### STANDARD ROAD CLOSURE GATES

#### DRAWING SCHEDULE

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<th>DRAWING NUMBER</th>
<th>DESCRIPTION</th>
<th>REV</th>
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<td>STD-G-010-01</td>
<td>ORDERING CHOICES &amp; GENERAL NOTES</td>
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<td>STD-G-010-02</td>
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<td>DOUBLE RAIL GATE ARM TYPES</td>
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<td>GATE ARM DETAILS</td>
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**ASSUME NOT TO SCALE**
**MAIN ORDERING CHOICES (SEE SHEET 02A03 FOR EXAMPLES)**

**ABUTMENTS**
- SINGLE-OR DOUBLE LOCK KEEPER
- CONCRETE BLOCKS
- CONCRETE BLOCKS
- SIGN, ETC.

**MINOR ORDERING CHOICES**
- SINGLE-OR DOUBLE LOCK KEEPER
- CONCRETE BLOCKS
- CONCRETE BLOCKS
- SIGN, ETC.

**CLOSED LATCH ABUTMENT**
- SURFACE MOUNTED OR BURIED FOOTING
- LATCHED WHEN ROADWAY IS CLOSED

**OPEN LATCH ABUTMENT**
- SURFACE MOUNTED OR BURIED FOOTING
- LATCHED WHEN ROADWAY IS OPEN

**GENERAL NOTES**

**0.0 GENERAL**
- THESE DRAWINGS PROVIDE STRUCTURAL DETAILS FOR ROAD CLOSURE GATES FOR INSTALLATION ON PUBLIC ROADS UNDER THE SUPERVISION OF THE MINISTRY OF FORESTS, LANDS, AND NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT.
- ROAD CLOSURE GATES ARE INHERENTLY HAZARDOUS ROADWAY STRUCTURES. ROADWAY DESIGN, TURNAROUND REQUIREMENTS, GATE LOCATION, GATE INSTALLATION REQUIREMENTS, ROAD AND GATE SIGNAGE, APPROACH BARRIER REQUIREMENTS, FABRICATION QUALITY ASSURANCE, SITE SUPERVISION OF INSTALLATION, AND GENERAL SAFETY SHALL BE THE RESPONSIBILITY OF THE QUALIFIED INDIVIDUAL FOR A SPECIFIC SITE.
- ANY INSTALLATION OR SIGNAGE REQUIREMENTS SHOWN ON THESE DRAWINGS MUST BE REVIEWED AND AMENDED AS NECESSARY BY THE RESPONSIBLE INDIVIDUAL.
- GATE ARM MUST BE LATCHED/SECURED AT ALL TIMES (OPEN OR CLOSED) TO ENSURE AGAINST SPEARING OF VEHICLES FROM AN UNSECURED ARM.
- ESSENTIAL GUIDANCE FOR USE OF THESE DWGS. IS AVAILABLE AT:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

**0.2 MATERIALS**
- HST:
  - TY MIN: 4340MCA, CSA G40.21M OR ASTM A500 GRADE C (BOTH SEAMED)
  - PLATE:
    - TY MIN: 300W OR 350W, CSA G40.21M
    - BOLTS:
      - ASTM A325 GALV.
      - ROD BAR:
        - ASTM A36
      - NUTS:
        - ASTM A563 GALV
      - STANDARD WASHERS:
        - ASTM 1994 GALV
      - HINGE PIPES:
        - ASTM A52 GR B (SEAMED) OR ASTM A52 GR B (SEAMLESS)
      - POST PIPES:
        - ASTM A52 GR B OR ASTM A52 GR 2

**0.3 FABRICATION**
- UNLESS NOTED OTHERWISE, ALL WELDS SHALL BE 6 mm IN SIZE.
- NO EXPOSED SHARP CORNERS ONTENTED ON STEEL COMPONENTS.
- WELDING SHALL BE IN ACCORDANCE WITH CSA W59 BY A COMPANY CERTIFIED TO CSA W47.3 FOR DIVISION 1, 2, OR 3.
- ALL STEEL GATE COMPONENTS SHALL HAVE THEIR EXTERIOR PAINTED, EXCEPT AS NOTED HEREIN, IN ACCORDANCE WITH THE MINISTRY "STEEL GUARDIAN COMPONENT PAINT STANDARD" LOCATED AT:
- COMPONENTS NOT TO BE PAINTED INCLUDE: HINGE PIN PIPE BELOW ITS CAP, LATCH PIN CHAIN, LATCH PIN, LOCK KEEPER, INTERIOR OF HINGE BASE COLLAR, INTERIOR OF HINGE TOP COLLAR, FOOTINGS, PORTION OF POSTS BURIED > 600 mm DEPTH, GROUND ANCHOR NAILS.
- EXTERIOR OF UNPAINTED PORTION OF HINGE PIN PIPE TO BE SANDBLASTED AS PER PAINT SPECIFICATION.
- FABRICATOR SHALL ENSURE THAT ALL COMPONENTS ARE FIT APPROPRIATELY AND MOVE OR ROTATE EASILY AND SMOOTHLY AS REQUIRED TO MEET THE REQUIRED FUNCTION.
- IN ACTUAL STEEL PIECES ObtAINED BY THE FABRICATOR DO NOT FUNCTION APPROPRIATELY, IT SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO REPLACE OR MODIFY THE PIECES AT NO COST TO THE MINISTRY. ANY SUCH MODIFICATIONS OR REPLACEMENTS REQUIRE PRIOR APPROVAL BY THE MINISTRY.
- FABRICATOR SHALL PAY PARTICULAR ATTENTION TO THIS REQUIREMENT WHEN ORDERING HINGE PIN AND TELESCOPING GATE ARM (HSS PIECES OF TELESCOPING SPECIFIED) DUE TO THE POSSIBILITY OF EXCESSIVELY PROTRUDING INTERIOR LONGITUDINAL WELD SEAM.
- GATE ARM SHALL BE COMPLETELY ASSEMBLED AND APPROPRIATE FUNCTIONING SHALL BE ENURED BY FABRICATOR PRIOR TO ASSEMBLY AND SHIPMENT TO THE MINISTRY.

**4.0 SIGNS, DELINERATORS AND REFLECTIVE TAPE**
- GENERAL:
  - REFLECTIVE TAPE, CHECKERBOARD SIGNS, AND DELINERATORS SHALL BE VISIBLE TO TRAFFIC FROM BOTH DIRECTIONS.
  - REFLECTIVE TAPE SHALL BE YELLOW/BLACK OR WHITE/BLACK STRIPED, MIN. 100 mm WIDE, HIGH-STRENGTH ROADWAY REFLECTIVE TAPE, APPLIED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS AFTER PAINTING.
  - DELINERATORS SHALL BE MINISTRY STANDARD ALUMINUM 300 mm x 300 mm YELLOW AND BLACK.
  - CHECKERBOARD SIGNS SHALL BE MINISTRY STANDARD ALUMINUM YELLOW AND BLACK.
  - UNLESS OTHERWISE SPECIFIED BY THE MINISTRY, ATTACHMENT DETAILS FOR SIGNS AND DELINERATORS SHALL BE DESIGNED AND BUILT BY THE FABRICATOR (WELDED TO THE GATE COMPONENTS PRIOR TO PAINTING) FOR ATTACHMENT OF SIGNS/DELINERATORS USING 13 mm BARRIER GALVANIZED BOLTS, CW NUTS AND WASHERS. MINIMUM 3 BOLTS PER SIGN/DELINERATOR.
- SURFACE MOUNTED ABUTMENTS
  - REFLECTIVE TAPE (FACING ONCOMING TRAFFIC) SHALL BE ATTACHED, FULL LENGTH, TO THE CORNER POSTS ADJACENT TO THE ROADWAY AND TO THE TOP HORIZONTAL RAILS-FACING TRAFFIC.
  - A DELINERATOR (FACING ONCOMING TRAFFIC) SHALL BE ATTACHED TO THE TOP OF EACH CORNER POST ADJACENT TO THE ROADWAY, EXTENDING ABOVE THE TOP OF THE POST (TOTAL OF 2 DELINERATORS PER ABUTMENT).
- BURIED FOOTING ABUTMENTS
  - REFLECTIVE TAPE (FACING ONCOMING TRAFFIC) SHALL BE ATTACHED TO THE POSTS, FULL LENGTH ABOVE GROUND.
  - DELINERATORS (FACING ONCOMING TRAFFIC) SHALL BE ATTACHED TO THE TOP OF EACH POST, EXTENDING ABOVE THE POST (TOTAL OF 2 DELINERATORS PER POST).
- GATE ARMS
  - REFLECTIVE TAPE SHALL BE ATTACHED TO THE GATE ARM TOP RAIL FULL LENGTH WHERE FEASIBLE CONSIDERING TELESCOPING ACTION (IF ANY).
  - STANDARD CHECKERBOARD SIGNS (MIN. 2 PER GATE ARM) SHALL BE ATTACHED, CENTRALLY, TO THE GATE ARM FOR VISIBILITY WHEN THE GATE IS CLOSED.

**ASSUME NOT TO SCALE**

**STANDARD ROAD CLOSURE GATES**

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**ABUTMENTS**
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**MINOR ORDERING CHOICES**
- SINGLE-OR DOUBLE LOCK KEEPER
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- SIGN, ETC.
GATE EXAMPLE #1 - SURFACE MOUNTED ABUTMENTS WITH SINGLE RAIL TELESCOPING GATE ARM
1:50 (HINGE PIN & LATCHING PIN NOT SHOWN FOR ENG. CLARITY)

GATE EXAMPLE #2 - SURFACE MOUNTED ABUTMENTS WITH DOUBLE RAIL FIXED LENGTH GATE ARM
1:50 (HINGE PIN & LATCHING PIN NOT SHOWN FOR ENG. CLARITY)

GATE ARM NOTES
- TELESCOPING GATE ARM TOTAL LENGTH CAN BE FIELD ADJUSTED TO SUIT VARIOUS ROAD WIDTHS WHEN
  GATE IS USED AT DIFFERENT LOCATIONS.
- FIXED LENGTH GATE ARM ACTUAL LENGTH MUST BE SPECIFIED BY THE MINISTRY AT TIME OF ORDERING.
- A SINGLE RAIL FIXED LENGTH GATE ARM OR A DOUBLE RAIL TELESCOPING GATE ARM COULD ALSO BE
  USED WITH SURFACE MOUNTED ABUTMENTS.

ASSUME NOT TO SCALE

STANDARD ROAD CLOSURE GATES
SURFACE MOUNTED GATE - LAYOUT & EXAMPLES

REVISIONS
TOP RAIL LENGTH VARIES 4300 TO 7300
ACTUAL LENGTH TO BE SPECIFIED BY MINISTRY WHEN ORDERING

750
1100
3750

500

HSS VERTICAL STRUTS (2 TOT)
102x102x4.8

HSS DIAG RAIL
127x127x4.8

HSS TOP RAIL
127x127x4.8

(TYP) ALL GATE ARM CONNECTIONS
TO BE 6 mm CONTINUOUS, SEALED
FILLET WELDS ALL AROUND EACH
CONNECTION, UND

HSS 102x102x4.8

HSS 127x127x4.8

HSS 152x152x9.5

- (INTERIOR LONGITUDINAL WELD SEAM TO BE
LOCATED ON THE SIDE NOT TOP OR BOTTOM)

- 2 - 19 mm Ø BOLTS w/ 2 STD WASHERS & 1 NUT PER BOLT
USED AT END OF 152x152 RAIL TO SECURE THE SPlice

VERTICAL BOLT HOLE LOCATIONS (12 TOT)
THROUGH RAIL & WITH SLIGHT LOCATIONAL
VARIATION IF RESIDO DUE TO INTERIOR WELD
SEAM ON 152x152

SINGLE RAIL FIXED LENGTH GATE ARM ELEV.

1:25

SINGLE RAIL TELESCOPING GATE ARM ELEV.

1:25

ASSUME NOT TO SCALE

STANDARD ROAD CLOSURE GATES

SINGLE RAIL GATE ARM TYPES

DATE
MICHELE HERVEY
GEOE GODDARD

FOR-11300-05
STD-G-010-04
OPEN LATCH ABUT. FRONT ELEV.
1/25 (CORNER PLATES, ANCHOR PINS & FLOOR BEAMS
NOT SHOWN FOR CLARITY - SEE SHEET 07 FOR DETAILS)

OPEN LATCH ABUT. SIDE ELEV.
1/25 (CORNER PLATES, ANCHOR PINS & FLOOR BEAMS
NOT SHOWN FOR CLARITY - SEE SHEET 07 FOR DETAILS)

APPROX. PLAN VIEW OF ABUTMENT BASES SHOWING FLOOR BEAM LAYOUT
CONCRETE BLOCKS & HINGE/LATCH DETAILS NOT SHOWN

ASSUME NOT TO SCALE

STANDARD ROAD CLOSURE GATES
SURFACE MOUNTED ABUTMENT DETAILS - (2 OF 4)

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Mabela

Ministry of
Forests, Lands, Natural
Resource Operations
and Rural Development

Glen Millen

FOR-11303-05

STANDARD ROAD CLOSURE GATES
SURFACE MOUNTED ABUTMENT DETAILS - (2 OF 4)

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Glen Millen

FOR-11303-05
LIFTING LUG
76x76x12.7 PL w/ 308 HOLE (CENTERED)
POST CAP PLATE
3003 x 12.7
19 PLATES (2 TOT) w/ 1038 HOLE
12.7 VER STIFFENER
PLATES (2 TOT) (COPE CORNERS TO CLEAR HORIZ WELDS)
HINGE TOP COLLAR
101.6 OD x 5.74 x 152 LG PIPE
273 OD x 9.36 POST
HINGE BASE COLLAR
101.6 OD x 5.74 x 94 LG PIPE
19 TOP PLATE w/ 1038 HOLE
12.7 PL 1200H w/ 22x42 RECT SLIT (CENTERED)
178 HGH x 19 SIDE PLATES (2 TOT) (COPE CORNERS AT TOP TO CLEAR HORIZ WELDS)
245x176x19 FRONT PLATE

SECTION - HINGE POST SIDE ELEV.
1:10 (HINGE PIN & GATE ARM NOT SHOW FOR CLARITY)

SECTION - HINGE POST FRONT ELEV.
1:10 (HINGE PIN & GATE ARM NOT SHOW FOR CLARITY)

SECTION - (THROUGH HINGE PIN 1): HINGE ASSEMBLY
1:10 (SHOWING PIN & GATE ARM SLEEVE)

NOTE: POST CAP PLATE & LIFTING LUG IS IDENTICAL FOR HINGE POST & BOTH LATCH POSTS

BURIED FOOTING ABUTMENT NOTES
- BURIED FOOTINGS SHALL BE PLACED ON A COMPETENT, FIRM SOIL OR GRAVEL BASE, AND SHALL BE BACKFILLED WITH 300 mm LIFTS OF COMPETENT GRANULAR SOIL FREE OF ORGANICS (COMPACTED TO 95% STANDARD PROCTOR).
- FOUNDATION CONDITIONS & COMPACTION TO BE VERIFIED BY THE INDIVIDUAL TAKING RESPONSIBILITY FOR THE GATE INSTALLATION.

ASSUME NOT TO SCALE

STANDARD ROAD CLOSURE GATES
BURIED FOOTING ABUTMENT DETAILS - (1 OF 3)

REV: 1

STD-G-010-11

MINISTRY OF FORESTS, LANDS, AND NATURAL RESOURCES
PARKS AND RECREATION

VINCENT HURLEY
WILSON KAIMAN

SIGNATURES

STANLEY MOORE
M.NEISER

DRAFTED

FOR: 11300-05