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## Liste des acronymes

AM	Avant-midi
PM	Après-midi
FDS	Fin de semaine
NDS	Niveau de service



## 1 CONTEXTE ET MANDAT

JADCO prévoit réaliser un développement immobilier à même le stationnement des Halles d'Anjou, un ensemble commercial à proximité des Galeries d'Anjou. Le développement prévu est situé à proximité des centres commerciaux des Galeries d'Anjou, des Halles d'Anjou et des autoroutes 40 et 25. Celui-ci comprend l'ajout de 685 unités de logement situées derrière les Halles d'Anjou et accessibles via l'avenue des Halles. La zone d'étude proposée est illustrée ci-dessous.

FIGURE 1 SECTEUR À L'ÉTUDE



Intervia a été mandaté pour réaliser une étude d'impact sur les déplacements à l'intérieur de la zone à l'étude comprenant les sept intersections suivantes :

1. Rue Jean-Talon / Boulevard des Galeries d'Anjou;
2. Rue Jean-Talon / Avenue des Halles;
3. Rue Jean-Talon / Accès A-40;
4. Accès Galeries d'Anjou / Halles d'Anjou / Boulevard des Galeries d'Anjou;
5. Rue Bélanger / Boulevard des Galeries d'Anjou;
6. Rue Bélanger / Avenue de Beaufort;
7. Rue Bélanger / Avenue des Halles.

Pour se faire, Intervia a effectué un relevé de comptage d'une journée en semaine et d'une journée en fin de semaine aux 7 intersections ci-dessus. La caractérisation du secteur à l'étude en termes de réseau routier, de camionnage, des déplacements en transport actif et collectif et de stationnement sur rue et hors rue a été effectuée. Une analyse des conditions de circulations actuelles et projetées à l'heure de pointe de l'avant-midi, de l'après-midi et de la fin de semaine a été réalisée afin de démontrer l'impact de l'implantation du projet. Enfin, si requis, une proposition de mesures d'atténuation des impacts du projet est fournie.

## 2 MÉTHODOLOGIE

La méthodologie employée dans le cadre de cette étude d'impact sur la circulation pour un projet de développement aux Halles d'Anjou est la suivante :

- Collecte de données auprès de JADCO corporation immobilière (intrants fournis, densification du projet, réunion de démarrage, enjeux propres au site à l'étude);
- Réalisation d'un relevé terrain et de comptages de circulation pour le secteur de l'étude;
- Caractérisation de la situation actuelle;
  - Description des réseaux de transport de chaque mode (véhiculaire, transport en commun, actif)
  - Modélisation des conditions de circulation actuelles avec le logiciel PTV Vistro pour les heures de pointe AM et PM d'une journée de semaine ainsi que l'heure de pointe de la fin de semaine
  - Analyse des résultats de la simulation pour les conditions actuelles obtenues par la méthodologie du HCM (Transportation Research Board, 2016)
- Caractérisation de la situation projetée;
  - Génération, distribution et affectation des débits générés par le futur développement en suivant la méthodologie du Trip Generation Handbook (Institute of Transportation Engineers, 2017) et en se basant sur les données de l'enquête O-D 2018 de l'ARTM
  - Modélisation des conditions de circulation projetées avec le logiciel PTV Vistro pour les heures de pointe AM et PM d'une journée de semaine ainsi que l'heure de pointe de la fin de semaine
  - Analyse des résultats de la simulation pour les conditions projetées obtenus par la méthodologie du HCM (Transportation Research Board, 2016)
- Formulation de recommandations de mesures d'atténuation (si nécessaire).

### 2.1 RELEVÉS ET INTRANTS

Une visite terrain du secteur à l'étude a été effectuée le 22 juin 2021 et a permis de mettre en lumière les éléments suivants :

- La trame urbaine de l'avenue des Halles et ses alentours;
- Les enjeux de circulation et les comportements des usagers sur l'avenue des Halles et aux intersections à l'étude;
- La présence des différents modes de transport.

Dans le but d'obtenir un portrait représentatif des conditions de circulation actuelles, des comptages multimodes (véhiculaires, piétons et cyclistes) par mouvements ont été réalisés pour une journée de semaine le jeudi 17 juin et le mardi 22 juin 2021 de 6h30 à 9h30, 11h à 13h et 15h30 à 18h30 et pour une journée de fin de semaine le samedi 19 juin 2021 de 10h30 à 18h30 aux intersections suivantes :

1. Jean-Talon / Boul. des Galeries d'Anjou;
2. Jean-Talon / Avenue des Halles;
3. Jean-Talon / Accès A-40;
4. Accès Galeries d'Anjou / Halles d'Anjou / Boul. des Galeries d'Anjou;
5. Rue Bélanger / Boul. des Galeries d'Anjou;
6. Rue Bélanger / Avenue de Beaufort;
7. Rue Bélanger / Avenue des Halles.

Le plan d'implantation du développement immobilier ainsi que les plans de feu de circulation ont été fournis en intrants.

### 2.1.1 Indicateurs de performances

L'indicateur de performance privilégié lors d'une étude d'impacts sur la circulation est le niveau de service (NDS). Il est défini à l'aide du retard moyen pour franchir l'intersection et caractérise principalement le niveau de confort perçu par les usagers à l'intersection. Un niveau de service « A » représente un retard moyen très court inférieur à 10 secondes alors que pour un niveau de service « F », le retard moyen par véhicule dépasse les 80 secondes. Le tableau 1 présente les niveaux de services pour une intersection contrôlée à feu ou avec arrêts.

TABEAU 1 NIVEAU DE SERVICE (INSTITUTE OF TRANSPORTATION ENGINEERS, 2008)

Niveau de service	Retard moyen (avec feux)	Retard moyen (avec arrêts)
A	0-10 secondes	0-10 secondes
B	10-20 secondes	10-15 secondes
C	20-35 secondes	15-25 secondes
D	35-55 secondes	25-35 secondes
E	55-80 secondes	35-50 secondes
F	> 80 secondes	> 50 secondes

### 3 CARACTÉRISTIQUES DE LA ZONE D'ÉTUDE

Cette section présente la caractérisation de la zone à l'étude selon les différents modes de transport et les conditions de circulation actuelles.

#### 3.1 DESCRIPTION DU RÉSEAU

Le réseau routier, de transport actif et de transport collectif est présenté dans les sections suivantes. Le réseau de camionnage et le stationnement sont également décrits.

##### 3.1.1 Réseau routier

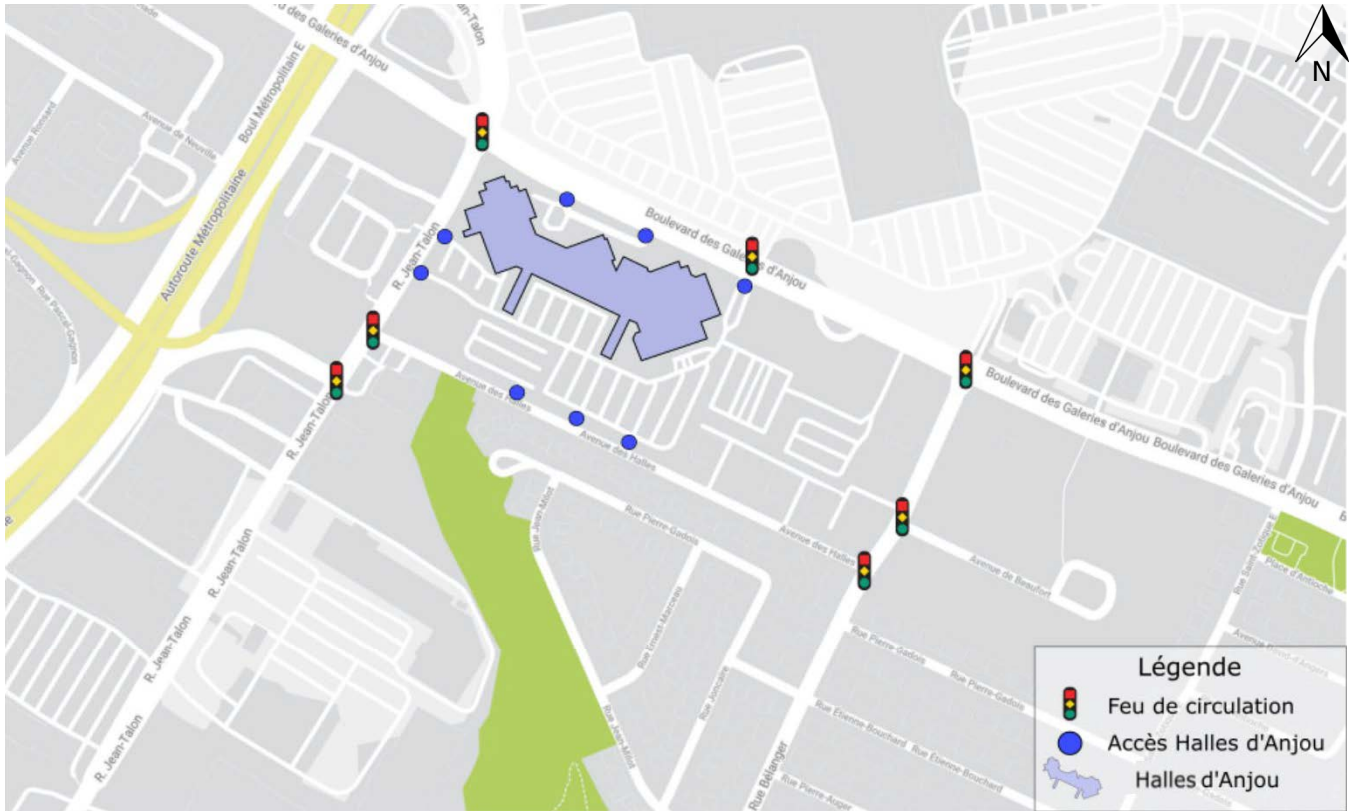
Le développement immobilier prévu sur l'avenue des Halles se trouve à proximité de l'intersection des autoroutes 25 et 40 et des Halles d'Anjou. La figure ci-dessous expose la hiérarchie du réseau routier dans le secteur à l'étude ainsi que le mode de gestion des intersections. L'accès au développement immobilier se situe sur l'avenue des Halles qui est une rue locale ayant une vitesse permise de 40 km/h. L'accès au développement immobilier est entouré de collectrices et d'artères secondaires et les intersections à proximité du développement immobilier sont toutes gérées par des feux de circulation.

FIGURE 2 HIÉRARCHIE DU RÉSEAU ROUTIER ET MODE DE GESTION DES INTERSECTIONS DANS LE SECTEUR À L'ÉTUDE



Plusieurs accès commerciaux se trouvent sur le périmètre de la zone à l'étude (voir figure 3). En effet, l'accès aux stationnements des Halles d'Anjou peut se faire à partir du boulevard des Galeries d'Anjou, de la rue Jean-Talon et de l'avenue des Halles.

FIGURE 3 ACCÈS COMMERCIAUX ACTUELS DE LA ZONE À L'ÉTUDE



SOURCE : TRAITEMENT INTERVIA

### 3.1.2 Réseau de transport actif

En ce qui concerne le transport actif, plusieurs aménagements sont présents dans le secteur à l'étude. Des trottoirs et des pistes cyclables permettent respectivement aux piétons et aux cyclistes de se déplacer de façon sécuritaire. Le □, le □ et la figure suivante résument les aménagements en place actuellement. Il est à noter que l'avenue des Halles comporte un trottoir du côté est de la chaussée seulement sur la majeure partie du tronçon. De plus, une signalisation en direction nord indique la présence de véhicules et de cyclistes sur la chaussée.

Des traverses piétonnes sont présentes seulement aux intersections et aux accès du boulevard des Galeries d'Anjou dans le secteur à l'étude. Des feux piétons sont présents à toutes les intersections du secteur à l'étude à l'exception des deux traverses suivantes qui sont interdites aux piétons :

- Approche est de l'intersection Jean-Talon / Accès A-40;
- Approche ouest de l'intersection Jean-Talon / Avenue des Halles.
- Réseau de transport actif des axes nord-sud à l'étude

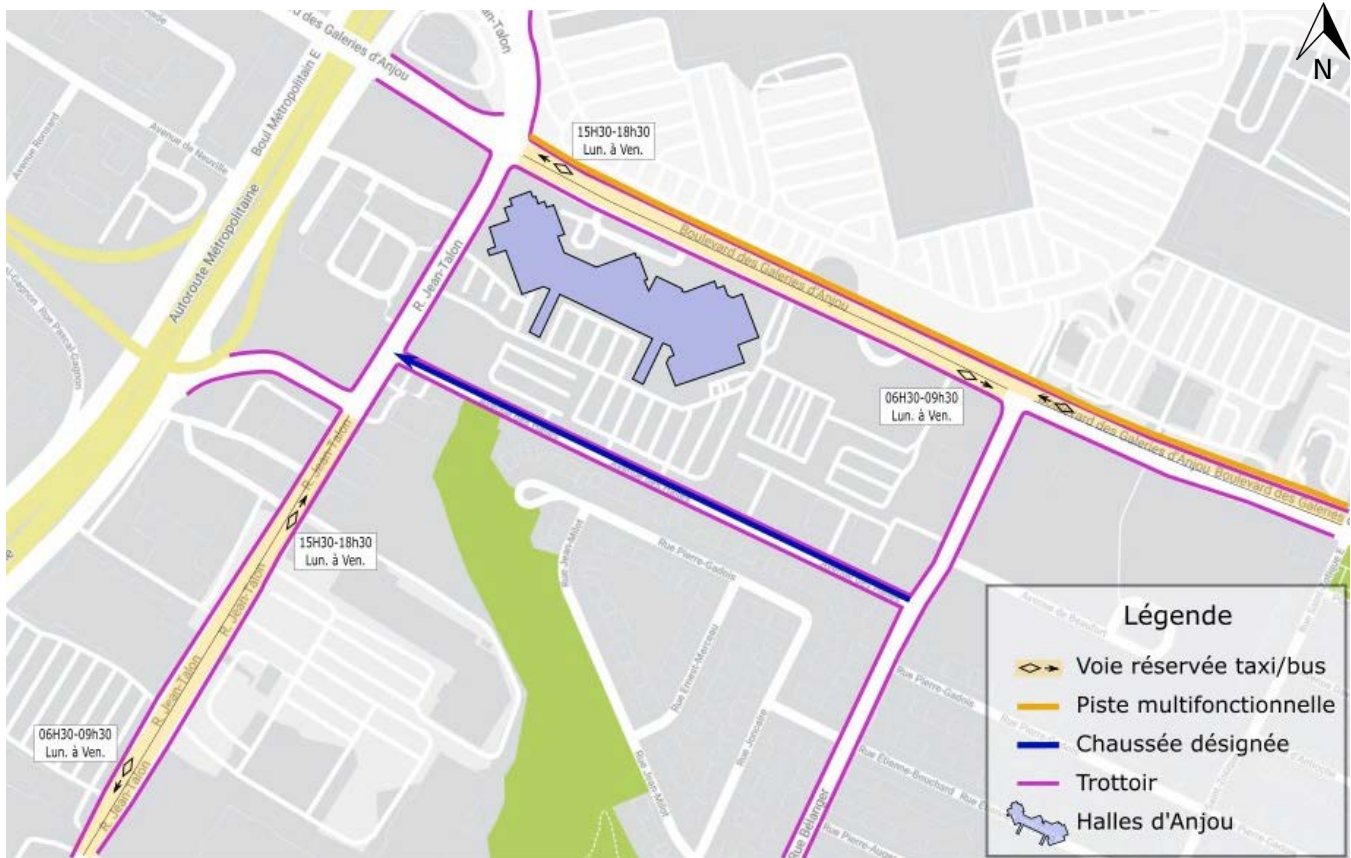
	Trottoir		Piste cyclable	
	Côté est	Côté ouest	Côté est	Côté ouest
<b>Boulevard des Galeries d'Anjou</b>	Oui	Oui	Multifonctionnelle	Non
<b>Accès A-40</b>	Oui	Oui	Non	Non
<b>Avenue des Halles</b>	Oui	Non	Chaussée désignée	Non

- Réseau de transport actif des axes est-ouest à l'étude

	Trottoir		Piste cyclable	
	Côté nord	Côté sud	Côté nord	Côté sud
<b>Rue Jean-Talon</b>	Oui	Oui	Non	Non
<b>Rue Bélanger</b>	Oui	Oui	Non	Non
<b>Avenue de Beaufort</b>	Oui	Oui	Non	Non



FIGURE 4 RÉSEAU DE TRANSPORT ACTIF ET VOIES RÉSERVÉES



SOURCE : TRAITEMENT INTERVIA

### 3.1.3 Réseau de transport collectif

Le réseau de transport collectif dans le secteur à l'étude est seulement constitué d'autobus, car aucune station de métro ou de train est présente dans ce secteur. Les arrêts et lignes d'autobus sont représentés respectivement sur la figure 5 et la figure 6 et les voies réservées sont présentées sur la figure précédente.

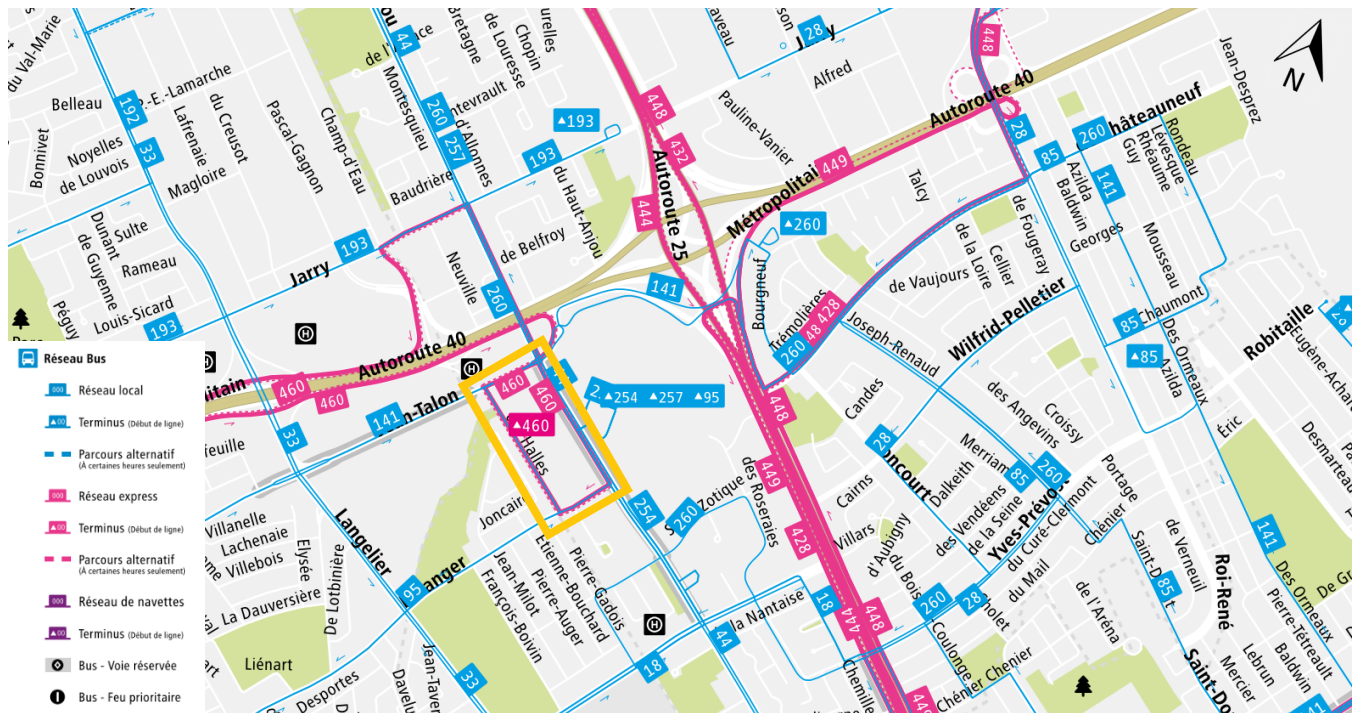
Deux (2) arrêts sur l'avenue des Halles permettent le passage des lignes d'autobus 95 et 460. La ligne 95 fait le trajet entre la station Jean-Talon et les Galeries d'Anjou et la ligne 460 (Réseau Express) transite entre Dorval et les Galeries d'Anjou. Deux arrêts sur la rue Jean-Talon à proximité du nouveau développement immobilier desservent les lignes d'autobus 141 et 372.

FIGURE 5 ARRÊT D'AUTOBUS DANS LE SECTEUR À L'ÉTUDE



SOURCE : SOCIÉTÉ DE TRANSPORT DE MONTRÉAL, TRAITEMENT : INTERVIA

FIGURE 6 LIGNE D'AUTOBUS DANS LE SECTEUR À L'ÉTUDE

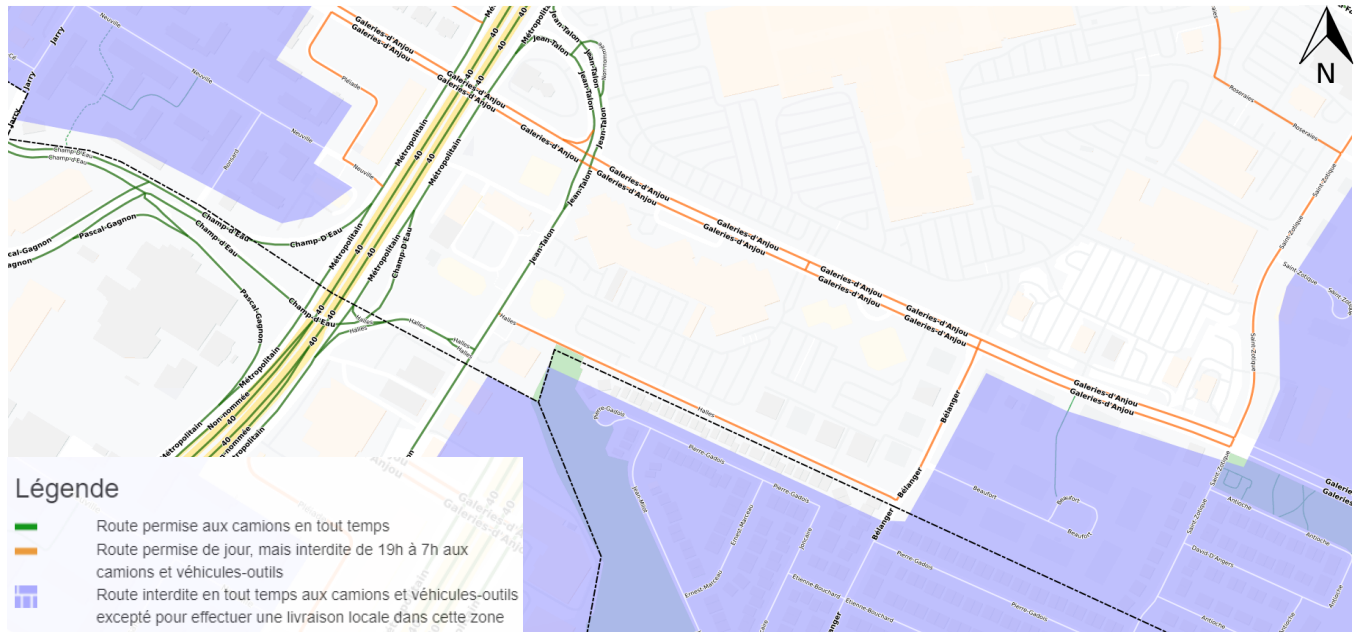


SOURCE : SOCIÉTÉ DE TRANSPORT DE MONTRÉAL, TRAITEMENT : INTERVIA

### 3.1.4 Réseau de camionnage

Le réseau de camionnage du secteur à l'étude est présenté sur la figure ci-dessous. Le boulevard des Galeries d'Anjou, la rue Bélanger et l'avenue des Halles sont interdits aux camions de nuit, c'est-à-dire de 19h à 7h, excepté la livraison locale. L'avenue Beaufort est interdite aux camions en tout temps excepté la livraison locale et la rue Jean-Talon est permise aux camions en tout temps.

FIGURE 7 RÉSEAU DE CAMIONNAGE DANS LE SECTEUR À L'ÉTUDE



SOURCE : VILLE DE MONTRÉAL



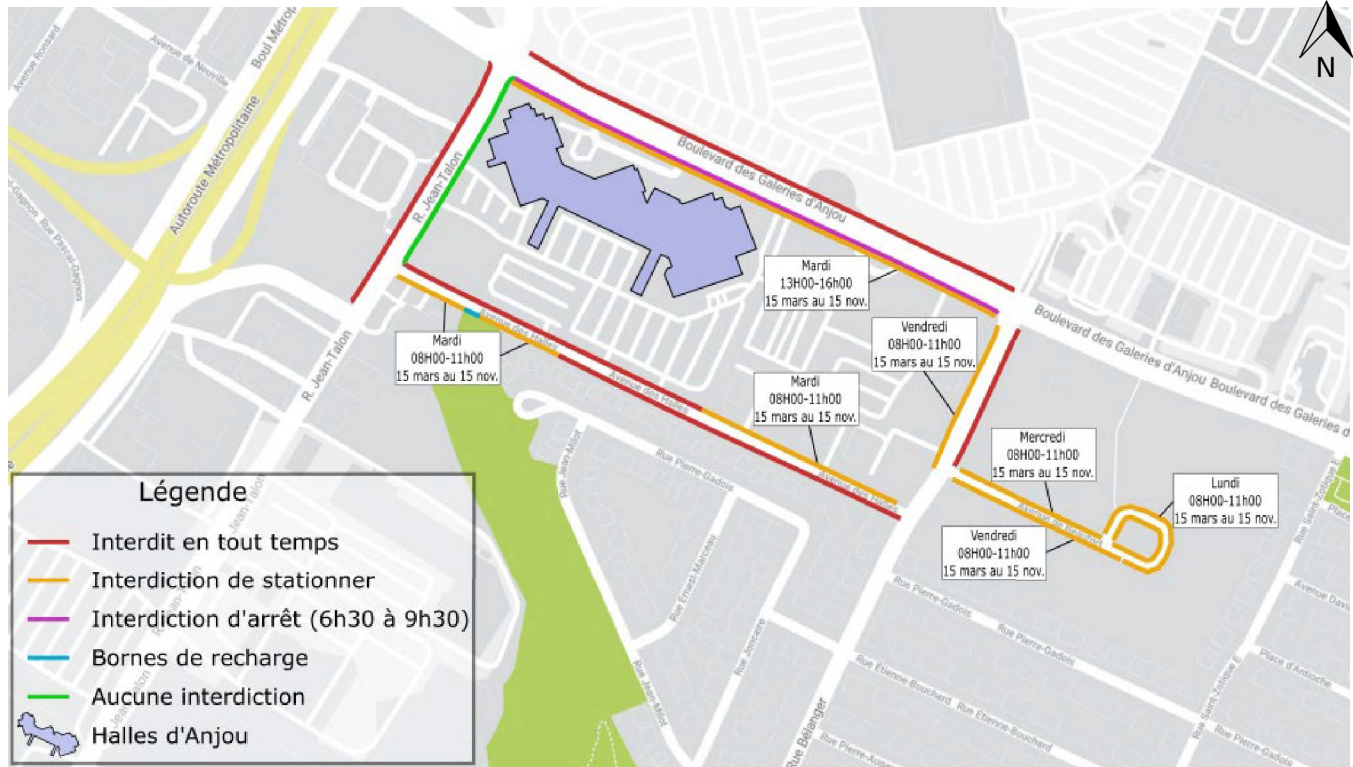
### 3.1.5 Stationnement

La présence d'interdictions de stationnement et de stationnement a été relevée dans le secteur à l'étude et est présentée dans cette section.

#### 3.1.5.1 Interdiction de stationnement sur rue

Les interdictions de stationnement sur rue relevées dans le secteur sont les suivantes :

FIGURE 8 STATIONNEMENT SUR RUE DANS LE SECTEUR À L'ÉTUDE



SOURCE : TRAITEMENT INTERVIA

#### 3.1.5.2 Stationnement hors rue

Plusieurs stationnements hors rue sont présents dans le secteur et en périphérie, ceux-ci incluent le stationnement des Halles d'Anjou, des Galeries d'Anjou et plusieurs autres stationnements privés. Ces stationnements ne sont cependant pas tous accessibles au publics ou disponibles pour les résidents. C'est pourquoi un ratio de stationnement de 1 case / 30 m<sup>2</sup> d'espace commercial est conservé pour répondre à la demande commerciale et un ratio de 1 case par logement est prévue pour la demande résidentielle. Il est important de noter que les ratios présentés offrent plus de cases de stationnement que le minimum requis par le règlement de 1 case / 60 m<sup>2</sup> et 0,75



## 3.2 CONDITIONS DE CIRCULATION ACTUELLES

Cette section traite des débits et des conditions de circulation actuelles des intersections à l'étude.

### 3.2.1 Débits de circulation

Cette section décrit les débits de circulation aux intersections à l'étude et les périodes de pointes déterminées à la suite de l'analyse des comptages effectués en juin 2021 mentionnés dans la section 2.1. Les périodes de pointes identifiées sont les suivantes :

- La pointe du matin (AM) : 8h00 à 9h00;
- La pointe de l'après-midi (PM) : 16h00 à 17h00;
- La pointe de la fin de semaine (FDS) : 14h00 à 15h00.

### 3.2.2 Conditions de circulation

Les conditions actuelles de circulation dans la zone d'étude ont été établies à l'aide du logiciel PTV Vistro pour les heures de pointe du matin, de l'après-midi et de la fin de semaine.

Lors de la visite terrain, il a été observé que le boulevard des Galeries d'Anjou est congestionné dans les deux directions en pointe PM. De plus, même si la voie réservée pour autobus et taxi n'est pas en fonction, elle est peu utilisée sauf pour effectuer le virage à droite. Le modèle Vistro est donc calibré pour tenir compte de cette observation.

### 3.2.2.1 Heure de pointe du matin

La figure 10 et la figure 11 présentent les niveaux de services véhiculaires par mouvement lors de la pointe AM.

FIGURE 10 NIVEAU DE SERVICE DANS LA SITUATION ACTUELLE LORS DE LA POINTE AM – PARTIE 1

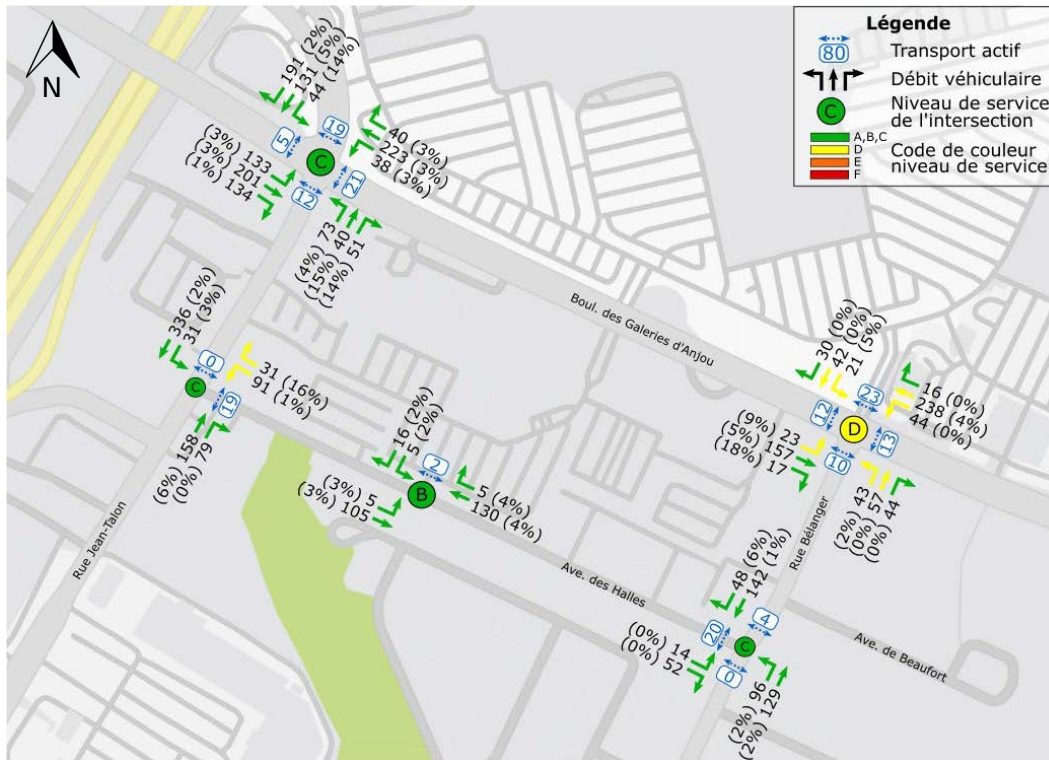


FIGURE 11 NIVEAU DE SERVICE DANS LA SITUATION ACTUELLE LORS DE LA POINTE AM – PARTIE 2



L'analyse des résultats montre que :

- Les intersections et accès du boulevard des Galeries d'Anjou opèrent avec les niveaux de service les plus élevés. En effet, les carrefours suivants opèrent avec des niveaux de service de D (retards véhiculaires entre 35 et 55 secondes).
  - Accès aux Galeries d'Anjou / Halles d'Anjou
  - Intersection avec la rue Bélanger
- Des niveaux de service de B et C sont observés aux intersections et accès de l'avenue des Halles, ce qui représente des retards entre 10 et 35 secondes.
- Les approches nord et sud de l'intersection de la rue Jean-Talon avec l'avenue des Halles et l'accès à l'autoroute 40 opèrent avec des niveaux de services de D. Cette situation s'explique par le temps limité qui est accordé à ces mouvements dans la programmation de feu actuelle.
  - Les niveaux de service globaux de ces intersections sont toutefois respectivement de C et de B.



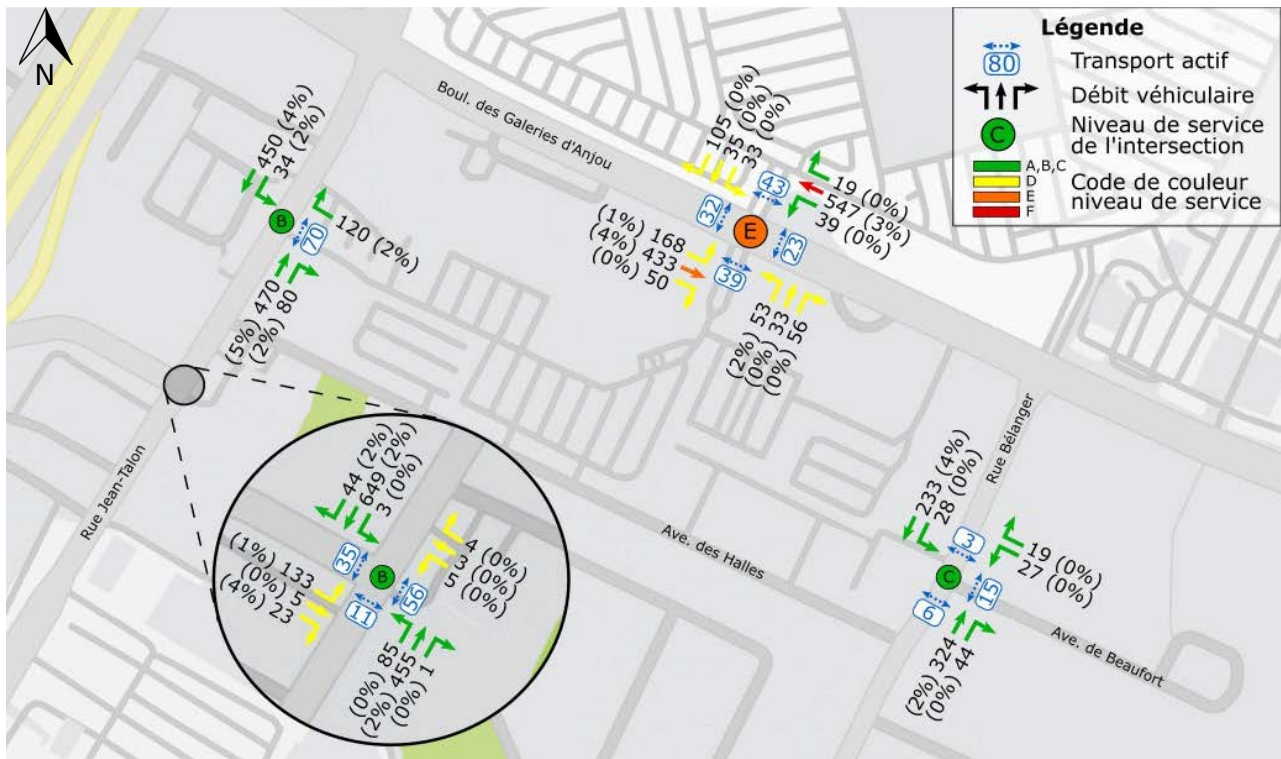
### 3.2.2.2 Heure de pointe de l'après-midi

La figure 12 et la figure 13 présentent les niveaux de services véhiculaires lors de la pointe PM.

FIGURE 12 NIVEAU DE SERVICE DANS LA SITUATION ACTUELLE LORS DE LA POINTE PM – PARTIE 1



FIGURE 13 NIVEAU DE SERVICE DANS LA SITUATION ACTUELLE LORS DE LA POINTE PM – PARTIE 2



L'analyse des résultats montre que :

Les intersections et accès du boulevard des Galeries d'Anjou opèrent avec les niveaux de service les plus élevés. En effet, les débits véhiculaires importants sur le boulevard des Galeries d'Anjou en après-midi engendrent des niveaux de service D et de E, avec des retards allant jusqu'à 78 secondes pour l'accès aux Galeries d'Anjou.

- Intersection avec la rue Jean-Talon
  - Le mouvement de virage à droite à partir de l'approche est opère avec un niveau de service de F
  - Le mouvement de tout droit à partir de l'approche sud opère avec un niveau de service de E
- Accès aux Galeries d'Anjou / Halles d'Anjou
  - Le mouvement de tout droit à partir de l'approche sud opère avec un niveau de service de F
  - Le mouvement de tout droit à partir de l'approche nord opère avec un niveau de service de E
- Intersection avec la rue Bélanger
  - Le mouvement de virage à gauche et de tout droit de l'approche ouest opèrent avec un niveau de service de E
  - Le mouvement de virage à gauche de l'approche est opère avec un niveau de service de E
- L'approche ouest de l'intersection de la rue Bélanger et de l'avenue des Halles opère avec un niveau de service de D. Le niveau de service de l'intersection demeure toutefois C, malgré les débits importants provenant de l'ouest.

### 3.2.2.3 Heure de pointe de la fin de semaine

La figure 14 et la figure 15 présentent les niveaux de services véhiculaires lors de la pointe FDS.

FIGURE 14 NIVEAU DE SERVICE DANS LA SITUATION ACTUELLE LORS DE LA POINTE FDS – PARTIE 1



FIGURE 15 NIVEAU DE SERVICE DANS LA SITUATION ACTUELLE LORS DE LA POINTE FDS – PARTIE 2





Les observations suivantes sont réalisées :

- Les intersections et accès du boulevard des Galeries d'Anjou présentent les niveaux de service les plus élevés. Des débits véhiculaires importants sur le boulevard des Galeries d'Anjou la fin de semaine expliquent ces niveaux de service de D.
  - Intersection avec la rue Jean-Talon
    - Le mouvement de virage à droite et à gauche à partir de l'approche est opèrent avec un niveau de service de E
  - Accès aux Galeries d'Anjou / Halles d'Anjou
    - Le mouvement de virage à droite à partir de l'approche ouest opère avec un niveau de service de E
    - Le mouvement de virage à droite à partir de l'approche est opère avec un niveau de service de E
  - Intersection avec la rue Bélanger
    - Le mouvement de virage à gauche et de tout droit de l'approche ouest opèrent avec un niveau de service de E
    - Le mouvement de virage à gauche de l'approche est opère avec un niveau de service de F
    - Le mouvement de tout droit de l'approche est opère avec un niveau de service de E
- L'approche est de l'intersection de la rue Jean-Talon avec l'avenue des Halles opère avec des niveaux de service de E et F. Un débit de plus de 500 véhicules allant tout droit cause le retard à cette approche.

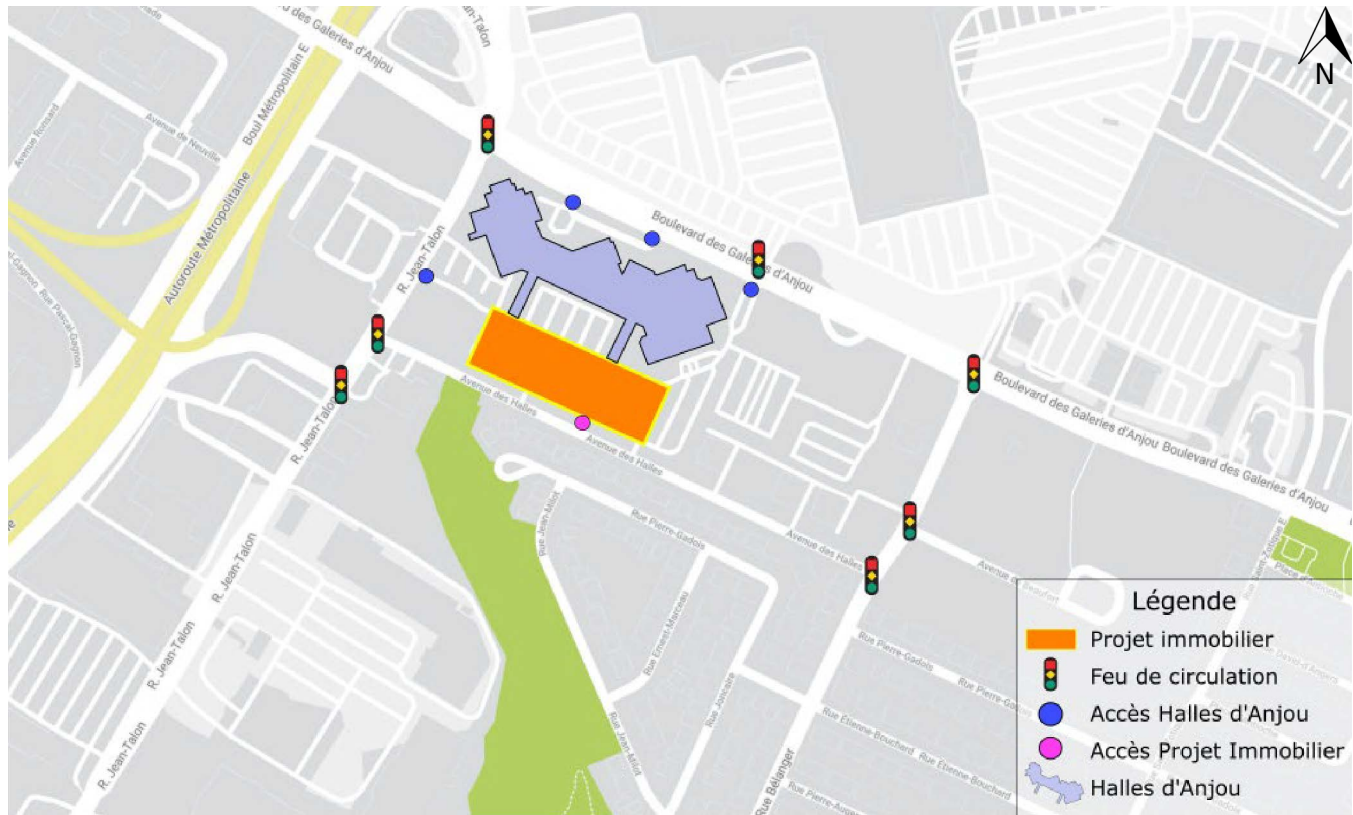
## 4 DÉPLACEMENTS GÉNÉRÉS PAR LE PROJET

Cette section traite des déplacements générés par le projet de développement résidentiel, la réaffectation de débits commerciaux et les conditions de circulation projetées.

### 4.1 RÉAFFECTATION DES DÉBITS COMMERCIAUX

Cette section traite de la réaffectation des débits véhiculaires empruntant l'accès commercial situé sur la rue des Halles d'Anjou. En effet, le développement résidentiel projeté amènera le retrait de l'accès au stationnement des Halles d'Anjou via la rue du même nom et amènera les usagers à emprunter soit l'accès sur Jean-Talon ou celui sur Galeries d'Anjou. L'accès projeté sur l'Avenue des Halles servira pour les résidents du nouveau développement immobilier. La figure ci-dessous présente les accès projetés.

FIGURE 16 ACCÈS DU PROJET IMMOBILIER ENVISAGÉ



Pour ce faire, une génération des Halles d'Anjou a été réalisée à laquelle les débits de circulation de l'accès sur le boulevard des Galeries d'Anjou ont été retirés. Les débits de circulation restants ont ensuite été séparés entre les accès Jean-Talon et Halles d'Anjou. Le tableau suivant présente le résumé de la génération :

TABLEAU 2 INFORMATION SUR LA GÉNÉRATION DES DÉBITS

Pointe	Usage	Unités	Code ITE	Land-use
AM	Commercial	150 000 pi <sup>2</sup>	820	Shopping center
PM	Commercial	150 000 pi <sup>2</sup>	820	Shopping center
FDS	Commercial	150 000 pi <sup>2</sup>	820	Shopping center

TABLEAU 3 GÉNÉRATION DES DÉBITS POUR LES HALLES D'ANJOU

Pointe	Débits générés		Intersection Galeries d'Anjou (comptage)		Débits aux autres accès (Jean-Talon et Halles d'Anjou)	
	Débits entrants	Débits sortants	Débits entrants	Débits sortants	Débits entrants	Débits sortants
AM	87	54	85	15	2	39
PM	352	382	124	142	228	240
FDS	443	410	242	202	201	208

Ainsi, les débits de circulation générés ont ensuite été séparés entre les accès sur les rues Jean-Talon et des Halles. Il est important de noter que la génération ci-dessus a été utilisée pour estimer les débits de circulation aux accès Jean-Talon et des Halles en vue de leur réaffectation vers les autres accès. Ces débits de circulation sont donc déjà inclus dans les comptages de la situation actuelle.

Le logiciel Vistro a été utilisé pour réaffecter les débits de circulation de l'accès sur la rue des Halles vers les accès sur la rue Jean-Talon et le boulevard des Galeries d'Anjou.

## 4.2 GÉNÉRATION DES DÉBITS

La méthodologie employée et la distribution et affectation des déplacements seront présentées dans cette section traitant la génération des débits.

### 4.2.1 Méthodologie

La génération des débits de circulation engendrés par le développement est évaluée à l'aide des données du Trip Generation Handbook, 10th edition de l'ITE (Institute of Transportation Engineers, 2017). Celui-ci permet d'obtenir une estimation des débits véhiculaires aux heures de pointe du matin, de l'après-midi et de la fin de semaine en fonction des usages prévus dans le projet. Le tableau ci-dessous détaille les usages, le code de l'ITE et les débits véhiculaires bruts générés.

TABLEAU 4 USAGES ET DÉBITS VÉHICULAIRES BRUTS GÉNÉRÉS

Pointe	Usage	Unités	Code ITE	Land-use	Débits bruts (véh/h)
AM	Résidentiel	685	221	Multi-family mid-rise	247
PM	Résidentiel	685	221	Multi-family mid-rise	301
FDS	Résidentiel	685	221	Multi-family mid-rise	301

Ensuite, les déplacements internes (entre les Halles d'Anjou et le projet), les déplacements en transport collectif et actifs ont été considérés pour obtenir les débits véhiculaires nets. Les débits internes ont été calculés à l'aide de l'outil disponible dans le NCHRP report 684 basé sur les données du Trip Generation Handbook et les parts modales ont été déterminées à l'aide des données de l'enquête O-D de 2018 de l'ARTM pour le secteur d'Anjou. Il est important de noter qu'une augmentation de la part modale du transport en commun dans le secteur est également anticipée lors du prolongement de la ligne bleue du métro de Montréal. Le tableau suivant présente les débits véhiculaires nets générés par le projet.

TABLEAU 5 DÉBITS VÉHICULAIRES NETS GÉNÉRÉS PAR LE PROJET

Pointe	Débits brut	Déplacements internes	Part modale transport en commun et transport actif	Déplacements véhiculaires	Proportion des débits entrant (%)	Proportion des débits sortant (%)	Débits véhiculaires nets (véh/h)	
							Entrants	Sortants
AM	247	2	40%	147	26%	74%	38	109
PM	301	35	40%	160	61%	39%	98	62
FDS	301	45	15%	218	49%	51%	107	111

Ainsi, les débits de circulation véhiculaires générés sont plus élevés aux heures de pointe du de l'après-midi (160 véh/h) et de la fin de semaine (218 véh/h).

#### 4.2.2 Distribution et affectation des déplacements

La distribution des déplacements s'est faite selon les données disponibles des déplacements du secteur Anjou de l'enquête O-D 2018 de l'ARTM. Puisque les données disponibles librement sont limitées à la période de pointe du matin, une hypothèse a été posée pour la période de l'après-midi où les déplacements sont pendulaires, c'est-à-dire l'inverse des déplacements du matin. Par conséquent, un déplacement produit le matin devient un déplacement attiré en après-midi. Dans le même ordre d'idée, les données de la pointe de l'après-midi sont considérées pour la pointe de la fin de semaine.

Le tableau suivant résume les pourcentages d'affectation des déplacements considérés.

TABLEAU 6 AFFECTATION DES DÉPLACEMENTS VÉHICULAIRES

Pointe	AM		PM		FDS	
	Depuis	Vers	Depuis	Vers	Depuis	Vers
Rue Jean-Talon Est à l'ouest du projet	18%	20%	26%	14%	24%	14%
Accès voie de service Jean-Talon/Des Halles	20%	4%	19%	8%	18%	4%
Accès voie de service Jean-Talon/Galeries d'Anjou	25%	34%	15%	31%	15%	34%
Boulevard des Galeries d'Anjou au nord de l'A-40	22%	23%	19%	26%	19%	24%
Espace commercial Galeries d'Anjou	0%	5%	7%	7%	10%	10%
Boulevard des Galeries d'Anjou au sud de Bélanger	5%	3%	10%	4%	10%	3%
Rue Bélanger à l'ouest du projet	10%	11%	4%	10%	4%	11%
Total	100%	100%	100%	100%	100%	100%

L'affectation des déplacements s'est faite à l'aide du logiciel Vistro et les figures suivantes présentent la variation des débits pour chaque mouvement aux intersections à l'étude entre la situation actuelle et la situation projetée.

FIGURE 17 VARIATION DES DÉBITS PAR MOUVEMENT EN POINTE AM





FIGURE 18 VARIATION DES DÉBITS PAR MOUVEMENT EN POINTE PM

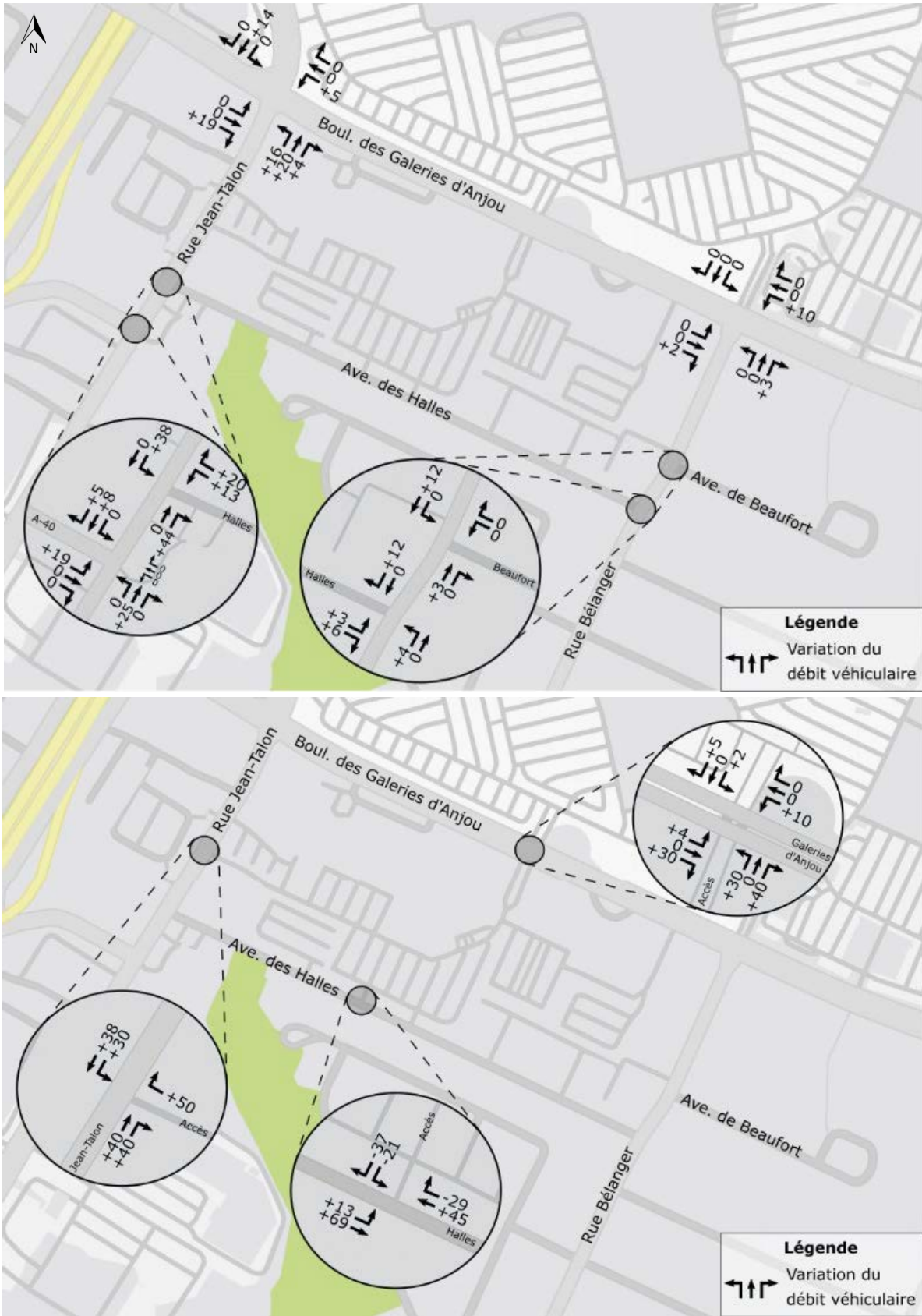
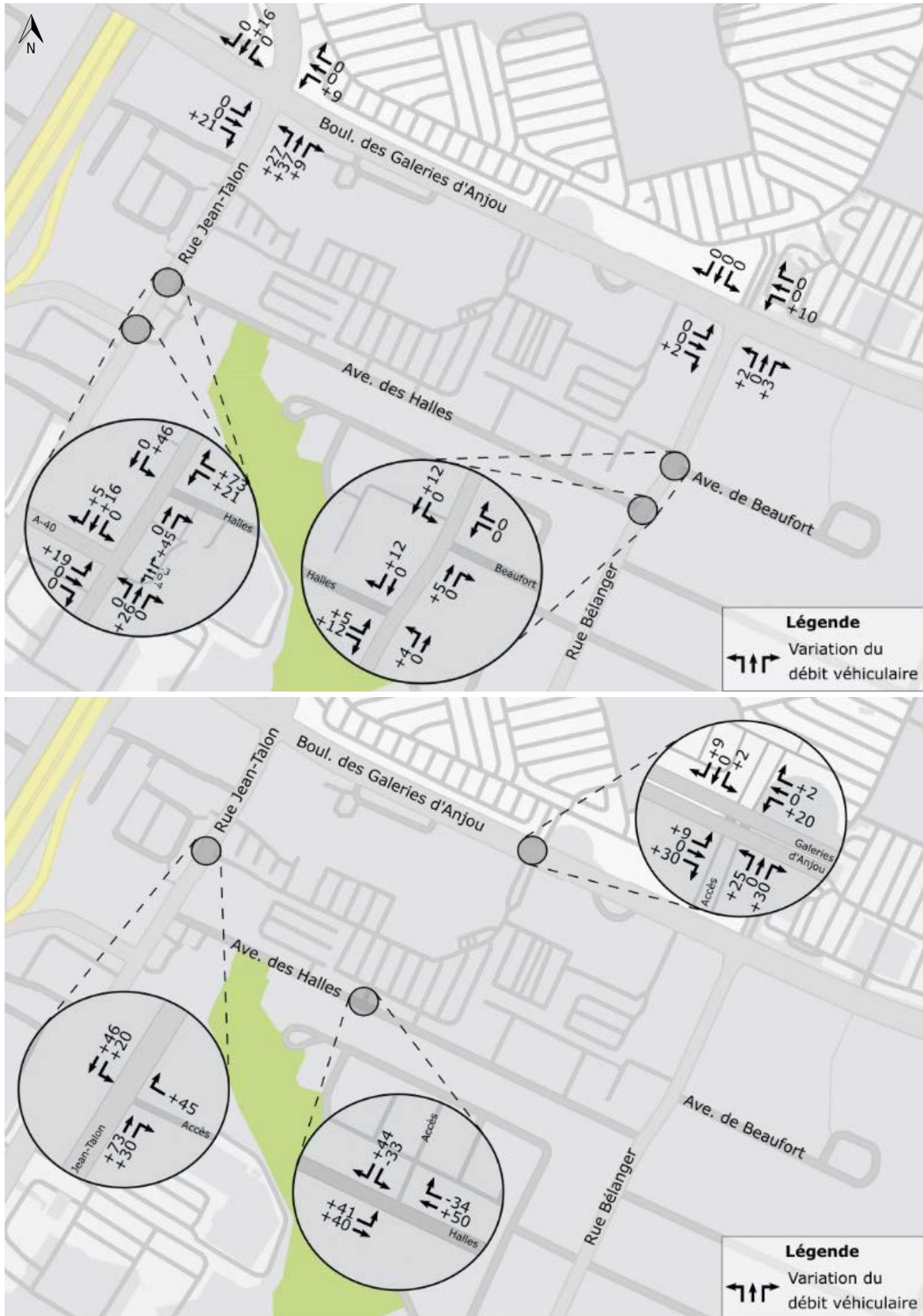


FIGURE 19 VARIATION DES DÉBITS PAR MOUVEMENT EN POINTE FDS



### 4.3 CONDITIONS DE CIRCULATION PROJETÉES

Cette section traite des conditions de circulation projetées sans mesures d'atténuation pour les périodes de pointes étudiées à la suite de l'implantation du projet. Les sections suivantes exposent et analysent les niveaux de services des intersections à l'étude.

#### 4.3.1 Heure de pointe de l'avant-midi

Les figures ci-dessous montrent les niveaux de services observés lors de la pointe de l'avant-midi.





Lors de la période de pointe AM, les niveaux de services aux intersections du secteur à l'étude demeurent similaires à ceux de la situation actuelle (voir figure 20 et figure 21). Ainsi, les problématiques soulevées dans la situation actuelle persistent et le retard le plus important de 42 secondes est observé à l'approche nord de l'intersection entre le boulevard des Galeries d'Anjou et l'accès aux Galeries d'Anjou.

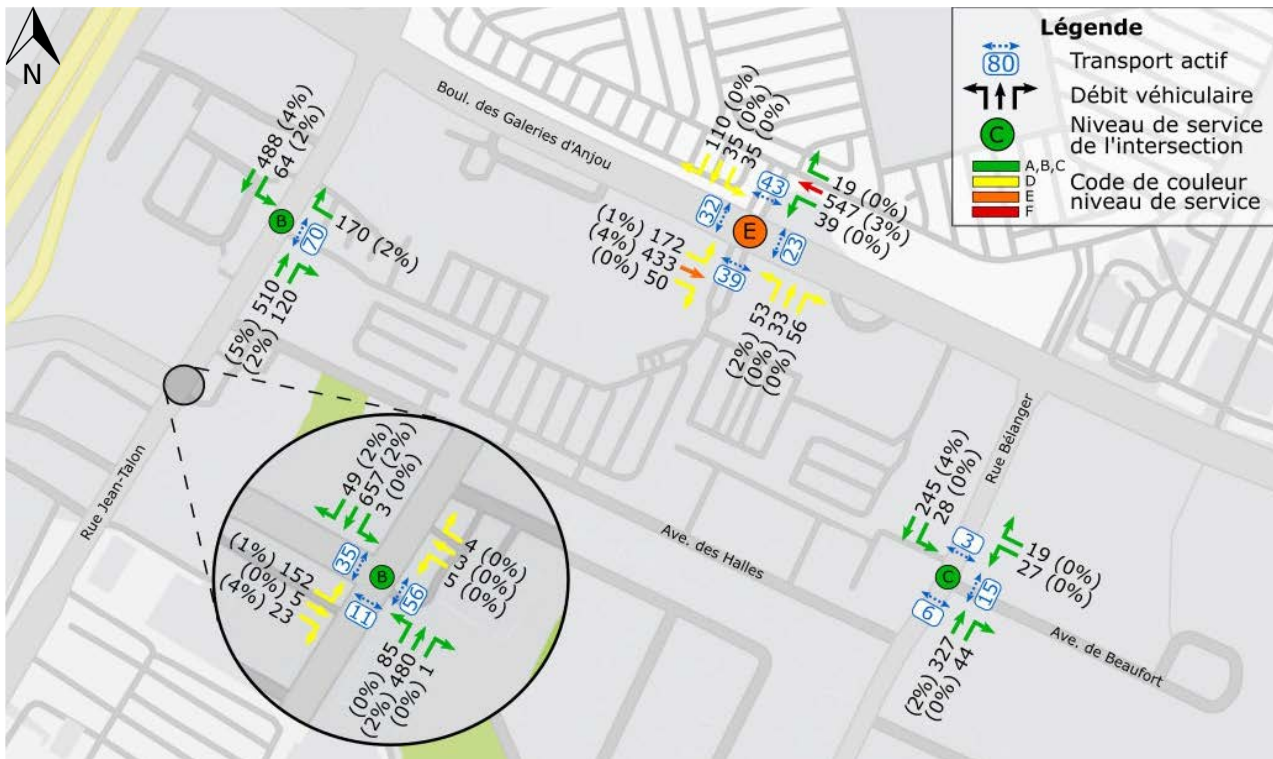
### 4.3.2 Heure de pointe de l'après-midi

Les figures ci-dessous montrent les niveaux de services observés lors de la pointe de l'après-midi.

FIGURE 22 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE LORS DE LA POINTE PM – PARTIE 1



FIGURE 23 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE LORS DE LA POINTE PM – PARTIE 2



De même pour la période de pointe PM lors de la situation projetée (voir figure 22 et figure 23), les niveaux de services aux intersections du secteur à l'étude restent identiques et les problématiques mentionnées précédemment sont toujours présentes excepté pour l'intersection Jean-Talon / Halles d'Anjou. En effet, le mouvement de virage à droite des Halles d'Anjou vers Jean-Talon se dégrade avec un niveau de service qui passe de D à E (+10 secondes).



### 4.3.3 Heure de pointe de la fin de semaine

Les figures ci-dessous montrent les niveaux de services observés lors de la pointe de la fin de semaine.

FIGURE 24 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE LORS DE LA POINTE FDS – PARTIE 1



FIGURE 25 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE LORS DE LA POINTE FDS – PARTIE 2



Pour la période de pointe FDS, les niveaux de services aux intersections (voir figure 19 et figure 20) sont semblables à la situation actuelle à l'exception de l'intersection entre la rue Jean-Talon et l'avenue des Halles. Le niveau de service anticipé à ce carrefour est de E avec un retard maximal de 75 secondes (+34 secondes). Des débits plus importants vers l'avenue des Halles, engendrés par le nouveau projet de développement immobilier créent plus de retard à cette intersection en comparaison avec la situation actuelle.

## 5 MESURES D'ATTÉNUATION

Les débits supplémentaires dans le secteur à l'étude engendrés par le projet de développement immobilier accentuent certaines problématiques déjà présentes dans le réseau. Cette section propose des mesures d'atténuation à ces impacts.

### 5.1 RECOMMANDATIONS GÉNÉRALES

Indépendamment du projet de développement immobilier, le réseau à l'étude n'est pas pleinement efficace et nécessiterait une uniformisation et des mises aux normes. Une uniformisation des durées de cycle permettrait une coordination efficace de l'axe du boulevard des Galeries d'Anjou et améliorerait les niveaux de services dans le secteur à l'étude. De plus, les intersections suivantes demandent une mise aux normes de leur plan de programmation de feu de circulation :

- Jean-Talon / Galerie d'Anjou;
- Galerie d'Anjou / Accès des Halles;
  - La modification du phasage des feux de circulation pour permettre les mouvements des approches est et ouest en simultané;
  - L'optimisation du minutage en fonction de la demande véhiculaire en période de pointe AM;
  - La modification de l'assignation des voies, soit des voies assignées au virage à gauche pour les approches est et ouest.
- Galerie d'Anjou / Bélanger;
- Bélanger / Avenue des Halles / Beaufort.

Ces bonifications au réseau permettraient de le rendre plus efficace et de diminuer les retards aux intersections.

### 5.2 RECOMMANDATIONS SPÉCIFIQUES AU PROJET

Tel que mentionné à la section 4, les conditions de circulation anticipées engendrent des problématiques à l'intersection suivante de la rue Jean-Talon / avenue des Halles à l'heure de pointe de la fin de semaine.

Des mesures d'atténuation ont donc été développées pour cette intersection, soient :

- Pour la pointe de l'après-midi, une modification du minutage pour atténuer l'impact du débit additionnel à l'approche de l'avenue des Halles est nécessaire.
- Pour la pointe de la fin de semaine, l'augmentation du cycle à 130 secondes et une modification du minutage pour atténuer l'impact du débit additionnel à l'approche de l'avenue des Halles est nécessaire.

Concernant l'augmentation du cycle à 130 secondes pour la période de fin de semaine, il est important d'élaborer sur cette proposition qui permet d'assurer le maintien de conditions de circulation acceptables après l'implantation du projet dans une situation anticipée jugée conservatrice. En effet, il s'agit d'un projet résidentiel dans un secteur commercial où l'analyse couvre l'heure de pointe de la période de fin de semaine, il est cependant fort probable que l'heure de pointe des usages commerciaux et résidentiels diffèrent, contribuant ainsi à une surévaluation des impacts potentiels.

De plus, bien que la modification du cycle à 130 secondes affecte la coordination de l'axe Jean-Talon et du réseau 505, l'intersection Jean-Talon / des Halles est située à la limite dudit réseau et l'intersection voisine (Jean-Talon / Galeries d'Anjou) a déjà un cycle différent. Ainsi, la modification du cycle à cet endroit pour la fin de semaine n'aurait comme effet que d'avoir le bris de coordination une intersection plus tôt.

Les figures suivantes présentent les conditions de circulation anticipées après la mise en place des mesures d'atténuation et les modifications proposées au minutage des feux de circulation pour les heures de pointe de l'après-midi et de la fin de semaine.

### **5.2.1 Heure de Pointe de l'après-midi**

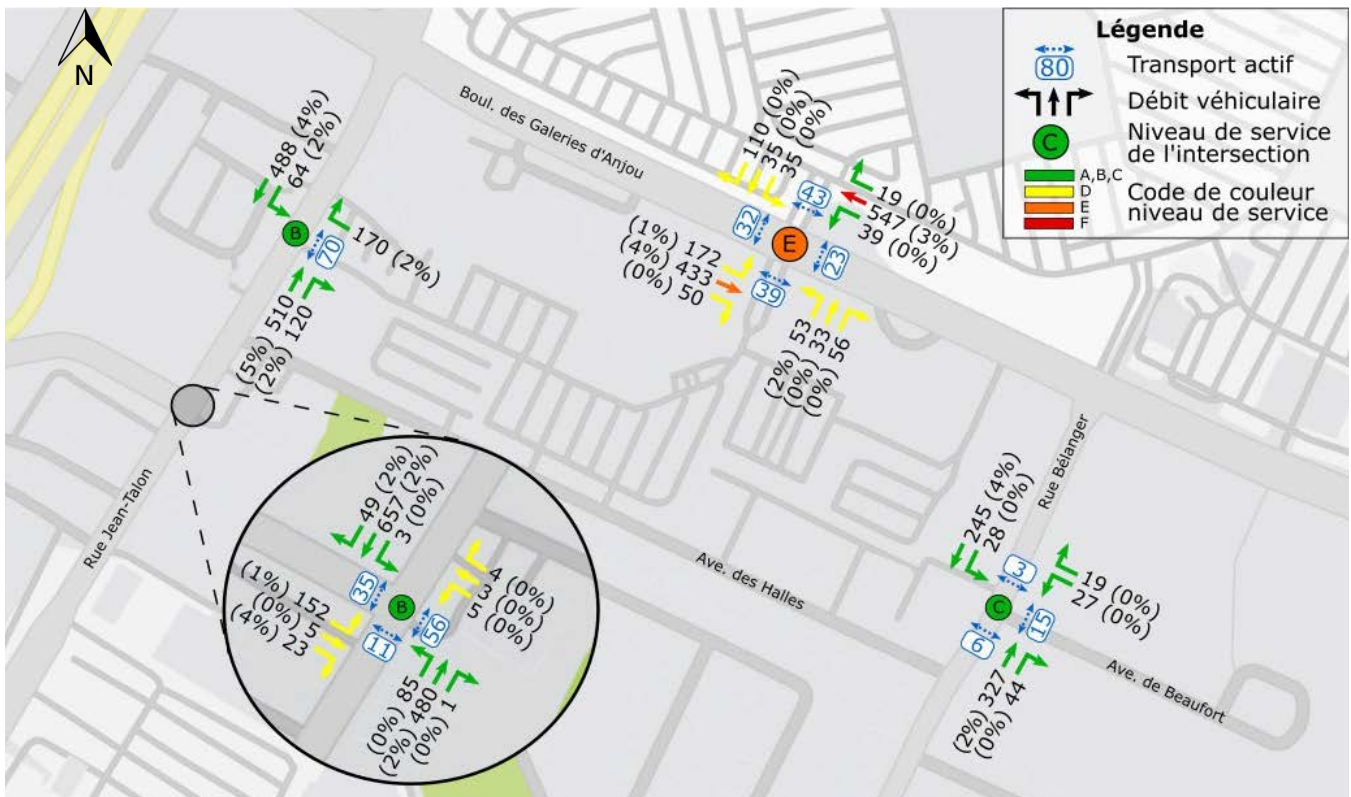
Les figures suivantes présentent les niveaux de services aux intersections à la suite de la mise en place des mesures d'atténuation proposées à Jean-Talon / avenue des Halles.



FIGURE 26 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE À LA SUITE DES MESURES D'ATTÉNUATION LORS DE LA POINTE PM – PARTIE 1



FIGURE 27 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE À LA SUITE DES MESURES D'ATTÉNUATION LORS DE LA POINTE PM – PARTIE 2



### 5.2.2 Heure de pointe de la fin de semaine

Les figures suivantes exposent les niveaux de services aux intersections à la suite de la mise en place des mesures d'atténuation des impacts.

FIGURE 28 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE À LA SUITE DES MESURES D'ATTÉNUATION LORS DE LA POINTE FDS – PARTIE 1



FIGURE 29 NIVEAU DE SERVICE DANS LA SITUATION PROJÉTÉE À LA SUITE DES MESURES D'ATTÉNUATION LORS DE LA POINTE FDS – PARTIE 2



## 6 CONCLUSION ET RECOMMANDATIONS

Le développement immobilier prévu par JADCO à même le stationnement des Halles d'Anjou est situé à proximité des centres commerciaux des Galeries d'Anjou, des Halles d'Anjou et des autoroutes 40 et 25. Celui-ci comprend l'ajout de 685 unités de logement situées derrière les Halles d'Anjou et accessibles via l'avenue des Halles. Intervia a été mandaté pour réaliser une étude d'impact sur les déplacements à l'intérieur de la zone d'étude.

Pour se faire, des comptages d'une journée en semaine et une journée de fin de semaine ont été effectués et ont permis d'établir le portrait du secteur à l'étude. Une description des réseaux routier, de transport actif, de transport collectif, de camionnage et la présentation du stationnement sur rue et hors rue sont fournis. Une analyse des conditions de circulations actuelles et projetées à l'heure de pointe de l'avant-midi, de l'après-midi et de la fin de semaine a été réalisée afin de démontrer l'impact de l'implantation du projet. Les principales observations sont les suivantes :

- Les pointes PM et FDS présentent conditions de circulation plus difficiles en raison des débits importants lors de ces heures de pointe. Les usages commerciaux du secteur favorisent en effet de plus grands débits le soir et la fin de semaine.
- À la fois dans la situation actuelle que dans la situation projetée, les intersections et accès du boulevard des Galeries d'Anjou opèrent avec des niveaux de services variant de D à E.

Finalement, des mesures d'atténuation sont proposées pour répondre à certaines problématiques identifiées dans la situation projetée à l'intersection Jean-Talon / avenue des Halles. Des mesures ciblées lors de l'implantation du projet cette intersection permettraient de conserver des conditions de circulation similaires à l'actuel :

- Rue Jean-Talon / Avenue des Halles (pour les pointes PM et FDS)
  - Augmentation du cycle à 130 secondes (pour la pointe FDS seulement)
  - Modification du minutage pour atténuer l'impact du débit additionnel à l'approche de l'avenue des Halles.

De façon plus globale, une uniformisation et une mise aux normes des programmations de feux serait souhaitable pour améliorer les conditions de circulation actuelles qui sont difficiles en période de pointe à certaines intersections de la zone à l'étude. Il est important de noter que cette recommandation est associée aux problématiques de circulation actuelles et non à l'ajout du projet à l'étude dans le cadre de ce mandat.

## 7 REFERENCES

- Institute of Transportation Engineers. (2008, février). Canadian Capacity Guide for Signalized Intersections.  
Institute of Transportation Engineers. (2017). Trip Generation Manual. *10th Edition*.  
Transportation Research Board. (2016). *Highway Capacity Manual* (éd. 6e, Vol. 2). United States of America.



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# Annexe 1 – Enquête O-D 2018

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116 – Montréal : Anjou

L'humain et la mobilité  
au cœur de vos projets

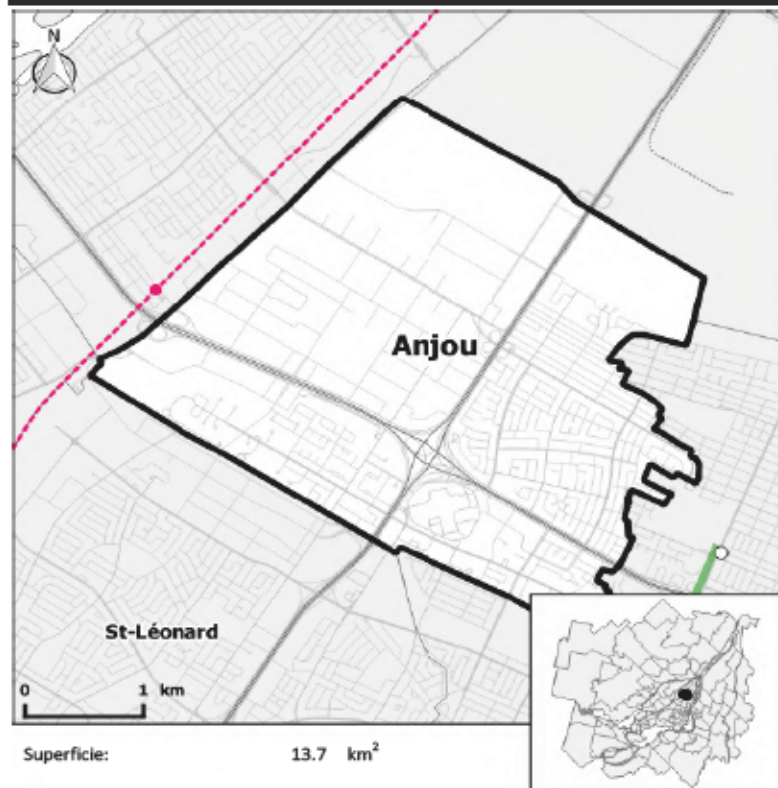
intervia

[intervia.ca](http://intervia.ca)



## 116 - Montréal : Anjou

Population: 42 720		Hommes 46.4%	Femmes 53.6%
Nombre de logis:	18 810	Âge	%
Logis enquêtés:	731	0-19	21.9%
Autos:	22 100	20-34	15.4%
Personnes/logis:	2.27	35-49	19.6%
Autos/logis:	1.17	50-64	19.8%
Autos/personne:	0.52	65 et +	23.3%
		Nb logis avec:	
		0 auto	18.7%
		1 auto	51.9%
		2 autos	24.1%
		3 autos	4.3%
		4 autos et +	1.0%



DÉPLACEMENTS DES RÉSIDENTS DU SECTEUR	
Nombre de déplacements effectués par les résidents:	88 000
Nombre de déplacements internes:	28 500
Nombre de résidents (5 ans et +) ne se déplaçant pas:	8 000
Déplacements par personne (5 ans et +):	2.18

Par MOTIF (tous modes - 24 heures)	Produits	Attirés	Externes
- Travail	24.0%	3.5%	26.2%
- Études	15.1%	6.2%	0.7%
- Loisir	8.9%	3.1%	29.4%
- Magasinage	13.0%	8.3%	19.5%
- Autres (sauf retour)	15.1%	9.4%	22.6%
- Retour au domicile	23.9%	69.5%	-
<b>TOTAL (nb)</b>	<b>56 100</b>	<b>55 700</b>	<b>4 700</b>

DÉPLACEMENTS PRODUITS ET ATTIRÉS PAR LE SECTEUR		
Par MOTIF - 24 hres (tous modes)	Produits	Attirés
- Travail	13.3%	25.0%
- Études	7.8%	4.4%
- Loisir	6.4%	5.8%
- Magasinage	10.6%	20.8%
- Autres (sauf retour)	11.2%	9.4%
- Retour au domicile	50.6%	34.5%
<b>TOTAL (nb)</b>	<b>112 200</b>	<b>112 200</b>

Par MODE - 24 hres (tous motifs sauf retour)	Produits	Attirés
- Motorisés (nb)	50 300 90.8%	68 700 93.5%
- Automobile (nb)	40 200 72.6%	61 000 83.0%
- Conducteur	81.8%	82.3%
- Passager	18.2%	17.7%
- T.C. Public (nb)	10 000 18.1%	6 900 9.4%
- Métro	58.8%	23.9%
- STM (bus)	83.4%	97.7%
- Train	0.6%	0.5%
- STL, RTL, exo (bus)	0.2%	2.8%
- Bimodal	9.2%	4.2%
- Autres motorisés (nb)	1 000 1.8%	1 100 1.5%
- Non motorisés (nb)	5 100 9.2%	4 700 6.4%
- Autres et indéterminés (nb)	100 0.2%	200 0.3%
<b>TOTAL (nb)</b>	<b>55 400</b>	<b>73 500</b>

Par MODE - PPAM (tous motifs sauf retour)	Produits	Attirés
- Motorisés	88.2%	91.8%
- Automobile	59.5%	79.9%
- T.C. Public	28.2%	9.9%
- Bimodal	2.8%	0.5%
- Autres motorisés	3.3%	2.5%
- Non motorisés	11.7%	7.9%
- Autres	0.2%	0.4%
<b>TOTAL (nb)</b>	<b>22 200</b>	<b>29 000</b>

Par PÉRIODE (Motorisés tous motifs)	Produits	Attirés
- PPAM	19.9%	26.5%
- Jour	27.3%	29.7%
- PPM	38.5%	31.4%
- Soir	13.1%	10.4%
- Nuit	1.2%	2.0%
<b>TOTAL (nb)</b>	<b>103 000</b>	<b>103 200</b>

## Annexe 2 – Situation actuelle AM

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 1 Actuel AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_AM\_RV0B.pdf

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	WB Thru	0,320	25,8	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Left	0,237	26,2	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,254	35,2	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	NB Thru	0,242	39,4	D
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Thru	0,394	27,9	C
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,022	9,0	A
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Right	0,292	24,2	C
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Right	0,331	13,7	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,007	10,0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	25,8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,320

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	14	0	52	96	129	0	0	142	48
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	2,08	1,55	0,00	0,00	1,41	6,25
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	14	0	52	96	129	0	0	142	48
Peak Hour Factor	1,0000	1,0000	1,0000	0,4400	1,0000	0,6200	0,7700	0,7000	1,0000	1,0000	0,7700	0,8000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	8	0	21	31	46	0	0	46	15
Total Analysis Volume [veh/h]	0	0	0	32	0	84	125	184	0	0	184	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			0			0			2		
v_di, Inbound Pedestrian Volume crossing in	2			0			0			2		
v_co, Outbound Pedestrian Volume crossing	0			10			0			10		
v_ci, Inbound Pedestrian Volume crossing mi	0			10			0			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,07	0,18	0,14
s, saturation flow rate [veh/h]	1900	1584	1694	1801
c, Capacity [veh/h]	652	562	681	580
d1, Uniform Delay [s]	0,00	22,20	23,23	25,51
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	0,83	2,18	2,23
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,21	0,45	0,42
d, Delay for Lane Group [s/veh]	0,00	23,03	25,41	27,74
Lane Group LOS	A	C	C	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	1,88	5,43	4,49
50th-Percentile Queue Length [ft/ln]	0,00	47,04	135,69	112,13
95th-Percentile Queue Length [veh/ln]	0,00	3,39	9,25	7,96
95th-Percentile Queue Length [ft/ln]	0,00	84,67	231,21	198,96

**Movement, Approach, & Intersection Results**

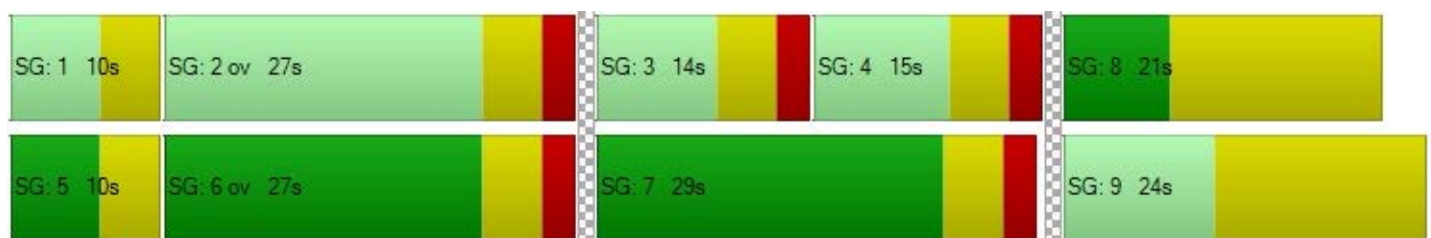
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	23,03	23,03	23,03	25,41	25,41	25,41	27,74	27,74	27,74
Movement LOS	A	A	A	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	0,00			23,03			25,41			27,74		
Approach LOS	A			C			C			C		
d_I, Intersection Delay [s/veh]	25,85											
Intersection LOS	C											
Intersection V/C	0,320											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0			11,0			11,0			11,0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00			0,00			0,00			0,00		
d_p, Pedestrian Delay [s]	34,67			34,67			34,67			34,67		
I_p,int, Pedestrian LOS Score for Intersection	1,714			2,010			1,996			1,984		
Crosswalk LOS	A			B			A			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	511			511			689			467		
d_b, Bicycle Delay [s]	24,94			24,94			19,34			26,45		
I_b,int, Bicycle LOS Score for Intersection	1,560			1,751			2,069			1,962		
Bicycle LOS	A			A			B			A		

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	26,2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,237

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	32	0	21	0	0	0	0	134	14	14	152	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,49	0,00	0,00	3,29	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	0	21	0	0	0	0	134	14	14	152	0
Peak Hour Factor	0,6700	1,0000	0,8800	1,0000	1,0000	1,0000	1,0000	0,7600	0,8800	0,5000	0,8400	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	12	0	6	0	0	0	0	44	4	7	45	0
Total Analysis Volume [veh/h]	48	0	24	0	0	0	0	176	16	28	181	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1		0		0		2					
v_di, Inbound Pedestrian Volume crossing in	2		0		0		1					
v_co, Outbound Pedestrian Volume crossing	5		0		4		0					
v_ci, Inbound Pedestrian Volume crossing mi	4		0		5		0					
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0					
Bicycle Volume [bicycles/h]	0		0		0		0					

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,10	0,12
s, saturation flow rate [veh/h]	1740	1900	1850	1773
c, Capacity [veh/h]	290	296	718	577
d1, Uniform Delay [s]	32,60	0,00	21,58	24,86
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,04	0,00	0,91	1,76
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,25	0,00	0,27	0,36
d, Delay for Lane Group [s/veh]	34,64	0,00	22,49	26,62
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,51	0,00	3,07	3,73
50th-Percentile Queue Length [ft/ln]	37,81	0,00	76,87	93,14
95th-Percentile Queue Length [veh/ln]	2,72	0,00	5,53	6,71
95th-Percentile Queue Length [ft/ln]	68,05	0,00	138,37	167,65

**Movement, Approach, & Intersection Results**

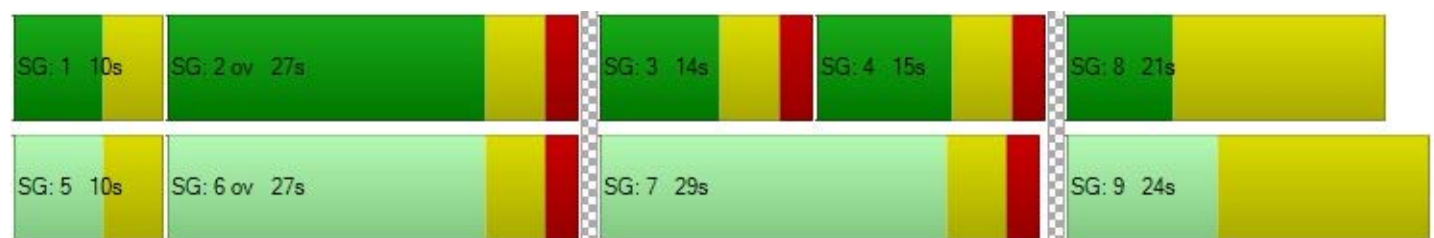
d_M, Delay for Movement [s/veh]	34,64	34,64	34,64	0,00	0,00	0,00	22,49	22,49	22,49	26,62	26,62	26,62
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,64			0,00			22,49			26,62		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	26,16											
Intersection LOS	C											
Intersection V/C	0,237											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,811	1,784	1,920	1,914
Crosswalk LOS	A	A	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,45	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	1,876	1,904
Bicycle LOS	A	A	A	A

**Sequence**





Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	35,2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,254

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	44	238	16	23	157	17	43	57	44	21	42	30
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,78	0,00	8,70	5,10	17,65	2,33	0,00	0,00	4,76	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	238	16	23	157	17	43	57	44	21	42	30
Peak Hour Factor	0,7900	0,9000	0,6700	0,7200	0,9600	0,7100	0,9000	0,6800	0,8500	0,7500	0,7500	0,5400
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	14	66	6	8	41	6	12	21	13	7	14	14
Total Analysis Volume [veh/h]	56	264	24	32	164	24	48	84	52	28	56	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		7			4			5			7	
v_di, Inbound Pedestrian Volume crossing in		7			5			4			7	
v_co, Outbound Pedestrian Volume crossing		5			5			5			4	
v_ci, Inbound Pedestrian Volume crossing mi		5			4			5			5	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		3			3			1			9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,03	0,14	0,02	0,02	0,05	0,05	0,04	0,04	0,03	0,02	0,03	0,03
s, saturation flow rate [veh/h]	1810	1843	1592	1685	1823	1732	1344	1900	1602	1284	1900	1609
c, Capacity [veh/h]	343	628	543	319	622	591	337	345	643	239	345	1012
d1, Uniform Delay [s]	44,75	33,46	29,10	44,21	30,24	30,30	42,72	46,23	12,92	49,44	45,52	9,42
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,02	2,06	0,15	0,63	0,52	0,57	0,89	1,67	0,25	0,99	1,01	0,10
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,16	0,42	0,04	0,10	0,15	0,16	0,14	0,24	0,08	0,12	0,16	0,06
d, Delay for Lane Group [s/veh]	45,78	35,52	29,26	44,83	30,76	30,87	43,60	47,89	13,17	50,43	46,53	9,53
Lane Group LOS	D	D	C	D	C	C	D	D	B	D	D	A
Critical Lane Group	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1,65	6,92	0,54	0,93	2,22	2,19	1,38	2,54	0,62	0,88	1,66	0,65
50th-Percentile Queue Length [ft/ln]	41,21	172,93	13,54	23,28	55,48	54,72	34,53	63,57	15,51	22,05	41,53	16,29
95th-Percentile Queue Length [veh/ln]	2,97	11,23	0,97	1,68	3,99	3,94	2,49	4,58	1,12	1,59	2,99	1,17
95th-Percentile Queue Length [ft/ln]	74,17	280,76	24,37	41,90	99,87	98,49	62,16	114,43	27,91	39,69	74,75	29,32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45,78	35,52	29,26	44,83	30,81	30,87	43,60	47,89	13,17	50,43	46,53	9,53
Movement LOS	D	D	C	D	C	C	D	D	B	D	D	A
d_A, Approach Delay [s/veh]	36,75			32,86			36,96			32,51		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	35,16											
Intersection LOS	D											
Intersection V/C	0,254											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0			9,0			9,0			9,0		
M_corner, Corner Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft²/ped]	763,64			812,73			856,26			549,97		
d_p, Pedestrian Delay [s]	36,45			36,45			36,45			36,45		
l_p,int, Pedestrian LOS Score for Intersection	2,456			2,484			2,211			2,356		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	889			889			444			444		
d_b, Bicycle Delay [s]	13,91			13,91			27,24			27,35		
l_b,int, Bicycle LOS Score for Intersection	2,127			1,741			1,863			1,791		
Bicycle LOS	B			A			A			A		

**Sequence**





Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	39,4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,242

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	20	296	2	43	351	44	5	2	8	8	21	24
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	2,70	0,00	6,98	6,84	4,55	0,00	0,00	0,00	0,00	0,00	4,17
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	296	2	43	351	44	5	2	8	8	21	24
Peak Hour Factor	0,8300	0,9100	0,5000	0,6000	0,8400	0,6100	0,6300	0,5000	0,6700	0,6700	0,5300	0,6700
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	6	81	1	18	104	18	2	1	3	3	10	9
Total Analysis Volume [veh/h]	24	325	4	72	418	72	8	4	12	12	40	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		1			8			8			1	
v_di, Inbound Pedestrian Volume crossing in		1			8			8			1	
v_co, Outbound Pedestrian Volume crossing		5			6			4			5	
v_ci, Inbound Pedestrian Volume crossing mi		4			5			5			6	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			8	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	10	30	0	10	30	0	0	17	0	0	20	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	16	35	0	16	35	0	0	22	0	0	25	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	C	C	C	C
C, Cycle Length [s]	122	122	122	122	122	122	122	122	122	122
L, Total Lost Time per Cycle [s]	4,00	0,00	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	46	35	35	46	35	35	22	22	25	25
g / C, Green / Cycle	0,38	0,29	0,29	0,38	0,29	0,29	0,18	0,18	0,20	0,20
(v / s)_i Volume / Saturation Flow Rate	0,02	0,17	0,00	0,06	0,14	0,14	0,01	0,01	0,02	0,03
s, saturation flow rate [veh/h]	1191	1859	1615	1225	1797	1707	1839	1470	1876	1471
c, Capacity [veh/h]	431	533	463	396	516	490	332	265	384	302
d1, Uniform Delay [s]	24,84	37,59	31,10	26,21	36,04	36,09	41,25	41,32	39,54	39,68
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,25	5,11	0,03	1,01	3,25	3,47	0,20	0,32	0,64	0,95
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,61	0,01	0,18	0,49	0,49	0,04	0,05	0,12	0,14
d, Delay for Lane Group [s/veh]	25,09	42,70	31,13	27,22	39,28	39,56	41,46	41,64	40,19	40,63
Lane Group LOS	C	D	C	C	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0,47	9,14	0,09	1,48	6,65	6,41	0,32	0,32	1,22	1,10
50th-Percentile Queue Length [ft/ln]	11,82	228,48	2,24	37,02	166,29	160,24	7,99	8,12	30,46	27,61
95th-Percentile Queue Length [veh/ln]	0,85	14,10	0,16	2,67	10,88	10,56	0,58	0,58	2,19	1,99
95th-Percentile Queue Length [ft/ln]	21,28	352,43	4,04	66,64	272,03	264,05	14,38	14,62	54,84	49,70

**Movement, Approach, & Intersection Results**

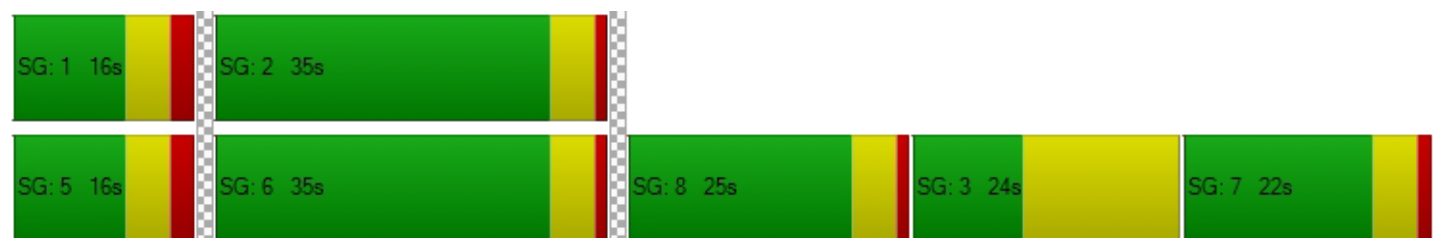
d_M, Delay for Movement [s/veh]	25,09	42,70	31,13	27,22	39,40	39,56	41,46	41,46	41,64	40,19	40,25	40,63
Movement LOS	C	D	C	C	D	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	41,37			37,86			41,55			40,39		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	39,37											
Intersection LOS	D											
Intersection V/C	0,242											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	1488,12	1187,93	700,13	6138,21
d_p, Pedestrian Delay [s]	32,09	32,09	32,09	32,09
I_p,int, Pedestrian LOS Score for Intersection	2,451	2,478	2,175	2,195
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	378	444
d_b, Bicycle Delay [s]	20,00	20,00	29,61	27,33
I_b,int, Bicycle LOS Score for Intersection	2,142	2,023	1,579	1,632
Bicycle LOS	B	B	A	A

**Sequence**





Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	27,9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,394

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	38	223	40	133	201	134	73	40	51	44	131	191
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,63	2,69	2,50	3,01	3,48	1,49	4,11	15,00	13,73	13,64	5,34	2,09
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	223	40	133	201	134	73	40	51	44	131	191
Peak Hour Factor	0,8600	0,9300	0,7700	0,7900	0,9700	0,8800	0,5900	0,6700	0,6700	0,7900	0,7800	0,8200
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	11	60	13	42	52	38	31	15	19	14	42	58
Total Analysis Volume [veh/h]	44	240	52	168	207	152	124	60	76	56	168	233
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		4			6			6			5	
v_di, Inbound Pedestrian Volume crossing in		5			6			6			4	
v_co, Outbound Pedestrian Volume crossing		11			2			10			2	
v_ci, Inbound Pedestrian Volume crossing mi		10			2			11			2	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			1			0			10	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,03	0,13	0,03	0,13	0,10	0,11	0,09	0,04	0,05	0,05	0,09	0,15
s, saturation flow rate [veh/h]	1258	1860	1569	1334	1848	1559	1378	1675	1414	1198	1820	1559
c, Capacity [veh/h]	538	565	476	539	561	473	694	598	505	464	650	557
d1, Uniform Delay [s]	19,76	31,19	28,08	21,54	30,28	30,46	15,88	24,00	24,43	26,12	25,50	27,12
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,30	2,34	0,46	1,51	1,64	2,10	0,56	0,34	0,63	0,53	0,96	2,30
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,08	0,43	0,11	0,31	0,34	0,36	0,18	0,10	0,15	0,12	0,26	0,42
d, Delay for Lane Group [s/veh]	20,06	33,52	28,55	23,05	31,91	32,56	16,44	24,34	25,06	26,65	26,46	29,43
Lane Group LOS	C	C	C	C	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0,73	5,54	1,07	3,04	4,23	3,83	1,84	1,12	1,46	1,12	3,34	5,03
50th-Percentile Queue Length [ft/ln]	18,23	138,56	26,78	76,05	105,87	95,84	45,92	28,02	36,54	27,94	83,54	125,75
95th-Percentile Queue Length [veh/ln]	1,31	9,40	1,93	5,48	7,61	6,90	3,31	2,02	2,63	2,01	6,02	8,71
95th-Percentile Queue Length [ft/ln]	32,81	235,08	48,20	136,90	190,24	172,50	82,65	50,44	65,78	50,30	150,38	217,71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20,06	33,52	28,55	23,05	31,96	32,56	16,44	24,34	25,06	26,65	26,46	29,43
Movement LOS	C	C	C	C	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	30,99			29,29			20,78			27,99		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27,88											
Intersection LOS	C											
Intersection V/C	0,394											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	803,15	3749,00	657,90	842,16
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	2,511	2,577	2,448	2,521
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,02	30,03	26,47	26,60
I_b,int, Bicycle LOS Score for Intersection	2,114	1,994	1,989	2,314
Bicycle LOS	B	A	A	B

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	9,0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,022

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	20	160	20	10	340
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	8,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	20	160	20	10	340
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	5	40	5	3	85
Total Analysis Volume [veh/h]	0	20	160	20	10	340
Pedestrian Volume [ped/h]	15		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,02	0,00	0,00	0,01	0,00
d_M, Delay for Movement [s/veh]	0,00	9,02	0,00	0,00	7,68	0,00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	0,07	0,00	0,00	0,02	0,01
95th-Percentile Queue Length [ft/ln]	0,00	1,67	0,00	0,00	0,56	0,28
d_A, Approach Delay [s/veh]	9,02		0,00		0,22	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0,47					
Intersection LOS	A					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	24,2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,292

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	



**Volumes**

Name						
Base Volume Input [veh/h]	91	31	158	79	31	336
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,10	16,13	6,33	0,00	3,23	2,08
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	31	158	79	31	336
Peak Hour Factor	0,8400	0,7800	0,7900	0,6600	0,8600	0,8900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	27	10	50	30	9	94
Total Analysis Volume [veh/h]	108	40	200	120	36	378
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	9		9		0	
v_ci, Inbound Pedestrian Volume crossing mi	9		9		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	29	29	5	39
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	31	31	35	35	10	44
Vehicle Extension [s]	3,0	3,0	0,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	15
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	0,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	5,0	2,0	0,0	2,0	2,0	2,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	7,00	4,00	4,00	4,00	4,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	5,00	2,00	2,00	2,00	0,00	2,00
g_i, Effective Green Time [s]	24	20	74	74	50	40
g / C, Green / Cycle	0,20	0,17	0,62	0,62	0,42	0,33
(v / s)_i Volume / Saturation Flow Rate	0,06	0,03	0,09	0,10	0,12	0,12
s, saturation flow rate [veh/h]	1794	1390	1805	1576	1748	1701
c, Capacity [veh/h]	359	232	1113	972	717	567
d1, Uniform Delay [s]	40,86	42,88	9,67	9,81	23,73	30,21
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,15	1,61	0,27	0,36	1,07	1,71
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,30	0,17	0,14	0,16	0,30	0,35
d, Delay for Lane Group [s/veh]	43,01	44,50	9,95	10,18	24,80	31,92
Lane Group LOS	D	D	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	2,95	1,13	1,82	1,86	4,30	4,64
50th-Percentile Queue Length [ft/ln]	73,67	28,22	45,52	46,51	107,44	116,01
95th-Percentile Queue Length [veh/ln]	5,30	2,03	3,28	3,35	7,70	8,17
95th-Percentile Queue Length [ft/ln]	132,61	50,79	81,94	83,71	192,43	204,33

**Movement, Approach, & Intersection Results**

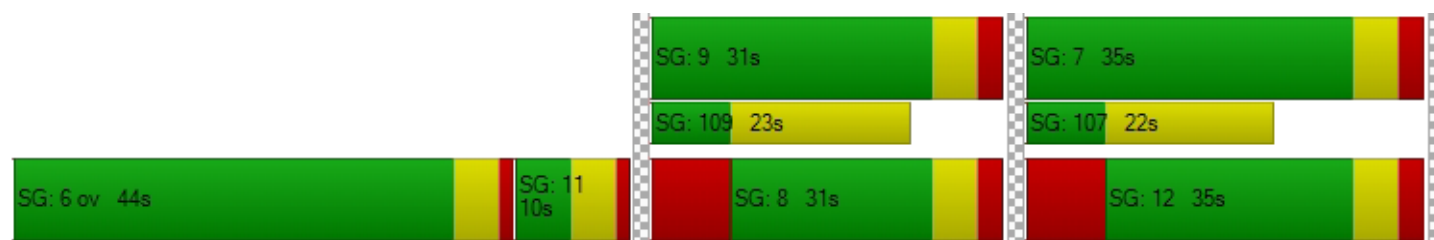
d_M, Delay for Movement [s/veh]	43,01	44,50	9,99	10,18	24,80	28,56
Movement LOS	D	D	A	B	C	C
d_A, Approach Delay [s/veh]	43,41		10,06		28,23	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	24,19					
Intersection LOS	C					
Intersection V/C	0,292					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,327	0,000	2,304
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	1233	650
d_b, Bicycle Delay [s]	37,62	8,82	27,34
I_b,int, Bicycle LOS Score for Intersection	1,560	1,824	1,901
Bicycle LOS	A	A	A

**Sequence**

Ring 1	-	-	-	9	-	7	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	-	12	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	13,7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,331

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	2	1	0	79	4	16	14	160	1	0	420	9
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	18,75	7,14	6,25	0,00	1,90	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	0	79	4	16	14	160	1	0	420	9
Peak Hour Factor	0,5000	0,2500	1,0000	0,6800	0,5000	0,8000	0,5000	0,6600	0,2500	1,0000	0,8800	0,5600
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	1	1	0	29	2	5	7	61	1	0	119	4
Total Analysis Volume [veh/h]	4	4	0	116	8	20	28	242	4	0	477	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			2			2			0		
v_di, Inbound Pedestrian Volume crossing in	0			2			2			0		
v_co, Outbound Pedestrian Volume crossing	7			4			6			4		
v_ci, Inbound Pedestrian Volume crossing mi	6			4			7			4		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	70,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	0	0	6	17	0	6	17	0
Maximum Green [s]	19	19	0	7	0	0	6	69	0	6	69	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	28	28	0	7	35	0	12	73	0	12	73	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	5	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	1,00	2,00	1,00	2,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	1,00	0,00	1,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	28	32	25	84	72	84	72
g / C, Green / Cycle	0,23	0,27	0,21	0,70	0,60	0,70	0,60
(v / s)_i Volume / Saturation Flow Rate	0,00	0,08	0,02	0,09	0,08	0,14	0,14
s, saturation flow rate [veh/h]	1632	1521	1529	1497	1635	1900	1707
c, Capacity [veh/h]	426	466	319	1078	981	1352	1024
d1, Uniform Delay [s]	35,42	36,87	38,31	6,01	10,48	6,43	11,12
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,08	1,28	0,54	0,24	0,30	0,32	0,52
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,02	0,25	0,09	0,13	0,14	0,19	0,23
d, Delay for Lane Group [s/veh]	35,50	38,14	38,85	6,25	10,77	6,74	11,64
Lane Group LOS	D	D	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,19	2,94	0,72	1,15	1,64	2,30	2,98
50th-Percentile Queue Length [ft/ln]	4,79	73,52	17,96	28,75	41,03	57,41	74,44
95th-Percentile Queue Length [veh/ln]	0,35	5,29	1,29	2,07	2,95	4,13	5,36
95th-Percentile Queue Length [ft/ln]	8,63	132,34	32,33	51,74	73,86	103,33	134,00

**Movement, Approach, & Intersection Results**

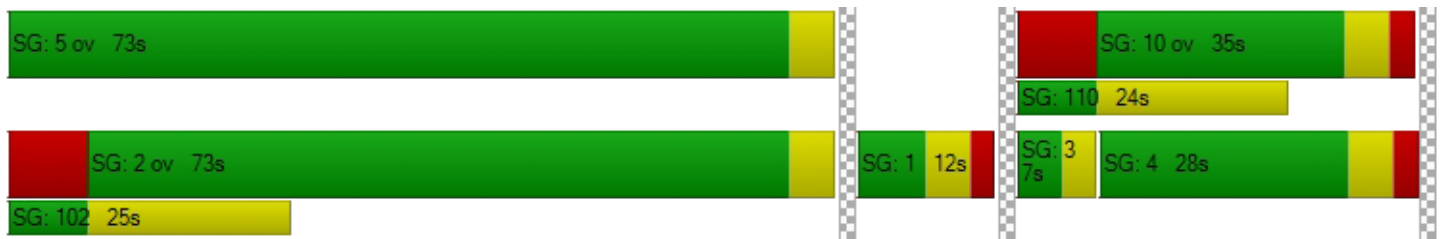
d_M, Delay for Movement [s/veh]	35,50	35,50	35,50	38,14	38,85	38,85	6,25	8,73	10,77	6,74	8,98	11,64
Movement LOS	D	D	D	D	D	D	A	A	B	A	A	B
d_A, Approach Delay [s/veh]	35,50			38,28			8,51			9,07		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13,71											
Intersection LOS	B											
Intersection V/C	0,331											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	472,31	830,83	1757,76	0,00
d_p, Pedestrian Delay [s]	49,50	49,50	49,50	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,960	2,056	2,339	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1150	1150
d_b, Bicycle Delay [s]	40,04	40,02	10,84	10,84
I_b,int, Bicycle LOS Score for Intersection	1,573	1,678	1,786	1,966
Bicycle LOS	A	A	A	A

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	-	4	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 9: Entrée développement / Avenue des Halles**

Control Type:	Two-way stop	Delay (sec / veh):	10,0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,007

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	130	5	5	105	5	16
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	4,00	4,00	3,23	3,23	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	5	5	105	5	16
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	33	1	1	26	1	4
Total Analysis Volume [veh/h]	130	5	5	105	5	16
Pedestrian Volume [ped/h]	0		0		2	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,00	0,00	0,01	0,02
d_M, Delay for Movement [s/veh]	0,00	0,00	7,51	0,00	10,00	9,05
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,01	0,01	0,07	0,07
95th-Percentile Queue Length [ft/ln]	0,00	0,00	0,26	0,26	1,87	1,87
d_A, Approach Delay [s/veh]	0,00		0,34		9,28	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0,87					
Intersection LOS	B					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 1 Actuel AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_AM\_RV0B.pdf

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	14	0	52	96	129	0	0	142	48	481

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	32	0	21	0	0	0	0	134	14	14	152	0	367

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	44	238	16	23	157	17	43	57	44	21	42	30	732

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	20	296	2	43	351	44	5	2	8	8	21	24	824

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	38	223	40	133	201	134	73	40	51	44	131	191	1299

ID	Intersection Name	Northbound			Eastbound		Westbound		Total Volume
		Right			Thru	Right	Left	Thru	
6	Accès Halles / Rue Jean-Talon Est	20			160	20	10	340	550



ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	91	31	158	79	31	336	726

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	2	1	0	79	4	16	14	160	1	0	420	9	706

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	130	5	5	105	5	16	266

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 1 Actuel AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_AM\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	14	0	52	96	129	0	0	142	48	481
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>52</b>	<b>96</b>	<b>129</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>48</b>	<b>481</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	32	0	21	0	0	0	0	134	14	14	152	0	367
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>32</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>134</b>	<b>14</b>	<b>14</b>	<b>152</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	44	238	16	23	157	17	43	57	44	21	42	30	732
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>44</b>	<b>238</b>	<b>16</b>	<b>23</b>	<b>157</b>	<b>17</b>	<b>43</b>	<b>57</b>	<b>44</b>	<b>21</b>	<b>42</b>	<b>30</b>	<b>732</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	20	296	2	43	351	44	5	2	8	8	21	24	824
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>20</b>	<b>296</b>	<b>2</b>	<b>43</b>	<b>351</b>	<b>44</b>	<b>5</b>	<b>2</b>	<b>8</b>	<b>8</b>	<b>21</b>	<b>24</b>	<b>824</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	38	223	40	133	201	134	73	40	51	44	131	191	1299	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>38</b>	<b>223</b>	<b>40</b>	<b>133</b>	<b>201</b>	<b>134</b>	<b>73</b>	<b>40</b>	<b>51</b>	<b>44</b>	<b>131</b>	<b>191</b>	<b>1299</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	20	160	20	10	340	550	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>20</b>	<b>160</b>	<b>20</b>	<b>10</b>	<b>340</b>	<b>550</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	91	31	158	79	31	336	726
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>91</b>	<b>31</b>	<b>158</b>	<b>79</b>	<b>31</b>	<b>336</b>	<b>726</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	2	1	0	79	4	16	14	160	1	0	420	9	706
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>79</b>	<b>4</b>	<b>16</b>	<b>14</b>	<b>160</b>	<b>1</b>	<b>0</b>	<b>420</b>	<b>9</b>	<b>706</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	130	5	5	105	5	16	266
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>130</b>	<b>5</b>	<b>5</b>	<b>105</b>	<b>5</b>	<b>16</b>	<b>266</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 1 Actuel AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_AM\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	0	0	0	0.00
<b>Added Trips Total</b>								<b>0</b>	<b>0</b>	<b>0</b>	<b>0,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 1 Actuel AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_AM\_RV0B.pdf

**Trip Distribution summary**

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	0,00	0	0,00	0
3: Gate	0,00	0	0,00	0
4: Gate	0,00	0	0,00	0
5: Gate	0,00	0	0,00	0
6: Gate	0,00	0	0,00	0
7: Gate	0,00	0	0,00	0
8: Gate	0,00	0	0,00	0
<b>Total</b>	<b>0,00</b>	<b>0</b>	<b>0,00</b>	<b>0</b>

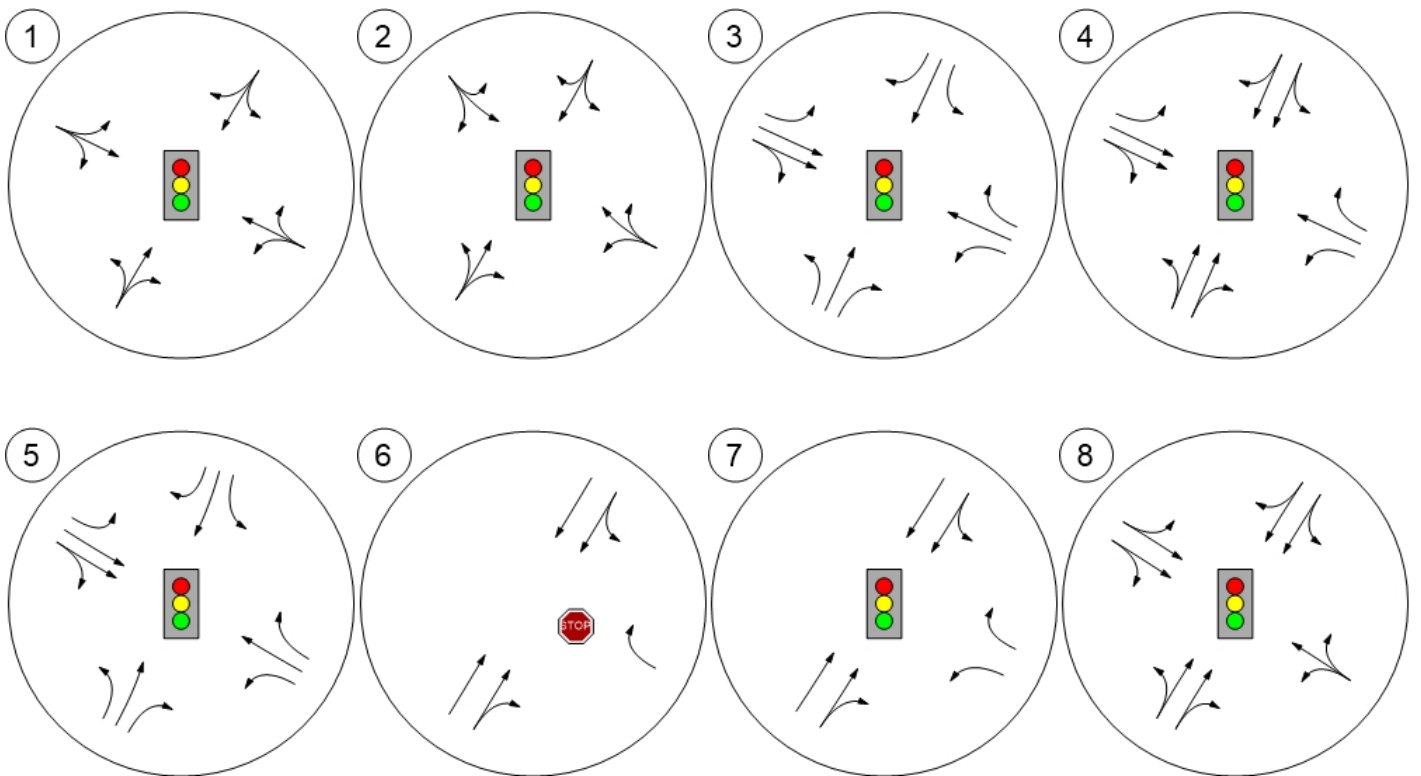


Study Intersections

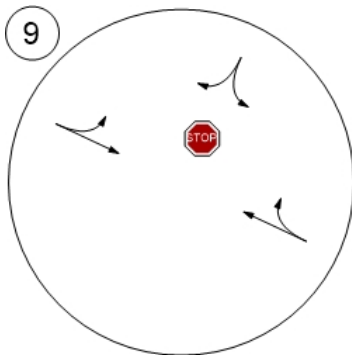
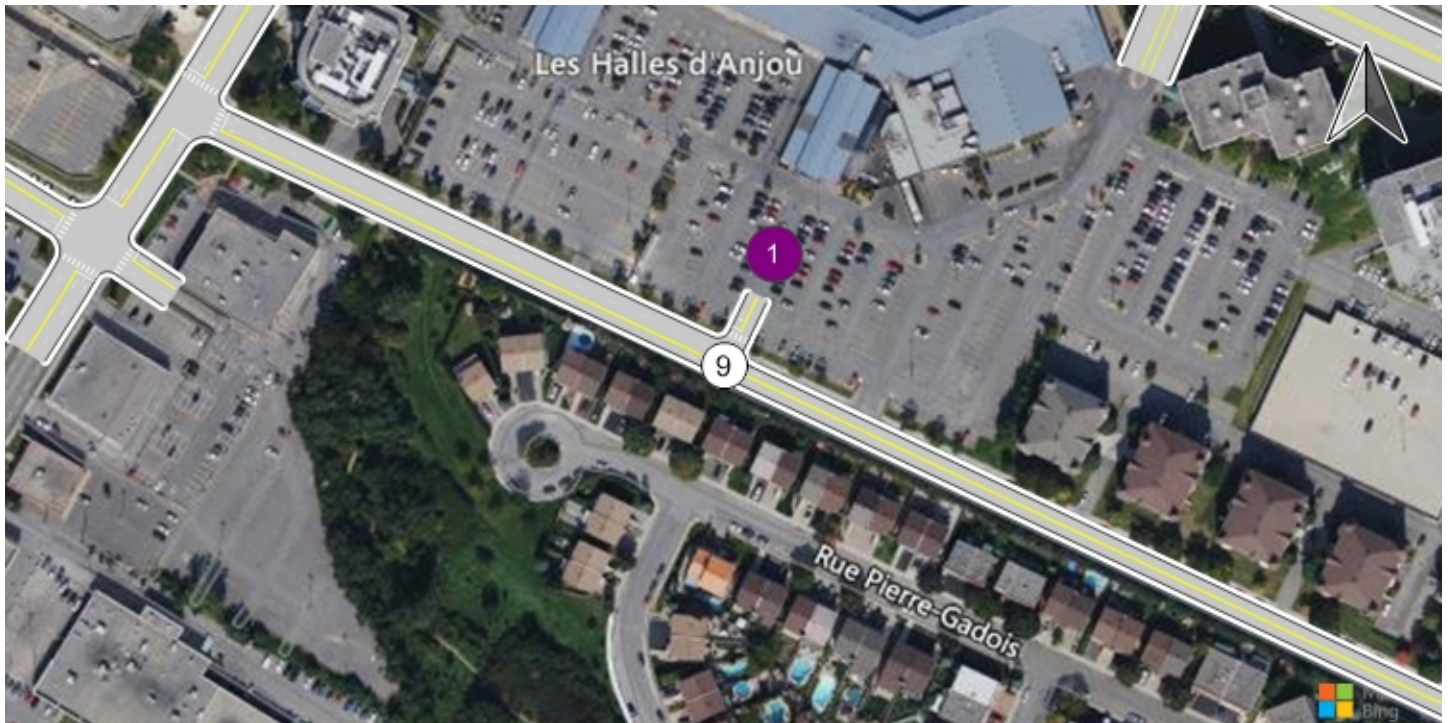




Lane Configuration and Traffic Control

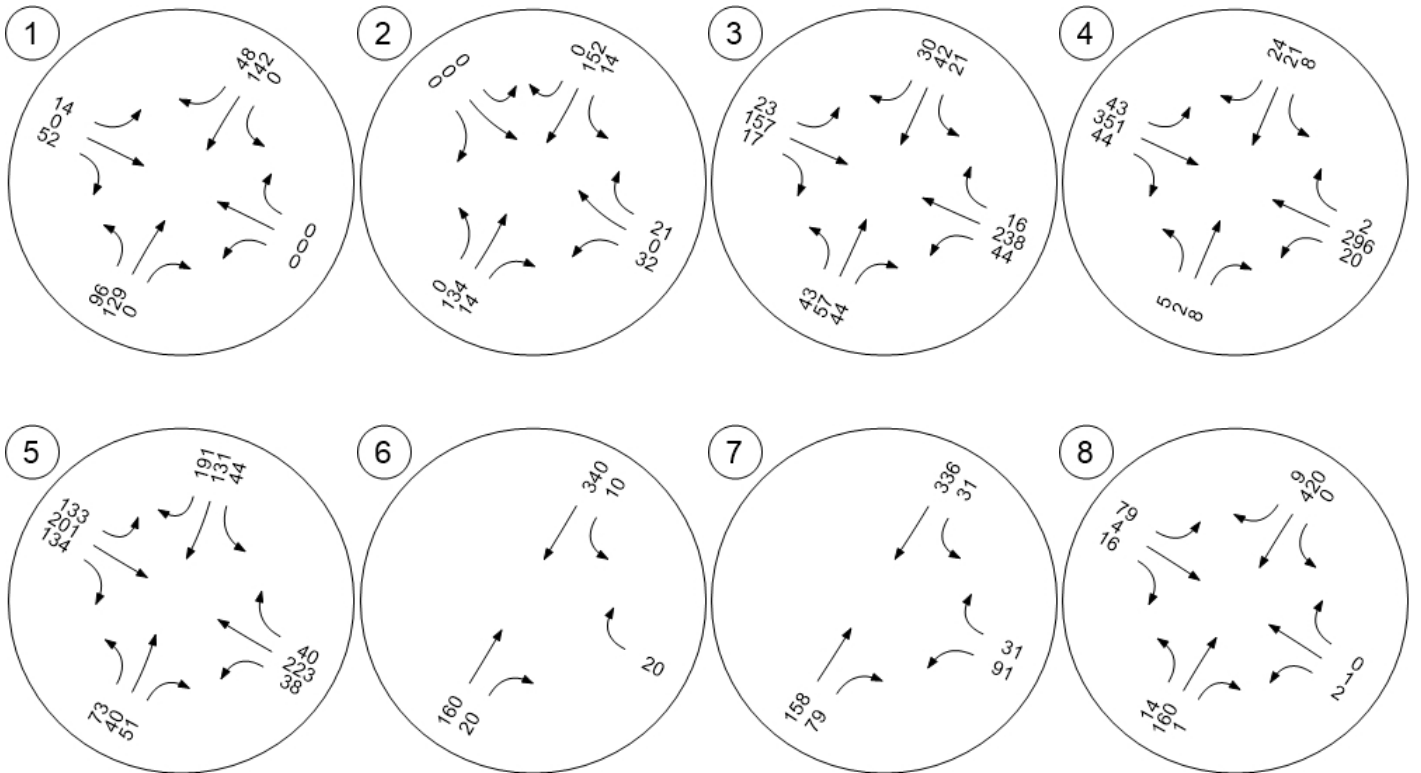


Lane Configuration and Traffic Control

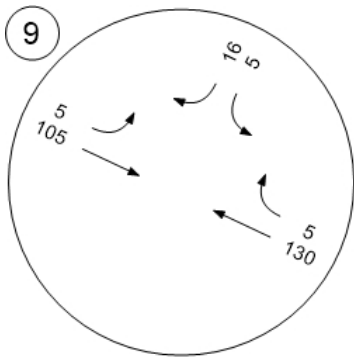
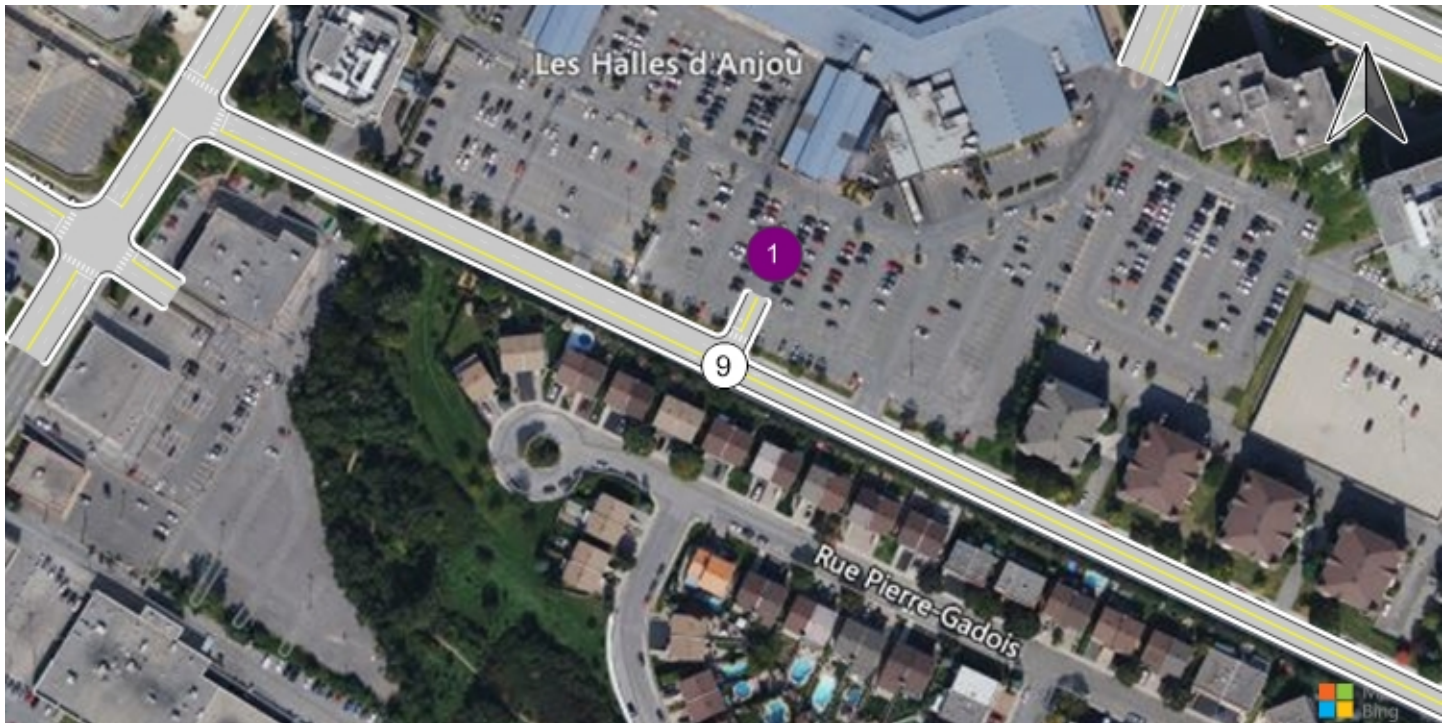




Traffic Volume - Base Volume

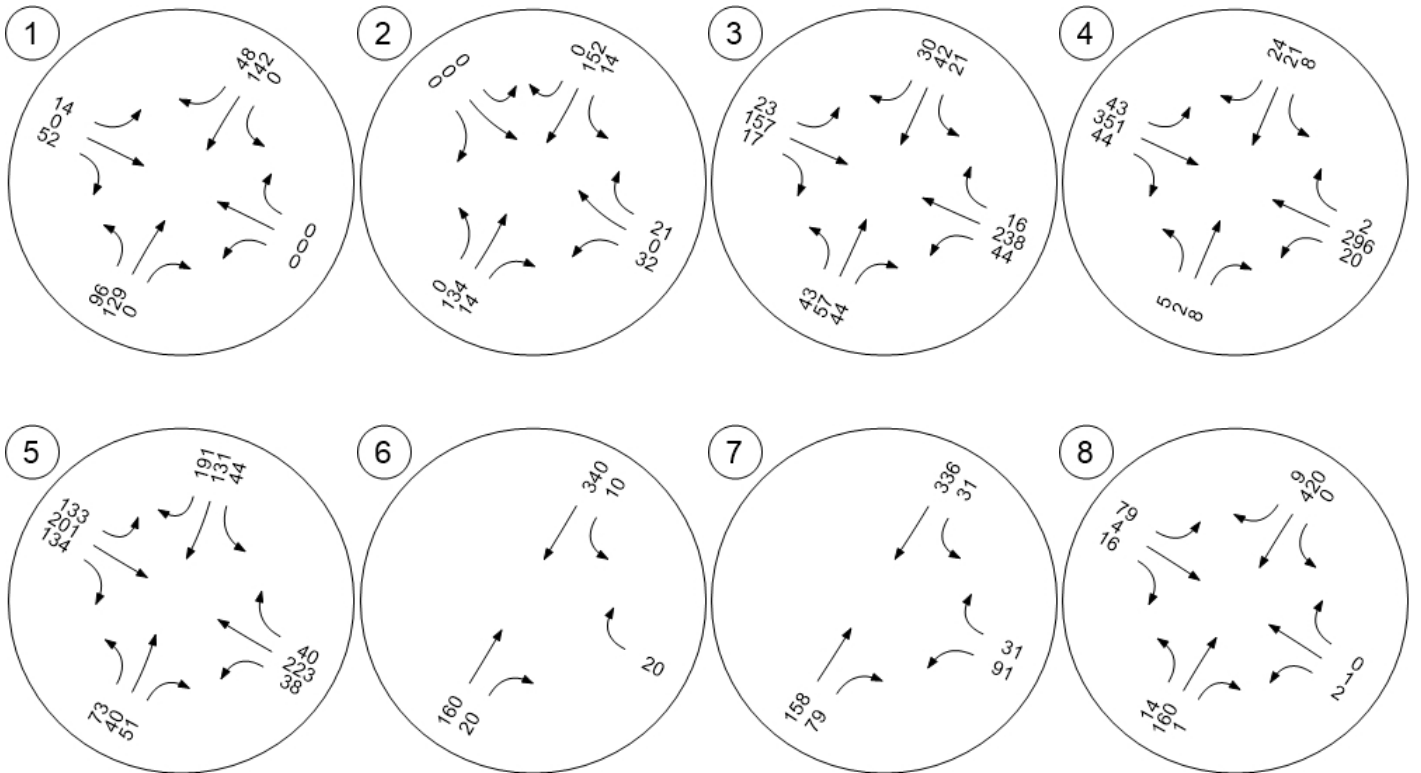


Traffic Volume - Base Volume

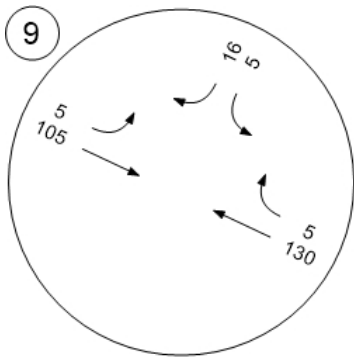
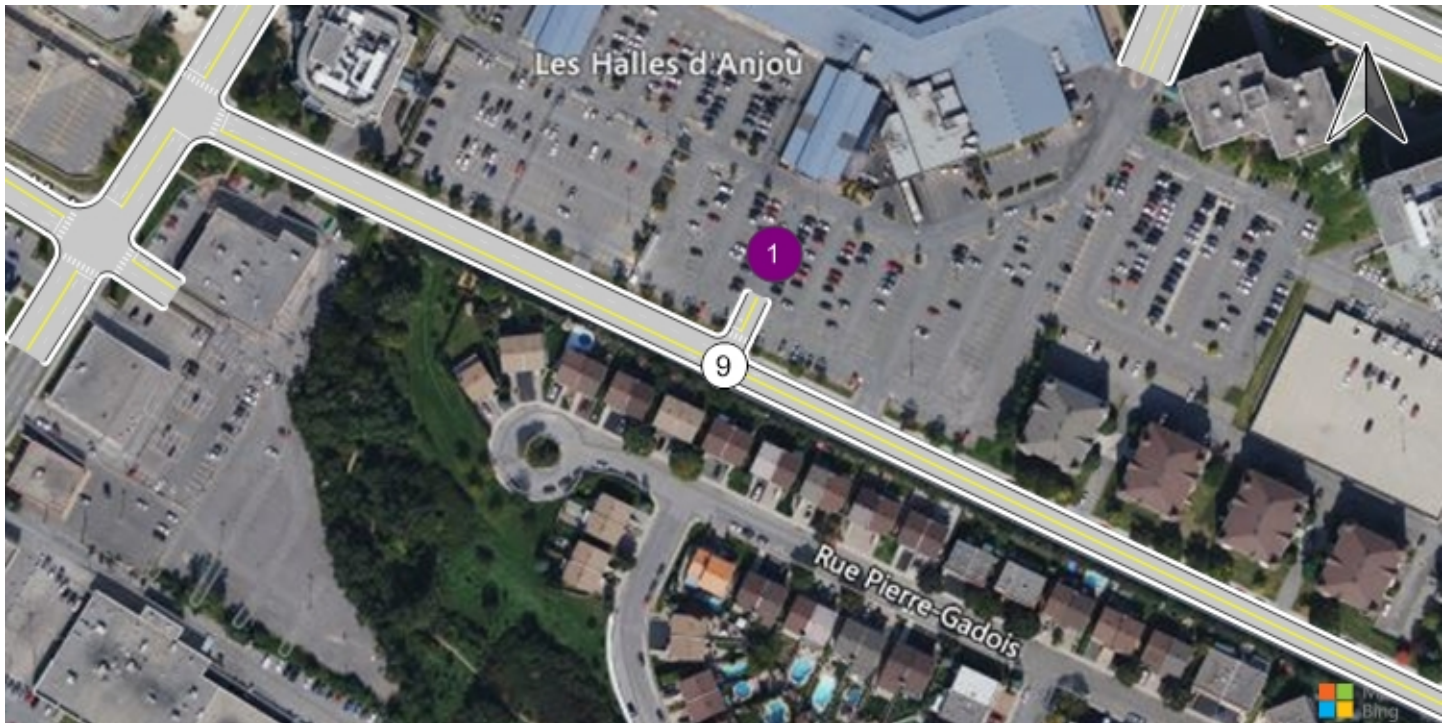




Traffic Volume - Future Total Volume

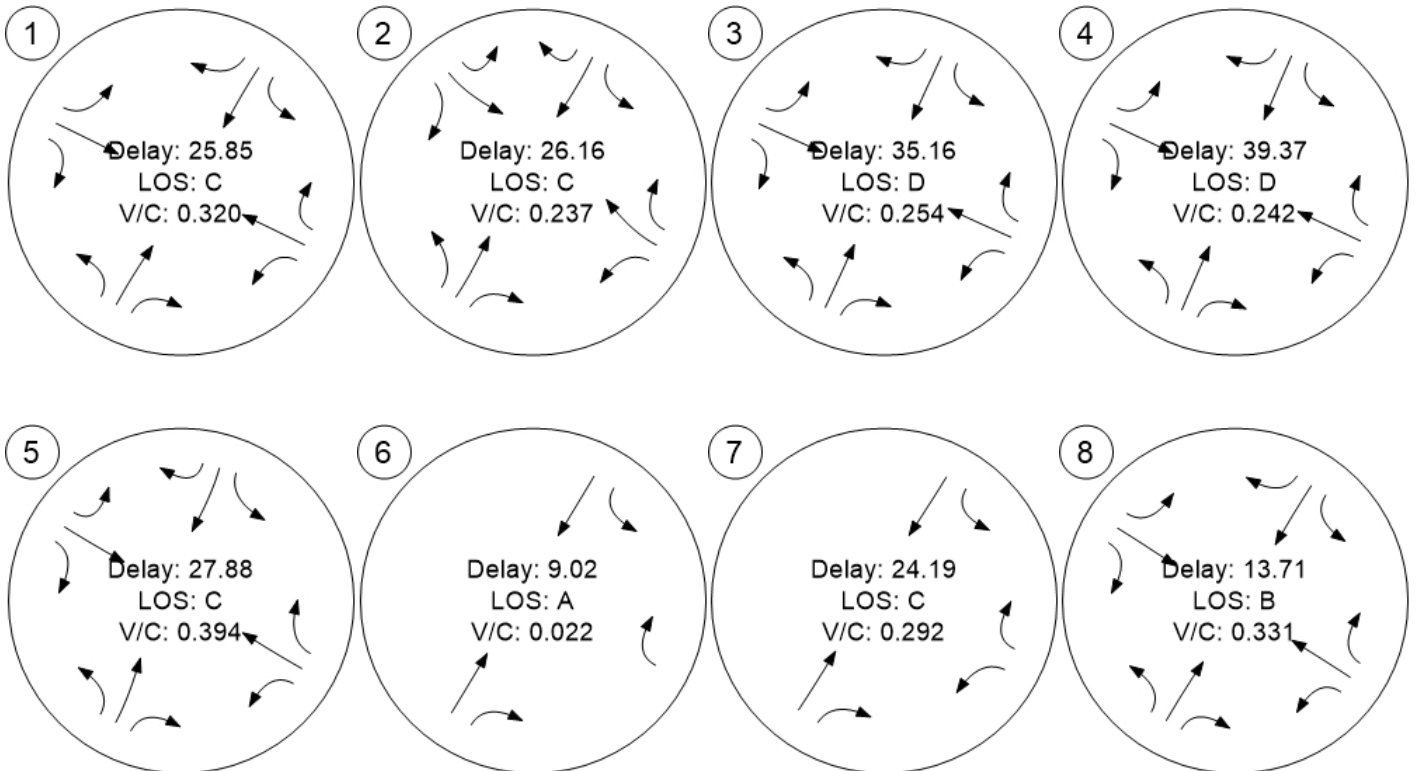


Traffic Volume - Future Total Volume



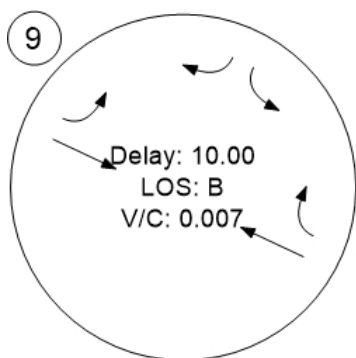
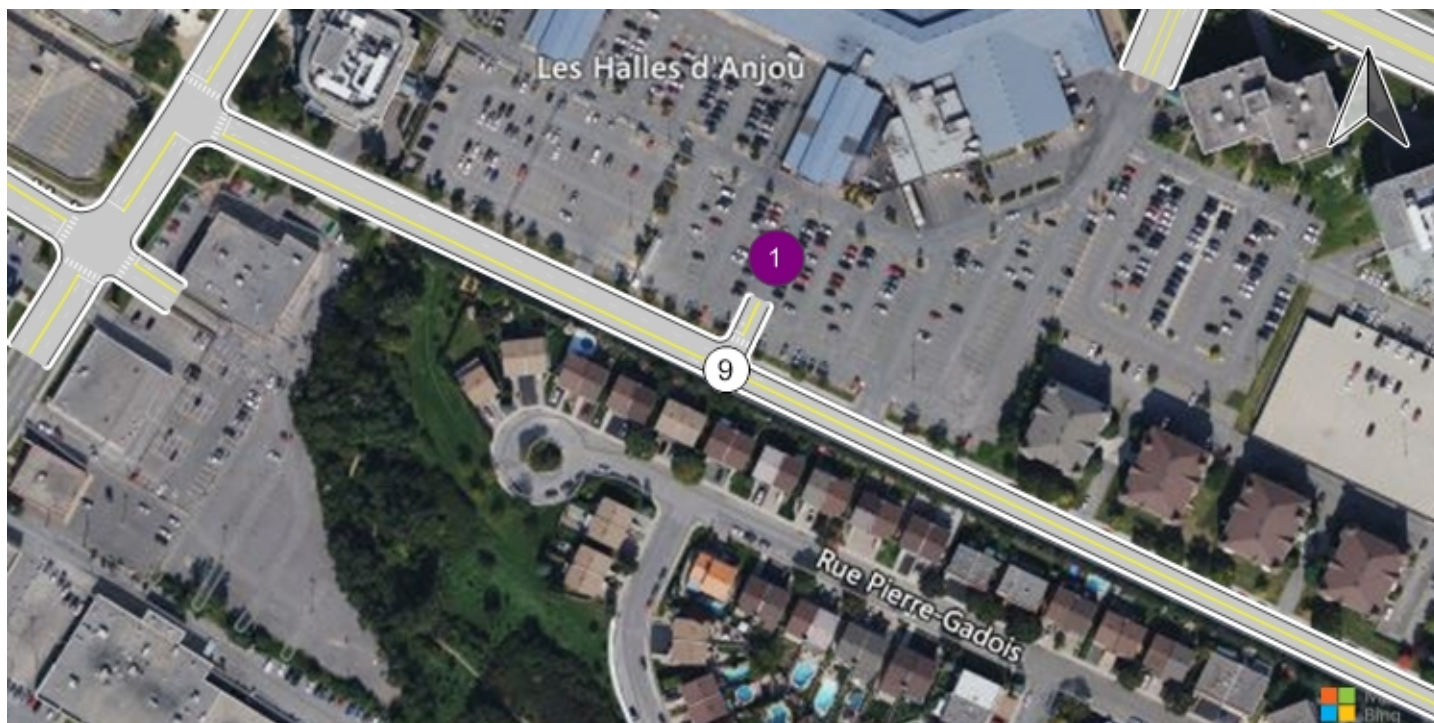


Traffic Conditions





Traffic Conditions



## Annexe 3 – Situation actuelle PM

L'humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 2 Actuel PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_PM\_RV0B.pdf

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	EB Thru	0,467	32,9	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Left	0,346	30,2	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,491	41,8	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	NB Thru	0,540	71,9	E
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Right	0,856	43,6	D
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,197	12,4	B
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Right	0,344	26,4	C
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Left	0,312	15,3	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,062	13,5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	32,9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,467

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	67	0	153	189	299	0	0	180	78
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	3,17	1,67	0,00	0,00	2,22	7,69
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	67	0	153	189	299	0	0	180	78
Peak Hour Factor	1,0000	1,0000	1,0000	0,8000	1,0000	0,8100	0,9100	0,8800	1,0000	1,0000	0,7900	0,8100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	21	0	47	52	85	0	0	57	24
Total Analysis Volume [veh/h]	0	0	0	84	0	189	208	340	0	0	228	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5			0			0			5		
v_di, Inbound Pedestrian Volume crossing in	5			0			0			5		
v_co, Outbound Pedestrian Volume crossing	5			13			5			13		
v_ci, Inbound Pedestrian Volume crossing mi	5			13			5			13		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14



**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,17	0,32	0,18
s, saturation flow rate [veh/h]	1900	1578	1730	1774
c, Capacity [veh/h]	652	561	692	572
d1, Uniform Delay [s]	0,00	24,81	27,57	26,98
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	3,01	9,03	4,02
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,49	0,79	0,57
d, Delay for Lane Group [s/veh]	0,00	27,81	36,59	31,00
Lane Group LOS	A	C	D	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	5,09	12,27	6,43
50th-Percentile Queue Length [ft/ln]	0,00	127,17	306,87	160,83
95th-Percentile Queue Length [veh/ln]	0,00	8,79	18,02	10,59
95th-Percentile Queue Length [ft/ln]	0,00	219,65	450,52	264,82

**Movement, Approach, & Intersection Results**

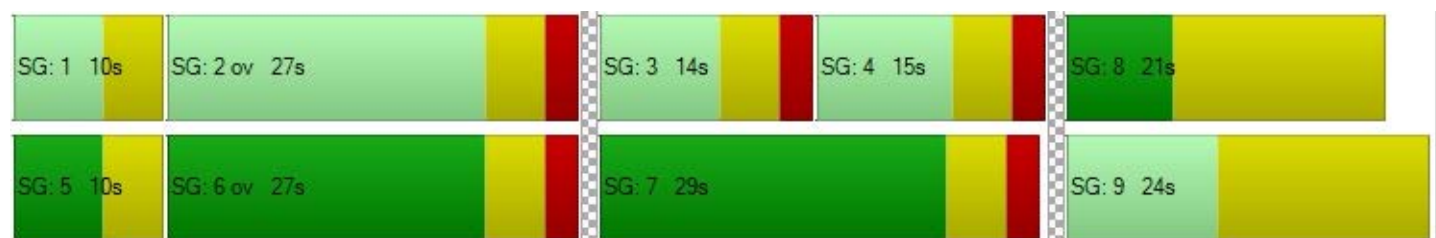
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	27,81	27,81	27,81	36,59	36,59	36,59	31,00	31,00	31,00
Movement LOS	A	A	A	C	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	0,00			27,81			36,59			31,00		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	32,92											
Intersection LOS	C											
Intersection V/C	0,467											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0			11,0			11,0			11,0		
M_corner, Corner Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
d_p, Pedestrian Delay [s]	34,67			34,67			34,67			34,67		
I_p,int, Pedestrian LOS Score for Intersection	1,714			2,484			2,185			2,199		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	511			511			689			467		
d_b, Bicycle Delay [s]	24,94			24,94			19,34			26,45		
I_b,int, Bicycle LOS Score for Intersection	1,560			2,010			2,464			2,094		
Bicycle LOS	A			B			B			B		

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	30,2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,346

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	27	0	19	0	0	0	0	324	44	28	233	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,54	0,00	0,00	4,29	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	0	19	0	0	0	0	324	44	28	233	0
Peak Hour Factor	0,6100	1,0000	0,6800	1,0000	1,0000	1,0000	1,0000	0,9000	0,8500	0,5800	0,8000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	11	0	7	0	0	0	0	90	13	12	73	0
Total Analysis Volume [veh/h]	44	0	28	0	0	0	0	360	52	48	291	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			3			3			2		
v_di, Inbound Pedestrian Volume crossing in	2			3			3			1		
v_co, Outbound Pedestrian Volume crossing	7			0			6			0		
v_ci, Inbound Pedestrian Volume crossing mi	6			0			7			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,22	0,19
s, saturation flow rate [veh/h]	1729	1900	1836	1755
c, Capacity [veh/h]	288	296	713	572
d1, Uniform Delay [s]	32,61	0,00	24,93	27,05
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,07	0,00	3,39	4,47
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,25	0,00	0,58	0,59
d, Delay for Lane Group [s/veh]	34,68	0,00	28,33	31,52
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,51	0,00	7,85	6,79
50th-Percentile Queue Length [ft/ln]	37,85	0,00	196,14	169,71
95th-Percentile Queue Length [veh/ln]	2,73	0,00	12,44	11,06
95th-Percentile Queue Length [ft/ln]	68,13	0,00	310,98	276,54

**Movement, Approach, & Intersection Results**

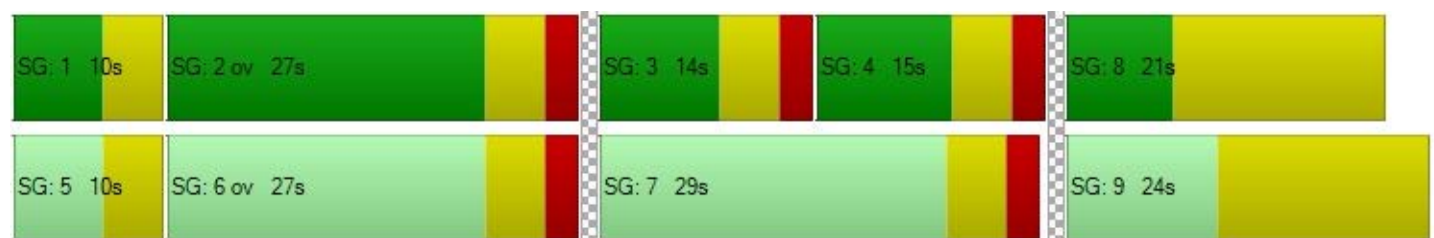
d_M, Delay for Movement [s/veh]	34,68	34,68	34,68	0,00	0,00	0,00	28,33	28,33	28,33	31,52	31,52	31,52
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,68			0,00			28,33			31,52		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	30,20											
Intersection LOS	C											
Intersection V/C	0,346											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,866	2,010	2,079	2,069
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,49	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	2,239	2,119
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report****Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	41,8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,491

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	88	416	86	79	356	86	84	164	113	39	109	90
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,61	0,00	0,00	2,25	13,95	1,19	0,61	0,88	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	416	86	79	356	86	84	164	113	39	109	90
Peak Hour Factor	0,7900	0,9700	0,8000	0,8600	0,9000	0,9000	0,7200	0,8500	0,7800	0,5700	0,6800	0,8300
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	28	107	27	23	99	24	29	48	36	17	40	27
Total Analysis Volume [veh/h]	111	429	108	92	396	96	117	193	145	68	160	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		19			17			18			20	
v_di, Inbound Pedestrian Volume crossing in		20			18			17			19	
v_co, Outbound Pedestrian Volume crossing		14			17			14			16	
v_ci, Inbound Pedestrian Volume crossing mi		14			16			14			17	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			3			1			11	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,06	0,23	0,07	0,05	0,21	0,07	0,09	0,10	0,09	0,06	0,08	0,07
s, saturation flow rate [veh/h]	1810	1846	1594	1810	1866	1404	1234	1891	1591	1209	1900	1608
c, Capacity [veh/h]	343	629	543	343	636	478	252	344	639	162	345	1012
d1, Uniform Delay [s]	46,20	37,35	30,73	45,69	36,39	30,72	51,50	49,20	13,75	58,06	48,24	9,75
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,50	5,89	0,82	1,92	4,54	0,94	6,07	6,49	0,83	7,82	4,41	0,21
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,32	0,68	0,20	0,27	0,62	0,20	0,47	0,56	0,23	0,42	0,46	0,11
d, Delay for Lane Group [s/veh]	48,70	43,24	31,55	47,61	40,94	31,66	57,57	55,69	14,57	65,88	52,66	9,96
Lane Group LOS	D	D	C	D	D	C	E	E	B	E	D	A
Critical Lane Group	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3,41	12,92	2,59	2,78	11,50	2,31	4,03	6,45	1,86	2,55	5,16	1,30
50th-Percentile Queue Length [ft/ln]	85,28	323,09	64,68	69,59	287,52	57,86	100,86	161,20	46,41	63,78	129,03	32,53
95th-Percentile Queue Length [veh/ln]	6,14	18,82	4,66	5,01	17,06	4,17	7,26	10,61	3,34	4,59	8,89	2,34
95th-Percentile Queue Length [ft/ln]	153,51	470,48	116,42	125,27	426,56	104,15	181,54	265,31	83,54	114,80	222,17	58,56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	48,70	43,24	31,55	47,61	40,94	31,66	57,57	55,69	14,57	65,88	52,66	9,96
Movement LOS	D	D	C	D	D	C	E	E	B	E	D	A
d_A, Approach Delay [s/veh]	42,22			40,46			43,07			41,61		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41,80											
Intersection LOS	D											
Intersection V/C	0,491											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0	9,0	9,0	9,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	208,39	171,83	180,49	156,08
d_p, Pedestrian Delay [s]	36,45	36,45	36,45	36,45
I_p,int, Pedestrian LOS Score for Intersection	2,643	2,709	2,333	2,444
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	889	444	444
d_b, Bicycle Delay [s]	13,90	13,91	27,24	27,37
I_b,int, Bicycle LOS Score for Intersection	2,629	2,523	2,310	2,114
Bicycle LOS	B	B	B	B

**Sequence**





Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	71,9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,540

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	39	547	19	168	433	50	53	33	56	33	35	105
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,11	0,00	1,19	3,70	0,00	1,89	0,00	0,00	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	547	19	168	433	50	53	33	56	33	35	105
Peak Hour Factor	0,8100	0,9100	0,5300	0,8800	0,9400	0,8300	0,8800	0,8300	0,8800	0,8300	0,7300	0,8500
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	12	150	9	48	115	15	15	10	16	10	12	31
Total Analysis Volume [veh/h]	48	601	36	191	461	60	60	40	64	40	48	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		12			19			19			12	
v_di, Inbound Pedestrian Volume crossing in		12			19			19			12	
v_co, Outbound Pedestrian Volume crossing		12			16			11			16	
v_ci, Inbound Pedestrian Volume crossing mi		11			16			12			16	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			1			19	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	12	35	0	12	35	0	0	19	0	0	24	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	18	40	0	18	40	0	0	24	0	0	29	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4,00	0,00	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	53	40	40	53	40	40	24	24	29	29
g / C, Green / Cycle	0,39	0,30	0,30	0,39	0,30	0,30	0,18	0,18	0,21	0,21
(v / s)_i Volume / Saturation Flow Rate	0,04	0,32	0,02	0,35	0,25	0,04	0,05	0,05	0,05	0,09
s, saturation flow rate [veh/h]	1206	1853	1615	541	1844	1615	1837	1490	1858	1423
c, Capacity [veh/h]	332	549	479	292	547	479	327	265	399	306
d1, Uniform Delay [s]	29,49	47,50	34,19	32,94	44,56	34,72	47,91	48,11	43,68	45,59
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,91	66,71	0,31	10,85	14,69	0,54	2,00	2,75	1,27	3,96
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,14	1,09	0,08	0,65	0,84	0,13	0,27	0,29	0,22	0,41
d, Delay for Lane Group [s/veh]	30,41	114,21	34,49	43,79	59,26	35,25	49,91	50,86	44,96	49,55
Lane Group LOS	C	F	C	D	E	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1,07	28,52	0,91	5,13	16,68	1,54	2,74	2,46	2,59	3,94
50th-Percentile Queue Length [ft/ln]	26,63	712,92	22,65	128,35	416,92	38,41	68,53	61,60	64,86	98,60
95th-Percentile Queue Length [veh/ln]	1,92	39,49	1,63	8,85	23,37	2,77	4,93	4,43	4,67	7,10
95th-Percentile Queue Length [ft/ln]	47,93	987,37	40,77	221,25	584,35	69,13	123,36	110,87	116,75	177,48

**Movement, Approach, & Intersection Results**

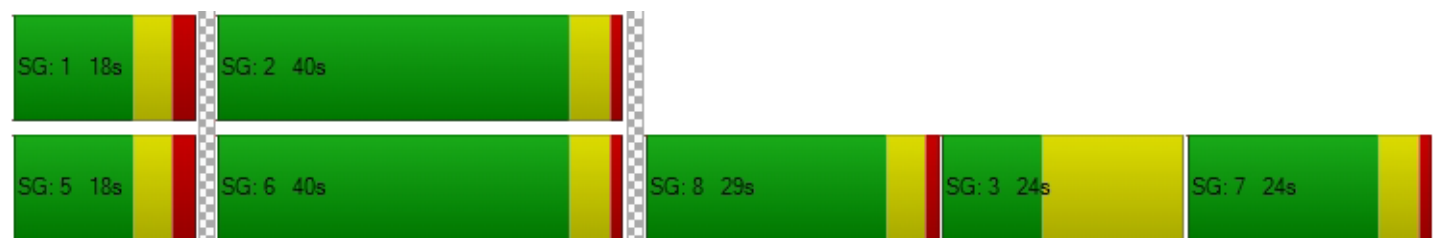
d_M, Delay for Movement [s/veh]	30,41	114,21	34,49	43,79	59,26	35,25	49,91	50,21	50,86	44,96	44,96	49,55
Movement LOS	C	F	C	D	E	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	104,14			53,09			50,35			47,64		
Approach LOS	F			D			D			D		
d_I, Intersection Delay [s/veh]	71,91											
Intersection LOS	E											
Intersection V/C	0,540											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	550,99	370,45	296,25	458,23
d_p, Pedestrian Delay [s]	32,09	32,09	32,09	32,09
I_p,int, Pedestrian LOS Score for Intersection	2,540	2,588	2,224	2,319
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	778	778	422	533
d_b, Bicycle Delay [s]	16,81	16,81	28,02	24,43
I_b,int, Bicycle LOS Score for Intersection	2,690	2,734	1,695	1,735
Bicycle LOS	B	B	A	A

**Sequence**





Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	43,6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,856

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	94	489	88	220	354	152	275	182	111	122	201	522
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,07	3,41	1,36	2,26	0,00	2,55	6,04	2,70	7,38	4,48	1,53
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	489	88	220	354	152	275	182	111	122	201	522
Peak Hour Factor	0,7800	0,9400	0,6100	0,9300	0,8900	0,8600	0,8600	0,7800	0,8200	0,9000	0,9300	0,9300
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	30	130	36	59	99	44	80	58	34	34	54	140
Total Analysis Volume [veh/h]	121	520	144	237	398	177	320	233	135	136	216	561
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		30			23			23			31	
v_di, Inbound Pedestrian Volume crossing in		31			23			23			30	
v_co, Outbound Pedestrian Volume crossing		53			11			53			11	
v_ci, Inbound Pedestrian Volume crossing mi		53			11			53			11	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			3			2			19	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,10	0,28	0,10	0,20	0,16	0,17	0,24	0,13	0,09	0,13	0,12	0,36
s, saturation flow rate [veh/h]	1157	1854	1458	1175	1866	1606	1361	1809	1422	1041	1833	1557
c, Capacity [veh/h]	461	563	443	349	566	487	664	646	508	337	655	556
d1, Uniform Delay [s]	21,53	37,75	29,90	26,27	32,42	32,71	18,27	26,56	25,30	35,07	26,23	35,53
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,38	23,17	1,95	10,24	3,58	4,57	2,49	1,56	1,28	3,56	1,35	40,30
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,26	0,92	0,33	0,68	0,53	0,56	0,48	0,36	0,27	0,40	0,33	1,01
d, Delay for Lane Group [s/veh]	22,92	60,92	31,85	36,51	36,00	37,28	20,76	28,13	26,58	38,64	27,58	75,83
Lane Group LOS	C	E	C	D	D	D	C	C	C	D	C	F
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2,14	17,20	3,22	5,14	7,35	6,78	5,52	4,86	2,71	3,47	4,44	20,84
50th-Percentile Queue Length [ft/ln]	53,61	429,92	80,43	128,39	183,75	169,45	137,90	121,45	67,67	86,85	110,90	521,06
95th-Percentile Queue Length [veh/ln]	3,86	24,00	5,79	8,85	11,80	11,05	9,37	8,47	4,87	6,25	7,89	28,50
95th-Percentile Queue Length [ft/ln]	96,50	599,94	144,77	221,31	294,91	276,20	234,19	211,81	121,80	156,32	197,26	712,50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22,92	60,92	31,85	36,51	36,31	37,28	20,76	28,13	26,58	38,64	27,58	75,83
Movement LOS	C	E	C	D	D	D	C	C	C	D	C	F
d_A, Approach Delay [s/veh]	49,73			36,58			24,40			58,87		
Approach LOS	D			D			C			E		
d_I, Intersection Delay [s/veh]	43,55											
Intersection LOS	D											
Intersection V/C	0,856											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	139,87	440,35	157,07	88,67
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	2,776	2,881	2,592	2,703
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,05	30,06	26,50	26,72
I_b,int, Bicycle LOS Score for Intersection	2,855	2,230	2,695	3,066
Bicycle LOS	C	B	B	C

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 6: Accès Halles / Rue Jean-Talon Est**

Control Type:	Two-way stop	Delay (sec / veh):	12,4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,197

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻↻		↻↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	120	470	80	34	450
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	5,00	2,00	2,00	3,50
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	120	470	80	34	450
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	30	118	20	9	113
Total Analysis Volume [veh/h]	0	120	470	80	34	450
Pedestrian Volume [ped/h]	70		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,20	0,00	0,00	0,04	0,00
d_M, Delay for Movement [s/veh]	0,00	12,38	0,00	0,00	9,19	0,00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	0,73	0,00	0,00	0,12	0,06
95th-Percentile Queue Length [ft/ln]	0,00	18,24	0,00	0,00	2,97	1,48
d_A, Approach Delay [s/veh]	12,38		0,00		0,65	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1,56					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	26,4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,344

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	193	100	444	156	37	495
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,04	10,00	2,70	0,00	0,00	2,22
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	100	444	156	37	495
Peak Hour Factor	0,8800	0,8300	0,9400	0,8100	0,8400	0,9600
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	55	30	118	48	11	129
Total Analysis Volume [veh/h]	219	120	472	193	44	516
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	3		0		4	
v_di, Inbound Pedestrian Volume crossing in	4		0		3	
v_co, Outbound Pedestrian Volume crossing	29		29		0	
v_ci, Inbound Pedestrian Volume crossing mi	29		29		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	2		1		1	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	55,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	29	29	5	40
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	31	31	34	34	10	45
Vehicle Extension [s]	3,0	3,0	0,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	15
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	0,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	5,0	2,0	0,0	2,0	2,0	2,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	7,00	4,00	2,00	2,00	4,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	5,00	2,00	2,00	2,00	0,00	2,00
g_i, Effective Green Time [s]	24	20	77	77	51	41
g / C, Green / Cycle	0,20	0,17	0,64	0,64	0,43	0,34
(v / s)_i Volume / Saturation Flow Rate	0,12	0,08	0,18	0,21	0,18	0,16
s, saturation flow rate [veh/h]	1795	1447	1859	1617	1601	1699
c, Capacity [veh/h]	359	241	1193	1038	635	580
d1, Uniform Delay [s]	43,74	45,32	9,38	9,70	24,46	31,05
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	7,53	7,16	0,58	0,82	2,27	2,78
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,61	0,50	0,28	0,32	0,45	0,48
d, Delay for Lane Group [s/veh]	51,26	52,48	9,96	10,51	26,73	33,83
Lane Group LOS	D	D	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6,68	3,73	3,86	4,03	5,95	6,73
50th-Percentile Queue Length [ft/ln]	167,07	93,23	96,53	100,68	148,84	168,29
95th-Percentile Queue Length [veh/ln]	10,92	6,71	6,95	7,25	9,96	10,99
95th-Percentile Queue Length [ft/ln]	273,05	167,81	173,76	181,23	248,89	274,67

**Movement, Approach, & Intersection Results**

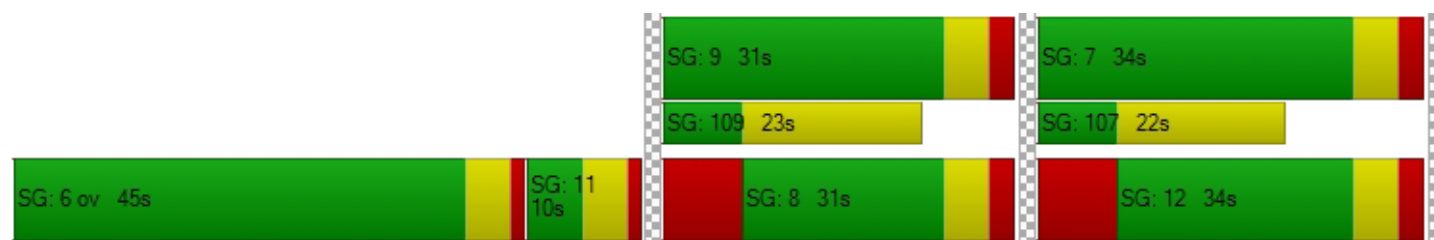
d_M, Delay for Movement [s/veh]	51,26	52,48	10,13	10,51	26,73	30,53
Movement LOS	D	D	B	B	C	C
d_A, Approach Delay [s/veh]	51,69		10,24		30,23	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	26,38					
Intersection LOS	C					
Intersection V/C	0,344					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	744,66
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,505	0,000	2,426
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	1233	667
d_b, Bicycle Delay [s]	37,64	8,82	26,68
I_b,int, Bicycle LOS Score for Intersection	1,560	2,108	2,022
Bicycle LOS	A	B	B

**Sequence**

Ring 1	-	-	-	9	-	7	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	-	12	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	15,3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,312

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	5	3	4	133	5	23	85	455	1	3	649	44
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,75	0,00	4,35	0,00	2,42	0,00	0,00	1,85	2,27
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	4	133	5	23	85	455	1	3	649	44
Peak Hour Factor	0,6300	0,2500	1,0000	0,7400	0,6300	0,7200	0,8500	0,9400	0,2500	0,3800	0,9000	0,7900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	2	3	1	45	2	8	25	121	1	2	180	14
Total Analysis Volume [veh/h]	8	12	4	180	8	32	100	484	4	8	721	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			5			6			0		
v_di, Inbound Pedestrian Volume crossing in	0			6			5			0		
v_co, Outbound Pedestrian Volume crossing	27			18			27			17		
v_ci, Inbound Pedestrian Volume crossing mi	27			17			27			18		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	48,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	0	0	6	17	0	6	17	0
Maximum Green [s]	18	18	0	7	0	0	6	63	0	6	63	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	27	27	0	7	34	0	12	74	0	12	74	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	5	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	1,00	2,00	1,00	2,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	1,00	0,00	1,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	27	31	24	85	73	85	73
g / C, Green / Cycle	0,23	0,26	0,20	0,70	0,61	0,70	0,61
(v / s)_i Volume / Saturation Flow Rate	0,01	0,12	0,03	0,24	0,22	0,22	0,22
s, saturation flow rate [veh/h]	1669	1523	1494	920	1692	1860	1651
c, Capacity [veh/h]	416	453	299	691	1029	1340	1004
d1, Uniform Delay [s]	36,51	39,21	39,46	9,16	11,76	6,75	11,86
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,27	2,59	0,93	1,21	0,97	0,60	1,04
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,40	0,13	0,32	0,36	0,31	0,37
d, Delay for Lane Group [s/veh]	36,78	41,80	40,38	10,37	12,73	7,35	12,91
Lane Group LOS	D	D	D	B	B	A	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0,59	4,86	1,05	2,97	5,06	3,94	5,14
50th-Percentile Queue Length [ft/ln]	14,72	121,44	26,36	74,32	126,53	98,54	128,61
95th-Percentile Queue Length [veh/ln]	1,06	8,47	1,90	5,35	8,75	7,09	8,86
95th-Percentile Queue Length [ft/ln]	26,49	211,81	47,45	133,77	218,77	177,37	221,60

**Movement, Approach, & Intersection Results**

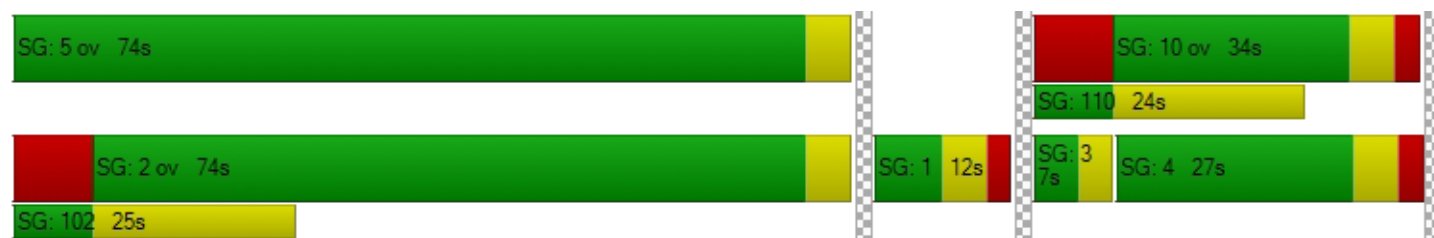
d_M, Delay for Movement [s/veh]	36,78	36,78	36,78	41,80	40,38	40,38	10,37	12,15	12,73	7,35	9,77	12,91
Movement LOS	D	D	D	D	D	D	B	B	B	A	A	B
d_A, Approach Delay [s/veh]	36,78			41,54			11,85			9,97		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15,35											
Intersection LOS	B											
Intersection V/C	0,312											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	146,16	199,86	837,68	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,965	2,208	2,471	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	467	1556	1556
d_b, Bicycle Delay [s]	26,48	26,45	2,22	2,22
I_b,int, Bicycle LOS Score for Intersection	1,599	1,741	2,045	2,207
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	-	4	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-








### Intersection Level Of Service Report

#### Intersection 9: Entrée développement / Avenue des Halles

Control Type:	Two-way stop	Delay (sec / veh):	13,5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,062

#### Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

#### Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	220	45	69	130	30	90
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	5,00	3,00	0,00	0,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	220	45	69	130	30	90
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	55	11	17	33	8	23
Total Analysis Volume [veh/h]	220	45	69	130	30	90
Pedestrian Volume [ped/h]	0		0		5	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,05	0,00	0,06	0,11
d_M, Delay for Movement [s/veh]	0,00	0,00	7,93	0,00	13,51	10,69
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,17	0,17	0,63	0,63
95th-Percentile Queue Length [ft/ln]	0,00	0,00	4,20	4,20	15,86	15,86
d_A, Approach Delay [s/veh]	0,00		2,75		11,40	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3,28					
Intersection LOS	B					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 2 Actuel PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_PM\_RV0B.pdf

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	67	0	153	189	299	0	0	180	78	966

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	27	0	19	0	0	0	0	324	44	28	233	0	675

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	88	416	86	79	356	86	84	164	113	39	109	90	1710

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	39	547	19	168	433	50	53	33	56	33	35	105	1571

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	94	489	88	220	354	152	275	182	111	122	201	522	2810

ID	Intersection Name	Northbound			Eastbound		Westbound		Total Volume
		Right	Thru	Right	Left	Thru			
6	Accès Halles / Rue Jean-Talon Est	120	470	80	34	450	1154		

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	193	100	444	156	37	495	1425

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	5	3	4	133	5	23	85	455	1	3	649	44	1410

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	220	45	69	130	30	90	584

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 2 Actuel PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_PM\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	67	0	153	189	299	0	0	180	78	966
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>0</b>	<b>153</b>	<b>189</b>	<b>299</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>78</b>	<b>966</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	27	0	19	0	0	0	0	324	44	28	233	0	675
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>27</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>324</b>	<b>44</b>	<b>28</b>	<b>233</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	88	416	86	79	356	86	84	164	113	39	109	90	1710
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>88</b>	<b>416</b>	<b>86</b>	<b>79</b>	<b>356</b>	<b>86</b>	<b>84</b>	<b>164</b>	<b>113</b>	<b>39</b>	<b>109</b>	<b>90</b>	<b>1710</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	39	547	19	168	433	50	53	33	56	33	35	105	1571
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>39</b>	<b>547</b>	<b>19</b>	<b>168</b>	<b>433</b>	<b>50</b>	<b>53</b>	<b>33</b>	<b>56</b>	<b>33</b>	<b>35</b>	<b>105</b>	<b>1571</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	94	489	88	220	354	152	275	182	111	122	201	522	2810	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>94</b>	<b>489</b>	<b>88</b>	<b>220</b>	<b>354</b>	<b>152</b>	<b>275</b>	<b>182</b>	<b>111</b>	<b>122</b>	<b>201</b>	<b>522</b>	<b>2810</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	120	470	80	34	450	1154	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>120</b>	<b>470</b>	<b>80</b>	<b>34</b>	<b>450</b>	<b>1154</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	193	100	444	156	37	495	1425
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>193</b>	<b>100</b>	<b>444</b>	<b>156</b>	<b>37</b>	<b>495</b>	<b>1425</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	5	3	4	133	5	23	85	455	1	3	649	44	1410
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>133</b>	<b>5</b>	<b>23</b>	<b>85</b>	<b>455</b>	<b>1</b>	<b>3</b>	<b>649</b>	<b>44</b>	<b>1410</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	220	45	69	130	30	90	584
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>220</b>	<b>45</b>	<b>69</b>	<b>130</b>	<b>30</b>	<b>90</b>	<b>584</b>



## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 2 Actuel PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_PM\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	0	0	0	0.00
<b>Added Trips Total</b>								<b>0</b>	<b>0</b>	<b>0</b>	<b>0,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 2 Actuel PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_PM\_RV0B.pdf

**Trip Distribution summary**

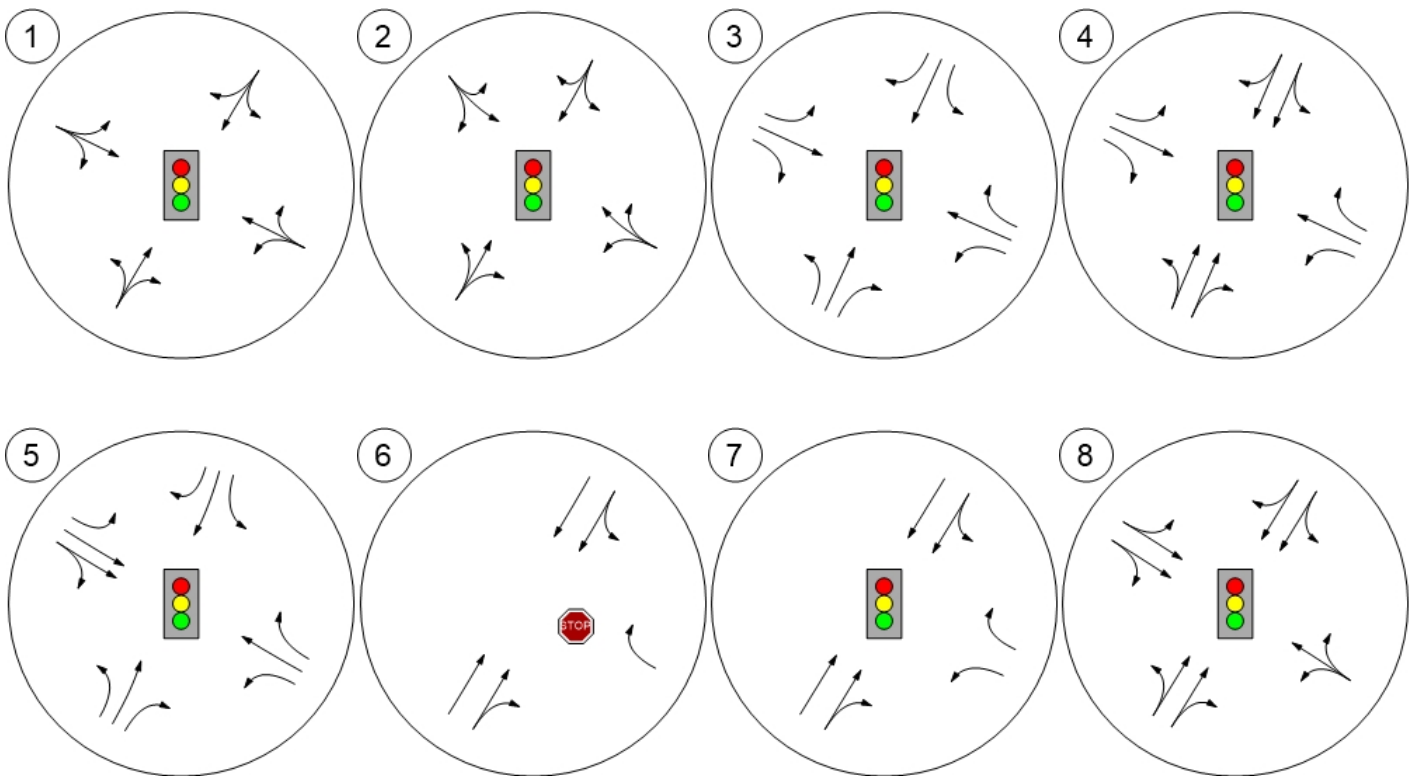
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	0,00	0	0,00	0
3: Gate	0,00	0	0,00	0
4: Gate	0,00	0	0,00	0
5: Gate	0,00	0	0,00	0
6: Gate	0,00	0	0,00	0
7: Gate	0,00	0	0,00	0
8: Gate	0,00	0	0,00	0
<b>Total</b>	<b>0,00</b>	<b>0</b>	<b>0,00</b>	<b>0</b>

Study Intersections

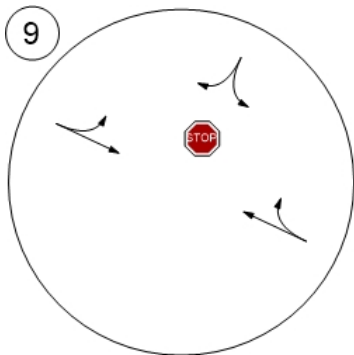
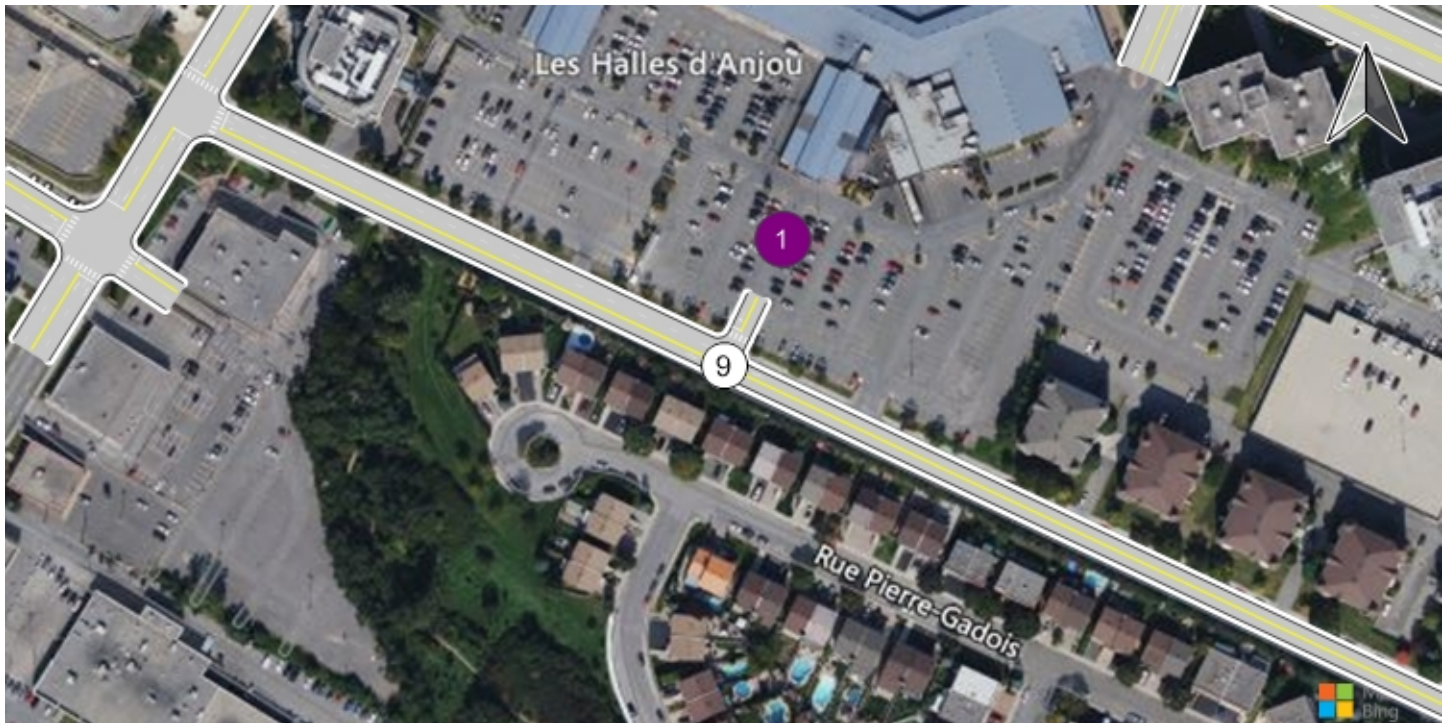




### Lane Configuration and Traffic Control

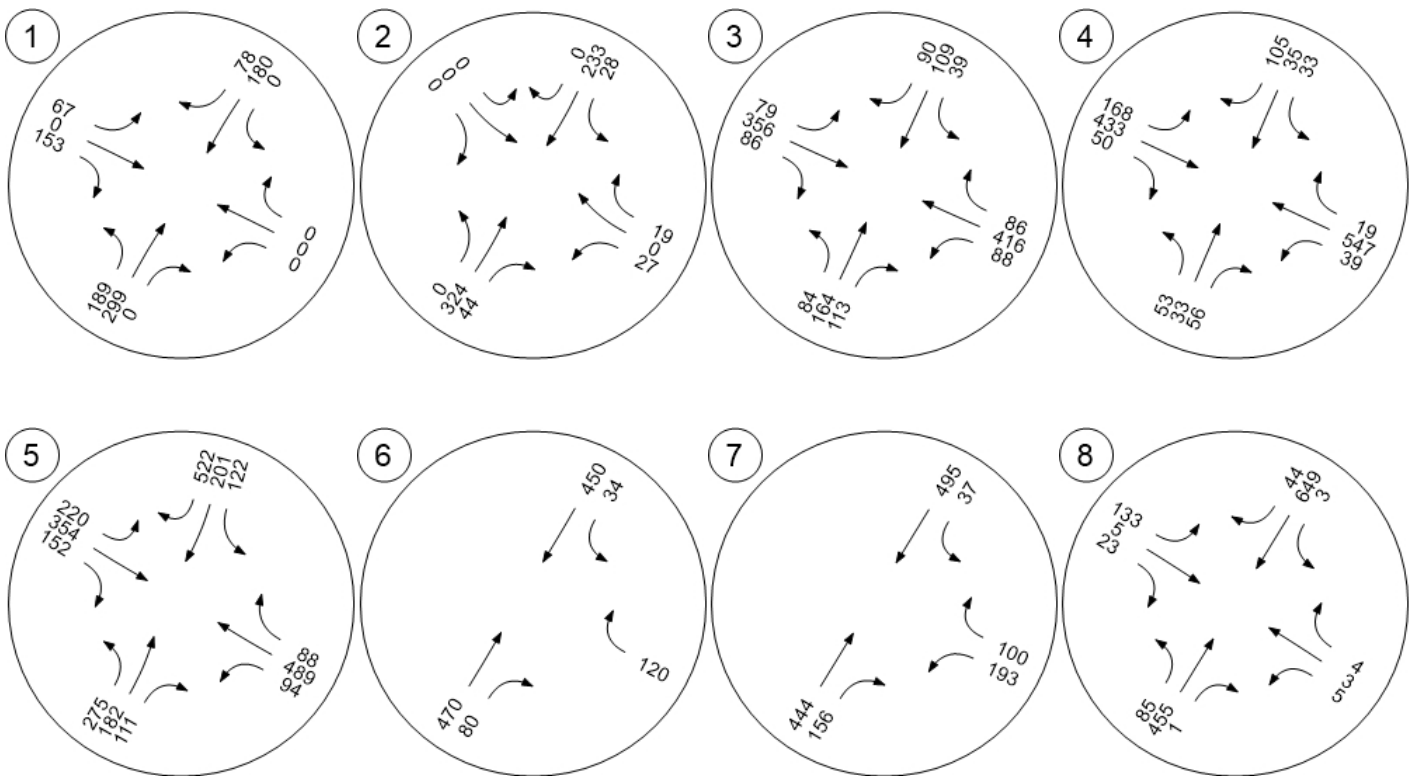


Lane Configuration and Traffic Control

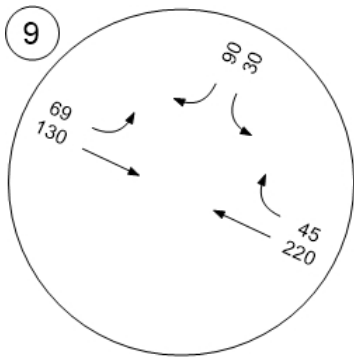
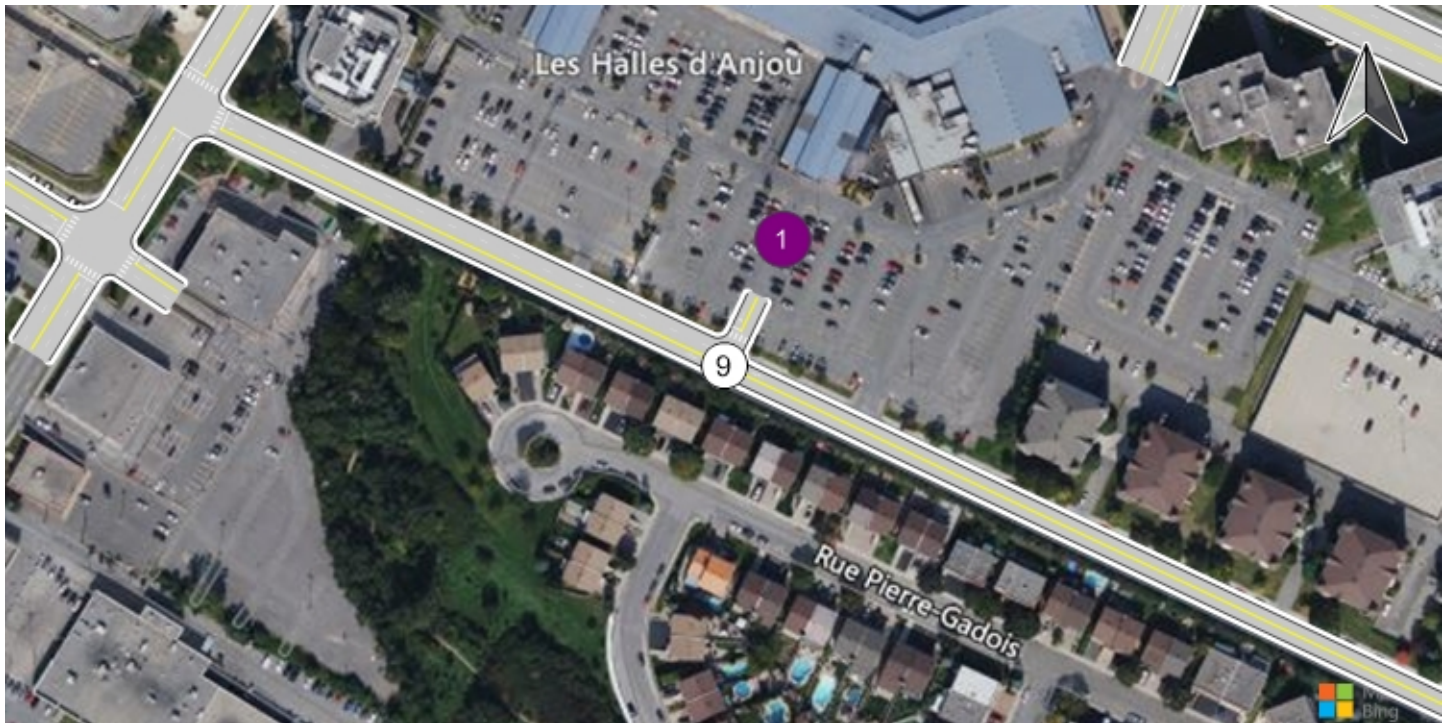




Traffic Volume - Base Volume

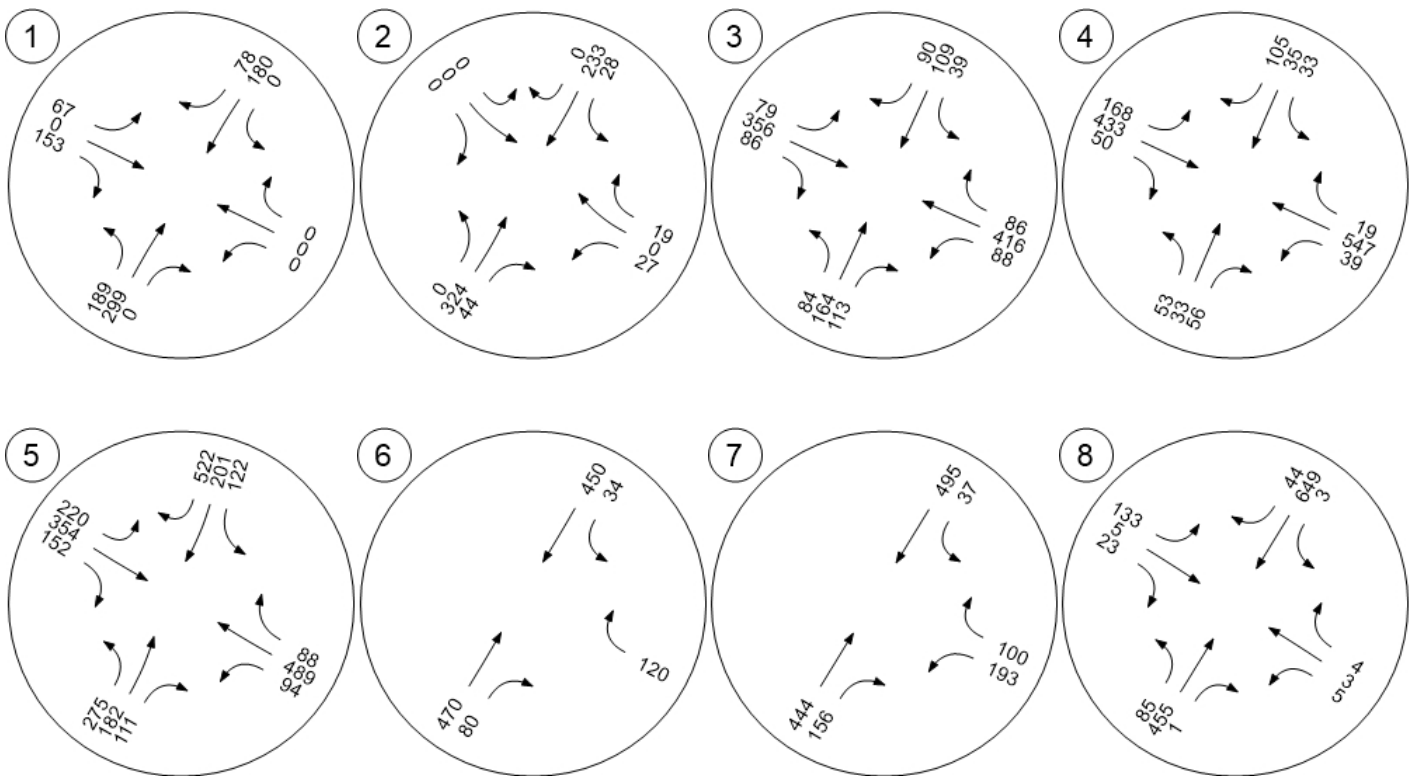


Traffic Volume - Base Volume

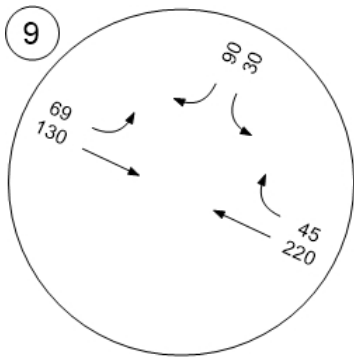
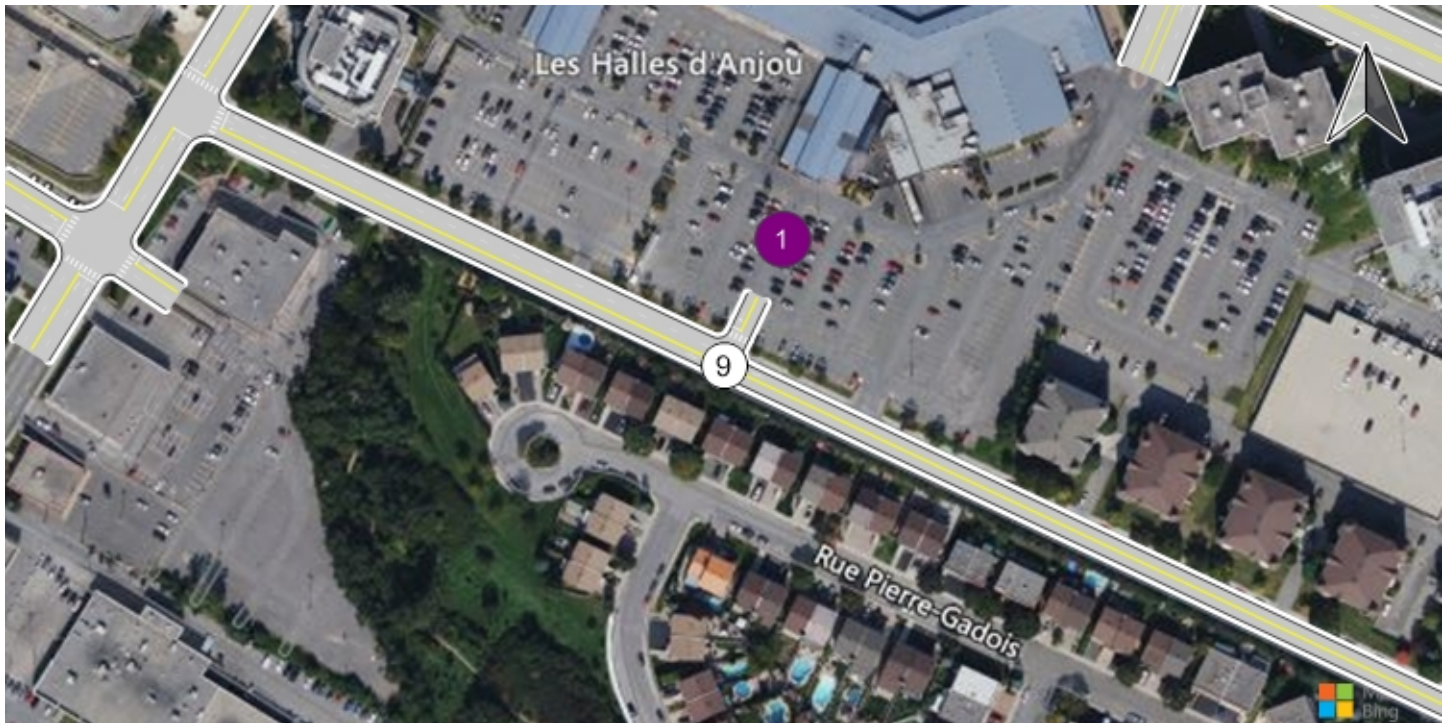




Traffic Volume - Future Total Volume

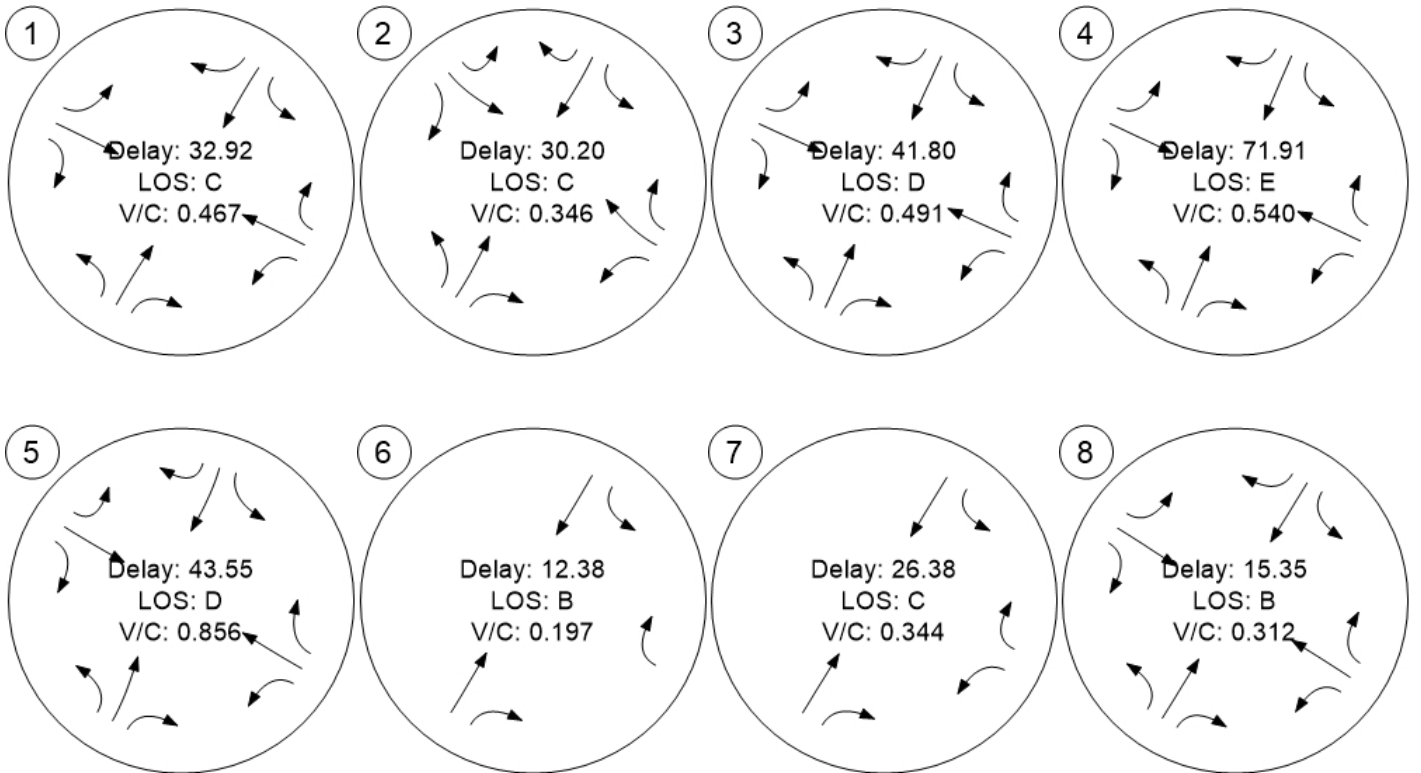


Traffic Volume - Future Total Volume

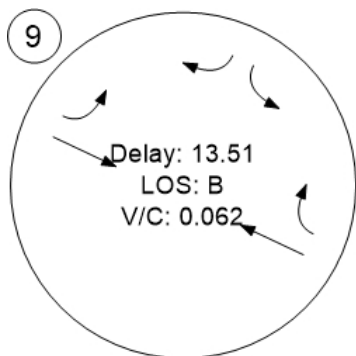
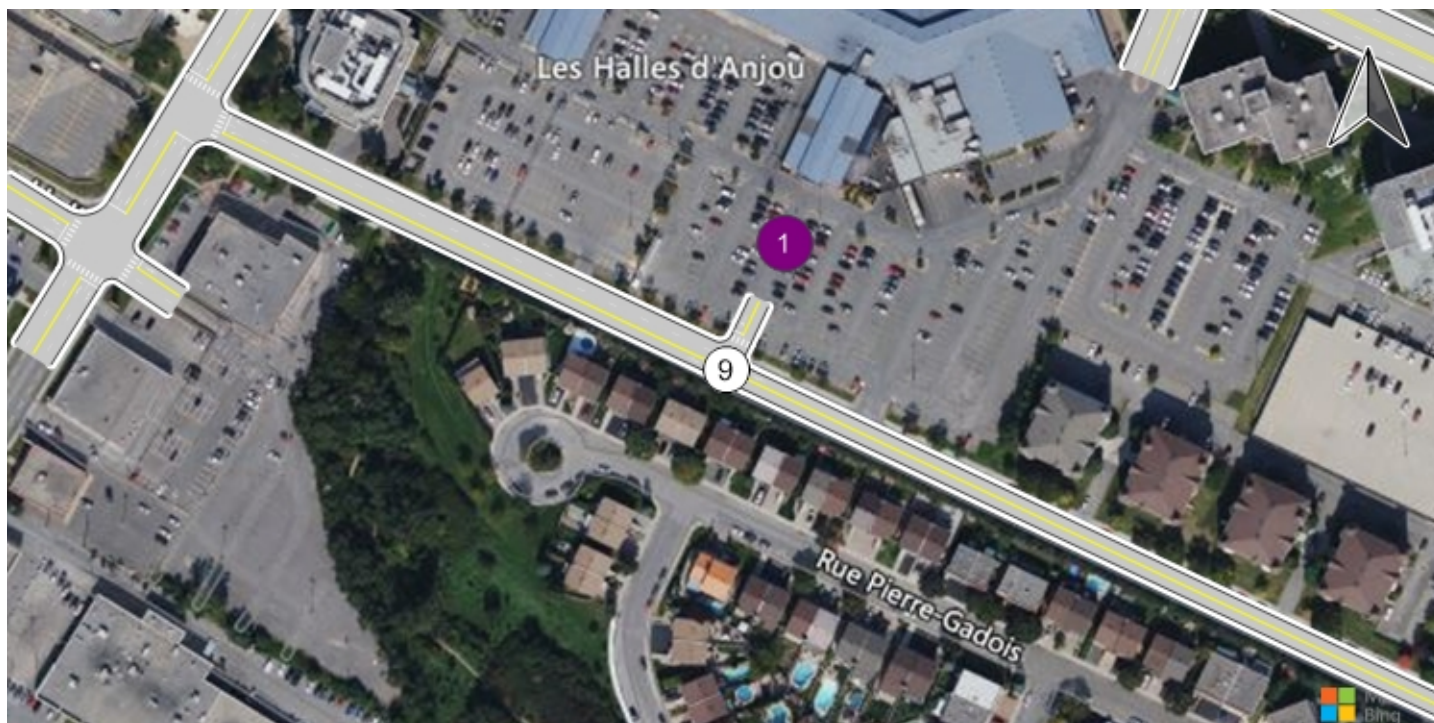




Traffic Conditions



Traffic Conditions



## Annexe 4 – Situation actuelle FDS

L'humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 3 Actuel FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_FDS\_RV0B.pdf

## Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	EB Thru	0,493	32,8	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Right	0,338	31,0	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,517	42,1	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	WB Right	0,518	46,0	D
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Left	0,717	38,1	D
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,168	12,3	B
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Left	0,457	41,6	D
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Left	0,332	14,6	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,098	13,1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.



**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	32,8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,493

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	86	0	157	163	312	0	0	215	79
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,64	1,84	0,00	0,00	0,00	1,86	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	86	0	157	163	312	0	0	215	79
Peak Hour Factor	1,0000	1,0000	1,0000	0,8300	1,0000	0,8400	0,8300	0,8900	1,0000	1,0000	0,9100	0,7100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	26	0	47	49	88	0	0	59	28
Total Analysis Volume [veh/h]	0	0	0	104	0	187	196	351	0	0	236	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			0			1			10		
v_di, Inbound Pedestrian Volume crossing in	10			1			0			10		
v_co, Outbound Pedestrian Volume crossing	0			16			0			15		
v_ci, Inbound Pedestrian Volume crossing mi	0			15			0			16		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,19	0,31	0,20
s, saturation flow rate [veh/h]	1900	1567	1772	1772
c, Capacity [veh/h]	652	559	706	572
d1, Uniform Delay [s]	0,00	25,20	27,34	27,42
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	3,44	8,12	4,74
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,52	0,77	0,61
d, Delay for Lane Group [s/veh]	0,00	28,63	35,46	32,16
Lane Group LOS	A	C	D	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	5,54	12,04	7,06
50th-Percentile Queue Length [ft/ln]	0,00	138,40	301,03	176,47
95th-Percentile Queue Length [veh/ln]	0,00	9,39	17,73	11,42
95th-Percentile Queue Length [ft/ln]	0,00	234,87	443,30	285,40

**Movement, Approach, & Intersection Results**

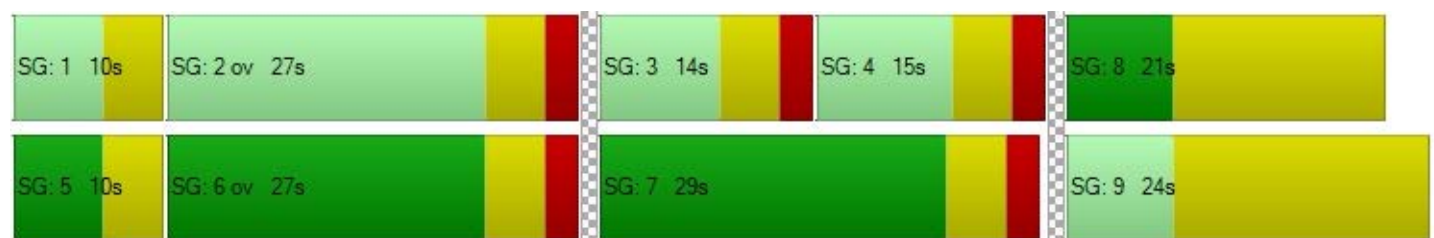
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	28,63	28,63	28,63	35,46	35,46	35,46	32,16	32,16	32,16
Movement LOS	A	A	A	C	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	0,00			28,63			35,46			32,16		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	32,81											
Intersection LOS	C											
Intersection V/C	0,493											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0			11,0			11,0			11,0		
M_corner, Corner Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
d_p, Pedestrian Delay [s]	34,67			34,67			34,67			34,67		
I_p,int, Pedestrian LOS Score for Intersection	1,714			2,489			2,187			2,253		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	511			511			689			467		
d_b, Bicycle Delay [s]	24,94			24,94			19,34			26,45		
I_b,int, Bicycle LOS Score for Intersection	1,560			2,040			2,462			2,132		
Bicycle LOS	A			B			B			B		

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	31,0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,338

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	23	0	31	0	0	0	0	365	41	26	275	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,45	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	0	31	0	0	0	0	365	41	26	275	0
Peak Hour Factor	0,8200	1,0000	0,7000	1,0000	1,0000	1,0000	1,0000	0,8700	0,7300	0,6500	0,9300	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	7	0	11	0	0	0	0	105	14	10	74	0
Total Analysis Volume [veh/h]	28	0	44	0	0	0	0	420	56	40	296	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	8			4			4			9		
v_di, Inbound Pedestrian Volume crossing in	9			4			4			8		
v_co, Outbound Pedestrian Volume crossing	12			0			11			0		
v_ci, Inbound Pedestrian Volume crossing mi	11			0			12			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,26	0,18
s, saturation flow rate [veh/h]	1685	1900	1861	1823
c, Capacity [veh/h]	281	296	722	592
d1, Uniform Delay [s]	32,64	0,00	25,98	26,85
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,19	0,00	4,67	3,92
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,26	0,00	0,66	0,57
d, Delay for Lane Group [s/veh]	34,84	0,00	30,65	30,77
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,52	0,00	9,57	6,62
50th-Percentile Queue Length [ft/ln]	38,03	0,00	239,35	165,62
95th-Percentile Queue Length [veh/ln]	2,74	0,00	14,65	10,85
95th-Percentile Queue Length [ft/ln]	68,45	0,00	366,21	271,15

**Movement, Approach, & Intersection Results**

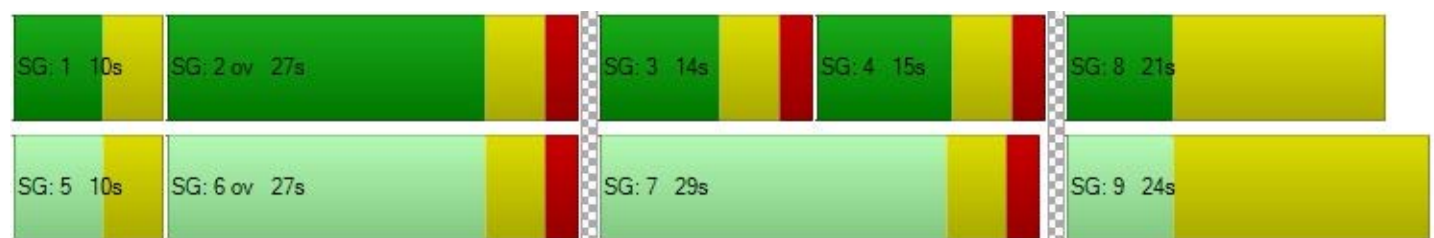
d_M, Delay for Movement [s/veh]	34,84	34,84	34,84	0,00	0,00	0,00	30,65	30,65	30,65	30,77	30,77	30,77
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,84			0,00			30,65			30,77		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	31,04											
Intersection LOS	C											
Intersection V/C	0,338											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,853	2,097	2,104	2,104
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,50	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	2,345	2,114
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	42,1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,517

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	90	464	129	121	299	60	74	211	85	69	143	191
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	1,29	0,78	0,00	1,67	6,67	0,00	0,00	0,00	0,00	0,70	0,52
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	464	129	121	299	60	74	211	85	69	143	191
Peak Hour Factor	0,8000	0,9100	0,8500	0,6600	0,9100	0,8300	0,7700	0,8600	0,8900	0,8600	0,7200	0,8000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	28	127	38	46	82	18	24	61	24	20	50	60
Total Analysis Volume [veh/h]	113	510	152	183	329	72	96	245	96	80	199	239
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		19			25			25			19	
v_di, Inbound Pedestrian Volume crossing in		19			25			25			19	
v_co, Outbound Pedestrian Volume crossing		17			20			17			20	
v_ci, Inbound Pedestrian Volume crossing mi		17			20			17			20	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		4			1			0			16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20



**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,06	0,18	0,18	0,10	0,11	0,11	0,08	0,13	0,06	0,07	0,11	0,15
s, saturation flow rate [veh/h]	1810	1881	1721	1810	1875	1745	1202	1900	1615	1153	1889	1601
c, Capacity [veh/h]	343	641	587	343	639	595	221	345	648	125	344	1007
d1, Uniform Delay [s]	46,26	35,09	35,17	48,25	32,21	32,28	53,23	50,72	13,29	62,50	49,38	10,68
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,56	3,20	3,57	5,85	1,33	1,47	6,10	11,67	0,48	22,76	6,96	0,56
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,33	0,54	0,54	0,53	0,32	0,33	0,43	0,71	0,15	0,64	0,58	0,24
d, Delay for Lane Group [s/veh]	48,82	38,28	38,74	54,10	33,54	33,75	59,33	62,39	13,78	85,25	56,34	11,24
Lane Group LOS	D	D	D	D	C	C	E	E	B	F	E	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3,48	9,53	8,89	6,02	5,16	4,92	3,37	8,75	1,18	3,49	6,70	3,17
50th-Percentile Queue Length [ft/ln]	86,96	238,13	222,21	150,53	128,94	122,99	84,23	218,66	29,54	87,24	167,38	79,16
95th-Percentile Queue Length [veh/ln]	6,26	14,59	13,78	10,05	8,88	8,56	6,06	13,60	2,13	6,28	10,94	5,70
95th-Percentile Queue Length [ft/ln]	156,54	364,67	344,44	251,14	222,05	213,93	151,62	339,92	53,17	157,04	273,47	142,49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	48,82	38,43	38,74	54,10	33,62	33,75	59,33	62,39	13,78	85,25	56,34	11,24
Movement LOS	D	D	D	D	C	C	E	E	B	F	E	B
d_A, Approach Delay [s/veh]	40,01			40,05			51,04			40,00		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42,10											
Intersection LOS	D											
Intersection V/C	0,517											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0			9,0			9,0			9,0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	186,07			104,80			135,00			138,46		
d_p, Pedestrian Delay [s]	36,45			36,45			36,45			36,45		
l_p,int, Pedestrian LOS Score for Intersection	2,665			2,823			2,333			2,515		
Crosswalk LOS	B			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	889			889			444			444		
d_b, Bicycle Delay [s]	13,92			13,90			27,22			27,44		
l_b,int, Bicycle LOS Score for Intersection	2,199			2,041			2,281			2,414		
Bicycle LOS	B			B			B			B		

**Sequence**

Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-







### Intersection Level Of Service Report

#### Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou

Control Type:	Signalized	Delay (sec / veh):	46,0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,518

#### Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	101	593	49	216	345	93	62	60	80	35	48	155
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,99	1,01	0,00	0,00	2,32	0,00	1,61	0,00	0,00	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	101	593	49	216	345	93	62	60	80	35	48	155
Peak Hour Factor	0,6000	0,9400	0,7200	0,8600	0,8700	0,8000	0,6700	0,7500	0,8000	0,8000	0,7500	0,7500
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	42	158	17	63	99	29	23	20	25	11	16	52
Total Analysis Volume [veh/h]	168	631	68	251	397	116	93	80	100	44	64	207
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		5			21			22			6	
v_di, Inbound Pedestrian Volume crossing in		6			22			21			5	
v_co, Outbound Pedestrian Volume crossing		13			24			13			24	
v_ci, Inbound Pedestrian Volume crossing mi		13			24			13			24	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		1			1			2			5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	12	35	0	12	35	0	0	19	0	0	24	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	18	40	0	18	40	0	0	24	0	0	29	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	6,0	6,0	0,0	6,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4,00	0,00	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	53	40	40	53	40	40	24	24	29	29
g / C, Green / Cycle	0,39	0,30	0,30	0,39	0,30	0,30	0,18	0,18	0,21	0,21
(v / s)_i Volume / Saturation Flow Rate	0,14	0,19	0,19	0,23	0,14	0,14	0,08	0,08	0,06	0,14
s, saturation flow rate [veh/h]	1166	1885	1816	1076	1865	1711	1841	1500	1862	1444
c, Capacity [veh/h]	432	558	538	378	553	507	327	267	400	310
d1, Uniform Delay [s]	28,64	41,19	41,23	31,63	38,99	39,06	49,57	49,84	44,18	48,58
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,63	5,46	5,71	8,89	2,99	3,32	4,37	5,96	1,66	10,84
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,39	0,64	0,64	0,66	0,48	0,49	0,45	0,48	0,27	0,67
d, Delay for Lane Group [s/veh]	31,27	46,65	46,93	40,53	41,98	42,38	53,94	55,81	45,83	59,42
Lane Group LOS	C	D	D	D	D	D	D	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4,00	11,14	10,81	6,73	7,76	7,24	4,84	4,31	3,23	7,35
50th-Percentile Queue Length [ft/ln]	100,06	278,57	270,33	168,28	193,99	181,10	120,99	107,72	80,73	183,80
95th-Percentile Queue Length [veh/ln]	7,20	16,62	16,21	10,99	12,33	11,66	8,45	7,71	5,81	11,80
95th-Percentile Queue Length [ft/ln]	180,12	415,43	405,15	274,65	308,20	291,45	211,19	192,83	145,31	294,98

**Movement, Approach, & Intersection Results**

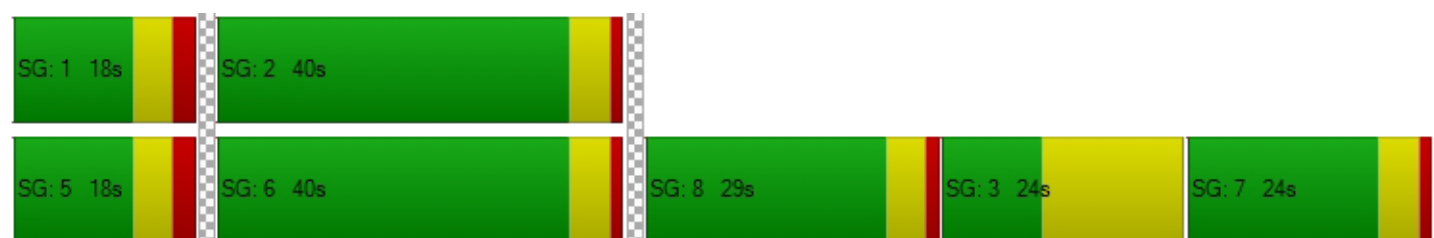
d_M, Delay for Movement [s/veh]	31,27	46,78	46,93	40,53	42,11	42,38	53,94	54,56	55,81	45,83	45,83	59,42
Movement LOS	C	D	D	D	D	D	D	D	E	D	D	E
d_A, Approach Delay [s/veh]	43,78			41,63			54,81			54,76		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45,96											
Intersection LOS	D											
Intersection V/C	0,518											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	468,66	223,35	222,75	918,79
d_p, Pedestrian Delay [s]	32,09	32,09	32,09	32,09
I_p,int, Pedestrian LOS Score for Intersection	2,678	2,725	2,344	2,399
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	778	778	422	533
d_b, Bicycle Delay [s]	16,81	16,81	28,03	24,26
I_b,int, Bicycle LOS Score for Intersection	2,275	2,190	1,785	1,819
Bicycle LOS	B	B	A	A

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report****Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	38,1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,717

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	173	516	118	218	344	176	247	325	138	171	270	481
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,16	0,78	0,00	0,00	1,16	0,00	0,00	3,38	2,17	0,00	3,70	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	173	516	118	218	344	176	247	325	138	171	270	481
Peak Hour Factor	0,8200	0,9300	0,8000	0,9600	0,9000	0,9200	0,9100	0,8900	0,8000	0,8100	0,9000	0,9200
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	53	139	37	57	96	48	68	91	43	53	75	131
Total Analysis Volume [veh/h]	211	555	148	227	382	191	271	365	173	211	300	523
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		15			19			20			16	
v_di, Inbound Pedestrian Volume crossing in		16			20			19			15	
v_co, Outbound Pedestrian Volume crossing		31			11			30			10	
v_ci, Inbound Pedestrian Volume crossing mi		30			10			31			11	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		4			3			1			9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,18	0,19	0,20	0,21	0,16	0,17	0,20	0,20	0,12	0,21	0,16	0,33
s, saturation flow rate [veh/h]	1148	1888	1715	1092	1883	1609	1330	1849	1488	1012	1844	1587
c, Capacity [veh/h]	459	573	521	425	572	488	613	660	531	266	659	567
d1, Uniform Delay [s]	22,85	33,66	33,84	23,92	32,37	32,64	18,22	28,83	25,97	45,36	27,64	34,23
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,29	5,31	6,19	4,73	3,49	4,46	2,31	3,31	1,63	21,25	2,26	22,92
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,46	0,64	0,65	0,53	0,53	0,55	0,44	0,55	0,33	0,79	0,46	0,92
d, Delay for Lane Group [s/veh]	26,14	38,97	40,03	28,65	35,86	37,11	20,53	32,15	27,60	66,61	29,90	57,14
Lane Group LOS	C	D	D	C	D	D	C	C	C	E	C	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4,05	9,33	8,82	4,50	7,33	6,70	4,52	8,39	3,56	7,44	6,55	16,85
50th-Percentile Queue Length [ft/ln]	101,19	233,25	220,40	112,43	183,31	167,61	113,01	209,78	89,08	186,07	163,66	421,15
95th-Percentile Queue Length [veh/ln]	7,29	14,34	13,69	7,98	11,77	10,95	8,01	13,14	6,41	11,92	10,74	23,58
95th-Percentile Queue Length [ft/ln]	182,15	358,48	342,14	199,38	294,33	273,78	200,18	328,55	160,35	297,92	268,56	589,43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26,14	39,33	40,03	28,65	36,12	37,11	20,53	32,15	27,60	66,61	29,90	57,14
Movement LOS	C	D	D	C	D	D	C	C	C	E	C	E
d_A, Approach Delay [s/veh]	36,40			34,24			27,28			51,17		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	38,13											
Intersection LOS	D											
Intersection V/C	0,717											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	219,83	496,02	171,83	174,92
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	3,025	2,846	2,689	2,747
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,08	30,06	26,48	26,59
I_b,int, Bicycle LOS Score for Intersection	2,314	2,220	2,894	3,266
Bicycle LOS	B	B	C	C

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	12,3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,168

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	100	577	70	30	589
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	2,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	100	577	70	30	589
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	25	144	18	8	147
Total Analysis Volume [veh/h]	0	100	577	70	30	589
Pedestrian Volume [ped/h]	50		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,17	0,01	0,00	0,04	0,01
d_M, Delay for Movement [s/veh]	0,00	12,28	0,00	0,00	9,38	0,00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	0,60	0,00	0,00	0,11	0,05
95th-Percentile Queue Length [ft/ln]	0,00	15,03	0,00	0,00	2,73	1,37
d_A, Approach Delay [s/veh]	12,28		0,00		0,45	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1,10					
Intersection LOS	B					



**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	41,6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,457

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	188	67	580	188	22	541
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	4,48	2,07	0,00	0,00	2,40
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	188	67	580	188	22	541
Peak Hour Factor	0,8700	0,6700	0,9500	0,8000	0,6900	0,9100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	54	25	153	59	8	149
Total Analysis Volume [veh/h]	216	100	611	235	32	595
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	19		19		0	
v_ci, Inbound Pedestrian Volume crossing mi	19		19		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	2		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	38,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	27	27	5	29
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	43	43	33	33	10	34
Vehicle Extension [s]	3,0	3,0	3,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	0
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	2,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	4,0	4,0	4,0	4,0	3,0	3,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	1,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	6,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6,00	6,00	6,00	6,00	5,00	5,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	4,00	4,00	4,00	4,00	0,00	3,00
g_i, Effective Green Time [s]	37	30	62	62	39	29
g / C, Green / Cycle	0,31	0,25	0,52	0,52	0,33	0,24
(v / s)_i Volume / Saturation Flow Rate	0,12	0,07	0,23	0,25	0,25	0,19
s, saturation flow rate [veh/h]	1810	1536	1869	1664	1210	1696
c, Capacity [veh/h]	558	384	966	860	298	410
d1, Uniform Delay [s]	32,59	36,07	18,12	18,79	37,50	42,79
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,02	1,64	1,44	2,01	52,95	15,16
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,39	0,26	0,44	0,49	1,00	0,80
d, Delay for Lane Group [s/veh]	34,62	37,71	19,56	20,80	90,45	57,95
Lane Group LOS	C	D	B	C	F	E
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5,26	2,54	7,62	7,98	11,33	10,85
50th-Percentile Queue Length [ft/ln]	131,53	63,46	190,48	199,54	283,20	271,29
95th-Percentile Queue Length [veh/ln]	9,02	4,57	12,15	12,61	16,88	16,25
95th-Percentile Queue Length [ft/ln]	225,57	114,23	303,66	315,37	422,00	406,36

**Movement, Approach, & Intersection Results**

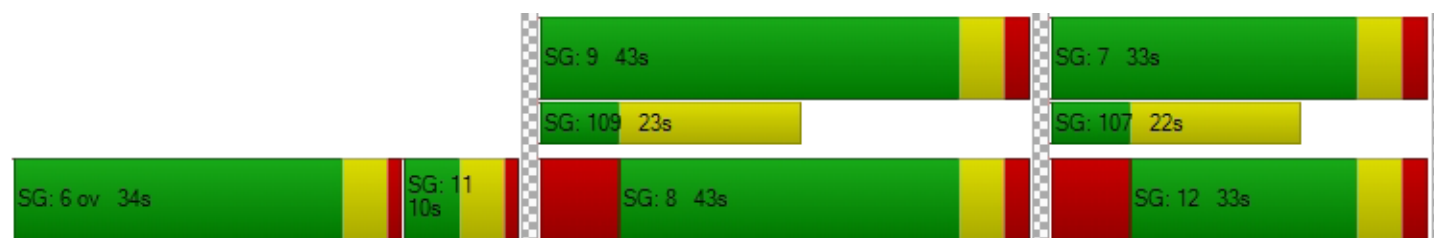
d_M, Delay for Movement [s/veh]	34,62	37,71	19,94	20,80	90,45	72,51
Movement LOS	C	D	B	C	F	E
d_A, Approach Delay [s/veh]	35,60		20,18		73,42	
Approach LOS	D		C		E	
d_I, Intersection Delay [s/veh]	41,56					
Intersection LOS	D					
Intersection V/C	0,457					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,347	0,000	2,471
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	617	1033	483
d_b, Bicycle Delay [s]	28,73	14,02	34,50
I_b,int, Bicycle LOS Score for Intersection	1,560	2,258	2,077
Bicycle LOS	A	B	B

**Sequence**

Ring 1	-	-	-	9	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	12	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	14,6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,332

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	7	1	5	181	0	26	62	581	10	0	696	25
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	3,85	0,00	2,07	0,00	0,00	1,87	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	5	181	0	26	62	581	10	0	696	25
Peak Hour Factor	0,5800	0,2500	0,6300	0,8700	0,6700	0,9300	0,7800	0,8900	0,6300	1,0000	0,9300	0,6900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	3	1	2	52	0	7	20	163	4	0	187	9
Total Analysis Volume [veh/h]	12	4	8	208	0	28	79	653	16	0	748	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			8			8			0		
v_di, Inbound Pedestrian Volume crossing in	0			8			8			0		
v_co, Outbound Pedestrian Volume crossing	23			10			23			9		
v_ci, Inbound Pedestrian Volume crossing mi	23			9			23			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			3			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	31,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	16	0	6	17	0	6	17	0
Maximum Green [s]	20	20	0	7	20	0	6	71	0	6	71	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	26	26	0	7	33	0	12	75	0	12	75	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	7	7	0	4	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	3	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	26	30	23	86	75	86	75
g / C, Green / Cycle	0,22	0,25	0,19	0,72	0,63	0,72	0,63
(v / s)_i Volume / Saturation Flow Rate	0,02	0,14	0,02	0,26	0,25	0,22	0,22
s, saturation flow rate [veh/h]	1539	1531	1411	1254	1688	1872	1672
c, Capacity [veh/h]	378	443	270	936	1055	1372	1045
d1, Uniform Delay [s]	37,32	40,86	40,00	6,40	11,28	6,18	10,84
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,32	3,55	0,77	1,01	1,15	0,57	0,94
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,47	0,10	0,35	0,40	0,30	0,35
d, Delay for Lane Group [s/veh]	37,64	44,42	40,77	7,41	12,42	6,75	11,78
Lane Group LOS	D	D	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0,60	5,83	0,74	2,82	5,80	3,70	4,85
50th-Percentile Queue Length [ft/ln]	14,97	145,75	18,62	70,61	144,96	92,48	121,20
95th-Percentile Queue Length [veh/ln]	1,08	9,79	1,34	5,08	9,75	6,66	8,46
95th-Percentile Queue Length [ft/ln]	26,95	244,75	33,52	127,09	243,68	166,46	211,47

**Movement, Approach, & Intersection Results**

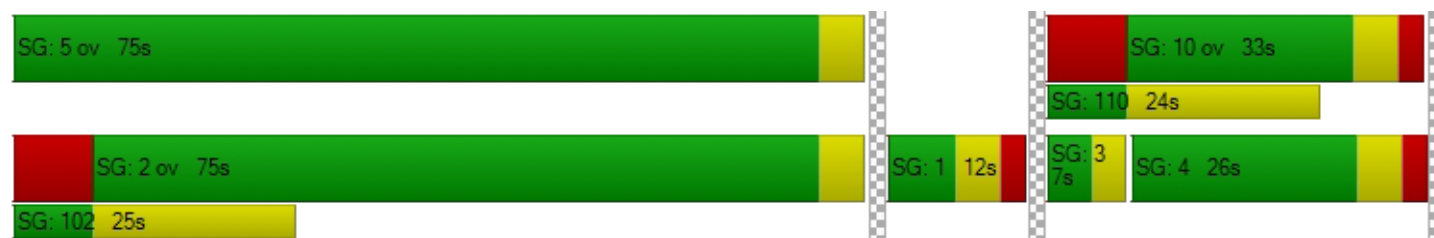
d_M, Delay for Movement [s/veh]	37,64	37,64	37,64	44,42	42,59	40,77	7,41	10,55	12,42	6,75	9,00	11,78
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	B
d_A, Approach Delay [s/veh]	37,64			43,98			10,26			9,13		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	14,57											
Intersection LOS	B											
Intersection V/C	0,332											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	123,58	278,52	419,32	0,00
d_p, Pedestrian Delay [s]	49,50	49,50	49,50	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,967	2,182	2,536	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	333	1183	1183
d_b, Bicycle Delay [s]	41,73	41,73	10,00	10,00
I_b,int, Bicycle LOS Score for Intersection	1,599	1,754	2,177	2,206
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 9: Entrée développement / Avenue des Halles**

Control Type:	Two-way stop	Delay (sec / veh):	13,1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,098

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	192	50	50	160	50	50
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	2,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	192	50	50	160	50	50
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	48	13	13	40	13	13
Total Analysis Volume [veh/h]	192	50	50	160	50	50
Pedestrian Volume [ped/h]	0		0		10	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,04	0,00	0,10	0,06
d_M, Delay for Movement [s/veh]	0,00	0,00	7,88	0,00	13,12	10,57
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,12	0,12	0,57	0,57
95th-Percentile Queue Length [ft/ln]	0,00	0,00	3,00	3,00	14,14	14,14
d_A, Approach Delay [s/veh]	0,00		1,88		11,84	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2,86					
Intersection LOS	B					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 3 Actuel FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_FDS\_RV0B.pdf

## Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	86	0	157	163	312	0	0	215	79	1012

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	23	0	31	0	0	0	0	365	41	26	275	0	761

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	90	464	129	121	299	60	74	211	85	69	143	191	1936

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	101	593	49	216	345	93	62	60	80	35	48	155	1837

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	173	516	118	218	344	176	247	325	138	171	270	481	3177

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	100	577	70	30	589	1366	

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	188	67	580	188	22	541	1586

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	7	1	5	181	0	26	62	581	10	0	696	25	1594

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	192	50	50	160	50	50	552



## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 3 Actuel FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_FDS\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	86	0	157	163	312	0	0	215	79	1012
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>0</b>	<b>157</b>	<b>163</b>	<b>312</b>	<b>0</b>	<b>0</b>	<b>215</b>	<b>79</b>	<b>1012</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	23	0	31	0	0	0	0	365	41	26	275	0	761
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>23</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>365</b>	<b>41</b>	<b>26</b>	<b>275</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	90	464	129	121	299	60	74	211	85	69	143	191	1936
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>90</b>	<b>464</b>	<b>129</b>	<b>121</b>	<b>299</b>	<b>60</b>	<b>74</b>	<b>211</b>	<b>85</b>	<b>69</b>	<b>143</b>	<b>191</b>	<b>1936</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	101	593	49	216	345	93	62	60	80	35	48	155	1837
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>101</b>	<b>593</b>	<b>49</b>	<b>216</b>	<b>345</b>	<b>93</b>	<b>62</b>	<b>60</b>	<b>80</b>	<b>35</b>	<b>48</b>	<b>155</b>	<b>1837</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	173	516	118	218	344	176	247	325	138	171	270	481	3177	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>173</b>	<b>516</b>	<b>118</b>	<b>218</b>	<b>344</b>	<b>176</b>	<b>247</b>	<b>325</b>	<b>138</b>	<b>171</b>	<b>270</b>	<b>481</b>	<b>3177</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	100	577	70	30	589	1366	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>100</b>	<b>577</b>	<b>70</b>	<b>30</b>	<b>589</b>	<b>1366</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	188	67	580	188	22	541	1586
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>188</b>	<b>67</b>	<b>580</b>	<b>188</b>	<b>22</b>	<b>541</b>	<b>1586</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	7	1	5	181	0	26	62	581	10	0	696	25	1594
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>7</b>	<b>1</b>	<b>5</b>	<b>181</b>	<b>0</b>	<b>26</b>	<b>62</b>	<b>581</b>	<b>10</b>	<b>0</b>	<b>696</b>	<b>25</b>	<b>1594</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	192	50	50	160	50	50	552
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>192</b>	<b>50</b>	<b>50</b>	<b>160</b>	<b>50</b>	<b>50</b>	<b>552</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 3 Actuel FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_FDS\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	0	0	0	0.00
<b>Added Trips Total</b>								<b>0</b>	<b>0</b>	<b>0</b>	<b>0,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 3 Actuel FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_actuelle\_FDS\_RV0B.pdf

**Trip Distribution summary**

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	0,00	0	0,00	0
3: Gate	0,00	0	0,00	0
4: Gate	0,00	0	0,00	0
5: Gate	0,00	0	0,00	0
6: Gate	0,00	0	0,00	0
7: Gate	0,00	0	0,00	0
8: Gate	0,00	0	0,00	0
<b>Total</b>	<b>0,00</b>	<b>0</b>	<b>0,00</b>	<b>0</b>

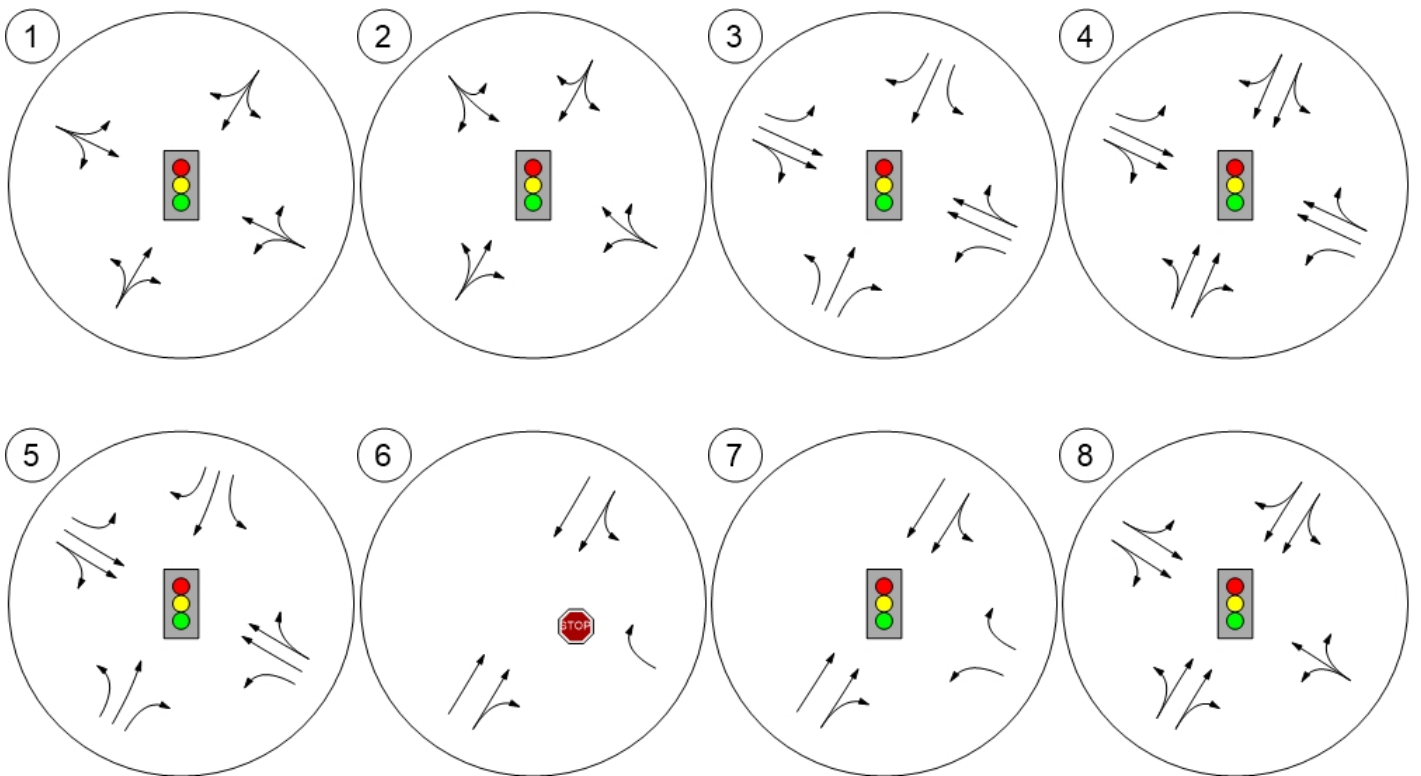


Study Intersections



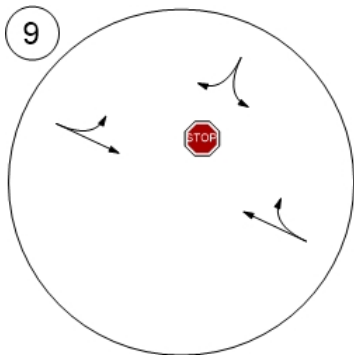
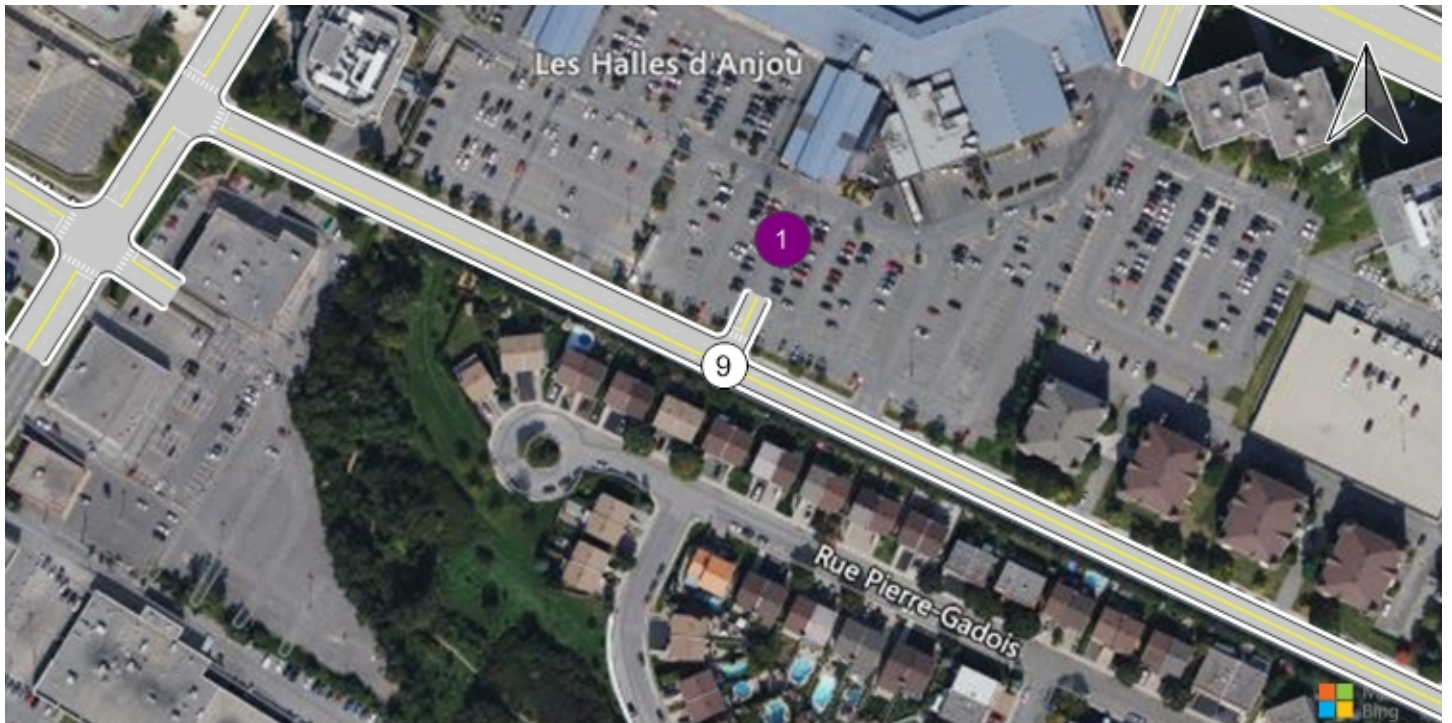


### Lane Configuration and Traffic Control

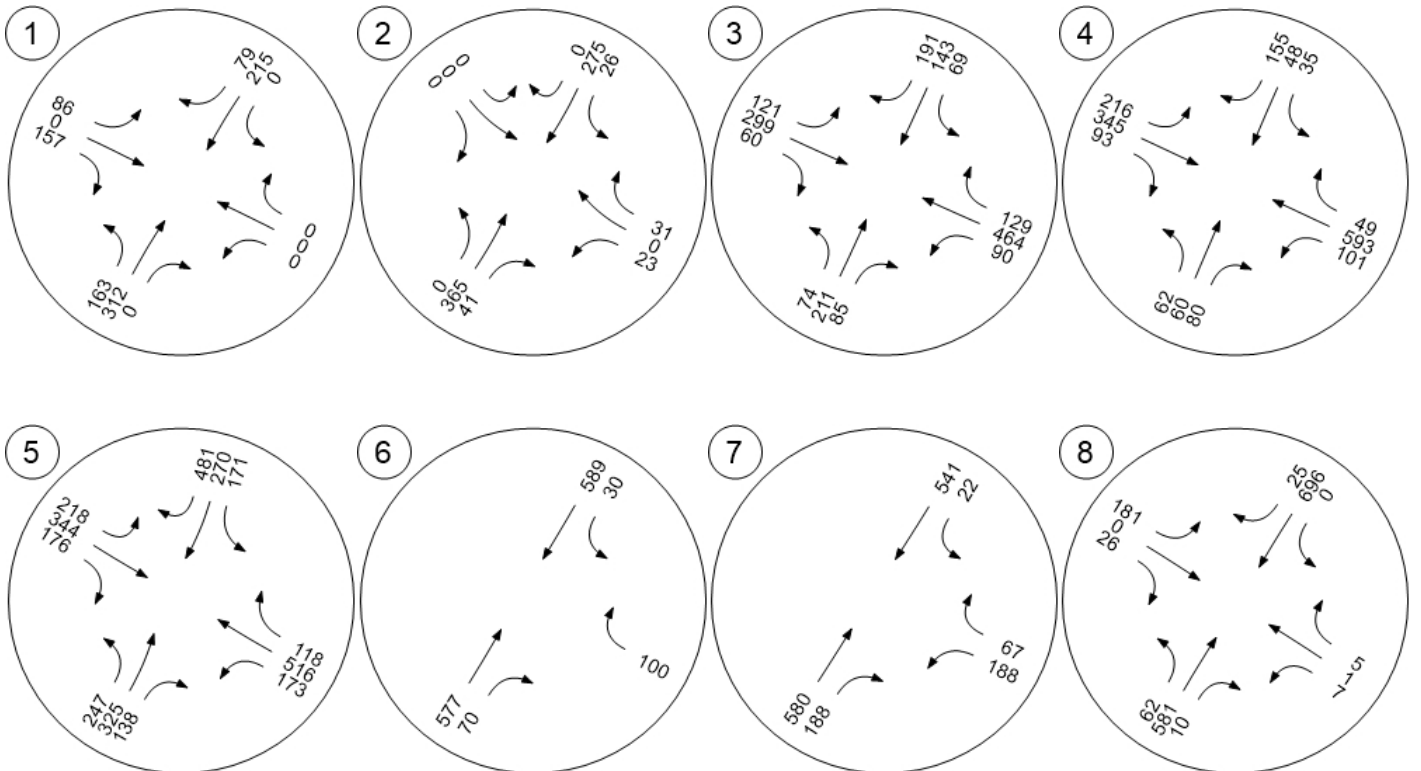




Lane Configuration and Traffic Control

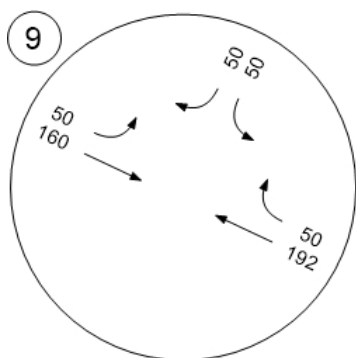
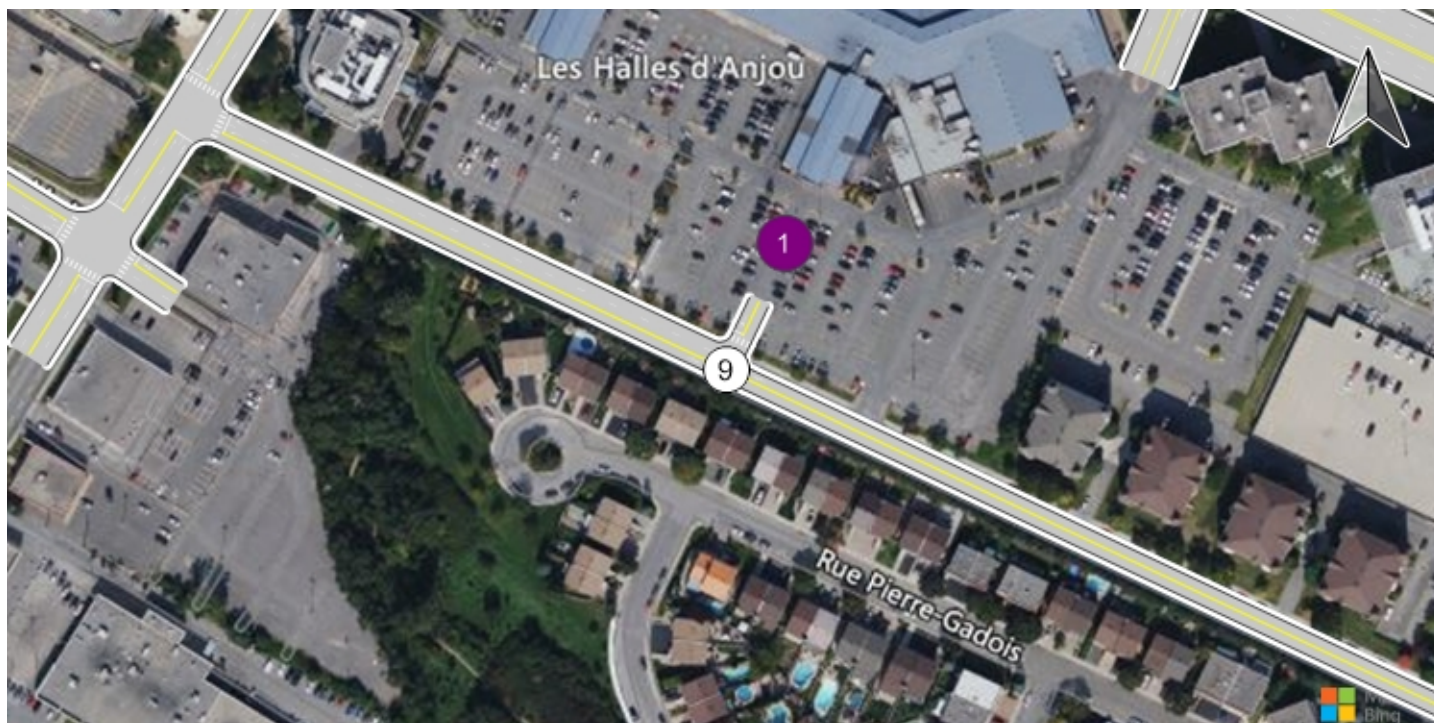


Traffic Volume - Base Volume

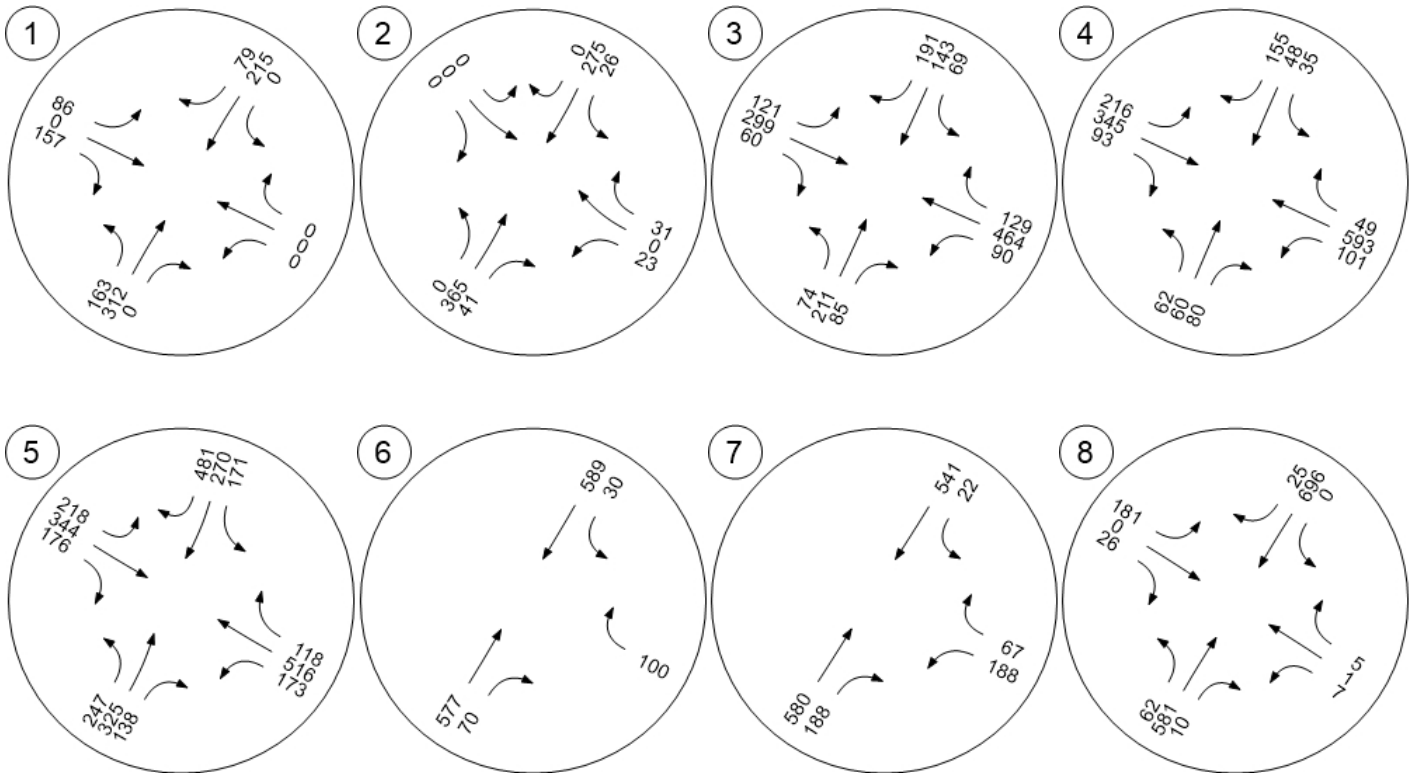




Traffic Volume - Base Volume

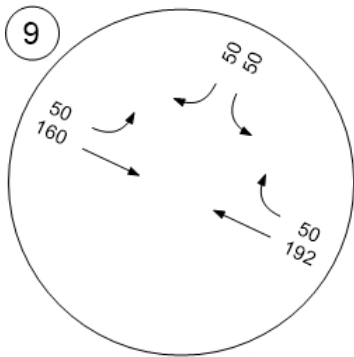
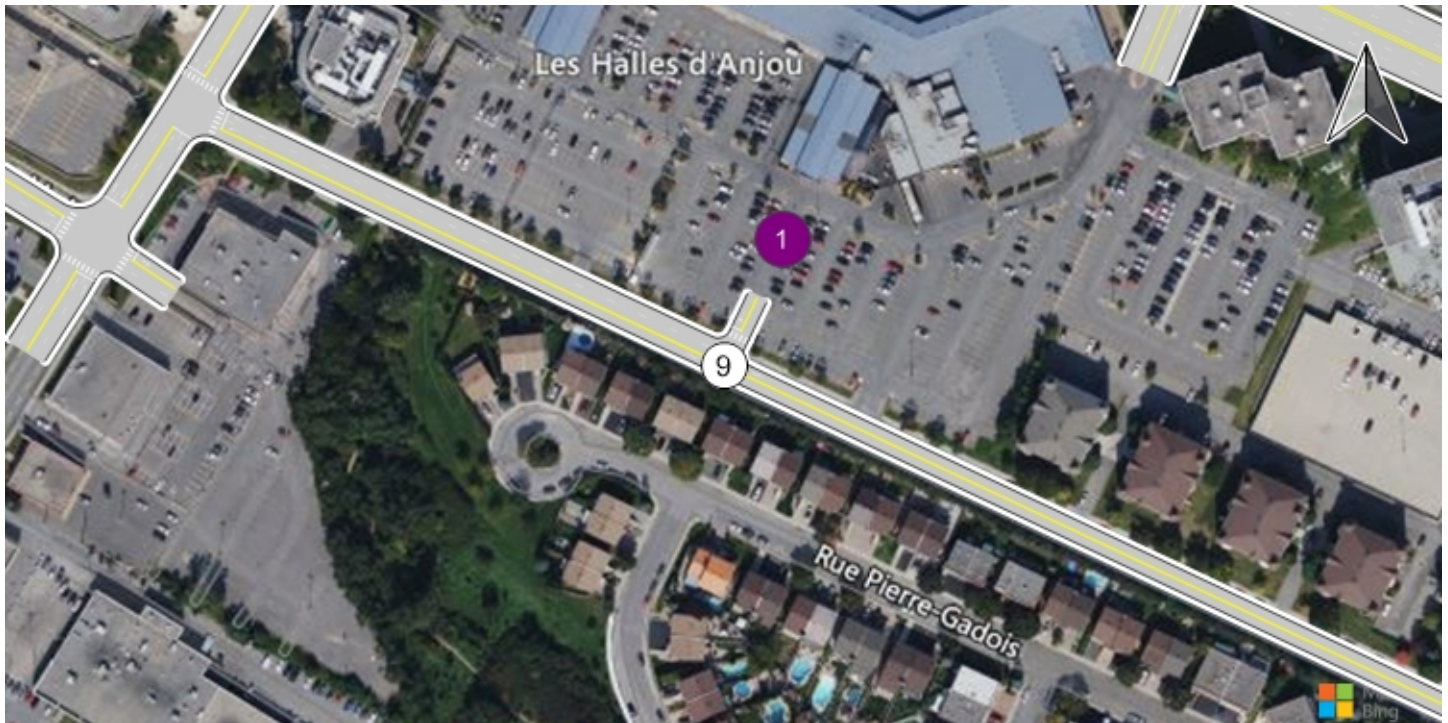


Traffic Volume - Future Total Volume

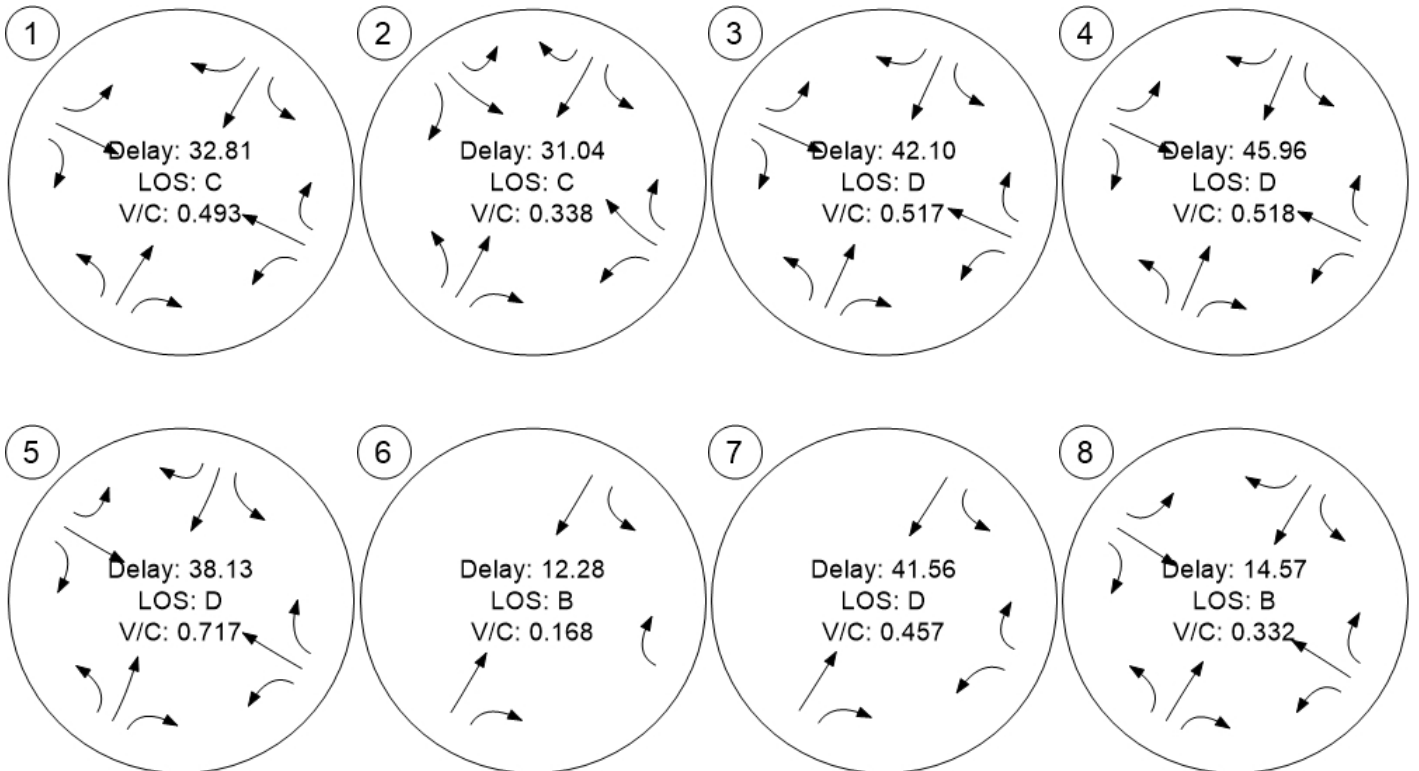




Traffic Volume - Future Total Volume

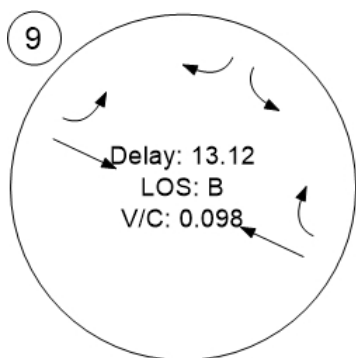
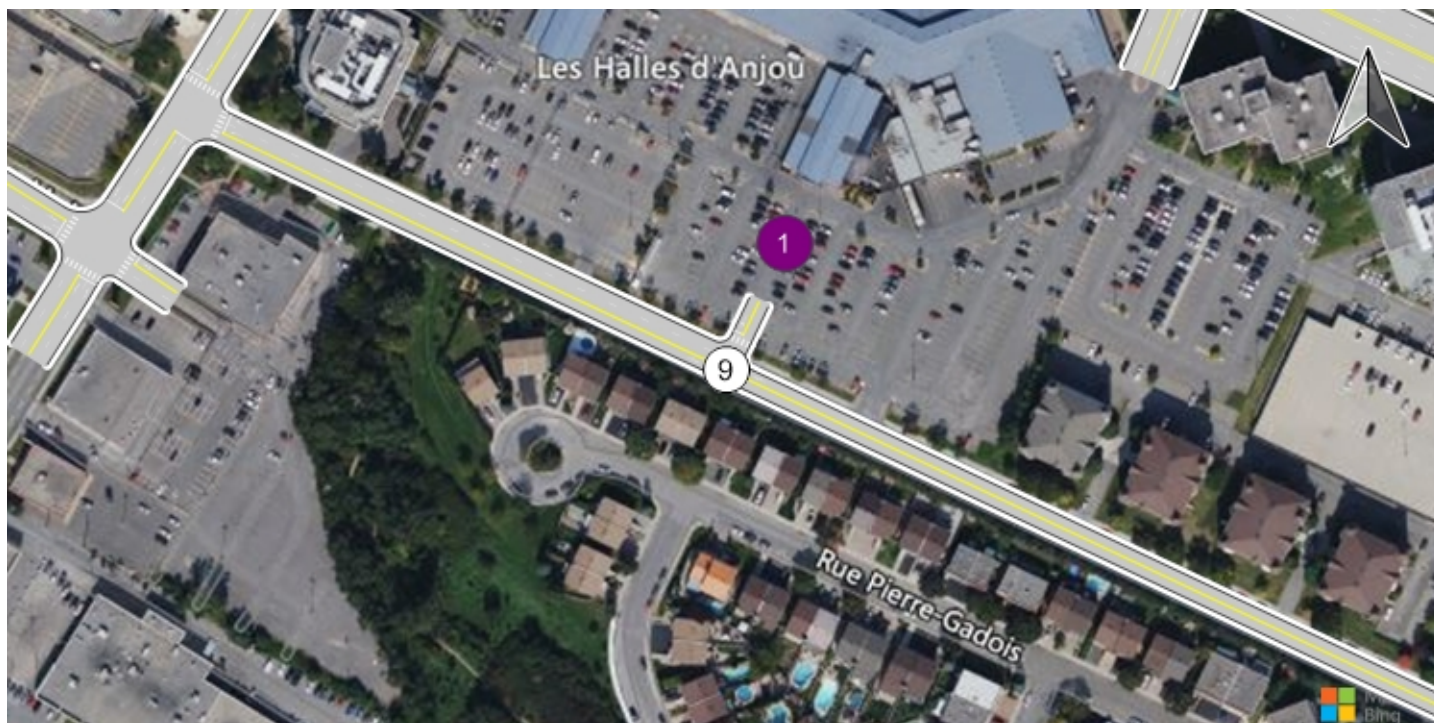


Traffic Conditions





Traffic Conditions





## Annexe 5 – Situation projetée AM

L'humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 4 Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_AM\_RV0B.pdf

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	WB Thru	0,338	26,0	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Left	0,239	26,2	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,255	35,1	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	NB Thru	0,254	39,4	D
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Thru	0,410	27,8	C
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,030	9,3	A
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Right	0,340	28,1	C
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Right	0,354	13,9	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,023	11,1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	26,0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,338

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	14	0	52	96	129	0	0	142	48
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	2,08	1,55	0,00	0,00	1,41	6,25
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	12	4	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	17	0	64	100	129	0	0	142	50
Peak Hour Factor	1,0000	1,0000	1,0000	0,4400	1,0000	0,6200	0,7700	0,7000	1,0000	1,0000	0,7700	0,8000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	10	0	26	32	46	0	0	46	16
Total Analysis Volume [veh/h]	0	0	0	39	0	103	130	184	0	0	184	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			0			0			2		
v_di, Inbound Pedestrian Volume crossing in	2			0			0			2		
v_co, Outbound Pedestrian Volume crossing	0			10			0			10		
v_ci, Inbound Pedestrian Volume crossing mi	0			10			0			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,09	0,19	0,14
s, saturation flow rate [veh/h]	1900	1585	1691	1798
c, Capacity [veh/h]	652	562	680	579
d1, Uniform Delay [s]	0,00	22,58	23,31	25,56
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	1,08	2,25	2,29
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,25	0,46	0,43
d, Delay for Lane Group [s/veh]	0,00	23,66	25,56	27,85
Lane Group LOS	A	C	C	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	2,35	5,54	4,55
50th-Percentile Queue Length [ft/ln]	0,00	58,73	138,47	113,83
95th-Percentile Queue Length [veh/ln]	0,00	4,23	9,40	8,05
95th-Percentile Queue Length [ft/ln]	0,00	105,71	234,96	201,32



**Movement, Approach, & Intersection Results**

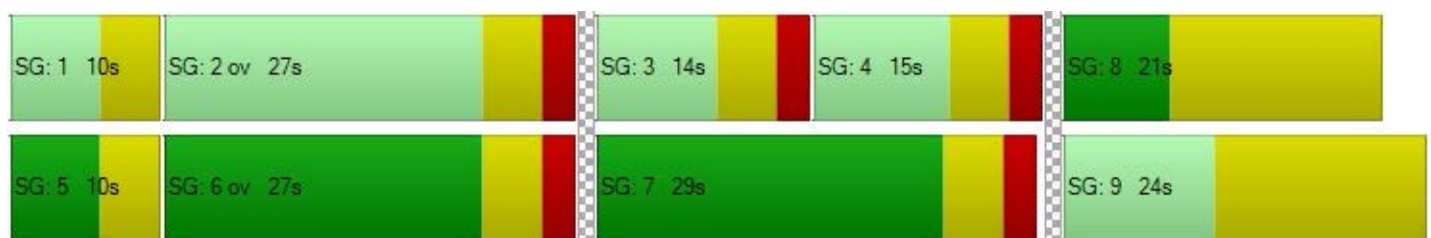
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	23,66	23,66	23,66	25,56	25,56	25,56	27,85	27,85	27,85
Movement LOS	A	A	A	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	0,00			23,66			25,56			27,85		
Approach LOS	A			C			C			C		
d_I, Intersection Delay [s/veh]	25,98											
Intersection LOS	C											
Intersection V/C	0,338											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,714	2,034	2,007	1,999
Crosswalk LOS	A	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	511	511	689	467
d_b, Bicycle Delay [s]	24,94	24,94	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,560	1,794	2,078	1,967
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	26,2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,239

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	+			+			+			+		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name													
Base Volume Input [veh/h]	32	0	21	0	0	0	0	134	14	14	152	0	
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,49	0,00	0,00	3,29	0,00	
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	3	0	0	2	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	0	21	0	0	0	0	137	14	14	154	0	
Peak Hour Factor	0,6700	1,0000	0,8800	1,0000	1,0000	1,0000	1,0000	0,7600	0,8800	0,5000	0,8400	1,0000	
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	12	0	6	0	0	0	0	45	4	7	46	0	
Total Analysis Volume [veh/h]	48	0	24	0	0	0	0	180	16	28	183	0	
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		1			0			0			2		
v_di, Inbound Pedestrian Volume crossing in		2			0			0			1		
v_co, Outbound Pedestrian Volume crossing		5			0			4			0		
v_ci, Inbound Pedestrian Volume crossing mi		4			0			5			0		
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0		
Bicycle Volume [bicycles/h]		0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,11	0,12
s, saturation flow rate [veh/h]	1740	1900	1851	1774
c, Capacity [veh/h]	290	296	719	577
d1, Uniform Delay [s]	32,60	0,00	21,63	24,89
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,04	0,00	0,94	1,78
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,25	0,00	0,27	0,37
d, Delay for Lane Group [s/veh]	34,64	0,00	22,57	26,67
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,51	0,00	3,15	3,77
50th-Percentile Queue Length [ft/ln]	37,81	0,00	78,68	94,17
95th-Percentile Queue Length [veh/ln]	2,72	0,00	5,67	6,78
95th-Percentile Queue Length [ft/ln]	68,05	0,00	141,63	169,51

**Movement, Approach, & Intersection Results**

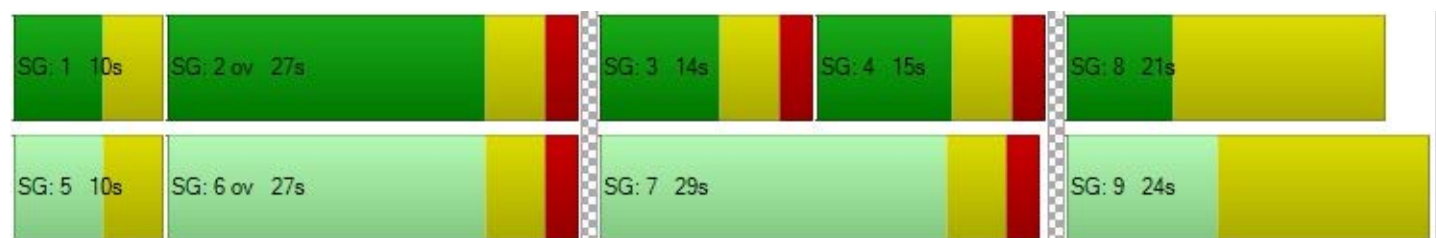
d_M, Delay for Movement [s/veh]	34,64	34,64	34,64	0,00	0,00	0,00	22,57	22,57	22,57	26,67	26,67	26,67
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,64			0,00			22,57			26,67		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	26,19											
Intersection LOS	C											
Intersection V/C	0,239											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,811	1,786	1,923	1,917
Crosswalk LOS	A	A	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,45	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	1,883	1,908
Bicycle LOS	A	A	A	A

**Sequence**





Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	35,1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,255

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	44	238	16	23	157	17	43	57	44	21	42	30
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,78	0,00	8,70	5,10	17,65	2,33	0,00	0,00	4,76	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	0	0	0	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	238	16	23	157	17	43	57	47	21	42	30
Peak Hour Factor	0,7900	0,9000	0,6700	0,7200	0,9600	0,7100	0,9000	0,6800	0,8500	0,7500	0,7500	0,5400
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	15	66	6	8	41	6	12	21	14	7	14	14
Total Analysis Volume [veh/h]	58	264	24	32	164	24	48	84	55	28	56	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		7			4			5			7	
v_di, Inbound Pedestrian Volume crossing in		7			5			4			7	
v_co, Outbound Pedestrian Volume crossing		5			5			5			4	
v_ci, Inbound Pedestrian Volume crossing mi		5			4			5			5	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		3			3			1			9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,03	0,14	0,02	0,02	0,05	0,05	0,04	0,04	0,03	0,02	0,03	0,03
s, saturation flow rate [veh/h]	1810	1843	1592	1685	1823	1732	1344	1900	1602	1284	1900	1609
c, Capacity [veh/h]	343	628	543	319	622	591	337	345	643	239	345	1012
d1, Uniform Delay [s]	44,80	33,46	29,10	44,21	30,24	30,30	42,72	46,23	12,94	49,44	45,52	9,42
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,07	2,06	0,15	0,63	0,52	0,57	0,89	1,67	0,26	0,99	1,01	0,10
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,17	0,42	0,04	0,10	0,15	0,16	0,14	0,24	0,09	0,12	0,16	0,06
d, Delay for Lane Group [s/veh]	45,87	35,52	29,26	44,83	30,76	30,87	43,60	47,89	13,21	50,43	46,53	9,53
Lane Group LOS	D	D	C	D	C	C	D	D	B	D	D	A
Critical Lane Group	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1,71	6,92	0,54	0,93	2,22	2,19	1,38	2,54	0,66	0,88	1,66	0,65
50th-Percentile Queue Length [ft/ln]	42,74	172,93	13,54	23,28	55,48	54,72	34,53	63,57	16,44	22,05	41,53	16,29
95th-Percentile Queue Length [veh/ln]	3,08	11,23	0,97	1,68	3,99	3,94	2,49	4,58	1,18	1,59	2,99	1,17
95th-Percentile Queue Length [ft/ln]	76,94	280,76	24,37	41,90	99,87	98,49	62,16	114,43	29,59	39,69	74,75	29,32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45,87	35,52	29,26	44,83	30,81	30,87	43,60	47,89	13,21	50,43	46,53	9,53
Movement LOS	D	D	C	D	C	C	D	D	B	D	D	A
d_A, Approach Delay [s/veh]	36,82			32,86			36,59			32,51		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	35,12											
Intersection LOS	D											
Intersection V/C	0,255											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0			9,0			9,0			9,0		
M_corner, Corner Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft²/ped]	759,61			812,73			856,26			549,97		
d_p, Pedestrian Delay [s]	36,45			36,45			36,45			36,45		
I_p,int, Pedestrian LOS Score for Intersection	2,457			2,484			2,212			2,356		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	889			889			444			444		
d_b, Bicycle Delay [s]	13,91			13,91			27,24			27,35		
I_b,int, Bicycle LOS Score for Intersection	2,131			1,741			1,868			1,791		
Bicycle LOS	B			A			A			A		

**Sequence**





Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	39,4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,254

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	22	296	2	43	351	46	6	2	17	8	21	24
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	2,70	0,00	6,98	6,84	4,55	0,00	0,00	0,00	0,00	0,00	4,17
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	296	2	48	351	46	6	2	17	8	21	24
Peak Hour Factor	0,8300	0,9100	0,5000	0,6000	0,8400	0,6100	0,6300	0,5000	0,6700	0,6700	0,5300	0,6700
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	7	81	1	20	104	19	2	1	6	3	10	9
Total Analysis Volume [veh/h]	27	325	4	80	418	75	10	4	25	12	40	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			8			8			1		
v_di, Inbound Pedestrian Volume crossing in	1			8			8			1		
v_co, Outbound Pedestrian Volume crossing	5			6			4			5		
v_ci, Inbound Pedestrian Volume crossing mi	4			5			5			6		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	10	30	0	10	30	0	0	17	0	0	20	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	16	35	0	16	35	0	0	22	0	0	25	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14



**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	C	C	C	C
C, Cycle Length [s]	122	122	122	122	122	122	122	122	122	122
L, Total Lost Time per Cycle [s]	4,00	0,00	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	46	35	35	46	35	35	22	22	25	25
g / C, Green / Cycle	0,38	0,29	0,29	0,38	0,29	0,29	0,18	0,18	0,20	0,20
(v / s)_i Volume / Saturation Flow Rate	0,02	0,17	0,00	0,07	0,14	0,14	0,01	0,02	0,02	0,03
s, saturation flow rate [veh/h]	1189	1859	1615	1225	1797	1704	1834	1470	1876	1471
c, Capacity [veh/h]	429	533	463	396	516	489	331	265	384	302
d1, Uniform Delay [s]	24,90	37,59	31,10	26,35	36,08	36,13	41,30	41,69	39,54	39,68
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,28	5,11	0,03	1,15	3,29	3,53	0,24	0,71	0,64	0,95
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,61	0,01	0,20	0,49	0,49	0,04	0,09	0,12	0,14
d, Delay for Lane Group [s/veh]	25,18	42,70	31,13	27,49	39,37	39,66	41,54	42,40	40,19	40,63
Lane Group LOS	C	D	C	C	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0,53	9,14	0,09	1,66	6,71	6,45	0,37	0,69	1,22	1,10
50th-Percentile Queue Length [ft/ln]	13,33	228,48	2,24	41,40	167,72	161,33	9,33	17,13	30,46	27,61
95th-Percentile Queue Length [veh/ln]	0,96	14,10	0,16	2,98	10,96	10,62	0,67	1,23	2,19	1,99
95th-Percentile Queue Length [ft/ln]	23,99	352,43	4,04	74,52	273,92	265,48	16,80	30,83	54,84	49,70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25,18	42,70	31,13	27,49	39,48	39,66	41,54	41,54	42,40	40,19	40,25	40,63
Movement LOS	C	D	C	C	D	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	41,24			37,83			42,09			40,39		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	39,35											
Intersection LOS	D											
Intersection V/C	0,254											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	1468,69	1187,93	695,66	6118,36
d_p, Pedestrian Delay [s]	32,09	32,09	32,09	32,09
I_p,int, Pedestrian LOS Score for Intersection	2,454	2,480	2,182	2,200
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	378	444
d_b, Bicycle Delay [s]	20,00	20,00	29,61	27,33
I_b,int, Bicycle LOS Score for Intersection	2,147	2,032	1,592	1,632
Bicycle LOS	B	B	A	A

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	27,8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,410

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	38	223	40	133	201	134	73	40	51	44	131	191
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,63	2,69	2,50	3,01	3,48	1,49	4,11	15,00	13,73	13,64	5,34	2,09
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	8	25	38	5	0	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	223	40	133	201	142	98	78	56	44	141	191
Peak Hour Factor	0,8600	0,9300	0,7700	0,7900	0,9700	0,8800	0,5900	0,6700	0,6700	0,7900	0,7800	0,8200
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	11	60	13	42	52	40	42	29	21	14	45	58
Total Analysis Volume [veh/h]	44	240	52	168	207	161	166	116	84	56	181	233
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	4		6			6			5			
v_di, Inbound Pedestrian Volume crossing in	5		6			6			4			
v_co, Outbound Pedestrian Volume crossing	11		2			10			2			
v_ci, Inbound Pedestrian Volume crossing mi	10		2			11			2			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		1			0			10			

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,04	0,13	0,03	0,13	0,11	0,11	0,12	0,07	0,06	0,05	0,10	0,15
s, saturation flow rate [veh/h]	1252	1860	1569	1334	1848	1550	1368	1675	1414	1141	1820	1559
c, Capacity [veh/h]	533	565	476	539	561	471	684	598	505	417	650	557
d1, Uniform Delay [s]	19,79	31,19	28,08	21,54	30,37	30,56	16,35	24,87	24,58	28,09	25,70	27,12
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,30	2,34	0,46	1,51	1,70	2,20	0,84	0,72	0,71	0,67	1,07	2,30
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,08	0,43	0,11	0,31	0,35	0,37	0,24	0,19	0,17	0,13	0,28	0,42
d, Delay for Lane Group [s/veh]	20,09	33,52	28,55	23,05	32,08	32,76	17,19	25,59	25,29	28,76	26,76	29,43
Lane Group LOS	C	C	C	C	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0,73	5,54	1,07	3,04	4,37	3,94	2,53	2,25	1,63	1,17	3,63	5,03
50th-Percentile Queue Length [ft/ln]	18,24	138,56	26,78	76,05	109,21	98,42	63,37	56,33	40,66	29,32	90,81	125,75
95th-Percentile Queue Length [veh/ln]	1,31	9,40	1,93	5,48	7,80	7,09	4,56	4,06	2,93	2,11	6,54	8,71
95th-Percentile Queue Length [ft/ln]	32,83	235,08	48,20	136,90	194,90	177,16	114,06	101,40	73,19	52,78	163,46	217,71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20,09	33,52	28,55	23,05	32,11	32,76	17,19	25,59	25,29	28,76	26,76	29,43
Movement LOS	C	C	C	C	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	30,99			29,47			21,71			28,32		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27,79											
Intersection LOS	C											
Intersection V/C	0,410											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	798,03	3702,33	647,82	842,16
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	2,512	2,606	2,473	2,534
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,02	30,03	26,47	26,60
I_b,int, Bicycle LOS Score for Intersection	2,114	2,002	2,164	2,335
Bicycle LOS	B	B	B	B

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	9,3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,030

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	26	160	24	12	340
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	8,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	68	0	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	26	228	24	12	358
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	7	57	6	3	90
Total Analysis Volume [veh/h]	0	26	228	24	12	358
Pedestrian Volume [ped/h]	15		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,03	0,00	0,00	0,01	0,00
d_M, Delay for Movement [s/veh]	0,00	9,27	0,00	0,00	7,85	0,00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	0,09	0,00	0,00	0,03	0,01
95th-Percentile Queue Length [ft/ln]	0,00	2,31	0,00	0,00	0,71	0,36
d_A, Approach Delay [s/veh]	9,27		0,00		0,25	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0,52					
Intersection LOS	A					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	28,1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,340

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	91	31	158	79	31	336
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,10	16,13	6,33	0,00	3,23	2,08
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	68	0	15	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	99	158	94	49	336
Peak Hour Factor	0,8400	0,7800	0,7900	0,6600	0,8600	0,8900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	35	32	50	36	14	94
Total Analysis Volume [veh/h]	139	127	200	142	57	378
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	9		9		0	
v_ci, Inbound Pedestrian Volume crossing mi	9		9		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	29	29	5	39
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	31	31	35	35	10	44
Vehicle Extension [s]	3,0	3,0	0,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	15
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	0,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	5,0	2,0	0,0	2,0	2,0	2,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	7,00	4,00	4,00	4,00	4,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	5,00	2,00	2,00	2,00	0,00	2,00
g_i, Effective Green Time [s]	24	20	74	74	50	40
g / C, Green / Cycle	0,20	0,17	0,62	0,62	0,42	0,33
(v / s)_i Volume / Saturation Flow Rate	0,08	0,09	0,09	0,11	0,14	0,13
s, saturation flow rate [veh/h]	1794	1390	1805	1555	1603	1701
c, Capacity [veh/h]	359	232	1113	959	635	567
d1, Uniform Delay [s]	41,63	45,79	9,74	9,91	24,49	30,49
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,14	9,02	0,29	0,41	1,51	1,90
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,39	0,55	0,15	0,18	0,35	0,38
d, Delay for Lane Group [s/veh]	44,76	54,81	10,03	10,31	26,00	32,40
Lane Group LOS	D	D	B	B	C	C
Critical Lane Group	No	Yes	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	3,90	4,06	1,96	2,01	4,51	5,02
50th-Percentile Queue Length [ft/ln]	97,40	101,38	48,99	50,23	112,66	125,50
95th-Percentile Queue Length [veh/ln]	7,01	7,30	3,53	3,62	7,99	8,69
95th-Percentile Queue Length [ft/ln]	175,33	182,48	88,18	90,42	199,69	217,36

**Movement, Approach, & Intersection Results**

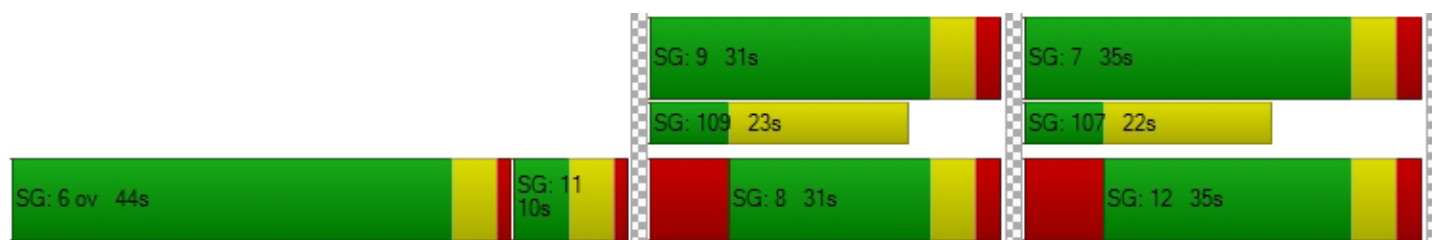
d_M, Delay for Movement [s/veh]	44,76	54,81	10,07	10,31	26,00	29,61
Movement LOS	D	D	B	B	C	C
d_A, Approach Delay [s/veh]	49,56		10,17		29,14	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	28,13					
Intersection LOS	C					
Intersection V/C	0,340					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,389	0,000	2,331
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	1233	650
d_b, Bicycle Delay [s]	37,62	8,82	27,34
I_b,int, Bicycle LOS Score for Intersection	1,560	1,842	1,918
Bicycle LOS	A	A	A

**Sequence**

Ring 1	-	-	-	9	-	7	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	-	12	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	13,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,354

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	2	1	0	79	4	16	14	160	1	0	420	9
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	18,75	7,14	6,25	0,00	1,90	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	8	0	0	0	7	0	0	22	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	0	87	4	16	14	167	1	0	442	13
Peak Hour Factor	0,5000	0,2500	1,0000	0,6800	0,5000	0,8000	0,5000	0,6600	0,2500	1,0000	0,8800	0,5600
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	1	1	0	32	2	5	7	63	1	0	126	6
Total Analysis Volume [veh/h]	4	4	0	128	8	20	28	253	4	0	502	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			2			2			0	
v_di, Inbound Pedestrian Volume crossing in		0			2			2			0	
v_co, Outbound Pedestrian Volume crossing		7			4			6			4	
v_ci, Inbound Pedestrian Volume crossing mi		6			4			7			4	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		1			0			0			0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	70,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	0	0	6	17	0	6	17	0
Maximum Green [s]	19	19	0	7	0	0	6	69	0	6	69	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	28	28	0	7	35	0	12	73	0	12	73	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	5	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	1,00	2,00	1,00	2,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	1,00	0,00	1,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	28	32	25	84	72	84	72
g / C, Green / Cycle	0,23	0,27	0,21	0,70	0,60	0,70	0,60
(v / s)_i Volume / Saturation Flow Rate	0,00	0,08	0,02	0,10	0,09	0,15	0,15
s, saturation flow rate [veh/h]	1632	1521	1529	1489	1635	1900	1700
c, Capacity [veh/h]	426	466	319	1072	981	1352	1020
d1, Uniform Delay [s]	35,42	37,13	38,31	6,03	10,52	6,50	11,24
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,08	1,46	0,54	0,26	0,31	0,34	0,57
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,02	0,27	0,09	0,13	0,15	0,20	0,24
d, Delay for Lane Group [s/veh]	35,50	38,59	38,85	6,29	10,83	6,84	11,81
Lane Group LOS	D	D	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,19	3,27	0,72	1,20	1,72	2,48	3,20
50th-Percentile Queue Length [ft/ln]	4,79	81,83	17,96	29,89	43,02	61,91	80,03
95th-Percentile Queue Length [veh/ln]	0,35	5,89	1,29	2,15	3,10	4,46	5,76
95th-Percentile Queue Length [ft/ln]	8,63	147,30	32,33	53,81	77,43	111,44	144,06

**Movement, Approach, & Intersection Results**

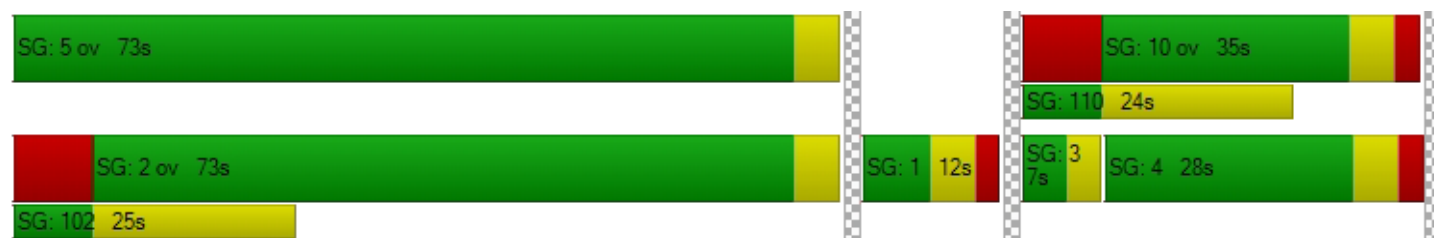
d_M, Delay for Movement [s/veh]	35,50	35,50	35,50	38,59	38,85	38,85	6,29	8,78	10,83	6,84	9,07	11,81
Movement LOS	D	D	D	D	D	D	A	A	B	A	A	B
d_A, Approach Delay [s/veh]	35,50			38,64			8,56			9,19		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13,94											
Intersection LOS	B											
Intersection V/C	0,354											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	472,31	814,30	1757,76	0,00
d_p, Pedestrian Delay [s]	49,50	49,50	49,50	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,960	2,062	2,348	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1150	1150
d_b, Bicycle Delay [s]	40,04	40,02	10,84	10,84
I_b,int, Bicycle LOS Score for Intersection	1,573	1,688	1,795	1,993
Bicycle LOS	A	A	A	A

**Sequence**




Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	-	4	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 9: Entrée développement / Avenue des Halles**

Control Type:	Two-way stop	Delay (sec / veh):	11,1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,023

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	135	0	0	110	0	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	4,00	4,00	3,23	3,23	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	33	0	15	94
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	6	33	110	15	94
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	34	2	8	28	4	24
Total Analysis Volume [veh/h]	135	6	33	110	15	94
Pedestrian Volume [ped/h]	0		0		2	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,02	0,00	0,02	0,10
d_M, Delay for Movement [s/veh]	0,00	0,00	7,58	0,00	11,07	9,58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,07	0,07	0,43	0,43
95th-Percentile Queue Length [ft/ln]	0,00	0,00	1,77	1,77	10,81	10,81
d_A, Approach Delay [s/veh]	0,00		1,75		9,78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3,35					
Intersection LOS	B					



## Développement aux Halles d'Anjou

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Scenario 4 Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_AM\_RV0B.pdf

## Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	17	0	64	100	129	0	0	142	50	502

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	32	0	21	0	0	0	0	137	14	14	154	0	372

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	46	238	16	23	157	17	43	57	47	21	42	30	737

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	22	296	2	48	351	46	6	2	17	8	21	24	843

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	38	223	40	133	201	142	98	78	56	44	141	191	1385

ID	Intersection Name	Northbound			Eastbound		Westbound		Total Volume
		Right			Thru	Right	Left	Thru	
6	Accès Halles / Rue Jean-Talon Est	26			228	24	12	358	648

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	117	99	158	94	49	336	853

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	2	1	0	87	4	16	14	167	1	0	442	13	747

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	135	6	33	110	15	94	393

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 4 Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_AM\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	14	0	52	96	129	0	0	142	48	481
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	3	0	12	4	0	0	0	0	2	21
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>64</b>	<b>100</b>	<b>129</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>50</b>	<b>502</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	32	0	21	0	0	0	0	134	14	14	152	0	367
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	3	0	0	2	0	5
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>32</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>137</b>	<b>14</b>	<b>14</b>	<b>154</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	44	238	16	23	157	17	43	57	44	21	42	30	732
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	2	0	0	0	0	0	0	0	3	0	0	0	5
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>46</b>	<b>238</b>	<b>16</b>	<b>23</b>	<b>157</b>	<b>17</b>	<b>43</b>	<b>57</b>	<b>47</b>	<b>21</b>	<b>42</b>	<b>30</b>	<b>737</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	22	296	2	43	351	46	6	2	17	8	21	24	838
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	5	0	0	0	0	0	0	0	0	5
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>22</b>	<b>296</b>	<b>2</b>	<b>48</b>	<b>351</b>	<b>46</b>	<b>6</b>	<b>2</b>	<b>17</b>	<b>8</b>	<b>21</b>	<b>24</b>	<b>843</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	38	223	40	133	201	134	73	40	51	44	131	191	1299	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	8	25	38	5	0	10	0	0	86
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>38</b>	<b>223</b>	<b>40</b>	<b>133</b>	<b>201</b>	<b>142</b>	<b>98</b>	<b>78</b>	<b>56</b>	<b>44</b>	<b>141</b>	<b>191</b>	<b>1385</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	26	160	24	12	340	562	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	68	0	0	18	86	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>26</b>	<b>228</b>	<b>24</b>	<b>12</b>	<b>358</b>	<b>648</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	91	31	158	79	31	336	726
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	26	68	0	15	18	0	127
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>117</b>	<b>99</b>	<b>158</b>	<b>94</b>	<b>49</b>	<b>336</b>	<b>853</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	2	1	0	79	4	16	14	160	1	0	420	9	706
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	8	0	0	0	7	0	0	22	4	41
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>87</b>	<b>4</b>	<b>16</b>	<b>14</b>	<b>167</b>	<b>1</b>	<b>0</b>	<b>442</b>	<b>13</b>	<b>747</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	135	0	0	110	0	0	245
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	6	33	0	15	94	148
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>135</b>	<b>6</b>	<b>33</b>	<b>110</b>	<b>15</b>	<b>94</b>	<b>393</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 4 Future AM

Report File: Z:\...\D21-

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0608\_RP\_Situation\_future\_AM\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	38	109	147	100,00
<b>Added Trips Total</b>								<b>38</b>	<b>109</b>	<b>147</b>	<b>100,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 4 Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_AM\_RV0B.pdf

**Trip Distribution summary**

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	17,62	7	20,27	22
3: Gate	19,87	8	3,84	4
4: Gate	25,18	10	34,11	38
5: Gate	22,33	8	22,53	25
6: Gate	0,00	0	5,00	5
7: Gate	5,00	2	3,02	3
8: Gate	10,00	4	11,23	12
<b>Total</b>	<b>100,00</b>	<b>39</b>	<b>100,00</b>	<b>109</b>

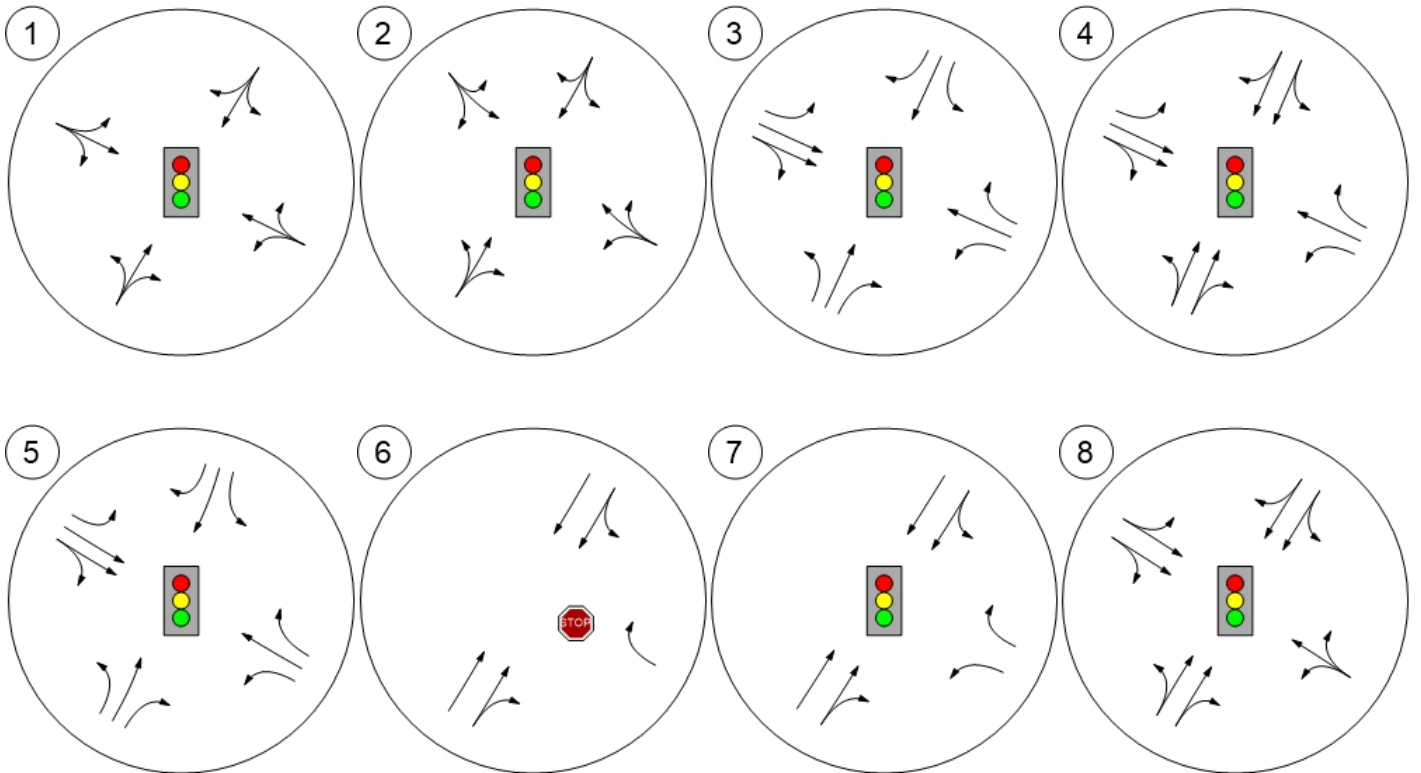


Study Intersections

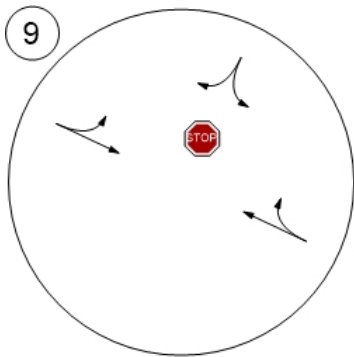
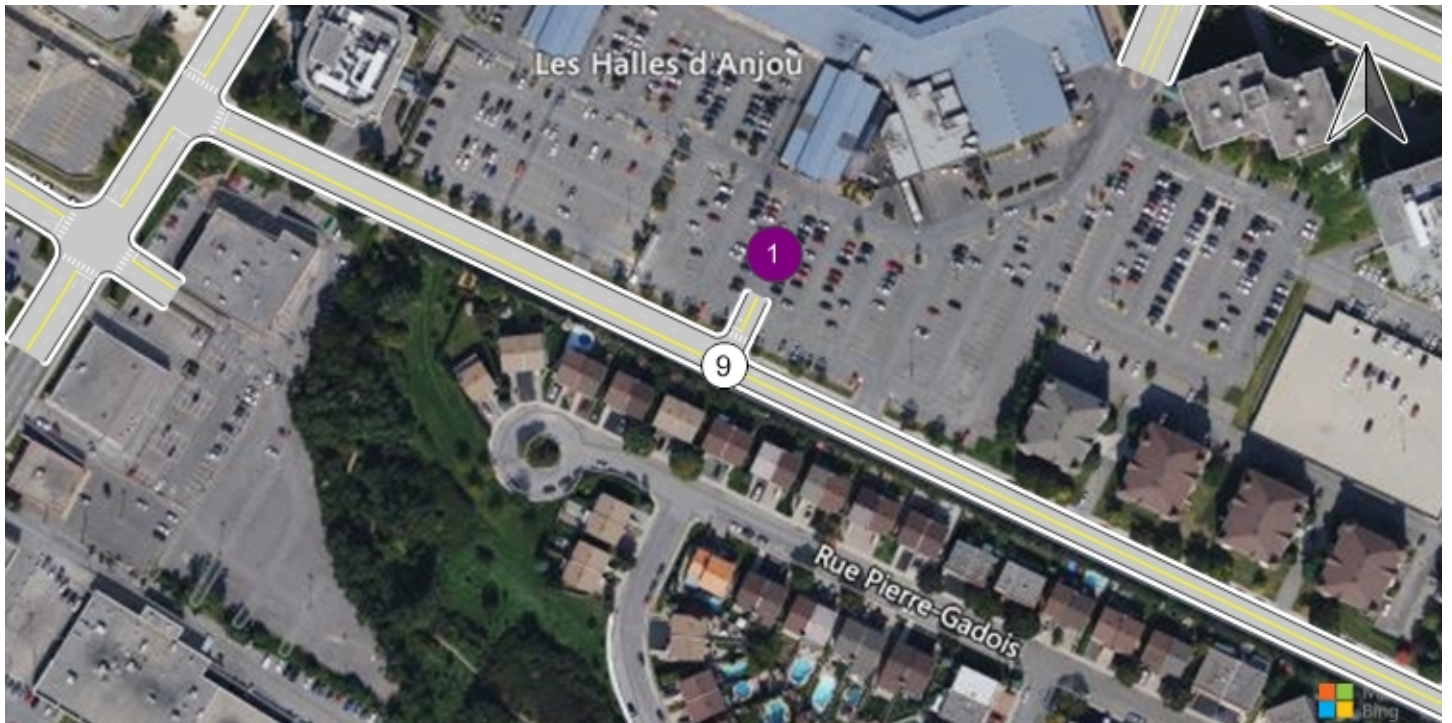




Lane Configuration and Traffic Control

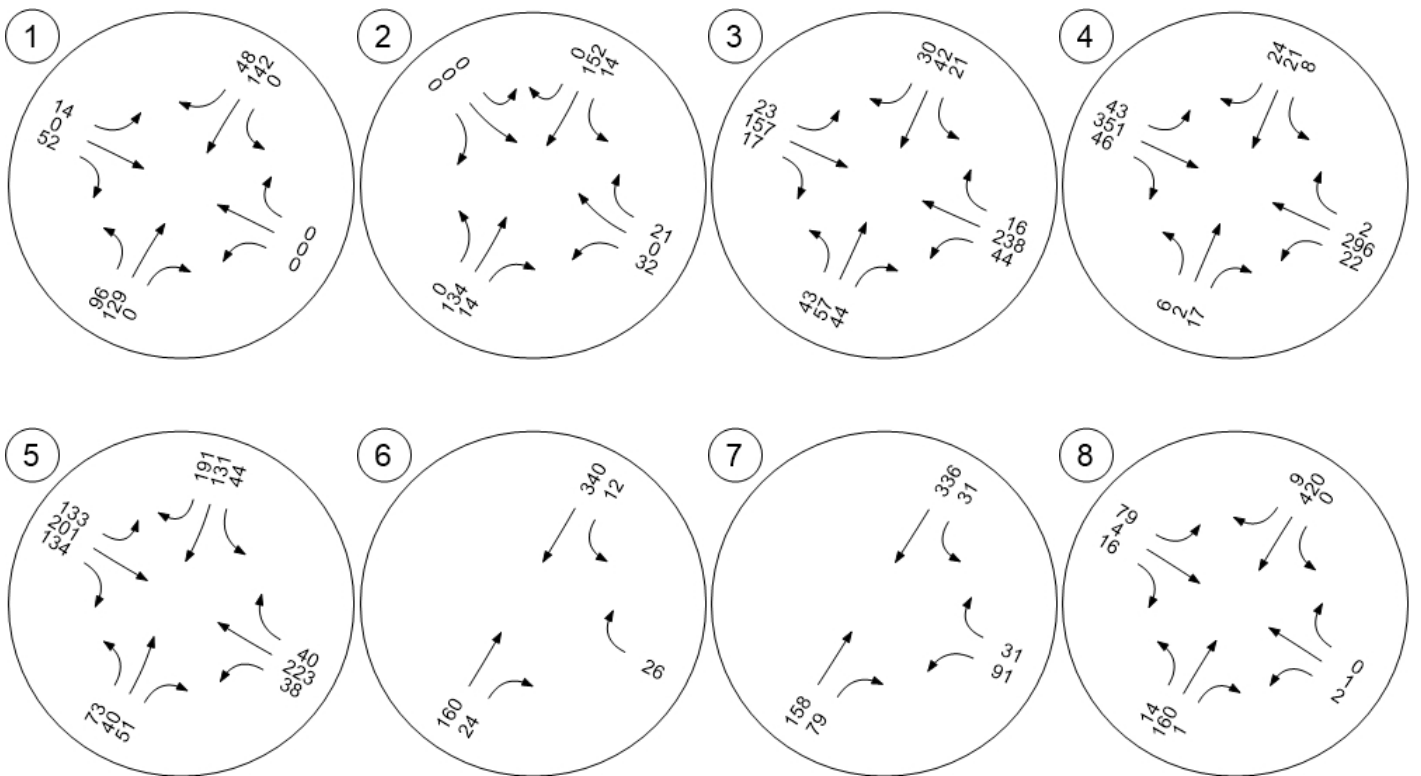


Lane Configuration and Traffic Control

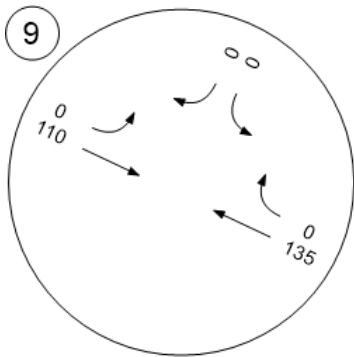
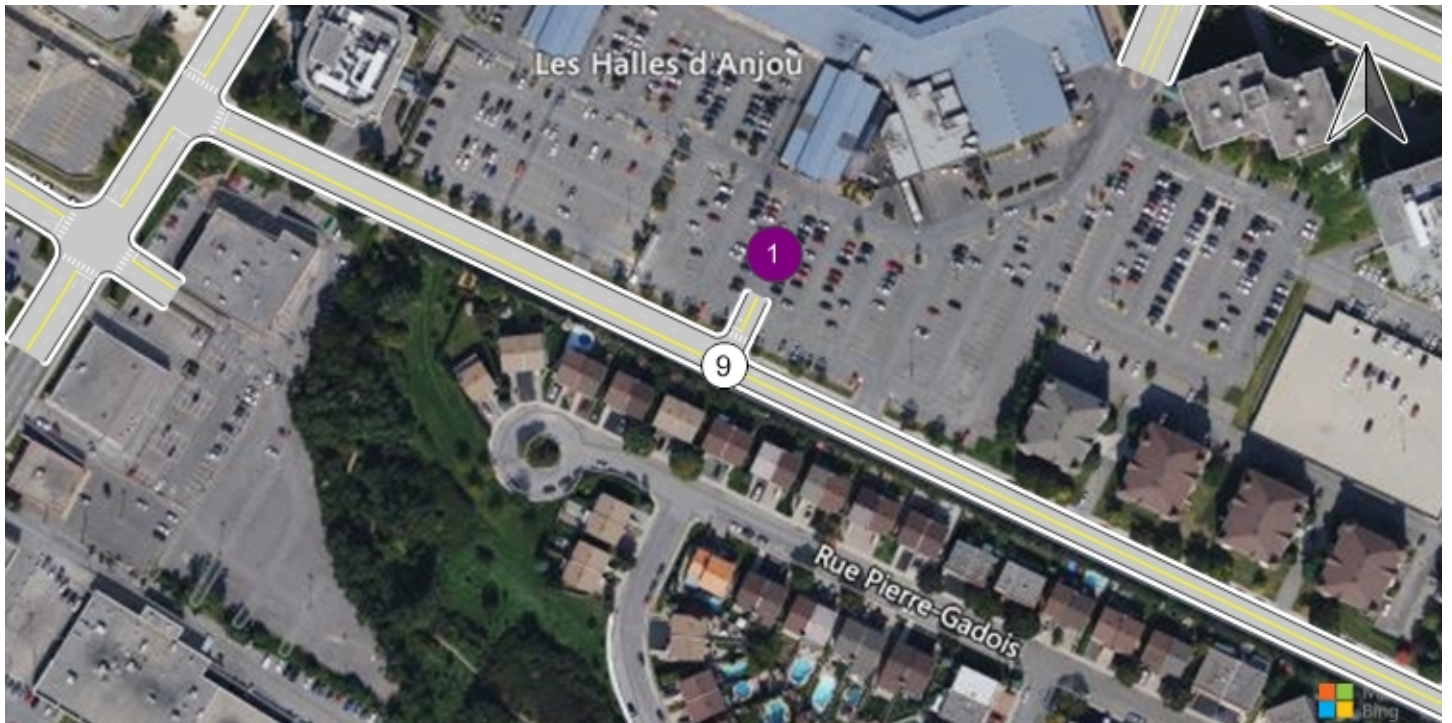




Traffic Volume - Base Volume

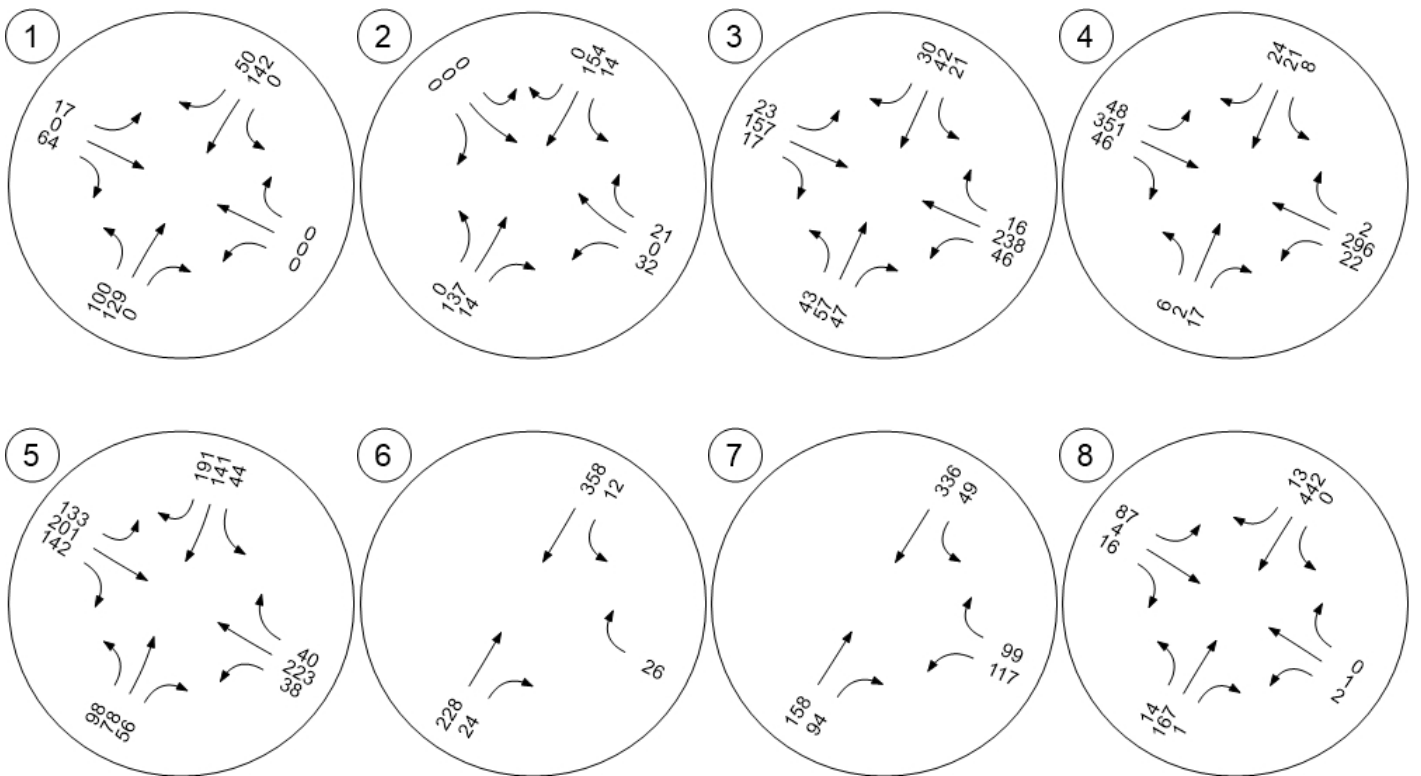


Traffic Volume - Base Volume

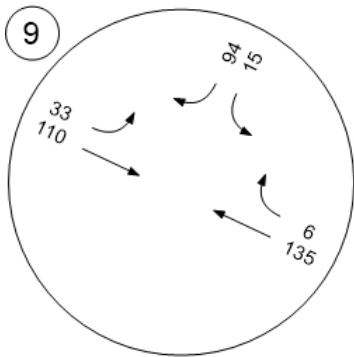
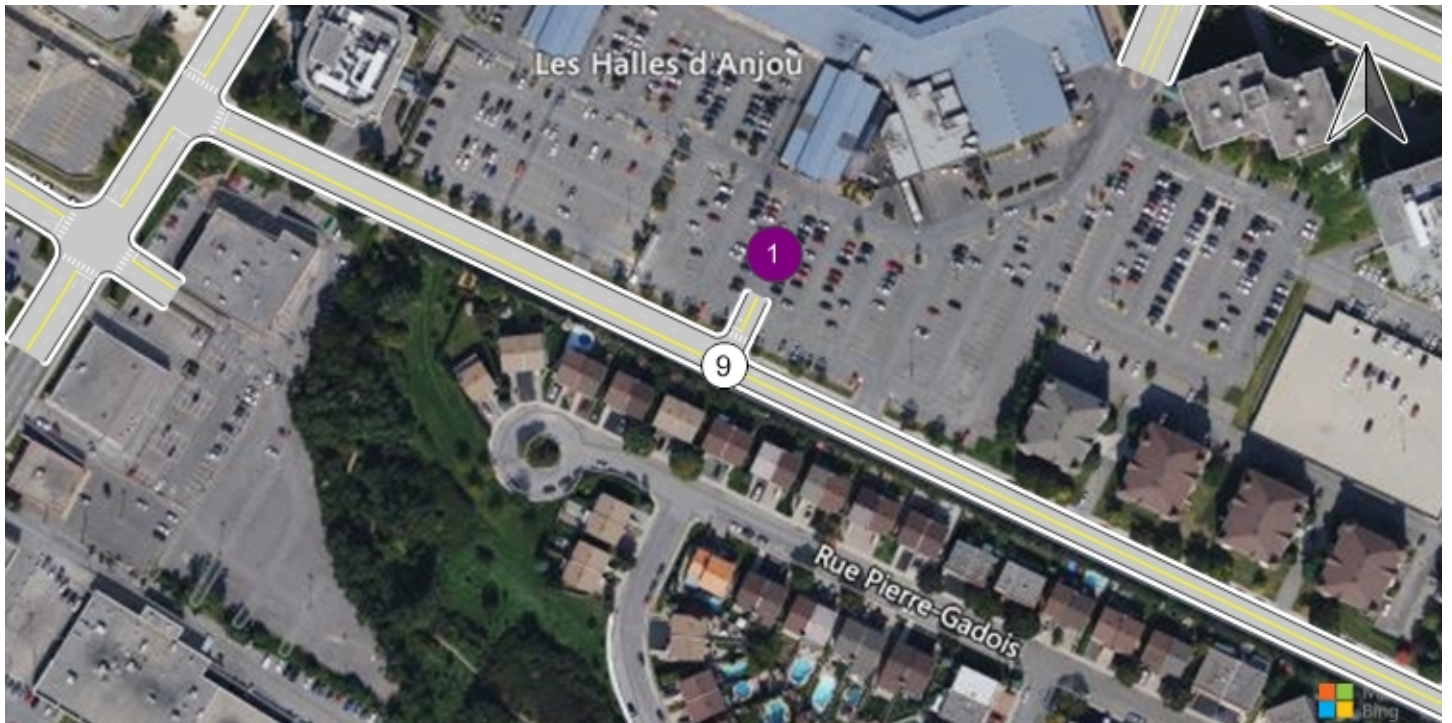




Traffic Volume - Future Total Volume

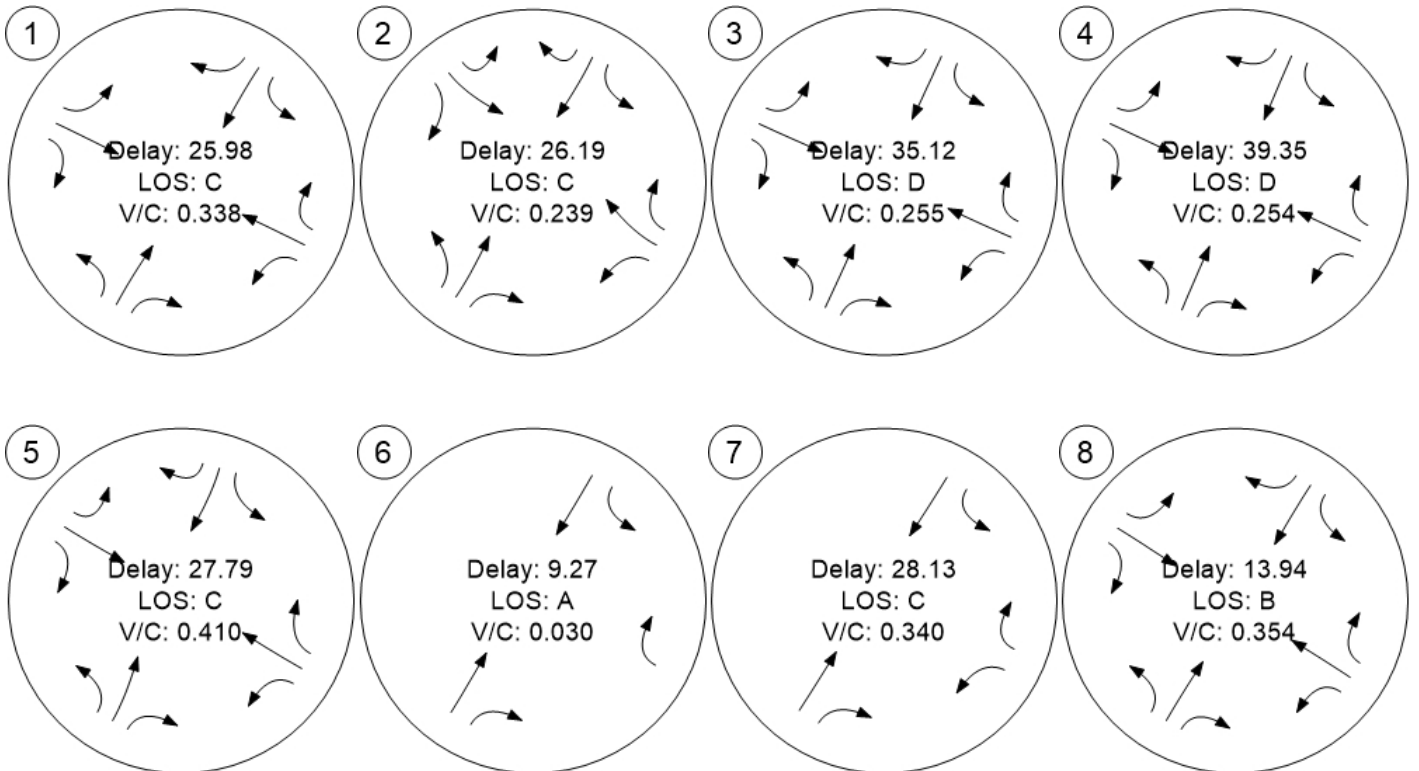


Traffic Volume - Future Total Volume

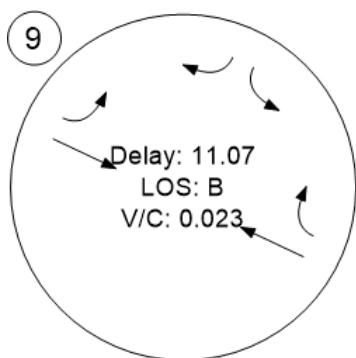
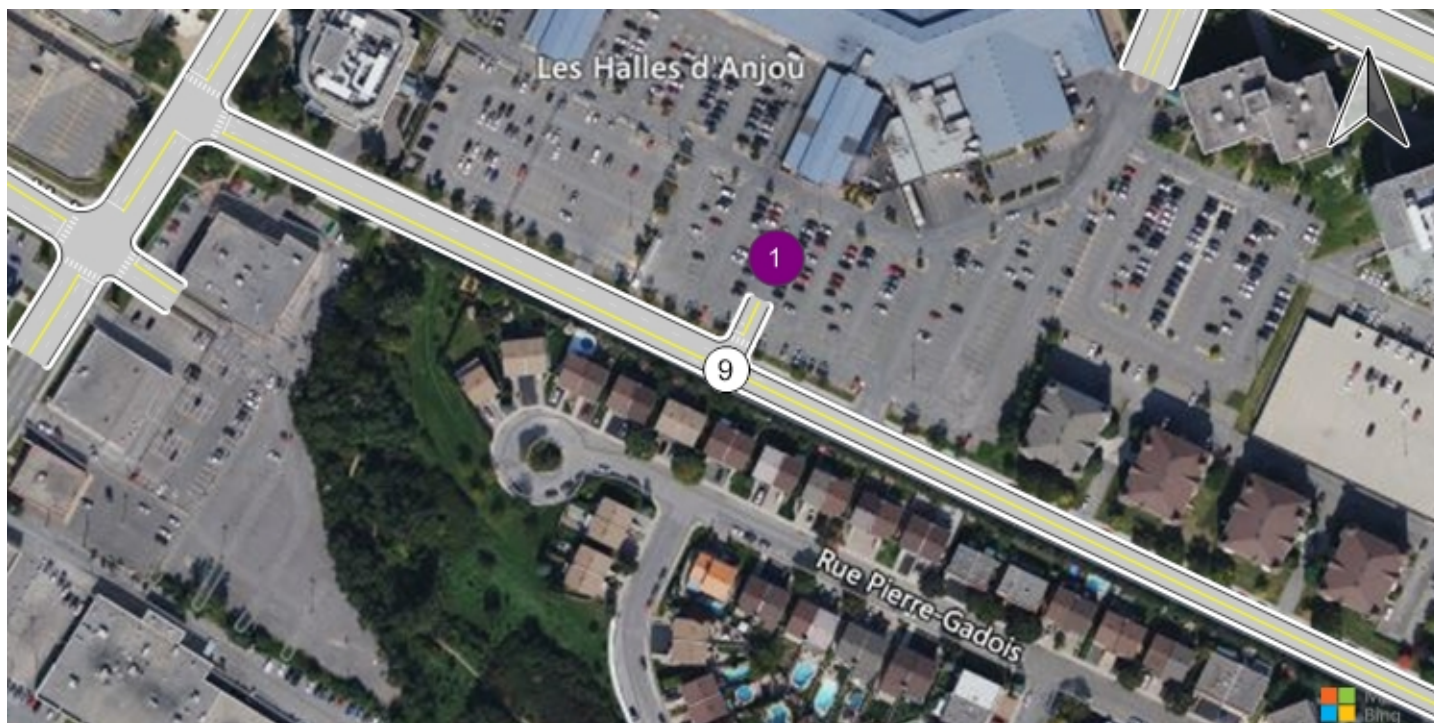




Traffic Conditions



Traffic Conditions



## Annexe 6 – Situation projetée PM

L'humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 5 Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_PM\_RV0B.pdf

## Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	EB Thru	0,483	33,3	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Left	0,354	30,6	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,498	41,8	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	NB Thru	0,571	70,5	E
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Right	0,863	43,5	D
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,297	13,9	B
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Right	0,375	30,8	C
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Left	0,320	15,9	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,022	14,4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	33,3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,483

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	67	0	153	189	299	0	0	180	78
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	3,17	1,67	0,00	0,00	2,22	7,69
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	6	4	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	70	0	159	193	299	0	0	180	90
Peak Hour Factor	1,0000	1,0000	1,0000	0,8000	1,0000	0,8100	0,9100	0,8800	1,0000	1,0000	0,7900	0,8100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	22	0	49	53	85	0	0	57	28
Total Analysis Volume [veh/h]	0	0	0	88	0	196	212	340	0	0	228	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5			0			0			5		
v_di, Inbound Pedestrian Volume crossing in	5			0			0			5		
v_co, Outbound Pedestrian Volume crossing	5			13			5			13		
v_ci, Inbound Pedestrian Volume crossing mi	5			13			5			13		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,18	0,32	0,19
s, saturation flow rate [veh/h]	1900	1577	1737	1765
c, Capacity [veh/h]	652	561	695	569
d1, Uniform Delay [s]	0,00	25,02	27,64	27,29
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	3,25	9,12	4,54
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,51	0,79	0,60
d, Delay for Lane Group [s/veh]	0,00	28,27	36,76	31,83
Lane Group LOS	A	C	D	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	5,35	12,41	6,85
50th-Percentile Queue Length [ft/ln]	0,00	133,81	310,27	171,27
95th-Percentile Queue Length [veh/ln]	0,00	9,15	18,19	11,14
95th-Percentile Queue Length [ft/ln]	0,00	228,67	454,71	278,58

**Movement, Approach, & Intersection Results**

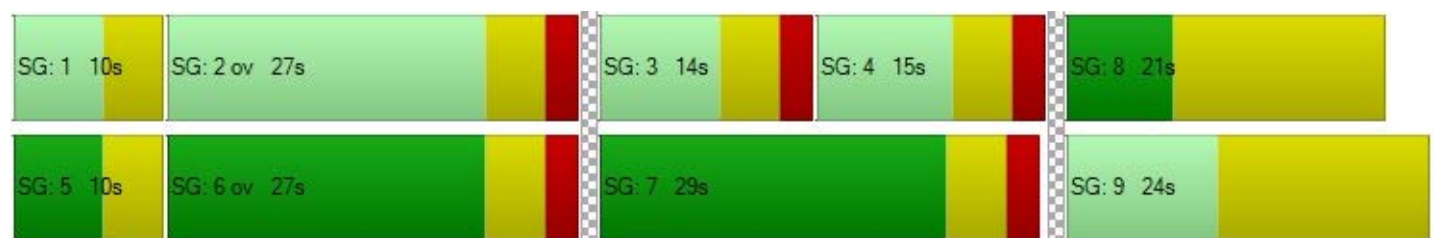
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	28,27	28,27	28,27	36,76	36,76	36,76	31,83	31,83	31,83
Movement LOS	A	A	A	C	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	0,00			28,27			36,76			31,83		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	33,29											
Intersection LOS	C											
Intersection V/C	0,483											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,714	2,505	2,190	2,213
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	511	511	689	467
d_b, Bicycle Delay [s]	24,94	24,94	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,560	2,028	2,470	2,119
Bicycle LOS	A	B	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	30,6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,354

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	27	0	19	0	0	0	0	324	44	28	233	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,54	0,00	0,00	4,29	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	3	0	0	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	0	19	0	0	0	0	327	44	28	245	0
Peak Hour Factor	0,6100	1,0000	0,6800	1,0000	1,0000	1,0000	1,0000	0,9000	0,8500	0,5800	0,8000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	11	0	7	0	0	0	0	91	13	12	77	0
Total Analysis Volume [veh/h]	44	0	28	0	0	0	0	363	52	48	306	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1		3			3			2			
v_di, Inbound Pedestrian Volume crossing in	2		3			3			1			
v_co, Outbound Pedestrian Volume crossing	7		0			6			0			
v_ci, Inbound Pedestrian Volume crossing mi	6		0			7			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	2		0			0			0			

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,23	0,20
s, saturation flow rate [veh/h]	1729	1900	1836	1758
c, Capacity [veh/h]	288	296	713	573
d1, Uniform Delay [s]	32,61	0,00	24,99	27,32
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,07	0,00	3,45	4,94
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,25	0,00	0,58	0,62
d, Delay for Lane Group [s/veh]	34,68	0,00	28,43	32,26
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,51	0,00	7,92	7,20
50th-Percentile Queue Length [ft/ln]	37,85	0,00	198,10	179,95
95th-Percentile Queue Length [veh/ln]	2,73	0,00	12,54	11,60
95th-Percentile Queue Length [ft/ln]	68,13	0,00	313,51	289,95



**Movement, Approach, & Intersection Results**

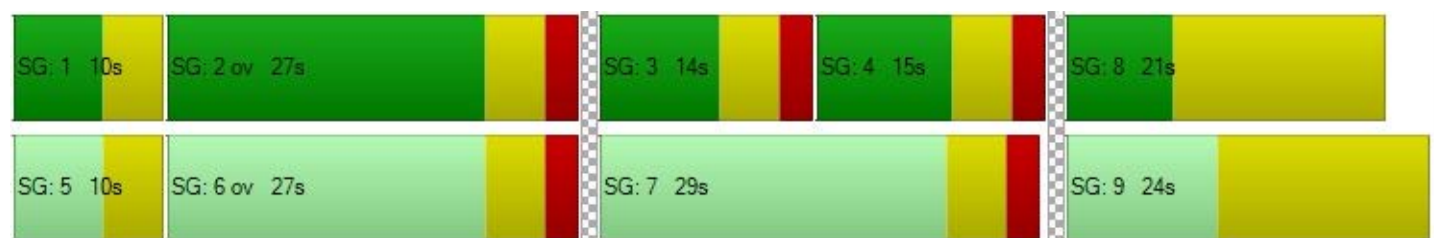
d_M, Delay for Movement [s/veh]	34,68	34,68	34,68	0,00	0,00	0,00	28,43	28,43	28,43	32,26	32,26	32,26
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,68			0,00			28,43			32,26		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	30,58											
Intersection LOS	C											
Intersection V/C	0,354											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,866	2,014	2,087	2,078
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,49	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	2,244	2,144
Bicycle LOS	A	A	B	B

**Sequence**





Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	41,8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,498

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	88	416	86	79	356	86	84	164	113	39	109	90
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,61	0,00	0,00	2,25	13,95	1,19	0,61	0,88	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	0	2	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	416	86	79	356	88	84	164	116	39	109	90
Peak Hour Factor	0,7900	0,9700	0,8000	0,8600	0,9000	0,9000	0,7200	0,8500	0,7800	0,5700	0,6800	0,8300
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	31	107	27	23	99	24	29	48	37	17	40	27
Total Analysis Volume [veh/h]	124	429	108	92	396	98	117	193	149	68	160	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		19			17			18			20	
v_di, Inbound Pedestrian Volume crossing in		20			18			17			19	
v_co, Outbound Pedestrian Volume crossing		14			17			14			16	
v_ci, Inbound Pedestrian Volume crossing mi		14			16			14			17	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			3			1			11	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,07	0,23	0,07	0,05	0,21	0,07	0,09	0,10	0,09	0,06	0,08	0,07
s, saturation flow rate [veh/h]	1810	1846	1594	1810	1866	1404	1234	1891	1591	1209	1900	1608
c, Capacity [veh/h]	343	629	543	343	636	478	252	344	639	162	345	1012
d1, Uniform Delay [s]	46,56	37,35	30,73	45,69	36,39	30,77	51,50	49,20	13,78	58,06	48,24	9,75
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,95	5,89	0,82	1,92	4,54	0,97	6,07	6,49	0,85	7,82	4,41	0,21
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,36	0,68	0,20	0,27	0,62	0,20	0,47	0,56	0,23	0,42	0,46	0,11
d, Delay for Lane Group [s/veh]	49,51	43,24	31,55	47,61	40,94	31,74	57,57	55,69	14,64	65,88	52,66	9,96
Lane Group LOS	D	D	C	D	D	C	E	E	B	E	D	A
Critical Lane Group	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3,85	12,92	2,59	2,78	11,50	2,37	4,03	6,45	1,91	2,55	5,16	1,30
50th-Percentile Queue Length [ft/ln]	96,33	323,09	64,68	69,59	287,52	59,17	100,86	161,20	47,84	63,78	129,03	32,53
95th-Percentile Queue Length [veh/ln]	6,94	18,82	4,66	5,01	17,06	4,26	7,26	10,61	3,44	4,59	8,89	2,34
95th-Percentile Queue Length [ft/ln]	173,40	470,48	116,42	125,27	426,56	106,50	181,54	265,31	86,12	114,80	222,17	58,56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49,51	43,24	31,55	47,61	40,94	31,74	57,57	55,69	14,64	65,88	52,66	9,96
Movement LOS	D	D	C	D	D	C	E	E	B	E	D	A
d_A, Approach Delay [s/veh]	42,50			40,44			42,84			41,61		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41,84											
Intersection LOS	D											
Intersection V/C	0,498											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0	9,0	9,0	9,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	206,47	171,83	179,41	156,08
d_p, Pedestrian Delay [s]	36,45	36,45	36,45	36,45
I_p,int, Pedestrian LOS Score for Intersection	2,647	2,710	2,338	2,444
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	889	444	444
d_b, Bicycle Delay [s]	13,90	13,91	27,24	27,37
I_b,int, Bicycle LOS Score for Intersection	2,650	2,527	2,317	2,114
Bicycle LOS	B	B	B	B

**Sequence**

Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	70,5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,571

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↱↲			↵↱↲			↵↱			↵↱		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	49	547	19	168	433	80	83	33	96	33	35	105
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,11	0,00	1,19	3,70	0,00	1,89	0,00	0,00	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	0	0	0	0	0	2	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	547	19	172	433	80	83	33	96	35	35	110
Peak Hour Factor	0,8100	0,9100	0,5300	0,8800	0,9400	0,8300	0,8800	0,8300	0,8800	0,8300	0,7300	0,8500
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	15	150	9	49	115	24	24	10	27	11	12	32
Total Analysis Volume [veh/h]	60	601	36	195	461	96	94	40	109	42	48	129
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		12			19			19			12	
v_di, Inbound Pedestrian Volume crossing in		12			19			19			12	
v_co, Outbound Pedestrian Volume crossing		12			16			11			16	
v_ci, Inbound Pedestrian Volume crossing mi		11			16			12			16	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			1			19	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	12	35	0	12	35	0	0	19	0	0	24	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	18	40	0	18	40	0	0	24	0	0	29	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4,00	0,00	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	53	40	40	53	40	40	24	24	29	29
g / C, Green / Cycle	0,39	0,30	0,30	0,39	0,30	0,30	0,18	0,18	0,21	0,21
(v / s)_i Volume / Saturation Flow Rate	0,05	0,32	0,02	0,36	0,25	0,06	0,07	0,08	0,05	0,09
s, saturation flow rate [veh/h]	1206	1853	1615	541	1844	1615	1834	1457	1857	1423
c, Capacity [veh/h]	332	549	479	292	547	479	326	259	399	306
d1, Uniform Delay [s]	29,72	47,50	34,19	33,07	44,56	35,54	49,13	49,45	43,73	45,76
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,19	66,71	0,31	11,46	14,69	0,94	3,64	5,21	1,31	4,23
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,18	1,09	0,08	0,67	0,84	0,20	0,40	0,43	0,23	0,42
d, Delay for Lane Group [s/veh]	30,91	114,21	34,49	44,53	59,26	36,48	52,78	54,66	45,05	49,99
Lane Group LOS	C	F	C	D	E	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1,34	28,52	0,91	5,28	16,68	2,52	4,26	3,78	2,66	4,13
50th-Percentile Queue Length [ft/ln]	33,61	712,92	22,65	132,08	416,92	63,11	106,54	94,44	66,43	103,17
95th-Percentile Queue Length [veh/ln]	2,42	39,49	1,63	9,05	23,37	4,54	7,65	6,80	4,78	7,43
95th-Percentile Queue Length [ft/ln]	60,50	987,37	40,77	226,32	584,35	113,59	191,17	170,00	119,58	185,71

**Movement, Approach, & Intersection Results**

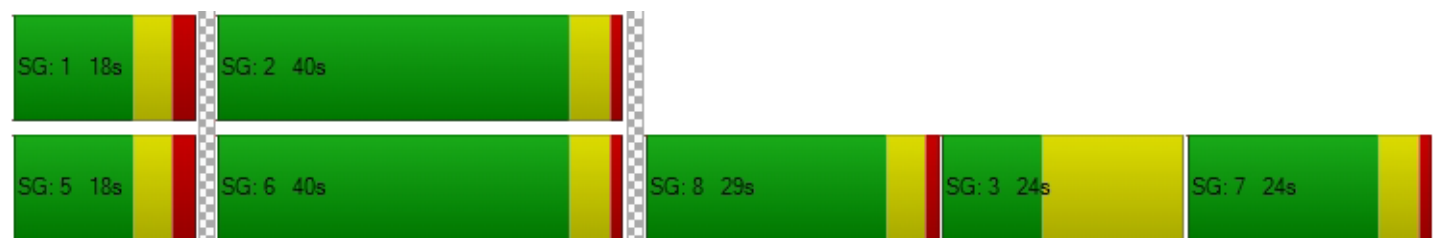
d_M, Delay for Movement [s/veh]	30,91	114,21	34,49	44,53	59,26	36,48	52,78	52,93	54,66	45,05	45,05	49,99
Movement LOS	C	F	C	D	E	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	102,92			52,53			53,65			47,96		
Approach LOS	F			D			D			D		
d_I, Intersection Delay [s/veh]	70,53											
Intersection LOS	E											
Intersection V/C	0,571											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	524,72	368,36	276,81	457,37
d_p, Pedestrian Delay [s]	32,09	32,09	32,09	32,09
I_p,int, Pedestrian LOS Score for Intersection	2,552	2,604	2,260	2,323
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	778	778	422	533
d_b, Bicycle Delay [s]	16,81	16,81	28,02	24,43
I_b,int, Bicycle LOS Score for Intersection	2,710	2,800	1,760	1,740
Bicycle LOS	B	C	A	A

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	43,5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,863

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	94	489	88	220	354	152	275	182	111	122	201	522
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,07	3,41	1,36	2,26	0,00	2,55	6,04	2,70	7,38	4,48	1,53
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	19	16	20	4	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	489	88	220	354	171	291	202	115	122	215	522
Peak Hour Factor	0,7800	0,9400	0,6100	0,9300	0,8900	0,8600	0,8600	0,7800	0,8200	0,9000	0,9300	0,9300
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	32	130	36	59	99	50	85	65	35	34	58	140
Total Analysis Volume [veh/h]	127	520	144	237	398	199	338	259	140	136	231	561
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		30			23			23			31	
v_di, Inbound Pedestrian Volume crossing in		31			23			23			30	
v_co, Outbound Pedestrian Volume crossing		53			11			53			11	
v_ci, Inbound Pedestrian Volume crossing mi		53			11			53			11	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			3			2			19	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,11	0,28	0,10	0,20	0,17	0,18	0,25	0,14	0,10	0,13	0,13	0,36
s, saturation flow rate [veh/h]	1145	1854	1458	1175	1866	1586	1350	1809	1422	1020	1833	1557
c, Capacity [veh/h]	452	563	443	349	566	481	653	646	508	319	655	556
d1, Uniform Delay [s]	21,77	37,75	29,90	26,27	32,69	33,02	18,60	27,01	25,39	36,37	26,48	35,53
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,55	23,17	1,95	10,24	3,92	5,11	2,92	1,85	1,34	4,13	1,49	40,30
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,28	0,92	0,33	0,68	0,56	0,58	0,52	0,40	0,28	0,43	0,35	1,01
d, Delay for Lane Group [s/veh]	23,32	60,92	31,85	36,51	36,61	38,13	21,52	28,86	26,74	40,50	27,97	75,83
Lane Group LOS	C	E	C	D	D	D	C	C	C	D	C	F
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2,27	17,20	3,22	5,14	7,75	7,11	5,94	5,51	2,82	3,58	4,80	20,84
50th-Percentile Queue Length [ft/ln]	56,67	429,92	80,43	128,39	193,86	177,67	148,43	137,64	70,47	89,39	119,88	521,06
95th-Percentile Queue Length [veh/ln]	4,08	24,00	5,79	8,85	12,32	11,48	9,93	9,35	5,07	6,44	8,39	28,50
95th-Percentile Queue Length [ft/ln]	102,00	599,94	144,77	221,31	308,03	286,97	248,34	233,85	126,84	160,91	209,66	712,50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23,32	60,92	31,85	36,51	36,93	38,13	21,52	28,86	26,74	40,50	27,97	75,83
Movement LOS	C	E	C	D	D	D	C	C	C	D	C	F
d_A, Approach Delay [s/veh]	49,59			37,10			25,09			58,74		
Approach LOS	D			D			C			E		
d_I, Intersection Delay [s/veh]	43,52											
Intersection LOS	D											
Intersection V/C	0,863											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	139,24	436,72	150,18	88,67
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	2,778	2,897	2,613	2,711
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,05	30,06	26,50	26,72
I_b,int, Bicycle LOS Score for Intersection	2,865	2,248	2,776	3,091
Bicycle LOS	C	B	C	C

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	13,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,297

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	170	470	120	64	450
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	5,00	2,00	2,00	3,50
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	40	0	0	38
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	170	510	120	64	488
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	43	128	30	16	122
Total Analysis Volume [veh/h]	0	170	510	120	64	488
Pedestrian Volume [ped/h]	70		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,30	0,01	0,00	0,08	0,00
d_M, Delay for Movement [s/veh]	0,00	13,92	0,00	0,00	9,68	0,00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	1,24	0,00	0,00	0,25	0,12
95th-Percentile Queue Length [ft/ln]	0,00	30,93	0,00	0,00	6,22	3,11
d_A, Approach Delay [s/veh]	13,92		0,00		1,12	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2,21					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	30,8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,375

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	193	100	444	156	37	495
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,04	10,00	2,70	0,00	0,00	2,22
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	40	0	44	38	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	206	140	444	200	75	495
Peak Hour Factor	0,8800	0,8300	0,9400	0,8100	0,8400	0,9600
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	59	42	118	62	22	129
Total Analysis Volume [veh/h]	234	169	472	247	89	516
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	3		0		4	
v_di, Inbound Pedestrian Volume crossing in	4		0		3	
v_co, Outbound Pedestrian Volume crossing	29		29		0	
v_ci, Inbound Pedestrian Volume crossing mi	29		29		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	2		1		1	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	55,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	29	29	5	40
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	31	31	34	34	10	45
Vehicle Extension [s]	3,0	3,0	0,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	15
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	0,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	5,0	2,0	0,0	2,0	2,0	2,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	7,00	4,00	2,00	2,00	4,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	5,00	2,00	2,00	2,00	0,00	2,00
g_i, Effective Green Time [s]	24	20	77	77	51	41
g / C, Green / Cycle	0,20	0,17	0,64	0,64	0,43	0,34
(v / s)_i Volume / Saturation Flow Rate	0,13	0,12	0,19	0,23	0,24	0,19
s, saturation flow rate [veh/h]	1795	1447	1859	1579	1211	1699
c, Capacity [veh/h]	359	241	1193	1013	423	580
d1, Uniform Delay [s]	44,16	47,01	9,55	9,97	30,70	31,94
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	8,89	15,65	0,65	0,97	8,63	3,64
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,65	0,70	0,30	0,35	0,68	0,54
d, Delay for Lane Group [s/veh]	53,05	62,65	10,20	10,95	39,33	35,58
Lane Group LOS	D	E	B	B	D	D
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7,29	5,79	4,25	4,49	6,70	7,98
50th-Percentile Queue Length [ft/ln]	182,14	144,86	106,32	112,27	167,46	199,52
95th-Percentile Queue Length [veh/ln]	11,71	9,74	7,64	7,97	10,94	12,61
95th-Percentile Queue Length [ft/ln]	292,81	243,56	190,88	199,16	273,57	315,34

**Movement, Approach, & Intersection Results**

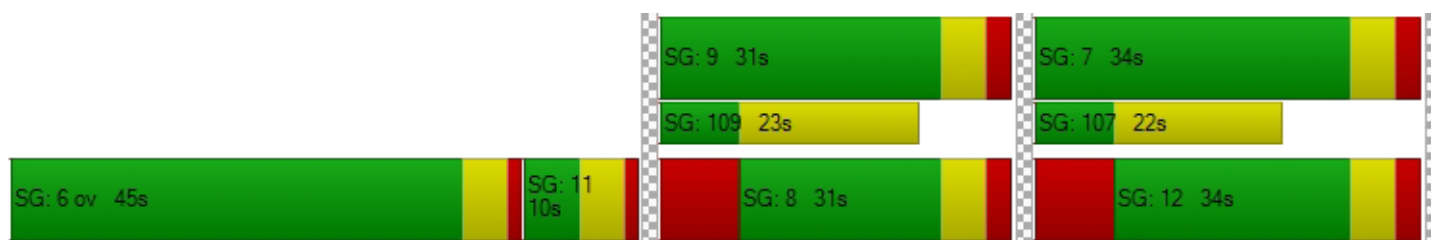
d_M, Delay for Movement [s/veh]	53,05	62,65	10,38	10,95	39,33	37,04
Movement LOS	D	E	B	B	D	D
d_A, Approach Delay [s/veh]	57,07		10,57		37,37	
Approach LOS	E		B		D	
d_I, Intersection Delay [s/veh]	30,81					
Intersection LOS	C					
Intersection V/C	0,375					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	612,46
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,564	0,000	2,449
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	1233	667
d_b, Bicycle Delay [s]	37,64	8,82	26,68
I_b,int, Bicycle LOS Score for Intersection	1,560	2,153	2,059
Bicycle LOS	A	B	B

**Sequence**

Ring 1	-	-	-	9	-	7	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	-	12	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	15,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,320

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	5	3	4	133	5	23	85	455	1	3	649	44
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,75	0,00	4,35	0,00	2,42	0,00	0,00	1,85	2,27
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	19	0	0	0	25	0	0	8	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	4	152	5	23	85	480	1	3	657	49
Peak Hour Factor	0,6300	0,2500	1,0000	0,7400	0,6300	0,7200	0,8500	0,9400	0,2500	0,3800	0,9000	0,7900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	2	3	1	51	2	8	25	128	1	2	183	16
Total Analysis Volume [veh/h]	8	12	4	205	8	32	100	511	4	8	730	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			5			6			0		
v_di, Inbound Pedestrian Volume crossing in	0			6			5			0		
v_co, Outbound Pedestrian Volume crossing	27			18			27			17		
v_ci, Inbound Pedestrian Volume crossing mi	27			17			27			18		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	48,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	0	0	6	17	0	6	17	0
Maximum Green [s]	18	18	0	7	0	0	6	63	0	6	63	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	27	27	0	7	34	0	12	74	0	12	74	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	5	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	1,00	2,00	1,00	2,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	1,00	0,00	1,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	27	31	24	85	73	85	73
g / C, Green / Cycle	0,23	0,26	0,20	0,70	0,61	0,70	0,61
(v / s)_i Volume / Saturation Flow Rate	0,01	0,13	0,03	0,25	0,23	0,23	0,23
s, saturation flow rate [veh/h]	1669	1523	1494	928	1692	1860	1646
c, Capacity [veh/h]	416	453	299	696	1029	1340	1002
d1, Uniform Delay [s]	36,51	39,90	39,46	9,21	11,92	6,78	11,94
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,27	3,23	0,93	1,27	1,04	0,62	1,08
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,45	0,13	0,33	0,37	0,32	0,38
d, Delay for Lane Group [s/veh]	36,78	43,14	40,38	10,48	12,96	7,40	13,02
Lane Group LOS	D	D	D	B	B	A	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0,59	5,65	1,05	3,14	5,38	4,04	5,27
50th-Percentile Queue Length [ft/ln]	14,72	141,22	26,36	78,40	134,38	101,12	131,77
95th-Percentile Queue Length [veh/ln]	1,06	9,55	1,90	5,64	9,18	7,28	9,04
95th-Percentile Queue Length [ft/ln]	26,49	238,66	47,45	141,12	229,44	182,02	225,90

**Movement, Approach, & Intersection Results**

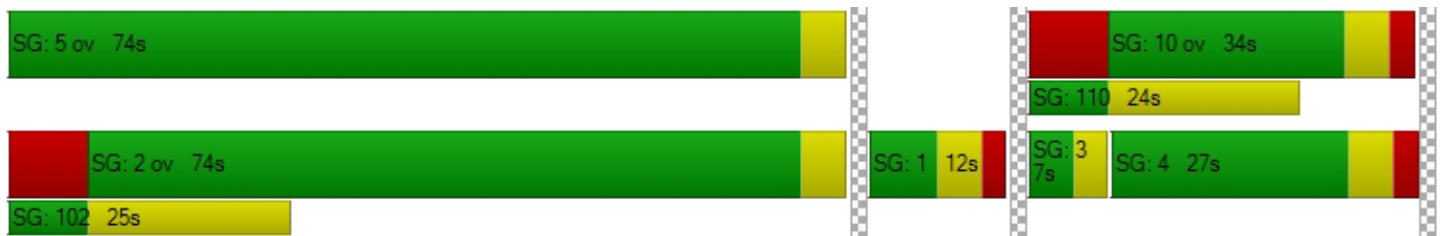
d_M, Delay for Movement [s/veh]	36,78	36,78	36,78	43,14	40,38	40,38	10,48	12,33	12,96	7,40	9,82	13,02
Movement LOS	D	D	D	D	D	D	B	B	B	A	A	B
d_A, Approach Delay [s/veh]	36,78			42,69			12,03			10,05		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	15,90											
Intersection LOS	B											
Intersection V/C	0,320											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	146,16	196,63	837,68	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,965	2,218	2,480	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	467	1556	1556
d_b, Bicycle Delay [s]	26,48	26,45	2,22	2,22
I_b,int, Bicycle LOS Score for Intersection	1,599	1,762	2,067	2,220
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	-	4	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-








### Intersection Level Of Service Report

#### Intersection 9: Entrée développement / Avenue des Halles

Control Type:	Two-way stop	Delay (sec / veh):	14,4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,022

#### Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

#### Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	265	0	0	199	0	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	5,00	3,00	0,00	0,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	82	0	9	53
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	265	16	82	199	9	53
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	66	4	21	50	2	13
Total Analysis Volume [veh/h]	265	16	82	199	9	53
Pedestrian Volume [ped/h]	0		0		5	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,06	0,00	0,02	0,07
d_M, Delay for Movement [s/veh]	0,00	0,00	8,00	0,00	14,42	10,30
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,20	0,20	0,30	0,30
95th-Percentile Queue Length [ft/ln]	0,00	0,00	5,12	5,12	7,59	7,59
d_A, Approach Delay [s/veh]	0,00		2,33		10,90	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2,13					
Intersection LOS	B					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 5 Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_PM\_RV0B.pdf

## Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	70	0	159	193	299	0	0	180	90	991

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	27	0	19	0	0	0	0	327	44	28	245	0	690

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	98	416	86	79	356	88	84	164	116	39	109	90	1725

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	49	547	19	172	433	80	83	33	96	35	35	110	1692

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	99	489	88	220	354	171	291	202	115	122	215	522	2888

ID	Intersection Name	Northbound			Eastbound		Westbound		Total Volume
		Right			Thru	Right	Left	Thru	
6	Accès Halles / Rue Jean-Talon Est	170			510	120	64	488	1352

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	206	140	444	200	75	495	1560

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	5	3	4	152	5	23	85	480	1	3	657	49	1467

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	265	16	82	199	9	53	624

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 5 Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_PM\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	67	0	153	189	299	0	0	180	78	966
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	3	0	6	4	0	0	0	0	12	25
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>0</b>	<b>159</b>	<b>193</b>	<b>299</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>90</b>	<b>991</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	27	0	19	0	0	0	0	324	44	28	233	0	675
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	3	0	0	12	0	15
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>27</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>327</b>	<b>44</b>	<b>28</b>	<b>245</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	88	416	86	79	356	86	84	164	113	39	109	90	1710
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	10	0	0	0	0	2	0	0	3	0	0	0	15
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>98</b>	<b>416</b>	<b>86</b>	<b>79</b>	<b>356</b>	<b>88</b>	<b>84</b>	<b>164</b>	<b>116</b>	<b>39</b>	<b>109</b>	<b>90</b>	<b>1725</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	49	547	19	168	433	80	83	33	96	33	35	105	1681
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	4	0	0	0	0	0	2	0	5	11
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>49</b>	<b>547</b>	<b>19</b>	<b>172</b>	<b>433</b>	<b>80</b>	<b>83</b>	<b>33</b>	<b>96</b>	<b>35</b>	<b>35</b>	<b>110</b>	<b>1692</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	94	489	88	220	354	152	275	182	111	122	201	522	2810	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	5	0	0	0	0	19	16	20	4	0	14	0	0	78
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>99</b>	<b>489</b>	<b>88</b>	<b>220</b>	<b>354</b>	<b>171</b>	<b>291</b>	<b>202</b>	<b>115</b>	<b>122</b>	<b>215</b>	<b>522</b>	<b>2888</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	170	470	120	64	450	1274	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	40	0	0	38	78	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>170</b>	<b>510</b>	<b>120</b>	<b>64</b>	<b>488</b>	<b>1352</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	193	100	444	156	37	495	1425
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	13	40	0	44	38	0	135
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>206</b>	<b>140</b>	<b>444</b>	<b>200</b>	<b>75</b>	<b>495</b>	<b>1560</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	5	3	4	133	5	23	85	455	1	3	649	44	1410
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	19	0	0	0	25	0	0	8	5	57
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>152</b>	<b>5</b>	<b>23</b>	<b>85</b>	<b>480</b>	<b>1</b>	<b>3</b>	<b>657</b>	<b>49</b>	<b>1467</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	265	0	0	199	0	0	464
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	16	82	0	9	53	160
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>265</b>	<b>16</b>	<b>82</b>	<b>199</b>	<b>9</b>	<b>53</b>	<b>624</b>



## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 5 Future PM

Report File: Z:\...\D21-

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0608\_RP\_Situation\_future\_PM\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	98	62	160	100,00
<b>Added Trips Total</b>								<b>98</b>	<b>62</b>	<b>160</b>	<b>100,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 5 Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_PM\_RV0B.pdf

**Trip Distribution summary**

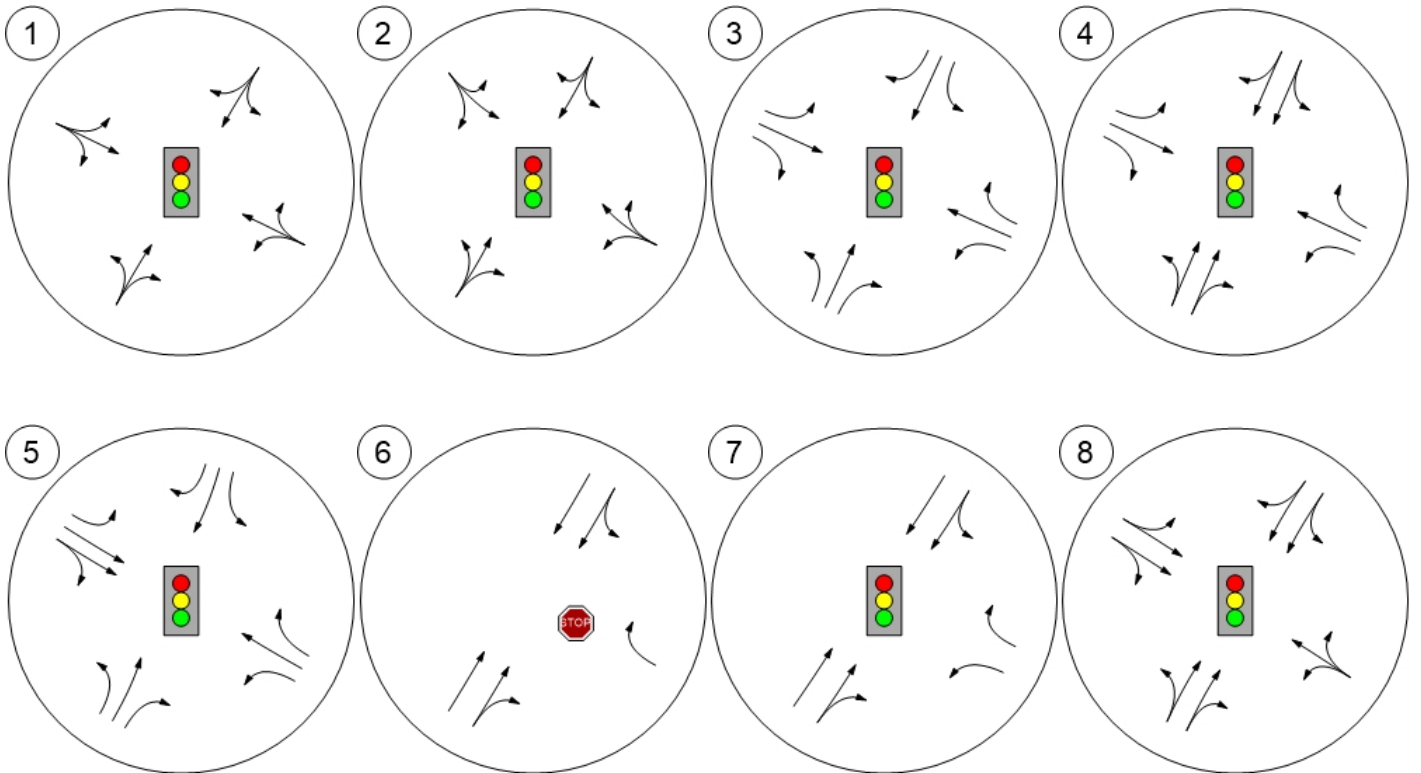
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	25,66	25	13,63	8
3: Gate	19,36	19	8,39	5
4: Gate	14,62	14	31,13	20
5: Gate	19,38	19	25,87	16
6: Gate	7,03	7	7,03	4
7: Gate	9,88	10	4,25	3
8: Gate	4,07	4	9,70	6
<b>Total</b>	<b>100,00</b>	<b>98</b>	<b>100,00</b>	<b>62</b>

Study Intersections

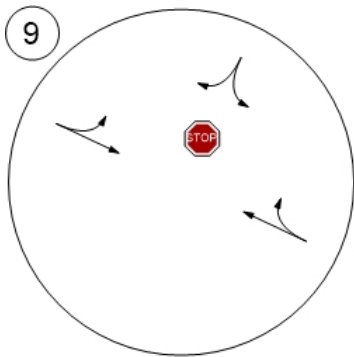
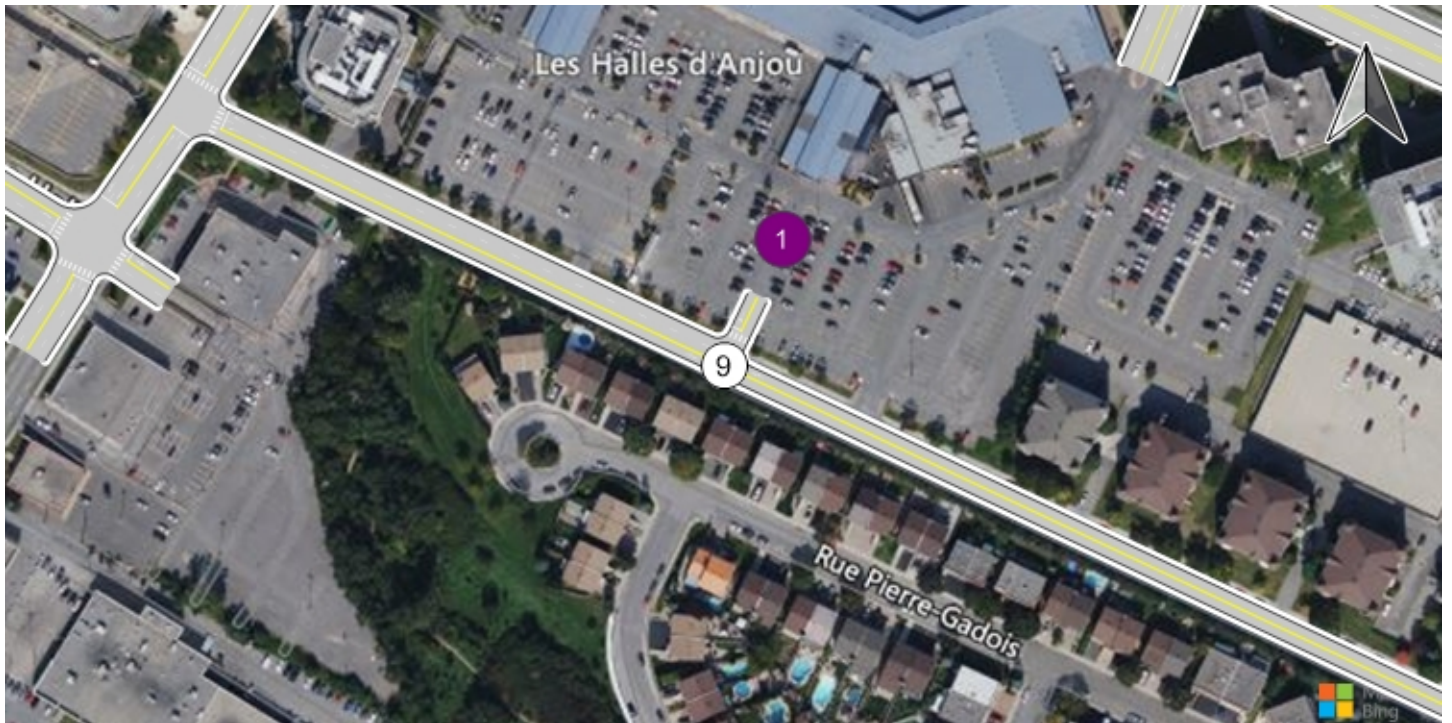




### Lane Configuration and Traffic Control

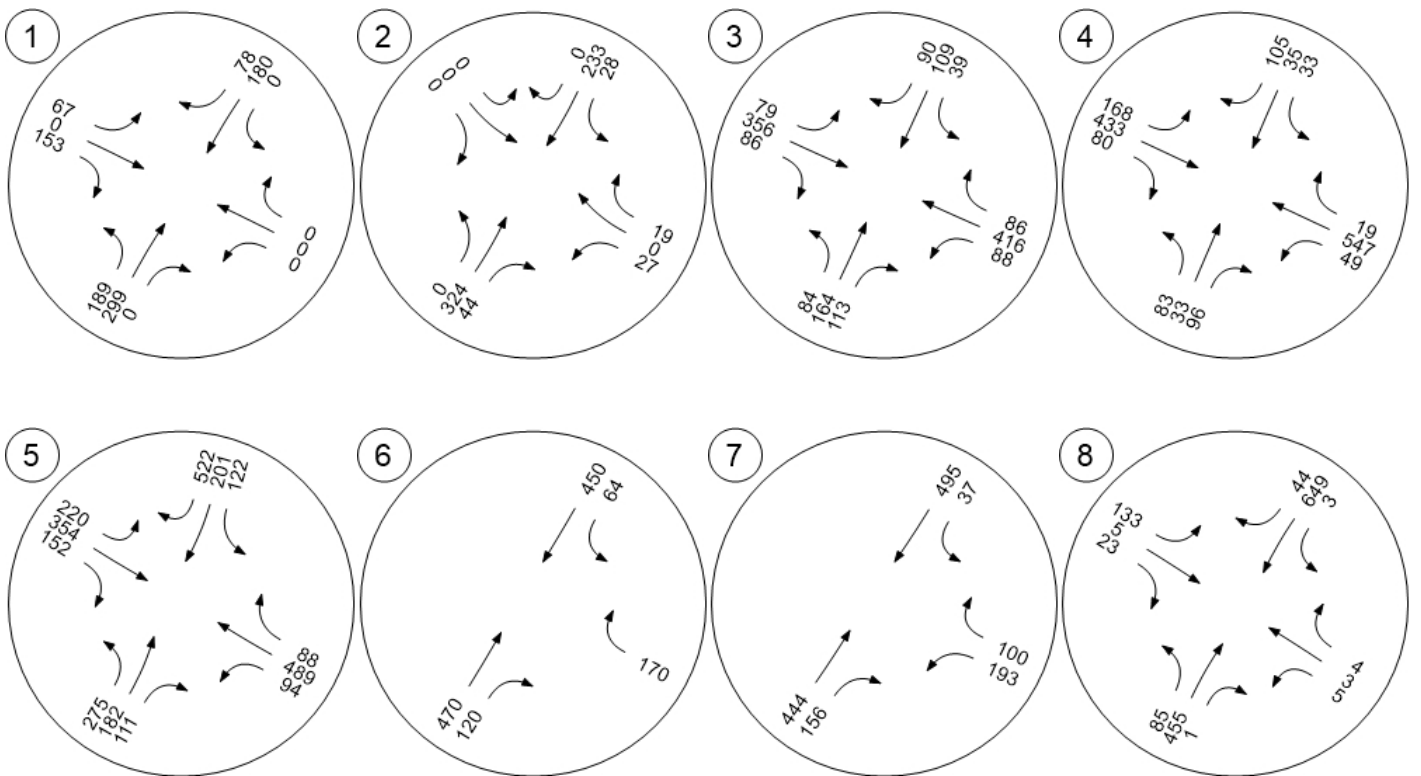


Lane Configuration and Traffic Control

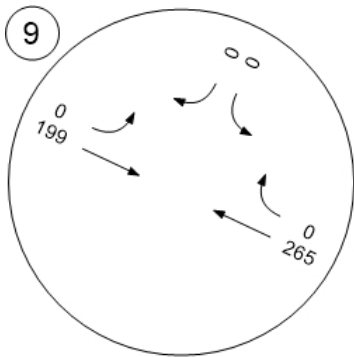
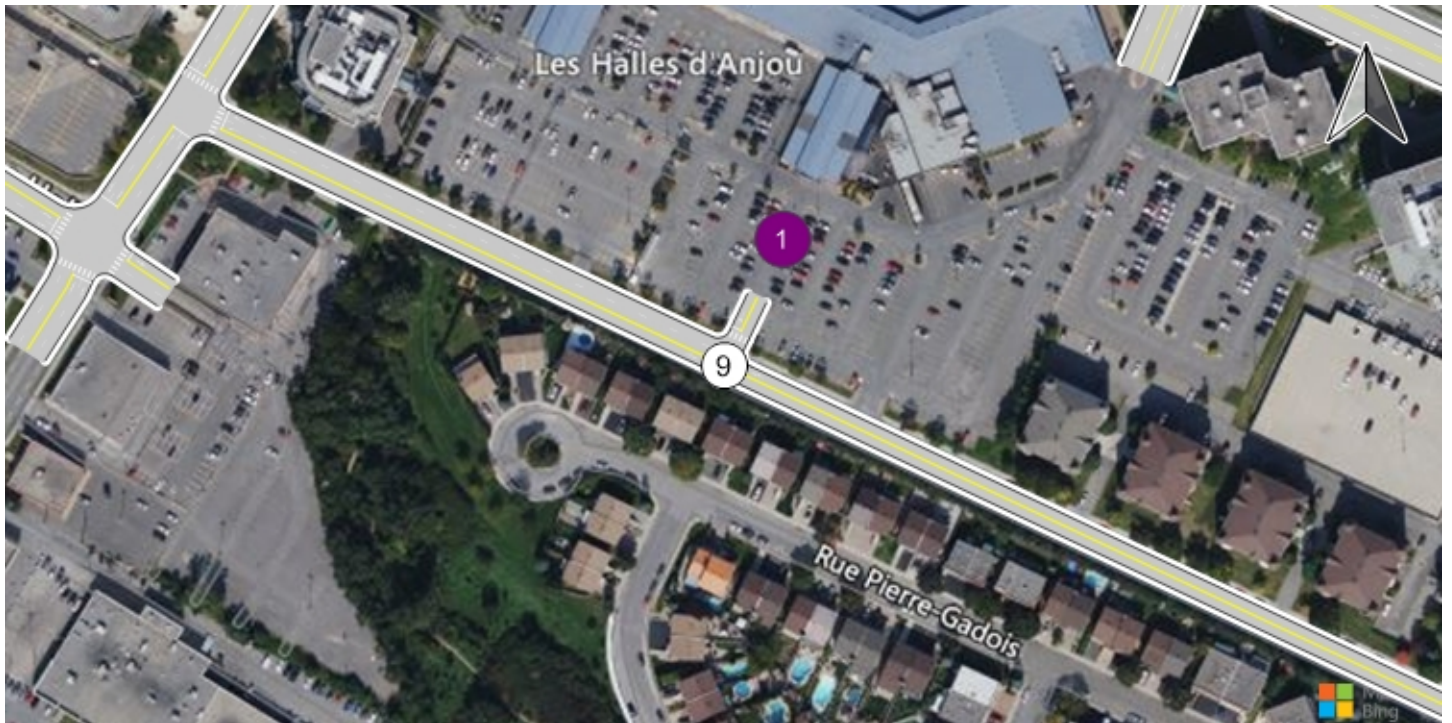




Traffic Volume - Base Volume

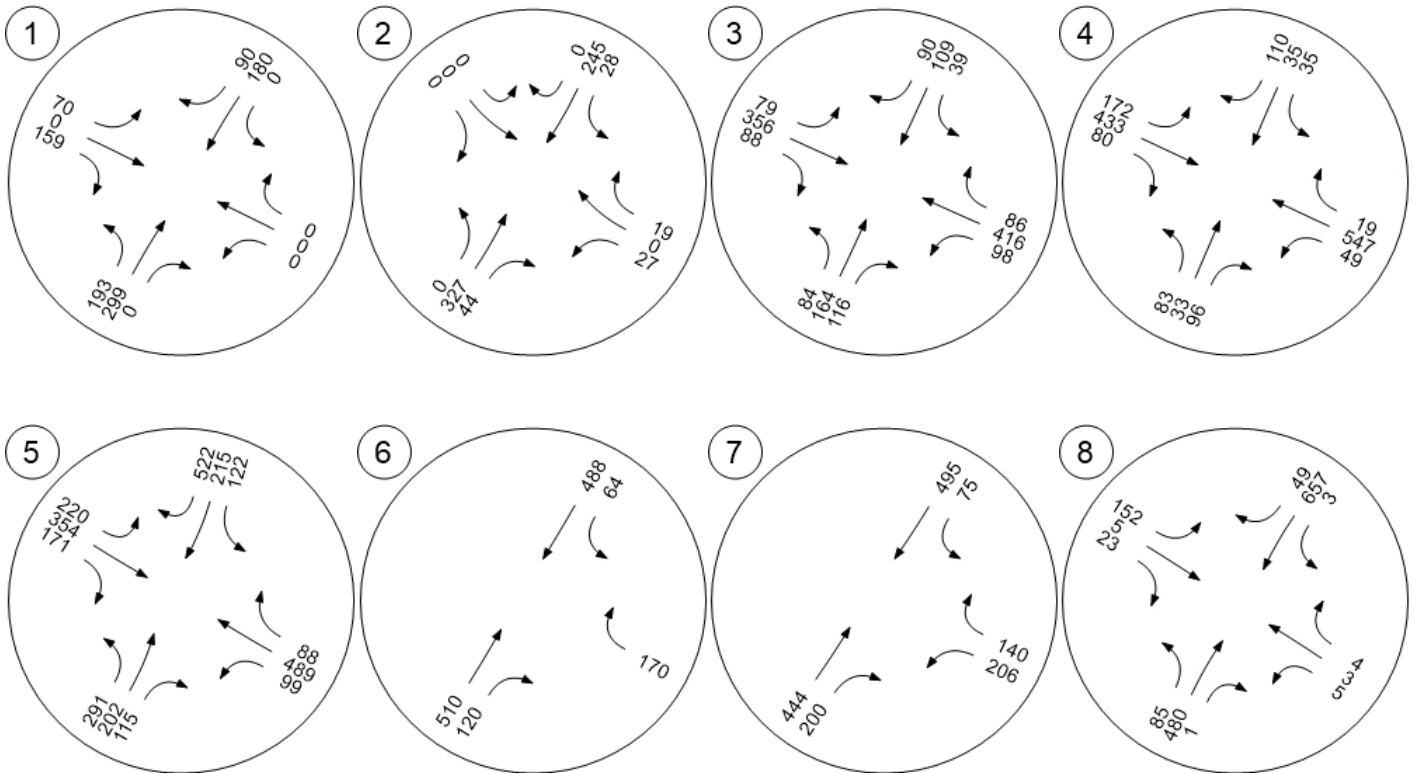


Traffic Volume - Base Volume

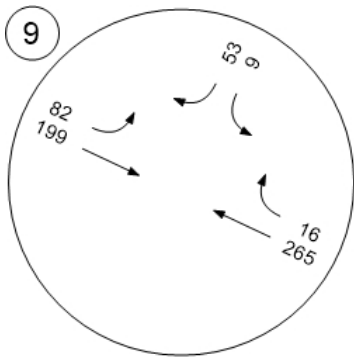
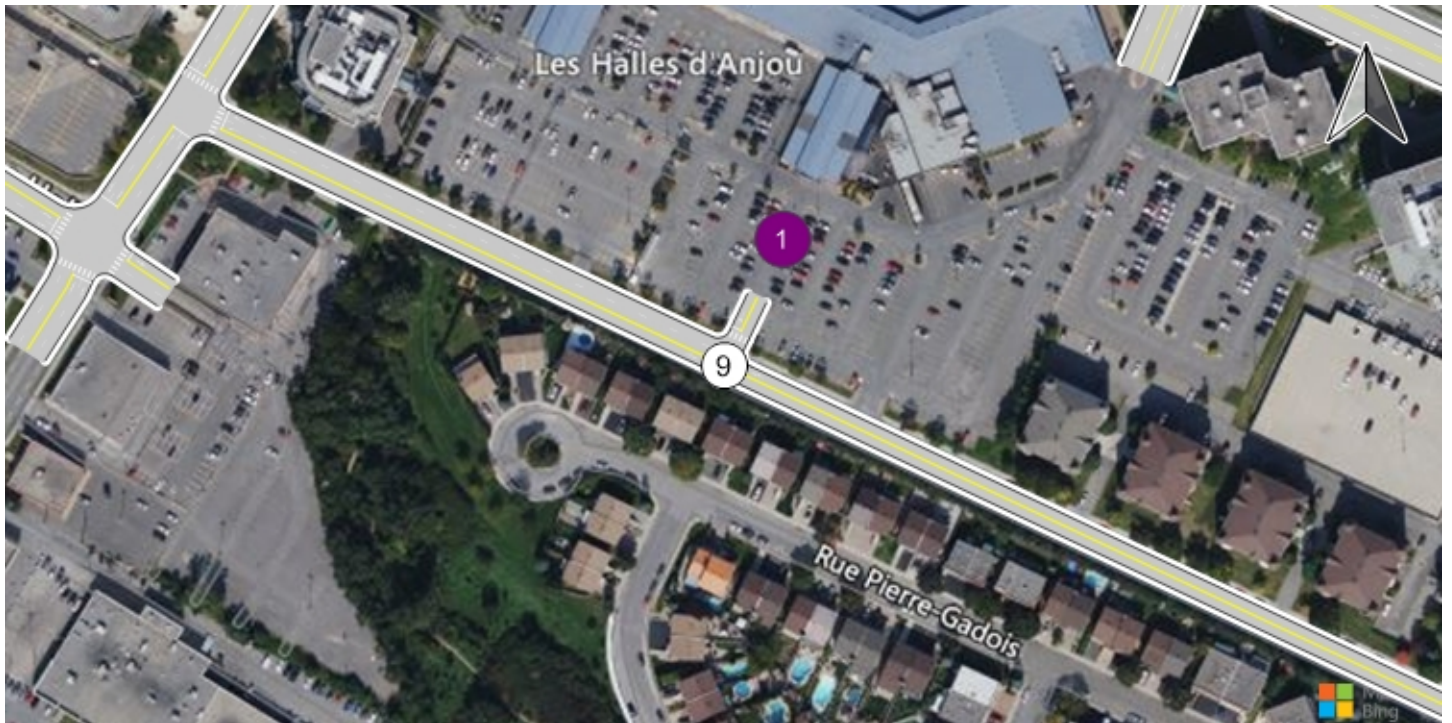




Traffic Volume - Future Total Volume

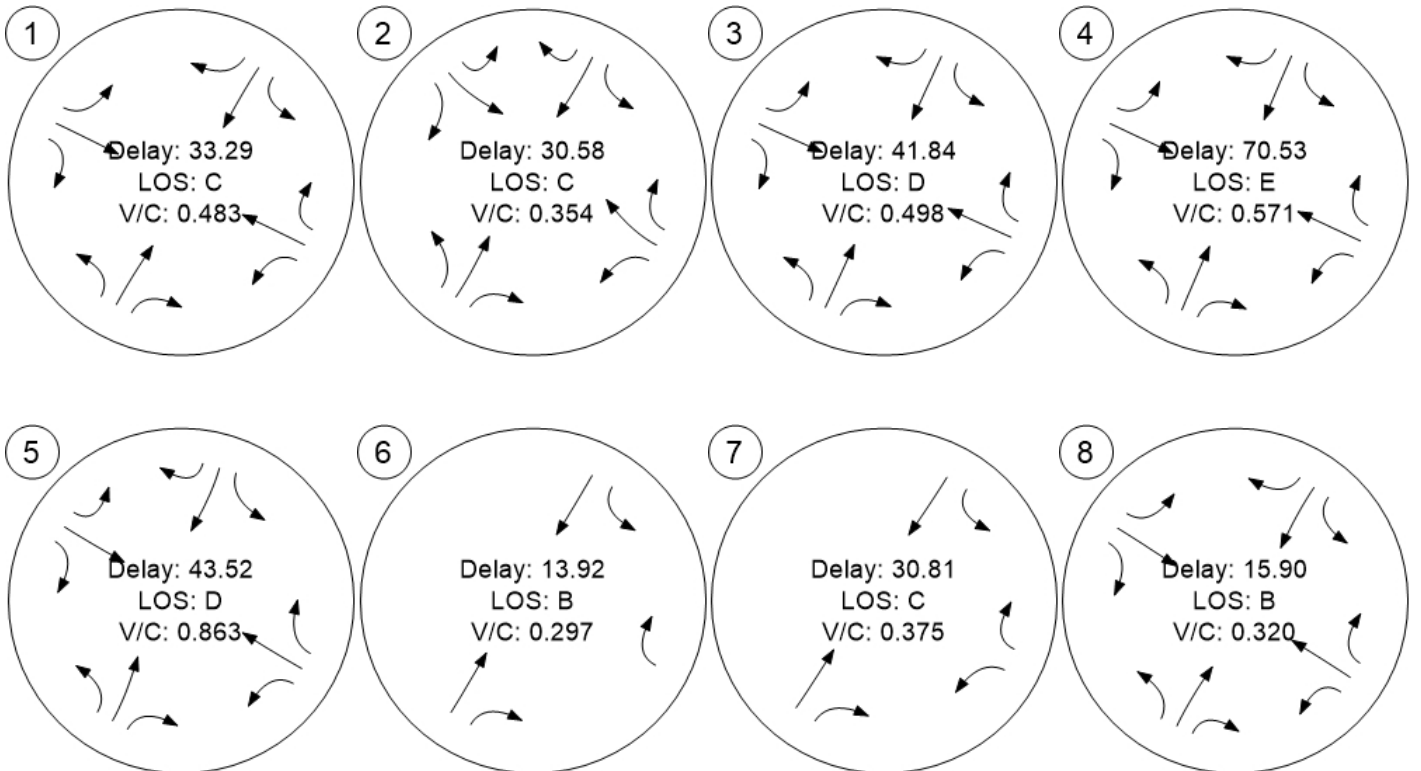


Traffic Volume - Future Total Volume

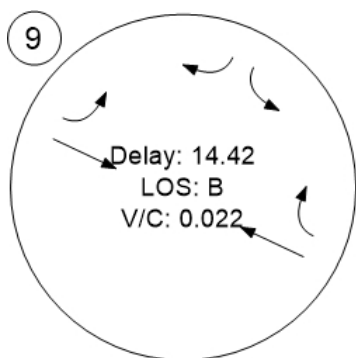
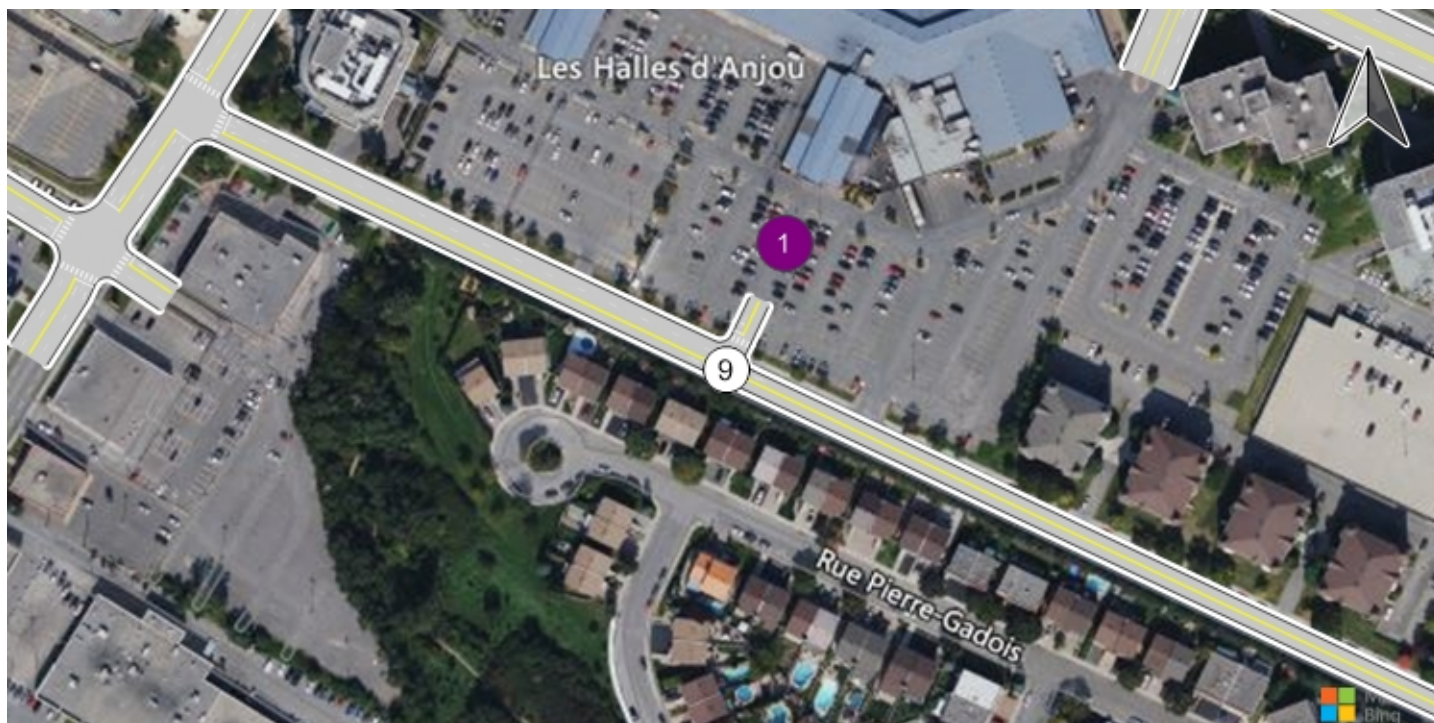




Traffic Conditions



Traffic Conditions



# Annexe 7 – Situation projetée FDS

L'humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

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Scenario 6 Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_FDS\_RV0B.pdf

## Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	EB Thru	0,516	33,4	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Right	0,345	31,4	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,520	42,2	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	WB Right	0,555	47,6	D
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Left	0,728	39,4	D
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,264	13,9	B
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Left	0,549	75,4	E
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Left	0,341	15,1	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,043	15,1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.



**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	33,4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,516

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	86	0	157	163	312	0	0	215	79
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,64	1,84	0,00	0,00	0,00	1,86	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	12	4	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	91	0	169	167	312	0	0	215	91
Peak Hour Factor	1,0000	1,0000	1,0000	0,8300	1,0000	0,8400	0,8300	0,8900	1,0000	1,0000	0,9100	0,7100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	27	0	50	50	88	0	0	59	32
Total Analysis Volume [veh/h]	0	0	0	110	0	201	201	351	0	0	236	128
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			0			1			10		
v_di, Inbound Pedestrian Volume crossing in	10			1			0			10		
v_co, Outbound Pedestrian Volume crossing	0			16			0			15		
v_ci, Inbound Pedestrian Volume crossing mi	0			15			0			16		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,20	0,31	0,21
s, saturation flow rate [veh/h]	1900	1568	1781	1763
c, Capacity [veh/h]	652	559	709	569
d1, Uniform Delay [s]	0,00	25,60	27,44	27,79
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	3,95	8,22	5,44
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,56	0,78	0,64
d, Delay for Lane Group [s/veh]	0,00	29,55	35,66	33,23
Lane Group LOS	A	C	D	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	6,05	12,21	7,56
50th-Percentile Queue Length [ft/ln]	0,00	151,14	305,14	189,11
95th-Percentile Queue Length [veh/ln]	0,00	10,08	17,94	12,08
95th-Percentile Queue Length [ft/ln]	0,00	251,95	448,38	301,88

**Movement, Approach, & Intersection Results**

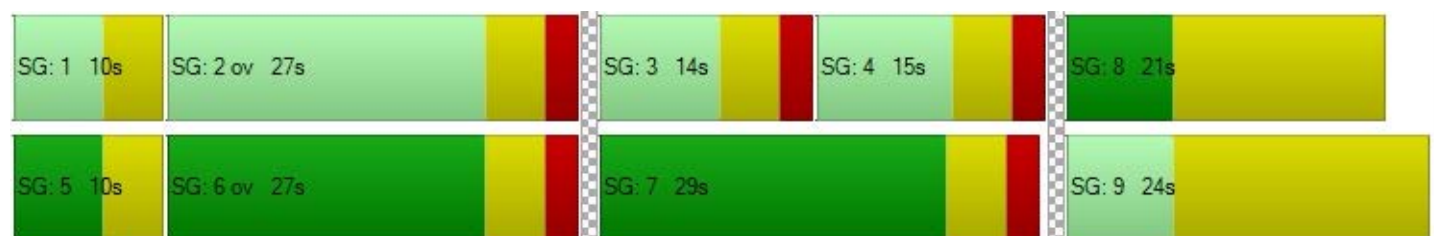
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	29,55	29,55	29,55	35,66	35,66	35,66	33,23	33,23	33,23
Movement LOS	A	A	A	C	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	0,00			29,55			35,66			33,23		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	33,39											
Intersection LOS	C											
Intersection V/C	0,516											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,714	2,517	2,197	2,273
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	511	511	689	467
d_b, Bicycle Delay [s]	24,94	24,94	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,560	2,073	2,470	2,160
Bicycle LOS	A	B	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	31,4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,345

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	23	0	31	0	0	0	0	365	41	26	275	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,45	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	5	0	0	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	0	31	0	0	0	0	370	41	26	287	0
Peak Hour Factor	0,8200	1,0000	0,7000	1,0000	1,0000	1,0000	1,0000	0,8700	0,7300	0,6500	0,9300	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	7	0	11	0	0	0	0	106	14	10	77	0
Total Analysis Volume [veh/h]	28	0	44	0	0	0	0	425	56	40	309	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	8			4			4			9		
v_di, Inbound Pedestrian Volume crossing in	9			4			4			8		
v_co, Outbound Pedestrian Volume crossing	12			0			11			0		
v_ci, Inbound Pedestrian Volume crossing mi	11			0			12			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,26	0,19
s, saturation flow rate [veh/h]	1685	1900	1862	1827
c, Capacity [veh/h]	281	296	723	593
d1, Uniform Delay [s]	32,64	0,00	26,08	27,08
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,19	0,00	4,80	4,25
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,26	0,00	0,67	0,59
d, Delay for Lane Group [s/veh]	34,84	0,00	30,88	31,34
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,52	0,00	9,72	6,97
50th-Percentile Queue Length [ft/ln]	38,03	0,00	243,08	174,14
95th-Percentile Queue Length [veh/ln]	2,74	0,00	14,84	11,29
95th-Percentile Queue Length [ft/ln]	68,45	0,00	370,92	282,35

**Movement, Approach, & Intersection Results**

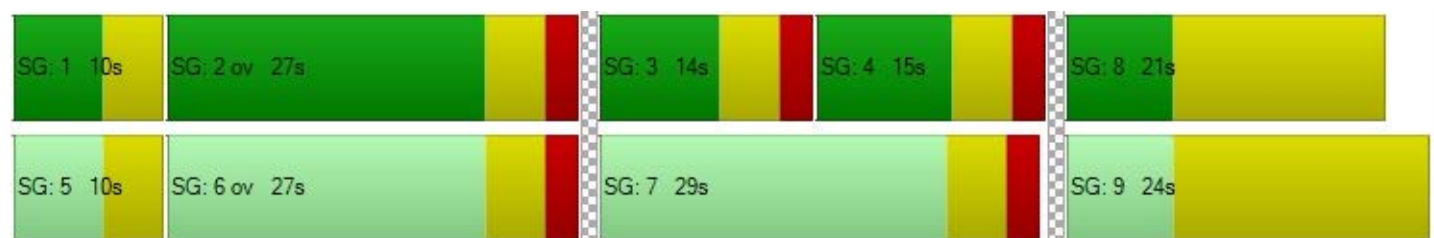
d_M, Delay for Movement [s/veh]	34,84	34,84	34,84	0,00	0,00	0,00	30,88	30,88	30,88	31,34	31,34	31,34
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,84			0,00			30,88			31,34		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	31,37											
Intersection LOS	C											
Intersection V/C	0,345											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,853	2,104	2,113	2,113
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,50	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	2,353	2,135
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	42,2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,520

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	90	464	129	121	299	60	74	211	85	69	143	191
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	1,29	0,78	0,00	1,67	6,67	0,00	0,00	0,00	0,00	0,70	0,52
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	0	2	2	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	464	129	121	299	62	76	211	88	69	143	191
Peak Hour Factor	0,8000	0,9100	0,8500	0,6600	0,9100	0,8300	0,7700	0,8600	0,8900	0,8600	0,7200	0,8000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	31	127	38	46	82	19	25	61	25	20	50	60
Total Analysis Volume [veh/h]	125	510	152	183	329	75	99	245	99	80	199	239
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		19			25			25			19	
v_di, Inbound Pedestrian Volume crossing in		19			25			25			19	
v_co, Outbound Pedestrian Volume crossing		17			20			17			20	
v_ci, Inbound Pedestrian Volume crossing mi		17			20			17			20	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		4			1			0			16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,07	0,18	0,18	0,10	0,11	0,11	0,08	0,13	0,06	0,07	0,11	0,15
s, saturation flow rate [veh/h]	1810	1881	1721	1810	1875	1741	1202	1900	1615	1153	1889	1601
c, Capacity [veh/h]	343	641	587	343	639	593	221	345	648	125	344	1007
d1, Uniform Delay [s]	46,59	35,09	35,17	48,25	32,24	32,32	53,38	50,72	13,32	62,50	49,38	10,68
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,98	3,20	3,57	5,85	1,35	1,49	6,43	11,67	0,50	22,76	6,96	0,56
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,36	0,54	0,54	0,53	0,32	0,33	0,45	0,71	0,15	0,64	0,58	0,24
d, Delay for Lane Group [s/veh]	49,57	38,29	38,74	54,10	33,59	33,81	59,81	62,39	13,82	85,25	56,34	11,24
Lane Group LOS	D	D	D	D	C	C	E	E	B	F	E	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3,89	9,53	8,89	6,02	5,21	4,96	3,49	8,75	1,22	3,49	6,70	3,17
50th-Percentile Queue Length [ft/ln]	97,20	238,19	222,15	150,53	130,18	123,96	87,29	218,66	30,53	87,24	167,38	79,16
95th-Percentile Queue Length [veh/ln]	7,00	14,59	13,77	10,05	8,95	8,61	6,29	13,60	2,20	6,28	10,94	5,70
95th-Percentile Queue Length [ft/ln]	174,95	364,74	344,37	251,14	223,74	215,25	157,13	339,92	54,96	157,04	273,47	142,49



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49,57	38,43	38,74	54,10	33,67	33,81	59,81	62,39	13,82	85,25	56,34	11,24
Movement LOS	D	D	D	D	C	C	E	E	B	F	E	B
d_A, Approach Delay [s/veh]	40,26			40,06			50,96			40,00		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42,18											
Intersection LOS	D											
Intersection V/C	0,520											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0	9,0	9,0	9,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	184,89	103,80	133,88	138,46
d_p, Pedestrian Delay [s]	36,45	36,45	36,45	36,45
I_p,int, Pedestrian LOS Score for Intersection	2,668	2,828	2,338	2,515
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	889	444	444
d_b, Bicycle Delay [s]	13,92	13,90	27,22	27,44
I_b,int, Bicycle LOS Score for Intersection	2,209	2,044	2,291	2,414
Bicycle LOS	B	B	B	B

**Sequence**





Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	47,6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,555

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	121	593	49	216	345	123	87	60	110	35	48	155
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,99	1,01	0,00	0,00	2,32	0,00	1,61	0,00	0,00	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	9	0	0	0	0	0	2	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	593	51	225	345	123	87	60	110	37	48	164
Peak Hour Factor	0,6000	0,9400	0,7200	0,8600	0,8700	0,8000	0,6700	0,7500	0,8000	0,8000	0,7500	0,7500
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	50	158	18	65	99	38	32	20	34	12	16	55
Total Analysis Volume [veh/h]	202	631	71	262	397	154	130	80	138	46	64	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5		21			22			6			
v_di, Inbound Pedestrian Volume crossing in	6		22			21			5			
v_co, Outbound Pedestrian Volume crossing	13		24			13			24			
v_ci, Inbound Pedestrian Volume crossing mi	13		24			13			24			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	1		1			2			5			

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	12	35	0	12	35	0	0	19	0	0	24	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	18	40	0	18	40	0	0	24	0	0	29	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	6,0	6,0	0,0	6,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4,00	0,00	0,00	4,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	53	40	40	53	40	40	24	24	29	29
g / C, Green / Cycle	0,39	0,30	0,30	0,39	0,30	0,30	0,18	0,18	0,21	0,21
(v / s)_i Volume / Saturation Flow Rate	0,18	0,19	0,19	0,24	0,15	0,16	0,10	0,11	0,06	0,15
s, saturation flow rate [veh/h]	1145	1885	1813	1074	1865	1677	1836	1482	1861	1444
c, Capacity [veh/h]	417	558	537	377	553	497	326	263	400	310
d1, Uniform Delay [s]	29,56	41,24	41,27	31,94	39,55	39,63	50,83	51,16	44,23	49,05
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	4,00	5,53	5,79	10,13	3,51	3,98	7,20	10,03	1,70	12,70
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,48	0,64	0,64	0,70	0,52	0,53	0,58	0,61	0,28	0,71
d, Delay for Lane Group [s/veh]	33,56	46,78	47,07	42,07	43,05	43,60	58,03	61,19	45,93	61,75
Lane Group LOS	C	D	D	D	D	D	E	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4,99	11,22	10,87	7,16	8,57	7,86	6,50	5,75	3,29	7,95
50th-Percentile Queue Length [ft/ln]	124,76	280,46	271,77	178,89	214,18	196,43	162,56	143,79	82,35	198,77
95th-Percentile Queue Length [veh/ln]	8,65	16,71	16,28	11,54	13,37	12,45	10,68	9,68	5,93	12,58
95th-Percentile Queue Length [ft/ln]	216,35	417,79	406,94	288,57	334,19	311,35	267,10	242,12	148,23	314,38

**Movement, Approach, & Intersection Results**

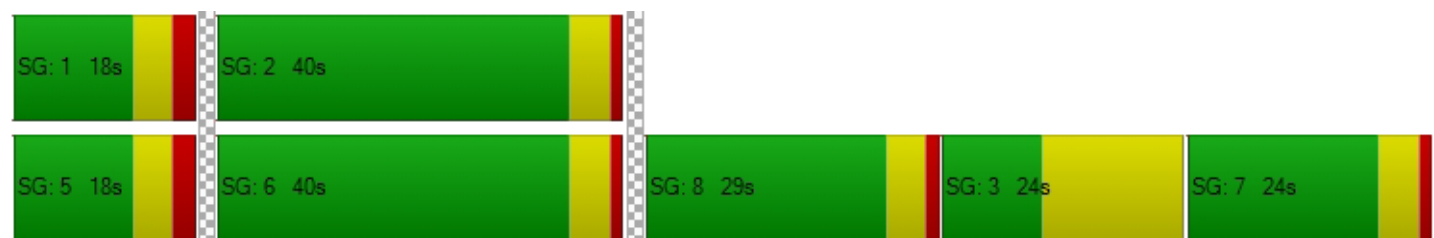
d_M, Delay for Movement [s/veh]	33,56	46,90	47,07	42,07	43,20	43,60	58,03	58,91	61,19	45,93	45,93	61,75
Movement LOS	C	D	D	D	D	D	E	E	E	D	D	E
d_A, Approach Delay [s/veh]	43,93			42,91			59,49			56,46		
Approach LOS	D			D			E			E		
d_I, Intersection Delay [s/veh]	47,57											
Intersection LOS	D											
Intersection V/C	0,555											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	449,04	220,01	202,08	908,46
d_p, Pedestrian Delay [s]	32,09	32,09	32,09	32,09
I_p,int, Pedestrian LOS Score for Intersection	2,691	2,741	2,393	2,410
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	778	778	422	533
d_b, Bicycle Delay [s]	16,81	16,81	28,03	24,26
I_b,int, Bicycle LOS Score for Intersection	2,305	2,230	1,847	1,831
Bicycle LOS	B	B	A	A

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	39,4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,728

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	173	516	118	218	344	176	247	325	138	171	270	481
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,16	0,78	0,00	0,00	1,16	0,00	0,00	3,38	2,17	0,00	3,70	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	0	0	0	21	27	37	9	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	182	516	118	218	344	197	274	362	147	171	286	481
Peak Hour Factor	0,8200	0,9300	0,8000	0,9600	0,9000	0,9200	0,9100	0,8900	0,8000	0,8100	0,9000	0,9200
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	55	139	37	57	96	54	75	102	46	53	79	131
Total Analysis Volume [veh/h]	222	555	148	227	382	214	301	407	184	211	318	523
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		15			19			20			16	
v_di, Inbound Pedestrian Volume crossing in		16			20			19			15	
v_co, Outbound Pedestrian Volume crossing		31			11			30			10	
v_ci, Inbound Pedestrian Volume crossing mi		30			10			31			11	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		4			3			1			9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,20	0,19	0,20	0,21	0,17	0,18	0,23	0,22	0,12	0,22	0,17	0,33
s, saturation flow rate [veh/h]	1135	1888	1715	1092	1883	1590	1318	1849	1488	976	1844	1587
c, Capacity [veh/h]	450	573	521	425	572	483	599	660	531	236	659	567
d1, Uniform Delay [s]	23,22	33,66	33,84	23,92	32,65	32,96	18,79	29,67	26,18	48,00	27,96	34,23
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,83	5,31	6,19	4,73	3,83	5,00	2,99	4,27	1,78	36,57	2,52	22,92
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,49	0,64	0,65	0,53	0,55	0,58	0,50	0,62	0,35	0,89	0,48	0,92
d, Delay for Lane Group [s/veh]	27,05	38,97	40,03	28,65	36,48	37,96	21,78	33,94	27,96	84,56	30,49	57,14
Lane Group LOS	C	D	D	C	D	D	C	C	C	F	C	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4,32	9,33	8,82	4,50	7,75	7,04	5,17	9,72	3,83	8,35	7,04	16,85
50th-Percentile Queue Length [ft/ln]	108,08	233,26	220,39	112,43	193,82	176,06	129,33	242,89	95,64	208,79	175,96	421,15
95th-Percentile Queue Length [veh/ln]	7,73	14,34	13,68	7,98	12,32	11,39	8,90	14,83	6,89	13,09	11,39	23,58
95th-Percentile Queue Length [ft/ln]	193,33	358,50	342,12	199,38	307,98	284,86	222,59	370,68	172,15	327,28	284,73	589,43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27,05	39,33	40,03	28,65	36,74	37,96	21,78	33,94	27,96	84,56	30,49	57,14
Movement LOS	C	D	D	C	D	D	C	C	C	F	C	E
d_A, Approach Delay [s/veh]	36,50			34,82			28,61			54,59		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	39,37											
Intersection LOS	D											
Intersection V/C	0,728											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	217,42	489,68	162,86	174,92
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	3,029	2,870	2,720	2,759
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,08	30,06	26,48	26,59
I_b,int, Bicycle LOS Score for Intersection	2,323	2,239	3,031	3,295
Bicycle LOS	B	B	C	C

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	13,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,264

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↗		↘		↙	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	145	577	100	50	589
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	2,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	73	0	0	46
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	145	650	100	50	635
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	36	163	25	13	159
Total Analysis Volume [veh/h]	0	145	650	100	50	635
Pedestrian Volume [ped/h]	50		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,26	0,01	0,00	0,06	0,01
d_M, Delay for Movement [s/veh]	0,00	13,87	0,00	0,00	9,93	0,00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	1,05	0,00	0,00	0,21	0,10
95th-Percentile Queue Length [ft/ln]	0,00	26,30	0,00	0,00	5,13	2,56
d_A, Approach Delay [s/veh]	13,87		0,00		0,73	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1,59					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	75,4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,549

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	



**Volumes**

Name						
Base Volume Input [veh/h]	188	67	580	188	22	541
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	4,48	2,07	0,00	0,00	2,40
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	73	0	45	46	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	140	580	233	68	541
Peak Hour Factor	0,8700	0,6700	0,9500	0,8000	0,6900	0,9100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	60	52	153	73	25	149
Total Analysis Volume [veh/h]	240	209	611	291	99	595
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	19		19		0	
v_ci, Inbound Pedestrian Volume crossing mi	19		19		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	2		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	38,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	27	27	5	29
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	43	43	33	33	10	34
Vehicle Extension [s]	3,0	3,0	3,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	0
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	2,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	4,0	4,0	4,0	4,0	3,0	3,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	1,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	6,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	6,00	6,00	6,00	6,00	5,00	5,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	4,00	4,00	4,00	4,00	0,00	3,00
g_i, Effective Green Time [s]	37	30	62	62	39	29
g / C, Green / Cycle	0,31	0,25	0,52	0,52	0,33	0,24
(v / s)_i Volume / Saturation Flow Rate	0,13	0,14	0,24	0,28	0,40	0,23
s, saturation flow rate [veh/h]	1810	1536	1869	1635	761	1696
c, Capacity [veh/h]	558	384	966	845	205	410
d1, Uniform Delay [s]	33,09	38,98	18,47	19,35	44,96	44,81
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,41	5,45	1,62	2,41	240,76	33,88
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,43	0,54	0,47	0,53	1,48	0,95
d, Delay for Lane Group [s/veh]	35,51	44,43	20,10	21,77	285,72	78,69
Lane Group LOS	D	D	C	C	F	E
Critical Lane Group	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5,96	5,92	8,30	8,80	18,25	15,21
50th-Percentile Queue Length [ft/ln]	148,88	147,99	207,45	220,07	456,21	380,17
95th-Percentile Queue Length [veh/ln]	9,96	9,91	13,02	13,67	30,51	21,60
95th-Percentile Queue Length [ft/ln]	248,94	247,75	325,56	341,72	762,79	540,05

**Movement, Approach, & Intersection Results**

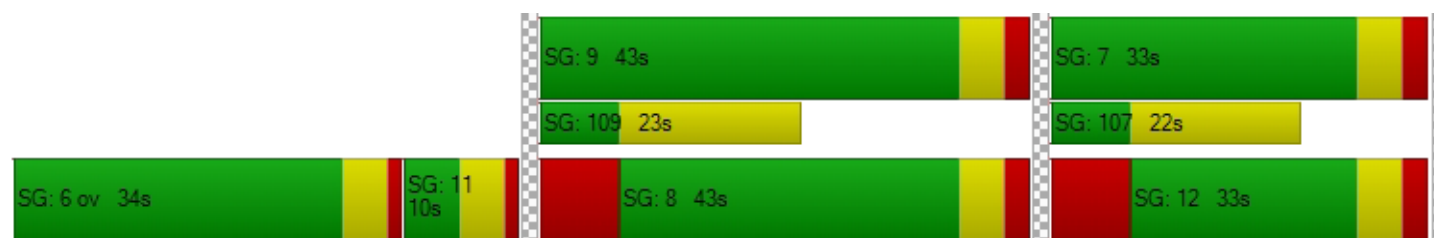
d_M, Delay for Movement [s/veh]	35,51	44,43	20,53	21,77	285,72	149,95
Movement LOS	D	D	C	C	F	F
d_A, Approach Delay [s/veh]	39,66		20,93		169,32	
Approach LOS	D		C		F	
d_I, Intersection Delay [s/veh]	75,40					
Intersection LOS	E					
Intersection V/C	0,549					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,301	0,000	2,514
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	617	1033	483
d_b, Bicycle Delay [s]	28,73	14,02	34,50
I_b,int, Bicycle LOS Score for Intersection	1,560	2,304	2,132
Bicycle LOS	A	B	B

**Sequence**

Ring 1	-	-	-	9	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	12	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	15,1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,341

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	7	1	5	181	0	26	62	581	10	0	696	25
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	3,85	0,00	2,07	0,00	0,00	1,87	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	19	0	0	0	26	0	0	16	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	5	200	0	26	62	607	10	0	712	30
Peak Hour Factor	0,5800	0,2500	0,6300	0,8700	0,6700	0,9300	0,7800	0,8900	0,6300	1,0000	0,9300	0,6900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	3	1	2	57	0	7	20	171	4	0	191	11
Total Analysis Volume [veh/h]	12	4	8	230	0	28	79	682	16	0	766	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			8			8			0		
v_di, Inbound Pedestrian Volume crossing in	0			8			8			0		
v_co, Outbound Pedestrian Volume crossing	23			10			23			9		
v_ci, Inbound Pedestrian Volume crossing mi	23			9			23			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			3			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	31,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	16	0	6	17	0	6	17	0
Maximum Green [s]	20	20	0	7	20	0	6	71	0	6	71	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	26	26	0	7	33	0	12	75	0	12	75	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	7	7	0	4	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	3	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	26	30	23	86	75	86	75
g / C, Green / Cycle	0,22	0,25	0,19	0,72	0,63	0,72	0,63
(v / s)_i Volume / Saturation Flow Rate	0,02	0,15	0,02	0,27	0,26	0,23	0,23
s, saturation flow rate [veh/h]	1539	1531	1411	1251	1688	1872	1667
c, Capacity [veh/h]	378	443	270	933	1055	1372	1042
d1, Uniform Delay [s]	37,32	41,54	40,00	6,47	11,44	6,24	10,94
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,32	4,31	0,77	1,07	1,23	0,59	1,00
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,52	0,10	0,36	0,42	0,31	0,37
d, Delay for Lane Group [s/veh]	37,64	45,85	40,77	7,55	12,66	6,83	11,94
Lane Group LOS	D	D	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0,60	6,58	0,74	2,95	6,13	3,86	5,05
50th-Percentile Queue Length [ft/ln]	14,97	164,43	18,62	73,72	153,24	96,49	126,16
95th-Percentile Queue Length [veh/ln]	1,08	10,78	1,34	5,31	10,19	6,95	8,73
95th-Percentile Queue Length [ft/ln]	26,95	269,57	33,52	132,69	254,75	173,68	218,27

**Movement, Approach, & Intersection Results**

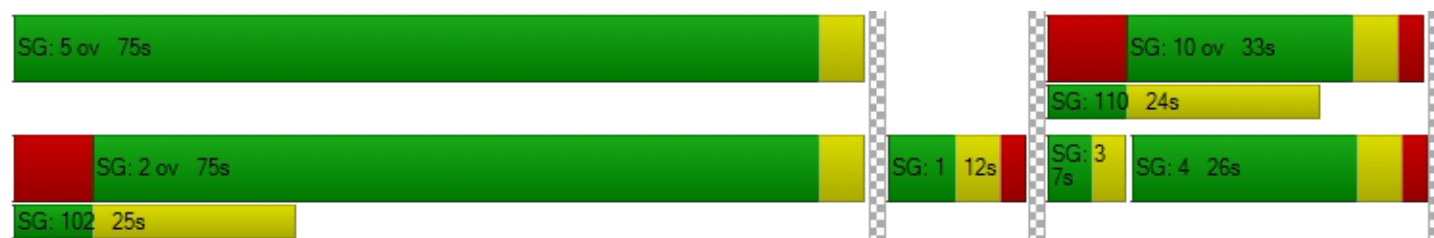
d_M, Delay for Movement [s/veh]	37,64	37,64	37,64	45,85	43,31	40,77	7,55	10,75	12,66	6,83	9,09	11,94
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	B
d_A, Approach Delay [s/veh]	37,64			45,30			10,46			9,24		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15,09											
Intersection LOS	B											
Intersection V/C	0,341											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	123,58	271,58	419,32	0,00
d_p, Pedestrian Delay [s]	49,50	49,50	49,50	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,967	2,191	2,548	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	333	1183	1183
d_b, Bicycle Delay [s]	41,73	41,73	10,00	10,00
I_b,int, Bicycle LOS Score for Intersection	1,599	1,772	2,201	2,227
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






### Intersection Level Of Service Report

#### Intersection 9: Entrée développement / Avenue des Halles

Control Type:	Two-way stop	Delay (sec / veh):	15,1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,043

#### Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

#### Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	242	0	0	200	0	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	2,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	91	0	17	94
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	242	16	91	200	17	94
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	61	4	23	50	4	24
Total Analysis Volume [veh/h]	242	16	91	200	17	94
Pedestrian Volume [ped/h]	0		0		10	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,07	0,00	0,04	0,12
d_M, Delay for Movement [s/veh]	0,00	0,00	8,02	0,00	15,05	10,71
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,23	0,23	0,59	0,59
95th-Percentile Queue Length [ft/ln]	0,00	0,00	5,72	5,72	14,64	14,64
d_A, Approach Delay [s/veh]	0,00		2,51		11,38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3,02					
Intersection LOS	C					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 6 Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_FDS\_RV0B.pdf

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	91	0	169	167	312	0	0	215	91	1045

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	23	0	31	0	0	0	0	370	41	26	287	0	778

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	100	464	129	121	299	62	76	211	88	69	143	191	1953

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	121	593	51	225	345	123	87	60	110	37	48	164	1964

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	182	516	118	218	344	197	274	362	147	171	286	481	3296

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	145	650	100	50	635	1580	

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	209	140	580	233	68	541	1771

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	7	1	5	200	0	26	62	607	10	0	712	30	1660

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	242	16	91	200	17	94	660

## Développement aux Halles d'Anjou

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Scenario 6 Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_FDS\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	86	0	157	163	312	0	0	215	79	1012
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	5	0	12	4	0	0	0	0	12	33
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>0</b>	<b>169</b>	<b>167</b>	<b>312</b>	<b>0</b>	<b>0</b>	<b>215</b>	<b>91</b>	<b>1045</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	23	0	31	0	0	0	0	365	41	26	275	0	761
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	5	0	0	12	0	17
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>23</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>370</b>	<b>41</b>	<b>26</b>	<b>287</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	90	464	129	121	299	60	74	211	85	69	143	191	1936
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	10	0	0	0	0	2	2	0	3	0	0	0	17
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>100</b>	<b>464</b>	<b>129</b>	<b>121</b>	<b>299</b>	<b>62</b>	<b>76</b>	<b>211</b>	<b>88</b>	<b>69</b>	<b>143</b>	<b>191</b>	<b>1953</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	121	593	49	216	345	123	87	60	110	35	48	155	1942
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	2	9	0	0	0	0	0	2	0	9	22
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>121</b>	<b>593</b>	<b>51</b>	<b>225</b>	<b>345</b>	<b>123</b>	<b>87</b>	<b>60</b>	<b>110</b>	<b>37</b>	<b>48</b>	<b>164</b>	<b>1964</b>



ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	173	516	118	218	344	176	247	325	138	171	270	481	3177	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	9	0	0	0	0	21	27	37	9	0	16	0	119	
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>182</b>	<b>516</b>	<b>118</b>	<b>218</b>	<b>344</b>	<b>197</b>	<b>274</b>	<b>362</b>	<b>147</b>	<b>171</b>	<b>286</b>	<b>481</b>	<b>3296</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	145	577	100	50	589	1461	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	73	0	0	46	119	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>145</b>	<b>650</b>	<b>100</b>	<b>50</b>	<b>635</b>	<b>1580</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	188	67	580	188	22	541	1586
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	21	73	0	45	46	0	185
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>209</b>	<b>140</b>	<b>580</b>	<b>233</b>	<b>68</b>	<b>541</b>	<b>1771</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	7	1	5	181	0	26	62	581	10	0	696	25	1594
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	19	0	0	0	26	0	0	16	5	66
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>7</b>	<b>1</b>	<b>5</b>	<b>200</b>	<b>0</b>	<b>26</b>	<b>62</b>	<b>607</b>	<b>10</b>	<b>0</b>	<b>712</b>	<b>30</b>	<b>1660</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	242	0	0	200	0	0	442
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	16	91	0	17	94	218
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>242</b>	<b>16</b>	<b>91</b>	<b>200</b>	<b>17</b>	<b>94</b>	<b>660</b>

## Développement aux Halles d'Anjou

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Scenario 6 Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_FDS\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	107	111	218	100,00
<b>Added Trips Total</b>								<b>107</b>	<b>111</b>	<b>218</b>	<b>100,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 6 Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_future\_FDS\_RV0B.pdf

**Trip Distribution summary**

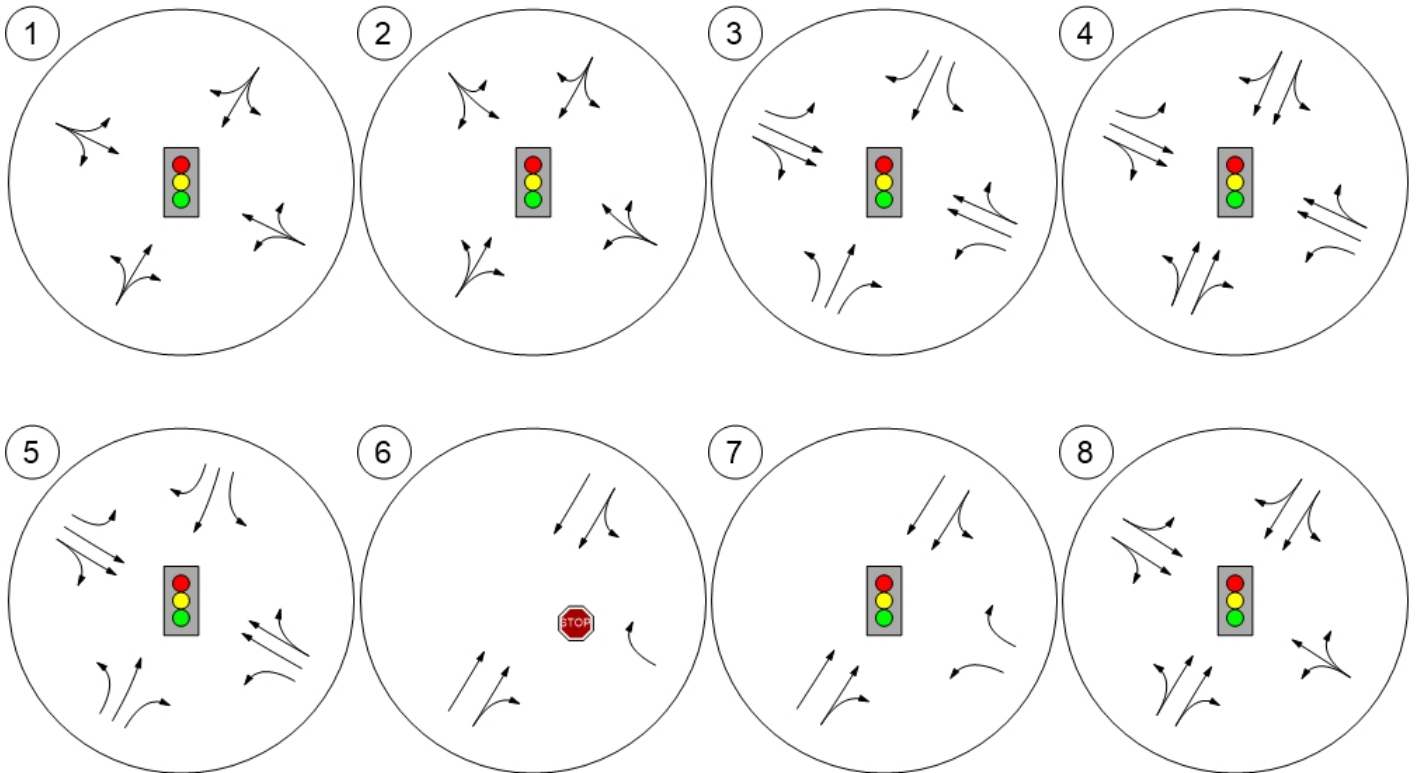
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	24,13	26	14,13	16
3: Gate	18,20	19	4,49	5
4: Gate	14,69	16	33,76	37
5: Gate	19,47	21	24,12	27
6: Gate	10,00	11	10,00	11
7: Gate	9,57	10	2,86	3
8: Gate	3,94	4	10,64	12
<b>Total</b>	<b>100,00</b>	<b>107</b>	<b>100,00</b>	<b>111</b>

Study Intersections

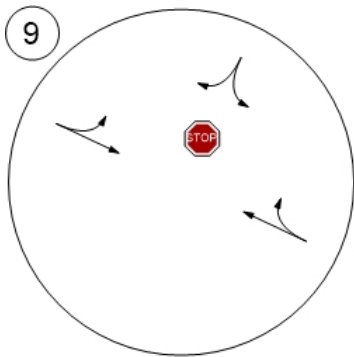
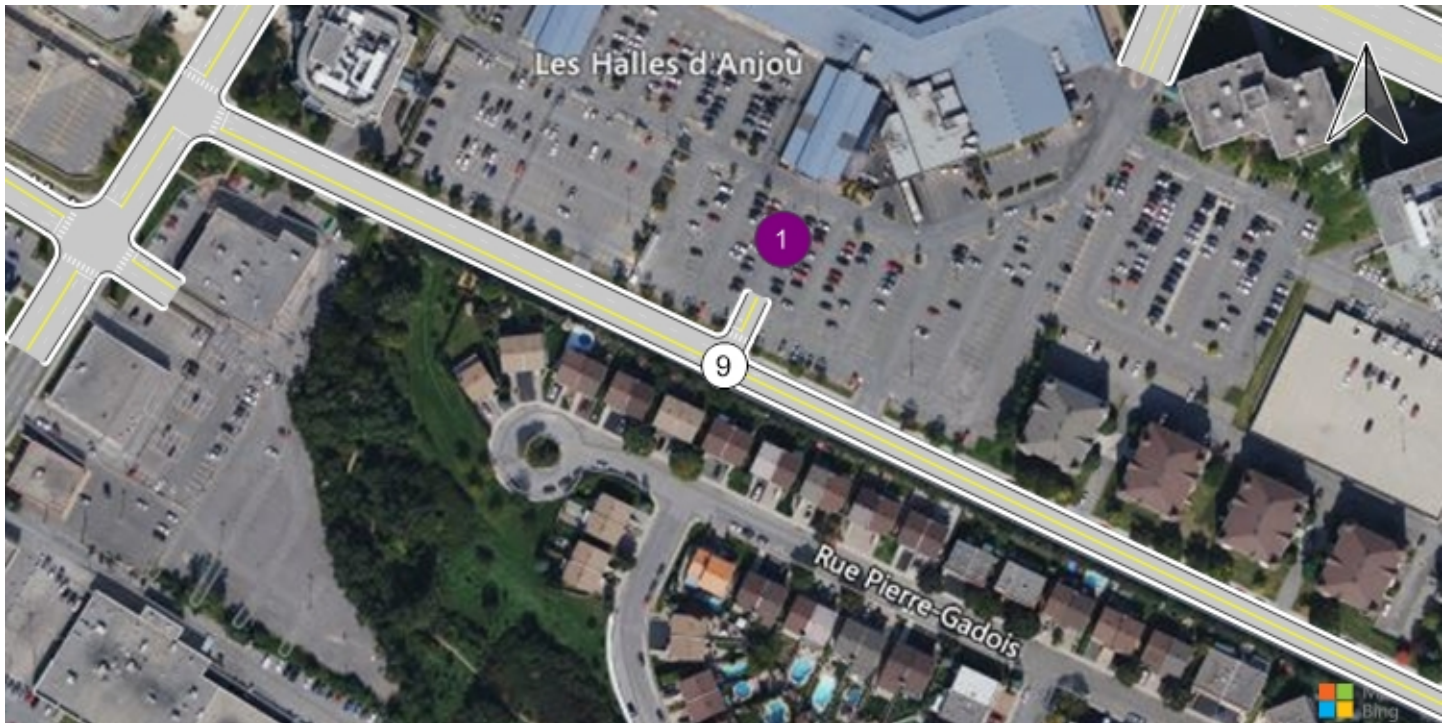




Lane Configuration and Traffic Control

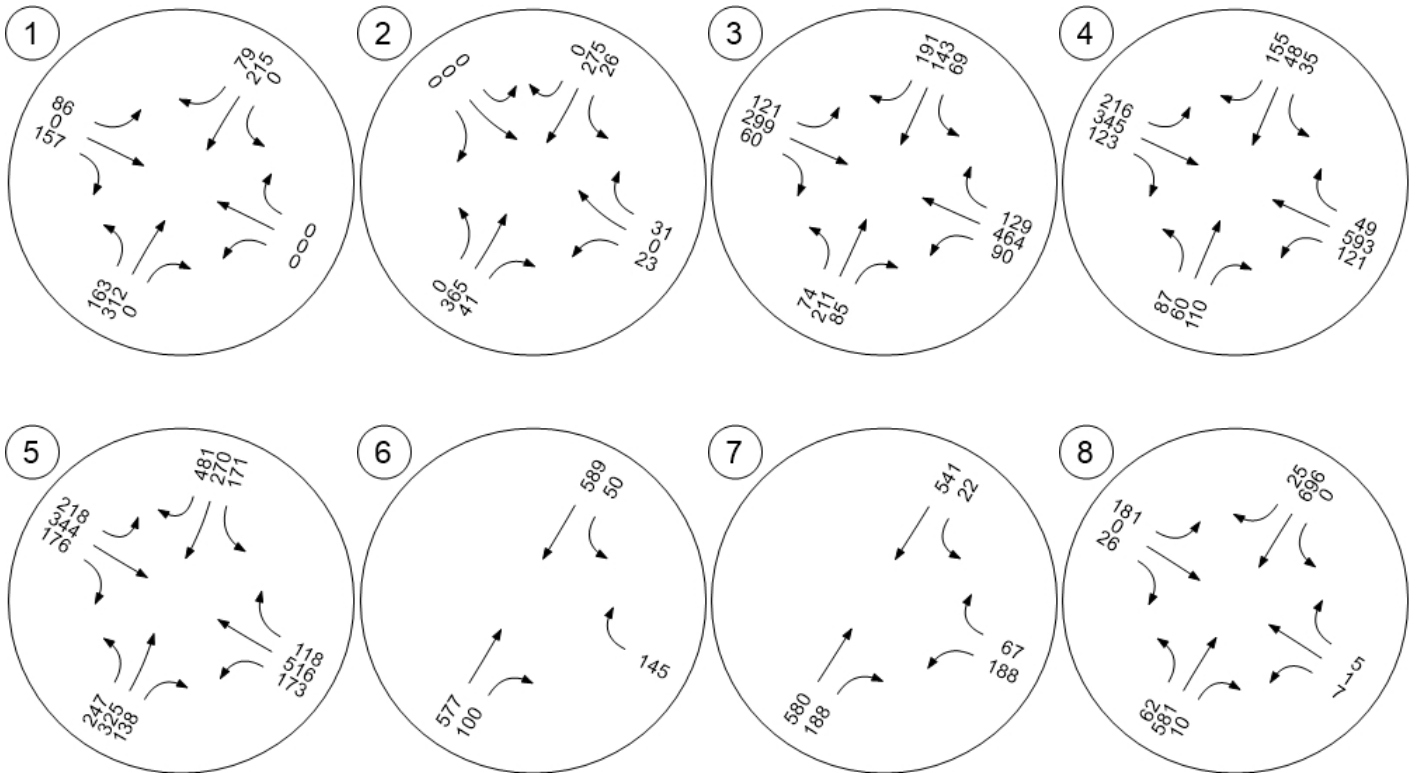


Lane Configuration and Traffic Control

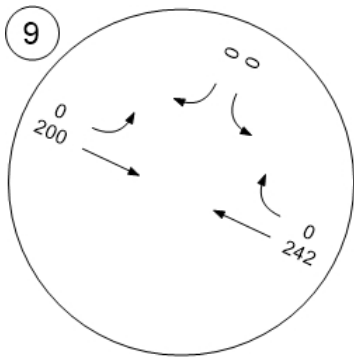
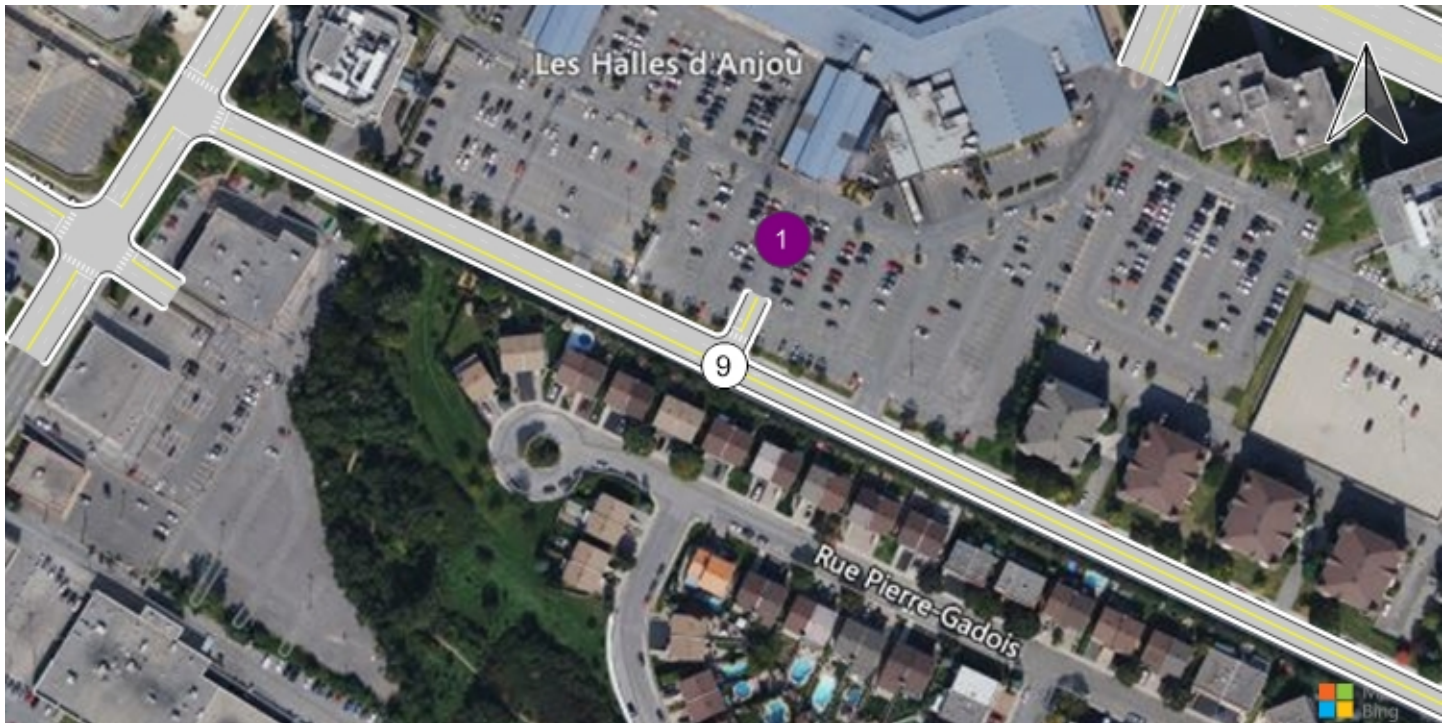




Traffic Volume - Base Volume

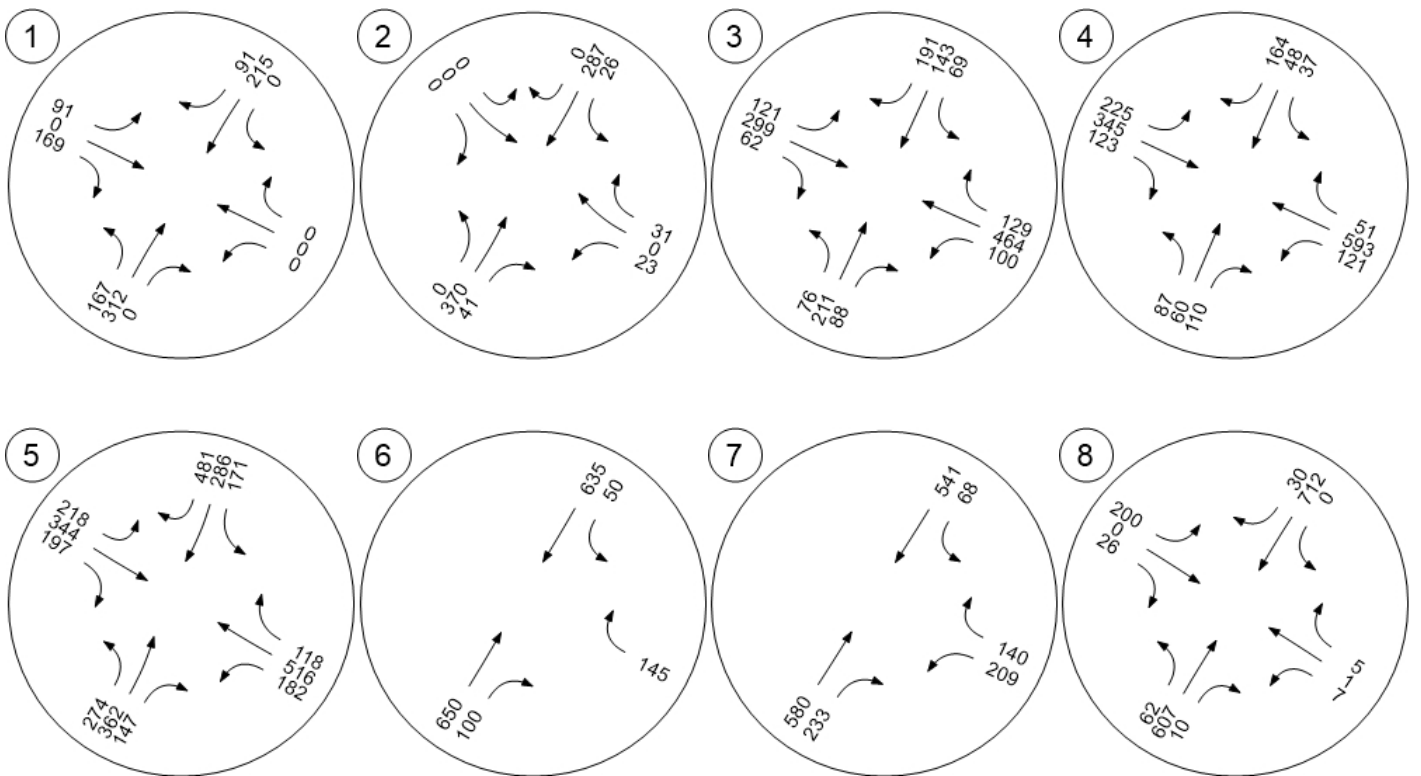


Traffic Volume - Base Volume

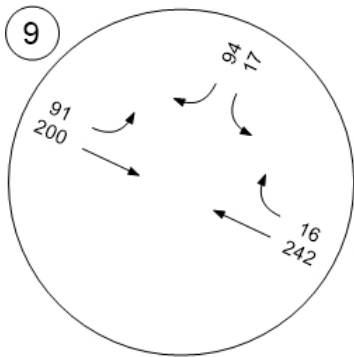
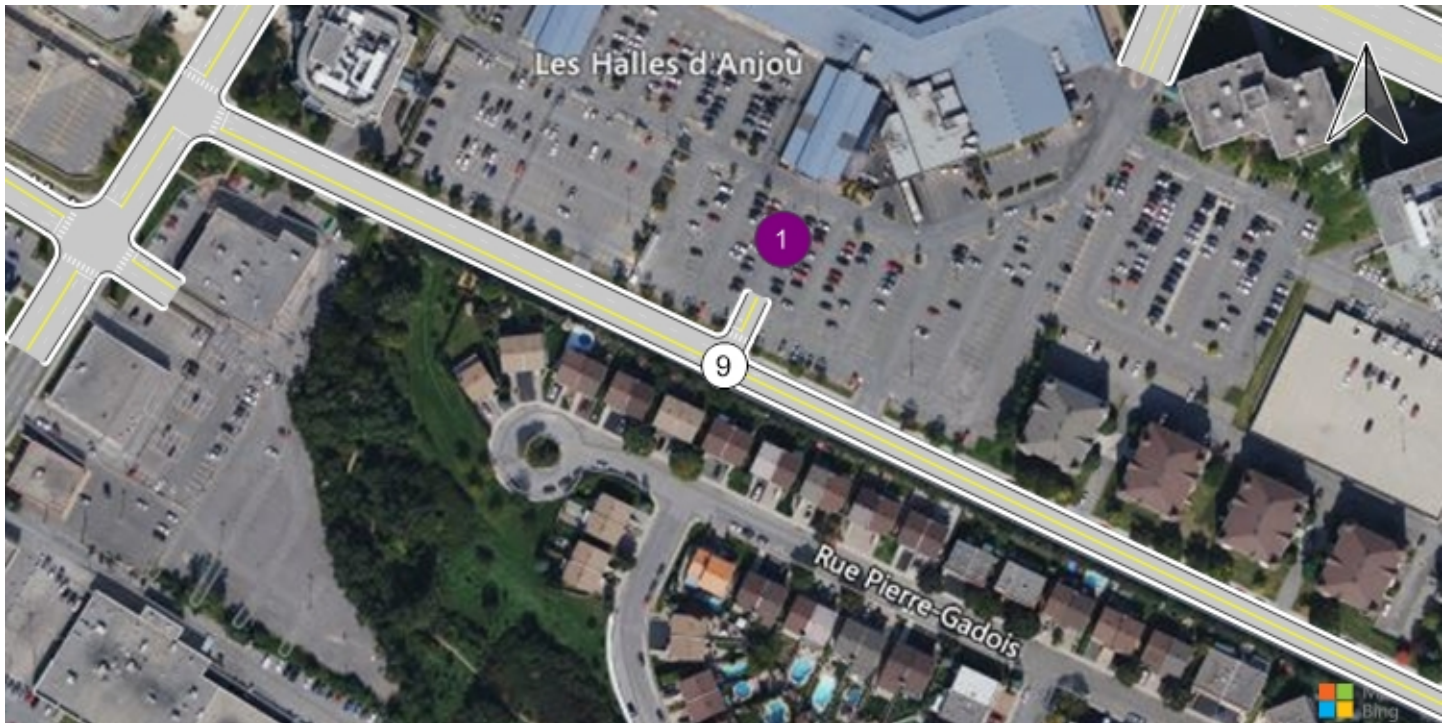




Traffic Volume - Future Total Volume

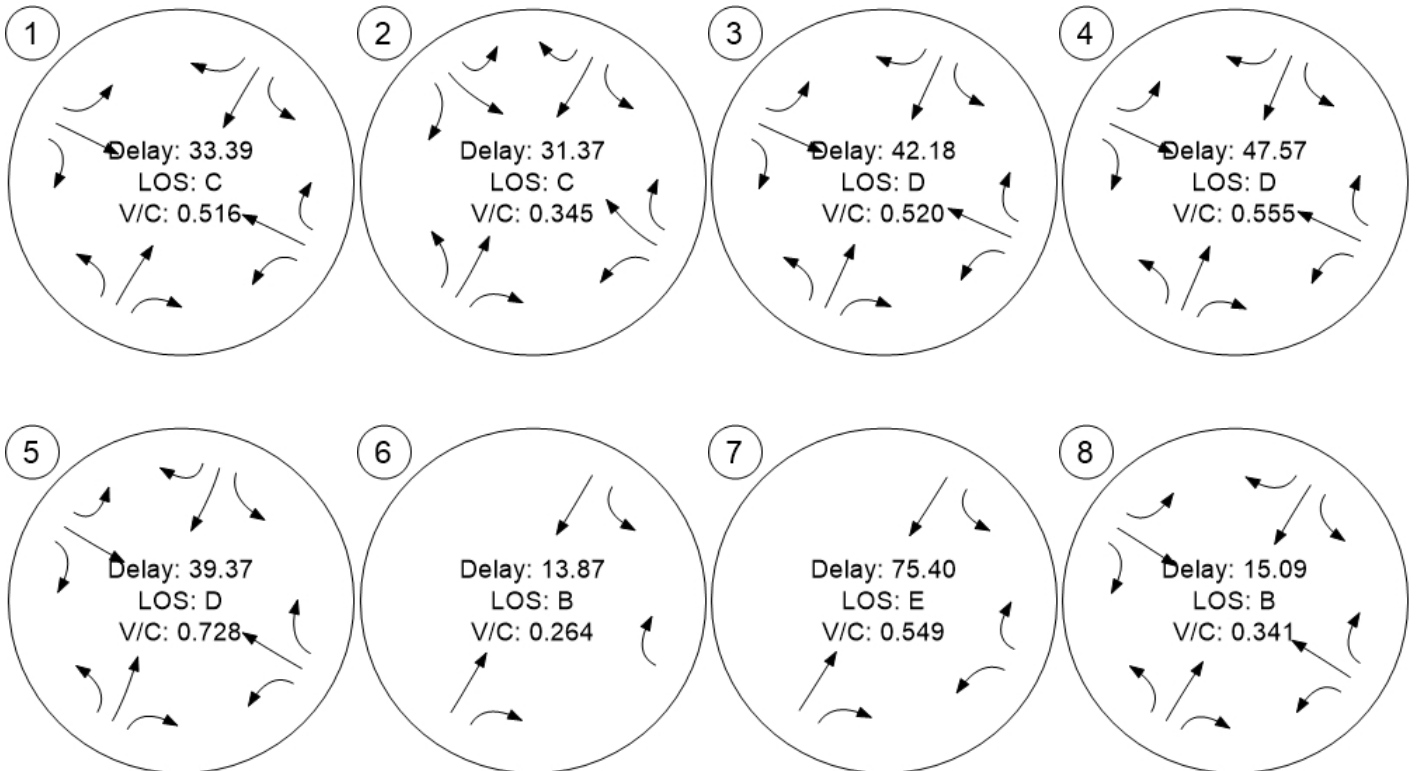


Traffic Volume - Future Total Volume

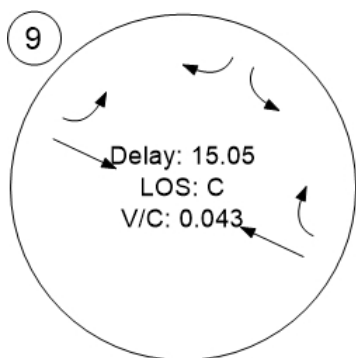
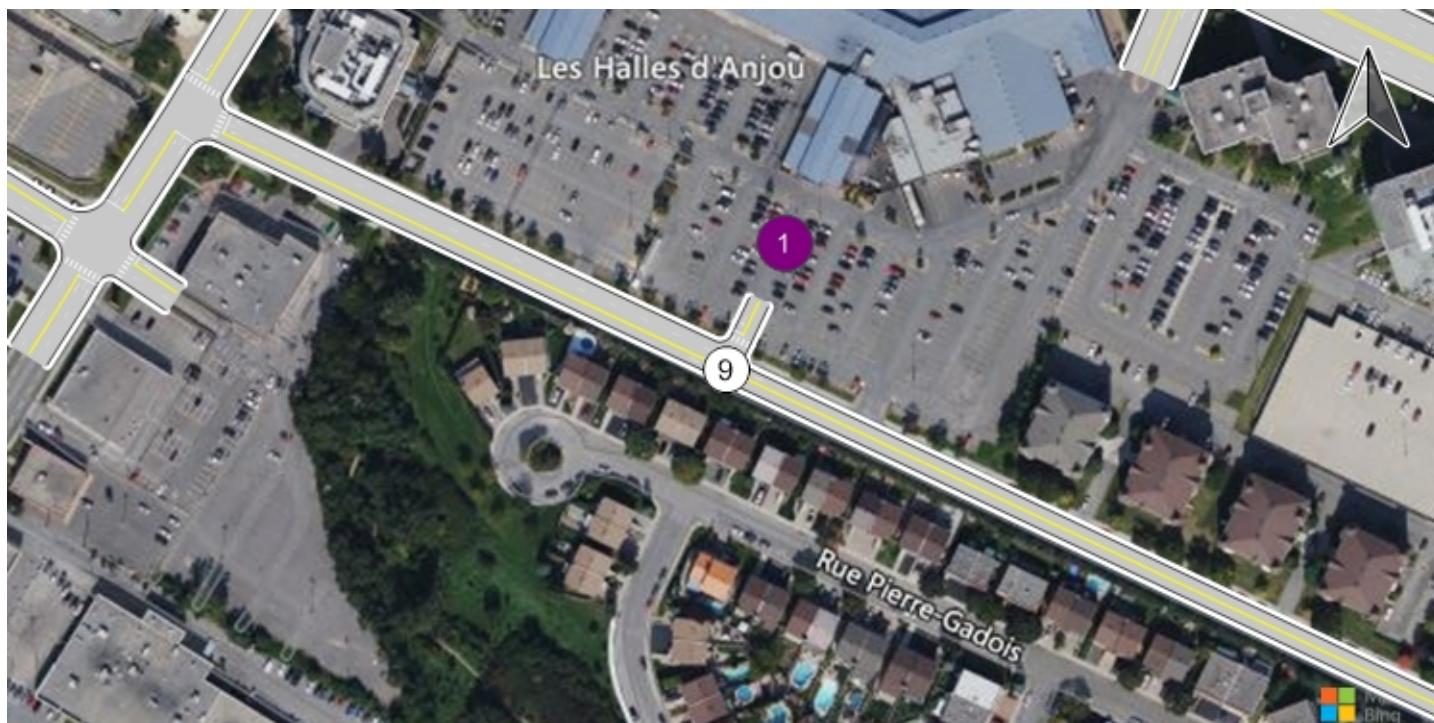




Traffic Conditions



Traffic Conditions



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## Annexe 8 – Mesures d’atténuation sur la situation projetée AM

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 7 Att Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_AM\_RV0B.pdf

## Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	WB Thru	0,338	26,0	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Left	0,239	26,2	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,255	35,1	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	NB Thru	0,255	39,3	D
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Thru	0,410	27,8	C
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,030	9,3	A
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Right	0,340	28,1	C
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Right	0,354	13,9	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,023	11,1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	26,0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,338

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	14	0	52	96	129	0	0	142	48
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	2,08	1,55	0,00	0,00	1,41	6,25
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	12	4	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	17	0	64	100	129	0	0	142	50
Peak Hour Factor	1,0000	1,0000	1,0000	0,4400	1,0000	0,6200	0,7700	0,7000	1,0000	1,0000	0,7700	0,8000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	10	0	26	32	46	0	0	46	16
Total Analysis Volume [veh/h]	0	0	0	39	0	103	130	184	0	0	184	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			0			0			2		
v_di, Inbound Pedestrian Volume crossing in	2			0			0			2		
v_co, Outbound Pedestrian Volume crossing	0			10			0			10		
v_ci, Inbound Pedestrian Volume crossing mi	0			10			0			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,09	0,19	0,14
s, saturation flow rate [veh/h]	1900	1585	1691	1798
c, Capacity [veh/h]	652	562	680	579
d1, Uniform Delay [s]	0,00	22,58	23,31	25,56
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	1,08	2,25	2,29
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,25	0,46	0,43
d, Delay for Lane Group [s/veh]	0,00	23,66	25,56	27,85
Lane Group LOS	A	C	C	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	2,35	5,54	4,55
50th-Percentile Queue Length [ft/ln]	0,00	58,73	138,47	113,83
95th-Percentile Queue Length [veh/ln]	0,00	4,23	9,40	8,05
95th-Percentile Queue Length [ft/ln]	0,00	105,71	234,96	201,32

**Movement, Approach, & Intersection Results**

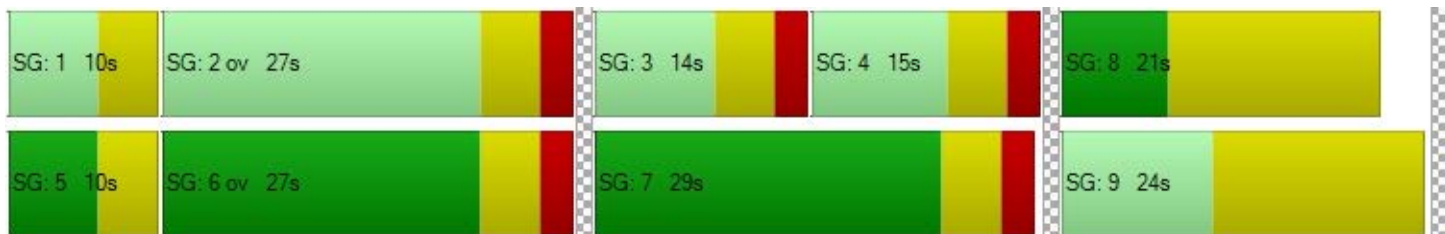
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	23,66	23,66	23,66	25,56	25,56	25,56	27,85	27,85	27,85
Movement LOS	A	A	A	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	0,00			23,66			25,56			27,85		
Approach LOS	A			C			C			C		
d_I, Intersection Delay [s/veh]	25,98											
Intersection LOS	C											
Intersection V/C	0,338											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,714	2,034	2,007	1,999
Crosswalk LOS	A	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	511	511	689	467
d_b, Bicycle Delay [s]	24,94	24,94	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,560	1,794	2,078	1,967
Bicycle LOS	A	A	B	A

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report**

**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	26,2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,239

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	32	0	21	0	0	0	0	134	14	14	152	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,49	0,00	0,00	3,29	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	3	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	0	21	0	0	0	0	137	14	14	154	0
Peak Hour Factor	0,6700	1,0000	0,8800	1,0000	1,0000	1,0000	1,0000	0,7600	0,8800	0,5000	0,8400	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	12	0	6	0	0	0	0	45	4	7	46	0
Total Analysis Volume [veh/h]	48	0	24	0	0	0	0	180	16	28	183	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1		0		0		2					
v_di, Inbound Pedestrian Volume crossing in	2		0		0		1					
v_co, Outbound Pedestrian Volume crossing	5		0		4		0					
v_ci, Inbound Pedestrian Volume crossing mi	4		0		5		0					
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0					
Bicycle Volume [bicycles/h]	0		0		0		0					

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,11	0,12
s, saturation flow rate [veh/h]	1740	1900	1851	1774
c, Capacity [veh/h]	290	296	719	577
d1, Uniform Delay [s]	32,60	0,00	21,63	24,89
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,04	0,00	0,94	1,78
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,25	0,00	0,27	0,37
d, Delay for Lane Group [s/veh]	34,64	0,00	22,57	26,67
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,51	0,00	3,15	3,77
50th-Percentile Queue Length [ft/ln]	37,81	0,00	78,68	94,17
95th-Percentile Queue Length [veh/ln]	2,72	0,00	5,67	6,78
95th-Percentile Queue Length [ft/ln]	68,05	0,00	141,63	169,51

**Movement, Approach, & Intersection Results**

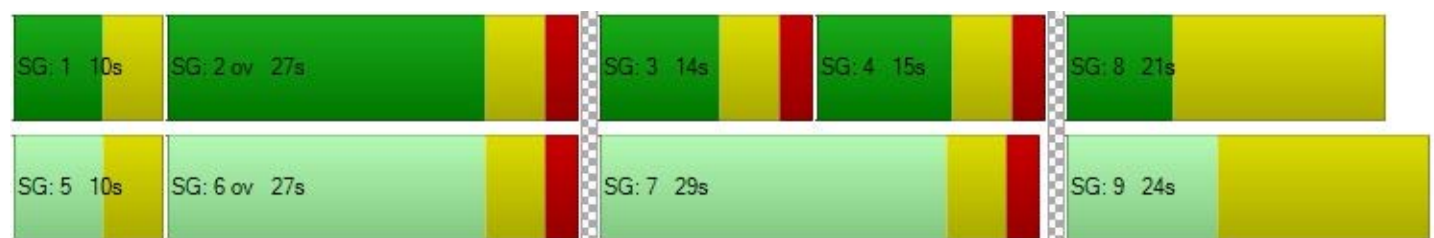
d_M, Delay for Movement [s/veh]	34,64	34,64	34,64	0,00	0,00	0,00	22,57	22,57	22,57	26,67	26,67	26,67
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,64			0,00			22,57			26,67		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	26,19											
Intersection LOS	C											
Intersection V/C	0,239											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,811	1,786	1,923	1,917
Crosswalk LOS	A	A	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,45	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	1,883	1,908
Bicycle LOS	A	A	A	A

**Sequence**





Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	35,1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,255

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	44	238	16	23	157	17	43	57	44	21	42	30
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,78	0,00	8,70	5,10	17,65	2,33	0,00	0,00	4,76	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	0	0	0	0	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	238	16	23	157	17	43	57	47	21	42	30
Peak Hour Factor	0,7900	0,9000	0,6700	0,7200	0,9600	0,7100	0,9000	0,6800	0,8500	0,7500	0,7500	0,5400
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	15	66	6	8	41	6	12	21	14	7	14	14
Total Analysis Volume [veh/h]	58	264	24	32	164	24	48	84	55	28	56	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		7			4			5			7	
v_di, Inbound Pedestrian Volume crossing in		7			5			4			7	
v_co, Outbound Pedestrian Volume crossing		5			5			5			4	
v_ci, Inbound Pedestrian Volume crossing mi		5			4			5			5	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		3			3			1			9	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,03	0,14	0,02	0,02	0,05	0,05	0,04	0,04	0,03	0,02	0,03	0,03
s, saturation flow rate [veh/h]	1810	1843	1592	1685	1823	1732	1344	1900	1602	1284	1900	1609
c, Capacity [veh/h]	343	628	543	319	622	591	337	345	643	239	345	1012
d1, Uniform Delay [s]	44,80	33,46	29,10	44,21	30,24	30,30	42,72	46,23	12,94	49,44	45,52	9,42
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,07	2,06	0,15	0,63	0,52	0,57	0,89	1,67	0,26	0,99	1,01	0,10
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,17	0,42	0,04	0,10	0,15	0,16	0,14	0,24	0,09	0,12	0,16	0,06
d, Delay for Lane Group [s/veh]	45,87	35,52	29,26	44,83	30,76	30,87	43,60	47,89	13,21	50,43	46,53	9,53
Lane Group LOS	D	D	C	D	C	C	D	D	B	D	D	A
Critical Lane Group	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1,71	6,92	0,54	0,93	2,22	2,19	1,38	2,54	0,66	0,88	1,66	0,65
50th-Percentile Queue Length [ft/ln]	42,74	172,93	13,54	23,28	55,48	54,72	34,53	63,57	16,44	22,05	41,53	16,29
95th-Percentile Queue Length [veh/ln]	3,08	11,23	0,97	1,68	3,99	3,94	2,49	4,58	1,18	1,59	2,99	1,17
95th-Percentile Queue Length [ft/ln]	76,94	280,76	24,37	41,90	99,87	98,49	62,16	114,43	29,59	39,69	74,75	29,32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45,87	35,52	29,26	44,83	30,81	30,87	43,60	47,89	13,21	50,43	46,53	9,53
Movement LOS	D	D	C	D	C	C	D	D	B	D	D	A
d_A, Approach Delay [s/veh]	36,82			32,86			36,59			32,51		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	35,12											
Intersection LOS	D											
Intersection V/C	0,255											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0			9,0			9,0			9,0		
M_corner, Corner Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft²/ped]	759,61			812,73			856,26			549,97		
d_p, Pedestrian Delay [s]	36,45			36,45			36,45			36,45		
l_p,int, Pedestrian LOS Score for Intersection	2,457			2,484			2,212			2,356		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	889			889			444			444		
d_b, Bicycle Delay [s]	13,91			13,91			27,24			27,35		
l_b,int, Bicycle LOS Score for Intersection	2,131			1,741			1,868			1,791		
Bicycle LOS	B			A			A			A		

**Sequence**





Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	39,3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,255

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	22	296	2	43	351	46	6	2	17	8	21	24
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	2,70	0,00	6,98	6,84	4,55	0,00	0,00	0,00	0,00	0,00	4,17
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	296	2	48	351	46	6	2	17	8	21	24
Peak Hour Factor	0,8300	0,9100	0,5000	0,6000	0,8400	0,6100	0,6300	0,5000	0,6700	0,6700	0,5300	0,6700
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	7	81	1	20	104	19	2	1	6	3	10	9
Total Analysis Volume [veh/h]	27	325	4	80	418	75	10	4	25	12	40	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		1			8			8			1	
v_di, Inbound Pedestrian Volume crossing in		1			8			8			1	
v_co, Outbound Pedestrian Volume crossing		5			6			4			5	
v_ci, Inbound Pedestrian Volume crossing mi		4			5			5			6	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			8	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	10	30	0	10	30	0	0	17	0	0	20	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	16	35	0	16	35	0	0	22	0	0	25	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	C	C	C	C
C, Cycle Length [s]	122	122	122	122	122	122	122	122	122	122
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	51	35	35	51	35	35	22	22	25	25
g / C, Green / Cycle	0,42	0,29	0,29	0,42	0,29	0,29	0,18	0,18	0,20	0,20
(v / s)_i Volume / Saturation Flow Rate	0,02	0,17	0,00	0,06	0,14	0,14	0,01	0,02	0,02	0,03
s, saturation flow rate [veh/h]	1198	1859	1615	1231	1797	1704	1834	1470	1876	1471
c, Capacity [veh/h]	452	533	463	421	516	489	331	265	384	302
d1, Uniform Delay [s]	24,90	37,59	31,10	26,35	36,08	36,13	41,30	41,69	39,54	39,68
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,25	5,11	0,03	1,00	3,29	3,53	0,24	0,71	0,64	0,95
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,06	0,61	0,01	0,19	0,49	0,49	0,04	0,09	0,12	0,14
d, Delay for Lane Group [s/veh]	25,15	42,70	31,13	27,35	39,37	39,66	41,54	42,40	40,19	40,63
Lane Group LOS	C	D	C	C	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0,53	9,14	0,09	1,65	6,71	6,45	0,37	0,69	1,22	1,10
50th-Percentile Queue Length [ft/ln]	13,28	228,48	2,24	41,17	167,72	161,33	9,33	17,13	30,46	27,61
95th-Percentile Queue Length [veh/ln]	0,96	14,10	0,16	2,96	10,96	10,62	0,67	1,23	2,19	1,99
95th-Percentile Queue Length [ft/ln]	23,91	352,43	4,04	74,11	273,92	265,48	16,80	30,83	54,84	49,70



**Movement, Approach, & Intersection Results**

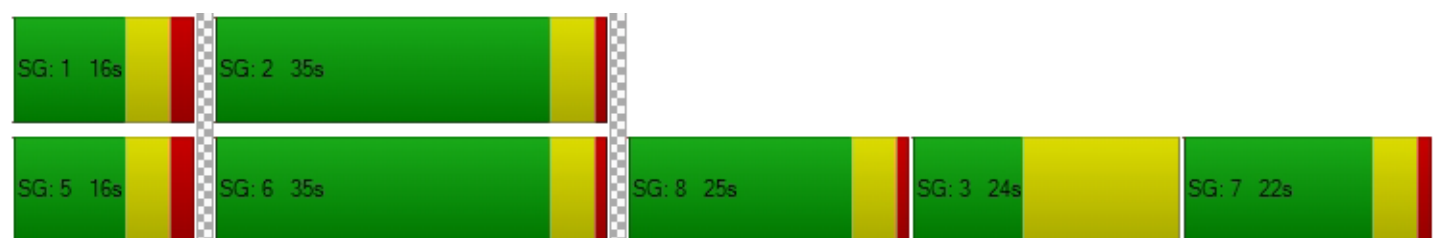
d_M, Delay for Movement [s/veh]	25,15	42,70	31,13	27,35	39,48	39,66	41,54	41,54	42,40	40,19	40,25	40,63
Movement LOS	C	D	C	C	D	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	41,24			37,81			42,09			40,39		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	39,34											
Intersection LOS	D											
Intersection V/C	0,255											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0	14,0	14,0	14,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	1091,71	879,49	496,24	4510,51
d_p, Pedestrian Delay [s]	46,82	46,82	46,82	46,82
I_p,int, Pedestrian LOS Score for Intersection	2,470	2,495	2,198	2,218
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	500	283	333
d_b, Bicycle Delay [s]	33,75	33,75	44,20	41,83
I_b,int, Bicycle LOS Score for Intersection	2,147	2,032	1,592	1,632
Bicycle LOS	B	B	A	A

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	27,8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,410

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	38	223	40	133	201	134	73	40	51	44	131	191
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,63	2,69	2,50	3,01	3,48	1,49	4,11	15,00	13,73	13,64	5,34	2,09
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	8	25	38	5	0	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	223	40	133	201	142	98	78	56	44	141	191
Peak Hour Factor	0,8600	0,9300	0,7700	0,7900	0,9700	0,8800	0,5900	0,6700	0,6700	0,7900	0,7800	0,8200
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	11	60	13	42	52	40	42	29	21	14	45	58
Total Analysis Volume [veh/h]	44	240	52	168	207	161	166	116	84	56	181	233
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	4		6			6			5			
v_di, Inbound Pedestrian Volume crossing in	5		6			6			4			
v_co, Outbound Pedestrian Volume crossing	11		2			10			2			
v_ci, Inbound Pedestrian Volume crossing mi	10		2			11			2			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		1			0			10			

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	6,0	0,0	0,0	6,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,04	0,13	0,03	0,13	0,11	0,11	0,12	0,07	0,06	0,05	0,10	0,15
s, saturation flow rate [veh/h]	1252	1860	1569	1334	1848	1550	1368	1675	1414	1141	1820	1559
c, Capacity [veh/h]	533	565	476	539	561	471	684	598	505	417	650	557
d1, Uniform Delay [s]	19,79	31,19	28,08	21,54	30,37	30,56	16,35	24,87	24,58	28,09	25,70	27,12
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,30	2,34	0,46	1,51	1,70	2,20	0,84	0,72	0,71	0,67	1,07	2,30
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,08	0,43	0,11	0,31	0,35	0,37	0,24	0,19	0,17	0,13	0,28	0,42
d, Delay for Lane Group [s/veh]	20,09	33,52	28,55	23,05	32,08	32,76	17,19	25,59	25,29	28,76	26,76	29,43
Lane Group LOS	C	C	C	C	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0,73	5,54	1,07	3,04	4,37	3,94	2,53	2,25	1,63	1,17	3,63	5,03
50th-Percentile Queue Length [ft/ln]	18,24	138,56	26,78	76,05	109,21	98,42	63,37	56,33	40,66	29,32	90,81	125,75
95th-Percentile Queue Length [veh/ln]	1,31	9,40	1,93	5,48	7,80	7,09	4,56	4,06	2,93	2,11	6,54	8,71
95th-Percentile Queue Length [ft/ln]	32,83	235,08	48,20	136,90	194,90	177,16	114,06	101,40	73,19	52,78	163,46	217,71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20,09	33,52	28,55	23,05	32,11	32,76	17,19	25,59	25,29	28,76	26,76	29,43
Movement LOS	C	C	C	C	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	30,99			29,47			21,71			28,32		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27,79											
Intersection LOS	C											
Intersection V/C	0,410											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	798,03	3702,33	647,82	842,16
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	2,512	2,606	2,473	2,534
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,02	30,03	26,47	26,60
I_b,int, Bicycle LOS Score for Intersection	2,114	2,002	2,164	2,335
Bicycle LOS	B	B	B	B

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	9,3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,030

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻↻		↻↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	26	160	24	12	340
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	8,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	68	0	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	26	228	24	12	358
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	7	57	6	3	90
Total Analysis Volume [veh/h]	0	26	228	24	12	358
Pedestrian Volume [ped/h]	15		0		0	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,03	0,00	0,00	0,01	0,00
d_M, Delay for Movement [s/veh]	0,00	9,27	0,00	0,00	7,85	0,00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	0,09	0,00	0,00	0,03	0,01
95th-Percentile Queue Length [ft/ln]	0,00	2,31	0,00	0,00	0,71	0,36
d_A, Approach Delay [s/veh]	9,27		0,00		0,25	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0,52					
Intersection LOS	A					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	28,1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,340

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	91	31	158	79	31	336
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,10	16,13	6,33	0,00	3,23	2,08
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	68	0	15	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	99	158	94	49	336
Peak Hour Factor	0,8400	0,7800	0,7900	0,6600	0,8600	0,8900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	35	32	50	36	14	94
Total Analysis Volume [veh/h]	139	127	200	142	57	378
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	9		9		0	
v_ci, Inbound Pedestrian Volume crossing mi	9		9		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	29	29	5	39
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	31	31	35	35	10	44
Vehicle Extension [s]	3,0	3,0	0,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	15
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	0,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	5,0	2,0	0,0	2,0	2,0	2,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	7,00	4,00	4,00	4,00	4,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	5,00	2,00	2,00	2,00	0,00	2,00
g_i, Effective Green Time [s]	24	20	74	74	50	40
g / C, Green / Cycle	0,20	0,17	0,62	0,62	0,42	0,33
(v / s)_i Volume / Saturation Flow Rate	0,08	0,09	0,09	0,11	0,14	0,13
s, saturation flow rate [veh/h]	1794	1390	1805	1555	1603	1701
c, Capacity [veh/h]	359	232	1113	959	635	567
d1, Uniform Delay [s]	41,63	45,79	9,74	9,91	24,49	30,49
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,14	9,02	0,29	0,41	1,51	1,90
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,39	0,55	0,15	0,18	0,35	0,38
d, Delay for Lane Group [s/veh]	44,76	54,81	10,03	10,31	26,00	32,40
Lane Group LOS	D	D	B	B	C	C
Critical Lane Group	No	Yes	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	3,90	4,06	1,96	2,01	4,51	5,02
50th-Percentile Queue Length [ft/ln]	97,40	101,38	48,99	50,23	112,66	125,50
95th-Percentile Queue Length [veh/ln]	7,01	7,30	3,53	3,62	7,99	8,69
95th-Percentile Queue Length [ft/ln]	175,33	182,48	88,18	90,42	199,69	217,36

**Movement, Approach, & Intersection Results**

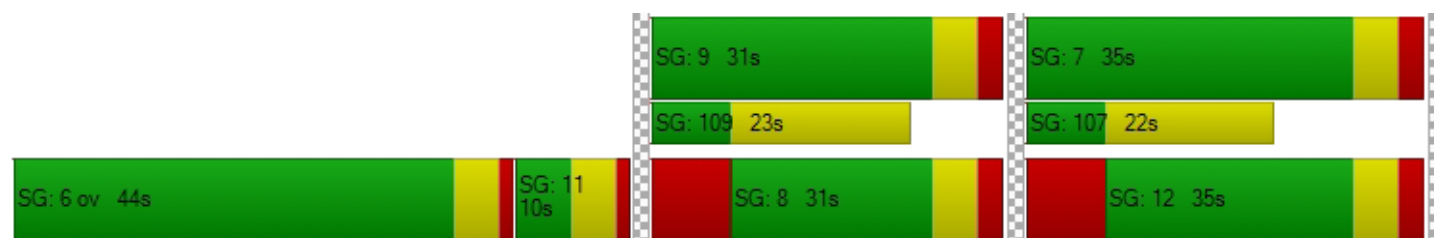
d_M, Delay for Movement [s/veh]	44,76	54,81	10,07	10,31	26,00	29,61
Movement LOS	D	D	B	B	C	C
d_A, Approach Delay [s/veh]	49,56		10,17		29,14	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	28,13					
Intersection LOS	C					
Intersection V/C	0,340					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,389	0,000	2,331
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	1233	650
d_b, Bicycle Delay [s]	37,62	8,82	27,34
I_b,int, Bicycle LOS Score for Intersection	1,560	1,842	1,918
Bicycle LOS	A	A	A

**Sequence**

Ring 1	-	-	-	9	-	7	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	-	12	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	13,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,354

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		



**Volumes**

Name												
Base Volume Input [veh/h]	2	1	0	79	4	16	14	160	1	0	420	9
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	18,75	7,14	6,25	0,00	1,90	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	8	0	0	0	7	0	0	22	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	0	87	4	16	14	167	1	0	442	13
Peak Hour Factor	0,5000	0,2500	1,0000	0,6800	0,5000	0,8000	0,5000	0,6600	0,2500	1,0000	0,8800	0,5600
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	1	1	0	32	2	5	7	63	1	0	126	6
Total Analysis Volume [veh/h]	4	4	0	128	8	20	28	253	4	0	502	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			2			2			0		
v_di, Inbound Pedestrian Volume crossing in	0			2			2			0		
v_co, Outbound Pedestrian Volume crossing	7			4			6			4		
v_ci, Inbound Pedestrian Volume crossing mi	6			4			7			4		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	70,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	0	0	6	17	0	6	17	0
Maximum Green [s]	19	19	0	7	0	0	6	69	0	6	69	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	28	28	0	7	35	0	12	73	0	12	73	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	5	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	1,00	2,00	1,00	2,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	1,00	0,00	1,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	28	32	25	84	72	84	72
g / C, Green / Cycle	0,23	0,27	0,21	0,70	0,60	0,70	0,60
(v / s)_i Volume / Saturation Flow Rate	0,00	0,08	0,02	0,10	0,09	0,15	0,15
s, saturation flow rate [veh/h]	1632	1521	1529	1489	1635	1900	1700
c, Capacity [veh/h]	426	466	319	1072	981	1352	1020
d1, Uniform Delay [s]	35,42	37,13	38,31	6,03	10,52	6,50	11,24
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,08	1,46	0,54	0,26	0,31	0,34	0,57
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,02	0,27	0,09	0,13	0,15	0,20	0,24
d, Delay for Lane Group [s/veh]	35,50	38,59	38,85	6,29	10,83	6,84	11,81
Lane Group LOS	D	D	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,19	3,27	0,72	1,20	1,72	2,48	3,20
50th-Percentile Queue Length [ft/ln]	4,79	81,83	17,96	29,89	43,02	61,91	80,03
95th-Percentile Queue Length [veh/ln]	0,35	5,89	1,29	2,15	3,10	4,46	5,76
95th-Percentile Queue Length [ft/ln]	8,63	147,30	32,33	53,81	77,43	111,44	144,06

**Movement, Approach, & Intersection Results**

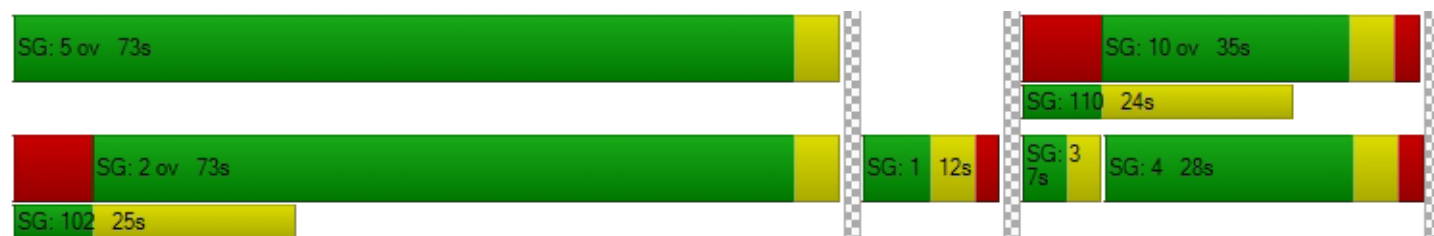
d_M, Delay for Movement [s/veh]	35,50	35,50	35,50	38,59	38,85	38,85	6,29	8,78	10,83	6,84	9,07	11,81
Movement LOS	D	D	D	D	D	D	A	A	B	A	A	B
d_A, Approach Delay [s/veh]	35,50			38,64			8,56			9,19		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13,94											
Intersection LOS	B											
Intersection V/C	0,354											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	472,31	814,30	1757,76	0,00
d_p, Pedestrian Delay [s]	49,50	49,50	49,50	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,960	2,062	2,348	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1150	1150
d_b, Bicycle Delay [s]	40,04	40,02	10,84	10,84
I_b,int, Bicycle LOS Score for Intersection	1,573	1,688	1,795	1,993
Bicycle LOS	A	A	A	A

**Sequence**




Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	-	4	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 9: Entrée développement / Avenue des Halles**

Control Type:	Two-way stop	Delay (sec / veh):	11,1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,023

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	135	0	0	110	0	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	4,00	4,00	3,23	3,23	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	33	0	15	94
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	6	33	110	15	94
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	34	2	8	28	4	24
Total Analysis Volume [veh/h]	135	6	33	110	15	94
Pedestrian Volume [ped/h]	0		0		2	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,02	0,00	0,02	0,10
d_M, Delay for Movement [s/veh]	0,00	0,00	7,58	0,00	11,07	9,58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,07	0,07	0,43	0,43
95th-Percentile Queue Length [ft/ln]	0,00	0,00	1,77	1,77	10,81	10,81
d_A, Approach Delay [s/veh]	0,00		1,75		9,78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3,35					
Intersection LOS	B					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 7 Att Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_AM\_RV0B.pdf

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	17	0	64	100	129	0	0	142	50	502

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	32	0	21	0	0	0	0	137	14	14	154	0	372

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	46	238	16	23	157	17	43	57	47	21	42	30	737

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	22	296	2	48	351	46	6	2	17	8	21	24	843

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	38	223	40	133	201	142	98	78	56	44	141	191	1385

ID	Intersection Name	Northbound			Eastbound		Westbound		Total Volume
		Right			Thru	Right	Left	Thru	
6	Accès Halles / Rue Jean-Talon Est	26			228	24	12	358	648



ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	117	99	158	94	49	336	853

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	2	1	0	87	4	16	14	167	1	0	442	13	747

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	135	6	33	110	15	94	393

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 7 Att Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_AM\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	14	0	52	96	129	0	0	142	48	481
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	3	0	12	4	0	0	0	0	2	21
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>64</b>	<b>100</b>	<b>129</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>50</b>	<b>502</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	32	0	21	0	0	0	0	134	14	14	152	0	367
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	3	0	0	2	0	5
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>32</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>137</b>	<b>14</b>	<b>14</b>	<b>154</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	44	238	16	23	157	17	43	57	44	21	42	30	732
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	2	0	0	0	0	0	0	0	3	0	0	0	5
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>46</b>	<b>238</b>	<b>16</b>	<b>23</b>	<b>157</b>	<b>17</b>	<b>43</b>	<b>57</b>	<b>47</b>	<b>21</b>	<b>42</b>	<b>30</b>	<b>737</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	22	296	2	43	351	46	6	2	17	8	21	24	838
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	5	0	0	0	0	0	0	0	0	5
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>22</b>	<b>296</b>	<b>2</b>	<b>48</b>	<b>351</b>	<b>46</b>	<b>6</b>	<b>2</b>	<b>17</b>	<b>8</b>	<b>21</b>	<b>24</b>	<b>843</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	38	223	40	133	201	134	73	40	51	44	131	191	1299	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	8	25	38	5	0	10	0	0	86
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>38</b>	<b>223</b>	<b>40</b>	<b>133</b>	<b>201</b>	<b>142</b>	<b>98</b>	<b>78</b>	<b>56</b>	<b>44</b>	<b>141</b>	<b>191</b>	<b>1385</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	26	160	24	12	340	562	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	68	0	0	18	86	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>26</b>	<b>228</b>	<b>24</b>	<b>12</b>	<b>358</b>	<b>648</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	91	31	158	79	31	336	726
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	26	68	0	15	18	0	127
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>117</b>	<b>99</b>	<b>158</b>	<b>94</b>	<b>49</b>	<b>336</b>	<b>853</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	2	1	0	79	4	16	14	160	1	0	420	9	706
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	8	0	0	0	7	0	0	22	4	41
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>87</b>	<b>4</b>	<b>16</b>	<b>14</b>	<b>167</b>	<b>1</b>	<b>0</b>	<b>442</b>	<b>13</b>	<b>747</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	135	0	0	110	0	0	245
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	6	33	0	15	94	148
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>135</b>	<b>6</b>	<b>33</b>	<b>110</b>	<b>15</b>	<b>94</b>	<b>393</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 7 Att Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_AM\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	38	109	147	100,00
<b>Added Trips Total</b>								<b>38</b>	<b>109</b>	<b>147</b>	<b>100,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 7 Att Future AM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_AM\_RV0B.pdf

**Trip Distribution summary**

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	17,62	7	20,27	22
3: Gate	19,87	8	3,84	4
4: Gate	25,18	10	34,11	38
5: Gate	22,33	8	22,53	25
6: Gate	0,00	0	5,00	5
7: Gate	5,00	2	3,02	3
8: Gate	10,00	4	11,23	12
<b>Total</b>	<b>100,00</b>	<b>39</b>	<b>100,00</b>	<b>109</b>

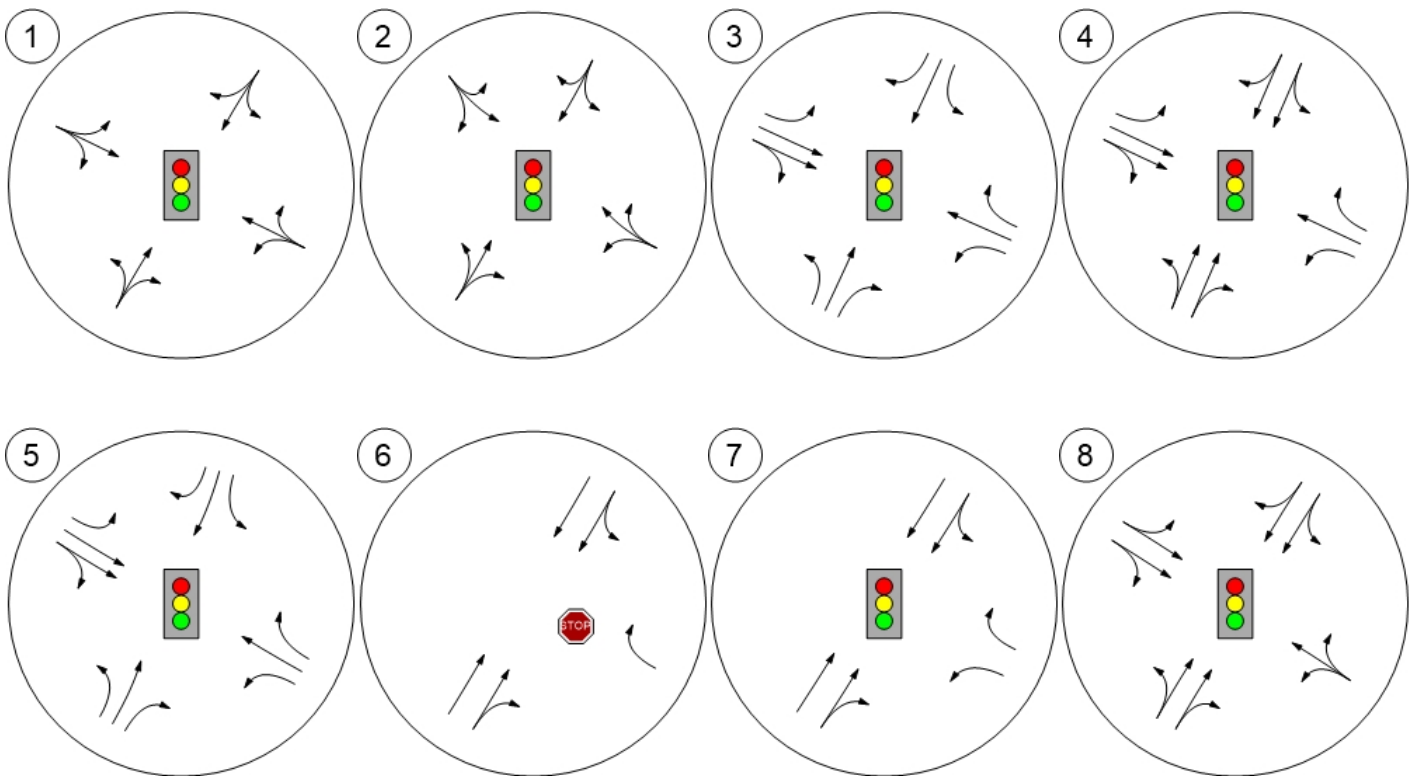


Study Intersections

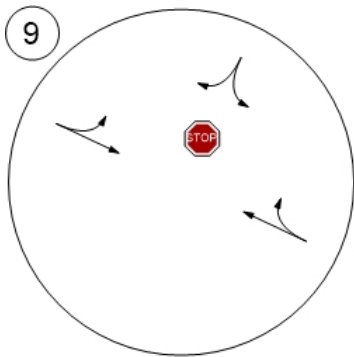
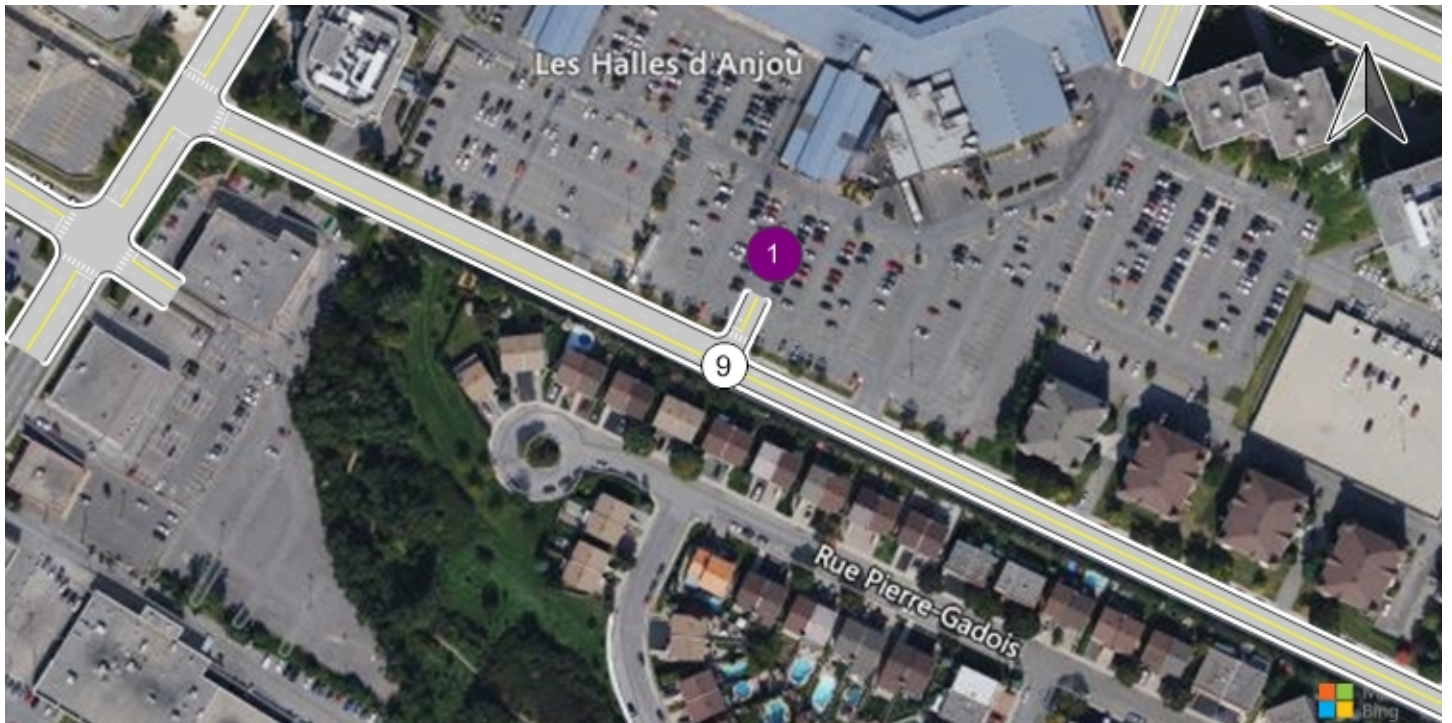




Lane Configuration and Traffic Control

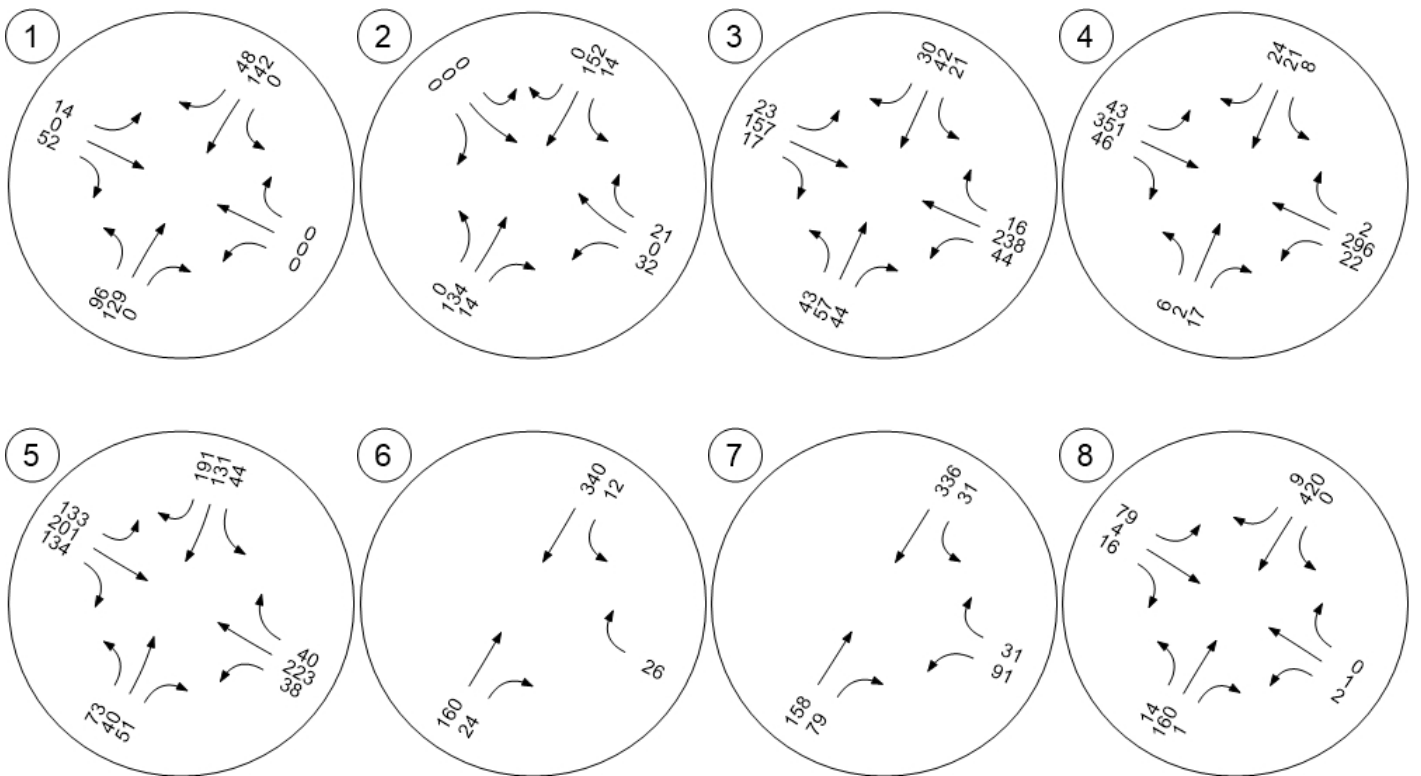


Lane Configuration and Traffic Control

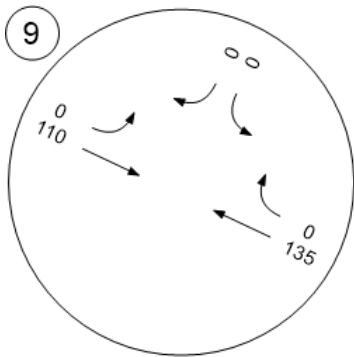
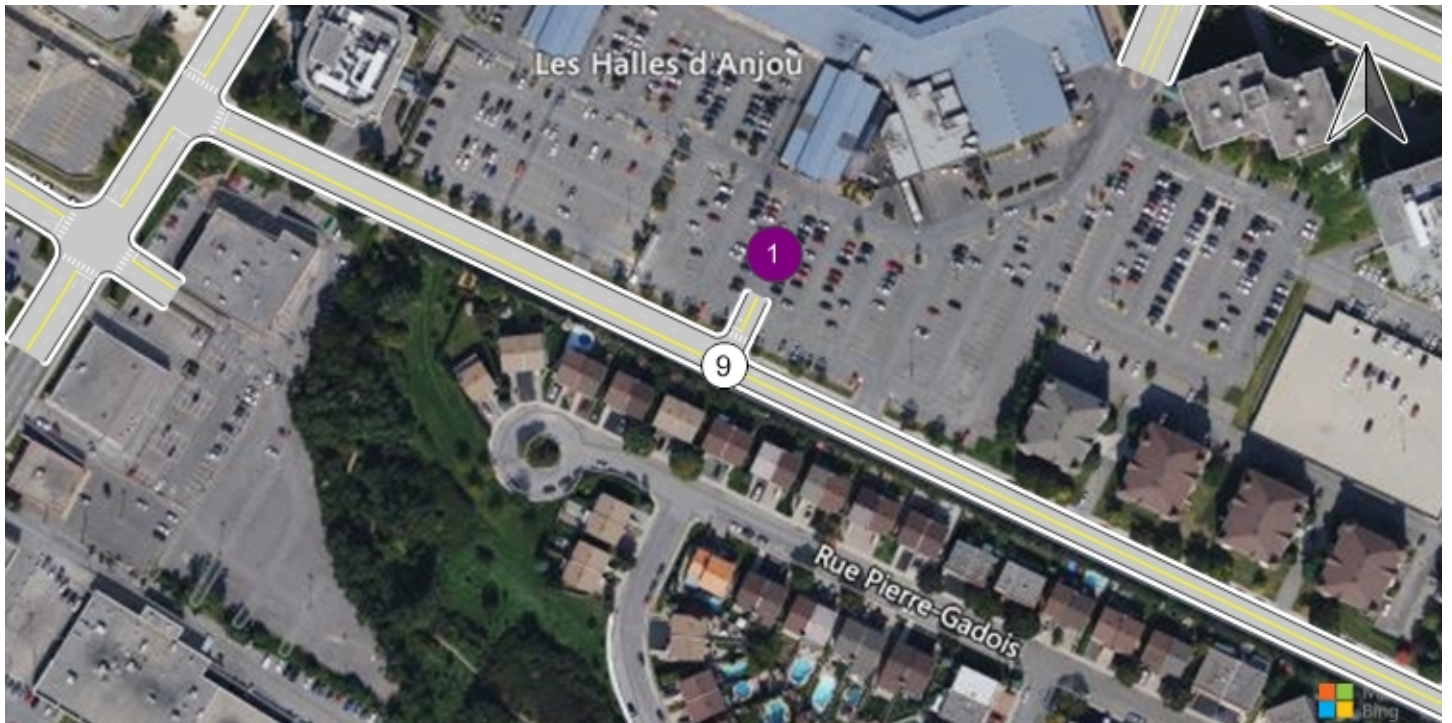




Traffic Volume - Base Volume

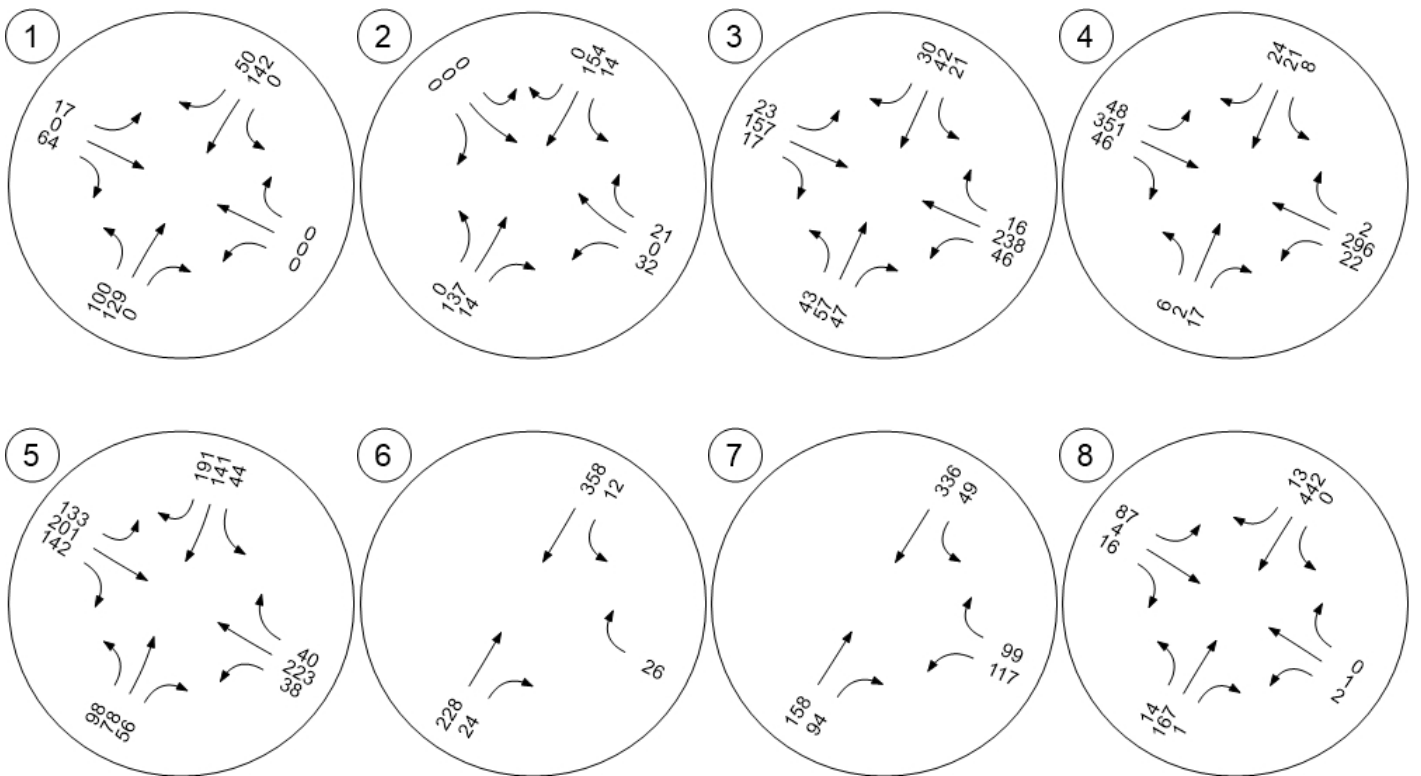


Traffic Volume - Base Volume

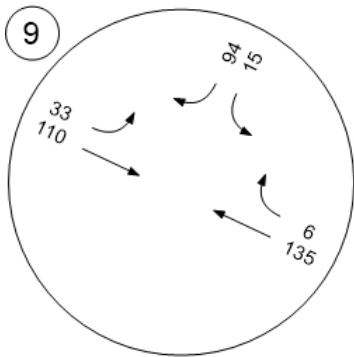
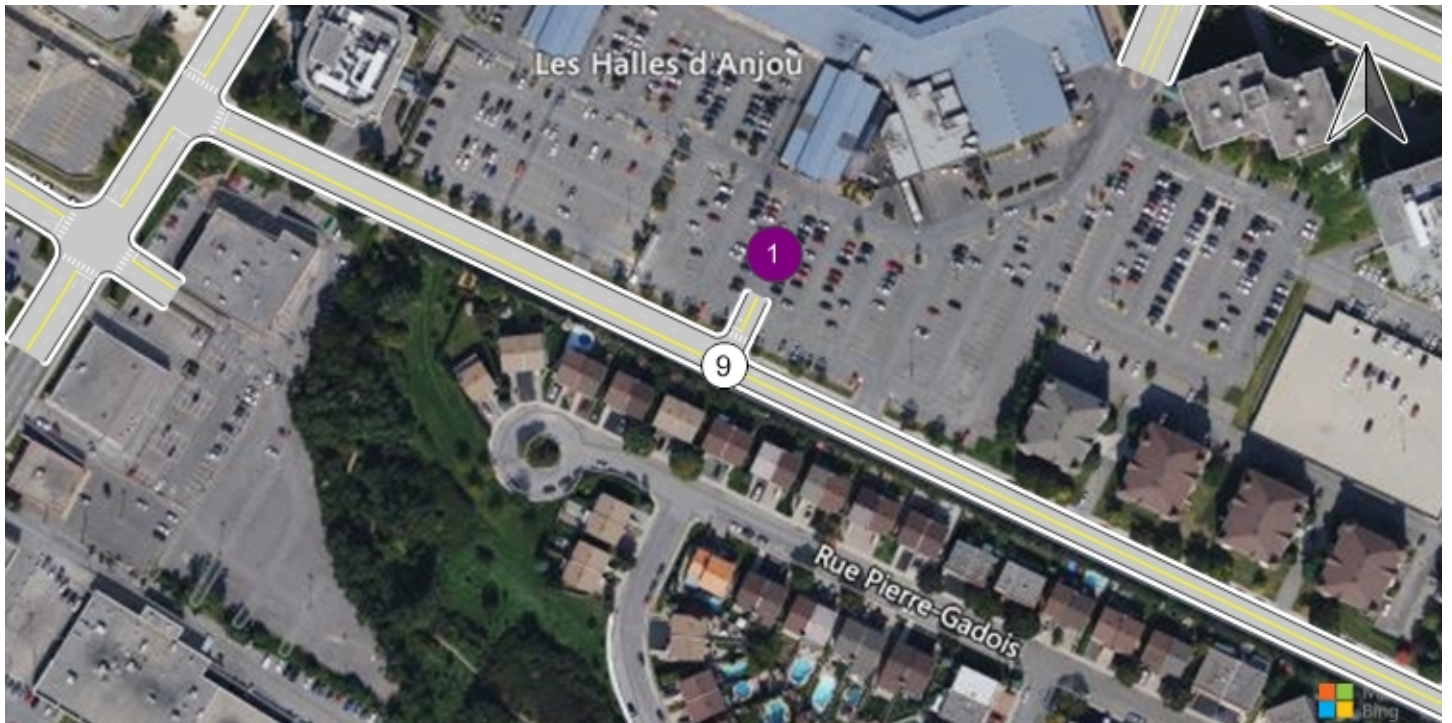




Traffic Volume - Future Total Volume

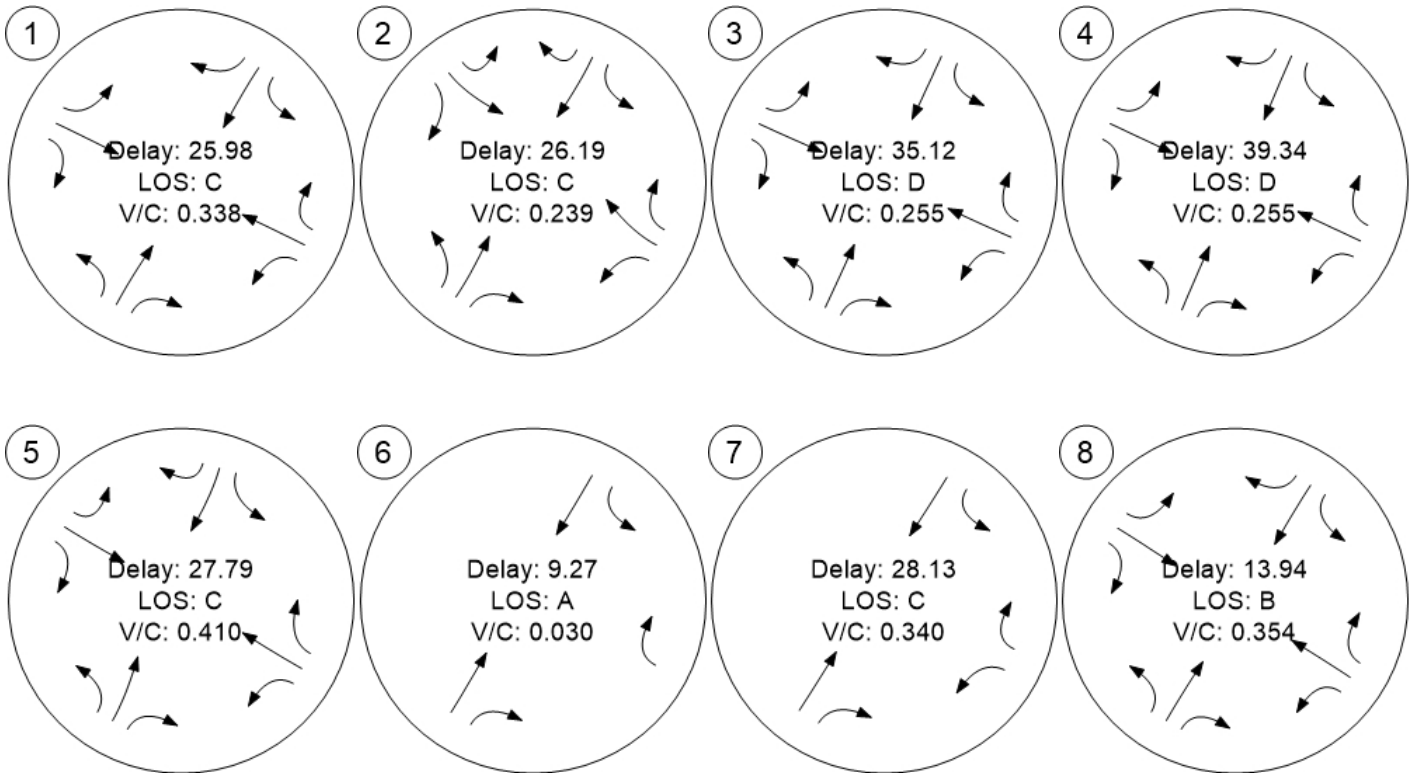


Traffic Volume - Future Total Volume



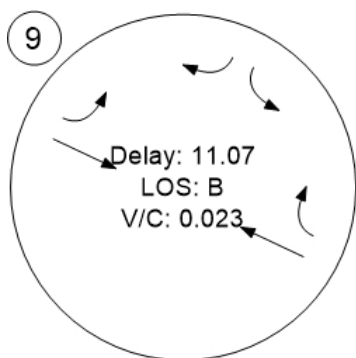
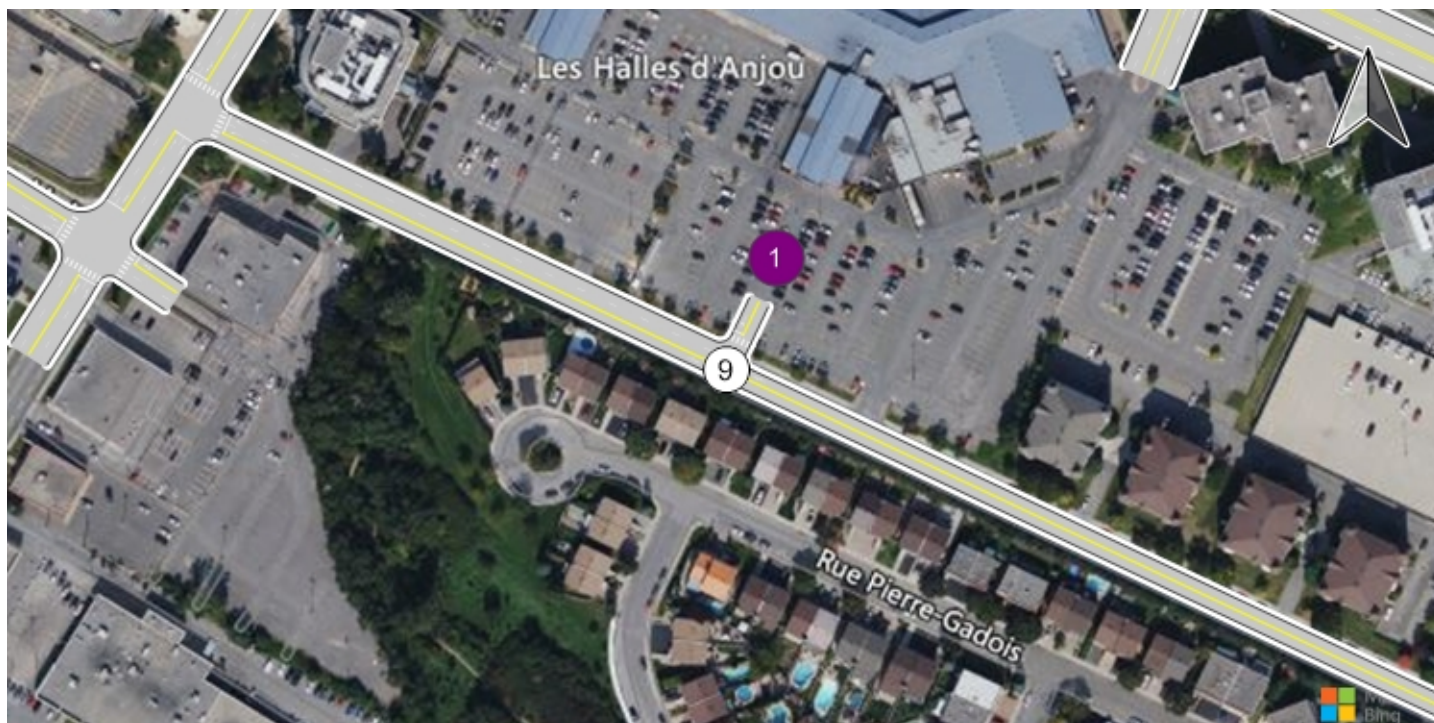


Traffic Conditions





Traffic Conditions



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## Annexe 9 – Mesures d’atténuation sur la situation projetée PM

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L’humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

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Scenario 8 Att Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_PM\_RV0B.pdf

## Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	EB Thru	0,483	33,3	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Left	0,354	30,6	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,498	41,8	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	NB Thru	0,573	70,8	E
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Right	0,863	43,5	D
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,297	13,9	B
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	NB Right	0,380	30,0	C
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Left	0,317	15,0	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,022	14,4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	33,3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,483

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	67	0	153	189	299	0	0	180	78
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	3,17	1,67	0,00	0,00	2,22	7,69
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	6	4	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	70	0	159	193	299	0	0	180	90
Peak Hour Factor	1,0000	1,0000	1,0000	0,8000	1,0000	0,8100	0,9100	0,8800	1,0000	1,0000	0,7900	0,8100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	22	0	49	53	85	0	0	57	28
Total Analysis Volume [veh/h]	0	0	0	88	0	196	212	340	0	0	228	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5			0			0			5		
v_di, Inbound Pedestrian Volume crossing in	5			0			0			5		
v_co, Outbound Pedestrian Volume crossing	5			13			5			13		
v_ci, Inbound Pedestrian Volume crossing mi	5			13			5			13		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14



**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,18	0,32	0,19
s, saturation flow rate [veh/h]	1900	1577	1737	1765
c, Capacity [veh/h]	652	561	695	569
d1, Uniform Delay [s]	0,00	25,02	27,64	27,29
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	3,25	9,12	4,54
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,51	0,79	0,60
d, Delay for Lane Group [s/veh]	0,00	28,27	36,76	31,83
Lane Group LOS	A	C	D	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	5,35	12,41	6,85
50th-Percentile Queue Length [ft/ln]	0,00	133,81	310,27	171,27
95th-Percentile Queue Length [veh/ln]	0,00	9,15	18,19	11,14
95th-Percentile Queue Length [ft/ln]	0,00	228,67	454,71	278,58

**Movement, Approach, & Intersection Results**

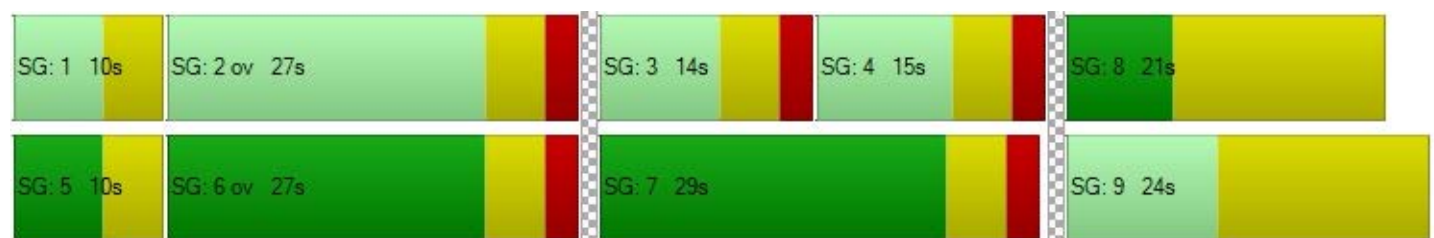
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	28,27	28,27	28,27	36,76	36,76	36,76	31,83	31,83	31,83
Movement LOS	A	A	A	C	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	0,00			28,27			36,76			31,83		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	33,29											
Intersection LOS	C											
Intersection V/C	0,483											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,714	2,505	2,190	2,213
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	511	511	689	467
d_b, Bicycle Delay [s]	24,94	24,94	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,560	2,028	2,470	2,119
Bicycle LOS	A	B	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	30,6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,354

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	27	0	19	0	0	0	0	324	44	28	233	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,54	0,00	0,00	4,29	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	3	0	0	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	0	19	0	0	0	0	327	44	28	245	0
Peak Hour Factor	0,6100	1,0000	0,6800	1,0000	1,0000	1,0000	1,0000	0,9000	0,8500	0,5800	0,8000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	11	0	7	0	0	0	0	91	13	12	77	0
Total Analysis Volume [veh/h]	44	0	28	0	0	0	0	363	52	48	306	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			3			3			2		
v_di, Inbound Pedestrian Volume crossing in	2			3			3			1		
v_co, Outbound Pedestrian Volume crossing	7			0			6			0		
v_ci, Inbound Pedestrian Volume crossing mi	6			0			7			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,23	0,20
s, saturation flow rate [veh/h]	1729	1900	1836	1758
c, Capacity [veh/h]	288	296	713	573
d1, Uniform Delay [s]	32,61	0,00	24,99	27,32
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,07	0,00	3,45	4,94
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,25	0,00	0,58	0,62
d, Delay for Lane Group [s/veh]	34,68	0,00	28,43	32,26
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,51	0,00	7,92	7,20
50th-Percentile Queue Length [ft/ln]	37,85	0,00	198,10	179,95
95th-Percentile Queue Length [veh/ln]	2,73	0,00	12,54	11,60
95th-Percentile Queue Length [ft/ln]	68,13	0,00	313,51	289,95

**Movement, Approach, & Intersection Results**

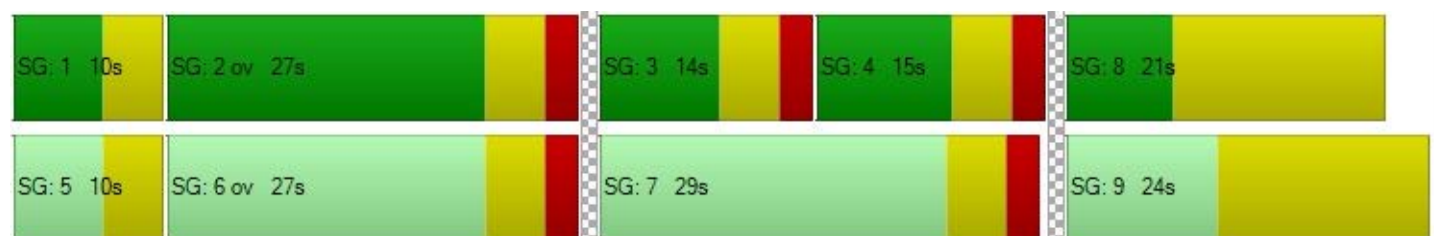
d_M, Delay for Movement [s/veh]	34,68	34,68	34,68	0,00	0,00	0,00	28,43	28,43	28,43	32,26	32,26	32,26
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,68			0,00			28,43			32,26		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	30,58											
Intersection LOS	C											
Intersection V/C	0,354											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,866	2,014	2,087	2,078
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,49	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	2,244	2,144
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report****Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	41,8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,498

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	88	416	86	79	356	86	84	164	113	39	109	90
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,61	0,00	0,00	2,25	13,95	1,19	0,61	0,88	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	0	2	0	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	416	86	79	356	88	84	164	116	39	109	90
Peak Hour Factor	0,7900	0,9700	0,8000	0,8600	0,9000	0,9000	0,7200	0,8500	0,7800	0,5700	0,6800	0,8300
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	31	107	27	23	99	24	29	48	37	17	40	27
Total Analysis Volume [veh/h]	124	429	108	92	396	98	117	193	149	68	160	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		19			17			18			20	
v_di, Inbound Pedestrian Volume crossing in		20			18			17			19	
v_co, Outbound Pedestrian Volume crossing		14			17			14			16	
v_ci, Inbound Pedestrian Volume crossing mi		14			16			14			17	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			3			1			11	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,07	0,23	0,07	0,05	0,21	0,07	0,09	0,10	0,09	0,06	0,08	0,07
s, saturation flow rate [veh/h]	1810	1846	1594	1810	1866	1404	1234	1891	1591	1209	1900	1608
c, Capacity [veh/h]	343	629	543	343	636	478	252	344	639	162	345	1012
d1, Uniform Delay [s]	46,56	37,35	30,73	45,69	36,39	30,77	51,50	49,20	13,78	58,06	48,24	9,75
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,95	5,89	0,82	1,92	4,54	0,97	6,07	6,49	0,85	7,82	4,41	0,21
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,36	0,68	0,20	0,27	0,62	0,20	0,47	0,56	0,23	0,42	0,46	0,11
d, Delay for Lane Group [s/veh]	49,51	43,24	31,55	47,61	40,94	31,74	57,57	55,69	14,64	65,88	52,66	9,96
Lane Group LOS	D	D	C	D	D	C	E	E	B	E	D	A
Critical Lane Group	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3,85	12,92	2,59	2,78	11,50	2,37	4,03	6,45	1,91	2,55	5,16	1,30
50th-Percentile Queue Length [ft/ln]	96,33	323,09	64,68	69,59	287,52	59,17	100,86	161,20	47,84	63,78	129,03	32,53
95th-Percentile Queue Length [veh/ln]	6,94	18,82	4,66	5,01	17,06	4,26	7,26	10,61	3,44	4,59	8,89	2,34
95th-Percentile Queue Length [ft/ln]	173,40	470,48	116,42	125,27	426,56	106,50	181,54	265,31	86,12	114,80	222,17	58,56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49,51	43,24	31,55	47,61	40,94	31,74	57,57	55,69	14,64	65,88	52,66	9,96
Movement LOS	D	D	C	D	D	C	E	E	B	E	D	A
d_A, Approach Delay [s/veh]	42,50			40,44			42,84			41,61		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41,84											
Intersection LOS	D											
Intersection V/C	0,498											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0	9,0	9,0	9,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	206,47	171,83	179,41	156,08
d_p, Pedestrian Delay [s]	36,45	36,45	36,45	36,45
I_p,int, Pedestrian LOS Score for Intersection	2,647	2,710	2,338	2,444
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	889	444	444
d_b, Bicycle Delay [s]	13,90	13,91	27,24	27,37
I_b,int, Bicycle LOS Score for Intersection	2,650	2,527	2,317	2,114
Bicycle LOS	B	B	B	B

**Sequence**





Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	70,8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,573

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	1	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	49	547	19	168	433	80	83	33	96	33	35	105
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,11	0,00	1,19	3,70	0,00	1,89	0,00	0,00	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	0	0	0	0	0	2	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	547	19	172	433	80	83	33	96	35	35	110
Peak Hour Factor	0,8100	0,9100	0,5300	0,8800	0,9400	0,8300	0,8800	0,8300	0,8800	0,8300	0,7300	0,8500
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	15	150	9	49	115	24	24	10	27	11	12	32
Total Analysis Volume [veh/h]	60	601	36	195	461	96	94	40	109	42	48	129
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		12			19			19			12	
v_di, Inbound Pedestrian Volume crossing in		12			19			19			12	
v_co, Outbound Pedestrian Volume crossing		12			16			11			16	
v_ci, Inbound Pedestrian Volume crossing mi		11			16			12			16	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			1			19	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	7	8	7	8	8
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	30	0	10	30	0	10	10	15	10	15	15
Maximum Green [s]	12	35	0	12	35	0	19	19	24	19	24	24
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	1,0	1,0	1,0	1,0	1,0	1,0
Split [s]	18	40	0	18	40	0	29	29	24	29	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	10	10	10	10	10	10
Pedestrian Clearance [s]	0	16	0	0	16	0	14	14	14	14	14	14
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	Yes	Yes		Yes	Yes			Yes			Yes	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	C	C	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	58	40	40	58	40	40	29	29	24	24
g / C, Green / Cycle	0,43	0,30	0,30	0,43	0,30	0,30	0,21	0,21	0,18	0,18
(v / s)_i Volume / Saturation Flow Rate	0,05	0,32	0,02	0,17	0,25	0,06	0,07	0,08	0,05	0,09
s, saturation flow rate [veh/h]	1214	1853	1615	1124	1844	1615	1834	1457	1857	1417
c, Capacity [veh/h]	353	549	479	292	547	479	394	313	330	252
d1, Uniform Delay [s]	29,72	47,50	34,19	35,97	44,56	35,54	44,81	45,09	47,96	50,20
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,04	66,71	0,31	11,46	14,69	0,94	2,25	3,18	2,03	7,26
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,17	1,09	0,08	0,67	0,84	0,20	0,33	0,36	0,27	0,51
d, Delay for Lane Group [s/veh]	30,76	114,21	34,49	47,43	59,26	36,48	47,06	48,27	49,99	57,46
Lane Group LOS	C	F	C	D	E	D	D	D	D	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1,34	28,52	0,91	5,28	16,68	2,52	3,98	3,51	2,83	4,47
50th-Percentile Queue Length [ft/ln]	33,42	712,92	22,65	132,08	416,92	63,11	99,56	87,75	70,75	111,86
95th-Percentile Queue Length [veh/ln]	2,41	39,49	1,63	9,05	23,37	4,54	7,17	6,32	5,09	7,94
95th-Percentile Queue Length [ft/ln]	60,15	987,37	40,77	226,32	584,35	113,59	179,21	157,96	127,34	198,59

**Movement, Approach, & Intersection Results**

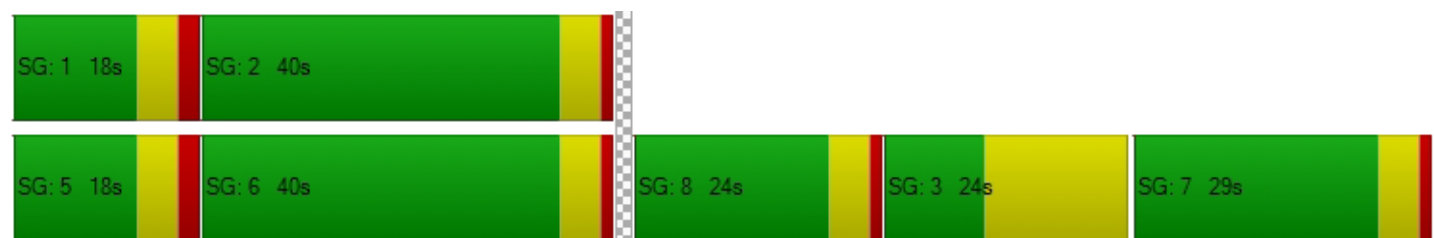
d_M, Delay for Movement [s/veh]	30,76	114,21	34,49	47,43	59,26	36,48	47,06	47,16	48,27	49,99	49,99	57,46
Movement LOS	C	F	C	D	E	D	D	D	D	D	D	E
d_A, Approach Delay [s/veh]	102,91			53,28			47,62			54,39		
Approach LOS	F			D			D			D		
d_I, Intersection Delay [s/veh]	70,79											
Intersection LOS	E											
Intersection V/C	0,573											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0			14,0			14,0			14,0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	377,23			262,36			192,56			321,56		
d_p, Pedestrian Delay [s]	46,82			46,82			46,82			46,82		
l_p,int, Pedestrian LOS Score for Intersection	2,567			2,619			2,277			2,344		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	583			583			400			317		
d_b, Bicycle Delay [s]	30,10			30,10			38,42			42,91		
l_b,int, Bicycle LOS Score for Intersection	2,710			2,800			1,760			1,740		
Bicycle LOS	B			C			A			A		

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	43,5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,863

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	94	489	88	220	354	152	275	182	111	122	201	522
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	3,07	3,41	1,36	2,26	0,00	2,55	6,04	2,70	7,38	4,48	1,53
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	0	0	19	16	20	4	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	489	88	220	354	171	291	202	115	122	215	522
Peak Hour Factor	0,7800	0,9400	0,6100	0,9300	0,8900	0,8600	0,8600	0,7800	0,8200	0,9000	0,9300	0,9300
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	32	130	36	59	99	50	85	65	35	34	58	140
Total Analysis Volume [veh/h]	127	520	144	237	398	199	338	259	140	136	231	561
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		30			23			23			31	
v_di, Inbound Pedestrian Volume crossing in		31			23			23			30	
v_co, Outbound Pedestrian Volume crossing		53			11			53			11	
v_ci, Inbound Pedestrian Volume crossing mi		53			11			53			11	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		2			3			2			19	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,11	0,28	0,10	0,20	0,17	0,18	0,25	0,14	0,10	0,13	0,13	0,36
s, saturation flow rate [veh/h]	1145	1854	1458	1175	1866	1586	1350	1809	1422	1020	1833	1557
c, Capacity [veh/h]	452	563	443	349	566	481	653	646	508	319	655	556
d1, Uniform Delay [s]	21,77	37,75	29,90	26,27	32,69	33,02	18,60	27,01	25,39	36,37	26,48	35,53
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	1,55	23,17	1,95	10,24	3,92	5,11	2,92	1,85	1,34	4,13	1,49	40,30
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,28	0,92	0,33	0,68	0,56	0,58	0,52	0,40	0,28	0,43	0,35	1,01
d, Delay for Lane Group [s/veh]	23,32	60,92	31,85	36,51	36,61	38,13	21,52	28,86	26,74	40,50	27,97	75,83
Lane Group LOS	C	E	C	D	D	D	C	C	C	D	C	F
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2,27	17,20	3,22	5,14	7,75	7,11	5,94	5,51	2,82	3,58	4,80	20,84
50th-Percentile Queue Length [ft/ln]	56,67	429,92	80,43	128,39	193,86	177,67	148,43	137,64	70,47	89,39	119,88	521,06
95th-Percentile Queue Length [veh/ln]	4,08	24,00	5,79	8,85	12,32	11,48	9,93	9,35	5,07	6,44	8,39	28,50
95th-Percentile Queue Length [ft/ln]	102,00	599,94	144,77	221,31	308,03	286,97	248,34	233,85	126,84	160,91	209,66	712,50



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23,32	60,92	31,85	36,51	36,93	38,13	21,52	28,86	26,74	40,50	27,97	75,83
Movement LOS	C	E	C	D	D	D	C	C	C	D	C	F
d_A, Approach Delay [s/veh]	49,59			37,10			25,09			58,74		
Approach LOS	D			D			C			E		
d_I, Intersection Delay [s/veh]	43,52											
Intersection LOS	D											
Intersection V/C	0,863											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	139,24	436,72	150,18	88,67
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	2,778	2,897	2,613	2,711
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,05	30,06	26,50	26,72
I_b,int, Bicycle LOS Score for Intersection	2,865	2,248	2,776	3,091
Bicycle LOS	C	B	C	C

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	13,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,297

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	170	470	120	64	450
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	5,00	2,00	2,00	3,50
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	40	0	0	38
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	170	510	120	64	488
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	43	128	30	16	122
Total Analysis Volume [veh/h]	0	170	510	120	64	488
Pedestrian Volume [ped/h]	70		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,30	0,01	0,00	0,08	0,00
d_M, Delay for Movement [s/veh]	0,00	13,92	0,00	0,00	9,68	0,00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	1,24	0,00	0,00	0,25	0,12
95th-Percentile Queue Length [ft/ln]	0,00	30,93	0,00	0,00	6,22	3,11
d_A, Approach Delay [s/veh]	13,92		0,00		1,12	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2,21					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	30,0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,380

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	193	100	444	156	37	495
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,04	10,00	2,70	0,00	0,00	2,22
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	40	0	44	38	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	206	140	444	200	75	495
Peak Hour Factor	0,8800	0,8300	0,9400	0,8100	0,8400	0,9600
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	59	42	118	62	22	129
Total Analysis Volume [veh/h]	234	169	472	247	89	516
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	3		0		4	
v_di, Inbound Pedestrian Volume crossing in	4		0		3	
v_co, Outbound Pedestrian Volume crossing	29		29		0	
v_ci, Inbound Pedestrian Volume crossing mi	29		29		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	2		1		1	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	55,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	29	29	5	40
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	35	35	30	30	10	45
Vehicle Extension [s]	3,0	3,0	0,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	15
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	0,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	5,0	2,0	0,0	2,0	2,0	2,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	0,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	7,00	4,00	2,00	2,00	4,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	5,00	2,00	2,00	2,00	0,00	2,00
g_i, Effective Green Time [s]	28	24	73	73	51	41
g / C, Green / Cycle	0,23	0,20	0,61	0,61	0,43	0,34
(v / s)_i Volume / Saturation Flow Rate	0,13	0,12	0,19	0,23	0,24	0,19
s, saturation flow rate [veh/h]	1795	1451	1859	1576	1179	1699
c, Capacity [veh/h]	419	290	1131	959	403	580
d1, Uniform Delay [s]	40,55	43,32	11,41	11,92	31,43	31,98
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	5,30	8,28	0,74	1,12	10,25	3,68
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,56	0,58	0,32	0,37	0,71	0,55
d, Delay for Lane Group [s/veh]	45,86	51,61	12,15	13,04	41,68	35,66
Lane Group LOS	D	D	B	B	D	D
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6,72	5,20	4,77	5,04	6,79	8,03
50th-Percentile Queue Length [ft/ln]	167,93	130,05	119,13	125,89	169,84	200,87
95th-Percentile Queue Length [veh/ln]	10,97	8,94	8,35	8,72	11,07	12,68
95th-Percentile Queue Length [ft/ln]	274,20	223,57	208,64	217,89	276,70	317,09



**Movement, Approach, & Intersection Results**

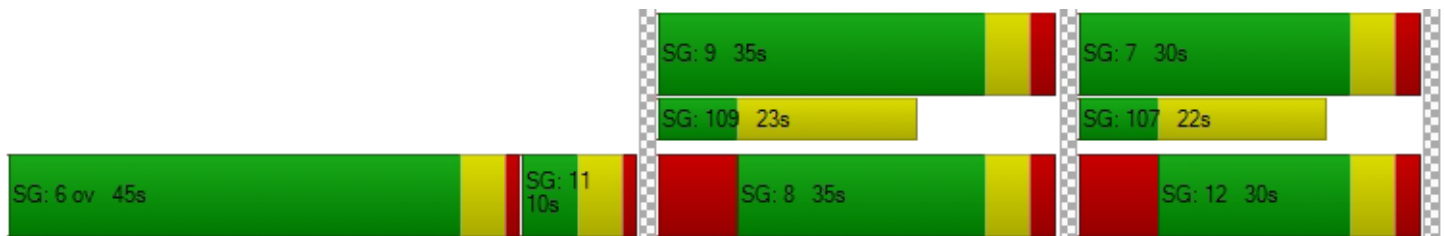
d_M, Delay for Movement [s/veh]	45,86	51,61	12,36	13,04	41,68	37,98
Movement LOS	D	D	B	B	D	D
d_A, Approach Delay [s/veh]	48,27		12,60		38,52	
Approach LOS	D		B		D	
d_I, Intersection Delay [s/veh]	30,00					
Intersection LOS	C					
Intersection V/C	0,380					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	612,46
d_p, Pedestrian Delay [s]	49,50	0,00	49,50
I_p,int, Pedestrian LOS Score for Intersection	2,550	0,000	2,449
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	1167	667
d_b, Bicycle Delay [s]	34,54	10,42	26,68
I_b,int, Bicycle LOS Score for Intersection	1,560	2,153	2,059
Bicycle LOS	A	B	B

**Sequence**

Ring 1	-	-	-	9	-	7	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	-	12	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	15,0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,317

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	5	3	4	133	5	23	85	455	1	3	649	44
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,75	0,00	4,35	0,00	2,42	0,00	0,00	1,85	2,27
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	19	0	0	0	25	0	0	8	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	3	4	152	5	23	85	480	1	3	657	49
Peak Hour Factor	0,6300	0,2500	1,0000	0,7400	0,6300	0,7200	0,8500	0,9400	0,2500	0,3800	0,9000	0,7900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	2	3	1	51	2	8	25	128	1	2	183	16
Total Analysis Volume [veh/h]	8	12	4	205	8	32	100	511	4	8	730	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			5			6			0		
v_di, Inbound Pedestrian Volume crossing in	0			6			5			0		
v_co, Outbound Pedestrian Volume crossing	27			18			27			17		
v_ci, Inbound Pedestrian Volume crossing mi	27			17			27			18		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	48,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	0	0	6	17	0	6	17	0
Maximum Green [s]	18	18	0	7	0	0	6	63	0	6	63	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	23	23	0	7	30	0	12	78	0	12	78	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	5	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	1,00	2,00	1,00	2,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	1,00	0,00	1,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	23	27	20	89	77	89	77
g / C, Green / Cycle	0,19	0,23	0,17	0,74	0,64	0,74	0,64
(v / s)_i Volume / Saturation Flow Rate	0,01	0,13	0,03	0,24	0,23	0,23	0,23
s, saturation flow rate [veh/h]	1674	1539	1490	956	1692	1859	1647
c, Capacity [veh/h]	361	406	248	748	1086	1402	1057
d1, Uniform Delay [s]	39,72	43,47	42,82	7,00	9,95	5,34	9,99
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,36	4,42	1,39	1,09	0,90	0,55	0,94
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,07	0,50	0,16	0,31	0,35	0,30	0,36
d, Delay for Lane Group [s/veh]	40,08	47,90	44,20	8,09	10,84	5,90	10,93
Lane Group LOS	D	D	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0,62	6,00	1,12	2,73	4,73	3,42	4,70
50th-Percentile Queue Length [ft/ln]	15,52	149,94	27,97	68,37	118,32	85,56	117,60
95th-Percentile Queue Length [veh/ln]	1,12	10,01	2,01	4,92	8,30	6,16	8,26
95th-Percentile Queue Length [ft/ln]	27,93	250,35	50,35	123,07	207,52	154,02	206,52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	40,08	40,08	40,08	47,90	44,20	44,20	8,09	10,12	10,84	5,90	8,07	10,93
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	B
d_A, Approach Delay [s/veh]	40,08			47,29			9,80			8,27		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	14,96											
Intersection LOS	B											
Intersection V/C	0,317											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	146,16	196,63	837,68	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,965	2,218	2,480	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	378	1644	1644
d_b, Bicycle Delay [s]	29,64	29,61	1,42	1,42
I_b,int, Bicycle LOS Score for Intersection	1,599	1,762	2,067	2,220
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	-	4	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






### Intersection Level Of Service Report

#### Intersection 9: Entrée développement / Avenue des Halles

Control Type:	Two-way stop	Delay (sec / veh):	14,4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,022

#### Intersection Setup

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

#### Volumes

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	265	0	0	199	0	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	5,00	3,00	0,00	0,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	82	0	9	53
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	265	16	82	199	9	53
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	66	4	21	50	2	13
Total Analysis Volume [veh/h]	265	16	82	199	9	53
Pedestrian Volume [ped/h]	0		0		5	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,06	0,00	0,02	0,07
d_M, Delay for Movement [s/veh]	0,00	0,00	8,00	0,00	14,42	10,30
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,20	0,20	0,30	0,30
95th-Percentile Queue Length [ft/ln]	0,00	0,00	5,12	5,12	7,59	7,59
d_A, Approach Delay [s/veh]	0,00		2,33		10,90	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2,13					
Intersection LOS	B					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 8 Att Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_PM\_RV0B.pdf

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	70	0	159	193	299	0	0	180	90	991

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	27	0	19	0	0	0	0	327	44	28	245	0	690

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	98	416	86	79	356	88	84	164	116	39	109	90	1725

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	49	547	19	172	433	80	83	33	96	35	35	110	1692

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	99	489	88	220	354	171	291	202	115	122	215	522	2888

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	170	510	120	64	488	1352	

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	206	140	444	200	75	495	1560

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	5	3	4	152	5	23	85	480	1	3	657	49	1467

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	265	16	82	199	9	53	624

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 8 Att Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_PM\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	67	0	153	189	299	0	0	180	78	966
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	3	0	6	4	0	0	0	0	12	25
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>0</b>	<b>159</b>	<b>193</b>	<b>299</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>90</b>	<b>991</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	27	0	19	0	0	0	0	324	44	28	233	0	675
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	3	0	0	12	0	15
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>27</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>327</b>	<b>44</b>	<b>28</b>	<b>245</b>	<b>0</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	88	416	86	79	356	86	84	164	113	39	109	90	1710
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	10	0	0	0	0	2	0	0	3	0	0	0	15
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>98</b>	<b>416</b>	<b>86</b>	<b>79</b>	<b>356</b>	<b>88</b>	<b>84</b>	<b>164</b>	<b>116</b>	<b>39</b>	<b>109</b>	<b>90</b>	<b>1725</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	49	547	19	168	433	80	83	33	96	33	35	105	1681
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	4	0	0	0	0	0	2	0	5	11
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>49</b>	<b>547</b>	<b>19</b>	<b>172</b>	<b>433</b>	<b>80</b>	<b>83</b>	<b>33</b>	<b>96</b>	<b>35</b>	<b>35</b>	<b>110</b>	<b>1692</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	94	489	88	220	354	152	275	182	111	122	201	522	2810	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	5	0	0	0	0	19	16	20	4	0	14	0	0	78
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>99</b>	<b>489</b>	<b>88</b>	<b>220</b>	<b>354</b>	<b>171</b>	<b>291</b>	<b>202</b>	<b>115</b>	<b>122</b>	<b>215</b>	<b>522</b>	<b>2888</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	170	470	120	64	450	1274	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	40	0	0	38	78	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>170</b>	<b>510</b>	<b>120</b>	<b>64</b>	<b>488</b>	<b>1352</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	193	100	444	156	37	495	1425
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	13	40	0	44	38	0	135
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>206</b>	<b>140</b>	<b>444</b>	<b>200</b>	<b>75</b>	<b>495</b>	<b>1560</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	5	3	4	133	5	23	85	455	1	3	649	44	1410
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	19	0	0	0	25	0	0	8	5	57
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>152</b>	<b>5</b>	<b>23</b>	<b>85</b>	<b>480</b>	<b>1</b>	<b>3</b>	<b>657</b>	<b>49</b>	<b>1467</b>

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	265	0	0	199	0	0	464
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	16	82	0	9	53	160
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>265</b>	<b>16</b>	<b>82</b>	<b>199</b>	<b>9</b>	<b>53</b>	<b>624</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 8 Att Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_PM\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	98	62	160	100,00
<b>Added Trips Total</b>								<b>98</b>	<b>62</b>	<b>160</b>	<b>100,00</b>



## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 8 Att Future PM

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_PM\_RV0B.pdf

**Trip Distribution summary**

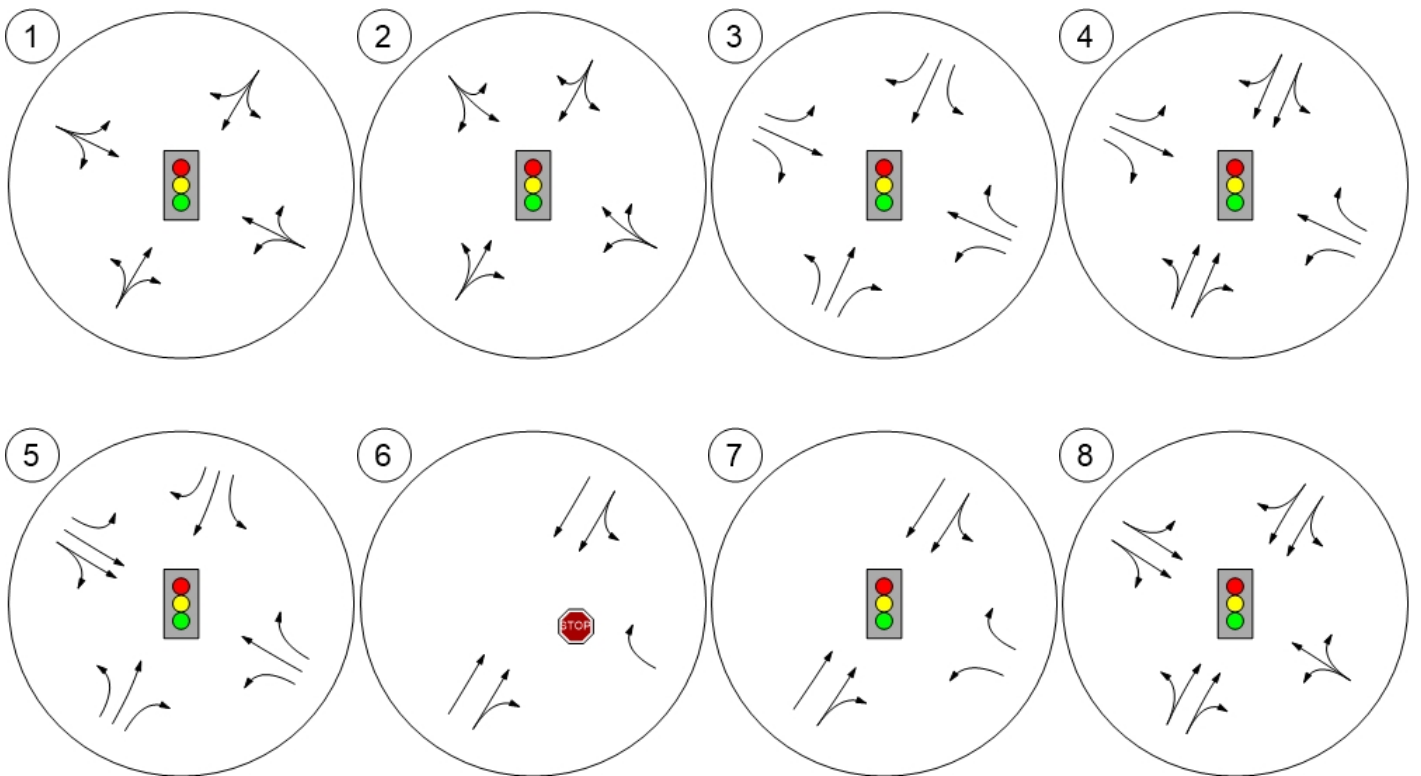
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	25,66	25	13,63	8
3: Gate	19,36	19	8,39	5
4: Gate	14,62	14	31,13	20
5: Gate	19,38	19	25,87	16
6: Gate	7,03	7	7,03	4
7: Gate	9,88	10	4,25	3
8: Gate	4,07	4	9,70	6
<b>Total</b>	<b>100,00</b>	<b>98</b>	<b>100,00</b>	<b>62</b>

Study Intersections

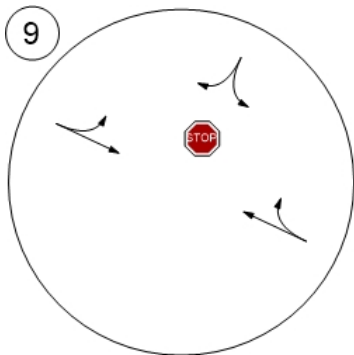
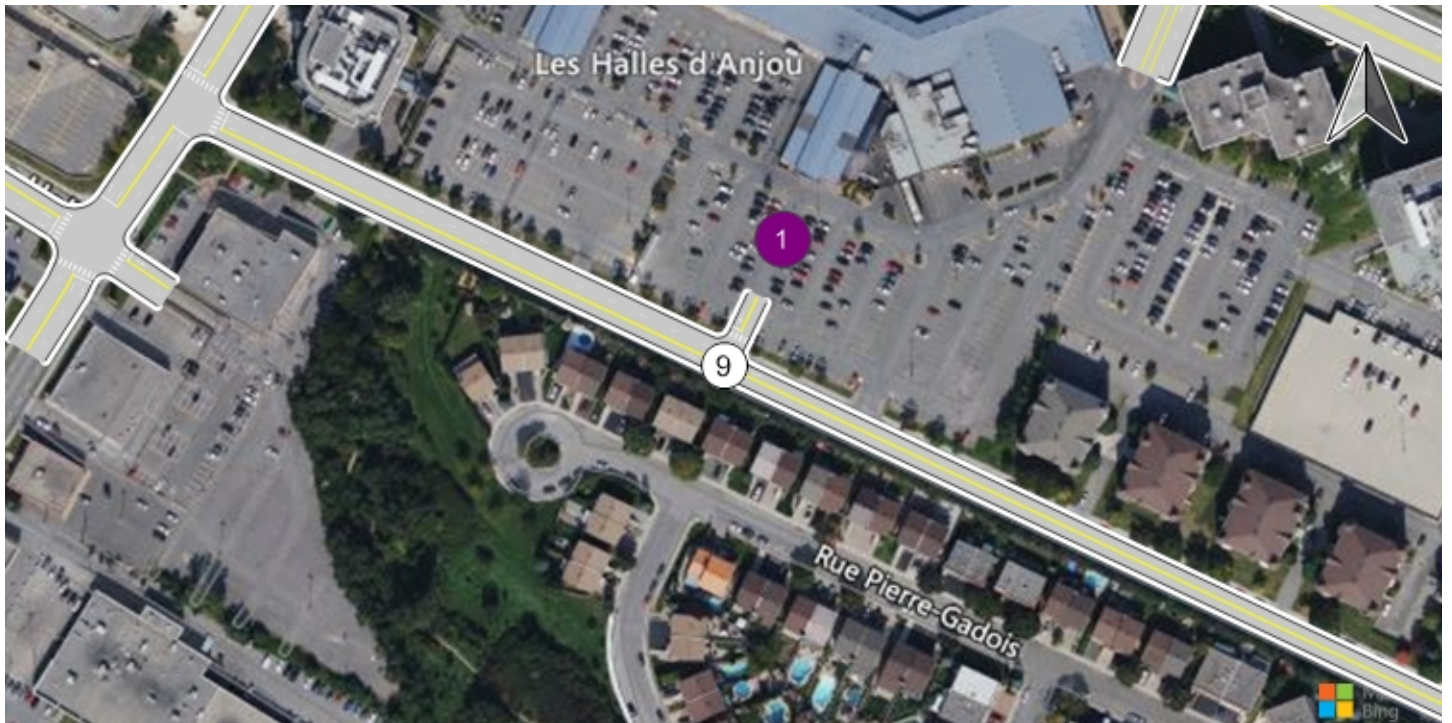




### Lane Configuration and Traffic Control

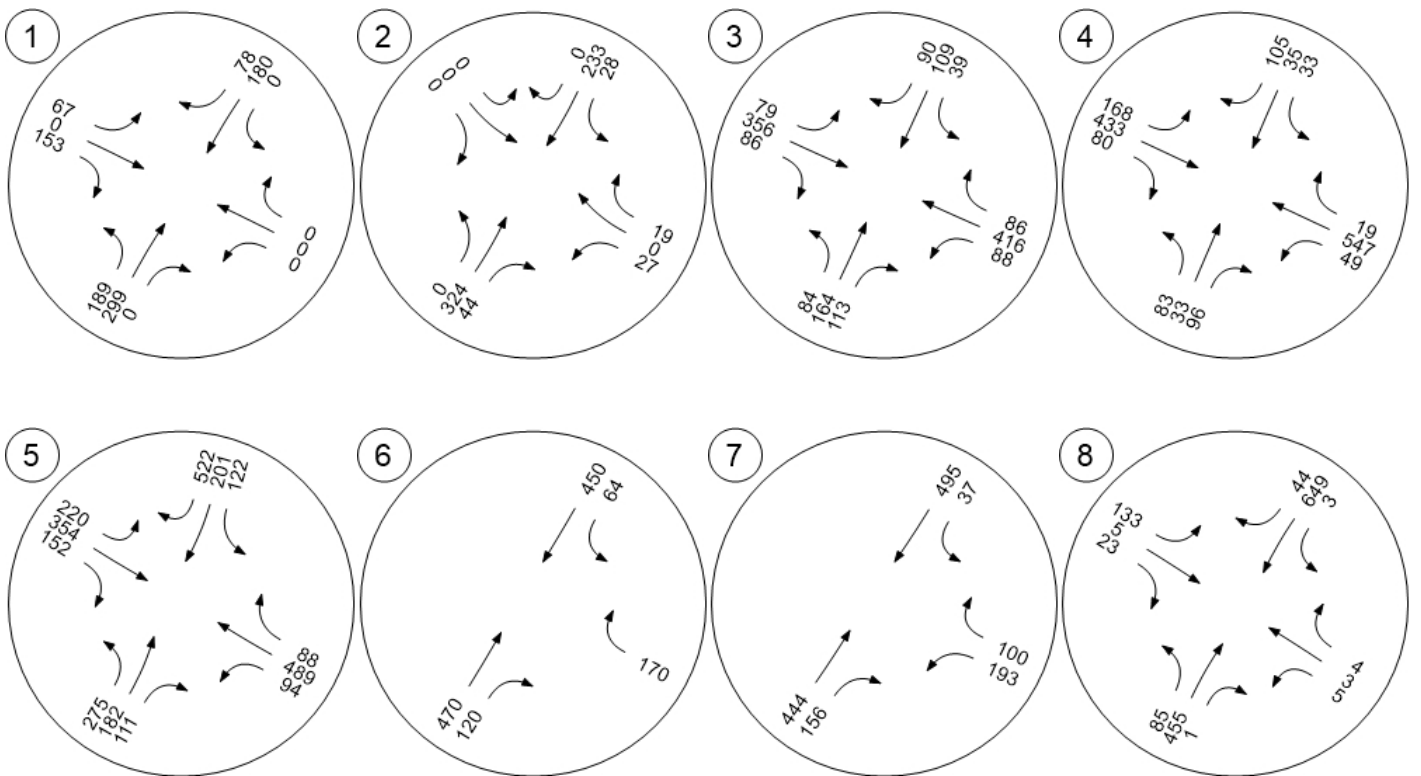


Lane Configuration and Traffic Control

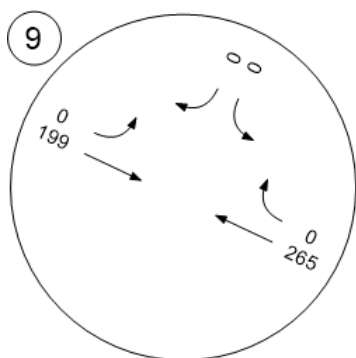
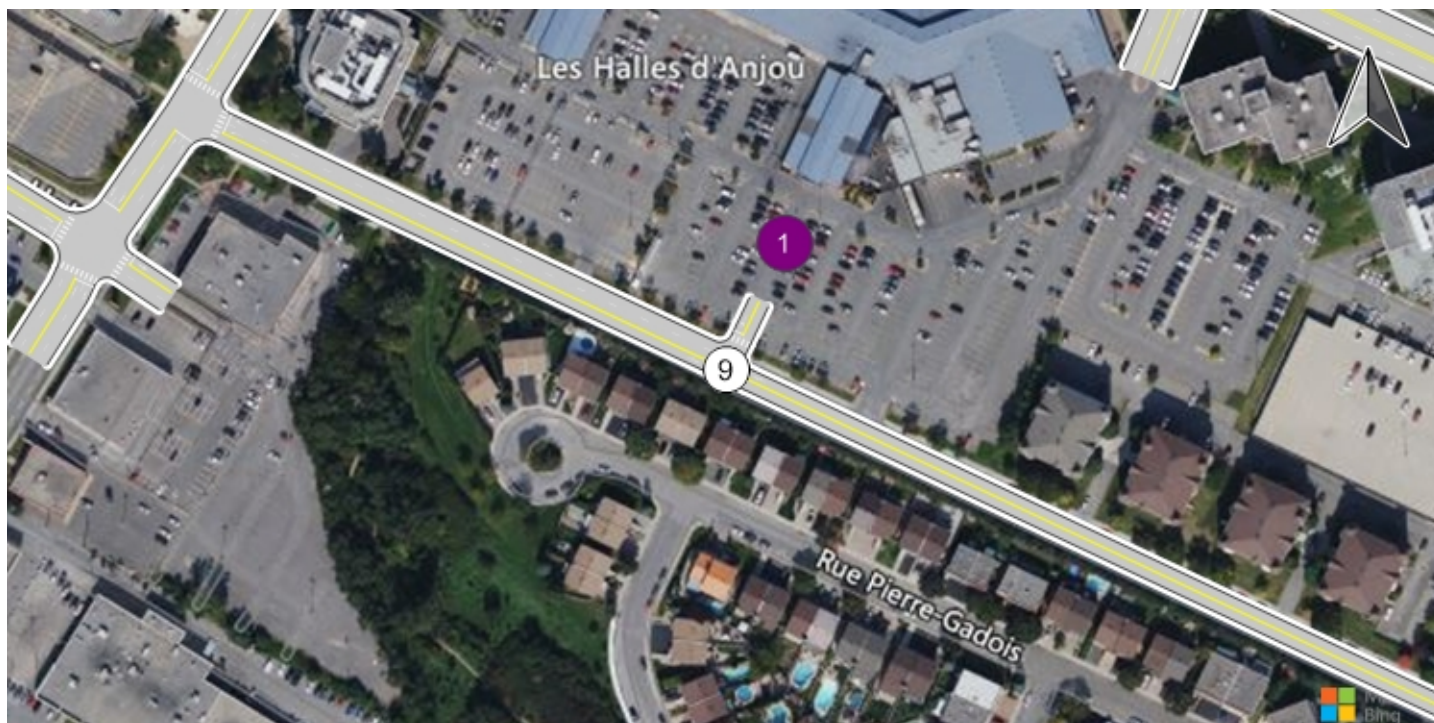




Traffic Volume - Base Volume

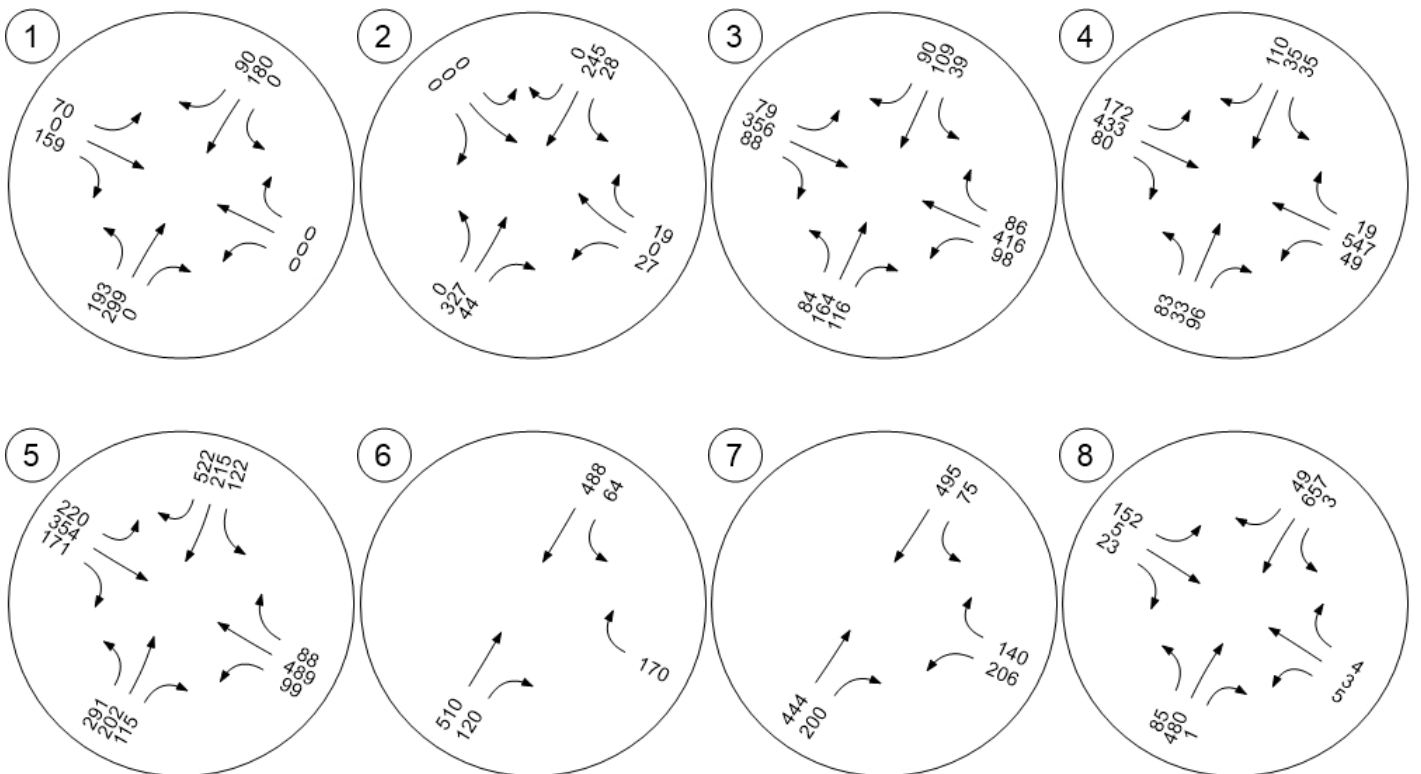


Traffic Volume - Base Volume



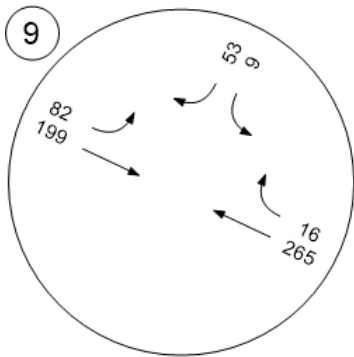
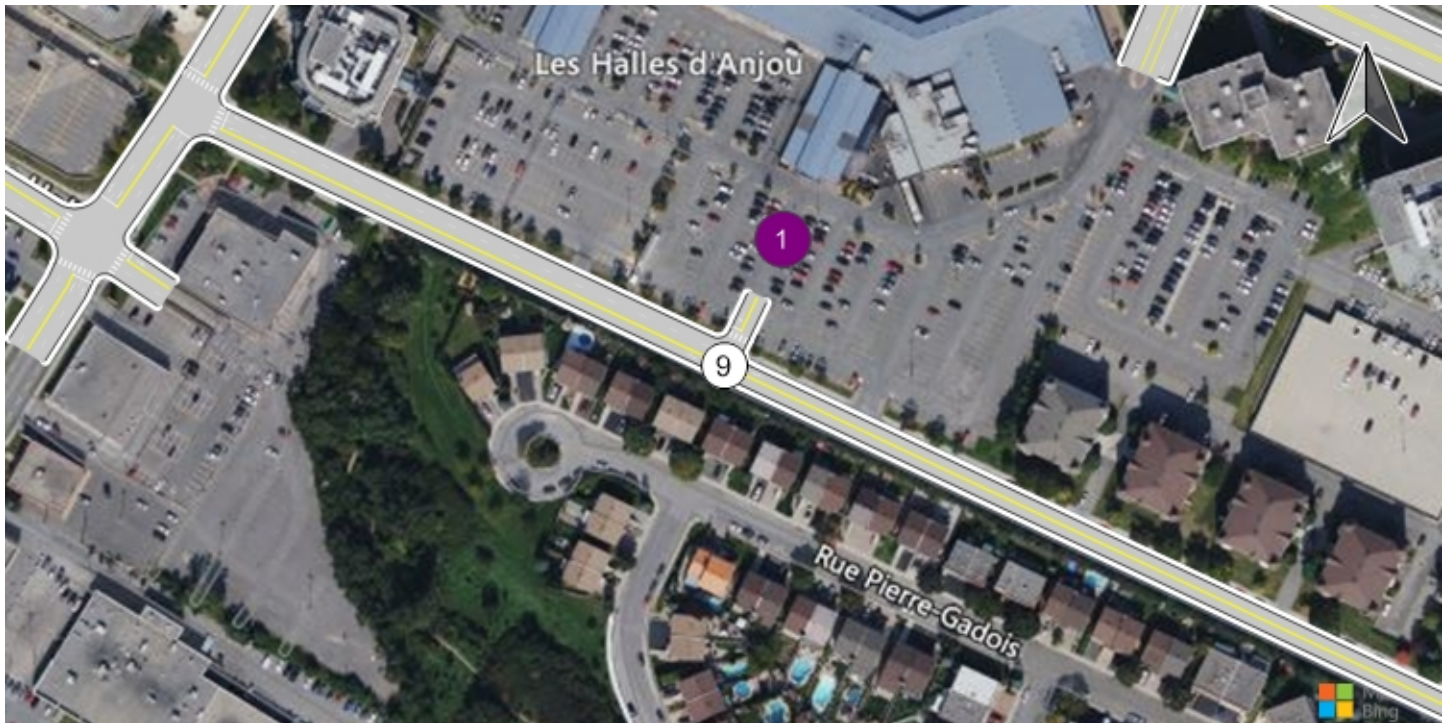


Traffic Volume - Future Total Volume

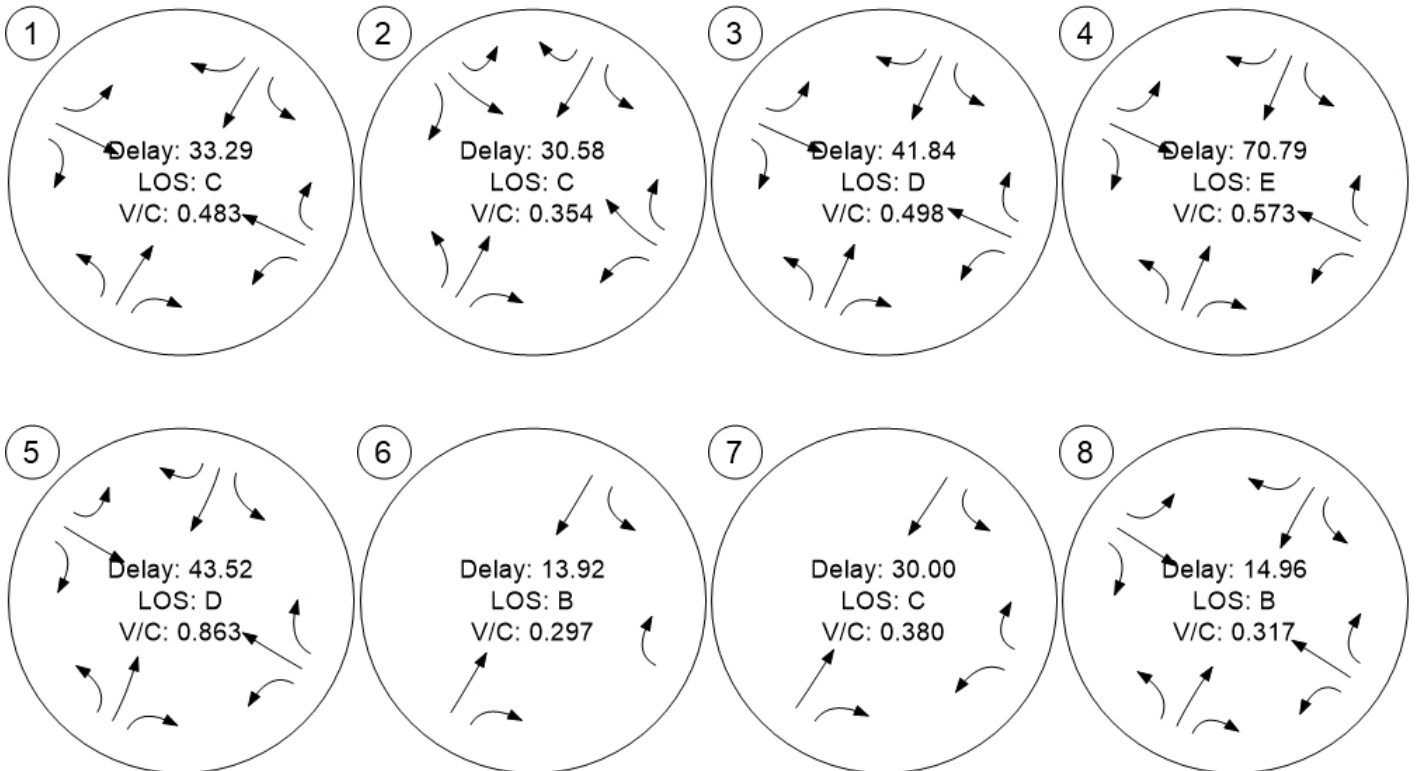




Traffic Volume - Future Total Volume

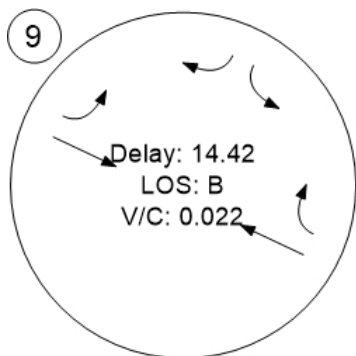
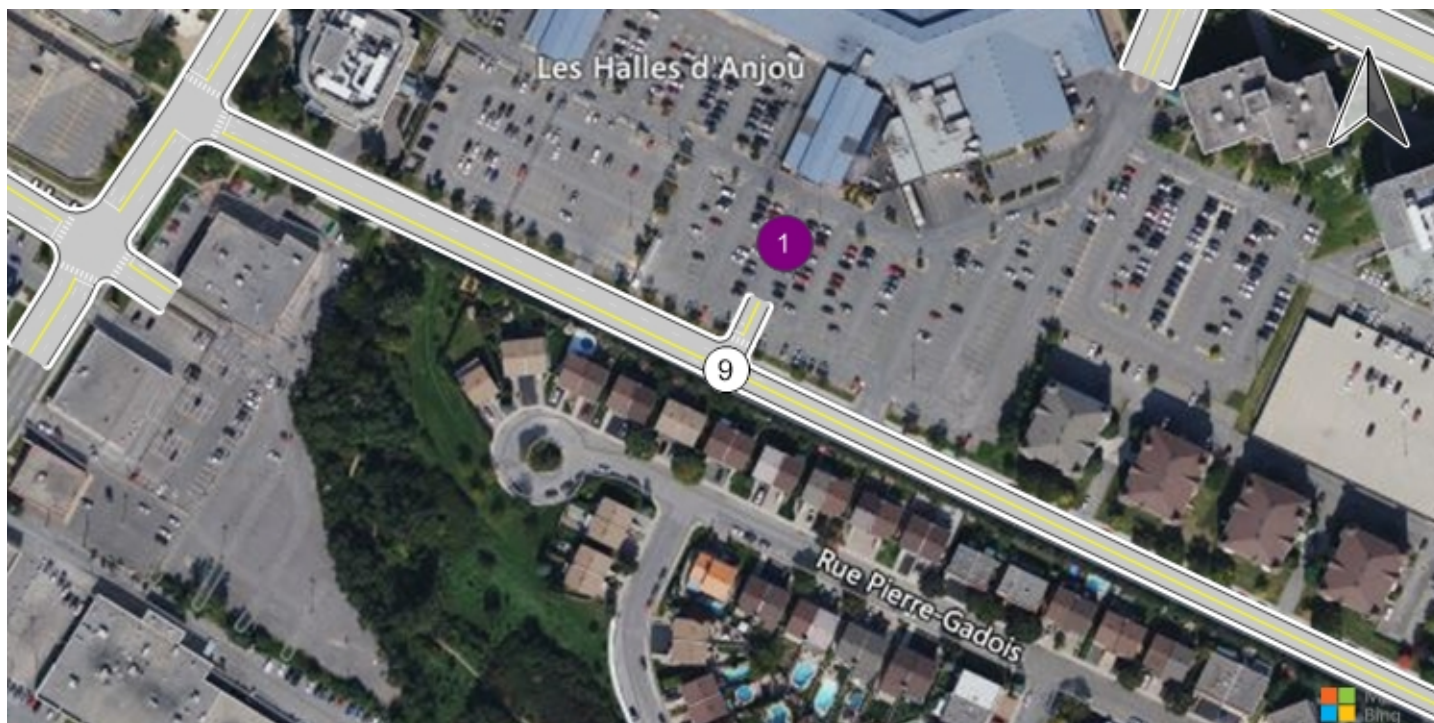


Traffic Conditions





Traffic Conditions



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# Annexe 10 – Mesures d'atténuation sur la situation projetée FDS

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L'humain et la mobilité  
au cœur de vos projets

intervia

[intervia.ca](http://intervia.ca)

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## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 9 Att Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_FDS\_RV0B.pdf

## Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Avenue des Halles / Rue Bélanger	Signalized	HCM 6th Edition	EB Thru	0,516	33,4	C
2	Avenue de Beaufort / Rue Bélanger	Signalized	HCM 6th Edition	NB Right	0,345	31,4	C
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Signalized	HCM 6th Edition	WB Left	0,520	42,2	D
4	Accès Halles / Boulevard des Galeries d'Anjou	Signalized	HCM 6th Edition	WB Right	0,557	47,4	D
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Left	0,728	39,4	D
6	Accès Halles / Rue Jean-Talon Est	Two-way stop	HCM 6th Edition	NB Right	0,264	13,9	B
7	Avenue des Halles / Rue Jean-Talon Est	Signalized	HCM 6th Edition	WB Left	0,527	48,0	D
8	Accès A-40 / Rue Jean-Talon Est	Signalized	HCM 6th Edition	SB Left	0,336	15,7	B
9	Entrée développement / Avenue des Halles	Two-way stop	HCM 6th Edition	WB Left	0,043	15,1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Avenue des Halles / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	33,4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,516

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name												
Base Volume Input [veh/h]	0	0	0	86	0	157	163	312	0	0	215	79
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,64	1,84	0,00	0,00	0,00	1,86	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	12	4	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	91	0	169	167	312	0	0	215	91
Peak Hour Factor	1,0000	1,0000	1,0000	0,8300	1,0000	0,8400	0,8300	0,8900	1,0000	1,0000	0,9100	0,7100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	0	0	27	0	50	50	88	0	0	59	32
Total Analysis Volume [veh/h]	0	0	0	110	0	201	201	351	0	0	236	128
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			0			1			10		
v_di, Inbound Pedestrian Volume crossing in	10			1			0			10		
v_co, Outbound Pedestrian Volume crossing	0			16			0			15		
v_ci, Inbound Pedestrian Volume crossing mi	0			15			0			16		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	7	0	0	7	0	0	5	0	0	6	0
Auxiliary Signal Groups								5,6				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	6	0	0	10	0
Maximum Green [s]	0	23	0	0	23	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	29	0	0	29	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	29	29	31	27
g / C, Green / Cycle	0,32	0,32	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,00	0,20	0,31	0,21
s, saturation flow rate [veh/h]	1900	1568	1781	1763
c, Capacity [veh/h]	652	559	709	569
d1, Uniform Delay [s]	0,00	25,60	27,44	27,79
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,00	3,95	8,22	5,44
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,00	0,56	0,78	0,64
d, Delay for Lane Group [s/veh]	0,00	29,55	35,66	33,23
Lane Group LOS	A	C	D	C
Critical Lane Group	No	Yes	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0,00	6,05	12,21	7,56
50th-Percentile Queue Length [ft/ln]	0,00	151,14	305,14	189,11
95th-Percentile Queue Length [veh/ln]	0,00	10,08	17,94	12,08
95th-Percentile Queue Length [ft/ln]	0,00	251,95	448,38	301,88

**Movement, Approach, & Intersection Results**

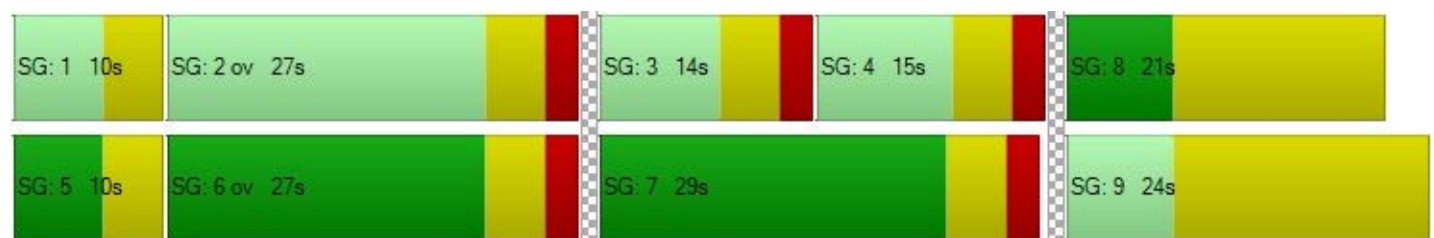
d_M, Delay for Movement [s/veh]	0,00	0,00	0,00	29,55	29,55	29,55	35,66	35,66	35,66	33,23	33,23	33,23
Movement LOS	A	A	A	C	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	0,00			29,55			35,66			33,23		
Approach LOS	A			C			D			C		
d_I, Intersection Delay [s/veh]	33,39											
Intersection LOS	C											
Intersection V/C	0,516											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,714	2,517	2,197	2,273
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	511	511	689	467
d_b, Bicycle Delay [s]	24,94	24,94	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,560	2,073	2,470	2,160
Bicycle LOS	A	B	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 2: Avenue de Beaufort / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	31,4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,345

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	23	0	31	0	0	0	0	365	41	26	275	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,45	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	5	0	0	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	0	31	0	0	0	0	370	41	26	287	0
Peak Hour Factor	0,8200	1,0000	0,7000	1,0000	1,0000	1,0000	1,0000	0,8700	0,7300	0,6500	0,9300	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	7	0	11	0	0	0	0	106	14	10	77	0
Total Analysis Volume [veh/h]	28	0	44	0	0	0	0	425	56	40	309	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	8			4			4			9		
v_di, Inbound Pedestrian Volume crossing in	9			4			4			8		
v_co, Outbound Pedestrian Volume crossing	12			0			11			0		
v_ci, Inbound Pedestrian Volume crossing mi	11			0			12			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Beginning of Both Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	3	0	0	1	0	0	2	0
Auxiliary Signal Groups								1,2				
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	4	0	0	6	0	0	10	0
Maximum Green [s]	0	9	0	0	8	0	0	6	0	0	21	0
Amber [s]	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	0,0	2,0	0,0	0,0	2,0	0,0	0,0	0,0	0,0	0,0	2,0	0,0
Split [s]	0	15	0	0	14	0	0	10	0	0	27	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			No			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	8
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	14



**Lane Group Calculations**

Lane Group	C	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	0,00	0,00	4,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	15	14	31	27
g / C, Green / Cycle	0,17	0,16	0,34	0,30
(v / s)_i Volume / Saturation Flow Rate	0,04	0,00	0,26	0,19
s, saturation flow rate [veh/h]	1685	1900	1862	1827
c, Capacity [veh/h]	281	296	723	593
d1, Uniform Delay [s]	32,64	0,00	26,08	27,08
k, delay calibration	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,19	0,00	4,80	4,25
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,26	0,00	0,67	0,59
d, Delay for Lane Group [s/veh]	34,84	0,00	30,88	31,34
Lane Group LOS	C	A	C	C
Critical Lane Group	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1,52	0,00	9,72	6,97
50th-Percentile Queue Length [ft/ln]	38,03	0,00	243,08	174,14
95th-Percentile Queue Length [veh/ln]	2,74	0,00	14,84	11,29
95th-Percentile Queue Length [ft/ln]	68,45	0,00	370,92	282,35

**Movement, Approach, & Intersection Results**

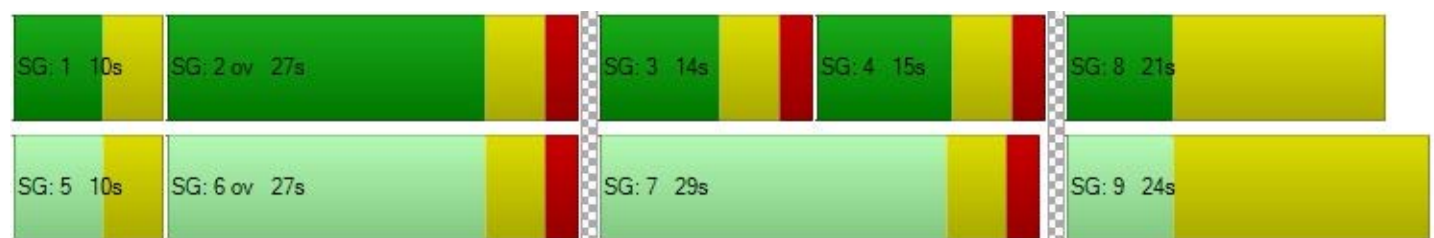
d_M, Delay for Movement [s/veh]	34,84	34,84	34,84	0,00	0,00	0,00	30,88	30,88	30,88	31,34	31,34	31,34
Movement LOS	C	C	C	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	34,84			0,00			30,88			31,34		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	31,37											
Intersection LOS	C											
Intersection V/C	0,345											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	34,67	34,67	34,67	34,67
I_p,int, Pedestrian LOS Score for Intersection	1,853	2,104	2,113	2,113
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	178	689	467
d_b, Bicycle Delay [s]	36,50	37,36	19,34	26,45
I_b,int, Bicycle LOS Score for Intersection	1,678	1,560	2,353	2,135
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	2	3	4	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	5	6	7	-	9	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 3: Boulevard des Galeries d'Anjou / Rue Bélanger**

Control Type:	Signalized	Delay (sec / veh):	42,2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,520

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	90	464	129	121	299	60	74	211	85	69	143	191
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	1,29	0,78	0,00	1,67	6,67	0,00	0,00	0,00	0,00	0,70	0,52
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	0	0	0	0	2	2	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	464	129	121	299	62	76	211	88	69	143	191
Peak Hour Factor	0,8000	0,9100	0,8500	0,6600	0,9100	0,8300	0,7700	0,8600	0,8900	0,8600	0,7200	0,8000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	31	127	38	46	82	19	25	61	25	20	50	60
Total Analysis Volume [veh/h]	125	510	152	183	329	75	99	245	99	80	199	239
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		19			25			25			19	
v_di, Inbound Pedestrian Volume crossing in		19			25			25			19	
v_co, Outbound Pedestrian Volume crossing		17			20			17			20	
v_ci, Inbound Pedestrian Volume crossing mi		17			20			17			20	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		4			1			0			16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Overlap	Permiss	Overlap	Permiss	Permiss	Overlap
Signal Group	5	2	0	5	6	0	8	4	4	0	4	4
Auxiliary Signal Groups							4,8		4,5,8			4,5
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	4	6	0	4	4	0	4	4	4	0	4	4
Maximum Green [s]	20	40	0	20	40	0	10	20	20	0	20	20
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	3,0	3,0	3,0	0,0	3,0	3,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	1,0	1,0	0,0	1,0	1,0
Split [s]	25	45	0	25	45	0	13	24	24	0	24	24
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No	No		No	No
Maximum Recall	Yes	Yes		Yes	Yes		Yes	Yes	Yes		Yes	Yes
Pedestrian Recall	No	No		No	No		No	No	No		No	No
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	7
Pedestrian Walk [s]	5
Pedestrian Clearance [s]	20

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	132	132	132	132	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	4,00	0,00	4,00	0,00	0,00	4,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	2,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	25	45	45	25	45	45	33	24	53	24	24	83
g / C, Green / Cycle	0,19	0,34	0,34	0,19	0,34	0,34	0,25	0,18	0,40	0,18	0,18	0,63
(v / s)_i Volume / Saturation Flow Rate	0,07	0,18	0,18	0,10	0,11	0,11	0,08	0,13	0,06	0,07	0,11	0,15
s, saturation flow rate [veh/h]	1810	1881	1721	1810	1875	1741	1202	1900	1615	1153	1889	1601
c, Capacity [veh/h]	343	641	587	343	639	593	221	345	648	125	344	1007
d1, Uniform Delay [s]	46,59	35,09	35,17	48,25	32,24	32,32	53,38	50,72	13,32	62,50	49,38	10,68
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	2,98	3,20	3,57	5,85	1,35	1,49	6,43	11,67	0,50	22,76	6,96	0,56
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,36	0,54	0,54	0,53	0,32	0,33	0,45	0,71	0,15	0,64	0,58	0,24
d, Delay for Lane Group [s/veh]	49,57	38,29	38,74	54,10	33,59	33,81	59,81	62,39	13,82	85,25	56,34	11,24
Lane Group LOS	D	D	D	D	C	C	E	E	B	F	E	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3,89	9,53	8,89	6,02	5,21	4,96	3,49	8,75	1,22	3,49	6,70	3,17
50th-Percentile Queue Length [ft/ln]	97,20	238,19	222,15	150,53	130,18	123,96	87,29	218,66	30,53	87,24	167,38	79,16
95th-Percentile Queue Length [veh/ln]	7,00	14,59	13,77	10,05	8,95	8,61	6,29	13,60	2,20	6,28	10,94	5,70
95th-Percentile Queue Length [ft/ln]	174,95	364,74	344,37	251,14	223,74	215,25	157,13	339,92	54,96	157,04	273,47	142,49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49,57	38,43	38,74	54,10	33,67	33,81	59,81	62,39	13,82	85,25	56,34	11,24
Movement LOS	D	D	D	D	C	C	E	E	B	F	E	B
d_A, Approach Delay [s/veh]	40,26			40,06			50,96			40,00		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42,18											
Intersection LOS	D											
Intersection V/C	0,520											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9,0	9,0	9,0	9,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	184,89	103,80	133,88	138,46
d_p, Pedestrian Delay [s]	36,45	36,45	36,45	36,45
I_p,int, Pedestrian LOS Score for Intersection	2,668	2,828	2,338	2,515
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	889	444	444
d_b, Bicycle Delay [s]	13,92	13,90	27,22	27,44
I_b,int, Bicycle LOS Score for Intersection	2,209	2,044	2,291	2,414
Bicycle LOS	B	B	B	B

**Sequence**

Ring 1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	8	4	2	5	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report**

**Intersection 4: Accès Halles / Boulevard des Galeries d'Anjou**

Control Type:	Signalized	Delay (sec / veh):	47,4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,557

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵ ↑ ↵			↵ ↑ ↵			↵ ↑			↵ ↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	121	593	49	216	345	123	87	60	110	35	48	155
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,99	1,01	0,00	0,00	2,32	0,00	1,61	0,00	0,00	0,00	0,00	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	9	0	0	0	0	0	2	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	593	51	225	345	123	87	60	110	37	48	164
Peak Hour Factor	0,6000	0,9400	0,7200	0,8600	0,8700	0,8000	0,6700	0,7500	0,8000	0,8000	0,7500	0,7500
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	50	158	18	65	99	38	32	20	34	12	16	55
Total Analysis Volume [veh/h]	202	631	71	262	397	154	130	80	138	46	64	219
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5		21			22			6			
v_di, Inbound Pedestrian Volume crossing in	6		22			21			5			
v_co, Outbound Pedestrian Volume crossing	13		24			13			24			
v_ci, Inbound Pedestrian Volume crossing mi	13		24			13			24			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	1		1			2			5			

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	10	30	0	10	30	0	0	10	0	0	15	0
Maximum Green [s]	12	35	0	12	35	0	0	19	0	0	24	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	0,0	4,0	0,0	0,0	4,0	0,0
All red [s]	2,0	1,0	0,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	1,0	0,0
Split [s]	18	40	0	18	40	0	0	24	0	0	29	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	0	8	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk												
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			Yes			Yes	
Detector Location [ft]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	6,0	6,0	0,0	6,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	3
Pedestrian Walk [s]	10
Pedestrian Clearance [s]	14

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	58	40	40	58	40	40	24	24	29	29
g / C, Green / Cycle	0,43	0,30	0,30	0,43	0,30	0,30	0,18	0,18	0,21	0,21
(v / s)_i Volume / Saturation Flow Rate	0,18	0,19	0,19	0,24	0,15	0,16	0,10	0,11	0,06	0,15
s, saturation flow rate [veh/h]	1153	1885	1813	1083	1865	1677	1836	1482	1861	1444
c, Capacity [veh/h]	436	558	537	394	553	497	326	263	400	310
d1, Uniform Delay [s]	29,56	41,24	41,27	31,94	39,55	39,63	50,83	51,16	44,23	49,05
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,52	5,53	5,79	8,60	3,51	3,98	7,20	10,03	1,70	12,70
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,46	0,64	0,64	0,67	0,52	0,53	0,58	0,61	0,28	0,71
d, Delay for Lane Group [s/veh]	33,08	46,78	47,07	40,54	43,05	43,60	58,03	61,19	45,93	61,75
Lane Group LOS	C	D	D	D	D	D	E	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4,95	11,22	10,87	7,03	8,57	7,86	6,50	5,75	3,29	7,95
50th-Percentile Queue Length [ft/ln]	123,84	280,46	271,77	175,87	214,18	196,43	162,56	143,79	82,35	198,77
95th-Percentile Queue Length [veh/ln]	8,60	16,71	16,28	11,38	13,37	12,45	10,68	9,68	5,93	12,58
95th-Percentile Queue Length [ft/ln]	215,09	417,79	406,94	284,62	334,19	311,35	267,10	242,12	148,23	314,38

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33,08	46,90	47,07	40,54	43,20	43,60	58,03	58,91	61,19	45,93	45,93	61,75
Movement LOS	C	D	D	D	D	D	E	E	E	D	D	E
d_A, Approach Delay [s/veh]	43,83			42,42			59,49			56,46		
Approach LOS	D			D			E			E		
d_I, Intersection Delay [s/veh]	47,36											
Intersection LOS	D											
Intersection V/C	0,557											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	14,0			14,0			14,0			14,0		
M_corner, Corner Circulation Area [ft²/ped]	0,00			0,00			0,00			0,00		
M_CW, Crosswalk Circulation Area [ft²/ped]	318,59			149,40			126,38			609,61		
d_p, Pedestrian Delay [s]	46,82			46,82			46,82			46,82		
I_p,int, Pedestrian LOS Score for Intersection	2,706			2,756			2,415			2,434		
Crosswalk LOS	B			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	583			583			317			400		
d_b, Bicycle Delay [s]	30,12			30,12			42,55			38,50		
I_b,int, Bicycle LOS Score for Intersection	2,305			2,230			1,847			1,831		
Bicycle LOS	B			B			A			A		

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	3	7	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 5: Boulevard des Galeries d'Anjou / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	39,4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,728

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name												
Base Volume Input [veh/h]	173	516	118	218	344	176	247	325	138	171	270	481
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	1,16	0,78	0,00	0,00	1,16	0,00	0,00	3,38	2,17	0,00	3,70	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	0	0	0	21	27	37	9	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	182	516	118	218	344	197	274	362	147	171	286	481
Peak Hour Factor	0,8200	0,9300	0,8000	0,9600	0,9000	0,9200	0,9100	0,8900	0,8000	0,8100	0,9000	0,9200
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	55	139	37	57	96	54	75	102	46	53	79	131
Total Analysis Volume [veh/h]	222	555	148	227	382	214	301	407	184	211	318	523
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		15			19			20			16	
v_di, Inbound Pedestrian Volume crossing in		16			20			19			15	
v_co, Outbound Pedestrian Volume crossing		31			11			30			10	
v_ci, Inbound Pedestrian Volume crossing mi		30			10			31			11	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		4			3			1			9	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	112
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	4	0	3	4	0	1	2	0	1	2	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	15	0	6	15	0	6	15	0	6	15	0
Maximum Green [s]	12	30	0	12	30	0	15	35	0	15	35	0
Amber [s]	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	0,0
Split [s]	17	35	0	17	35	0	20	40	0	20	40	0
Vehicle Extension [s]	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0	3,5	0,0	0,0
Walk [s]	0	9	0	0	9	0	0	20	0	0	20	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	15	0	0	15	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	1,0	1,0	0,0	1,0	1,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	Yes		No	Yes		No	Yes			Yes	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	4,00	1,00	1,00	4,00	1,00	1,00	4,00	0,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	1,00	1,00	0,00	1,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	47	34	34	47	34	34	55	40	40	40	40	40
g / C, Green / Cycle	0,42	0,30	0,30	0,42	0,30	0,30	0,49	0,36	0,36	0,36	0,36	0,36
(v / s)_i Volume / Saturation Flow Rate	0,20	0,19	0,20	0,21	0,17	0,18	0,23	0,22	0,12	0,22	0,17	0,33
s, saturation flow rate [veh/h]	1135	1888	1715	1092	1883	1590	1318	1849	1488	976	1844	1587
c, Capacity [veh/h]	450	573	521	425	572	483	599	660	531	236	659	567
d1, Uniform Delay [s]	23,22	33,66	33,84	23,92	32,65	32,96	18,79	29,67	26,18	48,00	27,96	34,23
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,83	5,31	6,19	4,73	3,83	5,00	2,99	4,27	1,78	36,57	2,52	22,92
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,49	0,64	0,65	0,53	0,55	0,58	0,50	0,62	0,35	0,89	0,48	0,92
d, Delay for Lane Group [s/veh]	27,05	38,97	40,03	28,65	36,48	37,96	21,78	33,94	27,96	84,56	30,49	57,14
Lane Group LOS	C	D	D	C	D	D	C	C	C	F	C	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4,32	9,33	8,82	4,50	7,75	7,04	5,17	9,72	3,83	8,35	7,04	16,85
50th-Percentile Queue Length [ft/ln]	108,08	233,26	220,39	112,43	193,82	176,06	129,33	242,89	95,64	208,79	175,96	421,15
95th-Percentile Queue Length [veh/ln]	7,73	14,34	13,68	7,98	12,32	11,39	8,90	14,83	6,89	13,09	11,39	23,58
95th-Percentile Queue Length [ft/ln]	193,33	358,50	342,12	199,38	307,98	284,86	222,59	370,68	172,15	327,28	284,73	589,43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27,05	39,33	40,03	28,65	36,74	37,96	21,78	33,94	27,96	84,56	30,49	57,14
Movement LOS	C	D	D	C	D	D	C	C	C	F	C	E
d_A, Approach Delay [s/veh]	36,50			34,82			28,61			54,59		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	39,37											
Intersection LOS	D											
Intersection V/C	0,728											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	24,0	24,0	13,0	13,0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	217,42	489,68	162,86	174,92
d_p, Pedestrian Delay [s]	34,57	34,57	43,75	43,75
I_p,int, Pedestrian LOS Score for Intersection	3,029	2,870	2,720	2,759
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	536	625	625
d_b, Bicycle Delay [s]	30,08	30,06	26,48	26,59
I_b,int, Bicycle LOS Score for Intersection	2,323	2,239	3,031	3,295
Bicycle LOS	B	B	C	C

**Sequence**

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Intersection Level Of Service Report

#### Intersection 6: Accès Halles / Rue Jean-Talon Est

Control Type:	Two-way stop	Delay (sec / veh):	13,9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,264

#### Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↻		↻↻		↻↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	Yes		No		No	

#### Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	145	577	100	50	589
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	2,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	73	0	0	46
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	145	650	100	50	635
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	0	36	163	25	13	159
Total Analysis Volume [veh/h]	0	145	650	100	50	635
Pedestrian Volume [ped/h]	50		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,26	0,01	0,00	0,06	0,01
d_M, Delay for Movement [s/veh]	0,00	13,87	0,00	0,00	9,93	0,00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0,00	1,05	0,00	0,00	0,21	0,10
95th-Percentile Queue Length [ft/ln]	0,00	26,30	0,00	0,00	5,13	2,56
d_A, Approach Delay [s/veh]	13,87		0,00		0,73	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1,59					
Intersection LOS	B					

**Intersection Level Of Service Report**  
**Intersection 7: Avenue des Halles / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	48,0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,527

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↔↔		↑↔		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

**Volumes**

Name						
Base Volume Input [veh/h]	188	67	580	188	22	541
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	4,48	2,07	0,00	0,00	2,40
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	73	0	45	46	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	140	580	233	68	541
Peak Hour Factor	0,8700	0,6700	0,9500	0,8000	0,6900	0,9100
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	60	52	153	73	25	149
Total Analysis Volume [veh/h]	240	209	611	291	99	595
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	19		19		0	
v_ci, Inbound Pedestrian Volume crossing mi	19		19		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	2		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	38,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Overlap	Overlap	Overlap	Overlap	Overlap	Permissive
Signal Group	9	8	7	12	11	6
Auxiliary Signal Groups	9	8	6,7	6,12	6,11	
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	4	16	10	10	3	14
Maximum Green [s]	25	18	27	27	5	29
Amber [s]	4,0	4,0	4,0	4,0	4,0	4,0
All red [s]	2,0	2,0	2,0	2,0	1,0	1,0
Split [s]	42	42	31	31	13	44
Vehicle Extension [s]	3,0	3,0	3,0	3,0	3,0	3,0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	16	0	15	0	0	0
Delayed Vehicle Green [s]	0,0	7,0	0,0	7,0	0,0	0,0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2,0	2,0	2,0	2,0	2,0	2,0
I2, Clearance Lost Time [s]	4,0	4,0	4,0	4,0	3,0	3,0
Minimum Recall	No	No	Yes	Yes	No	No
Maximum Recall	Yes	Yes	No	No	Yes	Yes
Pedestrian Recall	Yes	No	Yes	No	No	No
Detector Location [ft]	0,0	0,0	1,0	0,0	1,0	1,0
Detector Length [ft]	0,0	0,0	6,0	0,0	6,0	6,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	6,00	6,00	6,00	6,00	5,00	5,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	2,00	0,00
l2, Clearance Lost Time [s]	4,00	4,00	4,00	4,00	0,00	3,00
g_i, Effective Green Time [s]	36	29	70	70	52	39
g / C, Green / Cycle	0,28	0,22	0,54	0,54	0,40	0,30
(v / s)_i Volume / Saturation Flow Rate	0,13	0,14	0,24	0,28	0,34	0,22
s, saturation flow rate [veh/h]	1810	1536	1869	1637	919	1696
c, Capacity [veh/h]	501	343	1006	882	286	509
d1, Uniform Delay [s]	39,18	45,31	18,25	19,11	43,04	41,06
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	3,26	7,86	1,44	2,12	81,67	9,66
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,48	0,61	0,45	0,51	1,10	0,75
d, Delay for Lane Group [s/veh]	42,44	53,18	19,69	21,23	124,71	50,73
Lane Group LOS	D	D	B	C	F	D
Critical Lane Group	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6,88	6,82	8,60	9,10	12,84	12,35
50th-Percentile Queue Length [ft/ln]	172,00	170,61	214,92	227,46	321,03	308,80
95th-Percentile Queue Length [veh/ln]	11,18	11,11	13,41	14,05	19,85	18,12
95th-Percentile Queue Length [ft/ln]	279,55	277,71	335,13	351,13	496,19	452,90

**Movement, Approach, & Intersection Results**

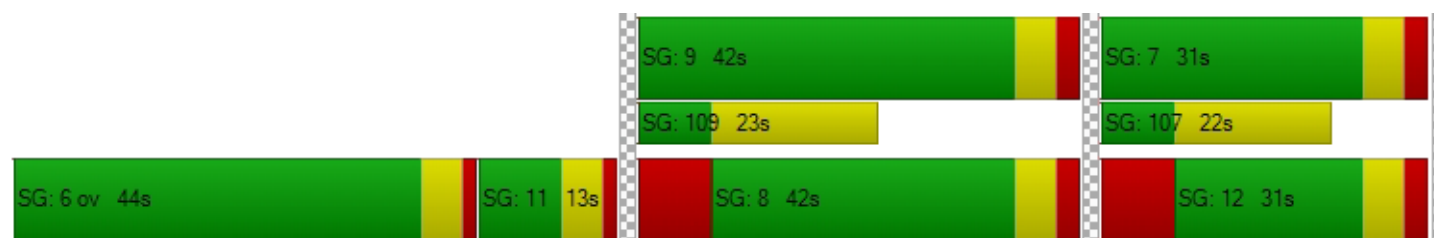
d_M, Delay for Movement [s/veh]	42,44	53,18	20,10	21,23	124,71	77,39
Movement LOS	D	D	C	C	F	E
d_A, Approach Delay [s/veh]	47,44		20,46		84,14	
Approach LOS	D		C		F	
d_I, Intersection Delay [s/veh]	48,00					
Intersection LOS	D					
Intersection V/C	0,527					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	0,0	11,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	0,00	0,00	0,00
d_p, Pedestrian Delay [s]	51,98	0,00	51,98
I_p,int, Pedestrian LOS Score for Intersection	2,374	0,000	2,516
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	1040	624
d_b, Bicycle Delay [s]	31,72	14,40	29,58
I_b,int, Bicycle LOS Score for Intersection	1,560	2,304	2,132
Bicycle LOS	A	B	B

**Sequence**

Ring 1	-	-	-	9	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	11	-	8	12	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 8: Accès A-40 / Rue Jean-Talon Est**

Control Type:	Signalized	Delay (sec / veh):	15,7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,336

**Intersection Setup**

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00			30,00			30,00			30,00		
Grade [%]	0,00			0,00			0,00			0,00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name												
Base Volume Input [veh/h]	7	1	5	181	0	26	62	581	10	0	696	25
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	0,00	0,00	0,00	0,00	0,00	3,85	0,00	2,07	0,00	0,00	1,87	0,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	19	0	0	0	26	0	0	16	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	1	5	200	0	26	62	607	10	0	712	30
Peak Hour Factor	0,5800	0,2500	0,6300	0,8700	0,6700	0,9300	0,7800	0,8900	0,6300	1,0000	0,9300	0,6900
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	3	1	2	57	0	7	20	171	4	0	191	11
Total Analysis Volume [veh/h]	12	4	8	230	0	28	79	682	16	0	766	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			8			8			0		
v_di, Inbound Pedestrian Volume crossing in	0			8			8			0		
v_co, Outbound Pedestrian Volume crossing	23			10			23			9		
v_ci, Inbound Pedestrian Volume crossing mi	23			9			23			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			3			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	31,0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0,00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Overlap	Overlap	Permiss	Overlap	Overlap	Permiss
Signal Group	4	4	0	3	10	0	1	2	0	1	2	0
Auxiliary Signal Groups				3,10			1,2	2,5		1,2	2,5	
Lead / Lag	Lag	-	-	Lead	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	16	16	0	4	16	0	6	17	0	6	17	0
Maximum Green [s]	20	20	0	7	20	0	6	71	0	6	71	0
Amber [s]	4,0	4,0	0,0	3,0	4,0	0,0	4,0	4,0	0,0	4,0	4,0	0,0
All red [s]	2,0	2,0	0,0	0,0	2,0	0,0	2,0	0,0	0,0	2,0	0,0	0,0
Split [s]	24	24	0	7	31	0	15	84	0	15	84	0
Vehicle Extension [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Walk [s]	7	7	0	4	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	3	17	0	0	18	0	0	18	0
Delayed Vehicle Green [s]	0,0	0,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0	0,0	7,0	0,0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I2, Clearance Lost Time [s]	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Minimum Recall		Yes		No	No		No	No		No	No	
Maximum Recall		No		Yes	Yes		Yes	Yes		Yes	Yes	
Pedestrian Recall		Yes		No	Yes		No	Yes		No	Yes	
Detector Location [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Detector Length [ft]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
I, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	0,00	3,00	3,00	0,00	0,00	0,00	0,00
l1_p, Permitted Start-Up Lost Time [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
l2, Clearance Lost Time [s]	0,00	0,00	3,00	0,00	0,00	0,00	0,00
g_i, Effective Green Time [s]	24	28	21	98	84	98	84
g / C, Green / Cycle	0,18	0,22	0,16	0,75	0,65	0,75	0,65
(v / s)_i Volume / Saturation Flow Rate	0,02	0,15	0,02	0,27	0,26	0,23	0,23
s, saturation flow rate [veh/h]	1525	1551	1403	1255	1688	1872	1667
c, Capacity [veh/h]	323	390	227	981	1091	1439	1077
d1, Uniform Delay [s]	43,80	48,89	46,63	5,24	11,03	5,10	10,55
k, delay calibration	0,50	0,50	0,50	0,50	0,50	0,50	0,50
l, Upstream Filtering Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00
d2, Incremental Delay [s]	0,45	6,44	1,12	0,95	1,12	0,53	0,91
d3, Initial Queue Delay [s]	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Rp, platoon ratio	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PF, progression factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00

**Lane Group Results**

X, volume / capacity	0,07	0,59	0,12	0,34	0,41	0,30	0,35
d, Delay for Lane Group [s/veh]	44,25	55,33	47,74	6,19	12,15	5,63	11,47
Lane Group LOS	D	E	D	A	B	A	B
Critical Lane Group	Yes	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0,69	7,62	0,85	2,71	6,27	3,54	5,17
50th-Percentile Queue Length [ft/ln]	17,16	190,55	21,32	67,69	156,67	88,42	129,23
95th-Percentile Queue Length [veh/ln]	1,24	12,15	1,54	4,87	10,37	6,37	8,90
95th-Percentile Queue Length [ft/ln]	30,88	303,74	38,38	121,84	259,31	159,16	222,45



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44,25	44,25	44,25	55,33	47,74	47,74	6,19	9,91	12,15	5,63	8,21	11,47
Movement LOS	D	D	D	E	D	D	A	A	B	A	A	B
d_A, Approach Delay [s/veh]	44,25			54,51			9,58			8,38		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	15,71											
Intersection LOS	B											
Intersection V/C	0,336											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11,0	11,0	11,0	0,0
M_corner, Corner Circulation Area [ft²/ped]	0,00	0,00	0,00	0,00
M_CW, Crosswalk Circulation Area [ft²/ped]	123,58	271,58	419,32	0,00
d_p, Pedestrian Delay [s]	49,50	49,50	49,50	0,00
I_p,int, Pedestrian LOS Score for Intersection	1,967	2,191	2,548	0,000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1333	1333
d_b, Bicycle Delay [s]	43,42	43,42	6,67	6,67
I_b,int, Bicycle LOS Score for Intersection	1,599	1,772	2,201	2,227
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	-	5	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report****Intersection 9: Entrée développement / Avenue des Halles**

Control Type:	Two-way stop	Delay (sec / veh):	15,1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0,043

**Intersection Setup**

Name	Northbound		Southbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12,00	12,00	12,00	12,00	12,00	12,00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100,00	100,00	100,00	100,00	100,00	100,00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0,00	0,00	0,00	0,00	0,00	0,00
Speed [mph]	30,00		30,00		30,00	
Grade [%]	0,00		0,00		0,00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Northbound		Southbound		Westbound	
Base Volume Input [veh/h]	242	0	0	200	0	0
Base Volume Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Heavy Vehicles Percentage [%]	2,00	2,00	2,00	2,00	2,00	2,00
Growth Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	91	0	17	94
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	242	16	91	200	17	94
Peak Hour Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Other Adjustment Factor	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
Total 15-Minute Volume [veh/h]	61	4	23	50	4	24
Total Analysis Volume [veh/h]	242	16	91	200	17	94
Pedestrian Volume [ped/h]	0		0		10	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0,00	0,00	0,07	0,00	0,04	0,12
d_M, Delay for Movement [s/veh]	0,00	0,00	8,02	0,00	15,05	10,71
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0,00	0,00	0,23	0,23	0,59	0,59
95th-Percentile Queue Length [ft/ln]	0,00	0,00	5,72	5,72	14,64	14,64
d_A, Approach Delay [s/veh]	0,00		2,51		11,38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3,02					
Intersection LOS	C					

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 9 Att Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_FDS\_RV0B.pdf

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	0	0	0	91	0	169	167	312	0	0	215	91	1045

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	23	0	31	0	0	0	0	370	41	26	287	0	778

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	100	464	129	121	299	62	76	211	88	69	143	191	1953

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	121	593	51	225	345	123	87	60	110	37	48	164	1964

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	182	516	118	218	344	197	274	362	147	171	286	481	3296

ID	Intersection Name	Northbound			Eastbound		Westbound		Total Volume
		Right			Thru	Right	Left	Thru	
6	Accès Halles / Rue Jean-Talon Est	145			650	100	50	635	1580

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	209	140	580	233	68	541	1771

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	7	1	5	200	0	26	62	607	10	0	712	30	1660

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	242	16	91	200	17	94	660

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 9 Att Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_FDS\_RV0B.pdf

## Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Avenue des Halles / Rue Bélanger	Final Base	0	0	0	86	0	157	163	312	0	0	215	79	1012
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	5	0	12	4	0	0	0	0	12	33
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>0</b>	<b>169</b>	<b>167</b>	<b>312</b>	<b>0</b>	<b>0</b>	<b>215</b>	<b>91</b>	<b>1045</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Avenue de Beaufort / Rue Bélanger	Final Base	23	0	31	0	0	0	0	365	41	26	275	0	761
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	5	0	0	12	0	17
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>23</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>370</b>	<b>41</b>	<b>26</b>	<b>287</b>	<b>0</b>	<b>778</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Boulevard des Galeries d'Anjou / Rue Bélanger	Final Base	90	464	129	121	299	60	74	211	85	69	143	191	1936
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	10	0	0	0	0	2	2	0	3	0	0	0	17
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>100</b>	<b>464</b>	<b>129</b>	<b>121</b>	<b>299</b>	<b>62</b>	<b>76</b>	<b>211</b>	<b>88</b>	<b>69</b>	<b>143</b>	<b>191</b>	<b>1953</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Accès Halles / Boulevard des Galeries d'Anjou	Final Base	121	593	49	216	345	123	87	60	110	35	48	155	1942
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	2	9	0	0	0	0	0	2	0	9	22
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>121</b>	<b>593</b>	<b>51</b>	<b>225</b>	<b>345</b>	<b>123</b>	<b>87</b>	<b>60</b>	<b>110</b>	<b>37</b>	<b>48</b>	<b>164</b>	<b>1964</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	Boulevard des Galeries d'Anjou / Rue Jean-Talon Est	Final Base	173	516	118	218	344	176	247	325	138	171	270	481	3177	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	9	0	0	0	0	21	27	37	9	0	16	0	119	
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>182</b>	<b>516</b>	<b>118</b>	<b>218</b>	<b>344</b>	<b>197</b>	<b>274</b>	<b>362</b>	<b>147</b>	<b>171</b>	<b>286</b>	<b>481</b>	<b>3296</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Right	Thru	Right	Left	Thru		
6	Accès Halles / Rue Jean-Talon Est	Final Base	145	577	100	50	589	1461	
		Growth Factor	1,00	1,00	1,00	1,00	1,00	-	
		In Process	0	0	0	0	0	0	
		Net New Trips	0	73	0	0	46	119	
		Other	0	0	0	0	0	0	
		<b>Future Total</b>	<b>145</b>	<b>650</b>	<b>100</b>	<b>50</b>	<b>635</b>	<b>1580</b>	

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
7	Avenue des Halles / Rue Jean-Talon Est	Final Base	188	67	580	188	22	541	1586
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	21	73	0	45	46	0	185
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>209</b>	<b>140</b>	<b>580</b>	<b>233</b>	<b>68</b>	<b>541</b>	<b>1771</b>

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	Accès A-40 / Rue Jean-Talon Est	Final Base	7	1	5	181	0	26	62	581	10	0	696	25	1594
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	19	0	0	0	26	0	0	16	5	66
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>7</b>	<b>1</b>	<b>5</b>	<b>200</b>	<b>0</b>	<b>26</b>	<b>62</b>	<b>607</b>	<b>10</b>	<b>0</b>	<b>712</b>	<b>30</b>	<b>1660</b>



ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
9	Entrée développement / Avenue des Halles	Final Base	242	0	0	200	0	0	442
		Growth Factor	1,00	1,00	1,00	1,00	1,00	1,00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	16	91	0	17	94	218
		Other	0	0	0	0	0	0	0
		<b>Future Total</b>	<b>242</b>	<b>16</b>	<b>91</b>	<b>200</b>	<b>17</b>	<b>94</b>	<b>660</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 9 Att Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_FDS\_RV0B.pdf

**Trip Generation summary****Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone	Residential	685	Units	1,000	0,000	50,00	50,00	107	111	218	100,00
<b>Added Trips Total</b>								<b>107</b>	<b>111</b>	<b>218</b>	<b>100,00</b>

## Développement aux Halles d'Anjou

Vistro File: Z:\...\D21-0608\_Halles\_Anjou\_RV01.vistro

Scenario 9 Att Future FDS

Report File: Z:\...\D21-

2021-07-06

0608\_RP\_Situation\_attenuation\_future\_FDS\_RV0B.pdf

**Trip Distribution summary**

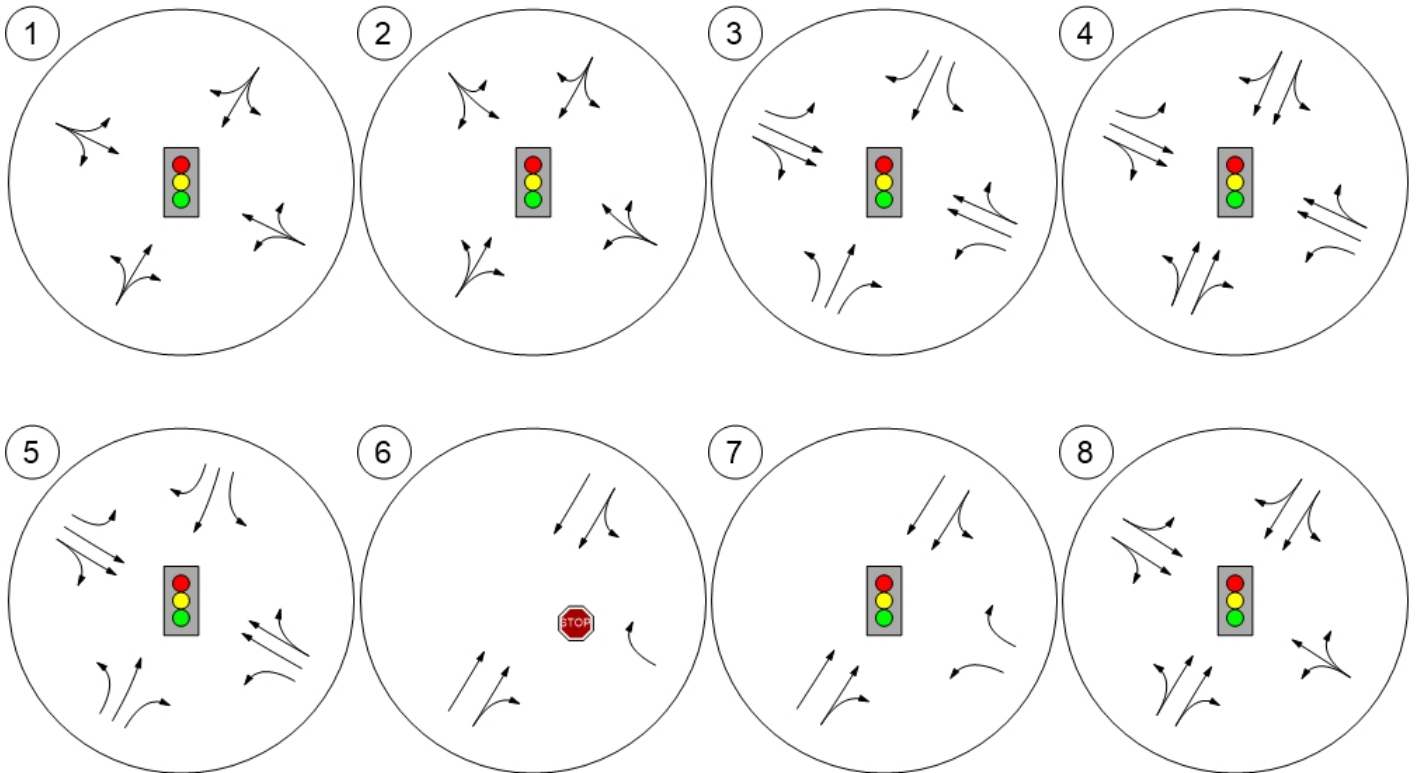
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	24,13	26	14,13	16
3: Gate	18,20	19	4,49	5
4: Gate	14,69	16	33,76	37
5: Gate	19,47	21	24,12	27
6: Gate	10,00	11	10,00	11
7: Gate	9,57	10	2,86	3
8: Gate	3,94	4	10,64	12
<b>Total</b>	<b>100,00</b>	<b>107</b>	<b>100,00</b>	<b>111</b>

Study Intersections

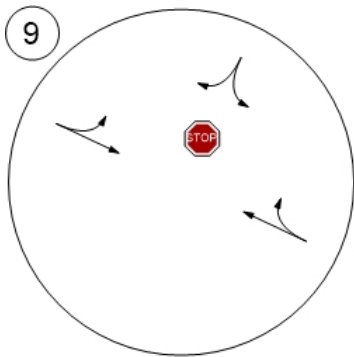
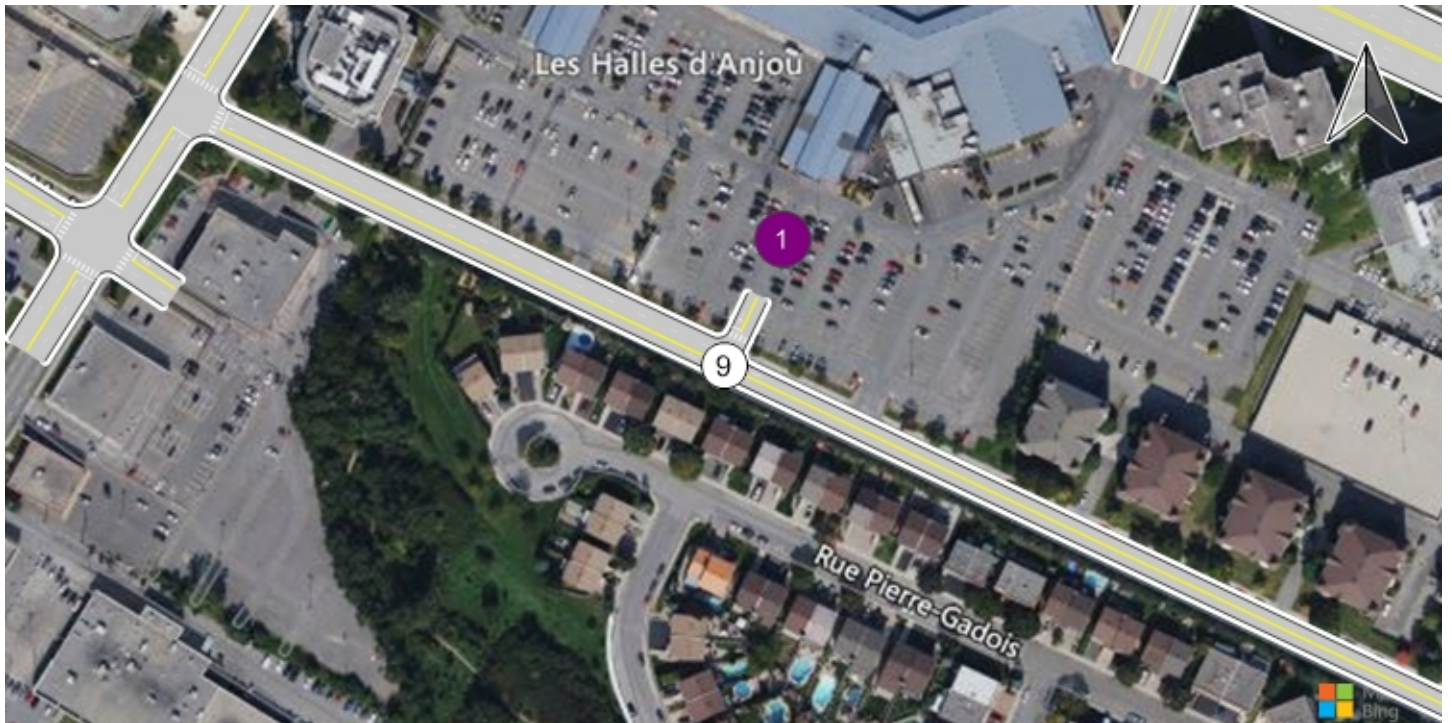




Lane Configuration and Traffic Control

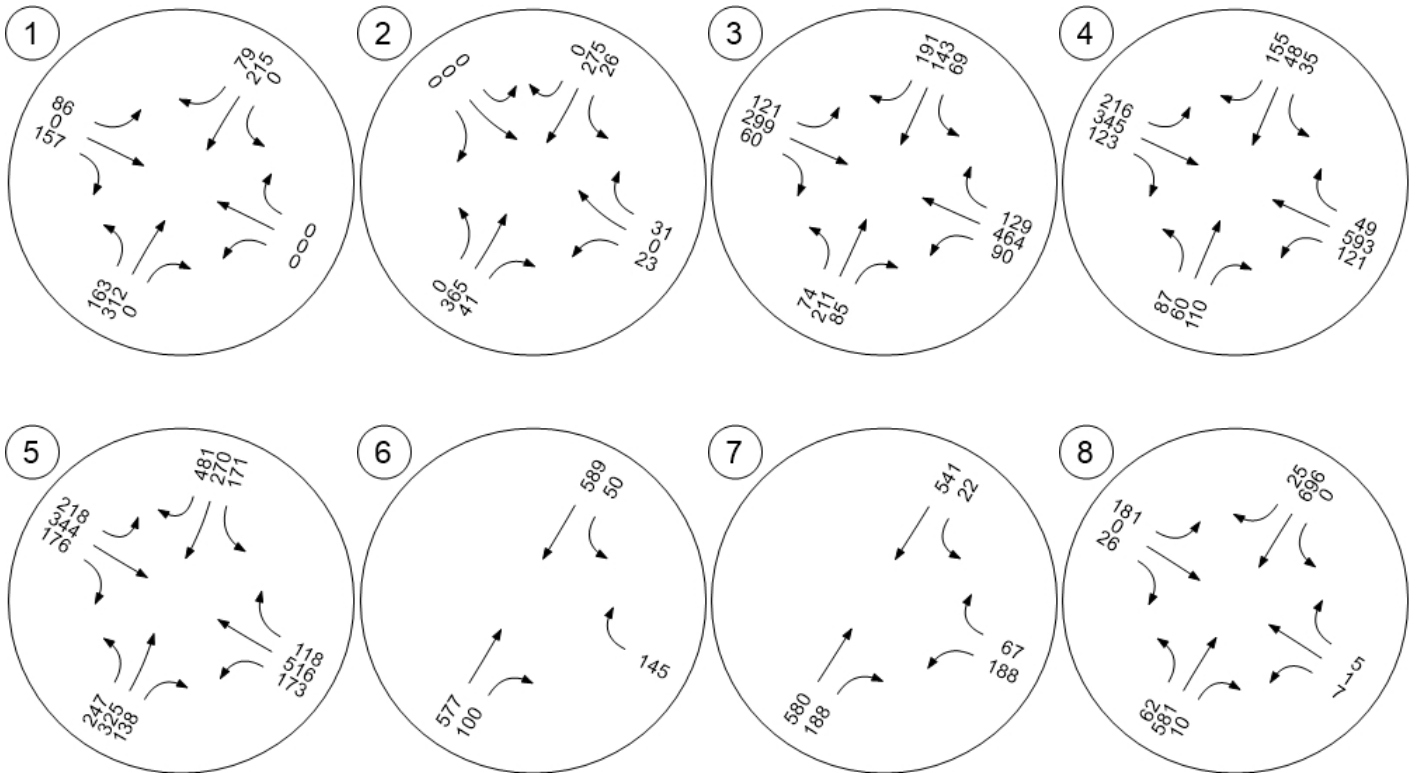


Lane Configuration and Traffic Control



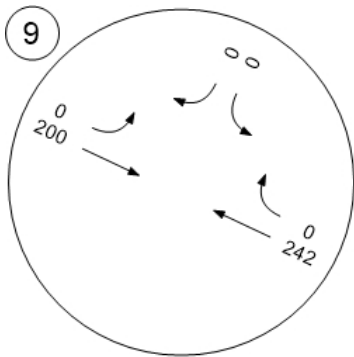
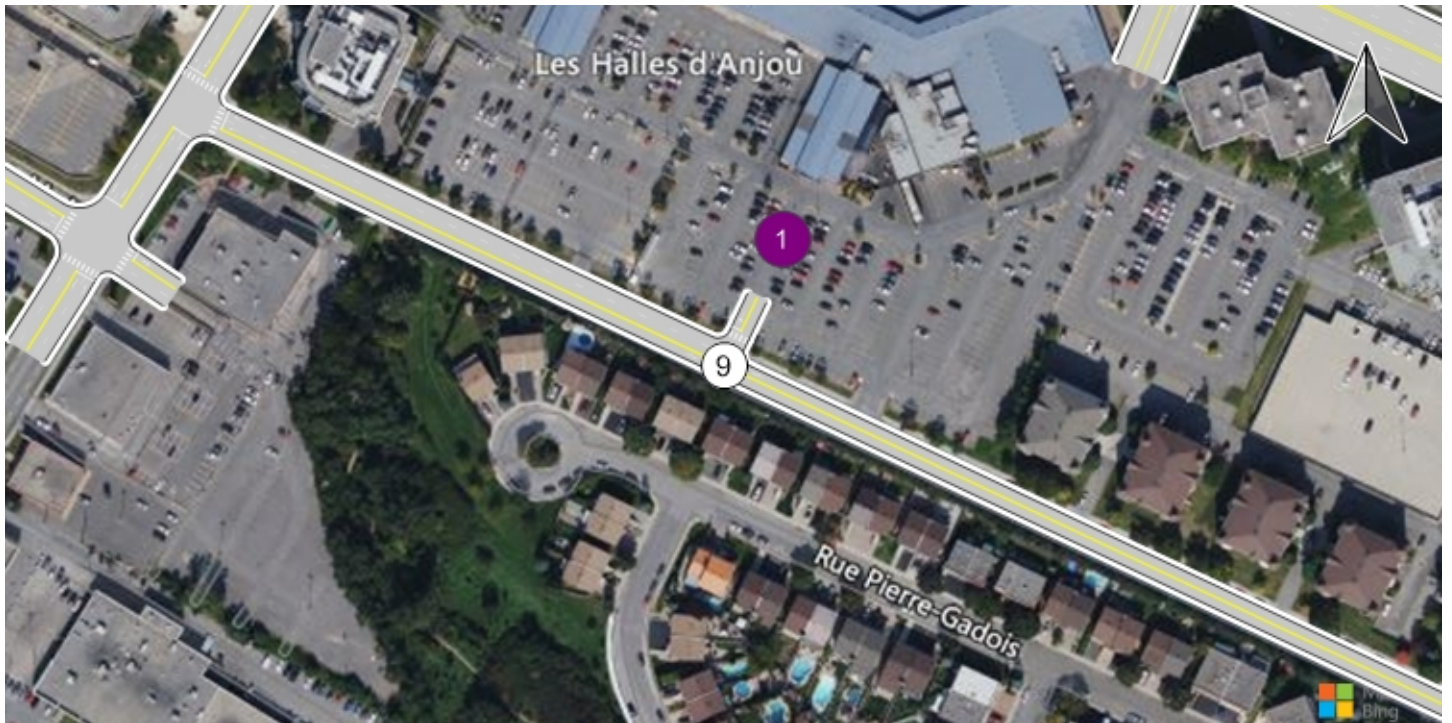


Traffic Volume - Base Volume

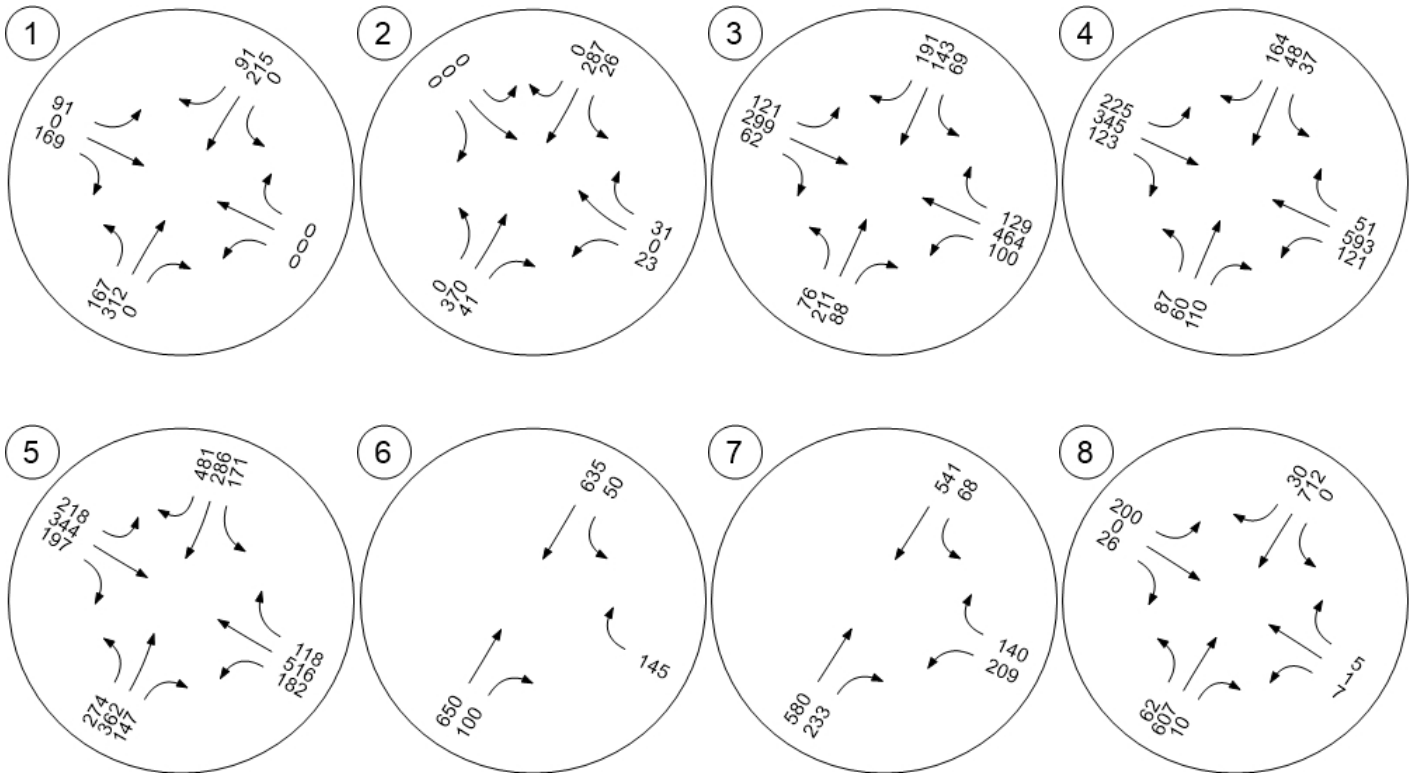




Traffic Volume - Base Volume

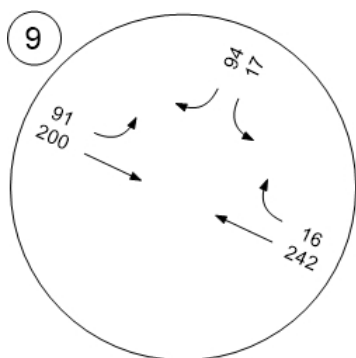
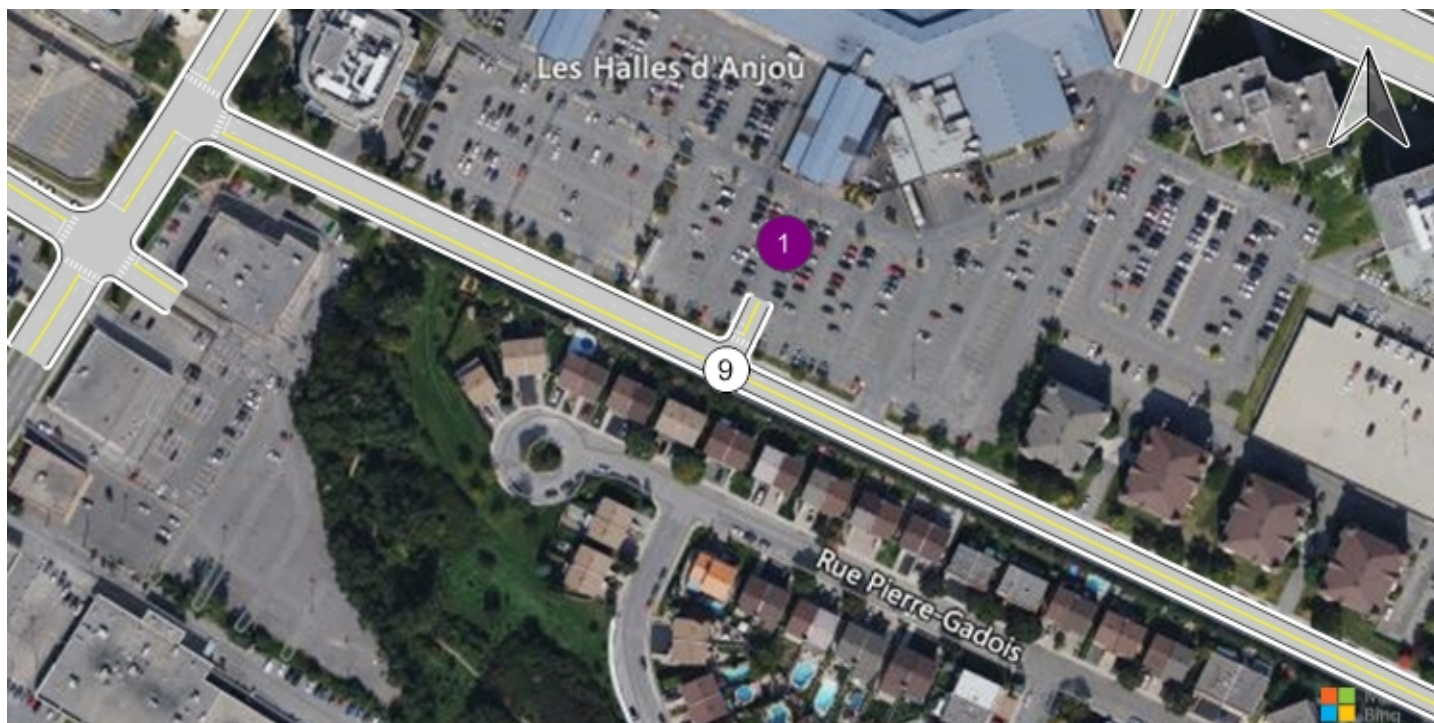


Traffic Volume - Future Total Volume

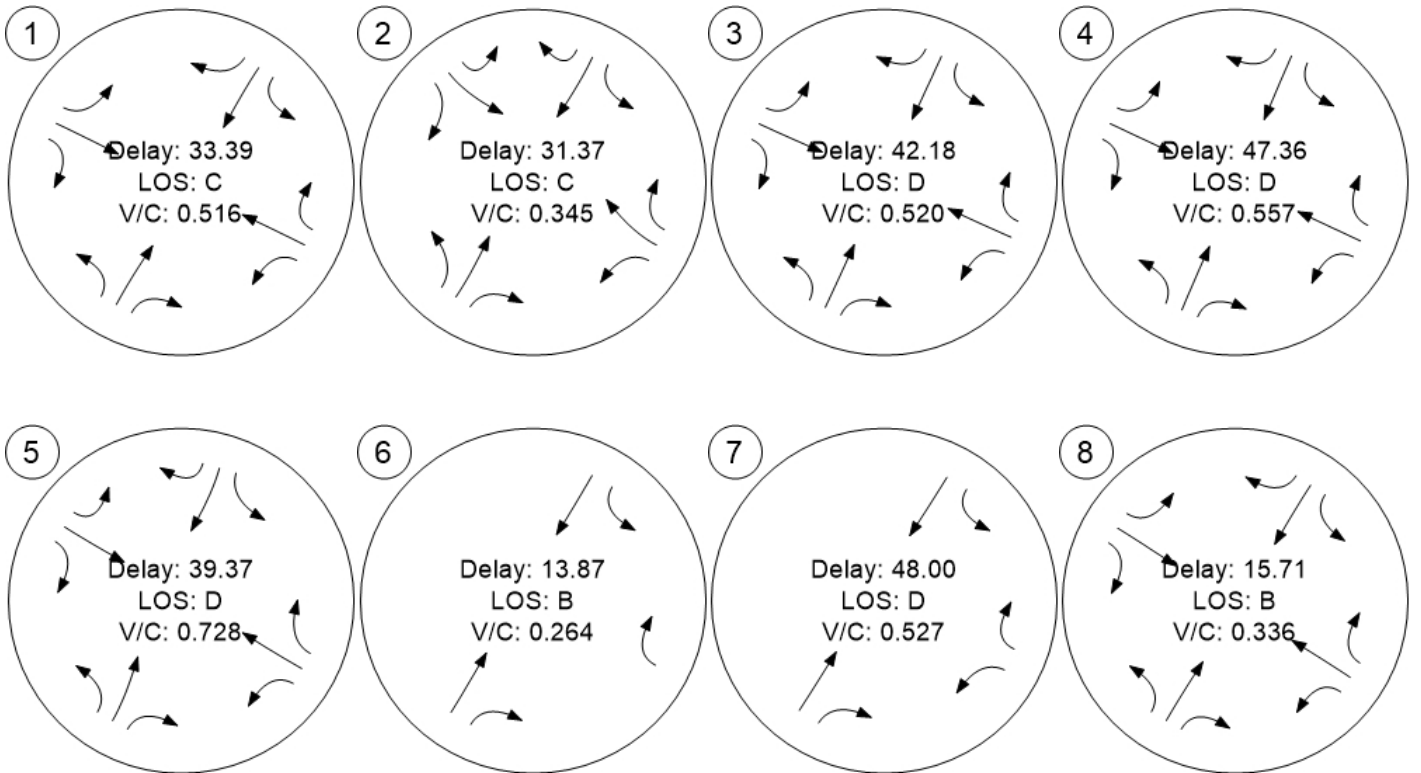




Traffic Volume - Future Total Volume



Traffic Conditions





Traffic Conditions

