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November 6, 2017

PROJECT NUMBER 17169

Votorantim Cimentos (CBM Aggregates)
ATTN: Mr. Mike Lebreton
55 Industrial Street
Toronto, ON M4G 3W9

Dear Mr. Lebreton

Re: Codrington Pit Annual Traffic & Safety Review

TMIG is pleased to submit the enclosed Annual Traffic & Safety Review for the recently opened Codrington Pit in Northumberland County. The Pit site is located south of the hamlet of Codrington on the east side of County Road 30, between of County Road No. 27 and Old Wooler Road.

As part of the approved and executed Development Agreement with the County, CBM Aggregates is to complete an annual traffic and safety review for County Road 30:

This Review has been prepared to ensure that the new Codrington Pit entrance and County Road 30 in the vicinity of the new access are operating as anticipated. The report includes information on how the operation of the Pit is not impacting traffic on County Road 30 and confirms that safety on County Road 30 has not been compromised as a result of the Pit activity, given the upgrades and mitigation that was completed during the development of the site.

TMIG finds the Codrington Pit access is operating as intended, providing a high degree of efficiency and safety

We trust the enclosed is sufficient for your needs, but please do not hesitate to contact the undersigned should you require any additional assistance.

Sincerely,
THE MUNICIPAL INFRASTRUCTURE GROUP LTD.

Michael Dowdall, C.E.T., MITE
Project Manager
mdowdall@tmig.ca

J.A. (Jim) Bacchus, B.A., MITE
Director of Transportation Services
jbacchus@tmig.ca

ANNUAL TRAFFIC & SAFETY REVIEW

CODRINGTON PIT

FINAL ▪ NOVEMBER 2017

REPORT PREPARED FOR

VOTORANTIM CIMENTOS (CBM AGGREGATES)
55 INDUSTRIAL STREET
TORONTO, ON M4G 3W9

REPORT PREPARED BY

THE MUNICIPAL INFRASTRUCTURE GROUP LTD.
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TMIG PROJECT NUMBER 17169

this report has been formatted for double-sided printing

EXECUTIVE SUMMARY

This study represents the first annual Traffic and Safety Review of the now-operating Codrington Pit access to County Road 30.

This report concludes:

- ✓ The Pit access has been designed and constructed in accordance with the conditions of the OMB Settlement and the executed Development Agreement, and to the satisfaction of the County of Northumberland.
- ✓ Codrington Pit truck activity has been measured to be less than forecasted in the approved traffic impact study (i.e., much less than the approved annual extraction amount), which is consistent with available shipping activity records obtained from CBM
- ✓ County Road 30 passing traffic was also observed to be less than forecasted in the original traffic study and there has been virtually no growth in traffic along this section of roadway over the last ten years
- ✓ Intersection analyses indicates very good peak hour traffic operations are being experienced at the Pit access, with excess capacity available for future traffic growth and/or increased Pit activity
- ✓ Neither the County, the Ministry of Transportation, nor the Ontario Provincial Police has any available records of collisions in the study area since the opening of the Pit access.
- ✓ A letter from a member of the public was published by the Brighton Independent in April 2017, complaining about a gravel truck trailing dust across the highway while exiting the Pit access. There was no formal complaint received by CBM about this incident or, to our knowledge, was any lodged with the County or reported to Police.
- ✓ A traffic related occurrence was ‘self-reported’ by a company driver to CBM Management in May of 2017. The occurrence described by the driver did not result in a collision, and according to the truck driver the cause of the traffic related occurrence appeared to be the driver of the passenger vehicle not properly following the southbound ’keep right’ signage or through lane pavement markings.
- ✓ TMIG finds the Codrington Pit access is operating as intended, and given the available information, provides an acceptable degree of efficiency and safety.

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1 INTRODUCTION

1.1 Retainer and Objective

The Municipal Infrastructure Group Ltd. (TMIG) was retained by Votorantim Cimentos (CBM Aggregates) to prepare this (first) annual Traffic and Safety Review for the recently opened Codrington Pit, herein after referred to as the 'Pit', in Northumberland County. The Pit site is located south of the hamlet of Codrington on the east side of County Road 30, between of County Road No. 27 and Old Wooler Road, as illustrated on **Figure 1-1.**

Figure 1-1 Site Location

This Review has been prepared to ensure that the new Codrington Pit entrance and County Road 30 in the vicinity of the new access are operating as anticipated. The report includes information on how the operation of the Pit is not impacting traffic on County Road 30 and confirms that safety on County Road 30 has not been compromised as a result of the Pit activity, given the upgrades and mitigation that was completed during the development of the site.

The Traffic and Safety Review will address the following items:

- Review traffic volumes generated by Codrington Pit and the forecasted County Road 30 background traffic.
- Monitor performance of the Pit access during the periods of typical shipping activity.
- Review available collision statistics at the new Pit access.
- Summarize information on / about traffic incidents / collisions (if any) that have been reported by or to CBM through its own internal reporting system by independent truckers or by residents / travelling public.
- Provide commentary on the traffic operations / functioning of the Pit access in regards to the forecasted performance contained in the prior traffic studies submitted during the Pit's approval process.

1.2 Study Background

CBM Aggregates operates Codrington Pit, located in Codrington, Municipality of Brighton, Northumberland County. The existing Pit is permitted to ship a maximum of 650,000 tones per year and the entrance/exit is known (municipally) as 2851 County Road 30.

As part of the approved and executed Development Agreement with the County (excerpt copied below), CBM Aggregates is to complete an annual traffic and safety review for County Road 30:

"St. Marys [CBM] *agree that it shall, at its sole cost, provide the County with an annual report with respect to traffic operations and road safety on County Road 30 in the vicinity of the intersection. The report shall be based on traffic and accident information obtained from the Ontario Provincial Police, the County Roads Department and St. Marys".*

The enclosed report is the first annual examination following the opening of the Pit in 2016.

TMIG has reviewed the approved Traffic Impact Study conducted by Grant A. Bacchus Ltd. (GAB Ltd.) dated June 2007 as well as a Road Safety Assessment conducted by GHD, dated March 2013, and have utilized the still-relevant information contained therein for the enclosed report and analyses.

1.3 Site Area

The study area includes the following unsignalized intersection:

- County Road 30 at Codrington Pit Access

1.4 Study Team

The TMIG team involved in the preparation of this study are:

- J.A. (Jim) Bacchus, B.A., MITE, Director of Transportation Services
- Michael Dowdall, C.E.T., Project Manager
- Sophie Xiong, B.Sc. EIT, Engineer in Training

2 BASELINE TRAFFIC

This section summarizes the proposed haul route, summarizes the data collection program, and presents the existing traffic volumes conditions at the study intersection (County Road 30 / Codrington Pit Access).

2.1 Haul Route

The 'haul route' for the purposes of this study is the Codrington Pit access to County Road 30.

County Road 30 is a north-south provincial highway with a posted speed limit of 80 km/h, a localized two-lane rural cross section, and is a designated haul route as per the Northumberland County Official Plan.

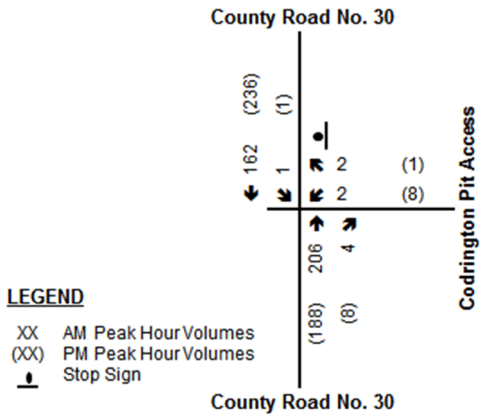
As part of the OMB settlement for the Pit, as stipulated in the Development Agreement, CBM has constructed the Codrington Pit access to County Road 30 with a northbound auxiliary right turn deceleration and storage lane of approximately 120 metres plus a southbound acceleration lane of approximately 485 metres (excluding tapers). A section of the shoulder on both sides of County Road 30 has also been paved in proximity of the Pit access to facilitate active transportation (pedestrians and cyclists).

The auxiliary lanes have been designed and constructed to facilitate safe and efficient access/egress of heavy trucks generated by the Pit in the primary direction of travel to/from the aggregate market (i.e., to/from the south). The original (as approved) traffic studies posited that local deliveries of material (either into or out of the Pit) could very well occur to/from the north, however the vast majority of truck traffic was forecasted to come from, and be destined to, points south on County Road 30.

2.2 Traffic Data

A weekday turning movement count was conducted by TMIG in August 2017 at the intersection of County Road 30 and the Pit Access. The weekday a.m. and p.m. peak hour existing traffic volumes are shown in **Figure 2-1**. The complete traffic survey summary is provided in **Appendix A**.

Figure 2-1 2017 Existing Traffic Volumes



2.3 County Road 30 Traffic Growth Review

The 2017 traffic data was reviewed and compared with the historic 2007 traffic data collected and presented in the traffic study prepared for the original Pit application.

It is evident from a review of this data that volumes along County Road 30 have not increased in any material way since 2007; indeed, peak hour flows appeared to have decreased over the last 10 years:

- Two-way traffic 2007 – 507 and 446 vehicles during the a.m. and p.m. peak hours respectively
- Two-way traffic 2017 – 368 and 440 vehicles during the a.m. and p.m. peak hours respectively

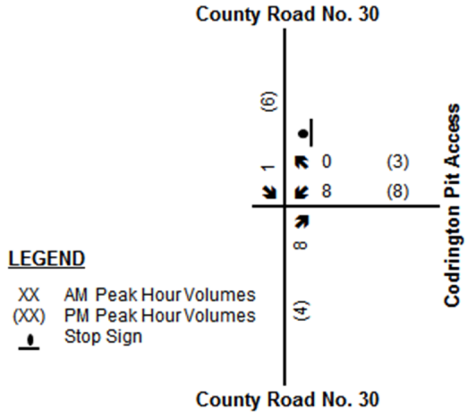
We make no conclusions about this lack of traffic growth, other than to note that the original traffic study forecasted growth on County Road 30 at the rate of 2% per year, and that the recommendations for the Pit access lane configurations were partially driven by predicted future County Road 30 passing traffic volumes. Since the predicted growth has seemingly not occurred, the turn lanes constructed in support of that future condition should be more than adequate to accommodate the peak shipping activity of the Pit.

2.4 Peak Truck Activity

The peak hour of truck traffic entering and exiting from the site access was extracted from the August 2017 tuning movement count, representing the highest level of truck traffic. While truck traffic is lower during the a.m. and p.m. peak hour, the peak truck traffic is used as a conservative estimate. These truck traffic volumes were confirmed as representative of a typical shipping period, based on a review of the shipping activity records provided by CBM.

Accordingly, in the period of highest truck traffic as per the August 22, 2017 TMC, there are 17 and 21 truck trips in/out of the site in the a.m. and p.m. truck peak hour, as shown in **Figure 2-2**.

Figure 2-2 Peak Truck Activity



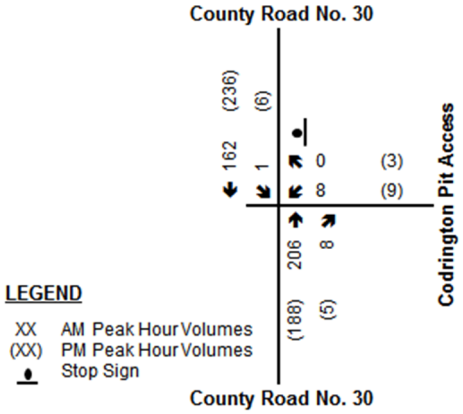
Trucks to and from the north are loaded trucks transferring aggregate to and from the Westwood Pit. As can be seen from a review of the August 2017 traffic count, while it is acknowledged that the counts indicate some traffic to and from the north, as forecasted in the original 2007 traffic study the primary (and more consistent) direction of travel for trucks generated by the Pit is to/from the south.

2.5 Baseline Traffic Volumes

The baseline traffic conditions for the peak study hours in 2017 was derived by combining the existing adjacent street a.m. and p.m. peak hour traffic and the peak hour of truck traffic to represent a high demand traffic model. It is important to note that this 'hybrid' peak hour was not in evidence during the counts, but we have adopted it to represent a 'worse case' scenario of busiest combined corridor activity.

Figure 2-3 summarize the total traffic volumes during the weekday a.m. and p.m. peak hours.

Figure 2-3 2017 Baseline Traffic Volumes

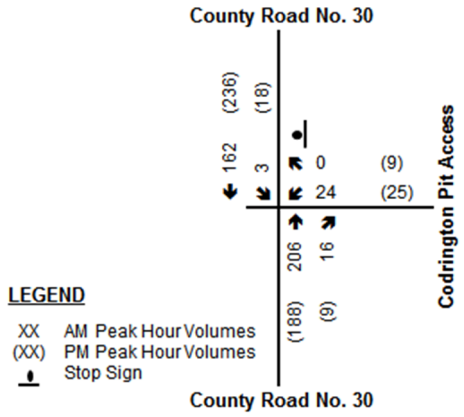


3 CAPACITY ANALYSIS

For the purpose of the heavy truck impact analyses, we have employed Passenger Car Equivalent (PCE) factors to account for the additional time it takes a heavy vehicle (in this case, different PCE's for each the loaded and empty gravel trucks) to travel through an intersection. Based on our experience, we have adopted a PCE of 3.0 for loaded trucks and a PCE of 2.0 for empty trucks. As a conservative measure, and to provide a consistent comparative analysis between all existing and future traffic scenarios, the PCE adjustment was applied to baseline turning movement volumes to/from the pit accesses.

The truck traffic volumes expressed as PCEs are shown in **Figure 3-1**.

Figure 3-1 2017 Total Traffic Volumes – PCE Adjusted



The capacity analysis identifies how well an intersection is operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 techniques within the Synchro Version 10 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. The existing heavy vehicle proportions are included in the intersection analyses. Detailed capacity sheets are attached in **Appendix B**.

The peak hour entrance operations are summarized in **Table 3-1**.

Table 3-1 Capacity Analysis of Codrington Pit Access and County Road 30

Traffic Condition	Movement v/c (LOS) 95th Percentile Queue, Delay in Seconds	
	AM Peak Hour	PM Peak Hour
Baseline 2017	WBLR: 0.06 (B) 1.4m, 14s SBLT: 0.00 (A) 0.1m. 1s	WBLR: 0.09 (B) 2.1m, 15s SBLT: 0.02 (A) 0.5m. 1s

Under 2017 baseline conditions, the intersection of County Road 30 and the Codrington Pit Access is expected to operate with no 'critical' movements (i.e., all performance metrics showing acceptable levels of service), with little queuing predicted for any of the intersection approaches and with delays of 15 seconds or less. The outbound (westbound) left and right turns from the Pit are operating at LOS 'B' during both weekday a.m. and p.m. peak hours.

These results indicate the physical improvements delivered as part of the Pit approvals are easily accommodating the peak hour demands of the Pit and County Road 30 traffic flows.

4 INCIDENT REPORTS

4.1 Collision Reports

TMIG have consulted with the three agencies responsible for collision reports within vicinity of site. The following summarizes the responses received:

- Ontario Provincial Police (OPP):
  - The Freedom of Information Coordinator advised that information can be obtained from the MTO, as OPP are not able to release this information due to privacy concerns.
- Ministry of Transportation of Ontario (MTO):
  - Confirmed that County Road 30 is under County of Northumberland jurisdiction, therefore MTO has no collision report records to share.
- County of Northumberland:
  - Road supervisors for this area have confirmed that they haven't had any complaints from the public or know of any safety incidents or collisions for this area.

Regarding the collision reports, at this time the County don't have access to any current data. They are in the process of obtaining access to MTO's collision database, however, it will still be several months before they are granted access to their data. It is suggested that once the County of Northumberland gains access to the MTO's collision database, it forward the information to CBM for review and inclusion in future annual reporting.

4.2 CBM Reported Incident

A traffic related occurrence was reported by a company driver to CBM Management in May 2017. According to the CBM driver, after stopping at the entrance, the way was clear and the driver pulled into the southbound acceleration lane. A southbound passenger car approached at high speed, braking and swerving into the County Road 30 through lane. By this description of the incident, the passenger car driver likely didn't correctly follow the pavement markings directing southbound vehicles to 'keep right' to bypass accelerating trucks.

The traffic related occurrence described above did not result in a collision, and there was no report of it made to CBM Management by the passenger car driver, or to our knowledge to the County or OPP.

4.3 Public Feedback

The Brighton Independent local newspaper received a letter describing an incident in April 2017. The letter is from a resident, who was driving southbound on County Road 30 approaching the Pit entrance when they noticed a fully-loaded dump truck driving out of the gates onto the highway. The resident complained that the truck leaving the Pit entrance onto the County Road 30 did so at speed and trailing dust that obscured visibility for several seconds. While we acknowledge the potential seriousness of this incident, there was no report of it made to CBM Management by the driver, or to our knowledge to the County or OPP.

Since all exiting trucks must stop at the weigh scale before exiting the site, the speeds at which trucks approach County Road 30 are limited (the weigh scale is just 100 metres east of County Road 30, insufficient distance for a loaded truck to gain much speed). Furthermore, CBM has installed a hard surface on the driveway for approximately 120 metres from its intersection with County Road 30, to mitigate dust flare ups. Unless dust entering the highway becomes a regular, confirmed, reported hazard, additional measures to control airborne dust are not justified at this time.

5 SITE ACCESS DESIGN

Proposed Pit Access

As per Grant A. Bacchus Ltd. Traffic Impact Assessment, June 2007, the proposed Pit access was recommended to provide the following:

- The private roadway connecting the proposed pit to County Road 30 should have a standard two-lane design of 5.0 metres per lane near the access to facilitate the safe movement of large aggregate vehicles as they exit and enter the site.
- Appropriate corner radii should also be provided to accommodate the turning movements of large gravel pit vehicles.
- At its connection to County Road 30 the access should be stop controlled for exiting vehicles.
- A southbound "By-Pass" through lane should be constructed on County Road 30 to permit adequate acceleration distance for southbound loaded trucks to gather sufficient speed before mixing with County Road 30 passing vehicles and to accommodate the occasional inbound left turning site-generated vehicle.
- For entering empty trucks arriving from the south, a northbound right turn taper with appropriate corner radius to facilitate inbound right turn movements of large tractor trailer vehicles should be constructed.
- Advance warning "truck entrance" signs should also be installed on County Road 30 north and south of the site access.

These recommended roadway improvements were illustrated conceptually in the GAB report and have been reproduced as **Appendix C**. These design elements were based upon Ministry of Transportation criteria using the projected future volumes and existing design speed of County Road 30 (assumed to be 90 km/h – 10 km/h above the posted speed limit).

Constructed Access

The Codrington Pit site access was ultimately constructed with the following design elements, which satisfied County of Northumberland engineering standards and design criteria, and which are consistent with the development agreement and OMB Settlement:

- The private roadway connecting the pit to County Road 30 provides a standard two-lane design of 5.0 metres per lane near the access to facilitate the safe movement of large aggregate vehicles as they exit and enter the site.
- Appropriate corner radii should to accommodate the turning movements of large gravel pit vehicles.
- At its connection to County Road 30 the access is stop controlled for exiting vehicles.
- A southbound "passing" lane (approximately 500 metres) and taper (100 metres) was constructed for southbound through vehicles on County Road 30 to permit adequate acceleration for southbound loaded trucks to gather sufficient speed before mixing with County Road 30 passing vehicles and to accommodate the occasional inbound left turning site-generated vehicle. This 'passing' lane merges with the single travel lane just north of Old Wooler Road.
- For entering empty trucks arriving from the south, a northbound right turn lane (109 metres) and taper (80.6 metres) with appropriate corner radius to facilitate inbound right turn movements of large tractor trailer vehicles was constructed.
- Advance warning "truck entrance" signs (Wc-108 & Wc-8t) installed on County Road 30 north and south of the site access.
- Permanent actuated flashing amber warning beacons installed above the "truck entrance" signs

Based on our review of the as-constructed Pit access design elements, they appear to be in excess of what was originally recommended in the approved traffic study from 2007, but consistent with, and to the satisfaction of County design requirements. These 'as-built' roadway improvements are illustrated in **Appendix D**.

APPENDIX A

Traffic Data

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 6:30:00
To: 12:00:00

One Hour Peak
From: 7:45:00
To: 8:45:00

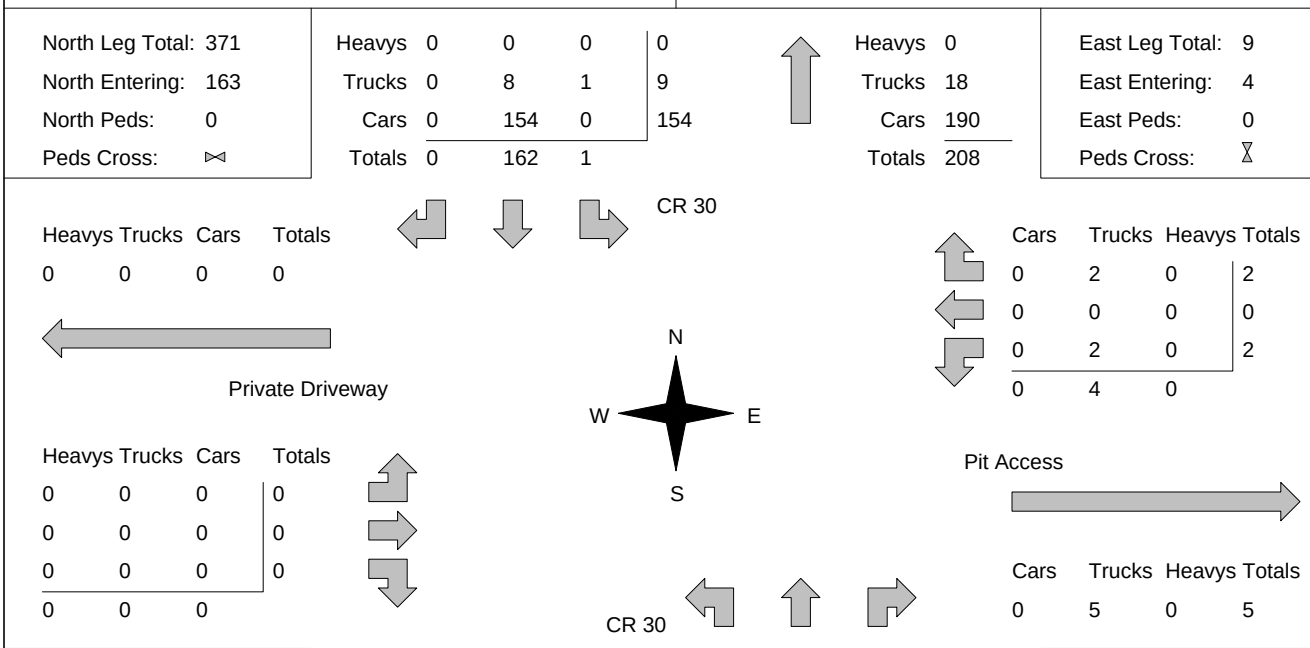
Municipality: Codrington
Site #: 1723200001
Intersection: CR 30 & Pit Access
TFR File #: 1
Count date: 22-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 30 runs N/S



Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 12:00:00
To: 19:00:00

One Hour Peak
From: 15:45:00
To: 16:45:00

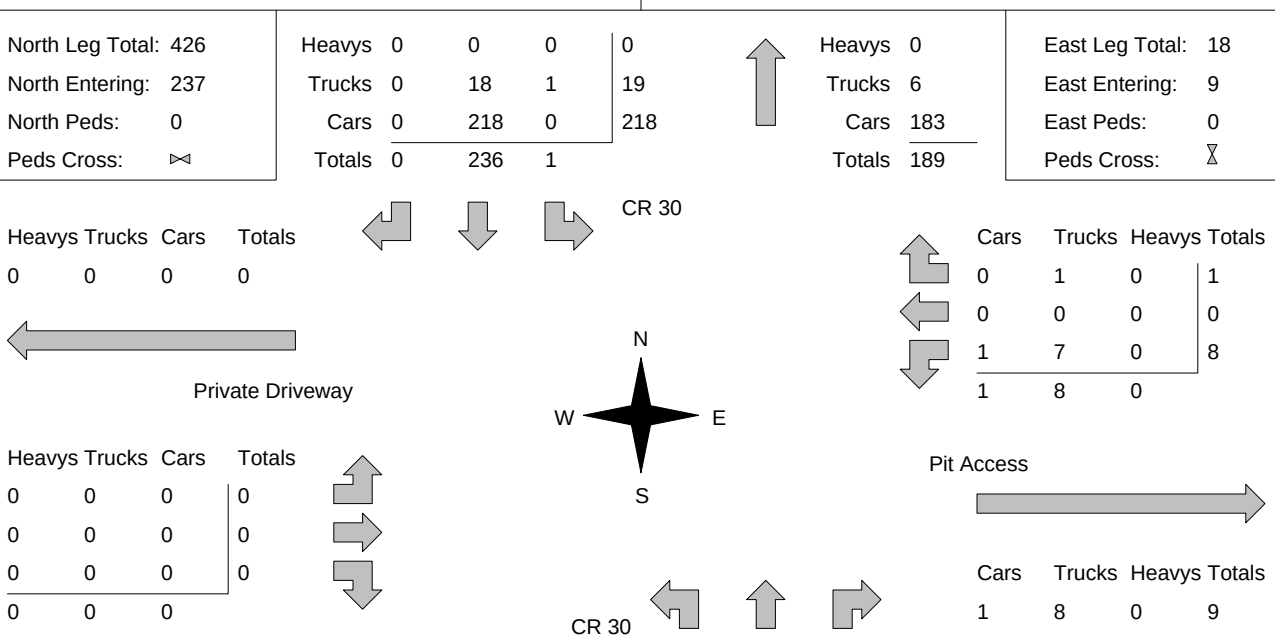
Municipality: Codrington
Site #: 1723200001
Intersection: CR 30 & Pit Access
TFR File #: 1
Count date: 22-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 30 runs N/S



Comments

Ontario Traffic Inc.

Eight Hour Peak Diagram

Eight Hour Peak
From: 10:00:00
To: 18:00:00

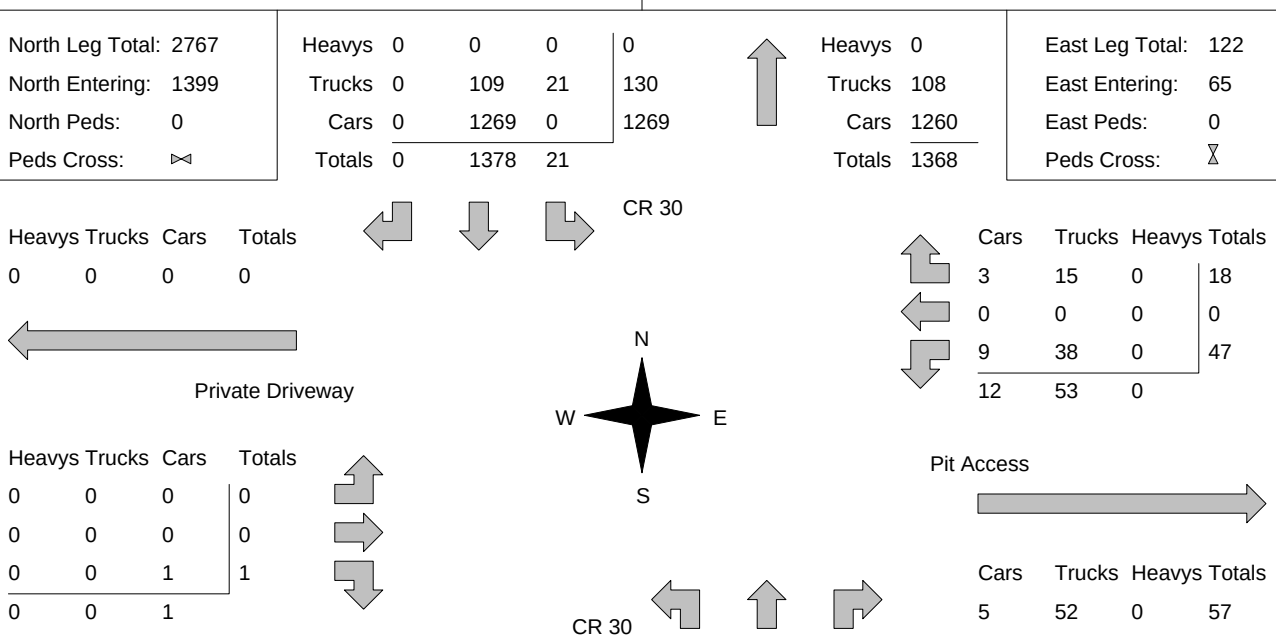
Municipality: Codrington
Site #: 1723200001
Intersection: CR 30 & Pit Access
TFR File #: 1
Count date: 22-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 30 runs N/S



Comments

Ontario Traffic Inc.

Total Count Diagram

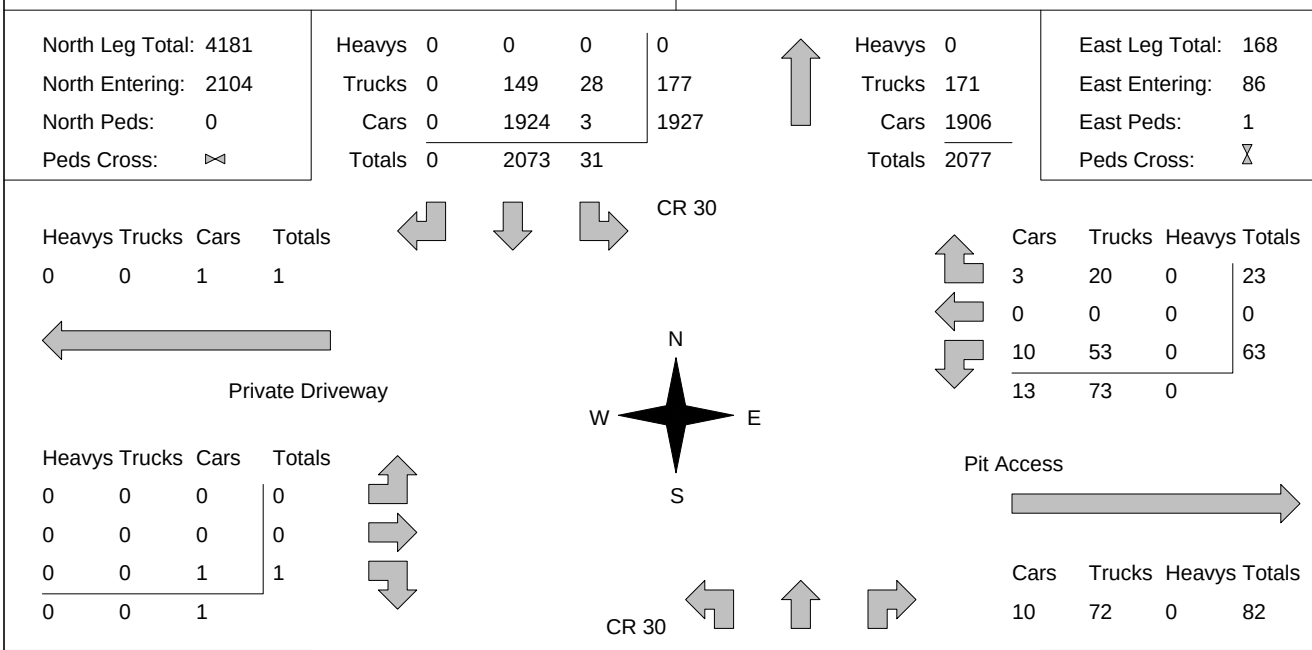
Municipality: Codrington
Site #: 1723200001
Intersection: CR 30 & Pit Access
TFR File #: 1
Count date: 22-Aug-17

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: CR 30 runs N/S



Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: CR 30 & Pit Access | **Count Date:** 22-Aug-17 | **Municipality:** Codrington

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	3	80	0	83	0	163
8:00:00	1	174	0	175	0	343
9:00:00	3	150	0	153	0	357
10:00:00	3	168	0	171	0	311
11:00:00	3	170	0	173	0	327
12:00:00	5	150	0	155	0	332
13:00:00	2	169	0	171	0	314
14:00:00	5	141	0	146	0	314
15:00:00	3	176	0	179	0	326
16:00:00	3	200	0	203	0	387
17:00:00	0	220	0	220	0	418
18:00:00	0	152	0	152	0	367
19:00:00	0	123	0	123	0	251
Totals:	31	2073	0	2104	0	4210

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	72	8	80	0
8:00:00	0	166	2	168	0
9:00:00	0	200	4	204	0
10:00:00	0	139	1	140	0
11:00:00	0	149	5	154	0
12:00:00	0	172	5	177	0
13:00:00	0	142	1	143	0
14:00:00	0	160	8	168	0
15:00:00	0	143	4	147	0
16:00:00	0	178	6	184	0
17:00:00	0	191	7	198	0
18:00:00	0	215	0	215	0
19:00:00	1	127	0	128	0
Totals:	1	2054	51	2106	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	10	0	0	10	0	10
9:00:00	3	0	2	5	0	5
10:00:00	3	0	3	6	1	6
11:00:00	4	0	1	5	0	5
12:00:00	4	0	3	7	0	8
13:00:00	4	0	5	9	0	9
14:00:00	7	0	1	8	0	8
15:00:00	6	0	5	11	0	11
16:00:00	8	0	0	8	0	8
17:00:00	8	0	2	10	0	10
18:00:00	6	0	1	7	0	7
19:00:00	0	0	0	0	0	0
Totals:	63	0	23	86	1	87

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0
9:00:00	0	0	0	0	0
10:00:00	0	0	0	0	0
11:00:00	0	0	0	0	0
12:00:00	0	0	1	1	0
13:00:00	0	0	0	0	0
14:00:00	0	0	0	0	0
15:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0
18:00:00	0	0	0	0	0
19:00:00	0	0	0	0	0
Totals:	0	0	1	1	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	11:00	12:00	15:00	16:00	17:00	18:00
Crossing Values:	10	3	4	4	6	8	8	6

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
6:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00	2	2	37	37	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
7:00:00	2	0	77	40	0	0	1	0	3	2	0	0	0	0	0	0	0	0	0	0
7:15:00	2	0	114	37	0	0	1	0	4	1	0	0	0	0	0	0	0	0	0	0
7:30:00	2	0	144	30	0	0	1	0	11	7	0	0	0	0	0	0	0	0	0	0
7:45:00	2	0	194	50	0	0	2	1	13	2	0	0	0	0	0	0	0	0	0	0
8:00:00	2	0	239	45	0	0	2	0	15	2	0	0	0	0	0	0	0	0	0	0
8:15:00	2	0	279	40	0	0	3	1	16	1	0	0	0	0	0	0	0	0	0	0
8:30:00	2	0	312	33	0	0	3	0	20	4	0	0	0	0	0	0	0	0	0	0
8:45:00	2	0	348	36	0	0	3	0	21	1	0	0	0	0	0	0	0	0	0	0
9:00:00	2	0	380	32	0	0	5	2	24	3	0	0	0	0	0	0	0	0	0	0
9:15:00	3	1	421	41	0	0	5	0	26	2	0	0	0	0	0	0	0	0	0	0
9:30:00	3	0	454	33	0	0	5	0	27	1	0	0	0	0	0	0	0	0	0	0
9:45:00	3	0	490	36	0	0	7	2	33	6	0	0	0	0	0	0	0	0	0	0
10:00:00	3	0	534	44	0	0	7	0	38	5	0	0	0	0	0	0	0	0	0	0
10:15:00	3	0	587	53	0	0	9	2	42	4	0	0	0	0	0	0	0	0	0	0
10:30:00	3	0	623	36	0	0	9	0	43	1	0	0	0	0	0	0	0	0	0	0
10:45:00	3	0	651	28	0	0	9	0	47	4	0	0	0	0	0	0	0	0	0	0
11:00:00	3	0	695	44	0	0	10	1	47	0	0	0	0	0	0	0	0	0	0	0
11:15:00	3	0	723	28	0	0	10	0	49	2	0	0	0	0	0	0	0	0	0	0
11:30:00	3	0	757	34	0	0	10	0	52	3	0	0	0	0	0	0	0	0	0	0
11:45:00	3	0	798	41	0	0	12	2	58	6	0	0	0	0	0	0	0	0	0	0
12:00:00	3	0	831	33	0	0	15	3	61	3	0	0	0	0	0	0	0	0	0	0
12:15:00	3	0	877	46	0	0	15	0	64	3	0	0	0	0	0	0	0	0	0	0
12:30:00	3	0	912	35	0	0	17	2	66	2	0	0	0	0	0	0	0	0	0	0
12:45:00	3	0	947	35	0	0	17	0	69	3	0	0	0	0	0	0	0	0	0	0
13:00:00	3	0	988	41	0	0	17	0	73	4	0	0	0	0	0	0	0	0	0	0
13:15:00	3	0	1024	36	0	0	18	1	77	4	0	0	0	0	0	0	0	0	0	0
13:30:00	3	0	1048	24	0	0	18	0	81	4	0	0	0	0	0	0	0	0	0	0
13:45:00	3	0	1079	31	0	0	19	1	85	4	0	0	0	0	0	0	0	0	0	0
14:00:00	3	0	1108	29	0	0	22	3	94	9	0	0	0	0	0	0	0	0	0	0
14:15:00	3	0	1155	47	0	0	22	0	97	3	0	0	0	0	0	0	0	0	0	0
14:30:00	3	0	1196	41	0	0	23	1	99	2	0	0	0	0	0	0	0	0	0	0
14:45:00	3	0	1236	40	0	0	25	2	103	4	0	0	0	0	0	0	0	0	0	0
15:00:00	3	0	1271	35	0	0	25	0	107	4	0	0	0	0	0	0	0	0	0	0
15:15:00	3	0	1325	54	0	0	25	0	111	4	0	0	0	0	0	0	0	0	0	0
15:30:00	3	0	1361	36	0	0	26	1	114	3	0	0	0	0	0	0	0	0	0	0
15:45:00	3	0	1405	44	0	0	27	1	117	3	0	0	0	0	0	0	0	0	0	0
16:00:00	3	0	1458	53	0	0	28	1	120	3	0	0	0	0	0	0	0	0	0	0
16:15:00	3	0	1518	60	0	0	28	0	124	4	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
16:30:00	3	0	1576	58	0	0	28	0	131	7	0	0	0	0	0	0	0	0	0	0
16:45:00	3	0	1623	47	0	0	28	0	135	4	0	0	0	0	0	0	0	0	0	0
17:00:00	3	0	1659	36	0	0	28	0	139	4	0	0	0	0	0	0	0	0	0	0
17:15:00	3	0	1696	37	0	0	28	0	141	2	0	0	0	0	0	0	0	0	0	0
17:30:00	3	0	1732	36	0	0	28	0	143	2	0	0	0	0	0	0	0	0	0	0
17:45:00	3	0	1763	31	0	0	28	0	146	3	0	0	0	0	0	0	0	0	0	0
18:00:00	3	0	1803	40	0	0	28	0	147	1	0	0	0	0	0	0	0	0	0	0
18:15:00	3	0	1848	45	0	0	28	0	148	1	0	0	0	0	0	0	0	0	0	0
18:30:00	3	0	1875	27	0	0	28	0	149	1	0	0	0	0	0	0	0	0	0	0
18:45:00	3	0	1899	24	0	0	28	0	149	0	0	0	0	0	0	0	0	0	0	0
19:00:00	3	0	1924	25	0	0	28	0	149	0	0	0	0	0	0	0	0	0	0	0
19:15:00	3	0	1924	0	0	0	28	0	149	0	0	0	0	0	0	0	0	0	0	0
19:17:18	3	0	1924	0	0	0	28	0	149	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
6:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	8	6	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	10	0	0	0	1	1	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	10	0	0	0	2	1	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	10	0	0	0	2	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	13	3	0	0	2	0	0	0	0	0	0	0	0	0
9:15:00	0	0	0	0	0	0	15	2	0	0	3	1	0	0	0	0	0	0	0	0
9:30:00	1	1	0	0	0	0	15	0	0	0	3	0	0	0	0	0	0	0	0	0
9:45:00	1	0	0	0	0	0	15	0	0	0	3	0	0	0	0	0	0	0	0	0
10:00:00	1	0	0	0	0	0	15	0	0	0	5	2	0	0	0	0	0	0	1	1
10:15:00	1	0	0	0	0	0	16	1	0	0	5	0	0	0	0	0	0	0	1	0
10:30:00	1	0	0	0	0	0	18	2	0	0	5	0	0	0	0	0	0	0	1	0
10:45:00	1	0	0	0	0	0	19	1	0	0	6	1	0	0	0	0	0	0	1	0
11:00:00	1	0	0	0	0	0	19	0	0	0	6	0	0	0	0	0	0	0	1	0
11:15:00	1	0	0	0	0	0	20	1	0	0	8	2	0	0	0	0	0	0	1	0
11:30:00	2	1	0	0	0	0	21	1	0	0	8	0	0	0	0	0	0	0	1	0
11:45:00	3	1	0	0	0	0	21	0	0	0	8	0	0	0	0	0	0	0	1	0
12:00:00	3	0	0	0	0	0	21	0	0	0	9	1	0	0	0	0	0	0	1	0
12:15:00	3	0	0	0	0	0	23	2	0	0	9	0	0	0	0	0	0	0	1	0
12:30:00	3	0	0	0	0	0	24	1	0	0	11	2	0	0	0	0	0	0	1	0
12:45:00	3	0	0	0	0	0	25	1	0	0	14	3	0	0	0	0	0	0	1	0
13:00:00	3	0	0	0	0	0	25	0	0	0	14	0	0	0	0	0	0	0	1	0
13:15:00	3	0	0	0	0	0	26	1	0	0	14	0	0	0	0	0	0	0	1	0
13:30:00	3	0	0	0	0	0	26	0	0	0	15	1	0	0	0	0	0	0	1	0
13:45:00	3	0	0	0	0	0	28	2	0	0	15	0	0	0	0	0	0	0	1	0
14:00:00	3	0	0	0	0	0	32	4	0	0	15	0	0	0	0	0	0	0	1	0
14:15:00	4	1	0	0	1	1	34	2	0	0	17	2	0	0	0	0	0	0	1	0
14:30:00	4	0	0	0	1	0	34	0	0	0	18	1	0	0	0	0	0	0	1	0
14:45:00	4	0	0	0	1	0	36	2	0	0	18	0	0	0	0	0	0	0	1	0
15:00:00	4	0	0	0	1	0	37	1	0	0	19	1	0	0	0	0	0	0	1	0
15:15:00	4	0	0	0	1	0	39	2	0	0	19	0	0	0	0	0	0	0	1	0
15:30:00	4	0	0	0	1	0	43	4	0	0	19	0	0	0	0	0	0	0	1	0
15:45:00	4	0	0	0	1	0	44	1	0	0	19	0	0	0	0	0	0	0	1	0
16:00:00	4	0	0	0	1	0	45	1	0	0	19	0	0	0	0	0	0	0	1	0
16:15:00	5	1	0	0	1	0	46	1	0	0	20	1	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
16:30:00	5	0	0	0	1	0	50	4	0	0	20	0	0	0	0	0	0	0	1	0
16:45:00	5	0	0	0	1	0	51	1	0	0	20	0	0	0	0	0	0	0	1	0
17:00:00	5	0	0	0	2	1	52	1	0	0	20	0	0	0	0	0	0	0	1	0
17:15:00	10	5	0	0	3	1	53	1	0	0	20	0	0	0	0	0	0	0	1	0
17:30:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
17:45:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
18:00:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
18:15:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
18:30:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
18:45:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
19:00:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
19:15:00	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0
19:17:18	10	0	0	0	3	0	53	0	0	0	20	0	0	0	0	0	0	0	1	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
6:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00	0	0	28	28	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0
7:00:00	0	0	66	38	2	1	0	0	6	4	6	6	0	0	0	0	0	0	0	0
7:15:00	0	0	98	32	2	0	0	0	8	2	7	1	0	0	0	0	0	0	0	0
7:30:00	0	0	138	40	2	0	0	0	11	3	7	0	0	0	0	0	0	0	0	0
7:45:00	0	0	170	32	2	0	0	0	16	5	8	1	0	0	0	0	0	0	0	0
8:00:00	0	0	220	50	2	0	0	0	18	2	8	0	0	0	0	0	0	0	0	0
8:15:00	0	0	256	36	2	0	0	0	24	6	8	0	0	0	0	0	0	0	0	0
8:30:00	0	0	307	51	2	0	0	0	27	3	8	0	0	0	0	0	0	0	0	0
8:45:00	0	0	360	53	2	0	0	0	32	5	12	4	0	0	0	0	0	0	0	0
9:00:00	0	0	397	37	2	0	0	0	41	9	12	0	0	0	0	0	0	0	0	0
9:15:00	0	0	423	26	2	0	0	0	45	4	12	0	0	0	0	0	0	0	0	0
9:30:00	0	0	462	39	2	0	0	0	48	3	12	0	0	0	0	0	0	0	0	0
9:45:00	0	0	489	27	2	0	0	0	50	2	13	1	0	0	0	0	0	0	0	0
10:00:00	0	0	523	34	2	0	0	0	54	4	13	0	0	0	0	0	0	0	0	0
10:15:00	0	0	559	36	2	0	0	0	59	5	14	1	0	0	0	0	0	0	0	0
10:30:00	0	0	584	25	2	0	0	0	62	3	15	1	0	0	0	0	0	0	0	0
10:45:00	0	0	608	24	2	0	0	0	64	2	15	0	0	0	0	0	0	0	0	0
11:00:00	0	0	659	51	3	1	0	0	67	3	17	2	0	0	0	0	0	0	0	0
11:15:00	0	0	692	33	3	0	0	0	70	3	17	0	0	0	0	0	0	0	0	0
11:30:00	0	0	730	38	3	0	0	0	76	6	18	1	0	0	0	0	0	0	0	0
11:45:00	0	0	777	47	3	0	0	0	81	5	19	1	0	0	0	0	0	0	0	0
12:00:00	0	0	815	38	4	1	0	0	83	2	21	2	0	0	0	0	0	0	0	0
12:15:00	0	0	844	29	4	0	0	0	87	4	21	0	0	0	0	0	0	0	0	0
12:30:00	0	0	869	25	4	0	0	0	91	4	21	0	0	0	0	0	0	0	0	0
12:45:00	0	0	911	42	4	0	0	0	100	9	21	0	0	0	0	0	0	0	0	0
13:00:00	0	0	937	26	4	0	0	0	103	3	22	1	0	0	0	0	0	0	0	0
13:15:00	0	0	967	30	4	0	0	0	104	1	23	1	0	0	0	0	0	0	0	0
13:30:00	0	0	1011	44	4	0	0	0	110	6	26	3	0	0	0	0	0	0	0	0
13:45:00	0	0	1048	37	4	0	0	0	114	4	28	2	0	0	0	0	0	0	0	0
14:00:00	0	0	1084	36	5	1	0	0	116	2	29	1	0	0	0	0	0	0	0	0
14:15:00	0	0	1111	27	5	0	0	0	116	0	29	0	0	0	0	0	0	0	0	0
14:30:00	0	0	1148	37	5	0	0	0	122	6	31	2	0	0	0	0	0	0	0	0
14:45:00	0	0	1183	35	5	0	0	0	124	2	32	1	0	0	0	0	0	0	0	0
15:00:00	0	0	1216	33	5	0	0	0	127	3	33	1	0	0	0	0	0	0	0	0
15:15:00	0	0	1250	34	5	0	0	0	129	2	36	3	0	0	0	0	0	0	0	0
15:30:00	0	0	1291	41	5	0	0	0	134	5	36	0	0	0	0	0	0	0	0	0
15:45:00	0	0	1329	38	6	1	0	0	136	2	37	1	0	0	0	0	0	0	0	0
16:00:00	0	0	1381	52	6	0	0	0	140	4	38	1	0	0	0	0	0	0	0	0
16:15:00	0	0	1421	40	7	1	0	0	140	0	41	3	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
16:30:00	0	0	1468	47	7	0	0	0	141	1	43	2	0	0	0	0	0	0	0	0
16:45:00	0	0	1512	44	7	0	0	0	141	0	44	1	0	0	0	0	0	0	0	0
17:00:00	0	0	1570	58	7	0	0	0	142	1	44	0	0	0	0	0	0	0	0	0
17:15:00	0	0	1628	58	7	0	0	0	144	2	44	0	0	0	0	0	0	0	0	0
17:30:00	0	0	1679	51	7	0	0	0	144	0	44	0	0	0	0	0	0	0	0	0
17:45:00	0	0	1728	49	7	0	0	0	145	1	44	0	0	0	0	0	0	0	0	0
18:00:00	0	0	1780	52	7	0	0	0	147	2	44	0	0	0	0	0	0	0	0	0
18:15:00	1	1	1820	40	7	0	0	0	148	1	44	0	0	0	0	0	0	0	0	0
18:30:00	1	0	1851	31	7	0	0	0	149	1	44	0	0	0	0	0	0	0	0	0
18:45:00	1	0	1881	30	7	0	0	0	149	0	44	0	0	0	0	0	0	0	0	0
19:00:00	1	0	1903	22	7	0	0	0	151	2	44	0	0	0	0	0	0	0	0	0
19:15:00	1	0	1903	0	7	0	0	0	151	0	44	0	0	0	0	0	0	0	0	0
19:17:18	1	0	1903	0	7	0	0	0	151	0	44	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
6:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.

Count Date: 22-Aug-17 Site #: 1723200001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
16:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:00:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:15:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19:17:18	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B

Capacity Analysis

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	24	0	206	16	3	162
Future Volume (Veh/h)	24	0	206	16	3	162
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	26	0	222	17	3	174
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	402	222			239	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402	222			239	
tC, single (s)	7.4	7.2			5.1	
tC, 2 stage (s)						
tF (s)	4.4	4.2			3.1	
p0 queue free %	94	100			100	
cM capacity (veh/h)	452	624			916	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	26	222	17	177
Volume Left	26	0	0	3
Volume Right	0	0	17	0
cSH	452	1700	1700	916
Volume to Capacity	0.06	0.13	0.01	0.00
Queue Length 95th (m)	1.4	0.0	0.0	0.1
Control Delay (s)	13.5	0.0	0.0	0.2
Lane LOS	B			A
Approach Delay (s)	13.5	0.0		0.2
Approach LOS	B			

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

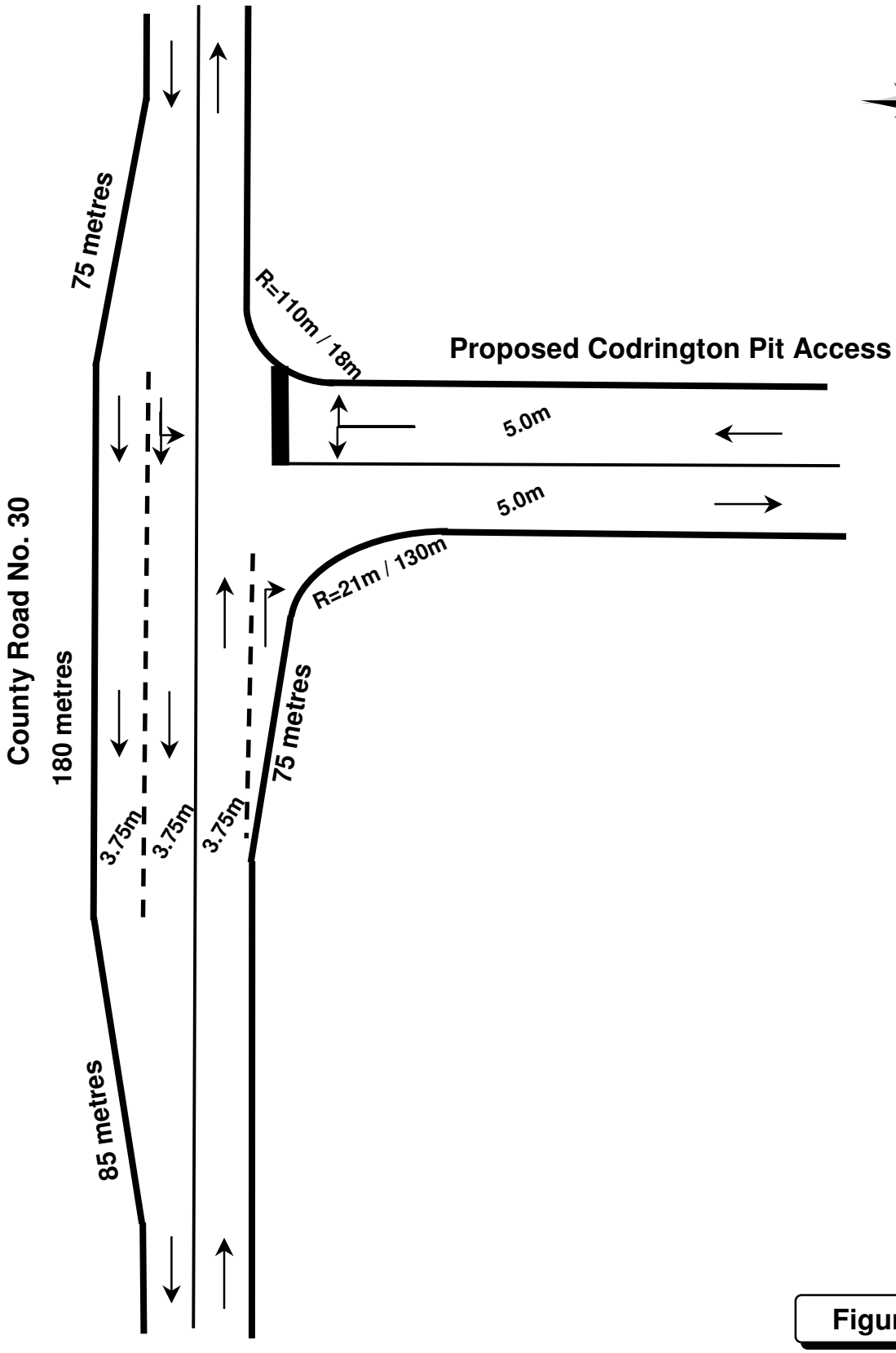
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	9	188	9	18	236
Future Volume (Veh/h)	25	9	188	9	18	236
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	27	10	202	10	19	254
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	494	202			212	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	494	202			212	
tC, single (s)	7.4	7.2			5.1	
tC, 2 stage (s)						
tF (s)	4.4	4.2			3.1	
p0 queue free %	93	98			98	
cM capacity (veh/h)	387	642			941	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	37	202	10	273
Volume Left	27	0	0	19
Volume Right	10	0	10	0
cSH	433	1700	1700	941
Volume to Capacity	0.09	0.12	0.01	0.02
Queue Length 95th (m)	2.1	0.0	0.0	0.5
Control Delay (s)	14.1	0.0	0.0	0.8
Lane LOS	B			A
Approach Delay (s)	14.1	0.0		0.8
Approach LOS	B			

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX C

Conceptual Site Access Design



Not to Scale

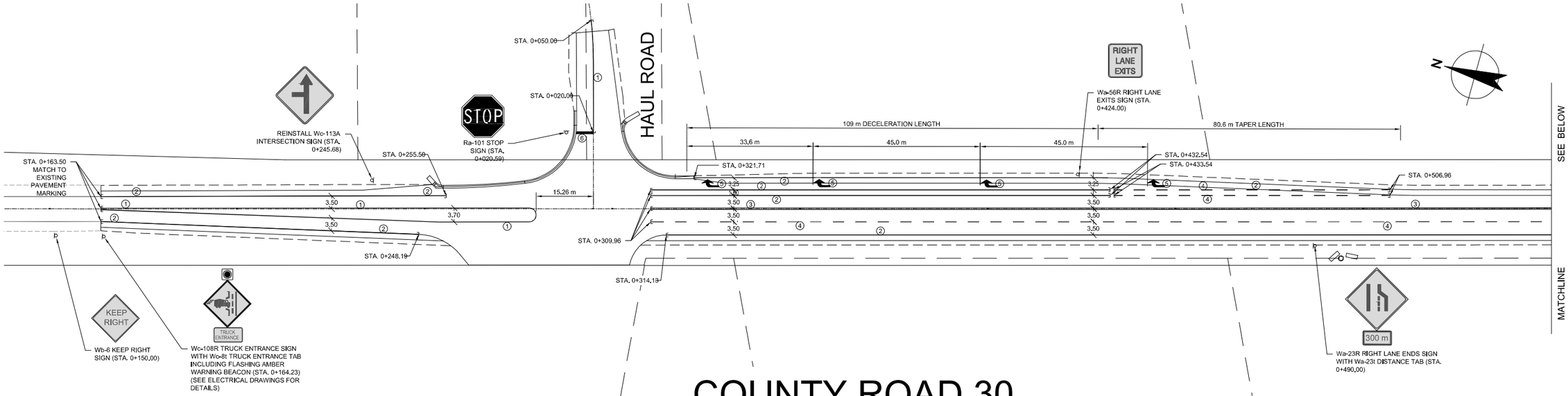
Figure 7

PROPOSED CODRINGTON PIT

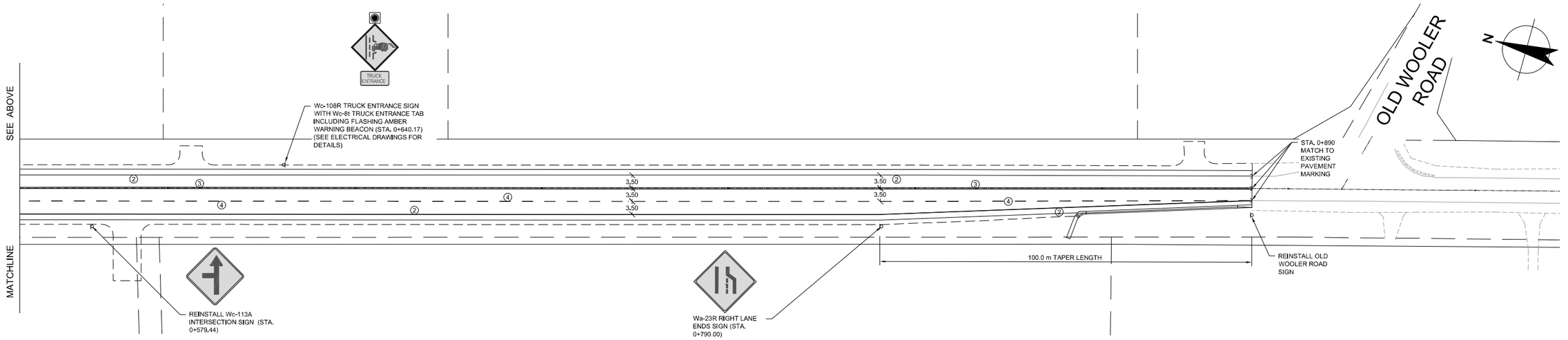
Recommended Codrington Pit Access Concept

APPENDIX D

'As-Built' Site Access Design



COUNTY ROAD 30



COUNTY ROAD 30

PAVEMENT MARKING LEGEND			
IDENTIFICATION	TYPE	COLOUR	WIDTH (cm)
1	SOLID	YELLOW	10
2	SOLID	WHITE	10
3	DOUBLE SOLID	YELLOW	10
4	3 - 3 - 3 BROKEN	WHITE	20
5	SYMBOLS	WHITE	-
6	SOLID	WHITE	60

NOTES

1. ALL MARKINGS SHALL CONFORM WITH THE ONTARIO TRAFFIC MANUAL (OTM) BOOK 11.
2. PROPOSED MARKINGS TO MATCH EXISTING AT ALL WORK AND/OR ROAD RECONSTRUCTION LIMITS.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
3	AS-BUILT		CP			07-07-15
2	ISSUED FOR CONSTRUCTION - HAUL RD. & STA. 0+500 MODIFIED		CM			04-09-14
1	ISSUED FOR CONSTRUCTION		RK			09-07-14

REGISTERED PROFESSIONAL ENGINEER — P. WEBER — "09-07-14" — PROVINCE OF ONTARIO

0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

GHD
65 Sunray Street
Whitby Ontario L1N 8Y3
T 1 905 686 6402 F 1 905 432 7877
E ytomail@ghd.com W www.ghd.com

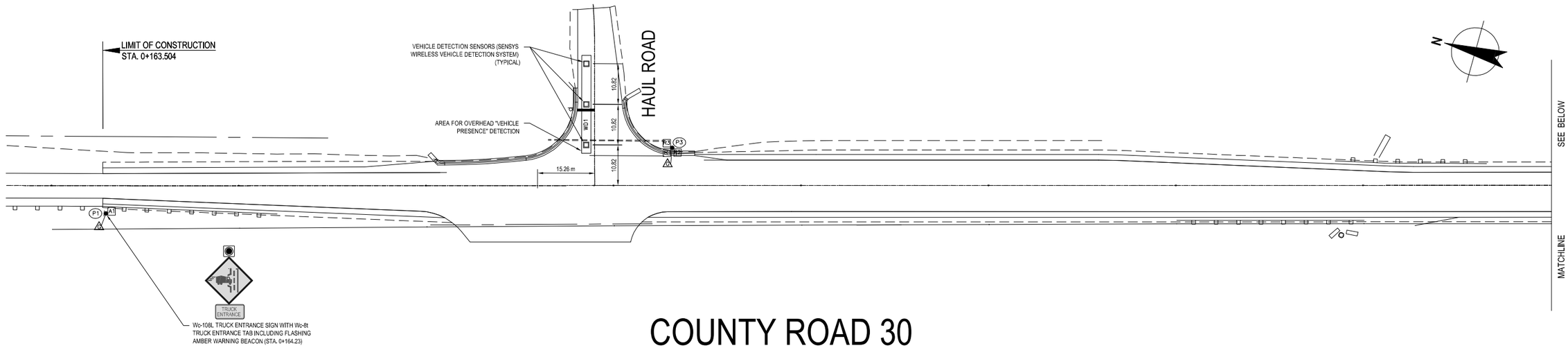
DO NOT SCALE

Drawn	C. MELOCHE	Designer	M.K. ISAJENKO
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	1:500	This Drawing must not be used for Construction unless signed as Approved	

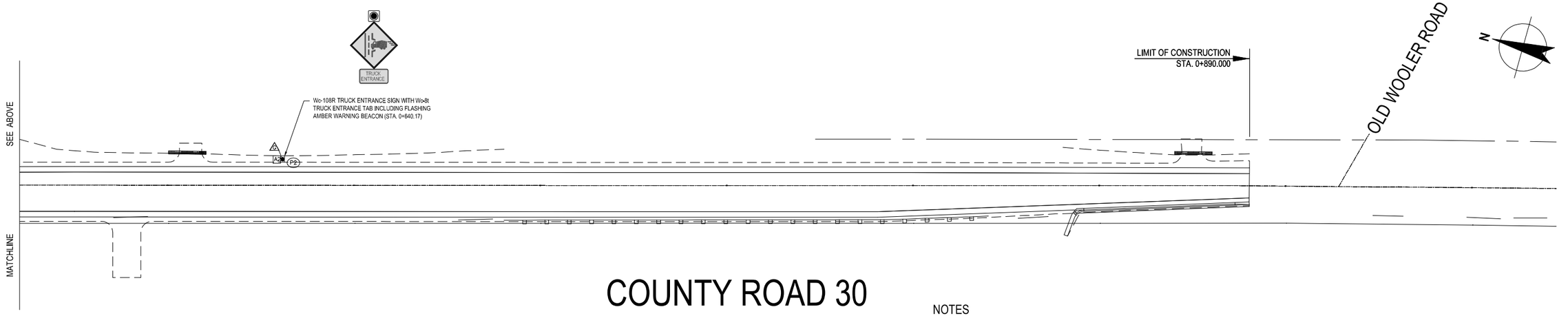
Client: CBM AGGREGATE DIVISION
Project: CODRINGTON PIT ACCESS DESIGN
Title: COUNTY ROAD 30 PAVEMENT MARKINGS AND SIGNAGE

Original Size: Arch D **Drawing No: 28-20762-C301** **Rev: 2**

Plot Date: 8 July 2015 - 11:03 AM Plotted by: Charlotte Pattee Cad File No: N:\CA\markham\Projects\88\2820762 - Codrington Pit\CADD\Drawings\As-Builts\28-20762-C301.dwg



COUNTY ROAD 30



COUNTY ROAD 30

	LEGEND	QTY
☐	WIRELESS VEHICLE DETECTOR (WVD) SENSOR	3
A	WIRELESS VEHICLE DETECTOR (WVD) ACCESS POINT	2
R	WIRELESS VEHICLE DETECTOR (WVD) REPEATER	3
⚑	PROPOSED STEEL POLE WITH SIGN & FLASHING BEACON	2
●	PROPOSED STEEL POLE	3
WD1	WIRELESS DETECTION AREA	
⚠	PROPOSED 20mm x 3m COPPER CLAD GROUND ROD WITH THERMIT WELD CONNECTION	3

POLES & ELECTRICAL STRUCTURES

NOTE: ALL DIMENSIONS ARE TO THE CENTRE OF POLE BASES, POLES, HANDWELLS ETC.

LOCATION	POLE OR STRUCT. No.	STATION	O/S FROM ℄	O/S PARAL. TO E/P	STANDARDS	COMMENTS
COUNTY ROAD 30	P1	0+164.23	N/A	4.0m	OPSD 2200.01, OPSD 2215.02, OPSD 2215.03	6.1m POWCO OCTAGONAL STEEL POLE; SOLAR POWERED FLASHING AMBER WARNING BEACON
COUNTY ROAD 30	P2	0+640.17	N/A	3.5m	OPSD 2200.01, OPSD 2215.02, OPSD 2215.03	6.1m POWCO OCTAGONAL STEEL POLE; SOLAR POWERED FLASHING AMBER WARNING BEACON
COUNTY ROAD 30	P3	1+319.68	N/A	3.0m	OPSD 2200.01, OPSD 2215.02, OPSD 2215.03	6.1m POWCO OCTAGONAL STEEL POLE

NOTES

1. CONTRACTOR TO INSTALL WVD - ACCESS POINT ON POLE P1 AND P2, WVD-REPEATERS ON POLE P3. COORDINATE INSTALLATION WITH TACEL LTD.
2. POLES ARE TO BE PLACED SO THAT THE POLE HANDHOLES ARE ON THE HOUSE SIDE OF THE POLES.
3. ALL CONNECTIONS FOR THE BURIED CABLE ARE TO BE MADE IN THE HANDHOLE OF THE STEEL POLES UNLESS OTHERWISE SPECIFIED.
4. GROUND PROPOSED POLES USING NO. 6 AWG GREEN GROUND WIRE. CHECK THE RESISTANCE TO GROUND.
5. THE POLES ARE TO BE INSTALLED DIRECTLY ON TOP OF THE CONCRETE POLE BASES AND LEVELLED WITH GALVANIZED STEEL SHIMS, IF NECESSARY. DOUBLE NUTTING OF POLES WILL NOT BE ALLOWED.
6. IF IT IS NECESSARY FOR THE CONTRACTOR TO WORK WITHIN 3 METRES OF PRIMARY HYDRO LINES, THE CONTRACTOR IS TO HAVE POWERSTREAM AUTHORITY PRESENT FOR THEIR ASSISTANCE/ADVICE TO DO THE WORK.
7. THE PROPOSED WORKS SHALL COMPLY WITH THE ONTARIO PROVINCIAL STANDARDS SPECIFICATIONS (OPSS) AND THE NORTHUMBERLAND COUNTY TRANSPORTATION DEPARTMENT.
8. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
9. ANY DISCREPANCIES OR REVISIONS TO THE DRAWINGS ARE TO BE REPORTED TO THE NORTHUMBERLAND COUNTY, DIRECTOR OF TRANSPORTATION CONSTRUCTION.
10. ALL EXISTING SERVICES AND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY, THE CONTRACTOR IS RESPONSIBLE TO ARRANGE FOR THE LOCATIONS OF ALL EXISTING SERVICES AND UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REPAIR ANY DAMAGES CAUSED BY CONSTRUCTION.
11. A ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE NORTHUMBERLAND COUNTY PRIOR TO THE COMMENCEMENT OF ANY WORKS WITHIN THE COUNTY ROAD 30 RIGHT-OF-WAY.
12. THE CONTRACTOR SHALL NOTIFY THE NORTHUMBERLAND COUNTY 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE.
13. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION TRAFFIC SIGNAGE, AND TRAFFIC CONTROL THROUGHOUT THE DURATION OF THE WORKS. TRAFFIC SIGNAGE MUST CONFORM TO ONTARIO TRAFFIC MANUAL BOOK 7. TRAFFIC FLOW SHALL BE MAINTAINED AT ALL TIMES THROUGH THE CONSTRUCTION LIMITS ON COUNTY ROAD 30 AND HAUL ROAD.
14. VEHICULAR ACCESS TO PRIVATE DRIVEWAY(S) SHALL BE MAINTAINED AT ALL TIMES.
15. MODIFICATIONS TO THE ENGINEERING DRAWINGS SHALL BE APPROVED BY THE NORTHUMBERLAND COUNTY DIRECTOR OF TRANSPORTATION CONSTRUCTION.
16. THE CONTRACTOR SHALL INSPECT THE COUNTY ROADS DAILY AND SHALL ENSURE THE ROADS ARE KEPT FREE OF DIRT AND DEBRIS. DAILY INSPECTION REPORTS ARE TO BE SUBMITTED TO THE NORTHUMBERLAND COUNTY, DIRECTOR OF TRANSPORTATION CONSTRUCTION .
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY APPROVALS, WHICH MAY BE NECESSARY FOR THE ABOVE NOTED WORKS, WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO: THE UTILITIES, TOWNSHIP, MINISTRY OF NATURAL RESOURCES, LOCAL CONSERVATION AUTHORITY, ETC.

No	Revision (Note: * indicates signatures on original issue of drawing or last revision of drawing)	Drawn	Job Manager	Project Director	Date
3	AS-BUILT	CP			07-07-15
2	ISSUED FOR CONSTRUCTION - HAUL RD. & STA. 0+500 MODIFIED				04-09-14
1	ISSUED FOR CONSTRUCTION	TS			09-07-14

LICENSED PROFESSIONAL ENGINEER
R. PRZYSLUPSKI
100060797
PROVINCE OF ONTARIO

0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

GHD
6705 Millcreek Drive, Unit 1
Mississauga Ontario L5N 5M4
T 1 416 213 7121 F 1 416 890 8499
E ytomail@ghd.com W www.ghd.com

Drawn T. SUE | Designer A. CHAMOLI
Drafting Check | Design Check
Approved (Project Director)
Date
Scale 1:500
This Drawing must not be used for Construction unless signed as Approved

Client CBM AGGREGATE DIVISION
Project CODRINGTON PIT ACCESS DESIGN
Title COUNTY ROAD 30 ELECTRICAL LAYOUT PLAN

Original Size Arch D **Drawing No: 28-20762-E001** **Rev: 2**

Plot Date: 8 July 2015 - 11:07 AM Plotted by: Charlotte Pattee
Cad File No: N:\CA\markham\Projects\88\2820762 - Codrington Pit\CADD\Drawings\As-Builts\28-20762-E001.dwg