

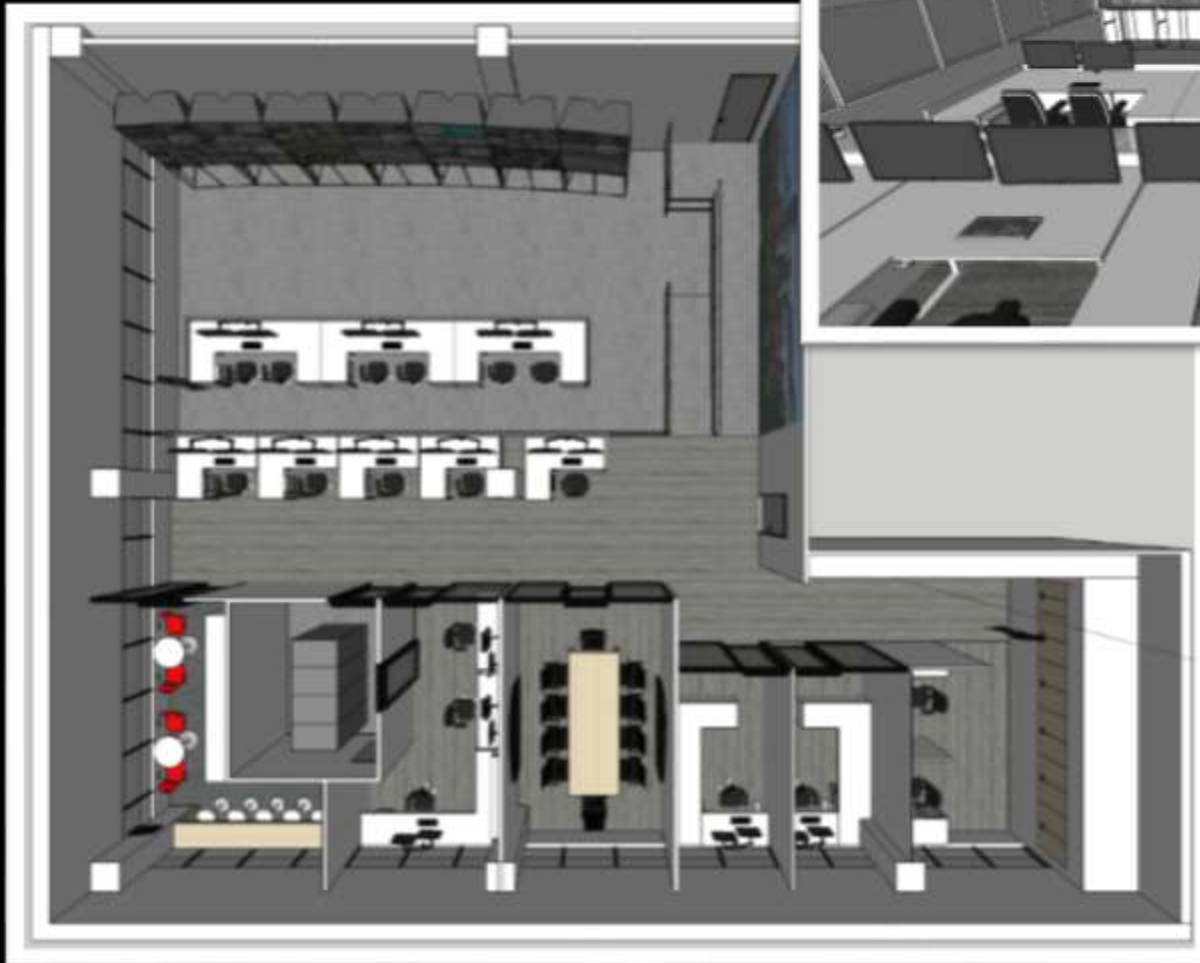


Calgary's Traffic Management Centre A Step Towards AI and Machine Learning

Sameer Patil, Traffic Leader, TMC
City of Calgary



Next-Gen TMC (2015-2018)



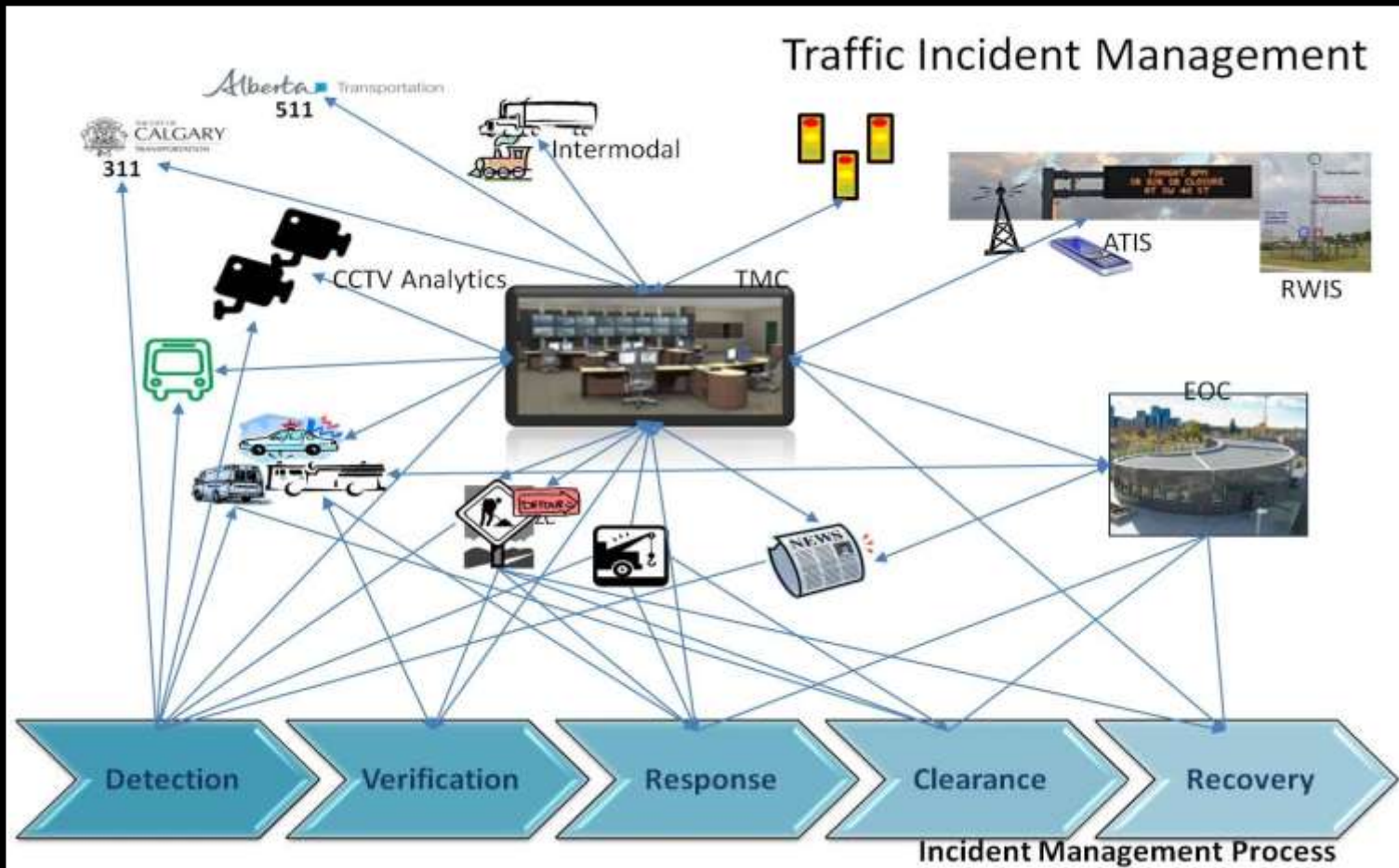
Calgary's TMC

Purpose

- To have a centralized traffic management centre for Calgary to:
 - Manage and monitor traffic flow
 - Manage traffic incidents and resulting congestion
 - Provide Traveler information



Our Traffic Incident Management Process



Key to effective traffic incident management is the capability:

- to collect reliable and timely traffic information
- of real-time identification and verification of incidents

Incident Detection- 911 CAD Database

- Phone Call (2005-2011)





Incident Detection- 911 CAD Database

- iNETViewer (2012-2016)

I/NetViewer

Search:

149952 [Logout]
Help

Main
Events
Units
Messages
Lineups
Inquiry
Configure

F2018049566 - 29B05 - Traffic Incidents - Unknown status/other codes N/A
30 QUARRY PT SE CALGARY

Overview
Chronology
Event Unit
View Map
Event Details

EVENT INFORMATION - F2018049566

18/MAY/24

| Event Type | Event ID | Priority | Status | Source | DGroup | Case Numbers | Disposition Code | Terminal | Dup No. | Calltaker ID |
|------------|-------------|----------|--------|---------|--------|--------------|------------------|------------|---------|--------------|
| 29B05 | F2018049566 | 4 | A | ANI/ALI | FCALG | F2018049566 | | pipsccomp2 | | 14 |

AGENCY INFORMATION

| Agency | Priority | DGroup | ESZ | Area | Added | Dispatched | Arrived | Closed | Close ID | Close Terminal | Event ID | Primary Unit | Situation | Comments |
|----------|----------|--------|--------|-------|--------------------|--------------------|---------|--------|----------|----------------|-------------|--------------|-----------|----------|
| FCALGARY | 4 | FCALG | 100000 | FCALG | 18/May/24 10:45:59 | 18/May/24 10:46:53 | | | | | F2018049566 | | | |

REMARKS
☒ Common
☐ Agency Specific

~AHS(EMS): 00010
~AHS(EMS): ** LOI search completed at 2018-05-24 10:45:10
~AHS(EMS): ^***SELECT AND RECOMMEND INITIATED***
~AHS(EMS): ^AFRRCS Received on 4112402 : 10.174.35.47
~AHS(EMS): Caller Relationship: 3rd party
~AHS(EMS): Problem: CAR ACCIDENT - HIT A TREE
~AHS(EMS): ** Event Type changed from 00A01(COLD) to 29(COLD) at: 2018-05-24 10:45:54
[See more remarks](#)

LOCATION INFORMATION

30 QUARRY PT SE CALGARY
X-STREET 1: QUARRY WY SE
X-STREET 2:
[Location Choices](#)

Calgary

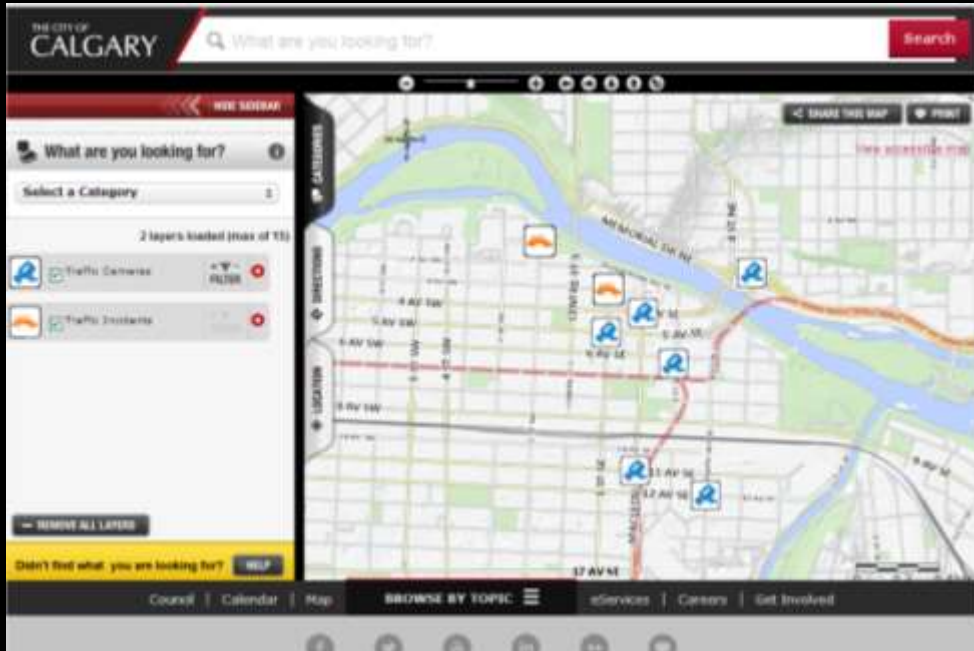


- Twitter

Traveler Information

- Traffic Advisory Radio 106.5 FM

- ATIS Website



- Dynamic Message Signs (DMS)



Single Incident Portal

- Direct Feed(2017)








ID: New Record Start Date: 2018/05/24 11:03:40 AM End Date:

(Address, Intersection, Placename) Quarry Wy and Quarry Gate SE

Quadrant SE

911 Event ID: F2018049566

Incident Type

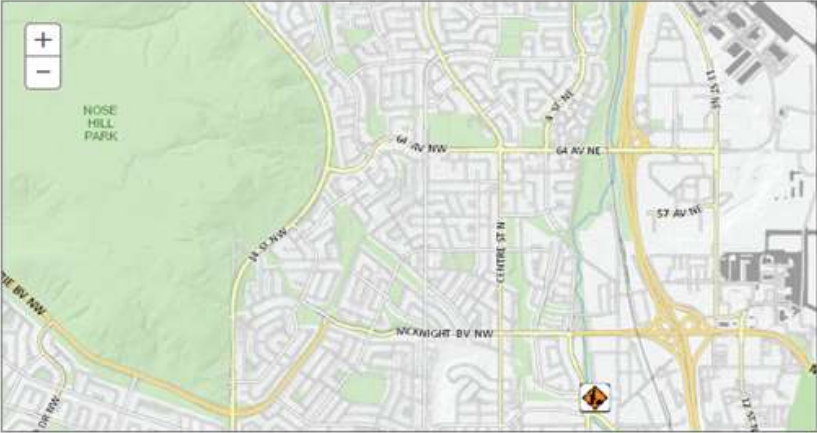
      

Incident Type Details

Locate


Preview

☐ Signal ☐ Construction ☐ Active Incidents ☐ Cam



Location co-ordinates

☒ No Image



You have reached the limit

Radio Format



311 And Fire Truck location Integration

911 Events

New Events (4) Active Events (6) Closed Events (10) Search CPS Data (All Events)

| ID | Address | Code | Time | CFD Arrival Time |
|-------------|------------------------------|--------|-------|------------------|
| F2018054703 | 23 AVE and BARLOW TR NE | 71B01 | 11:08 | 11:13 |
| F2018054675 | 5 ST and 4 AVE SW | 71 | 10:04 | NA |
| F2018054674 | 5 ST and 4 AVE SW | 77D02M | 10:04 | 10:07 |
| F2018054641 | CENTRE ST and MCKNIGHT BV NE | 77B01 | 8:58 | 9:04 |
| F2018054621 | 11 AVE and 1 ST SW | 77C02 | 8:34 | 8:38 |
| F2018054615 | ANDERSON RD and 14 ST SW | 29D02I | 8:25 | NA |
| F2018054606 | 39 AVE and 27 ST NE | 77C02 | 8:18 | 8:23 |
| F2018054601 | Unknown and 10 AVE SW | 77C02 | 8:10 | 8:20 |

Esri Map Google Map Inrix Map

☐ Signal ☐ Detours ☐ Incidents ☐ Cam ☒ FireTrucks



Details Cameras

Search by Location

5 ST and 4 AVE SW

Locate

Create New Incident Ignore Locate address from XY
Thu Jun 07 2018 13:38:14 GMT-0600 (Mountain Daylight Time)

Address:

5 ST and 4 AVE SW

EST:

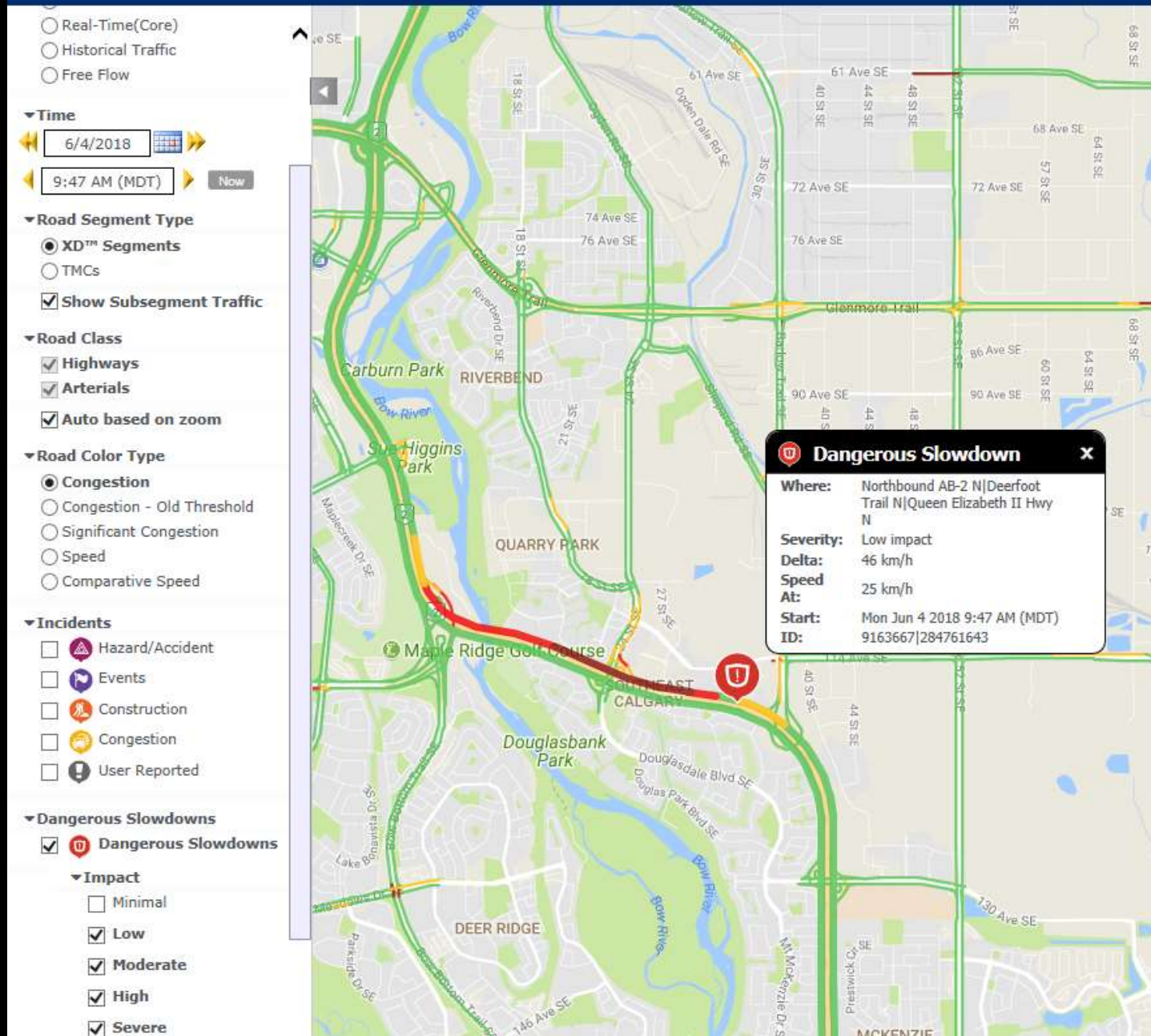
SPECIAL ADDRESS COMMENT:

***NUMBER OF FLOORS = 22 ***

BUS CITY OF CALGARY 911 4032969199 CALGARY POLICE 4032969197 AHS METRO CALGARY 1 4037779740
MVC - TRANSFERRED CALLER TO EMS, CALLER ALSO STATED THERE IS 'A BIT OF A FIRE UNDER THE VEHICLE'
Problem: CAR ACCIDENT - VEH ON FIRE

INRIX Data

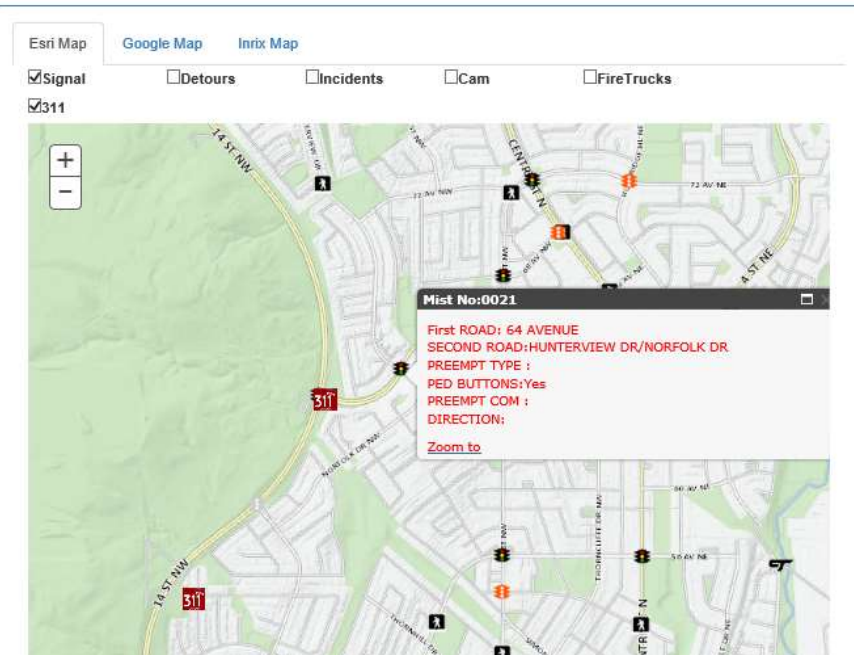
Dangerous Slowdown API Integration





INRIX Data Integration

| New Events (0) Active Events (1) Closed Events (69) Search CPS Data (All Events) | | | | | |
|--|---------------------|-------|-------|------------------|--------|
| ID | Address | Code | Time | CFD Arrival Time | Status |
| F2017083143 | 32 AVE and DEERFOOT | 72C01 | 10:26 | 11:32 | Active |



INRIX

New (2) Ignore (1) Closed (6)

16 Ave E/B

Abnormal Conditions

Active Ignore

View

64 Ave & Deerfoot

Abnormal Conditions

Active Ignore

View





TMC Work Flow Management System

Not secure | atismc.ccc.ca/Secure/DashBoard.aspx

Apps Bookmarks City of Calgary Bookmarks Regular Bookmarks Facebook AIB Welcome to ATE C ATE Investor Conn WOW Games with Gold FIBIT Dashboard Post/EMS backing Week Spot Guides Other bookmarks

TMC Workflow Management System

Recording Timings DMS Radio Other Map Message

Active Incidents (1) Closed incidents (12) 311 (616) TMC O (9) TMC T (8) 311 Closed (414) Tasks completed (204)

| Time | Address | Details | ID |
|-------|--|-----------------------|-------|
| 14:50 | Castleridge Boulevard and Westwinds Drive NE | Two vehicle incident. | 30806 |

Incidents Other 311 AIB

Last 24 hours

| Hour | Count |
|------|-------|
| 5 | 1 |
| 6 | 2 |
| 7 | 2 |
| 8 | 2 |
| 9 | 4 |
| 10 | 3 |
| 11 | 2 |
| 12 | 2 |
| 13 | 1 |
| 14 | 2 |

Highcharts.com

Tasks

Int_219 2018-06-04 DMB Timings

These timings are ready to install and are saved in the TMC folder. [Info](#)

Start Date: 4/6/2018 14:30 Expired [Complete](#)

Assigned to:TMC Tech **Medium**

Monitor 5B & NB on 36 St at Alport Tr NE Other

Due to road closure on Metis Tr b/w 80-104 Ave which is scheduled end at 6 PM June 2. Please monitor 5B & NB traffic along 36 St using ATT east side camera, esp during AM & PM peak. [Info](#)

Start Date: 28/5/2018 15:00 Expired [Complete](#)

Assigned to:TMC Tech **Medium**

INT_466 timings Timings

Please install timings for Int_466 2018-06-04 DMB. [Info](#)

Start Date: 4/6/2018 12:00 New [Complete](#)

Assigned to:TMC Tech **Medium**

Monitoring

Int_219 2018-06-04 DMB Timings

These timings are ready to install and are saved in the TMC folder. [Info](#)

End Date: 4/6/2018 21:00 Expired [Complete](#)

Assigned to:TMC Tech **Medium**

INT_466 timings Timings

Please install timings for Int_466 2018-06-04 DMB. [Info](#)

End Date: 4/6/2018 19:00 New [Complete](#)

Assigned to:TMC Tech **Medium**

INT_265 timings Timings

Please install timings for INT_265 2018-06-04 Maxtime. [Info](#)

End Date: 4/6/2018 19:00 New [Complete](#)

Assigned to:TMC Tech **Medium**

Techs

Supervisor Checklist All

Messages

- ATIS Enhancement realized – 80 % reduction in the Incident response time from TMC.
- Reduced potential for manual errors
- Automated process added huge efficiencies

What is Next?



Automated Incident Plan Activation

New Events (0)Active Events (1)Closed Events (69)SearchCPS Data (All Events)

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|-------------|---------------------|-------|-------|------------------|--------|
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INRIX

New (2)Ignore (1)Closed (6)

16 Ave E/B

Abnormal Conditions

ActiveIgnoreView

64 Ave & Deerfoot

Abnormal Conditions

ActiveIgnoreView

Esri MapGoogle MapInrix Map

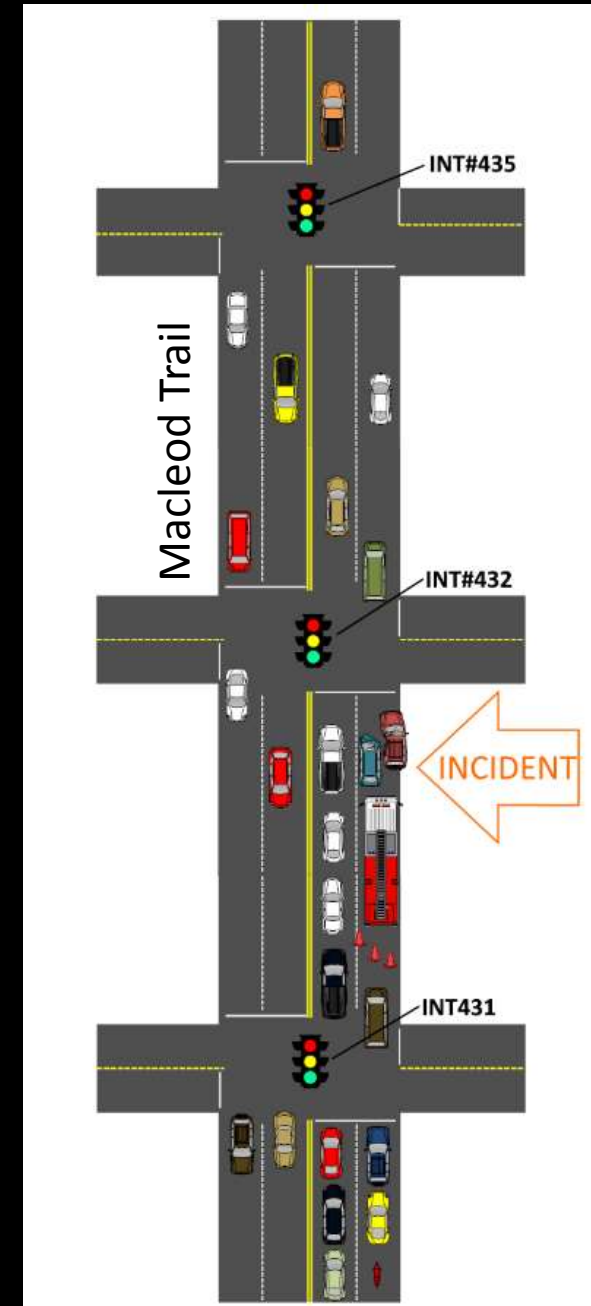
☒Signal☐Detours☐Incidents☐Cam☐FireTrucks

☒311

Do you want to extend NB Macleod Trail by 30sec?

INT # 431 into 611 Plan
INT # 432 into 611 Plan
INT # 435 into 611 Plan

IgnoreApply



Thank You!