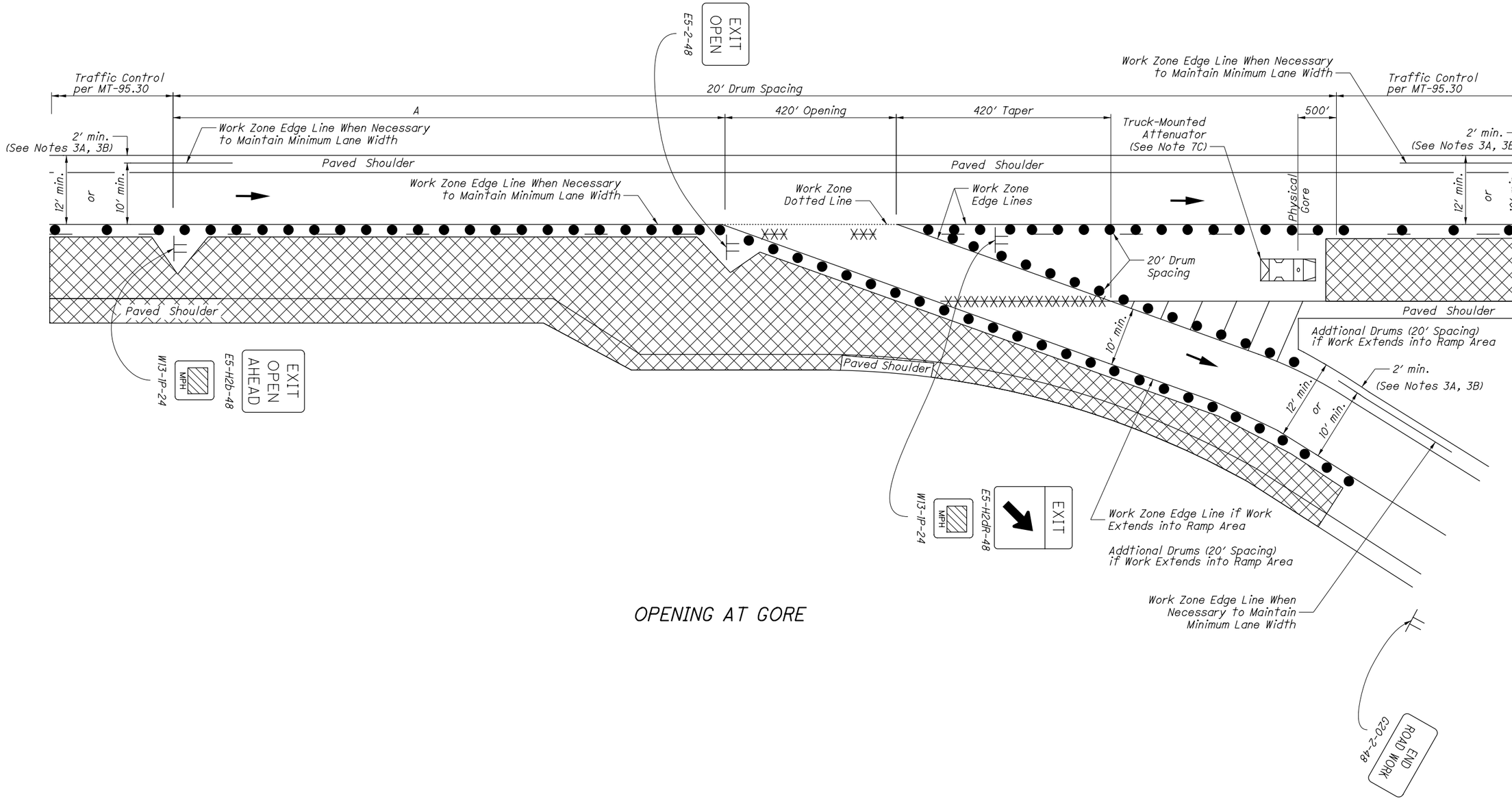


OPENING AT GORE

END ROAD WORK (G20-2-48)
Sign 200′ from End of Work

LEGEND

- WORK AREA
- DRUMS/CONES
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- SHADOW VEHICLE WITH TMA

TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE (A) BETWEEN SIGNS (FT)
MAJOR CONVENTIONAL	500
FREEWAY & EXPRESSWAY	1000

TABLE III (RAMP DESIGN SPEED)

MAINLINE DESIGN SPEED (MPH)	30	35	40	45	50	55	60	65	70	75
RAMP DESIGN SPEED (MPH)	25	30	35	40	45	48	50	55	60	65

THIS DRAWING REPLACES MT-98.20 DATED 07-18-2014.

REVISION DATE 04-19-2019

STATE OF OHIO DEPARTMENT OF TRANSPORTATION ADMINISTRATOR David L. Holstein

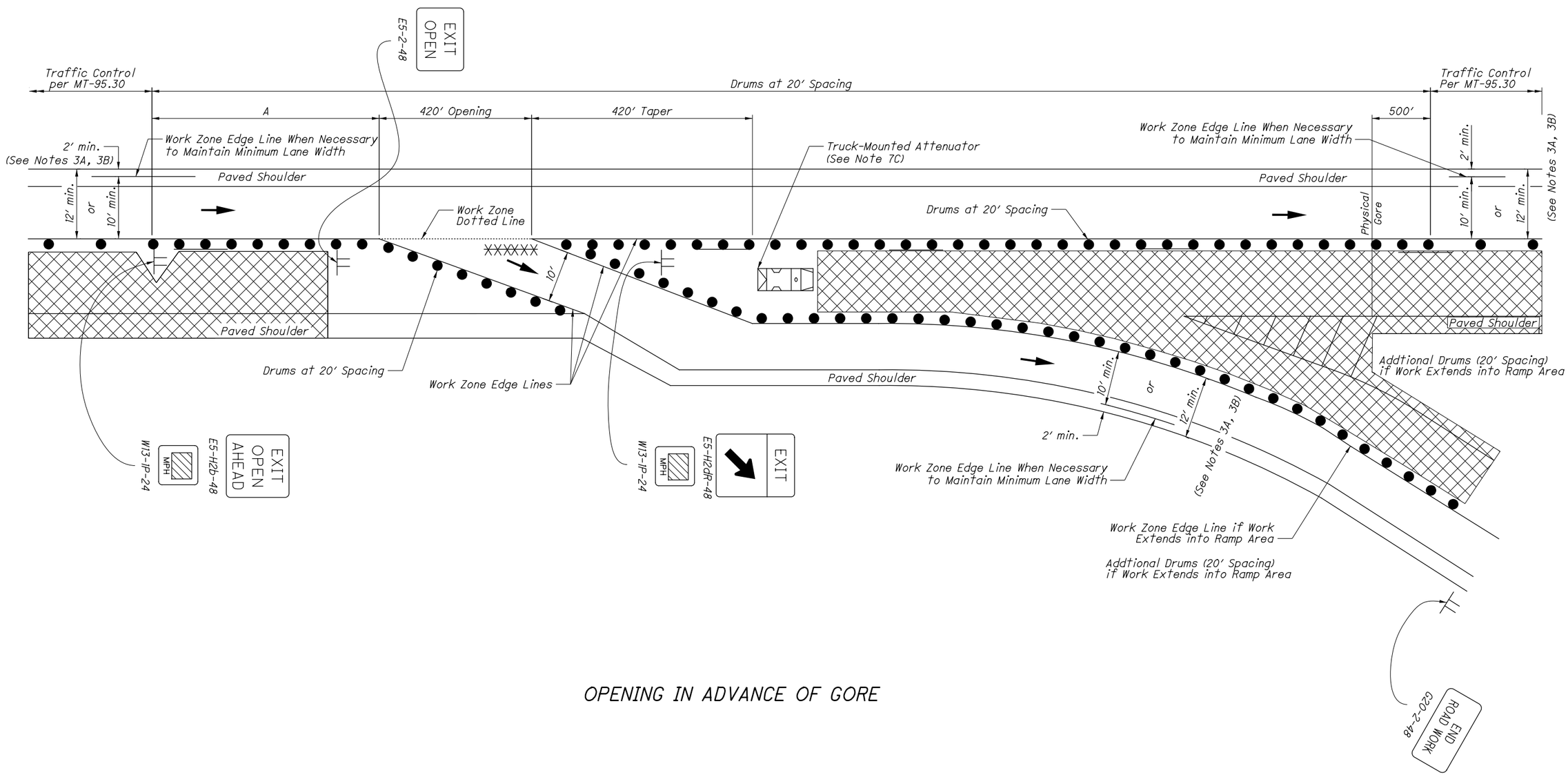
STDS. ENGINEER Soisson

OFFICE OF ROADWAY ENGINEERING

STANDARD ROADWAY CONSTRUCTION DRAWING

LANE CLOSURE AT EXIT RAMP USING DRUMS

SCD NUMBER MT-98.20



OPENING IN ADVANCE OF GORE

END ROAD WORK (G20-2-48)
Sign 200' From End of Work

LEGEND

- WORK AREA
- DRUMS/CONES
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
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LANE CLOSURE AT EXIT RAMP USING DRUMS

SCD NUMBER MT-98.20

NOTES:

SIGNING

1A. All signs approaching the exit shall be dual-mounted where two or more lanes remain open.

1B. The Advisory Speed (W13-1P) plaque shall be used when specified in the plan, or when it is necessary for the vehicle to reduce speed by more than 10 mph in order to safely exit from the mainline, as directed by the Engineer. The following additional criteria shall also apply:

a) Advisory speeds within 10 mph of the posted speed limit need not be displayed.
b) When provided at exit ramp openings (see Note 2A), the Advisory Speed plaque should typically be mounted below the EXIT (arrow) (E5-H2d) sign. The Advisory Speed plaque shall not be mounted below the Permanent Gore (E5-H1a) sign. As an alternative, the Advisory Speed plaque may be mounted below the EXIT OPEN (E5-2) sign.
c) The advisory speed displayed shall not be greater than would otherwise be required to accommodate the permanent ramp geometry at the exit.

1C. END ROAD WORK (G20-2) signs are only required for lane closures of more than 1 day. It is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits. Any END ROAD WORK sign which would fall within the limits of another work zone may be omitted.

1D. The work zone sign spacings shown in Table I are minimums. Maximum spacings should not be greater than 1.5 times the distances shown in Table I.

1E. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200′ for speeds of 45 mph or less and a minimum of 400′ for speeds of 50 mph or greater.

1F. For advance signing and pavement marking, and any other traffic control procedure to be implemented approaching the subject location, see Standard Construction Drawings (SCDs) MT-95.30, MT-95.40 or the MT-102 series as may be appropriate.

RAMP OPENING

2A. The opening to the ramp should be 420′ or more whenever possible. A lesser opening may be provided if no other alternative is available. When a lesser opening is provided, the advisory speed applicable to such condition shall be as follows:

Opening/Taper	Advisory Speed
390′	65 mph
360′	60 mph
330′	55 mph
300′	50 mph
270′	45 mph
240′	40 mph
210′	35 mph

2B. The opening shall never be less than 200′. If a 200′ minimum dimension cannot be provided, the ramp should be closed when so determined by the Engineer.

RAMP WIDTH

3A. Normally a 10′ minimum ramp width is to be maintained on existing ramp pavement.

3B. Where the condition in Note 3A is not possible, a minimum width of 12′ to the outside edge of the paved shoulder may be used only if the shoulder pavement buildup is adequate to carry the load. Where an edge line is required to designate a shoulder, the edge line shall be placed such that the minimum lane width is 10′ and the minimum shoulder width is 2′.

PAVEMENT MARKING

4A. If the construction operation requires a lane closure for more than 1 day, the existing conflicting reflectors from the raised pavement markers shall be removed.

4B. Additionally, if a lane closure of greater than 3 days is required, the appropriate color work zone edge lines shall be applied along the taper, and existing conflicting pavement markings shall be removed or covered as per CMS 614.11G.

4C. Work zone pavement markings which would conflict with the final traffic lanes shall be removable tape (CMS 740.06, Type I) unless the area will be resurfaced prior to project completion.

4D. After completion of the work, pavement markings other than CMS 740.06, Type I shall be removed in accordance with CMS 614.111. The original markings and raised pavement marker reflectors shall be restored at no additional cost unless separately itemized in the plans.

(RESERVED FOR FUTURE USE)

5A. (intentionally blank)

DRUMS / CONES

6A. Drum spacing shall be as follows:

a) 20′ center-to-center within the vicinity of the exit gore, and continuing to a point 500′ beyond the end of the physical gore.
b) As shown on SCD MT-95.30 elsewhere along the mainline; and
c) 20′ center-to-center along the ramp.

6B. Cones may be substituted for drums as follows:

a) Use of cones is permissible for either daytime operation or for nighttime operation, but shall not be used continuously, day and night. Upon completion of work within the work period, the cones shall be removed. They may again be placed on the highway in order to resume work in the following such work period.
b) Cones used for daytime traffic control shall have a minimum height of 28″.
c) Cones used for nighttime traffic control shall have a minimum height of 42″.
d) Use of cones at night shall be prohibited along tapers.
e) Cone spacing at night shall be at a maximum of 40′ but shall never be greater than the drum spacing called for in Note 6A.
f) Where cones are substituted for drums along tangents, intermixing of channelizing devices within the same run will not be permitted. Either cones shall be used for the entire length of the tangent section, or drums shall be used for the entire run.

6C. Provisions shall be made to stabilze cones and drums per the manufacturer's specifications to prevent them from blowing over.

SHADOW VEHICLE

7A. The shadow vehicle shall be in place and unoccupied whenever workers are in the work area. This vehicle shall be removed from the pavement whenever workers are not in the work area.

7B. The shadow vehicle shall be equipped with a high-intensity yellow rotating, flashing, oscillating, or strobe light(s), clearly visible a minimum of one-quarter mile.

7C. The shadow vehicle shall be equipped with a truck-mounted or trailer attenuator (TMA) in accordance with CMS 614.03.

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