet and outlet piping will be constructed above grade and contained in separate 42-inch-diameter steel carrier pipes. Conceptual plans for the project indicate the pipelines will be constructed on pipe supports spaced 35 to 40 feet apart. The pipes will be spaced about 1-foot apart and the alignment will cross the upstream face of the dam above the maximum water level elevation of (El.) 1,048 feet. The invert of the pipelines is planned to be at El. 1,051 feet. The pipe supports will consist of either an H-shape steel frame with the vertical supports consisting of driven pipe or H-piles or cast-in-place concrete pipe saddles supported on shallow foundations. The proposed pipeline alignment is shown on Plate 1 and the proposed pipe support systems are shown on Plate 2.

Based on information provided in the construction documents (Boyle, 1970[1]) for the Westlake Reservoir, we understand the existing west embankment is a zoned earth dam that is up to about 100 feet high. The maximum thickness of fill at the crest is estimated to be about 55 to 60 feet. The upstream face of the dam is inclined at 2.75h:1v and consists of random rock fill (Zone 4) covered by a thin layer of select rock fill (Zone 5) and rip rap. The Zone 4 material overlies an 8-foot-wide layer of filter sand material (Zone 2) and a core of clay and clayey sand material (Zone 1). The embankment was constructed above Conejo Volcanic basalt bedrock.

[1] Boyle Engineering (1970), "Contract Documents & Construction Specifications for Construction of Westlake Reservoir, Dam & Appurtenances", prepared for Las Virgenes Municipal Water District, dated November

A plan and cross section through the west embankment as provided on the design plans are shown on Plates 3 and 4, respectively. Material gradation requirements for the various fill zones of the embankment are provided in the following table.

Table 1. Zone Fill Requirements

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Particle Size	**Percent Passing**				
12-in					100
10-in				100	
6-in					70-100
4-in			100		
3-in					50-90
1-1/2-in			50-100		30-70
3/4-in			30-60		
3/8-in		100	15-35		5-40
No. 4	≥70	70-100	0-10		0-25
No. 16		30-70			
No. 50		10-30			
No. 200	≥ 40	0-5	0-3	≤25	0-5
Generalized Classification	Clay/Clayey Sand	Sand/Sand with Gravel	Gravel/Sandy Gravel	Random Granular Fill Boulders, Cobbles, Gravel, and Sand Cobbles,	Rockfill Boulders, Cobbles, Gravel, and Sand Cobbles,

Generalized Soil Conditions for Pipe Support Foundations

We developed a generalized soil profile (vertical soil profile) at the upstream face of the embankment at about El. 1,048 feet for use in providing preliminary geotechnical input into the design of the proposed pipe support foundations. Our assumed soil profile is provided in Table 2 - Generalized Soil Profile and is considered to be representative of the conditions in the central portion of the dam. Lesser thicknesses of fill and shallow bedrock conditions will occur near the abutments.

Table 2 - Generalized Soil Profile

Depth	Zone Material*	Assumed Soil Classification	Effective Unit Weight	Soil Friction Angle	Cohesion
0-13 feet	Zone 4	Dense Sand with Gravel, Cobbles & Boulders	57 pcf	35 degrees	0 psf
13-30 feet	Zone 2	Dense Sand	57 pcf	35 degrees	0 psf
30+ feet	Zone 1	Stiff to Very Stiff Clay/Clayey Sand	57 pcf	0 degrees	2000 psf

*We note that a nominal thickness of Zone 5 material may occur at the pile locations. However, Zone 5 material was not considered in our evaluations.

Preliminary Evaluation of Axial Pile Capacity

For preliminary design, we assumed the pipe support pile foundations will consist of either: 1) a 12-inch-diameter closed-end pipe pile with 0.5-inch wall thickness, or 2) a HP 12x74 pile. We estimated the ultimate static axial capacity of the piles using Version 4.0 of the computer program APILE (Ensoft, 2004[2]) for the assumed soil conditions provided in Table 2. We assumed the soils will be submerged and used effective unit weights in our analyses. The results of our axial pile analyses are provided in Appendix A - Axial Pile Calculations.

Based on our preliminary evaluations, we estimate that an ultimate axial capacity of about 50 kips can be achieved for piles embedded about 30 to 40 feet into the dam face (see Ultimate Capacity plots in Appendix A). We estimate the allowable capacity for piles embedded 30 to 40 feet into the dam will be about 25 to 30 kips (assumed factor of safety of 2).

Preliminary Evaluation of Lateral Pile Capacity

We evaluated the lateral pile load carrying capacity of the assumed 12-inch pipe and HP 12x74 piles using the computer program LPILE v5.0 (Ensoft, 2007[3]). The program uses a soil resistance-pile deflection model (p-y analysis) to estimate pile deformations and moment and shear forces in the pile. LPILE was used to estimate lateral load deflection and maximum moment for the piles for a range of lateral loads at the pile head. We performed our analyses for a single isolated pile for free- and fixed-head conditions and no factors of safety (a resistance factor of 1.0) were applied to the estimated loads or deflections. An axial load in the pile of 25 kips was assumed in the lateral analyses. The results of our lateral capacity evaluations are summarized in Table 3. Plots of pile deflection, bending moment, and shear versus depth and computer output for the analyses are provided in Appendix B - Lateral Pile Calculations.

[2] Ensoft (2004), Apile Plus 4.0 for Windows, A Program for the Analysis of the Axial Capacity of Driven Piles

[3] Ensoft (2007) LPILE Plus for Windows, Version 5.0, Analysis of Individual Piles and Drilled Shafts Subjected to Lateral Loading Using the p-y Method

Table 3. Lateral Pile Capacity

Pile Type	Pile Head Fixity	Estimated Pile Head Displacement (in)	Lateral Load (kips)	Maximum Bending Moment (ft-kips)
12-inch pipe, 0.5-inch wt	Free-Head	0.25	15	41
12-inch pipe, 0.5-inch wt	Fixed Head	0.25	38	123
HP 12 x 74	Free-Head	0.25	18	54
HP 14 x 89	Fixed Head	0.25	45	160

Conceptual plans provided to us from AECOM, indicate the piles will be spaced about 10 feet apart or more than 7 pile diameters; therefore, no reduction in lateral capacity for group effects are anticipated.

Pile Construction Considerations

The subsurface soils at the proposed pipe support locations will likely contain hard oversize rock up to 10 inches in diameter. As a result, difficult driving conditions may be encountered and we suggest that the piles be fitted with driving shoes to reduce the potential for damage to the piles during installation.

Preliminary Evaluation of Shallow Foundation Capacity

For preliminary design, we assumed the pipe support shallow foundations will consist of concrete pipe saddles supported on shallow spread footings. The footings would be founded at grade at the downslope edge of the footing and embedded approximately 4 to 5 feet below existing grade on the upslope edge. The pipe saddles will consist of a vertical stem extending up from the footing centerline and shaped to support the pipelines. The footing is estimated to be about 11 feet long and for purposes of our evaluation, we have assumed the footings will be about 6 to 8 feet wide.

For preliminary design and considering little to no embedment and potential sloping ground conditions, we recommend an allowable bearing capacity of 2,000 be used for conceptual design of the proposed shallow foundations. For preliminary input, we estimate that static settlement of the proposed footings should be less than about 1/2 inch assuming the underlying soils consist of dense granular material.

Lateral forces acting on shallow foundations can be resisted by soil friction at the base of the footing and passive resistance acting on buried foundation elements. For preliminary design and evaluation of foundation lateral resistance, we recommend a friction coefficient of 0.35 and a passive pressure value (expressed as an equivalent fluid weight) of 210 pcf be used to estimate the ultimate frictional force and ultimate passive resistance of the soil. The passive pressure value of 210 pcf is based on saturated soil conditions. An ultimate passive resistance of 400 pcf (equivalent fluid weight) can be used for unsaturated soil conditions.

We recommend a factor of safety of at least 1.5 be used when assessing foundation sliding and overturning. In addition, we recommend that strain compatibility be considered in the analysis because lateral movement of the foundation will be required to fully mobilize passive resistance.

LIMITATIONS

Our services with respect to this study were performed with a degree of care and skill equal to that ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, express or implied, is made or intended.

The recommendations provided in this letter should be considered preliminary and are based on assumed geotechnical conditions interpreted from construction specifications and drawings. We recommend that additional work be performed for final design. We expect that work will involve obtaining site-specific geotechnical data, geotechnical testing, and analyses design interaction with the project team.

CLOSURE

We appreciate the opportunity to provide geotechnical engineering services to AECOM for the pipeline support foundations proposed as part of LVMWD's 5-MG reservoir project. If you have questions of comments regarding the driving information provided in our report, do not hesitate to contact our office.

Sincerely,

FUGRO CONSULTANTS, INC.

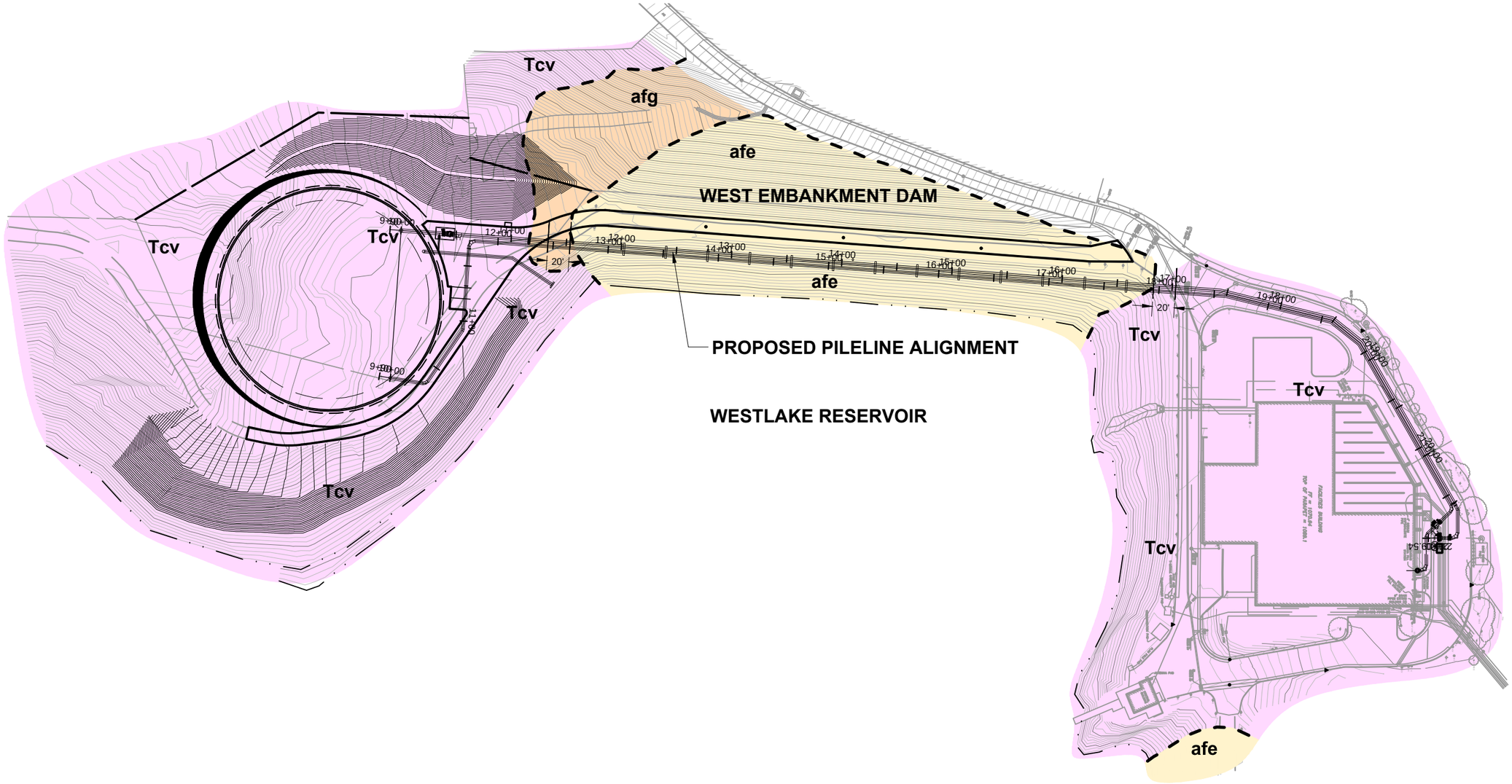
Gregory S. Denlinger, G.E.
Principal Engineer

Attachments:

Plate 1 - Pipeline Alignment
Plate 2 - Pipeline Support Systems
Plate3 - Plan or West Embankment Dam
Plate 4 - Profile of West Embankment Dam (Sta 13+00)
Appendix A - Axial Pile Calculations
Appendix B - Lateral Pile Calculations

Copies Submitted: (1) Addressee and Pdf via email

PLATES



BASE MAP SOURCE: CAD data from AECOM.

LEGEND

— — —	Geologic contact
afe	Dam Embankment Fill
afg	General Fill
Tcv	Conejo Volcanics

NORTH

0 100 200

FEET

PIPELINE ALIGNMENT
LVMWD 5MG Water Tank Storage
Thousand Oaks, California

PLATE 1

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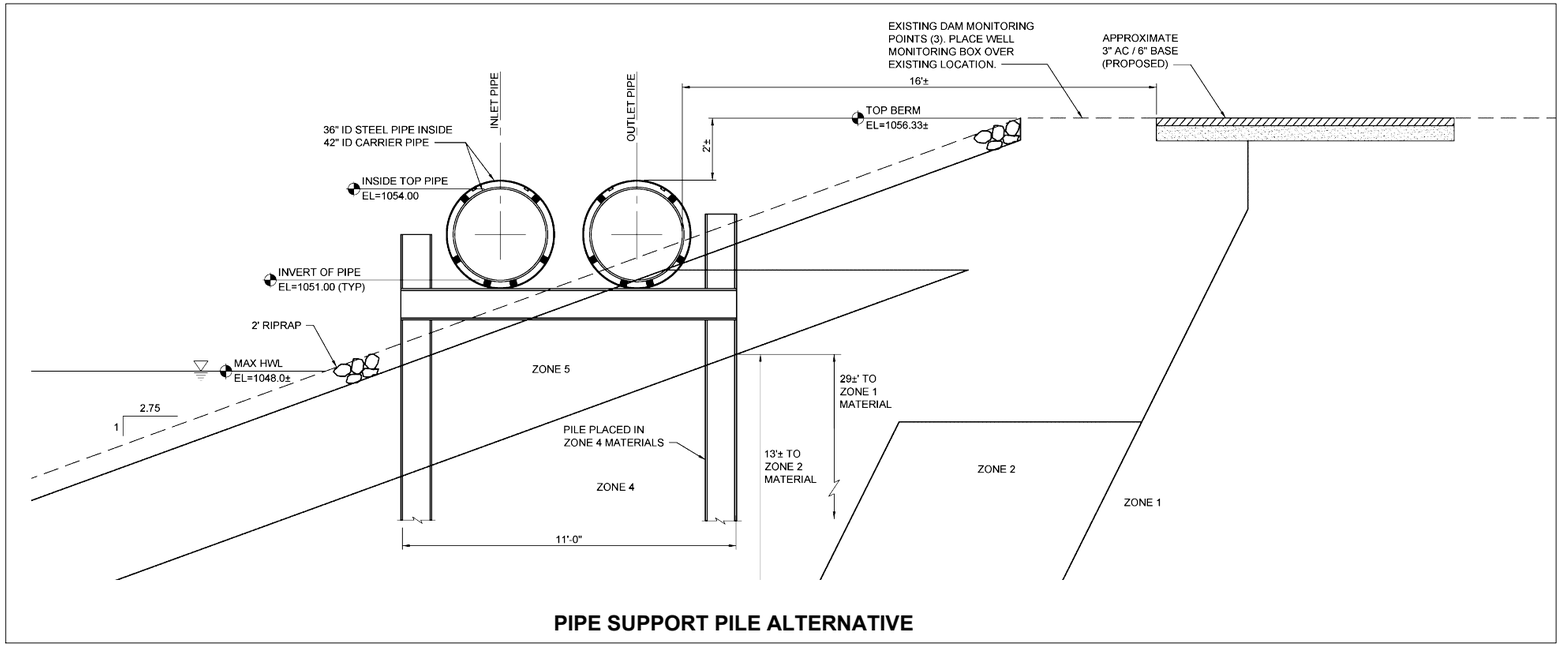
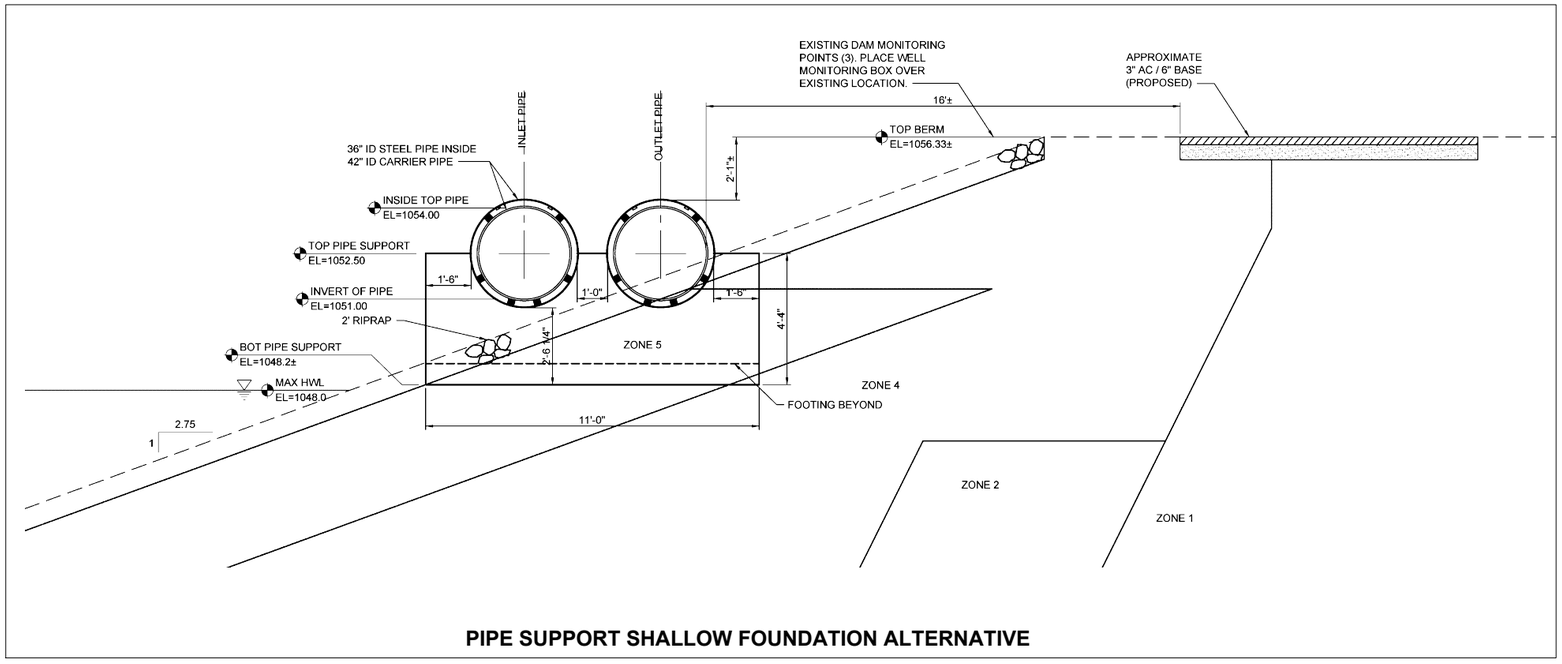


5
0
0 5
Horizontal and Vertical Scales in Feet

PIPE SUPPORT PILE ALTERNATIVE



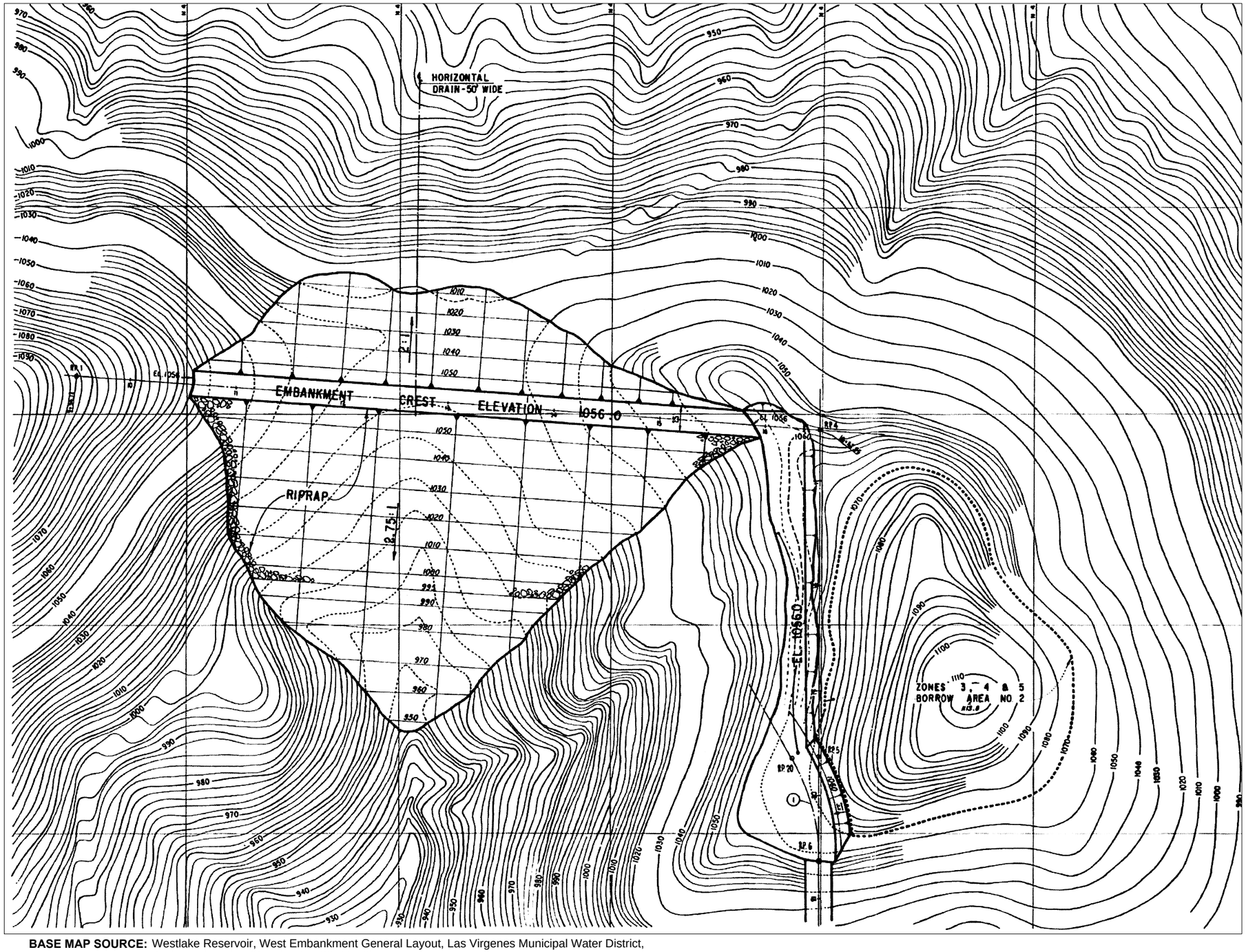
5
0
0 5
Horizontal and Vertical Scales in Feet

PIPE SUPPORT SHALLOW FOUNDATION ALTERNATIVE

SOURCE: Civil Details, West Saddle Dam Pipe Support, Las Virgenes Municipal Water District, City of Westlake, AECOM (Dwg No. C-4, Sht 14 of 40).

PIPELINE SUPPORT SYSTEMS
LVMWD 5MG Water Tank Storage
Thousand Oaks, California

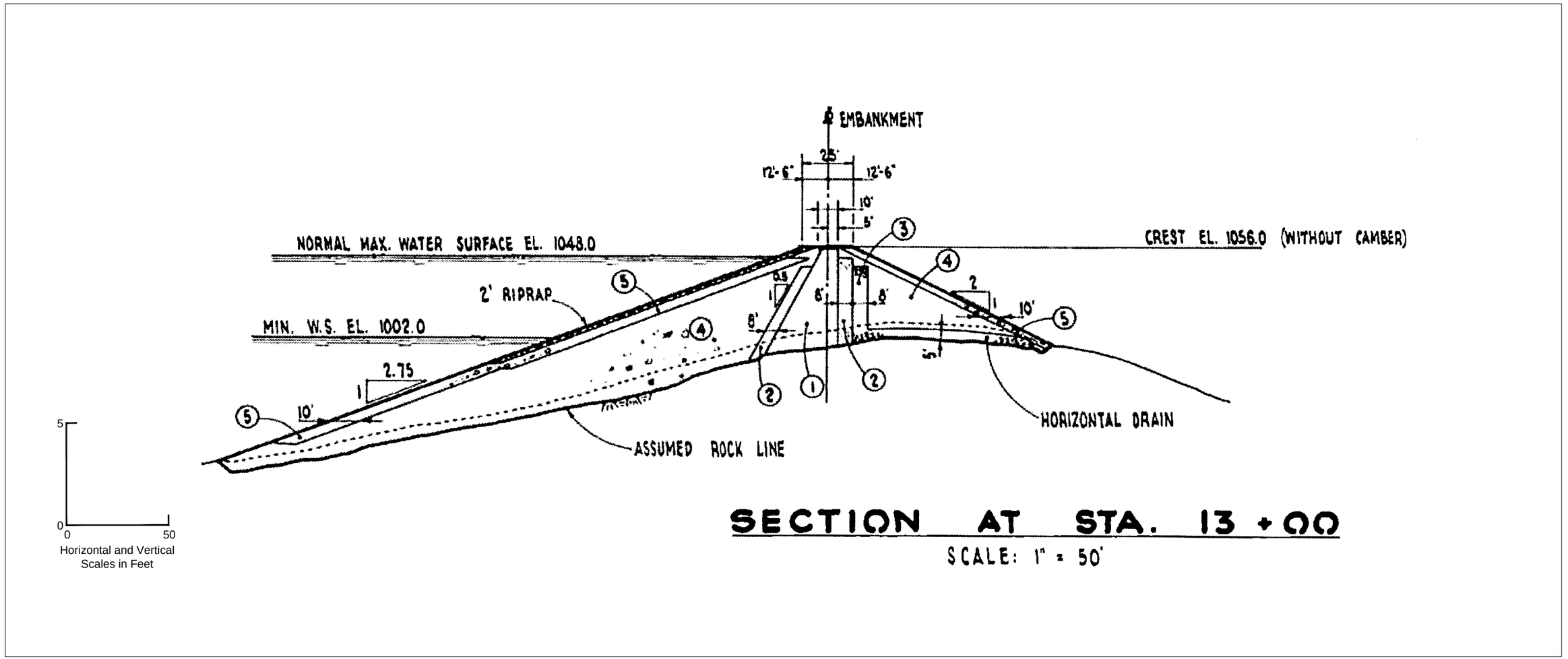
PLATE 2



BASE MAP SOURCE: Westlake Reservoir, West Embankment General Layout, Las Virgenes Municipal Water District, Boyle Engineering (Drawing No. 23, 11-70).

PLAN OF WEST EMBANKMENT DAM
LVMWD 5MG Water Tank Storage
Thousand Oaks, California

PLATE 3



SECTION AT STA. 13 + 00

SCALE: 1" = 50'

BASE MAP SOURCE: Westlake Reservoir, West Embankment Sections, Las Virgenes Municipal Water District, Boyle Engineering (Drawing No. 24, 11-70).

PROFILE OF WEST EMBANKMENT DAM
(STA 13+00)
LVMWD 5MG Water Tank Storage
Thousand Oaks, California

PLATE 4

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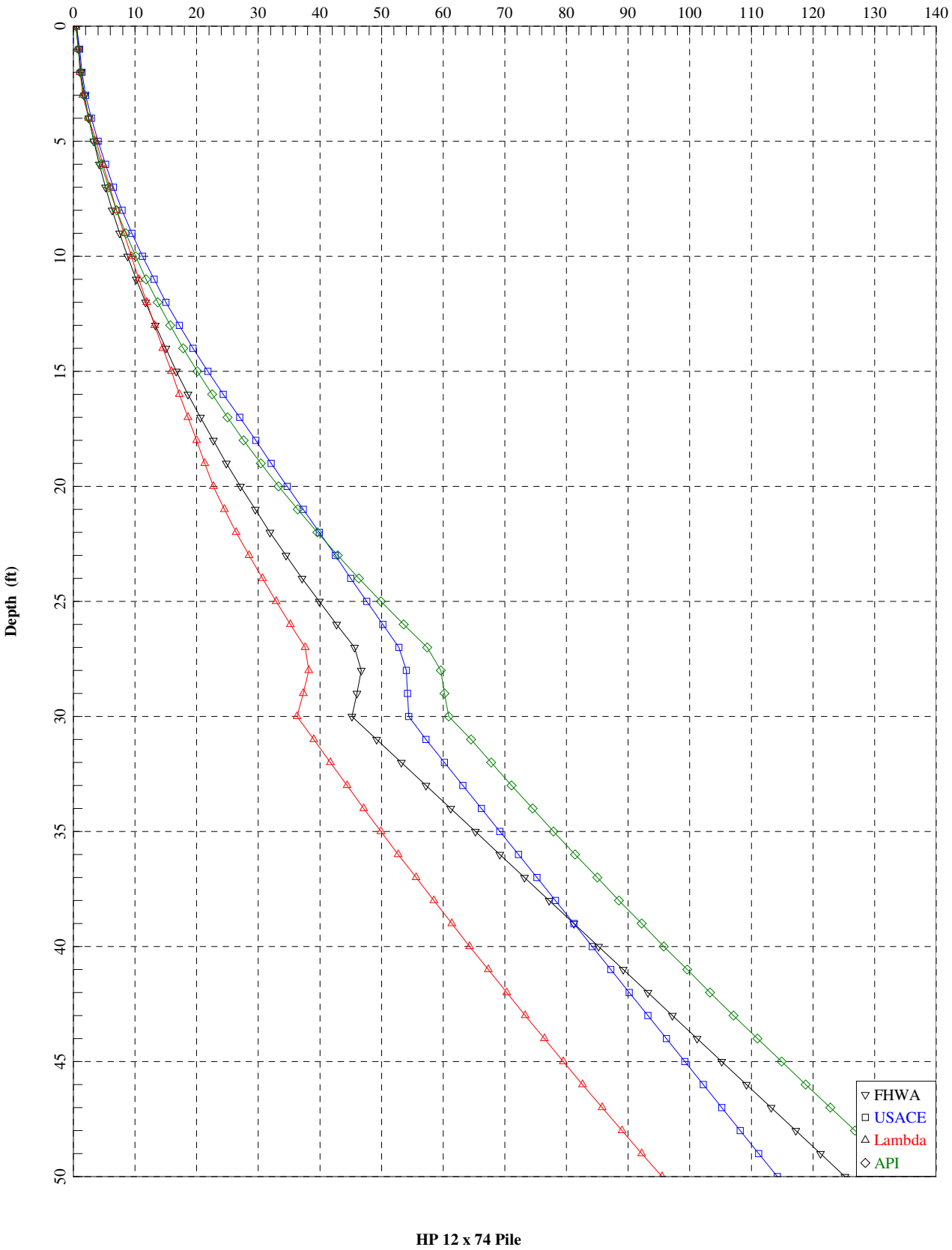
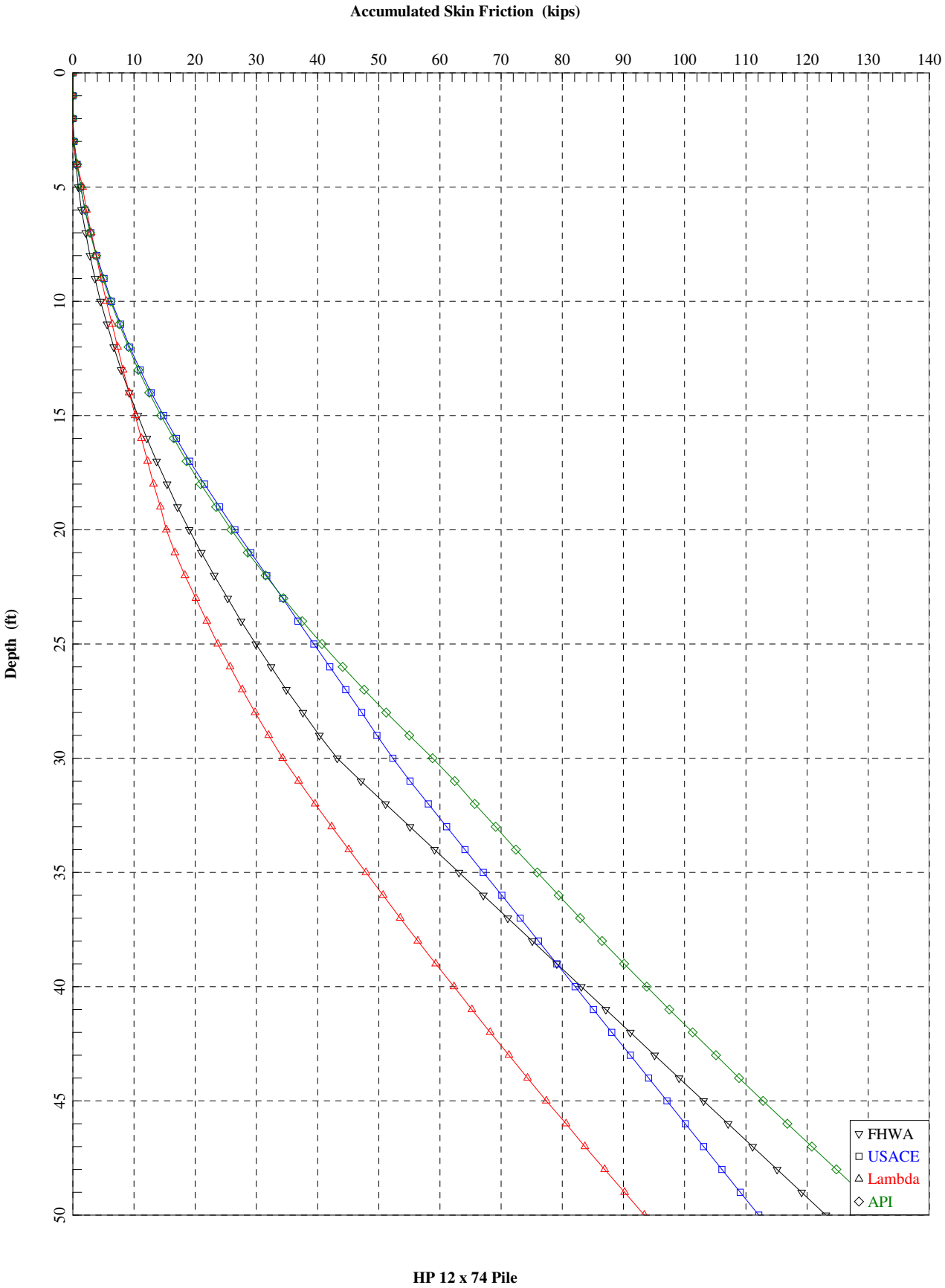
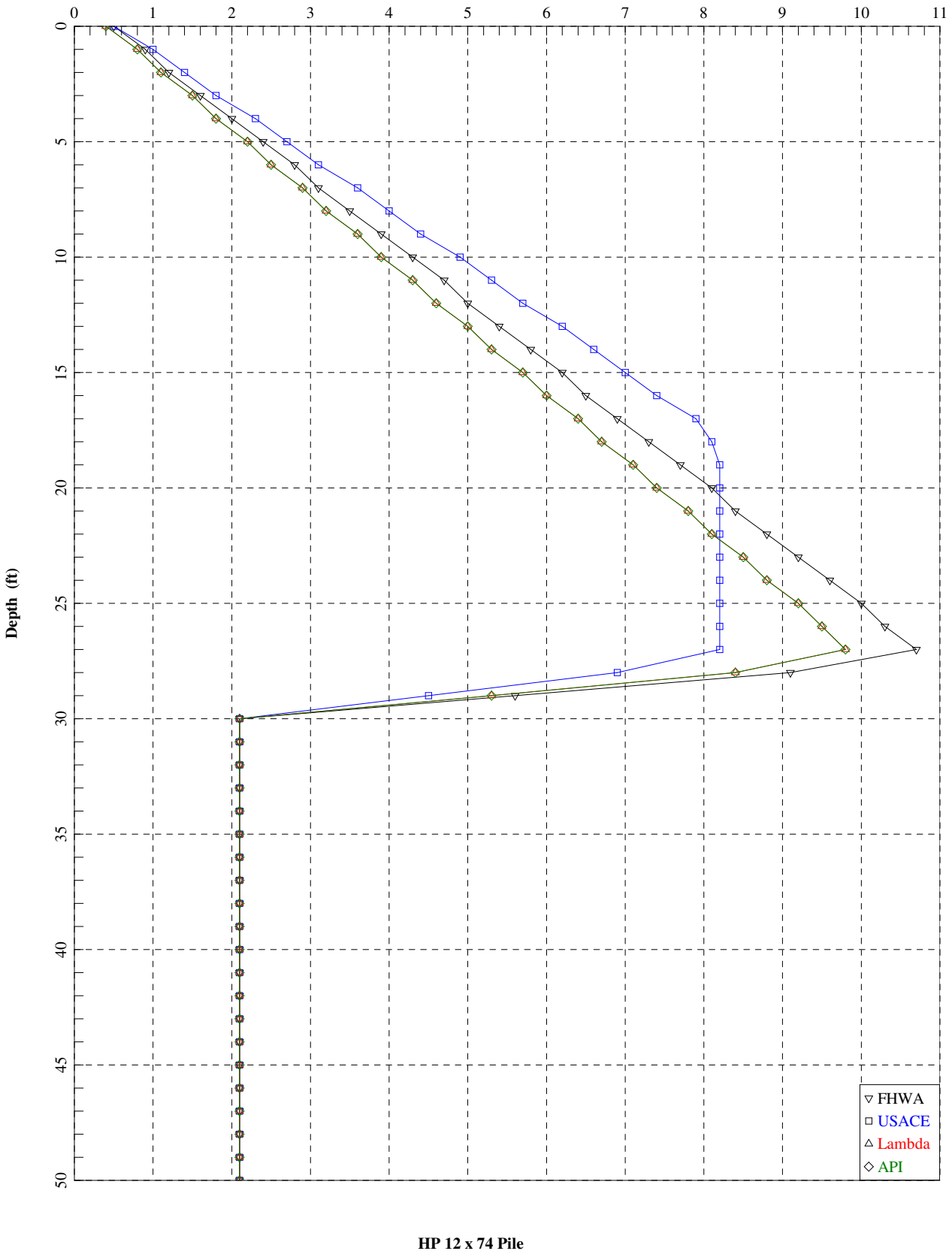
APPENDIX A
AXIAL PILE CALCULATIONS


Total Capacity (kips)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
FHWA
USACE
Lambda
API
HP 12 x 74 Pile


Accumulated Skin Friction (kips)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
FHWA
USACE
Lambda
API
HP 12 x 74 Pile



HP 12 x 74 Pile

1

AXIALLY LOADING PILE ANALYSIS PROGRAM - APILEplus
VERSION 4.0 - (C) COPYRIGHT ENSOFT,INC.,1987-2004.

LVMWD Westlake Reservoir Piles HP 12x74

DESIGNER : GSD

DATE : 2/4/13

PILE PROPERTIES :

PERIMETER OF PILE WITH NONCIRCULAR SECTION	=	48.00 IN.
TIP AREA OF PILE WITH NONCIRCULAR SECTION	=	0.15 SQF
OUTSIDE DIAMETER OF CIRCULAR PILE	=	16.00 IN.
INTERNAL DIAMETER OF CIRCULAR PILE	=	0.00 IN.
PILE LENGTH	=	50.00 FT.
MODULUS OF ELASTICITY	=	0.290E+08 PSI
LENGTH OF ENHANCED END SECTION	=	0.25 FT.
INTERNAL DIAMETER OF ENHANCED END SECTION	=	0.00 IN.

LENGTH OF SURFACE SECTION WITH ZERO SKIN FRICTION = 3.00 FT.
INCREMENT OF PILE LENGTH USED IN COMPUTATION = 1.00 FT.

SOIL INFORMATIONS :

DEPTH FT.	SOIL TYPE	LATERAL EARTH PRESSURE	EFFECTIVE UNIT WEIGHT LB/CF	FRICTION ANGLE DEGREES	BEARING CAPACITY FACTOR
0.00	SAND	1.00	57.00	35.00	40.00
13.00	SAND	1.00	57.00	35.00	40.00
13.00	SAND	1.00	57.00	35.00	40.00
30.00	SAND	1.00	57.00	35.00	40.00
30.00	CLAY	0.00	57.00	0.00	0.00
60.00	CLAY	0.00	57.00	0.00	0.00

MAXIMUM UNIT FRICTION KSF	MAXIMUM UNIT BEARING KSF	UNDISTURB SHEAR STRENGTH KSF	REMOLDED SHEAR STRENGTH KSF	BLOW COUNT	UNIT SKIN FRICTION KSF	UNIT END BEARING KSF
2.00	100.00	0.00	0.00	0.00	0.00	0.00
2.00	100.00	0.00	0.00	0.00	0.00	0.00
2.00	100.00	0.00	0.00	0.00	0.00	0.00
2.00	100.00	0.00	0.00	0.00	0.00	0.00
1.00	100.00	1.50	1.00	0.00	0.00	0.00
1.00	100.00	1.50	1.00	0.00	0.00	0.00

1

****
* COMPUTATION RESULT *
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PILE PENETRATION FT.	FED. HWY. METHOD TOTAL SKIN FRIC KIP	FED. HWY. METHOD END BEARING KIP	FED. HWY. METHOD ULTIM CAPACITY KIP	ARMY CORPS METHOD TOTAL SKIN FRIC KIP	ARMY CORPS METHOD END BEARING KIP	ARMY CORPS METHOD ULTIM CAPACITY KIP	LAMBDA 2 METHOD TOTAL SKIN FRIC KIP	LAMBDA 2 METHOD END BEARING KIP	LAMBDA 2 METHOD ULTIM CAPACITY KIP
0.0	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.4	0.4
1.0	0.0	0.9	0.9	0.0	1.0	1.0	0.0	0.8	0.8
2.0	0.0	1.2	1.2	0.0	1.4	1.4	0.0	1.1	1.1
3.0	0.1	1.6	1.8	0.2	1.8	2.0	0.0	1.5	1.5
4.0	0.5	2.0	2.5	0.7	2.3	2.9	0.7	1.8	2.5
5.0	0.9	2.4	3.3	1.3	2.7	4.0	1.6	2.2	3.7
6.0	1.4	2.8	4.2	2.0	3.1	5.2	2.2	2.5	4.8
7.0	2.1	3.1	5.2	2.9	3.6	6.5	3.0	2.9	5.9
8.0	2.8	3.5	6.3	3.9	4.0	7.9	3.8	3.2	7.0
9.0	3.6	3.9	7.5	5.1	4.4	9.5	4.6	3.6	8.2
10.0	4.5	4.3	8.8	6.3	4.9	11.2	5.5	3.9	9.4
11.0	5.6	4.7	10.2	7.8	5.3	13.1	6.4	4.3	10.6
12.0	6.7	5.0	11.7	9.3	5.7	15.0	7.3	4.6	11.9
13.0	7.9	5.4	13.3	11.0	6.2	17.2	8.2	5.0	13.2
14.0	9.2	5.8	15.0	12.8	6.6	19.4	9.2	5.3	14.5
15.0	10.6	6.2	16.7	14.8	7.0	21.8	10.2	5.7	15.9
16.0	12.1	6.5	18.6	16.9	7.4	24.3	11.2	6.0	17.2
17.0	13.7	6.9	20.6	19.1	7.9	27.0	12.2	6.4	18.6
18.0	15.4	7.3	22.7	21.5	8.1	29.6	13.2	6.7	20.0
19.0	17.1	7.7	24.8	24.0	8.2	32.1	14.3	7.1	21.3
20.0	19.0	8.1	27.1	26.5	8.2	34.7	15.3	7.4	22.7
21.0	21.0	8.4	29.5	29.1	8.2	37.3	16.7	7.8	24.5
22.0	23.1	8.8	31.9	31.7	8.2	39.9	18.3	8.1	26.4
23.0	25.3	9.2	34.5	34.3	8.2	42.5	20.1	8.5	28.5
24.0	27.5	9.6	37.1	36.8	8.2	45.0	21.9	8.8	30.7
25.0	29.9	10.0	39.9	39.4	8.2	47.6	23.7	9.2	32.9
26.0	32.4	10.3	42.7	42.0	8.2	50.2	25.7	9.5	35.2
27.0	34.9	10.7	45.6	44.6	8.2	52.8	27.7	9.8	37.6
28.0	37.6	9.1	46.7	47.2	6.9	54.0	29.8	8.4	38.2
29.0	40.3	5.6	46.0	49.7	4.5	54.2	32.0	5.3	37.3
30.0	43.2	2.1	45.2	52.3	2.1	54.4	34.3	2.1	36.3
31.0	47.1	2.1	49.2	55.1	2.1	57.2	36.9	2.1	39.0
32.0	51.1	2.1	53.2	58.1	2.1	60.2	39.6	2.1	41.7
33.0	55.1	2.1	57.2	61.1	2.1	63.2	42.3	2.1	44.4
34.0	59.1	2.1	61.2	64.1	2.1	66.2	45.1	2.1	47.1
35.0	63.1	2.1	65.2	67.1	2.1	69.2	47.9	2.1	49.9
36.0	67.1	2.1	69.2	70.1	2.1	72.2	50.7	2.1	52.7
37.0	71.1	2.1	73.2	73.1	2.1	75.2	53.5	2.1	55.6
38.0	75.1	2.1	77.2	76.1	2.1	78.2	56.4	2.1	58.5
39.0	79.1	2.1	81.2	79.1	2.1	81.2	59.3	2.1	61.4
40.0	83.1	2.1	85.2	82.1	2.1	84.2	62.3	2.1	64.3
41.0	87.1	2.1	89.2	85.1	2.1	87.2	65.2	2.1	67.3
42.0	91.1	2.1	93.2	88.1	2.1	90.2	68.2	2.1	70.3
43.0	95.1	2.1	97.2	91.1	2.1	93.2	71.3	2.1	73.3
44.0	99.1	2.1	101.2	94.1	2.1	96.2	74.3	2.1	76.4
45.0	103.1	2.1	105.2	97.1	2.1	99.2	77.4	2.1	79.5
46.0	107.1	2.1	109.2	100.1	2.1	102.2	80.6	2.1	82.6

47.0	111.1	2.1	113.2	103.1	2.1	105.2	83.7	2.1	85.8
48.0	115.1	2.1	117.2	106.1	2.1	108.2	86.9	2.1	89.0
49.0	119.1	2.1	121.2	109.1	2.1	111.2	90.2	2.1	92.2
50.0	123.1	2.1	125.2	112.1	2.1	114.2	93.4	2.1	95.5

****
* API RP-2A (1994) *
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PILE PENETRATION FT.	TOTAL SKIN FRICTION KIP	END BEARING KIP	ULTIMATE CAPACITY KIP
0.00	0.0	0.4	0.4
1.00	0.0	0.8	0.8
2.00	0.0	1.1	1.1
3.00	0.2	1.5	1.7
4.00	0.7	1.8	2.5
5.00	1.3	2.2	3.4
6.00	2.0	2.5	4.5
7.00	2.8	2.9	5.7
8.00	3.8	3.2	7.0
9.00	4.9	3.6	8.5
10.00	6.2	3.9	10.1
11.00	7.6	4.3	11.8
12.00	9.1	4.6	13.7
13.00	10.7	5.0	15.7
14.00	12.5	5.3	17.8
15.00	14.4	5.7	20.1
16.00	16.5	6.0	22.5
17.00	18.6	6.4	25.0
18.00	20.9	6.7	27.6
19.00	23.4	7.1	30.4
20.00	25.9	7.4	33.3
21.00	28.6	7.8	36.4
22.00	31.5	8.1	39.6
23.00	34.4	8.5	42.9
24.00	37.5	8.8	46.3
25.00	40.7	9.2	49.9
26.00	44.1	9.5	53.6
27.00	47.6	9.8	57.4
28.00	51.2	8.4	59.6
29.00	55.0	5.3	60.2
30.00	58.8	2.1	60.9
31.00	62.4	2.1	64.5
32.00	65.7	2.1	67.8
33.00	69.1	2.1	71.1
34.00	72.4	2.1	74.5
35.00	75.9	2.1	77.9
36.00	79.4	2.1	81.4
37.00	82.9	2.1	85.0
38.00	86.5	2.1	88.5
39.00	90.1	2.1	92.2
40.00	93.8	2.1	95.8
41.00	97.5	2.1	99.6
42.00	101.3	2.1	103.3
43.00	105.1	2.1	107.1
44.00	108.9	2.1	111.0
45.00	112.8	2.1	114.9
46.00	116.8	2.1	118.8
47.00	120.8	2.1	122.8
48.00	124.8	2.1	126.8

49.00	128.8	2.1	130.8
50.00	132.8	2.1	134.8

AN ASTERISK WILL BE PLACED IN THE END-BEARING COLUMN
IF THE TIP RESISTANCE IS CONTROLLED BY THE FRICTION
OF SOIL PLUG INSIDE AN OPEN-ENDED PIPE PILE.

****
* COMPUTE LOAD-DISTRIBUTION AND LOAD-SETTLEMENT *
* CURVES FOR AXIAL LOADING *
****

T-Z CURVE NO.	NO. OF POINTS	DEPTH TO CURVE FT.	LOAD TRANSFER PSI	PILE MOVEMENT IN.
1	10	0.0000E+00		
			0.0000E+00	0.0000E+00
			0.0000E+00	0.1000E-01
			0.0000E+00	0.2000E-01
			0.0000E+00	0.4000E-01
			0.0000E+00	0.6000E-01
			0.0000E+00	0.8000E-01
			0.0000E+00	0.9000E-01
			0.0000E+00	0.1000E+00
			0.0000E+00	0.5000E+00
			0.0000E+00	0.2000E+01
2	10	0.6525E+01		
			0.0000E+00	0.0000E+00
			0.1090E+00	0.1000E-01
			0.2180E+00	0.2000E-01
			0.4360E+00	0.4000E-01
			0.6541E+00	0.6000E-01
			0.8721E+00	0.8000E-01
			0.9811E+00	0.9000E-01
			0.1090E+01	0.1000E+00
			0.1090E+01	0.5000E+00
			0.1090E+01	0.2000E+01
3	10	0.1296E+02		
			0.0000E+00	0.0000E+00
			0.2096E+00	0.1000E-01
			0.4193E+00	0.2000E-01
			0.8385E+00	0.4000E-01
			0.1258E+01	0.6000E-01
			0.1677E+01	0.8000E-01
			0.1887E+01	0.9000E-01
			0.2096E+01	0.1000E+00
			0.2096E+01	0.5000E+00
			0.2096E+01	0.2000E+01
4	10	0.1300E+02		
			0.0000E+00	0.0000E+00
			0.2264E+00	0.1000E-01
			0.4528E+00	0.2000E-01
			0.9056E+00	0.4000E-01
			0.1358E+01	0.6000E-01
			0.1811E+01	0.8000E-01
			0.2038E+01	0.9000E-01
			0.2264E+01	0.1000E+00
			0.2264E+01	0.5000E+00
			0.2264E+01	0.2000E+01

04.62120197 HP 12x74.apo

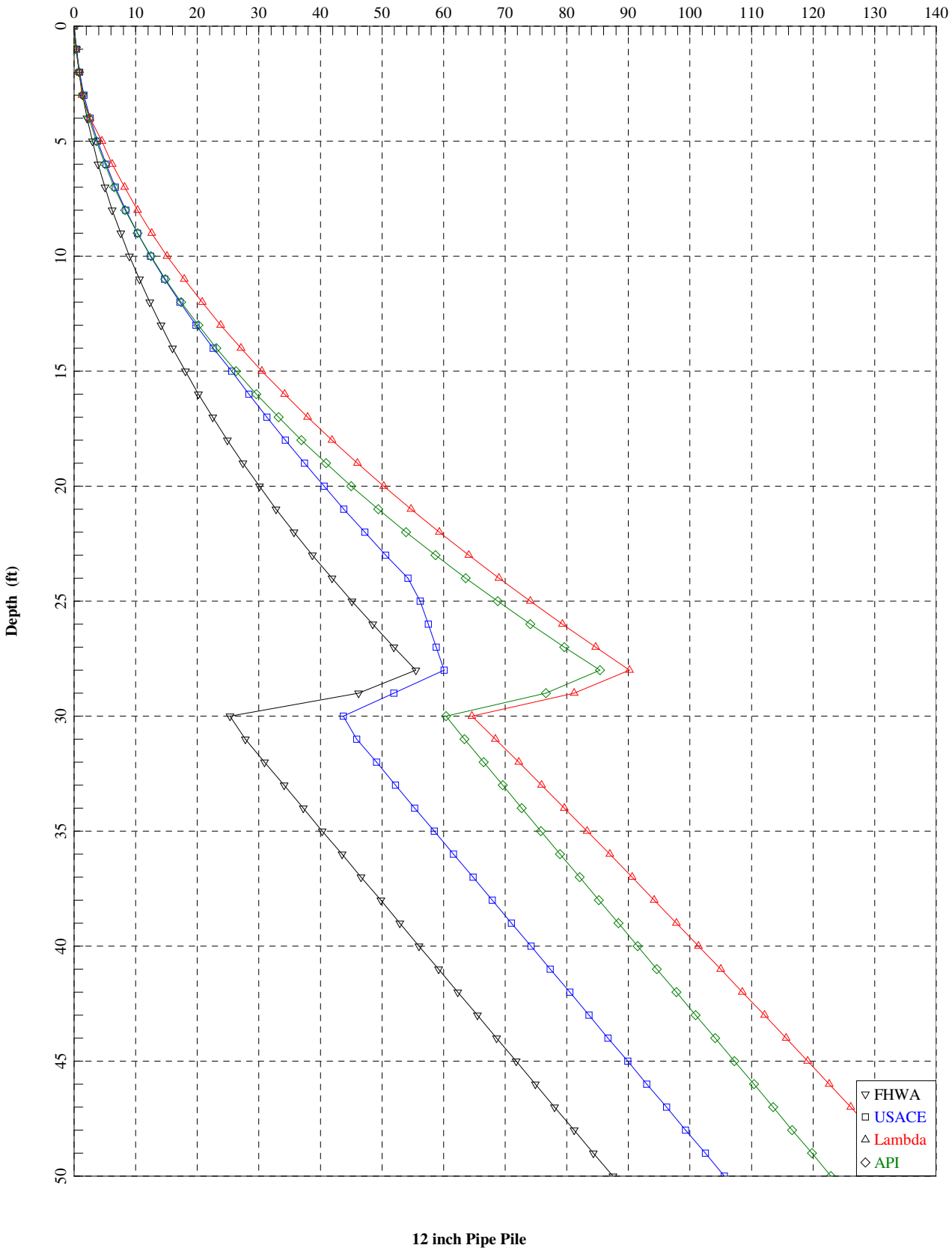
5	10	0.2152E+02		
			0.0000E+00	0.0000E+00
			0.3606E+00	0.1000E-01
			0.7212E+00	0.2000E-01
			0.1442E+01	0.4000E-01
			0.2163E+01	0.6000E-01
			0.2885E+01	0.8000E-01
			0.3245E+01	0.9000E-01
			0.3606E+01	0.1000E+00
			0.3606E+01	0.5000E+00
			0.3606E+01	0.2000E+01
6	10	0.2996E+02		
			0.0000E+00	0.0000E+00
			0.4947E+00	0.1000E-01
			0.9895E+00	0.2000E-01
			0.1979E+01	0.4000E-01
			0.2968E+01	0.6000E-01
			0.3958E+01	0.8000E-01
			0.4453E+01	0.9000E-01
			0.4947E+01	0.1000E+00
			0.4947E+01	0.5000E+00
			0.4947E+01	0.2000E+01
7	10	0.3000E+02		
			0.0000E+00	0.0000E+00
			0.2039E+01	0.2445E-01
			0.3398E+01	0.4736E-01
			0.5097E+01	0.8709E-01
			0.6116E+01	0.1222E+00
			0.6796E+01	0.1528E+00
			0.6116E+01	0.3056E+00
			0.6116E+01	0.4584E+00
			0.6116E+01	0.7639E+00
			0.6116E+01	0.3056E+01
8	10	0.4502E+02		
			0.0000E+00	0.0000E+00
			0.2083E+01	0.2445E-01
			0.3472E+01	0.4736E-01
			0.5208E+01	0.8709E-01
			0.6250E+01	0.1222E+00
			0.6944E+01	0.1528E+00
			0.6250E+01	0.3056E+00
			0.6250E+01	0.4584E+00
			0.6250E+01	0.7639E+00
			0.6250E+01	0.3056E+01
9	10	0.5996E+02		
			0.0000E+00	0.0000E+00
			0.2083E+01	0.2445E-01
			0.3472E+01	0.4736E-01
			0.5208E+01	0.8709E-01
			0.6250E+01	0.1222E+00
			0.6944E+01	0.1528E+00
			0.6250E+01	0.3056E+00
			0.6250E+01	0.4584E+00
			0.6250E+01	0.7639E+00
			0.6250E+01	0.3056E+01

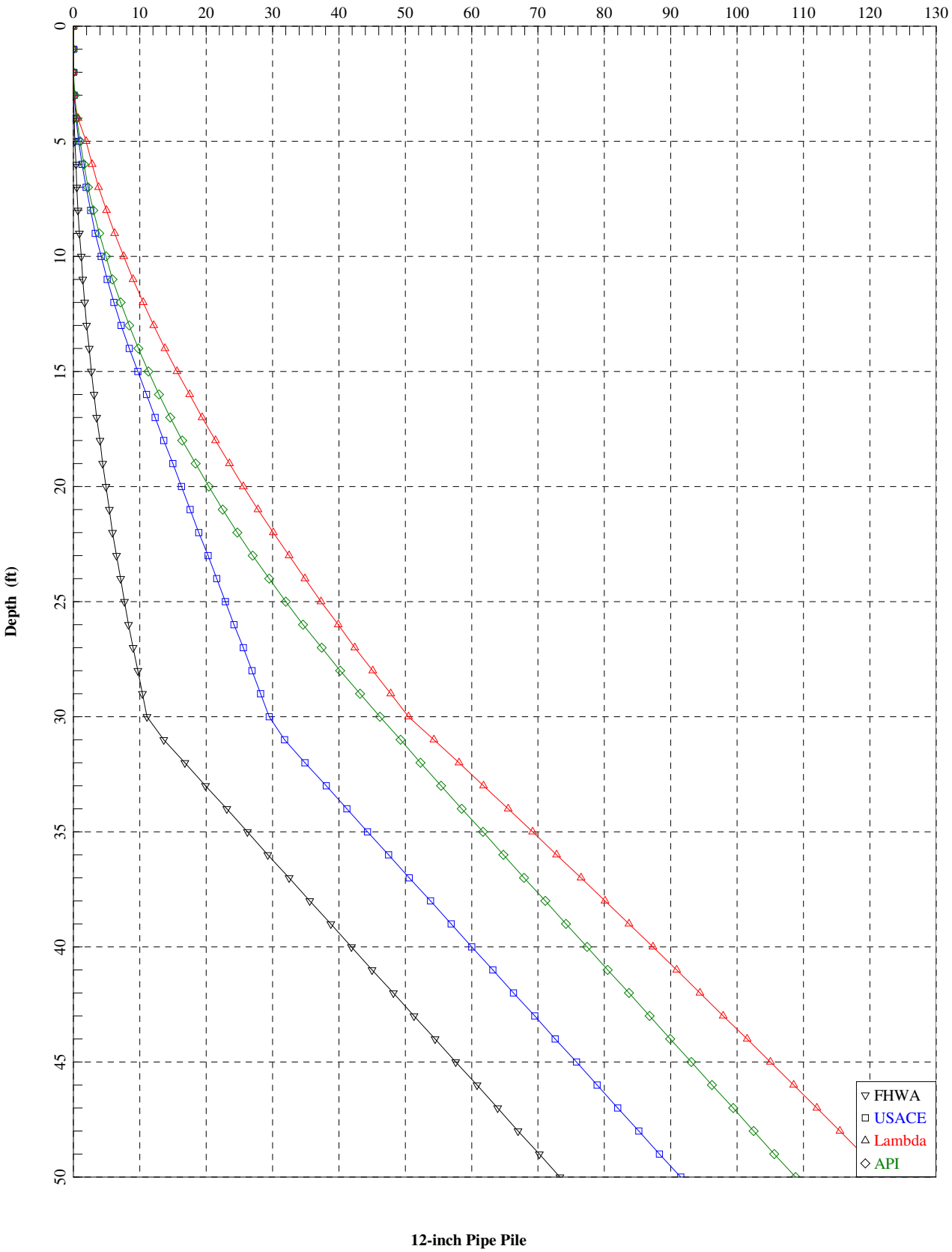
TIP LOAD KIP	TIP MOVEMENT IN.
0.0000E+00	0.0000E+00
0.1289E+00	0.7639E-02

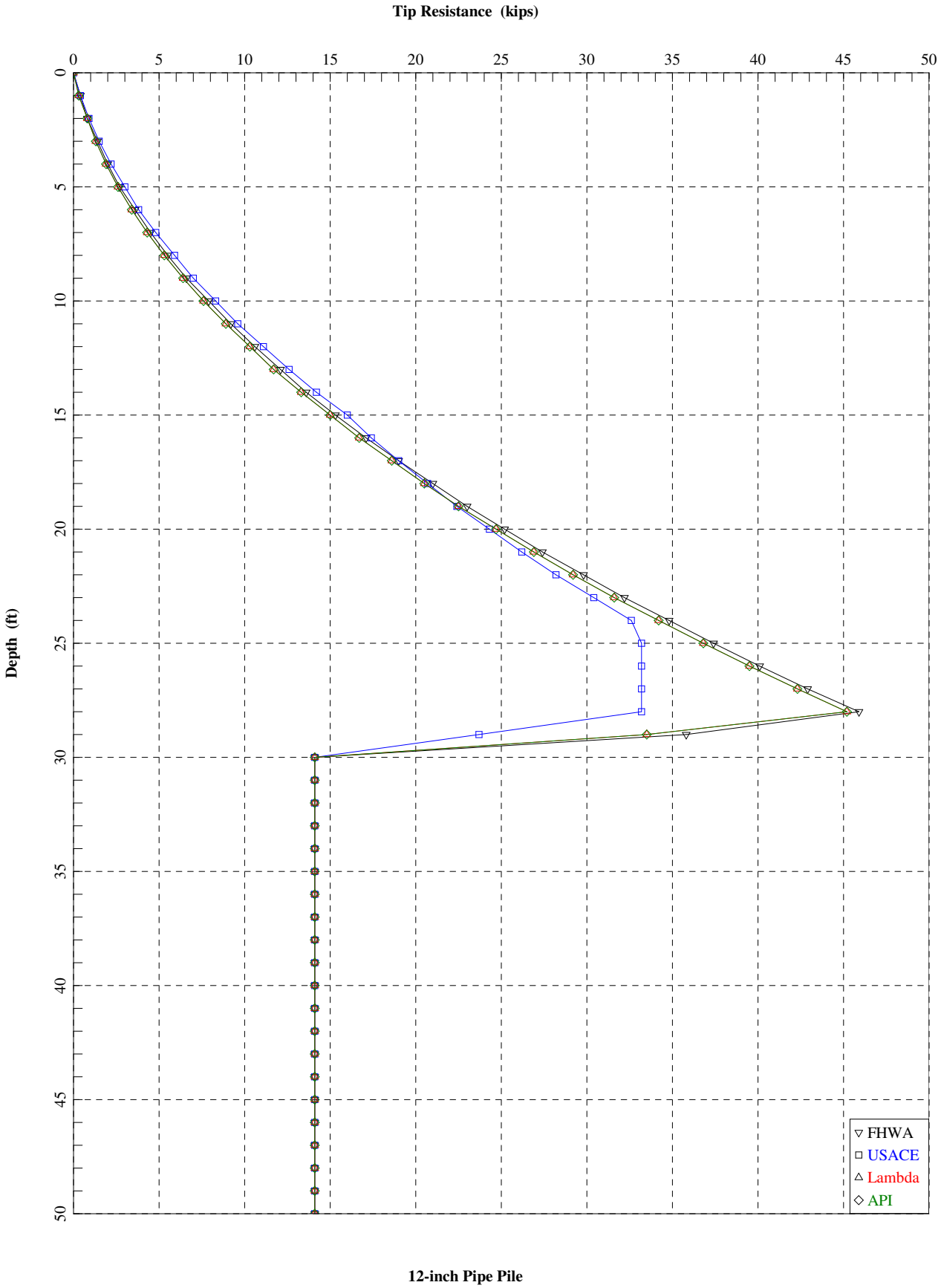
0.2578E+00	0.1528E-01
0.5156E+00	0.3056E-01
0.1031E+01	0.1986E+00
0.1547E+01	0.6417E+00
0.1856E+01	0.1115E+01
0.2063E+01	0.1528E+01
0.2063E+01	0.2292E+01
0.2063E+01	0.3056E+01

LOAD VERSUS SETTLEMENT CURVE

TOP LOAD KIP	TOP MOVEMENT IN.	TIP LOAD KIP	TIP MOVEMENT IN.
0.1657E+00	0.2004E-03	0.1687E-02	0.1000E-03
0.1657E+01	0.2004E-02	0.1687E-01	0.1000E-02
0.8284E+01	0.1002E-01	0.8437E-01	0.5000E-02
0.1662E+02	0.2006E-01	0.1687E+00	0.1000E-01
0.7224E+02	0.9282E-01	0.5753E+00	0.5000E-01
0.1092E+03	0.1659E+00	0.7287E+00	0.1000E+00
0.1159E+03	0.5712E+00	0.1382E+01	0.5000E+00
0.1163E+03	0.1072E+01	0.1781E+01	0.1000E+01
0.1166E+03	0.2072E+01	0.2063E+01	0.2000E+01


Total Capacity (kips)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
FHWA
USACE
Lambda
API
12 inch Pipe Pile


Accumulated Skin Friction (kips)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
FHWA
USACE
Lambda
API
12-inch Pipe Pile


Tip Resistance (kips)
0
5
10
15
20
25
30
35
40
45
50
Depth (ft)
FHWA
USACE
Lambda
API
12-inch Pipe Pile

1

AXIALLY LOADING PILE ANALYSIS PROGRAM - APILEplus
VERSION 4.0 - (C) COPYRIGHT ENSOFT,INC.,1987-2004.

LVMWD Westlake Reservoir Piles 12-inch Closed End

DESIGNER : GSD

DATE : 2/4/13

PILE PROPERTIES :

PERIMETER OF PILE WITH NONCIRCULAR SECTION	=	0.00 IN.
TIP AREA OF PILE WITH NONCIRCULAR SECTION	=	0.00 SQF
OUTSIDE DIAMETER OF CIRCULAR PILE	=	12.00 IN.
INTERNAL DIAMETER OF CIRCULAR PILE	=	11.00 IN.
PILE LENGTH	=	50.00 FT.
MODULUS OF ELASTICITY	=	0.290E+08 PSI

LENGTH OF SURFACE SECTION WITH ZERO SKIN FRICTION	= 3.00 FT.
INCREMENT OF PILE LENGTH USED IN COMPUTATION	= 1.00 FT.

SOIL INFORMATIONS :

DEPTH FT.	SOIL TYPE	LATERAL EARTH PRESSURE	EFFECTIVE UNIT WEIGHT LB/CF	FRICTION ANGLE DEGREES	BEARING CAPACITY FACTOR
0.00	SAND	1.00	57.00	35.00	40.00
13.00	SAND	1.00	57.00	35.00	40.00
13.00	SAND	1.00	57.00	35.00	40.00
30.00	SAND	1.00	57.00	35.00	40.00
30.00	CLAY	0.00	57.00	0.00	0.00
60.00	CLAY	0.00	57.00	0.00	0.00

MAXIMUM UNIT FRICTION KSF	MAXIMUM UNIT BEARING KSF	UNDISTURB SHEAR STRENGTH KSF	REMOLDED SHEAR STRENGTH KSF	BLOW COUNT	UNIT SKIN FRICTION KSF	UNIT END BEARING KSF
2.00	100.00	0.00	0.00	0.00	0.00	0.00
2.00	100.00	0.00	0.00	0.00	0.00	0.00
2.00	100.00	0.00	0.00	0.00	0.00	0.00
2.00	100.00	0.00	0.00	0.00	0.00	0.00
1.00	100.00	2.00	1.00	0.00	0.00	0.00
1.00	100.00	2.00	1.00	0.00	0.00	0.00

1

****
* COMPUTATION RESULT *
****

PILE PENETRATION FT.	FED. HWY. METHOD TOTAL SKIN FRIC KIP	FED. HWY. METHOD END BEARING KIP	FED. HWY. METHOD ULTIM CAPACITY KIP	ARMY CORPS METHOD TOTAL SKIN FRIC KIP	ARMY CORPS METHOD END BEARING KIP	ARMY CORPS METHOD ULTIM CAPACITY KIP	LAMBDA 2 METHOD TOTAL SKIN FRIC KIP	LAMBDA 2 METHOD END BEARING KIP	LAMBDA 2 METHOD ULTIM CAPACITY KIP
0.0	0.0	0.0*	0.0	0.0	0.0*	0.0	0.0	0.0*	0.0
1.0	0.0	0.4*	0.4	0.0	0.4*	0.4	0.0	0.3*	0.3
2.0	0.0	0.8*	0.8	0.0	0.9*	0.9	0.0	0.8*	0.8
3.0	0.0	1.4*	1.4	0.1	1.5*	1.6	0.0	1.3*	1.3
4.0	0.1	2.0*	2.1	0.4	2.2*	2.6	0.7	1.9*	2.6
5.0	0.2	2.7*	3.0	0.8	3.0*	3.8	1.9	2.6*	4.5
6.0	0.4	3.6*	3.9	1.3	3.8*	5.2	2.8	3.4*	6.2
7.0	0.5	4.5*	5.0	1.9	4.8*	6.7	3.8	4.3*	8.2
8.0	0.7	5.5*	6.2	2.6	5.9*	8.4	5.0	5.3*	10.3
9.0	0.9	6.6*	7.6	3.3	7.0*	10.3	6.2	6.4*	12.6
10.0	1.2	7.9*	9.0	4.2	8.3*	12.4	7.6	7.6*	15.1
11.0	1.4	9.2*	10.6	5.1	9.6*	14.7	9.0	8.9*	17.9
12.0	1.7	10.6*	12.3	6.1	11.1*	17.2	10.5	10.3*	20.8
13.0	2.0	12.1*	14.1	7.2	12.6*	19.8	12.1	11.7*	23.8
14.0	2.4	13.6*	16.0	8.4	14.2*	22.6	13.8	13.3*	27.1
15.0	2.7	15.3*	18.1	9.7	16.0*	25.6	15.6	15.0*	30.5
16.0	3.1	17.1*	20.2	11.0	17.4*	28.4	17.5	16.7*	34.2
17.0	3.5	19.0*	22.5	12.3	19.0*	31.3	19.4	18.6*	37.9
18.0	4.0	21.0*	24.9	13.6	20.7*	34.3	21.4	20.5*	41.9
19.0	4.4	23.0*	27.4	15.0	22.4*	37.4	23.5	22.5*	46.0
20.0	4.9	25.2*	30.1	16.3	24.3*	40.6	25.6	24.7*	50.3
21.0	5.4	27.4*	32.8	17.6	26.2*	43.8	27.8	26.9*	54.7
22.0	5.9	29.8*	35.7	18.9	28.2*	47.2	30.1	29.2*	59.3
23.0	6.5	32.2*	38.7	20.3	30.4*	50.6	32.5	31.6*	64.1
24.0	7.1	34.8*	41.9	21.6	32.6*	54.2	34.9	34.2*	69.0
25.0	7.7	37.4*	45.1	22.9	33.2*	56.2	37.3	36.8*	74.1
26.0	8.3	40.1*	48.5	24.2	33.2*	57.5	39.9	39.5*	79.3
27.0	9.0	42.9*	51.9	25.6	33.2*	58.8	42.4	42.3*	84.7
28.0	9.7	45.9*	55.5	26.9	33.2*	60.1	45.1	45.2*	90.2
29.0	10.4	35.8	46.2	28.2	23.7	51.9	47.8	33.5	81.2
30.0	11.1	14.1	25.3	29.5	14.1	43.7	50.5	14.1	64.6
31.0	13.6	14.1	27.8	31.8	14.1	45.9	54.3	14.1	68.4
32.0	16.8	14.1	30.9	34.9	14.1	49.1	58.1	14.1	72.2
33.0	19.9	14.1	34.1	38.1	14.1	52.2	61.8	14.1	75.9
34.0	23.1	14.1	37.2	41.2	14.1	55.3	65.5	14.1	79.6
35.0	26.2	14.1	40.3	44.3	14.1	58.5	69.2	14.1	83.3
36.0	29.3	14.1	43.5	47.5	14.1	61.6	72.8	14.1	87.0
37.0	32.5	14.1	46.6	50.6	14.1	64.8	76.5	14.1	90.6
38.0	35.6	14.1	49.8	53.8	14.1	67.9	80.1	14.1	94.2
39.0	38.8	14.1	52.9	56.9	14.1	71.0	83.7	14.1	97.8
40.0	41.9	14.1	56.0	60.0	14.1	74.2	87.3	14.1	101.4
41.0	45.0	14.1	59.2	63.2	14.1	77.3	90.9	14.1	105.0
42.0	48.2	14.1	62.3	66.3	14.1	80.5	94.4	14.1	108.5
43.0	51.3	14.1	65.5	69.5	14.1	83.6	97.9	14.1	112.1
44.0	54.5	14.1	68.6	72.6	14.1	86.7	101.5	14.1	115.6
45.0	57.6	14.1	71.8	75.8	14.1	89.9	105.0	14.1	119.1
46.0	60.8	14.1	74.9	78.9	14.1	93.0	108.5	14.1	122.6
47.0	63.9	14.1	78.0	82.0	14.1	96.2	112.0	14.1	126.1
48.0	67.0	14.1	81.2	85.2	14.1	99.3	115.5	14.1	129.6

49.0	70.2	14.1	84.3	88.3	14.1	102.5	118.9	14.1	133.1
50.0	73.3	14.1	87.5	91.5	14.1	105.6	122.4	14.1	136.5

****
* API RP-2A (1994) *
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PILE PENETRATION FT.	TOTAL SKIN FRICTION KIP	END BEARING KIP	ULTIMATE CAPACITY KIP
0.00	0.0	0.0*	0.0
1.00	0.0	0.3*	0.3
2.00	0.0	0.8*	0.8
3.00	0.2	1.3*	1.4
4.00	0.5	1.9*	2.4
5.00	1.0	2.6*	3.6
6.00	1.6	3.4*	5.0
7.00	2.2	4.3*	6.5
8.00	3.0	5.3*	8.3
9.00	3.9	6.4*	10.3
10.00	4.9	7.6*	12.5
11.00	5.9	8.9*	14.8
12.00	7.1	10.3*	17.4
13.00	8.4	11.7*	20.2
14.00	9.8	13.3*	23.1
15.00	11.3	15.0*	26.3
16.00	12.9	16.7*	29.6
17.00	14.6	18.6*	33.2
18.00	16.4	20.5*	36.9
19.00	18.4	22.5*	40.9
20.00	20.4	24.7*	45.0
21.00	22.5	26.9*	49.4
22.00	24.7	29.2*	53.9
23.00	27.0	31.6*	58.7
24.00	29.5	34.2*	63.6
25.00	32.0	36.8*	68.8
26.00	34.6	39.5*	74.1
27.00	37.4	42.3*	79.6
28.00	40.2	45.2*	85.4
29.00	43.2	33.5	76.6
30.00	46.2	14.1	60.4
31.00	49.3	14.1	63.4
32.00	52.3	14.1	66.5
33.00	55.4	14.1	69.6
34.00	58.5	14.1	72.7
35.00	61.7	14.1	75.8
36.00	64.8	14.1	78.9
37.00	67.9	14.1	82.1
38.00	71.1	14.1	85.2
39.00	74.2	14.1	88.4
40.00	77.4	14.1	91.5
41.00	80.5	14.1	94.6
42.00	83.7	14.1	97.8
43.00	86.8	14.1	100.9
44.00	89.9	14.1	104.1
45.00	93.1	14.1	107.2
46.00	96.2	14.1	110.4
47.00	99.4	14.1	113.5
48.00	102.5	14.1	116.6
49.00	105.6	14.1	119.8
50.00	108.8	14.1	122.9

AN ASTERISK WILL BE PLACED IN THE END-BEARING COLUMN
IF THE TIP RESISTANCE IS CONTROLLED BY THE FRICTION
OF SOIL PLUG INSIDE AN OPEN-ENDED PIPE PILE.

****
* COMPUTE LOAD-DISTRIBUTION AND LOAD-SETTLEMENT *
* CURVES FOR AXIAL LOADING *
****

T-Z CURVE NO.	NO. OF POINTS	DEPTH TO CURVE FT.	LOAD TRANSFER PSI	PILE MOVEMENT IN.
1	10	0.0000E+00		
			0.0000E+00	0.0000E+00
			0.0000E+00	0.1000E-01
			0.0000E+00	0.2000E-01
			0.0000E+00	0.4000E-01
			0.0000E+00	0.6000E-01
			0.0000E+00	0.8000E-01
			0.0000E+00	0.9000E-01
			0.0000E+00	0.1000E+00
			0.0000E+00	0.5000E+00
			0.0000E+00	0.2000E+01
2	10	0.6525E+01		
			0.0000E+00	0.0000E+00
			0.3575E-01	0.1000E-01
			0.7150E-01	0.2000E-01
			0.1430E+00	0.4000E-01
			0.2145E+00	0.6000E-01
			0.2860E+00	0.8000E-01
			0.3217E+00	0.9000E-01
			0.3575E+00	0.1000E+00
			0.3575E+00	0.5000E+00
			0.3575E+00	0.2000E+01
3	10	0.1296E+02		
			0.0000E+00	0.0000E+00
			0.6875E-01	0.1000E-01
			0.1375E+00	0.2000E-01
			0.2750E+00	0.4000E-01
			0.4125E+00	0.6000E-01
			0.5500E+00	0.8000E-01
			0.6187E+00	0.9000E-01
			0.6875E+00	0.1000E+00
			0.6875E+00	0.5000E+00
			0.6875E+00	0.2000E+01
4	10	0.1300E+02		
			0.0000E+00	0.0000E+00
			0.7425E-01	0.1000E-01
			0.1485E+00	0.2000E-01
			0.2970E+00	0.4000E-01
			0.4455E+00	0.6000E-01
			0.5940E+00	0.8000E-01
			0.6682E+00	0.9000E-01
			0.7425E+00	0.1000E+00
			0.7425E+00	0.5000E+00
			0.7425E+00	0.2000E+01
5	10	0.2152E+02		
			0.0000E+00	0.0000E+00

			0.1182E+00	0.1000E-01
			0.2365E+00	0.2000E-01
			0.4730E+00	0.4000E-01
			0.7095E+00	0.6000E-01
			0.9460E+00	0.8000E-01
			0.1064E+01	0.9000E-01
			0.1182E+01	0.1000E+00
			0.1182E+01	0.5000E+00
			0.1182E+01	0.2000E+01
6	10	0.2996E+02		
			0.0000E+00	0.0000E+00
			0.1622E+00	0.1000E-01
			0.3245E+00	0.2000E-01
			0.6490E+00	0.4000E-01
			0.9735E+00	0.6000E-01
			0.1298E+01	0.8000E-01
			0.1460E+01	0.9000E-01
			0.1622E+01	0.1000E+00
			0.1622E+01	0.5000E+00
			0.1622E+01	0.2000E+01
7	10	0.3000E+02		
			0.0000E+00	0.0000E+00
			0.1664E+01	0.1920E-01
			0.2774E+01	0.3720E-01
			0.4160E+01	0.6840E-01
			0.4992E+01	0.9600E-01
			0.5547E+01	0.1200E+00
			0.4992E+01	0.2400E+00
			0.4992E+01	0.3600E+00
			0.4992E+01	0.6000E+00
			0.4992E+01	0.2400E+01
8	10	0.4502E+02		
			0.0000E+00	0.0000E+00
			0.2083E+01	0.1920E-01
			0.3472E+01	0.3720E-01
			0.5208E+01	0.6840E-01
			0.6250E+01	0.9600E-01
			0.6944E+01	0.1200E+00
			0.6250E+01	0.2400E+00
			0.6250E+01	0.3600E+00
			0.6250E+01	0.6000E+00
			0.6250E+01	0.2400E+01
9	10	0.5996E+02		
			0.0000E+00	0.0000E+00
			0.2083E+01	0.1920E-01
			0.3472E+01	0.3720E-01
			0.5208E+01	0.6840E-01
			0.6250E+01	0.9600E-01
			0.6944E+01	0.1200E+00
			0.6250E+01	0.2400E+00
			0.6250E+01	0.3600E+00
			0.6250E+01	0.6000E+00
			0.6250E+01	0.2400E+01

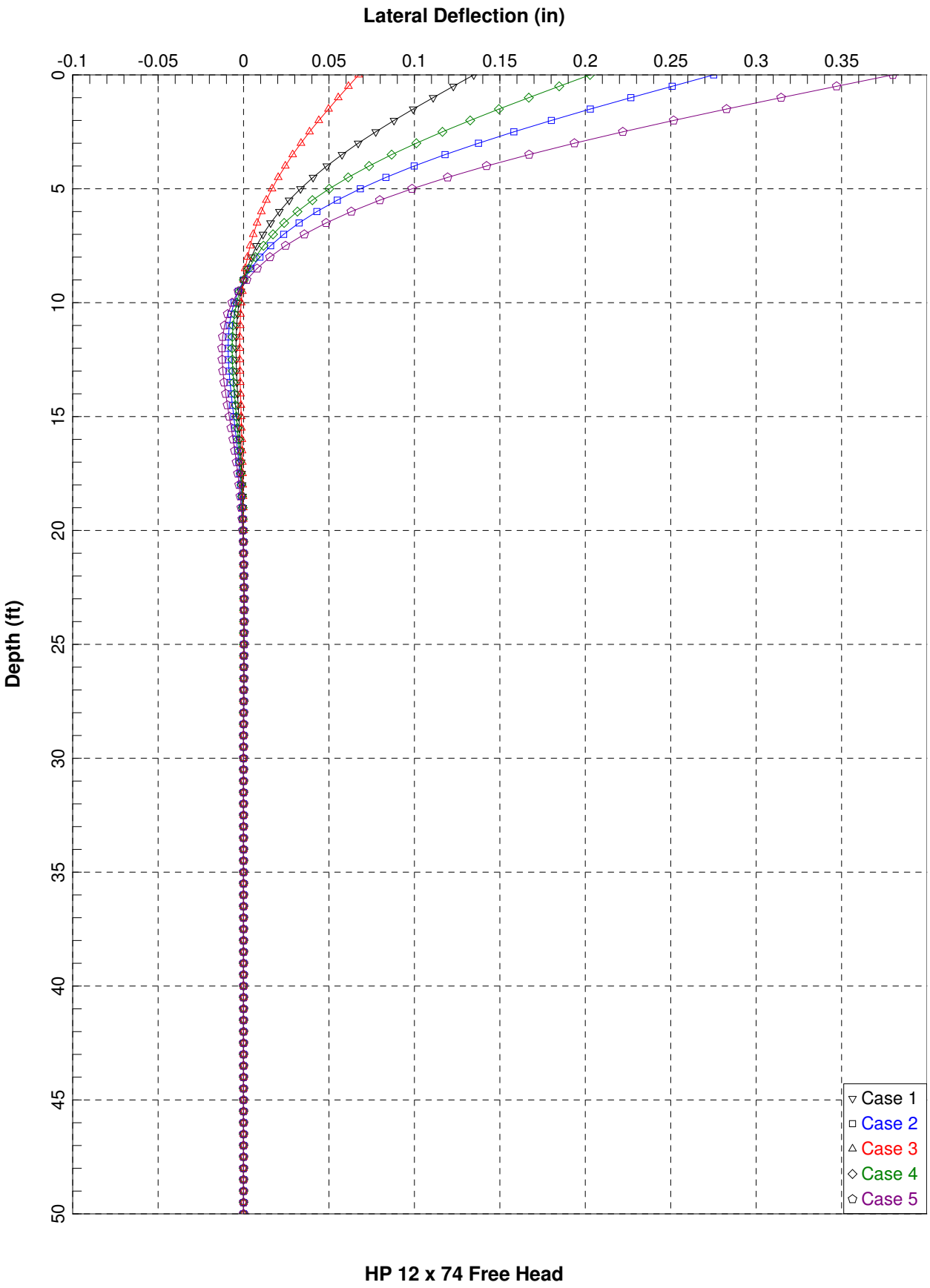
TIP LOAD KIP	TIP MOVEMENT IN.
0.0000E+00	0.0000E+00
0.8836E+00	0.6000E-02
0.1767E+01	0.1200E-01
0.3534E+01	0.2400E-01

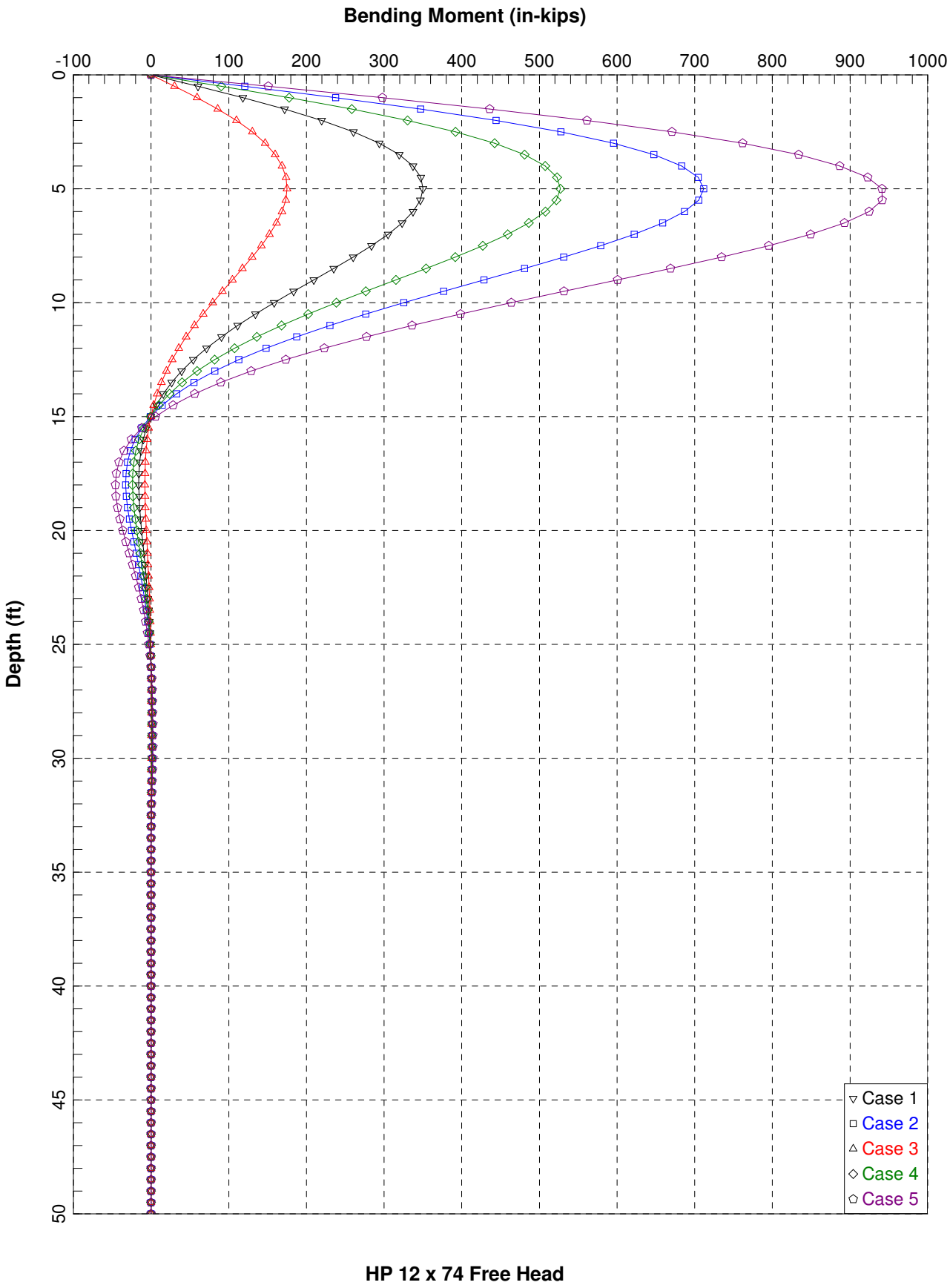
0.7069E+01	0.1560E+00
0.1060E+02	0.5040E+00
0.1272E+02	0.8760E+00
0.1414E+02	0.1200E+01
0.1414E+02	0.1800E+01
0.1414E+02	0.2400E+01

LOAD VERSUS SETTLEMENT CURVE

TOP LOAD KIP	TOP MOVEMENT IN.	TIP LOAD KIP	TIP MOVEMENT IN.
0.1300E+00	0.2145E-03	0.1473E-01	0.1000E-03
0.1300E+01	0.2145E-02	0.1473E+00	0.1000E-02
0.6499E+01	0.1072E-01	0.7363E+00	0.5000E-02
0.1303E+02	0.2147E-01	0.1473E+01	0.1000E-01
0.4827E+02	0.9173E-01	0.4230E+01	0.5000E-01
0.7057E+02	0.1613E+00	0.5569E+01	0.1000E+00
0.7340E+02	0.5652E+00	0.1056E+02	0.5000E+00
0.7610E+02	0.1068E+01	0.1326E+02	0.1000E+01
0.7697E+02	0.2069E+01	0.1414E+02	0.2000E+01

APPENDIX B
LATERAL PILE CALCULATIONS


Lateral Deflection (in)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
HP 12 x 74 Free Head


Bending Moment (in-kips)
-100
0
100
200
300
400
500
600
700
800
900
1000
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
HP 12 x 74 Free Head

LPILE Plus for Windows, Version 5.0 (5.0.39)

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

This program is licensed to:

greg denlinger
Fugro West

Path to file locations: O:\Management\04_2012\04_6212_0197_AECOM_LVWMD 5MG Reservoir\03_ENGINEERING\Preliminary Pile Calcs\
Name of input data file: LVMWD Westlake Reservoir HP 12x74.lpd
Name of output file: LVMWD Westlake Reservoir HP 12x74.lpo
Name of plot output file: LVMWD Westlake Reservoir HP 12x74.lpp
Name of runtime file: LVMWD Westlake Reservoir HP 12x74.lpr

Time and Date of Analysis

Date: February 8, 2013 Time: 15:49:55

Problem Title

LVMWD Westlake Reservoir HP 12x74

Program Options

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 1:
- Computation of Lateral Pile Response Using User-specified Constant EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 100

- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 600.00 in

Depth of ground surface below top of pile = .00 in

Slope angle of ground surface = -25.00 deg.

Structural properties of pile defined using 2 points

Point	Depth X in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	12.00000000	569.0000	22.0000	29000000.
2	600.0000	12.00000000	569.0000	22.0000	29000000.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by Reese et al., 1974
Distance from top of pile to top of layer = .000 in
Distance from top of pile to bottom of layer = 360.000 in
p-y subgrade modulus k for top of soil layer = 90.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 90.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 360.000 in
Distance from top of pile to bottom of layer = 700.000 in

(Depth of lowest layer extends 100.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	.00	.03300
2	360.00	.03300
3	360.00	.03300
4	700.00	.03300

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	.000	.00000	35.00	------	------
2	360.000	.00000	35.00	------	------
3	360.000	14.00000	.00	.01000	.0
4	700.000	14.00000	.00	.01000	.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Loading Type

Cyclic loading criteria was used for computation of p-y curves.

Number of cycles of loading = 10.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 10000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 20000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 5000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 15000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 25000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 10000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth X	Deflect. y	Moment M	Shear V	Slope S	Total Stress	Soil Res. p	Es*h F/L
in	in	lbs-in	lbs	Rad.	lbs/in**2	lbs/in	lbs/in
0.000	.134759	1.3994E-07	10000.0000	-.0019986	1136.3636	0.0000	0.0000
6.000	.122767	60299.7830	9801.1168	-.0019876	1772.2137	-66.2944	3240.0000
12.000	.110908	118210.	9242.8927	-.0019551	2382.8629	-119.7803	6480.0000
18.000	.099306	171801.	8400.9258	-.0019024	2947.9739	-160.8754	9720.0000
24.000	.088079	219592.	7347.5494	-.0018313	3451.9156	-190.2501	12960.0000
30.000	.077331	260521.	6150.4200	-.0017440	3883.5096	-208.7931	16200.0000
36.000	.067151	293920.	4871.3314	-.0016432	4235.6931	-217.5698	19440.0000
42.000	.057613	319470.	3565.2928	-.0015316	4505.1151	-217.7764	22680.0000

48.000	.048771	337163.	2279.8856	-.0014123	4691.6826	-210.6926	25920.0000
54.000	.040666	347252.	1054.9025	-.0012878	4798.0744	-197.6351	29160.0000
60.000	.033317	350208.	-77.7454	-.0011610	4829.2416	-179.9143	32400.0000
66.000	.026733	346668.	-1093.8757	-.0010343	4791.9095	-158.7958	35640.0000
72.000	.020905	337392.	-1976.6655	-.0009100	4694.0970	-135.4675	38880.0000
78.000	.015814	323221.	-2716.1050	-.0007899	4544.6653	-111.0123	42120.0000
84.000	.011427	305035.	-3308.3096	-.0006756	4352.9058	-86.3892	45360.0000
90.000	.007706	283724.	-3754.7342	-.0005686	4128.1764	-62.4190	48600.0000
96.000	.004604	260149.	-4061.3258	-.0004697	3879.5888	-39.7782	51840.0000
102.000	.002069	235129.	-4237.6523	-.0003797	3615.7512	-18.9973	55080.0000
108.000	4.79E-05	209411.	-4296.0402	-.0002989	3344.5667	-.4652946	58320.0000
114.000	-.001517	183666.	-4250.7485	-.0002274	3073.0852	15.5625	61560.0000
120.000	-.002681	158470.	-4117.2030	-.0001652	2807.4058	28.9526	64800.0000
126.000	-.003499	134309.	-3911.3074	-.0001120	2552.6260	39.6792	68040.0000
132.000	-.004024	111568.	-3648.8443	-6.7255E-05	2312.8318	47.8085	71280.0000
138.000	-.004306	90542.9255	-3344.9733	-3.0509E-05	2091.1221	53.4818	74520.0000
144.000	-.004390	71437.8658	-3013.8293	-1.0601E-06	1889.6627	56.8995	77760.0000
150.000	-.004319	54377.2922	-2668.2182	2.1814E-05	1709.7621	58.3042	81000.0000
156.000	-.004129	39412.7028	-2319.4080	3.8866E-05	1551.9633	57.9659	84240.0000
162.000	-.003852	26532.7365	-1977.0046	5.0855E-05	1416.1464	56.1686	87480.0000
168.000	-.003518	15673.3914	-1648.9058	5.8528E-05	1301.6367	53.1977	90720.0000
174.000	-.003150	6728.3081	-1341.3212	6.2601E-05	1207.3124	49.3305	93960.0000
180.000	-.002767	-441.2431	-1058.8460	6.3744E-05	1141.0165	44.8278	97200.0000
186.000	-.002385	-5996.9677	-804.5794	6.2574E-05	1199.6006	39.9277	100440.
192.000	-.002016	-10114.9684	-580.2731	5.9644E-05	1243.0241	34.8411	103680.
198.000	-.001669	-12978.1386	-386.5020	5.5446E-05	1273.2157	29.7493	106920.
204.000	-.001351	-14769.6263	-222.8458	5.0401E-05	1292.1066	24.8028	110160.
210.000	-.001065	-15667.4081	-88.0736	4.4868E-05	1301.5736	20.1213	113400.
216.000	-.000813	-15839.9693	19.6755	3.9139E-05	1303.3932	15.7951	116640.
222.000	-.000595	-15443.0441	102.7218	3.3452E-05	1299.2077	11.8870	119880.
228.000	-.000411	-14617.3435	163.6890	2.7987E-05	1290.5008	8.4354	123120.
234.000	-.000259	-13487.1716	205.3656	2.2877E-05	1278.5834	5.4568	

126360.						
240.000	-.000137	-12159.8195	230.5849	1.8214E-05	1264.5867	2.9496
129600.						
246.000	-4.05E-05	-10725.6175	242.1262	1.4053E-05	1249.4633	.8974709
132840.						
252.000	3.21E-05	-9258.5215	242.6355	1.0420E-05	1233.9930	-.7276831
136080.						
258.000	8.45E-05	-7817.1172	234.5658	7.3158E-06	1218.7937	-1.9622
139320.						
264.000	.000120	-6445.9272	220.1344	4.7226E-06	1204.3347	-2.8482
142560.						
270.000	.000141	-5176.9209	201.2979	2.6095E-06	1190.9533	-3.4306
145800.						
276.000	.000151	-4031.1350	179.7395	9.3542E-07	1178.8712	-3.7555
149040.						
282.000	.000152	-3020.3275	156.8690	-3.4658E-07	1168.2124	-3.8680
152280.						
288.000	.000147	-2148.6032	133.8320	-1.2863E-06	1159.0203	-3.8110
155520.						
294.000	.000137	-1413.9574	111.5266	-1.9340E-06	1151.2736	-3.6242
158760.						
300.000	.000124	-809.7040	90.6246	-2.3383E-06	1144.9018	-3.3432
162000.						
306.000	.000109	-325.7602	71.5972	-2.5447E-06	1139.7987	-2.9993
165240.						
312.000	9.33E-05	50.2260	54.7410	-2.5948E-06	1136.8933	-2.6194
168480.						
318.000	7.78E-05	331.9107	40.2055	-2.5254E-06	1139.8636	-2.2258
171720.						
324.000	6.30E-05	533.4498	28.0188	-2.3680E-06	1141.9888	-1.8365
174960.						
330.000	4.94E-05	668.8465	18.1120	-2.1494E-06	1143.4165	-1.4658
178200.						
336.000	3.72E-05	751.4383	10.3411	-1.8912E-06	1144.2874	-1.1245
181440.						
342.000	2.67E-05	793.5069	4.5059	-1.6103E-06	1144.7310	-.8205462
184680.						
348.000	1.79E-05	805.9925	.3659764	-1.3195E-06	1144.8627	-.5594358
187920.						
354.000	1.08E-05	798.2945	-2.3469	-1.0279E-06	1144.7815	-.3448484
191160.						
360.000	5.53E-06	778.1384	-12.1661	-7.4127E-07	1144.5690	-2.9282
3178588.						
366.000	1.93E-06	652.5233	-24.0160	-4.8116E-07	1143.2444	-1.0217
3178588.						
372.000	-2.47E-07	490.0903	-26.6894	-2.7343E-07	1141.5315	.1306071
3178588.						
378.000	-1.35E-06	332.3325	-24.1481	-1.2391E-07	1139.8680	.7165060
3178588.						
384.000	-1.73E-06	200.3508	-19.2436	-2.7061E-08	1138.4763	.9183015
3178588.						
390.000	-1.68E-06	101.4170	-13.8231	2.7803E-08	1137.4331	.8885354
3178588.						
396.000	-1.40E-06	34.4650	-8.9329	5.2507E-08	1136.7271	.7415537
3178588.						
402.000	-1.05E-06	-5.7930	-5.0440	5.7720E-08	1136.4247	.5547379
3178588.						
408.000	-7.07E-07	-26.0802	-2.2559	5.1925E-08	1136.6386	.3746177
3178588.						
414.000	-4.24E-07	-32.8796	-.4581416	4.1206E-08	1136.7103	.2246404
3178588.						
420.000	-2.13E-07	-31.5902	.5537737	2.9485E-08	1136.6967	.1126647
3178588.						

426.000	-7.02E-08	-26.2432	1.0034	1.8970E-08	1136.6404	.0372003	3178588.
432.000	1.50E-08	-19.5555	1.0912	1.0644E-08	1136.5698	-.0079327	3178588.
438.000	5.75E-08	-13.1523	.9759823	4.6972E-09	1136.5023	-.0304638	3178588.
444.000	7.13E-08	-7.8451	.7712092	8.7976E-10	1136.4464	-.0377939	3178588.
450.000	6.81E-08	-3.8981	.5496576	-1.2552E-09	1136.4047	-.0360567	3178588.
456.000	5.63E-08	-1.2488	.3520451	-2.1910E-09	1136.3768	-.0298142	3178588.
462.000	4.18E-08	.3271466	.1962177	-2.3585E-09	1136.3671	-.0221283	3178588.
468.000	2.80E-08	1.1065	.0853711	-2.0979E-09	1136.3753	-.0148205	3178588.
474.000	1.66E-08	1.3522	.0145345	-1.6509E-09	1136.3779	-.0087917	3178588.
480.000	8.17E-09	1.2814	-.0248173	-1.1721E-09	1136.3771	-.0043256	3178588.
486.000	2.53E-09	1.0548	-.0418161	-7.4733E-10	1136.3748	-.0013406	3178588.
492.000	-8.03E-10	.7798284	-.0445621	-4.1379E-10	1136.3719	.0004253	3178588.
498.000	-2.43E-09	.5201520	-.0394165	-1.7744E-10	1136.3691	.0012899	3178588.
504.000	-2.93E-09	.3068837	-.0308868	-2.7082E-11	1136.3669	.0015533	3178588.
510.000	-2.76E-09	.1495186	-.0218406	5.5895E-11	1136.3652	.0014621	3178588.
516.000	-2.26E-09	.0447800	-.0138604	9.1220E-11	1136.3641	.0011980	3178588.
522.000	-1.67E-09	-.0168333	-.0076199	9.6301E-11	1136.3638	.0008822	3178588.
528.000	-1.11E-09	-.0466875	-.0032160	8.4752E-11	1136.3641	.0005858	3178588.
534.000	-6.48E-10	-.0554505	-.0004284	6.6183E-11	1136.3642	.0003434	3178588.
540.000	-3.12E-10	-.0518487	.0010969	4.6675E-11	1136.3642	.0001651	3178588.
546.000	-8.81E-11	-.0423020	.0017320	2.9558E-11	1136.3641	4.6661E-05	3178588.
552.000	4.31E-11	-.0310731	.0018035	1.6218E-11	1136.3640	-2.2845E-05	3178588.
558.000	1.07E-10	-.0206650	.0015656	6.8114E-12	1136.3639	-5.6438E-05	3178588.
564.000	1.25E-10	-.0122875	.0011979	8.2036E-13	1136.3638	-6.6146E-05	3178588.
570.000	1.16E-10	-.0062906	.0008145	-2.5573E-12	1136.3637	-6.1653E-05	3178588.
576.000	9.42E-11	-.0025128	.0004799	-4.1578E-12	1136.3637	-4.9889E-05	3178588.
582.000	6.65E-11	-.0005309	.0002245	-4.7111E-12	1136.3636	-3.5221E-05	3178588.
588.000	3.76E-11	.0001831	5.9055E-05	-4.7744E-12	1136.3636	-1.9940E-05	3178588.
594.000	9.19E-12	.0001792	-1.5372E-05	-4.7085E-12	1136.3636	-4.8695E-06	3178588.
600.000	-1.89E-11	0.0000	0.0000	-4.6760E-12	1136.3636	9.9935E-06	1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	.13475874 in
Computed slope at pile head	=	-.00199855
Maximum bending moment	=	350207.92656 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	60.00000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 20000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth	Deflect.	Moment	Shear	Slope	Total	Soil Res. Es*h
X	y	M	V	S	Stress	p
in	in	lbs-in	lbs	Rad.	lbs/in**2	lbs/in	lbs/in
0.000	.275185	-2.0355E-07	20000.0000	-.0040695	1136.3636	0.0000	0.0000
6.000	.250768	120610.	19707.5682	-.0040476	2408.1783	-97.4773	2332.2854
12.000	.226615	237705.	18759.0252	-.0039824	3642.9199	-218.7038	5790.5452
18.000	.202980	346913.	17116.4335	-.0038761	4794.5019	-328.8268	9720.0000
24.000	.180101	444265.	14962.8974	-.0037323	5821.0574	-389.0186	12960.0000
30.000	.158192	527588.	12514.4854	-.0035556	6699.6807	-427.1188	16200.0000
36.000	.137434	595506.	9897.2697	-.0033514	7415.8606	-445.2865	19440.0000
42.000	.117975	647361.	7223.5706	-.0031254	7962.6613	-445.9465	22680.0000
48.000	.099929	683126.	4700.6610	-.0028836	8339.8024	-395.0233	23718.2908
54.000	.083373	704634.	2300.0176	-.0026312	8566.5945	-405.1911	29160.0000
60.000	.068354	711516.	-22.8878	-.0023738	8639.1653	-369.1107	32400.0000
66.000	.054887	705071.	-2108.3116	-.0021162	8571.2076	-326.0306	35640.0000
72.000	.042959	686851.	-3921.5265	-.0018632	8379.0788	-278.3744	38880.0000

78.000	.032529	658572.	-5441.7152	-.0016186	8080.8804	-228.3551	42120.0000
84.000	.023536	622036.	-6660.5823	-.0013857	7695.6165	-177.9339	45360.0000
90.000	.015900	579060.	-7580.7616	-.0011674	7242.4488	-128.7926	48600.0000
96.000	.009528	531417.	-8214.0982	-.0009655	6740.0566	-82.3196	51840.0000
102.000	.004315	480781.	-8579.8795	-.0007815	6206.1092	-39.6075	55080.0000
108.000	.000150	428693.	-8703.0833	-.0006161	5656.8498	-1.4605	58320.0000
114.000	-.003079	376529.	-8612.7007	-.0004697	5106.7893	31.5880	61560.0000
120.000	-.005486	325481.	-8340.1805	-.0003421	4568.5036	59.2520	64800.0000
126.000	-.007184	276549.	-7930.2513	-.0002326	4052.5235	77.3910	64638.4590
132.000	-.008278	230388.	-7426.7363	-.0001405	3565.7631	90.4473	65558.5858
138.000	-.008869	187470.	-6850.2908	-6.4494E-05	3113.2051	101.7012	68799.8109
144.000	-.009052	148204.	-6211.1796	-3.4665E-06	2699.1465	111.3359	73799.3183
150.000	-.008911	112937.	-5518.9219	4.4011E-05	2327.2672	119.4167	80407.0664
156.000	-.008524	81963.6390	-4801.6557	7.9445E-05	2000.6551	119.6720	84240.0000
162.000	-.007958	55293.6497	-4094.5755	.0001044	1719.4250	116.0213	87480.0000
168.000	-.007271	32797.4130	-3416.7055	.0001204	1482.2063	109.9353	90720.0000
174.000	-.006513	14257.0586	-2780.9384	.0001290	1286.7017	101.9871	93960.0000
180.000	-.005723	-612.5382	-2196.8289	.0001315	1142.8227	92.7160	97200.0000
186.000	-.004935	-12144.3239	-1670.8362	.0001291	1264.4233	82.6149	100440.
192.000	-.004174	-20701.3123	-1206.6304	.0001232	1354.6552	72.1204	103680.
198.000	-.003457	-26660.8365	-805.4441	.0001145	1417.4972	61.6083	106920.
204.000	-.002799	-30401.0063	-466.4476	.0001042	1456.9366	51.3905	110160.
210.000	-.002207	-32289.4603	-187.1302	9.2777E-05	1476.8500	41.7153	113400.
216.000	-.001686	-32674.4016	36.3269	8.0966E-05	1480.9092	32.7704	116640.
222.000	-.001236	-31877.8271	208.6977	6.9230E-05	1472.5094	24.6866	119880.
228.000	-.000855	-30190.7979	335.3884	5.7946E-05	1454.7200	17.5437	123120.
234.000	-.000540	-27870.5495	422.1502	4.7390E-05	1430.2534	11.3769	126360.
240.000	-.000286	-25139.2124	474.8317	3.7752E-05	1401.4520	6.1836	129600.
246.000	-8.72E-05	-22183.8950	499.1734	2.9149E-05	1370.2887	1.9303	132840.
252.000	6.35E-05	-19157.8765	500.6434	2.1632E-05	1338.3799	-1.4403	136080.
258.000	.000172	-16182.6644	484.3129	1.5207E-05	1307.0068	-4.0032	139320.
264.000	.000246	-13350.6837	454.7691	9.8378E-06	1277.1441	-5.8448	

142560.							
270.000	.000290	-10728.3869	416.0605	5.4601E-06	1249.4925	-7.0581	
145800.							
276.000	.000312	-8359.5957	371.6723	1.9897E-06	1224.5140	-7.7380	
149040.							
282.000	.000314	-6268.9161	324.5251	-6.6982E-07	1202.4682	-7.9778	
152280.							
288.000	.000303	-4465.0941	276.9935	-2.6213E-06	1183.4472	-7.8661	
155520.							
294.000	.000283	-2944.2076	230.9405	-3.9684E-06	1167.4098	-7.4849	
158760.							
300.000	.000256	-1692.6174	187.7615	-4.8114E-06	1154.2120	-6.9081	
162000.							
306.000	.000225	-689.6256	148.4363	-5.2445E-06	1143.6356	-6.2003	
165240.							
312.000	.000193	90.1913	113.5836	-5.3535E-06	1137.3147	-5.4172	
168480.							
318.000	.000161	674.9840	83.5173	-5.2144E-06	1143.4812	-4.6049	
171720.							
324.000	.000130	1093.9638	58.2999	-4.8928E-06	1147.8993	-3.8009	
174960.							
330.000	.000102	1376.0502	37.7924	-4.4437E-06	1150.8738	-3.0349	
178200.							
336.000	7.70E-05	1548.8060	21.7003	-3.9120E-06	1152.6955	-2.3292	
181440.							
342.000	5.52E-05	1637.6271	9.6118	-3.3326E-06	1153.6321	-1.7003	
184680.							
348.000	3.70E-05	1665.1475	1.0314	-2.7322E-06	1153.9223	-1.1598	
187920.							
354.000	2.25E-05	1650.8234	-4.5943	-2.1293E-06	1153.7713	-.7154098	
191160.							
360.000	1.15E-05	1610.6546	-24.9853	-1.5363E-06	1153.3477	-6.0816	
3178588.							
366.000	4.02E-06	1351.4612	-49.6168	-9.9781E-07	1150.6145	-2.1290	
3178588.							
372.000	-4.94E-07	1015.5518	-55.2187	-5.6747E-07	1147.0724	.2616762	
3178588.							
378.000	-2.79E-06	689.0073	-49.9980	-2.5757E-07	1143.6291	1.4786	
3178588.							
384.000	-3.58E-06	415.6531	-39.8651	-5.6733E-08	1140.7466	1.8991	
3178588.							
390.000	-3.47E-06	210.6433	-28.6502	5.7132E-08	1138.5848	1.8392	
3178588.							
396.000	-2.90E-06	71.8337	-18.5249	1.0849E-07	1137.1211	1.5359	
3178588.							
402.000	-2.17E-06	-11.6879	-10.4686	1.1942E-07	1136.4869	1.1495	
3178588.							
408.000	-1.47E-06	-53.8257	-4.6899	1.0751E-07	1136.9312	.7766921	
3178588.							
414.000	-8.80E-07	-67.9995	-.9616890	8.5364E-08	1137.0807	.4660600	
3178588.							
420.000	-4.42E-07	-65.3915	1.1386	6.1112E-08	1137.0532	.2340203	
3178588.							
426.000	-1.46E-07	-54.3553	2.0733	3.9341E-08	1136.9368	.0775589	
3178588.							
432.000	3.04E-08	-40.5239	2.2577	2.2092E-08	1136.7910	-.0160798	
3178588.							
438.000	1.19E-07	-27.2692	2.0208	9.7664E-09	1136.6512	-.0628817	
3178588.							
444.000	1.48E-07	-16.2767	1.5977	1.8495E-09	1136.5353	-.0781665	
3178588.							
450.000	1.41E-07	-8.0973	1.1393	-2.5819E-09	1136.4490	-.0746391	
3178588.							

456.000	1.17E-07	-2.6046	.7301051	-4.5276E-09	1136.3911	-.0617528
3178588.						
462.000	8.66E-08	.6652753	.4072777	-4.8802E-09	1136.3707	-.0458563
3178588.						
468.000	5.80E-08	2.2842	.1775226	-4.3439E-09	1136.3877	-.0307287
3178588.						
474.000	3.44E-08	2.7968	.0306130	-3.4202E-09	1136.3931	-.0182412
3178588.						
480.000	1.70E-08	2.6526	-.0510691	-2.4294E-09	1136.3916	-.0089862
3178588.						
486.000	5.28E-09	2.1847	-.0864188	-1.5499E-09	1136.3867	-.0027971
3178588.						
492.000	-1.64E-09	1.6161	-.0922090	-8.5891E-10	1136.3807	.0008670
3178588.						
498.000	-5.03E-09	1.0785	-.0816184	-3.6902E-10	1136.3750	.0026632
3178588.						
504.000	-6.06E-09	.6367524	-.0639900	-5.7179E-11	1136.3704	.0032129
3178588.						
510.000	-5.71E-09	.3106368	-.0452710	1.1506E-10	1136.3669	.0030267
3178588.						
516.000	-4.68E-09	.0934659	-.0287465	1.8853E-10	1136.3646	.0024815
3178588.						
522.000	-3.45E-09	-.0343776	-.0158176	1.9927E-10	1136.3640	.0018282
3178588.						
528.000	-2.29E-09	-.0964046	-.0066891	1.7550E-10	1136.3647	.0012146
3178588.						
534.000	-1.34E-09	-.1146995	-.0009077	1.3712E-10	1136.3648	.0007125
3178588.						
540.000	-6.47E-10	-.1073377	.0022588	9.6749E-11	1136.3648	.0003430
3178588.						
546.000	-1.84E-10	-.0876235	.0035800	6.1304E-11	1136.3646	9.7461E-05
3178588.						
552.000	8.83E-11	-.0643959	.0037321	3.3666E-11	1136.3643	-4.6763E-05
3178588.						
558.000	2.20E-10	-.0428483	.0032421	1.4168E-11	1136.3641	-.0001166
3178588.						
564.000	2.58E-10	-.0254945	.0024820	1.7428E-12	1136.3639	-.0001368
3178588.						
570.000	2.41E-10	-.0130651	.0016886	-5.2676E-12	1136.3638	-.0001276
3178588.						
576.000	1.95E-10	-.0052300	.0009956	-8.5938E-12	1136.3637	-.0001033
3178588.						
582.000	1.38E-10	-.0011150	.0004666	-9.7474E-12	1136.3636	-7.3005E-05
3178588.						
588.000	7.81E-11	.0003719	.0001234	-9.8825E-12	1136.3636	-4.1377E-05
3178588.						
594.000	1.92E-11	.0003692	-3.1234E-05	-9.7478E-12	1136.3636	-1.0180E-05
3178588.						
600.000	-3.89E-11	0.0000	0.0000	-9.6807E-12	1136.3636	2.0591E-05
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	.27518534 in
Computed slope at pile head	=	-.00406948
Maximum bending moment	=	711515.69261 lbs-in
Maximum shear force	=	20000.00000 lbs
Depth of maximum bending moment	=	60.00000000 in

Depth of maximum shear force = 0.00000 in
Number of iterations = 6
Number of zero deflection points = 7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 5000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. p lbs/in	Es*h F/L lbs/in
0.000	.067379	6.9971E-08	5000.0000	-.0009993	1136.3636	0.0000	0.0000
6.000	.061384	30149.8915	4900.5584	-.0009938	1454.2887	-33.1472	3240.0000
12.000	.055454	59104.8392	4621.4464	-.0009776	1759.6133	-59.8901	6480.0000
18.000	.049653	85900.5183	4200.4629	-.0009512	2042.1688	-80.4377	9720.0000
24.000	.044039	109796.	3673.7747	-.0009156	2294.1396	-95.1250	12960.0000
30.000	.038665	130261.	3075.2100	-.0008720	2509.9366	-104.3965	16200.0000
36.000	.033576	146960.	2435.6657	-.0008216	2686.0283	-108.7849	19440.0000
42.000	.028806	159735.	1782.6464	-.0007658	2820.7394	-108.8882	22680.0000
48.000	.024386	168581.	1139.9428	-.0007061	2914.0231	-105.3463	25920.0000
54.000	.020333	173626.	527.4513	-.0006439	2967.2190	-98.8175	29160.0000
60.000	.016659	175104.	-38.8727	-.0005805	2982.8026	-89.9571	32400.0000
66.000	.013367	173334.	-546.9378	-.0005172	2964.1366	-79.3979	35640.0000
72.000	.010453	168696.	-988.3328	-.0004550	2915.2303	-67.7337	38880.0000
78.000	.007907	161610.	-1358.0525	-.0003949	2840.5144	-55.5062	42120.0000
84.000	.005714	152518.	-1654.1548	-.0003378	2744.6347	-43.1946	45360.0000
90.000	.003853	141862.	-1877.3671	-.0002843	2632.2700	-31.2095	48600.0000
96.000	.002302	130075.	-2030.6629	-.0002349	2507.9762	-19.8891	51840.0000
102.000	.001035	117564.	-2118.8262	-.0001898	2376.0574	-9.4987	55080.0000

108.000	2.39E-05	104706.	-2148.0201	-.0001494	2240.4652	-.2326473
58320.0000						
114.000	-.000758	91832.8802	-2125.3742	-.0001137	2104.7244	7.7813
61560.0000						
120.000	-.001340	79235.2473	-2058.6015	-8.2593E-05	1971.8847	14.4763
64800.0000						
126.000	-.001750	67154.4402	-1955.6537	-5.5978E-05	1844.4948	19.8396
68040.0000						
132.000	-.002012	55784.1965	-1824.4221	-3.3627E-05	1724.5977	23.9042
71280.0000						
138.000	-.002153	45271.4628	-1672.4867	-1.5255E-05	1613.7429	26.7409
74520.0000						
144.000	-.002195	35718.9329	-1506.9146	-5.3004E-07	1513.0132	28.4498
77760.0000						
150.000	-.002159	27188.6461	-1334.1091	1.0907E-05	1423.0629	29.1521
81000.0000						
156.000	-.002064	19706.3514	-1159.7040	1.9433E-05	1344.1635	28.9830
84240.0000						
162.000	-.001926	13266.3683	-988.5023	2.5428E-05	1276.2550	28.0843
87480.0000						
168.000	-.001759	7836.6957	-824.4529	2.9264E-05	1219.0001	26.5988
90720.0000						
174.000	-.001575	3364.1540	-670.6606	3.1301E-05	1171.8380	24.6653
93960.0000						
180.000	-.001384	-220.6215	-529.4230	3.1872E-05	1138.6900	22.4139
97200.0000						
186.000	-.001193	-2998.4839	-402.2897	3.1287E-05	1167.9821	19.9638
100440.						
192.000	-.001008	-5057.4842	-290.1366	2.9822E-05	1189.6939	17.4205
103680.						
198.000	-.000835	-6489.0693	-193.2510	2.7723E-05	1204.7897	14.8746
106920.						
204.000	-.000675	-7384.8132	-111.4229	2.5201E-05	1214.2351	12.4014
110160.						
210.000	-.000532	-7833.7041	-44.0368	2.2434E-05	1218.9686	10.0606
113400.						
216.000	-.000406	-7919.9846	9.8377	1.9570E-05	1219.8784	7.8975
116640.						
222.000	-.000297	-7721.5220	51.3609	1.6726E-05	1217.7857	5.9435
119880.						
228.000	-.000206	-7308.6718	81.8445	1.3993E-05	1213.4322	4.2177
123120.						
234.000	-.000130	-6743.5858	102.6828	1.1439E-05	1207.4735	2.7284
126360.						
240.000	-6.83E-05	-6079.9098	115.2924	9.1071E-06	1200.4752	1.4748
129600.						
246.000	-2.03E-05	-5362.8088	121.0631	7.0267E-06	1192.9135	.4487354
132840.						
252.000	1.60E-05	-4629.2608	121.3178	5.2101E-06	1185.1783	-.3638416
136080.						
258.000	4.23E-05	-3908.5586	117.2829	3.6579E-06	1177.5787	-.9811213
139320.						
264.000	5.99E-05	-3222.9636	110.0672	2.3613E-06	1170.3492	-1.4241
142560.						
270.000	7.06E-05	-2588.4605	100.6490	1.3048E-06	1163.6585	-1.7153
145800.						
276.000	7.56E-05	-2015.5675	89.8698	4.6771E-07	1157.6174	-1.8778
149040.						
282.000	7.62E-05	-1510.1638	78.4345	-1.7329E-07	1152.2880	-1.9340
152280.						
288.000	7.35E-05	-1074.3016	66.9160	-6.4317E-07	1147.6919	-1.9055
155520.						
294.000	6.85E-05	-706.9787	55.7633	-9.6701E-07	1143.8186	-1.8121

158760.						
300.000	6.19E-05	-404.8520	45.3123	-1.1692E-06	1140.6327	-1.6716
162000.						
306.000	5.45E-05	-162.8801	35.7986	-1.2724E-06	1138.0812	-1.4997
165240.						
312.000	4.66E-05	25.1130	27.3705	-1.2974E-06	1136.6284	-1.3097
168480.						
318.000	3.89E-05	165.9554	20.1028	-1.2627E-06	1138.1136	-1.1129
171720.						
324.000	3.15E-05	266.7249	14.0094	-1.1840E-06	1139.1762	-.9182404
174960.						
330.000	2.47E-05	334.4233	9.0560	-1.0747E-06	1139.8901	-.7328945
178200.						
336.000	1.86E-05	375.7192	5.1705	-9.4561E-07	1140.3255	-.5622537
181440.						
342.000	1.33E-05	396.7535	2.2530	-8.0517E-07	1140.5473	-.4102731
184680.						
348.000	8.93E-06	402.9963	.1829882	-6.5977E-07	1140.6132	-.2797179
187920.						
354.000	5.41E-06	399.1472	-1.1734	-5.1394E-07	1140.5726	-.1724242
191160.						
360.000	2.76E-06	389.0692	-6.0831	-3.7063E-07	1140.4663	-1.4641
3178588.						
366.000	9.64E-07	326.2616	-12.0080	-2.4058E-07	1139.8040	-.5108643
3178588.						
372.000	-1.23E-07	245.0452	-13.3447	-1.3671E-07	1138.9476	.0653035
3178588.						
378.000	-6.76E-07	166.1663	-12.0740	-6.1953E-08	1138.1158	.3582530
3178588.						
384.000	-8.67E-07	100.1754	-9.6218	-1.3530E-08	1137.4200	.4591507
3178588.						
390.000	-8.39E-07	50.7085	-6.9116	1.3901E-08	1136.8983	.4442677
3178588.						
396.000	-7.00E-07	17.2325	-4.4664	2.6254E-08	1136.5453	.3707768
3178588.						
402.000	-5.24E-07	-2.8965	-2.5220	2.8860E-08	1136.3942	.2773690
3178588.						
408.000	-3.54E-07	-13.0401	-1.1280	2.5963E-08	1136.5011	.1873089
3178588.						
414.000	-2.12E-07	-16.4398	-.2290708	2.0603E-08	1136.5370	.1123202
3178588.						
420.000	-1.06E-07	-15.7951	.2768869	1.4742E-08	1136.5302	.0563324
3178588.						
426.000	-3.51E-08	-13.1216	.5016844	9.4851E-09	1136.5020	.0186002
3178588.						
432.000	7.49E-09	-9.7777	.5455860	5.3219E-09	1136.4667	-.0039663
3178588.						
438.000	2.88E-08	-6.5761	.4879912	2.3486E-09	1136.4330	-.0152319
3178588.						
444.000	3.57E-08	-3.9225	.3856046	4.3988E-10	1136.4050	-.0188969
3178588.						
450.000	3.40E-08	-1.9490	.2748288	-6.2761E-10	1136.3842	-.0180283
3178588.						
456.000	2.81E-08	-.6244159	.1760226	-1.0955E-09	1136.3702	-.0149071
3178588.						
462.000	2.09E-08	.1635733	.0981088	-1.1793E-09	1136.3654	-.0110642
3178588.						
468.000	1.40E-08	.5532440	.0426856	-1.0489E-09	1136.3695	-.0074103
3178588.						
474.000	8.30E-09	.6761146	.0072673	-8.2544E-10	1136.3708	-.0043958
3178588.						
480.000	4.08E-09	.6406987	-.0124087	-5.8603E-10	1136.3704	-.0021628
3178588.						

486.000	1.27E-09	.5273865	-.0209080	-3.7367E-10	1136.3692	-.0006703
3178588.						
492.000	-4.01E-10	.3899142	-.0222810	-2.0689E-10	1136.3677	.0002126
3178588.						
498.000	-1.22E-09	.2600760	-.0197082	-8.8722E-11	1136.3664	.0006450
3178588.						
504.000	-1.47E-09	.1534419	-.0154434	-1.3541E-11	1136.3653	.0007767
3178588.						
510.000	-1.38E-09	.0747593	-.0109203	2.7948E-11	1136.3644	.0007310
3178588.						
516.000	-1.13E-09	.0223900	-.0069302	4.5610E-11	1136.3639	.0005990
3178588.						
522.000	-8.33E-10	-.0084166	-.0038099	4.8150E-11	1136.3637	.0004411
3178588.						
528.000	-5.53E-10	-.0233437	-.0016080	4.2376E-11	1136.3639	.0002929
3178588.						
534.000	-3.24E-10	-.0277253	-.0002142	3.3091E-11	1136.3639	.0001717
3178588.						
540.000	-1.56E-10	-.0259244	.0005484	2.3338E-11	1136.3639	8.2530E-05
3178588.						
546.000	-4.40E-11	-.0211510	.0008660	1.4779E-11	1136.3639	2.3331E-05
3178588.						
552.000	2.16E-11	-.0155366	.0009017	8.1089E-12	1136.3638	-1.1423E-05
3178588.						
558.000	5.33E-11	-.0103325	.0007828	3.4057E-12	1136.3637	-2.8219E-05
3178588.						
564.000	6.24E-11	-.0061437	.0005989	4.1018E-13	1136.3637	-3.3073E-05
3178588.						
570.000	5.82E-11	-.0031453	.0004072	-1.2786E-12	1136.3637	-3.0826E-05
3178588.						
576.000	4.71E-11	-.0012564	.0002399	-2.0789E-12	1136.3636	-2.4945E-05
3178588.						
582.000	3.32E-11	-.0002655	.0001123	-2.3556E-12	1136.3636	-1.7611E-05
3178588.						
588.000	1.88E-11	9.1526E-05	2.9527E-05	-2.3872E-12	1136.3636	-9.9698E-06
3178588.						
594.000	4.60E-12	8.9591E-05	-7.6860E-06	-2.3543E-12	1136.3636	-2.4347E-06
3178588.						
600.000	-9.43E-12	0.0000	0.0000	-2.3380E-12	1136.3636	4.9967E-06
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	.06737937 in
Computed slope at pile head	=	-.00099928
Maximum bending moment	=	175103.96328 lbs-in
Maximum shear force	=	5000.00000 lbs
Depth of maximum bending moment	=	60.00000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 15000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth	Deflect.	Moment	Shear	Slope	Total	Soil Res. Es*h
X	y	M	V	S	Stress	p F/L
in	in	lbs-in	lbs	Rad.	lbs/in**2	lbs/in lbs/in
0.000	.202834	3.8166E-08	15000.0000	-.0030076	1136.3636	0.0000 0.0000
6.000	.184788	90451.1381	14728.9721	-.0029911	2090.1542	-90.3426 2933.3901
12.000	.166940	177645.	13917.0587	-.0029424	3009.5975	-180.2952 6480.0000
18.000	.149479	258339.	12649.7036	-.0028631	3860.4961	-242.1565 9720.0000
24.000	.132582	330300.	11064.1005	-.0027561	4619.3203	-286.3778 12960.0000
30.000	.116406	391935.	9262.0789	-.0026248	5269.2417	-314.2960 16200.0000
36.000	.101085	442233.	7336.6483	-.0024732	5799.6267	-327.5142 19440.0000
42.000	.086728	480716.	5370.6091	-.0023054	6205.4286	-327.8322 22680.0000
48.000	.073420	507372.	3435.5844	-.0021257	6486.5046	-317.1760 25920.0000
54.000	.061220	522581.	1591.4751	-.0019385	6646.8844	-297.5271 29160.0000
60.000	.050159	527051.	-113.6797	-.0017476	6694.0185	-270.8578 32400.0000
66.000	.040248	521741.	-1643.4729	-.0015570	6638.0282	-239.0732 35640.0000
72.000	.031475	507796.	-2972.5753	-.0013698	6490.9824	-203.9609 38880.0000
78.000	.023811	486481.	-4085.9122	-.0011890	6266.2183	-167.1514 42120.0000
84.000	.017207	459122.	-4977.6295	-.0010171	5977.7215	-130.0877 45360.0000
90.000	.011606	427055.	-5649.9103	-.0008560	5639.5776	-94.0059 48600.0000
96.000	.006936	391580.	-6111.7003	-.0007071	5265.5022	-59.9241 51840.0000
102.000	.003120	353927.	-6377.3962	-.0005716	4868.4536	-28.6412 55080.0000
108.000	7.64E-05	315223.	-6465.5481	-.0004499	4460.3288	-.7427386 58320.0000
114.000	-.002279	276475.	-6397.6160	-.0003424	4051.7408	23.3868 61560.0000
120.000	-.004032	238554.	-6196.8168	-.0002487	3651.8717	43.5463 64800.0000
126.000	-.005264	202188.	-5887.0880	-.0001686	3268.3962	59.6967 68040.0000
132.000	-.006055	167960.	-5492.1855	-.0001013	2907.4660	71.9375 71280.0000

138.000	-.006480	136312.	-5034.9285	-4.5993E-05	2573.7477	80.4815
74520.0000						
144.000	-.006607	107554.	-4536.5937	-1.6561E-06	2270.5028	85.6300
77760.0000						
150.000	-.006500	81873.2939	-4016.4589	3.2783E-05	1999.7024	87.7482
81000.0000						
156.000	-.006214	59346.8580	-3491.4866	5.8458E-05	1762.1653	87.2426
84240.0000						
162.000	-.005798	39957.9178	-2976.1380	7.6512E-05	1557.7125	84.5403
87480.0000						
168.000	-.005296	23610.2480	-2482.3038	8.8069E-05	1385.3293	80.0711
90720.0000						
174.000	-.004742	10143.8517	-2019.3328	9.4206E-05	1243.3287	74.2525
93960.0000						
180.000	-.004165	-650.0078	-1594.1448	9.5932E-05	1143.2178	67.4768
97200.0000						
186.000	-.003590	-9014.6659	-1211.4069	9.4175E-05	1231.4216	60.1025
100440.						
192.000	-.003035	-15215.1425	-873.7580	8.9770E-05	1296.8045	52.4471
103680.						
198.000	-.002513	-19526.6926	-582.0656	8.3454E-05	1342.2690	44.7837
106920.						
204.000	-.002034	-22224.9658	-335.6989	7.5863E-05	1370.7218	37.3386
110160.						
210.000	-.001603	-23577.8385	-132.8069	6.7536E-05	1384.9876	30.2921
113400.						
216.000	-.001223	-23838.9092	29.4102	5.8915E-05	1387.7405	23.7802
116640.						
222.000	-.000896	-23242.5911	154.4438	5.0355E-05	1381.4525	17.8976
119880.						
228.000	-.000619	-22000.6900	246.2425	4.2130E-05	1368.3569	12.7019
123120.						
234.000	-.000390	-20300.3205	309.0024	3.4439E-05	1350.4268	8.2181
126360.						
240.000	-.000206	-18302.9926	346.9882	2.7421E-05	1329.3653	4.4438
129600.						
246.000	-6.12E-05	-16144.6885	364.3829	2.1158E-05	1306.6064	1.3544
132840.						
252.000	4.82E-05	-13936.7449	365.1693	1.5689E-05	1283.3240	-1.0923
136080.						
258.000	.000127	-11767.3634	353.0393	1.1016E-05	1260.4483	-2.9510
139320.						
264.000	.000180	-9703.5777	331.3310	7.1120E-06	1238.6861	-4.2851
142560.						
270.000	.000212	-7793.5250	302.9893	3.9309E-06	1218.5449	-5.1622
145800.						
276.000	.000228	-6068.8852	270.5481	1.4106E-06	1200.3589	-5.6516
149040.						
282.000	.000229	-4547.3710	236.1297	-5.1947E-07	1184.3148	-5.8212
152280.						
288.000	.000221	-3235.1727	201.4589	-1.9344E-06	1170.4779	-5.7357
155520.						
294.000	.000206	-2129.2837	167.8876	-2.9097E-06	1158.8165	-5.4547
158760.						
300.000	.000186	-1219.6487	136.4275	-3.5185E-06	1149.2246	-5.0320
162000.						
306.000	.000164	-491.0978	107.7880	-3.8296E-06	1141.5422	-4.5146
165240.						
312.000	.000140	74.9559	82.4158	-3.9052E-06	1137.1540	-3.9428
168480.						
318.000	.000117	499.0636	60.5362	-3.8009E-06	1141.6262	-3.3504
171720.						
324.000	9.48E-05	802.5303	42.1916	-3.5642E-06	1144.8262	-2.7645

174960.						
330.000	7.43E-05	1006.4321	27.2786	-3.2354E-06	1146.9763	-2.2065
178200.						
336.000	5.60E-05	1130.8442	15.5806	-2.8468E-06	1148.2882	-1.6928
181440.						
342.000	4.01E-05	1194.2532	6.7963	-2.4241E-06	1148.9568	-1.2353
184680.						
348.000	2.69E-05	1213.1272	.5638445	-1.9864E-06	1149.1558	-.8422175
187920.						
354.000	1.63E-05	1201.6153	-3.5204	-1.5474E-06	1149.0344	-.5191834
191160.						
360.000	8.32E-06	1171.3471	-18.3046	-1.1159E-06	1148.7153	-4.4089
3178588.						
366.000	2.90E-06	982.2947	-36.1474	-7.2439E-07	1146.7218	-1.5387
3178588.						
372.000	-3.70E-07	737.7957	-40.1749	-4.1167E-07	1144.1436	.1961963
3178588.						
378.000	-2.04E-06	500.3195	-36.3512	-1.8657E-07	1141.6394	1.0784
3178588.						
384.000	-2.61E-06	301.6369	-28.9694	-4.0769E-08	1139.5443	1.3823
3178588.						
390.000	-2.52E-06	152.6991	-20.8100	4.1833E-08	1137.9738	1.3375
3178588.						
396.000	-2.11E-06	51.9042	-13.4485	7.9031E-08	1136.9110	1.1163
3178588.						
402.000	-1.58E-06	-8.7061	-7.5941	8.6885E-08	1136.4554	.8351191
3178588.						
408.000	-1.06E-06	-39.2515	-3.3968	7.8166E-08	1136.7775	.5639798
3178588.						
414.000	-6.38E-07	-49.4916	-.6902820	6.2031E-08	1136.8855	.3382067
3178588.						
420.000	-3.20E-07	-47.5535	.8332432	4.4388E-08	1136.8651	.1696350
3178588.						
426.000	-1.06E-07	-39.5060	1.5102	2.8560E-08	1136.7802	.0560248
3178588.						
432.000	2.25E-08	-29.4394	1.6425	1.6025E-08	1136.6741	-.0119252
3178588.						
438.000	8.65E-08	-19.8006	1.4692	7.0729E-09	1136.5724	-.0458496
3178588.						
444.000	1.07E-07	-11.8112	1.1610	1.3257E-09	1136.4882	-.0568889
3178588.						
450.000	1.02E-07	-5.8692	.8274839	-1.8887E-09	1136.4255	-.0542771
3178588.						
456.000	8.47E-08	-1.8808	.5300072	-3.2978E-09	1136.3835	-.0448818
3178588.						
462.000	6.29E-08	.4918992	.2954237	-3.5503E-09	1136.3688	-.0333127
3178588.						
468.000	4.21E-08	1.6653	.1285493	-3.1581E-09	1136.3812	-.0223121
3178588.						
474.000	2.50E-08	2.0354	.0219040	-2.4852E-09	1136.3851	-.0132363
3178588.						
480.000	1.23E-08	1.9289	-.0373439	-1.7645E-09	1136.3840	-.0065130
3178588.						
486.000	3.81E-09	1.5878	-.0629402	-1.1251E-09	1136.3804	-.0020191
3178588.						
492.000	-1.21E-09	1.1740	-.0670788	-6.2300E-10	1136.3760	.0006396
3178588.						
498.000	-3.66E-09	.7830823	-.0593359	-2.6719E-10	1136.3719	.0019414
3178588.						
504.000	-4.41E-09	.4620308	-.0464972	-4.0820E-11	1136.3685	.0023382
3178588.						
510.000	-4.15E-09	.2251277	-.0328801	8.4110E-11	1136.3660	.0022009
3178588.						

 516.000 -3.40E-09   .0674448   -.0208670 1.3730E-10   1136.3643   .0018035
3178588.
 522.000 -2.51E-09   -.0253175   -.0114725 1.4496E-10   1136.3639   .0013280
3178588.
 528.000 -1.66E-09   -.0702686   -.0048426 1.2758E-10   1136.3644   .0008819
3178588.
 534.000 -9.76E-10   -.0834672   -.0006459 9.9632E-11   1136.3645   .0005170
3178588.
 540.000 -4.69E-10   -.0780497   .0016506 7.0267E-11   1136.3645   .0002485
3178588.
 546.000 -1.33E-10   -.0636810   .0026070 4.4500E-11   1136.3643 7.0282E-05
3178588.
 552.000 6.49E-11   -.0467787   .0027148 2.4417E-11   1136.3641 -3.4364E-05
3178588.
 558.000 1.60E-10   -.0311109   .0023569 1.0257E-11   1136.3640 -8.4944E-05
3178588.
 564.000 1.88E-10   -.0184995   .0018033 1.2370E-12   1136.3638 -9.9567E-05
3178588.
 570.000 1.75E-10   -.0094714   .0012262 -3.8483E-12   1136.3637 -9.2808E-05
3178588.
 576.000 1.42E-10   -.0037839   .0007225 -6.2582E-12   1136.3637 -7.5103E-05
3178588.
 582.000 1.00E-10   -.0007999   .0003381 -7.0916E-12   1136.3636 -5.3024E-05
3178588.
 588.000 5.67E-11   .0002752 8.8953E-05 -7.1870E-12   1136.3636 -3.0020E-05
3178588.
 594.000 1.38E-11   .0002696 -2.3112E-05 -7.0879E-12   1136.3636 -7.3349E-06
3178588.
 600.000 -2.84E-11   0.0000   0.0000 -7.0389E-12   1136.3636 1.5039E-05
1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection   =   .20283368 in
Computed slope at pile head   =   -.00300759
Maximum bending moment   =   527050.93650 lbs-in
Maximum shear force   =   15000.00000 lbs
Depth of maximum bending moment =   60.00000000 in
Depth of maximum shear force   =   0.00000 in
Number of iterations   =   5
Number of zero deflection points =   7

             Computed Values of Load Distribution and Deflection
                 for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head =   25000.000 lbs
Specified moment at pile head   =   .000 in-lbs
Specified axial load at pile head   =   25000.000 lbs

(Zero moment for this load indicates free-head conditions)

  Depth   Deflect.   Moment   Shear   Slope   Total   Soil Res.

X in	y in	M lbs-in	V lbs	S Rad.	Stress lbs/in**2	p lbs/in	Es*h F/L lbs/in
0.000	.379958	-5.0888E-08	25000.0000	-.0054810	1136.3636	0.0000	0.0000
6.000	.347072	150822.	24676.5486	-.0054536	2726.7554	-107.8171	1863.8885
12.000	.314514	297755.	23632.2705	-.0053721	4276.1317	-240.2756	4583.7448
18.000	.282607	436021.	21827.1276	-.0052387	5734.1249	-361.4387	7673.6740
24.000	.251650	561252.	19418.5612	-.0050574	7054.6603	-441.4168	10524.5231
30.000	.221919	670561.	16582.7408	-.0048334	8207.3052	-503.8567	13622.7475
36.000	.193650	761695.	13474.8840	-.0045730	9168.2938	-532.0955	16486.3379
42.000	.167042	833631.	10311.2943	-.0042830	9926.8537	-522.4344	18765.3222
48.000	.142254	886715.	7325.4955	-.0039702	10486.6110	-472.8319	19943.1299
54.000	.119400	922728.	4436.3194	-.0036412	10866.3651	-490.2268	24634.4734
60.000	.098559	941043.	1464.0620	-.0033024	11059.4919	-500.5257	30470.4935
66.000	.079772	941288.	-1459.0466	-.0029602	11062.0712	-473.8439	35640.0000
72.000	.063038	924423.	-4106.0286	-.0026210	10884.2316	-408.4835	38880.0000
78.000	.048320	892802.	-6349.1035	-.0022906	10550.7946	-339.2081	42120.0000
84.000	.035551	848921.	-8173.0187	-.0019739	10088.0762	-268.7636	45360.0000
90.000	.024633	795318.	-9577.8989	-.0016750	9522.8433	-199.5298	48600.0000
96.000	.015451	734488.	-10576.9785	-.0013968	8881.4088	-133.4967	51840.0000
102.000	.007871	668813.	-11194.2399	-.0011417	8188.8747	-72.2570	55080.0000
108.000	.001750	600500.	-11462.0528	-.0009109	7468.5263	-17.0139	58320.0000
114.000	-.003060	531542.	-11418.9007	-.0007051	6741.3737	31.3979	61560.0000
120.000	-.006711	463685.	-11119.7434	-.0005242	6025.8345	68.3212	61081.0148
126.000	-.009351	398262.	-10651.3076	-.0003675	5335.9642	87.8241	56354.3333
132.000	-.011121	335979.	-10075.1982	-.0002340	4679.2041	104.2124	56224.4550
138.000	-.012159	277430.	-9407.6010	-.0001225	4061.8112	118.3200	58388.7335
144.000	-.012591	223125.	-8661.3257	-3.1469E-05	3489.1746	130.4384	62159.3085
150.000	-.012536	173503.	-7848.0010	4.0641E-05	2965.9258	140.6698	67326.8280
156.000	-.012103	128937.	-6978.8641	9.5626E-05	2495.9773	149.0425	73886.8478
162.000	-.011389	89728.4198	-6065.0595	.0001354	2082.5333	155.5590	81954.9223

168.000	-.010478	56115.3705	-5123.0796	.0001619	1728.0899	158.4343	90720.0000
174.000	-.009446	28202.8956	-4204.0099	.0001772	1433.7580	147.9223	93960.0000
180.000	-.008352	5614.0840	-3354.3484	.0001834	1195.5631	135.2982	97200.0000
186.000	-.007245	-12104.2973	-2584.5911	.0001822	1264.0012	121.2875	100440.
192.000	-.006165	-25455.6678	-1901.1138	.0001754	1404.7890	106.5382	103680.
198.000	-.005141	-34970.2729	-1306.6623	.0001644	1505.1187	91.6123	106920.
204.000	-.004193	-41184.9289	-800.8834	.0001505	1570.6511	76.9807	110160.
210.000	-.003335	-44626.0342	-380.8714	.0001349	1606.9369	63.0233	113400.
216.000	-.002574	-45795.8663	-41.7065	.0001185	1619.2726	50.0317	116640.
222.000	-.001913	-45162.0602	223.0321	.0001020	1612.5892	38.2145	119880.
228.000	-.001350	-43150.0688	420.7913	8.5902E-05	1591.3731	27.7053	123120.
234.000	-.000882	-40138.3347	559.6204	7.0759E-05	1559.6150	18.5711	126360.
240.000	-.000501	-36455.8512	647.8018	5.6834E-05	1520.7839	10.8227	129600.
246.000	-.000200	-32381.7630	693.5416	4.4319E-05	1477.8234	4.4239	132840.
252.000	3.08E-05	-28146.6480	704.7195	3.3314E-05	1433.1648	-.6979261	136080.
258.000	.000200	-23935.1232	688.6970	2.3845E-05	1388.7551	-4.6429	139320.
264.000	.000317	-19889.4380	652.1785	1.5878E-05	1346.0941	-7.5299	142560.
270.000	.000390	-16113.7445	601.1225	9.3319E-06	1306.2801	-9.4888	145800.
276.000	.000429	-12678.7679	540.6947	4.0973E-06	1270.0589	-10.6538	149040.
282.000	.000440	-9626.6379	475.2581	4.1976E-08	1237.8748	-11.1584	152280.
288.000	.000429	-6975.6836	408.3927	-2.9764E-06	1209.9209	-11.1301	155520.
294.000	.000404	-4725.0325	342.9381	-5.1037E-06	1186.1882	-10.6881	158760.
300.000	.000368	-2858.8953	281.0530	-6.4825E-06	1166.5102	-9.9403	162000.
306.000	.000326	-1350.4512	224.2863	-7.2478E-06	1150.6039	-8.9820	165240.
312.000	.000281	-165.2854	173.6534	-7.5234E-06	1138.1065	-7.8956	168480.
318.000	.000236	735.6464	129.7153	-7.4197E-06	1144.1209	-6.7504	171720.
324.000	.000192	1393.5237	92.6550	-7.0326E-06	1151.0581	-5.6030	174960.
330.000	.000151	1849.6164	62.3498	-6.4430E-06	1155.8675	-4.4987	178200.
336.000	.000115	2143.6546	38.4362	-5.7170E-06	1158.9681	-3.4725	181440.
342.000	8.29E-05	2312.5655	20.3666	-4.9068E-06	1160.7492	-2.5507	184680.
348.000	5.60E-05	2389.5257	7.4575	-4.0519E-06	1161.5607	-1.7524	187920.
354.000	3.42E-05	2403.2707	-1.0728	-3.1806E-06	1161.7057	-1.0911	

191160.						
360.000	1.78E-05	2377.6067	-32.6090	-2.3114E-06	1161.4351	-9.4210
3178588.						
366.000	6.51E-06	2012.6558	-71.2167	-1.5132E-06	1157.5867	-3.4482
3178588.						
372.000	-3.75E-07	1523.4608	-80.9657	-8.7029E-07	1152.4282	.1984987
3178588.						
378.000	-3.93E-06	1041.3286	-74.1170	-4.0399E-07	1147.3443	2.0844
3178588.						
384.000	-5.22E-06	634.1776	-59.5637	-9.9370E-08	1143.0509	2.7667
3178588.						
390.000	-5.13E-06	326.5941	-43.1152	7.5305E-08	1139.8075	2.7161
3178588.						
396.000	-4.32E-06	116.7723	-28.1029	1.5591E-07	1137.5950	2.2880
3178588.						
402.000	-3.26E-06	-10.6879	-16.0642	1.7520E-07	1136.4763	1.7249
3178588.						
408.000	-2.22E-06	-76.0501	-7.3667	1.5943E-07	1137.1656	1.1742
3178588.						
414.000	-1.34E-06	-99.1360	-1.7098	1.2758E-07	1137.4090	.7114085
3178588.						
420.000	-6.86E-07	-96.6059	1.5140	9.1993E-08	1137.3823	.3631744
3178588.						
426.000	-2.39E-07	-80.9962	2.9833	5.9703E-08	1137.2177	.1265953
3178588.						
432.000	3.09E-08	-60.8246	3.3139	3.3919E-08	1137.0050	-.0163699
3178588.						
438.000	1.68E-07	-41.2391	2.9977	1.5363E-08	1136.7985	-.0890353
3178588.						
444.000	2.15E-07	-24.8565	2.3885	3.3467E-09	1136.6257	-.1140374
3178588.						
450.000	2.08E-07	-12.5780	1.7155	-3.4592E-09	1136.4963	-.1103108
3178588.						
456.000	1.74E-07	-4.2700	1.1084	-6.5223E-09	1136.4087	-.0920467
3178588.						
462.000	1.30E-07	.7246205	.6257058	-7.1668E-09	1136.3713	-.0688476
3178588.						
468.000	8.77E-08	3.2407	.2797054	-6.4459E-09	1136.3978	-.0464859
3178588.						
474.000	5.26E-08	4.0830	.0566385	-5.1144E-09	1136.4067	-.0278697
3178588.						
480.000	2.64E-08	3.9219	-.0688885	-3.6591E-09	1136.4050	-.0139726
3178588.						
486.000	8.70E-09	3.2575	-.1246313	-2.3538E-09	1136.3980	-.0046083
3178588.						
492.000	-1.87E-09	2.4270	-.1354829	-1.3204E-09	1136.3892	.0009911
3178588.						
498.000	-7.15E-09	1.6321	-.1211531	-5.8240E-10	1136.3808	.0037855
3178588.						
504.000	-8.86E-09	.9733181	-.0957162	-1.0872E-10	1136.3739	.0046935
3178588.						
510.000	-8.45E-09	.4834940	-.0682058	1.5614E-10	1136.3687	.0044766
3178588.						
516.000	-6.99E-09	.1548022	-.0436731	2.7218E-10	1136.3653	.0037009
3178588.						
522.000	-5.18E-09	-.0406644	-.0243313	2.9293E-10	1136.3641	.0027463
3178588.						
528.000	-3.47E-09	-.1372614	-.0105763	2.6059E-10	1136.3651	.0018387
3178588.						
534.000	-2.06E-09	-.1676578	-.0017910	2.0515E-10	1136.3654	.0010897
3178588.						
540.000	-1.01E-09	-.1588149	.0030818	1.4579E-10	1136.3653	.0005345
3178588.						

546.000	-3.07E-10	-.1307203	.0051740	9.3155E-11	1136.3650	.0001629
3178588.						
552.000	1.09E-10	-.0967547	.0054896	5.1798E-11	1136.3647	-5.7673E-05
3178588.						
558.000	3.14E-10	-.0648600	.0048174	2.2415E-11	1136.3643	-.0001664
3178588.						
564.000	3.78E-10	-.0389524	.0037177	3.5416E-12	1136.3640	-.0002002
3178588.						
570.000	3.57E-10	-.0202489	.0025504	-7.2216E-12	1136.3638	-.0001889
3178588.						
576.000	2.91E-10	-.0083454	.0015209	-1.2420E-11	1136.3637	-.0001543
3178588.						
582.000	2.08E-10	-.0019949	.0007282	-1.4300E-11	1136.3637	-.0001100
3178588.						
588.000	1.20E-10	.0003970	.0002082	-1.4591E-11	1136.3636	-6.3354E-05
3178588.						
594.000	3.25E-11	.0005082	-3.3448E-05	-1.4426E-11	1136.3636	-1.7206E-05
3178588.						
600.000	-5.35E-11	0.0000	0.0000	-1.4334E-11	1136.3636	2.8355E-05
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 5:

Pile-head deflection	=	.37995784 in
Computed slope at pile head	=	-.00548104
Maximum bending moment	=	941287.93142 lbs-in
Maximum shear force	=	25000.00000 lbs
Depth of maximum bending moment	=	66.00000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	12
Number of zero deflection points	=	7

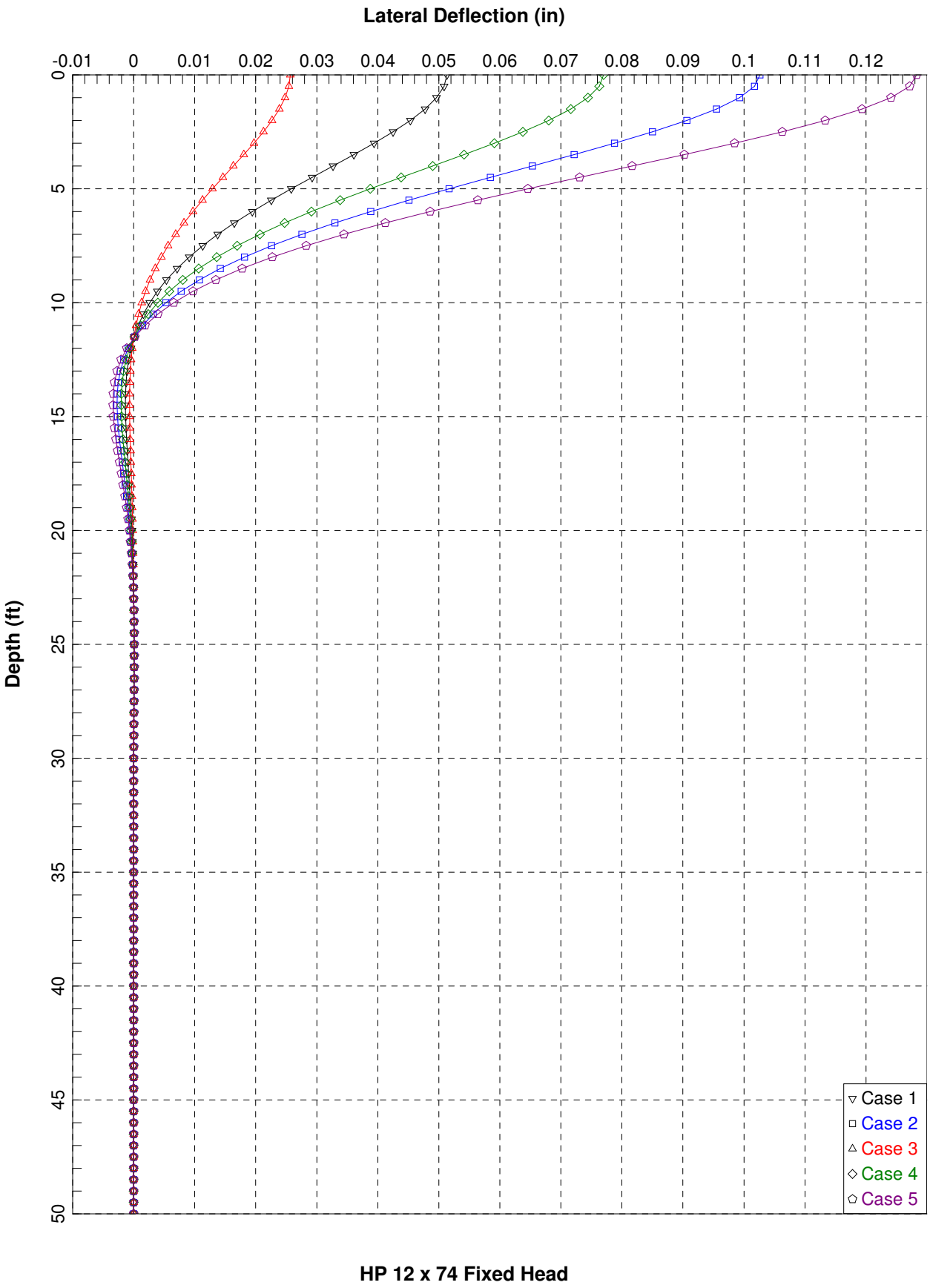
Summary of Pile Response(s)

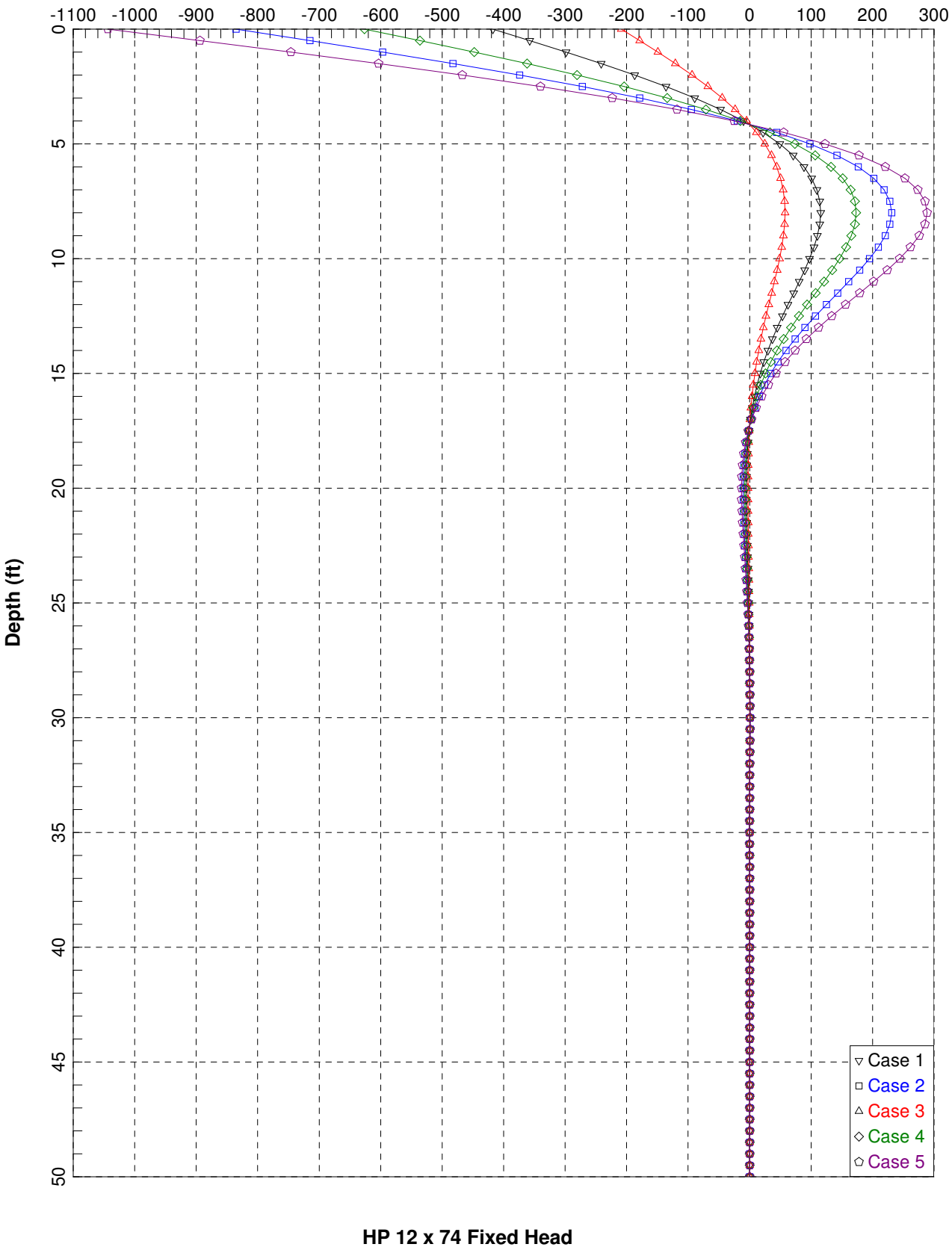
Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment, y = pile-head displacment in
Type 2 = Shear and Slope, M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness, V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment, S = Pile-head Slope, radians
Type 5 = Deflection and Slope, R = Rot. Stiffness of Pile-head in-lbs/rad

Load Type	Pile-Head Condition 1	Pile-Head Condition 2	Axial Load lbs	Pile-Head Deflection in	Maximum Moment in-lbs	Maximum Shear lbs
1	V= 10000.	M= 0.000	25000.0000	.1347587	350208.	10000.0000
1	V= 20000.	M= 0.000	25000.0000	.2751853	711516.	20000.0000
1	V= 5000.000	M= 0.000	25000.0000	.0673794	175104.	5000.0000
1	V= 15000.	M= 0.000	25000.0000	.2028337	527051.	15000.0000
1	V= 25000.	M= 0.000	25000.0000	.3799578	941288.	25000.0000

The analysis ended normally.


Lateral Deflection (in)
-0.01
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11
0.12
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
HP 12 x 74 Fixed Head


Bending Moment (in-kips)
-1100
-1000
-900
-800
-700
-600
-500
-400
-300
-200
-100
0
100
200
300
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
HP 12 x 74 Fixed Head

LVMWD Westlake Reservoir HP 12x74 fixed.lpo

LPILE Plus for Windows, Version 5.0 (5.0.39)

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

This program is licensed to:

greg denlinger
Fugro West

Path to file locations: O:\Management\04_2012\04_6212_0197_AECOM_LVWMD 5MG Reservoir\03_ENGINEERING\Preliminary Pile Calcs\
Name of input data file: LVMWD Westlake Reservoir HP 12x74 fixed.lpd
Name of output file: LVMWD Westlake Reservoir HP 12x74 fixed.lpo
Name of plot output file: LVMWD Westlake Reservoir HP 12x74 fixed.lpp
Name of runtime file: LVMWD Westlake Reservoir HP 12x74 fixed.lpr

Time and Date of Analysis

Date: February 8, 2013 Time: 15:54:39

Problem Title

LVMWD Westlake Reservoir HP 12x74 Fixed Head

Program Options

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 1:
- Computation of Lateral Pile Response Using User-specified Constant EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 100

- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 600.00 in

Depth of ground surface below top of pile = .00 in

Slope angle of ground surface = -25.00 deg.

Structural properties of pile defined using 2 points

Point	Depth X in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	12.00000000	569.0000	22.0000	29000000.
2	600.0000	12.00000000	569.0000	22.0000	29000000.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by Reese et al., 1974
Distance from top of pile to top of layer = .000 in
Distance from top of pile to bottom of layer = 360.000 in
p-y subgrade modulus k for top of soil layer = 90.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 90.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 360.000 in
Distance from top of pile to bottom of layer = 700.000 in

(Depth of lowest layer extends 100.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	.00	.03300
2	360.00	.03300
3	360.00	.03300
4	700.00	.03300

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	.000	.00000	35.00	------	------
2	360.000	.00000	35.00	------	------
3	360.000	14.00000	.00	.01000	.0
4	700.000	14.00000	.00	.01000	.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Loading Type

Cyclic loading criteria was used for computation of p-y curves.

Number of cycles of loading = 10.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 10000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 20000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 5000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 15000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 25000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 10000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X	Deflect. y	Moment M	Shear V	Slope S	Total Stress	Soil Res. Es*h p
in	in	lbs-in	lbs	Rad.	lbs/in**2	lbs/in F/L lbs/in
0.000	.051320	-417494.	10000.0000	5.7824E-19	5538.7595	0.0000 0.0000
6.000	.050865	-357482.	9917.5988	-.0001409	4905.9505	-27.4671 3240.0000
12.000	.049630	-298440.	9674.3976	-.0002601	4283.3628	-53.6000 6480.0000
18.000	.047743	-241312.	9281.5658	-.0003583	3680.9507	-77.3439 9720.0000
24.000	.045330	-186954.	8755.7938	-.0004361	3107.7606	-97.9134 12960.0000
30.000	.042509	-136111.	8117.7268	-.0004949	2571.6323	-114.7756 16200.0000
36.000	.039392	-89392.9645	7390.5120	-.0005359	2078.9960	-127.6293 19440.0000
42.000	.036079	-47264.4009	6598.4882	-.0005607	1634.7580	-136.3786 22680.0000

48.000	.032663	-10042.8898	5766.0383	-.0005711	1242.2641	-141.1047
25920.0000						
54.000	.029225	22099.3998	4916.6187	-.0005689	1369.3977	-142.0352
29160.0000						
60.000	.025836	49127.2185	4071.9738	-.0005560	1654.4011	-139.5131
32400.0000						
66.000	.022553	71129.8844	3251.5332	-.0005341	1886.4151	-133.9671
35640.0000						
72.000	.019426	88305.8566	2471.9873	-.0005051	2067.5326	-125.8816
38880.0000						
78.000	.016492	100945.	1747.0291	-.0004707	2200.8129	-115.7711
42120.0000						
84.000	.013777	109411.	1087.2467	-.0004325	2290.0870	-104.1563
45360.0000						
90.000	.011302	114122.	500.1470	-.0003919	2339.7589	-91.5436
48600.0000						
96.000	.009075	115531.	-9.7084	-.0003501	2354.6141	-78.4083
51840.0000						
102.000	.007100	114111.	-440.4794	-.0003084	2339.6380	-65.1820
55080.0000						
108.000	.005375	110338.	-792.7548	-.0002675	2299.8522	-52.2431
58320.0000						
114.000	.003890	104678.	-1069.2148	-.0002285	2240.1709	-39.9103
61560.0000						
120.000	.002633	97575.4614	-1274.2660	-.0001917	2165.2789	-28.4401
64800.0000						
126.000	.001590	89444.0344	-1413.6675	-.0001577	2079.5345	-18.0270
68040.0000						
132.000	.000741	80658.7561	-1494.1635	-.0001268	1986.8953	-8.8050
71280.0000						
138.000	6.86E-05	71552.0989	-1523.1349	-9.9083E-05	1890.8673	-.8521282
74520.0000						
144.000	-.000448	62410.8625	-1508.2793	-7.4728E-05	1794.4747	5.8040
77760.0000						
150.000	-.000828	53475.1653	-1457.3284	-5.3659E-05	1700.2494	11.1797
81000.0000						
156.000	-.001092	44939.0199	-1377.8050	-3.5766E-05	1610.2373	15.3281
84240.0000						
162.000	-.001257	36952.2348	-1276.8255	-2.0878E-05	1526.0181	18.3318
87480.0000						
168.000	-.001342	29623.3776	-1160.9443	-8.7742E-06	1448.7367	20.2953
90720.0000						
174.000	-.001363	23023.5354	-1036.0429	7.9743E-07	1379.1426	21.3385
93960.0000						
180.000	-.001333	17190.6236	-907.2576	8.1087E-06	1317.6356	21.5899
97200.0000						
186.000	-.001265	12134.0121	-778.9440	1.3440E-05	1264.3146	21.1813
100440.						
192.000	-.001171	7839.2640	-654.6732	1.7071E-05	1219.0272	20.2423
103680.						
198.000	-.001060	4272.8124	-537.2544	1.9273E-05	1181.4197	18.8973
106920.						
204.000	-.000940	1386.4288	-428.7792	2.0302E-05	1150.9833	17.2612
110160.						
210.000	-.000817	-878.6287	-330.6818	2.0395E-05	1145.6286	15.4380
113400.						
216.000	-.000695	-2587.8714	-243.8113	1.9764E-05	1163.6523	13.5189
116640.						
222.000	-.000580	-3810.2940	-168.5105	1.8601E-05	1176.5425	11.5814
119880.						
228.000	-.000472	-4615.5775	-104.6975	1.7069E-05	1185.0340	9.6896
123120.						
234.000	-.000375	-5071.7853	-51.9478	1.5308E-05	1189.8447	7.8937

126360.						
240.000	-.000289	-5243.5434	-9.5717	1.3433E-05	1191.6558	6.2317
129600.						
246.000	-.000214	-5190.6751	23.3125	1.1536E-05	1191.0983	4.7297
132840.						
252.000	-.000150	-4967.2540	47.7128	9.6889E-06	1188.7424	3.4037
136080.						
258.000	-9.74E-05	-4621.0280	64.7062	7.9456E-06	1185.0915	2.2607
139320.						
264.000	-5.47E-05	-4193.1638	75.3894	6.3432E-06	1180.5798	1.3003
142560.						
270.000	-2.12E-05	-3718.2585	80.8390	4.9048E-06	1175.5720	.5162124
145800.						
276.000	4.13E-06	-3224.5668	82.0799	3.6426E-06	1170.3661	-.1025765
149040.						
282.000	2.25E-05	-2734.3920	80.0615	2.5592E-06	1165.1973	-.5702199
152280.						
288.000	3.48E-05	-2264.5960	75.6418	1.6503E-06	1160.2434	-.9030402
155520.						
294.000	4.23E-05	-1827.1859	69.5772	9.0640E-07	1155.6310	-1.1185
158760.						
300.000	4.57E-05	-1429.9419	62.5187	3.1423E-07	1151.4421	-1.2343
162000.						
306.000	4.60E-05	-1077.0562	55.0117	-1.4156E-07	1147.7210	-1.2680
165240.						
312.000	4.40E-05	-769.7595	47.4996	-4.7732E-07	1144.4806	-1.2360
168480.						
318.000	4.03E-05	-506.9174	40.3302	-7.0943E-07	1141.7090	-1.1538
171720.						
324.000	3.55E-05	-285.5840	33.7629	-8.5351E-07	1139.3751	-1.0353
174960.						
330.000	3.01E-05	-101.5062	27.9776	-9.2389E-07	1137.4340	-.8931344
178200.						
336.000	2.44E-05	50.4243	23.0830	-9.3318E-07	1136.8954	-.7383944
181440.						
342.000	1.89E-05	175.7699	19.1250	-8.9205E-07	1138.2171	-.5809341
184680.						
348.000	1.37E-05	280.1922	16.0937	-8.0916E-07	1139.3182	-.4294966
187920.						
354.000	9.16E-06	369.1374	13.9294	-6.9110E-07	1140.2561	-.2919615
191160.						
360.000	5.42E-06	447.5519	4.4396	-5.4262E-07	1141.0830	-2.8713
3178588.						
366.000	2.65E-06	422.5753	-8.3898	-3.8443E-07	1140.8196	-1.4052
3178588.						
372.000	8.07E-07	346.9899	-13.8875	-2.4451E-07	1140.0226	-.4274241
3178588.						
378.000	-2.82E-07	255.9984	-14.7220	-1.3489E-07	1139.0631	.1492655
3178588.						
384.000	-8.12E-07	170.3665	-12.9840	-5.7371E-08	1138.1601	.4300773
3178588.						
390.000	-9.70E-07	100.2080	-10.1518	-8.1786E-09	1137.4203	.5139828
3178588.						
396.000	-9.10E-07	48.5475	-7.1636	1.8866E-08	1136.8756	.4820699
3178588.						
402.000	-7.44E-07	14.2388	-4.5353	3.0281E-08	1136.5138	.3940467
3178588.						
408.000	-5.47E-07	-5.8849	-2.4844	3.1800E-08	1136.4257	.2895666
3178588.						
414.000	-3.62E-07	-15.5840	-1.0401	2.7897E-08	1136.5280	.1918883
3178588.						
420.000	-2.12E-07	-18.3742	-.1277438	2.1723E-08	1136.5574	.1122216
3178588.						

426.000	-1.02E-07	-17.1234	.3702950	1.5269E-08	1136.5442	.0537914	3178588.
432.000	-2.86E-08	-13.9352	.5771254	9.6226E-09	1136.5106	.0151521	3178588.
438.000	1.39E-08	-10.2008	.6004384	5.2345E-09	1136.4712	-.0073811	3178588.
444.000	3.42E-08	-6.7315	.5239220	2.1561E-09	1136.4346	-.0181244	3178588.
450.000	3.98E-08	-3.9144	.4062862	2.2055E-10	1136.4049	-.0210875	3178588.
456.000	3.69E-08	-1.8562	.2844443	-8.2858E-10	1136.3832	-.0195265	3178588.
462.000	2.99E-08	-.5008103	.1784047	-1.2571E-09	1136.3689	-.0158201	3178588.
468.000	2.18E-08	.2850588	.0963399	-1.2963E-09	1136.3666	-.0115349	3178588.
474.000	1.43E-08	.6556572	.0389980	-1.1253E-09	1136.3706	-.0075791	3178588.
480.000	8.27E-09	.7533718	.0031171	-8.6912E-10	1136.3716	-.0043812	3178588.
486.000	3.88E-09	.6933234	-.0161882	-6.0610E-10	1136.3709	-.0020539	3178588.
492.000	9.97E-10	.5592952	-.0239342	-3.7837E-10	1136.3695	-.0005281	3178588.
498.000	-6.63E-10	.4062265	-.0244641	-2.0283E-10	1136.3679	.0003514	3178588.
504.000	-1.44E-09	.2657866	-.0211258	-8.0653E-11	1136.3664	.0007614	3178588.
510.000	-1.63E-09	.1527416	-.0162492	-4.5618E-12	1136.3652	.0008641	3178588.
516.000	-1.49E-09	.0707972	-.0112857	3.6079E-11	1136.3644	.0007904	3178588.
522.000	-1.20E-09	.0173024	-.0070102	5.2096E-11	1136.3638	.0006348	3178588.
528.000	-8.67E-10	-.0133414	-.0037284	5.2816E-11	1136.3638	.0004592	3178588.
534.000	-5.64E-10	-.0274537	-.0014538	4.5400E-11	1136.3639	.0002990	3178588.
540.000	-3.22E-10	-.0308000	-4.4992E-05	3.4809E-11	1136.3640	.0001706	3178588.
546.000	-1.47E-10	-.0280041	.0006999	2.4118E-11	1136.3639	7.7729E-05	3178588.
552.000	-3.26E-11	-.0224083	.0009849	1.4952E-11	1136.3639	1.7253E-05	3178588.
558.000	3.27E-11	-.0161902	.0009846	7.9348E-12	1136.3638	-1.7325E-05	3178588.
564.000	6.27E-11	-.0105949	.0008331	3.0651E-12	1136.3637	-3.3190E-05	3178588.
570.000	6.95E-11	-.0061940	.0006231	1.2759E-14	1136.3637	-3.6810E-05	3178588.
576.000	6.28E-11	-.0031178	.0004128	-1.6802E-12	1136.3637	-3.3272E-05	3178588.
582.000	4.93E-11	-.0012393	.0002346	-2.4723E-12	1136.3636	-2.6129E-05	3178588.
588.000	3.31E-11	-.0003013	.0001036	-2.7524E-12	1136.3636	-1.7555E-05	3178588.
594.000	1.63E-11	4.7235E-06	2.5038E-05	-2.8063E-12	1136.3636	-8.6316E-06	3178588.
600.000	-5.39E-13	0.0000	0.0000	-2.8055E-12	1136.3636	2.8580E-07	1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	.05132037 in
Computed slope at pile head	=	5.782412E-19
Maximum bending moment	=	-417493.87683 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	0.00000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 20000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in	F/L lbs/in
0.000	.102641	-834988.	20000.0000	1.1565E-18	9941.1554	0.0000	0.0000
6.000	.101730	-714965.	19835.1976	-.0002818	8675.5374	-54.9341	3240.0000
12.000	.099259	-596881.	19348.7952	-.0005203	7430.3620	-107.2000	6480.0000
18.000	.095486	-482623.	18563.1317	-.0007166	6225.5378	-154.6879	9720.0000
24.000	.090661	-373908.	17511.5877	-.0008723	5079.1576	-195.8268	12960.0000
30.000	.085019	-272223.	16235.4536	-.0009898	4006.9009	-229.5513	16200.0000
36.000	.078784	-178786.	14781.0240	-.0010717	3021.6283	-255.2586	19440.0000
42.000	.072158	-94528.8018	13196.9765	-.0011214	2133.1524	-272.7572	22680.0000
48.000	.065326	-20085.7796	11532.0765	-.0011423	1348.1645	-282.2094	25920.0000
54.000	.058451	44198.7996	9833.2374	-.0011379	1602.4318	-284.0703	29160.0000
60.000	.051672	98254.4371	8143.9476	-.0011120	2172.4385	-279.0263	32400.0000
66.000	.045107	142260.	6503.0663	-.0010683	2636.4666	-267.9341	35640.0000
72.000	.038852	176612.	4943.9746	-.0010103	2998.7016	-251.7631	38880.0000

78.000	.032983	201891.	3494.0583	-.0009415	3265.2622	-231.5423
42120.0000						
84.000	.027555	218823.	2174.4934	-.0008650	3443.8103	-208.3127
45360.0000						
90.000	.022603	228244.	1000.2941	-.0007837	3543.1542	-183.0871
48600.0000						
96.000	.018150	231061.	-19.4169	-.0007002	3572.8645	-156.8165
51840.0000						
102.000	.014201	228221.	-880.9587	-.0006167	3542.9123	-130.3641
55080.0000						
108.000	.010750	220675.	-1585.5095	-.0005351	3463.3408	-104.4862
58320.0000						
114.000	.007780	209355.	-2138.4296	-.0004569	3343.9781	-79.8205
61560.0000						
120.000	.005267	195151.	-2548.5320	-.0003834	3194.1941	-56.8803
64800.0000						
126.000	.003179	178888.	-2827.3350	-.0003154	3022.7053	-36.0540
68040.0000						
132.000	.001482	161318.	-2988.3271	-.0002535	2837.4270	-17.6100
71280.0000						
138.000	.000137	143104.	-3046.2698	-.0001982	2645.3710	-1.7043
74520.0000						
144.000	-.000896	124822.	-3016.5587	-.0001495	2452.5857	11.6080
77760.0000						
150.000	-.001656	106950.	-2914.6567	-.0001073	2264.1351	22.3594
81000.0000						
156.000	-.002183	89878.0398	-2755.6101	-7.1533E-05	2084.1110	30.6562
84240.0000						
162.000	-.002515	73904.4697	-2553.6509	-4.1756E-05	1915.6726	36.6635
87480.0000						
168.000	-.002685	59246.7553	-2321.8886	-1.7548E-05	1761.1097	40.5906
90720.0000						
174.000	-.002725	46047.0708	-2072.0858	1.5949E-06	1621.9215	42.6770
93960.0000						
180.000	-.002665	34381.2472	-1814.5151	1.6217E-05	1498.9075	43.1799
97200.0000						
186.000	-.002531	24268.0241	-1557.8879	2.6880E-05	1392.2655	42.3625
100440.						
192.000	-.002343	15678.5280	-1309.3464	3.4143E-05	1301.6908	40.4847
103680.						
198.000	-.002121	8545.6249	-1074.5089	3.8547E-05	1226.4757	37.7945
106920.						
204.000	-.001880	2772.8577	-857.5584	4.0605E-05	1165.6029	34.5223
110160.						
210.000	-.001634	-1757.2574	-661.3636	4.0789E-05	1154.8936	30.8759
113400.						
216.000	-.001391	-5175.7427	-487.6227	3.9529E-05	1190.9409	27.0377
116640.						
222.000	-.001159	-7620.5880	-337.0210	3.7202E-05	1216.7213	23.1629
119880.						
228.000	-.000944	-9231.1549	-209.3951	3.4139E-05	1233.7045	19.3791
123120.						
234.000	-.000750	-10143.5706	-103.8956	3.0616E-05	1243.3257	15.7874
126360.						
240.000	-.000577	-10487.0868	-19.1433	2.6865E-05	1246.9480	12.4634
129600.						
246.000	-.000427	-10381.3502	46.6250	2.3071E-05	1245.8331	9.4594
132840.						
252.000	-.000300	-9934.5080	95.4256	1.9378E-05	1241.1212	6.8074
136080.						
258.000	-.000195	-9242.0560	129.4123	1.5891E-05	1233.8194	4.5215
139320.						
264.000	-.000109	-8386.3275	150.7787	1.2686E-05	1224.7959	2.6007

142560.						
270.000	-4.25E-05	-7436.5171	161.6781	9.8096E-06	1214.7803	1.0324
145800.						
276.000	8.26E-06	-6449.1337	164.1599	7.2851E-06	1204.3686	-.2051529
149040.						
282.000	4.49E-05	-5468.7841	160.1231	5.1183E-06	1194.0310	-1.1404
152280.						
288.000	6.97E-05	-4529.1920	151.2835	3.3006E-06	1184.1231	-1.8061
155520.						
294.000	8.45E-05	-3654.3718	139.1543	1.8128E-06	1174.8983	-2.2370
158760.						
300.000	9.14E-05	-2859.8838	125.0373	6.2847E-07	1166.5206	-2.4687
162000.						
306.000	9.21E-05	-2154.1124	110.0233	-2.8312E-07	1159.0784	-2.5360
165240.						
312.000	8.80E-05	-1539.5190	94.9993	-9.5464E-07	1152.5976	-2.4720
168480.						
318.000	8.06E-05	-1013.8348	80.6604	-1.4189E-06	1147.0543	-2.3076
171720.						
324.000	7.10E-05	-571.1680	67.5259	-1.7070E-06	1142.3865	-2.0706
174960.						
330.000	6.01E-05	-203.0124	55.9552	-1.8478E-06	1138.5044	-1.7863
178200.						
336.000	4.88E-05	100.8487	46.1660	-1.8664E-06	1137.4271	-1.4768
181440.						
342.000	3.77E-05	351.5398	38.2500	-1.7841E-06	1140.0706	-1.1619
184680.						
348.000	2.74E-05	560.3845	32.1875	-1.6183E-06	1142.2728	-.8589933
187920.						
354.000	1.83E-05	738.2749	27.8587	-1.3822E-06	1144.1486	-.5839230
191160.						
360.000	1.08E-05	895.1037	8.8792	-1.0852E-06	1145.8023	-5.7426
3178588.						
366.000	5.30E-06	845.1505	-16.7795	-7.6885E-07	1145.2756	-2.8103
3178588.						
372.000	1.61E-06	693.9798	-27.7750	-4.8903E-07	1143.6815	-.8548481
3178588.						
378.000	-5.64E-07	511.9968	-29.4440	-2.6977E-07	1141.7625	.2985311
3178588.						
384.000	-1.62E-06	340.7329	-25.9679	-1.1474E-07	1139.9566	.8601545
3178588.						
390.000	-1.94E-06	200.4160	-20.3036	-1.6357E-08	1138.4770	1.0280
3178588.						
396.000	-1.82E-06	97.0950	-14.3273	3.7732E-08	1137.3875	.9641397
3178588.						
402.000	-1.49E-06	28.4776	-9.0706	6.0562E-08	1136.6639	.7880934
3178588.						
408.000	-1.09E-06	-11.7699	-4.9689	6.3600E-08	1136.4877	.5791333
3178588.						
414.000	-7.24E-07	-31.1680	-2.0801	5.5794E-08	1136.6923	.3837765
3178588.						
420.000	-4.24E-07	-36.7484	-.2554876	4.3446E-08	1136.7511	.2244431
3178588.						
426.000	-2.03E-07	-34.2469	.7405899	3.0539E-08	1136.7248	.1075827
3178588.						
432.000	-5.72E-08	-27.8705	1.1543	1.9245E-08	1136.6575	.0303042
3178588.						
438.000	2.79E-08	-20.4016	1.2009	1.0469E-08	1136.5788	-.0147622
3178588.						
444.000	6.84E-08	-13.4631	1.0478	4.3121E-09	1136.5056	-.0362488
3178588.						
450.000	7.96E-08	-7.8288	.8125725	4.4110E-10	1136.4462	-.0421750
3178588.						

456.000	7.37E-08	-3.7123	.5688886	-1.6572E-09	1136.4028	-.0390529
3178588.						
462.000	5.97E-08	-1.0016	.3568094	-2.5142E-09	1136.3742	-.0316401
3178588.						
468.000	4.35E-08	.5701175	.1926798	-2.5926E-09	1136.3696	-.0230697
3178588.						
474.000	2.86E-08	1.3113	.0779959	-2.2506E-09	1136.3775	-.0151582
3178588.						
480.000	1.65E-08	1.5067	.0062342	-1.7382E-09	1136.3795	-.0087623
3178588.						
486.000	7.75E-09	1.3866	-.0323764	-1.2122E-09	1136.3783	-.0041079
3178588.						
492.000	1.99E-09	1.1186	-.0478684	-7.5674E-10	1136.3754	-.0010561
3178588.						
498.000	-1.33E-09	.8124531	-.0489282	-4.0566E-10	1136.3722	.0007028
3178588.						
504.000	-2.87E-09	.5315732	-.0422515	-1.6131E-10	1136.3692	.0015227
3178588.						
510.000	-3.26E-09	.3054831	-.0324985	-9.1235E-12	1136.3669	.0017283
3178588.						
516.000	-2.98E-09	.1415944	-.0225714	7.2158E-11	1136.3651	.0015807
3178588.						
522.000	-2.40E-09	.0346048	-.0140205	1.0419E-10	1136.3640	.0012696
3178588.						
528.000	-1.73E-09	-.0266828	-.0074567	1.0563E-10	1136.3639	.0009184
3178588.						
534.000	-1.13E-09	-.0549075	-.0029075	9.0799E-11	1136.3642	.0005980
3178588.						
540.000	-6.44E-10	-.0616001	-8.9984E-05	6.9617E-11	1136.3643	.0003411
3178588.						
546.000	-2.93E-10	-.0560081	.0013998	4.8235E-11	1136.3642	.0001555
3178588.						
552.000	-6.51E-11	-.0448166	.0019697	2.9905E-11	1136.3641	3.4505E-05
3178588.						
558.000	6.54E-11	-.0323804	.0019693	1.5870E-11	1136.3640	-3.4650E-05
3178588.						
564.000	1.25E-10	-.0211899	.0016662	6.1302E-12	1136.3639	-6.6381E-05
3178588.						
570.000	1.39E-10	-.0123879	.0012462	2.5518E-14	1136.3638	-7.3621E-05
3178588.						
576.000	1.26E-10	-.0062356	.0008257	-3.3604E-12	1136.3637	-6.6543E-05
3178588.						
582.000	9.86E-11	-.0024785	.0004693	-4.9447E-12	1136.3637	-5.2258E-05
3178588.						
588.000	6.63E-11	-.0006026	.0002072	-5.5048E-12	1136.3636	-3.5109E-05
3178588.						
594.000	3.26E-11	9.4471E-06	5.0075E-05	-5.6127E-12	1136.3636	-1.7263E-05
3178588.						
600.000	-1.08E-12	0.0000	0.0000	-5.6109E-12	1136.3636	5.7160E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	.10264074 in
Computed slope at pile head	=	1.156482E-18
Maximum bending moment	=	-834987.75366 lbs-in
Maximum shear force	=	20000.00000 lbs
Depth of maximum bending moment	=	0.00000 in

Depth of maximum shear force = 0.00000 in
Number of iterations = 5
Number of zero deflection points = 7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 5000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. p lbs/in	Es*h F/L lbs/in
0.000	.025660	-208747.	5000.0000	2.8912E-19	3337.5616	0.0000	0.0000
6.000	.025432	-178741.	4958.7994	-7.0448E-05	3021.1571	-13.7335	3240.0000
12.000	.024815	-149220.	4837.1988	-.0001301	2709.8632	-26.8000	6480.0000
18.000	.023872	-120656.	4640.7829	-.0001791	2408.6572	-38.6720	9720.0000
24.000	.022665	-93477.0745	4377.8969	-.0002181	2122.0621	-48.9567	12960.0000
30.000	.021255	-68055.6537	4058.8634	-.0002474	1853.9979	-57.3878	16200.0000
36.000	.019696	-44696.4823	3695.2560	-.0002679	1607.6798	-63.8147	19440.0000
42.000	.018040	-23632.2004	3299.2441	-.0002804	1385.5608	-68.1893	22680.0000
48.000	.016332	-5021.4449	2883.0191	-.0002856	1189.3138	-70.5524	25920.0000
54.000	.014613	11049.6999	2458.3093	-.0002845	1252.8807	-71.0176	29160.0000
60.000	.012918	24563.6093	2035.9869	-.0002780	1395.3824	-69.7566	32400.0000
66.000	.011277	35564.9422	1625.7666	-.0002671	1511.3894	-66.9835	35640.0000
72.000	.009713	44152.9283	1235.9936	-.0002526	1601.9481	-62.9408	38880.0000
78.000	.008246	50472.6379	873.5146	-.0002354	1668.5883	-57.8856	42120.0000
84.000	.006889	54705.7141	543.6234	-.0002162	1713.2253	-52.0782	45360.0000
90.000	.005651	57060.9924	250.0735	-.0001959	1738.0613	-45.7718	48600.0000
96.000	.004538	57765.3746	-4.8542	-.0001751	1745.4889	-39.2041	51840.0000
102.000	.003550	57055.2573	-220.2397	-.0001542	1738.0008	-32.5910	55080.0000

108.000	.002687	55168.7512	-396.3774	-.0001338	1718.1079	-26.1215
58320.0000						
114.000	.001945	52338.8606	-534.6074	-.0001142	1688.2673	-19.9551
61560.0000						
120.000	.001317	48787.7307	-637.1330	-9.5842E-05	1650.8213	-14.2201
64800.0000						
126.000	.000795	44722.0172	-706.8337	-7.8841E-05	1607.9491	-9.0135
68040.0000						
132.000	.000371	40329.3781	-747.0818	-6.3378E-05	1561.6295	-4.4025
71280.0000						
138.000	3.43E-05	35776.0495	-761.5674	-4.9542E-05	1513.6155	-.4260641
74520.0000						
144.000	-.000224	31205.4312	-754.1397	-3.7364E-05	1465.4192	2.9020
77760.0000						
150.000	-.000414	26737.5827	-728.6642	-2.6829E-05	1418.3065	5.5898
81000.0000						
156.000	-.000546	22469.5099	-688.9025	-1.7883E-05	1373.3005	7.6640
84240.0000						
162.000	-.000629	18476.1174	-638.4127	-1.0439E-05	1331.1909	9.1659
87480.0000						
168.000	-.000671	14811.6888	-580.4722	-4.3871E-06	1292.5502	10.1476
90720.0000						
174.000	-.000681	11511.7677	-518.0214	3.9872E-07	1257.7531	10.6693
93960.0000						
180.000	-.000666	8595.3118	-453.6288	4.0543E-06	1226.9996	10.7950
97200.0000						
186.000	-.000633	6067.0060	-389.4720	6.7200E-06	1200.3391	10.5906
100440.						
192.000	-.000586	3919.6320	-327.3366	8.5357E-06	1177.6954	10.1212
103680.						
198.000	-.000530	2136.4062	-268.6272	9.6367E-06	1158.8916	9.4486
106920.						
204.000	-.000470	693.2144	-214.3896	1.0151E-05	1143.6735	8.6306
110160.						
210.000	-.000408	-439.3144	-165.3409	1.0197E-05	1140.9961	7.7190
113400.						
216.000	-.000348	-1293.9357	-121.9057	9.8822E-06	1150.0079	6.7594
116640.						
222.000	-.000290	-1905.1470	-84.2552	9.3006E-06	1156.4531	5.7907
119880.						
228.000	-.000236	-2307.7887	-52.3488	8.5346E-06	1160.6988	4.8448
123120.						
234.000	-.000187	-2535.8927	-25.9739	7.6540E-06	1163.1042	3.9468
126360.						
240.000	-.000144	-2621.7717	-4.7858	6.7163E-06	1164.0097	3.1158
129600.						
246.000	-.000107	-2595.3376	11.6563	5.7678E-06	1163.7310	2.3649
132840.						
252.000	-7.50E-05	-2483.6270	23.8564	4.8444E-06	1162.5530	1.7019
136080.						
258.000	-4.87E-05	-2310.5140	32.3531	3.9728E-06	1160.7276	1.1304
139320.						
264.000	-2.74E-05	-2096.5819	37.6947	3.1716E-06	1158.4717	.6501708
142560.						
270.000	-1.06E-05	-1859.1293	40.4195	2.4524E-06	1155.9678	.2581062
145800.						
276.000	2.06E-06	-1612.2834	41.0400	1.8213E-06	1153.3649	-.0512882
149040.						
282.000	1.12E-05	-1367.1960	40.0308	1.2796E-06	1150.7805	-.2851099
152280.						
288.000	1.74E-05	-1132.2980	37.8209	8.2516E-07	1148.3035	-.4515201
155520.						
294.000	2.11E-05	-913.5930	34.7886	4.5320E-07	1145.9973	-.5592466

158760.						
300.000	2.29E-05	-714.9710	31.2593	1.5712E-07	1143.9029	-.6171705
162000.						
306.000	2.30E-05	-538.5281	27.5058	-7.0779E-08	1142.0423	-.6339968
165240.						
312.000	2.20E-05	-384.8798	23.7498	-2.3866E-07	1140.4221	-.6180077
168480.						
318.000	2.02E-05	-253.4587	20.1651	-3.5472E-07	1139.0363	-.5768937
171720.						
324.000	1.78E-05	-142.7920	16.8815	-4.2676E-07	1137.8694	-.5176552
174960.						
330.000	1.50E-05	-50.7531	13.9888	-4.6194E-07	1136.8988	-.4465672
178200.						
336.000	1.22E-05	25.2122	11.5415	-4.6659E-07	1136.6295	-.3691972
181440.						
342.000	9.44E-06	87.8849	9.5625	-4.4603E-07	1137.2904	-.2904670
184680.						
348.000	6.86E-06	140.0961	8.0469	-4.0458E-07	1137.8409	-.2147483
187920.						
354.000	4.58E-06	184.5687	6.9647	-3.4555E-07	1138.3099	-.1459807
191160.						
360.000	2.71E-06	223.7759	2.2198	-2.7131E-07	1138.7233	-1.4356
3178588.						
366.000	1.33E-06	211.2876	-4.1949	-1.9221E-07	1138.5916	-.7025789
3178588.						
372.000	4.03E-07	173.4950	-6.9438	-1.2226E-07	1138.1931	-.2137120
3178588.						
378.000	-1.41E-07	127.9992	-7.3610	-6.7444E-08	1137.7134	.0746328
3178588.						
384.000	-4.06E-07	85.1832	-6.4920	-2.8685E-08	1137.2619	.2150386
3178588.						
390.000	-4.85E-07	50.1040	-5.0759	-4.0893E-09	1136.8920	.2569914
3178588.						
396.000	-4.55E-07	24.2737	-3.5818	9.4331E-09	1136.6196	.2410349
3178588.						
402.000	-3.72E-07	7.1194	-2.2676	1.5141E-08	1136.4387	.1970234
3178588.						
408.000	-2.73E-07	-2.9425	-1.2422	1.5900E-08	1136.3947	.1447833
3178588.						
414.000	-1.81E-07	-7.7920	-.5200366	1.3948E-08	1136.4458	.0959441
3178588.						
420.000	-1.06E-07	-9.1871	-.0638719	1.0861E-08	1136.4605	.0561108
3178588.						
426.000	-5.08E-08	-8.5617	.1851475	7.6346E-09	1136.4539	.0268957
3178588.						
432.000	-1.43E-08	-6.9676	.2885627	4.8113E-09	1136.4371	.0075761
3178588.						
438.000	6.97E-09	-5.1004	.3002192	2.6172E-09	1136.4174	-.0036905
3178588.						
444.000	1.71E-08	-3.3658	.2619610	1.0780E-09	1136.3991	-.0090622
3178588.						
450.000	1.99E-08	-1.9572	.2031431	1.1027E-10	1136.3843	-.0105438
3178588.						
456.000	1.84E-08	-.9280874	.1422222	-4.1429E-10	1136.3734	-.0097632
3178588.						
462.000	1.49E-08	-.2504051	.0892023	-6.2855E-10	1136.3663	-.0079100
3178588.						
468.000	1.09E-08	.1425294	.0481699	-6.4816E-10	1136.3651	-.0057674
3178588.						
474.000	7.15E-09	.3278286	.0194990	-5.6265E-10	1136.3671	-.0037896
3178588.						
480.000	4.14E-09	.3766859	.0015586	-4.3456E-10	1136.3676	-.0021906
3178588.						

486.000	1.94E-09	.3466617	-.0080941	-3.0305E-10	1136.3673	-.0010270
3178588.						
492.000	4.98E-10	.2796476	-.0119671	-1.8918E-10	1136.3666	-.0002640
3178588.						
498.000	-3.32E-10	.2031133	-.0122321	-1.0141E-10	1136.3658	.0001757
3178588.						
504.000	-7.19E-10	.1328933	-.0105629	-4.0327E-11	1136.3650	.0003807
3178588.						
510.000	-8.16E-10	.0763708	-.0081246	-2.2809E-12	1136.3644	.0004321
3178588.						
516.000	-7.46E-10	.0353986	-.0056428	1.8040E-11	1136.3640	.0003952
3178588.						
522.000	-5.99E-10	.0086512	-.0035051	2.6048E-11	1136.3637	.0003174
3178588.						
528.000	-4.33E-10	-.0066707	-.0018642	2.6408E-11	1136.3637	.0002296
3178588.						
534.000	-2.82E-10	-.0137269	-.0007269	2.2700E-11	1136.3638	.0001495
3178588.						
540.000	-1.61E-10	-.0154000	-2.2496E-05	1.7404E-11	1136.3638	8.5286E-05
3178588.						
546.000	-7.34E-11	-.0140020	.0003500	1.2059E-11	1136.3638	3.8865E-05
3178588.						
552.000	-1.63E-11	-.0112042	.0004924	7.4762E-12	1136.3638	8.6263E-06
3178588.						
558.000	1.64E-11	-.0080951	.0004923	3.9674E-12	1136.3637	-8.6625E-06
3178588.						
564.000	3.13E-11	-.0052975	.0004165	1.5326E-12	1136.3637	-1.6595E-05
3178588.						
570.000	3.47E-11	-.0030970	.0003115	6.3794E-15	1136.3637	-1.8405E-05
3178588.						
576.000	3.14E-11	-.0015589	.0002064	-8.4009E-13	1136.3637	-1.6636E-05
3178588.						
582.000	2.47E-11	-.0006196	.0001173	-1.2362E-12	1136.3636	-1.3065E-05
3178588.						
588.000	1.66E-11	-.0001506	5.1798E-05	-1.3762E-12	1136.3636	-8.7773E-06
3178588.						
594.000	8.15E-12	2.3618E-06	1.2519E-05	-1.4032E-12	1136.3636	-4.3158E-06
3178588.						
600.000	-2.70E-13	0.0000	0.0000	-1.4027E-12	1136.3636	1.4290E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	.02566018 in
Computed slope at pile head	=	2.891206E-19
Maximum bending moment	=	-208746.93841 lbs-in
Maximum shear force	=	5000.00000 lbs
Depth of maximum bending moment	=	0.00000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 15000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in
0.000	.076981	-626241.	15000.0000	-2.3130E-18	7739.9575	0.0000
6.000	.076297	-536224.	14876.3982	-.0002113	6790.7440	-41.2006
12.000	.074444	-447661.	14511.5964	-.0003902	5856.8624	-80.4000
18.000	.071615	-361968.	13922.3488	-.0005374	4953.2443	-116.0159
24.000	.067995	-280431.	13133.6908	-.0006542	4093.4591	-146.8701
30.000	.063764	-204167.	12176.5902	-.0007423	3289.2666	-172.1634
36.000	.059088	-134089.	11085.7680	-.0008038	2550.3121	-191.4440
42.000	.054119	-70896.6013	9897.7324	-.0008411	1883.9552	-204.5679
48.000	.048995	-15064.3347	8649.0574	-.0008567	1295.2143	-211.6571
54.000	.043838	33149.0997	7374.9280	-.0008534	1485.9148	-213.0527
60.000	.038754	73690.8278	6107.9607	-.0008340	1913.4198	-209.2697
66.000	.033830	106695.	4877.2998	-.0008012	2261.4409	-200.9506
72.000	.029139	132459.	3707.9809	-.0007577	2533.1171	-188.8224
78.000	.024737	151418.	2620.5437	-.0007061	2733.0376	-173.6567
84.000	.020666	164117.	1630.8701	-.0006487	2866.9486	-156.2345
90.000	.016953	171183.	750.2205	-.0005878	2941.4565	-137.3153
96.000	.013613	173296.	-14.5626	-.0005252	2963.7393	-117.6124
102.000	.010651	171166.	-660.7190	-.0004625	2941.2751	-97.7731
108.000	.008062	165506.	-1189.1322	-.0004013	2881.5965	-78.3646
114.000	.005835	157017.	-1603.8222	-.0003427	2792.0745	-59.8654
120.000	.003950	146363.	-1911.3990	-.0002875	2679.7365	-42.6602
126.000	.002385	134166.	-2120.5012	-.0002365	2551.1199	-27.0405
132.000	.001112	120988.	-2241.2453	-.0001901	2412.1612	-13.2075

138.000	.000103	107328.	-2284.7023	-.0001486	2268.1192	-1.2782
74520.0000						
144.000	-.000672	93616.2937	-2262.4190	-.0001121	2123.5302	8.7060
77760.0000						
150.000	-.001242	80212.7480	-2185.9925	-8.0488E-05	1982.1923	16.7695
81000.0000						
156.000	-.001638	67408.5298	-2066.7076	-5.3650E-05	1847.1741	22.9921
84240.0000						
162.000	-.001886	55428.3523	-1915.2382	-3.1317E-05	1720.8454	27.4976
87480.0000						
168.000	-.002013	44435.0664	-1741.4165	-1.3161E-05	1604.9232	30.4429
90720.0000						
174.000	-.002044	34535.3031	-1554.0643	1.1962E-06	1500.5320	32.0078
93960.0000						
180.000	-.001999	25785.9354	-1360.8863	1.2163E-05	1408.2716	32.3849
97200.0000						
186.000	-.001898	18201.0181	-1168.4159	2.0160E-05	1328.2900	31.7719
100440.						
192.000	-.001757	11758.8960	-982.0098	2.5607E-05	1260.3590	30.3635
103680.						
198.000	-.001591	6409.2187	-805.8816	2.8910E-05	1203.9477	28.3459
106920.						
204.000	-.001410	2079.6432	-643.1688	3.0453E-05	1158.2931	25.8917
110160.						
210.000	-.001225	-1317.9431	-496.0227	3.0592E-05	1150.2611	23.1570
113400.						
216.000	-.001043	-3881.8071	-365.7170	2.9647E-05	1177.2966	20.2783
116640.						
222.000	-.000869	-5715.4410	-252.7657	2.7902E-05	1196.6319	17.3721
119880.						
228.000	-.000708	-6923.3662	-157.0463	2.5604E-05	1209.3693	14.5343
123120.						
234.000	-.000562	-7607.6780	-77.9217	2.2962E-05	1216.5852	11.8405
126360.						
240.000	-.000433	-7865.3151	-14.3575	2.0149E-05	1219.3019	9.3475
129600.						
246.000	-.000320	-7786.0127	34.9688	1.7303E-05	1218.4657	7.0946
132840.						
252.000	-.000225	-7450.8810	71.5692	1.4533E-05	1214.9318	5.1056
136080.						
258.000	-.000146	-6931.5420	97.0592	1.1918E-05	1209.4555	3.3911
139320.						
264.000	-8.21E-05	-6289.7456	113.0841	9.5147E-06	1202.6878	1.9505
142560.						
270.000	-3.19E-05	-5577.3878	121.2585	7.3572E-06	1195.1762	.7743187
145800.						
276.000	6.19E-06	-4836.8503	123.1199	5.4638E-06	1187.3673	-.1538647
149040.						
282.000	3.37E-05	-4101.5881	120.0923	3.8388E-06	1179.6141	-.8553298
152280.						
288.000	5.23E-05	-3396.8940	113.4627	2.4755E-06	1172.1833	-1.3546
155520.						
294.000	6.34E-05	-2740.7789	104.3658	1.3596E-06	1165.2646	-1.6777
158760.						
300.000	6.86E-05	-2144.9129	93.7780	4.7135E-07	1158.9813	-1.8515
162000.						
306.000	6.91E-05	-1615.5843	82.5175	-2.1234E-07	1153.3997	-1.9020
165240.						
312.000	6.60E-05	-1154.6393	71.2495	-7.1598E-07	1148.5391	-1.8540
168480.						
318.000	6.05E-05	-760.3761	60.4953	-1.0641E-06	1144.3817	-1.7307
171720.						
324.000	5.33E-05	-428.3760	50.6444	-1.2803E-06	1140.8808	-1.5530

174960.						
330.000	4.51E-05	-152.2593	41.9664	-1.3858E-06	1137.9692	-1.3397
178200.						
336.000	3.66E-05	75.6365	34.6245	-1.3998E-06	1137.1612	-1.1076
181440.						
342.000	2.83E-05	263.6548	28.6875	-1.3381E-06	1139.1438	-.8714011
184680.						
348.000	2.06E-05	420.2884	24.1406	-1.2137E-06	1140.7955	-.6442449
187920.						
354.000	1.37E-05	553.7061	20.8940	-1.0367E-06	1142.2024	-.4379422
191160.						
360.000	8.13E-06	671.3278	6.6594	-8.1393E-07	1143.4427	-4.3069
3178588.						
366.000	3.98E-06	633.8629	-12.5847	-5.7664E-07	1143.0476	-2.1077
3178588.						
372.000	1.21E-06	520.4849	-20.8313	-3.6677E-07	1141.8521	-.6411361
3178588.						
378.000	-4.23E-07	383.9976	-22.0830	-2.0233E-07	1140.4128	.2238983
3178588.						
384.000	-1.22E-06	255.5497	-19.4759	-8.6056E-08	1139.0584	.6451159
3178588.						
390.000	-1.46E-06	150.3120	-15.2277	-1.2268E-08	1137.9486	.7709742
3178588.						
396.000	-1.36E-06	72.8212	-10.7454	2.8299E-08	1137.1315	.7231048
3178588.						
402.000	-1.12E-06	21.3582	-6.8029	4.5422E-08	1136.5889	.5910701
3178588.						
408.000	-8.20E-07	-8.8274	-3.7267	4.7700E-08	1136.4567	.4343500
3178588.						
414.000	-5.43E-07	-23.3760	-1.5601	4.1845E-08	1136.6101	.2878324
3178588.						
420.000	-3.18E-07	-27.5613	-.1916157	3.2584E-08	1136.6543	.1683323
3178588.						
426.000	-1.52E-07	-25.6851	.5554425	2.2904E-08	1136.6345	.0806871
3178588.						
432.000	-4.29E-08	-20.9029	.8656881	1.4434E-08	1136.5841	.0227282
3178588.						
438.000	2.09E-08	-15.3012	.9006577	7.8517E-09	1136.5250	-.0110716
3178588.						
444.000	5.13E-08	-10.0973	.7858830	3.2341E-09	1136.4701	-.0271866
3178588.						
450.000	5.97E-08	-5.8716	.6094293	3.3082E-10	1136.4256	-.0316313
3178588.						
456.000	5.53E-08	-2.7843	.4266665	-1.2429E-09	1136.3930	-.0292897
3178588.						
462.000	4.48E-08	-.7512154	.2676070	-1.8856E-09	1136.3716	-.0237301
3178588.						
468.000	3.27E-08	.4275881	.1445098	-1.9445E-09	1136.3681	-.0173023
3178588.						
474.000	2.15E-08	.9834858	.0584969	-1.6879E-09	1136.3740	-.0113687
3178588.						
480.000	1.24E-08	1.1301	.0046757	-1.3037E-09	1136.3756	-.0065717
3178588.						
486.000	5.82E-09	1.0400	-.0242823	-9.0916E-10	1136.3746	-.0030809
3178588.						
492.000	1.50E-09	.8389428	-.0359013	-5.6755E-10	1136.3725	-.0007921
3178588.						
498.000	-9.95E-10	.6093398	-.0366962	-3.0424E-10	1136.3701	.0005271
3178588.						
504.000	-2.16E-09	.3986799	-.0316886	-1.2098E-10	1136.3678	.0011421
3178588.						
510.000	-2.45E-09	.2291123	-.0243738	-6.8426E-12	1136.3661	.0012962
3178588.						

516.000	-2.24E-09	.1061958	-.0169285	5.4119E-11	1136.3648	.0011856
3178588.						
522.000	-1.80E-09	.0259536	-.0105154	7.8144E-11	1136.3639	.0009522
3178588.						
528.000	-1.30E-09	-.0200121	-.0055925	7.9225E-11	1136.3638	.0006888
3178588.						
534.000	-8.47E-10	-.0411806	-.0021806	6.8099E-11	1136.3641	.0004485
3178588.						
540.000	-4.83E-10	-.0462001	-6.7488E-05	5.2213E-11	1136.3641	.0002559
3178588.						
546.000	-2.20E-10	-.0420061	.0010499	3.6176E-11	1136.3641	.0001166
3178588.						
552.000	-4.89E-11	-.0336125	.0014773	2.2428E-11	1136.3640	2.5879E-05
3178588.						
558.000	4.91E-11	-.0242853	.0014770	1.1902E-11	1136.3639	-2.5988E-05
3178588.						
564.000	9.40E-11	-.0158924	.0012496	4.5977E-12	1136.3638	-4.9786E-05
3178588.						
570.000	1.04E-10	-.0092909	.0009346	1.9138E-14	1136.3637	-5.5216E-05
3178588.						
576.000	9.42E-11	-.0046767	.0006193	-2.5203E-12	1136.3637	-4.9907E-05
3178588.						
582.000	7.40E-11	-.0018589	.0003520	-3.7085E-12	1136.3637	-3.9194E-05
3178588.						
588.000	4.97E-11	-.0004519	.0001554	-4.1286E-12	1136.3636	-2.6332E-05
3178588.						
594.000	2.44E-11	7.0853E-06	3.7556E-05	-4.2095E-12	1136.3636	-1.2947E-05
3178588.						
600.000	-8.09E-13	0.0000	0.0000	-4.2082E-12	1136.3636	4.2870E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection	=	.07698055 in
Computed slope at pile head	=	-2.312965E-18
Maximum bending moment	=	-626240.81524 lbs-in
Maximum shear force	=	15000.00000 lbs
Depth of maximum bending moment	=	0.00000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 25000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth	Deflect.	Moment	Shear	Slope	Total	Soil Res.

X in	y in	M lbs-in	V lbs	S Rad.	Stress lbs/in**2	p lbs/in	Es*h F/L lbs/in
0.000	.128301	-1043735.	25000.0000	6.9389E-18	12142.3534	0.0000	0.0000
6.000	.127162	-893706.	24793.9970	-.0003522	10560.3309	-68.6677	3240.0000
12.000	.124074	-746101.	24185.9940	-.0006504	9003.8616	-134.0000	6480.0000
18.000	.119358	-603279.	23203.9146	-.0008957	7497.8314	-193.3599	9720.0000
24.000	.113326	-467385.	21889.4846	-.0010904	6064.8561	-244.7835	12960.0000
30.000	.106274	-340278.	20294.3170	-.0012372	4724.5352	-286.9391	16200.0000
36.000	.098479	-223482.	18476.2800	-.0013397	3492.9444	-319.0733	19440.0000
42.000	.090198	-118161.	16496.2206	-.0014018	2382.3496	-340.9466	22680.0000
48.000	.081658	-25107.2244	14415.0957	-.0014278	1401.1147	-352.7618	25920.0000
54.000	.073063	55248.4995	12291.5467	-.0014224	1718.9489	-355.0879	29160.0000
60.000	.064589	122818.	10179.9345	-.0013900	2431.4573	-348.7829	32400.0000
66.000	.056383	177825.	8128.8329	-.0013353	3011.4924	-334.9176	35640.0000
72.000	.048565	220765.	6179.9682	-.0012629	3464.2860	-314.7039	38880.0000
78.000	.041229	252363.	4367.5729	-.0011768	3797.4869	-289.4279	42120.0000
84.000	.034443	273529.	2718.1168	-.0010812	4020.6719	-260.3909	45360.0000
90.000	.028254	285305.	1250.3676	-.0009796	4144.8518	-228.8589	48600.0000
96.000	.022688	288827.	-24.2711	-.0008753	4181.9897	-196.0207	51840.0000
102.000	.017751	285276.	-1101.1984	-.0007709	4144.5494	-162.9551	55080.0000
108.000	.013437	275844.	-1981.8869	-.0006689	4045.0851	-130.6077	58320.0000
114.000	.009725	261694.	-2673.0370	-.0005711	3895.8818	-99.7756	61560.0000
120.000	.006583	243939.	-3185.6650	-.0004792	3708.6517	-71.1004	64800.0000
126.000	.003974	223610.	-3534.1687	-.0003942	3494.2907	-45.0676	68040.0000
132.000	.001853	201647.	-3735.4088	-.0003169	3262.6929	-22.0125	71280.0000
138.000	.000172	178880.	-3807.8372	-.0002477	3022.6228	-2.1303	74520.0000
144.000	-.001120	156027.	-3770.6983	-.0001868	2781.6412	14.5099	77760.0000
150.000	-.002070	133688.	-3643.3209	-.0001341	2546.0780	27.9492	81000.0000
156.000	-.002729	112348.	-3444.5126	-8.9416E-05	2321.0478	38.3202	84240.0000
162.000	-.003143	92380.5871	-3192.0637	-5.2195E-05	2110.4999	45.8294	87480.0000

168.000	-.003356	74058.4441	-2902.3608	-2.1935E-05	1917.2963	50.7382
90720.0000						
174.000	-.003407	57558.8385	-2590.1072	1.9936E-06	1743.3110	53.3463
93960.0000						
180.000	-.003332	42976.5590	-2268.1439	2.0272E-05	1589.5435	53.9749
97200.0000						
186.000	-.003163	30335.0301	-1947.3599	3.3600E-05	1456.2409	52.9531
100440.						
192.000	-.002929	19598.1600	-1636.6830	4.2678E-05	1343.0226	50.6058
103680.						
198.000	-.002651	10682.0311	-1343.1361	4.8184E-05	1249.0037	47.2431
106920.						
204.000	-.002350	3466.0721	-1071.9480	5.0756E-05	1172.9127	43.1529
110160.						
210.000	-.002042	-2196.5718	-826.7045	5.0987E-05	1159.5261	38.5949
113400.						
216.000	-.001739	-6469.6784	-609.5283	4.9411E-05	1204.5852	33.7971
116640.						
222.000	-.001449	-9525.7350	-421.2762	4.6503E-05	1236.8108	28.9536
119880.						
228.000	-.001181	-11538.9436	-261.7439	4.2673E-05	1258.0397	24.2239
123120.						
234.000	-.000937	-12679.4633	-129.8695	3.8270E-05	1270.0662	19.7342
126360.						
240.000	-.000721	-13108.8585	-23.9292	3.3582E-05	1274.5941	15.5792
129600.						
246.000	-.000534	-12976.6878	58.2813	2.8839E-05	1273.2004	11.8243
132840.						
252.000	-.000375	-12418.1350	119.2820	2.4222E-05	1267.3106	8.5093
136080.						
258.000	-.000243	-11552.5700	161.7654	1.9864E-05	1258.1834	5.6518
139320.						
264.000	-.000137	-10482.9094	188.4734	1.5858E-05	1246.9040	3.2509
142560.						
270.000	-5.31E-05	-9295.6463	202.0976	1.2262E-05	1234.3845	1.2905
145800.						
276.000	1.03E-05	-8061.4171	205.1998	9.1064E-06	1221.3698	-.2564412
149040.						
282.000	5.62E-05	-6835.9801	200.1539	6.3979E-06	1208.4478	-1.4255
152280.						
288.000	8.71E-05	-5661.4900	189.1044	4.1258E-06	1196.0630	-2.2576
155520.						
294.000	.000106	-4567.9648	173.9429	2.2660E-06	1184.5320	-2.7962
158760.						
300.000	.000114	-3574.8548	156.2967	7.8558E-07	1174.0598	-3.0859
162000.						
306.000	.000115	-2692.6405	137.5292	-3.5389E-07	1164.7570	-3.1700
165240.						
312.000	.000110	-1924.3988	118.7491	-1.1933E-06	1156.6561	-3.0900
168480.						
318.000	.000101	-1267.2935	100.8256	-1.7736E-06	1149.7270	-2.8845
171720.						
324.000	8.88E-05	-713.9600	84.4073	-2.1338E-06	1143.8922	-2.5883
174960.						
330.000	7.52E-05	-253.7655	69.9440	-2.3097E-06	1139.0395	-2.2328
178200.						
336.000	6.10E-05	126.0608	57.7075	-2.3329E-06	1137.6929	-1.8460
181440.						
342.000	4.72E-05	439.4247	47.8126	-2.2301E-06	1140.9973	-1.4523
184680.						
348.000	3.43E-05	700.4806	40.2343	-2.0229E-06	1143.7501	-1.0737
187920.						
354.000	2.29E-05	922.8436	34.8234	-1.7278E-06	1146.0949	-.7299037

191160.						
360.000	1.35E-05	1118.8797	11.0990	-1.3566E-06	1148.1620	-7.1782
3178588.						
366.000	6.63E-06	1056.4381	-20.9744	-9.6107E-07	1147.5036	-3.5129
3178588.						
372.000	2.02E-06	867.4748	-34.7188	-6.1129E-07	1145.5110	-1.0686
3178588.						
378.000	-7.04E-07	639.9960	-36.8050	-3.3722E-07	1143.1123	.3731639
3178588.						
384.000	-2.03E-06	425.9161	-32.4599	-1.4343E-07	1140.8548	1.0752
3178588.						
390.000	-2.43E-06	250.5200	-25.3795	-2.0446E-08	1139.0053	1.2850
3178588.						
396.000	-2.27E-06	121.3687	-17.9091	4.7166E-08	1137.6434	1.2052
3178588.						
402.000	-1.86E-06	35.5970	-11.3382	7.5703E-08	1136.7390	.9851168
3178588.						
408.000	-1.37E-06	-14.7124	-6.2111	7.9500E-08	1136.5188	.7239166
3178588.						
414.000	-9.06E-07	-38.9600	-2.6002	6.9742E-08	1136.7745	.4797207
3178588.						
420.000	-5.30E-07	-45.9355	-.3193595	5.4307E-08	1136.8480	.2805539
3178588.						
426.000	-2.54E-07	-42.8086	.9257374	3.8173E-08	1136.8150	.1344784
3178588.						
432.000	-7.15E-08	-34.8381	1.4428	2.4056E-08	1136.7310	.0378803
3178588.						
438.000	3.48E-08	-25.5020	1.5011	1.3086E-08	1136.6326	-.0184527
3178588.						
444.000	8.55E-08	-16.8289	1.3098	5.3901E-09	1136.5411	-.0453110
3178588.						
450.000	9.95E-08	-9.7860	1.0157	5.5137E-10	1136.4668	-.0527188
3178588.						
456.000	9.21E-08	-4.6404	.7111108	-2.0715E-09	1136.4126	-.0488162
3178588.						
462.000	7.47E-08	-1.2520	.4460117	-3.1427E-09	1136.3768	-.0395502
3178588.						
468.000	5.44E-08	.7126469	.2408497	-3.2408E-09	1136.3712	-.0288372
3178588.						
474.000	3.58E-08	1.6391	.0974949	-2.8132E-09	1136.3809	-.0189478
3178588.						
480.000	2.07E-08	1.8834	.0077928	-2.1728E-09	1136.3835	-.0109529
3178588.						
486.000	9.69E-09	1.7333	-.0404705	-1.5153E-09	1136.3819	-.0051349
3178588.						
492.000	2.49E-09	1.3982	-.0598355	-9.4592E-10	1136.3784	-.0013201
3178588.						
498.000	-1.66E-09	1.0156	-.0611603	-5.0707E-10	1136.3743	.0008785
3178588.						
504.000	-3.59E-09	.6644665	-.0528144	-2.0163E-10	1136.3706	.0019034
3178588.						
510.000	-4.08E-09	.3818539	-.0406231	-1.1404E-11	1136.3677	.0021603
3178588.						
516.000	-3.73E-09	.1769930	-.0282142	9.0198E-11	1136.3655	.0019759
3178588.						
522.000	-3.00E-09	.0432559	-.0175256	1.3024E-10	1136.3641	.0015869
3178588.						
528.000	-2.17E-09	-.0333535	-.0093209	1.3204E-10	1136.3640	.0011480
3178588.						
534.000	-1.41E-09	-.0686343	-.0036344	1.1350E-10	1136.3644	.0007475
3178588.						
540.000	-8.05E-10	-.0770001	-.0001125	8.7022E-11	1136.3644	.0004264
3178588.						

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 546.000 -3.67E-10   -.0700102    .0017498  6.0294E-11   1136.3644    .0001943
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 552.000 -8.14E-11   -.0560208    .0024622  3.7381E-11   1136.3642  4.3132E-05
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 564.000  1.57E-10   -.0264874    .0020827  7.6628E-12   1136.3639 -8.2976E-05
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 570.000  1.74E-10   -.0154849    .0015577  3.1897E-14   1136.3638 -9.2026E-05
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 576.000  1.57E-10   -.0077945    .0010321 -4.2005E-12   1136.3637 -8.3179E-05
3178588.
 582.000  1.23E-10   -.0030981    .0005866 -6.1808E-12   1136.3637 -6.5323E-05
3178588.
 588.000  8.28E-11   -.0007532    .0002590 -6.8810E-12   1136.3636 -4.3886E-05
3178588.
 594.000  4.07E-11  1.1809E-05  6.2594E-05 -7.0158E-12   1136.3636 -2.1579E-05
3178588.
 600.000 -1.35E-12      0.0000      0.0000 -7.0137E-12   1136.3636  7.1450E-07
1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No.  5:

Pile-head deflection             =      .12830092 in
Computed slope at pile head      =   6.938894E-18
Maximum bending moment           =     -1043735. lbs-in
Maximum shear force              =    25000.00000 lbs
Depth of maximum bending moment  =        0.00000 in
Depth of maximum shear force     =        0.00000 in
Number of iterations             =              5
Number of zero deflection points =              7



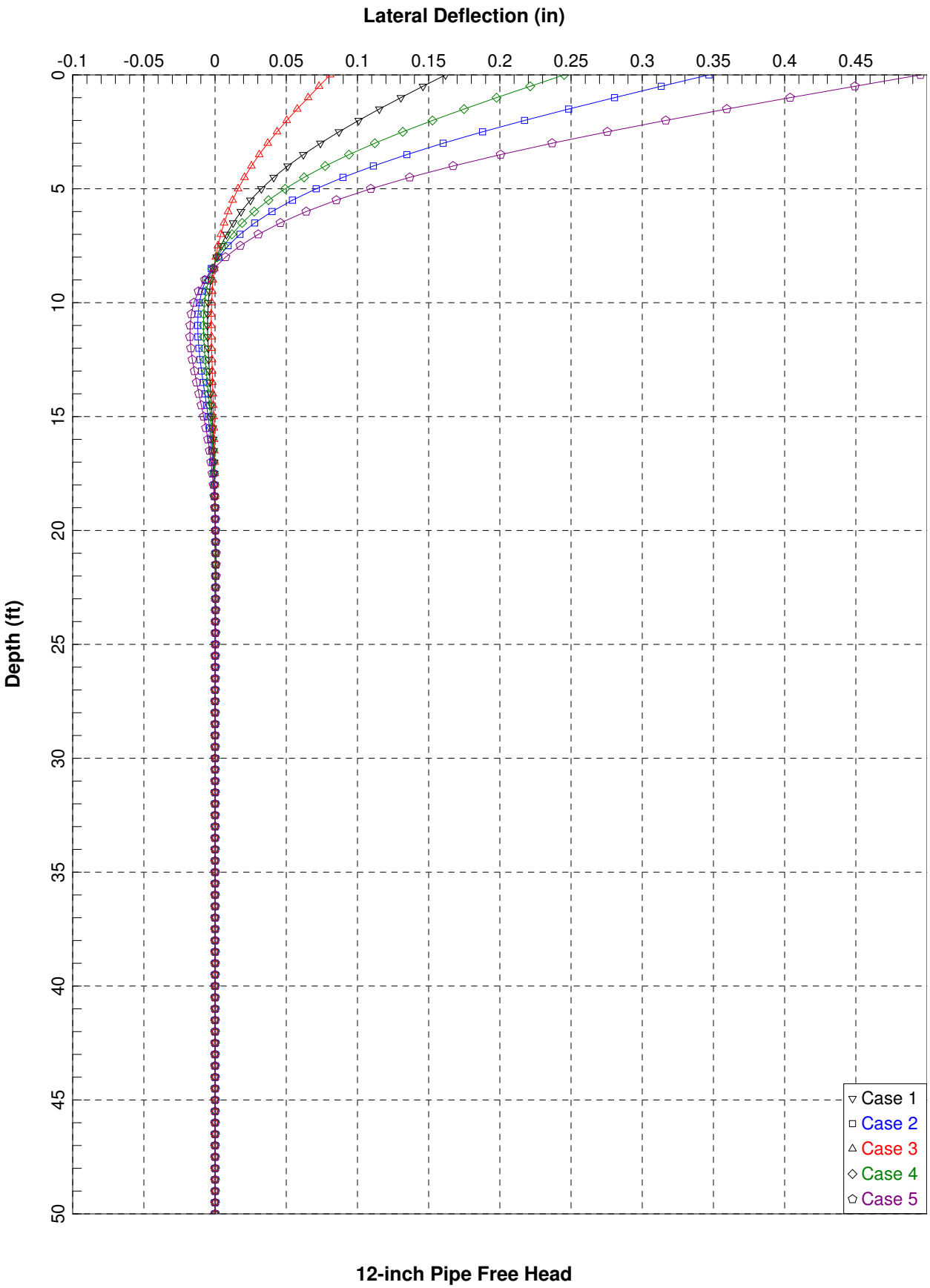

--------------------------------------------------------------------------------
                          Summary of Pile Response(s)
--------------------------------------------------------------------------------

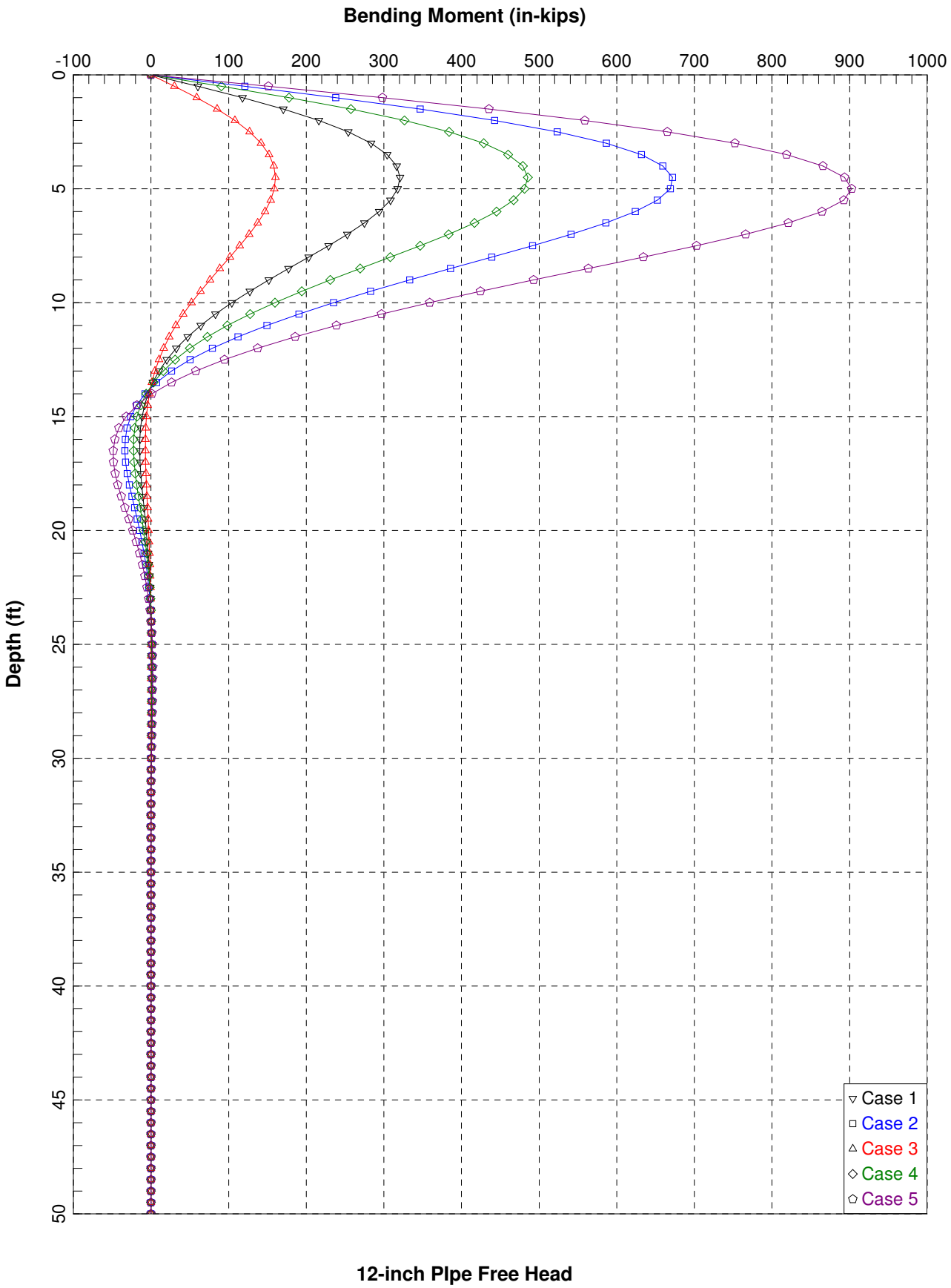
Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment,          y = pile-head displacment in
Type 2 = Shear and Slope,           M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness,  V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment,     S = Pile-head Slope, radians
Type 5 = Deflection and Slope,      R = Rot. Stiffness of Pile-head in-lbs/rad

Load  Pile-Head    Pile-Head       Axial    Pile-Head    Maximum     Maximum
Type  Condition    Condition       Load     Deflection    Moment      Shear
         1           2            lbs         in        in-lbs       lbs
---- ------------ ------------ ----------- ----------- ----------- -----------
  2  V=    10000. S=     0.000  25000.0000    .0513204    -417494.  10000.0000
  2  V=    20000. S=     0.000  25000.0000    .1026407    -834988.  20000.0000
  2  V=  5000.000 S=     0.000  25000.0000    .0256602    -208747.   5000.0000
  2  V=    15000. S=     0.000  25000.0000    .0769806    -626241.  15000.0000
  2  V=    25000. S=     0.000  25000.0000    .1283009   -1043735.  25000.0000
```

The analysis ended normally.


Lateral Deflection (in)
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
12-inch Pipe Free Head


Bending Moment (in-kips)
-100
0
100
200
300
400
500
600
700
800
900
1000
0
5
10
15
20
25
30
35
40
45
50
Depth (ft)
Case 1
Case 2
Case 3
Case 4
Case 5
12-inch Plpe Free Head

LVMWD Westlake Reservoir 12-inch pipe.lpo

LPILE Plus for Windows, Version 5.0 (5.0.39)

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

This program is licensed to:

greg denlinger
Fugro West

Path to file locations: O:\Management\04_2012\04_6212_0197_AECOM_LVWMD 5MG Reservoir\03_ENGINEERING\Preliminary Pile Calcs\
Name of input data file: LVMWD Westlake Reservoir 12-inch pipe.lpd
Name of output file: LVMWD Westlake Reservoir 12-inch pipe.lpo
Name of plot output file: LVMWD Westlake Reservoir 12-inch pipe.lpp
Name of runtime file: LVMWD Westlake Reservoir 12-inch pipe.lpr

Time and Date of Analysis

Date: February 8, 2013 Time: 16:02:02

Problem Title

LVMWD Westlake Reservoir 12-inch Pipe

Program Options

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 1:
- Computation of Lateral Pile Response Using User-specified Constant EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 100

- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 600.00 in

Depth of ground surface below top of pile = .00 in

Slope angle of ground surface = -25.00 deg.

Structural properties of pile defined using 2 points

Point	Depth X in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	12.00000000	362.0000	19.0000	29000000.
2	600.0000	12.00000000	362.0000	19.0000	29000000.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by Reese et al., 1974
Distance from top of pile to top of layer = .000 in
Distance from top of pile to bottom of layer = 360.000 in
p-y subgrade modulus k for top of soil layer = 90.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 90.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 360.000 in
Distance from top of pile to bottom of layer = 700.000 in

(Depth of lowest layer extends 100.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	.00	.03300
2	360.00	.03300
3	360.00	.03300
4	700.00	.03300

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	.000	.00000	35.00	------	------
2	360.000	.00000	35.00	------	------
3	360.000	14.00000	.00	.01000	.0
4	700.000	14.00000	.00	.01000	.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Loading Type

Cyclic loading criteria was used for computation of p-y curves.

Number of cycles of loading = 10.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 10000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 20000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 5000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 15000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Shear force at pile head = 25000.000 lbs
Bending moment at pile head = .000 in-lbs
Axial load at pile head = 25000.000 lbs

(Zero moment at pile head for this load indicates a free-head condition)

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 10000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in	F/L lbs/in
0.000	.161820	3.2375E-08	10000.0000	-.0026271	1315.7895	0.0000	0.0000
6.000	.146057	60394.0711	9763.3882	-.0026099	2316.7962	-78.8706	3240.0000
12.000	.130501	117944.	9103.9533	-.0025589	3270.6561	-140.9410	6480.0000
18.000	.115350	170409.	8120.5309	-.0024765	4140.2511	-186.8664	9720.0000
24.000	.100783	216133.	6906.8594	-.0023661	4898.1035	-217.6907	12960.0000
30.000	.086957	254001.	5549.4356	-.0022317	5525.7560	-234.7839	16200.0000
36.000	.074002	283396.	4125.7817	-.0020781	6012.9556	-239.7674	19440.0000
42.000	.062019	304134.	2703.1797	-.0019102	6356.6868	-234.4333	22680.0000

48.000	.051079	316407.	1337.8903	-.0017329	6560.1030	-220.6632
25920.0000						
54.000	.041225	320709.	74.8471	-.0015508	6631.4031	-200.3512
29160.0000						
60.000	.032469	317770.	-1052.2106	-.0013684	6582.7010	-175.3347
32400.0000						
66.000	.024804	308493.	-2020.2214	-.0011894	6428.9278	-147.3355
35640.0000						
72.000	.018196	293884.	-2815.9666	-.0010173	6186.8033	-117.9128
38880.0000						
78.000	.012597	275006.	-3434.9913	-.0008547	5873.9043	-88.4287
42120.0000						
84.000	.007940	252921.	-3880.3568	-.0007038	5507.8505	-60.0264
45360.0000						
90.000	.004151	228653.	-4161.2967	-.0005662	5105.6204	-33.6202
48600.0000						
96.000	.001145	203155.	-4291.8457	-.0004428	4683.0047	-9.8961
51840.0000						
102.000	-.001163	177284.	-4289.4994	-.0003341	4254.1955	10.6782
55080.0000						
108.000	-.002864	151782.	-4173.9547	-.0002401	3831.5059	27.8366
58320.0000						
114.000	-.004044	127268.	-3965.9703	-.0001603	3425.2103	41.4915
61560.0000						
120.000	-.004788	104238.	-3686.3735	-9.4166E-05	3043.4913	51.7074
64800.0000						
126.000	-.005174	83060.1592	-3355.2320	-4.0642E-05	2692.4772	58.6731
68040.0000						
132.000	-.005275	63987.4184	-2991.1966	1.3800E-06	2376.3544	62.6720
71280.0000						
138.000	-.005157	47165.3856	-2611.0146	3.3144E-05	2097.5362	64.0553
74520.0000						
144.000	-.004878	32645.2999	-2229.2039	5.5951E-05	1856.8718	63.2149
77760.0000						
150.000	-.004486	20398.1537	-1857.8754	7.1110E-05	1653.8804	60.5612
81000.0000						
156.000	-.004024	10329.4617	-1506.6849	7.9891E-05	1486.9960	56.5023
84240.0000						
162.000	-.003527	2293.9676	-1182.8927	8.3498E-05	1353.8110	51.4284
87480.0000						
168.000	-.003022	-3890.2996	-891.5110	8.3042E-05	1380.2696	45.6988
90720.0000						
174.000	-.002531	-8429.0770	-635.5164	7.9521E-05	1455.4979	39.6327
93960.0000						
180.000	-.002068	-11540.3533	-416.1061	7.3815E-05	1507.0660	33.5040
97200.0000						
186.000	-.001645	-13444.4946	-232.9795	6.6675E-05	1538.6264	27.5381
100440.						
192.000	-.001268	-14356.1101	-84.6292	5.8730E-05	1553.7361	21.9120
103680.						
198.000	-.000940	-14477.6639	31.3745	5.0490E-05	1555.7508	16.7559
106920.						
204.000	-.000662	-13994.7630	118.1146	4.2354E-05	1547.7469	12.1574
110160.						
210.000	-.000432	-13072.9951	179.0836	3.4619E-05	1532.4690	8.1656
113400.						
216.000	-.000247	-11856.1456	217.9704	2.7495E-05	1512.3002	4.7967
116640.						
222.000	-.000102	-10465.5986	238.4806	2.1116E-05	1489.2524	2.0400
119880.						
228.000	6.65E-06	-9000.7133	244.1914	1.5553E-05	1464.9726	-.1364099
123120.						
234.000	8.45E-05	-7539.9672	238.4414	1.0826E-05	1440.7613	-1.7803

126360.							
240.000	.000137	-6142.6645	224.2513	6.9162E-06	1417.6016	-2.9498	
129600.							
246.000	.000168	-4851.0265	204.2748	3.7746E-06	1396.1932	-3.7091	
132840.							
252.000	.000182	-3692.4991	180.7740	1.3331E-06	1376.9911	-4.1245	
136080.							
258.000	.000184	-2682.1382	155.6161	-4.8859E-07	1360.2448	-4.2614	
139320.							
264.000	.000176	-1824.9594	130.2869	-1.7766E-06	1346.0374	-4.1816	
142560.							
270.000	.000162	-1118.1628	105.9172	-2.6176E-06	1334.3226	-3.9416	
145800.							
276.000	.000145	-553.1681	83.3180	-3.0952E-06	1324.9580	-3.5914	
149040.							
282.000	.000125	-117.4178	63.0214	-3.2869E-06	1317.7356	-3.1741	
152280.							
288.000	.000105	204.0750	45.3234	-3.2621E-06	1319.1719	-2.7252	
155520.							
294.000	8.59E-05	427.4417	30.3276	-3.0816E-06	1322.8741	-2.2734	
158760.							
300.000	6.82E-05	568.9301	17.9864	-2.7969E-06	1325.2193	-1.8403	
162000.							
306.000	5.24E-05	644.1177	8.1399	-2.4503E-06	1326.4655	-1.4418	
165240.							
312.000	3.88E-05	667.3435	.5493863	-2.0755E-06	1326.8504	-1.0883	
168480.							
318.000	2.74E-05	651.3329	-5.0723	-1.6987E-06	1326.5850	-.7855839	
171720.							
324.000	1.84E-05	606.9856	-9.0364	-1.3391E-06	1325.8500	-.5357755	
174960.							
330.000	1.14E-05	543.2982	-11.6577	-1.0103E-06	1324.7944	-.3379862	
178200.							
336.000	6.25E-06	467.3968	-13.2386	-7.2152E-07	1323.5364	-.1889836	
181440.							
342.000	2.72E-06	384.6519	-14.0568	-4.7803E-07	1322.1649	-.0837745	
184680.							
348.000	5.13E-07	298.8581	-14.3564	-2.8271E-07	1320.7429	-.0160683	
187920.							
354.000	-6.71E-07	212.4602	-14.3405	-1.3659E-07	1319.3109	.0213714	
191160.							
360.000	-1.13E-06	126.8135	-12.4867	-3.9637E-08	1317.8914	.5965403	
3178588.							
366.000	-1.15E-06	62.6314	-8.8751	1.4501E-08	1316.8276	.6073388	
3178588.							
372.000	-9.52E-07	20.3081	-5.5400	3.8202E-08	1316.1261	.5043559	
3178588.							
378.000	-6.88E-07	-3.8601	-2.9335	4.2903E-08	1315.8535	.3644796	
3178588.							
384.000	-4.37E-07	-14.9067	-1.1452	3.7540E-08	1316.0365	.2316158	
3178588.							
390.000	-2.38E-07	-17.6139	-.0728654	2.8246E-08	1316.0814	.1258328	
3178588.							
396.000	-9.82E-08	-15.7896	.4607787	1.8701E-08	1316.0512	.0520486	
3178588.							
402.000	-1.31E-08	-12.0901	.6377713	1.0734E-08	1315.9899	.0069490	
3178588.							
408.000	3.06E-08	-8.1395	.6100583	4.9526E-09	1315.9244	-.0161867	
3178588.							
414.000	4.63E-08	-4.7709	.4878921	1.2632E-09	1315.8685	-.0245354	
3178588.							
420.000	4.57E-08	-2.2852	.3416355	-7.5326E-10	1315.8273	-.0242168	
3178588.							

426.000	3.73E-08	-.6710786	.2097446	-1.5981E-09	1315.8006	-.0197468
3178588.						
432.000	2.65E-08	.2322151	.1083313	-1.7235E-09	1315.7933	-.0140576
3178588.						
438.000	1.66E-08	.6294144	.0397875	-1.4773E-09	1315.7999	-.0087903
3178588.						
444.000	8.81E-09	.7101081	-.0005828	-1.0945E-09	1315.8012	-.0046665
3178588.						
450.000	3.46E-09	.6227485	-.0200801	-7.1357E-10	1315.7998	-.0018326
3178588.						
456.000	2.46E-10	.4693606	-.0259685	-4.0148E-10	1315.7973	-.0001302
3178588.						
462.000	-1.36E-09	.3112471	-.0242000	-1.7841E-10	1315.7946	.0007197
3178588.						
468.000	-1.90E-09	.1790144	-.0190289	-3.8307E-11	1315.7924	.0010040
3178588.						
474.000	-1.82E-09	.0829112	-.0131273	3.6543E-11	1315.7908	.0009632
3178588.						
480.000	-1.46E-09	.0214754	-.0079227	6.6373E-11	1315.7898	.0007717
3178588.						
486.000	-1.02E-09	-.0121806	-.0039838	6.9029E-11	1315.7897	.0005412
3178588.						
492.000	-6.28E-10	-.0263511	-.0013615	5.8018E-11	1315.7899	.0003329
3178588.						
498.000	-3.25E-10	-.0285357	.0001544	4.2333E-11	1315.7899	.0001724
3178588.						
504.000	-1.20E-10	-.0245114	.0008629	2.7174E-11	1315.7899	6.3760E-05
3178588.						
510.000	6.62E-13	-.0181896	.0010531	1.4972E-11	1315.7898	-3.5078E-07
3178588.						
516.000	5.93E-11	-.0118789	.0009578	6.3789E-12	1315.7897	-3.1417E-05
3178588.						
522.000	7.72E-11	-.0066982	.0007408	1.0702E-12	1315.7896	-4.0903E-05
3178588.						
528.000	7.21E-11	-.0029894	.0005034	-1.6982E-12	1315.7895	-3.8220E-05
3178588.						
534.000	5.68E-11	-.0006563	.0002985	-2.7401E-12	1315.7895	-3.0107E-05
3178588.						
540.000	3.93E-11	.0005930	.0001457	-2.7582E-12	1315.7895	-2.0801E-05
3178588.						
546.000	2.37E-11	.0010935	4.5624E-05	-2.2762E-12	1315.7895	-1.2573E-05
3178588.						
552.000	1.19E-11	.0011412	-1.1085E-05	-1.6376E-12	1315.7895	-6.3306E-06
3178588.						
558.000	4.08E-12	.0009609	-3.6562E-05	-1.0369E-12	1315.7895	-2.1618E-06
3178588.						
564.000	-4.93E-13	.0007028	-4.2264E-05	-5.6149E-13	1315.7895	2.6127E-07
3178588.						
570.000	-2.66E-12	.0004539	-3.7257E-05	-2.3094E-13	1315.7895	1.4077E-06
3178588.						
576.000	-3.26E-12	.0002557	-2.7846E-05	-2.8138E-14	1315.7895	1.7294E-06
3178588.						
582.000	-2.99E-12	.0001198	-1.7898E-05	7.9178E-14	1315.7895	1.5865E-06
3178588.						
588.000	-2.31E-12	4.0944E-05	-9.4602E-06	1.2511E-13	1315.7895	1.2261E-06
3178588.						
594.000	-1.49E-12	6.2309E-06	-3.4085E-06	1.3859E-13	1315.7895	7.9118E-07
3178588.						
600.000	-6.51E-13	0.0000	0.0000	1.4037E-13	1315.7895	3.4499E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	.16181953 in
Computed slope at pile head	=	-.00262714
Maximum bending moment	=	320708.69178 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	54.00000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	8

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 20000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in	F/L lbs/in
0.000	.346775	-8.0938E-08	20000.0000	-.0055635	1315.7895	0.0000	0.0000
6.000	.313394	120835.	19687.3963	-.0055289	3318.5716	-104.2012	1994.9546
12.000	.280428	237907.	18679.0619	-.0054264	5259.0066	-231.9103	4961.9233
18.000	.248277	346611.	16938.5069	-.0052594	7060.7263	-348.2747	8416.5900
24.000	.217315	442747.	14613.6711	-.0050338	8654.1430	-426.6706	11780.2239
30.000	.187872	523485.	11877.4038	-.0047577	9992.3427	-485.4185	15502.6631
36.000	.160223	586703.	8905.7084	-.0044404	11040.1566	-505.1466	18916.6156
42.000	.134587	631686.	5945.7476	-.0040922	11785.7233	-481.5070	21466.0536
48.000	.111116	659280.	3250.3673	-.0037233	12243.0844	-416.9531	22514.4441
54.000	.089907	671807.	721.3542	-.0033429	12450.7190	-426.0513	28432.9332
60.000	.071001	668939.	-1707.0122	-.0029598	12403.1806	-383.4042	32400.0000
66.000	.054389	652211.	-3826.4353	-.0025823	12125.9200	-323.0702	35640.0000
72.000	.040014	623797.	-5573.5112	-.0022176	11654.9616	-259.2884	38880.0000

78.000	.027778	585994.	-6936.3707	-.0018719	11028.4032	-194.9981	42120.0000
84.000	.017551	541122.	-7919.4188	-.0015498	10284.6597	-132.6846	45360.0000
90.000	.009180	491426.	-8540.5435	-.0012547	9460.9764	-74.3570	48600.0000
96.000	.002494	439012.	-8828.2608	-.0009888	8592.2271	-21.5488	51840.0000
102.000	-.002686	385784.	-8818.9282	-.0007531	7709.9961	24.6597	55080.0000
108.000	-.006544	333411.	-8578.7668	-.0005476	6841.9310	55.3941	50792.0767
114.000	-.009258	283003.	-8195.3685	-.0003715	6006.4450	72.4054	46926.7181
120.000	-.011001	235178.	-7718.3090	-.0002234	5213.7601	86.6145	47238.9672
126.000	-.011938	190450.	-7162.2078	-.0001018	4472.4225	98.7526	49631.3886
132.000	-.012222	149262.	-6538.8150	-4.6774E-06	3789.7385	109.0450	53530.7973
138.000	-.011994	111986.	-5859.0256	6.9979E-05	3171.9080	117.5515	58802.9440
144.000	-.011383	78932.2921	-5133.5510	.0001245	2624.0595	124.2734	65507.2314
150.000	-.010500	50345.8427	-4373.1381	.0001615	2150.2510	129.1976	73827.1866
156.000	-.009445	26406.1902	-3588.5955	.0001834	1753.4611	132.3166	84056.9016
162.000	-.008299	7227.6729	-2828.6460	.0001930	1435.5852	120.9998	87480.0000
168.000	-.007128	-7595.4699	-2142.2987	.0001929	1441.6812	107.7826	90720.0000
174.000	-.005984	-18537.7872	-1537.8234	.0001855	1623.0456	93.7091	93960.0000
180.000	-.004903	-26104.9871	-1018.4080	.0001727	1748.4688	79.4294	97200.0000
186.000	-.003912	-30810.4915	-583.6774	.0001564	1826.4606	65.4808	100440.
192.000	-.003026	-33156.0456	-230.3733	.0001382	1865.3372	52.2872	103680.
198.000	-.002254	-33616.4167	46.9779	.0001191	1872.9677	40.1632	106920.
204.000	-.001597	-32628.0313	255.4329	.0001001	1856.5856	29.3218	110160.
210.000	-.001052	-30581.2633	403.0559	8.2076E-05	1822.6612	19.8858	113400.
216.000	-.000612	-27815.9837	498.4135	6.5387E-05	1776.8279	11.9000	116640.
222.000	-.000268	-24619.9181	550.1482	5.0403E-05	1723.8544	5.3449	119880.
228.000	-7.31E-06	-21229.3267	566.6325	3.7301E-05	1667.6568	.1499327	123120.
234.000	.000180	-17831.5177	555.7038	2.6138E-05	1611.3395	-3.7928	126360.
240.000	.000306	-14568.7225	524.4736	1.6879E-05	1557.2600	-6.6172	129600.
246.000	.000383	-11542.8983	479.2064	9.4174E-06	1507.1082	-8.4718	132840.
252.000	.000419	-8821.0709	425.2575	3.5980E-06	1461.9951	-9.5111	136080.
258.000	.000426	-6440.8879	367.0611	-7.6335E-07	1422.5445	-9.8877	139320.
264.000	.000410	-4416.1087	308.1589	-3.8659E-06	1388.9846	-9.7464	

142560.						
270.000	.000379	-2741.8210	251.2590	-5.9115E-06	1361.2340	-9.2202
145800.						
276.000	.000339	-1399.2272	198.3163	-7.0948E-06	1338.9811	-8.4273
149040.						
282.000	.000294	-359.8972	150.6266	-7.5975E-06	1321.7546	-7.4692
152280.						
288.000	.000248	410.5713	108.9271	-7.5831E-06	1322.5945	-6.4306
155520.						
294.000	.000203	949.5033	73.4974	-7.1944E-06	1331.5271	-5.3793
158760.						
300.000	.000162	1294.6989	44.2569	-6.5531E-06	1337.2486	-4.3676
162000.						
306.000	.000125	1482.5518	20.8546	-5.7594E-06	1340.3622	-3.4332
165240.						
312.000	9.26E-05	1546.6820	2.7503	-4.8938E-06	1341.4251	-2.6016
168480.						
318.000	6.59E-05	1517.0234	-10.7158	-4.0182E-06	1340.9335	-1.8871
171720.						
324.000	4.44E-05	1419.2980	-20.2639	-3.1791E-06	1339.3137	-1.2956
174960.						
330.000	2.78E-05	1274.8108	-26.6264	-2.4092E-06	1336.9189	-.8253027
178200.						
336.000	1.55E-05	1100.5035	-30.5102	-1.7305E-06	1334.0299	-.4692740
181440.						
342.000	7.02E-06	909.2080	-32.5665	-1.1561E-06	1330.8592	-.2161538
184680.						
348.000	1.64E-06	710.0529	-33.3694	-6.9341E-07	1327.5583	-.0515102
187920.						
354.000	-1.30E-06	508.9827	-33.3999	-3.4504E-07	1324.2257	.0413646
191160.						
360.000	-2.50E-06	309.3579	-29.3091	-1.1119E-07	1320.9170	1.3222
3178588.						
366.000	-2.63E-06	157.3068	-21.1585	2.2171E-08	1318.3968	1.3946
3178588.						
372.000	-2.23E-06	55.4493	-13.4307	8.2970E-08	1316.7085	1.1813
3178588.						
378.000	-1.64E-06	-3.8868	-7.2853	9.7705E-08	1315.8539	.8671870
3178588.						
384.000	-1.06E-06	-32.0039	-3.0033	8.7449E-08	1316.3199	.5601535
3178588.						
390.000	-5.88E-07	-39.9526	-.3890552	6.6886E-08	1316.4517	.3112608
3178588.						
396.000	-2.55E-07	-36.6926	.9495754	4.4983E-08	1316.3976	.1349494
3178588.						
402.000	-4.78E-08	-28.5712	1.4303	2.6333E-08	1316.2630	.0252967
3178588.						
408.000	6.13E-08	-19.5367	1.4089	1.2585E-08	1316.1133	-.0324511
3178588.						
414.000	1.03E-07	-11.6688	1.1474	3.6672E-09	1315.9829	-.0547069
3178588.						
420.000	1.05E-07	-5.7693	.8159634	-1.3160E-09	1315.8851	-.0557642
3178588.						
426.000	8.75E-08	-1.8768	.5096490	-3.5011E-09	1315.8206	-.0463406
3178588.						
432.000	6.32E-08	.3475402	.2701052	-3.9381E-09	1315.7952	-.0335073
3178588.						
438.000	4.02E-08	1.3656	.1056668	-3.4485E-09	1315.8121	-.0213055
3178588.						
444.000	2.19E-08	1.6166	.0069969	-2.5963E-09	1315.8163	-.0115845
3178588.						
450.000	9.06E-09	1.4504	-.0421574	-1.7199E-09	1315.8135	-.0048003
3178588.						

456.000	1.23E-09	1.1112	-.0585112	-9.8786E-10	1315.8079	-.0006510
3178588.						
462.000	-2.79E-09	.7485191	-.0560249	-4.5641E-10	1315.8019	.0014797
3178588.						
468.000	-4.25E-09	.4390404	-.0448343	-1.1704E-10	1315.7968	.0022505
3178588.						
474.000	-4.20E-09	.2105424	-.0314116	6.8590E-11	1315.7930	.0022237
3178588.						
480.000	-3.43E-09	.0620811	-.0192969	1.4650E-10	1315.7905	.0018145
3178588.						
486.000	-2.44E-09	-.0210645	-.0099762	1.5822E-10	1315.7898	.0012924
3178588.						
492.000	-1.53E-09	-.0576808	-.0036729	1.3572E-10	1315.7904	.0008087
3178588.						
498.000	-8.11E-10	-.0651806	4.1994E-05	1.0061E-10	1315.7906	.0004297
3178588.						
504.000	-3.19E-10	-.0572070	.0018382	6.5631E-11	1315.7904	.0001691
3178588.						
510.000	-2.35E-11	-.0431415	.0023828	3.6955E-11	1315.7902	1.2434E-05
3178588.						
516.000	1.24E-10	-.0286246	.0022226	1.6446E-11	1315.7899	-6.5842E-05
3178588.						
522.000	1.74E-10	-.0164756	.0017487	3.5579E-12	1315.7897	-9.2117E-05
3178588.						
528.000	1.67E-10	-.0076414	.0012070	-3.3340E-12	1315.7896	-8.8460E-05
3178588.						
534.000	1.34E-10	-.0019912	.0007288	-6.0867E-12	1315.7895	-7.0922E-05
3178588.						
540.000	9.39E-11	.0011061	.0003667	-6.3397E-12	1315.7895	-4.9766E-05
3178588.						
546.000	5.78E-11	.0024117	.0001256	-5.3344E-12	1315.7895	-3.0620E-05
3178588.						
552.000	2.99E-11	.0026147	-1.3835E-05	-3.8980E-12	1315.7895	-1.5854E-05
3178588.						
558.000	1.10E-11	.0022468	-7.8915E-05	-2.5087E-12	1315.7895	-5.8392E-06
3178588.						
564.000	-1.78E-13	.0016685	-9.6150E-05	-1.3899E-12	1315.7895	9.4215E-08
3178588.						
570.000	-5.66E-12	.0010934	-8.6878E-05	-6.0060E-13	1315.7895	2.9965E-06
3178588.						
576.000	-7.39E-12	.0006261	-6.6151E-05	-1.0920E-13	1315.7895	3.9123E-06
3178588.						
582.000	-6.97E-12	.0002996	-4.3343E-05	1.5537E-13	1315.7895	3.6907E-06
3178588.						
588.000	-5.52E-12	.0001060	-2.3497E-05	2.7128E-13	1315.7895	2.9246E-06
3178588.						
594.000	-3.71E-12	1.7606E-05	-8.8246E-06	3.0660E-13	1315.7895	1.9661E-06
3178588.						
600.000	-1.84E-12	0.0000	0.0000	3.1163E-13	1315.7895	9.7550E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	.34677504 in
Computed slope at pile head	=	-.00556346
Maximum bending moment	=	671807.41557 lbs-in
Maximum shear force	=	20000.00000 lbs
Depth of maximum bending moment	=	54.00000000 in

Depth of maximum shear force = 0.00000 in
Number of iterations = 12
Number of zero deflection points = 8

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 5000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. p lbs/in	Es*h F/L lbs/in
0.000	.080910	1.6188E-08	5000.0000	-.0013136	1315.7895	0.0000	0.0000
6.000	.073028	30197.0356	4881.6941	-.0013049	1816.2928	-39.4353	3240.0000
12.000	.065250	58971.8114	4551.9766	-.0012795	2293.2228	-70.4705	6480.0000
18.000	.057675	85204.5932	4060.2655	-.0012383	2728.0203	-93.4332	9720.0000
24.000	.050391	108066.	3453.4297	-.0011830	3106.9465	-108.8454	12960.0000
30.000	.043478	127001.	2774.7178	-.0011159	3420.7728	-117.3919	16200.0000
36.000	.037001	141698.	2062.8909	-.0010391	3664.3725	-119.8837	19440.0000
42.000	.031010	152067.	1351.5899	-.0009551	3836.2381	-117.2166	22680.0000
48.000	.025540	158203.	668.9451	-.0008665	3937.9462	-110.3316	25920.0000
54.000	.020612	160354.	37.4236	-.0007754	3973.5963	-100.1756	29160.0000
60.000	.016235	158885.	-526.1053	-.0006842	3949.2453	-87.6674	32400.0000
66.000	.012402	154246.	-1010.1107	-.0005947	3872.3586	-73.6678	35640.0000
72.000	.009098	146942.	-1407.9833	-.0005086	3751.2964	-58.9564	38880.0000
78.000	.006298	137503.	-1717.4957	-.0004274	3594.8469	-44.2144	42120.0000
84.000	.003970	126461.	-1940.1784	-.0003519	3411.8200	-30.0132	45360.0000
90.000	.002075	114327.	-2080.6483	-.0002831	3210.7049	-16.8101	48600.0000
96.000	.000573	101578.	-2145.9228	-.0002214	2999.3971	-4.9481	51840.0000
102.000	-.000582	88641.9142	-2144.7497	-.0001671	2784.9925	5.3391	55080.0000

108.000	-.001432	75890.7783	-2086.9774	-.0001200	2573.6477	13.9183
58320.0000						
114.000	-.002022	63634.1958	-1982.9852	-8.0161E-05	2370.4999	20.7457
61560.0000						
120.000	-.002394	52119.0048	-1843.1868	-4.7083E-05	2179.6404	25.8537
64800.0000						
126.000	-.002587	41530.0796	-1677.6160	-2.0321E-05	2004.1333	29.3365
68040.0000						
132.000	-.002638	31993.7092	-1495.5983	6.9001E-07	1846.0719	31.3360
71280.0000						
138.000	-.002579	23582.6928	-1305.5073	1.6572E-05	1706.6628	32.0276
74520.0000						
144.000	-.002439	16322.6499	-1114.6019	2.7976E-05	1586.3306	31.6075
77760.0000						
150.000	-.002243	10199.0769	-928.9377	3.5555E-05	1484.8349	30.2806
81000.0000						
156.000	-.002012	5164.7308	-753.3425	3.9945E-05	1401.3927	28.2512
84240.0000						
162.000	-.001764	1146.9838	-591.4463	4.1749E-05	1334.8003	25.7142
87480.0000						
168.000	-.001511	-1945.1498	-445.7555	4.1521E-05	1348.0295	22.8494
90720.0000						
174.000	-.001265	-4214.5385	-317.7582	3.9761E-05	1385.6437	19.8164
93960.0000						
180.000	-.001034	-5770.1767	-208.0531	3.6907E-05	1411.4278	16.7520
97200.0000						
186.000	-.000823	-6722.2473	-116.4898	3.3337E-05	1427.2079	13.7691
100440.						
192.000	-.000634	-7178.0551	-42.3146	2.9365E-05	1434.7628	10.9560
103680.						
198.000	-.000470	-7238.8319	15.6873	2.5245E-05	1435.7701	8.3780
106920.						
204.000	-.000331	-6997.3815	59.0573	2.1177E-05	1431.7682	6.0787
110160.						
210.000	-.000216	-6536.4975	89.5418	1.7309E-05	1424.1292	4.0828
113400.						
216.000	-.000123	-5928.0728	108.9852	1.3747E-05	1414.0448	2.3983
116640.						
222.000	-5.11E-05	-5232.7993	119.2403	1.0558E-05	1402.5210	1.0200
119880.						
228.000	3.32E-06	-4500.3567	122.0957	7.7765E-06	1390.3810	-.0682050
123120.						
234.000	4.23E-05	-3769.9836	119.2207	5.4131E-06	1378.2754	-.8901369
126360.						
240.000	6.83E-05	-3071.3322	112.1256	3.4581E-06	1366.6955	-1.4749
129600.						
246.000	8.38E-05	-2425.5132	102.1374	1.8873E-06	1355.9914	-1.8545
132840.						
252.000	9.09E-05	-1846.2495	90.3870	6.6654E-07	1346.3903	-2.0623
136080.						
258.000	9.18E-05	-1341.0691	77.8080	-2.4430E-07	1338.0171	-2.1307
139320.						
264.000	8.80E-05	-912.4797	65.1434	-8.8829E-07	1330.9134	-2.0908
142560.						
270.000	8.11E-05	-559.0814	52.9586	-1.3088E-06	1325.0560	-1.9708
145800.						
276.000	7.23E-05	-276.5841	41.6590	-1.5476E-06	1320.3737	-1.7957
149040.						
282.000	6.25E-05	-58.7089	31.5107	-1.6434E-06	1316.7625	-1.5870
152280.						
288.000	5.26E-05	102.0375	22.6617	-1.6311E-06	1317.4807	-1.3626
155520.						
294.000	4.30E-05	213.7209	15.1638	-1.5408E-06	1319.3318	-1.1367

158760.
 300.000 3.41E-05   284.4651   8.9932 -1.3985E-06   1320.5044   -.9201684
162000.
 306.000 2.62E-05   322.0588   4.0699 -1.2251E-06   1321.1275   -.7209233
165240.
 312.000 1.94E-05   333.6717   .2746932 -1.0377E-06   1321.3199   -.5441549
168480.
 318.000 1.37E-05   325.6665   -2.5361 -8.4933E-07   1321.1873   -.3927919
171720.
 324.000 9.19E-06   303.4928   -4.5182 -6.6953E-07   1320.8197   -.2678877
174960.
 330.000 5.69E-06   271.6491   -5.8288 -5.0517E-07   1320.2919   -.1689931
178200.
 336.000 3.12E-06   233.6984   -6.6193 -3.6076E-07   1319.6629   -.0944918
181440.
 342.000 1.36E-06   192.3259   -7.0284 -2.3902E-07   1318.9772   -.0418873
184680.
 348.000 2.57E-07   149.4290   -7.1782 -1.4135E-07   1318.2662   -.0080342
187920.
 354.000 -3.35E-07   106.2301   -7.1702 -6.8295E-08   1317.5502   .0106857
191160.
 360.000 -5.63E-07   63.4068   -6.2434 -1.9818E-08   1316.8404   .2982701
3178588.
 366.000 -5.73E-07   31.3157   -4.4375 7.2504E-09   1316.3085   .3036694
3178588.
 372.000 -4.76E-07   10.1541   -2.7700 1.9101E-08   1315.9578   .2521780
3178588.
 378.000 -3.44E-07   -1.9300   -1.4667 2.1451E-08   1315.8215   .1822398
3178588.
 384.000 -2.19E-07   -7.4534   -.5726056 1.8770E-08   1315.9130   .1158079
3178588.
 390.000 -1.19E-07   -8.8069   -.0364327 1.4123E-08   1315.9354   .0629164
3178588.
 396.000 -4.91E-08   -7.8948   .2303893 9.3504E-09   1315.9203   .0260243
3178588.
 402.000 -6.56E-09   -6.0451   .3188857 5.3668E-09   1315.8897   .0034745
3178588.
 408.000 1.53E-08   -4.0698   .3050291 2.4763E-09   1315.8569   -.0080933
3178588.
 414.000 2.32E-08   -2.3855   .2439461 6.3158E-10   1315.8290   -.0122677
3178588.
 420.000 2.29E-08   -1.1426   .1708177 -3.7663E-10   1315.8084   -.0121084
3178588.
 426.000 1.86E-08   -.3355393   .1048723 -7.9903E-10   1315.7950   -.0098734
3178588.
 432.000 1.33E-08   .1161076   .0541657 -8.6174E-10   1315.7914   -.0070288
3178588.
 438.000 8.30E-09   .3147072   .0198937 -7.3863E-10   1315.7947   -.0043952
3178588.
 444.000 4.40E-09   .3550541   -.0002914 -5.4723E-10   1315.7954   -.0023332
3178588.
 450.000 1.73E-09   .3113743   -.0100401 -3.5679E-10   1315.7946   -.0009163
3178588.
 456.000 1.23E-10   .2346803   -.0129842 -2.0074E-10   1315.7934 -6.5076E-05
3178588.
 462.000 -6.79E-10   .1556235   -.0121000 -8.9204E-11   1315.7921   .0003598
3178588.
 468.000 -9.48E-10   .0895072   -.0095145 -1.9154E-11   1315.7910   .0005020
3178588.
 474.000 -9.09E-10   .0414556   -.0065637 1.8271E-11   1315.7902   .0004816
3178588.
 480.000 -7.28E-10   .0107377   -.0039613 3.3187E-11   1315.7897   .0003859
3178588.

486.000	-5.11E-10	-.0060903	-.0019919	3.4515E-11	1315.7896	.0002706
3178588.						
492.000	-3.14E-10	-.0131756	-.0006807	2.9009E-11	1315.7897	.0001664
3178588.						
498.000	-1.63E-10	-.0142678	7.7185E-05	2.1167E-11	1315.7897	8.6200E-05
3178588.						
504.000	-6.02E-11	-.0122557	.0004314	1.3587E-11	1315.7897	3.1880E-05
3178588.						
510.000	3.31E-13	-.0090948	.0005265	7.4858E-12	1315.7896	-1.7539E-07
3178588.						
516.000	2.97E-11	-.0059395	.0004789	3.1895E-12	1315.7896	-1.5708E-05
3178588.						
522.000	3.86E-11	-.0033491	.0003704	5.3509E-13	1315.7895	-2.0451E-05
3178588.						
528.000	3.61E-11	-.0014947	.0002517	-8.4912E-13	1315.7895	-1.9110E-05
3178588.						
534.000	2.84E-11	-.0003282	.0001492	-1.3700E-12	1315.7895	-1.5053E-05
3178588.						
540.000	1.96E-11	.0002965	7.2873E-05	-1.3791E-12	1315.7895	-1.0400E-05
3178588.						
546.000	1.19E-11	.0005467	2.2812E-05	-1.1381E-12	1315.7895	-6.2863E-06
3178588.						
552.000	5.97E-12	.0005706	-5.5425E-06	-8.1882E-13	1315.7895	-3.1653E-06
3178588.						
558.000	2.04E-12	.0004805	-1.8281E-05	-5.1846E-13	1315.7895	-1.0809E-06
3178588.						
564.000	-2.47E-13	.0003514	-2.1132E-05	-2.8074E-13	1315.7895	1.3064E-07
3178588.						
570.000	-1.33E-12	.0002270	-1.8628E-05	-1.1547E-13	1315.7895	7.0383E-07
3178588.						
576.000	-1.63E-12	.0001279	-1.3923E-05	-1.4069E-14	1315.7895	8.6470E-07
3178588.						
582.000	-1.50E-12	5.9896E-05	-8.9490E-06	3.9589E-14	1315.7895	7.9327E-07
3178588.						
588.000	-1.16E-12	2.0472E-05	-4.7301E-06	6.2556E-14	1315.7895	6.1303E-07
3178588.						
594.000	-7.47E-13	3.1155E-06	-1.7043E-06	6.9296E-14	1315.7895	3.9559E-07
3178588.						
600.000	-3.26E-13	0.0000	0.0000	7.0187E-14	1315.7895	1.7250E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	.08090976 in
Computed slope at pile head	=	-.00131357
Maximum bending moment	=	160354.34589 lbs-in
Maximum shear force	=	5000.00000 lbs
Depth of maximum bending moment	=	54.00000000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	8

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head = 15000.000 lbs
Specified moment at pile head = .000 in-lbs
Specified axial load at pile head = 25000.000 lbs

(Zero moment for this load indicates free-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in	F/L lbs/in
0.000	.245185	1.6188E-08	15000.0000	-.0039793	1315.7895	0.0000	0.0000
6.000	.221309	90596.8975	14717.0582	-.0039534	2817.3955	-94.3139	2556.9813
12.000	.197744	177791.	13799.2705	-.0038767	4262.5971	-211.6153	6420.8840
18.000	.174789	257351.	12314.9525	-.0037524	5581.2784	-283.1574	9720.0000
24.000	.152715	326696.	10475.8840	-.0035855	6730.6382	-329.8655	12960.0000
30.000	.131763	384137.	8419.0092	-.0033823	7682.7079	-355.7595	16200.0000
36.000	.112127	428739.	6261.8528	-.0031500	8421.9555	-363.2926	19440.0000
42.000	.093962	460225.	4106.4437	-.0028960	8943.8226	-355.1770	22680.0000
48.000	.077375	478885.	2038.1298	-.0026276	9253.1068	-334.2609	25920.0000
54.000	.062430	485471.	125.1109	-.0023521	9362.2621	-303.4120	29160.0000
60.000	.049150	481092.	-1581.3630	-.0020758	9289.6861	-265.4126	32400.0000
66.000	.037520	467117.	-3046.2124	-.0018049	9058.0587	-222.8705	35640.0000
72.000	.027492	445079.	-4249.2670	-.0015442	8692.7841	-178.1477	38880.0000
78.000	.018990	416589.	-5183.6366	-.0012980	8220.5790	-133.3088	42120.0000
84.000	.011916	383264.	-5853.8259	-.0010694	7668.2386	-90.0877	45360.0000
90.000	.006157	346664.	-6273.7078	-.0008608	7061.5996	-49.8730	48600.0000
96.000	.001587	308238.	-6464.4551	-.0006737	6424.7095	-13.7095	51840.0000
102.000	-.001927	269293.	-6452.5236	-.0005086	5779.2012	17.6866	55080.0000
108.000	-.004517	230960.	-6267.7603	-.0003657	5143.8636	43.9011	58320.0000
114.000	-.006314	194189.	-5955.2651	-.0002442	4534.3930	60.2639	57262.4950
120.000	-.007446	159571.	-5558.9997	-.0001431	3960.6051	71.8245	57872.5484
126.000	-.008031	127524.	-5098.5819	-6.1023E-05	3429.4470	81.6480	60997.5258
132.000	-.008179	98405.8657	-4583.8549	3.5406E-06	2946.8259	89.9276	65971.5554

138.000	-.007989	72516.6848	-4023.8977	5.2385E-05	2517.7235	96.7248
72645.3331						
144.000	-.007550	50103.3782	-3440.1737	8.7426E-05	2146.2322	97.8499
77760.0000						
150.000	-.006940	31208.3722	-2865.5669	.0001107	1833.0553	93.6857
81000.0000						
156.000	-.006222	15683.3763	-2322.4308	.0001241	1575.7349	87.3597
84240.0000						
162.000	-.005451	3301.9839	-1821.9280	.0001295	1370.5185	79.4746
87480.0000						
168.000	-.004668	-6218.6059	-1371.7481	.0001287	1418.8603	70.5854
90720.0000						
174.000	-.003907	-13197.5896	-976.4374	.0001231	1534.5341	61.1849
93960.0000						
180.000	-.003191	-17972.7864	-637.7966	.0001142	1613.6810	51.6954
97200.0000						
186.000	-.002537	-20885.4082	-355.3173	.0001031	1661.9565	42.4644
100440.						
192.000	-.001954	-22267.5227	-126.6317	9.0762E-05	1684.8644	33.7642
103680.						
198.000	-.001448	-22432.2169	52.0472	7.7988E-05	1687.5942	25.7954
106920.						
204.000	-.001018	-21666.3528	185.5097	6.5386E-05	1674.9003	18.6921
110160.						
210.000	-.000663	-20225.7165	279.1734	5.3415E-05	1651.0223	12.5292
113400.						
216.000	-.000377	-18332.2968	338.7538	4.2396E-05	1619.6397	7.3310
116640.						
222.000	-.000154	-16173.3901	369.9873	3.2536E-05	1583.8567	3.0802
119880.						
228.000	1.33E-05	-13902.2102	378.4079	2.3941E-05	1546.2128	-.2733062
123120.						
234.000	.000133	-11639.6775	369.1770	1.6642E-05	1508.7123	-2.8037
126360.						
240.000	.000213	-9477.0789	346.9622	1.0607E-05	1472.8681	-4.6013
129600.						
246.000	.000260	-7479.3132	315.8616	5.7617E-06	1439.7560	-5.7656
132840.						
252.000	.000282	-5688.4680	279.3665	1.9988E-06	1410.0735	-6.3994
136080.						
258.000	.000284	-4127.5147	240.3568	-8.0631E-07	1384.2013	-6.6038
139320.						
264.000	.000272	-2803.9443	201.1226	-2.7871E-06	1362.2637	-6.4743
142560.						
270.000	.000251	-1713.2074	163.4051	-4.0780E-06	1344.1852	-6.0982
145800.						
276.000	.000224	-841.8599	128.4514	-4.8081E-06	1329.7430	-5.5530
149040.						
282.000	.000193	-170.3484	97.0777	-5.0974E-06	1318.6129	-4.9049
152280.						
288.000	.000162	324.6013	69.7361	-5.0533E-06	1321.1696	-4.2089
155520.						
294.000	.000133	668.0011	46.5820	-4.7696E-06	1326.8613	-3.5091
158760.						
300.000	.000105	885.0160	27.5378	-4.3258E-06	1330.4582	-2.8390
162000.						
306.000	8.07E-05	999.7526	12.3528	-3.7872E-06	1332.3600	-2.2227
165240.						
312.000	5.97E-05	1034.3854	.6554884	-3.2059E-06	1332.9340	-1.6764
168480.						
318.000	4.22E-05	1008.5802	-8.0001	-2.6221E-06	1332.5063	-1.2088
171720.						
324.000	2.82E-05	939.1702	-14.0966	-2.0655E-06	1331.3558	-.8233119

174960.						
330.000	1.75E-05	840.0405	-18.1215	-1.5571E-06	1329.7128	-.5183098
178200.						
336.000	9.55E-06	722.1796	-20.5427	-1.1106E-06	1327.7593	-.2887742
181440.						
342.000	4.12E-06	593.8609	-21.7898	-7.3456E-07	1325.6325	-.1269315
184680.						
348.000	7.35E-07	460.9218	-22.2397	-4.3313E-07	1323.4291	-.0230119
187920.						
354.000	-1.07E-06	327.1147	-22.2061	-2.0794E-07	1321.2113	.0342100
191160.						
360.000	-1.76E-06	194.5112	-19.3055	-5.8872E-08	1319.0134	.9326520
3178588.						
366.000	-1.78E-06	95.4664	-13.6782	2.3995E-08	1317.3718	.9430993
3178588.						
372.000	-1.47E-06	30.3651	-8.5086	5.9953E-08	1316.2928	.7801144
3178588.						
378.000	-1.06E-06	-6.6548	-4.4824	6.6729E-08	1315.8998	.5619657
3178588.						
384.000	-6.72E-07	-23.4433	-1.7287	5.8128E-08	1316.1780	.3559067
3178588.						
390.000	-3.63E-07	-27.4171	-.0837145	4.3594E-08	1316.2439	.1924367
3178588.						
396.000	-1.49E-07	-24.4609	.7299202	2.8768E-08	1316.1949	.0787749
3178588.						
402.000	-1.80E-08	-18.6667	.9948975	1.6444E-08	1316.0989	.0095509
3178588.						
408.000	4.86E-08	-12.5271	.9462651	7.5296E-09	1315.9971	-.0257617
3178588.						
414.000	7.23E-08	-7.3138	.7540308	1.8597E-09	1315.9107	-.0383164
3178588.						
420.000	7.09E-08	-3.4793	.5263287	-1.2246E-09	1315.8471	-.0375843
3178588.						
426.000	5.76E-08	-.9974988	.3219816	-2.5039E-09	1315.8060	-.0305314
3178588.						
432.000	4.09E-08	.3852432	.1653881	-2.6789E-09	1315.7959	-.0216664
3178588.						
438.000	2.55E-08	.9879615	.0598850	-2.2865E-09	1315.8058	-.0135013
3178588.						
444.000	1.35E-08	1.1045	-.0020115	-1.6885E-09	1315.8078	-.0071309
3178588.						
450.000	5.22E-09	.9643296	-.0317059	-1.0973E-09	1315.8055	-.0027672
3178588.						
456.000	2.93E-10	.7244075	-.0404737	-6.1468E-10	1315.8015	-.0001554
3178588.						
462.000	-2.15E-09	.4788301	-.0375184	-2.7084E-10	1315.7974	.0011405
3178588.						
468.000	-2.96E-09	.2742681	-.0293979	-5.5625E-11	1315.7940	.0015664
3178588.						
474.000	-2.82E-09	.1260726	-.0202164	5.8779E-11	1315.7916	.0014941
3178588.						
480.000	-2.25E-09	.0316530	-.0121561	1.0385E-10	1315.7900	.0011927
3178588.						
486.000	-1.57E-09	-.0198313	-.0060763	1.0723E-10	1315.7898	.0008339
3178588.						
492.000	-9.65E-10	-.0412947	-.0020416	8.9763E-11	1315.7902	.0005110
3178588.						
498.000	-4.97E-10	-.0443573	.0002812	6.5286E-11	1315.7902	.0002632
3178588.						
504.000	-1.81E-10	-.0379400	.0013589	4.1768E-11	1315.7901	9.6000E-05
3178588.						
510.000	4.35E-12	-.0280634	.0016400	2.2907E-11	1315.7899	-2.3022E-06
3178588.						

 516.000 9.37E-11   -.0182673   .0014842 9.6668E-12   1315.7898 -4.9622E-05
3178588.
 522.000 1.20E-10   -.0102560   .0011441 1.5157E-12   1315.7896 -6.3756E-05
3178588.
 528.000 1.12E-10   -.0045390   .0007750 -2.7122E-12   1315.7895 -5.9258E-05
3178588.
 534.000 8.78E-11   -.0009549   .0004577 -4.2822E-12   1315.7895 -4.6514E-05
3178588.
 540.000 6.05E-11   .0009548   .0002221 -4.2822E-12   1315.7895 -3.2035E-05
3178588.
 546.000 3.64E-11   .0017111 6.8084E-05 -3.5204E-12   1315.7895 -1.9291E-05
3178588.
 552.000 1.82E-11   .0017729 -1.8756E-05 -2.5247E-12   1315.7895 -9.6555E-06
3178588.
 558.000 6.12E-12   .0014868 -5.7445E-05 -1.5932E-12   1315.7895 -3.2408E-06
3178588.
 564.000 -8.93E-13   .0010840 -6.5748E-05 -8.5855E-13   1315.7895 4.7285E-07
3178588.
 570.000 -4.19E-12   .0006981 -5.7678E-05 -3.4928E-13   1315.7895 2.2172E-06
3178588.
 576.000 -5.08E-12   .0003920 -4.2947E-05 -3.7775E-14   1315.7895 2.6933E-06
3178588.
 582.000 -4.64E-12   .0001828 -2.7495E-05 1.2646E-13   1315.7895 2.4573E-06
3178588.
 588.000 -3.57E-12 6.1991E-05 -1.4455E-05 1.9640E-13   1315.7895 1.8894E-06
3178588.
 594.000 -2.28E-12 9.2379E-06 -5.1605E-06 2.1676E-13   1315.7895 1.2088E-06
3178588.
 600.000 -9.65E-13   0.0000   0.0000 2.1940E-13   1315.7895 5.1139E-07
1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection   =   .24518518 in
Computed slope at pile head   =   -.00397932
Maximum bending moment   =   485470.51310 lbs-in
Maximum shear force   =   15000.00000 lbs
Depth of maximum bending moment =   54.00000000 in
Depth of maximum shear force   =   0.00000 in
Number of iterations   =   6
Number of zero deflection points =   8

             Computed Values of Load Distribution and Deflection
                 for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Moment (BC Type 1)
Specified shear force at pile head =   25000.000 lbs
Specified moment at pile head   =   .000 in-lbs
Specified axial load at pile head   =   25000.000 lbs

(Zero moment for this load indicates free-head conditions)

  Depth   Deflect.   Moment   Shear   Slope   Total   Soil Res.

X in	y in	M lbs-in	V lbs	S Rad.	Stress lbs/in**2	p lbs/in	Es*h F/L lbs/in
0.000	.495268	-2.2663E-07	25000.0000	-.0076631	1315.7895	0.0000	0.0000
6.000	.449290	151149.	24643.6266	-.0076199	3821.0292	-118.7911	1586.3855
12.000	.403830	298009.	23500.6753	-.0074915	6255.1732	-262.1926	3895.5923
18.000	.359392	435405.	21541.4594	-.0072819	8532.4473	-390.8793	6525.6853
24.000	.316446	558692.	18961.0975	-.0069979	10575.8708	-469.2413	8897.0748
30.000	.275417	665038.	15955.6547	-.0066481	12338.5112	-532.5730	11602.1691
36.000	.236669	752154.	12666.4802	-.0062432	13782.4283	-563.8185	14293.8694
42.000	.200499	818908.	9295.8739	-.0057942	14888.8545	-559.7170	16749.6885
48.000	.167138	865443.	6076.9082	-.0053129	15660.1423	-513.2716	18425.6406
54.000	.136745	893425.	2964.3840	-.0048102	16123.9389	-524.2365	23002.0809
60.000	.109415	902458.	-187.1302	-.0042970	16273.6619	-526.2683	28858.9077
66.000	.085181	892469.	-3283.8538	-.0037841	16108.0861	-505.9729	35640.0000
72.000	.064006	864187.	-6046.0547	-.0032821	15639.3356	-414.7608	38880.0000
78.000	.045795	820901.	-8254.7891	-.0028006	14921.8757	-321.4841	42120.0000
84.000	.030400	765970.	-9908.7057	-.0023471	14011.4245	-229.8214	45360.0000
90.000	.017631	702700.	-11026.5926	-.0019274	12962.7539	-142.8075	48600.0000
96.000	.007271	634229.	-11643.4838	-.0015453	11827.8737	-62.8229	51840.0000
102.000	-.000913	563442.	-11806.8002	-.0012031	10654.6068	8.3841	55080.0000
108.000	-.007166	492908.	-11608.0632	-.0009012	9485.5420	57.8615	48449.3812
114.000	-.011728	424416.	-11191.1511	-.0006391	8350.3018	81.1092	41496.4995
120.000	-.014834	358806.	-10647.8889	-.0004152	7262.8553	99.9782	40438.2200
126.000	-.016710	296765.	-9999.8015	-.0002279	6234.5543	116.0510	41669.0581
132.000	-.017569	238877.	-9262.2717	-7.4818E-05	5275.0776	129.7923	44325.7688
138.000	-.017608	185641.	-8448.8794	4.6496E-05	4392.7066	141.3385	48161.1326
144.000	-.017011	137477.	-7572.7446	.0001388	3594.4063	150.7065	53156.3562
150.000	-.015942	94726.0801	-6647.0078	.0002052	2885.8350	157.8725	59416.7879
156.000	-.014549	57650.8999	-5684.9650	.0002487	2271.3293	162.8084	67143.6747
162.000	-.012957	26431.8807	-4700.0390	.0002728	1753.8869	165.5002	76635.7689

168.000	-.011276	1168.6036	-3705.6686	.0002806	1335.1586	165.9566	88309.8069
174.000	-.009590	-18120.3372	-2757.2782	.0002758	1616.1266	150.1736	93960.0000
180.000	-.007966	-32001.4756	-1919.6161	.0002615	1846.2007	129.0471	97200.0000
186.000	-.006452	-41234.1744	-1208.4626	.0002406	1999.2288	108.0040	100440.
192.000	-.005079	-46575.1931	-621.1429	.0002155	2087.7540	87.7692	103680.
198.000	-.003866	-48752.5266	-151.1407	.0001882	2123.8424	68.8982	106920.
204.000	-.002821	-48445.3470	210.9137	.0001604	2118.7510	51.7866	110160.
210.000	-.001941	-46269.6952	476.3304	.0001334	2082.6905	36.6856	113400.
216.000	-.001220	-42769.3953	657.5446	.0001079	2024.6745	23.7191	116640.
222.000	-.000646	-38411.5397	767.4154	8.4732E-05	1952.4448	12.9045	119880.
228.000	-.000203	-33585.8301	818.6464	6.4157E-05	1872.4607	4.1725	123120.
234.000	.000124	-28607.0296	823.3288	4.6384E-05	1789.9391	-2.6118	126360.
240.000	.000353	-23719.7999	792.6015	3.1431E-05	1708.9353	-7.6307	129600.
246.000	.000501	-19105.2403	736.4208	1.9193E-05	1632.4509	-11.0963	132840.
252.000	.000584	-14888.5082	663.4249	9.4785E-06	1562.5603	-13.2357	136080.
258.000	.000615	-11146.9853	580.8818	2.0384E-06	1500.5461	-14.2786	139320.
264.000	.000608	-7918.5377	494.7044	-3.4100E-06	1447.0360	-14.4472	142560.
270.000	.000574	-5209.5092	409.5177	-7.1615E-06	1402.1349	-13.9484	145800.
276.000	.000522	-3002.1770	328.7650	-9.5082E-06	1365.5493	-12.9691	149040.
282.000	.000460	-1261.4766	254.8400	-1.0727E-05	1336.6979	-11.6725	152280.
288.000	.000393	59.1208	189.2325	-1.1070E-05	1316.7694	-10.1966	155520.
294.000	.000327	1012.6348	132.6800	-1.0764E-05	1332.5735	-8.6542	158760.
300.000	.000264	1654.5100	85.3154	-1.0002E-05	1343.2123	-7.1340	162000.
306.000	.000207	2039.4205	46.8073	-8.9461E-06	1349.5920	-5.7021	165240.
312.000	.000157	2218.8810	16.4865	-7.7292E-06	1352.5665	-4.4048	168480.
318.000	.000114	2239.5772	-6.5415	-6.4551E-06	1352.9095	-3.2712	171720.
324.000	7.94E-05	2142.3194	-23.3014	-5.2029E-06	1351.2975	-2.3155	174960.
330.000	5.19E-05	1961.5210	-34.8687	-4.0302E-06	1348.3009	-1.5403	178200.
336.000	3.10E-05	1725.1044	-42.3058	-2.9767E-06	1344.3824	-.9387515	181440.
342.000	1.61E-05	1454.7448	-46.6125	-2.0680E-06	1339.9013	-.4968274	184680.
348.000	6.23E-06	1166.3747	-48.6881	-1.3189E-06	1335.1217	-.1950533	187920.
354.000	3.14E-07	870.8827	-49.3033	-7.3675E-07	1330.2240	-.0100052	

```
191160.
 360.000 -2.61E-06    574.9559    -45.1801 -3.2357E-07   1325.3191      1.3844
3178588.
 366.000 -3.57E-06    328.8181    -35.3550 -6.5303E-08   1321.2395      1.8907
3178588.
 372.000 -3.40E-06    150.7157    -24.2844  7.1732E-08   1318.2875      1.7995
3178588.
 378.000 -2.71E-06     37.3839    -14.5818  1.2549E-07   1316.4091      1.4346
3178588.
 384.000 -1.89E-06    -24.3042     -7.2725  1.2922E-07   1316.1923      1.0018
3178588.
 390.000 -1.16E-06    -49.9248     -2.4276  1.0801E-07   1316.6170    .6131433
3178588.
 396.000 -5.95E-07    -53.4681    .3573159  7.8464E-08   1316.6757    .3151707
3178588.
 402.000 -2.16E-07    -45.6606      1.6458  5.0136E-08   1316.5463    .1143326
3178588.
 408.000  6.71E-09    -33.7332      1.9782  2.7448E-08   1316.3486   -.0035548
3178588.
 414.000  1.14E-07    -21.9309      1.7870  1.1541E-08   1316.1530   -.0601596
3178588.
 420.000  1.45E-07    -12.2925      1.3758  1.7610E-09   1315.9932   -.0769228
3178588.
 426.000  1.35E-07     -5.4222    .9309369 -3.3013E-09   1315.8793   -.0713545
3178588.
 432.000  1.06E-07     -1.1203    .5490659 -5.1710E-09   1315.8080   -.0559358
3178588.
 438.000  7.26E-08      1.1681    .2658130 -5.1573E-09   1315.8088   -.0384819
3178588.
 444.000  4.37E-08      2.0710    .0809172 -4.2316E-09   1315.8238   -.0231501
3178588.
 450.000  2.19E-08      2.1404   -.0232751 -3.0281E-09   1315.8249   -.0115807
3178588.
 456.000  7.36E-09      1.7927   -.0697164 -1.9042E-09   1315.8192   -.0038997
3178588.
 462.000 -9.90E-10      1.3044   -.0798419 -1.0192E-09   1315.8111    .0005246
3178588.
 468.000 -4.87E-09    .8348540   -.0705306 -4.0783E-10   1315.8033    .0025792
3178588.
 474.000 -5.88E-09    .4581214   -.0534413 -3.8341E-11   1315.7971    .0031172
3178588.
 480.000 -5.33E-09    .1935693   -.0356208  1.4789E-10   1315.7927    .0028230
3178588.
 486.000 -4.11E-09    .0306271   -.0206208  2.1196E-10   1315.7900    .0021770
3178588.
 492.000 -2.79E-09   -.0539444   -.0096633  2.0530E-10   1315.7904    .0014755
3178588.
 498.000 -1.65E-09   -.0853939   -.0026210  1.6548E-10   1315.7909    .0008719
3178588.
 504.000 -7.99E-10   -.0854465    .0012653  1.1666E-10   1315.7909    .0004235
3178588.
 510.000 -2.46E-10   -.0702456    .0029267  7.2166E-11   1315.7906    .0001303
3178588.
 516.000  6.66E-11   -.0503473    .0032119  3.7704E-11   1315.7903 -3.5264E-05
3178588.
 522.000  2.06E-10   -.0317142    .0027780  1.4254E-11   1315.7900   -.0001094
3178588.
 528.000  2.38E-10   -.0170159    .0020722  3.2800E-13   1315.7898   -.0001259
3178588.
 534.000  2.10E-10   -.0068478    .0013602 -6.4915E-12   1315.7896   -.0001115
3178588.
 540.000  1.60E-10   -.0006916    .0007720 -8.6460E-12   1315.7895 -8.4608E-05
3178588.
```

```
 546.000  1.07E-10    .0024187    .0003487 -8.1525E-12   1315.7895 -5.6498E-05
3178588.
 552.000  6.19E-11    .0034948  8.0827E-05 -6.4626E-12   1315.7895 -3.2782E-05
3178588.
 558.000  2.91E-11    .0033905 -6.3761E-05 -4.4950E-12   1315.7895 -1.5414E-05
3178588.
 564.000  7.94E-12    .0027310   -.0001226 -2.7456E-12   1315.7895 -4.2064E-06
3178588.
 570.000 -3.85E-12    .0019199   -.0001291 -1.4165E-12   1315.7895  2.0400E-06
3178588.
 576.000 -9.06E-12    .0011820   -.0001086 -5.3010E-13   1315.7895  4.7987E-06
3178588.
 582.000 -1.02E-11    .0006168 -7.7980E-05 -1.6070E-14   1315.7895  5.4100E-06
3178588.
 588.000 -9.25E-12    .0002462 -4.7048E-05  2.3055E-13   1315.7895  4.9008E-06
3178588.
 594.000 -7.45E-12  5.2126E-05 -2.0512E-05  3.1582E-13   1315.7895  3.9443E-06
3178588.
 600.000 -5.46E-12      0.0000      0.0000  3.3071E-13   1315.7895  2.8931E-06
1589294.
```

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 5:

```
Pile-head deflection             =      .49526821 in
Computed slope at pile head      =     -.00766307
Maximum bending moment           =   902458.30242 lbs-in
Maximum shear force              =    25000.00000 lbs
Depth of maximum bending moment  =    60.00000000 in
Depth of maximum shear force     =        0.00000 in
Number of iterations             =             13
Number of zero deflection points =              7
```

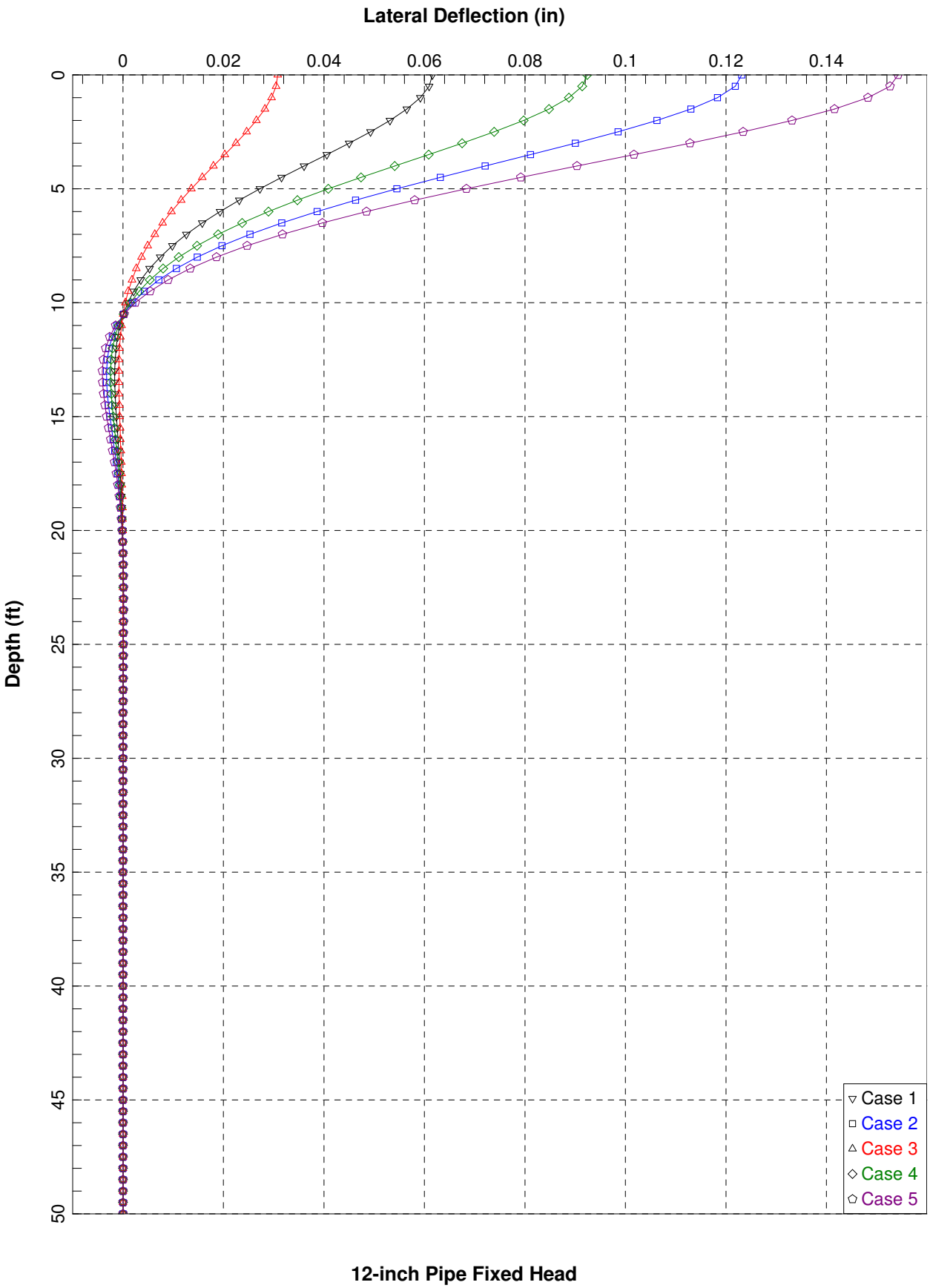
Summary of Pile Response(s)

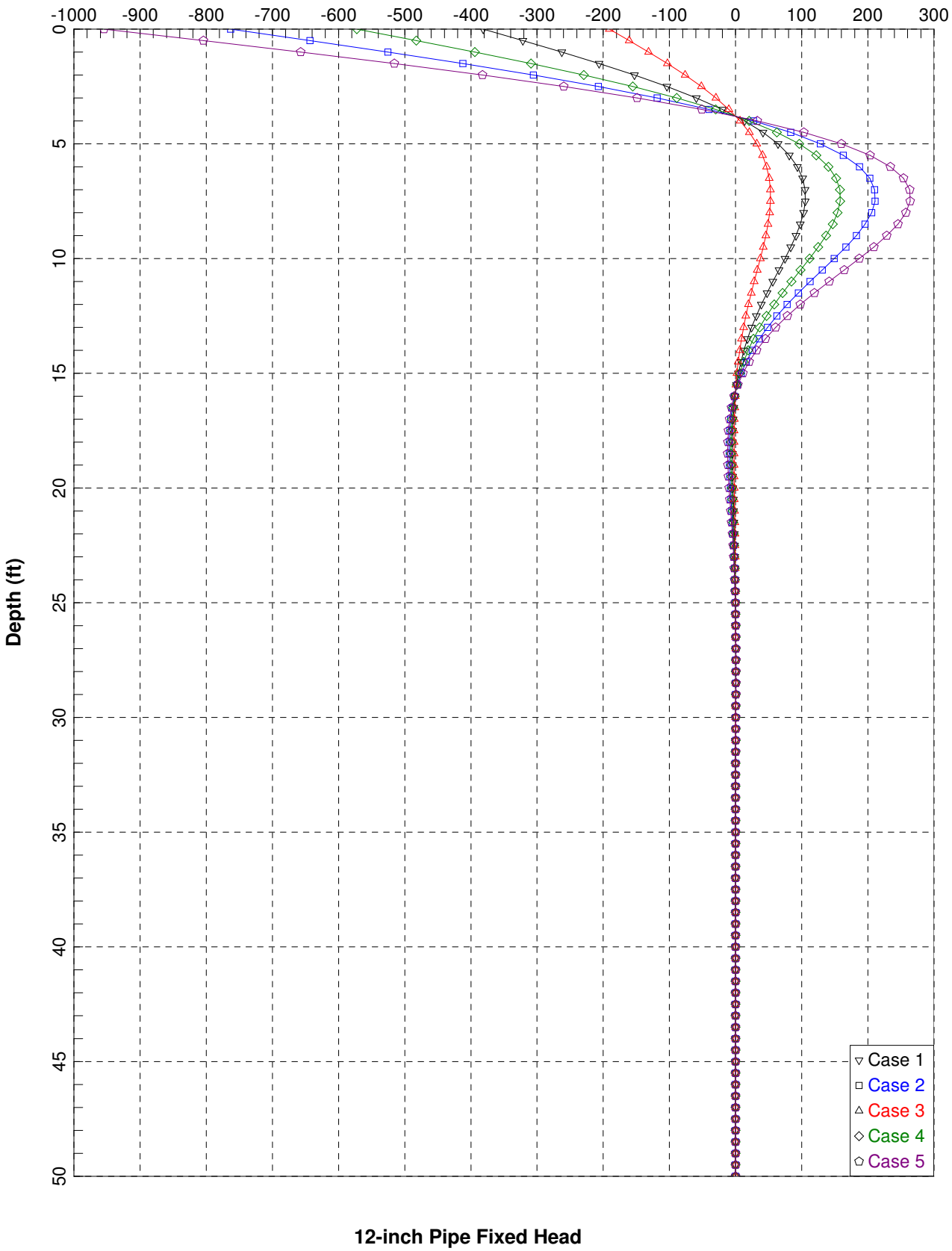
Definition of Symbols for Pile-Head Loading Conditions:

```
Type 1 = Shear and Moment,          y = pile-head displacment in
Type 2 = Shear and Slope,           M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness,  V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment,     S = Pile-head Slope, radians
Type 5 = Deflection and Slope,      R = Rot. Stiffness of Pile-head in-lbs/rad
```

Load Type	Pile-Head Condition 1	Pile-Head Condition 2	Axial Load lbs	Pile-Head Deflection in	Maximum Moment in-lbs	Maximum Shear lbs
1	V= 10000.	M= 0.000	25000.0000	.1618195	320709.	10000.0000
1	V= 20000.	M= 0.000	25000.0000	.3467750	671807.	20000.0000
1	V= 5000.000	M= 0.000	25000.0000	.0809098	160354.	5000.0000
1	V= 15000.	M= 0.000	25000.0000	.2451852	485471.	15000.0000
1	V= 25000.	M= 0.000	25000.0000	.4952682	902458.	25000.0000

The analysis ended normally.


Lateral Deflection (in)
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
12-inch Pipe Fixed Head


Bending Moment (in-kips)
-1000
-900
-800
-700
-600
-500
-400
-300
-200
-100
0
100
200
300
Depth (ft)
0
5
10
15
20
25
30
35
40
45
50
Case 1
Case 2
Case 3
Case 4
Case 5
12-inch Pipe Fixed Head

LVMWD Westlake Reservoir 12-inch pipe fixed.lpo

LPILE Plus for Windows, Version 5.0 (5.0.39)

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

This program is licensed to:

greg denlinger
Fugro West

Path to file locations: O:\Management\04_2012\04_6212_0197_AECOM_LVWMD 5MG Reservoir\03_ENGINEERING\Preliminary Pile Calcs\
Name of input data file: LVMWD Westlake Reservoir 12-inch pipe fixed.lpd
Name of output file: LVMWD Westlake Reservoir 12-inch pipe fixed.lpo
Name of plot output file: LVMWD Westlake Reservoir 12-inch pipe fixed.lpp
Name of runtime file: LVMWD Westlake Reservoir 12-inch pipe fixed.lpr

Time and Date of Analysis

Date: February 8, 2013 Time: 16:03:33

Problem Title

LVMWD Westlake Reservoir 12-inch Pipe Fixed Head

Program Options

Units Used in Computations - US Customary Units: Inches, Pounds

Basic Program Options:

Analysis Type 1:
- Computation of Lateral Pile Response Using User-specified Constant EI

Computation Options:
- Only internally-generated p-y curves used in analysis
- Analysis does not use p-y multipliers (individual pile or shaft action only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix elements
- Output pile response for full length of pile
- Analysis assumes no soil movements acting on pile
- No additional p-y curves to be computed at user-specified depths

Solution Control Parameters:
- Number of pile increments = 100

- Maximum number of iterations allowed = 100
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 1.0000E+02 in

Printing Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (spacing of output points) = 1

Pile Structural Properties and Geometry

Pile Length = 600.00 in

Depth of ground surface below top of pile = .00 in

Slope angle of ground surface = -25.00 deg.

Structural properties of pile defined using 2 points

Point	Depth X in	Pile Diameter in	Moment of Inertia in**4	Pile Area Sq.in	Modulus of Elasticity lbs/Sq.in
1	0.0000	12.00000000	362.0000	19.0000	29000000.
2	600.0000	12.00000000	362.0000	19.0000	29000000.

Soil and Rock Layering Information

The soil profile is modelled using 2 layers

Layer 1 is sand, p-y criteria by Reese et al., 1974
Distance from top of pile to top of layer = .000 in
Distance from top of pile to bottom of layer = 360.000 in
p-y subgrade modulus k for top of soil layer = 90.000 lbs/in**3
p-y subgrade modulus k for bottom of layer = 90.000 lbs/in**3

Layer 2 is stiff clay without free water
Distance from top of pile to top of layer = 360.000 in
Distance from top of pile to bottom of layer = 700.000 in

(Depth of lowest layer extends 100.00 in below pile tip)

Effective Unit Weight of Soil vs. Depth

Effective unit weight of soil with depth defined using 4 points

Point No.	Depth X in	Eff. Unit Weight lbs/in**3
1	.00	.03300
2	360.00	.03300
3	360.00	.03300
4	700.00	.03300

Shear Strength of Soils

Shear strength parameters with depth defined using 4 points

Point No.	Depth X in	Cohesion c lbs/in**2	Angle of Friction Deg.	E50 or k_rm	RQD %
1	.000	.00000	35.00	------	------
2	360.000	.00000	35.00	------	------
3	360.000	14.00000	.00	.01000	.0
4	700.000	14.00000	.00	.01000	.0

Notes:

(1) Cohesion = uniaxial compressive strength for rock materials.
(2) Values of E50 are reported for clay strata.
(3) Default values will be generated for E50 when input values are 0.
(4) RQD and k_rm are reported only for weak rock strata.

Loading Type

Cyclic loading criteria was used for computation of p-y curves.

Number of cycles of loading = 10.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load Case Number 1

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 10000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 2

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 20000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 3

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 5000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 4

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 15000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Load Case Number 5

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Shear force at pile head = 25000.000 lbs
Slope at pile head = .000 in/in
Axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head condition)

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 1

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 10000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X	Deflect. y	Moment M	Shear V	Slope S	Total Stress	Soil Res. Es*h p
in	in	lbs-in	lbs	Rad.	lbs/in**2	lbs/in F/L lbs/in
0.000	.061571	-381589.	10000.0000	-1.7347E-18	7640.4727	0.0000 0.0000
6.000	.060916	-321573.	9901.3155	-.0002009	6645.7265	-32.8948 3240.0000
12.000	.059159	-262713.	9610.9546	-.0003679	5670.1512	-63.8921 6480.0000
18.000	.056501	-206131.	9144.6813	-.0005019	4732.3260	-91.5323 9720.0000
24.000	.053137	-152826.	8525.7589	-.0006045	3848.8239	-114.7751 12960.0000
30.000	.049248	-103641.	7782.5265	-.0006778	3033.5893	-132.9690 16200.0000
36.000	.045003	-59232.7650	6946.1856	-.0007243	2297.5480	-145.8113 19440.0000
42.000	.040556	-20069.0699	6048.8456	-.0007470	1648.4260	-153.3020 22680.0000

48.000	.036040	13577.4729	5121.8628	-.0007488	1540.8305	-155.6922
25920.0000						
54.000	.031570	41617.9313	4194.4925	-.0007331	2005.5894	-153.4312
29160.0000						
60.000	.027243	64131.2983	3292.8580	-.0007028	2378.7392	-147.1136
32400.0000						
66.000	.023136	81343.0770	2439.2294	-.0006613	2664.0173	-137.4293
35640.0000						
72.000	.019308	93600.4289	1651.5910	-.0006113	2867.1778	-125.1169
38880.0000						
78.000	.015801	101346.	943.4702	-.0005556	2995.5500	-110.9234
42120.0000						
84.000	.012641	105089.	323.9910	-.0004966	3057.5918	-95.5697
45360.0000						
90.000	.009842	105382.	-201.8857	-.0004364	3062.4593	-79.7226
48600.0000						
96.000	.007404	102797.	-632.9776	-.0003769	3019.6077	-63.9747
51840.0000						
102.000	.005319	97899.7576	-971.3920	-.0003196	2938.4374	-48.8301
55080.0000						
108.000	.003570	91236.2037	-1221.9718	-.0002655	2827.9917	-34.6965
58320.0000						
114.000	.002133	83315.7531	-1391.7118	-.0002156	2696.7136	-21.8835
61560.0000						
120.000	.000982	74600.3549	-1489.1754	-.0001705	2552.2594	-10.6044
64800.0000						
126.000	8.67E-05	65496.8022	-1523.9386	-.0001305	2401.3718	-.9832905
68040.0000						
132.000	-.000584	56352.2361	-1506.0794	-9.5659E-05	2249.8044	6.9363
71280.0000						
138.000	-.001061	47452.5470	-1445.7301	-6.5995E-05	2102.2958	13.1801
74520.0000						
144.000	-.001376	39023.2734	-1352.6984	-4.1283E-05	1962.5841	17.8305
77760.0000						
150.000	-.001557	31232.5506	-1236.1650	-2.1206E-05	1833.4561	21.0140
81000.0000						
156.000	-.001630	24195.6549	-1104.4557	-5.3663E-06	1716.8224	22.8891
84240.0000						
162.000	-.001621	17980.6927	-964.8862	6.6864E-06	1613.8120	23.6340
87480.0000						
168.000	-.001550	12615.0140	-823.6743	1.5430E-05	1524.8781	23.4366
90720.0000						
174.000	-.001436	8091.9726	-685.9089	2.1347E-05	1449.9106	22.4852
93960.0000						
180.000	-.001294	4377.7031	-555.5710	2.4911E-05	1388.3481	20.9608
97200.0000						
186.000	-.001137	1417.6472	-435.5931	2.6567E-05	1339.2864	19.0318
100440.						
192.000	-.000975	-857.3843	-327.9496	2.6727E-05	1330.0003	16.8493
103680.						
198.000	-.000816	-2525.7663	-233.7683	2.5760E-05	1357.6530	14.5444
106920.						
204.000	-.000666	-3670.3317	-153.4540	2.3989E-05	1376.6237	12.2270
110160.						
210.000	-.000528	-4374.4112	-86.8176	2.1690E-05	1388.2935	9.9852
113400.						
216.000	-.000406	-4718.6502	-33.2033	1.9092E-05	1393.9991	7.8863
116640.						
222.000	-.000299	-4778.5783	8.3904	1.6378E-05	1394.9924	5.9783
119880.						
228.000	-.000209	-4622.8791	39.1998	1.3691E-05	1392.4118	4.2915
123120.						
234.000	-.000135	-4312.2883	60.5985	1.1138E-05	1387.2639	2.8414

126360.						
240.000	-7.55E-05	-3899.0382	74.0141	8.7913E-06	1380.4144	1.6305
129600.						
246.000	-2.94E-05	-3426.7564	80.8598	6.6978E-06	1372.5865	.6514264
132840.						
252.000	4.89E-06	-2930.7295	82.4815	4.8810E-06	1364.3651	-.1108623
136080.						
258.000	2.91E-05	-2438.4424	80.1184	3.3467E-06	1356.2056	-.6768430
139320.						
264.000	4.50E-05	-1970.3126	74.8768	2.0868E-06	1348.4466	-1.0703
142560.						
270.000	5.42E-05	-1540.5463	67.7153	1.0835E-06	1341.3234	-1.3168
145800.						
276.000	5.81E-05	-1158.0539	59.4389	3.1232E-07	1334.9837	-1.4420
149040.						
282.000	5.79E-05	-827.3730	50.7016	-2.5505E-07	1329.5028	-1.4705
152280.						
288.000	5.50E-05	-549.5583	42.0142	-6.4854E-07	1324.8982	-1.4253
155520.						
294.000	5.02E-05	-323.0084	33.7568	-8.9789E-07	1321.1432	-1.3271
158760.						
300.000	4.42E-05	-144.2075	26.1940	-1.0314E-06	1318.1797	-1.1938
162000.						
306.000	3.78E-05	-8.3710	19.4913	-1.0750E-06	1315.9282	-1.0404
165240.						
312.000	3.13E-05	90.0104	13.7320	-1.0517E-06	1317.2814	-.8793198
168480.						
318.000	2.52E-05	156.7285	8.9339	-9.8117E-07	1318.3872	-.7200530
171720.						
324.000	1.95E-05	197.5113	5.0643	-8.7994E-07	1319.0631	-.5698103
174960.						
330.000	1.46E-05	217.7640	2.0540	-7.6126E-07	1319.3988	-.4336160
178200.						
336.000	1.04E-05	222.3878	-.1908368	-6.3548E-07	1319.4755	-.3146675
181440.						
342.000	6.97E-06	215.6646	-1.7788	-5.1030E-07	1319.3640	-.2146626
184680.						
348.000	4.28E-06	201.1950	-2.8252	-3.9117E-07	1319.1242	-.1341148
187920.						
354.000	2.28E-06	181.8800	-3.4454	-2.8170E-07	1318.8041	-.0726412
191160.						
360.000	9.02E-07	159.9344	-5.0963	-1.8402E-07	1318.4403	-.4776613
3178588.						
366.000	7.17E-08	120.7792	-6.6433	-1.0380E-07	1317.7913	-.0380030
3178588.						
372.000	-3.44E-07	80.2456	-6.2106	-4.6357E-08	1317.1195	.1822377
3178588.						
378.000	-4.85E-07	46.2656	-4.8938	-1.0204E-08	1316.5563	.2566978
3178588.						
384.000	-4.66E-07	21.5228	-3.3824	9.1676E-09	1316.1462	.2471078
3178588.						
390.000	-3.75E-07	5.6741	-2.0458	1.6940E-08	1315.8835	.1984177
3178588.						
396.000	-2.63E-07	-3.0321	-1.0323	1.7695E-08	1315.8397	.1394196
3178588.						
402.000	-1.62E-07	-6.7190	-.3562626	1.4908E-08	1315.9008	.0859299
3178588.						
408.000	-8.43E-08	-7.3117	.0354665	1.0899E-08	1315.9107	.0446464
3178588.						
414.000	-3.14E-08	-6.2966	.2193441	7.0097E-09	1315.8938	.0166461
3178588.						
420.000	-1.60E-10	-4.6817	.2695363	3.8724E-09	1315.8671	8.4676E-05
3178588.						

426.000	1.50E-08	-3.0634	.2458758	1.6591E-09	1315.8402	-.0079715
3178588.						
432.000	1.97E-08	-1.7317	.1905735	2.8883E-10	1315.8182	-.0104626
3178588.						
438.000	1.85E-08	-.7765622	.1297627	-4.2796E-10	1315.8023	-.0098077
3178588.						
444.000	1.46E-08	-.1744262	.0771138	-6.9972E-10	1315.7924	-.0077420
3178588.						
450.000	1.01E-08	.1490131	.0378095	-7.0698E-10	1315.7919	-.0053594
3178588.						
456.000	6.13E-09	.2795000	.0119884	-5.8452E-10	1315.7941	-.0032476
3178588.						
462.000	3.10E-09	.2930497	-.0026849	-4.2091E-10	1315.7943	-.0016435
3178588.						
468.000	1.08E-09	.2474079	-.0093308	-2.6646E-10	1315.7936	-.0005718
3178588.						
474.000	-9.52E-11	.1811600	-.0108949	-1.4399E-10	1315.7925	5.0437E-05
3178588.						
480.000	-6.49E-10	.1167122	-.0097129	-5.8868E-11	1315.7914	.0003436
3178588.						
486.000	-8.02E-10	.0646229	-.0074082	-7.0482E-12	1315.7905	.0004247
3178588.						
492.000	-7.33E-10	.0278162	-.0049690	1.9368E-11	1315.7899	.0003884
3178588.						
498.000	-5.69E-10	.0049886	-.0028993	2.8743E-11	1315.7896	.0003015
3178588.						
504.000	-3.88E-10	-.0069838	-.0013777	2.8172E-11	1315.7896	.0002057
3178588.						
510.000	-2.31E-10	-.0115520	-.0003934	2.2876E-11	1315.7897	.0001224
3178588.						
516.000	-1.14E-10	-.0117112	.0001547	1.6228E-11	1315.7897	6.0229E-05
3178588.						
522.000	-3.64E-11	-.0097011	.0003932	1.0109E-11	1315.7896	1.9286E-05
3178588.						
528.000	7.61E-12	-.0069958	.0004390	5.3372E-12	1315.7896	-4.0333E-06
3178588.						
534.000	2.76E-11	-.0044352	.0003829	2.0706E-12	1315.7895	-1.4643E-05
3178588.						
540.000	3.25E-11	-.0024014	.0002874	1.1688E-13	1315.7895	-1.7196E-05
3178588.						
546.000	2.90E-11	-.0009864	.0001897	-8.5122E-13	1315.7895	-1.5386E-05
3178588.						
552.000	2.22E-11	-.0001252	.0001081	-1.1689E-12	1315.7895	-1.1785E-05
3178588.						
558.000	1.50E-11	.0003117	4.8924E-05	-1.1156E-12	1315.7895	-7.9557E-06
3178588.						
564.000	8.86E-12	.0004622	1.0978E-05	-8.9437E-13	1315.7895	-4.6930E-06
3178588.						
570.000	4.29E-12	.0004437	-9.9114E-06	-6.3547E-13	1315.7895	-2.2700E-06
3178588.						
576.000	1.23E-12	.0003435	-1.8681E-05	-4.1050E-13	1315.7895	-6.5322E-07
3178588.						
582.000	-6.41E-13	.0002197	-1.9622E-05	-2.4956E-13	1315.7895	3.3960E-07
3178588.						
588.000	-1.76E-12	.0001081	-1.5803E-05	-1.5589E-13	1315.7895	9.3330E-07
3178588.						
594.000	-2.51E-12	3.0102E-05	-9.0115E-06	-1.1639E-13	1315.7895	1.3306E-06
3178588.						
600.000	-3.16E-12	0.0000	0.0000	-1.0779E-13	1315.7895	1.6732E-06
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 1:

Pile-head deflection	=	.06157066 in
Computed slope at pile head	=	-1.734723E-18
Maximum bending moment	=	-381589.22289 lbs-in
Maximum shear force	=	10000.00000 lbs
Depth of maximum bending moment	=	0.00000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 2

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 20000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in	F/L lbs/in
0.000	.123141	-763178.	20000.0000	-3.4694E-18	13965.1560	0.0000	0.0000
6.000	.121833	-643146.	19802.6309	-.0004019	11975.6635	-65.7897	3240.0000
12.000	.118319	-525426.	19221.9092	-.0007358	10024.5128	-127.7842	6480.0000
18.000	.113003	-412262.	18289.3625	-.0010038	8148.8625	-183.0647	9720.0000
24.000	.106273	-305653.	17051.5177	-.0012089	6381.8584	-229.5503	12960.0000
30.000	.098496	-207281.	15565.0530	-.0013555	4751.3891	-265.9380	16200.0000
36.000	.090007	-118466.	13892.3712	-.0014486	3279.3065	-291.6226	19440.0000
42.000	.081112	-40138.1398	12097.6912	-.0014939	1981.0625	-306.6040	22680.0000
48.000	.072080	27154.9458	10243.7257	-.0014976	1765.8714	-311.3845	25920.0000
54.000	.063140	83235.8625	8388.9850	-.0014661	2695.3894	-306.8624	29160.0000
60.000	.054487	128263.	6585.7161	-.0014057	3441.6889	-294.2272	32400.0000
66.000	.046272	162686.	4878.4588	-.0013225	4012.2451	-274.8585	35640.0000
72.000	.038616	187201.	3303.1821	-.0012225	4418.5661	-250.2337	38880.0000

78.000	.031602	202691.	1886.9404	-.0011111	4675.3104	-221.8468	42120.0000
84.000	.025283	210177.	647.9821	-.0009931	4799.3941	-191.1393	45360.0000
90.000	.019685	210765.	-403.7714	-.0008728	4809.1291	-159.4452	48600.0000
96.000	.014809	205594.	-1265.9552	-.0007539	4723.4260	-127.9494	51840.0000
102.000	.010638	195800.	-1942.7839	-.0006391	4561.0853	-97.6602	55080.0000
108.000	.007139	182472.	-2443.9436	-.0005310	4340.1940	-69.3931	58320.0000
114.000	.004266	166632.	-2783.4236	-.0004313	4077.6376	-43.7669	61560.0000
120.000	.001964	149201.	-2978.3509	-.0003410	3788.7294	-21.2088	64800.0000
126.000	.000173	130994.	-3047.8771	-.0002610	3486.9542	-1.9666	68040.0000
132.000	-.001168	112704.	-3012.1588	-.0001913	3183.8194	13.8727	71280.0000
138.000	-.002122	94905.0941	-2891.4602	-.0001320	2888.8021	26.3602	74520.0000
144.000	-.002752	78046.5468	-2705.3969	-8.2566E-05	2609.3786	35.6609	77760.0000
150.000	-.003113	62465.1012	-2472.3300	-4.2412E-05	2351.1226	42.0280	81000.0000
156.000	-.003261	48391.3098	-2208.9113	-1.0733E-05	2117.8554	45.7782	84240.0000
162.000	-.003242	35961.3853	-1929.7725	1.3373E-05	1911.8345	47.2681	87480.0000
168.000	-.003100	25230.0281	-1647.3485	3.0859E-05	1733.9667	46.8733	90720.0000
174.000	-.002872	16183.9451	-1371.8178	4.2694E-05	1584.0317	44.9703	93960.0000
180.000	-.002588	8755.4061	-1111.1420	4.9821E-05	1460.9067	41.9216	97200.0000
186.000	-.002274	2835.2943	-871.1862	5.3133E-05	1362.7833	38.0637	100440.
192.000	-.001950	-1714.7685	-655.8992	5.3454E-05	1344.2111	33.6987	103680.
198.000	-.001632	-5051.5325	-467.5366	5.1520E-05	1399.5165	29.0889	106920.
204.000	-.001332	-7340.6634	-306.9080	4.7979E-05	1437.4579	24.4540	110160.
210.000	-.001057	-8748.8224	-173.6352	4.3381E-05	1460.7976	19.9703	113400.
216.000	-.000811	-9437.3004	-66.4066	3.8184E-05	1472.2088	15.7726	116640.
222.000	-.000598	-9557.1566	16.7807	3.2756E-05	1474.1954	11.9565	119880.
228.000	-.000418	-9245.7581	78.3996	2.7382E-05	1469.0341	8.5831	123120.
234.000	-.000270	-8624.5766	121.1970	2.2276E-05	1458.7383	5.6828	126360.
240.000	-.000151	-7798.0764	148.0282	1.7583E-05	1445.0394	3.2610	129600.
246.000	-5.88E-05	-6853.5129	161.7197	1.3396E-05	1429.3836	1.3029	132840.
252.000	9.78E-06	-5861.4591	164.9631	9.7620E-06	1412.9407	-.2217245	136080.
258.000	5.83E-05	-4876.8849	160.2368	6.6933E-06	1396.6218	-1.3537	139320.
264.000	9.01E-05	-3940.6252	149.7537	4.1736E-06	1381.1037	-2.1407	

142560.							
270.000	.000108	-3081.0926	135.4306	2.1670E-06	1366.8573	-2.6337	
145800.							
276.000	.000116	-2316.1078	118.8778	6.2464E-07	1354.1780	-2.8839	
149040.							
282.000	.000116	-1654.7460	101.4032	-5.1010E-07	1343.2162	-2.9410	
152280.							
288.000	.000110	-1099.1167	84.0283	-1.2971E-06	1334.0069	-2.8507	
155520.							
294.000	.000100	-646.0169	67.5136	-1.7958E-06	1326.4969	-2.6543	
158760.							
300.000	8.84E-05	-288.4150	52.3880	-2.0628E-06	1320.5698	-2.3876	
162000.							
306.000	7.56E-05	-16.7420	38.9826	-2.1500E-06	1316.0670	-2.0809	
165240.							
312.000	6.26E-05	180.0207	27.4640	-2.1034E-06	1318.7732	-1.7586	
168480.							
318.000	5.03E-05	313.4570	17.8678	-1.9623E-06	1320.9849	-1.4401	
171720.							
324.000	3.91E-05	395.0226	10.1286	-1.7599E-06	1322.3368	-1.1396	
174960.							
330.000	2.92E-05	435.5280	4.1080	-1.5225E-06	1323.0082	-.8672319	
178200.							
336.000	2.08E-05	444.7757	-.3816735	-1.2710E-06	1323.1614	-.6293350	
181440.							
342.000	1.39E-05	431.3292	-3.5577	-1.0206E-06	1322.9386	-.4293253	
184680.							
348.000	8.56E-06	402.3900	-5.6503	-7.8235E-07	1322.4589	-.2682296	
187920.							
354.000	4.56E-06	363.7600	-6.8909	-5.6341E-07	1321.8186	-.1452823	
191160.							
360.000	1.80E-06	319.8688	-10.1927	-3.6805E-07	1321.0912	-.9553226	
3178588.							
366.000	1.43E-07	241.5584	-13.2867	-2.0761E-07	1319.7932	-.0760061	
3178588.							
372.000	-6.88E-07	160.4912	-12.4212	-9.2714E-08	1318.4495	.3644755	
3178588.							
378.000	-9.69E-07	92.5313	-9.7876	-2.0408E-08	1317.3231	.5133955	
3178588.							
384.000	-9.33E-07	43.0457	-6.7648	1.8335E-08	1316.5029	.4942157	
3178588.							
390.000	-7.49E-07	11.3482	-4.0916	3.3879E-08	1315.9776	.3968355	
3178588.							
396.000	-5.26E-07	-6.0642	-2.0646	3.5389E-08	1315.8900	.2788393	
3178588.							
402.000	-3.24E-07	-13.4379	-.7125253	2.9816E-08	1316.0122	.1718599	
3178588.							
408.000	-1.69E-07	-14.6235	.0709330	2.1797E-08	1316.0319	.0892929	
3178588.							
414.000	-6.28E-08	-12.5933	.4386881	1.4019E-08	1315.9982	.0332921	
3178588.							
420.000	-3.20E-10	-9.3634	.5390726	7.7448E-09	1315.9447	.0001694	
3178588.							
426.000	3.01E-08	-6.1267	.4917515	3.3182E-09	1315.8910	-.0159430	
3178588.							
432.000	3.95E-08	-3.4634	.3811469	5.7766E-10	1315.8469	-.0209252	
3178588.							
438.000	3.70E-08	-1.5531	.2595255	-8.5591E-10	1315.8152	-.0196153	
3178588.							
444.000	2.92E-08	-.3488525	.1542276	-1.3994E-09	1315.7953	-.0154840	
3178588.							
450.000	2.02E-08	.2980262	.0756190	-1.4140E-09	1315.7944	-.0107189	
3178588.							

456.000	1.23E-08	.5590000	.0239769	-1.1690E-09	1315.7987	-.0064952
3178588.						
462.000	6.20E-09	.5860994	-.0053697	-8.4182E-10	1315.7992	-.0032870
3178588.						
468.000	2.16E-09	.4948158	-.0186616	-5.3292E-10	1315.7977	-.0011436
3178588.						
474.000	-1.90E-10	.3623199	-.0217898	-2.8798E-10	1315.7955	.0001009
3178588.						
480.000	-1.30E-09	.2334244	-.0194258	-1.1774E-10	1315.7933	.0006871
3178588.						
486.000	-1.60E-09	.1292458	-.0148164	-1.4096E-11	1315.7916	.0008493
3178588.						
492.000	-1.47E-09	.0556324	-.0099381	3.8736E-11	1315.7904	.0007767
3178588.						
498.000	-1.14E-09	.0099772	-.0057986	5.7485E-11	1315.7896	.0006031
3178588.						
504.000	-7.76E-10	-.0139675	-.0027554	5.6345E-11	1315.7897	.0004113
3178588.						
510.000	-4.62E-10	-.0231041	-.0007868	4.5751E-11	1315.7899	.0002449
3178588.						
516.000	-2.27E-10	-.0234224	.0003093	3.2455E-11	1315.7899	.0001205
3178588.						
522.000	-7.28E-11	-.0194022	.0007864	2.0217E-11	1315.7898	3.8572E-05
3178588.						
528.000	1.52E-11	-.0139917	.0008779	1.0674E-11	1315.7897	-8.0665E-06
3178588.						
534.000	5.53E-11	-.0088704	.0007659	4.1411E-12	1315.7896	-2.9287E-05
3178588.						
540.000	6.49E-11	-.0048027	.0005748	2.3376E-13	1315.7896	-3.4392E-05
3178588.						
546.000	5.81E-11	-.0019727	.0003793	-1.7024E-12	1315.7895	-3.0773E-05
3178588.						
552.000	4.45E-11	-.0002504	.0002163	-2.3377E-12	1315.7895	-2.3570E-05
3178588.						
558.000	3.00E-11	.0006235	9.7848E-05	-2.2311E-12	1315.7895	-1.5911E-05
3178588.						
564.000	1.77E-11	.0009245	2.1956E-05	-1.7887E-12	1315.7895	-9.3861E-06
3178588.						
570.000	8.57E-12	.0008875	-1.9823E-05	-1.2709E-12	1315.7895	-4.5401E-06
3178588.						
576.000	2.47E-12	.0006870	-3.7362E-05	-8.2101E-13	1315.7895	-1.3064E-06
3178588.						
582.000	-1.28E-12	.0004394	-3.9244E-05	-4.9913E-13	1315.7895	6.7920E-07
3178588.						
588.000	-3.52E-12	.0002162	-3.1607E-05	-3.1178E-13	1315.7895	1.8666E-06
3178588.						
594.000	-5.02E-12	6.0204E-05	-1.8023E-05	-2.3279E-13	1315.7895	2.6612E-06
3178588.						
600.000	-6.32E-12	0.0000	0.0000	-2.1558E-13	1315.7895	3.3465E-06
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 2:

Pile-head deflection	=	.12314132 in
Computed slope at pile head	=	-3.469447E-18
Maximum bending moment	=	-763178.44577 lbs-in
Maximum shear force	=	20000.00000 lbs
Depth of maximum bending moment	=	0.00000 in

Depth of maximum shear force = 0.00000 in
Number of iterations = 5
Number of zero deflection points = 7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 3

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 5000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. p lbs/in	Es*h F/L lbs/in
0.000	.030785	-190795.	5000.0000	-8.6736E-19	4478.1311	0.0000	0.0000
6.000	.030458	-160786.	4950.6577	-.0001005	3980.7580	-16.4474	3240.0000
12.000	.029580	-131357.	4805.4773	-.0001840	3492.9703	-31.9461	6480.0000
18.000	.028251	-103066.	4572.3406	-.0002509	3024.0577	-45.7662	9720.0000
24.000	.026568	-76413.2058	4262.8794	-.0003022	2582.3067	-57.3876	12960.0000
30.000	.024624	-51820.2947	3891.2632	-.0003389	2174.6894	-66.4845	16200.0000
36.000	.022502	-29616.3825	3473.0928	-.0003622	1806.6687	-72.9057	19440.0000
42.000	.020278	-10034.5350	3024.4228	-.0003735	1482.1077	-76.6510	22680.0000
48.000	.018020	6788.7364	2560.9314	-.0003744	1428.3100	-77.8461	25920.0000
54.000	.015785	20808.9656	2097.2463	-.0003665	1660.6895	-76.7156	29160.0000
60.000	.013622	32065.6491	1646.4290	-.0003514	1847.2643	-73.5568	32400.0000
66.000	.011568	40671.5385	1219.6147	-.0003306	1989.9034	-68.7146	35640.0000
72.000	.009654	46800.2145	825.7955	-.0003056	2091.4836	-62.5584	38880.0000
78.000	.007901	50672.7746	471.7351	-.0002778	2155.6697	-55.4617	42120.0000
84.000	.006321	52544.3692	161.9955	-.0002483	2186.6906	-47.7848	45360.0000
90.000	.004921	52691.2053	-100.9428	-.0002182	2189.1244	-39.8613	48600.0000
96.000	.003702	51398.5177	-316.4888	-.0001885	2167.6986	-31.9874	51840.0000
102.000	.002660	48949.8788	-485.6960	-.0001598	2127.1134	-24.4150	55080.0000

108.000	.001785	45618.1018	-610.9859	-.0001328	2071.8906	-17.3483
58320.0000						
114.000	.001066	41657.8765	-695.8559	-.0001078	2006.2515	-10.9417
61560.0000						
120.000	.000491	37300.1774	-744.5877	-8.5258E-05	1934.0245	-5.3022
64800.0000						
126.000	4.34E-05	32748.4011	-761.9693	-6.5240E-05	1858.5807	-.4916453
68040.0000						
132.000	-.000292	28176.1180	-753.0397	-4.7830E-05	1782.7970	3.4682
71280.0000						
138.000	-.000531	23726.2735	-722.8650	-3.2997E-05	1709.0426	6.5900
74520.0000						
144.000	-.000688	19511.6367	-676.3492	-2.0641E-05	1639.1868	8.9152
77760.0000						
150.000	-.000778	15616.2753	-618.0825	-1.0603E-05	1574.6228	10.5070
81000.0000						
156.000	-.000815	12097.8275	-552.2278	-2.6832E-06	1516.3060	11.4446
84240.0000						
162.000	-.000810	8990.3463	-482.4431	3.3432E-06	1464.8007	11.8170
87480.0000						
168.000	-.000775	6307.5070	-411.8371	7.7148E-06	1420.3338	11.7183
90720.0000						
174.000	-.000718	4045.9863	-342.9545	1.0674E-05	1382.8500	11.2426
93960.0000						
180.000	-.000647	2188.8515	-277.7855	1.2455E-05	1352.0688	10.4804
97200.0000						
186.000	-.000568	708.8236	-217.7966	1.3283E-05	1327.5379	9.5159
100440.						
192.000	-.000488	-428.6921	-163.9748	1.3363E-05	1322.8949	8.4247
103680.						
198.000	-.000408	-1262.8831	-116.8841	1.2880E-05	1336.7212	7.2722
106920.						
204.000	-.000333	-1835.1659	-76.7270	1.1995E-05	1346.2066	6.1135
110160.						
210.000	-.000264	-2187.2056	-43.4088	1.0845E-05	1352.0415	4.9926
113400.						
216.000	-.000203	-2359.3251	-16.6016	9.5459E-06	1354.8943	3.9431
116640.						
222.000	-.000150	-2389.2892	4.1952	8.1889E-06	1355.3910	2.9891
119880.						
228.000	-.000105	-2311.4395	19.5999	6.8456E-06	1354.1006	2.1458
123120.						
234.000	-6.75E-05	-2156.1442	30.2993	5.5689E-06	1351.5267	1.4207
126360.						
240.000	-3.77E-05	-1949.5191	37.0071	4.3956E-06	1348.1019	.8152416
129600.						
246.000	-1.47E-05	-1713.3782	40.4299	3.3489E-06	1344.1880	.3257132
132840.						
252.000	2.44E-06	-1465.3648	41.2408	2.4405E-06	1340.0773	-.0554311
136080.						
258.000	1.46E-05	-1219.2212	40.0592	1.6733E-06	1335.9976	-.3384215
139320.						
264.000	2.25E-05	-985.1563	37.4384	1.0434E-06	1332.1180	-.5351726
142560.						
270.000	2.71E-05	-770.2732	33.8577	5.4175E-07	1328.5564	-.6584160
145800.						
276.000	2.90E-05	-579.0270	29.7195	1.5616E-07	1325.3866	-.7209830
149040.						
282.000	2.90E-05	-413.6865	25.3508	-1.2753E-07	1322.6462	-.7352392
152280.						
288.000	2.75E-05	-274.7792	21.0071	-3.2427E-07	1320.3438	-.7126644
155520.						
294.000	2.51E-05	-161.5042	16.8784	-4.4894E-07	1318.4663	-.6635644

158760.						
300.000	2.21E-05	-72.1037	13.0970	-5.157OE-07	1316.9846	-.5969009
162000.						
306.000	1.89E-05	-4.1855	9.7456	-5.375OE-07	1315.8588	-.5202195
165240.						
312.000	1.57E-05	45.0052	6.8660	-5.2584E-07	1316.5354	-.4396599
168480.						
318.000	1.26E-05	78.3642	4.4669	-4.9058E-07	1317.0883	-.3600265
171720.						
324.000	9.77E-06	98.7556	2.5321	-4.3997E-07	1317.4263	-.2849051
174960.						
330.000	7.30E-06	108.8820	1.0270	-3.8063E-07	1317.5941	-.2168080
178200.						
336.000	5.20E-06	111.1939	-.0954184	-3.1774E-07	1317.6325	-.1573337
181440.						
342.000	3.49E-06	107.8323	-.8894136	-2.5515E-07	1317.5767	-.1073313
184680.						
348.000	2.14E-06	100.5975	-1.4126	-1.9559E-07	1317.4568	-.0670574
187920.						
354.000	1.14E-06	90.9400	-1.7227	-1.4085E-07	1317.2968	-.0363206
191160.						
360.000	4.51E-07	79.9672	-2.5482	-9.2011E-08	1317.1149	-.2388306
3178588.						
366.000	3.59E-08	60.3896	-3.3217	-5.1902E-08	1316.7904	-.0190015
3178588.						
372.000	-1.72E-07	40.1228	-3.1053	-2.3179E-08	1316.4545	.0911189
3178588.						
378.000	-2.42E-07	23.1328	-2.4469	-5.1021E-09	1316.1729	.1283489
3178588.						
384.000	-2.33E-07	10.7614	-1.6912	4.5838E-09	1315.9678	.1235539
3178588.						
390.000	-1.87E-07	2.8370	-1.0229	8.4698E-09	1315.8365	.0992089
3178588.						
396.000	-1.32E-07	-1.5161	-.5161557	8.8473E-09	1315.8146	.0697098
3178588.						
402.000	-8.11E-08	-3.3595	-.1781313	7.4540E-09	1315.8452	.0429650
3178588.						
408.000	-4.21E-08	-3.6559	.0177333	5.4493E-09	1315.8501	.0223232
3178588.						
414.000	-1.57E-08	-3.1483	.1096720	3.5048E-09	1315.8417	.0083230
3178588.						
420.000	-7.99E-11	-2.3409	.1347682	1.9362E-09	1315.8283	4.2338E-05
3178588.						
426.000	7.52E-09	-1.5317	.1229379	8.2955E-10	1315.8149	-.0039858
3178588.						
432.000	9.87E-09	-.8658538	.0952867	1.4441E-10	1315.8038	-.0052313
3178588.						
438.000	9.26E-09	-.3882811	.0648814	-2.1398E-10	1315.7959	-.0049038
3178588.						
444.000	7.31E-09	-.0872131	.0385569	-3.4986E-10	1315.7909	-.0038710
3178588.						
450.000	5.06E-09	.0745065	.0189048	-3.5349E-10	1315.7907	-.0026797
3178588.						
456.000	3.07E-09	.1397500	.0059942	-2.9226E-10	1315.7918	-.0016238
3178588.						
462.000	1.55E-09	.1465248	-.0013424	-2.1045E-10	1315.7919	-.0008218
3178588.						
468.000	5.40E-10	.1237040	-.0046654	-1.3323E-10	1315.7915	-.0002859
3178588.						
474.000	-4.76E-11	.0905800	-.0054475	-7.1995E-11	1315.7910	2.5218E-05
3178588.						
480.000	-3.24E-10	.0583561	-.0048564	-2.9434E-11	1315.7904	.0001718
3178588.						

486.000	-4.01E-10	.0323114	-.0037041	-3.5241E-12	1315.7900	.0002123
3178588.						
492.000	-3.67E-10	.0139081	-.0024845	9.6840E-12	1315.7897	.0001942
3178588.						
498.000	-2.85E-10	.0024943	-.0014496	1.4371E-11	1315.7895	.0001508
3178588.						
504.000	-1.94E-10	-.0034919	-.0006888	1.4086E-11	1315.7895	.0001028
3178588.						
510.000	-1.16E-10	-.0057760	-.0001967	1.1438E-11	1315.7896	6.1224E-05
3178588.						
516.000	-5.68E-11	-.0058556	7.7326E-05	8.1138E-12	1315.7896	3.0115E-05
3178588.						
522.000	-1.82E-11	-.0048505	.0001966	5.0543E-12	1315.7896	9.6431E-06
3178588.						
528.000	3.81E-12	-.0034979	.0002195	2.6686E-12	1315.7895	-2.0166E-06
3178588.						
534.000	1.38E-11	-.0022176	.0001915	1.0353E-12	1315.7895	-7.3217E-06
3178588.						
540.000	1.62E-11	-.0012007	.0001437	5.8441E-14	1315.7895	-8.5981E-06
3178588.						
546.000	1.45E-11	-.0004932	9.4830E-05	-4.2561E-13	1315.7895	-7.6932E-06
3178588.						
552.000	1.11E-11	-6.2593E-05	5.4073E-05	-5.8443E-13	1315.7895	-5.8924E-06
3178588.						
558.000	7.51E-12	.0001559	2.4462E-05	-5.5778E-13	1315.7895	-3.9779E-06
3178588.						
564.000	4.43E-12	.0002311	5.4889E-06	-4.4719E-13	1315.7895	-2.3465E-06
3178588.						
570.000	2.14E-12	.0002219	-4.9557E-06	-3.1774E-13	1315.7895	-1.1350E-06
3178588.						
576.000	6.17E-13	.0001717	-9.3406E-06	-2.0525E-13	1315.7895	-3.2661E-07
3178588.						
582.000	-3.21E-13	.0001098	-9.8110E-06	-1.2478E-13	1315.7895	1.6980E-07
3178588.						
588.000	-8.81E-13	5.4052E-05	-7.9016E-06	-7.7944E-14	1315.7895	4.6665E-07
3178588.						
594.000	-1.26E-12	1.5051E-05	-4.5058E-06	-5.8197E-14	1315.7895	6.6531E-07
3178588.						
600.000	-1.58E-12	0.0000	0.0000	-5.3896E-14	1315.7895	8.3662E-07
1589294.						

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 3:

Pile-head deflection	=	.03078533 in
Computed slope at pile head	=	-8.673617E-19
Maximum bending moment	=	-190794.61144 lbs-in
Maximum shear force	=	5000.00000 lbs
Depth of maximum bending moment	=	0.00000 in
Depth of maximum shear force	=	0.00000 in
Number of iterations	=	5
Number of zero deflection points	=	7

Computed Values of Load Distribution and Deflection
for Lateral Loading for Load Case Number 4

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head = 15000.000 lbs
Specified slope at pile head = 0.000E+00 in/in
Specified axial load at pile head = 25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

Depth X in	Deflect. y in	Moment M lbs-in	Shear V lbs	Slope S Rad.	Total Stress lbs/in**2	Soil Res. Es*h p lbs/in
0.000	.092356	-572384.	15000.0000	-2.3130E-18	10802.8144	0.0000
6.000	.091375	-482359.	14851.9732	-.0003014	9310.6950	-49.3423
12.000	.088739	-394070.	14416.4319	-.0005519	7847.3320	-95.8382
18.000	.084752	-309197.	13717.0219	-.0007528	6440.5943	-137.2985
24.000	.079705	-229240.	12788.6383	-.0009067	5115.3411	-172.1627
30.000	.073872	-155461.	11673.7897	-.0010166	3892.4892	-199.4535
36.000	.067505	-88849.1475	10419.2784	-.0010865	2788.4273	-218.7170
42.000	.060834	-30103.6049	9073.2684	-.0011205	1814.7443	-229.9530
48.000	.054060	20366.2093	7682.7943	-.0011232	1653.3510	-233.5384
54.000	.047355	62426.8969	6291.7388	-.0010996	2350.4894	-230.1468
60.000	.040865	96196.9474	4939.2871	-.0010542	2910.2140	-220.6704
66.000	.034704	122015.	3658.8441	-.0009919	3338.1312	-206.1439
72.000	.028962	140401.	2477.3866	-.0009169	3642.8720	-187.6753
78.000	.023702	152018.	1415.2053	-.0008333	3835.4302	-166.3851
84.000	.018962	157633.	485.9866	-.0007448	3928.4929	-143.3545
90.000	.014763	158074.	-302.8285	-.0006546	3935.7942	-119.5839
96.000	.011107	154196.	-949.4664	-.0005654	3871.5169	-95.9621
102.000	.007979	146850.	-1457.0880	-.0004794	3749.7613	-73.2451
108.000	.005354	136854.	-1832.9577	-.0003983	3584.0929	-52.0448
114.000	.003199	124974.	-2087.5677	-.0003235	3387.1756	-32.8252
120.000	.001473	111901.	-2233.7632	-.0002558	3170.4944	-15.9066
126.000	.000130	98245.2034	-2285.9078	-.0001957	2944.1630	-1.4749
132.000	-.000876	84528.3541	-2259.1191	-.0001435	2716.8119	10.4045

138.000	-.001592	71178.8206	-2168.5951	-9.8992E-05	2495.5489	19.7701	74520.0000
144.000	-.002064	58534.9101	-2029.0477	-6.1924E-05	2285.9814	26.7457	77760.0000
150.000	-.002335	46848.8259	-1854.2475	-3.1809E-05	2092.2894	31.5210	81000.0000
156.000	-.002445	36293.4824	-1656.6835	-8.0495E-06	1917.3389	34.3337	84240.0000
162.000	-.002431	26971.0390	-1447.3294	1.0030E-05	1762.8233	35.4510	87480.0000
168.000	-.002325	18922.5210	-1235.5114	2.3144E-05	1629.4224	35.1549	90720.0000
174.000	-.002154	12137.9589	-1028.8634	3.2021E-05	1516.9711	33.7277	93960.0000
180.000	-.001941	6566.5546	-833.3565	3.7366E-05	1424.6274	31.4412	97200.0000
186.000	-.001705	2126.4708	-653.3897	3.9850E-05	1351.0348	28.5477	100440.
192.000	-.001463	-1286.0764	-491.9244	4.0090E-05	1337.1057	25.2740	103680.
198.000	-.001224	-3788.6494	-350.6524	3.8640E-05	1378.5848	21.8167	106920.
204.000	-.000999	-5505.4976	-230.1810	3.5984E-05	1407.0408	18.3405	110160.
210.000	-.000792	-6561.6168	-130.2264	3.2536E-05	1424.5456	14.9777	113400.
216.000	-.000609	-7077.9753	-49.8049	2.8638E-05	1433.1040	11.8294	116640.
222.000	-.000449	-7167.8675	12.5856	2.4567E-05	1434.5939	8.9674	119880.
228.000	-.000314	-6934.3186	58.7997	2.0537E-05	1430.7229	6.4373	123120.
234.000	-.000202	-6468.4325	90.8978	1.6707E-05	1423.0011	4.2621	126360.
240.000	-.000113	-5848.5573	111.0212	1.3187E-05	1412.7269	2.4457	129600.
246.000	-4.41E-05	-5140.1346	121.2898	1.0047E-05	1400.9851	.9771396	132840.
252.000	7.33E-06	-4396.0943	123.7223	7.3215E-06	1388.6529	-.1662934	136080.
258.000	4.37E-05	-3657.6636	120.1776	5.0200E-06	1376.4137	-1.0153	139320.
264.000	6.76E-05	-2955.4689	112.3153	3.1302E-06	1364.7751	-1.6055	142560.
270.000	8.13E-05	-2310.8195	101.5730	1.6252E-06	1354.0903	-1.9752	145800.
276.000	8.71E-05	-1737.0809	89.1584	4.6848E-07	1344.5809	-2.1629	149040.
282.000	8.69E-05	-1241.0595	76.0524	-3.8258E-07	1336.3595	-2.2057	152280.
288.000	8.25E-05	-824.3375	63.0212	-9.7280E-07	1329.4525	-2.1380	155520.
294.000	7.52E-05	-484.5127	50.6352	-1.3468E-06	1323.8201	-1.9907	158760.
300.000	6.63E-05	-216.3112	39.2910	-1.5471E-06	1319.3747	-1.7907	162000.
306.000	5.67E-05	-12.5565	29.2369	-1.6125E-06	1315.9976	-1.5607	165240.
312.000	4.70E-05	135.0155	20.5980	-1.5775E-06	1318.0273	-1.3190	168480.
318.000	3.77E-05	235.0927	13.4008	-1.4717E-06	1319.6860	-1.0801	171720.
324.000	2.93E-05	296.2669	7.5964	-1.3199E-06	1320.7000	-.8547154	

174960.						
330.000	2.19E-05	326.6460	3.0810	-1.1419E-06	1321.2035	-.6504240
178200.						
336.000	1.56E-05	333.5817	-.2862552	-9.5322E-07	1321.3185	-.4720012
181440.						
342.000	1.05E-05	323.4969	-2.6682	-7.6545E-07	1321.1513	-.3219940
184680.						
348.000	6.42E-06	301.7925	-4.2377	-5.8676E-07	1320.7916	-.2011722
187920.						
354.000	3.42E-06	272.8200	-5.1681	-4.2255E-07	1320.3114	-.1089617
191160.						
360.000	1.35E-06	239.9016	-7.6445	-2.7603E-07	1319.7657	-.7164919
3178588.						
366.000	1.08E-07	181.1688	-9.9650	-1.5571E-07	1318.7923	-.0570046
3178588.						
372.000	-5.16E-07	120.3684	-9.3159	-6.9536E-08	1317.7845	.2733566
3178588.						
378.000	-7.27E-07	69.3985	-7.3407	-1.5306E-08	1316.9397	.3850467
3178588.						
384.000	-7.00E-07	32.2843	-5.0736	1.3751E-08	1316.3246	.3706618
3178588.						
390.000	-5.62E-07	8.5111	-3.0687	2.5409E-08	1315.9305	.2976266
3178588.						
396.000	-3.95E-07	-4.5482	-1.5485	2.6542E-08	1315.8649	.2091295
3178588.						
402.000	-2.43E-07	-10.0784	-.5343939	2.2362E-08	1315.9565	.1288949
3178588.						
408.000	-1.26E-07	-10.9676	.0531998	1.6348E-08	1315.9713	.0669697
3178588.						
414.000	-4.71E-08	-9.4449	.3290161	1.0515E-08	1315.9460	.0249691
3178588.						
420.000	-2.40E-10	-7.0226	.4043045	5.8086E-09	1315.9059	.0001270
3178588.						
426.000	2.26E-08	-4.5950	.3688136	2.4887E-09	1315.8656	-.0119573
3178588.						
432.000	2.96E-08	-2.5976	.2858602	4.3324E-10	1315.8325	-.0156939
3178588.						
438.000	2.78E-08	-1.1648	.1946441	-6.4193E-10	1315.8088	-.0147115
3178588.						
444.000	2.19E-08	-.2616394	.1156707	-1.0496E-09	1315.7938	-.0116130
3178588.						
450.000	1.52E-08	.2235196	.0567143	-1.0605E-09	1315.7932	-.0080392
3178588.						
456.000	9.20E-09	.4192500	.0179827	-8.7679E-10	1315.7964	-.0048714
3178588.						
462.000	4.65E-09	.4395745	-.0040273	-6.3136E-10	1315.7968	-.0024653
3178588.						
468.000	1.62E-09	.3711119	-.0139962	-3.9969E-10	1315.7956	-.0008577
3178588.						
474.000	-1.43E-10	.2717399	-.0163424	-2.1599E-10	1315.7940	7.5655E-05
3178588.						
480.000	-9.73E-10	.1750683	-.0145693	-8.8302E-11	1315.7924	.0005154
3178588.						
486.000	-1.20E-09	.0969343	-.0111123	-1.0572E-11	1315.7911	.0006370
3178588.						
492.000	-1.10E-09	.0417243	-.0074536	2.9052E-11	1315.7902	.0005826
3178588.						
498.000	-8.54E-10	.0074829	-.0043489	4.3114E-11	1315.7896	.0004523
3178588.						
504.000	-5.82E-10	-.0104756	-.0020665	4.2259E-11	1315.7896	.0003085
3178588.						
510.000	-3.47E-10	-.0173280	-.0005901	3.4313E-11	1315.7898	.0001837
3178588.						

 516.000 -1.71E-10   -.0175668   .0002320 2.4341E-11   1315.7898 9.0344E-05
3178588.
 522.000 -5.46E-11   -.0145516   .0005898 1.5163E-11   1315.7897 2.8929E-05
3178588.
 528.000 1.14E-11   -.0104938   .0006584 8.0058E-12   1315.7896 -6.0499E-06
3178588.
 534.000 4.15E-11   -.0066528   .0005744 3.1058E-12   1315.7896 -2.1965E-05
3178588.
 540.000 4.87E-11   -.0036020   .0004311 1.7532E-13   1315.7895 -2.5794E-05
3178588.
 546.000 4.36E-11   -.0014795   .0002845 -1.2768E-12   1315.7895 -2.3080E-05
3178588.
 552.000 3.34E-11   -.0001878   .0001622 -1.7533E-12   1315.7895 -1.7677E-05
3178588.
 558.000 2.25E-11   .0004676 7.3386E-05 -1.6733E-12   1315.7895 -1.1934E-05
3178588.
 564.000 1.33E-11   .0006934 1.6467E-05 -1.3416E-12   1315.7895 -7.0395E-06
3178588.
 570.000 6.43E-12   .0006656 -1.4867E-05 -9.5321E-13   1315.7895 -3.4051E-06
3178588.
 576.000 1.85E-12   .0005152 -2.8022E-05 -6.1576E-13   1315.7895 -9.7982E-07
3178588.
 582.000 -9.62E-13   .0003295 -2.9433E-05 -3.7434E-13   1315.7895 5.0940E-07
3178588.
 588.000 -2.64E-12   .0001622 -2.3705E-05 -2.3383E-13   1315.7895 1.4000E-06
3178588.
 594.000 -3.77E-12 4.5153E-05 -1.3517E-05 -1.7459E-13   1315.7895 1.9959E-06
3178588.
 600.000 -4.74E-12   0.0000   0.0000 -1.6169E-13   1315.7895 2.5099E-06
1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.

Output Summary for Load Case No. 4:

Pile-head deflection   =   .09235599 in
Computed slope at pile head   = -2.312965E-18
Maximum bending moment   = -572383.83433 lbs-in
Maximum shear force   =   15000.00000 lbs
Depth of maximum bending moment =   0.00000 in
Depth of maximum shear force   =   0.00000 in
Number of iterations   =   5
Number of zero deflection points =   7

             Computed Values of Load Distribution and Deflection
                 for Lateral Loading for Load Case Number 5

Pile-head boundary conditions are Shear and Slope (BC Type 2)
Specified shear force at pile head =   25000.000 lbs
Specified slope at pile head   =   0.000E+00 in/in
Specified axial load at pile head   =   25000.000 lbs

(Zero slope for this load indicates fixed-head conditions)

  Depth   Deflect.   Moment   Shear   Slope   Total   Soil Res.

X	y	M	V	S	Stress	p	Es*h F/L
in	in	lbs-in	lbs	Rad.	lbs/in**2	lbs/in	lbs/in
0.000	.154253	-954491.	25000.0000	4.6259E-18	17136.0794	0.0000	0.0000
6.000	.152616	-804450.	24752.7620	-.0005027	14649.2134	-82.4127	3240.0000
12.000	.148221	-657307.	24025.2886	-.0009204	12210.3788	-160.0785	6480.0000
18.000	.141572	-515870.	22857.0155	-.0012556	9866.1265	-229.3459	9720.0000
24.000	.133153	-382646.	21306.1448	-.0015124	7657.9886	-287.6110	12960.0000
30.000	.123423	-259743.	19443.5877	-.0016960	5620.9201	-333.2414	16200.0000
36.000	.112802	-148814.	17347.4325	-.0018127	3782.3226	-365.4770	19440.0000
42.000	.101670	-51029.8704	15098.0636	-.0018698	2161.5884	-384.3127	22680.0000
48.000	.090364	32923.5459	12819.2371	-.0018750	1861.4836	-375.2962	24919.0991
54.000	.079170	103363.	10539.0516	-.0018361	3028.9963	-384.7657	29160.0000
60.000	.068331	159943.	8277.7968	-.0017608	3966.7782	-368.9859	32400.0000
66.000	.058040	203225.	6136.5651	-.0016570	4684.1644	-344.7579	35640.0000
72.000	.048446	234079.	4160.4956	-.0015321	5195.5499	-313.9319	38880.0000
78.000	.039655	253611.	2383.5608	-.0013927	5519.2843	-278.3797	42120.0000
84.000	.031734	263099.	828.6981	-.0012450	5676.5533	-239.9079	45360.0000
90.000	.024715	263929.	-491.5929	-.0010944	5690.2990	-200.1891	48600.0000
96.000	.018601	257529.	-1574.2884	-.0009454	5584.2199	-160.7094	51840.0000
102.000	.013370	245321.	-2424.6176	-.0008017	5381.8819	-122.7336	55080.0000
108.000	.008980	228674.	-3054.6748	-.0006663	5105.9619	-87.2855	58320.0000
114.000	.005374	208865.	-3481.9572	-.0005412	4777.6352	-55.1420	61560.0000
120.000	.002485	187053.	-3727.9036	-.0004281	4416.1092	-26.8401	64800.0000
126.000	.000237	164258.	-3816.4990	-.0003277	4038.3023	-2.6917	68040.0000
132.000	-.001447	141353.	-3772.9965	-.0002404	3658.6559	17.1926	71280.0000
138.000	-.002647	119054.	-3622.7915	-.0001659	3289.0673	32.8758	74520.0000
144.000	-.003439	97929.2305	-3390.4730	-.0001039	2938.9259	44.5637	77760.0000
150.000	-.003894	78399.9327	-3099.0631	-5.3551E-05	2615.2359	52.5729	81000.0000
156.000	-.004081	60756.5391	-2769.4453	-1.3785E-05	2322.8039	57.2997	84240.0000
162.000	-.004060	45170.7249	-2419.9747	1.6486E-05	2064.4755	59.1905	87480.0000

168.000	-.003883	31711.8973	-2066.2547	3.8457E-05	1841.4010	58.7161	90720.0000
174.000	-.003598	20364.1314	-1721.0616	5.3338E-05	1653.3165	56.3482	93960.0000
180.000	-.003243	11043.1563	-1394.3934	6.2314E-05	1498.8252	52.5412	97200.0000
186.000	-.002850	3612.7159	-1093.6197	6.6502E-05	1375.6687	47.7168	100440.
192.000	-.002445	-2100.2301	-823.7071	6.6934E-05	1350.5999	42.2541	103680.
198.000	-.002047	-6291.8489	-587.4984	6.4536E-05	1420.0743	36.4821	106920.
204.000	-.001671	-9169.5720	-386.0227	6.0117E-05	1467.7713	30.6764	110160.
210.000	-.001326	-10942.1570	-218.8178	5.4370E-05	1497.1512	25.0585	113400.
216.000	-.001018	-11811.6969	-84.2498	4.7868E-05	1511.5635	19.7975	116640.
222.000	-.000751	-11967.5146	20.1837	4.1072E-05	1514.1461	15.0137	119880.
228.000	-.000526	-11581.8141	97.5758	3.4343E-05	1507.7532	10.7837	123120.
234.000	-.000339	-10806.9084	151.3652	2.7945E-05	1494.9095	7.1461	126360.
240.000	-.000190	-9773.8155	185.1274	2.2063E-05	1477.7864	4.1080	129600.
246.000	-7.46E-05	-8591.9981	202.4037	1.6815E-05	1458.1983	1.6508	132840.
252.000	1.16E-05	-7350.0158	206.5670	1.2259E-05	1437.6129	-.2630205	136080.
258.000	7.26E-05	-6116.8721	200.7241	8.4109E-06	1417.1741	-1.6846	139320.
264.000	.000113	-4943.8504	187.6492	5.2501E-06	1397.7317	-2.6737	142560.
270.000	.000136	-3866.6566	169.7465	2.7323E-06	1379.8777	-3.2939	145800.
276.000	.000145	-2907.7117	149.0359	7.9642E-07	1363.9836	-3.6096	149040.
282.000	.000145	-2078.4646	127.1584	-6.2848E-07	1350.2392	-3.6829	152280.
288.000	.000138	-1381.6221	105.3966	-1.6173E-06	1338.6893	-3.5711	155520.
294.000	.000126	-813.2207	84.7051	-2.2445E-06	1329.2683	-3.3261	158760.
300.000	.000111	-364.4877	65.7489	-2.5810E-06	1321.8307	-2.9927	162000.
306.000	9.47E-05	-23.4602	48.9443	-2.6919E-06	1316.1783	-2.6088	165240.
312.000	7.85E-05	223.6513	34.5018	-2.6347E-06	1319.4964	-2.2053	168480.
318.000	6.31E-05	391.3516	22.4669	-2.4589E-06	1322.2760	-1.8063	171720.
324.000	4.90E-05	493.9920	12.7589	-2.2059E-06	1323.9772	-1.4297	174960.
330.000	3.66E-05	545.1200	5.2050	-1.9090E-06	1324.8246	-1.0883	178200.
336.000	2.61E-05	557.0241	-.4296331	-1.5940E-06	1325.0219	-.7899404	181440.
342.000	1.75E-05	540.4426	-4.4166	-1.2804E-06	1324.7471	-.5390586	184680.
348.000	1.08E-05	504.4087	-7.0446	-9.8182E-07	1324.1498	-.3369244	187920.
354.000	5.73E-06	456.2022	-8.6032	-7.0731E-07	1323.3508	-.1826030	

191160.						
360.000	2.27E-06	401.3830	-12.7583	-4.6224E-07	1322.4422	-1.2024
3178588.						
366.000	1.85E-07	303.2411	-16.6590	-2.6088E-07	1320.8156	-.0977768
3178588.						
372.000	-8.61E-07	201.5534	-15.5843	-1.1662E-07	1319.1301	.4560014
3178588.						
378.000	-1.21E-06	116.2644	-12.2854	-2.5801E-08	1317.7165	.6436211
3178588.						
384.000	-1.17E-06	54.1357	-8.4945	2.2894E-08	1316.6868	.6200254
3178588.						
390.000	-9.40E-07	14.3234	-5.1402	4.2457E-08	1316.0269	.4980823
3178588.						
396.000	-6.61E-07	-7.5592	-2.5956	4.4390E-08	1315.9148	.3501181
3178588.						
402.000	-4.08E-07	-16.8369	-.8975696	3.7418E-08	1316.0685	.2158865
3178588.						
408.000	-2.12E-07	-18.3413	.0868170	2.7366E-08	1316.0935	.1122423
3178588.						
414.000	-7.91E-08	-15.8033	.5492990	1.7608E-08	1316.0514	.0419184
3178588.						
420.000	-5.74E-10	-11.7550	.6759660	9.7329E-09	1315.9843	.0003040
3178588.						
426.000	3.77E-08	-7.6946	.6170120	4.1748E-09	1315.9170	-.0199553
3178588.						
432.000	4.95E-08	-4.3521	.4784382	7.3222E-10	1315.8616	-.0262359
3178588.						
438.000	4.65E-08	-1.9536	.3258998	-1.0697E-09	1315.8219	-.0246102
3178588.						
444.000	3.67E-08	-.4409491	.1937629	-1.7540E-09	1315.7968	-.0194354
3178588.						
450.000	2.54E-08	.3720731	.0950781	-1.7737E-09	1315.7956	-.0134595
3178588.						
456.000	1.54E-08	.7005202	.0302207	-1.4672E-09	1315.8011	-.0081596
3178588.						
462.000	7.80E-09	.7351616	-.0066550	-1.0569E-09	1315.8017	-.0041323
3178588.						
468.000	2.72E-09	.6209776	-.0233734	-6.6938E-10	1315.7998	-.0014405
3178588.						
474.000	-2.32E-10	.4548810	-.0273258	-3.6194E-10	1315.7970	.0001231
3178588.						
480.000	-1.62E-09	.2931772	-.0243754	-1.4817E-10	1315.7943	.0008604
3178588.						
486.000	-2.01E-09	.1624212	-.0185992	-1.7970E-11	1315.7922	.0010650
3178588.						
492.000	-1.84E-09	.0699919	-.0124804	4.8447E-11	1315.7906	.0009746
3178588.						
498.000	-1.43E-09	.0126422	-.0072855	7.2061E-11	1315.7897	.0007570
3178588.						
504.000	-9.75E-10	-.0174555	-.0034649	7.0685E-11	1315.7898	.0005165
3178588.						
510.000	-5.81E-10	-.0289578	-.0009924	5.7422E-11	1315.7900	.0003077
3178588.						
516.000	-2.86E-10	-.0293815	.0003850	4.0750E-11	1315.7900	.0001515
3178588.						
522.000	-9.18E-11	-.0243503	.0009852	2.5396E-11	1315.7899	4.8614E-05
3178588.						
528.000	1.89E-11	-.0175669	.0011011	1.3417E-11	1315.7898	-9.9902E-06
3178588.						
534.000	6.92E-11	-.0111417	.0009610	5.2129E-12	1315.7897	-3.6680E-05
3178588.						
540.000	8.14E-11	-.0060360	.0007216	3.0407E-13	1315.7896	-4.3130E-05
3178588.						

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 546.000  7.29E-11   -.0024825    .0004764 -2.1303E-12   1315.7895 -3.8614E-05
3178588.
 552.000  5.58E-11   -.0003189    .0002718 -2.9308E-12   1315.7895 -2.9587E-05
3178588.
 558.000  3.77E-11    .0007797    .0001231 -2.7991E-12   1315.7895 -1.9982E-05
3178588.
 564.000  2.23E-11    .0011588  2.7743E-05 -2.2451E-12   1315.7895 -1.1793E-05
3178588.
 570.000  1.08E-11    .0011133 -2.4764E-05 -1.5959E-12   1315.7895 -5.7092E-06
3178588.
 576.000  3.11E-12    .0008621 -4.6834E-05 -1.0314E-12   1315.7895 -1.6478E-06
3178588.
 582.000 -1.60E-12    .0005516 -4.9236E-05 -6.2737E-13   1315.7895  8.4732E-07
3178588.
 588.000 -4.42E-12    .0002715 -3.9673E-05 -3.9217E-13   1315.7895  2.3405E-06
3178588.
 594.000 -6.31E-12  7.5613E-05 -2.2630E-05 -2.9298E-13   1315.7895  3.3404E-06
3178588.
 600.000 -7.93E-12      0.0000      0.0000 -2.7137E-13   1315.7895  4.2030E-06
1589294.

Output Verification:

Computed forces and moments are within specified convergence limits.


Output Summary for Load Case No.  5:

Pile-head deflection             =      .15425262 in
Computed slope at pile head      =   4.625929E-18
Maximum bending moment           =  -954490.82646 lbs-in
Maximum shear force              =    25000.00000 lbs
Depth of maximum bending moment  =        0.00000 in
Depth of maximum shear force     =        0.00000 in
Number of iterations             =              5
Number of zero deflection points =              7




--------------------------------------------------------------------------------
                          Summary of Pile Response(s)
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Definition of Symbols for Pile-Head Loading Conditions:

Type 1 = Shear and Moment,          y = pile-head displacment in
Type 2 = Shear and Slope,           M = Pile-head Moment lbs-in
Type 3 = Shear and Rot. Stiffness,  V = Pile-head Shear Force lbs
Type 4 = Deflection and Moment,     S = Pile-head Slope, radians
Type 5 = Deflection and Slope,      R = Rot. Stiffness of Pile-head in-lbs/rad

Load  Pile-Head    Pile-Head       Axial    Pile-Head    Maximum     Maximum
Type  Condition    Condition       Load     Deflection    Moment      Shear
         1           2            lbs         in        in-lbs       lbs
---- ------------ ------------ ----------- ----------- ----------- -----------
  2  V=    10000. S=     0.000  25000.0000    .0615707    -381589.  10000.0000
  2  V=    20000. S=     0.000  25000.0000    .1231413    -763178.  20000.0000
  2  V=  5000.000 S=     0.000  25000.0000    .0307853    -190795.   5000.0000
  2  V=    15000. S=     0.000  25000.0000    .0923560    -572384.  15000.0000
  2  V=    25000. S=     0.000  25000.0000    .1542526    -954491.  25000.0000
```

The analysis ended normally.