APPENDIX D

FIRST AMERICAN TITLE COMPANY

Preliminary Title Reports

APPENDIX D

Amended

First American Title Company

6683 Owens Drive
Pleasanton, CA 94588

Title Officer:	Toni Pinck
Phone:	(925)225-2625
Fax No.:	(925)225-2684
E-Mail:	tpinck@firstam.com
Escrow Officer:	Michelle Chan
Phone:	(925)738-4050
Fax No.:	(866)648-7806
E-Mail:	mlchan@firstam.com
E-Mail Loan Documents to:	Please contact the Escrow Officer for email address for sending loan documents.
Property:	60 Sinnott Lane Milpitas, CA

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth in Exhibit A attached. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of March 08, 2011 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

ALTA Extended Owner's Policy 1402.06 (6-17-06)

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

Kevin Pham and Nhung Le Ngoc Tong, husband and wife as joint tenants

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A fee.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2011-2012, a lien not yet due or payable.

2. General and special taxes and assessments for the fiscal year 2010-2011.

First Installment:	$2,342.32, PAID
Penalty:	$0.00
Second Installment:	$2,342.32, DUE
Penalty:	$0.00
Tax Rate Area:	12-056
A. P. No.:	086-27-008

3. Assessment liens, if applicable, collected with the general and special taxes, including but not limited to those disclosed by the reflection of the following on the tax roll:

   Community Facilities District County Library.

4. Lien(s) for bond assessment(s), if applicable. Further information available upon inquiry.

5. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

6. An easement for a water pipe line and incidental purposes, recorded July 14, 1933 as Book 658, Page 45 of Official Records.

   In Favor of: Mary Way Wentworth

   Affects: A portion of said land. Refer to said document for full particulars.

   The location of the easement cannot be determined from record information.

7. The fact that the land lies within the boundaries of the Milpitas Redevelopment Project Area No. 1, as disclosed by the document recorded January 12, 1977 as Book C534, Page 1 of Official Records.

   Document(s) declaring modifications thereof recorded December 29, 1979 as Book E901, Page 236 of Official Records.

   Document(s) declaring modifications thereof recorded November 16, 1984 as Book J043, Page 665 of Official Records.

   Document(s) declaring modifications thereof recorded October 18, 1996 as Document No. 13489204 of Official Records.

   Document(s) declaring modifications thereof recorded June 18, 2003 as Document No. 17119592 of Official Records.

   Document(s) declaring modifications thereof recorded May 11, 2010 as Document No. 20708005 of Official Records.

8. Any defects, liens, encumbrances or other matters which name parties with the same or similar names as Kevin Pham (4 matters) and Nhung Le Ngoc Tong (3matters). The name search necessary to ascertain the existence of such matters has not been completed. In order to complete this preliminary report or commitment, we will require a statement of information.

9. Water rights, claims or title to water, whether or not shown by the public records.

10. Rights of parties in possession.

11. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/ACSM survey.

Prior to the issuance of any policy of title insurance, the Company will require:

12. An ALTA/ACSM survey of recent date which complies with the current minimum standard detail requirements for ALTA/ACSM land title surveys.

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. According to the latest available equalized assessment roll in the office of the county tax assessor, there is located on the land a(n) Single Family Residence known as 60 Sinnott Lane, Milpitas, California.

2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

3. We find no open deeds of trust. Escrow please confirm before closing.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

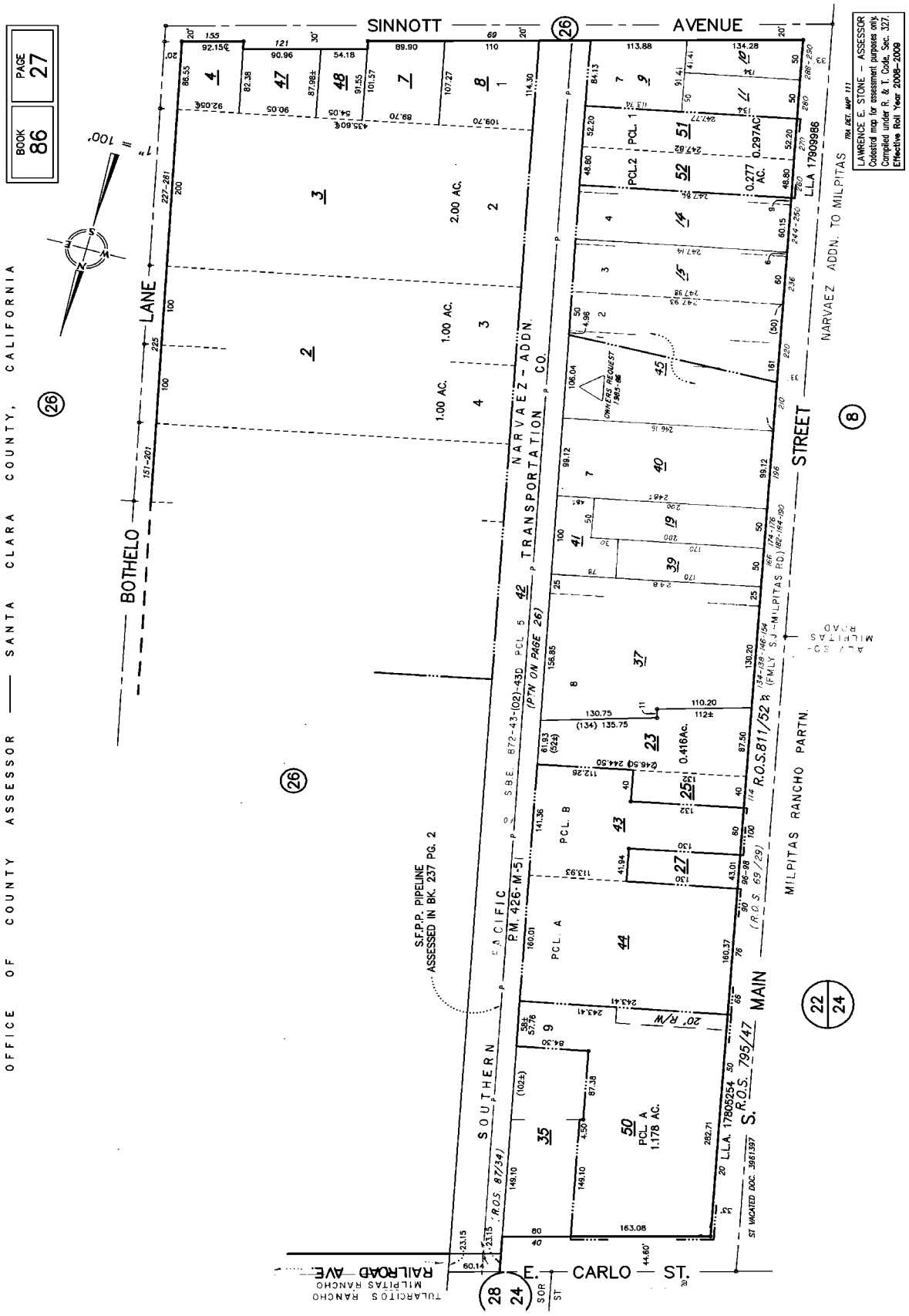
LEGAL DESCRIPTION

Real property in the City of Milpitas , County of Santa Clara, State of California, described as follows:

A PORTION OF LOT ONE, MAP OF NARVAEZ SECOND ADDITION TO THE TOWN OF MILPITAS FILED ON SEPTEMBER 5, 1890 IN BOOK "E" OF MAPS, AT PAGE 41, SANTA CLARA COUNTY RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT A ONE INCH BAR AT THE SOUTHWEST CORNER OF LOT ONE OF THE NARVAEZ SECOND ADDITION TO THE TOWN OF MILPITAS; THENCE ALONG THE EASTERLY BOUNDARY OF THE CENTRAL PACIFIC RAILROAD COMPANY'S RIGHT OF WAY, N. 11 DEG. 36' W. 114.3 FEET TO THE INTERSECTION OF THE LINE BETWEEN LOTS ONE AND TWO AS SHOWN UPON SAID MAP; THENCE ALONG THE LINE BETWEEN SAID LOTS ONE AND TWO N. 78 DEG. 24' E. 109.7 FEET TO A STAKE; THENCE LEAVING SAID LOT LINE S. 11 DEG. 36' E. 107.29 FEET TO A ONE INCH BAR IN THE NORTH LINE OF A ROAD 30 FEET WIDE; THENCE ALONG THE NORTH LINE OF SAID ROAD S. 74 DEG. 50' W. 110 FEET TO THE POINT OF BEGINNING.

APN: 086-27-008


BOOK 86
PAGE 27
OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA
SINNOTT AVENUE
BOTHELO LANE
NARVAEZ - ADDN. TRANSPORTATION CO.
NARVAEZ ADDN. TO MILPITAS
MILPITAS STREET
MILPITAS RANCHO PARTN.
R.O.S.811/52
R.O.S. 795/47
MAIN
SOUTHERN PACIFIC
P.M. 426-M-51
S.F.P.P. PIPELINE ASSESSED IN BK. 237 PG. 2
E. CARLO ST.
RAILROAD AVE
TULARCITOS RANCHO
MILPITAS RANCHO
LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2008–2009

NOTICE

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
   (i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
   (ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
   (iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
   (a) to timely record the instrument of transfer; or
   (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
   (i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
   (ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
   (a) to timely record the instrument of transfer; or
   (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

10. AMERICAN LAND TITLE ASSOCIATION RESIDENTIAL
TITLE INSURANCE POLICY - 1987
EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:

   * land use
   * land division
   * improvements on the land
   * environmental protection

   This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.

This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.

2. The right to take the land by condemning it, unless:
   * a notice of exercising the right appears in the public records on the Policy Date
   * the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking.
3. Title Risks:
   * that are created, allowed, or agreed to by you
   * that are known to you, but not to us, on the Policy Date - unless they appeared in the public records
   * that result in no loss to you
   * that first affect your title after the Policy Date - this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
   * to any land outside the area specifically described and referred to in Item 3 of Schedule A, or
   * in streets, alleys, or waterways that touch your land

   This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 2008
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 2008

Covered Risks 16 (Subdivision Law Violation). 18 (Building Permit). 19 (Zoning) and 21 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building b. zoning
   c. land use d. improvements on the land
   e. land division f. environmental protection

   This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.

   This Exclusion does not limit the coverage described in Covered Risk 11 or 21

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows: Covered Risk 16, 18, 19 and 21, Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A. The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16: 1% of Policy Amount or $5,000.00 (whichever is less)	$10,000.00
Covered Risk 18: 1% of Policy Amount or $5,000.00 (whichever is less)	$25,000.00
Covered Risk 19: 1% of Policy Amount or $5,000.00 (whichever is less)	$25,000.00
Covered Risk 21: 1% of Policy Amount or $2,500.00 (whichever is less)	$5,000.00

12. THIRD GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (1/01/08)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions, or location of any improvement erected on the Land; (iii) the subdivision of land; or(iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b)Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage

provided under Covered Risk 11(b).

14. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 13 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

15. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

   (i) the occupancy, use, or enjoyment of the Land;

   (ii) the character, dimensions, or location of any improvement erected on the Land;

   (iii) the subdivision of land; or

   (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters

   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

   (c) resulting in no loss or damage to the Insured Claimant;

   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or

   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors? rights laws, that the transaction vesting the Title as shown in Schedule A, is

   (a) a fraudulent conveyance or fraudulent transfer; or

   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

16. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 15 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

First American Title

Privacy Information
We Are Committed to Safeguarding Customer Information
In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability
This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

Types of Information
Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information
We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers
Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security
We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

Information Obtained Through Our Web Site
First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.
In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.
There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

Business Relationships
First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

Cookies
Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.
FirstAm.com uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

Fair Information Values
Fairness We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.
Public Record We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.
Use We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.
Accuracy We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.
Education We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.
Security We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain

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First American Title Company

6683 Owens Drive
Pleasanton, CA 94588

Title Officer:	Toni Pinck
Phone:	(925)225-2625
Fax No.:	(925)225-2684
E-Mail:	tpinck@firstam.com

Escrow Officer:	Michelle Chan
Phone:	(925)738-4050
Fax No.:	(866)648-7806
E-Mail:	mlchan@firstam.com

E-Mail Loan Documents to:	Please contact the Escrow Officer for email address for sending loan documents.
Property:	261 Bothelo Avenue Milpitas, CA

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth in Exhibit A attached. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of March 02, 2011 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

Charles Duran and Carol Duran, or their successors, as trustees of the Charles Duran and Carol Duran Revocable Trust dated September 8, 1999, as to an undivided 1/2 interest and Marchand Lessel Venables and Kandra Kay Venables, trustees of the Venables Revocable Trust, dated April 24, 2002 as to an undivided 1/2 interest

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A fee.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2011-2012, a lien not yet due or payable.

2. General and special taxes and assessments for the fiscal year 2010-2011.

First Installment:	$7,309.84, PAID
Penalty:	$0.00
Second Installment:	$7,309.84, DUE
Penalty:	$0.00
Tax Rate Area:	12-056
A. P. No.:	086-27-003

3. Assessment liens, if applicable, collected with the general and special taxes, including but not limited to those disclosed by the reflection of the following on the tax roll:

   Community Facilities District County Library.

4. Lien(s) for bond assessment(s), if applicable. Further information available upon inquiry.

5. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

6. An easement for right to erect a tower, tank and windmill and pump right to lay water pipes and incidental purposes in the document recorded April 01, 1910 in Book 356 of Deeds, Page 58.

7. The fact that the land lies within the boundaries of the Milpitas Redevelopment Project Area No. 1, as disclosed by the document recorded January 12, 1977 as Book C534, Page 1 of Official Records.

   Document(s) declaring modifications thereof recorded October 29, 1979 as Book E901, Page 236 of Official Records.

   Document(s) declaring modifications thereof recorded November 16, 1984 as Book J043, Page 665 of Official Records.

   Document(s) declaring modifications thereof recorded October 18, 1996 as Document No. 13489204 of Official Records.

   Document(s) declaring modifications thereof recorded June 18, 2003 as Document No. 17119592 of Official Records.

   Document(s) declaring modifications thereof recorded May 11, 2010 as Document No. 20708005 of Official Records.

8. An easement for public service and utility easement purposes and incidental purposes, recorded November 27, 1995 as Document No. 13108745 of Official Records.

   In Favor of: The City of Milpitas, California, a Municipal corporation, its successor and assigns

   Affects: A portion of said land. Refer to said document for full particulars

9. A Deed of Trust to secure an original indebtedness of $725,000.00 recorded December 08, 1998 as Document No. 14538480 of Official Records.

   Dated: November 13, 1998

   Trustor: Charles Duran, Carol Duran, Marchand L. Venables and Kandra K. Venables, vested as follows: Charles Duran and Carol Duran, husband and wife, as community property, as to an undivided 1/2 interest and Marchand L. Venables and Kandra K. Venables, husband and wife, as community property, as to an undivided 1/2 interest

   Trustee: Old Republic Title Company

   Beneficiary: Bank of Santa Clara

10. Any defects, liens, encumbrances or other matters which name parties with the same or similar names as Charles Duran and Carol Duran (3 matters). The name search necessary to ascertain the existence of such matters has not been completed. In order to complete this preliminary report or commitment, we will require a statement of information.

11. Water rights, claims or title to water, whether or not shown by the public records.

12. Rights of parties in possession.

Prior to the issuance of any policy of title insurance, the Company will require:

13. With respect to the trust referred to in the vesting:
a. A certification pursuant to Section 18100.5 of the California Probate Code in a form satisfactory to the Company.
b. Copies of those excerpts from the original trust documents and amendments thereto which designate the trustee and confer upon the trustee the power to act in the pending transaction.
c. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require.

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. According to the latest available equalized assessment roll in the office of the county tax assessor, there is located on the land a(n) Single Family Residence known as 261 Bothelo Avenue, Milpitas, California.

2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

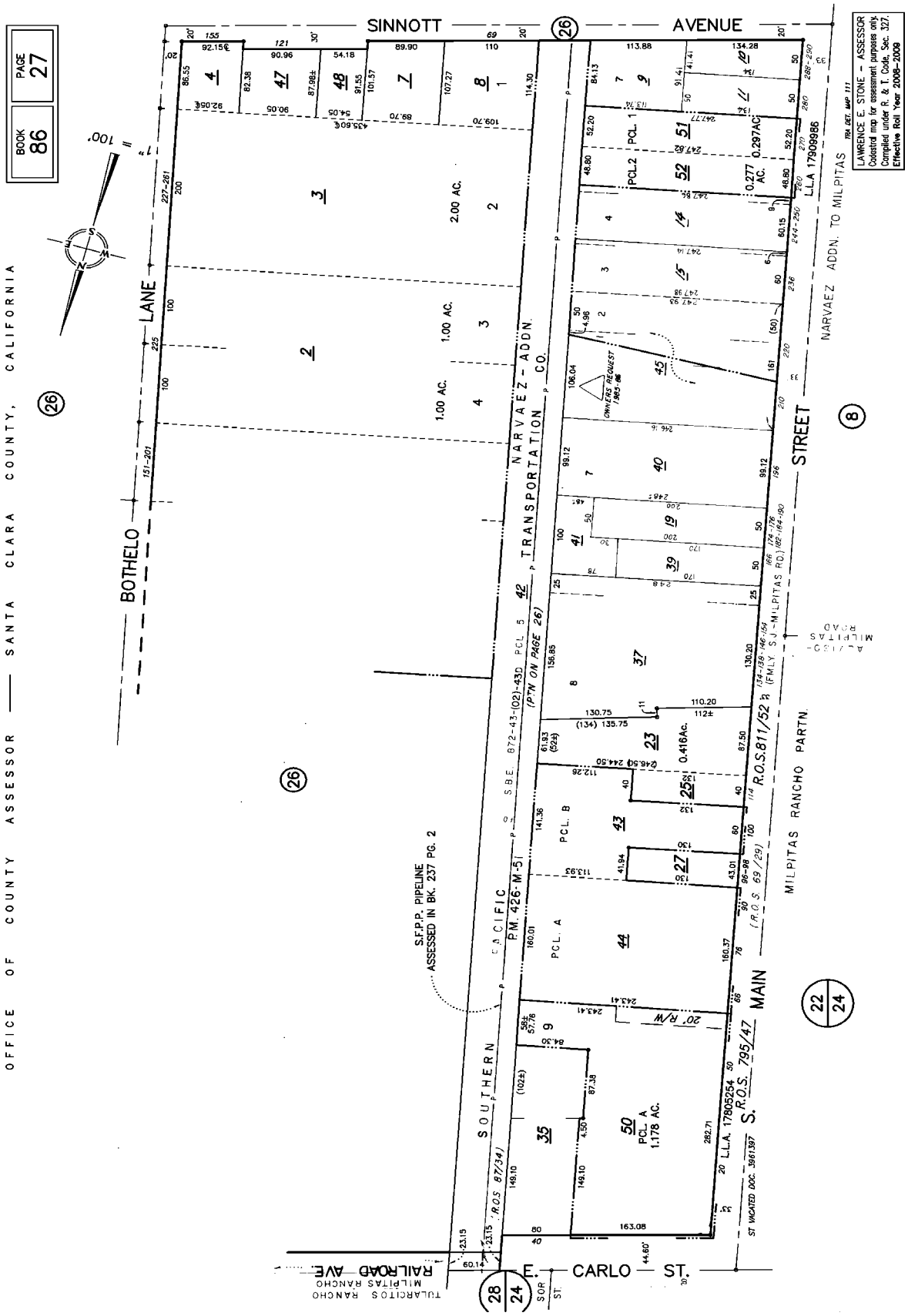
LEGAL DESCRIPTION

Real property in the City of Milpitas , County of Santa Clara, State of California, described as follows:

LOT 2, AS DELINEATED UPON THAT CERTAIN MAP ENTITLED "MAP OF NARVAEZ SECOND ADDITION TO THE TOWN OF MILPITAS", FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, ON SEPTEMBER 5TH, 1890 IN BOOK E OF MAPS, AT PAGE 41.

EXCEPTING THEREFROM AN UNDIVIDED 1/2 INTEREST IN THE WELL NOW ON THAT CERTAIN LOT AS GRANTED IN THE DEED FROM JOSEPH GABRIEL ET UX TO JOSE M. NORA, RECORDED APRIL 1, 1910 IN BOOK 356 OF DEEDS, PAGE 58.

APN: 086-27-003


BOOK 86
PAGE 27
SINNOTT AVENUE
BOTHELO LANE
NARVAEZ - ADDN.
TRANSPORTATION CO.
NARVAEZ ADDN. TO MILPITAS
MILPITAS STREET
MILPITAS RANCHO PARTN.
S. MAIN
E. CARLO ST.
RAILROAD AVE
TULARCITOS RANCHO
MILPITAS RANCHO
SOUTHERN PACIFIC
S.F.P.P. PIPELINE ASSESSED IN BK. 237 PG. 2
OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA

NOTICE

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
(a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
(c) resulting in no loss or damage to the insured claimant;
(d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
(iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:
1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance

resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.

2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
(a) created, suffered, assumed or agreed to by the insured claimant;
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
(c) resulting in no loss or damage to the insured claimant;
(d) attaching or created subsequent to Date of Policy; or
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

10. AMERICAN LAND TITLE ASSOCIATION RESIDENTIAL TITLE INSURANCE POLICY - 1987 EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
   * land use
   * land division
   * improvements on the land
   * environmental protection

   This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.
   This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
   * a notice of exercising the right appears in the public records on the Policy Date
   * the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking.
3. Title Risks:
   * that are created, allowed, or agreed to by you
   * that are known to you, but not to us, on the Policy Date - unless they appeared in the public records
   * that result in no loss to you
   * that first affect your title after the Policy Date - this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
   * to any land outside the area specifically described and referred to in Item 3 of Schedule A, or
   * in streets, alleys, or waterways that touch your land

   This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 2008
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 2008

Covered Risks 16 (Subdivision Law Violation). 18 (Building Permit). 19 (Zoning) and 21 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building b. zoning
   c. land use d. improvements on the land
   e. land division f. environmental protection
   This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This Exclusion does not limit the coverage described in Covered Risk 11 or 21

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows: Covered Risk 16, 18, 19 and 21, Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A. The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16: 1% of Policy Amount or $5,000.00 (whichever is less)	$10,000.00
Covered Risk 18: 1% of Policy Amount or $5,000.00 (whichever is less)	$25,000.00
Covered Risk 19: 1% of Policy Amount or $5,000.00 (whichever is less)	$25,000.00
Covered Risk 21: 1% of Policy Amount or $2,500.00 (whichever is less)	$5,000.00

12. THIRD GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (1/01/08)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions, or location of any improvement erected on the Land; (iii) the subdivision of land; or(iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b)Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
(e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

14. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 13 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

15. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

   (i) the occupancy, use, or enjoyment of the Land;

   (ii) the character, dimensions, or location of any improvement erected on the Land;

   (iii) the subdivision of land; or

   (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters

   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

   (c) resulting in no loss or damage to the Insured Claimant;

   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or

   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors? rights laws, that the transaction vesting the Title as shown in Schedule A, is

   (a) a fraudulent conveyance or fraudulent transfer; or

   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

16. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 15 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

First American Title

Privacy Information
We Are Committed to Safeguarding Customer Information
In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability
This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

Types of Information
Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information
We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers
Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security
We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

Information Obtained Through Our Web Site
First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.
In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.
There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

Business Relationships
First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

Cookies
Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.
FirstAm.com uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

Fair Information Values
Fairness We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.
Public Record We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.
Use We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.
Accuracy We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.
Education We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.
Security We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain

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First American Title Company

6683 Owens Drive
Pleasanton, CA 94588

Title Officer:	Toni Pinck
Phone:	(925)225-2625
Fax No.:	(925)225-2684
E-Mail:	tpinck@firstam.com

Escrow Officer:	Michelle Chan
Phone:	(925)738-4050
Fax No.:	(866)648-7806
E-Mail:	mlchan@firstam.com

E-Mail Loan Documents to:	Please contact the Escrow Officer for email address for sending loan documents.
Property:	Botelho Avenue Milpitas, CA

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth in Exhibit A attached. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of March 02, 2011 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

Michael Darold Preston, or his Successor in Trust, as Trustee of The Michael Darold Preston Trust dated February 20, 1998, as to Tracts One and Two; Michael Darold Preston and Deborah Riordan Preston, or their Successors in Trust, as Trustees of The Preston Family Trust dated February 20, 1988, as to Tract Three; and Michael Darold Preston and Deborah Riordan Preston, Trustees of the Preston Family Trust dated February 20, 1998, as to Tract Four

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A fee.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2011-2012, a lien not yet due or payable.

The Following Matters Affect Tract One:

2. General and special taxes and assessments for the fiscal year 2010-2011.

First Installment:	$28,853.39, PAID
Penalty:	$0.00
Second Installment:	$28,853.39, DUE
Penalty:	$0.00
Tax Rate Area:	12-056
A. P. No.:	086-26-029

3. Assessment liens, if applicable, collected with the general and special taxes, including but not limited to those disclosed by the reflection of the following on the tax roll:

Community Facilities District County Library.

4. The land lies within the boundaries of proposed community facilities District No. 2005-1, as disclosed by a map filed April 08, 2005 in Book 41, Page 3 of maps of assessment and community facilities districts.

5. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

6. An easement for agreement to construct, reconstruct, maintain and use a private roadway and incidental purposes, recorded December 21, 1956 as Book 3691, Page 746 of Official Records.
   In Favor of: Pacific Railroad Company, a Corporation of the State of Utah, Southern Pacific Company, a corportion of Delaware and the Westerly Pacific Railroad Company, a corporation
   Affects: As described therein

7. The terms and provisions contained in the document entitled "Transfer of title to sewer system" recorded January 05, 1965 as Book 6804, Page 106 of Official Records.

8. A lease dated April 15, 1988, executed by Darold J. and Marie D. Preston his wife and Michael D. Preston as lessor and Preston Pipelines Inc. as lessee, recorded May 18, 1988 as Book K539, Page 978 of Official Records.

   A document recorded March 06, 2007 as Document No. 19328768 of Official Records provides that the above document was subordinated to the document recorded March 06, 2007 as Document No. 19328769 of Official Records.

   Defects, liens, encumbrances or other matters affecting the leasehold estate, whether or not shown by the public records.

9. Covenants, conditions, restrictions and easements in the document recorded June 30, 1995 as Document No. 12932396 of Official Records, which provide that a violation thereof shall not defeat or render invalid the lien of any first mortgage or deed of trust made in good faith and for value, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status, national origin, sexual orientation, marital status, ancestry, source of income or disability, to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes or applicable state law. Lawful restrictions under state and federal law on the age of occupants in senior housing or housing for older persons shall not be construed as restrictions based on familial status.

10. An easement for channel and incidental purposes, recorded October 01, 1999 as Document No. 15004858 of Official Records.
    In Favor of: Union Pacific Railroad Company, a Delaware Corporation
    Affects: As described therein

11. An easement for channel and incidental purposes, recorded October 01, 1999 as Document No. 15004859 of Official Records.
    In Favor of: City of Milpitas, a Municipal Corporation
    Affects: As described therein

12. Covenants, conditions, restrictions and easements in the document recorded October 26, 1999 as Document No. 15031874 of Official Records, which provide that a violation thereof shall not defeat or render invalid the lien of any first mortgage or deed of trust made in good faith and for value, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, handicap, familial status, national origin, sexual orientation, marital status, ancestry, source of income or disability, to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes or applicable state law. Lawful restrictions under state and federal law on the age of occupants in senior housing or housing for older persons shall not be construed as restrictions based on familial status.

13. A Deed of Trust to secure an original indebtedness of $165,165.00 recorded February 01, 2000 as Document No. 15139338 of Official Records.

Dated:	January 10, 1999
Trustor:	Michael D. Preston, a married man as his sole and separate property
Trustee:	Chicago Title Company, a California corportion
Beneficiary:	Darold J. Preston and Marie D. Preston, husband and wife, as community property

Notes:
a. If this deed of trust is to be eliminated in the policy or policies contemplated by this report/commitment, we will require all of the following prior to the recordation of any documents or the issuance of any policy of title insurance:
i. Original note and deed of trust.
ii. Payoff demand statement signed by all present beneficiaries.
iii. Request for reconveyance signed by all present beneficiaries.
b. If the payoff demand statement or the request for reconveyance is to be signed by a servicer, we will also require a full copy of the loan servicing agreement executed by all present beneficiaries.
c. If any of the beneficial interest is presently held by trustees under a trust agreement, we will require a certification pursuant to Section 18100.5 of the California Probate Code in a form satisfactory to the Company

14. A Deed of Trust to secure an original indebtedness of $2,034,510.37 recorded March 06, 2007 as Document No. 19328769 of Official Records.

Dated:	February 20, 2007
Trustor:	Michael Darold Preston, as Trustee of the Michael Darold Preston Trust dated February 20, 1998
Trustee:	Old Republic Title Company, a corporation
Beneficiary:	Comerica Bank

A document entitled "Assignment of Real Property Leases and Rents" recorded March 06, 2007 as Document No. 19328770 of Official Records, as additional security for the payment of the indebtedness secured by the deed of trust recorded March 06, 2007 as Document No. 19328769 of Official Records.

<u>The Following Matters Affect Tract Two:</u>

15. General and special taxes and assessments for the fiscal year 2010-2011.

First Installment:	$32,536.45, PAID
Penalty:	$0.00
Second Installment:	$32,536.45, DUE
Penalty:	$0.00
Tax Rate Area:	12-056
A. P. No.:	086-26-030

16. Assessment liens, if applicable, collected with the general and special taxes, including but not limited to those disclosed by the reflection of the following on the tax roll:

    Community Facilities District County Library.

17. The land lies within the boundaries of proposed community facilities District No. 2005-1, as disclosed by a map filed April 08, 2005 in Book 41, Page 3 of maps of assessment and community facilities districts.

18. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

19. An easement for right to construct, reconstruct, maintain and use a 21 inch vitrified clay sewer pipe and incidental purposes, recorded January 26, 1955 as Book 3068, Page 460 of Official Records.
    In Favor of: Santa Clara County Sanitation District No. 8
    Affects: As described therein

20. The terms and provisions contained in the document entitled "Agreement" recorded December 21, 1956 as Book 3691, Page 746 of Official Records.

21. An easement for construct, reconstruct, maintain and use a street or highway and incidental purposes, recorded August 17, 1964 as Book 6625, Page 261 of Official Records.
    In Favor of: City of Milpitas, a Municipal Corporation of the State of California
    Affects: As described therein

22. An easement for channel and incidental purposes, recorded October 01, 1999 as Document No. 15004858 of Official Records.
    In Favor of: Union Pacific Railroad Company, a Delaware Corporation
    Affects: As described therein

23. An easement for access and waterline and incidental purposes, recorded October 01, 1999 as Document No. 15004860 of Official Records.
    In Favor of: City of Milpitas, California, a Municipal Corporation
    Affects: As described therein

24. A Deed of Trust to secure an original indebtedness of $5,250,000.00 recorded May 18, 2001 as Document No. 15684324 of Official Records.

Dated:	May 18, 2001
Trustor:	Michael D. Preston, a married man as his sole and separate property
Trustee:	Chicago Title Company
Beneficiary:	Security Life of Denver Insurance Company, a Colorado corporation

A document entitled "Assignment of Rents and Leases" recorded May 18, 2001 as Document No. 15684325 of Official Records, as additional security for the payment of the indebtedness secured by the deed of trust recorded May 18, 2001 as Document No. 15684324 of Official Records.

25. A financing statement recorded May 18, 2001 as Document No. 15684326 of Official Records.

Debtor:	Michael D. Preston
Secured party:	Security Life of Denver Insurance Company

An amendment to the financing statement was recorded May 18, 2006 as Document No. 18940702 of Official Records.

26. Any facts, rights, interests or claims that may exist or arise by reason of the following matters disclosed by an ALTA/ACSM survey made by Kier & Wright Civil Engineers & Surveyors, Inc. on March 15, 2001, designated Job Number 95130-5:
(A) the fact that the parking area and curbs on the northerly portion of said land encroach onto the 10.00 foot waterline easment and onto the 20.00 foot storm drain easement (15004860).

The Following Matters Affect Tract Three:

27. General and special taxes and assessments for the fiscal year 2010-2011.

First Installment:	$2,071.89, PAID
Penalty:	$0.00
Second Installment:	$2,071.89, DUE
Penalty:	$0.00
Tax Rate Area:	12-056
A. P. No.:	028-23-018

28. Assessment liens, if applicable, collected with the general and special taxes, including but not limited to those disclosed by the reflection of the following on the tax roll:

Community Facilities District County Library.

29. The land lies within the boundaries of proposed community facilities District No. 2005-1, as disclosed by a map filed April 08, 2005 in Book 41, Page 3 of maps of assessment and community facilities districts.

30. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

31. The terms and provisions contained in the document entitled "Agreement" recorded January 3, 1928 as Book 44, Page 278 of Miscellaneous Records.

32. The effect of a map purporting to show the land and other property, filed Book 363, Page 33 of Record of Surveys.

33. An easement for ingress and egress and incidental purposes, recorded April 14, 1998 as Document no. 14139464 of Official Records.
    In Favor of: Union Pacific Railroad Company
    Affects: As described therein

34. An easement shown or dedicated on the Map as referred to in the legal description

    For: public service utility and incidental purposes.

35. The rights, if any, of a city, public utility or special district, pursuant to Section 8345 et seq. of the California Streets and Highways Code, to preserve a public easement in portions of Carlo Street and Railroad Avenue as the same was vacated by the document recorded April 14, 1998 as Document No. 14139462 of Official Records.

36. An easement for waterline, storm line & channel and incidental purposes, recorded October 01, 1999 as Document No. 15004860 of Official Records.
    In Favor of: The City of Milpitas, California, a Municipal Corporation, its successors and assigns
    Affects: As described therein

<u>The Following Matters Affect Tract Four:</u>

37. General and special taxes and assessments for the fiscal year 2010-2011.

First Installment:	$7,771.62, PAID
Penalty:	$0.00
Second Installment:	$7,771.62, DUE
Penalty:	$0.00
Tax Rate Area:	12-056
A. P. No.:	086-27-002

38. Assessment liens, if applicable, collected with the general and special taxes, including but not limited to those disclosed by the reflection of the following on the tax roll:

    Community Facilities District County Library.

39. The land lies within the boundaries of proposed community facilities District No. 2005-1, as disclosed by a map filed April 08, 2005 in Book 41, Page 3 of maps of assessment and community facilities districts.

40. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

41. Water rights, claims or title to water, whether or not shown by the public records.

The Following Matters Affect Tracts One, Two, Three and Four:

42. The fact that the land lies within the boundaries of the Milpitas Redevelopment Project Area No. 1 Redevelopment Project Area, as disclosed by the document recorded January 12, 1977 as Book C534, Page 1 of Official Records.

    Document(s) declaring modifications thereof recorded December 29, 1979 as Book E901, Page 236 of Official Records.

    Document(s) declaring modifications thereof recorded November 16, 1984 as Book J043, Page 665 of Official Records.

    Document(s) declaring modifications thereof recorded October 18, 1996 as Document No. 13489204 of Official Records.

    Document(s) declaring modifications thereof recorded June 08, 2003 as Document No. 17119592 of Official Records.

    Document(s) declaring modifications thereof recorded December 19, 2006 as Document No. 19232155 of Official Records.

    Document(s) declaring modifications thereof recorded May 11, 2010 as Document No. 20708005 of Official Records.

43. Rights of parties in possession.

44. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/ACSM survey.

Prior to the issuance of any policy of title insurance, the Company will require:

45. With respect to the trust referred to in the vesting:
    a. A certification pursuant to Section 18100.5 of the California Probate Code in a form satisfactory to the Company.
    b. Copies of those excerpts from the original trust documents and amendments thereto which designate the trustee and confer upon the trustee the power to act in the pending transaction.
    c. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require.

46. An ALTA/ACSM survey of recent date which complies with the current minimum standard detail requirements for ALTA/ACSM land title surveys.

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. The property covered by this report is vacant land.

2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

3. The following additional parcel or parcels has/have appeared in a recorded document or documents describing the land referred to in this preliminary report/commitment:

   TRACT 4A: TOGETHER WITH:

   A. AN UNDIVIDED 1/2 INTEREST IN THE WELL NOW ON THAT CERTAIN LOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, AND BOUNDED AND PARTICULARLY DESCRIBED AS FOLLOWS:

   LOT 2 OF THE NARVAEZ SECOND ADDITION OF THE TOWN OF MILPITAS, ACCORDING TO A MAP NOW OF RECORD IN THE RECORDER'S OFFICE IN BOOK E OF MAPS, PAGE 41.

   B. RIGHT OF WAY 5 FEET IN WIDTH FROM THE NEAREST POINT ON LOT 3 OF SAID NARVAEZ SECOND ADDITION TO SAID WELL AND THE RIGHT TO ERECT A TOWER, TANK AND WINDMILL WITHIN 20 FEET SQUARE ROUND SAID WELL AND TO PLACE A PUMP THEREIN, SAID TOWER, TANK, WINDMILL AND PUMP TO BE FOR THE JOINT USE AND BENEFIT OF THE PARTIES TO THIS INSTRUMENT, THEIR HEIRS AND ASSIGNS. ALSO THE RIGHT TO LAY WATER PIPES FROM SAID WELL ON AND IN THE SAID RIGHT OF WAY AND TO MAINTAIN A GATE ON THE DIVIDING LINE OF SAID LOTS 2 AND 3 AT THE POINT WHERE SAID RIGHT OF WAY TERMINATES, AS GRANTED IN THE DEED FROM JOSEPH GABRIEL AND WIFE TO JOZE M. NOEA, DATED APRIL 1, 1910 AND RECORDED APRIL 1, 1910 IN BOOK 356 OF DEEDS, PAGE 58.

   No insurance will be provided as to these parcels, but the parties to the transaction contemplated by this preliminary report/commitment may wish to consider whether these parcels should be included in the documents to be recorded.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

LEGAL DESCRIPTION

Real property in the City of Milpitas , County of Santa Clara, State of California, described as follows:

TRACT ONE:

ALL OF LOT 5, AS SHOWN UPON THAT CERTAIN MAP ENTITLED "MAP OF NARVAES SECOND ADDITION TO THE TOWN OF MILPITAS" WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA ON SEPTEMBER 5, 1890, IN BOOK E OF MAPS AT PAGE 41, AND A PORTION OF THAT CERTAIN PROPERTY DESCRIBED IN THAT CERTAIN DEED DATED JANUARY 29, 1930, RECORDED FEBRUARY 19, 1930, IN VOLUME 503, OFFICIAL RECORDS AT PAGE 357, RECORDS OF SANTA CLARA COUNTY, AND A PORTION OF PARCEL ONE AND PARCEL TWO DESCRIBED IN THAT CERTAIN GRANT DEED RECORDED APRIL 19, 1953, IN BOOK 2602 AT PAGE 517, RECORDS OF SAID COUNTY, SAID PROPERTY BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST NORTHWESTERLY CORNER OF SAID LOT 5;

THENCE ALONG WESTERLY LINE OF THAT CERTAIN PROPERTY DESCRIBED IN SAID DEED RECORDED IN VOLUME 503 AT PAGE 357 OF OFFICIAL RECORDS, NORTH 11° 30' 00" WEST, 329.32 FEET;

THENCE LEAVING SAID WESTERLY LINE THE FOLLOWING SIX (6) COURSES:

NORTH 78° 50' 00" EAST, 386.47 FEET TO THE NON-TANGENT CURVE TO THE LEFT;
SOUTHEASTERLY ALONG SAID CURVE HAVING A RADIUS OF 820.00 FEET, WHOSE RADIUS POINT BEARS NORTH 70° 12' 52" EAST, THROUGH A CENTRAL ANGLE OF 9° 37' 14", AN ARC DISTANCE OF 137.68 FEET;
SOUTH 29° 24' 22" EAST, 207.78 FEET TO THE TANGENT CURVE TO THE RIGHT,
SOUTHERLY ALONG SAID CURVE, HAVING A RADIUS OF 114.50 FEET, THROUGH A CENTRAL OF 18° 18' 27", AN ARC DISTANCE OF 36.59 FEET;
SOUTH 11° 05' 55" EAST, 131.66 FEET;
SOUTH 78° 30' 00" WEST, 51.06 FEET TO THE SOUTHWESTERLY BOUNDARY OF SAID PARCEL TWO;

THENCE ALONG THE SOUTHWESTERLY BOUNDARY OF SAID PARCEL TWO NORTH 11° 28' 50" WEST, 70.00 FEET TO THE MOST SOUTHEASTERLY CORNER OF SAID LOT 5;

THENCE ALONG THE SOUTHERLY LINE OF SAID LOT 5 SOUTH 78° 30' 00" WEST, 435.09 FEET;

THENCE ALONG THE WESTERLY LINE OF SAID LOT 5 NORTH 11° 30' 00" WEST, 100.00 FEET TO THE POINT OF BEGINNING.

TRACT TWO:

BEING A PORTION OF THAT CERTAIN PROPERTY DESCRIBED IN THAT CERTAIN DEED DATED JANUARY 29, 1930, RECORDED FEBRUARY 19, 1930, IN VOLUME 503 OFFICIAL RECORDS, AT PAGE 357, RECORDS OF SANTA CLARA COUNTY, AND A PORTION OF PARCEL ONE DESCRIBED IN THAT CERTAIN GRANT DEED, RECORDED APRIL 19, 1953, IN BOOK 2602 AT PAGE 517, RECORDS OF SAID COUNTY, SAID PROPERTY BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST NORTHWESTERLY CORNER OF LOT 5, AS SHOWN UPON THAT CERTAIN MAP ENTITLED "MAP OF NARVAES SECOND ADDITION TO THE TOWN OF MILPITAS", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF SANTA CLARA COUNTY, STATE OF CALIFORNIA ON SEPTEMBER 5, 1890 IN BOOK E OF MAPS, AT PAGE 41.

THENCE ALONG WESTERLY LINE OF THAT CERTAIN PROPERTY DESCRIBED IN SAID DEED, RECORDED IN VOLUME 503 AT PAGE 357 OF OFFICIAL RECORDS, NORTH 11° 30' 00" WEST, 329.32 FEET TO THE POINT OF BEGINNING.

THENCE CONTINUING ALONG SAID WESTERLY LINE NORTH 11° 30' 00" EAST, 651.33 FEET TO THE NORTHERLY LINE OF CALAVERAS ROAD;

THENCE ALONG SAID NORTHERLY LINE OF CALAVERAS ROAD NORTH 74° 31' 56" EAST, 301.91 FEET;

THENCE LEAVING SAID NORTHERLY LINE, THE FOLLOWING FIVE (5) COURSES:

SOUTH 18° 40' 44" EAST, 46.27 FEET;
NORTH 74° 31' 56" EAST, 20.87 FEET;
SOUTH 16° 44' 06" EAST, 586.85 FEET TO THE TANGENT CURVE TO THE LEFT;

SOUTHEASTERLY ALONG SAID CURVE, HAVING A RADIUS OF 820.00 FEET, THROUGH A CENTRAL ANGLE OF 3° 03' 03", AN ARC DISTANCE OF 43.66 FEET; SOUTH 78º 30' 00" WEST 386.47 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPTING THEREFROM ALL MINERALS AND MINERAL RIGHTS, WITH NO RIGHTS OF SURFACE ENTRY, INTEREST AND ROYALTIES, INCLUDING, WITHOUT LIMITING THE GENERALITY THEREOF, OIL, GAS AND OTHER HYDROCARBON SUBSTANCES, AS WELL AS METALLIC OR OTHER SOLID MATERIALS IN AND UNDER SAID LAND, AS RESERVED IN THAT CERTAIN DEED EXECUTED BY SOUTHERN PACIFIC TRANSPORTATION COMPANY, A DELAWARE CORPORATION, RECORDED JUNE 30, 1995 IN BOOK N902, PAGE 1723, OFFICIAL RECORDS.

TRACT THREE:

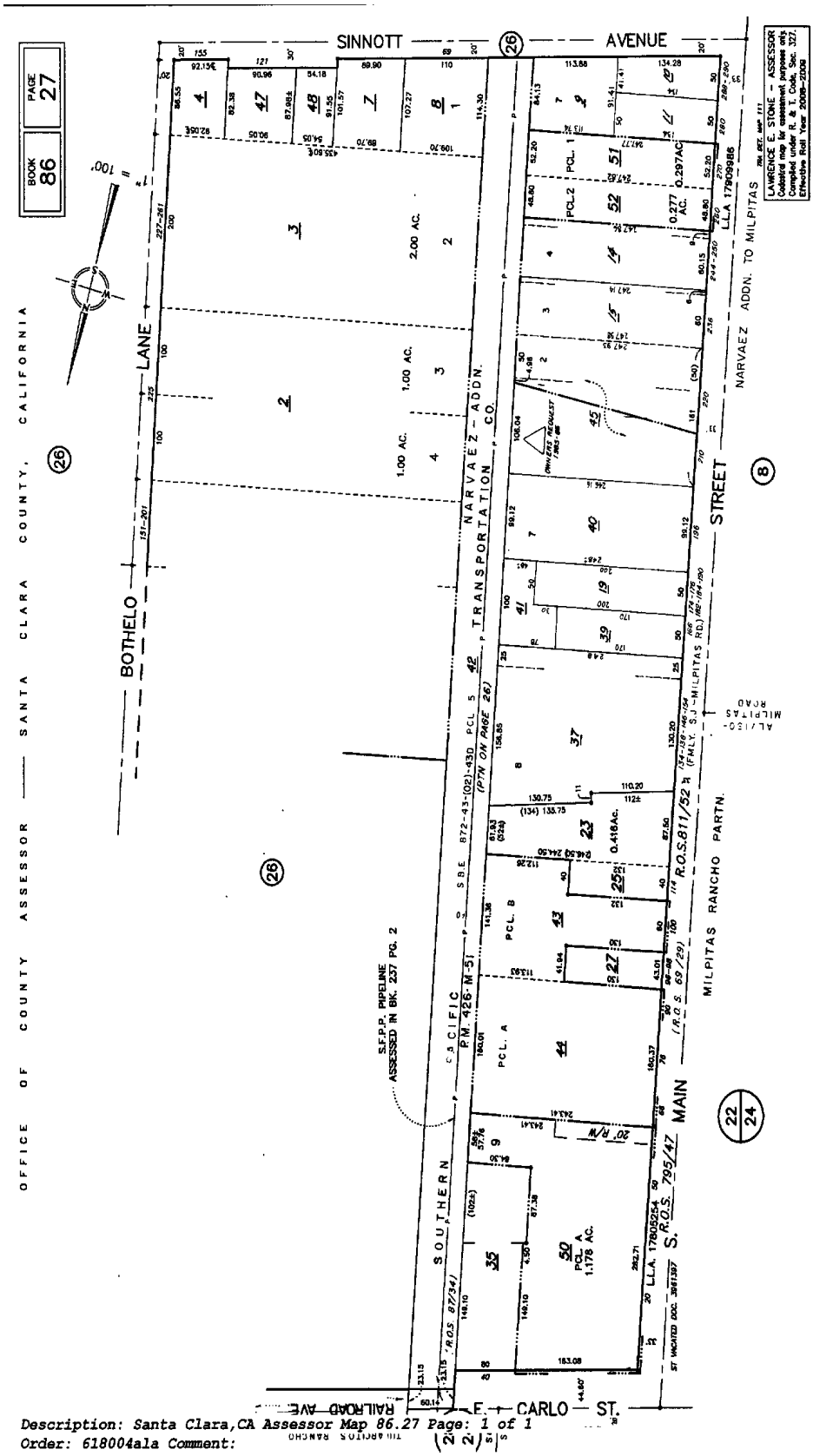
ALL OF PARCEL 1, AS DELINEATED UPON THAT CERTAIN MAP ENTITLED "PARCEL MAP RAILROAD AVENUE LAND OF UNION PACIFIC RAILROAD CO. PARCEL3 OF PARCEL MAP BOOK 536 OF MAPS, PAGE 32 THROUGH 34, SANTA CLARA COUNTY RECORDS", FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, ON APRIL 14TH, 1998 IN BOOK 700 OF MAPS, AT PAGE 45 AND 46.

EXCEPTING THEREFROM ALL MINERALS AND ALL MINERAL RIGHTS OF EVERY KIND AND CHARACTER NOW KNOWN TO EXIST OR HEREAFTER DISCOVERED UNDERLYING THE PROPERTY, INCLUDING WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, OIL AND GAS AND RIGHTS THERETO, TOGETHER WITH THE SOLE, EXCLUSIVE AND PERPETUAL RIGHT TO THE GRANTOR, ITS SUCCESSORS AND ASSIGNS, BUT WITHOUT ENTERING UPON OR USING THE SURFACE OF THE PROPERTY, AND IN SUCH MANNER AS NOT TO DAMAGE THE SURFACE OF THE PROPERTY, OR TO INTERFERE WITH THE USE THEREOF BY THE GRANTEES, THEIR HEIRS AND ASSIGNS, AS RESERVED IN QUITCLAIM DEED TO MICHAEL DONALD PRESTON, ET UX, RECORDED APRIL 14, 1998 AS INSTRUMENT NO. 14139464.

TRACT FOUR:

LOTS 3 AND 4, MAP OF NARVAEZ SECOND ADDITION TO THE TOWN OF MILPITAS, FILED SEPTEMBER 5, 1890 IN BOOK E OF MAPS, PAGE 41, SANTA CLARA COUNTY RECORDS.

APN: 086-26-029 (Affects: Tract One);
086-26-030 (Affects: Tract Two);
028-23-018 (Affects: Tract Three); and
086-27-002 (Affects: Tract Four)



Description: Santa Clara,CA Assessor Map 86.27 Page: 1 of 1
Order: 618004ala Comment:

NOTICE

First American Title

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
(a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
(c) resulting in no loss or damage to the insured claimant;
(d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
(iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:
1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance

resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.

2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
(a) created, suffered, assumed or agreed to by the insured claimant;
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
(c) resulting in no loss or damage to the insured claimant;
(d) attaching or created subsequent to Date of Policy; or
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

10. AMERICAN LAND TITLE ASSOCIATION RESIDENTIAL TITLE INSURANCE POLICY - 1987 EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
   * land use
   * land division
   * improvements on the land
   * environmental protection

   This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.
   This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
   * a notice of exercising the right appears in the public records on the Policy Date
   * the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking.
3. Title Risks:
   * that are created, allowed, or agreed to by you
   * that are known to you, but not to us, on the Policy Date - unless they appeared in the public records
   * that result in no loss to you
   * that first affect your title after the Policy Date - this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
   * to any land outside the area specifically described and referred to in Item 3 of Schedule A, or
   * in streets, alleys, or waterways that touch your land

   This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 2008
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 2008

Covered Risks 16 (Subdivision Law Violation). 18 (Building Permit). 19 (Zoning) and 21 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building b. zoning
   c. land use d. improvements on the land
   e. land division f. environmental protection
   This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This Exclusion does not limit the coverage described in Covered Risk 11 or 21

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows: Covered Risk 16, 18, 19 and 21, Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A. The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16: 1% of Policy Amount or $5,000.00 (whichever is less)	$10,000.00
Covered Risk 18: 1% of Policy Amount or $5,000.00 (whichever is less)	$25,000.00
Covered Risk 19: 1% of Policy Amount or $5,000.00 (whichever is less)	$25,000.00
Covered Risk 21: 1% of Policy Amount or $2,500.00 (whichever is less)	$5,000.00

12. THIRD GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (1/01/08)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions, or location of any improvement erected on the Land; (iii) the subdivision of land; or(iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b)Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

(c) resulting in no loss or damage to the Insured Claimant;
(d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
(e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

14. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 13 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

15. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

   (i) the occupancy, use, or enjoyment of the Land;

   (ii) the character, dimensions, or location of any improvement erected on the Land;

   (iii) the subdivision of land; or

   (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters

   (a) created, suffered, assumed, or agreed to by the Insured Claimant;

   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;

   (c) resulting in no loss or damage to the Insured Claimant;

   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or

   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors? rights laws, that the transaction vesting the Title as shown in Schedule A, is

   (a) a fraudulent conveyance or fraudulent transfer; or

   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

16. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 15 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

First American Title

Privacy Information
We Are Committed to Safeguarding Customer Information
In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability
This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

Types of Information
Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information
We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers
Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security
We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

Information Obtained Through Our Web Site
First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.
In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.
There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

Business Relationships
First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

Cookies
Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.
FirstAm.com uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

Fair Information Values
Fairness We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.
Public Record We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.
Use We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.
Accuracy We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.
Education We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.
Security We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain

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APPENDIX E

ENVIRONMENTAL DATA RESOURCES, INC.

Aerial Photo Decade Package

APPENDIX E

Preston Pipelines
133 Bothelo Avenue
Milpitas, CA 95035

Inquiry Number: 3081528.5
June 03, 2011

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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Date EDR Searched Historical Sources:

Aerial Photography June 03, 2011

Target Property:

133 Bothelo Avenue

Milpitas, CA 95035

Year	***Scale***	***Details***	***Source***
1939	Aerial Photograph. Scale: 1"=555'	Flight Year: 1939	Fairchild
1948	Aerial Photograph. Scale: 1"=555'	Flight Year: 1948	Exxon
1956	Aerial Photograph. Scale: 1"=555'	Flight Year: 1956	Aero
1965	Aerial Photograph. Scale: 1"=333'	Flight Year: 1965	Cartwright
1975	Aerial Photograph. Scale: 1"=550'	Flight Year: 1975	NASA
1982	Aerial Photograph. Scale: 1"=690'	Flight Year: 1982	USGS
1993	Aerial Photograph. Scale: 1"=666'	Flight Year: 1993	USGS
1998	Aerial Photograph. Scale: 1"=666'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=604'	Flight Year: 2005	EDR

INQUIRY #: 3081528.5

YEAR: 1939

= 555'

N

EDR Environmental Data Resources Inc

INQUIRY #: 3081528.5
YEAR: 1948
= 555'
N

INQUIRY #: 3081528.5

YEAR: 1956

= 555'

N

EDR Environmental Data Resources Inc

INQUIRY #: 3081528.5
YEAR: 1965
= 333'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3081528.5
YEAR: 1975
= 550'
N

INQUIRY #: 3081528.5
YEAR: 1982
= 690'
N

INQUIRY #: 3081528.5
YEAR: 1993
= 666'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3081528.5
YEAR: 1998
= 666'
N

INQUIRY #: 3081528.5
YEAR: 2005
= 604'
N

APPENDIX F

ENVIRONMENTAL DATA RESOURCES, INC.

City Directory

APPENDIX F

Preston Pipelines
133 Bothelo Avenue
Milpitas, CA 95035

Inquiry Number: 3081528.6
May 27, 2011

The EDR-City Directory Abstract

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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Executive Summary

Findings

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2006. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2006	Haines Company, Inc.	X	X	X	-
2001	Haines & Company, Inc.	-	-	-	-
2000	Haines & Company	-	X	X	-
1996	Pacific Bell	-	X	X	-
1991	PACIFIC BELL WHITE PAGES	-	X	X	-
1986	Pacific Bell	-	-	-	-
1985	Pacific Bell	-	X	X	-
1982	Pacific Telephone	-	-	-	-
1980	Pacific Telephone	-	X	X	-
1978	R. L. Polk & Co.	-	-	-	-
1975	Pacific Telephone	-	X	X	-
1974	R. L. Polk & Co.	-	-	-	-
1970	R. L. Polk & Co.	-	-	-	-
1968	R. L. Polk & Co.	-	-	-	-
1966	R. L. Polk & Co.	-	-	-	-
1965	R. L. Polk & Co.	-	-	-	-
1964	R. L. Polk & Co.	-	-	-	-
1963	Pacific Telephone	-	X	X	-
1962	R. L. Polk & Co.	-	-	-	-
1960	R. L. Polk & Co.	-	-	-	-
1957	Pacific Telephone	-	X	X	-
	R. L. Polk Co.	-	X	X	-
1955	R.L. Polk and Co Publishers	-	-	-	-
1950	R. L. Polk Co.	-	-	-	-
1946	R.L. Polk	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1945	R. L. Polk & Co.	-	-	-	-
1942	R.L. Polk	-	-	-	-
1940	R. L. Polk & Co.	-	-	-	-
1936	R. L. Polk & Co.	-	-	-	-
1935	R. L. Polk & Co. of California	-	-	-	-
1931	R. L. Polk & Co.	-	-	-	-
1930	R. L. Polk & Co. of California	-	-	-	-
1926	R. L. Polk Co.	-	-	-	-
1925	R. L. Polk & Co.	-	-	-	-
1922	R. L. Polk Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

133 Bothelo Avenue
Milpitas, CA 95035

FINDINGS DETAIL

Target Property research detail.

Year	*Uses*	*Source*
2006	PIPELINES	Haines Company, Inc.
	PRest ON	Haines Company, Inc.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

BOTHELO AVE

151 BOTHELO AVE

Year	Uses	Source
1996	PRESTON PIPELINE INC	Pacific Bell
1980	Able Waste Removal	Pacific Telephone
	Yard	Pacific Telephone
1975	FORTE TROY LANDSCAPING	Pacific Telephone

16 BOTHELO AVE

Year	Uses	Source
1991	TSUKUDA GEORGE LCS W	PACIFIC BELL WHITE PAGES

201 BOTHELO AVE

Year	Uses	Source
1963	Tucker Paul L Pauls Auto Wreckng & Mtl	Pacific Telephone
	Pauls Auto Wrecking & Metal Salvage	Pacific Telephone

21 BOTHELO AVE

Year	Uses	Source
1975	BERTRAM THOMAS L JR	Pacific Telephone

224 BOTHELO AVE

Year	Uses	Source
1963	Castro Juan	Pacific Telephone

225 BOTHELO AVE

Year	Uses	Source
1996	MILPITAS AUTO DISMANTLERS	Pacific Bell
1991	MILPITAS AUTO DIS MAN TLE RS	PACIFIC BELL WHITE PAGES
	MILPITAS AUTO DISMANTLERS	PACIFIC BELL WHITE PAGES
1985	MILPITAS AUTO DISMANTLERS	Pacific Bell
1975	MILPITAS F & J AUTO WRECKING	Pacific Telephone
	F & J AUTO WRECKING	Pacific Telephone
1963	Gucho Guadalupe Milpitas Auto Wreckrs	Pacific Telephone
	Residence	Pacific Telephone

FINDINGS

261 BOTHELO AVE

Year	Uses	Source
2006	DURAN	Haines Company, Inc.
	VENABLES	Haines Company, Inc.
1996	DURAN & VENABLES	Pacific Bell
1975	CASTRO JUAN	Pacific Telephone

6 BOTHELO AVE

Year	Uses	Source
1957	HOWARD GUSTIN GUSTIN HOWARDI V MOTRS	Pacific Telephone

7 BOTHELO AVE

Year	Uses	Source
1957	Torres Salvatore	R. L. Polk Co.

SINNOTT LN

121 SINNOTT LN

Year	Uses	Source
2006	BAPTIST	Haines Company, Inc.
	MISSIONARY	Haines Company, Inc.
	MACEDONIA	Haines Company, Inc.

155 SINNOTT LN

Year	Uses	Source
2006	NGUYENTuan	Haines Company, Inc.

69 SINNOTT LN

Year	Uses	Source
2006	MCGRATH Terry	Haines Company, Inc.
2000	MCGRATHTery	Haines & Company
1985	RAHL WAYNE	Pacific Bell

87 SINNOTT LN

Year	Uses	Source
2006	o SANTOS Henry	Haines Company, Inc.
	GEIS Deborah P	Haines Company, Inc.
	WILSON Joshua	Haines Company, Inc.
2000	SANTOS Henry	Haines & Company
	GEIS Deborah P 40a	Haines & Company
1980	Avila Joseph	Pacific Telephone

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
133 Bothelo Avenue	2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
121 SINNOTT LN	2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
151 BOTHELO AVE	2006, 2001, 2000, 1991, 1986, 1985, 1982, 1978, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
155 SINNOTT LN	2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
16 BOTHELO AVE	2006, 2001, 2000, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
201 BOTHELO AVE	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
21 BOTHELO AVE	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
224 BOTHELO AVE	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
225 BOTHELO AVE	2006, 2001, 2000, 1986, 1982, 1980, 1978, 1974, 1970, 1968, 1966, 1965, 1964, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
261 BOTHELO AVE	2001, 2000, 1991, 1986, 1985, 1982, 1980, 1978, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
6 BOTHELO AVE	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
69 SINNOTT LN	2001, 1996, 1991, 1986, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
7 BOTHELO AVE	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
87 SINNOTT LN	2001, 1996, 1991, 1986, 1985, 1982, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

APPENDIX G

ENVIRONMENTAL DATA RESOURCES, INC.

Environmental Lien Search Report

APPENDIX G

Preston Pipelines
133 Bothelo Avenue
Milpitas, CA 95035

Inquiry Number: 3081528.7
June 03, 2011

The EDR Environmental LienSearch™ Report

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

The EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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The EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

133 Bothelo Avenue
Preston Pipelines
Milpitas, CA 95035

RESEARCH SOURCE

Source 1:

Santa Clara county recorder
Santa Clara, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	Deed
Title is vested in:	Michael D Preston & Deborah Riordan Preston Truste
Title received from:	Michael D Preston & Deborah Riordan Preston
Deed Dated	4/8/2003
Deed Recorded:	5/5/2003
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	see exhibit
Miscellaneous Comments:	028-23-018
Legal Description:	see exhibit
Legal Current Owner:	Michael D Preston & Deborah Riordan Preston Trustees
Property Identifiers:	028-23-018
Comments:	see exhibit

Deed 2:

Type of Deed:	Deed
Title is vested in:	Michael D Preston Trustee
Title received from:	Michael D Preston
Deed Dated	1/16/2003
Deed Recorded:	6/16/2003
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	

	see exhibit
Miscellaneous Comments:	086-26-029
Legal Description:	see exhibit
Legal Current Owner:	Michael D Preston Trustee
Property Identifiers:	086-26-029
Comments:	see exhibit

Deed 3:

Type of Deed:	Deed
Title is vested in:	Michael D Preston Trustee
Title received from:	Michael D Preston
Deed Dated	1/16/2003
Deed Recorded:	5/5/2003
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	see exhibit
Miscellaneous Comments:	086-26-030
Legal Description:	see exhibit
Legal Current Owner:	Michael D Preston Trustee
Property Identifiers:	086-26-030
Comments:	see exhibit

Deed 4:

Type of Deed:	Deed
Title is vested in:	Michael D Preston & Deborah Riordan Preston Truste
Title received from:	Luis G Tapia & Mary E Tapia
Deed Dated	4/4/2000
Deed Recorded:	4/11/2000
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	see exhibit
Miscellaneous Comments:	086-27-002
Legal Description:	see exhibit

The EDR Environmental LienSearch™ Report

Legal Current Owner: Michael D Preston & Deborah Riordan Preston Trustees

Property Identifiers: 086-27-002

Comments: see exhibit

Deed 5:

Type of Deed: Deed
Title is vested in: Marchand Lessel Venables & Kandra Kay Vanable Trus
Title received from: Marchand Lessel Venables & Kandra Kay Vanable
Deed Dated 7/2/2002
Deed Recorded: 8/21/2002
Book: NA
Page: na
Volume: na
Instrument: na
Docket: NA
Land Record Comments: see exhibit
Miscellaneous Comments: 086-27-003

Legal Description: see exhibit

Legal Current Owner: Marchand Lessel Venables & Kandra Kay Vanable Trustee

Property Identifiers: 086-27-003

Comments: see exhibit

Deed 6:

Type of Deed: Deed
Title is vested in: Michael D Preston Trustee
Title received from: Kevin Pham & Nhung Le Ngoc Tong
Deed Dated 4/15/2011
Deed Recorded: 4/28/2011
Book: NA
Page: na
Volume: na
Instrument: na
Docket: NA
Land Record Comments: see exhibit
Miscellaneous Comments: 086-27-008

Legal Description: see exhibit

Legal Current Owner: Michael D Preston Trustee

Property Identifiers: 086-27-008

The EDR Environmental LienSearch™ Report

Comments: see exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

Deed Exhibit 1

DOCUMENT: 17011739

0017011739

Pages 3

Fees	13 00
Taxes	
Copies.	
AMT PAID	13 00

BRENDA DAVIS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Attorney

RDE # 008/002
5/05/2003
8:11 AM

Recording Requested By:
Robert A. Biorn, Esq.

When Recorded Mail To:

Mr. and Mrs. Michael D. Preston
1325 Dry Creek Road
Campbell, CA 95008

Mail Tax Statements To:

Mr. and Mrs. Michael D. Preston
1325 Dry Creek Road
Campbell, CA 95008

APN 028-23-016

TRUST TRANSFER DEED

GRANT DEED (Excluded from Reappraisal under Proposition 13. i.e., Calif. Const. Art 13A§1 et. seq.)

The undersigned Grantors declare under penalty of perjury that the following is true and correct: There is no consideration for this transfer. Documentary transfer tax is none - transfer to or from trustee - no sale pursuant to Revenue and Taxation Code §11930. This is a transfer to a revocable trust under §62 of the Revenue and Taxation Code.

GRANTORS: MICHAEL DAROLD PRESTON and DEBORAH J. PRESTON

hereby GRANT to

MICHAEL DAROLD PRESTON and DEBORAH RIORDAN PRESTON, or their Successors in Trust, as Trustees of THE PRESTON FAMILY TRUST dated February 20, 1988, all of their right, title, and interest in

the following described real property in the City of Milpitas, County of Santa Clara, State of California:

See Exhibit "A" attached hereto and made a part hereof.

Commonly known as 0 Railroad, Milpitas, CA

Dated: April 8, 2003

MICHAEL DAROLD PRESTON

DEBORAH J. PRESTON

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

On this 8th day of April, ~~2002~~ 2003, before me, the undersigned Notary Public, personally appeared MICHAEL DAROLD PRESTON and DEBORAH J. PRESTON, personally known to me (or proved to me on the basis of satisfactory evidence) to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument the persons, or the entity upon behalf of which the persons acted, executed the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

JEANETTE J. CHAVEZ
COMM. # 1341062
NOTARY PUBLIC-CALIFORNIA
SANTA CLARA COUNTY
COMM. EXP. FEB. 21, 2006

Notary Public

Exhibit "A"

All that real property in the City of Milpitas, County of Santa Clara, State of California, described as follows:

All of Parcel 1, as shown upon that certain Map entitled, "Parcel Map Railroad Avenue Land of Union Pacific Railroad Co. Parcel 3 of Parcel Map Book 536 of Maps pages 32 thru 34, Santa Clara County Records", which map filed for record in the office of the Recorder of the County of Santa Clara, State of California on April 14, 1998, in Book 700 of Maps, at pages 45 and 46.

Reserving therefrom an easement 20.00 feet in width for the purpose of Ingress and Egress, said easement being the southeasterly 20.00 feet of Parcel 1 hereinabove described and as shown on said Parcel Map as "20' wide Ingress & Egress Easement over Parcel 1 for the benefit of Parcel 2 and for the benefit of APN 86-26-26".

Containing 1.53 acres more or less

APN 028-23-016
Commonly known as 0 Railroad, Milpitas, CA

Deed Exhibit 2

DOCUMENT: 17110834

0017110834

Pages: 3

Fees....	23.00
Taxes..	
Copies .	
AMT PAID	23.00

BRENDA DAVIS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Beneficiary

RDE # 012/006
6/16/2003
9:12 AM

Recording Requested By:
Robert A. Biorn, Esq.

When Recorded Mail To:

Michael D. Preston
1325 Dry Creek Road
Campbell, CA 95008

Mail Tax Statements To:

Michael D. Preston
1325 Dry Creek Road
Campbell, CA 95008

APN 086-26-029

TRUST TRANSFER DEED

GRANT DEED (Excluded from Reappraisal under Proposition 13. i.e., Calif. Const. Art 13A§1 et. seq.)

The undersigned Grantor declares under penalty of perjury that the following is true and correct: There is no consideration for this transfer. Documentary transfer tax is none - transfer to or from trustee - no sale pursuant to Revenue and Taxation Code §11930. This is a transfer to a revocable trust under §62 of the Revenue and Taxation Code.

GRANTOR: MICHAEL D. PRESTON

hereby GRANTS to

MICHAEL DAROLD PRESTON, or his Successor in Trust, as Trustee of THE MICHAEL DAROLD PRESTON TRUST dated February 20, 1998, all of his right, title and interest in

the following described real property in the City of Milpitas, County of Santa Clara, State of California:

See Exhibit "A" attached hereto and made a part hereof.

Commonly known as 133 Bothelo Avenue, Milpitas, CA

Dated: JAN 16, 2003

Michael D Preston

MICHAEL D. PRESTON

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

On this 16th day of January, ~~2002,~~ 2003 before me, the undersigned Notary Public, personally appeared MICHAEL D. PRESTON, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Debbie L. Shimizu
Notary Public

MGC1 DEBBIE L. SHIMIZU
COMM. # 1230835
NOTARY PUBLIC-CALIFORNIA
SANTA CLARA COUNTY
COMM. EXP. AUG. 27, 2003 MGC1

Exhibit "A"

PARCEL 4

All that certain real property situate in the City of Milpitas, County of Santa Clara, State of California, described as follows:

All of Lot 5, as shown upon that certain Map entitled "Map of Narvaes Second Addition to the Town of Milpitas" which Map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California on September 5, 1890, in Book E of Maps at Page 41, and a portion of that certain property described in that certain deed dated January 29, 1930, recorded February 19, 1930, in Volume 503, Official Records at Page 357, records of Santa Clara County, and a portion of Parcel One and Parcel Two described in that certain Grant Deed recorded April 19, 1953, in Book 2602 at Page 517, records of said County, said property being more particularly described as follows:

Beginning at the most northwesterly corner of said Lot 5;

Thence along westerly line of that certain property described in said deed recorded in Volume 503 at Page 357 of Official Records, North 11° 30′ 00″ West, 329.32 feet;

Thence leaving said westerly line the following six (6) courses:

North 78° 50′ 00″ East, 386.47 feet to the non-tangent curve to the left;
Southeasterly along said curve having a radius of 820.00 feet, whose radius point bears North 70° 12′ 52″ East, through a central angle of 9° 37′ 14″, an arc distance of 137. 68 feet;
South 29° 24′ 22″ East, 207.78 feet to the tangent curve to the right,
Southerly along said curve, having a radius of 114.50 feet, through a central angel of 18° 18′ 27″, an arc distance of 36.59 feet;
South 11° 05′ 55″ East, 131.66 feet;
South 73° 30′ 00″ West, 51.06 feet to the southwesterly boundary of said Parcel Two;

Thence along the southwesterly boundary of said Parcel Two North 11° 28′ 50″ West, 70.00 feet to the most southeasterly corner of said Lot 5;

Thence along the southerly line of said Lot 5 South 78° 30′ 00″ West, 435.09 feet;

Thence along the westerly line of said Lot 5 North 11° 30′ 00″ West, 100.00 feet to the Point of Beginning.

APN 086-26-029
Commonly known as 133 Bothelo Avenue, Milpitas, CA

Deed Exhibit 3

Recording Requested By:
Robert A. Biorn, Esq.

When Recorded Mail To:

Michael D. Preston
1325 Dry Creek Road
Campbell, CA 95008

Mail Tax Statements To:

Michael D. Preston
1325 Dry Creek Road
Campbell, CA 95008

DOCUMENT: 17011738

0017011738

Pages: 3

Fees	13 00
Taxes	
Copies	
AMT PAID	13 00

BRENDA DAVIS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Attorney

RDE # 008/002
5/05/2003
8:11 AM

APN 086-26-030

TRUST TRANSFER DEED

GRANT DEED (Excluded from Reappraisal under Proposition 13. i.e., Calif. Const. Art 13A§1 et. seq.)

The undersigned Grantor declares under penalty of perjury that the following is true and correct: There is no consideration for this transfer. Documentary transfer tax is none - transfer to or from trustee - no sale pursuant to Revenue and Taxation Code §11930. This is a transfer to a revocable trust under §62 of the Revenue and Taxation Code.

GRANTOR: MICHAEL D. PRESTON

hereby GRANTS to

MICHAEL DAROLD PRESTON, or his Successor in Trust, as Trustee of THE MICHAEL DAROLD PRESTON TRUST dated February 20, 1998, all of his right, title and interest in

the following described real property in the City of Milpitas, County of Santa Clara, State of California:

See Exhibit "A" attached hereto and made a part hereof.

Commonly known as 80 Railroad, Milpitas, CA

Dated: JAN. 16, 2003

MICHAEL D. PRESTON

STATE OF CALIFORNIA)
) ss.
COUNTY OF SANTA CLARA)

On this 16th day of January, ~~2002,~~ 2003 before me, the undersigned Notary Public, personally appeared MICHAEL D. PRESTON, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Debbie L. Shimizu
Notary Public

MGC1 DEBBIE L. SHIMIZU MGC1
COMM. # 1230335
NOTARY PUBLIC-CALIFORNIA
SANTA CLARA COUNTY
COMM. EXP. AUG. 27, 2003

Exhibit "A"

All that certain real property in the City of Milpitas, County of Santa Clara, State of California, described as follows:

Being a portion of that certain property described in that certain Deed dated January 29, 1930, recorded February 19, 1930, in Volume 503 Official Records, at Page 357, records of Santa Clara County, and a portion of Parcel One described in that certain Grant Deed, recorded April 19, 1953, in Book 2602 at page 517, records of said County, said property being more particularly described as follows:

Beginning at the most Northwesterly corner of Lot 5, as shown upon that certain Map entitled "Map of Narvaes Second Addition to the Town of Milpitas", which Map was filed for record in the Office of the Recorder of Santa Clara County, State of California on September 5, 1890 in Book E of Maps, at Page 41.

Thence along Westerly line of that certain property described in said Deed, recorded in Volume 503 at page 357 of Official Records, North 11° 30′ 00″ West, 329.32 feet to the Point of Beginning.

Thence continuing along said Westerly line North 11° 30′ 00″ East, 651.33 feet to the Northerly line of Calaveras Road;

Thence along said Northerly line of Calaveras Road North 74° 31′ 56″ East, 301.91 feet;

Thence leaving said Northerly line, the following five (5) courses:

South 18° 40′ 44″ East, 46.27 feet;
North 74 ° 31′ 56″ East, 20.87 feet;
South 16° 44′ 06″ East, 586.85 feet to the tangent curve to the left;

Southeasterly along said curve, having a radius of 820.00 feet, through a central angle of 3° 03′ 03″, an arc distance of 43.66 feet;

Excepting therefrom all minerals and mineral rights, with no rights of surface entry, interest and royalties, including, without limiting the generality thereof, oil, gas and other hydrocarbon substances, as well as metallic or other solid materials in and under said land, as reserved in that certain deed executed by Southern Pacific Transportation Company, a Delaware Corporation, recorded June 30, 1995 in Book N902, Page 1723, Official Records.

APN 086-26-030
Commonly known as 80 Railroad, Milpitas, CA

Deed Exhibit 4

RECORDING REQUESTED BY
CHICAGO TITLE COMPANY
AND WHEN RECORDED MAIL TO

Michael Darold Preston, Trustee

133 Bothelo Ave
Milpitas, California 95035

DOCUMENT: 15209607

Titles: 1 / Pages: 2

Fees	40.00
Taxes	1138.50
Copies	
AMT PAID	1178 50

BRENDA DAVIS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Chicago Title

RDE # 008
4/11/2000
8:00 AM

Escrow No. 842366 - SM
Order No. 842366 - LM
225 Bothelo Ave, Milpitas

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

Assessor's Parcel No: 086-27-002

THE UNDERSIGNED GRANTOR(S) DECLARE(S)
DOCUMENTARY TRANSFER TAX IS $1,138.50
[ ] unincorporated area [X] City of Milpitas
[X] computed on the full value of the interest or property conveyed, or is
[ ] computed on the full value less the value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
Luis G. Tapia and Mary E. Tapia, Husband and Wife, As Joint Tenants

hereby GRANT(S) to
Michael Darold Preston and Deborah Riordan Preston, Trustees of the Preston Family Trust dated February 20, 1998

the following described real property in the City of Milpitas
County of SANTA CLARA, State of California:

LEGAL DESCRIPTION ATTACHED HERETO AND MADE A PART HEREOF BY REFERENCE

Dated April 4, 2000

STATE OF CALIFORNIA
COUNTY OF SANTA CLARA } SS.
On April 5, 2000 before me,
the undersigned
a Notary Public in and for said County and State, personally appeared
Luis G. Tapia and Mary E. Tapia

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Luis G. Tapia

Mary E. Tapia

S. MC KENNA
Commission # 1222120
Notary Public — California
Santa Clara County
My Comm. Expires May 28, 2003

Signature of Notary

Date My Commission Expires

FOR NOTARY SEAL OR STAMP

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE: IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name | Street Address | City, State & Zip

GD1 -05/30/97bk

N-27-98

Escrow No. 842366 -SM

LEGAL DESCRIPTION EXHIBIT

All that certain Real Property in the City of Milpitas, County of Santa Clara, State of California, described as follows:

Lots 3 and 4, Map of Narvaez Second Addition to the Town of Milpitas, filed September 5, 1890 in Book E of Maps, Page 41, Santa Clara County Records.

Together with:

A. An undivided 1/2 interest in the well now on that certain Lot, piece or Parcel of Land situate, lying and being in the County of Santa Clara, State of California, and bounded and particularly described as follows:

Lot 2 of The Narvaez Second Addition of the Town of Milpitas, according to a Map now of record in the Recorder's Office in Book E of Maps, Page 41.

B. Right of Way 5 feet in width from the nearest point on Lot 3 of said Narvaez Second Addition to said well and the right to erect a tower, tank and windmill within 20 feet square round said well and to place a pump therein, said tower, tank, windmill and pump to be for the joint use and benefit of the parties to this instrument, their heirs and assigns. Also the right to lay water pipes from said well on and in the said right of way and to maintain a gate on the dividing line of said Lots 2 and 3 at the point where said right of way terminates, as granted in the Deed from Joseph Gabriel and Wife to Joze M. Noea, dated April 1, 1910 and recorded April 1, 1910 in Book 356 of Deeds, Page 58.

Deed Exhibit 5

RECORDING REQUESTED BY
AND WHEN RECORDED, MAIL THIS DEED TO:

Greene Radovsky Maloney & Share LLP
Attn: Judy A. Wilson
Four Embarcadero Center, Suite 4000
San Francisco, CA 94111

MAIL TAX STATEMENTS TO:

Mr. and Mrs. Sean Venables
185 Celeste Way
Santa Cruz, CA 95065-9720

DOCUMENT: 16432445

0016432445

Titles: 1 / Pages: 2

Fees.... 20.00
Taxes...
Copies..
AMT PAID 20.00

BRENDA DAVIS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Attorney

RDE # 004
8/21/2002
2:36 PM

SPACE ABOVE THIS LINE FOR RECORDER'S USE

DOCUMENTARY TRANSFER TAX $ -0-

Conveyance of realty with no consideration: transfer between spouses to community property

___ COMPUTED ON FULL VALUE OF PROPERTY CONVEYED
___ OR COMPUTED ON FULL VALUE LESS LIENS AND ENCUMBRANCES REMAINING AT TIME OF SALE

The undersigned
Signature of Declarant or Agent determining tax. Firm Name

GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Marchand L. Venables and Kandra K. Venables, husband and wife, as Community Property, as to an undivided 1/2 interest

hereby GRANT(S) to

Marchand Lessel Venables and Kandra Kay Venables, Trustees of The Venables Revocable Trust, dated April 24, 2002, as to an undivided 1/2 interest

the following described real property in the City of Milpitas, County of Santa Clara, State of California:

LOT 2, as delineated upon that certain Map entitled "Map of Narvaez Second Addition to the Town of Milpitas", filed for record in the Office of the Recorder of the County of SANTA CLARA, State of California, on September 5th, 1890 in Book E of Maps, at Page 41.

A.P.N.: 086-27-003

Dated: 7/02/02

Marchand L. Venables

Kandra K. Venables

Kandra K. Venables

44230/0801
WSM/226943.1

ACKNOWLEDGMENT

STATE OF CALIFORNIA)
)ss.
COUNTY OF Santa Cruz)

On 2 July 2002, before me, Teresa R. Mendoza a Notary Public for the State of California, personally appeared Marchand L. Venables and Kandra K. Venables, personally known to me (or proved to me on the basis of satisfactory evidence) to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same in their authorized capacity and that, by their signatures on the instrument the persons, or the entity upon behalf of which the persons acted, executed the instrument.

WITNESS my hand and official seal.

TERESA R. MENDOZA
Commission # 1252784
Notary Public - California
Santa Cruz County
My Comm. Expires Feb 7, 2004

Teresa R. Mendoza (Notary's Seal)
Notary's Signature

44230/0801
WSM/226943.1

Deed Exhibit 6

RECORDING REQUESTED BY:
Chicago Title Company
Escrow No.: 11-**98206282**-TW
Locate No.: CACTI7743-7743-2982-0098206282
Title No.: 11-**98206282**-MC

When Recorded Mail Document and Tax Statement To:
The Michael Darold Preston Trust dated February 20, 1998
133 Bothelo Avenue
Milpitas, CA 95035

DOCUMENT: 21159119

Pages: 2

Fees.. 28 00
Taxes.. -- Conf --
Copies.
AMT PAID 28 00

REGINA ALCOMENDRAS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Chicago Title

RDE # 011
4/28/2011
8:00 AM

APN: 086-27-008

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

The undersigned grantor(s) declare(s)
Documentary transfer tax is $

FILOR REQUESTS THAT TRANSFER TAX NOT BE FILMED -
R&T 11932-11933

[ ] computed on full value of property conveyed, or
[ ] computed on full value less value of liens or encumbrances remaining at time of sale,
[ ] Unincorporated Area City of **Milpitas,**

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Kevin Pham and Nhung Le Ngoc Tong, husband and wife as Joint Tenants

hereby GRANT(S) to

FILOR REQUESTS
DO NOT RECORD STAMP VALUE

Michael Darold Preston, Trustee of The Michael Darold Preston Trust dated February 20, 1998.

086-27-008

The following described real property in the City of **Milpitas**, County of **Santa Clara**, State of **California**:
SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

DATED: April 15, 2011

State of California)
County of Santa Clara)

On April 18, 2011 before me, E. Abbasteh, Notary Public (here insert name and title of the officer), personally appeared Kevin Pham, Nhung Le Ngoc Tong, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature E. Abbasteh (Seal)

Kevin Pham

Nhung Le Ngoc Tong

E. ABBASTEH
Commission # 1765735
Notary Public - California
Santa Clara County
My Comm. Expires Sep 7, 2011

MAIL TAX STATEMENTS AS DIRECTED ABOVE

Escrow No.: 11-**98206282**-TW
Locate No.: CACTI7743-7743-2982-0098206282
Title No.: 11-**98206282**-MC

EXHIBIT "A"

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MILPITAS, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

A portion of Lot One, Map of Narvaez Second Addition to the Town of Milpitas filed on September 5, 1890 in Book "E" of Maps, at Page 41, Santa Clara County Records, described as follows:

Beginning at a one inch bar at the Southwest corner of Lot One of the Narvaez Second Addition to the Town of Milpitas; thence along the Easterly boundary of the Central Pacific Railroad Company's right of way, N. 11 deg. 36' W. 114.3 feet to the intersection of the line between Lots One and Two as shown upon said Map; thence along the line between said Lots One and Two N. 78 deg. 24' E. 109.7 feet to a stake; thence leaving said Lot line S. 11 deg. 36' E. 107.29 feet to a one inch bar in the North line of a Road 30 feet wide; thence along the North line of said Road S. 74 deg. 50' W. 110 feet to the Point Of Beginning.

APN: 086-27-008

APPENDIX H

Qualification of Environmental Professional

APPENDIX H

SHAWN MUNGER, CHG
PRINCIPAL GEOLOGIST

EDUCATION

BS, Geology, U.C. Davis, 1985

EXPERIENCE

Years with ENGEO: 25
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS

Certified Hydrogeologist, CA, 413
40 Hour HAZWOPER Training, CA
Certified Environmental Manager, NV, 1332
Registered Environmental Assessor II, CA, 20201
Professional Geologist, CA, 5810

SPECIALIZATIONS

- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

Since joining ENGEO in 1985, Mr. Munger has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, phase I and II site assessment projects, UST site investigations, risk based corrective action (RBCA), VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager for environmental and hazardous materials projects involving groundwater hydrology, contaminant fate and transport, and remediation. He is Principal-in-Charge of our on-call contract with DTSC and the environmental components of our on-call contracts with the City of Sacramento and the County of Sacramento.

Selected Project Experience

Seacliff Estates—Richmond, CA
Principal in Charge. Mr. Munger provided oversight, review, and consultation during preparation of phase I and II site assessments and soil remediation. The 12-acre site was formerly part of Kaiser Shipyard No. 3 and was used for ship repair and maintenance along with scrap metal and salvage yards. The property was developed as a single-family residential subdivision.

Renaissance Square—Concord, CA
Project Manager. Mr. Munger provided consultation, data analysis, and field observation. This former automotive dealership was redeveloped as a five-story multi-family residential structure supported on slab-on-grade foundations, with two levels of below-grade parking. Petroleum hydrocarbon-impacted soil was encountered during excavation of the parking structure, which required characterization and remediation. Soil impacts were attributed to former sumps, USTs and hydraulic lifts.

Pleasant Hill BART Station—Walnut Creek, CA
Principal in Charge. Mr. Munger provided oversight, data analysis and consultation during the preparation of a phase II environmental site assessment. The property is an existing BART station that encompasses 20 acres, including the platform/station area, electrical facilities, a parking garage and additional paved parking areas.

Mills Ranch—King City, CA
Principal in Charge. Mr. Munger provided principal oversight of phase I and II environmental site assessments and risk evaluations. The approximate 80-acre property is used for agricultural cultivation and commercial uses. The proposed mixed-use development includes over 400 single-family residential lots.

Select Foods Site/Cross Creek—Hayward, CA
Principal in Charge. Mr. Munger provided principal oversight, consultation, and data analysis. The property was a former processed food facility, a drum recycling business, battery manufacturing operation and a bus assembly plant. Following completion of soil remediation under RWQCB oversight, the property was developed into a single-family residential subdivision.

Southchase Property—West Sacramento, CA
Project Manager. Mr. Munger provided environmental consultation regarding soil contamination and site characterization work. The property is a former farm headquarters with storage structures and orchards.

Westshore—Richmond, CA
Project Manager. Mr. Munger conducted phase I and II site assessments, risk evaluations and prepared a soil management plan. The property was a former automotive manufacturing plant proposed for a multi-unit condominium development, including a 6-story podium structure to include five residential floors with 269 units and one parking floor.

Union Pacific Railroad Corridor—San Jose, CA.
Project Manager. Mr. Munger prepared a phase I and II environmental assessment. Work included a site reconnaissance, historical records research and recovery of soil samples with laboratory analysis. Lead impacted soil was identified which required risk evaluation. This former 1800 lineal foot section of the former Union Pacific Railroad Corridor was proposed for mixed-use development.

Sparklizing Cleaners and Laundry—Fremont, CA
Principal in Charge. Mr. Munger provided principal review and data analysis for this former dry cleaning facility which had released tetrachloroethylene (PCE) to site soil and groundwater. The project site consists of a drycleaning facility located within a commercial/retail center. Drycleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to soil and groundwater beneath the site. As a result, the CRWQCB opened a Spills, Leaks, Investigations, and Cleanups (SLIC) case and the site was referred to the Alameda County Water District (ACWD) for lead agency oversight. A series of soil and groundwater investigations identified a source area beneath the drycleaner suite and an adjoining retail suite. A CAP submitted to ACWD in 2009 involves using in-situ chemical oxidation (ISCO) to remediate groundwater and vadose zone soil impacts within the source area.

Mare Island, 3rd and Connelly Utility Corridor—Vallejo, CA
Principal in Charge. Mr. Munger provided principal oversight during demolition and soil excavation activities. The project consisted of utility demolition and soil excavation activities

required to prepare for construction of a 300 – foot water and sewer utility corridor along Connelly Street between 3rd Street and Azuar Drive.

Ivy Glen (Former Tredegar)—Fremont, CA
Principal in Charge. Mr. Munger provided oversight of site characterizations, risk evaluations and groundwater monitoring for this for this former industrial facility. The property was a former industrial facility with documented soil and groundwater contamination. Risk assessments allowed redevelopment of the site as a single-family residential subdivision. Groundwater monitoring continues to date as a result of residual docs beneath the property.

County Crossings Property—Antioch, CA
Principal in Charge. Mr. Munger provided environmental consultation and data review with regard to soil and groundwater contamination. Constituents of concern include petroleum hydrocarbons, nitrates and manganese. The approximately 264 acre site includes several former industrial facilities and petroleum pipelines. Soil and groundwater at the site has been impacted with petroleum hydrocarbons, nitrates and manganese. Planned uses include commercial, residential, retail, and a BART-oriented transit village. The center, which is currently in the entitlement phase, is estimated to break ground in 2011.

Arroyo Crossing—Livermore, CA
Principal in Charge. Mr. Munger provided oversight, data analysis and regulatory consultation while ENGEO provided geotechnical and environmental engineering services for this 34-acre site. This former corporation yard and quarry site was developed into a single-family residential subdivision.

620 North Ninth Street—San Jose, CA
Principal in Charge. Mr. Munger provided oversight of soil, groundwater and soil gad characterizations, risk evaluations and remedial action plan preparation. Mr. Munger also closely interacted with RWQCB staff to achieve approval for residential development. The property is a former fruit packing plant and food preparation facility. The proposed development consists of a single-family residential subdivision.

Former SFPP Alignment—Concord, CA
Project Manager. Mr. Munger prepared a Phase I and II environmental assessment for a ± 6,500-foot corridor formerly occupied by the Southern Pacific Railroad (SPRR). Kinder Morgan petroleum pipelines existed within an easement along the property. Work included the recovery of soil and groundwater samples along the SP right of way. The site was a former ± 6,500-foot corridor formerly occupied by the Southern Pacific Railroad. Kinder Morgan petroleum pipelines existed within an easement along the property. The southern portion of the site was crossed by East Bay Municipal Utilities District water distribution lines and a multi-lane highway overpass. The corridor was developed as a self-storage facility.

Gale Ranch Middle School—San Ramon, CA
Principal in Charge. Mr. Munger provided review and supervision of a Preliminary Endangerment Assessment prepared for this school site under the oversight of DTSC. This former site was developed into a public middle school.

Highlands Ranch—Antioch, CA
Principal in Charge. Mr. Munger provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.

Hercules Property—Hercules, CA
Project Manager. Mr. Munger provided oversight of a phase I environmental site assessment, site asbestos survey, site characterization, and demolition observation/contaminant assessment. The project area consists of ± 167 acres located near and along the southeastern shore of San Pablo Bay in Hercules. The property was once a portion of a 1300-acre manufacturing facility that was operated by DuPont from 1879 to 1913 and Hercules Incorporated from 1913 to 1979. The planned development includes single/multi family residential development with some commercial components.

Gold Rush Ranch and Golf Resort—Sutter creek, CA
Principal in Charge. Mr. Munger provided principal oversight during the preparation of a preliminary endangerment report, including soil, groundwater and surface water sampling. The project site consists of 945 acres of undeveloped land located near the City of Sutter Creek, California. The proposed development plan for the site involves the Gold Rush Ranch and Golf Resort, which includes an 18-hole championship golf course, 1,334 new homes, a commercial center, and open space. The client has entered into a VCA with the Department of Toxic Substances Control (DTSC) to address historic mine tailings at the site. A PEA was prepared to evaluate human health risks associated with elevated arsenic in tailings, soil, and surface water at the site. The PEA was approved by DTSC in 2009. Based on the findings of the PEA, a removal action workplan (RAW) will be prepared to address the human health risks associated with the arsenic impacts.

1000 Howe Road—Martinez, CA
Principal in Charge. Mr. Munger provided oversight and analysis for this soil remediation project. Mr. Munger worked closely with RWQCB personnel to develop a cost effective and timely closure for site closure and approval for residential development. The site is occupied by a general engineering contractor and was a former bus leasing company. Improvements at the property included an office/warehouse structure and an equipment yard. The proposed development consists of a single-family residential subdivision.

D-2 - Phase II Environmental Site Assessment

Project No.
9273.000.000

August 22, 2011

Mr. Todd Callahan
KB HOME, South Bay Inc.
6700 Koll Center Parkway, Suite 200
Pleasanton, CA 94566

Subject: Preston Pipelines Property
Milpitas, California

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Reference: ENGEO, Phase I Environmental Site Assessment, Preston Pipelines Property, Milpitas, California, Project No. 9273.000.000, July 12, 2011 (DRAFT).

Dear Mr. Callahan:

We are pleased to submit our phase II environmental assessment conducted at the subject property (Property) in Milpitas, California. The purpose of the assessment was to assess the extent of Recognized Environmental Conditions (RECs) identified in the referenced report that could affect the proposed redevelopment of the Property.

BACKGROUND

The Property is located on Bothelo Avenue in Milpitas, California (Figure 1). The Property encompasses approximately 15.11 acres. The parcels that constitute the Property are devoted to a variety of uses. A small parcel at 69 Sinnott Lane is a vacant lot with a remnant slab associated with a former residential structure. A parcel at 261 Bothelo Avenue is occupied by Duran and Venables engineering contractors and is maintained as a corporation yard. Preston Pipelines maintains a large portion of the Property as a corporation yard that includes offices and shop facilities. A large commercial "high-bay flex" building is present to the north of the Preston Pipelines facility. Additionally, Devcon Construction maintains the northeastern portion of the Property as a corporation yard.

A Union Pacific rail yard and rail line are located to the east of the Property. Another Union Pacific rail line is located to the west of the Property. A large automotive parking lot is located to the south of the Property. Other properties to the north, west, and south are devoted to commercial, industrial, and residential purposes.

The Property has been used for industrial purposes for decades, and as a result, significant environmental impact and subsequent site characterization, remediation, and monitoring have been performed. Several previous environmental issues were characterized at the Property, and case closure was granted in June 1995. However, these closures were likely granted for an industrial/commercial land use. Additionally, closure standards and criteria have become more restrictive in the intervening years since closure. It is possible that "re-opener" clauses exist

within these previous closures should land use change (i.e., the currently contemplated residential conversion).

As presented in the referenced phase I assessment, one Recognized Environmental Condition (REC) was identified for the Property:

- The existence of an MTBE plume at the Property.

Additionally, two historic Recognized Environmental Conditions were identified:

- The former presence of an automotive wrecking yard at the southern portion of the 133 Bothelo Avenue parcel.
- The previous presence and subsequent mitigation of soil and groundwater impacts (leading to case closure in 1995).

SCOPE OF FIELD EXPLORATION

A surface and subsurface soil sampling study was performed to assess fill materials and potential areas of soil impact in areas identified in the referenced phase I report, including the former wrecking yard, fill materials within the former creek alignment, and other points of concern. A total of 12 soil borings were advanced in select locations across the Property to approximate depths ranging between 4 and 12 feet below the ground surface. Groundwater was encountered in two borings (CS-1 and CS-2); a groundwater sample was collected from these locations. Additionally, we performed a soil vapor sampling program. Soil vapor samples were collected from a total of 10 temporary soil vapor sampling points situated across the Property. Details of the sampling program are presented below.

Several tasks that had been originally proposed as a part of this study were eliminated. First, the approximate location of a 2-foot-diameter hole mentioned in the referenced document could not be determined; therefore, soil sampling at the hole location was not completed. Given the site development since the 1990s, the feature is likely under a building or surface improvements and likely had been filled in during site grading activities. Second, previous reports identified groundwater at depths of approximately 5 feet below the ground surface in onsite wells. Based on discussions with Stratus Environmental (the consultant currently performing quarterly groundwater sampling), the groundwater at the Property exists in a confined condition. Groundwater has been encountered at approximately 15 feet below the ground surface; however, once encountered, it reaches a static level of approximately 5 feet below the ground surface. As mentioned, groundwater was not sampled from every boring location as originally anticipated; it was sampled from two soil borings (CS-1 and CS-2).

SAMPLING ACTIVITIES

Soil Sampling

Surface and subsurface samples were collected from a variety of locations across the Property as shown in Figure 2. Soil Samples were retrieved within continuous Geoprobe® acetate core liners

measuring 4 feet in length. The soil cores from each boring were logged by an ENGEO engineer. The following table summarizes the depth of exploration and locations for the respective soil samples:

TABLE 1
Summary of Soil Boring Depths with Respect to Location

Sample	Depth Of Boring	Location
CS-1 – CS-3	12 feet	Former creek channel alignment
SS-1 – SS-2	4 to 8 feet	Pressure washer and drum storage
S-1 – S-6	8 feet	Wrecking yard

Specific soil samples were collected for laboratory analysis by cutting a 6-inch portion of the Geoprobe® soil core liners corresponding to the respective desired sampling depths in each location. During sampling, retrieved soils were screened for visual and olfactory evidence of impact as well as with a photoionization detector (PID) for volatile organic vapors.

The sample sleeves were sealed using Teflon sheets secured by tight fitting plastic end caps. Upon collection of samples, a sample label was placed on the sample and included a unique sample number, sample location, time/date collected, lab analysis, and the sampler's identification. The soil samples were placed in an ice-cooled chest and submitted under documented chain-of-custody to Torrent Laboratory, Inc. in Milpitas, California. The submitted soil samples were analyzed for the following target analytes:

- Total petroleum hydrocarbons as gasoline (TPH-g), methyl-tert butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylene(s) (BTEX) by EPA Method 8260B (all soil samples).

- Total petroleum hydrocarbons as diesel (TPH-d) and motor oil (TPH-mo) by EPA Method 8015B with silica gel cleanup (all soil samples).

- Volatile organic compounds (VOCs) by EPA Test Method 8260B (all soil samples except those in wrecking yard).

- LUFT Metals by EPA Test Method 6010B (all soil samples).

- Polycyclic aromatic hydrocarbons (PAHs) by EPA Test Method 8310 (all soil samples except those in wrecking yard).

Groundwater Sampling

As mentioned, groundwater was encountered in two borings (CS-1 and CS-2). A grab groundwater sample was collected from each location. A temporary PVC casing was placed in the boring to facilitate sample collection using a new disposable bailer. Following collection, the water sample was placed in laboratory-provided glassware. Upon collection of the sample, a sample label was placed on each container indicating the sample ID, date and time of collection,

and the sampler signature. The containers were placed in an ice-cooled chest for delivery under documented chain-of-custody to Torrent Laboratory, Inc. in Milpitas, California for analysis. The submitted water sample was analyzed for the following target analytes:

- TPH-g, MTBE, and BTEX by EPA Method 8260B.
- TPH-d and TPH-mo by EPA Method 8015B with silica gel cleanup (Sample CS-2).

Soil Vapor Sampling

A total of 10 soil vapor samples were collected from temporary sampling well points installed in locations situated across the Property as shown in Figure 2. Samples were collected from a depth of 5 feet below the ground surface. The soil vapor samples were collected from temporary probes advanced with a Geoprobe® direct push rig.

The sample train was connected to the Teflon tubing emanating from the sampling point using airtight connectors and a built-in flow controller set to 150 ml/min. Prior to sample collection, a purge canister was opened and three purge volumes were extracted from the well. The purging process also allowed for a system leak test. After purging, a sample was collected by opening the sample canister valve and allowing the sample canister to extract soil vapor until the vacuum in the sample canister reached approximately 5 inches Hg. The leak detection compound 1,1-Diflouroethane was applied to cloth rags, which were placed around the manifold fittings during sample collection as an additional system leak check.

Following sampling, each sample canister with a unique identification number, sampling time, pre- and post-sample vacuum readings. The sample canisters were submitted under documented chain of custody to Torrent Laboratory, Inc. in Milpitas, California for analysis. The submitted samples were analyzed for volatile organic compounds (VOCs), including TPH-g, by EPA Test Method TO-15.

ANALYTICAL RESULTS

Soil

Several target analytes were detected in both surface and subsurface soil samples. In general, these concentrations were below Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (RWQCB) assuming a residential land use scenario[1], as well as the California Human Health Screening Levels (CHHSLs) established by the California Environmental Protection Agency (Cal/EPA). Trace VOC, TPH-g, and TPH-d concentrations were detected in several samples below ESLs and CHHSLs. TPH-mo concentrations were detected in most soil samples. Three samples (S-4@4', CS-2 (composite), and SS-2@2') exhibited respective TPH-mo concentrations of 1,100, 550, and 12,000 mg/kg, which exceeds the respective ESL of 370 mg/kg. Sample SS-2@2' reportedly included a significant asphalt percentage, which could have resulted in an elevated TPH-mo concentration.

[1] SFRWQCB ESLs, 2008: Table A-1 – Shallow Soil Screening Levels for Residential Land Use where Groundwater is a Potential Drinking Water Source

Several samples exhibited lead, cadmium, and/or nickel concentrations in excess of ESLs and CHHSLs; however, with the exception of five samples, the metals are within the expected range of background concentrations. Additionally, several soil samples also exhibited detectable PAH concentrations. As with other analytes, these concentrations were below respective screening levels; however, some samples did exhibit elevated PAH concentrations. Sample CS-3 (composite) exhibited a 2-methylnapthalene concentration of 10,000 µg/kg and a benzo(a)pyrene concentration of 230 µg/kg. Sample SS-1@4' exhibited a fluorene concentration of 10,000 µg/kg. These concentrations exceed respective ESLs.

The laboratory results are presented in their entirety in Appendix A. A summary of the soil sample analysis is presented in Table A.

Groundwater

Although limited samples were collected, only one target analyte was detected. Diisopropyl ether (DIPE), a fuel oxygenate, was detected in sample CS-1 at a concentration of 3.2 micrograms per liter (µg/l). This trace concentration of DIPE as well as the absence of fuel range hydrocarbons and other oxygenates (including MTBE) suggests that widespread groundwater impact outside the identified MTBE plume is not present at the Property.

The laboratory results are presented in their entirety in Appendix A. A summary of the groundwater sample analysis is presented below in Table 2.

TABLE 2
Summary of Groundwater Sample Laboratory Analysis

Sample	Sample Date	TPH-g	TPH-d	TPH-mo	BTEX	DIPE	Other VOCs
		µg/l	mg/l	mg/l	µg/l	µg/l	µg/l
CS-1	7/25/2011	ND<26	N/A	N/A	ND	3.2	ND
CS-2	7/25/2011	ND<22	ND<0.111	ND<0.0492	ND	ND<0.36	ND

Notes:
µg/l Microgram per liter
mg/l Milligram per liter
ND Non-detect
N/A Not applicable

Soil Vapor

Several VOCs were detected within soil vapor samples. With the exception of TPH-g, all detected analytes were below respective ESLs assuming a residential land use scenario[2]. Three samples, SG-1, SG-8, and SG-9, exhibited TPH-g concentrations of 34,000, 44,000, and 18,000 micrograms per cubic meter (µg/m^3), which exceeds the respective ESL of 10,000 µg/m^3.

[2] SFRWQCB ESLs, 2008: Table E-2 – Shallow Soil Gas Screening Levels for Residential Land Use.

Additionally, although none of the detected benzene concentrations exceed the respective ESL of 84 $\mu g/m^3$, four samples (SG-2, SG-4, SG-9, and SG-10) exhibited concentrations in excess of the respective CHHSL of 36.2 $\mu g/m^3$ assuming a residential land use scenario.

The laboratory results are presented in their entirety in Appendix A. A summary of the soil vapor analysis is presented in Table B.

DISCUSSION

Elevated concentrations of several metallic (including lead, cadmium, and nickel), petroleum hydrocarbon, and PAH target analytes were identified in surface and subsurface soil samples; in many cases, these concentrations exceeded respective screening levels for a residential land use scenario. These impacts are random in distribution and likely represent isolated, limited volumes of impact. Although widespread soil impact does not appear to be present at the Property, discrete areas of soil impact necessitating mitigation should be anticipated near these elevated concentrations. A likely remediation scenario would include excavation and subsequent transport and disposal. Since the extent of these impacts are unknown, the impacted volumes could range from a less than ten to several hundred cubic yards of soil impact at each location. Additionally, although much of the soil would meet the criteria for disposal in non-hazardous waste landfills (typically at $25 to $40 per ton), some small discrete volume could be expected to be classified as hazardous waste necessitating disposal at a hazardous waste landfill (often more than $100 per ton). Additional soil characterization would be required to approximate the impacted soil volume and further characterize the corresponding volumes of waste classifications.

Regarding the MTBE plume, a Corrective Action Plan (CAP) was completed for the Property on August 1, 2011. The CAP identified an in-situ oxidation (ISCO) remediation program consisting of ozone/hydrogen peroxide (O_3/H_2O_2) to mitigate the MTBE impact in shallow groundwater beneath the Property. It is our opinion that the use of ISCO to mitigate the plume is an appropriate technology. Further, As presented in the CAP, the County of Santa Clara Department of Environmental Health (CSCDEH) previously indicated that cleanup criteria at the site is to be based on the secondary MCL of MTBE (5.0 µg/L) based on a designated beneficial use. However, total dissolved solids (TDS) levels measured at the Property have been nearly double the level to be considered of beneficial use. Therefore, the MTBE secondary MCL is not considered an appropriate cleanup goal. We concur with the recommendation in the CAP that the cleanup criteria be reconsidered.

The CAP also suggests that closure may be achieved within one year; occurring in August 2012. The CAP does state that this goal is very aggressive, requiring system approval by October 2012, six months of system operation, and closure following three months of groundwater verification monitoring; acknowledging that these steps may require more time. It is our opinion that this timeframe is unrealistic. All of these activities and time required for milestones will very likely require a much longer timeframe. For instance, it should be expected that 12 to 18 months of groundwater verification monitoring would be necessary. A more realistic, though optimistic,

date of closure may be expected between June and December 2013. Additionally, for cost estimation purposes, a preliminary estimate cost of remediation is approximately $150,000 to $200,000.

Elevated TPH-g and benzene concentrations were identified in several soil vapor samples. The TPH-g concentrations were within samples SG-1 (near the southwest corner of the high-bay flex building), SG-8 (at the center of the Property near the MTBE plume), and SG-9 (in the northwest corner of the wrecking yard). Although the corresponding impact source cannot be confirmed, it is likely that the elevated soil vapor concentrations are emanating from the MTBE/petroleum hydrocarbon plume at the Property. The detected concentrations are sufficient to potentially necessitate remediation and/or engineering/institutional controls to allow for residential development. The detected soil vapor concentrations, should they be emanating from the plume, would be expected to attenuate following ISCO application. The elevated vapor concentrations may also have emanated from localized soil and/or groundwater impacts at or near the respective sample locations. Additional characterization may be performed to determine the extent of these impacts. If impact is present, remedial methods may include excavation, ISCO (near the area of detected vapor), or soil vapor extraction (SVE). Costs associated with this mitigation cannot be estimated without additional characterization. Alternatively, engineering controls, such as soil vapor barriers and/or subsurface venting systems, may be considered depending on the type of residential structures proposed for the Property.

If you have any questions regarding this report, please do not hesitate to contact us.

Sincerely,

ENGEO Incorporated

REGISTERED PROFESSIONAL ENGINEER
JEFFREY A. ADAMS
No. 69633
Exp. 6/30/2012
CIVIL
STATE OF CALIFORNIA

Jeffrey A. Adams, PhD, PE, REA I

Shawn Munger, CHG, REAII

jaa/sm/cjn

Attachments: Figures 1 and 2
Tables A and B
Appendix A – Laboratory Analysis Report

FIGURES

Figure 1 – Vicinity Map
Figure 2 – Site Plan

9273.000.000
August 22, 2011

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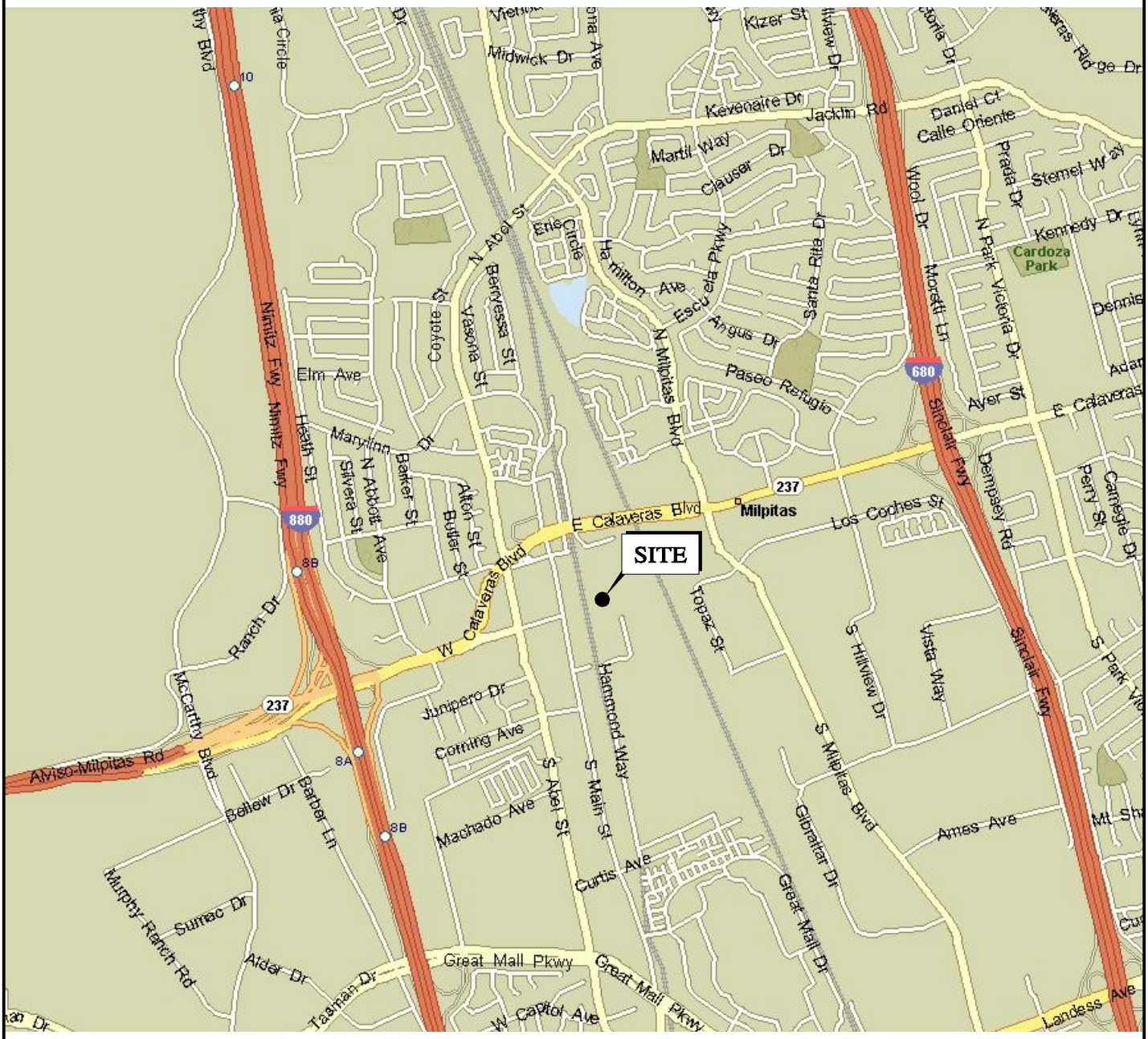

BASE MAP SOURCE: MS STREETS AND TRIPS

ENGEO
Expect Excellence

VICINITY MAP

PRESTON PIPELINES PROPERTY

MILPITAS, CALIFORNIA

PROJECT NO.: 9273.000.000		FIGURE NO.
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ORIGINAL FIGURE PRINTED IN COLOR

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0 FEET 100

0 METERS 50

EXPLANATION

S-6 ● APPROXIMATE LOCATION OF SOIL SAMPLE

SG-10 ● APPROXIMATE LOCATION OF SOIL VAPOR SAMPLE

CS-3 ◆ APPROXIMATE LOCATION OF SOIL SAMPLE IN FORMER CREEK ALIGNMENT

SS-2 ▲ APPROXIMATE LOCATION OF SURFACE SOIL SAMPLE

BASE MAP SOURCE: GOOGLE EARTH PRO

ENGEO Expect Excellence

SITE PLAN

PRESTON PIPELINES PROPERTY

MILPITAS, CALIFORNIA

PROJECT NO.: 9273.000.000	FIGURE NO. 2
SCALE: AS SHOWN	
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ORIGINAL FIGURE PRINTED IN COLOR

TABLES

Table A - Soil Sample
Table B – Soil Vapor Sampling

9273.000.000
August 22, 2011

TABLE A
SOIL SAMPLING

SOIL SAMPLING - LABORATORY ANALYSIS

SAMPLE	DATE	DEPTH (ft.)	TPH-GASOLINE (mg/kg)	TPH-DIESEL (mg/kg)	TPH-MO (mg/kg)	BENZENE (µg/kg)	TOLUENE (µg/kg)	ETHYLBENZENE (µg/kg)	XYLENE(S) (µg/kg)	MTBE (µg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	LEAD (mg/kg)	NICKEL (mg/kg)	ZINC (mg/kg)	NAPHTHALENE (µg/kg)	1-METHYLNAPTHALENE (µg/kg)	2-METHYLNAPTHALENE (µg/kg)	ACENAPHTHENE (µg/kg)	ANTHRACENE (µg/kg)	PYRENE (µg/kg)	BENZO(A)ANTHRACENE (µg/kg)	BENZO(B)FLUORANTHENE (µg/kg)	BENZO(K)FLUORANTHENE (µg/kg)	BENZO(A)PYRENE (µg/kg)	PHENANTHRENE (µg/kg)	FLUORANTHENE (µg/kg)	FLUORENE (µg/kg)	CHRYSENE (µg/kg)	OTHER SVOCs (µg/kg)	OTHER VOCs (µg/kg)
		ESL (Table A-1)	83	83	370	44	2900	2300	2300	23	1.7	750	200	150	600	1300	N/A	250	16000	2800	85000	380	380	380	38	11000	40000	8900	23000	N/A	N/A
		CHSSL (RES.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.7	100,000	80	1600	23,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-1@2'	7/26/2011	2'	ND<0.017	ND<0.76	29	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	49	9	79	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-1@6'	7/26/2011	6'	ND<0.017	ND<0.76	9.6	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	48	7.2	73	49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-2@2.5'	7/26/2011	2.5'	ND<0.017	ND<0.76	65.0	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	**2.8**	52	**140**	110	180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-2@6'	7/26/2011	6'	ND<0.017	ND<0.76	ND<1.8	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	44	5.6	65	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-3@2'	7/26/2011	2'	ND<0.017	ND<0.76	95	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	160	23	**270**	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-3@4'	7/26/2011	4'	ND<0.017	ND<0.76	11	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	40	16	62	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-3@6'	7/26/2011	6'	ND<0.017	ND<0.76	14	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	51	7.5	76	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-4@2'	7/26/2011	2'	ND<0.017	ND<0.76	71	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	240	6.5	**400**	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-4@4'	7/26/2011	4'	0.21	ND<0.76	**1100**	ND<1.5	22	ND<0.86	ND<0.66	ND<2.6	1.7	56	47	52	120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-5@2'	7/26/2011	2'	ND<0.017	ND<0.76	160	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	1.4	46	**87**	81	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-5@6'	7/26/2011	6'	ND<0.017	ND<0.76	37	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	44	8	67	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-6@2'	7/26/2011	2'	ND<0.017	ND<0.76	4.4	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	50	9.3	75	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S-6@6'	7/26/2011	6'	ND<0.017	ND<0.76	10	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	48	5.7	70	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CS-1 COMP	7/25/2011	1', 4', 7'	ND<0.017	ND<1.5	150	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	1.5	33	17	44	67	ND<800	ND<800	ND<800	ND<800	ND<16	ND<400	ND<40	ND<40	ND<14	ND<16	69	120	ND<800	ND<16	ND	ND
CS-2 COMP	7/25/2011	1', 4', 7'	ND<0.017	ND<3.8	**550**	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	40	10	65	48	ND<1600	ND<1600	ND<1600	ND<1600	ND<32	ND<800	ND<80	ND<80	ND<28	ND<32	210	ND<80	ND<1600	ND<32	ND	ND
CS-3 COMP	7/25/2011	1', 4', 7'	ND<0.017	ND<2.3	210	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	ND<0.059	32	25	39	67	1100	1500	**10000**	9000	120	490	320	200	120	**230**	520	830	ND<800	320	ND	ND
SS-1@4'	7/26/2011	4'	ND<0.017	53	250	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	1.4	24	36	33	73	ND<800	ND<800	ND<800	ND<800	ND<16	ND<400	ND<40	ND<40	ND<14	ND<16	140	210	**10000**	41	ND	ND
SS-2@2'	7/26/2011	2'	ND<0.017	ND<77	**12000**	ND<1.5	14	ND<0.86	ND<0.66	ND<2.6	ND<0.059	18	4.3	26	38	ND<1600	ND<1600	ND<1600	ND<1600	ND<32	ND<800	ND<80	ND<80	ND<28	ND<32	ND<80	ND<80	ND<1600	ND<32	ND	ND
SS-2@3'	7/26/2011	3'	ND<0.017	ND<3.8	56	ND<1.5	ND<0.98	ND<0.86	ND<0.66	ND<2.6	**1.8**	62	**350**	78	130	ND<800	ND<800	ND<800	ND<800	ND<16	ND<400	ND<40	ND<40	ND<14	ND<16	57	ND<40	ND<800	ND<16	ND	ND

TABLE B
SOIL VAPOR SAMPLING

SOIL VAPOR SAMPLING

	SAMPLE	SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-9	SG-10	ESL ($\mu g/m^3$)
	DATE	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/26/2011	7/25/2011	7/26/2011	7/26/2011	
ANALYTE	UNIT											
TPH-GASOLINE	($\mu g/m^3$)	**34,000**	9000	2500	6500	4000	5800	2900	**44000**	**18000**	8100	10,000
ACETONE	($\mu g/m^3$)	ND<8.8	ND<3.5	141	ND<3.5	694	582	ND<3.5	ND<3.5	ND<3.5	ND<3.5	660,000
CARBON DISULFIDE	($\mu g/m^3$)	51.2	178	ND<4.1	115	160	159	345	75.8	ND<3.2	53.1	N/A
4-METHYL-2-PENTANONE (MIBK)	($\mu g/m^3$)	ND<8.5	62	ND<4.2	ND<3.4	29	59	49.4	ND<3.4	ND<3.4	59.5	630,000
4-ETHYL TOLUENE	($\mu g/m^3$)	86.2	28.4	ND<4.1	ND<3.3	ND<3.3	37.8	14.3	193	56.6	20.6	N/A
1,3,5-TRIMETHYLBENZENE	($\mu g/m^3$)	21.1	ND<3	ND<3.8	ND<3	ND<3.3	ND<4.4	ND<3.5	109	13.7	ND<3.5	N/A
1,2,4-TRIMETHYLBENZENE	($\mu g/m^3$)	ND<6.9	23.1	ND<3.4	ND<2.8	ND<2.8	29	ND<2.8	322	44.9	ND<2.8	N/A
2-BUTANONE	($\mu g/m^3$)	ND<6.3	153	ND<3.1	ND<2.5	252	185	ND<2.5	ND<2.5	230	ND<2.5	1,000,000
BENZENE	($\mu g/m^3$)	ND<6.9	38.8	ND<3.4	44.9	14.3	20.4	18.6	12.2	77.8	40.3	84
TOLUENE	($\mu g/m^3$)	ND<9.5	108	ND<4.8	49.6	35.9	286	27.4	ND<3.8	324	206	630,000
ETHYLBENZENE	($\mu g/m^3$)	ND<9.9	ND<4	ND<5	ND<4	ND<4	23.7	ND<4	39	40.2	ND<4	980
XYLENE(S)	($\mu g/m^3$)	76.9	123	ND<4	23.2	ND,3.2	132.4	42.5	311.4	223.7	67.2	21,000
DIPE	($\mu g/m^3$)	ND<8.8	ND<3.5	1440	ND<3.5	46	ND<5.1	ND<3.5	608	ND<3.5	ND<3.5	N/A
1,1-DFA (LEAK COMPOUND)	($\mu g/m^3$)	ND<5	ND<2	ND<2.5	ND<2	ND<2.8	ND<2.9	ND<2	ND<2	ND<2	ND<2	N/A (10,000 ALLOWABLE)
OTHER VOCs	($\mu g/m^3$)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A

APPENDIX A

Laboratory Analysis Report

9273.000.000
August 22, 2011

Scott Johns
Engeo Inc (SJ)
6399 San Ignacio Ave, Suite 150
San Jose, California 95119
Tel: 408-574-4900/Scott cell:925570-5855
Fax: 888-279-2698

RE: Preston Pipelines

Work Order No.: 1107159

Dear Scott Johns:

Torrent Laboratory, Inc. received 20 sample(s) on July 26, 2011 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

N. S. Kabir

Nutan Kabir

August 05, 2011
Date

Date: 8/5/2011

Client: Engeo Inc (SJ)

Project: Preston Pipelines

Work Order: 1107159

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

SG-7 1107159-001A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	4	3.2	12	345
Benzene	ETO15	4	2.7	6.4	18.6
Toluene	ETO15	4	3.8	7.6	27.4
4-Methyl-2-Pentanone (MIBK)	ETO15	4	3.4	8.2	49.4
m,p-Xylene	ETO15	4	6.5	17	29.1
o-Xylene	ETO15	4	3.2	8.6	13.4
4-Ethyl Toluene	ETO15	4	3.3	9.8	14.3
TPH-Gasoline	ETO3	8	1400	2800	2900

SG-10 1107159-002A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	4	3.2	12	53.1
Benzene	ETO15	4	2.7	6.4	40.3
Toluene	ETO15	4	3.8	7.6	206
4-Methyl-2-Pentanone (MIBK)	ETO15	4	3.4	8.2	59.5
m,p-Xylene	ETO15	4	6.5	17	49.5
o-Xylene	ETO15	4	3.2	8.6	17.7
4-Ethyl Toluene	ETO15	4	3.3	9.8	20.6
TPH-Gasoline	ETO3	8	1400	2800	8100

S-1@2' 1107159-003A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	49	mg/Kg
Lead	SW6010B	1	0.043	1.0	9.0	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	79	mg/Kg
Zinc	SW6010B	1	0.59	5.0	57	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	29	mg/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

S-1@6' 1107159-004A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	48	mg/Kg
Lead	SW6010B	1	0.043	1.0	7.2	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	73	mg/Kg
Zinc	SW6010B	1	0.59	5.0	49	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	9.6	mg/Kg

S-2@2.5' 1107159-005A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Cadmium	SW6010B	1	0.0590	1.0	2.8	mg/Kg
Chromium	SW6010B	1	0.0590	5.0	52	mg/Kg
Lead	SW6010B	1	0.043	1.0	140	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	110	mg/Kg
Zinc	SW6010B	1	0.59	5.0	180	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	65	mg/Kg

S-2@6' 1107159-006A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	44	mg/Kg
Lead	SW6010B	1	0.043	1.0	5.6	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	65	mg/Kg
Zinc	SW6010B	1	0.59	5.0	43	mg/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

S-3@2' 1107159-007A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	160	mg/Kg
Lead	SW6010B	1	0.043	1.0	23	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	270	mg/Kg
Zinc	SW6010B	1	0.59	5.0	57	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	95	mg/Kg

S-3@4' 1107159-008A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	40	mg/Kg
Lead	SW6010B	1	0.043	1.0	16	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	62	mg/Kg
Zinc	SW6010B	1	0.59	5.0	52	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	11	mg/Kg

S-3@6' 1107159-009A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	51	mg/Kg
Lead	SW6010B	1	0.043	1.0	7.5	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	76	mg/Kg
Zinc	SW6010B	1	0.59	5.0	51	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	14	mg/Kg

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

S-4@2' 1107159-010A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	240	mg/Kg
Lead	SW6010B	1	0.043	1.0	6.5	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	400	mg/Kg
Zinc	SW6010B	1	0.59	5.0	38	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	71	mg/Kg

S-4@4' 1107159-011A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Cadmium	SW6010B	1	0.0590	1.0	1.7	mg/Kg
Chromium	SW6010B	1	0.0590	5.0	56	mg/Kg
Lead	SW6010B	1	0.043	1.0	47	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	52	mg/Kg
Zinc	SW6010B	1	0.59	5.0	120	mg/Kg
TPH(Gasoline)	8260TPH	1	17	100	210	ug/Kg
TPH as Motor Oil (SG)	SW8015B(M)	3	27	60	1100	mg/Kg
Toluene	SW8260B	1	0.98	10	22	ug/Kg

S-5@2' 1107159-012A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Cadmium	SW6010B	1	0.0590	1.0	1.4	mg/Kg
Chromium	SW6010B	1	0.0590	5.0	46	mg/Kg
Lead	SW6010B	1	0.043	1.0	87	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	81	mg/Kg
Zinc	SW6010B	1	0.59	5.0	57	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	2	3.6	7.9	160	mg/Kg

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

S-5@6' 1107159-013A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	44	mg/Kg
Lead	SW6010B	1	0.043	1.0	8.0	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	67	mg/Kg
Zinc	SW6010B	1	0.59	5.0	40	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	37	mg/Kg

SS-1@4' 1107159-015A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Cadmium	SW6010B	1	0.0590	1.0	1.4	mg/Kg
Chromium	SW6010B	1	0.0590	5.0	24	mg/Kg
Lead	SW6010B	1	0.043	1.0	36	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	33	mg/Kg
Zinc	SW6010B	1	0.59	5.0	73	mg/Kg
TPH as Diesel (SG)	SW8015B(M)	1	3.8	10	53	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	9.0	20	250	mg/Kg
Fluorene	SW8310	20	800	800	10000	ug/Kg
Phenanthrene	SW8310	20	40.00	20000	140	ug/Kg
Fluoranthene	SW8310	20	40.0	40	210	ug/Kg
Chrysene	SW8310	20	16.0	16	41	ug/Kg

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

SS-2@2' 1107159-017A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	18	mg/Kg
Lead	SW6010B	1	0.043	1.0	4.3	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	26	mg/Kg
Zinc	SW6010B	1	0.59	5.0	38	mg/Kg
Toluene	SW8260B	1	0.98	10	14	ug/Kg
TPH as Motor Oil (SG)	SW8015B(M)	5	180	400	12000	mg/Kg
Benzo(a)anthracene	SW8310	40	80.0	80	130	ug/Kg

SS-2@3' 1107159-018A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Cadmium	SW6010B	1	0.0590	1.0	1.8	mg/Kg
Chromium	SW6010B	1	0.0590	5.0	62	mg/Kg
Lead	SW6010B	1	0.043	1.0	350	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	78	mg/Kg
Zinc	SW6010B	1	0.59	5.0	130	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	9.0	20	56	mg/Kg
Phenanthrene	SW8310	20	40.00	20000	57	ug/Kg

S-6@2' 1107159-019A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	50	mg/Kg
Lead	SW6010B	1	0.043	1.0	9.3	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	75	mg/Kg
Zinc	SW6010B	1	0.59	5.0	55	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	4.4	mg/Kg

Sample Result Summary

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

S-6@6' 1107159-020A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	48	mg/Kg
Lead	SW6010B	1	0.043	1.0	5.7	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	70	mg/Kg
Zinc	SW6010B	1	0.59	5.0	46	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	1	1.8	4.0	10	mg/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SG-7	**Lab Sample ID:**	1107159-001A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6333	**Received PSI :**	13.6
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	345	111.29		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	ND	ND		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	18.6	5.81		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SG-7	**Lab Sample ID:**	1107159-001A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6333	**Received PSI :**	13.6
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	27.4	7.21		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	49.4	12.05		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	29.1	6.77		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	13.4	3.12		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	14.3	2.92		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	ND	ND		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	101 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SG-7	**Lab Sample ID:**	1107159-001A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6333	**Received PSI :**	13.6
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	2900	823.86	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SG-10	**Lab Sample ID:**	1107159-002A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6107	**Received PSI :**	11.9
Collection Volume (L):	0.00	**Corrected PSI :**	23.8
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	53.1	17.13		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	ND	ND		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	40.3	12.59		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SG-10	**Lab Sample ID:**	1107159-002A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6107	**Received PSI :**	11.9
Collection Volume (L):	0.00	**Corrected PSI :**	23.8
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	206	54.21		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	59.5	14.51		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	49.5	11.51		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	17.7	4.12		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	20.6	4.20		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	ND	ND		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	101 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SG-10	**Lab Sample ID:**	1107159-002A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6107	**Received PSI :**	11.9
Collection Volume (L):	0.00	**Corrected PSI :**	23.8
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	8100	2,301.14	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-1@2'	**Lab Sample ID:**	1107159-003A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	49		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	9.0		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	79		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	57		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	103		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	96.7		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	98.0		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	95.6		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	29		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	85.4		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-1@6'	**Lab Sample ID:**	1107159-004A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	48		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	7.2		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	73		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	49		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	105		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	98.1		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	106		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	79.2		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	9.6	x	mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	108		%	406053	3256

NOTE: x-Discrete hydrocarbon peak present within the motor oil quantitation range.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-2@2.5'	**Lab Sample ID:**	1107159-005A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	2.8		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	52		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	140		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	110		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	180		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	107		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	95.3		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	104		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	85.1		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	65	x	mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	104		%	406053	3256

NOTE: x-Discrete hydrocarbon peak present within the motor oil quantitation range.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-2@6'	**Lab Sample ID:**	1107159-006A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	44		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	5.6		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	65		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	43		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	104		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	95.2		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	105		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	90.1		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	ND		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	108		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-3@2'	**Lab Sample ID:**	1107159-007A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	160		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	23		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	270		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	57		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	104		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	88.5		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	104		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	92.3		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	95		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	101		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-3@4'	**Lab Sample ID:**	1107159-008A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	40		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	16		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	62		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	52		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	106		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	97.9		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	106		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	87.5		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	11		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	105		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-3@6'	**Lab Sample ID:**	1107159-009A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	51		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	7.5		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	76		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	51		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	111		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	97.1		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	112		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	71.6		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	14		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	104		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-4@2'	**Lab Sample ID:**	1107159-010A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	240		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	6.5		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	400		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	38		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	109		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	88.2		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	106		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	93.6		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	1	0.76	2.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	1	1.8	4.0	71		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	1	61.5	133	97.9		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-4@4'	**Lab Sample ID:**	1107159-011A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	1.7		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	56		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	47		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	52		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	120		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	22		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	103		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	100		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	128		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	210	x	ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	73.6		%	406080	3275

NOTE: x - Does not match pattern of reference Gasoline standard. Reported value due to contribution from non-fuel light hydrocarbons to the C5-C12 range quantified as Gasoline.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/29/11	3	11	30	ND		mg/Kg	406077	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/29/11	3	27	60	1100		mg/Kg	406077	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/29/11	3	61.5	133	113		%	406077	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-5@2'	**Lab Sample ID:**	1107159-012A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	1.4		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	46		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	87		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	81		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	57		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	109		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	97.7		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	109		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	86.4		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/29/11	2	1.5	4.0	ND		mg/Kg	406077	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/29/11	2	3.6	7.9	160		mg/Kg	406077	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/29/11	2	61.5	133	90.0		%	406077	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-5@6'	**Lab Sample ID:**	1107159-013A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	44		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	8.0		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	67		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	40		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	108		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	97.7		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	116		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	65.8		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/28/11	07/29/11	1	0.76	2.0	ND		mg/Kg	406077	3263
TPH as Motor Oil (SG)	SW8015B(M)	7/28/11	07/29/11	1	1.8	4.0	37		mg/Kg	406077	3263
Pentacosane (S)	SW8015B(M)	7/28/11	07/29/11	1	61.5	133	98.8		%	406077	3263

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-1@4'	**Lab Sample ID:**	1107159-015A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	1.4		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	24		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	36		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	33		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	73		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/28/11	1	4.4	10	ND		ug/Kg	406080	NA
Chloromethane	SW8260B	NA	07/28/11	1	4.6	10	ND		ug/Kg	406080	NA
Vinyl Chloride	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Bromomethane	SW8260B	NA	07/28/11	1	4.7	10	ND		ug/Kg	406080	NA
Trichlorofluoromethane	SW8260B	NA	07/28/11	1	2.9	10	ND		ug/Kg	406080	NA
1,1-Dichloroethene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Freon 113	SW8260B	NA	07/28/11	1	3.7	10	ND		ug/Kg	406080	NA
Methylene Chloride	SW8260B	NA	07/28/11	1	2.0	50	ND		ug/Kg	406080	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
tert-Butanol	SW8260B	NA	07/28/11	1	21	50	ND		ug/Kg	406080	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/28/11	1	2.2	10	ND		ug/Kg	406080	NA
1,1-Dichloroethane	SW8260B	NA	07/28/11	1	1.3	10	ND		ug/Kg	406080	NA
ETBE	SW8260B	NA	07/28/11	1	2.4	10	ND		ug/Kg	406080	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
2,2-Dichloropropane	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
Bromochloromethane	SW8260B	NA	07/28/11	1	2.3	10	ND		ug/Kg	406080	NA
Chloroform	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
Carbon Tetrachloride	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
1,1,1-Trichloroethane	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
1,1-Dichloropropene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
TAME	SW8260B	NA	07/28/11	1	2.1	10	ND		ug/Kg	406080	NA
1,2-Dichloroethane	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
Trichloroethylene	SW8260B	NA	07/28/11	1	3.9	10	ND		ug/Kg	406080	NA
Dibromomethane	SW8260B	NA	07/28/11	1	2.2	10	ND		ug/Kg	406080	NA
1,2-Dichloropropane	SW8260B	NA	07/28/11	1	1.3	10	ND		ug/Kg	406080	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-1@4'	**Lab Sample ID:**	1107159-015A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Bromodichloromethane	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Tetrachloroethylene	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
1,1,2-Trichloroethane	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
Dibromochloromethane	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
1,3-Dichloropropane	SW8260B	NA	07/28/11	1	2.1	10	ND		ug/Kg	406080	NA
1,2-Dibromoethane	SW8260B	NA	07/28/11	1	1.7	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
Chlorobenzene	SW8260B	NA	07/28/11	1	4.2	10	ND		ug/Kg	406080	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
Styrene	SW8260B	NA	07/28/11	1	0.77	10	ND		ug/Kg	406080	NA
Bromoform	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
Isopropyl Benzene	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
n-Propylbenzene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
Bromobenzene	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/28/11	1	3.0	10	ND		ug/Kg	406080	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
1,2,3-Trichloropropane	SW8260B	NA	07/28/11	1	3.3	10	ND		ug/Kg	406080	NA
4-Chlorotoluene	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
2-Chlorotoluene	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
tert-Butylbenzene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
sec-Butyl Benzene	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
p-Isopropyltoluene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
1,3-Dichlorobenzene	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
1,4-Dichlorobenzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
n-Butylbenzene	SW8260B	NA	07/28/11	1	2.2	10	ND		ug/Kg	406080	NA
1,2-Dichlorobenzene	SW8260B	NA	07/28/11	1	1.3	10	ND		ug/Kg	406080	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/28/11	1	4.2	10	ND		ug/Kg	406080	NA
Hexachlorobutadiene	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/28/11	1	2.1	10	ND		ug/Kg	406080	NA
Naphthalene	SW8260B	NA	07/28/11	1	2.8	10	ND		ug/Kg	406080	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-1@4'	**Lab Sample ID:**	1107159-015A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2,3-Trichlorobenzene	SW8260B	NA	07/28/11	1	2.9	10	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	112		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	99.4		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	113		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Naphthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Acenapthylene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
1-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
2-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Acenaphthene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Fluorene	SW8310	7/30/11	08/04/11	20	800	800	10000		ug/Kg	406132	3271
Phenanthrene	SW8310	7/30/11	08/04/11	20	40.00	20000	140	J	ug/Kg	406132	3271
Anthracene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	210		ug/Kg	406132	3271
Pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(a)anthracene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Chrysene	SW8310	7/30/11	08/04/11	20	16.0	16	41		ug/Kg	406132	3271
Benzo(b)fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Benzo(k)fluoranthene	SW8310	7/30/11	08/04/11	20	14.0	16	ND		ug/Kg	406132	3271
Benzo(a)pyrene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Dibenzo(a,h)anthracene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(ghi)perylene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Indeno(1,2,3-cd)pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Decafluorobiphenyl (S)	SW8310	7/30/11	08/04/11	20	60	140	0.000	S,D	%	406132	3271

NOTE: Note: Reporting limits increased due to the nature of the sample matrix (viscous and dark color extract). D = Surrogates diluted out.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	77.9		%	406080	3275

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-1@4'	**Lab Sample ID:**	1107159-015A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/28/11	07/29/11	1	3.8	10	53	x	mg/Kg	406077	3263
TPH as Motor Oil (SG)	SW8015B(M)	7/28/11	07/29/11	1	9.0	20	250		mg/Kg	406077	3263
Pentacosane (S)	SW8015B(M)	7/28/11	07/29/11	1	61.5	133	82.4		%	406077	3263

NOTE: x- Not typical of Diesel standard pattern (possibly aged Diesel). Motor oil result is elevated due to overlapping of diesel and motor oil quantitation ranges.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@2'	**Lab Sample ID:**	1107159-017A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	18		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	4.3		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	26		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	38		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/28/11	1	4.4	10	ND		ug/Kg	406080	NA
Chloromethane	SW8260B	NA	07/28/11	1	4.6	10	ND		ug/Kg	406080	NA
Vinyl Chloride	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Bromomethane	SW8260B	NA	07/28/11	1	4.7	10	ND		ug/Kg	406080	NA
Trichlorofluoromethane	SW8260B	NA	07/28/11	1	2.9	10	ND		ug/Kg	406080	NA
1,1-Dichloroethene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Freon 113	SW8260B	NA	07/28/11	1	3.7	10	ND		ug/Kg	406080	NA
Methylene Chloride	SW8260B	NA	07/28/11	1	2.0	50	ND		ug/Kg	406080	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
tert-Butanol	SW8260B	NA	07/28/11	1	21	50	ND		ug/Kg	406080	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/28/11	1	2.2	10	ND		ug/Kg	406080	NA
1,1-Dichloroethane	SW8260B	NA	07/28/11	1	1.3	10	ND		ug/Kg	406080	NA
ETBE	SW8260B	NA	07/28/11	1	2.4	10	ND		ug/Kg	406080	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
2,2-Dichloropropane	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
Bromochloromethane	SW8260B	NA	07/28/11	1	2.3	10	ND		ug/Kg	406080	NA
Chloroform	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
Carbon Tetrachloride	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
1,1,1-Trichloroethane	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
1,1-Dichloropropene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
TAME	SW8260B	NA	07/28/11	1	2.1	10	ND		ug/Kg	406080	NA
1,2-Dichloroethane	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
Trichloroethylene	SW8260B	NA	07/28/11	1	3.9	10	ND		ug/Kg	406080	NA
Dibromomethane	SW8260B	NA	07/28/11	1	2.2	10	ND		ug/Kg	406080	NA
1,2-Dichloropropane	SW8260B	NA	07/28/11	1	1.3	10	ND		ug/Kg	406080	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@2'	**Lab Sample ID:**	1107159-017A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Bromodichloromethane	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	14		ug/Kg	406080	NA
Tetrachloroethylene	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
1,1,2-Trichloroethane	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
Dibromochloromethane	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
1,3-Dichloropropane	SW8260B	NA	07/28/11	1	2.1	10	ND		ug/Kg	406080	NA
1,2-Dibromoethane	SW8260B	NA	07/28/11	1	1.7	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
Chlorobenzene	SW8260B	NA	07/28/11	1	4.2	10	ND		ug/Kg	406080	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
Styrene	SW8260B	NA	07/28/11	1	0.77	10	ND		ug/Kg	406080	NA
Bromoform	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
Isopropyl Benzene	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
n-Propylbenzene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
Bromobenzene	SW8260B	NA	07/28/11	1	1.2	10	ND		ug/Kg	406080	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/28/11	1	3.0	10	ND		ug/Kg	406080	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
1,2,3-Trichloropropane	SW8260B	NA	07/28/11	1	3.3	10	ND		ug/Kg	406080	NA
4-Chlorotoluene	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
2-Chlorotoluene	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
tert-Butylbenzene	SW8260B	NA	07/28/11	1	1.4	10	ND		ug/Kg	406080	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/28/11	1	1.1	10	ND		ug/Kg	406080	NA
sec-Butyl Benzene	SW8260B	NA	07/28/11	1	1.6	10	ND		ug/Kg	406080	NA
p-Isopropyltoluene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
1,3-Dichlorobenzene	SW8260B	NA	07/28/11	1	1.8	10	ND		ug/Kg	406080	NA
1,4-Dichlorobenzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
n-Butylbenzene	SW8260B	NA	07/28/11	1	2.2	10	ND		ug/Kg	406080	NA
1,2-Dichlorobenzene	SW8260B	NA	07/28/11	1	1.3	10	ND		ug/Kg	406080	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/28/11	1	4.2	10	ND		ug/Kg	406080	NA
Hexachlorobutadiene	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/28/11	1	2.1	10	ND		ug/Kg	406080	NA
Naphthalene	SW8260B	NA	07/28/11	1	2.8	10	ND		ug/Kg	406080	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@2'	**Lab Sample ID:**	1107159-017A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2,3-Trichlorobenzene	SW8260B	NA	07/28/11	1	2.9	10	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	124		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	102		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	123		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Naphthalene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Acenapthylene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
1-Methylnapthalene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
2-Methylnapthalene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Acenaphthene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Fluorene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Phenanthrene	SW8310	7/30/11	08/04/11	40	80.00	40000	ND		ug/Kg	406132	3271
Anthracene	SW8310	7/30/11	08/04/11	40	32.0	32	ND		ug/Kg	406132	3271
Fluoranthene	SW8310	7/30/11	08/04/11	40	80.0	80	ND		ug/Kg	406132	3271
Pyrene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Benzo(a)anthracene	SW8310	7/30/11	08/04/11	40	80.0	80	130		ug/Kg	406132	3271
Chrysene	SW8310	7/30/11	08/04/11	40	32.0	32	ND		ug/Kg	406132	3271
Benzo(b)fluoranthene	SW8310	7/30/11	08/04/11	40	80.0	80	ND		ug/Kg	406132	3271
Benzo(k)fluoranthene	SW8310	7/30/11	08/04/11	40	28.0	32	ND		ug/Kg	406132	3271
Benzo(a)pyrene	SW8310	7/30/11	08/04/11	40	32.0	32	ND		ug/Kg	406132	3271
Dibenzo(a,h)anthracene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Benzo(ghi)perylene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Indeno(1,2,3-cd)pyrene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Decafluorobiphenyl (S)	SW8310	7/30/11	08/04/11	40	60	140	0.000	S,D	%	406132	3271

NOTE: Note: Reporting limits increased due to the nature of the sample matrix (viscous and dark color extract). D = Surrogates diluted out.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	49.8		%	406080	3275

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@2'	**Lab Sample ID:**	1107159-017A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/28/11	07/29/11	5	77	200	ND		mg/Kg	406077	3263
TPH as Motor Oil (SG)	SW8015B(M)	7/28/11	07/29/11	5	180	400	12000		mg/Kg	406077	3263
Pentacosane (S)	SW8015B(M)	7/28/11	07/29/11	5	61.5	133	0.000	S,D	%	406077	3263

NOTE: D - Surrogates not recoverable due to dilution of the sample.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@3'	**Lab Sample ID:**	1107159-018A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	1.8		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	62		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	350		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	78		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	130		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/29/11	1	4.4	10	ND		ug/Kg	406083	NA
Chloromethane	SW8260B	NA	07/29/11	1	4.6	10	ND		ug/Kg	406083	NA
Vinyl Chloride	SW8260B	NA	07/29/11	1	2.6	10	ND		ug/Kg	406083	NA
Bromomethane	SW8260B	NA	07/29/11	1	4.7	10	ND		ug/Kg	406083	NA
Trichlorofluoromethane	SW8260B	NA	07/29/11	1	2.9	10	ND		ug/Kg	406083	NA
1,1-Dichloroethene	SW8260B	NA	07/29/11	1	1.5	10	ND		ug/Kg	406083	NA
Freon 113	SW8260B	NA	07/29/11	1	3.7	10	ND		ug/Kg	406083	NA
Methylene Chloride	SW8260B	NA	07/29/11	1	2.0	50	ND		ug/Kg	406083	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/29/11	1	1.1	10	ND		ug/Kg	406083	NA
MTBE	SW8260B	NA	07/29/11	1	2.6	10	ND		ug/Kg	406083	NA
tert-Butanol	SW8260B	NA	07/29/11	1	21	50	ND		ug/Kg	406083	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/29/11	1	2.2	10	ND		ug/Kg	406083	NA
1,1-Dichloroethane	SW8260B	NA	07/29/11	1	1.3	10	ND		ug/Kg	406083	NA
ETBE	SW8260B	NA	07/29/11	1	2.4	10	ND		ug/Kg	406083	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/29/11	1	1.8	10	ND		ug/Kg	406083	NA
2,2-Dichloropropane	SW8260B	NA	07/29/11	1	1.2	10	ND		ug/Kg	406083	NA
Bromochloromethane	SW8260B	NA	07/29/11	1	2.3	10	ND		ug/Kg	406083	NA
Chloroform	SW8260B	NA	07/29/11	1	1.2	10	ND		ug/Kg	406083	NA
Carbon Tetrachloride	SW8260B	NA	07/29/11	1	1.6	10	ND		ug/Kg	406083	NA
1,1,1-Trichloroethane	SW8260B	NA	07/29/11	1	1.2	10	ND		ug/Kg	406083	NA
1,1-Dichloropropene	SW8260B	NA	07/29/11	1	1.4	10	ND		ug/Kg	406083	NA
Benzene	SW8260B	NA	07/29/11	1	1.5	10	ND		ug/Kg	406083	NA
TAME	SW8260B	NA	07/29/11	1	2.1	10	ND		ug/Kg	406083	NA
1,2-Dichloroethane	SW8260B	NA	07/29/11	1	1.9	10	ND		ug/Kg	406083	NA
Trichloroethylene	SW8260B	NA	07/29/11	1	3.9	10	ND		ug/Kg	406083	NA
Dibromomethane	SW8260B	NA	07/29/11	1	2.2	10	ND		ug/Kg	406083	NA
1,2-Dichloropropane	SW8260B	NA	07/29/11	1	1.3	10	ND		ug/Kg	406083	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@3'	**Lab Sample ID:**	1107159-018A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Bromodichloromethane	SW8260B	NA	07/29/11	1	1.1	10	ND		ug/Kg	406083	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/29/11	1	1.4	10	ND		ug/Kg	406083	NA
Toluene	SW8260B	NA	07/29/11	1	0.98	10	ND		ug/Kg	406083	NA
Tetrachloroethylene	SW8260B	NA	07/29/11	1	1.8	10	ND		ug/Kg	406083	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/29/11	1	1.2	10	ND		ug/Kg	406083	NA
1,1,2-Trichloroethane	SW8260B	NA	07/29/11	1	1.8	10	ND		ug/Kg	406083	NA
Dibromochloromethane	SW8260B	NA	07/29/11	1	1.1	10	ND		ug/Kg	406083	NA
1,3-Dichloropropane	SW8260B	NA	07/29/11	1	2.1	10	ND		ug/Kg	406083	NA
1,2-Dibromoethane	SW8260B	NA	07/29/11	1	1.7	10	ND		ug/Kg	406083	NA
Ethyl Benzene	SW8260B	NA	07/29/11	1	0.86	10	ND		ug/Kg	406083	NA
Chlorobenzene	SW8260B	NA	07/29/11	1	4.2	10	ND		ug/Kg	406083	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/29/11	1	0.86	10	ND		ug/Kg	406083	NA
m,p-Xylene	SW8260B	NA	07/29/11	1	1.9	10	ND		ug/Kg	406083	NA
o-Xylene	SW8260B	NA	07/29/11	1	0.66	5.0	ND		ug/Kg	406083	NA
Styrene	SW8260B	NA	07/29/11	1	0.77	10	ND		ug/Kg	406083	NA
Bromoform	SW8260B	NA	07/29/11	1	1.9	10	ND		ug/Kg	406083	NA
Isopropyl Benzene	SW8260B	NA	07/29/11	1	1.2	10	ND		ug/Kg	406083	NA
n-Propylbenzene	SW8260B	NA	07/29/11	1	1.4	10	ND		ug/Kg	406083	NA
Bromobenzene	SW8260B	NA	07/29/11	1	1.2	10	ND		ug/Kg	406083	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/29/11	1	3.0	10	ND		ug/Kg	406083	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/29/11	1	1.1	10	ND		ug/Kg	406083	NA
1,2,3-Trichloropropane	SW8260B	NA	07/29/11	1	3.3	10	ND		ug/Kg	406083	NA
4-Chlorotoluene	SW8260B	NA	07/29/11	1	1.6	10	ND		ug/Kg	406083	NA
2-Chlorotoluene	SW8260B	NA	07/29/11	1	1.6	10	ND		ug/Kg	406083	NA
tert-Butylbenzene	SW8260B	NA	07/29/11	1	1.4	10	ND		ug/Kg	406083	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/29/11	1	1.1	10	ND		ug/Kg	406083	NA
sec-Butyl Benzene	SW8260B	NA	07/29/11	1	1.6	10	ND		ug/Kg	406083	NA
p-Isopropyltoluene	SW8260B	NA	07/29/11	1	1.5	10	ND		ug/Kg	406083	NA
1,3-Dichlorobenzene	SW8260B	NA	07/29/11	1	1.8	10	ND		ug/Kg	406083	NA
1,4-Dichlorobenzene	SW8260B	NA	07/29/11	1	1.5	10	ND		ug/Kg	406083	NA
n-Butylbenzene	SW8260B	NA	07/29/11	1	2.2	10	ND		ug/Kg	406083	NA
1,2-Dichlorobenzene	SW8260B	NA	07/29/11	1	1.3	10	ND		ug/Kg	406083	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/29/11	1	4.2	10	ND		ug/Kg	406083	NA
Hexachlorobutadiene	SW8260B	NA	07/29/11	1	2.6	10	ND		ug/Kg	406083	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/29/11	1	2.1	10	ND		ug/Kg	406083	NA
Naphthalene	SW8260B	NA	07/29/11	1	2.8	10	ND		ug/Kg	406083	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@3'	**Lab Sample ID:**	1107159-018A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2,3-Trichlorobenzene	SW8260B	NA	07/29/11	1	2.9	10	ND		ug/Kg	406083	NA
(S) Dibromofluoromethane	SW8260B	NA	07/29/11	1	59.8	148	93.8		%	406083	NA
(S) Toluene-d8	SW8260B	NA	07/29/11	1	55.2	133	99.0		%	406083	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/29/11	1	55.8	141	110		%	406083	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Naphthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Acenapthylene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
1-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
2-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Acenaphthene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Fluorene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Phenanthrene	SW8310	7/30/11	08/04/11	20	40.00	20000	57	J	ug/Kg	406132	3271
Anthracene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(a)anthracene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Chrysene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Benzo(b)fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Benzo(k)fluoranthene	SW8310	7/30/11	08/04/11	20	14.0	16	ND		ug/Kg	406132	3271
Benzo(a)pyrene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Dibenzo(a,h)anthracene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(ghi)perylene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Indeno(1,2,3-cd)pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Decafluorobiphenyl (S)	SW8310	7/30/11	08/04/11	20	60	140	0.000	S,D	%	406132	3271

NOTE: Note: Reporting limits increased due to the nature of the sample matrix (viscous and dark color extract). D = Surrogates diluted out.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	86.9		%	406080	3275

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	SS-2@3'	**Lab Sample ID:**	1107159-018A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 / 0:00		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/28/11	07/29/11	1	3.8	10	ND		mg/Kg	406077	3263
TPH as Motor Oil (SG)	SW8015B(M)	7/28/11	07/29/11	1	9.0	20	56		mg/Kg	406077	3263
Pentacosane (S)	SW8015B(M)	7/28/11	07/29/11	1	61.5	133	82.2		%	406077	3263

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-6@2'	**Lab Sample ID:**	1107159-019A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	50		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	9.3		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	75		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	55		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	113		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	102		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	106		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	57.4		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/28/11	07/29/11	1	0.76	2.0	ND		mg/Kg	406077	3263
TPH as Motor Oil (SG)	SW8015B(M)	7/28/11	07/29/11	1	1.8	4.0	4.4		mg/Kg	406077	3263
Pentacosane (S)	SW8015B(M)	7/28/11	07/29/11	1	61.5	133	117		%	406077	3263

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Scott Johns
Engeo Inc (SJ)

Date Received: 07/26/11
Date Reported: 08/05/11

Client Sample ID:	S-6@6'	**Lab Sample ID:**	1107159-020A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/26/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/28/11	07/29/11	1	0.0590	1.0	ND		mg/Kg	406057	3260
Chromium	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	48		mg/Kg	406057	3260
Lead	SW6010B	7/28/11	07/29/11	1	0.043	1.0	5.7		mg/Kg	406057	3260
Nickel	SW6010B	7/28/11	07/29/11	1	0.0590	5.0	70		mg/Kg	406057	3260
Zinc	SW6010B	7/28/11	07/29/11	1	0.59	5.0	46		mg/Kg	406057	3260

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	07/28/11	1	2.6	10	ND		ug/Kg	406080	NA
Benzene	SW8260B	NA	07/28/11	1	1.5	10	ND		ug/Kg	406080	NA
Toluene	SW8260B	NA	07/28/11	1	0.98	10	ND		ug/Kg	406080	NA
Ethyl Benzene	SW8260B	NA	07/28/11	1	0.86	10	ND		ug/Kg	406080	NA
m,p-Xylene	SW8260B	NA	07/28/11	1	1.9	10	ND		ug/Kg	406080	NA
o-Xylene	SW8260B	NA	07/28/11	1	0.66	5.0	ND		ug/Kg	406080	NA
(S) Dibromofluoromethane	SW8260B	NA	07/28/11	1	59.8	148	102		%	406080	NA
(S) Toluene-d8	SW8260B	NA	07/28/11	1	55.2	133	96.7		%	406080	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/28/11	1	55.8	141	113		%	406080	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/28/11	07/28/11	1	17	100	ND		ug/Kg	406080	3275
(S) 4-Bromofluorobenzene	8260TPH	7/28/11	07/28/11	1	43.9	127	60.2		%	406080	3275

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/28/11	07/29/11	1	0.76	2.0	ND		mg/Kg	406077	3263
TPH as Motor Oil (SG)	SW8015B(M)	7/28/11	07/29/11	1	1.8	4.0	10		mg/Kg	406077	3263
Pentacosane (S)	SW8015B(M)	7/28/11	07/29/11	1	61.5	133	110		%	406077	3263

MB Summary Report

Work Order:	1107159	**Prep Method:**	3545_TPH	**Prep Date:**	07/27/11	**Prep Batch:**	3256
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406053
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Diesel Range Organics (DRO)	0.76	2.0	ND	
TPH as Bunker Oil	1.78	4.0	ND	
TPH as Fuel Oil	1.78	4.0	ND	
TPH as Diesel	0.758	2.0	ND	
TPH as Heating Oil	3.30	4.0	ND	
TPH as Hydraulic Oil	1.78	4.0	ND	
TPH as Jet A	0.758	2.0	ND	
TPH as Jet Fuel	0.76	2.0	ND	
TPH as JP-4	0.758	2.0	ND	
TPH as JP-5	0.758	2.0	ND	
TPH as JP-7	0.758	2.0	ND	
TPH as JP-8	0.758	2.0	ND	
TPH as Kerosene	0.758	3.3	ND	
TPH as Mineral Oil	1.78	4.0	ND	
TPH as Motor Oil	1.8	4.0	ND	
TPH as Naphtha	0.758	3.3	ND	
TPH as Oil	1.78	4.0	ND	
TPH as Stoddard	0.758	3.3	ND	
TPH as Transformer Oil	1.78	4.0	ND	
Creosote	0.758	3.3	ND	
Pentacosane (S)			97.8	

Work Order:	1107159	**Prep Method:**	3050	**Prep Date:**	07/28/11	**Prep Batch:**	3260
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406057
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Cadmium	0.059	1.0	ND	
Chromium	0.059	5.0	0.16	
Lead	0.043	1.0	0.28	
Nickel	0.059	5.0	0.12	
Zinc	0.59	5.0	ND	

MB Summary Report

Work Order:	1107159	**Prep Method:**	3545_TPHSG	**Prep Date:**	07/28/11	**Prep Batch:**	3263
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406077
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.76	2.0	0.80	
TPH as Motor Oil (SG)	1.8	4.0	ND	
Pentacosane (S)			87.3	

Work Order:	1107159	**Prep Method:**	3545_PAH	**Prep Date:**	07/30/11	**Prep Batch:**	3271
Matrix:	Soil	**Analytical Method:**	SW8310	**Analyzed Date:**	08/04/11	**Analytical Batch:**	406132
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Naphthalene	40.0	40	ND	
Acenapthylene	40.0	40	ND	
1-Methylnapthalene	40.0	40	ND	
2-Methylnapthalene	40.0	40	ND	
Acenaphthene	40.0	40	ND	
Fluorene	40.0	40	ND	
Phenanthrene	2.000	1000	ND	
Anthracene	0.800	0.80	ND	
Fluoranthene	2.00	2.0	ND	
Pyrene	20.0	20	ND	
Benzo(a)anthracene	2.00	2.0	ND	
Chrysene	0.800	0.80	ND	
Benzo(b)fluoranthene	2.00	2.0	ND	
Benzo(k)fluoranthene	0.700	0.80	ND	
Benzo(a)pyrene	0.800	0.80	ND	
Dibenzo(a,h)anthracene	20.0	20	ND	
Benzo(ghi)perylene	20.0	20	ND	
Indeno(1,2,3-cd)pyrene	20.0	20	ND	
Decafluorobiphenyl (S)			98.7	

MB Summary Report

Work Order:	1107159	**Prep Method:**	5035	**Prep Date:**	07/28/11	**Prep Batch:**	3275
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/28/11	**Analytical Batch:**	406080
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	17	100	ND	
(S) 4-Bromofluorobenzene			98.9	

Work Order:	1107159	**Prep Method:**	5035	**Prep Date:**	07/29/11	**Prep Batch:**	3278
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406083
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	17	100	89	
(S) 4-Bromofluorobenzene			110	

MB Summary Report

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406033
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.30	1.00	ND	
1,1-Difluoroethane	0.18	0.500	ND	
1,2-Dichlorotetrafluoroethane	0.70	2.00	ND	
Chloromethane	0.15	0.500	ND	
Vinyl Chloride	0.26	1.00	ND	
1,3-Butadiene	0.20	0.500	ND	
Bromomethane	0.18	0.500	ND	
Chloroethane	0.19	0.500	ND	
Trichlorofluoromethane	0.32	1.00	ND	
1,1-Dichloroethene	0.15	0.500	ND	
Freon 113	0.11	0.500	ND	
Carbon Disulfide	0.26	1.00	ND	
2-Propanol (Isopropyl Alcohol)	0.39	4.00	ND	
Methylene Chloride	0.17	0.500	ND	
Acetone	0.37	4.00	ND	
trans-1,2-Dichloroethene	0.16	0.500	ND	
Hexane	0.15	0.500	ND	
MTBE	0.24	0.500	ND	
tert-Butanol	0.22	2.00	ND	
Diisopropyl ether (DIPE)	0.21	0.500	ND	
1,1-Dichloroethane	0.18	0.500	ND	
ETBE	0.16	0.500	ND	
cis-1,2-Dichloroethene	0.13	0.500	ND	
Chloroform	0.25	1.00	ND	
Vinyl Acetate	0.16	0.500	ND	
Carbon Tetrachloride	0.14	0.500	ND	
1,1,1-Trichloroethane	0.15	0.500	ND	
2-Butanone (MEK)	0.21	0.500	ND	
Ethyl Acetate	0.21	0.500	ND	
Tetrahydrofuran	0.10	0.500	ND	
Benzene	0.21	0.500	ND	
TAME	0.086	0.500	ND	
1,2-Dichloroethane (EDC)	0.24	0.500	ND	
Trichloroethylene	0.26	1.00	ND	
1,2-Dichloropropane	0.29	1.00	ND	
Bromodichloromethane	0.13	0.500	ND	
1,4-Dioxane	0.35	1.00	ND	
trans-1,3-Dichloropropene	0.19	0.500	ND	
Toluene	0.25	0.500	ND	
4-Methyl-2-Pentanone (MIBK)	0.21	0.500	ND	
cis-1,3-Dichloropropene	0.25	0.500	ND	

MB Summary Report

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406033
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Tetrachloroethylene	0.13	0.500	ND	
1,1,2-Trichloroethane	0.17	0.500	ND	
Dibromochloromethane	0.20	0.500	ND	
1,2-Dibromoethane (EDB)	0.27	1.00	ND	
2-Hexanone	0.27	1.00	ND	
Ethyl Benzene	0.23	0.500	ND	
Chlorobenzene	0.15	0.500	ND	
1,1,1,2-Tetrachloroethane	0.15	0.500	ND	
m,p-Xylene	0.38	1.00	ND	
o-Xylene	0.19	0.500	ND	
Styrene	0.16	0.500	ND	
Bromoform	0.11	0.500	ND	
1,1,2,2-Tetrachloroethane	0.10	0.500	ND	
4-Ethyl Toluene	0.17	0.500	ND	
1,3,5-Trimethylbenzene	0.15	0.500	ND	
1,2,4-Trimethylbenzene	0.14	0.500	ND	
1,4-Dichlorobenzene	0.11	0.500	ND	
1,3-Dichlorobenzene	0.14	0.500	ND	
Benzyl Chloride	0.12	0.500	ND	
1,2-Dichlorobenzene	0.15	0.500	ND	
Hexachlorobutadiene	0.22	0.500	ND	
1,2,4-Trichlorobenzene	0.46	1.00	ND	
Naphthalene	0.28	1.00	ND	
(S) 4-Bromofluorobenzene			98.5	

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO3	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406046
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH-Gasoline	50	100	ND	

MB Summary Report

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/28/11	**Analytical Batch:**	406080
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	
o-Xylene	0.66	5.0	ND	

MB Summary Report

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/28/11	**Analytical Batch:**	406080
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			104	
(S) Toluene-d8			91.2	
(S) 4-Bromofluorobenzene			101	

MB Summary Report

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406083
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	
o-Xylene	0.66	5.0	ND	

MB Summary Report

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406083
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			99.1	
(S) Toluene-d8			97.4	
(S) 4-Bromofluorobenzene			109	

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107159	**Prep Method:**	3545_TPH	**Prep Date:**	07/27/11	**Prep Batch:**	3256
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406053
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Diesel Range Organics (DRO)	0.76	2.0	ND	33.33	83.7	64.3	26.3	50.8 - 111	30	
Pentacosane (S)			ND	100	120	92.8		61.5 - 133		

Work Order:	1107159	**Prep Method:**	3050	**Prep Date:**	07/28/11	**Prep Batch:**	3260
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406057
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Cadmium	0.059	1.0	ND	50	96.3	94.9	1.51	68.7 - 110	30	
Chromium	0.059	5.0	0.16	50	100	98.7	1.33	76 - 116	30	
Lead	0.13	1.0	0.28	50	99.4	99.6	0.161	67.9 - 118	30	
Nickel	0.059	5.0	0.12	50	99.1	97.6	1.58	61.5 - 122	30	
Zinc	0.59	5.0	ND	50	97.6	96.4	1.29	59.9 - 122	30	

Work Order:	1107159	**Prep Method:**	3545_TPHSG	**Prep Date:**	07/28/11	**Prep Batch:**	3263
Matrix:	Soil	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406077
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.76	2.0	0.80	33.33	85.4	80.4	6.03	50.8 - 111	30	
TPH as Motor Oil (SG)			ND	100				61.5 - 133		

Work Order:	1107159	**Prep Method:**	3545_PAH	**Prep Date:**	07/30/11	**Prep Batch:**	3271
Matrix:	Soil	**Analytical Method:**	SW8310	**Analyzed Date:**	08/04/11	**Analytical Batch:**	406132
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Acenaphthene	40.0	40	ND	200	91.3	98.6	9.0	60 - 140	30	,
Fluorene	40.0	40	ND	200	106	113	7.3	60 - 140	30	,
Benzo(a)pyrene	0.800	0.80	ND	10	92.4	74.9	21	60 - 140	30	,
Decafluorobiphenyl (S)			98.7	2000	101	116		60 - 140		,

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107159	**Prep Method:**	5035	**Prep Date:**	07/28/11	**Prep Batch:**	3275
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/28/11	**Analytical Batch:**	406080
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	17	100	ND	1000	102	108	5.37	48.2 - 132	30	,
(S) 4-Bromofluorobenzene			98.9	50	103	112		57 - 127		,

Work Order:	1107159	**Prep Method:**	5035	**Prep Date:**	07/29/11	**Prep Batch:**	3278
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406083
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	17	100	89	1000	110	119	7.48	48.2 - 132	30	,
(S) 4-Bromofluorobenzene			110	50	118	117		57 - 127		,

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406033
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.15	0.500	ND	20	91.8	102	10.1	65 - 135	30	,
Benzene	0.21	0.500	ND	20	106	117	9.69	65 - 135	30	,
Trichloroethylene	0.26	1.00	ND	20	112	125	11.2	65 - 135	30	,
Toluene	0.25	0.500	ND	20	110	122	10.4	65 - 135	30	,
Chlorobenzene	0.15	0.500	ND	20	102	113	10.1	65 - 135	30	,
(S) 4-Bromofluorobenzene			ND	20	85.0	90.0		65 - 135		,

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO3	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406046
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH-Gasoline	50	100	ND	500	99.5	111	11.1	50 - 150	30	,

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LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/28/11	**Analytical Batch:**	406080
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	95.0	105	10.0	53.7 - 139	30	,
Benzene	1.5	10	ND	50	89.8	97.9	8.61	66.5 - 135	30	,
Trichloroethylene	3.9	10	ND	50	85.3	89.6	5.01	57.5 - 150	30	,
Toluene	0.98	10	ND	50	87.5	91.8	4.70	56.8 - 134	30	,
Chlorobenzene	4.2	10	ND	50	91.0	97.7	7.12	57.4 - 134	30	,
(S) Dibromofluoromethane			ND	50	98.4	104		59.8 - 148		,
(S) Toluene-d8			ND	50	93.9	95.4		55.2 - 133		,
(S) 4-Bromofluorobenzene			ND	50	99.0	99.7		55.8 - 141		,

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406083
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	98.2	96.9	1.33	53.7 - 139	30	,
Benzene	1.5	10	ND	50	94.1	94.7	0.487	66.5 - 135	30	,
Trichloroethylene	3.9	10	ND	50	94.4	93.6	0.872	57.5 - 150	30	,
Toluene	0.98	10	ND	50	90.9	91.7	0.986	56.8 - 134	30	,
Chlorobenzene	4.2	10	ND	50	99.0	95.7	3.41	57.4 - 134	30	,
(S) Dibromofluoromethane			ND	50	93.2	99.6		59.8 - 148		,
(S) Toluene-d8			ND	50	94.5	95.2		55.2 - 133		,
(S) 4-Bromofluorobenzene			ND	50	97.6	101		55.8 - 141		,

MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107159	**Prep Method:**	3050	**Prep Date:**	07/28/11	**Prep Batch:**	3260
Matrix:	**Soil**	**Analytical Method:**	SW6010B	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406057
Spiked Sample:	1107159-003A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Cadmium	0.059	1.0	0.016	50	87.1	88.4	1.44	68.7 - 110	30	
Chromium	0.059	5.0	0.98	50	87.7	91.2	1.71	76 - 116	30	
Lead	0.13	1.0	0.18	50	82.3	84.9	2.86	67.9 - 118	30	
Nickel	0.059	5.0	1.6	50	79.9	81.2	0.499	61.5 - 122	30	
Zinc	0.59	5.0	1.1	50	85.1	91.8	3.43	59.9 - 122	30	

Work Order:	1107159	**Prep Method:**	3545_TPHSG	**Prep Date:**	07/28/11	**Prep Batch:**	3263
Matrix:	**Soil**	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406077
Spiked Sample:	1107159-019A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.76	2.0	12.3856	33.33	87.7	81.9	6.72	50.8 - 111	30	
Pentacosane (S)				100	112	116		61.5 - 133		

Work Order:	1107159	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	**Soil**	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/28/11	**Analytical Batch:**	406080
Spiked Sample:	1107159-020A						
Units:	ug/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Benzene	1.5	10	0	50	111	110	0.525	66.5 - 135	30	
Toluene	0.98	10	9.02	50	102	101	0.654	56.8 - 134	30	
(S) Dibromofluoromethane				50	103	104		59.8 - 148		
(S) Toluene-d8				50	101	105		55.2 - 133		
(S) 4-Bromofluorobenzene				50	111	122		55.8 - 141		

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Engeo Inc (SJ)

Project Name: Preston Pipelines

Work Order No.: 1107159

Date and Time Received: 7/26/2011 16:42

Received By: yb

Physically Logged By: yb

Checklist Completed By: yb

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes		
Container/Temp Blank temperature in compliance?		Temperature:	°C
Water-VOA vials have zero headspace?	No VOA vials submitted		
Water-pH acceptable upon receipt?			
pH Checked by:	pH Adjusted by:		

Login Summary Report

Client ID:	TL5224 Engeo Inc (SJ)	**QC Level:**	
Project Name:	Preston Pipelines	**TAT Requested:**	5+ day:0
Project # :	9273.000.000	**Date Received:**	7/26/2011
Report Due Date:	8/2/2011	**Time Received:**	16:42

Comments: 5 day TAT! Received 2 air samples and 18 soils, 2 soils On Hold.Per client TPHg added to 015,017,018.

Work Order # : ***1107159***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1107159-001A	SG-7	07/26/11	Air					
							A_TO-3GRO	
							A_TO-15Full-B	
							A_TO-15Full-A	
1107159-002A	SG-10	07/26/11	Air					
							A_TO-3GRO	
							A_TO-15Full-A	
							A_TO-15Full-B	
1107159-003A	S-1@2'	07/26/11 0:00	Soil	01/22/12				
							S_6010BCAM17	
							S_TPHDOSG	
							S_GCMS-GRO	
							S_8260MBTEX	
Sample Note:	Metals -LUFT 5 only.							
1107159-004A	S-1@6'	07/26/11	Soil	01/22/12				
							S_6010BCAM17	
							S_GCMS-GRO	
							S_TPHDOSG	
							S_8260MBTEX	
1107159-005A	S-2@2.5'	07/26/11	Soil	01/22/12				
							S_6010BCAM17	
							S_GCMS-GRO	
							S_8260MBTEX	
							S_TPHDOSG	
1107159-006A	S-2@6'	07/26/11	Soil	01/22/12				
							S_6010BCAM17	
							S_8260MBTEX	
							S_TPHDOSG	
							S_GCMS-GRO	
1107159-007A	S-3@2'	07/26/11	Soil	01/22/12				
							S_6010BCAM17	
							S_TPHDOSG	
							S_8260MBTEX	
							S_GCMS-GRO	
1107159-008A	S-3@4'	07/26/11 0:00	Soil	01/22/12				
							S_6010BCAM17	

Login Summary Report

Client ID:	TL5224	Engeo Inc (SJ)	**QC Level:**	
Project Name:	Preston Pipelines		**TAT Requested:**	5+ day:0
Project # :	9273.000.000		**Date Received:**	7/26/2011
Report Due Date:	8/2/2011		**Time Received:**	16:42

Comments: 5 day TAT! Received 2 air samples and 18 soils, 2 soils On Hold.Per client TPHg added to 015,017,018.

Work Order # : ***1107159***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1107159-009A	S-3@6'	07/26/11	Soil	01/22/12			S_8260MBTEX S_GCMS-GRO S_TPHDOSG	
1107159-010A	S-4@2'	07/26/11 0:00	Soil	01/22/12			S_6010BCAM17 S_GCMS-GRO S_8260MBTEX S_TPHDOSG	
1107159-011A	S-4@4'	07/26/11	Soil	01/22/12			S_6010BCAM17 S_GCMS-GRO S_TPHDOSG S_8260MBTEX	
1107159-012A	S-5@2'	07/26/11 0:00	Soil	01/22/12			S_6010BCAM17 S_8260MBTEX S_GCMS-GRO S_TPHDOSG	
1107159-013A	S-5@6'	07/26/11	Soil	01/22/12			S_6010BCAM17 S_8260MBTEX S_TPHDOSG S_GCMS-GRO	
1107159-014A	SS-1@2'	07/26/11 0:00	Soil	01/22/12	On-Hold		S_6010BCAM17 S_TPHDOSG S_8260MBTEX S_GCMS-GRO	
1107159-015A	SS-1@4'	07/26/11	Soil	01/22/12			Hold Samples	
1107159-016A	SS-1@6'	07/26/11	Soil	01/22/12	On-Hold		S_6010BCAM17 S_8260Full S_TPHDOSG S_8310 S_GCMS-GRO	

Login Summary Report

Client ID:	TL5224 Engeo Inc (SJ)	**QC Level:**	
Project Name:	Preston Pipelines	**TAT Requested:**	5+ day:0
Project # :	9273.000.000	**Date Received:**	7/26/2011
Report Due Date:	8/2/2011	**Time Received:**	16:42

Comments: 5 day TAT! Received 2 air samples and 18 soils, 2 soils On Hold.Per client TPHg added to 015,017,018.

Work Order # : ***1107159***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
							Hold Samples	
1107159-017A	SS-2@2'	07/26/11	Soil	01/22/12			S_6010BCAM17 S_8260Full S_GCMS-GRO S_TPHDOSG S_8310	
1107159-018A	SS-2@3'	07/26/11 0:00	Soil	01/22/12			S_6010BCAM17 S_8310 S_GCMS-GRO S_8260Full S_TPHDOSG	
1107159-019A	S-6@2'	07/26/11	Soil	01/22/12			S_6010BCAM17 S_8260MBTEX S_TPHDOSG S_GCMS-GRO	
1107159-020A	S-6@6'	07/26/11	Soil	01/22/12			S_6010BCAM17 S_TPHDOSG S_GCMS-GRO S_8260MBTEX	

Torrent LABORATORY, INC.

1107159

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 9273,000,000
PROJECT NAME: Preston Pipelines
SAMPLED BY: (SIGNATURE/PRINT) Scott Johns / Scott Johns
PROJECT MANAGER: Jeff Adams
ROUTING: E-MAIL sjohns@engeo.com; jadams@engeo.com ~~Hard Copy~~ ~~Scott Johns~~

	SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE	70-15 w/TPH-g	8260B TPH-g Full Scan	8015B TPH-g extract w/silica gel cleanup	6010B LUFT	8310 PAHs	8260B TPH-g MTBE BTEX ONLY	REMARKS REQUIRED DETECTION LIMITS
001A	SG-7	7/26/11		Vapor	1	summa	NA	X						
002A	SG-10							X						
003A	S-1 @ 2'			Soil	1	Liner	ice			X	X		X	
004A	S-1 @ 6'									X	X		X	
005A	S-2 @ 2.5'									X	X		X	
006A	S-2 @ 6'									X	X		X	
007A	S-3 @ 2'									X	X		X	
008A	S-3 @ 4'									X	X		X	
009A	S-3 @ 6'									X	X		X	
010A	S-4 @ 2'									X	X		X	
011A	S-4 @ 4'									X	X		X	
012A	S-5 @ 2'									X	X		X	
013A	S-5 @ 6'									X	X		X	
014A	SS-1 @ 2'													HOLD
015A	SS-1 @ 4'								X	X	X	X		
016A	SS-1 @ 6'													HOLD
017A	SS-2 @ 2'				1	bag	ice		X	X	X	X		
018A	SS-2 @ 3'					liner			X	X	X	X		
019A	S-6 @ 2'									X	X		X	
020A	S-6 @ 6'									X	X		X	

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Scott Johns	7/26/11 4:42	[signature]		7/26/11 16:42	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
		[signature]			
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS	
				· Standard 5-Day TAT	

ENGEO INCORPORATED
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SAN JOSE, CALIFORNIA 95119
(408) 574-4900 FAX (888) 279-2698
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DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO PROJECT FIELD FILES

Scott Johns
Engeo Inc (SJ)
6399 San Ignacio Ave, Suite 150
San Jose, California 95119
Tel: 408-574-4900/Scott cell:925570-5855
Fax: 888-279-2698

RE: Preston Pipelines

Work Order No.: 1107152

Dear Jeff Adams:

Torrent Laboratory, Inc. received 18 sample(s) on July 25, 2011 for the analyses presented in the following Report.

As per CoC three (3:1) composites for soils.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

N. S. Kabir

Nutan Kabir

August 05, 2011

Date

Date: 8/5/2011

Client: Engeo Inc (SJ)

Project: Preston Pipelines

Work Order: 1107152

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

SG-1 1107152-001A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	10	8.1	31	51.2
m,p-Xylene	ETO15	10	16	43	56.3
o-Xylene	ETO15	10	8.1	22	20.6
4-Ethyl Toluene	ETO15	10	8.2	25	86.2
1,3,5-Trimethylbenzene	ETO15	10	7.6	25	21.1
TPH-Gasoline	ETO3	20	3500	7000	34000

SG-2 1107152-002A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	4	3.2	12	178
2-Butanone (MEK)	ETO15	4	2.5	6.0	153
Benzene	ETO15	4	2.7	6.4	38.8
Toluene	ETO15	4	3.8	7.6	108
4-Methyl-2-Pentanone (MIBK)	ETO15	4	3.4	8.2	62.0
m,p-Xylene	ETO15	4	6.5	17	90.1
o-Xylene	ETO15	4	3.2	8.6	32.9
4-Ethyl Toluene	ETO15	4	3.3	9.8	28.4
1,2,4-Trimethylbenzene	ETO15	4	2.8	9.8	23.1
TPH-Gasoline	ETO3	8	1400	2800	9900

SG-3 1107152-003A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Acetone	ETO15	5	4.4	48	141
Diisopropyl ether (DIPE)	ETO15	5	4.4	11	1440
TPH-Gasoline	ETO3	8	1400	2800	2500

Sample Result Summary

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

SG-4 1107152-004A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	4	3.2	12	115
Benzene	ETO15	4	2.7	6.4	44.9
Toluene	ETO15	4	3.8	7.6	49.6
m,p-Xylene	ETO15	4	6.5	17	23.2
TPH-Gasoline	ETO3	8	1400	2800	6500

SG-5 1107152-005A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	4	3.2	12	160
Acetone	ETO15	4	3.5	38	694
Diisopropyl ether (DIPE)	ETO15	4	3.5	8.4	46.0
2-Butanone (MEK)	ETO15	4	2.5	6.0	252
Benzene	ETO15	4	2.7	6.4	14.3
Toluene	ETO15	4	3.8	7.6	35.9
4-Methyl-2-Pentanone (MIBK)	ETO15	4	3.4	8.2	29.0
TPH-Gasoline	ETO3	8	1400	2800	4000

Sample Result Summary

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

SG-6 1107152-006A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
TPH-Gasoline	ETO3	11.6	2000	4100	5800
Carbon Disulfide	ETO15	5.8	4.7	18	159
Acetone	ETO15	5.8	5.1	56	582
2-Butanone (MEK)	ETO15	5.8	3.6	8.7	185
Benzene	ETO15	5.8	4.0	9.3	20.4
Toluene	ETO15	5.8	5.5	11	286
4-Methyl-2-Pentanone (MIBK)	ETO15	5.8	4.9	12	59.0
Ethyl Benzene	ETO15	5.8	5.7	12	23.7
m,p-Xylene	ETO15	5.8	9.4	25	99.0
o-Xylene	ETO15	5.8	4.7	12	33.4
4-Ethyl Toluene	ETO15	5.8	4.7	14	37.8
1,2,4-Trimethylbenzene	ETO15	5.8	4.0	14	29.0

SG-8 1107152-007A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Carbon Disulfide	ETO15	4	3.2	12	75.8
Diisopropyl ether (DIPE)	ETO15	4	3.5	8.4	608
Benzene	ETO15	4	2.7	6.4	12.2
Ethyl Benzene	ETO15	4	4.0	8.6	39.0
m,p-Xylene	ETO15	4	6.5	17	224
o-Xylene	ETO15	4	3.2	8.6	87.4
4-Ethyl Toluene	ETO15	4	3.3	9.8	193
1,3,5-Trimethylbenzene	ETO15	4	3.0	9.8	109
1,2,4-Trimethylbenzene	ETO15	4	2.8	9.8	322
TPH-Gasoline	ETO3	8	1400	2800	44000

Sample Result Summary

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Comp. CS-1(1,4,7) 1107152-008A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Cadmium	SW6010B	1	0.0590	1.0	1.5	mg/Kg
Chromium	SW6010B	1	0.0590	5.0	33	mg/Kg
Lead	SW6010B	1	0.043	1.0	17	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	44	mg/Kg
Zinc	SW6010B	1	0.59	5.0	67	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	2	3.6	7.9	150	mg/Kg
Phenanthrene	SW8310	20	40.00	20000	69	ug/Kg
Fluoranthene	SW8310	20	40.0	40	120	ug/Kg

CS-1 1107152-009A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Diisopropyl ether (DIPE)	SW8260B	1.19	0.43	0.60	3.2	ug/L

Comp. CS-2(1,4,7) 1107152-010A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	40	mg/Kg
Lead	SW6010B	1	0.043	1.0	10	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	65	mg/Kg
Zinc	SW6010B	1	0.59	5.0	48	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	5	8.9	20	550	mg/Kg
Phenanthrene	SW8310	40	80.00	40000	210	ug/Kg
Chrysene	SW8310	40	32.0	32	45	ug/Kg

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

CS-2 1107152-011A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit

All compounds were non-detectable for this sample.

Comp. CS-3(1,4,7) 1107152-012A

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Chromium	SW6010B	1	0.0590	5.0	32	mg/Kg
Lead	SW6010B	1	0.043	1.0	25	mg/Kg
Nickel	SW6010B	1	0.0590	5.0	39	mg/Kg
Zinc	SW6010B	1	0.59	5.0	67	mg/Kg
TPH as Motor Oil (SG)	SW8015B(M)	3	5.3	12	210	mg/Kg
Naphthalene	SW8310	20	800	800	1100	ug/Kg
1-Methylnapthalene	SW8310	20	800	800	1500	ug/Kg
2-Methylnapthalene	SW8310	20	800	800	10000	ug/Kg
Acenaphthene	SW8310	20	800	800	9000	ug/Kg
Phenanthrene	SW8310	20	40.00	20000	520	ug/Kg
Anthracene	SW8310	20	16.0	16	120	ug/Kg
Fluoranthene	SW8310	20	40.0	40	830	ug/Kg
Pyrene	SW8310	20	400	400	490	ug/Kg
Benzo(a)anthracene	SW8310	20	40.0	40	320	ug/Kg
Chrysene	SW8310	20	16.0	16	320	ug/Kg
Benzo(b)fluoranthene	SW8310	20	40.0	40	200	ug/Kg
Benzo(k)fluoranthene	SW8310	20	14.0	16	120	ug/Kg
Benzo(a)pyrene	SW8310	20	16.0	16	230	ug/Kg

Sample Result Summary

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

SG-9 1107152-013A

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
2-Butanone (MEK)	ETO15	4	2.5	6.0	230
Benzene	ETO15	4	2.7	6.4	77.8
Toluene	ETO15	4	3.8	7.6	324
Ethyl Benzene	ETO15	4	4.0	8.6	40.2
m,p-Xylene	ETO15	4	6.5	17	168
o-Xylene	ETO15	4	3.2	8.6	55.7
4-Ethyl Toluene	ETO15	4	3.3	9.8	56.6
1,3,5-Trimethylbenzene	ETO15	4	3.0	9.8	13.7
1,2,4-Trimethylbenzene	ETO15	4	2.8	9.8	44.9
TPH-Gasoline	ETO3	8	1400	2800	18000

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-1	**Lab Sample ID:**	1107152-001A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7482	**Received PSI :**	11.9
Collection Volume (L):	0.00	**Corrected PSI :**	23.7
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Dichlorodifluoromethane	ETO15	NA	07/26/11	10	15	50	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	10	5.0	14	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	10	49	140	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	10	3.2	11	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	10	6.7	26	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	10	4.5	11	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	10	7.2	20	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	10	5.0	13	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	10	18	56	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	10	6.1	20	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	10	8.5	39	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	10	8.1	31	51.2	16.52		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	10	9.7	100	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	10	5.8	35	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	10	8.8	96	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	10	6.4	20	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	10	5.3	18	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	10	8.7	18	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	10	9.1	84	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	10	8.8	21	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	10	7.5	21	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	10	6.8	21	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	10	5.4	20	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	10	12	49	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	10	5.7	18	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	10	8.6	32	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	10	8.5	28	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	10	6.3	15	ND	ND		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	10	7.4	18	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	10	3.0	15	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	10	6.9	16	ND	ND		406033	NA
TAME	ETO15	NA	07/26/11	10	3.6	21	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	10	9.9	21	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	10	14	54	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-1	**Lab Sample ID:**	1107152-001A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7482	**Received PSI :**	11.9
Collection Volume (L):	0.00	**Corrected PSI :**	23.7
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1,2-Dichloropropane	ETO15	NA	07/26/11	10	13	46	ND	ND		406033	NA
Bromodichloromethane	ETO15	NA	07/26/11	10	8.9	34	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	10	12	36	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	10	8.7	23	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	10	9.5	19	ND	ND		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	10	8.5	21	ND	ND		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	10	11	23	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	10	9.1	34	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	10	9.3	28	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	10	17	43	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	10	20	77	ND	ND		406033	NA

NOTE: The reporting limits were raised due to the high concentration of non-target compounds

The results shown below are reported using their MDL.

2-Hexanone	ETO15	NA	07/26/11	10	11	41	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	10	9.9	22	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	10	7.1	23	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	10	10	35	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	10	16	43	56.3	13.09		406033	NA
o-Xylene	ETO15	NA	07/26/11	10	8.1	22	20.6	4.79	J	406033	NA
Styrene	ETO15	NA	07/26/11	10	6.9	22	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	10	11	50	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	10	7.0	35	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	10	8.2	25	86.2	17.59		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	10	7.6	25	21.1	4.31	J	406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	10	6.9	25	ND	ND		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	10	6.5	30	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	10	8.4	30	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	10	6.2	26	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	10	9.1	30	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	10	24	55	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	10	34	74	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	10	15	52	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	10	65	135	105 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-1	**Lab Sample ID:**	1107152-001A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7482	**Received PSI :**	11.9
Collection Volume (L):	0.00	**Corrected PSI :**	23.7
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	20	3500	7000	34000	9,659.09	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-2	**Lab Sample ID:**	1107152-002A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6121	**Received PSI :**	14.0
Collection Volume (L):	0.00	**Corrected PSI :**	28.1
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	178	57.42		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	153	51.00		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	38.8	12.13		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-2	**Lab Sample ID:**	1107152-002A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6121	**Received PSI :**	14.0
Collection Volume (L):	0.00	**Corrected PSI :**	28.1
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	108	28.42		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	62.0	15.12		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	90.1	20.95		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	32.9	7.65		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	28.4	5.80		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	23.1	4.71		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	104 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-2	**Lab Sample ID:**	1107152-002A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6121	**Received PSI :**	14.0
Collection Volume (L):	0.00	**Corrected PSI :**	28.1
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	9900	2,812.50	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-3	**Lab Sample ID:**	1107152-003A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7476	**Received PSI :**	13.9
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	5	7.6	25	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	5	2.5	6.8	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	5	25	70	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	5	1.6	5.3	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	5	3.3	13	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	5	2.2	5.5	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	5	3.6	9.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	5	2.5	6.5	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	5	9.0	28	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	5	3.1	10	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	5	4.2	19	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	5	4.1	16	ND	ND		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	5	4.9	50	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	5	2.9	18	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	5	4.4	48	141	58.75		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	5	3.2	10	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	5	2.6	8.8	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	5	4.3	9.0	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	5	4.6	42	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	5	4.4	11	1440	342.86		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	5	3.8	10	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	5	3.4	11	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	5	2.7	10	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	5	6.2	25	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	5	2.8	8.8	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	5	4.3	16	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	5	4.2	14	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	5	3.1	7.5	ND	ND		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	5	3.7	9.0	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	5	1.5	7.5	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	5	3.4	8.0	ND	ND		406033	NA
TAME	ETO15	NA	07/26/11	5	1.8	11	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	5	4.9	10	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	5	6.9	27	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	5	6.6	23	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-3	**Lab Sample ID:**	1107152-003A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7476	**Received PSI :**	13.9
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	5	4.4	17	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	5	6.2	18	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	5	4.3	11	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	5	4.8	9.5	ND	ND		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	5	4.2	10	ND	ND		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	5	5.6	11	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	5	4.5	17	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	5	4.6	14	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	5	8.7	21	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	5	10	39	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	5	5.6	21	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	5	5.0	11	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	5	3.6	12	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	5	5.2	17	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	5	8.1	22	ND	ND		406033	NA
o-Xylene	ETO15	NA	07/26/11	5	4.0	11	ND	ND		406033	NA
Styrene	ETO15	NA	07/26/11	5	3.4	11	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	5	5.5	25	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	5	3.5	17	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	5	4.1	12	ND	ND		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	5	3.8	12	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	5	3.4	12	ND	ND		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	5	3.2	15	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	5	4.2	15	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	5	3.1	13	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	5	4.5	15	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	5	12	28	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	5	17	37	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	5	7.3	26	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	5	65	135	99.0 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-3	**Lab Sample ID:**	1107152-003A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7476	**Received PSI :**	13.9
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	2500	710.23	J	406046	NA

NOTE: Reporting limits were raised due to insufficient sample for multiple analyses (1-L canister).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-4	**Lab Sample ID:**	1107152-004A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6120	**Received PSI :**	14.3
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	115	37.10		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	ND	ND		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	44.9	14.03		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-4	**Lab Sample ID:**	1107152-004A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6120	**Received PSI :**	14.3
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	49.6	13.05		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	ND	ND		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	23.2	5.40		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	ND	ND		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	ND	ND		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	ND	ND		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	103 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-4	**Lab Sample ID:**	1107152-004A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6120	**Received PSI :**	14.3
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	6500	1,846.59	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-5	**Lab Sample ID:**	1107152-005A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7546	**Received PSI :**	12.3
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	160	51.61		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	694	289.17		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	46.0	10.95		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	252	84.00		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	14.3	4.47		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-5	**Lab Sample ID:**	1107152-005A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7546	**Received PSI :**	12.3
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	35.9	9.45		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	29.0	7.07		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	ND	ND		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	ND	ND		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	ND	ND		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	ND	ND		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	ND	ND		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	94.9 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-5	**Lab Sample ID:**	1107152-005A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7546	**Received PSI :**	12.3
Collection Volume (L):	0.00	**Corrected PSI :**	0.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	4000	1,136.36	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-6	**Lab Sample ID:**	1107152-006A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6114	**Received PSI :**	9.7
Collection Volume (L):	0.00	**Corrected PSI :**	14.1
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	5.8	8.8	29	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	5.8	2.9	7.8	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	5.8	29	81	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	5.8	1.8	6.1	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	5.8	3.9	15	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	5.8	2.6	6.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	5.8	4.2	11	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	5.8	2.9	7.5	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	5.8	10	32	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	5.8	3.5	12	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	5.8	4.9	22	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	5.8	4.7	18	159	51.29		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	5.8	5.6	58	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	5.8	3.4	20	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	5.8	5.1	56	582	242.50		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	5.8	3.7	12	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	5.8	3.1	10	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	5.8	5.0	10	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	5.8	5.3	49	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	5.8	5.1	12	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	5.8	4.4	12	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	5.8	3.9	12	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	5.8	3.1	12	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	5.8	7.2	28	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	5.8	3.3	10	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	5.8	5.0	18	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	5.8	4.9	16	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	5.8	3.6	8.7	185	61.67		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	5.8	4.3	10	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	5.8	1.8	8.7	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	5.8	4.0	9.3	20.4	6.38		406033	NA
TAME	ETO15	NA	07/26/11	5.8	2.1	12	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	5.8	5.7	12	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	5.8	8.0	31	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	5.8	7.6	27	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-6	**Lab Sample ID:**	1107152-006A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6114	**Received PSI :**	9.7
Collection Volume (L):	0.00	**Corrected PSI :**	14.1
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	5.8	5.2	19	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	5.8	7.2	21	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	5.8	5.0	13	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	5.8	5.5	11	286	75.26		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	5.8	4.9	12	59.0	14.39		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	5.8	6.5	13	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	5.8	5.2	20	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	5.8	5.4	16	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	5.8	10	25	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	5.8	12	45	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	5.8	6.5	24	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	5.8	5.7	12	23.7	5.51		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	5.8	4.1	13	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	5.8	6.0	20	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	5.8	9.4	25	99.0	23.02		406033	NA
o-Xylene	ETO15	NA	07/26/11	5.8	4.7	12	33.4	7.77		406033	NA
Styrene	ETO15	NA	07/26/11	5.8	4.0	13	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	5.8	6.4	29	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	5.8	4.1	20	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	5.8	4.7	14	37.8	7.71		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	5.8	4.4	14	ND	ND		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	5.8	4.0	14	29.0	5.92		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	5.8	3.7	17	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	5.8	4.9	17	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	5.8	3.6	15	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	5.8	5.3	17	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	5.8	14	32	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	5.8	20	43	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	5.8	8.4	30	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	5.8	65	135	100 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-6	**Lab Sample ID:**	1107152-006A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	6114	**Received PSI :**	9.7
Collection Volume (L):	0.00	**Corrected PSI :**	14.1
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	11.6	2000	4100	5800	1,647.73	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-8	**Lab Sample ID:**	1107152-007A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7465	**Received PSI :**	12.0
Collection Volume (L):	0.00	**Corrected PSI :**	24.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	75.8	24.45		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	608	144.76		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	ND	ND		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	12.2	3.81		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-8	**Lab Sample ID:**	1107152-007A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7465	**Received PSI :**	12.0
Collection Volume (L):	0.00	**Corrected PSI :**	24.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	ND	ND		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	ND	ND		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	39.0	9.07		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	224	52.09		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	87.4	20.33		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	193	39.39		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	109	22.24		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	322	65.71		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	107 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-8	**Lab Sample ID:**	1107152-007A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /	**Certified Clean WO # :**	
Canister/Tube ID:	A7465	**Received PSI :**	12.0
Collection Volume (L):	0.00	**Corrected PSI :**	24.0
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	44000	12,500.00	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-1(1,4,7)	**Lab Sample ID:**	1107152-008A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/26/11	07/26/11	1	0.0590	1.0	1.5		mg/Kg	406019	3236
Chromium	SW6010B	7/26/11	07/26/11	1	0.0590	5.0	33		mg/Kg	406019	3236
Lead	SW6010B	7/26/11	07/26/11	1	0.043	1.0	17		mg/Kg	406019	3236
Nickel	SW6010B	7/26/11	07/26/11	1	0.0590	5.0	44		mg/Kg	406019	3236
Zinc	SW6010B	7/26/11	07/26/11	1	0.59	5.0	67		mg/Kg	406019	3236

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/27/11	1	4.4	10	ND		ug/Kg	406045	NA
Chloromethane	SW8260B	NA	07/27/11	1	4.6	10	ND		ug/Kg	406045	NA
Vinyl Chloride	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
Bromomethane	SW8260B	NA	07/27/11	1	4.7	10	ND		ug/Kg	406045	NA
Trichlorofluoromethane	SW8260B	NA	07/27/11	1	2.9	10	ND		ug/Kg	406045	NA
1,1-Dichloroethene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
Freon 113	SW8260B	NA	07/27/11	1	3.7	10	ND		ug/Kg	406045	NA
Methylene Chloride	SW8260B	NA	07/27/11	1	2.0	50	ND		ug/Kg	406045	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
MTBE	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
tert-Butanol	SW8260B	NA	07/27/11	1	21	50	ND		ug/Kg	406045	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,1-Dichloroethane	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA
ETBE	SW8260B	NA	07/27/11	1	2.4	10	ND		ug/Kg	406045	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
2,2-Dichloropropane	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
Bromochloromethane	SW8260B	NA	07/27/11	1	2.3	10	ND		ug/Kg	406045	NA
Chloroform	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
Carbon Tetrachloride	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
1,1,1-Trichloroethane	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1-Dichloropropene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Benzene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
TAME	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
1,2-Dichloroethane	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
Trichloroethylene	SW8260B	NA	07/27/11	1	3.9	10	ND		ug/Kg	406045	NA
Dibromomethane	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,2-Dichloropropane	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-1(1,4,7)	**Lab Sample ID:**	1107152-008A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Bromodichloromethane	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Toluene	SW8260B	NA	07/27/11	1	0.98	10	ND		ug/Kg	406045	NA
Tetrachloroethylene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1,2-Trichloroethane	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
Dibromochloromethane	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
1,3-Dichloropropane	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
1,2-Dibromoethane	SW8260B	NA	07/27/11	1	1.7	10	ND		ug/Kg	406045	NA
Ethyl Benzene	SW8260B	NA	07/27/11	1	0.86	10	ND		ug/Kg	406045	NA
Chlorobenzene	SW8260B	NA	07/27/11	1	4.2	10	ND		ug/Kg	406045	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/27/11	1	0.86	10	ND		ug/Kg	406045	NA
m,p-Xylene	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
o-Xylene	SW8260B	NA	07/27/11	1	0.66	5.0	ND		ug/Kg	406045	NA
Styrene	SW8260B	NA	07/27/11	1	0.77	10	ND		ug/Kg	406045	NA
Bromoform	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
Isopropyl Benzene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
n-Propylbenzene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Bromobenzene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/27/11	1	3.0	10	ND		ug/Kg	406045	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
1,2,3-Trichloropropane	SW8260B	NA	07/27/11	1	3.3	10	ND		ug/Kg	406045	NA
4-Chlorotoluene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
2-Chlorotoluene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
tert-Butylbenzene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
sec-Butyl Benzene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
p-Isopropyltoluene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
1,3-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
1,4-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
n-Butylbenzene	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,2-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/27/11	1	4.2	10	ND		ug/Kg	406045	NA
Hexachlorobutadiene	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
Naphthalene	SW8260B	NA	07/27/11	1	2.8	10	ND		ug/Kg	406045	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-1(1,4,7)	**Lab Sample ID:**	1107152-008A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2,3-Trichlorobenzene	SW8260B	NA	07/27/11	1	2.9	10	ND		ug/Kg	406045	NA
(S) Dibromofluoromethane	SW8260B	NA	07/27/11	1	59.8	148	102		%	406045	NA
(S) Toluene-d8	SW8260B	NA	07/27/11	1	55.2	133	91.0		%	406045	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/27/11	1	55.8	141	108		%	406045	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Naphthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Acenapthylene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
1-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
2-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Acenaphthene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Fluorene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Phenanthrene	SW8310	7/30/11	08/04/11	20	40.00	20000	69	J	ug/Kg	406132	3271
Anthracene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	120		ug/Kg	406132	3271
Pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(a)anthracene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Chrysene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Benzo(b)fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	ND		ug/Kg	406132	3271
Benzo(k)fluoranthene	SW8310	7/30/11	08/04/11	20	14.0	16	ND		ug/Kg	406132	3271
Benzo(a)pyrene	SW8310	7/30/11	08/04/11	20	16.0	16	ND		ug/Kg	406132	3271
Dibenzo(a,h)anthracene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(ghi)perylene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Indeno(1,2,3-cd)pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Decafluorobiphenyl (S)	SW8310	7/30/11	08/04/11	20	60	140	124		%	406132	3271

NOTE: Note: Reporting limits increased due to the nature of the sample matrix (viscous and dark color extract).

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/27/11	07/27/11	1	17	100	ND		ug/Kg	406045	3249
(S) 4-Bromofluorobenzene	8260TPH	7/27/11	07/27/11	1	43.9	127	99.9		%	406045	3249

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-1(1,4,7)	**Lab Sample ID:**	1107152-008A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	2	1.5	4.0	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	2	3.6	7.9	150		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	2	61.5	133	71.2		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	CS-1	**Lab Sample ID:**	1107152-009A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Water
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Dichlorodifluoromethane	SW8260B	NA	07/26/11	1.19	0.48	0.60	ND		ug/L	406028	NA
Chloromethane	SW8260B	NA	07/26/11	1.19	0.48	0.60	ND		ug/L	406028	NA
Vinyl Chloride	SW8260B	NA	07/26/11	1.19	0.44	0.60	ND		ug/L	406028	NA
Bromomethane	SW8260B	NA	07/26/11	1.19	0.45	0.60	ND		ug/L	406028	NA
Trichlorofluoromethane	SW8260B	NA	07/26/11	1.19	0.40	0.60	ND		ug/L	406028	NA
1,1-Dichloroethene	SW8260B	NA	07/26/11	1.19	0.34	0.60	ND		ug/L	406028	NA
Freon 113	SW8260B	NA	07/26/11	1.19	0.45	0.60	ND		ug/L	406028	NA
Methylene Chloride	SW8260B	NA	07/26/11	1.19	0.21	6.0	ND		ug/L	406028	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/26/11	1.19	0.37	0.60	ND		ug/L	406028	NA
MTBE	SW8260B	NA	07/26/11	1.19	0.45	0.60	ND		ug/L	406028	NA
tert-Butanol	SW8260B	NA	07/26/11	1.19	1.8	6.0	ND		ug/L	406028	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/26/11	1.19	0.43	0.60	3.2		ug/L	406028	NA
1,1-Dichloroethane	SW8260B	NA	07/26/11	1.19	0.34	0.60	ND		ug/L	406028	NA
ETBE	SW8260B	NA	07/26/11	1.19	0.47	0.60	ND		ug/L	406028	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/26/11	1.19	0.39	0.60	ND		ug/L	406028	NA
2,2-Dichloropropane	SW8260B	NA	07/26/11	1.19	0.44	0.60	ND		ug/L	406028	NA
Bromochloromethane	SW8260B	NA	07/26/11	1.19	0.41	0.60	ND		ug/L	406028	NA
Chloroform	SW8260B	NA	07/26/11	1.19	0.35	0.60	ND		ug/L	406028	NA
Carbon Tetrachloride	SW8260B	NA	07/26/11	1.19	0.32	0.60	ND		ug/L	406028	NA
1,1,1-Trichloroethane	SW8260B	NA	07/26/11	1.19	0.38	0.60	ND		ug/L	406028	NA
1,1-Dichloropropene	SW8260B	NA	07/26/11	1.19	0.47	0.60	ND		ug/L	406028	NA
Benzene	SW8260B	NA	07/26/11	1.19	0.40	0.60	ND		ug/L	406028	NA
TAME	SW8260B	NA	07/26/11	1.19	0.38	0.60	ND		ug/L	406028	NA
1,2-Dichloroethane	SW8260B	NA	07/26/11	1.19	0.33	0.60	ND		ug/L	406028	NA
Trichloroethylene	SW8260B	NA	07/26/11	1.19	0.45	0.60	ND		ug/L	406028	NA
Dibromomethane	SW8260B	NA	07/26/11	1.19	0.25	0.60	ND		ug/L	406028	NA
1,2-Dichloropropane	SW8260B	NA	07/26/11	1.19	0.44	0.60	ND		ug/L	406028	NA
Bromodichloromethane	SW8260B	NA	07/26/11	1.19	0.27	0.60	ND		ug/L	406028	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/26/11	1.19	0.36	0.60	ND		ug/L	406028	NA
Toluene	SW8260B	NA	07/26/11	1.19	0.23	0.60	ND		ug/L	406028	NA
Tetrachloroethylene	SW8260B	NA	07/26/11	1.19	0.18	0.60	ND		ug/L	406028	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/26/11	1.19	0.24	0.60	ND		ug/L	406028	NA
1,1,2-Trichloroethane	SW8260B	NA	07/26/11	1.19	0.24	0.60	ND		ug/L	406028	NA
Dibromochloromethane	SW8260B	NA	07/26/11	1.19	0.26	0.60	ND		ug/L	406028	NA
1,3-Dichloropropane	SW8260B	NA	07/26/11	1.19	0.21	0.60	ND		ug/L	406028	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	CS-1	**Lab Sample ID:**	1107152-009A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Water
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
1,2-Dibromoethane	SW8260B	NA	07/26/11	1.19	0.23	0.60	ND		ug/L	406028	NA
Chlorobenzene	SW8260B	NA	07/26/11	1.19	0.17	0.60	ND		ug/L	406028	NA
Ethyl Benzene	SW8260B	NA	07/26/11	1.19	0.18	0.60	ND		ug/L	406028	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/26/11	1.19	0.12	0.60	ND		ug/L	406028	NA
m,p-Xylene	SW8260B	NA	07/26/11	1.19	0.24	1.2	ND		ug/L	406028	NA
o-Xylene	SW8260B	NA	07/26/11	1.19	0.15	0.60	ND		ug/L	406028	NA
Styrene	SW8260B	NA	07/26/11	1.19	0.24	0.60	ND		ug/L	406028	NA
Bromoform	SW8260B	NA	07/26/11	1.19	0.54	1.2	ND		ug/L	406028	NA
Isopropyl Benzene	SW8260B	NA	07/26/11	1.19	0.34	0.60	ND		ug/L	406028	NA
Bromobenzene	SW8260B	NA	07/26/11	1.19	0.46	0.60	ND		ug/L	406028	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/26/11	1.19	0.30	0.60	ND		ug/L	406028	NA
n-Propylbenzene	SW8260B	NA	07/26/11	1.19	0.35	0.60	ND		ug/L	406028	NA
2-Chlorotoluene	SW8260B	NA	07/26/11	1.19	0.39	0.60	ND		ug/L	406028	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/26/11	1.19	0.24	0.60	ND		ug/L	406028	NA
4-Chlorotoluene	SW8260B	NA	07/26/11	1.19	0.39	0.60	ND		ug/L	406028	NA
tert-Butylbenzene	SW8260B	NA	07/26/11	1.19	0.34	0.60	ND		ug/L	406028	NA
1,2,3-Trichloropropane	SW8260B	NA	07/26/11	1.19	0.70	1.2	ND		ug/L	406028	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/26/11	1.19	0.39	0.60	ND		ug/L	406028	NA
sec-Butyl Benzene	SW8260B	NA	07/26/11	1.19	0.29	0.60	ND		ug/L	406028	NA
p-Isopropyltoluene	SW8260B	NA	07/26/11	1.19	0.29	0.60	ND		ug/L	406028	NA
1,3-Dichlorobenzene	SW8260B	NA	07/26/11	1.19	0.37	0.60	ND		ug/L	406028	NA
1,4-Dichlorobenzene	SW8260B	NA	07/26/11	1.19	0.44	0.60	ND		ug/L	406028	NA
n-Butylbenzene	SW8260B	NA	07/26/11	1.19	0.38	0.60	ND		ug/L	406028	NA
1,2-Dichlorobenzene	SW8260B	NA	07/26/11	1.19	0.47	0.60	ND		ug/L	406028	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/26/11	1.19	0.53	1.2	ND		ug/L	406028	NA
Hexachlorobutadiene	SW8260B	NA	07/26/11	1.19	0.26	0.60	ND		ug/L	406028	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/26/11	1.19	0.58	1.2	ND		ug/L	406028	NA
Naphthalene	SW8260B	NA	07/26/11	1.19	0.68	1.2	ND		ug/L	406028	NA
1,2,3-Trichlorobenzene	SW8260B	NA	07/26/11	1.19	0.62	1.2	ND		ug/L	406028	NA
(S) Dibromofluoromethane	SW8260B	NA	07/26/11	1.19	61.2	131	105		%	406028	NA
(S) Toluene-d8	SW8260B	NA	07/26/11	1.19	75.1	127	94.1		%	406028	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/26/11	1.19	64.1	120	103		%	406028	NA

NOTE: Reporting limit raised due to sediment in all voas.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	CS-1	**Lab Sample ID:**	1107152-009A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Water
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH(Gasoline)	8260TPH	NA	07/26/11	1.19	26	60	ND		ug/L	406028	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	07/26/11	1.19	34	114	88.1		%	406028	NA

NOTE: Raised reporting limit - see comment for 8260B analysis.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-2(1,4,7)	**Lab Sample ID:**	1107152-010A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/26/11	07/26/11	1	0.0590	1.0	ND		mg/Kg	406019	3236
Chromium	SW6010B	7/26/11	07/26/11	1	0.0590	5.0	40		mg/Kg	406019	3236
Lead	SW6010B	7/26/11	07/26/11	1	0.043	1.0	10		mg/Kg	406019	3236
Nickel	SW6010B	7/26/11	07/26/11	1	0.0590	5.0	65		mg/Kg	406019	3236
Zinc	SW6010B	7/26/11	07/26/11	1	0.59	5.0	48		mg/Kg	406019	3236

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/27/11	1	4.4	10	ND		ug/Kg	406045	NA
Chloromethane	SW8260B	NA	07/27/11	1	4.6	10	ND		ug/Kg	406045	NA
Vinyl Chloride	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
Bromomethane	SW8260B	NA	07/27/11	1	4.7	10	ND		ug/Kg	406045	NA
Trichlorofluoromethane	SW8260B	NA	07/27/11	1	2.9	10	ND		ug/Kg	406045	NA
1,1-Dichloroethene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
Freon 113	SW8260B	NA	07/27/11	1	3.7	10	ND		ug/Kg	406045	NA
Methylene Chloride	SW8260B	NA	07/27/11	1	2.0	50	ND		ug/Kg	406045	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
MTBE	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
tert-Butanol	SW8260B	NA	07/27/11	1	21	50	ND		ug/Kg	406045	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,1-Dichloroethane	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA
ETBE	SW8260B	NA	07/27/11	1	2.4	10	ND		ug/Kg	406045	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
2,2-Dichloropropane	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
Bromochloromethane	SW8260B	NA	07/27/11	1	2.3	10	ND		ug/Kg	406045	NA
Chloroform	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
Carbon Tetrachloride	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
1,1,1-Trichloroethane	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1-Dichloropropene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Benzene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
TAME	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
1,2-Dichloroethane	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
Trichloroethylene	SW8260B	NA	07/27/11	1	3.9	10	ND		ug/Kg	406045	NA
Dibromomethane	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,2-Dichloropropane	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-2(1,4,7)	**Lab Sample ID:**	1107152-010A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Bromodichloromethane	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Toluene	SW8260B	NA	07/27/11	1	0.98	10	ND		ug/Kg	406045	NA
Tetrachloroethylene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1,2-Trichloroethane	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
Dibromochloromethane	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
1,3-Dichloropropane	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
1,2-Dibromoethane	SW8260B	NA	07/27/11	1	1.7	10	ND		ug/Kg	406045	NA
Ethyl Benzene	SW8260B	NA	07/27/11	1	0.86	10	ND		ug/Kg	406045	NA
Chlorobenzene	SW8260B	NA	07/27/11	1	4.2	10	ND		ug/Kg	406045	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/27/11	1	0.86	10	ND		ug/Kg	406045	NA
m,p-Xylene	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
o-Xylene	SW8260B	NA	07/27/11	1	0.66	5.0	ND		ug/Kg	406045	NA
Styrene	SW8260B	NA	07/27/11	1	0.77	10	ND		ug/Kg	406045	NA
Bromoform	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
Isopropyl Benzene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
n-Propylbenzene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Bromobenzene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/27/11	1	3.0	10	ND		ug/Kg	406045	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
1,2,3-Trichloropropane	SW8260B	NA	07/27/11	1	3.3	10	ND		ug/Kg	406045	NA
4-Chlorotoluene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
2-Chlorotoluene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
tert-Butylbenzene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
sec-Butyl Benzene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
p-Isopropyltoluene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
1,3-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
1,4-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
n-Butylbenzene	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,2-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/27/11	1	4.2	10	ND		ug/Kg	406045	NA
Hexachlorobutadiene	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
Naphthalene	SW8260B	NA	07/27/11	1	2.8	10	ND		ug/Kg	406045	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-2(1,4,7)	**Lab Sample ID:**	1107152-010A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2,3-Trichlorobenzene	SW8260B	NA	07/27/11	1	2.9	10	ND		ug/Kg	406045	NA
(S) Dibromofluoromethane	SW8260B	NA	07/27/11	1	59.8	148	116		%	406045	NA
(S) Toluene-d8	SW8260B	NA	07/27/11	1	55.2	133	88.2		%	406045	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/27/11	1	55.8	141	115		%	406045	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Naphthalene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Acenapthylene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
1-Methylnapthalene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
2-Methylnapthalene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Acenaphthene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Fluorene	SW8310	7/30/11	08/04/11	40	1600	1600	ND		ug/Kg	406132	3271
Phenanthrene	SW8310	7/30/11	08/04/11	40	80.00	40000	210	J	ug/Kg	406132	3271
Anthracene	SW8310	7/30/11	08/04/11	40	32.0	32	ND		ug/Kg	406132	3271
Fluoranthene	SW8310	7/30/11	08/04/11	40	80.0	80	ND		ug/Kg	406132	3271
Pyrene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Benzo(a)anthracene	SW8310	7/30/11	08/04/11	40	80.0	80	ND		ug/Kg	406132	3271
Chrysene	SW8310	7/30/11	08/04/11	40	32.0	32	45		ug/Kg	406132	3271
Benzo(b)fluoranthene	SW8310	7/30/11	08/04/11	40	80.0	80	ND		ug/Kg	406132	3271
Benzo(k)fluoranthene	SW8310	7/30/11	08/04/11	40	28.0	32	ND		ug/Kg	406132	3271
Benzo(a)pyrene	SW8310	7/30/11	08/04/11	40	32.0	32	ND		ug/Kg	406132	3271
Dibenzo(a,h)anthracene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Benzo(ghi)perylene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Indeno(1,2,3-cd)pyrene	SW8310	7/30/11	08/04/11	40	800	800	ND		ug/Kg	406132	3271
Decafluorobiphenyl (S)	SW8310	7/30/11	08/04/11	40	60	140	0.000	S,D	%	406132	3271

NOTE: Note: Reporting limits increased due to the nature of the sample matrix (viscous and dark color extract). D = Surrogates diluted out.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/27/11	07/27/11	1	17	100	ND		ug/Kg	406045	3249
(S) 4-Bromofluorobenzene	8260TPH	7/27/11	07/27/11	1	43.9	127	78.9		%	406045	3249

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-2(1,4,7)	**Lab Sample ID:**	1107152-010A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	5	3.8	9.9	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	5	8.9	20	550		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	5	61.5	133	80.5		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	CS-2	**Lab Sample ID:**	1107152-011A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Water
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/26/11	1	0.41	0.50	ND		ug/L	406028	NA
Chloromethane	SW8260B	NA	07/26/11	1	0.41	0.50	ND		ug/L	406028	NA
Vinyl Chloride	SW8260B	NA	07/26/11	1	0.37	0.50	ND		ug/L	406028	NA
Bromomethane	SW8260B	NA	07/26/11	1	0.37	0.50	ND		ug/L	406028	NA
Trichlorofluoromethane	SW8260B	NA	07/26/11	1	0.34	0.50	ND		ug/L	406028	NA
1,1-Dichloroethene	SW8260B	NA	07/26/11	1	0.29	0.50	ND		ug/L	406028	NA
Freon 113	SW8260B	NA	07/26/11	1	0.38	0.50	ND		ug/L	406028	NA
Methylene Chloride	SW8260B	NA	07/26/11	1	0.18	5.0	ND		ug/L	406028	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/26/11	1	0.31	0.50	ND		ug/L	406028	NA
MTBE	SW8260B	NA	07/26/11	1	0.38	0.50	ND		ug/L	406028	NA
tert-Butanol	SW8260B	NA	07/26/11	1	1.5	5.0	ND		ug/L	406028	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/26/11	1	0.36	0.50	ND		ug/L	406028	NA
1,1-Dichloroethane	SW8260B	NA	07/26/11	1	0.28	0.50	ND		ug/L	406028	NA
ETBE	SW8260B	NA	07/26/11	1	0.40	0.50	ND		ug/L	406028	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/26/11	1	0.33	0.50	ND		ug/L	406028	NA
2,2-Dichloropropane	SW8260B	NA	07/26/11	1	0.37	0.50	ND		ug/L	406028	NA
Bromochloromethane	SW8260B	NA	07/26/11	1	0.34	0.50	ND		ug/L	406028	NA
Chloroform	SW8260B	NA	07/26/11	1	0.29	0.50	ND		ug/L	406028	NA
Carbon Tetrachloride	SW8260B	NA	07/26/11	1	0.26	0.50	ND		ug/L	406028	NA
1,1,1-Trichloroethane	SW8260B	NA	07/26/11	1	0.32	0.50	ND		ug/L	406028	NA
1,1-Dichloropropene	SW8260B	NA	07/26/11	1	0.40	0.50	ND		ug/L	406028	NA
Benzene	SW8260B	NA	07/26/11	1	0.33	0.50	ND		ug/L	406028	NA
TAME	SW8260B	NA	07/26/11	1	0.32	0.50	ND		ug/L	406028	NA
1,2-Dichloroethane	SW8260B	NA	07/26/11	1	0.28	0.50	ND		ug/L	406028	NA
Trichloroethylene	SW8260B	NA	07/26/11	1	0.38	0.50	ND		ug/L	406028	NA
Dibromomethane	SW8260B	NA	07/26/11	1	0.21	0.50	ND		ug/L	406028	NA
1,2-Dichloropropane	SW8260B	NA	07/26/11	1	0.37	0.50	ND		ug/L	406028	NA
Bromodichloromethane	SW8260B	NA	07/26/11	1	0.23	0.50	ND		ug/L	406028	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/26/11	1	0.30	0.50	ND		ug/L	406028	NA
Toluene	SW8260B	NA	07/26/11	1	0.19	0.50	ND		ug/L	406028	NA
Tetrachloroethylene	SW8260B	NA	07/26/11	1	0.15	0.50	ND		ug/L	406028	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/26/11	1	0.20	0.50	ND		ug/L	406028	NA
1,1,2-Trichloroethane	SW8260B	NA	07/26/11	1	0.20	0.50	ND		ug/L	406028	NA
Dibromochloromethane	SW8260B	NA	07/26/11	1	0.21	0.50	ND		ug/L	406028	NA
1,3-Dichloropropane	SW8260B	NA	07/26/11	1	0.18	0.50	ND		ug/L	406028	NA
1,2-Dibromoethane	SW8260B	NA	07/26/11	1	0.19	0.50	ND		ug/L	406028	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	CS-2	**Lab Sample ID:**	1107152-011A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Water
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Chlorobenzene	SW8260B	NA	07/26/11	1	0.14	0.50	ND		ug/L	406028	NA
Ethyl Benzene	SW8260B	NA	07/26/11	1	0.15	0.50	ND		ug/L	406028	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/26/11	1	0.10	0.50	ND		ug/L	406028	NA
m,p-Xylene	SW8260B	NA	07/26/11	1	0.20	1.0	ND		ug/L	406028	NA
o-Xylene	SW8260B	NA	07/26/11	1	0.13	0.50	ND		ug/L	406028	NA
Styrene	SW8260B	NA	07/26/11	1	0.20	0.50	ND		ug/L	406028	NA
Bromoform	SW8260B	NA	07/26/11	1	0.45	1.0	ND		ug/L	406028	NA
Isopropyl Benzene	SW8260B	NA	07/26/11	1	0.28	0.50	ND		ug/L	406028	NA
Bromobenzene	SW8260B	NA	07/26/11	1	0.39	0.50	ND		ug/L	406028	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/26/11	1	0.26	0.50	ND		ug/L	406028	NA
n-Propylbenzene	SW8260B	NA	07/26/11	1	0.30	0.50	ND		ug/L	406028	NA
2-Chlorotoluene	SW8260B	NA	07/26/11	1	0.33	0.50	ND		ug/L	406028	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/26/11	1	0.20	0.50	ND		ug/L	406028	NA
4-Chlorotoluene	SW8260B	NA	07/26/11	1	0.32	0.50	ND		ug/L	406028	NA
tert-Butylbenzene	SW8260B	NA	07/26/11	1	0.29	0.50	ND		ug/L	406028	NA
1,2,3-Trichloropropane	SW8260B	NA	07/26/11	1	0.59	1.0	ND		ug/L	406028	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/26/11	1	0.33	0.50	ND		ug/L	406028	NA
sec-Butyl Benzene	SW8260B	NA	07/26/11	1	0.24	0.50	ND		ug/L	406028	NA
p-Isopropyltoluene	SW8260B	NA	07/26/11	1	0.25	0.50	ND		ug/L	406028	NA
1,3-Dichlorobenzene	SW8260B	NA	07/26/11	1	0.31	0.50	ND		ug/L	406028	NA
1,4-Dichlorobenzene	SW8260B	NA	07/26/11	1	0.37	0.50	ND		ug/L	406028	NA
n-Butylbenzene	SW8260B	NA	07/26/11	1	0.32	0.50	ND		ug/L	406028	NA
1,2-Dichlorobenzene	SW8260B	NA	07/26/11	1	0.39	0.50	ND		ug/L	406028	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/26/11	1	0.45	1.0	ND		ug/L	406028	NA
Hexachlorobutadiene	SW8260B	NA	07/26/11	1	0.22	0.50	ND		ug/L	406028	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/26/11	1	0.48	1.0	ND		ug/L	406028	NA
Naphthalene	SW8260B	NA	07/26/11	1	0.57	1.0	ND		ug/L	406028	NA
1,2,3-Trichlorobenzene	SW8260B	NA	07/26/11	1	0.52	1.0	ND		ug/L	406028	NA
(S) Dibromofluoromethane	SW8260B	NA	07/26/11	1	61.2	131	114		%	406028	NA
(S) Toluene-d8	SW8260B	NA	07/26/11	1	75.1	127	93.1		%	406028	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/26/11	1	64.1	120	101		%	406028	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	CS-2	**Lab Sample ID:**	1107152-011A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Water
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	07/26/11	1	22	50	ND		ug/L	406028	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	07/26/11	1	34	114	106		%	406028	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
TPH as Diesel (SG)	SW8015B(M)	7/29/11	07/29/11	1	0.0492	0.12	ND		mg/L	406134	3269
TPH as Motor Oil (SG)	SW8015B(M)	7/29/11	07/29/11	1	0.111	0.25	ND		mg/L	406134	3269
Pentacosane (S)	SW8015B(M)	7/29/11	07/29/11	1	57.9	125	79.4		%	406134	3269

NOTE: Note: Reporting limits increased due to limited sample available.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-3(1,4,7)	**Lab Sample ID:**	1107152-012A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Cadmium	SW6010B	7/26/11	07/26/11	1	0.0590	1.0	ND		mg/Kg	406019	3236
Chromium	SW6010B	7/26/11	07/26/11	1	0.0590	5.0	32		mg/Kg	406019	3236
Lead	SW6010B	7/26/11	07/26/11	1	0.043	1.0	25		mg/Kg	406019	3236
Nickel	SW6010B	7/26/11	07/26/11	1	0.0590	5.0	39		mg/Kg	406019	3236
Zinc	SW6010B	7/26/11	07/26/11	1	0.59	5.0	67		mg/Kg	406019	3236

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	07/27/11	1	4.4	10	ND		ug/Kg	406045	NA
Chloromethane	SW8260B	NA	07/27/11	1	4.6	10	ND		ug/Kg	406045	NA
Vinyl Chloride	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
Bromomethane	SW8260B	NA	07/27/11	1	4.7	10	ND		ug/Kg	406045	NA
Trichlorofluoromethane	SW8260B	NA	07/27/11	1	2.9	10	ND		ug/Kg	406045	NA
1,1-Dichloroethene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
Freon 113	SW8260B	NA	07/27/11	1	3.7	10	ND		ug/Kg	406045	NA
Methylene Chloride	SW8260B	NA	07/27/11	1	2.0	50	ND		ug/Kg	406045	NA
trans-1,2-Dichloroethene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
MTBE	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
tert-Butanol	SW8260B	NA	07/27/11	1	21	50	ND		ug/Kg	406045	NA
Diisopropyl ether (DIPE)	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,1-Dichloroethane	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA
ETBE	SW8260B	NA	07/27/11	1	2.4	10	ND		ug/Kg	406045	NA
cis-1,2-Dichloroethene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
2,2-Dichloropropane	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
Bromochloromethane	SW8260B	NA	07/27/11	1	2.3	10	ND		ug/Kg	406045	NA
Chloroform	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
Carbon Tetrachloride	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
1,1,1-Trichloroethane	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1-Dichloropropene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Benzene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
TAME	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
1,2-Dichloroethane	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
Trichloroethylene	SW8260B	NA	07/27/11	1	3.9	10	ND		ug/Kg	406045	NA
Dibromomethane	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,2-Dichloropropane	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-3(1,4,7)	**Lab Sample ID:**	1107152-012A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Bromodichloromethane	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
cis-1,3-Dichloropropene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Toluene	SW8260B	NA	07/27/11	1	0.98	10	ND		ug/Kg	406045	NA
Tetrachloroethylene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
trans-1,3-Dichloropropene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1,2-Trichloroethane	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
Dibromochloromethane	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
1,3-Dichloropropane	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
1,2-Dibromoethane	SW8260B	NA	07/27/11	1	1.7	10	ND		ug/Kg	406045	NA
Ethyl Benzene	SW8260B	NA	07/27/11	1	0.86	10	ND		ug/Kg	406045	NA
Chlorobenzene	SW8260B	NA	07/27/11	1	4.2	10	ND		ug/Kg	406045	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	07/27/11	1	0.86	10	ND		ug/Kg	406045	NA
m,p-Xylene	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
o-Xylene	SW8260B	NA	07/27/11	1	0.66	5.0	ND		ug/Kg	406045	NA
Styrene	SW8260B	NA	07/27/11	1	0.77	10	ND		ug/Kg	406045	NA
Bromoform	SW8260B	NA	07/27/11	1	1.9	10	ND		ug/Kg	406045	NA
Isopropyl Benzene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
n-Propylbenzene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
Bromobenzene	SW8260B	NA	07/27/11	1	1.2	10	ND		ug/Kg	406045	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	07/27/11	1	3.0	10	ND		ug/Kg	406045	NA
1,3,5-Trimethylbenzene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
1,2,3-Trichloropropane	SW8260B	NA	07/27/11	1	3.3	10	ND		ug/Kg	406045	NA
4-Chlorotoluene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
2-Chlorotoluene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
tert-Butylbenzene	SW8260B	NA	07/27/11	1	1.4	10	ND		ug/Kg	406045	NA
1,2,4-Trimethylbenzene	SW8260B	NA	07/27/11	1	1.1	10	ND		ug/Kg	406045	NA
sec-Butyl Benzene	SW8260B	NA	07/27/11	1	1.6	10	ND		ug/Kg	406045	NA
p-Isopropyltoluene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
1,3-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.8	10	ND		ug/Kg	406045	NA
1,4-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.5	10	ND		ug/Kg	406045	NA
n-Butylbenzene	SW8260B	NA	07/27/11	1	2.2	10	ND		ug/Kg	406045	NA
1,2-Dichlorobenzene	SW8260B	NA	07/27/11	1	1.3	10	ND		ug/Kg	406045	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	07/27/11	1	4.2	10	ND		ug/Kg	406045	NA
Hexachlorobutadiene	SW8260B	NA	07/27/11	1	2.6	10	ND		ug/Kg	406045	NA
1,2,4-Trichlorobenzene	SW8260B	NA	07/27/11	1	2.1	10	ND		ug/Kg	406045	NA
Naphthalene	SW8260B	NA	07/27/11	1	2.8	10	ND		ug/Kg	406045	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-3(1,4,7)	**Lab Sample ID:**	1107152-012A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,2,3-Trichlorobenzene	SW8260B	NA	07/27/11	1	2.9	10	ND		ug/Kg	406045	NA
(S) Dibromofluoromethane	SW8260B	NA	07/27/11	1	59.8	148	99.5		%	406045	NA
(S) Toluene-d8	SW8260B	NA	07/27/11	1	55.2	133	84.0		%	406045	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	07/27/11	1	55.8	141	117		%	406045	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
The results shown below are reported using their MDL.											
Naphthalene	SW8310	7/30/11	08/04/11	20	800	800	1100		ug/Kg	406132	3271
Acenapthylene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
1-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	1500		ug/Kg	406132	3271
2-Methylnapthalene	SW8310	7/30/11	08/04/11	20	800	800	10000		ug/Kg	406132	3271
Acenaphthene	SW8310	7/30/11	08/04/11	20	800	800	9000		ug/Kg	406132	3271
Fluorene	SW8310	7/30/11	08/04/11	20	800	800	ND		ug/Kg	406132	3271
Phenanthrene	SW8310	7/30/11	08/04/11	20	40.00	20000	520	J	ug/Kg	406132	3271
Anthracene	SW8310	7/30/11	08/04/11	20	16.0	16	120		ug/Kg	406132	3271
Fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	830		ug/Kg	406132	3271
Pyrene	SW8310	7/30/11	08/04/11	20	400	400	490		ug/Kg	406132	3271
Benzo(a)anthracene	SW8310	7/30/11	08/04/11	20	40.0	40	320		ug/Kg	406132	3271
Chrysene	SW8310	7/30/11	08/04/11	20	16.0	16	320		ug/Kg	406132	3271
Benzo(b)fluoranthene	SW8310	7/30/11	08/04/11	20	40.0	40	200		ug/Kg	406132	3271
Benzo(k)fluoranthene	SW8310	7/30/11	08/04/11	20	14.0	16	120		ug/Kg	406132	3271
Benzo(a)pyrene	SW8310	7/30/11	08/04/11	20	16.0	16	230		ug/Kg	406132	3271
Dibenzo(a,h)anthracene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Benzo(ghi)perylene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Indeno(1,2,3-cd)pyrene	SW8310	7/30/11	08/04/11	20	400	400	ND		ug/Kg	406132	3271
Decafluorobiphenyl (S)	SW8310	7/30/11	08/04/11	20	60	140	0.000	S,D	%	406132	3271

NOTE: Note: Reporting limits increased due to the nature of the sample matrix (viscous and dark color extract). D = Surrogates diluted out.

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	7/27/11	07/27/11	1	17	100	ND		ug/Kg	406045	3249
(S) 4-Bromofluorobenzene	8260TPH	7/27/11	07/27/11	1	43.9	127	77.3		%	406045	3249

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	Comp. CS-3(1,4,7)	**Lab Sample ID:**	1107152-012A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 /		
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel (SG)	SW8015B(M)	7/27/11	07/27/11	3	2.3	5.9	ND		mg/Kg	406053	3256
TPH as Motor Oil (SG)	SW8015B(M)	7/27/11	07/27/11	3	5.3	12	210		mg/Kg	406053	3256
Pentacosane (S)	SW8015B(M)	7/27/11	07/27/11	3	61.5	133	95.9		%	406053	3256

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-9	**Lab Sample ID:**	1107152-013A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 / 0:00	**Certified Clean WO # :**	
Canister/Tube ID:	6315	**Received PSI :**	10.2
Collection Volume (L):	0.00	**Corrected PSI :**	20.5
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Dichlorodifluoromethane	ETO15	NA	07/26/11	4	6.1	20	ND	ND		406033	NA
1,1-Difluoroethane	ETO15	NA	07/26/11	4	2.0	5.4	ND	ND		406033	NA
1,2-Dichlorotetrafluoroethane	ETO15	NA	07/26/11	4	20	56	ND	ND		406033	NA
Chloromethane	ETO15	NA	07/26/11	4	1.3	4.2	ND	ND		406033	NA
Vinyl Chloride	ETO15	NA	07/26/11	4	2.7	10	ND	ND		406033	NA
1,3-Butadiene	ETO15	NA	07/26/11	4	1.8	4.4	ND	ND		406033	NA
Bromomethane	ETO15	NA	07/26/11	4	2.9	7.8	ND	ND		406033	NA
Chloroethane	ETO15	NA	07/26/11	4	2.0	5.2	ND	ND		406033	NA
Trichlorofluoromethane	ETO15	NA	07/26/11	4	7.2	22	ND	ND		406033	NA
1,1-Dichloroethene	ETO15	NA	07/26/11	4	2.4	8.0	ND	ND		406033	NA
Freon 113	ETO15	NA	07/26/11	4	3.4	15	ND	ND		406033	NA
Carbon Disulfide	ETO15	NA	07/26/11	4	3.2	12	ND	ND		406033	NA
2-Propanol (Isopropyl Alcohol)	ETO15	NA	07/26/11	4	3.9	40	ND	ND		406033	NA
Methylene Chloride	ETO15	NA	07/26/11	4	2.3	14	ND	ND		406033	NA
Acetone	ETO15	NA	07/26/11	4	3.5	38	ND	ND		406033	NA
trans-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.6	8.0	ND	ND		406033	NA
Hexane	ETO15	NA	07/26/11	4	2.1	7.0	ND	ND		406033	NA
MTBE	ETO15	NA	07/26/11	4	3.5	7.2	ND	ND		406033	NA
tert-Butanol	ETO15	NA	07/26/11	4	3.6	34	ND	ND		406033	NA
Diisopropyl ether (DIPE)	ETO15	NA	07/26/11	4	3.5	8.4	ND	ND		406033	NA
1,1-Dichloroethane	ETO15	NA	07/26/11	4	3.0	8.2	ND	ND		406033	NA
ETBE	ETO15	NA	07/26/11	4	2.7	8.4	ND	ND		406033	NA
cis-1,2-Dichloroethene	ETO15	NA	07/26/11	4	2.1	8.0	ND	ND		406033	NA
Chloroform	ETO15	NA	07/26/11	4	4.9	20	ND	ND		406033	NA
Vinyl Acetate	ETO15	NA	07/26/11	4	2.3	7.0	ND	ND		406033	NA
Carbon Tetrachloride	ETO15	NA	07/26/11	4	3.5	13	ND	ND		406033	NA
1,1,1-trichloroethane	ETO15	NA	07/26/11	4	3.4	11	ND	ND		406033	NA
2-Butanone (MEK)	ETO15	NA	07/26/11	4	2.5	6.0	230	76.67		406033	NA
Ethyl Acetate	ETO15	NA	07/26/11	4	3.0	7.2	ND	ND		406033	NA
Tetrahydrofuran	ETO15	NA	07/26/11	4	1.2	6.0	ND	ND		406033	NA
Benzene	ETO15	NA	07/26/11	4	2.7	6.4	77.8	24.31		406033	NA
TAME	ETO15	NA	07/26/11	4	1.4	8.4	ND	ND		406033	NA
1,2-Dichloroethane (EDC)	ETO15	NA	07/26/11	4	3.9	8.2	ND	ND		406033	NA
Trichloroethylene	ETO15	NA	07/26/11	4	5.6	22	ND	ND		406033	NA
1,2-Dichloropropane	ETO15	NA	07/26/11	4	5.3	18	ND	ND		406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-9	**Lab Sample ID:**	1107152-013A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 / 0:00	**Certified Clean WO # :**	
Canister/Tube ID:	6315	**Received PSI :**	10.2
Collection Volume (L):	0.00	**Corrected PSI :**	20.5
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
Bromodichloromethane	ETO15	NA	07/26/11	4	3.6	13	ND	ND		406033	NA
1,4-Dioxane	ETO15	NA	07/26/11	4	5.0	14	ND	ND		406033	NA
trans-1,3-Dichloropropene	ETO15	NA	07/26/11	4	3.5	9.0	ND	ND		406033	NA
Toluene	ETO15	NA	07/26/11	4	3.8	7.6	324	85.26		406033	NA
4-Methyl-2-Pentanone (MIBK)	ETO15	NA	07/26/11	4	3.4	8.2	ND	ND		406033	NA
cis-1,3-Dichloropropene	ETO15	NA	07/26/11	4	4.5	9.0	ND	ND		406033	NA
Tetrachloroethylene	ETO15	NA	07/26/11	4	3.6	14	ND	ND		406033	NA
1,1,2-Trichloroethane	ETO15	NA	07/26/11	4	3.7	11	ND	ND		406033	NA
Dibromochloromethane	ETO15	NA	07/26/11	4	6.9	17	ND	ND		406033	NA
1,2-Dibromoethane (EDB)	ETO15	NA	07/26/11	4	8.2	31	ND	ND		406033	NA
2-Hexanone	ETO15	NA	07/26/11	4	4.5	16	ND	ND		406033	NA
Ethyl Benzene	ETO15	NA	07/26/11	4	4.0	8.6	40.2	9.35		406033	NA
Chlorobenzene	ETO15	NA	07/26/11	4	2.8	9.2	ND	ND		406033	NA
1,1,1,2-Tetrachloroethane	ETO15	NA	07/26/11	4	4.2	14	ND	ND		406033	NA
m,p-Xylene	ETO15	NA	07/26/11	4	6.5	17	168	39.07		406033	NA
o-Xylene	ETO15	NA	07/26/11	4	3.2	8.6	55.7	12.95		406033	NA
Styrene	ETO15	NA	07/26/11	4	2.8	8.8	ND	ND		406033	NA
Bromoform	ETO15	NA	07/26/11	4	4.4	20	ND	ND		406033	NA
1,1,2,2-Tetrachloroethane	ETO15	NA	07/26/11	4	2.8	14	ND	ND		406033	NA
4-Ethyl Toluene	ETO15	NA	07/26/11	4	3.3	9.8	56.6	11.55		406033	NA
1,3,5-Trimethylbenzene	ETO15	NA	07/26/11	4	3.0	9.8	13.7	2.80		406033	NA
1,2,4-Trimethylbenzene	ETO15	NA	07/26/11	4	2.8	9.8	44.9	9.16		406033	NA
1,4-Dichlorobenzene	ETO15	NA	07/26/11	4	2.6	12	ND	ND		406033	NA
1,3-Dichlorobenzene	ETO15	NA	07/26/11	4	3.4	12	ND	ND		406033	NA
Benzyl Chloride	ETO15	NA	07/26/11	4	2.5	10	ND	ND		406033	NA
1,2-Dichlorobenzene	ETO15	NA	07/26/11	4	3.6	12	ND	ND		406033	NA
Hexachlorobutadiene	ETO15	NA	07/26/11	4	9.7	22	ND	ND		406033	NA
1,2,4-Trichlorobenzene	ETO15	NA	07/26/11	4	14	30	ND	ND		406033	NA
Naphthalene	ETO15	NA	07/26/11	4	5.8	21	ND	ND		406033	NA
(S) 4-Bromofluorobenzene	ETO15	NA	07/26/11	4	65	135	107 %			406033	NA

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Jeff Adams
Engeo Inc (SJ)

Date Received: 07/25/11
Date Reported: 08/05/11

Client Sample ID:	SG-9	**Lab Sample ID:**	1107152-013A
Project Name/Location:	Preston Pipelines	**Sample Matrix:**	Soil Vapor
Project Number:	9273.000.000		
Date/Time Sampled:	07/25/11 / 0:00	**Certified Clean WO # :**	
Canister/Tube ID:	6315	**Received PSI :**	10.2
Collection Volume (L):	0.00	**Corrected PSI :**	20.5
Tag Number:	Preston Pipelines		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	07/27/11	8	1400	2800	18000	5,113.64	x	406046	NA

NOTE: x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.

MB Summary Report

Work Order:	1107152	**Prep Method:**	3050	**Prep Date:**	07/26/11	**Prep Batch:**	3236
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406019
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Arsenic	0.28	1.7	ND	
Barium	1	5.0	ND	
Cadmium	0.059	1.0	ND	
Chromium	0.059	5.0	0.12	
Lead	0.043	1.0	0.27	
Nickel	0.059	5.0	0.095	
Selenium	0.29	5.0	ND	
Silver	1.0	1.0	ND	
Zinc	0.59	5.0	ND	

Work Order:	1107152	**Prep Method:**	5030	**Prep Date:**	07/26/11	**Prep Batch:**	3239
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406028
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	22	50	ND	
(S) 4-Bromofluorobenzene			97.1	

Work Order:	1107152	**Prep Method:**	5035	**Prep Date:**	07/27/11	**Prep Batch:**	3249
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406045
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	17	100	23	
(S) 4-Bromofluorobenzene			112	

MB Summary Report

Work Order:	1107152	**Prep Method:**	3545_TPH	**Prep Date:**	07/27/11	**Prep Batch:**	3256
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406053
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Diesel Range Organics (DRO)	0.76	2.0	ND	
TPH as Bunker Oil	1.78	4.0	ND	
TPH as Fuel Oil	1.78	4.0	ND	
TPH as Diesel	0.758	2.0	ND	
TPH as Heating Oil	3.30	4.0	ND	
TPH as Hydraulic Oil	1.78	4.0	ND	
TPH as Jet A	0.758	2.0	ND	
TPH as Jet Fuel	0.76	2.0	ND	
TPH as JP-4	0.758	2.0	ND	
TPH as JP-5	0.758	2.0	ND	
TPH as JP-7	0.758	2.0	ND	
TPH as JP-8	0.758	2.0	ND	
TPH as Kerosene	0.758	3.3	ND	
TPH as Mineral Oil	1.78	4.0	ND	
TPH as Motor Oil	1.8	4.0	ND	
TPH as Naphtha	0.758	3.3	ND	
TPH as Oil	1.78	4.0	ND	
TPH as Stoddard	0.758	3.3	ND	
TPH as Transformer Oil	1.78	4.0	ND	
Creosote	0.758	3.3	ND	
Pentacosane (S)			97.8	

Work Order:	1107152	**Prep Method:**	3510_TPHSG	**Prep Date:**	07/29/11	**Prep Batch:**	3269
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406134
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.0440	0.10	ND	
TPH as Motor Oil (SG)	0.0920	0.20	ND	
Pentacosane (S)			82.6	

MB Summary Report

Work Order:	1107152	**Prep Method:**	3545_PAH	**Prep Date:**	07/30/11	**Prep Batch:**	3271
Matrix:	Soil	**Analytical Method:**	SW8310	**Analyzed Date:**	08/04/11	**Analytical Batch:**	406132
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Naphthalene	40.0	40	ND	
Acenapthylene	40.0	40	ND	
1-Methylnapthalene	40.0	40	ND	
2-Methylnapthalene	40.0	40	ND	
Acenaphthene	40.0	40	ND	
Fluorene	40.0	40	ND	
Phenanthrene	2.000	1000	ND	
Anthracene	0.800	0.80	ND	
Fluoranthene	2.00	2.0	ND	
Pyrene	20.0	20	ND	
Benzo(a)anthracene	2.00	2.0	ND	
Chrysene	0.800	0.80	ND	
Benzo(b)fluoranthene	2.00	2.0	ND	
Benzo(k)fluoranthene	0.700	0.80	ND	
Benzo(a)pyrene	0.800	0.80	ND	
Dibenzo(a,h)anthracene	20.0	20	ND	
Benzo(ghi)perylene	20.0	20	ND	
Indeno(1,2,3-cd)pyrene	20.0	20	ND	
Decafluorobiphenyl (S)			98.7	

MB Summary Report

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406028
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.41	0.50	ND	
Chloromethane	0.41	0.50	ND	
Vinyl Chloride	0.37	0.50	ND	
Bromomethane	0.37	0.50	ND	
Trichlorofluoromethane	0.34	0.50	ND	
1,1-Dichloroethene	0.29	0.50	ND	
Freon 113	0.38	0.50	ND	
Methylene Chloride	0.18	5.0	ND	
trans-1,2-Dichloroethene	0.31	0.50	ND	
MTBE	0.38	0.50	ND	
tert-Butanol	1.5	5.0	ND	
Diisopropyl ether (DIPE)	0.36	0.50	ND	
1,1-Dichloroethane	0.28	0.50	ND	
ETBE	0.40	0.50	ND	
cis-1,2-Dichloroethene	0.33	0.50	ND	
2,2-Dichloropropane	0.37	0.50	ND	
Bromochloromethane	0.34	0.50	ND	
Chloroform	0.29	0.50	ND	
Carbon Tetrachloride	0.26	0.50	ND	
1,1,1-Trichloroethane	0.32	0.50	ND	
1,1-Dichloropropene	0.40	0.50	ND	
Benzene	0.33	0.50	ND	
TAME	0.32	0.50	ND	
1,2-Dichloroethane	0.28	0.50	ND	
Trichloroethylene	0.38	0.50	ND	
Dibromomethane	0.21	0.50	ND	
1,2-Dichloropropane	0.37	0.50	ND	
Bromodichloromethane	0.23	0.50	ND	
cis-1,3-Dichloropropene	0.30	0.50	ND	
Toluene	0.19	0.50	ND	
Tetrachloroethylene	0.15	0.50	ND	
trans-1,3-Dichloropropene	0.20	0.50	ND	
1,1,2-Trichloroethane	0.20	0.50	ND	
Dibromochloromethane	0.21	0.50	ND	
1,3-Dichloropropane	0.18	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
1,1,1,2-Tetrachloroethane	0.10	0.50	ND	
m,p-Xylene	0.20	1.0	ND	
o-Xylene	0.13	0.50	ND	

MB Summary Report

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406028
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.20	0.50	ND	
Bromoform	0.45	1.0	ND	
Isopropyl Benzene	0.28	0.50	ND	
Bromobenzene	0.39	0.50	ND	
1,1,2,2-Tetrachloroethane	0.26	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
2-Chlorotoluene	0.33	0.50	ND	
1,3,5-Trimethylbenzene	0.20	0.50	ND	
4-Chlorotoluene	0.32	0.50	ND	
tert-Butylbenzene	0.29	0.50	ND	
1,2,3-Trichloropropane	0.59	1.0	ND	
1,2,4-Trimethylbenzene	0.33	0.50	ND	
sec-Butyl Benzene	0.24	0.50	ND	
p-Isopropyltoluene	0.25	0.50	ND	
1,3-Dichlorobenzene	0.31	0.50	ND	
1,4-Dichlorobenzene	0.37	0.50	ND	
n-Butylbenzene	0.32	0.50	ND	
1,2-Dichlorobenzene	0.39	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.45	1.0	ND	
Hexachlorobutadiene	0.22	0.50	ND	
1,2,4-Trichlorobenzene	0.48	1.0	ND	
Naphthalene	0.57	1.0	ND	
1,2,3-Trichlorobenzene	0.52	1.0	ND	
Ethanol	100	100	ND	TIC
(S) Dibromofluoromethane			110	
(S) Toluene-d8			97.3	
(S) 4-Bromofluorobenzene			98.1	

MB Summary Report

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406033
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.30	1.00	ND	
1,1-Difluoroethane	0.18	0.500	ND	
1,2-Dichlorotetrafluoroethane	0.70	2.00	ND	
Chloromethane	0.15	0.500	ND	
Vinyl Chloride	0.26	1.00	ND	
1,3-Butadiene	0.20	0.500	ND	
Bromomethane	0.18	0.500	ND	
Chloroethane	0.19	0.500	ND	
Trichlorofluoromethane	0.32	1.00	ND	
1,1-Dichloroethene	0.15	0.500	ND	
Freon 113	0.11	0.500	ND	
Carbon Disulfide	0.26	1.00	ND	
2-Propanol (Isopropyl Alcohol)	0.39	4.00	ND	
Methylene Chloride	0.17	0.500	ND	
Acetone	0.37	4.00	ND	
trans-1,2-Dichloroethene	0.16	0.500	ND	
Hexane	0.15	0.500	ND	
MTBE	0.24	0.500	ND	
tert-Butanol	0.22	2.00	ND	
Diisopropyl ether (DIPE)	0.21	0.500	ND	
1,1-Dichloroethane	0.18	0.500	ND	
ETBE	0.16	0.500	ND	
cis-1,2-Dichloroethene	0.13	0.500	ND	
Chloroform	0.25	1.00	ND	
Vinyl Acetate	0.16	0.500	ND	
Carbon Tetrachloride	0.14	0.500	ND	
1,1,1-Trichloroethane	0.15	0.500	ND	
2-Butanone (MEK)	0.21	0.500	ND	
Ethyl Acetate	0.21	0.500	ND	
Tetrahydrofuran	0.10	0.500	ND	
Benzene	0.21	0.500	ND	
TAME	0.086	0.500	ND	
1,2-Dichloroethane (EDC)	0.24	0.500	ND	
Trichloroethylene	0.26	1.00	ND	
1,2-Dichloropropane	0.29	1.00	ND	
Bromodichloromethane	0.13	0.500	ND	
1,4-Dioxane	0.35	1.00	ND	
trans-1,3-Dichloropropene	0.19	0.500	ND	
Toluene	0.25	0.500	ND	
4-Methyl-2-Pentanone (MIBK)	0.21	0.500	ND	
cis-1,3-Dichloropropene	0.25	0.500	ND	

MB Summary Report

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406033
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Tetrachloroethylene	0.13	0.500	ND	
1,1,2-Trichloroethane	0.17	0.500	ND	
Dibromochloromethane	0.20	0.500	ND	
1,2-Dibromoethane (EDB)	0.27	1.00	ND	
2-Hexanone	0.27	1.00	ND	
Ethyl Benzene	0.23	0.500	ND	
Chlorobenzene	0.15	0.500	ND	
1,1,1,2-Tetrachloroethane	0.15	0.500	ND	
m,p-Xylene	0.38	1.00	ND	
o-Xylene	0.19	0.500	ND	
Styrene	0.16	0.500	ND	
Bromoform	0.11	0.500	ND	
1,1,2,2-Tetrachloroethane	0.10	0.500	ND	
4-Ethyl Toluene	0.17	0.500	ND	
1,3,5-Trimethylbenzene	0.15	0.500	ND	
1,2,4-Trimethylbenzene	0.14	0.500	ND	
1,4-Dichlorobenzene	0.11	0.500	ND	
1,3-Dichlorobenzene	0.14	0.500	ND	
Benzyl Chloride	0.12	0.500	ND	
1,2-Dichlorobenzene	0.15	0.500	ND	
Hexachlorobutadiene	0.22	0.500	ND	
1,2,4-Trichlorobenzene	0.46	1.00	ND	
Naphthalene	0.28	1.00	ND	
(S) 4-Bromofluorobenzene			98.5	

MB Summary Report

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406045
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	4.4	10	ND	
Chloromethane	4.6	10	ND	
Vinyl Chloride	2.6	10	ND	
Bromomethane	4.7	10	ND	
Trichlorofluoromethane	2.9	10	ND	
1,1-Dichloroethene	1.5	10	ND	
Freon 113	3.7	10	ND	
Methylene Chloride	2.0	50	ND	
trans-1,2-Dichloroethene	1.1	10	ND	
MTBE	2.6	10	ND	
tert-Butanol	21	50	ND	
Diisopropyl ether (DIPE)	2.2	10	ND	
1,1-Dichloroethane	1.3	10	ND	
ETBE	2.4	10	ND	
cis-1,2-Dichloroethene	1.8	10	ND	
2,2-Dichloropropane	1.2	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	1.2	10	ND	
Carbon Tetrachloride	1.6	10	ND	
1,1,1-Trichloroethane	1.2	10	ND	
1,1-Dichloropropene	1.4	10	ND	
Benzene	1.5	10	ND	
TAME	2.1	10	ND	
1,2-Dichloroethane	1.9	10	ND	
Trichloroethylene	3.9	10	ND	
Dibromomethane	2.2	10	ND	
1,2-Dichloropropane	1.3	10	ND	
Bromodichloromethane	1.1	10	ND	
cis-1,3-Dichloropropene	1.4	10	ND	
Toluene	0.98	10	ND	
Tetrachloroethylene	1.8	10	ND	
trans-1,3-Dichloropropene	1.2	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.1	10	ND	
1,3-Dichloropropane	2.1	10	ND	
1,2-Dibromoethane	1.7	10	ND	
Ethyl Benzene	0.86	10	ND	
Chlorobenzene	4.2	10	ND	
1,1,1,2-Tetrachloroethane	0.86	10	ND	
m,p-Xylene	1.9	10	ND	
o-Xylene	0.66	5.0	ND	

MB Summary Report

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406045
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.77	10	ND	
Bromoform	1.9	10	ND	
Isopropyl Benzene	1.2	10	ND	
n-Propylbenzene	1.4	10	ND	
Bromobenzene	1.2	10	ND	
1,1,2,2-Tetrachloroethane	3.0	10	ND	
1,3,5-Trimethylbenzene	1.1	10	ND	
1,2,3-Trichloropropane	3.3	10	ND	
4-Chlorotoluene	1.6	10	ND	
2-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.4	10	ND	
1,2,4-Trimethylbenzene	1.1	10	ND	
sec-Butyl Benzene	1.6	10	ND	
p-Isopropyltoluene	1.5	10	ND	
1,3-Dichlorobenzene	1.8	10	ND	
1,4-Dichlorobenzene	1.5	10	ND	
n-Butylbenzene	2.2	10	ND	
1,2-Dichlorobenzene	1.3	10	ND	
1,2-Dibromo-3-Chloropropane	4.2	10	ND	
Hexachlorobutadiene	2.6	10	ND	
1,2,4-Trichlorobenzene	2.1	10	ND	
Naphthalene	2.8	10	ND	
1,2,3-Trichlorobenzene	2.9	10	ND	
(S) Dibromofluoromethane			102	
(S) Toluene-d8			87.0	
(S) 4-Bromofluorobenzene			101	

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO3	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406046
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH-Gasoline	50	100	ND	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107152	**Prep Method:**	3050	**Prep Date:**	07/26/11	**Prep Batch:**	3236
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406019
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Arsenic	0.28	1.7	ND	50	92.3	96.1	3.99	71 - 121	30	
Barium	1	5.0	ND	50	101	101	0.0990	70.2 - 130	30	
Cadmium	0.059	1.0	ND	50	94.5	94.9	0.422	68.7 - 110	30	
Chromium	0.059	5.0	0.12	50	101	102	0.789	76 - 116	30	
Lead	0.13	1.0	0.27	50	94.4	98.3	4.07	67.9 - 118	30	
Nickel	0.059	5.0	0.095	50	100	100	0.300	61.5 - 122	30	
Selenium	0.29	5.0	ND	50	88.5	92.1	4.02	62 - 111	30	
Silver	1.0	1.0	ND	50	94.5	94.6	0.0740	81.1 - 109	30	
Zinc	0.59	5.0	ND	50	99.0	99.7	0.715	59.9 - 122	30	

Work Order:	1107152	**Prep Method:**	5030	**Prep Date:**	07/26/11	**Prep Batch:**	3239
Matrix:	Water	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406028
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	22	50	ND	227.27	80.4	72.8	9.83	52.4 - 127	30	
(S) 4-Bromofluorobenzene			97.1	11.36	94.4	90.2		58.4 - 133		

Work Order:	1107152	**Prep Method:**	5035	**Prep Date:**	07/27/11	**Prep Batch:**	3249
Matrix:	Soil	**Analytical Method:**	8260TPH	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406045
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	17	100	23	1000	112	115	2.75	48.2 - 132	30	
(S) 4-Bromofluorobenzene			112	50	103	106		57 - 127		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107152	**Prep Method:**	3545_TPH	**Prep Date:**	07/27/11	**Prep Batch:**	3256
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406053
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Diesel Range Organics (DRO)	0.76	2.0	ND	33.33	83.7	64.3	26.3	50.8 - 111	30	
Pentacosane (S)			ND	100	120	92.8		61.5 - 133		

Work Order:	1107152	**Prep Method:**	3510_TPHSG	**Prep Date:**	07/29/11	**Prep Batch:**	3269
Matrix:	Water	**Analytical Method:**	SW8015B(M)	**Analyzed Date:**	07/29/11	**Analytical Batch:**	406134
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.0440	0.10	ND	1	45.7	60.1	27.1	34.5 - 95.6	30	
TPH as Motor Oil (SG)			ND	100				57.9 - 125		

Work Order:	1107152	**Prep Method:**	3545_PAH	**Prep Date:**	07/30/11	**Prep Batch:**	3271
Matrix:	Soil	**Analytical Method:**	SW8310	**Analyzed Date:**	08/04/11	**Analytical Batch:**	406132
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Acenaphthene	40.0	40	ND	200	91.3	98.6	9.0	60 - 140	30	,
Fluorene	40.0	40	ND	200	106	113	7.3	60 - 140	30	,
Benzo(a)pyrene	0.800	0.80	ND	10	92.4	74.9	21	60 - 140	30	,
Decafluorobiphenyl (S)			98.7	2000	101	116		60 - 140		,

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406028
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.29	0.50	ND	17.04	106	108	1.79	61.4 - 129	30	,
Benzene	0.33	0.50	ND	17.04	111	113	2.03	66.9 - 140	30	,
Trichloroethylene	0.38	0.50	ND	17.04	98.5	103	4.61	69.3 - 144	30	,
Toluene	0.19	0.50	ND	17.04	99.5	95.5	4.35	76.6 - 123	30	,
Chlorobenzene	0.14	0.50	ND	17.04	97.6	95.5	1.98	73.9 - 137	30	,
(S) Dibromofluoromethane			ND	11.36	101	106		61.2 - 131		,
(S) Toluene-d8			ND	11.36	96.2	91.1		75.1 - 127		,
(S) 4-Bromofluorobenzene			ND	11.36	101	105		64.1 - 120		,

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	07/26/11	**Analytical Batch:**	406033
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.15	0.500	ND	20	91.8	102	10.1	65 - 135	30	,
Benzene	0.21	0.500	ND	20	106	117	9.69	65 - 135	30	,
Trichloroethylene	0.26	1.00	ND	20	112	125	11.2	65 - 135	30	,
Toluene	0.25	0.500	ND	20	110	122	10.4	65 - 135	30	,
Chlorobenzene	0.15	0.500	ND	20	102	113	10.1	65 - 135	30	,
(S) 4-Bromofluorobenzene			ND	20	85.0	90.0		65 - 135		,

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406045
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	1.5	10	ND	50	117	103	12.1	53.7 - 139	30	,
Benzene	1.5	10	ND	50	107	104	2.73	66.5 - 135	30	,
Trichloroethylene	3.9	10	ND	50	101	107	6.05	57.5 - 150	30	,
Toluene	0.98	10	ND	50	94.9	103	8.53	56.8 - 134	30	,
Chlorobenzene	4.2	10	ND	50	95.5	93.5	2.03	57.4 - 134	30	,
(S) Dibromofluoromethane			ND	50	97.5	88.9		59.8 - 148		,
(S) Toluene-d8			ND	50	89.6	94.2		55.2 - 133		,
(S) 4-Bromofluorobenzene			ND	50	101	104		55.8 - 141		,

Work Order:	1107152	**Prep Method:**	NA	**Prep Date:**	NA	**Prep Batch:**	NA
Matrix:	Air	**Analytical Method:**	ETO3	**Analyzed Date:**	07/27/11	**Analytical Batch:**	406046
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH-Gasoline	50	100	ND	500	99.5	111	11.1	50 - 150	30	,

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg.m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the anlayte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: Engeo Inc (SJ)

Project Name: Preston Pipelines

Work Order No.: 1107152

Date and Time Received: 7/25/2011 17:40

Received By: yb

Physically Logged By: yb

Checklist Completed By: yb

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes		
Container/Temp Blank temperature in compliance?		Temperature:	°C
Water-VOA vials have zero headspace?	No		
Water-pH acceptable upon receipt?			
pH Checked by:	pH Adjusted by:		

Sample CS-1: insifficient sample volume to analyzed TPHDOSG (3 VOA only)

Login Summary Report

Client ID:	TL5224 Engeo Inc (SJ)	**QC Level:**	
Project Name:	Preston Pipelines	**TAT Requested:**	5+ day:0
Project # :	9273.000.000	**Date Received:**	7/25/2011
Report Due Date:	8/1/2011	**Time Received:**	17:40

Comments: 5 day TAT! Sample SG-9 (canister #6513) not in CoC, login as 1107152-013A (on hold now).Per client analyze this air sample.
Sample 1107152-009A: insifficient sample volume to analyzed TPHDOSG (3 VOA only) Do not analyze for TPHDO analyze only for TPHg,8260.

Work Order # : ***1107152***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1107152-001A	SG-1	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-B	
							A_TO-15Full-A	
1107152-002A	SG-2	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-A	
							A_TO-15Full-B	
1107152-003A	SG-3	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-B	
							A_TO-15Full-A	
1107152-004A	SG-4	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-B	
							A_TO-15Full-A	
1107152-005A	SG-5	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-B	
							A_TO-15Full-A	
1107152-006A	SG-6	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-A	
							A_TO-15Full-B	
1107152-007A	SG-8	07/25/11	Air					
							A_TO-3GRO	
							A_TO-15Full-A	
							A_TO-15Full-B	
1107152-008A	Comp. CS-1(1,4,7)	07/25/11	Soil	01/21/12				
							S_6010BCAM17	
							S_TPHDOSG	
							S_8310	
							S_GCMS-GRO	
							S_8260Full	

Login Summary Report

Client ID:	TL5224 Engeo Inc (SJ)	**QC Level:**	
Project Name:	Preston Pipelines	**TAT Requested:**	5+ day:0
Project # :	9273.000.000	**Date Received:**	7/25/2011
Report Due Date:	8/1/2011	**Time Received:**	17:40

Comments: 5 day TAT! Sample SG-9 (canister #6513) not in CoC, login as 1107152-013A (on hold now).Per client analyze this air sample.
Sample 1107152-009A: insifficient sample volume to analyzed TPHDOSG (3 VOA only) Do not analyze for TPHDO analyze only for TPHg,8260.

Work Order # : ***1107152***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
Sample Note:	Composite CS-1@1' , CS-1@4' & CS-1@7' Metals- Luft 5.							
1107152-009A	CS-1	07/25/11	Water	09/08/11				
							W_GCMS-GRO	
							W_8260Full	
1107152-010A	Comp. CS-2(1,4,7)	07/25/11	Soil	01/21/12				
							S_6010BCAM17	
							S_TPHDOSG	
							S_8310	
							S_8260Full	
							S_GCMS-GRO	
Sample Note:	Composite CS-2@1' , CS-2@4' & CS-2@7'							
1107152-011A	CS-2	07/25/11	Water	09/08/11				
							W_GCMS-GRO	
							W_TPHDOSG	
							W_8260Full	
1107152-012A	Comp. CS-3(1,4,7)	07/25/11	Soil	01/21/12				
							S_6010BCAM17	
							S_TPHDOSG	
							S_8310	
							S_GCMS-GRO	
							S_8260Full	
Sample Note:	Comp 012B,C,D.							
1107152-013A	SG-9	07/25/11 0:00	Air					
							A_TO-3GRO	
							A_TO-15Full-A	
							A_TO-15Full-B	

Torrent LABORATORY, INC.

1107152

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 9273.000.000
PROJECT NAME: Preston Pipelines
SAMPLED BY: (SIGNATURE/PRINT) Scott Johns / Scott Johns
PROJECT MANAGER: Jeff Adams
ROUTING: E-MAIL sjohns@engeo.com ; jadams@engeo.com ~~Hard Copy~~ ~~Scott Johns~~

	SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE	8260B VOCs	8015B W/silica gel cleanup TPH-d motor oil	LUFT Metals	(Poly cyclic aromatic hydrocarbons) PAHs 8310	TO-15 with TPH-g								REMARKS REQUIRED DETECTION LIMITS
-001A	SG-1	7/25/11		vapor	1	summa	NA					X								
-002A	SG-2											X								
-003A	SG-3											X								
-004A	SG-4											X								
-005A	SG-5											X								
-006A	SG-6											X								
-007A	SG-8											X								
-008A	CS-1 c'	-008B		Soil	1	Liner	NA/ICE	X	X	X	X									Composite CS-1 c'
	CS-1 c4'	-008C						X	X	X	X									c4'
	CS-1 c7'	-008D						X	X	X	X									c7'
-009A	CS-1			water	3	VOA	HCL/ICE	X	X											ONLY 3 (VOA)
-010A	CS-2 c'	-010B		Soil	1	Liner	ICE	X	X	X	X									Composite CS-2 c'
	CS-2 c4'	-010C						X	X	X	X									c4'
	CS-2 c7'	-010D						X	X	X	X									c7'
-011A	CS-2			water	4	Amber/VOA	HCL/NA/ICE	X	X											
-012A	CS-3 c'	-012B		Soil	1	Liner	ICE	X	X	X	X									Composite CS-3 c'
	CS-3 c4'	-012C						X	X	X	X									c4'
	CS-3 c7'	-012D						X	X	X	X									c7'

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Scott Johns	7/25/11 5:40	[signature]		7/25/11 17:40	T-15°
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
		[signature]			
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS Standard 5-Day TAT	

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Appendix E:
Hydrology and Water Quality Review

HYDROLOGY AND WATER QUALITY REVIEW

DRAFT

For

PRESTON PIPELINE SITE

Milpitas, California

April 3, 2012

Prepared For:

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APPROACH TO ANALYSIS

This impact evaluation identifies potentially significant hydrologic impacts of the project both during project construction and at completion, and describes mitigation measures needed to reduce those impacts to the level of "less than significant".

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines and the Regulatory Setting requirements considers the proposed project to have a significant environmental impact with regard to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to inundation by seiche, tsunami, or mudflow.

PROJECT DESCRIPTION

Project Site

KB Homes proposes the construction of 220 high density single family and townhouse residential units with associated access roads and utilities on 15.4 acres in the City of Milpitas, Santa Clara County, California (APN 086-26-018, 086-26-029, 086-26-030, 086-27-002, 086-27-003). The proposed project includes the allocation of a 1.2 acre public park to the north of the site and a 4,000 square foot open space area to the south. The project site is currently a paved industrial yard used by Preston Pipeline and is bounded by Highway 237 and the Railroad Avenue cul-de-sac to the north, Union Pacific Transportation Company lands to the west, Bothelo Avenue to the south and the Union Pacific Railroad and locomotive storage yard to the east. Refer to Figure 1 for project location. The purpose of this report is to evaluate the existing and proposed hydrologic conditions and assess potential hydrologic and storm water quality impacts due to the proposed project. This analysis is based on topographic survey data and project site plans created by Ruggeri Jensen Azar (RJA) Associates, provided March 2012.

Regulatory Setting

The project site is located within the Coyote Creek watershed and the San Francisco Bay Regional Water Quality Control Board (RWQCB) jurisdictional zone regarding storm water quality and system design.[1] All of the storm water runoff drains to Ford Creek thence to Wrigley-Ford Creek, which are owned and maintained by the City of Milpitas. The City's Wrigley-Ford Pump Station discharges into Berryessa Creek, which is under the jurisdiction of the Santa Clara Valley Water District (SCVWD), eventually draining to Coyote Creek and the San Francisco Bay. The San Francisco Bay watershed is regulated by the San Francisco Bay RWQCB, the City of Milpitas, the County of Santa Clara and SCVWD. The SFRWQCB requirements are administered by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCUVRPPP). For the portion of the site subject to SCUVRPPP standards, the project design should follow the regulations set forth in the C.3 Stormwater Handbook.[2] Construction site controls should be designed per the Bay Area Stormwater Management Agencies Association (BASMAA) Blueprint for a Clean Bay and California Stormwater Quality Association Best Management Practices (CASQA BMP) Handbook.

[1] *Waterboards Map*, California State Water Resources Control Board, December 7, 2010.
[2] *C.3 Stormwater Handbook.* Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), May 2006.

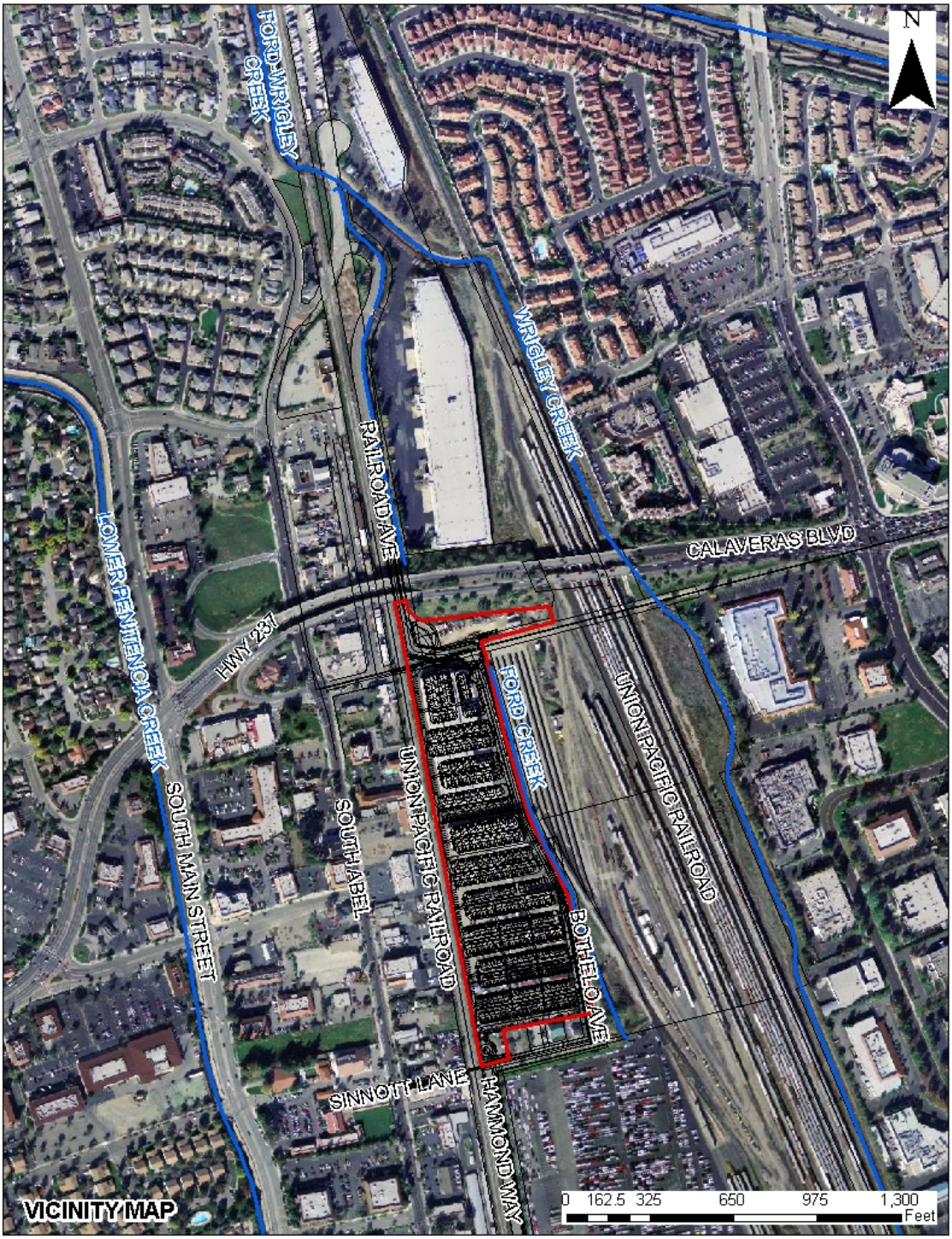

Figure 1: Vicinity Map

Hydrology and Water Quality Issues Not Discussed Further

The following environmental impacts have been determined to be ***less than significant*** and are not analyzed further for the reasons given:

- Violate Waste Discharge Requirements: Wastewater from the project site is planned to be delivered via piped sanitary sewer lines to the San Jose/Santa Clara Water Pollution Control Plant, which is assumed to be in compliance with all applicable waste discharge requirements, and said compliance (or lack thereof) would not be impacted by the proposed project.

- Risk of Seiche: The resonant oscillation of water in an enclosed body of water is a seiche. There are no lakes or other enclosed bodies of water adjacent to the project to produce seiche events that could affect the project site.

- Risk of Tsunami: The project is not near the ocean; thus tsunami events would not affect the project site.

PROJECT IMPACTS AND MITIGATION MEASURES

Each of the listed potential hydrology and water quality impacts are analyzed in turn, combined into an overarching impact where appropriate. For those impacts found to be significant, mitigation measures that reduce the impact to less than significant are described.

Impact HYDRO-1: **Violate any water quality standards or otherwise substantially degrade water quality**

Finding: ***Less than Significant with Mitigation***

Coyote Creek is listed as an impaired water body by the 2002 EPA 303(d) list for Diazinon. Diazinon occurs as a result of increased runoff from urban areas and pesticides. As of 2006 Coyote Creek was been removed from the impaired list for meeting the Total Maximum Daily Load (TMDL) requirements.[3] South San Francisco Bay is listed as impaired for mercury, polychlorinated biphenyls (PCBs), and dioxins by the 2006 EPA 303(d) list. Dioxins are complex chemicals which are the product of many industrial processes. High levels of mercury are present in the San Francisco Bay due to metal processing, medical waster, coal burning, and other forms of mining. Atmospheric deposition is the greatest mode of transport for mercury. PCBs are a group of chemicals created for industrial uses, specifically in electrical equipment that were prohibited in the United States in 1978 and which have found their way to surface waters.

[3] Water Quality Assessment and Total Maximum Daily Loads Information, United States Environmental Protection Agency, http://www.epa.gov/waters/ir/index.html, February 2012.

Surface Water Quality

The proposed project could generate significant adversely impacted water quality. Pollutants and chemicals associated with urban development could run off new roadways and other impervious surfaces. The pollutants could then flow into the creek described herein. These pollutants could include, but may not be limited to, heavy metals from automobile emissions, oil, grease, debris, and air pollution residue. Contaminated urban runoff that remains relatively untreated could result in incremental long-term degradation of water quality.

Short-term adverse impacts to water quality may also occur during construction of the project when areas of disturbed soils become susceptible to water erosion and downstream sedimentation. Grading in proximity to drainage features could result in an increase in bank erosion, affecting both water quality and slope stability along the drainage feature. The soil stockpile could contribute to increased sedimentation of the natural waters.

Site design to reduce impervious area coverage, limited grading and fitting of structures to the existing topography, and use of swales rather than storm drain pipes to convey runoff are favored approaches to managing urban runoff.[4] Current agency guidance also recommends that, where soils and geotechnical conditions allow, runoff be infiltrated using a combination of treatment BMPs, such as grass swales and infiltration trenches, to reduce peak flows and enhance water quality.

There are several pollutants that the project development could contribute to the surface water, including sediment and typical urban pollutants. In contrast to other potential pollutants, sediment is typically of greatest potential concern during the construction-phase of development. After a project has been constructed and the landscaping has been installed, erosion and sedimentation from residential development sites are usually minimal. Pollutants other than sediment which might typically degrade surface-water quality during project construction include petroleum products (gasoline, diesel, kerosene, oil, and grease), hydrocarbons from asphalt paving, paints, and solvents, detergents, nutrients (fertilizers), pesticides (insecticides, fungicides, herbicides, rodenticides), and litter. Once the housing and roadways have been constructed, typical urban runoff contaminants might include all of the above constituents, as well as trace metals from pavement runoff, nutrients, and bacteria from pet wastes, and landscape maintenance debris.

Since most of the drainage system will overland release directly to Ford Creek, these pollutants could affect aquatic and wetland habitats and sensitive species, and sediment could reduce flood storage downstream. Without mitigation, the effects on surface water quality could potentially be ***significant***.

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[4] *California Storm Water Best Management Practice Handbook – Construction*, California Storm Water Quality Association, 2003.

Therefore, the following mitigation measures are necessary to reduce the effects on surface quality to a ***less than significant*** level:

Mitigation Measures

Potential construction-phase and post-construction pollutant impacts from the development of the site can be controlled below the level of significance through preparation and implementation of:

1) an erosion control plan,

2) a storm water pollution prevention plan (SWPPP), and

3) a storm water management plan (SWMP)

consistent with recommended design criteria, in accordance with the NPDES permitting requirements enforced by the Regional Board and SCVURPPP.

The erosion control plan forms a significant portion of the construction-phase controls required in a SWPPP, which also details the construction-phase housekeeping measures for control of contaminants other than sediment. The SWMP implements treatment measures and best management practices (BMPs) to be implemented for control of pollutants once the project has been constructed. Both the SWPPP and the SWMP set forth the BMP monitoring and maintenance schedule and identifies the responsible entities during the construction and post-construction phases for the proposed site development and housing construction.

The applicant's SWPPP shall proscribe construction-phase BMPs to adequately contain sediment on-site and prevent construction activities from degrading surface runoff. The erosion control plan in the SWPPP would include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for re-vegetation or mulching. Appropriate controls should be included to limit discharge of sediment from the soil stockpile. These controls may include diversions, wind and erosion blankets, and perimeter controls. The plan would also prescribe treatment measures to trap sediment once it has been mobilized, at a scale and density appropriate to the size and slope of the catchment. These measures typically include inlet protection, straw bale barriers, straw mulching, straw wattles, silt fencing, check dams, terracing, and siltation or sediment ponds.

BMPs shall be implemented in accordance with criteria in the California Stormwater BMP Handbook for Construction[5] or other accepted guidance listed by the SCVURPPP C.3 Manual and shall be reviewed and approved by the City prior to issuance of grading or building permits.

[5]*California Storm Water Quality Task Force, 2003, ibid.*

The applicant shall identify the SWPPP Manager who will be the responsible party during the construction phase to ensure proper implementation, maintenance and performance of the BMPs.

The applicant's SWMP shall implement post-construction water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable (MEP) for both the Site development and housing development projects. The site must comply with C.3 requirements for New Development set forth in the Municipal Regional Stormwater NPDES Permit.[6]

This permit, in addition to requirements of the SCVURPPP C.3 Guidance Manual, detail BMP selection and design requirements. Neighborhood-level and/or lot-level BMPs to promote infiltration or "green" treatment of storm runoff shall be emphasized, consistent with Regional Board guidance for NPDES Phase 2 permit compliance. These types of BMPs include infiltration basins and trenches, constructed wetlands, rain gardens, grassy swales, media filters, and biofiltration features. BMPs shall be designed in accordance with engineering criteria in the California Stormwater BMP Handbook for New and Redevelopment[7] as specified by the Municipal Regional Permit or by the SCVURPPP C.3 Manual and designs shall be reviewed and approved by the City prior to issuance of grading or building permits for the roadway or driveways.

These types of structural BMPs are intended to supplement other storm water management program measures, such as street sweeping and litter control, outreach regarding appropriate fertilizer and pesticide use practices, and managed disposal of hazardous wastes. The applicant shall prepare a clearly defined operations and maintenance plan for water quality and quality control measures. The design and maintenance documents shall include measures to limit vector concerns, especially with respect to control of mosquitoes. The applicant shall identify the responsible parties and provide adequate funding to operate and maintain storm water improvements (through a HOA, Geological Hazard Abatement District, CSD, CFD or similar organization). The applicant shall also establish financial assurances, as deemed appropriate by the City of Milpitas; enabling the City to maintain the storm water improvements should the HOA or other entity disband or cease to perform its maintenance responsibilities.

[6] Municipal Regional Stormwater NPDES Permit, California Water Resources Control Board, San Francisco Bay Region, October 2009.

[7] *California Stormwater Best Management Practice Handbook – New Development and Redevelopment*, California Stormwater Quality Association, 2003.

Impact HYDRO-2: **Substantially deplete groundwater supplies or interfere with groundwater recharge**

Finding: ***Less than Significant***

The project site is entirely underlain by the Santa Clara Sub-Basin groundwater basin as defined by the Department of Water Resources (DWR). Within the Santa Clara Sub-Basin, the site is located within the Santa Clara Plain as described by the Santa Clara Valley Water District (SCVWD). Recharge of the Santa Clara Pain is achieved partially through recharge activities of the SCVWD and through natural recharge (35,100 afy). SCVWD activities include controlled in stream recharge, spreader dams, and off-stream recharge facilities such as gravel pits.[8] The proposed project has no impact to the SCVWD recharge activities for the Santa Clara Plain groundwater basin.

The Santa Clara Valley basin is estimated to have an operation storage capacity 350,000 acre-feet, and basin pumping between 2001 and 2009 ranges from 82,600 acre-feet to 115,400 acre-feet.[9]

The surface area of the Santa Clara Plain groundwater basin is 144,000 acres (225 square miles). Although infiltration varies over the basin, this creates an average annual natural infiltration volume of 0.24 acre-foot per acre of surface area. The total pervious surface of the existing development is about 2 acres. Applying the average annual infiltration volume (0.24 af/acre) and the most conservative assumption, that no rainfall onto impervious surfaces is able to percolate into the groundwater basin, results in a current condition of about 0.5 acre-foot/year of infiltration. In the proposed condition, the total pervious area is approximately 4.9 acres which results in a post-project infiltration of approximately 1.2 acre-feet/year. This shows an increase in groundwater recharge in the proposed project condition of about 0.7 acre-feet/year. Furthermore, these calculations assume zero infiltration of rainfall onto impervious areas, but in fact the project is required to use drainage structures and Best Management Practices (BMPs), none of which exist for the current site, which will promote infiltration of runoff from impervious surfaces.

Given these calculations, and the project plan to increase pervious area, the impact of the project to groundwater recharge is ***less than significant***.

[8] *California's Groundwater Bulletin 118.*
[9] *Urban Water Management Plan*, Santa Clara Valley Water District, 2010.

Impact HYDRO-3: **Substantially alter the existing drainage pattern of the site in a manner which would result in substantial erosion or siltation on- or off-site**

Finding: ***Less than Significant with Mitigation***

As described in HYDRO-4, post-project peak runoff from the site does not exceed pre-project peak runoff for the 2-, 10-, and 100-year storm events. Therefore, hydromodification per the Regional Board and SCVURPPP is not required. The potential for erosion or siltation is potentially decreased due to the reduction in runoff. At later stages of planning, a Stormwater Pollution Prevention Plan (SWPPP) and a Stormwater Management Plan (SWMP) must be prepared to avoid on-site erosion. The reports will need to ensure that erosion does not occur due to a concentration in flows whether during construction or post construction. These requirements, and other impacts and mitigation measures specific to sediment as a water quality concern, are discussed in Mitigation Measure HYDRO-1.

With these mitigation measures, impacts to erosion or siltation on or off site due to the project will be reduced to ***less than significant***.

Impact HYDRO-4: **Substantially alter the existing drainage pattern of the site, in a manner which would exceed the capacity of storm water drainage systems, provide substantial additional sources of polluted runoff, or result in substantial flooding on- or off-site**

Finding: ***Less than Significant***

Note that the following impact analysis is based on flooding and capacity exceedance from onsite flows only and does not take into account floodplain impedance or alteration. See HYDRO-6 for a floodplain impact analysis.

Existing Site Drainage Pattern

The existing 15 acre site is within the tributary basin of Ford Creek (Figure 2). Elevations range from 17 feet to 22 feet with mild slopes of approximately 2 percent. The site can be divided into two drainage basins defined by areas contributing to the Union Pacific Railroad conveyance in the west, or Ford Creek outfalls to the east. Ford Creek is a natural channel along the length of the project site before entering a set of dual 48-inch culverts beneath the Railroad Avenue cul-de-sac and Highway 237. Excessive sedimentation has occurred at the twin culverts which causes flooding upstream of Highway 237 (see HYDRO-5). Downstream of the twin culverts, Ford Creek is an open channel piped beneath two driveways before its confluence with Wrigley Creek to form Ford-Wrigley Creek. The channel upstream of the site is also contained within a pipe between Bothelo Avenue and Hammond Way.

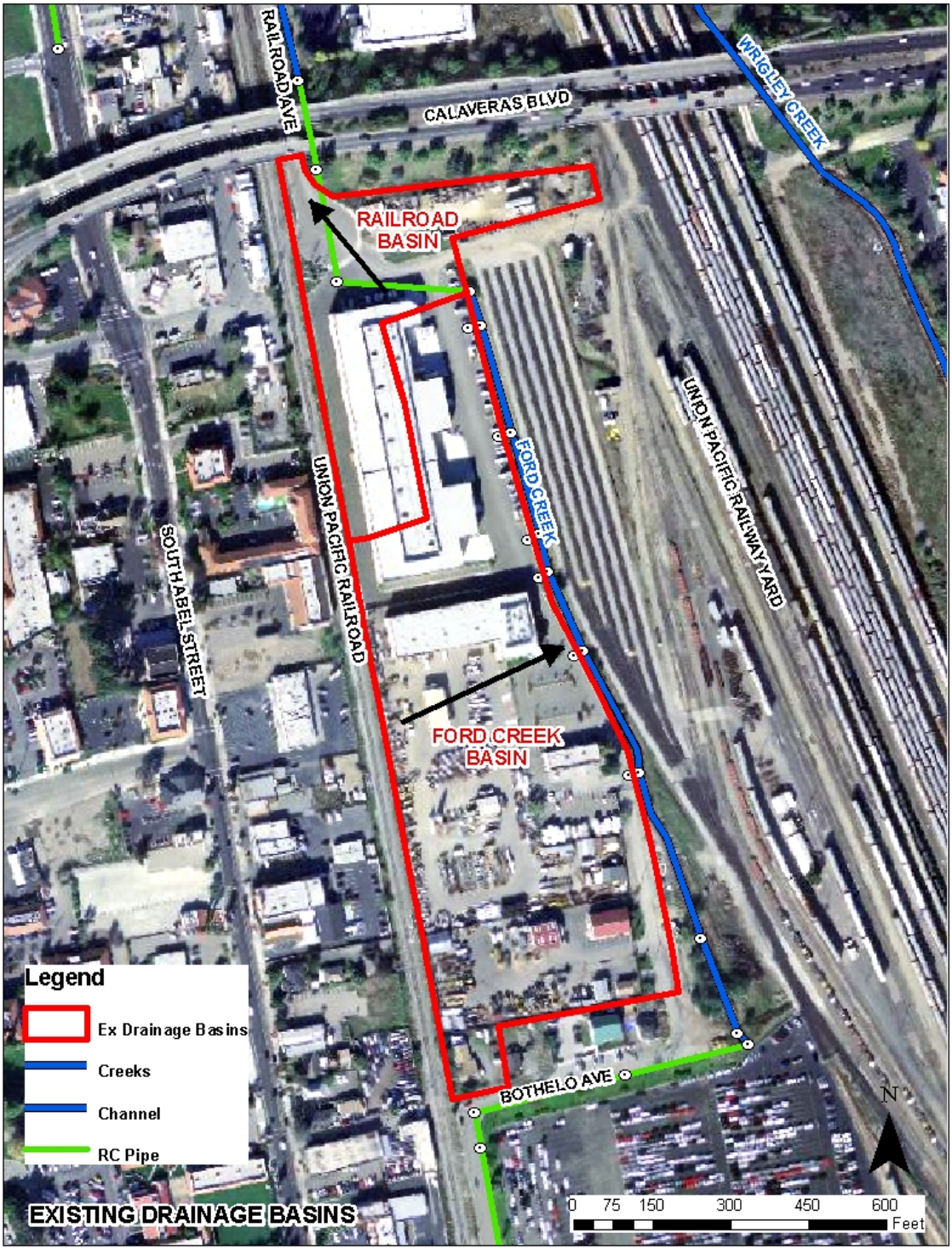

Figure 2: Existing Drainage Basins

Onsite lands in the northwest with an area totally approximately 3.7 acres are sloped to the west. Flood waters from this drainage basin are conveyed overland parallel to the Union Pacific railway and enter a City of Milpitas owned underground drainage system approximately 190 feet north of the site. Runoff is piped to the east in a 24-inch reinforced concrete pipe (RCP) before it outlets to Ford Creek.

The eastern and southern portions of the site are sloped to the east and discharge to one of seven Ford Creek outfalls. Outfalls range in diameter from 30 to 36 inches. The 14.4 acre area tributary directly to Ford Creek is conveyed either by overland flow or through a limited onsite pipe network.

The site is located within Basin "F1" of the draft Milpitas Storm Drain Master Plan (SDMP).[10] The basin is characterized as heavy industrial land use and encompasses the tributary drainage area of Ford Creek. Ford Creek is maintained by the City of Milpitas and has a drainage area of approximately 298 acres and a 100-year discharge of 175 cubic feet per section (cfs) at the Calaveras Boulevard crossing. The project site makes up approximately 5% of the contributing area.

To estimate peak storm water runoff from the site before and after development, the Rational Method is employed per the Milpitas Storm Drain Master Plan, which references the Santa Clara County Drainage Manual (SCCDM).[11] The Rational Method analyzes land use, soil type, project size, and rainfall rates for a particular project location to estimate a peak flow from each drainage basin for a particular storm recurrence and duration. Land use for the site will change with the proposed development from industrial to high density residential.

Existing soils underlying the site are Natural Resources Conservation Service Hydrologic Soil Group D.[12] The onsite Embarcadero and Newpark Soil Complexes are included in Soil Group D, qualified as having high runoff potential and very slow infiltration rates. Areas with group D soil experience greater peak runoff values and faster times of concentration (i.e. quicker peak runoff) than those areas characterized by groups A, B, and C soils.

The Rational Method incorporates soil type when determining the runoff coefficient (C). The C-Value (C) ranges from 0 to 1, with 0 being the most pervious and 1 being impervious. Rainfall intensity rates for the project site are based on a mean annual precipitation (MAP) value of 15 inches. Corresponding intensity-duration-frequency (IDF) curves are used to determine the rainfall intensity at each storm frequency and duration. The project site is analyzed for the 2-year, 10-year and 100-year design storms.

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[10] *Storm Drain Master Plan – Draft*, prepared by Schaaf & Wheeler, City of Milpitas, May 2010.
[11] *Drainage Manual*. Santa Clara County, California, prepared by Schaaf & Wheeler. August 14, 2007.
[12] *Soil Map –Santa Clara Area (CA641), California, Western Part*. Web Soil Survey - National Cooperative Soil Survey, Natural Resources Conservation Service,. July 27, 2010. Website: http://websoilsurvey.nrcs.usda.gov.

The pre-project peak flows are listed below in Table 1 for storm duration equal to the time of concentration (Tc) for each sub-basin.

Table 1: Existing Peak Flow Rates, Q (cfs)			
Basin	2-year Storm	10-year Storm	100-year Storm
Railroad (NW)	2	4	6
Ford Creek (E)	5	9	12

Post-Project Site Drainage Pattern

Detailed project grading was not provided at the time of analysis, but the preliminary plan is to drain the entire site area directly to Ford Creek, re-using existing outfalls. The post project flow rates are based on the total site drainage area and the proposed changes in land use. See Figure 3 for a post-project drainage map.

The entire site will decrease in imperviousness from 87% to 68%. The average site C-value will decrease from 0.82 to 0.64 due to the construction of the private park, open space, and landscaping around the residential units. Refer to Table 2 for the results of an analysis for post-project peak runoff rates. The total runoff from the site for the 100-year storm decreases from 18 cfs to 12 cfs.

Table 2: Proposed Project Peak Flow Rates (cfs)			
Basin	2-year Storm	10-year Storm	100-year Storm
Entire Site	5	8	12

The detailed project site proposed drainage system was not provided at the time of this study. See mitigation measure HYDRO-1 for mitigation recommendations for low impact drainage design to meet water quality standards.

Hydromodification is a design process by which peak flows from a proposed project are limited to pre-project conditions for a particular set of storm duration and return intervals. This is usually achieved through increasing pervious area, and installing infiltration storm water controls such as vegetated swales and detention basins. According to the SCVURPPP Hydromodification Management Plan[13] and C.3 Stormwater Guidebook,[14] the project site is located in an area exempt from hydromodification requirements. The site is exempt based on location within an area which is at least 65% impervious at 90% built-out. Since the project proposes to reduce the peak 2-year, 10-year and 100-year flows through increasing impervious area, the site meets the requirements of hydromodification regardless of exemption.

[13]Hydromodification Management Plan, Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), April 2005
[14] C.3 Stormwater Guidebook, SCVURPPP, May 2006

Figure 3: Proposed Drainage and Site Use

Detailed grading and storm drainage utility plans have not been provided at the time of this study but the preliminary plan is to drain the entire site directly to Ford Creek. This should be verified prior to project approval. Since post-project flows during the 100-year storm will spill and travel overland via Railroad Avenue and the Union Pacific Railroad tracks back to Ford Creek without flooding property (see HYDRO-5), detailed onsite drainage flow paths can be altered without causing a worsening of the flood risks onsite or to adjacent properties. The grading and drainage plan can follow existing drainage basin patterns or direct all water to Ford Creek without producing negative impacts or causing additional risk of flooding.

Presuming that the project follows existing onsite drainage patterns or directs all flow to Ford Creek, impacts to onsite flood risk and storm drain systems as a result of the project are ***less than significant***. (See HYDRO-6 for risks based on flood flows and impedance.)

Impact HYDRO-5: **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map**

Finding: ***Less than Significant with Mitigation***

Per the Federal Emergency Management Agency (FEMA) flood insurance rate map (FIRM) number 06085C0067H, dated May 18, 2009, the project site is located in special flood hazard area (SFHA) Zones X and AH. The Zone X designation is for areas of 0.2% (i.e. 500-year) chance flooding; areas of 1% (i.e. 100-year) chance flooding with average depths of less than one foot or with drainage areas less than one square mile. Zone X is considered outside of the designated 100-year special flood hazard area. Zone AH identifies an area of ponded flood depths of 1 to 3 feet. Portions of the project are within an AH Zone identified by the FIRM with a ponded elevation (i.e. base flood elevation) of 23 feet (North American Vertical Datum - NAVD88). This base flood elevation appears to be a datum error based on an earlier conversion from NGVD29 to NAVD88, and should in fact be 20 feet NAVD based on the datum conversion of 2.85 feet used in the currently effective FIS.[15] The previous effective FEMA map, dated 1982, shows an AH Zone of elevation 17 feet NGVD29 (20 feet NAVD88). Other than datum conversion, there are no changes to the zone determinations, delineations, or base flood elevations between the previous and current map. It appears that the conversion between NGVD and NAVD was incorrectly performed twice for this specific Zone AH ponded area. The 2009 FEMA SFHA designations are shown on Figure 4.

[15] Flood Insurance Study, Santa Clara County and Incorporated Cities, Vol. 4, May 18, 2009, Page 134.

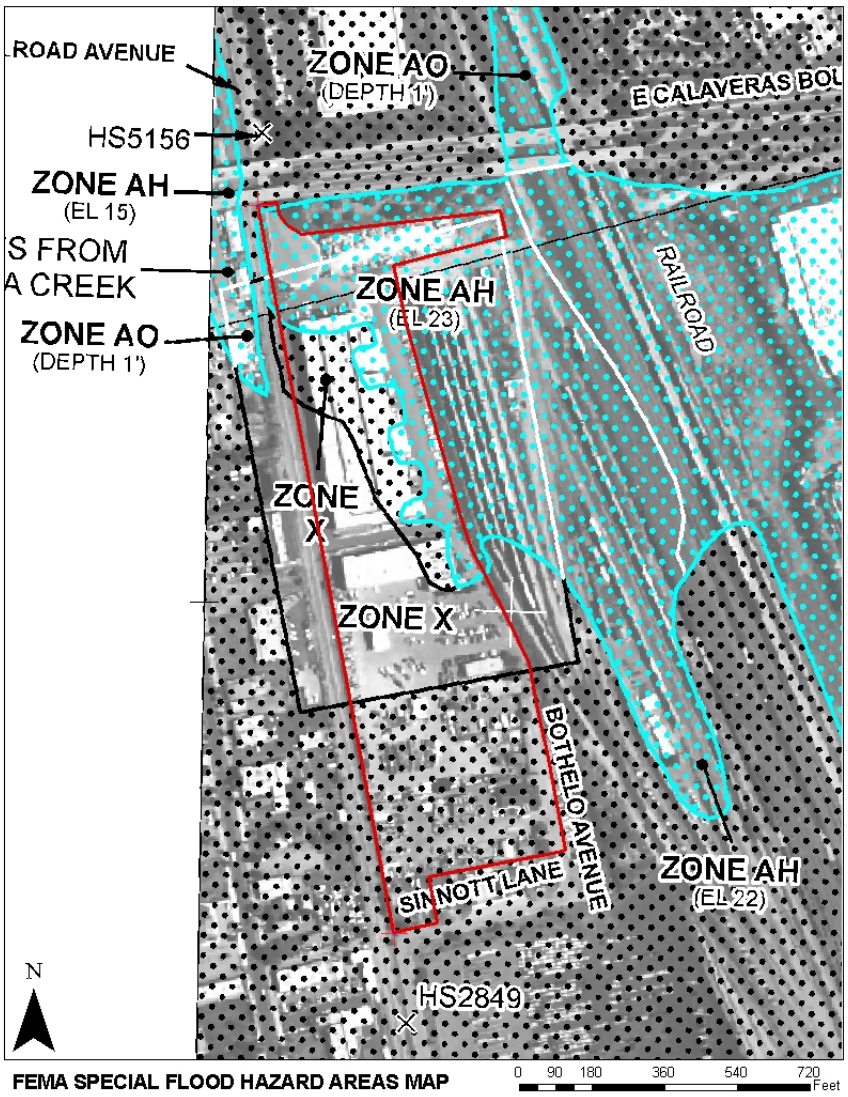

Figure 4: FEMA Special Flood Hazard Zones

In addition to the FEMA flood designations, a study of Ford and Ford-Wrigley Creeks performed by Schaaf & Wheeler in 2010 describes known flooding issues regarding Ford Creek upstream of Calaveras Boulevard.[16] A hydraulic model utilizing Army Corps of Engineers HEC-RAS software was created as part of the Wrigley-Ford study to evaluate flooding and channel capacity. Due to sedimentation and channel roughness from excessive vegetation growth the 48-inch dual culverts beneath Railroad Avenue and Calaveras Boulevard do not provide sufficient capacity and cause spilling upstream. A dredging project was designed by the City of Milpitas based on the Wrigley-Ford Creek study which involves the regular removal of sediment, dredging of Ford Creek to create a uniformly sloped channel, and removal of invasive vegetation.

[16] *Wrigley-Ford Dredging Hydraulic Impacts Analysis Memo*, Schaaf & Wheeler, July 9, 2010.

The project is scheduled to be completed during summer 2012 and is therefore considered to be complete as the existing condition for this analysis.

After the dredging project has been completed, the cumulative 100-year peak spill from Ford Creek between the Highway 237 culverts and Bothelo Avenue is 35 cubic feet per second (cfs). Excess water from Ford Creek is blocked from spilling to the east by the Union Pacific Railroad storage area. Local site drainage and drainage from the Union Pacific Railroad storage area is unable to enter the creek (which is over capacity during the 100-year storm) and will contribute an additional 20 cfs to excess flows at the project site. Shallow local ponding will occur on the project site to elevation 20 (NAVD), before that ponded water is released to the west toward the Union Pacific Railroad tracks in four locations: three along the left overbank across the project site and one at the upstream faces of the Highway 237 culverts to the north. See Existing Floodplain Map Figure 5.

The three offsite spills from the Preston Pipeline site flow along the Union Pacific Railroad track generally to the north (and also potentially to the west as shallow sheet flow through the adjacent neighborhood), where they combine with water that spills at the Highway 237 culvert entrance and flows through the storage yard to the north or through the parking lot above the culvert centerline before flowing across the Railroad Avenue cul-de-sac. The combined spill is then conveyed along Railroad Avenue and the Union Pacific Railroad right of way 190 feet north to inlets and a 24-inch corrugated metal pipe which outfalls to lower Ford Creek. Flow in excess of the CMP capacity will simply return to the creek over its western bank.

Railroad Avenue has a 'top of curb' capacity of approximately 35 cfs based on existing conditions and assuming a City of Milpitas standard 36-foot crowned road section. The railroad tracks have a capacity of about 100 cfs while maintaining approximately one foot of freeboard to the rails. Thus existing spills from Ford Creek and local runoff from the project site that cannot enter Ford Creek (55 cfs in total) are ultimately conveyed along the Union Pacific Railroad right-of-way under the Highway 237 overpass and back to Ford Creek downstream of Highway 237 without overtopping the railroad tracks. The lower reach of Ford Creek before its confluence with Wrigley Creek has sufficient capacity to carry the 100-year discharge within its banks, and Wrigley-Ford Creek has sufficient capacity to carry the combined 100-year discharge from Wrigley and Ford Creeks within its banks, assuming no upstream spills.[17]

[17]City of Milpitas, *Wrigley-Ford Dredging Hydraulic Analysis*, prepared by Schaaf & Wheeler, June 2010.

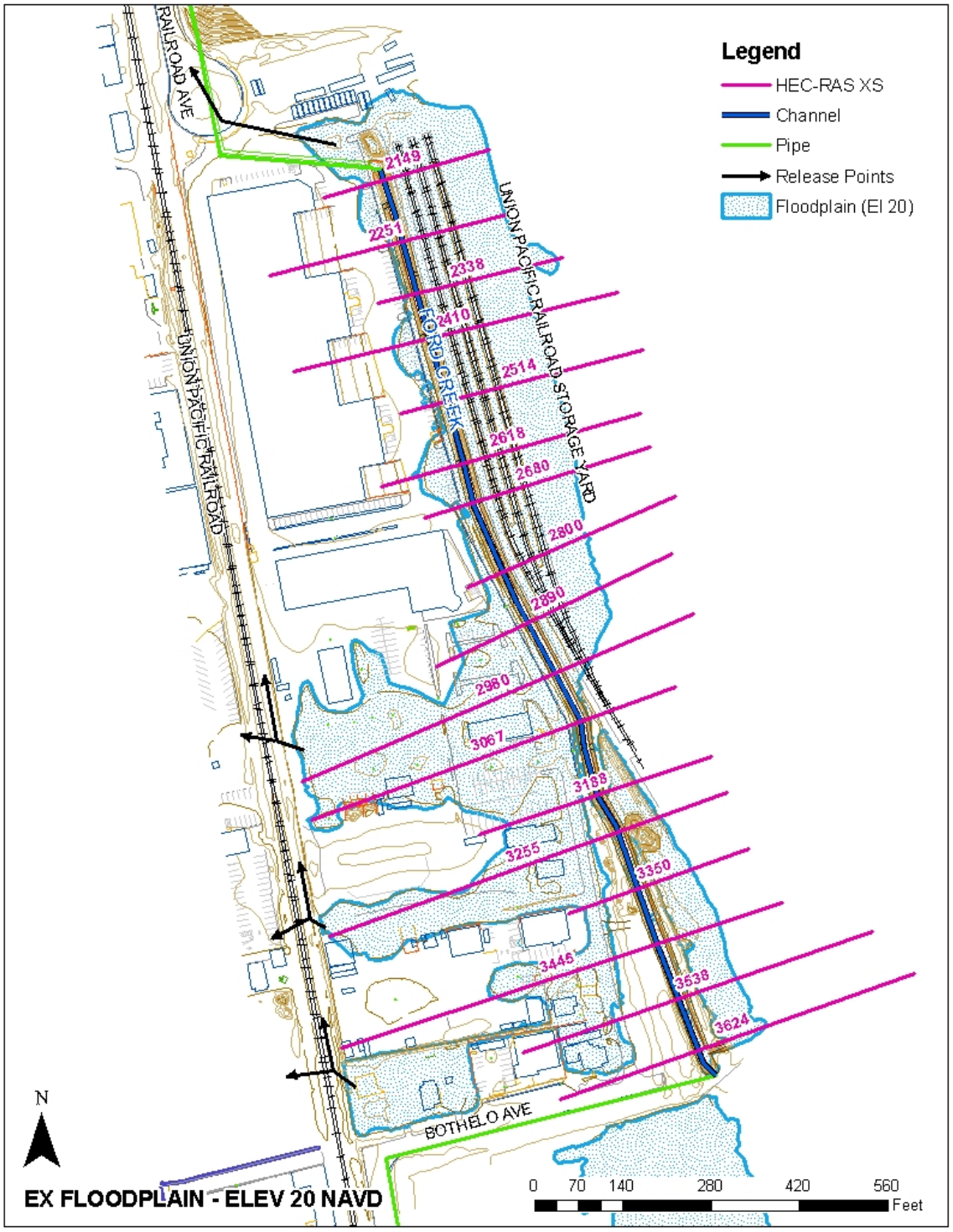

Figure 5: Existing Floodplain and HEC-RAS Sections

Mitigation Measures

To protect proposed structures from spills from Ford Creek and to remove them from the FEMA special hazard area, structures built at the site will need to be elevated so that the lowest adjacent grade to any residential structure exceeds elevation 20 feet NAVD. It has been shown by independent analysis performed by Schaaf & Wheeler that the FEMA special flood hazard zone AH should be at elevation 20 feet NAVD. A LOMR should be completed to revise the map base flood elevation and remove the site from the SFHA. The City of Milpitas requires finish floor elevations to be set at one foot above the base flood elevation. Therefore, the site should be designed to provide finish floor elevations of 21 feet NAVD or greater.

Impact HYDRO-6: **Place within a 100-year flood hazard area structures which would impede or redirect flood flows**

Finding: ***Less than Significant with Mitigation***

Mitigation measures for HYDRO-5 have the potential to block the release of flood water spilled from Ford Creek. Schaaf & Wheeler has used the existing HEC-RAS model from the 2010 Ford-Wrigley Creek Dredging study to develop a revised model depicting the post-project conditions at the site, assuming the entire site is filled as described for mitigation for HYDRO-5. After the placement of project fill, the localized shallow ponding during extreme runoff events would be removed and the local runoff and creek spills described previously would release to the north over Railroad Avenue. Approximately 55 cfs would flow across the proposed park and north down Railroad Avenue and the railroad tracks, matching the existing northern flow path condition. Overland release into the Union Pacific Railroad tracks to the west of the project due to local drainage and creek spills would be eliminated, thereby also reducing flooding risks to structures west of the site. The limitation of upstream spills and re-direction of local drainage into the creek would result in a rise of water surface elevation of up to 0.4 foot within Ford Creek, conservatively assuming all local onsite flow enters the creek at the upstream end of the creek model. The City of Milpitas and Santa Clara Valley Water District consider flood elevation impacts greater than 0.1 foot to be ***significant***, therefore additional mitigation is required.

Mitigation Measures

To eliminate the impact caused by placing fill at the site and forcing spill to the north over Railroad Avenue cul-de-sac, the project must provide additional conveyance in Ford Creek; or alternatively provide flow passageways through the site which mimic existing floodplain conditions. Due to the proposed housing design requiring at-grade access to garages, lowering the motor way and bike path which runs parallel and adjacent to Ford Creek appears to be the most feasible alternative.

By lowering the elevation of this access route and removing the small berm along the left bank of the creek (from cross section 3445 to 2149 in Figure 5), the capacity of the creek during extreme flood events would be increased, thereby reducing 100-year water surface elevations. Based on a modified HEC-RAS model, the road would need to be lowered to an elevation equivalent to the 10-year water surface elevation. This scenario provides protection of the bike path and roadway during the 10-year storm event, and provides increased conveyance for larger discharges so that the project has no adverse impacts to Ford Creek 100-year water surface elevations. Roadway elevations should range from 19.7 feet NAVD at Bothelo Avenue to 17.6 feet NAVD at the Railroad Avenue cul-de-sac. To provide overland release of spills from Ford Creek, the proposed park and cul-de-sac extension should remain at existing grade. The park should not include any features which would obstruct the flow of water to the north. See proposed grading Figure 6.

With these recommended mitigation measures in place, the project will not place any proposed structures within the flood hazard area, and have a ***less than significant with mitigation*** impact on the regulatory floodplain.

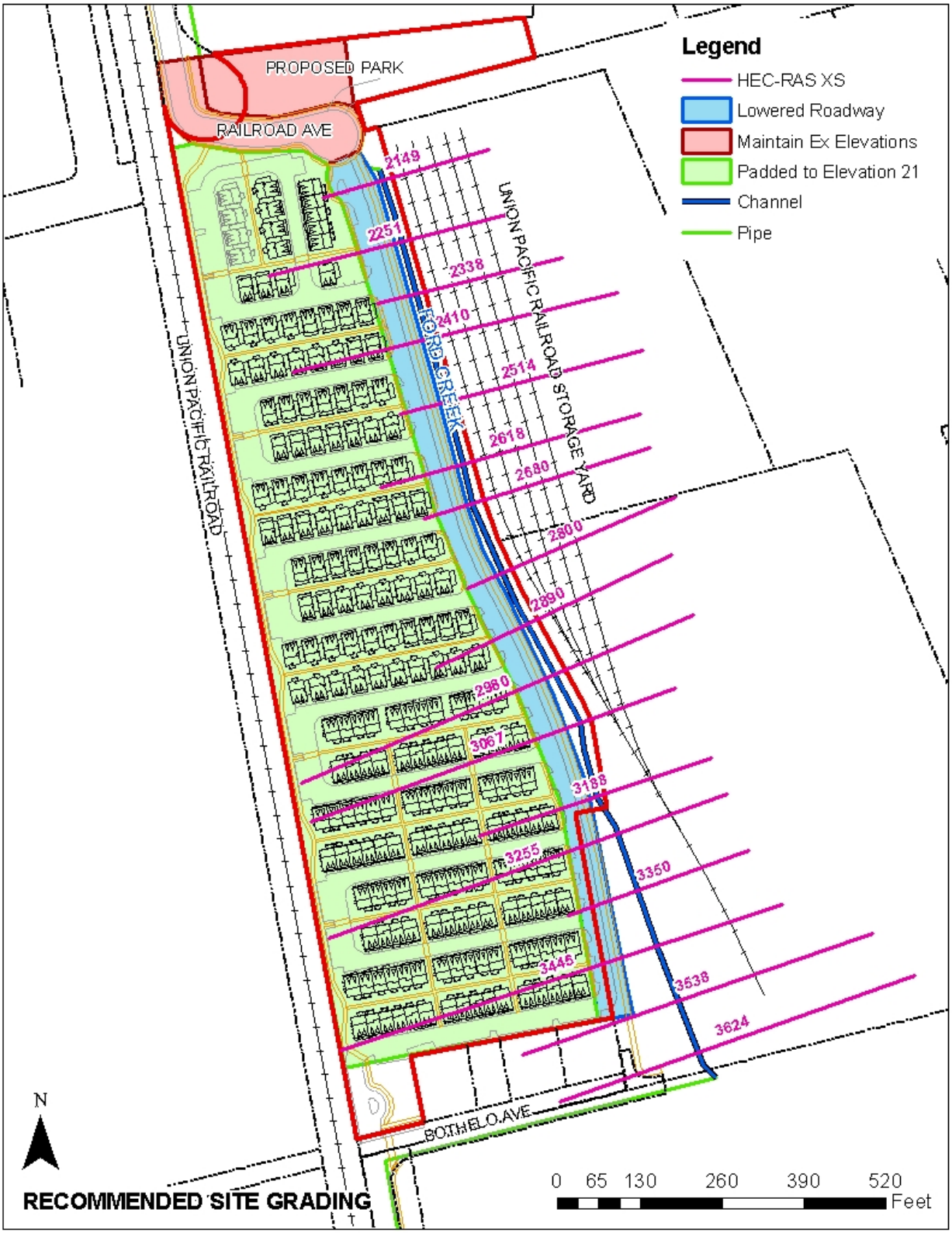

Figure 6: Floodplain Mitigation

Impact HYDRO-7: **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam**

Finding: ***Less than Significant***

The effective Flood Insurance Rate Map reflects the presence of certified levees, or the absence of certification to National Flood Insurance Program standards, whereby such uncertified levees are assumed not to exist. Therefore, the floodplain hazards described in HYDRO-5 account for potential levee failure hazards.

The site is located within the inundation boundaries of Anderson Dam. It is not located within the inundation limits of Lexington, Cherry Flat, Elsma, Levin, Steven's Creek or Coyote Dams.[18] The Santa Clara Valley Water District (SCVWD) performed an analysis of the effects of Anderson Dam failure in 2003.[19] This analysis resulted in an expected maximum wet weather inundation depth of approximately 9.5 feet (elevation 30.5 feet NAVD) at the project site within 9 hours after dam failure (See Figure 7). There is no expected inundation at the project site during fair weather conditions. These results assume that the dam is at full capacity during failure. The dam is currently kept at a maximum depth of about 68 percent full due to a recent SCVWD seismic analysis.[20] This analysis determined that the dam may experience significant damage in an earthquake and the water level should remain about 25 feet below the spillway until seismic retrofits can be completed. (The currently estimated date of completion is 2018.) Due to the high water surface elevations occurring with a dam failure during wet weather conditions, designing the project to withstand dam inundation is infeasible.

While the project site is subject to deep inundation should Leroy Anderson Dam fail catastrophically during a storm event, the dam is inspected twice a year by the District in the presence of representatives from the California Division of Safety of Dams and the Federal Energy Regulatory Commission. Furthermore as previously discussed, Anderson Reservoir is managed to prevent significant damage during a maximum credible earthquake. So while potential inundation resulting from catastrophic dam failure could damage property and proposed structures within the project site and pose a severe hazard to public safety, the probability of such failure is extremely remote and therefore the potential impact is ***less than significant***.

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18 *Dam Failure Inundation Hazard Map for Milpitas*. Association of Bay Area Governments' (ABAG). 1995. Website: http://www.abag.ca.gov.

19 *Anderson Dam EAP Map 2003 Flood Inundation Map*, *Sheet 4*, Santa Clara Valley Water District, 2003.

20 *Anderson Dam Seismic Stability Study*. Santa Clara Valley Water District. July 2011. Website: http://www.valleywater.org/.

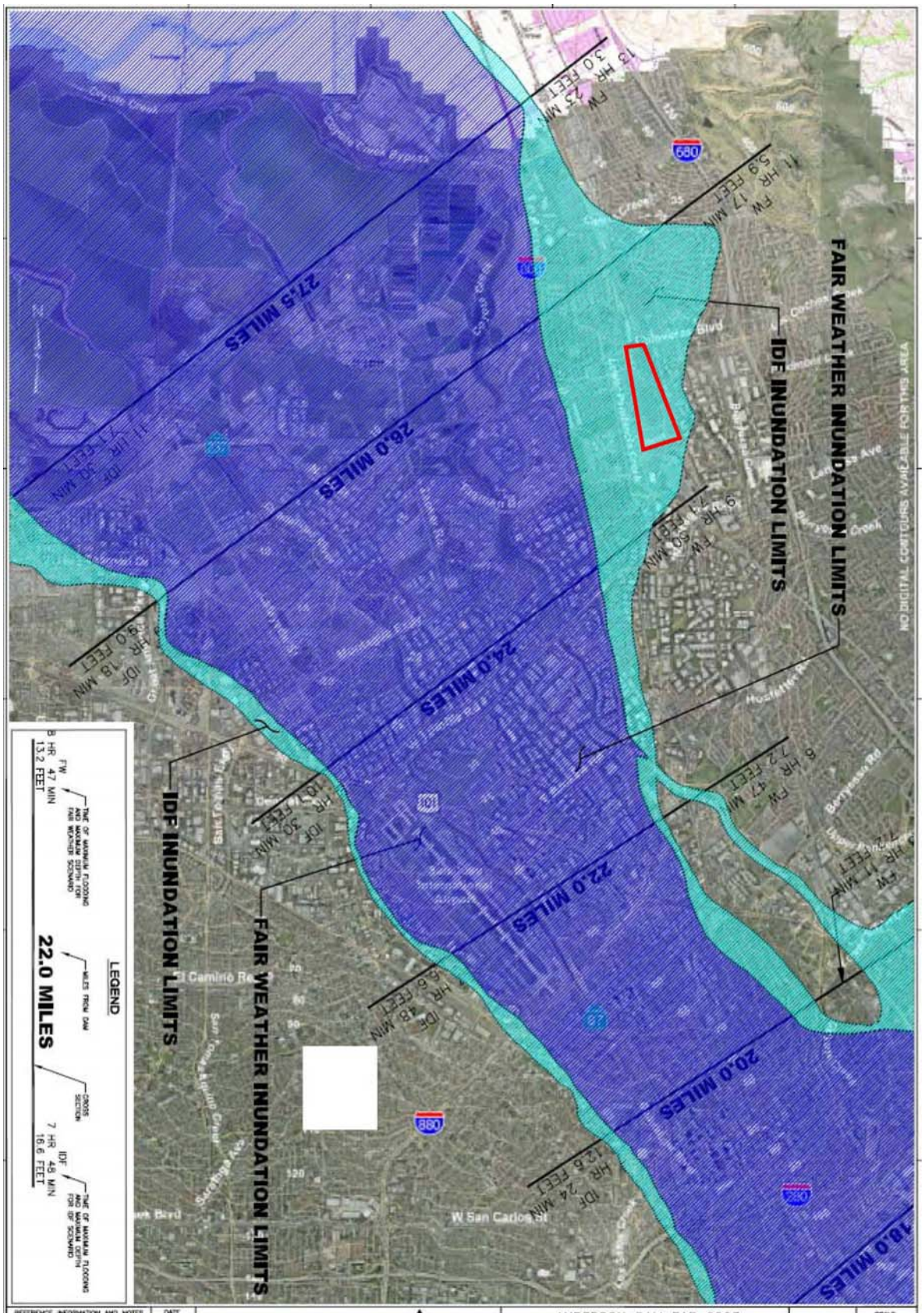

Figure 7: Anderson Dam Inundation Limits

Impact HYDRO-8: Expose people to landslide or mudflow hazards

Finding: ***Less than Significant***

According to the Landslide Inventory Map of the Milpitas Quadrangle,[21] (Figure 8) the project site is not located within the limits of existing or known landslides. The potential of exposure to landslide or mudflow hazards due to this project is therefore ***less than significant***. Nonetheless, a geologist or geotechnical engineer should be retained during the detailed design and construction of the project for general soil construction suitability.

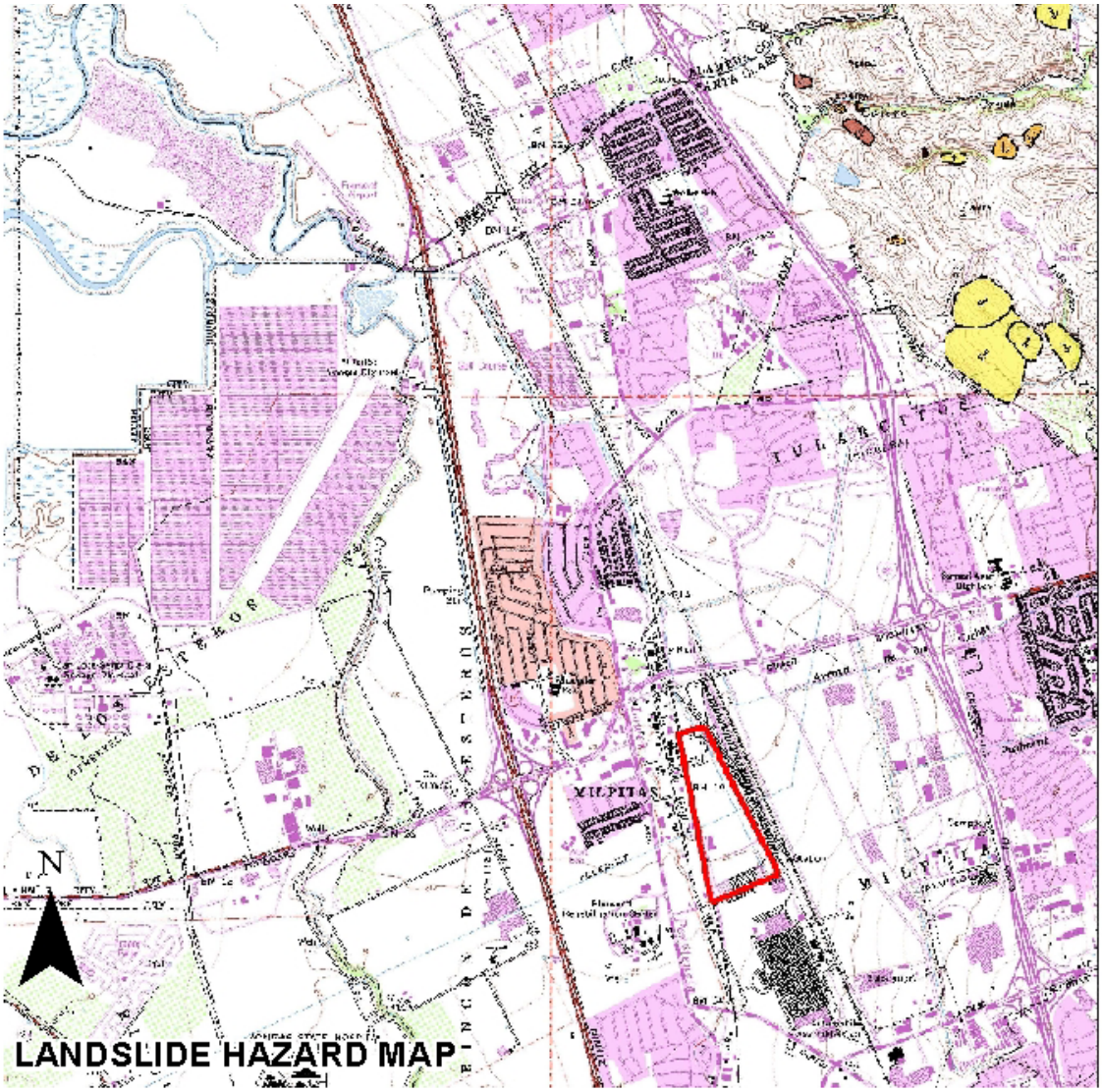

Figure 8: Landslide Hazard Map

[21] *Landslide Inventory Map, Milpitas Quadrangle*. State of California Department of Conservation. June 2011.

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Appendix F:
Noise and Vibration Study

Veneklasen Associates
Consultants in Acoustics | AV | IT | Environmental Noise

February 14, 2012

KB HOME SOUTH BAY
6700 Koll Center Parkway, Suite 200
Pleasanton, California 94566

Attention: Mr. Jedediah Bennett

Subject: Preston Property
Milpitas, California
Exterior Envelope Acoustical Design
VA Project No. 2367-054

Dear Jed:

Veneklasen Associates (VA) has completed our noise study of Preston Property in Milpitas, California. This report represents the results of our findings.

1.0 INTRODUCTION

This study was conducted to determine the impact of the exterior noise sources on the proposed residential development located at 133, 225, 227 – 261 Bothelo Lane and to provide exterior façade mitigation required to reduce interior noise levels to equal to or below acceptable limits based upon the City of Milpitas' Noise Element, and California State Building Code criteria. Exterior noise levels at selected locations were measured and predicted at the site. Based on these levels, interior noise levels were calculated for proposed residential development. Several different types of glazing were evaluated and the results are presented in this report.

The project consists of 98 single family homes and 122 town homes comprising 220 total residential units. The project also includes a 1.3 acre park. The site is located east of the Southern Pacific Railroad, west of Southern Pacific rail yard, south of East Calaveras Boulevard and north of a parking lot.

2.0 NOISE CRITERIA

LDN (Day-Night Sound Level) is the 24-hour equivalent average sound pressure level in which the nighttime noise levels, occurring between the hours of 10pm and 7am, are weighted by adding 10 dB to the average hourly noise level.

The City of Milpitas' General Plan states the 'normally acceptable' exterior DNL for residential-single family and residential multiple family land uses are 60 and 65 DNL respectively. The Noise Element states that if the noise level in rear yards or common open spaces exceeds the 'normally acceptable' level, then noise mitigation is required to reduce to acceptable levels.

The City's Noise Element also states that new residential development (single family and multifamily) and lodging facilities must have interior noise levels of 45 dB DNL or less, which is consistent with the State of California Building Code. The City requires mechanical ventilation where use of windows for ventilation (open windows) will result in higher than 45 DNL interior noise levels.

Mechanical ventilating system or other means of natural ventilation shall be provided per applicable codes, but cannot compromise the acoustical isolation.

2.1 VIBRATION CRITERIA

The CBC nor the City of Milpitas General Plan have vibration criteria.

The U.S. Department of Transportation, Federal Transit Administration, Office of Planning, "Transit Noise and Vibration Impact Assessment," contains the requirements for vibration levels related to exterior sound sources that potentially generate ground borne vibration. The criterion, presented in Table 8-1 of that report, is shown in Table 1, below.

Table 1 – Ground-borne Vibration Impact Criteria

Land Use Category	Ground-borne Vibration Impact Levels (re: 10^{-6} inches per second)		
	Frequent Events (> 70 events/day)	Occasional Events (30-70 events/day)	Infrequent Events (< 30 events/day)
Residences and buildings where people normally sleep	< 72 VdB	< 75 VdB	< 80 VdB

The FTA criteria is defined as the maximum rms vibration velocity level with a one-second averaging time expressed in one-third octave band spectra.

The FTA acknowledges that the development of these criteria is based on studies of rail transit systems. The FTA has suggestions of how to apply these criteria to freight trains as the duration of a pass-by is typically longer than a commuter train.

3.0 EXTERIOR NOISE MEASUREMENTS

3.1 Noise Measurements

Noise from vehicular movement on East Calaveras Boulevard and train activity on the Santa Fe Railroad are the dominant noise sources impacting the site. VA visited the site to perform noise measurements of the existing conditions.

VA positioned a long term noise monitor on the roof of the existing Sun Microsystems building that operated and stored data from Tuesday January 17, 2012 to Tuesday January 24, 2012. VA also completed short-term noise measurements at 4 locations on the project site. Table 2 reports the average LDN measured during the dates monitored. The LDN value was computed from the hourly average noise levels. Figure 1 shows the location of the long term measurement locations on the site.

Table 2 – Long Term Noise Monitor Descriptions

Measurement Location	Noise Level, LDN	Nighttime Maximum, dBA	Typical Train Event Maximum, dBA
Location 1	63	79	76

3.2 VIBRATION (ACCELERATION) MEASUREMENTS

VA measured ground vibration levels from train pass-bys at Location 2 on Figure 1, which is a distance of 100 feet from the railroad track. Continuous vibration levels were recorded at one second intervals from Tuesday January 17, 2012 to Tuesday January 24, 2012. VA utilized an accelerometer magnetically attached to a ground spike driven into the existing soil. The accelerometer was connected to a Bruel & Kjaer 2250, which monitored and stored the measured acceleration levels. The equipment used was calibrated prior to and after completion of the measurements.

Table 3 – Site Monitor Locations and Measured Vibration Levels

Position	Description	Location	Vibration Level, (velocity) VdB
Location 2	Long-term Vibration Monitor	100 feet East of Rail line	57

Railroad Activity

VA recorded railroad activity over a period of 7 days. During this period VA documented 10 trains. Based on our observations and knowledge of the rail line the recorded trains were freight trains usually consisting of an engine and only a few cars. The frequency of train events is 1 to 2 per day. *Therefore the FTA criterion for 'Infrequent' events, 80VdB, is the applicable criteria.*

On the east side of the track there exists a rail yard. VA observed minimal activity in the yard. However, VA understands that the BART system will be extended past the site on the east side. The rail line will be over 200 feet from the project property line and not expected to cause a significant noise or vibration impact on the site.

Train Mix (type of train and speed)

Of the 10 train events recorded, all were freight trains. The freight trains observed were traveling at approximately 10mph.

Figure 1 –Noise Monitor Location

3.3 Computer Modeling

VA has utilized the Traffic Noise Model computer software program developed by the FHWA (Federal Highway Administration) in order to predict traffic noise levels at various locations. The primary purpose of the computer model was to determine how the noise environment will change for future traffic conditions. Future traffic volume projections were not available. VA assumed a 1 percent increase in traffic count per year, consistent with industry practice. Using this increase, the noise level increase due to vehicular movement in between 2012 and 2032 will be approximately 1 dB.

3.4 Overall Exterior Exposure

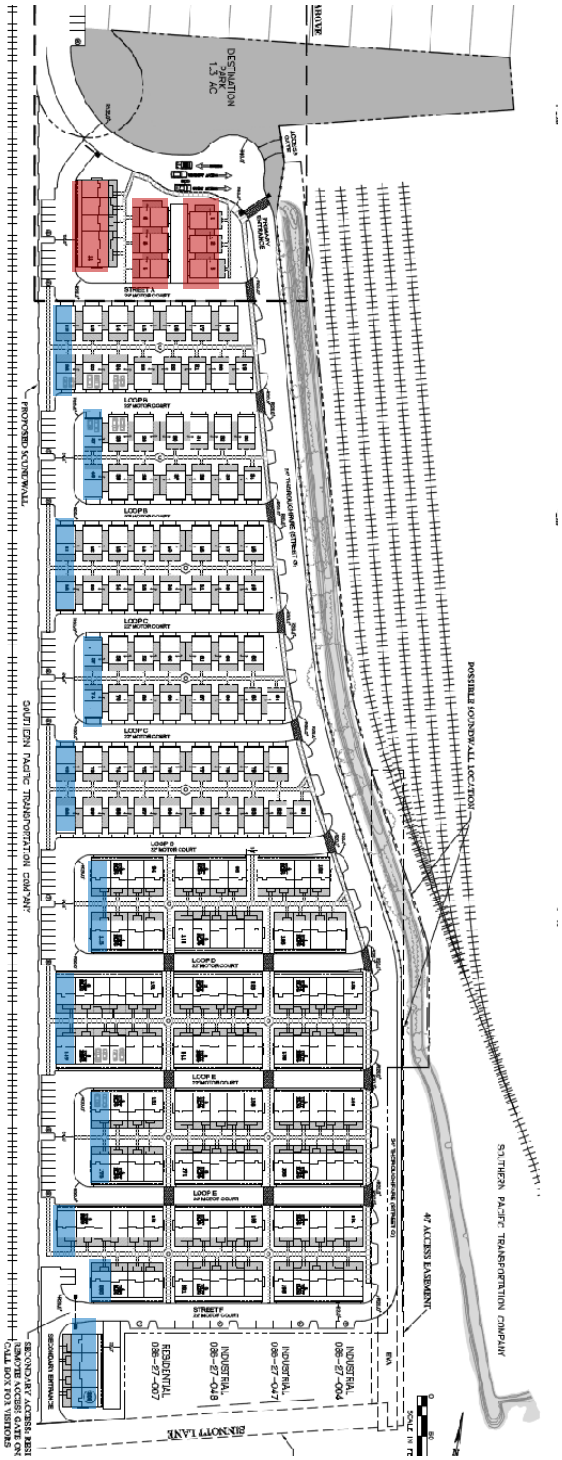
Based on our measurements, the computer model, VA calculated the existing and future LDN noise levels at each facade. To simplify the analysis and presentation of our results, VA has separated the site by zones based on sound exposure and required mitigation. The predicted noise levels at each location are listed in Table 2, below.

Table 4 –Existing and Future Exterior Noise Levels by Location

Zone	Existing, LDN	2030, LDN	Nighttime Maximum, dBA
A	63	64	79
B	<60	<60	76
Remaining Units	<60	<60	73

The requirements set forth by the State of California require that the sound level current or future, whichever is greater, be used for the acoustical analysis. As shown in Table 2, future sound levels will be greater than existing and, therefore, were used for the prediction of interior sound levels.

Figure 2 – Noise Exposure Zones



Zone A **Zone B**

3.5 Exterior Noise Mitigation

The project includes a 1.3 acre park and private yards for many homes included in the project. As described in section 2.0, the permissible maximum outdoor noise level is 60 LDN for single family dwellings. In Zone A the future noise level exceeds the criteria, noise barriers will be required to protect private yards. VA understands that the private yards will be individually protected with walls at the perimeter of the yard. *VA has calculated that the fence enclosing the private yards in Zone A should be at least 6 feet in height.*

VA has calculated that the exterior noise criterion of 60 LDN will be met in the park without any noise mitigation measures.

Noise barriers can consist of a building, wall, berm or combination of the two. The noise barriers must have a surface density of at least 2 pounds per square foot and shall have no openings or gaps. The barriers may be constructed of wood, concrete, stud and stucco, plate glass, Plexiglas or a combination of these materials as long as it has the correct surface density. Any access gates located in a barrier shall also have a surface density of at least 2 pounds per square foot and any gaps shall be minimized to maintain the noise reduction provided by the barrier. *It's recommended that client submit a detail of the fence for approval.*

4.0 INTERIOR NOISE CALCULATION

VA's calculations include the exterior wall construction for the building, but indicate that the interior noise levels are determined by the acoustical performance of the glazing system.

VA utilized the window assemblies shown in Table 4, below. The transmission loss values were based on typical glazing units. The actual construction and STC ratings shown may differ. Note that the STC ratings presented are for the entire window assembly including frame and seals.

It should be noted that common construction practices achieve outdoor to indoor noise reductions exceeding 20 dB. Therefore, areas exposed to noise levels less than 65 will satisfy the interior noise requirement without special acoustical constructions. This translates to mean that any typical window (dual glazed) would result in a sound level lower than the requirement within the Building Code.

4.1 Building Wall Construction

VA understands the exterior wall will consist of a 2x4 wood stud wall with batt insulation. Interior finish will be one layer of 5/8 inch type 'x' gypsum board and exterior finish will consist of stucco or fiber cement lap siding.

VA also evaluated the noise through the roof of the buildings, but found this acoustical path to be insignificant to the resultant interior noise level.

4.2 Exterior Glazing

VA utilized the window assemblies shown in the table below. The transmission loss values were based on typical glazing assemblies. The actual construction and STC ratings shown may differ.

Table 5 –Glazing Assembly Descriptions

STC Rating	Thickness	Typical Glazing Construction
STC 29	1" dual	1/8" lite, 3/4" airspace, 1/8" lite
STC 30	1" dual	1/8" lite, 3/4" airspace, 1/8" lite
STC 33	1" dual	3/16" lite, 11/16" airspace, 1/8" lite

VA calculated the interior level within the residential units given the measured noise environment and the exterior façade construction described above. The calculations were based on the floor plans provided. The results for each location are presented in the following tables.

4.3 Interior Noise Level

Table 6 shows the predicted interior LDN noise levels for each location.

Table 6 – Calculated Future Interior and Exterior LDN Noise Levels and Their Acceptability

Zone	Future Exterior Noise Level*	Windows, Sliding Glass Doors and Entry Doors	Interior Noise Level	Interior Noise Level Criteria	Conclusion
A	64	STC 29	40	≤ 45	Acceptable
B	<60	Typical construction practices are sufficient to satisfy interior noise criterion. STC 29, minimum, recommended, not required			
Remaining Units	<60	Typical construction practices are sufficient to satisfy interior noise criterion. STC 29, minimum, recommended, not required			

4.4 Interior Maximum Noise Level

In a similar manner, VA calculated the maximum interior noise levels. The results are shown in table 7 below.

Table 7 – Calculated Interior and Exterior Maximum Noise Levels and Their Acceptability

Zone	Exterior Maximum Noise Level, dBA	Windows, Sliding Glass Doors and Entry Doors	Interior Noise Level	Interior Noise Level Criteria	Conclusion
A	79	STC 33	50	≤ 50	Acceptable
B	76	STC 31	50	≤ 50	Acceptable

4.5 Mechanical Ventilation Requirement

Because the windows and doors must be kept closed to meet the noise requirements at some locations, mechanical ventilation is required. The residential units located in Zone A will require mechanical ventilation. The mechanical ventilation shall meet all Code requirements, including the capability to provide sufficient fresh air exchanges, without depending on open windows or leakage through windows and doors. The ventilation system shall not compromise the sound insulation capability of the exterior façade assembly.

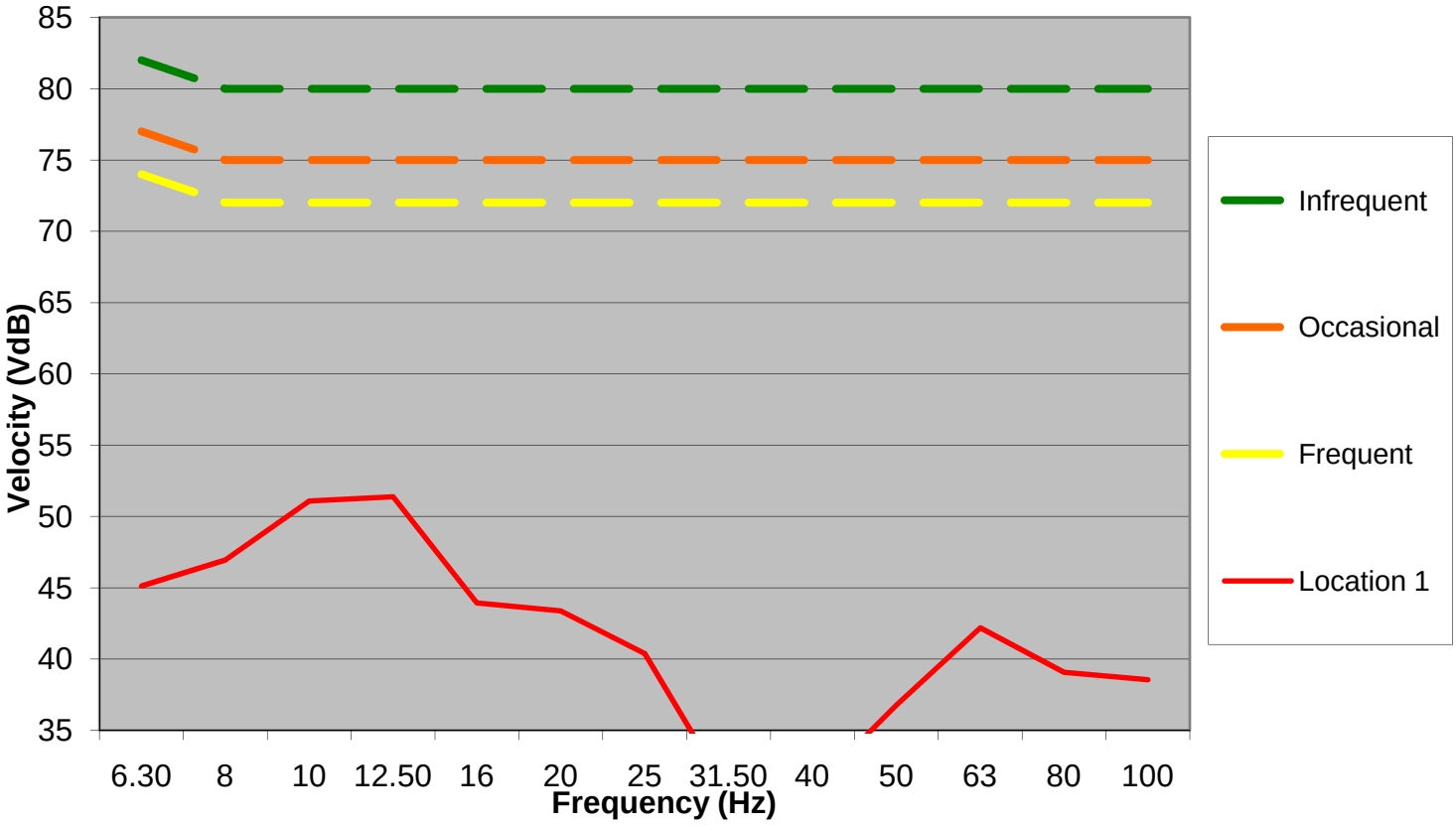
A noise study is typically required when the noise exposure for all or part of a site is equal to or greater than 60 CNEL. The homes located further from Calaveras Road and the homes near the east property lines will be exposed to sound pressure levels below the 60 CNEL threshold given the shielding that is provided by the building. In these areas, no acoustical requirements are applicable. Therefore, the need for acoustical rated windows and mechanical ventilation is not required. All units exposed to an exterior noise level of less than 60 CNEL would comply with the interior noise criteria of 45 dBA and do not require a mechanical ventilation system.

5.0 VIBRATION IMPACT

Based on our measurements, the maximum rms vibration level, with a one second averaging time, of the train pass-by events at Location 2 is shown in Figure 3 below. Of these maximum vibration levels, VA utilized the vibration spectrum level that represents the 90th percentile of the events captured. VA did not base our analysis on the maximum event but instead based it on a statistical representation of the events captured. VA has determined that 75% of the train events measured will be below the 90th percentile and 25% will be above.

Figure 3 shows the 90th percentile maximum vibration (velocity) levels measured as a function of frequency for the pass-bys measured. The 90th percentile vibration levels are shown with reference to the FTA criteria.

Figure 3 – 90th Percentile Vibration Levels at Location 2



5.1 Vibration Mitigation Discussion

As stated in section 3.1, the applicable vibration criteria for this project is 80 VdB based on the land use and train activity. The measured ground-borne vibration at the project site was 57 VdB; therefore no vibration mitigation is required for this project.

6.0 CONCLUSION

The following is a summary of the conclusions within this report.

- Side yards in Zone A are above the 60 CNEL desired by the City of Milpitas. A 6 foot tall fence is required to reduce the exterior noise to acceptable levels.
- No additional mitigation required for the park.
- No changes required to the design of the exterior wall construction shown on the drawings.
- No changes required to the exterior roof construction shown on the drawings.
- The mitigation recommendations for the window systems and fresh air requirements are provided in Table 8, below, which will satisfy the required noise criterion referenced within Section 2.

Table 8 – Mitigation Method

Zone	Windows, Sliding Glass Doors and Entry Doors	Mechanical Ventilation
A	STC 33	Required
B	STC 31	Not Required
Remaining Units	No rating required.	Not Required

The roof construction as shown on the drawings is acceptable. No roof construction modifications are necessary to satisfy the City's interior noise criteria.

Various noise mitigation methods may be utilized to satisfy the noise criteria described in this report. Alteration of mitigation methods that deviate from requirements should be reviewed by the acoustical consultant.

- *No mitigation is required for the vibration caused by activity on the adjacent railroad.*

We trust this information is satisfactory. If you have any questions or comments regarding this report, please do not hesitate to contact us.

Sincerely,
Veneklasen Associates, Inc.

Patrick Murphy
Associate

G:\2367-54\Preston Property\ Report 01.doc

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/23/2012
Case Description: Milpitas Preston Property

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
SFR 87 Sinnot Lane	Residential	63	63	63

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40	85		5	0
Grader	No	40	85		55	0
Flat Bed Truck	No	40		74.3	105	0
Backhoe	No	40		77.6	155	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	105	101	N/A	N/A	N/A	N/A
Grader	84.2	80.2	N/A	N/A	N/A	N/A
Flat Bed Truck	67.8	63.8	N/A	N/A	N/A	N/A
Backhoe	67.7	63.8	N/A	N/A	N/A	N/A
Total	**105**	**101.1**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Church 121 Sinnot Lane	Commercial	63	63	63

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40	85		8	0
Grader	No	40	85		58	0
Flat Bed Truck	No	40		74.3	108	0
Backhoe	No	40		77.6	158	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	97.6	93.6	N/A	N/A	N/A	N/A
Grader	83.7	79.7	N/A	N/A	N/A	N/A
Flat Bed Truck	67.6	63.6	N/A	N/A	N/A	N/A
Backhoe	67.6	63.6	N/A	N/A	N/A	N/A
Total	**97.6**	**93.8**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
MFR 133 Sinot Lane	Residential	63	63	63

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40	85		20	0
Grader	No	40	85		70	0
Flat Bed Truck	No	40		74.3	120	0
Backhoe	No	40		77.6	170	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Day Lmax	Day Leq	Noise Limits (dBA) Evening Lmax	Evening Leq
Dozer	93	89	N/A	N/A	N/A	N/A
Grader	82.1	78.1	N/A	N/A	N/A	N/A
Flat Bed Truck	66.6	62.7	N/A	N/A	N/A	N/A
Backhoe	66.9	63	N/A	N/A	N/A	N/A
Total	**93**	**89.3**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Construction Sound Wall Noise Calculations

Stationary Noise Sources	Distance from Residence to Wall	Distance from source to Wall	Height of Wall (feet)	Without Wall Noise Level at Residence	With Wall Noise Level at Residence	Source Height (feet)	Exterior Observer Height (feet)	Source Frequency (hz)	barrier to receiver - b (all)	road to barrier - a	road to receiver - c	path difference y =a+b-c (auto)	line of sight (slope)	fresnel	Barrier Atten
87 Sinnot Ln															
Avg Noise	5	5	10	101.0	**88.0**	10	5	800	7.1	5.0	11.2	0.8907	1	2.533626	-12.989
Max Noise	5	5	10	105.0	**92.0**	10	5	800	7.1	5.0	11.2	0.8907	1	2.533626	-12.989
121 Sinnot Ln															
Avg Noise	8	5	10	94.0	**82.8**	10	5	800	9.4	5.0	13.9	0.5056	1	1.438131	-11.16
Max Noise	8	5	10	98.0	**86.8**	10	5	800	9.4	5.0	13.9	0.5056	1	1.438131	-11.16
133 Sinnot Ln															
Avg Noise	20	5	10	89.0	**81.3**	10	5	800	20.6	5.0	25.5	0.1204	1	0.342558	-7.7
Max Noise	20	5	10	93.0	**85.3**	10	5	800	20.6	5.0	25.5	0.1204	1	0.342558	-7.7

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

	Vehicle Mix 1 (Local and Collectors)				Vehicle Mix 2 (Arterials)				Vehicle Mix 3 (State Route 237)			
Vehicle Type	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	66.45%	13.62%	15.93%	96.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	1.20%	0.22%	0.61%	2.02%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	1.08%	0.10%	0.79%	1.98%

Road Name: Abel Street **Segment: North of Marilyn Drive**

Average Daily Traffic: 18250 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.75	-0.67	-1.20	64.99	62.87	61.56	55.54	63.96	64.59	70 dBA:	**24**	**26**
Medium Trucks	74.83	-15.49	-0.67	-1.20	57.47	36.22	42.24	23.95	37.10	39.85	65 dBA:	**51**	**57**
Heavy Trucks	80.05	-19.44	-0.67	-1.20	58.73	33.38	29.98	34.63	40.83	40.93	60 dBA:	**111**	**122**
				Total:	**66.50**	**62.88**	**61.61**	**55.58**	**63.99**	**64.62**	55 dBA:	**239**	**263**

Road Name: Abel Street **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 15830 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.13	-6.30	-1.20	58.74	56.62	55.31	49.30	57.72	58.34	70 dBA:	**20**	**22**
Medium Trucks	74.83	-16.10	-6.30	-1.20	51.22	29.98	36.00	17.70	30.85	33.60	65 dBA:	**43**	**47**
Heavy Trucks	80.05	-20.06	-6.30	-1.20	52.49	27.14	23.74	28.39	34.58	34.68	60 dBA:	**92**	**101**
				Total:	**60.25**	**56.64**	**55.36**	**49.33**	**57.75**	**58.38**	55 dBA:	**198**	**218**

Road Name: Abel Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 17200 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.49	-1.16	-1.20	64.25	62.12	60.81	54.80	63.22	63.84	70 dBA:	**21**	**23**
Medium Trucks	74.83	-15.74	-1.16	-1.20	56.73	35.48	41.50	23.21	36.35	39.10	65 dBA:	**46**	**51**
Heavy Trucks	80.05	-19.70	-1.16	-1.20	57.99	32.64	29.24	33.89	40.09	40.18	60 dBA:	**99**	**109**
				Total:	**65.75**	**62.14**	**60.86**	**54.84**	**63.25**	**63.88**	55 dBA:	**213**	**234**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Abel Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 14540 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.77	-6.30	-1.20	58.37	56.25	54.94	48.93	57.35	57.97	70 dBA:	**19**	**21**
Medium Trucks	74.83	-16.47	-6.30	-1.20	50.86	29.61	35.63	17.33	30.48	33.23	65 dBA:	**40**	**44**
Heavy Trucks	80.05	-20.43	-6.30	-1.20	52.12	26.77	23.37	28.02	34.22	34.31	60 dBA:	**87**	**96**
				Total:	**59.88**	**56.27**	**54.99**	**48.97**	**57.38**	**58.01**	55 dBA:	**187**	**206**

Road Name: Abel Street **Segment: North of Main Street**

Average Daily Traffic: 10990 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-0.45	-2.20	-1.20	61.26	59.14	57.83	51.81	60.23	60.86	70 dBA:	**16**	**17**
Medium Trucks	74.83	-17.69	-2.20	-1.20	53.74	32.49	38.51	20.22	33.36	36.12	65 dBA:	**34**	**37**
Heavy Trucks	80.05	-21.64	-2.20	-1.20	55.00	29.65	26.25	30.90	37.10	37.20	60 dBA:	**73**	**80**
				Total:	**62.77**	**59.15**	**57.88**	**51.85**	**60.26**	**60.89**	55 dBA:	**157**	**173**

Road Name: Abel Street **Segment: South of Main Street**

Average Daily Traffic: 15920 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.16	-1.16	-1.20	63.91	61.79	60.47	54.46	62.88	63.51	70 dBA:	**20**	**22**
Medium Trucks	74.83	-16.08	-1.16	-1.20	56.39	35.14	41.16	22.87	36.01	38.77	65 dBA:	**44**	**48**
Heavy Trucks	80.05	-20.03	-1.16	-1.20	57.65	32.30	28.90	33.55	39.75	39.85	60 dBA:	**94**	**103**
				Total:	**65.41**	**61.80**	**60.53**	**54.50**	**62.91**	**63.54**	55 dBA:	**202**	**223**

Road Name: Main Street **Segment: North of Weller Lane**

Average Daily Traffic: 4600 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-3.56	0.09	-1.20	57.84	55.72	54.40	48.39	56.81	57.44	70 dBA:	**7**	**7**
Medium Trucks	73.11	-20.80	0.09	-1.20	51.20	29.95	35.97	17.68	30.83	33.58	65 dBA:	**14**	**16**
Heavy Trucks	80.26	-24.76	0.09	-1.20	54.39	29.04	25.64	30.29	36.49	36.59	60 dBA:	**31**	**34**
				Total:	**60.06**	**55.74**	**54.47**	**48.46**	**56.86**	**57.49**	55 dBA:	**67**	**73**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Main Street **Segment: South of Weller Lane**

Average Daily Traffic: 5390 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 53.67 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.88	-0.57	-1.20	57.87	55.75	54.44	48.42	56.84	57.47	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.11	-0.57	-1.20	51.24	29.99	36.01	17.71	30.86	33.61	65 dBA:	**16**	**17**
Heavy Trucks	80.26	-24.07	-0.57	-1.20	54.43	29.08	25.68	30.33	36.52	36.62	60 dBA:	**34**	**38**
				Total:	**60.10**	**55.77**	**54.50**	**48.49**	**56.89**	**57.52**	55 dBA:	**74**	**81**

Road Name: Main Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 10140 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-0.80	0.09	-1.20	63.20	61.08	59.76	53.75	62.17	62.80	70 dBA:	**15**	**17**
Medium Trucks	74.83	-18.04	0.09	-1.20	55.68	34.43	40.45	22.16	35.30	38.05	65 dBA:	**33**	**36**
Heavy Trucks	80.05	-21.99	0.09	-1.20	56.94	31.59	28.19	32.84	39.04	39.14	60 dBA:	**70**	**77**
				Total:	**64.70**	**61.09**	**59.82**	**53.79**	**62.20**	**62.83**	55 dBA:	**151**	**166**

Road Name: Main Street **Segment: North of Great Mall Parkway**

Average Daily Traffic: 12860 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.23	-2.20	-1.20	61.94	59.82	58.51	52.50	60.92	61.54	70 dBA:	**17**	**19**
Medium Trucks	74.83	-17.01	-2.20	-1.20	54.42	33.18	39.20	20.90	34.05	36.80	65 dBA:	**38**	**41**
Heavy Trucks	80.05	-20.96	-2.20	-1.20	55.69	30.34	26.94	31.58	37.78	37.88	60 dBA:	**81**	**89**
				Total:	**63.45**	**59.83**	**58.56**	**52.53**	**60.95**	**61.58**	55 dBA:	**174**	**192**

Road Name: Main Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 5660 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 65 FEET FROM CENTERLINE (Equiv. Lane Dist: 63.88 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-3.33	-1.70	-1.20	58.88	56.75	55.44	49.43	57.85	58.48	70 dBA:	**10**	**11**
Medium Trucks	74.83	-20.57	-1.70	-1.20	51.36	30.11	36.13	17.84	30.98	33.73	65 dBA:	**22**	**24**
Heavy Trucks	80.05	-24.53	-1.70	-1.20	52.62	27.27	23.87	28.52	34.72	34.81	60 dBA:	**47**	**52**
				Total:	**60.38**	**56.77**	**55.50**	**49.47**	**57.88**	**58.51**	55 dBA:	**101**	**111**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Milpitas Boulevard **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 18080 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 2 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 86.16 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.46	-3.65	-1.20	61.73	59.35	58.06	52.01	60.44	61.07	70 dBA:	**25**	**27**
Medium Trucks	74.83	-13.40	-3.65	-1.20	56.58	37.37	29.59	38.80	44.95	44.98	65 dBA:	**53**	**57**
Heavy Trucks	80.05	-11.18	-3.65	-1.20	64.01	47.02	39.24	48.45	54.60	54.64	60 dBA:	**114**	**123**
				Total:	**66.50**	**59.63**	**58.12**	**53.73**	**61.54**	**62.04**	55 dBA:	**246**	**265**

Road Name: Marylinn Drive **Segment: East of Abel Street**

Average Daily Traffic: 5480 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.80	0.09	-1.20	58.60	56.48	55.16	49.15	57.57	58.20	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.04	0.09	-1.20	51.96	30.71	36.73	18.44	31.59	34.34	65 dBA:	**16**	**18**
Heavy Trucks	80.26	-24.00	0.09	-1.20	55.15	29.80	26.40	31.05	37.25	37.35	60 dBA:	**35**	**38**
				Total:	**60.82**	**56.50**	**55.23**	**49.22**	**57.62**	**58.25**	55 dBA:	**75**	**82**

Road Name: Weller Lane **Segment: West of Main Street**

Average Daily Traffic: 2950 Vehicles | Vehicle Speed: 25 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	59.44	-4.70	-1.16	-1.20	52.38	50.26	48.95	42.93	51.35	51.98	70 dBA:	**3**	**4**
Medium Trucks	71.09	-21.94	-1.16	-1.20	46.79	25.54	31.56	13.27	26.41	29.16	65 dBA:	**7**	**8**
Heavy Trucks	78.74	-25.89	-1.16	-1.20	50.49	25.14	21.74	26.39	32.59	32.68	60 dBA:	**16**	**18**
				Total:	**55.22**	**50.29**	**49.03**	**43.03**	**51.42**	**52.05**	55 dBA:	**35**	**38**

Road Name: Calaveras Boulevard **Segment: West of Abel Street**

Average Daily Traffic: 46620 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 3 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.07 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	5.76	-0.61	-1.20	69.06	66.49	65.63	61.54	69.05	69.55	70 dBA:	**53**	**57**
Medium Trucks	74.83	-11.01	-0.61	-1.20	62.01	42.00	40.60	40.29	46.94	47.21	65 dBA:	**114**	**123**
Heavy Trucks	80.05	-11.09	-0.61	-1.20	67.14	46.70	42.53	46.58	52.93	53.04	60 dBA:	**245**	**265**
				Total:	**71.71**	**66.55**	**65.66**	**61.71**	**69.18**	**69.67**	55 dBA:	**529**	**571**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Calaveras Boulevard **Segment: East of Abel Street**

Average Daily Traffic: 51070 Vehicles Vehicle Speed: 40 MPH Vehicle Mix: 3 Roadway Classification: Arterial

	NOISE PARAMETERS AT 150 FEET FROM CENTERLINE (Equiv. Lane Dist: 147.73 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	5.58	-7.16	-1.20	64.58	62.01	61.15	57.06	64.57	65.07	70 dBA:	**66**	**71**
Medium Trucks	76.31	-11.19	-7.16	-1.20	56.76	36.75	35.35	35.04	41.69	41.96	65 dBA:	**143**	**154**
Heavy Trucks	81.16	-11.28	-7.16	-1.20	61.52	41.08	36.92	40.97	47.31	47.42	60 dBA:	**307**	**331**
				Total:	**66.78**	**62.06**	**61.18**	**57.19**	**64.67**	**65.16**	55 dBA:	**662**	**714**

Road Name: Curtis Avenue **Segment: West of Main Street**

Average Daily Traffic: 3850 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Local

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.59 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-4.34	-1.25	-1.20	55.73	53.61	52.29	46.28	54.70	55.33	70 dBA:	**6**	**6**
Medium Trucks	73.11	-21.57	-1.25	-1.20	49.09	27.84	33.87	15.57	28.72	31.47	65 dBA:	**12**	**14**
Heavy Trucks	80.26	-25.53	-1.25	-1.20	52.28	26.93	23.53	28.18	34.38	34.48	60 dBA:	**27**	**30**
				Total:	**57.96**	**53.63**	**52.36**	**46.35**	**54.75**	**55.38**	55 dBA:	**58**	**64**

Road Name: Curtis Avenue **Segment: East of Main Street**

Average Daily Traffic: 5410 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Local

	NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 44.45 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.86	0.66	-1.20	59.12	56.99	55.68	49.67	58.09	58.71	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.10	0.66	-1.20	52.48	31.23	37.25	18.96	32.10	34.85	65 dBA:	**16**	**17**
Heavy Trucks	80.26	-24.05	0.66	-1.20	55.67	30.32	26.92	31.57	37.77	37.86	60 dBA:	**34**	**37**
				Total:	**61.34**	**57.01**	**55.75**	**49.74**	**58.14**	**58.77**	55 dBA:	**73**	**80**

Road Name: Great Mall Parkway **Segment: West of Abel Street**

Average Daily Traffic: 32340 Vehicles Vehicle Speed: 40 MPH Vehicle Mix: 2 Roadway Classification: Arterial

	NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 117.15 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	3.41	-5.65	-1.20	63.92	61.55	60.25	54.20	62.63	63.26	70 dBA:	**44**	**48**
Medium Trucks	76.31	-11.46	-5.65	-1.20	58.01	38.80	31.02	40.22	46.38	46.41	65 dBA:	**95**	**104**
Heavy Trucks	81.16	-9.24	-5.65	-1.20	65.07	48.08	40.30	49.51	55.66	55.70	60 dBA:	**206**	**223**
				Total:	**68.00**	**61.76**	**60.30**	**55.60**	**63.51**	**64.04**	55 dBA:	**443**	**481**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

	Vehicle Mix 1 (Local and Collectors)				Vehicle Mix 2 (Arterials)				Vehicle Mix 3 (State Route 237)			
Vehicle Type	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	66.45%	13.62%	15.93%	96.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	1.20%	0.22%	0.61%	2.02%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	1.08%	0.10%	0.79%	1.98%

Road Name: Abel Street **Segment: North of Marilyn Drive**

Average Daily Traffic: 18320 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.77	-0.67	-1.20	65.01	62.89	61.57	55.56	63.98	64.61	70 dBA:	**24**	**26**
Medium Trucks	74.83	-15.47	-0.67	-1.20	57.49	36.24	42.26	23.97	37.11	39.86	65 dBA:	**52**	**57**
Heavy Trucks	80.05	-19.42	-0.67	-1.20	58.75	33.40	30.00	34.65	40.85	40.94	60 dBA:	**111**	**122**
				Total:	**66.51**	**62.90**	**61.63**	**55.60**	**64.01**	**64.64**	55 dBA:	**239**	**264**

Road Name: Abel Street **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 16070 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.20	-6.30	-1.20	58.81	56.69	55.37	49.36	57.78	58.41	70 dBA:	**20**	**22**
Medium Trucks	74.83	-16.04	-6.30	-1.20	51.29	30.04	36.06	17.77	30.91	33.66	65 dBA:	**43**	**47**
Heavy Trucks	80.05	-19.99	-6.30	-1.20	52.55	27.20	23.80	28.45	34.65	34.75	60 dBA:	**93**	**102**
				Total:	**60.31**	**56.70**	**55.43**	**49.40**	**57.81**	**58.44**	55 dBA:	**200**	**220**

Road Name: Abel Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 17640 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.60	-1.16	-1.20	64.36	62.23	60.92	54.91	63.33	63.95	70 dBA:	**22**	**24**
Medium Trucks	74.83	-15.63	-1.16	-1.20	56.84	35.59	41.61	23.32	36.46	39.21	65 dBA:	**47**	**51**
Heavy Trucks	80.05	-19.59	-1.16	-1.20	58.10	32.75	29.35	34.00	40.20	40.29	60 dBA:	**100**	**111**
				Total:	**65.86**	**62.25**	**60.97**	**54.95**	**63.36**	**63.99**	55 dBA:	**216**	**238**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Abel Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 14690 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.81	-6.30	-1.20	58.42	56.30	54.98	48.97	57.39	58.02	70 dBA:	**19**	**21**
Medium Trucks	74.83	-16.43	-6.30	-1.20	50.90	29.65	35.67	17.38	30.52	33.27	65 dBA:	**41**	**45**
Heavy Trucks	80.05	-20.38	-6.30	-1.20	52.16	26.81	23.41	28.06	34.26	34.36	60 dBA:	**88**	**96**
				Total:	**59.92**	**56.31**	**55.04**	**49.01**	**57.42**	**58.05**	55 dBA:	**189**	**208**

Road Name: Abel Street **Segment: North of Main Street**

Average Daily Traffic: 11140 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-0.39	-2.20	-1.20	61.32	59.20	57.88	51.87	60.29	60.92	70 dBA:	**16**	**17**
Medium Trucks	74.83	-17.63	-2.20	-1.20	53.80	32.55	38.57	20.28	33.42	36.18	65 dBA:	**34**	**38**
Heavy Trucks	80.05	-21.58	-2.20	-1.20	55.06	29.71	26.31	30.96	37.16	37.26	60 dBA:	**74**	**81**
				Total:	**62.82**	**59.21**	**57.94**	**51.91**	**60.32**	**60.95**	55 dBA:	**158**	**175**

Road Name: Abel Street **Segment: South of Main Street**

Average Daily Traffic: 16120 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.21	-1.16	-1.20	63.96	61.84	60.53	54.52	62.94	63.56	70 dBA:	**20**	**22**
Medium Trucks	74.83	-16.02	-1.16	-1.20	56.45	35.20	41.22	22.92	36.07	38.82	65 dBA:	**44**	**48**
Heavy Trucks	80.05	-19.98	-1.16	-1.20	57.71	32.36	28.96	33.61	39.81	39.90	60 dBA:	**95**	**104**
				Total:	**65.47**	**61.86**	**60.58**	**54.56**	**62.97**	**63.60**	55 dBA:	**204**	**225**

Road Name: Main Street **Segment: North of Weller Lane**

Average Daily Traffic: 5110 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-3.11	0.09	-1.20	58.30	56.17	54.86	48.85	57.27	57.89	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.34	0.09	-1.20	51.66	30.41	36.43	18.14	31.28	34.03	65 dBA:	**15**	**17**
Heavy Trucks	80.26	-24.30	0.09	-1.20	54.85	29.50	26.10	30.75	36.95	37.04	60 dBA:	**33**	**36**
				Total:	**60.52**	**56.19**	**54.93**	**48.92**	**57.32**	**57.95**	55 dBA:	**71**	**79**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Main Street **Segment: South of Weller Lane**

Average Daily Traffic: 5660 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 53.67 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.66	-0.57	-1.20	58.08	55.96	54.65	48.64	57.06	57.68	70 dBA:	**8**	**8**
Medium Trucks	73.11	-19.90	-0.57	-1.20	51.45	30.20	36.22	17.93	31.07	33.82	65 dBA:	**16**	**18**
Heavy Trucks	80.26	-23.86	-0.57	-1.20	54.64	29.29	25.89	30.54	36.74	36.83	60 dBA:	**35**	**39**
				Total:	**60.31**	**55.98**	**54.72**	**48.71**	**57.11**	**57.74**	55 dBA:	**76**	**84**

Road Name: Main Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 10360 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-0.71	0.09	-1.20	63.29	61.17	59.86	53.84	62.26	62.89	70 dBA:	**15**	**17**
Medium Trucks	74.83	-17.94	0.09	-1.20	55.77	34.52	40.54	22.25	35.40	38.15	65 dBA:	**33**	**36**
Heavy Trucks	80.05	-21.90	0.09	-1.20	57.04	31.68	28.29	32.93	39.13	39.23	60 dBA:	**71**	**78**
				Total:	**64.80**	**61.18**	**59.91**	**53.88**	**62.29**	**62.92**	55 dBA:	**153**	**169**

Road Name: Main Street **Segment: North of Great Mall Parkway**

Average Daily Traffic: 13080 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.31	-2.20	-1.20	62.02	59.89	58.58	52.57	60.99	61.62	70 dBA:	**18**	**19**
Medium Trucks	74.83	-16.93	-2.20	-1.20	54.50	33.25	39.27	20.98	34.12	36.87	65 dBA:	**38**	**42**
Heavy Trucks	80.05	-20.89	-2.20	-1.20	55.76	30.41	27.01	31.66	37.86	37.95	60 dBA:	**82**	**90**
				Total:	**63.52**	**59.91**	**58.64**	**52.61**	**61.02**	**61.65**	55 dBA:	**176**	**194**

Road Name: Main Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 5710 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 65 FEET FROM CENTERLINE (Equiv. Lane Dist: 63.88 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-3.29	-1.70	-1.20	58.92	56.79	55.48	49.47	57.89	58.51	70 dBA:	**10**	**11**
Medium Trucks	74.83	-20.53	-1.70	-1.20	51.40	30.15	36.17	17.88	31.02	33.77	65 dBA:	**22**	**24**
Heavy Trucks	80.05	-24.49	-1.70	-1.20	52.66	27.31	23.91	28.56	34.76	34.85	60 dBA:	**47**	**52**
				Total:	**60.42**	**56.81**	**55.53**	**49.51**	**57.92**	**58.55**	55 dBA:	**102**	**112**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Milpitas Boulevard **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 18120 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 2 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 86.16 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.47	-3.65	-1.20	61.73	59.36	58.07	52.01	60.45	61.08	70 dBA:	**25**	**27**
Medium Trucks	74.83	-13.39	-3.65	-1.20	56.59	37.38	29.60	38.80	44.96	44.99	65 dBA:	**53**	**57**
Heavy Trucks	80.05	-11.17	-3.65	-1.20	64.02	47.03	39.25	48.46	54.61	54.65	60 dBA:	**114**	**123**
				Total:	**66.50**	**59.64**	**58.13**	**53.74**	**61.55**	**62.05**	55 dBA:	**246**	**266**

Road Name: Marylinn Drive **Segment: East of Abel Street**

Average Daily Traffic: 5560 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.74	0.09	-1.20	58.66	56.54	55.23	49.21	57.63	58.26	70 dBA:	**8**	**8**
Medium Trucks	73.11	-19.98	0.09	-1.20	52.03	30.78	36.80	18.50	31.65	34.40	65 dBA:	**16**	**18**
Heavy Trucks	80.26	-23.93	0.09	-1.20	55.22	29.87	26.47	31.12	37.31	37.41	60 dBA:	**35**	**39**
				Total:	**60.89**	**56.56**	**55.29**	**49.28**	**57.68**	**58.31**	55 dBA:	**75**	**83**

Road Name: Weller Lane **Segment: West of Main Street**

Average Daily Traffic: 3190 Vehicles | Vehicle Speed: 25 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	59.44	-4.36	-1.16	-1.20	52.72	50.60	49.28	43.27	51.69	52.32	70 dBA:	**4**	**4**
Medium Trucks	71.09	-21.60	-1.16	-1.20	47.13	25.88	31.90	13.61	26.75	29.50	65 dBA:	**8**	**9**
Heavy Trucks	78.74	-25.55	-1.16	-1.20	50.83	25.48	22.08	26.73	32.93	33.02	60 dBA:	**17**	**19**
				Total:	**55.56**	**50.63**	**49.37**	**43.37**	**51.76**	**52.39**	55 dBA:	**37**	**40**

Road Name: Calaveras Boulevard **Segment: West of Abel Street**

Average Daily Traffic: 46970 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 3 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.07 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	5.79	-0.61	-1.20	69.09	66.52	65.66	61.57	69.08	69.58	70 dBA:	**53**	**57**
Medium Trucks	74.83	-10.97	-0.61	-1.20	62.04	42.03	40.63	40.32	46.97	47.24	65 dBA:	**115**	**124**
Heavy Trucks	80.05	-11.06	-0.61	-1.20	67.17	46.73	42.57	46.62	52.96	53.07	60 dBA:	**247**	**266**
				Total:	**71.74**	**66.58**	**65.70**	**61.74**	**69.21**	**69.70**	55 dBA:	**532**	**573**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Calaveras Boulevard **Segment: East of Abel Street**

Average Daily Traffic: 51250 Vehicles | Vehicle Speed: 40 MPH | Vehicle Mix: 3 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 150 FEET FROM CENTERLINE (Equiv. Lane Dist: 147.73 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	5.59	-7.16	-1.20	64.59	62.03	61.16	57.07	64.58	65.09	70 dBA:	**66**	**72**
Medium Trucks	76.31	-11.18	-7.16	-1.20	56.78	36.77	35.37	35.06	41.71	41.97	65 dBA:	**143**	**154**
Heavy Trucks	81.16	-11.26	-7.16	-1.20	61.54	41.10	36.93	40.98	47.33	47.43	60 dBA:	**308**	**332**
				Total:	**66.79**	**62.07**	**61.19**	**57.20**	**64.68**	**65.18**	55 dBA:	**663**	**716**

Road Name: Curtis Avenue **Segment: West of Main Street**

Average Daily Traffic: 4300 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Local

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.59 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-3.86	-1.25	-1.20	56.21	54.09	52.77	46.76	55.18	55.81	70 dBA:	**6**	**7**
Medium Trucks	73.11	-21.09	-1.25	-1.20	49.57	28.32	34.35	16.05	29.20	31.95	65 dBA:	**13**	**15**
Heavy Trucks	80.26	-25.05	-1.25	-1.20	52.76	27.41	24.01	28.66	34.86	34.96	60 dBA:	**29**	**32**
				Total:	**58.44**	**54.11**	**52.84**	**46.83**	**55.23**	**55.86**	55 dBA:	**62**	**68**

Road Name: Curtis Avenue **Segment: East of Main Street**

Average Daily Traffic: 6070 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Local

	NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 44.45 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.36	0.66	-1.20	59.62	57.49	56.18	50.17	58.59	59.21	70 dBA:	**8**	**9**
Medium Trucks	73.11	-19.60	0.66	-1.20	52.98	31.73	37.75	19.46	32.60	35.35	65 dBA:	**17**	**19**
Heavy Trucks	80.26	-23.55	0.66	-1.20	56.17	30.82	27.42	32.07	38.27	38.36	60 dBA:	**37**	**40**
				Total:	**61.84**	**57.51**	**56.25**	**50.24**	**58.64**	**59.27**	55 dBA:	**79**	**87**

Road Name: Great Mall Parkway **Segment: West of Abel Street**

Average Daily Traffic: 32640 Vehicles | Vehicle Speed: 40 MPH | Vehicle Mix: 2 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 117.15 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	3.45	-5.65	-1.20	63.96	61.59	60.29	54.24	62.67	63.30	70 dBA:	**45**	**48**
Medium Trucks	76.31	-11.42	-5.65	-1.20	58.05	38.84	31.06	40.26	46.42	46.45	65 dBA:	**96**	**104**
Heavy Trucks	81.16	-9.20	-5.65	-1.20	65.11	48.12	40.34	49.55	55.70	55.74	60 dBA:	**207**	**224**
				Total:	**68.04**	**61.80**	**60.34**	**55.64**	**63.55**	**64.08**	55 dBA:	**446**	**484**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND BASELINE CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

	Vehicle Mix 1 (Local and Collectors)				Vehicle Mix 2 (Arterials)				Vehicle Mix 3 (State Route 237)			
Vehicle Type	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	66.45%	13.62%	15.93%	96.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	1.20%	0.22%	0.61%	2.02%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	1.08%	0.10%	0.79%	1.98%

Road Name: Abel Street **Segment: North of Marilyn Drive**

Average Daily Traffic: 19540 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	2.05	-0.67	-1.20	65.29	63.17	61.85	55.84	64.26	64.89	70 dBA:	**25**	**28**
Medium Trucks	74.83	-15.19	-0.67	-1.20	57.77	36.52	42.54	24.25	37.39	40.14	65 dBA:	**54**	**59**
Heavy Trucks	80.05	-19.14	-0.67	-1.20	59.03	33.68	30.28	34.93	41.13	41.22	60 dBA:	**116**	**128**
				Total:	**66.79**	**63.18**	**61.91**	**55.88**	**64.29**	**64.92**	55 dBA:	**250**	**275**

Road Name: Abel Street **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 17500 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.57	-6.30	-1.20	59.18	57.06	55.74	49.73	58.15	58.78	70 dBA:	**21**	**23**
Medium Trucks	74.83	-15.67	-6.30	-1.20	51.66	30.41	36.43	18.14	31.28	34.03	65 dBA:	**46**	**50**
Heavy Trucks	80.05	-19.62	-6.30	-1.20	52.92	27.57	24.17	28.82	35.02	35.12	60 dBA:	**98**	**108**
				Total:	**60.68**	**57.07**	**55.80**	**49.77**	**58.18**	**58.81**	55 dBA:	**212**	**233**

Road Name: Abel Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 20600 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	2.28	-1.16	-1.20	65.03	62.91	61.59	55.58	64.00	64.63	70 dBA:	**24**	**26**
Medium Trucks	74.83	-14.96	-1.16	-1.20	57.51	36.26	42.28	23.99	37.13	39.89	65 dBA:	**52**	**57**
Heavy Trucks	80.05	-18.92	-1.16	-1.20	58.77	33.42	30.02	34.67	40.87	40.97	60 dBA:	**111**	**123**
				Total:	**66.53**	**62.92**	**61.65**	**55.62**	**64.03**	**64.66**	55 dBA:	**240**	**264**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND BASELINE CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Abel Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 16740 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.38	-6.30	-1.20	58.99	56.86	55.55	49.54	57.96	58.59	70 dBA:	**21**	**23**
Medium Trucks	74.83	-15.86	-6.30	-1.20	51.47	30.22	36.24	17.95	31.09	33.84	65 dBA:	**44**	**49**
Heavy Trucks	80.05	-19.82	-6.30	-1.20	52.73	27.38	23.98	28.63	34.83	34.92	60 dBA:	**95**	**105**
				Total:	**60.49**	**56.88**	**55.60**	**49.58**	**57.99**	**58.62**	55 dBA:	**206**	**227**

Road Name: Abel Street **Segment: North of Main Street**

Average Daily Traffic: 13190 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.34	-2.20	-1.20	62.05	59.93	58.62	52.61	61.03	61.65	70 dBA:	**18**	**20**
Medium Trucks	74.83	-16.90	-2.20	-1.20	54.53	33.29	39.31	21.01	34.16	36.91	65 dBA:	**38**	**42**
Heavy Trucks	80.05	-20.85	-2.20	-1.20	55.80	30.45	27.05	31.69	37.89	37.99	60 dBA:	**82**	**91**
				Total:	**63.56**	**59.94**	**58.67**	**52.64**	**61.06**	**61.69**	55 dBA:	**177**	**195**

Road Name: Abel Street **Segment: South of Main Street**

Average Daily Traffic: 20500 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	2.26	-1.16	-1.20	65.01	62.89	61.57	55.56	63.98	64.61	70 dBA:	**24**	**26**
Medium Trucks	74.83	-14.98	-1.16	-1.20	57.49	36.24	42.26	23.97	37.11	39.86	65 dBA:	**52**	**57**
Heavy Trucks	80.05	-18.94	-1.16	-1.20	58.75	33.40	30.00	34.65	40.85	40.94	60 dBA:	**111**	**122**
				Total:	**66.51**	**62.90**	**61.63**	**55.60**	**64.01**	**64.64**	55 dBA:	**239**	**264**

Road Name: Main Street **Segment: North of Weller Lane**

Average Daily Traffic: 4600 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-3.56	0.09	-1.20	57.84	55.72	54.40	48.39	56.81	57.44	70 dBA:	**7**	**7**
Medium Trucks	73.11	-20.80	0.09	-1.20	51.20	29.95	35.97	17.68	30.83	33.58	65 dBA:	**14**	**16**
Heavy Trucks	80.26	-24.76	0.09	-1.20	54.39	29.04	25.64	30.29	36.49	36.59	60 dBA:	**31**	**34**
				Total:	**60.06**	**55.74**	**54.47**	**48.46**	**56.86**	**57.49**	55 dBA:	**67**	**73**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND BASELINE CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Main Street **Segment: South of Weller Lane**

Average Daily Traffic: 5390 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 53.67 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.88	-0.57	-1.20	57.87	55.75	54.44	48.42	56.84	57.47	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.11	-0.57	-1.20	51.24	29.99	36.01	17.71	30.86	33.61	65 dBA:	**16**	**17**
Heavy Trucks	80.26	-24.07	-0.57	-1.20	54.43	29.08	25.68	30.33	36.52	36.62	60 dBA:	**34**	**38**
				Total:	**60.10**	**55.77**	**54.50**	**48.49**	**56.89**	**57.52**	55 dBA:	**74**	**81**

Road Name: Main Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 12230 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.01	0.09	-1.20	64.01	61.89	60.58	54.57	62.99	63.61	70 dBA:	**17**	**19**
Medium Trucks	74.83	-17.22	0.09	-1.20	56.49	35.24	41.27	22.97	36.12	38.87	65 dBA:	**37**	**41**
Heavy Trucks	80.05	-21.18	0.09	-1.20	57.76	32.41	29.01	33.65	39.85	39.95	60 dBA:	**79**	**87**
				Total:	**65.52**	**61.90**	**60.63**	**54.60**	**63.02**	**63.65**	55 dBA:	**171**	**188**

Road Name: Main Street **Segment: North of Great Mall Parkway**

Average Daily Traffic: 14950 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.89	-2.20	-1.20	62.60	60.47	59.16	53.15	61.57	62.20	70 dBA:	**19**	**21**
Medium Trucks	74.83	-16.35	-2.20	-1.20	55.08	33.83	39.85	21.56	34.70	37.45	65 dBA:	**42**	**46**
Heavy Trucks	80.05	-20.31	-2.20	-1.20	56.34	30.99	27.59	32.24	38.44	38.53	60 dBA:	**89**	**99**
				Total:	**64.10**	**60.49**	**59.22**	**53.19**	**61.60**	**62.23**	55 dBA:	**193**	**212**

Road Name: Main Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 8040 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 65 FEET FROM CENTERLINE (Equiv. Lane Dist: 63.88 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-1.81	-1.70	-1.20	60.40	58.28	56.97	50.95	59.37	60.00	70 dBA:	**13**	**14**
Medium Trucks	74.83	-19.05	-1.70	-1.20	52.88	31.63	37.65	19.36	32.51	35.26	65 dBA:	**28**	**30**
Heavy Trucks	80.05	-23.00	-1.70	-1.20	54.15	28.79	25.39	30.04	36.24	36.34	60 dBA:	**59**	**65**
				Total:	**61.91**	**58.29**	**57.02**	**50.99**	**59.40**	**60.03**	55 dBA:	**128**	**141**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND BASELINE CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Milpitas Boulevard **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 19300 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 2 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 86.16 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.75	-3.65	-1.20	62.01	59.64	58.34	52.29	60.72	61.35	70 dBA:	**26**	**28**
Medium Trucks	74.83	-13.12	-3.65	-1.20	56.86	37.65	29.87	39.08	45.23	45.27	65 dBA:	**55**	**60**
Heavy Trucks	80.05	-10.90	-3.65	-1.20	64.30	47.31	39.53	48.73	54.89	54.92	60 dBA:	**119**	**129**
				Total:	**66.78**	**59.91**	**58.41**	**54.02**	**61.82**	**62.33**	55 dBA:	**257**	**277**

Road Name: Marylinn Drive **Segment: East of Abel Street**

Average Daily Traffic: 5480 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.80	0.09	-1.20	58.60	56.48	55.16	49.15	57.57	58.20	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.04	0.09	-1.20	51.96	30.71	36.73	18.44	31.59	34.34	65 dBA:	**16**	**18**
Heavy Trucks	80.26	-24.00	0.09	-1.20	55.15	29.80	26.40	31.05	37.25	37.35	60 dBA:	**35**	**38**
				Total:	**60.82**	**56.50**	**55.23**	**49.22**	**57.62**	**58.25**	55 dBA:	**75**	**82**

Road Name: Weller Lane **Segment: West of Main Street**

Average Daily Traffic: 2950 Vehicles | Vehicle Speed: 25 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	59.44	-4.70	-1.16	-1.20	52.38	50.26	48.95	42.93	51.35	51.98	70 dBA:	**3**	**4**
Medium Trucks	71.09	-21.94	-1.16	-1.20	46.79	25.54	31.56	13.27	26.41	29.16	65 dBA:	**7**	**8**
Heavy Trucks	78.74	-25.89	-1.16	-1.20	50.49	25.14	21.74	26.39	32.59	32.68	60 dBA:	**16**	**18**
				Total:	**55.22**	**50.29**	**49.03**	**43.03**	**51.42**	**52.05**	55 dBA:	**35**	**38**

Road Name: Calaveras Boulevard **Segment: West of Abel Street**

Average Daily Traffic: 53770 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 3 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.07 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	6.38	-0.61	-1.20	69.68	67.11	66.25	62.16	69.67	70.17	70 dBA:	**58**	**63**
Medium Trucks	74.83	-10.39	-0.61	-1.20	62.63	42.62	41.22	40.91	47.56	47.83	65 dBA:	**125**	**135**
Heavy Trucks	80.05	-10.47	-0.61	-1.20	67.76	47.32	43.15	47.20	53.55	53.66	60 dBA:	**270**	**291**
				Total:	**72.33**	**67.17**	**66.28**	**62.33**	**69.80**	**70.29**	55 dBA:	**582**	**627**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND BASELINE CONDITIONS

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Calaveras Boulevard **Segment: East of Abel Street**

Average Daily Traffic: 56860 Vehicles Vehicle Speed: 40 MPH Vehicle Mix: 3 Roadway Classification: Arterial

	NOISE PARAMETERS AT 150 FEET FROM CENTERLINE (Equiv. Lane Dist: 147.73 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	6.04	-7.16	-1.20	65.04	62.48	61.61	57.52	65.03	65.54	70 dBA:	**71**	**77**
Medium Trucks	76.31	-10.72	-7.16	-1.20	57.23	37.22	35.82	35.51	42.16	42.43	65 dBA:	**153**	**165**
Heavy Trucks	81.16	-10.81	-7.16	-1.20	61.99	41.55	37.38	41.43	47.78	47.89	60 dBA:	**330**	**356**
				Total:	**67.25**	**62.52**	**61.64**	**57.66**	**65.14**	**65.63**	55 dBA:	**711**	**767**

Road Name: Curtis Avenue **Segment: West of Main Street**

Average Daily Traffic: 3850 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Local

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.59 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-4.34	-1.25	-1.20	55.73	53.61	52.29	46.28	54.70	55.33	70 dBA:	**6**	**6**
Medium Trucks	73.11	-21.57	-1.25	-1.20	49.09	27.84	33.87	15.57	28.72	31.47	65 dBA:	**12**	**14**
Heavy Trucks	80.26	-25.53	-1.25	-1.20	52.28	26.93	23.53	28.18	34.38	34.48	60 dBA:	**27**	**30**
				Total:	**57.96**	**53.63**	**52.36**	**46.35**	**54.75**	**55.38**	55 dBA:	**58**	**64**

Road Name: Curtis Avenue **Segment: East of Main Street**

Average Daily Traffic: 5410 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Local

	NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 44.45 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.86	0.66	-1.20	59.12	56.99	55.68	49.67	58.09	58.71	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.10	0.66	-1.20	52.48	31.23	37.25	18.96	32.10	34.85	65 dBA:	**16**	**17**
Heavy Trucks	80.26	-24.05	0.66	-1.20	55.67	30.32	26.92	31.57	37.77	37.86	60 dBA:	**34**	**37**
				Total:	**61.34**	**57.01**	**55.75**	**49.74**	**58.14**	**58.77**	55 dBA:	**73**	**80**

Road Name: Great Mall Parkway **Segment: West of Abel Street**

Average Daily Traffic: 34850 Vehicles Vehicle Speed: 40 MPH Vehicle Mix: 2 Roadway Classification: Arterial

	NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 117.15 ft)										**Centerline Distance to Noise Contour (in feet)**		
	Noise Adjustments				**Unmitigated Noise Levels**								
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	3.73	-5.65	-1.20	64.24	61.87	60.58	54.52	62.96	63.59	70 dBA:	**47**	**51**
Medium Trucks	76.31	-11.13	-5.65	-1.20	58.33	39.12	31.34	40.55	46.70	46.74	65 dBA:	**100**	**109**
Heavy Trucks	81.16	-8.91	-5.65	-1.20	65.40	48.41	40.62	49.83	55.99	56.02	60 dBA:	**216**	**234**
				Total:	**68.33**	**62.09**	**60.63**	**55.92**	**63.84**	**64.36**	55 dBA:	**466**	**505**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND WITH PROJECT

Project: Preston Property Residential
Site Conditions: Soft

	Vehicle Mix 1 (Local and Collectors)				Vehicle Mix 2 (Arterials)				Vehicle Mix 3 (State Route 237)			
Vehicle Type	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evenin	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.40%	69.50%	12.90%	9.60%	92.00%	66.45%	13.62%	15.93%	96.00%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	1.20%	0.22%	0.61%	2.02%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	1.08%	0.10%	0.79%	1.98%

Road Name: Abel Street **Segment: North of Marilyn Drive**

Average Daily Traffic: 19610 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.54 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	2.06	-0.67	-1.20	65.30	63.18	61.87	55.86	64.28	64.90	70 dBA:	**25**	**28**
Medium Trucks	74.83	-15.17	-0.67	-1.20	57.79	36.54	42.56	24.26	37.41	40.16	65 dBA:	**54**	**59**
Heavy Trucks	80.05	-19.13	-0.67	-1.20	59.05	33.70	30.30	34.95	41.14	41.24	60 dBA:	**116**	**128**
				Total:	**66.81**	**63.20**	**61.92**	**55.89**	**64.31**	**64.94**	55 dBA:	**250**	**276**

Road Name: Abel Street **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 17740 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.63	-6.30	-1.20	59.24	57.12	55.80	49.79	58.21	58.84	70 dBA:	**21**	**24**
Medium Trucks	74.83	-15.61	-6.30	-1.20	51.72	30.47	36.49	18.20	31.34	34.09	65 dBA:	**46**	**51**
Heavy Trucks	80.05	-19.56	-6.30	-1.20	52.98	27.63	24.23	28.88	35.08	35.17	60 dBA:	**99**	**109**
				Total:	**60.74**	**57.13**	**55.86**	**49.83**	**58.24**	**58.87**	55 dBA:	**214**	**235**

Road Name: Abel Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 21050 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	2.37	-1.16	-1.20	65.12	63.00	61.69	55.68	64.10	64.72	70 dBA:	**24**	**27**
Medium Trucks	74.83	-14.87	-1.16	-1.20	57.60	36.36	42.38	24.08	37.23	39.98	65 dBA:	**52**	**58**
Heavy Trucks	80.05	-18.82	-1.16	-1.20	58.87	33.52	30.12	34.76	40.96	41.06	60 dBA:	**113**	**125**
				Total:	**66.63**	**63.01**	**61.74**	**55.71**	**64.13**	**64.76**	55 dBA:	**244**	**268**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND WITH PROJECT

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Abel Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 16880 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 130 FEET FROM CENTERLINE (Equiv. Lane Dist: 129.44 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.41	-6.30	-1.20	59.02	56.90	55.59	49.58	57.99	58.62	70 dBA:	**21**	**23**
Medium Trucks	74.83	-15.82	-6.30	-1.20	51.50	30.25	36.28	17.98	31.13	33.88	65 dBA:	**45**	**49**
Heavy Trucks	80.05	-19.78	-6.30	-1.20	52.77	27.41	24.02	28.66	34.86	34.96	60 dBA:	**96**	**106**
				Total:	**60.53**	**56.91**	**55.64**	**49.61**	**58.02**	**58.65**	55 dBA:	**207**	**228**

Road Name: Abel Street **Segment: North of Main Street**

Average Daily Traffic: 13330 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.39	-2.20	-1.20	62.10	59.98	58.66	52.65	61.07	61.70	70 dBA:	**18**	**20**
Medium Trucks	74.83	-16.85	-2.20	-1.20	54.58	33.33	39.35	21.06	34.20	36.95	65 dBA:	**38**	**42**
Heavy Trucks	80.05	-20.81	-2.20	-1.20	55.84	30.49	27.09	31.74	37.94	38.04	60 dBA:	**83**	**91**
				Total:	**63.60**	**59.99**	**58.72**	**52.69**	**61.10**	**61.73**	55 dBA:	**179**	**197**

Road Name: Abel Street **Segment: South of Main Street**

Average Daily Traffic: 20690 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	2.30	-1.16	-1.20	65.05	62.93	61.61	55.60	64.02	64.65	70 dBA:	**24**	**27**
Medium Trucks	74.83	-14.94	-1.16	-1.20	57.53	36.28	42.30	24.01	37.15	39.90	65 dBA:	**52**	**57**
Heavy Trucks	80.05	-18.90	-1.16	-1.20	58.79	33.44	30.04	34.69	40.89	40.98	60 dBA:	**112**	**123**
				Total:	**66.55**	**62.94**	**61.67**	**55.64**	**64.05**	**64.68**	55 dBA:	**241**	**265**

Road Name: Main Street **Segment: North of Weller Lane**

Average Daily Traffic: 5110 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-3.11	0.09	-1.20	58.30	56.17	54.86	48.85	57.27	57.89	70 dBA:	**7**	**8**
Medium Trucks	73.11	-20.34	0.09	-1.20	51.66	30.41	36.43	18.14	31.28	34.03	65 dBA:	**15**	**17**
Heavy Trucks	80.26	-24.30	0.09	-1.20	54.85	29.50	26.10	30.75	36.95	37.04	60 dBA:	**33**	**36**
				Total:	**60.52**	**56.19**	**54.93**	**48.92**	**57.32**	**57.95**	55 dBA:	**71**	**79**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND WITH PROJECT

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Main Street **Segment: South of Weller Lane**

Average Daily Traffic: 5660 Vehicles Vehicle Speed: 30 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 53.67 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.66	-0.57	-1.20	58.08	55.96	54.65	48.64	57.06	57.68	70 dBA:	**8**	**8**
Medium Trucks	73.11	-19.90	-0.57	-1.20	51.45	30.20	36.22	17.93	31.07	33.82	65 dBA:	**16**	**18**
Heavy Trucks	80.26	-23.86	-0.57	-1.20	54.64	29.29	25.89	30.54	36.74	36.83	60 dBA:	**35**	**39**
				Total:	**60.31**	**55.98**	**54.72**	**48.71**	**57.11**	**57.74**	55 dBA:	**76**	**84**

Road Name: Main Street **Segment: South of Curtis Avenue**

Average Daily Traffic: 12440 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.09	0.09	-1.20	64.09	61.96	60.65	54.64	63.06	63.69	70 dBA:	**17**	**19**
Medium Trucks	74.83	-17.15	0.09	-1.20	56.57	35.32	41.34	23.05	36.19	38.94	65 dBA:	**37**	**41**
Heavy Trucks	80.05	-21.11	0.09	-1.20	57.83	32.48	29.08	33.73	39.93	40.02	60 dBA:	**80**	**88**
				Total:	**65.59**	**61.98**	**60.71**	**54.68**	**63.09**	**63.72**	55 dBA:	**173**	**191**

Road Name: Main Street **Segment: North of Great Mall Parkway**

Average Daily Traffic: 15170 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 68.96 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	0.95	-2.20	-1.20	62.66	60.54	59.23	53.21	61.63	62.26	70 dBA:	**19**	**21**
Medium Trucks	74.83	-16.29	-2.20	-1.20	55.14	33.89	39.91	21.62	34.76	37.52	65 dBA:	**42**	**46**
Heavy Trucks	80.05	-20.24	-2.20	-1.20	56.40	31.05	27.65	32.30	38.50	38.60	60 dBA:	**90**	**100**
				Total:	**64.16**	**60.55**	**59.28**	**53.25**	**61.66**	**62.29**	55 dBA:	**195**	**214**

Road Name: Main Street **Segment: South of Great Mall Parkway**

Average Daily Traffic: 8090 Vehicles Vehicle Speed: 35 MPH Vehicle Mix: 1 Roadway Classification: Collector

	NOISE PARAMETERS AT 65 FEET FROM CENTERLINE (Equiv. Lane Dist: 63.88 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	-1.78	-1.70	-1.20	60.43	58.31	56.99	50.98	59.40	60.03	70 dBA:	**13**	**14**
Medium Trucks	74.83	-19.02	-1.70	-1.20	52.91	31.66	37.68	19.39	32.53	35.28	65 dBA:	**28**	**30**
Heavy Trucks	80.05	-22.97	-1.70	-1.20	54.17	28.82	25.42	30.07	36.27	36.37	60 dBA:	**60**	**66**
				Total:	**61.93**	**58.32**	**57.05**	**51.02**	**59.43**	**60.06**	55 dBA:	**128**	**141**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND WITH PROJECT

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Milpitas Boulevard **Segment: North of Calaveras Boulevard**

Average Daily Traffic: 19330 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 2 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 86.16 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	1.75	-3.65	-1.20	62.02	59.64	58.35	52.30	60.73	61.36	70 dBA:	**26**	**28**
Medium Trucks	74.83	-13.11	-3.65	-1.20	56.87	37.66	29.88	39.09	45.24	45.27	65 dBA:	**55**	**60**
Heavy Trucks	80.05	-10.89	-3.65	-1.20	64.30	47.31	39.53	48.74	54.89	54.93	60 dBA:	**119**	**129**
				Total:	**66.79**	**59.92**	**58.41**	**54.02**	**61.83**	**62.33**	55 dBA:	**257**	**277**

Road Name: Marylinn Drive **Segment: East of Abel Street**

Average Daily Traffic: 5560 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 48.54 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.74	0.09	-1.20	58.66	56.54	55.23	49.21	57.63	58.26	70 dBA:	**8**	**8**
Medium Trucks	73.11	-19.98	0.09	-1.20	52.03	30.78	36.80	18.50	31.65	34.40	65 dBA:	**16**	**18**
Heavy Trucks	80.26	-23.93	0.09	-1.20	55.22	29.87	26.47	31.12	37.31	37.41	60 dBA:	**35**	**39**
				Total:	**60.89**	**56.56**	**55.29**	**49.28**	**57.68**	**58.31**	55 dBA:	**75**	**83**

Road Name: Weller Lane **Segment: West of Main Street**

Average Daily Traffic: 3190 Vehicles | Vehicle Speed: 25 MPH | Vehicle Mix: 1 | Roadway Classification: Collector

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.79 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	59.44	-4.36	-1.16	-1.20	52.72	50.60	49.28	43.27	51.69	52.32	70 dBA:	**4**	**4**
Medium Trucks	71.09	-21.60	-1.16	-1.20	47.13	25.88	31.90	13.61	26.75	29.50	65 dBA:	**8**	**9**
Heavy Trucks	78.74	-25.55	-1.16	-1.20	50.83	25.48	22.08	26.73	32.93	33.02	60 dBA:	**17**	**19**
				Total:	**55.56**	**50.63**	**49.37**	**43.37**	**51.76**	**52.39**	55 dBA:	**37**	**40**

Road Name: Calaveras Boulevard **Segment: West of Abel Street**

Average Daily Traffic: 53880 Vehicles | Vehicle Speed: 35 MPH | Vehicle Mix: 3 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.07 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	65.11	6.39	-0.61	-1.20	69.69	67.12	66.26	62.17	69.68	70.18	70 dBA:	**58**	**63**
Medium Trucks	74.83	-10.38	-0.61	-1.20	62.64	42.63	41.23	40.92	47.57	47.83	65 dBA:	**125**	**135**
Heavy Trucks	80.05	-10.47	-0.61	-1.20	67.77	47.33	43.16	47.21	53.56	53.67	60 dBA:	**270**	**292**
				Total:	**72.34**	**67.18**	**66.29**	**62.34**	**69.81**	**70.30**	55 dBA:	**582**	**628**

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: BACKGROUND WITH PROJECT

Project: Preston Property Residential
Site Conditions: Soft

Road Name: Calaveras Boulevard **Segment: East of Abel Street**

Average Daily Traffic: 57040 Vehicles | Vehicle Speed: 40 MPH | Vehicle Mix: 3 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 150 FEET FROM CENTERLINE (Equiv. Lane Dist: 147.73 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	6.06	-7.16	-1.20	65.06	62.49	61.63	57.54	65.05	65.55	70 dBA:	**71**	**77**
Medium Trucks	76.31	-10.71	-7.16	-1.20	57.24	37.23	35.83	35.52	42.17	42.44	65 dBA:	**153**	**166**
Heavy Trucks	81.16	-10.80	-7.16	-1.20	62.00	41.56	37.40	41.45	47.79	47.90	60 dBA:	**331**	**357**
				Total:	**67.26**	**62.54**	**61.66**	**57.67**	**65.15**	**65.64**	55 dBA:	**712**	**769**

Road Name: Curtis Avenue **Segment: West of Main Street**

Average Daily Traffic: 4300 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Local

	NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.59 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-3.86	-1.25	-1.20	56.21	54.09	52.77	46.76	55.18	55.81	70 dBA:	**6**	**7**
Medium Trucks	73.11	-21.09	-1.25	-1.20	49.57	28.32	34.35	16.05	29.20	31.95	65 dBA:	**13**	**15**
Heavy Trucks	80.26	-25.05	-1.25	-1.20	52.76	27.41	24.01	28.66	34.86	34.96	60 dBA:	**29**	**32**
				Total:	**58.44**	**54.11**	**52.84**	**46.83**	**55.23**	**55.86**	55 dBA:	**62**	**68**

Road Name: Curtis Avenue **Segment: East of Main Street**

Average Daily Traffic: 6070 Vehicles | Vehicle Speed: 30 MPH | Vehicle Mix: 1 | Roadway Classification: Local

	NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 44.45 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	62.51	-2.36	0.66	-1.20	59.62	57.49	56.18	50.17	58.59	59.21	70 dBA:	**8**	**9**
Medium Trucks	73.11	-19.60	0.66	-1.20	52.98	31.73	37.75	19.46	32.60	35.35	65 dBA:	**17**	**19**
Heavy Trucks	80.26	-23.55	0.66	-1.20	56.17	30.82	27.42	32.07	38.27	38.36	60 dBA:	**37**	**40**
				Total:	**61.84**	**57.51**	**56.25**	**50.24**	**58.64**	**59.27**	55 dBA:	**79**	**87**

Road Name: Great Mall Parkway **Segment: West of Abel Street**

Average Daily Traffic: 35150 Vehicles | Vehicle Speed: 40 MPH | Vehicle Mix: 2 | Roadway Classification: Arterial

	NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 117.15 ft)										**Centerline Distance to**		
	Noise Adjustments				**Unmitigated Noise Levels**						**Noise Contour (in feet)**		
Vehicle Type	REMEL	Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		Ldn	CNEL
Automobiles	67.36	3.77	-5.65	-1.20	64.28	61.91	60.62	54.56	62.99	63.62	70 dBA:	**47**	**51**
Medium Trucks	76.31	-11.10	-5.65	-1.20	58.37	39.16	31.38	40.59	46.74	46.77	65 dBA:	**101**	**109**
Heavy Trucks	81.16	-8.88	-5.65	-1.20	65.43	48.44	40.66	49.87	56.02	56.06	60 dBA:	**217**	**236**
				Total:	**68.36**	**62.12**	**60.66**	**55.96**	**63.87**	**64.40**	55 dBA:	**469**	**508**

Appendix G:
Public Services and Recreation Supporting Information

Milpitas Police Department

Dennis Graham
Chief of Police

March 28, 2012

Michael Brandman Associates
Bishop Ranch 3
2633 Camino Ramon, Suite 460
San Ramon, CA 94583

Attn: Grant Gruber

Dear Mr. Gruber,

The following information is our answers to your questionnaire regarding the proposed Preston Property Residential project.

1. The Milpitas Police Department (Police Department) provides police protection to the City of Milpitas. The Police Department is headquartered at 1275 N. Milpitas Boulevard.

The Police Department is staffed by 104 employees. Of this figure, 83 positions are sworn law enforcement officers and 21 are non-sworn civilians.

The Field Services Division provides 24-hour patrols of the City of Milpitas. The Field Services Division is organized into three patrol shifts, each of which is supervised by a lieutenant and two sergeants. The City is divided into six geographical beats, and on most shifts and most days, each beat is filled. The Traffic Safety Unit of the Field Services Division is responsible for traffic enforcement and is staffed by a lieutenant, a sergeant, and 8 officers.

The Special Operations Division oversees the Investigations Bureau. Ten detectives investigate crimes, with five assigned to general crimes and five assigned to street crimes.

2. Although there is no way to accurately anticipate how many calls for service the proposed project will generate, adding 220 dwelling units on a 15.4 gross-acre project area will without a doubt generate a number of calls for service. For instance, an apartment complex in the City of Milpitas consisting of 101 dwelling units (about half the size of the proposed project) generated approximately 160 calls for service for the year 2011. With this comparison, it is possible for this project to generate in the area of 300 to 350 calls for service on an annual basis.

The Police Department responded to 78,894 calls for service in 2011.

In 2011, the Police Department's average response time for emergency calls was 2 minutes, 41 seconds, and average response time for priority calls was 5 minutes, 14 seconds. The Police Department has adopted a standard response time of 4 minutes or less for all emergency calls.

3. There are a few concerns that the police department has about providing law enforcement services to the proposed project. They are as follows:

- Overall response times may increase due to the location of the proposed project site. Officers responding from the east side of town are limited to the use of Highway 237 and Montague Expressway, which can be heavily congested with traffic during the commute hours.
- Due to budgetary concerns, staffing levels continue to decrease and may create delayed response times with a rising population and an increase with calls for service.
- The location of the proposed project site is of some concern due to its proximity to the railroad tracks. There is a high potential for vandalism, theft and other crimes due to the volume of people walking along the railroad tracks.

4. The proposed project does not raise any additional concerns about providing law enforcement services. The following recommendations should be considered:

- Video/security cameras should be installed in the common areas such as hallways, elevators and parking garages.
- Parking lots and associated driveways, circulation areas, entrance and exit doors should be provided with lighting of sufficient wattage to provide adequate illumination to make clearly visible the presence of any person on or about the premises during the hours of darkness.

5. A recommendation specifically during the construction phase is for on-site security to be present around-the-clock to prevent any theft or vandalism of construction materials.

Sincerely,

Sandy Holliday

Sandy Holliday
Police Lieutenant

MILPITAS FIRE DEPARTMENT

777 South Main Street, Milpitas, CA 95035 (408) 586-2800 FAX (408) 942-3269

Michael Brandman Associates
Bishop Ranch 3
2633 Camino Ramon, Suite 460
San Ramon, CA 94583
Attn: Grant Gruber

April 6, 2012

Mr. Gruber:

The following response to the Preston Property Residential Project Environmental Impact Report outline the Milpitas Fire Departments' position related to the proposed project and the EIR. Please feel free to contact the Milpitas Fire Department Office of the Fire Chief with any questions or need for additional clarity.

Milpitas Fire Department Questionnaire

1. Below is a description of the Milpitas Fire Department we have prepared based on information obtained for the Preston Residential Project Environmental Impact Report (2012)

Fire Protection and Emergency Medical Services

The Milpitas Fire Department provides fire protection and emergency medical services to the City of Milpitas. The Fire Department's service area within the city limits is approximately 13.6 square miles, containing a population of approximately 69.000. The Fire Department is headquartered at Station 1, located at 777 S. Main St. in Milpitas.

Stations

The Fire Department operates four fire stations. The nearest station to the project site is Station 1, located at 777 S. Main St.

Fire Station 1 Summary:

Address: 777 S. Main Street
Approximate distance from project site (miles): .60
Remarks: Typically staffed with 7 personnel; equipped with an engine and truck/rescue company. This staffing includes a supervisory Battalion Chief

MILPITAS FIRE DEPARTMENT

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Organization and Staffing

The Fire Department employs 60 people in two divisions; the Response and Preparedness Division and Fire Prevention Division.

The Response and Preparedness Division is responsible for responding to emergency incidents, safety, training, disaster preparedness, and public information. The Response and Preparedness Division is staffed with 56 positions.

The Fire Prevention Division oversees fire and public safety plan review, inspection and enforcement for new construction, fire extinguishing and detection systems, annual inspections, hazardous materials regulation, and investigations. The Fire Prevention Division is staffed with 4 positions.

Apparatus

The Fire Department operates 3 engines, 1 engine/quint, 1 truck, and 1 rescue

Calls for Service

In 2011, the Fire Department responded to 4,075 calls for service.

Response Times

The emergency response time goal of the Fire Department is to deploy one engine to the scene of an emergency within 5 minutes 90% of the time. The Fire Department's average response time to all calls is currently below the 5 minute response time goal.

Mutual Aid

The Fire Department has mutual aid agreements with the City of Fremont and San Jose Fire as well as the Spring Valley Volunteer Fire Department through the Santa Clara County Local Mutual Aid Plan. In addition to local joint response, all fire departments in the State are signatory to a master mutual aid agreement. This agreement was established to provide assistance for major incidents.

ISO Rating

The Insurance Service Office (ISO) Grading Schedule is a means of classifying cities with reference to their fire defenses and physical conditions. The insurance classification developed under this schedule is only one of several elements used in development of fire insurance rates. The ISO rating for the fire department is Class 3.

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The ISO rating is on a scale of 1 to 10, where Class 1 is the best rating. In most instances, the fire insurance costs are the same for single-family residential structures in the 2 to 4 rating range. Commercial, industrial, and multiple residential insurance cost can be substantially affected by ISO ratings.

2. Please identify the number of calls for service that you anticipate the proposed project will generate, and if possible, please provide a breakdown of call type (medical emergency, fire, false alarms, etc.). Please indicate if the Fire Department would have adequate resources to accommodate this number of calls for service.

Based on fire department reports for the month of February 2012, Station 1 (closest station to the proposed project) responded to 81 incidents with an average response time of 4 minutes, 8 seconds. This proposed project will be 220 residential housing units, with an average family of 3 this will total a minimum of 660 residents located within this proposed residential development. Currently 65% to 70% of all fire department call volume is emergency medical in nature. That trend would continue within this proposed project. There would also be 5% fire response. The fire department would have adequate resources to accommodate this increase in calls for service.

3. Please describe any significant challenges the proposed project may present to the Fire Department. This includes concerns related to response times, staffing, apparatus, fire stations, etc. For any significant concerns, please describe what measures you would recommend to reduce the potential impact.

A major significant challenge is the at-grade railroad crossings at Hammond Ave. (primary access) and Railroad Ave. (secondary access) for emergency response units at Fire Station 1. Response times to the proposed project could be significantly impacted by these crossings.

Currently, the majority of occupants of the proposed project are working Mon. thru Fri. 8am to 5pm due to the areas commercial and industrial zoning. With the proposed development of 220 single family residential units, the evening population will increase significantly. This increase in population will increase demands for emergency services within the development, especially emergency medical responses.

The following outline measures that may reduce the above described impacts:

- Grade separation between existing railroad alignment and access roads.
- Reconnect Sinnott Lane which creates a 3rd at-grade crossing, which will result in another access point midway between Hammond Ave. and Railroad Ave.
- Connect Yosemite with East Curtis; develop and designate as an Emergency Vehicle Access Roadway (EVA Only).

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Other areas of concern: underground unleaded gas pipeline that runs adjacent and parallel to the existing rail alignment and underground jet fuel pipeline running in north/south direction.

4. Please fee free to provide any additional information you believe to be relevant to the proposed project.

Hazardous materials/chemicals are known to be transported via rail cars through the rail yard adjacent to the proposed project. There have been documented leaks/spills and releases.

- Approximately 2 years ago, a hazardous material release occurred due to off-gassing of a rail tanker car.
- Approximately 7 years ago, 2 rail cars collided and caused a release of approximately 1500 - 2000 gallons of diesel fuel.

Respectfully submitted,

Brian Sturdivant, Fire Chief
Milpitas, CA

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October 10, 2012

INTRODUCTION

Citygate was asked to review the Preston Pipe site development application (Project) before the City of Milpitas for fire department response time and on-site protection requirements. This report summarizes our review methods, research, findings and concluding opinions.

SUMMARY FINDINGS

Overall, Citygate finds the proposed Project can be built within the requirements of the adopted City of Milpitas fire codes and policies. While the Project is located in a challenging location for response times, these challenges can be safely mitigated to a level of insignificance by the proper application of various fire code and development standards.

Citygate does not see insurmountable problems for fire and EMS access on-site to the buildings proposed. The buildings will be fully protected with automatic fire sprinkler protection per the adopted Milpitas Fire Code amendments.

The fire stations are within City requirements for travel distance. While the public street access points require traversing at-grade railroad tracks, many developed areas in the Bay Area and country have fire apparatus access that is occasionally hampered by at-grade train crossings. In the event one or even all three of the at-grade crossings were to be blocked by a train, an existing emergency vehicle access (EVA) response route exists by using the existing Calaveras Boulevard overpass to access the Great Mall ring road which then connects via Comet Drive to Curtis Avenue and finally to the southern project entrance on Hammond Way.

ANALYSIS

This review was tasked to address two themes: (1) fire department response access; and (2) once fire apparatus and personnel are on-site, their access and other fire code issues that would pertain to the Project's buildings.

Citygate reviewed the "Preston Property Site Plan," a single sheet dated January 27, 2012, and a set of six site drawings dated October 11, 2011.

Response Access Analysis

The site is located in-between two operational north-south railroad track sets, and is bordered on the north and south by existing commercial properties. The City of Milpitas operates four fire stations inside the City. One station is north of the site, one is southeast, and two are south and southwest. Their street address locations and travel distances[1] to inside the northern or southern third of the Project area are:

- Station #1 - 777 South Main Street is 0.8 miles to southern Project access point.
- Station #2 - 1263 Yosemite Drive is 3.1 miles to the northern Project access point.
- Station #3 - 45 Midwick Drive is 1.7 miles to the northern Project access point.
- Station #4 - 775 Barber Lane is 2.4 miles to the southern Project access point.

The fire stations can access the Project from the north via Railroad Avenue and from the south via Hammond Way. All fire apparatus must cross over at-grade railroad crossings on the Union Pacific freight line that is just west of the Project location. There is no direct public street access to the Project through the rail yard on the east side of the Project. To access Railroad Avenue or Hammond Way from the east side of the two railroad alignments, both Stations #2 and #3 have to use overpasses north or south of the Project and then cross back easterly over the Union Pacific track alignment onto Railroad Avenue or Hammond Way.

Response Time Requirements

The Insurance Service Office (ISO) measures a fire department's ability to stop a conflagration from occurring. They use multiple factors to assess a department's ability ranging from apparatus, staffing, response distance and municipal water supply, to cite a few. The assessment results in a classification on a 1 to 10 scale, with Class 1 being the best. Currently Milpitas is rated as Class 3.

The ISO classification system requires the first-due engine company in a "built-up" area to be within 1.5 miles driving distance of protected properties. Where required, an aerial ladder apparatus and other needed units should be within 2.5 miles driving distance.

The current Milpitas General Plan for fire department response time policy states in Section 5.c-I-1: "Maintain a response time of four minutes or less for all urban service areas." The start and end times for this measure are not specified, nor is the definition of an urban service area. However, in fire service best practice publications, a time of 4 minutes is commonly referred to as "travel" time, with the start point being upon leaving the fire station and the end point being the arrival of the first unit at the front of the building to be reached.

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[1] Close estimates of travel using Google Earth over the actual travel path.

In the United States, the common practice is that City General Plan response time goals are designed to set the physical spacing for all fire stations, not necessarily guarantee that level of customer services to each and every emergency. In fact, a recommended best practice publication[2] recommends the goal for the deployment system be to deliver a specified response time to 90 percent of the citywide incidents. In Citygate's broad experience in the United States Fire Service, as well as through our review of all available best practice publications on fire service deployment policies, Citygate has never seen a local government response policy designed to guarantee a certain response time to 100 percent of all incidents, nor to specific parcels.

As for the use of the word "maintain" in the current Milpitas General Plan policy for fire service response time, the definition of "maintain" in section 5.c-I-1 is not defined. Based on the fire service planning principals explained above, the usual and customary use of the word "maintain" would be to keep open or to add stations to deliver the 4-minute *travel time* to the entire road network in the City, not necessarily to overcome occasional physical obstacles such as traffic, bad weather, at-grade train crossings or fire units being busy at other emergencies.

Response Time Calculations

At a constant speed of 35 miles per hour, a fire unit can travel 2.33 miles in 4 minutes. At a constant speed of 25 miles per hour, a fire unit can travel 1.66 miles.

As can be seen from the travel distances listed on page 2 of this report for the Milpitas fire stations, Station #1 is within 1.5 miles or well under 4 minutes travel time to the Project. Stations #3 and #4 are within 2.5 miles driving distance which is also within a best practices recommendation of 8 minutes travel for follow-on units to serious emergencies. Milpitas Fire Station #1 also houses the Department's ladder truck, so it also is within 2.5 miles of the Project, per the ISO classification system.

As for the at-grade railroad crossings that the fire apparatus must traverse to get into the Project area streets, at-grade crossings are not uncommon in the Bay Area or in many communities in the United States. There are no fire code or other published fire service best practice guides that would limit or stop development due to at-grade crossings potentially interfering with fire or emergency medical responses. Fire Department dispatch centers can communicate with railroads to prevent trains from interfering with emergency response needs.

The other factor to take into account is the frequency of train traffic. In Milpitas, the track on the west side of the Preston Project is a single-track freight line operated by Union Pacific Railroad. According to the Federal Railroad Administration Office of Safety Analysis[3] and verified by a

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[2] National Fire Protection Association Standard 1710, "Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments." 2010 Ed.; Section 5.2.4.1.1

[3] http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/crossing/xingqryloc.aspx

phone call to the Union Pacific Public Affairs Office in Sacramento, the freight line through Milpitas runs up to four freight trains per day, plus some switching movements.

There are three at-grade crossings that can impede fire apparatus travel. Blocking all three at-grade crossings at once on a single-track line means a sole train has to be stalled and be 1.27 miles (6,730 feet) long or about 100-130 cars depending on the type of cargo cars used. But even if a long train blocked all three at-grade crossings near the Preston site, all four fire stations can still reach the Great Mall parking lot and then north through the parking lot to West Curtis Avenue without encountering an at-grade train crossing (See Exhibits 3.10-1 through 3.10-5).

Therefore, while the response routes to the site could be interrupted, there is an alternative path. Also, as a partial mitigation to response time delays, all of the buildings in the Preston Project will be fully fire sprinklered per the adopted Milpitas Fire Code for this type of residential occupancy.

The EVA response routes miles and estimated response times for all four fire stations are:

Station ID	Via West Mall Entrance		Via Southern Mall Entrance		Via Main Street to Railroad	
	Miles	Time - Min/Sec 25/35 MPH	Time - Min/Sec 25/35 MPH	Miles	Miles	Time - Min/Sec 25/35 MPH
#1	1.1	2:37/1:53	5:29/3:58	2.3	2.1	5:00/3:37
#2	3.6	8:34/6:13	9:03/6:33	3.8		
#3	3.5	8:20/6:02	11:11/8:06	4.7		
#4	2.4	5:46/4:10	7:52/5:41	3.3		

In published fire service deployment best practice recommendations, there are no suggested time requirements for an EVA to meet. As an alternative route, it is commonly understood that access is compromised either by distance, terrain or closed gates to be opened. In any event, the response time will be delayed.

As can be seen in the table above, Fire Station #1 can still access the project if two or even all three at-grade crossings are closed within a 1:53 to 5:29 minute time frame depending on actual speeds and shortest alternative route available. This is within the best practice recommendations for a travel time of 8 minutes for second-due units on multiple unit emergencies. Thus using the Great Mall EVA is the Station #1 time delay impact is less than would occur if Station #1 was unavailable and another station had to respond to Hammond Way or West Curtis, east of the tracks via normal routing. The other stations, while delayed if crossings are blocked, can also

access the project in the range of 4:10 to 11:11 travel minutes depending on route and actual speed.

In any event, use of the Great Mall EVA still provides at least two engines and the ladder truck from Stations #1 and #4 in under 7:52 minutes, in the worst-case scenario, which is less than a normally desirable 8 minutes for First Alarm units. In the worst-case scenario, the fourth-due unit, if needed, would still arrive by the 9th minute.

Therefore an alternative emergency vehicle route to the project does exist, using mostly public streets, which also means residents in the project could be easily evacuated over the same alternative response routes. The use of EVA routing, while it does cause delays, only slows response times to the project area from better than desired, to at or slightly past the City's goal point for 1st due and multiple unit responses.

Response Time Findings

Given the above analysis of fire department response distances to the Project site, Citygate finds:

1. The first-due fire station, housing both engine and ladder units, is well within 1.5 miles driving distance or 4 minutes driving time to the Project;
2. Two other fire stations are less than 2.5 miles or 8 minutes distance/time from the Project, thus delivering a total of four fire units to the Project within 8 minutes driving time, which is consistent with national best practice advice;[4]
3. There is a longer, but feasible emergency response route to the Project if trains were to block two or even all three at-grade railroad crossings at once;
4. The buildings in the Project will be protected by fire sprinklers, lessening the severity of fires;
5. Close to this proposed Project, Milpitas has already allowed multi-family dwelling units between the two railroad tracks on Parc Place, just north of the Great Mall. The only difference is that this project abuts a small switching yard instead of a thru line. However, train emergencies can occur anywhere along a track alignment.
6. Citygate finds that many communities across the United States are impacted by at-grade crossings and also allow housing close to rail lines and switching yards.
7. While occasionally hazardous materials transit this rail line, they also transit all the way along the East Bay corridor from urban Richmond and Oakland to San Jose. Not one community has enacted residential zoning restrictions next to rail

[4] National Fire Protection Standard #1710 on Deployment for Career Fire Departments, 2010 Ed. Section 5.2.4.2.1

lines or yards to Citygate's knowledge. All of the area's fire departments are prepared for hazardous materials response and, in the case of the Preston site, both normal and EVA access routes exist to evacuate people if necessary.

8. Regardless of what is eventually built on the Preston Pipe property, given that a switching yard does handle the re-configuration of trains that slightly increases the chance of an accident, Citygate recommends the City and railroad periodically review emergency notification procedures to ensure that information can be readily transmitted and received without delay.

Given the above findings, Citygate Associates does not see a response route or time issue that would prevent the Project being considered under the City's adopted Fire Code, General Plan, Development Policies or other national best practice publications for fire service deployment.

On-Site Fire Department Access and Protection Analysis

Once fire apparatus reaches the Project, the apparatus must be able to maneuver through the site to within 150 feet of the exterior of all the buildings, access fire hydrants and be able to travel through or turn around on site to leave the Project. Citygate conducted a preliminary review of these issues using Project plans and the City's adopted Fire and Development Codes and Standards. Given the basic plans available for review at the pre-development phase, some details are not yet fully decided and the review below does not replace the City's required plan check process that will determine final requirements.

Fire Department Access into the Site

Two (2) points of access into the site are shown. A third emergency vehicle access (EVA) is noted adjacent to the Union Pacific Railroad and Ford Creek. It is shown connecting to Sinnott Lane. It appears, based on property line configurations that a portion of the 24-foot thoroughfare is not within the Preston site. This third access point also crosses other private property. Citygate cannot determine if the City would eventually require a third point of EVA access required based on the size of the Project. City Development Code Section V-300-2.162 specifies that the Fire official can require additional EVA connections for projects exceeding 200 units. If there is a third access point required and it has a gate, EVA connections shall have an acceptable key box or electronic gate override capability as noted in City Code Section V-300-2.58.

Vertical clearance at and through the site shall be a minimum of 13 feet, 6 inches per City Codes. Consideration of tree planting locations and streetlights would ensure appropriate vertical clearance for fire apparatus.

On-Site Fire Department Access

Under the City's adopted Fire Code, the fire lane width as proposed is acceptable (except as noted below where fire hydrants are located). If, however, any portions of the building(s) exceed 30 feet in height, the fire apparatus access roads will be required to be 26 feet per City Code Section V-300-2.160.

Based on the proposed width of the internal motor courts and thoroughfares, no parking or standing is permitted to meet the minimum fire lane width of 20 feet. Fire lane designation by curb painting and posting will be required on all thoroughfares and motor courts.

Per City Code Section V-300-2.56, traffic-calming devices (speed humps, circles etc.) are prohibited unless specifically approved by the fire code official.

When fire hydrants are provided on access road(s), the minimum access road width is 26 feet per City Code Section V-300-2.157. The Preston plan's proposed roadway width is 22 feet for the motor courts. This potential conflict will have to be cleared during final design and the City's plan check/permitting process.

It is recommended that the site design civil engineer provide a turning template to City staff using a software program such as "Auto Turn" to show the motor court turning radius works with the apparatus responding to this site. The Milpitas Fire Department turning requirements are based on radius measurements of 28 feet inside and 48 feet outside. Clearance from streetlights, landscaping, bio swales, etc. will be required.

Based on the site plan, adequate clearance from extended vehicles parked in front of driveways on the motor courts is needed. No driveways are shown for individual residences. No on-site recreational vehicle parking is shown. Minimal off-street parking is shown.

Citygate recommends that a hammerhead turnaround for fire apparatus be provided at building 196 (street F / street G radius).

Fire Hydrant Locations and Fire Flow

On-site fire hydrant locations appear to meet ±300 foot spacing per City development requirements in Section V-300-2.157. Motor Court minimum width at hydrants is required to be 26 feet.

The minimum fire flow is ±2,000gpm at 20-psi residual pressure in the water mains. Generally, fire flow is required from 2 sources of supply or two points of connection. Two points of connection are provided per the current Project plan at Hammond Way and Railroad Avenue. The actual fire flows and water main, fire hydrant designs will be finalized during Project design and City plan check.

Automatic Fire Sprinkler Protection

Per City Development Ordinance Section V-300-2.65, all new construction is required to have automatic fire sprinkler protection. *All* areas within the building are required to have fire sprinkler protection, including garages, attics, between floors, bathrooms, etc.

On-site Fire Department Access and Protection Findings

Given the above pre-development review based on the Project preliminary design and City Development Codes, Citygate finds:

1. The site will require a minimum of two open, public points of street access into the Project;
2. Adequate on-site clearances for fire apparatus driving lane width, turn around and fire hydrant access will be required. These issues are not mitigated by fire sprinklers and must be provided for, even if doing so lowers the total unit density on the site;
3. There are at least two adequate access points and probable adequate connection points for City water to serve fire hydrants and fire sprinklers.

Given the above findings, Citygate Associates does not see where the City's Development and Fire Codes cannot be accommodated during final building design and approval. As such, we see the initial Project plan as feasible for development.

CONCLUSION

As long as the Project is constructed as Citygate reviewed it and the appropriate Building, Fire and City Development codes are met, Citygate does not see insurmountable problems for fire and EMS access to the buildings proposed. The buildings will be fully fire sprinklered per the adopted City Fire Code.

One fire station is within City requirements for travel distance. Two other fire stations using normal routing are within acceptable multiple-unit response time goals. Not all developed parcels in the Bay Area or even the country have fire apparatus access that is not occasionally hampered by at-grade train crossings and, in the case of the Preston Pipe location, an acceptable EVA route already exists.

Appendix H:
Traffic Study

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Preston Residential Development

Transportation Impact Analysis

Prepared for:

The City of Milpitas

July 16, 2012

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Executive Summary

The purpose of this report is to analyze the transportation impacts of the proposed Preston residential development located south of Railroad Avenue and west of the Union Pacific Railroad Warm Springs Subdivision in Milpitas, California. The project may construct as many as 220 residential units. The existing uses onsite would be removed. The site is currently occupied by the Preston Pipelines yard and an existing warehouse. This warehouse was previously occupied by Sun Microsystems, but is now only partially occupied by Apto Solutions. Primary access to the site would be via driveways on Railroad Avenue and Hammond Way.

The impacts of the development were evaluated relative to the level of service policies and methodologies applicable in the City of Milpitas. Because the project is expected to generate more than 100 peak hour trips, the analysis also was conducted in accordance with the requirements of the Valley Transportation Authority (VTA), the administering agency for the Congestion Management Program (CMP) of Santa Clara County. The study included an analysis of traffic conditions at twelve signalized intersections. The intersections were analyzed during the weekday AM and PM peak hours of traffic (commonly referred to as the commute hours), which occur from 7:00 to 9:00 AM and 4:00 to 6:00 PM. These periods represent the most congested traffic conditions of an average weekday.

Trip Generation & Assignment

The amount of traffic generated by the proposed project was estimated by applying the appropriate trip generation rates to the size of the development. The trip generation rates used to estimate project traffic were those from the publication entitled *Trip Generation, 8th Edition,* by the Institute of Transportation Engineers (ITE). Based on these rates, the proposed project would generate 1,647 daily vehicle trips, with 127 trips occurring during the AM peak hour and 163 trips occurring during the PM peak hour. Traffic that is currently generated from the existing onsite uses was measured directly in the field (via traffic counts) and was subtracted from the overall project trip generation. After accounting for existing traffic from the site (which is already on the public street system), the proposed project would generate 1,233 net daily vehicle trips, with 98 net trips occurring during the AM peak hour and 107 net trips occurring during the PM peak hour.

The proposed project's trip distribution pattern was estimated based on a select zone analysis from the City of Milpitas Travel Demand Forecast Model. Separate distributions were developed for the proposed residential uses and the existing onsite industrial uses. The trips generated by the proposed project were assigned to the roadway network based on the residential directional distribution for the AM and PM peak hours. Trips generated by the existing industrial uses were subtracted at each intersection movement for the AM and PM peak hours.

Intersection Level of Service

The results of the signalized intersection level of service analysis for the (1) existing plus project and (2) background plus project scenarios are summarized in Tables ES-1. According to City of Milpitas and Congestion Management Program (CMP) guidelines, the proposed project would not result in any significant impacts to the study intersections under existing plus project conditions or background plus project conditions. All City of Milpitas intersections would operate at LOS D or better and the CMP intersections would operate at LOS E or better.

Year 2030 Traffic Impacts

Year 2030 conditions with the proposed project were evaluated relative to year 2030 conditions with the prior land use designation in order to determine potential impacts. According to the analysis, the proposed project would result in the following significant impacts:

- Abel Street – Milpitas Boulevard to Calaveras Boulevard, Southbound
- Abel Street –Calaveras Boulevard to Great Mall Parkway, Southbound
- Abel Street –Calaveras Boulevard to Great Mall Parkway, Northbound
- Main Street –Marylinn Drive to Calaveras Boulevard, Northbound
- Main Street –Calaveras Boulevard to Carlo Street, Northbound

To mitigate the year 2030 project impacts to Main Street and Abel Street would require widening each roadway by one additional through lane. There is insufficient right-of-way to widen these streets without removal of sidewalks and/or nearby existing buildings. Therefore, mitigation of these impacts would be infeasible and the impacts should be considered significant and unavoidable. However, as partial mitigation for the impacts, the project could participate in the Midtown Specific Plan traffic impact fee as well as the Calaveras Boulevard Widening traffic impact fee. Participation in these fee programs, and construction of the fee program improvements, would help reduce overall travel times in the project vicinity and serve as partial mitigation for project imapcts.

Pedestrian, Bicycle, & Transit Facilities

According to the U.S. Census, pedestrian trips comprise approximately 1.3% of the total commute mode share in the City of Milpitas. For the proposed project, this would equate to approximately 1 or 2 new pedestrian commute trips during the AM and PM peak hours. In addition, the project would generate some pedestrian trips to/from transit stops, schools, shopping centers, and recreational areas. There are no sidewalks on Railroad Avenue, Sinnott Lane, or Hammond Way (near the project site), which are the public streets that immediately surround the project site. Sidewalks are provided on Main Street and on Hammond Way, near Curtis Avenue. These are approximately 2,100 feet north and 2,400 feet south of the project site, respectively. Although Main Street is approximately 1 block west of the project site, the existing rail line precludes direct pedestrian access to the nearby commercial uses. There are existing crossing gates for the railroad tracks on Railroad Avenue and Curtis Avenue. The rail crossing at Curtis Avenue includes sidewalks and ADA compliant wheelchair ramps. The rail crossing on Main Street does not include pedestrian facilities. To reach most nearby destinations on foot, many residents would find it quicker to cross the tracks illegally at the existing opening in the fence on Sinnott Lane, which is located near the southern limits of the project site. This opening does not include crossing gates or ADA compliant ramps. Union Pacific discourages additional at-grade crossings, and as such, would not likely allow the installation of pedestrian enhancements at this crossing.

> **Recommendation**: The project applicant should coordinate with City staff to develop a plan to preclude direct pedestrian access to Sinnott Lane on the opposite side of the Union Pacific rail line. This could require constructing a fence either (1) at the end of Sinnott Lane on the west side of the tracks or (2) along Hammond Way on the east side of the tracks.

The project applicant is proposing to provide a pedestrian path between the project site and Main Street on the west side of Railroad Avenue. In addition, the project applicant is proposing to provide a pedestrian path between the project site and Curtis Avenue on the east side of Hammond Way. These proposed paths would provide an ADA compliant route between the project site and the existing pedestrian facilities.

The existing rail lines on both sides of the project are a significant barrier to pedestrian accessibility. With the proposed sidewalk projects along Railroad Avenue and Hammond Way, the walking distances from the project site to retail areas are generally comparable to those found in other parts of Milpitas. However, from a planning perspective, the site's geographic proximity to Midtown presents an opportunity to provide a strong connection between the residential and retail uses. It has been suggested by City staff that a grade-separated crossing over or under the Union Pacific railroad tracks at Carlo Street would enhance pedestrian accessibility in the project vicinity and reduce pedestrian walk times to and from the proposed project. The design and location of a grade-separated crossing would require a detailed design study involving the project proponent, City of Milpitas, surrounding property owners, and Union Pacific. Additional land use changes to the City General Plan on either side of the tracks may also be contemplated to maximize the potential benefits. The cost of a grade-separated crossing would be significant and possibly qualify for matching funds from regional, state, and federal agencies. Variables affecting the design would include the walk times to and from existing and future land uses, visual impacts, the layout of ADA compliant ramps, and right of way acquisition. The design would also likely require feedback from the public and surrounding property owners.

City staff have also suggested a pedestrian connection from the north end of the project site to the Calaveras overcrossing, which would make use of an existing railroad crossing. Starting at the project site, the sidewalk would run along the east side of Railroad Avenue under Calaveras Boulevard, and traverse up the existing embankment of the Calaveras overcrossing (via switchbacks) to connect to the existing sidewalk at the overcrossing. The project proponent has agreed to pursue this pedestrian route as a means to improve pedestrian accessibility in the project area. However, part of the improvement would be located in Caltrans' right of way, and as such, would require encroachment permits. In addition, the design at the embankment would need to comply with ADA requirements.

The nearest bike lanes to the project site are provided on Main Street and Weller Lane. Both of these are approximately one-half mile from the project site and a 3-minute ride (assuming a 10 mph average bike speed). In addition, Marylinn Drive is designated as a bike route. There are no bike lanes on Railroad Avenue, Sinnott Lane, or Hammond Way. However, there is a future bike path shown in the *Milpitas Bikeways Master Plan* proposed along Railroad Avenue and Wrigley Creek north of the project site. It appears that the proposed project plan to provide a path along Railroad Avenue could be the initial leg of this bike path. The volume of traffic on Railroad Avenue, Sinnott Lane, and Hammond Way is relatively low and suitable for shared use between bikes and motor vehicles. According to the U.S. Census, bicycle trips comprise less than 1% of the total commute mode share in the City of Milpitas. For the proposed project, this would equate to approximately 1 or 2 new bike trips during the AM and PM peak hours. The low volume of bicycle trips generated by the project would not exceed the bicycle-carrying capacity of streets surrounding the site, and the increase in bicycle trips would not, by itself, require new off-site bicycle facilities.

To improve bike accessibility, city staff have suggested that the project evaluate the feasibility of widening Hammond Way to provide one vehicle travel lane in each direction and one Class 2 bike lane in each direction. In conjunction with this improvement, the existing 90 degree parking on the west side of Hammond Way could be converted to parallel parking, which would then be provided on both sides of the street from Sinnott Lane to Curtis Avenue. In addition, existing parallel parking would be eliminated on Curtis Avenue between Hammond Way and Main Street and replaced with new Class 2 bike lanes on both sides of the street. With these improvements, there would be a contiguous bike lane between the project site and the existing bike lanes on Main Street. The project civil engineer, RJA, has prepared a preliminary plan showing the requested changes to Hammond Way and Curtis Avenue. The plan shows that Hammond Way would be widened by approximately 12 feet. Under existing conditions, there are 95 marked parking stalls on Hammond

Way and 15 marked parking stalls on Curtis Drive in the project area. With the proposed roadway widening on Hammond Way, there would be 184 marked parking stalls on Hammond Way and 6 marked parking stalls on Curtis Drive. Thus, the proposed design would increase the parking supply in the area by 80 spaces. City staff have also requested that the project provide a pedestrian/bike path onsite that would link the pedestrian and bike facilities on Hammond Way to those on Railroad Avenue.

The Santa Clara Valley Transportation Authority (VTA) provides existing bus service on the surrounding roadway network. Bus stops for Routes 47 and 66 are located on Main Street, near Weller Lane. These stops are approximately one-half mile walk from the project site. The Great Mall/Main Transit Center, which provides numerous light rail and bus connections, is located approximately 1 mile south of the project site. According to the U.S. Census, transit trips comprise approximately 3% of the total commute mode share in the City of Milpitas. For the proposed project, this would equate to approximately 4 or 5 new transit trips during the AM and PM peak hours. This volume of riders would not exceed the carrying capacity of the existing bus and rail service near the project site. Therefore, no major improvements to the existing transit facilities would be necessary in conjunction with the proposed project.

Site Access & Circulation

The site access and circulation were reviewed in accordance with the standards and methods employed by the traffic engineering community. Because this site plan is conceptual, prior to final design, the site plan should be reviewed by the City prior to construction. In addition, Hexagon recommends that the two 90 degree bends on the main drive aisle onsite have painted centerlines to help guide opposing vehicles around the turns. The curves should be signed as 10 mph.

Table ES-1
Signalized Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Existing Avg. Delay	Existing LOS	Existing + Project Avg. Delay	Existing + Project LOS	Existing + Project Incr. In Crit. Delay	Existing + Project Incr. In Crit. V/C	Background Avg. Delay	Background LOS	Background + Project Avg. Delay	Background + Project LOS	Background + Project Incr. In Crit. Delay	Background + Project Incr. In Crit. V/C
1	Abel St and Marylinn Dr	AM	18.8	B	18.8	B	0.0	0.000	19.0	B	19.0	B	0.0	0.000
		PM	19.0	B	19.1	B	0.1	0.004	19.1	B	19.2	B	0.1	0.004
2	Abel St and Weller Ln	AM	7.4	A	9.3	A	1.3	0.021	7.5	A	9.0	A	1.2	0.021
		PM	9.1	A	9.4	A	0.4	0.010	8.8	A	9.1	A	0.4	0.010
3	Main St and Weller Ln	AM	9.3	A	9.1	A	0.1	0.001	9.3	A	9.1	A	0.1	0.001
		PM	12.8	B	12.7	B	-0.3	0.015	12.8	B	12.7	B	-0.3	0.015
4	Abel St and Calaveras Blvd*	AM	43.5	D	44.3	D	1.1	0.012	49.1	D	50.5	D	2.2	0.012
		PM	57.2	E	57.8	E	0.7	0.004	66.1	E	67.1	E	1.2	0.004
5	Milpitas Blvd and Calaveras Blvd*	AM	39.5	D	39.4	D	0.0	0.001	48.8	D	48.8	D	0.2	0.001
		PM	44.1	D	44.4	D	0.6	0.005	50.9	D	51.5	D	1.2	0.005
6	Able St and Curtis Ave	AM	11.2	B	12.0	B	0.6	0.020	10.2	B	11.2	B	0.8	0.020
		PM	9.1	A	9.2	A	0.1	0.015	9.1	A	9.2	A	0.1	0.015
7	Main St and Curtis Ave	AM	19.7	B	19.9	B	0.0	0.018	19.6	B	20.0	C	0.2	0.018
		PM	20.4	C	20.7	C	0.2	0.020	20.4	C	20.5	C	0.2	0.020
8	Abel St and Great Mall Pkwy	AM	27.9	C	28.2	C	0.5	0.013	28.7	C	28.9	C	0.6	0.013
		PM	25.1	C	25.3	C	0.2	0.002	27.8	C	28.0	C	0.1	0.002
9	Main St and Great Mall Pkwy	AM	17.4	B	17.8	B	0.6	0.008	18.1	B	18.4	B	0.5	0.008
		PM	22.6	C	22.7	C	0.1	0.003	23.7	C	23.8	C	0.1	0.003
10	Abel St and Main St	AM	10.1	B	10.2	B	0.0	0.003	12.4	B	12.5	B	0.0	0.005
		PM	8.1	A	8.0	A	-0.1	0.002	11.2	B	11.1	B	0.0	0.002
11	I-880 NB Ramps and Great Mall Pkwy	AM	30.2	C	30.3	C	0.1	0.004	31.8	C	32.0	C	0.2	0.004
		PM	22.1	C	22.5	C	0.5	0.002	23.2	C	23.4	C	0.2	0.002
12	I-880 SB Ramps and Tasman Dr	AM	18.3	B	18.3	B	0.0	0.002	18.9	B	19.0	B	0.0	0.002
		PM	24.6	C	24.7	C	0.1	0.001	29.8	C	30.0	C	0.4	0.001

* Denotes CMP Intersection.
Note: LOS includes planned improvements at Main/Abel under background conditions.

1. Introduction

The purpose of this report is to analyze the transportation impacts of the proposed Preston residential development located south of Railroad Avenue and west of the Union Pacific Railroad Warm Springs Subdivision in Milpitas, California. The project may construct as many as 220 residential units. The existing uses onsite would be removed. The site is currently occupied by the Preston Pipelines yard and an existing warehouse. This warehouse was previously occupied by Sun Microsystems, but is now only partially occupied by Apto Solutions. Primary access to the site would be via driveways on Railroad Avenue and Hammond Way. The project location is shown graphically in Figure 1. A preliminary project site plan is shown in Figure 2.

Scope of Work

The impacts of the development were evaluated relative to the level of service policies and methodologies applicable in the City of Milpitas. Because the project is expected to generate more than 100 peak hour trips, the analysis also was conducted in accordance with the requirements of the Valley Transportation Authority (VTA), the administering agency for the Congestion Management Program (CMP) of Santa Clara County. CMP guidelines were followed for CMP designated intersections and freeway segments. The following signalized intersections were analyzed for this project. Each CMP intersection is denoted with an asterisk (*).

1. Abel Street and Marylinn Drive
2. Abel Street and Weller Lane
3. Main Street and Weller Lane
4. Abel Street and Calaveras Boulevard*
5. Milpitas Boulevard and Calaveras Boulevard*
6. Abel Street and Curtis Avenue
7. Main Street and Curtis Avenue
8. Abel Street and Great Mall Parkway
9. Main Street and Great Mall Parkway
10. Abel Street and Main Street
11. Great Mall Parkway and I-880 Northbound Ramps
12. Tasman Drive and I-880 Southbound Ramps

The study intersections were selected based on discussions with City of Milpitas staff. The intersections were analyzed during the weekday AM and PM peak hours of traffic (referred to as the commute hours), which occur from 7:00 to 9:00 AM and 4:00 to 6:00 PM. These periods represent the most congested traffic conditions of an average weekday. The project impacts were evaluated for the following scenarios:

Figure 1

Project Site Location and Study Intersections

NORTH
Not to Scale

Figure 2

Site Plan

Scenario 1: *Existing Conditions.* Existing traffic volumes were obtained from current AM and PM peak hour traffic counts.

Scenario 2: *Background Conditions.* Background traffic volumes were estimated by adding to existing peak-hour volumes the projected volumes from approved but not yet completed developments. The latter component is contained in the City of Milpitas Approved Trips Inventory (ATI) and the City of San Jose Approved Trips Inventory.

Scenario 3: *Existing + Project Conditions.* Projected peak hour traffic volumes were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing + Project conditions were evaluated relative to existing conditions in order to determine potential project impacts.

Scenario 4: *Background + Project Conditions.* Projected peak hour traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project. Background + Project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions*. Cumulative conditions were represented by year 2030 traffic volumes on the roadway network. Traffic volumes were obtained from the City of Milpitas Travel Demand Forecast (TDF) model. Per City of Milpitas requirements, the impact of the proposed project was measured on roadway segments (rather than intersections) in the project vicinity.

According to CMP guidelines, a freeway segment should be studied when a proposed development would add traffic to a segment greater than one percent of its capacity. Table 1 shows this comparison. (The methods used to assign project traffic to the roadway network are described in the "Project Impacts and Recommendations" chapter of this report.) The capacity of a mixed-flow lane as specified by the *Highway Capacity Manual* is 2,200 vehicles per hour (vph) on four-lane facilities, and 2,300 vph on facilities with six or more lanes. High occupancy vehicle (HOV) lanes and auxiliary lanes were not included for this calculation. Based on this comparison, the project would not create a significant impact on freeway segments and no additional analysis is required.

Methodology

This section describes the methods used to determine the traffic operations for each scenario. It includes the methods used for data collection, level of service calculations, and describes the various level of service standards, as well as the criteria for project impacts.

Data Collection

The data for the study locations were obtained through field observations, previous traffic studies, the City of Milpitas, City of San Jose, current traffic counts (see appendix A), and the VTA CMP Monitoring and Conformance Report. The following data were collected from these sources:

- existing traffic volumes,
- lane geometries,
- signal timing and phasing,
- a list of approved projects (ATI), and
- Year 2030 forecast traffic volumes

Table 1
Freeway Segment Evaluation

Freeway	Segment	Direction	# of Lanes	Capacity* (vphpl)	1% of Capacity	Project Trips AM	Project Trips PM
I-680	Scott Creek Rd to Jacklin Rd	SB	3	6900	69	2	4
I-680	Jacklin Road to SR 237	SB	3	6900	69	1	3
I-680	SR 237 to Yosemite Dr	SB	4	9200	92	4	2
I-880	Dixon Landing Rd to SR 237	SB	4	9200	92	3	12
I-880	SR 237 to Great Mall Pkwy	SB	3	6900	69	0	0
I-880	Great Mall Pkwy to Montague Exp	SB	3	6900	69	11	6
SR 237	west of I-880	WB	3	6900	69	10	6
I-680	Scott Creek Rd to Jacklin Rd	NB	3	6900	69	4	3
I-680	Jacklin Road to SR 237	NB	3	6900	69	3	2
I-680	SR 237 to Yosemite Dr	NB	4	9200	92	1	4
I-880	Dixon Landing Rd to SR 237	NB	4	9200	92	11	6
I-880	SR 237 to Great Mall Pkwy	NB	3	6900	69	0	0
I-880	Great Mall Pkwy to Montague Exp	NB	3	6900	69	3	11
SR 237	west of I-880	EB	2	4400	44	3	11

*Capacity was based on the ideal capacity cited in the *2000 Highway Capacity Manual*
Note: This assignment is for scoping purposes and does not include credit for the existing uses onsite. Actual project traffic on the freeway would be less than what is shown here.

Level of Service Methods

The previously described data were used to calculate each study location's level of service (LOS). Level of service is a qualitative measure of traffic operations, ranging from LOS A (free-flow condition) to LOS F (forced-flow conditions). The levels of service at signalized intersections were evaluated using TRAFFIX software with CMP defaults. This method uses the *2000 Highway Capacity Manual* methodology to estimate the average control delay per vehicle in seconds. This average delay can then be correlated to a level of service as shown in Table 2.

Roadway Segments

For 2030 conditions, the traffic operations at the study segments were calculated based on volume-to-capacity (v/c) ratios, which can be correlated to level of service. Table 3 shows the roadway types, capacity assumptions, and LOS thresholds that were used for this analysis.

Level of Service Standards

For CMP intersections and roadway segments, the minimum acceptable level of service is LOS E. At intersections and roadway segments in Milpitas that are not CMP intersections, the minimum acceptable level of service is LOS D. Calaveras Boulevard, Montague Expressway, I-880, and I-680 are the CMP roadways in the project vicinity.

Table 2
Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lenghts, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.

Project Impact Criteria

According to the City of Milpitas, as well as the CMP, project impacts at signalized intersections occur when:

1. The level of service at an intersection drops below its LOS standard (LOS E at CMP intersections, and LOS D on city streets) when project traffic is added; or
2. An intersection that is operating worse than its level of service standard under no project conditions has an increase in critical delay of four or more seconds **AND** the demand-to-capacity ratio (V/C) is increased by more than 0.01 when project traffic is added.

Table 3
City of Milpitas Roadway Segment LOS

Facility	Lane Capacity	Levels of Service					
		A	B	C	D	E	F
Freeway	2,000	1,200	1,400	1,600	1,800	2,000	>2,000
Expressway	1,100	660	770	880	990	1,100	>1,100
Major Arterial	1,000	600	700	800	900	1,000	>1,000
Arterial	900	540	630	720	810	900	>900

The exception to this threshold is when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e. the change in average stopped delay for critical movements is negative). In this case, the threshold is when the project increases the critical V/C value by .01 or more.

For roadway segments under year 2030 conditions, the traffic operations were evaluated based on volume-to-capacity (v/c) ratios. Under cumulative conditions, a project is said to adversely impact a roadway segment if:

- The roadway segment is projected to operate below its LOS standard under no project conditions and the proposed project is projected to cause an increase in traffic of at least one percent of its capacity. **Or**
- The roadway segment is projected to operate at or better than its LOS standard under no project conditions and the proposed project is projected to degrade the level of service to less than acceptable levels.

Report Organization

The remainder of this report is divided into five chapters. Chapter 2 describes the existing roadway network, transit service, and existing bicycle and pedestrian facilities. Chapter 3 presents the intersection operations under background conditions. Chapter 4 describes the method used to estimate project traffic and the project's impact on signalized intersections. Chapter 5 describes non-level of service issues associated with the proposed project. Chapter 6 discusses the traffic conditions under 2030 conditions.

2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network facilities and operations, transit service, and bicycle and pedestrian facilities.

Roadway Network

Regional access to the project site is provided via Interstate 680 (I-680), Interstate 880 (I-880), and State Route 237 (SR 237). Direct access to the site is provided via Hammond Way, Railroad Avenue, and Sinnott Lane. Other major facilities in the vicinity of the project site include Great Mall Parkway, Main Street, and Abel Street. These facilities are described below.

I-680 is a north/south freeway traversing the eastern portion of Milpitas. This freeway connects the inland East Bay communities to the north with San Jose to the south. I-680 has six lanes plus a southbound high occupancy vehicle (HOV) lane north of SR 237, and eight lanes south of SR 237.

I-880 is a north/south freeway providing regional access from East Bay cities to San Jose, where it becomes SR 17 and extends into Santa Cruz. Within the City of Milpitas, I-880 is primarily a six-lane freeway. North of SR 237, this facility is eight lanes.

State Route 237/Calaveras Boulevard is an east/west arterial between I-880 and I-680 and generally provides six travel lanes (four on the Union Pacific overcrossing). West of I-880, this facility becomes a freeway with four mixed flow lanes and two High Occupancy Vehicle (HOV) lanes. Calaveras Boulevard accommodates a significant amount of regional through traffic during the peak commute hours. Milpitas staff estimate that approximately 50 percent of the peak hour traffic between I-680 and I-880 is generated outside of Milpitas. The predominate direction of travel is westbound in the morning and eastbound during the afternoon.

Great Mall Parkway is a six lane, east/west, divided arterial connecting Capital Avenue to I-880. In general, this roadway operates within capacity and does not experience significant peak hour congestion except at its intersection with Montague Expressway. West of I-880, Great Mall Parkway becomes Tasman Drive.

Main Street is a north/south roadway connecting Montague Expressway to residential areas north of Calaveras Boulevard. This roadway consists of four travel lanes from Montague Expressway to just north of Curtis Avenue, where it transitions to a two lane facility with parking on both sides. Main Street currently operates within capacity, but experiences peak hour congestion at its intersection with Montague Expressway.

Abel Street is a four-lane north/south arterial beginning at South Main Street and terminating at North Milpitas Boulevard. This roadway provides a two-way center left-turn lane along some segments. This facility is signalized at major cross streets, where left-turn pockets are provided. On-street parking is generally prohibited, except adjacent to residential frontage. With the exception of certain movements at major intersections, this facility generally operates within its design capacity.

Railroad Avenue is a two-lane north/south roadway that begins as a cul-du-sac at the northern limits of the project site and ends at North Main Street. It provides access to the surrounding industrial properties. Two project driveways are proposed to connect to Railroad Avenue.

Hammond Way is a two-lane north/south roadway that begins at Sinnott Lane at the southern limits of the project site and ends at West Curtis Avenue. It provides access to the surrounding industrial properties. One project driveway is proposed to connect to Hammond Way.

Sinnott Lane is a two-lane east/west roadway that begins at Hammond Way and ends at Bothelo Avenue. It provides access to the surrounding industrial properties. Emergency vehicle access (EVA) via Bothelo Avenue from the project site is proposed to connect to Sinnott Lane.

Pedestrian and Bicycle Facilities

There are no sidewalks on Railroad Avenue, Sinnott Lane, or Hammond Way, which are the public streets that immediately surround the project site. Sidewalks are provided on Main Street and West Curtis Avenue. These are approximately one-half mile north and south of the project site. On Main Street, sidewalks are provided on both sides of the street and crosswalks are provided at signalized intersections. Although Main Street is approximately 1 block west of the project site, the existing rail line precludes direct pedestrian access to the nearby commercial uses.

The nearest bike lanes to the project site are provided on Main Street and Weller Lane. Marylinn Drive is designated as a bike route. There are no bike lanes on Railroad Avenue, Sinnott Lane, or Hammond Way. However, the volume of traffic on these streets is relatively low, and suitable for shared use between bikes and motor vehicles. Figure 3 shows the existing bikeways in the project vicinity.

Transit Service

The Santa Clara Valley Transportation Authority (VTA) provides existing bus service on the surrounding roadway network. Bus stops for Routes 47 and 66 are located on Main Street, near Weller Lane. These stops are approximately one-half mile walk from the project site. The Great Mall/Main Transit Center, which provides numerous light rail and bus connections, is located approximately 1 mile south of the project site. The light rail connects North First Street in San Jose to Hostetter Avenue via center lane medians on Tasman Drive, Great Mall Parkway, and Capitol Avenue. Figure 4 shows the existing transit service. Table 4 summarizes the service frequencies for the transit routes in the study area.

Existing Intersection Levels of Service

Existing PM peak-hour traffic volumes for the CMP intersections were obtained from the CMP Monitoring Report for Santa Clara County. All other existing peak hour traffic volumes were obtained from traffic counts conducted in January of 2011 and January 2012. The traffic count data are included in Appendix A.

Table 4
VTA Transit Service

Route	Route Description	Weekday Hours of Operation	Headway [1]
46	Great Mall/Main Transit Center to Washington & Escuela via Yellowstone	6:30AM to 7:10PM	25 to 30
47	Great Mall/Main Transit Center to McCarthy Ranch	6:30AM to 9:50PM	25 to 30
66	Kaiser San Jose to Milpitas/Dixon Road	5:30AM to 12:00PM	10 to 20
70	Capitol LRT Station to Great Mall/Main Transit Center	5:20AM to 11:30PM	15 to 20
71	Eastridge Transit Center to Great Mall/Main Transit Center via White Rd.	5:30AM to 10:15PM	15 to 20
77	Eastridge Transit Center to Great Mall/Main Transit Center via King Rd.	5:20AM to 9:00PM	15 to 20
104	Express - Penitencia Creek Transit Center to Palo Alto - Westbound	6:00AM to 7:50AM	45 to 50
104	Express - Penitencia Creek Transit Center to Palo Alto - Eastbound	3:15PM to 6:00PM	45 to 50
180	Express - Fremont BART Station to Great Mall/Main	5:45AM to 10:00PM	25 to 30
181	Express - Fremont BART Station to Diridon Transit Center	5:30PM to 11:45PM	15 to 20
321	Westbound Great Mall/Main Transit Center to Lockheed Martin/Moffett Park	8:10 AM	NA
321	Eastbound Great Mall/Main Transit Center to Lockheed Martin/Moffett Park	6:27 PM	NA

[1] Approximate headways during commute periods, in minutes
NA - Route has only one trip

The operations of the study intersections were evaluated using TRAFFIX software to determine their levels of service (LOS). The lane configurations used for the calculations are shown in Figure 5. The intersection turn movement volumes are shown in Figure 6. Table 5 presents the results of the signalized intersection level of service calculations. All City of Milpitas intersections operate at LOS D or better and the CMP intersections operate at LOS E or better. The TRAFFIX level of service calculation sheets are included in Appendix B.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculations does not accurately reflect level of service in the field. Based on the field observations, the level of service analysis appears to accurately reflect actual existing traffic conditions. However, the following operational issues were observed:

- **Calaveras Boulevard** experiences long vehicle queues westbound during the AM commute hours and eastbound during the PM commute hours. Sometimes, these queues do not clear Calaveras Boulevard's intersections with Milpitas Boulevard and Abel Street in a single signal cycle. During the PM peak hour at the intersection of Calaveras Boulevard and Abel Street, the northbound right turn queues on Abel Street sometimes spill out of the turn pocket, and the westbound left turn from Calaveras Boulevard to southbound Abel Street occasionally spills out of the turn pocket.
- **I-880** experiences congestion at its ramp meters northbound and southbound at the Tasman Drive/Great Mall Parkway interchange. The vehicle queues from the I-880 ramp meters nearly extended to Great Mall Parkway and Tasman Drive. However, during the observations, the queues did not spill back to the point where surface street operations were adversely impacted.

Figure 3
Existing Bikeways

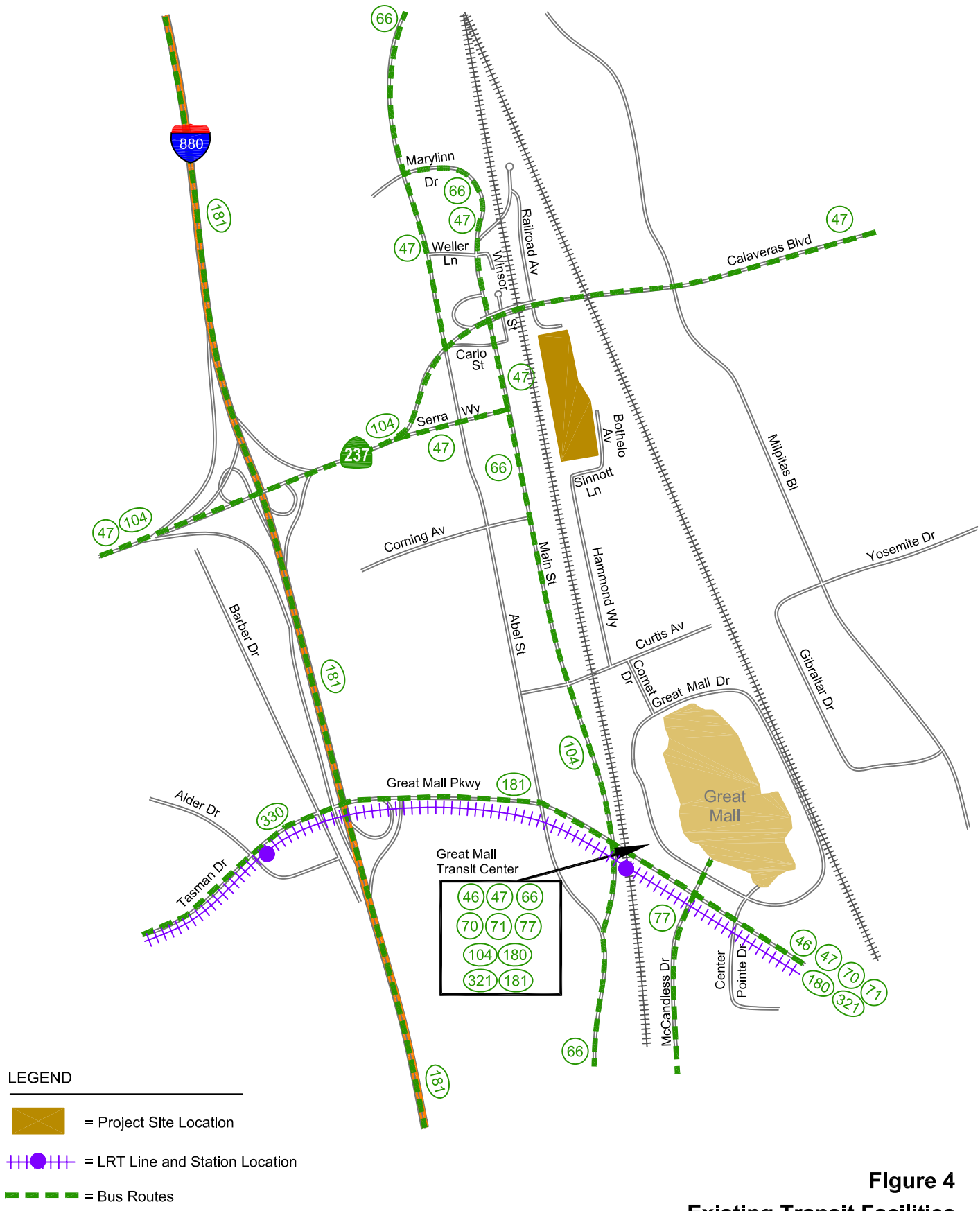

Figure 4
Existing Transit Facilities

NORTH
Not to Scale

Table 5
Existing Intersection Levels of Service

Study Number	Intersection	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS
1	Abel St and Marylinn Dr	AM	01/05/11	18.8	B
		PM	01/05/11	19.0	B
2	Abel St and Weller Ln	AM	01/11/12	7.4	A
		PM	01/11/12	9.1	A
3	Main St and Weller Ln	AM	01/11/12	9.3	A
		PM	01/11/12	12.8	B
4	Abel St and Calaveras Blvd*	AM	01/05/11	43.5	D
		PM	09/28/10	57.2	E
5	Milpitas Blvd and Calaveras Blvd*	AM	01/05/11	39.5	D
		PM	09/28/10	44.1	D
6	Able St and Curtis Ave	AM	01/06/11	11.2	B
		PM	01/06/11	9.1	A
7	Main St and Curtis Ave	AM	01/06/11	19.7	B
		PM	01/06/11	20.4	C
8	Abel St and Great Mall Pkwy	AM	01/05/11	27.9	C
		PM	01/05/11	25.1	C
9	Main St and Great Mall Pkwy	AM	01/05/11	17.4	B
		PM	01/05/11	22.6	C
10	Abel St and Main St	AM	01/05/11	10.1	B
		PM	01/05/11	8.1	A
11	I-880 NB Ramps and Great Mall Pkwy	AM	01/05/11	30.2	C
		PM	01/05/11	22.1	C
12	I-880 SB Ramps and Tasman Dr	AM	01/05/11	18.3	B
		PM	01/05/11	24.6	C

* Denotes CMP Intersection.

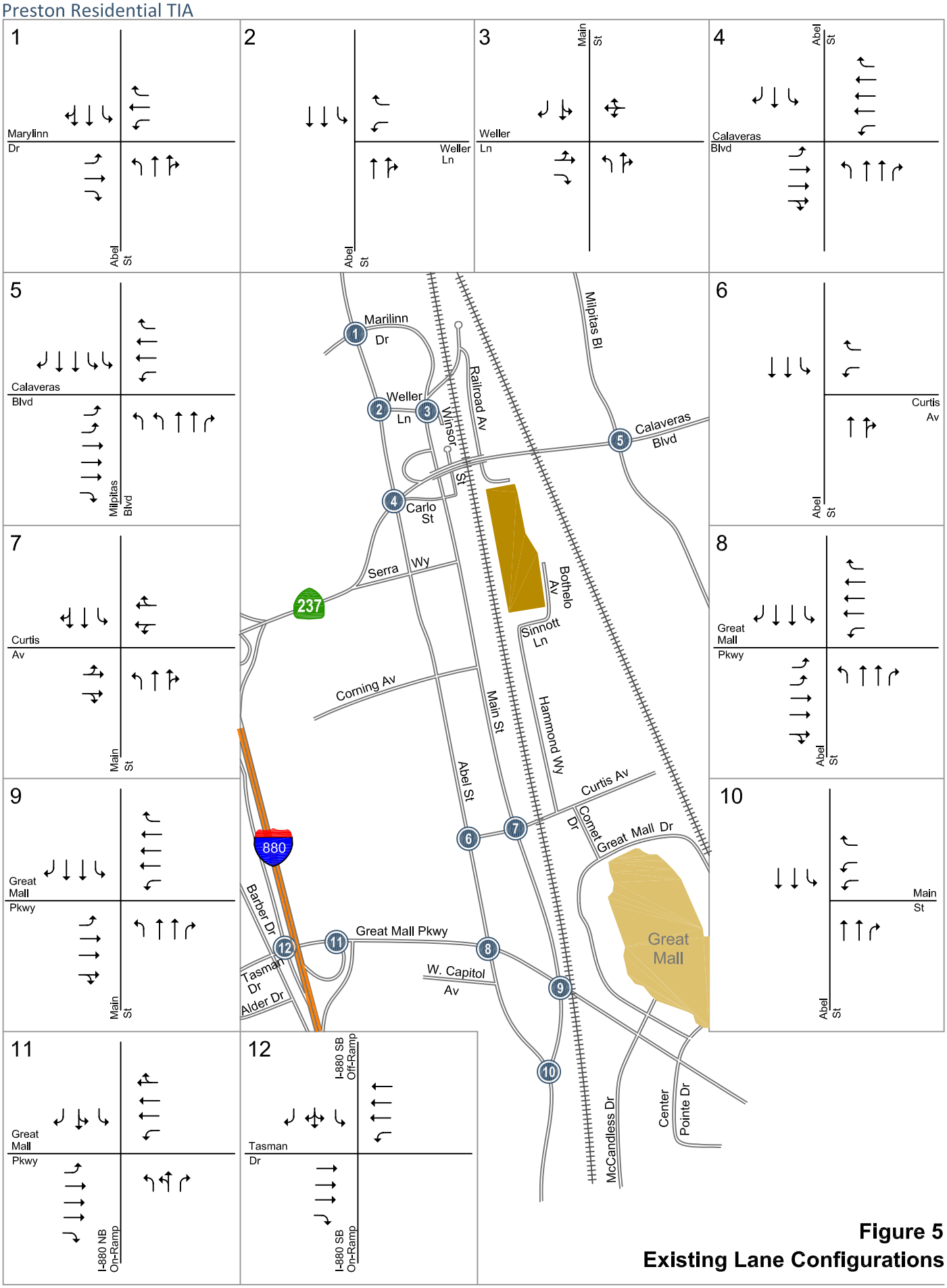

Figure 5
Existing Lane Configurations

NORTH
Not to Scale

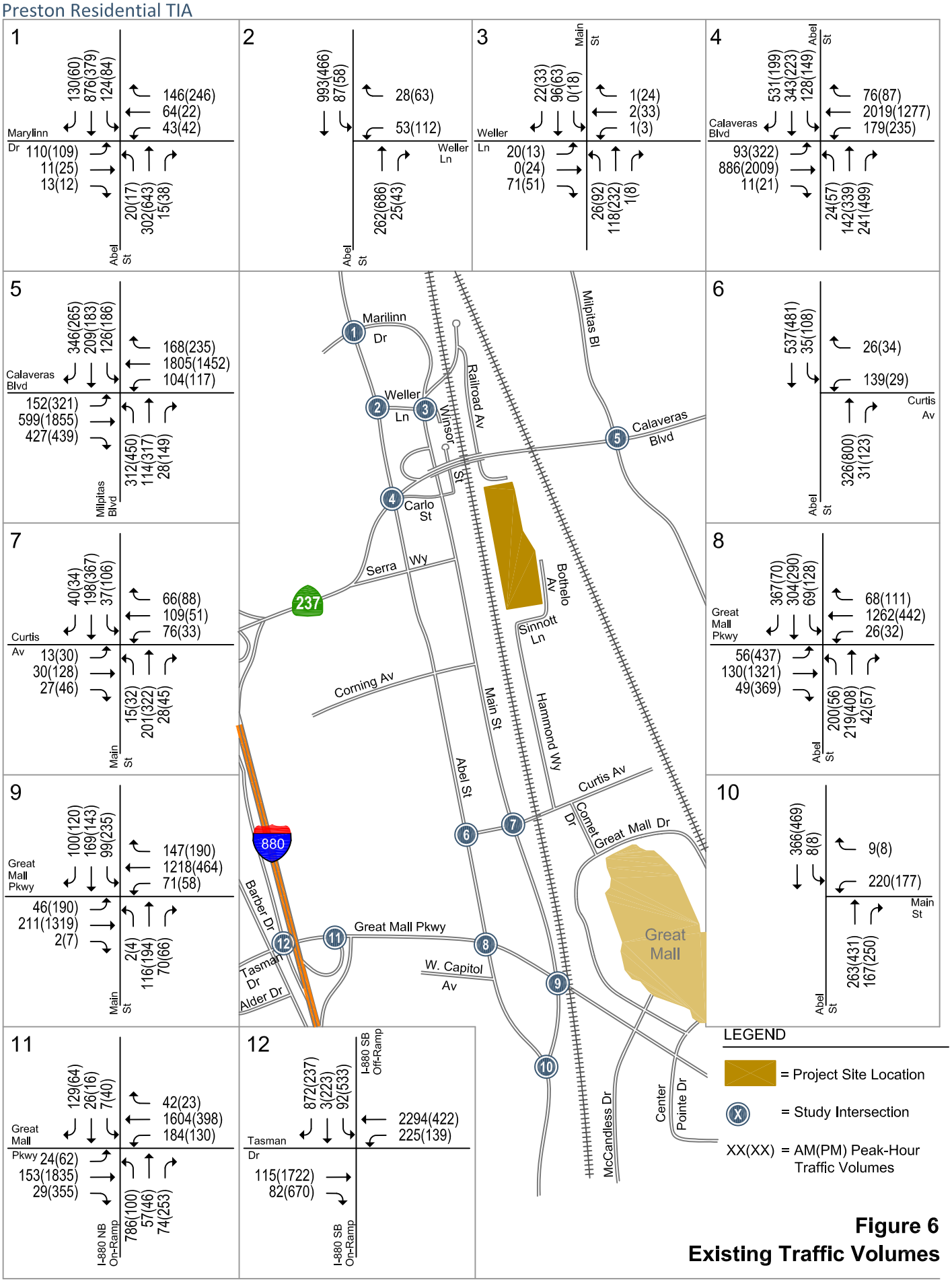

Figure 6
Existing Traffic Volumes

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3. Background Conditions

This chapter describes background traffic conditions. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site. Traffic volume and roadway network assumptions are described below. The pedestrian and bicycle facilities were assumed unchanged from those of existing conditions.

Roadway Network Assumptions

The City of Milpitas has a long-range plan to install a raised center median and add landscaping along South Main Street and South Abel Street between Great Mall Parkway and Montague Expressway. The plan is on file with the City. At the intersection of South Abel Street/South Main Street, the plan would reduce the number of westbound left turn lanes on South Main Street from two lanes under existing conditions to one lane. Aside from this, all other intersection geometries will remain the same as under existing conditions.

Approved Developments and Background Traffic Volumes

Background peak-hour traffic volumes were calculated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The list of approved but not yet constructed developments and the corresponding traffic volumes were supplied by the Cities of Milpitas and San Jose and can be found in Appendix C. Background traffic volumes are shown in Figure 7.

Intersection Levels of Service

Intersection level of service calculations were conducted to evaluate the operating levels of the key signalized intersections under background conditions. Table 6 presents the results of the signalized intersection level of service calculations under background conditions. All City of Milpitas intersections would operate at LOS D or better and the CMP intersections would operate at LOS E or better. The TRAFFIX level of service calculation sheets are included in Appendix B.

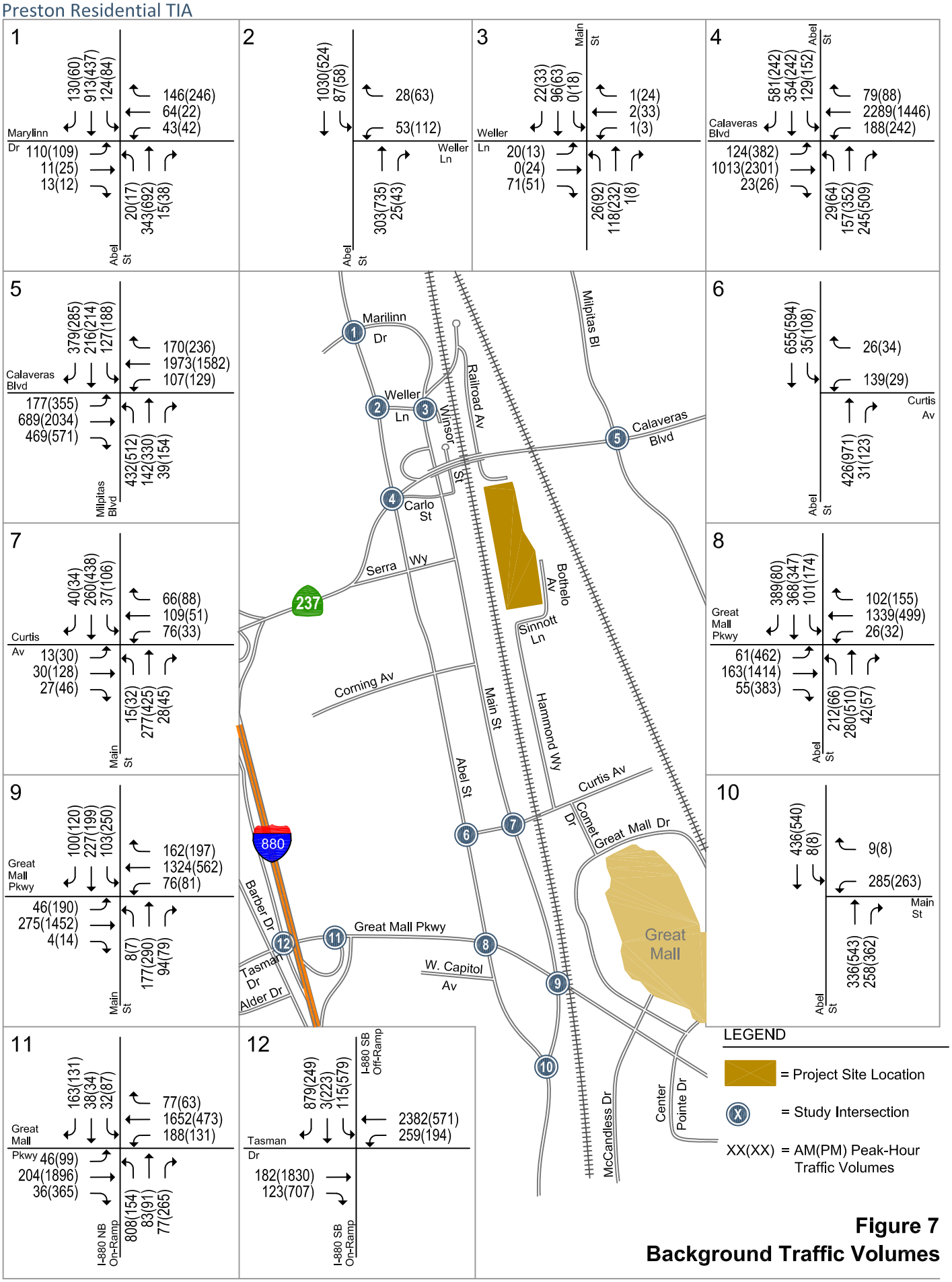

Figure 7
Background Traffic Volumes

NORTH
Not to Scale

Table 6
Background Intersection Levels of Service

Intersection	Peak Hour	Existing Avg. Delay	Existing LOS	Background Avg. Delay	Background LOS
Signalized Intersections:					
Abel St and Marylinn Dr	AM	18.8	B	19.0	B
	PM	19.0	B	19.1	B
Abel St and Weller Ln	AM	7.4	A	7.5	A
	PM	9.1	A	8.8	A
Main St and Weller Ln	AM	9.3	A	9.3	A
	PM	12.8	B	12.8	B
Abel St and Calaveras Blvd*	AM	43.5	D	49.1	D
	PM	57.2	E	66.1	E
Milpitas Blvd and Calaveras Blvd*	AM	39.5	D	48.8	D
	PM	44.1	D	50.9	D
Able St and Curtis Ave	AM	11.2	B	10.2	B
	PM	9.1	A	9.1	A
Main St and Curtis Ave	AM	19.7	B	19.6	B
	PM	20.4	C	20.4	C
Abel St and Great Mall Pkwy	AM	27.9	C	28.7	C
	PM	25.1	C	27.8	C
Main St and Great Mall Pkwy	AM	17.4	B	18.1	B
	PM	22.6	C	23.7	C
Abel St and Main St	AM	10.1	B	12.4	B
	PM	8.1	A	11.2	B
I-880 NB Ramps and Great Mall Pkwy	AM	30.2	C	31.8	C
	PM	22.1	C	23.2	C
I-880 SB Ramps and Tasman Dr	AM	18.3	B	18.9	B
	PM	24.6	C	29.8	C

* Denotes CMP Intersection
Note: LOS includes planned improvements at Main/Abel under background conditions.

4. Project Impacts and Recommendations

The impacts of the proposed project are discussed in this chapter. First, the method used to estimate the amount of traffic added to the roadway system by the project is described. Then, as specified by CMP requirements, individual intersections are analyzed with the addition of project traffic. Under project conditions, the roadway network would be the same as under background conditions.

Project Traffic Estimates

The amount of traffic associated with a development is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In the first step, the amount of traffic entering and exiting the site is estimated on a peak hour basis. In the second step, the directions of approach and departure of project traffic are estimated. In the third step, the trips are assigned to specific streets and intersections. This process is described in the following sections.

Trip Generation

The amount of traffic generated by the proposed project was estimated by applying the appropriate trip generation rates to the size of the development. The trip generation rates used to estimate project traffic were those from the publication entitled *Trip Generation, 8th Edition,* by the Institute of Transportation Engineers (ITE). Based on these rates, the proposed project would generate 1,647 daily vehicle trips, with 127 trips occurring during the AM peak hour and 163 trips occurring during the PM peak hour. Traffic that is currently generated from the existing onsite uses was measured directly in the field (via traffic counts) and was subtracted from the overall project trip generation. After accounting for existing traffic from the site (which is already on the public street system), the proposed project would generate 1,233 net daily vehicle trips, with 98 net trips occurring during the AM peak hour and 107 net trips occurring during the PM peak hour. The project trip generation estimates are presented in Table 7.

Trip Distribution & Assignment

The proposed project's trip distribution pattern was estimated based on a select zone analysis from the City of Milpitas Travel Demand Forecast Model. Separate distributions were developed for the proposed residential uses and the existing onsite industrial uses. These are shown graphically in Figures 8 and 9. The trips generated by the proposed project were assigned to the roadway network based on the residential directional distribution for the AM and PM peak hours. Trips generated by the existing industrial uses were subtracted at each intersection movement for the AM and PM peak hours. Figure 10 shows the net project trip assignment (proposed project traffic minus existing use traffic). The traffic volumes under (1) existing plus project and (2) background plus project conditions are shown in Figures 11 and 12, respectively.

Table 7
Near Term Project Trip Generation

Land Use	Size	ITE Code	Daily Rate [1]	Daily Total	AM Peak Hour Rate [1]	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Rate [1]	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
Proposed Use												
Single Family Homes	98 DU	210	9.57	938	0.75	74	19	55	1.01	100	62	38
Townhomes	122 DU	230	5.81	709	0.44	54	9	45	0.52	63	43	20
Subtotal				1,647		127	28	99		163	105	58
Existing Use												
Preston Pipelines [2]				-414		-29	-15	-14		-56	-20	-36
Net Project Trips:				**1,233**		**98**	**13**	**85**		**107**	**85**	**22**

[1] Rates Per ITE *Trip Generation* Manual, 8th Edition, 2008
[2] Trips measured directly from the site. Daily trip generation estimated from PM peak hour count using ITE data.

Intersection Level of Service Impacts and Mitigation

The results of the signalized intersection level of service analysis for the (1) existing plus project and (2) background plus project scenarios are summarized in Tables 8 and 9, respectively. It should be noted that, at some study intersections, the average delay under project conditions is shown to be better than under no project conditions. This occurs because the intersection delay is a weighted average of *all* intersection movements. The addition of project traffic to movements with delays lower than the average intersection delay (such as right turns) can reduce the average delay for the entire intersection. The detailed TRAFFIX level of service calculation sheets are included in Appendix B.

According to the definitions provided in Chapter 1, the proposed project would not result in any significant impacts to the study intersections under existing plus project conditions or background plus project conditions. All City of Milpitas intersections would operate at LOS D or better and the CMP intersections would operate at LOS E or better.

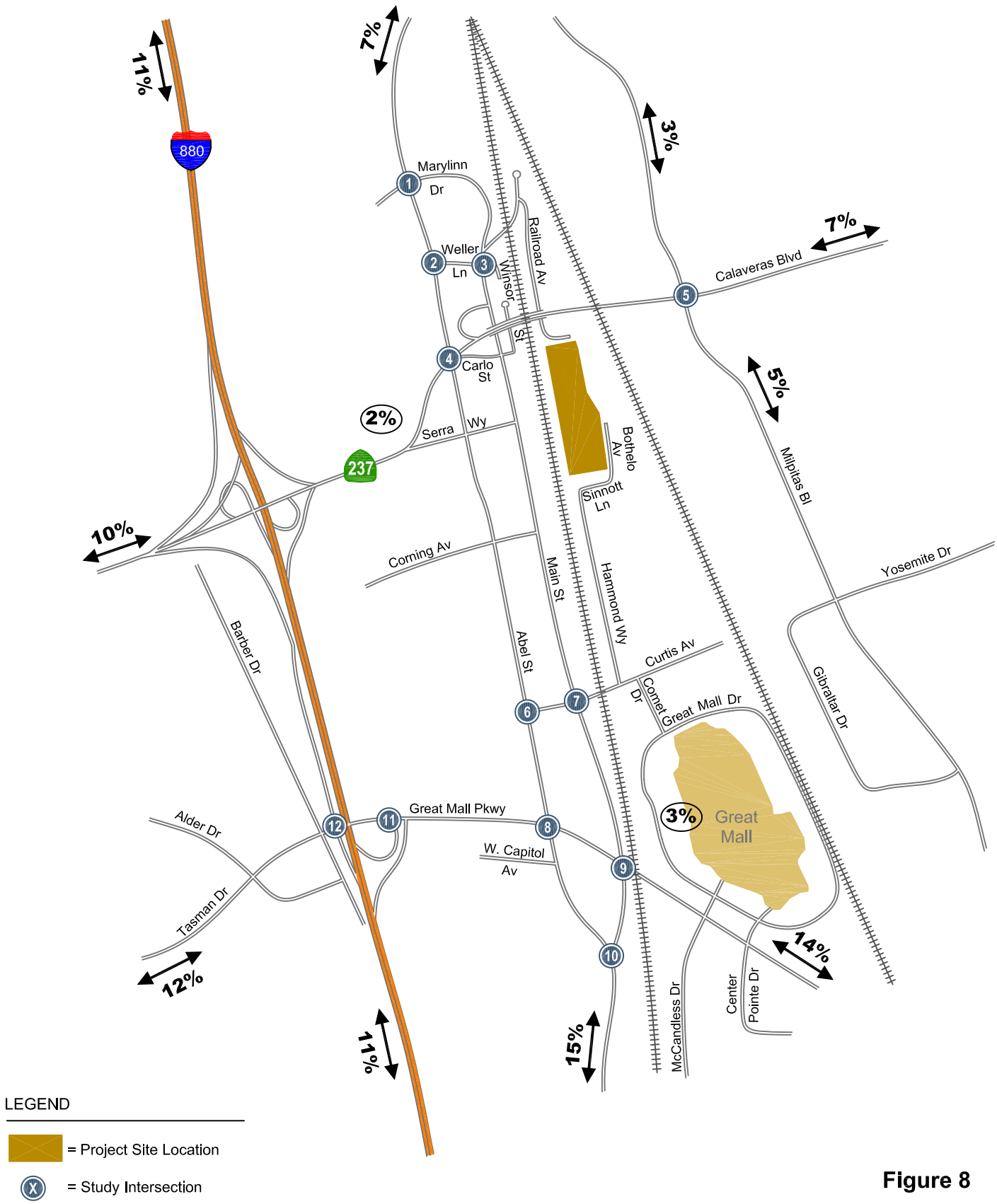

Figure 8

Proposed Project Trip Distribution (Residential)

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Not to Scale

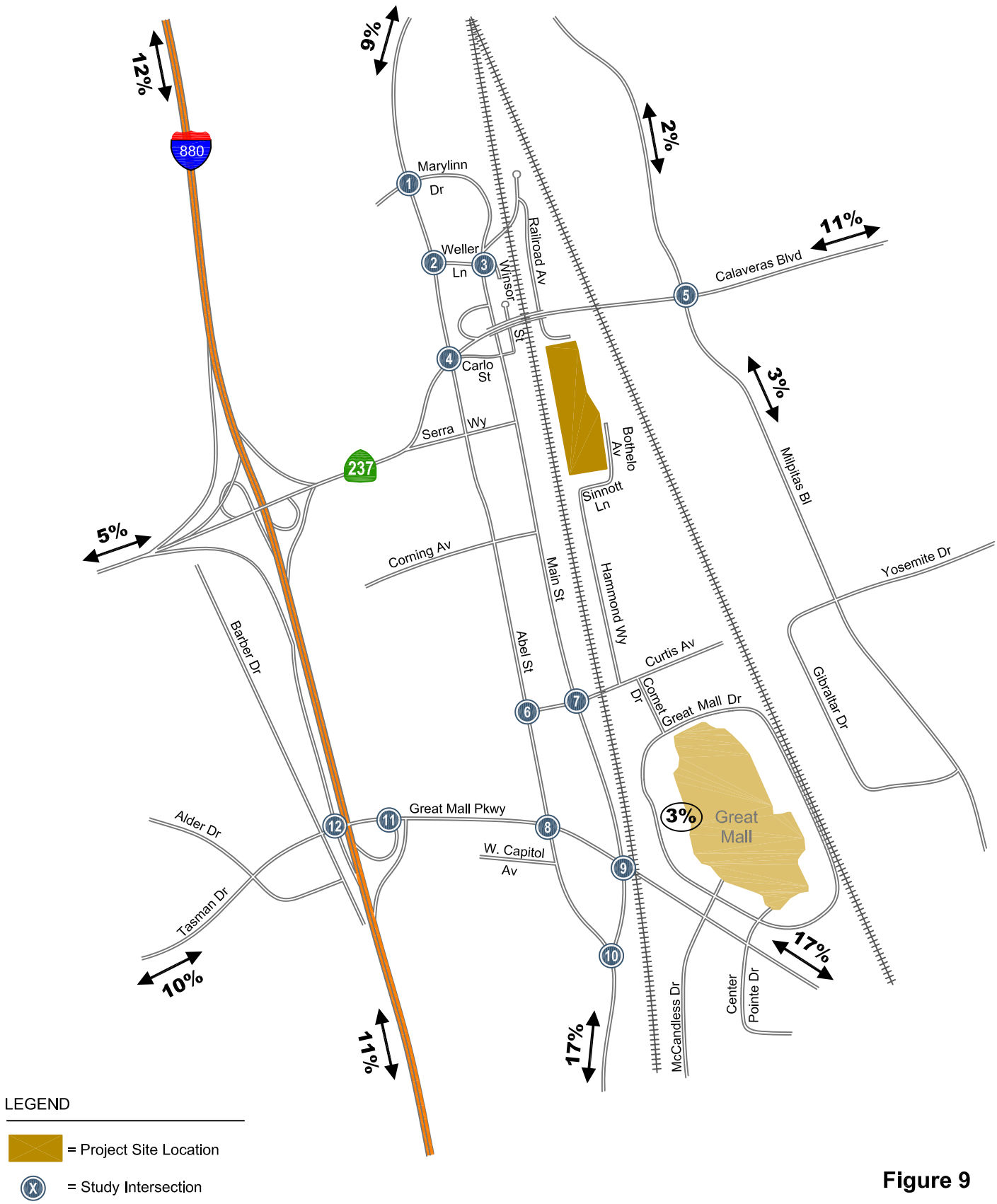

Figure 9

Existing Industrial Use Trip Distribution

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Not to Scale

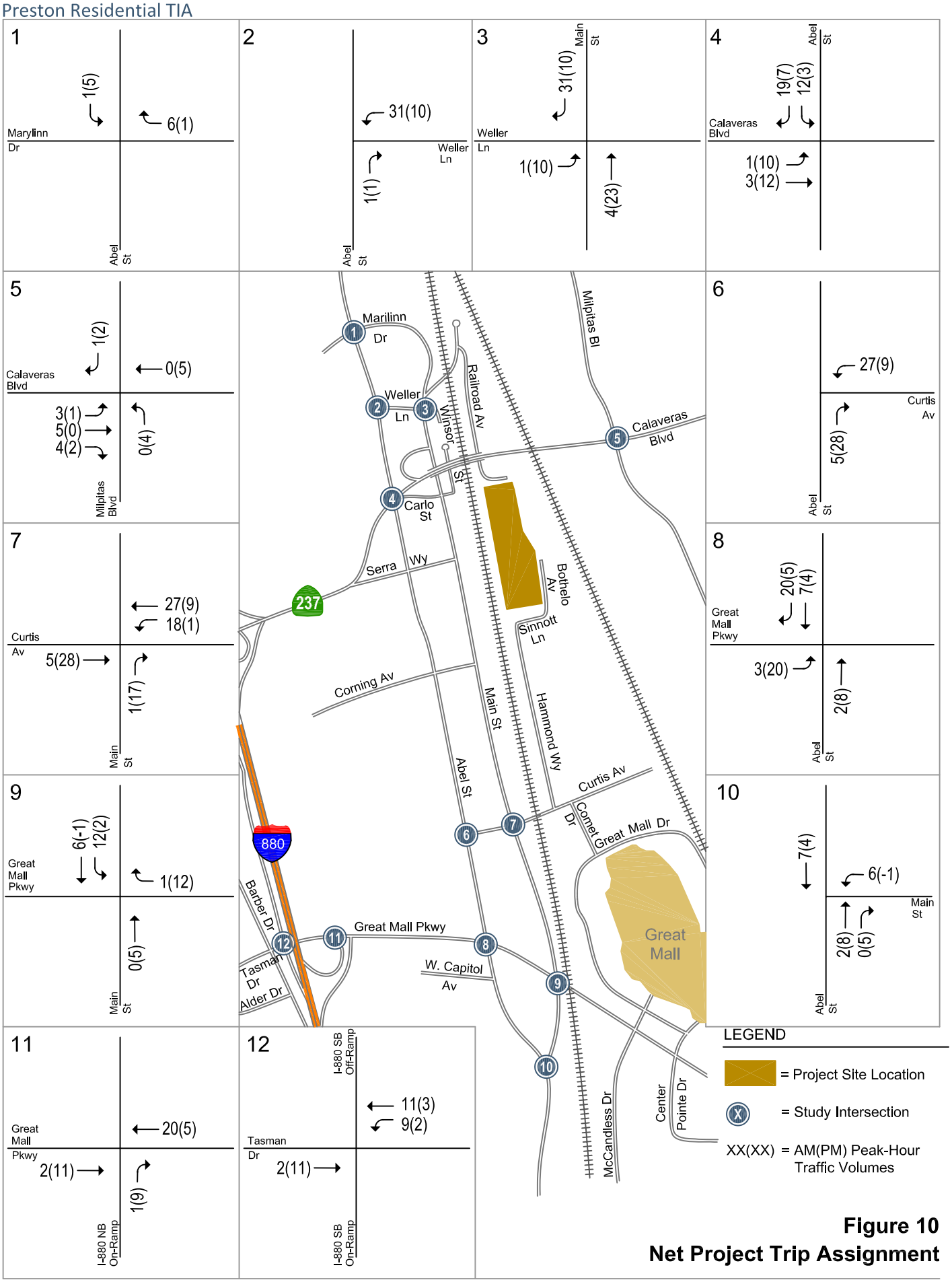

Figure 10
Net Project Trip Assignment

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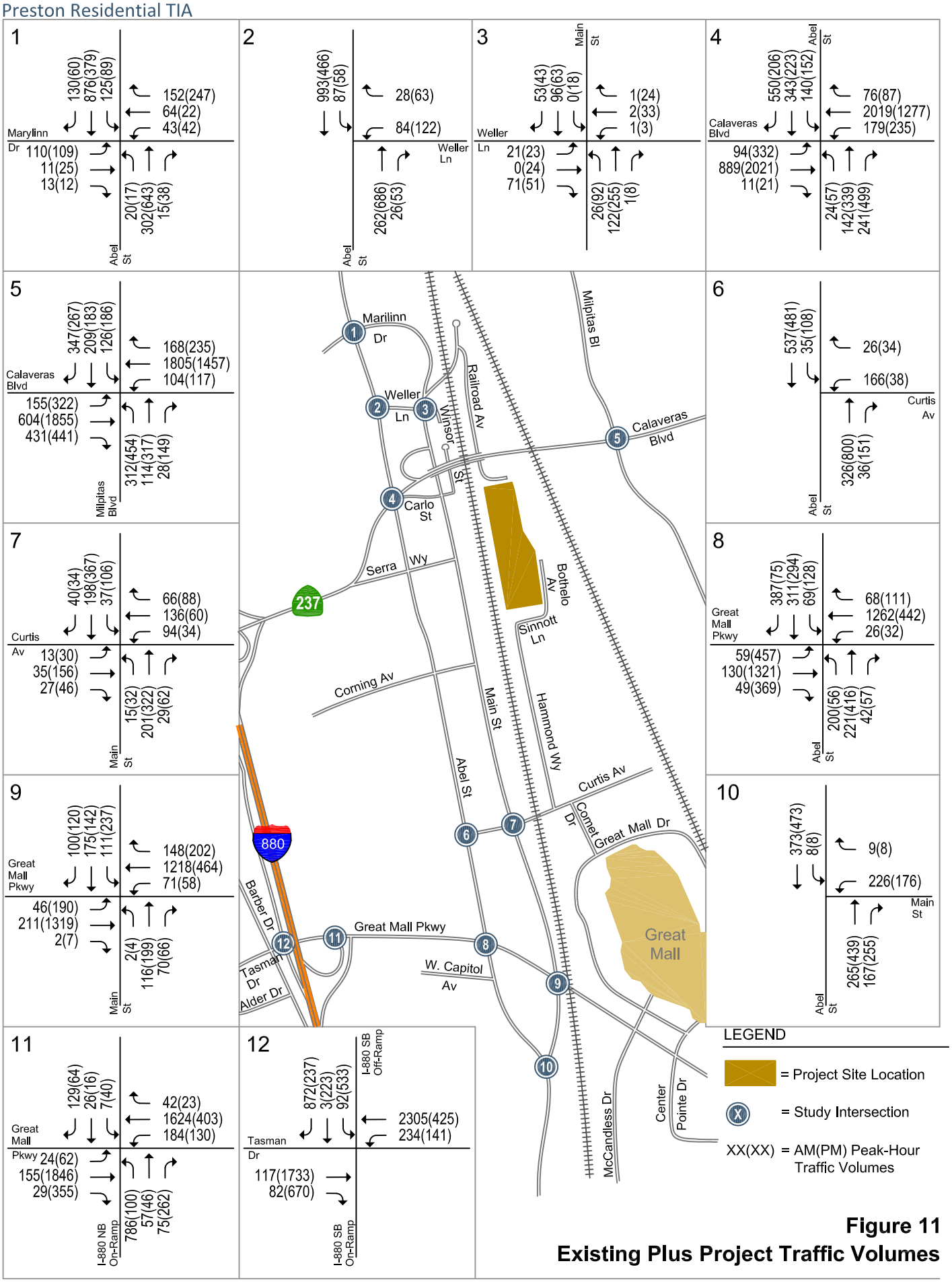


Figure 11
Existing Plus Project Traffic Volumes

NORTH
Not to Scale

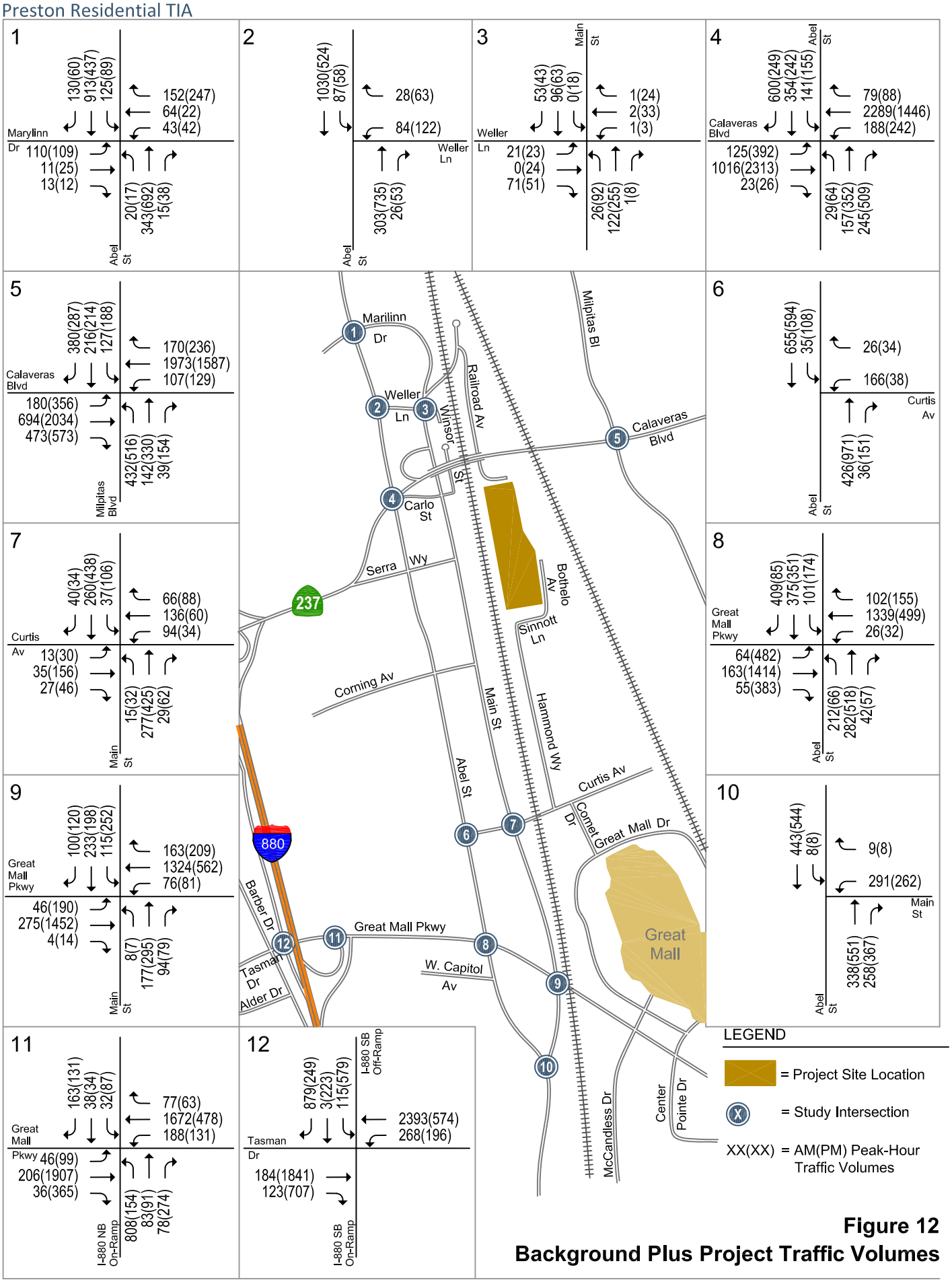


Figure 12
Background Plus Project Traffic Volumes

NORTH
Not to Scale

Table 8
Existing Plus Project Intersection Levels of Service

Intersection	Peak Hour	Existing Avg. Delay	Existing LOS	Existing + Project Avg. Delay	Existing + Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
Signalized Intersections:							
Abel St and Marylinn Dr	AM	18.8	B	18.8	B	0.0	0.000
	PM	19.0	B	19.1	B	0.1	0.004
Abel St and Weller Ln	AM	7.4	A	9.3	A	1.3	0.021
	PM	9.1	A	9.4	A	0.4	0.010
Main St and Weller Ln	AM	9.3	A	9.1	A	0.1	0.001
	PM	12.8	B	12.7	B	-0.3	0.015
Abel St and Calaveras Blvd*	AM	43.5	D	44.3	D	1.1	0.012
	PM	57.2	E	57.8	E	0.7	0.004
Milpitas Blvd and Calaveras Blvd*	AM	39.5	D	39.4	D	0.0	0.001
	PM	44.1	D	44.4	D	0.6	0.005
Able St and Curtis Ave	AM	11.2	B	12.0	B	0.6	0.020
	PM	9.1	A	9.2	A	0.1	0.015
Main St and Curtis Ave	AM	19.7	B	19.9	B	0.0	0.018
	PM	20.4	C	20.7	C	0.2	0.020
Abel St and Great Mall Pkwy	AM	27.9	C	28.2	C	0.5	0.013
	PM	25.1	C	25.3	C	0.2	0.002
Main St and Great Mall Pkwy	AM	17.4	B	17.8	B	0.6	0.008
	PM	22.6	C	22.7	C	0.1	0.003
Abel St and Main St	AM	10.1	B	10.2	B	0.0	0.003
	PM	8.1	A	8.0	A	-0.1	0.002
I-880 NB Ramps and Great Mall Pkwy	AM	30.2	C	30.3	C	0.1	0.004
	PM	22.1	C	22.5	C	0.5	0.002
I-880 SB Ramps and Tasman Dr	AM	18.3	B	18.3	B	0.0	0.002
	PM	24.6	C	24.7	C	0.1	0.001

* Denotes CMP Intersection.

Table 9
Background Plus Project Intersection Levels of Service

Intersection	Peak Hour	Background Avg. Delay	Background LOS	Background + Project Avg. Delay	Background + Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
Signalized Intersections:							
Abel St and Marylinn Dr	AM	19.0	B	19.0	B	0.0	0.000
	PM	19.1	B	19.2	B	0.1	0.004
Abel St and Weller Ln	AM	7.5	A	9.0	A	1.2	0.021
	PM	8.8	A	9.1	A	0.4	0.010
Main St and Weller Ln	AM	9.3	A	9.1	A	0.1	0.001
	PM	12.8	B	12.7	B	-0.3	0.015
Abel St and Calaveras Blvd*	AM	49.1	D	50.5	D	2.2	0.012
	PM	66.1	E	67.1	E	1.2	0.004
Milpitas Blvd and Calaveras Blvd*	AM	48.8	D	48.8	D	0.2	0.001
	PM	50.9	D	51.5	D	1.2	0.005
Able St and Curtis Ave	AM	10.2	B	11.2	B	0.8	0.020
	PM	9.1	A	9.2	A	0.1	0.015
Main St and Curtis Ave	AM	19.6	B	20.0	C	0.2	0.018
	PM	20.4	C	20.5	C	0.2	0.020
Abel St and Great Mall Pkwy	AM	28.7	C	28.9	C	0.6	0.013
	PM	27.8	C	28.0	C	0.1	0.002
Main St and Great Mall Pkwy	AM	18.1	B	18.4	B	0.5	0.008
	PM	23.7	C	23.8	C	0.1	0.003
Abel St and Main St	AM	12.4	B	12.5	B	0.0	0.005
	PM	11.2	B	11.1	B	0.0	0.002
I-880 NB Ramps and Great Mall Pkwy	AM	31.8	C	32.0	C	0.2	0.004
	PM	23.2	C	23.4	C	0.2	0.002
I-880 SB Ramps and Tasman Dr	AM	18.9	B	19.0	B	0.0	0.002
	PM	29.8	C	30.0	C	0.4	0.001

* Denotes CMP Intersection
Note: LOS includes planned improvements at Main/Abel under background conditions.

5. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project site, including:

- Vehicular site access and on-site circulation
- Potential impacts to bike, pedestrian and transit facilities

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Site Access & Circulation

This section describes the site access and circulation of the proposed residential project. Because this site plan is conceptual, prior to final design, the site plan should be reviewed by the City Traffic Engineering division. All dimensions discussed in this section are approximate.

Site Access

The proposed site plan shows one driveway on Railroad Avenue and one driveway on Hammond Way. Both driveways would have security gates that would either be operated by remote control or key cards. As part of the project, the existing cul-de-sac on Railroad Avenue would be extended approximately 150 feet to the east.

The driveway on Railroad Avenue would be located at the end of the cul-de-sac. The driveway would be approximately 22 feet wide at its throat and accommodate inbound and outbound project traffic. The security gate would be located approximately 80 feet from Railroad Avenue. This driveway would include a pull-out area for guests. It is anticipated that this driveway would accommodate 57 AM peak hour trips and 73 PM peak hour trips. Given the very low traffic volume on Railroad Avenue, this driveway would operate with little delay. There are no apparent sight distance conflicts at this driveway and the gate location would not likely cause inbound vehicle queues to spill back onto the public street.

The southern project driveway would be located at the southern limits of the project site directly opposite Hammond Way. The driveway would form the north leg of a T-intersection at Hammond Way and Sinnott Lane. The driveway would be approximately 24 feet wide at its throat and accommodate inbound and outbound project traffic. The security gate would be located approximately 95 feet from the public street. This driveway also would include a pull-out area for guests. It is anticipated that this driveway would accommodate 70 AM peak hour trips and 90 PM peak hour trips. Given the very low traffic volume on Hammond Way and Sinnott Lane, this driveway would operate with little delay and vehicle conflicts would

be infrequent. There are no apparent sight distance conflicts at this driveway and the gate location would not likely cause inbound vehicle queues to spill back onto the public street.

> **Recommendation**: Although there are no sight distance conflicts apparent on the current plan, the project driveways should be reviewed by City staff prior to final design to insure the sight lines are free and clear of obstructions. Any landscaping and signage should be located in such a way to insure an unobstructed view for drivers entering and exiting the site.

Onsite Circulation

Onsite, the two project driveways would be connected by a 22 foot wide, two-way, north/south drive aisle. This drive aisle would connect to 9 two-way onsite drive aisles (hereafter referred to as motor courts), which would provide direct access to residences. The motor courts would run east/west and are shown as 22 feet wide, with at least 27 feet provided between opposing buildings. The motor courts drive aisles would range in length from approximately 240 feet to 380 feet. Resident parking would be provided in private garages. All guest parking is shown either as (1) parallel parking or (2) at 90 degrees to the drive aisles. In areas where 90 degree guest parking is shown, the adjacent drive aisles would be 25 feet wide. There are no dead end parking aisles or roadways on the project plan. Because of the low traffic volumes onsite, the onsite intersections would operate with little delay.

At the southern end of the project site, the main north/south drive aisle would turn east/west and have two 90 degree bends in the roadway. Assuming that vehicles drive at an appropriate speed and slow in advance of each turn, there is adequate sight distance and clearance between opposing vehicles around of each of these 90 degree bends. However, it is possible that some drivers would attempt to drive through the 90 degree bends at higher speeds using the entire drive aisle (as opposed to staying in their designated lane).

> **Recommendation**: The two 90 degree bends on the main drive aisle onsite should have painted centerlines to help guide opposing vehicles around the turns. In addition, the curves should be signed as 10 mph.

> **Recommendation**: Although there are no sight distance conflicts shown on the current plan, landscaping is not shown. Prior to final design, City staff should review the plan to insure that landscaping does not interfere with onsite sight distance.

Truck turning templates (WB-40) were used to evaluate the accessibility of the onsite circulation aisles for moving trucks and other large vehicles. Based on this analysis, trucks would be able to traverse the site, although at onsite intersections trucks would encroach on the opposing travel lanes. This is common for private residential developments and is considered acceptable because truck traffic would be infrequent.

Pedestrian sidewalks and crosswalks are generally provided onsite between the residential entryways, the parking areas, and the public street system. There are long pedestrian/bike paths shown running north/south on the eastern and western limits of the project site. These would connect to new planned sidewalks on Railroad Avenue, Sinnott Lane, and Hammond Way, north and south of the project site. Onsite, the speed and volume of vehicular traffic would be low, and suitable for shared use between bikes and motor vehicles. Additional discussion of bike and pedestrian access to the project site is discussed in the next section of this chapter.

Pedestrian, Bicycle, & Transit Facilities

According to the U.S. Census, pedestrian trips comprise approximately 1.3% of the total commute mode share in the City of Milpitas. For the proposed project, this would equate to approximately 1 or 2 new pedestrian commute trips during the AM and PM peak hours. In addition, the project would generate some pedestrian trips to/from transit stops (see further discussion below), schools, shopping centers, and recreational areas. There are no sidewalks on Railroad Avenue, Sinnott Lane, or Hammond Way (near the project site), which are the public streets that immediately surround the project site. Sidewalks are provided on Main Street and on Hammond Way, near Curtis Avenue. These are approximately 2,100 feet north and 2,400 feet south of the project site, respectively. Assuming a typical walk speed of 4 feet per second, it would take approximately 9 minutes to walk to the pedestrian facilities on Main Street and approximately 10 minutes to walk to the pedestrian facilities on Hammond Way. On Main Street, sidewalks are provided on both sides of the street and crosswalks are provided at signalized intersections. Although Main Street is approximately 1 block west of the project site, the existing rail line precludes direct pedestrian access to the nearby commercial uses. There are existing crossing gates for the railroad tracks on Railroad Avenue and Curtis Avenue (see photos on pages 30). The rail crossing at Curtis Avenue includes sidewalks and ADA compliant wheelchair ramps. The rail crossing on Main Street does not include pedestrian facilities. To reach most nearby destinations on foot, many residents would find it quicker to cross the tracks illegally at the existing opening in the fence on Sinnott Lane, which is located near the southern limits of the project site (see photo on Page 31). This opening does not include crossing gates or ADA compliant ramps. Union Pacific discourages additional at-grade crossings, and as such, would not likely allow the installation of pedestrian enhancements at this crossing.

Existing Curtis Avenue RR Crossing

Recommendation: The project applicant should coordinate with City staff to develop a plan to preclude direct pedestrian access to Sinnott Lane on the opposite side of the Union Pacific rail line. This could require constructing a fence either (1) at the end of Sinnott Lane on the west side of the tracks or (2) along Hammond Way on the east side of the tracks.

Existing Railroad Avenue RR Crossing

The project applicant is proposing to provide a pedestrian path between the project site and Main Street on the west side of Railroad Avenue (see Figure 13). In addition, the project applicant is proposing to provide a pedestrian path between the project site and Curtis Avenue on the east side of Hammond Way (see Figure 14). These proposed paths would provide an ADA compliant route between the project site and the existing pedestrian facilities.

The existing rail lines on both sides of the project are a significant barrier to pedestrian accessibility. With the proposed sidewalk projects along Railroad Avenue and Hammond Way, the walking distances from the project site to retail areas are generally comparable to those found in other parts of Milpitas. However, from a planning perspective, the site's

geographic proximity to Midtown presents an opportunity to provide a strong connection between the residential and retail uses. It has been suggested by City staff that a grade-separated crossing over or under the Union Pacific railroad tracks at Carlo Street would enhance pedestrian accessibility in the project vicinity and reduce pedestrian walk times to and from the proposed project. The design and location of a grade-separated crossing would require a detailed design study involving the project proponent, City of Milpitas, surrounding property owners, and Union Pacific. Additional land use changes to the City General Plan on either side of the tracks may also be contemplated to maximize the potential benefits. The cost of a grade-separated crossing would be significant and possibly qualify for matching funds from regional, state, and federal agencies. Variables affecting the design would include the walk times to and from existing and future land uses, visual impacts, the layout of ADA compliant ramps, and right of way acquisition. The design would also likely require feedback from the public and surrounding property owners.

City staff have also suggested a pedestrian connection from the north end of the project site to the Calaveras overcrossing, which would make use of an existing railroad crossing. Starting at the project site, the sidewalk would run along the east side of Railroad Avenue under Calaveras Boulevard, and traverse up the existing embankment of the Calaveras overcrossing (via switchbacks) to connect to the existing sidewalk at the overcrossing (see also Figure 13). The project proponent has agreed to pursue this pedestrian route as a means to improve pedestrian accessibility in the project area. However, part of the improvement would be located in Caltrans' right of way, and as such, would require encroachment permits. In addition, the design at the embankment would need to comply with ADA requirements.

Existing Sinnott Lane RR Opening

The nearest bike lanes to the project site are provided on Main Street and Weller Lane. Both of these are approximately one-half mile from the project site and a 3-minute ride (assuming a 10 mph average bike speed). In addition, Marylinn Drive is designated as a bike route. There are no bike lanes on Railroad Avenue, Sinnott Lane, or Hammond Way. However, there is a future bike path shown in the *Milpitas Bikeways Master Plan* proposed along Railroad Avenue and Wrigley Creek north of the project site. It appears that the proposed project plan to provide a path along Railroad Avenue could be the initial leg of this bike path. The volume of traffic on Railroad Avenue, Sinnott Lane, and Hammond Way is relatively low and suitable for shared use between bikes and motor vehicles. According to the U.S. Census, bicycle trips comprise less than 1% of the total commute mode share in the City of Milpitas. For the proposed project, this would equate to approximately 1 or 2 new bike trips during the AM and PM peak hours. The low volume of bicycle trips generated by the project would not exceed the bicycle-carrying capacity of streets surrounding the site, and the increase in bicycle trips would not, by itself, require new off-site bicycle facilities.

To improve bike accessibility, city staff have suggested that the project evaluate the feasibility of widening Hammond Way to provide one vehicle travel lane in each direction and one Class 2 bike lane in each direction. In conjunction with this improvement, the existing 90 degree parking on the west side of Hammond Way could be converted to parallel parking, which would then be provided on both sides of the street from Sinnott Lane to Curtis Avenue. In addition, existing parallel parking would be eliminated on Curtis Avenue between Hammond Way and Main Street and replaced with new Class 2 bike lanes on both sides of the street. With these improvements, there would be a contiguous bike lane between the project site and the existing bike lanes on Main Street. The project civil engineer, RJA, has prepared a preliminary plan showing the requested changes to Hammond Way and Curtis Avenue. The plan shows that Hammond Way would be widened by approximately 12 feet. Under existing conditions, there are 95

marked parking stalls on Hammond Way and 15 marked parking stalls on Curtis Drive in the project area. With the proposed roadway widening on Hammond Way, there would be 184 marked parking stalls on Hammond Way and 6 marked parking stalls on Curtis Drive. Thus, the proposed design would increase the parking supply in the area by 80 spaces. City staff have also requested that the project provide a pedestrian/bike path onsite that would link the pedestrian and bike facilities on Hammond Way to those on Railroad Avenue.

The Santa Clara Valley Transportation Authority (VTA) provides existing bus service on the surrounding roadway network. Bus stops for Routes 47 and 66 are located on Main Street, near Weller Lane. These stops are approximately one-half mile walk from the project site. The Great Mall/Main Transit Center, which provides numerous light rail and bus connections, is located approximately 1 mile south of the project site. According to the U.S. Census, transit trips comprise approximately 3% of the total commute mode share in the City of Milpitas. For the proposed project, this would equate to approximately 4 or 5 new transit trips during the AM and PM peak hours. This volume of riders would not exceed the carrying capacity of the existing bus and rail service near the project site. Therefore, no major improvements to the existing transit facilities would be necessary in conjunction with the proposed project.

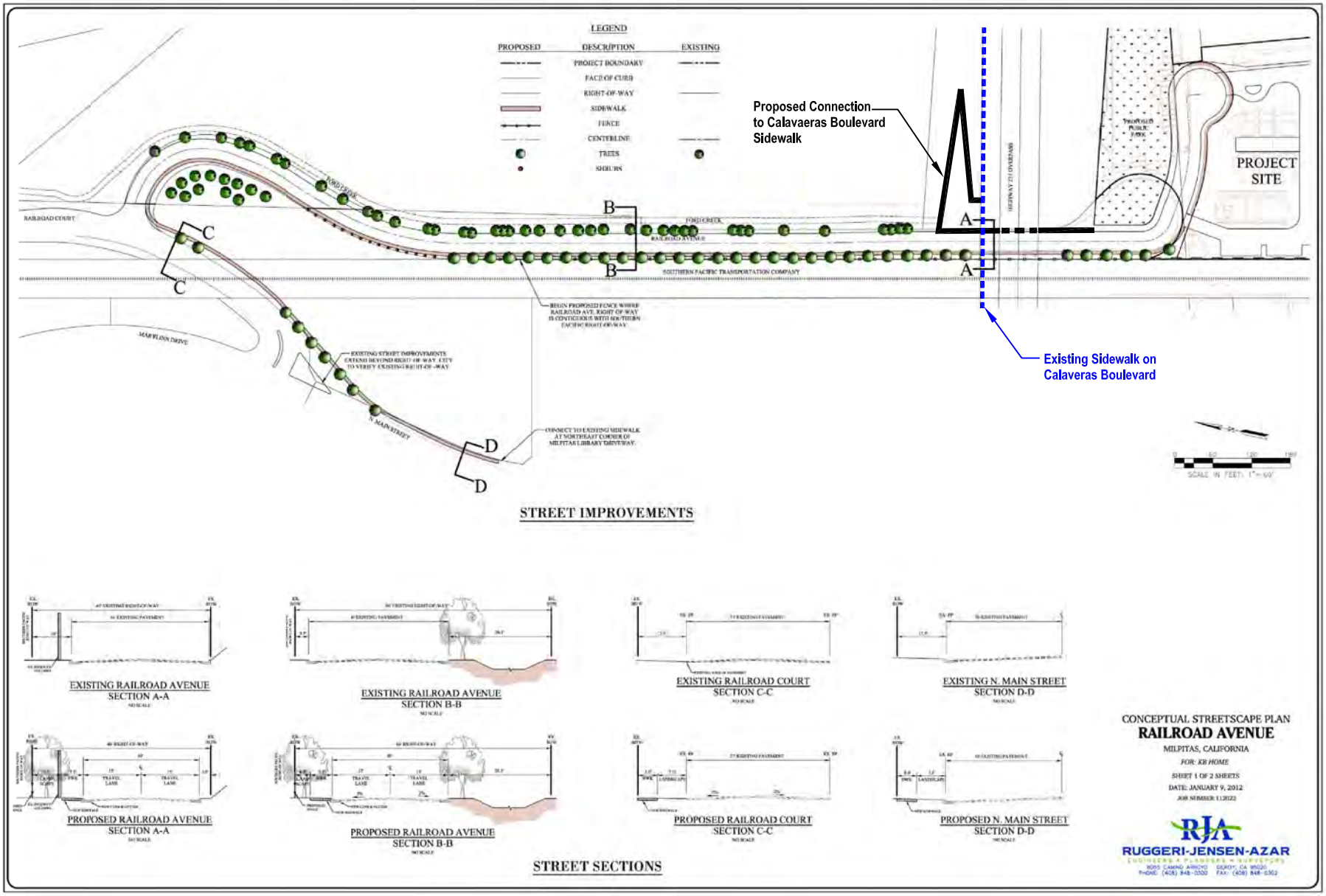


Figure 13

Railroad Avenue Street Improvements

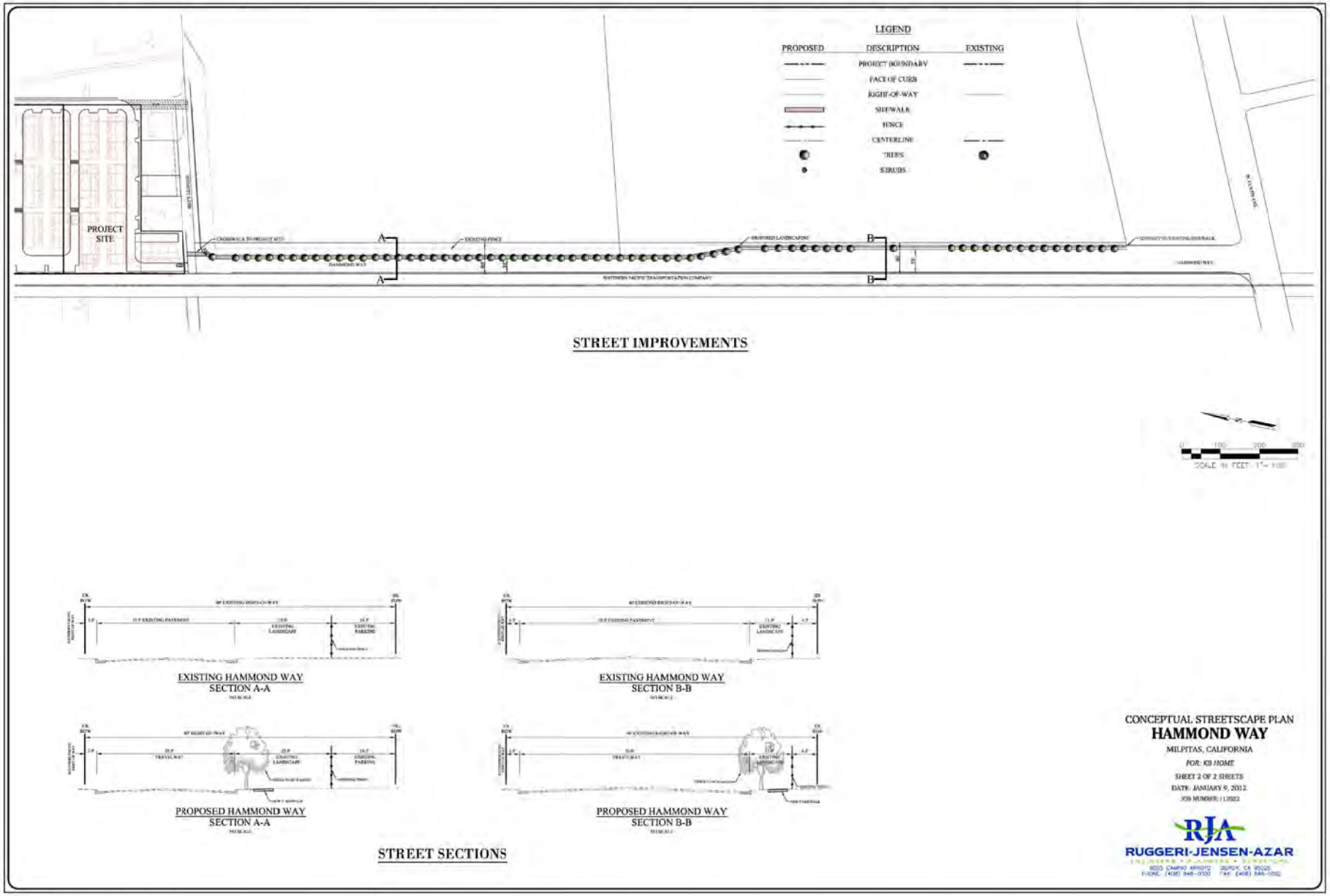


Figure 14

Hammond Way Street Improvements

6. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions. The analysis of cumulative conditions was conducted based on projected roadway link volumes using year 2030 land use data. AM and PM peak hour volumes were developed using the City of Milpitas Travel Demand Forecast (TDF) model, which is a sub-area model of the VTA CMP TDF model.

2030 Network Assumptions

The year 2030 roadway network includes planned transportation improvements. The improvements included in the City of Milpitas TDF model have a high probability of receiving funding in the future. Within the study area, the following improvements were included:

- **I-880 Widening Projects.** I-880 will be widened to include a high occupancy vehicle lane in each direction from Montague Expressway north into Alameda County.
- **Calaveras Boulevard.** Calaveras Boulevard will be widened to six lanes between Milpitas Boulevard and Abel Street. Operational improvements are also planned for intersections on Calaveras Boulevard between I-680 and I-880.
- **Montague Expressway.** Montague Expressway will be widened to provide eight lanes between Great Mall Parkway and I-880. The intersection of Montague Expressway and Great Mall Parkway is planned for grade separation.

Planned improvements outside the study area are described in the VTA Valley Transportation Plan (VTP) 2030, which is on file with the City of Milpitas. It should be noted that some VTP 2030 projects in the City of Milpitas have been identified for VTP 2030 funding. However, the City is still responsible for the 20 percent local match. Therefore, additional monetary contributions for these projects are necessary.

Year 2030 Traffic Volumes

The previously approved land use for the project site under year 2030 conditions includes warehouse uses (prior Sun Microsystems building) and industrial use (Preston Pipelines). The Preston Pipelines buildings are currently occupied. In the prior Sun Microsystems building, 48,700 square feet are unoccupied. For this reason, traffic from the unoccupied portion this building was estimated using ITE rates.

The proposed project includes 98 single family homes and 122 town homes. For the purposes of estimating the effect of the proposed land use change, the traffic impacts of the proposed project were evaluated relative to the prior land use. The net project traffic volumes for the year 2030 analysis were calculated using a three-step process as follows:

- **Traffic Generation.** A comparison of the trip generation between the proposed project and the previously-assumed year 2030 land uses are shown in Table 10. The proposed change in land use would increase the trip generation from the site by 84 trips during the AM peak hour and 91 trips during the PM peak hour.
- **Traffic Distribution & Assignment.** The directions of approach and departure of the proposed and prior land uses were estimated along major travel corridors. The peak hour trips generated by the proposed and prior land uses were assigned to specific street segments in accordance with their trip distributions. This process is described in detail in Chapter 4.
- **Traffic Volume Tabulation.** For each roadway link, the projected peak hour traffic volumes with the proposed project were estimated by subtracting the trips generated by the prior land use from year 2030 traffic volumes, and adding the estimated traffic generated by the proposed project.

Table 10
Year 2030 Project Trip Generation

		ITE	Daily		AM Peak Hour				PM Peak Hour			
Land Use	Size	Code	Rate [1]	Total	Rate [1]	Total	In	Out	Rate [1]	Total	In	Out
Proposed Use												
Single Family Homes	98 DU	210	9.57	938	0.75	74	19	55	1.01	99	62	37
Townhomes	122 DU	230	5.81	709	0.44	54	9	45	0.52	63	43	20
Subtotal				1,647		127	28	99		162	105	57
Existing General Plan Uses												
Occupied Existing Uses [2]				-414		-29	-15	-14		-56	-20	-36
Warehouse [3]	48.7 KSF	150	3.56	-173	0.30	-15	-12	-3	0.32	-16	-4	-12
Subtotal				-587		-44	-27	-17		-72	-24	-48
Net Project Trips:				**1,059**		**84**	**1**	**83**		**91**	**81**	**10**

[1] Rates Per ITE *Trip Generation* Manual, 8th Edition, 2008
[2] Trips measured directly from the site. Daily trip generation estimated from PM peak hour count using ITE data.
[3] Represents unoccupied portion of the prior Sun Microsystems building. Traffic estimated using ITE rates.

Year 2030 Traffic Impacts

Year 2030 conditions with the proposed project were evaluated relative to year 2030 conditions with the prior land use designation in order to determine potential impacts. The impacts of the proposed land use change are summarized in Tables 11 and 12 for the AM and PM peak hours, respectively. According to the analysis, the proposed project would result in the following significant impacts:

- **Abel Street – Milpitas Boulevard to Calaveras Boulevard, Southbound.** During the AM peak hour, the roadway segment would operate at LOS F under year 2030 no project conditions. The level of service standard for this roadway segment is LOS D. The project would add traffic equal to 1.7% of the roadway capacity. According to the City of Milpitas, this is a significant impact.

- **Abel Street –Calaveras Boulevard to Great Mall Parkway, Southbound.** During the AM peak hour, the roadway segment would operate at LOS E under year 2030 no project conditions. The level of service standard for this roadway segment is LOS D. The project would add traffic equal to 1.4% of the roadway capacity. According to the City of Milpitas, this is a significant impact.
- **Abel Street –Calaveras Boulevard to Great Mall Parkway, Northbound.** During the PM peak hour, the roadway segment would operate at LOS F under year 2030 no project conditions. The level of service standard for this roadway segment is LOS D. The project would add traffic equal to 1.5% of the roadway capacity. According to the City of Milpitas, this is a significant impact.
- **Main Street –Marylinn Drive to Calaveras Boulevard, Northbound.** During the PM peak hour, the roadway segment would operate at LOS F under year 2030 no project conditions. The level of service standard for this roadway segment is LOS D. The project would add traffic equal to 2.3% of the roadway capacity. According to the City of Milpitas, this is a significant impact.
- **Main Street –Calaveras Boulevard to Carlo Street, Northbound.** During the PM peak hour, the roadway segment would operate at LOS F under year 2030 no project conditions. The level of service standard for this roadway segment is LOS D. The project would add traffic equal to 1.2% of the roadway capacity. According to the City of Milpitas, this is a significant impact.

To mitigate the year 2030 project impacts to Main Street and Abel Street would require widening each roadway by one additional through lane. There is insufficient right-of-way to widen these streets without removal of sidewalks and/or nearby existing buildings. Therefore, mitigation of these impacts would be infeasible and the impacts should be considered significant and unavoidable. However, as partial mitigation for the impacts, the project could participate in the Midtown Specific Plan traffic impact fee as well as the Calaveras Boulevard Widening traffic impact fee. The purpose of the Midtown fee program is to fund the transportation improvements necessary to build out the 1,000-acre Midtown planning area. Many of these improvements would occur on Main Street and Abel Street. These include: additional eastbound and westbound turn lanes at the intersection of Calaveras Boulevard/Abel Street, a new traffic signal at the intersection of Main Street/Corning Avenue, and the addition of a second northbound left turn lane at Great Mall Parkway/Abel Street. The purpose of the Calaveras Boulevard fee is to fund the widening of the bridge section of Calaveras Boulevard between Milpitas Boulevard and Abel Street from four lanes to six lanes. The proposed project would add traffic to the Midtown area and Calaveras Boulevard. Participation in these fee programs, and construction of the fee program improvements, would help reduce overall travel times in the project vicinity and serve as partial mitigation for project impacts.

Table 11
Year 2030 AM Peak Hour LOS

				LOS	Volumes		Project Trips		Capacity		v/c		LOS		Adverse
Segment	From	To	Direction	Standard	No Project	Project	abs	% /a/	No Project	Project	No Project	Project	No Project	Project	Impact ?
Calaveras Blvd /b/															
	I-880	Abbott Avenue	EB	E	1,872	1,874	2	0.1%	3,600	3,600	0.52	0.52	A	A	no
	Abbott Avenue	Abel Street	EB	E	1,937	1,940	3	0.1%	3,600	3,600	0.54	0.54	A	A	no
	Abel Street	Milpitas Boulevard	EB	E	1,097	1,109	12	0.4%	2,700	2,700	0.41	0.41	A	A	no
	Milpitas Boulevard	Hillview Drive	EB	E	864	869	5	0.2%	2,700	2,700	0.32	0.32	A	A	no
	Hillview Drive	I-680	EB	E	790	795	5	0.2%	2,700	2,700	0.29	0.29	A	A	no
	I-880	Abbott Avenue	WB	E	3,106	3,124	18	0.7%	2700	2700	1.15	1.16	F	F	no
	Abbott Avenue	Abel Street	WB	E	3,011	3,030	19	0.7%	2700	2700	1.12	1.12	F	F	no
	Abel Street	Milpitas Boulevard	WB	E	3,050	3,049	-1	0.0%	2700	2700	1.13	1.13	F	F	no
	Milpitas Boulevard	Hillview Drive	WB	E	2,451	2,450	-1	0.0%	2700	2700	0.91	0.91	E	E	no
	Hillview Drive	I-680	WB	E	2,634	2,633	-1	0.0%	2700	2700	0.98	0.98	E	E	no
Abel Street															
	Milpitas Blvd.	Calavaras Blvd.	NB	D	974	975	1	0.1%	1,800	1,800	0.54	0.54	A	A	no
	Calaveras Blvd.	Great Mall Parkway	NB	D	1,350	1,352	2	0.1%	1,800	1,800	0.75	0.75	C	C	no
	Great Mall Parkway	S. Main Street	NB	D	893	895	2	0.1%	1,800	1,800	0.50	0.50	A	A	no
	Milpitas Blvd.	Calavaras Blvd.	SB	D	2,155	2,186	31	1.7%	1,800	1,800	1.20	1.21	F	F	yes
	Calaveras Blvd.	Great Mall Parkway	SB	D	1,646	1,672	26	1.4%	1,800	1,800	0.91	0.93	E	E	yes
	Great Mall Parkway	S. Main Street	SB	D	717	724	7	0.4%	1,800	1,800	0.40	0.40	A	A	no
Great Mall Parkway															
	I-880	S. Main Street	EB	D	904	904	0	0.0%	2,700	2,700	0.33	0.33	A	A	no
	S. Main Street	Montague Expressway	EB	D	1,661	1,672	11	0.4%	2,700	2,700	0.62	0.62	B	B	no
	I-880	S. Main Street	WB	D	3,552	3,571	19	0.7%	2,700	2,700	1.32	1.32	F	F	no
	S. Main Street	Montague Expressway	WB	D	2,341	2,340	-1	0.0%	2,700	2,700	0.87	0.87	D	D	no
Main Street															
	Marylinn Drive	Calaveras Blvd. Ramp	NB	D	302	303	1	0.1%	900	900	0.34	0.34	A	A	no
	Calaveras Blvd. Ramp	Carlo Street Ramp	NB	D	183	185	2	0.2%	900	900	0.20	0.21	A	A	no
	Carlo Street Ramp	Curtis Avenue	NB	D	545	545	0	0.0%	900	900	0.61	0.61	B	B	no
	Curtis Avenue	Great Mall Parkway	NB	D	744	740	-4	-0.2%	1,800	1,800	0.41	0.41	A	A	no
	Great Mall Parkway	Abel Street	NB	D	830	827	-3	-0.2%	1,800	1,800	0.46	0.46	A	A	no
	Abel Street	Cedar Way	NB	D	1,712	1,711	-1	-0.1%	1,800	1,800	0.95	0.95	E	E	no
	Cedar Way	Montague Expressway	NB	D	1,782	1,781	-1	-0.1%	1,800	1,800	0.99	0.99	E	E	no
	Marylinn Drive	Calaveras Blvd. Ramp	SB	D	628	659	31	3.4%	900	900	0.70	0.73	B	C	no
	Calaveras Blvd. Ramp	Carlo Street Ramp	SB	D	1,372	1,372	0	0.0%	900	900	1.52	1.52	F	F	no
	Carlo Street Ramp	Curtis Avenue	SB	D	1,506	1,506	0	0.0%	900	900	1.67	1.67	F	F	no
	Curtis Avenue	Great Mall Parkway	SB	D	1,700	1,716	16	0.9%	1,800	1,800	0.94	0.95	E	E	no
	Great Mall Parkway	Abel Street	SB	D	1,111	1,116	5	0.3%	1,800	1,800	0.62	0.62	B	B	no
	Abel Street	Cedar Way	SB	D	1,697	1,709	12	0.7%	1,800	1,800	0.94	0.95	E	E	no
	Cedar Way	Montague Expressway	SB	D	1,977	1,989	12	0.7%	1,800	1,800	1.10	1.11	F	F	no

/a/ project trips as a percent of roadway capacity
/b/ CMP route

Table 12
Year 2030 PM Peak Hour LOS

				LOS	Volumes		Project Trips		Capacity		v/c		LOS		Adverse
Segment	From	To	Direction	Standard	No Project	Project	abs	% /a/	No Project	Project	No Project	Project	No Project	Project	Impact ?
Calaveras Blvd /b/															
	I-880	Abbott Avenue	EB	E	3,842	3,861	19	0.5%	3,600	3,600	1.07	1.07	F	F	no
	Abbott Avenue	Abel Street	EB	E	3,611	3,632	21	0.6%	3,600	3,600	1.00	1.01	F	F	no
	Abel Street	Milpitas Boulevard	EB	E	3,191	3,193	2	0.1%	2,700	2,700	1.18	1.18	F	F	no
	Milpitas Boulevard	Hillview Drive	EB	E	2,475	2,474	-1	0.0%	2,700	2,700	0.92	0.92	E	E	no
	Hillview Drive	I-680	EB	E	2,710	2,709	-1	0.0%	2,700	2,700	1.00	1.00	F	F	no
	I-880	Abbott Avenue	WB	E	2,456	2,460	4	0.1%	2700	2700	0.91	0.91	E	E	no
	Abbott Avenue	Abel Street	WB	E	2,441	2,446	5	0.2%	2700	2700	0.90	0.91	E	E	no
	Abel Street	Milpitas Boulevard	WB	E	1,841	1,851	10	0.4%	2700	2700	0.68	0.69	B	B	no
	Milpitas Boulevard	Hillview Drive	WB	E	1,282	1,286	4	0.1%	2700	2700	0.47	0.48	A	A	no
	Hillview Drive	I-680	WB	E	1,186	1,190	4	0.1%	2700	2700	0.44	0.44	A	A	no
Abel Street															
	Milpitas Blvd.	Calavaras Blvd.	NB	D	1,971	1,981	10	0.6%	1,800	1,800	1.10	1.10	F	F	no
	Calaveras Blvd.	Great Mall Parkway	NB	D	2,000	2,027	27	1.5%	1,800	1,800	1.11	1.13	F	F	yes
	Great Mall Parkway	S. Main Street	NB	D	383	391	8	0.4%	1,800	1,800	0.21	0.22	A	A	no
	Milpitas Blvd.	Calavaras Blvd.	SB	D	1,338	1,345	7	0.4%	1,800	1,800	0.74	0.75	C	C	no
	Calaveras Blvd.	Great Mall Parkway	SB	D	1,511	1,518	7	0.4%	1,800	1,800	0.84	0.84	D	D	no
	Great Mall Parkway	S. Main Street	SB	D	966	970	4	0.2%	1,800	1,800	0.54	0.54	A	A	no
Great Mall Parkway															
	I-880	S. Main Street	EB	D	3,931	3,950	19	0.7%	2,700	2,700	1.46	1.46	F	F	no
	S. Main Street	Montague Expressway	EB	D	2,819	2,818	-1	0.0%	2,700	2,700	1.04	1.04	F	F	no
	I-880	S. Main Street	WB	D	1,406	1,409	3	0.1%	2,700	2,700	0.52	0.52	A	A	no
	S. Main Street	Montague Expressway	WB	D	1,558	1,569	11	0.4%	2,700	2,700	0.58	0.58	A	A	no
Main Street															
	Marylinn Drive	Calaveras Blvd. Ramp	NB	D	1038	1,059	21	2.3%	900	900	1.15	1.18	F	F	yes
	Calaveras Blvd. Ramp	Carlo Street Ramp	NB	D	963	974	11	1.2%	900	900	1.07	1.08	F	F	yes
	Carlo Street Ramp	Curtis Avenue	NB	D	1,488	1,488	0	0.0%	900	900	1.65	1.65	F	F	no
	Curtis Avenue	Great Mall Parkway	NB	D	1,771	1,786	15	0.8%	1,800	1,800	0.98	0.99	E	E	no
	Great Mall Parkway	Abel Street	NB	D	1,280	1,284	4	0.2%	1,800	1,800	0.71	0.71	C	C	no
	Abel Street	Cedar Way	NB	D	1,711	1,723	12	0.7%	1,800	1,800	0.95	0.96	E	E	no
	Cedar Way	Montague Expressway	NB	D	2,014	2,026	12	0.7%	1,800	1,800	1.12	1.13	F	F	no
	Marylinn Drive	Calaveras Blvd. Ramp	SB	D	406	413	7	0.8%	900	900	0.45	0.46	A	A	no
	Calaveras Blvd. Ramp	Carlo Street Ramp	SB	D	1,002	1,002	0	0.0%	900	900	1.11	1.11	F	F	no
	Carlo Street Ramp	Curtis Avenue	SB	D	1,177	1,177	0	0.0%	900	900	1.31	1.31	F	F	no
	Curtis Avenue	Great Mall Parkway	SB	D	1,331	1,326	-5	-0.3%	1,800	1,800	0.74	0.74	C	C	no
	Great Mall Parkway	Abel Street	SB	D	803	799	-4	-0.2%	1,800	1,800	0.45	0.44	A	A	no
	Abel Street	Cedar Way	SB	D	1,809	1,809	0	0.0%	1,800	1,800	1.01	1.01	F	F	no
	Cedar Way	Montague Expressway	SB	D	1,933	1,933	0	0.0%	1,800	1,800	1.07	1.07	F	F	no

/a/ project trips as a percent of roadway capacity

/b/ CMP route

Preston Residential Development Transportation Impact Analysis Technical Appendices

July 16, 2012

Appendix A

Traffic Counts

Intersection Turning Movement

Prepared by:

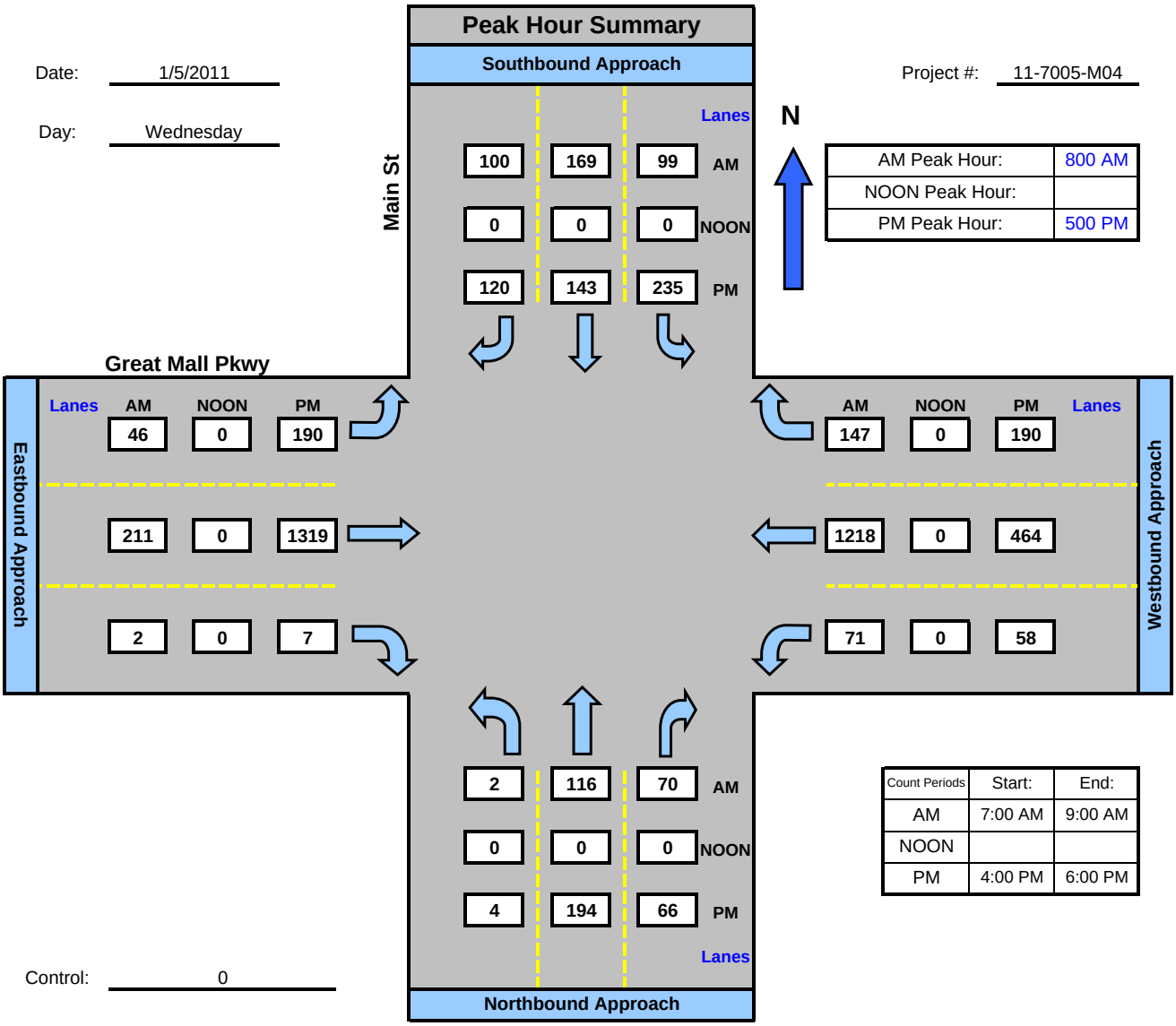
National Data & Surveying Services

Main St and Great Mall Pkwy , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M04



AM Peak Hour:	800 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

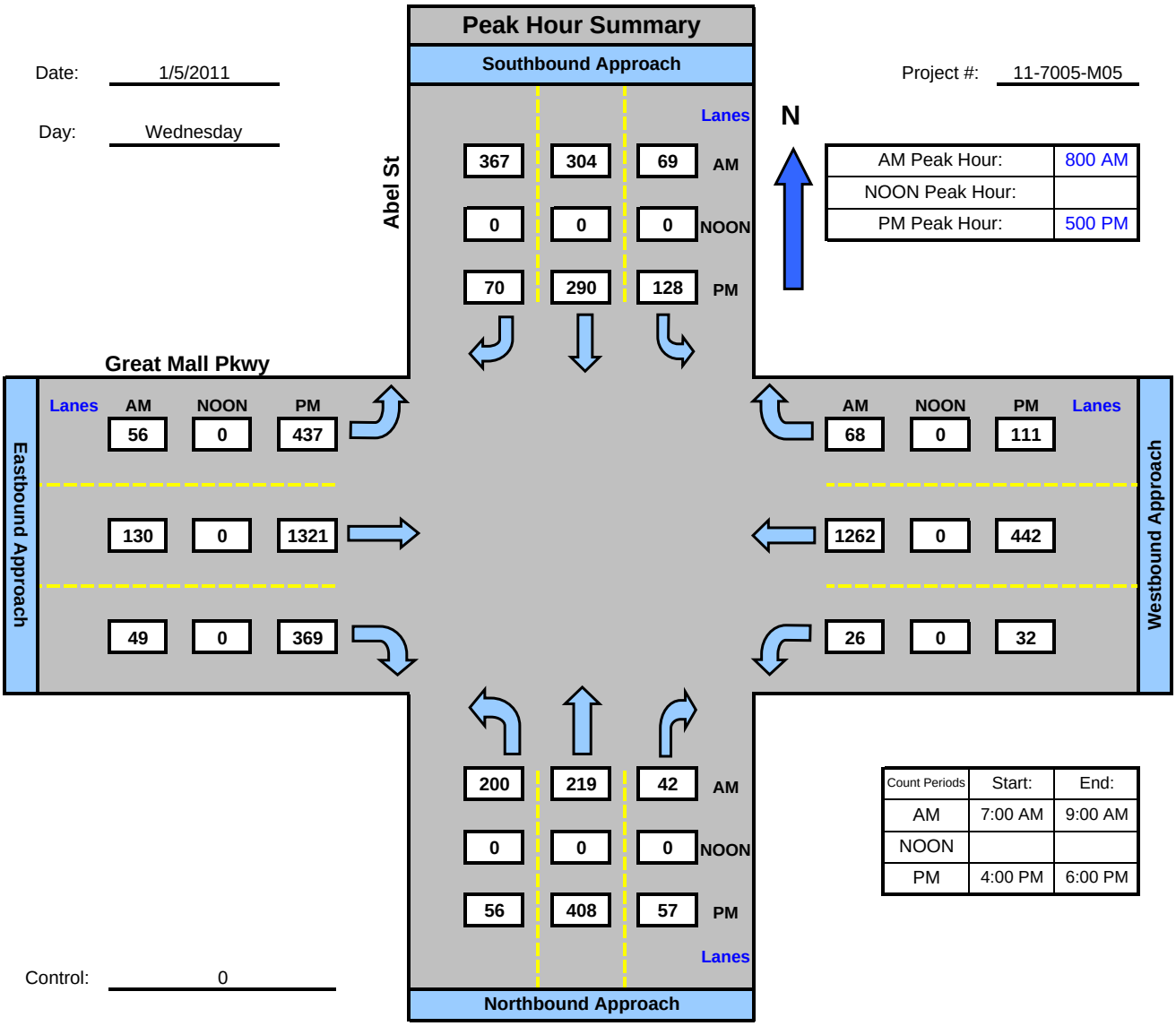
National Data & Surveying Services

Abel St and Great Mall Pkwy , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M05



AM Peak Hour:	800 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

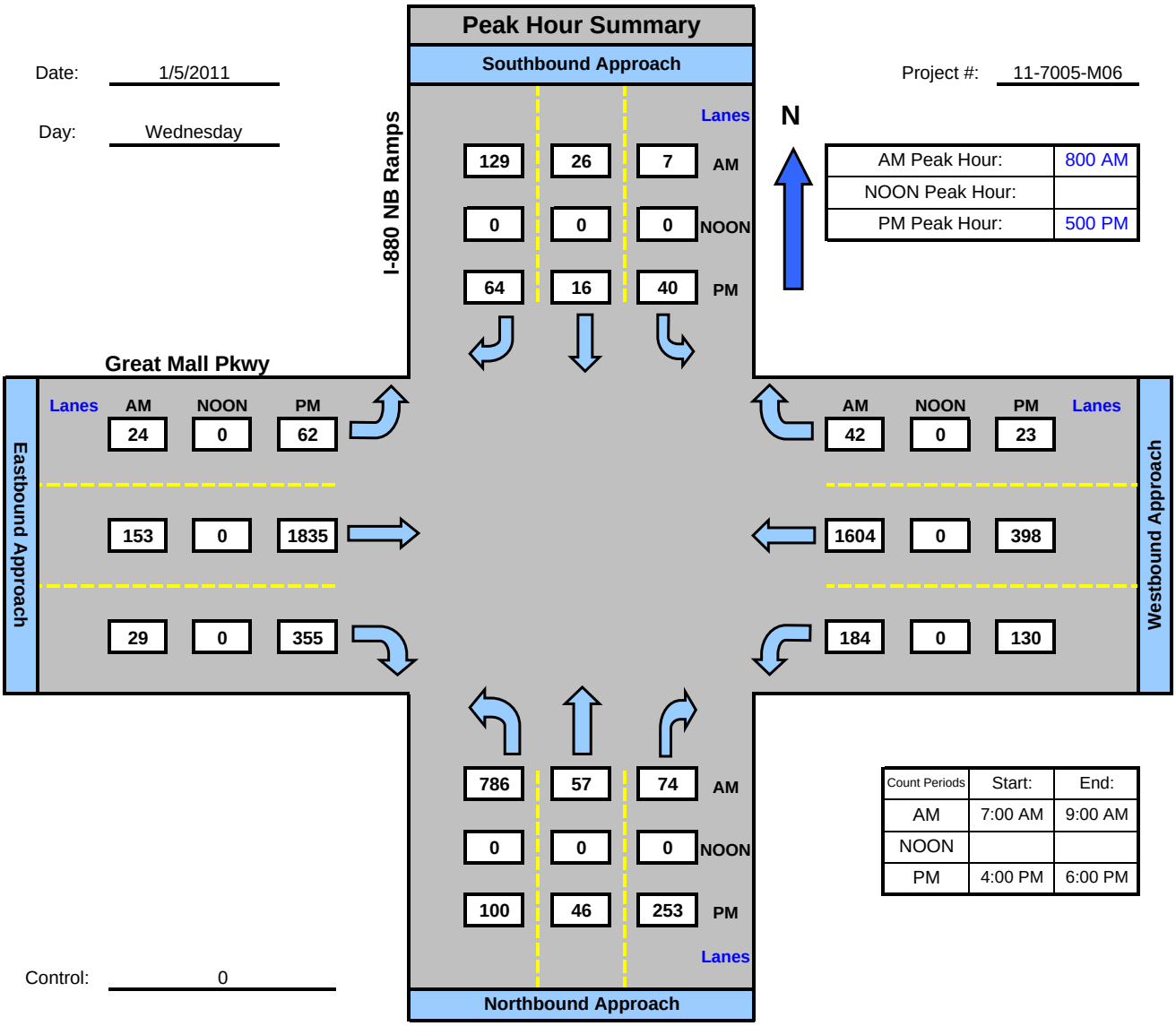
I-880 NB Ramps and Great Mall Pkwy , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M06

AM Peak Hour:	800 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM



Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

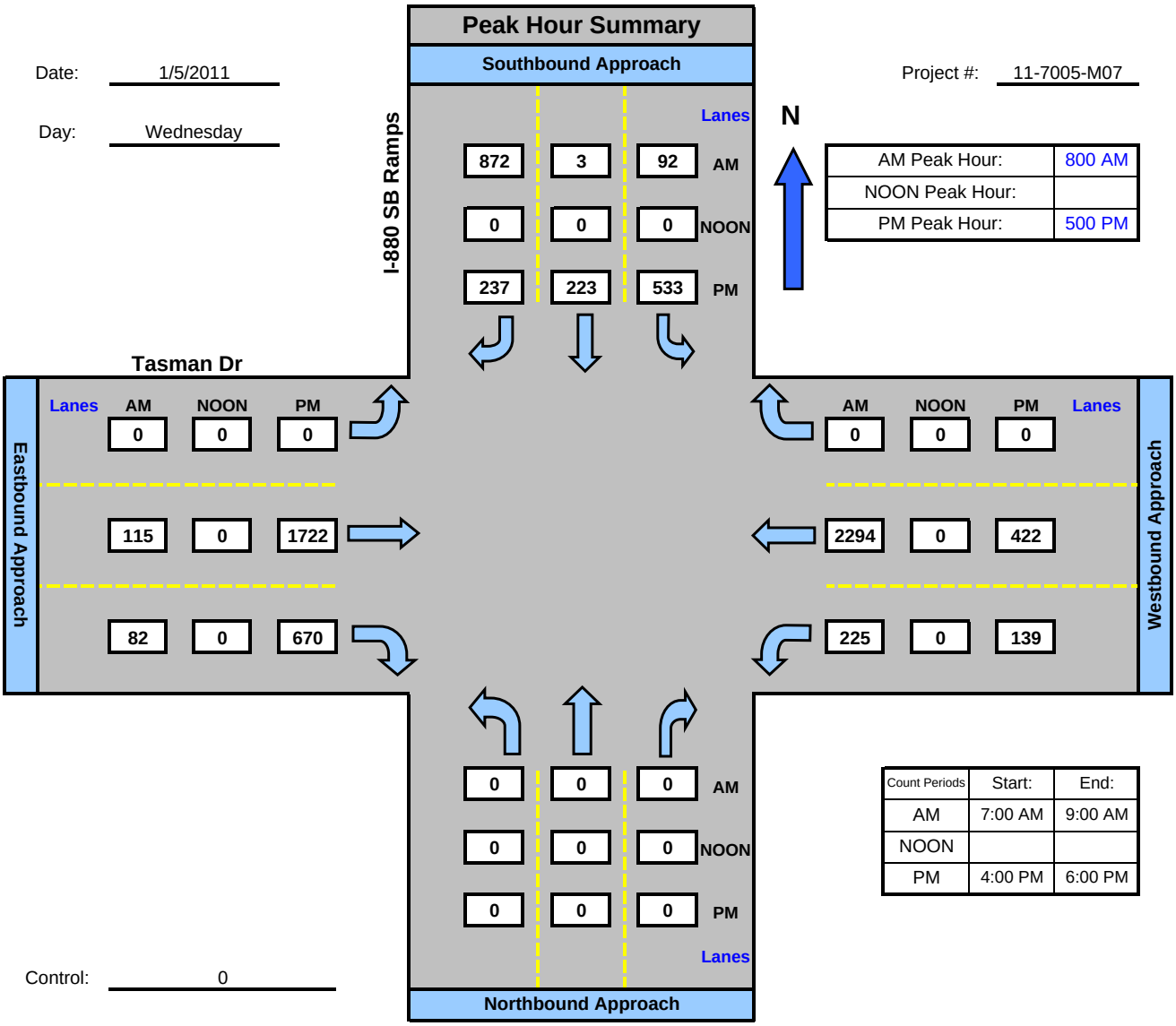
I-880 SB Ramps and Tasman Dr , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M07

AM Peak Hour:	800 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM



Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

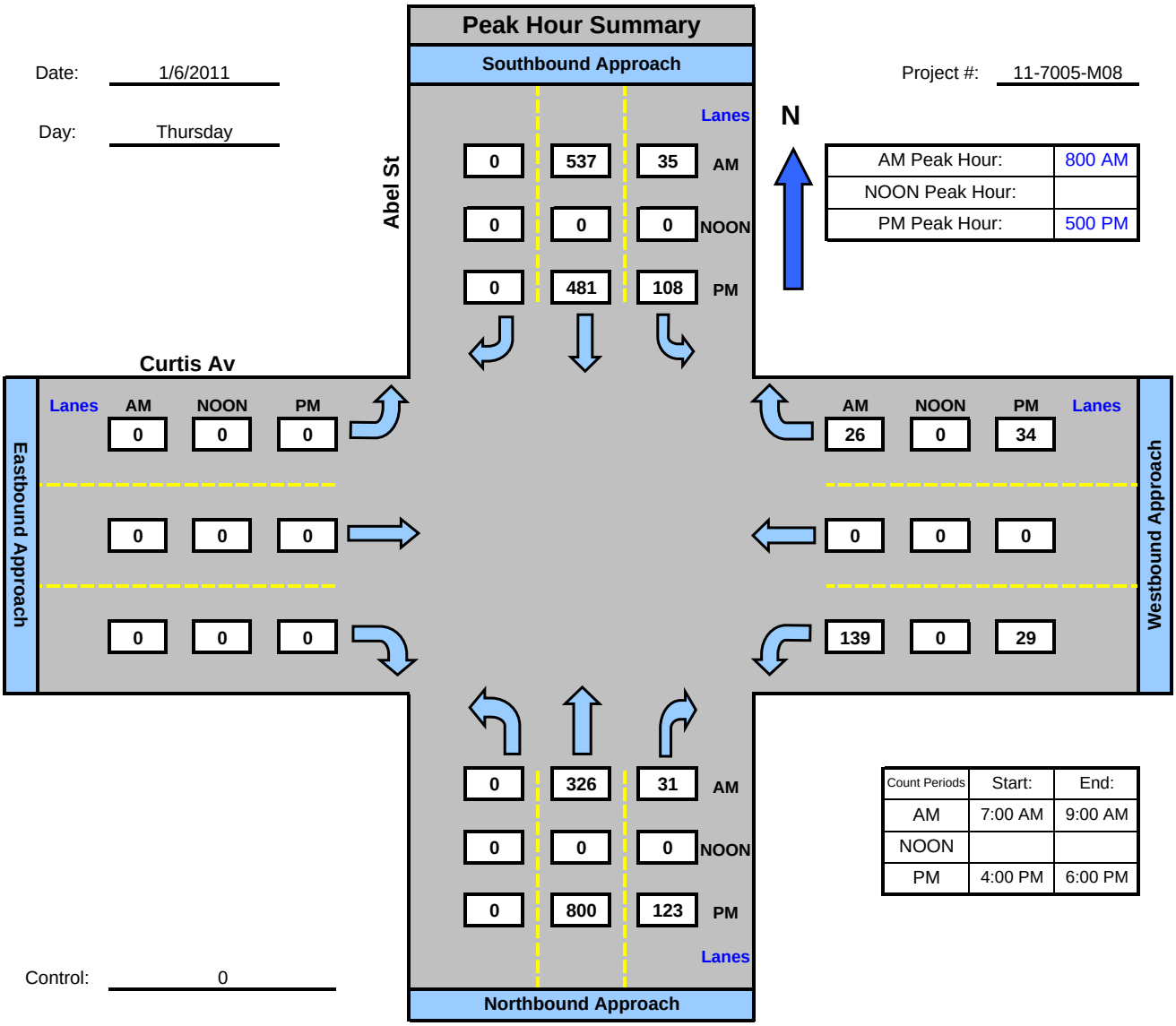
National Data & Surveying Services

Abel St and Curtis Av , City of Milpitas

Date: 1/6/2011

Day: Thursday

Project #: 11-7005-M08



AM Peak Hour:	800 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

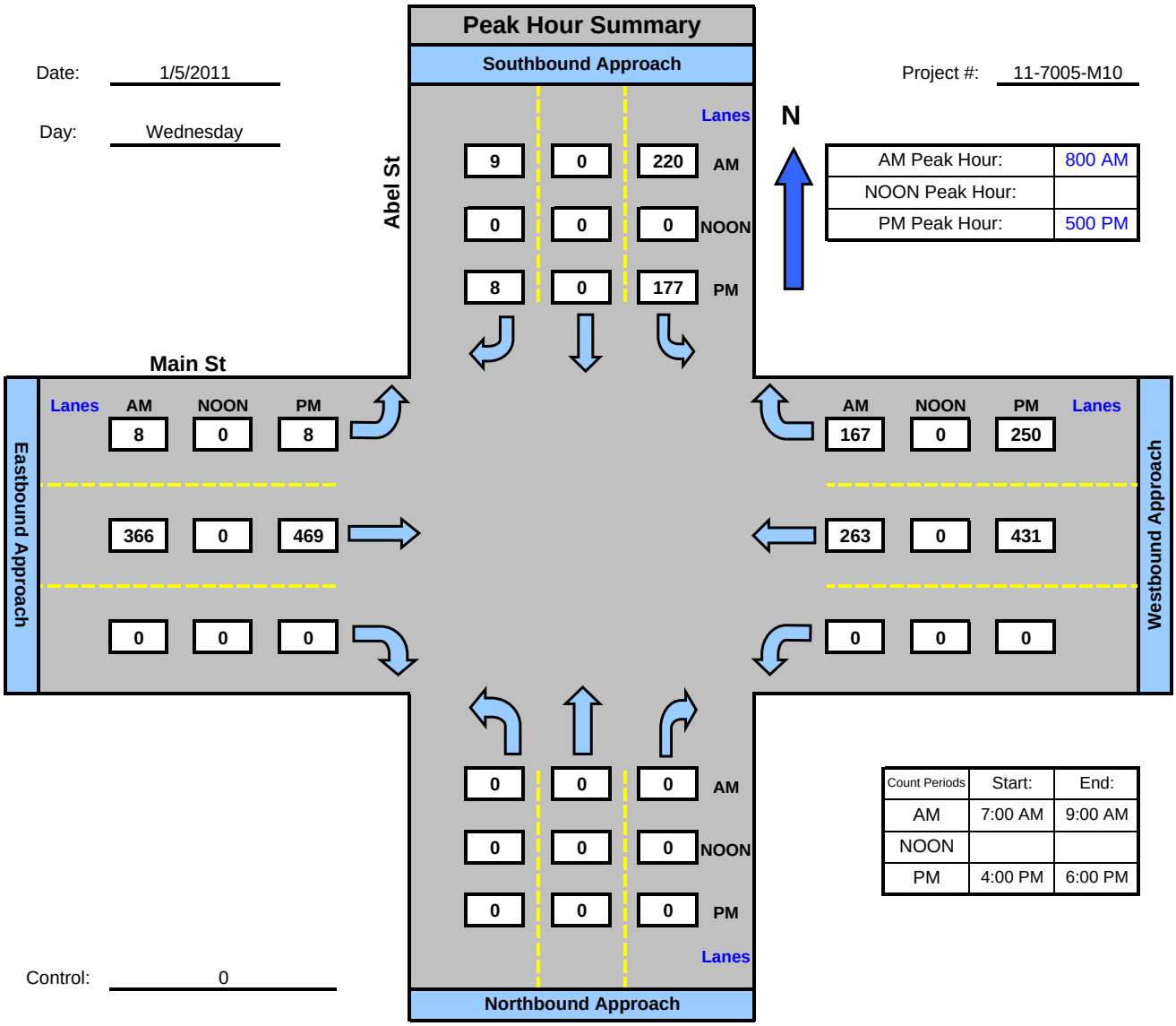
National Data & Surveying Services

Abel St and Main St , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M10



AM Peak Hour:	800 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Main St and Curtis Av , City of Milpitas

Date: 1/6/2011

Day: Thursday

Project #: 11-7005-M11

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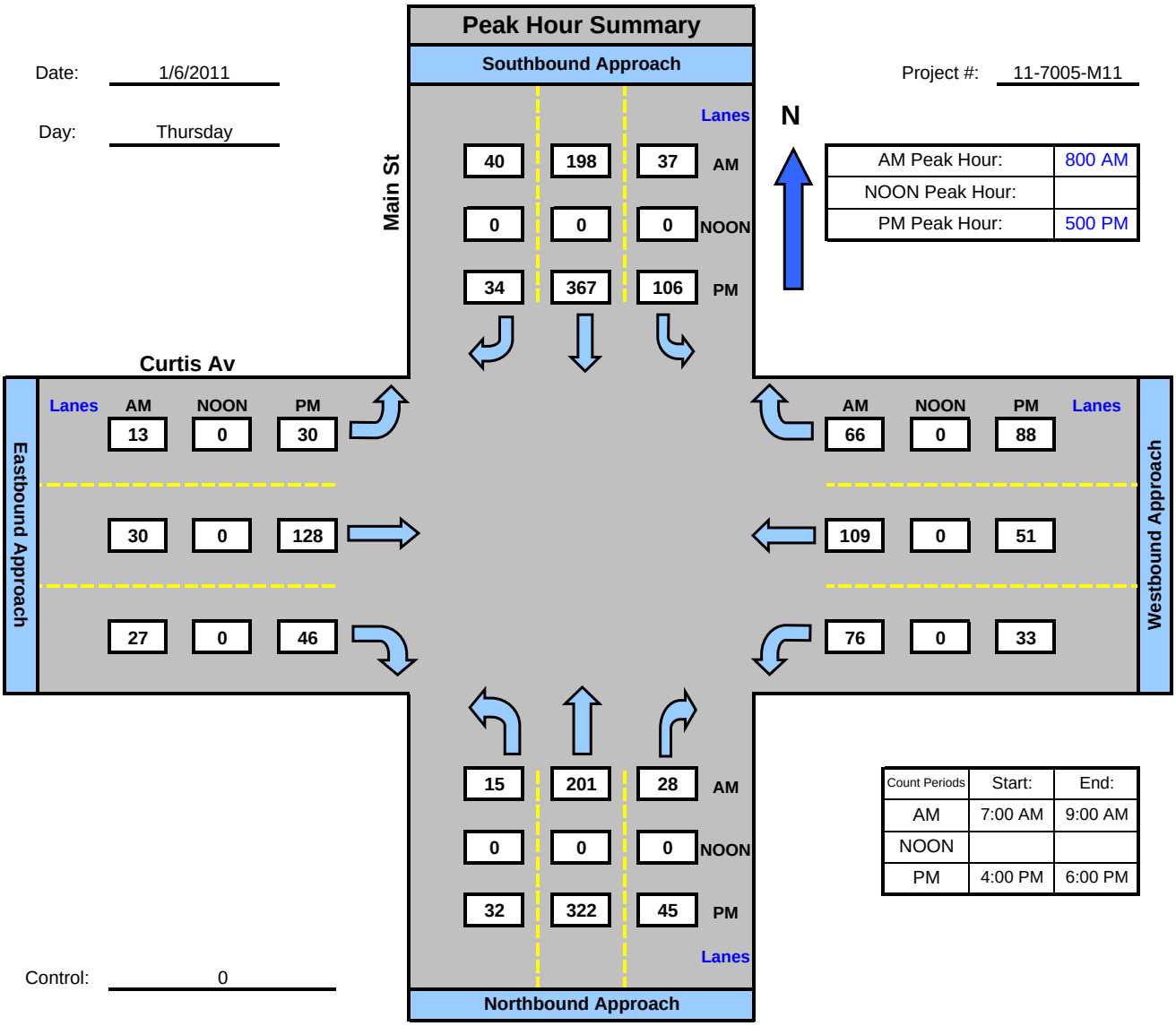
NOON Peak Hour:	
PM Peak Hour:	500 PM



Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

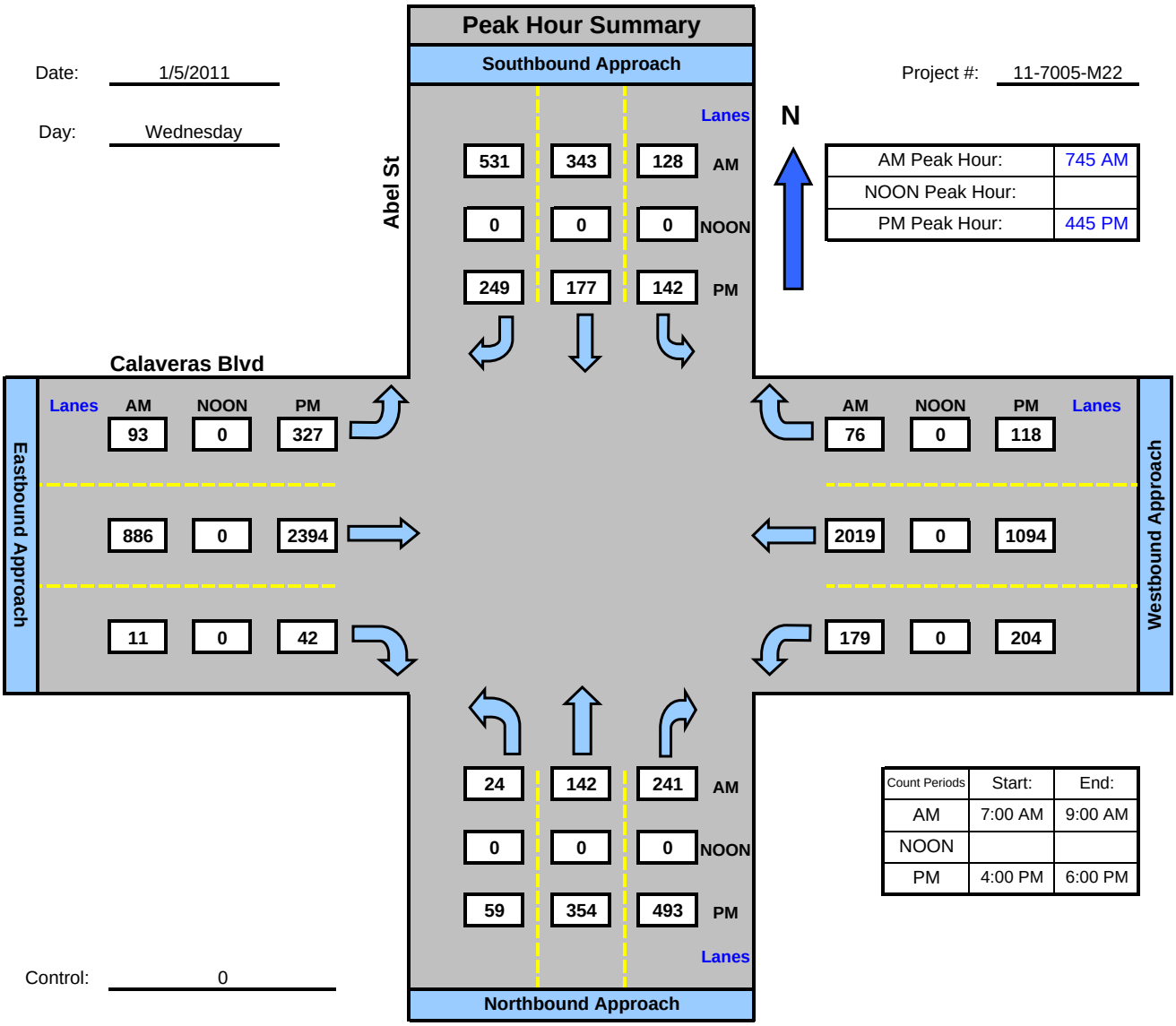
National Data & Surveying Services

Abel St and Calaveras Blvd , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M22



AM Peak Hour:	745 AM
NOON Peak Hour:	
PM Peak Hour:	445 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

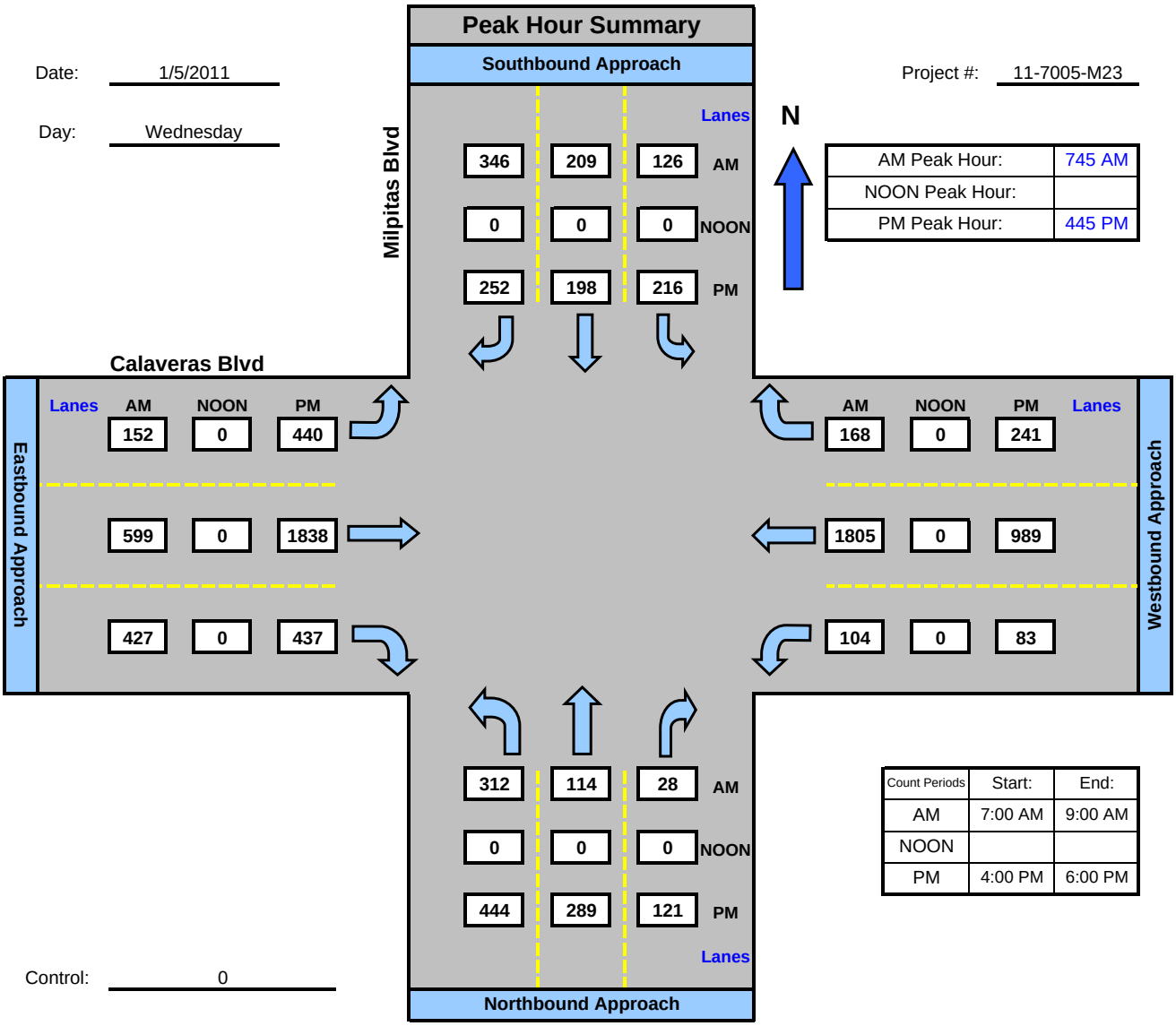
National Data & Surveying Services

Milpitas Blvd and Calaveras Blvd , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M23



AM Peak Hour:	745 AM
NOON Peak Hour:	
PM Peak Hour:	445 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

Intersection Turning Movement

Prepared by:

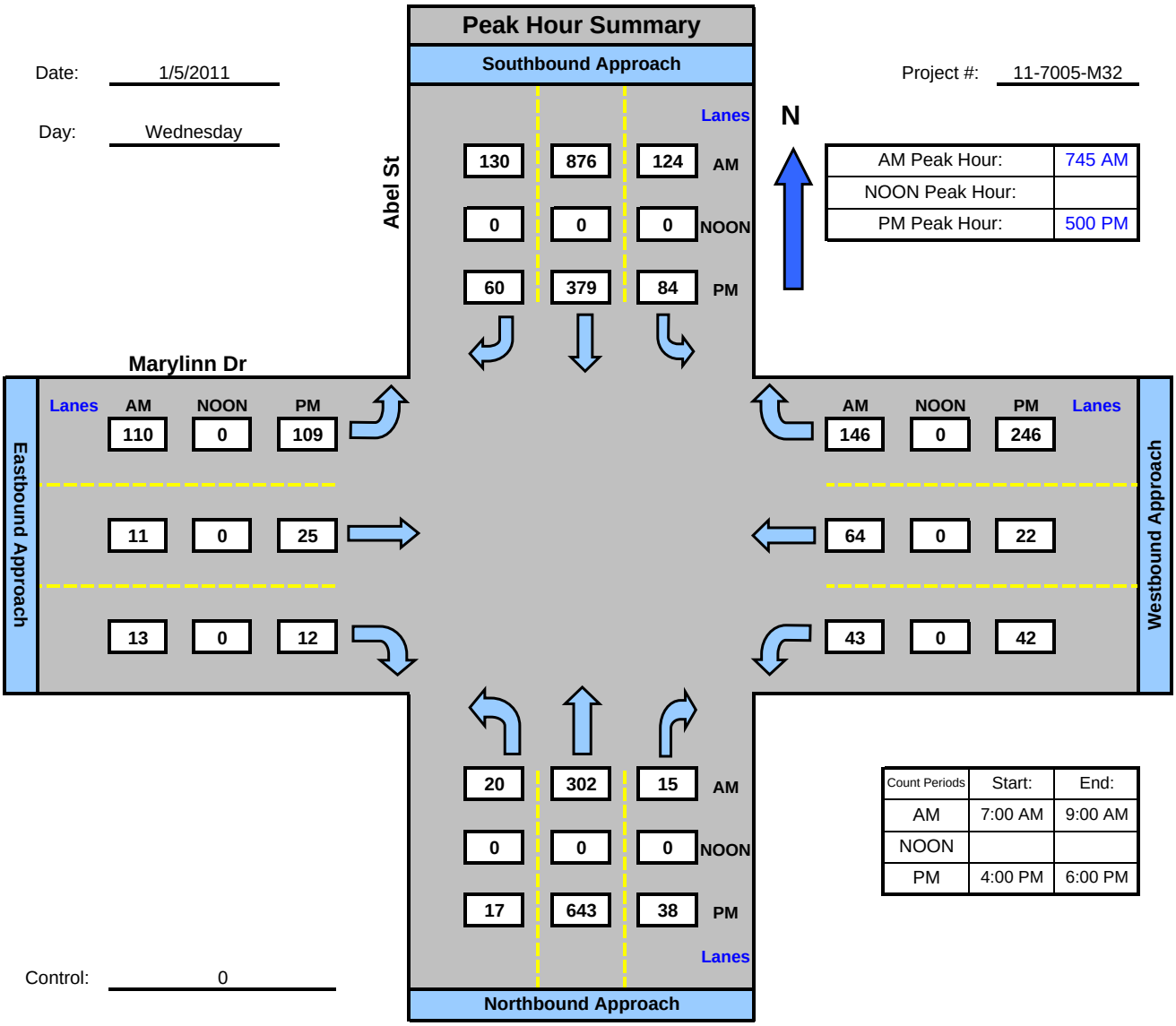
National Data & Surveying Services

Abel St and Marylinn Dr , City of Milpitas

Date: 1/5/2011

Day: Wednesday

Project #: 11-7005-M32



AM Peak Hour:	745 AM
NOON Peak Hour:	
PM Peak Hour:	500 PM

Count Periods	Start:	End:
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Control: 0

AM Peak-Hour Volume Count Worksheet

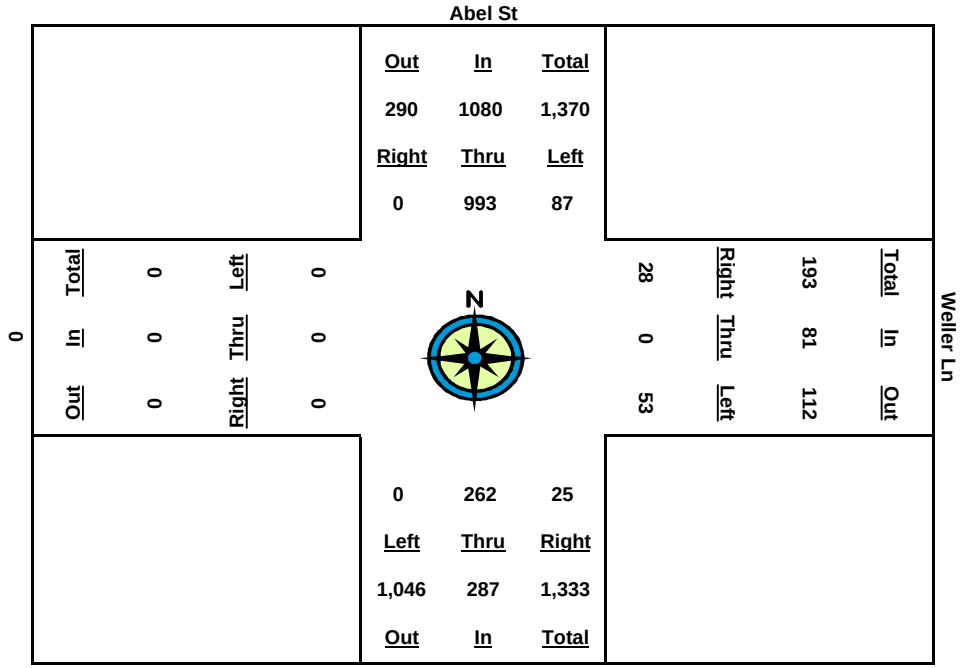
HEXAGON TRANSPORTATION CONSULTANTS
4377 First Street, Suite A
Pleasanton, CA 94566
Phone 925-225-1439 Fax 925-225-0688

Date: 1/11/12
Counter: MN
Intersection Name: Abel St and Weller Ln
Weather: clear
City/Project: Milpitas - Preston Property

	Abel St				Weller Ln				Abel St							
	North Approach				East Approach				South Approach				West Approach			
End Time	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	90	11	101	6	0	8	14	8	23	0	31	0	0	0	0
7:30	0	207	20	227	9	0	23	32	10	96	0	106	0	0	0	0
7:45	0	406	28	434	15	0	33	48	18	208	0	226	0	0	0	0
8:00	0	679	48	727	24	0	44	68	23	279	0	302	0	0	0	0
8:15	0	916	76	992	26	0	52	78	26	353	0	379	0	0	0	0
8:30	0	1,149	94	1,243	35	0	68	103	32	415	0	447	0	0	0	0
8:45	0	1,399	115	1,514	43	0	86	129	43	470	0	513	0	0	0	0
9:00	0	1,621	131	1,752	49	0	100	149	51	520	0	571	0	0	0	0

Peak Hour	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**PK Hour**
7:00 - 8:00	0	679	48	727	24	0	44	68	23	279	0	302	0	0	0	0	1,097
7:15 - 8:15	0	826	65	891	20	0	44	64	18	330	0	348	0	0	0	0	1,303
7:30 - 8:30	0	942	74	1,016	26	0	45	71	22	319	0	341	0	0	0	0	1,428
7:45 - 8:45	0	993	87	1,080	28	0	53	81	25	262	0	287	0	0	0	0	1,448
8:00 - 9:00	0	942	83	1,025	25	0	56	81	28	241	0	269	0	0	0	0	1,375
Peak Volumes:	**0**	**993**	**87**	**1,080**	**28**	**0**	**53**	**81**	**25**	**262**	**0**	**287**	**0**	**0**	**0**	**0**	**1,448**

Cut and Paste	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**
	0	262	25	87	993	0	0	0	0	53	0	28



PM Peak-Hour Volume Count Worksheet

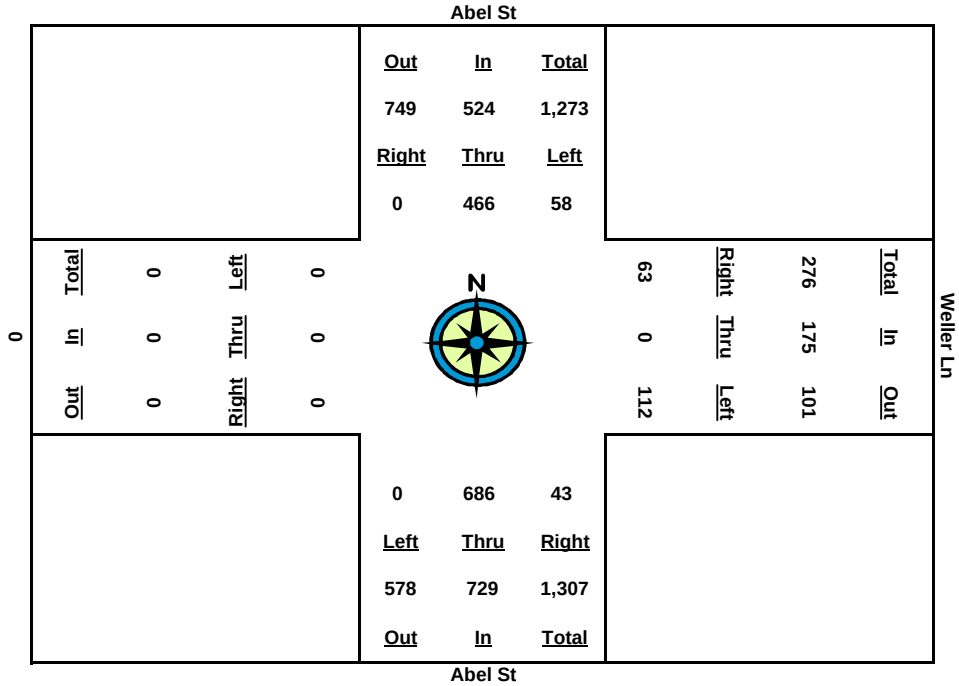
HEXAGON TRANSPORTATION CONSULTANTS
4377 First Street, Suite A
Pleasanton, CA 94566
Phone 925-225-1439 Fax 925-225-0688

Date: 1/11/12
Counter: MN
Intersection Name: Abel St and Weller Ln
Weather: clear
City/Project: Milpitas - Preston Property

	Abel St				Weller Ln				Abel St							
	North Approach				East Approach				South Approach				West Approach			
Start Time	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	92	9	101	10	0	23	33	21	134	0	155	0	0	0	0
4:45	0	195	18	213	18	0	51	69	40	271	0	311	0	0	0	0
5:00	0	303	31	334	28	0	83	111	54	405	0	459	0	0	0	0
5:15	0	409	44	453	48	0	100	148	66	572	0	638	0	0	0	0
5:30	0	518	59	577	62	0	137	199	78	742	0	820	0	0	0	0
5:45	0	638	77	715	77	0	153	230	89	905	0	994	0	0	0	0
6:00	0	769	89	858	91	0	195	286	97	1,091	0	1,188	0	0	0	0

Peak Hour	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	PK Hour
4:00 - 5:00	0	303	31	334	28	0	83	111	54	405	0	459	0	0	0	0	904
4:15 - 5:15	0	409	44	453	48	0	100	148	66	572	0	638	0	0	0	0	1,239
4:30 - 5:30	0	426	50	476	52	0	114	166	57	608	0	665	0	0	0	0	1,307
4:45 - 5:45	0	443	59	502	59	0	102	161	49	634	0	683	0	0	0	0	1,346
5:00 - 6:00	0	466	58	524	63	0	112	175	43	686	0	729	0	0	0	0	1,428
Peak Volumes:	**0**	**466**	**58**	**524**	**63**	**0**	**112**	**175**	**43**	**686**	**0**	**729**	**0**	**0**	**0**	**0**	**1,428**

Cut and Paste	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
	0	686	43	58	466	0	0	0	0	112	0	63



AM Peak-Hour Volume Count Worksheet

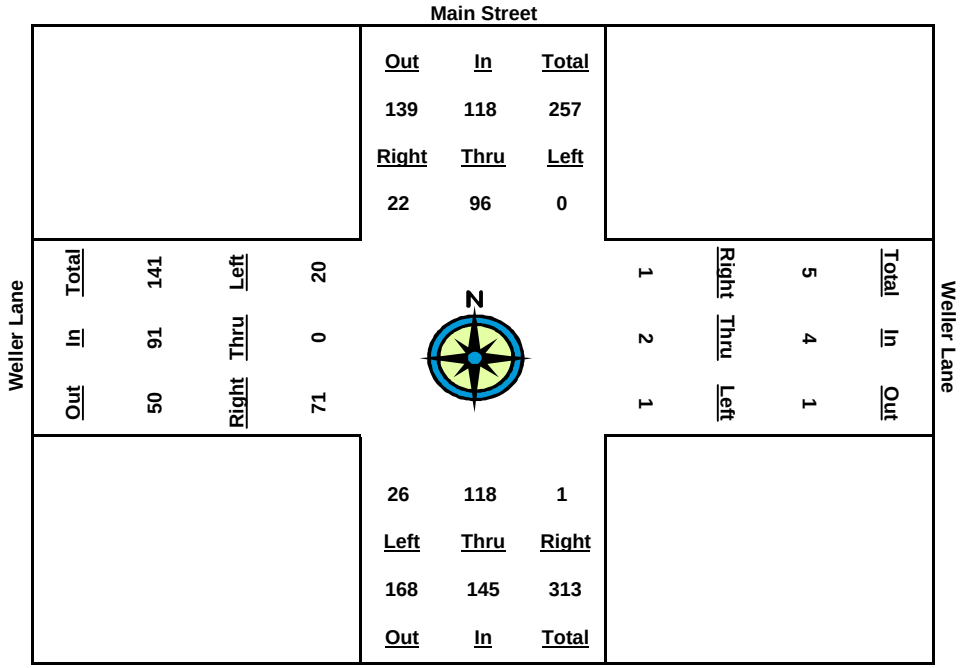
HEXAGON TRANSPORTATION CONSULTANTS
111 W. St. John St, Suite 850
San Jose, CA 95113
Phone 408-971-6100 Fax 408-971-6102

Date: 1/11/12
Counter: Ling Jin
Intersection Name: Main Street and Weller Ln
Weather: Clear
City/Project: Milpitas

	Main Street				Weller Lane				Main Street				Weller Lane				
	North Approach				East Approach				South Approach				West Approach				
Start Time	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Bike**
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	5	8	0	13	0	0	0	0	0	10	6	16	8	3	6	17	0
7:30	10	22	0	32	0	0	0	0	0	27	12	39	19	3	8	30	1
7:45	15	38	0	53	0	0	0	0	0	71	23	94	28	3	14	45	3
8:00	21	65	0	86	1	1	0	2	0	97	26	123	49	3	16	68	3
8:15	26	96	0	122	1	1	0	2	1	124	28	153	74	3	25	102	5
8:30	32	118	0	150	1	2	1	4	1	145	38	184	90	3	28	121	5
8:45	41	138	0	179	1	3	1	5	1	163	50	214	114	4	30	148	8
9:00	44	159	3	206	2	5	1	8	1	180	54	235	139	4	32	175	9

Peak Hour	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**PK Hour**
7:00 - 8:00	21	65	0	86	1	1	0	2	0	97	26	123	49	3	16	68	279
7:15 - 8:15	21	88	0	109	1	1	0	2	1	114	22	137	66	0	19	85	333
7:30 - 8:30	22	96	0	118	1	2	1	4	1	118	26	145	71	0	20	91	358
7:45 - 8:45	26	100	0	126	1	3	1	5	1	92	27	120	86	1	16	103	354
8:00 - 9:00	23	94	3	120	1	4	1	6	1	83	28	112	90	1	16	107	345
Peak Volumes:	**22**	**96**	**0**	**118**	**1**	**2**	**1**	**4**	**1**	**118**	**26**	**145**	**71**	**0**	**20**	**91**	**358**

Cut and Paste	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**
	26	118	1	0	96	22	20	0	71	1	2	1



PM Peak-Hour Volume Count Worksheet

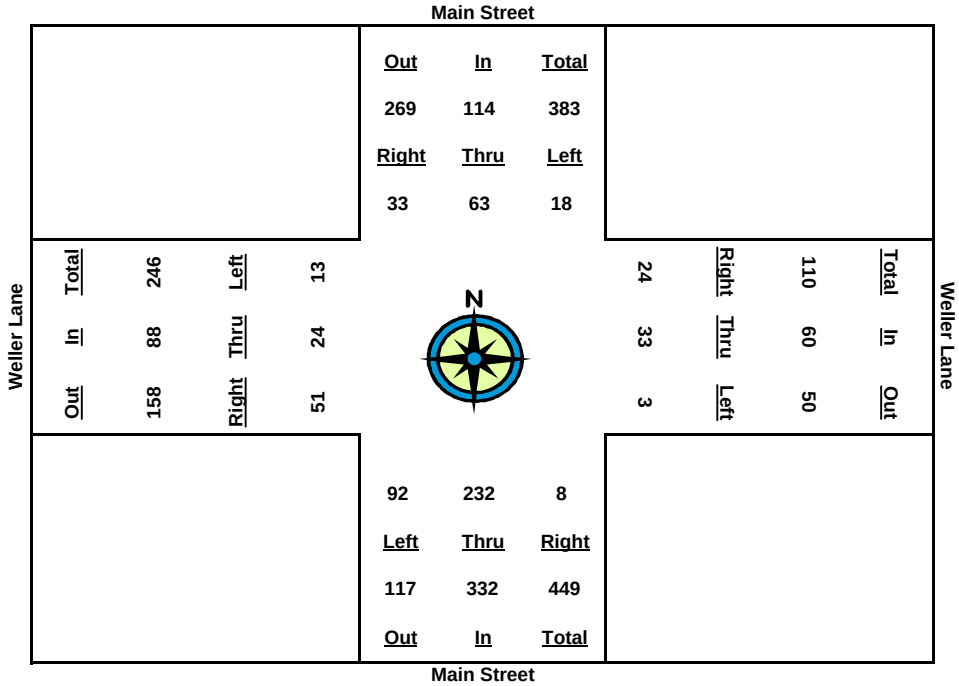
HEXAGON TRANSPORTATION CONSULTANTS
111 W. St. John St, Suite 850
San Jose, CA 95113
Phone 408-971-6100 Fax 408-971-6102

Date: 1/11/12
Counter: Ling
Intersection Name: Main Street and Weller Ln
Weather: Clear
City/Project: Milpitas

	Main Street				Weller Lane				Main Street				Weller Lane					
	North Approach				East Approach				South Approach				West Approach					
Start Time	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Bike**	**Ped**
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	5	17	4	26	5	6	1	12	3	41	19	63	9	6	9	24	0	3
4:30	19	35	10	64	8	8	2	18	5	81	42	128	21	9	11	41	1	6
4:45	31	54	14	99	10	15	3	28	7	140	62	209	35	17	17	69	3	19
5:00	36	67	20	123	18	21	5	44	8	195	82	285	51	19	20	90	5	36
5:15	50	82	23	155	24	32	5	61	12	256	106	374	63	25	23	111	5	41
5:30	52	98	28	178	32	41	5	78	13	313	134	460	72	33	24	129	7	45
5:45	60	114	31	205	38	46	8	92	14	373	161	548	83	37	24	144	9	57
6:00	65	126	39	230	47	55	8	110	16	440	176	632	97	42	25	164	11	66

Peak Hour	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**Right**	**Thru**	**Left**	**Total**	**PK Hour**
4:00 - 5:00	36	67	20	123	18	21	5	44	8	195	82	285	51	19	20	90	542
4:15 - 5:15	45	65	19	129	19	26	4	49	9	215	87	311	54	19	14	87	576
4:30 - 5:30	33	63	18	114	24	33	3	60	8	232	92	332	51	24	13	88	594
4:45 - 5:45	29	60	17	106	28	31	5	64	7	233	99	339	48	20	7	75	584
5:00 - 6:00	29	59	19	107	29	34	3	66	8	245	94	347	46	23	5	74	594
Peak Volumes:	**33**	**63**	**18**	**114**	**24**	**33**	**3**	**60**	**8**	**232**	**92**	**332**	**51**	**24**	**13**	**88**	**594**

Cut and Paste	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**
	92	232	8	18	63	33	13	24	51	3	33	24



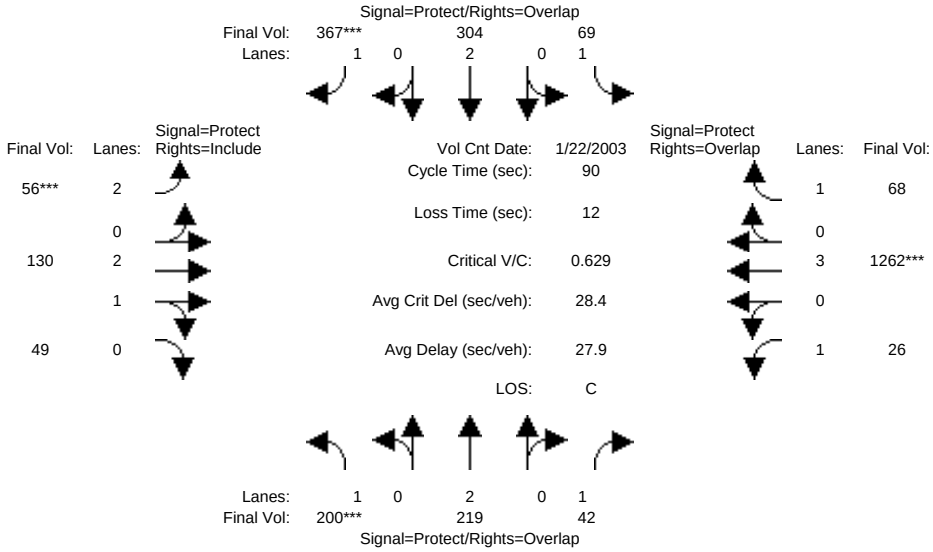
Appendix B

LOS Calculations

Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	200	219	42	69	304	367	56	130	49	26	1262	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	219	42	69	304	367	56	130	49	26	1262	68
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	200	219	42	69	304	367	56	130	49	26	1262	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	219	42	69	304	367	56	130	49	26	1262	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	219	42	69	304	367	56	130	49	26	1262	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	219	42	69	304	367	56	130	49	26	1262	68
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.15	0.85	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4065	1532	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.06	0.02	0.04	0.08	0.21	0.02	0.03	0.03	0.01	0.22	0.04
Crit Moves:	****					****	****				****	
Green Time:	17.4	22.0	38.7	15.4	20.0	27.0	7.0	23.9	23.9	16.7	33.6	49.0
Volume/Cap:	0.59	0.24	0.06	0.23	0.36	0.70	0.23	0.12	0.12	0.08	0.59	0.07
Delay/Veh:	40.6	27.9	15.1	34.0	30.8	35.4	41.1	25.2	25.2	30.8	23.9	9.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.6	27.9	15.1	34.0	30.8	35.4	41.1	25.2	25.2	30.8	23.9	9.9
LOS by Move:	D	C	B	C	C	D	D	C	C	C	C	A
DesignQueue:	9	4	1	3	6	15	2	2	2	1	14	2

Note: Queue reported is the number of cars per lane.

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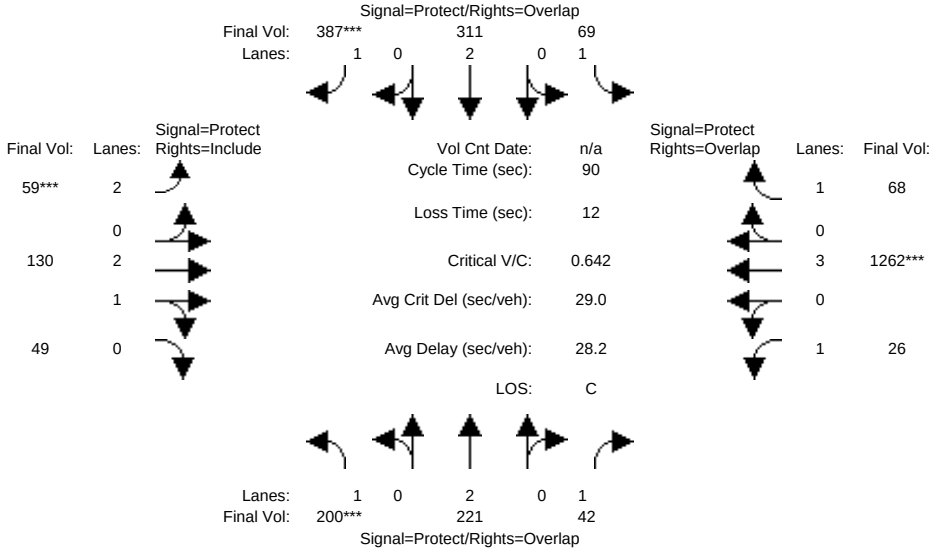
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	200	221	42	69	311	387	59	130	49	26	1262	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	221	42	69	311	387	59	130	49	26	1262	68
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	200	221	42	69	311	387	59	130	49	26	1262	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	221	42	69	311	387	59	130	49	26	1262	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	221	42	69	311	387	59	130	49	26	1262	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	221	42	69	311	387	59	130	49	26	1262	68
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.15	0.85	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4065	1532	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.06	0.02	0.04	0.08	0.22	0.02	0.03	0.03	0.01	0.22	0.04
Crit Moves:	****					****	****				****	
Green Time:	16.9	22.5	38.9	15.7	21.2	28.2	7.0	23.4	23.4	16.4	32.8	48.5
Volume/Cap:	0.61	0.23	0.06	0.23	0.35	0.70	0.24	0.12	0.12	0.08	0.61	0.07
Delay/Veh:	41.6	27.5	15.0	33.6	29.7	34.6	41.3	25.6	25.6	31.1	24.7	10.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.6	27.5	15.0	33.6	29.7	34.6	41.3	25.6	25.6	31.1	24.7	10.1
LOS by Move:	D	C	B	C	C	C	D	C	C	C	C	B
DesignQueue:	9	4	1	3	6	15	2	2	2	1	14	2

Note: Queue reported is the number of cars per lane.

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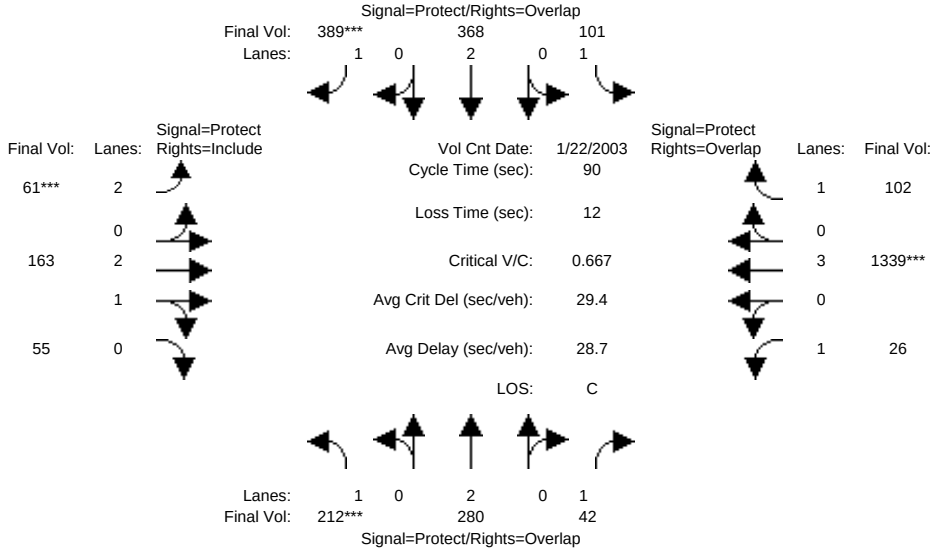
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	212	280	42	101	368	389	61	163	55	26	1339	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	212	280	42	101	368	389	61	163	55	26	1339	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	212	280	42	101	368	389	61	163	55	26	1339	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	212	280	42	101	368	389	61	163	55	26	1339	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	280	42	101	368	389	61	163	55	26	1339	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	212	280	42	101	368	389	61	163	55	26	1339	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.99	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.22	0.78	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4185	1412	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.07	0.02	0.06	0.10	0.22	0.02	0.04	0.04	0.01	0.23	0.06
Crit Moves:	****					****	****				****	
Green Time:	17.2	22.2	38.8	15.5	20.5	27.5	7.0	23.7	23.7	16.6	33.3	48.8
Volume/Cap:	0.63	0.30	0.06	0.33	0.43	0.73	0.25	0.15	0.15	0.08	0.63	0.11
Delay/Veh:	42.4	28.4	15.1	35.7	31.2	36.3	41.4	25.6	25.6	30.9	24.8	10.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.4	28.4	15.1	35.7	31.2	36.3	41.4	25.6	25.6	30.9	24.8	10.2
LOS by Move:	D	C	B	D	C	D	D	C	C	C	C	B
DesignQueue:	10	5	1	5	7	16	2	3	3	1	15	3

Note: Queue reported is the number of cars per lane.

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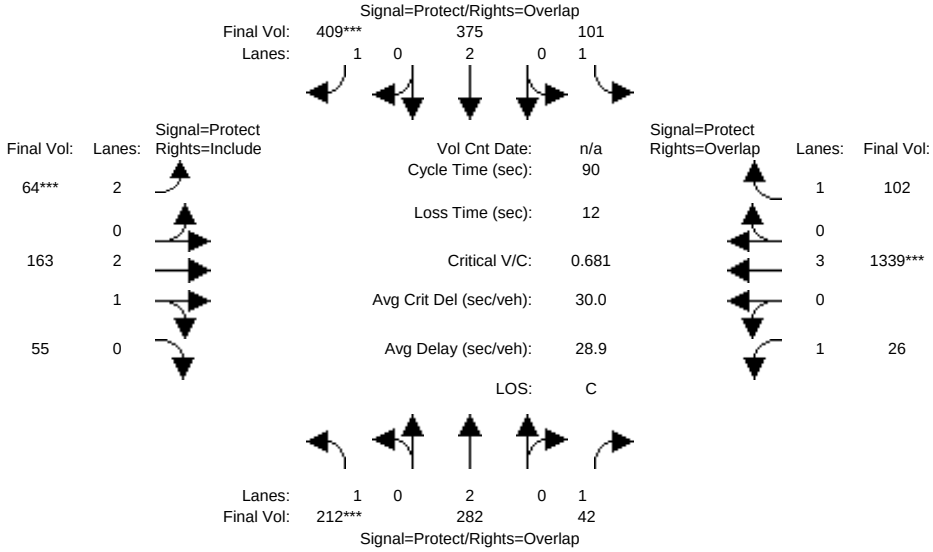
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	212	282	42	101	375	409	64	163	55	26	1339	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	212	282	42	101	375	409	64	163	55	26	1339	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	212	282	42	101	375	409	64	163	55	26	1339	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	212	282	42	101	375	409	64	163	55	26	1339	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	282	42	101	375	409	64	163	55	26	1339	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	212	282	42	101	375	409	64	163	55	26	1339	102
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.99	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.22	0.78	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4185	1412	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.07	0.02	0.06	0.10	0.23	0.02	0.04	0.04	0.01	0.23	0.06
Crit Moves:	****					****	****				****	
Green Time:	16.8	22.6	38.9	15.8	21.6	28.6	7.0	23.3	23.3	16.3	32.6	48.4
Volume/Cap:	0.65	0.30	0.06	0.33	0.41	0.73	0.26	0.15	0.15	0.08	0.65	0.11
Delay/Veh:	43.5	28.0	15.0	35.3	30.2	35.7	41.6	26.0	26.0	31.1	25.5	10.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.5	28.0	15.0	35.3	30.2	35.7	41.6	26.0	26.0	31.1	25.5	10.4
LOS by Move:	D	C	B	D	C	D	D	C	C	C	C	B
DesignQueue:	10	5	1	5	7	16	2	3	3	1	15	3

Note: Queue reported is the number of cars per lane.

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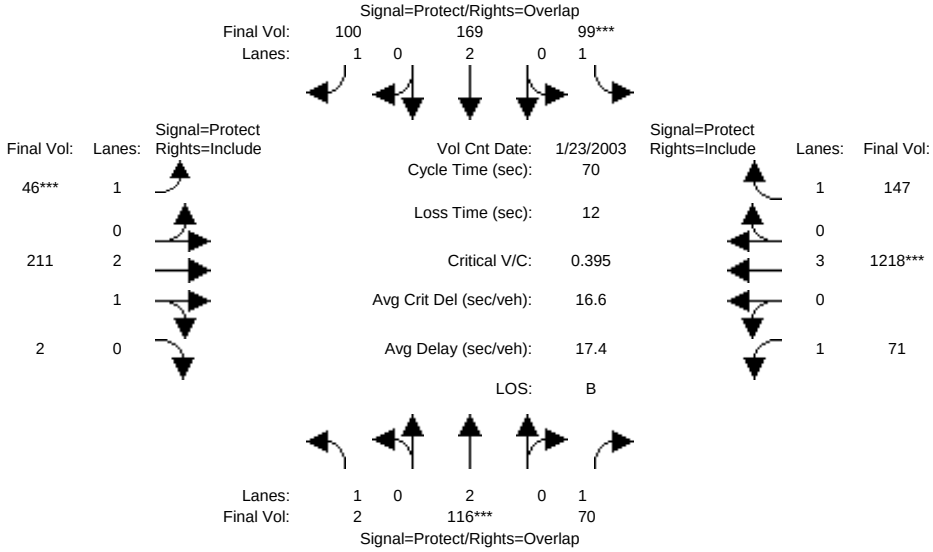
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Jan 2003 <<												
Base Vol:	2	116	70	99	169	100	46	211	2	71	1218	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	116	70	99	169	100	46	211	2	71	1218	147
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	116	70	99	169	100	46	211	2	71	1218	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	116	70	99	169	100	46	211	2	71	1218	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	116	70	99	169	100	46	211	2	71	1218	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	116	70	99	169	100	46	211	2	71	1218	147
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5547	53	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.03	0.04	0.06	0.04	0.06	0.03	0.04	0.04	0.04	0.21	0.08
Crit Moves:		****		****			****				****	
Green Time:	7.7	10.0	26.2	8.6	10.9	17.9	7.0	23.2	23.2	16.2	32.4	32.4
Volume/Cap:	0.01	0.21	0.11	0.46	0.28	0.22	0.26	0.11	0.11	0.17	0.46	0.18
Delay/Veh:	27.9	27.4	14.6	35.5	27.3	21.7	32.7	16.4	16.4	22.5	13.4	11.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.9	27.4	14.6	35.5	27.3	21.7	32.7	16.4	16.4	22.5	13.4	11.5
LOS by Move:	C	C	B	D	C	C	C	B	B	C	B	B
DesignQueue:	0	2	2	4	3	3	2	2	2	2	9	3

Note: Queue reported is the number of cars per lane.

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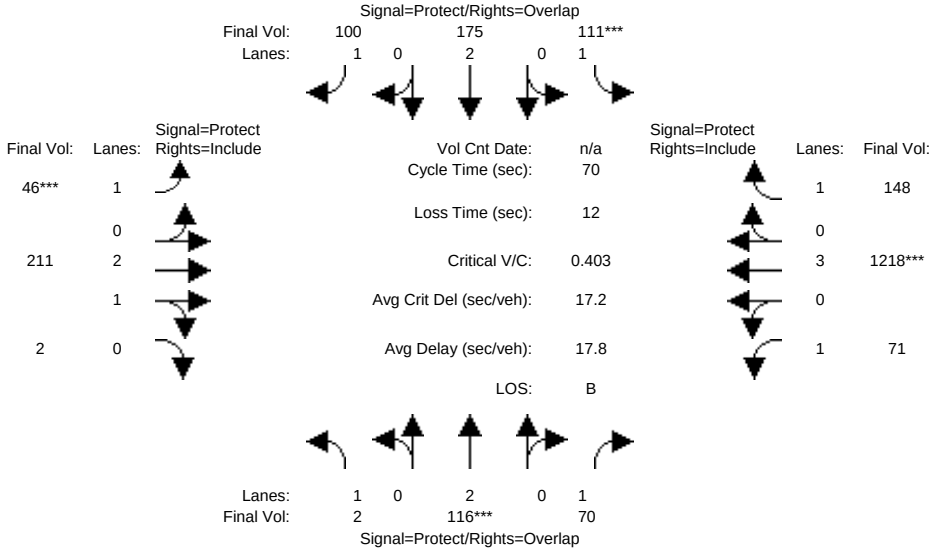
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	2	116	70	111	175	100	46	211	2	71	1218	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	116	70	111	175	100	46	211	2	71	1218	148
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	116	70	111	175	100	46	211	2	71	1218	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	116	70	111	175	100	46	211	2	71	1218	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	116	70	111	175	100	46	211	2	71	1218	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	116	70	111	175	100	46	211	2	71	1218	148
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5547	53	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.03	0.04	0.06	0.05	0.06	0.03	0.04	0.04	0.04	0.21	0.08
Crit Moves:		****		****			****				****	
Green Time:	8.0	10.0	25.9	9.4	11.4	18.4	7.0	22.7	22.7	15.9	31.6	31.6
Volume/Cap:	0.01	0.21	0.11	0.47	0.28	0.22	0.26	0.12	0.12	0.18	0.47	0.19
Delay/Veh:	27.6	27.4	14.8	34.7	26.9	21.3	32.7	16.7	16.7	22.8	14.0	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.6	27.4	14.8	34.7	26.9	21.3	32.7	16.7	16.7	22.8	14.0	12.0
LOS by Move:	C	C	B	C	C	C	C	B	B	C	B	B
DesignQueue:	0	2	2	4	3	3	2	2	2	2	9	4

Note: Queue reported is the number of cars per lane.

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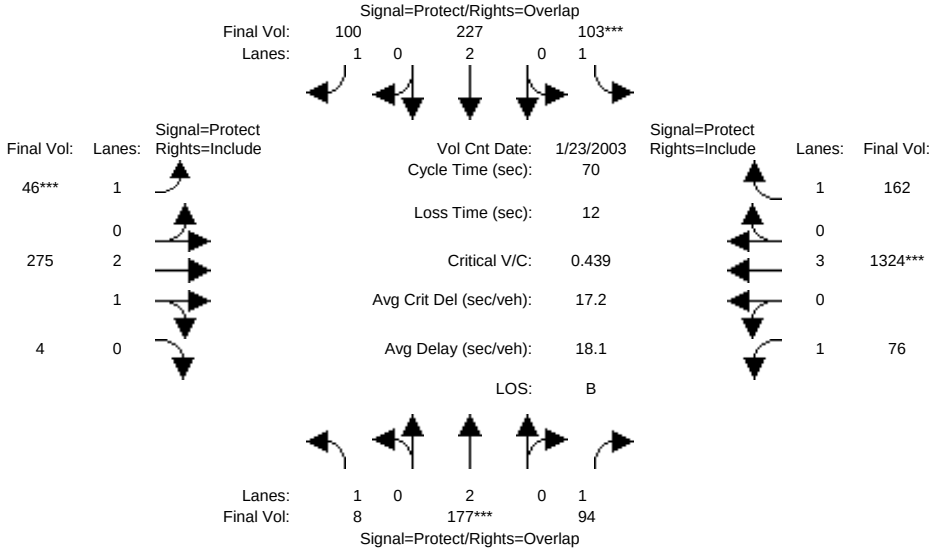
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Jan 2003 <<												
Base Vol:	8	177	94	103	227	100	46	275	4	76	1324	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	177	94	103	227	100	46	275	4	76	1324	162
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	177	94	103	227	100	46	275	4	76	1324	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	177	94	103	227	100	46	275	4	76	1324	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	177	94	103	227	100	46	275	4	76	1324	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	177	94	103	227	100	46	275	4	76	1324	162
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.96	0.04	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5520	80	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.05	0.05	0.06	0.06	0.06	0.03	0.05	0.05	0.04	0.23	0.09
Crit Moves:		****		****			****				****	
Green Time:	7.5	10.0	26.4	8.3	10.8	17.8	7.0	23.4	23.4	16.4	32.7	32.7
Volume/Cap:	0.04	0.33	0.14	0.50	0.39	0.23	0.26	0.15	0.15	0.19	0.50	0.20
Delay/Veh:	28.4	28.6	14.8	37.2	28.6	21.9	32.7	16.5	16.5	22.5	13.6	11.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.4	28.6	14.8	37.2	28.6	21.9	32.7	16.5	16.5	22.5	13.6	11.5
LOS by Move:	C	C	B	D	C	C	C	B	B	C	B	B
DesignQueue:	0	3	3	4	4	3	2	2	2	2	10	4

Note: Queue reported is the number of cars per lane.

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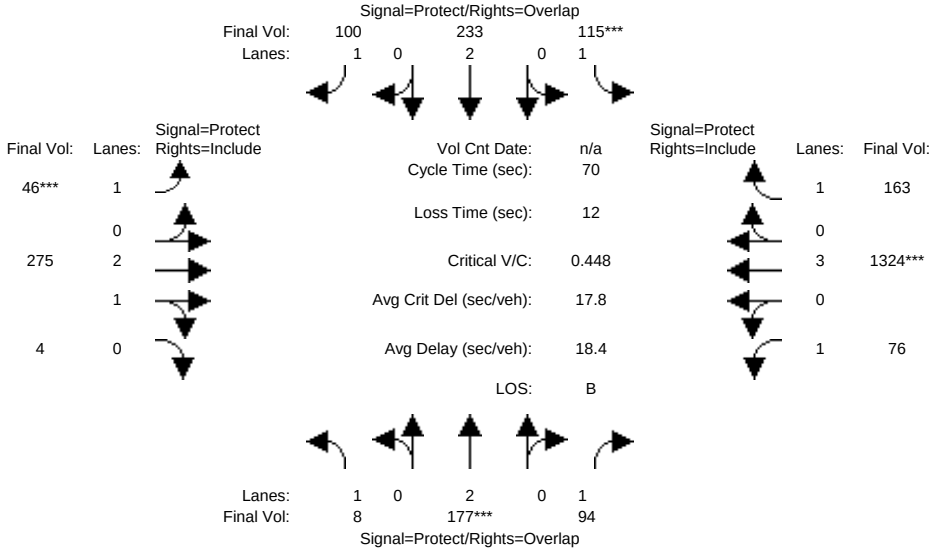
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	8	177	94	115	233	100	46	275	4	76	1324	163
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	177	94	115	233	100	46	275	4	76	1324	163
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	177	94	115	233	100	46	275	4	76	1324	163
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	177	94	115	233	100	46	275	4	76	1324	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	177	94	115	233	100	46	275	4	76	1324	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	177	94	115	233	100	46	275	4	76	1324	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.96	0.04	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5520	80	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.05	0.05	0.07	0.06	0.06	0.03	0.05	0.05	0.04	0.23	0.09
Crit Moves:		****		****			****				****	
Green Time:	7.8	10.0	26.0	9.0	11.2	18.2	7.0	22.9	22.9	16.0	32.0	32.0
Volume/Cap:	0.04	0.33	0.14	0.51	0.38	0.22	0.26	0.15	0.15	0.19	0.51	0.20
Delay/Veh:	28.1	28.6	15.1	36.4	28.1	21.4	32.7	16.8	16.8	22.8	14.2	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.1	28.6	15.1	36.4	28.1	21.4	32.7	16.8	16.8	22.8	14.2	12.0
LOS by Move:	C	C	B	D	C	C	C	B	B	C	B	B
DesignQueue:	0	3	3	4	4	3	2	3	3	3	10	4

Note: Queue reported is the number of cars per lane.

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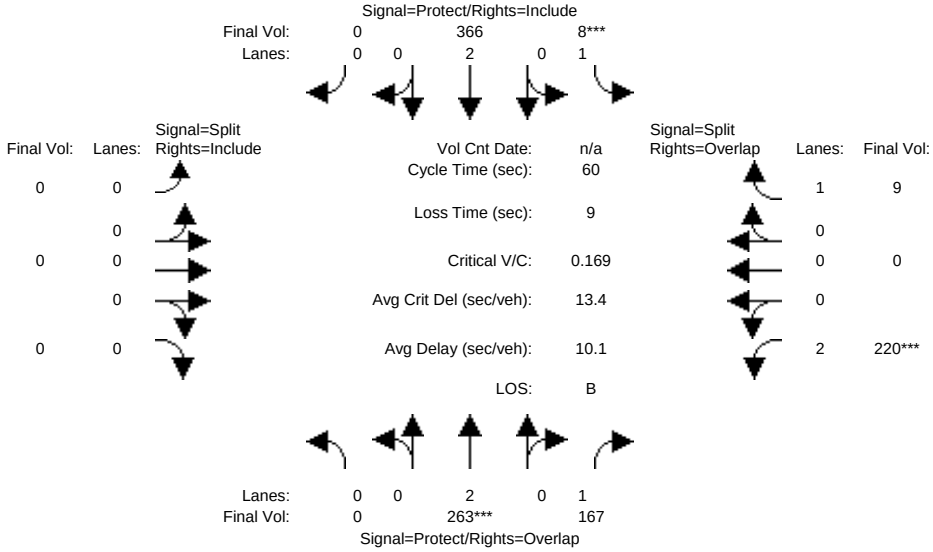
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #200: Abel Street / Main Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	263	167	8	366	0	0	0	0	220	0	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	263	167	8	366	0	0	0	0	220	0	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	263	167	8	366	0	0	0	0	220	0	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	263	167	8	366	0	0	0	0	220	0	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	263	167	8	366	0	0	0	0	220	0	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	263	167	8	366	0	0	0	0	220	0	9
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	1750	3800	0	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.07	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.07	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	0.0	21.9	44.0	7.0	28.9	0.0	0.0	0.0	0.0	22.1	0.0	29.1
Volume/Cap:	0.00	0.19	0.13	0.04	0.20	0.00	0.00	0.00	0.00	0.19	0.00	0.01
Delay/Veh:	0.0	13.3	2.6	23.9	9.2	0.0	0.0	0.0	0.0	13.2	0.0	8.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.3	2.6	23.9	9.2	0.0	0.0	0.0	0.0	13.2	0.0	8.0
LOS by Move:	A	B	A	C	A	A	A	A	A	B	A	A
DesignQueue:	0	3	2	0	3	0	0	0	0	3	0	0

Note: Queue reported is the number of cars per lane.

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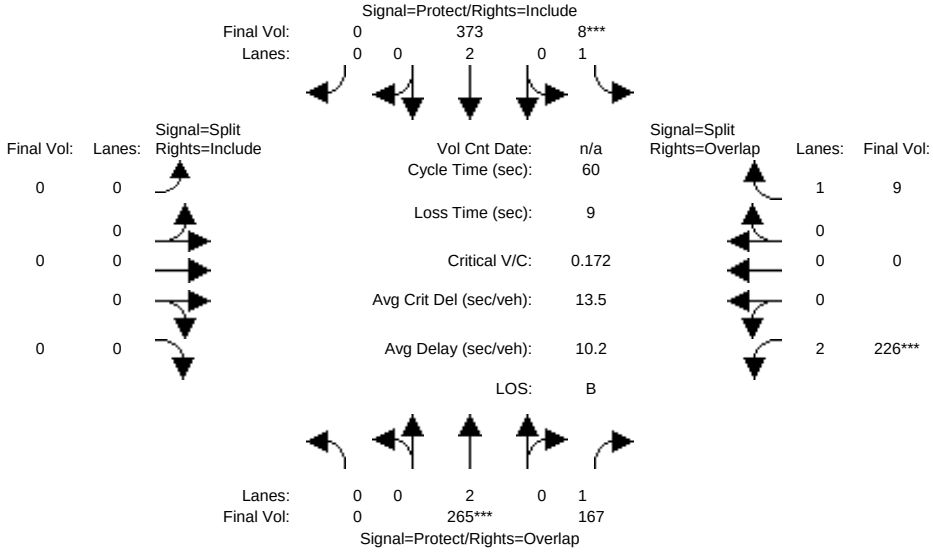
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #200: Abel Street / Main Street



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		265		167		8		373		0		0		0		0		226		0		9	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		265		167		8		373		0		0		0		0		226		0		9	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		265		167		8		373		0		0		0		0		226		0		9	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		265		167		8		373		0		0		0		0		226		0		9	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		265		167		8		373		0		0		0		0		226		0		9	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		265		167		8		373		0		0		0		0		226		0		9	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92		0.83		1.00		0.92	
Lanes:	0.00		2.00		1.00		1.00		2.00		0.00		0.00		0.00		0.00		2.00		0.00		1.00	
Final Sat.:	0		3800		1750		1750		3800		0		0		0		0		3150		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.07		0.10		0.00		0.10		0.00		0.00		0.00		0.00		0.07		0.00		0.01	
Crit Moves:			****				****												****					
Green Time:	0.0		21.7		44.0		7.0		28.7		0.0		0.0		0.0		0.0		22.3		0.0		29.3	
Volume/Cap:	0.00		0.19		0.13		0.04		0.21		0.00		0.00		0.00		0.00		0.19		0.00		0.01	
Delay/Veh:	0.0		13.5		2.6		23.9		9.3		0.0		0.0		0.0		0.0		13.1		0.0		7.9	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		13.5		2.6		23.9		9.3		0.0		0.0		0.0		0.0		13.1		0.0		7.9	
LOS by Move:	A		B		A		C		A		A		A		A		A		B		A		A	
DesignQueue:	0		3		2		0		3		0		0		0		0		3		0		0	

Note: Queue reported is the number of cars per lane.

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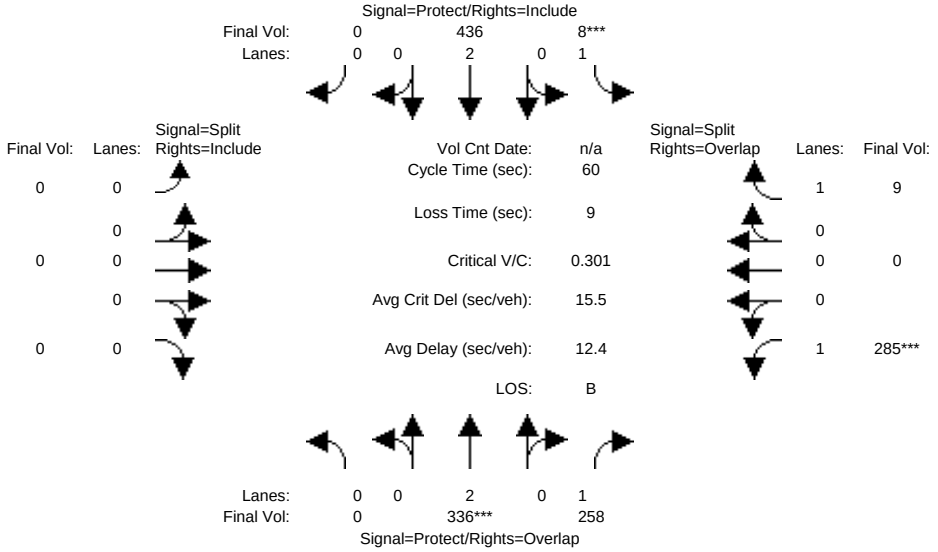
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #200: Abel Street / Main Street



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		336		258		8		436		0		0		0		0		285		0		9	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		336		258		8		436		0		0		0		0		285		0		9	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		336		258		8		436		0		0		0		0		285		0		9	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		336		258		8		436		0		0		0		0		285		0		9	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		336		258		8		436		0		0		0		0		285		0		9	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		336		258		8		436		0		0		0		0		285		0		9	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		2.00		1.00		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3800		1750		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.09		0.15		0.00		0.11		0.00		0.00		0.00		0.00		0.16		0.00		0.01	
Crit Moves:			****				****												****					
Green Time:	0.0		15.5		44.0		7.0		22.5		0.0		0.0		0.0		0.0		28.5		0.0		35.5	
Volume/Cap:	0.00		0.34		0.20		0.04		0.31		0.00		0.00		0.00		0.00		0.34		0.00		0.01	
Delay/Veh:	0.0		19.1		2.9		23.9		13.8		0.0		0.0		0.0		0.0		11.0		0.0		5.0	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		19.1		2.9		23.9		13.8		0.0		0.0		0.0		0.0		11.0		0.0		5.0	
LOS by Move:	A		B		A		C		B		A		A		A		A		B		A		A	
DesignQueue:	0		4		3		0		5		0		0		0		0		6		0		0	

Note: Queue reported is the number of cars per lane.

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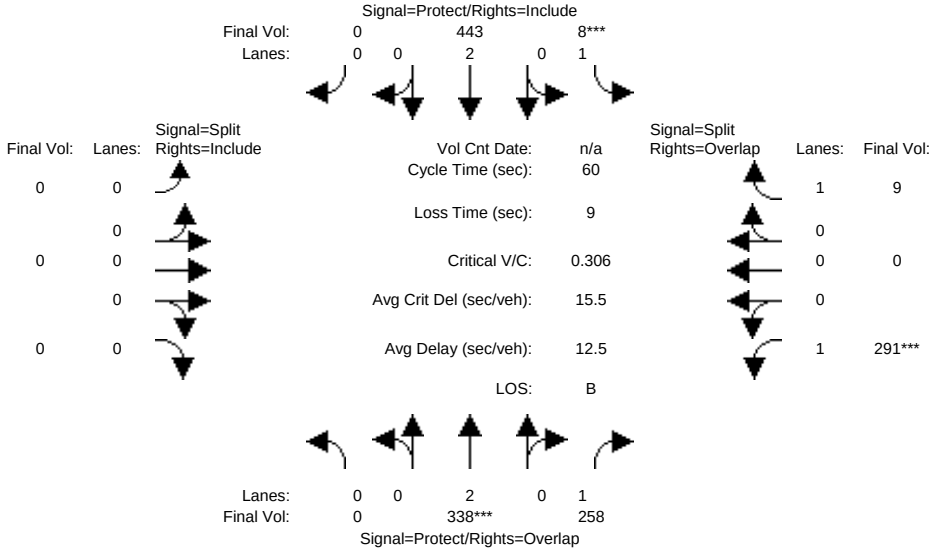
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #200: Abel Street / Main Street



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		338		258		8		443		0		0		0		0		291		0		9	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		338		258		8		443		0		0		0		0		291		0		9	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		338		258		8		443		0		0		0		0		291		0		9	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		338		258		8		443		0		0		0		0		291		0		9	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		338		258		8		443		0		0		0		0		291		0		9	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		338		258		8		443		0		0		0		0		291		0		9	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		2.00		1.00		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3800		1750		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.09		0.15		0.00		0.12		0.00		0.00		0.00		0.00		0.17		0.00		0.01	
Crit Moves:			****				****												****					
Green Time:	0.0		15.3		44.0		7.0		22.3		0.0		0.0		0.0		0.0		28.7		0.0		35.7	
Volume/Cap:	0.00		0.35		0.20		0.04		0.31		0.00		0.00		0.00		0.00		0.35		0.00		0.01	
Delay/Veh:	0.0		19.2		2.9		23.9		14.0		0.0		0.0		0.0		0.0		11.0		0.0		5.0	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		19.2		2.9		23.9		14.0		0.0		0.0		0.0		0.0		11.0		0.0		5.0	
LOS by Move:	A		B		A		C		B		A		A		A		A		B		A		A	
DesignQueue:	0		4		3		0		5		0		0		0		0		6		0		0	

Note: Queue reported is the number of cars per lane.

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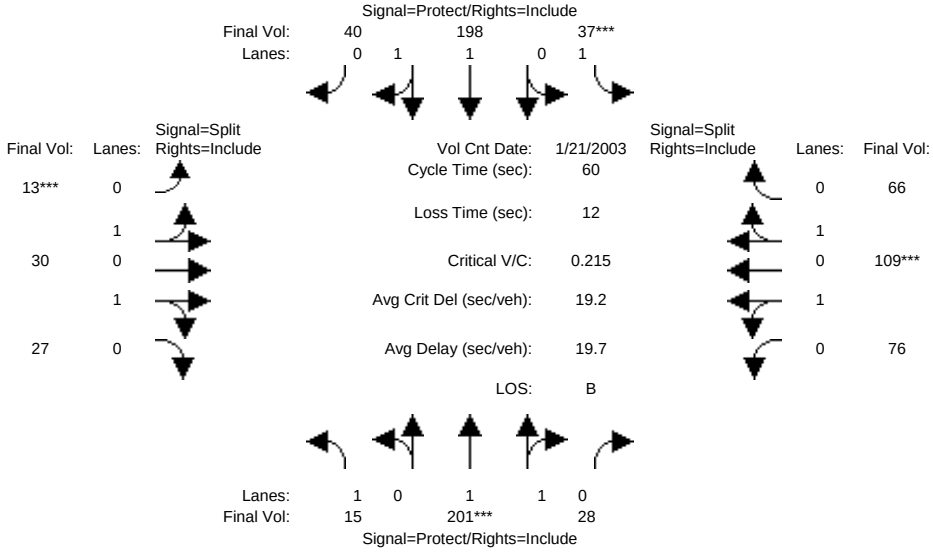
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 21 Jan 2003 <<												
Base Vol:	15	201	28	37	198	40	13	30	27	76	109	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	201	28	37	198	40	13	30	27	76	109	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	201	28	37	198	40	13	30	27	76	109	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	201	28	37	198	40	13	30	27	76	109	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	201	28	37	198	40	13	30	27	76	109	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	201	28	37	198	40	13	30	27	76	109	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.75	0.25	1.00	1.65	0.35	0.37	0.86	0.77	0.60	0.87	0.53
Final Sat.:	1750	3247	452	1750	3078	622	669	1543	1389	1090	1563	947
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.06	0.02	0.06	0.06	0.02	0.02	0.02	0.07	0.07	0.07
Crit Moves:		****		****			****				****	
Green Time:	8.9	14.6	14.6	7.0	12.7	12.7	10.0	10.0	10.0	16.4	16.4	16.4
Volume/Cap:	0.06	0.25	0.25	0.18	0.30	0.30	0.12	0.12	0.12	0.25	0.25	0.25
Delay/Veh:	22.4	19.0	19.0	25.9	20.9	20.9	21.6	21.6	21.6	17.6	17.6	17.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.4	19.0	19.0	25.9	20.9	20.9	21.6	21.6	21.6	17.6	17.6	17.6
LOS by Move:	C	B	B	C	C	C	C	C	C	B	B	B
DesignQueue:	0	3	3	1	3	3	1	1	1	3	3	3

Note: Queue reported is the number of cars per lane.

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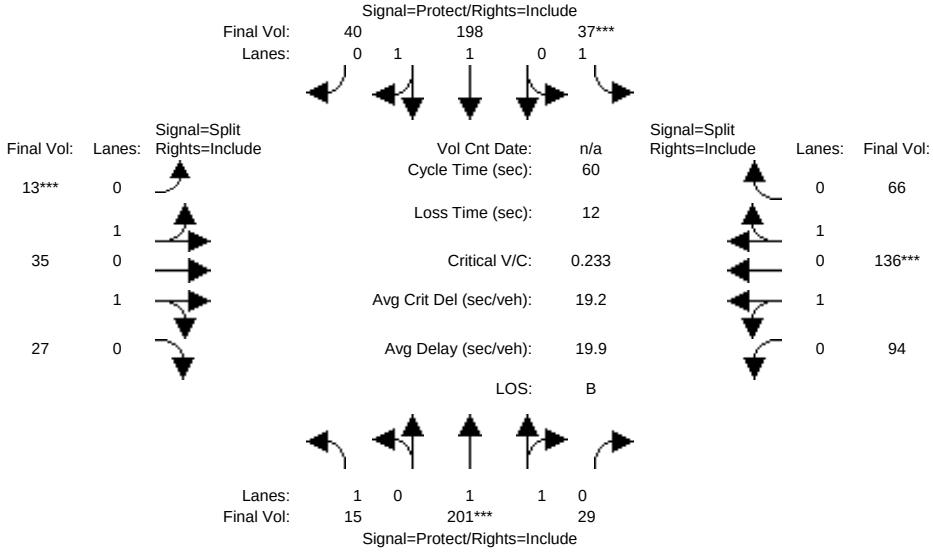
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	15	201	29	37	198	40	13	35	27	94	136	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	201	29	37	198	40	13	35	27	94	136	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	201	29	37	198	40	13	35	27	94	136	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	201	29	37	198	40	13	35	27	94	136	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	201	29	37	198	40	13	35	27	94	136	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	201	29	37	198	40	13	35	27	94	136	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.74	0.26	1.00	1.65	0.35	0.35	0.93	0.72	0.63	0.92	0.45
Final Sat.:	1750	3233	466	1750	3078	622	624	1680	1296	1143	1654	803
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.06	0.02	0.06	0.06	0.02	0.02	0.02	0.08	0.08	0.08
Crit Moves:		****		****			****				****	
Green Time:	8.4	13.3	13.3	7.0	12.0	12.0	10.0	10.0	10.0	17.7	17.7	17.7
Volume/Cap:	0.06	0.28	0.28	0.18	0.32	0.32	0.13	0.13	0.13	0.28	0.28	0.28
Delay/Veh:	22.9	20.2	20.2	25.9	21.7	21.7	21.7	21.7	21.7	16.9	16.9	16.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.9	20.2	20.2	25.9	21.7	21.7	21.7	21.7	21.7	16.9	16.9	16.9
LOS by Move:	C	C	C	C	C	C	C	C	C	B	B	B
DesignQueue:	0	3	3	1	3	3	1	1	1	4	4	4

Note: Queue reported is the number of cars per lane.

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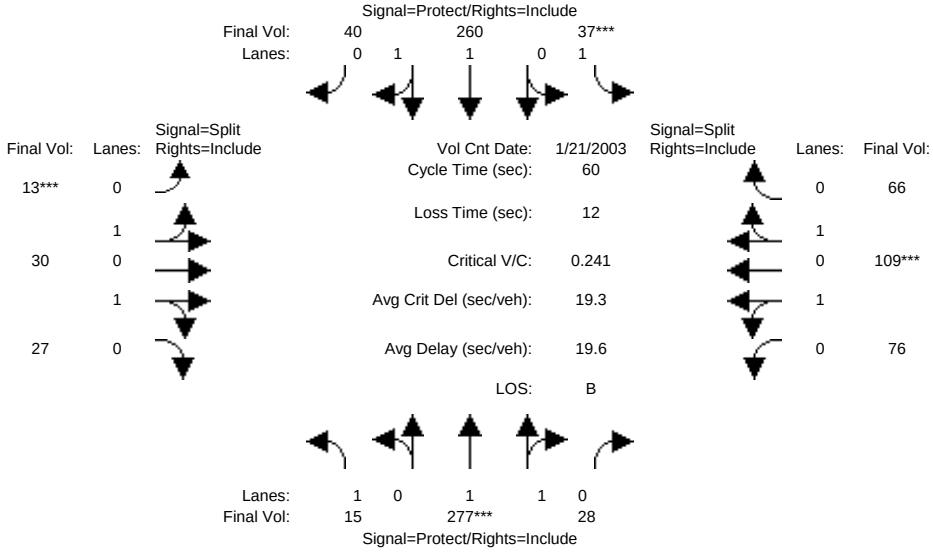
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 21 Jan 2003 <<												
Base Vol:	15	277	28	37	260	40	13	30	27	76	109	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	277	28	37	260	40	13	30	27	76	109	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	277	28	37	260	40	13	30	27	76	109	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	277	28	37	260	40	13	30	27	76	109	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	277	28	37	260	40	13	30	27	76	109	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	277	28	37	260	40	13	30	27	76	109	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.81	0.19	1.00	1.73	0.27	0.37	0.86	0.77	0.60	0.87	0.53
Final Sat.:	1750	3360	340	1750	3206	493	669	1543	1389	1090	1563	947
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.02	0.08	0.08	0.02	0.02	0.02	0.07	0.07	0.07
Crit Moves:		****		****			****				****	
Green Time:	9.8	16.8	16.8	7.0	14.0	14.0	10.0	10.0	10.0	14.2	14.2	14.2
Volume/Cap:	0.05	0.29	0.29	0.18	0.35	0.35	0.12	0.12	0.12	0.29	0.29	0.29
Delay/Veh:	21.5	17.7	17.7	25.9	20.3	20.3	21.6	21.6	21.6	19.7	19.7	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.5	17.7	17.7	25.9	20.3	20.3	21.6	21.6	21.6	19.7	19.7	19.7
LOS by Move:	C	B	B	C	C	C	C	C	C	B	B	B
DesignQueue:	0	4	4	1	4	4	1	1	1	3	3	3

Note: Queue reported is the number of cars per lane.

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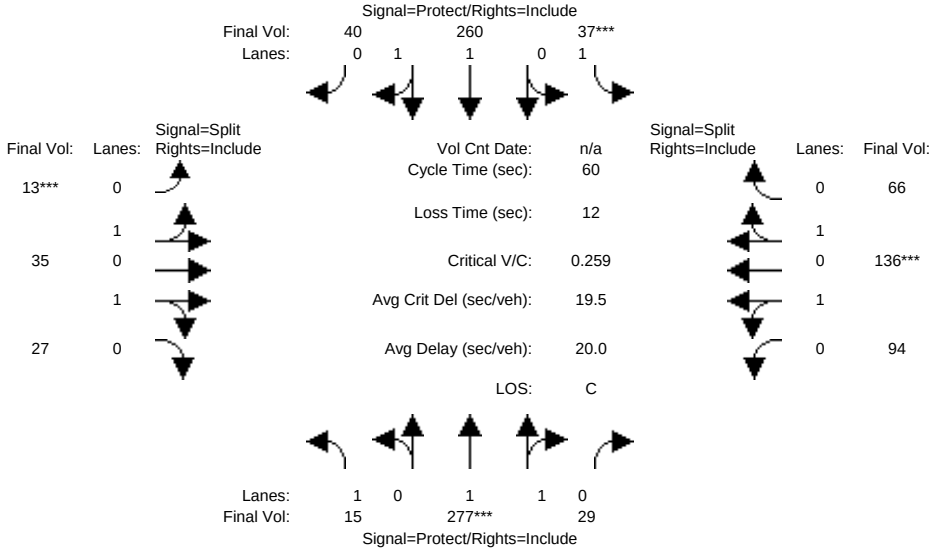
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	15	277	29	37	260	40	13	35	27	94	136	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	277	29	37	260	40	13	35	27	94	136	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	277	29	37	260	40	13	35	27	94	136	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	15	277	29	37	260	40	13	35	27	94	136	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	277	29	37	260	40	13	35	27	94	136	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	277	29	37	260	40	13	35	27	94	136	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.81	0.19	1.00	1.73	0.27	0.35	0.93	0.72	0.63	0.92	0.45
Final Sat.:	1750	3349	351	1750	3206	493	624	1680	1296	1143	1654	803
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.02	0.08	0.08	0.02	0.02	0.02	0.08	0.08	0.08
Crit Moves:		****		****			****				****	
Green Time:	9.3	15.5	15.5	7.0	13.3	13.3	10.0	10.0	10.0	15.5	15.5	15.5
Volume/Cap:	0.06	0.32	0.32	0.18	0.37	0.37	0.13	0.13	0.13	0.32	0.32	0.32
Delay/Veh:	22.0	18.8	18.8	25.9	21.1	21.1	21.7	21.7	21.7	18.9	18.9	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.0	18.8	18.8	25.9	21.1	21.1	21.7	21.7	21.7	18.9	18.9	18.9
LOS by Move:	C	B	B	C	C	C	C	C	C	B	B	B
DesignQueue:	0	4	4	1	4	4	1	1	1	4	4	4

Note: Queue reported is the number of cars per lane.

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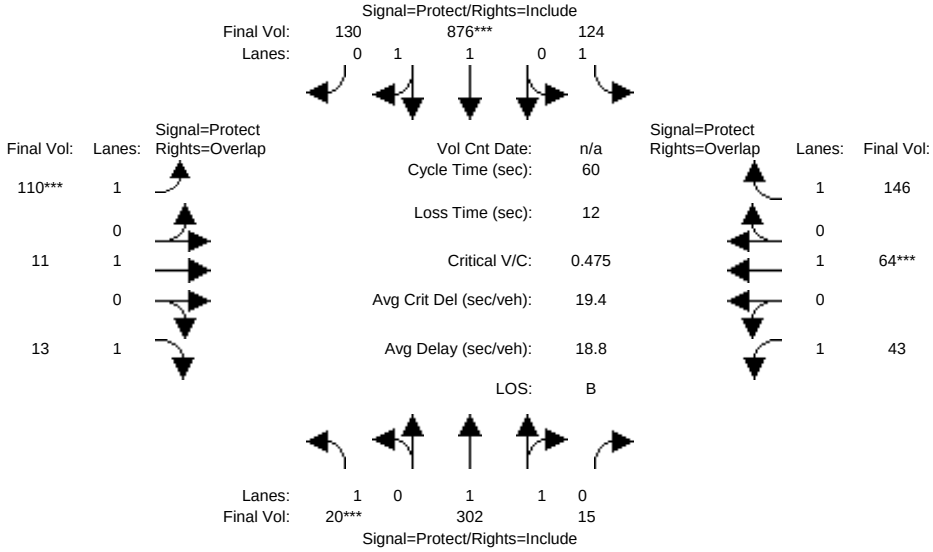
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	302	15	124	876	130	110	11	13	43	64	146
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	302	15	124	876	130	110	11	13	43	64	146
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	302	15	124	876	130	110	11	13	43	64	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	302	15	124	876	130	110	11	13	43	64	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	302	15	124	876	130	110	11	13	43	64	146
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	302	15	124	876	130	110	11	13	43	64	146
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.90	0.10	1.00	1.73	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3525	175	1750	3222	478	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.09	0.09	0.07	0.27	0.27	0.06	0.01	0.01	0.02	0.03	0.08
Crit Moves:	****				****		****				****	
Green Time:	7.0	18.2	18.2	12.8	24.0	24.0	7.0	10.0	17.0	7.0	10.0	22.8
Volume/Cap:	0.10	0.28	0.28	0.33	0.68	0.68	0.54	0.03	0.03	0.21	0.20	0.22
Delay/Veh:	24.6	16.5	16.5	22.4	17.4	17.4	34.8	21.2	15.6	26.3	23.0	13.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.6	16.5	16.5	22.4	17.4	17.4	34.8	21.2	15.6	26.3	23.0	13.4
LOS by Move:	C	B	B	C	B	B	C	C	B	C	C	B
DesignQueue:	1	4	4	4	11	11	4	0	0	1	2	3

Note: Queue reported is the number of cars per lane.

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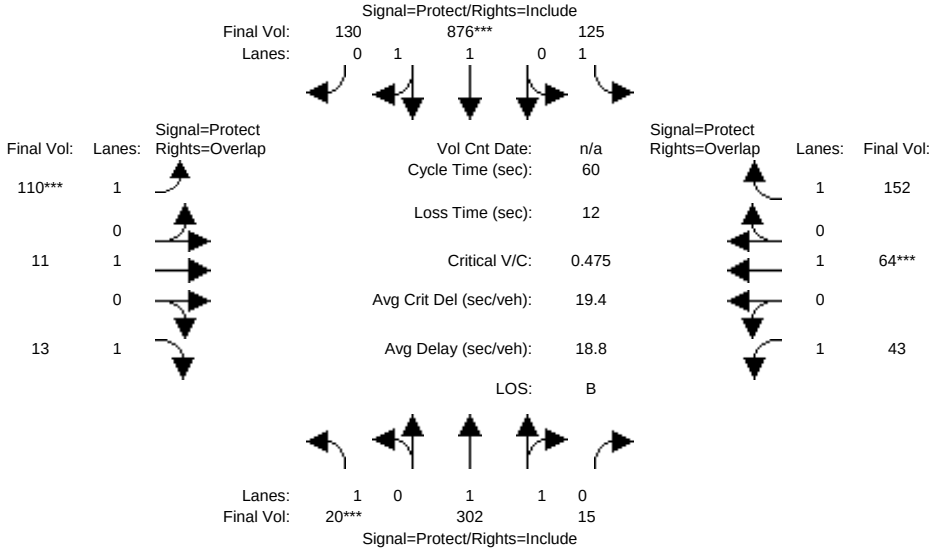
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	302	15	125	876	130	110	11	13	43	64	152
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	302	15	125	876	130	110	11	13	43	64	152
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	302	15	125	876	130	110	11	13	43	64	152
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	302	15	125	876	130	110	11	13	43	64	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	302	15	125	876	130	110	11	13	43	64	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	302	15	125	876	130	110	11	13	43	64	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.90	0.10	1.00	1.73	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3525	175	1750	3222	478	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.09	0.09	0.07	0.27	0.27	0.06	0.01	0.01	0.02	0.03	0.09
Crit Moves:	****				****		****				****	
Green Time:	7.0	18.2	18.2	12.8	24.0	24.0	7.0	10.0	17.0	7.0	10.0	22.8
Volume/Cap:	0.10	0.28	0.28	0.34	0.68	0.68	0.54	0.03	0.03	0.21	0.20	0.23
Delay/Veh:	24.6	16.5	16.5	22.4	17.4	17.4	34.8	21.2	15.6	26.3	23.0	13.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.6	16.5	16.5	22.4	17.4	17.4	34.8	21.2	15.6	26.3	23.0	13.5
LOS by Move:	C	B	B	C	B	B	C	C	B	C	C	B
DesignQueue:	1	4	4	4	11	11	4	0	0	1	2	3

Note: Queue reported is the number of cars per lane.

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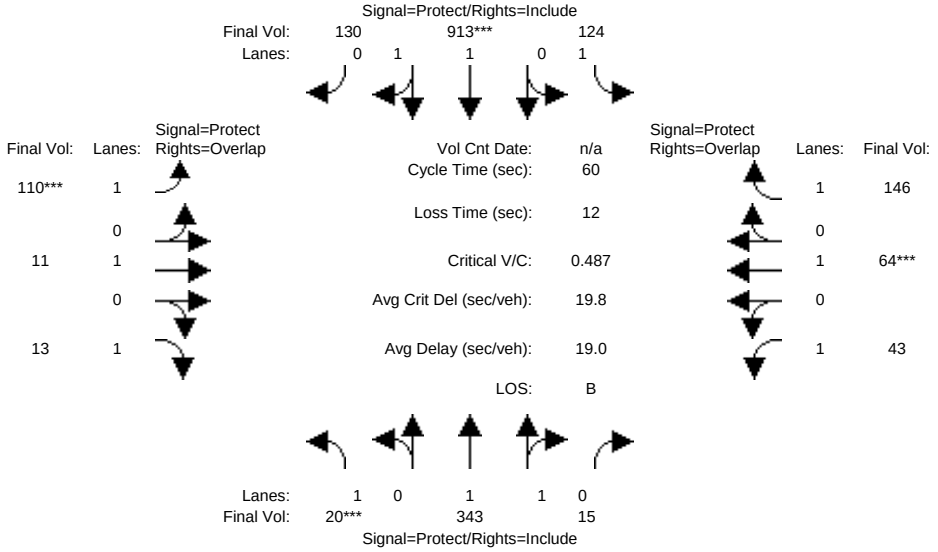
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		7		10		10		7		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	20		343		15		124		913		130		110		11		13		43		64		146	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	20		343		15		124		913		130		110		11		13		43		64		146	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	20		343		15		124		913		130		110		11		13		43		64		146	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	20		343		15		124		913		130		110		11		13		43		64		146	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	20		343		15		124		913		130		110		11		13		43		64		146	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	20		343		15		124		913		130		110		11		13		43		64		146	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.97		0.95		0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	1.00		1.91		0.09		1.00		1.74		0.26		1.00		1.00		1.00		1.00		1.00		1.00	
Final Sat.:	1750		3545		155		1750		3238		461		1750		1900		1750		1750		1900		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.01		0.10		0.10		0.07		0.28		0.28		0.06		0.01		0.01		0.02		0.03		0.08	
Crit Moves:	****								****				****								****			
Green Time:	7.0		18.2		18.2		12.8		24.0		24.0		7.0		10.0		17.0		7.0		10.0		22.8	
Volume/Cap:	0.10		0.32		0.32		0.33		0.70		0.70		0.54		0.03		0.03		0.21		0.20		0.22	
Delay/Veh:	24.6		16.8		16.8		22.4		17.9		17.9		34.8		21.2		15.6		26.3		23.0		13.4	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	24.6		16.8		16.8		22.4		17.9		17.9		34.8		21.2		15.6		26.3		23.0		13.4	
LOS by Move:	C		B		B		C		B		B		C		C		B		C		C		B	
DesignQueue:	1		4		4		4		12		12		4		0		0		1		2		3	

Note: Queue reported is the number of cars per lane.

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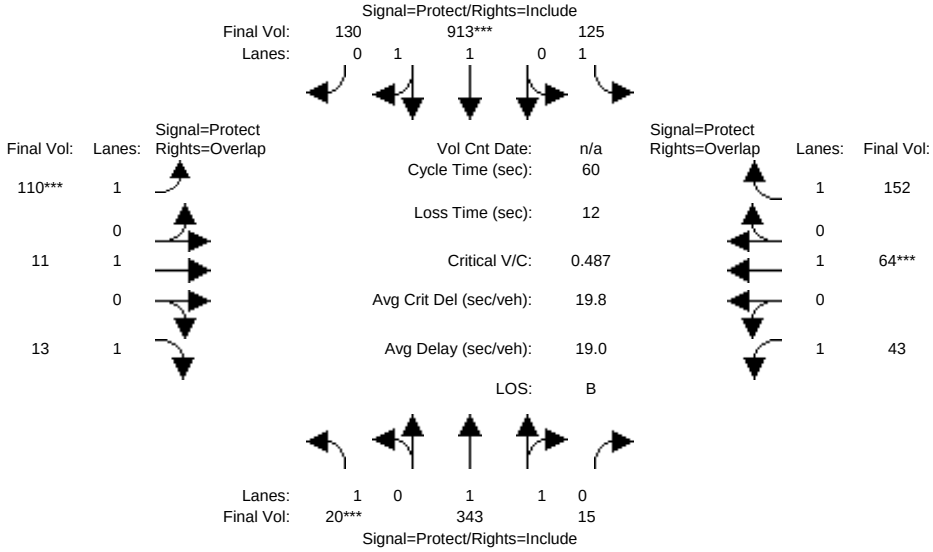
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	20	343	15	125	913	130	110	11	13	43	64	152
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	343	15	125	913	130	110	11	13	43	64	152
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	343	15	125	913	130	110	11	13	43	64	152
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	343	15	125	913	130	110	11	13	43	64	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	343	15	125	913	130	110	11	13	43	64	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	343	15	125	913	130	110	11	13	43	64	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.91	0.09	1.00	1.74	0.26	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3545	155	1750	3238	461	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.07	0.28	0.28	0.06	0.01	0.01	0.02	0.03	0.09
Crit Moves:	****				****		****				****	
Green Time:	7.0	18.2	18.2	12.8	24.0	24.0	7.0	10.0	17.0	7.0	10.0	22.8
Volume/Cap:	0.10	0.32	0.32	0.34	0.70	0.70	0.54	0.03	0.03	0.21	0.20	0.23
Delay/Veh:	24.6	16.8	16.8	22.4	17.9	17.9	34.8	21.2	15.6	26.3	23.0	13.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.6	16.8	16.8	22.4	17.9	17.9	34.8	21.2	15.6	26.3	23.0	13.5
LOS by Move:	C	B	B	C	B	B	C	C	B	C	C	B
DesignQueue:	1	4	4	4	12	12	4	0	0	1	2	3

Note: Queue reported is the number of cars per lane.

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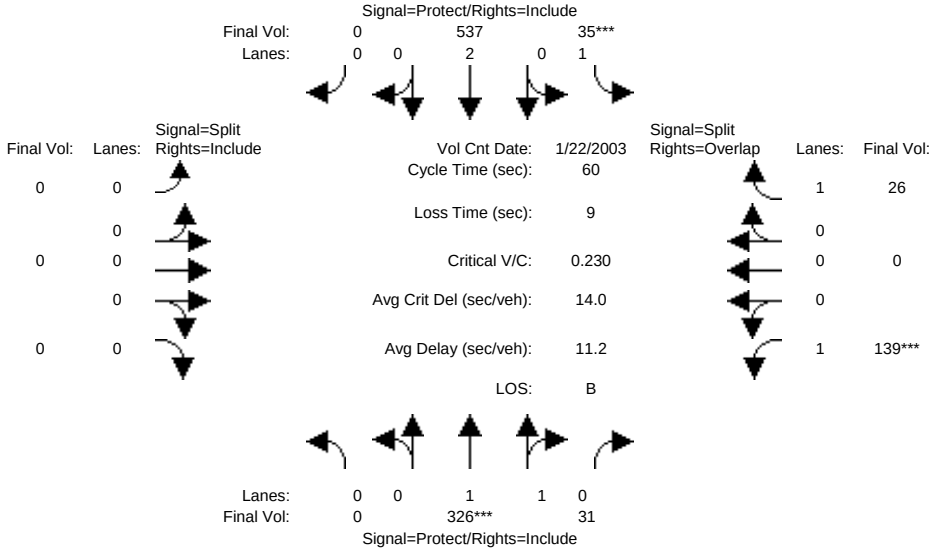
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	0	326	31	35	537	0	0	0	0	139	0	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	326	31	35	537	0	0	0	0	139	0	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	326	31	35	537	0	0	0	0	139	0	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	326	31	35	537	0	0	0	0	139	0	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	326	31	35	537	0	0	0	0	139	0	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	326	31	35	537	0	0	0	0	139	0	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	1.82	0.18	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3378	321	1750	3800	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.10	0.02	0.14	0.00	0.00	0.00	0.00	0.08	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	0.0	24.1	24.1	7.0	31.1	0.0	0.0	0.0	0.0	19.9	0.0	26.9
Volume/Cap:	0.00	0.24	0.24	0.17	0.27	0.00	0.00	0.00	0.00	0.24	0.00	0.03
Delay/Veh:	0.0	12.2	12.2	25.7	8.4	0.0	0.0	0.0	0.0	15.6	0.0	9.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.2	12.2	25.7	8.4	0.0	0.0	0.0	0.0	15.6	0.0	9.4
LOS by Move:	A	B	B	C	A	A	A	A	A	B	A	A
DesignQueue:	0	4	4	1	4	0	0	0	0	3	0	1

Note: Queue reported is the number of cars per lane.

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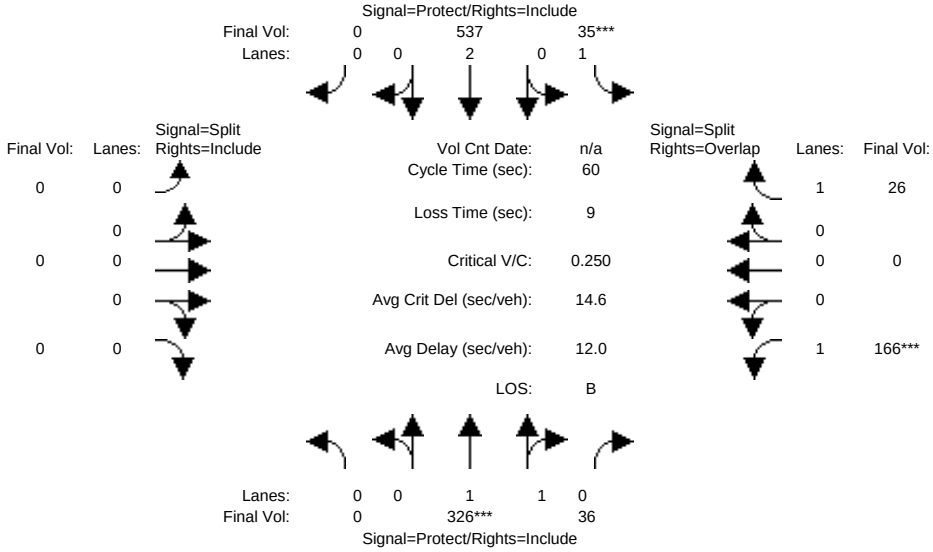
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		326		36		35		537		0		0		0		0		166		0		26	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		326		36		35		537		0		0		0		0		166		0		26	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		326		36		35		537		0		0		0		0		166		0		26	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		326		36		35		537		0		0		0		0		166		0		26	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		326		36		35		537		0		0		0		0		166		0		26	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		326		36		35		537		0		0		0		0		166		0		26	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.80		0.20		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3332		368		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.10		0.10		0.02		0.14		0.00		0.00		0.00		0.00		0.09		0.00		0.01	
Crit Moves:			****				****												****					
Green Time:	0.0		22.3		22.3		7.0		29.3		0.0		0.0		0.0		0.0		21.7		0.0		28.7	
Volume/Cap:	0.00		0.26		0.26		0.17		0.29		0.00		0.00		0.00		0.00		0.26		0.00		0.03	
Delay/Veh:	0.0		13.6		13.6		25.7		9.5		0.0		0.0		0.0		0.0		14.5		0.0		8.4	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		13.6		13.6		25.7		9.5		0.0		0.0		0.0		0.0		14.5		0.0		8.4	
LOS by Move:	A		B		B		C		A		A		A		A		A		B		A		A	
DesignQueue:	0		4		4		1		5		0		0		0		0		4		0		0	

Note: Queue reported is the number of cars per lane.

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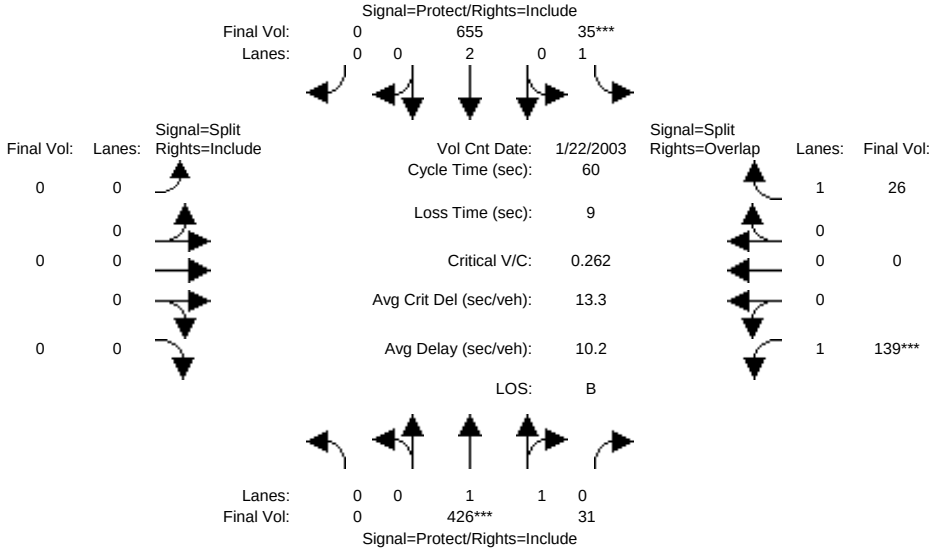
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	0	426	31	35	655	0	0	0	0	139	0	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	426	31	35	655	0	0	0	0	139	0	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	426	31	35	655	0	0	0	0	139	0	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	426	31	35	655	0	0	0	0	139	0	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	426	31	35	655	0	0	0	0	139	0	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	426	31	35	655	0	0	0	0	139	0	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	1.86	0.14	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3449	251	1750	3800	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.12	0.12	0.02	0.17	0.00	0.00	0.00	0.00	0.08	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	0.0	26.8	26.8	7.0	33.8	0.0	0.0	0.0	0.0	17.2	0.0	24.2
Volume/Cap:	0.00	0.28	0.28	0.17	0.31	0.00	0.00	0.00	0.00	0.28	0.00	0.04
Delay/Veh:	0.0	10.9	10.9	25.7	7.3	0.0	0.0	0.0	0.0	17.9	0.0	10.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.9	10.9	25.7	7.3	0.0	0.0	0.0	0.0	17.9	0.0	10.9
LOS by Move:	A	B	B	C	A	A	A	A	A	B	A	B
DesignQueue:	0	4	4	1	5	0	0	0	0	4	0	1

Note: Queue reported is the number of cars per lane.

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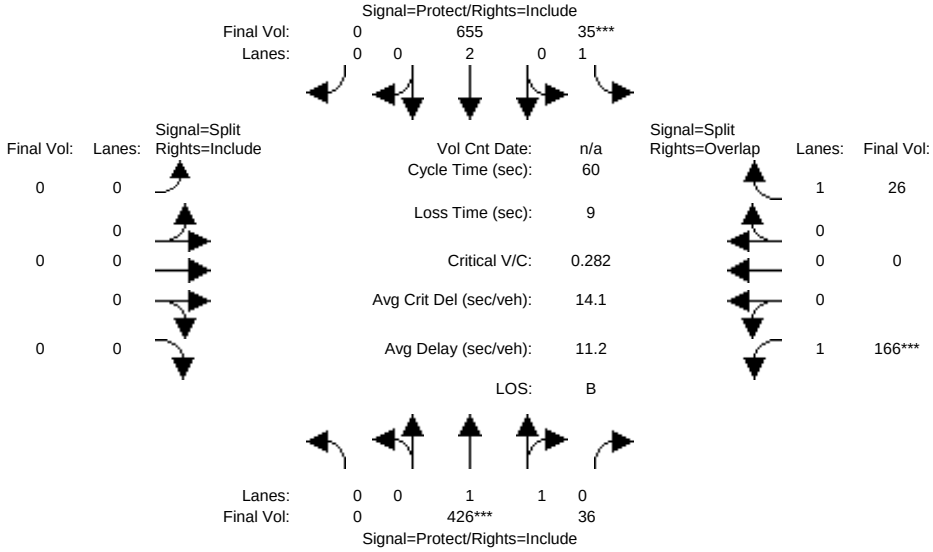
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	426	36	35	655	0	0	0	0	166	0	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	426	36	35	655	0	0	0	0	166	0	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	426	36	35	655	0	0	0	0	166	0	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	426	36	35	655	0	0	0	0	166	0	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	426	36	35	655	0	0	0	0	166	0	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	426	36	35	655	0	0	0	0	166	0	26
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	1.84	0.16	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3411	288	1750	3800	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.12	0.12	0.02	0.17	0.00	0.00	0.00	0.00	0.09	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	0.0	25.0	25.0	7.0	32.0	0.0	0.0	0.0	0.0	19.0	0.0	26.0
Volume/Cap:	0.00	0.30	0.30	0.17	0.32	0.00	0.00	0.00	0.00	0.30	0.00	0.03
Delay/Veh:	0.0	12.2	12.2	25.7	8.3	0.0	0.0	0.0	0.0	16.9	0.0	9.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.2	12.2	25.7	8.3	0.0	0.0	0.0	0.0	16.9	0.0	9.9
LOS by Move:	A	B	B	C	A	A	A	A	A	B	A	A
DesignQueue:	0	5	5	1	5	0	0	0	0	4	0	1

Note: Queue reported is the number of cars per lane.

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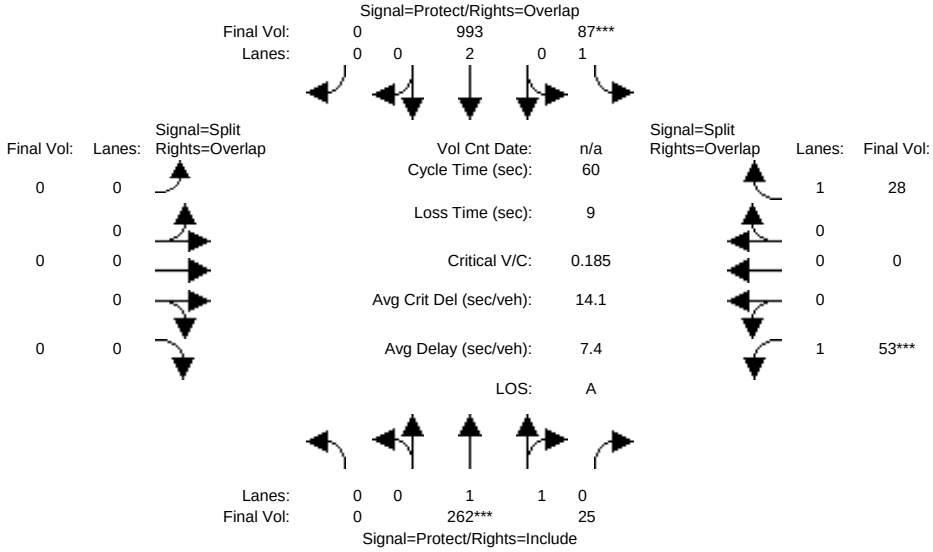
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	262	25	87	993	0	0	0	0	53	0	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	262	25	87	993	0	0	0	0	53	0	28
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	262	25	87	993	0	0	0	0	53	0	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	262	25	87	993	0	0	0	0	53	0	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	262	25	87	993	0	0	0	0	53	0	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	262	25	87	993	0	0	0	0	53	0	28
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	1.82	0.18	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3377	322	1750	3800	0	0	0	0	1750	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.08	0.08	0.05	0.26	0.00	0.00	0.00	0.00	0.03	0.00	0.02
Crit Moves:		****		****						****		
Green Time:	0.0	25.0	25.0	16.0	41.0	0.0	0.0	0.0	0.0	10.0	0.0	26.0
Volume/Cap:	0.00	0.19	0.19	0.19	0.38	0.00	0.00	0.00	0.00	0.18	0.00	0.04
Delay/Veh:	0.0	11.3	11.3	17.8	4.5	0.0	0.0	0.0	0.0	22.8	0.0	9.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.3	11.3	17.8	4.5	0.0	0.0	0.0	0.0	22.8	0.0	9.9
LOS by Move:	A	B	B	B	A	A	A	A	A	C	A	A
DesignQueue:	0	3	3	2	6	0	0	0	0	2	0	1

Note: Queue reported is the number of cars per lane.

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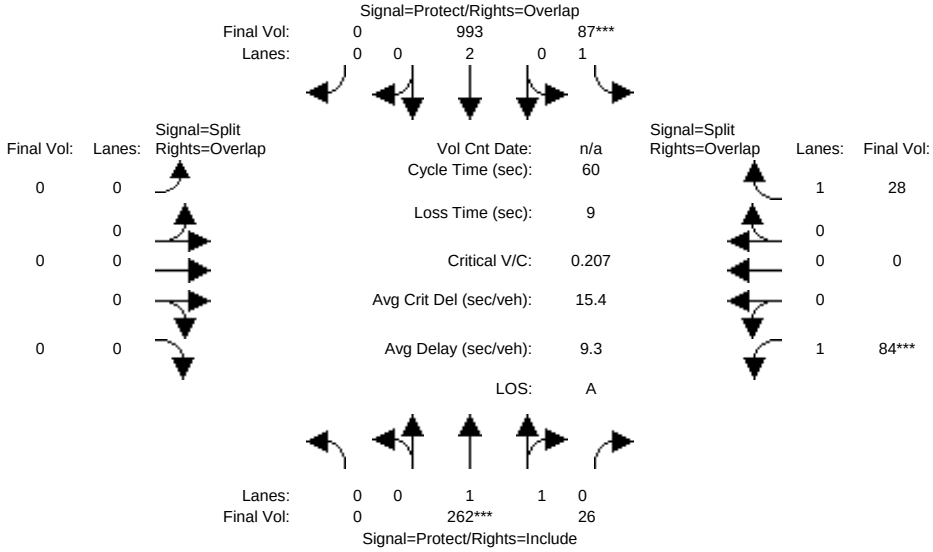
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		262		26		87		993		0		0		0		0		84		0		28	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		262		26		87		993		0		0		0		0		84		0		28	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		262		26		87		993		0		0		0		0		84		0		28	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		262		26		87		993		0		0		0		0		84		0		28	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		262		26		87		993		0		0		0		0		84		0		28	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		262		26		87		993		0		0		0		0		84		0		28	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.81		0.19		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3366		334		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.08		0.08		0.05		0.26		0.00		0.00		0.00		0.00		0.05		0.00		0.02	
Crit Moves:			****				****												****					
Green Time:	0.0		22.6		22.6		14.4		37.1		0.0		0.0		0.0		0.0		13.9		0.0		28.4	
Volume/Cap:	0.00		0.21		0.21		0.21		0.42		0.00		0.00		0.00		0.00		0.21		0.00		0.03	
Delay/Veh:	0.0		13.0		13.0		19.3		6.5		0.0		0.0		0.0		0.0		19.7		0.0		8.5	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		13.0		13.0		19.3		6.5		0.0		0.0		0.0		0.0		19.7		0.0		8.5	
LOS by Move:	A		B		B		B		A		A		A		A		A		B		A		A	
DesignQueue:	0		3		3		2		7		0		0		0		0		2		0		1	

Note: Queue reported is the number of cars per lane.

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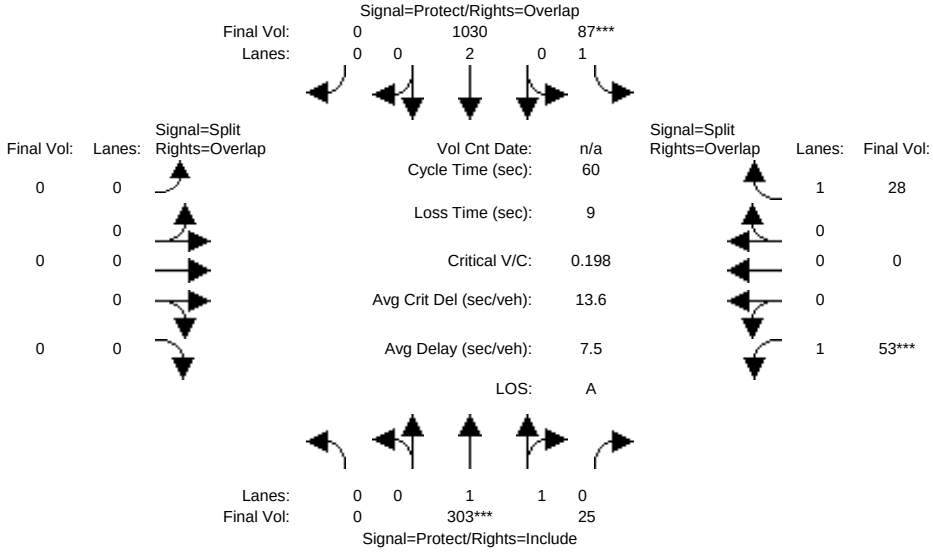
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		303		25		87		1030		0		0		0		0		53		0		28	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		303		25		87		1030		0		0		0		0		53		0		28	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		303		25		87		1030		0		0		0		0		53		0		28	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		303		25		87		1030		0		0		0		0		53		0		28	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		303		25		87		1030		0		0		0		0		53		0		28	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		303		25		87		1030		0		0		0		0		53		0		28	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.84		0.16		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3418		282		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.09		0.09		0.05		0.27		0.00		0.00		0.00		0.00		0.03		0.00		0.02	
Crit Moves:			****				****												****					
Green Time:	0.0		26.3		26.3		14.7		41.0		0.0		0.0		0.0		0.0		10.0		0.0		24.7	
Volume/Cap:	0.00		0.20		0.20		0.20		0.40		0.00		0.00		0.00		0.00		0.18		0.00		0.04	
Delay/Veh:	0.0		10.7		10.7		19.0		4.6		0.0		0.0		0.0		0.0		22.8		0.0		10.6	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		10.7		10.7		19.0		4.6		0.0		0.0		0.0		0.0		22.8		0.0		10.6	
LOS by Move:	A		B		B		B		A		A		A		A		A		C		A		B	
DesignQueue:	0		3		3		2		6		0		0		0		0		2		0		1	

Note: Queue reported is the number of cars per lane.

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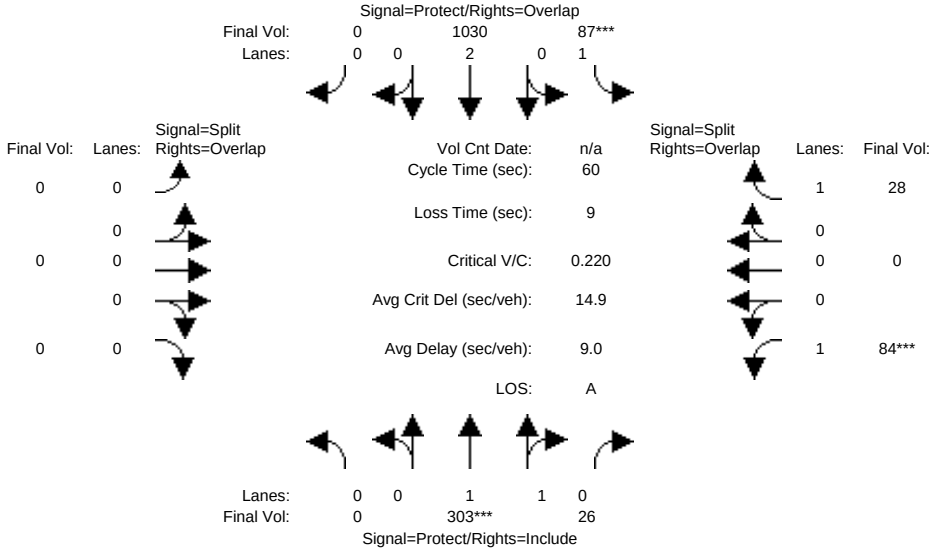
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Min. Green:	7		10	10	7		10	10	10		10	10	10		10	10
Y+R:	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Volume Module:																
Base Vol:	0		303	26	87		1030	0	0		0	0	84		0	28
Growth Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0		303	26	87		1030	0	0		0	0	84		0	28
Added Vol:	0		0	0	0		0	0	0		0	0	0		0	0
PasserByVol:	0		0	0	0		0	0	0		0	0	0		0	0
Initial Fut:	0		303	26	87		1030	0	0		0	0	84		0	28
User Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	0		303	26	87		1030	0	0		0	0	84		0	28
Reduct Vol:	0		0	0	0		0	0	0		0	0	0		0	0
Reduced Vol:	0		303	26	87		1030	0	0		0	0	84		0	28
PCE Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	0		303	26	87		1030	0	0		0	0	84		0	28
Saturation Flow Module:																
Sat/Lane:	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.92		0.98	0.95	0.92		1.00	0.92	0.92		1.00	0.92	0.92		1.00	0.92
Lanes:	0.00		1.84	0.16	1.00		2.00	0.00	0.00		0.00	0.00	1.00		0.00	1.00
Final Sat.:	0		3407	292	1750		3800	0	0		0	0	1750		0	1750
Capacity Analysis Module:																
Vol/Sat:	0.00		0.09	0.09	0.05		0.27	0.00	0.00		0.00	0.00	0.05		0.00	0.02
Crit Moves:			****		****								****			
Green Time:	0.0		24.3	24.3	13.6		37.9	0.0	0.0		0.0	0.0	13.1		0.0	26.7
Volume/Cap:	0.00		0.22	0.22	0.22		0.43	0.00	0.00		0.00	0.00	0.22		0.00	0.04
Delay/Veh:	0.0		12.0	12.0	20.2		6.2	0.0	0.0		0.0	0.0	20.6		0.0	9.5
User DelAdj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	0.0		12.0	12.0	20.2		6.2	0.0	0.0		0.0	0.0	20.6		0.0	9.5
LOS by Move:	A		B	B	C		A	A	A		A	A	C		A	A
DesignQueue:	0		3	3	2		7	0	0		0	0	2		0	1

Note: Queue reported is the number of cars per lane.

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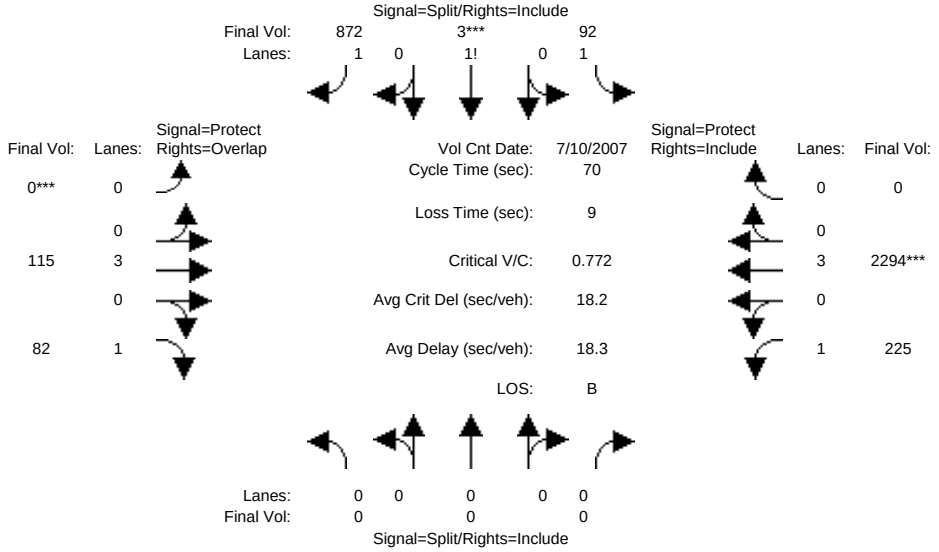
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	0	0	0	92	3	872	0	115	82	225	2294	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	92	3	872	0	115	82	225	2294	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	92	3	872	0	115	82	225	2294	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	92	3	872	0	115	82	225	2294	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	92	3	872	0	115	82	225	2294	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	92	3	872	0	115	82	225	2294	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.10	0.01	1.89	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	1920	11	3414	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.27	0.26	0.00	0.02	0.05	0.13	0.40	0.00
Crit Moves:					****		****				****	
Green Time:	0.0	0.0	0.0	24.5	24.5	24.5	0.0	19.2	19.2	17.3	36.5	0.0
Volume/Cap:	0.00	0.00	0.00	0.14	0.77	0.73	0.00	0.07	0.17	0.52	0.77	0.00
Delay/Veh:	0.0	0.0	0.0	15.6	24.9	23.4	0.0	18.9	20.1	27.2	15.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.6	24.9	23.4	0.0	18.9	20.1	27.2	15.4	0.0
LOS by Move:	A	A	A	B	C	C	A	B	C	C	B	A
DesignQueue:	0	0	0	2	14	13	0	1	3	7	16	0

Note: Queue reported is the number of cars per lane.

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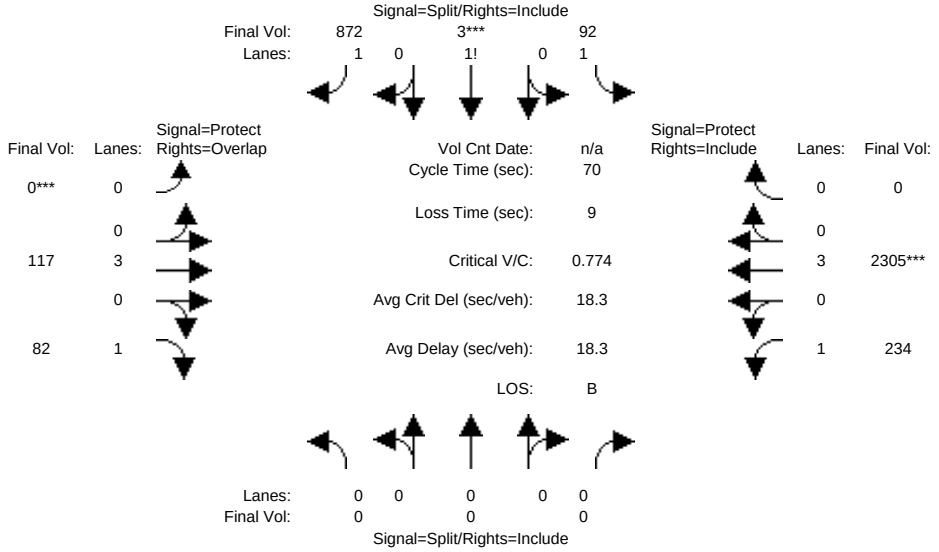
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	92	3	872	0	117	82	234	2305	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	92	3	872	0	117	82	234	2305	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	92	3	872	0	117	82	234	2305	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	92	3	872	0	117	82	234	2305	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	92	3	872	0	117	82	234	2305	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	92	3	872	0	117	82	234	2305	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.10	0.01	1.89	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	1920	11	3414	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.27	0.26	0.00	0.02	0.05	0.13	0.40	0.00
Crit Moves:					****		****				****	
Green Time:	0.0	0.0	0.0	24.4	24.4	24.4	0.0	18.9	18.9	17.7	36.6	0.0
Volume/Cap:	0.00	0.00	0.00	0.14	0.77	0.73	0.00	0.08	0.17	0.53	0.77	0.00
Delay/Veh:	0.0	0.0	0.0	15.6	25.0	23.5	0.0	19.1	20.4	27.1	15.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.6	25.0	23.5	0.0	19.1	20.4	27.1	15.4	0.0
LOS by Move:	A	A	A	B	C	C	A	B	C	C	B	A
DesignQueue:	0	0	0	2	14	13	0	1	3	8	16	0

Note: Queue reported is the number of cars per lane.

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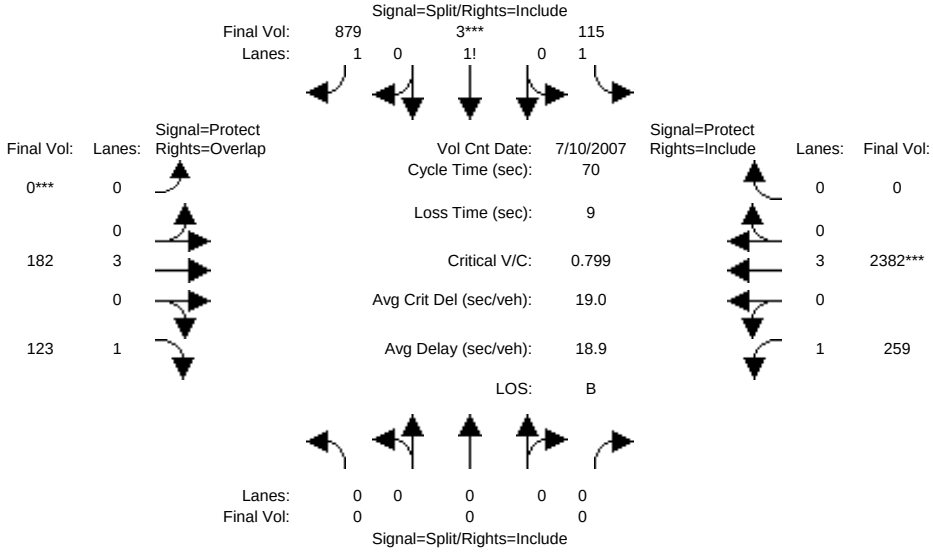
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	0	0	0	115	3	879	0	182	123	259	2382	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	115	3	879	0	182	123	259	2382	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	115	3	879	0	182	123	259	2382	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	115	3	879	0	182	123	259	2382	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	115	3	879	0	182	123	259	2382	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	115	3	879	0	182	123	259	2382	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.12	0.01	1.87	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	1956	11	3377	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.28	0.26	0.00	0.03	0.07	0.15	0.42	0.00
Crit Moves:					****		****				****	
Green Time:	0.0	0.0	0.0	24.4	24.4	24.4	0.0	18.0	18.0	18.6	36.6	0.0
Volume/Cap:	0.00	0.00	0.00	0.17	0.80	0.75	0.00	0.12	0.27	0.56	0.80	0.00
Delay/Veh:	0.0	0.0	0.0	15.8	26.0	23.9	0.0	20.1	22.3	26.9	16.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.8	26.0	23.9	0.0	20.1	22.3	26.9	16.0	0.0
LOS by Move:	A	A	A	B	C	C	A	C	C	C	B	A
DesignQueue:	0	0	0	3	14	13	0	2	4	8	17	0

Note: Queue reported is the number of cars per lane.

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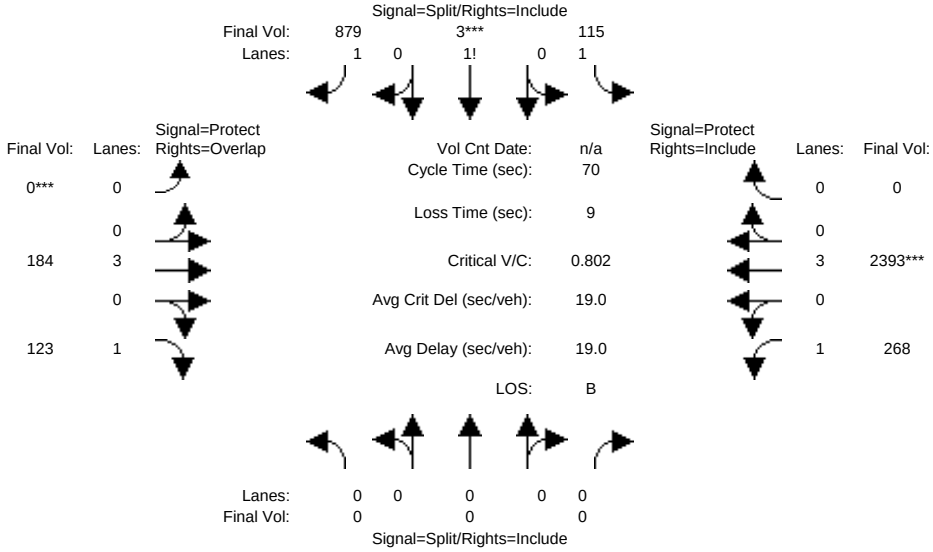
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	115	3	879	0	184	123	268	2393	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	115	3	879	0	184	123	268	2393	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	115	3	879	0	184	123	268	2393	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	115	3	879	0	184	123	268	2393	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	115	3	879	0	184	123	268	2393	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	115	3	879	0	184	123	268	2393	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.12	0.01	1.87	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	1956	11	3377	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.28	0.26	0.00	0.03	0.07	0.15	0.42	0.00
Crit Moves:					****		****				****	
Green Time:	0.0	0.0	0.0	24.3	24.3	24.3	0.0	17.7	17.7	19.0	36.7	0.0
Volume/Cap:	0.00	0.00	0.00	0.17	0.80	0.75	0.00	0.13	0.28	0.57	0.80	0.00
Delay/Veh:	0.0	0.0	0.0	15.9	26.2	24.0	0.0	20.4	22.6	26.8	16.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.9	26.2	24.0	0.0	20.4	22.6	26.8	16.1	0.0
LOS by Move:	A	A	A	B	C	C	A	C	C	C	B	A
DesignQueue:	0	0	0	3	14	13	0	2	4	9	17	0

Note: Queue reported is the number of cars per lane.

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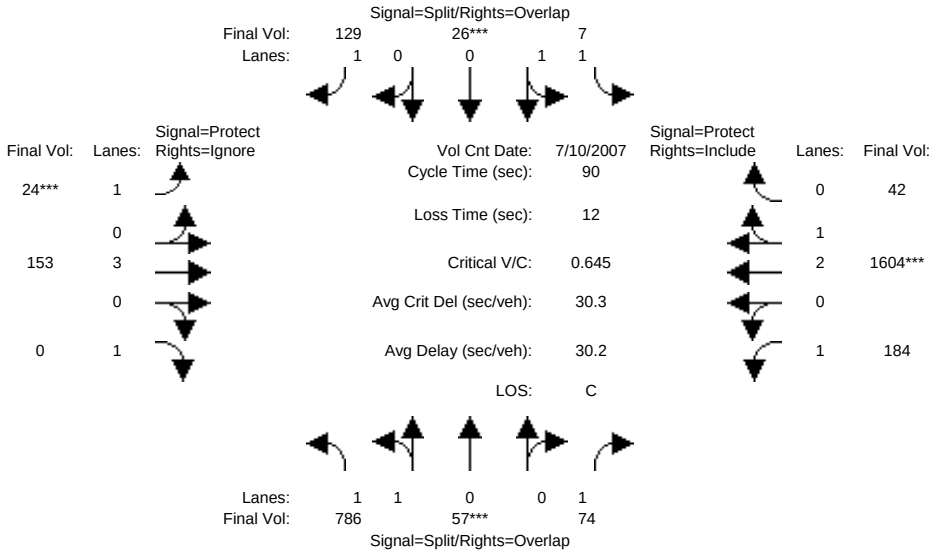
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	786	57	74	7	26	129	24	153	29	184	1604	42
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	786	57	74	7	26	129	24	153	29	184	1604	42
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	786	57	74	7	26	129	24	153	29	184	1604	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	786	57	74	7	26	129	24	153	0	184	1604	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	786	57	74	7	26	129	24	153	0	184	1604	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	786	57	74	7	26	129	24	153	0	184	1604	42
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	1.87	0.13	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.92	0.08
Final Sat.:	3310	240	1750	1750	1900	1750	1750	5700	1750	1750	5457	143
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.04	0.00	0.01	0.07	0.01	0.03	0.00	0.11	0.29	0.29
Crit Moves:		****			****		****				****	
Green Time:	27.3	27.3	47.1	10.0	10.0	17.0	7.0	20.9	0.0	19.8	33.7	33.7
Volume/Cap:	0.78	0.78	0.08	0.04	0.12	0.39	0.18	0.12	0.00	0.48	0.78	0.78
Delay/Veh:	34.4	34.4	10.9	35.8	37.0	35.4	41.6	27.4	0.0	34.8	27.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	34.4	10.9	35.8	37.0	35.4	41.6	27.4	0.0	34.8	27.9	27.9
LOS by Move:	C	C	B	D	D	D	D	C	A	C	C	C
DesignQueue:	17	17	2	0	1	6	1	2	0	8	19	19

Note: Queue reported is the number of cars per lane.

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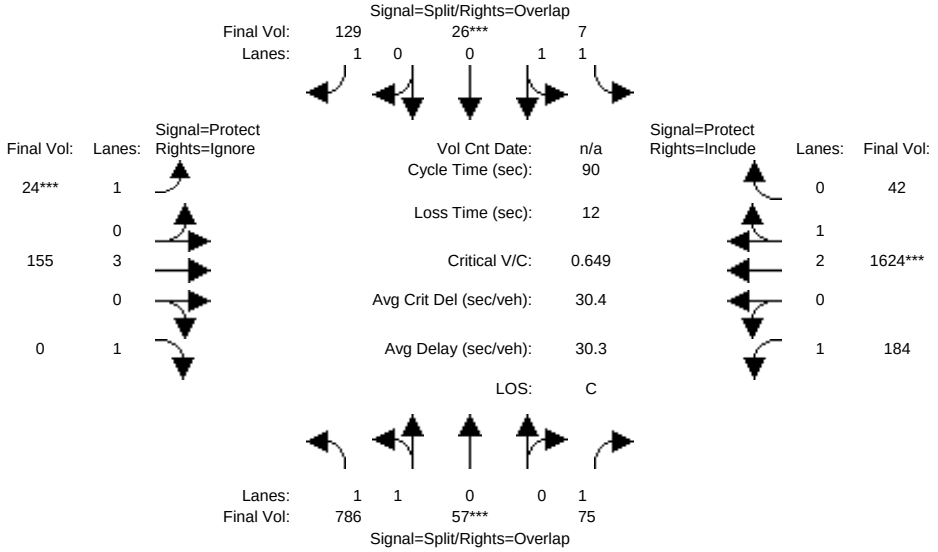
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	786	57	75	7	26	129	24	155	29	184	1624	42
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	786	57	75	7	26	129	24	155	29	184	1624	42
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	786	57	75	7	26	129	24	155	29	184	1624	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	786	57	75	7	26	129	24	155	0	184	1624	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	786	57	75	7	26	129	24	155	0	184	1624	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	786	57	75	7	26	129	24	155	0	184	1624	42
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	1.87	0.13	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.92	0.08
Final Sat.:	3310	240	1750	1750	1900	1750	1750	5700	1750	1750	5459	141
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.04	0.00	0.01	0.07	0.01	0.03	0.00	0.11	0.30	0.30
Crit Moves:		****			****		****				****	
Green Time:	27.1	27.1	47.0	10.0	10.0	17.0	7.0	21.0	0.0	19.9	33.9	33.9
Volume/Cap:	0.79	0.79	0.08	0.04	0.12	0.39	0.18	0.12	0.00	0.48	0.79	0.79
Delay/Veh:	34.8	34.8	10.9	35.8	37.0	35.4	41.6	27.3	0.0	34.7	28.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.8	34.8	10.9	35.8	37.0	35.4	41.6	27.3	0.0	34.7	28.0	28.0
LOS by Move:	C	C	B	D	D	D	D	C	A	C	C	C
DesignQueue:	17	17	2	0	1	6	1	2	0	8	19	19

Note: Queue reported is the number of cars per lane.

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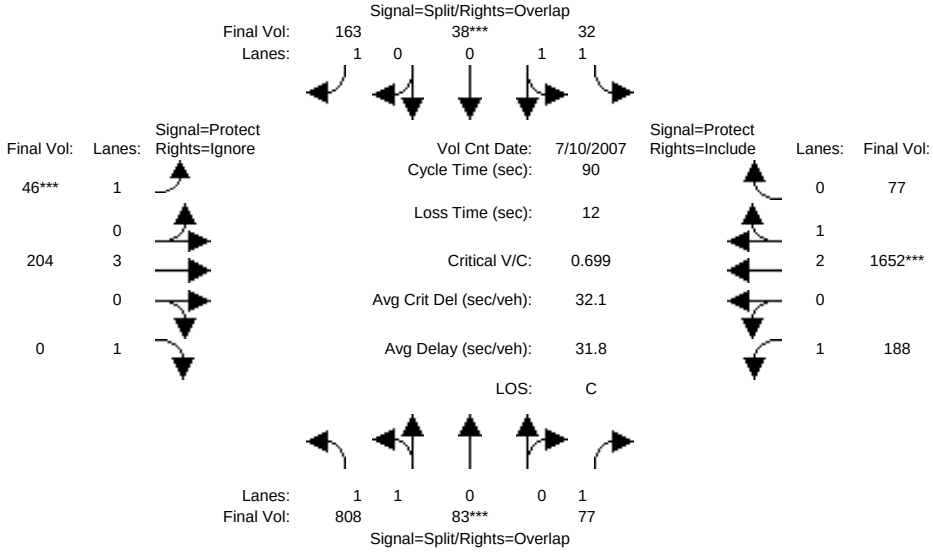
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	808	83	77	32	38	163	46	204	36	188	1652	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	808	83	77	32	38	163	46	204	36	188	1652	77
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	808	83	77	32	38	163	46	204	36	188	1652	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	808	83	77	32	38	163	46	204	0	188	1652	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	808	83	77	32	38	163	46	204	0	188	1652	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	808	83	77	32	38	163	46	204	0	188	1652	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	1.82	0.18	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.86	0.14
Final Sat.:	3219	331	1750	1750	1900	1750	1750	5700	1750	1750	5350	249
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.04	0.02	0.02	0.09	0.03	0.04	0.00	0.11	0.31	0.31
Crit Moves:		****			****		****				****	
Green Time:	27.4	27.4	47.3	10.0	10.0	17.0	7.0	20.7	0.0	20.0	33.6	33.6
Volume/Cap:	0.83	0.83	0.08	0.16	0.18	0.49	0.34	0.16	0.00	0.48	0.83	0.83
Delay/Veh:	36.4	36.4	10.8	37.0	37.3	37.8	45.9	28.0	0.0	34.8	29.4	29.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.4	36.4	10.8	37.0	37.3	37.8	45.9	28.0	0.0	34.8	29.4	29.4
LOS by Move:	D	D	B	D	D	D	D	C	A	C	C	C
DesignQueue:	18	18	2	2	2	7	2	3	0	8	20	20

Note: Queue reported is the number of cars per lane.

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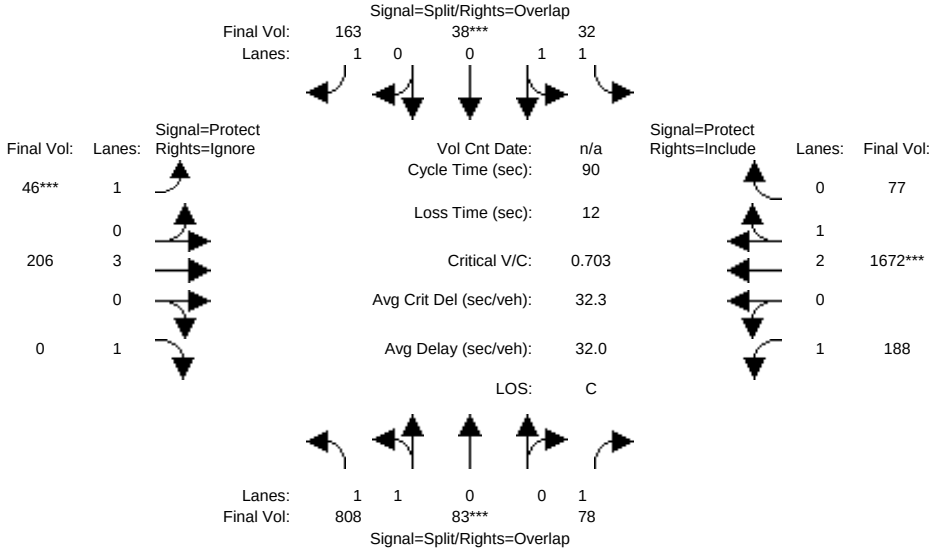
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	808	83	78	32	38	163	46	206	36	188	1672	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	808	83	78	32	38	163	46	206	36	188	1672	77
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	808	83	78	32	38	163	46	206	36	188	1672	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	808	83	78	32	38	163	46	206	0	188	1672	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	808	83	78	32	38	163	46	206	0	188	1672	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	808	83	78	32	38	163	46	206	0	188	1672	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	1.82	0.18	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.86	0.14
Final Sat.:	3219	331	1750	1750	1900	1750	1750	5700	1750	1750	5353	247
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.04	0.02	0.02	0.09	0.03	0.04	0.00	0.11	0.31	0.31
Crit Moves:		****			****		****				****	
Green Time:	27.2	27.2	47.2	10.0	10.0	17.0	7.0	20.8	0.0	20.1	33.8	33.8
Volume/Cap:	0.83	0.83	0.08	0.16	0.18	0.49	0.34	0.16	0.00	0.48	0.83	0.83
Delay/Veh:	36.8	36.8	10.8	37.0	37.3	37.8	45.9	27.9	0.0	34.7	29.5	29.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.8	36.8	10.8	37.0	37.3	37.8	45.9	27.9	0.0	34.7	29.5	29.5
LOS by Move:	D	D	B	D	D	D	D	C	A	C	C	C
DesignQueue:	18	18	2	2	2	7	2	3	0	8	20	20

Note: Queue reported is the number of cars per lane.

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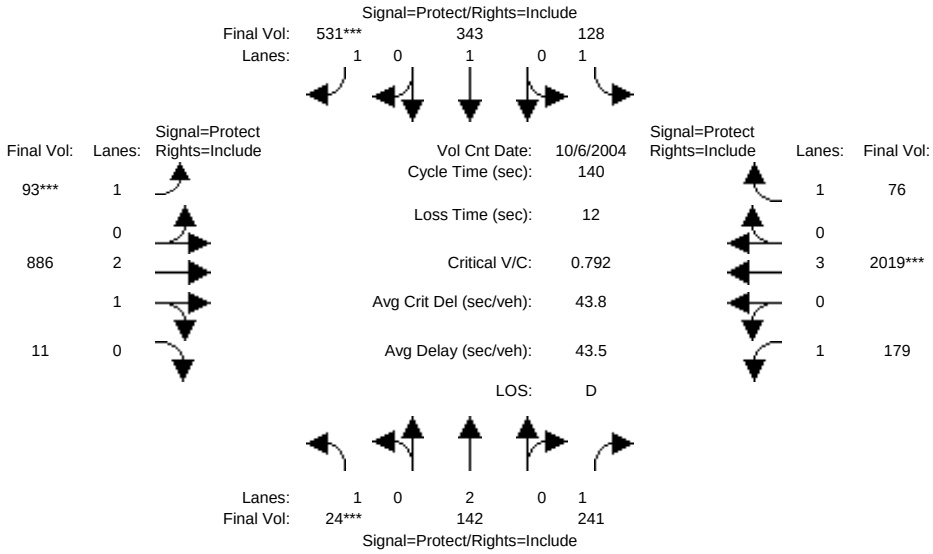
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Oct 2004 <<												
Base Vol:	24	142	241	128	343	531	93	886	11	179	2019	76
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	142	241	128	343	531	93	886	11	179	2019	76
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	142	241	128	343	531	93	886	11	179	2019	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	24	142	241	128	343	531	93	886	11	179	2019	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	142	241	128	343	531	93	886	11	179	2019	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	24	142	241	128	343	531	93	886	11	179	2019	76
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.96	0.04	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5531	69	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.14	0.07	0.18	0.30	0.05	0.16	0.16	0.10	0.35	0.04
Crit Moves:	****					****	****				****	
Green Time:	7.0	38.3	38.3	20.3	51.7	51.7	9.0	42.3	42.3	27.0	60.3	60.3
Volume/Cap:	0.27	0.14	0.50	0.50	0.49	0.82	0.82	0.53	0.53	0.53	0.82	0.10
Delay/Veh:	71.7	38.6	46.6	62.1	36.4	51.3	111.3	41.8	41.8	56.6	38.4	24.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.7	38.6	46.6	62.1	36.4	51.3	111.3	41.8	41.8	56.6	38.4	24.0
LOS by Move:	E	D	D	E	D	D	F	D	D	E	D	C
DesignQueue:	2	4	15	9	18	31	7	17	17	13	33	4

Note: Queue reported is the number of cars per lane.

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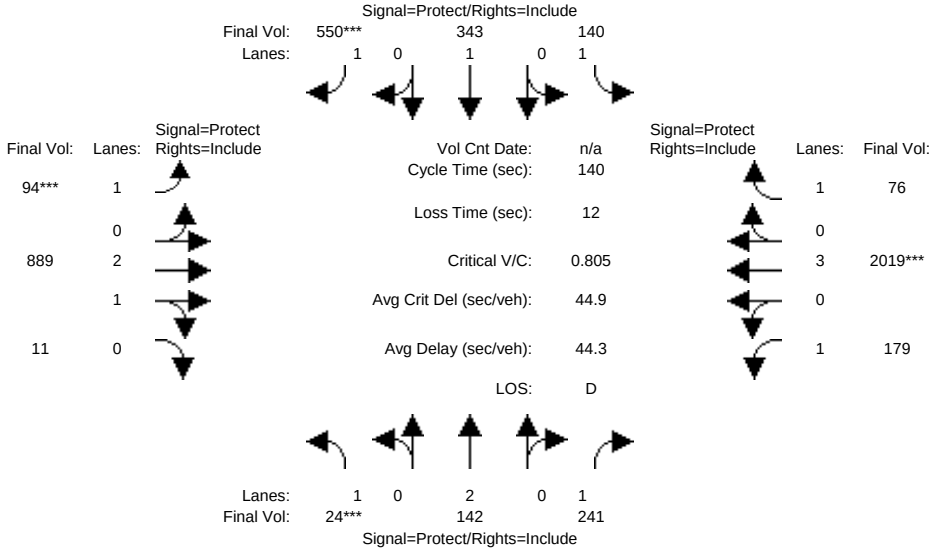
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	24	142	241	140	343	550	94	889	11	179	2019	76
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	142	241	140	343	550	94	889	11	179	2019	76
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	142	241	140	343	550	94	889	11	179	2019	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	24	142	241	140	343	550	94	889	11	179	2019	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	142	241	140	343	550	94	889	11	179	2019	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	24	142	241	140	343	550	94	889	11	179	2019	76
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.96	0.04	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5531	68	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.14	0.08	0.18	0.31	0.05	0.16	0.16	0.10	0.35	0.04
Crit Moves:	****					****	****				****	
Green Time:	7.0	37.7	37.7	21.9	52.7	52.7	9.0	41.8	41.8	26.6	59.3	59.3
Volume/Cap:	0.27	0.14	0.51	0.51	0.48	0.84	0.84	0.54	0.54	0.54	0.84	0.10
Delay/Veh:	71.7	39.1	47.2	60.8	35.6	51.7	113.7	42.3	42.3	57.3	39.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.7	39.1	47.2	60.8	35.6	51.7	113.7	42.3	42.3	57.3	39.6	24.6
LOS by Move:	E	D	D	E	D	D	F	D	D	E	D	C
DesignQueue:	2	4	15	10	17	32	8	17	17	13	33	4

Note: Queue reported is the number of cars per lane.

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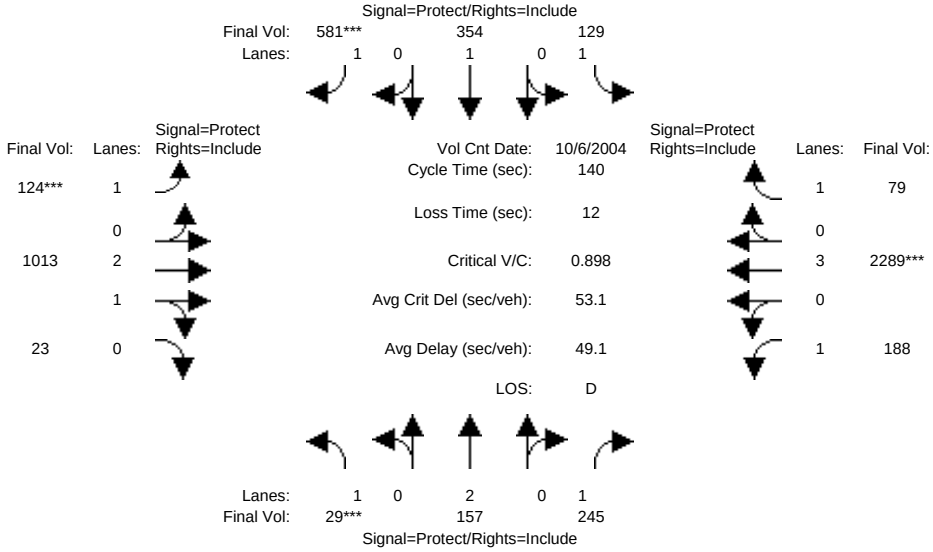
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Oct 2004 <<												
Base Vol:	29	157	245	129	354	581	124	1013	23	188	2289	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	157	245	129	354	581	124	1013	23	188	2289	79
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	157	245	129	354	581	124	1013	23	188	2289	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	157	245	129	354	581	124	1013	23	188	2289	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	157	245	129	354	581	124	1013	23	188	2289	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	157	245	129	354	581	124	1013	23	188	2289	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.93	0.07	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5476	124	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.14	0.07	0.19	0.33	0.07	0.19	0.19	0.11	0.40	0.05
Crit Moves:	****					****	****				****	
Green Time:	7.0	37.3	37.3	19.6	49.9	49.9	10.7	45.0	45.0	26.1	60.4	60.4
Volume/Cap:	0.33	0.16	0.53	0.53	0.52	0.93	0.93	0.58	0.58	0.58	0.93	0.10
Delay/Veh:	74.1	39.6	48.0	63.7	38.5	65.9	125.5	40.9	40.9	59.1	45.7	24.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.1	39.6	48.0	63.7	38.5	65.9	125.5	40.9	40.9	59.1	45.7	24.0
LOS by Move:	E	D	D	E	D	E	F	D	D	E	D	C
DesignQueue:	2	5	16	10	19	35	10	20	20	13	38	4

Note: Queue reported is the number of cars per lane.

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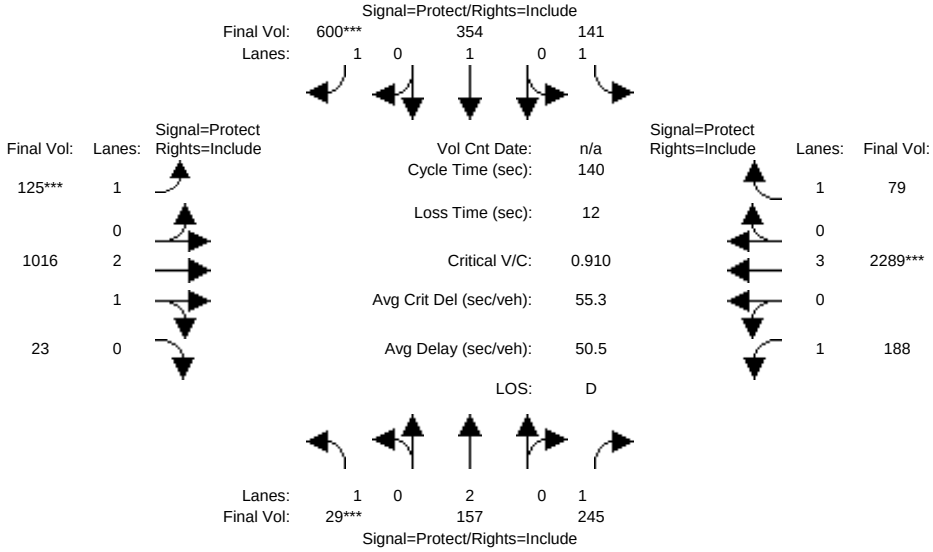
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	29	157	245	141	354	600	125	1016	23	188	2289	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	157	245	141	354	600	125	1016	23	188	2289	79
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	157	245	141	354	600	125	1016	23	188	2289	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	157	245	141	354	600	125	1016	23	188	2289	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	157	245	141	354	600	125	1016	23	188	2289	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	157	245	141	354	600	125	1016	23	188	2289	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.93	0.07	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5476	124	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.14	0.08	0.19	0.34	0.07	0.19	0.19	0.11	0.40	0.05
Crit Moves:	****					****	****				****	
Green Time:	7.0	36.7	36.7	21.1	50.8	50.8	10.6	44.4	44.4	25.7	59.6	59.6
Volume/Cap:	0.33	0.16	0.53	0.53	0.51	0.94	0.94	0.58	0.58	0.58	0.94	0.11
Delay/Veh:	74.1	40.1	48.7	62.4	37.6	67.5	128.8	41.5	41.5	59.8	47.8	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.1	40.1	48.7	62.4	37.6	67.5	128.8	41.5	41.5	59.8	47.8	24.5
LOS by Move:	E	D	D	E	D	E	F	D	D	E	D	C
DesignQueue:	2	5	16	10	18	35	10	20	20	13	38	4

Note: Queue reported is the number of cars per lane.

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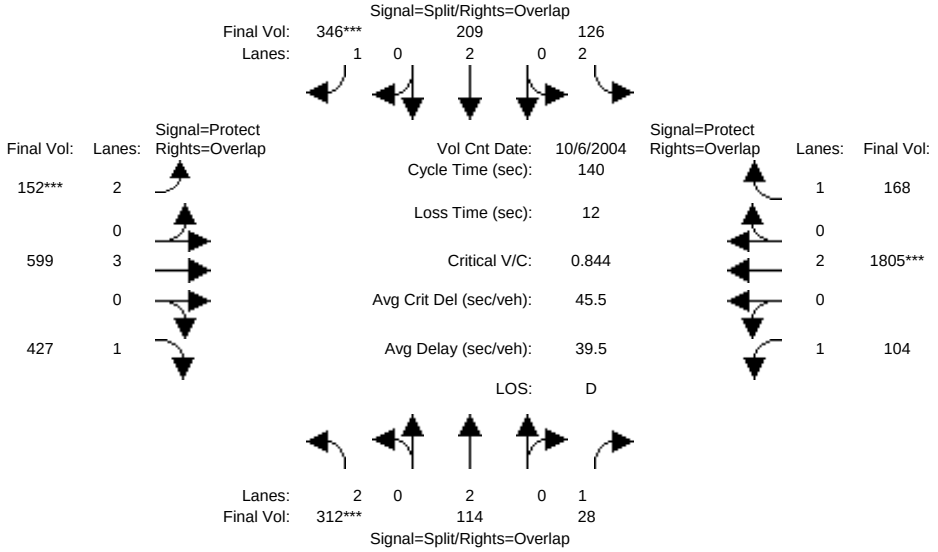
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Oct 2004 <<												
Base Vol:	312	114	28	126	209	346	152	599	427	104	1805	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	312	114	28	126	209	346	152	599	427	104	1805	168
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	312	114	28	126	209	346	152	599	427	104	1805	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	312	114	28	126	209	346	152	599	427	104	1805	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	114	28	126	209	346	152	599	427	104	1805	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	312	114	28	126	209	346	152	599	427	104	1805	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.03	0.02	0.04	0.06	0.20	0.05	0.11	0.24	0.06	0.48	0.10
Crit Moves:	****					****	****				****	
Green Time:	16.4	16.4	41.7	24.5	24.5	32.5	8.0	61.5	78.0	25.2	78.8	103.3
Volume/Cap:	0.84	0.26	0.05	0.23	0.31	0.85	0.84	0.24	0.44	0.33	0.84	0.13
Delay/Veh:	81.0	57.6	35.3	50.6	51.7	71.1	101.2	24.8	19.6	52.8	29.8	5.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.0	57.6	35.3	50.6	51.7	71.1	101.2	24.8	19.6	52.8	29.8	5.5
LOS by Move:	F	E	D	D	D	E	F	C	B	D	C	A
DesignQueue:	13	4	2	5	7	24	7	9	17	7	35	4

Note: Queue reported is the number of cars per lane.

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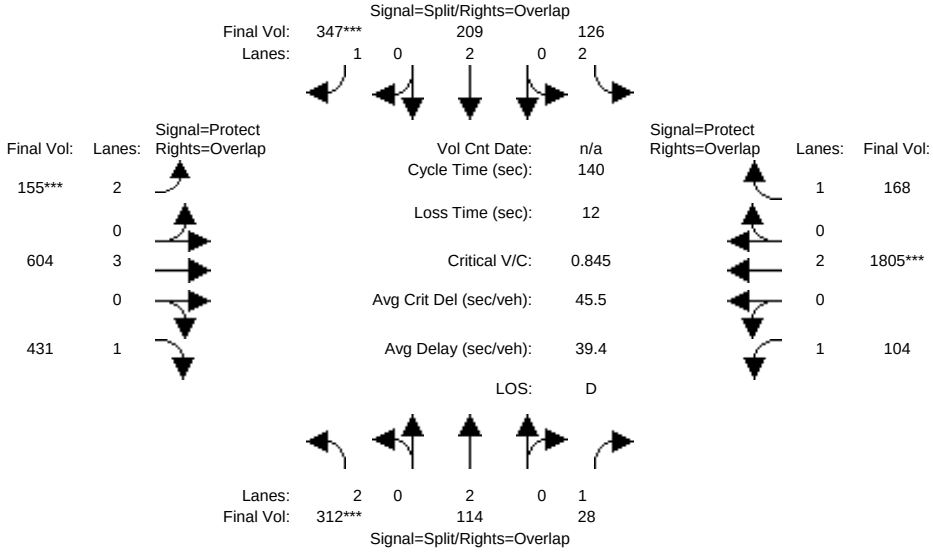
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	312	114	28	126	209	347	155	604	431	104	1805	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	312	114	28	126	209	347	155	604	431	104	1805	168
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	312	114	28	126	209	347	155	604	431	104	1805	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	312	114	28	126	209	347	155	604	431	104	1805	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	114	28	126	209	347	155	604	431	104	1805	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	312	114	28	126	209	347	155	604	431	104	1805	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.10	0.03	0.02	0.04	0.06	0.20	0.05	0.11	0.25	0.06	0.48	0.10
Crit Moves:	****					****	****				****	
Green Time:	16.4	16.4	41.4	24.6	24.6	32.7	8.2	61.9	78.3	25.0	78.7	103.3
Volume/Cap:	0.84	0.26	0.05	0.23	0.31	0.85	0.84	0.24	0.44	0.33	0.84	0.13
Delay/Veh:	81.0	57.6	35.5	50.5	51.6	70.4	100.7	24.6	19.5	53.1	29.9	5.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.0	57.6	35.5	50.5	51.6	70.4	100.7	24.6	19.5	53.1	29.9	5.5
LOS by Move:	F	E	D	D	D	E	F	C	B	D	C	A
DesignQueue:	13	4	2	5	7	24	7	9	17	7	35	4

Note: Queue reported is the number of cars per lane.

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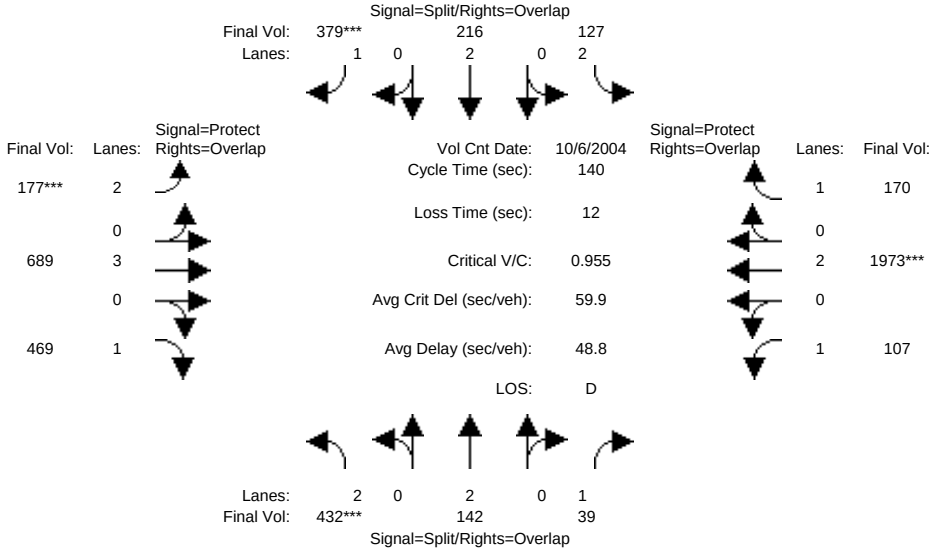
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 6 Oct 2004 <<												
Base Vol:	432	142	39	127	216	379	177	689	469	107	1973	170
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	432	142	39	127	216	379	177	689	469	107	1973	170
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	432	142	39	127	216	379	177	689	469	107	1973	170
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	432	142	39	127	216	379	177	689	469	107	1973	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	432	142	39	127	216	379	177	689	469	107	1973	170
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	432	142	39	127	216	379	177	689	469	107	1973	170
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.04	0.02	0.04	0.06	0.22	0.06	0.12	0.27	0.06	0.52	0.10
Crit Moves:	****					****	****				****	
Green Time:	20.1	20.1	47.0	23.5	23.5	31.8	8.2	57.5	77.6	26.9	76.1	99.7
Volume/Cap:	0.95	0.26	0.07	0.24	0.34	0.95	0.95	0.29	0.48	0.32	0.95	0.14
Delay/Veh:	91.9	54.5	31.8	51.6	52.8	88.5	120.9	28.0	20.7	51.2	42.0	6.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	91.9	54.5	31.8	51.6	52.8	88.5	120.9	28.0	20.7	51.2	42.0	6.7
LOS by Move:	F	D	C	D	D	F	F	C	C	D	D	A
DesignQueue:	18	5	2	5	7	26	8	11	19	7	41	4

Note: Queue reported is the number of cars per lane.

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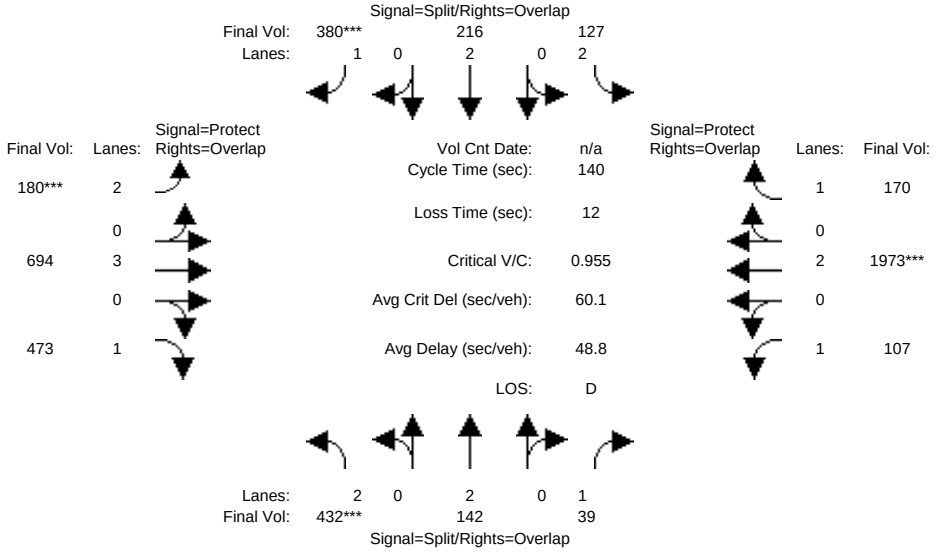
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	432	142	39	127	216	380	180	694	473	107	1973	170
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	432	142	39	127	216	380	180	694	473	107	1973	170
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	432	142	39	127	216	380	180	694	473	107	1973	170
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	432	142	39	127	216	380	180	694	473	107	1973	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	432	142	39	127	216	380	180	694	473	107	1973	170
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	432	142	39	127	216	380	180	694	473	107	1973	170
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.04	0.02	0.04	0.06	0.22	0.06	0.12	0.27	0.06	0.52	0.10
Crit Moves:	****					****	****				****	
Green Time:	20.1	20.1	46.7	23.4	23.4	31.8	8.4	57.9	78.0	26.6	76.1	99.5
Volume/Cap:	0.96	0.26	0.07	0.24	0.34	0.96	0.96	0.29	0.49	0.32	0.96	0.14
Delay/Veh:	92.0	54.5	32.0	51.6	52.9	88.6	120.5	27.7	20.6	51.5	42.1	6.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	92.0	54.5	32.0	51.6	52.9	88.6	120.5	27.7	20.6	51.5	42.1	6.7
LOS by Move:	F	D	C	D	D	F	F	C	C	D	D	A
DesignQueue:	18	5	2	5	7	26	8	11	19	7	41	4

Note: Queue reported is the number of cars per lane.

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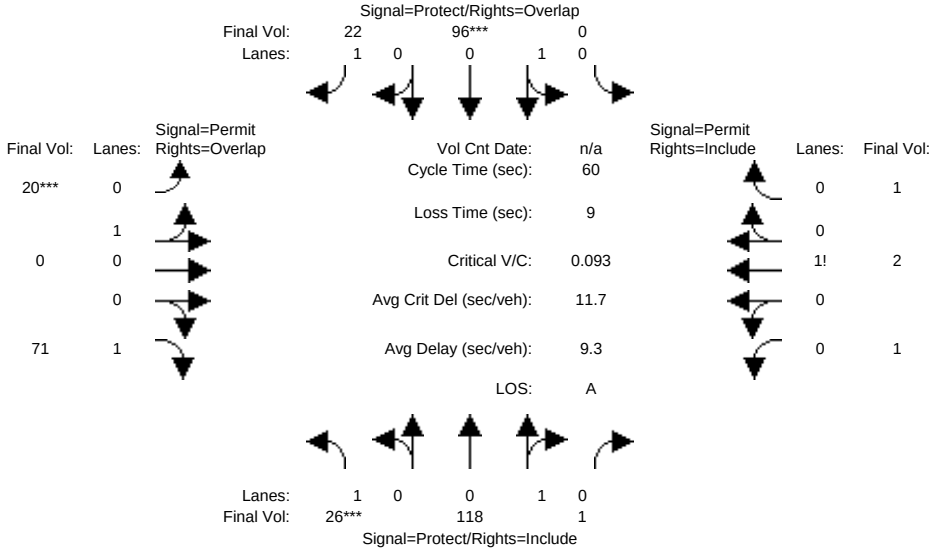
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	26	118	1	0	96	22	20	0	71	1	2	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	118	1	0	96	22	20	0	71	1	2	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	118	1	0	96	22	20	0	71	1	2	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	118	1	0	96	22	20	0	71	1	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	118	1	0	96	22	20	0	71	1	2	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	118	1	0	96	22	20	0	71	1	2	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.92	0.92
Lanes:	1.00	0.99	0.01	0.00	1.00	1.00	1.00	0.00	1.00	0.25	0.50	0.25
Final Sat.:	1750	1785	15	0	1800	1750	1800	0	1750	438	875	438
Capacity Analysis Module:												
Vol/Sat:	0.01	0.07	0.07	0.00	0.05	0.01	0.01	0.00	0.04	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green Time:	8.9	41.0	41.0	0.0	32.1	32.1	10.0	0.0	18.9	10.0	10.0	10.0
Volume/Cap:	0.10	0.10	0.10	0.00	0.10	0.02	0.07	0.00	0.13	0.01	0.01	0.01
Delay/Veh:	22.2	3.3	3.3	0.0	6.9	6.6	21.2	0.0	14.8	20.9	20.9	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	3.3	3.3	0.0	6.9	6.6	21.2	0.0	14.8	20.9	20.9	20.9
LOS by Move:	C	A	A	A	A	A	C	A	B	C	C	C
DesignQueue:	1	1	1	0	2	0	1	0	2	0	0	0

Note: Queue reported is the number of cars per lane.

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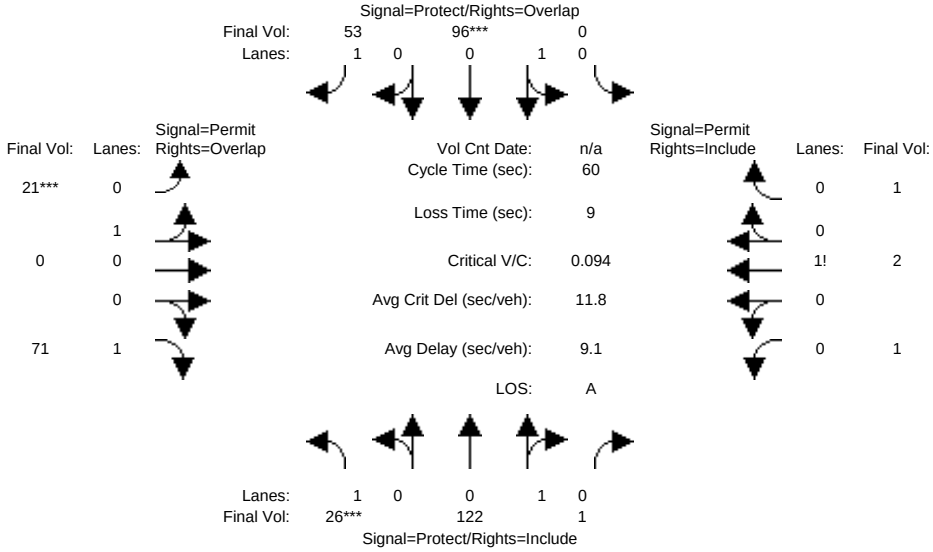
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj AM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Min. Green:	7	10	10		7	10	10		10	10	10		10	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module:																
Base Vol:	26	122	1		0	96	53		21	0	71		1	2	1	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	26	122	1		0	96	53		21	0	71		1	2	1	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	26	122	1		0	96	53		21	0	71		1	2	1	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	26	122	1		0	96	53		21	0	71		1	2	1	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	26	122	1		0	96	53		21	0	71		1	2	1	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	26	122	1		0	96	53		21	0	71		1	2	1	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.95	0.95		0.95	0.95	0.92		0.95	0.95	0.92		0.92	0.92	0.92	
Lanes:	1.00	0.99	0.01		0.00	1.00	1.00		1.00	0.00	1.00		0.25	0.50	0.25	
Final Sat.:	1750	1785	15		0	1800	1750		1800	0	1750		438	875	438	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.07	0.07		0.00	0.05	0.03		0.01	0.00	0.04		0.00	0.00	0.00	
Crit Moves:	****					****			****							
Green Time:	8.9	41.0	41.0		0.0	32.1	32.1		10.0	0.0	18.9		10.0	10.0	10.0	
Volume/Cap:	0.10	0.10	0.10		0.00	0.10	0.06		0.07	0.00	0.13		0.01	0.01	0.01	
Delay/Veh:	22.2	3.3	3.3		0.0	6.9	6.7		21.2	0.0	14.8		20.9	20.9	20.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	22.2	3.3	3.3		0.0	6.9	6.7		21.2	0.0	14.8		20.9	20.9	20.9	
LOS by Move:	C	A	A		A	A	A		C	A	B		C	C	C	
DesignQueue:	1	1	1		0	2	1		1	0	2		0	0	0	

Note: Queue reported is the number of cars per lane.

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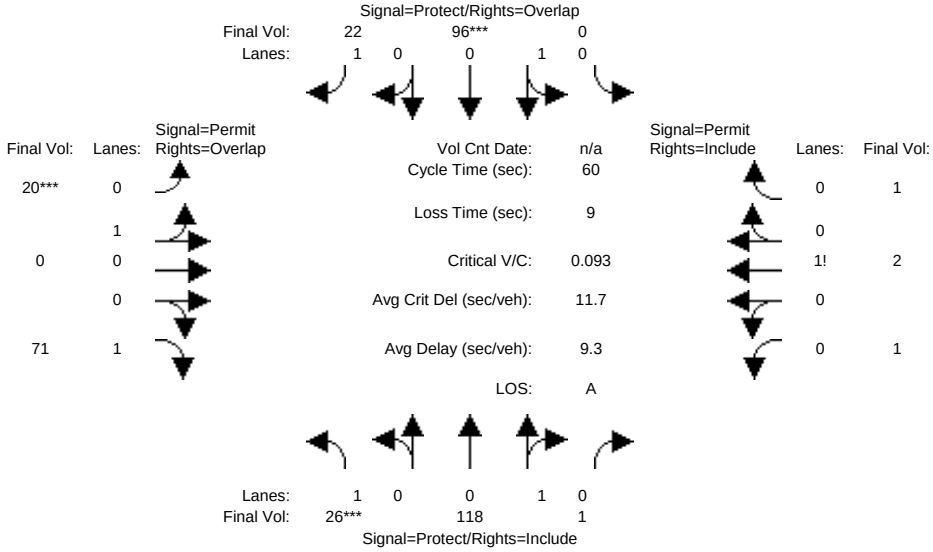
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	26	118	1	0	96	22	20	0	71	1	2	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	118	1	0	96	22	20	0	71	1	2	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	118	1	0	96	22	20	0	71	1	2	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	118	1	0	96	22	20	0	71	1	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	118	1	0	96	22	20	0	71	1	2	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	118	1	0	96	22	20	0	71	1	2	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.92	0.92
Lanes:	1.00	0.99	0.01	0.00	1.00	1.00	1.00	0.00	1.00	0.25	0.50	0.25
Final Sat.:	1750	1785	15	0	1800	1750	1800	0	1750	438	875	438
Capacity Analysis Module:												
Vol/Sat:	0.01	0.07	0.07	0.00	0.05	0.01	0.01	0.00	0.04	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green Time:	8.9	41.0	41.0	0.0	32.1	32.1	10.0	0.0	18.9	10.0	10.0	10.0
Volume/Cap:	0.10	0.10	0.10	0.00	0.10	0.02	0.07	0.00	0.13	0.01	0.01	0.01
Delay/Veh:	22.2	3.3	3.3	0.0	6.9	6.6	21.2	0.0	14.8	20.9	20.9	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	3.3	3.3	0.0	6.9	6.6	21.2	0.0	14.8	20.9	20.9	20.9
LOS by Move:	C	A	A	A	A	A	C	A	B	C	C	C
DesignQueue:	1	1	1	0	2	0	1	0	2	0	0	0

Note: Queue reported is the number of cars per lane.

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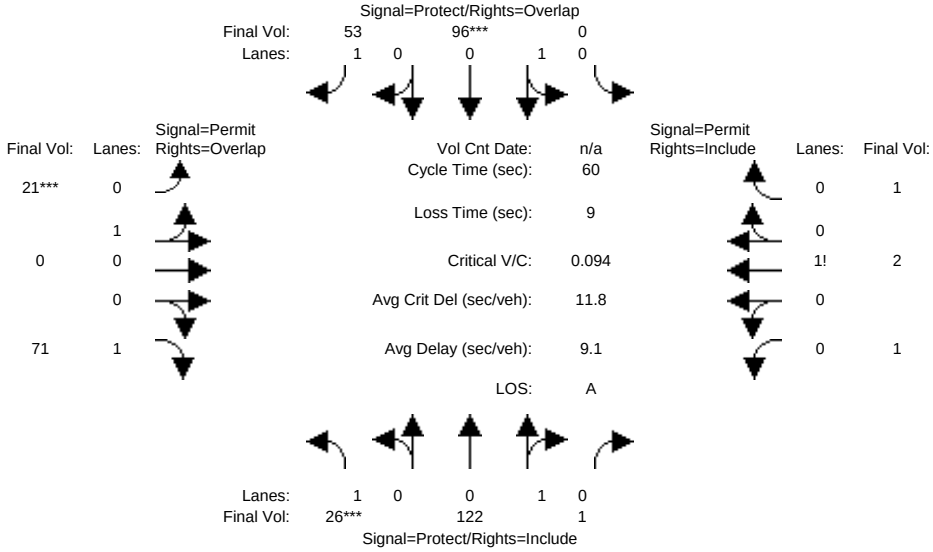
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj AM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	26	122	1	0	96	53	21	0	71	1	2	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	122	1	0	96	53	21	0	71	1	2	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	122	1	0	96	53	21	0	71	1	2	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	122	1	0	96	53	21	0	71	1	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	122	1	0	96	53	21	0	71	1	2	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	122	1	0	96	53	21	0	71	1	2	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.92	0.92
Lanes:	1.00	0.99	0.01	0.00	1.00	1.00	1.00	0.00	1.00	0.25	0.50	0.25
Final Sat.:	1750	1785	15	0	1800	1750	1800	0	1750	438	875	438
Capacity Analysis Module:												
Vol/Sat:	0.01	0.07	0.07	0.00	0.05	0.03	0.01	0.00	0.04	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green Time:	8.9	41.0	41.0	0.0	32.1	32.1	10.0	0.0	18.9	10.0	10.0	10.0
Volume/Cap:	0.10	0.10	0.10	0.00	0.10	0.06	0.07	0.00	0.13	0.01	0.01	0.01
Delay/Veh:	22.2	3.3	3.3	0.0	6.9	6.7	21.2	0.0	14.8	20.9	20.9	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	3.3	3.3	0.0	6.9	6.7	21.2	0.0	14.8	20.9	20.9	20.9
LOS by Move:	C	A	A	A	A	A	C	A	B	C	C	C
DesignQueue:	1	1	1	0	2	1	1	0	2	0	0	0

Note: Queue reported is the number of cars per lane.

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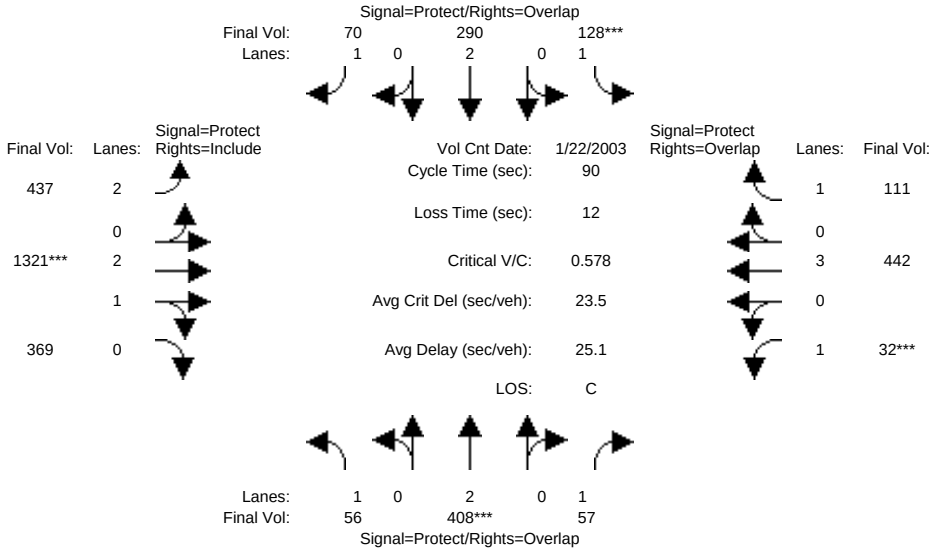
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	56	408	57	128	290	70	437	1321	369	32	442	111
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	408	57	128	290	70	437	1321	369	32	442	111
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	408	57	128	290	70	437	1321	369	32	442	111
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	408	57	128	290	70	437	1321	369	32	442	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	408	57	128	290	70	437	1321	369	32	442	111
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	408	57	128	290	70	437	1321	369	32	442	111
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.99	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.32	0.68	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4376	1222	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.03	0.07	0.08	0.04	0.14	0.30	0.30	0.02	0.08	0.06
Crit Moves:		****		****				****		****		
Green Time:	10.9	15.8	22.8	10.8	15.6	44.2	28.6	44.4	44.4	7.0	22.9	33.6
Volume/Cap:	0.26	0.61	0.13	0.61	0.44	0.08	0.44	0.61	0.61	0.24	0.31	0.17
Delay/Veh:	38.9	38.4	26.5	50.3	35.4	12.3	25.7	17.5	17.5	43.0	27.7	19.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.9	38.4	26.5	50.3	35.4	12.3	25.7	17.5	17.5	43.0	27.7	19.4
LOS by Move:	D	D	C	D	D	B	C	B	B	D	C	B
DesignQueue:	3	9	2	6	6	2	9	16	16	2	6	4

Note: Queue reported is the number of cars per lane.

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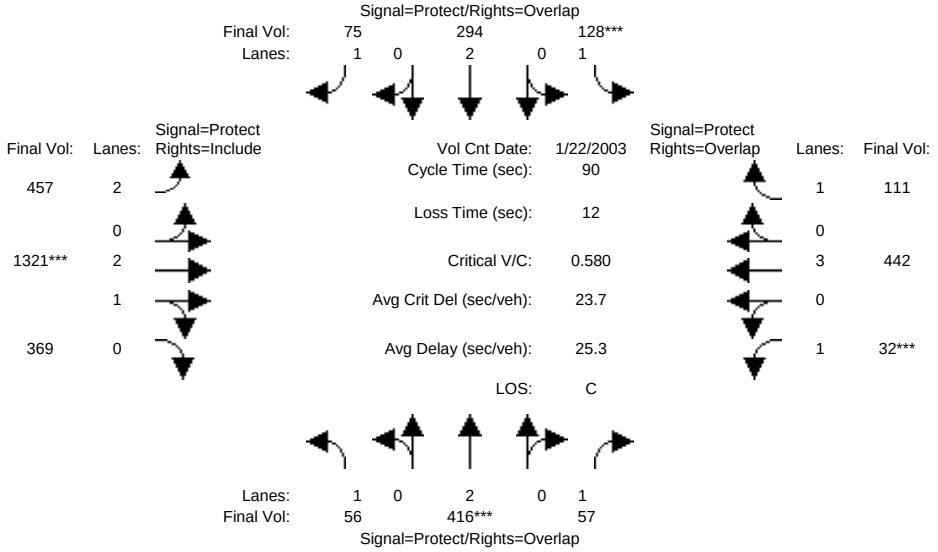
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	56	416	57	128	294	75	457	1321	369	32	442	111
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	416	57	128	294	75	457	1321	369	32	442	111
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	416	57	128	294	75	457	1321	369	32	442	111
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	416	57	128	294	75	457	1321	369	32	442	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	416	57	128	294	75	457	1321	369	32	442	111
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	416	57	128	294	75	457	1321	369	32	442	111
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.99	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.32	0.68	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4376	1222	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.03	0.07	0.08	0.04	0.15	0.30	0.30	0.02	0.08	0.06
Crit Moves:		****		****				****		****		
Green Time:	11.0	16.0	23.0	10.7	15.7	44.8	29.0	44.2	44.2	7.0	22.2	32.9
Volume/Cap:	0.26	0.61	0.13	0.61	0.44	0.09	0.45	0.61	0.61	0.24	0.31	0.17
Delay/Veh:	38.7	38.3	26.3	50.5	35.3	12.1	25.6	17.7	17.7	43.0	28.3	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.7	38.3	26.3	50.5	35.3	12.1	25.6	17.7	17.7	43.0	28.3	19.9
LOS by Move:	D	D	C	D	D	B	C	B	B	D	C	B
DesignQueue:	3	9	2	6	6	2	10	16	16	2	6	4

Note: Queue reported is the number of cars per lane.

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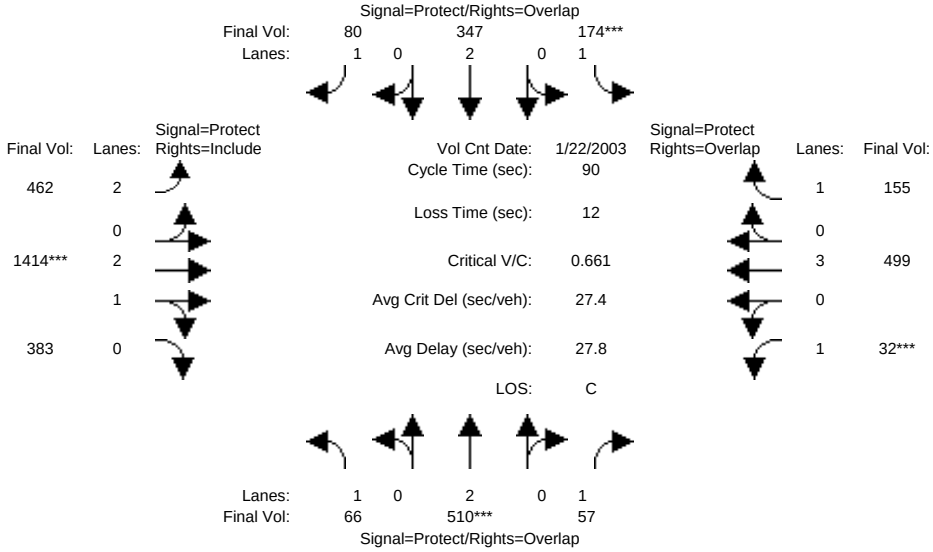
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	66	510	57	174	347	80	462	1414	383	32	499	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	510	57	174	347	80	462	1414	383	32	499	155
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	510	57	174	347	80	462	1414	383	32	499	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	510	57	174	347	80	462	1414	383	32	499	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	510	57	174	347	80	462	1414	383	32	499	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	510	57	174	347	80	462	1414	383	32	499	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.99	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.34	0.66	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4405	1193	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.03	0.10	0.09	0.05	0.15	0.32	0.32	0.02	0.09	0.09
Crit Moves:		****		****				****		****		
Green Time:	12.3	17.2	24.2	12.7	17.6	45.0	27.4	41.1	41.1	7.0	20.7	33.5
Volume/Cap:	0.28	0.70	0.12	0.70	0.47	0.09	0.48	0.70	0.70	0.24	0.38	0.24
Delay/Veh:	37.7	39.7	25.4	52.3	34.2	12.0	27.3	21.2	21.2	43.0	30.1	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.7	39.7	25.4	52.3	34.2	12.0	27.3	21.2	21.2	43.0	30.1	20.4
LOS by Move:	D	D	C	D	C	B	C	C	C	D	C	C
DesignQueue:	3	11	2	8	7	2	10	18	18	2	7	5

Note: Queue reported is the number of cars per lane.

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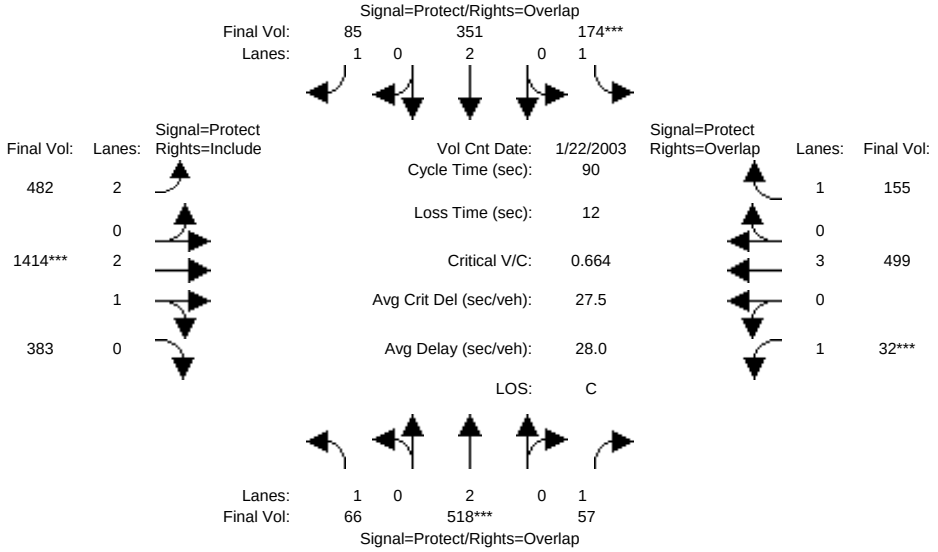
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #75: Abel St / Great Mall Parkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<												
Base Vol:	66	518	57	174	351	85	482	1414	383	32	499	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	518	57	174	351	85	482	1414	383	32	499	155
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	518	57	174	351	85	482	1414	383	32	499	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	518	57	174	351	85	482	1414	383	32	499	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	518	57	174	351	85	482	1414	383	32	499	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	518	57	174	351	85	482	1414	383	32	499	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	0.99	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.34	0.66	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	4405	1193	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.14	0.03	0.10	0.09	0.05	0.15	0.32	0.32	0.02	0.09	0.09
Crit Moves:		****		****				****		****		
Green Time:	12.4	17.4	24.4	12.7	17.7	45.5	27.8	40.9	40.9	7.0	20.2	32.8
Volume/Cap:	0.27	0.71	0.12	0.71	0.47	0.10	0.50	0.71	0.71	0.24	0.39	0.24
Delay/Veh:	37.6	39.6	25.2	52.5	34.1	11.8	27.2	21.4	21.4	43.0	30.6	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.6	39.6	25.2	52.5	34.1	11.8	27.2	21.4	21.4	43.0	30.6	20.8
LOS by Move:	D	D	C	D	C	B	C	C	C	D	C	C
DesignQueue:	3	11	2	8	7	2	10	18	18	2	7	5

Note: Queue reported is the number of cars per lane.

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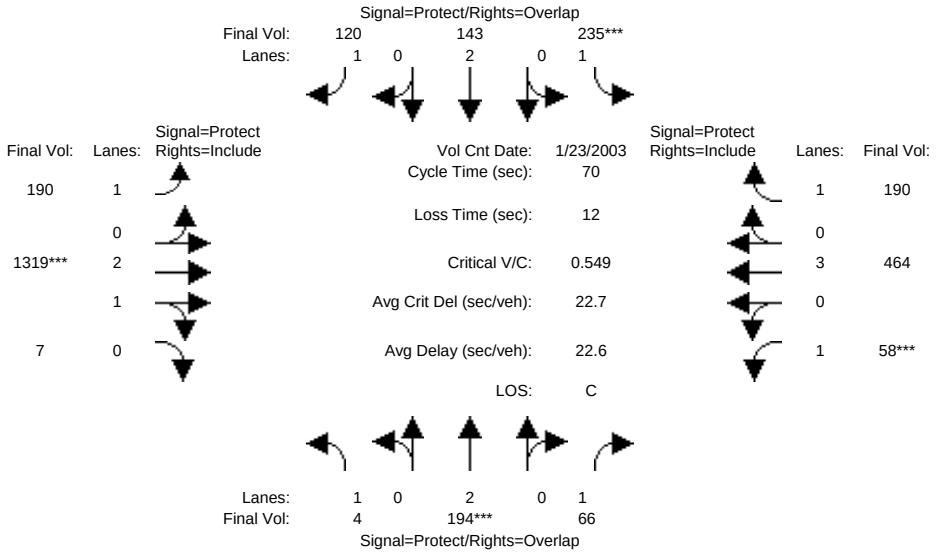
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Jan 2003 <<												
Base Vol:	4	194	66	235	143	120	190	1319	7	58	464	190
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	194	66	235	143	120	190	1319	7	58	464	190
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	194	66	235	143	120	190	1319	7	58	464	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	194	66	235	143	120	190	1319	7	58	464	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	194	66	235	143	120	190	1319	7	58	464	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	194	66	235	143	120	190	1319	7	58	464	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.98	0.02	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5570	30	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.05	0.04	0.13	0.04	0.07	0.11	0.24	0.24	0.03	0.08	0.11
Crit Moves:		****		****				****		****		
Green Time:	10.2	10.0	17.0	14.8	14.6	28.9	14.3	26.2	26.2	7.0	18.8	18.8
Volume/Cap:	0.02	0.36	0.16	0.63	0.18	0.17	0.53	0.63	0.63	0.33	0.30	0.40
Delay/Veh:	25.7	28.9	21.6	33.1	23.3	13.4	30.4	19.5	19.5	34.3	20.9	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.7	28.9	21.6	33.1	23.3	13.4	30.4	19.5	19.5	34.3	20.9	23.5
LOS by Move:	C	C	C	C	C	B	C	B	B	C	C	C
DesignQueue:	0	3	2	8	2	3	7	12	12	2	4	6

Note: Queue reported is the number of cars per lane.

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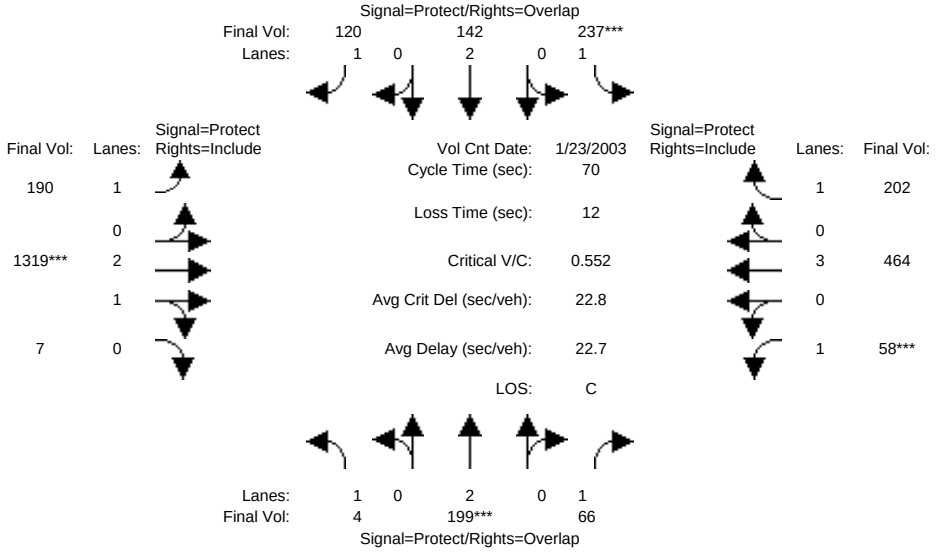
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		7		10		10		7		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 23 Jan 2003 <<																								
Base Vol:	4		199		66		237		142		120		190		1319		7		58		464		202	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	4		199		66		237		142		120		190		1319		7		58		464		202	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	4		199		66		237		142		120		190		1319		7		58		464		202	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	4		199		66		237		142		120		190		1319		7		58		464		202	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	4		199		66		237		142		120		190		1319		7		58		464		202	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	4		199		66		237		142		120		190		1319		7		58		464		202	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		0.98		0.95		0.92		1.00		0.92	
Lanes:	1.00		2.00		1.00		1.00		2.00		1.00		1.00		2.98		0.02		1.00		3.00		1.00	
Final Sat.:	1750		3800		1750		1750		3800		1750		1750		5570		30		1750		5700		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.05		0.04		0.14		0.04		0.07		0.11		0.24		0.24		0.03		0.08		0.12	
Crit Moves:			****				****								****				****					
Green Time:	10.3		10.0		17.0		14.9		14.7		28.9		14.3		26.1		26.1		7.0		18.8		18.8	
Volume/Cap:	0.02		0.37		0.16		0.64		0.18		0.17		0.53		0.64		0.64		0.33		0.30		0.43	
Delay/Veh:	25.7		29.0		21.6		33.1		23.2		13.4		30.5		19.5		19.5		34.3		20.9		24.0	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	25.7		29.0		21.6		33.1		23.2		13.4		30.5		19.5		19.5		34.3		20.9		24.0	
LOS by Move:	C		C		C		C		C		B		C		B		B		C		C		C	
DesignQueue:	0		3		2		8		2		3		7		12		12		2		4		6	

Note: Queue reported is the number of cars per lane.

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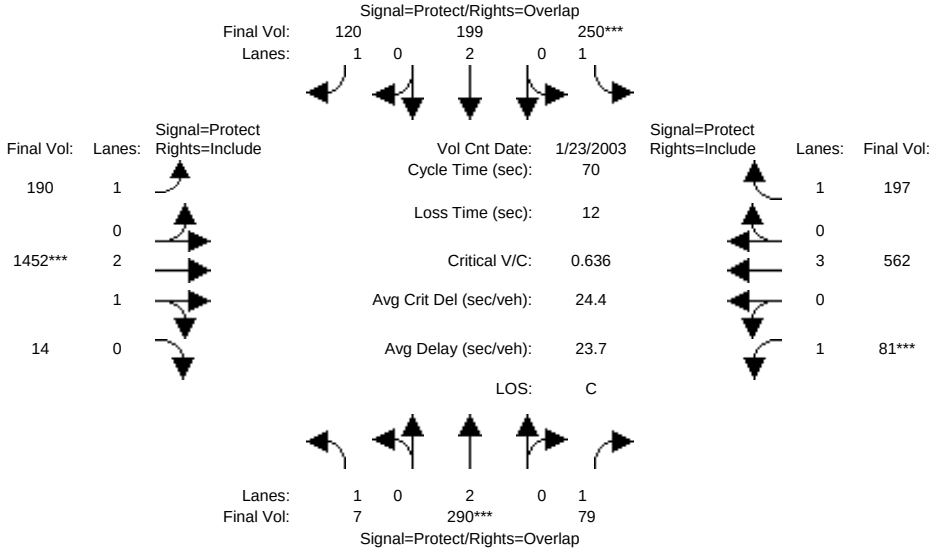
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		7		10		10		7		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 23 Jan 2003 <<																								
Base Vol:	7		290		79		250		199		120		190		1452		14		81		562		197	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	7		290		79		250		199		120		190		1452		14		81		562		197	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	7		290		79		250		199		120		190		1452		14		81		562		197	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	7		290		79		250		199		120		190		1452		14		81		562		197	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	7		290		79		250		199		120		190		1452		14		81		562		197	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	7		290		79		250		199		120		190		1452		14		81		562		197	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		0.98		0.95		0.92		1.00		0.92	
Lanes:	1.00		2.00		1.00		1.00		2.00		1.00		1.00		2.97		0.03		1.00		3.00		1.00	
Final Sat.:	1750		3800		1750		1750		3800		1750		1750		5546		53		1750		5700		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.08		0.05		0.14		0.05		0.07		0.11		0.26		0.26		0.05		0.10		0.11	
Crit Moves:			****				****								****				****					
Green Time:	10.1		10.0		17.0		14.5		14.4		28.9		14.5		26.5		26.5		7.0		19.0		19.0	
Volume/Cap:	0.03		0.53		0.19		0.69		0.25		0.17		0.52		0.69		0.69		0.46		0.36		0.41	
Delay/Veh:	26.0		31.6		22.0		36.0		24.1		13.5		30.1		20.2		20.2		38.3		21.2		23.5	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	26.0		31.6		22.0		36.0		24.1		13.5		30.1		20.2		20.2		38.3		21.2		23.5	
LOS by Move:	C		C		C		D		C		B		C		C		C		D		C		C	
DesignQueue:	0		5		3		9		3		3		7		13		13		3		5		6	

Note: Queue reported is the number of cars per lane.

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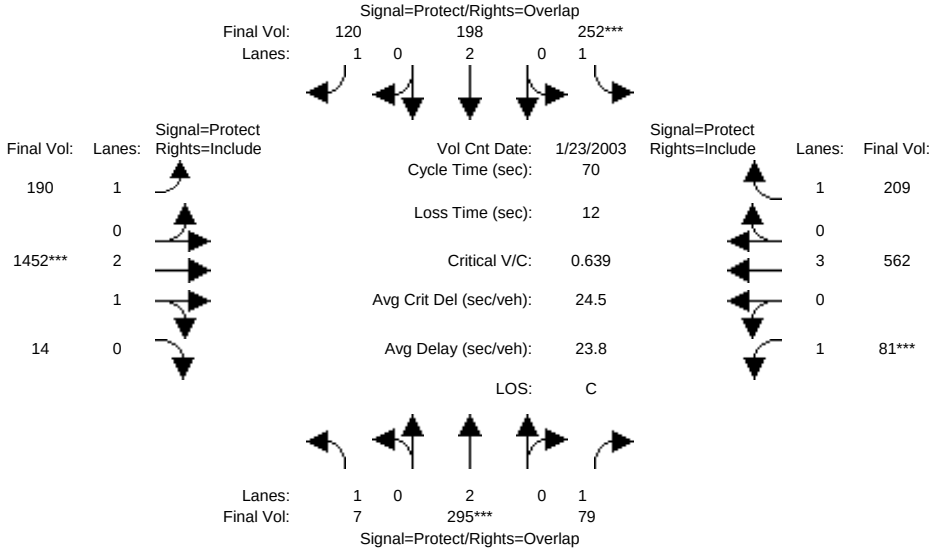
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #80: Main Street / Great Mall Pkway



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		7		10		10		7		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 23 Jan 2003 <<																								
Base Vol:	7		295		79		252		198		120		190		1452		14		81		562		209	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	7		295		79		252		198		120		190		1452		14		81		562		209	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	7		295		79		252		198		120		190		1452		14		81		562		209	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	7		295		79		252		198		120		190		1452		14		81		562		209	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	7		295		79		252		198		120		190		1452		14		81		562		209	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	7		295		79		252		198		120		190		1452		14		81		562		209	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		0.98		0.95		0.92		1.00		0.92	
Lanes:	1.00		2.00		1.00		1.00		2.00		1.00		1.00		2.97		0.03		1.00		3.00		1.00	
Final Sat.:	1750		3800		1750		1750		3800		1750		1750		5546		53		1750		5700		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.08		0.05		0.14		0.05		0.07		0.11		0.26		0.26		0.05		0.10		0.12	
Crit Moves:			****				****								****				****					
Green Time:	10.1		10.0		17.0		14.5		14.4		28.9		14.4		26.5		26.5		7.0		19.0		19.0	
Volume/Cap:	0.03		0.54		0.19		0.69		0.25		0.17		0.53		0.69		0.69		0.46		0.36		0.44	
Delay/Veh:	25.9		31.8		22.0		36.0		24.0		13.5		30.1		20.2		20.2		38.3		21.3		24.0	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	25.9		31.8		22.0		36.0		24.0		13.5		30.1		20.2		20.2		38.3		21.3		24.0	
LOS by Move:	C		C		C		D		C		B		C		C		C		D		C		C	
DesignQueue:	0		5		3		9		3		3		7		13		13		3		5		7	

Note: Queue reported is the number of cars per lane.

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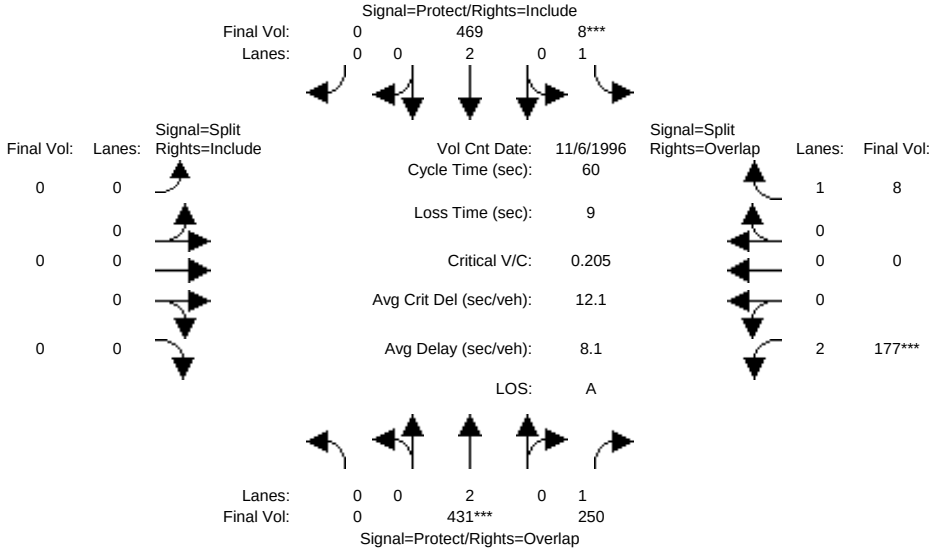
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #200: Abel Street / Main Street



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 6 Nov 1996 <<																								
Base Vol:	0		431		250		8		469		0		0		0		0		177		0		8	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		431		250		8		469		0		0		0		0		177		0		8	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		431		250		8		469		0		0		0		0		177		0		8	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		431		250		8		469		0		0		0		0		177		0		8	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		431		250		8		469		0		0		0		0		177		0		8	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		431		250		8		469		0		0		0		0		177		0		8	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92		0.83		1.00		0.92	
Lanes:	0.00		2.00		1.00		1.00		2.00		0.00		0.00		0.00		0.00		2.00		0.00		1.00	
Final Sat.:	0		3800		1750		1750		3800		0		0		0		0		3150		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.11		0.14		0.00		0.12		0.00		0.00		0.00		0.00		0.06		0.00		0.00	
Crit Moves:			****				****												****					
Green Time:	0.0		29.4		44.0		7.0		36.4		0.0		0.0		0.0		0.0		14.6		0.0		21.6	
Volume/Cap:	0.00		0.23		0.19		0.04		0.20		0.00		0.00		0.00		0.00		0.23		0.00		0.01	
Delay/Veh:	0.0		9.1		2.8		23.9		5.5		0.0		0.0		0.0		0.0		18.9		0.0		12.4	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		9.1		2.8		23.9		5.5		0.0		0.0		0.0		0.0		18.9		0.0		12.4	
LOS by Move:	A		A		A		C		A		A		A		A		A		B		A		B	
DesignQueue:	0		4		3		0		3		0		0		0		0		3		0		0	

Note: Queue reported is the number of cars per lane.

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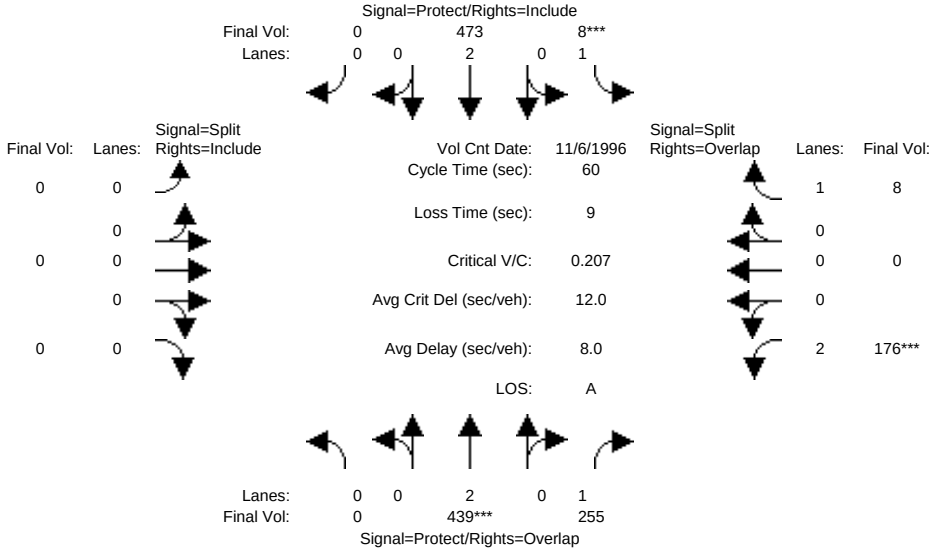
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #200: Abel Street / Main Street



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 6 Nov 1996 <<																								
Base Vol:	0		439		255		8		473		0		0		0		0		176		0		8	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		439		255		8		473		0		0		0		0		176		0		8	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		439		255		8		473		0		0		0		0		176		0		8	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		439		255		8		473		0		0		0		0		176		0		8	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		439		255		8		473		0		0		0		0		176		0		8	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		439		255		8		473		0		0		0		0		176		0		8	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92		0.83		1.00		0.92	
Lanes:	0.00		2.00		1.00		1.00		2.00		0.00		0.00		0.00		0.00		2.00		0.00		1.00	
Final Sat.:	0		3800		1750		1750		3800		0		0		0		0		3150		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.12		0.15		0.00		0.12		0.00		0.00		0.00		0.00		0.06		0.00		0.00	
Crit Moves:			****				****												****					
Green Time:	0.0		29.7		44.0		7.0		36.7		0.0		0.0		0.0		0.0		14.3		0.0		21.3	
Volume/Cap:	0.00		0.23		0.20		0.04		0.20		0.00		0.00		0.00		0.00		0.23		0.00		0.01	
Delay/Veh:	0.0		9.0		2.8		23.9		5.4		0.0		0.0		0.0		0.0		19.1		0.0		12.5	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		9.0		2.8		23.9		5.4		0.0		0.0		0.0		0.0		19.1		0.0		12.5	
LOS by Move:	A		A		A		C		A		A		A		A		A		B		A		B	
DesignQueue:	0		4		3		0		3		0		0		0		0		3		0		0	

Note: Queue reported is the number of cars per lane.

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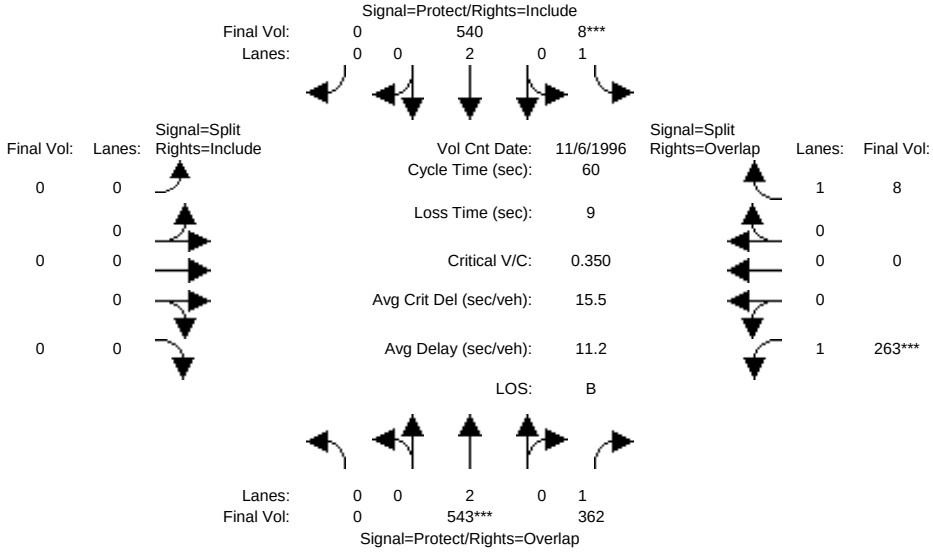
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #200: Abel Street / Main Street



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Min. Green:	7		10	10	7		10	10	10		10	10	10		10	10
Y+R:	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Volume Module: >> Count Date: 6 Nov 1996 <<																
Base Vol:	0	543	362		8	540		0	0		0	0	263		0	8
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	543	362		8	540		0	0		0	0	263		0	8
Added Vol:	0	0	0		0	0		0	0		0	0	0		0	0
PasserByVol:	0	0	0		0	0		0	0		0	0	0		0	0
Initial Fut:	0	543	362		8	540		0	0		0	0	263		0	8
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	0	543	362		8	540		0	0		0	0	263		0	8
Reduct Vol:	0	0	0		0	0		0	0		0	0	0		0	0
Reduced Vol:	0	543	362		8	540		0	0		0	0	263		0	8
PCE Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	0	543	362		8	540		0	0		0	0	263		0	8
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.92	1.00	0.92		0.92	1.00		0.92	0.92		1.00	0.92	0.92		1.00	0.92
Lanes:	0.00	2.00	1.00		1.00	2.00		0.00	0.00		0.00	0.00	1.00		0.00	1.00
Final Sat.:	0	3800	1750		1750	3800		0	0		0	0	1750		0	1750
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.21		0.00	0.14		0.00	0.00		0.00	0.00	0.15		0.00	0.00
Crit Moves:		****			****								****			
Green Time:	0.0	21.4	44.0		7.0	28.4		0.0	0.0		0.0	0.0	22.6		0.0	29.6
Volume/Cap:	0.00	0.40	0.28		0.04	0.30		0.00	0.00		0.00	0.00	0.40		0.00	0.01
Delay/Veh:	0.0	15.3	3.2		23.9	10.1		0.0	0.0		0.0	0.0	15.6		0.0	7.8
User DelAdj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	0.0	15.3	3.2		23.9	10.1		0.0	0.0		0.0	0.0	15.6		0.0	7.8
LOS by Move:	A	B	A		C	B		A	A		A	A	B		A	A
DesignQueue:	0	6	4		0	5		0	0		0	0	6		0	0

Note: Queue reported is the number of cars per lane.

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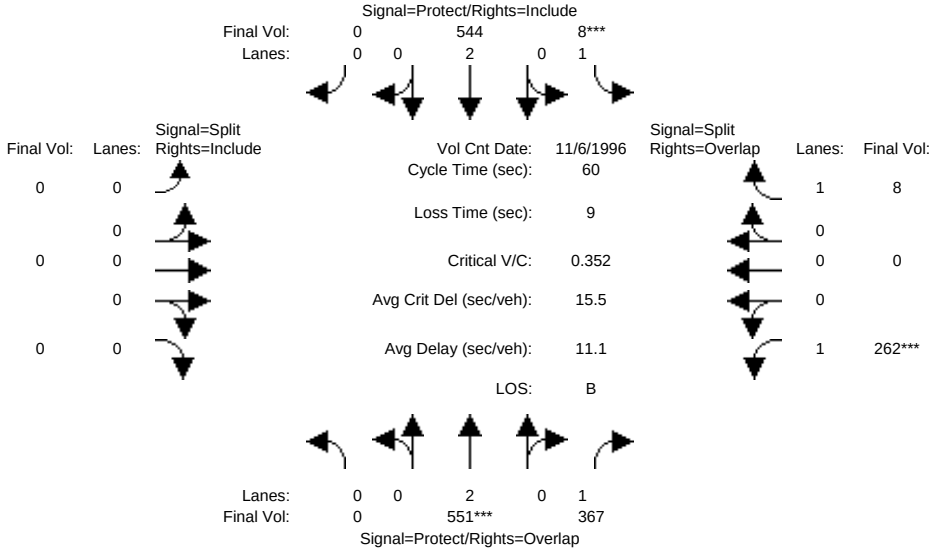
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #200: Abel Street / Main Street



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 6 Nov 1996 <<																								
Base Vol:	0		551		367		8		544		0		0		0		0		262		0		8	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		551		367		8		544		0		0		0		0		262		0		8	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		551		367		8		544		0		0		0		0		262		0		8	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		551		367		8		544		0		0		0		0		262		0		8	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		551		367		8		544		0		0		0		0		262		0		8	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		551		367		8		544		0		0		0		0		262		0		8	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		2.00		1.00		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3800		1750		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.15		0.21		0.00		0.14		0.00		0.00		0.00		0.00		0.15		0.00		0.00	
Crit Moves:			****				****												****					
Green Time:	0.0		21.6		44.0		7.0		28.6		0.0		0.0		0.0		0.0		22.4		0.0		29.4	
Volume/Cap:	0.00		0.40		0.29		0.04		0.30		0.00		0.00		0.00		0.00		0.40		0.00		0.01	
Delay/Veh:	0.0		15.2		3.3		23.9		10.0		0.0		0.0		0.0		0.0		15.7		0.0		7.9	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		15.2		3.3		23.9		10.0		0.0		0.0		0.0		0.0		15.7		0.0		7.9	
LOS by Move:	A		B		A		C		A		A		A		A		A		B		A		A	
DesignQueue:	0		6		4		0		5		0		0		0		0		6		0		0	

Note: Queue reported is the number of cars per lane.

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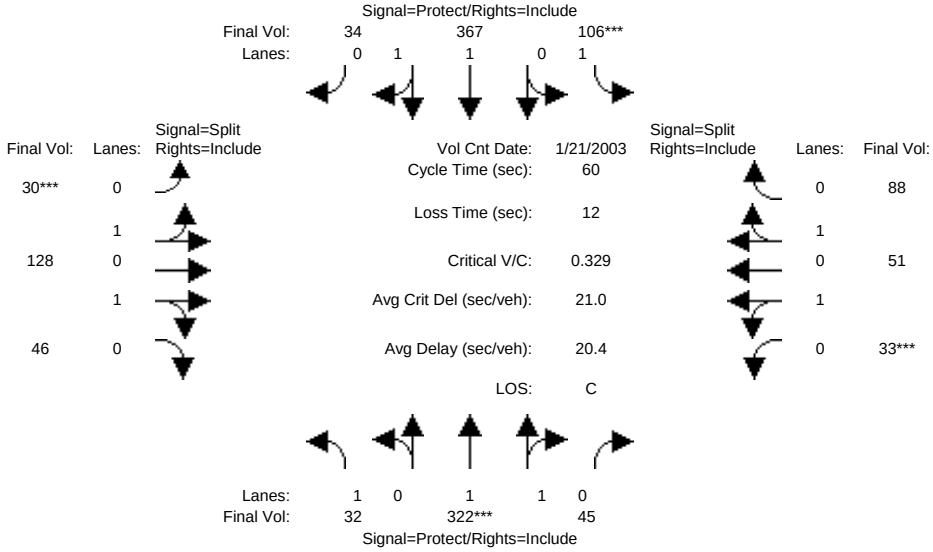
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 21 Jan 2003 <<												
Base Vol:	32	322	45	106	367	34	30	128	46	33	51	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	322	45	106	367	34	30	128	46	33	51	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	322	45	106	367	34	30	128	46	33	51	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	322	45	106	367	34	30	128	46	33	51	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	322	45	106	367	34	30	128	46	33	51	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	322	45	106	367	34	30	128	46	33	51	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.75	0.25	1.00	1.83	0.17	0.29	1.26	0.45	0.39	0.61	1.00
Final Sat.:	1750	3246	454	1750	3386	314	529	2259	812	707	1093	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.10	0.10	0.06	0.11	0.11	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:		****		****			****			****		
Green Time:	11.5	17.4	17.4	10.6	16.5	16.5	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.10	0.34	0.34	0.34	0.39	0.39	0.34	0.34	0.34	0.28	0.28	0.29
Delay/Veh:	20.5	17.7	17.7	24.6	18.9	18.9	23.6	23.6	23.6	23.0	23.0	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.5	17.7	17.7	24.6	18.9	18.9	23.6	23.6	23.6	23.0	23.0	23.2
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
DesignQueue:	1	5	5	3	5	5	3	3	3	2	2	3

Note: Queue reported is the number of cars per lane.

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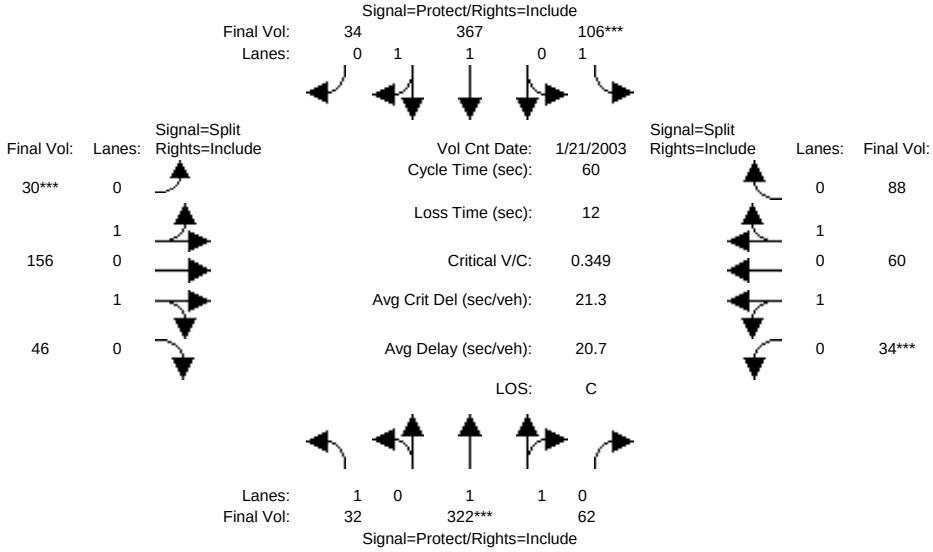
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 21 Jan 2003 <<												
Base Vol:	32	322	62	106	367	34	30	156	46	34	60	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	322	62	106	367	34	30	156	46	34	60	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	322	62	106	367	34	30	156	46	34	60	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	322	62	106	367	34	30	156	46	34	60	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	322	62	106	367	34	30	156	46	34	60	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	322	62	106	367	34	30	156	46	34	60	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.67	0.33	1.00	1.83	0.17	0.26	1.34	0.40	0.37	0.66	0.97
Final Sat.:	1750	3102	597	1750	3386	314	466	2421	714	673	1187	1741
Capacity Analysis Module:												
Vol/Sat:	0.02	0.10	0.10	0.06	0.11	0.11	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:		****		****			****			****		
Green Time:	11.2	17.2	17.2	10.1	16.1	16.1	10.7	10.7	10.7	10.0	10.0	10.0
Volume/Cap:	0.10	0.36	0.36	0.36	0.40	0.40	0.36	0.36	0.36	0.30	0.30	0.30
Delay/Veh:	20.8	18.0	18.0	25.6	19.3	19.3	23.2	23.2	23.2	23.2	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.8	18.0	18.0	25.6	19.3	19.3	23.2	23.2	23.2	23.2	23.2	23.2
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
DesignQueue:	1	5	5	3	5	5	3	3	3	3	3	3

Note: Queue reported is the number of cars per lane.

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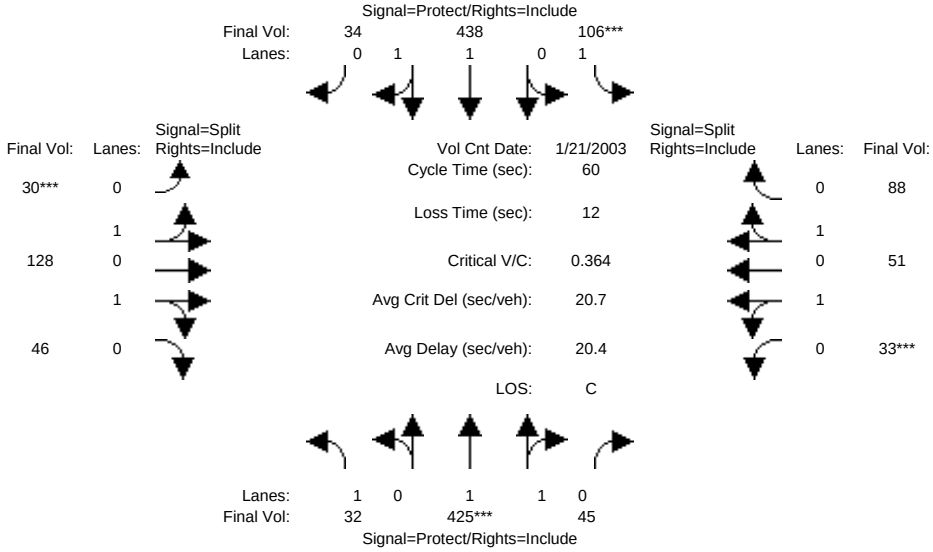
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 21 Jan 2003 <<												
Base Vol:	32	425	45	106	438	34	30	128	46	33	51	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	425	45	106	438	34	30	128	46	33	51	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	425	45	106	438	34	30	128	46	33	51	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	425	45	106	438	34	30	128	46	33	51	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	425	45	106	438	34	30	128	46	33	51	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	425	45	106	438	34	30	128	46	33	51	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.80	0.20	1.00	1.85	0.15	0.29	1.26	0.45	0.39	0.61	1.00
Final Sat.:	1750	3345	354	1750	3433	267	529	2259	812	707	1093	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.13	0.06	0.13	0.13	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:		****		****			****			****		
Green Time:	11.5	19.0	19.0	9.0	16.5	16.5	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.10	0.40	0.40	0.40	0.46	0.46	0.34	0.34	0.34	0.28	0.28	0.29
Delay/Veh:	20.5	17.1	17.1	27.6	19.6	19.6	23.6	23.6	23.6	23.0	23.0	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.5	17.1	17.1	27.6	19.6	19.6	23.6	23.6	23.6	23.0	23.0	23.2
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
DesignQueue:	1	6	6	3	6	6	3	3	3	2	2	3

Note: Queue reported is the number of cars per lane.

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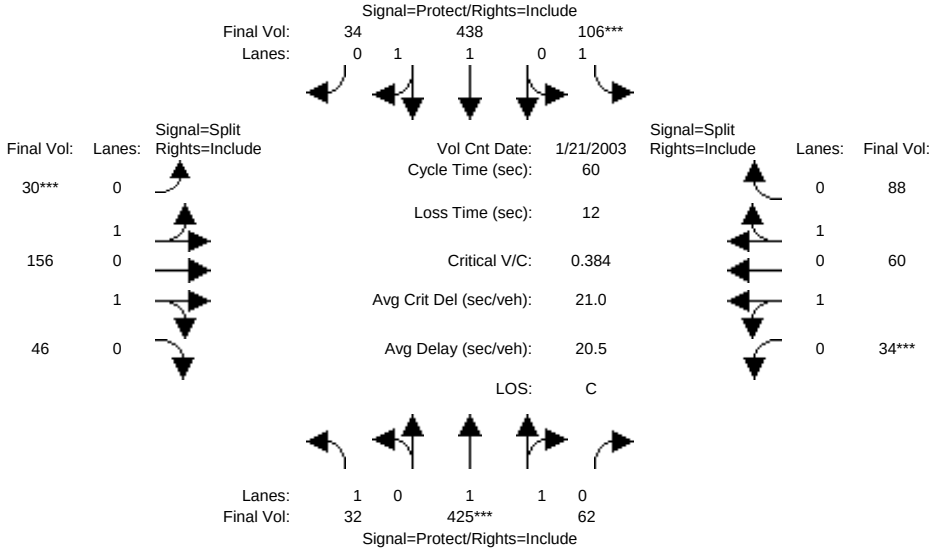
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #206: Main Street and Curtis Avenue



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 21 Jan 2003 <<												
Base Vol:	32	425	62	106	438	34	30	156	46	34	60	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	425	62	106	438	34	30	156	46	34	60	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	425	62	106	438	34	30	156	46	34	60	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	425	62	106	438	34	30	156	46	34	60	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	425	62	106	438	34	30	156	46	34	60	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	425	62	106	438	34	30	156	46	34	60	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	1.74	0.26	1.00	1.85	0.15	0.26	1.34	0.40	0.37	0.66	0.97
Final Sat.:	1750	3229	471	1750	3433	267	466	2421	714	673	1187	1741
Capacity Analysis Module:												
Vol/Sat:	0.02	0.13	0.13	0.06	0.13	0.13	0.06	0.06	0.06	0.05	0.05	0.05
Crit Moves:		****		****			****			****		
Green Time:	11.5	19.2	19.2	8.8	16.5	16.5	10.0	10.0	10.0	10.0	10.0	10.0
Volume/Cap:	0.10	0.41	0.41	0.41	0.46	0.46	0.39	0.39	0.39	0.30	0.30	0.30
Delay/Veh:	20.5	17.1	17.1	28.0	19.6	19.6	24.1	24.1	24.1	23.2	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.5	17.1	17.1	28.0	19.6	19.6	24.1	24.1	24.1	23.2	23.2	23.2
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
DesignQueue:	1	6	6	3	6	6	3	3	3	3	3	3

Note: Queue reported is the number of cars per lane.

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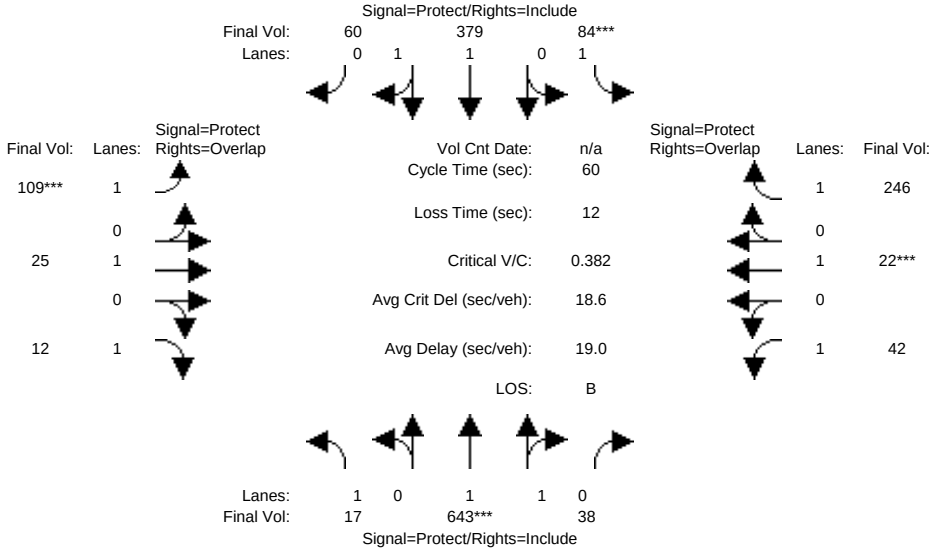
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	17	643	38	84	379	60	109	25	12	42	22	246
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	643	38	84	379	60	109	25	12	42	22	246
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	643	38	84	379	60	109	25	12	42	22	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	643	38	84	379	60	109	25	12	42	22	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	643	38	84	379	60	109	25	12	42	22	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	643	38	84	379	60	109	25	12	42	22	246
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.89	0.11	1.00	1.72	0.28	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3493	206	1750	3194	506	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.18	0.05	0.12	0.12	0.06	0.01	0.01	0.02	0.01	0.14
Crit Moves:		****		****			****				****	
Green Time:	12.4	23.2	23.2	7.0	17.7	17.7	7.8	10.5	22.9	7.3	10.0	17.0
Volume/Cap:	0.05	0.48	0.48	0.41	0.40	0.40	0.48	0.08	0.02	0.20	0.07	0.50
Delay/Veh:	19.3	15.0	15.0	30.6	18.0	18.0	31.1	21.1	11.6	25.7	21.5	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.3	15.0	15.0	30.6	18.0	18.0	31.1	21.1	11.6	25.7	21.5	21.4
LOS by Move:	B	B	B	C	B	B	C	C	B	C	C	C
DesignQueue:	0	8	8	3	5	5	3	1	0	1	1	7

Note: Queue reported is the number of cars per lane.

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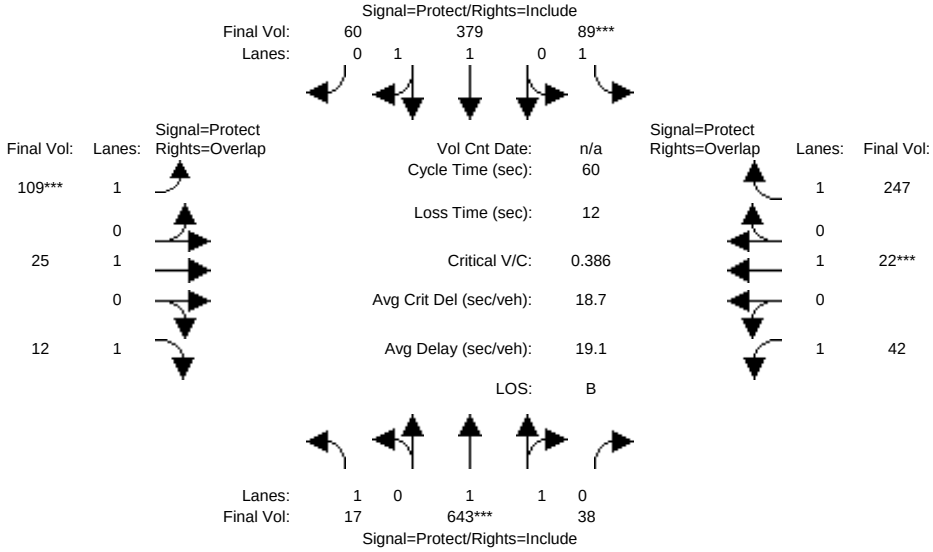
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	17	643	38	89	379	60	109	25	12	42	22	247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	643	38	89	379	60	109	25	12	42	22	247
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	643	38	89	379	60	109	25	12	42	22	247
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	643	38	89	379	60	109	25	12	42	22	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	643	38	89	379	60	109	25	12	42	22	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	643	38	89	379	60	109	25	12	42	22	247
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.89	0.11	1.00	1.72	0.28	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3493	206	1750	3194	506	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.18	0.05	0.12	0.12	0.06	0.01	0.01	0.02	0.01	0.14
Crit Moves:		****		****			****				****	
Green Time:	12.4	23.2	23.2	7.0	17.7	17.7	7.8	10.5	22.9	7.3	10.0	17.0
Volume/Cap:	0.05	0.48	0.48	0.44	0.40	0.40	0.48	0.08	0.02	0.20	0.07	0.50
Delay/Veh:	19.3	15.0	15.0	31.3	18.0	18.0	31.1	21.1	11.6	25.7	21.5	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.3	15.0	15.0	31.3	18.0	18.0	31.1	21.1	11.6	25.7	21.5	21.5
LOS by Move:	B	B	B	C	B	B	C	C	B	C	C	C
DesignQueue:	0	8	8	3	5	5	3	1	0	1	1	7

Note: Queue reported is the number of cars per lane.

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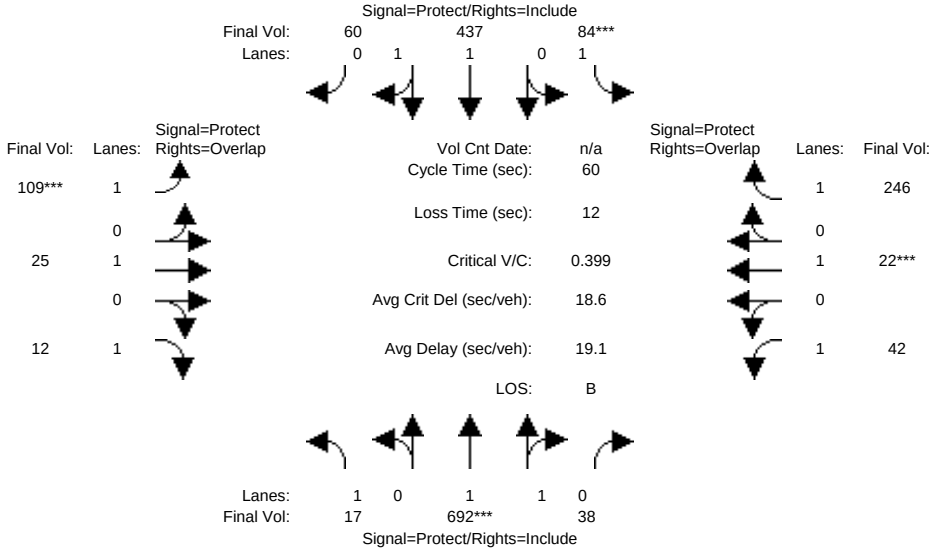
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	17	692	38	84	437	60	109	25	12	42	22	246
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	692	38	84	437	60	109	25	12	42	22	246
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	692	38	84	437	60	109	25	12	42	22	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	692	38	84	437	60	109	25	12	42	22	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	692	38	84	437	60	109	25	12	42	22	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	692	38	84	437	60	109	25	12	42	22	246
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.89	0.11	1.00	1.75	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3507	193	1750	3253	447	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.20	0.05	0.13	0.13	0.06	0.01	0.01	0.02	0.01	0.14
Crit Moves:		****		****			****				****	
Green Time:	12.6	23.6	23.6	7.0	18.0	18.0	7.4	10.3	22.8	7.2	10.0	17.0
Volume/Cap:	0.05	0.50	0.50	0.41	0.45	0.45	0.50	0.08	0.02	0.20	0.07	0.50
Delay/Veh:	19.2	15.0	15.0	30.6	18.3	18.3	32.6	21.4	11.6	26.0	21.5	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.2	15.0	15.0	30.6	18.3	18.3	32.6	21.4	11.6	26.0	21.5	21.4
LOS by Move:	B	B	B	C	B	B	C	C	B	C	C	C
DesignQueue:	0	8	8	3	6	6	4	1	0	1	1	7

Note: Queue reported is the number of cars per lane.

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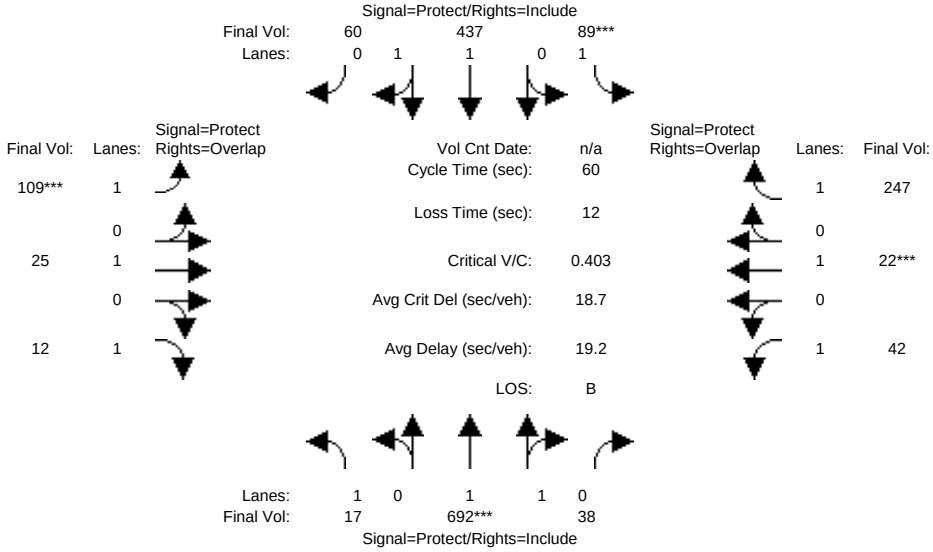
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #229: Abel Street / Marylinn Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	17	692	38	89	437	60	109	25	12	42	22	247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	692	38	89	437	60	109	25	12	42	22	247
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	692	38	89	437	60	109	25	12	42	22	247
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	692	38	89	437	60	109	25	12	42	22	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	692	38	89	437	60	109	25	12	42	22	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	692	38	89	437	60	109	25	12	42	22	247
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.89	0.11	1.00	1.75	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1750	3507	193	1750	3253	447	1750	1900	1750	1750	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.20	0.05	0.13	0.13	0.06	0.01	0.01	0.02	0.01	0.14
Crit Moves:		****		****			****				****	
Green Time:	12.6	23.6	23.6	7.0	18.0	18.0	7.4	10.3	22.8	7.2	10.0	17.0
Volume/Cap:	0.05	0.50	0.50	0.44	0.45	0.45	0.50	0.08	0.02	0.20	0.07	0.50
Delay/Veh:	19.2	15.0	15.0	31.3	18.3	18.3	32.6	21.4	11.6	26.0	21.5	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.2	15.0	15.0	31.3	18.3	18.3	32.6	21.4	11.6	26.0	21.5	21.5
LOS by Move:	B	B	B	C	B	B	C	C	B	C	C	C
DesignQueue:	0	8	8	3	6	6	4	1	0	1	1	7

Note: Queue reported is the number of cars per lane.

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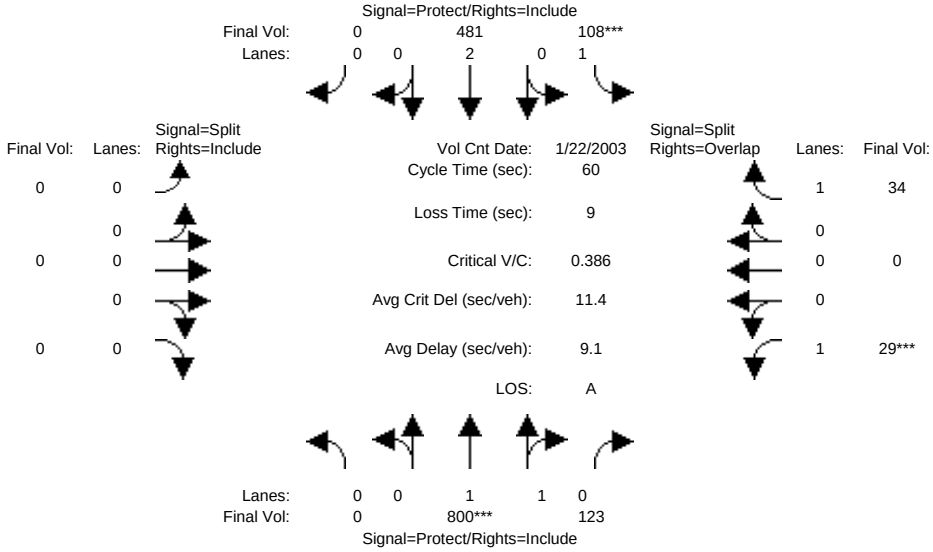
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 22 Jan 2003 <<																								
Base Vol:	0		800		123		108		481		0		0		0		0		29		0		34	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		800		123		108		481		0		0		0		0		29		0		34	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		800		123		108		481		0		0		0		0		29		0		34	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		800		123		108		481		0		0		0		0		29		0		34	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		800		123		108		481		0		0		0		0		29		0		34	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		800		123		108		481		0		0		0		0		29		0		34	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.73		0.27		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3207		493		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.25		0.25		0.06		0.13		0.00		0.00		0.00		0.00		0.02		0.00		0.02	
Crit Moves:			****				****												****					
Green Time:	0.0		32.9		32.9		8.1		41.0		0.0		0.0		0.0		0.0		10.0		0.0		18.1	
Volume/Cap:	0.00		0.46		0.46		0.46		0.19		0.00		0.00		0.00		0.00		0.10		0.00		0.06	
Delay/Veh:	0.0		8.9		8.9		30.1		3.6		0.0		0.0		0.0		0.0		21.9		0.0		15.1	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		8.9		8.9		30.1		3.6		0.0		0.0		0.0		0.0		21.9		0.0		15.1	
LOS by Move:	A		A		A		C		A		A		A		A		A		C		A		B	
DesignQueue:	0		8		8		3		3		0		0		0		0		1		0		1	

Note: Queue reported is the number of cars per lane.

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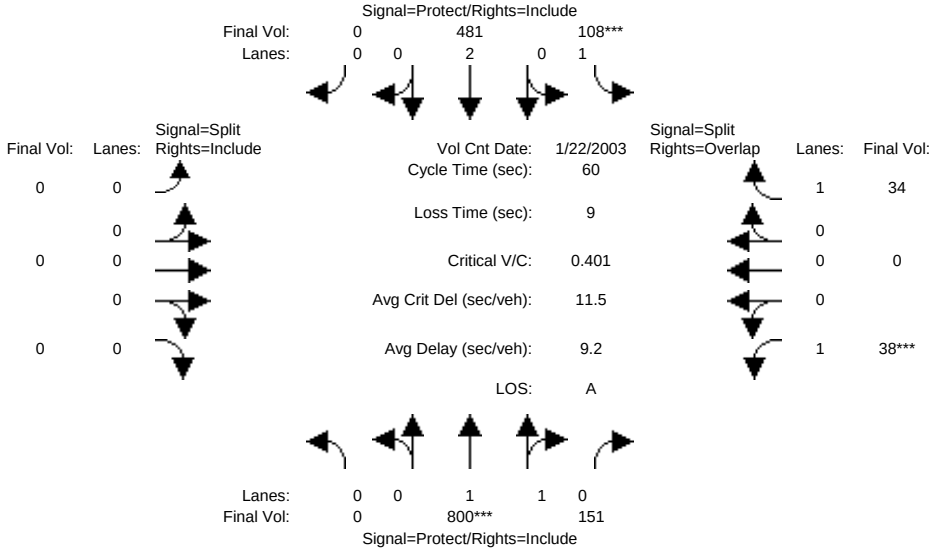
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module: >> Count Date: 22 Jan 2003 <<																								
Base Vol:	0		800		151		108		481		0		0		0		0		38		0		34	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		800		151		108		481		0		0		0		0		38		0		34	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		800		151		108		481		0		0		0		0		38		0		34	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		800		151		108		481		0		0		0		0		38		0		34	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		800		151		108		481		0		0		0		0		38		0		34	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		800		151		108		481		0		0		0		0		38		0		34	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.67		0.33		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3112		587		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.26		0.26		0.06		0.13		0.00		0.00		0.00		0.00		0.02		0.00		0.02	
Crit Moves:			****				****												****					
Green Time:	0.0		33.1		33.1		7.9		41.0		0.0		0.0		0.0		0.0		10.0		0.0		17.9	
Volume/Cap:	0.00		0.47		0.47		0.47		0.19		0.00		0.00		0.00		0.00		0.13		0.00		0.06	
Delay/Veh:	0.0		8.9		8.9		30.7		3.6		0.0		0.0		0.0		0.0		22.2		0.0		15.3	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		8.9		8.9		30.7		3.6		0.0		0.0		0.0		0.0		22.2		0.0		15.3	
LOS by Move:	A		A		A		C		A		A		A		A		A		C		A		B	
DesignQueue:	0		8		8		3		3		0		0		0		0		1		0		1	

Note: Queue reported is the number of cars per lane.

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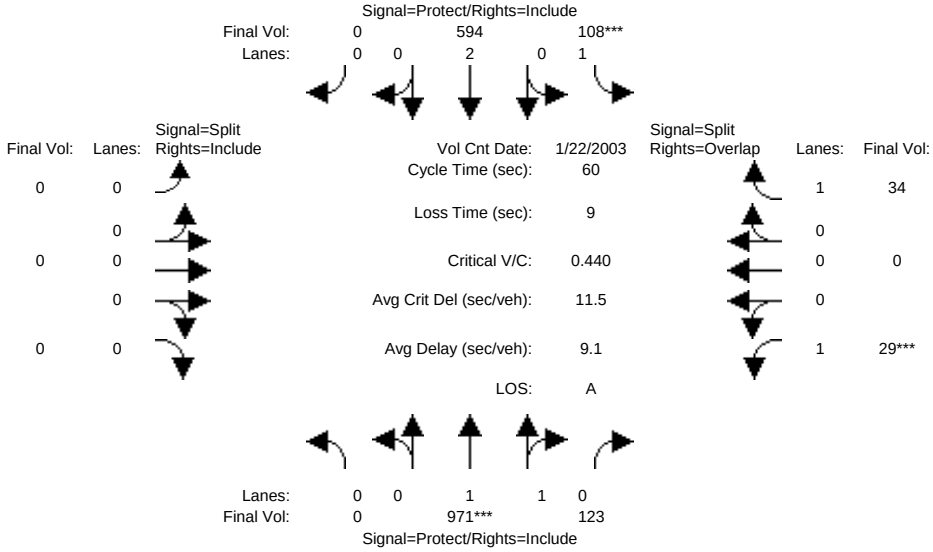
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Min. Green:	7	10	10		7	10	10		10	10	10		10	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 22 Jan 2003 <<																
Base Vol:	0	971	123		108	594	0		0	0	0		29	0	34	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	971	123		108	594	0		0	0	0		29	0	34	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	0	971	123		108	594	0		0	0	0		29	0	34	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	971	123		108	594	0		0	0	0		29	0	34	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	971	123		108	594	0		0	0	0		29	0	34	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	971	123		108	594	0		0	0	0		29	0	34	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.98	0.95		0.92	1.00	0.92		0.92	1.00	0.92		0.92	1.00	0.92	
Lanes:	0.00	1.77	0.23		1.00	2.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	3284	416		1750	3800	0		0	0	0		1750	0	1750	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.30	0.30		0.06	0.16	0.00		0.00	0.00	0.00		0.02	0.00	0.02	
Crit Moves:		****			****								****			
Green Time:	0.0	33.9	33.9		7.1	41.0	0.0		0.0	0.0	0.0		10.0	0.0	17.1	
Volume/Cap:	0.00	0.52	0.52		0.52	0.23	0.00		0.00	0.00	0.00		0.10	0.00	0.07	
Delay/Veh:	0.0	9.0	9.0		34.0	3.8	0.0		0.0	0.0	0.0		21.9	0.0	15.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	9.0	9.0		34.0	3.8	0.0		0.0	0.0	0.0		21.9	0.0	15.9	
LOS by Move:	A	A	A		C	A	A		A	A	A		C	A	B	
DesignQueue:	0	9	9		4	3	0		0	0	0		1	0	1	

Note: Queue reported is the number of cars per lane.

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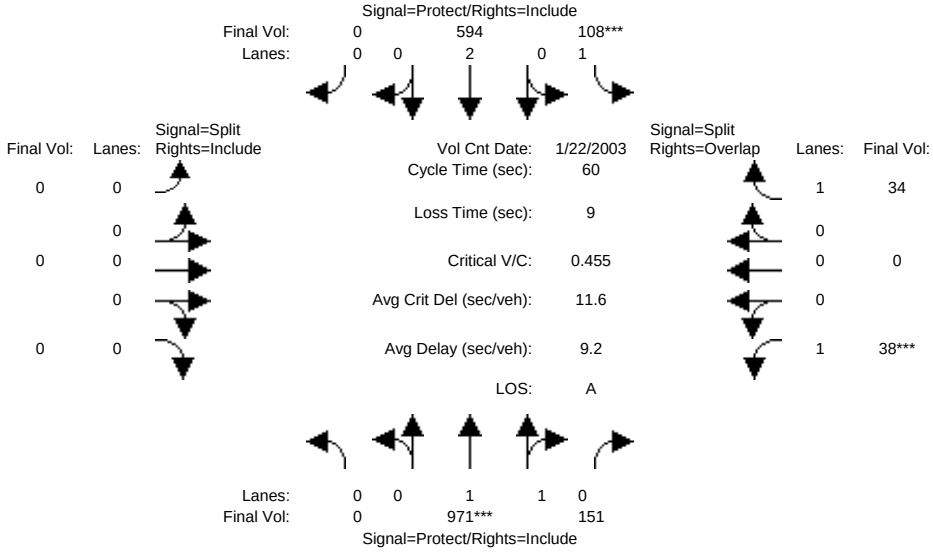
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #231: Abel Street / Curtis Avenue



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Min. Green:	7		10	10	7		10	10	10		10	10	10		10	10
Y+R:	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Volume Module: >> Count Date: 22 Jan 2003 <<																
Base Vol:	0	971		151	108	594		0	0		0	0	38		0	34
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	971		151	108	594		0	0		0	0	38		0	34
Added Vol:	0	0		0	0	0		0	0		0	0	0		0	0
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	971		151	108	594		0	0		0	0	38		0	34
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	0	971		151	108	594		0	0		0	0	38		0	34
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	0	971		151	108	594		0	0		0	0	38		0	34
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	0	971		151	108	594		0	0		0	0	38		0	34
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.92	0.98		0.95	0.92	1.00		0.92	0.92		1.00	0.92	0.92		1.00	0.92
Lanes:	0.00	1.72		0.28	1.00	2.00		0.00	0.00		0.00	0.00	1.00		0.00	1.00
Final Sat.:	0	3202		498	1750	3800		0	0		0	0	1750		0	1750
Capacity Analysis Module:																
Vol/Sat:	0.00	0.30		0.30	0.06	0.16		0.00	0.00		0.00	0.00	0.02		0.00	0.02
Crit Moves:		****			****								****			
Green Time:	0.0	34.0		34.0	7.0	41.0		0.0	0.0		0.0	0.0	10.0		0.0	17.0
Volume/Cap:	0.00	0.54		0.54	0.53	0.23		0.00	0.00		0.00	0.00	0.13		0.00	0.07
Delay/Veh:	0.0	9.1		9.1	34.4	3.8		0.0	0.0		0.0	0.0	22.2		0.0	16.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	0.0	9.1		9.1	34.4	3.8		0.0	0.0		0.0	0.0	22.2		0.0	16.0
LOS by Move:	A	A		A	C	A		A	A		A	A	C		A	B
DesignQueue:	0	9		9	4	3		0	0		0	0	1		0	1

Note: Queue reported is the number of cars per lane.

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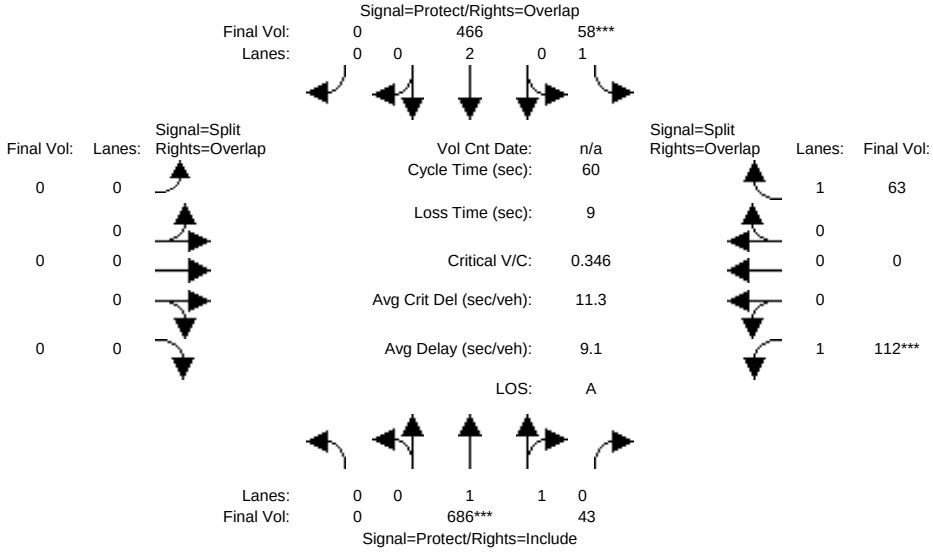
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		686		43		58		466		0		0		0		0		112		0		63	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		686		43		58		466		0		0		0		0		112		0		63	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		686		43		58		466		0		0		0		0		112		0		63	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		686		43		58		466		0		0		0		0		112		0		63	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		686		43		58		466		0		0		0		0		112		0		63	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		686		43		58		466		0		0		0		0		112		0		63	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.88		0.12		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3482		218		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.20		0.20		0.03		0.12		0.00		0.00		0.00		0.00		0.06		0.00		0.04	
Crit Moves:			****				****												****					
Green Time:	0.0		33.2		33.2		7.0		40.2		0.0		0.0		0.0		0.0		10.8		0.0		17.8	
Volume/Cap:	0.00		0.36		0.36		0.28		0.18		0.00		0.00		0.00		0.00		0.36		0.00		0.12	
Delay/Veh:	0.0		7.9		7.9		27.7		3.9		0.0		0.0		0.0		0.0		24.7		0.0		15.9	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		7.9		7.9		27.7		3.9		0.0		0.0		0.0		0.0		24.7		0.0		15.9	
LOS by Move:	A		A		A		C		A		A		A		A		A		C		A		B	
DesignQueue:	0		6		6		2		3		0		0		0		0		3		0		2	

Note: Queue reported is the number of cars per lane.

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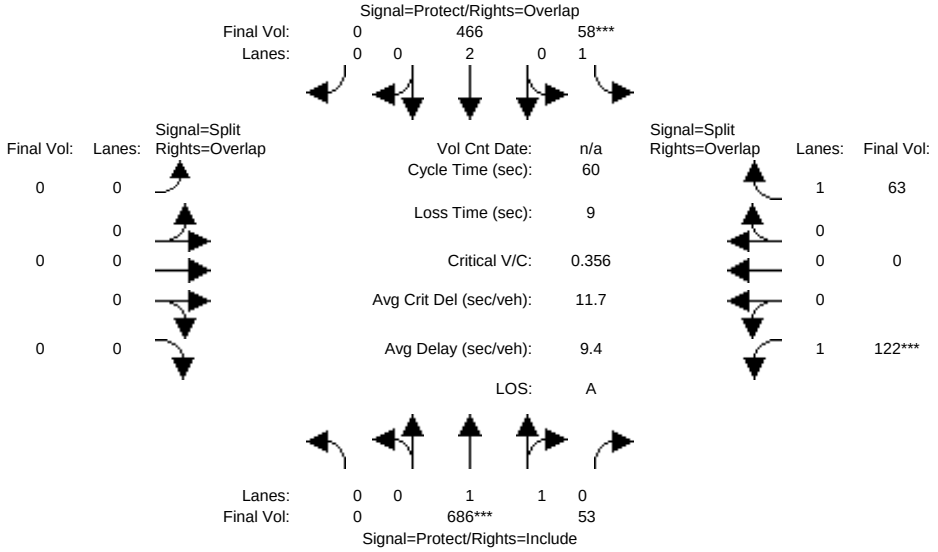
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		686		53		58		466		0		0		0		0		122		0		63	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		686		53		58		466		0		0		0		0		122		0		63	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		686		53		58		466		0		0		0		0		122		0		63	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		686		53		58		466		0		0		0		0		122		0		63	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		686		53		58		466		0		0		0		0		122		0		63	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		686		53		58		466		0		0		0		0		122		0		63	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.85		0.15		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3434		265		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.20		0.20		0.03		0.12		0.00		0.00		0.00		0.00		0.07		0.00		0.04	
Crit Moves:			****				****												****					
Green Time:	0.0		32.6		32.6		7.0		39.6		0.0		0.0		0.0		0.0		11.4		0.0		18.4	
Volume/Cap:	0.00		0.37		0.37		0.28		0.19		0.00		0.00		0.00		0.00		0.37		0.00		0.12	
Delay/Veh:	0.0		8.3		8.3		27.7		4.1		0.0		0.0		0.0		0.0		24.3		0.0		15.4	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		8.3		8.3		27.7		4.1		0.0		0.0		0.0		0.0		24.3		0.0		15.4	
LOS by Move:	A		A		A		C		A		A		A		A		A		C		A		B	
DesignQueue:	0		6		6		2		3		0		0		0		0		4		0		2	

Note: Queue reported is the number of cars per lane.

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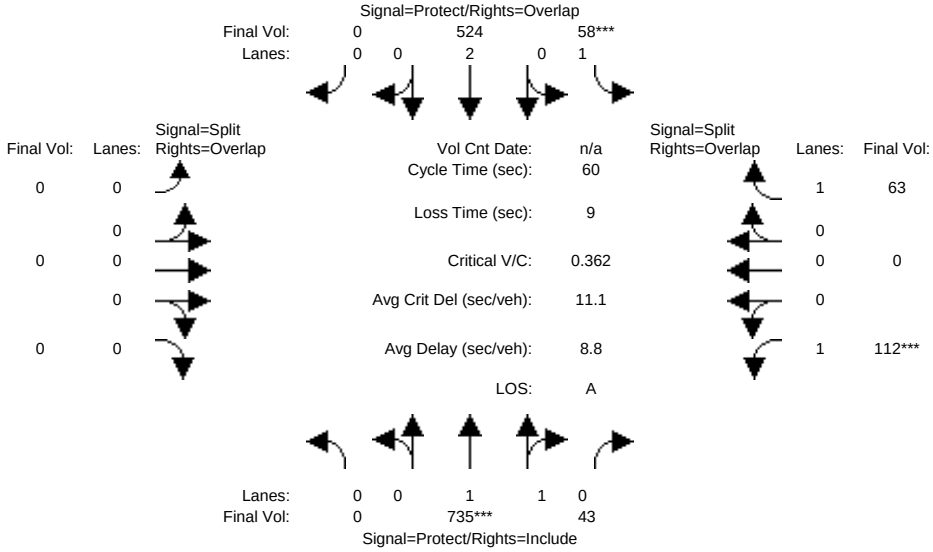
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		735		43		58		524		0		0		0		0		112		0		63	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		735		43		58		524		0		0		0		0		112		0		63	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		735		43		58		524		0		0		0		0		112		0		63	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		735		43		58		524		0		0		0		0		112		0		63	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		735		43		58		524		0		0		0		0		112		0		63	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		735		43		58		524		0		0		0		0		112		0		63	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.89		0.11		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3495		204		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.21		0.21		0.03		0.14		0.00		0.00		0.00		0.00		0.06		0.00		0.04	
Crit Moves:			****				****												****					
Green Time:	0.0		33.7		33.7		7.0		40.7		0.0		0.0		0.0		0.0		10.3		0.0		17.3	
Volume/Cap:	0.00		0.37		0.37		0.28		0.20		0.00		0.00		0.00		0.00		0.37		0.00		0.13	
Delay/Veh:	0.0		7.8		7.8		27.7		3.8		0.0		0.0		0.0		0.0		25.6		0.0		16.3	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		7.8		7.8		27.7		3.8		0.0		0.0		0.0		0.0		25.6		0.0		16.3	
LOS by Move:	A		A		A		C		A		A		A		A		A		C		A		B	
DesignQueue:	0		6		6		2		3		0		0		0		0		3		0		2	

Note: Queue reported is the number of cars per lane.

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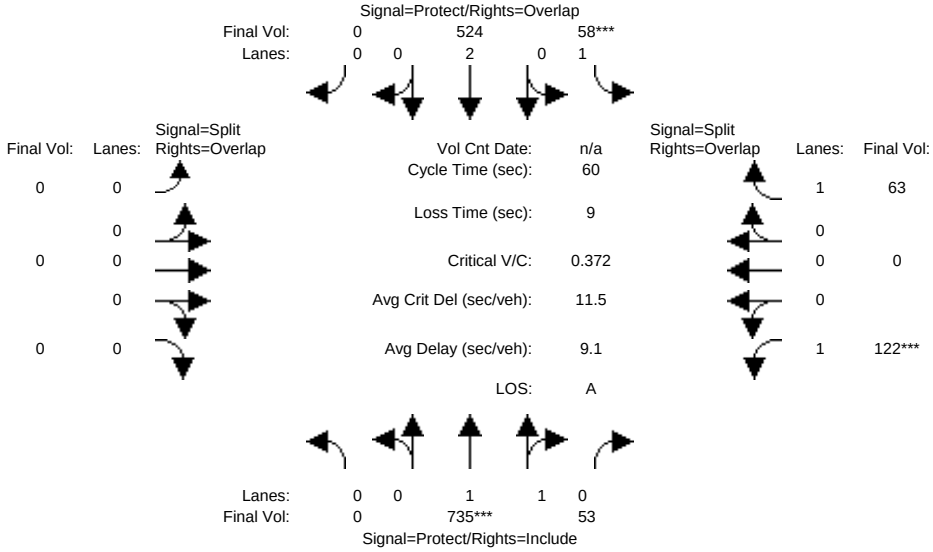
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #234: Abel Street / Weller Lane



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	0		735		53		58		524		0		0		0		0		122		0		63	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0		735		53		58		524		0		0		0		0		122		0		63	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	0		735		53		58		524		0		0		0		0		122		0		63	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	0		735		53		58		524		0		0		0		0		122		0		63	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	0		735		53		58		524		0		0		0		0		122		0		63	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	0		735		53		58		524		0		0		0		0		122		0		63	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.98		0.95		0.92		1.00		0.92		0.92		1.00		0.92		0.92		1.00		0.92	
Lanes:	0.00		1.86		0.14		1.00		2.00		0.00		0.00		0.00		0.00		1.00		0.00		1.00	
Final Sat.:	0		3451		249		1750		3800		0		0		0		0		1750		0		1750	
Capacity Analysis Module:																								
Vol/Sat:	0.00		0.21		0.21		0.03		0.14		0.00		0.00		0.00		0.00		0.07		0.00		0.04	
Crit Moves:			****				****												****					
Green Time:	0.0		33.1		33.1		7.0		40.1		0.0		0.0		0.0		0.0		10.9		0.0		17.9	
Volume/Cap:	0.00		0.39		0.39		0.28		0.21		0.00		0.00		0.00		0.00		0.39		0.00		0.12	
Delay/Veh:	0.0		8.2		8.2		27.7		4.0		0.0		0.0		0.0		0.0		25.2		0.0		15.8	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	0.0		8.2		8.2		27.7		4.0		0.0		0.0		0.0		0.0		25.2		0.0		15.8	
LOS by Move:	A		A		A		C		A		A		A		A		A		C		A		B	
DesignQueue:	0		6		6		2		3		0		0		0		0		4		0		2	

Note: Queue reported is the number of cars per lane.

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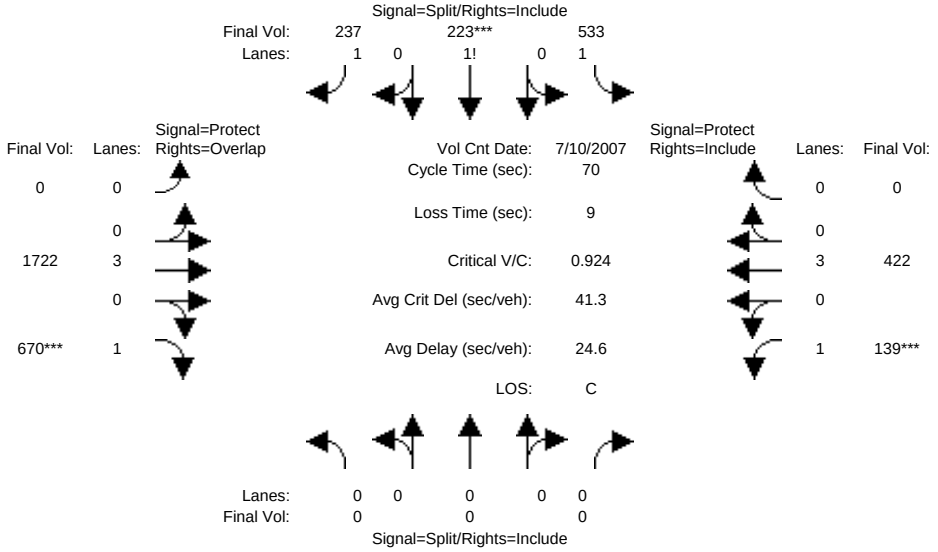
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	0	0	0	533	223	237	0	1722	670	139	422	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	533	223	237	0	1722	670	139	422	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	533	223	237	0	1722	670	139	422	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	533	223	237	0	1722	670	139	422	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	533	223	237	0	1722	670	139	422	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	533	223	237	0	1722	670	139	422	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.44	0.36	1.20	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	2542	651	2096	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.34	0.11	0.00	0.30	0.38	0.08	0.07	0.00
Crit Moves:					****				****	****		
Green Time:	0.0	0.0	0.0	25.5	25.5	25.5	0.0	28.5	28.5	7.0	35.5	0.0
Volume/Cap:	0.00	0.00	0.00	0.58	0.94	0.31	0.00	0.74	0.94	0.79	0.15	0.00
Delay/Veh:	0.0	0.0	0.0	19.3	38.1	16.2	0.0	19.8	41.9	60.8	9.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.3	38.1	16.2	0.0	19.8	41.9	60.8	9.3	0.0
LOS by Move:	A	A	A	B	D	B	A	B	D	E	A	A
DesignQueue:	0	0	0	10	18	5	0	14	19	5	3	0

Note: Queue reported is the number of cars per lane.

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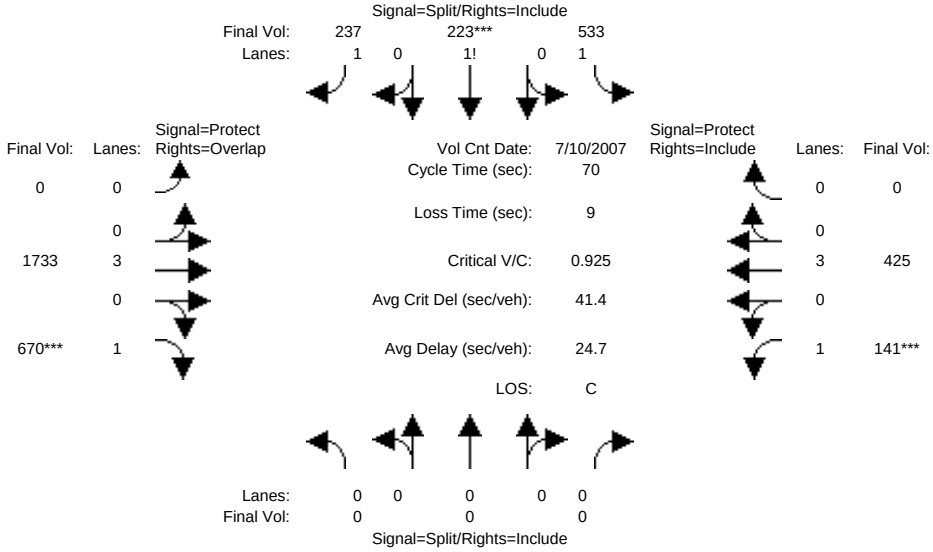
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	0	0	0	533	223	237	0	1733	670	141	425	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	533	223	237	0	1733	670	141	425	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	533	223	237	0	1733	670	141	425	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	533	223	237	0	1733	670	141	425	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	533	223	237	0	1733	670	141	425	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	533	223	237	0	1733	670	141	425	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.44	0.36	1.20	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	2542	651	2096	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.34	0.11	0.00	0.30	0.38	0.08	0.07	0.00
Crit Moves:					****				****	****		
Green Time:	0.0	0.0	0.0	25.5	25.5	25.5	0.0	28.5	28.5	7.0	35.5	0.0
Volume/Cap:	0.00	0.00	0.00	0.58	0.94	0.31	0.00	0.75	0.94	0.81	0.15	0.00
Delay/Veh:	0.0	0.0	0.0	19.3	38.1	16.2	0.0	19.9	41.9	62.2	9.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.3	38.1	16.2	0.0	19.9	41.9	62.2	9.3	0.0
LOS by Move:	A	A	A	B	D	B	A	B	D	E	A	A
DesignQueue:	0	0	0	10	18	5	0	14	19	5	3	0

Note: Queue reported is the number of cars per lane.

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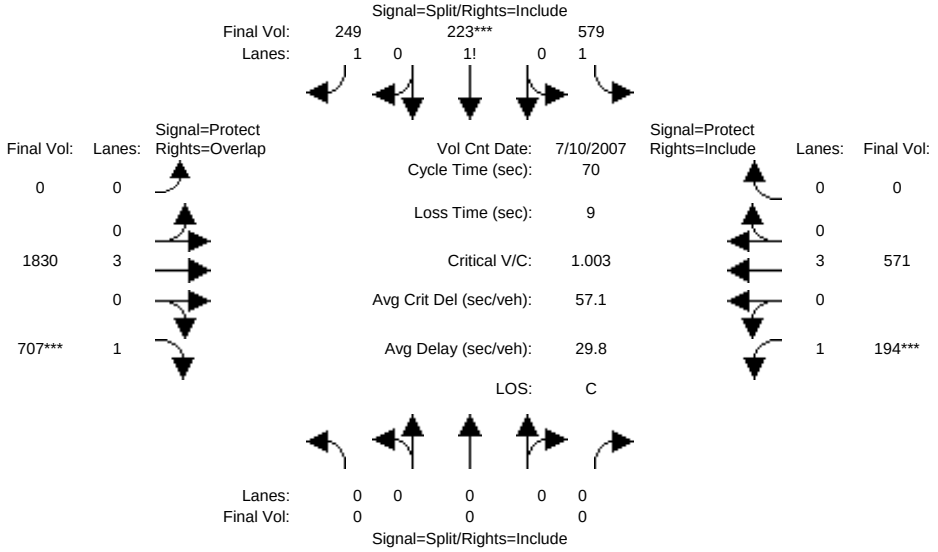
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	0	0	0	579	223	249	0	1830	707	194	571	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	579	223	249	0	1830	707	194	571	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	579	223	249	0	1830	707	194	571	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	579	223	249	0	1830	707	194	571	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	579	223	249	0	1830	707	194	571	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	579	223	249	0	1830	707	194	571	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.46	0.34	1.20	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	2572	621	2097	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.36	0.12	0.00	0.32	0.40	0.11	0.10	0.00
Crit Moves:					****				****	****		
Green Time:	0.0	0.0	0.0	25.1	25.1	25.1	0.0	28.2	28.2	7.7	35.9	0.0
Volume/Cap:	0.00	0.00	0.00	0.63	1.00	0.33	0.00	0.80	1.00	1.00	0.20	0.00
Delay/Veh:	0.0	0.0	0.0	20.4	50.9	16.7	0.0	21.4	55.5	96.6	9.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.4	50.9	16.7	0.0	21.4	55.5	96.6	9.4	0.0
LOS by Move:	A	A	A	C	D	B	A	C	E	F	A	A
DesignQueue:	0	0	0	11	19	6	0	15	20	8	4	0

Note: Queue reported is the number of cars per lane.

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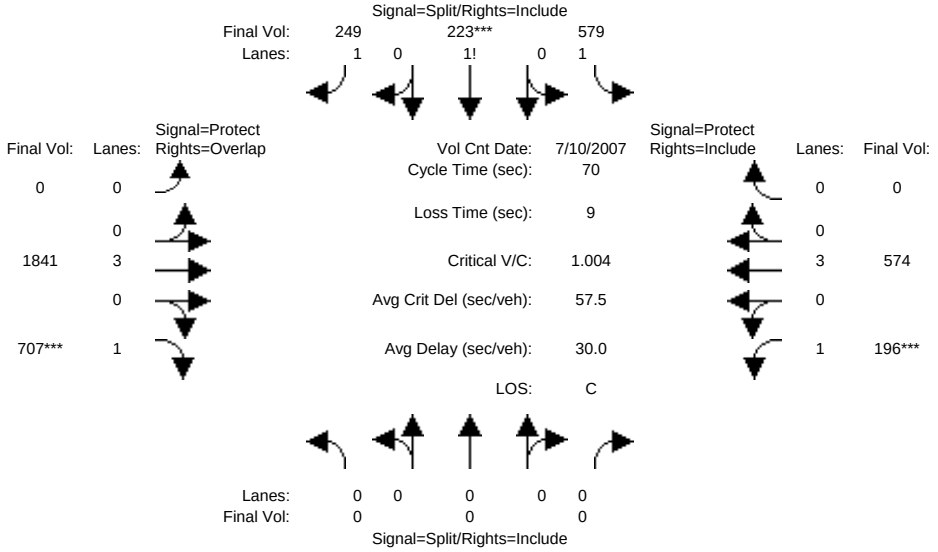
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #1022: I-880 SB Ramps & Tasman Dr/Great Mall Pkwy



Street Name:	I-880 SB Ramps						Tasman Dr/Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	0	0	0	579	223	249	0	1841	707	196	574	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	579	223	249	0	1841	707	196	574	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	579	223	249	0	1841	707	196	574	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	579	223	249	0	1841	707	196	574	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	579	223	249	0	1841	707	196	574	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	579	223	249	0	1841	707	196	574	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	0.00	0.00	1.46	0.34	1.20	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	0	0	0	2572	621	2097	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.36	0.12	0.00	0.32	0.40	0.11	0.10	0.00
Crit Moves:					****				****	****		
Green Time:	0.0	0.0	0.0	25.0	25.0	25.0	0.0	28.2	28.2	7.8	36.0	0.0
Volume/Cap:	0.00	0.00	0.00	0.63	1.00	0.33	0.00	0.80	1.00	1.00	0.20	0.00
Delay/Veh:	0.0	0.0	0.0	20.5	51.3	16.7	0.0	21.6	55.8	96.6	9.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.5	51.3	16.7	0.0	21.6	55.8	96.6	9.3	0.0
LOS by Move:	A	A	A	C	D	B	A	C	E	F	A	A
DesignQueue:	0	0	0	11	19	6	0	16	20	8	4	0

Note: Queue reported is the number of cars per lane.

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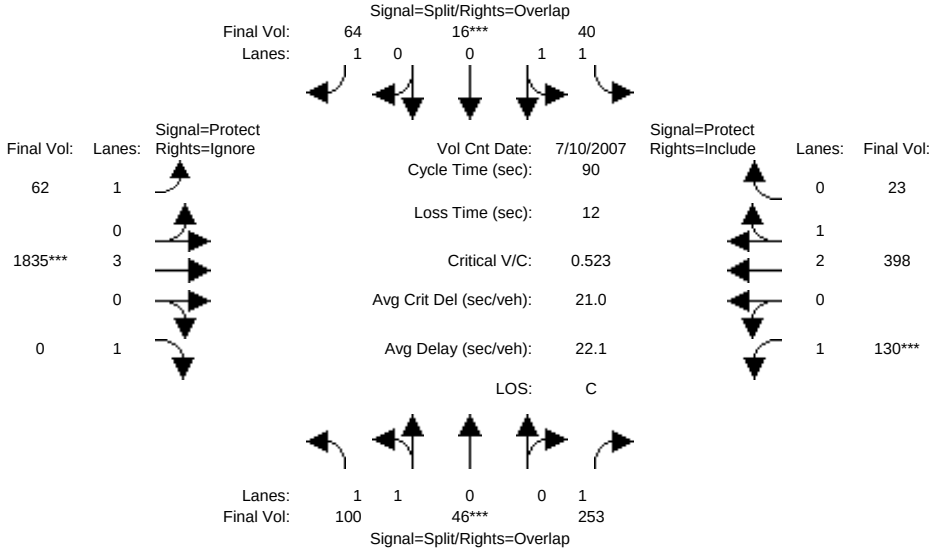
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	100	46	253	40	16	64	62	1835	355	130	398	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	46	253	40	16	64	62	1835	355	130	398	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	46	253	40	16	64	62	1835	355	130	398	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	100	46	253	40	16	64	62	1835	0	130	398	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	46	253	40	16	64	62	1835	0	130	398	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	100	46	253	40	16	64	62	1835	0	130	398	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	1.38	0.62	1.00	1.44	0.56	1.00	1.00	3.00	1.00	1.00	2.83	0.17
Final Sat.:	2431	1118	1750	2536	1014	1750	1750	5700	1750	1750	5294	306
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.14	0.02	0.02	0.04	0.04	0.32	0.00	0.07	0.08	0.08
Crit Moves:		****			****			****		****		
Green Time:	11.5	11.5	22.1	10.0	10.0	33.3	23.3	45.9	0.0	10.6	33.2	33.2
Volume/Cap:	0.32	0.32	0.59	0.14	0.14	0.10	0.14	0.63	0.00	0.63	0.20	0.20
Delay/Veh:	37.6	37.6	35.8	36.9	36.9	18.9	26.3	17.0	0.0	51.6	19.6	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.6	37.6	35.8	36.9	36.9	18.9	26.3	17.0	0.0	51.6	19.6	19.6
LOS by Move:	D	D	D	D	D	B	C	B	A	D	B	B
DesignQueue:	3	3	11	1	1	2	3	16	0	6	5	5

Note: Queue reported is the number of cars per lane.

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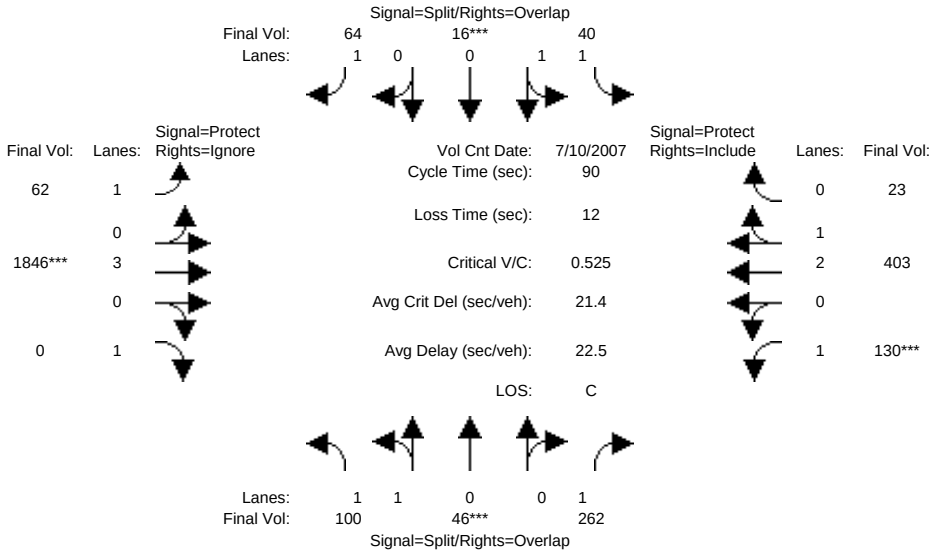
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	100	46	262	40	16	64	62	1846	355	130	403	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	46	262	40	16	64	62	1846	355	130	403	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	46	262	40	16	64	62	1846	355	130	403	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	100	46	262	40	16	64	62	1846	0	130	403	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	46	262	40	16	64	62	1846	0	130	403	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	100	46	262	40	16	64	62	1846	0	130	403	23
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	0.98	0.95
Lanes:	1.38	0.62	1.00	1.44	0.56	1.00	1.00	3.00	1.00	1.00	2.83	0.17
Final Sat.:	2431	1118	1750	2536	1014	1750	1750	5700	1750	1750	5297	302
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.15	0.02	0.02	0.04	0.04	0.32	0.00	0.07	0.08	0.08
Crit Moves:		****			****			****		****		
Green Time:	12.3	12.3	22.7	10.0	10.0	32.9	22.9	45.3	0.0	10.4	32.7	32.7
Volume/Cap:	0.30	0.30	0.59	0.14	0.14	0.10	0.14	0.64	0.00	0.64	0.21	0.21
Delay/Veh:	36.5	36.5	35.3	36.9	36.9	19.1	26.6	17.6	0.0	52.8	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.5	36.5	35.3	36.9	36.9	19.1	26.6	17.6	0.0	52.8	19.9	19.9
LOS by Move:	D	D	D	D	D	B	C	B	A	D	B	B
DesignQueue:	3	3	11	1	1	2	3	17	0	6	5	5

Note: Queue reported is the number of cars per lane.

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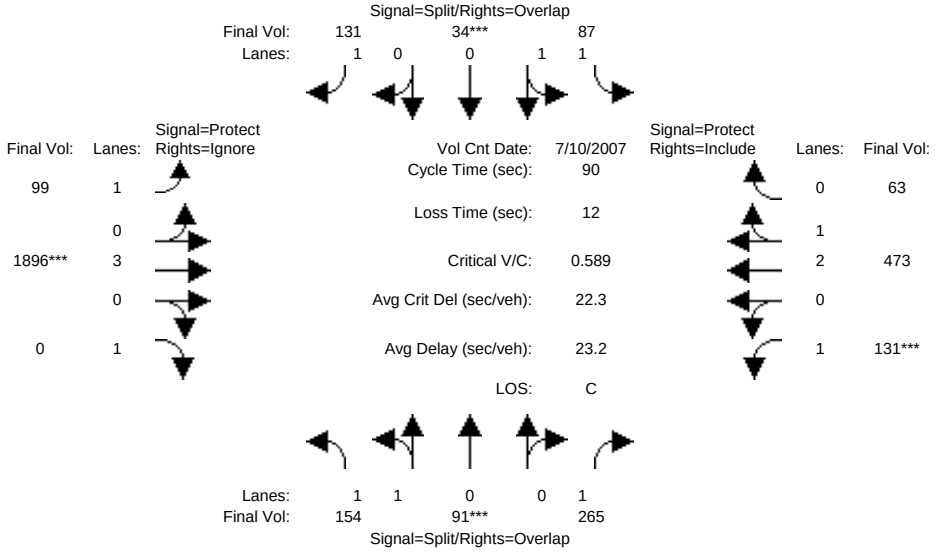
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	154	91	265	87	34	131	99	1896	365	131	473	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	91	265	87	34	131	99	1896	365	131	473	63
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	154	91	265	87	34	131	99	1896	365	131	473	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	154	91	265	87	34	131	99	1896	0	131	473	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	91	265	87	34	131	99	1896	0	131	473	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	154	91	265	87	34	131	99	1896	0	131	473	63
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	0.99	0.95
Lanes:	1.27	0.73	1.00	1.45	0.55	1.00	1.00	3.00	1.00	1.00	2.63	0.37
Final Sat.:	2231	1318	1750	2552	997	1750	1750	5700	1750	1750	4941	658
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.15	0.03	0.03	0.07	0.06	0.33	0.00	0.07	0.10	0.10
Crit Moves:		****			****			****		****		
Green Time:	10.4	10.4	21.0	10.0	10.0	33.7	23.7	47.0	0.0	10.6	33.9	33.9
Volume/Cap:	0.60	0.60	0.65	0.31	0.31	0.20	0.21	0.64	0.00	0.64	0.25	0.25
Delay/Veh:	44.1	44.1	39.0	38.8	38.8	19.7	26.9	16.4	0.0	52.0	19.6	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.1	44.1	39.0	38.8	38.8	19.7	26.9	16.4	0.0	52.0	19.6	19.6
LOS by Move:	D	D	D	D	D	B	C	B	A	D	B	B
DesignQueue:	6	6	11	3	3	5	4	17	0	6	6	6

Note: Queue reported is the number of cars per lane.

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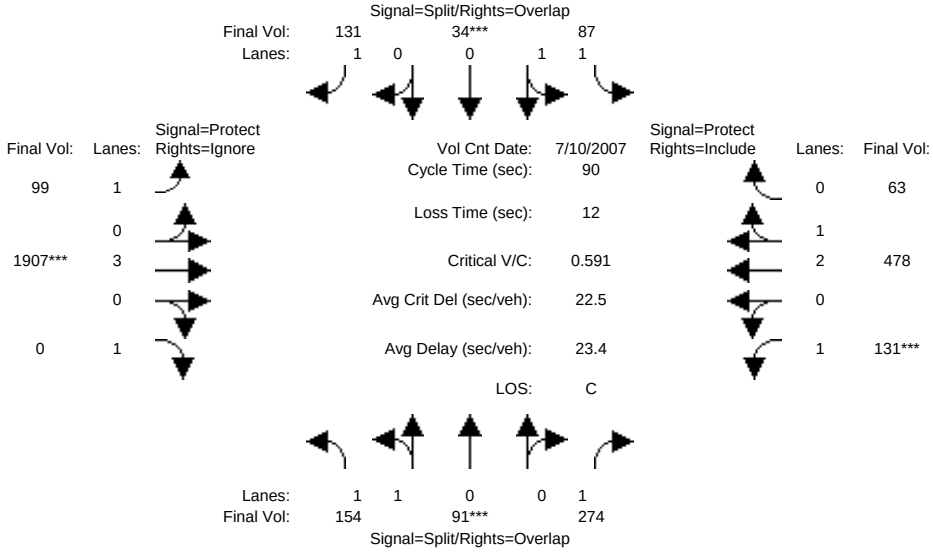
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #1023: I-880 NB Ramps & Great Mall Pkwy



Street Name:	I-880 NB Ramps						Great Mall Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 10 Jul 2007 <<												
Base Vol:	154	91	274	87	34	131	99	1907	365	131	478	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	154	91	274	87	34	131	99	1907	365	131	478	63
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	154	91	274	87	34	131	99	1907	365	131	478	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	154	91	274	87	34	131	99	1907	0	131	478	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	91	274	87	34	131	99	1907	0	131	478	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	154	91	274	87	34	131	99	1907	0	131	478	63
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.92	1.00	0.92	0.92	0.99	0.95
Lanes:	1.27	0.73	1.00	1.45	0.55	1.00	1.00	3.00	1.00	1.00	2.64	0.36
Final Sat.:	2231	1318	1750	2552	997	1750	1750	5700	1750	1750	4947	652
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.16	0.03	0.03	0.07	0.06	0.33	0.00	0.07	0.10	0.10
Crit Moves:		****			****			****		****		
Green Time:	11.0	11.0	21.4	10.0	10.0	33.5	23.5	46.6	0.0	10.4	33.5	33.5
Volume/Cap:	0.57	0.57	0.66	0.31	0.31	0.20	0.22	0.65	0.00	0.65	0.26	0.26
Delay/Veh:	42.5	42.5	38.9	38.8	38.8	19.9	27.1	16.8	0.0	52.9	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.5	42.5	38.9	38.8	38.8	19.9	27.1	16.8	0.0	52.9	19.9	19.9
LOS by Move:	D	D	D	D	D	B	C	B	A	D	B	B
DesignQueue:	6	6	12	3	3	5	4	17	0	6	6	6

Note: Queue reported is the number of cars per lane.

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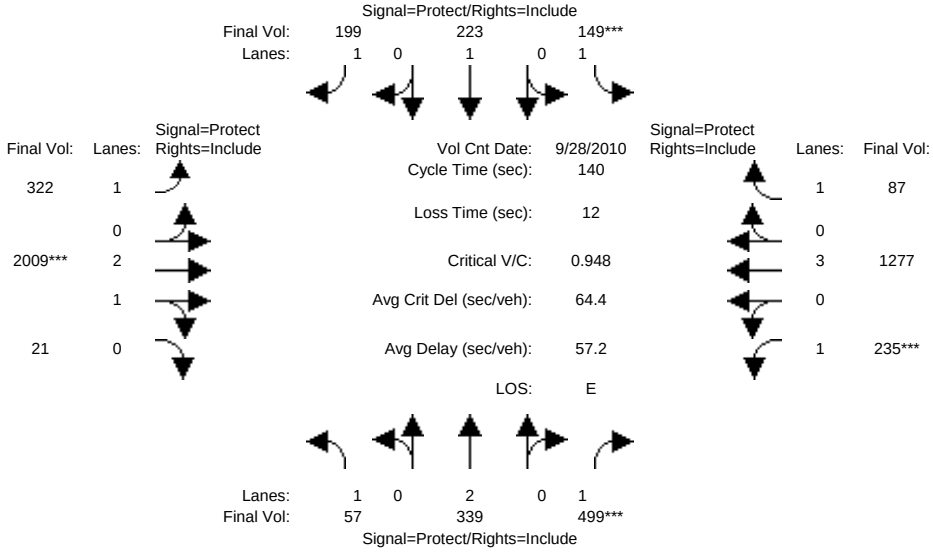
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 28 Sep 2010 <<												
Base Vol:	57	339	499	149	223	199	322	2009	21	235	1277	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	57	339	499	149	223	199	322	2009	21	235	1277	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	57	339	499	149	223	199	322	2009	21	235	1277	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	57	339	499	149	223	199	322	2009	21	235	1277	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	339	499	149	223	199	322	2009	21	235	1277	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	57	339	499	149	223	199	322	2009	21	235	1277	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5542	58	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.09	0.29	0.09	0.12	0.11	0.18	0.36	0.36	0.13	0.22	0.05
Crit Moves:			****	****				****		****		
Green Time:	16.3	42.1	42.1	12.6	38.3	38.3	33.1	53.5	53.5	19.8	40.3	40.3
Volume/Cap:	0.28	0.30	0.95	0.95	0.43	0.42	0.78	0.95	0.95	0.95	0.78	0.17
Delay/Veh:	59.8	38.3	76.2	122.7	44.4	44.3	63.6	52.5	52.5	104.8	49.5	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.8	38.3	76.2	122.7	44.4	44.3	63.6	52.5	52.5	104.8	49.5	38.1
LOS by Move:	E	D	E	F	D	D	E	D	D	F	D	D
DesignQueue:	4	9	32	12	13	13	22	37	37	18	25	5

Note: Queue reported is the number of cars per lane.

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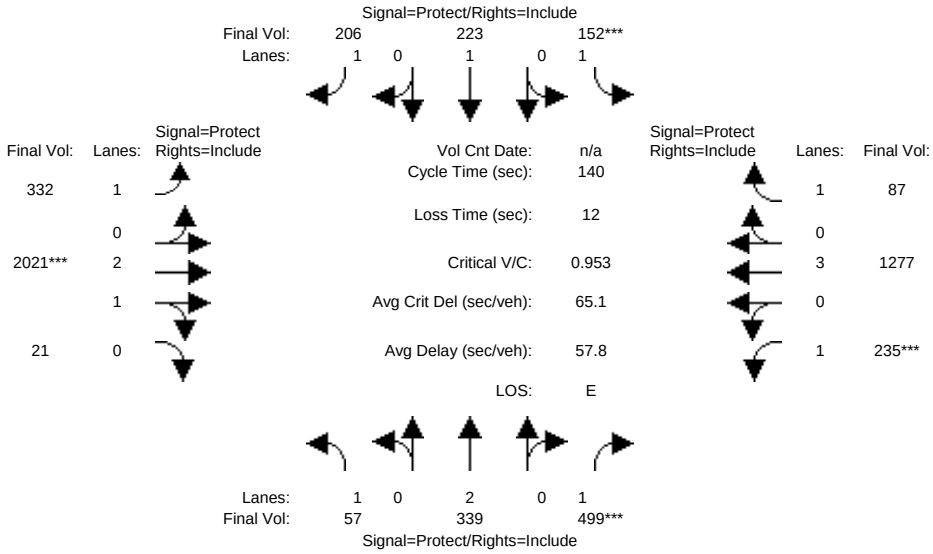
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	57	339	499	152	223	206	332	2021	21	235	1277	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	57	339	499	152	223	206	332	2021	21	235	1277	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	57	339	499	152	223	206	332	2021	21	235	1277	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	57	339	499	152	223	206	332	2021	21	235	1277	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	339	499	152	223	206	332	2021	21	235	1277	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	57	339	499	152	223	206	332	2021	21	235	1277	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5542	58	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.09	0.29	0.09	0.12	0.12	0.19	0.36	0.36	0.13	0.22	0.05
Crit Moves:			****	****				****		****		
Green Time:	16.3	41.9	41.9	12.8	38.4	38.4	33.6	53.6	53.6	19.7	39.7	39.7
Volume/Cap:	0.28	0.30	0.95	0.95	0.43	0.43	0.79	0.95	0.95	0.95	0.79	0.18
Delay/Veh:	59.9	38.4	77.2	123.0	44.4	44.6	63.9	53.1	53.1	105.9	50.3	38.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.9	38.4	77.2	123.0	44.4	44.6	63.9	53.1	53.1	105.9	50.3	38.6
LOS by Move:	E	D	E	F	D	D	E	D	D	F	D	D
DesignQueue:	4	9	32	12	13	13	22	37	37	18	25	5

Note: Queue reported is the number of cars per lane.

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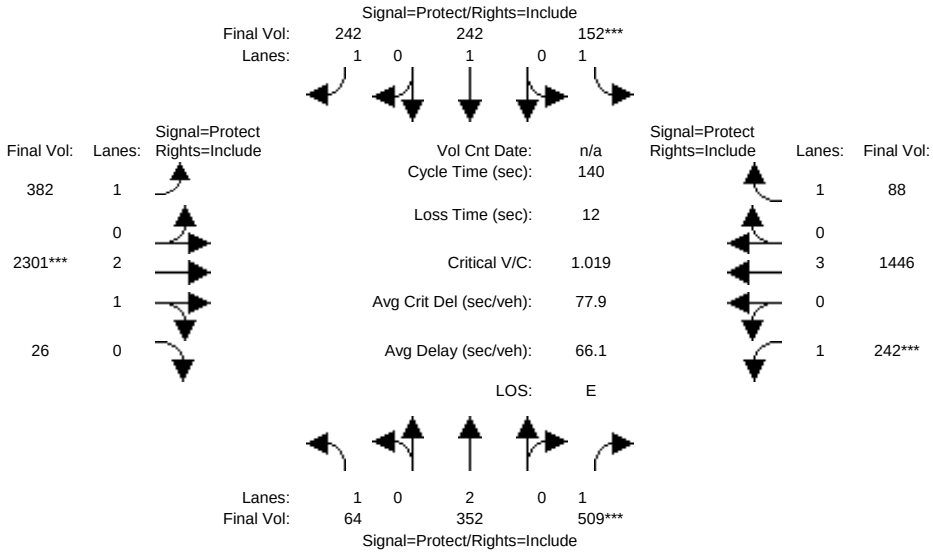
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	64	352	509	152	242	242	382	2301	26	242	1446	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	352	509	152	242	242	382	2301	26	242	1446	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	352	509	152	242	242	382	2301	26	242	1446	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	352	509	152	242	242	382	2301	26	242	1446	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	352	509	152	242	242	382	2301	26	242	1446	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	352	509	152	242	242	382	2301	26	242	1446	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5537	63	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.09	0.29	0.09	0.13	0.14	0.22	0.42	0.42	0.14	0.25	0.05
Crit Moves:			****	****				****		****		
Green Time:	13.8	40.0	40.0	11.9	38.1	38.1	35.2	57.1	57.1	19.0	40.9	40.9
Volume/Cap:	0.37	0.32	1.02	1.02	0.47	0.51	0.87	1.02	1.02	1.02	0.87	0.17
Delay/Veh:	65.1	40.2	95.1	142.8	45.5	46.9	70.3	65.2	65.2	123.8	53.4	37.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.1	40.2	95.1	142.8	45.5	46.9	70.3	65.2	65.2	123.8	53.4	37.7
LOS by Move:	E	D	F	F	D	D	E	E	E	F	D	D
DesignQueue:	5	10	33	12	14	15	26	41	41	18	28	5

Note: Queue reported is the number of cars per lane.

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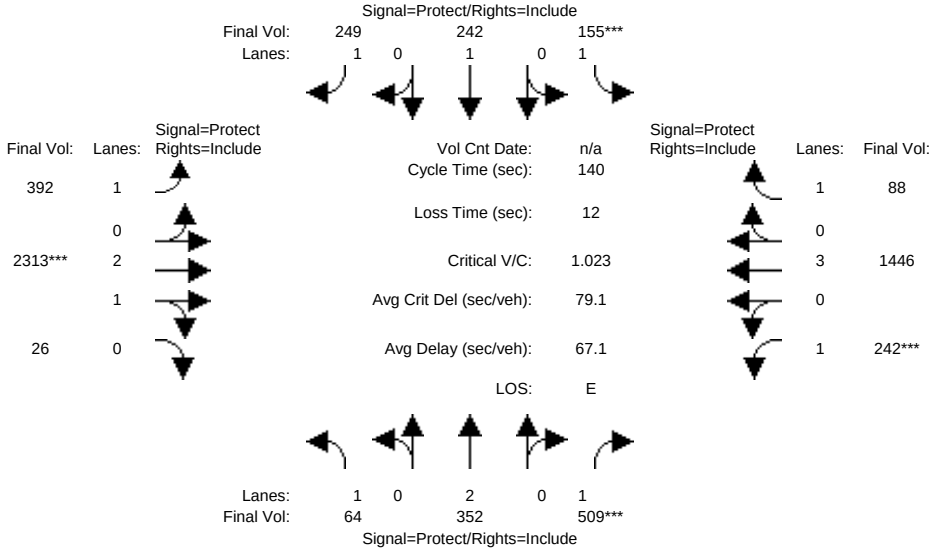
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #1024: Abel St & Calaveras Blvd



Street Name:	Abel St						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	64	352	509	155	242	249	392	2313	26	242	1446	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	352	509	155	242	249	392	2313	26	242	1446	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	352	509	155	242	249	392	2313	26	242	1446	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	352	509	155	242	249	392	2313	26	242	1446	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	352	509	155	242	249	392	2313	26	242	1446	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	352	509	155	242	249	392	2313	26	242	1446	88
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	1900	1750	1750	5538	62	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.09	0.29	0.09	0.13	0.14	0.22	0.42	0.42	0.14	0.25	0.05
Crit Moves:			****	****				****		****		
Green Time:	13.5	39.8	39.8	12.1	38.4	38.4	35.7	57.2	57.2	18.9	40.4	40.4
Volume/Cap:	0.38	0.33	1.02	1.02	0.46	0.52	0.88	1.02	1.02	1.02	0.88	0.17
Delay/Veh:	65.7	40.3	96.4	143.3	45.2	46.9	71.2	66.4	66.4	125.2	54.5	38.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.7	40.3	96.4	143.3	45.2	46.9	71.2	66.4	66.4	125.2	54.5	38.1
LOS by Move:	E	D	F	F	D	D	E	E	E	F	D	D
DesignQueue:	5	10	33	12	14	16	26	41	41	18	29	5

Note: Queue reported is the number of cars per lane.

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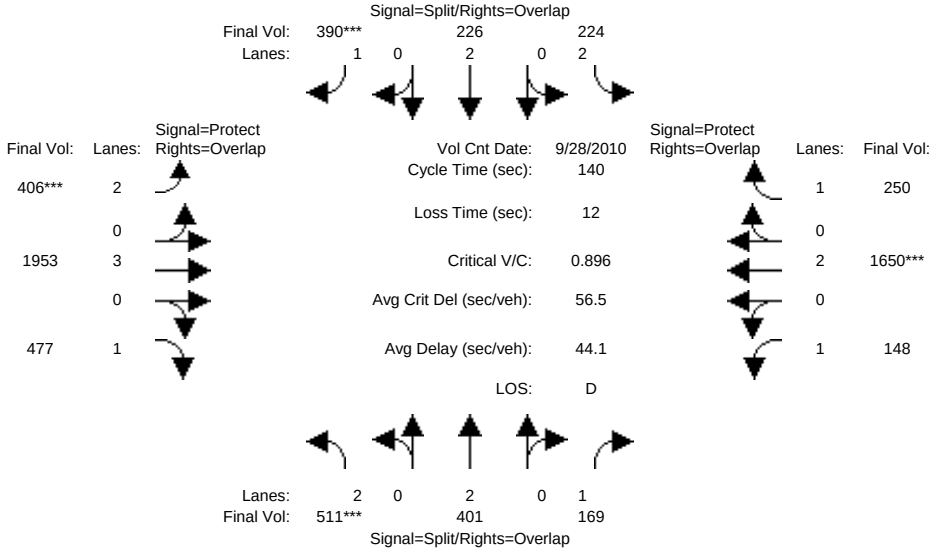
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 28 Sep 2010 <<												
Base Vol:	450	317	149	186	183	265	321	1855	439	117	1452	235
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	450	317	149	186	183	265	321	1855	439	117	1452	235
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	450	317	149	186	183	265	321	1855	439	117	1452	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.79	0.88	0.83	0.81	0.68	0.79	0.95	0.92	0.79	0.88	0.94
PHF Volume:	511	401	169	224	226	390	406	1953	477	148	1650	250
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	511	401	169	224	226	390	406	1953	477	148	1650	250
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	511	401	169	224	226	390	406	1953	477	148	1650	250
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.16	0.11	0.10	0.07	0.06	0.22	0.13	0.34	0.27	0.08	0.43	0.14
Crit Moves:	****					****	****				****	
Green Time:	25.4	25.4	42.8	14.6	14.6	34.8	20.2	70.6	95.9	17.4	67.8	82.5
Volume/Cap:	0.90	0.58	0.32	0.68	0.57	0.90	0.90	0.68	0.40	0.68	0.90	0.24
Delay/Veh:	75.3	56.1	38.9	71.2	65.5	74.5	81.8	27.5	10.5	74.4	40.2	14.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.3	56.1	38.9	71.2	65.5	74.5	81.8	27.5	10.5	74.4	40.2	14.3
LOS by Move:	E	E	D	E	E	E	F	C	B	E	D	B
DesignQueue:	21	13	10	10	8	26	17	28	14	11	37	9

Note: Queue reported is the number of cars per lane.

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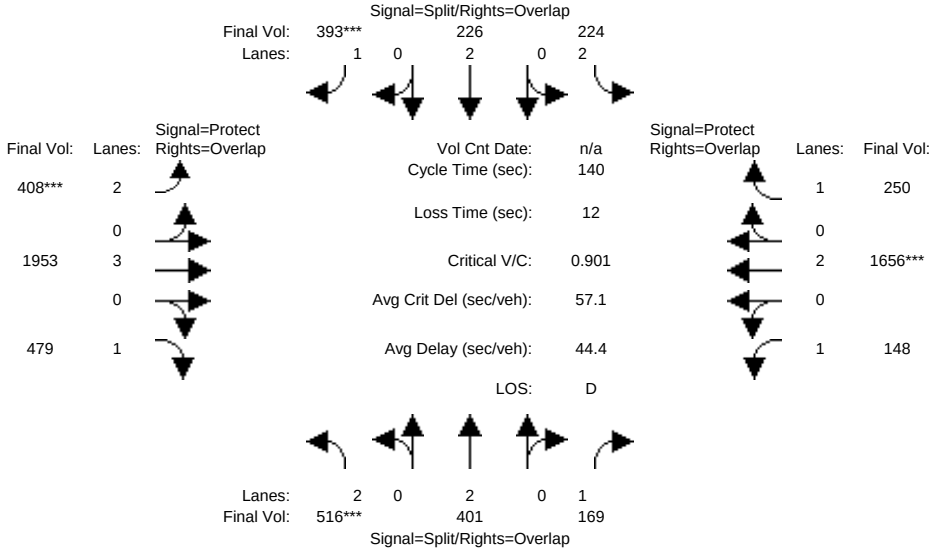
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	454	317	149	186	183	267	322	1855	441	117	1457	235
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	454	317	149	186	183	267	322	1855	441	117	1457	235
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	454	317	149	186	183	267	322	1855	441	117	1457	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.79	0.88	0.83	0.81	0.68	0.79	0.95	0.92	0.79	0.88	0.94
PHF Volume:	516	401	169	224	226	393	408	1953	479	148	1656	250
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	516	401	169	224	226	393	408	1953	479	148	1656	250
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	516	401	169	224	226	393	408	1953	479	148	1656	250
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.16	0.11	0.10	0.07	0.06	0.22	0.13	0.34	0.27	0.08	0.44	0.14
Crit Moves:	****					****	****				****	
Green Time:	25.4	25.4	42.8	14.8	14.8	34.9	20.1	70.4	95.9	17.4	67.7	82.5
Volume/Cap:	0.90	0.58	0.32	0.67	0.56	0.90	0.90	0.68	0.40	0.68	0.90	0.24
Delay/Veh:	75.9	55.9	38.9	70.8	65.2	75.2	82.6	27.6	10.6	74.6	40.7	14.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.9	55.9	38.9	70.8	65.2	75.2	82.6	27.6	10.6	74.6	40.7	14.4
LOS by Move:	E	E	D	E	E	E	F	C	B	E	D	B
DesignQueue:	21	13	10	10	8	26	17	28	14	11	38	9

Note: Queue reported is the number of cars per lane.

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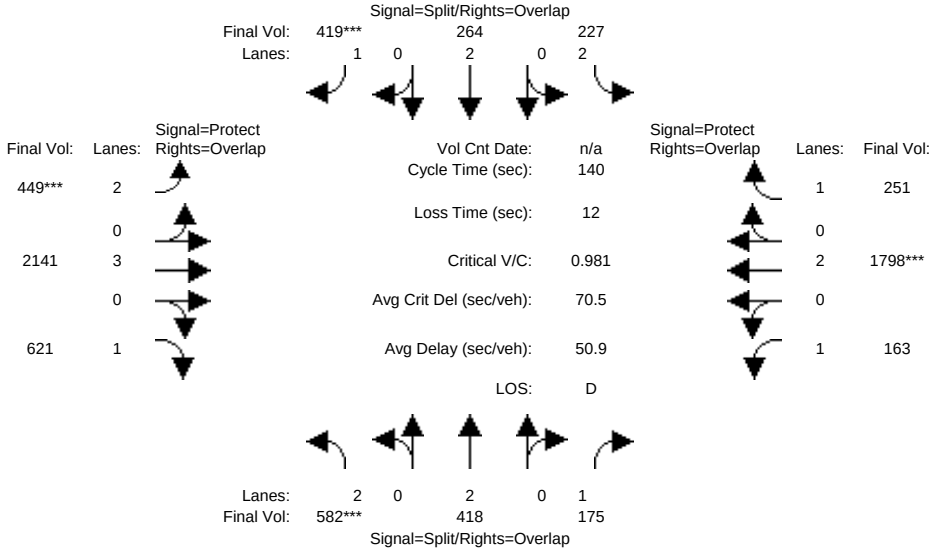
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	512	330	154	188	214	285	355	2034	571	129	1582	236
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	512	330	154	188	214	285	355	2034	571	129	1582	236
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	512	330	154	188	214	285	355	2034	571	129	1582	236
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.79	0.88	0.83	0.81	0.68	0.79	0.95	0.92	0.79	0.88	0.94
PHF Volume:	582	418	175	227	264	419	449	2141	621	163	1798	251
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	582	418	175	227	264	419	449	2141	621	163	1798	251
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	582	418	175	227	264	419	449	2141	621	163	1798	251
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.18	0.11	0.10	0.07	0.07	0.24	0.14	0.38	0.35	0.09	0.47	0.14
Crit Moves:	****					****	****				****	
Green Time:	26.3	26.3	43.8	13.8	13.8	34.2	20.4	70.4	96.7	17.5	67.5	81.3
Volume/Cap:	0.98	0.58	0.32	0.73	0.70	0.98	0.98	0.75	0.51	0.75	0.98	0.25
Delay/Veh:	89.3	55.3	38.2	75.2	71.7	91.8	97.3	29.6	11.9	79.8	52.7	14.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.3	55.3	38.2	75.2	71.7	91.8	97.3	29.6	11.9	79.8	52.7	14.9
LOS by Move:	F	E	D	E	E	F	F	C	B	E	D	B
DesignQueue:	23	14	10	10	9	29	19	31	18	12	41	9

Note: Queue reported is the number of cars per lane.

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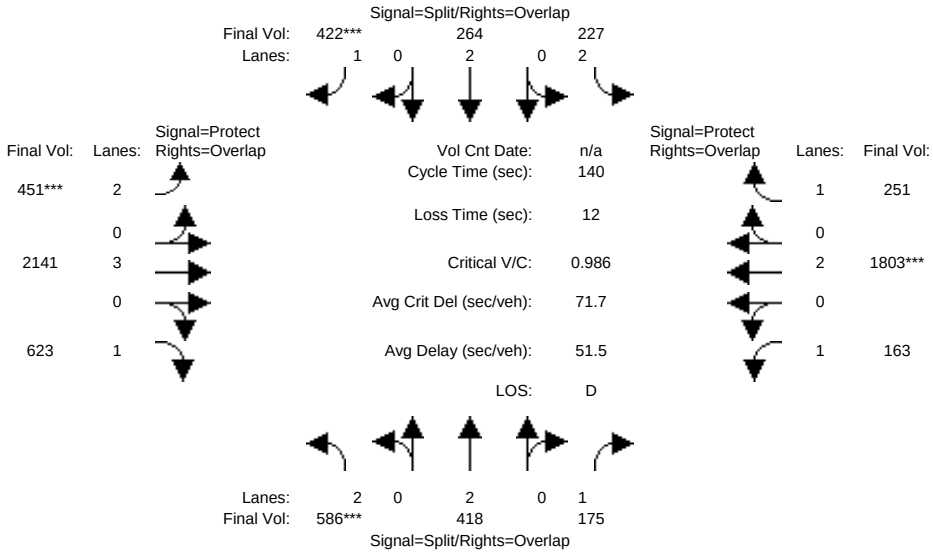
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #1025: Milpitas Blvd & Calaveras Blvd



Street Name:	Milpitas Blvd						Calaveras Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	516	330	154	188	214	287	356	2034	573	129	1587	236
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	516	330	154	188	214	287	356	2034	573	129	1587	236
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	516	330	154	188	214	287	356	2034	573	129	1587	236
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.79	0.88	0.83	0.81	0.68	0.79	0.95	0.92	0.79	0.88	0.94
PHF Volume:	586	418	175	227	264	422	451	2141	623	163	1803	251
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	586	418	175	227	264	422	451	2141	623	163	1803	251
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	586	418	175	227	264	422	451	2141	623	163	1803	251
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.19	0.11	0.10	0.07	0.07	0.24	0.14	0.38	0.36	0.09	0.47	0.14
Crit Moves:	****					****	****				****	
Green Time:	26.4	26.4	43.9	13.9	13.9	34.2	20.3	70.2	96.6	17.4	67.4	81.3
Volume/Cap:	0.99	0.58	0.32	0.72	0.70	0.99	0.99	0.75	0.52	0.75	0.99	0.25
Delay/Veh:	90.4	55.2	38.2	74.7	71.3	92.9	98.6	29.7	12.0	80.0	54.0	15.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	90.4	55.2	38.2	74.7	71.3	92.9	98.6	29.7	12.0	80.0	54.0	15.0
LOS by Move:	F	E	D	E	E	F	F	C	B	E	D	B
DesignQueue:	23	14	10	10	9	29	19	31	18	12	42	9

Note: Queue reported is the number of cars per lane.

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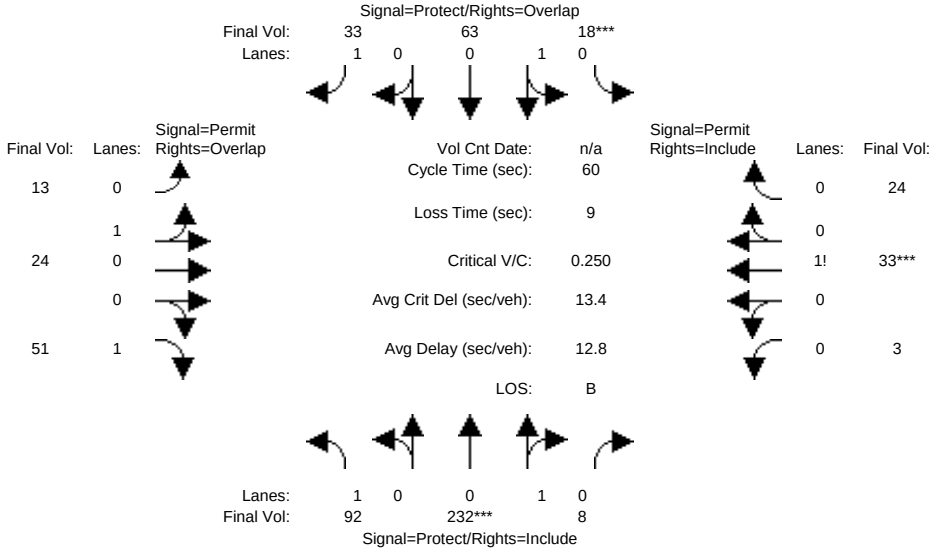
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	92	232	8	18	63	33	13	24	51	3	33	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	232	8	18	63	33	13	24	51	3	33	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	232	8	18	63	33	13	24	51	3	33	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	232	8	18	63	33	13	24	51	3	33	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	232	8	18	63	33	13	24	51	3	33	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	232	8	18	63	33	13	24	51	3	33	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.92	0.92
Lanes:	1.00	0.97	0.03	0.22	0.78	1.00	0.35	0.65	1.00	0.05	0.55	0.40
Final Sat.:	1750	1740	60	400	1400	1750	632	1168	1750	88	963	700
Capacity Analysis Module:												
Vol/Sat:	0.05	0.13	0.13	0.05	0.05	0.02	0.02	0.02	0.03	0.03	0.03	0.03
Crit Moves:		****		****							****	
Green Time:	16.9	30.7	30.7	10.3	24.1	24.1	10.0	10.0	26.9	10.0	10.0	10.0
Volume/Cap:	0.19	0.26	0.26	0.26	0.11	0.05	0.12	0.12	0.07	0.21	0.21	0.21
Delay/Veh:	16.5	8.4	8.4	22.0	11.3	11.0	21.5	21.5	9.4	21.9	21.9	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.5	8.4	8.4	22.0	11.3	11.0	21.5	21.5	9.4	21.9	21.9	21.9
LOS by Move:	B	A	A	C	B	B	C	C	A	C	C	C
DesignQueue:	2	4	4	2	2	1	1	1	1	2	2	2

Note: Queue reported is the number of cars per lane.

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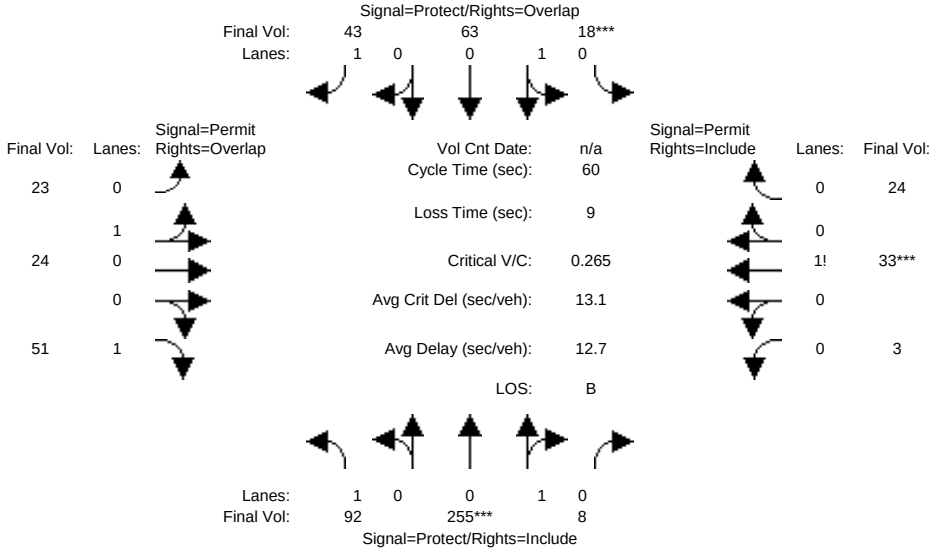
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Proj PM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	92	255	8	18	63	43	23	24	51	3	33	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	255	8	18	63	43	23	24	51	3	33	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	255	8	18	63	43	23	24	51	3	33	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	255	8	18	63	43	23	24	51	3	33	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	255	8	18	63	43	23	24	51	3	33	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	255	8	18	63	43	23	24	51	3	33	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.92	0.92
Lanes:	1.00	0.97	0.03	0.22	0.78	1.00	0.49	0.51	1.00	0.05	0.55	0.40
Final Sat.:	1750	1745	55	400	1400	1750	881	919	1750	88	963	700
Capacity Analysis Module:												
Vol/Sat:	0.05	0.15	0.15	0.05	0.05	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Crit Moves:		****		****							****	
Green Time:	16.9	31.3	31.3	9.7	24.1	24.1	10.0	10.0	26.9	10.0	10.0	10.0
Volume/Cap:	0.19	0.28	0.28	0.28	0.11	0.06	0.16	0.16	0.07	0.21	0.21	0.21
Delay/Veh:	16.5	8.2	8.2	22.6	11.3	11.0	21.6	21.6	9.4	21.9	21.9	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.5	8.2	8.2	22.6	11.3	11.0	21.6	21.6	9.4	21.9	21.9	21.9
LOS by Move:	B	A	A	C	B	B	C	C	A	C	C	C
DesignQueue:	2	5	5	2	2	1	1	1	1	2	2	2

Note: Queue reported is the number of cars per lane.

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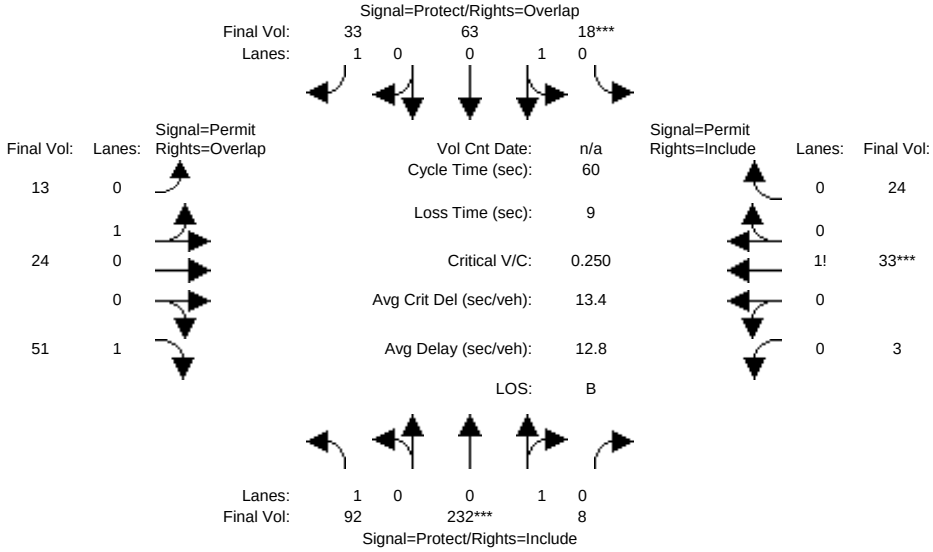
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Min. Green:	7		10		10		7		10		10		10		10		10		10		10		10	
Y+R:	4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0		4.0	
Volume Module:																								
Base Vol:	92		232		8		18		63		33		13		24		51		3		33		24	
Growth Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	92		232		8		18		63		33		13		24		51		3		33		24	
Added Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	92		232		8		18		63		33		13		24		51		3		33		24	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	92		232		8		18		63		33		13		24		51		3		33		24	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	92		232		8		18		63		33		13		24		51		3		33		24	
PCE Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
MLF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
FinalVolume:	92		232		8		18		63		33		13		24		51		3		33		24	
Saturation Flow Module:																								
Sat/Lane:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:	0.92		0.95		0.95		0.95		0.95		0.92		0.95		0.95		0.92		0.92		0.92		0.92	
Lanes:	1.00		0.97		0.03		0.22		0.78		1.00		0.35		0.65		1.00		0.05		0.55		0.40	
Final Sat.:	1750		1740		60		400		1400		1750		632		1168		1750		88		963		700	
Capacity Analysis Module:																								
Vol/Sat:	0.05		0.13		0.13		0.05		0.05		0.02		0.02		0.02		0.03		0.03		0.03		0.03	
Crit Moves:			****				****														****			
Green Time:	16.9		30.7		30.7		10.3		24.1		24.1		10.0		10.0		26.9		10.0		10.0		10.0	
Volume/Cap:	0.19		0.26		0.26		0.26		0.11		0.05		0.12		0.12		0.07		0.21		0.21		0.21	
Delay/Veh:	16.5		8.4		8.4		22.0		11.3		11.0		21.5		21.5		9.4		21.9		21.9		21.9	
User DelAdj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:	16.5		8.4		8.4		22.0		11.3		11.0		21.5		21.5		9.4		21.9		21.9		21.9	
LOS by Move:	B		A		A		C		B		B		C		C		A		C		C		C	
DesignQueue:	2		4		4		2		2		1		1		1		1		2		2		2	

Note: Queue reported is the number of cars per lane.

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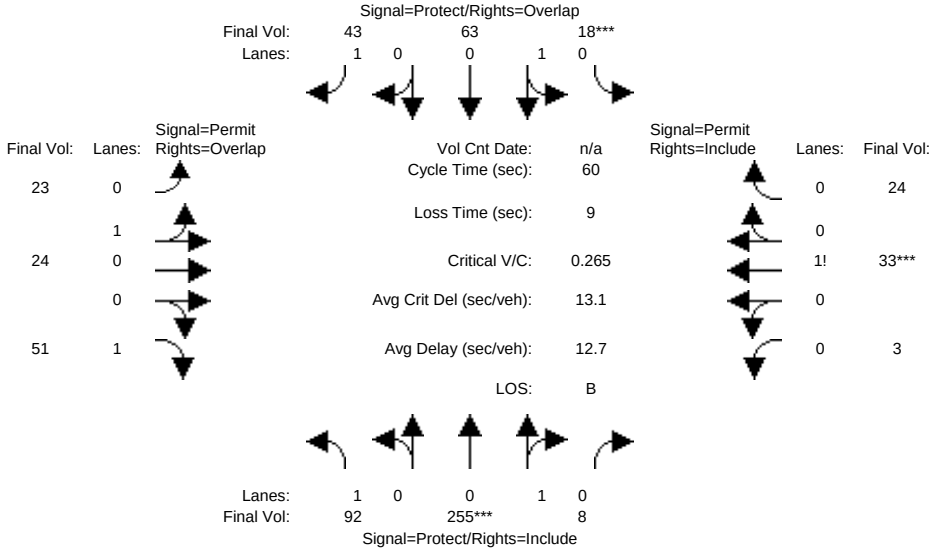
Preston Pipeline Property TIA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Proj PM

Intersection #6006: Main St / Weller Ln



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	92	255	8	18	63	43	23	24	51	3	33	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	255	8	18	63	43	23	24	51	3	33	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	255	8	18	63	43	23	24	51	3	33	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	255	8	18	63	43	23	24	51	3	33	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	255	8	18	63	43	23	24	51	3	33	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	255	8	18	63	43	23	24	51	3	33	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.95	0.92	0.92	0.92	0.92
Lanes:	1.00	0.97	0.03	0.22	0.78	1.00	0.49	0.51	1.00	0.05	0.55	0.40
Final Sat.:	1750	1745	55	400	1400	1750	881	919	1750	88	963	700
Capacity Analysis Module:												
Vol/Sat:	0.05	0.15	0.15	0.05	0.05	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Crit Moves:		****		****							****	
Green Time:	16.9	31.3	31.3	9.7	24.1	24.1	10.0	10.0	26.9	10.0	10.0	10.0
Volume/Cap:	0.19	0.28	0.28	0.28	0.11	0.06	0.16	0.16	0.07	0.21	0.21	0.21
Delay/Veh:	16.5	8.2	8.2	22.6	11.3	11.0	21.6	21.6	9.4	21.9	21.9	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.5	8.2	8.2	22.6	11.3	11.0	21.6	21.6	9.4	21.9	21.9	21.9
LOS by Move:	B	A	A	C	B	B	C	C	A	C	C	C
DesignQueue:	2	5	5	2	2	1	1	1	1	2	2	2

Note: Queue reported is the number of cars per lane.

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Appendix C

Approved Trips

City of Milpitas Approved Trip Inventory

Date of Last Update: 2/2/2012

MASTER LIST

Num.	Approved Projects	Units in TIA	% Included	Units in ATI Database	Notes
1	Shea Residential	204	100%	204	Main/Abel (204 Residential Units)
2	Sinclair Horizon Residential Project	82	100%	82	Sinclair Frontage Road (82 Residential Units)
3	Walmart Expansion	150,000	100%	150,000	McCarthy Blvd/Ranch Dr (150,000 S.F)
4	Robson Homes	88	100%	88	Los Coches St, W/O I-680 (88 Res. Units)
5	Piper Montague	942	100%	942	Btwn Piper Dr & Milpitas Blvd (942 Res Units)
6	Murphy Ranch Residential Project	659	100%	659	Murphy Ranch Road (659 Residential Units)
7	Landmark Towers Mixed Use Project	523	100%	523	Barber Lane, S/O Bellew (375 Condo Units, 148 ksf retail)
8	Contour	134	100%	134	300 Montague Expressway (134 Units)
9	Elmwood Residential & Comercial	902	36%	328	Elmwood Road (722 res units & 180 ksf auto dealer)
10			0%		
11			0%		
12			0%		
13			0%		
14			0%		
15			0%		
16			0%		
17			0%		
18			0%		
19			0%		
20			0%		
21			0%		
22			0%		
23			0%		
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36			0%		
37			0%		
38			0%		
39			0%		
40			0%		
41			0%		
42			0%		
43			0%		
44			0%		
45			0%		
46			0%		
47			0%		
48			0%		
49			0%		
50			0%		

City of San Jose
Citywide Traffix Database
(updated March 22, 2011)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3030 237/ZANKER (N)

Cycle (sec):	71	Critical Vol./Cap.(X):	0.438
Loss Time (sec):	9	Average Delay (sec/veh):	14.9
Optimal Cycle:	36	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0 2	0 1		1 0 1	0 0		0 0 0	0 0		2 0 0	0 1	
Volume Module: >> Count Date: 18 Sep 2008 << 7:30-8:30AM												
Base Vol:	0	85	576	25	106	0	0	0	0	322	0	48
Growth Adj:	1.10	1.10	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.15	1.15	1.15
Initial Bse:	0	93	633	25	106	0	0	0	0	370	0	55
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	282	9	22	188	0	0	0	0	185	0	395
Initial Fut:	0	375	642	47	294	0	0	0	0	555	0	450
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	375	0	47	294	0	0	0	0	555	0	450
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	375	0	47	294	0	0	0	0	555	0	450
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	375	0	47	294	0	0	0	0	555	0	450
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	1750	1900	0	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.00	0.03	0.15	0.00	0.00	0.00	0.00	0.18	0.00	0.26
Crit Moves:		****		****								****
Green Time:	0.0	15.3	0.0	7.0	22.3	0.0	0.0	0.0	0.0	39.7	0.0	39.7
Volume/Cap:	0.00	0.46	0.00	0.27	0.49	0.00	0.00	0.00	0.00	0.31	0.00	0.46
Delay/Veh:	0.0	24.7	0.0	30.5	20.4	0.0	0.0	0.0	0.0	8.5	0.0	9.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.7	0.0	30.5	20.4	0.0	0.0	0.0	0.0	8.5	0.0	9.6
LOS by Move:	A	C	A	C	C+	A	A	A	A	A	A	A
HCM2kAvgQ:	0	4	0	1	6	0	0	0	0	4	0	7

Note: Queue reported is the number of cars per lane.

City of San Jose
Citywide Traffix Database
(updated March 22, 2011)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3031 237/ZANKER (S)

Cycle (sec):	76	Critical Vol./Cap.(X):	0.607
Loss Time (sec):	9	Average Delay (sec/veh):	20.0
Optimal Cycle:	40	Level Of Service:	B-

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	10	10	7	10	0	10	10	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3 0	1	1 0	2 0	0	0 1	0 0	2	0 0	0 0	0
Volume Module: >> Count Date: 18 Sep 2008 << 8:00-9:00AM												
Base Vol:	0	547	195	55	419	0	31	1	761	0	0	0
Growth Adj:	1.13	1.13	1.13	1.15	1.15	1.15	1.02	1.02	1.02	1.00	1.00	1.00
Initial Bse:	0	620	221	63	482	0	32	1	774	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	299	32	117	255	0	68	0	78	0	0	0
Initial Fut:	0	919	253	180	737	0	100	1	852	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	919	0	180	737	0	100	1	852	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	919	0	180	737	0	100	1	852	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	919	0	180	737	0	100	1	852	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.83	0.92	1.00	0.92
Lanes:	0.00	3.00	1.00	1.00	2.00	0.00	0.99	0.01	2.00	0.00	0.00	0.00
Final Sat.:	0	5700	1750	1750	3800	0	1782	18	3150	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.00	0.10	0.19	0.00	0.06	0.06	0.27	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green Time:	0.0	20.2	0.0	12.9	33.1	0.0	33.9	33.9	33.9	0.0	0.0	0.0
Volume/Cap:	0.00	0.61	0.00	0.61	0.45	0.00	0.13	0.13	0.61	0.00	0.00	0.00
Delay/Veh:	0.0	25.1	0.0	32.8	15.2	0.0	12.4	12.4	16.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	25.1	0.0	32.8	15.2	0.0	12.4	12.4	16.8	0.0	0.0	0.0
LOS by Move:	A	C	A	C-	B	A	B	B	B	A	A	A
HCM2kAvgQ:	0	7	0	5	6	0	1	1	10	0	0	0

Note: Queue reported is the number of cars per lane.

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City of San Jose
Citywide Traffix Database
(updated March 22, 2011)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5801 MONTAGUE/OAKLAND

Cycle (sec):	180	Critical Vol./Cap.(X):	1.141
Loss Time (sec):	12	Average Delay (sec/veh):	95.3
Optimal Cycle:	240	Level of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 0	1	2 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module: >> Count Date: 28 Oct 2008 << 8:00-9:00 AM												
Base Vol:	479	248	77	154	168	379	145	1079	278	180	2812	113
Growth Adj:	1.04	1.04	1.04	1.10	1.10	1.10	1.08	1.08	1.08	1.10	1.10	1.10
Initial Bse:	499	258	80	169	185	417	156	1160	299	198	3085	124
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	43	61	11	21	43	48	26	185	37	28	286	19
Initial Fut:	542	319	91	190	228	465	182	1345	336	226	3371	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	542	319	91	190	228	465	182	1345	336	226	3371	143
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	542	319	91	190	228	465	182	1345	336	226	3371	143
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	542	319	91	190	228	465	182	1345	336	226	3371	143
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.99	0.95	0.83	0.98	0.95
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.38	0.62	2.00	2.87	0.13
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	4480	1119	3150	5372	228
Capacity Analysis Module:												
Vol/Sat:	0.17	0.08	0.05	0.06	0.06	0.27	0.06	0.30	0.30	0.07	0.63	0.63
Crit Moves:	****					****	****				****	
Green Time:	27.1	34.9	55.7	25.1	32.8	41.9	9.1	87.3	87.3	20.8	99.0	99.0
Volume/Cap:	1.14	0.43	0.17	0.43	0.33	1.14	1.14	0.62	0.62	0.62	1.14	1.14
Delay/Veh:	162.7	64.3	45.5	71.7	64.3	158.2	199.8	34.6	34.6	79.1	109	108.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	162.7	64.3	45.5	71.7	64.3	158.2	199.8	34.6	34.6	79.1	109	108.6
LOS by Move:	F	E	D	E	E	F	F	C-	C-	E-	F	F
HCM2kAvgQ:	26	8	4	6	5	38	10	23	23	8	84	84

Note: Queue reported is the number of cars per lane.

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Citywide Traffix Database
(updated March 22, 2011)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3031 237/ZANKER (S)

Cycle (sec):	63	Critical Vol./Cap.(X):	0.701
Loss Time (sec):	9	Average Delay (sec/veh):	18.8
Optimal Cycle:	47	Level Of Service:	B-

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	10	10	7	10	0	10	10	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	3 0	1	1 0	2 0	0	0 1	0 0	2	0 0	0 0	0
Volume Module: >> Count Date: 14 Sep 2010 << 5:00-6:00PMPM												
Base Vol:	0	819	742	219	475	0	8	0	56	0	0	0
Growth Adj:	1.12	1.12	1.12	1.11	1.11	1.11	1.01	1.01	1.01	1.00	1.00	1.00
Initial Bse:	0	917	831	244	529	0	8	0	57	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	172	128	439	302	0	22	5	29	0	0	0
Initial Fut:	0	1089	959	683	831	0	30	5	86	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1089	0	683	831	0	30	5	86	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1089	0	683	831	0	30	5	86	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1089	0	683	831	0	30	5	86	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.83	0.92	1.00	0.92
Lanes:	0.00	3.00	1.00	1.00	2.00	0.00	0.86	0.14	2.00	0.00	0.00	0.00
Final Sat.:	0	5700	1750	1750	3800	0	1544	256	3150	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.00	0.39	0.22	0.00	0.02	0.02	0.03	0.00	0.00	0.00
Crit Moves:		****		****			****					
Green Time:	0.0	14.5	0.0	29.5	44.0	0.0	10.0	10.0	10.0	0.0	0.0	0.0
Volume/Cap:	0.00	0.83	0.00	0.83	0.31	0.00	0.12	0.12	0.17	0.00	0.00	0.00
Delay/Veh:	0.0	27.8	0.0	21.9	3.7	0.0	22.9	22.9	23.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	27.8	0.0	21.9	3.7	0.0	22.9	22.9	23.1	0.0	0.0	0.0
LOS by Move:	A	C	A	C+	A	A	C+	C+	C	A	A	A
HCM2kAvgQ:	0	10	0	15	3	0	1	1	1	0	0	0

Note: Queue reported is the number of cars per lane.

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Citywide Traffix Database
(updated March 22, 2011)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3030 237/ZANKER (N)

Cycle (sec):	59	Critical Vol./Cap.(X):	0.768
Loss Time (sec):	9	Average Delay (sec/veh):	16.8
Optimal Cycle:	53	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2 0	1	1 0	1 0	0	0 0	0 0	0	2 0	0 0	1
Volume Module: >> Count Date: 14 Sep 2010 << 5:00PM-6PMPM												
Base Vol:	0	70	728	22	246	0	0	0	0	427	0	71
Growth Adj:	1.04	1.04	1.04	1.15	1.15	1.15	1.00	1.00	1.00	1.02	1.02	1.02
Initial Bse:	0	73	754	25	283	0	0	0	0	438	0	73
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	84	36	75	632	0	0	0	0	96	0	104
Initial Fut:	0	157	790	100	915	0	0	0	0	534	0	177
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	157	0	100	915	0	0	0	0	534	0	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	157	0	100	915	0	0	0	0	534	0	177
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	157	0	100	915	0	0	0	0	534	0	177
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	1750	1900	0	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.04	0.00	0.06	0.48	0.00	0.00	0.00	0.00	0.17	0.00	0.10
Crit Moves:	****				****					****		
Green Time:	0.0	21.8	0.0	15.2	37.0	0.0	0.0	0.0	0.0	13.0	0.0	13.0
Volume/Cap:	0.00	0.11	0.00	0.22	0.77	0.00	0.00	0.00	0.00	0.77	0.00	0.46
Delay/Veh:	0.0	12.3	0.0	17.5	11.0	0.0	0.0	0.0	0.0	26.8	0.0	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.3	0.0	17.5	11.0	0.0	0.0	0.0	0.0	26.8	0.0	20.8
LOS by Move:	A	B	A	B	B+	A	A	A	A	C	A	C+
HCM2kAvgQ:	0	1	0	2	14	0	0	0	0	8	0	4

Note: Queue reported is the number of cars per lane.

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(updated March 22, 2011)

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5801 MONTAGUE/OAKLAND

Cycle (sec):	190	Critical Vol./Cap.(X):	1.065
Loss Time (sec):	12	Average Delay (sec/veh):	80.2
Optimal Cycle:	240	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Ovl			Ovl			Include			Include	
Min. Green:	14	10	10	14	10	10	14	126	10	14	99	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 0	1	2 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module: >> Count Date: 2 Oct 2008 << 5:15-6:15PM												
Base Vol:	261	310	170	187	553	215	461	2793	343	158	1384	144
Growth Adj:	1.09	1.09	1.09	1.05	1.05	1.05	1.07	1.07	1.07	1.05	1.05	1.05
Initial Bse:	286	339	186	196	578	225	494	2995	368	167	1459	152
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	38	78	42	24	56	16	75	320	35	34	204	31
Initial Fut:	324	417	228	220	634	241	569	3315	403	201	1663	183
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	324	417	228	220	634	241	569	3315	403	201	1663	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	324	417	228	220	634	241	569	3315	403	201	1663	183
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	324	417	228	220	634	241	569	3315	403	201	1663	183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.99	0.95	0.83	0.99	0.95
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.66	0.34	2.00	2.69	0.31
Final Sat.:	3150	3800	1750	3150	3800	1750	3150	4992	607	3150	5045	555
Capacity Analysis Module:												
Vol/Sat:	0.10	0.11	0.13	0.07	0.17	0.14	0.18	0.66	0.66	0.06	0.33	0.33
Crit Moves:	****				****			****		****		
Green Time:	14.5	22.7	36.7	15.3	23.5	59.6	36.1	126	126.0	14.0	104	103.9
Volume/Cap:	1.35	0.92	0.67	0.87	1.35	0.44	0.95	1.00	1.00	0.86	0.60	0.60
Delay/Veh:	269.6	106	76.4	112.1	254	52.5	101.6	47.0	47.0	113.9	38.3	38.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	269.6	106	76.4	112.1	254	52.5	101.6	47.0	47.0	113.9	38.3	38.3
LOS by Move:	F	F	E-	F	F	D-	F	D	D	F	D+	D+
HCM2kAvgQ:	19	15	15	10	30	14	23	79	79	9	28	28

Note: Queue reported is the number of cars per lane.

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Appendix I:
Utility Systems Supporting Information

DRAFT Technical Memorandum

City of Milpitas

Subject: **DRAFT – Preston Development Water & Sewer Analysis**

Prepared For: Marilyn Nickel

Prepared by: Matt Hoeft, Celine Monget

Reviewed by: Marc Nakamoto

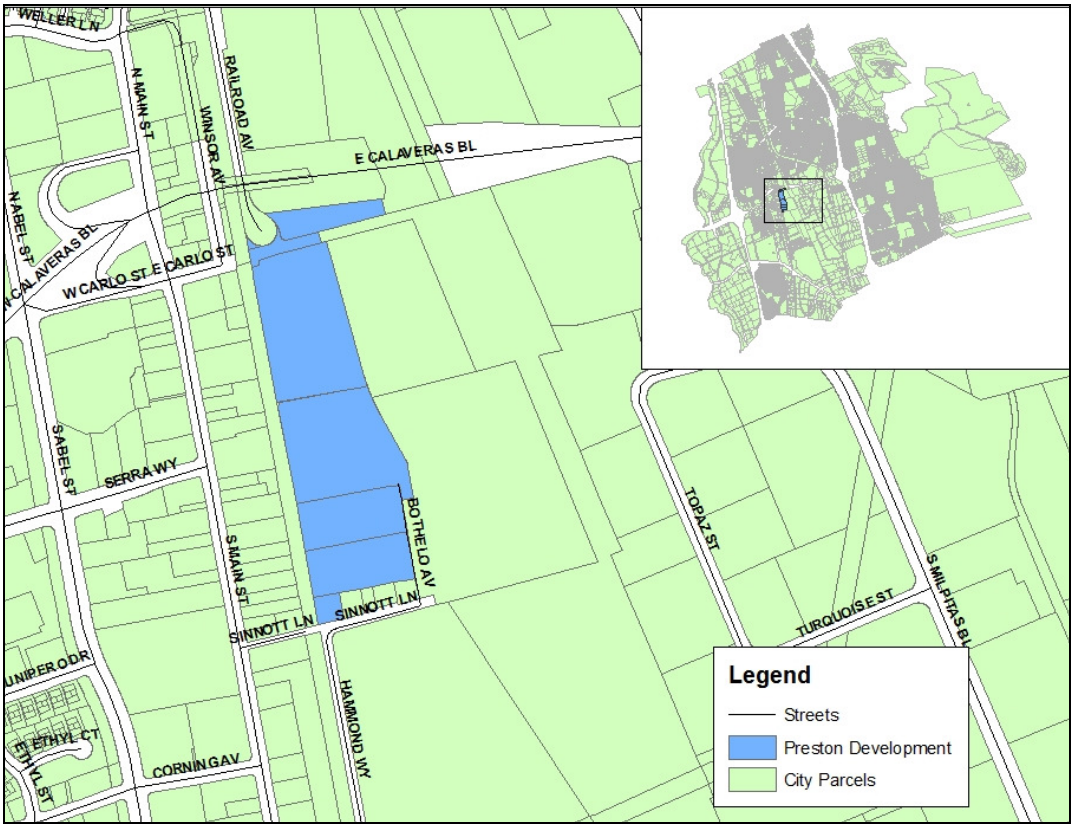
Date: March 9, 2012

Reference: 0051-017.02

1 Background

KB Home has proposed a multi-family high-density (MFH) development for the Preston property (Preston development), that will replace existing light industrial, manufacturing and warehouse land uses with 220 new MFH-density dwelling units. This technical memorandum (TM) summarizes the methodology and results of the analysis to determine the need for water distribution system and/or sewer collection system improvements beyond those identified in scenario 3 from the *2009 Master Plan Update* and the *2009 Sewer Master Plan* as a result of increased water demands and sewer flows resulting from the Preston development. Figure 1 shows the Preston development project area.

Figure 1 – Preston Development Parcels



2 Objectives

The sewer collection system analysis was limited to updating the base wastewater flow from the re-zoned parcels in the Preston development. Groundwater infiltration (GWI) and rainfall-dependent inflow/infiltration (RDII) were assumed to match the values from the *2009 Sewer Master Plan*.

For the analysis of the water distribution system, two water demand scenarios were developed to evaluate the impacts of the Preston development, including the following: 1) Peak Hour flow scenario; and 2) Fire flow scenario.

Recent water infrastructure improvements in the vicinity of the Preston development were incorporated into the H2OMap model to reflect infrastructure upgrades not previously captured in Scenario 3 of the modeled water distribution system. These improvements include:

- Replacement of an existing 8-inch water line along Carlo with a 12-inch line
- New 12-inch line along Calaveras Boulevard overpass
- Replacement of an existing 6-inch water line with a 12-inch line on Winsor Street
- Replacement of a 8-inch water line along N. Main Street with a 12-inch line
- Replacement of an existing 6-inch water line on Weller lane with a 8-inch water line

In addition, the water model was updated to replace a 6-inch water line with a 12-inch water line as shown on *The Preliminary Review Application for Preston Property* maps on the eastern part of Preston development and continuing as Bothelo Lane and Sinnott Lane.

3 Methodology

The methodologies for the water and sewer analyses are as follows:

Sewer Collection System Analysis

1. Estimate the average base wastewater flows for the re-zoned parcels in the Preston development given the specific development information and land use designations.
2. Update the parcel flow information in the City's Hydra sewer model to generate an updated sewer flow file.
3. Analyze the sewer collection system with the updated flow file and the existing GWI and RDII.
4. Examine the sewer pipe hydraulic grade line profiles for surcharges and compare to results from Scenario 3 of the 2009 *Sewer Master Plan*.

Water Distribution System Analysis

1. Estimate the water demands associated with peak hour and fire flow conditions for the re-zoned parcels in the Preston development given the specific development information and land use designations.
2. Update the water demand information in the City's H2OMap water model to generate a file with updated water pressures and pipelines velocity and headloss under both peak hour and fire flow scenarios.
3. Analyze the updated water model distribution system pressures, conveyance velocities and headloss under both peak hour and fire flow scenarios.
4. Compare findings of the present analysis to the results of the 2009 *Sewer Master Plan* Scenario 3.

The assumptions and criteria used for the water and sewer analyses are summarized in Table 1.

Table 1 – Development and Flow Projection Criteria

Item	Value
Residential Density Assumptions	
Multi-Family High Density (MFH)	220 DUs[1]
	3.13 Persons/DU[2]
Sewer Flow Factor	90 gpd/person
Average Day Water Demand Factor (MFH)	90 gpd/person[3]
Maximum Day Peaking Factor (MFH)	1.9[4]
Peak Hour Factor (MFH)	3.8[4]
Fire Flow Demand (Residential)	2,500 gpm[5]
Fire Flow Scenario (MFH)	Maximum Day + Fire Flow (2,500 gpm)[6]

Notes:
1. The Preston property has a proposed 220 total DUs, which was used directly to estimate the base wastewater flow. The range of acceptable number of DUs per acre from the *General Plan* is 12 – 20 DU/acre.
2. Based on *General Plan*, Table 2-4 persons per housing unit by land use designation.
3. Per City of Milpitas *2009 Water Master Plan Update* Table 3-1 Footnote b.
4. Per City of Milpitas *2009 Water Master Plan Update* Table 3-2.
5. Per City of Milpitas *2009 Water Master Plan Update* Table 5-2.
6. Per City of Milpitas *2009 Water Master Plan Update* Table 5-1.

4 Results

The following section describes the results of the analysis for the sewer collection and water distribution systems.

4.1 Sewer Collection System

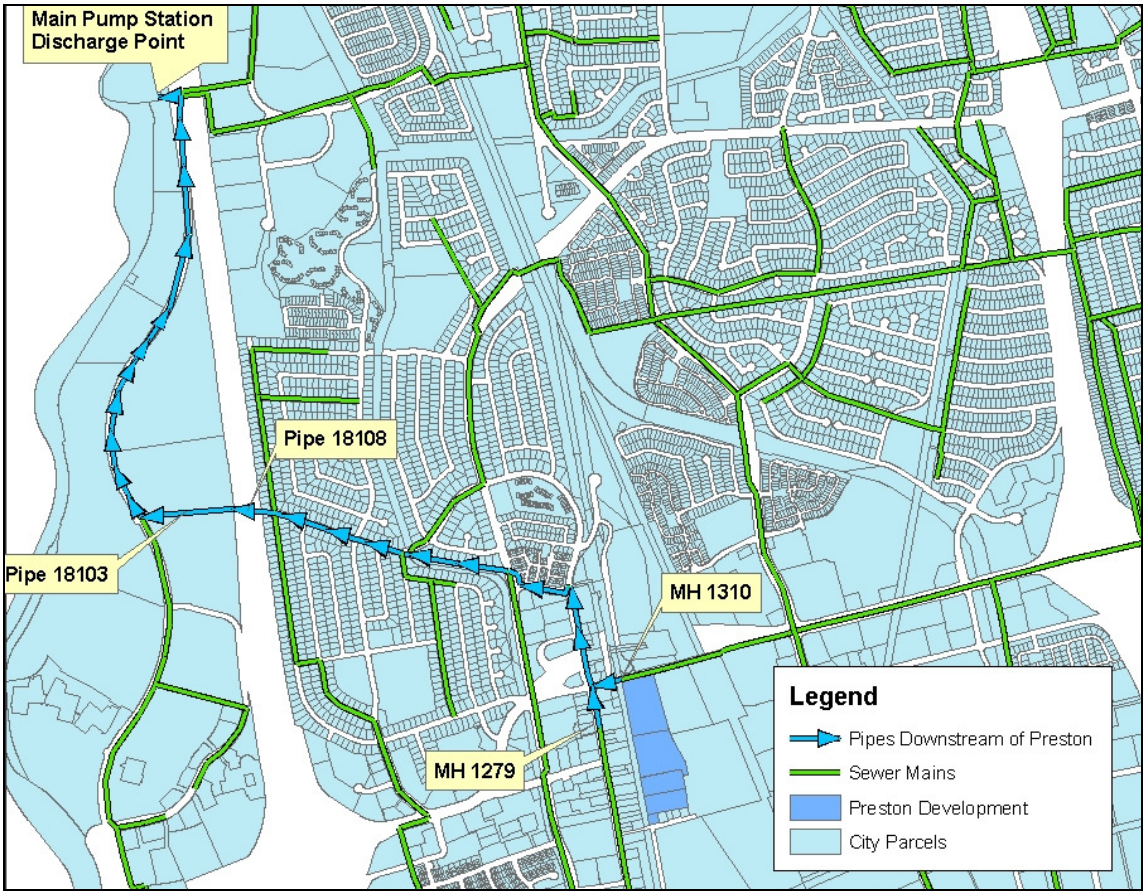
Table 2 shows the existing and projected base wastewater flow for each type of land use before and after re-zoning.

Table 2 – Preston Property Zoning and Sewer Flow Changes

APN	Drains to Manhole No.	2009 Sewer Master Plan – Scenario 3		Preston Development Land Use		Change in Flows (gpd)
		Land Use	Sewer Flow (gpd)	Land Use	Sewer Flow (gpd)	
8626029	1279	IND	2,592	MFH	19,643	17,051
8627002	1279	IND	1,152	MFH	8,730	7,578
8627003	1279	IND	1,134	MFH	8,594	7,460
8626030	1310	IND-TOD	3,000	MFH	22,734	19,734
8627008	1279	SFL	259	MFH	1,273	1,014
2823018	1310	PRKI	0	PRKI	0	0
Total			**8,396**		**60,974**	**53,578**

The parcels included in the Preston development drain primarily into manholes in the 21-inch sewer main in South Main Street (Manhole 1279), with two parcels (8626030 and 2823018) draining to a manhole in the 24-inch sewer main in East Calaveras Boulevard (Manhole 1310). The two mains converge near the intersection of South Main and East Calaveras, and the flow continues to a 24-inch main. Figure 2 below shows the location of the Preston development in relation to the downstream pipelines.

Figure 2 – Map of Affected Pipelines



The flow path downstream from the Preston development to the main pump station does not coincide with any capital improvement projects identified in the *2009 Sewer Master Plan*. Table 3 shows the sewer model results for each pipe starting at the manholes (1279 and 1310) and continuing through the discharge point (Milpitas Main Pump Station). Model results indicate that the collection system has adequate capacity to handle the additional flow from the Preston Development as there are no pipes that surcharge. Model results are essentially unchanged from the *2009 Sewer Master Plan* Scenario 3. Figure 3 shows the pipe profile from manhole 1279 to the discharge to the Main Pump Station.

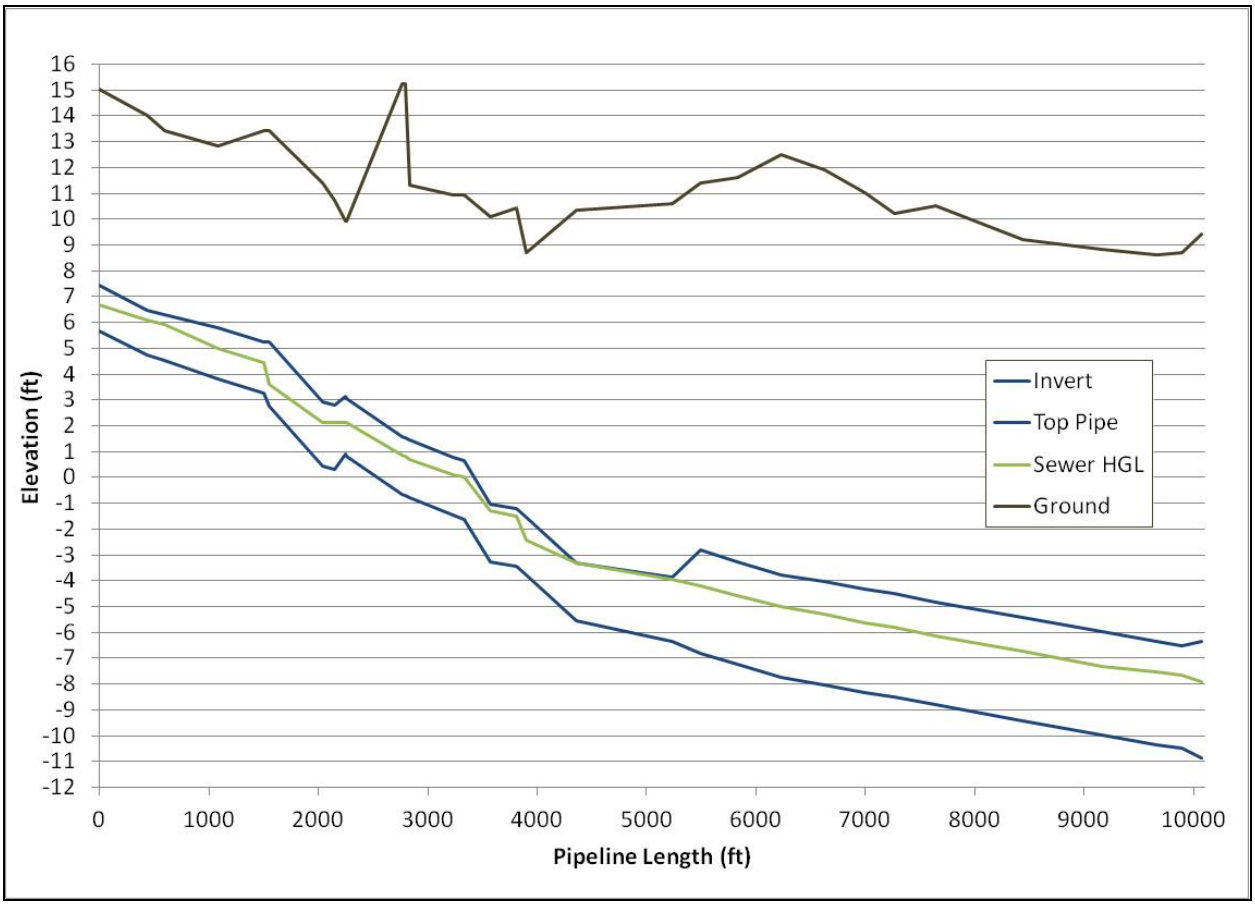
Preston Development – All Flow to East Calaveras Boulevard

Preliminary utility plans from KB Home propose that all the parcels be connected to the sewer main along East Calaveras Blvd (i.e., MH 1310). The available capacity in the 24-inch sewer main in East Calaveras Blvd is approximately 7.66 cubic feet per second under peak wet weather flow conditions. The additional base wastewater flow from the Preston property project is approximately 0.13 cfs, therefore, the 24-inch pipe in East Calaveras Blvd has capacity to accommodate all flow from the Preston development.

Table 3 – Sewer Model Results

Pipe ID	Length (ft)	Size (in)	Invert Elevation (ft)	Top Pipe Elevation (ft)	HGL Elevation (ft)	Surcharge (ft)	Ground Elevation (ft)	Depth to HGL (ft)
33108	436	21	4.73	6.48	6.11	0	14.02	7.91
33201	314	21	4.73	6.48	6.11	0	14.02	7.91
33102	163	21	4.55	6.3	5.91	0	13.42	7.51
32410	488	24	3.81	5.81	4.99	0	12.82	7.83
32405	419	24	3.25	5.25	4.43	0	13.42	8.99
32402	43	30	2.75	5.25	3.61	0	13.42	9.81
32403	489	30	0.44	2.94	2.14	0	11.42	9.28
32103	113	30	0.3	2.8	2.12	0	10.72	8.6
32102	93	27	0.9	3.15	2.11	0	9.92	7.81
18311	15	27	0.8	3.05	2.11	0	9.92	7.81
18309	507	27	-0.67	1.58	0.86	0	15.22	14.36
18223	30	27	-0.71	1.54	0.81	0	15.22	14.41
18219	41	27	-0.78	1.47	0.71	0	11.32	10.61
18217	397	27	-1.46	0.79	0.1	0	10.92	10.82
18212	103	27	-1.61	0.64	0.03	0	10.92	10.89
18208	234	27	-3.29	-1.04	-1.29	0	10.09	11.38
18112	240	27	-3.44	-1.19	-1.48	0	10.44	11.92
18110	91	27	-3.78	-1.53	-2.42	0	8.72	11.14
18108	452	27	-5.55	-3.3	-3.31	0	10.33	13.64
18103	882	30	-6.36	-3.86	-3.94	0	10.62	14.56
7301	260	48	-6.8	-2.8	-4.18	0	11.42	15.6
6602	333	48	-7.25	-3.25	-4.57	0	11.62	16.19
6601	402	48	-7.76	-3.76	-5.01	0	12.52	17.53
6302	399	48	-8.04	-4.04	-5.3	0	11.92	17.22
6301	371	48	-8.32	-4.32	-5.62	0	11.02	16.64
5602	260	48	-8.51	-4.51	-5.81	0	10.22	16.03
5601	381	48	-8.81	-4.81	-6.12	0	10.52	16.64
5504	794	48	-9.42	-5.42	-6.71	0	9.22	15.93
5303	735	48	-9.98	-5.98	-7.3	0	8.82	16.12
5302	491	48	-10.35	-6.35	-7.53	0	8.62	16.15
5304	229	48	-10.5	-6.5	-7.64	0	8.72	16.36
4606	180	54	-10.84	-6.34	-7.9	0	9.42	17.32

Figure 3 – Sewer Pipe Profile to Main Pump Station



4.2 Water Distribution System

Table 4 shows the existing and projected average water demand for each type of land use within the Preston development area before and after re-zoning. Table 5 shows peak hour and fire flow water demands before and after rezoning of the Preston development area. The fire flow water demand for the Preston development is lower than under existing conditions as multifamily development has a fire flow requirement of 2,500 gpm, which is lower than the 5,000 gpm fire flow requirement for industrial development. Therefore, for the fire flow condition, the Preston development has no additional impacts from the baseline Scenario 3 fire flow condition.

Table 4 – Preston Property Zoning and Average Water Demand Changes

		Existing Average Day Demand - Scenario 3				Preston Development Average Day Demand					Water Demand Change
APN	H2oMap Model ID	Land Use	2007 WUF (gpd/ acre)[1]	Acreage[2]	Av. Day Demand (gpd)	Land Use	2007 WUF (gpd/ DU)[3]	DU (or Acreage)[4]	Approx. Revised DU (or Acreage)	Av. Day Demand (gpd)	
8626029	9913	IND	2,000	4.3	8,634	MFH	282	56	60	16,902	8,268
8626030	9914	IND-TOD	1,600	5.0	8,006	MFH	282	59	62	17,465	9,460
8627002	1909	IND	2,000	1.9	3,842	MFH	282	46	48	13,522	9,680
8627003	1909	IND	2,000	1.9	3,778	MFH	282	44	46	12,958	9,180
8627008	1909	SFL	2,240	0.3	635	MFH	282	4	4	1,127	492
2823018	1901					PRKI		1.3	1.3	1,690	1,690
Total				**13.4**	**24,895**			**209**	**220**[5]	**63,664**	**38,769**

Notes:

1. From Water Use Factor Table 3-1 from the *2009 Water Master Plan Update*
2. From Parcel_scenario3_MTBO File
3. Assumes a population density of 3.13 persons/DU and a flow factor of 90 gpd/person from Rezoning and Treatment Capacity Requirements Update Draft TM
4. From Preliminary Review Application for Preston Property. Acreage is for park only.
5. Based on email from Marilyn Nickel Dated 1/27/2012
6. Water demand for park assumes 1,300 gpd/acreage based on Water Use Factor Table 3-1 from 2009 Master Plan

Table 5 – Preston Property Peak Hour and Fire Flow Water Demands

		Existing Peak Hour and Fire Flow Demand -Scenario 3				Preston Development Peak Hour and Fire Flow Demand			
APN	H2oMap Model ID	Av. Day Demand (gpd)	Max Day Peak Hour Demand (gpd)[1]	Max Day Peak Hour Demand (gpm)	Max Day + Fire Flow Demand (gpm)[2]	Av. Day Demand (gpd)	Max Day Peak Hour Demand (gpd)[3]	Max Day Peak Hour Demand (gpm)	Max Day + Fire Flow Demand (gpm)[2]
8626029	9913	8,634	20,722	14	5,009	16,902	64,228	45	2,522
8626030	9914	8,006	19,214	13	8	17,465	66,369	46	23
8627002	1909	3,842	9,220	6	4	13,522	51,382	36	18
8627003	1909	3,778	9,067	6	4	12,958	49,241	34	17
8627008	1909	635	2,414	2	1	1,127	4,282	3	1
2823018[5]	1901		-	-	-	1,690	5,070	14	1
Total		**24,895**	**60,637**	**42**	**5,026**	**63,664**	**240,571**	**177**	**2,583**

Notes:

1. Max day and peak hour factors assumes to be 1.5 and 2.4, respectively, based on Table 3-2 from 2009 Master Plan
2. Fire flows assumed to be 5,000 gpm for Industrial use (existing conditions) and 2,500 gpm for multi-family housing (MFH) (new conditions with Preston development)
3. Max day and peak hour factors assumes to be 1.9 and 3.8, respectively, based on Table 3-2 from 2009 Master Plan
4. Max day and peak hour irrigation factors assumed to be 1 and 12 (assuming a 2-hour irrigation period daily), respectively.

The water model consolidates demands from multiple parcels into a water demand node. In order to reflect the new water demands resulting from the Preston development under both peak hour and fire flow scenarios, the water demand associated with the existing land use designation for the Preston parcels was subtracted from the total water demand at each node listed in Table 5 and the estimated new water demand for the Preston development was added. Table 6 summarizes the water supply and valve settings for the system evaluation. The Preston development had no impact on the status of emergency pressure reducing valves from the Scenario 3 baseline condition.

Table 6 – Water Supply and Valve Settings

Model ID	Water Supply/ Valve Setting	Model Setting (Typical Setting)
10002	SFPUC Main Turnout	Open
10004	SFPUC Calaveras Turnout	Open
10005	SCVWD Gibraltar Turnout	Open
10007	SFPUC Sunnyhills Turnout	Open
40001	SFPUC Gibraltar Reservoir	Open
40002	SFPUC Ayer Reservoir	Open
40003	Tularcitos Reservoir	Open
40004	Minnis Ranch Reservoir	Open
40005	SCVWD Gibraltar Reservoir	Open
7000	New SCWD Montague Turnout	Closed
7002	ACWD Intertie	Closed
7004	San Jose Water Company Intertie	Closed
7006	ACWD Intertie	Closed
70010	Pinewod Well	Closed
70011	Curtis Well	Closed
70013	New Intertie Tank	Closed
Model ID	**Valve**	**Setting**
20001	N. Milpitas PRV	Open
20002	Tularcitos S. Vault PRV	Open
20003	Tularcitos N. Vault PRV	Open
20004	Calera Creek Heights PRV	Open
20005	Yosemite EPRV	Closed
20006	Junipero EPRV	Closed
20007	Live oak EPRV	Closed
20008	Montague EPRV	Closed
20009	Curtis PRV	Open
20010	Capitol PRV	Open
20011	Cadillac EPRV	Closed
20012	Sunnyhills PRV	Open
20013	California EPRV	Closed
20014	Main PRV	Open
20016	Gibraltar PRV	Open

Figure 4 – Valve Settings near Preston Development

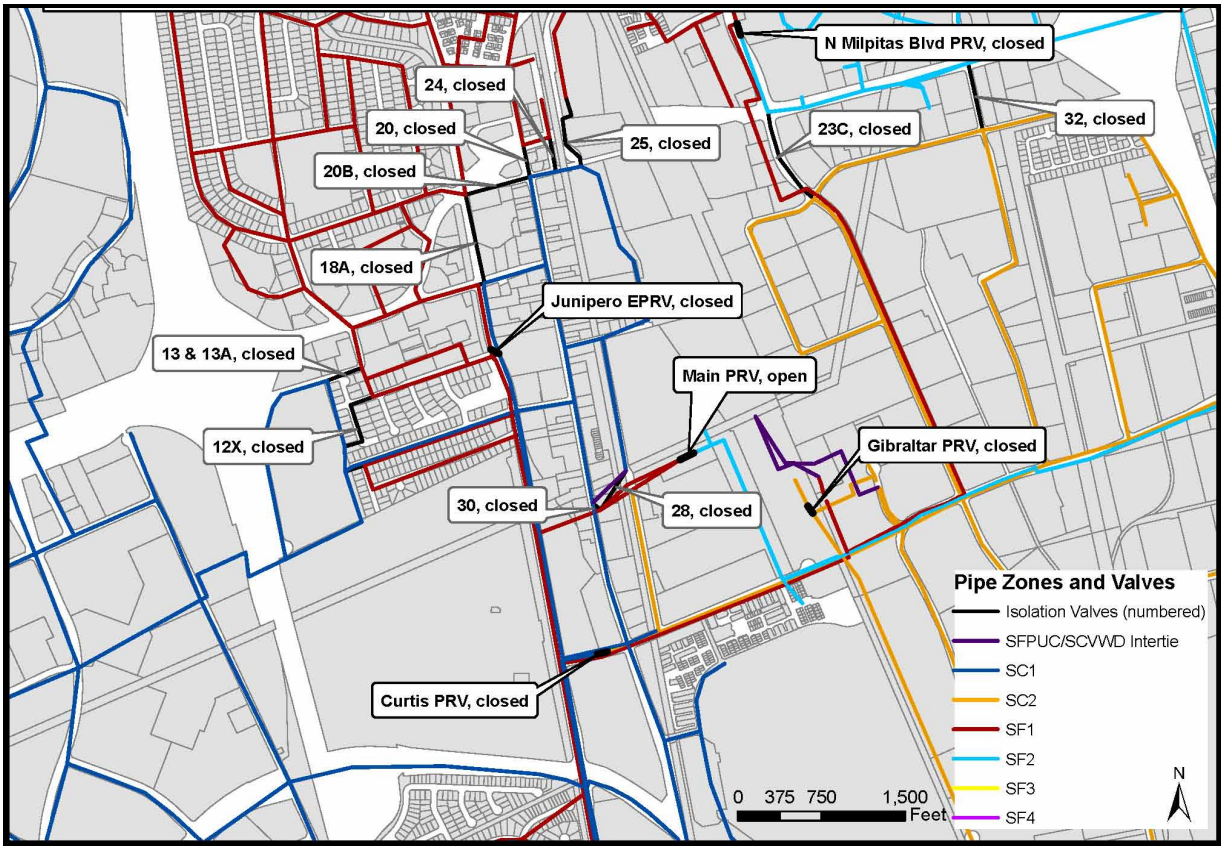
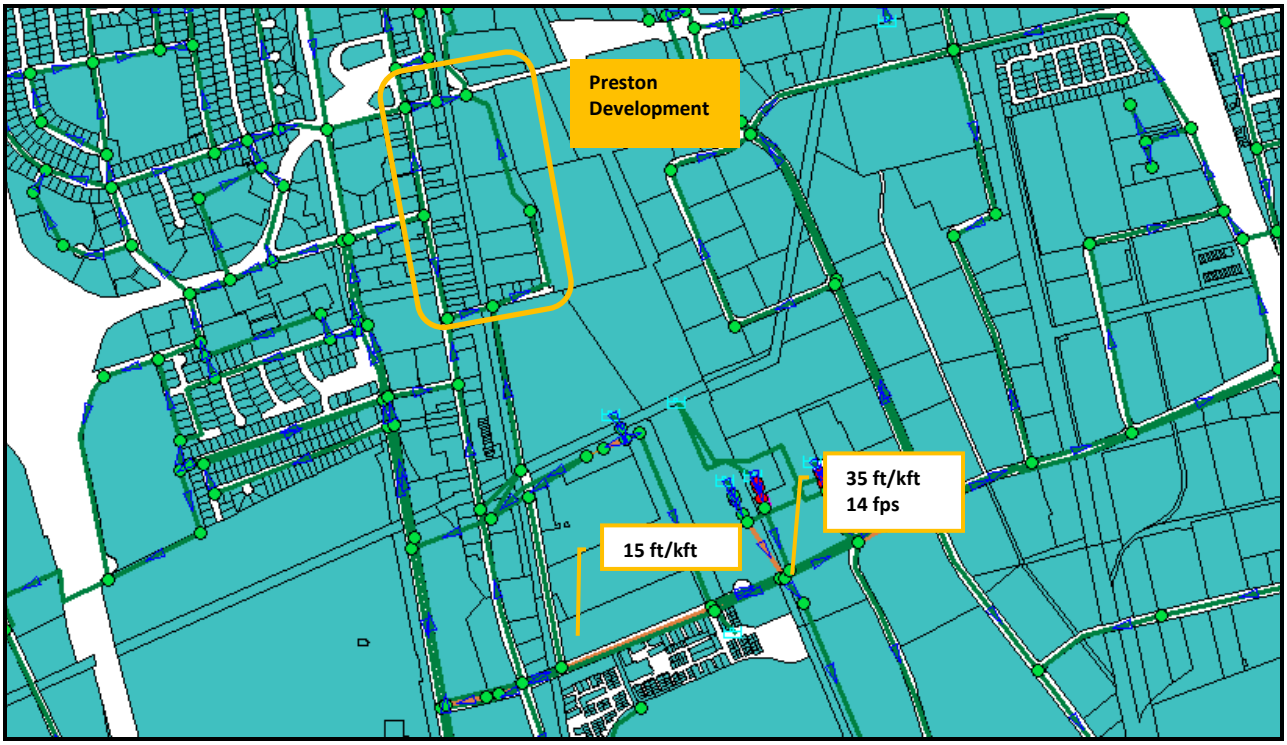


Table 7 – Modeled Peak Hour and Fire Flow Water Pressures

APN	H2oMap Model ID	Buildout Peak Hour Demand (gpm)	Buildout Peak Hour Pressure (psi)	Buildout Max Day +Fire Flow Demand (gpm)	Buildout Max Day +Fire Flow Pressure (psi)
8626029	9913	100	73	2,557	60
8626030	9914	56	73	29	62
8627002	1909	187	73	112	63
8627003	1909	28	73	13	63
8627008	1909	1	73	1	63
2823018[5]	1901	104	73	64	63

Table 7 and Figure 4 summarize model results for the peak hour conditions, all the nodes within and in the vicinity of the Preston development meet the minimum pressure criteria of 30 psi. Model results indicated high headloss and velocities at the Gibraltar turnout (35 ft/kft and 14 feet per second along pipe 213) and high headloss along the 18-inch water line along Curtis Avenue that connects Santa Clara Zone 2 to the Santa Clara Zone 1 (15 feet/kfeet along pipes 212 and 227). These headloss and velocities issues matched the results of the Scenario 3 baseline from the *2009 Water Master Plan Update*. The replacement of these pipelines with larger and/or parallel pipelines was already identified as a long-term Capital Improvement Project (CIP) as listed in Table ES-2 of the *2009 Water Master Plan Update* to address high headloss in these pipes under Scenario 3.

Figure 5 –Peak Hour Condition Headloss Impacts



For the fire flow condition, Table 7 summarizes the results and shows that all nodes within and in the vicinity of the Preston development meet the minimum pressure criteria of 20 psi under fire flow conditions. Velocity and headloss criteria do not apply to fire flow condition as these emergency events are rare occurrences.

5 Conclusions

The Preston development increases sewer flow to the collection system. Sewer modeling indicated the collection system has adequate capacity to handle the additional flow.

The Preston development increases water demand under normal operating conditions but does not lead to any additional impacts to the system beyond those expected under Scenario 3 of *2009 Water Master Plan Update*.

Appendix J:
Fiscal Impact Analysis

Preston Property Residential Project
Fiscal Impact Analysis

Prepared for:

Michael Brandman and Associates

Prepared by:

ALH|ECON
ALH Urban & Regional Economics

August 2012

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August 8, 2012

Mr. Jason Brandman
Executive Vice President
Michael Brandman Associates
Bishop Ranch 3
2633 Camino Ramon, Suite 460
San Ramon, CA 94583

Re: Preston Property Residential Project Fiscal Impact Analysis

Dear Mr. Brandman:

ALH Urban & Regional Economics (ALH Economics) is pleased to present this fiscal impact analysis of the proposed Preston Property Residential Project in the City of Milpitas. This analysis was prepared to provide an overview of the project's prospective fiscal impacts on the City of Milpitas' General Fund assuming development of the project, which would involve the conversion of 15.4 acres of industrial zoned land to residential.

This report includes three Appendices. Appendix A includes the exhibits documenting the fiscal impact analysis. Appendix B includes back up documentation in support of the study's main exhibits. Appendix C includes introductory materials for ALH Economics.

It has been a pleasure working with you on this interesting project. Please let me know if there are any questions or comments on the analysis included herein.

Sincerely,

Amy L. Herman, AICP
Principal

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I. INTRODUCTION AND SUMMARY OF FINDINGS

INTRODUCTION

ALH Urban & Regional Economics ("ALH Economics") prepared a fiscal impact analysis of the planned Preston Property Residential Project in Milpitas, California. The proposed project is located at the site of Preston Pipelines, an underground engineering contractor, on Bothelo Lane between East Calaveras Boulevard and the Union Pacific Milpitas Rail Yard. The residential development is planned to include up to 220 new townhomes and single-family detached homes, developed by KB Home (the "Project"). The Project will be located on six parcels of land totaling 15.4 acres that would be acquired from Preston Pipelines. The purpose of this analysis is to demonstrate the net fiscal impacts of the Project relative to the City of Milpitas General Fund, including in comparison to the existing Preston Pipelines and other uses on the property.

Preston Pipelines, the primary existing use on the Project property, is looking for an alternate location in Milpitas for relocation purposes. The same is true with the other construction-related uses on the property. If this relocation occurs, either for all or some of the existing uses, then Milpitas will continue to provide services to all or some of the businesses and receive General Fund revenues. The balance of General Fund costs and revenues associated with relocated uses could change if the businesses locate elsewhere in Milpitas. However, the cost and revenue profile would likely remain similar or possibly greater, depending upon the value of the underlying property and the associated property tax payments, since property is reassessed and taxed at the prevailing tax rate upon sale. Therefore, if new property sales in Milpitas occur as part of a relocation plan then the net revenues associated with the existing uses could increase over the current estimated amount.

The fiscal impact analysis is based on key information about the Project and Preston Pipelines as well as select assumptions developed by ALH Economics. All relevant information and assumptions are cited in the report or the back up documentation. All dollar figures cited are in 2012 dollars. Due to the nature of the development planning process, assumptions relevant to the fiscal impact analysis may change over time. This dynamic nature suggests that study findings should be considered general rather than detailed indications of the Project's forecasted performance.

SUMMARY OF FINDINGS

Existing Land Uses

The net fiscal impact of the existing uses on the City of Milpitas General Fund is estimated to range from $25,147 to $33,231 annually. This reflects annual revenues estimated at $42,860 and annual expenditures ranging from $9,629 to $17,713. The net fiscal impact range comprises a positive flow of revenues to the City of Milpitas General Fund. This is also the estimated amount of net revenue the City of Milpitas will lose on an annual basis if Preston Pipelines and the other existing uses on the property relocate out of Milpitas to make way for the Project.

Preston Property Residential Project

The net fiscal impact of the Preston Property Residential Project on the City of Milpitas General Fund is estimated to range from ($93,566) to $100,053 annually. This is a wide spread, with one end of the range indicating that the Project will comprise a net drag on the City of Milpitas' General Fund and

the other end of the range indicating a strong net gain to the City's General Fund. These net fiscal impact findings reflect annual estimated revenues of $307,330 balanced by City service costs ranging from $207,276 to $400,895 a year. This expenditures range is due to several alternative approaches to estimating Police and Fire service costs for the Project, with other net fiscal impact findings based on variations of these costs falling within the ($93,566) to $100,053 per year range.

The biggest factor accounting for the negative net fiscal impact results is the potential for the Project to require the services of a newly hired Police officer, as suggested by the City's Police Department. Varying assumptions about Fire services can also contribute to the negative net fiscal impact of the Project. In these current times of fiscal austerity, it may be difficult for the City of Milpitas to hire additional Police staff. If this is the case, this would enhance the likelihood that the Project will result in a net positive impact on the City's General Fund. There are also some City service cost permutations that could effectively result in revenue neutrality.

Relocated Existing Uses and Preston Property Residential Project

It is possible that the Project can be developed with the existing uses relocating elsewhere in Milpitas. Assuming the net fiscal impact profile of the relocated existing uses matches the current profile, the results of both these development scenarios indicates a net annual fiscal impact ranging from ($68,419) to $133,284. The range in net impact findings is again due to the range of possible Police and Fire services costs, especially for the Project.

Real estate market information suggests that it is unlikely that Preston Pipelines could locate an equivalent-sized, appropriately zoned property in Milpitas. With lesser space requirements, the other existing uses on the property have a greater chance of staying within Milpitas upon relocation from the site. Under this scenario, with Preston Pipelines leaving Milpitas but the other existing uses locating elsewhere within the City, results in a net annual fiscal impact range of ($83,507) to $113,345.

Similar to the Project alone, the likelihood that the net fiscal impact will be positive for either of these scenarios will be enhanced if the City of Milpitas does not hire an additional Police officer to serve the Project, which has been suggested as a possible service need.

Limitations of Findings

The foregoing findings are intended to give a general sense of the net fiscal impact of the Preston Property Residential Project compared to the existing uses. The figures are not precise estimates and changes will occur if the revenue and expenditure factors or other assumptions are developed with more precision. Nonetheless, the findings suggest a possibility that the Project, alone or in combination with all or partial relocation of the existing uses, may result in a negative net fiscal impact on the City's General Fund unless fiscal austerity results in no increased City Police staff to serve the Project's estimated Police service needs.

II. METHODOLOGY AND DATA RESOURCES

METHODOLOGY

ALH Economics developed an approach to the Preston Property Residential Project fiscal impact analysis designed to provide an understanding of the Project's net fiscal impact on the City of Milpitas' General Fund using specific Project information as much as possible. This includes estimates of revenues generated by the Project that accrue to the City's General Fund as well as service costs incurred by the City funded through the General Fund. The Project's estimated fiscal impacts were compared to the estimated fiscal impacts of the existing construction-related land uses.

The analysis is grounded in the City's budget and existing revenue bases and performance estimates for the Project and the existing land uses. The analysis is structured to examine the Project's impacts upon full build out and assumed stabilization. To facilitate the analysis and interpretation of the results the findings are presented in 2012 dollars.

The fiscal impact analysis does not include one-time development-related fees that may be assessed by the City of Milpitas. These fees are typically assessed on a cost recovery basis and are thus excluded from the analysis. Other potential fees, such as impact fees, are also excluded as they too are designed to provide a nexus with the services provided.

The City General Fund expenditures analysis was conducted using two approaches – the marginal cost, or case study approach, and the average cost approach. The marginal cost approach involves obtaining detailed estimates from City department representatives based on project specifics, such as number of residential units and household counts, and comparing them when possible to the underlying property's existing uses. This approach is often perceived as the more accurate approach to estimating expenditures because it is based on expectations of actual service requirements and associated City costs. Revenues can also be estimated on a marginal basis, based on revenues tied to specific project performance characteristics, such as property value and business license fees.

For the purpose of this study, queries about marginal costs were directed to City department representatives through the Planning Department and relayed to ALH Economics. The key departments that were queried include the Police and Fire Departments. The alternative approach to expenditures is an average cost approach. This is typically the most expeditious approach for a fiscal impact analysis but is also one that can result in under or over estimation of both project-related costs and revenues. In this approach, costs are derived by determining an average cost to provide existing services on a per capita basis for the relevant population served, which is then applied to the comparable population base for the project or land use under study.

In general, a jurisdiction's "service population" for fiscal impact analysis purposes is equivalent to the resident population plus some factor of the workforce. This is the population base provided services by the jurisdiction under study. Most fiscal impact analysts typically equate 2 to 3 employees with 1 resident, or 0.5 to 0.33 employees per resident, on the theory that people who work in an area place less demands on services than residents. For the purpose of this analysis ALH Economics used the 0.5 employees per resident factor, which is a more conservative choice than the 0.33 factor, especially relative to service cost estimates based on the average cost approach. The average costs in this study are based on the City of Milpitas' annual budget, which for this analysis included the Final Budget for Fiscal Year 2011-2012.

Wherever possible, efforts were made throughout the analysis to develop assumptions or estimates in a conservative manner, in order to not overstate potential net revenues attributable to the existing land uses or the Project. The analysis was conducted in a series of linked excel-based worksheets. Exhibits generated from these worksheets are included in Appendices A and B. These exhibits are briefly introduced and discussed in the following chapters, with more detailed information and explanatory comments provided in the exhibit footnotes.

DATA RESOURCES

The fiscal impact analysis relied upon a number of key resources. These resources are all identified in the sources and notes to the exhibits developed to support the analysis and provide the results. These resources are as follows:

- *Materials provided by KB Home.* These materials include the Project's Assessor's Parcel Numbers (APN), the Project description, estimated home pricing, and other development-related parameters.

- *Materials provided by other relevant parties.* Through KB Home, Preston Pipelines provided information about the property and the existing operations, including property tax bills, employment counts, utility bills, and business license fee payments. Michael Brandman Associates provided additional Project-related information and assumptions.

- *City of Milpitas resources*. These include the City's website, the City of Milpitas 2011-2012 Final Budget, the Planning Department and other departmental representatives, and the City of Milpitas Business License Fee schedule.

- *Third party resources*. A number of third party resources were referred to for information important to the analysis. These sources include the Santa Clara County Tax Collector's Office, the County of Santa Clara Controller-Treasurer Department; RealQuest; Californiacityfinance.com; State of California Department of Finance; State of California Employment Development Department; Hanley Wood; International Council of Shopping Centers; California State Board of Equalization; United States Census Bureau; and Claritas, Inc. Local real estate commercial brokers provided information about the industrial real estate market.

All of these resources are identified as warranted in the text and the series of exhibits that document the fiscal impact analysis. The cited exhibits can be found in Appendices A and B.

III. FISCAL ASSUMPTIONS AND REVENUE AND EXPENDITURE ESTIMATES

FISCAL ASSUMPTIONS

The assumptions and building blocks underlying the fiscal impact analysis for the Preston Property Residential Project and the existing uses are presented in Exhibits 1-A, 1-B, and 2, which can be found in Appendix A. A summary of these exhibits and their primary purposes follow.

- ***Exhibits 1-A and 1-B, Existing Use Population Characteristics and Proposed Residential Project Description and Population.*** These exhibits summarize key characteristics of the existing land uses and the proposed residential use. For the existing use, Exhibit 1-A lists the existing businesses located on the property and the number of jobs at each business. This information was provided by Preston Pipelines. These employment counts provide a basis for estimating the "service population" for the existing uses. This service population estimate, which totals 40, comprises one-half the 80 estimated full-time equivalent employees, on the assumption that employees do not require the same level of service as residents. This is an industry-standard assumption, and is relevant to the calculation of average cost City of Milpitas expenditures.

  Exhibit 1-B provides service population estimates for the Project as well as residential unit count and pricing information. The City of Milpitas directed the analysis to include up to 220 homes. KB Home provided unit distribution and pricing information for a slightly lower total unit count of 215 homes. ALH Economics calculated average pricing information for these 215 homes and then applied the average and other relevant home characteristics to the maximum 220 unit count.

  The KB Home 215 unit count information included 120 townhomes and 95 single-family detached units. The anticipated unit pricing per KB Home ranges from $473,000, as the starting townhome price, to $620,000, as the maximum single-family unit price. These prices were reviewed for reasonableness by ALH Economics pursuant to the unit pricing information in Exhibit B-1. The overall average unit price for the Project is $539,947. Finally, the 220 homes are anticipated to have an average of 3.5 residents each, resulting in a total population estimate of 770. This is equivalent to a service population of 770, with the number of residents synonymous with the service population count. This is also an industry-standard assumption, and is relevant to the calculation of average cost City of Milpitas expenditures.

- ***Exhibit 2, City of Milpitas Demographic, Employment, and Tax Characteristics.*** This exhibit contains many of the baseline assumptions and information necessary to generate estimates of City of Milpitas revenues and expenses applicable to the existing land uses and the Project. These include population and employment estimates used to generate the size of the City's existing service population for the purpose of deriving existing average cost expenditures and some per capita revenues. These figures are benchmarked to 2012, which generally corresponds with the FY 2011-2012 City budget information that is a foundation for the analysis. These estimates include a population base of 66,966 and an employment base of 29,200. Under the assumption that the City's service population is equivalent to residents plus one-half the employment base, the City's relevant service population is estimated at 81,566.

This exhibit also includes key tax-related information unique to the City of Milpitas, such as property and sales tax rates, vehicle in lieu of property tax revenues, secured and unsecured property assessed valuation, and unsecured property tax revenues, all of which are germane to the fiscal impact analysis as noted in other exhibits. Most relevant is the City's 15.73% share of the basic 1% property tax rate collected by Santa Clara County. In addition, most cities in the State of California receive 1.0% of taxable sales in sales tax revenues. This is the rate applicable to the City of Milpitas. This 1.0% sales tax rate is the effective sales tax rate for Milpitas. This comprises a basic rate of 0.75% with an additional 0.25% generated pursuant to the "triple flip," which includes sales taxes diverted temporarily by the State of California but returned via other fiscal means. This other fiscal means is through property taxes, resulting in an effective 1.0% retail sales tax rate. To simplify the analysis only this 1.0% sales tax rate is reflected in the analysis. Some cities in California have additional retail sales taxes implemented for dedicated purposes, such as public safety, but no such additional retail sales tax is present in Milpitas.

FISCAL REVENUE ESTIMATES

The revenue calculations for the fiscal impact analysis are presented in Exhibits 3 through 6. A summary of these exhibits and their primary purpose follows.

- ***Exhibit 3, Property Valuation, Annual Property Tax Payments, and Transfer Taxes; Existing Land Uses and Preston Property Residential Project, FY 2011-2012 Dollars.*** This exhibit presents the assumptions and conclusions regarding the property valuation of the existing land uses and the Project upon the completion of development, the estimated property tax revenues that currently accrue to the City of Milpitas General Fund, and transfer taxes that will accrue to the City of Milpitas based upon typical turnover of residential homes.

  The current property valuation for the Preston Property Residential Project development site totals $18.4 million. This is the summation of the values for the six parcels comprising the development site. The projected valuation for the Preston Pipeline Residential Project is based on the average home value multiplied by the number of homes. The average home value of $539,947 was presented in Exhibit 1-B. Based on the 220 unit count, this results in a projected property valuation of $118.8 million. The increment in value between the existing land uses and the Preston Pipeline Residential Project is $100.4 million.

  The City of Milpitas receives a 15.73% share of the 1.0% basic Santa Clara County property tax rate. Pursuant to this tax rate share the City of Milpitas currently receives an estimated $28,900 in property tax revenues associated with the existing land uses. Upon completion of the Preston Property Residential Project the City's property tax revenue is projected to increase to $186,912. This results in a net increment of $158,013 attributable to development of the Preston Pipeline Residential Project.

  The City of Milpitas receives transfer tax payments associated with real property sales. The City's transfer tax rate is $0.55 per $1,000 in property sales. In any one year, some residential homes in a community turn over. The typical industry assumption is that the average home turns over once every 7 years, or at a rate of 14% per year. To estimate the annual transfer tax revenue potential from resale of the Project's homes the analysis assumes 14% of the property valuation will turnover annually. This results in annual sales totaling $17.0 million, which results in $9,333 in transfer tax revenues to the City of Milpitas annually.

Note that over time the home values will increase, but this analysis is conducted in constant Fiscal Year 2011-2012 dollars.

- ***Exhibits 4-A and 4-B, Property Tax in Lieu of VLF Estimates, for Existing Uses and for Preston Property Residential Project, FY 2011-12 Dollars.*** This revenue component, Property Tax in Lieu of Vehicle License Fees (VLF), is derived from a property's share of the total property valuation throughout the city in which it is located. For an existing use it would be tied to the property's share of the current valuation. For a planned development project, such as the Project, it would be based upon the project's anticipated contribution to increased property valuation throughout the city. This is the method by which such tax revenues are estimated by the State of California and redistributed to local jurisdictions. This is a State substitute for prior motor vehicle license taxes that were redistributed by the State to municipalities.

  The results of these calculations are presented in Exhibit 4-A for the existing uses and Exhibit 4-B for the Project. The Exhibit 4-A finding indicates that the existing land uses are estimated to account for $7,260 of the City's property tax in lieu of VLF revenues. Because of the greater value imputed to the property due to the Project's residential development, these revenues will increase substantially following completion of the Project. The total property tax in lieu of VLF revenue attributable to the Project is estimated at $39,678. This is attributable to the Project's estimated 0.87% increase in the City's assessed valuation. This is a nominal, but noticeable increase, and will result in a net revenue increase of $32,418 to the City of Milpitas.

- ***Exhibit 5, Estimated Annual Retail Sales Tax Generation, Existing Uses and Preston Property Residential Project Build Out, FY 2011-12 Dollars.*** Neither the existing use nor the Project include retail components. However, the occupants of the property generate retail spending in the City of Milpitas. This includes spending by the estimated 80 employees who currently work on the property or the 220 households that will be living at the Project. Exhibit 5 presents the estimated retail spending for these populations in the City of Milpitas, the share of sales assumed to be taxable, and the associated retail sales tax revenues that will accrue to the City.

  For the existing employee retail sales estimate ALH Economics drew upon findings from the International Council of Shopping Centers (ICSC) regarding office worker retail spending during the workday. ICSC conducts this type of survey on a recurring basis, with the most recent survey findings released in early 2012. The employees of the existing uses are not office workers, and typically represent construction trades. Therefore, ALH Economics adjusted the office worker spending estimate on a pro rata basis in accordance with the differential in annual average wages, as cited in Exhibit 5 (see footnote 1). Further adjustments account for the portion of spending estimated to be taxable and thus generate retail sales tax. The resulting estimate is annual worker spending on taxable items in Milpitas totaling $280,000, which generates an estimated $2,808 in annual retail sales tax revenues to the City of Milpitas from the employees of the existing uses.

  Households make much greater retail expenditures than individual employees. The Project's 220 households are estimated to generate $30,000 a year in retail spending, 87% of which is estimated to be taxable. These estimates are based on a retail demand estimate prepared by ALH Economics and cited in Exhibit 5. Assuming the City of Milpitas captures 75% of Project residents' taxable retail spending results in a Project-based taxable sales estimate of $4.3

million. This results in an estimated $43,065 in annual retail sales tax revenues to the City of Milpitas.

- ***Exhibit 6, Assorted City of Milpitas General Fund Revenues, Existing Uses and Preston Property Residential Project, FY 2011-12 Dollars.*** There are three revenue sources identified in this exhibit along with the corresponding revenues estimated to be generated by the existing uses and the Project. These revenue sources include fines and forfeits, franchise taxes, and business license fees. There are yet other revenues that are or will be generated by the existing uses and the Project that accrue to the General Fund, but ALH Economics believes the three cited revenues are likely to comprise the most substantial revenue sources, aside from the previously referenced property tax, property tax in lieu of VLF revenues, and retail sales tax.

  The fines and forfeits revenues were estimated based on a per service population estimate, then applied to the estimated service populations for the existing uses and the Project. The resulting estimates are $349 in annual fines and forfeits revenues for the existing uses and $6,721 in annual revenues for the Project.

  The franchise fees were also estimated on a per service population basis, but with different service populations, depending upon the nature of the service provided. These are noted in Exhibit 6, and include apportioning the electric and gas franchise fees across the City's entire service population, apportioning the commercial garbage franchise fee across only the City's employment base, and apportioning the non-commercial garbage franchise fee and the CATV franchise fee across only the City's resident base. The resulting per service population, employee, or resident estimates are presented in Exhibit 6. Based on these estimates, the existing uses are estimated to generate $3,243 annually in franchise fees to the City of Milpitas and the Project is estimated to generate $21,620 annually in franchise fees.

  Finally, the existing businesses annually pay business license fees to the City of Milpitas. These fees are estimated to total $300 per year. This total reflects a $50 per year fee for contractors and a $25 per year renewal processing fee. All of the property's existing businesses are assumed to meet the City's business definition for contractors.

FISCAL EXPENDITURE ESTIMATES

As discussed in the Methodology section, fiscal impact studies typically engage in two methods to estimate project-based service costs. One is the average cost approach, usually implemented in the absence of detailed service provision and cost information, and one is the marginal, or case study approach, which derives estimated service costs based on expectations of service demands and associated actual service delivery costs.

Exhibit 7 presents the calculations to derive the average costs relevant to the City of Milpitas General Fund. These calculations are based on the departmental expenditures associated with the City's General Fund, spread across the relevant population served. Exhibit 8 reflects marginal cost analysis based on information provided by the City of Milpitas relevant to the two most significant services provided by the City, i.e., Police and Fire services.

- ***Exhibit 7, City of Milpitas General Fund Average Cost Expenditures, FY 2011-2012 Adopted Budget, Fiscal Impact Factors City of Milpitas.*** In this exhibit the City of Milpitas' General Fund expenditures are expressed as average costs relative to key populations, e.g.,

the City's service population, the City's resident population, or the City's employment base. These costs include the General Fund outlay less adjustments for select revenue offsets, which are delineated in Appendix B.

Exhibit 7 is structured to facilitate analysis of the City's expenditures on a fixed and variable cost basis. Using this approach, some of the City's departmental expenditures are assumed to be fixed regardless of the size of the population served. The balance of the expenditures is then deemed to be variable, i.e., to change with the size of the population served. Typically, departments with greater administrative functions have higher percentages of fixed costs, which in this analysis is assumed to be 75%. In Exhibit 7, representative departments with this assumption include Administration (which includes City Council, City Manager, among others), Information Services, and Finance. In contrast, other departments are assumed to have a high proportion of variable costs, with wider scalability to provide the necessary services. These departments are assumed to have only 10% to 25% of fixed expenditures, and include departments such as Police (10%), Fire (25%), and Engineering (25%). Changes in these assumptions will impact the resulting average cost figures. These percentage fixed assumptions were developed by ALH Economics based on industry experience, and were not validated with City of Milpitas representatives. City representatives were queried about this topic but were unable to provide input regarding fixed expenditures allocations since this topic has not been previously studied.

Of the major City departments funded through the General Fund, ALH Economics assumes that all but one of these departments serves both the City's resident population and the workforce. The one category assumed to serve only the City's resident population is the Parks & Recreation Department.

For the departments assumed to serve the City's workforce, the average cost per resident is $491.51. Because of the assumed lesser cost to serve workers, the average cost per worker employed in the City is estimated at $221.41.

- ***Exhibit 8, City of Milpitas Select Estimated Marginal Service Costs, FY 2011-2012 Dollars.*** Information about the Project was shared with the City of Milpitas Police and Fire Departments for the purpose of estimating the marginal costs to serve the Project. These two departments were queried because of their high proportion of General Fund expenditures, comprising approximately 57% of the total City budget.

  Each of these two departments provided information regarding their current service provision and estimated changes necessary following development of the Project. The shared information also provided perspective on the type and amount of services currently being provided to the existing land uses on the Preston Pipelines property.

  The Police Department information is fully presented in Exhibit 8. In summary, the Police Department information suggests that given the current number of calls for service, the average cost per call for service is $254. Pursuant to the number of recent calls for service in the area of the existing Preston Pipelines uses, the marginal cost to provide Police services to the existing uses is $762 a year. In contrast, the Police Department estimates that a residential community the size of the Project could generate 300 to 350 annual calls for service. Given the average call per service cost this totals an estimated $82,561 (for an average of 325 calls per year).

The Police Department provided additional information that could result in a different marginal cost estimate for the Project. This information suggested that the Project could generate the need for an additional police officer to serve the Project. Based upon departmental staff counts provided by the Police Department, which totals 104 employees, and the $20.0 million estimated General Fund budget (less revenue offsets, see Exhibit 7), the City's cost per Police Department staff is $192,708. Thus, this figure also comprises a marginal cost General Fund Police expenditure estimate for the Project.

As noted in Exhibit 8, the Fire Department believes there are adequate existing resources to accommodate the anticipated increase in calls for service attributable to the Project. Accordingly, there are no City-based marginal cost estimates for Fire Department services.

IV. FISCAL IMPACT FINDINGS

The results of the existing uses and Preston Property Residential Project fiscal impact analysis are presented in Exhibits 9 and 10. These findings present the estimated annual revenues and expenditures accruing to the City of Milpitas' General Fund at present for the existing uses and projected to accrue for the Project or a combination of the Project and the existing uses if they relocate elsewhere in the City.

For each scenario there are two net impact estimates presented in Exhibits 9 and 10. One scenario is labeled "Low Net Revenue Impact" and the other is labeled "High Net Revenue Impact." The label "Low" reflects the least amount of net positive impact on the General Fund, which could also include a negative impact, or a loss. This scenario typically reflects the greatest level of expenditures, including either the average or marginal cost approach, depending upon which one results in the greatest set of expenditures. In contrast, the "High" label reflects the greatest amount of net positive impact on the General Fund.

All figures cited in this chapter are referenced in Exhibits 9 (for the individual scenarios) or 10 (for combined scenarios) unless otherwise noted. These figures pertain to the estimated 80 employees of the existing uses and projected 770 residents of the Preston Property Residential Project.

NET FISCAL IMPACT ANALYSIS OF EXISTING USES

Summary of Revenues

The fiscal impact findings indicate that on an annual basis, the existing uses generate an estimated $42,860 annually to the City of Milpitas General Fund. The largest General Fund revenue component is property taxes, estimated at $28,900 per year. All other General Fund revenues are much lower, with property tax in lieu of VLF comprising the next largest General Fund revenue source at $7,260. This in turn is followed by franchise fees at $3,243 and retail sales taxes generated by worker spending at $2,808. Modest revenues are anticipated from fines and forfeits at $349 and business license fees at $300. There are likely yet additional General Fund revenues generated by the existing uses, but the most substantial revenue sources are reflected in the $42,860 annual estimate.

Summary of Expenditures

The average cost General Fund expenditures estimated to be attributable to the existing uses totals $17,713. These are the average costs associated with the estimated 80 employees that currently work at the site. This expenditure figure is inclusive of $8,846 in Police service costs estimated using the average cost approach documented in Exhibit 7. Substituting the marginal cost estimated Police service costs of $762 presented in Exhibit 8 for the estimated average Police costs results in a lower annual expenditures estimate of $9,629.

Net Fiscal Impact Summary

The net result of the fiscal impact of the existing uses is estimated to range from $25,147 to $33,231 annually. This is a net positive flow of revenues to the City of Milpitas General Fund. This is the amount of net revenue the City of Milpitas will lose on an annual basis if Preston Pipelines and the other existing uses relocate out of Milpitas to make way for the Project.

NET FISCAL IMPACT ANALYSIS OF PRESTON PROPERTY RESIDENTIAL PROJECT

Summary of Revenues

The fiscal impact findings for the Project indicate that on an annual basis, the Project will generate an estimated $307,330 to the City of Milpitas General Fund. Similar to the existing uses, the largest General Fund revenue component is property taxes, estimated at $186,912 per year. This is a much greater volume of property taxes over the existing uses, comprising a six-fold increase. Even without this increment in property tax revenues the Project will generate more General Fund revenues than the existing uses. Other substantially increased annual revenues include retail sales taxes estimated at $43,065, property tax in lieu of VLF at $39,678, and franchise fees at $21,620. All other remaining estimated revenues are also greater than for the existing uses with the exception of business license fees, which do not pertain to the Project's residential uses.

Summary of Expenditures

There is a wide variation in the Project's estimated General Fund expenditures, depending upon the cost estimation basis for Police and Fire expenditures. These costs, presented in Exhibits 8 and 9, are summarized in Table 1, located below, along with all other estimated service costs.

Using the average cost approach to estimating Police services results in an annual Police service cost estimate of $170,278, i.e., $221.14 per resident (see Exhibit 7). The marginal cost approach presented in Exhibit 8 resulted in two Police service cost estimates that straddle this average cost estimate. These costs are $82,561 at the low end, reflecting the service call approach, and $192,708 at the high end, reflecting the police staffing approach (see Exhibit 8). These two figures included in the net fiscal impact analysis documented in Exhibit 9.

Table 1. Summary of Preston Property Residential Project
Annual General Fund Expenditures

Annual Police Expenditures	
Average Cost Basis (per resident)	$170,278
Marginal Cost Basis (service calls), Low	$82,561
Marginal Cost Basis (new officer), High	$192,708
Annual Fire Expenditures	
Average Cost Basis (per resident)	$88,045
Marginal Cost Basis (equal to existing uses)	$4,574
All Other Average Cost Expenditures	$120,142

Source: Exhibits 8 and 9.

For Fire services, the estimated annual expenditures range is from $4,574, based on the marginal cost approach, to $88,045, which is based on the average cost approach of $114.34 per resident (see Exhibit 7). The $4,574 marginal cost Fire estimate is considered in the analysis because as noted in Exhibit 8, the Fire Department indicated an expectation that there are adequate existing resources to accommodate the anticipated increase in calls for service attributable to the Project. The $4,574 figure is the estimated marginal cost to serve the existing uses. For purposes of the analysis, ALH Economics therefore considered this the relevant marginal service cost for the Project as well.

All other service costs total $120,142 per year for the Project. This reflects an estimated $156.03 average cost per resident, i.e., exclusive of Fire and Police services (see Exhibit 7).

The range of Police and Fire service costs is reflected in Exhibit 9. With these figures included, the estimated annual General Fund expenditures attributable to the Project ranges from $207,276 as reflected in the "High Net Revenue Impact" scenario to $400,895 in the "Low Net Revenue Impact" scenario. These figures are boxed for emphasis in Table 2, located below, which shows the full array of annual General Fund expenditures given the possible mixes of average and marginal cost Police and Fire service cost estimates.

Table 2. Summary Table of Preston Property Residential Project
Total Annual General Fund Expenditures
With a Range of Police and Fire Service Costs

	Police Service Costs		
	Average Cost	Marginal Cost	
		Low	High
Fire Service Costs			
Average Cost	$378,465	$290,748	$400,895
Marginal Cost	$294,994	$207,276	$317,424

As noted in Table 2, for many of the permutations of Police and Fire service costs, the total annual expenditures are estimated at close to or over $300,000.

Net Fiscal Impact Summary

The net result of the fiscal impact of the Preston Property Residential Project on the City of Milpitas General Fund is estimated to range from ($93,566) to $100,053 annually. This is a wide spread, comprising an approximate $200,000 range, with one end of the range indicating that the Project will comprise a net drag on the City of Milpitas' General Fund ("Low Net Revenue Impact") and the other end of the range indicating a strong net gain to the City's General Fund ("High Net Revenue Impact"). These net fiscal impact findings are boxed for emphasis in Table 3 on the next page, which shows the net fiscal impact findings based upon the permutation of annual expenditures pursuant to the mixes of average and marginal Police and Fire services costs.

Table 3. Summary Table of Preston Property Residential Project
Net Annual General Fund Fiscal Impacts
With a Range of Police and Fire Service Costs

	Police Service Costs		
	Average Cost	Marginal Cost	
		Low	High
Fire Service Costs			
Average Cost	($71,135)	$16,582	($93,566)
Marginal Cost	$12,336	$100,053	($10,095)

As these summary findings indicate, the Preston Property Residential Project will result in a net positive gain to the City of Milpitas General Fund in half of the six Police and Fire service cost permutations. Two of the net positive permutations include the marginal cost of Fire services, i.e., the $4,574 estimated pursuant to current Dire service costs to the property. If the City of Milpitas finds this to be an unrealistic service cost scenario, then the Project is more likely to result in an annual net drag on the City's General Fund. However, a different marginal cost estimate could still result in a positive net fiscal impact, depending upon the magnitude of the cost.

These results suggest that the City of Milpitas should carefully evaluate the likely service needs of the Project and determine the most likely Police and Fire services cost profile in assessing the prospective net fiscal impact of the Project. If the cost of Police and Fire services can be kept low, then the Project has a strong likelihood of generating a net positive flow of revenue to the City's General Fund. However, if a new Police officer is needed and hired, and the marginal cost of this new Police officer is fully attributed to the Project, then the net fiscal impact of the Project on the City's General Fund will be negative, regardless of the Fire service costs. In these current times of fiscal austerity, it may be difficult for the City of Milpitas to hire additional police staff. If this is the case, this enhances the likelihood that the Project will result in a net positive impact on the City's General Fund.

NET FISCAL IMPACT ANALYSIS OF RELOCATED EXISTING USES AND PRESTON PROPERTY RESIDENTIAL PROJECT

There is another possible net fiscal impact scenario, which would involve both development of the Preston Property Residential Project and relocation of the existing uses elsewhere in Milpitas. If Preston Pipelines and the other existing uses relocate in Milpitas then the City of Milpitas would incur the net fiscal impact of both scenarios.

ALH Economics contacted several industrial brokers active in Milpitas to inquire about the feasibility of Preston Pipelines and the other existing uses relocating to another Milpitas industrial site. The information generally indicated that it is unlikely that Preston Pipelines could find a suitable site within the Milpitas City boundaries. While Milpitas has industrial properties available, properties the size necessary for Preston Pipelines are not readily available. Smaller sites might be available for the other

existing uses, but limited sites are available at the size required for Preston Pipelines. This is especially the case given the propensity for other like industrial sites in Milpitas to similarly seek conversion in the long-term to residential use.

This market-based information suggests that it is unlikely that Preston Pipelines would successfully relocate in Milpitas. Therefore, the net positive fiscal impact benefits associated with Preston Pipelines are not likely to be retained after development of the Preston Property Residential Project. However, other businesses are also associated with the net positive fiscal impact of the existing uses. Therefore, there is some likelihood that a portion of the net positive fiscal impacts would be retained if these uses remain in Milpitas.

Assuming the net fiscal impact profile of the relocated existing uses matches the current profile, the results of full or partial retention of the existing uses plus development of the Preston Pipeline Residential Property are summarized in Exhibit 10 as well as Tables 4 and 5 on the next page. The partial existing use scenario assumes that 40% of the net fiscal impacts occur, since the existing uses other than Preston Pipelines generate 40% of the existing on-site employment. This analysis uses employment as a proxy for site occupation and revenue and cost generation.

These analyses assume relocation of the existing uses would result in the same balance of General Fund costs and revenues as at the current location. However, this balance could change upon relocation, depending upon the value of the underlying property and if the relocation involves the purchase of property, since property is reassessed and taxed at the prevailing tax rate upon sale. Therefore, if a new property sale in Milpitas occurs as part of a relocation plan then the net revenues associated with the existing uses could increase over the current estimated amount.

For the full retention of Preston Pipelines scenario, the overall range of the net fiscal impact for full retention and Preston Pipeline Residential Property development is ($68,419) to $133,284. This reflects the summation of the "Low Net Revenue Impact" and "High Net Revenue Impact" findings for both development options, presented in Exhibit 9.

Similar to the other tabular presentations above, the range of net fiscal impact findings combining these two development options is presented in Table 4, with the low and high values boxed. This summary, however, reflects only the existing use "High Net Revenue Impact" findings in an effort to maintain simplicity. Therefore, only the high value box matches one of the net fiscal impact figures in Exhibit 10.

These findings indicate that given the estimated Police and Fire costs, the combined net fiscal impact will be negative only if the average Police and Fire costs pertain to the Project or if the average Fire costs are applied along with the high marginal Police service cost involving the hiring of a new police office fully attributed to the Project.

As cited above, if it is difficult for the City to hire new police staff due to fiscal austerity, then there is a greater likelihood that the Project and the Milpitas relocation of Preston Pipelines and the other existing uses will result in a net positive impact on the City's General Fund.

Table 4. Summary Table of Combined Existing Uses and Preston Property Residential Project (1)
Net Annual General Fund Fiscal Impacts
With a Range of Police and Fire Service Costs

	Police Service Costs		
	Average Cost	Marginal Cost	
		Low	High
Fire Service Costs			
Average Cost	($37,904)	$49,813	($60,335)
Marginal Cost	$45,567	$133,284	$23,136

(1) Reflects the "High Net Revenue Impact" for the existing uses in Exhibit 10.

A less favorable combination scenario reflects relocation within Milpitas of the existing uses other than Preston Pipelines and development of the Preston Property Residential Project. The overall range of the net fiscal impact findings for this scenario is ($83,507) to $113,345. This reflects the summation of the "Low Net Revenue Impact" and "High Net Revenue Impact" findings for both development options, but including only 40% of the results for the existing uses. The range of findings pursuant to the permutations of Police and Fire costs are presented in Table 5, below. This table demonstrates a similar pattern to the findings combining both development scenarios, but with negative impacts a bit deeper and less favorable positive impacts.

Table 5. Summary Table of Partial Combined Existing Uses and
Preston Property Residential Project (1)
Net Annual General Fund Fiscal Impacts
With a Range of Police and Fire Service Costs

	Police Service Costs		
	Average Cost	Marginal Cost	
		Low	High
Fire Service Costs			
Average Cost	($57,843)	$29,874	($80,273)
Marginal Cost	$25,628	$113,345	$3,198

(1) Reflects 40% of the "High Net Revenue Impact" for the existing uses in Exhibit 10.

FISCAL IMPACT LIMITATIONS

The foregoing fiscal impact analysis is intended to give a general sense of the net fiscal impact of the Preston Property Residential Project compared to the existing uses. The figures are not precise estimates and changes will occur if the revenue and expenditure factors or other assumptions are developed with more precision. Nonetheless, the findings suggest a possibility that the Project, alone or in combination with relocation of the existing uses, may result in a negative net fiscal impact on the City's General Fund unless fiscal austerity results in no increased City Police staff to serve the Project's estimated Police service needs. However, some limitations to the analysis, listed below, may affect the degree of the estimated net impacts of the Project and the existing uses and change the net fiscal impact balance.

General Limitations

- The analysis is benchmarked to estimated stabilized operations for the Project. The net impacts during the development period will vary from the stabilized operations estimate.

- The analysis may not be inclusive of all revenue and cost estimates. Major categories associated with ongoing revenues and costs are included, but there may be other less significant categories excluded from the analysis.

One-time Revenues and Appropriations

- The fiscal impact analysis does not include development-related one-time fees that may be assessed by the City of Milpitas. These fees are typically assessed on a cost recovery basis and are thus excluded from the analysis. Other potential fees, such as impact fees, are also excluded as they too are designed to provide a nexus with the services provided.

- Depending upon how construction contracts are structured, there may be the potential for the City of Milpitas to benefit from construction-related sales and use taxes associated with the Project's construction effort. These revenues are excluded from the analysis but could comprise a strong source of one-time revenues.

- Another one-time revenue that could benefit the City of Milpitas during the Project's construction period includes retail sales tax revenues resulting from construction worker spending in Milpitas. Another one-time revenue comprises the transfer taxes paid on the sale of the Preston Pipelines property to KB home to support the Preston Property Residential Project.

Ongoing Revenue and Appropriation Factors

- The analysis does not include any increase in valuation, such that would occur with the maximum 2% allowable increase pursuant to Proposition 13 or that would occur based upon increased valuation upon sale.

- The analysis does not take into account long-term service cost inflation, which may or may not be greater than the estimated rate of inflation.

- The Preston Property Residential Project may trigger the need for additional services not accounted for in this analysis. The costs associated with these services could be meaningful, both for amortized capital and operating expenditures, and could reduce estimated net positive annual impacts. The likelihood of such additional costs being high, however, is deemed to be low.

In summary, the existing land uses and Preston Property Residential Project net fiscal impact findings estimated above may change as more information and factors are considered.

ASSUMPTIONS AND GENERAL LIMITING CONDITIONS

ALH Urban & Regional Economics has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. Such information was compiled from a variety of sources, including interviews with government officials, review of City and County documents, and other third parties deemed to be reliable. Although ALH Urban & Regional Economics believes all information in this study is correct, it does not warrant the accuracy of such information and assumes no responsibility for inaccuracies in the information by third parties. We have no responsibility to update this report for events and circumstances occurring after the date of this report. Further, no guarantee is made as to the possible effect on development of present or future federal, state or local legislation, including any regarding environmental or ecological matters.

The accompanying projections and analyses are based on estimates and assumptions developed in connection with the study. In turn, these assumptions, and their relation to the projections, were developed using currently available economic data and other relevant information. It is the nature of forecasting, however, that some assumptions may not materialize, and unanticipated events and circumstances may occur. Therefore, actual results achieved during the projection period will likely vary from the projections, and some of the variations may be material to the conclusions of the analysis.

Contractual obligations do not include access to or ownership transfer of any electronic data processing files, programs or models completed directly for or as by-products of this research effort, unless explicitly so agreed as part of the contract.

APPENDIX A: EXHIBITS

Exhibit 1-A
Preston Property Residential Project
Existing Use Population Characteristics

Land Use	Value	Measurement
On-Site Employment (1)		
Preston Pipelines	48	jobs
Devcon Construction	2	jobs
Duran and Venables Construction	5	jobs
Apto Solutions	25	jobs
	80	jobs
Service Population Employment Equivalent (2)	40	service population

Sources: Preston Pipelines; and ALH Urban & Regional Economics.

Notes:
(1) On-site employment figures provided by Preston Pipelines Inc. for Preston Pipelines and other property occupants.
(2) All employees are assumed to be equivalent to one-half a resident for City average service cost purposes. This is a standard fiscal impact analysis assumption.

Exhibit 1-B
Preston Property Residential Project
Proposed Residential Project Description and Population

Land Use	Number of Units (1)	Unit Pricing Range	Assumed Average Pricing (2)	Estimated Number of Residents (3)	Service Population (4)
Townhomes	120	$473,000 - $538,000	$506,292	420	420
Plan 1	33	$473,000 - $497,000	$485,000		
Plan 2	37	$485,000 - $515,000	$500,000		
Plan 3	50	$512,000 - $538,000	$525,000		
Single-family Detached	95	$550,000 - $620,000	$582,458	333	333
Plan 1	33	$550,000 - $580,000	$565,000		
Plan 2	31	$573,000 - $594,000	$583,500		
Plan 3	31	$580,000 - $620,000	$600,000		
Sub-total	215	$473,000 - $620,000	$539,947	753	753
	5	NA	NA	18	18
Total (5)	220	$473,000 - $620,000	$539,947	770	770

Sources: KB Home; Michael Brandman Associates; and ALH Urban & Regional Economics.

Notes:
(1) KB Home provided unit distribution and pricing data for 215 homes. The City of Milpitas has instructed the analysis to be conducted for up to 220 homes. Therefore, an additional 5 units are added to the total count provided by KB Home.
(2) Assumes the weighted average of the midpoint price for each residential product type plan.
(3) Based upon an average of 3.5 residents per household. This is consistent with the EIR assumption prepared by Michael Brandman Associates
(4) All residents are assumed to be equivalent to one service population for City of Milpitas average service cost purposes. This is a standard fiscal impact analysis assumption.

Exhibit 2
Preston Property Residential Project
City of Milpitas Demographic, Employment, and Tax Characteristics

Data Point	Value	Measurement
Population and Employment Base, 2012 estimates		
City of Milpitas Population (1)	66,966	annual
City of Milpitas Employment Base (1)	29,200	annual
Estimated Service Population (2)	81,566	annual
City of Milpitas Tax Rates and Select Tax Revenues		
General Fund Property Tax Rate (3)	15.73%	of 1.0% of property value
Sales Tax Rate (4)		
Basic Sales Tax Rate, General Fund	1.00%	of taxable sales amount
Vehicle in Lieu of Property Tax Revenues (5)		
FY 2011-2012, Actual	$4,550,000	annual
Transfer Tax Rate (6)	$0.55	per $1,000 property value
Assessed City of Milpitas Valuation, FY 2011/12 (5)		
Secured Property	$10,108,401,450	annual
Unsecured Property	$1,407,271,419	annual

Sources: "Table 2: E-5 City/County Population and Housing Estimates, 1/1/2012," State of California Department of Finance; "Monthly Labor Force Data for Cities and Census Designated Places (CDP), Annual Average 2011 - Revised," State of California Employment Development Department, Labor Market Information Division; County of Santa Clara, Finance Agency, Controller-Treasurer Department, FY 2011-2012; City of Milpitas Finance Department; Californiacityfinance.com; "County of Santa Clara Tax Rates & Information, Fiscal Year 2011-2012"; and ALH Urban & Regional Economics.

Notes:
(1) January 2012 population estimate prepared by the State of California Department of Finance. The employment figure comprises the annual average figure for 2011 as estimated by the State of California Employment Development Department. This is the most recent annualized figure available at the time this study was conducted.
(2) The service population is equivalent to the residential population plus 1/2 the employment base. This is a standard fiscal impact assumption.
(3) The Preston Pipelines property is located in Tax Rate Area (TRA) 012-056. The Tax allocation factor for the City of Milpitas after ERAF retention for this TRA is 0.1573490906.
(4) The sales tax rate is inclusive of the triple flip, i.e., sales taxes diverted temporarily by the State of California but returned via other fiscal means.
(5) From "County of Santa Clara Tax Rates & Information, Fiscal Year 2011-2012," page D-1.

Exhibit 3
Preston Property Residential Project
Property Valuation, Annual Property Tax Payments, and Transfer Taxes
Existing Land Uses and Preston Property Residential Project
City of Milpitas, FY 2011-2012 Dollars

Item	Amount
Property Valuation	
Existing Property Valuation	
Property Value (1)	$18,366,567
Preston Property Residential Project	
Average Residential Unit Sales Price (2)	$539,947
Number of Residential Units (2)	220
Total Residential Valuation	$118,788,233
Incremental Property Valuation	$100,421,666
Property Tax	
Parameters (3)	
Basic County Tax Rate	1.00%
City of Milpitas Share of Basic Tax Amount	15.73%
Existing Property Tax	
Total	$183,666
Share Accruing to Milpitas (4)	$28,900
Preston Property Residential Project	
Total	$1,187,882
Share Accruing to Milpitas (5)	$186,912
Incremental Property Tax	
Total	$1,004,217
Share Accruing to Milpitas (6)	$158,013
Transfer Taxes	
Total Residential Assessed Valuation	$118,788,233
Annual property turnover rate (7)	14%
Annual values of sales turnover	$16,969,748
Annual Average Transfer Taxes	$9,333

Sources: Santa Clara County Tax Collector's Office, Secured Property Tax Bills for Fiscal Year July 1, 2011 - June 30, 2012; County of Santa Clara, Controller-Treasurer Department, Property Tax Division; Realquest; and ALH Urban & Regional Economics.

Notes:
(1) Includes the assessed valuation of assessor parcel numbers associated with Preston Pipelines, i.e., APN 028-23-018-00; 086-26-029-00; 086-26-030-00; 086-27-002-00; 086-27-003-00; and 086-27-008-00.
(2) See Exhibit 1B.
(3) See Exhibit 2.
(4) This is the FY 2011-2012 share of the basic 1.0% County tax rate that accrues to the City of Milpitas, after adjusting for ERAF. Provided by the County of Santa Clara Controller-Treasurer Department.
(5) Estimated property tax revenues associated with the Preston Pipeline Residential Project.
(6) Difference between estimated revenues for Preston Pipeline Residential Project and existing land use.
(7) Assumes residential units turnover once every 7 years, which is a standard industry assumption.

Exhibit 4-A
Preston Property Residential Project
Property Tax in Lieu of VLF Estimates for Existing Uses
City of Milpitas, FY 2011-12 Dollars

Category	Value
Assessed Value	
City of Milpitas Secured Property Assessed Valuation (1)	$10,108,401,450
City of Milpitas Unsecured Property Assessed Valuation (1)	$1,407,271,419
Total	$11,515,672,869
Property Valuation Attributable to Preston Pipelines Existing Uses (2)	$18,366,567
Percent Share of Property Valuation Attributable to Preston Pipelines Existing Uses	0.16%
VLF in Lieu Revenue	
FY 2011-2012 adopted (1)	$4,550,000
Share of VLF Attributable to Preston Pipelines Existing Uses	
Percent Assessed Value	0.16%
VLF In Lieu Revenue Attributable to Existing Preston Pipelines Uses	$7,260

Source: ALH Urban & Regional Economics.

Notes:
(1) See Exhibit 2.
(2) See Exhibit 3.

Exhibit 4-B
Preston Property Residential Project
Property Tax in Lieu of VLF Estimates for Preston Property Residential Project
Project Stabilization
City of Milpitas, FY 2011-12 Dollars

Category	Value
Assessed Value Change	
City of Milpitas Secured Property Assessed Valuation (1)	$10,108,401,450
City of Milpitas Unsecured Property Assessed Valuation (1)	$1,407,271,419
Total	$11,515,672,869
Property Valuation Increment Attributable Preston Property Residential Project (2)	$100,421,666
Total Projected Property Valuation (Inclusive of Preston Property Residential Project)	$11,616,094,535
Percent Increase in Property Valuation Attributable to Preston Property Residential Project	0.87%
VLF in Lieu Revenue	
FY 2010-2011 actual (1)	$4,550,000
City Increase (Annual)	
Percent Assessed Value	0.87%
VLF In Lieu Revenue Attributable to Preston Property Residential Project	$39,678
Net increase in VLF compared to Existing Use (3)	$32,418

Source: ALH Urban & Regional Economics.

Notes:
(1) See Exhibit 2.
(2) See Exhibit 3.
(3) See Exhibit 4-A for value associated with the existing use.

Exhibit 5
Preston Property Residential Project
Estimated Annual Retail Sales Tax Generation
Existing Uses and Preston Property Residential Project Build Out
City of Milpitas, FY 2011-12 Dollars

Project Component	Figure	Measure
Existing Preston Pipelines Industrial Land Use		
Industrial Worker Retail Sales		
Number of on-site Employees	80	jobs
Workday Retail Spending (1)	$5,200	annual worker spending
Milpitas Capture Rate (2)	75%	
Total Industrial Worker Spending	$312,000	
Taxable Retail Sales		
Taxable Retail Sales (3)	90%	percent taxable
Total Taxable Spending	$280,800	annual
Sales Tax		
City of Milpitas Basic Sales Tax Rate, General Fund	1.00%	of taxable sales amount
Generated Sales Tax	$2,808	annual retail sales tax
Residential Land Use Alternative		
Household Retail Sales		
Number of Households (4)	220	households
Retail Spending (5)	$30,000	average annual per household
Total Household Retail Spending	$6,600,000	
Taxable Retail Sales		
Taxable Retail Sales (6)	87%	percent taxable
Total Taxable Spending	$5,742,000	
Percent Captured in Milpitas (7)	75%	
Milpitas Taxable Sales, annual	$4,306,500	
Sales Tax		
City of Milpitas Basic Sales Tax Rate, General Fund	1.00%	of taxable sales amount
Generated Sales Tax	$43,065	annual retail sales tax

Source: International Council of Shopping Centers, "Office-Worker Retail Spending in a Digital Age," 2012; and ALH Urban & Regional Economics.

Notes:
(1) See Exhibit B-1. Based on office worker spending patterns in ample urban areas pursuant to the International Council of Shopping Centers 2012 study "Office-Worker Retail Spending in a Digital Age." For this analysis construction workers are assumed to spend 60% as much on retail during the workday as office workers. This assumption is based on analysis of average industry wages in office-based sectors compared to the construction sector in Santa Clara County, pursuant to 2010 County Business Patterns data. The figure is rounded to the nearest 100.
(2) ALH Economics assumption, reflecting a portion of workday spending outside Milpitas on the way to or from work.
(3) Based on the findings from the "Office-Worker Retail Spending in a Digital Age" study regarding the distribution of worker spending on groceries versus other retail goods, presented in Exhibit B-1, and the typical share of grocery sales that are taxable, assumed to be 30%, 90% of worker spending is assumed to be spent on taxable items.
(4) See Exhibit 1-B.
(5) See Exhibit B-3. ALH Urban & Regional Economics conducted a Retail Demand, Sales Attraction, and Spending Analysis for the City of Milpitas based upon 2010 demographic data and retail expenditure patterns pursuant to the United States Consumer Expenditures Survey. The result indicated estimated average household spending on retail totaling approximately $28,200 in 2010 dollars for the highest income range analyzed by the Consumer Expenditures Survey. For analytic purposes this figure was inflated to $30,000 to reflect an estimated 2012 average household spending figure for Preston Property Residential Project households.
(6) Based on the analysis from Milpitas' retail sales base in Exhibit B-2, showing adjustments for taxable to total retail sales.
(7) This analysis assumes that Milpitas retailers will capture 75% of the KB Home resident retail spending. The Retail Demand, Sales Attraction, and Spending Analysis in Exhibit B-3 indicates that Milpitas is a net attraction city in all major retail categories, meaning that the City attracts more sales than expected from resident spending. The 75% assumption allows for 25% of all resident spending to occur outside Milpitas, facilitating comparison shopping, travel-related spending, and other expenditures beyond the city's ample retail base.

Exhibit 6
Preston Property Residential Project
Assorted City of Milpitas General Fund Revenues
Existing Uses and Preston Property Residential Project
City of Milpitas, FY 2011-12 Dollars

Fines and Forfeits - Existing Uses and Proposed Residential

Fines and Forfeits Revenues and Population Basis Data	***Parameters and Annual Revenue***
City of Milpitas FY 2011/12 Fines and Forfeits (1)	$712,000
City Service Population (2)	81,566
Fines and Forfeits Revenues Per Service Population (3)	$8.73
Existing Industrial Uses	
Service Population (4)	40
Existing Fines and Forfeits Tax Revenues (5)	$349
Preston Property Residential Project	
Service Population (6)	770
Project Fines and Forfeits Tax Revenues (5)	$6,721

Franchise Fees - Existing Uses and Proposed Residential

Franchise Fee Revenues and Population Basis Data	***Parameters and Annual Revenue***
Franchise Fees Applicable to all Service Population	
City of Milpitas FY 2011/12, Electric Franchise (1)	$1,108,000
City of Milpitas FY 2011/12, Gas Franchise (1)	$198,000
City Service Population (2)	81,566
Electric & Gas Franchise Fee Per Service Population (3)	$16.01
Franchise Fees Applicable to all Employees	
City of Milpitas FY 2011/12, Garbage Franchise - Commercial (1)	$950,000
City Employment Base (2)	29,200
Commercial Garbage Franchise Fee Per Employee (3)	$32.53
Franchise Fees Applicable to all Residents	
City of Milpitas FY 2011/12, Garbage Franchise - Non-Commercial (1)	$434,000
City of Milpitas Resident Base (2)	66,966
Non-Commercial Garbage Franchise Fee Per Resident (3)	$6.48
City of Milpitas FY 2011/12, CATV Franchise (1)	$374,000
City of Milpitas Resident Base (2)	66,966
CATV Franchise Fee Resident (3)	$5.58

Estimated Franchise Fee Revenues

Existing Industrial Uses	
Service Population (4)	40
Employees (4)	80
Electric & Gas Franchise Fee (7)	$640
Commercial Garbage Franchise Fee (7)	$2,603
Sub-total	$3,243
Preston Property Residential Project	
Service Population (6)	770
Electric & Gas Franchise Fee (7)	$12,329
Non-Commercial Garbage Franchise Fee (7)	$4,990
CATV Franchise Fee (7)	$4,300
Sub-total	$21,620

Continued on next page

Exhibit 6
Preston Property Residential Project
Assorted City of Milpitas General Fund Revenues
Existing Uses and Preston Property Residential Project
City of Milpitas, FY 2011-12 Dollars

Estimated Business License Fee Revenues

Business License Fee	***Parameters and Annual Revenue***
Business License Fees for Existing Businesses	
Preston Pipelines (8)	$75.00
Devcon Construction (9)	$75.00
Duran and Venables Construction (9)	$75.00
Apto Solutions (9)	$75.00
Total	$300.00

Sources: "2011-2012 Budget & Financial Plan, Final Budget, City of Milpitas," page 69; Preston Pipelines; City of Milpitas Business License Fee Schedule; and ALH Urban & Regional Economics.

Notes:
(1) All revenue figures are from the City of Milpitas 2011-2012 Budget & Financial Plan, Final Budget.
(2) See Exhibit 2.
(3) Calculated on a per population basis for the population cited, i.e., city service population, city employment base, or city residential base, as noted.
(4) See Exhibit 1-A.
(5) Calculated by multiplying the per population, employee, or resident figure by the existing uses or Preston Property Residential Project service population estimates.
(6) See Exhibit 1-B.
(7) Calculated by multiplying the per population, employee, or resident fee by the associated estimates for the existing uses or the Preston Property Residential Project.
(8) Provided by Preston Pipelines. This is the amount paid for Preston Pipelines Inc. Business License issued July 11, 2011.
(9) Estimate generated by ALH Urban & Regional Economics. Each business is assumed to pay an annual fee comparable to the Preston Pipelines fee, which is equivalent to the City of Milpitas business license fee for contractors located inside the City of Milpitas plus a $25 renewal processing fee.

Exhibit 7
Preston Property Residential Project
City of Milpitas General Fund Average Cost Expenditures
FY 2011-2012 Adopted Budget
Fiscal Impact Factors City of Milpitas

City Services (1)	FY Budget (2)	Revenue Offsets (3)	Adjusted General Fund Expenditures (4)	Percent Fixed (5)	Allocable Variable Expenditures (6)	Population Factor (7)	Expenditure per Service Population (8)	Expenditure per Resident (9)	Expenditure per Employee (10)
Administration (11)	$3,092,272	($746,656)	$2,345,616	75%	$586,404	Service Population	$7.19	$7.19	$3.59
Building (12)	$2,178,195	($2,873,204)	$0	NA	NA	NA	$0.00	$0.00	$0.00
Information Services	$2,691,105	($186,809)	$2,504,296	75%	$626,074	Service Population	$7.68	$7.68	$3.84
Finance	$2,407,918	($167,151)	$2,240,767	75%	$560,192	Service Population	$6.87	$6.87	$3.43
Public Works	$5,235,009	($942,399)	$4,292,610	25%	$3,219,458	Service Population	$39.47	$39.47	$19.74
Engineering	$862,417	($59,866)	$862,417	25%	$646,813	Service Population	$7.93	$7.93	$3.96
Planning & Neighborhood	$1,310,977	($266,004)	$1,044,973	25%	$783,730	Service Population	$9.61	$9.61	$4.80
Parks & Recreation (13)	$5,594,422	($1,971,301)	$3,623,121	10%	$3,260,809	Resident Population	$48.69	$48.69	$0.00
Police	$22,776,776	($2,735,096)	$20,041,680	10%	$18,037,512	Service Population	$221.14	$221.14	$110.57
Fire	$14,595,639	($2,160,186)	$12,435,453	25%	$9,326,590	Service Population	$114.34	$114.34	$57.17
Non-Departmental	$5,012,368	($347,944)	$4,664,424	50%	$2,332,212	Service Population	$28.59	$28.59	$14.30
Total	$65,757,098	($12,456,616)	$53,300,482	NA	$39,379,792		$476.65	$491.51	$221.41

Sources: "2011-2012 Budget & Financial Plan, Final Budget, City of Milpitas," pages 98 & 99; and ALH Urban & Regional Economics.

Notes:
(1) All City General Fund expenditures are captured in these service areas, which include aggregated expenditure items.
(2) See Exhibit B-5 for the line item detail reflected in each departmental aggregation.
(3) See Exhibit B-8.
(4) General Fund expenditures less Charges for Current Services.
(5) Fiscal impact studies that examine municipal expenditures on an average cost basis, such as this analysis, often assume a portion of City expenditures are fixed and will not vary with a change in the population served. The resulting variable expenditures are then allocated across the relevant population served, which could include just residents, just employees, or the service population, which includes both residents and an allocation for employees. For the purpose of this analysis, all of the City service categories that are primarily administrative are assumed to have the majority of their expenditures fixed at 75%, thus with 25% that varies with the size of the population served. This applies to approximately one-half the major City services, with expenditures in the other half ranging from 10% to 50% fixed, reflecting that only some portion of the costs in these departments will not vary with changes in the City's service population.
(6) Comprises the share of the General Fund expenditures assumed to be allocable to the population served, i.e., total expenditures less fixed expenditures.
(7) The analysis assumes all expenditures except Parks & Recreation are spread across the resident and employment base, i.e., the service population. The Parks & Recreation costs are assumed to only apply to residents.
(8) Equal to allocable expenditures divided by the service population with the exception of Parks & Recreation, which are assumed to only be allocable to residents.
(9) The expenditure per resident is equal to the expenditure per service population.
(10) The expenditure per employee is equal to one half the expenditure per service population.
(11) Includes City Council, City Manager, City Clerk, Human Resources, and City Attorney.
(12) The analytical revenue offsets indicate the expenditures for this City department are sufficiently offset by service and other charges. Thus, no General Fund expenditures for this City department are included in the analysis.
(13) These services are assumed to apply only to the City's resident population.

Exhibit 8
Preston Property Residential Project
City of Milpitas Select Estimated Marginal Service Costs (1)
City of Milpitas, FY 2011-2012 Dollars

	Estimated Annual Marginal Cost			
	Existing	KB Home Project		
City Department	Use	Low	High	Explanatory Comments
Police	$762	$82,561	$192,708	The Police Department indicates that there were 78,894 calls for service in 2011. The approved Fiscal Year 2011-2012 Police Department budget allocated by the General Fund, less revenue offsets, totals $20,041,680 (see Exhibit 7). This results in a $254 per call cost of service. The Police Department indicated that the existing Preston Pipeline area had 3 reports taken during 2011. At the $254 per call cost this equates to a marginal service cost estimate of $762 per year. The Police Department estimates that a residential development the size of the Preston Property Residential Project could generate in the area of 300 to 350 calls for service on an annual basis, or more given the Project's high density nature. Using the average of this figure, or 325, results in a marginal service cost estimate of $82,561 per year given the $254 average per call cost. The Police Department indicated the Department is staffed by 104 employees, of which 83 positions are sworn law enforcement officers and 21 are non-sworn civilians. Given the approved fiscal year 2011-2012 Police Department General Fund budget allocation of $2,041,680 this results in a per employee cost of $192,708 (see Exhibit 7). The Police Department estimates that given the prospective population count of the Preston Property Residential Project, there could be the need for one additional office to serve the Project. As noted above, the estimated cost per Police Department employee regardless of position is $192,708.
Fire	NA	$0	$0	The Fire Department indicates that there are adequate existing resources to accommodate the anticipated increase in calls for service attributable to the Preston Property Residential Project.

Sources: City of Milpitas, Departmental estimates conveyed by Sheldon Ah Sing, Senior Planner; and ALH Urban & Regional Economics.

Notes:
(1) These costs are estimated on a marginal cost, or case study basis. This means cost estimates were prepared based upon the level of service anticipated to be provided to the Project and the corresponding cost by Department as estimated by Department representatives.

Exhibit 9
Preston Property Residential Project
Annual Net Fiscal Impact Analysis, Existing Uses and Preston Property Residential Development (1)
City of Milpitas General Fund
FY 2011-12 Dollars

General Fund Revenues and Expenditures Categories	Existing Preston Pipelines Uses: Low Net Revenue Impact	Existing Preston Pipelines Uses: High Net Revenue Impact	Preston Property Residential Development: Low Net Revenue Impact	Preston Property Residential Development: High Net Revenue Impact
Revenues (2)				
Property Taxes (3)	$28,900	$28,900	$186,912	$186,912
Transfer Taxes (3)	$0	$0	$9,333	$9,333
Property Tax in Lieu of VLF (4)	$7,260	$7,260	$39,678	$39,678
Business License Fees (5)	$300	$300	$0	$0
Retail Sales Taxes (6)	$2,808	$2,808	$43,065	$43,065
Franchise Fees (5)(7)	$3,243	$3,243	$21,620	$21,620
Fines & Forfeits (5)	$349	$349	$6,721	$6,721
Sub-total	$42,860	$42,860	$307,330	$307,330
Expenditures (8)				
Administration	$288	$288	$5,536	$5,536
Building	$0	$0	$0	$0
Information Services	$307	$307	$5,910	$5,910
Finance	$275	$275	$5,288	$5,288
Public Works	$1,579	$1,579	$30,392	$30,392
Engineering	$317	$317	$6,106	$6,106
Planning & Neighborhood	$384	$384	$7,399	$7,399
Parks & Recreation	$0	$0	$37,494	$37,494
Police	$8,846	$762 (9)	$192,708 (10)	$82,561
Fire	$4,574	$4,574 (11)	$88,045	$4,574 (11)
Non-Departmental	$1,144	$1,144	$22,017	$22,017
Sub-total	$17,713	$9,629	$400,895	$207,276
Net Impact (12)	**$25,147**	**$33,231**	**($93,566)**	**$100,053**

Source: ALH Urban & Regional Economics.

See notes on the following page

Exhibit 9
Preston Property Residential Project
Annual Net Fiscal Impact Analysis, Existing Uses and Preston Property Residential Development (1)
City of Milpitas General Fund
FY 2011-12 Dollars

Notes:

(1) Reflects estimated revenues less estimated expenditures, resulting in a net fiscal impact on an annual basis on the City of Milpitas General Fund. The "Low Net Revenue Impact" column reflects a low, to negative net benefit to the City's General Fund while the "High Net Revenue Impact" column reflects a relatively higher net benefit to the City's General Fund.
(2) Includes the most substantial revenues anticipated to accrue to the City of Milpitas General Fund resulting from the Project's stabilized operations. However, there may be yet additional revenues flowing to the General Fund pursuant to the Project's operations.
(3) See Exhibit 3.
(4) See Exhibit 4-A for the existing use and Exhibit 4-B for the Preston Property Residential Project.
(5) See Exhibit 6.
(6) See Exhibit 5.
(7) Franchise fees for the existing Preston Pipelines uses may be higher depending upon actual utility costs.
(8) Unless otherwise noted, figures comprise the per employee, per service population, or per resident counts in Exhibits 1-A or 1-B multiplied by the General Fund expenditures costs derived in Exhibit 7.
(9) See Exhibit 8.
(10) This figure corresponds to the marginal cost of adding one police office (see Exhibit 8). This cost is generally similar to the estimated cost using the average cost approach of $192,708, which results from multiplying the Preston Property Residential Project resident count of 770 by the per resident Police cost of $221.14 derived in Exhibit 7).
(11) Per the information conveyed in Exhibit 8, the Fire Department does not estimate the need for any incremental, or marginal costs associated with serving the Preston Property Residential Project. Accordingly, ALH Urban & Regional Economics assumes the average cost estimated for the existing use will equally apply as the marginal cost for the existing use and the marginal cost for the Preston Property Residential Project. Thus, the figure of $4,574 is input as the Fire Department cost for the "high net impact" scenario for the Existing Preston Pipeline Use and the Preston Property Residential Project.
(12) Comprises revenues less expenditures.

Exhibit 10
Preston Property Residential Project
Annual Net Fiscal Impact Analysis, Combined Existing Uses and Preston Property Residential Development (1)
City of Milpitas General Fund
FY 2011-12 Dollars

General Fund Revenues and Expenditures Categories	Relocated Existing Uses and New Residential Development (2)		Partial Relocated Existing Uses and New Residential Development (3)	
	Low Net Revenue Impact	High Net Revenue Impact	Low Net Revenue Impact	High Net Revenue Impact
Revenues				
Property Taxes	$215,812	$215,812	$198,472	$198,472
Transfer Taxes	$9,333	$9,333	$9,333	$9,333
Property Tax in Lieu of VLF	$46,938	$46,938	$42,582	$42,582
Business License Fees	$300	$300	$120	$120
Retail Sales Taxes	$45,873	$45,873	$44,188	$44,188
Franchise Fees	$24,863	$24,863	$22,917	$22,917
Fines & Forfeits	$7,071	$7,071	$6,861	$6,861
Sub-total	$350,190	$350,190	$324,474	$324,474
Expenditures				
Administration	$5,823	$5,823	$5,651	$5,651
Building	$0	$0	$0	$0
Information Services	$6,217	$6,217	$6,033	$6,033
Finance	$5,563	$5,563	$5,398	$5,398
Public Works	$31,971	$31,971	$31,024	$31,024
Engineering	$6,423	$6,423	$6,233	$6,233
Planning & Neighborhood	$7,783	$7,783	$7,552	$7,552
Parks & Recreation	$37,494	$37,494	$37,494	$37,494
Police	$201,554	$83,323	$196,247	$82,866
Fire	$92,619	$9,148	$89,874	$6,403
Non-Departmental	$23,160	$23,160	$22,474	$22,474
Sub-total	$418,608	$216,906	$407,980	$211,128
Net Impact (4)	**($68,419)**	**$133,284**	**($83,507)**	**$113,345**

Source: ALH Urban & Regional Economics.

Notes:
(1) This exhibit presents the net fiscal impact if the existing uses remained in Milpitas, in all or part, and if the Preston Property Residential Development is built.
(2) Adds together the findings for the existing uses and the Preston Property Residential Development, presented in Exhibit 9.
(3) This scenario includes the findings for the Preston Property Residential Development and 40% of the existing uses. The purpose is to model the net fiscal impact scenario if Preston Pipelines relocates out of Milpitas but the other existing uses relocated within Milpitas. The 40% factor reflects the share of the existing site employment associated with these uses other than Preston Pipelines. This is a proxy for the existing division of impacts between Preston Pipelines and all other existing site users.
(4) Comprises revenues less expenditures.

APPENDIX B: SUPPORT EXHIBITS

Exhibit B-1
Preston Property Residential Project
Currently Selling Condominium and Townhouse Developments
Milpitas, San Jose, and Fremont
March 2012

City and Project	Developer	Size Range (Sq. Ft.)	Price Range	Price Range per Sq. Ft.	Date Closed Out (1)
Milpitas					
The Paragon	DR Horton Inc.	1,171 - 1,691	$374,990 - $479,990	$283.85 - $320.23	N/A
Luna at Terra Serena	KB Home	905 - 1,853	$307,250 - $520,801	$281.06 - $339.50	7/31/2010
	Average	**1,038 - 1,772**	**$341,120 - $500,396**	**$282.45 - $329.87**	
San Jose					
The 88	Wilson Meany Sullivan	992 - 2,319	$395,000 - $1,500,000	$398.19 - $646.83	N/A
Axis	Almaden Tower Venture, LLC	800 - 1,800	$295,000 - $1,360,000	$368.75 - $755.56	N/A
City Heights	Barry Swenson Builder	600 - 1,325	$290,000 - $269,000	$203.02 - $483.33	N/A
Messina Gardens	Pinn Brothers Fine Homes	1,316 - 1,809	$399,900 - $475,000	$262.58 - $303.88	1/31/2012
Villas at Lundy	Toll Brothers	1,283 - 1,548	$459,995 - $564,995	$358.53 - $364.98	N/A
The Works	Barry Swenson Builder	700 - 1,440	$465,000	$322.92 - $664.29	N/A
Cachet	DR Horton, Inc.	1,405 - 1,927	$349,990 - $423,990	$220.03 - $249.10	N/A
Celadon	Warmington Homes California	1,316 - 1,809	$538,800	$297.84 - $409.42	N/A
Grandview Terrace	Pinn Brothers Fine Homes	1,316 - 1,809	$418,000 - $534,000	$295.19 - $317.63	1/31/2012
Hampton Park	Taylor Morrison	1,213 - 1,573	$499,990 - $599,990	$381.43 - $412.19	12/31/2011
Modern Ice Homes	Taylor Morrison	1,288 - 1,660	$399,583 - $444,990	$268.07 - $310.24	N/A
Pepper Lane	Pulte Homes	1,129 - 2,006	$429,990 - $589,990	$294.11 - $380.86	N/A
Savona	Lennar Homes	1,347 - 2,031	$384,000 - $507,795	$250.02 - $285.08	N/A
Willow Village Square	Radio Homes	1,746 - 1,913	$539,950 - $620,000	$309.25 - $324.10	N/A
	Average	**1,175 - 1,784**	**$418,943 - $657,479**	**$302.14 - $421.96**	
Fremont					
Gramercy at Park Lane West	Regis Homes	1,210 - 1,671	$329,900 - $459,900	$272.64 - $275.22	N/A
Mission Ridge	KB Home	1,431 - 1,842	$585,560 - $713,106	$387.14 - $409.20	N/A
Central Park Terraces	Pulte Homes	1,644 - 2,094	$575,990 - $635,990	$303.72 - $350.36	N/A
Villa D'Este Towns	Pulte Homes	1,263 - 1,582	$419,990 - $499,990	$316.05 - $332.53	N/A
Westerly at Park Lane West	Regis Homes	1,428 - 1,758	$615,900	$350.34 - $431.30	N/A
	Average	**1,395 - 1,789**	**$505,468 - $577,247**	**$325.98 - $359.72**	
	Total Average	**1,214 - 1,784**	**$432,132 - $622,196**	**$305.94 - $398.37**	

Sources: Hanley Wood; and ALH Urban & Regional Economics.

Notes:
(1) N/A denotes that the project has not closed out.

Exhibit B-2
Preston Property Residential Project
Office Worker Weekly Retail Spending Patterns (1)
in 2011 Dollars

	Spending Patterns (1)					
	Suburban (2)			Suburban - Ample Adjustment (3)		
Category of Spending (4)	**Weekly**	**Annualized**	**Percent**	**Weekly**	**Annualized**	**Percent**
Full-Service Restaurants and Fast Food	$26.29	$1,367.08	22.7%	$37.57	$1,953.64	22.7%
Goods and Services						
Groceries	$15.98	$830.96	13.8%	$22.84	$1,187.68	13.8%
All Other	$73.33	$3,813.16	63.4%	$104.80	$5,449.60	63.4%
Total	$115.60	$6,011.20	100.0%	$165.21	$8,590.92	100.0%

Sources: "Office-Worker Retail Spending in a Digital Age," Michael P. Niemira and John Connolly, ICSC Research Department, 2012; and ALH Urban & Regional Economics.

Notes:
(1) Excludes spending on transportation and online purchases.
(2) The ICSC study findings are presented for urban/central city, suburban, and rural/small town geographies. The main distinction is defining an urban area to include a core area with a large population nucleus, together with adjacent communities that have a high degree of economics and social integration with the core. Given the nature of the project and the surrounding area, the Preston Pipelines development site was deemed more characteristic of an urban work location than a suburban work location.
(3) The ICSC survey findings indicate that office workers in urban areas with an ample supply of retail shopping opportunities spend approximately 43% more on an average weekly basis than workers in locations not considered characterized by ample retail opportunities. ALH Economics distributed the total spending based on the percentage sales distribution figure for the basic urban office worker.
(4) A range of categories are included in the "All Other" category, including drug stores, clothing stores, shoe stores, and department stores. ALH Urban & Regional Economics collapsed these categories into one comprehensive category for analytical purposes.

Exhibit B-3
Preston Property Residential Project
City of Milpitas Taxable Retail Sales
Adjusted to Total Retail Sales
in Current Dollars
Fourth Quarter 2009 and First - Third Quarters of 2010

	Taxable Retail Sales					Retail Sales in the City of Milpitas Adjusted for Total Sales (1)
	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Total Taxable Sales in the City of Milpitas	
Type of Retailer	**[A]**	**[B]**	**[C]**	**[D]**	**[E = A + B + C + D]**	**[F]**
Motor Vehicle and Parts Dealers	$33,690,905 (3)	$26,757,000	$30,680,000	$34,984,000	$126,111,905	$126,111,905
Home Furnishings and Appliances	$28,436,000	$23,146,000	$26,386,000	$26,196,000	$104,164,000	$104,164,000
Building Materials and Garden Equip.	$10,421,000	$10,973,000	$12,284,000	$11,713,000	$45,391,000	$45,391,000
Food and Beverage Stores	$9,648,000	$8,169,000	$9,054,000	$9,816,000	$36,687,000	$122,290,000 (2)
Gasoline Stations	$19,935,000	$19,044,000	$20,311,000	$22,376,000	$81,666,000	$81,666,000
Clothing and Clothing Accessories	$67,431,000	$49,767,000	$58,831,000	$59,076,000	$235,105,000	$235,105,000
General Merchandise Stores	$30,854,000	$22,140,000	$24,391,000	$24,171,000	$104,392,905	$130,491,131 (4)
Food Services and Drinking Places	$44,928,000	$44,808,000	$47,031,000	$46,963,000	$183,730,000	$183,730,000
Other Retail Group	$19,585,095 (5)	$17,885,000	$19,183,000	$18,730,000	$75,383,095	$111,279,229 (6)
Total	**$264,929,000**	**$222,689,000**	**$248,151,000**	**$254,025,000**	**$989,794,000**	**$1,140,228,264 (7)**

Sources: California State Board of Equalization, "Taxable Sales in California" reports, for Fourth Quarter 2009, First Quarter 2010, Second Quarter 2010, and Third Quarter 2010; and ALH Urban & Regional Economics.

Notes:
(1) See footnotes 2, 4, and 6 regarding taxable sales adjustments.
(2) Sales for Food and Beverage stores have been adjusted to account for non-taxable sales; only 30% of all Food store sales are estimated to be taxable.
(3) The BOE omitted the figure for the Motor Vehicles and Parts category as it would result in the disclosure of confidential information. The BOE bundles this figure into the Other Retail group. The BOE does provide General Merchandise figures for the first three quarters of 2010. ALH Urban & Regional Economics estimated the figure for Motor Vehicles and Parts by calculating the average of the given Motor Vehicles and Parts sales for the three quarters in 2010 and applied that to the total taxable sales for the fourth quarter of 2009 to get the taxable amount of Motor Vehicles and Parts sales for the study period. This figure was also subtracted from the Other Retail group.
(4) Sales for General Merchandise stores have been adjusted to account for non-taxable food sales, since some General Merchandise store sales include non-taxable food items. ALH Urban & Regional Economics estimates that at least 20% of General Merchandise sales are for grocery items that are also non-taxable. This estimate is based on the analyses of the 2007 U.S. Economic Census, which attributes 21% of General Merchandise stores sales to food.
(5) See adjustment referenced in footnote 3.
(6) Sales for the Other Retail group have been adjusted to account for non-taxable drug store sales, since drug store sales are included in the Other Retail group category. ALH Urban & Regional Economics estimates that 33% of drug store sales are taxable, based on discussions with the California BOE and examination of U.S. Census data. In Santa Clara County, drug store sales in Q4 2009, Q1 2010, Q2 2010, and Q3 2010 represented approximately 23.5% of all Other Retail group sales. ALH Urban & Regional Economics applied that percentage and then adjusted upward for non-taxable sales.
(7) In aggregate, the taxable retail sales are estimated to comprise 87% of total retail sales.

Exhibit B-4
Preston Property Residential Project
Retail Demand, Sales Attraction, and Spending Analysis (1)
City of Milpitas
2010
(in $000s)

Type of Retailer	Per Household (2) (3) Spending	Per Household (2) (3) Sales	Market Area Household Spending (4)	City of Milpitas Sales (5)	Retail Sales Attraction/(Leakage) Amount	Retail Sales Attraction/(Leakage) Percent
Motor Vehicles and Parts Dealers	$4,566	$6,574	$87,594	$126,112	$38,518	30.5%
Home Furnishings and Appliance Stores	$802	$5,430	$15,380	$104,164	$88,784	85.2%
Building Materials and Garden Equip (6)	$2,296	$2,366	$44,053	$45,391	$1,338	2.9%
Food and Beverage Stores (7)	$4,663	$6,375	$89,451	$122,290	$32,839	26.9%
Gasoline Stations	$3,070	$4,257	$58,888	$81,666	$22,778	27.9%
Clothing and Clothing Accessories Stores	$1,378	$12,255	$26,442	$235,105	$208,663	88.8%
General Merchandise Stores (8)	$4,020	$6,802	$77,113	$130,491	$53,378	40.9%
Food Services and Drinking Places	$3,664	$9,577	$70,286	$183,730	$113,444	61.7%
Other Retail Group (9)	$3,706	$5,801	$71,101	$111,279	$40,178	36.1%
Total	**$28,165**	**$59,436**	**$540,309**	**$1,140,228**	**$599,919**	**52.6%**

Sources: 2010 U.S. Census; Claritas Inc.; and ALH Urban & Regional Economics.

Notes:
(1) All figures are expressed in constant 2010 dollars.
(2) The household spending estimates were generated by ALH Urban & Regional Economics Retail Demand, Sales Attraction, and Spending Leakage Analysis.
(3) The household count is estimated at 19,814 per the 2010 U.S. Census. The analysis assumes an average household income in 2010 of $92,318 as estimated by the 2010 U.S. Census. This income corresponds with the highest income range included in the U.S. Consumer Expenditures Survey, upon which this analysis is predicated.
(4) Represents per household spending multiplied by the market area household count.
(5) See Exhibit B-3.
(6) Building Materials and Garden Equipment includes hardware stores, plumbing and electrical supplies, paint and wallpaper products, glass stores, lawn and garden equipment, and lumber.
(7) Sales for Food and Beverage stores have been adjusted to account for non-taxable sales; only 30 percent of all food store sales are estimated to be taxable.
(8) Sales for General Merchandise stores have been adjusted to account for non-taxable sales.
(9) Other Retail Group includes drugs stores, health and personal care, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, office and school supplies, second-hand merchandise, and miscellaneous other retail stores.

Exhibit B-5
Preston Property Residential Project
City of Milpitas General Fund Expenditures
FY 2011-2012 Adopted Budget

Fund/Function	Total (1)
City Council	$333,860
City Manager	$439,059
City Clerk	$752,722
Human Resources	$922,145
City Attorney	$644,486
Sub-total Administration	***$3,092,272***
Building Inspection Services	$906,395
Plan Checking	$453,103
Building Administration	$225,078
Permit Center	$500,906
Public Works Inspection Services	$92,713
Sub-total Building	***$2,178,195***
Information Services	***$2,691,105***
Finance Administration	$645,200
Accounting Services	$1,096,463
Receivables	$214,365
Purchasing	$451,890
Sub-total Finance	**$2,407,918**
Public Works Administration	$155,586
Street Maintenance	$1,624,536
Trees & Landscape Maintenance	$1,310,099
Facilities Maintenance	$2,144,788
Sub-total Public Works	***$5,235,009***
Engineering Administration	$141,528
Design & Construction	$213,619
Land Development	$347,416
Traffic Engineering	$36,354
Utility Engineering	$123,500
Sub-total Engineering	***$862,417***

Fund/Function	Total (1)
Planning	$775,829
Neighborhood Services	$535,148
Sub-total Planning & Neighborhood	***$1,310,977***
Park Maintenance	$1,821,662
Recreation Administration	$1,105,824
Senior citizen Services	$631,434
Youth Programs	$380,721
Teens	$170,342
Special Events	$95,825
Cultural Arts	$19,805
Rainbow theatre	$142,433
General Classes	$359,617
Aquatics	$361,644
Sports & Fitness Classes	$419,094
Adult Sports	$49,669
Volunteer Services	$36,352
Sub-total Parks & Recreation	***$5,594,422***
Police Administration	$673,293
Records	$1,258,376
Personnel & Training	$323,100
Communications	$2,582,824
Patrol Services	$11,852,045
Traffic	$2,703,606
Crossing Guards	$289,490
Community Relations	$849,918
Investigations	$2,244,124
Sub-total Police	***$22,776,776***
Fire Administration	$506,916
A/B/C Battalions Operations	$12,808,257
Disaster Preparation & Public Education	$216,679
Prevention Div Admin	$363,513
Fire Inspection, Plan Check & Invstg	$700,274
Sub-total Fire	***$14,595,639***
Non-Departmental	***$5,012,368***
Grand Total	**$65,757,098**

Sources: "2011-2012 Budget & Financial Plan, Final Budget, City of Milpitas," pages 98 & 99; and ALH Urban & Regional Economics.

Notes:
(1) Totals include Personnel Services and Supplies & Contractual Services.

Exhibit B-6
Preston Property Residential Project
City of Milpitas General Fund Charges for Current Services
FY 2011-2012 Adopted Budget

	Description	Approved	Assigned Department (1)
3601	General Government Service Charges	$111,000	Administration
3602	Sales of Maps and Documents - Gen Govt	$0	Administration
3603	Rents, Leases and Concessions - Gen Govt	$253,000	Administration
3604	BL Processing Fee	$145,000	Administration
3608	PJ Legal Overhead Charge	$16,000	Administration
3609	PJ Legal Reimbursement	$7,000	Administration
3611	PF Overhead Charges - PW/E	$370,000	PW and Eng.
3612	PJ Labor Reimbursement - PW/E	$160,000	PW and Eng.
3613	PJ Vendor Reimbursement - PSW/E	$2,000	PW and Eng.
3616	Engineering Plan Check Fee	$10,000	PW and Eng.
3617	Planning Fees	$1,000	PW and Eng.
3618	Sales of Maps and Doc - PW/Engr	$1,000	PW and Eng.
3619	Rent, Lease & Concess - PW/Engr	$25,000	PW and Eng.
3631	Paramedic Service	$2,000	Fire
3632	Firewatch Services	$1,000	Fire
3633	Fire Cost Recovery	$0	Fire
3634	Unwanted Alarms - Fire	$13,000	Fire
3637	Fire Service Charges	$200,000	Fire
3638	Sale of Maps & Documents - Fire	$0	Fire
3639	Fire Electronic Archive Charge	$8,000	Fire
3641	Police Service Charges	$430,000	Police
3643	Fingerprints	$2,000	Police
3644	Sales of Maps & Documents - Police	$12,000	Police
3645	Police Cost Recovery	$2,000	Police
3646	Rents, Leases & Concessions - Police	$4,000	Police
3647	DUI - Police Cost Recovery	$6,000	Police
3651	Rents, Leases & Concessions - Recreation	$135,000	Parks & Rec.
3652	Recreation Fees	$1,425,953	Parks & Rec.
3653	Senior Nutrition Fees	$20,000	Parks & Rec.
3655	Sales of Merchandise Recreation	$2,000	Parks & Rec.
3661	Sales of Maps & Documents - Building	$0	Building
3662	Records Retention Fee	$30,000	Building
3663	Building Service Charges	$1,000	Building
3665	PJ Overhead Charges - Building	$103,000	Building
3666	PJ Labor Reimbursement - Building	$47,000	Building
3667	Building State Mandated Standard Fee	$4,000	Building
3672	Public Works Cost Recovery	$10,000	PW and Eng.
3681	PJ Overhead Charge - Planning	$90,000	Planning
3682	P Labor Reimbursement - Planning	$40,000	Planning
3683	PJ Vendor Reimbursement - Planning	$13,000	Planning
3685	Housing & Neighborhood Services	$18,000	Planning
3691	Fire GIS Mapping	$0	Fire
3692	Fire Automation Fee	$17,000	Fire
		$3,736,953	

Sources: "2011-2012 Budget & Financial Plan, Final Budget, City of Milpitas," pages 70 & 71; and ALH Urban & Regional Economics.

Notes:
(1) Allocated to General Fund departments by ALH Urban & Regional Economics. These charges are assumed to reduce the General Fund expenditures and are hence a deduct against the General Fund expenditures in Exhibit B-5.

Exhibit B-7
Preston Property Residential Project
City of Milpitas Revenues to Offset General Fund Expenditures
FY 2011-2012 Adopted Budget

	Description	Approved	Assigned Department (1)
Licenses and Permits			
3210	Building Permits	$2,537,000	Building
3220	Fire Permits	$620,000	Fire
3240	Life Safety Annual Permits	$240,000	Fire
3250	Fire Inspections	$46,000	Fire
	Sub-total	$3,443,000	
Fines and Forfeits			
3301	Vehicle Code Fines	$308,000	Police
3302	Other Court Fines	$262,000	Police
3305	Booking Fees	$5,000	Police
3306	NBO Violation Fees	$4,000	Planning
3307	Impound Fees	$84,000	Police
3308	Animal Violations	$10,000	Planning
3309	False Alarm Fee	$39,000	Police
	Sub-total	$712,000	
Operating Transfers In			
3806	Op Trfs in from Solid Waste Service	$127,512	Allocated
3807	Op Trfs in from Solid Waste Reduction	$112,535	Proportionally to
3808	Op Trfs in from Housing Reserves	$1,032,754	all City
3810	Op Trfs in from Park Impr	$0	departments
3811	Op Trfs in from RDA	$8,148,195	based upon the
3812	Op Trfs in from Water M&O	$1,703,840	distribution of the
3814	Op Trfs in from Recycled	$151,102	City's General
3815	Op Trfs in from Sewer M&O	$1,434,209	Fund
3817	Op Trfs in from Equipment Replacement	$0	expenditures
3819	Op Trfs in from Other	$2,711	pursuant to
3822	Op Trfs in from General Gov't Fund	$0	Exhibit 8.
3823	Op Trfs in Storm Drain Fund	$0	
3841	Appn Transfers in from Redevel	$0	
3849	Other Appn Transfers In	$0	
3899	Op Trfs in from Subsidiary CIP Fund	$0	
	Sub-total	$12,712,858	
	Sub-total not including RDA Transfers (1)	$4,564,663	

Sources: "2011-2012 Budget & Financial Plan, Final Budget, City of Milpitas," pages 69 & 71; and ALH Urban & Regional Economics.

Notes:
(1) Conservatively analyzed excluding Redevelopment Agency transfers due to the early 2012 demise of Redevelopment in the State of California.

Exhibit B-8
Preston Property Residential Project
City of Milpitas General Fund Expenditures Adjustments (1)
FY 2011-2012 Adopted Budget

	General Fund Expenditures		General Fund Adjustments for Select Revenue Offsets				
City Services	**Amount (2)**	**Percent Distribution**	**Charges for Current Services (3)**	**Licenses and Permits (4)**	**Fines and Forfeits (4)**	**Operating Transfers In (4)(5)**	**Total**
Administration	$3,092,272	4.7%	($532,000)	$0	$0	($214,656)	($746,656)
Building	$2,178,195	3.3%	($185,000)	($2,537,000)	$0	($151,204)	($2,873,204)
Information Services	$2,691,105	4.1%	$0	$0	$0	($186,809)	($186,809)
Finance	$2,407,918	3.7%	$0	$0	$0	($167,151)	($167,151)
Public Works	$5,235,009	8.0%	($579,000)	$0	$0	($363,399)	($942,399)
Engineering	$862,417	1.3%	(inc. above)	$0	$0	($59,866)	($59,866)
Planning & Neighborhood	$1,310,977	2.0%	($161,000)	$0	($14,000)	($91,004)	($266,004)
Parks & Recreation	$5,594,422	8.5%	($1,582,953)	$0	$0	($388,348)	($1,971,301)
Police	$22,776,776	34.6%	($456,000)	$0	($698,000)	($1,581,096)	($2,735,096)
Fire	$14,595,639	22.2%	($241,000)	($906,000)	$0	($1,013,186)	($2,160,186)
Non-Departmental	$5,012,368	7.6%	$0	$0	$0	($347,944)	($347,944)
Total	$65,757,098	100.0%	($3,736,953)	($3,443,000)	($712,000)	($4,564,663)	($12,456,616)

Sources: ALH Urban & Regional Economics.

Notes:
(1) Comprises General Fund expenditures less revenue offsets, such as charges for services and transfers from other City departments.
(2) See Exhibit 8.
(3) See Exhibit B-6.
(4) See Exhibit B-7
(5) See Exhibit B-7. Reflects the operating transfers excluding RDA transfers in. This is an analytically conservative option given the recent demise of Redevelopment in the State of California.

APPENDIX C: FIRM INTRODUCTION

FIRM INTRODUCTION

ALH Urban & Regional Economics (ALH Economics) is a recently formed sole proprietorship devoted to providing urban and regional economic consulting services to clients throughout California. Until early summer 2011, Amy L. Herman, Principal of ALH Economics, was a Senior Managing Director with CBRE Consulting in San Francisco, a division of the real estate services firm CB Richard Ellis. CBRE Consulting was the successor name of Sedway Group, a well established urban economic and real estate consulting firm acquired by CB Richard Ellis in the late 1990s. Ms. Herman's tenure with Sedway Group and then CBRE Consulting's land use and economics practice totaled more than 20 years. During that time Ms. Herman established a strong professional network and client base providing a range of services such as economic development and redevelopment, market feasibility analysis, fiscal and economic impact analysis, location analysis, strategic planning, and policy analysis. Ms. Herman's client base includes governmental clients, transportation agencies, corporations, environmental consultants, educational and health institutions, non-profits, and developers.

During spring 2011, CBRE chose to restructure the land use and economics practice area within CBRE Consulting. Ms. Herman took this opportunity to establish her own firm, through which she can continue to serve her existing client base and expand her practice in areas that suit her professional and personal interests. Examples of clients that have already retained the services of ALH Economics include the following: University of California at Berkeley; LSA Associates; Jack Faucett Associates; Hanna Novato, LLC; Terry Margerum & Associates; Raney Planning and Management, Inc.; Sedway Consulting; University of California at Riverside; During Associates; Lamphier-Gregory; Gresham Savage Nolan & Tilden, PC; California Gold Development Corporation; Environmental Science Associates (ESA); Arcadia Development Co.; PCR Services Corporation; Catellus Development Corporation; Sedgwick LLP; Michael Brandman Associates; the City of Concord; and the Hospital Council of Northern and Central California.