NEW HAVEN – HARTFORD – SPRINGFIELD

HIGH SPEED RAIL PROGRAM

Berlin Station

OSTA Administrative Decision Request/Checklist

STATE PROJECT NO. 170-2296

AUGUST 2013

Prepared For:

Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, Connecticut 06131-7546

Submitted By: **PROGRAM MANAGEMENT TEAM,**

PARSONS BRINCKERHOFF

Parsons Brinckerhoff
148 Eastern Boulevard, Suite 200
Glastonbury, Connecticut 06033

STV 100 Years

STV Incorporated
80 Ferry Boulevard
Stratford, CT 06615

INTRODUCTION

The New Haven-Hartford-Springfield rail project will provide Connecticut and New England with improved rail service and expanded regional multimodal transportation opportunities. The project will include increasing train speeds, improving track and signals along the corridor, upgrading bridges, constructing new stations, and enhancing safety at at-grade crossings. In addition, improvements to or relocations of seven existing stations, including Wallingford, Meriden, Berlin, Hartford, Windsor, Windsor Locks, and Springfield, for Amtrak intercity service, as well as additional parking and station access will be undertaken.

The following document provides the information requested for submission to the Office of State Traffic Administration for proposed improvements at the Berlin Station. This submittal includes the evaluation of traffic conditions in the vicinity of the Berlin Station as a result of future increased NHHS ridership and analyzes the potential traffic impacts of the proposed project on traffic operations.

ADMINISTRATIVE DECISION REQUEST CHECKLIST

STATE OF CONNECTICUT
Office of the State Traffic Administration
Department of Transportation
2800 Berlin Turnpike
P.O. Box 317546 Newington, CT 06131-7546
Phone: (860) 594-3020 Fax: (860) 594-2377

MAJOR TRAFFIC GENERATOR
ADMINISTRATIVE DECISION REQUEST/CHECKLIST
(To be used where no state highway mitigation/safety measures are proposed)

Date: October 29, 2013

(PLEASE FILL OUT COMPLETELY)

DEVELOPMENT INFORMATION

Name of Facility: New Haven-Hartford-Springfield Rail Project - Berlin Station

Location (complete street address; if none, provide map/block/lot information): 51 Depot Road

Town and Zip Code: Kensington, CT 06037

Proposed Gross Floor Area (GSF) and Land Use of Expansion: Existing 6,800 GSF station building to remain

Proposed GSF and Land Use of Land Use Change (i.e. xx retail to xx office, etc.): Existing 6,800 GSF station building to remain. Two commercial parcels and one residential parcel will be removed for expansion of station parking lot.

Total Gross Floor Area Categorized By Land Use: 6,800 GSF station building

Existing Parking Spaces: 75 Parking Spaces Added by Expansion/Land Use Change: 143

Total Parking Spaces: 218 Number Designated Handicapped: 6

Land Owner's Corporate Name*: Connecticut Department of Transportation

Land Owner Contact for Written Correspondence: John E. Bernick

Land Owner's Address: 2800 Berlin Turnpike, PO Box 317546

Town, State, & Zip Code: Newington, CT 06131

Tel: 860-594-3304

Land Owner's E-Mail: John.Bernick@ct.gov

Full Time Permanent Jobs Created: 0

CONSULTANT INFORMATION

Company Name: STV Incorporated

Contact Person: Tim Casey

Address: 80 Ferry Boulevard

Town, State, and Zip Code: Stratford, CT 06615

Phone: 203-375-0521

FAX Number: 203-377-2541

E-Mail: Tim.Casey@stvinc.com

*** As noted in the municipal land records. If there is more than one land owner, a separate form shall be provided for each.**

ADMINISTRATIVE DECISION SUBMISSION GUIDELINES

- All of the information listed below shall be submitted for the review of new major traffic generators that do not substantially affect the state highway system (i.e. mitigation or safety measures regarding state highways are not necessary to accommodate traffic generated the new major traffic generator).
- The information is also required for the review of proposed expansions or land use changes to existing major traffic generators that predate the Office of the State Traffic Administration (OSTA) certification process and those that were previously certified that do not substantially affect the state highway system.

If changes to the state highway system are being proposed to mitigate the impact of the traffic associated with a new major traffic generator or a proposed expansion or land use change to an existing major traffic generator then the development will be considered to have a substantial impact on the state highway system **DO NOT USE THIS CHECKLIST**. Formal OSTA action will be required and a major traffic generator certificate application and the information on its associated checklist must be submitted.

This completed checklist shall accompany the administrative decision request. Copies of any information submitted but not considered pertinent to the application will be discarded.

Five (5) paper copies and one (1) DVD of the information deemed appropriate to the development shall be submitted to the OSTA, with an additional set of the information forwarded by the developer to the Local Traffic Authority of each involved municipality. The DVD shall contain all required information in digital (i.e. not scanned) .pdf format and the original data files for the traffic and drainage analysis.

The request will not be considered complete until all of the applicable information is received.

SUBMITTED	N/A	
☑	☐	I. Site Plan:

An overall site plan showing the entire OSTA certifiable area, including the administrative decision review area uniquely identified as such, shall be provided, sized to fit on a single 2' x 3' plan sheet, that identifies all buildings (including gross floor area and land use for each), parking spaces, property lines, internal connections to abutting properties, names of all property owners (including the abutting property owners), and the complete street address(es) for all properties within the certifiable area. If street address information is not available, show map / block / lot information. An aerial photograph may be used.

The entire OSTA certifiable area shall include all parcels whose traffic must use the review development's access drive(s) and shall be distinguishable by a distinct peripheral property line with the call out "OSTA Certifiable Area". Refer to the OSTA web site to view sample overall site plans.

The overall site plan must show the Intersection Sight Distances (ISD) that will be provided and maintained for any existing and proposed drives onto a state highway that were not part of a previous OSTA certificate. The ISD may be shown directly on the drives or listed in a tabular format.

	☑	If any state highway driveway ISD encroach on property not owned by the AD developer, OSTA certification will be required and the development proposal will not qualify for an AD. The N/A box must be checked here to verify there is no such encroachment.

SUBMITTED	N/A	
☑	☐	II. Site Location Plan - Showing State highways and major intersecting Town roads in the vicinity of the site.
		III. Traffic Information - Contact the Trip Analysis Section at (860) 594-2025 with any questions regarding trip generation or distribution. The amount of traffic information required will be based on the expected number of new trips associated with the development/expansion/land use change.
☐	☑	If 50 or fewer new trips, submit only information noted in Item D-1 below.
☐	☑	If more than 50 but less than100 new trips, submit all information noted under Item C below as well as the information noted in Item D-1 and D-2 for all site driveways.
☑	☐	If approximately 100 or more new trips, or 50 or more new trips to an individual intersection left turn movement, then submit all information noted under Items A through G below for site access driveways and any other intersections where approximately 100 or more new trips are being added, or 50 or more new trips to an individual intersection left turn movement.
		A. Existing Traffic Volumes
☑	☐	1. Flow diagrams showing the appropriate existing peak hour traffic volumes for the proposed development, inclusive of all site drives. Diagrams must indicate date of submission and date of existing traffic.
☑	☐	2. Identify the hours of the day, day of week and how the peak hours were determined in relation to the proposed development.
		The morning/afternoon weekday and weekend midday peak hours are the most typical time periods analyzed. Depending on the type of proposed development, all or some combination of these hours will be required. In some cases, the peak hour of the generator may be needed (e.g. movie theatre – evenings, school – dismissal peak).
		Approach volumes must be totaled and checked for accuracy before submission. Traffic volumes between intersections shall be balanced or an explanation for the break in traffic flow provided.
		Areas experiencing a significant recreational peak shall be counted during the peak season. When this is not possible, traffic volumes may be seasonally adjusted to reflect the heaviest peak hour volume.
		B. Background Traffic
☑	☐	1. Identify other developments, including those previously approved by the OSTA, or pending, but not yet operational, and include their volume in the background traffic.
☑	☐	2. Identify any annual growth or seasonal adjustment factors used and justify their selection.

SUBMITTED	N/A	
☑	☐	3. Provide flow diagrams showing the appropriate background peak hour traffic volumes for the proposed development as determined in the existing condition. Diagrams must indicate date of submission and date of background traffic. Background traffic flow diagrams must be consistent with existing traffic diagrams.

Approach volumes must be totaled and checked for accuracy before submission. Traffic volumes between intersections shall be balanced or an explanation for the break in traffic flow provided.

If there are overlapping intersections with a recent, previously approved MTG, the combined traffic figures from the prior MTG shall be used as base traffic for the new project.

C. Trip Distribution

☑	☐	1. Provide flow diagrams showing the percent distribution of generated traffic, by direction, for each major road leading to the area and at all access points. Diagrams must include date of submission. Flow diagrams shall be consistent with the peak hours analyzed in the existing and background traffic conditions.
☑	☐	2. Provide a description of the methodology used to develop the trip distribution. Any differences in the approach and departure distribution shall be explained.

D. Site Generated Traffic / Combined Traffic Volumes

☑		1. Submit a narrative regarding logic used for the trip generation.
☑	☐	2. Provide flow diagrams for the applicable peak hour(s) for the generated traffic volumes.
☑	☐	3. Provide flow diagrams for the applicable peak hour(s) for the combined traffic volumes (the sum of the background and generated traffic volumes). Diagrams must include date of submission and date of combined traffic.

In most cases, trip generation data derived from the latest ITE Trip Generation Report will be acceptable. Approved ConnDOT studies are currently utilized to derive trip generation data for, super food stores and Dunkin' Donuts locations. Other studies will be taken into consideration, but will be subject to approval.

Out parcels contained within retail developments shall utilize the most specific land use code available via ITE or other acceptable study data. For restaurants, indicate whether it is a fast- food or sit-down style service, and if there is a drive-up window proposed.

Trip generation for the Christmas Season, as defined by ITE, is not currently required. Trip generation shall reflect a successful day, not abnormally high-peak periods such as holiday weekends.

For retail developments, Friday afternoon and Saturday midday peak are required study periods. For apartments, condominiums, hotels and motels, the number of 1-, 2- and 3-bedroom units, and the square foot area of each type of unit shall be noted. For hotels and motels, list the number of rooms.

SUBMITTED	N/A	
		E. Capacity Analysis, including all input data, supportive computation sheets and/or charts shall be submitted. The format for the submitted analysis shall be in accordance with Transportation Research Board's Highway Capacity Manual (HCM 2000). Inquiries about the format of the analysis may be directed to the Division of Traffic Engineering (860) 594-2710. Analysis should be provided for intersections, interchanges, or expressways for the following time periods and traffic conditions:
☑	☐	1. Background Traffic and Combined Traffic – Analyze same peak hours as shown in the traffic flow diagrams.
☐	☑	2. Morning and afternoon peak hour of the generator, if different than the morning and afternoon peak hour of the adjacent highway.
		F. Storage / Queue Analysis - The submission of a storage and/or queue analysis supporting the background and combined traffic capacity analysis provided under Sections III-E.1 and III-E.2 is usually necessary under the following conditions:
☑	☐	1. When exclusive turning lanes exist, there is potential through lane blockage of turn lane or visa verse.
☑	☐	2. When there is a potential for vehicular backups affecting operation of nearby intersections, major drives and/or nearby rail crossings.
☐	☑	3. When there is limited stopping sight distance on a signalized approach.
☐	☑	4. Off-ramp approaches to signalized intersections.
☐	☑	5. Other conditions may be identified during the review by the engineer which would require a storage/queue analysis.
☑	☐	G. Supply information on the latest available three years of accident experience. A narrative for all existing site drives and off-site impacted locations is required. A table of data or collision diagram may be used to demonstrate the crash history.

IV. Drainage Requirements

For developments that do not have frontage on a state highway or state railroad, no drainage information will be required.

For those that do have frontage on a state highway, the amount of drainage information required will be based on an assessment of the drainage impact to the state highway system associated with the development/expansion/land use change. See attached form " *OSTA Administrative Decision Request – Drainage* " to determine if this project will qualify for an exemption of drainage information or if further drainage information as shown below will be required.

☑	☐	A. Drainage Report - A well-documented Drainage Report will facilitate the drainage review process. Failure to provide the Drainage Report will delay the review and approval process until the document is received. Inquiries regarding submissions may be directed to the Division of Design Services - Hydraulics and Drainage, (860)594-3238.

SUBMITTED	N/A	
☑	☐	1. Locate the MTG site on an 8.5" x 11" excerpt of a USGS topographic quadrangle map (Scale 1:24,000). Indicate the quadrangle name and number on this plan.
☑	☐	2. Locate the MTG site on the relevant portion of the FEMA Flood Insurance Rate Map (FIRM) and Floodway Map. Indicate the panel number, scale, and effective date of the map(s).
☑	☐	3. A detailed narrative specifically relating the proposed drainage design to existing State drainage facilities, (roadways, railroads, etc.), describing any potential impacts consequent to the proposed construction is required. The narrative must contain a definitive conclusion on whether there is any drainage impact to State facilities. The narrative should also include a discussion of existing and proposed drainage patterns. It is desirable to maintain the existing drainage patterns. Diversions of storm runoff to State drainage facilities are generally not acceptable unless appropriate drainage rights are obtained from all affected downstream owners.
☑	☐	4. Contour plans depicting tributary drainage areas both within and, where applicable, beyond the MTG boundaries are required. In some cases, the entire MTG site may drain away from the State transportation facility. In this instance, the report narrative identified in Item No. 3 above should so indicate. This will negate the requirement for drainage design computations; however, contour plans are still needed to verify the drainage patterns.
☑	☐	5. Submit drainage layout and details of existing and proposed storm sewer as well as hydraulic structure designs and their relationships to any adjacent State drainage facilities. All proposed outlets connecting or discharging to State maintained facilities must be clearly indicated. Further, existing State maintained drainage facilities that are located adjacent to development property and/or are potentially affected by the proposed construction must be shown on the plans. Copies of "as-built" plans showing the location of these State systems are acceptable providing that the appropriate pipe sizes, type of pipe, invert elevations, drainage structure types, and top of frame elevations are obtained for hydraulic computations, where required.
☑	☐	6. Existing and proposed drainage rights and easements of the MTG site and contiguous State properties must be identified on the plans and described in the drainage report narrative. If there are no existing drainage rights or easements recorded for the MTG or contiguous State property, the drainage report narrative must indicate same.
		7. For development sites that: • Connect or discharge to existing State drainage facilities – a. and b. below are required. • Receive discharge from existing State drainage facilities – a. and b. below are required. • Propose pavement widening on State roadways – a., b., and c. below are required.

SUBMITTED	N/A	
☑	☐	a. Supporting computations and electronic data files for gutter flow, storm sewer, hydraulic grade line (water surface profile) and outlet protection, as appropriate for the development.
☑	☐	b. An analysis, including computations and electronic data files for gutter flow, storm sewer, hydraulic grade line (water surface profile) and outlet protection, as appropriate for the State facilities, shall be performed to its terminus or to a distinct hydraulic control to verify its adequacy. This analysis must consider the relative times-to-peak of the site and State maintained drainage systems and is required even if a reduction in peak flows from the site itself is anticipated.
☑	☐	c. A visual inspection of the existing State drainage facilities (pipes and structures) shall be performed to verify its condition and documented. The condition of existing ditches and outlets of the State drainage systems shall also be field inspected to verify their stability, need for cleaning, and to ensure no erosion or sediment problems exist.
☑	☐	8. Design plans and computations (including electronic data files) for any proposed storm water detention (above or below grade), retention or infiltration facilities. These plans must indicate sizes, dimensions, elevations and construction materials for the facility and its proposed outlet. At a minimum, design requirements must meet the standards set forth in the Department's Drainage Manual. Where failure of these facilities could impact adjoining State systems or structures, an Inspection/Maintenance plan must be prepared by the developer. This plan, together with any formal agreements or related documents, are normally filed in the town land records.
☑	☐	9. Indicate the location and type of any features included in the proposed drainage design to treat storm runoff and thereby enhance storm water quality. Treatment shall be accomplished prior to discharging to State drainage systems.
☐	☑	10. For sites which contain regulated floodplain or floodway areas as defined by the relevant Flood Insurance Study documents, within their boundaries, the applicant must depict the limits of same on the development site plan(s). Additionally, any proposed encroachments within these regulated areas must be evaluated, at least in a qualitative sense, for potential impacts upon upstream or downstream State facilities. Ultimately, a detailed hydraulic evaluation of floodplain or floodway encroachments may be required.

V. Planning and / or Zoning Approval

☐	☑	Provide a copy of local Planning and or Zoning approval and date received, or documentation that it is not required. If the Planning and or Zoning approval does not specify the size of the development, land use and parking which has been approved, or does not reference a site plan with the same information, then written confirmation from the Planning and or Zoning Office will also be required specifically indicating what has been approved.

SUBMITTED	N/A	
☐	☑	If approval is required, the town must be in receipt of an appropriate application prior to the submission of the AD request to the OSTA. If the approval has not been granted, a statement indicating the anticipated schedule for obtaining Planning and or Zoning approval must be supplied. Upon approval, a copy thereof must be submitted.

VI. Local Traffic Authority Concurrence

☐		Written confirmation from the Local Traffic Authority indicating concurrence with the assessment of no substantial impact to the state highway system contingent on the Department's agreement with said assessment must be provided.

OFFICE OF THE STATE TRAFFIC ADMINISTRATION (OSTA) - ADMINISTRATIVE DECISION REQUEST - DRAINAGE		
Name of Facility	Town	State Route(s)
New Haven-Hartford-Springfield Rail Project - Berlin Station	Berlin	Rte 372
Location (complete street address; if none, provide map/block/lot information)		
51 Depot Road		

Stormwater Runoff (*at least one of the following must be checked to qualify):*

☐ The proposed project will not increase impervious area at the site.

☐ Stormwater runoff from the site does not drain nor is directed to State property or State owned/maintained drainage facilities.

Diversions (*the following must be checked to qualify)*:

☑ Proposed drainage patterns on the site are maintained as closely as possible to the existing site conditions. No diversion of stormwater or stream flow is proposed that will potentially affect State or private property.

State Drainage System Modifications (*the following must be checked to qualify)*:

☑ There are no new connections or modifications to State owned/maintained drainage systems.

☐ There are no modifications to the development drainage system that a State drainage connects or discharges to.

Drainage Rights/Easements (*Check all that apply. Response will be used to determine if new/additional ROW is required*):

☐ State drainage facilities are not located on the subject site.

☐ Runoff from any adjacent State highway or railroad facility does not discharge onto the subject site.

☐ Existing and /or proposed site drainage does not connect to a State owned/maintained drainage facility.

☑ Existing site drainage connects to a State owned/ maintained drainage facility. A record of the connection
A record of the connection - ☐ exists - ☐ does not exist at the DOT District office.

☐ Land records were searched and no State drainage rights/easements were found for the subject site.

☐ A State " drainage right of way " or " easement " is recorded on the land records for the property.

Description of State drainage right of way or easement (*type & location*)

☐ The proposed project will not affect an existing State drainage right of way or easement on the subject property.

Flood History (*the following must be checked to qualify*):

☐ The subject site does not have a history of flooding or known drainage problems. The applicant has consulted with the municipality and the DOT District Drainage office regarding any flood history or known drainage problems at the site. A copy of the meeting/telephone report is attached.

Other Approvals

Has the drainage design and stormwater management for the project been approved at the local level? ☐ Yes ☑ No

Professional Engineer Certification

I have conducted a site investigation and reviewed the proposed project plans relative to the information required for this document. Based on my review and reasonable investigation, including my inquiry of those individuals responsible for obtaining the in formation, I hereby certify that the information provided on this document is complete and true.

Name	PE Number	
James E. Sherwonit	12175	
Signature	Date	Affix P.E. Stamp Here

DRAINAGE REQUIREMENTS

MH
TF = 60.5
INV. IN = 52.15
INV. OUT = 52.15

ROOF DRAINS TO
DISCHARGE TO GRADE
ON STONE SPLASH PAD.

TYPE "C" CB TOP
TF = 56.0
INV. IN = 49.8
INV. OUT = EXIST.

CONNECT TO EXISTING CB
INV. IN = 51.9

REMOVE EXIST. CB
EXTEND EXIST. PIPE

OUTLET CONTROL
STRUCTURE 1 (OCS)
TF = 56.6
INV. IN = 50.8
INV. OUT = 50.8

TYPE "C" CB
TF = 60.7
INV. = MATCH EXIST.

LAWN DRAIN
TF = 59.4
INV. IN = 52.4
INV. OUT = 52.4

PROPOSED GAUNTLET
TRACK BASELINE
(N.I.C., SEE NOTE 2)

PROPOSED TRACK 2 BASELINE
(N.I.C., SEE NOTE 1)

PROPOSED TRACK 1 BASELINE
(N.I.C., SEE NOTE 1)

LAWN DRAIN
TF = 59.4
INV. IN = 53.1
INV. OUT = 53.1

MH
TF = 58.0
INV. IN = 53.3
INV. OUT = 53.3

CONST. MH ON EXIST. PIPE
MATCH EXIST. INVERTS

MH
TF = 59.5
INV. IN (W) = 52.1
INV. IN (N) = 54.4
INV. OUT = 52.0

REMOVE EXIST 15" RCP

TYPE "C" CB
TF = 56.3
INV. = 53.0

MH = 8' DIA.
TF = 57.6
INV. = 50.8
INV. = 50.8
INV. = 50.8

15" RCP

1330+00

1333+05

1335+00

1340+00

8" PVC
INV. = 58.0
INV. = 57.0

12" PVC

8" PVC

36" HDPE

UNDERGROUND DETENTION SYSTEM
SITE NO. 1
2000LF OF 36" HDPE PIPE
BOTTOM OF SYSTEM = 50.8

12" RCP

24" RCP

RAIN GARDEN
6" PERF. HDPE

LAWN DRAIN
TF = 57.0
INV. IN = 53.8
INV. OUT = 53.5

INV. = 57.2

6" PVC

CONST. MH ON EXIST. PIPE
INV. IN (N) = 53.4
INV. OUT = 53.4

MH
TF = 57.8
INV. IN (W) = 52.4
INV. IN (S) = 52.4
INV. IN (E) = 52.3
INV. OUT = 52.3

TYPE "CL" CB
TF = 56.0
INV. IN = 53.0

MH
TF = 60.0
INV. IN (N) = 55.8
INV. OUT = 55.8

MH
TF = 57.7
INV. IN = 52.2
INV. OUT = 52.1 - LOW FLOW
INV. OUT = 52.8

TYPE "C" CB
TF = 58.5
INV. IN = 54.7
INV. OUT = 54.7

MH
TF = 57.8
INV. IN (S) = 52.4
INV. IN (HDS) = 51.9
INV. OUT = 51.9

CONVERT CB TO MH

LAWN DRAIN
TF = 57.75
INV. IN = 53.25
INV. OUT = 55.0

TYPE "CL" CB
TF = 57.0
INV. IN (W) = 53.2
INV. IN (N) = 53.1
INV. OUT = 53.1

MH - 8' DIA.
TF = 58.0
INV. IN = 51.8
INV. OUT = 50.8
INV. OUT = 50.8

MH - 8' DIA.
TF = 59.3
INV. = 50.8
INV. = 50.8
INV. = 50.8

TYPE "CL" CB
TF =56.0
INV. IN = 53.0

MH
TF = 57.5
INV. IN (S) = 52.7
INV. IN (W) = 52.6
INV. OUT = 52.6

HDS (SITE NO. 1)
TF = 57.8
INV. IN = 52.2
INV. OUT = 51.9

MH
TF = 58.9
INV. IN (N) = 53.9
INV. OUT = 53.9

FARMINGTON AVENUE

STATE OF CONNECTICUT D.O.T. (7-168-3A)

NOTE 1:
THE BASELINE OF THE PROPOSED TRACK IS BY OTHERS AND BEING CONSTRUCTED UNDER A SEPARATE STATE PROJECT. IT IS SHOWN HERE FOR INFORMATIONAL PURPOSES ONLY AND IS IN NO WAY WARRANTED TO INDICATE THE AS-BUILT CONDITIONS IN THE FIELD. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE PROPOSED TRACK VIA A FIELD SURVEY PRIOR TO START OF PLATFORM CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES. AT ALL TIMES DURING THE CONSTRUCTION OF THE PLATFORMS, THE CONTRACTOR SHALL MAINTAIN THE 5'-7" HORIZONTAL OFFSET TO THE FACE OF RUBRAIL AND THE 4'-0" VERTICAL OFFSET FROM THE TOP OF NEAREST RAIL.

NOTE 2:
THE BASELINE OF THE PROPOSED GAUNTLET TRACK IS BY OTHERS AND BEING CONSTRUCTED UNDER A SEPARATE STATE PROJECT. IT IS REFERENCED HERE FOR INFORMATIONAL PURPOSES ONLY AND IS IN NO WAY WARRANTED TO INDICATE THE AS-BUILT CONDITIONS IN THE FIELD. AT ALL TIMES DURING THE CONSTRUCTION OF THE PLATFORMS, THE CONTRACTOR SHALL MAINTAIN THE 5'-7" HORIZONTAL OFFSET TO THE FACE OF RUBRAIL AND THE 4'-0" VERTICAL OFFSET FROM THE TOP OF NEAREST RAIL.

SEMI FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 4/9/2013

DESIGNER/DRAFTER: R. SZWELICKI
CHECKED BY: P. VITALIANO
SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..007..04..CSP..GRD.dgn

SIGNATURE/BLOCK:
Vanasse Hangen Brustlin, Inc
54 Tuttle Place
Middletown, CT 06457-1847
APPROVED BY:

PROJECT TITLE:
NEW HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

TOWN: **BERLIN**

DRAWING TITLE: **GRADING AND DRAINAGE PLAN**

PROJECT NO. **170-3155**
DRAWING NO. **DRG-001**
SHEET NO.

SITE PLAN

Building and Parking Summary						
	Existing		Proposed Administrative Design		Allowable Development with Admistrative Decision	
Land Use:	Square Footage	Parking	Square Footage	Parking	Square Footage	Parking
Train Station	6,800	75	N/A	+143	6,800	218
Houses	4,760		N/A		0	
Garage	7,400		N/A		0	

6,800 SF EXISTING STATION

218 PARKING SPACES

3,140 SF HOUSE TO BE DEMOLISHED

1,620 SF HOUSE TO BE DEMOLISHED

OSTA CERTIFIABLE AREA

7,400 SF GARAGE TO BE DEMOLISHED

PAVEMENT MARKING NOTES

1. FINAL PAVEMENT MARKINGS SHALL BE EXPOXY RESIN.
2. PAVEMENT MARKINGS SHALL BE INSTALLED THROUGHOUT THE PROJECT LIMIT OF PAVEMENT MARKINGS OR AS DIRECTED BY THE ENGINEER. ALL CONFLICTING PAVEMENT MARKINGS WITHIN THE LIMIT OF CONSTRUCTION TO BE REMOVED.
3. PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH TRAFFIC STANDARD DETAIL SHEET TR-1210_03 "SPECIAL DETAILS AND PAVEMENT MARKINGS FOR TWO-WAY HIGHWAYS."
4. BAR TYPE CROSSWALK SHALL BE 24" WIDE BAR WITH 24" SPACING.

STANDARD PARKING SPACES:	212
ACCESSIBLE PARKING SPACES:	6
TOTAL PARKING SPACES:	218

SIGNING NOTES

1. ALL EXISTING SIGNS WITHIN LIMIT OF SIGNING TO BE REMOVED UNLESS OTHERWISE NOTED ON PLAN OR DIRECTED BY THE ENGINEER.
2. ALL EXISTING SIGNS OUTSIDE THE LIMIT OF SIGNING TO REMAIN UNLESS OTHERWISE NOTED ON PLAN OR DIRECTED BY THE ENGINEER.
3. EXACT SIGN LOCATIONS TO BE VERIFIED BY THE ENGINEER. SIGNS SHALL NOT BE INSTALLED LESS THAN 10' FROM UTILITY POLES. UTILITY POLE LOCATIONS SHOWN ON PLAN ARE APPROXIMATE. SEE UTILITY PLANS FOR EXACT LOCATIONS.
4. SIGN SHALL BE INSTALLED PER TRAFFIC TYPICAL SHEET TR-1208_01 "SIGN SUPPORT AND SIGN PLACEMENT DETAILS, GORE EXIT SIGN" AND TR-1208_02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
5. ALL SIGNS TO BE SALVAGED OR DISPOSED OF IN ACCORDANCE WITH THE SPECIAL PROVISION ITEM NO. 1206023A "REMOVAL AND RELOCATION OF EXISTING SIGNS."
6. ALL STREET NAME SIGNS WITHIN THE PROJECT LIMITS SHALL BE RELOCATED AS NECESSARY. THIS RELOCATION IS PAYABLE UNDER ITEM NO. 1206023A "REMOVAL AND RELOCATION OF EXISTING SIGNS."

DETECTORS

I.D.	SIZE	TURNS	MODE
D5	10' X 6'	3	PRESENCE

100% SUBMISSION

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 12/8/2013

DESIGNER/DRAFTER: **P. BRAND**
CHECKED BY: **A. SARDILLI**
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CIV..CGR..CPS..0170-2296..007...04..CSP...SPMP_001.dgn

SIGNATURE/BLOCK:
Baker
Michael Baker Jr., Inc
500 Enterprise Drive, Suite 2B
Rocky Hill, CT 06067

APPROVED BY:

PROJECT TITLE:
NEW HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

TOWN: **BERLIN**

DRAWING TITLE:
SIGNING AND PAVEMENT MARKING PLAN

PROJECT NO. **170-3155**
DRAWING NO. **SPM-001**
SHEET NO. **01.04.002**

SITE LOCATION PLAN

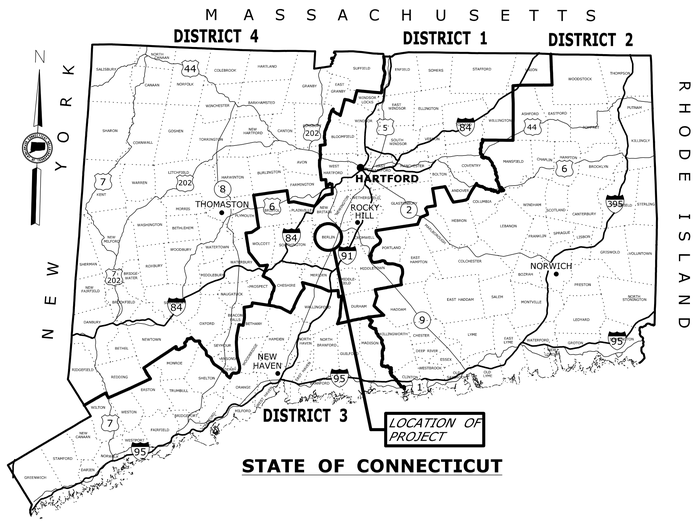
CONNECTICUT DEPARTMENT OF TRANSPORTATION

Plans For

NEW HAVEN - HARTFORD - SPRINGFIELD RAIL CORRIDOR PROJECT

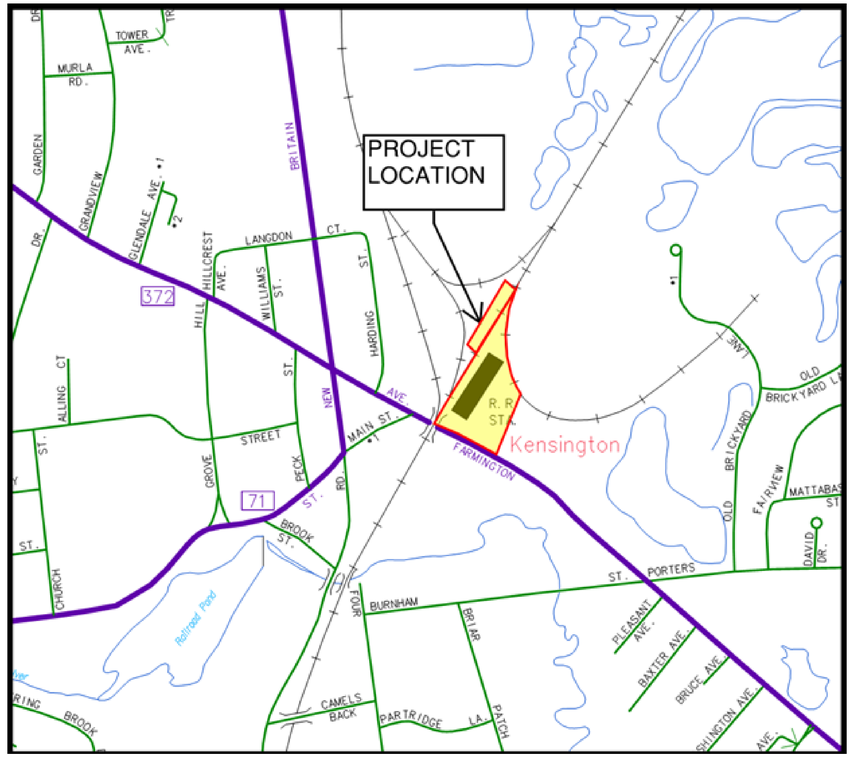
Town(s)/City of

BERLIN



STATE OF CONNECTICUT

STATION UPGRADE PLANS



LOCATION PLAN

NOT TO SCALE

GENERAL NOTES:

1. FEDERAL AID PROJECT NO. XXXX-XXXX
2. CONSTRUCTION SPECIFICATIONS:
   Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction, Form 816, dated 2004; Supplemental Specifications, dated July 2012; and Special Provisions
3. 400 FOOT GRID BASED ON CONNECTICUT COORDINATE SYSTEM SYSTEM N.A.D. 1983
4. VERTICAL DATUM BASED ON NAVD 1988

DISCLAIMER

IT IS THE RESPONSIBILITY OF EACH BIDDER AND ALL OTHER INTERESTED PARTIES TO OBTAIN ALL BIDDING RELATED INFORMATION AND DOCUMENTS FROM OFFICAL SOURCES WITHIN THE DEPARTMENT.

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LIST OF DRAWINGS

SHEET NO.	DRAWING TITLE	SHEET COUNT
	TITLE SHEET	1
02	GENERAL	1
03	EXISTING CONDITIONS PLAN	1
04	SURVEY CONTROL POINTS	1
05	DEMOLITION PLAN	1
06	SITE PLAN	1
07	GRADING AND DRAINAGE PLAN	1
08	SITE ILLUMINATION PLANS	2
10	CODE COMPLIANCE PLAN	1
11	ARCHITECTURAL PLANS	15
25	SIGNAGE PLANS	2
27	STRUCTURE PLANS	14
41	ELECTRICAL PLANS	8
49	MECHANICAL PLANS	2

*THE INITIAL SUBSET SHEET COUNT DOES NOT INCLUDE ADDENDUMS AND CHANGE ORDERS

PRELIMINARY DESIGN REVIEW

STANDARD CONVENTIONS

North Arrow W/No. Coor.
Grid Arrow
Edge Of Road
Concrete Pavement
Dirt Road
B.C.L.C.
Granite Curb
Guide Rail
Concrete Median Barrier
Bit. Walk
Conc. Sidewalk
Railroad Tracks
Limit Of Marsh
Stone Wall
Ledge Outcrop
Inland Wetland Limits
STATE LINE
Power Line
Swamp
Building
Transmission Tower
Chain Link Fence
Rustic Fence
Pipe Fence
Board Fence
Water Edge
Stream
Ditch
TOWN LINE
Riprap
Hedge Row
Tree Line
Shrub
Evergreen Tree
Deciduous Tree
Retaining Wall
Highway Line
Street Line
Property Line
Lot Line
Easement Line

THE DESIGN APPEARS TO CONFORM TO APPLICABLE CRITERIA. APPROVAL IS NOT TO BE CONSTRUED TO MEAN THAT ALL ASPECTS OF THE DESIGN HAVE BEEN PERSONALLY CHECKED BY THE UNDERSIGNED.

SUBMITTED BY: TRANSPORTATION PRINCIPAL ENGINEER -

APPROVAL RECOMMENDED BY: MANAGER OF -

APPROVED BY: TRANSPORTATION ENGINEERING ADMINISTRATOR - JAMES H. NORMAN P.E.

Plans For
NEW HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

Town(s)/City
BERLIN

STATE PROJECT NO.
0170-3155

DRAWING NO.
TSH-001

SHEET NO.
01.01

TRAFFIC VOLUMES

TRAFFIC VOLUMES

The traffic study area comprises three signalized intersections along Route 372 in the town of Berlin that are in close proximity to the existing rail station. These include:

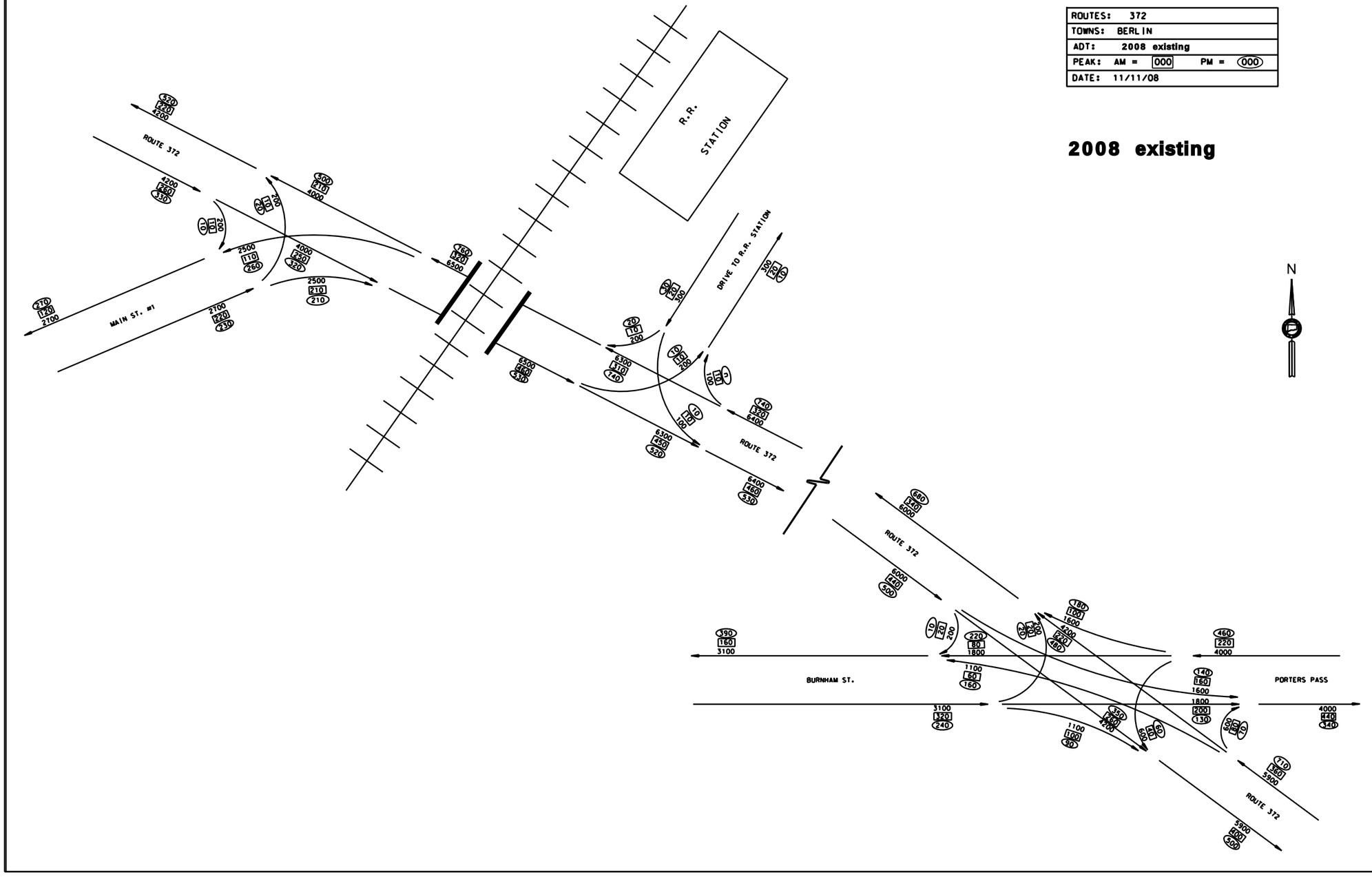
- Route 372/Farmington Avenue and Main Street
- Route 372/Farmington Avenue and Depot Road (Station Driveway)
- Route 372/Farmington Avenue and Burnham Road/Porters Pass

These study intersections were selected in consultation with the Connecticut Department of Transportation (ConnDOT) for traffic analyses performed for the NHHS High Speed Rail Service Environmental Assessment (EA).

The existing AM and PM peak hour traffic volumes were collected in 2008 by the EA consultant team. These volumes were checked and balanced by ConnDOT, who provided the following existing, 2016 No Build, and 2016 Build AM and PM peak hour volumes used for traffic analysis.

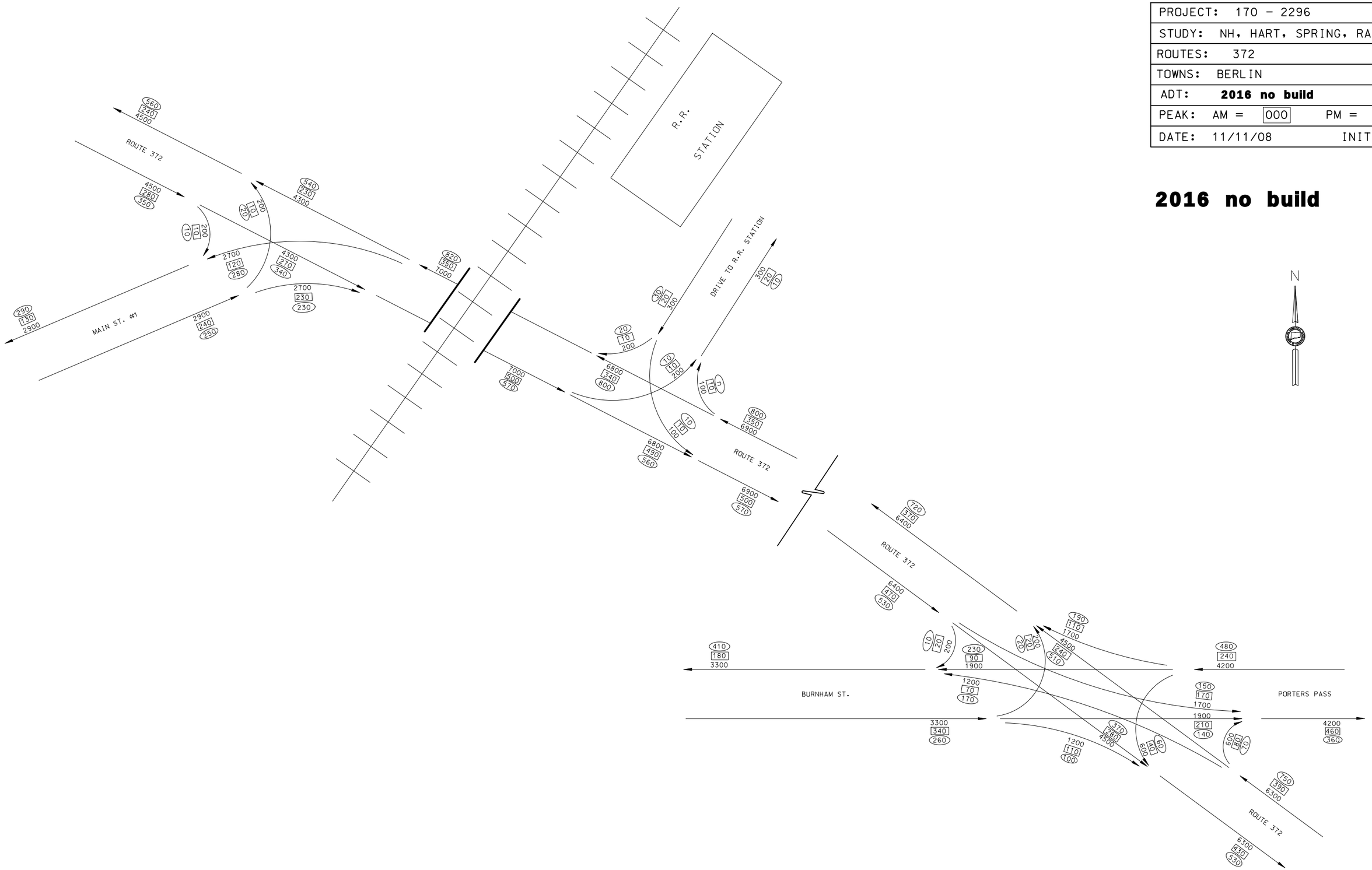
ROUTES:	372
TOWNS:	BERLIN
ADT:	2008 existing
PEAK: AM =	000 PM = (000)
DATE:	11/11/08

2008 existing



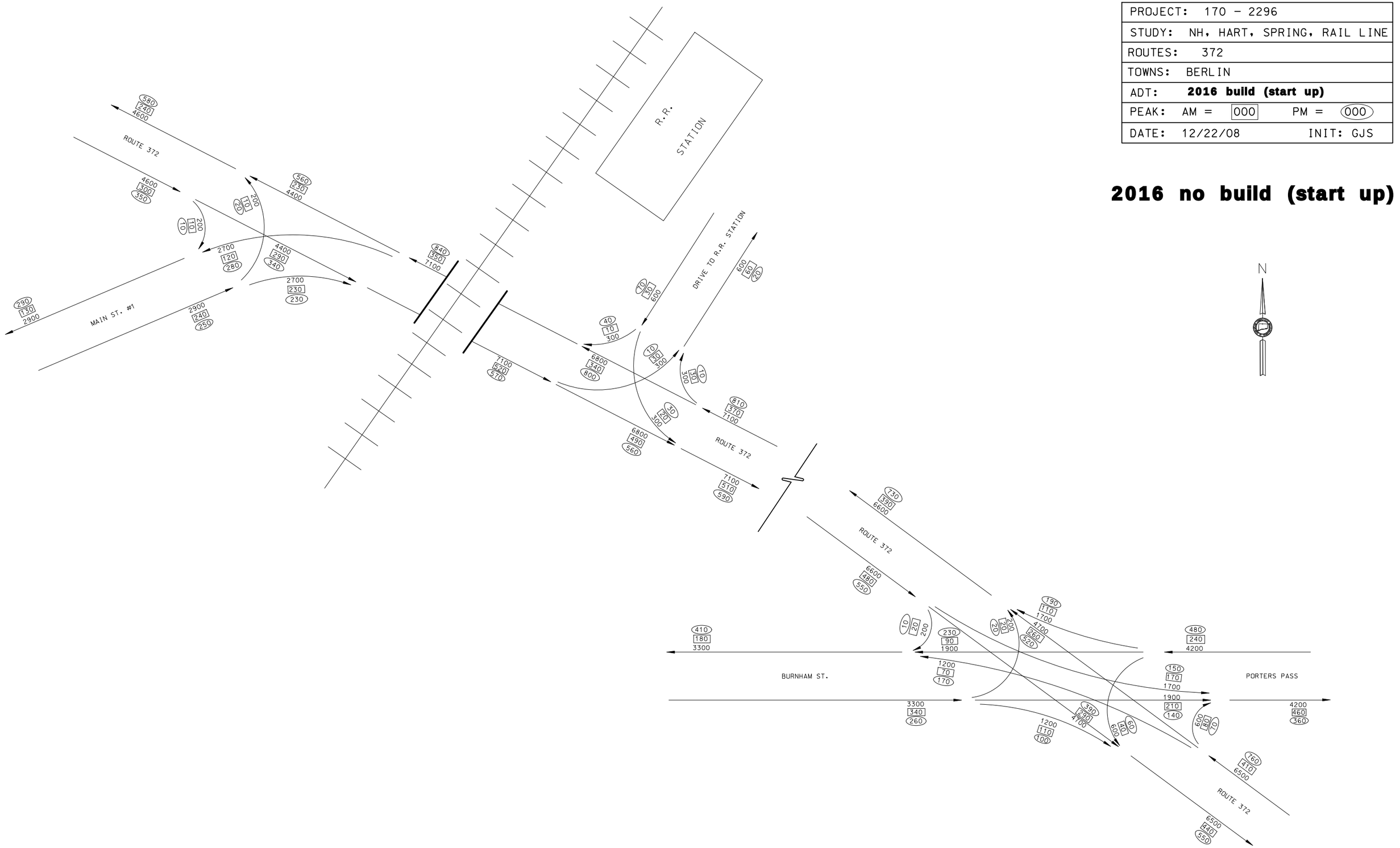
PROJECT:	170 - 2296
STUDY:	NH, HART, SPRING, RAIL LINE
ROUTES:	372
TOWNS:	BERLIN
ADT:	**2016 no build**
PEAK:	AM = 000 PM = 000
DATE:	11/11/08 INIT: GJS

2016 no build



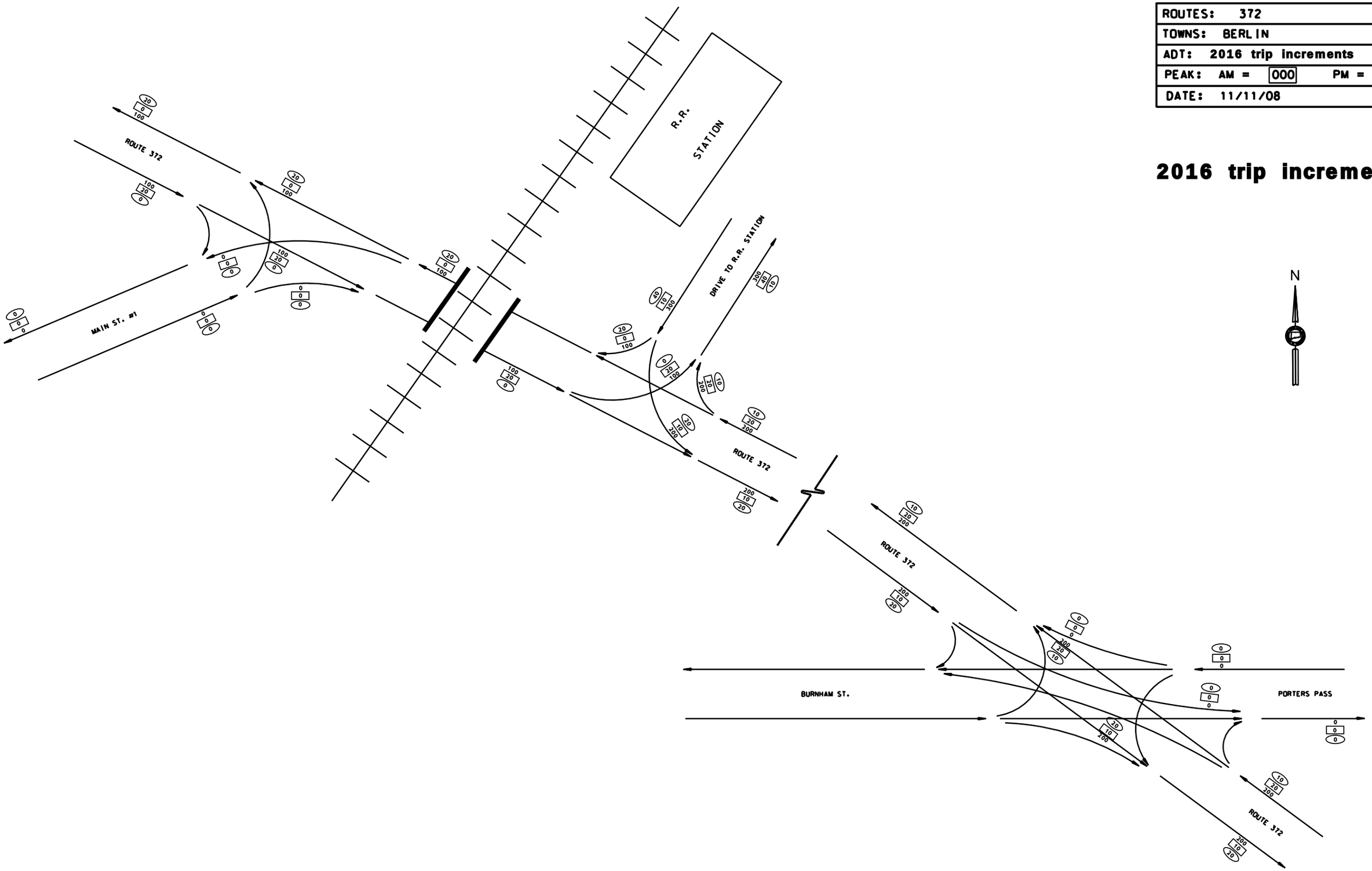
PROJECT:	170 - 2296
STUDY:	NH, HART, SPRING, RAIL LINE
ROUTES:	372
TOWNS:	BERLIN
ADT:	**2016 build (start up)**
PEAK:	AM = 000 PM = 000
DATE:	12/22/08 INIT: GJS

2016 no build (start up)



ROUTES:	372
TOWNS:	BERLIN
ADT:	2016 trip increments
PEAK:	AM = 000 PM = 000
DATE:	11/11/08

2016 trip increments



CAPACITY ANALYSIS

TRAFFIC ANALYSIS METHODOLOGY AND RESULTS

Synchro 8 traffic analysis software was used to determine the capacities and levels of service for each of the intersections comprising the traffic study. This program utilizes the analytical methodologies developed in the *Highway Capacity Manual (HCM)*, and generates an intersection level of service output based on calculated delays and queues.

For a signalized intersection, levels of service are determined for the intersection and its individual lane groups and are defined in terms of the average control delays experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the intersection or lane group is saturated.

The delay levels for signalized intersections are detailed below.

- LOS A describes operations with very low delay, i.e., up to 10 seconds per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
- LOS B describes operations with delay in the range of 10 to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- LOS C describes operations with delay in the range of 20 to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping at an intersection is significant at this level, although many still pass through without stopping.
- LOS D describes operations with delay in the range of 35 to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles that do not stop declines.
- LOS E describes operations with delay in the range of 55 to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios.

- LOS F describes operations with delay in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume-to-capacity ratios with cycle failures. Poor progression and long cycle lengths may also be contributing to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

LOS A, B, C, and D are generally considered acceptable, and LOS E and F are considered unacceptable.

The level-of-service analyses indicated that all three intersections in the study area operate at acceptable levels during both the AM and PM peak hours – with overall operations at LOS C or better.

The analysis of the future traffic conditions of the proposed project (i.e., the future No Build condition) serves as the baseline against which impacts of the project are compared. There would be no new stations and no increase in automobile traffic accessing stations under the No Build condition. Therefore, the only difference between the 2008 Existing and 2016 No Build conditions is the increased traffic volumes on the study area roadway network, which were approved by ConnDOT.

The No Build traffic analysis results indicated that all movements at the three study intersections would continue to operate at the same levels as existing conditions with the exception of westbound Porters Pass' the through/right-turn shared movement at Route 372, which would deteriorate from Existing LOS D to No Build LOS E during the PM peak hour.

The proposed project includes new surface parking for Berlin Station and increased ridership, which would generate new vehicular trips to the station. Peak-hour traffic volumes increments that would result from the project and the total 2016 Build traffic volumes were reviewed and approved by ConnDOT.

As documented in the Traffic Operations Analysis technical paper for the NHHS Environmental Assessment (EA), the impact criteria for the project were established as follows:

- Intersections serving station driveways – If the Build LOS at any intersection approach is LOS E or worse, then mitigation would be required to improve approach LOS to LOS D or better.

- Intersections not serving station driveways (off-site intersections) – If the project causes any approach to deteriorate to LOS E or worse, traffic mitigation would be needed.

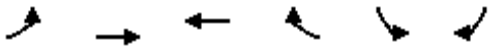
Analysis of the Build peak hour traffic volumes indicated that no deterioration in level of service would be experienced by any of the study intersection approaches.

Intersection Levels of Service at Berlin Station

INTERSECTION & APPROACH			2008 Existing						2016 No Build						2016 Build					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Route 372 at Main Street																				
Route 372	EB	LTR	0.32	14.4	B	0.46	18.8	B	0.36	15.7	B	0.49	19.6	B	0.38	15.9	B	0.48	18.9	B
	WB	L	0.18	2.3	A	0.47	2.7	A	0.20	2.4	A	0.52	4.2	A	0.22	2.6	A	0.56	4.3	A
		TR	0.20	2.9	A	0.48	3.9	A	0.22	3.1	A	0.52	4.3	A	0.22	3.2	A	0.56	4.9	A
Main Street	NB	LT	0.04	28.3	C	0.08	29.2	C	0.04	28.1	C	0.08	29.0	C	0.04	28.8	C	0.08	29.5	C
		R	0.55	27.1	C	0.49	24.1	C	0.56	26.5	C	0.52	24.4	C	0.61	29.0	C	0.59	27.9	C
	SB	LTR	0.13	38.9	D	0.09	37.0	D	0.13	38.7	D	0.09	37.0	D	0.08	36.6	D	0.06	34.9	C
Overall Intersection		**-**		**13.5**	**B**		**11.1**	**B**		**13.7**	**B**		**11.8**	**B**		**14.5**	**B**		**12.3**	**B**
Route 372 at Depot Road																				
Route 372	EB	LT	0.35	1.1	A	0.41	1.1	A	0.35	0.4	A	0.44	1.1	A	0.39	0.5	A	0.45	1.3	A
	WB	TR	0.30	7.4	A	0.72	13.3	B	0.34	7.9	A	0.78	15.5	B	0.36	8.5	A	0.81	17.8	B
Depot Road	SB	LR	0.19	39.5	D	0.14	37.4	D	0.19	39.5	D	0.14	37.4	D	0.24	37.9	D	0.28	36.5	D
Overall Intersection		**-**		**4.6**	**A**		**8.9**	**A**		**4.3**	**A**		**10.1**	**B**		**4.9**	**A**		**12.2**	**B**
Route 372 at Burnham Street/Porters Pass																				
Burnham Street	EB	L	0.11	27.8	C	0.28	27.9	C	0.10	26.4	C	0.28	26.9	C	0.10	26.4	C	0.28	26.9	C
		TR	0.78	42.5	D	0.47	28.3	C	0.82	44.2	D	0.54	28.4	C	0.82	44.2	D	0.54	28.4	C
Porters Pass	WB	L	0.42	32.5	C	0.30	27.0	C	0.39	30.4	C	0.29	25.8	C	0.39	30.4	C	0.29	25.8	C
		TR	0.38	30.0	C	0.89	51.4	D	0.53	30.7	C	0.95	61.1	E	0.53	30.7	C	0.95	61.1	E
Route 372	NB	L	0.10	8.2	A	0.32	9.6	A	0.12	9.1	A	0.36	10.7	B	0.13	9.1	A	0.37	10.9	B
		T	0.26	12.6	B	0.60	20.3	C	0.29	14.1	B	0.67	23.1	C	0.32	14.4	B	0.68	23.5	C
		R	0.06	10.8	B	0.06	12.7	B	0.11	12.3	B	0.11	14.1	B	0.11	12.3	B	0.11	14.1	B
	SB	L	0.24	6.4	A	0.34	10.5	B	0.27	7.3	A	0.40	12.1	B	0.28	7.3	A	0.41	12.2	B
		TR	0.31	11.6	B	0.45	17.4	B	0.34	13.1	B	0.50	19.3	B	0.35	13.2	B	0.53	19.8	B
Overall Intersection		**-**		**21.2**	**C**		**25.6**	**C**		**22.3**	**C**		**28.9**	**C**		**22.3**	**C**		**29.0**	**C**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	250	10	110	210	0	10	0	210	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7		3.7	5.7			4.2	3.7		5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.99		1.00	1.00			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)		1853		1770	1863			1770	1583		1778	
Flt Permitted		1.00		0.50	1.00			0.95	1.00		0.99	
Satd. Flow (perm)		1853		935	1863			1770	1583		1778	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	272	11	120	228	0	11	0	228	2	4	2
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	281	0	120	228	0	0	11	228	0	8	0
Turn Type	Perm	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	
Protected Phases		2		1	6		4	4	1 4	3	3	
Permitted Phases	2			6								
Actuated Green, G (s)		38.1		50.2	50.2			13.0	25.6		2.9	
Effective Green, g (s)		38.1		50.2	50.2			13.0	21.4		2.9	
Actuated g/C Ratio		0.47		0.62	0.62			0.16	0.26		0.04	
Clearance Time (s)		5.7		3.7	5.7			4.2			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		871		666	1154			284	418		63	
v/s Ratio Prot		c0.15		0.02	0.12			0.01	c0.14		c0.00	
v/s Ratio Perm				0.09								
v/c Ratio		0.32		0.18	0.20			0.04	0.55		0.13	
Uniform Delay, d1		13.4		6.5	6.7			28.7	25.6		37.8	
Progression Factor		1.00		0.34	0.39			1.00	1.00		1.00	
Incremental Delay, d2		1.0		0.1	0.4			0.1	1.5		0.9	
Delay (s)		14.4		2.3	2.9			28.8	27.1		38.7	
Level of Service		B		A	A			C	C		D	
Approach Delay (s)		14.4			2.7			27.2			38.7	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	10	450	310	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	3.7		5.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	1.00		0.93	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		1861	1855		1695	
Flt Permitted		1.00	1.00		0.98	
Satd. Flow (perm)		1855	1855		1695	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	489	337	11	11	11
RTOR Reduction (vph)	0	0	1	0	11	0
Lane Group Flow (vph)	0	500	347	0	11	0
Turn Type	custom	NA	NA		NA	
Protected Phases	4	4 6	1 2		3	
Permitted Phases	6					
Actuated Green, G (s)		63.2	50.2		2.9	
Effective Green, g (s)		63.2	50.2		2.9	
Actuated g/C Ratio		0.78	0.62		0.04	
Clearance Time (s)					5.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)		1448	1149		60	
v/s Ratio Prot		c0.06	0.19		c0.01	
v/s Ratio Perm		c0.21				
v/c Ratio		0.35	0.30		0.19	
Uniform Delay, d1		2.7	7.2		37.9	
Progression Factor		0.35	1.00		1.00	
Incremental Delay, d2		0.1	0.1		1.5	
Delay (s)		1.1	7.4		39.5	
Level of Service		A	A		D	
Approach Delay (s)		1.1	7.4		39.5	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

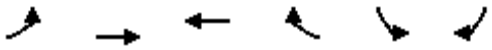
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	20	200	100	40	80	100	160	260	20	60	220	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.92		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1710		1711	1650		1711	1781		1711	1801	1531
Flt Permitted	0.50	1.00		0.25	1.00		0.56	1.00		0.57	1.00	1.00
Satd. Flow (perm)	892	1710		452	1650		1017	1781		1034	1801	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	217	109	43	87	109	174	283	22	65	239	87
RTOR Reduction (vph)	0	22	0	0	54	0	0	3	0	0	0	42
Lane Group Flow (vph)	22	304	0	43	142	0	174	302	0	65	239	45
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	20.5	20.5		20.5	20.5		58.6	49.9		52.4	46.8	46.8
Effective Green, g (s)	20.5	20.5		20.5	20.5		58.6	49.9		52.4	46.8	46.8
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.65	0.55		0.58	0.52	0.52
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	203	389		102	375		729	987		644	936	796
v/s Ratio Prot		c0.18			0.09		c0.02	c0.17		0.01	0.13	
v/s Ratio Perm	0.02			0.10			0.13			0.05		0.03
v/c Ratio	0.11	0.78		0.42	0.38		0.24	0.31		0.10	0.26	0.06
Uniform Delay, d1	27.5	32.7		29.7	29.4		6.2	10.8		8.2	12.0	10.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	9.9		2.8	0.6		0.2	0.8		0.1	0.7	0.1
Delay (s)	27.8	42.5		32.5	30.0		6.4	11.6		8.2	12.6	10.8
Level of Service	C	D		C	C		A	B		A	B	B
Approach Delay (s)		41.6			30.5			9.7			11.5	
Approach LOS		D			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

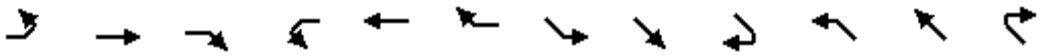
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	320	10	260	500	0	20	0	210	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7		3.7	5.7			4.2	3.7		5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	1.00			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)		1855		1770	1863			1770	1583		1778	
Flt Permitted		1.00		0.41	1.00			0.95	1.00		0.99	
Satd. Flow (perm)		1855		757	1863			1770	1583		1778	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	348	11	283	543	0	22	0	228	2	4	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	358	0	283	543	0	0	22	228	0	8	0
Turn Type	Perm	NA		pm+pt	NA		Split	NA	custom	Split	NA	
Protected Phases		2		1	6		4	4	1 4	3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		34.1		49.1	49.1			12.8	28.3		4.2	
Effective Green, g (s)		34.1		49.1	49.1			12.8	24.1		4.2	
Actuated g/C Ratio		0.42		0.61	0.61			0.16	0.30		0.05	
Clearance Time (s)		5.7		3.7	5.7			4.2			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		780		600	1129			279	470		92	
v/s Ratio Prot		0.19		0.07	c0.29			0.01	c0.14		c0.00	
v/s Ratio Perm				0.22								
v/c Ratio		0.46		0.47	0.48			0.08	0.49		0.09	
Uniform Delay, d1		16.8		8.3	8.9			29.1	23.4		36.6	
Progression Factor		1.00		0.28	0.32			1.00	1.00		1.00	
Incremental Delay, d2		1.9		0.4	1.1			0.1	0.8		0.4	
Delay (s)		18.8		2.7	3.9			29.2	24.1		37.0	
Level of Service		B		A	A			C	C		D	
Approach Delay (s)		18.8			3.5			24.6			37.0	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	10	520	740	5	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	3.7		5.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	1.00		0.91	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		1861	1861		1667	
Flt Permitted		0.99	1.00		0.98	
Satd. Flow (perm)		1848	1861		1667	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	565	804	5	11	22
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	0	576	809	0	12	0
Turn Type	custom	NA	NA		NA	
Protected Phases	4	4 6	1 2		3	
Permitted Phases	6					
Actuated Green, G (s)		61.9	49.1		4.2	
Effective Green, g (s)		61.9	49.1		4.2	
Actuated g/C Ratio		0.76	0.61		0.05	
Clearance Time (s)					5.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)		1414	1128		86	
v/s Ratio Prot		c0.06	c0.43		c0.01	
v/s Ratio Perm		0.25				
v/c Ratio		0.41	0.72		0.14	
Uniform Delay, d1		3.3	11.1		36.7	
Progression Factor		0.28	1.00		1.00	
Incremental Delay, d2		0.2	2.2		0.8	
Delay (s)		1.1	13.3		37.4	
Level of Service		A	B		D	
Approach Delay (s)		1.1	13.3		37.4	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



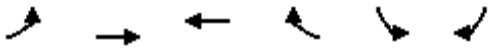
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	20	130	90	60	220	180	140	350	10	160	480	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1690		1711	1679		1711	1793		1711	1801	1531
Flt Permitted	0.17	1.00		0.46	1.00		0.33	1.00		0.44	1.00	1.00
Satd. Flow (perm)	299	1690		821	1679		591	1793		798	1801	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	141	98	65	239	196	152	380	11	174	522	76
RTOR Reduction (vph)	0	29	0	0	34	0	0	1	0	0	0	32
Lane Group Flow (vph)	22	210	0	65	401	0	152	390	0	174	522	44
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	24.1	24.1		24.1	24.1		51.8	43.1		52.0	43.2	43.2
Effective Green, g (s)	24.1	24.1		24.1	24.1		51.8	43.1		52.0	43.2	43.2
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.58	0.48		0.58	0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	80	452		219	449		448	858		550	864	734
v/s Ratio Prot		0.12			c0.24		c0.03	0.22		0.03	c0.29	
v/s Ratio Perm	0.07			0.08			0.16			0.15		0.03
v/c Ratio	0.28	0.47		0.30	0.89		0.34	0.45		0.32	0.60	0.06
Uniform Delay, d1	26.0	27.6		26.2	31.7		10.0	15.6		9.3	17.1	12.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	0.8		0.8	19.7		0.5	1.7		0.3	3.1	0.2
Delay (s)	27.9	28.3		27.0	51.4		10.5	17.4		9.6	20.3	12.7
Level of Service	C	C		C	D		B	B		A	C	B
Approach Delay (s)		28.3			48.2			15.4			17.1	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

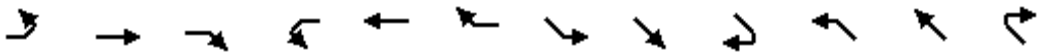
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	270	10	120	230	0	10	0	230	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7		3.7	5.7			4.2	3.7		5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	1.00			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)		1854		1770	1863			1770	1583		1778	
Flt Permitted		1.00		0.48	1.00			0.95	1.00		0.99	
Satd. Flow (perm)		1854		885	1863			1770	1583		1778	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	293	11	130	250	0	11	0	250	2	4	2
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	302	0	130	250	0	0	11	250	0	8	0
Turn Type	Perm	NA		pm+pt	NA		Split	NA	custom	Split	NA	
Protected Phases		2		1	6		4	4	1 4	3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		36.7		49.4	49.4			13.8	27.0		2.9	
Effective Green, g (s)		36.7		49.4	49.4			13.8	22.8		2.9	
Actuated g/C Ratio		0.45		0.61	0.61			0.17	0.28		0.04	
Clearance Time (s)		5.7		3.7	5.7			4.2			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		840		638	1136			301	445		63	
v/s Ratio Prot		c0.16		0.02	0.13			0.01	c0.16		c0.00	
v/s Ratio Perm				0.10								
v/c Ratio		0.36		0.20	0.22			0.04	0.56		0.13	
Uniform Delay, d1		14.5		7.0	7.1			28.1	24.8		37.8	
Progression Factor		1.00		0.33	0.37			1.00	1.00		1.00	
Incremental Delay, d2		1.2		0.2	0.4			0.0	1.6		0.9	
Delay (s)		15.7		2.4	3.1			28.1	26.5		38.7	
Level of Service		B		A	A			C	C		D	
Approach Delay (s)		15.7			2.9			26.5			38.7	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	10	490	340	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	3.7		5.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	1.00		0.93	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		1861	1855		1695	
Flt Permitted		0.99	1.00		0.98	
Satd. Flow (perm)		1849	1855		1695	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	533	370	11	11	11
RTOR Reduction (vph)	0	0	1	0	11	0
Lane Group Flow (vph)	0	544	380	0	11	0
Turn Type	Perm	NA	NA		NA	
Protected Phases		4 6	1 2		3	
Permitted Phases	4 6					
Actuated Green, G (s)		67.4	49.4		2.9	
Effective Green, g (s)		67.4	49.4		2.9	
Actuated g/C Ratio		0.83	0.61		0.04	
Clearance Time (s)					5.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)		1538	1131		60	
v/s Ratio Prot			0.20		c0.01	
v/s Ratio Perm		c0.29				
v/c Ratio		0.35	0.34		0.19	
Uniform Delay, d1		1.6	7.8		37.9	
Progression Factor		0.15	1.00		1.00	
Incremental Delay, d2		0.1	0.2		1.5	
Delay (s)		0.4	7.9		39.5	
Level of Service		A	A		D	
Approach Delay (s)		0.4	7.9		39.5	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	4.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



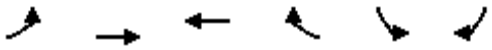
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	20	210	110	40	90	110	170	280	20	70	240	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.92		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1708		1711	1652		1711	1782		1711	1801	1531
Flt Permitted	0.47	1.00		0.25	1.00		0.54	1.00		0.56	1.00	1.00
Satd. Flow (perm)	852	1708		449	1652		972	1782		1007	1801	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	228	120	43	98	120	185	304	22	76	261	87
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	22	348	0	43	218	0	185	324	0	76	261	87
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	22.3	22.3		22.3	22.3		56.7	47.8		50.7	44.8	44.8
Effective Green, g (s)	22.3	22.3		22.3	22.3		56.7	47.8		50.7	44.8	44.8
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.63	0.53		0.56	0.50	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	211	423		111	409		685	946		613	896	762
v/s Ratio Prot		c0.20			0.13		c0.03	c0.18		0.01	0.14	
v/s Ratio Perm	0.03			0.10			0.14			0.06		0.06
v/c Ratio	0.10	0.82		0.39	0.53		0.27	0.34		0.12	0.29	0.11
Uniform Delay, d1	26.1	32.0		28.2	29.3		7.1	12.1		9.0	13.3	12.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	12.2		2.2	1.3		0.2	1.0		0.1	0.8	0.3
Delay (s)	26.4	44.2		30.4	30.7		7.3	13.1		9.1	14.1	12.3
Level of Service	C	D		C	C		A	B		A	B	B
Approach Delay (s)		43.1			30.6			11.0			12.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	340	10	280	540	0	20	0	230	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7		3.7	5.7			4.2	3.7		5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	1.00			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)		1855		1770	1863			1770	1583		1778	
Flt Permitted		1.00		0.38	1.00			0.95	1.00		0.99	
Satd. Flow (perm)		1855		712	1863			1770	1583		1778	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	370	11	304	587	0	22	0	250	2	4	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	380	0	304	587	0	0	22	250	0	8	0
Turn Type	Perm	NA		pm+pt	NA		Split	NA	custom	Split	NA	
Protected Phases		2		1	6		4	4	1 4	3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		33.7		48.9	48.9			13.0	28.7		4.2	
Effective Green, g (s)		33.7		48.9	48.9			13.0	24.5		4.2	
Actuated g/C Ratio		0.42		0.60	0.60			0.16	0.30		0.05	
Clearance Time (s)		5.7		3.7	5.7			4.2			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		771		580	1124			284	478		92	
v/s Ratio Prot		0.20		0.07	c0.32			0.01	c0.16		c0.00	
v/s Ratio Perm				c0.24								
v/c Ratio		0.49		0.52	0.52			0.08	0.52		0.09	
Uniform Delay, d1		17.4		8.7	9.3			28.9	23.4		36.6	
Progression Factor		1.00		0.41	0.33			1.00	1.00		1.00	
Incremental Delay, d2		2.2		0.6	1.2			0.1	1.0		0.4	
Delay (s)		19.6		4.2	4.3			29.0	24.4		37.0	
Level of Service		B		A	A			C	C		D	
Approach Delay (s)		19.6			4.2			24.8			37.0	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	10	560	800	5	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	3.7		5.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	1.00		0.91	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		1861	1861		1667	
Flt Permitted		0.99	1.00		0.98	
Satd. Flow (perm)		1848	1861		1667	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	609	870	5	11	22
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	0	620	875	0	12	0
Turn Type	custom	NA	NA		NA	
Protected Phases	4	4 6	1 2		3	
Permitted Phases	6					
Actuated Green, G (s)		61.9	48.9		4.2	
Effective Green, g (s)		61.9	48.9		4.2	
Actuated g/C Ratio		0.76	0.60		0.05	
Clearance Time (s)					5.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)		1414	1123		86	
v/s Ratio Prot		c0.07	c0.47		c0.01	
v/s Ratio Perm		0.26				
v/c Ratio		0.44	0.78		0.14	
Uniform Delay, d1		3.4	12.0		36.7	
Progression Factor		0.28	1.00		1.00	
Incremental Delay, d2		0.2	3.5		0.8	
Delay (s)		1.1	15.5		37.4	
Level of Service		A	B		D	
Approach Delay (s)		1.1	15.5		37.4	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

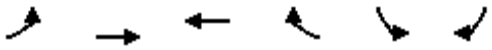
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	20	140	100	60	230	190	150	370	10	170	510	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1688		1711	1678		1711	1793		1711	1801	1531
Flt Permitted	0.16	1.00		0.44	1.00		0.29	1.00		0.41	1.00	1.00
Satd. Flow (perm)	280	1688		787	1678		517	1793		740	1801	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	152	109	65	250	207	163	402	11	185	554	76
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	22	261	0	65	457	0	163	412	0	185	554	76
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	25.7	25.7		25.7	25.7		50.1	41.3		50.5	41.5	41.5
Effective Green, g (s)	25.7	25.7		25.7	25.7		50.1	41.3		50.5	41.5	41.5
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.56	0.46		0.56	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	79	482		224	479		404	822		512	830	705
v/s Ratio Prot		0.15			c0.27		c0.04	0.23		0.04	c0.31	
v/s Ratio Perm	0.08			0.08			0.19			0.17		0.05
v/c Ratio	0.28	0.54		0.29	0.95		0.40	0.50		0.36	0.67	0.11
Uniform Delay, d1	25.0	27.2		25.0	31.6		11.4	17.1		10.2	18.9	13.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	1.2		0.7	29.6		0.7	2.2		0.4	4.2	0.3
Delay (s)	26.9	28.4		25.8	61.1		12.1	19.3		10.7	23.1	14.1
Level of Service	C	C		C	E		B	B		B	C	B
Approach Delay (s)		28.3			56.7			17.2			19.4	
Approach LOS		C			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	290	10	120	230	0	10	0	230	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7		3.7	5.7			4.2	3.7		5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	1.00			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)		1854		1770	1863			1770	1583		1778	
Flt Permitted		1.00		0.46	1.00			0.95	1.00		0.99	
Satd. Flow (perm)		1854		849	1863			1770	1583		1778	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	315	11	130	250	0	11	0	250	2	4	2
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	324	0	130	250	0	0	11	250	0	8	0
Turn Type	Perm	NA		pm+pt	NA		Split	NA	custom	Split	NA	
Protected Phases		2		1	6		4	4	1 4	3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		36.9		48.6	48.6			13.0	25.2		4.5	
Effective Green, g (s)		36.9		48.6	48.6			13.0	21.0		4.5	
Actuated g/C Ratio		0.46		0.60	0.60			0.16	0.26		0.06	
Clearance Time (s)		5.7		3.7	5.7			4.2			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		844		600	1117			284	410		98	
v/s Ratio Prot		c0.17		0.02	0.13			0.01	c0.16		c0.00	
v/s Ratio Perm				0.11								
v/c Ratio		0.38		0.22	0.22			0.04	0.61		0.08	
Uniform Delay, d1		14.6		7.4	7.5			28.7	26.4		36.3	
Progression Factor		1.00		0.33	0.37			1.00	1.00		1.00	
Incremental Delay, d2		1.3		0.2	0.4			0.1	2.6		0.4	
Delay (s)		15.9		2.6	3.2			28.8	29.0		36.6	
Level of Service		B		A	A			C	C		D	
Approach Delay (s)		15.9			3.0			29.0			36.6	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	30	490	340	30	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	3.7		5.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.99		0.95	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		1857	1842		1722	
Flt Permitted		0.97	1.00		0.97	
Satd. Flow (perm)		1799	1842		1722	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	533	370	33	22	11
RTOR Reduction (vph)	0	0	4	0	10	0
Lane Group Flow (vph)	0	566	399	0	23	0
Turn Type	Perm	NA	NA		NA	
Protected Phases		4 6	1 2		3	
Permitted Phases	4 6					
Actuated Green, G (s)		65.8	48.6		4.5	
Effective Green, g (s)		65.8	48.6		4.5	
Actuated g/C Ratio		0.81	0.60		0.06	
Clearance Time (s)					5.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)		1461	1105		95	
v/s Ratio Prot			0.22		c0.01	
v/s Ratio Perm		c0.31				
v/c Ratio		0.39	0.36		0.24	
Uniform Delay, d1		2.1	8.3		36.6	
Progression Factor		0.15	1.00		1.00	
Incremental Delay, d2		0.2	0.2		1.3	
Delay (s)		0.5	8.5		37.9	
Level of Service		A	A		D	
Approach Delay (s)		0.5	8.5		37.9	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

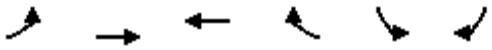
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	20	210	110	40	90	110	170	290	20	70	260	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.92		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1708		1711	1652		1711	1783		1711	1801	1531
Flt Permitted	0.47	1.00		0.25	1.00		0.52	1.00		0.55	1.00	1.00
Satd. Flow (perm)	852	1708		449	1652		935	1783		988	1801	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	228	120	43	98	120	185	315	22	76	283	87
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	22	348	0	43	218	0	185	335	0	76	283	87
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	22.3	22.3		22.3	22.3		56.7	47.8		50.7	44.8	44.8
Effective Green, g (s)	22.3	22.3		22.3	22.3		56.7	47.8		50.7	44.8	44.8
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.63	0.53		0.56	0.50	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	211	423		111	409		665	946		603	896	762
v/s Ratio Prot		c0.20			0.13		c0.03	c0.19		0.01	0.16	
v/s Ratio Perm	0.03			0.10			0.15			0.06		0.06
v/c Ratio	0.10	0.82		0.39	0.53		0.28	0.35		0.13	0.32	0.11
Uniform Delay, d1	26.1	32.0		28.2	29.3		7.1	12.2		9.0	13.5	12.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	12.2		2.2	1.3		0.2	1.0		0.1	0.9	0.3
Delay (s)	26.4	44.2		30.4	30.7		7.3	13.2		9.1	14.4	12.3
Level of Service	C	D		C	C		A	B		A	B	B
Approach Delay (s)		43.1			30.6			11.1			13.1	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	340	10	280	560	0	20	0	230	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7		3.7	5.7			4.2	3.7		5.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		1.00		1.00	1.00			1.00	0.85		0.97	
Flt Protected		1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)		1855		1770	1863			1770	1583		1778	
Flt Permitted		1.00		0.39	1.00			0.95	1.00		0.99	
Satd. Flow (perm)		1855		724	1863			1770	1583		1778	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	370	11	304	609	0	22	0	250	2	4	2
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	380	0	304	609	0	0	22	250	0	8	0
Turn Type	Perm	NA		pm+pt	NA		Split	NA	custom	Split	NA	
Protected Phases		2		1	6		4	4	1 4	3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		34.5		47.4	47.4			12.5	25.9		6.2	
Effective Green, g (s)		34.5		47.4	47.4			12.5	21.7		6.2	
Actuated g/C Ratio		0.43		0.59	0.59			0.15	0.27		0.08	
Clearance Time (s)		5.7		3.7	5.7			4.2			5.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)		790		542	1090			273	424		136	
v/s Ratio Prot		0.20		0.06	c0.33			0.01	c0.16		c0.00	
v/s Ratio Perm				c0.26								
v/c Ratio		0.48		0.56	0.56			0.08	0.59		0.06	
Uniform Delay, d1		16.8		9.4	10.4			29.3	25.8		34.7	
Progression Factor		1.00		0.37	0.34			1.00	1.00		1.00	
Incremental Delay, d2		2.1		0.9	1.4			0.1	2.1		0.2	
Delay (s)		18.9		4.3	4.9			29.5	27.9		34.9	
Level of Service		B		A	A			C	C		C	
Approach Delay (s)		18.9			4.7			28.0			34.9	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	10	560	800	10	30	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	3.7		5.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	1.00		0.92	
Flt Protected		1.00	1.00		0.98	
Satd. Flow (prot)		1861	1860		1684	
Flt Permitted		0.99	1.00		0.98	
Satd. Flow (perm)		1848	1860		1684	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	609	870	11	33	43
RTOR Reduction (vph)	0	0	0	0	40	0
Lane Group Flow (vph)	0	620	881	0	36	0
Turn Type	custom	NA	NA		NA	
Protected Phases	4	4 6	1 2		3	
Permitted Phases	6					
Actuated Green, G (s)		59.9	47.4		6.2	
Effective Green, g (s)		59.9	47.4		6.2	
Actuated g/C Ratio		0.74	0.59		0.08	
Clearance Time (s)					5.0	
Vehicle Extension (s)					3.0	
Lane Grp Cap (vph)		1368	1088		128	
v/s Ratio Prot		c0.07	c0.47		c0.02	
v/s Ratio Perm		0.27				
v/c Ratio		0.45	0.81		0.28	
Uniform Delay, d1		4.1	13.2		35.3	
Progression Factor		0.26	1.00		1.00	
Incremental Delay, d2		0.2	4.5		1.2	
Delay (s)		1.3	17.8		36.5	
Level of Service		A	B		D	
Approach Delay (s)		1.3	17.8		36.5	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	20	140	100	60	230	190	150	390	10	170	520	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1711	1688		1711	1678		1711	1794		1711	1801	1531
Flt Permitted	0.16	1.00		0.44	1.00		0.28	1.00		0.39	1.00	1.00
Satd. Flow (perm)	280	1688		787	1678		499	1794		703	1801	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	152	109	65	250	207	163	424	11	185	565	76
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	22	261	0	65	457	0	163	434	0	185	565	76
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	25.7	25.7		25.7	25.7		50.1	41.3		50.5	41.5	41.5
Effective Green, g (s)	25.7	25.7		25.7	25.7		50.1	41.3		50.5	41.5	41.5
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.56	0.46		0.56	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	79	482		224	479		396	823		495	830	705
v/s Ratio Prot		0.15			c0.27		c0.04	0.24		0.04	c0.31	
v/s Ratio Perm	0.08			0.08			0.19			0.17		0.05
v/c Ratio	0.28	0.54		0.29	0.95		0.41	0.53		0.37	0.68	0.11
Uniform Delay, d1	25.0	27.2		25.0	31.6		11.6	17.4		10.4	19.0	13.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.9	1.2		0.7	29.6		0.7	2.4		0.5	4.5	0.3
Delay (s)	26.9	28.4		25.8	61.1		12.2	19.8		10.9	23.5	14.1
Level of Service	C	C		C	E		B	B		B	C	B
Approach Delay (s)		28.3			56.7			17.7			19.8	
Approach LOS		C			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

QUEUE ANALYSIS

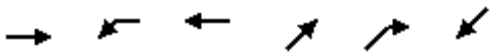
Intersection Approach 95th-Percentile Queue Lengths (ft)

INTERSECTION & APPROACH		Mvt.	2008 Existing [1] [2]		2016 No Build [1] [2]		2016 Build [1] [2]	
			AM	PM	AM	PM	AM	PM
Route 372 at Main Street								
Route 372	EB	LTR	152	198	165	212	184	212
	WB	L	10	21	11	m28	11	m30
		TR	22	53	23	69	23	78
Main Street	NB	LT	19	30	19	30	19	31
		R	161	162	176	178	182	184
	SB	LTR	17	17	17	17	16	16
Route 372 at Depot Road								
Route 372	EB	LT	9	11	9	11	10	11
	WB	TR	130	424	144	494	144	#503
Depot Road	SB	LR	27	31	27	31	45	54
Route 372 at Burnham Street/Porters Pass								
Burnham Street	EB	L	28	33	28	33	28	33
		TR	239	162	275	202	275	202
Porters Pass	WB	L	52	64	52	65	52	65
		TR	114	#374	169	#441	169	#441
Route 372	NB	L	28	65	32	69	32	69
		T	137	337	150	366	163	376
		R	25	29	57	51	57	51
	SB	L	65	57	69	61	69	61
		TR	168	233	183	249	189	266

Note:

[1] m: Volume for 95th percentile queue is metered by upstream signal.

[2] #: 95th percentile volume exceeds capacity, queue may be longer.



Lane Group	EBT	WBL	WBT	NET	NER	SWT
Lane Group Flow (vph)	283	120	228	11	228	8
v/c Ratio	0.30	0.17	0.19	0.04	0.46	0.06
Control Delay	14.3	2.5	3.0	28.6	25.5	34.9
Queue Delay	0.0	0.4	0.4	0.0	0.0	0.0
Total Delay	14.3	2.9	3.5	28.6	25.5	34.9
Queue Length 50th (ft)	78	5	13	5	82	4
Queue Length 95th (ft)	152	10	22	19	161	17
Internal Link Dist (ft)	356		128	55		17
Turn Bay Length (ft)						
Base Capacity (vph)	940	723	1223	290	491	219
Starvation Cap Reductn	0	308	619	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.29	0.38	0.04	0.46	0.04

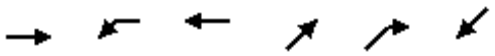
Intersection Summary

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	500	348	22
v/c Ratio	0.32	0.28	0.15
Control Delay	1.1	7.0	26.2
Queue Delay	0.3	0.0	0.0
Total Delay	1.3	7.0	26.2
Queue Length 50th (ft)	0	52	5
Queue Length 95th (ft)	9	130	27
Internal Link Dist (ft)	128	548	216
Turn Bay Length (ft)			
Base Capacity (vph)	1557	1264	218
Starvation Cap Reductn	489	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.47	0.28	0.10

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT	NWR
Lane Group Flow (vph)	22	326	43	196	174	305	65	239	87
v/c Ratio	0.11	0.79	0.42	0.46	0.23	0.30	0.09	0.26	0.10
Control Delay	26.4	43.7	41.0	21.3	6.7	13.2	6.4	14.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	43.7	41.0	21.3	6.7	13.2	6.4	14.3	3.8
Queue Length 50th (ft)	10	159	21	60	31	89	11	72	0
Queue Length 95th (ft)	28	239	52	114	65	168	28	137	25
Internal Link Dist (ft)		492		441		530		323	
Turn Bay Length (ft)	50		140		170		120		120
Base Capacity (vph)	257	514	130	526	763	1005	750	936	837
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.63	0.33	0.37	0.23	0.30	0.09	0.26	0.10

Intersection Summary



Lane Group	EBT	WBL	WBT	NET	NER	SWT
Lane Group Flow (vph)	359	283	543	22	228	8
v/c Ratio	0.43	0.44	0.46	0.08	0.41	0.06
Control Delay	18.2	3.8	4.0	29.6	24.0	34.6
Queue Delay	0.0	0.1	0.5	0.0	0.0	0.0
Total Delay	18.2	3.9	4.5	29.6	24.0	34.6
Queue Length 50th (ft)	125	12	30	9	90	4
Queue Length 95th (ft)	198	21	53	30	162	17
Internal Link Dist (ft)	356		128	55		31
Turn Bay Length (ft)						
Base Capacity (vph)	826	637	1173	283	541	219
Starvation Cap Reductn	0	40	273	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.47	0.60	0.08	0.42	0.04

Intersection Summary

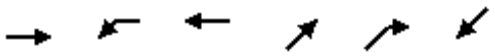
Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	576	809	33
v/c Ratio	0.39	0.66	0.22
Control Delay	1.3	13.7	22.5
Queue Delay	0.1	0.0	0.0
Total Delay	1.4	13.7	22.5
Queue Length 50th (ft)	8	275	5
Queue Length 95th (ft)	11	424	31
Internal Link Dist (ft)	128	548	216
Turn Bay Length (ft)			
Base Capacity (vph)	1496	1219	225
Starvation Cap Reductn	216	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.45	0.66	0.15

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT	NWR
Lane Group Flow (vph)	22	239	65	435	152	391	174	522	76
v/c Ratio	0.28	0.50	0.30	0.90	0.33	0.46	0.31	0.60	0.10
Control Delay	35.2	26.5	29.4	51.4	9.0	18.6	8.5	21.8	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	26.5	29.4	51.4	9.0	18.6	8.5	21.8	5.8
Queue Length 50th (ft)	10	92	29	209	32	150	38	219	5
Queue Length 95th (ft)	33	162	64	#374	57	233	65	337	29
Internal Link Dist (ft)		492		441		530		563	
Turn Bay Length (ft)	50		140		170		120		120
Base Capacity (vph)	86	515	237	517	485	859	590	864	766
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.46	0.27	0.84	0.31	0.46	0.29	0.60	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NET	NER	SWT
Lane Group Flow (vph)	304	130	250	11	250	8
v/c Ratio	0.33	0.19	0.21	0.04	0.47	0.06
Control Delay	15.3	2.6	3.1	28.4	25.1	34.9
Queue Delay	0.0	0.4	0.4	0.0	0.0	0.0
Total Delay	15.3	3.0	3.5	28.4	25.1	34.9
Queue Length 50th (ft)	94	6	14	4	84	4
Queue Length 95th (ft)	165	11	23	19	176	17
Internal Link Dist (ft)	356		128	55		27
Turn Bay Length (ft)						
Base Capacity (vph)	909	693	1205	304	516	219
Starvation Cap Reductn	0	269	563	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.31	0.39	0.04	0.48	0.04

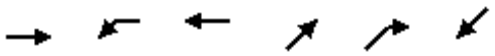
Intersection Summary

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	544	381	22
v/c Ratio	0.32	0.31	0.15
Control Delay	0.7	7.5	26.2
Queue Delay	0.0	0.0	0.0
Total Delay	0.7	7.5	26.2
Queue Length 50th (ft)	0	63	5
Queue Length 95th (ft)	9	144	27
Internal Link Dist (ft)	128	548	216
Turn Bay Length (ft)			
Base Capacity (vph)	1684	1247	218
Starvation Cap Reductn	138	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.35	0.31	0.10

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT	NWR
Lane Group Flow (vph)	22	348	43	218	185	326	76	261	87
v/c Ratio	0.10	0.82	0.39	0.53	0.26	0.34	0.12	0.29	0.11
Control Delay	25.5	48.1	37.9	33.7	7.5	14.6	6.9	15.6	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	48.1	37.9	33.7	7.5	14.6	6.9	15.6	14.3
Queue Length 50th (ft)	10	184	20	106	37	104	14	86	26
Queue Length 95th (ft)	28	275	52	169	69	183	32	150	57
Internal Link Dist (ft)		492		441		530		323	
Turn Bay Length (ft)	50		140		170		120		120
Base Capacity (vph)	246	493	129	476	714	964	714	896	762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.71	0.33	0.46	0.26	0.34	0.11	0.29	0.11

Intersection Summary



Lane Group	EBT	WBL	WBT	NET	NER	SWT
Lane Group Flow (vph)	381	304	587	22	250	8
v/c Ratio	0.47	0.49	0.50	0.08	0.44	0.06
Control Delay	18.8	5.2	4.4	29.5	24.5	34.6
Queue Delay	0.0	0.1	0.7	0.0	0.0	0.0
Total Delay	18.8	5.3	5.1	29.5	24.5	34.6
Queue Length 50th (ft)	135	12	32	9	100	4
Queue Length 95th (ft)	212	m28	69	30	178	17
Internal Link Dist (ft)	356		128	55		31
Turn Bay Length (ft)						
Base Capacity (vph)	815	615	1168	286	549	219
Starvation Cap Reductn	0	24	272	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.51	0.66	0.08	0.46	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

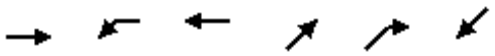
Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	620	875	33
v/c Ratio	0.42	0.72	0.22
Control Delay	1.4	15.7	22.5
Queue Delay	0.1	0.0	0.0
Total Delay	1.5	15.7	22.5
Queue Length 50th (ft)	8	317	5
Queue Length 95th (ft)	11	494	31
Internal Link Dist (ft)	128	548	216
Turn Bay Length (ft)			
Base Capacity (vph)	1495	1214	225
Starvation Cap Reductn	168	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.47	0.72	0.15

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT	NWR
Lane Group Flow (vph)	22	261	65	457	163	413	185	554	76
v/c Ratio	0.28	0.54	0.29	0.95	0.39	0.50	0.35	0.67	0.11
Control Delay	35.5	32.0	29.2	64.5	10.1	20.1	9.3	24.2	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	32.0	29.2	64.5	10.1	20.1	9.3	24.2	15.0
Queue Length 50th (ft)	10	124	29	253	35	162	40	239	24
Queue Length 95th (ft)	33	202	65	#441	61	249	69	366	51
Internal Link Dist (ft)		492		441		530		323	
Turn Bay Length (ft)	50		140		170		120		120
Base Capacity (vph)	81	487	227	484	438	823	547	830	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.54	0.29	0.94	0.37	0.50	0.34	0.67	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NET	NER	SWT
Lane Group Flow (vph)	337	130	250	11	250	8
v/c Ratio	0.38	0.21	0.22	0.04	0.52	0.05
Control Delay	16.3	3.0	3.4	30.0	28.0	33.3
Queue Delay	0.0	0.2	0.3	0.0	0.0	0.0
Total Delay	16.3	3.2	3.6	30.0	28.0	33.3
Queue Length 50th (ft)	115	6	15	5	102	4
Queue Length 95th (ft)	184	11	23	19	182	16
Internal Link Dist (ft)	356		128	55		27
Turn Bay Length (ft)						
Base Capacity (vph)	892	629	1162	277	485	219
Starvation Cap Reductn	0	167	444	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.28	0.35	0.04	0.52	0.04

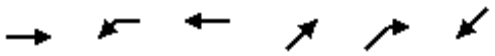
Intersection Summary

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	566	381	44
v/c Ratio	0.36	0.32	0.27
Control Delay	0.9	8.3	31.4
Queue Delay	0.1	0.0	0.0
Total Delay	1.0	8.3	31.4
Queue Length 50th (ft)	8	92	16
Queue Length 95th (ft)	10	144	45
Internal Link Dist (ft)	128	548	216
Turn Bay Length (ft)			
Base Capacity (vph)	1570	1204	223
Starvation Cap Reductn	280	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.44	0.32	0.20

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT	NWR
Lane Group Flow (vph)	22	348	43	218	185	337	76	283	87
v/c Ratio	0.10	0.82	0.39	0.53	0.27	0.35	0.12	0.32	0.11
Control Delay	25.5	48.1	37.9	33.7	7.6	14.7	6.9	15.9	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	48.1	37.9	33.7	7.6	14.7	6.9	15.9	14.3
Queue Length 50th (ft)	10	184	20	106	37	109	14	95	26
Queue Length 95th (ft)	28	275	52	169	69	189	32	163	57
Internal Link Dist (ft)		492		441		530		323	
Turn Bay Length (ft)	50		140		170		120		120
Base Capacity (vph)	246	493	129	476	694	964	704	896	762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.71	0.33	0.46	0.27	0.35	0.11	0.32	0.11

Intersection Summary



Lane Group	EBT	WBL	WBT	NET	NER	SWT
Lane Group Flow (vph)	381	304	609	22	250	8
v/c Ratio	0.47	0.53	0.55	0.08	0.50	0.05
Control Delay	18.8	5.5	5.1	30.8	27.5	33.0
Queue Delay	0.0	0.2	1.0	0.0	0.0	0.0
Total Delay	18.8	5.7	6.1	30.8	27.5	33.0
Queue Length 50th (ft)	135	15	38	9	103	4
Queue Length 95th (ft)	212	m30	78	31	184	16
Internal Link Dist (ft)	356		128	55		31
Turn Bay Length (ft)						
Base Capacity (vph)	814	569	1113	274	492	219
Starvation Cap Reductn	0	35	267	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.57	0.72	0.08	0.51	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	620	881	76
v/c Ratio	0.44	0.76	0.40
Control Delay	1.6	18.1	24.5
Queue Delay	0.1	0.0	0.0
Total Delay	1.7	18.1	24.5
Queue Length 50th (ft)	8	322	16
Queue Length 95th (ft)	11	#503	54
Internal Link Dist (ft)	128	548	216
Turn Bay Length (ft)			
Base Capacity (vph)	1427	1157	245
Starvation Cap Reductn	160	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.76	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT	NWR
Lane Group Flow (vph)	22	261	65	457	163	435	185	565	76
v/c Ratio	0.28	0.54	0.29	0.95	0.40	0.53	0.36	0.68	0.11
Control Delay	35.5	32.0	29.2	64.5	10.3	20.6	9.4	24.7	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	32.0	29.2	64.5	10.3	20.6	9.4	24.7	15.0
Queue Length 50th (ft)	10	124	29	253	35	173	40	246	24
Queue Length 95th (ft)	33	202	65	#441	61	266	69	376	51
Internal Link Dist (ft)		492		441		530		323	
Turn Bay Length (ft)	50		140		170		120		120
Base Capacity (vph)	81	487	227	484	429	823	529	830	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.54	0.29	0.94	0.38	0.53	0.35	0.68	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

ACCIDENT ANALYSIS

ACCIDENT ANALYSIS

Accident records for the most recent three-year period available, January 2006 through December 2008, were obtained from ConnDOT. The accident records are summarized in the following tables and figure. The summary categorizes accidents by type, severity, weather, light condition, road surface condition, time of day, day of week, and time of year.

According to the records, a total of 63 accidents occurred within approximately 0.5-mile segment of Route 372 between Main Street and Burnham Road/Porters Pass during the three-year analysis period. The intersection with the highest number of accidents (18) was Route 372 at Burnham Street/Porters Pass.

Overall, the predominant accident types were rear-end collisions (51 percent) resulting mainly from following too closely.

Three-Year Accident Summary based on CONNDOT Reports

Route 372 between Main Street and Burnham Street

Jan 1, 2006 to Dec 31, 2008

Day of Week	#Acc	%
Sunday	8	12.7%
Monday	8	12.7%
Tuesday	12	19.0%
Wednesday	13	20.6%
Thursday	9	14.3%
Friday	6	9.5%
Saturday	7	11.1%
Total	**63**	

Collision Type	#Acc	%
Turning - same direction	4	6.3%
Turning - opp. direction	4	6.3%
Turning - intersecting paths	7	11.1%
Sideswipe	4	6.3%
Miscellaneous	0	0.0%
Overturn	1	1.6%
Angle	0	0.0%
Rear-end	32	50.8%

	#Acc	%
Head-on	0	0.0%
Backing	3	4.8%
Parking	0	0.0%
Pedestrian	0	0.0%
Jackknife	0	0.0%
Fixed object	7	11.1%
Moving object	0	0.0%
Unknown	1	1.6%
Total	**63**	

Time of Year	#Acc	%
Winter (Dec-Feb)	14	22.2%
Spring (Mar-May)	16	25.4%
Summer (Jun-Aug)	18	28.6%
Fall (Sep-Nov)	15	23.8%
Total	**63**	

Weather	#Acc	%
No Adverse Condition	54	85.7%
Rain	7	11.1%
Sleet/Hail	1	1.6%
Snow	1	1.6%
Fog	0	0.0%

	#Acc	%
Blowing Sand,Soil, Dirt	0	0.0%
Severe Crosswinds	0	0.0%
Other	0	0.0%
Unknown	0	0.0%
Total	**63**	

Time of Day	#Acc	%
6 AM - 10 AM	8	12.7%
10 AM - 4 PM	29	46.0%
4 PM - 7 PM	17	27.0%
7 PM - 12 Mid	9	14.3%
12 Mid - 6 AM	0	0.0%
Unknown	0	0.0%
Total	**63**	

Contributing Factor	#Acc	%
Violated Traffic Control	3	4.8%
Under the Influence	1	1.6%
Failed to Grant ROW	7	11.1%
Improper Passing Maneuver	4	6.3%
Following Too Closely	29	46.0%
Slippery Surface	1	1.6%
Driver Lost Control	3	4.8%

	#Acc	%
Defective Equipment	3	4.8%
Unsafe Right Turn on Red	1	1.6%
Insufficient Vertical Clearance	4	6.3%
Unknown	1	1.6%
Unsafe Backing	3	4.8%
Improper Turning Maneuver	3	4.8%
Total	**63**	

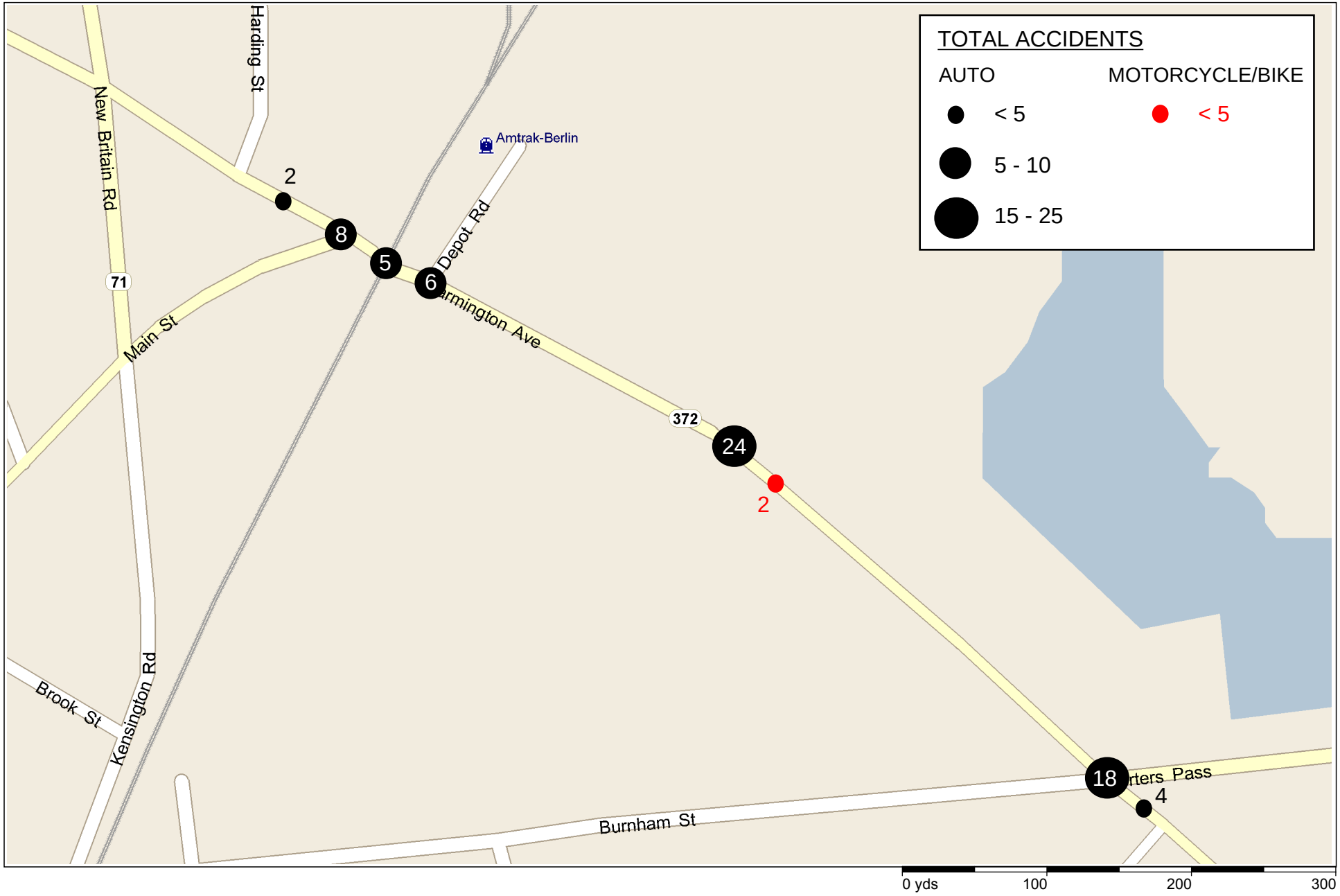
Road Surface Condition	#Acc	%
Dry	49	77.8%
Wet	11	17.5%
Snow/Slush	1	1.6%
Ice	1	1.6%
Sand, Mud, Dirt or Oil	1	1.6%
Other	0	0.0%
Total	**63**	

Light Condition	#Acc	%
Daylight	49	77.8%
Dark-not lighted	0	0.0%
Dark-lighted	14	22.2%
Dawn	0	0.0%
Dusk	0	0.0%
Unknown	0	0.0%
Total	**63**	

Accident Severity	#Acc	%
Fatal Accidents	0	0.0%
Incapacitating Injury	0	0.0%
Non-incapacitating Evident Injury	3	4.8%
Possible Injury	10	15.9%
Not injured	50	79.4%
Total	**63**	

Summary of Accident Severity by Year	2006	2007	2008	Total
Fatal Accidents	0	0	0	0
Incapacitating Injury	0	0	0	0
Non-incapacitating Evident Injury	1	1	1	3
Possible Injury	5	4	1	10
Not injured	18	22	10	50
Total Accidents	**24**	**27**	**12**	**63**

Summary of Accidents by Location	2006	2007	2008	Total
Route 372 and Main Street	3	4	1	8
Route 372 and Amtrak Underpass	4	0	0	4
Route 372 and Depot Road	0	4	2	6
Route 372 and Burnham Street/Porters Pass	9	6	4	19
Total Accidents	**16**	**14**	**7**	**37**


TOTAL ACCIDENTS
AUTO
MOTORCYCLE/BIKE
< 5
< 5
5 - 10
15 - 25
New Britain Rd
Harding St
Amtrak-Berlin
Depot Rd
Main St
71
372
Brook St
Kensington Rd
Burnham St
2
8
5
6
24
2
18
4
0 yds
100
200
300

Accident Summary of ConnDOT Data (2006 - 2008)

No.	Location	Vehicle	Motorcycle	Bike	Collision Type										Contributing Factor													Road Condition							Notes
					Turning-Opp. Direction	Turning-Intersecting Paths	Rear-End	Backing	Fixed-Object	Turning-Same Direction	Sideswipe-same Direction	Sideswipe-Opp. Direction	Overturn	Unknown	Failed to Grant ROW	Unsafe Backing	Following too Closely	Defective Equipment	Insufficient Vert. Clearance	Violated Traffic Control	Under the Influence	Improper Passing Manuever	Driver Lost Control	Improper Turning Maneuver	Slippery Surface	Unsafe RTOR	Unknown	Dry	Wet	Dawn/Dusk	Dark-Lit	Day	Sand / Mud / Dirt / Oil	No Adverse Condition	
1	Dr to Diary Queen	1			1										1														1		1				Rain
2	at Diary Queen	1				1									1													1				1		1	
3	at Main Street	1					1											1										1			1			1	
4	Main Street	1						1								1														1			1		
5	Main Street	1					1										1											1				1			Rain
6	Main Street	1					1										1											1				1		1	
7	at Main Street	1					1										1											1			1			1	
8	at Main Street	1						1								1												1				1		1	
9	Main Street	1			1										1													1			1			1	
10	Main Street	1					1										1											1				1		1	
11	Amtrak UP	1							1										1									1				1		1	
12	Amtrak UP	1							1										1									1				1		1	
13	Amtrak UP	1							1										1										1			1		1	Rain
14	Amtrak UP	1							1										1									1				1		1	
15	Depot Road	1					1										1											1				1		1	
16	at Depot Road	1				1	1													1								1				1		1	
17	at Depot Road	1					1										1											1				1		1	
18	at Depot Road	1								1																									
19	at Depot Road	1				1														1								1				1		1	
20	at Depot Road	1					1										1											1				1		1	
21	30 feet east of Depot Road			1						1							1											1				1		1	
22	857 Farmington Avenue	1					1										1												1		1				Rain
23	200 ft east of Depot Road	1				1									1													1				1		1	
24	200 ft east of Depot Road	1					1										1											1			1				
25	500 Feet E of Main Street	1					1										1											1				1		1	
26	500 ft east of Depot Road	1				1									1													1				1		1	
27	Dr to Kensington Fire Dept	1					1										1											1				1		1	
28	.1 M E of Depot Road	1					1													1								1				1		1	
29	.1 M E of Depot Road	1					1										1											1				1		1	
30	.1 M E of Depot Road	1					1										1												1			1			Rain
31	CDR FR Rite Aid Pharmacy	1				1									1													1				1		1	
32	at 900 Farmington Avenue	1					1										1											1				1		1	
33	E of Depot Road	1									1											1						1			1			1	
34	.2 M W of Porters Pass		1				1										1											1				1		1	
35	.2 M W of Burnham Street	1					1										1												1		1				Rain
36	.2 M W of Burnham Street	1					1										1											1				1		1	
37	.21 M W of Burnham Street	1							1													1						1			1				
38	.1 M W of Burnham Street	1					1										1											1				1		1	
39	.1 M W of Burnham Street	1								1												1							1			1		1	Rain
40	500 ft W of Burnham Street	1								1														1					1		1			1	Rain
41	250 ft W of Burnham Street	1									1											1						1				1		1	
42	100 ft W of Burnham Street	1					1											1										1				1		1	
43	125 ft W of Burnham Street	1							1													1						1				1		1	
44	100 ft W of Burnham Street	1					1										1											1				1		1	
45	50 ft W of Porters Pass	1						1								1												1				1		1	
46	on 372, 50 Ft W	1							1																1				1			1			Snow

Accident Summary of ConnDOT Data (2006 - 2008)

No.	Location	Vehicle	Motorcycle	Bike	Collision Type										Contributing Factor												Road Condition							Notes
					Turning-Opp. Direction	Turning-Intersecting Paths	Rear-End	Backing	Fixed-Object	Turning-Same Direction	Sideswipe-same Direction	Sideswipe-Opp. Direction	Overturn	Unknown	Failed to Grant ROW	Unsafe Backing	Following too Closely	Defective Equipment	Insufficient Vert. Clearance	Violated Traffic Control	Under the Influence	Improper Passing Manuever	Driver Lost Control	Improper Turning Maneuver	Slippery Surface	Unsafe RTOR	Unknown	Dry	Wet	Dawn/Dusk	Dark-Lit	Day	Sand / Mud / Dirt / Oil	No Adverse Condition	
47	at Porters Pass	1					1										1													1		1				Rain
48	at Porters Pass	1				1																	1					1			1				
49	at Porters Pass	1					1										1											1				1			Rain
50	at Burnham Street	1					1										1										1				1			1	
51	at Burnham Street	1											1							1								1			1			1	
52	at Porters Pass	1			1										1													1				1		1	
53	at Porters Pass	1					1										1											1				1		1	
54	Burnham Street	1					1										1											1				1		1	
55	on Burham Ave	1					1										1											1				1		1	
56	Burnham Street	1					1										1											1				1		1	
57	Porter Pass	1										1											1					1			1			1	
58	Burnham Street	1			1										1													1				1		1	
59	at Porter Pass	1					1											1										1				1		1	
60	at Burnham Street	1				1																				1			1			1			Rain
61	on Porter Pass	1								1														1				1				1		1	
62	Porter Pass	1			1										1													1				1			
63	Burnham Street	1					1										1												1		1			1	
64	Burnham Street	1												1													1	1				1		1	
65	35 ft E of Porters Pass	1					1										1											1				1		1	
66	at cdr to CVS	1				1									1													1				1		1	
67	at dr to CVS	1			1										1														1				1			Rain
68	at dr to CVS	1				1																1						1				1		1	