LEGAL DESCRIPTION

PARCEL NO. 1:

The North 1/2 of the North 1/2 of the West 1/2 of Government Lot 4 of the Northwest 1/4 of Section 1, Township 2 South, Range 7 West, San Bernardino Meridian, according to United States Government Survey approved by Survey General December 3, 1981.

EXCEPT therefrom the West 30 feet as conveyed to the County of San Bernardino by deed recorded July 02, 1954 in Book 3415 Page 63 Official Records.

PARCEL NO. 2:

The Northerly 857,72 feet of the East 1/2 of Government Lot 4, in the Northwest 1/4 of Section 1, Township 2 South, Range 7 West, San Bernardino Meridian as per United States Government Township Plat thereof.

NOTE: Said Northerly 857.72 feet is measured at right angles to the North line of said Section 1.

PARCEL NO. 3:

The East 1/2 of the Government Lot 4, in the Northwest 1/4 Section 1, Township 2 of South, Range, 7 West, San Bernardino Meridian, as per United States Government Township Plate thereof.

EXCEPT therefrom the Northerly 857.72 feet thereof, measured at right angles to the Northerly line of said Section 1.

PARCEL NO. 4:

The West 1/2 of the Government Lot 3 in the Northwest 1/4 of Section 1, Township 2 South, Range 7 West, San Bernardino Meridian, as per United States Government Township Plat thereof.

Together with an easement and right of way to construct, use, maintain and repair a road 30 feet wide, extending in a general Northerly and Southerly direction in, on, over and across that certain property deeded to Southern Surplus Realty Co., a California corporation by deed recorded December 06, 1973 in Book 8322 Page 69 Official Records.

EXCEPT therefrom that portion conveyed to Southern Surplus Realty Co., a California corporation by deed recorded December 06, 1973 in Book 8322 Page 69 Official Records.

PARCEL NO. 5:

The Northerly 658.94 feet of the West 1/2 of the Southeast 1/4 of the Northwest 1/4 of Section 1, Township 2 South, Range 7 West, San Bernardino Meridian, as per United STates Government Township Plat thereof.

Together with an easement and right of way to construct, use, maintain and repair a road, 30 feet wide, extending in a general Northerly and Southerly direction in, on, over and across that certain property deeded to Southern Surplus Realty Co., a California Corp. by deed recorded December 06, 1973 in Book 8322 Page 69 Official Records.

EXCEPT therefrom that portion conveyed to the State of California, by deed recorded July 09, 1969 in Book 7264 Page 437 Official Records.

ALSO EXCEPT therefrom that portion conveyed to Southern Surplus Realty Co., a California corporation, by deed recorded December 06, 1973 as Instrument No. in Book 8322 Page 69 Official Records.

PARCEL NO. 6:

That portion of the West 1/2 of the Southeast 1/4 of the Northwest 1/4 of Section 1, Township 2 South, Range 7 West San Bernardino Meridian, as per United STates Government Township Plat thereof, lying Southerly of the Northerly 658.94 feet and Northerly of the North line of the land conveyed to the State of California, by deed recorded April 10, 1970 in Book 7421 Page 759 Official Records.

PARCEL NO. 7:

That portion of the Southwest 1/4 of Section 1, Township 2 South, Range 7 West, San Bernardino Meridian, according to the Official Plat thereof, described as follows:

Beginning on the East line of said Southwest 1/4 distant along said East line, North 0 degrees 30 minutes 53 seconds West, 448.03 feet from the South line of said Southwest 1/4'

Thence North 71 degrees 30 minutes 00 seconds West, 699.50 feet to the West line of the Northeast 1/4 of the said Southwest 1/4;

Thence along said West line North 0 degrees 28 minutes 31 seconds West, 631.50 feet to the North line of said Southwest 1/4;

Thence along said North line North 89 degrees 33 minutes 52 seconds East, 660.91 feet to said East line of said Southwest 1/4'

Thence along said East line South 0 degrees 30 minutes 53 seconds East, 858.48 feet to the point of beginning.

EXCEPT the Southerly 230 feet of the hereinabove described parcels.

ALSO EXCEPT therefrom that portion conveyed to Southern California Edison Company, a corporation, by deed recorded July 30, 1973 in Book 8235 Page 148 of Official Records in the office of the County Recorder of said County.

ALSO EXCEPT therefrom all uranium, thorium and other fissionable materials, all oil, gas, petroleum, asphaltum and other hydrocarbon substances, and other minerals and mineral ores of every kind and character, whether similar to these herein specific or not, within or underlying, or which may be produced from the hereinabove described

land, together with the right to use that portion only of said land which underlies a plane parallel to and 500 feet below the present surface of said land, for the purpose of prospecting for, developing and/or extracting said uranium, thorium and other fissionable materials, all oil, gas, petroleum, asphaltum and other mineral or hydrocarbon substances from said land, it being expressly understood and agreed that said grantor, its successors and assigns, shall have no right to enter upon the surface of said land, or to use said land or any portion thereof to said depth of 500 feet, for any purpose whatsoever as reserved in the conveyance from Southern Surplus Realty, by deed recorded May 18, 1982 as Instrument No. 82-096628 Official Records.

PARCEL NO. 8:

That portion of the East 1/2 of the East 1/2 of the Northwest 1/4 Section 1, Township 2 South, Range 7 West, San Bernardino Base and Meridian, according to the Official Plat of said land approved by the Surveyor General dated April 16, 1857, described as follows:

Beginning at the Northeast corner of said Northwest 1/4;

Thence along the East line of said Northwest 1/4, South 0 degrees 35 minutes 35 seconds East, 2,426.56 feet to a point in the Northerly line of the land conveyed to the State of California by deed recorded April 10, 1970 in Book 7421 Page 759 Official Records:

Thence along said Northerly line, North 72 degrees 04 minutes 05 seconds West, 433.59 feet;

Thence North 71 degrees 30 minutes 00 seconds West 264.91 feet to a point in the West line of said East 1/2 of the East 1/2 of the Northwest 1/4;

Thence along said West line, North 0 degrees 33 minutes 14 seconds West, 2,213.06 feet to a point in the North line of said Section 1;

Thence along said North line, South 89 degrees 38 minutes 44 seconds East 660.03 feet to the point of beginning.

therefrom that portion conveyed to Southern Surplus Realty Co., a California corporation by deed recorded January 02, 1975 in Book 8586 Page 124 of Official Records.

The North 330 feet of the West 330 feet of Government Lot 2 of the Northeast 1/4 of Section 1 Township 2 South, Range 7 West, San Bernardino Base and Meridian, according to the Official Plat of said land approved by the Surveyor General, dated April 16, 1857.

EXCEPT therefrom that portion conveyed to Southern Surplus Realty Co., a California corporation by deed recorded January 02, 1975 in Book 8586 Page 124 of Official Records.

PARCEL NO. 10:

That portion of the Southeast 1/4 of Section 36, Township 1 South, Range 7 West, San

Bernardino Base and Meridian, according to the Official Plat of said land approved by the Surveyor General, July 28, 1865, described as follows:

Beginning at a point on the South line of said Section 36, from which the Southeast corner of said Section bears East 20 chains;

Thence North 13.25 chains;

Thence West 20 chains;

Thence South 13.25 chains;

Thence East 20 chains to the point of beginning.

EXCEPT any portion there of lying Northerly of the Southerly line of that parcel of land described in the deed to the State of California, recorded June 14, 1945 in Book 1784 Page 490 Official Records.

ALSO EXCEPT therefrom that portion conveyed to Southern Surplus Realty Co., a California corporation by deed recorded January 02, 1975 in Book 8586 Page 124 of Official Records.

PARCEL NO. 11

An easement and right of way to construct, use, maintain and repair a roadway, as reserved over parcel of land granted to Southern Surplus REalty Co., in the County of San Bernardino, State of California.

Said easement is over three strips of land and described as follows:

Strip 1:

A strip of land 60 feet wide, the centerline which is coincident with the North line of said Section 1, Township 2 South, Range 7 West, San Bernardino Base and Meridian.

Strip 2:

A strip of land, 60 feet wide, the centerline of which is coincident with the East line of said Government Lot 3 of the Northwest 1/4 of said Section 1.

Strip 3:

A strip of land, 60 feet wide, the Westerly line of said strip of land being coincident with the Westerly line of the East 1/2 of said Government Lot 3.

APPENDIX B:
ASSESSMENT DISTRICT
NO. 103 DOCUMENTS

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
CITY OF ONTARIO
Special Assessment Investigation,
Limitation and Majority Protest Act of 1931
and
Municipal Improvement Act of 1913
(Haven Avenue Corridor Improvements)

Amended Preliminary - January 6, 1987

51441

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

(Haven Avenue Corridor Improvements)

Howard J. Snider
Mayor

Beecher Medlin
Mayor Pro-tem

Jim W. Bowman Faye Myers Dastrup
Councilmembers

Roger D. Hughbanks - City Manager
Samuel S. Crowe - City Attorney
DeLoris E. Arterburn - City Clerk
Kenneth M. Keenly - City Treasurer
LeRoy D. Bender - City Engineer
and Superintendent of Streets
Samuel R. Norris - Administrative Services Director
Robert Jackson - Assistant City Manager/Development

Professional Services

F. Mackenzie Brown, Inc. - Bond Counsel
Fieldman, Rolapp and Associates - Financial Consultants
Willdan Associates - Assessment Engineer

Preliminary - January 6, 1987

51441

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

TABLE OF CONTENTS

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

Pursuant to the provisions of Part 7.5 of the Special Assessment Investigation, Limitation and Majority Protest Act of 1931, which is Division 4 of the Streets and Highways Code of the State of California, and the Municipal Improvement Act of 1913, which is Division 12 of the Streets and Highways Code of the State of California, and in accordance with the Resolution of Intention, Resolution No. ____, adopted by the CITY COUNCIL of the

CITY OF ONTARIO

(hereinafter referred to as the "City"), State of California, in connection with the proceedings for

ASSESSMENT DISTRICT NO. 103
(Haven Avenue Corridor Improvements)

(hereinafter referred to as the "Assessment District" or "District"), I, William C. Stookey, authorized representative of Willdan Associates, the duly appointed ENGINEER OF WORK, submit this Engineer's Report ("Report") for Assessment District No. 103 consisting of five (5) parts as follows:

PART I

Plans and Specifications

Plans and specifications for the proposed improvements.

PART II

Cost Estimate

An estimate of the cost of all proposed improvements, including incidental expenses, is included in this Report and is also on file in the office of the City Clerk.

PART III

Assessment Roll

A proposed assessment of the total amount of the costs and expenses of the proposed improvements upon the subdivisions of land within the Assessment District, in proportion to the estimated benefits to be received by the subdivisions from the improvements, is set forth upon the Assessment Roll filed with and made part of this Report.

Prior Assessment Liens

The total amount, as near as may be determined, of the total principal sum of all unpaid special assessments and special assessments required or proposed to be levied against the total area to be assessed under any complete or pending assessment proceedings (other than that contemplated for this Assessment District) which would require an investigation and report under the Special Assessment Investigation, Limitation and Majority Protest Act of 1931.

True Value

The total true value, as near as may be determined, of the parcels of land and improvements which are proposed to be assessed.

PART IV

Assessment Diagram

A diagram showing the Assessment District, the boundaries and the dimensions of the subdivisions of land within the Assessment District as they existed at the time of the passage of the Resolution of Intention is filed with and made a part of this Report and part of the assessment.

PART V

Description of Works of Improvement

A description of the proposed Works of Improvement and descriptions of all rights-of-way, easements, and lands to be acquired are filed with and made a part of this Report.

Dated this ___ day of _____, 1986.

WILLDAN ASSOCIATES
Engineer of Work
City of Ontario
State of California

By_____
William C. Stookey

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PRELIMINARY APPROVAL

Preliminary approval by the City Council of the City of Ontario, California on the ____ day of _____, 1987.

_____
DeLoris E. Arterburn, City Clerk
City of Ontario

FINAL APPROVAL

Final approval by the City Council of the City of Ontario, California on the _____ day of _____, 1987.

_____
DeLoris E. Arterburn, City Clerk
City of Ontario

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART I - PLANS AND SPECIFICATIONS

Plans and Specifications

The plans and specifications for the proposed improvements for this Assessment District are preliminary and sufficient to provide a general description of the Works of Improvement. Information related to the proposed improvements is developed from preliminary engineering design efforts. From the preliminary engineering the general location of the improvements is shown at Part IV - Assessment Diagram, and construction cost estimates are shown at Part II - Cost Estimates.

Upon completion, such plans and specifications will not be bound with this Report, but will be on file in the office of the City Engineer of the City of Ontario. Such plans and specifications as now proposed are incorporated as if attached to, and made a part of, this Report by this reference.

The general location of the improvements is shown on the Assessment Diagram.

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART II - COST ESTIMATES

Introduction

The proposed Works of Improvement will establish Haven Avenue as a major unobstructed arterial highway between the Pomona Freeway (California Route 60) and the San Bernardino Freeway (Interstate 10).

It is proposed that Haven Avenue be widened to a minimum of six traffic lanes between the two freeways. Grade separations (underpasses) are proposed at the Haven Avenue crossings of both the Southern Pacific and Union Pacific Railroads as well as bridge widening and an interchange at the Pomona Freeway (California Route 60).

	Preliminary	Confirmed
Project No. 1 Southern Pacific Railroad Grade Separation	$ 3,072,000.00	
Project No. 2 Haven Avenue Improvements	4,465,000.00	
Project No. 3 Union Pacific Railroad /Mission Avenue Grade Separation	3,850,000.00	
Project No. 4 Pomona Freeway Interchange and Bridge Widening	3,807,000.00	
Construction Contingency	1,639,000.00	
Total	$16,833,000.00	

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART II - COST ESTIMATES
PROJECT INCIDENTAL EXPENSES

	Preliminary	Confirmed
Project Incidentals		
Design Engineering	$ 875,000.00	
Design Survey	343,000.00	
Soils Engineering	86,000.00	
Soils/Materials Testing	86,000.00	
Construction Survey	343,000.00	
City Inspection	514,000.00	
Plan Checking	343,000.00	
Allowance for Cost Escalation	596,000.00	
Contingency	190,000.00	
Subtotal	$ 3,376,000.00	
General Incidentals		
Financial Consultant	$ 30,000.00	
Bond Counsel	75,000.00	
Assessment Engineer	75,000.00	
Assessment District Coordination	95,000.00	
Appraiser	20,000.00	
Official Statement	6,000.00	
Bond Printing and Servicing	10,000.00	
Filing and Recording Fees	1,000.00	
Registration Fee and Paying Agent	15,000.00	
Printing, Advertising and Notices	5,000.00	
*Bond Anticipation Note Interest	480,000.00	
Right-of-Way Acquisition - Structures	2,000,000.00	
Right-of-Way Acquisition - Haven Avenue	2,505,000.00	
City Administration	150,000.00	
Incidental Contingency	139,000.00	
Subtotal	$ 5,606,000.00	
Total Incidentals	$ 8,982,000.00	

* Bond Anticipation Note interest equals 24 months' interest at approximately 8 percent per annum on the estimated $3,000,000.00 of Bond Anticipation Notes proposed to be issued.

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART II - COST ESTIMATES
SUMMARY OF COSTS AND AMOUNT
TO ASSESSMENT

	Preliminary	Confirmed
Construction Costs		
Project No. 1	$ 3,072,000.00	
Project No. 2	4,465,000.00	
Project No. 3	3,850,000.00	
Project No. 4	3,807,000.00	
Contingency	1,639,000.00	
	$16,833,000.00	
Incidental Expenses	$ 8,982,000.00	
Contributions		
City of Ontario Completion Guarantee	($ 1,500,000.00)	
From Properties Outside the District	(290,000.00)	
City of Ontario	(400,000.00)	
Ontario R.D.A.	(370,000.00)	
City of Los Angeles D.D.A.	(195,000.00)	
Public Utilities Commission	(1,250,000.00)	
Ontario Airport Authority for Haven Avenue	(1,774,000.00)	
Developer Contribution	(147,000.00)	
	($ 5,926,000.00)	
	$19,889,000.00	
Reserve Fund 7%±	$ 1,547,000.00	
Marketing 3%±	663,000.00	
Amount to Assessment	$22,099,000.00	

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART III - ASSESSMENT ROLL,
PRIOR ASSESSMENT LIENS, TRUE VALUE

WHEREAS, on the ___ day of _____, 1987, the City Council of the City of Ontario, California, did, pursuant to the provisions of the Municipal Improvement Act of 1913, which is Division 12 of the Streets and Highways Code of the State of California, as amended, adopt its Resolution of Intention No. _____, for the financing and construction of certain public improvements, together with appurtenances and appurtenant work in connection therewith, in a special Assessment District known and designated as

ASSESSMENT DISTRICT NO. 103
(Haven Avenue Corridor Improvements)

(hereinafter referred to as the "Assessment District" or "District"); and,

WHEREAS, the Resolution of Intention, as required by law, did direct the appointed Engineer of Work to make and file a Report consisting of the following:

a. Plans;
b. Specifications;
c. Cost Estimate;
d. Assessment Diagram showing the Assessment District and the subdivisions of land contained therein; and
e. A proposed assessment of the costs and expenses of the works of improvement levied upon the parcels and lots of land within the boundaries of the Assessment District.

For particulars, reference is made to the Resolution of Intention as previously adopted.

NOW, THEREFORE, I, William C. Stookey, the authorized representative of Willdan Associates, the duly appointed ENGINEER OF WORK, pursuant to the Municipal Improvement Act of 1913, do herein submit the following:

1. The total amount, as near as may be determined, of the total principal sum of all unpaid special assessments and special assessments required or proposed to be levied under any completed or pending assessment proceedings (other than that contemplated for this Assessment District) against the total area proposed to be assessed is shown in the Debt Limitation Report at Exhibit B-1.

2. The total true value, as near as may be determined, of the parcels of land and the improvements which are proposed to be assessed by this District is shown in the Debt Limitation Report at Exhibit B-1.

3. I, pursuant to the provisions of the law and the Resolution of Intention, have assessed the costs and expenses of the proposed Works of Improvement upon the parcels of land in the Assessment District in direct proportion and relation to the estimated benefits to be received by each of the parcels. For particulars of identification of the parcels, reference is made to the Assessment Diagram (see 4. below).

4. An Assessment Diagram is required by law and is attached as Exhibit A. The Assessment Diagram shows the Assessment District, as well as the boundaries and dimensions of the respective parcels and subdivisions of land within the District as they existed at the time of the passage of the Resolution of Intention. Each of the subdivisions of land or parcels or lots, respectively, have been

given a separate number on the Assessment Diagram and in the Assessment Roll (see 3 above).

5. The subdivisions and parcels of land and their numbers shown on the Assessment Diagram correspond with the numbers appearing on the Assessment Roll, attached as Exhibit B.

6. NOTICE IS HEREBY GIVEN that serial bonds will be issued to represent all unpaid assessments. The interest rate of such bonds will not exceed the current legal maximum rate of 12 percent per annum. The bonds will be issued in the manner and form as provided in the Improvement Bond Act of 1915, which is Division 10 of the Streets and Highways Code of the State of California. The last installment of the bonds shall mature a maximum of and not to exceed nineteen (19) years from the second day of September next succeeding 12 months from their date.

7. By virtue of the authority contained in the Municipal Improvement Act of 1913 and by further direction and order of the City Council, I hereby make the following assessment to cover the costs and expenses of the Works of Improvement for the Assessment District based on the costs and expenses as set forth below:

	As Preliminarily Approved	As Confirmed
Cost of Construction	$16,833,000.00	$
Incidental Costs and Expenses	$ 8,982,000.00	$
Total Cost	$25,815,000.00	$
Contribution	(5,926,000.00)	$
Reserve Fund	1,547,000.00	$
Marketing	663,000.00	$
Balance to Assessment	$22,099,000.00	$

For particulars of the individual assessments and their descriptions, reference is made to the Assessment Roll (see Exhibit B).

8. All costs and expenses of the Works of Improvement have been assessed to all parcels of land within the Assessment District in a manner which is more clearly defined in the Method of Assessment, attached as Exhibit C.

WILLDAN ASSOCIATES
Engineer of Work
City of Ontario
State of California

Date _____

By _____
William C. Stookey

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

CERTIFICATIONS

I, as City Clerk, do hereby certify that the foregoing assessment, together with the diagram attached thereto, was filed in my office on the ___ day of _____, 1987.

_____
DeLoris E. Arterburn, City Clerk
City of Ontario
State of California

I, as City Clerk, do hereby certify that the foregoing assessment, together with the diagram attached thereto, was approved and confirmed by the City Council of said City on the ___ day of _____, 1987.

_____
DeLoris E. Arterburn, City Clerk
City of Ontario
State of California

I, as Superintendent of Streets of said City, do hereby certify that the foregoing assessments, together with the diagram attached thereto, was recorded in my office on the ___ day of _____, 1987.

_____
LeRoy D. Bender,
Superintendent of Streets
City of Ontario
State of California

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART IV - ASSESSMENT DIAGRAM

The Assessment Diagram is shown in a reduced scale format as Exhibit A.

COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

PART V - DESCRIPTION OF WORKS OF IMPROVEMENT AND RIGHTS-OF-WAY TO BE ACQUIRED

Description of Works of Improvement

Project No. 1 Grade Separation at the Southern Pacific Railroad tracks and Haven Avenue.

Project No. 2 Haven Avenue Improvements.

The construction of certain grading, drainage, paving, base, curbs and gutters, intersection work, street lights, signage, traffic signal, striping, and under pavement utilities, together with appurtenances and appurtenant work from approximately 300 feet south of the centerline of California Route 60 (the Pomona Freeway) to the southerly right-of-way of the Interstate 10 Freeway all as were particularly set forth on the preliminary plans on file in the office of the City of Ontario, City Engineer. Said work may properly be described as six-lane improvements from Route 60 (Pomona Freeway) to Jurupa Road and eight-lane improvements from Jurupa Road to Airport Road and fulfillment of ultimate plans for that street within the described limits.

Project No. 3 Grade Separation at the Union Pacific Railroad tracks and Haven Avenue.

Project No. 4 Interchange and bridge widening of Haven Avenue at its intersection with the California Route 60 (Pomona) Freeway.

PART V (Cont.) - DESCRIPTION OF WORKS OF IMPROVEMENT AND RIGHT-OF-WAY CERTIFICATE

RIGHT-OF-WAY CERTIFICATE

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO
CITY OF ONTARIO

The undersigned, William C. Stookey, hereby CERTIFIES UNDER PENALTY OF PERJURY that the following is all true and correct.

At all times herein mentioned, the undersigned was, and now is, the authorized representative of Willdan Associates the duly appointed ENGINEER OF WORK of the CITY OF ONTARIO, CALIFORNIA.

That there have now been instituted proceedings under the provisions of the Municipal Improvement Act of 1913, which is Division 12 of the Streets and Highways Code of the State of California, for the construction of certain public improvements in a special assessment district known and designated as ASSESSMENT DISTRICT NO. 103.

THE UNDERSIGNED STATES AND CERTIFIES AS FOLLOWS:

That the rights-of-way and easements not already in the possession of the City of Ontario but identified in preliminary engineering are on the map entitled Right-of-Way to be Acquired, said map being incorporated into this report by reference and being placed on file in the office of the City Engineer of the City of Ontario.

It is acknowledged that the proposed Works of Improvement must be constructed within public rights-of-way, land, or easements owned by the

CITY OF ONTARIO at the time of the construction of the Works of Improvement, and the undersigned hereby further certifies that provisions have been made in the cost estimates outlined herein for the acquisition of all necessary rights-of-way for the Works of Improvements and that I will not authorize the commencement of construction prior to acquisition of said rights-of-way by the City of Ontario.

EXECUTED this ___ day of _____, 1987, at _____, California.

WILLDAN ASSOCIATES
Engineer of Work
City of Ontario
State of California

By_____
William C. Stookey

on file in the office of the City Engineer, prepared by Thomas C. Stowe, Real Estate Appraiser, dated March 14, 1986 indicates that property values for lands adjacent to Haven Avenue could increase by over $100,000 per acre as the result of the added access and exposure provided by the interchanges and the grade separations proposed.

CONCEPT

The assessment area has a symmetry which is unique to assessment districts of this type. The southern boundary is the existing right-of-way of the Route 60 Freeway. Below that area is a single-family residential development which has little reason or benefit to integrate with the commercial, industrial, or high-density residential contemplated for the area north of that freeway. The northerly boundary of the proposed Assessment District is the southerly boundary of the San Bernardino Freeway (Interstate 10). Major highway structures, existing or proposed, between these extremities include an interchange with the Route 60 Freeway and Haven Avenue, a grade separation of the Union Pacific Railroad and Haven Avenue, a grade separation of the Southern Pacific Railroad and Haven Avenue, and an interchange of Haven Avenue with the San Bernardino Freeway. Of these major improvements, the interchange with the San Bernardino Freeway is existing and financed totally from public sources. Although this interchange is not adequate to accommodate the ultimate projected traffic flows, it nonetheless, represents a significant existing benefit to the northerly portion of this District that is not also available at the south where Haven Avenue crosses the Route 60 Freeway.

When the above-described major structures are completed and connected by a fully improved Haven Avenue, all properties fronting that street will enjoy a rather uniform benefit by reason of symmetrical access and exposure to high traffic volume. The benefit conveyed by this District to the individual properties is not uniform since the Haven Avenue/San Bernardino Freeway interchange exists and can be assumed to have influenced

the value of the properties in this vicinity. Such properties do, however, benefit from this program by reason of free traffic movement between the two freeways and exposure to the high traffic volumes that these connections will afford.

To integrate all properties into this program and account for this differential in benefit, a credit is given to those properties within this District that are or will be receiving significant benefit from this existing structure, is estimated at $1.1 million.

To accomplish this credit, $1.1 million is added to the total program costs for the major structures and assessed to all properties. A $1.1 million credit is then given to only those properties receiving direct benefit from that structure.

In order to expedite the proceedings and the construction, the City has contracted for the Southern Pacific Railroad grade separation at Haven Avenue. That project, which is currently underway, has been funded, in part, by advances made by property owners within the boundaries of this District together with certain public funding sources. Those properties within the boundaries of this District that have made cash advances will have those advances refunded either in the form of an assessment credit or in the form of a cash payment. Where a refund is made in the form of a cash payment, it will only be in the amount the cash advance will generate, thus the soft costs necessary in raising the cash will be lost to the contributor if he elects to receive his refund in the form of cash rather than as an assessment credit.

The public contributions are applied only to the major structures, with the exception of certain street improvements where the public airport property abuts Haven Avenue.

In an east-west direction, the benefit boundaries are terminated halfway between adjoining arterial streets, establishing a symmetrical pattern in that direction also. It can be assumed that properties beyond that point will likely receive obligations for the improvements on Archibald and Milliken from which they will derive their principal benefit. In the northeast corner of the described Assessment District boundaries where properties exist that will neither have access nor direct exposure to Haven Avenue, the boundaries are adjusted to effect their elimination.

Although the benefit boundaries as stated above terminate halfway between parallel arterial streets, the benefit itself, when this boundary bisects a single development, is not necessarily limited to such a benefit line. In the case of the California Commerce Center development, the boundary streets such as Milliken Avenue, Airport Drive and including Haven Avenue, provide benefit to th entire property since they all constitute part of the overall development plan for the property. For this reason, the proposed boundary is extended eastward to incorporate the entire California Commerce Center development even though the benefit amount is calculated on a lesser acreage. The same is also true with the Hunt property in the Southerly portion of this District. Although property lines currently exist on the Hunt parcels that conform with the benefit lines proposed herein, that property has submitted a precise plan which totally obliterates existing property lines and leaves no distinction that can be used in the future for an assessment boundary. These boundary extensions in no way relieve those properties from obligation to improve other bordering or arterial streets. Properties where benefit boundaries do not coincide with property lines are included in their entirety so as to avoid having the Assessment District boundary cut through properties.

Utilizing the above criteria as a basis, the assessments program is divided into three categories, i.e., Major Structures; Haven Avenue Improvements; and Rights-of-Way.

Major Structures

The major structures are the Haven Avenue/Route 60 interchange, at the Haven Avenue/Union Pacific Railroad grade separation, the Haven Avenue/Southern Pacific Railroad grade separation, and the Haven Avenue/San Bernardino Freeway interchange. Since the Haven Avenue/San Bernardino Freeway interchange exists, it is not financed by this project. Its inclusion as an in-and-out cost and credit is used to establish equity between the northern and southern portions of this assessment area.

These structures are of direct and immediate benefit to the properties within this District, but they also provide certain general benefit to the community. For this reason, the entire public contribution, excepting only direct frontage payments by the public airport, is applied to the costs of these major structures, reducing the assessments to the properties to which it is applied by that general benefit amount. The cost of those structures, less the general benefit public contribution is distributed equally, on an area basis, to all properties within this District with the Haven Avenue/San Bernardino Freeway interchange credit being applied only to those properties lying northerly of the Union Pacific Railroad. The Union Pacific Railroad is the southerly terminus of existing benefit from the Haven Avenue/San Bernardino Freeway interchange since connecting traffic routes to the south do not exist.

Haven Avenue

The construction of boundary streets in the City of Ontario, as in most California communities is generally made a direct obligation of the abutting properties as a development prerequisite. Developers expect and recognize this obligation when determining the value of such properties. Recognizing that the purpose and benefit of this District is to facilitate development of the properties lying therein, Haven Avenue is assessed on the basis of front footage. In applying this front footage assessment

method to the various properties, it is assumed that all properties will receive some, but limited, access to that street. Since all such properties will have limited access, no differential is made for the acquisition of access rights. Front footage is determined as the full frontage which a property has on Haven Avenue independent of whether or not the property has full access rights; assuming, however, that the property will be accessible to that street. Frontage for corner parcels is extended to the centerline of the boundary street consistent with normal City imposed improvement requirements.

At the northerly end of the assessment area, within the San Bernardino/Haven Avenue interchange, the frontage within that interchange is not applied to adjoining properties since the street at that location has already been improved and can be assumed to have been reflected in the acquisition costs of those properties.

Certain central portions of Haven Avenue have previously been approved by public programs. Certain portions of this improvement may remain upon completion of this program. So as to equitably distribute these costs amongst all properties, the cost of improving Haven Avenue is determined in its total, and assessable front footage is determined in its total, and the front footage assessment distributed accordingly. Where properties exist for which no known or guaranteed assessment is available, such frontage is not included in the assessable front footage, thus resulting in the assessable parcels assuming that cost equally. This report assumes that the airport will pay its full equitable share of Haven Avenue that abuts its frontage, but assumes that properties held by the County of San Bernardino will not do likewise. Subsequent changes in the San Bernardino situation, if they occur, will effect the reduction of all assessments for Haven Avenue frontage properties.

Rights-of-Way - Major Structures

Rights-of-way fall in two categories, i.e., the rights-of-way required for Haven Avenue and those rights-of-way lying beyond the normal boundaries of Haven Avenue to accommodate the slopes and ramps of the major structures.

Rights-of-way for major structures will be acquired by the Assessment District with the cost thereof included within the major structures item. Any property owner that will give his rights-of-way, rather than receive payment, will be granted a credit against his assessment equal to the value of the rights-of-way plus the cost of deriving the funds by this assessment process needed to make the cash payment. This amount cannot be determined accurately until bond discount and reserve funds are known, but it will probably be within the magnitude of 10- to 12-percent.

The area proposed for acquisition of all major structure rights-of-way is not included in the are used to calculate the assessment, thus the acquisition of the rights-of-way should not reduce the assessment upon the property.

Rights-of-Way - Haven Avenue

The City currently possesses only a portion of the rights-of-way required for Haven Avenue. The portion which it does possess has generally been gratis dedication, thus an inequity would occur if the cost of additional rights-of-way were assessed uniformly to all properties. To avoid this inequity, and following what court established guidelines in such circumstances seem to suggest, the assessment formula provides for the acquisition of all Haven Avenue rights-of-way whether or not they are currently dedicated to the City. The value of these rights-of-way are uniformly assessed on a front footage basis to adjoining properties. In the event of a portion of such valuations resulting from damages or severance, such

amounts would be assessed to th entire project on an area basis; however, at this point, none of these are known to be present. Where these rights-of-way exist, the adjoining property is given a credit in an amount equal to the value of the right-of-way. Where properties dedicate these rights-of-way to the City, the value of such rights-of-way plus the cost of money as indicated above will be entered as a credit to the property.

This program sets forth a contribution in the amount of $1.5 million without precisely setting forth the source of the contribution. The intent of this item is not to create a fixed obligation on another funding source, but rather to limit the obligation of the property owners within this Assessment District. If the improvements set forth herein can be accomplished for the $22.7 million assessment obligation and no other public funding source becomes available, no monies from this funding source will be required. On the other hand, to the extent that funding might become available from other sources pertaining to ground access to the airport, that amount shall first be applied to offset any project costs exceeding $22.7 million and, to the extent that a balance remains, such funds will be utilized to either reduce the assessments or reduce the debt service.

Possible funding sources for this $1.5 million would include federal, state, or local public contributions as well as the possibility of private contributions other than the assessments. So as to establish the obligation to the property owners with certainty, a last resort option would be the deferral of certain non-essential project amenities, thus committing the City to fund such items by methods other than assessments upon the properties within this District. Examples of such items that could be deferred would include, but not be limited to, landscaping, landscape medians, parking lanes, etc., none of which would impair the basic function of the improvements for which the properties are being assessed. This $1.5 million and assessment limit is further intended to offset any general benefit which could be attributed to the improvements proposed.

In conclusion, it is my opinion that the assessments for Assessment District No. 103 are allocated in accordance with the benefits which the land received from the Works of Improvement.

WILLDAN ASSOCIATES
Engineer of Work
City of Ontario
State of California

By_____
William C. Stookey

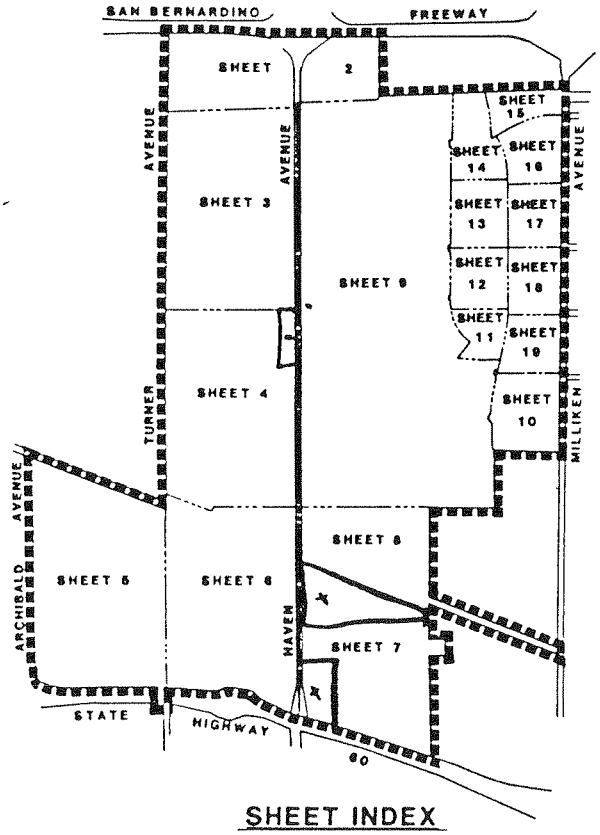
EXHIBIT A
TO
COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

The Assessment Diagram in reduced scale format follows.

SHEET 1 OF 19 SHEETS

ASSESSMENT DIAGRAM
ASSESSMENT DISTRICT NO. 103
(HAVEN AVENUE CORRIDOR IMPROVEMENTS)

CITY OF ONTARIO
COUNTY OF SAN BERNARDINO
STATE OF CALIFORNIA



SHEET INDEX

NOT TO SCALE

LEGEND:

- INDICATES ASSESSMENT DISTRICT BOUNDARY
- INDICATES PROPOSED STREET IMPROVEMENTS
- (6) INDICATES ASSESSMENT NUMBER
- 210-212-23 INDICATES ASSESSOR'S PARCEL NUMBER PER 1986-1987 FISCAL YEAR
- INDICATES COMMON OWNERSHIP

AN ASSESSMENT WAS LEVIED BY THE CITY COUNCIL ON THE LOTS, PIECES AND PARCELS OF LAND SHOWN ON THIS ASSESSMENT DIAGRAM. SAID ASSESSMENT WAS LEVIED ON THE ___ DAY OF _____, 1986. SAID ASSESSMENT DIAGRAM AND ASSESSMENT ROLL WERE RECORDED IN THE OFFICE OF THE SUPERINTENDENT OF STREETS OF SAID CITY ON THE ___ DAY OF _____, 1987. REFERENCE IS MADE TO THE ASSESSMENT ROLL RECORDED IN THE OFFICE OF THE SUPERINTENDENT OF STREETS FOR THE EXACT AMOUNT OF EACH ASSESSMENT LEVIED AGAINST EACH PARCEL OF LAND SHOWN ON THIS ASSESSMENT DIAGRAM.

_____
CITY CLERK
CITY OF ONTARIO

RECORDED IN THE OFFICE OF THE SUPERINTENDENT OF STREETS OF THE CITY OF ONTARIO THIS __ DAY OF _____, 1987.

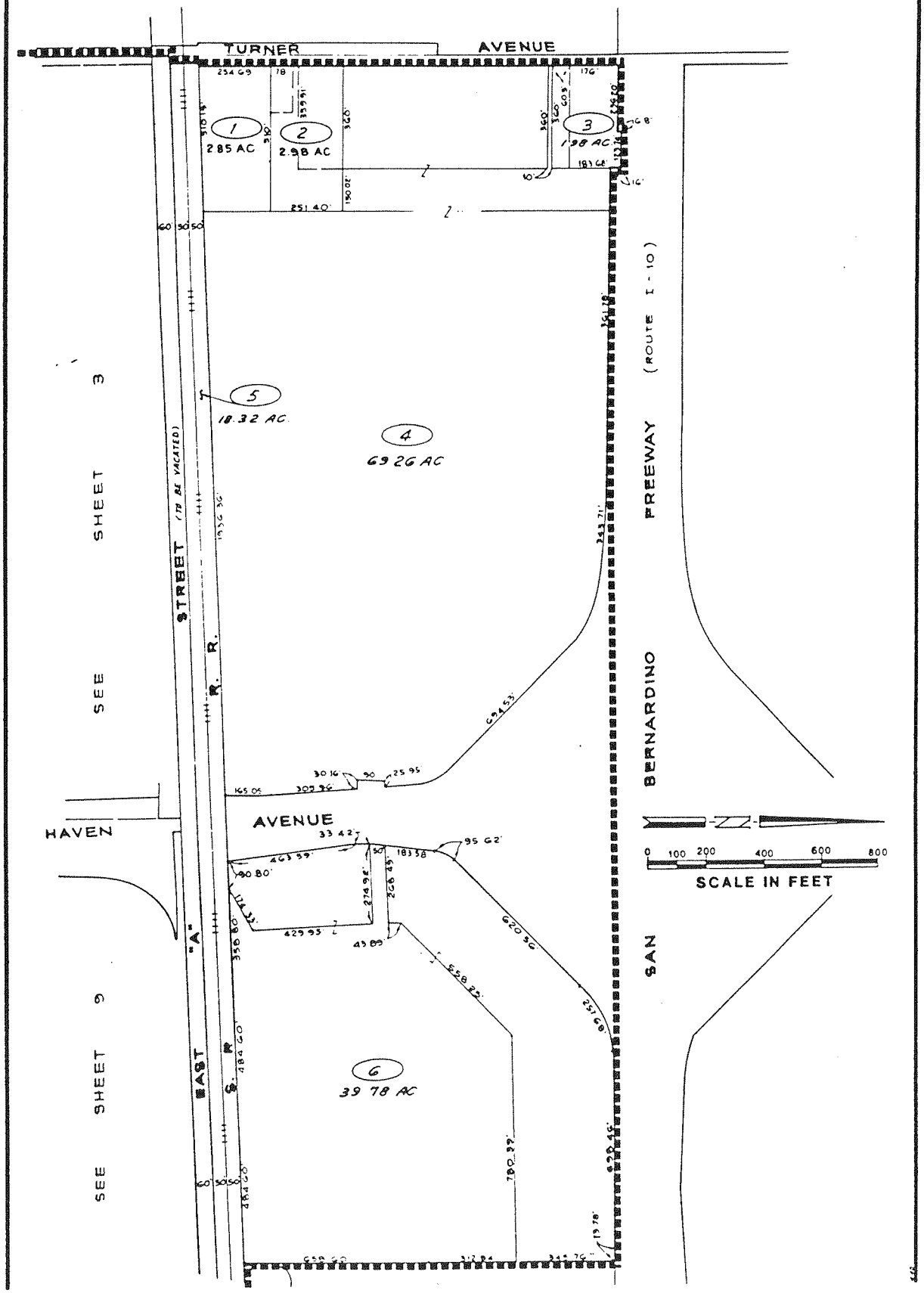
_____
SUPERINTENDENT OF STREETS
CITY OF ONTARIO

FILED IN THE OFFICE OF THE CITY CLERK OF THE CITY OF ONTARIO THIS __ DAY OF _____, 1987.

_____
CITY CLERK
CITY OF ONTARIO

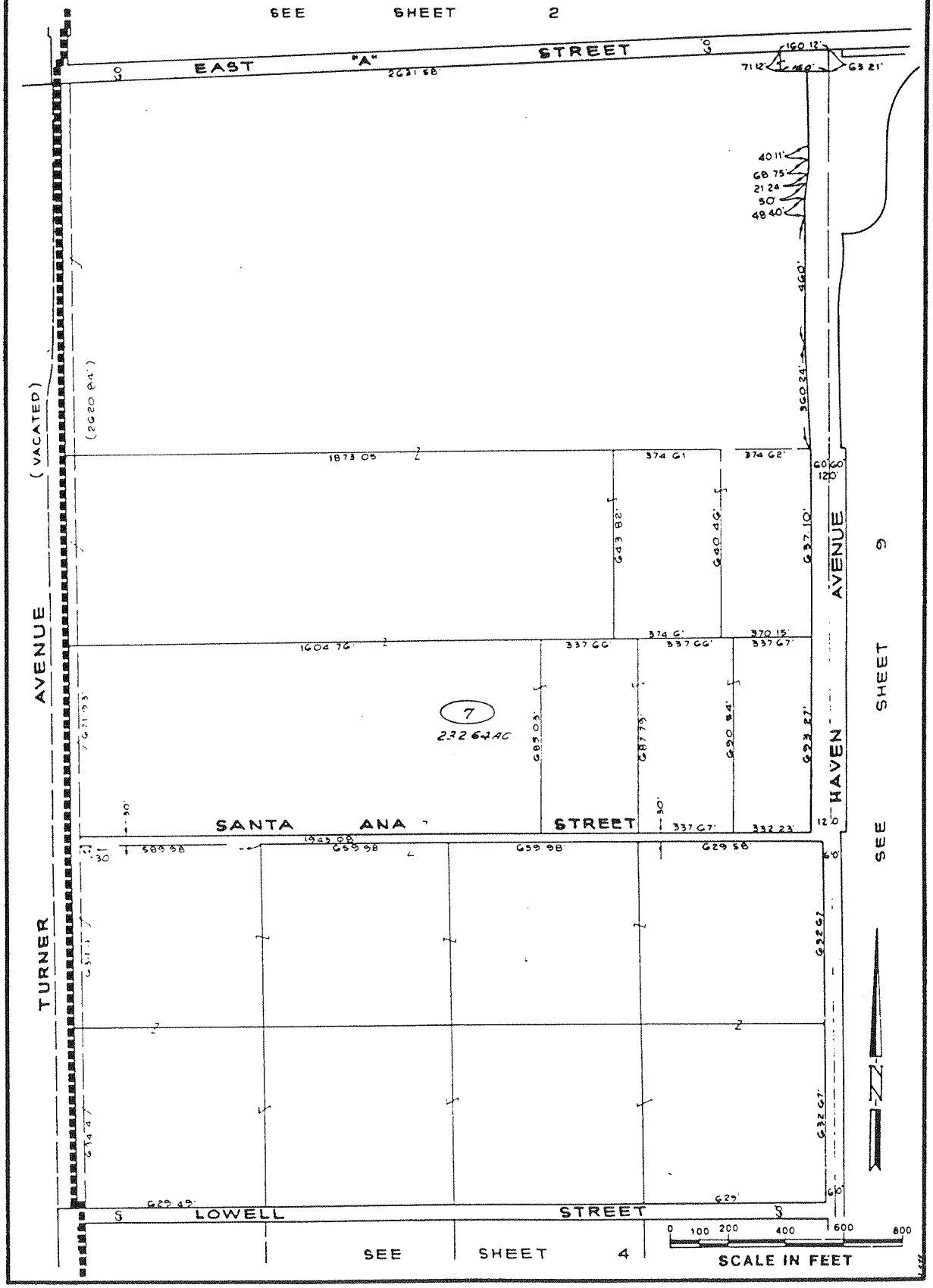
SHEET 2 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



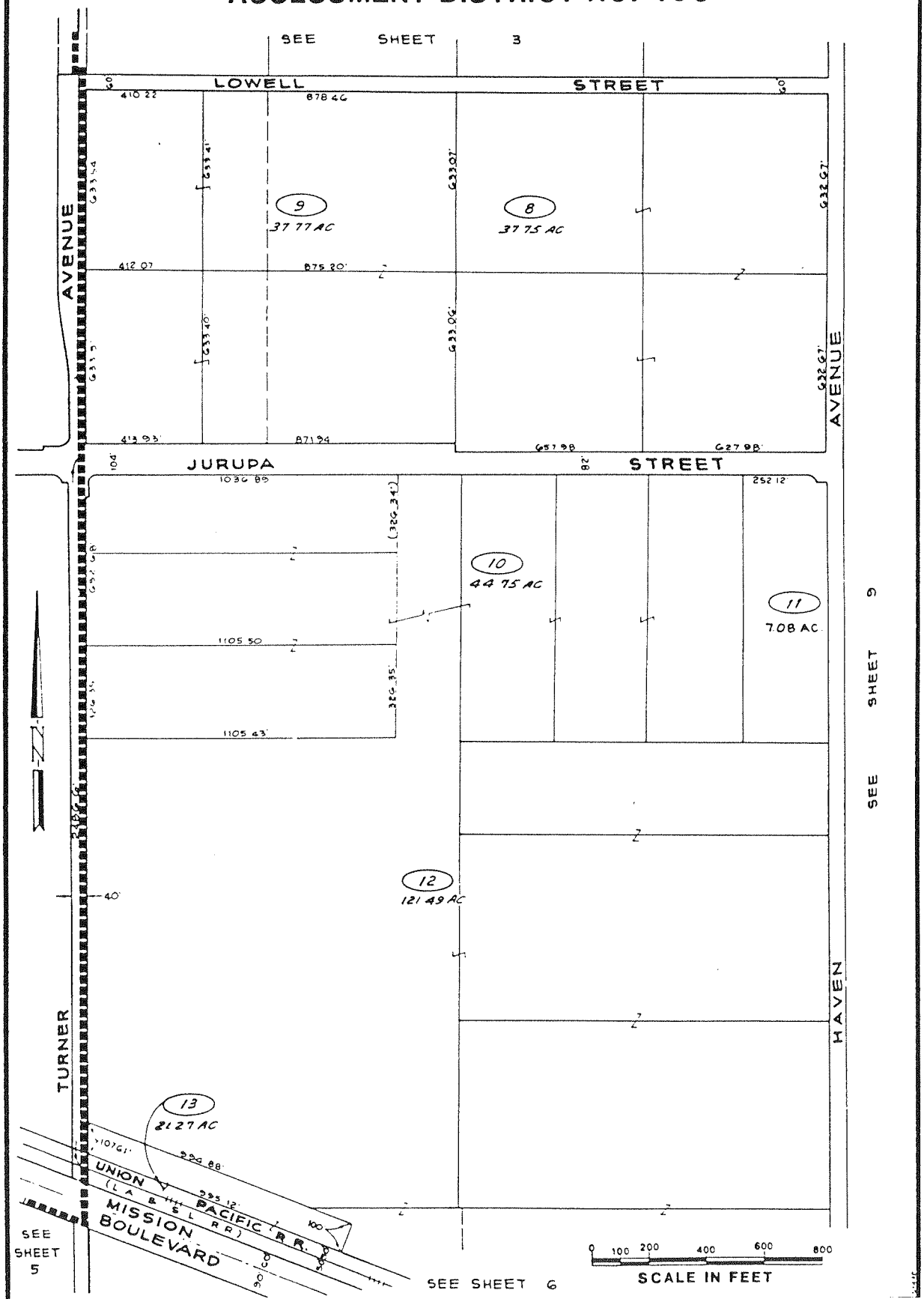
SHEET 3 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103

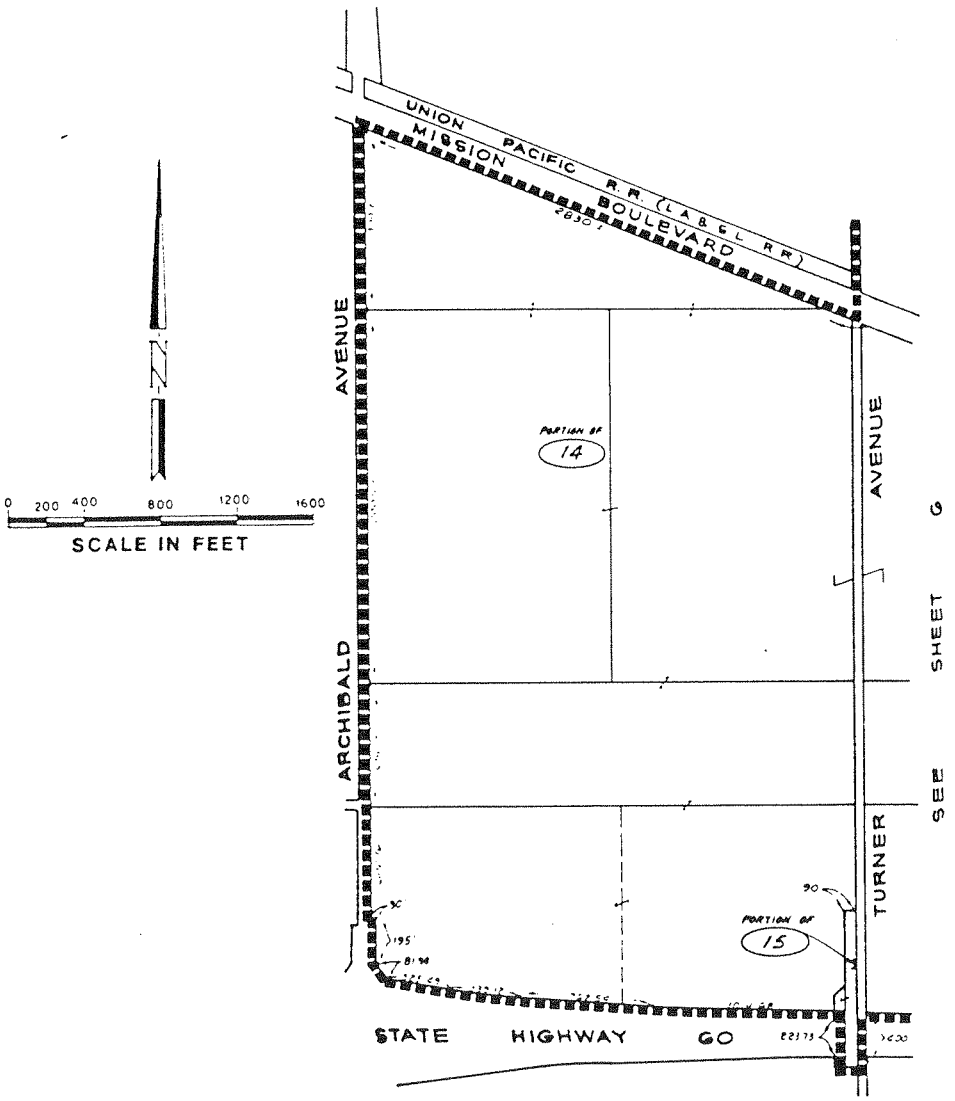


SHEET 4 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103

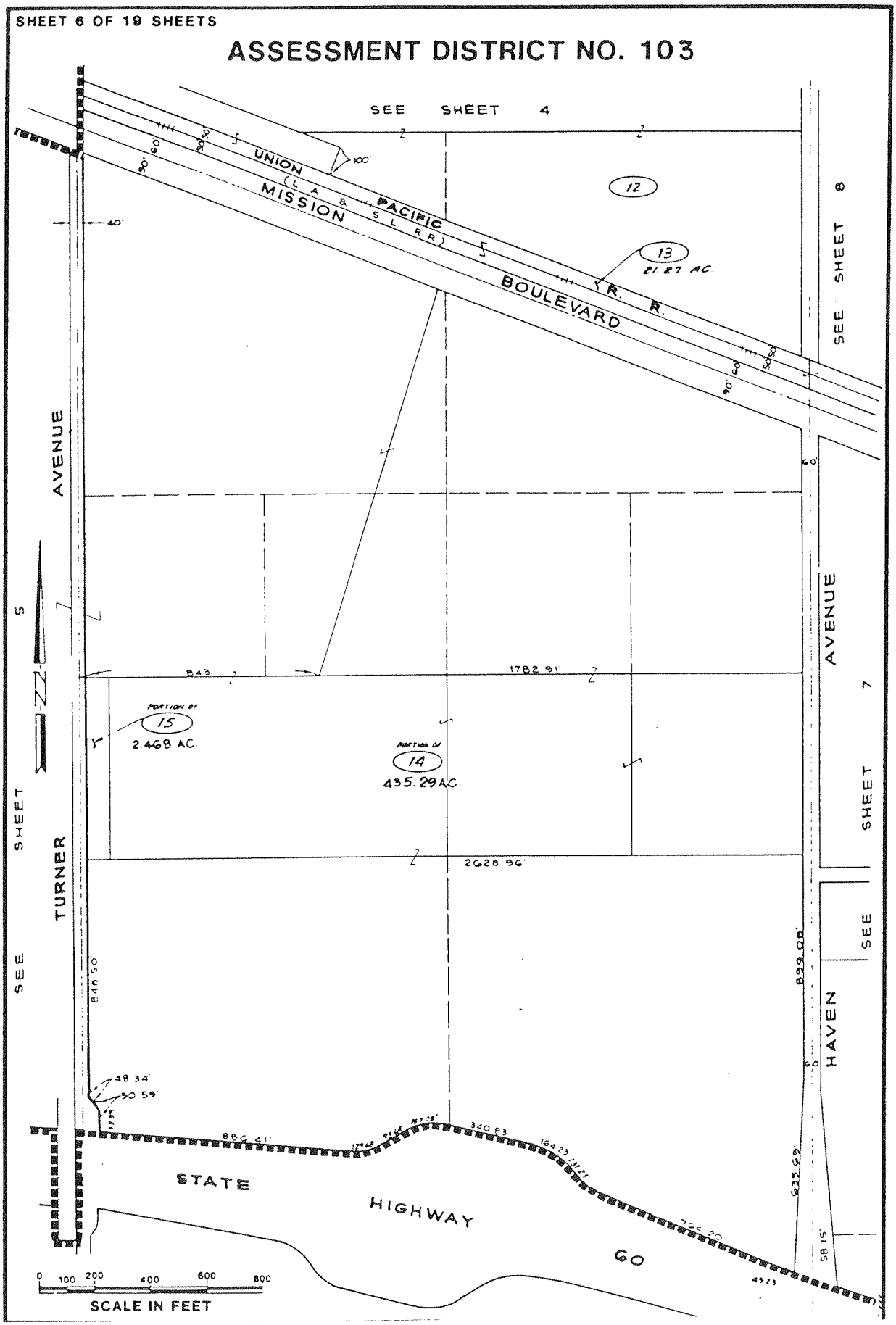


ASSESSMENT DISTRICT NO. 103



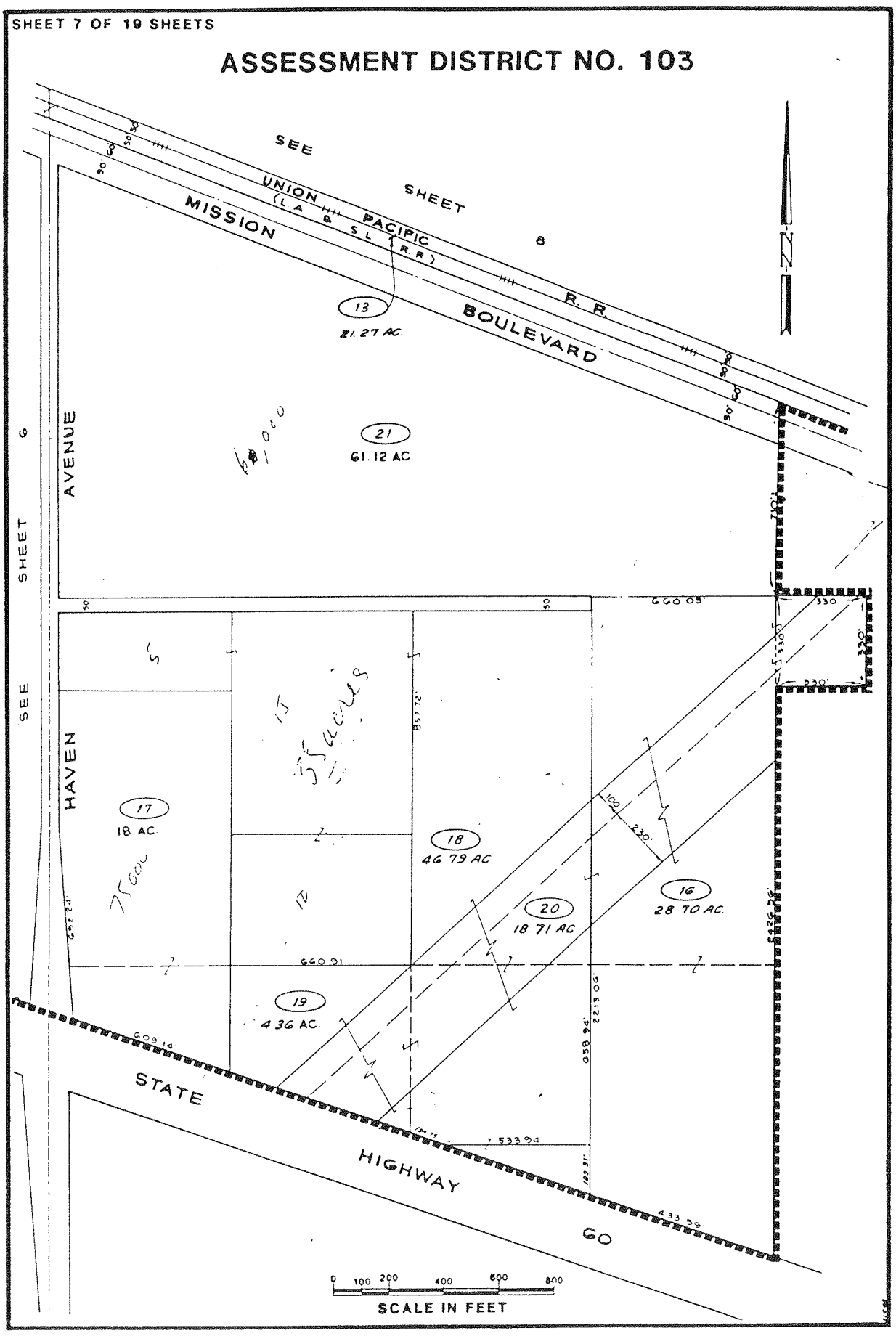
SHEET 6 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



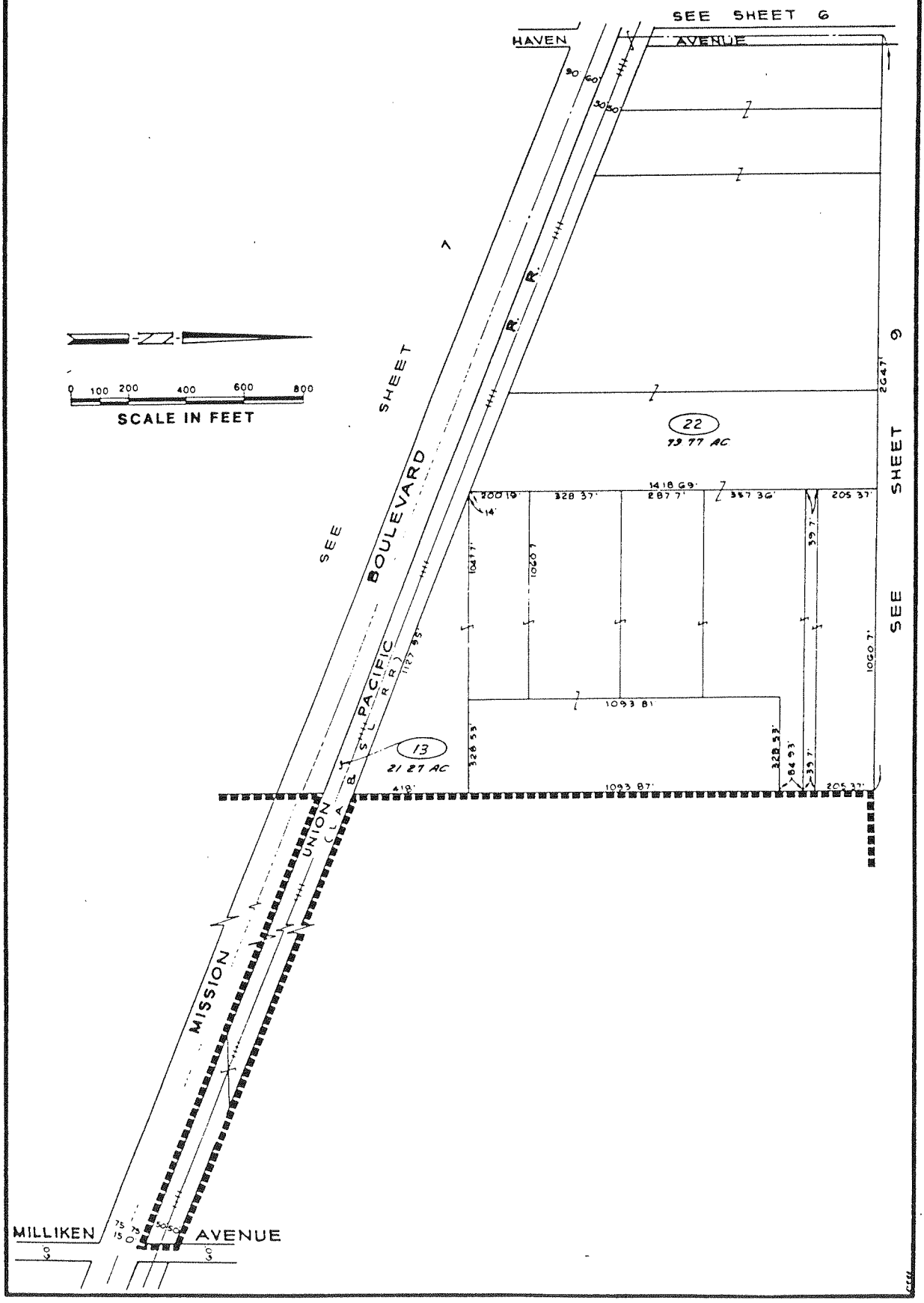
SHEET 7 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



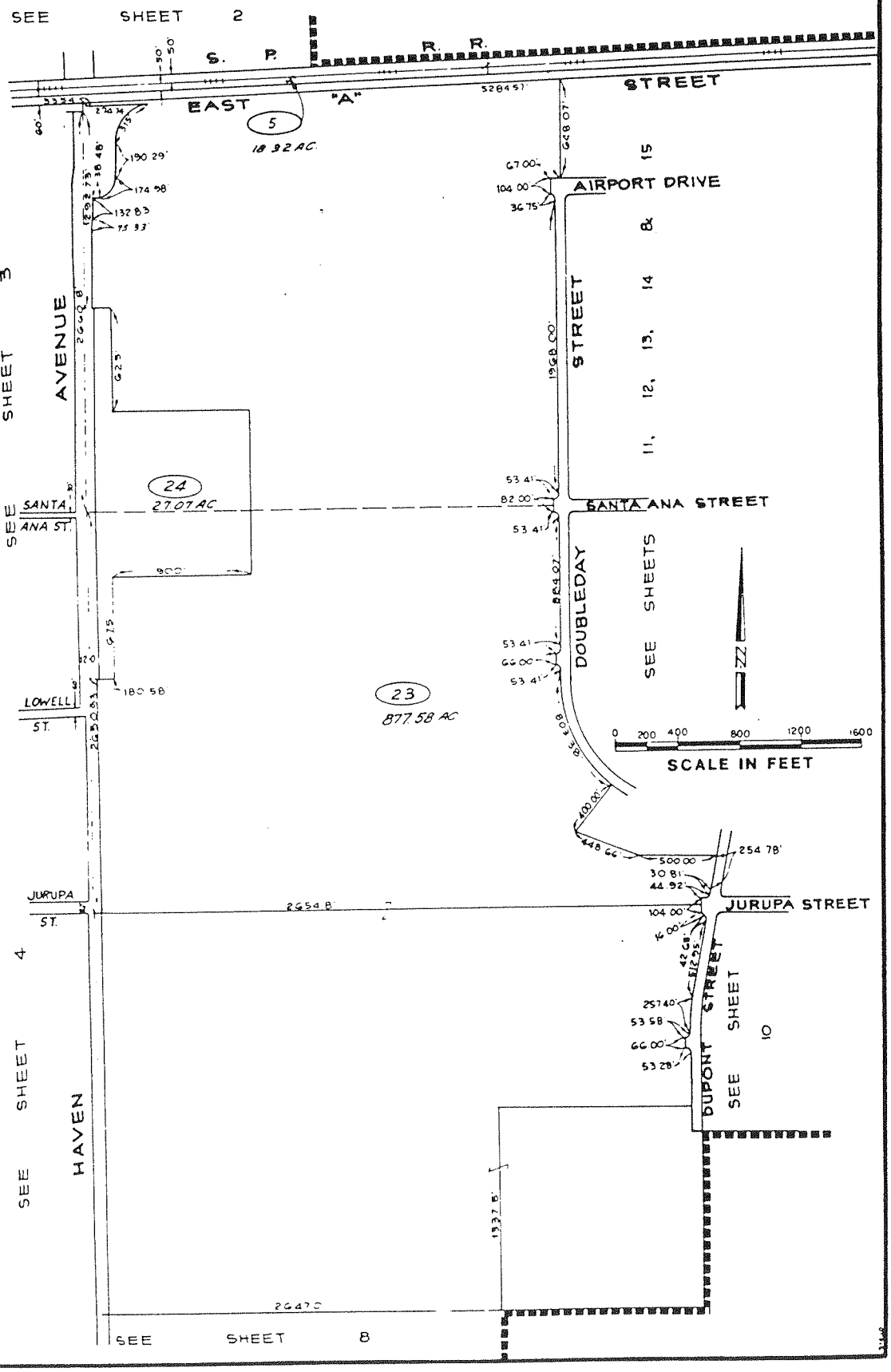
SHEET 8 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



SHEET 9 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



SHEET 10 OF 19 SHEETS

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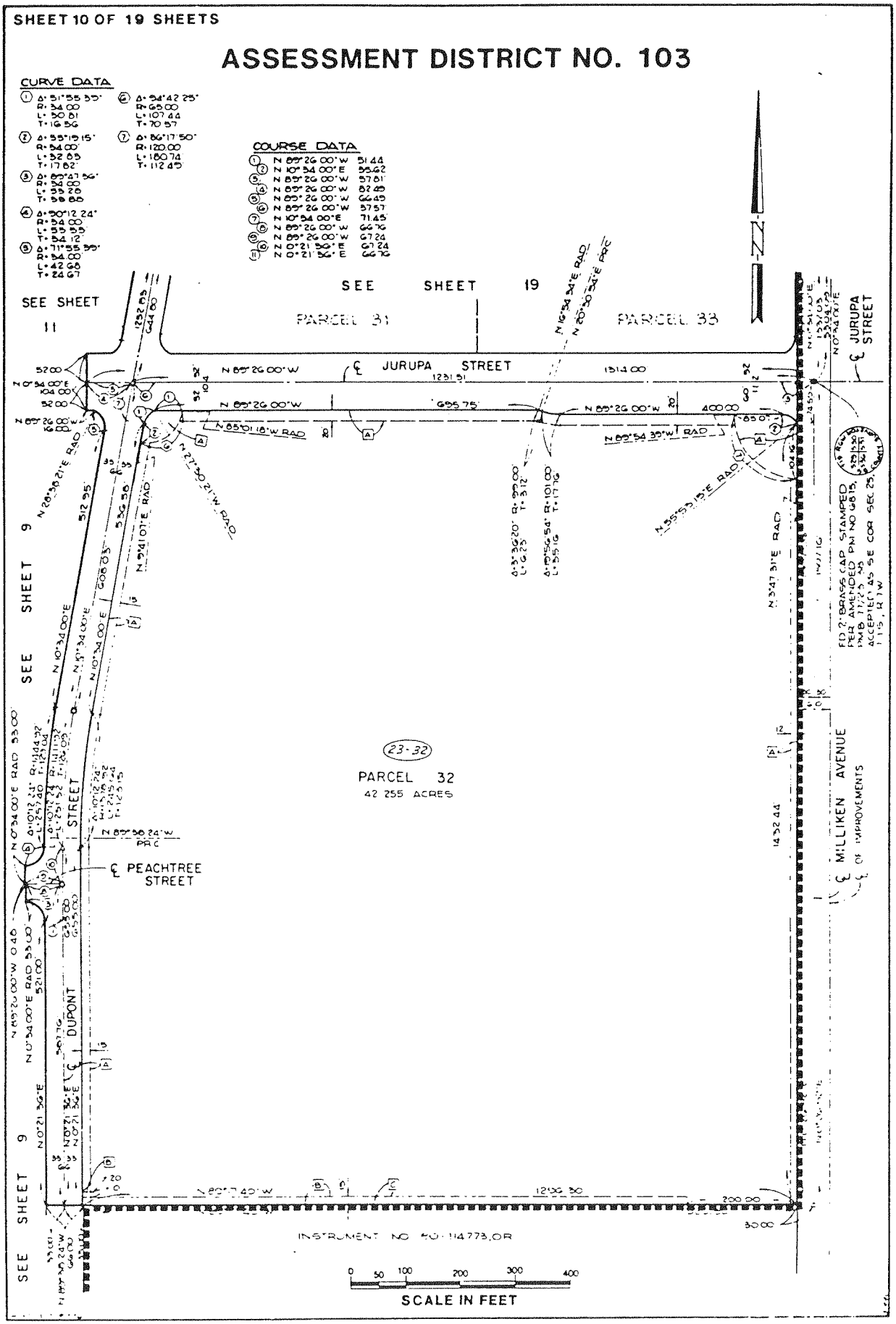

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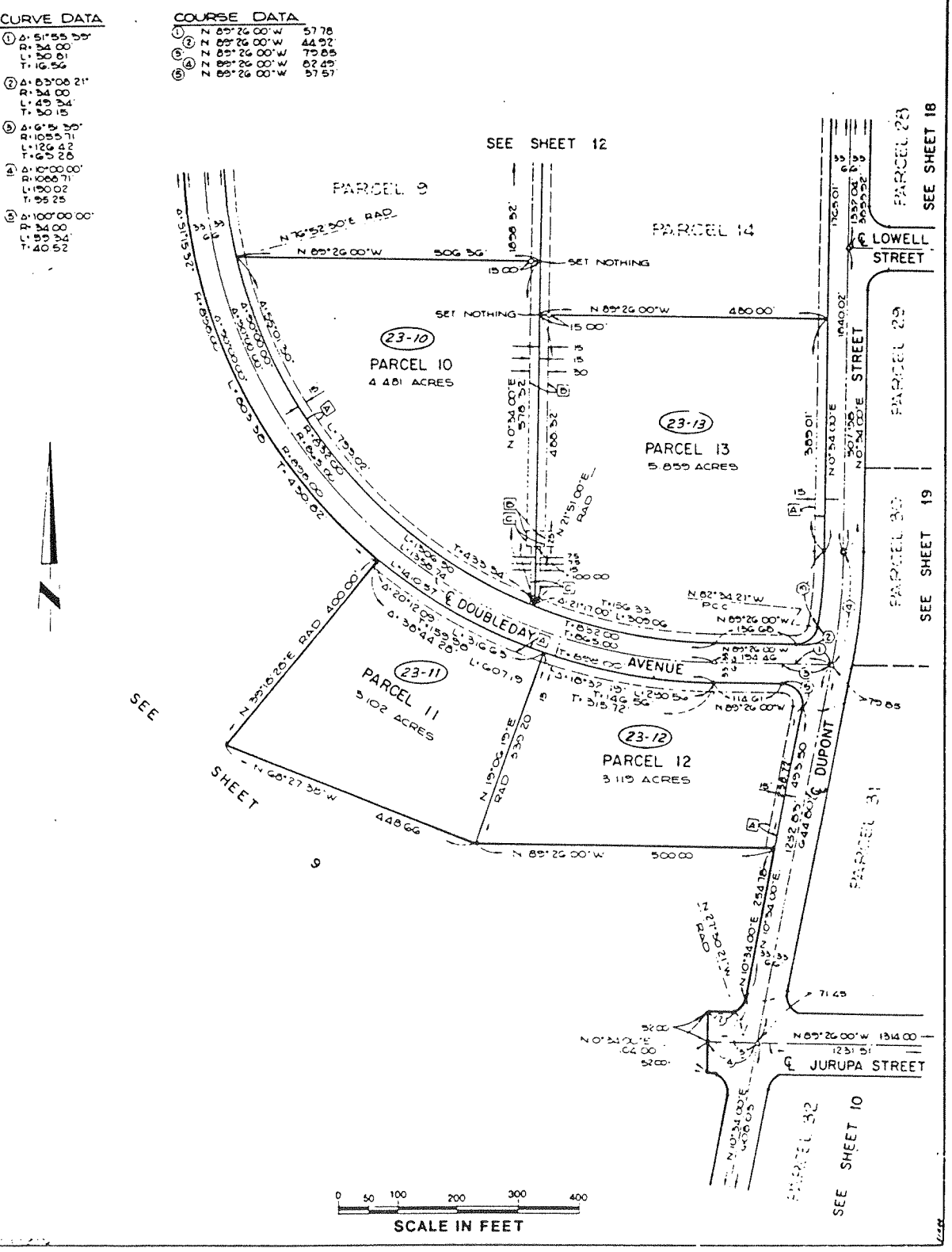
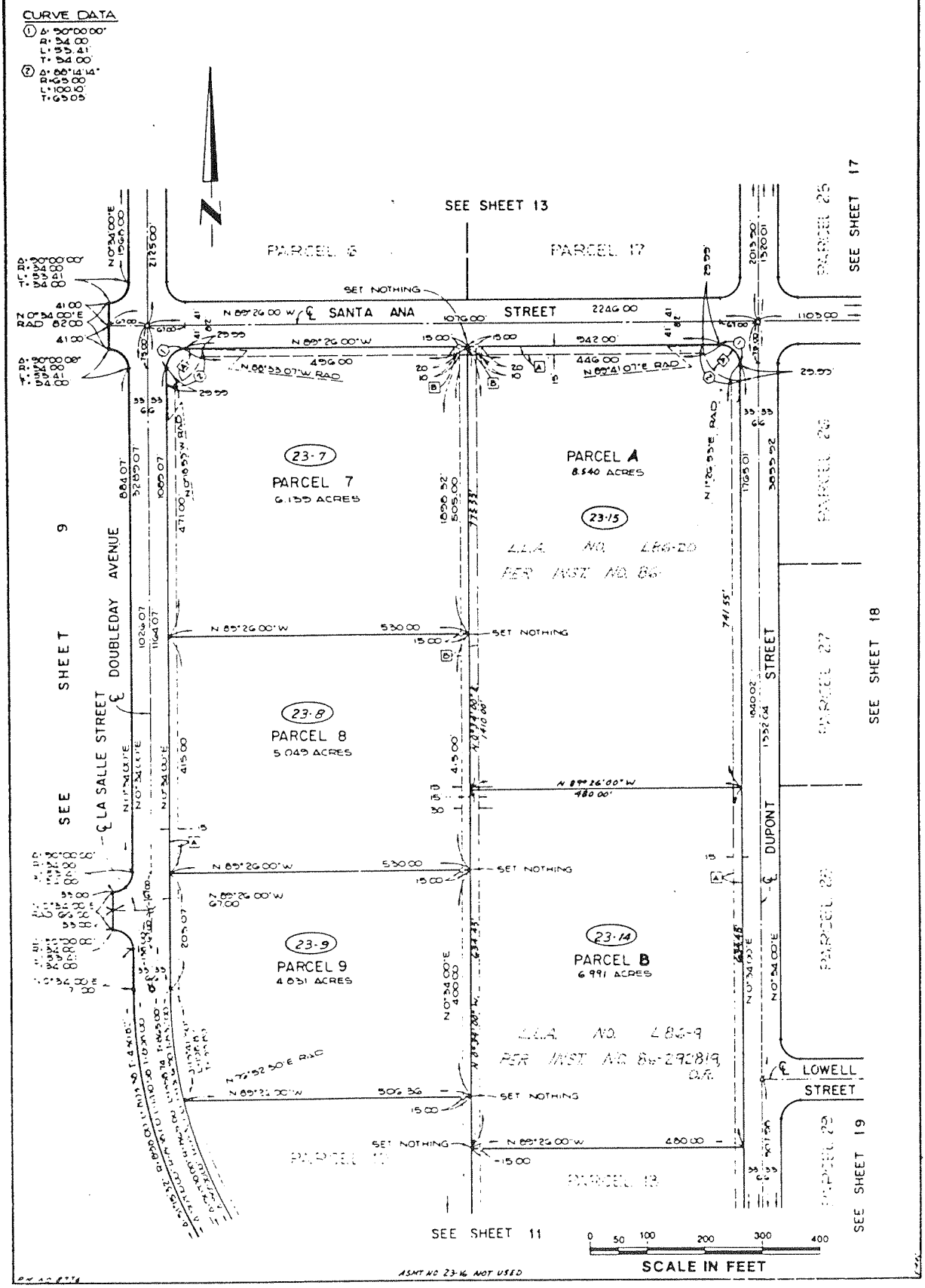


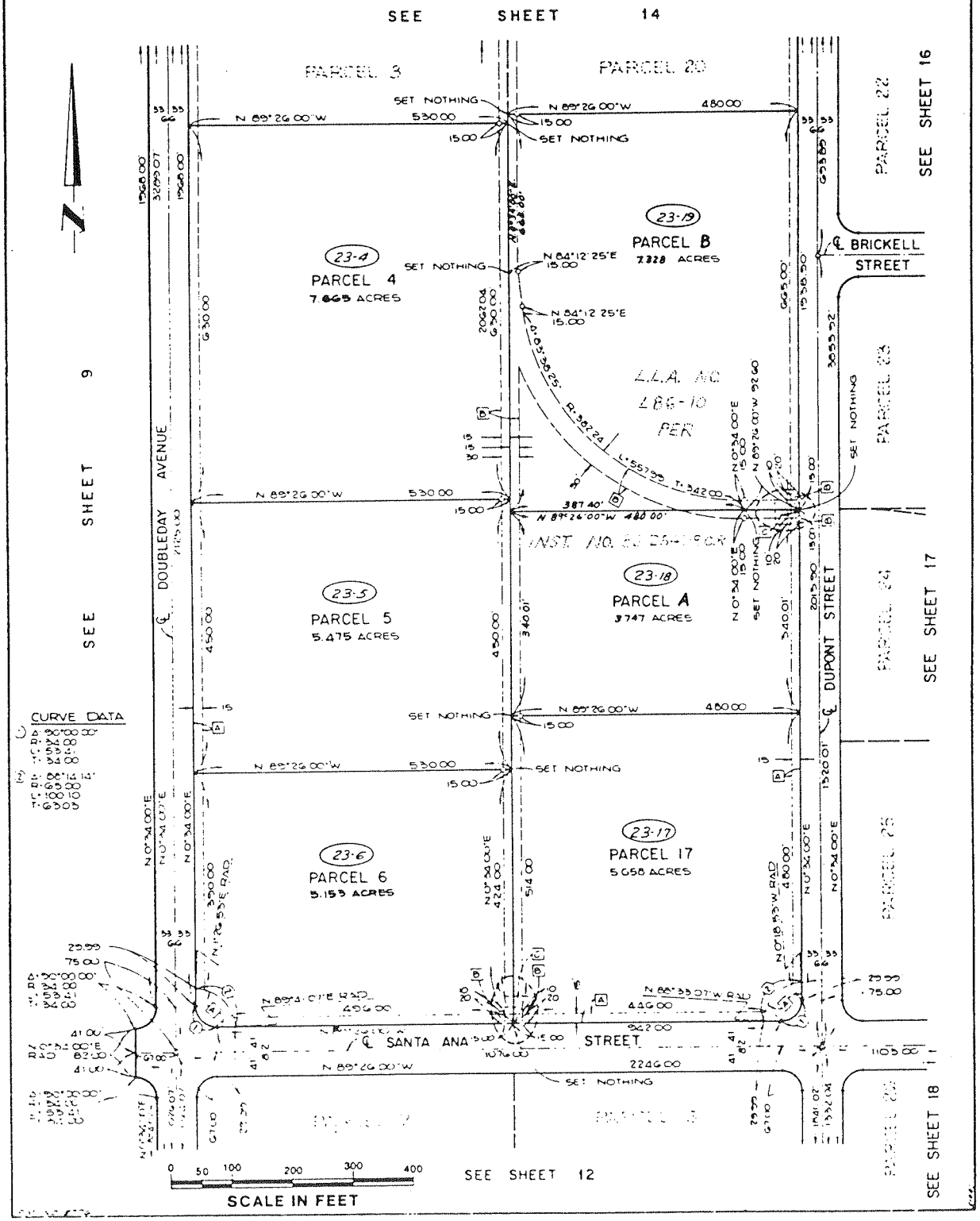
SHEET 12 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103

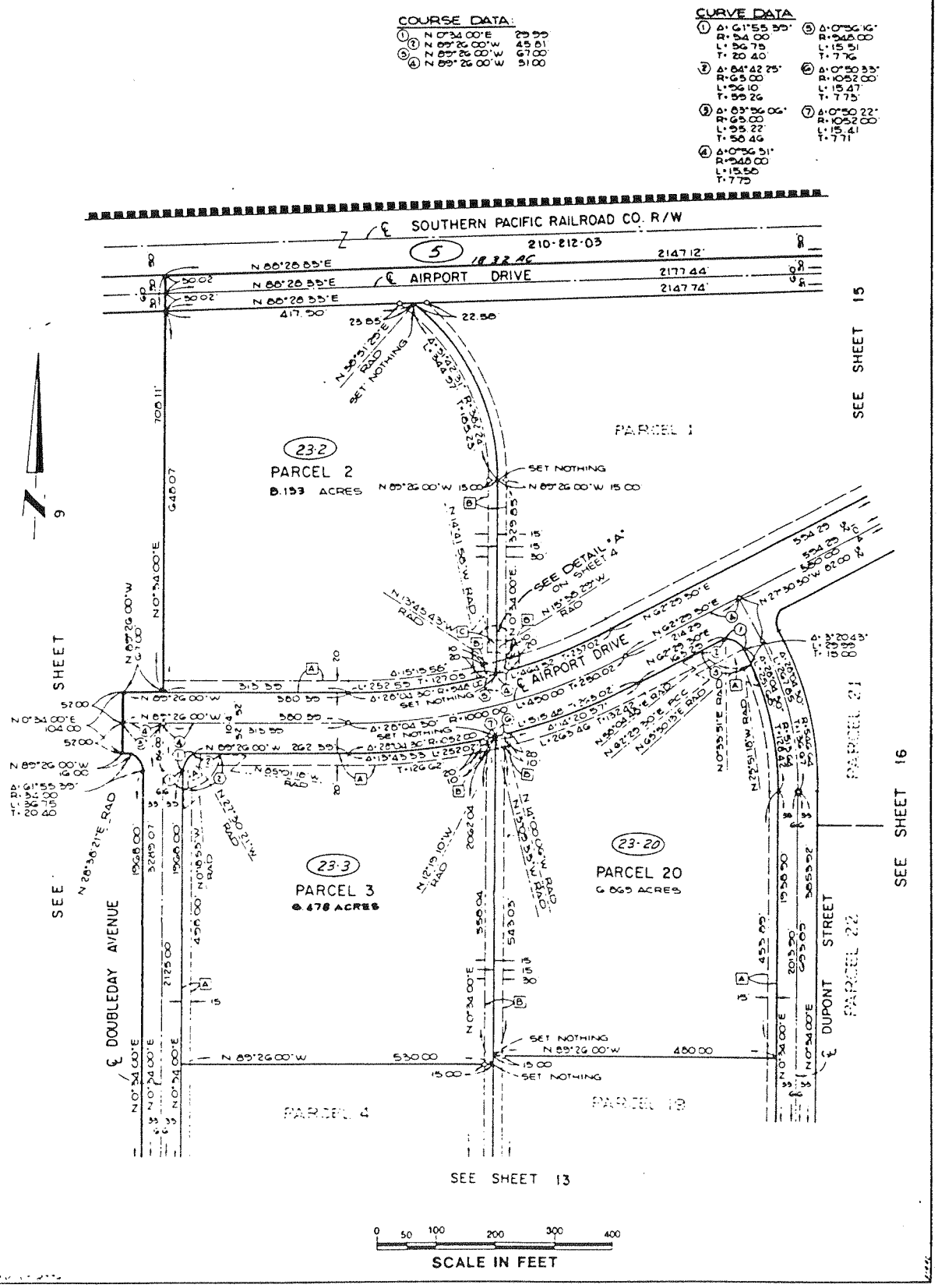


SHEET 13 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103

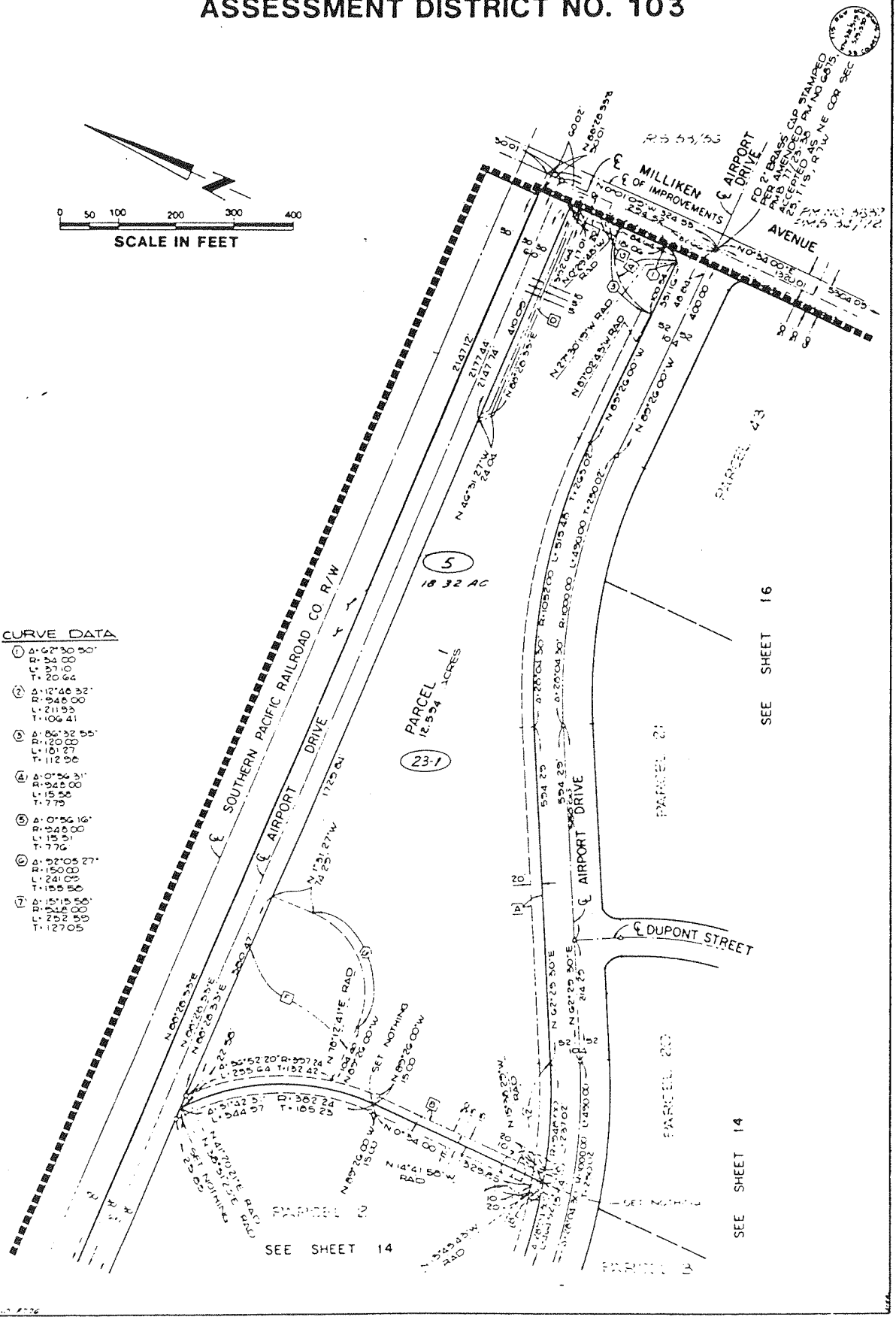


ASSESSMENT DISTRICT NO. 103



SHEET 15 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



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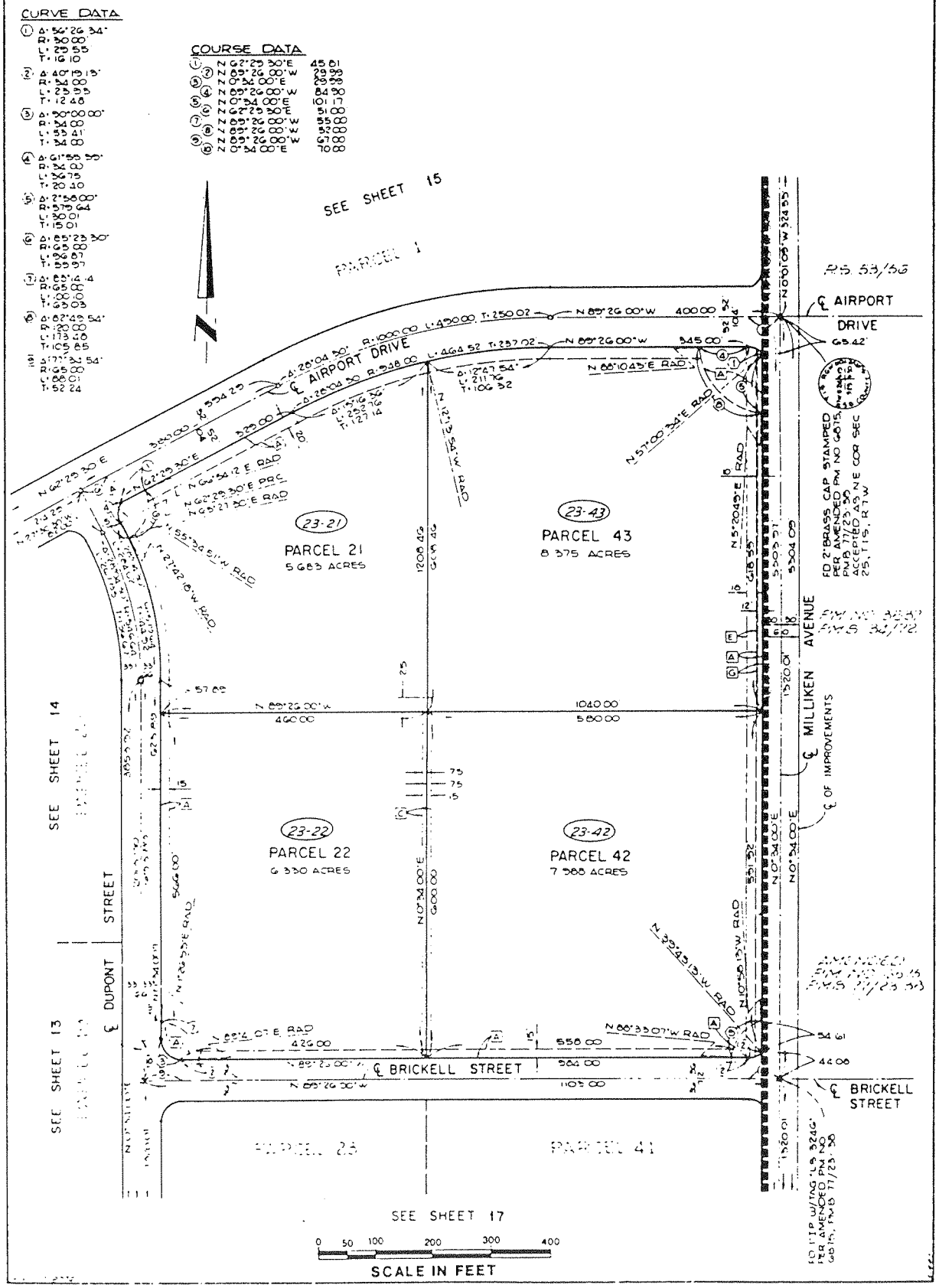


ASSESSMENT DISTRICT NO. 103

CURVE DATA

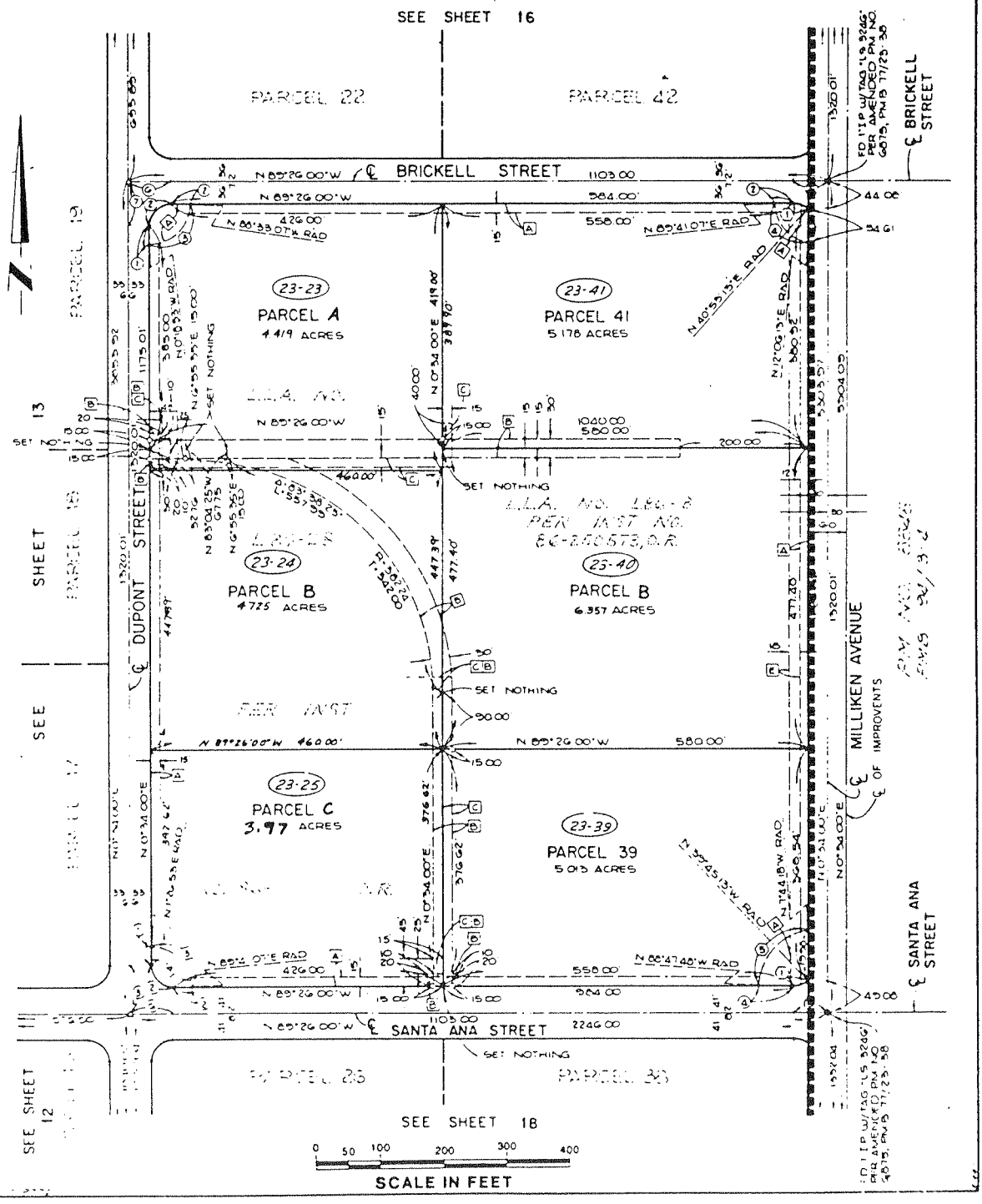
① Δ: 40°19.15'
R: 34.00
L: 23.95
T: 12.48

② Δ: 90°00.00'
R: 34.00
L: 53.41
T: 34.00

③ Δ: 88°14.14'
R: 65.00
L: 100.06
T: 63.05

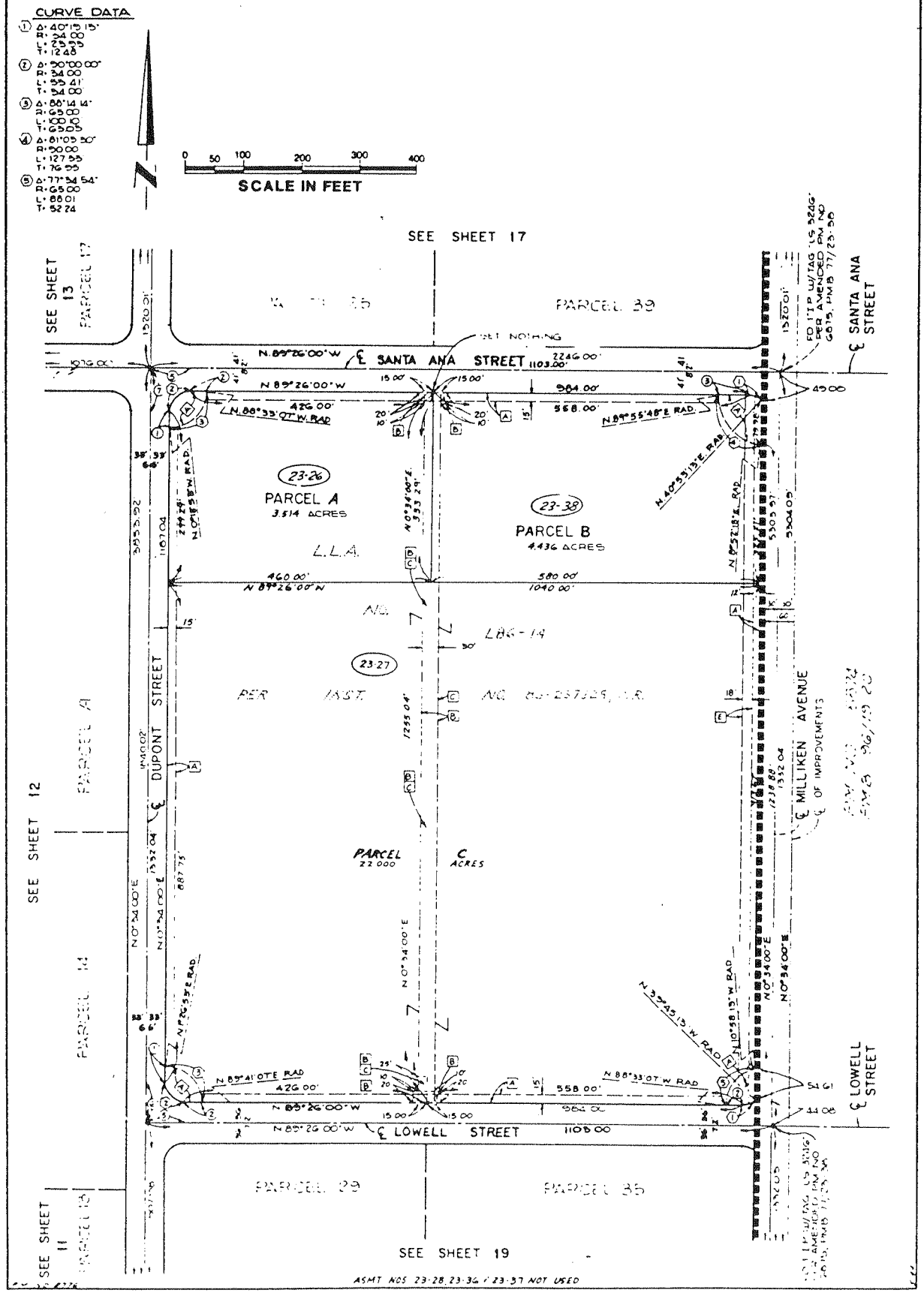
④ Δ: 77°34.54'
R: 65.00
L: 88.01
T: 52.24

⑤ Δ: 81°03.30'
R: 90.00
L: 127.33
T: 76.55



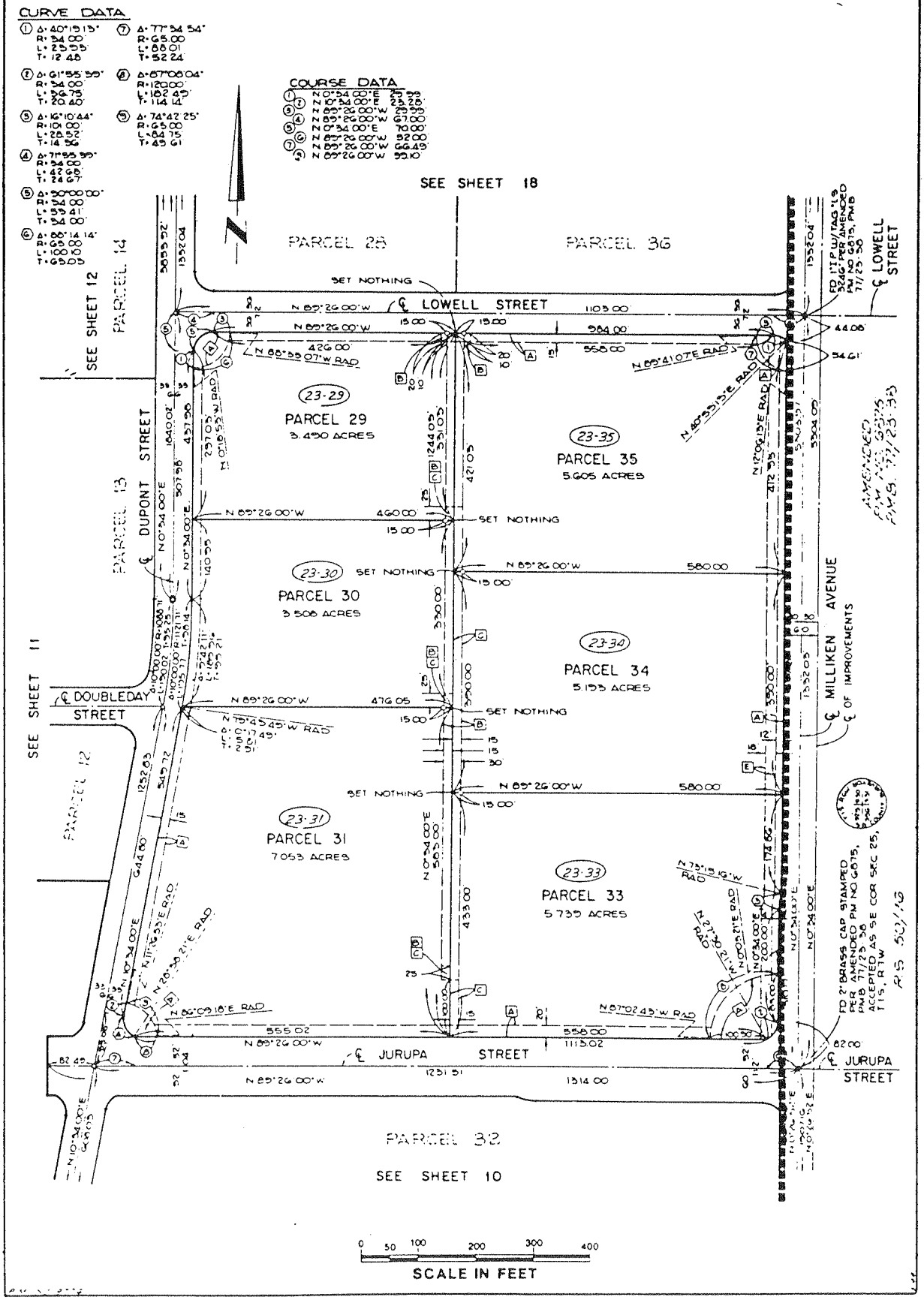
SHEET 18 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



SHEET 19 OF 19 SHEETS

ASSESSMENT DISTRICT NO. 103



EXHIBITS B AND B-1
TO
COMBINED ENGINEER'S REPORT
ASSESSMENT DISTRICT NO. 103
City of Ontario

The Assessment Roll and Debt Limitation Report follows.

EXHIBIT B - ASSESSMENT ROLL
ASSESSMENT DISTRICT NO 103
CITY OF ONTARIO
HAVEN AVENUE CORRIDOR IMPROVEMENTS

ASMT NUMBER	ASSESSOR'S NUMBER	OWNER'S NAME & ADDRESS	AMENDED PRELIMINARY ASSESSMENT	CONFIRMED ASSESSMENT
1	210-194-12	ROADWAY EXPRESS, INC P.O. BOX 471 AKRON, OH 44309	$32,224.70	
2	210-194-09	ROMAN CATHOLIC BISHOP OF SAN BERNARDINO 1450 N "D" STREET SAN BERNARDINO, CA 92405	$33,694.60	
3	210-194-06	CUCAMONGA SCHOOL DISTRICT 8776 ARCHIBALD AVE RANCHO CUCAMONGA, CA 91730		
4	210-194-10 210-194-11 210-194-14	CENTRELAKE BUSINESS PARK ASSOC C/O CLIFTON CHANG P.O. BOX 6011 ORANGE, CA 92613	$1,007,887.68	
5	210-194-02 210-194-03 210-212-02 210-212-03	SOUTHERN PACIFIC TRANS CO SPTC ONE MARKET PLAZA ROOM 455 SAN FRANCISCO, CA 94105	0.00	
6	210-212-21 210-212-22 210-212-23	INTERNATIONAL PERMALITE INC 300 N HAVEN AVE ONTARIO, CA 91761	$768,763.91	
7	211-202-02 211-202-04 211-202-16 211-202-15 211-202-13 113-511-02 113-511-01 211-202-09 211-202-11 211-212-01 211-212-02 211-212-03 211-212-04 211-212-08 211-212-07 211-212-06 211-212-05	CITY OF LOS ANGELES DEPARTMENT OF AIRPORTS #1 WORLD WAY LOS ANGELES, CA 90009	$256,054.88	

		OWNER'S NAME & ADDRESS	AMENDED PRELIMINARY ASSESSMENT	CONFIRMED ASSESSMENT
	3-03	VALACAL COMPANY	$1,152,294.63	
211	3-04	GREENWICH OFFICE PARK 5		
	13-06	51 WEAVER STREET		
	11-213-05	GREENWICH, CT 06836-3160		
	211-213-09	HOFER, PAUL	$427,061.97	
	211-213-10	11248 S TURNER AVE		
		ONTARIO, CA 91761		
10	211-263-11	ONTARIO AIRPORT DISTRIBUTION C	$505,984.21	
	211-263-13	#6 UPPER NEWPORT PLAZA		
	211-263-15	NEWPORT BEACH, CA 92660		
	211-263-17			
	211-263-09			
	211-263-12			
11	211-263-16	HAVEN PROPERTIES LTD	$548,987.16	
		P.O. BOX 552		
		ALTA LOMA, CA 91701		
12	211-263-08	CUCAMONGA VINTNERS	$2,593,114.46	
	211-263-04	846 W. FOOTHILL BLVD. STE L		
	211-263-05	UPLAND, CA 91786		
	211-263-06			
	211-272-02			
13	211-263-01	UNION PACIFIC RAILROAD (LA & S	0.00	
	211-272-01	5500 FERGUSON DRIVE		
	211-291-01	LOS ANGELES, CA 90022		
	218-082-01			
14	211-273-12	HUNT INDUSTRIES	$3,954,296.79	
	211-273-15	2400 THANKSGIVING TOWER		
	211-273-11	DALLAS, TX 75201		
	211-273-08			
	211-273-07			
	218-061-10			
	211-271-01			
	211-271-02			
	211-271-03			
	211-262-01			
	218-051-37			

AMENDED

SMT UMBER	ASSESSOR'S NUMBER	OWNER'S NAME & ADDRESS	PRELIMINARY ASSESSMENT	CONFIRMED ASSESSMENT
5	211-273-10 218-051-15 218-051-36	SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT 825 E. THIRD STREET SAN BERNARDINO, CA 92415-0835	0.00	
6	218-071-48 218-071-47 218-081-05	BURSTON, HERSCHEL 3260 FRYMAN ROAD STUDIO CITY, CA 91604	$369,904.91	
7	218-071-04	HAVEN-SIXTY LIMITED P.O. BOX 552 ALTA LOMA, CA 91701	$733,554.14	
8	218-071-05 218-071-23 218-071-24 218-071-41 218-071-42 218-071-30	K & K PROPERTIES/CHO S KAM 973 EMERSON STREET UPLAND, CA 91786	$785,115.50	
9	218-071-35 218-071-36	K & K PROPERTIES 973 EMERSON STREET UPLAND, CA 91786	$56,194.61	
0	218-081-06 218-071-45	SOUTHERN CALIFORNIA EDISON 1351 E FRANCIS STREET ONTARIO, CA 91761		
1	211-301-01	DE GROOT, PETE P.O. BOX 668 DOWNEY, CA 90241	$1,315,426.18	
2	211-291-12 211-291-13 211-291-17 211-291-16 211-291-15 211-291-14 211-291-07 211-291-06 211-291-05 211-291-04 211-291-03 211-291-02	SAN BERNARDINO COUNTY DUMP 825 E THIRD STREET SAN BERNARDINO, CA 92415-0835	$145,857.30	

ASMT NUMBER	ASSESSOR'S NUMBER	OWNER'S NAME & ADDRESS	AMENDED PRELIMINARY ASSESSMENT	CONFIRMED ASSESSMENT
23	211-221-26 211-281-08 211-281-09	VINA VISTA VENTURE- NEW JOINT VENTURE 10889 WILSHIRE BLVD STE 960 LOS ANGELES, CA 90024	$4,662,151.80	
23-1	211-221-06	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$110,614.61	
23-2	211-221-07	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$71,429.43	
23-3	211-221-08	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$56,932.70	
23-4	211-221-09	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$67,330.07	
23-5	211-221-10	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$48,146.79	
23-6	211-221-11	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$45,247.44	
23-7	211-231-01	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$53,945.49	
23-8	211-231-02	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$44,368.85	
23-9	211-231-03	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$42,435.95	
23-10	211-231-04	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE	$39,360.88	

ASMT NUMBER	ASSESSOR'S NUMBER	OWNER'S NAME & ADDRESS	PRELIMINARY ASSESSMENT	CONFIRMED ASSESSMENT
23-11	211-231-05	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$27,236.32	
23-12	211-231-06	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$27,412.04	
23-13	211-231-07	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$51,485.43	
23-14	PARCEL 5 LLA NO L86-9 INST #86-292819	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$61,413.51	
23-15	PARCEL A LLA NO L86-20 INST #86-	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$75,031.67	
23-17	211-221-12	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$49,728.25	
23-18	PARCEL A LLA NO L86-10 INST #86-254119	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$32,947.16	
23-19	PARCEL B LLA NO L86-10 INST #86-254119	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$64,400.72	
23-20	211-221-15	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$60,359.20	
23-21	211-221-16	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$49,903.97	
23-22	211-221-17	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$55,614.81	

ASMT NUMBER	ASSESSOR'S NUMBER	OWNER'S NAME & ADDRESS	AMENDED PRELIMINARY ASSESSMENT	CONFIRMED ASSESSMENT
23-23	PARCEL A LLA NO L86-28 INST #86-	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$38,833.72	
23-24	PARCEL B LLA NO L86-28 INST #86-	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$41,557.35	
23-25	PARCEL C LLA NO L86-28 INST #86-	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$34,880.06	
23-26	PARCEL A LLA NO L86-14 INST #86-257329	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$30,838.54	
23-27	PARCEL C LLA NO L86-14 INST #86-257329	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$153,290.02	
23-29	211-231-14	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$30,662.83	
23-30	211-231-15	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$30,838.54	
23-31	211-231-16	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$61,940.67	
23-32	211-281-07	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$371,292.56	
23-33	211-231-17	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$50,431.12	
23-34	211-231-18	ONTARIO INDUSTRIAL PARTNERS C/O THE LUSK COMPANY 17550 GILLETTE AVENUE IRVINE, CA 92714	$45,598.87	

EXHIBIT B1 - DEBT LIMITATION REPORT
ASSESSMENT DISTRICT NO 103
CITY OF ONTARIO
HAVEN AVENUE CORRIDOR IMPROVEMENTS

SMT UMBER	ASSESSOR PARCEL NUMBER	COUNTY ASSESSOR LAND VALUE	COUNTY ASSESSOR IMPROVED VALUE	TRUE VALUE OF PARCEL (1931 ACT)	1/2 TRUE OF PARCEL (1931 ACT)	UNPAID SPECIAL ASSESSMENTS	PRELIMINARILY APPROVED ASSESSMENT
	210-194-12	79,172.00	135,596.00	214,768.00	107,384.00	0.00	32,224.70
	210-194-09	23,877.00	55,362.00	79,239.00	39,619.50	0.00	33,694.60
	210-194-06	0.00	0.00	0.00	0.00	0.00	0.00
	210-194-10	7,075,761.00	0.00	7,075,761.00	3,537,880.50	0.00	1,007,887.68
	210-194-11						
	210-194-14						
	210-194-02	0.00	0.00	0.00	0.00	0.00	0.00
	210-194-03						
	210-212-02						
	210-212-03						
	210-212-21	3,693,420.00	2,443,680.00	6,137,100.00	3,068,550.00	0.00	768,765.91
	210-212-22						
	210-212-23						
	211-202-02	0.00	0.00	0.00	0.00	0.00	256,054.88
	211-202-04						
	211-202-16						
	211-202-15						
	211-202-13						
	113-511-02						
	113-511-01						
	211-202-09						
	211-202-11						
	211-212-01						
	211-212-02						
	211-212-03						
	211-212-04						
	211-212-08						
	211-212-07						
	211-212-06						
	211-212-05						
	211-213-03	5,031,864.00	0.00	5,031,864.00	2,515,932.00	0.00	1,152,294.63
	211-213-04						
	211-213-06						
	211-213-05						

SMT UMBER	ASSESSOR PARCEL NUMBER	COUNTY ASSESSOR LAND VALUE	COUNTY ASSESSOR IMPROVED VALUE	TRUE VALUE OF PARCEL (1931 ACT)	1/2 TRUE OF PARCEL (1931 ACT)	UNPAID SPECIAL ASSESSMENTS	PRELIMINARILY APPROVED ASSESSMENT
	211-213-09 211-213-10 211-213-11 211-213-12	325,834.00	20,627.00	346,461.00	173,230.50	0.00	427,061.97
U	211-263-11 211-263-13 211-263-15 211-263-17 211-263-09 211-263-12	4,970,868.00	0.00	4,970,868.00	2,485,434.00	0.00	505,984.21
1	211-263-18	204,985.00	0.00	204,985.00	102,492.50	0.00	548,987.16
2	211-263-08 211-263-04 211-263-05 211-263-06 211-272-02	586,688.00	11,960.00	598,648.00	299,324.00	0.00	2,593,114.46
3	211-263-01 211-272-01 211-291-01 218-082-01	0.00	0.00	0.00	0.00	0.00	0.00
4	211-273-12 211-273-15 211-273-11 211-273-06 211-273-07 218-061-10 211-271-01 211-271-02 211-271-03 211-262-01 218-051-37	5,866,960.00	8,133.00	5,875,093.00	2,937,546.50	0.00	3,954,296.79
5	211-273-10 218-051-15 218-051-36	0.00	0.00	0.00	0.00	0.00	0.00
6	218-071-48 218-071-47 218-081-05	141,684.00	0.00	141,684.00	70,842.00	0.00	369,904.91
7	218-071-04	826,502.00	0.00	826,502.00	413,251.00	0.00	733,554.14

SMT UMBER	ASSESSOR PARCEL NUMBER	COUNTY ASSESSOR LAND VALUE	COUNTY ASSESSOR IMPROVED VALUE	TRUE VALUE OF PARCEL (1931 ACT)	1/2 TRUE OF PARCEL (1931 ACT)	UNPAID SPECIAL ASSESSMENTS	PRELIMINARILY APPROVED ASSESSMENT
8	218-071-05 218-071-23 218-071-22 218-071-41 218-071-42 218-071-30	357,714.00	416,017.00	473,731.00	236,865.50	0.00	785,115.50
9	218-071-35 218-071-36	90,203.00	0.00	90,203.00	45,101.50	0.00	56,194.61
0	218-081-06 218-071-45	0.00	0.00	0.00	0.00	0.00	0.00
1	211-301-01	283,612.00	9,271.00	292,883.00	146,441.50	0.00	1,515,426.18
2	211-291-12 211-291-13 211-291-17 211-291-16 211-291-15 211-291-14 211-291-07 211-291-06 211-291-05 211-291-04 211-291-03 211-291-02	0.00	0.00	0.00	0.00	0.00	143,857.30
3	211-221-26 211-281-08 211-281-09	3,081,057.00	0.00	3,081,057.00	1,540,528.50	0.00	4,662,151.60
3-1	211-221-06	815,000.00	0.00	815,000.00	407,500.00	0.00	110,614.61
3-2	211-221-07	526,000.00	0.00	526,000.00	263,000.00	0.00	71,429.45
3-3	211-221-08	419,500.00	0.00	419,500.00	209,750.00	0.00	56,932.70
3-4	211-221-09	496,500.00	0.00	496,500.00	248,250.00	0.00	67,300.07
3-5	211-221-10	354,700.00	0.00	354,700.00	177,350.00	0.00	48,146.79
3-6	211-221-11	333,400.00	0.00	333,400.00	166,700.00	0.00	45,247.44
3-7	211-231-01	397,400.00	0.00	397,400.00	198,700.00	0.00	53,945.49
3-8	211-231-02	326,900.00	0.00	326,900.00	163,450.00	0.00	44,368.85

ASMT NUMBER	ASSESSOR PARCEL NUMBER	COUNTY ASSESSOR LAND VALUE	COUNTY ASSESSOR IMPROVED VALUE	TRUE VALUE OF PARCEL (1931 ACT)	1/2 TRUE OF PARCEL (1931 ACT)	UNPAID SPECIAL ASSESSMENTS	PRELIMINARILY APPROVED ASSESSMENT
23-9	211-231-03	132,600.00	0.00	132,600.00	66,300.00	0.00	42,435.95
23-10	211-231-04	290,000.00	0.00	290,000.00	145,000.00	0.00	39,360.88
23-11	211-231-05	200,700.00	0.00	200,700.00	100,350.00	0.00	27,236.32
23-12	211-231-06	202,000.00	0.00	202,000.00	101,000.00	0.00	27,412.04
23-13	211-231-07	379,300.00	0.00	379,300.00	189,650.00	0.00	51,485.43
23-14	PARCEL B LLA NO L86-9 INST #86-292819	452,340.00	0.00	452,340.00	226,170.00	0.00	61,413.51
23-15	PARCEL A LLA NO L86-20 INST # 86-	552,860.00	0.00	552,860.00	276,430.00	0.00	75,031.67
23-17	211-221-12	333,400.00	0.00	333,400.00	166,700.00	0.00	49,728.25
23-18	PARCEL A LLA NO L86-10 INST # 86-254119	242,532.00	0.00	242,532.00	121,266.00	0.00	32,947.16
23-19	PARCEL B LLA NO L86-10 INST # 86-254119	474,068.00	0.00	474,068.00	237,034.00	0.00	64,400.72
23-20	211-221-15	444,700.00	0.00	444,700.00	222,350.00	0.00	60,359.20
23-21	211-221-16	367,700.00	0.00	367,700.00	183,850.00	0.00	49,903.97
23-22	211-221-17	409,700.00	0.00	409,700.00	204,850.00	0.00	55,614.81
23-23	PARCEL A LLA NO L86-28 INST # 86-	289,892.00	0.00	289,892.00	144,946.00	0.00	38,833.72
23-24	PARCEL B LLA NO L86-28 INST # 86-	302,496.00	0.00	302,496.00	151,248.00	0.00	41,557.35
23-25	PARCEL C LLA NO L86-28 INST # 86-	252,080.00	0.00	252,080.00	126,040.00	0.00	34,880.06
23-26	PARCEL A LLA NO L86-14 INST # 86-257329	232,092.00	0.00	232,092.00	116,046.00	0.00	30,838.54

SMT UMBER	ASSESSOR PARCEL NUMBER	COUNTY ASSESSOR LAND VALUE	COUNTY ASSESSOR IMPROVED VALUE	TRUE VALUE OF PARCEL (1931 ACT)	1/2 TRUE OF PARCEL (1931 ACT)	UNPAID SPECIAL ASSESSMENTS	PRELIMINARILY APPROVED ASSESSMENT
3-27	PARCEL C LLA NO L86-14 INST # 86-257329	1,431,234.00	0.00	1,431,234.00	715,617.00	0.00	193,290.02
3-29	211-231-14	225,900.00	0.00	225,900.00	112,950.00	0.00	30,662.83
3-30	211-231-15	227,200.00	0.00	227,200.00	113,600.00	0.00	30,838.54
3-31	211-231-16	456,300.00	0.00	456,300.00	228,150.00	0.00	61,940.67
3-32	211-281-07	2,735,500.00	0.00	2,735,500.00	1,367,750.00	0.00	371,292.56
3-33	211-231-17	371,600.00	0.00	371,600.00	185,800.00	0.00	50,431.12
3-34	211-231-18	336,000.00	0.00	336,000.00	168,000.00	0.00	45,598.87
3-35	211-231-19	363,100.00	0.00	363,100.00	181,550.00	0.00	49,288.96
3-38	PARCEL B LLA NO L86-14 INST # 86-257329	270,774.00	0.00	270,774.00	135,387.00	0.00	39,009.44
3-39	211-221-21	324,300.00	0.00	324,300.00	162,150.00	0.00	44,017.41
3-40	PARCEL B LLA NO L86-8 INST # 86-250573	415,932.00	0.00	415,932.00	207,966.00	0.00	55,878.39
3-41	211-221-23	335,300.00	0.00	335,300.00	167,650.00	0.00	45,511.01
3-42	211-221-24	517,200.00	0.00	517,200.00	258,600.00	0.00	70,199.42
3-43	211-221-25	542,400.00	0.00	542,400.00	271,200.00	0.00	73,625.93
4	211-221-04	0.00	0.00	0.00	0.00	0.00	109,420.42
ISTRICT TOTALS		50,420,801.00	2,800,646.00	53,221,447.00	26,610,723.50	0.00	22,099,000.00

APPENDIX C:
MASTER PLAN OF
WATER AND SEWER

HAVEN GATEWAY CENTRE

Ontario, California

MASTER PLANS OF

WATER, SEWER AND DRAINAGE

FOR THE

HAVEN GATEWAY CENTRE

ONTARIO, CALIFORNIA

PREPARED BY

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INTRODUCTION

1.0

HAVEN GATEWAY CENTRE AT ONTARIO
MASTER PLAN OF WATER AND SEWER

1.0 INTRODUCTION

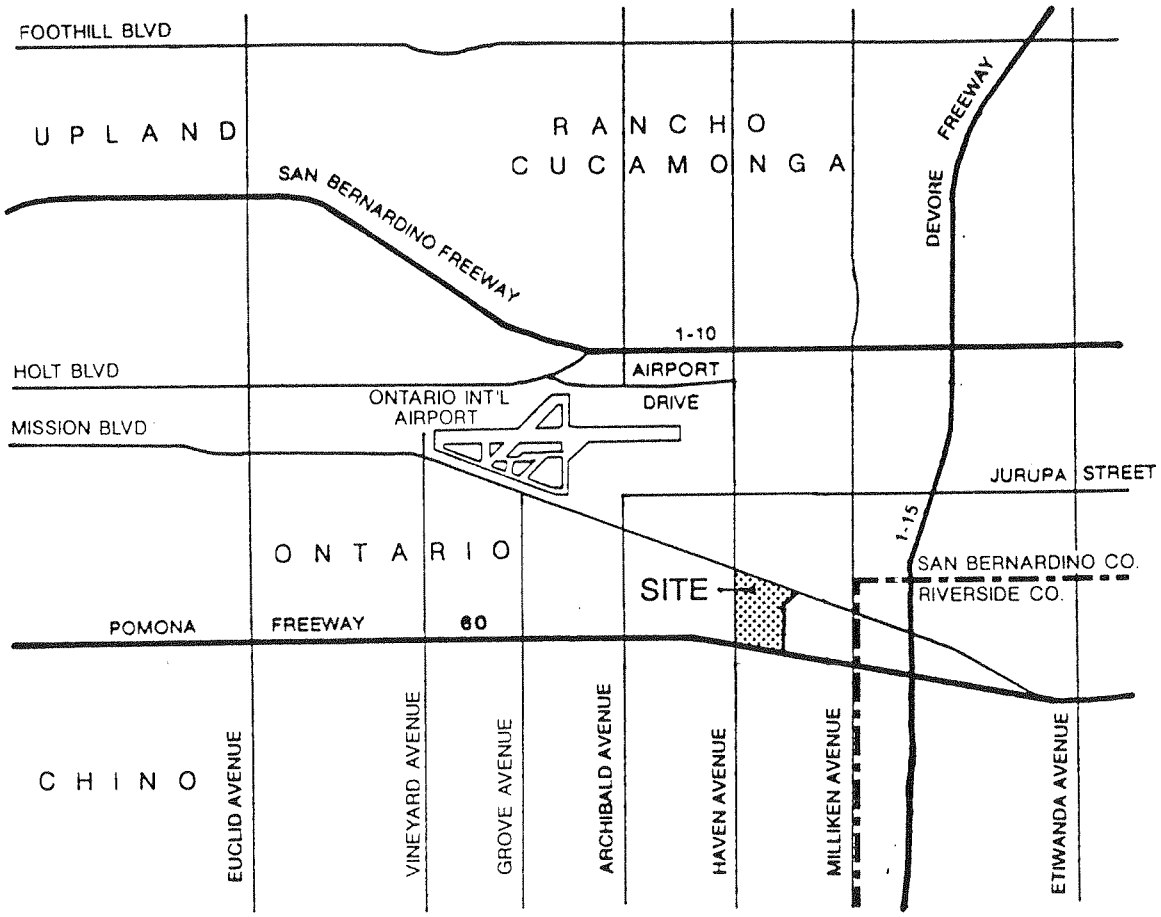
This report was prepared for the Haven Gateway Partner's development known as the Haven Gateway Centre. Its purpose was to establish some guidelines for design and construction of sewer and water systems and support the Specific Plan submitted to the City of Ontario in October 1990. These Master Plans take into consideration the existing and future regional water and sewer facilities.

1.1 Project Description

The Haven Gateway Centre at Ontario is a major master planned, highly controlled, Business Park, Industrial, Corporate Manufacturing, Research and Development, Corporate and General Office, Airport-related facilities, and related service Commercial and Retail. Development of this project is scheduled to occur over a ten year period of time.

1.2 Location

The site is located in the eastern portion of the City of Ontario. It is bounded by the Pomona Freeway (I-60) to the south, Haven Avenue to the west, Mission Boulevard and the Union Pacific Railroad on the north and Doubleday Avenue on the East. Major freeways servicing the project include the San Bernardino Freeway (I-10) to the north, Pomona Freeway (SR60) to the south and the Devore Freeway (I-15) to the east (see Exhibits 3 and 4).



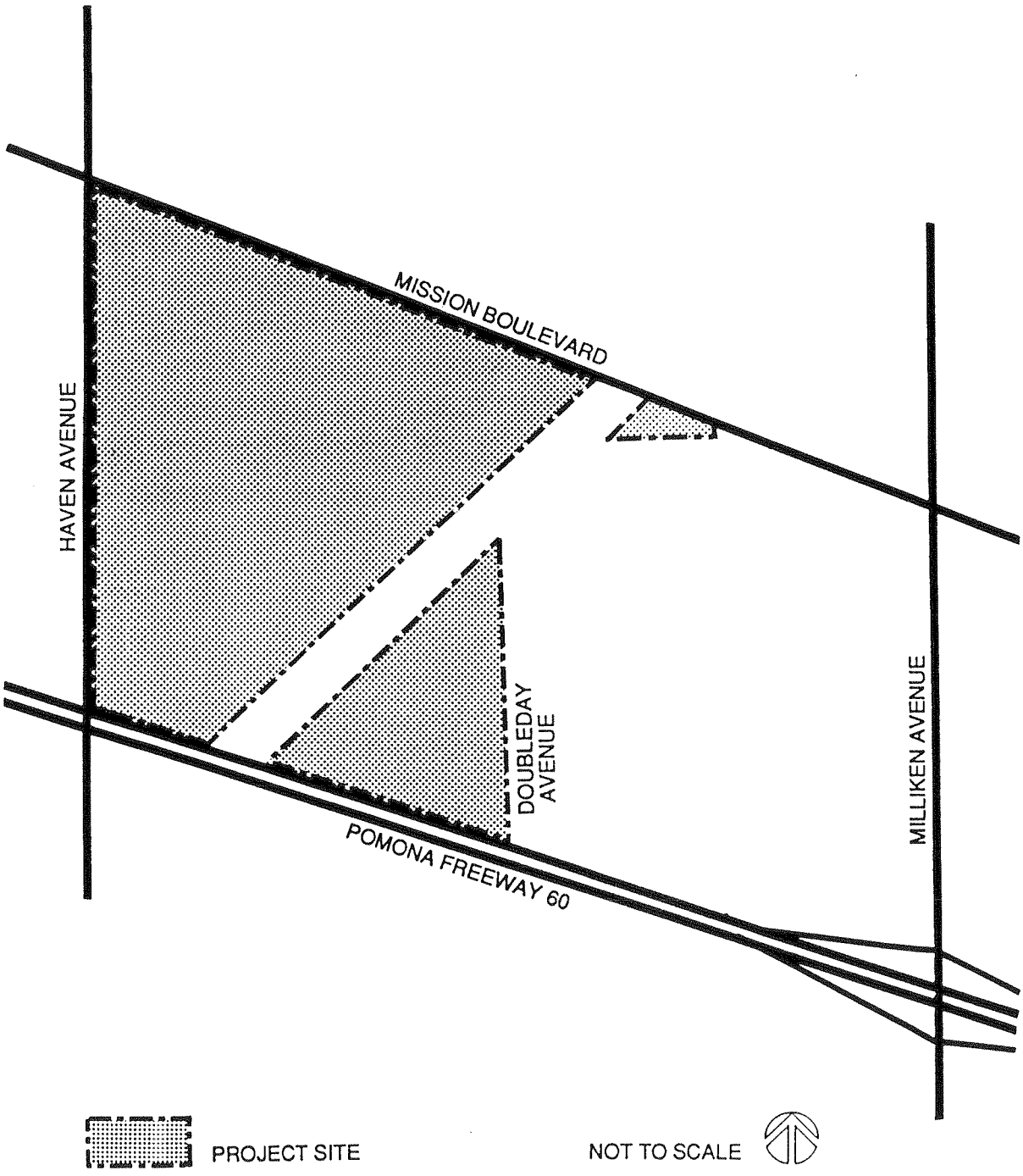
NOT TO SCALE

HAVEN GATEWAY CENTRE

Ontario, California

AREA CONTEXT

EXHIBIT 3



HAVEN GATEWAY CENTRE

Ontario, California

PROJECT SITE

EXHIBIT 4

LAND USE
2.0

2.0 LAND USE

The proposed land use for the Haven Gateway Centre will be Industrial, Commercial/Office, and Business Park with related Hotel and Retail Services. Such designations are intended to respond to a wide range of demands for land uses while offering a variety of development and employment opportunities, all within an integrated setting.

The Land Use Plan has been designed to allow for future flexibility in determining specific land uses and their intensity, so that as market demands change over time, the project can respond to these changes. The land use plan presented at this time anticipates a balance between industrial and office uses. However, if demand increases for office space, industrial space, or retail/facilities during the project construction, the plan has the flexibility to allow for this.

Exhibit 10 shows the proposed land use by location and Table 1 summarizes the acreage of each land use to be developed.

2.1 PHASING OF ROADWAYS

Haven Gateway Centre will be developed in three (3) separate phases, but not necessarily in any particular order. (See Exhibit 50. Each phase will construct all the necessary infrastructures to supply it's needs, as required by the City of Ontario, during the subdivision map approval process.

All streets that are entirely within the boundaries of a single phase will be constructed to their full widths during the development of that phase.

If a street's centerline is the dividing line between two phases or adjacent properties, (See Exhibit 5). The affected street will be constructed to it's centerline during the development of that phase.

The Intersection of Philadelphia and Mission will be constructed during the development of Phase I or Phase II, whichever phase is first to submit a subdivision map for final approval. The actual parameters of the intersection's construction will be decided during the subdivision map's approval process.

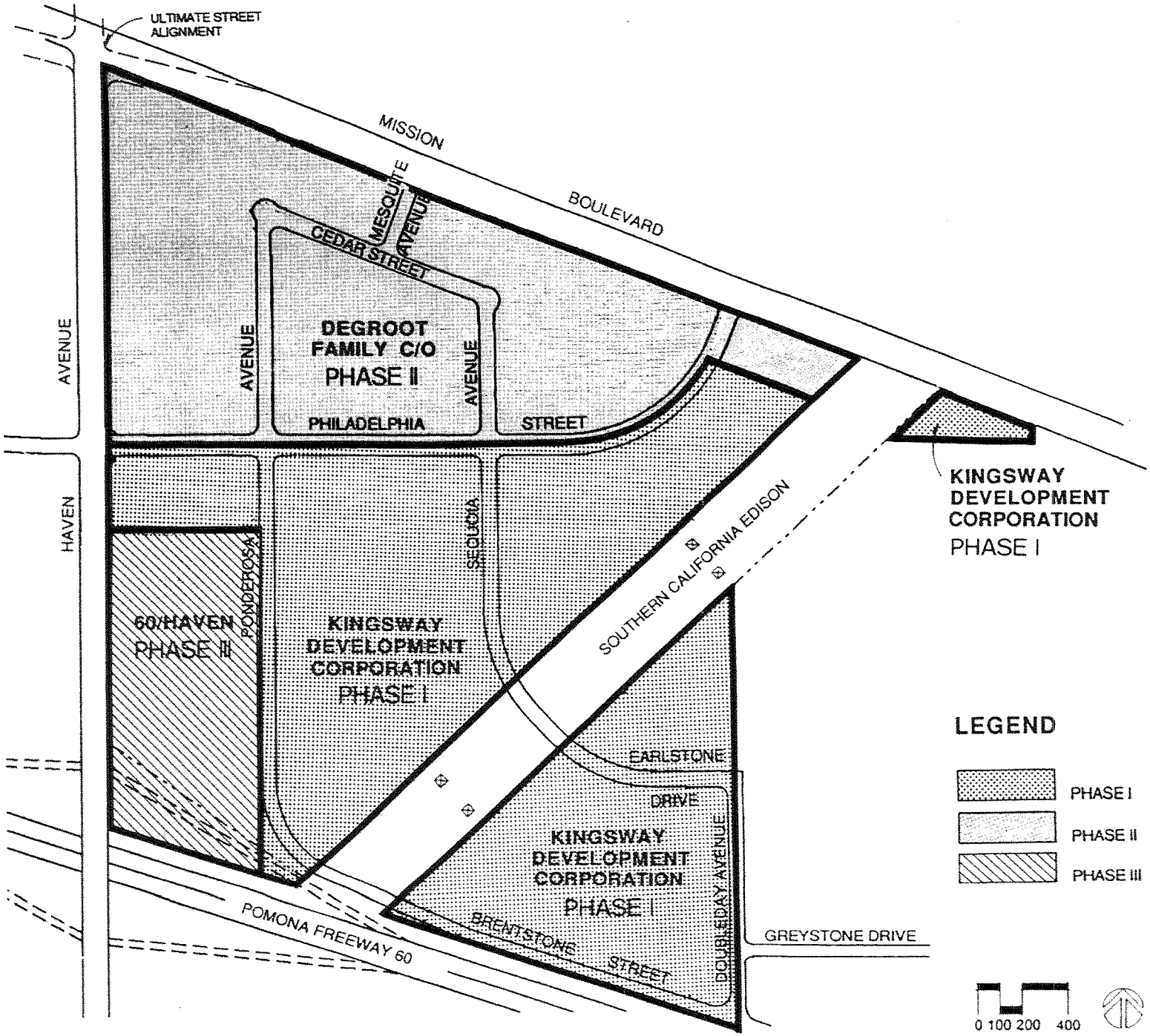
2.2 PHASING OF INFRASTRUCES

Haven Gateway Centre will be developed in three (3) separate phases, I, II, and III, but not necessarily in that order. Infrastructure Exhibits 25, 26, and 27 were designed as if Phase I, II, and II were developed in chronological order, which is currently the anticipated order of development. If the order of development changes in the future, each phase's sponsor/applicant will construct or bond for all required drainage, water, and wastewater improvements to serve their phase of the Haven Gateway Centre Project. At the time of each phase's subdivision map approval the engineering department will determine what infrastructure is necessary to support that phase.

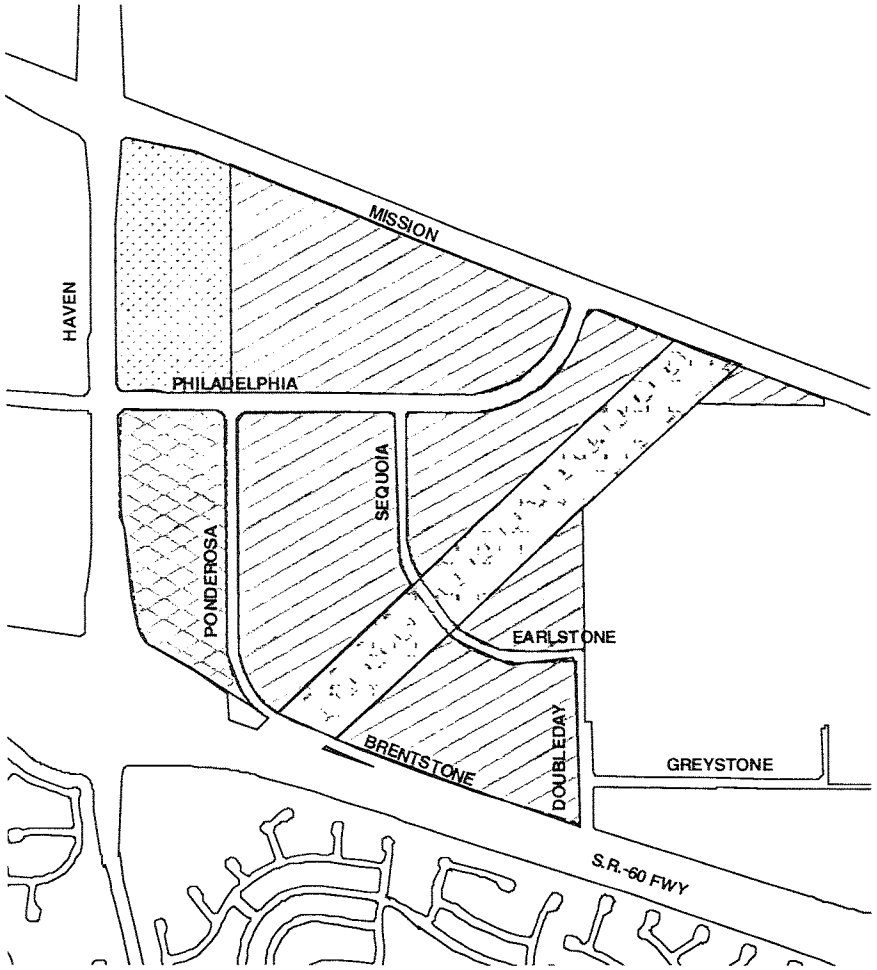
TABLE 1

PROPOSED ACREAGE BY LAND USE

LAND USE	ACREAGE	SQUARE FOOTAGE	F.A.R.
Industrial	104	4,530,424	.50
Business Park	14	609,840	.50
Commercial/Office	44	1,916,640	.50
Street Right-of-Way	19	827,640	
TOTAL	181	7,884,544	



OWNERSHIP MAP
Exhibit 5



LAND USE

- BUSINESS PARK
- COMMERCIAL/OFFICE
- INDUSTRIAL
- INDUSTRIAL-SCE

NOTE: Although the SCE property is zoned for industrial uses, the only permitted use on the SCE proeprty will be ancillary uses such as, but not limited to, parking, roadways, recreation, landscaping, and agricultural uses. Any proposed use must be approved by both the City of Ontario and SCE during the "Development Review" process. Both the City and SCE retain the right to refuse any use they deem inappropriate for the SCE property.

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W E
S

1000 0 1000 Feet

EXHBIT 10
LAND USE PLAN

WATER MASTER PLAN
3.0

3.0 WATER MASTER PLAN

There is currently no City of Ontario domestic water service to the project site, however there are the following facilities in the area: a 12 inch main in Archibald Avenue from State Route 60 to Mission Boulevard, a 12 inch main in Mission Boulevard from Hellman Avenue to Archibald Avenue, a 12 inch main in Haven Avenue from Riverside Drive to State Route 60, a 12 inch main along the San Bernardino/Riverside County line between Milliken Avenue and Wineville Avenue, a 18 inch main in Milliken Avenue between Jurupa Street and the San Bernardino/Riverside County line and a 10 inch main in Doubleday Avenue adjacent to the east side of the project site.

The City of Ontario has completed a new water treatment plant, which will increase the amount of non-local water from the current rate of 20% to 35-40%. Non-local sources of water include the Metropolitan Water District of Southern California. The ground water aquifer has been a steady source of high quality water, low in turbidity and dissolved salts, and free from pathogenic organisms.

The City of Ontario's water master plan shows the project site to be in the Phillips Street zone. The Fourth Street system zone is to the west of the project site and forms a common zone boundary along Haven Avenue.

Groundwater withdrawal will be required to serve the project site within the Phillips Street zone. Future supplies would be available within the Fourth Street Zone system at the proposed intersection of Haven Avenue and Philadelphia Street and at Haven Avenue at Mission Blvd. by a future 12" water line within Haven Avenue is currently being designed per assessment district 103 improvements for Haven Avenue from Pomona Freeway (SR60) to Mission Blvd.

3.1 Water Demands

The land use data described in Section 2 along with consumption trends for various land uses was used to determine the water demand for this project. A comparison of water demand factors as presented in the City of Ontario master water plan report dated January, 1981 are shown in Table 2, along with proposed HGC demand design factors

TABLE 2

COMPARISON OF WATER DEMAND FACTORS
MEAN ANNUAL (GAL/AC-DAY)

	City Master Plan	HGC Master Plan
Industrial	2,150	2,150
Commercial/Office	1,953	1,953
Business Park	1,953	1,953

Water demands very considerably over the year, and peak flows for different land uses occur at different times. Maximum daily demands are normally 1.8 to 2.0 times the figures listed in Table 2.

The City of Ontario's Master Water Plan currently shows residential zoning for the project site. Based on the Industrial/Commercial and Business Park acreage shown in Table 1 and the water demand factors shown in Table 2, the estimated average domestic water demand is 336,874 Gal/AC-Day or 0.34 M.G.D.

The increased demand generated by this project will require either additional pumping of the existing aquifer or additional purchase of water from the Metropolitan Water District, the amount of which is insignificant in proportion to the City's current average daily demand. The amount of non-local water has increased due to the construction of a new water treatment plant by the City of Ontario, and thus there will be additional water to service the project without affecting the water table.

The major factor in sizing the water system for this development, considering the proposed land use, is fireflow demand. A fireflow of 5,000 gpm combined with a maximum daily demand was used to size the water pipe network. A fireflow of 5,000 gpm is normally required for industrial/commercial projects per the City of Ontario's Master Water Plan and is the basis of the project site water system design.

3.2 Existing System

The project is largely undeveloped and, as such, only a portion of the area has a water distribution network. Exhibit 26 shows the location of existing water lines.

In the past, ground water has been the source of eighty percent of the City of Ontario's water, with peak demands met through the use of Colorado River water from the Metropolitan Water District of Southern California. The wells within the City limits are owned by the City of Ontario and draw from the Chino Basin.

A 10" water line exists in Doubleday to its terminus. This is the only constructed water line existing in the area to serve the project. With the completion of the Haven Avenue improvements, there will be a 12" line in Haven Avenue with a 12 inch stub to Philadelphia and a 12" stub in mission Blvd. Anticipated supply of 5,000 $\pm$ G.P.M. at the proposed Haven Avenue and Philadelphia Street intersection to serve the project site is currently being designed under assessment district 103 improvements for Haven Avenue.

3.3 Systems Requirements

All water facility improvements will be done in accordance with the requirements of the City of Ontario. The minimum pipe diameter used in the network is 12 inch. Minimum residual pressure allowed is 20 psi for fire flow conditions. Fire hydrant spacing will generally be 300-350'. Fire hydrants will be located in accordance with fire department recommendations.

Water mains will be located in streets having lot frontage. The minimum size of these lines will be 12 inches. The water lines will be designed to provide 5,000 to 6,000 gallons per minute (9 pm) fire flow in addition to average demand. Specifically, 1000 (9 pm) will be provided for industrial/commercial domestic sue, and 5,000 to 6,000 gpm for fire flow, as required by the City of Ontario.

3.4 Water Master Plan

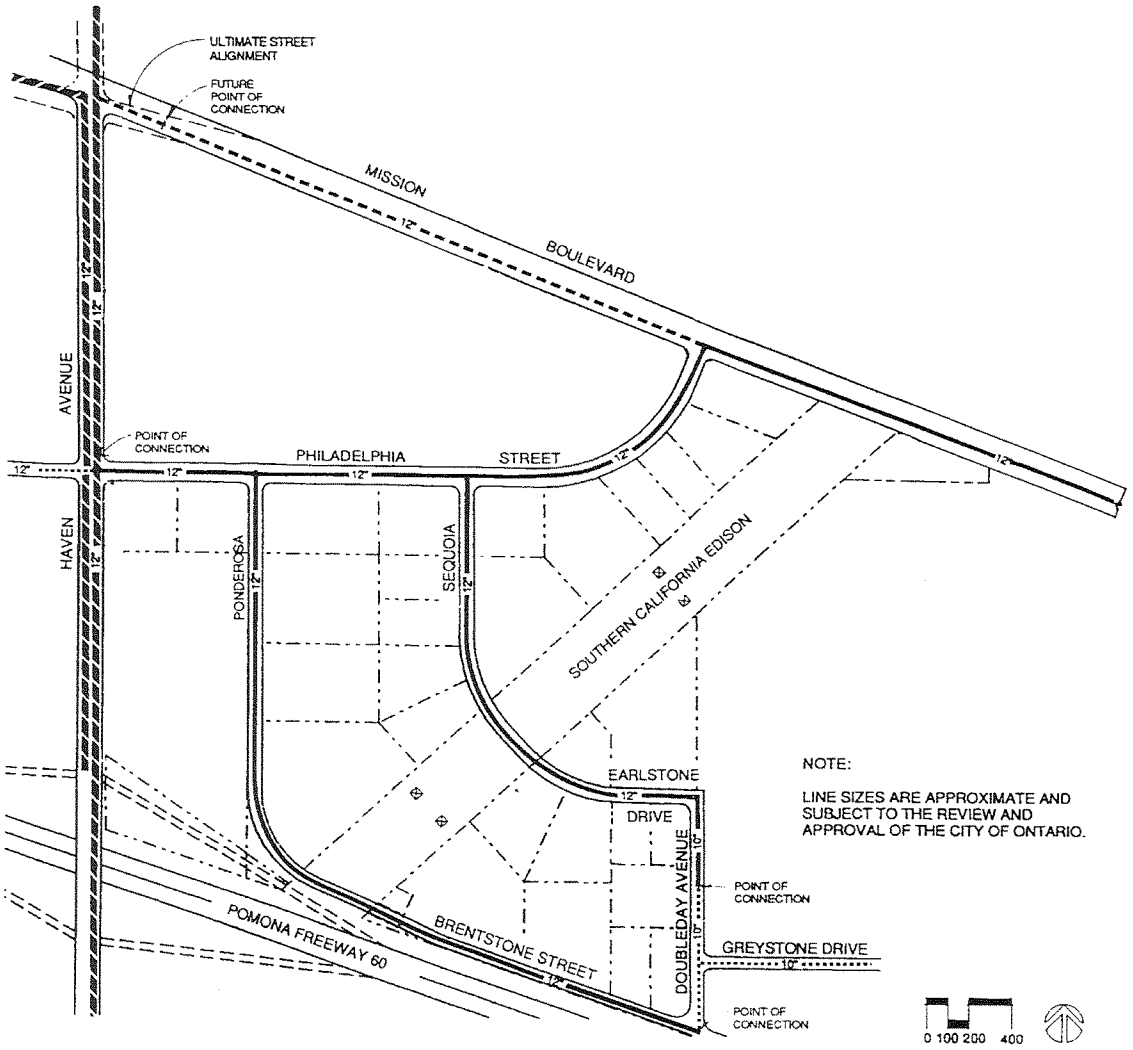
The Water Master Plan is shown in Exhibit 26. The water required to support the development of the project site will be provided by the expansion of the City of Ontario's existing water system in the Phillips Street zone. The Water Master Plan indicates the water facilities required to serve the project site.

Water supply will be provided by an existing 10" water line within Doubleday Avenue from its terminus along the eastern side of the project site and by the future 12" water line connection to the City of Ontario's Fourth Street zone at Haven Avenue and Philadelphia Street and at Haven Avenue at Mission Blvd.

A future offsite 12" water line within Mission Boulevard from the project site to the existing City of Ontario's 18 inch water line located at Milliken Avenue and Mission Boulevard may be required to bring adequate water supply to the project site should the 12" water main improvements along Haven Avenue not be adequate for fire flow.

Should the project sponsor require service in advance of the City's ability to supply, system improvements shall be installed under a project sponsor-led improvement program.

The project sponsor may request participation pursuant to City policy in effect at the time of request for facility oversizing, and/or offsite construction at the time the improvements are made. Fee schedules in effect at the time of development shall also be applied. Public water facilities will be placed in dedicated public streets, in other dedicated easements which private streets, or in other dedicated easements subject to the approval of the City Engineer and Public Services Director.



LEGEND

- PHASE I - WATER LINE
- PHASE II - WATER LINE
- PHASE III - WATER LINE
- EXISTING WATER LINE
- IMPROVEMENTS INCLUDED IN ASSESSMENT DISTRICT 103

EXHIBIT 26
WATER MASTER PLAN

SEWER MASTER PLAN
4.0

4.0 SEWER MASTER PLAN

There is currently no sewer collection system available to serve the project site, however, there are the following facilities in the area; a 27" sewer main in Greystone Street and Doubleday Streets and an 8" sewer main to its northern terminus in Doubleday Street. Both lines will connect to a future 27" gravity sewer, lift station and force main sewer improvements currently under construction within the project site per Assessment District 105 improvements. In addition an 8" stub will be provided in the future at the intersection of Haven Avenue and Philadelphia Street as part of A.D. 103 improvements to Haven Avenue.

Wastewater in Ontario is primarily collected by lines owned and maintained by the City. The Regional Sewerage Contract of 1972 provided the Chino Basin Municipal Water District rights to treat the collected sewer treatment. It also operates and maintains all interceptor systems and water reclamation plants for reuse and/or disposal of the wastewater.

Wastewater treatment for the project will be conducted at Regional Plant Number 1. The district anticipates expanding the facility from its current capacity of 32 MGD to 44 MGD by mid-1990. The plant is currently operating at capacity and is processing 30 MGD of its rated 32 MGD. This upgrading should be complete by 1990. Although AD No. 105 will add an additional burden to the plant this burden will not preclude development of the site.

4.1 Sewage Generation

The land use data described in Section 2 along with wastewater flow generation factors for various land uses were used to determine the sewage generation for this project. A comparison of wastewater flow generation factors presented in the 1980 City of Ontario master sewer plan are shown in Table 3, along with the proposed HGC generation design factors.

TABLE 3

Comparison of Wastewater Flow
Generation Factors Mean Annual (GAL/AC-DAY)

	CITY MASTER PLAN	HGC MASTER PLAN
Industrial	4,000	4,000
Commercial/Office	3,000	3,000
Business Park	3,000	3,000

Wastewater flow generation vary considerably over the year, and peak flows for different land uses occur at different times. Maximum daily flow generation are normally 1.5 to 2.0 times the figures listed in Table 3.

Based on the Industrial/Commercial acreage shown in Table 1 and the wastewater flow generation factors shown in Table 3, the estimated average sewage generation is 590,000 GAL/AC-DAY or 0.6 MGD.

The increased demand will place an added burden on the existing treatment plant at present conditions, however with the proposed year 1990 expansion and the A.D. 105 improvements under construction sufficient capacity will be available when it is needed.

4.2 Existing System

The project is largely undeveloped and, as such, only a portion of the area has a sewer collection network. Exhibit 27 shows the location of existing sewer lines.

An 8" sewer line to serve the project exists in Doubleday to its terminus to the north and connects to a 27" sewer line in Doubleday southward from Greystone to Brentstone.

A future 27" sewer line to serve the project is under construction and will start at Brentstone and Doubleday and flow to a future lift station and force main along the north side of SR60 as part of Assessment District 105 improvements and will serve the ultimate project site for sewer collection. In addition a future 8" connection is being designed as part of AD 103 improvements for Haven Avenue at Philadelphia and will serve the project site in the future.

The Chino Basin Municipal Water District also maintains a 27 inch non-reclaimable industrial sewer line through the property. CBMWD currently maintains the Cucamonga Interceptor main in Haven Avenue, just south of Mission Avenue. Proposed improvements include rerouting a portion of that line to allow for the proposed realignment of Mission Blvd. at Haven Avenue.

4.3 System Requirements

Design and construction of the sewer system will be completed in accordance with the standards and specifications of the City of Ontario.

Sewer main sizing is based on the wastewater generation factors shown in Table 3.

Sewer mains for the project will be a minimum of eight inches in diameter to carry the proposed wastewater discharge from the project, and will be designed in accordance with City of Ontario standards.

Sewer pipes are sized so that eight inch lines would be 50 percent full at design (peak) flow levels. For mains larger than eight inches, pipes are sized to flow seventy-five percent (75%) full. The minimum allowable size was eight inch. The estimated pipe slope used is based on the general fall of the existing ground and proposed street alignment.

Minimum depth of sewer is assumed to be six to seven feet below finished grade. Manholes will be spaced at 300 to 400 feet. The sewer system has been laid out so all parcels can be served by public sewers, in public right of way or easement, without the necessity of pumping.

4.4 Sewer Master Plan

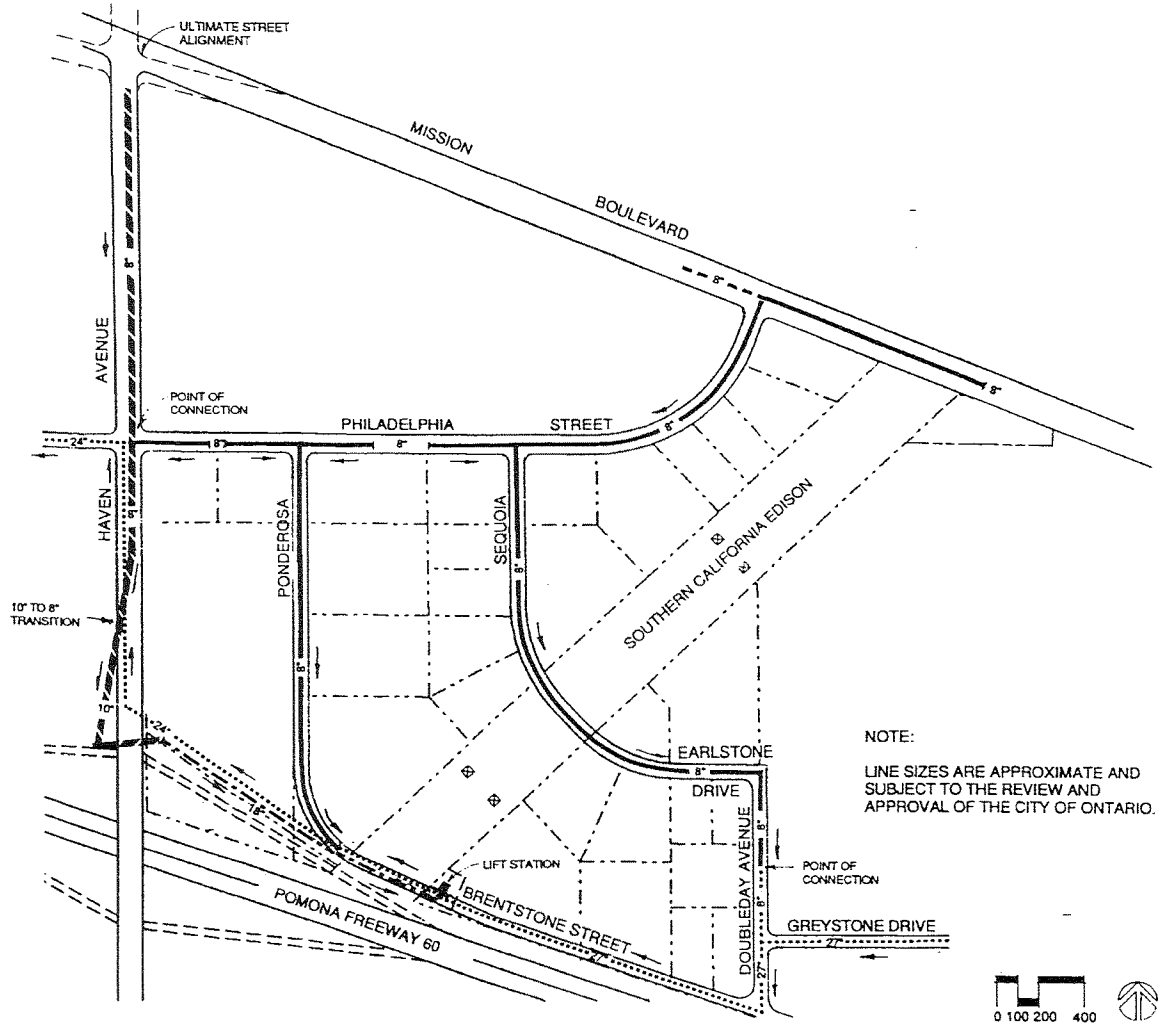
The overall system to serve the project site will be collected and diverted to a new lift station located east of Haven Avenue as shown on Exhibit 27. The lift station will pump the effluent up Haven Avenue to a new 72" line being constructed by CBMWD. This new line will parallel the existing 42" line. The lift station and the 72" line should be completed near the end of 1989. The Sewer Master Plan is shown in Exhibit 27. The Sewer Master Plan indicates the sewer collection system required to serve the project site.

The construction of these sewer lines will be phased to coincide with the project build-out time. Public wastewater facilities will be placed in dedicated streets, in dedicated easements within private streets or, in other dedicated easements subject to the approval of the City Engineer and Public Services Director.

An additional system of sewer lines will be constructed to connect to the CBMWD's existing non-reclaimable waste line in Philadelphia Street. Such a system will be offered to users that have a need for such a facility.

Should the project sponsor require service in advance of the City's ability to supply, system improvements shall be installed under a project sponsor-led improvement program.

The project sponsor may request participation pursuant to City policy in effect at the time of request for facility oversizing, and/or offsite construction at the time the improvements are made. Fee schedules in effect at the time of development shall also be applied. Public sewer facilities will be placed in dedicated public streets, in other dedicated easements within private streets, or in other dedicated easements subject to the approval of the City Engineer and Public Services Director.



LEGEND

- PHASE I - SEWER LINE
- PHASE II - SEWER LINE
- PHASE III - SEWER LINE
- EXISTING SEWER LINE
- DIRECTION OF FLOW
- IMPROVEMENTS INCLUDED IN ASSESSMENT DISTRICT 103

EXHIBIT 27
SEWER MASTER PLAN

DRAINAGE MASTER PLAN
5.0

5.0 Drainage Master Plan

There is currently no on-site storm drain system. There are, however, storm drains collecting surface runoff at SR60 which collect and convey Haven Gateway Centre storm runoff under the freeway and away from the project. There is also a major drain system in Haven Avenue and Philadelphia Street, which was designed to accept the 100-year storm runoff from 30± acres of the northwest corner of the project. Sizes of the drains under SR60 vary from 24" RCP to a 6' x 3' RCB. The system in Haven and Philadelphia has stubbed out a 54" RCP to serve the northwest corner of the site.

The capacity of the downstream drainage system is somewhat limited and it will be necessary for the owners of property within the project to detain a portion of the storm runoff on-site. The plan presented herein is for each area within the affected area (see hydrology report dated 6/29/89 by FWLS) to detain its proportionate share of the excess runoff. This share amounts to the equivalent of 1/4" of runoff per acre. This excess runoff can be mitigated by detention (ponding) in parking lots and landscaped areas or by constructing a ground water recharge system. A centralized detention system to serve the entire project is specifically not recommended. Initial construction and on-going maintenance costs cannot be justified for the amount of drainage that needs to be detained. Additionally, there are multiple property owners within the project and taking land from one owner for the benefit of the entire project would not be equitable.

5.1 Drainage Generation Factors

The hydrology study was performed using San Bernardino County 1983 version of the rational and unit hydrograph methods. The rational method is used to provide for a 100-year flood frequency and is required for sizing of all drainage facilities. The unit hydrograph method provides the total volume generated by the developed site. The total volume, once calculated via the unit hydrograph method, is adjusted to reflect the rational methods peak discharge rate.

Calculation of runoff amounts and volumes were based on the land uses proposed and collection system shown in the master plan of storm drain. The 1983 100-year rainfall and runoff generation factors were used rather than the more current 1986 factors in order to be consistent with City policy. Calculated runoff factors vary from 2.01 cfs per acre to 3.50 cfs per acre depending on the individual times of concentration result in higher runoff factors.

5.2 Existing System

There is no on-site storm drain collection system. There are, however, storm drains existing along the southern and western side of the project which were designed to collect and convey storm runoff generated on-site. Near the intersection of Haven Avenue and Philadelphia Street a 54" RCP is stubbed out a to the site to convey the 100-year storm runoff from 30± acres of the northwest corner of the site. Along the southern boundary there are four storm drain lines that collect surface runoff and convey it

under SR60 to a downstream storm drain system. These lines consist of two 36" RCP's, a 6' x 3' RCB and one 24" RCP, west to east, respectively. Although designed to convey the 100-year storm flow, the downstream system assumed a different land use than is now proposed and the system cannot convey the peak flow generated by our development. As a result, it will be necessary to detain a small portion of our storm runoff to match our discharge values to downstream capacities. The amount of runoff needed to be detained is equivalent to 1/4" per acre for those portions of the project discharging into the other lines (54" RCP, western 36"RCP and 24" RCP) are not affected and do not require detention of storm runoff.

5.3 System Requirements

Basic system requirements are set by City and County policy. Surface runoff is allowed in streets until either the 10-year runoff exceeds top of curb or the 100-year runoff exceeds the limits of street right-of-way. At that point, surface runoff is then underground . More strict requirements may be imposed by the developer.

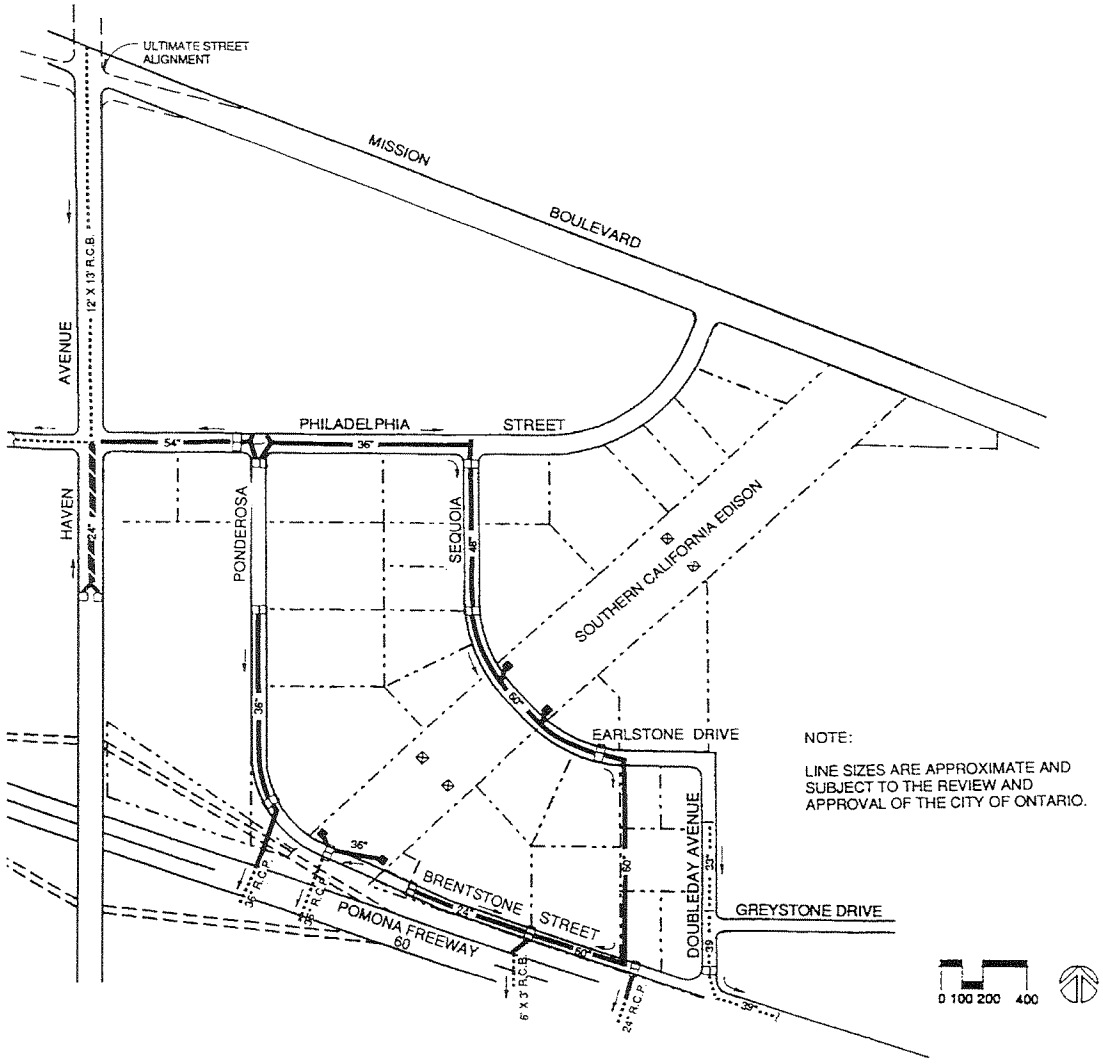
All storm drain facilities will be constructed to City of Ontario and/or County of San Bernardino standards and requirements. Public facilities will be a minimum of 18" in diameter and located in either public rights-of-way or easements dedicated to the maintaining agency. All systems will be designed to 100-year standards as defined in the 1983 San Bernardino County Hydrology Manual.

Estimated storm drain limits and sizes are shown on the master plan of storm drains. Actual limits and sizes will be based on subsequent hydrology and hydraulic calculations of a more precise level at final design.

5.4 Drainage Master Plan

The master plan of storm drain is shown on Exhibit 25. It consists of a collection of storm drain lines to underground storm runoff and convey it to adjacent systems for conveyance to off-site facilities. On-site lines are expected to range from 24" to 60" in size; however, the exact extent and size of the system will be determined by a subsequent hydrology and hydraulic study at final design stage.

Flood Insurance Rate Maps indicate there is no off-site area contributing storm runoff to the project site. Facilities will be designed only to convey project generated storm runoff. All on-site facilities will be designed to 100-year frequency standards and may incorporate on-site detention if necessary.



LEGEND

- PHASE I - STORM DRAIN
- PHASE II - STORM DRAIN
- PHASE III - STORM DRAIN
- EXISTING STORM DRAIN
- PROPOSED CATCH BASIN
- PROPOSED PARKWAY DRAIN
- DIRECTION OF FLOW
- IMPROVEMENTS INCLUDED IN ASSESSMENT DISTRICT 103

EXHIBIT 25

CONCEPTUAL STORM DRAIN MASTER PLAN

Southern California Edison Company

P O BOX 410

100 LONG BEACH BOULEVARD

LONG BEACH, CALIFORNIA 90801

ROBERT W BRAY
MANAGER OF
REAL PROPERTIES AND
ADMINISTRATIVE SERVICES

Leason Pomeroy Associates
44 Plaza Square
Orange, CA 92666

April 11, 1989

Attention: Mr. Richard H. Faber

Gentlemen:

SUBJECT: Lugo-Mira Loma 500 kV T/L R/W (Easements)
Haven Gateway Commerce Center
RP File No. G6-88-0311

We have reviewed your request for a consent for two road crossings across the subject right of way.

The request has been approved as shown on the attached plans, subject to the following conditions:

1. All costs incurred for the proposed project shall be borne by Kingsway Development Corp.

2. Adequate access to all Edison structures shall be provided and at no time is there to be any interference with the free movement of Edison Company equipment and materials.

3. All equipment working on the Edison right of way shall maintain a minimum clearance of twenty-seven (27) feet from all overhead conductors and more than twenty-five (25) feet from all Edison structures.

4. The construction area shall be watered down periodically to prevent dust contamination to Edison Company insulators. Any maintenance required by Edison on its facilities over and above normal, and resulting from this operation, shall be paid for by Kingsway Development Corp.

5. All Edison areas shall be left in essentially the same condition as prior to performing the proposed work.

6. Patrol roads fourteen (14) feet wide inside the berms and capable of supporting forty (40) tons on a three-axle truck must be provided at locations as indicated on the enclosed plan(s).

7. Construction of crossing (cut or fill) must be adequately sloped to enable access of equipment onto patrol road. Maximum grade not to exceed 12%; maximum cross slope not to exceed 2%.

8. Any earth disturbed within the Edison right of way and/or backfilling shall be compacted to ninety percent (90%).

9. Commercial-type driveways sixteen (16) feet wide with curb depressions capable of supporting forty (40) tons on a three-axle truck shall be installed on the Edison right of way as shown on the enclosed plan(s).

10. Underground facilities installed on the Edison right of way shall have a minimum cover of three feet and shall be capable of withstanding a gross load of forty (40) tons on a three-axle truck.

11. Suitable identification markers shall be installed on the Edison right of way indicating the location and depth of any underground lines and/or pipelines.

12. Parking of vehicles on the Edison right of way shall not be permitted.

13. Flammable materials shall not be stored on the Edison right of way. Staging of equipment or materials will not be allowed on the right of way.

14. Kingsway Development Corp. agrees, for itself, and for its and their agents and employees and any person or persons claiming under Kingsway Development Corp. to save harmless and indemnify Edison, its successors and assigns and its and their officers, agents and employees, from and against all claims, demands, loss, damage, actions, causes of action, expense and/or liability arising or growing out of loss of or damage to property including the property of Edison, its successors and assigns, and its and their officers, agents and employees, or injury to or death of persons resulting in any manner, directly or indirectly, from the maintenance, use, operation, repair or presence of the herein approved use of the Edison right of way.

15. Final plans, including street improvement plans, grading plans, and any landscape plans must be submitted to the Regional Manager, Southern California Edison Company, 430 N. Vinyard Avenue, Suite 210, Ontario, CA 91764 for review and approval at least sixty (60) days prior to commencement of any construction affecting the Edison right of way.

Please have the appropriate persons sign and date the enclosed copy of this letter, thereby indicating acceptance of the above conditions by Kingsway Development Corp. Please return the signed copy, using the enclosed envelope.

In the event the copy of this letter is not signed and returned within sixty (60) days from the date hereinabove written, we will assume that your project has been either cancelled or delayed. In either instance, any consent granted or implied is voided without further notice.

Thank you for your cooperation in this matter. If you should have any questions concerning this matter, please contact Ms. Marion Watkins at (714) 395-3349.

Very truly yours,

MW:nm
2726p

Enclosures

ACCEPTED AND APPROVED:

LEASON POMEROY ASSOCIATES

Kingsway Development Corp.

By _____ Date 4/27/89

Title President

TRAFFIC IMPACT STUDY FOR HAVEN GATEWAY CENTER

Prepared for

LOCKMAN & ASSOCIATES

CONSULTING ENGINEERS AND

PLANNERS

Prepared by

BARTON-ASCHMAN ASSOCIATES, INC.

APPENDIX D:
SOUTHERN CALIFORNIA
EDISON COMPANY

TRAFFIC IMPACT STUDY FOR HAVEN GATEWAY CENTER

Prepared for

LOCKMAN & ASSOCIATES

CONSULTING ENGINEERS AND

PLANNERS

Prepared by

BARTON-ASCHMAN ASSOCIATES, INC.

November 1990

FIGURES

TABLES

1.
INTRODUCTION

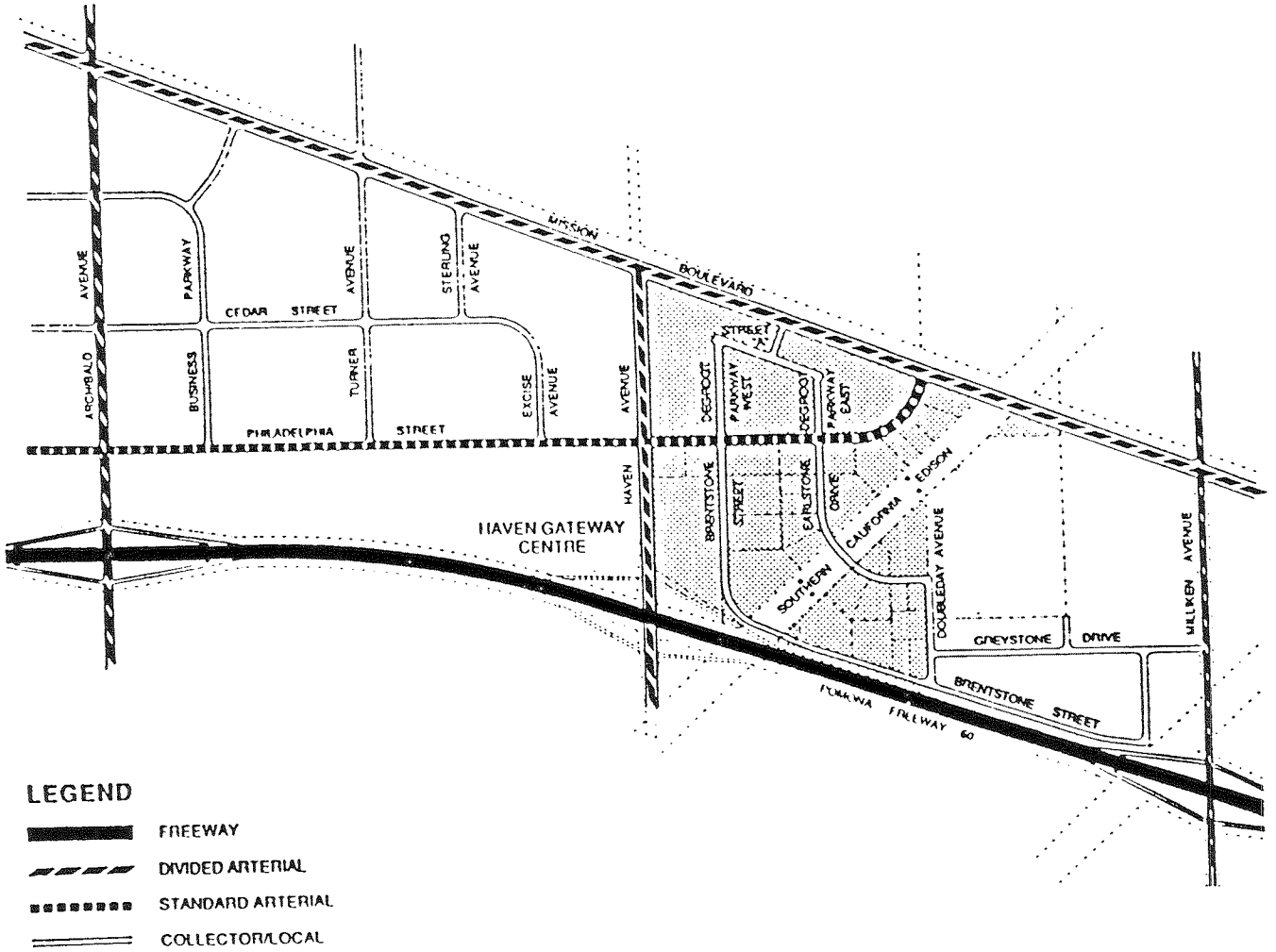
The Haven Gateway Center is proposed on the north side of the Pomona Freeway (SR-60) between Haven and Milliken Avenues in the City of Ontario.

This report presents the analysis of project-generated traffic impacts on the local street network serving the site, including the identification of mitigation measures, as necessary, to alleviate adverse traffic impacts.

PROJECT DESCRIPTION AND LOCATION

The proposed Haven Gateway Center development is to be located to the south of Mission Boulevard, to the west of Milliken Avenue, to the north of SR-60, and to the east of Haven Avenue in the City of Ontario, as shown in Figure 1. It will include 79 acres of industrial park and 83 acres of retail uses, with a combined total of 162 acres of development.

Figure 2 shows the proposed site plan for the Haven Gateway Center. The primary gateways to the project will be on Mission Boulevard and Haven Avenue. Access to the proposed development will be as illustrated on the site plan.



SOURCE: LOCKMAN & ASSOCIATES

VICINITY MAP

BARTON-ASCHMAN ASSOCIATES, INC.

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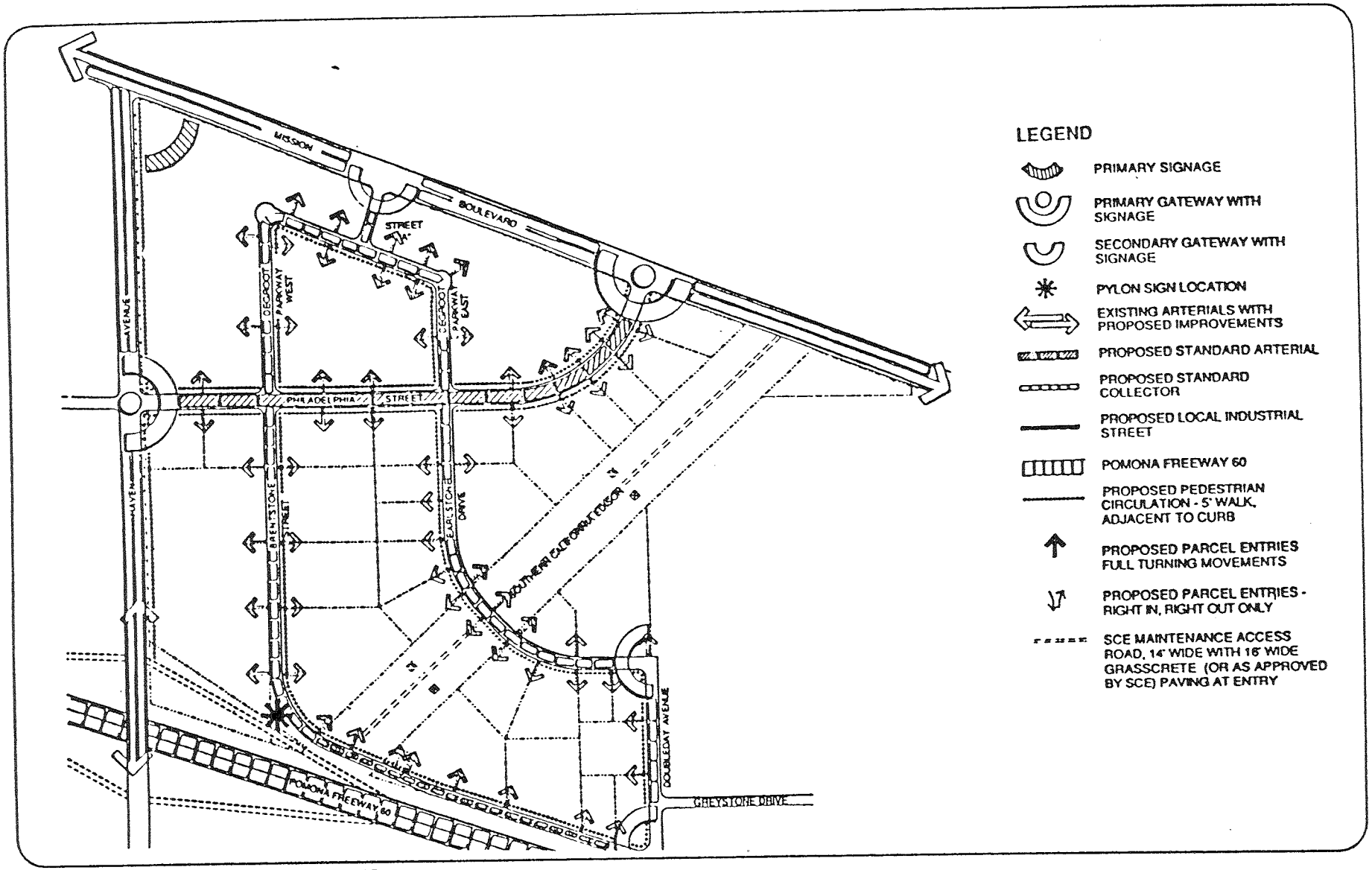
FIGURE 1



SOURCE: LOCKMAN & ASSOCIATES

SITE PLAN

BARTON-ASCHMAN ASSOCIATES, INC.

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FIGURE 2

STUDY PURPOSE AND PROCEDURE

Barton-Aschman Associates, Inc., was retained to evaluate the traffic impacts associated with the proposed development. In completing the study, the following analyses were undertaken:

1. *Collection of Data*—This phase of the study included a reconnaissance of the site and surrounding streets, discussions with public officials to determine the status of any proposed street improvements that would affect access to the site, and a determination of existing peak-hour traffic volumes on the nearby streets. Existing traffic volume information was obtained from previous studies completed for this project.

2. *Analysis of Existing Conditions*—Morning and evening peak-hour level-of-service results for existing conditions at each of the key intersections in the study area were obtained from previously completed traffic studies in the area, which were provided by officials at the City of Ontario.

3. *Directional Distribution*—The distribution of project-generated traffic on adjacent streets was estimated according to the expected traffic patterns in the study area, and through discussions with City officials. The resulting distribution was largely based on the geographical locations of residential concentrations.

4. *Traffic Generation*—Estimates of the weekday morning and evening peak-hour traffic volumes that would be generated by the proposed project were made. Traffic generation factors for the proposed land uses were obtained from *Trip Generation* (Institute of Transportation Engineers, Fourth Edition, 1987). The estimated traffic volumes were compared to traffic volume estimates for the project site used in previous traffic studies completed for the proposed project. Based on this comparison, the net increase in peak-hour trips due to the current development proposal was established.

5. *Traffic Assignment*—Based on the results of the traffic distribution and traffic generation analyses, the net increase in projected weekday morning and evening peak-hour project traffic volumes (as described above) was assigned to the roadway system.

6. *Analysis of Future Conditions*—Level-of-service analyses were performed at each of the key intersections in the study area using the Intersection Capacity Utilization (ICU) technique. Calculations were made for the years 1995 and 2010, including the project-generated trips.

7. *Mitigation Measures*—Improvements were recommended, as necessary, to alleviate any adverse traffic impacts associated with the proposed project.

2.
EXISTING CONDITIONS

The primary roadways in the vicinity of the site include Haven Avenue, Milliken Avenue, and Mission Boulevard.

- *Haven Avenue*—North of the SR-60 Freeway, Haven Avenue is currently a two-lane roadway. Haven Avenue will be widened to eight lanes between the freeway and the future alignment of Philadelphia Street and seven lanes between Philadelphia Street and Mission Boulevard by 1995. A new diamond-type interchange is scheduled to be constructed on Haven Avenue at the SR-60 Freeway in 1991.

- *Mission Boulevard*—This east-west, four-lane divided arterial street provides access to Central Ontario to the west and to Riverside to the east of the site.

- *Milliken Avenue*—Milliken Avenue is partially improved to its ultimate six-lane divided cross-section in the vicinity of the site. Milliken Avenue has an interchange with the SR-60 Freeway.

STUDY INTERSECTIONS

Based upon discussions with staff of the City of Ontario, the following 11 intersections were selected for detailed analysis:

- Mission Boulevard/Milliken Avenue
- Milliken Avenue/Greystone Drive
- Milliken Avenue/Westbound SR-60 Ramps
- Milliken Avenue/Eastbound SR-60 Ramps
- Haven Avenue/Mission Boulevard
- Haven Avenue/Philadelphia Street
- Haven Avenue/Westbound SR-60 Ramps
- Haven Avenue/Eastbound SR-60 Ramps
- Philadelphia Street/Mission Boulevard
- Philadelphia Street/Brentstone Drive
- Philadelphia Street/Earlstone Drive

Figure 3 shows the existing lane configurations at the key intersections, and Figures 4 and 5 illustrate the existing morning and evening peak-hour traffic volumes, respectively.

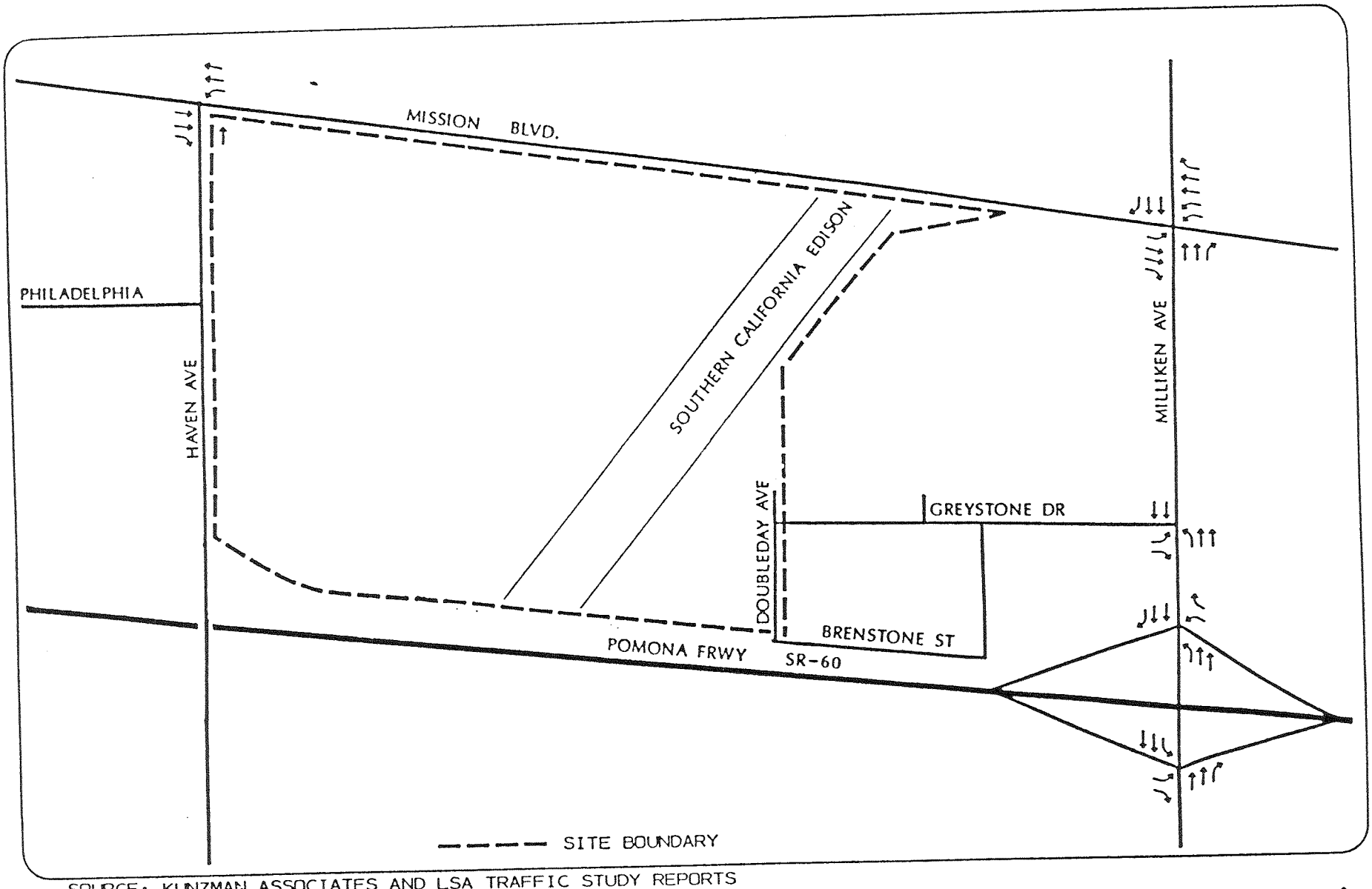
LEVEL-OF-SERVICE CONCEPT

The "quality of flow" on a street system is typically described by transportation planners in terms of level of service. As summarized in Table 1, levels of service range from A to F, with Level of Service A indicating virtually no delay or congestion and Level of Service F representing essentially total intersection breakdown with stop-and-go operation. Level of Service F is considered unsatisfactory in the City of Ontario.

In calculating levels of service, the Intersection Capacity Utilization (ICU) method was employed. The resulting ICU value is defined as "the sum of the ratios of approach volume divided by approach capacity for each leg of the intersection which controls traffic signal timing plus an allowance for clearance times."

EXISTING LEVELS OF SERVICE

The existing levels of service at the study intersections were obtained from a previously completed traffic study report (*Haven Gateway Center Traffic Study*, Kunzman Associates, May 1989). They were calculated using the ICU technique with the lane configurations illustrated in Figure 3.



SOURCE: KUNZMAN ASSOCIATES AND LSA TRAFFIC STUDY REPORTS

EXISTING LANE CONFIGURATIONS

BARTON-ASCHMAN ASSOCIATES, INC.

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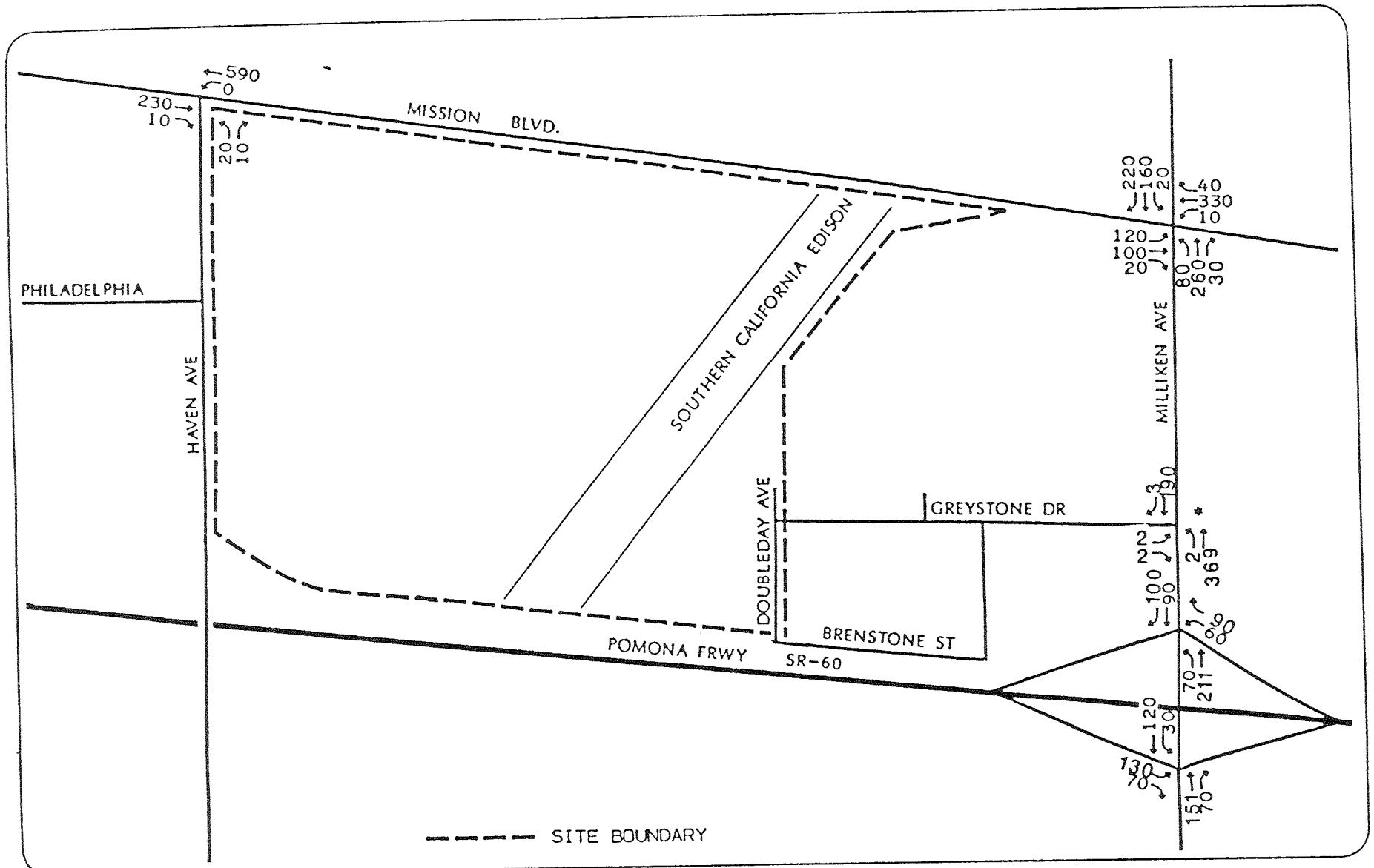
FIGURE 3



* SOURCE: BARTON-ASCHMAN ASSOCIATES INC., 1990
SOURCE: KUNZMAN ASSOCIATES TRAFFIC STUDY REPORT, 1989

EXISTING WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

BARTON-ASCHMAN ASSOCIATES, INC.

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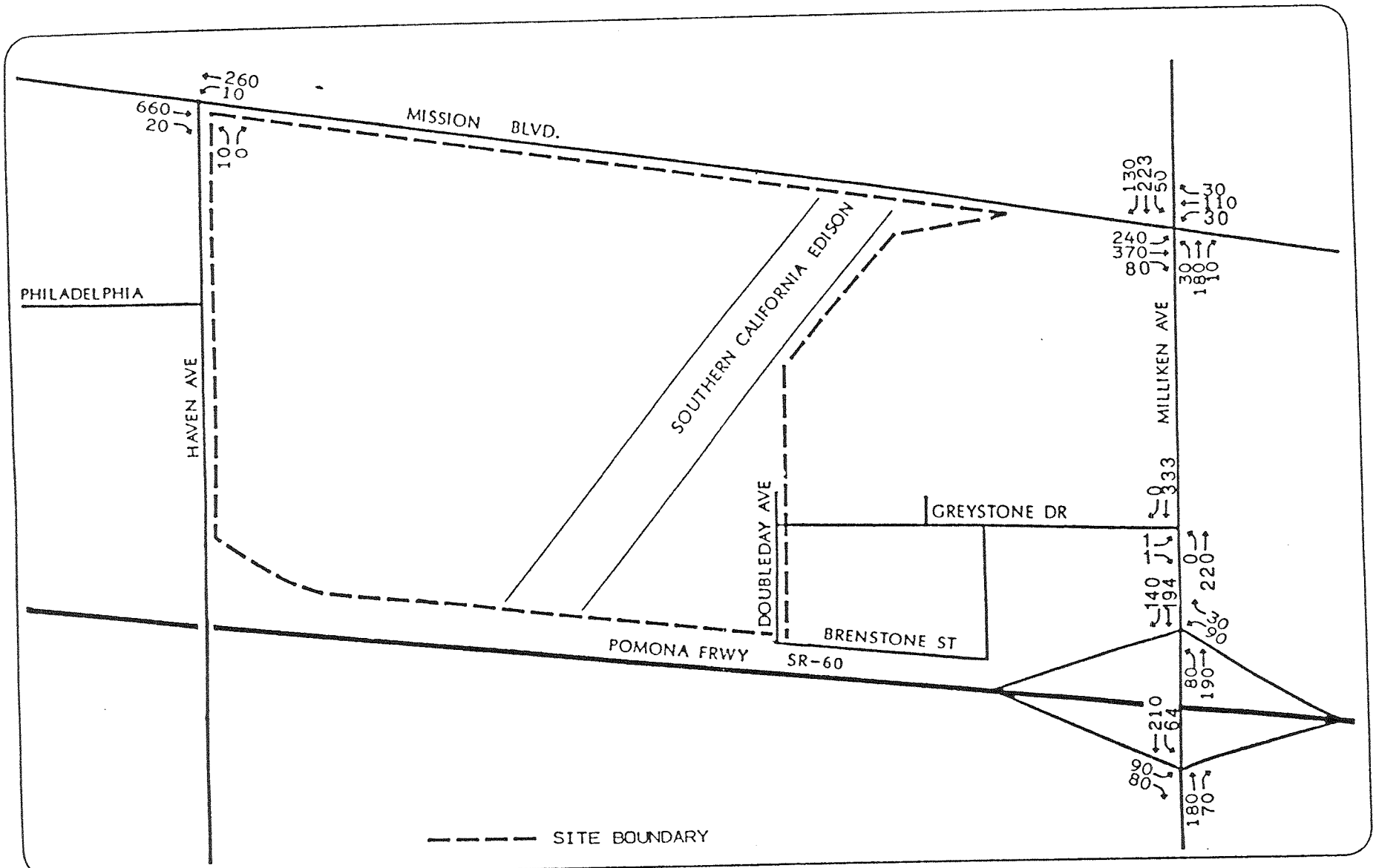
FIGURE 4



SOURCE: BARTON-ASCHMAN ASSOCIATES INC., 1990
SOURCE: KUNZMAN ASSOCIATES TRAFFIC STUDY REPORT, 1989

EXISTING WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

BARTON-ASCHMAN ASSOCIATES, INC.

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FIGURE 5

TABLE 1
INTERSECTION LEVEL-OF-SERVICE DEFINITIONS[1]

Level of Service	Interpretation	Volume-to-Capacity Ratio[2]
A	Uncongested operations; all vehicles clear in a single cycle.	0.00-0.60
B		0.61-0.70
C	Light congestion; occasional backups on critical approaches.	0.71-0.80
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	0.81-0.90
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	0.91-1.00
F	Total breakdown with stop-and-go operations.	1.01+

NOTES:
(1) Source: *Highway Capacity Manual*, 1965.
(2) Volume/Level of Service E capacity.

Table 2 summarizes the existing levels of service at the key intersections. As shown, all of the intersections are currently operating at Level of Service C or better during both the morning and evening peak hours.

TABLE 2
EXISTING LEVELS OF SERVICE

Intersection	AM Peak		PM Peak	
	V/C[1]	LoS[2]	V/C	LoS
Mission Boulevard/Milliken Avenue	0.32	A	0.37	A
Milliken Avenue/Greystone Drive	0.44	A	0.44	A
Milliken Avenue/Westbound SR-60	0.21	A	0.21	A
Milliken Avenue/Eastbound SR-60	0.63	B	0.79	C
Haven Avenue/Mission Boulevard	0.25	A	0.35	A

NOTES:
(1) Volume-to-capacity ratio.
(2) Level of service (refer to Table 1 for a discussion of levels of service).

3.
FUTURE CONDITIONS

Future traffic will consist of "background" or non-project volumes plus the volumes generated by the proposed project. For this analysis, the background traffic information was obtained from the City of Ontario. Specifically, the analysis incorporates traffic volumes that were forecasted for the years 1995 and 2010. Background traffic information was obtained for both the morning and evening peak hours.

Note that the traffic volumes acquired from the City included certain assumptions relative to the likely land uses on the site of the proposed Haven Gateway Center. Generally, it was assumed that light industrial development would occur on the site. It was necessary, therefore, to adjust the traffic forecasts to reflect the actual proposed land uses (i.e., a combination of light industrial and retail uses). Essentially, the net difference between the number of trips previously forecasted for the project site and the number of trips estimated to be generated by the currently proposed land uses was added to the non-project volumes.

FUTURE NON-PROJECT TRAFFIC CONDITIONS

Future Street Network

As mentioned in Chapter 2, Haven Avenue will be widened to eight lanes from north of the SR-60 to Philadelphia Street and to seven lanes from Philadelphia Street to Mission Boulevard. A new diamond-type interchange will be constructed on Haven Avenue at the SR-60 Freeway.

Philadelphia Street will be extended from Haven Avenue along its present alignment and swing northerly to intersect with Mission Boulevard. Brentstone Street will be extended westerly, then turn to the north to continue as Degroot Parkway East from Philadelphia Street. Earlstone Drive will begin at the extension of Doubleday Avenue and turn to the north to continue as Degroot Parkway West from Philadelphia Street. Future lane configurations are illustrated in Figure 6 for the 1995 conditions, and Figure 7 for the 2010 conditions.

Future Background Traffic

For the purposes of this analysis, future background traffic volumes consisted of a forecast of future traffic volumes, including the assumed light industrial development on the project site. The future background volumes were established based upon information presented in *Traffic Analysis Study for Haven Avenue Interchange at SR-60* (source: Mohle, Grover & Associates, June 1988) and other information provided by staff of the City of Ontario. Future background traffic volumes were identified for the 11 key intersections in the project's vicinity for both the morning and evening peak hours.

Trip Distribution and Assignment

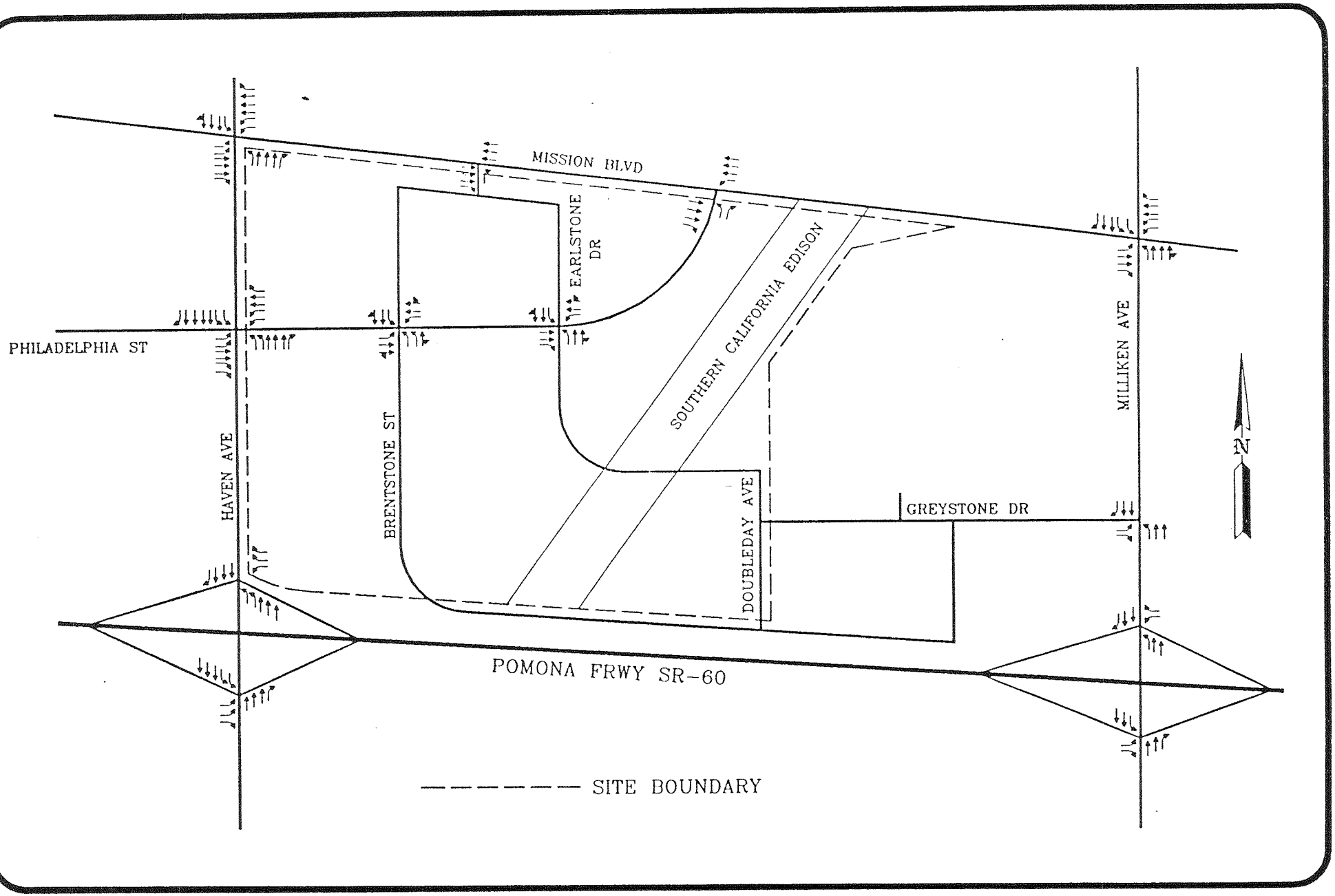
The assignment of the non-project trips to the future local roadway system was obtained from the City of Ontario. This non-project traffic assignment was taken from previous traffic studies completed for the project study area. Figures 8 through 11 illustrate the estimated background traffic volumes for the years 1995 and 2010, for both the morning and the evening peak hours at the key intersections.

PROJECT TRAFFIC CONDITIONS

Project Trip Generation

The volume of peak-hour traffic that would be generated by the proposed Haven Gateway Center project was estimated using trip generation rates published in *Trip Generation* (Institute of Transportation Engineers, Fourth Edition, 1987). Table 3 summarizes the number of trips estimated to be generated by the proposed project during the weekday morning and evening peak hours, as well as a comparison to the previously assumed trip generation for the project site.

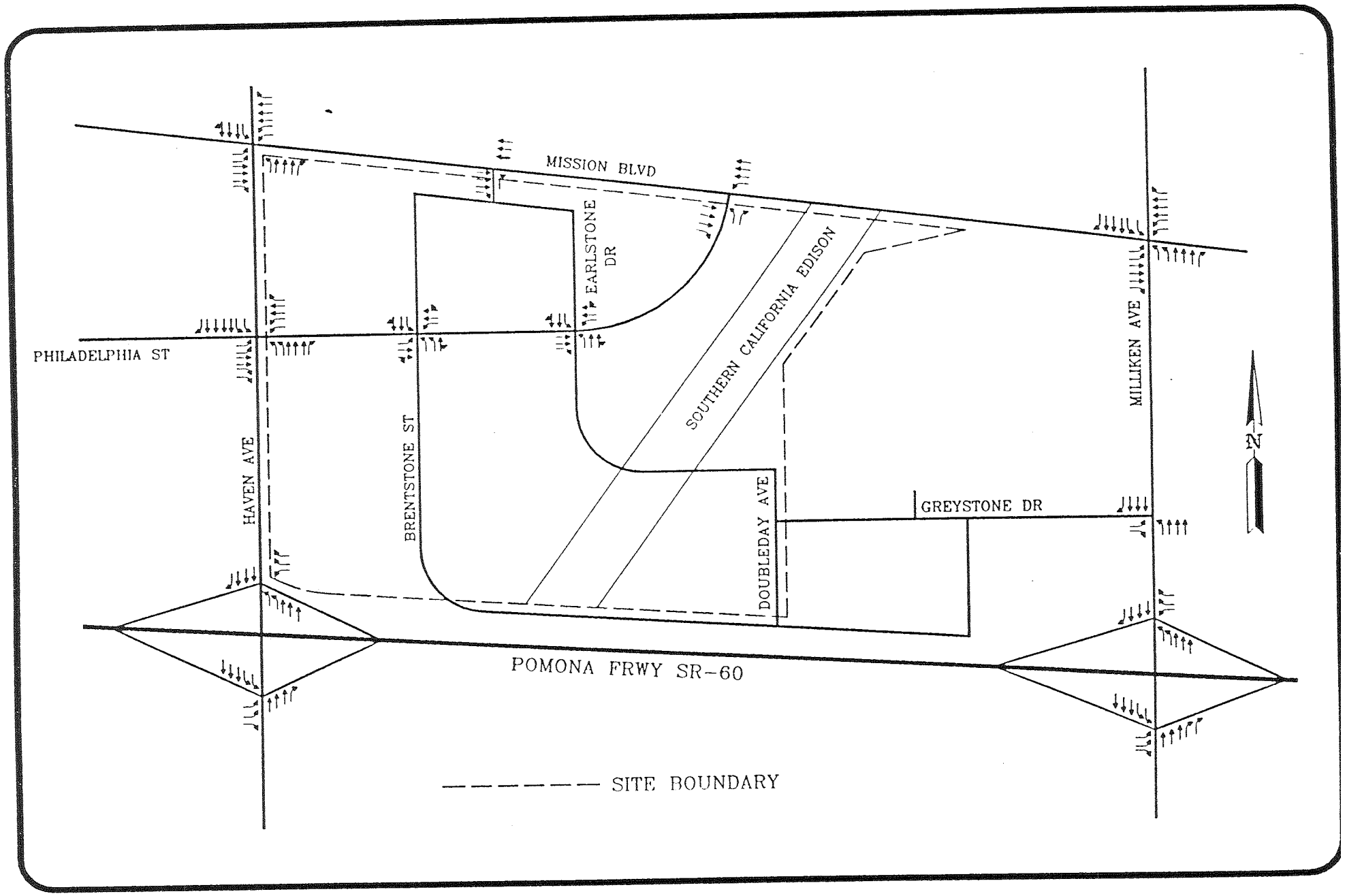
As shown, the current development proposal will generate a total of 1,745 trips in the morning peak hour (1,335 inbound, 410 outbound). When compared to the previously assumed land-use plan, however, the net trip generation is seen to be significantly less. In fact, the inbound trip generation estimate is 140 trips lower than had previously been analyzed. Combined with an increase in outbound traffic of 143 trips, an overall net increase of 3 morning peak-hour trips has been identified.



1995 LANE CONFIGURATIONS

Barton-Aschman Associates, Inc.

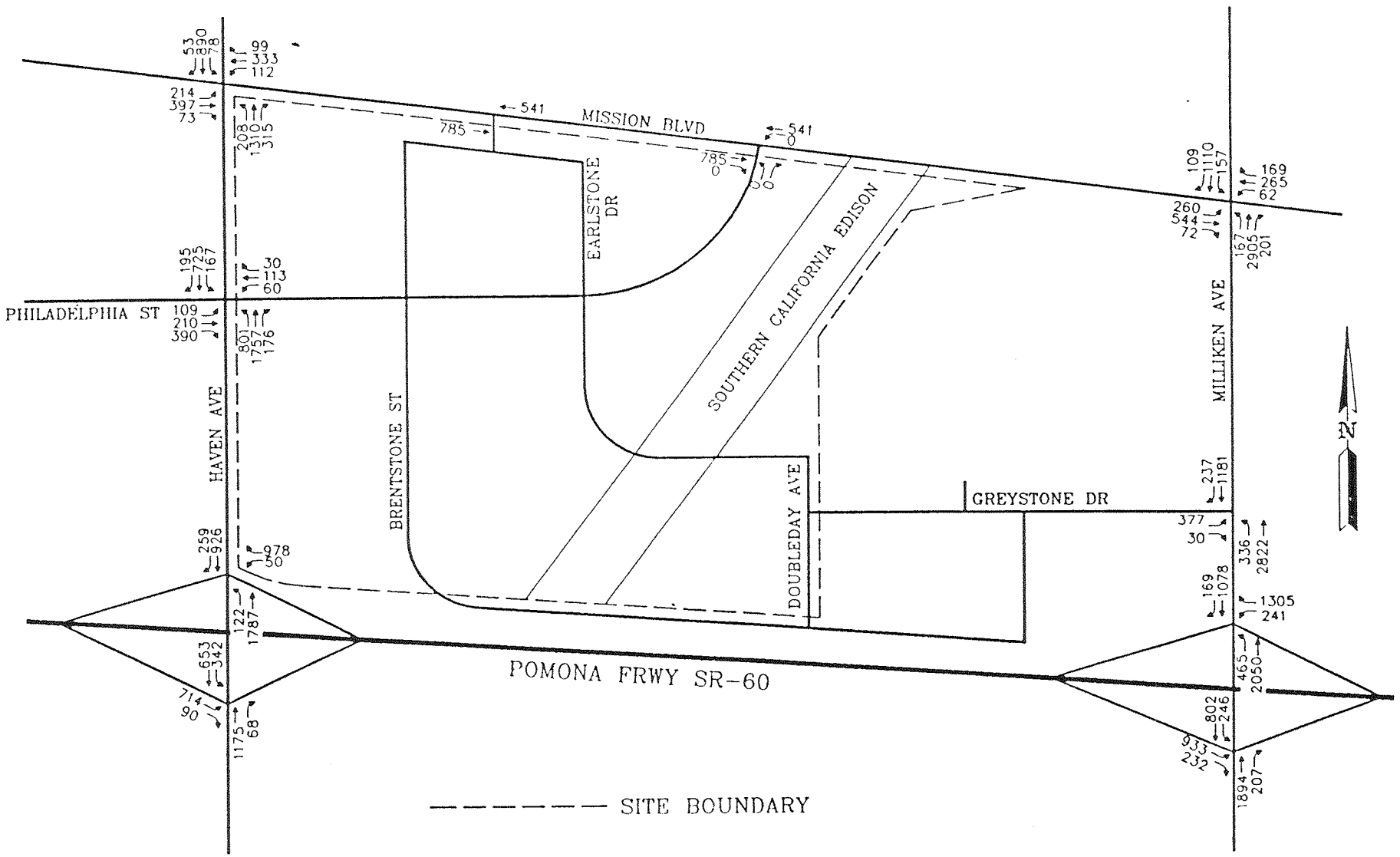
FIGURE 6



2010 LANE CONFIGURATIONS

Barton-Aschman Associates, Inc.

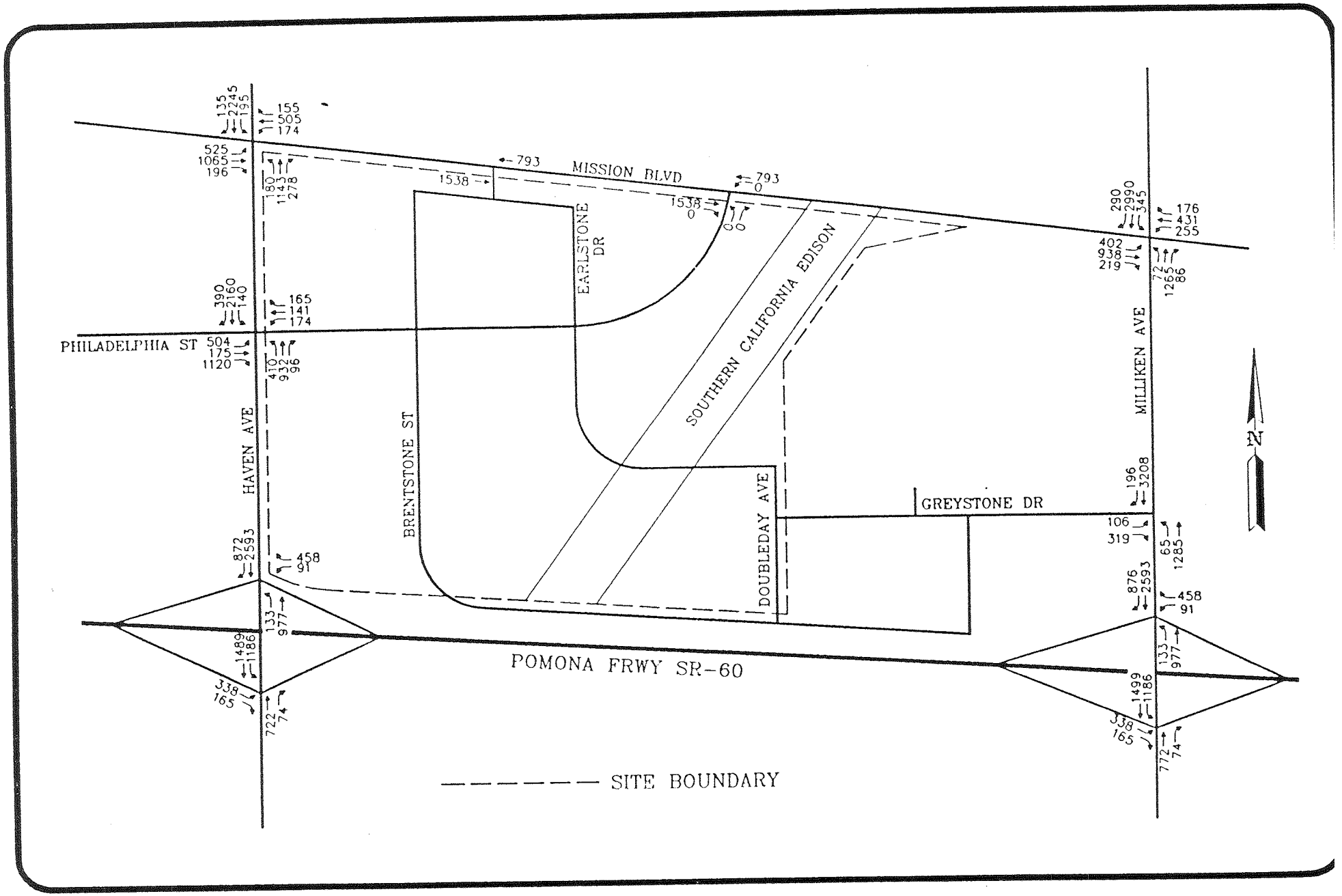
FIGURE 7



1995 ESTIMATED WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

Barton-Aschman Associates, Inc.

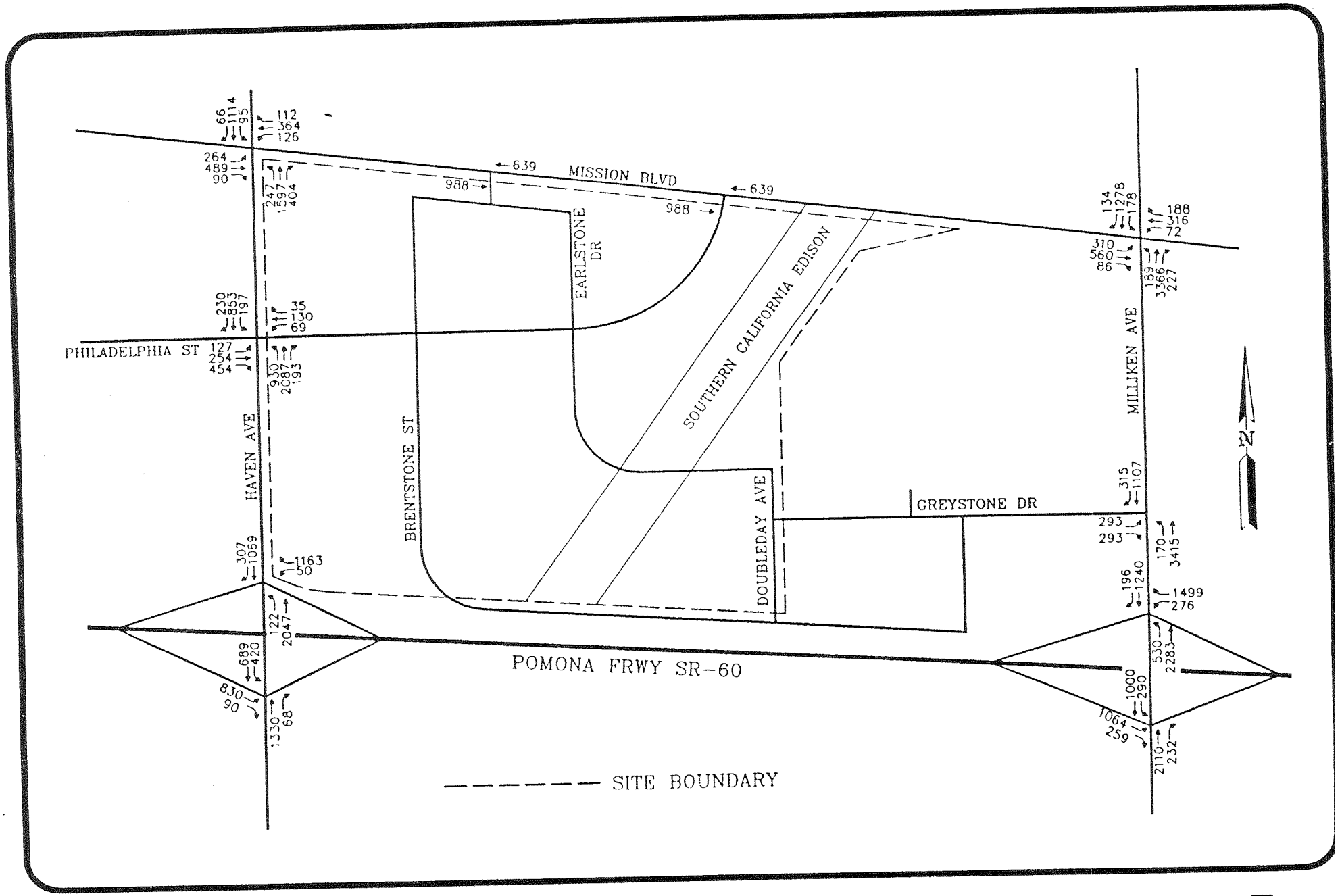
FIGURE 8



1995 ESTIMATED WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

Barton-Aschman Associates, Inc.

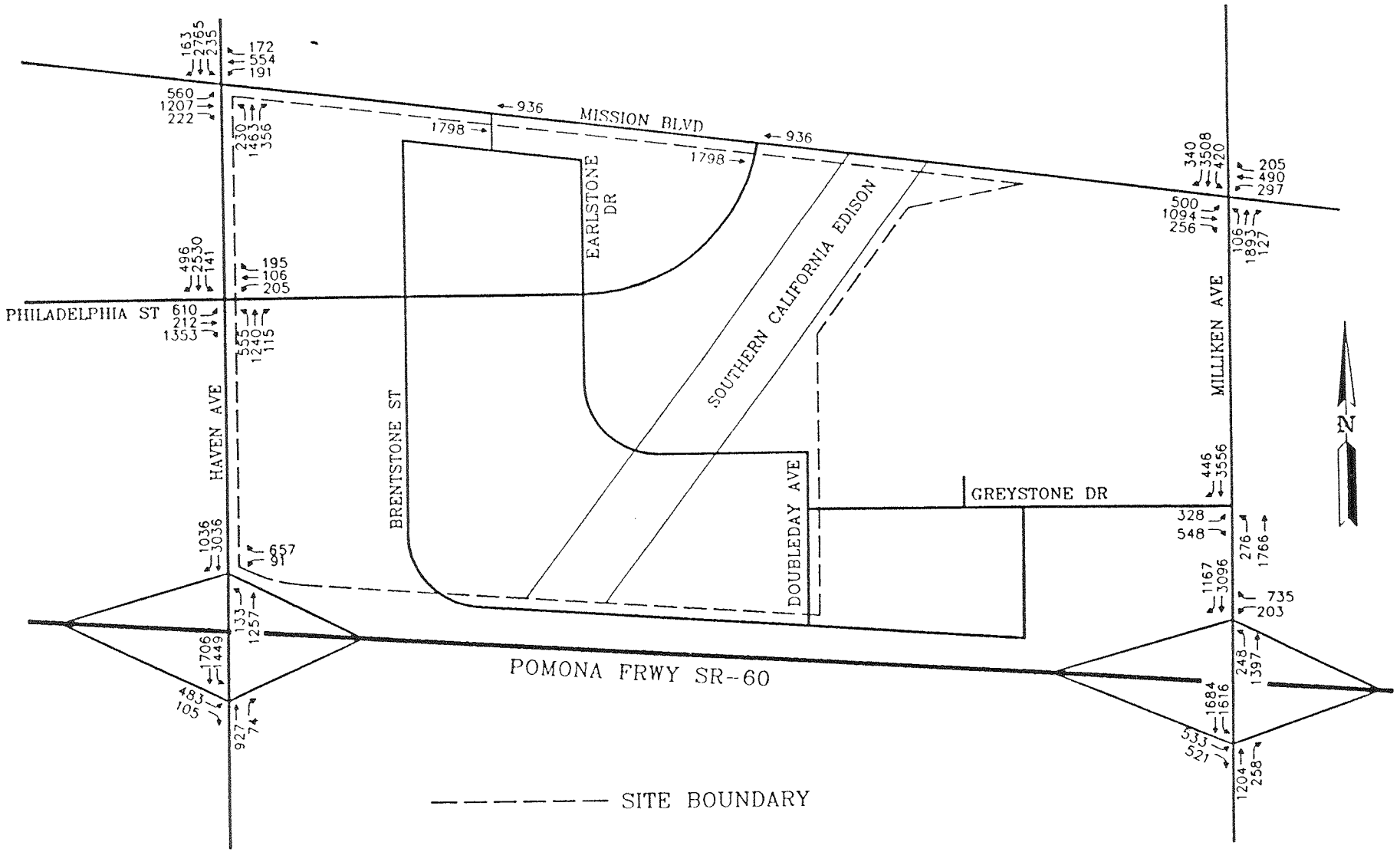
FIGURE 9



2010 ESTIMATED WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

Barton-Aschman Associates, Inc.

FIGURE 10



2010 ESTIMATED WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

Barton-Aschman Associates, Inc.

FIGURE 11

TABLE 3
PROJECT TRIP GENERATION

Land Use	Size[2]	Weekday Peak-Hour Trips[1]					
		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Industrial	79 Acres	775	170	945	130	760	890
Retail	83 Acres	560	240	800	1,715	1,930	3,645
Total	162 Acres	1,335	410	1,745	1,845	2,690	4,535
Zone 64[3] Light Industrial	1,568,800 SF[4]	1,475	267	1,742	628	1,224	1,852
Difference		-140	143	3	1,217	1,466	2,683

NOTES:

(1) Based upon vehicular trip generation rates published in *Trip Generation,* Institute of Transportation Engineers, Fourth Edition, 1987.

(2) Acres of land were converted to square feet of building area by considering 35 percent coverage (source: Lockman & Associates).

(3) Source: *Traffic Analysis Study for Haven Avenue Interchange at SR-60,* Mohle, Grover & Associates, June 1988.

(4) Square feet.

In the evening peak hour, the current development proposal is estimated to generate 4,535 trips (1,845 inbound, 2,690 outbound). Again, comparison to the previous land-use plan indicates a reduction in the effective trip generation estimate. Overall, a net increase of 2,683 peak-hour trips is estimated, including 1,217 additional inbound trips and 1,466 additional outbound trips.

Project Trip Distribution and Assignment

The estimated distribution of project-generated traffic is shown on Figure 12. The trip distribution pattern was based on information presented in other previous traffic studies and consultation with the City of Ontario.

The net project-generated trips were assigned to the local roadway system in accordance with the trip distribution information presented in Figure 12. Figures 13 and 14 show the net project trip assignment for the morning and evening peak hours, respectively.

TOTAL TRAFFIC CONDITIONS

Figures 15 and 16 illustrate the combination of 1995 non-project traffic and the net project-generated traffic during the morning and evening peak hours, respectively. Figures 17 and 18 illustrate similar information for the year 2010.

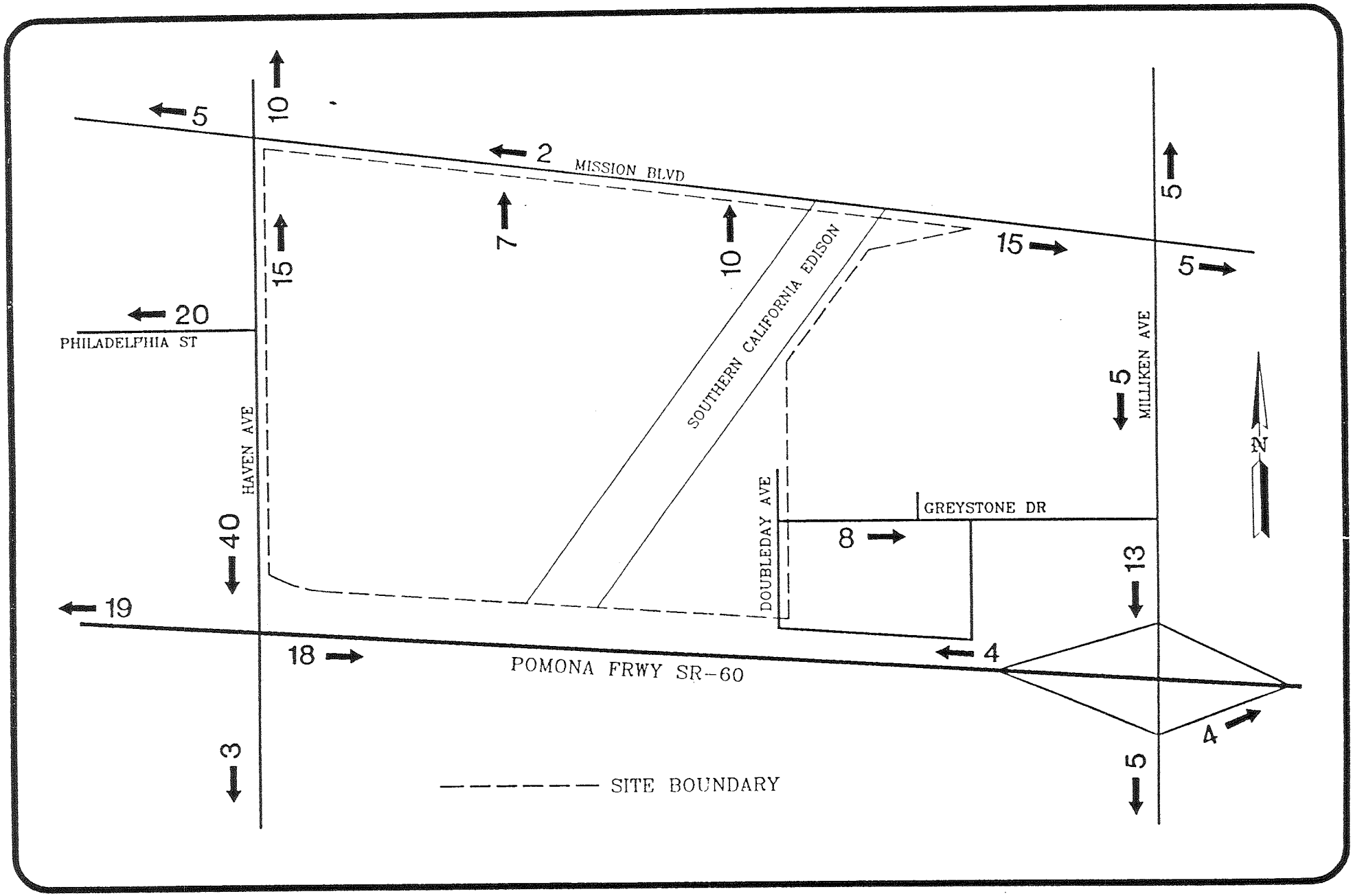
1995 Levels of Service

Table 4 summarizes the 1995 level-of-service analyses at the study intersections following project implementation. As the table reveals, during the morning peak hour, three of the intersections are projected to operate at Level of Service E or F. Specifically, Milliken Avenue/Greystone Drive will be at Level of Service E, while Milliken Avenue/Westbound SR-60 and Milliken Avenue/Eastbound SR-60 are projected to be at Level of Service F. The remaining eight intersections will be at Level of Service D or better, including seven locations at Level of Service A.

During the evening peak hour, three intersections (Milliken Avenue/Greystone Drive, Milliken Avenue/Westbound SR-60, and Milliken Avenue/Eastbound SR-60) are projected to operate at Level of Service F. Mission Boulevard/Milliken Avenue is expected to be at Level of Service E. The remaining seven intersections will operate at Level of Service D or better.

2010 Levels of Service

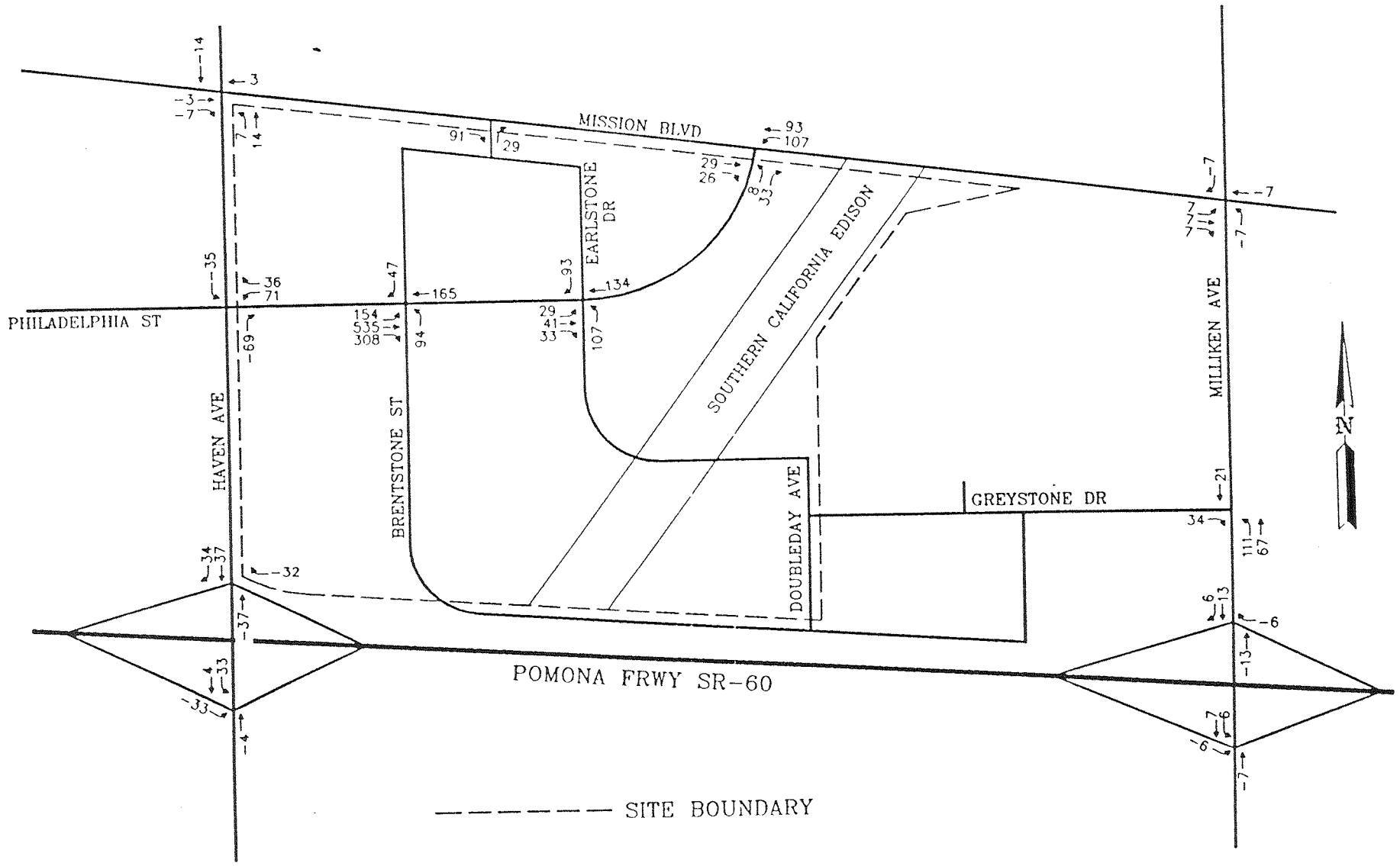
Table 5 summarizes the 2010 level-of-service analyses at the study intersections after project implementation. As the table reveals, during the morning peak hour, none of the intersections are projected to operate at Level of Service E or F. The four key intersections on Milliken



PROJECT TRAFFIC DISTRIBUTION (PERCENT)

Barton-Aschman Associates, Inc.

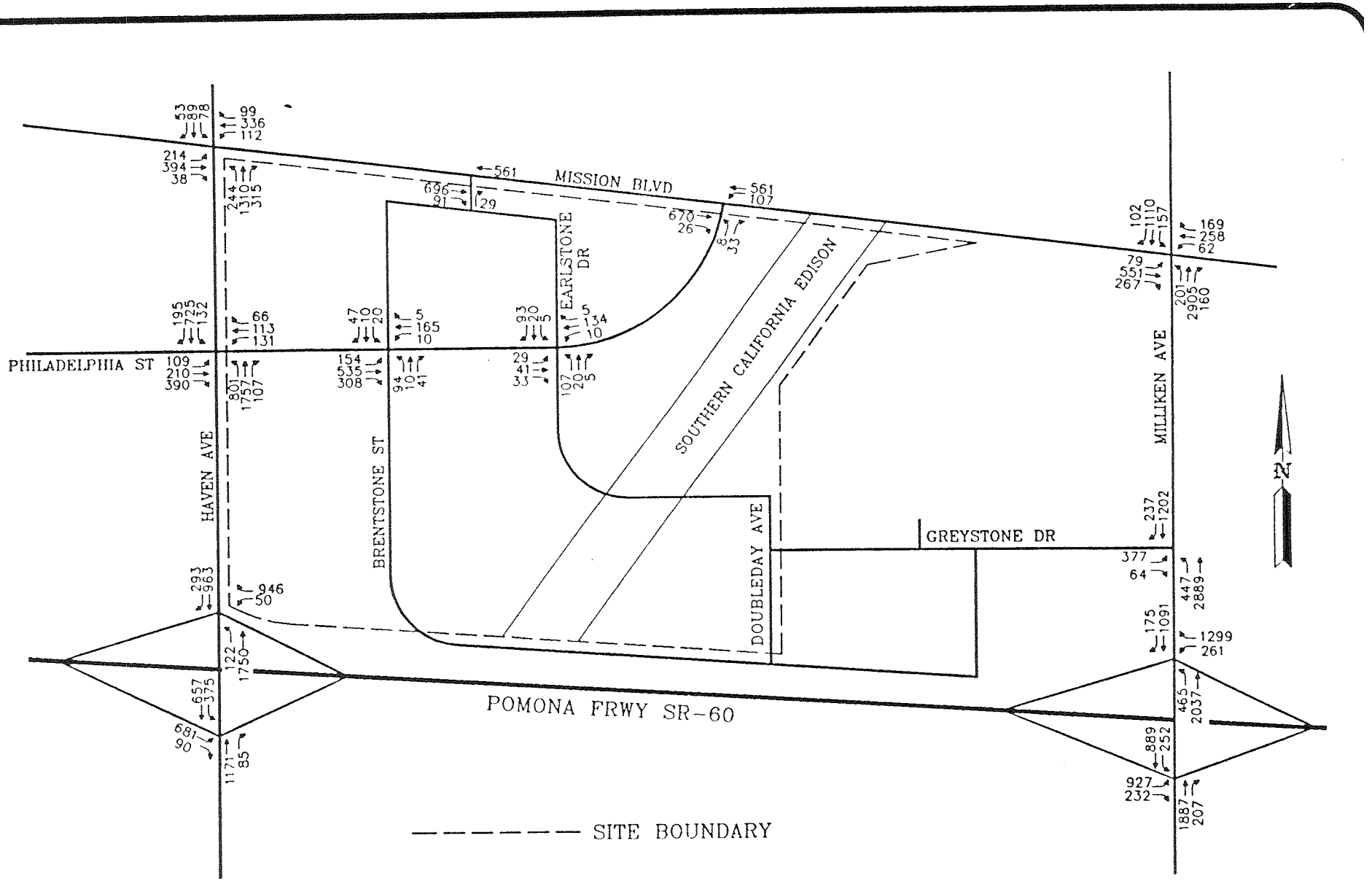
FIGURE 12



NET CHANGE IN AM PEAK HOUR TRAFFIC VOLUMES GENERATED BY THE PROJECT

FIGURE 13

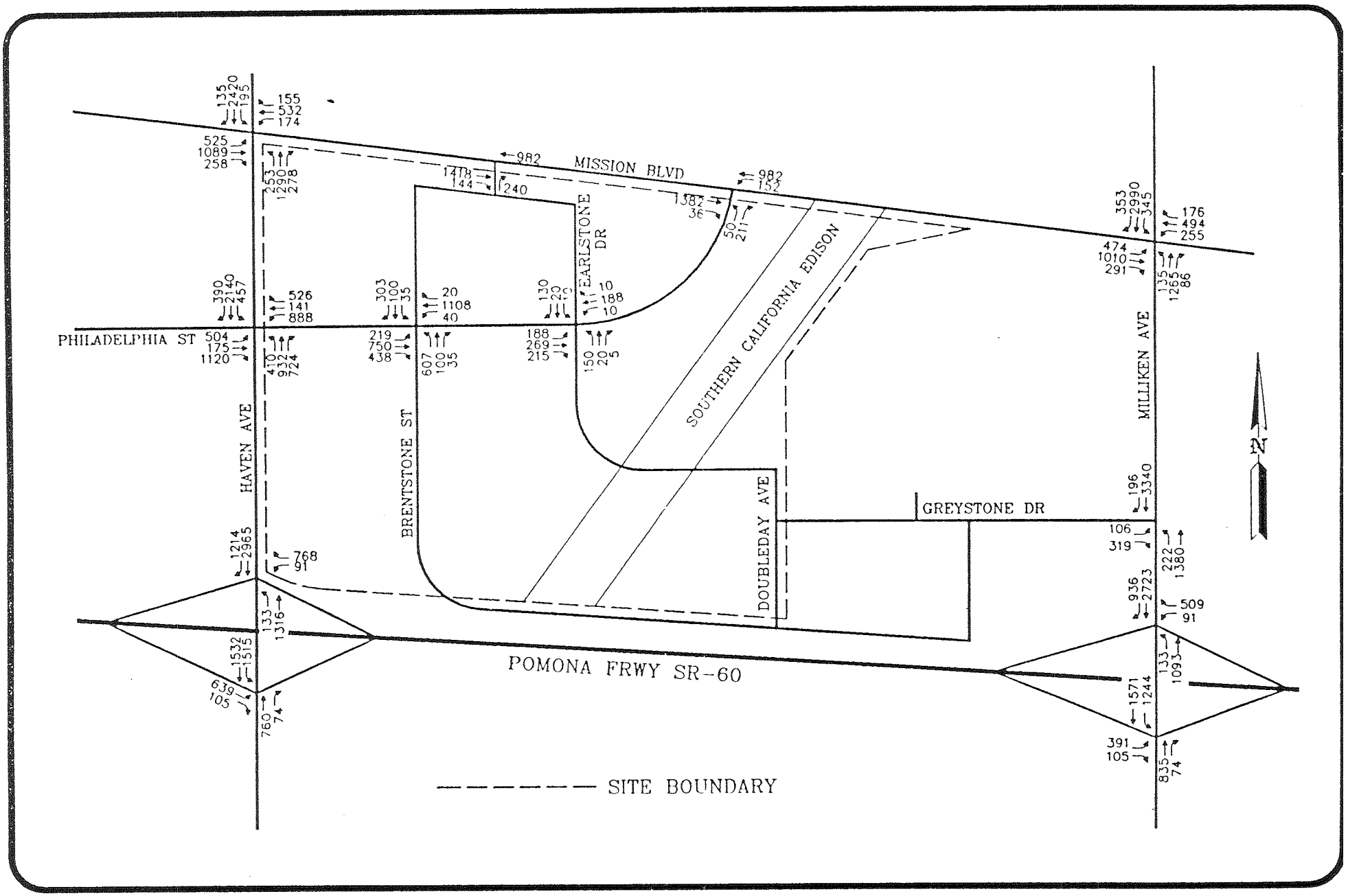
Barton-Aschman Associates, Inc.



1995 TOTAL WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

Barton-Aschman Associates, Inc.

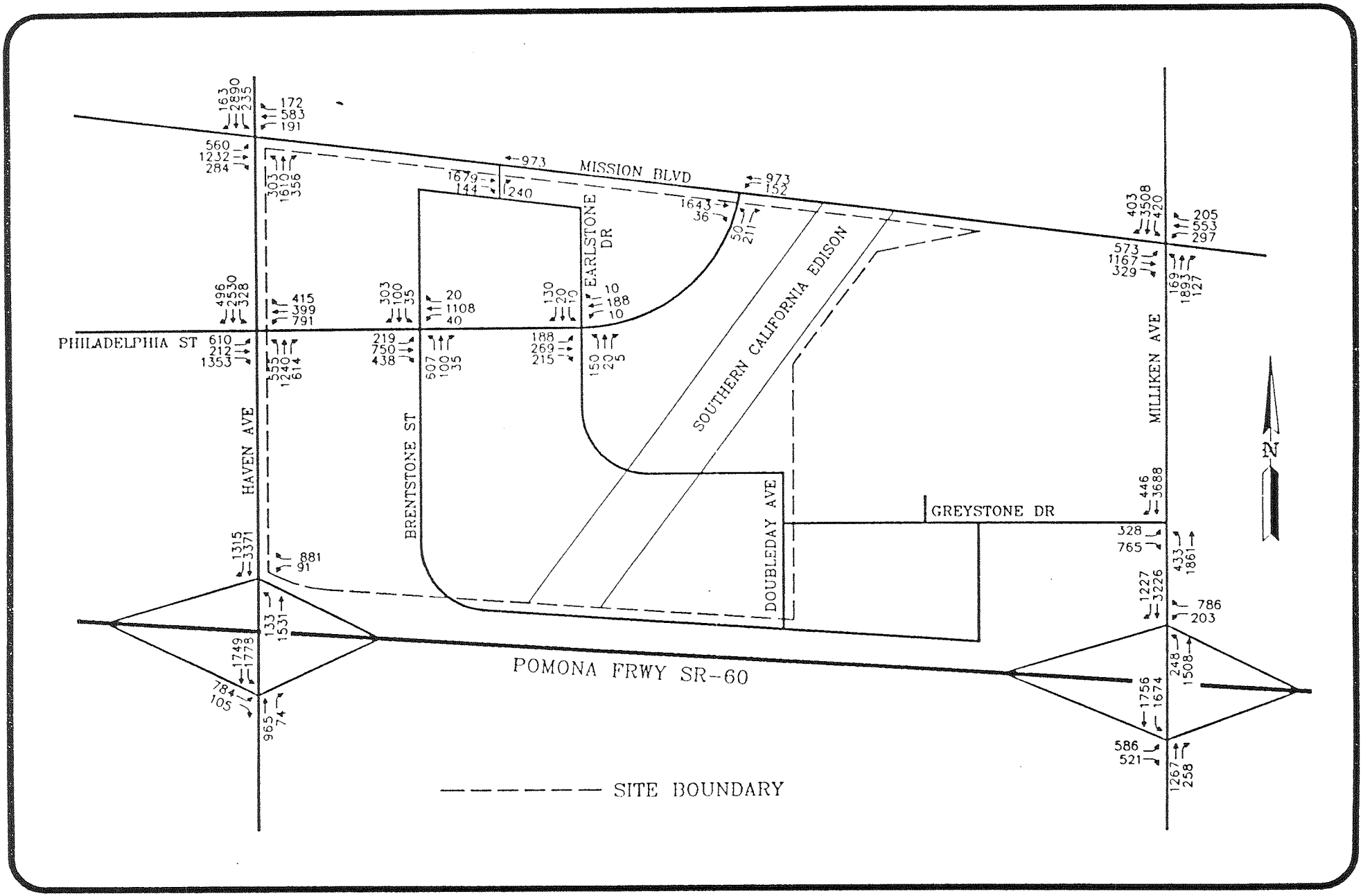
FIGURE 15



1995 TOTAL WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

Barton-Aschman Associates, Inc.

FIGURE 16



2010 TOTAL WEEKDAY PM PEAK HOUR

Barton-Aschman Associates, Inc.

FIGURE 18

TABLE 4
1995 FUTURE LEVEL-OF-SERVICE SUMMARY

Intersection	Weekday Peak Hour							
	With Project				With Mitigation			
	AM		PM		AM		PM	
	V/C[1]	LoS[2]	V/C	LoS	V/C	LoS	V/C	LoS
Mission Blvd./Milliken Ave.	0.81	D	0.97	E	--[3]	--	--	--
Milliken Ave./Greystone Dr.	0.91	E	1.12	F	0.91	E	0.83	D
Milliken Ave./Westbound SR-60	1.26	F	1.10	F	0.85	D	0.83	D
Milliken Ave./Eastbound SR-60	1.25	F	1.23	F	0.80	C	0.78	C
Haven Ave./Mission Blvd.	0.45	A	0.89	D	--	--	--	--
Haven Ave./Philadelphia St.	0.50	A	0.89	D	--	--	--	--
Haven Ave./Westbound SR-60	0.60	A	0.89	D	--	--	--	--
Haven Ave./Eastbound SR-60	0.57	A	0.82	D	--	--	--	--
Philadelphia St./Mission Blvd.	0.23	A	0.41	A	--	--	--	--
Philadelphia St./Brentstone Dr.	0.33	A	0.77	C	--	--	--	--
Philadelphia St./Earlstone Dr.	0.17	A	0.29	A	--	--	--	--

NOTES:
(1) Volume-to-capacity ratio.
(2) Level of service.
(3) No mitigation necessary.

TABLE 5
2010 FUTURE LEVEL-OF-SERVICE SUMMARY

Intersection	Weekday Peak Hour							
	With Project				With Mitigation			
	AM		PM		AM		PM	
	V/C[1]	LoS[2]	V/C	LoS	V/C	LoS	V/C	LoS
Mission Blvd./Milliken Ave.	0.83	D	1.01	F	0.79	C	0.98	E
Milliken Ave./Greystone Dr.	0.83	D	1.14	F	0.81	D	1.00	E
Milliken Ave./Westbound SR-60	0.82	D	0.93	E	--[3]	--	--	--
Milliken Ave./Eastbound SR-60	0.82	D	0.93	E	--	--	--	--
Haven Ave./Mission Blvd.	0.57	A	1.05	F	0.52	A	0.95	E
Haven Ave./Philadelphia St.	0.57	A	0.97	E	--	--	--	--
Haven Ave./Westbound SR-60	0.68	B	0.97	E	--	--	--	--
Haven Ave./Eastbound SR-60	0.66	B	0.97	E	--	--	--	--
Philadelphia St./Mission Blvd.	0.23	A	0.41	A	--	--	--	--
Philadelphia St./Brentstone Dr.	0.33	A	0.77	C	--	--	--	--
Philadelphia St./Earlstone Dr.	0.17	A	0.29	A	--	--	--	--

NOTES:
(1) Volume-to-capacity ratio.
(2) Level of service.
(3) No mitigation necessary.

Avenue are projected to operate at Level of Service D, while the other seven intersections will all be at Level of Service A or B.

During the evening peak hour, three intersections are projected to operate at Level of Service F (Mission Boulevard/Milliken Avenue, Milliken Avenue/Greystone Drive, and Haven Avenue/Mission Boulevard). Five locations will be at Level of Service E, while the remaining three locations will be at either Level of Service A or C.

MITIGATION MEASURES

The mitigation measures described below are recommended at the key intersections to offset the significant adverse traffic impacts due directly to the proposed project. In accordance with City of Ontario policy, these mitigation measures are intended to provide intersection operation at Level of Service E or better.

1995 Conditions

- *Milliken Avenue/Greystone Drive*—Restripe the north approach as three through lanes and one dedicated right-turn lane.

- *Milliken Avenue/Westbound SR-60*—Provide an additional through lane on both the north and south approaches (i.e., a total of three through lanes and one right-turn lane on the north approach and three through lanes and one left-turn lane on the south approach). Also, provide one additional shared left/right-turn lane on the east approach (i.e., a total of one right-turn lane, one left-turn lane, and one shared left-/right-turn lane on the east approach).

- *Milliken Avenue/Eastbound SR-60*—Provide one additional left-turn lane on the north approach (i.e., a total of two through lanes and two left-turn lanes). Also, provide an additional through lane on the south approach (i.e., a total of three through lanes and one right turn-lane). Further, provide an additional shared left/right-turn lane on the west approach (i.e., a total of one right-turn lane, one left-turn lane, and one shared left-/right-turn lane).

2010 Conditions

- *Haven Avenue/Mission Boulevard*—Provide an additional left-turn lane on the south approach (i.e., a total of three through lanes and two left-turn lanes).

- *Mission Boulevard/Milliken Avenue*—Restripe the north approach to provide one shared through/right-turn lane, three through lanes, and two left-turn only lanes.

- *Milliken Avenue/Greystone Drive*—Restripe the west approach to provide one right- turn lane and one shared left-/right-turn lane.

TRAFFIC SIGNAL WARRANTS

Traffic signal warrants have been adopted by the Federal Highway Administration and Caltrans. Certain of these warrants for new signals are based on daily traffic volumes. For this signal warrant analysis, the morning and evening peak-hour volumes were assumed to represent 10 percent of the daily traffic volumes. Appendix A shows the signal warrant analysis in terms of daily traffic volumes.

According to discussions with staff at the City of Ontario, installation of traffic signals has already been approved at the following intersections:

- Haven Avenue/Mission Boulevard
- Haven Avenue/Philadelphia Street
- Haven Avenue/Westbound SR-60
- Haven Avenue/Eastbound SR-60

In addition, based on the projected daily volumes for the 1995 future traffic conditions, traffic signal warrants are met at the following locations:

- Milliken Avenue/Greystone Drive
- Brentstone Street/Philadelphia Street
- Mission Boulevard/Philadelphia Street

It should be noted that signals should be installed only when warranted and that installation of unwarranted signals can increase accident potential, energy consumption, and air pollutant emissions, while costing governmental jurisdictions approximately $500 per month for maintenance and utilities.