

**Mobile Delineator Safe Work Practice Template
with
Application for Approval**

[Insert your company name and graphic, if desired. Expand space as required]

[Insert your company document reference number, if desired. Expand space as required]

Transportation and Infrastructure Renewal's (Department) Template Reference
Number: 2018.01.25.

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Introduction

This section contains requirements and guidelines for completing this Safe Work Practice Template / Application for Approval.

The NS Temporary Workplace Traffic Control Manual (Manual) requires that the Department of Transportation and Infrastructure Renewal (Department) approve equipment and procedures for laying out and picking up delineators from a moving vehicle.

Companies seeking Department approvals must do so by adapting this template document to meet their needs and sending their requests to the Nova Scotia Temporary Workplace Traffic Control Program Administrator at tcm@novascotia.ca.

This template may be updated from time to time as standards change; those with prior approvals will be notified when updates occur. After a change, companies must resubmit approval requests using the new template document; enclosures may also need to be approved anew if safety standards change. Companies may only do mobile delineator work with written approval from the Department's Temporary Workplace Traffic Control Program Administrator using the latest Department approved template document; each enclosure must be supported by a test certificate valid for the current period and issued in consideration of the latest standards.

This document has been prepared in response to requests for Departmental approval of procedures involving a worker stationed in a worker enclosure attached to the back of a truck. While the Department, in cooperation with stakeholders, has tried to consider all conditions when preparing this template, it remains the responsibility of each company to ensure that their safe work practice provides rules and standards that are sufficient to create and maintain safe conditions.

The Department may suspend the use of this template, or change requirements in writing.

Important: The design and use of a worker enclosure requires compliance with all applicable NS legislation. The requirements of this document are subordinate to every requirement of NS legislation.

Unless stated otherwise, terms used in this document mean the same as when they are used in the NS Temporary Workplace Traffic Control Manual (Manual).

In this document the term "mobile delineator work" means actively laying out or picking up delineators at a temporary workplace from a moving vehicle. This vehicle must be specially designed for the task using standards and procedures approved by the Department.

In this document the term "worker enclosure", or in context "enclosure," means the engineered enclosure used to hold and protect a worker while performing mobile delineator work, all

supporting hardware holding the enclosure in place, and all modifications to the truck necessary to accommodate the enclosure.

Rules and procedures in Sections 1 through 6 form a part of this approval and must be adhered to, unless expressly stated otherwise. Where a company wishes to be excused from a standard, rule, or procedure, they should strike-out the rule on this document but NOT remove the original text. Where a company wants to add a rule(s) or procedure(s) not included in this document then it/they should be added to Appendix “B.”

Each application must be accompanied by documentation stipulated in Section 2. A testing certificate and any additional information necessary to support the design of the worker enclosure must be in Appendix A. The enclosure designer’s, and additional company specific rules and procedures (if any) must be in Appendix B; both appendices become a part of this safe work practice upon approval.

Italicized text found on the cover page and Section 1 of this template must be replaced with company specific information

Section 1

This section contains applicant and contact information, and a place for the Department's approval.

Applicant Company Name, Address and Phone Number:

[Fill in your company name, address and phone number; expand space as needed]

The Name, Title, and Contact Information for the Person Within Your Company Who Should Be Contacted Regarding this Application and Subsequent Use of an Enclosure:

[Detail the person within your company who will deal with the Department on this issue (provide updated information as staff changes), expand space as needed]

Insert the distinct identifying mark(s) from the enclosure(s) to which this approval is intended to apply. Where enclosures share a single design and this approval is intended to apply to more than one, list all the distinct identifying marks on the enclosures to which the approval is intended to apply:

[Write in the enclosure's distinct identifying mark; expand space as needed]

By signing below I *[insert name]* request approval of *[insert company's name]* safe work practice. I agree to be the company's primary contact person in matters related to mobile delineator work and worker enclosures, and will ensure *[insert company's name]* compliance with the conditions of this safe work practice.

Signature:

Date: yyyy.mm.dd

Approved by:

Nova Scotia Temporary Workplace Traffic Control
Program Administrator

Date: yyyy.mm.dd

Section 2

This section contains requirements for designing, constructing, testing and certification of an engineered work enclosure.

2.1 Introduction

It is the Department's position that the worker enclosure's design, manufacture, testing, certification, inspection, maintenance and safety are wholly the responsibility of the company using the enclosure and by association their professional advisors. The enclosure's compliance with all applicable laws is wholly the responsibility of the user.

2.2 Worker Enclosure Design

The enclosure must be designed by a Professional Engineer licensed in the area in which the engineering design and decisions have been made.

(From an enclosure end user's perspective there may be an advantage to having all matters related to the design and approval documented and verifiable. This could result in simpler and less costly future recertification should ties to the original designer be interrupted. It is suggested that companies keep records sufficient to meet their legal obligations if challenged.)

2.3 Designer's Information in Support of Ongoing Safety

The original design and subsequent certification(s) require the approval of a Professional Engineer. The Professional Engineer who provides subsequent enclosure certifications is, by their approval, taking full responsibility for the integrity of the design and the current condition of the equipment recertified. In the event that any aspect of earlier work is found unsatisfactory, it is incumbent on the person providing the recertification to have deficiencies corrected before approval.

The designer's enclosure standards, recommendations, and procedures necessary for the safe use or maintenance of the enclosure must be included in Appendix B for reference by the company and crews using the enclosure. During recertification the Professional Engineer signing the certificate must review this information and update it if needed.

The enclosure's designer must provide all necessary standards and procedures to support ongoing safe use and maintenance. For example, but not limited to:

- A procedure for mounting and dismounting the enclosure taking into account mounting on the right or left side of the truck if so equipped. Include instructions for moving tail lights to the left or right, etc.
- A procedure for adjusting the height of the enclosure or, if not adjustable, provisions to ensure the correct mounting height.
- A description of every enclosure component, point, or weld subject to a daily pre-use inspection. The list should highlight any part of the enclosure that may be subject to high stresses and therefore increased risk of failure. The pre-use inspection list must be accompanied by a description of “significant deficiencies” which, if found, would justify removing the enclosure from active use.
- The maximum operating speed for the vehicle when the enclosure is occupied (default maximum is 20 km/h).
- A standard for the maximum weight of the enclosure’s occupant and minimum clearance to the road surface, taking into consideration road conditions, vehicle operating speed, and dynamic loading.
- Standards for lights, reflectors or surface finishes that are necessary to enhance visibility or are necessary for safety or regulatory compliance. Specify any requirements for operation, repair or upkeep as well as the provisions to control corrosion if required.
- Provisions to prevent occupants of the enclosure from falling out or becoming wedged. The enclosure’s designer should specify equipment and use standards that include the use of a harness and lanyard by the enclosure occupant.
- A statement requiring that each enclosure be permanently marked with its year of manufacture, the name of the company that fabricated it, and a distinct mark to identify it from all other enclosures. (Companies may use the distinct mark in the testing and certification process as well as to log any approvals, repairs and/or failures.)
- Any operational or use limitations.

2.4 Enclosure Fabrication and Inspection / Testing

- The enclosure must be fabricated and inspected or tested to standards acceptable to the Professional Engineer who will sign the test certificate.

2.5 *Enclosure Certification*

A certificate must be issued by a Professional Engineer for enclosures that pass inspection or testing. It must provide clear assurances that the enclosure is safe and legal for use.

Each enclosure needs an initial certificate and to be recertified, thereafter, upon expiration. Enclosures must also be recertified if they are deemed to have a “significant deficiency” by the certifying Engineer or if the enclosure or any part of the supporting hardware needs to be replaced or requires structural repairs. The expiry date of a certificate is set by the Professional Engineer who signs the certificate and must appear on the certificate.

Place the certificate(s) accompanying this approval request into Appendix A. Send a copy of each replacement certificate to the Department’s Temporary Workplace Traffic Control Program Administrator. The Department must be in receipt of a current certificate for each enclosure before the enclosure is used. A legible copy of the current certificate for the enclosure in use must be in the truck performing mobile delineator work and be made available to the appropriate Department, and external authorities upon request.

The minimum information required on an enclosure certificate includes:

- The enclosure owner’s company name and business address.
- The enclosure designer’s (company) name and business address.
- The time period during which the certificate is valid.
- The enclosure design name or reference number (as may be shown on the design drawings), and the enclosure’s distinct mark distinguishing it from other enclosures.
- The name and business address of the enclosure’s manufacturer.
- Any limitations applicable to the enclosure or its use.
- The certificate must include a declaration verifying that the enclosure has passed an inspection and/or testing. It must also validate the **current** adequacy of the designer’s operation and maintenance standards and procedures found in Appendix B. This declaration confirms the enclosure and documentation are safe and correct.
- The certificate must be signed and dated by a Professional Engineer licensed to practice in Nova Scotia. The signature must be supported by the printed name and contact information of the signator

Section 3

This section lists the general training requirements for the company and those who will do mobile delineator work. Training requirements should include, but not limited to;

- It is the responsibility of everyone doing mobile delineator work to follow all instructions and procedures, and to ensure that their training is up-to-date and adequate.
- Everyone involved in mobile delineator work must complete a training session approved by their company before being assigned mobile delineator work.
- Training must be done annually before performing mobile delineator work.
- Training must focus on the tasks that the individual will be assigned.
- Everyone doing mobile delineator work must be made generally aware of the responsibilities of all others who do mobile delineator work, even those who do dissimilar work.
- Refresher training (a toolbox talk) must be given to everyone involved in mobile delineator work before every project. Where a previously trained employee joins a work team midway through a project but is absent for the refresher training for that project, they must participate in refresher training that integrates them safely into the new team before doing mobile delineator work on that project.
- The individual providing the training must be a competent person, as defined by the Nova Scotia Occupational Health and Safety Act.
- Each company must maintain training records.

Section 4

This section lists safety rules applicable at all times while mobile delineator work is being carried out.

Applicant produced rules or procedures must be organized in Appendix B.

4.1 *General rules to be applied to mobile delineator work*

- If it is found that rules, requirements, or procedures in this document do not provide safe conditions:
 - Do not start, or immediately stop mobile delineator work and do not begin again without approval of the company contact person and the Department's Temporary Workplace Traffic Control Program Administrator.
 - Immediately report the unsafe condition to the company contact person named in Section 1 of this safe work practice.
 - The company contact person named in Section 1 of this safe work practice must immediately report the unsafe condition to the Department's Temporary Workplace Traffic Control Program Administrator.
- Safety standards, rules, and procedures specified by the applicant in Appendix B must also be followed.
- It is prohibited to use mobile delineator procedures to lay out or pick up delineators that will result in traffic on BOTH sides of the workers, unless they are protected from traffic on at least one side by an engineered barrier or a non traversable median. Otherwise, this safe work practice applies to all road types for which a procedure has been approved.

4.2. *Rules primarily affecting or applying to the person in the enclosure*

- A person must not occupy the box or bed of a truck while it is in motion.
- A person in the enclosure must pay full attention to their work and eliminate all distractions. They must turn off all entertainment devices, such as the radio, and eliminate non-essential phone and two-way radio communication.
- A person must not get in or out of the enclosure while it is in motion nor can they get in or out of the enclosure unless the truck has pulled off to the edge of the road and is stopped in a position of safety as far as practical from the active travel lane.

- The person in the enclosure must wear a safety harness and use a lanyard of a standard specified by the person signing the enclosure's certificate. The lanyard must be secured in the way specified by the certificate signatory. While in use, the lanyard must prevent an enclosure occupant from touching the ground.
- The person in the enclosure must wear:
 - CSA Z 96-15, Class 2, Level 2, high visibility apparel made with fluorescent background material.
 - CSA, Type II, G or E head protection. The worker in the enclosure should use a chin strap to prevent loss of their hard hat while stooping.
 - CSA, Grade I protective footwear.
- Only one person is permitted in the enclosure at a time. The weight of the person in the enclosure must not exceed the enclosure's design values (see the designer's limitations in Appendix B).
- It is forbidden for any person to cling to the outside of an enclosure while in motion.
- A person must not occupy the enclosure unless actively laying out or picking up delineators. Workers must be transported in the cab of the truck or by other approved means until ready to actively lay out or pick up delineators.
- When the worker in the enclosure cannot comfortably reach or rearrange items in the truck, the vehicle must stop in a position of safety as far as practical from the active travel lane before retrieving or sorting the items.
- The worker and all items on the truck must remain stable, safe and under control at all times. The worker in the enclosure must ensure that there are no items in or on the vehicle or on their body that could become hazardous to them or the public by snagging, shifting, or extending or falling into an open driving lane.
- The worker in the enclosure must ensure that they do not obscure brake, tail, or turn lights.
- The worker in the enclosure must ensure that the surface on which they stand is free from tripping hazards such as debris, ice and snow.

- The driver of the vehicle with the enclosure and the person who occupies the enclosure must have prearranged signals for:
 - Stop
 - Move forward
 - Move backward
 - Move slightly to the right
 - Move slightly to the left
 - Slow down
 - Pull over to a position of safety at the edge of the road, and
 - Take emergency avoidance measures.

Important: The driver must perform these maneuvers only when directed by the person in the enclosure, and only when it is safe to do so. The exception is that they may act independently if it is essential for safety.

4.3. Rules primarily affecting or applying to vehicle driver(s)

- A legible and current copy of the mobile delineator safe work practice, including Appendix A and B, must be in the vehicle used for mobile delineator work and be made available to the appropriate Department, and external authorities upon request. The document must be replaced if it becomes outdated or damaged.
- When any person is in the enclosure, the vehicle's speed limit is the lower of 20 km/h or the speed limit set by the Professional Engineer who certified the enclosure. If the Engineer has set a lower speed limit it will be shown in Appendix B.
- When any person is in the enclosure the vehicle must accelerate and decelerate gradually so as not to destabilize the worker in the enclosure (unless reacting to an emergency).
- The vehicle with the enclosure must have a window(s) open when doing mobile delineator work so that audible signals between the driver and occupant of the enclosure are practicable.
- The driver of the vehicle(s) doing mobile delineator work must pay full attention to their work and eliminate all distractions. They must turn off all entertainment devices, such as the radio, and eliminate non-essential phone and two-way radio communication.
- The worker in the enclosure and the vehicle's driver must constantly monitor public traffic on all approaches. They must constantly evaluate their surroundings and know at all times how they will react to a threat. On becoming aware of a threat they must act immediately and defensively.

- Only the vehicle driver is allowed in a vehicle actively doing mobile delineator work.

4.4. Rules primarily applicable to a vehicle or the enclosure

- All vehicles used for mobile delineator work must be equipped with a Flashing Light Unit (FLU) and a 360° amber flashing light. FLUs must be aimed to provide the best viewing angle for approaching drivers. These warning lights must be used following conventions in the Manual.
- Where multiple vehicles are used to do mobile delineator work, each one must remain in radio contact with all others.
- When delineators are being laid out beside a lane open to traffic:
 - Delineators must always be laid out by driving forward with the flow of traffic (upstream to downstream).
 - A second vehicle must, at all times, follow the person in the enclosure, positioning themselves between the worker and public traffic.
- When delineators are being picked up beside a lane open to traffic, delineators may be picked up in two ways:
 - Delineators may be picked up by driving two service vehicles within the delineated area, in reverse, against the flow of traffic (downstream to upstream).

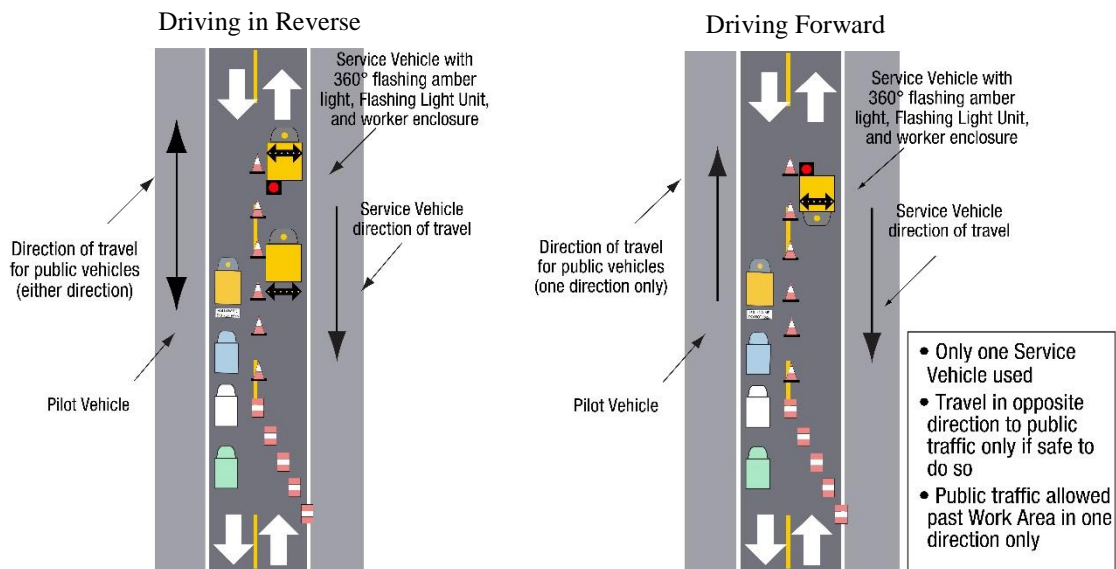
When this method is chosen the second service vehicle must, at all times, precede the person in the enclosure, in a position between the worker and public traffic.

- Provided measures are taken not to confuse oncoming traffic (e.g. headlights at night), delineators may be picked up by driving the service vehicle within the delineated area in a forward direction, against the flow of traffic (downstream to upstream).

When this method is chosen a second service vehicle must not be used behind the worker enclosure. (This will prevent the second vehicle from operating outside the delineated area.)

On a two-lane two-way road, when driving the service vehicle within the delineated area in a forward direction, against the flow of traffic, public traffic must be restricted to one direction only (see following illustrations). Traffic Control Person must ensure that traffic only flows in the direction opposite to the vehicle containing the worker enclosure and must stop traffic when a gap develops at the back of traffic following the pilot vehicle.

PICKING UP DELINEATORS ON TWO-LANE TWO-WAY ROADS:



- Vehicle(s) must be positioned to provide the greatest safety practical to the worker in the enclosure. When two vehicles are required to work together, in consultation with the Temporary Workplace Signer, the drivers of the enclosure vehicle and the support vehicle must establish and maintain a safety space between the vehicles so that the person in the enclosure is provided the maximum safety under all operating conditions. In setting the safety space, consideration must be given to vehicle weights, speeds, stopping distances, hills, and turns, number of lanes, sight distances, and road surface conditions.
- Only currently certified enclosures may be used for mobile delineator work.
- Before work begins, the enclosure occupant and the enclosure vehicle driver must ensure that the enclosure meets, and will maintain under all operating conditions, the minimum clearance as set by the Professional Engineer who has signed the enclosure certificate (see Appendix B).
- Before work begins, the enclosure occupant and the enclosure vehicle driver must inspect the enclosure and all supporting members for function and soundness. The inspection must include the pre-use inspection items specified by the Professional Engineer who has signed the certificate (see Appendix B).
- Where any deficiency matching a “significant deficiency” from the company’s pre-use inspection list, or any condition affecting compliance with NS legislation, visibility, or safety is observed, the enclosure must be immediately removed from service (see the significant deficiency list in Appendix B). Where any structural part has been modified, repaired or replaced, the enclosure must be certified anew by a Professional Engineer.

(For clarification, ‘structural part’ means any part having a reasonable expectation of affecting the strength or integrity of the enclosure.)

- Enclosures removed from service for a significant deficiency must be tagged with a clearly legible and waterproof label that identifies the problem(s), and prohibits the enclosure’s use. The enclosure must not be used until repaired, and if needed, retested and certified again. The company must log enclosure deficiencies by the distinct mark and track the failure, repair, testing, and recertification, as applicable.

Section 5

This section contains the procedures for mobile delineator work on two-lane two-way roads.

The company's contact person must immediately notify the Department's Temporary Workplace Traffic Control Program Administrator if safety concerns arise with the use of this procedure or with the use of a worker enclosure in general.

5.1 Procedure for laying out and picking up delineators on two-lane two-way roads

There are two methods for laying out and picking up delineators on two-lane two-way roads:

- A) Close both lanes, permitting the vehicle with the enclosure freedom to lay out and pick up delineators without risk from public traffic.
- B) Permit traffic past the work area while delineators are laid out or picked up, but under control of Traffic Control Persons and a pilot vehicle.

The Temporary Workplace Signer must choose the best method, taking into consideration the length of the work area and traffic delays. Work areas longer than 1 km or those that result in delays > 10 min should use Traffic Control Persons and a pilot vehicle to maximize traffic flow.

5.A.1. Laying out delineators on a two-lane two-way road, stopping traffic in both directions (not using a pilot vehicle)

1. At the start of this procedure, all signs and Traffic Control Persons have been put in place using approved procedures from the Manual. **Comply with rules in Section 4 of this document which deal with such things as using a second vehicle to provide worker protection and driving forward or in reverse.** As well, comply with rules and procedures in Appendix B.
2. Using Traffic Control Persons, stop traffic flow in both directions and allow the Traffic Control Person Zone to clear of public traffic.
3. A service vehicle displaying an FLU in bar mode and a 360° amber flashing light takes a position in the middle of the lane to be closed, upstream of the work area. It should be positioned approximately half way between the Traffic Control Person and the place where the transition taper will start.

4. When the Traffic Control Person Zone is clear of public traffic, the vehicle with the enclosure, displaying an FLU in bar mode and a 360° amber flashing light, moves to a position of safety close to the place where delineators will be placed first.
5. The worker enters the enclosure and attaches the safety lanyard.
6. The delineators are laid out using the vehicle with the enclosure attached.
7. The vehicle with the enclosure moves to a position of safety at the edge of the road and stops. The worker exits the enclosure.
8. Workers place a properly aimed FLU in bar mode at the boundary of the transition taper and the buffer area, and another one at the termination taper, if required by the Manual.
9. Remove the service vehicle blocking the lane in advance of the transition taper.
10. Delineators, vehicles, and / or Flashing Light Units are now in place; Traffic Control Persons may regulate traffic past the work area and work can begin.

Note: It is permissible instead to lay out the delineators in the transition taper by hand using an approved procedure from the Manual.

5.A.2. Picking up delineators on a two-lane two-way road, stopping traffic in both directions (not using a pilot vehicle)

1. Using Traffic Control Persons, stop traffic flow in both directions and allow the Traffic Control Person Zone to clear of public traffic.
2. A service vehicle displaying an FLU in bar mode and a 360° amber flashing light takes a position in the middle of the closed lane upstream of the work area. It should be positioned approximately half way between the Traffic Control Person and the transition taper.
3. Remove the FLU at the termination taper if there is one.
4. The vehicle with the enclosure, displaying an FLU in bar mode and a 360° amber flashing light, moves to a position of safety at the edge of the road close to the place where the first delineator will be picked up, and stops. The worker enters the enclosure and attaches the safety lanyard.
5. The delineators are picked up using the vehicle with the enclosure attached.
6. The vehicle with the enclosure moves to a position of safety at the edge of the road and stops. The worker exits the enclosure.

7. Remove the FLU at the transition taper if there is one.
8. Remove the service vehicle blocking the lane upstream of where the transition taper was.
9. Delineators, vehicles, and / or Flashing Light Units have now been removed. Continue by removing Traffic Control Persons and signs using approved procedures from the Manual.

Note: It is permissible instead to pick up the delineators in the transition taper by hand using an approved procedure from the Manual.

5.B.1. Laying out delineators on a two-lane two-way road using a pilot vehicle

1. At the start of this procedure, all signs and Traffic Control Persons have been put in place using approved procedures from the Manual. **Comply with rules in Section 4 of this document which deal with such things as using a second vehicle to provide worker protection and driving forward or in reverse.** As well, comply with rules and procedures in Appendix B.
2. The Traffic Control Person upstream of the work area stops traffic.
3. A service vehicle, displaying an FLU in bar mode and a 360° amber flashing light, takes a position in the middle of the lane to be closed, upstream of the work area. It should be positioned approximately half way between the Traffic Control Person and the place where the transition taper will start.
4. The vehicle with the enclosure, which is displaying an FLU in bar mode and a 360° amber flashing light, moves to a position of safety at the edge of the road and stops. The stopping location is close to the place where delineators will be placed first. The worker enters the enclosure and attaches the safety lanyard.
5. Starting at the edge of the road, the vehicle with the enclosure lays out delineators in the transition taper, and the first delineator(s) in the buffer area, in that order. (Lay out delineators from the upstream to the downstream end of the workplace.)
6. On roads with speed zones greater than 80 km/h, place a properly aimed FLU in bar mode at the boundary between the transition taper and the buffer area. (Note: This is a third vehicle, or it is an FLU trailer.)
7. At this time, the pilot vehicle, directed by Traffic Control Persons, may lead traffic past the work area in the open lane, reversing traffic flow as needed.

8. As soon as the vehicle with the enclosure attached is far enough advanced up the buffer area (see Section 4), the service vehicle blocking the lane moves into a defensive position behind it to provide worker protection. It moves forward between the delineator(s) in the transition taper and not around the taper into the open travel lane. It then follows the vehicle with the enclosure attached as the rest of the delineators are laid out.
9. The vehicle with the enclosure moves to a position of safety at the edge of the road and stops. The worker exits the enclosure.
10. Place a properly aimed FLU in bar mode at the approach and termination taper, if necessary and if required by the Manual.
11. Delineators, vehicles, and / or Flashing Light Units are now in place; Traffic Control Persons regulate traffic past the work area and work can begin.

Note: It is permissible instead to lay out the delineators in the transition taper by hand using an approved procedure from the Manual.

5.B.2. Picking up delineators on a two-lane two-way road using a pilot vehicle

Note: This procedure describes picking up delineators while driving the service vehicles in reverse. The procedure may be adapted for driving in a forward direction, as per the footnote from item # 4 (see the bottom of the page).

1. The pilot vehicle, directed by Traffic Control Persons, may continue leading traffic past the work area in the open lane.
2. Remove the FLU at the termination taper if there is one there.
3. The vehicle with the enclosure, displaying an FLU in bar mode and a 360° amber flashing light, moves to a position of safety at the edge of the road close to the last downstream delineator, and stops. The worker enters the enclosure and attaches the safety lanyard.
4. The vehicle with the enclosure, working in tandem with a service vehicle displaying an FLU in bar mode and a 360° amber flashing light¹, starts at the last downstream delineator and picks up all the delineators, except those in the transition taper.
5. The Traffic Control Person on the same side of the road and upstream of the work area stops traffic.

¹ If the vehicle containing the enclosure is picking up delineators while driving in the forward direction, a secondary service vehicle used for protection is NOT permitted (see Section 4.4 for details and restrictions).

6. A service vehicle, displaying an FLU in bar mode and a 360° amber flashing light, safely stops in the middle of the lane in which work has been done. It should be positioned upstream of the work area and approximately half way between the Traffic Control Person and the transition taper. (Note: This may be an additional vehicle put in place before picking up any delineators or it is permissible to delay its placement and use the same service vehicle that provided protection to the worker in the enclosure while delineators in the work and buffer areas were being picked up.)
7. Remove the FLU at the transition taper if there is one.
8. Starting at the last remaining downstream delineator, the vehicle with the enclosure picks up all delineators in the transition taper.
9. The vehicle with the enclosure moves to a position of safety at the edge of the road and stops. The worker exits the enclosure.
10. Remove the service vehicle blocking the lane.
11. Delineators, vehicles, and / or Flashing Light Units have now been removed. Continue by removing Traffic Control Persons and signs using approved procedures from the Manual.

Note: It is permissible instead to pick up the delineators in the transition taper by hand using an approved procedure from the Manual

Section 6

This section contains procedures for doing mobile delineator work on multi-lane roads.

A minimum of three FLUs are needed to perform this procedure.

The company's contact person must immediately notify the Department's Temporary Workplace Traffic Control Program Administrator if safety concerns arise with the use of this procedure or with the use of a worker enclosure in general.

This procedure describes work in the right lane of a multi-lane road. The procedure may be adapted for working in a left lane, **however it is prohibited to use mobile delineator procedures to lay out or pick up delineators that will result in traffic on BOTH sides of the workers, unless they are protected from traffic on at least one side by an engineered barrier or a non traversable median.**

6.1 Procedure for laying out delineators on multi-lane roads

1. At the start of this procedure, all signs have been put in place using approved procedures from the Manual. **Comply also with rules in Section 4 of this document, which deal with such things as using a second vehicle to provide worker protection and driving forward or in reverse.** As well, comply with company specific rules and procedures in Appendix B.
2. A service vehicle displaying an FLU in left arrow mode and a 360° amber flashing light enters the traffic stream and stops gradually in the middle of the lane in which work will take place. It should be positioned upstream of the work area and approximately half way between the last sign and the place where the transition taper will start. Note: For higher speeds, if a protection vehicle is available, consider using it for this purpose.
3. The vehicle with the enclosure, which is displaying an FLU in bar mode and a 360° amber flashing light, moves to a position of safety at the edge of the road and stops. The stopping location is close to the place where delineators will be placed first. The worker enters the enclosure and attaches the safety lanyard.
4. Place a TC-6 sign at the transition taper if one is required.
5. Starting at the edge of the road, the vehicle with the enclosure lays out delineators in the transition taper and the first delineators in the buffer area in that order. (Lay out delineators from the upstream to the downstream end of the workplace.)
6. Position a properly aimed FLU in left arrow mode at the boundary between the transition taper and the buffer area. (Note: This is a third vehicle, or it is an FLU trailer.)

7. As soon as the vehicle with the enclosure attached is far enough advanced up the buffer area (see Section 4), the service vehicle blocking the lane moves into a defensive position behind it to provide worker protection. It moves forward between the delineator(s) in the transition taper and not around the taper into the open travel lane. **Note: The vehicle following the enclosure now changes its FLU to bar mode (because the upstream FLU at the taper / buffer area shows arrow mode).** This second service vehicle provides worker protection by following the vehicle with the enclosure attached as it lays out the rest of the delineators, finishing at the last downstream delineator.
8. The vehicle with the enclosure moves to a position of safety at the edge of the road and stops. The worker exits the enclosure.
9. Delineators, vehicles, and / or Flashing Light Units are now in place, work can begin.

Note: It is permissible instead to lay out the delineators in the transition taper by hand using an approved procedure from the Manual.

6.2. Procedure for picking up delineators on multi-lane roads

Note: This procedure describes picking up delineators while driving the service vehicles in reverse. The procedure may be adapted for driving in a forward direction, as per the footnote from item # 3 (see the bottom of the page).

1. At the start of this procedure all signs and delineators are in place and traffic is self regulating past the work area in one open lane. An FLU is in place inside the delineators at the boundary of the transition taper and buffer area.
2. The vehicle with the enclosure, which is displaying an FLU in bar mode and a 360° amber flashing light, moves to a position of safety at the edge of the road close to the last downstream delineator and stops. The worker enters the enclosure and attaches the safety lanyard.
3. The vehicle with the enclosure, working in tandem with a service vehicle displaying an FLU in bar mode and a 360° amber flashing light², starts at the last downstream delineator and picks up all the delineators, except those in the transition taper.
4. A service vehicle displaying an FLU in left arrow mode and a 360° amber flashing light safely stops in the middle of the lane in which work has been done. It should be positioned upstream of the work area and approximately half way between the last sign and the transition taper. (Note: This may be an additional vehicle put in place before picking up any

² If the vehicle containing the enclosure is picking up delineators while driving in the forward direction, a secondary service vehicle used for protection is NOT permitted (see Section 4.4 for details and restrictions).

delineators or it is permissible to delay its placement and use the same service vehicle that provided protection to the worker in the enclosure while delineators in the work and buffer areas were being picked up.) For higher speeds, if a protection vehicle is available, consider using it for this purpose.

5. Remove the FLU at the transition taper.
6. Starting at the last remaining downstream delineator, the vehicle with the enclosure picks up all delineators in the transition taper.
7. Pick up the TC-6 sign at the transition taper, if one was used.
8. The vehicle with the enclosure moves to a position of safety at the edge of the road and stops. The worker exits the enclosure.
9. Remove the service vehicle (or protection vehicle) that is blocking the lane.
10. Delineators, vehicles, and / or Flashing Light Units have now been removed. Continue by removing signs using approved procedures from the Manual.

Note: It is permissible instead to pick up the delineators in the transition taper by hand using an approved procedure from the Manual.

Appendix A

Appendix A is provided for applicants to insert their Enclosure Test Certificate as well as any information required to support the design of the work enclosure. Refer to sections 2 and 4 for requirements.

Appendix B

Appendix B is provided for applicants to add rules and procedures to supplement those in the main body of this document (daily pre-use inspection list, significant deficiency list, weight restrictions for the enclosure, etc). Refer to sections 2 and 4 for requirements.