

July 8th, 2025

Mr. TJ Sohal
VP Operations
1000198532 Ontario Inc.
1172 Walkley Road
Ottawa, Ontario,
K12V 2P7
[Ph: (613) 864-2344 / e-mail: tj@hieottawa.com]

Mr. Mike Giampa
Project Manager, Transportation Approvals
City of Ottawa
Planning, Real Estate and Economic
Development Department
110 Laurier Avenue
Ottawa, Ontario
K1P 1J1

Re: 2726-2732 Moodie Drive, Ottawa, Ontario
Proposed Single-Storey Two-Building Warehouse Facility
Addendum to June 1st, 2023, Technical Memorandum
Castleglenn Project Number: 7314

The purpose of this addendum document is to identify the sight line requirements at the two proposed accesses (Moodie Drive & Fallowfield Road) to the proposed revised 2726-2732 Moodie Drive Warehouse facility and the south-west corner of the Moodie Drive & Fallowfield Road intersection.

The Revised Site Plan: The proposed development would be comprised of five individual single-storey warehouse buildings serviced by a total of 345 parking stalls comprised of 56 tractor-trailer stalls and 289 parking stalls for passenger vehicles.

Accesses: Two accesses are planned to service the site.

- The primary heavy vehicle access (which can also be used by passenger vehicles) would be located on Moodie Drive, opposite Bride Private; and
- A secondary, right-in right-out access would be connected to Fallowfield Road which is intended to accommodate passenger and emergency (fire truck) vehicles.

Intersection Sight Distance (ISD) is defined as the minimum separation distance that would permit a motorist to leave an access to:

- a) perceive and react to cross traffic along the connecting roadway,
- b) evaluate the available gaps in the traffic stream along the connecting roadway, and
- c) select a gap between vehicles that travel along the roadway that would provide the motorist with sufficient time to exit the access and safely enter, cross, or turn onto the roadway without causing conflicts with approaching vehicles.

Stopping Sight Distance (SSD) is defined as the minimum distance a motorist travel on the connecting roadway to:

- a) first perceive a hazard on the roadway ahead,
- b) initiate breaking, and
- c) bring the vehicle to a complete stop before reaching the hazard.

SSD accounts for motorist perception-reaction time, vehicle type (passenger vehicle, tractor trailer, etc.), vehicle deceleration characteristics, road surface conditions, roadway grade, vehicle braking system etc.

The sightline distances for the two access to the development and the Moodie Drive & Fallowfield Road intersection have been evaluated as follows:

A. Moodie Drive Access

A sight distance assessment was conducted for the proposed Moodie Drive access to the proposed warehouse facility. The access would be minor leg STOP-controlled. Heavy vehicles (WB-20's) would use the Moodie access to enter and leave the proposed development. Heavy vehicle traffic originates from, and is predominantly destined to, the Highway 416/Fallowfield Road interchange and would use the Moodie Drive access.

ISD: Attachment “A-1” illustrates the (cyan coloured) intersection (ISD) sight triangles that were determined for the Moodie Drive access. In accordance with the Ministry of Transportation of Ontario’s (MTO’s) geometric design standards¹ the decision point of the departure sight triangle from the site access should be from 4.4-to-5.4 m from the edge of the Moodie Drive travel way. The analyses assumed a WB-20 that leaves the access must observe oncoming traffic along Moodie Drive to assess the required gap necessary to safely complete the left turn maneuver out of the site. TAC standards indicate for a 90 km/h design speed (80 km/h posted) the “required” ISD for northbound traffic would be 290m and for southbound traffic would be 270m. Table A-1 indicates the “available” ISD is approximately 300m on both sides of the proposed access whereas the “required” ISD is less than the “available” distance. In short, **the required ISD distances for both northbound and southbound traffic are satisfied by the proposed Moodie Drive access.**

SSD: TAC standards indicate that the section of Moodie Drive fronting the proposed development would require a 160m stopping sight distance to avoid a collision with a vehicle that exits the Moodie access. The available sight distance determined from observations from Streetview photography was determined to be in the order of 270-to-300m. It was concluded that **sufficient SSD is available that exceeds the require SSD of 160m.**

The inset box within Attachment A-1 illustrates a red shaded area that fronts Moodie Drive south of the access. The red shaded areas should be interpreted as a clear zone, free of obstacles (such as planned signage and landscaping foliage) that may hinder the view of Moodie Drive traffic.

Table A-1: ISD and SSD Distances at 90kph Design Speed (Moodie Dr. Access)

		<i>Design Speed: 90 kph (Posted Speed: 80 kph)</i>		
<i>Intersection Sight Distance (ISD) for</i>	<i>To</i>	<i>Required Distance</i>	<i>Available Distance</i>	<i>Satisfied</i>
Passenger Vehicle Measured from • North to south	WB-20 leaves Warehouse Access	270m ¹	300m	YES
Passenger Vehicle Measured from • South to North	WB-20 leaves Warehouse Access	290m ²	300m	YES
<i>Intersection Stop Sight Distance (SSD) for</i>	<i>To</i>	<i>Required Distance</i>	<i>Available Distance</i>	<i>Satisfied</i>
Passenger Vehicle Measured from • South to North • North to South	WB-20 enters and exits the site	160m ³	270m-to-300m	YES

1. “TAC Geometric Design Guide for Canadian Roads”, Chapter 9 Intersections, TAC Figure 9.9.5. Intersection Sight Distance – Case B2, Right Turn from Stop, Pg. 71 (Combined Truck)
2. Ibid, Figure 9.9.4. Intersection Sight Distance – Case B1, Left Turn from Stop, Chapter 9 Intersections. Pg. 69 (Combined Truck)
3. Ibid, Table 2.5.2. Stopping Sight Distance on Level roadways, Chapter 2 Design Controls, Classification and Consistency. Pg. 38

¹ “MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads”, Appendix 9: Intersections, June 2017, Page 66

B. Fallowfield Access

The Fallowfield Road access is situated at the northern edge of the site and has been designed to accommodate only right-in/right-out movements. The access would be minor leg STOP-controlled and is limited to passenger vehicles and emergency services, such as fire trucks (Single-Unit Trucks). Tractor-trailer, and multi-axle vehicles would be prohibited from using the access by way of signage. The design speed for Fallowfield Road is 90 km/h.

ISD: Attachment A-2 presents the delineation of both the “Required” and “Available” sight triangles, shown in orange, for a right-in/right-out access designed specifically for emergency vehicles and passenger cars. A single unit truck was selected as the design vehicle for analysis to conform to the MTO’s geometric design criteria. The sight distance assessment evaluated applied to vehicles that would exit the access to make the northbound-right turn onto Fallowfield Road. The “Required” ISD was determined to be 210 meters. The ISD was measured from a distance between 4.4-to-5.4 meters from the edge of the access entrance point. Based on observations from Street View imagery, **the “Available” ISD at the Fallowfield Road access was determined to exceed 300m and conforms to Transportation Association of Canada (TAC) standards.**

SSD: For eastbound vehicles on Fallowfield Road that approach a stopped vehicle that waits to turn right into the site from Fallowfield access, the minimum required stopping sight distance (SSD) is 160m, based on a design speed of 90 km/h. Aerial imagery confirms that the available sight distance exceeds 300m. Therefore, **the “Available” SSD is more than sufficient to meet the required standard.**

The first inset box in Attachment “A-2” provides a visual representation of the anticipated turning movements for vehicles that access the site, both entering and exiting via the right-in/right-out configuration. This includes the path of passenger vehicles and emergency vehicles that maneuver into and out of the access point from Fallowfield Road. The second inset box emphasizes the importance of maintaining clear sight lines for safe vehicle operation. **The red-shaded area must be kept clear of obstacles (landscaping, signage, foliage etc.) that could potentially impede visibility of oncoming traffic along Fallowfield Road.**

Table B-1 summarizes both the Intersection Sight Distance (ISD) and Stopping Sight Distance (SSD) applicable to the current posted speed limit of 80 km/h on Fallowfield Road.

Table B-1: ISD and SSD Distances at 90kph Design Speed (Fallowfield Access)

		<i>Design Speed: 90 kph (Posted Speed: 80 kph)</i>		
<i>Intersection Sight Distance (ISD) for</i>	<i>To</i>	<i>Required Distance</i>	<i>Available Distance</i>	<i>Satisfied</i>
Passenger Vehicle Measured from • West to East	HSU leaves Warehouse Access	210m ¹	300m	YES
<i>Intersection Stop Sight Distance (SSD) for</i>	<i>To</i>	<i>Required Distance</i>	<i>Available Distance</i>	<i>Satisfied</i>
Passenger Vehicle Measured from • West to East	HSU enters and exits the site	160m ²	<300	YES

1. TAC Geometric Design Guide for Canadian Roads, Chapter 9 Intersections, TAC Figure 9.9.5. Intersection Sight Distance – Case B2, Right Turn from Stop, Pg. 71 (Single Unit Truck)
2. Ibid, Chapter 2 Design Controls, Classification and Consistency, Table 2.5.2. Stopping Sight Distance on Level roadways, Pg. 38

C. Fallowfield Road and Moodie Drive Intersection

CI: View of Eastbound traffic from West of Intersection of the Westbound Left Turn Movements

Attachment “A-3” illustrates the sight distance triangles effecting the south-west quadrant of the Moodie Drive / Fallowfield Road intersection.

The upper portion of Attachment “A-3” illustrates the sight triangle required for an eastbound passenger vehicle that travels on Fallowfield Road at a speed of 90 Km/h to identify and react to a heavy vehicle (WB-20) that attempts to:

- complete a westbound left turn from Fallowfield Road onto Moodie Drive South, or
- complete a northbound right turn from Moodie Drive onto Fallowfield Road East.

ISD: The first exhibit illustrates the required sight distance for heavy trucks (WB-20) that makes westbound left turn from Fallowfield Road to Moodie Drive to safely cross the intersection during green time and avoid collision with the eastbound through vehicles that approach the intersection. The “Required” ISD based on MTO’s geometric design for combined trucks such as WB-20’s and design speed of 90 Km/h is 295m and the “Available” distance is 300m.

SSD: The minimum required stopping distance for vehicles that travel eastbound on Fallowfield Road and approach the intersection from the west, is 160 meters. This distance ensures that drivers have sufficient time to perceive and react to safely come to a complete stop and avoid a potential collision with a heavy vehicle that executes a left turn from Fallowfield Road westbound into the site. This requirement is based on a design speed of 90 km/h, reflects standard safety considerations for intersection operations involving heavy vehicles and the “Available” distance is 300m.

The red-shaded area shown in the figure is intended to remain completely free of any visual obstructions to ensure adequate sight distance is maintained.

Table C-1 provides a summary of the intersection sight distance (ISD) and stopping sight distance (SSD) requirements for the westbound left-turn movement at this intersection.

Table C-1: ISD and SSD Distances at 90kph Design Speed (Fallowfield Rd & Moodie Dr. Intersection)

		Design Speed: 90 kph (Posted Speed: 80 kph)		
Intersection Sight Distance (ISD) for	To	Required Distance	Available Distance	Satisfied
Passenger Vehicle Measured from <ul style="list-style-type: none"> • East to South 	WB-20 turns left from Fallowfield Rd to Moodie Dr.	295m ¹	300m	YES
Intersection Stop Sight Distance (SSD) for	To	Required Distance	Available Distance	Satisfied
Passenger Vehicle Measured from <ul style="list-style-type: none"> • West to East 	WB-20 turns left from Fallowfield Rd to Moodie Dr.	160 ²	300m	YES

1. TAC Geometric Design Guide for Canadian Roads, Chapter 9 Intersections, Figure 9.9.4. Intersection Sight Distance – Case B1, Left Turn from Stop, Pg. 69 (Combination Truck: WB-20)

2. Ibid, Chapter 2 Design Controls, Classification and Consistency, Table 2.5.2. Stopping Sight Distance on Level roadways, Pg. 38

C2: View of Eastbound traffic from West of Intersection of the Northbound Right Turn Movements

The lower portion of Attachment “A-3” focuses on the required sightline of northbound right-turn vehicles that would turn right onto Moodie Drive to observe eastbound through vehicles when there is a red signal phase that faces northbound Moodie Drive traffic. (Right-turn on red).

ISD: At this location, the “Available” sight distance is 300 metres which exceeds the “Required” 270 metres as specified in the MTO’s Geometric Design Guide for WB-20 trucks that operate at a design speed of 90 km/h. The exhibit indicates that there is sufficient visibility for northbound right turn vehicles to avoid a potential conflict with eastbound through vehicles that approach the intersection.

SSD: As illustrated in the exhibit, the “Required” Stop Sight Distance (SSD) for vehicles that approach the intersection on Fallowfield Road is 160 metres. This distance represents the minimum length of roadway ahead that must be visible to a motorist to assure a safe stop, that would account for perception-reaction time and deceleration distance. The diagram confirms that the “Available” sight distance along this approach exceeds the “Required” 160 metres. The exhibit indicates that adequate separation and visibility is provided in accordance with design standards.

The red shaded area must remain free of any obstructions to ensure that eastbound vehicles on Fallowfield Road and northbound right turn vehicles on Moodie Drive have a clear sight line to detect one another.

Table C-2: ISD and SSD Distance at 90kph Design Speed (Fallowfield Rd & Moodie Dr. Intersection)

		<i>Design Speed: 90 kph (Posted Speed: 80 kph)</i>		
<i>Intersection Sight Distance (ISD) for</i>	<i>To</i>	<i>Required Distance</i>	<i>Available Distance</i>	<i>Satisfied</i>
Passenger Vehicle Measured from • South to East	WB-20 right turn from Moodie Dr. to Fallowfield Rd.	270m ¹	300m	YES
<i>Intersection Stop Sight Distance (SSD) for</i>	<i>To</i>	<i>Required Distance</i>	<i>Available Distance</i>	<i>Satisfied</i>
Passenger Vehicle Measured from • West to East	WB-20 right turn from Moodie Dr. to Fallowfield Rd	160m ²	300m	YES

1. TAC Geometric Design Guide for Canadian Roads, Chapter 9 Intersections, Figure 9.9.5. Intersection Sight Distance – Case B2, Right Turn from Stop, Pg. 71 (Combination Truck: WB-20)
2. Ibid, Chapter 2 Design Controls, Classification and Consistency, Table 2.5.2. Stopping Sight Distance on Level roadways, Pg. 38

*D. Fallowfield Road and Moodie Drive Intersection**D1. View from Northbound Approach South of Intersection of the Pedestrian Crossing on South of the Intersection*

The first exhibit in Attachment “A-4” examines whether northbound vehicles that turn left from Moodie Drive onto Fallowfield Road have sufficient visibility of pedestrians who cross on the west side of the intersection. The sight triangle is defined from the north edge of the pedestrian crossing and extends to the south side of the intersection. The exhibit indicates that there are no property obstructions of the critical sightline. Therefore, no further mitigation measures are required.

D2. View from Eastbound STOP Bar West of Intersection of the Pedestrian Crossing South of the Intersection

The second exhibit evaluates whether eastbound vehicles on the west side of the intersection that make a right-turn from Fallowfield Road onto Moodie Drive have an adequate sightline to observe pedestrians that may cross on the south side of Moodie Drive during the green signal phase on Fallowfield Road.

ISD: The “required” intersection sight distance is 40 metres, comprised of:

- a 25-metre length as measured from the STOP line on the west leg of Fallowfield Road as specified in the MTO’s Geometric Design Guide, and
- an additional 15 metres that extend toward the center of the Fallowfield Road westbound lane to complete the right-turn movement onto southbound Moodie Drive.

Table C-3: ISD Distance at 30kph Design Speed for Turning movement

(Fallowfield Rd & Moodie Dr. Intersection)

		Design Speed: 90 kph (Posted Speed: 80 kph)	
Intersection Sight Distance (ISD) for	To	Required Distance	Satisfied
Passenger Vehicle Measured from <ul style="list-style-type: none"> • West to south 	WB-20 turns right from Fallowfield Rd to Moodie Dr.	40m ¹	As there are no obstructions within the sightlines, the visibility requirement would be satisfied.

3. TAC Figure 9.9.1. Intersection Sight Distance – TAC Geometric Design Guide for Canadian Roads, Chapter 9 Intersections. Pg. 64

The bottom exhibit illustrates a red shaded area within the cyan-coloured sight tringle that must remain clear of any obstructions. This area is already incorporated within Exhibit “A-3”.

Conclusion:

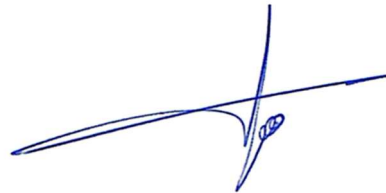
The above sightline assessments conducted on behalf of the proposed warehouse development at 2726–2732 Moodie Drive confirm that all Intersection Sight Distance (ISD) and Stopping Sight Distance (SSD) requirements with TAC and MTO guidelines are satisfied at both the Moodie Drive and Fallowfield Road access points, as well as the critical movements at the Moodie Drive and Fallowfield Road intersection.

The sight triangles as illustrated in the attached exhibits by shaded areas must remain free of any landscaping or physical obstacles that may obscure required sight distances.

Respectfully,




Mr. Arthur Gordon B.A. P.Eng
Principal Engineer
Castleglenn Consultants Inc.

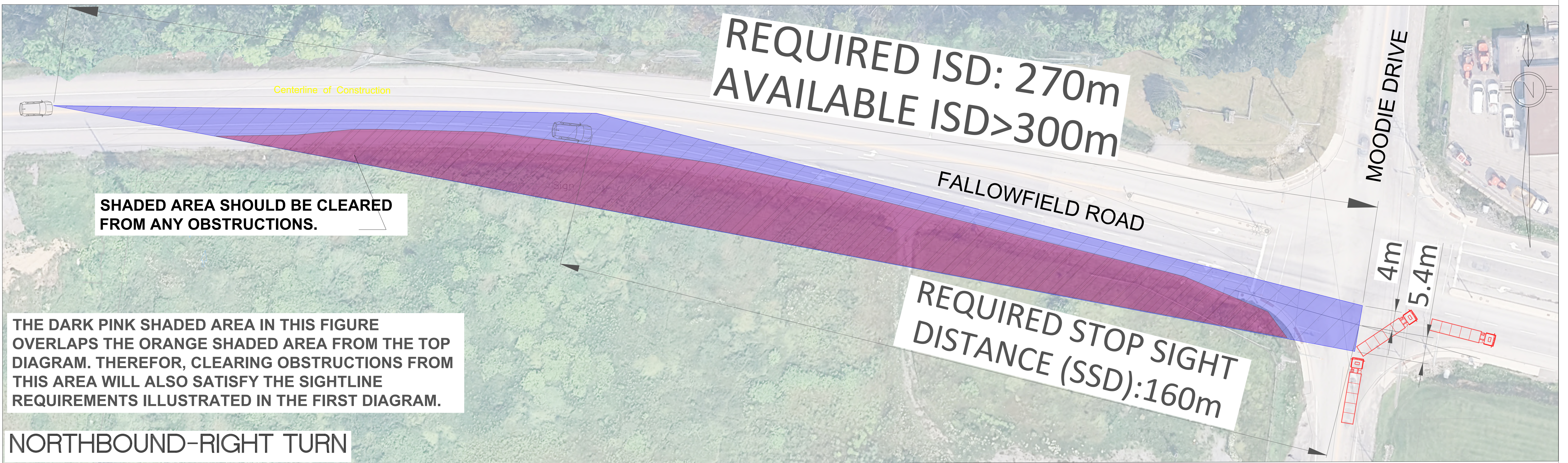
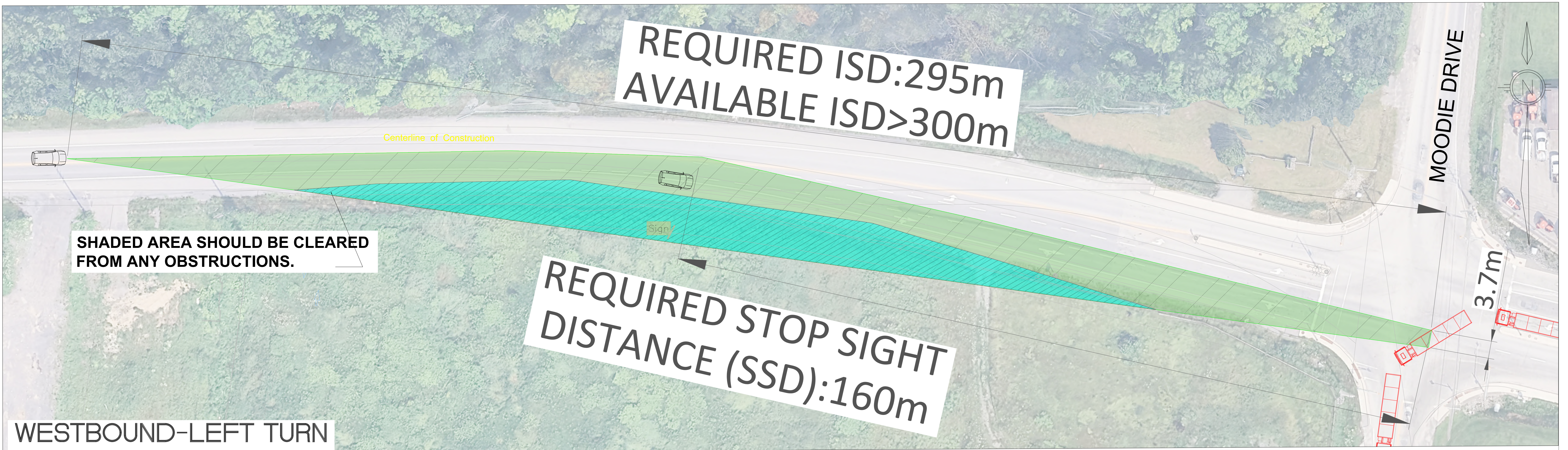


Mrs. Sadaf Jamshidi M.Sc. M.Eng.
Transportation Planner
Castleglenn Consultants Inc

Attachment “A-1”
Sight Distance: Moodie Drive Access

Attachment “A-2”
Sight Distance: Fallowfield Road Access

Attachment “A-3”
Sight Distance: Fallowfield Rd and Moodie Dr Intersection
(Westbound Left-Turn, Northbound Right-Turn)



THE DARK PINK SHADED AREA IN THIS FIGURE OVERLAPS THE ORANGE SHADED AREA FROM THE TOP DIAGRAM. THEREFOR, CLEARING OBSTRUCTIONS FROM THIS AREA WILL ALSO SATISFY THE SIGHTLINE REQUIREMENTS ILLUSTRATED IN THE FIRST DIAGRAM.

Attachment “A-4”
Sight Distance: Fallowfield Rd and Moodie Dr Intersection
(Northbound Left-Turn and Eastbound Right-Turn)

