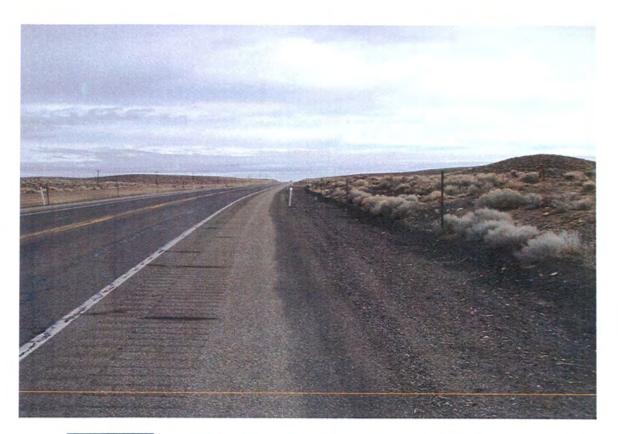
### SUMMARY OF SITE CONDITIONS

### US 50 LY 14.00 TO LY 19.93 NEAR CHAVES ROAD TO NEAR ROYS ROAD LYON COUNTY, NEVADA





State of Nevada Department of Transportation Materials Division

Summary of Site Conditions for US 50 LY 14.00 to LY 19.93 From Near Chaves Lane to Near Roys Road

September 2010

E. A. No. 73475-1

Lyon County, Nevada

Summary by \_\_\_\_

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### **INTRODUCTION**

This geotechnical summary has been produced for the US 50 widening project on US 50 from near Chaves Road to near Roy's Road LY 14.00 to LY 20.39. The purpose of this summary is to provide information regarding the subsurface soil and groundwater conditions along the project alignment. The investigation was conducted primarily for the roadway widening design. Site specific geotechnical work was also completed for the traffic cable barriers as well as roadway cut slopes.

### **PROJECT DESCRIPTION**

The Nevada Department of Transportation has determined that a two-lane section of US 50 between near Chaves Road and near Roy's Road in Lyon County, Nevada will be widened to a four lane divided highway. Approximately 22,000 feet of traffic cable barrier is planned for construction for the median in 9 discreet segments. The majority of the project alignment, from about Station "X2" 884+00 to about Station "X2" 1131+00 is located on the relatively flat Misfits Flat. This segment is bordered by residential neighborhoods and irrigated fields. The western segment of the project alignment from about Station "X2" 884+00 is located in the foothills of the Pine Nut Mountains. This portion of the project is bordered by undeveloped brushy, hilly terrain.

#### **SITE CONDITIONS**

#### **Surficial Geology**

According to available references (Geological Map of Lyon, Douglas and Ormsby Counties, Nevada: Nevada Bureau of Mines, 1969, Bulletin 75, Plate 1), the portion of the project site located within Misfits Flat is founded on Quaternary aged stream laid plain deposits composed of gravel, sand and silt, and the fine sand, silt and clay of river flood plains along with playa clay and sand. The exploratory borings completed along the project alignment within Misfits Flat confirm these findings. This map also indicates that the western portion of this project that climbs into the Pine Nut Mountain foothills is founded on the geologic unit "Kg". Unit "Kg" is described as granitic "nonporphyritic quartz monzonite, granodiorite and hybrid mafic rocks". Additionally, a portion of the foothills near the beginning of the project is founded on geologic unit "Th". Unit "Th" is described as "rhyolite pumice tuff-breccia and welded tuff" with a "welded black, glassy basal layer". The line sampling completed in the areas to be cut appears to confirm these findings along with more decomposed surficial materials.

#### Site Investigation

Site specific geotechnical information was gathered for the cable barrier design, cut slope rippability, pavement design and other purposes. Subsurface information was gathered during winter and spring of 2010. The cable barrier design borings (CA1-CA6) were drilled using a Deidrich D120 drill rig (unit #1082) equipped with an internal anvil automatic hammer utilizing Hollow Stem Continuous Flight Augering (HSA) drilling

methods. Boring depths ranged from 12.5 to 14.5 feet. Augured samples of subgrade native and embankment fill soils and driven samples were obtained were obtained from each boring. Driven samples were obtained using a Standard Penetration Test (SPT ASTM D 1586) sampler and a California Modified Sampler (CMS ASTM D 3550) by driving the sampler 18 inches (unless otherwise noted) into the bottom of the boring using a 30-inch drop of an automatic hammer weight of 140 pounds. The energy transfer from the automatic hammer into the drill string is 72% (SPT energy calibration by Gregg Drilling and Testing, Inc., June 11, 2009) with an approximate energy correction factor of 1.2. Sampler driving resistance (N-value), expressed as blows per the last foot of penetration are presented on the Exploration Logs at the respective depth. N-value is an indication of the apparent density of coarse-grained soils and the consistency of fine-grained soils. Blow counts presented on the Exploration Logs have not been corrected for rod length, hammer type, etc. Soils were classified by the Unified Soil Classification System (USCS), in the field according ASTM D 2488 and following laboratory analysis in accordance with ASTM D 2487. Bulk samples were also obtained.

Cut slope line sampling and roadway line sampling was performed with a Deidrich D120 drill rig (unit #1082) and a Mobile Drill B-52 (unit #1755) utilizing Hollow Stem Continuous Flight Augering (HSA) drilling methods. Bulk samples were obtained.

Exploration Logs and Line Sampling Data are included in Appendix A. Location maps have been provided for the CA1 - CA6 borings. Location maps have not been provided for the other borings; however they are identified by the "L1" and "X2" stationing of US 50 which are shown on the Plan Sheets. Laboratory Test Results from the borings are included in Appendix B. Seismic refraction survey data and Refraction Microtremor (ReMi) data was obtained from three lines of geophones placed in the two tallest cut areas of the project. Seismic refraction survey data and Refraction Microtremor (ReMi) data are included in Appendix C. Location maps have been provided for these data.

#### Laboratory Testing

Selected samples were tested at the NDOT headquarters laboratory facilities. Laboratory test results can be found in Appendix B. The laboratory testing program consisted of:

Natural Moisture Content (AASHTO T-265) Particle Size Gradations (AASHTO T-87 & T-27) Hydrometer (AASHTO T-88) Unit Weight Specific Gravity (AASHTO T-100) Atterberg Limits (AASHTO T-89 & T-90) Consolidated Undrained Triaxial (AASHTO T-297) Direct Shear (AASHTO T-236) Resistance Value (R-Value Nevada T 115) Soil Chemistry: Resistivity (AASHTO T-288) pH (AASHTO T-289) Conductivity

#### Embankment Fill

Existing roadway embankment fills are under the structural section and along the shoulder areas. They are generally classified as medium dense silty sands and range in depth from 0 feet to about 4 feet from the ground surface along the project alignment. Embankment fill is planned for placement to similar depths along the entire widening project and is required to be placed to not less than 90% of the maximum density.

#### Soil and Groundwater Conditions

Site soils consisted of native soil and bedrock along a majority of the project alignment with embankment fill in the depressions between foothills and in the transition area from foothills to valley floor. Bedrock typically underlies the roadbed in the foothills and native soil underlies the roadbed in the valley. Bedrock was encountered in the cable barrier boring CA6, and the cut slope line sampling borings C-1#1, C-2#1, C-2#3 and C-2#4.

Soils were generally moist during cable barrier boring sampling, which was accomplished with snow cover on the ground surface or recently melted. No ground water was encountered in any of the borings drilled along this project alignment during the subsurface investigation. However, the groundwater table elevation will fluctuate depending on the time of year and precipitation amounts. Surface water can be troublesome due to the low permeability of the surficial native clayey sand soils.

#### Soil Corrosivity

Selected samples from the cable barrier borings (CA) underwent chemical analysis. The pH values ranged from neutral (6.9) to slightly basic (8.4). Soil resistivity values ranged from moderately corrosive (2,092 Ohm-cm) to mildly corrosive (9,709 Ohm-cm) with samples fairly evenly divided between the moderately corrosive and mildly corrosive categories. Soil conductivity values are indicative of soil salinity and are typically inversely proportional to resistivity values. These conductivity values ranged from 103 to 485  $\mu$ S/cm. Soil chemistry laboratory test results can be found in Appendix B.

#### **DISCUSSION AND RECOMMENDATIONS**

#### **Frost Depth**

Assume a frost depth of 1.5 feet for foundation design.

#### Foundation Design Profiles for Cable Barriers

The cable barrier exploration logs are numbered CA1 - CA6 in Appendix A. Borings are located at most of the planned cable barrier terminal locations: the beginning of the cable barrier rail project (CA6), Caroline Way (CA5), Turf Farm Road (CA4), Crow Lane (CA3), Boyer Lane (CA2), and the end of the cable barrier rail project (CA1). Note that the surface elevations are from the existing shoulder surface adjacent to the existing pavement. These may differ from the surface elevation at the time of cable barrier construction. Additional line sampling data for the project area is also located in

Appendix A. Bedrock was encountered at the beginning of the cable barrier rail project at a depth of 13 feet below ground surface, underneath bedrock that had decomposed to clay. Bedrock is likely to be encountered in the vicinity of rock cuts from the beginning of the cable rail barrier project to near Caroline Way. The Caroline Way and Turf Farm Road borings produced primarily silty sands with some clay and gravel components. The Boyer Lane boring produced silty and/or clayey sand for the full depth explored. The Crow Lane and end of the cable barrier rail borings produced primarily clayey sand in the upper 4.5 feet to 6 feet explored, overlying 3 feet to 5.5 feet of clays and then silty or clayey sand. The end of cable rail project boring also produced increasing amounts of gravel with depths starting at about 9 feet below ground surface.

#### **Excavations**

Much of the excavation is in the Pine Nut Mountain foothills near the beginning of the project, generally between stations "X2" 805+00 and "X2" 812+00 to the south, between "X2" 836+00 and "X2" 847+00 to the north and south, and between stations "X2" 865+00 and "X2" 876+00 to the north. Difficult excavation can be expected in these native soils, especially when nearing grade elevations. Additional ripping effort with heavier equipment may be required. Seismic velocities were recorded as high as 7000ft/s to 8000ft/s in native materials to be excavated between stations "X2" 840+40 and "X2" 842+30. Clay seams from weathered bedrock may also be encountered. The clay seams are not suitable material for use on the project and must be wasted. For additional information refer to seismic surveys for two of the cut slopes in Appendix C.

Testing showed that native soils in the south frontage road area from about "SFR" 1065+00 through its terminus at Roys Road and including Roys Road south of US 50 have very low R-values. Excavated materials from these areas do not meet borrow requirements and cannot be used elsewhere on the project. See the Plan Sheets for additional information.

#### **Constructability**

Based on the results of our field exploration, shallow bedrock may be encountered during construction, especially in areas of exposed rock cut. Review of the line sample and other exploratory borings conducted in early 2010 reveals no groundwater is likely to be encountered. However there is a high likelihood of surface water impacting construction during and following precipitation events due to observed low infiltration rates. Heavy rutting can be expected in saturated surficial soils following precipitation events until the surficial water has evaporated.

### **REFERENCES**

Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, FHWA-SA-96-072, Victor Elias, P.E., 1997.

<u>Geology and Mineral Deposits of Lyon, Douglas, and Ormsby Counties, Nevada</u>, Nevada Bureau of Mines, Bulletin 75, James G. Moore, 1969.

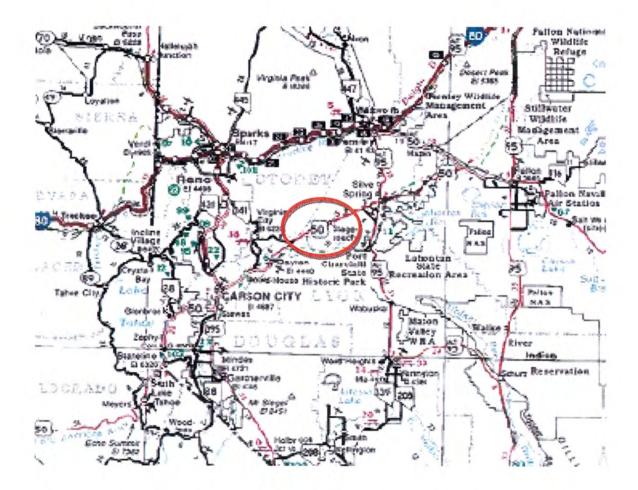
Geotechnical Policies and Procedures Manual, Nevada Department of Transportation, 2005.

<u>2007 Northern Nevada Code Amendments</u> to the 2006 International Building Code, International Code Council.

Preliminary Construction Plans, Project No. SPF-050-2(019), Lyon County, Randolph Koniak, Designer, undated.

# Appendix A Line Sample and Exploration Log Sheets

Project Area Location Map Cable Barrier Exploration Logs Cable Barrier Line Sampling Cut Slope Line Sampling Roadway Line Sampling



Project Area Location Map

Cable Barrier Exploration Logs

### **KEY TO EXPLORATION LOGS**

	PARTICLE SIZE LIMITS													
CLAY	SILT		SAND		GR	AVEL	COBBLES	BOULDERS						
		FINE	MEDIUM	COARSE	FINE	COARSE								
.00:	 2 mm	<u>#</u> 200	 # <b>40</b> #1	 10 #4	∛4 i	nch 3 i	inch 12	inch						

USCS GROUP	TYPICAL SOIL DESCRIPTION
GW	Well graded gravels, gravel-sand mixtures, little or no fines
GP	Poorly graded gravels, gravel-sand mixtures, little or no fines
GC	Clayey gravels, poorly graded gravel-sand-clay mixtures
SW	Well graded sands, gravelly sands, little or no fines
SP	Poorly graded sands, gravelly sands, little or no fines
SM	Silty sands, poorly graded sand-silt mixtures
SC	Clayey sands, poorly graded sand-clay mixtures
ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
OL	Organic silts and organic silt-clays of low plasticity
MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
СН	Inorganic clays of high plasticity, fat clays
ОН	Organic clays of medium to high plasticity
PT	Peat and other highly organic soils

#### **MOISTURE CONDITION CRITERIA**

MOISTURE CONI	DITION CRITERIA	SOIL CEMENTATION CRITERIA						
<u>Description</u> Dry	<u>Criteria</u> Absence of moisture, dusty, dry to touch.	<u>Description</u> Weak	<u>Criteria</u> Crumbles or breaks with handling or little finger pressure.					
Moist Wet	Damp, no visible free water. Visible free water, usually below	Moderate	Crumbles or breaks with considerable finger pressure.					
$\nabla$ $\blacksquare$	groundwater table. Groundwater Elevation Symbols	Strong	Won't break or crumble w/finger pressure					

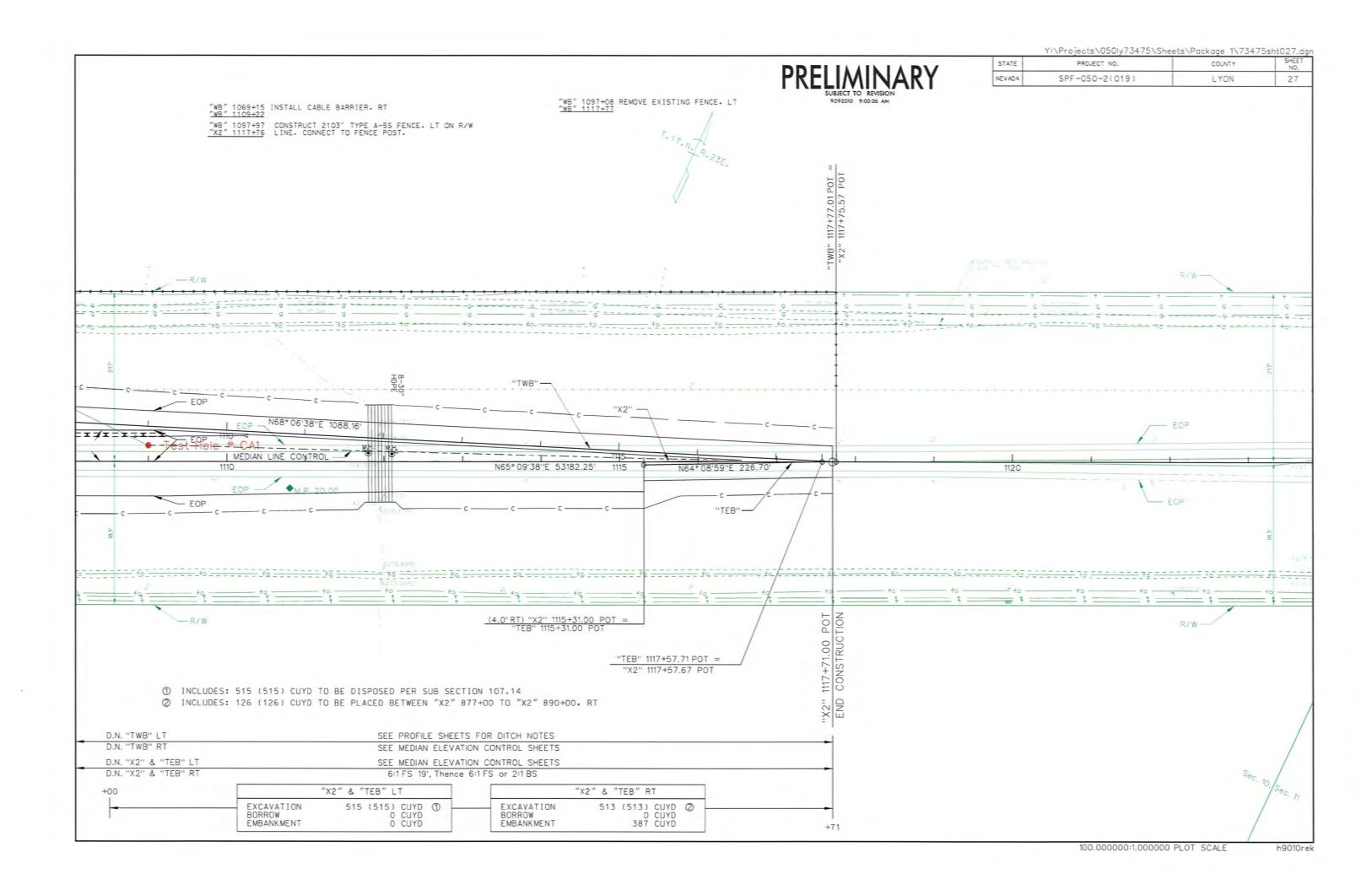
STANDARD PENETRATION CLASSIFICATION*												
	GRANULAR SOIL	C	LAYEY SOIL									
BLOWS/FT	DENSITY	BLOWS/FT	CONSISTENCY									
0 - 4	VERY LOOSE	0 - 1	VERY SOFT									
5 - 10	LOOSE	2 - 4	SOFT									
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF									
31 - 50	DENSE	9 - 15	STIFF									
OVER 50	VERY DENSE	16 - 30	VERY STIFF									
*Standard Pene 30 inch free fal	tration Test (N) 140 lb hammer l on 2 inch O.D. x 1.4 inch I.D. sampler.	31 - 60 OVER 60	HARD VERY HARD									

Field Blow counts on California Modified Sampler (NCMS) can be converted to NSPT field by: (NCMS field )(0.62) = NSPT field

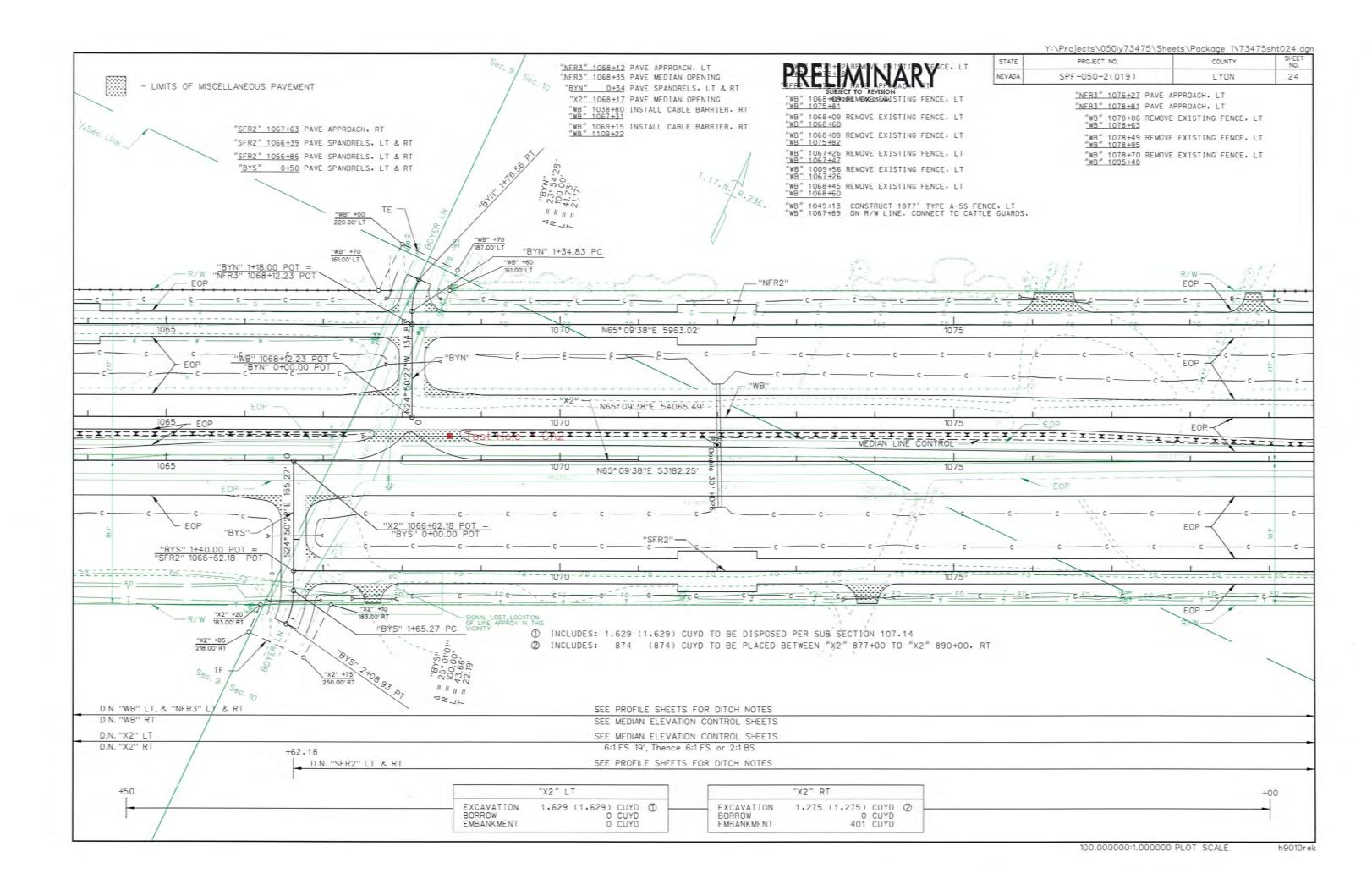
Blow counts from Automatic Hammer can be converted to Standard SPT N60 by: Rig #1627: (NSPT field)(1.2) =N60 Rig #1082: (NSPT field)(1.45) =N60

TEST ABBREVIATIONSCDCONSOLIDATED DRAINEDCHCHEMICAL (CORROSIVENESS)CMCOMPACTIONCUCONSOLIDATED UNDRAINED	OC ORGANIC CONTENT C CONSOLIDATION PI PLASTICITY INDEX ROD ROCK QUALITY DESIGNATION	SAMPLER NOTATION CMS CALIF. MODIFIED SAMPLER <sup>1</sup> CPT CONE PENETRATION TEST CS CONTINUOUS SAMPLER <sup>2</sup>
D DISPERSIVE SOILS DS DIRECT SHEAR E EXPANSIVE SOIL G SPECIFIC GRAVITY H HYDROMETER HC HYDRO-COLLAPSE K PERMEABILITY	RV R-VALUE S SIEVE ANALYSIS SL SHRINKAGE LIMIT U UNCONFINED COMPRESSION UU UNCONSOLIDATED UNDRAINED UW UNIT WEIGHT W MOISTURE CONTENT	PB       PITCHER BARREL         RC       ROCK CORE <sup>3</sup> SH       SHELBY TUBE <sup>4</sup> SPT       STANDARD PENETRATION TEST         TP       TEST PIT         1- I.D.= 2.421 inch
SOIL COLOR DESIGNATIONS ARE FRO CHARTS. EXAMPLE: (7.5 YR 5/3) BROW		2- I.D.=3.228 inch with tube; 3.50 inch w/o tube 3- NXB I.D.= 1.875 inch 4- I.D.= 2.875 inch

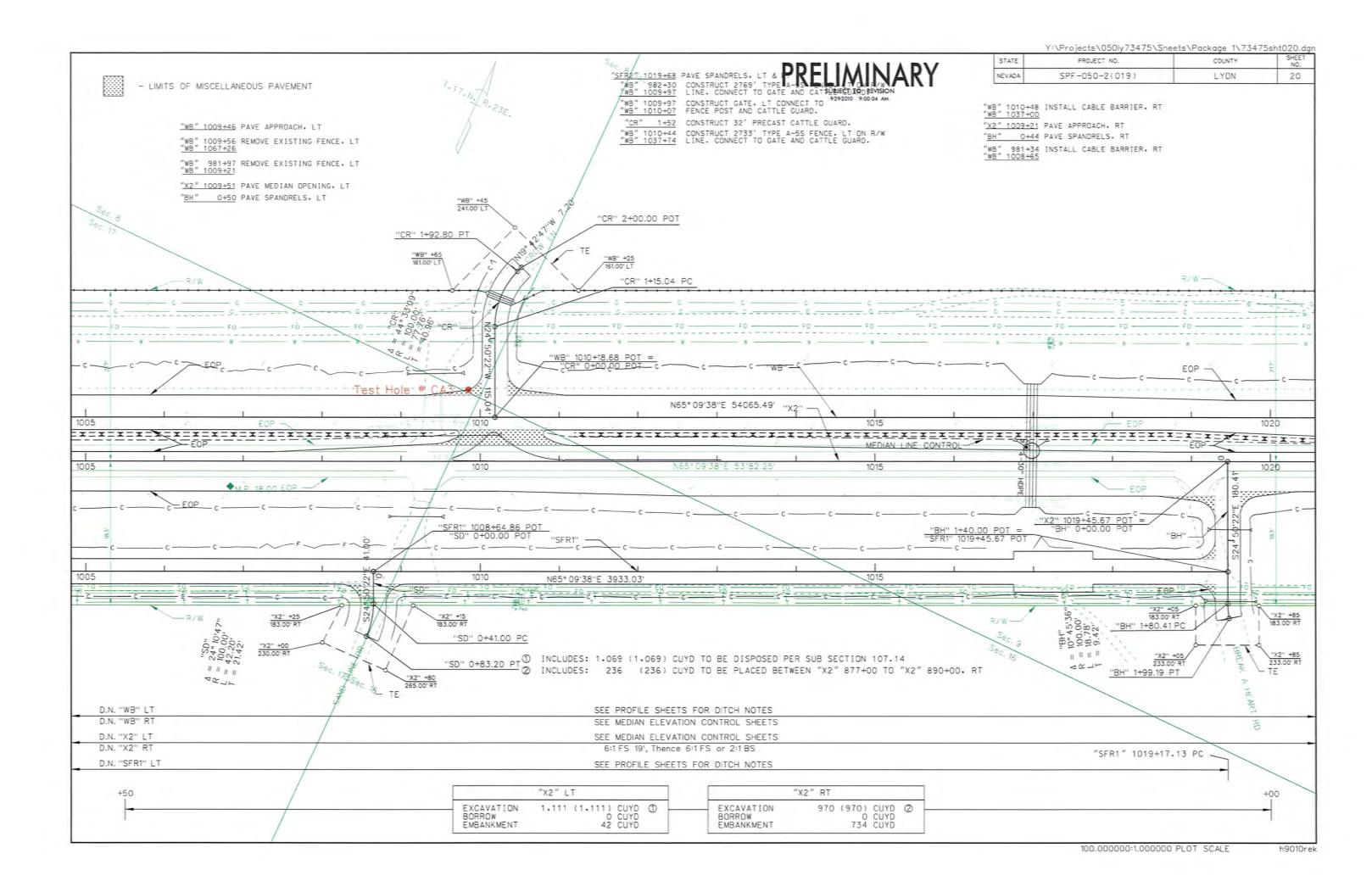
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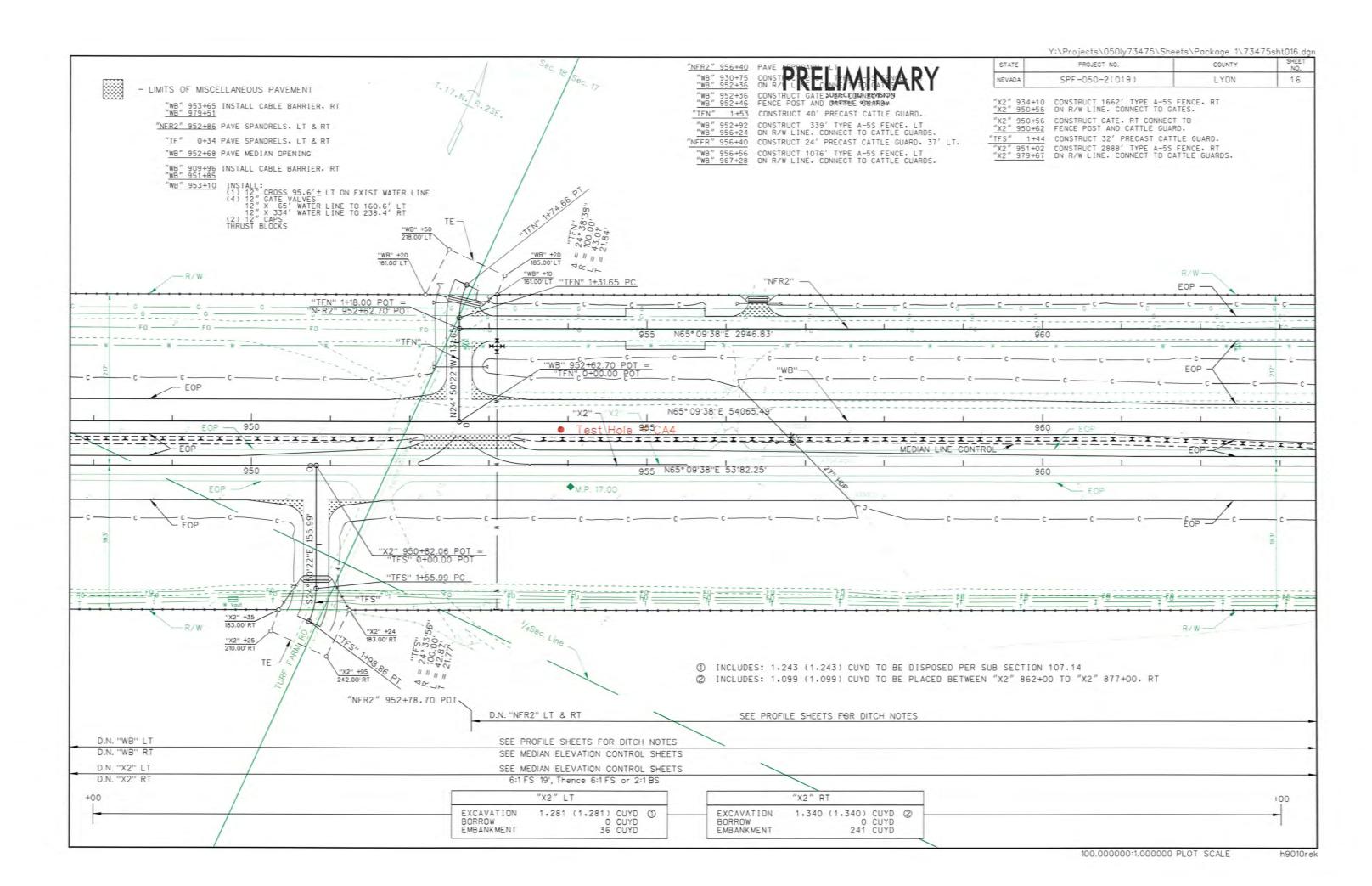
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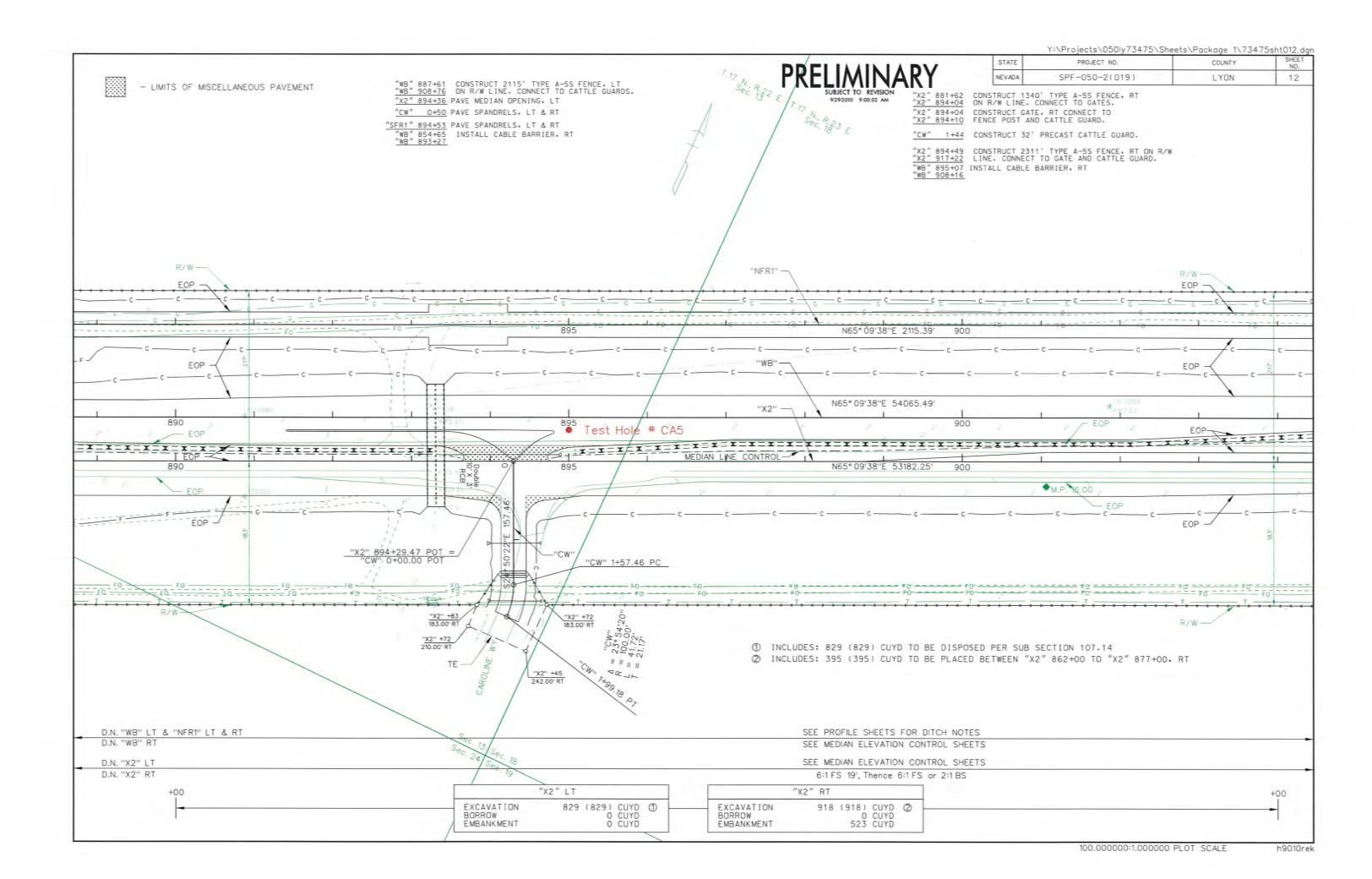
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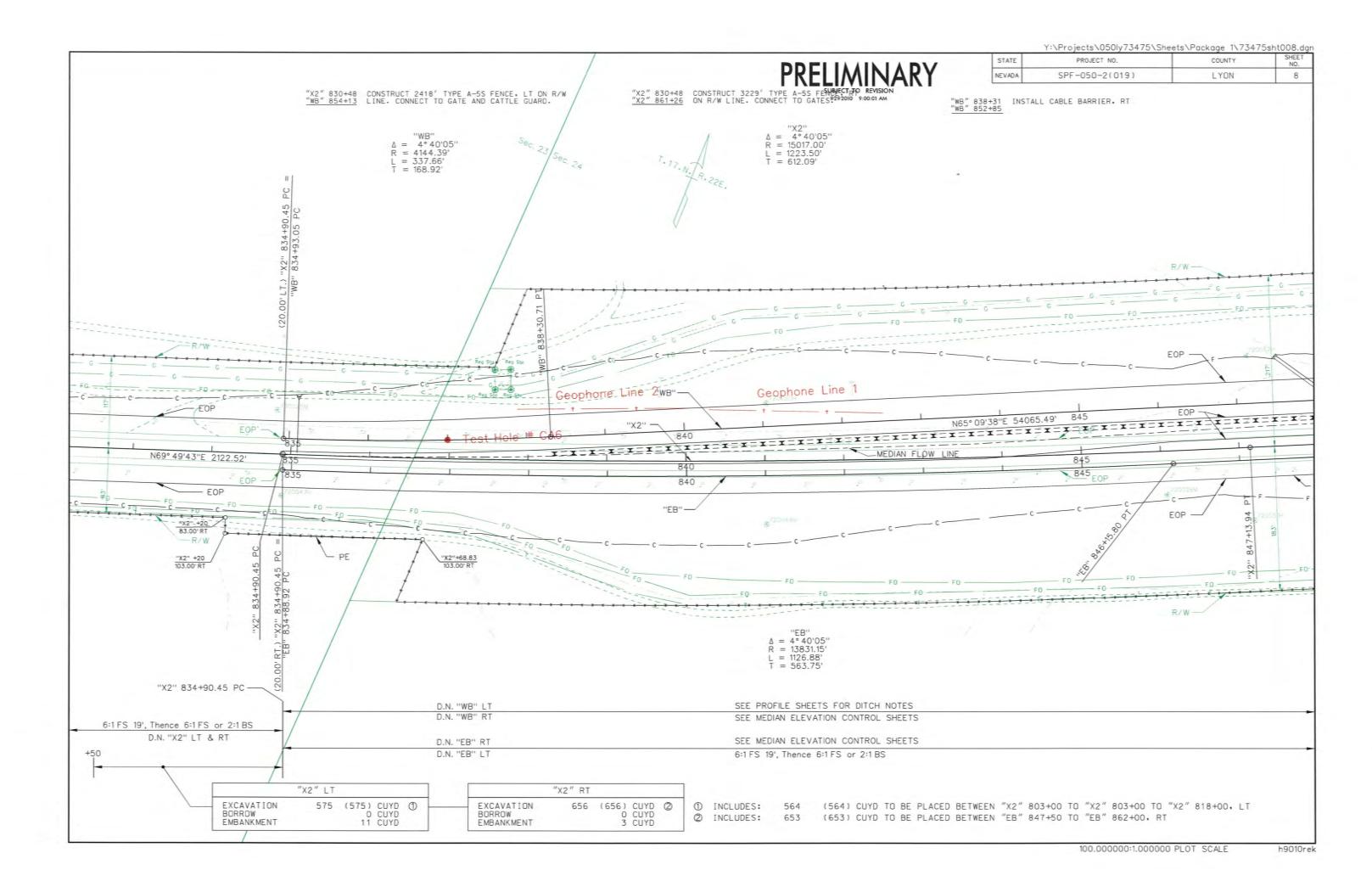


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		4		TART DAT		12/10								SHEET 1 OF 1
DEPAR TRANSI	TMENT OF			ND DATE			 0 Stagecoad	<b>.</b>				STATION	X2 837+00	)
				OB DESCR		P 14 to		511				OFFSET	22L Collegher	
		$\langle  $		OCATION								ENGINEER	Callaghan D-120	
				ORING		A6						EQUIPMENT	Altamirand	
				.A. #		8475		<u> </u>	GROU DATE	NDWATEF				
			G	ROUND EL	.EV(†	t)			DAIL	DEFIII		DRILLING	hollow aug	
GEOTEC ENGIN	EERING		н	AMMER DF	ROP SY	STEM <u>a</u>	utomatic					BACKFILLED	Yes D	ATE 4/12/10
ELEV. (ft)	DEPTH (ft)	SA NO.	MPLE TYPE		Last	Percent Recov'd	LAB TESTS	USCS Group		MAT	ERIAL D	ESCRIPTION	1	REMARKS
										brown mo	ist silty san	d		begin cable rail
	-													edge of oil
	-							SM						
	4.00								1.00					
				4					4.20	yellow tan	moist sand	ly fat clay		gypsum crystals
		A	мс	8	23	100	sieve, pi, moisture,	CL		-				
-	-5						unit weight		5.00	vellow tan	and rust m	oist lean clay wit	h sand	
	5.50			15				-		,				
				1										
	<b>[</b>													
	F													
	-													
	9.00							CL						
				7										gypsum crystals and pyrite
		в	SPT	10	24	100	sieve, pi, moisture,							and pyrite
-	10	-					chem							
	10.50			14										
	-													
	-				1									
	40.00													
	13.00	С	NR		refusal				13.00					
				refusal										
									1					

Cable Barrier Line Sampling

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	<u>, R</u> V-281-10	, C-314-10							
E.A.:	73475	-	Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	03/25/10									
Samplers:	<u>Marshall,</u>	Wimer		Station	"X2" 1109	+00		Route	US 50	
				Location fro	om oil (ft)	Lt.	23'	Rt.		
Sample No.:	CA1			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV	Sub 🗆	Chem 🗆	DC 🗆	Other D	□ 0				0	
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗖		2				2	
	Brushy 🗆	Grassy 🗆			4		Sandy C	Clay	4	100
Cut Section		Fill Section			6		Clay	,	6	PSI
Taken Through Oi	1 🗖	Taken on Sho	ulder 🔳		8				8	•
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:	SPT taken fi	rom 3½' to 5'.	Shelby taken f	rom 5¼ to	12				12	
	7¼				14				14	
<b>.</b>					16				16	
Submitted By:	R. Wimer				18				18	
Title:	Engineerii	ng Tech I			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	
1/2"	
3/8"	100
No. 4	98
No. 10	94
No. 16	90
No. 40	80
No. 50	75
No. 100	64
No. 200	51

Liquid Limit	36	
Plastic Index	19	
Specific Gravity		
Resistance Value	19	
Cover		Expansion Pressure
Thickness	22.6	
Sand Equiv Natural Mo Resistivity		2,212
pH Factor		7.3
HRB Class	ification	

Remarks:

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Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-282-10, C-3	315-10		_					
E.A.:	73475	Job De	escription:	US 50 from	LY 14.00 to	20.39			
Date Rec'd	03/25/10								
Samplers:	Marshall, Wimer		Station	"X2" 1068-	⊦60		Route	US 50	
			Location fro	m oil (ft)	Lt.	29'	Rt.		
Sample No.:	CA2	-	County:	LYON					
Sample Type:				Depth (ft)	Boring D	escription			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	0				0	
Vegetation:	None 🔳 Trees 🖾 Sh	rubs 🛛		2				2	
	Brushy 🗆 Grassy 🗆			4		Silty		4	100
Cut Section	Fill Section			6		Sandy Cl	lay	6	PSI
Taken Through Oi	Taken on Shoulder			8				8	
Gravel Depth (in)	Oil Depth (in)			10				10	
Remarks:	CA sample taken 31/2' to 5'. SPT	taken fron	n 5' to 6½	12				12	
				14				14	
				16				16	
Submitted By:	R. Wimer			18				18	
Title:	Engineering Tech I			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	
1/2"	
3/8"	100
No. 4	97
No. 10	89
No. 16	84
No. 40	74
No. 50	69
No. 100	58
No. 200	46

Liquid Limit	26	
Plastic Index	9	
Specific Gravity		
Resistance Value	16	
Cover		Expansion Pressure
Thickness	23.5	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	isture, %	2,681 7.6

Remarks:

Date Reported: Lab No.:	<u>04/23/10</u> Soils10-01, RV-3	302-10, C-338	3-10							
E.A.:	73475		Job D	escription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	4/5/10									
Samplers:	Altamirano, Wi	mer		Station	"X2" 1009-	+85		Route	US 50	
<u></u>				Location fro	om oil (ft)	Lt.	35'	Rt.		
Sample No.:	CA3			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description	•		PSI
RV	Sub 🗆 C	hem 🗆 🔡	DC 🗆	Other [	0				0	
Vegetation:	None 📕 Trees	□ Shru	os 🗆		2		Silt, Sand,	Gravel	2	100
	Brushy 🗇 Grassy	<u>,</u>			4				4	
Cut Section	Fill Se	ction 🗆			6				6	
Taken Through Oi	l 🗆 Taken	on Shoulder			8				8	
Gravel Depth (in)	Oil De	pth (in)			10				10	
Remarks:	CA sample taken 3	1/2' to 5'. With b	low cou	ints of	12				12	
4-8-15. SPT samp	le taken from 7½' to	9' with blow co	ounts of	8-10-16	14				14	
SPT sample taken	from 12½' to 14' wit	h blow counts o	of. 7-9-1	0.	16				16	
Submitted By:	O. Altamirano				18				18	
Title:	Supervisor I				20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	100
3/4"	95
1/2"	88
3/8"	83
No. 4	65
No. 10	48
No. 16	42
No. 40	30
No. 50	25
No. 100	18
No. 200	13

Liquid Limit	22	
Plastic Index	4	
Specific Gravity		
Resistance Value	77	
Cover		Expansion Pressure
Thickness	4.1	
Sand Equiv	alent	
Natural Mo	isture, %	
Resistivity		2,506
pH Factor		8.3
HRB Classi	fication	

Remarks:

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Lab No.:       Soils10-01, RV-303-10, C-339-10         E.A.:       73475       Job Description:       US 50 from LY 14.00 frow LY 14.00 from LY 14.00 from LY 14.00 frow LY 14.00 from LY 14.	D to 20.39 Route US 50
Date Rec'd 4/5/10	
	Route US 50
Samplers: Altamirano, Wimer Station "X2" 1009+85	Route US 50
Location from oil (ft) Lt.	<b>35'</b> Rt.
Sample No.: CA3A County: LYON	
Sample Type: Depth (ft) Boring	g Description PSI
$\frac{RV}{Sub} \subseteq Chem} \subseteq DC \subseteq Other} \subseteq 0$	0
Vegetation: None ■ Trees □ Shrubs □ 2	<u>2</u>
Brushy Grassy 4 Sil	Silt, Sand, Very Lt. Gravel 4
Cut Section  Fill Section  6	Lt. Clay 6 200
Taken Through Oil 🗆 Taken on Shoulder 🔳 8	8
Gravel Depth (in) 0il Depth (in) 10	10
Remarks: CA sample taken 3½' to 5'. With blow counts of 12	12
4-8-15. SPT sample taken from 7½' to 9' with blow counts of 8-10-16 14	14
SPT sample taken from 12½' to 14' with blow counts of. 7-9-10.	16
Submitted By: O. Altamirano 18	18
Title: Supervisor I 20	20
	•

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	93
3/8"	93
No. 4	89
No. 10	81
No. 16	77
No. 40	66
No. 50	60
No. 100	44
No. 200	30

Liquid Limit	20	
Plastic Index	5	
Specific Gravity		
Resistance Value	43	
Cover		Expansion Pressure
Thickness	14.9	
Sand Equiv Natural Mo Resistivity pH Factor		<u>2,532</u> 7.9
HRB Class	ification	······································

Remarks:

Date Reported:	04/23/10							
Lab No.:	Soils10-01, RV-304-10	, C-340-10		_				
E.A.:	73475	Job D	Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	4/5/10							
Samplers:	Altamirano, Wimer		Station	<u>"X2" 953+9</u>	0	Route	US 50	
····	·····		Location fro	m oil (ft)	Lt. <u>45'</u>	Rt.		
Sample No.:	CA4		County:	LYON				
Sample Type:				Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	0			0	
Vegetation:	None 🔳 Trees 🗆	Shrubs 🛛		2	Silt, Sand,	Gravel	2	100
	Brushy 🗆 Grassy 🗆			4			4	
Cut Section	Fill Section			6			6	
Taken Through O	il 🗆 Taken on Sho	oulder 🔳		8			8	
Gravel Depth (in)	Oil Depth (in	)	_	10			10	
Remarks:	SPT sample taken from 12	½ to 3', blow co	unt 8-4-4.	12			12	
SPT sample taken	from 6' to 71/2, blow count 6	5-7-12.		14			14	
CA sample taken :	from 13' to 14½, blow count	t 12-23-37.		16			16	
Submitted By:	O. Altamirano			18			18	
Title:	Supervisor I			20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	-
3/4"	100
1/2"	93
3/8"	85
No. 4	73
No. 10	59
No. 16	50
No. 40	33
No. 50	25
No. 100	12
No. 200	1

Liquid Limit	21	
Plastic Index	NP	
Specific Gravity		
Resistance Value	78	
Cover		Expansion Pressure
Thickness	3.8	<u></u>
Sand Equiv Natural Mc		
Resistivity		2,625
pH Factor		8.2
HRB Class	ification	

Remarks:

Date Reported:	04/23/10							
Lab No.:	Soils10-01, RV-305-1	0, C-341-10		_				
E.A.:	73475	Job E	Description:	US 50 from L	Y 14.00 to 20.39			
Date Rec'd	4/5/10							
Samplers:	Altamirano, Wimer		Station	"X2" 953+90		Route	US 50	
			Location fro	om oil (ft)	Lt. <b>45'</b>	Rt.		
Sample No.:	CA4A		County:	LYON				
Sample Type:				Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem	DC DC	Other 🗆	1 0			0	
Vegetation:	None 🔳 Trees 🗀	Shrubs 🗆		2				
	Brushy 🗆 Grassy 🗆			4	Silt, Sand, Ver	ry Lt. Gravel	4	
Cut Section $\Box$	Fill Section			6	Lt. C	lay	6	200
Taken Through O	il 🗖 🛛 Taken on Sh	oulder 🔳		8			8	<u> </u>
Gravel Depth (in)	Oil Depth (in	n)	_	10			10	
Remarks:	SPT sample taken from	½ to 3', blow co	unt 8-4-4.	12			12	
SPT sample taken	from 6' to 71/2, blow count	6-7-12.		14			14	
CA sample taken f	rom 13' to 14½, blow cour	nt 12-23-37.		16			16	
Submitted By:	O. Altamirano			18			18	
Title:	Supervisor I			20			20	
				_ ·				

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	97
3/8"	96
No. 4	89
No. 10	77
No. 16	69
No. 40	48
No. 50	39
No. 100	20
No. 200	0

Liquid Limit	20	
Plastic Index	4	
Specific Gravity		
Resistance Value	67	
Cover		Expansion Pressure
Thickness	7.3	
Sand Equiv	alent	
Natural Mo	isture, %	
Resistivity		2,463
pH Factor		7.9
HRB Class	ification	

Remarks:

NDOT 027, Rev. 05-01

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Date Reported:	04/23/10							
Lab No.:	Soils10-01, RV-307-10, C	-347-10						
E.A.:	73475	Job D	escription:	US 50 from 1	LY 14.00 to 20.39			
Date Rec'd	4/12/10							
Samplers:	Altamirano, Wimer		Station	"X2" 895+0	0	Route	US 50	
			Location fro	m oil (ft)	Lt. 35'	Rt.		
Sample No.:	CA5		County:	LYON				
Sample Type:				Depth (ft)	Boring Description	_		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	0			0	
Vegetation:	None 🔳 Trees 🖾 S	Shrubs 🛛		2	Silt, Sand, C	fravel	2	100
	Brushy 🗆 Grassy 🗆			4			4	
Cut Section $\Box$	Fill Section			6			6	
Taken Through Oi	1 🗖 Taken on Shoulde	er 🔳		8			8	
Gravel Depth (in)	Oil Depth (in)		_	10			10	
Remarks:	SPT sample taken @ 2' blow	counts= 4-3	- 3-3.	12			12	
CA sample taken (	26', blow counts=3-5-8. SPT	sample take	n @ 11',	14			14	
blow counts = 6-8-	9.			16			16	
Submitted By:	O. Altamirano			18			18	
Title:	Supervisor I			20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	100
1"	93
3/4"	93
1/2"	79
3/8"	70
No. 4	52
No. 10	40
No. 16	35
No. 40	24
No. 50	20
No. 100	14
No. 200	10

Liquid Limit	23	
Plastic Index	4	
Specific Gravity		
Resistance Value	74	
Cover		Expansion Pressure
Thickness	5.1	
Sand Equivalent Natural Moisture, % Resistivity pH Factor HRB Classification		

#### Remarks:

Date Reported:	04/23/10									
Lab No.:	Soils10-01, 1	RV-308-10,	C-348-10							
E.A.:	73475		Job D	escription:	US 50 fron	n LY 14.00	to 20.39			
Date Rec'd	4/12/10									
Samplers:	Altamirano,	Wimer	_	Station	"X2" 895+	-00		Route	US 50	
			_	Location fro	om oil (ft)	Lt.	35'	Rt.		
Sample No.:	CA5A			County:	LYON					
Sample Type:			·		Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	1 0				0	
Vegetation:	None 🔳 Ti	rees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆 G	rassy 🗆			4		Silt, Sa	ind	4	
Cut Section $\Box$	Fi	ll Section			6		Very Lt. (	Gravel	6	100
Taken Through Oil	I 🗆 Ta	aken on Shou	lder 🔳		8		-		8	
Gravel Depth (in)	0	il Depth (in)			10				10	
Remarks:	SPT sample ta	ken @ 2' blo	w counts= 4-3	-3.	12				12	
CA sample taken (a	96', blow coun	ts=3-5-8. SP	T sample take	n @ 11',	14				14	
blow counts = 6-8-	9				16				16	
Submitted By: O. Altamirano		18				18				
Title:	Supervisor I	[			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	96
3/8"	95
No. 4	89
No. 10	79
No. 16	72
No. 40	54
No. 50	45
No. 100	30
No. 200	19

Liquid Limit	19	
Plastic Index	NP	
Specific Gravity		
Resistance Value	67	
Cover		Expansion Pressure
Thickness	7.3	
Sand Equivalent Natural Moisture, % Resistivity pH Factor HRB Classification		

Remarks:

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Date Reported: Lab No.:	04/23/10 Soils10-01, RV-309-10, 0	C <b>-349-10</b>							
E.A.:	73475		escription:	US 50 from	n LY 14.00 t	o 20.39			
Date Rec'd	4/12/10		-						
Samplers:	Altamirano, Wimer		Station	"X2" 837+	00		Route	US 50	
	·	-	Location fro	om oil (ft)	Lt.	22'	Rt.		
Sample No.:	CA6		County:	LYON				<u></u>	
Sample Type:				Depth (ft)	Boring I	Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	J 0	S	Silt, Sand,	Lt. Gravel	0	
Vegetation:	None 🔳 Trees 🗆	Shrubs 🛛		2		Silty	Clay	2	100
	Brushy 🗆 Grassy 🗆			4				4	
Cut Section	Fill Section	]		- 6				6	
Taken Through Oi	1 🖾 Taken on Shoul	der 🔳		8				8	
Gravel Depth (in)	Oil Depth (in)			10				10	
Remarks:	CA sample taken @ 4' blow	counts= 4-8-	15.	12				12	
SPT sample taken	@ 9', blow counts=7-10-14.	PSI from 3' to	o 13' 6"	- 14				14	
was 300 PSI.				- 16				16	
Submitted By:	O. Altamirano			- 18				18	
Title:	Supervisor I			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	96
3/8"	91
No. 4	74
No. 10	57
No. 16	49
No. 40	36
No. 50	31
No. 100	24
No. 200	18

Liquid Limit	22	
Plastic Index	3	
Specific Gravity		
Resistance Value	61	
Cover		Expansion Pressure
Thickness	9.2	
Sand Equiv Natural Mo Resistivity pH Factor HRB Classi	isture, %	

Remarks:

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Date Reported: Lab No.:	04/23/10 Soils10-01,	<u>RV-310-10</u>	, C-350-10							
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00 t	o 20.39			
Date Rec'd	4/12/10									
Samplers:	Altamirano	, Wimer		Station	"X2" 837+	00		Route	US 50	
			_	Location fro	om oil (ft)	Lt.	22'	Rt.		
Sample No.:	CA6A			County:	LYON					
Sample Type:					Depth (ft)	Boring I	Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0	
Vegetation:	None 🔳 T	rees 🗆	Shrubs 🗖		2				2	
	Brushy 🗆 G	rassy 🗆			4		Silt, Sand	, Clay	4	
Cut Section	F	ill Section			6				6	100
Taken Through Oil		aken on Sho	ulder 🔳		8				8	•
Gravel Depth (in)	0	il Depth (in)		_	10				10	
Remarks:	CA sample tal	<u>ken @</u> 4' blo	w counts= 4-8	-15.	12				12	
SPT sample taken (	@ 9', blow cou	ints=7-10-14	. 300 PSI was	applied	14				14	
from 13' to 13' 6".					16				16	
Submitted By:	O. Altamira	no			18				18	
Title:	Supervisor ]	[			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	100
3/4"	97
1/2"	95
3/8"	92
No. 4	86
No. 10	81
No. 16	78
No. 40	72
No. 50	69
No. 100	63
No. 200	59

Liquid Limit	47	
Plastic Index	26	
Specific Gravity		
Resistance Value	12	
Cover		Expansion Pressure
Thickness	24.8	
Sand Equiv Natural Mo Resistivity pH Factor		

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Remarks:

NDOT 027, Rev. 05-01

Cut Slope Line Sampling

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-234-10, C-	-258-10				
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/25/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 810+2	20.00	Route US 50 E.	B.
Sommers		Location fro	om oil (ft)	Lt	Rt. 100'	
Sample No.:	C-1 #1	County:	LYON			-
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗖	DC 🖾 Other 🗆	□ 0		0	
Vegetation:	None 🗖 Trees 🗆 S	hrubs 🖾	2	Silt, Sand, Lt	. Clay 2	100
	Brushy 🛛 Grassy 🗖		4		4	
Cut Section	Fill Section		6		6	
Taken Through C	Dil 🛛 Taken on Shoulde	er 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole is at top of cut. Dril	ll hole ground	12		12	
elevation is 9' hig	her than edge of oil elevation.		14		14	
South side of US	50.		16		16	
Submitted By:	R. Wimer		18		18	
Title:	Engineering Tech I		20		20	
			-			

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	
1/2"	
3/8"	100
No. 4	99
No. 10	81
No. 16	63
No. 40	39
No. 50	34
No. 100	27
No. 200	22

Liquid Limit	29	
Plastic Index	5	
Specific Gravity		
Resistance Value	64	
Cover		Expansion Pressure
Thickness	6.0	
Sand Equiv	alent	
Natural Mo	isture, %	
Resistivity		8,183
pH Factor		7.5
HRB Classi	fication	

Date Reported:	04/23/10							
Lab No.:	Soils10-01, RV-235-10, C	C-259-10		_				
E.A.:	73475	Job D	escription:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	2/25/10							
Samplers:	Rigsby, Wimer,		Station	"X2" 810+2	20.00	Route	US 50 E.I	3
Sommers			Location fro	m oil (ft)	Lt	Rt.	100'	
Sample No.:	-C-1 #1A		County:	LYON				
Sample Type:				Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other	<u>1</u> 0			0	
Vegetation:	None 🗖 Trees 🗖	Shrubs 🛛		2			2	100
	Brushy 🗆 Grassy 🗆			_ 4			4	
Cut Section	Fill Section	3		6	Silt, Sand, L	t. Clay	6	100
Taken Through Oi	1 🗆 Taken on Should	ler 🗆		8	Fractured B		8	300
Gravel Depth (in)	Oil Depth (in)		-	10	Silt, Sand,	Gravel		100
Remarks:	Drill hole is at top of cut. Dr	ill hole grou	nd	12			12	
elevation is 9' high	er than edge of oil elevation.			14			14	
South side of US 5	i0.			16			16	
Submitted By:	R. Wimer			18			18	
Title:	Engineering Tech I			20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	92
3/8"	86
No. 4	72
No. 10	52
No. 16	40
No. 40	26
No. 50	23
No. 100	19
No. 200	15

5 57	
57	
57	
	Expansion Pressure
7.7	
ent	
ure, %	
	7,825
	7.7
ation	
ι	nt ure, %

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-236-10, C-2	260-10	_			
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/25/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 810+2	20.00	Route US 50 E.I	B.
Sommers		Location fro	om oil (ft)	Lt	Rt. 100'	
Sample No.:	C-1 #1B	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC D Other	] 0		0	
Vegetation:	None 🔳 Trees 🗆 Sh	rubs 🗖	2		2	
	Brushy 🗆 Grassy 🗆		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oil	Taken on Shoulder		8		8	
Gravel Depth (in)	Oil Depth (in)		10			
Remarks:	Drill hole is at top of cut. Drill	hole ground	12	Silt, Sand, Gra	wel 12	100
elevation is 9' high	er than edge of oil elevation.		14		14	
South side of US 5	0.		16		16	
Submitted By:	R. Wimer		18		18	
Title:	Engineering Tech I		20		20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	96
3/8"	84
No. 4	65
No. 10	50
No. 16	42
No. 40	29
No. 50	25
No. 100	20
No. 200	17

Liquid Limit	25	
Plastic Index	5	
Specific Gravity		
Resistance Value	55	
Cover		Expansion Pressure
Thickness	8.1	
Sand Equiv	valent	·
Natural Mo	visture, %	
Resistivity		7,669
pH Factor		7.5
HRB Class	ification	

Date Reported:	04/23/10									
Lab No.:	Soils10-01, RV-23	7-10, C-2	51-10		_					
E.A.:	73475		Job D	escription:		m LY 14.(	0 to 20.39			
Date Rec'd	3/2/10									
Samplers:	Rigsby, Wimer,			Station	"X2" 841-	+40.00		Route	US 50 W.	B.
Sommers				Location fro	m oil (ft)	Lt.	80'	Rt.		
Sample No.:	C-2 #1			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PSI
RV 🗖	Sub 🗆 Che	em 🗆	DC 🗆	Other 🗆	0		Gravel, Decom	p. Granite	0	100
Vegetation:	None 🗆 Trees I	⊐ Shr	ubs 🗆		2				2	
	Brushy 🗖 Grassy				4		Fractured B	edrock	4	300
Cut Section	Fill Sect	ion 🗖 .			6				6	
Taken Through Oi	1 🗆 Taken or	1 Shoulder			8				8	
Gravel Depth (in)	Oil Dept	h (in)		_	10				10	
Remarks:	Drill hole is at top of	cut. Drill l	iole groui	nd	12				12	
elevation is 9' high	er than edge of oil ele	vation.			14				14	
North side of US 5	0.				16				16	
Submitted By:	R. Wimer				18				18	
Title:	<b>Engineering Tech</b>	Ι			20				20	
									•	

Sieve Size	% Passing
3"	
2"	
1.5"	100
1"	86
3/4"	84
1/2"	78
3/8"	73
No. 4	66
No. 10	60
No. 16	55
No. 40	42
No. 50	38
No. 100	31
No. 200	24

Liquid Limit	19	
Plastic Index	3	
Specific Gravity		
Resistance Value	62	
Cover		Expansion Pressure
Thickness	6.5	<u>.</u>
Sand Equiv Natural Mo		
Resistivity		6,489
pH Factor		7.5
HRB Class	ification	

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Date Reported:	04/23/10									
Lab No.:	Soils10-01, RV	-238-10, C-20	52-10		_					
E.A.:	73475		Job D	escription:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	3/2/10									
Samplers:	Rigsby, Wime	r,		Station	"X2" 841	+40.00		Route	<u>US 50 W.</u>	<b>B</b> .
Sommers				Location fro	m oil (ft)	Lt.	80'	Rt.		
Sample No.:	C-2 #1A			County:	LYON					
Sample Type:					Depth (ft)	Borir	ng Description			PSI
RV 🗖	Sub 🗀	Chem 🗆	DC 🗆	Other 🗆	0				0	100
Vegetation:	None 🗆 Tree	s 🗆 Shr	ubs 🗆		2				2	
	Brushy 📕 Gras	sy 🗆			_ 4				4	
Cut Section	Fill S	Section 🗆			6		Fractured E	Bedrock	6	300
Taken Through Oi	l 🗆 Take	n on Shoulder			8				8	
Gravel Depth (in)	Oil I	Depth (in)		_	10		Decomposed	l Granite		_100
Remarks:	Drill hole is at to	p of cut. Drill l	nole grou	nd	12				12	
elevation is 9' high	er than edge of oil	elevation.			14				14	
North side of US 5	0.				16				16	
Submitted By:	R. Wimer				18				18	
Title:	Engineering T	ech I			20				20	
					-					

Sieve Size	% Passing
3"	
2"	
1.5"	100
1"	99
3/4"	99
1/2"	99
3/8"	97
No. 4	91
No. 10	79
No. 16	70
No. 40	56
No. 50	51
No. 100	44
No. 200	36

Liquid Limit	18	
Plastic Index	2	
Specific Gravity		
Resistance Value	76	
Cover		Expansion Pressure
Thickness	3.3	
Sand Equiv Natural Mc		
Resistivity		7,220
pH Factor		7.7
HRB Class	ification	

Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-239-10,	<u>C-263-10</u>		-					
E.A.:	73475	Job Do	escription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	3/2/10								
Samplers:	Rigsby, Wimer,	_	Station	"X2" 841+4	40.00		Route	US 50 W.	B.
Sommers		_	Location fro	m oil (ft)	Lt	80'	Rt.		
Sample No.:	C-2 #1B	-	County:	LYON					
Sample Type:				Depth (ft)	Boring	Description			PSI
RV 🗖	Sub Chem	DC 🗆	Other 🗆	l 0	G	ravel, Decon	np. Granite	0	
Vegetation:	None 🗆 Trees 🗆	Shrubs 🗆		2				2	
	Brushy 📕 Grassy 🗖			4		Fractured H	Bedrock	4	
Cut Section	Fill Section			6				6	
Taken Through Oil	Taken on Shoul	lder 🗆		8				8	
Gravel Depth (in)	Oil Depth (in)			10					
Remarks:	Drill hole is at top of cut. D	rill hole grour	nd	12		Decomposed	d Granite	12-	350
elevation is 9' high	er than edge of oil elevation.			14		Refusal (	@ 1 <b>2'</b>	14	
North side of US 5	0.			16				16	
Submitted By:	R. Wimer			- 18				18	
Title:	Engineering Tech I			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	100
1"	99
3/4"	96
1/2"	80
3/8"	65
No. 4	39
No. 10	25
No. 16	22
No. 40	18
No. 50	17
No. 100	16
No. 200	13

Liquid Limit	22	
Plastic Index	5	
Specific Gravity		
Resistance Value	76	
Cover		Expansion Pressure
Thickness	3.3	<u></u>
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	isture, %	7,252 7.7

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-240-10, C	-264-10		_		
E.A.:	73475	Job Descri	iption:	US 50 from I	LY 14.00 to 20.39	
Date Rec'd	3/2/10					
Samplers:	Rigsby, Wimer,	Stat	tion	"X2" 841+10	0. <b>00</b> R	oute US 50 E.B.
Sommers		Loc	cation fro	m oil (ft)	Lt	Rt. 100'
Sample No.:	C-2 #2	Coι	unty:	LYON		
Sample Type:				Depth (ft)	Boring Description	PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	<u> </u>		0
Vegetation:	None 🗆 Trees 🗆 S	Shrubs 🗖		2	Silt, Sand, Grave	1 2 100
	Brushy 📕 Grassy 🗖			4		4
Cut Section	Fill Section	l		6		6
Taken Through O	Taken on Should	er 🗆		8		8
Gravel Depth (in)	Oil Depth (in)			10		10
Remarks:	Drill hole is at top of cut. Dri	ll hole ground		12		12
elevation is 15' hig	ther than edge of oil elevation.			14		14
South side of US	50.			16		16
Submitted By:	R. Wimer			18		18
Title:	Engineering Tech I			20		20
· · · ·	_					
	Sieve Size % Passing			Liquid Limit	29	
	3"			Plastic Index	9	
	2" 100			Specific Gravit	у	

2"	100
1.5"	97
1"	97
3/4"	95
1/2"	88
3/8"	82
No. 4	65
No. 10	49
No. 16	42
No. 40	30
No. 50	27
No. 100	22
No. 200	18

Liquid Limit	29	
Plastic Index	9	
Specific Gravity		
Resistance Value	55	
Cover		Expansion Pressure
Thickness	8.1	<u> </u>
Sand Equiv Natural Mo Resistivity pH Factor		5,068 7.6
HRB Class	ification	

Date Reported:	04/23/10						
Lab No.:	Soils10-01, RV-241-10, C-	265-10					
E.A.:	73475	Job Description	n: US 50 from	n LY 14.00 to 20.39			
Date Rec'd	3/2/10						
Samplers:	Rigsby, Wimer,	Station	"X2" 841-	+10.00	Route US	50 E.I	3.
Sommers		Location	n from oil (ft)	Lt	Rt	100'	
Sample No.:	C-2 #2A	County:	LYON				
Sample Type:			Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC D Othe	er 🗆 0			0	
Vegetation:	None 🗆 Trees 🗆 S	hrubs 🗖	2			2	
	Brushy 🗖 Grassy 🛛		4			4	
Cut Section	Fill Section		6			6	
Taken Through Oi	I □ Taken on Shoulde	er 🗆	8	Silt, Sand, G	ravel	8	100
Gravel Depth (in)	Oil Depth (in)		10	•	<u> </u>	10	
Remarks:	Drill hole is at top of cut. Dril	l hole ground	12			12	
elevation is 15' hig	her than edge of oil elevation.		14			14	
South side of US 5	0.		16			16	
Submitted By:	R. Wimer		18			18	
Title:	Engineering Tech I		20			20	
						-	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	95
3/8"	89
No. 4	71
No. 10	56
No. 16	48
No. 40	35
No. 50	31
No. 100	26
No. 200	22

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Liquid Limit	30	
Plastic Index	11	
Specific Gravity	· · ·	
Resistance Value	41	_
Cover		Expansion Pressure
Thickness	11.4	
Sand Equiv Natural Mc Resistivity		5,794
pH Factor		7.8
HRB Class	ification	

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-254-10, C-	284-10				
E.A.:	73475	Job Description:	US 50 from	n LY 14.00 to 20.39		
Date Rec'd	3/2/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 841+	10.00 Ro	ute US 50 E.I	<b>B.</b>
Sommers		Location	from oil (ft)	Lt	Rt. 100'	
Sample No.:	C-2 #2B	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆 Other	□ 0		0	
Vegetation:	None 🗆 Trees 🗆 S	hrubs 🗆	2		2	
	Brushy 📕 Grassy 🛛		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oil	□ Taken on Shoulde	er 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole is at top of cut. Dri	ll hole ground	12		12	
elevation is 15' hig	her than edge of oil elevation.		14	Silt, Sand, Gravel	14	100
South side of US 5	0.		16		16	
Submitted By:	R. Wimer		18		18	
Title:	Engineering Tech I		20		20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	100
3/4"	98
1/2"	90
3/8"	84
No. 4	66
No. 10	47
No. 16	39
No. 40	29
No. 50	26
No. 100	22
No. 200	19

Liquid Limit	30	
Plastic Index	11	
Specific Gravity		
Resistance Value	27	
Cover		Expansion Pressure
Thickness	14.6	
Sand Equiv	alent	
Natural Mo	oisture, %	
Resistivity		6,112
pH Factor		7.9
HRB Class	ification	

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-255-10, C-285-10					
E.A.:	73475 Job Descri	ption:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	3/2/10					
Samplers:	Rigsby, Wimer, Stat	ion	"X2" 841+1	0.00	Route US 50 E.	B.
Sommers	Loc	ation fror	n oil (ft)	Lt	Rt. <u>100'</u>	
Sample No.:	C-2 #2C Cou	inty:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV	Sub Chem DC D	Other 🗆	0		0	
Vegetation:	None 🗆 Trees 🗆 Shrubs 🗆		2		2	
	Brushy 🗖 Grassy 🛱		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oi	I □ Taken on Shoulder □		8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole is at top of cut. Drill hole ground		12		12	
elevation is 15' hig	her than edge of oil elevation.		14		14	
South side of US 5	0.		16		16	
Submitted By:	R. Wimer		18	Silt, Sand, Gra	avel 18	100
Title:	Engineering Tech I		20			

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	94
3/8"	88
No. 4	64
No. 10	42
No. 16	34
No. 40	25
No. 50	24
No. 100	21
No. 200	18

Liquid Limit	30	
Plastic Index	13	
Specific Gravity		
Resistance Value	42	
Cover		Expansion Pressure
Thickness	11.2	
Sand Equiv Natural Mo Resistivity		6,596
pH Factor		7.8
HRB Class	ification	

Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV	-256-10, C-2	86-10		_				
E.A.:	73475		Job De	escription:	US 50 fron	n LY 14.00 to 20.39			
Date Rec'd	2/25/10								
Samplers:	Rigsby, Wimer	r,		Station	"X2" 838+	70.00	Route	US 50 E.H	3.
Sommers				Location fro	om oil (ft)	Lt.	Rt.	100'	
Sample No.:	C-2 #3			County:	LYON				
Sample Type:					Depth (ft)	<b>Boring Description</b>			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	<u> </u>			0	
Vegetation:	None 🗆 Trees	s 🗆 Shi	rubs 🗆		2	Silt, Sand,	Gravel	2	100
	Brushy 📕 Gras	sy 🗆			4			4	
Cut Section	Fill S	Section 🗆			6			6	
Taken Through Oi	1 🗆 Take	n on Shoulder			8			8	
Gravel Depth (in)	Oil I	Depth (in)			10			10	
Remarks:	Drill hole is at to	p of cut. Drill	hole groun	d	12			12	
elevation is 17' hig	ther than edge of o	il elevation.			14			14	
South side of US 5	i0.				16			16	
Submitted By:	R. Wimer				18			18	
Title:	Engineering To	ech I			20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	97
3/8"	93
No. 4	76
No. 10	57
No. 16	48
No. 40	35
No. 50	31
No. 100	25
No. 200	20

Liquid Limit	30	
Plastic Index	8	
Specific Gravity		_
Resistance Value	52	
Cover		Expansion Pressure
Thickness	8.8	
Sand Equiv	alent	
Natural Mo	isture, %	
Resistivity		5,995
pH Factor		7.8
HRB Class	ification	

Date Reported:	04/23/10							
Lab No.:	Soils10-01, RV-257-10, 0	C-287-10		-				
E.A.:	73475	Job De	scription:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	2/25/10							
Samplers:	Rigsby, Wimer,	-	Station	"X2" 838+	70.00	Route	US 50 E.H	3.
Sommers		]	Location fro	om oil (ft)	Lt	Rt.	100'	
Sample No.:	C-2 #3A	(	County:	LYON				
Sample Type:				Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	1 0			0	
Vegetation:	None 🗆 Trees 🗆	Shrubs 🛛		2			2	
	Brushy 🗖 Grassy 🛛			4			4	
Cut Section	Fill Section			6			6	
Taken Through Oil	Taken on Shoul	der 🗆		8	Silt, San	d, Gravel	8	100
Gravel Depth (in)	Oil Depth (in)			10			10	
Remarks:	Drill hole is at top of cut. D	rill hole ground	1	12			12	
elevation is 17' hig	her than edge of oil elevation			14			14	
South side of US 5	0.			16			16	
Submitted By:	R. Wimer			18			18	
Title:	Engineering Tech I			20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	97
3/8"	92
No. 4	72
No. 10	52
No. 16	43
No. 40	29
No. 50	26
No. 100	21
No. 200	17

Liquid Limit	30	
Plastic Index	8	
Specific Gravity		
Resistance Value	68	
Cover		Expansion Pressure
Thickness	5.1	
Sand Equiv Natural Mc		
Resistivity		1,565
pH Factor		7.5
HRB Class	ification	

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Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-262-10, C	-292-10				
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/25/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 838+	70.00	Route US 50 E.	B
Sommers		Location fr	rom oil (ft)	Lt	Rt. 100'	
Sample No.:	C-2 #3B	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC D Other	□ 0		0	
Vegetation:	None 🗆 Trees 🗆 S	Shrubs 🗆	2		2	
	Brushy 🗖 Grassy 🛛		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oi	l □ Taken on Shoulde	er 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10			
Remarks:	Drill hole is at top of cut. Dri	ll hole ground	12		12	
elevation is 17' hig	her than edge of oil elevation.		14	Silt, Sand, Grav	/el 14	100
South side of US 5	0.		16	· · ·	16	
Submitted By:	R. Wimer		18		18	
Title:	Engineering Tech I		20		20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	93
3/8"	87
No. 4	78
No. 10	66
No. 16	59
No. 40	46
No. 50	42
No. 100	35
No. 200	30

Liquid Limit	34	
Plastic Index	13	
Specific Gravity		
Resistance Value	23	
Cover		Expansion Pressure
Thickness	15.6	
Sand Equiv Natural Mo	oisture, %	
Resistivity		2,469
pH Factor		7.8
HRB Class	ification	

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-264-10, C	-294-10				
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/25/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 838+	70.00 R	oute US 50 E.	<b>B.</b>
Sommers		Location fr	rom oil (ft)	Lt.	Rt. 100'	
Sample No.:	C-2 #3C	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆 Other [	□ 0		0	
Vegetation:	None 🗆 Trees 🗆 S	hrubs 🗆	2		2	
· · · · · · · · · · · · · · · · · · ·	Brushy 🗖 Grassy 🛛		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oil	Taken on Shoulde	er 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole is at top of cut. Dri	ll hole ground	12		12	
elevation is 17' hig	her than edge of oil elevation.		14		14	
South side of US 5	0.		16	Silt, Sand, Grave	1 16	100
Submitted By:	R. Wimer		18	Fractured Bedroc	k 18	300
Title:	Engineering Tech I		20			

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	100
3/4"	97
1/2"	89
3/8"	82
No. 4	63
No. 10	50
No. 16	45
No. 40	37
No. 50	34
No. 100	30
No. 200	26

Liquid Limit	36	
Plastic Index	17	
Specific Gravity		
Resistance Value	22	
Cover		Expansion Pressure
Thickness	15.8	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	isture, %	<u>1,894</u> 7.7

Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-265-10,	C-295-10		-					
E.A.:	73475	Job D	escription:	US 50 from	<u>n LY 14.00</u>	to 20.39			
Date Rec'd	2/23/10								
Samplers:	Rigsby, Wimer,	_	Station	"X2" 839+	-00.00		Route	US 50	
Altamirano		_	Location fro	om oil (ft)	Lt	70'	Rt.		
Sample No.:	C-2 #4		County:	LYON					
Sample Type:				Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	0		Fractured		0	250
Vegetation:	None 🔳 Trees 🗆	Shrubs 🛛		2		Bedrock		2	
	Brushy 🗆 Grassy 🗆			4				4	350
Cut Section	Fill Section			6				6	
Taken Through Oi	1 🗆 Taken on Shou	lder 🗆		8				8	
Gravel Depth (in)	Oil Depth (in)		_	10				10	
Remarks:	Drill hole was located @ to	p of cut. Sta C	Cap "E"	12				12	
427+17.87 is 165'	east of hole on top of cut, di	ficulties drillin	ng from	14				14	
2' to 5' (very hard)	snow accumulation 6".			16				16	
Submitted By:	R. Wimer			18				18	
Title:	Engineering Tech I			20				20	
				-				-	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	99
3/8"	96
No. 4	89
No. 10	72
No. 16	62
No. 40	46
No. 50	41
No. 100	32
No. 200	26

Liquid Limit	22		
Plastic Index	NP		
Specific Gravity			
Resistance Value	65		
Cover		<b>Expansion Pressure</b>	
Thickness	5.8	<u> </u>	
Sand Equiv	alent		
Natural Mo	isture, %		
Resistivity		7,874	
pH Factor		7.9	
HRB Class	ification		

Date Reported:	04/23/10						
Lab No.:	Soils10-01, RV-266-10, C	-296-10	_				
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	2/23/10						
Samplers:	Rigsby, Wimer,	Station	"X2" 839+0	)0.00	Route	US 50	
Altamirano		Location fro	om oil (ft)	Lt. <b>70'</b>	Rt.		
Sample No.:	C-2 #4A	County:	LYON				
Sample Type:			Depth (ft)	<b>Boring Description</b>			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆 Other 🗆	<u> </u>			0	
Vegetation:	None 🔳 Trees 🗆 S	Shrubs 🗖	2			2	
	Brushy 🛛 Grassy 🗖	·····	4			4	
Cut Section	Fill Section	]	6			6	
Taken Through O	il 🛛 Taken on Should	er 🗆	8	Fractured E	Bedrock	8	300
Gravel Depth (in)	Oil Depth (in)		10				
Remarks:	Drill hole was located @ top	of cut. Sta Cap "E"	12			12	
427+17.87 is 165	' east of hole on top of cut, diffic	culties drilling from	14			14	
2' to 5' (very hard	) snow accumulation 6".		16			16	
Submitted By:	R. Wimer		18			18	
Title:	<b>Engineering Tech I</b>		20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	92
3/8"	87
No. 4	69
No. 10	46
No. 16	36
No. 40	25
No. 50	23
No. 100	19
No. 200	16

Liquid Limit	24	
Plastic Index	5	
Specific Gravity		
Resistance Value	50	
Cover		Expansion Pressure
Thickness	9.3	
Sand Equiv Natural Mc Resistivity		8,772
pH Factor HRB Class	ification	8.0

Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-267-10, C	2-297-10		_					
E.A.:	73475	Job De	escription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/23/10								
Samplers:	Rigsby, Wimer,		Station	"X2" 839+0	0.00		Route	US 50	
Altamirano			Location fro	om oil (ft)	Lt.	70'	Rt.		
Sample No.:	C-2 #4B		County:	LYON					
Sample Type:				Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other C	<u> </u>				0	
Vegetation:	None 🗖 Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆 Grassy 🗆			4				4	
Cut Section	Fill Section			6				6	
Taken Through Of	il 🗆 Taken on Should	ler 🗆		8				8	
Gravel Depth (in)	Oil Depth (in)			10				<u> </u>	
Remarks:	Drill hole was located @ top	of cut. Sta C	ap "E"	12		Fractured b	edrock	12	
427+17.87 is 165'	east of hole on top of cut, diffi	culties drillin	g from	14				14	300
2' to 5' (very hard)	snow accumulation 6".			16				16	
Submitted By:	R. Wimer			18				18	
Title:	<b>Engineering Tech I</b>			20				20	
				-					

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	96
3/8"	85
No. 4	61
No. 10	41
No. 16	32
No. 40	22
No. 50	19
No. 100	16
No. 200	13

Liquid Limit	25		
Plastic Index	6		
Specific Gravity			
Resistance Value	58		
Cover		Expansion Pressure	
Thickness	7.4		
Sand Equiv Natural Mo			
Resistivity		8,475	
pH Factor		7.9	
HRB Class	ification		

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-268-10, C	-298-10				
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/23/10					
Samplers:	Rigsby, Wimer,	Station	<u>"X2" 839+0</u>	0.00	Route US 50	
Altamirano		Location fro	om oil (ft)	Lt. <b>70'</b>	Rt	•
Sample No.:	C-2 #4C	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC D Other D	□ 0		0	
Vegetation:	None 🔳 Trees 🗆	Shrubs 🗖	2		2	
	Brushy 🗆 Grassy 🗖		4		4	
Cut Section	Fill Section	ו	6		6	
Taken Through C	il 🗆 Taken on Should	er 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole was located @ top	of cut. Sta Cap "E"	12		12	
427+17.87 is 165	' east of hole on top of cut, diffi	culties drilling from	14		14	
2' to 5' (very hard	) snow accumulation 6".		16		16	
Submitted By:	R. Wimer		18	Fractured be	drock 18	300
Title:	Engineering Tech I		20		20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	87
3/8"	78
No. 4	45
No. 10	18
No. 16	12
No. 40	9
No. 50	9
No. 100	8
No. 200	7

Liquid Limit	28	
Plastic Index	10	
Specific Gravity		
Resistance Value	69	
Cover		Expansion Pressure
Thickness	4.9	
Sand Equiv	alent	
Natural Mo	isture, %	
Resistivity		8,547
pH Factor		8.0
HRB Class	ification	

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-274-10, C-3	304-10				
E.A.:	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/25/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 866+3	8 <b>5.00</b> R	oute US 50	
Altamirano		Location fr	om oil (ft)	Lt. <b>80'</b>	Rt	
Sample No.:	C-3 #1	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC D Other	□ 0	Decomposed	0	100
Vegetation:	None 🗆 Trees 🗆 Sł	nrubs 🗆	2	Granite	2	
	Brushy 🗖 Grassy 🛛		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oi	1 D Taken on Shoulder	r 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole is at top of cut. Drill	hole ground	12		12	
elevation is 7' high	er than edge of oil elevation.		14		14	
			16		16	
Submitted By:	R. Wimer		18		18	
Title:	Engineering Tech I		20		20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	100
3/4"	98
1/2"	87
3/8"	80
No. 4	61
No. 10	43
No. 16	35
No. 40	24
No. 50	21
No. 100	16
No. 200	13

Liquid Limit	26	
Plastic Index	6	
Specific Gravity		
Resistance Value	64	
Cover		Expansion Pressure
Thickness	6.0	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	isture, %	9,091 7.9

Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-275-10, C-	308-10		_					
E.A.:	73475	Job De	scription:	US 50 fro	m LY 14.0	0 to 20.39			
Date Rec'd	2/25/10								
Samplers:	Rigsby, Wimer,	:	Station	"X2" 866	+35.00		Route	US 50	
Altamirano		]	Location fro	om oil (ft)	Lt.	80'	Rt.		
Sample No.:	C-3 #1A		County:	LYON					
Sample Type:				Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other $\Box$	J 0				0	
Vegetation:	None 🗆 Trees 🗆 S	hrubs 🛛		2				2	
	Brushy 🗖 Grassy 🛛			4				4	
Cut Section	Fill Section			6				6	
Taken Through O	il 🛛 🛛 Taken on Shoulde	r 🗆		8		Decomposed	Granite	8	100
Gravel Depth (in)	Oil Depth (in)			10				10	
Remarks:	Drill hole is at top of cut. Dril	l hole groun	d	12				12	
elevation is 7' hig	her than edge of oil elevation.			14				14	
				16				16	
Submitted By:	R. Wimer			18				18	
Title:	<b>Engineering Tech I</b>			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	96
3/8"	89
No. 4	69
No. 10	50
No. 16	42
No. 40	29
No. 50	26
No. 100	20
No. 200	17

Liquid Limit	29	
Plastic Index	9	
Specific Gravity		
Resistance Value	72	
Cover		Expansion Pressure
Thickness	4.2	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	oisture, %	

<b>20.39</b> Route		
Route		
Route		
	US 50	
<b>80'</b> Rt	t	
escription		PSI
	0	
	2	
	4	
	6	
	8	
	10	
Decomposed Granite	12	100
	14	
	16	
	18	
	20	
	80' R	80'       Rt.         escription       0         2       4         6       8         10       9         Decomposed Granite       12         14       16         18       18

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	97
3/8"	95
No. 4	87
No. 10	68
No. 16	57
No. 40	40
No. 50	36
No. 100	29
No. 200	24

Liquid Limit	33	
Plastic Index	14	
Specific Gravity		
Resistance Value	36	
Cover		Expansion Pressure
Thickness	12.5	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	isture, %	

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Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-277-10, C	-310-10		_					
E.A.:	73475	Job Des	scription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/25/10								
Samplers:	Rigsby, Wimer,	S	Station	"X2" 866+3	35.00		Route	US 50	
Altamirano		I	Location fro	om oil (ft)	Lt.	80'	Rt.		
Sample No.:	C-3 #1C	(	County:	LYON					
Sample Type:				Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	] 0				0	
Vegetation:	None 🗆 Trees 🗆 S	hrubs 🗆		2				2	
	Brushy 📕 Grassy 🛛			4				4	
Cut Section	Fill Section			6				6	
Taken Through Oil	□ Taken on Shoulde	er 🗆		8				8	
Gravel Depth (in)	Oil Depth (in)			10				10	
Remarks:	Drill hole is at top of cut. Dri	ll hole ground	đ	12				12	
elevation is 7' high	er than edge of oil elevation.			14				14	
				16				16	
Submitted By:	R. Wimer			18		Decomposed	Granite	18	100
Title:	Engineering Tech I			20				20	

Sieve Size	% Passing
3"	/ · · · · · · · · · · · · · · · · · · ·
2"	
1.5"	
1"	
3/4"	
1/2"	
3/8"	100
No. 4	98
No. 10	84
No. 16	72
No. 40	53
No. 50	46
No. 100	35
No. 200	26

Liquid Limit	26	
Plastic Index	7	
Specific Gravity		
Resistance Value	49	
Cover		Expansion Pressure
Thickness	9.5	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	oisture, %	

Date Reported:	04/23/10								
Lab No.:	Soils10-01, RV-278-1	0, C-311-10		_					
E.A.:	73475	Job D	escription:	US 50 from	LY 14.00	) to 20.39			
Date Rec'd	2/25/10								
Samplers:	Rigsby, Wimer,		Station	"X2" 871+0	0.00		Route	US 50	
Altamirano			Location fro	om oil (ft)	Lt.	100'	Rt.		
Sample No.:	C-4 #1		County:	LYON					
Sample Type:				Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆 Chem	DC DC	Other $\Box$	] 0				0	
Vegetation:	None 🛛 Trees 🗆	Shrubs 🗆		2		Silt, Sand,	Gravel	2	100
	Brushy 📕 Grassy 🛛			4				4-	
Cut Section	Fill Section			6				6	
Taken Through Oi	□ Taken on Sh	oulder 🗖		8		Decompose	d Granite 🖉	8	
Gravel Depth (in)	Oil Depth (i	n)	_	10				10	
Remarks:	Drill hole is at top of cut	. Drill hole grou	nd	12				12	
elevation is 15' hig	her than edge of oil elevat	tion.		14				14	
		_		16				16	
Submitted By:	R. Wimer			18				18	
Title:	Engineering Tech I			20				20	
	an Santage Status								
	Sieve Size % Passing	3		Liquid Limit	_	23	_		
	3"			Plastic Index		NP	_		
	2"			Specific Gravi	ity		_		
	1.5"			Resistance Va	lue	82	_		
	1"			Cover			Expansion F	Pressure	

2	
1.5"	
1"	
3/4"	
1/2"	
3/8"	100
No. 4	97
No. 10	78
No. 16	66
No. 40	44
No. 50	38
No. 100	26
No. 200	17

quid Limit	23	
astic Index	NP	
pecific Gravity		
esistance Value	82	
over		Expansion Pressure
Thickness	1.9	
Sand Equiv Natural Mo Resistivity pH Factor HRB Class	oisture, %	

Date Reported:	04/23/10							
Lab No.:	Soils10-01, RV-279-10, C	C-312-10		_				
E.A.:	73475	Job D	escription:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	2/25/10							
Samplers:	Rigsby, Wimer,		Station	"X2" 871+0	0.00	Route	US 50	
Altamirano			Location from	m oil (ft)	Lt. 100'	Rt.		
Sample No.:	C-4 #1A		County:	LYON				
Sample Type:				Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆	Other 🗆	0			0	
Vegetation:	None 🗆 Trees 🗆	Shrubs 🛛		2			2	
	Brushy 🗖 Grassy 🛛			4			4	
Cut Section	Fill Section [			6	Silt, Sand,	Gravel	6	
Taken Through O	il 🛛 Taken on Should	der 🗆		8	Decomposed	Granite	8	100
Gravel Depth (in)	Oil Depth (in)			10				
Remarks:	Drill hole is at top of cut. Dr	rill hole groun	nd	12			12	I
elevation is 15' high	gher than edge of oil elevation.			14			14	I
				16			16	I
Submitted By:	R. Wimer			18			18	I
Title:	Engineering Tech I			20			20	1
				- '				

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	99
3/8"	98
No. 4	92
No. 10	68
No. 16	54
No. 40	34
No. 50	28
No. 100	19
No. 200	13

Liquid Limit	23	
Plastic Index	NP	
Specific Gravity		
Resistance Value	76	
Cover		Expansion Pressure
Thickness	3.3	
Sand Equivalent Natural Moisture, % Resistivity pH Factor HRB Classification		

Remarks:

NDOT 027, Rev. 05-01

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Date Reported:	04/23/10						
Lab No.:	Soils10-01, RV-280-10, C-	313-10					
E.A.:	73475	Job Descriptior	us 50 from	LY 14.00 to 20.39			
Date Rec'd	2/25/10						
Samplers:	Rigsby, Wimer,	Station	"X2" 871+0	00.00	Route	US 50	
Altamirano		Location	from oil (ft)	Lt. 100'	Rt		
Sample No.:	C-4 #1B	County:	LYON				
Sample Type:			Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🛛 Othe	r 🗆 0			0	
Vegetation:	None 🗆 Trees 🗆 Sł	rubs 🗆	2			2	
	Brushy 📕 Grassy 🛛		4			4	
Cut Section	Fill Section		6			6	
Taken Through Oil	1 □ Taken on Shoulde		8			8	
Gravel Depth (in)	Oil Depth (in)		10				
Remarks:	Drill hole is at top of cut. Drill	hole ground	12	Silt, San	d, Gravel	12	100
elevation is 15' hig	her than edge of oil elevation.		14	Decompo	sed Granite	14	
			16	<b>.</b>		16	
Submitted By:	R. Wimer		18			18	
Title:	Engineering Tech I		20			20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	
1/2"	100
3/8"	99
No. 4	94
No. 10	75
No. 16	62
No. 40	40
No. 50	34
No. 100	23
No. 200	15

Liquid Limit	23	
Plastic Index	NP	
Specific Gravity		
Resistance Value	78	
Cover		Expansion Pressure
Thickness	2.8	
Sand Equiv Natural Mc Resistivity pH Factor HRB Class	oisture, %	

Date Reported:	04/23/10					
Lab No.:	Soils10-01, RV-283-10, C-	316-10	_			
E. <b>A.</b> :	73475	Job Description:	US 50 from	LY 14.00 to 20.39		
Date Rec'd	2/25/10					
Samplers:	Rigsby, Wimer,	Station	"X2" 871+	0 <b>0.00</b> Rout	te US 50	
Altamirano		Location fro	om oil (ft)	Lt. 100' H	Rt.	
Sample No.:	C-4 #1C	County:	LYON			
Sample Type:			Depth (ft)	Boring Description		PSI
RV 🗖	Sub 🗆 Chem 🗆	DC 🗆 Other 🗆	0		0	
Vegetation:	None 🗆 Trees 🗖 Sł	nrubs 🗆	2		2	
	Brushy 📕 Grassy 🛛		4		4	
Cut Section	Fill Section		6		6	
Taken Through Oi	I 🗆 Taken on Shoulde	r 🗆	8		8	
Gravel Depth (in)	Oil Depth (in)		10		10	
Remarks:	Drill hole is at top of cut. Dril	hole ground	12		12	
elevation is 15' hig	ther than edge of oil elevation.		14		14	
			16		16	
Submitted By:	R. Wimer		18	Decomposed Granite	18	100
Title:	Engineering Tech I		20		20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	
1/2"	
3/8"	100
No. 4	93
No. 10	71
No. 16	58
No. 40	39
No. 50	33
No. 100	23
No. 200	16

Liquid Limit	24	
Plastic Index	3	
Specific Gravity		
Resistance Value	73	
Cover		Expansion Pressure
Thickness	3.9	
Sand Equiv	alent	
Natural Mo	isture, %	
Resistivity		11,403
pH Factor		7.8
HRB Class	ification	

Roadway Line Sampling

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-1-10, C-	1-10	•	_					
E.A.:	73475		Job D	escription:	<u>US 50 fro</u>	m LY 1	4.00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,	_	Station	<u>"L1" 782</u>	+25.00		Route	<u>US 50</u>	
Altamirano			-	Location fro	om oil (ft)	Lt	·	Rt.	33'	
Sample No.:	1			County:	LYON					
Sample Type:					Depth (ft)	1	Boring Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other $\Box$	0		Silt, Sand	, Gravel	0	150
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🛛			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoul	der 📕		8				8	
Gravel Depth (in)		Oil Depth (in)	<u> </u>	_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Lim	nit	25			
	3"	5	•		Plastic Inde		8	-		
	2"		-		Specific Gr			-		
	1.5"		-		Resistance		59	_		
	1"		-		Cover		Stabilometer	- Expansion	Pressure	
	3/4"	100	-			kness	9.9	I		
	1/2"	84	-					-	·	
	3/8"	79	-			Sand Equ	uvalent			
	No. 4	63	-			-	loisture, %			
	No. 10	48	-			Resistivit		1,965		
	No. 16	41	-			pH Facto	•	8.4		
	No. 40	30	-			·	ssification			

#### Remarks:

No. 50

No. 100

No. 200

27

21 17

Date Reported:	04/23/10	_										
Lab No.:	Soils10-01	l, RV-2-10, C-2	-10		_							
E.A.:	73475	_	Job I	Description:	US 50 from LY 14.00 to 20.39							
Date Rec'd	01/06/10	_										
Samplers:	Hinton, V	Vimer,		Station	"L1" 782+25	.00	Route	US 50				
Altamirano				Location fro	om oil (ft)	Lt.	Rt.	33'	_			
Sample No.:	1A			County:	LYON	·····						
Sample Type:					Depth (ft)	Boring Description			PSI			
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>			0	150			
Vegetation:	None 🔳	Trees 🗖	Shrubs 🛛		2							
	Brushy 🛛	Grassy 🛛			4	Silt, Sand, Ve	ry Lt. Gravel	4				
Cut Section		Fill Section			6	Cla	ıy	6				
Taken Through Oi	1 🗆	Taken on Should	ler 🔳		8			8				
Gravel Depth (in)		Oil Depth (in)		_	10			10				
Remarks:					12			12				
					14			14				
					16			16				
Submitted By:	Maynard	Hinton			18			18				
Title:	Engineeri	ng Tech III			20			20				
	Sieve Size	% Passing			Liquid Limit	23						
	3"				Plastic Index	7						
	2"				Specific Gravity	у	_					
	1.5"				Resistance Valu	ue <b>44</b>	-					
	1"				Cover	Stabilometer	– Expansion P	ressure				
	3/4"	100			Thicknes	s <u>14.6</u>						
	1/2"	98										
	3/8"	98			Sand	d Equivalent						
	No. 4	92			Natu	aral Moisture, %						
	No. 10	79			Resi	stivity	2,833					
	No. 16	70				Factor	7.6					
	No. 40	54			-	B Classification	·					
	No. 50	49										
	No. 100	38										

Remarks:

28

No. 200

Date Reported:	04/23/10	DX 2 10 C	2 10						
Lab No.: E.A.:	<u>5011910-01</u> 73475	, RV-3-10, C-		Descriptions	_ US 50 from LY	14 00 to 20 30			
Date Rec'd	01/06/10		J00 I	Description:	05 50 11011 11	14.00 10 20.39			
		limor		Station	"L1" 792+00.00	<u> </u>	Route U	18 50	
Samplers: Altamirano	Hinton, W	imer,	-		-		$\frac{1}{Rt.}$	26'	
Sample No.:	2		-	Location fro County:	LYON	Lt	KI	20	
Sample Type:	<u> </u>			County.	Depth (ft)	Boring Description			P
RV	Sub 🗆	Chem 🗆	DC 🗆	Other D		Silt Sand	Gravel	0	15
Vegetation:		Trees	Shrubs 🗆	Oulei -	2	Sint Saine		2-	1.
vegetation.	Brushy $\Box$		Silluos 🗖		4			4	
Cut Section					6			6	
Taken Through Oi		Taken on Shou			8			8	
Gravel Depth (in)		Oil Depth (in)			10			10	
Remarks:				_	12			12	
	<u></u>				- 14			14	
					<b>–</b> 16			16	
Submitted By:	Maynard 1	Hinton			- 18			18	
Title:		ng Tech III			20			20	
	Sieve Size 3"	% Passing	-		Liquid Limit Plastic Index	<u>24</u> <u>8</u>	_		
	2"		_		Specific Gravity		_		
	1.5"		-		Resistance Value	53	_		
	1"	100	-		Cover	Stabilometer	Expansion Pro	essure	
	3/4"	94	-		Thickness	11.8			
	1/2"	84	-						
	3/8"	77	-			quivalent		<u> </u>	
	No. 4	61	-			l Moisture, %			
	No. 10	47	-		Resisti	-	2,137	<u></u>	
	No. 16	41	-		pH Fac		8.4		
	No. 40	30	-		HRB C	Classification			
	No. 50	27	-						
	No. 100	21	-						
	No. 200	17	_						

Date Reported: Lab No.: E.A.:	04/23/10 Soils10-01, 73475	, RV-4-10, C-4-10		Description:	US 50 from LY 14.00 to 20.39							
Date Rec'd	01/06/10											
Samplers:	Hinton, W	imer,		Station	<u>"L1" 792+</u>			- Route <u>I</u>				
Altamirano Sample No.:	2A			Location fro	m oil (ft) LYON	Lt.			26'			
Sample Type:				County:		D				DGI		
RV	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	Depth (ft)	D	oring Description		0	PSI 150		
Vegetation:			rubs 🗆	Oulei –	2				<u>2</u>	150		
vegetation.		Grassy	u03 🖽		4		Silt, Sand, Ve	rv I t Gravel	2 4			
Cut Section		Fill Section					Lt. Clay 6					
Taken Through Oil		Taken on Shoulder			8				8			
Gravel Depth (in)		Oil Depth (in)			10				10			
Remarks:		· · · · · · · · · · · · · · · · · · ·		_	12				12			
					- 14				14			
					- 16				16			
Submitted By:	Maynard l	Hinton			18				18			
Title:	Engineerin	ng Tech III			20				20			
	Sieve Size	% Passing			Liquid Limit		22					
	3"	70 x 4551115			Plastic Index		5	_				
	2"				Specific Gra			_				
	1.5"				Resistance V	-	38	_				
	1"				Cover		Stabilometer	Expansion Pr	essure			
	3/4"				Thick	ness	16.5	•				
	1/2"	100										
	3/8"	99			S	and Equi	valent					
	No. 4	94			Ν	latural M	oisture, %					
	No. 10	87			R	esistivity		1,919				
	No. 16	81			<b>p</b> ]	H Factor		7.6				
	No. 40	68			Н	IRB Clas	sification					
	No. 50	63										
	No. 100	49										
	No. 200	33										

#### Remarks:

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Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-5-10, C-5-10			_					
E.A.:	73475		Job E	Description:	US 50 from	<u>m LY 1</u>	4.00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 802-	+00.00		Route	US 50	
Altamirano				Location from	m oil (ft)	Lt		Rt.	26'	
Sample No.:	3			County:	LYON					
Sample Type:					Depth (ft)		Boring Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	0		Silt Sand	Gravel	0	150
Vegetation:	None 🔳	Trees 🖸 Shr	ubs 🗖		2				2	
	Brushy 🗆	Grassy 🗆			- 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:	1 <del></del>				12				12	
					14				14	
					16				16	
Submitted By:	Maynard Hinton				18				18	
Title:	Engineeri	ng Tech III			20				20	
					1					
		l					10			
	Sieve Size	% Passing			Liquid Lim		18	_		
	3"				Plastic Inde		NP			
	2"				Specific Gra	•		_		
	1.5"				Resistance '	Value	82	_		
	1"	100			Cover		Stabilometer	Expansion	Pressure	
	3/4"	95			Thick	iness	2.5	_		
	1/2"	87								
	3/8"	83				Sand Equ				
	No. 4	71					Aoisture, %			
	<u>No. 10</u>	58				Resistivi	•	2,817		
	No. 16	51			-	oH Facto		8.2		
	No. 40	36			1	HRB Cla	ssification			
	No. 50	31								
	No. 100	20								

12

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-6-10, C-6-1	0		_					
E.A.:	73475		Job I	Description:	US 50 fro	m LY 14	.00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 802	2+00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	26'	
Sample No.:	<b>3A</b>	_		County:	LYON			_		
Sample Type:					Depth (ft)	В	oring Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🗆		2			18 181. B.	2	
	Brushy 🗆	Grassy 🗆			4		Gravell	y <u>Sand</u>	4	
Cut Section		Fill Section			6		Silt, Sand, Gr	avel, Lt Clay	6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Lin	nit	23			
	3"				Plastic Ind	ex	6			
	2"				Specific G	ravity				
	1.5"	100			Resistance	Value	50	_		
	1"	98			Cover		Stabilometer	Expansion P	ressure	
	3/4"	91			Thic	kness	12.7	_		
	1/2"	84								
	3/8"	76				Sand Equi	valent			
	No. 4	64				Natural M	oisture, %			
	No. 10	52				Resistivity	/	2,857		
	No. 16	46				pH Factor		8.0		
	No. 40	36				HRB Clas	sification			
	No. 50	32								
	No. 100	24								
	No. 200	17								

Date Reported:	04/23/10								
Lab No.:	Soils10-01	, RV-7-10, C-7-	10		_				
E.A.:	73475		Job D	Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	01/06/10								
Samplers:	Hinton, W	/imer,		Station	"X2" 812+0	0.00	Route US 50		
Altamirano				Location fro	om oil (ft)	Lt	Rt <b>25'</b>		
Sample No.:	4			County:	LYON				
Sample Type:					Depth (ft)	Boring Description		PSI	
RV 🗖	Sub 🗆	Chem 🛛	DC 🗆	Other [	<u> </u>	Silt, Sand, F	Fine Gravel 0	150	
Vegetation:	None	Trees 🗆 S	Shrubs 🛛		2		2		
	Brushy 🗆	Grassy 🛛			4		4	I	
Cut Section		Fill Section	l		6		6		
Taken Through Oil		Taken on Should	er 🗖		8		8		
Gravel Depth (in)		Oil Depth (in)			10		10		
Remarks:					12		12		
					14		14		
					16		16		
Submitted By:	Maynard	Hinton			18		18		
Title:	Engineeri	ng Tech III			20		20	I	
						· · · · · · · · · · · · · · · · · · ·			
	Sieve Size	% Passing			Liquid Limit	17	_		
	3"				Plastic Index	NP	_		
	2"				Specific Grav				
	1.5"				Resistance Va	lue <u>64</u>	_		
	1"				Cover	Stabilometer	Expansion Pressure		
	3/4"	100			Thickne	ess <u>8.3</u>			
	1/2"	95							
	3/8"	93			Sa	nd Equivalent	<b>••••</b>		
	No. 4	85			Na	tural Moisture, %			
	No. 10	76			Re	sistivity	3,378		
	No. 16	68			pН	l Factor	8.3		

HRB Classification

Remarks:

No. 40

No. 50

No. 100 No. 200 45

38 25

18

NDOT 027, Rev. 05-01

• -	04/23/10									
Lab No.:	Soils10-01, RV-8-10, C-8-10				_					
	73475		Job D	escription:	US 50 from LY 14.00 to 20.39					
Date Rec'd	)1/06/10									
Samplers: Hinton, Wimer,			Station	Station	"X2" 812+00	.00	Route US 50			
Altamirano				Location fro	m oil (ft)	Lt	Rt. 25'			
Sample No.:	<b>4A</b>			County:	LYON	· · · · · · · · · · · · · · · · · · ·	······ <u>·</u> ····			
Sample Type:					Depth (ft)	Boring Description	PSI			
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		0 150			
Vegetation: N	None 🔳	Trees 🗆 Shru	ubs 🗆		2		2			
F	Brushy 🗆 Grassy 🗆				4	Gravel	Ily Sand 4			
Cut Section	Fill Section			6	Lť	Clay 6				
Taken Through Oil		Taken on Shoulder			8		8			
Gravel Depth (in)		Oil Depth (in)		_	10		10			
Remarks:					12		12			
					14		14			
					16		16			
Submitted By: <u>N</u>	Maynard 1	Hinton			18		18			
Title:	Engineerii	ng Tech III			20		20			
	Sieve Size	% Passing			Liquid Limit	18				
	3" 3"	70 Fassing			Plastic Index	10	_			
· _	3 2"				Specific Gravit					
-	1.5"				Resistance Valu		_			
-	1"	<u> </u>				Stabilometer				
-	3/4"	100			Cover Thicknes		Expansion Pressure			
-	3/4 1/2"	99			THICKNES	· ··	<u> </u>			
-	3/8"	98			Com	l Equivalent				
-	No. 4	<u> </u>				ral Moisture, %				
-	No. 10	92				stivity	3,861			
	110, 10					Factor	8.4			
	No 16	Xn			рпі	40:01	U.T			
-	No. 16	<u> </u>			-	Classification	····			
	No. 40	56			-	B Classification	······			
					-	3 Classification				

Date Reported:	04/23/10										
Lab No.:	Soils10-01, RV-9-10, C-9-10										
E.A.:	73475		Job I	Description:	US 50 from LY 14.00 to 20.39						
Date Rec'd	01/06/10			Station							
Samplers:	Hinton, W	'imer,	-		"X2" 822+00.	00	Route US 50				
Altamirano			-	Location fro		Lt	Rt	25'			
Sample No.:	5			County:	LYON						
Sample Type:					Depth (ft)	Boring Description			PS		
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	0	Silt, Sand, Gra	avel, Lt. Clay	0	15		
Vegetation:	None	Trees 🖾	Shrubs 🛛		2			2			
	Brushy 🗖	Grassy 🛛			4			4			
Cut Section		Fill Section	<b></b>		6			6			
Taken Through Oi		Taken on Shoul	der 🔳		8			8			
Gravel Depth (in)		Oil Depth (in)		_	10			10			
Remarks:					12			12			
					14			14			
					16			16			
Submitted By:	Maynard l	Hinton			18			18			
Title:	Engineerir	ng Tech III			20			20			
	Sieve Size 3"	% Passing	•		Liquid Limit Plastic Index	<u>23</u> 5	_				
	2"		_		Specific Gravity						
	1.5"				Resistance Valu	e <b>67</b>					
	1"		-		Cover	Stabilometer	Expansion Pr	essure			
	3/4"	100	-		Thickness	7.3	_				
	1/2"	90	_								
	3/8"	86	-		Sand	Equivalent					
	No. 4	73	-			ral Moisture, %			•		
	No. 10	60	-			tivity	1,658		•		
	No. 16	53	•		pH F	-	8.2		•		
	No. 40	40	-		-	Classification			•		
	No. 50	35	-						•		
	No. 100	26	-								
			-								

Date Reported: Lab No.:	04/23/10 Soils10-01	- l, RV-10-10, C	C-10-10		_					
E.A.:	73475	_	Job D	Description:	US 50 from	n LY 14	.00 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, V	Vimer,	_	Station	"X2" 822-	+00.00		Route	US 50	
Altamirano			_	Location fro	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	5A			County:	LYON					
Sample Type:					Depth (ft)	В	oring Description			PSI
RV 🗖	Sub 🗆	Chem □	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2					
	Brushy 🗆	Grassy 🗆			4		Gravelly	y Sand	4	
Cut Section		Fill Section			6		Lt. C	Clay	6	
Taken Through Oil		Taken on Shou	lder 📕		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ing Tech III			20				20	
		· · · · · · · · · · · · · · · · · · ·								
	Sieve Size	% Passing	_		Liquid Limi	t	30	_		
	3"		_		Plastic Index	x	13	_		
	2"		_		Specific Gra	ivity	<u> </u>	_		
	1.5"		_		Resistance V	Value	15	_		
	1"		_		Cover		Stabilometer	Expansion	Pressure	
	3/4"	100	_		Thick	ness	23.9	_		
	1/2"	98	_							
	3/8"	96	_		S	Sand Equi	valent			
	No. 4	88	_		Ν	Vatural M	oisture, %			
	No. 10	79	_		F	Resistivity	,	2,016		
	No. 16	73	_		р	H Factor		7.7		
	No. 40	58	_		H	IRB Class	sification			
	No. 50	52								
	No. 100	43								

Remarks:

No. 200

Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-11-10, C	2-11-10							
E.A.:	73475	,,,		Description:	- US 50 from	LY 14.	00 to 20.39			
Date Rec'd	01/06/10	•		•						
Samplers:	Hinton, W	/imer,		Station	"X2" 832+0	0.00		Route	US 50	
Altamirano		·	-	Location fro	m oil (ft)	Lt.		- Rt.	25'	
Sample No.:	6		-	County:	LYON			-		
Sample Type:					Depth (ft)	Во	oring Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		Silt, Sand	, Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🛛			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi		Taken on Shou	lder 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
<u></u>						· • ·				
	Sieve Size	% Passing	_		Liquid Limit		21	_		
	3"		_		Plastic Index		1	_		
	2"		_		Specific Grav	ity		_		
	1.5"	100			Resistance Va	alue	61			
	1"	99	_		Cover		Stabilometer	Expansion	Pressure	
	3/4"	99	_		Thickne	ess	9.2	_		
	1/2"	89	_							
	3/8"	84			Sa	nd Equiv	valent			
	No. 4	71			Na	atural Mo	oisture, %			
	No. 10	58	_		Re	sistivity		2,092		
	No. 16	52	_		pН	I Factor		7.8		
	No. 40	39			HF	RB Class	sification			
	No. 50	34	_							
	No. 100	26	_							

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-12-10, C	C-12-10		_					
E.A.:	73475		Job D	escription:	US 50 from	LY 14.	00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,	_	Station	"X2" 832+0	00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	6A			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	<u> </u>				0	150
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2					
	Brushy 🛛	Grassy 🗆			4		Silt, Sand	l Gravel	4	
Cut Section		Fill Section			6		Decompose	ed Granite	6	500 PSI
Taken Through Oil		Taken on Shou	ılder 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing	-		Liquid Limit	-	30	_		
	3"		_		Plastic Index	-	12	_		
	2"		_		Specific Grav			-		
	1.5"		_		Resistance Va	-	18	_		
	1"		_		Cover		Stabilometer	Expansion	Pressure	
	3/4"	100	_		Thickne	ess -	22.9	_		
	1/2"	91	_							
	3/8"	87				nd Equiv				-
	No. 4	76	_			atural Mo	isture, %	·		-
	No. 10	62	_			esistivity		2,500		-
	No. 16	55	_		-	I Factor		8.3		-
	No. 40	44	_		HI	RB Classi	fication	<u> </u>		-
	No. 50	39	_							
	No. 100	33	-							
	No. 200	28								

Remarks:

Date Reported:	04/23/10	DV 12 10 (	12 10							
Lab No.: E.A.:	73475	, RV-13-10, C		Description:	- US 50 from	T V 14 00 to	20.20			
	<u>/34/5</u> 01/06/10	-	100 L	escription:	03 50 11 0111	1.1 14.00 10	20.39			
Date Rec'd		-		Quert's	"ED! 942+0			D(-		
Samplers:	Hinton, W	imer,	_	Station	<u>"EB" 842+0</u>			- Route		
Altamirano	-		_	Location fro		Ľt			25'	
Sample No.:	7			County:	LYON					
Sample Type:					Depth (ft)	Boring De				PSI
RV	Sub 🗆		DC 🗆	Other 🗆	- 1	C L	Silt, Sand	, Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆				- 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shou	lder 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
								· · ·		
	Sieve Size	% Passing	_		Liquid Limit		20	_		
	3"		_		Plastic Index		NP	_		
	2"		_		Specific Grave	ty		_		
	1.5"	100	_		Resistance Va	lue	81	_		
	1"	89	_		Cover			Expansion I	ressure	
	3/4"	83	_		Thickne	SS	2.9	_		
	1/2"	74						_		
	3/8"	69			Sa	nd Equivalent				
	No. 4	55	_		Na	tural Moisture	,%			
	No. 10	44			Re	sistivity		2,481		
	No. 16	38			pН	Factor		7.6		
	No. 40	27	_		HR	B Classificati	on			
	No. 50	22	-							
	No. 100	15	_							

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	<u>, RV-14-10, C-1</u>	4-10		_					
E.A.:	73475		Job D	escription:	<u>US 50 fro</u>	om LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"EB" 842	2+00.00		Route	US 50	
Altamirano				Location fro	. ,	Lt	0	Rt.	25'	
Sample No.:	7A			County:	LYON					
Sample Type:					Depth (ft)	Borir	ng Description			PSI
RV	Sub 🗆	Chem 🗆	DC 🗆	Other [					0	150
Vegetation:			hrubs 🛛		2				2	
	Brushy 🛛				_ 4		Silt, Sand	l Gravel	4	
Cut Section		Fill Section			6				6	
Taken Through C		Taken on Shoulde	r 📕		8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:	Heavier grav	vel and harder drill	ing from 3	½' to 4½'.	12				12	
					_ 14				14	
					_ 16				16	
Submitted By:	Maynard				<b>–</b> <sup>18</sup>				18	
Title:	Engineerii	ng Tech III		·	20				20	
	Sieve Size	% Passing			Liquid Lin	nit	25			
	3"	70 T assing			Plastic Ind		<u> </u>	-		
	2"				Specific G	-		-		
	1.5"				Resistance		64	_		
	1.5	100			Cover		<del>_</del>	– Expansion	Pressure	
	3/4"	95				kness	8.3	ZAPUILION	11000010	
	1/2"	84						_		
	3/8"	76				Sand Equival	lent			
	No. 4	53				Natural Mois				
	No. 10	37				Resistivity	,	4,167		
	No. 16	30				pH Factor		8.0		
	No. 40	21				HRB Classifi	ication			
	No. 50	<u> </u>					-			

Remarks:

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No. 100

No. 200

Date Reported:	04/23/10	-								
Lab No.:		1, RV-15-10, C-1			-					
E.A.:	73475	-	Job I	Description:	US 50 from	n LY 14.(	0 to 20.39			
Date Rec'd	01/06/10	_					<b>.</b> .			
Samplers:	Hinton, V	Vimer,		Station	"X2" 852+	00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	8			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other	0		Silt, Sand, G	ravel, Lt. Oil	0	150
Vegetation:	None 🔳	Trees 🗆 S	hrubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulde	er 🔳		8				8	
Gravel Depth (in)		_Oil Depth (in)		_	10				10	
Remarks:		_			12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineer	ing Tech III			20				20	
									•	178
	Sieve Size	% Passing			Liquid Limit		22	_		
	3"				Plastic Index		2			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue	81			
	1"				Cover	-		Expansion F	ressure	
	3/4"	100			Thickn	ness	2.9			
	1/2"	92				•				
	3/8"	87			Sa	and Equiv	alent			
	No. 4	69				atural Mo				
	No. 10	53			R	esistivity		1,295		
	No. 16	46				H Factor		7.6		
	No. 40	33			-	RB Classi	fication			
	No. 50	27								
	No. 100	19								

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-16-10, C-	16-10		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 852-	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	8A			County:	LYON					
Sample Type:			-		Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	J 0				0	150
Vegetation:	None 🔳	Trees 🗆 🚦	Shrubs 🗆		2				2	
	Brushy 🗖	Grassy 🗖			4		Silt, Sand	d Gravel	4	
Cut Section $\Box$		Fill Section			6		Lt. C	Clay	6	
Taken Through Or		Taken on Should	ler 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					-16				16	
Submitted By:	Maynard 1	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	at at l						20			
	Sieve Size	% Passing			Liquid Limi		29	_		
	3"				Plastic Inde	-	13	_		
	2"				Specific Gra	_		_		
	1.5"	100			Resistance	Value _	39	_		
	1"	88			Cover			Expansion P	ressure	
	3/4"	88			Thick	mess –	16.2			
	1/2"	84								
	3/8"	75				Sand Equiva				
	No. 4	62				Natural Mois	sture, %			
	No. 10	50				Resistivity		1,287		
	No. 16	45			-	H Factor		7.3		
	No. 40	35			ł	HRB Classif	ication			
	No. 50	31								
	No. 100	23								
	No. 200	17								

Date Reported:	04/23/10									
Lab No.:		, RV-17-10, C-17			-					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	to 20.39	<u></u>	• •	
Date Rec'd	01/06/10	, 								
Samplers:	Hinton, W	/imer,		Station	<u>"X2" 862+</u>			Route		
Altamirano				Location from	. ,	Lt			26'	
Sample No.:	9			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description		r	PSI
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	0		Silt, Sand	l, Gravel	0	150
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🛛		2				2-	
	Brushy 🗆	Grassy 🗆			- 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III		<u></u>	20				20	
	Sieve Size	% Passing			Liquid Limit		20			
	3"	70 T ussing			Plastic Index		NP	_		
	2"				Specific Grav					
	1.5"				Resistance V		81	_		
	1.5				Cover	alue	01	- Expansion D		
	3/4"	100			Thickn		2.9	Expansion P	ressure	
	1/2"	94			THICKI		4.7			
	3/8"				0.					
		86				and Equival				
	No. 4	72				atural Mois	ture, %	1.50(		
	No. 10	56				esistivity		1,706		
	No. 16	48			-	H Factor		7.7		
	<u>No. 40</u>	34			Н	RB Classifi	cation			
	No. 50	28								
	<u>No. 100</u>	19								
	No. 200	13								

Remarks:

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Date Reported:	04/23/10									
Lab No.:		, RV-18-10, C			-					
E.A.:	73475		Job E	Description:	<u>US 50 fro</u>	m LY 14.00	) to 20.39			
Date Rec'd	01/06/10									_
Samplers:	Hinton, W	imer,		Station	"X2" 862-			Route I		
Altamirano				Location fro		Lt			26'	
Sample No.:	9A	·····		County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			P
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	- 1				0	1
Vegetation:		Trees 🛛	Shrubs 🛛		2					
	Brushy 🗆 🛛	Grassy 🗆			_ 4		Silt, Sand	l Gravel	4	
Cut Section					6		Very L	t. Clay	6	
Taken Through Oi		Taken on Shoul	der 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)	<b>.</b>	_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard l	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi		21	_		
	3"				Plastic Inde		2	-		
	2"				Specific Gra			_		
	1.5"	100			Resistance	Value _	76	_		
	1"	99			Cover		. –	Expansion Pr	ressure	
	3/4"	95			Thick	mess	4.5			
	1/2"	87								
	3/8"	79				Sand Equival				
	No. 4	64				Natural Mois	ture, %			
	No. 10	51				Resistivity		2,793		
	No. 16	45			-	oH Factor		8.0		
	No. 40	33			I	HRB Classifi	cation			
	No. 50	28								
	No. 100	20								
	No. 200	14								

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-19-10, C-19	-10		_					
E.A.:	73475	_	Job I	Description:	US 50 from	m LY 14	.00 to 20.39			
Date Rec'd	01/06/10	-								
Samplers:	Hinton, W	Vimer,		Station	"X2" 872	+00.00		Route _	J <b>S 50</b>	
Altamirano				Location fro	m oil (ft)	Lt.		Rt	25'	
Sample No.:	10			County:	LYON					
Sample Type:					Depth (ft)	В	oring Description			PSI
RV 🗖	Sub 🗆	l Chem 🗆	DC 🗆	Other 🗆	0		Silt, Sand, Gr	avel, Lt. Clay	0	150
Vegetation:	None 🔳	Trees D Sh	rubs 🗆		2					
	Brushy 🛛	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					- 14				14	
					- 16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:	Engineeri	ng Tech III							20	
									•	
					, <u>, , , , , , , , , , , , , , , </u>					
	Sieve Size	% Passing			Liquid Lim	it	22			
	3"				Plastic Inde	x	2			
	2"				Specific Gr	avity		_		
	1.5"	100			Resistance	Value	80			
	1"	94			Cover			Expansion Pr	essure	
	3/4"	94			Thick	kness	3.2	_		
	1/2"	88								
	3/8"	84			5	Sand Equi	valent			
	No. 4	70			]	Natural M	oisture, %			
	No. 10	57			]	Resistivity	/	1,912		
	No. 16	50			1	pH Factor		7.9		
	No. 40	36			]	HRB Clas	sification			
	No. 50	30								
	No. 100	21								

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01,	, RV-20-10, C	-20-10							
E.A.:	73475		Job I	Description:	<u>US 50 fro</u>	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	imer,	-	Station	"X2" 872	+00.00		Route	US 50	
Altamirano			_	Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	10A			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	0				0	150
Vegetation:	None 🔳 🤇	Trees 🛛	Shrubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			4		Silt, Sand	l Gravel	4	
Cut Section	1	Fill Section			6		Very L	t. Clay	6	
Taken Through O	il 🗆 🧳	Taken on Shoul	der 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)	( <u> </u>	_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard I	Hinton			18				18	
Title:	Engineerin	g Tech III			20				20	
· · · · · · · · · · · · · · · · · · ·			<u></u>							
	Sieve Size	% Passing			Liquid Lim	nit	21			
	3"		-		Plastic Inde	ex –	2	-		
	2"		-		Specific G	avity –		-		
	1.5"	100	_		Resistance	- Value	80	-		
	1"	94	-		Cover	-		– Expansion P	ressure	
	3/4"	94	-		Thic	kness	3.2	-		
	1/2"	86	_			-				
	3/8"	77	_			Sand Equiva	alent			
	No. 4	61	-			Natural Moi				
	No. 10	48	-			Resistivity		2,469		
	No. 16	41	-			pH Factor		8.0		
	No. 40	29	-			HRB Classi:	fication			
	No. 50	25	-							
	No. 100	17	-							
	No. 200	12	-							

Date Reported:	04/23/10								
Lab No.: E.A.:	Soils10-01 73475	, RV-21-10, C		Description:	- US 50 from T	Y 14.00 to 20.39			
E.A.: Date Rec'd	<u>/34/5</u> 01/06/10		100 L	Jescription:	05 50 HOM L	1 14.00 to 20.39			
Samplers:	Hinton, W	limor		Station	"X2" 882+00.	00	Route		
Altamirano	Hillon, w	mer,	_	Location from	· · · · ·	Lt.	Rt.	22'	
Sample No.:	11		_	County:	LYON	Ll	Kl		
	11			County.	Depth (ft)	Boring Description			PS
Sample Type: RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [			nd, Gravel	0	15
Vegetation:		Trees	Shrubs 🗆	Other -	2	Siit, Sa	na, Graver		15
vegetation:	Brushy				4		·	4	
Cut Section	•	Fill Section			- 4 6			4 6	
Taken Through Oi		Taken on Shou			8			0 8	
Gravel Depth (in)		Oil Depth (in)			10			10	
Remarks:				-	12			12	
Kennarks.					- 12			12	
					- 14			16	
Submitted By:	Maynard	Hinton			- 18			18	
Title:		ng Tech III		· · · ·	- 20			20	
	Sieve Size	% Passing			Liquid Limit	20			
	3"	8	-		Plastic Index	NP			
	2"		-		Specific Gravity	A			
	1.5"		-		Resistance Value				
	1"		-		Cover		Expansion Pr	essure	
	3/4"	100	-		Thickness	2.9			
	1/2"	89				· · · · ·			
	3/8"	87	-		Sand	Equivalent			
	No. 4	74	-			al Moisture, %			
	No. 10	61	-		Resis		2,045		
	No. 16	54	_		pH Fa	-	8.2		
	No. 40	37	_		-	Classification			
	No. 50	30	_				<b></b>		
	No. 100	20	_						
	No. 200	14	_						

Date Reported:	04/23/10									
Lab No.:		, RV-22-10, C-22			-					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 882-			Route <u>I</u>		
Altamirano				Location fro		Lt		Rt	22'	
Sample No.:	11A			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description		T	PSI
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Shi	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			4		Silt, Sand	Gravel	4	
Cut Section $\Box$		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	0. 0.	04 Denni i			r 1 r					
	Sieve Size	% Passing			Liquid Limi		21			
	3"	· · · · · · · · · · · · · · · · · · ·			Plastic Index		2			
	2"				Specific Gra	·				
	1.5"				Resistance V	Value	84			
	1"	4.0.0			Cover			Expansion Pr	essure	
	3/4"	100			Thick	ness	1.9	_		
	1/2"	92								
	3/8"	85				Sand Equivale	•		<u></u>	
	No. 4	67			Ν	Natural Moistu	re, %			
	No. 10	52				Resistivity		2,653		
	No. 16	45			-	H Factor		8.1		
	<u>No. 40</u>	32			H	IRB Classifica	ation .			
	No. 50	27								
	No. 100	19								
	No. 200	14								

Date Reported:	04/23/10									
Lab No.:		<u>, RV-23-10, C-23-</u>	·10		_					
E.A.:	73475		Job D	Description:	US 50 from	LY 14.00 to	20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 892+	00.00		Route	US 50	
Altamirano				Location fro		Lt		Rt.	30'	
Sample No.:	12			County:	LYON					
Sample Type:					Depth (ft)	Boring D	escription			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>		Silt, Sand		0	150
Vegetation:	None	Trees  Shr	ubs 🗆		2		Very L	t. Clay	2	
	Brushy 🗆	Grassy D			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		25			
	3"				Plastic Index		7			
	2"				Specific Grav	vity		_		
	1.5"				Resistance V		80	_		
	1"				Cover			- Expansion I	Pressure	
	3/4"	100			Thickn	ess	3.2	-		
	1/2"	83						_		
	3/8"	76			Sa	and Equivalent	:			
	No. 4	58				atural Moistur				
	No. 10	44				esistivity	-	3,745		
	No. 16	38				H Factor		7.9		
						RB Classificat	ion			
	No. 40	27			11.	ICD Classificat	ion			
	<u>No. 40</u> No. 50	27 23			11.	itib Classificat	1011			
	No. 40 No. 50 No. 100				11		1011			

Date Reported: Lab No.: E.A.:	73475	, RV-24-10, C-24		Description:	<u>US 50 fron</u>	n LY 14.00	) to 20.39			
Date Rec'd Samplers:	01/06/10 Hinton, W	imer.		Station	"X2" 892+	-00.00		Route	US 50	
Altamirano		mier,		Location fro		 Lt.		_ Route _		
Sample No.:	12A			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗖	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Shi	ubs 🗆		2				2_	
	Brushy 🗆	Grassy 🗆			4		Silt, Sand	l Gravel	4	
Cut Section		Fill Section			6		Cla	iy	6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					_ 12				12	
					_ 14				14	
					- 16				16	
Submitted By:	Maynard				- 18				18	
Title:	Engineerii	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit	: 	27	_		
	3"				Plastic Index		12			
	2"				Specific Gra	vity		_		
	1.5"				Resistance V	/alue	41			
	1"				Cover			Expansion Pr	ressure	
	3/4"	100			Thick	ness	15.6			
	1/2"	97								
	3/8"	96			S	and Equival	ent			
	No. 4	88			N	latural Moist	ture, %			
	No. 10	78			R	esistivity		3,106		
	No. 16	71			p	H Factor		7.5		
	No. 40	57			Н	IRB Classifi	cation			
	No. 50	50								
	No. 100	38								
	No. 200	28								

Date Reported:	04/23/10									
Lab No.:		, RV-170-10, C-		<u> </u>		T T / / / 0.0 / /				
E.A.:	73475	-	Jop I	Description:	US 50 from	LY 14.00 to 2	.0.39			
Date Rec'd	01/06/10	-		<b>a</b>					<b>T</b> IC <b>50</b>	
Samplers:	Hinton, W	limer,		Station	"X2" 896+0				<u>US 50</u>	
Altamirano				Location fro		Lt		Rt.	120'	
Sample No.:	13			County:	LYON					
Sample Type:					Depth (ft)	Boring Dese				PSI
RV	Sub 🗆		DC 🗆	Other 🗆	-		Sandy Silt	t	0	350
Vegetation:			hrubs 🗇		2				2	
	Brushy 🗆	Grassy			- 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulde	r 🗆		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
<del></del>										
	Sieve Size	% Passing			Liquid Limit		21			
	3"				Plastic Index		2			
	2"				Specific Grav	ity				
	1.5"				Resistance Va	lue	69			
	1"				Cover		Ex	pansion	Pressure	
	3/4"				Thickne	ess 4	1.9			
	1/2"	100								
	3/8"	99			Sa	nd Equivalent				
	No. 4	95				tural Moisture,	%			
	No. 10	86			Re	sistivity		5,394		
	No. 16	80				I Factor		7.7		
	No. 40	65			-	B Classificatio	n			
	No. 50	58						·		
	No. 100	39								

Remarks:

No. 200

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-27-10, C-			-					
E.A.:	73475	_	Job D	escription:	US 50 from	LY 14.0	0 to 20.39			
Date Rec'd	01/06/10	_							· · · · ·	
Samplers:	Hinton, V	Vimer,		Station	"X2" 902+0	00.00		Route _	US 50	
Altamirano				Location from	m oil (ft)	Lt.		Rt.	28'	
Sample No.:	14			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description		<u> </u>	PSI
RV 🗖	Sub 🗆	I Chem □	DC 🗆	Other 🗆	0			Fine Gravel	0	150
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2		Lt. (	Clay	2	
	Brushy 🗆	Grassy 🛛			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Should	ler 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:		-			12				12	
					- 14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ing Tech III		<b>-</b>	20				20	
					- ·				•	
	Sieve Size	% Passing			Liquid Limit		22			
	3"				Plastic Index	-	3	_		
	2"				Specific Grav	- ity				
	1.5"	100			Resistance Va	-	81	·		
	1"	94			Cover	-		 Expansion P	ressure	
	3/4"	94			Thickn	ess	2.9	•		
	1/2"	79				-				
	3/8"	73			Sa	nd Equiva	alent			
	No. 4	56				tural Moi				
	No. 10	44				sistivity	,	2,494		
	No. 16	38				I Factor		7.5		
	No. 40	28			-	RB Classi	fication			
	No. 50	24								
	No. 100	18								

Remarks:

12

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-28-10, C-28-	-10		_					
E.A.:	73475		Job D	Description:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 902-	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	28'	
Sample No.:	14A			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗆		2				2	
	Brushy 🛛	Grassy 🗆			4		Silt, Sand	l Gravel	4	
Cut Section		Fill Section			6		Lt. C	lay	6	
Taken Through O	il 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:									12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	1									
	Sieve Size	% Passing			Liquid Lim	it –	20	_		
	3"				Plastic Inde	_	1	_		
	2"				Specific Gra	• •		_		
	1.5"				Resistance	Value	71	_		
	1"				Cover			Expansion P	ressure	
	3/4"	100			Thick	cness	6.0			
	1/2"	91								
	3/8"	88			\$	Sand Equiva	alent			
	No. 4	81			]	Natural Moi	sture, %			
	No. 10	70			]	Resistivity		3,311		
	No. 16	64			1	pH Factor		7.3		
	No. 40	50			1	HRB Classi	fication			
	No. 50	45								
	No. 100	34								

Remarks:

No. 200

Date Reported:	04/23/10	-								
Lab No.:	Soils10-01	, RV-171-10, C	2-192-10		_					
E.A.:	73475		Job D	escription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	Vimer,		Station	"X2" 907+0	0.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	125'	
Sample No.:	15			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆	Chem 🗖	DC 🗆	Other [	<u> </u>		S	and	0	100
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2		Sand	dy Silt	2	
	Brushy 🖾	Grassy 🖾			4				4	
Cut Section		Fill Section	ם ייי		6				6	
Taken Through Oil		Taken on Should	ler 🗆		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
									<u> </u>	
	Sieve Size	% Passing			Liquid Limit		20			
	3"				Plastic Index		NP			
	2"				Specific Grav	ity				
	1.5"				Resistance Va	alue	65	_		
	1"				Cover			Expansion <b>F</b>	ressure	
	3/4"				Thickne	ess	5.8			
	1/2"	100								
	3/8"	99			Sa	nd Equivaler	nt			
	No. 4	96			Na	atural Moistu	re, %			
	No. 10	86			Re	sistivity		9,930		
	No. 16	79			pН	I Factor		7.5		
	No. 40	62			HI	RB Classifica	ation			
	No. 50	55								
	No. 100	38								

Remarks:

23

No. 200

Date Reported:	04/23/10									
Lab No.:		, RV-31-10, C-3			_					
E.A.:	73475		Job E	Description:	US 50 from	LY 14.0	0 to 20.39	· · · · · · · · · · · · · · · · · · ·		
Date Rec'd	01/06/10									
Samplers:	<u>Hinton, W</u>	/imer,		Station	<u>"X2" 912+0</u>	00.00		Route _	U <b>S 50</b>	
Altamirano				Location fro	om oil (ft)	Lt		Rt	28'	
Sample No.:	16			County:	LYON					
Sample Type:					Depth (ft)	Borii	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other $\Box$	0		Silt, Sand,	Gravel, Clay	0	150
Vegetation:	None 🔳	Trees D S	hrubs 🛛		2				2	
	Brushy 🛛	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through C	Dil 🗖	Taken on Shoulde	er 🗖		8				8	
Gravel Depth (in)	)	Oil Depth (in)			10				10	
Remarks:				-	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III							20	
	Sieve Size	% Passing			Liquid Limit		23			
	3"				Plastic Index	-	4			
	2"				Specific Grav	vity -				
	1.5"				Resistance Va		64			
	1"				Cover	-		Expansion P	ressure	
	3/4"	100			Thickn	ess	8.3	•		
	1/2"	90				-				
	3/8"	81			Sa	ind Equiva	lent			
	No. 4	65				atural Moi			······	
	No. 10	51				esistivity	,	3,413		
	No. 16	44				H Factor		7.8		
	No. 40	31			-	RB Classif	ication			
	No. 50	27						· · · · · · · · · · · · · · · · · · ·		
	No. 100	19								

Remarks:

14

No. 200

Date Reported:	04/23/10									
Lab No.:		<u>, RV-32-10, C-3</u>	32-10		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.0	00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 912+	-00.00		Route I		
Altamirano				Location fro		Lt.			28'	
Sample No.:	16A			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PS
RV 🗖	Sub 🗆		DC 🗆	Other $\Box$	0				0	15
Vegetation:			Shrubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			_ 4		Silt, Sand, Ve	ry Lt. Gravel	4	
Cut Section		Fill Section			6		Cla	ıy	6	
Taken Through Oi	1 🗆	Taken on Should	er 📕		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard I	Hinton							18	
Title:	Engineerii	ng Tech III			20				20	
	Sieve Size	0/ Deceirer		<b></b>	Y : : J T : :					
	Sieve Size	% Passing			Liquid Limi	-	23	-		
	3"				Plastic Index	-	5	_		
	2"				Specific Gra	•		_		
	1.5"				Resistance V	alue -	65	-		
	1"	100			Cover		0.0	Expansion Pr	ressure	
	3/4"	100			Thick	ness .	8.0			•••
	1/2"	99			~		1 4			
	3/8"	98				and Equiv				
	No. 4	91				latural Mo	isture, %		<u> </u>	
	No. 10	81				Resistivity		3,584		
	No. 16	75			-	H Factor	~ .	7.5		
	No. 40	64			F	IRB Classi	tication			
	No. 50	59								
	No. 100	46								
	No. 200	32								

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	, RV-172-10,	C-193-10							
E.A.:	73475	_	Job I	Description:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, W	Vimer,	-	Station	<u>"X2" 917</u>	+00.00		Route	US 50	
Altamirano			_	Location fr	om oil (ft)	Lt.		Rt.	120'	
Sample No.:	17			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other C	<u> </u>		Sa	ind	0	100
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2		Sand	ly Silt	2	
	Brushy 🗆	Grassy 🛛			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoul	der		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:		-			12				12	
					14				14	
	i.								16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III							20	
	<u> </u>				<b>.</b>					
	Sieve Size	% Passing	-		Liquid Lim	-	21			
	3"		-		Plastic Inde	_	1			
	2"		-		Specific Gr	-	(0)			
	1.5"		-		Resistance	Value _	69	— <u> </u>	-	
	1"		-		Cover		4.0	Expansion I	Pressure	
	3/4"	100	-		Thicl	cness _	4.9			
	1/2"	100	-							
	3/8"	99	-			Sand Equiva				
	No. 4	96	-			Natural Moi	sture, %			
	<u>No. 10</u>	89	-			Resistivity		9,862		
	<u>No. 16</u>	84	-			pH Factor		7.4		
	No. 40	72	-			HRB Classif	fication	<b>.</b>		
	No. 50	65	-							
	No. 100	46	-							
	No. 200	30	_							

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	, RV-35-10, C-	35-10		_					
E.A.:	73475		Job D	Description:	US 50 from	m LY 14	.00 to 20.39			
Date Rec'd	01/06/10	-								
Samplers:	Hinton, W	Vimer,		Station	"X2" 922-	+00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	27'	
Sample No.:	18			County:	LYON					
Sample Type:					Depth (ft)	В	oring Description			PSI
RV	Sub 🗆	Chem	DC 🗆	Other 🗆	0		Silt, Sand, Lt.	Gravel Clay	0	150
Vegetation:	None 🗖	Trees 🛛	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🛛			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Of	il 🗆	Taken on Should	ler		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
							<u></u>	<u></u>		
	Sieve Size	% Passing			Liquid Lim	it	21			
	3"				Plastic Inde		2	_		
	2"				Specific Gra			-		
	1.5"				Resistance '		77	-		
	1"				Cover	-		– Expansion	Pressure	
	3/4"	100			Thick	mess	4.1	1		
	1/2"	98						-		
	3/8"	95			Ś	Sand Equi	valent			
	No. 4	80				-	oisture, %			
	No. 10	64				Resistivity		2,874		
	No. 16	55				pH Factor		7.9		
	No. 40	39			-	HRB Class				
	No. 50	32			-					
	No. 100	22								

Remarks:

No. 200

Date Reported: Lab No.:	04/23/10 Soils10-01	- l, RV-36-10, C-	36-10		_					
E.A.:	73475	_	Job D	escription:	US 50 fro	<u>m LY 14.</u>	00 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, V	Vimer,		Station	"X2" 922	+00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	27'	
Sample No.:	18A			County:	LYON					
Sample Type:					Depth (ft)	Boi	ring Description			PSI
RV 🗖	Sub □	Chem	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆		· · · · · · · · · · · · · · · · · · ·	- 4		Very Lt. G	ravelly Silt	4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Should	ler 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	g. g.					•.	22			
	Sieve Size	% Passing			Liquid Lim		22	_		
	3"				Plastic Inde		NP	_		
	2"				Specific Gr	•		_		
	1.5"				Resistance	Value	61	-		
	1"				Cover			Expansion	Pressure	
	3/4"	100			Thicl	kness	9.2	_		
	1/2"	98								
	3/8"	97				Sand Equiv		<b>.</b>		
	No. 4	92				Natural Mo	isture, %	· · · · · ·		
	No. 10	83				Resistivity		3,413		
	No. 16	76				pH Factor		7.7		
	No. 40	63				HRB Class	ification			
	No. 50	57								
	No. 100	44								

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-37-10, C-37	7-10		_					
E.A.:	73475		Job E	Description:	US 50 from	n LY 14.00	) to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 932+	-00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt		Rt.	25'	
Sample No.:	19			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>		Silt, Sand	, Gravel	0	150
Vegetation:	None	Trees 🗆 Sh	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🛛			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
				N. 1	14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit	t	23	_		
	3"				Plastic Index	<u>د</u>	3	_		
	2"				Specific Gra	vity		_		
	1.5"				Resistance V	/alue	80	_		
	1"	100			Cover			Expansion P	ressure	
	3/4"	98			Thick	ness	3.2			
	1/2"	86								
	3/8"	81			S	and Equival	ent			
	No. 4	67			Ň	latural Mois	ture, %			
	<u>No. 10</u>	50			R	Resistivity		2,358		
	No. 16	42			р	H Factor		7.7		
	No. 40	28			Н	IRB Classifi	cation			
	No. 50	23								
	No. 100	15								
	No. 200	11								

Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-38-10, C	-38-10							
E.A.:	73475	<u>, x</u>		Description:	 US 50 from	n LY 14.00	) to 20.39			
Date Rec'd	01/06/10			<b>I</b>						
Samplers:	Hinton, W	'imer,		Station	"X2" 932+	00.00		Route	US 50	
Altamirano		·	•	Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	19A	an intern		County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other $\Box$	0				0	150
Vegetation:	None 🗖	Trees 🗖	Shrubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			4		Silt, Sand, I	Lt. Gravel	4	
Cut Section		Fill Section			6		Very Lig	ht Clay	6	
Taken Through Oi	1 🗆	Taken on Shoul	der 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineerii	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		22			
	3"	70 I assing	ı		Plastic Index		3	-		
	2"				Specific Grav			-		
	1.5"				Resistance V		75	-		
	1.5				Cover	<u> </u>	10	- Expansion	Pressure	
	3/4"	100	•		Thickn	ness	4.8	p		
	1/2"	99				_		-	,	
	3/8"	95			Sa	and Equival	ent			
	No. 4	85				atural Mois				
	No. 10	75				esistivity		3,472		
	No. 16	69				H Factor		7.8		
	No. 40	54			-	RB Classifi	cation			
	No. 50	48	•							

Remarks:

No. 100

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-39-10, C-	39-10		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	01/06/10				<b></b>					
Samplers:	Hinton, W	'imer,		Station	"X2" 942-	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt		Rt	25'	
Sample No.:	20			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description		r	PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	<u> </u>		Silt, Sand, I		0	15
Vegetation:	None 🗖	Trees 🗆 🖇	Shrubs 🛛		2		Very Lig	ht Clay	2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section	נ		6				6	
Taken Through Oi	1 🗆	Taken on Should	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard I	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	0/ Degaine			T :: J T ::					
		% Passing			Liquid Limi		22	-		
	3"				Plastic Index		1	-		
	2"				Specific Gra		01	-		
	1.5"				Resistance V	value	81	-		
	1"	100			Cover		2.0	Expansion P	ressure	
	3/4"	100			Thick	ness	2.9			
	1/2"	85			_					
	3/8"	80				Sand Equivale				
	No. 4	66				Natural Moist	ure, %			
	No. 10	54				Resistivity		2,188		
	No. 16	47			•	H Factor		7.8		
	No. 40	34			ł	IRB Classific	ation			
	No. 50	28								
	No. 100	19								
	No. 200	13								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-40-10, C-40	-10		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 942+	-00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	20A			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	J 0				0	150
Vegetation:	None	Trees  Sh	rubs 🗆		2				2	
	Brushy 🛛	Grassy			4		Lt. Grav	elly Silt	4	
Cut Section		Fill Section							6	
Taken Through C	Dil 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)	)	Oil Depth (in)		_	10				10	
Remarks:			•		12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III							20	
	Sieve Size	% Passing			Liquid Limi	t	22	_		
	3"				Plastic Inde	x	NP	_		
	2"				Specific Gra	wity		_		
	1.5"				Resistance V	/alue	77			
	1"				Cover			Expansion F	ressure	
	3/4"	100			Thick	ness	4.1			
	1/2"	97								
	3/8"	97			S	and Equival	ent			
	No. 4	90			١	Vatural Mois	ture, %			
	No. 10	80			F	Resistivity		2,874		
	No. 16	74			p	H Factor		7.8		
	No. 40	62			H	IRB Classifi	cation			
	No. 50	57								
	No. 100	43								

Remarks:

No. 200

Date Reported:	04/23/10	- 	11 10							
Lab No.: E.A.:	<u>5011510-01</u> 73475	l <b>, RV-41-10, C-</b> 4		Description:	_ US 50 from	TV 14 00	to 20 20			
	<u>/34/3</u> 01/06/10	-	100 L	description:	US 50 from	111114.00	10 20.39			
Date Rec'd		-		Chatien	W21 052	00.00		Davita	118 50	
Samplers:	Hinton, V	vimer,		Station	<u>"X2" 952+</u>			_ Route _		
Altamirano	21			Location fro	, ,	Lt		- <sup>Rt.</sup> -	33'	
Sample No.:	21			County:	LYON					
Sample Type:	0 I F				Depth (ft)	Boring	Description	0.14		PS:
RV 🗖	Sub			Other 🗆	-		Gravel	ly Silt	0	150
Vegetation:			hrubs 🗆		2			· · · ·	2	
	Brushy 🗆	Grassy			- 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	i] 🗖	Taken on Should	er 💻		8				8	
Gravel Depth (in)	<u> </u>	Oil Depth (in)		-	10				10	
Remarks:					- 12				12	
					- 14				14	
0.1.1.1.0	<b>NG</b> 1	TT• /			- 16				16	
Submitted By:	Maynard				- 18				18	
Title:	Engineeri	ng Tech III			20				20	
						-	· · · · ·	<u> </u>	·····	
	Sieve Size	% Passing			Liquid Limit	:	21			
	3"				Plastic Index		1	-		
	2"				Specific Grav	vity		-		
	1.5"				Resistance V	alue	77			
	1"	100			Cover			– Expansion P	ressure	
	3/4"	97			Thickr	iess	4.1	-		
	1/2"	92				_				
	3/8"	89			S	and Equivale	nt			
	No. 4	80				atural Moistu				
	No. 10	71			R	esistivity		4,016		
	No. 16	65				H Factor		7.8		
	No. 40	51			-	<b>RB</b> Classific	ation			
	No. 50	45						· · · · ·		
	No. 100	33								

Remarks:

No. 200

Date Reported: Lab No.:	04/23/10 Soils10-0	_ 1, RV-42-10, C-4	42-10						
E.A.:	73475	, , , , , , , , , , , , , , , , , , , ,		Description:	- US 50 from	LY 14.00 to 20.39			
Date Rec'd	01/06/10	-		Ĩ					
Samplers:	Hinton, V	– Vimer,		Station	"X2" 952+0	00.00	Route	US 50	
Altamirano		· · · · ·		Location fro	m oil (ft)	Lt.	– Rt.		
Sample No.:	21A			County:	LYON		_		
Sample Type:					Depth (ft)	Boring Description			PSI
RV 🗖	Sub □	□ Chem □	DC 🗆	Other 🗆	0			0	150
Vegetation:	None 🔳	Trees D S	Shrubs 🗆		2			2	
	Brushy 🗆	Grassy 🗆			4	Gravelly Si	lt, Lt. Clay	4	
Cut Section		Fill Section			6			6	
Taken Through Oi	il 🗆	Taken on Shoulde	er 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:				_	12			12	
					14			14	
					16			16	
Submitted By:	Maynard	Hinton			18			18	
Title:		ing Tech III						20	
								-	
	Sieve Size	% Passing			Liquid Limit	23			
	3"	, v i ussing			Plastic Index		_		
	2"				Specific Grav				
	1.5"				Resistance Va	·	_		
	1.5				Cover	uiuo <u> </u>	Expansion	Pressure	
	3/4"	100			Thickn	less 9.2	Expansion	TTOBUL	
	1/2"	99			1 moni		_		
	3/8"	98			Sa	and Equivalent			
	No. 4	92				atural Moisture, %			
	No. 10	82				esistivity	3,774		
	No. 16	76				H Factor	7.7		
	No. 40	64			-	RB Classification			
	No. 50	58							
	No. 100	46							

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:		, RV-43-10, C-43								
E.A.:	73475		Job I	Description:	US 50 fro	m LY 14.	00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 962	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	22			County:	LYON					
Sample Type:					Depth (ft)	Во	ring Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	<u> </u>		Silt, Sand,		0	150
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🛛		2		Very L	t. Clay	2	
	Brushy 🛛	Grassy			4				4	
Cut Section		Fill Section							6	
Taken Through O	il 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:				_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
									•	
	Sieve Size	% Passing			Liquid Lim	ut	19			
	3"				Plastic Inde		NP	_		
	2"				Specific Gr			_		
	1.5"				Resistance		79	_		
	1"	· · · · ·			Cover	· araç		— Expansion	Pressure	
	3/4"	100				kness	3.5	Expansion		
	1/2"	96								
	3/8"	91				Sand Equiv	valent			
	No. 4	75				Natural Mo				
	No. 10	61				Resistivity		2,577		
	No. 16	54				pH Factor		7.8		
	No. 40	39				HRB Class	ification			
	No. 50	34				0.000				
	No. 100	23								

#### Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-44-10, C-44	-10		_					
E.A.:	73475		Job E	Description:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 962	+00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	22A			County:	LYON			-		
Sample Type:					Depth (ft)	Bori	ing Description			PSI
RV 🗖	Sub 🗆	Chem 🗖	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Shr	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🛛			4		Silt, Sand,	Lt. Gravel	4	
Cut Section		Fill Section			6		Cla	iy	6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:				_	12				12	
					14				14	
-		· ·			16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
									· · ·	
	Sieve Size	% Passing			Liquid Lim	nit _	23	_		
	3"				Plastic Inde	ex _	6	_		
	2"				Specific Gr	avity		_		
	1.5"				Resistance	Value	39	_		
	1"				Cover			Expansion I	Pressure	
	3/4"	100			Thic	kness _	16.2	_		
	1/2"	98								
	3/8"	98			ł	Sand Equiva	alent			
	No. 4	92				Natural Moi	isture, %			
	No. 10	85				Resistivity		2,994		
	No. 16	80				pH Factor		7.9		
	No. 40	69				HRB Classi	fication			
	No. 50	63								
	No. 100	51								
	No. 200	35								

Date Reported:	04/23/10								
Lab No.:	Soils10-01	, RV-45-10, C-	-45-10		_				
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	01/06/10								
Samplers:	Hinton, W	'imer,		Station	"X2" 972+	00.00	Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt	Rt.	25'	
Sample No.:	23			County:	LYON		· · · · · · · · · · · · · · · · · · ·		
Sample Type:					Depth (ft)	Boring Description			PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	0		, Lt. Gravel	0	15
Vegetation:	None 🔳	Trees 🗖	Shrubs 🛛		2	Very	Lt. Clay	2	
	Brushy 🛛	Grassy 🗆			4			4	
Cut Section		Fill Section			6			6	
Taken Through Oi	il 🗆	Taken on Should	der 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard I	Hinton			18			18	
Title:	Engineeriu	ng Tech III			20			20	
	Sieve Size	% Passing			Liquid Limit	22			
	3"	<u> </u>			Plastic Index				
	2"				Specific Grav				
	1.5"				Resistance V		<u></u>		
	1"				Cover	······	— Expansion P	ressure	
	3/4"	100			Thickn	less <b>3.2</b>			
	1/2"	95			1				
	3/8"	90			S	and Equivalent			
	No. 4	74				atural Moisture, %			
	No. 10	59				esistivity	3,195		
	No. 16	51				H Factor	8.0		
	No. 40	37			-	RB Classification			
	No. 50	32							
	No. 100	22							

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-25-10, C-25	-10		_					
E.A.:	73475		Job E	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, V	Vimer,		Station	"X2" 972+	-00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt		Rt.	25'	
Sample No.:	23A			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	<u> </u>				0	150
Vegetation:	None 🔳	Trees 🗆 Shr	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🛛			4		Gravel	ly Silt	4	
Cut Section		Fill Section			6		Lt. (	Clay	6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
	-				14				14	
-					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ing Tech III							20	
									•	
	Sieve Size	% Passing			Liquid Limit	;	21			
	3"				Plastic Index		3	_		
	2"				Specific Gra	vity		_		
	1.5"				Resistance V	'alue	71			
	1"				Cover			Expansion P	ressure	
	3/4"	100			Thick	ness_	6.0			
	1/2"	99								
	3/8"	99			S	and Equivale	ent			
	No. 4	94			Ν	atural Moist	ure, %			
	No. 10	90			R	esistivity		3,086		
	No. 16	87			pl	H Factor		7.6		
	No. 40	80			Н	RB Classific	ation	40000000000000000000000000000000000000		
	No. 50	76								
	No. 100	56								

Remarks:

No. 200

Date Reported:	04/23/10	-							
Lab No.:	Soils10-01	l, RV-26-10, C	2-26-10		-				
E.A.:	73475	-	Job D	escription:	US 50 from	LY 14.00 to 2	0.39		
Date Rec'd	01/06/10	-							
Samplers:	Hinton, V	Vimer,	_	Station	<u>"X2" 982+0</u>	0.00	Route	US 50	
Altamirano			_	Location from	m oil (ft)	Lt	Rt	25'	
Sample No.:	24			County:	LYON				
Sample Type:					Depth (ft)	Boring Desci	ription		PSI
RV 🗖	Sub □	Chem	DC 🗆	Other 🗆	0		Sand, Lt. Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2		Very Lt. Clay	2	
	Brushy 🗆	Grassy 🗆			. 4			4	
Cut Section		Fill Section			6			6	
Taken Through Oi		Taken on Shou	lder 🗖		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard	Hinton			18			18	
Title:	Engineer	ng Tech III			20			20	
	Sieve Size	0/ Dessing				3	0		
		% Passing	-		Liquid Limit		20		
	3"		-		Plastic Index		2		
	2"		-		Specific Gravi	·			
	1.5"	100	-		Resistance Va	lue <u>8</u>	<u></u>	<b>n</b>	
		100	-		Cover	-	Expansion	Pressure	
	3/4"	97	-		Thickne	ess <u>3</u>	.2		
	1/2"	96	-		-				
	3/8"	91	-			nd Equivalent			
	<u>No. 4</u>	77	-			tural Moisture, 9	M		
	No. 10	66	_			sistivity	1,776		
	No. 16	59	-		-	Factor	8.2		
	No. 40	45	_		HR	B Classification	n		
	No. 50	39	_						
	No. 100	26	_						

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-29-10, C-29	-10		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 982+	+00.00		Route	US 50	
Altamirano				Location fro		Lt.		Rt.	25'	
Sample No.:	24A			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>				0	150
Vegetation:	None 🔳	Trees 🗆 Shr	rubs 🗆		2					
	Brushy 🗆	Grassy 🗆			_ 4		Gravelly S	llt, Lt. Clay	4	
Cut Section		Fill Section			6		Silt, Sand,	Lt. Gravel	6	
Taken Through Oi		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi	t	24		<u></u>	
	3"	70 I ussing			Plastic Index	-	7	_		
	2"				Specific Gra	-	/	_		
	1.5"				Resistance V	-	53			
	1.5				Cover	-		— Expansion I	Dressure	
	3/4"	100			Thick	ness	11.8	Expansion	ressure	
	1/2"	99			THICK	-	11.0	_		
	3/8"	99			S	and Equiv	alent			
	No. 4	93				Natural Moi				
	No. 10	86				Resistivity		2,445		
	No. 16	82				H Factor		7.9		
	No. 40	74			-	IRB Classi	fication			
	No. 50	70								
	No. 100	58								
	No. 200	42								

Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-30-10, C-30	-10		-					
E.A.:	73475		Job E	Description:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 992	+00.00		Route I	U <b>S 50</b>	
Altamirano				Location fro		Lt		Rt.	25'	
Sample No.:	25			County:	LYON					
Sample Type:					Depth (ft)	Borin	ng Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other	_ 0		Gravell	y Silt	0	150
Vegetation:	None 🔳	Trees 🛛 Shr	ubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Lim	it	22			
	3"	, , , , , , , , , , , , , , , , , , ,			Plastic Inde		6	-		
	2"				Specific Gra			-		
	1.5"				Resistance	-	79	-		
	1"	<u></u>			Cover			- Expansion Pr	ressure	
	3/4"	100			Thick	mess	3.5			
	1/2"	93			•					
	3/8"	85			5	Sand Equiva	lent			
	No. 4	67				Natural Mois				
	No. 10	52				Resistivity	,	·		
	No. 16	45				pH Factor		•		
	No. 40	33			-	HRB Classif	ication			
	No. 50	28								
	No. 100	20								
	No. 200	14								

Date Reported:	04/23/10								
Lab No.:		, RV-33-10, C-33			-				
E.A.:	73475		Job D	Description:	US 50 from	LY 14.00	to 20.39	··· ·	
Date Rec'd	01/06/10								
Samplers:	Hinton, W	'imer,		Station	"X2" 992+(			Route <u>US 50</u>	
Altamirano				Location fro	. ,	Lt		Rt. 25'	
Sample No.:	25A			County:	LYON				
Sample Type:					Depth (ft)	Boring	, Description	I	PSI
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	0			0	150
Vegetation:	None 🔳	Trees 🗆 Shi	rubs 🗆		2			2	
	Brushy 🗆	Grassy 🗆			_ 4		Silt,	Clay 4	
Cut Section		Fill Section			6		Grave	lly Silt 6	
Taken Through Oil		Taken on Shoulder			8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard I	Hinton			18			18	
Title:	Engineerin	ng Tech III			20			20	
	Sieve Size	% Passing			Liquid Limit		23	· · · · · · · · · · · · · · · · · · ·	
	3"	, , , , , , , , , , , , , , , , , , , ,			Plastic Index		6	_	
	2"				Specific Grav	/itv			
	1.5"				Resistance Va		39		
	1.5				Cover			Expansion Pressure	
	3/4"	100			Thickn	ess	16.2		
	1/2"	97					- •		
	3/8"	97			Sa	nd Equivale	ent		
	No. 4	94				atural Moist		<u></u>	
	No. 10	90				esistivity	ure, 70		
	No. 16	87				H Factor			
	No. 40	78				RB Classific	cation		
	No. 50	72			11				
		· -							
	No. 100	58							

Date Reported: Lab No.:	04/23/10 Soils10.0	_ 1, RV-34-10, C	34 10							
E.A.:	73475	<u>1, KV-34-10, C</u>		Description:	US 50 from	n I.V 14 (	00 to 20 39			
Date Rec'd	01/06/10	-	500 E	escription.	05 50 1101					
Samplers:	Hinton, V	– Vimer		Station	"X2" 1002	+-00 00		Route	US 50	
Altamirano	IIIIIton,	, inici,		Location fro		Lt.		- Route Rt.		
Sample No.:	26		•	County:	LYON	Lt				
Sample Type:				<b>,</b> ,,	Depth (ft)	Bo	ring Description			PSI
RV 🗖	Sub [	□ Chem □	DC 🗆	Other			Silt, Sand, I	Lt. Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗆		2		Very Lt		2	
5	Brushy 🗆				4				4	
Cut Section					- 6				6	
Taken Through Oi	1 🗆	Taken on Shoul			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:		_		-	12				12	
					- 14				14	
	· · ·				- 16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:		ing Tech III			- 20				20	
					- ·					
	Sieve Size	e % Passing			Liquid Limi	t	23	_		
	3"				Plastic Index	x	3	_		
	2"		-		Specific Gra	wity				
	1.5"				Resistance V	/alue	79	_		
	1"				Cover			Expansion	Pressure	
	3/4"	100			Thick	ness	3.5	_		
	1/2"	95						_		
	3/8"	90			S	and Equiv	alent			
	No. 4	75			N	Natural Mo	isture, %			
	No. 10	58			R	Resistivity				
	No. 16	50	-		р	H Factor				
	No. 40	36	-		H	IRB Class	ification			
	No. 50	30	-							
	No 100	21								

Remarks:

No. 200

14

Date Reported:	04/23/10									
Lab No.:		l, RV-141-10, C-1								
E.A.:	73475	-	Job D	escription:	US 50 from	m LY 14.00	to 20.39			
Date Rec'd	01/06/10	-					· · · • • • • •			
Samplers:	Hinton, V	Vimer,		Station	"X2" 1002	• • •		_	<u>US 50</u>	
Altamirano				Location fro		Lt		_ Rt.	25'	
Sample No.:	26A			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub □		DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🗖	Trees D Sh	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			_ 4		Gravel	ly Silt	4	
Cut Section		Fill Section			6		Lt. C	lay	6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	0: 0:				<b>T</b> : : : : : : : : : : : : : : : : : : :		10			
	Sieve Size	% Passing			Liquid Lim		<u>19</u>	-		
					Plastic Inde		NP	-		
	2"				Specific Gr	_		_		
	1.5"				Resistance	Value	74			
	1"				Cover			Expansion	Pressure	
	3/4"	100			Thick	iness	5.1	_		
	1/2"	96								
	3/8"	93				Sand Equivale				
	<u>No. 4</u>	86				Natural Moist	ure, %			
	No. 10	73				Resistivity		3,663		
	No. 16	67			I	oH Factor		7.8		
	No. 40	54			1	HRB Classific	ation	·		
	No. 50	48								
	No. 100	35								

Remarks:

23

Date Reported:	04/23/10									
Lab No.:	Soils10-01,	, RV-142-10,	C-162-10							
E.A.:	73475		Job E	Description:	US 50 fron	n LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	imer,		Station	"X2" 1012	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	26'	
Sample No.:	27			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	<u> </u>		Lt. Gravel,	Sandy Clay	0	150
Vegetation:	None 🗖	Trees 🗖	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through O	il 🗆 👘	Taken on Sho	ulder		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard l	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		20			
	3"				Plastic Index	-	4			
	2"		_		Specific Gra	- vity		_		
	1.5"				Resistance V	• _	70	_		
	1"		—		Cover	-		Expansion F	ressure	
	3/4"	100			Thick	ness	6.4	•		
	1/2"	97	_			-				
	3/8"	94			S	and Equiva	alent			
	No. 4	85				latural Moi				
	No. 10	74	_			esistivity		2,959		
	No. 16	68				H Factor		7.8		
	No. 40	52			H	RB Classi	fication			
	No. 50	45								

Remarks:

31

22

No. 100

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	1, RV-143-10, C	C-163-10							
E.A.:	73475		Job D	Description:	US 50 from	n LY 14.0	00 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, V	Vimer,		Station	"X2" 1012	2+00.00		Route I	U <b>S 50</b>	
Altamirano	_			Location fro	om oil (ft)	Lt.		Rt	26'	
Sample No.:	27A			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PS
RV 🗖	Sub 🗆	Chem	DC 🗆	Other [	<u> </u>				0	15
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2					
	Brushy 🗆	Grassy 🛛			4		Silt, Sand, Ve	ry Lt. Gravel	4	
Cut Section		Fill Section	3		6		Lt. C	Clay	6	
Taken Through Oi	1 🗆	Taken on Should	ler 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineer	ing Tech III							20	
<b></b>									_	
		1								
	Sieve Size	% Passing			Liquid Limi	-	24	_		
	3"				Plastic Inde	-	9	_		
	2"				Specific Gra			_		
	1.5"				Resistance	Value	25	_		
	1"				Cover			Expansion Pr	ressure	
	3/4"	100			Thick	iness .	20.7	<b></b> _		
	1/2"	99								
	3/8"	99			S	Sand Equiv	alent			
	No. 4	95			1	Natural Mo	isture, %	Los o		
	No. 10	91			F	Resistivity		3,333		
	No. 16	88			F	oH Factor		7.8		
	No. 40	80			H	HRB Classi	fication			
	No. 50	74								
	No. 100	59								

Remarks:

43

Date Reported:	04/23/10									
Lab No.:	-	<u>, RV-173-10, C-</u>			-					
E.A.:	73475		Job I	Description:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 1020			Route _		
Altamirano				Location fro		Lt			130'	
Sample No.:	28			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description		r	PSI
RV 🗖	Sub 🗖		DC 🗆	Other $\Box$	0				0	100
Vegetation:	None 🔳	Trees D S	hrubs 🛛		2		Sand	y Silt	2	
	Brushy 🛛	Grassy 🗆			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	il 🗆	Taken on Shoulde	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton		*	18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi	it _	28			
	3"				Plastic Inde	x _	10	_		
	2"				Specific Gra	avity _				
	1.5"				Resistance V	Value _	35			
	1"				Cover			Expansion P	ressure	
	3/4"				Thick	iness	12.8			
	1/2"					_				
	3/8"	100			S	Sand Equiva	lent			
	No. 4	95				Natural Moi				
	No. 10	82				Resistivity		305		
	No. 16	76				oH Factor		8.4		
	No. 40	65			-	HRB Classif	ication			
	No. 50	59								
	No. 100	47								
	No. 200	34								

Date Reported:	04/23/10								
Lab No.:		<u>, RV-144-10, C</u>	C-164-10		_				
E.A.:	73475		Job E	Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	01/06/10								
Samplers:	Hinton, W	'imer,		Station	"X2" 1022+	00.00	Route		
Altamirano				Location fro	om oil (ft)	Lt	Rt.	25'	
Sample No.:	29			County:	LYON				
Sample Type:					Depth (ft)	Boring Description	l		PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	0	Silt, Sand	, Fine Gravel	0	15
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2			2	
	Brushy 🛛	Grassy D			4			4	
Cut Section		Fill Section [	2		6			6	
Taken Through Oi	i1 🗖	Taken on Should	ler 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard	Hinton			18			18	
Title:	Engineeri	ng Tech III			20			20	
		<u></u>			a a constructura de la constructura	lan da a la			
	Sieve Size	% Passing			Liquid Limit	21			
	3"				Plastic Index	2			
	2"				Specific Gravi	ty			
	1.5"				Resistance Va	lue <b>75</b>			
	1"				Cover		Expansion P	ressure	
	3/4"	100			Thickne	ess <b>4.8</b>			
	1/2"	97					-		
	3/8"	93			Sar	nd Equivalent			
	No. 4	78			Na	tural Moisture, %			
	No. 10	64			Re	sistivity	2,375		
	No. 16	56			pH	Factor	7.8		
	No. 40	41			HR	B Classification			
	No. 50	34							
	No. 100	24							
	No. 200	16							

Date Reported: Lab No.:	04/23/10	, RV-145-10, C-	165 10							
E.A.:	73475	, <b>KV-145-10</b> , C-		escription:	- US 50 from	. T V 14 M	) to 20 30			
Date Rec'd	01/06/10		100 D	escription.	05 50 1101	11114.00	5 10 20.37			
Samplers:	Hinton, W	/imer		Station	"X2" 1022	+00 00		Route <b>U</b>	18 50	
Altamirano	<u>IIIIIton</u> , v	mer,		Location from		Lt.		Rt.	25'	
Sample No.:	29A			County:	LYON	Ll		<u> </u>	43	
Sample Type:				<u> </u>	Depth (ft)	Borin	ng Description			PSI
RV I	Sub 🗆	Chem 🗆	DC 🗆	Other			<u> </u>		0	150
Vegetation:	None 🔳		hrubs 🛛		2				2	
-	Brushy 🗆	Grassy 🛛			4		Silt, Sand,	Lt. Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulde	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		26			
	3"	70 I ussing			Plastic Index		9	-		
	2"				Specific Grav		,	-		
	1.5"				Resistance V		26	-		
	1.5	· · · · · · · · · · · · ·			Cover		20	- Expansion Pr	essure	
	3/4"	100			Thickr	ness	20.4	Expunsion	ossure	
	1/2"	97			1111010		2011			
	3/8"	95			S	and Equival	lent			
	No. 4	88				atural Mois				
	No. 10	78				esistivity	,	2,740		
	No. 16	72				H Factor		8.1		
	No. 40	60			-	RB Classifi	ication			
	No. 50	54								
	No. 100	40								
	No. 200	29								

Date Reported:	04/23/10								
Lab No.:	Soils10-01,	, RV-174-10,	C-195-10		_				
E.A.:	73475		Job I	Description:	US 50 from L	Y 14.00 to 20.39			
Date Rec'd	01/06/10								
Samplers:	Hinton, W	'imer,	_	Station	"X2" 1027+0	0.00	Route	US 50	
Altamirano			_	Location fro	om oil (ft)	Lt.	Rt.	120'	
Sample No.:	30		-	County:	LYON		_		
Sample Type:					Depth (ft)	Boring Description			PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	<u> </u>	Silt, San	d, Gravel	0	10
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2			2	
	Brushy 🗆	Grassy 🛛			4			4	
Cut Section		Fill Section			6			6	
Taken Through Oi	il 🗆 🦿	Taken on Shou	lder 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		-	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard l	Hinton			18			18	
Title:	Engineerin	ng Tech III			20			20	
	X								<u> </u>
	Sieve Size	% Passing	-		Liquid Limit	22			
	3"		_		Plastic Index	2			
	2"		_		Specific Gravity	/			
	1.5"	i	_		Resistance Valu	ie <u>71</u>			
	1"		_		Cover		Expansion H	Pressure	
	3/4"		_		Thicknes	s <u>4.4</u>			
	1/2"		_						
	3/8"	100	_		Sand	l Equivalent			
	No. 4	95	_		Natu	ral Moisture, %			
	No. 10	90	_		Resi	stivity	312		
	No. 16	87	_		pH I	Factor	8.5		
	No. 40	78	_		HRE	<b>B</b> Classification			
	No. 50	69	_						
	No. 100	43	_						
	No. 200	24							

Date Reported:	04/23/10	-								
Lab No.:	Soils10-01	l, RV-146-10, C	2-166-10		_					
E.A.:	73475	_	Job E	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, V	Vimer,		Station	"X2" 1032	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt		Rt.	25'	
Sample No.:	31			County:	LYON					
Sample Type:					Depth (ft)	Borir	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		Silt, Sand	, Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗆		2				2	
	Brushy 🗆	Grassy 🗖			4				4	
Cut Section		Fill Section	ב		6				6	
Taken Through Oi	1 🗆	Taken on Should	ler 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ing Tech III							20	
	<u>.</u>									
	Sieve Size	% Passing			Liquid Limit		22	_		
	3"				Plastic Index		3	-		
	2"	ļ			Specific Gra	-		-		
	1.5"				Resistance V	alue	77	_		
	1"				Cover			Expansion F	ressure	
	3/4"	100			Thick	ness	4.1			
	1/2"	97								
	3/8"	91				and Equiva				
	No. 4	74			N	atural Mois	sture, %			
	No. 10	59				esistivity		2,347		
	No. 16	51			p.	H Factor		7.8		
	No. 40	37			Н	RB Classif	ication			
	No. 50	32								
	No. 100	22								

Remarks:

NDOT 027, Rev. 05-01

No. 200

14

	04/23/10								
Lab No.:	Soils10-01,	, RV-147-10, C	C-167-10		_				
E.A.:	73475		Job D	Description:	US 50 from L	Y 14.00 to 20.39			
Date Rec'd	01/06/10								
Samplers:	Hinton, W	imer,		Station	"X2" 1032+0	0.00	Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.	Rt.	25'	
Sample No.:	31A			County:	LYON				
Sample Type:					Depth (ft)	Boring Description			PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	0			0	15
Vegetation:	None	Trees 🛛	Shrubs 🛛		2	· · · · · · · · · · · · · · · · · · ·		2_	
	Brushy 🗆	Grassy 🗆			4	Silt, Sand,	Lt. Gravel	4	
Cut Section	. ]	Fill Section	2		6	Very L	t. Clay	6	
Taken Through Oi	1 🗆 '	Taken on Should	der 📕		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard H	Hinton			18			18	
					10				
Title:	Engineerin				20			20	
Title:	Engineerin Sieve Size 3" 2" 1.5" 1" 3/4" 1/2"				-	ie <u>23</u>		20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4"	ng Tech III % Passing			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness	7 1e 23 5 21.3	  Expansion 	20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4" 1/2" 3/8"	ng Tech III % Passing 100			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness Sand	7 ne 23 s 21.3	Expansion	20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4" 1/2" 3/8" No. 4	ng Tech III % Passing 100 99 91			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness Sand Natu	7           Jee         23           s         21.3           I Equivalent tral Moisture, %		20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4" 1/2" 3/8" No. 4 No. 10	ng Tech III % Passing 100 99 91 80			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness Sand Natu Resis	7       ne     23       ss     21.3       I Equivalent tral Moisture, % stivity	3,125	20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4" 1/2" 3/8" No. 4 No. 10 No. 16	ng Tech III % Passing 100 99 91 80 74			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness Sand Natu Resis pH F	7       ie     23       is     21.3       I Equivalent tral Moisture, % stivity Cactor		20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4" 1/2" 3/8" No. 4 No. 10 No. 16 No. 40	ng Tech III % Passing 100 99 91 80 74 62			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness Sand Natu Resis pH F	7       ne     23       ss     21.3       I Equivalent tral Moisture, % stivity	3,125	20	
Title:	Sieve Size 3" 2" 1.5" 1" 3/4" 1/2" 3/8" No. 4 No. 10 No. 16	ng Tech III % Passing 100 99 91 80 74			20 Liquid Limit Plastic Index Specific Gravity Resistance Valu Cover Thickness Sand Natu Resist pH F	7       ie     23       is     21.3       I Equivalent tral Moisture, % stivity Cactor	3,125	20	

#### Remarks:

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Date Reported:	04/23/10	-	C 107 10				
Lab No.:		1, RV-175-10,			-		
E.A.:	73475	_	Job D	Description:	US 50 from	LY 14.00 to 20.39	
Date Rec'd	01/06/10	-					
Samplers:	Hinton, V	Vimer,	<u></u>	Station	"X2" 1037+		Route US 50
Altamirano			_	Location fro	. ,	Lt	Rt. <u>130'</u>
Sample No.:	32			County:	LYON		
Sample Type:	_		_		Depth (ft)	Boring Description	
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	-	Grav	elly Silt 0 100
Vegetation:		Trees 🛛	Shrubs 🛛		2		2
	Brushy 🗆	· · · · · ·			_ 4		4
Cut Section		Fill Section			6		6
Taken Through Oi		Taken on Shou	lder		8		8
Gravel Depth (in)		Oil Depth (in)		_	10		10
Remarks:					12		12
					14		14
					16		16
Submitted By:	Maynard	Hinton			18		18
Title:	Engineer	ing Tech III			20		20
	Sieve Size	% Passing			Liquid Limit	23	
	3"	701 usbing	-		Plastic Index	2	
	2"		-		Specific Grav		
	1.5"	100	_		Resistance Va	-	—
	1"	99	_		Cover		Expansion Pressure
	3/4"	99	-		Thickne	ess <b>3.3</b>	<b>r</b>
	1/2"	99	-				
	3/8"	98	-		Sa	nd Equivalent	
	No. 4	88				tural Moisture, %	
	No. 10	73	-			sistivity	1,969
	No. 16	65	-			Factor	8.0
	No. 40	52	-		-	B Classification	
	No. 50	45					

Remarks:

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No. 100 No. 200

Date Reported: Lab No.:	04/23/10 Soils10-0		C-168-10		_					
E.A.:	73475		Job D	Description:	US 50 from	n LY 14.0	00 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton,	Wimer,		Station	"X2" 1042	2+00.00		Route	US 50	
Altamirano				Location from	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	33			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PSI
RV 🗖	Sub l	Chem	DC 🗆	Other 🗆	0		Silt, Sand	, Gravel	0	150
Vegetation:	None	Trees 🛛	Shrubs 🛛		2				2_	
<b></b>	Brushy D	□ Grassy □			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Should	ler 🗖		8				8	
Gravel Depth (in)		_Oil Depth (in)		_	10				10	
Remarks:					. 12				12	
					14				14	
					16				16	
Submitted By:	Maynar	d Hinton			18				18	
Title:	Enginee	ring Tech III			20				20	
<del>,</del>					T:: 11T:					
	Sieve Siz	e % Passing			Liquid Limi	-	22	_		
					Plastic Inde	-	2	-		
					Specific Gra		77	-		
	<u> </u>	100			Resistance '	value .		<b>-</b>	D	
		100			Cover		4.1	Expansion	Pressure	
	3/4"	97			Thick	ness	4.1	_		
	1/2"	92				10.	1 /			
	3/8"	86				Sand Equiv			,	
	<u>No. 4</u>	<u>69</u>				Natural Mo	isture, %	2 200		
	No. 10	56				Resistivity		2,299		
	No. 16	49			-	H Factor	· C'	7.8	<u></u>	
	No. 40	36			1	HRB Class	incation			
	No. 50	31								

Remarks:

No. 200

14

Date Reported:	04/23/10	,								
Lab No.:		, RV-149-10, C-			_					
E.A.:	73475		Job I	Description:	US 50 fro	om LY 14	.00 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	<u>"X2" 104</u>	2+00.00		Route		
Altamirano				Location fro		Lt.			25'	
Sample No.:	33A			County:	LYON					
Sample Type:					Depth (ft)	В	oring Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees D S	hrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			_ 4		Gravelly Si	lt, Lt. Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulde	er 📕		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					- 14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III	· · ·		20				20	
	Sieve Size	% Passing			Liquid Lin		21			
	3"	70 Fassing			-		3	_		
	2"				Plastic Inde		3	-		
	1.5"	100			Specific Gi Resistance	•	64	_		
	1.5	90			Cover	value	04	- Europeien D		
	3/4"	<u> </u>				kness	8.3	Expansion P	ressure	
	<u> </u>	83			Inc	kness	0.0			
						Q 1 F	14			
	<u>3/8"</u>	81				Sand Equi				
	No. 4	76				Natural M		2 550		
	No. 10	<u> </u>				Resistivity		3,559		
	No. 16	57				pH Factor		7.7		
	No. 40	45				HRB Class	sification		<u></u>	
	No. 50	40								
	No. 100	30								
	No. 200	20								

Remarks:

NDOT 027, Rev. 05-01

Date Reported:	04/23/10	-								
Lab No.:		l, RV-176-10, C								
E.A.:	73475	-	Job E	Description:	US 50 from	m LY 14.	00 to 20.39			
Date Rec'd	01/06/10	-			<u> </u>					
Samplers:	Hinton, V	Vimer,		Station	"X2" 104	ů.		_	US 50	
Altamirano				Location from	. ,	Lt.		Rt.	125'	
Sample No.:	34			County:	LYON					
Sample Type:					Depth (ft)	Bo	ring Description			PSI
RV 🗖	Sub □	Chem	DC 🗆	Other $\Box$	0		Grave	lly Silt	0	100
Vegetation:	None 🔳	Trees D S	Shrubs 🛛		2				2	
	Brushy 🛛	Grassy 🛛			4				4	
Cut Section		Fill Section	]		6				6	
Taken Through Oil		Taken on Should	er 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:				_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	· · · · · · · · · · · · · · · · · · ·	ng Tech III							20	
	Sieve Size	% Passing			Liquid Lim	it	22			
	3"				Plastic Inde	×	4	_		
	2"				Specific Gr	avity				
	1.5"				Resistance	Value	42	_		
	1"				Cover			Expansion	Pressure	
	3/4"	100			Thick	mess	11.2	î		
	1/2"	99						_		
	3/8"	99				Sand Equiv	alent			
	No. 4	93				Natural Mo				
	No. 10	83				Resistivity		3,344		
	No. 16	78				pH Factor		8.0		
	No. 40	66			-	HRB Class	ification			
	No. 50	59								
	No. 100	42								

Remarks:

27

Date Reported:	04/23/10	_							
Lab No.:	Soils10-0	1, RV-150-10,	C-170-10		_				
E.A.:	73475	_	Job I	Description:	US 50 from	n LY 14.00 to 20.39			
Date Rec'd	01/06/10					·			
Samplers:	Hinton, V	Wimer,	_	Station	"X2" 1052	+00.00	Route I	J <b>S 50</b>	
Altamirano				Location fro	om oil (ft)	Lt	Rt.	25'	
Sample No.:	35			County:	LYON				
Sample Type:					Depth (ft)	Boring Description			PSI
RV 🗖	Sub 🛛	Chem	DC 🗆	Other D	0	Silt, Sand	i, Gravel	0	150
Vegetation:	None 🔳	Trees 🗖	Shrubs 🛛		2				
	Brushy 🗆	Grassy □			4			4	
Cut Section		Fill Section			6			6	
Taken Through Oil		Taken on Shou	lder 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
		· · · · · · · · · · · · · · · · · · ·			14			14	
					16			16	
Submitted By:	Maynarc	l Hinton			18			18	
Title:	Engineer	ing Tech III			20			20	
	Sieve Size	0/ Dessing				25			
		e % Passing			Liquid Limit	··· · · ·	—		
	3"		-		Plastic Index		_		
	2"	· •	-		Specific Grav	-	-		
	1.5"	100	-		Resistance V	alue <b>83</b>	- <u> </u>		
	3/4"	100	_		Cover	2.2	Expansion Pr	essure	
		90	-		Thickr	ness <b>2.2</b>			
	1/2"	80	_		0	4 T i			
	<u> </u>	75	-			and Equivalent			
	<u>No. 4</u>	59	_			atural Moisture, %	2.029		
	<u>No. 10</u>	45				esistivity	2,028	<u></u>	
	No. 16	39			pl	H Factor	8.1		

HRB Classification

Remarks:

27

23 16

12

No. 40

No. 50

No. 100

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-151-10, C	C <b>-171-10</b>		_					
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 1052+	-00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt		Rt.	25'	
Sample No.:	35A			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🛛			4		Silt, Sand, I	Fine Gravel	4	
Cut Section		Fill Section [			6				6	
Taken Through Oil		Taken on Should	der 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
									· · · · · · · · · · · · · · · · · · ·	
		1								
	Sieve Size	% Passing			Liquid Limit		22	-		
	3"				Plastic Index		3	_		
	2"				Specific Grav					
	1.5"	100			Resistance Va	alue	73			
	1"	93			Cover			Expansion P	ressure	
	3/4"	93			Thickn	ess	5.4			
	1/2"	88								
	3/8"	84			Sa	nd Equivale	ent			
	No. 4	71			Na	atural Moist	ure, %			
	No. 10	56			Re	esistivity		3,096		
	No. 16	49			pH	I Factor		7.9		
	No. 40	38			HI	RB Classific	cation			
	No. 50	33								
	No. 100	25								

Remarks:

17

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	, RV-177-10, C-1	98-10		_					
E.A.:	73475	_	Job E	Description:	US 50 from	LY 14.0	0 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, W	Vimer,		Station	"X2" 1057-	+00.00		Route	U <b>S 50</b>	
Altamirano				Location from	m oil (ft)	Lt.			120'	
Sample No.:	36			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗖	Chem 🗆	DC 🗆	Other 🗆	0		Grave	lly Silt	0	100
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🗆		2				2	
	Brushy 🗆	Grassy			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗖	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
									-	
		I								
	Sieve Size	% Passing			Liquid Limit	-	20	_		
	3"				Plastic Index		3	_		
	2"				Specific Grav	· -		_		
	1.5"				Resistance V	alue _	35	_		
	1"				Cover			Expansion P	essure	
	3/4"				Thickn	ess _	12.8			
	1/2"									
	3/8"	100			Sa	and Equiva	lent			
	No. 4	96			Na	atural Mois	sture, %			
	No. 10	89			Re	esistivity		3,472		
	No. 16	83			pł	H Factor		8.2		
	No. 40	72			H	RB Classif	ication			
	No. 50	66								
	No. 100	50								

Remarks:

No. 200

33

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-152-10,	C-172-10							
E.A.:	73475		Job D	escription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,		Station	"X2" 1062+	-00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	37			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	<u> </u>		Silt, Sand	l, Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs $\Box$		2		Lt. (	Clay	2_	
	Brushy 🗆	Grassy 🗖			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shou	lder 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:					12				12	
					14				14	
· · ·					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
		l								
	Sieve Size	% Passing	-		Liquid Limit	<u> </u>	25	_		
	3"		_		Plastic Index		5	_		
	2"		_		Specific Grav	ity		_		
	1.5"		_		Resistance Va	alue	67	_		
	1"		_		Cover			Expansion 1	Pressure	
	3/4"	100			Thickne	ess	7.3	_		
	1/2"	86	_							
	3/8"	76	_			nd Equivale				
	<u>No. 4</u>	58	-		Na	tural Moist	ure, %			
	No. 10	45	_		Re	sistivity		1,953		
	No. 16	39	_		-	[Factor		8.3		
	<u>No. 40</u>	28			HI	<b>RB</b> Classific	cation	<u></u>		
	<u>No. 50</u>	24	-							
	No. 100	18	_							
	No. 200	13	_							

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-153-10, C	-173-10							
E.A.:	73475		Job D	escription:	US 50 fro	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	<u>Hinton, W</u>	/imer,		Station	<u>"X2" 106</u>	2+00.00		Route	<u>US 50</u>	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	37A			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0	150
Vegetation:	None 🔳	Trees 🗆 S	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🛛			4		Silt, San	d Gravel	4	
Cut Section		Fill Section	l		6				6	
Taken Through Oi	1 🗆	Taken on Should	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
<b></b>					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Lim	nit –	23			
	3"				Plastic Inde	ex –	4	_		
	2"				Specific G	ravity _		_		
	1.5"				Resistance	Value _	56	_		
	1"				Cover			Expansion	Pressure	
	3/4"	100			Thic	kness _	10.8	_		
	1/2"	97								
	3/8"	93				Sand Equiva	alent			
	No. 4	78				Natural Moi	sture, %			
	No. 10	62				Resistivity		2,353		
	No. 16	55				pH Factor		8.1		
	No. 40	44				HRB Classi	fication			
	No. 50	40								
	No. 100	30								
	No. 200	21								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-284-10, C	-317-10							
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	03/25/10						<u> </u>			
Samplers:	Altamiran	o, Marshall		Station	<u>"X2" 1068</u>	8+40		Route	US 50	E.B.
				Location fro	om oil (ft)	Lt.		. Rt.		-
Sample No.:	38			County:	LYON					
Sample Type:					Depth (ft)	Borir	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0	
Vegetation:	None 🛛	Trees 🗆	Shrubs 🛛		2		Silt		2	
	Brushy 🛛	Grassy 🗖			_ 4		San	d	4	100
Cut Section		Fill Section	ב		6				6	
Taken Through Oi	1 🗆	Taken on Should	ler 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
***					16				16	
Submitted By:	Altamiran	0			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size 3" 2" 1.5" 1"	% Passing			Liquid Limit Plastic Index Specific Gra Resistance V	vity	23 5 7	Expansion	Progeuro	
	3/4"				Cover			Expansion	Pressure	
	1/2"				Thick	ness	19.3			
	3/8"	100			C		4			
		96				and Equival				-
	No. 4	<u>90</u> 88				latural Mois .esistivity	ture, %	6 6 4 5		-
	No. 10	88				-		6,645		-
	No. 16	<u> </u>			-	H Factor	antion	7.6		•
	No. 40	<u>68</u>			Н	RB Classifi	cation			
	No. 50	<u> </u>								
	No. 100									
	No. 200	31								

Remarks:

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Date Reported:	04/23/10							
Lab No.:	Soils10-0	1, RV-154-10,	C-174-10		_			
E.A.:	73475	_	Job I	Description:	US 50 from	n LY 14.00 to 20.39		
Date Rec'd	01/06/10							
Samplers:	Hinton,	Wimer,	_	Station	"X2" 1072	+00.00	Route US 50	
Altamirano			_	Location fr	om oil (ft)	Lt	Rt <b>25'</b>	
Sample No.:	39			County:	LYON			
Sample Type:					Depth (ft)	Boring Description		PSI
RV 🗖	Sub [	□ Chem □	DC 🗆	l Other	0	Silt, San	id, Gravel	0 150
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2		······	2
	Brushy [	□ Grassy □			4			4
Cut Section		Fill Section			6			6
Taken Through Oil		Taken on Shou	ılder 🔳		8		:	8
Gravel Depth (in)		_Oil Depth (in)		_	10		1	0
Remarks:					12		1	2
					14		14	4
					16		1	6
Submitted By:	Maynaro	l Hinton			18		1	8
Title:	Engineer	ring Tech III			20		2	0
	Sieve Size	e % Passing	_		Liquid Limi	t24		
	3"		_		Plastic Index	x4		
	2"				Specific Gra	wity		
	1.5"				Resistance V	/alue <b>74</b>		
	1"	100			Cover		Expansion Pressure	
	3/4"	95			Thick	ness <b>5.1</b>		
	1/2"	84						
	3/8"	74			S	and Equivalent		
	No. 4	57			N	Jatural Moisture, %		
	No. 10	44			R	Resistivity	2,183	
	No. 16	39			р	H Factor	8.1	

HRB Classification

Remarks:

29

25

18

13

No. 40

No. 50

No. 100

Date Reported:	04/23/10									
Lab No.:	Soils10-01	<u>, RV-155-10, C-1</u>	76-10		-					
E.A.:	73475		Job E	Description:	US 50 fro	om LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 107	72+00.00		Route	US 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	39A			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Shr	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			_ 4		Silt, Sand	l, Gravel	4	
Cut Section		Fill Section			6		Lt. C	Clay	6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
·····										
	Sieve Size	% Passing			Liquid Lin	nit _	26			
	3"				Plastic Ind	ex _	9			
	2"				Specific G	ravity _				
	1.5"				Resistance	Value	47			
	1"				Cover	_		Expansion F	ressure	
	3/4"	100			Thic	kness	13.7			
	1/2"	92				_				
	3/8"	90				Sand Equiva	lent			
	No. 4	86				Natural Mois	sture, %			
	No. 10	80				Resistivity		2,571		
	No. 16	75				pH Factor		8.0		
	No. 40	65				HRB Classif	ication			
	No. 50	60								
	No. 100	49								
	No. 200	36								

Date Reported:	04/23/10	_							
Lab No.:	Soils10-01	, RV-178-10, C-	-199-10		_				
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00 to 20	).39		
Date Rec'd	2/9/10	_							
Samplers:	Hinton, W	- Vimer,		Station	"X2" 1077+	-00.00	Rout	e US 50	
Altamirano				Location fro	om oil (ft)	Lt.	F	Rt. 120'	
Sample No.:	40			County:	LYON				
Sample Type:					Depth (ft)	Boring Descri	iption		PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other [	0	(	Gravelly Silt	0	100
Vegetation:	None 🔳	Trees 🗆 S	Shrubs 🗖		2			2	
	Brushy 🛛	Grassy			4			4	
Cut Section		Fill Section			- 6			6	
Taken Through Oi	1 🗖	Taken on Shoulde	er 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
								16	
Submitted By:	Maynard	Hinton			18			18	
Title:	Engineeri	ing Tech III						20	
								•	
	Sieve Size	% Passing			Liquid Limit	2	8		
	3"				Plastic Index	1	1		
	2"				Specific Grav	ity			
	1.5"				Resistance Va	alue <b>6</b>	i <u> </u>		
	1"				Cover		Expansio	n Pressure	
	3/4"	100			Thickne	ess <u>19</u>	.5		
	1/2"	99							
	3/8"	97			Sa	nd Equivalent			
	No. 4	91			Na	tural Moisture, %	ó		
	No. 10	85			Re	sistivity	5,285		
	No. 16	81			pН	Factor	7.6		
	No. 40	72			HF	<b>RB</b> Classification			
	No. 50	68							
	No. 100	58							

Remarks:

No. 200

47

Date Reported:	04/23/10								
Lab No.:		, RV-156-10, (			-				
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00 to 20	0.39		
Date Rec'd	01/06/10								
Samplers:	Hinton, W	/imer,	-	Station	"X2" 1082+			US 50	
Altamirano			-	Location from		Lt	Rt.	25'	
Sample No.:	41			County:	LYON				
Sample Type:					Depth (ft)	Boring Descr	iption	······································	PSI
RV 🗖	Sub 🗆		DC 🗆	Other 🗆			Sand, Fine Gravel	0	150
Vegetation:	None 🔳	Trees 🗖	Shrubs 🗀		2		Very Lt. Clay	2	
	Brushy 🗆	Grassy 🛛			_ 4			4	
Cut Section		Fill Section			6			6	
Taken Through Oil		Taken on Shoul	der		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard	Hinton			18			18	
Title:	Engineeri	ng Tech III			20			20	
	Q: Q:			· · · · · · · · · · · · · · · · · · ·	·····				
	Sieve Size	% Passing	•		Liquid Limit	2			
	3"		-		Plastic Index	. 4	L		
	2"		-		Specific Grav				
	1.5"	100	-		Resistance Va	lue <u>7</u>		_	
	1"	100	-		Cover	-	Expansion	Pressure	
	3/4"	89	-		Thickne	ess <u>3</u> .	.8		
	1/2"	75	-		~				
	3/8"	71	-			nd Equivalent			
	No. 4	57	-			tural Moisture, %			
	<u>No. 10</u>	44	-			sistivity	1,887		
	No. 16	38	-		-	Factor	8.0		
	No. 40	28	-		HF	B Classification			
	No. 50	24	-						
	No. 100	18	-						
	No. 200	13	_						

\_\_\_\_

Date Reported: Lab No.:	04/23/10 Soils10-01.	, RV-157-10,	C-178-10						
E.A.:	73475	/		Description:	US 50 from I	Y 14.00 to 20.39			
Date Rec'd	01/06/10			-					
Samplers:	Hinton, W	'imer,		Station	"X2" 1082+0	0.00	Route	US 50	
Altamirano			_	Location fro	om oil (ft)	Lt.	 Rt.	25'	
Sample No.:	41A			County:	LYON				
Sample Type:					Depth (ft)	Boring Description			Р
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	0			0	15
Vegetation:	None	Trees 🗆	Shrubs 🗆		2			2	
· · · · · · · · · · · ·	Brushy 🗆	Grassy 🛛			4	Gravelly Sil	t, Lt. Clay	4	
Cut Section		Fill Section			6			6	
Taken Through Oi	1 🗆	Taken on Shou	lder 🗖		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard ]	Hinton			18			18	
Title:	Engineerir	ng Tech III			20			20	
								<u></u>	
	Sieve Size	% Passing	-		Liquid Limit	27	-		
	3"		_		Plastic Index	10	-		
	2"		-		Specific Gravit		-		
	1.5"		-		Resistance Valu	1e <u>22</u>	<b>-</b>		
	1"	400	_		Cover		Expansion P	ressure	
	3/4"	100	-		Thicknes	s <u>21.6</u>			
	1/2"	95	_						
	3/8"	92	-			d Equivalent			
	No. 4	86	_			ral Moisture, %			
	No. 10	76				stivity	2,092		
	No. 16	71	-		•	Factor	7.8		
	No. 40	60	_		HRI	<b>B</b> Classification			
	No. 50	56	_						
	No. 100	45	_						
	No. 200	34							

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-179-10, C	C-200-10		_					
E.A.:	73475		Job D	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	02/17/10									
Samplers:	Rigsby, W	'imer,		Station	<u>"X2" 1085-</u>	+00.00		Route	US 50	
				Location fro	om oil (ft)	Lt.		Rt.	109'	
Sample No.:	42			County:	LYON			_		
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	□ 0		Sand	y Silt	0	100
Vegetation:	None 🗆	Trees 🗆	Shrubs 🔳		2				2	
	Brushy 🗆	Grassy 🛛			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Should	der 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:	SPT taken 1	'-2 1/2 '		_	12				12	
					14				14	
					16				16	
Submitted By:	R. Wimer				18				18	
Title:	Engineeri	ng Tech I							20	
	Sieve Size	% Passing			Liquid Limit		39			
	3"				Plastic Index		14			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue —	16	_		
	1"				Cover			Expansion P	ressure	
	3/4"				Thickn	ess	17.2			
	1/2"									
	3/8"	100			Sa	ınd Equival	ent			
	No. 4	97			N	atural Mois	ture, %			
	No. 10	91			Re	esistivity		3,390		
	No. 16	87			pł	H Factor		8.4		
	No. 40	77			H	RB Classifi	cation			
	No. 50	74								
	No. 100	68								
	No. 200	63								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	<u>, RV-158-10, C-1</u>	79-10		<del></del>					
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 1092+	-00.00		Route	<u>US 50</u>	
Altamirano				Location fro	om oil (ft)	Lt		Rt.	25'	
Sample No.:	43			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	1 0		Silt, Sand,	Gravel	0	150
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🗆		2				2_	
	Brushy 🗆	Grassy			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:	Engineeri	ng Tech III							20	
					-				•	
	a: a:									
	Sieve Size	% Passing			Liquid Limit	<u></u>	24	-		
	3"	s			Plastic Index	. —	4	-		
	2"				Specific Grav	·		-		
	1.5"				Resistance Va	alue	76	-		
	1"	100			Cover			Expansion	Pressure	
	3/4"	95			Thickne	ess	4.5	-		
	1/2"	81								
	3/8"	71			Sa	nd Equivale	ent	·		
	No. 4	56			Na	utural Moist	ure, %			

1,582

8.1

Resistivity

pH Factor

HRB Classification

Remarks:

43

38

27

23 17

12

No. 10

No. 16

No. 40 No. 50

No. 100 No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-159-10,	C-180-10		_					
E.A.:	73475		Job E	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	/imer,	_	Station	"X2" 1092-	+00.00		Route	US 50	
Altamirano				Location fro	om oil (ft)	Lt.		Rt.	25'	
Sample No.:	43A			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem □	DC 🗆	Other D	□ 0				0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2					
	Brushy 🗆	Grassy 🛛			4		Gravelly S	ilt, Lt. Clay	4	
Cut Section		Fill Section							6	
Taken Through Oil		Taken on Shou	lder		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:				_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III							20	
	Sieve Size	% Passing			Liquid Limit		26			
	3"		-		Plastic Index	-	9	_		
	2"		-		Specific Grav	vity –				
	1.5"		-		Resistance V	alue	24			
	1"		-		Cover	_		Expansion I	Pressure	
	3/4"	100	-		Thickn	ness	21.0			
	1/2"	95				-				
	3/8"	91			Sa	and Equiva	lent			
	No. 4	77			N	atural Moi	sture, %			
	No. 10	67			R	esistivity		2,188		
	No. 16	62			pl	H Factor		8.1		
	No. 40	52	_		H	RB Classi	fication			
	No. 50	48	_							
	No. 100	40	_							
	No. 200	30	_							

Date Reported:	04/23/10									
Lab No.:	Soils10-01	<u>, RV-180-10,</u>	C-201-10							
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00 to	20.39			
Date Rec'd	02/17/10									
Samplers:	Rigsby, W	'imer	_	Station	"X2" 1095+	-00.00		Route	US 50	
				Location fro	om oil (ft)	Lt		Rt.	95'	
Sample No.:	44			County:	LYON					_
Sample Type:					Depth (ft)	Boring Des	cription			PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	<u> </u>		Sandy S	ilt	0	10
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗆		2				2	Blo
	Brushy 🗆	Grassy 🗆			4				4	Cour
Cut Section		Fill Section			6				6	6-9-
Taken Through Oi	1 🗆	Taken on Shou	ılder		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:	SPT taken 1	'-2 1/2'			12				12	
				<u>.</u>	14				14	
	- 1				16				16	
Submitted By:	R. Wimer				18				18	
Title:	Engineeri	ng Tech I			20				20	
	Sieve Size	% Passing	_		Liquid Limit		34			
	3"				Plastic Index		14			
	2"		_		Specific Grav	ity				
	1.5"		_		Resistance Va	alue	14			
	1"		_		Cover		F	Expansion	Pressure	
	3/4"		_		Thickne	ess 1	17.7			
	1/2"						–			
	3/8"		_		Sa	nd Equivalent	_			-
	No. 4	100	_		Na	atural Moisture,	%		-	_
	No. 10	97	_		Re	sistivity	_	969		-
	No. 16	93	_		pН	I Factor	_	7.9		-
	No. 40	85	_		HF	RB Classificatio	on –			-
							_			-
	No. 50	81	_							
	No. 50 No. 100	81 73	_							

Remarks:

-

Date Reported:	04/23/10	-								
Lab No.:	Soils10-01	l, RV-160-10, (	C <b>-181-10</b>		_					
E.A.:	73475	-	Job E	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, V	Vimer,	_	Station	"X2" 1102-	+00.00		Route	US 50	
Altamirano			_	Location fro	om oil (ft)	Lt		Rt.	25'	
Sample No.:	45			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub □	Chem 🗆	DC 🗆	Other C	0		Silt, Sand	, Gravel	0	150
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoul	der 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
· · · · · · · · · · · · · · · · · · ·		<b>.</b>								
	a. a.				<b>.</b>		25			
	Sieve Size	% Passing	•		Liquid Limit		25	-		
			-		Plastic Index	. —	5	_		
					Specific Grav		=0	_		
	1.5"		-		Resistance Va	alue				
	<u> </u>	100	•		Cover		~ ~	Expansion 1	Pressure	
	3/4"	100	•		Thickn	ess	3.5	_	· · · · · · ·	
	1/2"	83	-							
	3/8"	73	-			nd Equivale				
	<u>No. 4</u>	55	-			atural Moisti	ure, %			
	<u>No. 10</u>	42	•			esistivity		2,445		
	<u>No. 16</u>	37	-		•	I Factor		8.3		
	<u>No. 40</u>	27	•		HI	RB Classific	ation			
	<u>No. 50</u>	23	•							
	No. 100	18								

Remarks:

13

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	, RV-162-10,	<u>C-183-10</u>		_					
E.A.:	73475	_	Job D	escription:	US 50 from	LY 14.0	0 to 20.39			
Date Rec'd	01/06/10	_								
Samplers:	Hinton, V	Vimer,		Station	"X2" 1102-	+00.00		Route I	U <b>S 50</b>	
Altamirano				Location from	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	45A			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub □	Chem 🗆	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			4		Gravelly S	lt, Lt. Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shou	lder 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:		-			12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
									-	
	Sieve Size	% Passing			Liquid Limit		23			
	3"	701 ussing	-		Plastic Index	-	5			
	2"		-		Specific Grav	-	5			
	1.5"		_		Resistance Va	•	33	_		
	1.5		-		Cover			 Expansion P	TARGUTA	
	3/4"	100	-		Thickn	<b>ess</b>	18.1	Expansion F.	Casult	
	1/2"	99	-		THICKI		10,1			
	3/8"	96	-		Sa	ind Equiva	lent			
	No. 4	87	-			atural Mois				
	No. 10	75	-			esistivity		2,088		
	No. 16	67	_			H Factor		7.8		
	No. 40	54	-		•	RB Classif	ication	/ 10		
	No. 50	49	-		11					
	No. 100	39	-							

Remarks:

No. 200

29

Date Reported: Lab No.:	04/23/10 Soils10-0	_ 1, RV-163-10, (	C-184-10							
E.A.:	73475	<u>1, K ( -105-10, (</u>		Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	01/06/10	-								
Samplers:	Hinton, V	– Vimer.		Station	"X2" 1112-	+00.00		Route	US 50	
Altamirano		,	-	Location from		Lt.		- Rt.	25'	
Sample No.:	46		-	County:	LYON	_		- ·		
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	□ Chem □	DC 🗆	Other 🗆	0		Silt, Sand	, Gravel	0	150
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2				2	
	Brushy 🗆	l Grassy □			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil	1 🗖	Taken on Shoul	lder		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:		-		-	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineer	ing Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		26			
	3"		-		Plastic Index		6	-		
	2"		-		Specific Grav	vity		-		
	1.5"		-		Resistance V	alue	77	-		
	1"	100	-		Cover			- Expansion I	Pressure	
	3/4"	96	_		Thickn	ess	4.1			
	1/2"	82	-					_		
	3/8"	71	_		Sa	nd Equival	ent			
	No. 4	53	-		N	atural Mois	ture, %			
	No. 10	41	-		Re	esistivity		1,681		
	No. 16	36	_		pł	H Factor		8.3		
	No. 40	27	_		H	RB Classifi	cation			
	No. 50	23	_							
	No. 100	18	_							

Remarks:

No. 200

13

Date Rec'd       01/06/10       Route       US 50         Samplers:       Hinton, Wimer,       Station       "X2" 1112+00.00       Route       US 50         Attamirano       Location from oil (ft)       L.       Ru       Z5'         Sample No:       46A       Courty:       LVON       PSI         RV ■       Sub       Chem       DC       Other       0-       2-         Brushy © Grassy       Grassy       4-       Gravelly Silt, Lt. Clay       4-         Cut Section       Fill Section       6-       Fat Clay       6-         Gravel Depth (in)       Oil Depth (in)       10-       10-       10-         Remarks:       Exremely soft drilling.       12       12-       12-         Submitted By:       Maynard Hinton       12       12-       12-         Title:       Engineering Tech III       20-       20-       20-       20-         Sieve Size       % Passing       Liquid Limit       27       27         Submitted By:       Maynard Hinton       18-       10-       10-         1/2"       93       3/8"       90       Sand Equivalent       10-         No. 4       80       Cover	Date Reported: Lab No.:	04/23/10 Soils10-01	<u>, RV-164-10, (</u>	C-185-10		_					
Samplers:         Hinton, Winer,         Station         "X2" 1112+00.00         Route         US 50           Altamirano         Location from oil (ft)         Lt.         Rt.         25'           Sample No.:         46A         County:         LYON         Rt.         25'           Sample No.:         Sub         Chem         DC         Other         0         0         150           Sample Type:         Depth (ft)         Boring Description         PSI         2-         10-         10-         10-         10-         10-         10-         10-         10-         10-	E.A.:	73475		Job E	Description:	US 50 from	n LY 14.0	) to 20.39			
Attamirano         Location from oil (ft)         Lt         Rt.         25'           Sample No.:         46A         County:         LVON         PSI         PSI           Sample No.:         Attamirano         Depth (th)         Boring Description         PSI         PSI           RV         Sub         Chem         DC         Other         0-         0-         150           Vegetation:         None         Trees         Shrubs         0         2-         Gravelly Silt, Lt. Clay         4-           Cut Section         Fill Section         6-         6-         Fait Clay         6-         6-         7-         7-         6-         7-         7-         6-         7- <th>Date Rec'd</th> <th>01/06/10</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Date Rec'd	01/06/10									
Sample No.:         46A         County:         LYON           Sample Type:         Depth (ft)         Boring Description         PSI           RV         Sub         Chen         DC         Other         0-         0-         150           Vegetation:         None         Trees         Shrubs         2-         2-         2-         2-           Brushy         Grassy         -         -         -         2-         10-         10-         10-         10-         10-         10-         10-         10-         10-         10-         12-         14-         14-         14-         16-         18-         12-         12-         12-         12-         10-         12-         10-         10	Samplers:	Hinton, W	'imer,		Station	"X2" 1112	+00.00		Route	US 50	
Sample Type:         Depth (th)         Boring Description         PSI           RV         Sub         Chem         DC         Other         0-         2-           Brushy         Grassy         0         0-         2-         2-           Brushy         Grassy         0-         0-         2-         2-           Brushy         Grassy         0-         0-         150           Cut Section         Fill Section         0-         16-         16-           Taken Through Oil         Taken on Shoulder         8-         8-         8-           Gravel Depth (in)         Oil Depth (in)         10-         10-         10-           Remarks:         Exremely soft drilling.         12-         12-         12-           Submitted By:         Maynard Hinton         18-         18-         16-           Sieve Size         % Passing         Liquid Limit         27         20-         20-         20-           11t:         2"         0-         10         10-         10-         10-           11t:         2"         0-         10         10-         10-         10-         10-           11t:         10'	Altamirano				Location fro	m oil (ft)	Lt		Rt	25'	
RV         Sub         Chem         DC         Other         0-         150           Vegetation:         None         Trees         Shrubs	Sample No.:	46A			County:	LYON					
Vegetation:       None       Trees       Shrubs       2-       2-         Brushy       Grassy       -	Sample Type:					Depth (ft)	Borir	g Description			PSI
Brushy       Grassy	RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	150
Cut SectionFill SectionFill SectionFill SectionFill SectionTaken Through OilTaken on ShoulderImage: Section for the section of the section for the se	Vegetation:	None	Trees 🗆	Shrubs 🛛		2					
Size Size       % Passing       Liquid Limit       27 $3''$ $10^{}$ $10^{}$ $3''$ $10^{}$ $10^{}$ $3''$ $12^{}$ $12^{}$ $14^{}$ $14^{}$ $16^{}$ $16^{}$ $16^{}$ $16^{}$ $11^{}$ $12^{}$ $12^{}$ $12^{}$ $12^{}$ $12^{}$ $14^{}$ $16^{}$ $16^{}$ $16^{}$ $18^{}$ $20^{}$ $2^{}$ $20^{}$ $20^{}$ $2^{}$ $20^{}$ $20^{}$ $3''$ $100^{}$ $12^{}$ $3'''$ $100^{}$ $12^{}$ $3''''$ $100^{}$ $12^{}$ $3''''''$ $93^{}$ $20^{}$ $20^{}$ $3''''''''''''''''''''''''''''''''''''$		Brushy	Grassy 🗆			_ 4		Gravelly Sil	t, Lt. Clay	4	
Gravel Depth (in)      Oil Depth (in)      10-       10-         Remarks:       Exremely soft drilling.       12       12         14       14       14         16       16       16         Submitted By:       Maynard Hinton       18       20         Title:       Engineering Tech III       20       20         2"       20       20       20         3"       Plastic Index       10         2"       Specific Gravity	Cut Section		Fill Section			6		Fat C	lay		
Remarks:       Exremely soft drilling.       12       12         14       14       14         16       16         Submitted By:       Maynard Hinton       18         Title:       Engineering Tech III       20       20         Sieve Size       % Passing       Liquid Limit       27 $3"$ Plastic Index       10 $2"$ Specific Gravity       Expansion Pressure $1.5"$ Resistance Value       36 $1"$ Cover       Expansion Pressure $3/4"$ 100       Thickness       17.2 $3/8"$ 90       Sand Equivalent       Natural Moisture, %         No. 4       80       PH Factor       8.3         No. 40       60       HRB Classification       8.3	Taken Through Oil		Taken on Shoul	der 🔳		8				8	
Image: Submitted By:       Maynard Hinton       14       14         Submitted By:       Engineering Tech III       16       16         Title:       Engineering Tech III       20       20 $3''$ Plastic Index       10 $2''$ Specific Gravity $1.5''$ Resistance Value       36 $1''$ Cover       Expansion Pressure $3/4''$ 100       Thickness       17.2 $1/2''$ 93 $3/8''$ 90       Sand Equivalent         No. 4       80       Natural Moisture, %         No. 10       72       Resistivity       1,672         No. 16       68       pH Factor       8.3         No. 40       60       HRB Classification	Gravel Depth (in)		Oil Depth (in)		_	10				10	
Image: Size with the second secon	Remarks:	Exremely so	oft drilling.			12				12	
Submitted By: Fritle:Maynard Hinton Engineering Tech III $18-$ $20 18-$ $20-$ Sieve Size% PassingLiquid Limit $27$ Plastic Index $20 3"$ Plastic Index $10$ Specific Gravity $1.5"$ $1.5"$ Resistance Value $36$ 						14				14	
Fitle:       Engineering Tech III $20 20-$ Sieve Size       % Passing       Liquid Limit $27$ 3"       Plastic Index $10$ 2"       Specific Gravity         1.5"       Resistance Value $36$ 1"       Cover       Expansion Pressure $3/4$ " $100$ Thickness $17.2$ $3/8$ " $90$ Sand Equivalent $$ $3/8$ " $90$ Sand Equivalent $$ $No. 4$ $80$ Natural Moisture, % $$ $No. 10$ $72$ PH Factor $8.3$ $$ $No. 40$ $60$ HRB Classification $$						16				16	
Sieve Size% PassingLiquid Limit $27$ $3"$ Plastic Index $10$ $2"$ Specific Gravity $1.5"$ Resistance Value $36$ $1"$ CoverExpansion Pressure $3/4"$ $100$ Thickness $17.2$ $1/2"$ $93$ Sand Equivalent $3/8"$ 90Sand EquivalentNo. 4 $80$ Natural Moisture, %No. 10 $72$ Resistivity $1,672$ No. 16 $68$ pH Factor $8.3$ No. 40 $60$ HRB Classification	Submitted By:	Maynard	Hinton			18				18	
3"Plastic Index $10$ $2"$ Specific Gravity $1.5"$ Resistance Value $1''$ $36$ $1"$ Cover $3/4"$ $100$ $1/2"$ $93$ $3/8"$ $90$ No. 4 $80$ No. 10 $72$ No. 16 $68$ No. 40 $60$ No. 50 $55$ No. 100 $47$	Title:	Engineeri	ng Tech III			20				20	
3"Plastic Index $10$ $2"$ Specific Gravity $1.5"$ Resistance Value $1''$ $36$ $1"$ Cover $3/4"$ $100$ $1/2"$ $93$ $3/8"$ $90$ No. 4 $80$ No. 10 $72$ No. 16 $68$ No. 40 $60$ No. 50 $55$ No. 100 $47$		Sieve Size	% Passing			Liquid Limit	· · ·	27			
2"Specific Gravity Resistance Value $36$ Expansion Pressure $1''$ CoverExpansion Pressure $3/4"$ $100$ Thickness $17.2$ $1/2"$ $93$ Sand Equivalent $$			/010351115			-			-		
1.5"       Resistance Value       36         1"       Cover       Expansion Pressure         3/4"       100       Thickness       17.2         1/2"       93       Sand Equivalent       Sand Equivalent         No. 4       80       Natural Moisture, %       Resistivity       1,672         No. 10       72       Resistivity       1,672       PH Factor       8.3         No. 40       60       HRB Classification       HRB Classification								10	_		
1"       Cover       Expansion Pressure         3/4"       100       Thickness       17.2         1/2"       93       Sand Equivalent						-	·	36	-		
3/4"       100       Thickness       17.2         1/2"       93							<u> </u>		– Expansion P	ressure	
1/2"       93         3/8"       90         No. 4       80         No. 10       72         No. 16       68         No. 40       60         No. 50       55         No. 100       47		······	100				ness	17.2	I		
3/8"       90       Sand Equivalent         No. 4       80       Natural Moisture, %         No. 10       72       Resistivity       1,672         No. 16       68       pH Factor       8.3         No. 40       60       HRB Classification         No. 50       55       100       47							· · · ·				
No. 4       80       Natural Moisture, %         No. 10       72       Resistivity       1,672         No. 16       68       pH Factor       8.3         No. 40       60       HRB Classification         No. 50       55         No. 100       47						S	and Equiva	lent			
No. 10         72         Resistivity         1,672           No. 16         68         pH Factor         8.3           No. 40         60         HRB Classification           No. 50         55           No. 100         47							-		- 1. MILTON		
No. 16         68         pH Factor         8.3           No. 40         60         HRB Classification								·····, · ·	1.672		
No. 40         60         HRB Classification           No. 50         55           No. 100         47							-				
No. 50         55           No. 100         47								ication			
No. 100 47								-			
110. 200 37		No. 200	39								

Remarks:

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E.A.:       73475       Job Description:       US 50 from LY 14.00 to 20.39         Date Rec'd       01/06/10       Route       US 50         Samplers:       Hinton, Wimer,       Station       "X2" 1122+00.00       Route       US 50         Altamirano       Location from oil (ft)       Lt.       Rt.       25'         Sample No.:       47       County:       LYON       PSI         Sample No.:       47       County:       LYON       PSI         Sample Type:       Deth (ft)       Boring Description       PSI         RV       Sub       Cherm       DC       Other       0       Silt, Sand, Gravel       0       150         Vegetation:       None       Trees       Shrubs       2       2-       4<	Date Reported:	04/23/10	_						
Date Rec'd       01/06/10       Station       "X2" 1122+00.00       Route       US 50         Altamirano       Location from oil (ft)       Lt       Rt.       25'         Sample No:       47       County:       LYON       PSI         Sample Type:       Dc       Other       0-       Sitt, Sand, Gravel       0       150         RV       Sub       Chem       DC       Other       0-       Sitt, Sand, Gravel       0       150         Vegetation:       None       Trees       Shrubs       2-         4-       4-         Cut Section       Fill Section       6       8       8       6       6       10         Taken Through Oil       Taken on Shoulder       8       8       10       10         Remarks:	Lab No.:	Soils10-01	, RV-165-10,	C-186-10					
Samplers:       Hinton, Wimer,       Station       "X2" 1122+00.00       Route       US 50         Altamirano       Location from oil (ft)       Lt.       Rt.       25'         Sample No.:       47       County:       LYON       PSI         Sample No.:       47       Depth (ft)       Boring Description       PSI         RV       Sub       Chem       DC       Other       0       Silt, Sand, Gravel       0       150         Vegetation:       None       Trees       Shrubs       2       -2- <th< th=""><th>E.A.:</th><th>73475</th><th></th><th>Job D</th><th>Description:</th><th>US 50 from I</th><th>LY 14.00 to 20.39</th><th></th><th></th></th<>	E.A.:	73475		Job D	Description:	US 50 from I	LY 14.00 to 20.39		
Altamirano       Location from oil (ft)       Lt.       Rt. $25'$ Sample No.:       47       County:       LYON       PSI         Sample Type:       Depth (ft)       Bering Description       PSI         RV       Sub       Chem       DC       Other       0       Silt, Sand, Gravel       0       150         Vegetation:       None       Trees       Shrubs       2       2       2       2       2       2       2       2       2       2       2       2       2       150         Vegetation:       None       Trees       Shrubs       2       2       2       2       2       150         Vegetation:       Fill Section       6       6       6       6       6       6       16 <th>Date Rec'd</th> <th>01/06/10</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Date Rec'd	01/06/10							
Sample No.:         47         County:         LYON           Sample Type:         Depth (th)         Boring Description         PSI           RV         Sub         Chem         DC         Other         0         Silt, Sand, Gravel         0         150           Vegetation:         None         Trees         Shrubs         2          2-           Brushy         Grassy         -         4         4         4         4           Cut Section         Fill Section         6         6         8         8         8           Gravel Depth (in)         Oil Depth (in)         10         12         12         14           Remarks:         -         14         14         14           Submitted By:         Maynard Hinton         18         18           Title:         Engineering Tech III         20         20         20           3"	Samplers:	Hinton, V	Vimer,	_	Station	<u>"X2" 1122+0</u>	0.00	Route US 50	
Sample Type:       Depth (h)       Boring Description       PSI         RV       Sub       Chem       DC       Other       0       Silt, Sand, Gravel       0       150         Vegetation:       None       Trees       Shrubs       2       2-       150       3-       3-       3-       3-       3-       3-       3-       4-       4-       4-       4-       4-       4-       4-       4-       10-       10       10       10       10       10       10       12       14-       14-       14-       14-       14-       14-       16       18       18       18       18       20       20       20       20       20       20       20       20       20       20       20	Altamirano			_	Location fro	om oil (ft)	Lt	Rt. 25'	-
RV       Sub       Chem       DC       Other       0-       Silt, Sand, Gravel       0-       150         Vegetation:       None       Trees       Shrubs       2-	Sample No.:	47			County:	LYON			
Vegetation:       None       Trees       Shrubs       2-         Brushy       Grassy       4-       4-         Cut Section       Fill Section       6-       6-         Taken Through Oil       Taken on Shoulder       8-       8-         Gravel Depth (in)       Oil Depth (in)       10-       10-         Remarks:       12-       12-       12-         Submitted By:       Maynard Hinton       18-       18-         Title:       Engineering Tech III       20-       20-         Sieve Size       % Passing       Liquid Limit       25 $\frac{3"}{1.5"}$ Resistance Value       74       Expansion Pressure $\frac{3/4"}{98}$ 98       Thickness       5.1       Expansion Pressure	Sample Type:					Depth (ft)	Boring Description		PSI
Brushy       Grassy       4       4         Cut Section       Fill Section       6       6         Taken Through Oil       Taken on Shoulder       8       8         Gravel Depth (in)       Oil Depth (in)       10       10         Remarks:       12       12       12         Itemarks:       12       14       14         Submitted By:       Maynard Hinton       18       16         Title:       Engineering Tech III       20       20       20         Sieve Size       % Passing       Liquid Limit       25       6         2"       Specific Gravity       74       1.5"       1.5"       Expansion Pressure         3/4"       98       Thickness       5.1	RV 🗖	Sub □	Chem	DC 🗆	Other 🗆	0	Silt, San	d, Gravel 0	150
Cut Section       Fill Section       6         Taken Through Oil       Taken on Shoulder       8         Gravel Depth (in)       Oil Depth (in)       10         Remarks:       12       12         Identified By:       Maynard Hinton       18         Title:       Engineering Tech III       20         Sieve Size       % Passing       Liquid Limit       25         3"       Plastic Index       6         2"       Specific Gravity       74         1.5"       Resistance Value       74         1/2"       88       Thickness       5.1	Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2		2	
Taken Through Oil $\Box$ Taken on Shoulder88Gravel Depth (in)Oil Depth (in)1010Remarks:1212141414Submitted By:Maynard Hinton18Title:Engineering Tech III2020202020202020202020202020202121222020202020202020202020202020202121222123<		Brushy 🗆	Grassy 🛛			4		4	
Gravel Depth (in)       Oil Depth (in)       10         Remarks:       12         14       14         16       16         Submitted By:       Maynard Hinton         Title:       Engineering Tech III         20       20         20       20         20       20         21       18         18       18         20       20         20       20	Cut Section		Fill Section			6		6	
Remarks:       12       12       12         Image: 14       14       14       14         Submitted By:       Maynard Hinton       18       16         Title:       Engineering Tech III       20       20       20         Sieve Size       % Passing       Liquid Limit       25       20         3"       Plastic Index       6       6         2"       Specific Gravity           1.5"       Resistance Value       74          1.5"       Cover       Expansion Pressure          3/4"       98       Thickness       5.1	Taken Through Oil		Taken on Shou	lder		8		8	
Image: state of the system	Gravel Depth (in)		Oil Depth (in)		_	10		10	
Submitted By:         Maynard Hinton         16           Title:         Engineering Tech III         20         20           Sieve Size         % Passing         Liquid Limit         25           3"         Plastic Index         6           2"         Specific Gravity            1.5"         Resistance Value         74           1"         100         Cover         Expansion Pressure           3/4"         98         Thickness         5.1	Remarks:	. <u> </u>				12		12	
Submitted By:       Maynard Hinton       18         Title:       Engineering Tech III       20       20         Sieve Size       % Passing       Liquid Limit       25         3"       Plastic Index       6         2"       Specific Gravity       15"         1.5"       Resistance Value       74         1"       100       Cover       Expansion Pressure         3/4"       98       Thickness       5.1						14		14	
Title:Engineering Tech III $20 20-$ Sieve Size% PassingLiquid Limit $25$ 3"Plastic Index $6$ 2"Specific Gravity1.5"Resistance Value $74$ 1"100Cover $3/4$ " $98$ $1/2$ " $88$						16		16	
Sieve Size       % Passing       Liquid Limit       25         3"       Plastic Index       6         2"       Specific Gravity         1.5"       Resistance Value       74         1"       100       Cover       Expansion Pressure         3/4"       98       Thickness       5.1	Submitted By:	Maynard	Hinton			18		18	
3"       Plastic Index       6         2"       Specific Gravity         1.5"       Resistance Value       74         1"       100       Cover       Expansion Pressure         3/4"       98       Thickness       5.1         1/2"       88       1       1	Title:	Engineeri	ing Tech III			20		20	
3"       Plastic Index       6         2"       Specific Gravity         1.5"       Resistance Value       74         1"       100       Cover       Expansion Pressure         3/4"       98       Thickness       5.1         1/2"       88       1       1		Sieve Size	% Passing			Liquid Limit	25		
2"         Specific Gravity           1.5"         Resistance Value         74           1"         100         Cover         Expansion Pressure           3/4"         98         Thickness         5.1           1/2"         88				-		-	6		
1.5"         Resistance Value         74           1"         100         Cover         Expansion Pressure           3/4"         98         Thickness         5.1           1/2"         88		2"		-			<b></b>	_	
1"         100         Cover         Expansion Pressure           3/4"         98         Thickness         5.1           1/2"         88		1.5"		-		-			
3/4"         98         Thickness         5.1           1/2"         88			100	-		Cover		Expansion Pressure	
1/2" 88		3/4"	98	-		Thicknes	s <b>5.1</b>	-	
3/8" 76 Sand Equivalent		1/2"	88	-					
		3/8"	76	_		Sand	d Equivalent		

Natural Moisture, %

HRB Classification

Resistivity

pH Factor

1,577

7.9

Remarks:

58

44

38

29

26

21 17

No. 4

No. 10

No. 16

No. 40

No. 50

No. 100

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-166-10, C-1	87-10		_					
E.A.:	73475		Job I	Description:	US 50 fro	m LY 14.0	0 to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 112	2+00.00		Route I	U <b>S 50</b>	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	47A			County:	LYON					
Sample Type:					Depth (ft)	Borin	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗖	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			4		Lt. Silt	y Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
									-	
	Sieve Size	% Passing			Liquid Lim	_	32	<u> </u>		
	3"				Plastic Inde		15			
	2"				Specific Gr	· —		_		
	1.5"				Resistance	Value	25	_		
	1"				Cover			Expansion Pr	essure	
	3/4"	100			Thicl	cness _	20.7	<u> </u>		
	1/2"	98								
	3/8"	94			:	Sand Equiva	lent	<u></u>		
	No. 4	89			]	Natural Mois	sture, %			
	No. 10	82			]	Resistivity		894		
	No. 16	78				pH Factor		8.0		
	No. 40	71			]	HRB Classif	ication			
	No. 50	68								
	No. 100	61								
	No. 200	51								

Remarks:

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Date Reported:	04/23/10	_							
Lab No.:	Soils10-01	l, RV-167-10,	C-188-10		-				
E.A.:	73475	_	Job I	Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	01/06/10	_							
Samplers:	Hinton, V	Vimer,	_	Station	"X2" 1131+	00.00	Route	US 50	
Altamirano			_	Location from	m oil (ft)	Lt	Rt.	25'	
Sample No.:	48			County:	LYON				
Sample Type:					Depth (ft)	Boring Description			PSI
RV 🗖	Sub □	Chem	DC 🗆	Other 🗆	0	Silt, Sand	d, Gravel	0	150
Vegetation:	None 🔳	Trees 🗖	Shrubs 🛛		2			2	
	Brushy 🗆	Grassy 🛛			4			4	
Cut Section		Fill Section			6			6	
Taken Through Oi		Taken on Shoul	lder 🔳		8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	
					16			16	
Submitted By:	Maynard	Hinton			18			18	
Title:	Engineeri	ing Tech III			20			20	
		1							
	Sieve Size	% Passing	-		Liquid Limit	27			
	3"		-		Plastic Index	8	<u> </u>		
	2"		-		Specific Grav	•	_		
	1.5"		-		Resistance Va	lue <u>77</u>			
	1"	100	-		Cover		Expansion I	ressure	
	3/4"	98	-		Thickne	ess <u>4.1</u>		<u> </u>	
	1/2"	83	-						
	3/8"	73	-		Sa	nd Equivalent			
	No. 4	54	_		Na	tural Moisture, %			
	No. 10	41	-		Re	sistivity	1,506		
	No. 16	36	-		pН	Factor	8.0		
	No. 40	27	-		HF	B Classification			
	No. 50	24	_						
	No. 100	19							

Remarks:

15

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-168-10, C-18	89-10		_					
E.A.:	73475		Job E	Description:	US 50 from	n LY 14.0	) to 20.39			
Date Rec'd	01/06/10									
Samplers:	Hinton, W	'imer,		Station	"X2" 1131	+00.00		Route	JS 50	
Altamirano				Location fro	m oil (ft)	Lt.		Rt.	25'	
Sample No.:	48A			County:	LYON					
Sample Type:					Depth (ft)	Borir	ng Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🛛 Shr	ubs 🛛		2					
	Brushy 🗆	Grassy 🗆					Lt. Silt	y Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
<u> </u>										
	Sieve Size	% Passing			Liquid Limi	t	32	_		
	3"				Plastic Index	к <u> </u>	16	-		
	2"				Specific Gra	wity		_		
	1.5"				Resistance V	/alue	29	_		
	1"	· · · · ·			Cover			Expansion Pr	essure	
	3/4"	100			Thick	ness	19.4			
	1/2"	98								
	3/8"	95			S	and Equival	lent			
	No. 4	89			Ν	Vatural Mois	ture, %			
	No. 10	81			R	Resistivity		1,104		
	No. 16	76			р	H Factor		8.0		
	No. 40	65			H	IRB Classifi	cation			
	No. 50	61								
	No. 100	50								
	No. 200	38								

Remarks:

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Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-181-10, C	C-202-10		_					
E.A.:	73475		Job I	Description:	US 50 from	m LY 14.0	0 to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2" 112	6+50.00		Route	US 50	
				Location from	om oil (ft)	Lt	20'	Rt.		
Sample No.:	49			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PS
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	<u> </u>		Silt, San	d, Gravel	0	30
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆 👘	Taken on Should	der 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard l	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Lim	it _	25			
	3"				Plastic Inde	x _	6			
	2"				Specific Gra	avity _				
	1.5"				Resistance '	Value _	79			
	1"	100			Cover			Expansion P	ressure	
	3/4"	96			Thick	mess	3.5			
	1/2"	81						_		
	3/8"	68			S	Sand Equiva	lent			
	No. 4	48			l	Natural Mois	sture, %			
	No. 10	34			I	Resistivity		2,358		
	No. 16	29				oH Factor		8.1		
	No. 40	21			I	HRB Classif	ication			
	No. 50	18								
	No. 100	14								
	No. 200	10								

Date Reported:	04/23/10	DX/ 102 10	C 000 10						
Lab No.:		RV-182-10,			-	T T7 1 4 0			
E.A.:	73475		Job I	Description:	<u>US 50 Iro</u>	m LY 14.0	0 to 20.39		
Date Rec'd	2/9/10			~ .		< . <b>.</b>			
Samplers:	Hinton, La	rracuente	_	Station	<u>"X2" 112</u>			Route <u>US 50</u>	
Sample No.:	49A		-	Location fro	om oil (ft) LYON	Lt	20'	Rt	_
	<b>-</b> 77A			County.		Deel			
Sample Type: RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [		Bon	ng Description	0	3
Vegetation:		Trees	Shrubs		2			2	
vegetation.	Brushy $\Box$		Silluos 🗆		2 4		C	lay 4	
Cut Section	-	-			- 4			6	
Taken Through Oi		Taken on Shou			8			8	
Gravel Depth (in)		Oil Depth (in)			10			10	
Remarks:		o		_	12			12	
	• • • • • • • •				- 14			14	
								16	
Submitted By:	Maynard I	Hinton			- 18			18	
Title:	Engineerin							20	
				<b>11188</b> ( ) ( ) ( )					
	Sieve Size	% Passing	_		Liquid Lim	it _	35	_	
	3"		_		Plastic Inde	x	18	_	
	2"		_		Specific Gr	avity _		_	
	1.5"		_		Resistance	Value	24		
	1"	100	_		Cover			Expansion Pressure	
	3/4"	98	_		Thick	cness _	21.0		
	1/2"	98	_						
	3/8"	96	-		:	Sand Equiva	llent		
	No. 4	92	_		]	Natural Moi	sture, %		_
	No. 10	87	_		]	Resistivity		1,883	_
	No. 16	83	_		-	pH Factor		7.9	_
	No. 40	74	-		]	HRB Classif	fication		
	No. 50	71	-						
	No. 100	63	_						
	No. 200	53	_						

Date Reported:	04/23/10								
Lab No.:		, RV-183-10,	C-204-10		-				
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	) to 20.39		
Date Rec'd	2/9/10								
Samplers:	Hinton, La	arracuente	_	Station	"X2" 1117-	+00.00		Route	US 50
			_	Location fro		Lt	20'	Rt	
Sample No.:	50			County:	LYON				
Sample Type:					Depth (ft)	Borin	g Description		PSI
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	- 0		Silt, Sar	id, Gravel	0 350
Vegetation:		Trees 🛛	Shrubs 🛛		2				2
	Brushy 🛛				- 4				4
Cut Section		Fill Section			6				6
Taken Through Oil		Taken on Shou	lder		8				8
Gravel Depth (in)		Oil Depth (in)		_	10				10
Remarks:					_ 12				12
					- 14				14
					16				16
Submitted By:	Maynard				18				18
Title:	Engineeri	ng Tech III			20				20
		0/ Drazina			T:		25		
	Sieve Size	% Passing	-		Liquid Limit		25		
	<u> </u>		-		Plastic Index	., —	3		
			_		Specific Grav	-	77		
	<u> </u>	100	_		Resistance Va	alue	77	—	
		100	-		Cover		4.1	Expansion P	ressure
	<u> </u>	<u>98</u> 82	-		Thickn	ess	4.1	<u> </u>	
			<u></u>		0		4		
	3/8"	<u>71</u> 48	_			nd Equival		······	
	No. 4		-			atural Mois	ture, %	1 (52	
	No. 10	33	_			esistivity		1,653	<u>_</u>
	No. 16	27	-		-	I Factor		8.3	
	No. 40	20	_		HI	RB Classifi	cation	·····	<u> </u>
	No. 50	17	-						
	No. 100	13	_						
	No. 200	9							

#### Remarks:

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Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-184-10, C	C-205-10							
E.A.:	73475		Job E	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2" 1117+	+00.00		Route	US 50	
	<b>-</b>			Location fro	om oil (ft)	Lt.	20'	Rt.		
Sample No.:	50A		-	County:	LYON					-
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	0				0	350
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗆		2				<u> </u>	
	Brushy 🗆	Grassy 🛛			4				4	Sandy
Cut Section		Fill Section			6		Cla	ıy	6	Clay
Taken Through Oi	1 🗆	Taken on Shoul	der 🔳		8				8	1
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III							20	
	<u> </u>	0/ Densine		<u>. Waatii ka ka aa aa aa aa</u>	T : : J T : : A		33			
	Sieve Size	% Passing	•		Liquid Limit			_		
	<u>3"</u> 2"				Plastic Index	., —	16	-		
	1.5"		-		Specific Grav Resistance Va	-	26	-		
	1.5		-				20	- r	<b>)</b>	
	3/4"	100	-		Cover		20.4	Expansion F	ressure	
	<u> </u>	<u>100</u> 95	-		Thickn	ess	20.4			
	3/8"	93 92	-		G.					
		92 87	-			nd Equival				-
	No. 4		-			atural Moist	lure, %	1.065	· · · · · · · · · · · · · · · · · · ·	-
	No. 10	78 73	-			esistivity I Factor		<u>1,965</u> 8.1		-
	No. 16	63	-		-	n Factor RB Classifi	action	0.1		-
	<u>No. 40</u> No. 50	<u> </u>	-		HI.		cation			-
	No. 100	51	-							
	No. 200	40								
	INO. 200	I 40								

Date Reported:	04/23/10									
Lab No.:		<u>, RV-185-10, C-2</u>			-					
E.A.:	73475		Job D	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2"1107			Route I	J <b>S 50</b>	
				Location from	1	Lt.	40'	Rt.		
Sample No.:	51			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV	Sub 🗆		DC 🗆	Other 🗆	0				0	300
Vegetation:	None 🔳	Trees D Sh	irubs 🗆		2		Cla	ау	2	
	Brushy 🗆	Grassy			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi	t	30			
	3"				Plastic Index		14	_		
	2"				Specific Gra			<del></del>		
	1.5"	100			Resistance V	· _	17	_		
	1"	98			Cover			Expansion Pr	essure	
	3/4"	97			Thick	ness	23.2		•••••	
	1/2"	91								
	3/8"	89			S	and Equival	ent			
	No. 4	82				latural Moist				
	No. 10	75				Resistivity	····, · ·	3,067	·	
	No. 16	70				H Factor		8.1		
	No. 40	59			-	IRB Classifi	cation			
	No. 50	54								
	No. 100	46								
	No. 200	39								

Remarks:

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Date Reported:	04/23/10									
Lab No.:		<u>, RV-186-10, C-2</u>			-					
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2"1097+			Route <u>U</u>	IS 50	
Sample No.:	52			Location from County:	m oil (ft) LYON	Lt	40'	Rt		
Sample Type:				county.	Depth (ft)	Boring	g Description			PSI
RV	Sub 🗆	Chem	DC 🗆	Other 🗆	· · · · · · · · · · · · · · · · · · ·	Dormg		d, Gravel	0	300
Vegetation:			rubs 🗆		- 2			ay	2	500
vegetation.	Brushy				4		C	ay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)	_		10				10	
Remarks:	<del></del>			-	12				10	
romands.					- 12				14	
<u></u>					- 16				16	
Submitted By:	Maynard	 Hinton			- 18				18	
Title:		ng Tech III			- 20				20	
<u> </u>	0	04 D			<b>.</b>					
	Sieve Size	% Passing			Liquid Limit		30			
	3"				Plastic Index	·	13			
	2"				Specific Grav			_		
	1.5"	100			Resistance V	alue	22	—		
	1"	100			Cover		<b>31</b> (	Expansion Pro	essure	
	3/4"	95			Thickn	ess —	21.6			
	1/2"	90			0	. 1				
	3/8"	88				nd Equivale				
	<u>No. 4</u>	84				atural Moist	ure, %	2.740		
	No. 10	<u> </u>				esistivity		2,740		
	No. 16	<u>77</u> 70			-	I Factor		7.5		
	<u>No. 40</u>	67			H.	RB Classific	ation	<b>H</b> · · · ·		
	No. 50 No. 100	60								
		48								
	No. 200	40								

Date Reported:	04/23/10									
Lab No.:		, RV-187-10,								
E.A.:	73475		Job	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente	-	Station	"X2"1095			Route US	5 50	
<u>.</u>			-	Location fr	. ,	Lt	135'			
Sample No.:	53			County:	LYON					
Sample Type:				_	Depth (ft)	Borii	ng Description			PSI
RV 🗖	Sub 🗆		DC C						0	100
Vegetation:		Trees 🗆	Shrubs 🗆	]	2		Silty		2	
	Brushy 🗆				_ 4		Ŝa	nd	4	
Cut Section					6				6	
Taken Through Oi		Taken on Shoul	der 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton							18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit	t _	24	_		
	3"		-		Plastic Index	<u>د</u>	6	_		
	2"		_		Specific Gra	vity		_		
	1.5"		_		Resistance V	/alue	29	_		
	1"		_		Cover			Expansion Pres	sure	
	3/4"		_		Thick	ness	14.2			
	1/2"									
	3/8"	100	-		S	and Equiva	lent			
	No. 4	99	_			- Iatural Mois				
	No. 10	93	_		R	esistivity		4,902		
	No. 16	86	-			H Factor		8.0	<u> </u>	
	No. 40	72	-		_	IRB Classif	ication			
	No. 50	66	-							
	No. 100	53	-							
			-							

Remarks:

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	1, RV-188-10, C-2	209-10		_					
E.A.:	73475	_	Job E	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10	_								
Samplers:	Hinton, L	arracuente		Station	"X2"1087+	00.00		Route	US 50	
				Location fro	• •	Lt	40'	Rt.		
Sample No.:	54			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	0				0	300
Vegetation:	None	Trees 🗆 Sh	rubs 🗆		2		Sandy	Clay	2	
<b></b>	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder	•		8				8	
Gravel Depth (in)	<u></u>	Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineer	ing Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		41			
	3"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Plastic Index		22	-		
	2"				Specific Grav	itv —				
	1.5"				Resistance Va	·	24	-		
	1"				Cover			– Expansion	Pressure	
	3/4"				Thickne	ess	21.0	Subanoron		
	1/2"	100			1 mekin			-		
	3/8"	99			Sa	nd Equival	ent			

Natural Moisture, %

HRB Classification

Resistivity

pH Factor

3,922

7.9

Remarks:

No. 4

No. 10

No. 16

No. 40

No. 50

No. 100

No. 200

96

91

88

78

74

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	. RV-189-10, C-2	10-10		<u>.</u>					
E.A.:	73475	_	Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10	_								
Samplers:	Hinton, L	arracuente		Station	"X2"1082+	00.00		Route <u>U</u>	JS 50	
				Location from	m oil (ft)	Lt	145'			
Sample No.:	55			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub □	Chem	DC 🗆	Other 🗆	0		Silt,	Sand	0	100
Vegetation:	None 🔳	Trees 🗆 Shi	rubs 🗆		2		Very I	.t. Clay	2	
	Brushy 🗆	Grassy 🗆			4		Sa	nd	4	
Cut Section		Fill Section			6				6	
Taken Through Oil	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineer	ing Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		32			
	3"				Plastic Index		12			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue	24			
	1"	ļ			Cover			Expansion Pr	essure	
	3/4"	ļ			Thickn	ess	15.3			
	1/2"	ļ								
	3/8"	100			Sa	and Equivale	ent			
	<u>No. 4</u>	99			N	atural Moist	ure, %			
	No. 10	94			Re	esistivity		7,278		
	No. 16	89			pł	H Factor		7.5		
	No. 40	77			Н	RB Classific	cation			
	No. 50	72								
	No. 100	62								

Remarks:

50

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01,	, RV-190-10, C	C-211-10		_					
E. <b>A.</b> :	73475		Job I	Description:	US 50 fro	m LY 14.0	0 to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	irracuente		Station	"X2"1077	/+00.00		Route	US 50	
				Location fro	om oil (ft)	Lt.	40'	Rt.		
Sample No.:	56			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PS
RV 🗖	Sub 🗆	Chem	DC 🗆	Other [	0		Silt San	d Gravel	0	30
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗆		2		Very I	Lt. Clay	2	
	Brushy 🗖	Grassy 🗖			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through O	il 🗆 '	Taken on Should	ler 📕		8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:					12				12	
					14				14	
									16	
Submitted By:	Maynard I	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Lim	it	27			
	3"				Plastic Inde	-	11			
	2"				Specific Gr	avity -				
	1.5"	,			Resistance		28			
	1"				Cover	-		 Expansion P	ressure	
	3/4"	100			Thick	cness	19.7	•		
	1/2"	99				-				
	3/8"	98			:	Sand Equiva	alent			
	No. 4	96				Natural Moi		· · · · ·		
	No. 10	90				Resistivity	-	2,770		
	No. 16	86				pH Factor		7.8		
	No. 40	74				HRB Classi:	fication			
	No. 50	70								
	No. 100	58								
	No. 200	44								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-191-10, C	-212-10		-					
E.A.:	73475		Job E	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	<u>2/9/10</u>									
Samplers:	Hinton, La	arracuente		Station	"X2"1072+	00.00		Route <u>U</u>	J <b>S 50</b>	
				Location from		Lt.	140'	Rt		
Sample No.:	57			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	- 0		Silt,Sand,V	ery Lt Clay	0	100
Vegetation:	None 🔳	Trees 🗆 👷	Shrubs 🗆		2				2	
	Brushy	Grassy 🗆			_ 4		Gravel	ly Sand	4	∠
Cut Section		Fill Section	]		6				6	← <sub>Silt</sub>
Taken Through O	il 🗆	Taken on Should	ler 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					_ 12				12	
			AT 201 - 5		14				14	
					16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:	Engineeri	ng Tech III			20				20	
	· · · _							······································		
	Sieve Size	% Passing			Liquid Limit		23	_		
	3"				Plastic Index		3			
	2"				Specific Grav	vity		_		
	1.5"				Resistance Va	alue	64			
	1"				Cover			Expansion Pr	essure	
	3/4"				Thickn	ess	6.0			
	1/2"									
-	3/8"	100			Sa	and Equival	ent			
	No. 4	98			Na	atural Mois	ture, %			
	No. 10	89			Re	esistivity		7,874		
	No. 16	83			pł	H Factor		6.9		
					មា	RB Classif	ication			
	No. 40	69			11					
		69 62			11					
	No. 40									

Remarks:

NDOT 027, Rev. 05-01

Date Reported:	04/23/10										
Lab No.:	Soils10-01	, RV-193-10,	C-21	4-10		_					
E.A.:	73475			Job D	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10										
Samplers:	Hinton, L	arracuente	_		Station	"X2"1067+	00.00		Route	US 50	
					Location fro	m oil (ft)	Lt.	40'	Rt.		
Sample No.:	58				County:	LYON					
Sample Type:						Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆		DC 🗆	Other 🗆	0		Silty Sa	andy	0	300
Vegetation:	None	Trees 🛛	Shru	ibs 🗆		2		Clay	y	2	
	Brushy 🗆	Grassy 🛛				4				4	
Cut Section		Fill Section				6				6	
Taken Through Oi	1 🗆	Taken on Shou	ılder			8				8	
Gravel Depth (in)		Oil Depth (in)			_	10				10	
Remarks:						12				12	
						14				14	
						16				16	
Submitted By:	Maynard	Hinton				18				18	
Title:	Engineeri	ng Tech III				20				20	
<u>.</u>										·	
	Sieve Size	% Passing	_			Liquid Limit		26			
	3"					Plastic Index		9			
	2"					Specific Grav	rity				
	1.5"					Resistance Va	alue	32			
	1"					Cover			Expansion	Pressure	
	3/4"	100	_			Thickn	ess	18.4			
	1/2"	98									

Sand Equivalent	
Natural Moisture, %	
Resistivity	3,436
pH Factor	7.2
HRB Classification	

Remarks:

3/8"

No. 4

No. 10

No. 16

No. 40

No. 50 No. 100

No. 200

**97** 

93

82 76

64

59

Date Reported:	04/23/10								
Lab No.:		, RV-194-10, C			-				
E.A.:	73475	-	Job D	escription:	US 50 from	n LY 14.00	) to 20.39		<b></b>
Date Rec'd	2/9/10	-							
Samplers:	Hinton, L	arracuente		Station	"X2"1062			Route US 50	
				Location fro	. ,	Lt	145'	Rt	
Sample No.:	59			County:	LYON				
Sample Type:			_	_	Depth (ft)	Borin	g Description		PSI
RV 🗖	Sub 🗆		DC 🗆	Other [	0		Silty		100
Vegetation:			Shrubs 🛛		2			-	
	Brushy 🗆				_ 4		Sand		
Cut Section		Fill Section			6			e	
Taken Through Oil		Taken on Should	ler 🔳		8			8	;
Gravel Depth (in)		Oil Depth (in)		_	10			10	)
Remarks:					12			12	2
					14			14	<b>⊢</b>
					16			16	5
Submitted By:	Maynard	Hinton			18			18	3
Title:	Engineeri	ng Tech III			20			20	)
	Sieve Size	% Passing	s denderie i	12 10 ko d - 1	Liquid Limi	it	21		
	3"	, , , , , , , , , , , , , , , , , , ,			Plastic Inde		NP		
	2"				Specific Gra			_	
	1.5"				Resistance Y	· –	69		
	1"				Cover			Expansion Pressure	
	3/4"	100			Thick	mess	4.9	Expansion ressure	
	1/2"	99			THE		-102		
	3/8"	97			c	Sand Equival	lent		
	No. 4	92				Natural Mois		files	
	No. 10	82				Resistivity		5,271	
	No. 16	76				oH Factor		7.4	
	No. 40	64			-	HRB Classifi	ication		

Remarks:

No. 50

No. 100

No. 200

58 42

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-195-10,	C-216-10		-					
E.A.:	73475	_	Job D	Description:	US 50 from	LY 14.00 to	20.39			
Date Rec'd	2/9/10	_								
Samplers:	Hinton, L	arracuente	_	Station	"X2"1057+	00.00		Route	US 50	
			_	Location from	m oil (ft)	Lt	40'	Rt.		
Sample No.:	60			County:	LYON					
Sample Type:					Depth (ft)	Boring De	escription			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	0		Silty S	andy	0	300
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2		Cla	у	2	
	Brushy 🗆	Grassy 🗆			4					€-
Cut Section		Fill Section			6				6	Clay
Taken Through Oi		Taken on Shou	lder		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ing Tech III			20				20	
······································										
	Sieve Size	% Passing			Liquid Limit		21			
	3"		-		Plastic Index		4	-		
	2"				Specific Grav	ity		-		
	1.5"		_		Resistance Va		31	-		
	1"		-		Cover			- Expansion l	Pressure	
	3/4"	100	-		Thickne	ess	18.8	-		
	1/2"	99	-					-	<u></u>	
	3/8"	97			Sa	nd Equivalent				
	No. 4	91	-			itural Moisture				•
	No. 10	83				sistivity		4,587		
	No. 16	78	-			I Factor		7.6		•
	No. 40	66	-		-	RB Classificati	ion			•
	No. 50	60								•
	No. 100	45	-							

Remarks:

31

No. 200

Date Reported:	04/23/10	-	3 315 10							
Lab No.:		1, RV-196-10, C	-				0 4 - 20 20			
E.A.:	73475	-	Job I	Description:	US 50 from	n LY 14.0	0 to 20.39			
Date Rec'd	<u>2/9/10</u>			<b>a</b>					TIC #0	
Samplers:	Hinton, I	arracuente		Station	<u>"X2"1052</u>		- 4 - 1		US 50	
Sample No.:	61	· · · · · · ·		Location fro County:	LYON	Lt	145'	Rt.	·	
-	UI			County:						
Sample Type: RV 🗖	Sub 🗆	□ Chem □	DC 🗆	Other $\Box$	Depth (ft)	Borii	ng Description	d Carrel	0	PSI 100
	None		Shrubs	Other L	-			d,Gravel _t_Clay		100
Vegetation:		Grassy	Snrubs 🗆		2			-	2	
Cut Section	Brushy 🗆				- 4		Grave	lly Silt	<u> </u>	
Taken Through Oi	1 🗆	Fill Section [ Taken on Shoul			0 8				6 8	
-										
Gravel Depth (in) Remarks:		Oil Depth (in)		-	10 12				10 12	
Remarks:					- 12 14				12	
					-					
Submitted By:	Maynard	Uinton			- 16 18				16 18	
Title:		ing Tech III			- 18				20	
The.	Engmeer				201				20	
	Sieve Size	% Passing				L	20			·
		% Passing	I.		Liquid Limit	_				
	<u>3"</u> 2"				Plastic Index		2			
					Specific Gra		40			
	1.5"				Resistance V	alue _	40	<b>—</b>	n	
	1"				Cover		11.6	Expansion	Pressure	
	3/4"				Thick	ness _	11.6			
	1/2"	100			~		1 .			
	3/8"	100				and Equiva		<del></del>		
	No. 4	94				latural Mois	sture, %	10 (04		
	<u>No. 10</u>	83 76				esistivity		10,604		
	<u>No. 16</u>	62			-	H Factor		7.1		
	<u>No. 40</u>				F.	IRB Classif	ication			
	<u>No. 50</u>	<u>56</u> 42								

Remarks:

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-197-10,	C-218-10		-					
E.A.:	73475	-	Job D	escription:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10	-								
Samplers:	Hinton, L	arracuente	_	Station	"X2"1047+	00.00		Route US	50	
			_	Location from		Lt	40'	Rt		
Sample No.:	62			County:	LYON			· · · ·		
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	. 0				0	300
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2		Sandy	' Clay	2	
<u>_</u>	Brushy 🗆	Grassy 🗆			_ 4		Cl	ay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shou	lder 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		20			
	3"	<u> </u>	-		Plastic Index		3	_		
	2"		-		Specific Grav	vitv		_		
	1.5"		-		Resistance V		40	_		
	1"		-		Cover			Expansion Pres	sure	
	3/4"		-		Thickn	ess	15.9	•		
	1/2"		-			,				
	3/8"	100	_		Sa	nd Equivale	nt			
	No. 4	95	-			atural Moistu				
	No. 10	87	-			esistivity		4,695		
	No. 16	83	-			I Factor		7.6		
	No. 40	72	-		-	RB Classific	ation			
	No. 50	66	_							
	No. 100	49	_							

Remarks:

No. 200

Date Reported:	04/23/10	-								
Lab No.:	Soils10-01	, RV-198-10, C-	219-10		_					
E.A.:	73475	_	Job D	Description:	US 50 from I	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2"1042+0	0.00		Route I	U <b>S 50</b>	
				Location from	m oil (ft)	Lt	145'	Rt		
Sample No.:	63			County:	LYON					
Sample Type:					Depth (ft)	Boring	, Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		Silt Sand	l Gravel	0	100
Vegetation:	None 🔳	Trees 🗆 S	hrubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆	_		4		Silt Sand F	ine Gravel	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulde	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					- 16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:	Engineeri	ng Tech III			20				20	
		· -			- ·				•	
	Sieve Size	% Passing			Liquid Limit		24			
	3"				Plastic Index		5	_		
	2"				Specific Gravit	tv —		_		
	1.5"				Resistance Val	· —	32	_		
	1"				Cover			— Expansion Pi	ressure	
	3/4"	100			Thicknes	ss	13.5	1		
	1/2"	98								
	3/8"	96			San	nd Equivale	ent			
	No. 4	85				tural Moist		· · · · · ·		
	No. 10	69				sistivity	-	6,131		
	No. 16	61				Factor		7.7		
	No. 40	48			-	B Classific	ation			
	No. 50	43						· · · ·		

#### Remarks:

No. 100

No. 200

30

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-199-10, C-2	20-10		_					
E.A.:	73475	_	Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2"1037+	-00.00		Route	US 50	
				Location fro	om oil (ft)	Lt.	40'	Rt.		
Sample No.:	64			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	] 0				0	300
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🗆		2		Sandy	Clay	2	
	Brushy 🗖	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:		· · · · · · · · · · · · · · · · · · ·		_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
					-				•	
		-								
	Sieve Size	% Passing			Liquid Limit		19	_		
	3"				Plastic Index	_	NP			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue	81			
	1"				Cover			Expansion I	Pressure	
	3/4"	100			Thickn	ess	2.9	_		
	1/2"	91								
	3/8"	83			Sa	and Equival	ent			
	No. 4	65			Na	atural Moist	ure, %			
	No. 10	49				esistivity		5,285		
	No. 16	42			pF	H Factor		7.8		
	No. 40	29			-	RB Classifi	cation			
	No. 50	24								
	No. 100	14								

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9

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-200-10, C-22	21-10		_					
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2"1027+	-00.00		Route U	S 50	
				Location fro	. ,	Lt	43'			
Sample No.:	65			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other	0				0	300
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗆		2		<u>Cl</u>	<u>ay</u>	2	
	Brushy 🗆	Grassy 🗆			_ 4		Silt Sand	Lt. Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					- 12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton	,		18				18	
Title:	Engineeri	ng Tech III			20				20	
		· · · · · · · · · · · · · · · · · · ·								
	Sieve Size	% Passing			Liquid Limit		22			
	3"				Plastic Index		3			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue	60			
	1"				Cover			Expansion Pre	ssure	
	3/4"	100			Thickn	iess	9.5	_		
	1/2"	99								
	3/8"	97			Sa	and Equival	ent			
	No. 4	93			N	atural Moist	ure, %			
	No. 10	85			R	esistivity		5,000		
	No. 16	80				H Factor		7.8		
	No. 40	68			-	RB Classifie	cation			
	No. 50	62						<u>.</u>		
	No. 100	45								
	No. 200	29								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-201-10, C-2	22-10		_					
E.A.:	73475		Job I	Description:	US 50 from	m LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	<u>"X2"1017</u>	+00.00		Route U	S 50	
				Location fro	m oil (ft)	Lt	42'	Rt		
Sample No.:	66			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗖	DC 🗆	Other	0				0	300
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗖		2		Sand	y Silt	2	
·····	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	il 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
			1	***** ****		······				
	Sieve Size	% Passing			Liquid Limi	it	28	_		
	3"				Plastic Inde	x	8	_		
	2"				Specific Gra	avity				
	1.5"				Resistance '	Value	23			
	1"				Cover			Expansion Pre	essure	
	3/4"				Thick	mess	21.3			
	1/2"	100								
	3/8"	99			5	Sand Equival	ent			
	No. 4	95			ſ	Natural Mois	ture, %			
	No. 10	89			I	Resistivity		149		
	No. 16	84				oH Factor		7.8		
	No. 40	74			-	HRB Classifi	cation			
	No. 50	67								
	No. 100	52								
	No. 200	37								

Date Reported:	04/23/10								
Lab No.:	Soils10-01	, RV-202-10, C-22	23-10		_				
E.A.:	73475		Job E	Description:	US 50 from	n LY 14.00	to 20.39		
Date Rec'd	2/9/10								
Samplers:	Hinton, L	arracuente		Station	"X2"1007+			Route US 50	
				Location fro		Lt	40'	Rt	
Sample No.:	67			County:	LYON				
Sample Type:					Depth (ft)	Boring	g Description		PSI
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	0		Silt	Sand	0 300
Vegetation:			ubs 🗆		2		Lt.	Clay	2
	Brushy 🗆	Grassy 🗆			- 4				4
Cut Section		Fill Section			6				6
Taken Through Oil		Taken on Shoulder			8				8
Gravel Depth (in)	<u> </u>	Oil Depth (in)		_	10				10
Remarks:					12				12
					14				14
					16				16
Submitted By:	Maynard	Hinton			18				18
Title:	Engineeri	ng Tech III			20				20
	Sieve Size	% Passing			Liquid Limit		21	······································	
	3"	70 1 dooning			Plastic Index		4	_	
	2"				Specific Grav			_	
	1.5"				Resistance V	-	36	_	
	1.5				Cover	<u> </u>	50	— Expansion Pro	essure
	3/4"	100			Thickr	iess	17.2	Dapatoion I N	
	1/2"	99							
	3/8"	98			S	and Equival	ent		
	No. 4	96				atural Moist			
	No. 10	89				esistivity	, · •	1,751	
	No. 16	85				H Factor		8.8	<u>_</u>
	No. 40	73			-	RB Classifi	cation		
	No. 50	65							
	No. 100	43							
	No. 200	26							

Remarks:

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Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	, RV-203-10, C	C-224-10		_					
E.A.:	73475	_	Job D	escription:	US 50 from	50 from LY 14.00 to 20.39				
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2"997+00	).00		Route	US 50	
				Location fro	om oil (ft)	Lt	40'	Rt.		
Sample No.:	68			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	1 0				0	300
Vegetation:	None 🔳	Trees 🗆	Shrubs 🛛		2		Silt San	1 Clay	2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section	]		6				6	
Taken Through Oi	1 🗆	Taken on Should	ler 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:				_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
<u> </u>										
	Sieve Size	% Passing			Liquid Limit		20			
	3"	701 ussing			Plastic Index		3	-		
		1			I lastic much		<u> </u>	_		

100
98
94
89
86
74
63
38
23

Liquid Limit	20	
Plastic Index	3	
Specific Gravity		
Resistance Value	58	
Cover		Expansion Pressure
Thickness	10.2	
Sand Equiv Natural Mo		
Resistivity		3,559
pH Factor		8.4
HRB Class	ification	

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-204-10, C-22	25-10		_					
E.A.:	73475		Job D	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2"987+0	00.00		Route U	I <mark>S 50</mark>	
				Location fro	m oil (ft)	Lt.	40'	Rt		
Sample No.:	69			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	300
Vegetation:	None 🔳	Trees 🗆 Shru	ubs 🗆		2		Silt San	d Gravel	2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					- 14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		21			
	3"	<u>0</u>			Plastic Index		3			
	2"				Specific Gra			_		
	1.5"				Resistance V	-	29			
	1"				Cover		•	— Expansion Pr	essure	
	3/4"	100			Thick	ness	19.4			
	1/2"	94								
	3/8"	89			S	and Equival	ent			
	No. 4	74				atural Moist				
	No. 10	60			R	esistivity		4,149		
	No. 16	54				H Factor		8.0		
	No. 40	43			-	IRB Classifi	cation	<b>.</b>		
	No. 50	38								
	No. 100	28								
	No. 200	19								

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-205-10, C	-226-10		_					
E.A.:	73475	-	Job I	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/9/10	-								3 50
Samplers:	Hinton, L	arracuente		Station	"X2"982+	00.00		Route I	ute US 50	
				Location fre	. ,	Lt.	145'	Rt.		
Sample No.:	70			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			F
RV 🗖	Sub 🗆		DC 🗆	Other D	0		Silty	Clay	0	1
Vegetation:	None 🔳		Shrubs 🗆		2				2	
	Brushy 🗆	Grassy			_ 4		<u> </u>	lly_Silt	4	←
Cut Section		Fill Section			6				6	S
Taken Through Oi	1 🗆	Taken on Should	ler 🗖		8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:					_ 12				12	
- n					14				14	
									16	
Submitted By:	Maynard								18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi	+	24			
	3"	70 Fassing			Plastic Index		<u></u> 7	_		
	2"						/	_		
	1.5"				Specific Gra Resistance V	-	44	_		
	<u> </u>				Cover		74	Expansion P	ACCUTA	
	3/4"				Thick	<b>1</b> 966	10.7	Expansion Pl	CSSULC	
	<u> </u>				THICK		10./			
	3/8"	100			c	and Equival	ent			
		99				Sand Equival Natural Mois				•
	<u>No. 4</u>	<u>99</u> 97					uic, /0	7,008		-
	<u>No. 10</u>	97				Resistivity H Factor		7,008		•
	No. 16	89			-	H Factor IRB Classifi	antion			•
	No. 40	89			ł	IKD Ulassii	cation			•
	No. 50	59								
	<u>No. 100</u>									
	No. 200	36								

Date Reported:	04/23/10	<u>)                                    </u>									
Lab No.:	Soils10-	01, RV-206-10,	C-227-	-10		_					
E.A.:	73475			Job D	escription:	iption: US 50 from LY 14.00 to 20.39					
Date Rec'd	2/9/10										
Samplers:	Hinton,	Larracuente	_		Station	"X2"977+0	0.00		Route	<u>US 50</u>	
					Location fro	om oil (ft)	Lt	40'	Rt.	,	
Sample No.:	71				County:	LYON					
Sample Type:						Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub	□ Chem □	D	C □	Other $\Box$	] 0		Silt San	d	0	300
Vegetation:	None	Trees 🗆	Shrub	s 🗆		2		Lt. Grave	el	2	
	Brushy [	□ Grassy □				4		Lt. Clay	/	4	
Cut Section		Fill Section				6				6	
Taken Through Oi	1 🗆	Taken on Shou	ılder			8				8	
Gravel Depth (in)		Oil Depth (in)			_	10				10	
Remarks:					_	12				12	
						14				14	
						16				16	
Submitted By:	Maynar	d Hinton				18				18	
Title:	Enginee	ring Tech III								20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	97
3/8"	94
No. 4	87
No. 10	79
No. 16	75
No. 40	66
No. 50	61
No. 100	49
No. 200	33

Liquid Limit	25	
Plastic Index	7	
Specific Gravity		
Resistance Value	48	
Cover		Expansion Pressure
Thickness	13.4	
Sand Equiv Natural Mo		
Resistivity		4,926
pH Factor		7.7
HRB Class		

Date Reported:	04/23/10									
Lab No.:	Soils10-01,	RV-207-10, C-	228-10		_					
E.A.:	73475		Job D	Description:	US 50 from	n LY 14.(	0 to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	rracuente		Station	<u>"X2"972+</u>	00.00		Route	U <b>S 50</b>	
				Location fro	om oil (ft)	Lt.	145'	Rt.		
Sample No.:	72			County:	LYON					
Sample Type:					Depth (ft)	Bor	ing Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other $\Box$	0		Silt Sand V	ery Lt. Clay	0	100
Vegetation:	None 🔳 7	Trees 🗆 S	hrubs 🛛		2					
	Brushy 🗆	Grassy 🗆			4		Sand	y Silt	4	<del>ç</del>
Cut Section	]	Fill Section			6				6	Silt
Taken Through O	il 🗆 🤺	Faken on Shoulde	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					14				14	
				1 10	16				16	
Submitted By:	Maynard I	linton			18				18	
Title:	Engineerin	g Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi	-	18	_		
	3"	<u>,                                </u>			Plastic Index	•	2			
	2"				Specific Gra	-				
	1.5"				Resistance V	Value .	68	_		
	1"				Cover			Expansion P	ressure	
	3/4"				Thick	ness .	5.1			
	1/2"									
	3/8"	100			S	Sand Equiv	alent			
	No. 4	99			١	Natural Mo	isture, %			
	No. 10	97			F	Resistivity		6,468		
	No. 16	95			p	H Factor		7.5		
	No. 40	87			H	IRB Classi	fication			
	No. 50	80								
	No. 100	55								
	No. 200	32								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-208-10, C-22	29-10		_					
E.A.:	73475		Job E	Description:	US 50 fron	n LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2"967+	00.00		Route US 5	0	
<b></b>				Location from		Lt	40'	Rt		
Sample No.:	73			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		Silt	Sand	0	300
Vegetation:	None 🔳	Trees 🗖 Shr	ubs 🗆		2		Gra	vel	2	
	Brushy 🗆	Grassy 🗆			4		Lt. (	Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)	<u></u>	Oil Depth (in)		_	10				10	
Remarks:					12				12	
					_ 14				14	
·····					- 16				16	
Submitted By:	Maynard	Hinton			_ 18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit	+	19			
	3"				Plastic Index		1	_		
	2"				Specific Gra		<u>+</u>			
	1.5"	100			Resistance V		73	_		
	1"	97			Cover			Expansion Pressur	e	
	3/4"	97			Thick	ness	5.4		-	
	1/2"	93						<u> </u>		
	3/8"	91			S	and Equivale	ent			
	No. 4	84				latural Moist				
	No. 10	78				esistivity		4,831		
	No. 16	74				H Factor		7.8		
	No. 40	62			-	IRB Classific	cation			
	No. 50	56								
	No. 100	40								
	No. 200	24								

E.A.:       73475       Job Description:       US 50 from LY 14.00 to 20.39         Date Rec'd       2/9/10       Image: Station       Image: Ward ward ward ward ward ward ward ward w											04/23/10	• .
Date Rec'd       2/9/10         Samplers:       Hinton, Larracuente       Station       "X2"962+00.00       Route       US 50         Location from oil (ft)       Lt.       145'       Rt.										RV-209-10, C-2		
Samplers:       Hinton, Larracuente       Station       "X2"962+00.00       Route       US 50         Location from oil (ft)       Lt.       145'       Rt.					0 to 20.39	n LY 14.0	US 50 fron	escription:	Job D			
Location from oil (ft)Lt.145'Rt.Sample No.:74County:LYONSample Type: $Depth (ft)$ Boring DescriptionHRVSubChemDCOther0SubChemDCOther0Silt Sand Very Lt. Clay0											-	
Sample No.:     74     County:     LYON       Sample Type:     Depth (ft)     Boring Description     H       RV     Sub     Chem     DC     Other     0     Silt Sand Very Lt. Clay     0     1				—						rracuente	Hinton, La	Samplers:
Sample Type:     Depth (ft)     Boring Description     H       RV     Sub     Chem     DC     Other     0     Silt Sand Very Lt. Clay     0     1				Rt.	145'	Lt						
RV Sub Chem DC Other 0 Silt Sand Very Lt. Clay 0 1		وسنبسر					LYON	County:			74	Sample No.:
	PSI		<u> </u>		ng Description	Bori	Depth (ft)					Sample Type:
Vegetation: None Trees Shrubs 22-	00	1	0	ery Lt. Clay	Silt Sand Ve		. 0	Other 🗆	DC 🗆	Chem 🗆	Sub 🗆	RV 🗖
			2				2		ubs 🗆	Trees 🗆 Sh	None 🔳	Vegetation:
Brushy Grassy Grassy 4			·4	1 Gravel	Silt_Sand		. 4			Grassy 🗆	Brushy 🗆	
Cut Section Fill Section 6 6 5	Silt	ેશ	6				6			Till Section		Cut Section
Taken Through Oil 🗆 Taken on Shoulder 🔳 8 8			8				8			Taken on Shoulder		Taken Through Oil
Gravel Depth (in) Oil Depth (in) 10 10			10				10			Dil Depth (in)		Gravel Depth (in)
Remarks: 12 12			12				12					Remarks:
14			14				14					
16			16				16					
Submitted By: Maynard Hinton 18			18				18			linton	Maynard	Submitted By:
Title: Engineering Tech III 20 20			20				20			g Tech III	Engineeri	Title:
			• 	<u> </u>			• •					·
Sieve Size % Passing Liquid Limit 21					21	t	Liquid Limi			% Passing	Sieve Size	
3" Plastic Index 3					3	- x	Plastic Inde				3"	
2" Specific Gravity				_		-						
1.5" Resistance Value 55				_	55	-	-				1.5"	
1" <b>100</b> Cover Expansion Pressure			Pressure	Expansion 1		-				100		
$\frac{1}{3/4"}  97 \qquad \text{Thickness}  8.1$					8.1	ness						
1/2" 97				_		-						
3/8" 95 Sand Equivalent					alent	Sand Equiv	S					
No. 4 88 Natural Moisture, %		•				-						
No. 10         76         Resistivity         8,217		•		8.217	····· <b>·</b> , ···							
No. 16         71         pH Factor         7.5		•				•						
No. 40     59     HRB Classification		•			fication		-					
No. 50 53		_				0.000						
No. 100 38		-									NO. 50	

Remarks:

25

No. 200

Date Reported:	04/23/10									
Lab No.:		, RV-210-10, C-23			-					
E.A.:	73475		Job E	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2"957+			Route	U <b>S 50</b>	
		<b>B 1 1 1 1 1</b>		Location from	• •	Lt	40'	Rt		
Sample No.:	75			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		Silt	Sand	0	300
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗆		2		Very Lt	t. Gravel	2	
	Brushy 🗆	Grassy 🗆			- 4		Lt.	Clay	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		24			
	3"	, , , , , , , , , , , , , , , , , , ,			Plastic Index		7			
	2"				Specific Gra		,	_		
	1.5"				Resistance V	-	55			
	1.5				Cover			Expansion P	ressure	
	3/4"	100			Thick	ness	11.1			
	1/2"	98					•			
	3/8"	98			S	and Equivale	ent			
	No. 4	95				atural Moist				
	No. 10	91				esistivity	-,	5,302		
	No. 16	87				H Factor		<u></u> 7.4		
	No. 40	76			-	RB Classific	ation			
	No. 50	71								
	No. 100	59								
	No. 200	42								

Remarks:

Date Reported:	04/23/10									
Lab No.:		, RV-211-10, C-2			-					
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	<u>"X2"952+6</u>			Route U	S 50	
				Location from	. ,	Lt	145'			
Sample No.:	76			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗰	Sub 🗆	Chem	DC 🗆	Other 🗆	-		Sand	y Silt	0	100
Vegetation:			nrubs 🗖		2				2	
	Brushy 🗆	-			- 4		Grave	lly Silt	4	
Cut Section		Fill Section			6				6	
Taken Through Oi		Taken on Shoulder	r 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					- 12				12	
					- 14				14	
					- 16				16	
Submitted By:	Maynard				- 18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		22			
	3"				Plastic Index		3			
	2"				Specific Grav	vitv —	_	_		
	1.5"				Resistance V		69	_		
	1"				Cover	<u> </u>		— Expansion Pre	ssure	
	3/4"	100			Thickn	ess	4.9	L .		
	1/2"	99								
	3/8"	99			Sa	nd Equival	ent			
	No. 4	94				atural Moist				
	No. 10	89				esistivity		6,770		
	No. 16	85				I Factor		7.2		
	No. 40	76			•	RB Classifi	cation	-		
	No. 50	72								
	No. 100	58								
	No. 200	37								

Remarks:

Date Reported:	04/23/10									
Lab No.:		, RV-212-10, C-2				T TZ 1 4 00				
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/9/10			~ .					<u> </u>	
Samplers:	Hinton, L	arracuente		Station	<u>"X2"947+(</u>			Route $\underline{\mathbf{U}}$	<u>S 50</u>	
Sample No.:	77			Location from County:	m oil (ff) LYON	Lt	41'	Rt		
Sample Type:				•	Depth (ft)	Boring	g Description			PSI
RV I	Sub 🗆	Chem	DC 🗆	Other 🗆	0		Silty S	Sandy	0	300
Vegetation:	None 🔳		rubs 🗆		2		Cla	-	2	
U	Brushy 🗆				4			•	4	
Cut Section	<b>e</b>	Fill Section			- 6		·····		6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:				-	12				12	- 300
					- 14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
				• • • • • • • • • • • • • • • • • • •						<u> </u>
	Sieve Size	% Passing			Liquid Limit	:	21	_		
	3"				Plastic Index	. <u> </u>	2	_		
	2"				Specific Grav					
	1.5"				Resistance V	/alue	73	_		
	1"	ļ			Cover			Expansion Pre	essure	
	3/4"	100			Thick	ness	5.4			
	1/2"	99								
	3/8"	99				and Equival				,
	No. 4	94				latural Moist	ture, %			
	No. 10	85				esistivity		5,333		
	No. 16	81			-	H Factor		7.6		,
	No. 40	69			Н	IRB Classifi	cation			,
	No. 50	64								
	No. 100	50								
	No. 200	34								

Date Reported:	04/23/10								
Lab No.:	Soils10-01	, RV-213-10,	C-234-10		_				
E.A.:	73475		Job	Description:	US 50 from	LY 14.00	to 20.39		
Date Rec'd	2/9/10								
Samplers:	Hinton, L	arracuente		Station	"X2"937+0	0.00		Route US 50	
				Location fro	om oil (ft)	Lt.	40'	Rt.	
Sample No.:	78		_	County:	LYON				
Sample Type:					Depth (ft)	Boring	Description		PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	□ Other □	<u> </u>		Silt Sand	0	300
Vegetation:	None 🔳	Trees 🗖	Shrubs 🗆	]	2		Clay	2	.]
	Brushy 🗆	Grassy 🗖			4			4	-
Cut Section		Fill Section			6			6	-
Taken Through Oi	1 🗆	Taken on Shou	lder		8			8	.
Gravel Depth (in)		Oil Depth (in)			10			10	
Remarks:		-			12			12	
					14			14	
· · · ·					16			16	
Submitted By:	Maynard	Hinton			18			18	-
Title:	Engineeri	ng Tech III			20			20	-
									· · · ·
	Sieve Size	% Passing			Liquid Limit		22		
	3"		-		Plastic Index	<u></u>	3		
	2"		-		Specific Grav	ity			
	1.5"		-		Resistance Va	alue	68		
	1"				Cover		Ex	pansion Pressure	
	3/4"				Thickne	ess	7.0		
	1/2"	100	-			<u></u>			

Sand Equivalent	
Natural Moisture, %	
Resistivity	4,630
pH Factor	7.6
HRB Classification	

Remarks:

3/8"

No. 4

No. 10

No. 16

No. 40 No. 50

No. 100 No. 200 98 97

94

90

79

74 58

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-214-10,	C-235-10		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	) to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente	_	Station	"X2"927+(	0.00		Route I	U <b>S 50</b>	
			-	Location fro	om oil (ft)	Lt.	42'	Rt.		
Sample No.:	79			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			Р
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other D	0				0	3
Vegetation:	None 🔳	Trees 🗖	Shrubs 🛛		2		Silt Sand	Lt. Clay	2	
	Brushy 🗆	Grassy 🛛			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shou	lder 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
										_
	Sieve Size	% Passing			Liquid Limit		19			
	3"				Plastic Index		NP	_		
	2"		-		Specific Grav	vity —				
	1.5"		•		Resistance V	_	71	_		
	1"		-		Cover			– Expansion Pr	essure	
	3/4"	100	-		Thickn	ess	6.0	•		
	1/2"	99	•							_
	3/8"	97	-		Sa	nd Equival	ent			
	No. 4	94	-			atural Mois				
	No. 10	87	-			esistivity		5,721		
	No. 16	82	-			I Factor		7.6		
	No. 40	70	-		-	RB Classifi	cation			
	No. 50	63	•						an a	
	No. 100	46	•							
			-							

Remarks:

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Date Reported:	04/23/10								
Lab No.:		<u>, RV-215-10, C</u>							
E.A.:	73475		Job I	Description:	<b>US 50 fro</b>	m LY 14.0	0 to 20.39		
Date Rec'd	2/9/10				<u> </u>		· · ·		
Samplers:	Hinton, L	arracuente		Station	<u>"X2"917</u> +	+00.00		Route US 5	50
	,			Location fro		Lt.	40'	Rt	
Sample No.:	80			County:	LYON				
Sample Type:					Depth (ft)	Bori	ng Description		1
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0 3
Vegetation:	None 🔳	Trees 🗆 S	Shrubs 🛛		2		Silty	Sand	2
	Brushy 🗆	Grassy 🗆			4				-4- <
Cut Section		Fill Section	]		6				6 S
Taken Through Oi	1 🗆	Taken on Should	er 🗖		8				8
Gravel Depth (in)		Oil Depth (in)		_	10				10
Remarks:					12				12
					14				14
					16				16
Submitted By:	Maynard	Hinton			18				18
Title:	Engineeri	ng Tech III			20				20
	Sieve Size	% Passing			Liquid Limi	-	19		
	3"				Plastic Inde		NP	_	
	2"				Specific Gra	_		_	
	1.5"				Resistance	Value	78	_	
	1"				Cover			Expansion Pressu	re
	3/4"				Thick	mess _	3.8		
	1/2"	100							
	3/8"	99				Sand Equiva			
	No. 4	94			١	Natural Mois	sture, %		
	<u>No. 10</u>	82			F	Resistivity		5,225	
	<u>No. 16</u>	74			-	H Factor		7.5	
	No. 40	56			H	HRB Classif	ication		
	No. 50	49							
	No. 100	34							
	No. 200	22							

Date Reported:	04/23/10	-								
Lab No.:		l, RV-230-10, C			-					
E.A.:	73475	-	Job D	escription:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/23/10	-							<u>.</u>	-
Samplers:	Wimer, A	ltamirano		Station	"X2" 908+			Route	US 50	
				Location from		Lt	40'	Rt.		
Sample No.:	81			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub □	□ Chem □	DC 🗆	Other 🗆	0				0	150
Vegetation:	None 🔳	Trees 🗆 S	Shrubs 🛛		2		San	d Silt	2	
	Brushy 🗆	Grassy 🗆			4				4	<-
Cut Section		Fill Section	]		6				6	Sand
Taken Through Oi		Taken on Should	er 🗖	20'Wof Clof	8				8	
Gravel Depth (in)		Oil Depth (in)		Iron Mt. Rd	10				10	
Remarks:	Location of	f drill hole is 30' R	t of C.L. of	- fr. Road	12				12	
	SPT sample	e taken from 1'-2 1	/2'. Snow ac	xc. @	14				14	
	location 6"-	-8".			- 16				16	
	Maynard	Hinton			- 18				18	
Title:		ing Tech III			20				20	
		-						······································		
	Sieve Size	% Passing			Liquid Limit		21			
	3"				Plastic Index		NP			
	2"				Specific Grav	/ity	•	—		
	1.5"				Resistance Va	alue	79	-		
	1"				Cover			— Expansion P	ressure	
	3/4"	100			Thickn	ess	3.5	•		
	1/2"	99								
	3/8"	98			Sa	nd Equivale	nt			
	No. 4	93				atural Moistu		·		
	No. 10	79				esistivity	,	5,981		
	No. 16	70				I Factor		6.8		
	No. 40	51			-	RB Classific	ation			
	No. 50	44								
	No. 100	32								

Remarks:

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No. 200

Date Reported:	04/23/10												
Lab No.:	Soils10-01	<u>, RV-216-10, C-2</u>	39-10		-								
E.A.:	73475		Job I	Description:	US 50 from LY 14.00 to 20.39								
Date Rec'd	2/9/10												
Samplers:	Hinton, L	arracuente		Station	<u>"X2"907+</u>	00.00		Route	US 50				
		<u></u>		Location from		Lt	43'	Rt.					
Sample No.:	82			County:	LYON				a				
Sample Type:					Depth (ft)	Borin	g Description		r	PSI			
RV 🗖	Sub 🗆		DC 🗆	Other 🗆	- 0		Silt S	Sand	0	300			
Vegetation:			ubs 🗆		2		Very L	t. Clay	2				
	Brushy 🗆	Grassy 🗆			_ 4				4				
Cut Section		Fill Section			6				6				
Taken Through Oil		Taken on Shoulder			8				8				
Gravel Depth (in)		Oil Depth (in)		_	10				10				
Remarks:					12				12				
· · · · ·					14				14				
					16				16				
Submitted By:	Maynard	Hinton			18				18				
Title:	Engineeri	ng Tech III			20				20				
	Sieve Size	% Passing			Liquid Limi	t	21						
	3"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Plastic Inde		2						
	2"				Specific Gra			_					
	1.5"				Resistance V	-	67						
	1"				Cover		•.	— Expansion I	Pressure				
	3/4"	100			Thick	ness	7.3	p					
	1/2"	95						_					
	3/8"	94			S	Sand Equival	ent						
	No. 4	88				Natural Mois							
	No. 10	77				Resistivity	,						
	No. 16	70				H Factor							
	No. 40	55				IRB Classifi	cation						
	No. 50	49			_								
	No. 100	34											
	No. 200	23											

Date Reported:	04/23/10									
Lab No.:	Soils10-01, RV	<mark>-231-10, C-2</mark>	55-10		_					
E.A.:	73475		Job D	escription:	US 50 from	LY 14.00	) to 20.39			
Date Rec'd	2/23/10									
Samplers:	Wimer, Altam	<u>irano</u>		Station	"X2"902+0	0.00		Route	US 50	
				Location fro	om oil (ft)	Lt	140'	Rt.		
Sample No.:	83			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>		Sand Sil	t	0	150
Vegetation:	None 🔳 Tree	s 🗂 Shi	rubs 🗖		2				2	
	Brushy 🗆 Gras	sy 🗆			4				4	
Cut Section	Fill S	Section 🗆			6				6	
Taken Through Oi	I 🖾 🛛 Take	en on Shoulder			8				8	
Gravel Depth (in)	Oil I	Depth (in)		_	10				10	
Remarks:	Location of drill	hole is 20' Rt c	of CL of F	'R Road	12				12	
	SPT sample take	n 1'-2 1/2' Snov	w cover @	) location	14				14	
	6"-8"				16				16	
Submitted By:	Maynard Hint	ton			18				18	
Title:	Engineering T	ech III			20				20	

Sieve Size	% Passing
3"	
2"	
1.5"	
1"	
3/4"	100
1/2"	99
3/8"	98
No. 4	93
No. 10	81
No. 16	74
No. 40	57
No. 50	51
No. 100	37
No. 200	24

Liquid Limit	23	
Plastic Index	5	
Specific Gravity		
Resistance Value	65	
Cover		Expansion Pressure
Thickness	5.8	
Sand Equiv Natural Mo Resistivity		10,142
pH Factor		6.8
HRB Class	ification	

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-217-10, C-2	40-10		_					
E.A.:	73475	_	Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10	_								
Samplers:	Hinton, L	arracuente		Station	<u>"X2"897+0</u>	0.00		Route	US 50	
				Location fro	om oil (ft)	Lt	42'	Rt.		
Sample No.:	84			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	0		Silt	Sand	0	300
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆					Gravel	ly Sand	4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					_ 14				14	
					16				16	
Submitted By:	Maynard				18				18	
Title:	Engineeri	ing Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		21			
	3"	,			Plastic Index		4			
	2"	······································			Specific Grav	 vitv				
	1.5"				Resistance Va		69			
	1"				Cover			 Expansion I	ressure	
	3/4"	100			Thickn	ess	6.7	r		
	1/2"	98								
	3/8"	97			Sa	nd Equival	ent			
	No. 4	92				atural Mois				-
	No. 10	78				esistivity	,			-
	No. 16	69				I Factor		· · · · ·		-
	No. 40	50			-	RB Classifi	cation			-
	No. 50	42						-, <u>, , , , , , , , , , , , , , , , , , </u>		-
	No. 100	29								
		19								

Remarks:

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Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-232-10, C-2	256-10							
E.A.:	73475		Job D	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/23/10									
Samplers:	Rigsby, W	/imer		Station	"X2"892+0	0.00		Route U	S 50	
				Location fro	m oil (ft)	Lt	132'	Rt		
Sample No.:	85			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub □	Chem 🗆	DC 🗆	Other	0		Silt S	Sand	0	100
Vegetation:	None 🔳	Trees 🗆 Sh	nrubs 🗆		2		Gra	vel	2	Blow
	Brushy 🗆	Grassy 🛛			4[		Silty	Sand	4	Count
Cut Section		Fill Section			6				6	7
Taken Through Oil		Taken on Shoulder	r 🔳	40' from	8				8	10
Gravel Depth (in)		Oil Depth (in)		Fr. Road	10				10	22
Remarks:	SPT 1' to 2	1/2' SPT blow coun	nt 7-10-22.		12				12	
	<b>-</b>				14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
-	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		23			
	3"				Plastic Index		3	_		
	2"				Specific Grav	/itv				
	1.5"				Resistance Va		69			
	1"	100			Cover			Expansion Pres	ssure	
	3/4"	95			Thickn	ess	4.9	—		
	1/2"	89								
	3/8"	85			Sa	nd Equivale	ent			
	No. 4	73				atural Moist				
	No. 10	58				esistivity	,	6,406		
	No. 16	50				I Factor		7.5		
	No. 40	36			-	RB Classific	cation			
	No. 50	30								
	No. 100	20								
	No. 200	14								

Remarks:

NDOT 027, Rev. 05-01

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Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-233-10, C-2	257-10		_					
E.A.:	73475		Job I	Description:	US 50 fron	n LY 14.00	to 20.39			
Date Rec'd	2/23/10									
Samplers:	Rigsby, W	'imer		Station	"X2" 887+	-78.04		Route	U <b>S 50</b>	
				Location fro	m oil (ft)	Lt	140'	Rt.		
Sample No.:	86			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0		Silt S	Sand	0	100
Vegetation:	None	Trees 🗆 Sh	rubs 🗆		2		Grav	vel	2	
	Brushy 🗆	Grassy			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder		40' from	8				8	
Gravel Depth (in)		Oil Depth (in)		Fr. Road	10				10	
Remarks:	SPT 1' to 2	1/2' SPT blow coun	t 3-8-16.	_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
_	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit	t	28			
	3"				Plastic Index		12	-		
	2"	100			Specific Gra			_		
	1.5"	95			Resistance V	-	31	-		
	1"	89			Cover			Expansion Pression Pression Pression	essure	
	3/4"	77			Thick	ness	13.7			
	1/2"	65						<u> </u>		
	3/8"	61			S	and Equival	ent			
	No. 4	51				Iatural Moist				
	No. 10	43			R	esistivity		6,020		
	No. 16	40				H Factor		6.9		
	No. 40	33			-	IRB Classifi	cation			
	No. 50	29								
	No. 100	21								
	No. 200	17								

Remarks:

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Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-218-10, C-	241-10		_					
E.A.:	73475	-	Job E	Description:	US 50 from	LY 14.00	) to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2"887+0	0.00	Ro		Route US 50	
				Location fro	om oil (ft)	Lt.	40'	Rt.		
Sample No.:	. 87			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗖	DC 🗆	Other 🗆	0				0	100
Vegetation:	None 🔳	Trees 🗆 S	hrubs 🗖		2		Silt, Sand	l, Gravel	2	
	Brushy 🗆	Grassy 🗆							4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulde	r 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:					12				12	
					14				14	
					16				16	
-	Maynard	Hinton			18				18	
-	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		23			
	3"				Plastic Index		5	_		
	2"				Specific Grav	vity		_		
	1.5"				Resistance V	alue	45	_		
	1"				Cover			Expansion P	ressure	
	3/4"	100			Thickn	ess	14.3	_		
	1/2"	95								
	3/8"	91			Sa	nd Equival	lent			
	No. 4	80			N	atural Mois	ture, %			
	No. 10	67			Re	esistivity			<u> </u>	
	<u>No. 16</u>	60			pł	I Factor				
	No. 40	46			H	RB Classifi	ication			
	No. 50	40								
	No. 100	28								
	No. 200	20								

Remarks:

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Date Reported: Lab No.:	Soils10-01.	, RV-219-10,	C-242-10								
E.A.:	73475	,,		Description:	US 50 from LY 14.00 to 20.39						
Date Rec'd	2/9/10			•							
Samplers:	Hinton, La	arracuente	_	Station	"X2" 887	+00.00		Route	US 50		
				Location fro	om oil (ft)	Lt.	40'	Rt.			
Sample No.:	87A			County:	LYON						
Sample Type:					Depth (ft)	Во	ring Description			Р	
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0	10	
Vegetation:	None 🔳	Trees 🗖	Shrubs 🗖		2				2		
	Brushy 🗆	Grassy 🛛			4		Sandy	Clay	4		
Cut Section		Fill Section			6		Silt, Sano	l, Gravel	6		
Taken Through O		Taken on Shou	lder 📕		8				8		
Gravel Depth (in)		Oil Depth (in)		-	10				10		
Remarks:					- 12				12		
					- 14				14		
					_ 16				16		
Submitted By:	Maynard l				- 18				18		
Title:		ng Tech III			20				20		
	Sieve Size	% Passing	_		Liquid Lim	it	21				
	3"		_		Plastic Inde	x	NP	-			
	2"		_		Specific Gr	avity					
	1.5"	100			Resistance	Value	77				
	1"	85	_		Cover			Expansion P	ressure		
	3/4"	85	_		Thick	cness	4.1				
	1/2"	72	_								
	3/8"	66	_		1	Sand Equiv	alent				
	No. 4	46	_		]	Natural Mo	oisture, %				
	No. 10	32	_		]	Resistivity					
	No. 16	26	_		1	pH Factor					
	No. 40	17	_		]	HRB Class	ification				
	No. 50	14	_								
	No. 100	8	_								
	No. 200	5									

Remarks:

NDOT 027, Rev. 05-01

Date Reported:	04/23/10											
Lab No.:		<u>, RV-220-10, C-2</u>			_							
E.A.:	73475		Job D	escription:	US 50 from LY 14.00 to 20.39							
Date Rec'd	2/9/10											
Samplers:	Hinton, L	arracuente		Station	"X2"877+00.00			Route	US 50			
				Location fro	m oil (ft)	Lt	40'	Rt.				
Sample No.:	88			County:	LYON							
Sample Type:					Depth (ft)	Bori	ng Description			PSI		
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	100		
Vegetation:	None 🔳	Trees 🗆 Sh	irubs 🗆		2		Silt, Sand,	Gravel	2			
	Brushy 🗆	Grassy 🗆			4				4			
Cut Section		Fill Section			6				6			
Taken Through Oi		Taken on Shoulder			8				8			
Gravel Depth (in)		Oil Depth (in)		_	10				10			
Remarks:					12				12			
					14				14			
					16				16			
Submitted By:	Maynard	Hinton			18				18			
Title:	Engineeri	ng Tech III			20				20			
<b></b>												
	Sieve Size	% Passing			Liquid Lim	nit _	18	_				
	3"				Plastic Inde	ex _	NP	_				
	2"				Specific G	ravity		_				
	1.5"				Resistance	Value	77	_				
	1"	100			Cover			Expansion	Pressure			
	3/4"	92			Thic	kness _	4.1	_				
	1/2"	86										
	3/8"	82				Sand Equiva	lent					
	No. 4	72				Natural Moi	sture, %					
	No. 10	59				Resistivity						
	No. 16	51				pH Factor						
	No. 40	34				HRB Classif	fication					
	No. 50	28										

Remarks:

No. 100

No. 200

17

10

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-221-10, C-2	44-10		_					
E.A.:	73475		Job D	escription:	US 50 from	n LY 14.00	) to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, La	arracuente		Station	"X2" 877+	-00.00		Route U	S 50	
				Location fro	m oil (ft)	Lt	40'	Rt		
Sample No.:	88A			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description		<b>,</b>	PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other $\Box$	0				0	100
Vegetation:	None 🔳	Trees D Sh	rubs 🛛		2					
	Brushy 🗆	Grassy 🗆			_ 4		Sa	nd	4	
Cut Section		Fill Section			6		Silt, Sand	, Lt. Clay	6	
Taken Through Of		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
				<u> </u>						
	Sieve Size	% Passing			Liquid Limi	t	29	_		
	3"				Plastic Index	· _	8	_		
	2"				Specific Gra	vity		_		
	1.5"				Resistance V	/alue	58	_		
	1"	100			Cover			Expansion Pre	ssure	
	3/4"	98			Thick	ness	10.2			
	1/2"									
	3/8"	96			S	and Equival	lent			
	No. 4	91			Ν	latural Mois	ture, %			
	No. 10	81			R	lesistivity				
	No. 16	70			p	H Factor				
	No. 40	48			F	IRB Classifi	ication			
	No. 50	42								
	No. 100	31								
	No. 200	24								

Date Reported:	04/23/10									
Lab No.:	-	, RV-224-10, C-2			-					
E.A.:	73475	-	Job I	Description:	US 50 from	n LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2"867+0	00.00		Route US	50	
				Location from	• •	Lt	38'	Rt		
Sample No.:	89			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0			Sand	0	100
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗆		2		Fine (	Gravel	-2	
	Brushy 🛛	Grassy			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:				_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:		ng Tech III							20	
					• •					
	Sieve Size	% Passing			Liquid Limit		21			
	3"				Plastic Index		NP			
	2"				Specific Gra	vity —				
	1.5"				Resistance V		80			
	1"	100			Cover			Expansion Press	ure	
	3/4"	97			Thick	ness	3.2	•		
	1/2"	92								
	3/8"	86			S	and Equival	ent			
	No. 4	61				atural Mois				
	No. 10	43				esistivity	·	6,057		
	No. 16	34				H Factor		7.1		
	No. 40	19			-	RB Classifi	cation			
	No. 50	14								
	No. 100	8								

Remarks:

4

No. 200

Lab No.:	Soils10-01,	, RV-225-10, (	C-249-10						
E.A.:	73475	6 <u></u>		Description:	– US 50 from	n LY 14.00 to	o 20.39		
Date Rec'd	2/9/10			•					
Samplers:	Hinton, La	rracuente	_	Station	"X2" 867+	00.00		Route U	S 50
-				Location fro	om oil (ft)	Lt.	38'		
Sample No.:	89A		-	County:	LYON				
Sample Type:					Depth (ft)	Boring D	Description		
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	l Other [	0				0
Vegetation:	None 🔳	Trees 🛛	Shrubs 🛛		2				
	Brushy 🗆	Grassy 🗆			4[				€- 4 Gr
Cut Section		Fill Section			6	Ι	Decompos	ed Granite	6
Taken Through O	Dil 🗆	Taken on Shoul	der 🔳		8		<b></b>		8
Gravel Depth (in)	) 	Oil Depth (in)		_	10				10
Remarks:					12				12
					14				14
					16				16
Submitted By:	Maynard l	Hinton			18				18
Title:	Engineerin	ng Tech III			20				20
	Sieve Size	% Passing			Liquid Limit		20	_	
	3"		•		Plastic Index		NP		
	2"				Specific Grav	vity		_	
	1.5"				Resistance V	alue	76	_	
	1"				Cover			Expansion Pre	essure
	3/4"	100			Thickn	ness	4.5		
	1/01	96							
	1/2"	70	-						
	3/8"	91			Sa	and Equivalen	t		
						and Equivalen atural Moistur		·	<u></u>
	3/8"	91			N	-		9,911	
	3/8" No. 4	91 75			N R	atural Moistur		9,911 7.9	
	3/8" No. 4 No. 10	91 75 52			N R pl	atural Moistur esistivity	re, %		
	3/8" No. 4 No. 10 No. 16	91 75 52 40			N R pl	atural Moistur esistivity H Factor	re, %		
	3/8" No. 4 No. 10 No. 16 No. 40	91 75 52 40 24			N R pl	atural Moistur esistivity H Factor	re, %		

Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-285-10, C-:	318-10							
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2" 857+	00.00		Route US	<u> </u>	
				Location from	m oil (ft)	Lt	40'	Rt		
Sample No.:	90			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆	Chem	DC 🗆	Other 🗆	. 0			Sand	0	100
Vegetation:	None 🔳	Trees D Sł	nrubs 🛛		2		Fine	Gravel	2	
	Brushy 🛛	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulde	r 📖		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		21			
	3"				Plastic Index		NP			
	2"				Specific Grav			_		
	1.5"				Resistance V	-	80			
	1"				Cover			— Expansion Pres	ssure	
	3/4"	100			Thickn	ess	3.2			
	1/2"	89					•			
	3/8"	78			Sa	nd Equivale	ent			
	No. 4	49				atural Moist				
	No. 10	34				esistivity	,	4,292		
	No. 16	27				H Factor		7.4		
	No. 40	17			•	RB Classific	cation			
	No. 50	13								
	No. 100	8								
	No. 200	4								

Lab No.:										
	Soils10-01,	RV-226-10, 0	C <b>-250-10</b>		_					
E.A.:	73475		Job I	Description:	US 50 from	n LY 14.00	) to 20.39			
Date Rec'd	2/9/10						<u></u>			
Samplers:	Hinton, La	rracuente		Station	"X2" 857+	-00.00		Route _	U <b>S 50</b>	
				Location fro	. ,	Lt	40'	Rt		
Sample No.:	90A			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			P
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	0				0	1
Vegetation:	None 📕 '	Trees 🛛	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			_ 4		Silt, Sand	l, Gravel	4	
Cut Section		Fill Section			6		Decompos	ed Granite	6	
Taken Through Oil		Taken on Shoul	der 📕		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:	<u></u> .				12				12	
					14				14	
					16				16	
Submitted By:	Maynard <b>H</b>	Hinton			18				18	
Title:	Engineerin	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limi	t	26			
	3"	,	I		Plastic Index		9	_		
	2"				Specific Gra		,	_		
•	1.5"				Resistance V	· _	41			
	1"	100			Cover		•*	– Expansion Pr	essure	
	3/4"	96			Thick	ness	15.6	2. punoion 11	230410	
	1/2"	77			THICK					
	3/8"	65			2	and Equival	ent			
	No. 4	46				latural Mois				
	No. 10	36				cesistivity		3,610		
	No. 16	32				H Factor		7.8		
					-	IRB Classifi	cation			
	No. 40	26					- allon			
	No. 40	<u>26</u> 23								
	No. 40 No. 50 No. 100	26 23 18								

Date Reported:	04/23/10									
Lab No.:		, RV-290-10, C-3				* ** 4 4 0.0				
E.A.:	73475		Jop T	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	<u>2/9/10</u>	. ,		~ · ·						
Samplers:	Hinton, L	arracuente		Station	<u>"X2" 847+0</u>			Route _	550	
Sample No.:	91			Location from County:	m oil (ft) LYON	Lt	40'	Rt	<u> </u>	
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV I	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆				d, Gravel	0	100
Vegetation:	None 🔳		nrubs 🗆		2		· · · · · · · · · · · · · · · · · · ·	·	2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder	r 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:				-	12				12	
					14				14	
				-	16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size 3" 2"	% Passing			Liquid Limit Plastic Index Specific Grave	-	24 NP			
	1.5"				Resistance Va	lue	80	_		
	1"	100			Cover			Expansion Provide the Image Science Provide	essure	
	3/4"	97			Thickne	ess	3.2		n .	
	1/2"	85								
	3/8"	73				nd Equivale				
	<u>No. 4</u>	42				tural Moist	ure, %			
	<u>No. 10</u>					sistivity		3,636	<u>_</u>	
	<u>No. 16</u>	17			-	Factor		7.8		
	<u>No. 40</u>				HR	B Classific	cation			
	<u>No. 50</u>	8								
	<u>No. 100</u>	5								
	No. 200	3								

Date Reported:	04/23/10	-						
Lab No.:	Soils10-01	, RV-227-10, C-25	51-10	_				
E.A.:	73475	-	Job Description:	US 50 from	LY 14.00 to 20.39			
Date Rec'd	2/9/10	-						
Samplers:	Hinton, L	arracuente	Station	<u>"X2" 847+0</u>	0.00	Route US	50	
			Location fro		Lt40'	Rt		
Sample No.:	91A		County:	LYON				
Sample Type:				Depth (ft)	Boring Description		<u> </u>	PSI
RV 🗖	Sub 🗆		DC Other	<u>1</u> 0			0	100
Vegetation:			ıbs 🗆	2			2	
	Brushy 🛛	Grassy 🛛		_ 4	Silt, Sand	l, Lt. Clay	4	
Cut Section		Fill Section		6			6	
Taken Through Or	il 🗆	Taken on Shoulder		8			8	
Gravel Depth (in)		Oil Depth (in)		10			10	
Remarks:				12			12	
				14			14	
				16			16	
Submitted By:	Maynard	Hinton		18			18	
Title:	Engineeri	ng Tech III		20			20	
	Sieve Size	% Passing		Liquid Limit	24			
	3"			Plastic Index	4	_		
	2"			Specific Grav				
	1.5"			Resistance Va	-	_		
	1"			Cover		— Expansion Press	ure	
	3/4"			Thickne	ess <b>4.8</b>	r	-	
	1/2"	100						
	3/8"	99		Sar	nd Equivalent			
	No. 4	94			tural Moisture, %			
	No. 10	86			sistivity	2,941		
	No. 16	78			Factor	7.8		
	No. 40	56		-	B Classification			
	No. 50	49						
	No. 100	38						

Remarks:

No. 200

28

Date Reported:	<u>04/23/10</u>	DV 201 10 C 2	24 10							
Lab No.:	-	<u>, RV-291-10, C-3</u>			TIS 50 from	T X/ 1 / 00	4- 20 20			
E.A.:	73475		JOD I	Description:	US 50 from	ILY 14.00	10 20.39			
Date Rec'd	<u>2/9/10</u>	·		<b>a</b>		00.00		<b></b>	0.50	
Samplers:	Hinton, La	arracuente		Station	<u>"X2" 837+</u>			Route <u>U</u>	8 50	
Sample No.:	92			Location from County:	m oil (ff)	Lt	20'	Rt		
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other	0		Silt, Sand,	Fine Gravel	0	100
Vegetation:	None 🔳	Trees 🗆 Sh	rubs 🗆		2		C	bil		
0	Brushy 🗖	Grassy 🗖			4				4	
Cut Section	·	Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					- 14				14	
					16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:	Engineeri	ng Tech III			20				20	
							arranda (h. 1997).			
	Sieve Size	% Passing			Liquid Limit		19			
	3"				Plastic Index	_	NP			
	2"				Specific Grav	vity				
	1.5"	100			Resistance V	alue	79			
	1"	93			Cover			Expansion Pro	essure	
	3/4"	91			Thickr	iess	3.5			
	1/2"	85								
	3/8"	80			Sa	and Equival	ent			
	No. 4	59			N	atural Mois	ture, %			
	No. 10	43			R	esistivity		2,174		
	No. 16	35			pl	H Factor		8.4		
	No. 40	23			Н	RB Classifi	cation			
	No. 50	19								
	No. 100	12								
	No. 200	7								

Date Reported:	04/23/10	-								
Lab No.:	Soils10-01	, RV-228-10, C	-252-10		_					
E.A.:	73475		Job E	Description:	US 50 from	LY 14.00	) to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	<u>"X2" 837+0</u>	00.00		Route	US 50	
				Location fro	om oil (ft)	Lt	20'	Rt.		
Sample No.:	92A			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other [	□ 0				0	100
Vegetation:	None 🔳	Trees 🖾 🖇	Shrubs 🖽		2				2	
	Brushy 🗆	Grassy 🛛			4		Silt, Sand	l, Gravel	4	
Cut Section		Fill Section	]		6		Lt. C	Clay	6	
Taken Through Oi	1 🗆	Taken on Should	er 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:				_	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton		·	18				18	
Title:	Engineeri	ng Tech III			20				20	
	<u>.</u>			<u></u>						
	Sieve Size	% Passing			Liquid Limit	_	31	_		
	3"				Plastic Index		13	_		
	2"				Specific Grav	rity		_		
	1.5"				Resistance Va	alue	66	_		
	1"	100			Cover			Expansion	Pressure	
	3/4"	97			Thickn	ess	7.6	_		
	1/2"	92								
	3/8"	85			Sa	nd Equival	lent			
	No. 4	61			Na	atural Mois	sture, %			
	No. 10	42			Re	esistivity		3,096		
	No. 16	34			pŀ	I Factor		8.2		
	No. 40	24			H	RB Classifi	ication			
	No. 50	22								
	No. 100	18								
	No. 200	16								

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-293-10, C-32	26-10		-					
E.A.:	73475		Job E	Description:	US 50 from	LY 14.0	0 to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2" 827+0	00.00		Route	US 50	
				Location fro	m oil (ft)	Lt.	20'	Rt.		
Sample No.:	93			County:	LYON					
Sample Type:					Depth (ft)	Bori	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>		Silt Sand, F	ine Gravel	0	100
Vegetation:	None 🔳	Trees 🗆 Shr	ubs 🗆		2				2	
	Brushy 🗆	Grassy			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)	-	_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing			Liquid Limit		19			
	3"				Plastic Index		NP	_		
	2"				Specific Grav	- vitv		_		
	1.5"				Resistance Va		81	_		
	1"	100			Cover			– Expansion	Pressure	
	3/4"	98			Thickn	ess	2.9	1		
	1/2"	94				_		-		
	3/8"	88			Sa	ınd Equiva	ılent			
	No. 4	67				atural Moi			·	
	N. 10	51						1 111		

Resistivity 1,111 7.5 pH Factor HRB Classification

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-229-10,	C-253-10		-					
E.A.:	73475		Job D	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10				<u> </u>					
Samplers:	Hinton, La	arracuente	_	Station	"X2" 827+0	00.00		Route	US 50	
			_	Location fro	om oil (ft)	Lt	20'	Rt.		
Sample No.:	93A			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	0				0	100
Vegetation:	None 🔳	Trees 🗖	Shrubs 🛛		2			·	2	
	Brushy 🗆	Grassy			_ 4		Sand	ly_Silt	4	
Cut Section		Fill Section			6		Grave	ly Sand	6	
Taken Through Oil		Taken on Shou	lder 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
		I								
	Sieve Size	% Passing	-		Liquid Limit		24			
	3"		-		Plastic Index	_	5	_		
	2"	<u></u>	-		Specific Grav	rity	- ··· ·			
	1.5"		-		Resistance Va	alue	37			
	1"		-		Cover			Expansion	Pressure	
	3/4"		-		Thickn	ess	16.9			
	1/2"	100	-							
	3/8"	97	_		Sa	nd Equival	ent			
	No. 4	89	-		Na	atural Moist	ture, %		· · · · · ·	
	No. 10	81	-		Re	esistivity		1,215		
	No. 16	76	-		-	I Factor		7.3		
	No. 40	60	-		HI	RB Classifi	cation			
	No. 50	52	-							
	No. 100	39	_							
	No. 200	29	_							

#### Remarks:

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Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-294-10, C-3	327-10		_					
E.A.:	73475		Job D	Description:	US 50 from	LY 14.0	0 to 20.39			
Date Rec'd	2/9/10	-								
Samplers:	Hinton, L	arracuente		Station	"X2" 817+(	00.00		Route	US 50	
				Location fro	om oil (ft)	Lt.	20'	Rt.		
Sample No.:	94	-		County:	LYON					
Sample Type:					Depth (ft)	Borir	ng Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other C	<u> </u>		Silt, San	d, Gravel	0	100
Vegetation:	None 🔳	Trees	rubs 🛛		2				<u> </u>	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)		_	10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineeri	ng Tech III			20				20	
<u> </u>	Sieve Size	% Passing			Liquid Limit		20	<u> </u>		
	3"	,			Plastic Index		NP			
	2"				Specific Grav	- vitv	111			
	1.5"				Resistance Va	-	80			
	1"	100			Cover			Expansion F	ressure	
	3/4"	96			Thickn	ess	3.2	F		
	1/2"	87								
	3/8"	79			Sa	nd Equiva	lent			
	No. 4	58				atural Mois				
	No. 10	41				esistivity	,	2,146		
	No. 16	34				I Factor		8.1		
	No. 40	23			•	RB Classif	ication			
	No. 50	19								
	No. 100	13								
	No. 200	9								

#### Remarks:

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Date Reported: Lab No.:	04/23/10 Soils10-01	, RV-295-10, C	-328-10							
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	<u>"X2" 817+</u>	00.00		Route U	<u>s 50</u>	
Sample No.:	94A			Location from County:	m oil (ft) LYON	Lt	20'			
Sample Type:	2414			county.	Depth (ft)	Boring	Description			PSI
RV	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆		Doring	Description		0	100
Vegetation:	None		hrubs 🗆		- 0 2				2	100
i ogotation.	Brushy				4		Silt,	Sand		
Cut Section	2140119	Fill Section □			- 6		Lt. (	Clav	6	
Taken Through Oil		Taken on Should			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:				_	12				12	
					- 14				14	
					- 16				16	
Submitted By:	Maynard	Hinton			- 18				18	
	Engineeri	ng Tech III			20				20	
		<u> </u>								
	Sieve Size	% Passing			Liquid Limit		24			
	3"				Plastic Index		4			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue	43	_		
	1"				Cover			Expansion Pre	essure	
	3/4"	100			Thickn	ness	14.9			
	1/2"	99								
	3/8"	97			Sa	and Equivale	ent			
	No. 4	91			N	atural Moist	ure, %			
	No. 10	81			R	esistivity		3,067		
	No. 16	73			-	H Factor		7.7		
	No. 40	56			Н	RB Classific	cation			
	No. 50	51								
	<u>No. 100</u>	41								
	No. 200	29								

Remarks:

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Date Reported:	04/23/10									
Lab No.:		, RV-296-10, C	2-329-10		_					
E.A.:	73475		Job D	Description:	US 50 from	m LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	<u>Hinton, L</u>	arracuente		Station	"X2" 807	+00.00		Route US	S 50	
				Location fro	m oil (ft)	Lt	20'	Rt		
Sample No.:	95			County:	LYON					
Sample Type:					Depth (ft)	Boring	Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	<u> </u>		Silt, Sand	l, Gravel	0	100
Vegetation:	None 🔳	Trees 🗆 👷	Shrubs 🛛		2				2	
	Brushy 🗆	Grassy 🗆			4				4	
Cut Section		Fill Section	נ		6				6	
Taken Through Oi		Taken on Should	er		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:				-	12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:	Engineeri	ng Tech III			20				20	
	Sieve Size	% Passing		·	Liquid Lim	:+	20			
	3"	70 Fassing			Plastic Inde			_		
	2"						NP	_		
	1.5"				Specific Gr		00	_		
	<u> </u>	100			Resistance	value	80			
	3/4"	100			Cover		2.2	Expansion Pres	sure	
		<u>95</u> 90			Thick	mess	3.2			
	1/2"					- 1 <b>-</b> - 1				
	3/8"	<u> </u>				Sand Equivale				
	No. 4					Natural Moist	ure, %			
	No. 10	49				Resistivity		2,398	<u> </u>	
	No. 16	42			•	oH Factor		8.0		
	No. 40	27				HRB Classific	ation			

Remarks:

<u>No. 50</u>

No. 100

No. 200

22

13 8

Date Reported:	04/23/10								
Lab No.:	<u>Soils10-01</u>	, RV-297-10, C-33	30-10		_				
E.A.:	73475		Job I	Description:	US 50 from	LY 14.00	to 20.39		
Date Rec'd	2/9/10								
Samplers:	Hinton, L	arracuente		Station	"X2" 807+	00.00		Route US 50	
				Location fro	. ,	Lt	20'	Rt	_
Sample No.:	95A			County:	LYON				
Sample Type:					Depth (ft)	Boring	Description		PSI
RV 🗖	Sub 🗆		DC 🗆	Other $\Box$	0			0	100
Vegetation:			ubs 🗆		2			2	
	Brushy 🗆	Grassy 🗆		u	_ 4		Sand	y Silt 4	
Cut Section		Fill Section			6		Gravelly	Silty Sand 6-	
Taken Through Oi	1 🗆	Taken on Shoulder			8			8	
Gravel Depth (in)		Oil Depth (in)		_	10			10	
Remarks:					12			12	
					14			14	,
					16			16	
Submitted By:	Maynard	Hinton			18			18	
Fitle: <u>H</u>	Engineeri	ng Tech III			20			20	
	Sieve Size	% Passing			Liquid Limit	• •• •	21		
	3"	70 Tussing			Plastic Index		3	_	
	2"				Specific Grav		<u> </u>	_	
	1.5"				Resistance Va		54	_	
	1:5				Cover		<b>J1</b>	Expansion Pressure	
	3/4"	100			Thickn	ess	11.4		
	1/2"	99			1 month		T		
	3/8"	96			Sa	nd Equivale	nt		
	No. 4	87				atural Moist			-
	No. 10	77				sistivity		3,922	-
	No. 16	69				I Factor		7.5	-
	No. 40	51			-	RB Classific	ation		-
	No. 50	45							-
	No. 100	28							
	No. 200	23							

Lab No.:	Soils10-0	1, RV-298-10, C	C <b>-331-10</b>		_					
E.A.:	73475	_	Job	Description:	US 50 fron	n LY 14.00	to 20.39			
Date Rec'd	2/9/10	_								
Samplers:	Hinton, L	arracuente		Station	"X2" 797+	-00.00		Route	US 50	
				Location fro	om oil (ft)	Lt	20'	Rt.		
Sample No.:	96			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PS
RV 🗖	Sub 🗆	□ Chem □	DC 🗆	Other D	0		Silt, Sand	l, Gravel	0	10
Vegetation:	None	Trees 🛛	Shrubs 🗆		2			· · · · · · · · · · · · · · · · · · ·	2	
	Brushy 🗆	Grassy 🗆			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oi	1 🗆	Taken on Should	der 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:					12				12	
					14				14	
					16				16	
Submitted By:	Maynard	Hinton			18				18	
Title:	Engineer	ing Tech III			20				20	
					· · · · · · · · · · · · · · · · · · ·					
	o: o:	0 ( Density			т т		20			
	Sieve Size	% Passing			Liquid Limit		<u>20</u>	-		
	3"				Plastic Index		NP	_		
	2"				Specific Grav	· _	01	_		
	1.5"	100			Resistance V	aiue	81			
	1"	100			Cover		2.0	Expansion I	ressure	
	3/4"	98			Thickr	ness	2.9			
	1/2"	93			~					
	3/8"	88				and Equivale				
	<u>No. 4</u>	74				atural Moist	ure, %			
	<u>No. 10</u>	58				esistivity		2,924		
	No. 16	48			-	H Factor	_	8.1		
	No. 40	29			H	RB Classific	ation			
	No. 50	23								
	No. 100	13								

7

No. 200

Remarks:

Date Reported:	04/23/10	_								
Lab No.:	Soils10-01	l, RV-299-10, C-3	35-10		_					
E.A.:	73475	_	Job I	Description:	US 50 from	1 LY 14.00	to 20.39			
Date Rec'd	2/9/10									
Samplers:	Hinton, L	arracuente		Station	"X2" 797+	00.00		Route	U <b>S 50</b>	
				Location from	m oil (ft)	Lt	20'	Rt.		
Sample No.:	96A			County:	LYON					
Sample Type:					Depth (ft)	Boring	g Description			PSI
RV 🗖	Sub 🗆	I Chem □	DC 🗆	Other 🗆	0				0	100
Vegetation:	None 🔳	Trees 🗆 Shi	rubs 🗆		2				2	
	Brushy 🗆	Grassy 🗆			4		Silt,	Sand	4	
Cut Section		Fill Section			6		Lt.	Clay	6	
Taken Through Oi	1 🗆	Taken on Shoulder			8				8	
Gravel Depth (in)		Oil Depth (in)			10				10	
Remarks:				-	12				12	
					14				14	
· · ·					16				16	
Submitted By:	Maynard	Hinton			- 18				18	
Title:		ng Tech III			20				20	
· · · · · · · · · · · · · · · · · · ·					- •				•	
	Sieve Size	% Passing			Liquid Limit		22			
	3"				Plastic Index		3			
	2"				Specific Grav	vity				
	1.5"				Resistance V	alue	44			
	1"				Cover			Expansion P	ressure	
	3/4"	100			Thickr	ness	14.6			
	1/2"	98								
	3/8"	97			Sa	and Equivale	ent			
	No. 4	91			N	atural Moist	ure, %			
	No. 10	81			R	esistivity		3,226		
	No. 16	73			pl	H Factor		7.7		
	No. 40	56			-	RB Classific	ation			
	No. 50	49						<u>.</u>		
	No. 100	37								

Remarks:

25

No. 200

Date Reported:	04/23/10									
Lab No.:	Soils10-01	, RV-300-10, C-	336-10		_					
E.A.:	73475	-	Job D	Description:	US 50 from	n LY 14.00	) to 20.39			
Date Rec'd	03/25/10									
Samplers:	Altamirar	10, Marshall		Station	"L1" 787+	-00		Route	US 50	W.B.
		<u> </u>		Location fro	• •	Lt	30	Rt		_
Sample No.:	97			County:	LYON					
Sample Type:					Depth (ft)	Borin	g Description			PSI
RV 🗖	Sub 🗆	Chem 🗆	DC 🗆	Other 🗆	0				0	
Vegetation:	None 🔳	Trees D S	hrubs 🗖		2		Silt, Sand	l, Gravel	2	100
	Brushy 🗆	Grassy 🗆			_ 4				4	
Cut Section		Fill Section			6				6	
Taken Through Oil		Taken on Shoulde	r 🔳		8				8	
Gravel Depth (in)		Oil Depth (in)		-	10				10	
Remarks:					12				12	
					_ 14				14	
					16				16	
Submitted By:	Altamirar	10			18				18	
Title:	Engineeri	ng Tech III			20				20	
	<u> 0: 0:</u>			······	т''					
	Sieve Size	% Passing			Liquid Limit		22	_		
	3"				Plastic Index		5	_		
	2"	100			Specific Gra	-	()	_		
	1.5"	<u>100</u> 99			Resistance V	alue	64	- <u>.</u> .	D	
	3/4"	99 97			Cover		0.2	Expansion	Pressure	
	1/2"	82			Thick	ness	8.3	_		
	3/8"	73			c	and Equival	~~**			
	No. 4	58				and Equival Iatural Moist				-
	No. 10	<u> </u>					lure, 70	2 052		-
	No. 16	40				lesistivity H Factor		<u>2,053</u> 8.4	-	-
	No. 40	29			-	H Factor IRB Classifi	antion	0.4		-
	No. 50	25			П		cation			-
	No. 100	19								
	No. 200	15								
	110.200	1.7								

Date Reported: Lab No.:	04/23/10 Soils10-0	_ 1, RV-301-10, (	C-337-10							
E.A.:	73475	<u>1, KV-301-10, V</u>		Description:	US 50 from	m I.V 14 (	0 to 20 39			
Date Rec'd	03/25/10	-	300 L	cscription.	05 50 110		0 10 20.37			
Samplers:		– no, Marshall		Station	"L1" 787-	+00		Route	US 50	W.B.
Samplers.	<u>Antainin a</u>	110, 1111 Shan	-	Location fro		Lt.	30	_ Rt		
Sample No.:	97A			County:	LYON	-		_		-
Sample Type:					Depth (ft)	Bori	ing Description			PSI
RV 🗖	Sub 🗆	□ Chem □	DC 🗆	Other	0				0	-
Vegetation:	None 🔳	Trees 🗆	Shrubs 🗆		2				2	<u> </u>
	Brushy 🗆	Grassy □			4		Silt, San	d, Gravel	4	- 100
Cut Section		Fill Section		·	6				6	-
Taken Through Oi	1 🗆	Taken on Shoul	der 🔳		8				8	-
Gravel Depth (in)		Oil Depth (in)			10				10	-
Remarks:					12				12	-
					14				14	-
			·		16				16	-
Submitted By:	Altamira	no			18				18	-
Title:	Engineer	ing Tech III			20				20	-
	Sieve Size	% Passing			Liquid Lim	it	24			
	3"		•		Plastic Inde	- x	6	_		
	2"		•		Specific Gr	- avity		_		
	1.5"		-		Resistance	-	48			
	1"	100	-		Cover	-		Expansion	Pressure	
	3/4"	96	-		Thick	cness	13.4	-		
	1/2"	96	-			-				
	3/8"	94	-		:	Sand Equiva	alent			
	No. 4	90	-			Natural Moi				
	No. 10	83	-		2	Resistivity		3,401		_
	No. 16	77	-		1	pH Factor		7.3		_
	No. 40	63	-			HRB Classi	fication			
	No. 50	56	-							_
	No 100	44	-							

Remarks:

No. 200

31

# Appendix B

Laboratory Test Results

Summary of Results Particle Size Distribution Reports Triaxial Test Results Direct Shear Test Reports Chemical Analyses

> 73475 EA/Cont #

CA1

Boring No.

Elevation (ft)

Job Description US 50 Widening - Stagecoach

Date Station "X2" 1109 + 00

04/05/2010

_					· · · ·			 		····	 	
	COMMENTS				H, CU, UW, G = 2.69	ප්	c					
	ပ	psi	dual									
EST	Ð	deg.	Residual									
STRENGTH TEST	ပ	psi		•								
STRE	Ð	deg.	Peak									
	TEST	TYPE										
	₫	%		18	26	1	ю					
	Ч	%		17	21	16	20		1			
		%		35	47	27	23					
%	PASS	#200		45.6	64.2	21.1	21.7					
DRΥ	Ŵ	pcf			85.6							
	%M			17.3	26.3	11.6	10.6					
	SOIL	GROUP		sc	Ъ	ပ္တ	SM					
	BLOWS											
SAMP-	LER	TYPE		SPT	чS	SPT	TqS					
SAMPLE	DEPTH	(#)		3.5 - 5.0	5.3 - 7.3	8.0 - 9.5	13.0 - 14.5					
	SAMPLE	NO		۲	В	ပ	۵					

CMS = California Modified Sampler 2.42" ID SPT = Standard Penetration 1.38" ID CS = Continuous Sample 3.23" ID CSS = Calif. Split Spoon 2.42" ID CPT = Cone Penetration Test Sh = Shelby Tube 2.87" ID P = Pushed, not driven PB = Pitcher Barrel RC = Rock Core TP = Test Pit R = Refusal

\* = Average of subsamples

 $N = (N_{css})(0.62)$ 

N = Field SPT

N = No. of blows per ft., sampler

C = Cohesion

 $\Phi = Friction$ 

MD = Moisture Density G = Specific Gravity PI = Plasticity Index OC = Consolidation H = Hydrometer S = Sieve PL = Plastic Limit LL = Liquid Limit NP = Non-Plastic Ch = Chemical RV = R - Value

UU = Unconsolidated Undrained

CU = Consolidated Undrained CD = Consolidated Drained

DS = Direct Shear

U = Unconfined Compressive

E = Swell/Pressure on Expansive Soils SL = Shrinkage Limit W = Moisture Content CM = Compaction UW= Unit Weight

O = Organic Content K = Permeability

RQD = Rock Quality Designation D = Dispersive

X = X-Ray Defraction

HCpot = Hydro-Collapse Potential

> 73475 EA/Cont #

Job Description US 50 Widening - Stagecoach

Elevation (ft) CA 2 **Boring No.** 

Date Station "X2" 1068 + 60

04/05/2010

Г												
	COMMENTS			H, DS, UW, G = 2.68	H, DS, UW, G = 2.68	H, Ch	H, Ch					
	υ	psi	luai	0	2							
EST	Ð	deg.	Residual	34	32							
STRENGTH TEST	υ	psi	ak	0	7							retion
STR	Ð	deg.	Peak	34	32							moitreemon = Mo
	TEST	TYPE		SQ	DS							
ſ	ā	%		4	5	11	ЧN					1
	Ч	%		19	17	18	ď					meter
Γ	L	%		23	22	29	21					
%	PASS	#200		24.7	23.5	44.8	12.1					
DRY	MN	pcť		96.1	96.3							
Γ	W%			15.2	11.6	16.8	9.0					
Γ	SOIL	GROUP		SC-SM	SC-SM	သိ	SM					
z	٧S											
SAMP-	LER	TYPE		CMS	CMS	SPT	SPT					
Γ	DEPTH			4.0 - 4.5	4.5 - 5.0	5.0 - 6.5	11.0 - 12.5					
	SAMPLE	Ö		A1	A2	m	U					•

CMS = California Modified Sampler 2.42" ID SPT = Standard Penetration 1.38" ID CS = Continuous Sample 3.23" ID CSS = Calif. Split Spoon 2.42" ID CPT = Cone Penetration Test Sh = Shelby Tube 2.87" ID P = Pushed, not driven PB = Pitcher Barrel RC = Rock Core TP = Test Pit R = Refusal

 $N = (N_{css})(0.62)$ N = No. of blows per ft., sampler UU = Unconsolidated Undrained CU = Consolidated Undrained U = Unconfined Compressive CD = Consolidated Drained DS = Direct Shear C = Cohesion N = Field SPT Φ = Friction

RV = R - Value MD = Moisture Density G = Specific Gravity OC = Consolidation PI = Plasticity Index LL = Liquid Limit PL = Plastic Limit NP = Non-Plastic H = Hydrometer S = Sieve Ch = Chemical

E = Swell/Pressure on Expansive Soils RQD = Rock Quality Designation W = Moisture Content SL = Shrinkage Limit O = Organic Content UW= Unit Weight CM = Compaction K = Permeability D = Dispersive

X = X-Ray Defraction HCpot = Hydro-Collapse Potential

\* = Average of subsamples

> 73475 EA/Cont #

Job Description US 50 Widening - Stagecoach

Date Station "X2" 1009 + 85

04/12/2010

Γ			<u> </u>							
	COMMENTS		H, G = 2-68	H, G = 2.69	H, Ch	H, Ch				
	ပ	Inal Inal								
EST	φĘ	Residual								
STRENGTH TEST	ບ <u>ຊ</u>	s x								
STR	φ	Peak								
	TEST									
	<u> </u>	۹	7	31	20	4				
	٦۲ %	•	12	19	20	22				
	% LL	۹	19	50	40	26				
%	PASS #200	007#	30.6	70.3	53.4	25.4				
DRY	۸Ü مر	5								
	%M		10.5	26.1	18.8	12.3				
		5005	SC-SM	н	CL	SC-SM				
	BLOWS									
SAMP-	LER TVPF	]	CMS	CMS	SPT	SPT				
SAMPLE	DEPTH /#\	(11)	4.0 - 4.5	4.5 - 5.0	7.5 - 9.0	12.5 - 14.0				
	SAMPLE	j.	A1	A2	۵	ပ				

 $N = (N_{css})(0.62)$ UU = Unconsolidated Undrained N = No. of blows per ft., sampler U = Unconfined Compressive CU = Consolidated Undrained CD = Consolidated Drained DS = Direct Shear C = Cohesion N = Field SPT 

RV = R - Value MD = Moisture Density G = Specific Gravity PI = Plasticity Index OC = Consolidation LL = Liquid Limit PL = Plastic Limit H = Hydrometer S = Sieve NP = Non-Plastic Ch = Chemical

E = Swell/Pressure on Expansive Soils W = Moisture Content SL = Shrinkage Limit UW= Unit Weight O = Organic Content CM = Compaction K = Permeability D = Dispersive

RQD = Rock Quality Designation X = X-Ray Defraction

\* = Average of subsamples

RC = Rock Core PB = Pitcher Barrel CSS = Calif. Spint Spoon 2.42" ID CPT = Cone Penetration Test R = Refusal Sh = Shelby Tube 2.87" iD P = Pushed, not driven

CMS = California Modified Sampler 2.42" ID

SPT = Standard Penetration 1.38" ID CS = Continuous Sample 3.23" ID

TP = Test Pit

CA 3 Boring No.

Elevation (ft)

HCpot = Hydro-Collapse Potential

> 73475 EA/Cont #

Job Description US 50 Widening - Stagecoach

COMMENTS 04/12/2010 ъ ಕ Date ပ ig Residual deg. Ð Station "X2" 945 + 85 STRENGTH TEST c psi Peak deg. Ð TEST TYPE ٩ Å ٩ ⊡ % 2 ЧN ЧN ЧZ 19 പ % 18 20 19 רא <del>ר</del> 2 % PASS #200 17.5 28.4 10.4 4.0 bg V RY Elevation (ft) %M 9.8 4.7 4.4 6.7 SOIL GROUP SP-SM МQ SM SM BLOWS per ft. CMS<sub>bag</sub> SAMP-Ler Type SPT CMS SPT CA 4 13.5 - 14.0 14.0 - 15.0 SAMPLE DEPTH 1.5 - 3.0 6.0 - 7.5 ŧ Boring No. SAMPLE 9 V ∢ ш δ 3

CMS = California Modified Sampler 2.42" ID SPT = Standard Penetration 1.38" ID CS = Continuous Sample 3.23" ID CSS = Calif. Split Spoon 2.42" ID CPT = Cone Penetration Test R = Refusal Sh = Shelby Tube 2.87" ID P = Pushed, not driven PB = Pitcher Barrel RC = Rock Core TP = Test Pit

\* = Average of subsamples

MD = Moisture Density G = Specific Gravity PI = Plasticity Index OC = Consolidation PL = Plastic Limit NP = Non-Plastic LL = Liquid Limit H = Hydrometer Ch = Chemicat RV = R - Value S = Sieve

UU = Unconsolidated Undrained

CU = Consolidated Undrained CD = Consolidated Drained

DS = Direct Shear

U = Unconfined Compressive

E = Swell/Pressure on Expansive Soils W = Moisture Content SL = Shrinkage Limit O = Organic Content CM = Compaction UW= Unit Weight K = Permeability D = Dispersive

RQD = Rock Quality Designation

HCpot = Hydro-Collapse Potential X = X-Ray Defraction

 $N = (N_{css})(0.62)$ 

N = Field SPT

N = No. of blows per ft., sampler

C = Cohesion

> 73475 EA/Cont #

Elevation (ft)

Station "X2" 895 + 00

	SAMPLE	SAMP-				DRY	%			┝		STR	STRENGTH TEST	EST		
SAMPLE	DEPTH	LER	BLOWS		%M	M	PASS	Н	Ч	<u> </u>	TEST	Ð	ပ	Ð	ပ	COMMENTS
NO	(tt)	TYPE		GROUP		pcť	#200	%	%	%	TYPE	deg.	psi	deg.	psi	
												Pe	Peak	Res	Residual	
۲	2.0 - 3.5	SPT		SC-SM	10.6		22.0	22	18	4						сч
<u>8</u>	6.5 - 7.0	CMS		SM	6.6	109.7	19.1	16	d	dN	DS	36	0	36	0	H, DS, UW, G = 2.69
B2	7.0 - 7.5	CMS		SM	7.3		16.9	22	19	e						H, G = 2.69
υ	11.0 - 12.5	SPT		sc	12.3		23.0	27	18	ი						с
·																
Califor	CMS = California Modified Sampler 2.42" ID	e e	U = Unconfin	U = Unconfined Compressive	e		$1^{-}$	H = Hydrometer	neter		1	CM = Compaction	action			
	-				-			· č					L	с 	-	

SPT = Standard Penetration 1.38" ID CS = Continuous Sample 3.23" ID RC = Rock Core PB = Pitcher Barrel CSS = Calif. Split Spoon 2.42" ID CPT = Cone Penetration Test Sh = Shelby Tube 2.87" ID P = Pushed, not driven TP = Test Pit R = Refusal

\* = Average of subsamples

RV = R - Value MD = Moisture Density S = Sieve G = Specific Gravity PI = Plasticity Index OC = Consolidation PL = Plastic Limit LL = Liquid Limit NP = Non-Plastic H = Hydrometer Ch = Chemical

UU = Unconsolidated Undrained

CU = Consolidated Undrained CD = Consolidated Drained

DS = Direct Shear

E = Swell/Pressure on Expansive Soils W = Moisture Content SL = Shrinkage Limit O = Organic Content CM = Compaction UW= Unit Weight K = Permeability D = Dispersive

HCpot = Hydro-Collapse Potential RQD = Rock Quality Designation X = X-Ray Defraction

 $N = (N_{css})(0.62)$ 

N = Field SPT

N = No. of blows per ft., sampler

C = Cohesion

Job Description US 50 Widening - Stagecoach

Boring No.

CA 5

04/12/2010

Date

> 73475 EA/Cont #

Job Description US 50 Widening - Stagecoach

04/12/2010		COMMENTS		NM	NN	Ch, G = 2.70				
Date		1								
		c bsi	Residual							
+ 20	EST	φ eg.	Resi							
X2" 837	STRENGTH TEST	c Dsi	k							
Station "X2" 837 + 20	STRE	φ. de de	Peak							
0)		TEST TYPE								
		<u>٦</u> %		30	25	22				
		۳L %	2	22	21	26				
		% LL	2	52	46	48				
	%	PASS #200		57.4	77.5	71.3				
u (ft)	DRY	UW DCf	i	114.8	110.4					
Elevation (ft		%M		14.5	11.7	13.2				
-		SOIL GROUP		Ю	СГ	СГ				
	z	BLOWS per ft.								
	SAMP-	LER	1	CMS	CMS	SPT				
CA 6	SAMPLE	DEPTH (ft)	6	4.5 - 5.0	5.0 - 5.5	9.0 - 10.5				
Boring No.		SAMPLE NO.		A1	A2	æ				

CMS = California Modified Sampler 2.42" ID	SPT = Standard Penetration 1.38" ID	CS = Continuous Sample 3.23" ID	RC = Rock Core	PB = Pitcher Barrel	CSS = Calif. Split Spoon 2.42" ID	CPT = Cone Penetration Test	: Test Pit	P = Pushed, not driven	Refusal	Sh = Shelby Tube 2.87" ID	
CMS = C	SPT = St	CS = Cor	RC = Ro	PB = Pito	CSS = C	CPT = Ci	TP = Test Pit	P = Push	R = Refusal	Sh = She	

\* = Average of subsamples

 $N = (N_{css})(0.62)$ 

N = Field SPT

N = No. of blows per ft., sampler

C = Cohesion

UU = Unconsolidated Undrained

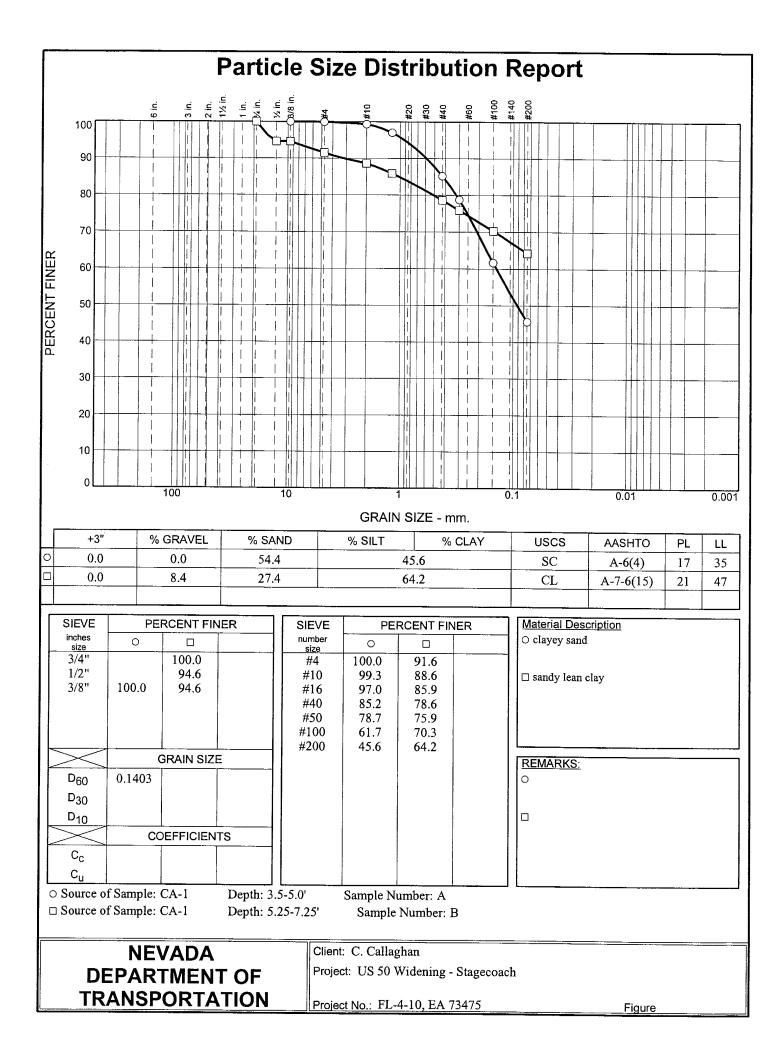
U = Unconfined Compressive CD = Consolidated Drained

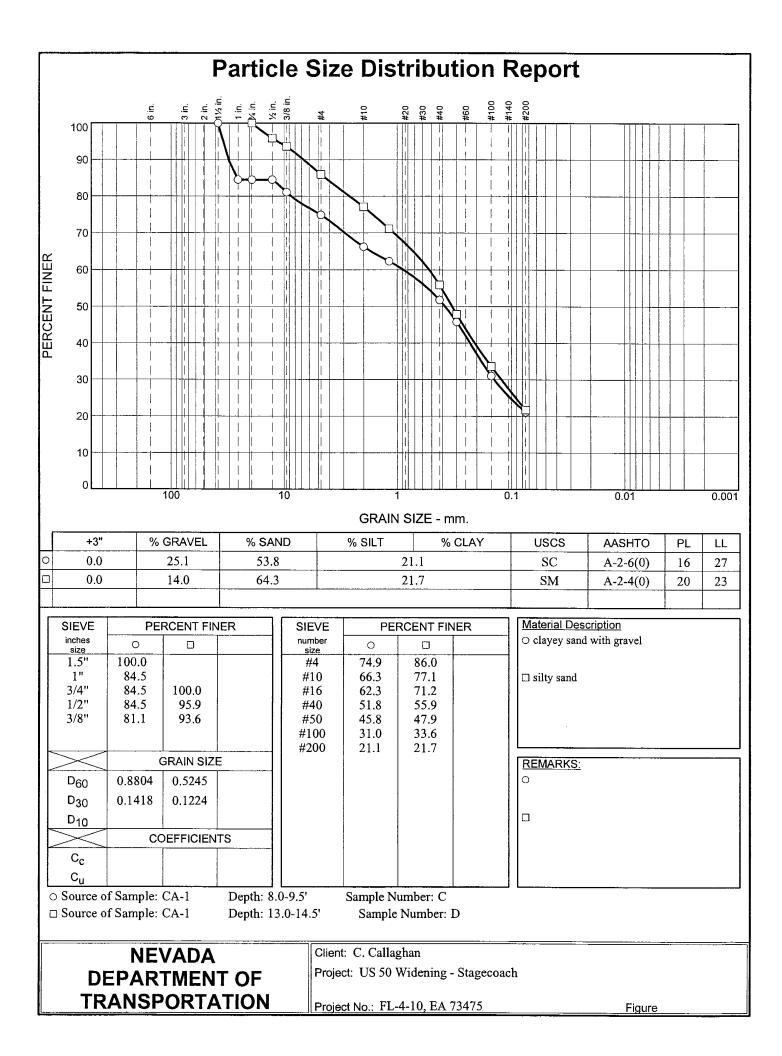
CU = Consolidated Undrained

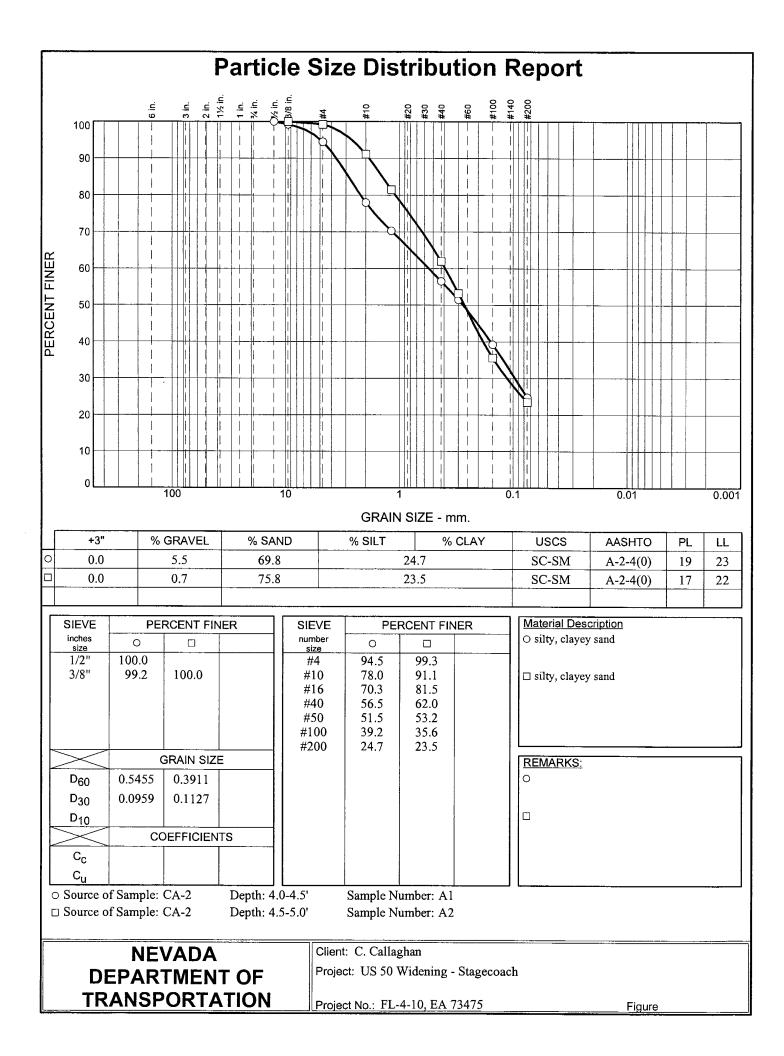
DS = Direct Shear

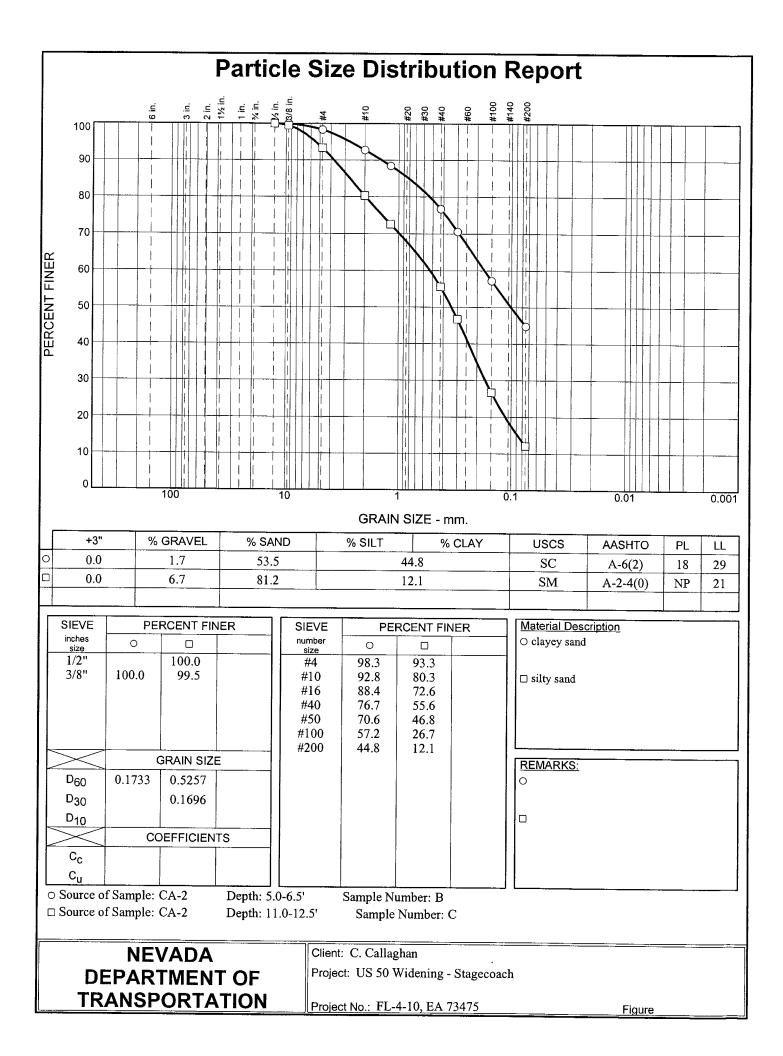
RV = R - Vatue MD = Moisture Density G = Specific Gravity PI = Plasticity Index OC = Consolidation LL = Liquid Limit PL = Plastic Limit NP = Non-Plastic H = Hydrometer Ch = Chemical S = Sieve

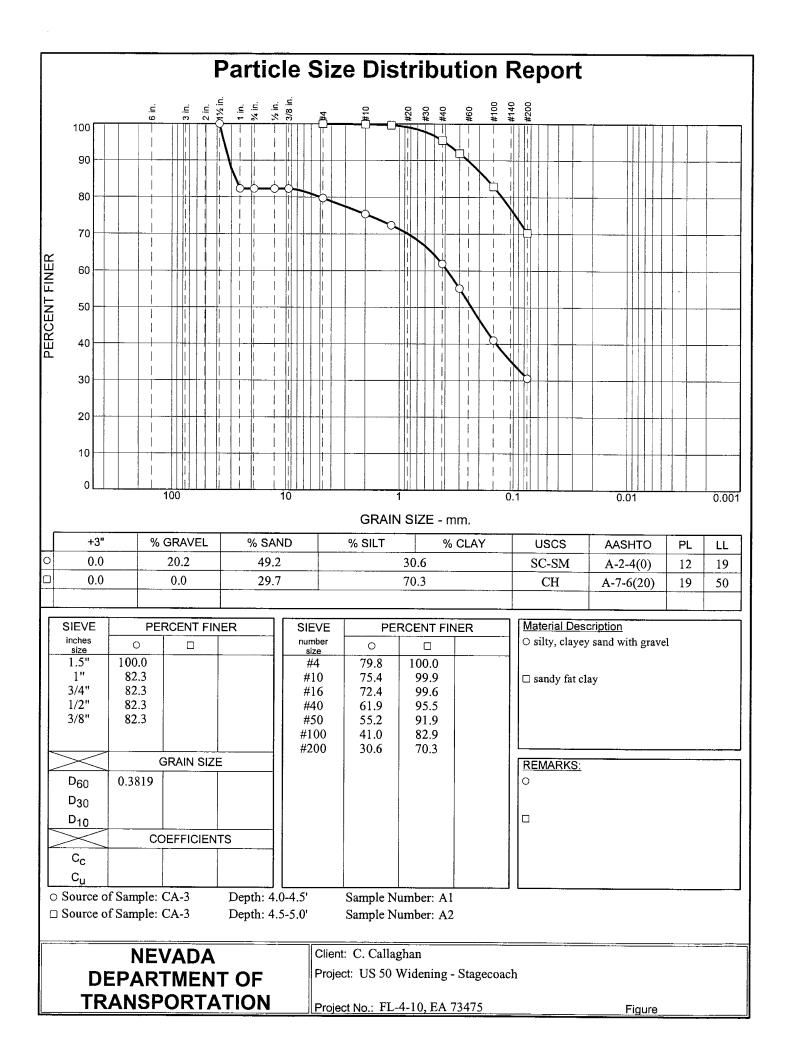
E = Swell/Pressure on Expansive Soils X = X-Ray Defraction HCpot = Hydro-Collapse Potential RQD = Rock Quality Designation W = Moisture Content SL = Shrinkage Limit O = Organic Content CM = Compaction UW= Unit Weight K = Permeability D = Dispersive

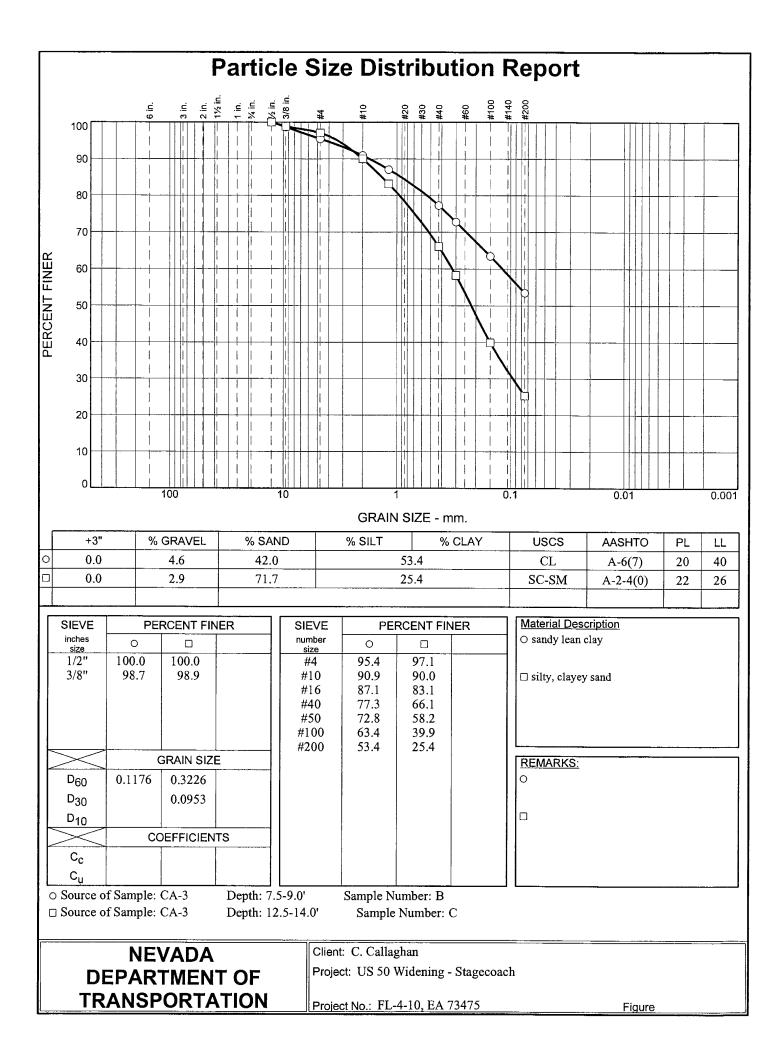


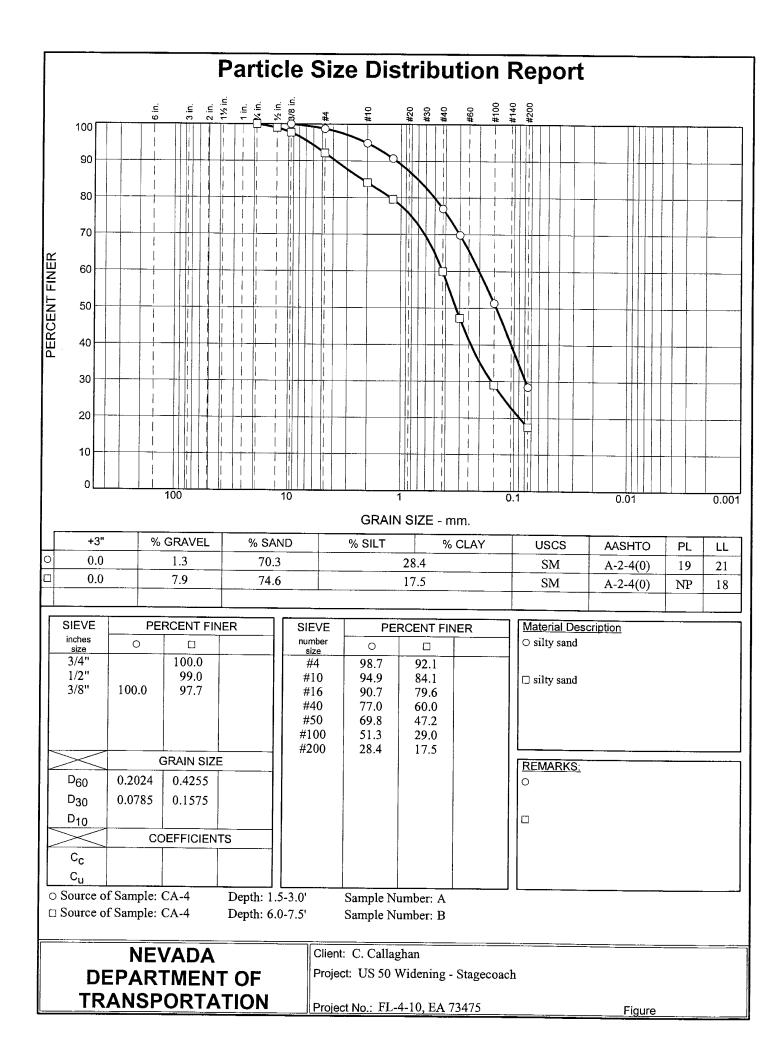


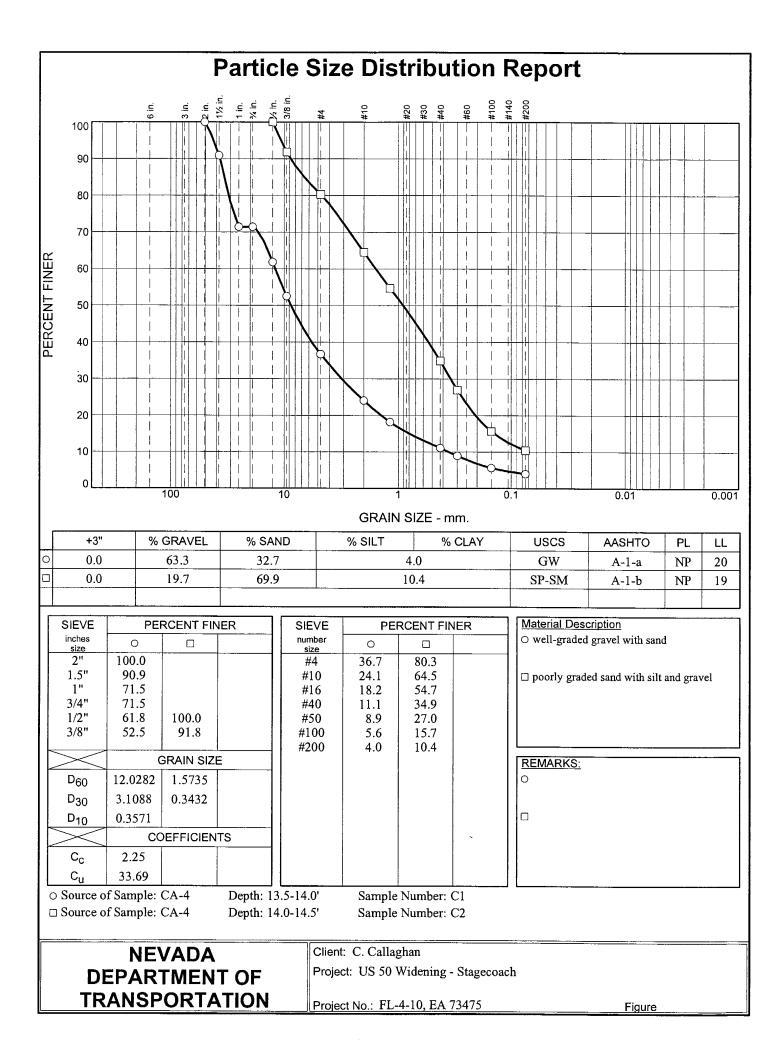


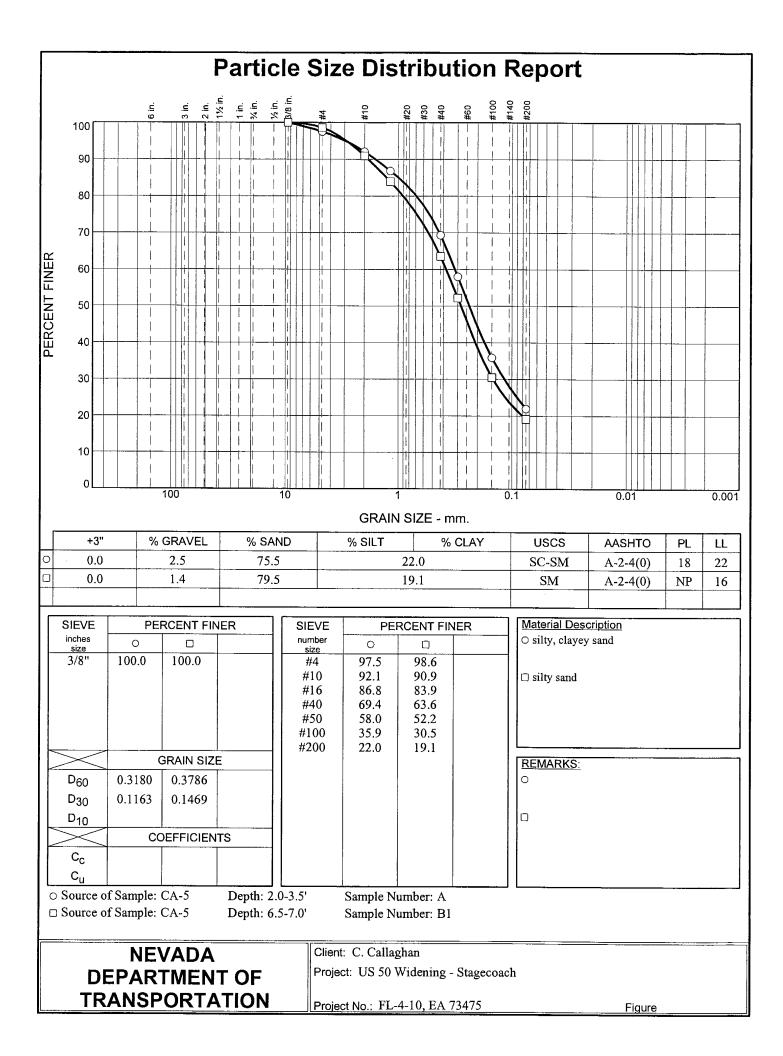


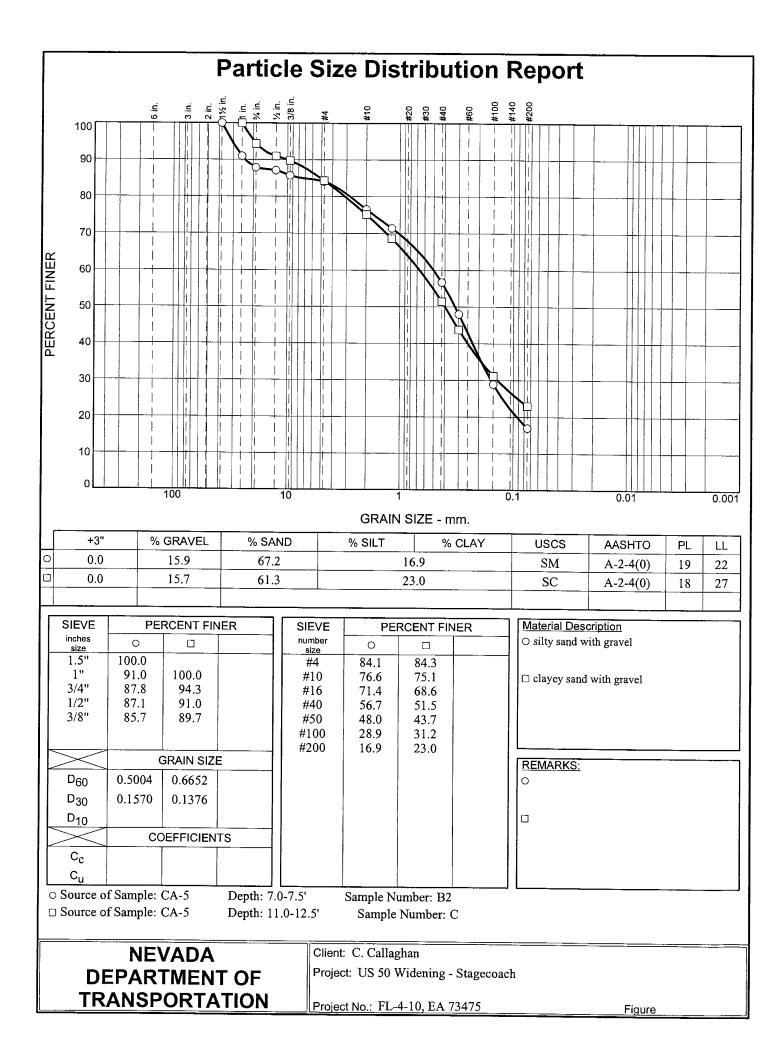


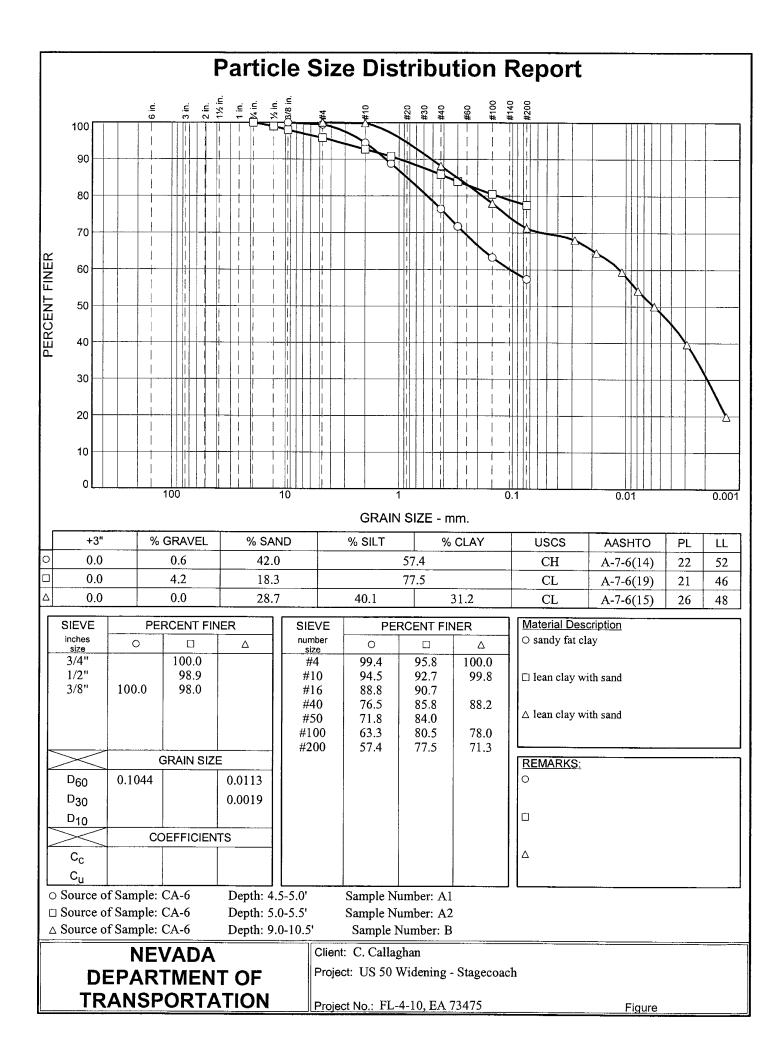


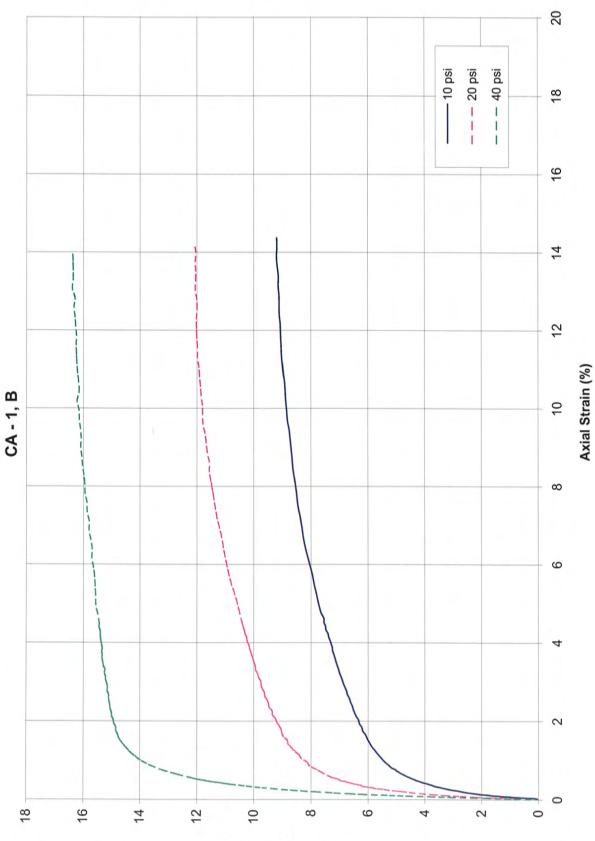




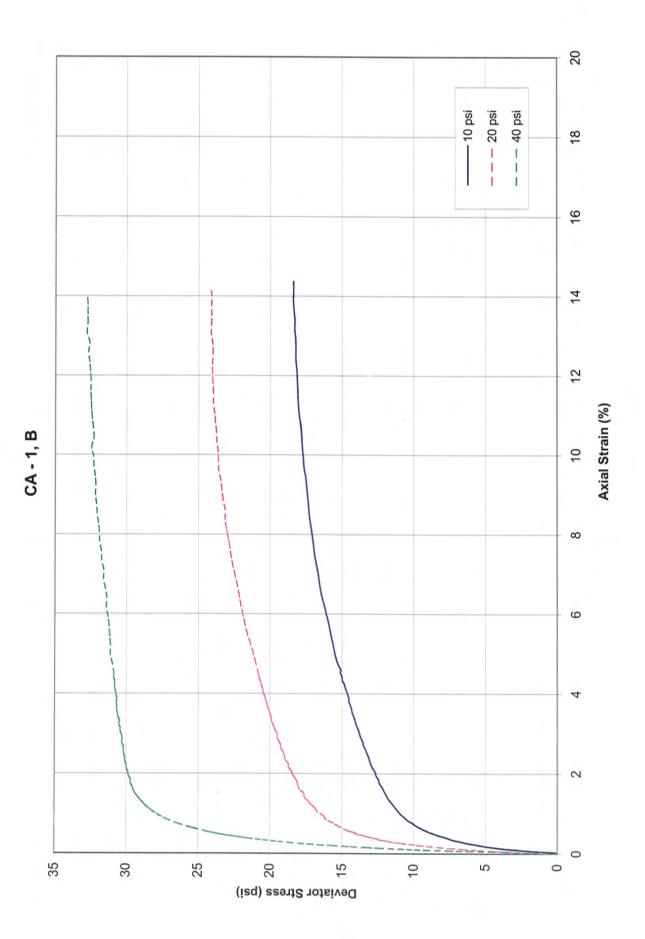


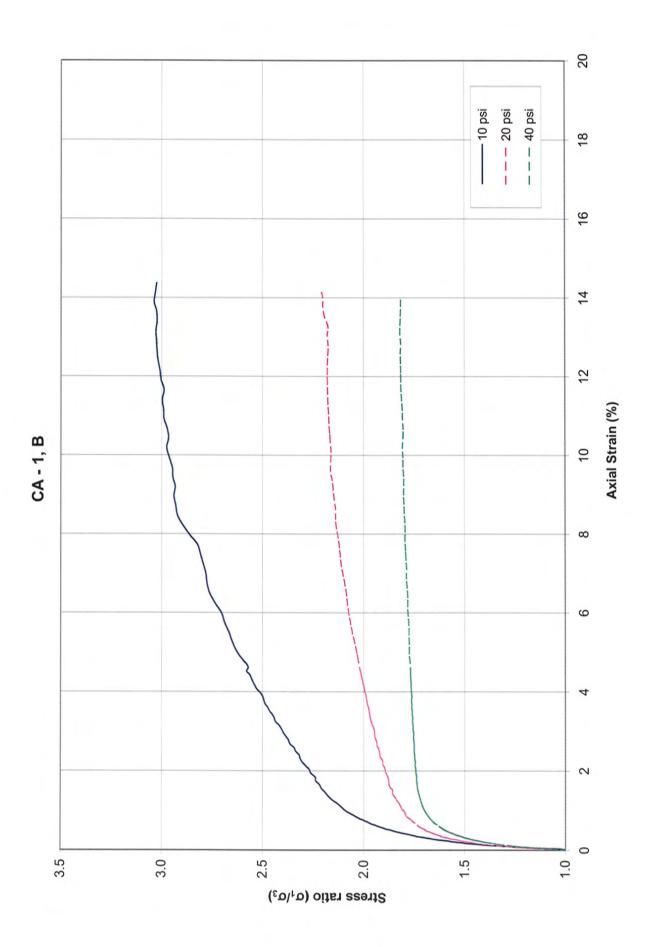


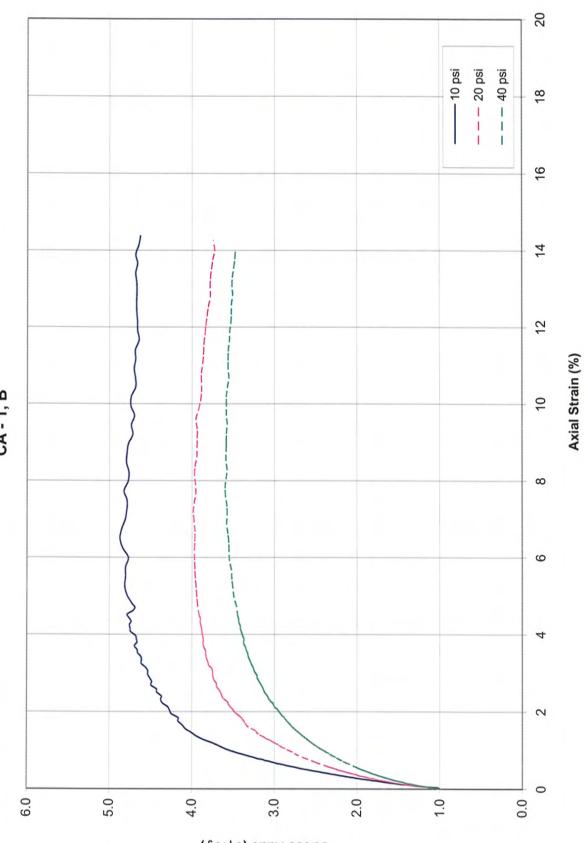




Shear Stress (psi)

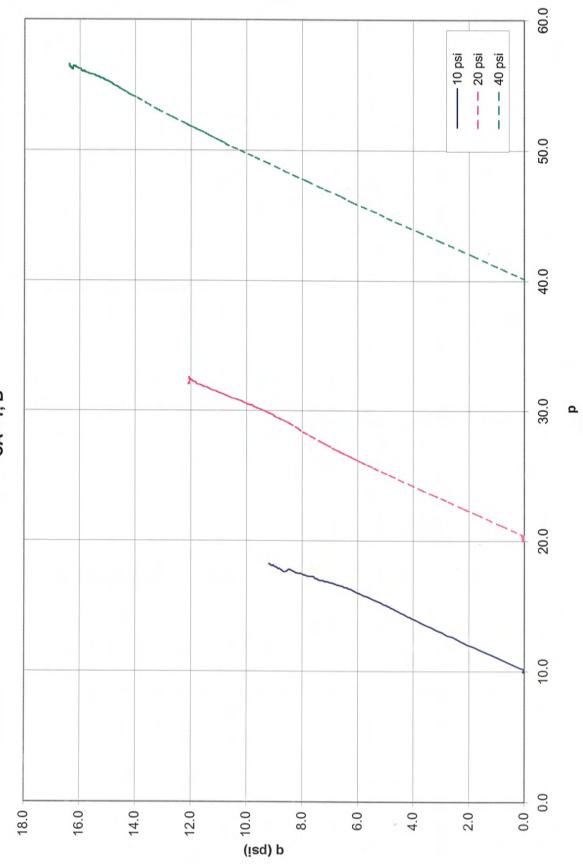




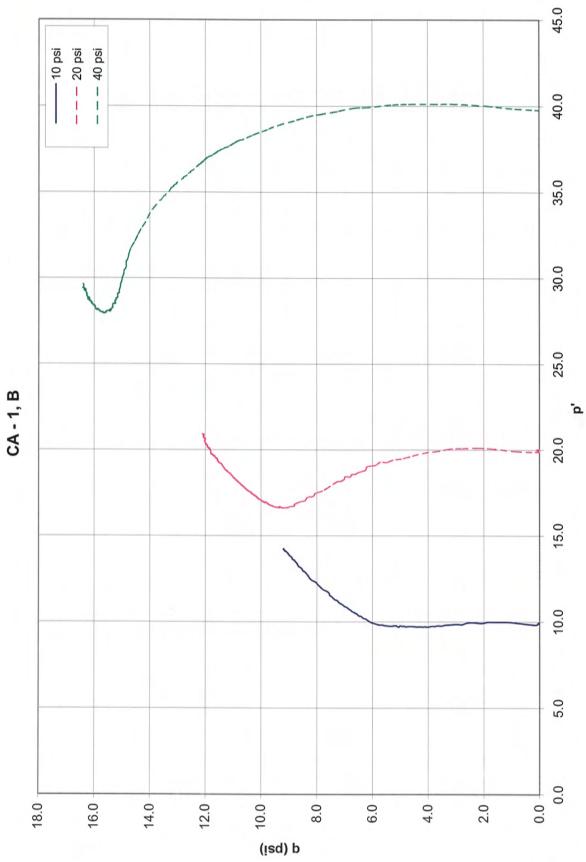


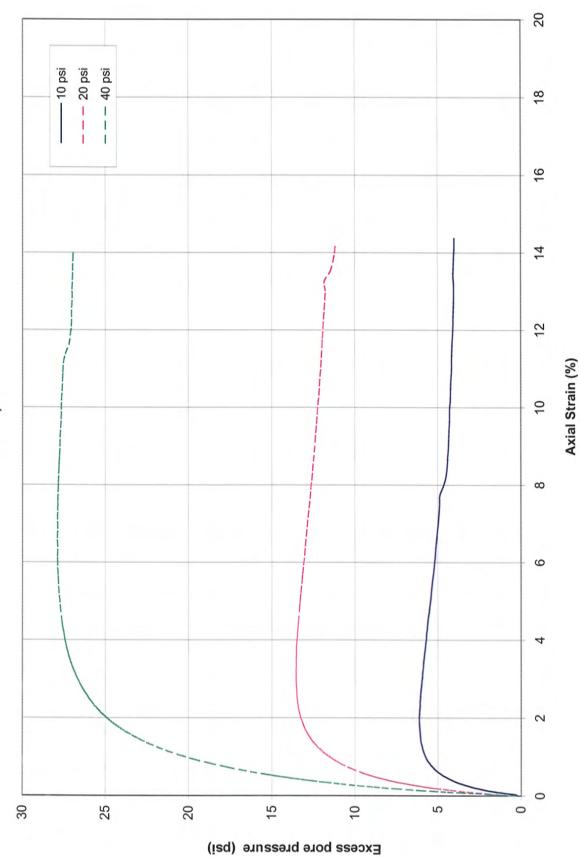
CA - 1, B

Stress Ratio (01'/03')



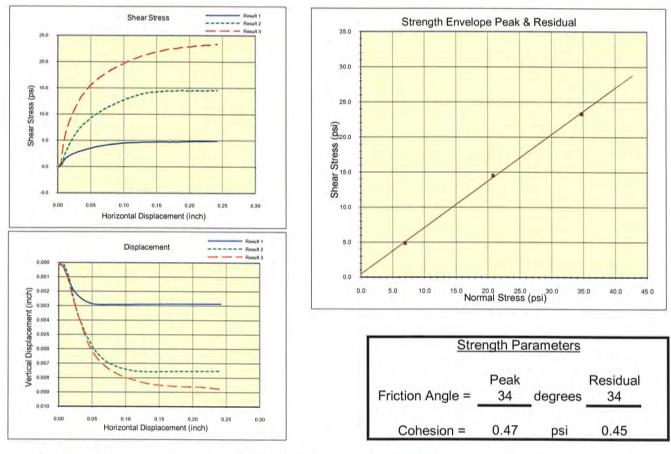
CA - 1, B







# DIRECT SHEAR TEST REPORT



Project: FL-4-10

Boring: CA-2

Sample: A1

	Result 1	Result 2	Result 3	
Specimen:	а	b	С	
Date Tested	04/22/2010	04/21/2010	04/20/2010	
Diameter (inch):	2.42	2.42	2.42	
Height (inch):	1.00	1.00	1.00	
Depth (ft):	4.50	4.50	4.50	
Moisture (%)	15.0	15.0	15.6	
Dry Unit Wt (pcf)	96.6	96.2	95.5	
SHEAR				
Displacement Rate( <sup>in</sup> / <sub>min</sub> )	0.0054	0.0055	0.0053	
Normal Stress (psi)	6.93	20.79	34.70	
Peak Shear Stress(psi)	4.92	14.58	23.36	
Residual Shear Stress(psi)	4.9	14.5	23.3	
Residual Point Picked @(in)	0.242	0.242	0.242	
Time @ Peak Failure (min)	43.5	34.3	43.2	

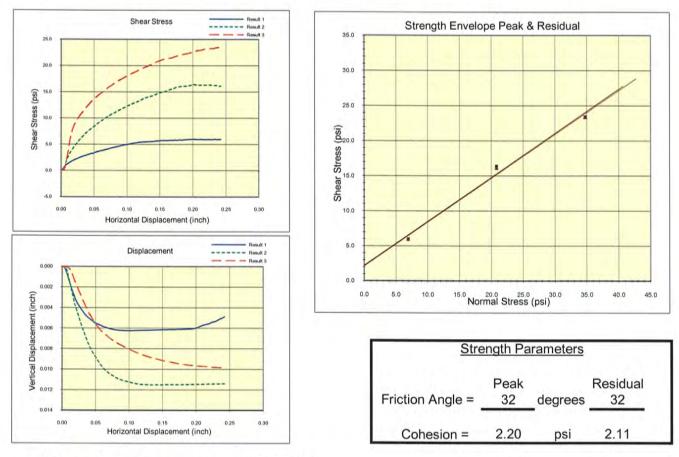
#### **Specimen Comments**

- a Medium brown clayey sand shear @ 1000 psf
- b Medium brown clayey sand shear @ 3000 psf
- C Medium brown clayey sand shear @ 5000 psf



DigiShear Report v4b \_\_ CA2-A1-10.xls

## DIRECT SHEAR TEST REPORT



Project: FL-4-10

Boring: CA-2

Sample: A2

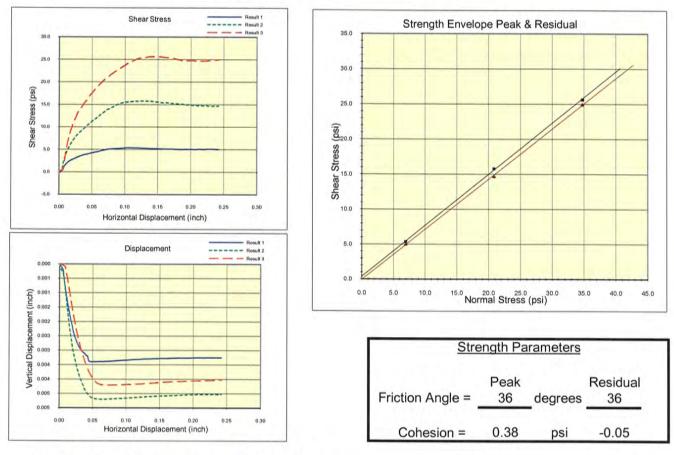
	Result 1	Result 2	Result 3	
Specimen:	а	b	С	
Date Tested	04/27/2010	04/27/2010	04/26/2010	
Diameter (inch):	2.42	2.42	2.42	*** ** *
Height (inch):	1.00	1.00	1.00	
Depth (ft):	5.00	5.00	5.00	
Moisture (%)	11.2	10.6	13.1	
Dry Unit Wt (pcf)	98.0	95.1	95.8	
SHEAR				
Displacement Rate( <sup>in</sup> / <sub>min</sub> )	0.0053	0.0054	0.0054	
Normal Stress (psi)	6.91	20.79	34.71	
Peak Shear Stress(psi)	5.98	16.38	23.45	
Residual Shear Stress(psi)	6.0	16.1	23.4	
Residual Point Picked @(in)	0.242	0.242	0.242	
Time @ Peak Failure (min)	42.5	36.9	43.5	

### Specimen Comments

- a Medium brown silty sand shear @ 1000 psf
- b Medium brown clayey sand shear @ 3000 psf
- Medium brown clayey sand shear @ 5000 psf



## DIRECT SHEAR TEST REPORT



Project: FL-4-10

Boring: CA-5

Sample: B1

	Result 1	Result 2	Result 3	
Specimen:	а	b	С	
Date Tested	04/30/2010	04/29/2010	04/29/2010	
Diameter (inch):	2.42	2.42	2.42	
Height (inch):	1.00	1.00	1.00	
Depth (ft):	7.00	7.00	7.00	
Moisture (%)	6.6	6.6	6.6	
Dry Unit Wt (pcf)	109.7	109.7	109.6	
SHEAR				
Displacement Rate( <sup>in</sup> / <sub>min</sub> )	0.0055	0.0057	0.0055	
Normal Stress (psi)	6.94	20.82	34.71	
Peak Shear Stress(psi)	5.35	15.78	25.64	
Residual Shear Stress(psi)	5.0	14.7	25.0	
Residual Point Picked @(in)	0.242	0.242	2.420	
Time @ Peak Failure (min)	19.1	23.0	25.8	

### Specimen Comments

- a Medium brown sandy shear @ 1000 psf
- b Medium brown sandy shear @ 3000 psf
- c Medium brown sandy shear @ 5000 psf



## NEVADA DEPARTMENT OF TRANSPORTATION GEOTECHNICAL SECTION

### CHEMICAL ANALYSIS

\_\_\_\_\_

**E.A. No.** 73475

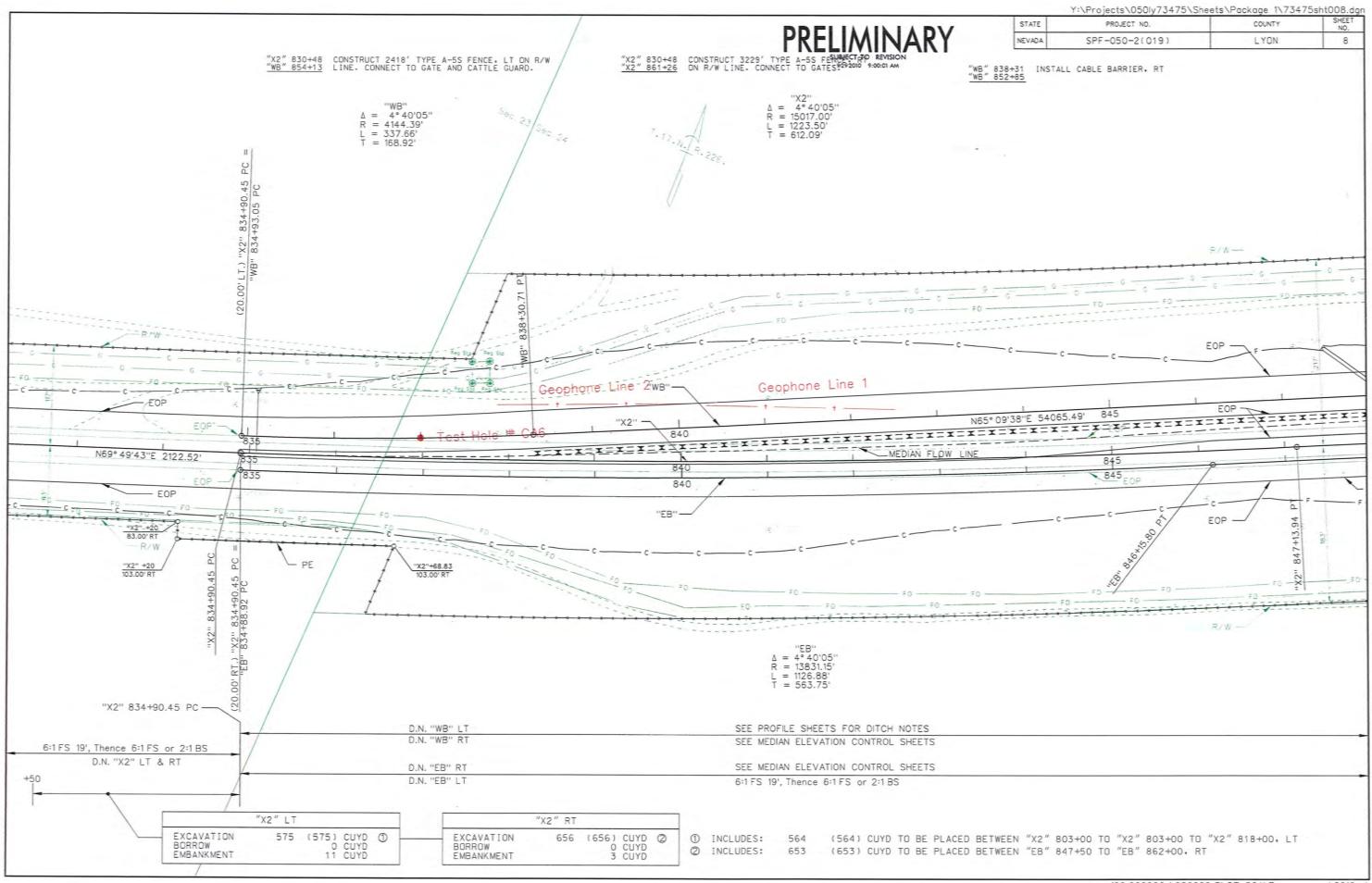
PROJECT US 50 Widening - Stagecoach

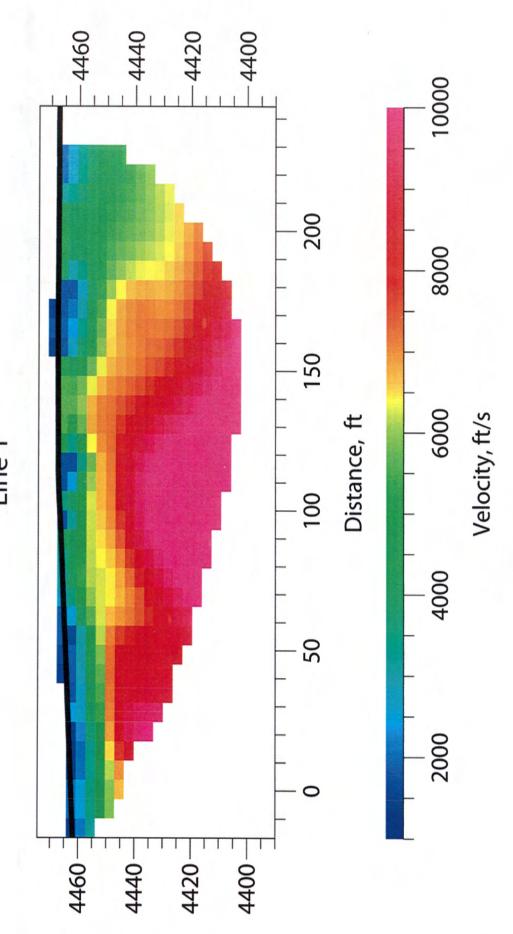
**BORING #** CA 1, CA 2, CA 3, CA 4, CA 5, CA 6

Sample No.	Chlorides	Sulfates	Ph	Resistivity	Conductivity
	* ppm	* ppm		Ohm - cm	μS
CA 1, C			7.2	3,509	285
CA 1, D			7.3	2,862	485
CA 2, B			6.9	3,534	283
CA 2, C			7.6	5,076	197
CA 3, B			8.4	2,092	478
CA 3, C			8.1	2,809	356
CA 4, C1			7.7	9,709	103
CA 4, C2			7.8	7,813	128
CA 5, A			7.0	5,495	182
CA 5, C			6.9	5,319	188
CA 6, B			6.9	3,831	261
	**************************************				
			· · · · · · · · · · ·		

\* Can be tested under special request.

# Appendix C Seismic Refraction and ReMi Results

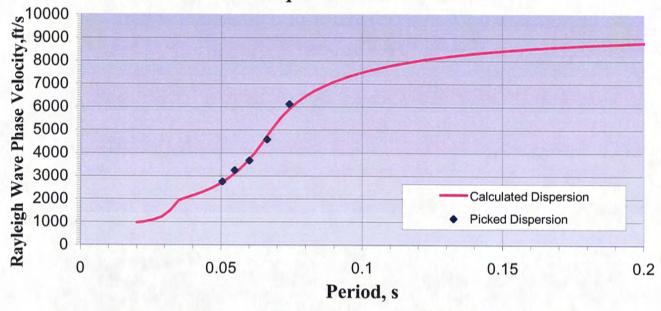




Elevation, ft

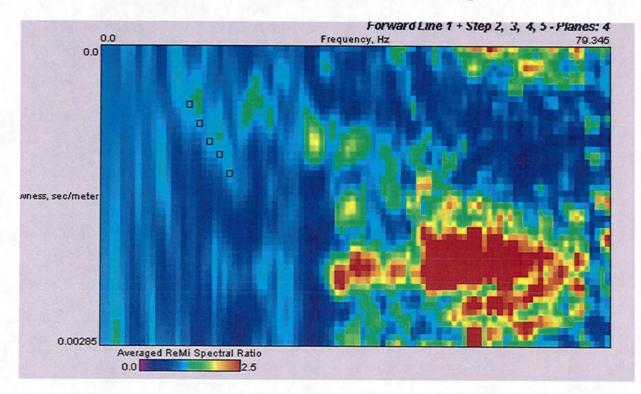
Line 1

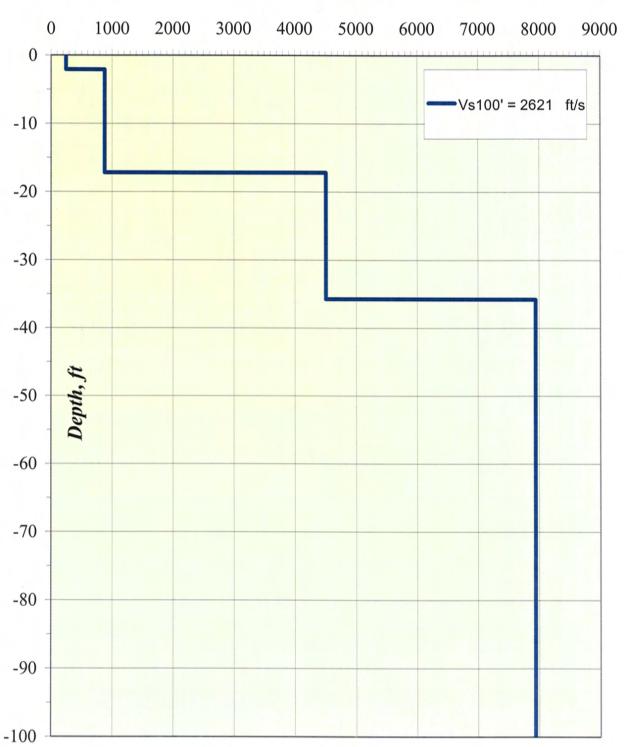
flevation, ft



Line 1: Supportive Illustration Dispersion Curve and Fits

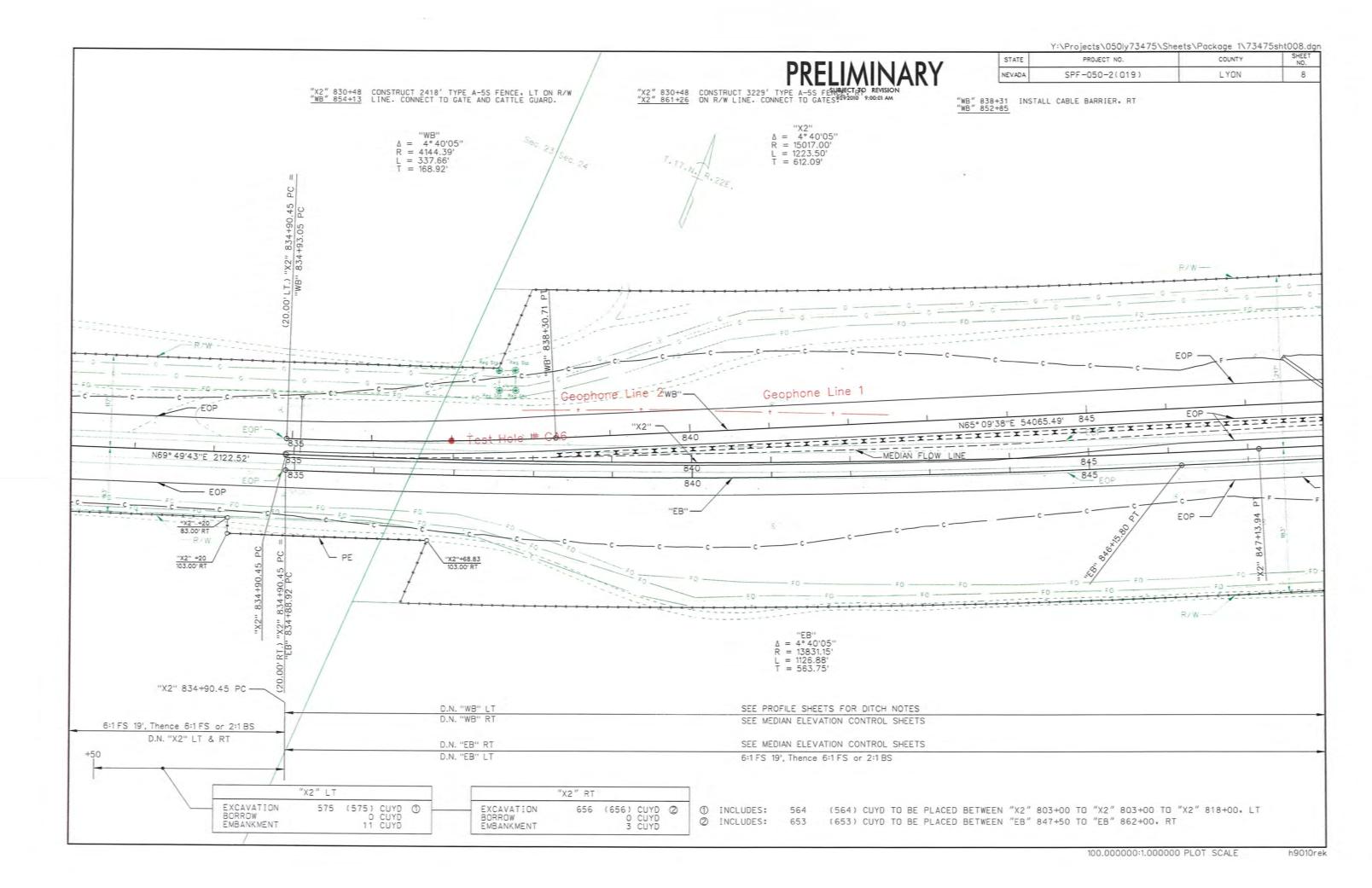
p-f Image with Dispersion Modeling Picks

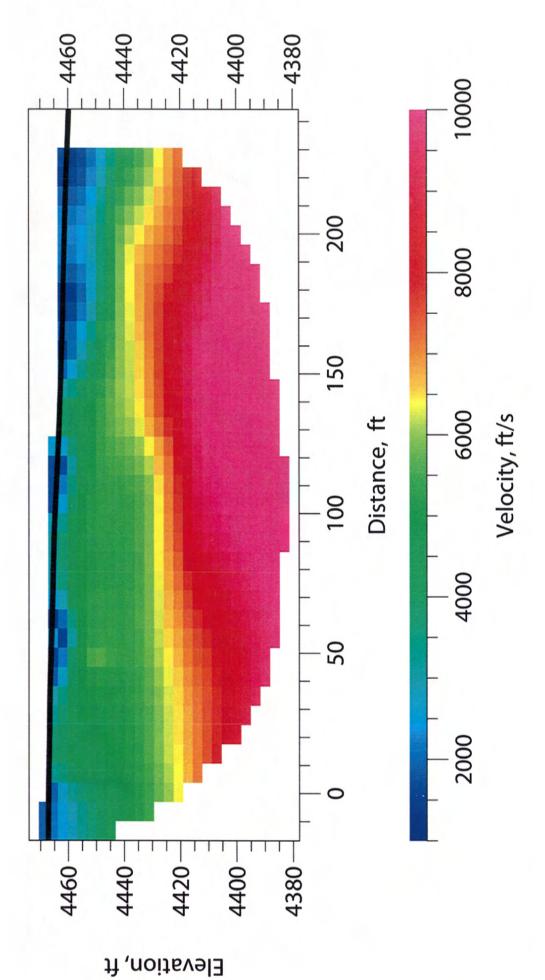




Shear-Wave Velocity, ft/s

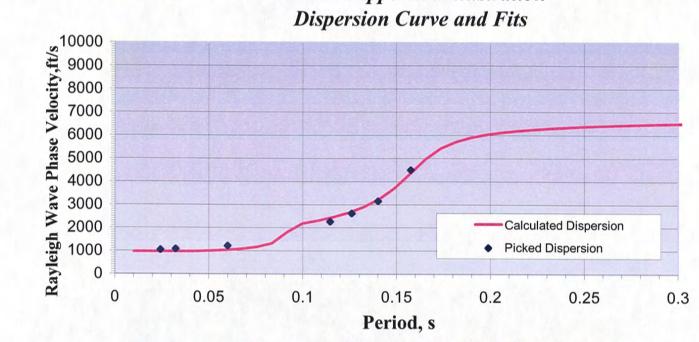
Line 1: Vs Model





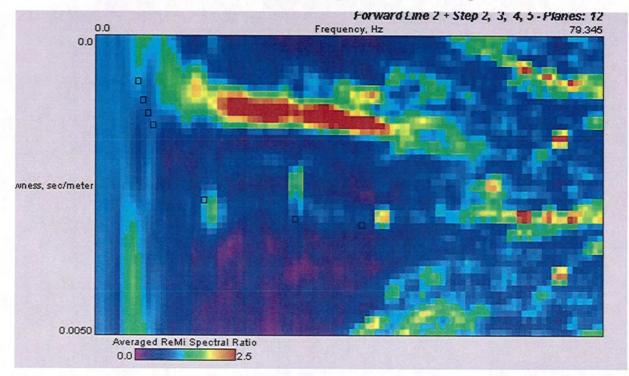
Line 2

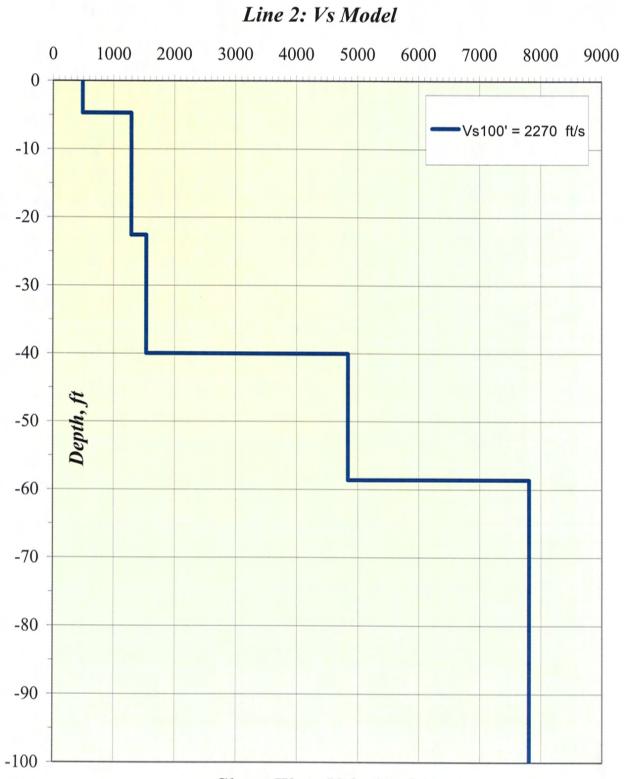
# Elevation, ft



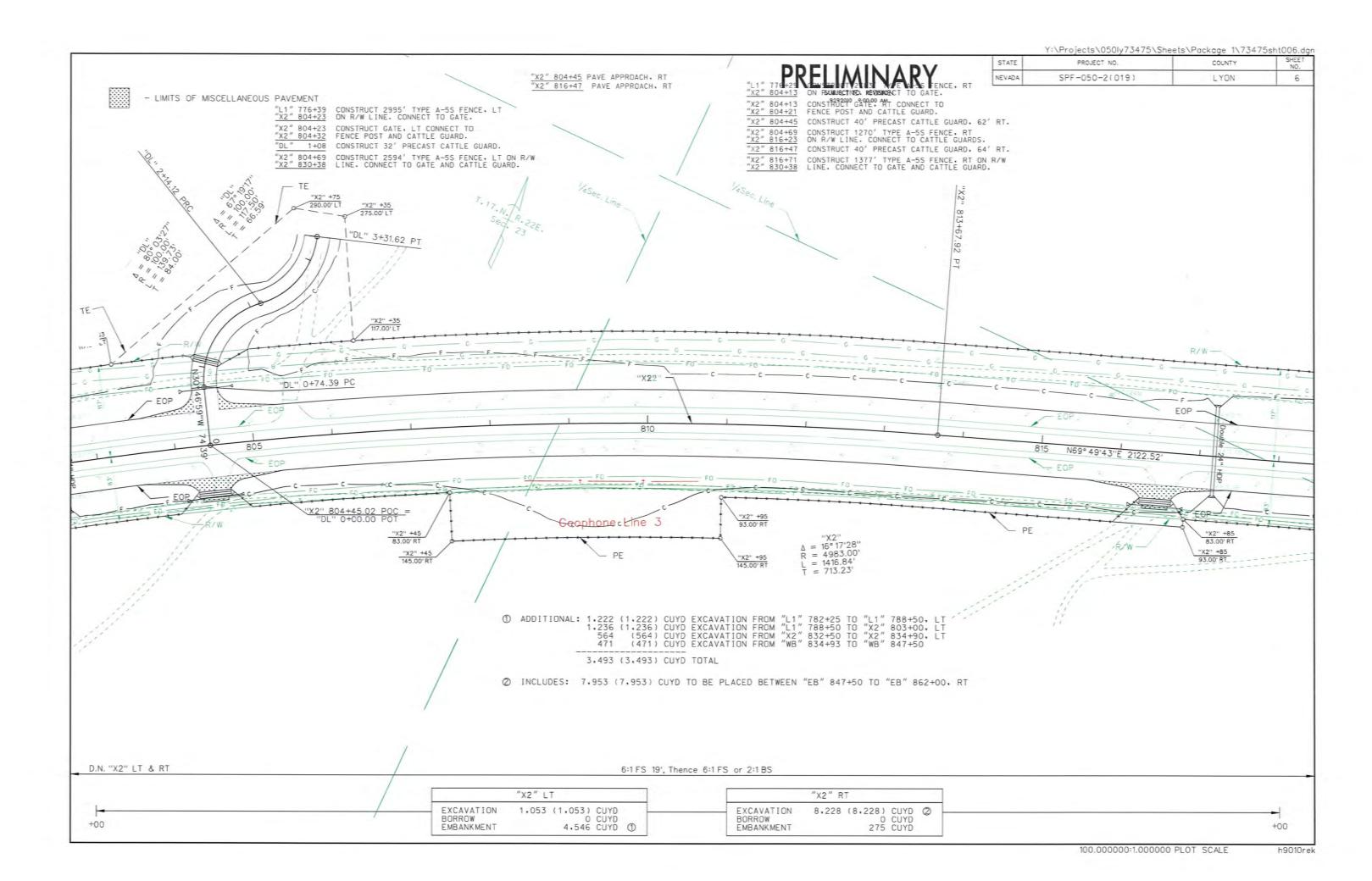
Line 2: Supportive Illustration **Dispersion Curve and Fits** 

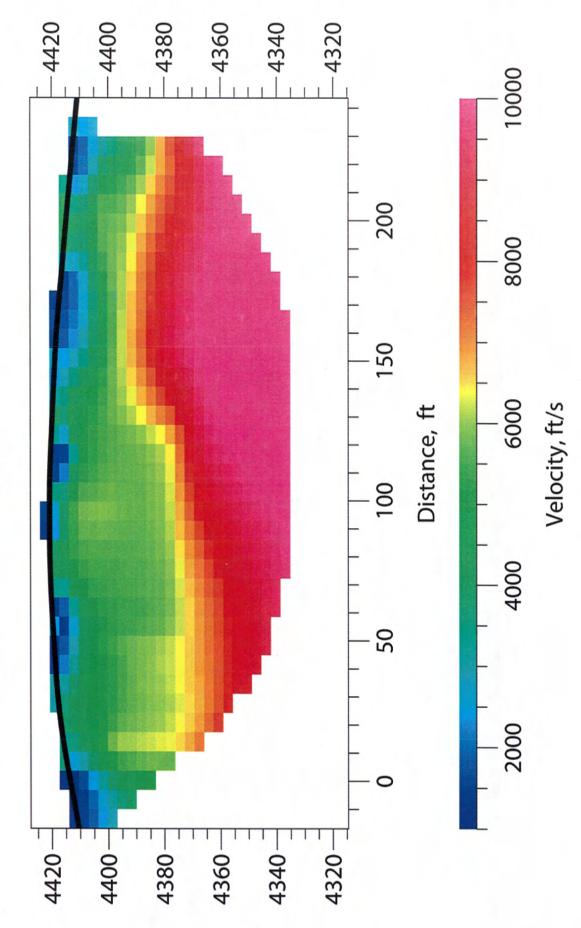
p-f Image with Dispersion Modeling Picks





Shear-Wave Velocity, ft/s

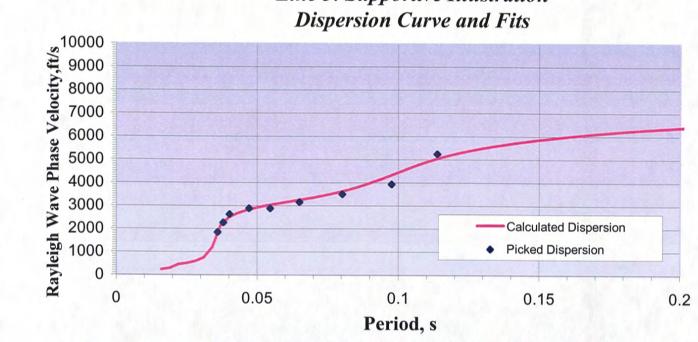




Elevation, ft

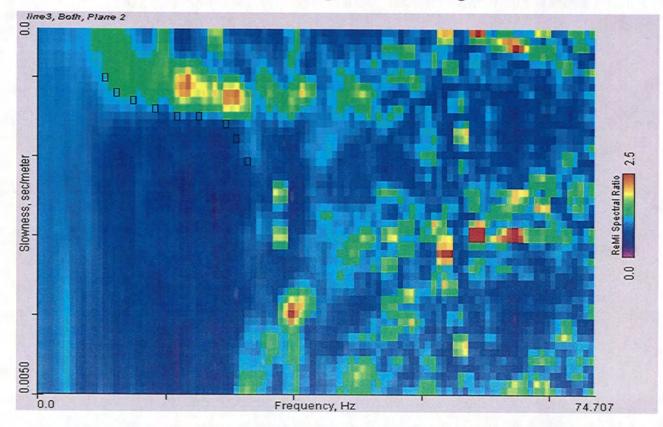
Line 3

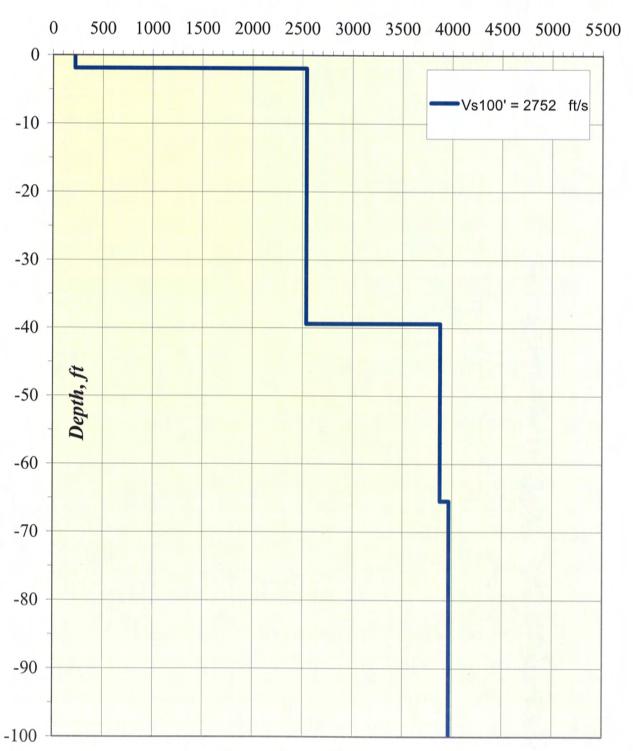
ft ,noiteval3



Line 3: Supportive Illustration **Dispersion Curve and Fits** 

p-f Image with Dispersion Modeling Picks





# Line 3: Vs Model

Shear-Wave Velocity, ft/s