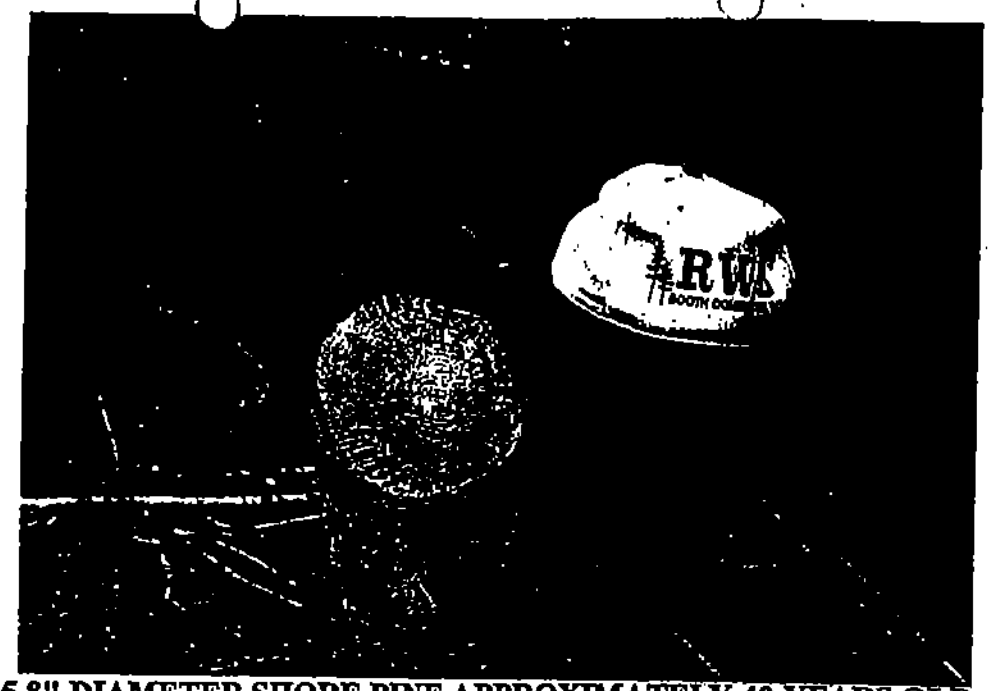
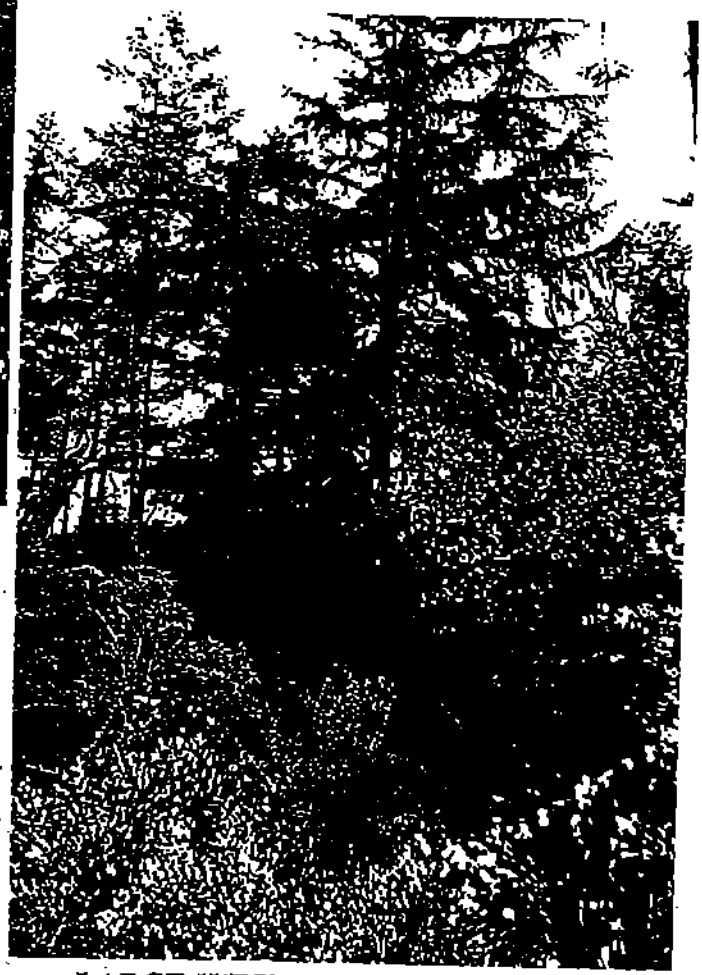


5.8" DIAMETER SHORE PINE APPROXIMATELY 40 YEARS OLD

LARGE TREE IS A POORLY FORMED DOUGLAS FIR

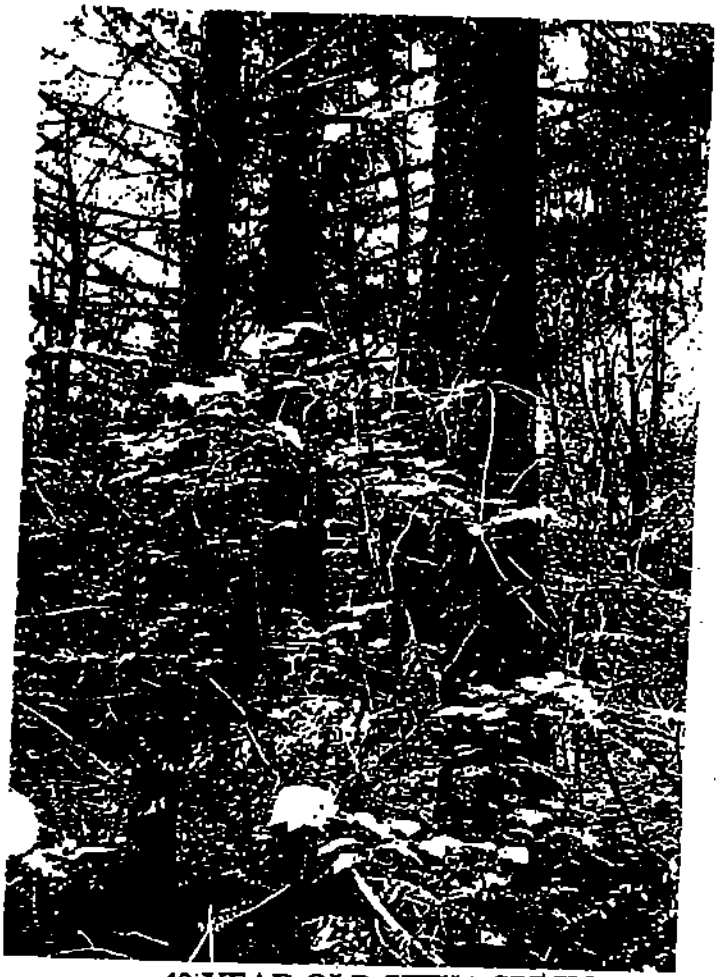
**SHORE PINE THICKET
ON WALDPORT FINE SAND
SOILS**



**LARGE WESTERN HEMLOCK
ON WEST EDGE OF WETLAND
ON STEEP EASTERN SLOPE
HECETA FINE SAND SOILS**

**WETLAND THICKET
ON HECETA FINE SAND
SOILS
(RIBBON UNDER HAT MARKS
WETLAND WEST EDGE)**

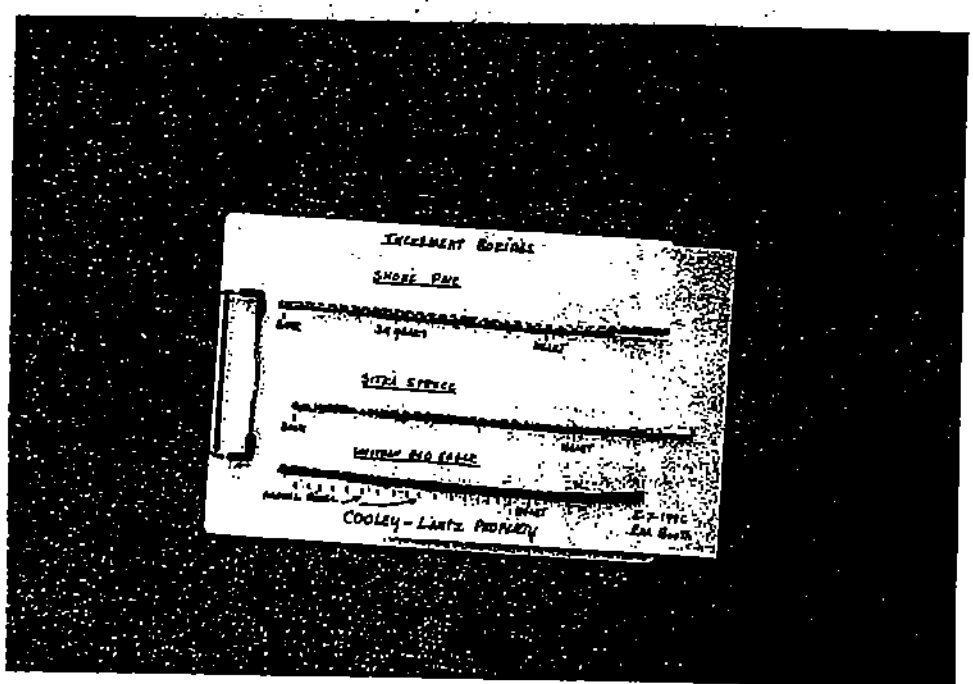
SHORE PINE AND RED CEDAR THICKET
IN THE WETLAND
ON HECETA FINE SAND SOILS



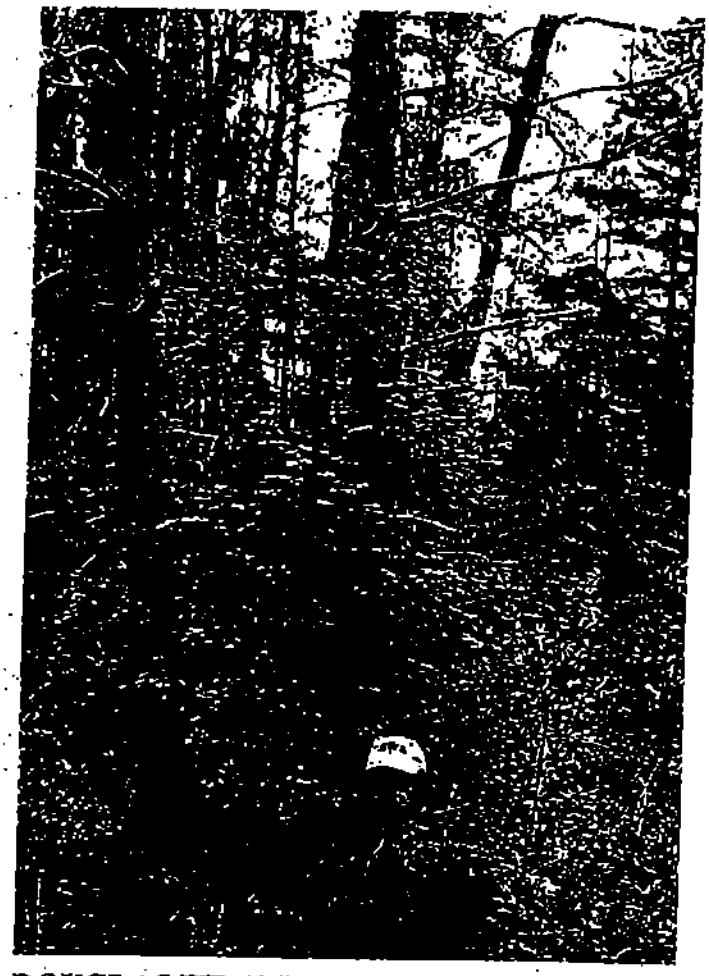
**40 YEAR OLD SITKA SPRUCE
ON LINT SILT LOAM SOILS (74B)
EAST OF WOAHINK CREEK
(HAT ON STICK FOREGROUND)**

**40 YEAR OLD SHORE PINE
ON LINT SILT LOAM SOILS (74B)
EAST OF WOAHINK CREEK
(HAT ON STICK IN FOREGROUND)**

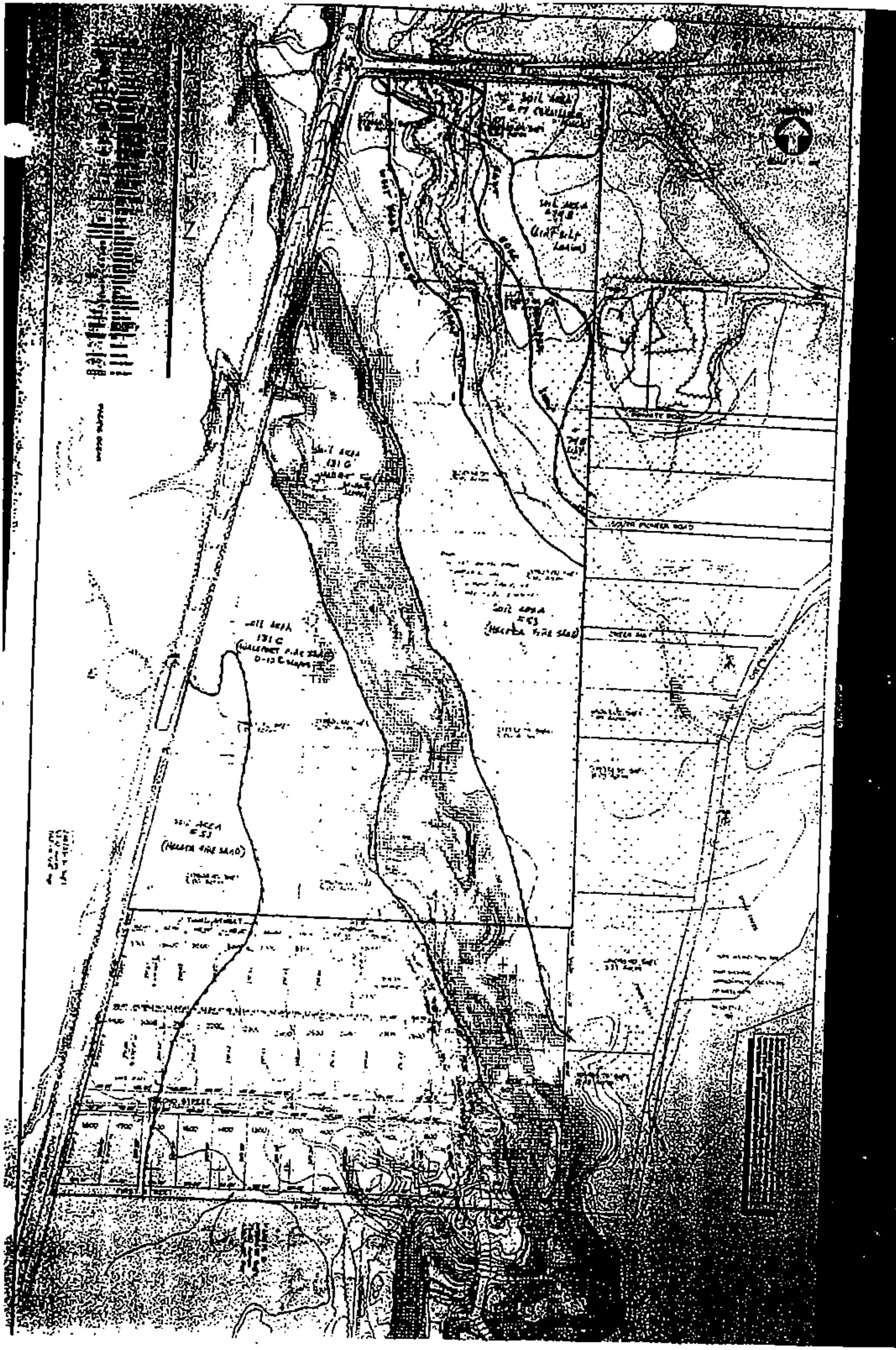
40 YEAR OLD WESTERN RED CEDAR ON LINT SILT LOAM SOILS (74B)
(HAT HANGING ON BRANCH)



INCREMENT BORINGS OF SHORE PINE, SITKA SPRUCE AND WESTERN RED CEDAR PICTURED IN PREVIOUS THREE PHOTOS TAKEN AT DBH. AGE AT DBH WAS APPROXIMATELY 34 YEARS. SHORE PINE GREW 14.8 INCHES IN DIAMETER IN 34 YEARS



DOUGLAS FIR 8' TALL AND 18 YEARS OLD
NOTE INTERNODES ARE 4 TO 8" APART
ON WALDPORT FINE SAND SOILS
(EVIDENCE OF VERY SLOW GROWTH)



EGR & Associates, Inc.
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Cooley-Lantz Property

Geologic, Hydrogeologic, and Geotechnical Assessment

Purpose

This report has been prepared to address the issues of water supply, waste disposal impacts, and geologic stability of the Cooley-Lantz Property.

Background

Location

The Cooley-Lantz Property is located adjacent to the incorporated community of Dunes City. To the south of the property is the West Lake area (a part of Dunes City). To the west is Highway 101 and the Dunes National Recreation Area Dunes NRA). To the north is Clear Lake Road which gives access to much of Dunes City. To the east is developed portions of dunes City and Siltcoos Lake.

The property is 80.25 acres in size in a rectangular shape. The property is located in Township 19 South, Range 12 West, and covers lots 19-12-27-2 TL 700; and 19-12-27-3 TL 100 through 600 and 800 through 3700. No dwellings or other structures presently occupy the site. The site was previously platted into 36 lots, along the southern portion of the property.

Climate

The climate is temperate marine with wet mild winters and dry cool summers. An average of 70 to 80 inches of precipitation falls annually with most of the rainfall occurring between November and April. The average January temperature is ?? F and the average July temperature is ??F. Evapotranspiration is about 24 to 26 inches per year.

Geologic setting

The Cooley-Lantz property is underlain by a thick blanket of fine, wind blown sands. These sands are variously loose to semi-consolidated depending upon the length of time the dunes have been stabilized. These sands are laid upon a terrace of marine sandstone and shales which makes up the bedrock beneath the site. This bedrock was carved by the ocean wave action and subsequently buried by the wind blown sand and stream deposits over the past 50,000 to 80,000 years. This process has continued right to present times

EXHIBIT "J"

with the current dune forms on the site stabilized by vegetation but not yet forming semi-consolidated soils and iron cemented sands.

The dune forms on property are stabilized oblique dunes which have been stabilized by vegetative cover . Deep soils and cemented sand layers have not developed yet on these dunes indicating a relatively recent stabilization (geologically speaking). In the interdune areas there are some deflation plains and sand hummocks of secondary dunes. These dunes are much lower and more irregular in outline than the long ridges of the oblique dunes.

The present landforms on the site are the dominant dunes, secondary dunes, flood plain surfaces and a delta/wetland marsh. The dunes formed by wind action blowing sand to the east. Between the dunes deflation plains form and upon those deflation plains secondary dunes and sand hummocks form. Along Woahink Creek a small food plain formed where the creek washes and redeposits the sands. As the creek enters Siltcoos Lake a delta has formed the has become a wetland marsh.

Hydrogeology

The ground water beneath the subject property primarily comes from direct precipitation. The sands allow less than 10% of the rainfall to escape as runoff. Only 24 to 26 inches per year can escape as evapotranspiration. This leaves 36 to 40 inches of recharge per year or 977,000 gallons per acre of recharge. For comparison a dwelling using an average of 500 gpd 182,500 gallons per year.

The groundwater at this site flows generally from north to south. Locally some of this ground water discharges to Woahink Creek or Siltcoos Lake, but most of the ground water flow discharges directly south into the Siltcoos River. Some portion of the ground water flow beneath this site comes from Woahink Lake as ground water underflow.

The sands beneath the Cooley-Lantz properties are in excess of 90 feet deep and contain one of the best groundwater supplies in the area south of the Siuslaw River. This was identified in the 1979 Lane County Water Supply Report as being the best potential water supply area for the area south of the Siuslaw River.

Impacts

Geology

Fine sand can make an excellent base for roads and buildings as long as it is properly compacted, not placed on slopes above its angle of repose, and protected from erosion both by wind and water.

At the Cooley-Lantz site the slopes are generally not overly steep though a few of the slopes are near the angle of repose. With proper care in design and construction the site is very stable. Streets and lot layouts should be designed to avoid steeper slopes wherever

possible and to provide appropriate stabilization through pilings, retaining walls or other means in areas where steep slopes cannot be avoided. Street layouts and building layouts should be designed to minimized disturbance of naturally occurring vegetation.

Construction should be completed in winter to take advantage of wet weather when wind erosion is minimized. Temporary cover for exposed sand must be used. All disturbed areas must be replanted or covered with a non erosive surface as soon as possible after construction has been completed. If these simple safeguards are followed the construction on the sand is easy, safe and very stable. Clean sand is rarely involved in landslides, slumps, or other mass wasting phenomenon unless undercut by running water or blowing sand.

Hydrogeology - Water Supply

This area has the best ground water supply of any area south of the Siuslaw River. The aquifer is relatively deep at about 100 feet. The site is downgradient of Woahink Lake and may also be down gradient of the Siltcoos Lake. Individual wells on lots large enough to accommodate on-site sewage disposal systems would all have adequate water supplies for domestic use. Water quality may require some treatment since iron dissolved in the ground water is a common occurrence in this area. No water rights would be required for individual well systems.

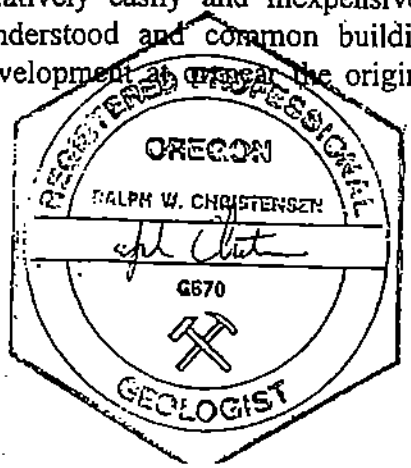
Hydrogeology - Waste Disposal

One of the crucial issues around Woahink Lake is the introduction of nutrients into that lake. The subject property is downgradient of Woahink Lake and therefore none of the nutrients associated with on-site sewage disposal can get into the lake. Only a limited amount of water will get into Siltcoos Lake and this lake is already nutrient rich.

The nutrients from this site will primarily discharge to the Siltcoos River and will be discharged to the ocean within hours along with the nutrients emanating from Siltcoos Lake.

Summary

In summary this site is well suited for geologically and hydrogeologically to accept development. The water supply is abundant, on-site waste systems will not degrade sensitive lakes or streams, and the sand can be relatively easily and inexpensively maintained as a solid foundation by using well understood and common building practices. It is quite likely this site could sustain development at or near the original platted density.



Ralph Christensen, RPG

06/02/98

TRAFFIC IMPACT ANALYSIS
FOR
PROPOSED SUBDIVISION AT THE
COOLEY-LANTZ PROPERTY IN DUNES CITY, OREGON

March, 1997

EXHIBIT "K"

Prepared for:

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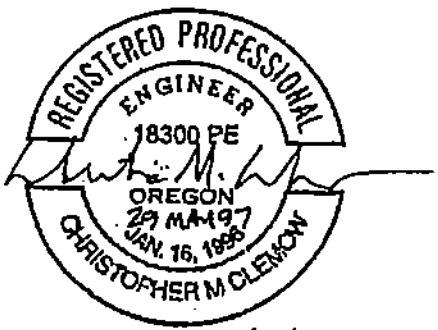
TRAFFIC IMPACT ANALYSIS
FOR
PROPOSED SUBDIVISION AT THE
COOLEY-LANTZ PROPERTY IN DUNES CITY, OREGON

March, 1997



EXPIRES 12/31/97

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FIGURES

INTRODUCTION

This report summarizes the Traffic Impact Analysis performed for the proposed residential subdivision located on the Cooley-Lantz property in the Dunes City area. Included in the report are the existing and projected traffic volumes, and an evaluation of sight distance and operating conditions at the existing and proposed intersections in the project area.

The project site is located on the east side of Highway 101 between Clear Lake Road and Pacific Avenue (also referred to as West Lake Road, County Road 5350), (see Figure 1). The proposed subdivision will include 47 residential lots ranging from one-half acre to about eight acres in size (see Figure 2). The proposed access points to serve the site include two from Highway 101, one from Foothill Drive, and one from Clear Lake Road. Foothill Drive and the proposed Highway 101 south access are to serve 37 lots. The proposed Highway 101 north access and the Clear Lake Road access are to serve four or five lots each.

EXISTING ROADWAY SYSTEM

Highway 101 in the project vicinity is a two lane roadway with 5.5 foot paved shoulders on each side. The posted speed is 55 miles per hour (MPH) in the project area; however, there is a horizontal curve to the south of Pacific Avenue with an advisory speed of 40 MPH. There is no existing development or access points along Highway 101 between Clear Lake Road and Pacific Avenue.

Clear Lake Road is a two lane roadway primarily serving residents east of Highway 101. The posted speed is 45 MPH.

Pacific Avenue also primarily serves residents east of Highway 101 and a Lane County boat ramp. It is a two lane roadway with a posted speed of 25 MPH.

EXISTING TRAFFIC VOLUMES

The existing average daily traffic (ADT) volumes in the project area are as follows:

Roadway	ADT
Highway 101 (Clear Lake Road to Pacific Avenue)	7,940
Clear Lake Road (East of Highway 101)	1,920
Pacific Avenue (East of Highway 101)	850

The daily traffic volume for Highway 101 was obtained from 1995 Traffic Volume Tables, published by Oregon Department of Transportation (ODOT). It was factored by 1.34, as indicated on Permanent Recorder 06-001, to represent the peak traffic months of the year.

The daily traffic volumes for Clear Lake Road and Pacific Avenue were taken from 1994 Traffic Volume Tables, published by Lane County Department of Public Works. For study purposes, these volumes were also factored by 1.34 to represent the peak traffic months of the year.

The existing peak hour traffic volumes were estimated at the Highway 101 intersections with Clear Lake Road and Pacific Avenue by factoring the daily traffic by 0.124. The peak hour volumes represent the 30th highest hour of the year, as indicated by ODOT, Permanent Recorder 06-001. The directional split of the traffic on the roadways was estimated to be 50 percent in each direction. The distribution of the turning movements to and from Clear Lake Road and Pacific Avenue via Highway 101 was assumed to be 75 percent to and from the north and 25 percent to and from the south. The resulting existing peak hour traffic volumes are as shown on Figure 3.

FUTURE TRAFFIC VOLUMES

Peak hour traffic volumes for the 'No Build' and 'Build' scenarios were projected for the Year 2002 (the assumed completion year if the site develops). The future 'No Build' traffic volumes were calculated by applying a two percent per year growth rate to the existing turning movements. This growth rate is based on historical data for Highway 101. The future, 'No Build' traffic volumes are shown on Figure 4.

The proposed subdivision will have a single family dwelling unit on each of the lots. According to the Institute of Transportation Engineers, Trip Generation Manual, 1991, a single family dwelling unit will generate about ten trips per day and one trip during the peak hour. Applying this rate, the proposed development is projected to generate 470 trips per day and 47 trips during the peak hour. All of the site generated trips were assumed to be to and from Highway 101; 75 percent via the north and 25 percent via the south. The site generated traffic volumes are illustrated on Figure 5. The projected 'Build' traffic volumes, (the background 'No Build' traffic plus the site generated traffic), are shown on Figure 6.

LEVEL OF SERVICE ANALYSIS

A level of service analysis was performed for the Highway 101 intersections of Clear Lake Road, Pacific Avenue, and the two proposed accesses during the peak hour. The computer program UNSIG, developed by the Oregon Department of Transportation, was used to calculate the levels of service. At an unsignalized intersection, the level of service is calculated only for movements which have to yield the right-of-way. The results are shown on the following table:

LEVEL OF SERVICE

ntersection With Highway 101	Movement	Level of Service		
		Existing	2002 No Build	2002 Build
lear Lake Road	West Bound Right and Left Turn	B	C	C
	South Bound Left Turn	A	A	A
acific Avenue	West Bound Right and Left Turn	A	B	B
	South Bound Left Turn	A	A	A
roposed North Highway 101 ccess	West Bound Right and Left Turn	N/A	N/A	C
	South Bound Left Turn	N/A	N/A	A
roposed South Highway 101 ccess	West Bound Right and Left Turn	N/A	N/A	B
	South Bound Left Turn	N/A	N/A	A

sults of the analysis indicate the existing and proposed intersections in the project area will operate at ceptable levels of service with and without the proposed development.

GHT DISTANCE EVALUATION

ght distances were evaluated for vehicles turning onto Highway 101 from Clear Lake Road, Pacific enue, and the two proposed access points. A field survey was performed at the access points (see Figure and the measured distances were compared to the recommended minimum sight distances given in nerican Association of State Highway and Transportation Officials' manual, A Policy on Geometric sign of Highways and Streets, 1990. The results are as follows:

SIGHT DISTANCE FOR WESTBOUND VEHICLES TURNING ONTO HIGHWAY 101				
Minor Street Approach to Highway 101	Measured Sight Distance (ft)		Recommended Minimum Sight Distance (ft)	
	To the North	To the South	To the North	To the South
Clear Lake Road	1000+	775	770*	770*
Pacific Avenue	1000+	580	770*	450**
Proposed Highway 101 North Access	1000+	1000+	770*	770*
Proposed Highway 101 South Access	1000+	1000+	770*	770*

* Sight distance needed to obtain 85 percent (47 MPH) of the posted speed (55 MPH), without being overtaken by an approaching vehicle.

** Sight distance needed to obtain 85 percent (34 MPH) of the advisory speed for the horizontal curve (40 MPH), without being overtaken by an approaching vehicle.

The results of this evaluation indicate there is adequate sight distance for vehicles to exit the four studied access points onto Highway 101.

CLEAR LAKE ROAD ACCESS

The possible locations for the Clear Lake Road access are limited due to the identified wetlands on the property. The wetlands begin on the northern property boundary and extend south and east. To serve the northern lots west of the wetland, an access from Clear Lake Road is proposed as shown in Figure 7. This access will serve 4 to 5 lots (4 to 5 peak hour trips) and is limited to the area it can serve by the wetlands and a large sand dune which extends along the boundary between Lots 6, 7, and 8. The maximum distance the access can be placed from Highway 101 without impacting the wetland area is approximately 150 feet (centerline to centerline). Due to the close proximity to Highway 101, the access is proposed to be located at this maximum distance.

CONCLUSIONS AND RECOMMENDATIONS

The proposed 47 lot subdivision is expected to generate 470 trips per day and 47 trips during the peak hour. These site generated trips will not significantly impact the operating conditions of the existing Highway 101 intersections in the project vicinity.

The existing and proposed Highway 101 intersections are projected to operate at acceptable levels of service through Year 2002. The sight distance evaluation indicates there is adequate sight distance for vehicles accessing Highway 101 at the four studied locations.

It is recommended the access onto Clear Lake Road be constructed at the maximum distance (approximately 150 feet) from Highway 101. This distance cannot be increased without impacting identified wetlands on the property. Because this access will generate 4 to 5 peak trips, no modifications will be needed to Clear Lake Road to accommodate left turning traffic.

FIGURES

VICINITY MAP

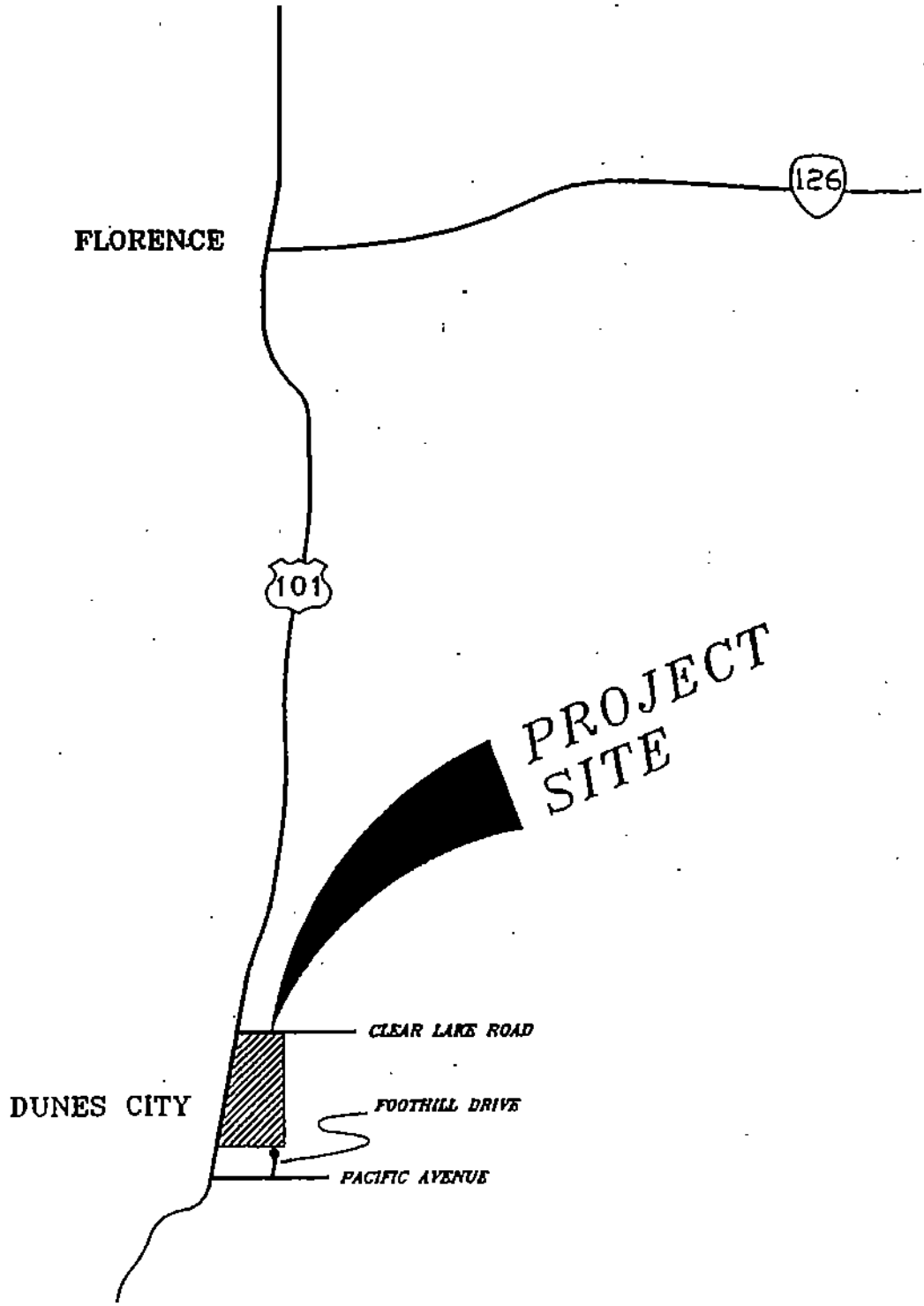


FIGURE 1

NOT TO SCALE

SITE PLAN

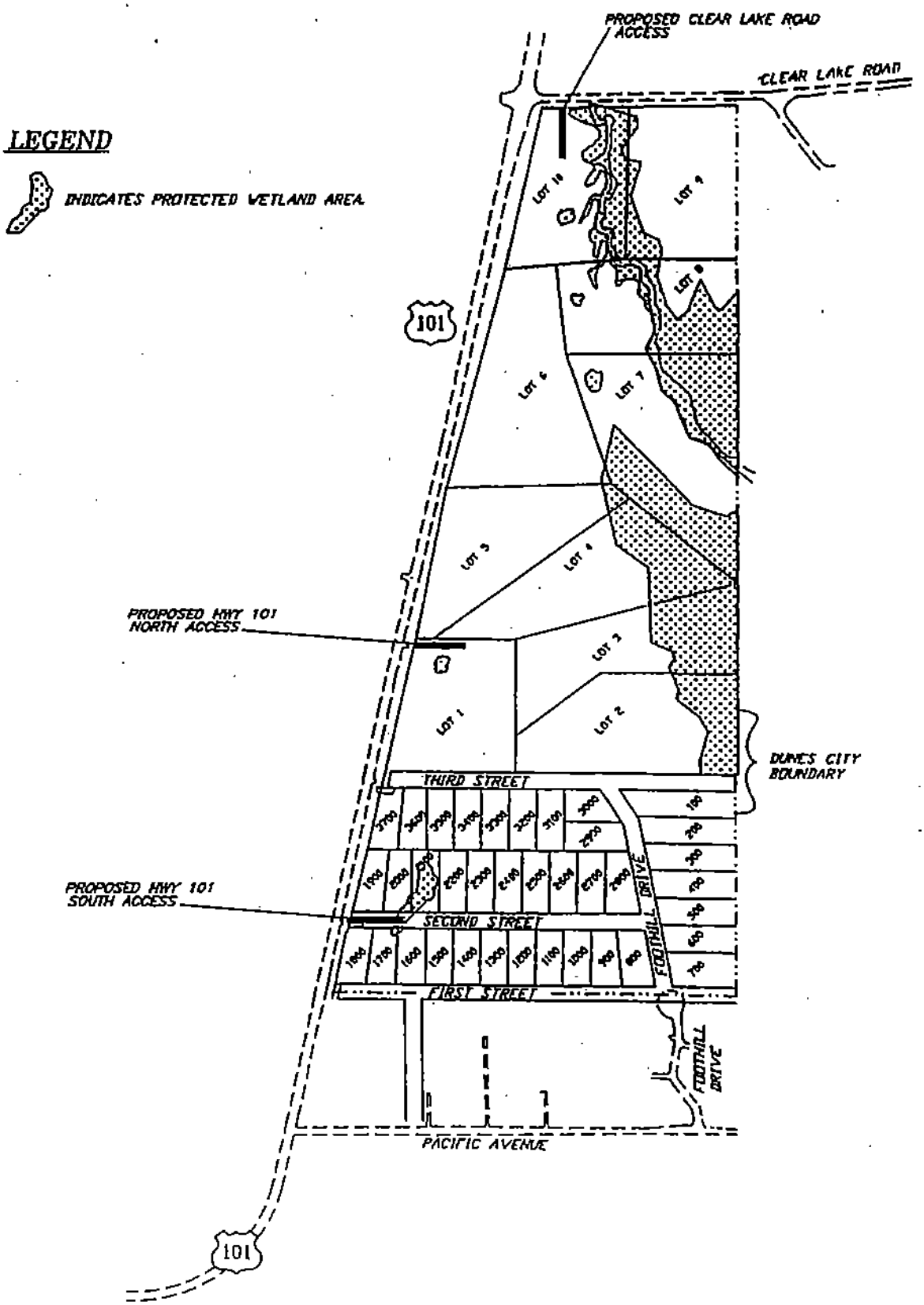


FIGURE 2

EXISTING TRAFFIC VOLUMES
(PEAK HOUR)

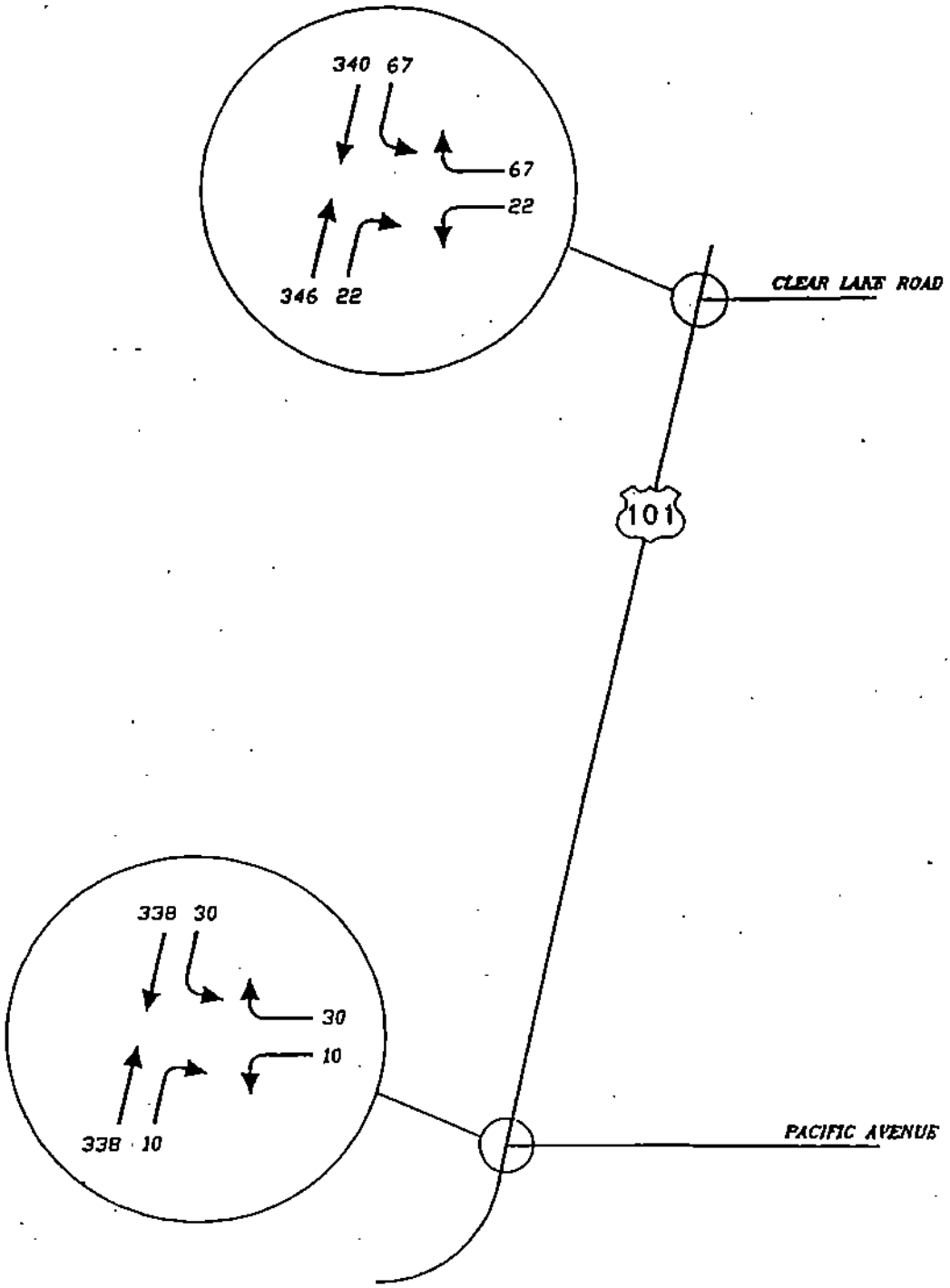


FIGURE 3

NOT TO SCALE

YEAR 2002 'NO BUILD' TRAFFIC VOLUMES
(PEAK HOUR)

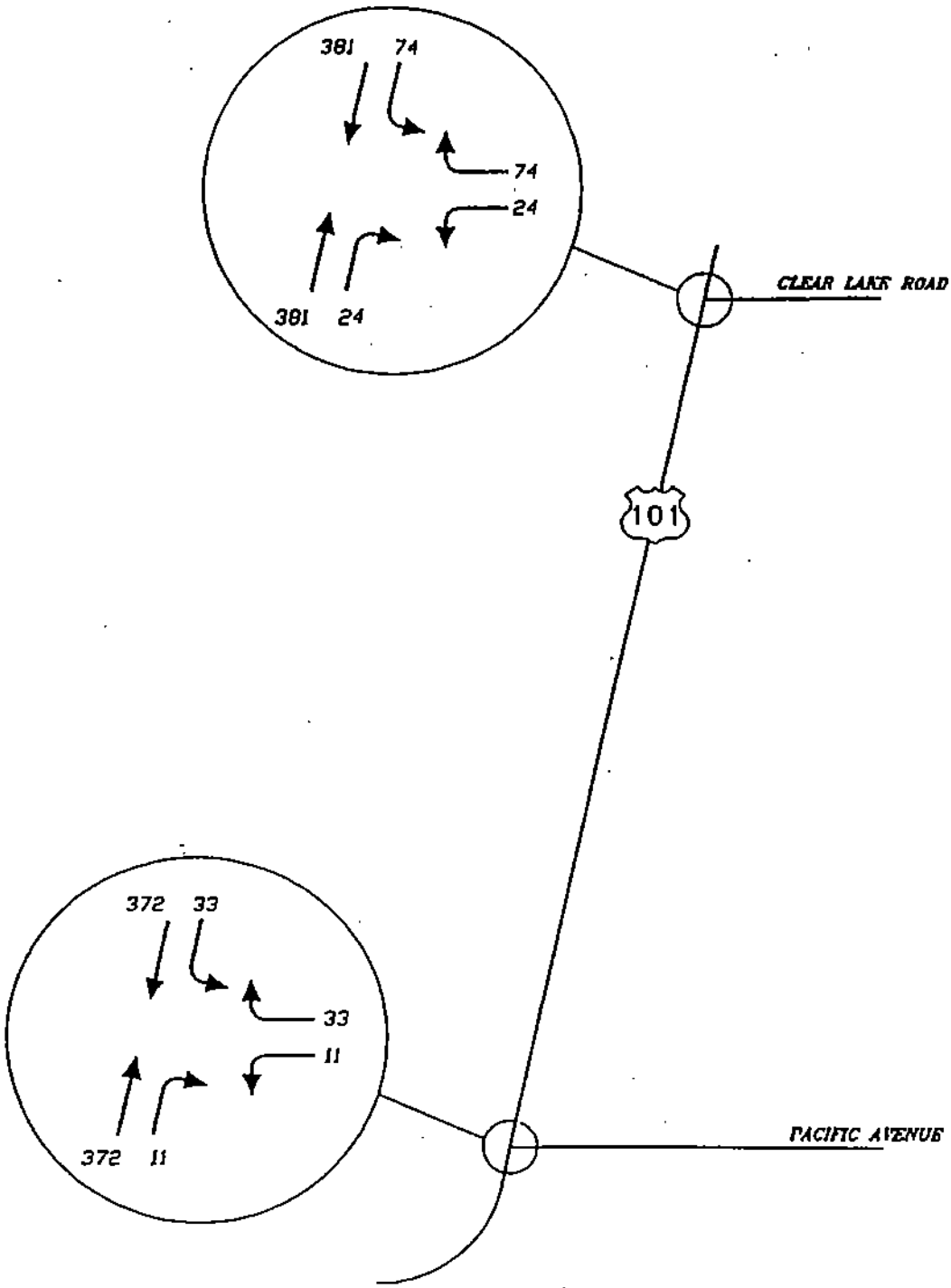


FIGURE 4

NOT TO SCALE

SITE GENERATED TRAFFIC
(PEAK HOUR)

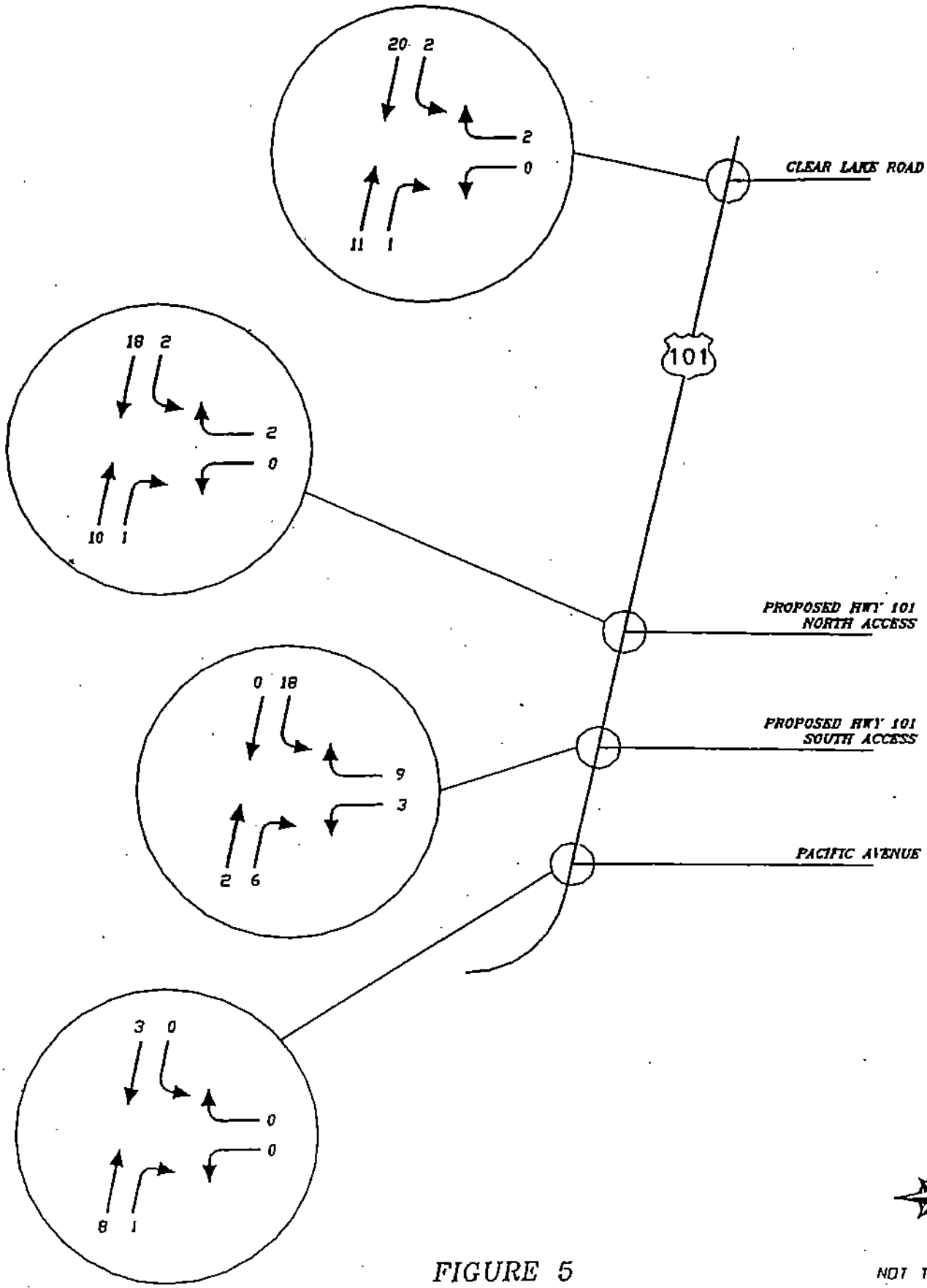


FIGURE 5

FILE NAME: F:\96\96142\TVII 3.DWG

YEAR 2002 'BUILD' TRAFFIC VOLUMES
(PEAK HOUR)

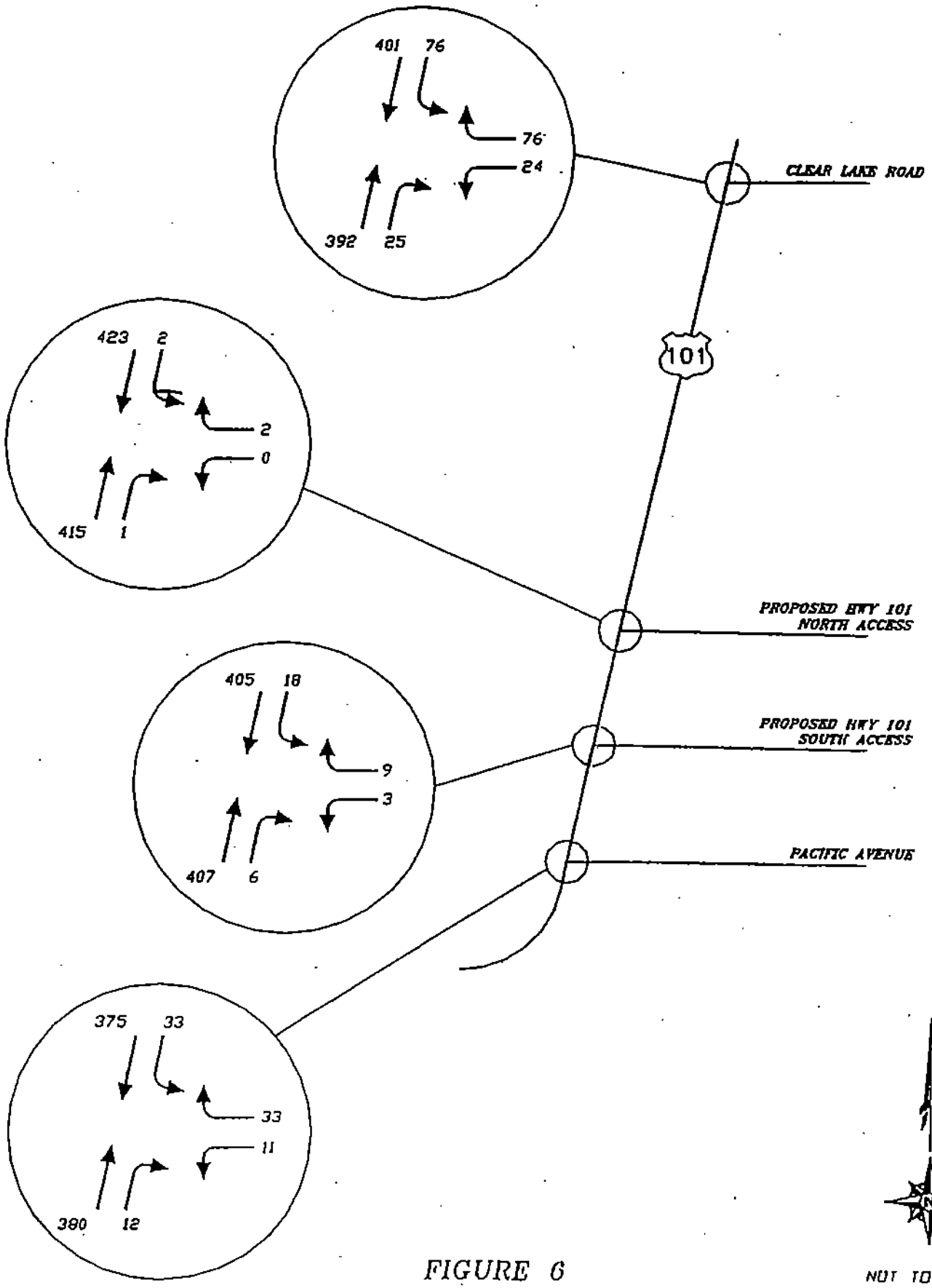


FIGURE 6

NOT TO SCALE

APPENDICES

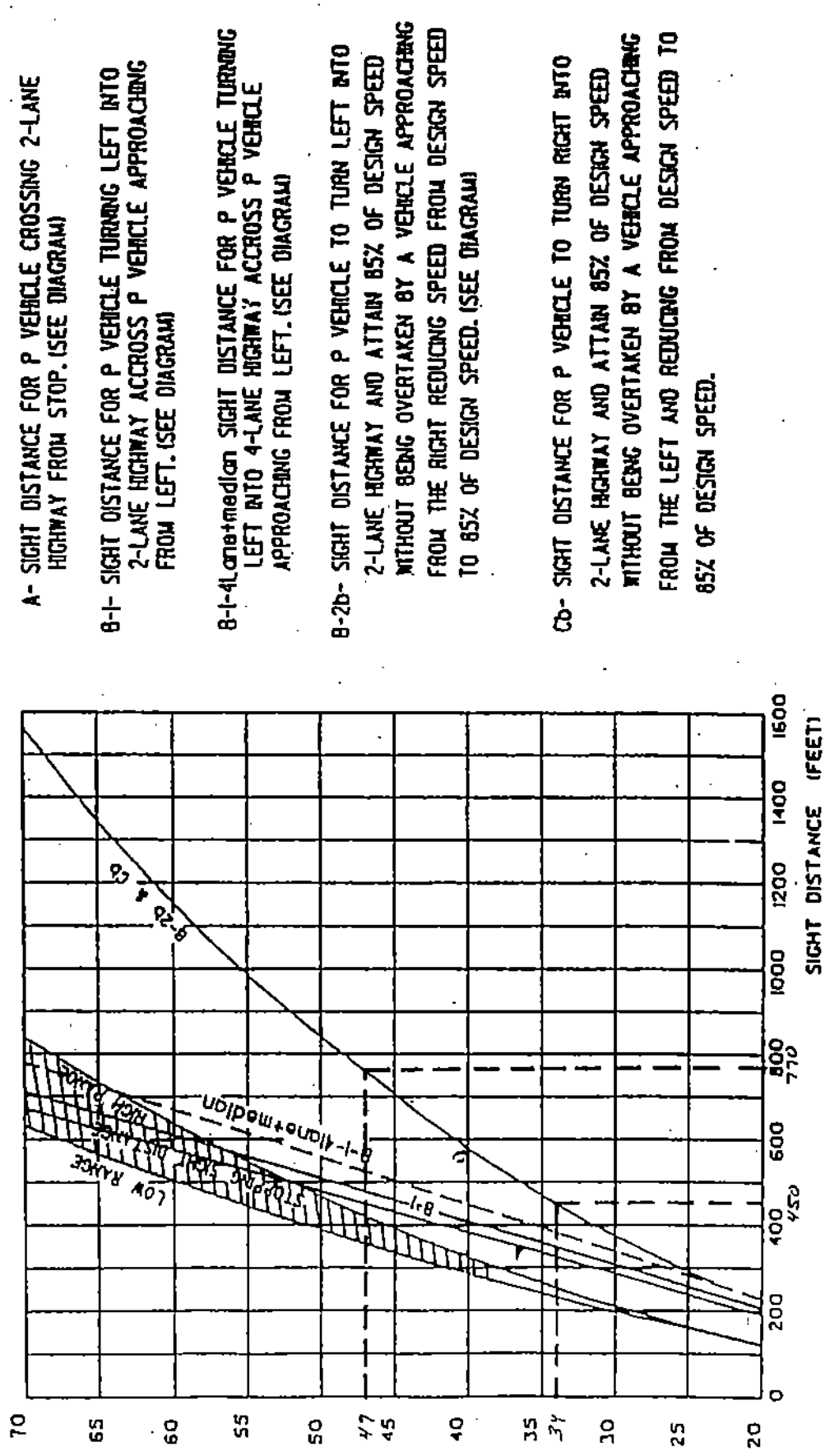


Figure IX-40. Intersection sight distance at at-grade intersection (Case IIIB and Case IIIC).

UNSIGNALIZED - T - INTE ECTION CAPACITY CALCULATI FORM

2/ 4/1997 19:10:50

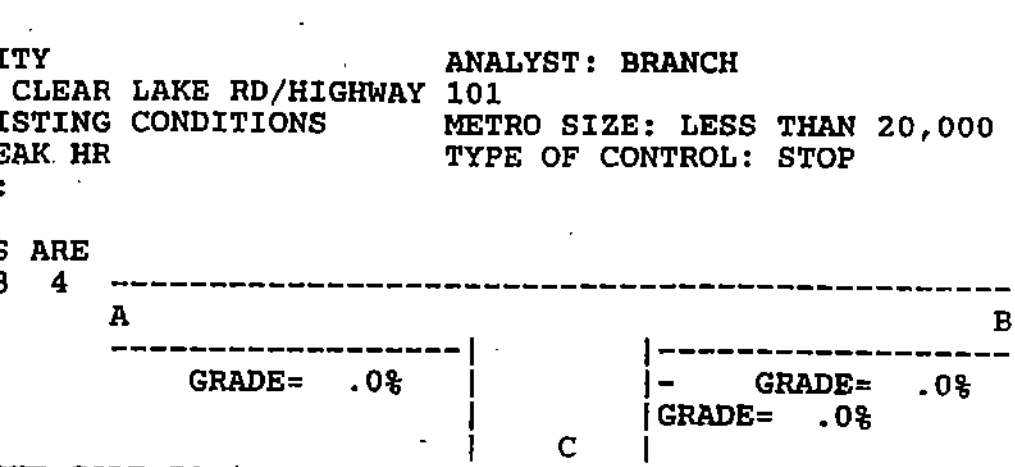
FILE NAME:

CITY: DUNES CITY
INTERSECTION: CLEAR LAKE RD/HIGHWAY 101
ALTERNATE: EXISTING CONDITIONS
COUNT: 1997 PEAK HR
LOCATION PLAN:

ANALYST: BRANCH
METRO SIZE: LESS THAN 20,000
TYPE OF CONTROL: STOP

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	2	3		
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	346	22	67	346	22	67
PCH			74		24	74
LANES	1		2		1	

STEP 1 RIGHT TURN FROM C — CR

CONFLICTING FLOWS = MH =	357. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	587. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B — BL

CONFLICTING FLOWS = MH =	368. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	723. PCH
DEMAND = BL =	74 PCH
CAPACITY USED =	10.23 %
IMPEDANCE FACTOR = P2 =	.929
AVAILABLE RESERVE =	649. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C — CL

CONFLICTING FLOWS = MH =	770. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	242. PCH
ADJUSTING FOR IMPEDANCE = M3 =	225. PCH

STEP 3 CONTINUED

	CL
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A
SHARED LANE DEMAND =	98 PCH
POTENTIAL CAPACITY = M13 =	422. PCH
AVAILABLE RESERVE =	324. PCH
DELAY & LOS =	B

LOS C VOLUMES: VEHICLES PER HOUR	LEG C 211.

VER 03/93

UNSIGNALIZED - T - JTERSECTION CAPACITY CALCL ITION FORM

2/ 4/1997 19:12:32

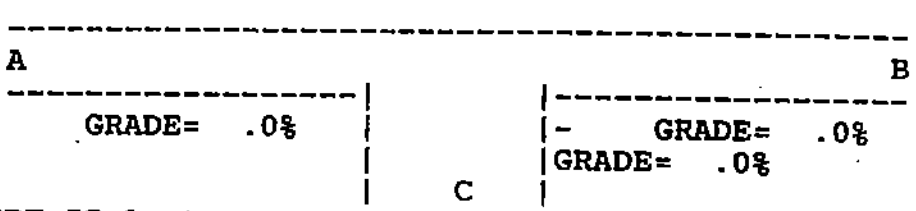
FILE NAME:

CITY: DUNES CITY
INTERSECTION: CLEAR LAKE RD/HIGHWAY 101
ALTERNATE: NO BUILD
COUNT: 2002 PEAK HR
LOCATION PLAN:

ANALYST: BRANCH
METRO SIZE: LESS THAN 20,000
TYPE OF CONTROL: STOP

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	2	3		
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	381	24	74	381	24	74
PCH			81		26	81
LANES		1		2		1

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	393. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	559. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	405. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	692. PCH
DEMAND = BL =	81 PCH
CAPACITY USED =	11.71 %
IMPEDANCE FACTOR = P2 =	.919
AVAILABLE RESERVE =	611. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	848. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	211. PCH
ADJUSTING FOR IMPEDANCE = M3 =	194. PCH

STEP 3 CONTINUED

	CL	
NO SHARED LANE DEMAND =	0	PCH
AVAILABLE RESERVE =	0.	PCH
DELAY & LOS =	N/A	
SHARED LANE DEMAND =	107	PCH
POTENTIAL CAPACITY = M13 =	383.	PCH
AVAILABLE RESERVE =	276.	PCH
DELAY & LOS =	C	

LOS C VOLUMES:	LEG C
VEHICLES PER HOUR	211.

VER 03/93

UNSIGNALIZED - T - INTERSECTION CAPACITY CALCULATION FORM

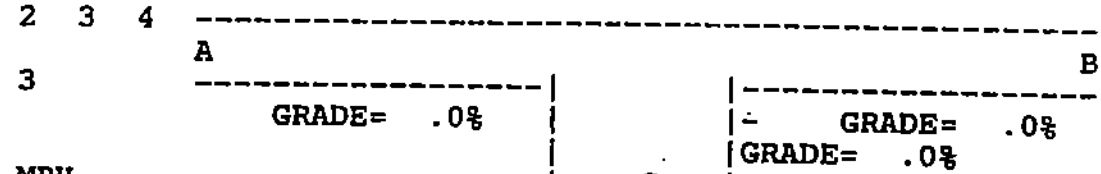
FILE NAME: 2/ 4/1997 19:13:28

CITY: DUNES CITY
INTERSECTION: CLEAR LAKE RD/HIGHWAY 101
ALTERNATE: [redacted] BUILD
COUNT: 2002 PEAK HR
LOCATION PLAN:

ANALYST: BRANCH
METRO SIZE: LESS THAN 20,000
TYPE OF CONTROL: STOP

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	2	3		
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	392	25	76	401	24	76
PCH			84		26	84
LANES	1		2		1	

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	405. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	550. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	417. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	682. PCH
DEMAND = BL =	84 PCH
CAPACITY USED =	12.32 %
IMPEDANCE FACTOR = P2 =	.914
AVAILABLE RESERVE =	598. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	882. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	198. PCH
ADJUSTING FOR IMPEDANCE = M3 =	181. PCH

STEP 3 CONTINUED

	CL	
NO SHARED LANE DEMAND =	0	PCH
AVAILABLE RESERVE =	0.	PCH
DELAY & LOS =	N/A	
SHARED LANE DEMAND =	110	PCH
POTENTIAL CAPACITY = M13 =	372.	PCH
AVAILABLE RESERVE =	262.	PCH
DELAY & LOS =	C	

LOS C VOLUMES: VEHICLES PER HOUR	LEG C
	212.

VER 03/93

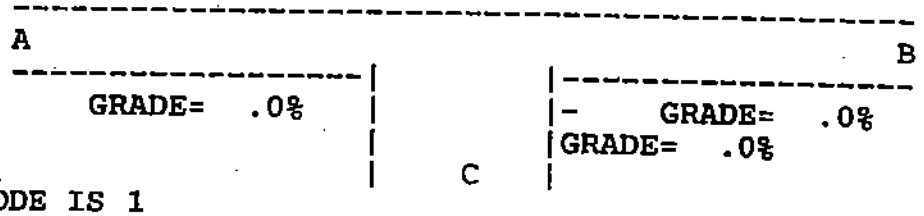
UNSIGNALIZED - T - INTERSECTION CAPACITY CALCULATION FORM

FILE NAME: 2/ 4/1997 19:16:19

CITY: DUNES CITY ANALYST: BRANCH
INTERSECTION: PACIFIC AVE/HIGHWAY 101
ALTERNATE: EXISTING CONDITIONS METRO SIZE: LESS THAN 20,000
COUNT: 1997 PEAK HR TYPE OF CONTROL: STOP
LOCATION PLAN:

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	2	3		
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	338	10	30	338	10	30
PCH			33		11	33
LANES	1		2		1	

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	343. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	598. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	348. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	741. PCH
DEMAND = BL =	33 PCH
CAPACITY USED =	4.46 %
IMPEDANCE FACTOR = P2 =	.970
AVAILABLE RESERVE =	708. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	711. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	269. PCH
ADJUSTING FOR IMPEDANCE = M3 =	261. PCH

STEP 3 CONTINUED

	CL	
NO SHARED LANE DEMAND =	0	PCH
AVAILABLE RESERVE =	0.	PCH
DELAY & LOS =	N/A	
SHARED LANE DEMAND =	44	PCH
POTENTIAL CAPACITY = M13 =	452.	PCH
AVAILABLE RESERVE =	408.	PCH
DELAY & LOS =	A	

LOS C VOLUMES:	LEG C
VEHICLES PER HOUR	119.

VER 03/93

UNSIGNALIZED - T - INTERSECTION CAPACITY CALCULATION FORM

2/ 4/1997 19:18:48

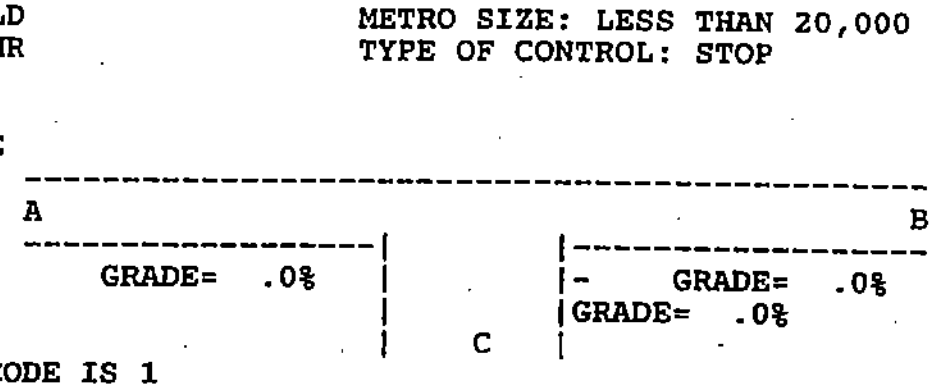
FILE NAME:

CITY: DUNES CITY
INTERSECTION: PACIFIC AVE/HIGHWAY 101
ALTERNATE: NO BUILD
COUNT: 2002 PEAK HR
LOCATION PLAN:

ANALYST: BRANCH
METRO SIZE: LESS THAN 20,000
TYPE OF CONTROL: STOP

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	2	3		
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	372	11	33	372	11	33
PCH			36		12	36
LANES	1		2		1	

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	378. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	571. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	383. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	710. PCH
DEMAND = BL =	36 PCH
CAPACITY USED =	5.07 %
IMPEDANCE FACTOR = P2 =	.966
AVAILABLE RESERVE =	674. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	783. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	237. PCH
ADJUSTING FOR IMPEDANCE = M3 =	229. PCH

STEP 3 CONTINUED

	CL	
NO SHARED LANE DEMAND =	0	PCH
AVAILABLE RESERVE =	0.	PCH
DELAY & LOS =	N/A	
SHARED LANE DEMAND =	48	PCH
POTENTIAL CAPACITY = M13 =	416.	PCH
AVAILABLE RESERVE =	368.	PCH
DELAY & LOS =	B	

LOS C VOLUMES:	LEG C
VEHICLES PER HOUR	119.

VER 03/93

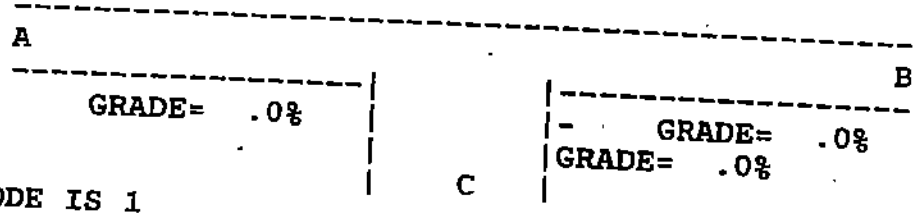
UNSIGNALIZED - T - INTERSECTION CAPACITY CALCULATION FORM

FILE NAME: 2/ 4/1997 19:19:58

CITY: DUNES CITY
INTERSECTION: PACIFIC AVE/HIGHWAY 101 ANALYST: BRANCH
ALTERNATE: [redacted] BUILD
COUNT: 2002 PEAK HR METRO SIZE: LESS THAN 20,000
LOCATION PLAN: TYPE OF CONTROL: STOP

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	2	3		
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	380	12	33	375	11	33
PCH			36		12	36
LANES		1		2		1

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	386. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	565. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	392. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	703. PCH
DEMAND = BL =	36 PCH
CAPACITY USED =	5.12 %
IMPEDANCE FACTOR = P2 =	.966
AVAILABLE RESERVE =	667. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	794. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	232. PCH
ADJUSTING FOR IMPEDANCE = M3 =	224. PCH

STEP 3 CONTINUED

	CL
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A
SHARED LANE DEMAND =	48 PCH
POTENTIAL CAPACITY = M13 =	409. PCH
AVAILABLE RESERVE =	361. PCH
DELAY & LOS =	B

LOS C VOLUMES:	LEG C
VEHICLES PER HOUR	116.

VER 03/93

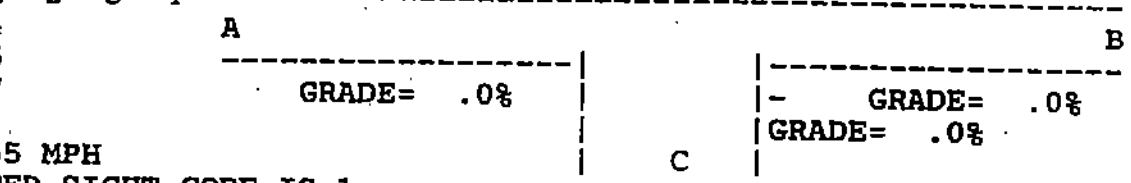
UNSIGNALIZED - T - INTERSECTION CAPACITY CALCULATION FORM

FILE NAME: 2/ 4/1997 19:22:35

CITY: DUNES CITY ANALYST: BRANCH
INTERSECTION: PROPOSED HWY 101 NORTH ACCESS/HIGHWAY 101
ALTERNATE: BUILD METRO SIZE: LESS THAN 20,000
COUNT: 2002 PEAK HR TYPE OF CONTROL: STOP
LOCATION PLAN:

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	6			
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	415	1	2	423	0	2
PCH			2		0	2
LANES		1		1		1

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	416. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	542. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	416. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	683. PCH
DEMAND = BL =	2 PCH
CAPACITY USED =	.29 %
IMPEDANCE FACTOR = P2 =	.999
AVAILABLE RESERVE =	681. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	841. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	214. PCH
ADJUSTING FOR IMPEDANCE = M3 =	213. PCH

STEP 3 CONTINUED

	CL	
NO SHARED LANE DEMAND =	0	PCH
AVAILABLE RESERVE =	0.	PCH
DELAY & LOS =	N/A	
SHARED LANE DEMAND =	2	PCH
POTENTIAL CAPACITY = M13 =	239.	PCH
AVAILABLE RESERVE =	237.	PCH
DELAY & LOS =	C	

LOS C VOLUMES:	LEG C
VEHICLES PER HOUR	5.

VER 03/93

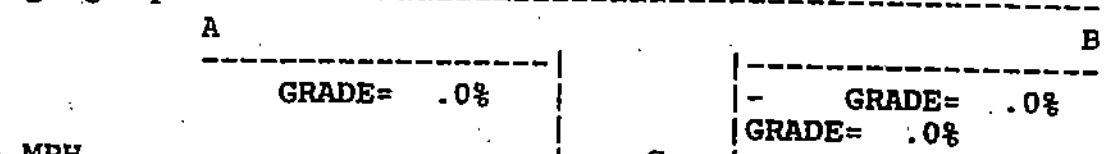
UNSIGNALIZED - T - INTERSECTION CAPACITY CALCULATION FORM

FILE NAME: 2/ 4/1997 19:24:13

CITY: DUNES CITY ANALYST: BRANCH
INTERSECTION: PROPOSED SOUTH HWY 101 SOUTH ACCESS/HIGHWAY 101
ALTERNATE: BUILD METRO SIZE: LESS THAN 20,000
COUNT: 2002 PEAK HR TYPE OF CONTROL: STOP
LOCATION PLAN:

APPROACH CODES ARE

LANE	1	2	3	4
A	4			
B	6			
C	7			



SPEED: 55 MPH
RESTRICTED SIGHT CODE IS 1
MINOR STREET ADJUSTMENTS -
ACCELERATION LANE? NO
CURB RADIUS OR TURN ANGLE? NO

APPROACH	A		B		C	
MOVE	AT	AR	BL	BT	CL	CR
VOLUME	407	6	18	405	3	9
PCH			20		3	10
LANES	1		1		1	

STEP 1 RIGHT TURN FROM C

	CR
CONFLICTING FLOWS = MH =	410. VPH
CRITICAL GAP = TG =	6.5 SECS
POTENTIAL CAPACITY = M1 =	546. PCH
SHARED LANE - SEE STEP 3	
NO SHARED LANE DEMAND =	0 PCH
AVAILABLE RESERVE =	0. PCH
DELAY & LOS =	N/A

STEP 2 LEFT TURN FROM B

	BL
CONFLICTING FLOWS = MH =	413. VPH
CRITICAL GAP = TG =	5.5 SECS
POTENTIAL CAPACITY = M2 =	685. PCH
DEMAND = BL =	20 PCH
CAPACITY USED =	2.92 %
IMPEDANCE FACTOR = P2 =	.981
AVAILABLE RESERVE =	665. PCH
DELAY & LOS =	A

STEP 3 LEFT TURN FROM C

	CL
CONFLICTING FLOWS = MH =	833. VPH
CRITICAL GAP = TG =	7.5 SECS
POTENTIAL CAPACITY = M3 =	217. PCH
ADJUSTING FOR IMPEDANCE = M3 =	212. PCH

STEP 3 CONTINUED

	CL	
NO SHARED LANE DEMAND =	0	PCH
AVAILABLE RESERVE =	0.	PCH
DELAY & LOS =	N/A	
SHARED LANE DEMAND =	13	PCH
POTENTIAL CAPACITY = M13 =	401.	PCH
AVAILABLE RESERVE =	388.	PCH
DELAY & LOS =	B	

LOS C VOLUMES:	LEG C
VEHICLES PER HOUR	50.

VER 03/93

Oregon

DEPARTMENT OF
TRANSPORTATION

District 5

FILE CODE:

April 15, 1997

Harry A. Taylor
25119 Lamb Road
Elmira, OR 97437

Re: Cooley-Lantz Property Zone Change.

This office has reviewed the traffic impact study for the proposed development abutting the Coast Highway. The levels of service and the sight distance at the two proposed access points are within acceptable levels.

This letter is in reference to the zone change only; the development as now planned will not change the level of service on the Coast Highway. All final plans and approach locations are subject to review by this office when approach permits are applied for.

Sincerely,

Michael J. Barker

Michael J. Barker
Permit Specialist

mjb
c: file

3620 Gateway
Springfield, OR 97477
(541) 726-2552
FAX (541) 726-2509

EXHIBIT L