BORING No. : 527-6109 (Sheet 2 of 2)

Date Drilled: 11/5/96
Project Name : I-5/805 Retaining Walls
Location : 4H:528+73 "SDI" Line
Logged by: Ramiro Oguito
Drilling Method : Mud Rotary

Top of hole elevation : 11.60 m

SAMPLE				PROFILE	
DEPTH m	NUMBER	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	DESCRIPTION OF MATERIALS
-13.00					
	9	SPT	33		- at 13.5 m: Grades to dense
-14.00					
-15.00	10	SPT	7		Silty CLAY (CH): Firm, fat, olive gray, traces of sand.
-16.00					
-17.00	11	SPT	11		- at 17.0 m: Grades to stiff
-18.00					
	12	SPT	8		
-19.00					Silty CLAY (CL): Firm, gray olive with clayey SILT, locally sandy.
-20.00	13	SPT	7		
-21.00					
	14	SPT	20		
-22.00					Gravelly SAND (SP): Intermixed with Sandy GRAVEL (GP) lenses very dense, gray quartz sand and volcanic rock pebbles.
-23.00					
-24.00					
-25.00					
	9	SPT	>50		Bedrock: Sandstone: very dense, light olive gray, fine to medium grained

LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

NOTE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, P1 4/46.3, 10 2/2.15	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

JEFF J. TESAR No. 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans now has a web site! To get to the web site, go to http://www.dot.ca.gov

Caltrans Metric

DRAWN BY
CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

BRIDGE NO.
POST MILE

BORING: 527-6109 **R-103**

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275

DATE PLOTTED: 06-APR-2001
TIME PLOTTED: 13:54

USERNAME: rbdloc

FORM DC DE-88-FF (REV. 3/88)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805.56	R45.5/R59.5, 41.4/46.3, TO 7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

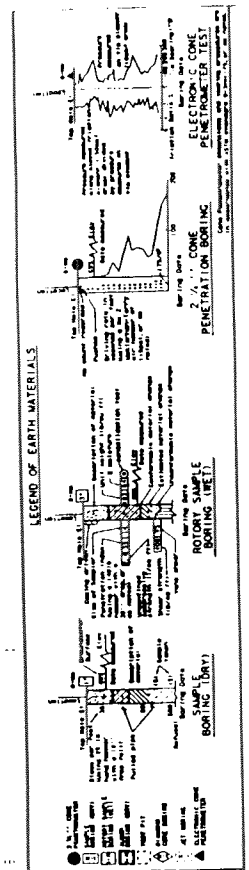
REGISTERED GEOLOGIST JEFF J. TESAR No. 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Cal Trans now has a web site! To get to the web site, go to: http://trsc.dot.ca.gov

Caltrans Metric



BORING No. : 543-896-6

Date Drilled: 08/28/96

Project Name : I-5/805 Widening

Location : 501+543+28 "SB" Line

Logged by: Ramiro Oquita

Drilling Method : Mud rotary

Top of hole elevation : 7.31 m

DEPTH (M)	SAMPLE NUMBER	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	PROFILE DESCRIPTION OF MATERIALS
					Ground Surface
0.0					Sandy CLAY (CL): olive gray, stiff.
-1.00					Silty SAND (SM): med dense, olive gray to yellow brown, fine to medium grained.
	1	SPT	19		Clayey SAND (SC): medium dense, olive gray.
-2.00					- at 3.6 m: Grades to Silty Sand
-3.00					
	2	SPT	24		
-4.00					
	3	SPT	27		
-5.00					SAND and GRAVEL (GP): fine to coarse sand, volcanic rock pebble fragments.
-6.00					
	4	SPT	41		Bedrock (Del Mar Fm.): Claystone, hard, green gray.

LEGEND OF EARTH MATERIALS

ELECTRONIC CONE PENETROMETER TEST

2 1/4" CONE PENETRATION BORING

ROTARY SAMPLE BORING (WET)

SAMPLE BORING (DRY)

LEGEND OF EARTH MATERIALS

CLAY, CLAYEY SILT, FILL, ASPHALT PAVEMENT, SAND, SILTSTONE, GRAVEL, SILT, SANDY CLAY, CLAYEY SAND, BEDROCK, SANDY SILT, SILTY SAND, SILTY CLAY

CONSISTENCY CLASSIFICATION FOR SOILS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY

CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

BRIDGE NO.

POST MILE

BORING: 543-896-6 R-104

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

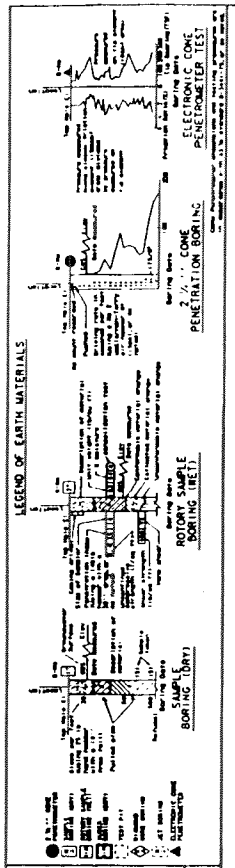
REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275 EA 0301U1

USERNAME => tbdjoc
DGN FILE => 0301uoo4.dgn

DATE PLOTTED => 06-APR-2001
TIME PLOTTED => 15:55

FORM DC-OE-92 PF (REV. 5/88)



BORING No. : 543-896-7

Date Drilled: 08/29/96
Project Name : I-5/805 Widening
Location : 45L;542+35 "SB" Line
Logged by: Ramiro Oquita
Drilling Method : Mud rotary

Top of hole elevation : 7.31 m

DEPTH (M)	SAMPLE NUMBER	SAMPLE TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	PROFILE DESCRIPTION OF MATERIALS
0.0					Ground Surface
-1.00					Clayey SAND (SC): very loose, yellow brown, fine to medium, wet.
-2.00	1	SPT	1		
-3.00					Gravelly SAND (SP): dense, brown, pebbles to 2.54 cm in diameter
	2	SPT	36		
-4.00					Silty to Clayey SAND (SM/SC): medium dense, moderate brown.
-5.00	3	SPT	16		
-6.00					
-7.00					
-8.00	4	SPT	11		Clean to clayey SAND (SC/SP): medium dense, pale brown, gravel lenses at 8.08 m
-9.00	5	SPT	39		- at 9.0 m: Gravelly SAND (SP): dense pale brown.
-10.00					Sandy GRAVEL (GP): very dense, volcanic rock pebbles and cobbles.
-11.00					
-12.00	6	SPT	>50		Bedrock: DELMAR FORMATION - Claystone (CL): hard, pale olive.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, 41.4/46.3, TO.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST JEFF J. TEGAN No. 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans Metric

Caltrans now has a web site! To get to the web site, go to: http://trescdat.ca.gov

LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY
CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO.
POST MILE

BORING: 543-896-7 R-105

LOG OF TEST BORINGS (of)

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

FORM DC-OE 92 PP (REV. 3 88)

USERNAME => tbdjac
DGN FILE => b0301qaa5.dgn

CU 11275 EA 0301U1

DATE PLOTTED => 06-APR-2001
TIME PLOTTED => 15:55

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805.56	R45.5/R59.5, 41.4/46.3, TO 7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST JEFF G. TESAR 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Cal Trans now has a web site! To get to the web site, go to: http://trasc.dot.ca.gov

Caltrans Metric

BORING No. : 543-896-8

Date Drilled: 08/28/96
Project Name : I-5/805 Widening
Location : 40L,541+40 "SB" Line
Logged by: Ramiro Oquita
Drilling Method : Mud Rotary

Top of hole elevation : 7.62 m

DEPTH (M)	SAMPLE NUMBER	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	PROFILE DESCRIPTION OF MATERIALS
					Ground Surface
0.0					Silty SAND (SM): clayey, yellow brown, fine to medium grained, medium dense.
-1.00					
	1	SPT	18		
-2.00					
-3.00					SAND (SW): dense, yellow-brown, medium to coarse grained, with trace of pebbles.
	2	SPT	36		
-4.00					
	3	SPT	27		
-5.00					
-6.00	4	SPT	34		
-7.00					
	5	SPT	29		Silty SAND (SM): medium dense, pale yellow-brown, medium to coarse grained, with gravel lenses.
-8.00					
-9.00					Sandy SILT (ML): very stiff, yellow brown, grades downward into interlayered silty SAND and SILT (ML).
	6	SPT	21		
-10.00					
	7	SPT	64		
-11.00					GRAVEL (GP) very dense, comprise of volcanic rock clasts. Silty to sandy.
					Bedrock: DELMAR FORMATION - Claystone (CL): hard, pale green gray to gray green.
-12.00					

LEGEND OF EARTH MATERIALS

ELECTRONIC CONE PENETROMETER TEST

2 ½" CONE PENETRATION BORING

ROTARY SAMPLE BORING (WET)

SAMPLE BORING (DRY)

LEGEND OF EARTH MATERIALS

CLAY, CLAYEY SILT, FILL, ASPHALT PAVEMENT, SAND, SILTSTONE, GRAVEL, SILT, SILTY CLAY

CONSISTENCY CLASSIFICATION FOR SOILS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY

CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

BRIDGE NO.

POST MILE

BORING: 543-896-8 **R-106**

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275 EA 030111

DATE PLOTTED => 06-APR-2001
TIME PLOTTED => 15:56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, 41.4/46.3, 70.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST JEFF J. TEGAN No. 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet

Cal Trans now has a web site! To get to the web site go to: http://trescdot.ca.gov

Caltrans Metric

BORING No. : 543-996-10

Date Drilled: 09/04/96

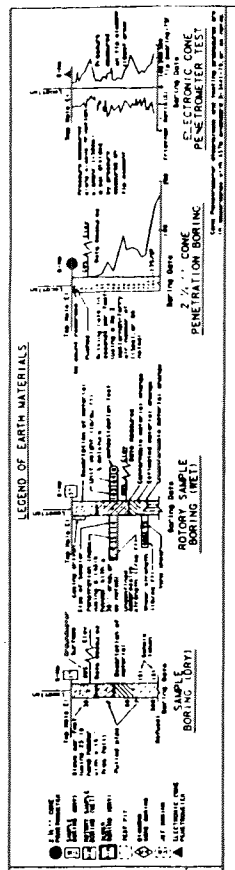
Project Name : I-5/805 Widening

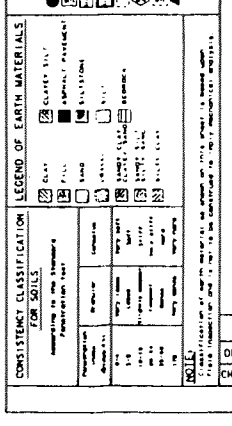
Location : 411+543+99 "SB" Line

Drilling Method : Mud Rotary

Top of hole elevation : 15.24 m

SAMPLE				PROFILE	
DEPTH FT / M	NUMBER	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	DESCRIPTION OF MATERIALS
0.0					Ground Surface
-1.00					Bedrock (Torrey Sand Fm): Clayey SAND (SC): dense, fine to medium grained, yellow brown, poorly indurated.
-2.00	1	SPT	50		Clayey SILT (ML): with lesser amounts of silty CLAY, hard, pale olive gray.
-3.00	2	SPT	93		Silty SAND (SM): very dense, fine to coarse grained, yellow brown, poorly indurated.
-4.00	3	SPT	47		Clayey SAND (SC): dense fine to coarse grained, yellow brown, grades down into clayey, sandy siltstone, poorly indurated.





DRAWN BY

CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

BRIDGE NO

POST MILE

BORING: 543-996-10 R-107

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275

FORM OC DE 92 PF NEY 3/88

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, 41.4/46.3, 10.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST JEFF J. TESAR No. 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Cal Trans now has a web site! To get to the web site, go to: http://tresc.dot.ca.gov

Caltrans Metric

BORING No. : 565-B1

Date Drilled: 02/09/2001

Project Name : I-5/805 Retaining Walls

Location : 36L+566+02 "SD" Line

Drilling Method : Flight Auger

Top of hole elevation : 26.40 m

SAMPLE				PROFILE	
DEPTH M	NUMBER	TYPE	BLOWS PER 0.30 METERS (N)	SYMBOL	DESCRIPTION OF MATERIALS
					Ground Surface
0.0					FILL: SAND (SP): Brown, moist, medium dense, medium to fine grained, locally slightly clayey.
-1.00	1	SPT	14		
-2.00	2	SPT	14		BAY POINT FORMATION: SAND (SP): Brown, moist, medium dense, medium to fine grained.
-3.00	3	SPT	14		
-4.00					- at 3.7 m: Grades to fine grained and light brown in color
-5.00	4	SPT	16		
-6.00	5	SPT	15		
					No water encountered

LEGEND OF EARTH MATERIALS

ELECTRONIC CONE PENETROMETER TEST

2 1/4" CONE PENETRATION BORING

ROTARY SAMPLE BORING (WET)

SAMPLE BORING (DRY)

LEGEND OF EARTH MATERIALS

CLAY, CLAYEY SILT, FILL, ASPHALT PAVEMENT, SAND, SILTSTONE, GRAVEL, SILT, SANDY CLAY, BEDROCK, SILTY SAND, SILTY CLAY

CONSISTENCY CLASSIFICATION FOR SOILS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY

CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS 0 1 2 3

BRIDGE NO. **BORING:569A-B1** **R-108**

POST MILE **LOG OF TEST BORINGS** (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275 EA 0301U1

DATE PLOTTED => 06-APR-2001
TIME PLOTTED => 15:57

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, R1.4/R6.3, T0.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST JEFF J. TESAR No. 2131 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans now has a web site! To get to the web site, go to http://rtsc.dot.ca.gov

Caltrans Metric

BORING No. : 565-B2

Date Drilled: 02/09/2001

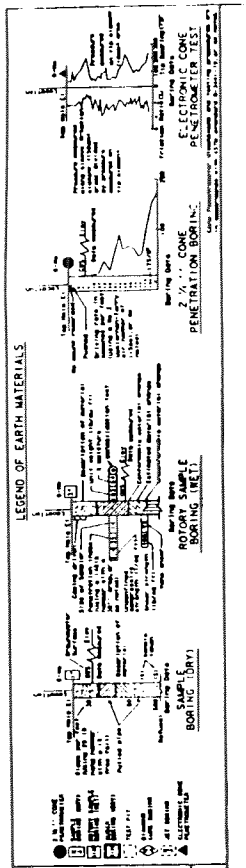
Project Name : I-5/805 Retaining Walls

Location : 441,564.82 "50" Line

Drilling Method : Flight Auger

Top of hole elevation : 22.10 m

SAMPLE				PROFILE	
DEPTH (m)	NUMBER	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	DESCRIPTION OF MATERIALS
					Ground Surface
0.0					FILL: Disturbed Native Soils of the BAY POINT FORMATION - SAND (SP): Brown, moist, very loose, medium to fine grained.
-1.00	1	SPT	3		at 1.5 m: Grades to loose
-2.00	2	SPT	5		
-3.00	3	SPT	7		BAY POINT FORMATION: Sand (SP): Light brown, moist, loose, medium to fine grained
-4.00					at 3.4 m: Locally clayey bands, presence of shells
-5.00	4	SPT	7		
-6.00	5	SPT	13		at 6.0 m: Grades to medium dense
					No water encountered



DRAWN BY

CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS 0 1 2 3 4 5

BRIDGE NO.

POST MILE

BORING: 565-B2 R-109

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275 EA 0301U1

DATE PLOTTED : 06-APR-2001 TIME : 15:34

USERNAME : s10010c
DGN FILE : s0010ugp9.dgn

FORM OC 01-92 PF WEEK 1/98

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, R1.4/R6.3, T0.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST — JEFF J. TEGAN — No. 2121 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans Metric

Caltrans now has a web site! To get to the web site, go to http://trsc.dot.ca.gov

BORING No. : 569-B6

Date Drilled: 02/09/2001

Project Name : I-5/805 Retaining Walls

Location : 231+567+30 "SD" Line

Drilling Method : Flight Auger

Top of hole elevation : 29.8 m

SAMPLE				PROFILE	
DEPTH (m)	NUMBER	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	DESCRIPTION OF MATERIALS
0.0					Ground Surface
					ASPHALT PAVEMENT
					FILL (base and subbase)
-1.00	1	SPT	30		FILL: Sand (SP): Brown, moist, medium dense, medium grained.
-2.00	2	SPT	25		BAY POINT FORMATION: Sand (SP): Light brown, moist, loose, medium grained, traces of fine gravel.
-3.00	3	SPT	10		- at 2.7 m: Grades to medium to coarse grained.
-4.00	4	SPT	10		
-5.00	5	SPT	12		- at 4.6 m: Grades to medium dense
-6.00	6	SPT	11		
					No water encountered

LEGEND OF EARTH MATERIALS

2 1/2" O.D. CONE PENETRATION BORING

ELECTRONIC CONE PENETROMETER TEST

ROTARY SAMPLE BORING (WET)

SAMPLE BORING (DRY)

ELECTRONIC CONE PENETROMETER

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration resistance (blows/ft)	Consistency	Approximate unconfined compressive strength (tsf)
0-4	Very soft	0-0.25
5-9	Soft	0.25-0.5
10-30	Medium stiff	0.5-1.0
31-50	Stiff	1.0-2.0
51-75	Very stiff	2.0-4.0
76	Very dense	4.0

NOTE: Classification of earth material as shown on this drawing is based upon visual field and laboratory examination of the material.

DRAWN BY

CHECKED BY

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS 0 1 2 3 4

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO.

POST MILE

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

BORING: 569-B6 R-110

LOG OF TEST BORINGS (1 of 1)

CU 11275 EA 030101

DATE PLOTTED => 04-APR-2001
TIME PLOTTED => 15:59

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, R1.4/46.3, 10.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST — JOSE J. TESAR — No. 2137 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans now has a web site! To get to the web site, go to http://www.dot.ca.gov

Caltrans Metric

BORING No. : 545B B5 (Sheet 1 of 2)

Date Drilled: 06/29/99

Project Name : I-5/805 Retaining Walls

Location : 22.2Lt 544+08.5 "SB" Line

Logged by: Joe Pratt

Drilling Method : Mud Rotary (Mud Cooling)

Top of hole elevation : 24.4 m

SAMPLE

DEPTH (m)	NUMBER	RECOVERY %	RQD	TYPE	BLOWS PER 0.30 METER (N)
0.0	1			SPT	21
-1.00					
	2			SPT	>50
-2.00					
-3.00	3			SPT	>50
-4.00	4	70	38	CORING	
-5.00	5	84	24	CORING	
-6.00					
-7.00	6	94	30	CORING	
-8.00	7	92	50	CORING	
-9.00					
-10.00	8	14	0	CORING	
-11.00	9	22	0	CORING	
-12.00					
	10	0	0	CORING	

PROFILE

SYMBOL

DESCRIPTION OF MATERIALS

Ground Surface

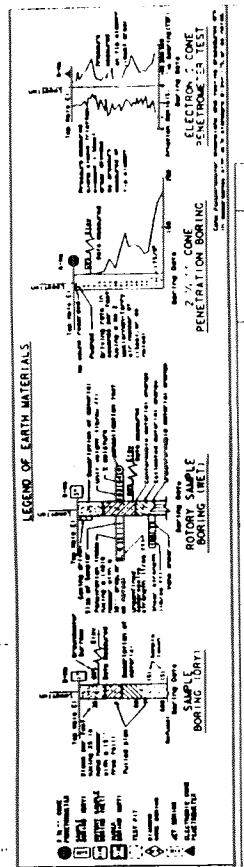
FILL:
SILTY fine SAND (SM), contains scattered roots, wood fragments, minor GRAVEL and COBBLES (up to 5%, up to 150 mm dia.), artificial embankment fill, medium dense, yellowish brown, dry.

MUDSTONE/CLAYSTONE interbedded with minor medium SANDSTONE: (probable Eocene Torrey Sandstone), dominantly soil-like, light brownish gray to light olive and strong brown, mottled (MUDSTONE) & yellowish brown (SANDSTONE), intensely to moderately weathered, soft to very soft, moderately to thinly bedded, unfractured, exhibits moderate to slow slaking, dry.

Very fine SANDSTONE interbedded with minor SILTSTONE (30%): dominantly soil-like, light olive gray & strong brown mottled, intensely weathered, soft to moderately soft, moderately thickly bedded, moderately fractured (90 to 300 mm spacing), fractures dip from 50° to 80° and show iron and magnesium oxide(?) staining and dendritic patterns on surfaces, unit is partially cemented (50%) to uncemented, gradational contacts.
MUDSTONE (70%) interbedded with very fine SANDSTONE (30%): dominantly soil-like, light olive gray to yellowish brown and strong brown, mottled, soft, dominantly uncemented, gradational contacts.

MUDSTONE interbedded with very fine to medium SANDSTONE and rare conglomerate: light olive gray and yellowish brown, strong brown mottled, intensely weathered, soft to minor moderately soft, moderately to thinly bedded (300 mm to 60 mm thick), bedding dips from 0 to approx. 20°, mostly uncemented (60% with soil-like properties) and cemented (40% with rock-like properties), conglomerate lense (approx. 0.6 m thick) above elev. +17.0 m.

Medium to fine SANDSTONE interbedded with CLAYSTONE: contains minor scattered coarse GRAVEL and COBBLES (hard metavolcanic rock fragments), light gray to yellowish brown and strong brown mottled, intensely weathered, soft (rock-like) CLAYSTONE to uncemented (soil-like) SANDSTONE, moderately to thinly bedded, unfractured, slow slaking.



CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Consistency	Blows/ft	Penetration Resistance (N-blows/ft)
Extremely Stiff	30-50	15-30
Very Stiff	15-30	8-15
Stiff	8-15	4-8
Medium Stiff	4-8	2-4
Soft	2-4	1-2
Very Soft	0-2	0-1

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply representation of materials.

DRAWN BY

CHECKED BY

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS 0 1 2 3 4 5

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE NO.

POST MILE

BORING: 545B-B5

R-111

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275

EA 030101

USERNAME = thatar

FORM DC-OE-92 PF GREY 3/91

DATE - TIME PLOTTED = 08-APR-2001 11:53

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	5, 805, 56	R45.5/R59.5, 41.4/46.3, 10.7/2.0	XX	XXX

CERTIFIED ENGINEERING GEOLOGIST

REGISTERED GEOLOGIST JEFF J. TESAR No. 2137 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

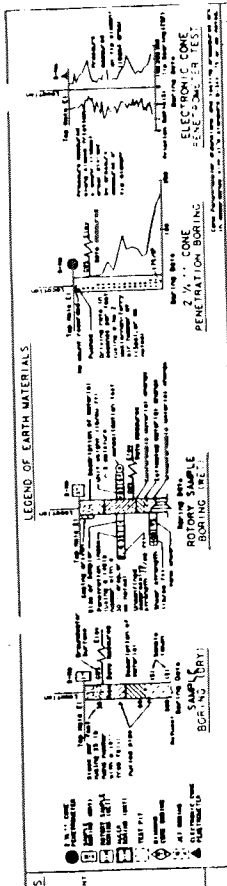
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans Metric

SAMPLE / PROFILE

DEPTH	NUMBER	RECOVERY %	RQD	TYPE	BLOWS PER 0.30 METER (N)	SYMBOL	DESCRIPTION OF MATERIALS
14.00	11	38	0	CORING			Medium to fine SANDSTONE with scattered GRAVEL and minor COBBLES (up to 150 mm dia.) hard, metavocanic), interbedded with CLAYSTONE and SILTSTONE, yellowish brown to light gray to black, moderately to intensely weathered, dominantly uncemented (soil-like) SANDSTONE and minor soft (rock-like) SILTSTONE/CLAYSTONE with CLAY matrix and/or cement, thinly to moderately bedded, unfractured, some hard drilling in GRAVEL/COBBLE zones.
-15.00							
-16.00	12	24	0	CORING			
-17.00	13	66	16	CORING			
-18.00							Conglomerate composed of coarse GRAVEL and small COBBLES (up to 150 mm dia.) with fine SAND (SP) matrix (30 -35%): varicolored rock fragments and brownish gray matrix, matrix is soil-like and uncemented, subangular to subrounded metavolcanic rock clasts are very hard (very hard drilling).
-19.00	14	80	0	CORING			
-20.00	16	73	0	CORING			SILTSTONE interbedded with minor CLAYSTONE and fine SANDSTONE (interbedded rock-like/soil-like units): olive gray, contains zones with pelecypod debris (source for calcite cement), moderately weathered, moderately soft, moderately fractured, rare fractures dip 80° in cemented zones.
-21.00							Fine SANDSTONE interbedded with SILTSTONE and minor CLAYSTONE (dominantly rock-like): contains zones with pelecypod and gastropod debris, light to dark gray, olive gray, and greenish gray, intensely to moderately weathered, moderately hard (some cemented SANDSTONE and SILTSTONE) to soft (CLAYSTONE/SILTSTONE), some zones uncemented and soil-like, moderately to thinly bedded (beds dip 10°), unfractured to moderately fractured (cemented SANDSTONE), minor subvertical (80° dip) fractures partially infilled with calcite cement, burrow mottled SILTSTONE, slow slaking.
-22.00	17	100	74	CORING			
-23.00	18	100	40	CORING			
-24.00							
-25.00	19	94	14	CORING			
-26.00	20	92	52	CORING			
-27.00							
-28.00	21	100		CORING			
-29.00							



LEGEND OF EARTH MATERIALS

CLAY, CLAYEY SILT, FILL, ASPHALT PAVEMENT, SAND, SILTSTONE, GRAVEL, SILT, SANDY CLAY, BEDROCK, CLAYEY SAND, SANDY SILT, SILTY SAND, SILTY CLAY

CONSISTENCY CLASSIFICATION FOR SOILS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

BORING No. : 545B-B5 (Sheet 2 of 2)

Date Drilled: 06/29/99

Project Name : 1-5/805 Retaining Walls

Location : 22.2L; 544+68.5 "SB" Line

Logged by: Joe Pratt

Drilling Method : Mud Rotary and Coring

Top of hole elevation : 24.4 m

DRAWN BY

CHECKED BY

CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

BRIDGE NO.

POST MILE

BORING: 545B-B5 R-112

LOG OF TEST BORINGS (of)

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CU 11275 EA 0301U1

USERNAME => tbdjoc
DGN FILE => b0301ugo12.dgn

DATE PLOTTED => 06-APR-2001
TIME PLOTTED => 16:00

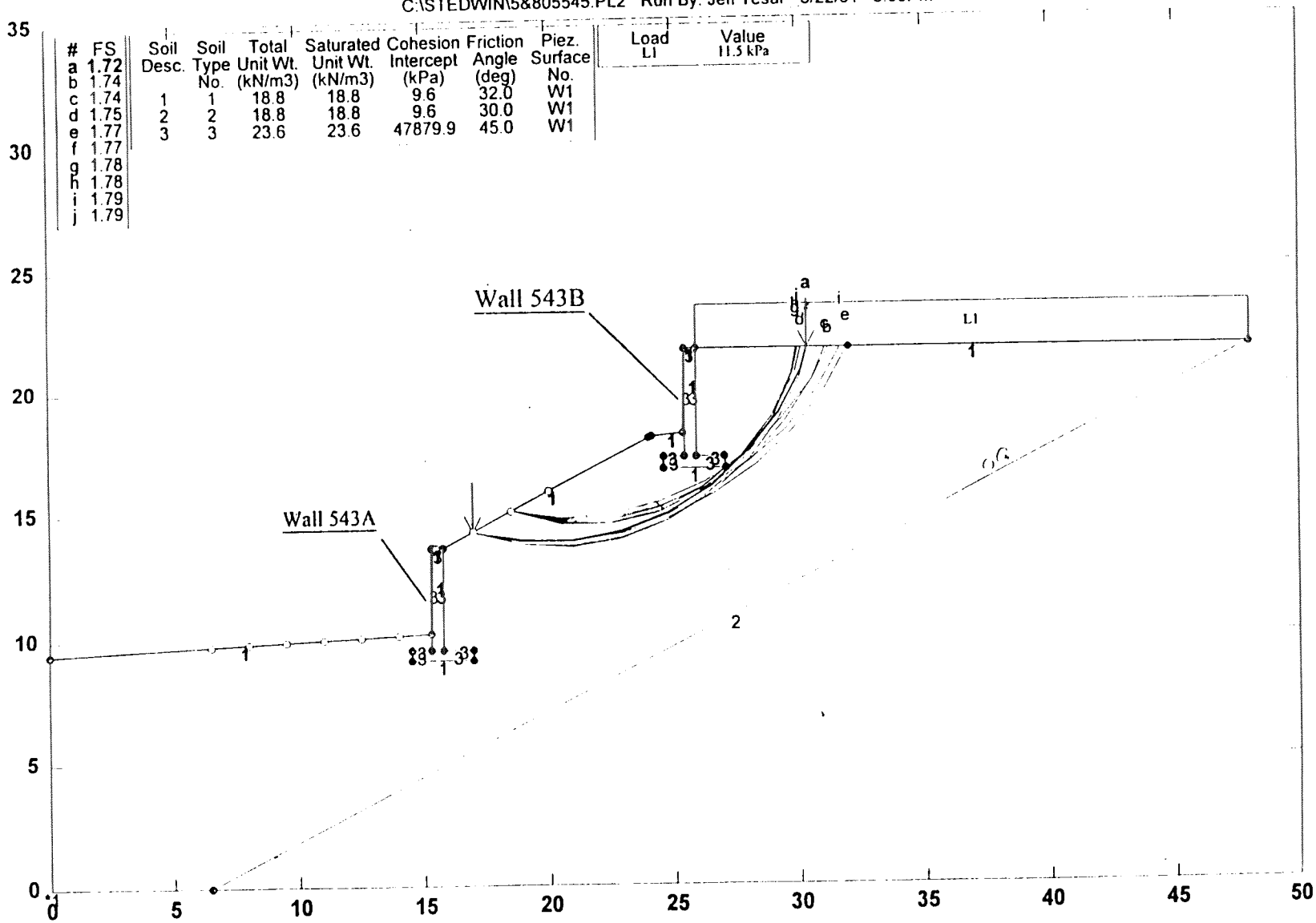
Interstates 5&805, Retaining Walls, Walls 545A and 543B

C:\STEDWIN\5&805545.PL2 Run By: Jeff Tesar 3/22/01 5:03PM

#	FS
a	1.72
b	1.74
c	1.74
d	1.75
e	1.77
f	1.77
g	1.78
h	1.78
i	1.79
j	1.79

Soil Desc.	Soil Type No.	Total Unit Wt. (kN/m3)	Saturated Unit Wt. (kN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Piez. Surface No.
1	1	18.8	18.8	9.6	32.0	W1
2	2	18.8	18.8	9.6	30.0	W1
3	3	23.6	23.6	47879.9	45.0	W1

Load	Value
L1	11.5 kPa



GSTABL7 FSmin=1.72

Safety Factors Are Calculated By The Modified Bishop Method

STED

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **
** Version 1.0, January 1996; Version 1.16, May 2000 **
--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/22/01
Time of Run: 5:03PM
Run By: Jeff Tesar
Input Data Filename: C:5&805545.PRP
Output Filename: C:5&805545.OUT
Unit System: SI
Plotted Output Filename: C:5&805545.PLT
PROBLEM DESCRIPTION Interstates 5&805, Retaining Walls, Walls 543A and 543B

BOUNDARY COORDINATES
8 Top Boundaries
25 Total Boundaries

Boundary No.	X-Left (m)	Y-Left (m)	X-Right (m)	Y-Right (m)	Soil Type Below Bnd
1	0.00	9.40	15.30	10.20	1
2	15.30	10.20	15.31	13.60	1
3	15.31	13.60	15.79	13.60	1
4	15.79	13.60	24.10	18.00	1
5	24.10	18.00	25.40	18.10	1
6	25.40	18.10	25.45	21.60	1
7	25.45	21.60	25.90	21.60	1
8	25.90	21.60	48.00	21.60	1
9	14.50	9.10	14.51	9.55	3
10	14.51	9.55	15.32	9.55	3
11	15.32	9.55	15.33	13.59	3
12	15.33	13.59	15.80	13.59	3
13	15.80	13.59	15.81	9.55	3
14	15.81	9.55	16.99	9.55	3
15	16.99	9.55	17.00	9.10	3
16	14.50	9.10	17.00	9.10	1
17	24.60	16.70	24.62	17.15	3
18	24.62	17.15	25.42	17.15	3
19	25.42	17.15	25.44	21.60	3
20	25.44	21.60	25.89	21.60	3
21	25.89	21.60	25.91	17.15	3
22	25.91	17.15	27.09	17.15	3
23	27.09	17.15	27.10	16.70	3
24	24.60	16.70	27.10	16.70	1
25	6.50	0.00	48.00	21.60	2

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN/m3)	Saturated Unit Wt. (kN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1	18.8	18.8	9.6	32.0	0.00	0.0	1
2	18.8	18.8	9.6	30.0	0.00	0.0	1
3	23.6	23.6	47879.9	45.0	0.00	0.0	1

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (m)	X-Right (m)	Intensity (kPa)	Deflection (deg)
1	25.90	48.00	11.5	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

Searching Routine Will Be Limited To An Area Defined By 1 Boundaries Of Which The First 1 Boundaries Will Deflect Surfaces Upward

Boundary No.	X-Left (m)	Y-Left (m)	X-Right (m)	Y-Right (m)
1	0.00	0.00	0.00	0.00

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.
400 Trial Surfaces Have Been Generated.
40 Surfaces Initiate From Each Of 10 Points Equally Spaced
Along The Ground Surface Between X = 6.50(m)
and X = 20.00(m)
Each Surface Terminates Between X = 24.00(m)
and X = 32.00(m)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(m)
2.00(m) Line Segments Define Each Trial Failure Surface.
Restrictions Have Been Imposed Upon The Angle Of Initiation.
The Angle Has Been Restricted Between The Angles Of -15.0
And 25.0 deg.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	17.00	14.24
2	18.97	13.87
3	20.97	13.86
4	22.93	14.22
5	24.80	14.94
6	26.51	15.98
7	27.99	17.32
8	29.20	18.91
9	30.10	20.70
10	30.36	21.60

Circle Center At X = 20.0 ; Y = 24.6 and Radius, 10.8
*** 1.721 ***
Individual data on the 21 slices

Slice No.	Width (m)	Weight (kN)	Water Force Top (kN)	Water Force Bot (kN)	Tie Force Norm (kN)	Tie Force Tan (kN)	Earthquake Force Hor (kN)	Earthquake Force Ver (kN)	Surcharge Load (kN)
1	2.0	26.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.0	73.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.0	104.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1.2	71.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.5	30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.2	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.6	34.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.4	61.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
15	0.6	66.3	0.0	0.0	0.0	0.0	0.0	0.0	6.8
16	0.6	60.2	0.0	0.0	0.0	0.0	0.0	0.0	6.7
17	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18	0.9	78.4	0.0	0.0	0.0	0.0	0.0	0.0	10.2
19	1.2	79.6	0.0	0.0	0.0	0.0	0.0	0.0	13.9
20	0.9	30.5	0.0	0.0	0.0	0.0	0.0	0.0	10.4
21	0.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0	3.0

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	18.50	15.04
2	20.48	14.78
3	22.48	14.88
4	24.43	15.34

5	26.26	16.14
6	27.93	17.25
7	29.37	18.63
8	30.54	20.26
9	31.18	21.60

Circle Center At X = 20.9 ; Y = 26.0 and Radius, 11.2

*** 1.736 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	17.00	14.24
2	18.97	13.89
3	20.97	13.88
4	22.94	14.20
5	24.83	14.85
6	26.59	15.82
7	28.15	17.06
8	29.48	18.56
9	30.54	20.25
10	31.09	21.60

Circle Center At X = 20.1 ; Y = 25.6 and Radius, 11.7

*** 1.738 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	18.50	15.04
2	20.46	14.61
3	22.46	14.63
4	24.40	15.09
5	26.20	15.97
6	27.76	17.22
7	29.01	18.78
8	29.88	20.58
9	30.12	21.60

Circle Center At X = 21.4 ; Y = 23.6 and Radius, 9.0

*** 1.755 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	17.00	14.24
2	18.97	13.91
3	20.97	13.89
4	22.95	14.17
5	24.86	14.76
6	26.66	15.64
7	28.30	16.78
8	29.75	18.17
9	30.96	19.76
10	31.92	21.51
11	31.95	21.60

Circle Center At X = 20.1 ; Y = 26.8 and Radius, 12.9

*** 1.771 ***

Failure Surface Specified By 10 Coordinate Points

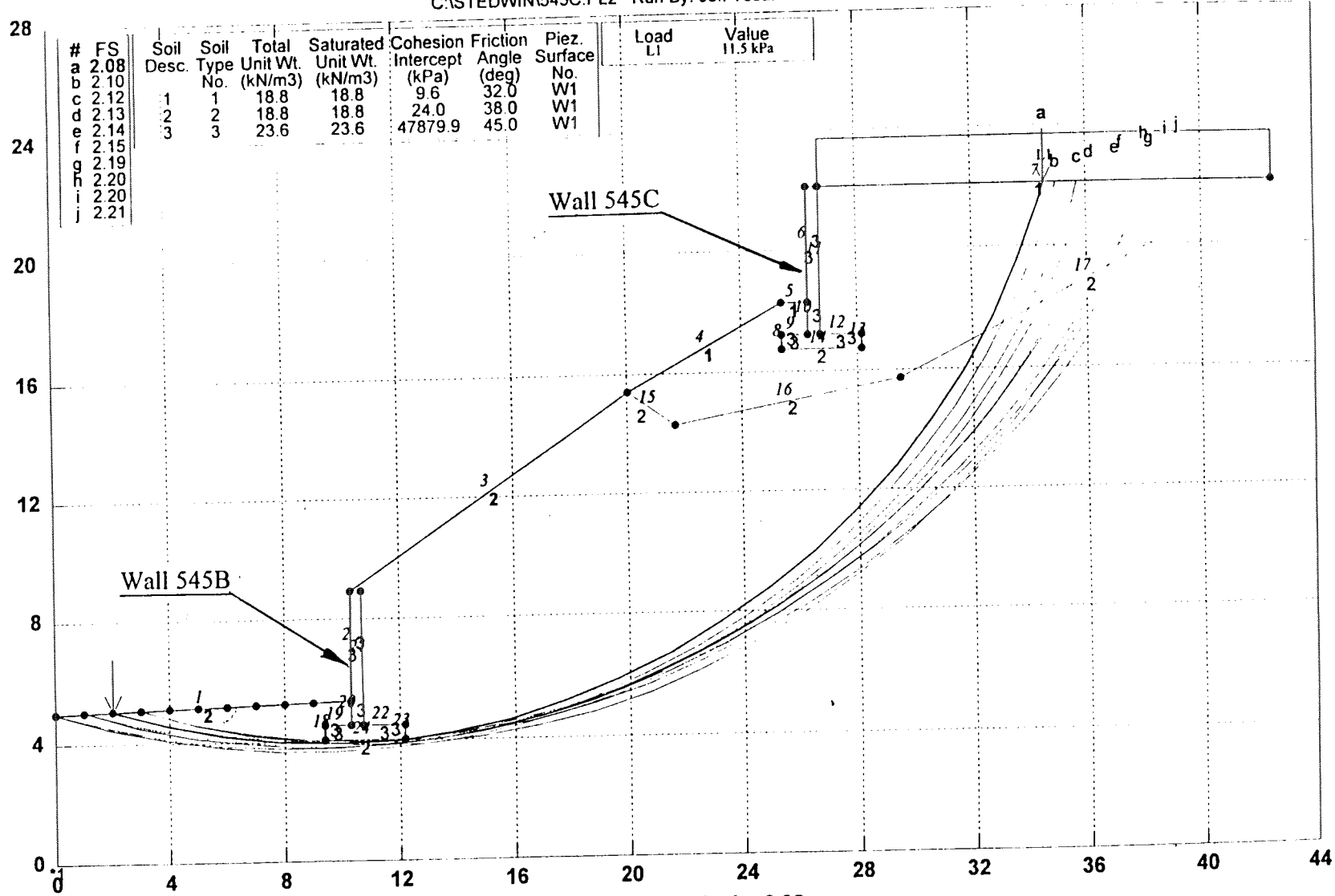
Point No.	X-Surf (m)	Y-Surf (m)
1	17.00	14.24
2	18.94	13.76
3	20.94	13.67
4	22.92	13.96
5	24.80	14.63
6	26.52	15.66
7	28.00	17.00
8	29.20	18.61
9	30.06	20.41
10	30.36	21.60

Circle Center At X = 20.4 ; Y = 23.8 and Radius, 10.2

```
      ***      1.773    ***
Failure Surface Specified By 10 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1          17.00        14.24
    2          18.94        13.74
    3          20.93        13.64
    4          22.91        13.95
    5          24.78        14.66
    6          26.47        15.73
    7          27.90        17.13
    8          29.02        18.78
    9          29.77        20.64
   10          29.95        21.60
Circle Center At X =    20.4 ; Y =    23.3  and Radius,     9.7
      ***      1.777    ***
Failure Surface Specified By  9 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1          18.50        15.04
    2          20.44        14.56
    3          22.44        14.55
    4          24.39        15.00
    5          26.19        15.88
    6          27.73        17.15
    7          28.94        18.74
    8          29.76        20.57
    9          29.95        21.60
Circle Center At X =    21.5 ; Y =    23.1  and Radius,     8.7
      ***      1.777    ***
Failure Surface Specified By  9 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1          18.50        15.04
    2          20.48        14.72
    3          22.48        14.76
    4          24.44        15.15
    5          26.30        15.89
    6          28.00        16.94
    7          29.49        18.27
    8          30.72        19.84
    9          31.65        21.60
Circle Center At X =    21.3 ; Y =    26.0  and Radius,    11.3
      ***      1.787    ***
Failure Surface Specified By  9 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1          18.50        15.04
    2          20.44        14.55
    3          22.44        14.52
    4          24.39        14.96
    5          26.19        15.83
    6          27.74        17.09
    7          28.96        18.68
    8          29.78        20.51
    9          29.99        21.60
Circle Center At X =    21.6 ; Y =    23.1  and Radius,     8.6
      ***      1.789    ***
```

Interstates 5&805, Retaining Walls, Walls 545B and 545C

C:\STEDWIN\545C.PL2 Run By: Jeff Tesar 4/4/01 12:33PM



#	FS
a	2.08
b	2.10
c	2.12
d	2.13
e	2.14
f	2.15
g	2.19
h	2.20
i	2.20
j	2.21

Soil Desc.	Soil Type No.	Total Unit Wt. (kN/m3)	Saturated Unit Wt. (kN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Piez. Surface No.
1	1	18.8	18.8	9.6	32.0	W1
2	2	18.8	18.8	24.0	38.0	W1
3	3	23.6	23.6	47879.9	45.0	W1

Load	Value
L1	11.5 kPa

GSTABL7 FSmin=2.08

Safety Factors Are Calculated By The Modified Bishop Method

STED

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **
** Version 1.0, January 1996; Version 1.16, May 2000 **
--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer`s Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 4/4/01
Time of Run: 12:33PM
Run By: Jeff Tesar
Input Data Filename: C:545C.PRP
Output Filename: C:545C.OUT
Unit System: SI
Plotted Output Filename: C:545C.PLT
PROBLEM DESCRIPTION Interstates 5&805, Retaining Walls, Walls 545B and 545C

BOUNDARY COORDINATES
7 Top Boundaries
24 Total Boundaries

Boundary No.	X-Left (m)	Y-Left (m)	X-Right (m)	Y-Right (m)	Soil Type Below Bnd
1	0.00	5.00	10.30	5.30	2
2	10.30	5.30	10.31	8.90	3
3	10.31	8.90	20.05	15.40	2
4	20.05	15.40	25.40	18.30	1
5	25.40	18.30	26.30	18.30	1
6	26.30	18.30	26.32	22.10	3
7	26.32	22.10	42.50	22.10	1
8	25.40	16.75	25.41	17.20	3
9	25.41	17.20	26.29	17.20	3
10	26.29	17.20	26.30	18.30	3
11	26.70	22.10	26.71	17.20	3
12	26.71	17.20	28.15	17.20	3
13	28.15	17.20	28.16	16.75	3
14	25.40	16.75	28.16	16.75	2
15	20.05	15.40	21.70	14.30	2
16	21.70	14.30	29.50	15.75	2
17	29.50	15.75	42.50	22.10	2
18	9.40	4.04	9.41	4.50	3
19	9.41	4.50	10.29	4.50	3
20	10.29	4.50	10.30	5.30	3
21	10.70	8.90	10.71	4.50	3
22	10.71	4.50	12.15	4.50	3
23	12.15	4.50	12.16	4.05	3
24	9.40	4.05	12.16	4.05	2

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN/m3)	Saturated Unit Wt. (kN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1	18.8	18.8	9.6	32.0	0.00	0.0	1
2	18.8	18.8	24.0	38.0	0.00	0.0	1
3	23.6	23.6	47879.9	45.0	0.00	0.0	1

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (m)	X-Right (m)	Intensity (kPa)	Deflection (deg)
1	26.70	42.50	11.5	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

Searching Routine Will Be Limited To An Area Defined By 1 Boundaries Of Which The First 1 Boundaries Will Deflect Surfaces Upward

Boundary No.	X-Left (m)	Y-Left (m)	X-Right (m)	Y-Right (m)
1	0.00	0.00	0.00	0.00

A Critical Failure Surface Searching Method, Using A Random

Technique For Generating Circular Surfaces, Has Been Specified.
400 Trial Surfaces Have Been Generated.
40 Surfaces Initiate From Each Of 10 Points Equally Spaced
Along The Ground Surface Between X = 0.00(m)
and X = 9.00(m)
Each Surface Terminates Between X = 26.70(m)
and X = 42.50(m)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(m)
2.00(m) Line Segments Define Each Trial Failure Surface.
Restrictions Have Been Imposed Upon The Angle Of Initiation.
The Angle Has Been Restricted Between The Angles Of -15.0
And 25.0 deg.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Failure Surface Specified By 22 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	2.00	5.06
2	3.93	4.54
3	5.90	4.18
4	7.89	3.97
5	9.89	3.91
6	11.89	4.00
7	13.87	4.24
8	15.83	4.64
9	17.75	5.19
10	19.63	5.88
11	21.45	6.71
12	23.20	7.68
13	24.87	8.78
14	26.45	10.00
15	27.93	11.35
16	29.31	12.80
17	30.57	14.35
18	31.70	16.00
19	32.71	17.72
20	33.59	19.52
21	34.32	21.39
22	34.54	22.10

Circle Center At X = 9.7 ; Y = 30.0 and Radius, 26.1
*** 2.083 ***
Individual data on the 43 slices

Slice No.	Width (m)	Weight (kN)	Water Force Top (kN)	Water Force Bot (kN)	Tie Force Norm (kN)	Tie Force Tan (kN)	Earthquake Force Hor (kN)	Earthquake Force Ver (kN)	Surcharge Load (kN)
1	1.9	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1.5	37.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.5	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.4	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.4	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	1.2	126.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.3	30.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	1.7	211.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	2.0	276.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	1.9	301.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

18	1.9	317.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.4	73.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	1.4	247.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.3	44.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	1.5	266.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	1.7	293.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.5	91.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.9	147.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.1	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.3	56.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1
32	1.2	263.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1
33	0.2	44.2	0.0	0.0	0.0	0.0	0.0	0.0	2.5
34	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
35	1.1	214.2	0.0	0.0	0.0	0.0	0.0	0.0	13.2
36	0.2	33.4	0.0	0.0	0.0	0.0	0.0	0.0	2.2
37	1.1	169.1	0.0	0.0	0.0	0.0	0.0	0.0	12.3
38	1.1	148.5	0.0	0.0	0.0	0.0	0.0	0.0	13.1
39	0.7	70.5	0.0	0.0	0.0	0.0	0.0	0.0	7.8
40	0.3	29.1	0.0	0.0	0.0	0.0	0.0	0.0	3.8
41	0.9	57.2	0.0	0.0	0.0	0.0	0.0	0.0	10.0
42	0.7	22.7	0.0	0.0	0.0	0.0	0.0	0.0	8.4
43	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5

Failure Surface Specified By 22 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	3.00	5.09
2	4.93	4.58
3	6.90	4.22
4	8.89	4.02
5	10.89	3.97
6	12.89	4.08
7	14.87	4.34
8	16.83	4.76
9	18.74	5.33
10	20.61	6.05
11	22.42	6.91
12	24.15	7.91
13	25.80	9.04
14	27.35	10.30
15	28.81	11.67
16	30.15	13.16
17	31.37	14.74
18	32.46	16.41
19	33.42	18.17
20	34.24	19.99
21	34.92	21.88
22	34.98	22.10

Circle Center At X = 10.5 ; Y = 29.6 and Radius, 25.6

*** 2.098 ***

Failure Surface Specified By 22 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	3.00	5.09
2	4.94	4.58
3	6.90	4.23
4	8.89	4.02
5	10.89	3.96
6	12.89	4.06
7	14.87	4.30
8	16.84	4.70
9	18.76	5.24
10	20.64	5.93

11	22.46	6.75
12	24.21	7.72
13	25.89	8.81
14	27.48	10.02
15	28.97	11.35
16	30.36	12.79
17	31.63	14.34
18	32.79	15.97
19	33.82	17.68
20	34.71	19.47
21	35.47	21.32
22	35.72	22.10

Circle Center At X = 10.6 ; Y = 30.4 and Radius, 26.4
*** 2.116 ***

Failure Surface Specified By 22 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	3.00	5.09
2	4.94	4.59
3	6.91	4.24
4	8.90	4.03
5	10.89	3.97
6	12.89	4.06
7	14.88	4.30
8	16.84	4.68
9	18.77	5.21
10	20.65	5.88
11	22.48	6.69
12	24.25	7.63
13	25.94	8.70
14	27.54	9.89
15	29.06	11.20
16	30.47	12.62
17	31.77	14.13
18	32.96	15.74
19	34.03	17.43
20	34.96	19.20
21	35.77	21.03
22	36.14	22.10

Circle Center At X = 10.7 ; Y = 30.9 and Radius, 26.9
*** 2.125 ***

Failure Surface Specified By 23 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	2.00	5.06
2	3.94	4.58
3	5.91	4.23
4	7.90	4.01
5	9.90	3.94
6	11.90	4.00
7	13.89	4.20
8	15.86	4.53
9	17.80	5.00
10	19.71	5.60
11	21.58	6.32
12	23.38	7.18
13	25.13	8.15
14	26.80	9.25
15	28.40	10.45
16	29.91	11.76
17	31.33	13.17
18	32.65	14.68
19	33.86	16.27
20	34.96	17.94
21	35.94	19.68
22	36.80	21.49

23	37.04	22.10

Circle Center At X = 10.0 ; Y = 33.2 and Radius, 29.2
*** 2.139 ***

Failure Surface Specified By 23 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	1.00	5.03
2	2.94	4.52
3	4.90	4.15
4	6.89	3.90
5	8.88	3.79
6	10.88	3.82
7	12.88	3.97
8	14.86	4.26
9	16.81	4.68
10	18.73	5.23
11	20.62	5.90
12	22.45	6.70
13	24.23	7.62
14	25.94	8.66
15	27.58	9.80
16	29.13	11.06
17	30.60	12.41
18	31.98	13.86
19	33.26	15.40
20	34.43	17.02
21	35.50	18.72
22	36.44	20.48
23	37.18	22.10

Circle Center At X = 9.5 ; Y = 33.8 and Radius, 30.0
*** 2.152 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	0.00	5.00
2	1.93	4.49
3	3.90	4.10
4	5.88	3.83
5	7.87	3.69
6	9.87	3.67
7	11.87	3.77
8	13.86	4.00
9	15.82	4.36
10	17.77	4.83
11	19.68	5.43
12	21.55	6.14
13	23.37	6.97
14	25.13	7.91
15	26.84	8.95
16	28.47	10.11
17	30.03	11.36
18	31.51	12.70
19	32.90	14.14
20	34.20	15.66
21	35.40	17.26
22	36.51	18.93
23	37.50	20.66
24	38.21	22.10

Circle Center At X = 9.2 ; Y = 35.7 and Radius, 32.1
*** 2.192 ***

Failure Surface Specified By 23 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	3.00	5.09
2	4.93	4.58
3	6.90	4.20

4	8.88	3.96
5	10.88	3.86
6	12.88	3.90
7	14.87	4.08
8	16.85	4.40
9	18.80	4.85
10	20.71	5.44
11	22.57	6.16
12	24.38	7.01
13	26.13	7.98
14	27.81	9.07
15	29.41	10.28
16	30.91	11.59
17	32.33	13.01
18	33.64	14.51
19	34.84	16.11
20	35.93	17.79
21	36.90	19.54
22	37.75	21.35
23	38.04	22.10

Circle Center At X = 11.3 ; Y = 32.6 and Radius, 28.7

*** 2.197 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	0.00	5.00
2	1.94	4.52
3	3.91	4.15
4	5.89	3.90
5	7.89	3.77
6	9.89	3.76
7	11.88	3.87
8	13.87	4.11
9	15.84	4.46
10	17.78	4.93
11	19.70	5.51
12	21.57	6.21
13	23.40	7.02
14	25.18	7.93
15	26.90	8.96
16	28.55	10.08
17	30.13	11.30
18	31.64	12.62
19	33.07	14.02
20	34.40	15.51
21	35.65	17.07
22	36.80	18.71
23	37.85	20.41
24	38.76	22.10

Circle Center At X = 9.0 ; Y = 37.0 and Radius, 33.3

*** 2.201 ***

Failure Surface Specified By 24 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	1.00	5.03
2	2.94	4.55
3	4.91	4.20
4	6.90	3.96
5	8.89	3.85
6	10.89	3.86
7	12.89	3.98
8	14.87	4.23
9	16.84	4.61
10	18.78	5.10
11	20.68	5.70
12	22.55	6.42

```
  13          24.37        7.26
  14          26.13        8.20
  15          27.83        9.25
  16          29.47       10.40
  17          31.03       11.65
  18          32.52       12.99
  19          33.92       14.42
  20          35.23       15.93
  21          36.44       17.52
  22          37.56       19.18
  23          38.57       20.90
  24          39.18       22.10
Circle Center At X =    9.8 ; Y =   36.6  and Radius,   32.8
     ***      2.212   ***
```

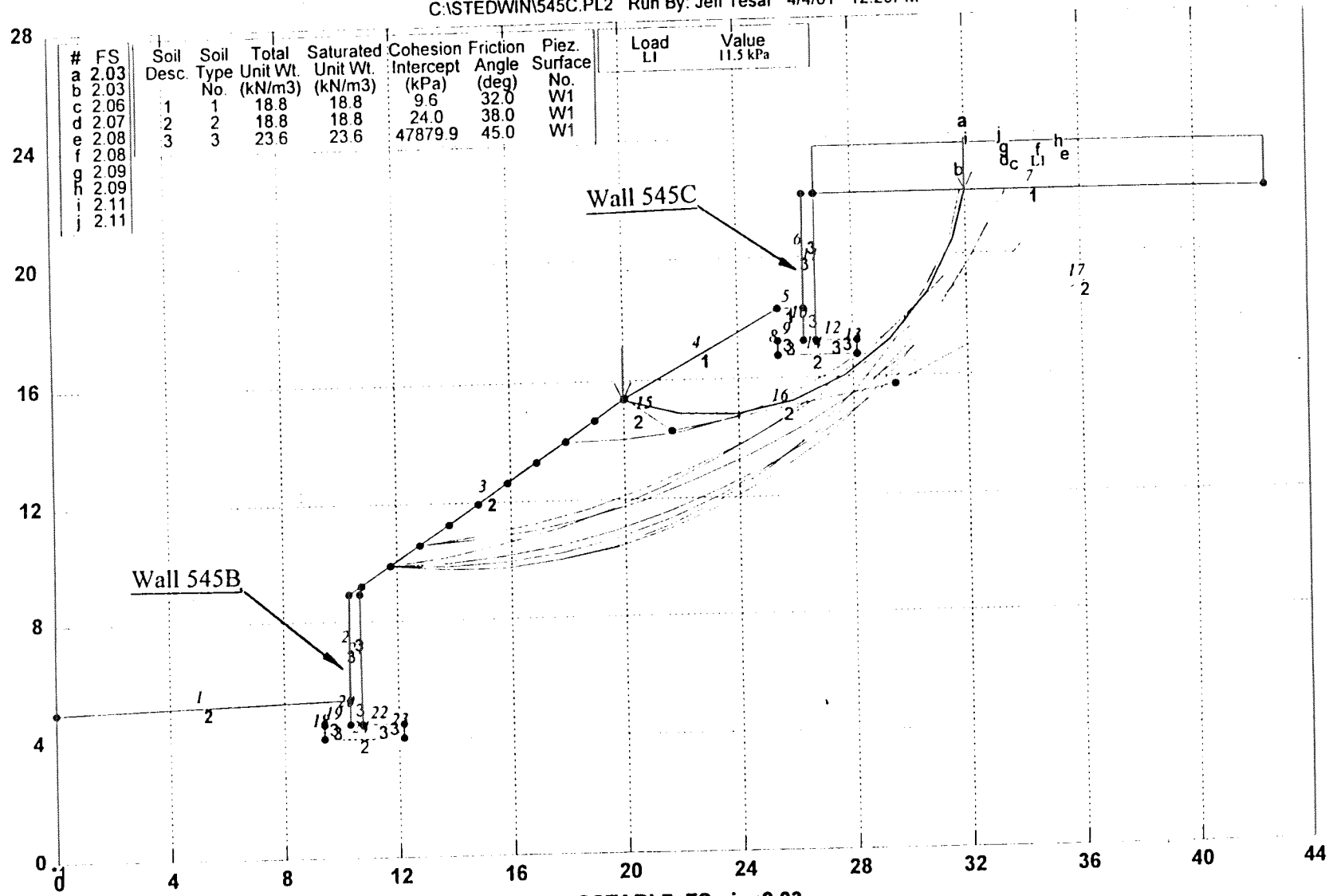
Interstates 5&805, Retaining Walls, Walls 545B and 545C

C:\STEDWIN\545C.PL2 Run By: Jeff Tesar 4/4/01 12:29PM

#	FS
a	2.03
b	2.03
c	2.06
d	2.07
e	2.08
f	2.08
g	2.09
h	2.09
i	2.11
j	2.11

Soil Desc.	Soil Type No.	Total Unit Wt. (kN/m3)	Saturated Unit Wt. (kN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Piez. Surface No.
1	1	18.8	18.8	9.6	32.0	W1
2	2	18.8	18.8	24.0	38.0	W1
3	3	23.6	23.6	47879.9	45.0	W1

Load	Value
L1	11.5 kPa



GSTABL7 FSmin=2.03

Safety Factors Are Calculated By The Modified Bishop Method

STED

*** GSTABL7 ***
** GSTABL7 by Garry H. Gregory, P.E. **
** Version 1.0, January 1996; Version 1.16, May 2000 **
--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 4/4/01
Time of Run: 12:29PM
Run By: Jeff Tesar
Input Data Filename: C:545C.PRP
Output Filename: C:545C.OUT
Unit System: SI
Plotted Output Filename: C:545C.PLT
PROBLEM DESCRIPTION Interstates 5&805, Retaining Walls, Walls 545B and 545C

BOUNDARY COORDINATES
7 Top Boundaries
24 Total Boundaries

Boundary No.	X-Left (m)	Y-Left (m)	X-Right (m)	Y-Right (m)	Soil Type Below Bnd
1	0.00	5.00	10.30	5.30	2
2	10.30	5.30	10.31	8.90	3
3	10.31	8.90	20.05	15.40	2
4	20.05	15.40	25.40	18.30	1
5	25.40	18.30	26.30	18.30	1
6	26.30	18.30	26.32	22.10	3
7	26.32	22.10	42.50	22.10	1
8	25.40	16.75	25.41	17.20	3
9	25.41	17.20	26.29	17.20	3
10	26.29	17.20	26.30	18.30	3
11	26.70	22.10	26.71	17.20	3
12	26.71	17.20	28.15	17.20	3
13	28.15	17.20	28.16	16.75	3
14	25.40	16.75	28.16	16.75	2
15	20.05	15.40	21.70	14.30	2
16	21.70	14.30	29.50	15.75	2
17	29.50	15.75	42.50	22.10	2
18	9.40	4.04	9.41	4.50	3
19	9.41	4.50	10.29	4.50	3
20	10.29	4.50	10.30	5.30	3
21	10.70	8.90	10.71	4.50	3
22	10.71	4.50	12.15	4.50	3
23	12.15	4.50	12.16	4.05	3
24	9.40	4.05	12.16	4.05	2

ISOTROPIC SOIL PARAMETERS
3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (kN/m3)	Saturated Unit Wt. (kN/m3)	Cohesion Intercept (kPa)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (kPa)	Piez. Surface No.
1	18.8	18.8	9.6	32.0	0.00	0.0	1
2	18.8	18.8	24.0	38.0	0.00	0.0	1
3	23.6	23.6	47879.9	45.0	0.00	0.0	1

BOUNDARY LOAD(S)
1 Load(s) Specified

Load No.	X-Left (m)	X-Right (m)	Intensity (kPa)	Deflection (deg)
1	26.70	42.50	11.5	0.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.
Searching Routine Will Be Limited To An Area Defined By 1 Boundaries Of Which The First 1 Boundaries Will Deflect Surfaces Upward

Boundary No.	X-Left (m)	Y-Left (m)	X-Right (m)	Y-Right (m)
1	0.00	0.00	0.00	0.00

A Critical Failure Surface Searching Method, Using A Random

Technique For Generating Circular Surfaces, Has Been Specified.
400 Trial Surfaces Have Been Generated.
40 Surfaces Initiate From Each Of 10 Points Equally Spaced
Along The Ground Surface Between X = 10.75(m)
and X = 20.00(m)
Each Surface Terminates Between X = 26.70(m)
and X = 42.50(m)
Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(m)
2.00(m) Line Segments Define Each Trial Failure Surface.
Restrictions Have Been Imposed Upon The Angle Of Initiation.
The Angle Has Been Restricted Between The Angles Of -15.0
And 25.0 deg.
Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.
* * Safety Factors Are Calculated By The Modified Bishop Method * *
Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	20.00	15.37
2	21.94	14.88
3	23.94	14.83
4	25.90	15.22
5	27.73	16.04
6	29.33	17.23
7	30.63	18.75
8	31.57	20.52
9	31.99	22.10

Circle Center At X = 23.2 ; Y = 23.8 and Radius, 9.0
*** 2.026 ***
Individual data on the 19 slices

Slice No.	Width (m)	Weight (kN)	Water Force Top (kN)	Water Force Bot (kN)	Tie Force Norm (kN)	Tie Force Tan (kN)	Earthquake Force Hor (kN)	Earthquake Force Ver (kN)	Surcharge Load (kN)
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1.8	28.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	2.0	79.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	1.5	80.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.5	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.4	22.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.4	47.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1
12	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	11.7
13	1.0	122.8	0.0	0.0	0.0	0.0	0.0	0.0	4.9
14	0.4	47.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1
15	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	13.5
16	1.2	117.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
17	1.3	100.6	0.0	0.0	0.0	0.0	0.0	0.0	10.7
18	0.9	43.4	0.0	0.0	0.0	0.0	0.0	0.0	4.9
19	0.4	6.4	0.0	0.0	0.0	0.0	0.0	0.0	

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	20.00	15.37
2	21.93	14.86
3	23.93	14.80
4	25.89	15.20
5	27.71	16.03
6	29.30	17.25
7	30.57	18.79
8	31.46	20.58

```
    9          31.81        22.10
Circle Center At X =    23.2 ; Y =    23.6  and Radius,     8.8
      ***      2.033    ***
Failure Surface Specified By 14 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1         11.78         9.88
    2         13.76        10.15
    3         15.72        10.55
    4         17.65        11.06
    5         19.55        11.70
    6         21.40        12.45
    7         23.20        13.32
    8         24.95        14.29
    9         26.63        15.38
   10         28.24        16.56
   11         29.78        17.85
   12         31.23        19.22
   13         32.59        20.69
   14         33.75        22.10
Circle Center At X =     8.4 ; Y =    41.8  and Radius,    32.1
      ***      2.061    ***
Failure Surface Specified By 15 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1         11.78         9.88
    2         13.78         9.81
    3         15.77         9.93
    4         17.75        10.22
    5         19.70        10.69
    6         21.59        11.33
    7         23.42        12.13
    8         25.17        13.10
    9         26.83        14.22
   10         28.38        15.49
   11         29.81        16.89
   12         31.11        18.41
   13         32.27        20.04
   14         33.27        21.76
   15         33.43        22.10
Circle Center At X =    13.5 ; Y =    32.1  and Radius,    22.3
      ***      2.071    ***
Failure Surface Specified By 15 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1         12.81        10.57
    2         14.80        10.73
    3         16.78        11.02
    4         18.73        11.44
    5         20.66        11.98
    6         22.55        12.64
    7         24.39        13.42
    8         26.18        14.32
    9         27.90        15.33
   10         29.56        16.45
   11         31.14        17.67
   12         32.65        18.99
   13         34.06        20.40
   14         35.38        21.90
   15         35.54        22.10
Circle Center At X =    11.2 ; Y =    41.8  and Radius,    31.3
      ***      2.080    ***
Failure Surface Specified By 14 Coordinate Points
  Point       X-Surf       Y-Surf
   No.         (m)          (m)
    1         12.81        10.57
```

2	14.79	10.83
3	16.75	11.21
4	18.69	11.71
5	20.59	12.32
6	22.45	13.06
7	24.27	13.90
8	26.02	14.85
9	27.72	15.91
10	29.35	17.07
11	30.90	18.33
12	32.38	19.68
13	33.77	21.12
14	34.61	22.10

Circle Center At X = 9.6 ; Y = 43.1 and Radius, 32.7

*** 2.082 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	17.94	14.00
2	19.94	14.00
3	21.93	14.24
4	23.87	14.71
5	25.75	15.41
6	27.53	16.32
7	29.19	17.43
8	30.71	18.73
9	32.07	20.19
10	33.25	21.81
11	33.41	22.10

Circle Center At X = 18.9 ; Y = 31.0 and Radius, 17.1

*** 2.093 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	11.78	9.88
2	13.78	9.94
3	15.77	10.14
4	17.74	10.47
5	19.68	10.95
6	21.59	11.56
7	23.44	12.30
8	25.24	13.17
9	26.98	14.17
10	28.64	15.28
11	30.22	16.51
12	31.71	17.85
13	33.10	19.28
14	34.38	20.81
15	35.32	22.10

Circle Center At X = 12.0 ; Y = 38.4 and Radius, 28.5

*** 2.093 ***

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	11.78	9.88
2	13.77	9.70
3	15.77	9.73
4	17.75	9.98
5	19.70	10.44
6	21.59	11.10
7	23.40	11.95
8	25.10	13.00
9	26.69	14.22
10	28.13	15.60
11	29.42	17.13
12	30.55	18.78

13	31.49	20.55
14	32.11	22.10

Circle Center At X = 14.5 ; Y = 28.4 and Radius, 18.8

*** 2.111 ***

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (m)	Y-Surf (m)
1	11.78	9.88
2	13.77	9.71
3	15.77	9.74
4	17.76	9.97
5	19.71	10.38
6	21.62	10.99
7	23.46	11.78
8	25.21	12.74
9	26.86	13.87
10	28.39	15.16
11	29.79	16.59
12	31.05	18.14
13	32.14	19.82
14	33.07	21.59
15	33.28	22.10

Circle Center At X = 14.5 ; Y = 30.2 and Radius, 20.5

*** 2.113 ***

Photo 1: Wall 456 Location; looking north from about Station 456+00

Photo 2: Wall 456 Location; looking north from about Station 458+80

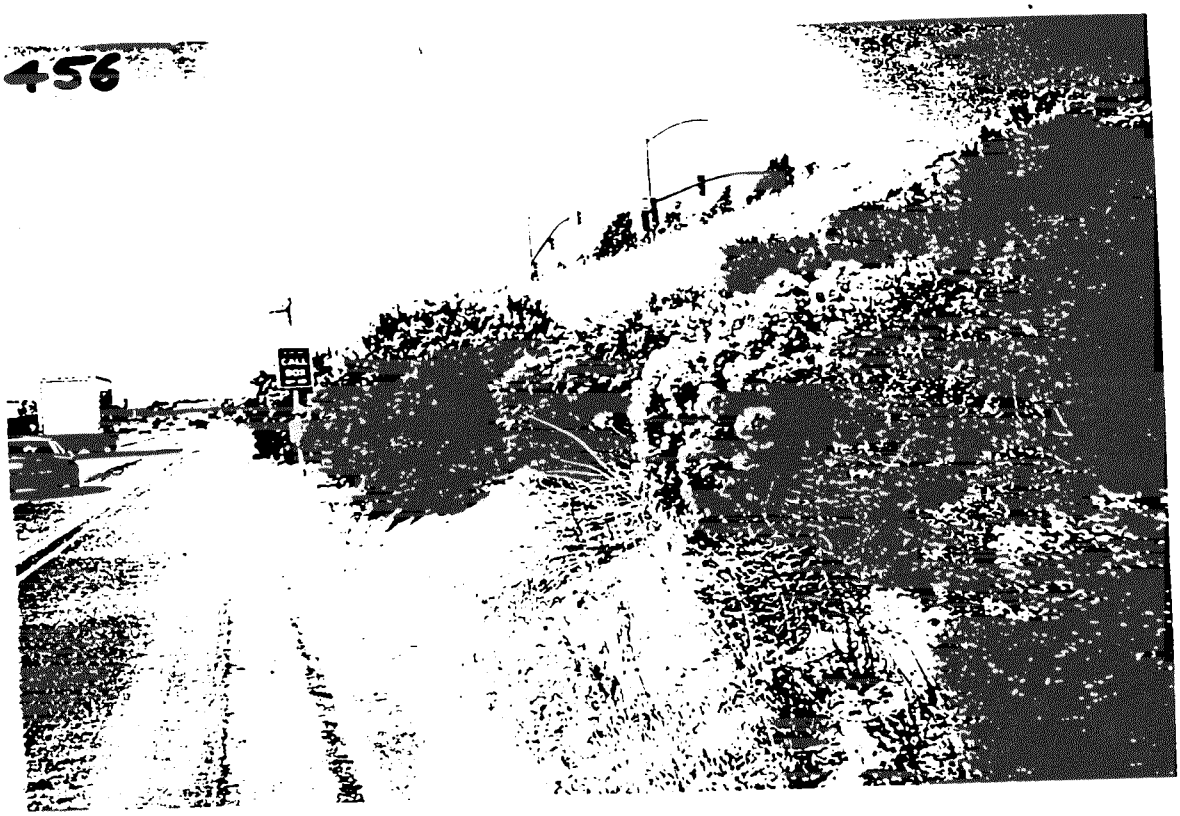


Photo 3: Wall 456 Location; looking north from about Station 460+30

Photo 4: Wall 466 Location; looking north from about Station 465+80

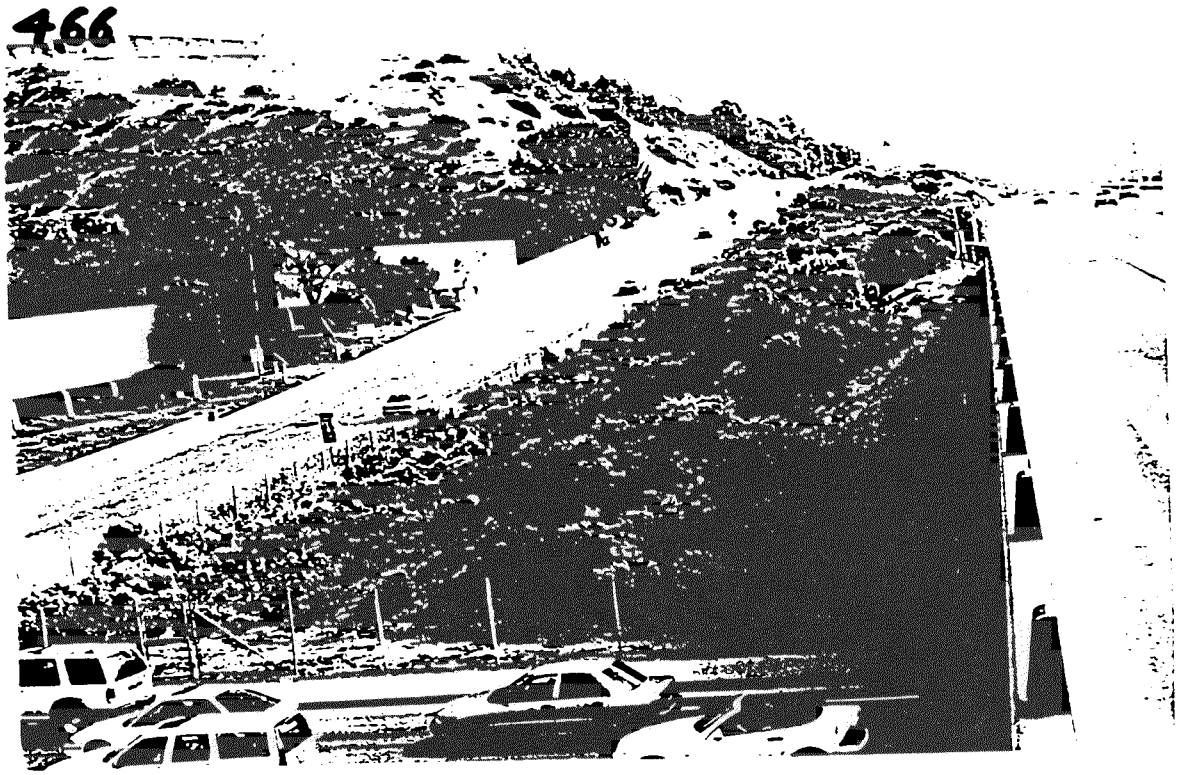


Photo 5: Wall 466 Location; looking south from Sorrento Valley Blvd undercrossing

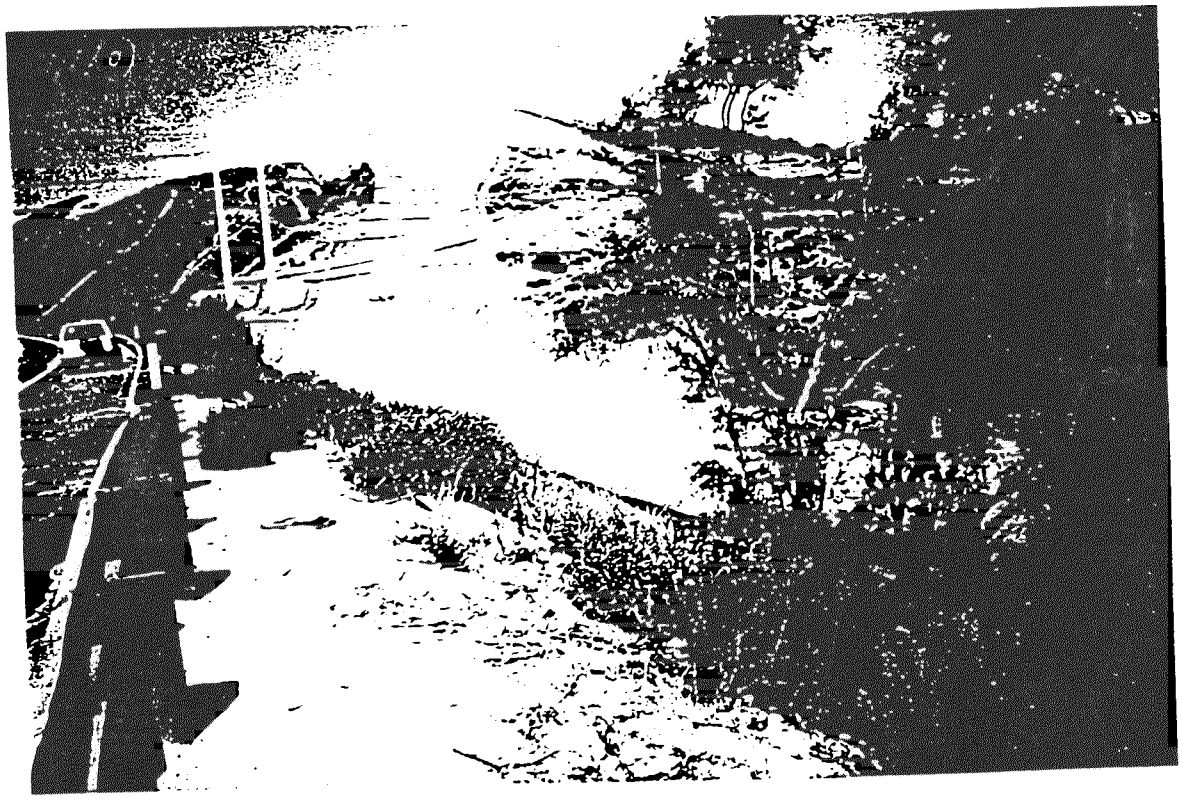


Photo 6: Wall 470 Location; looking north from about Station 470+50

Photo 7: Wall 512 Location; looking north form about Station 512+10

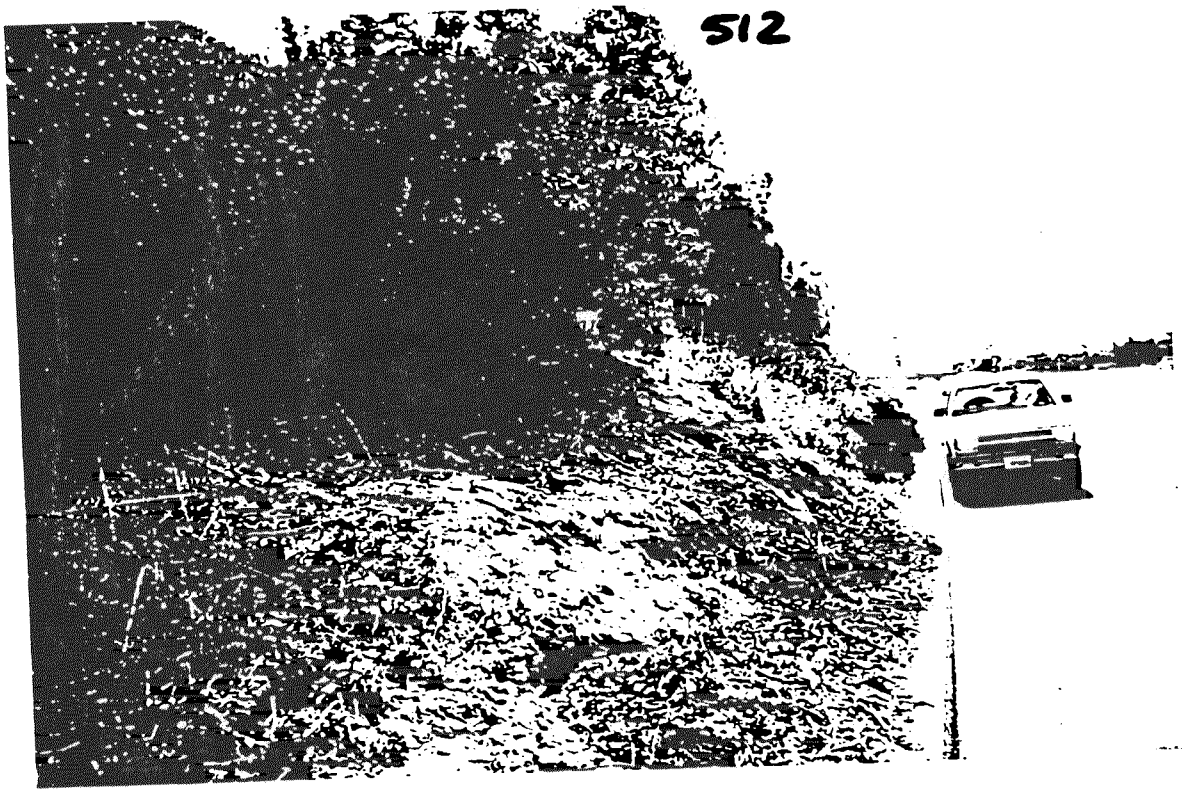


Photo 8: Wall 512 Location; looking south from about Station 513+90

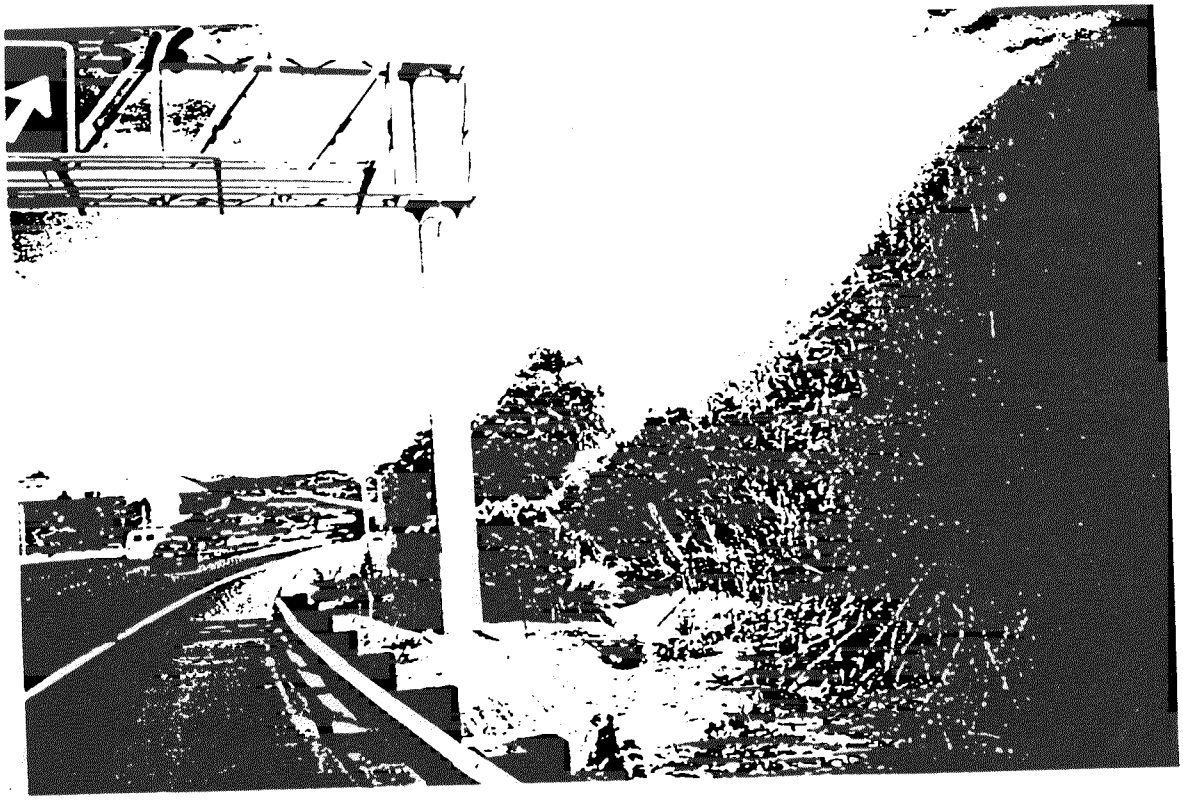


Photo 9: Wall 516 Location; looking north form about Station 515+00

Photo 10: Wall 516 Location; looking north from about Station 515+80

Photo 11: Wall 527 Location; looking south form about Station 529+60

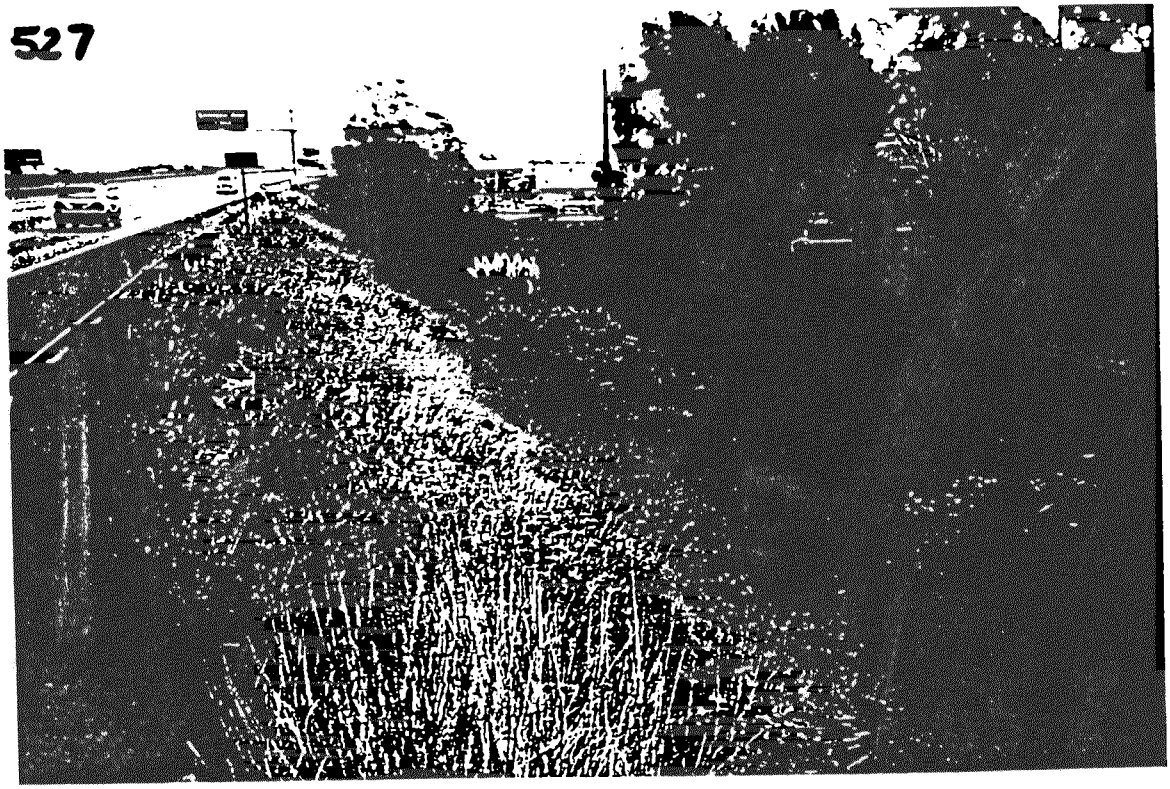


Photo 12: Wall 527 Location; looking south from about Station 528+10

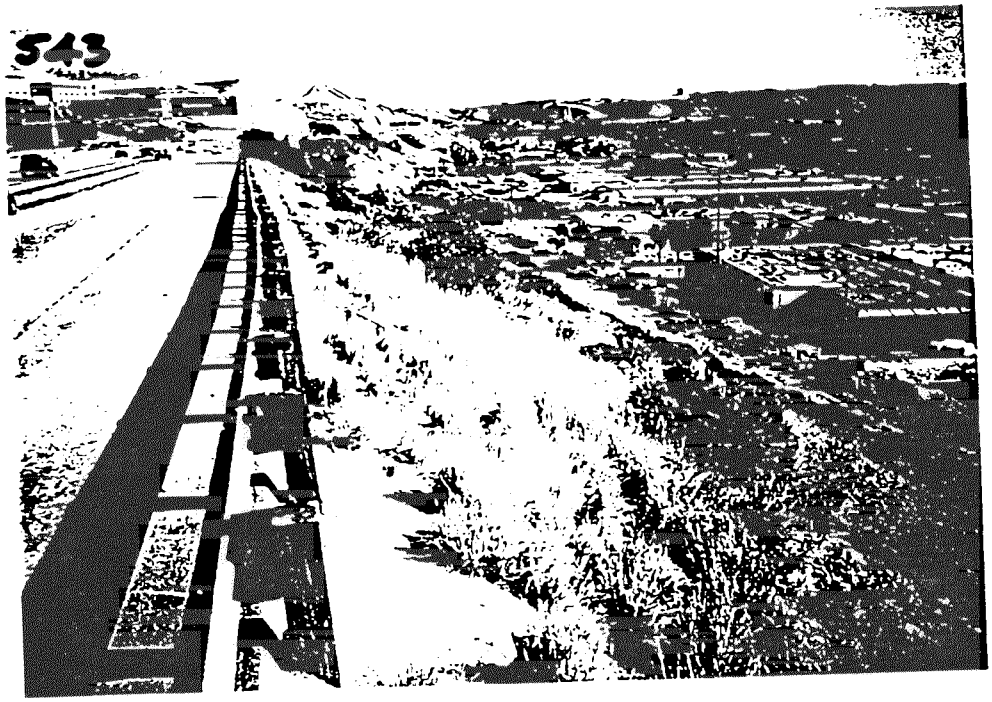


Photo 13: Wall 543 Location; looking south form about Station 544+0

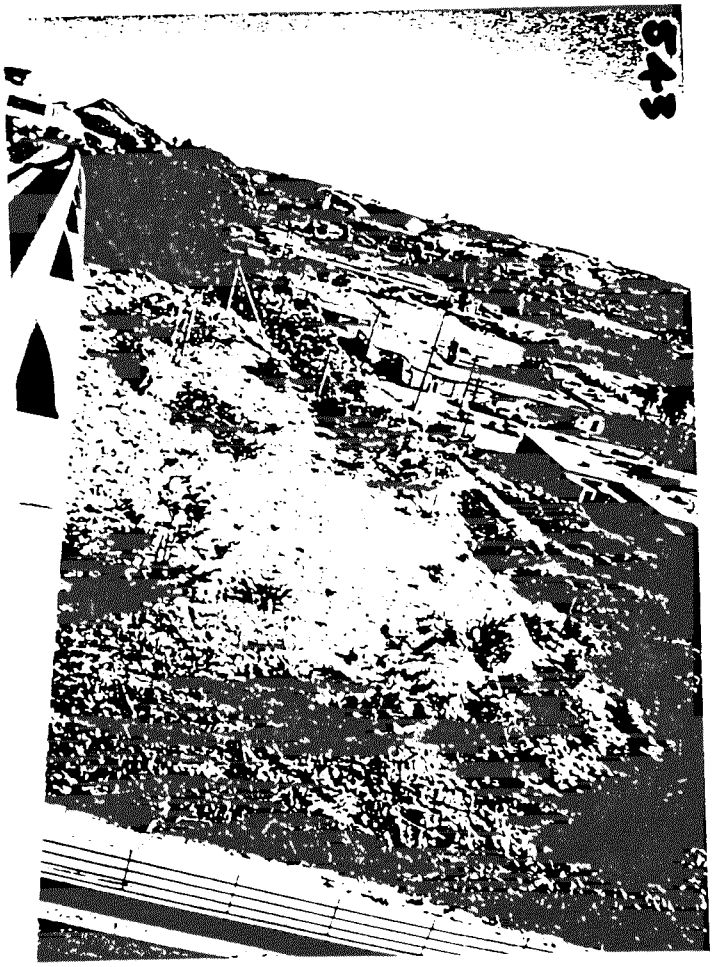


Photo 14: Walls 543 & 4 Location: looking south from Carmel Mountain Rd undercrossing

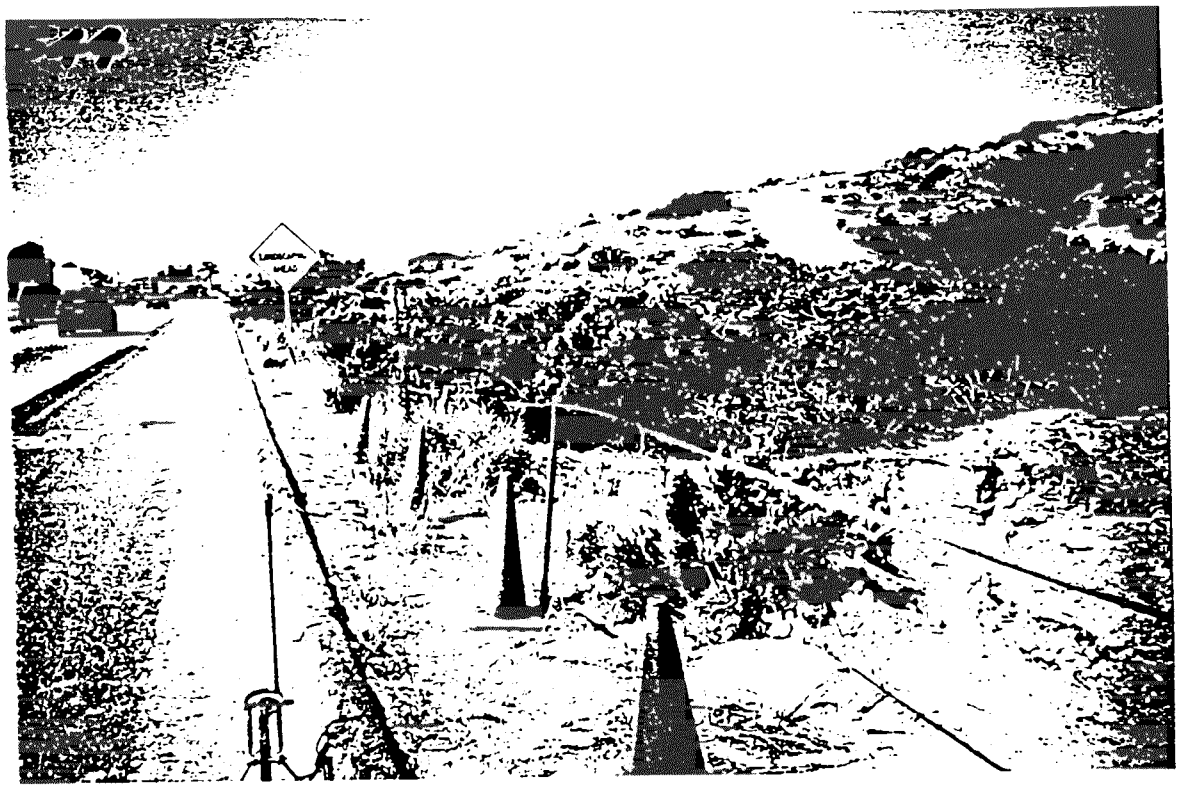


Photo 15: Wall 544 Location; looking north form about Station 543+10

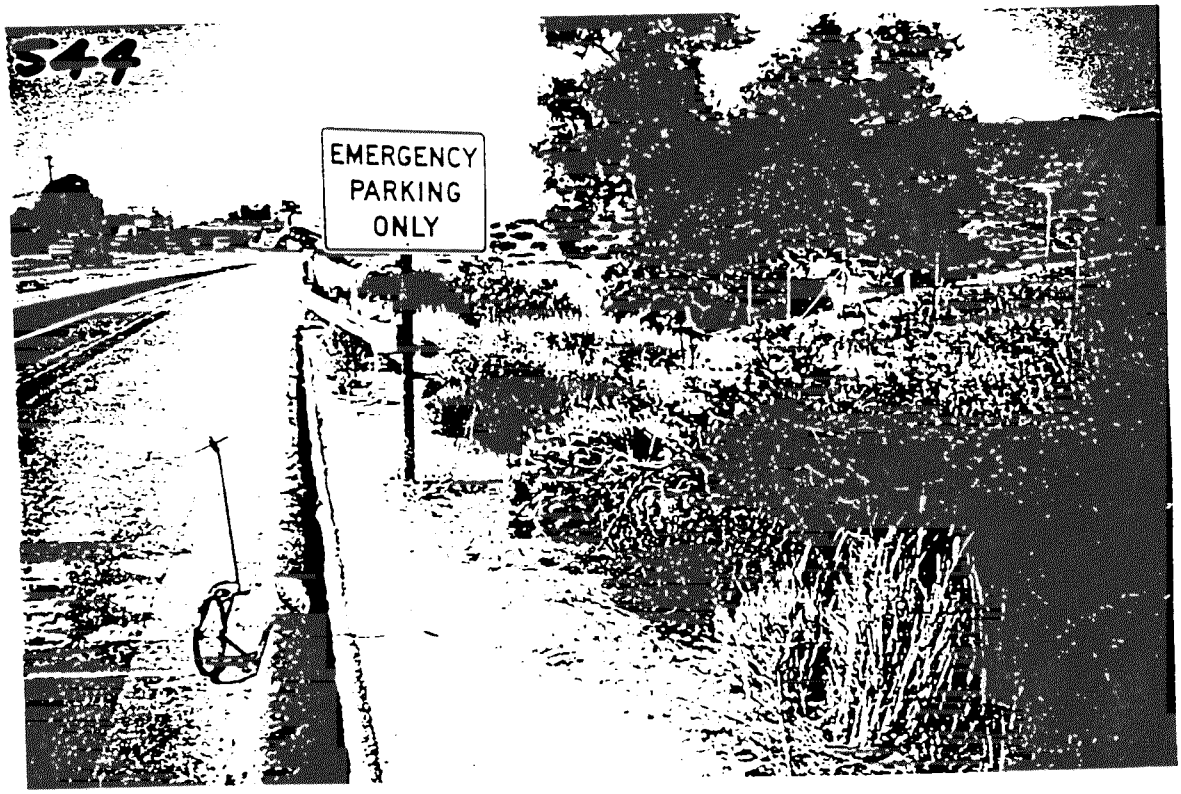


Photo 16: Wall 544 Location: looking north from about Station 544+20

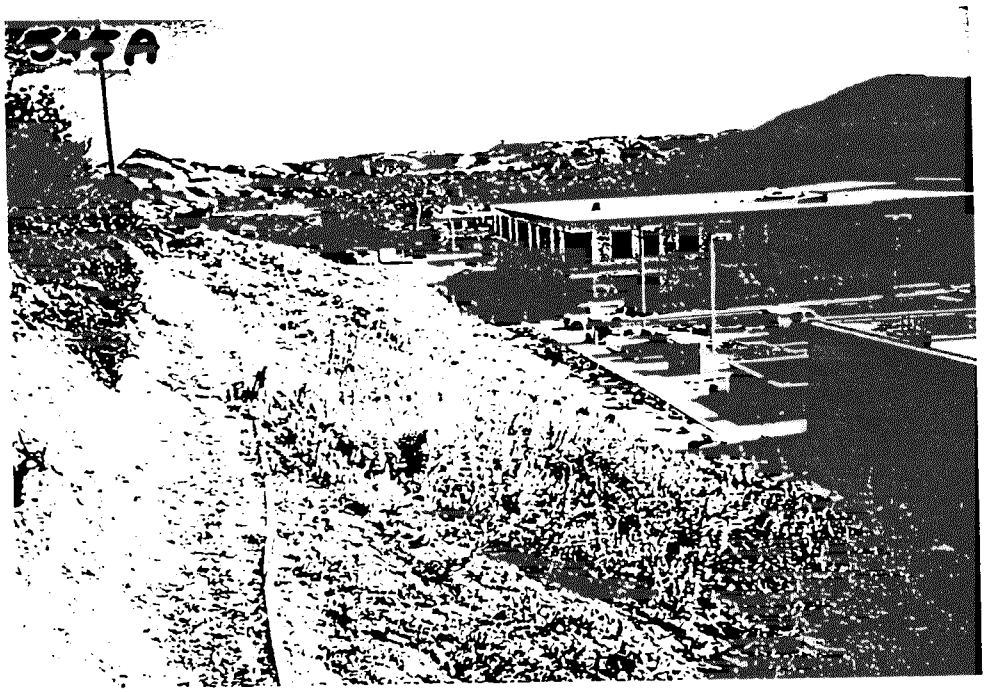


Photo 17: Wall 545A Location; looking south form about Station 546+00

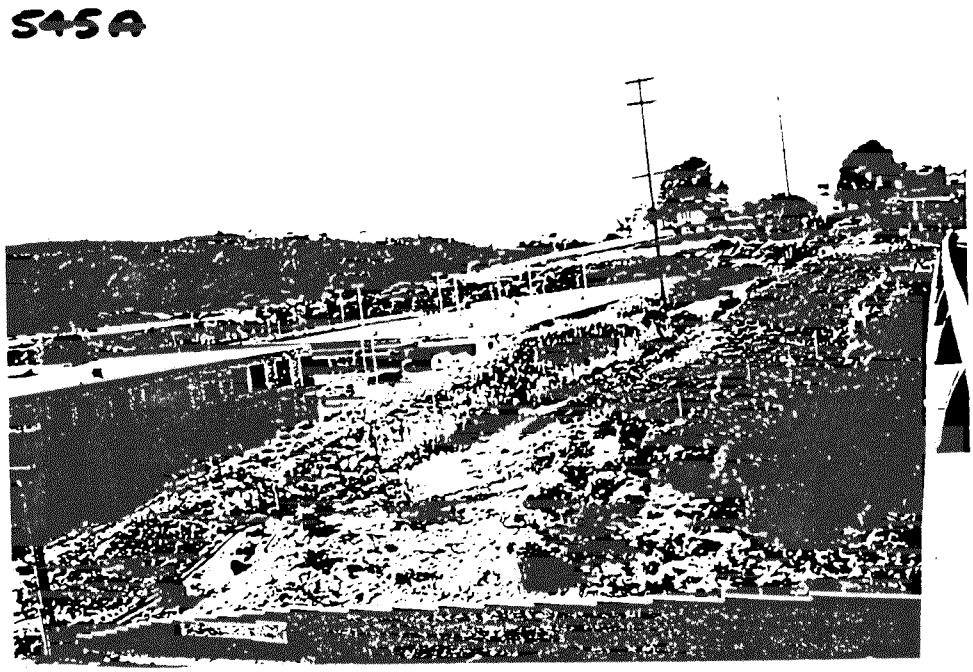


Photo 18: Walls 545A, 3A, & 6 Location; looking north from Carmel Mountain Rd undercrossing

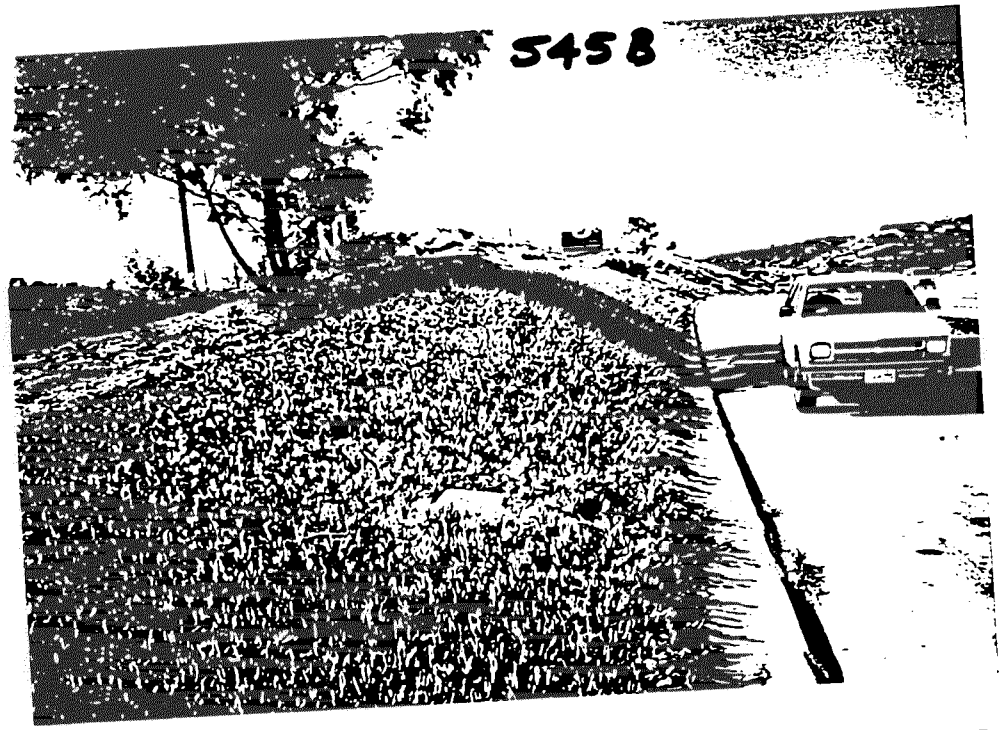


Photo 19: Wall 545B Location; looking north form about Station 545+20

Photo 20: Walls 545B & 5 Location; looking south from about Station 545+50

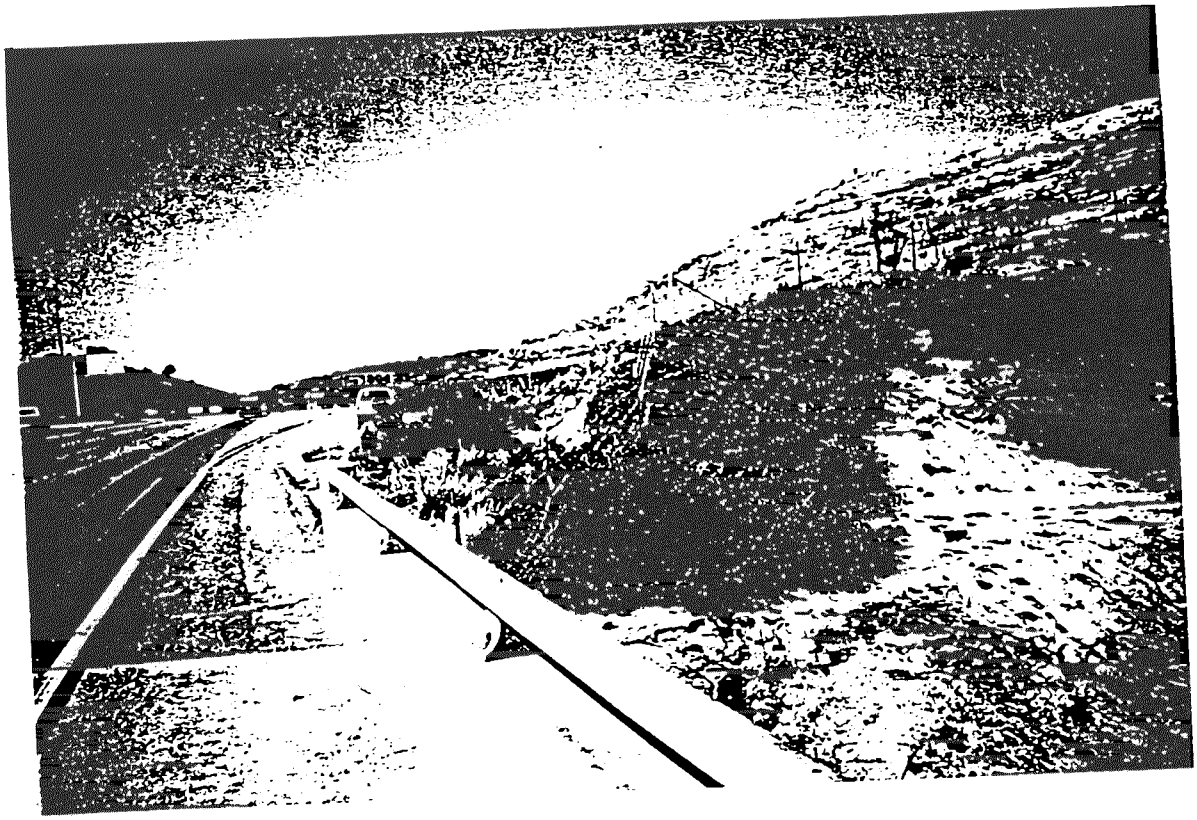


Photo 21: Wall 546 Location; looking north form Carmel Mountain Rd undercrossing

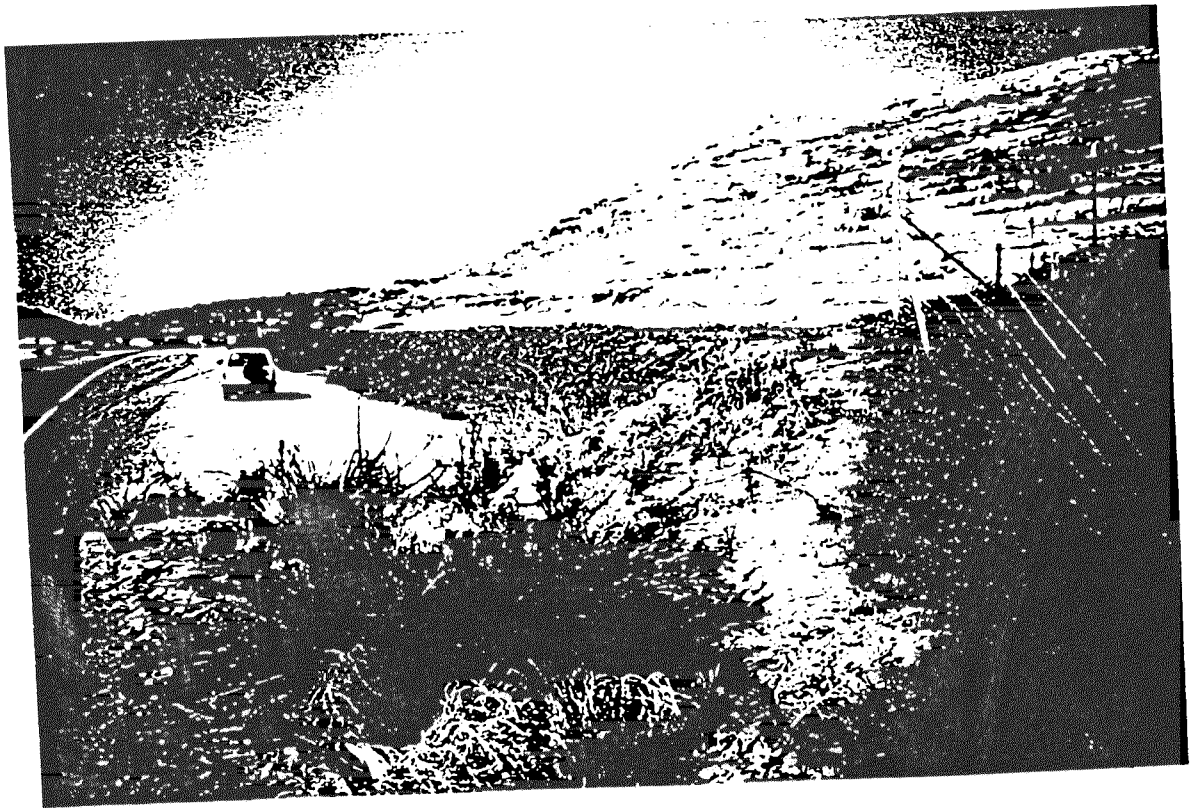


Photo 22: Wall 546 Location; looking north from about Station 545+60

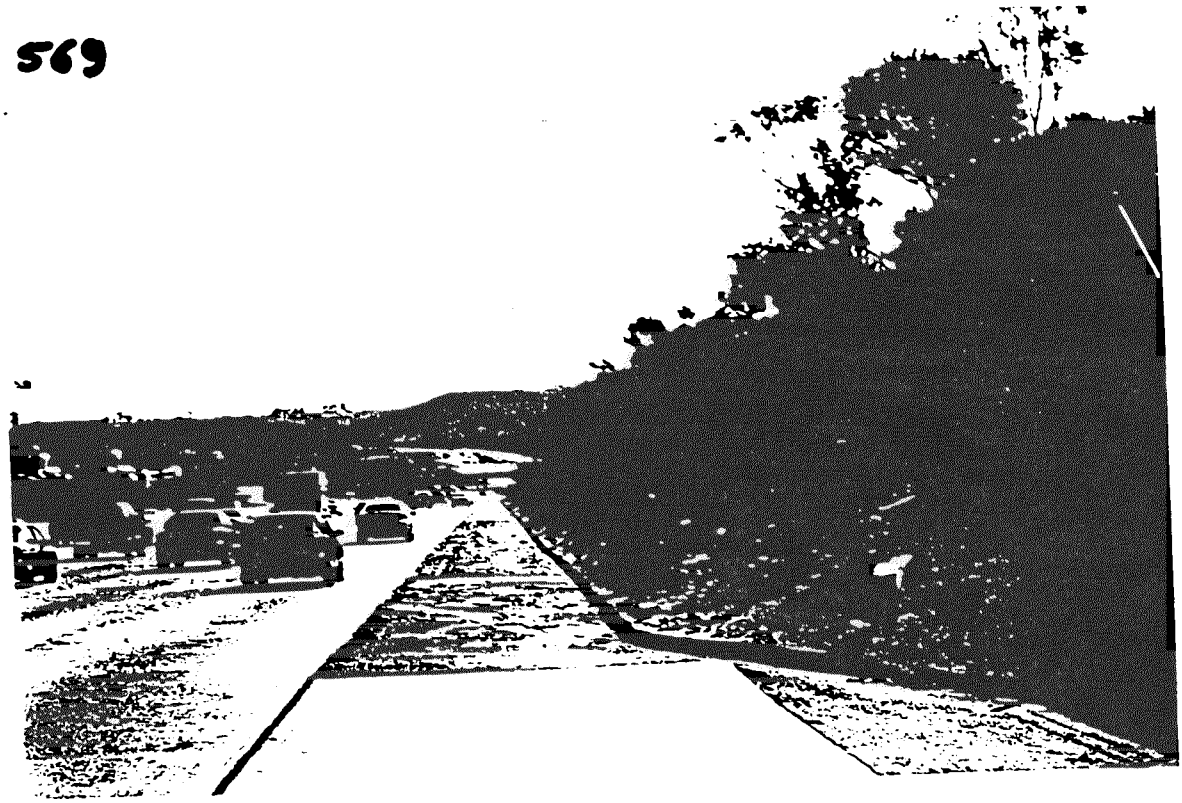


Photo 23: Wall 569 Location; looking south form about Station 574+40

Photo 24: Wall 569 Location; looking south from about Station 569+20

470