

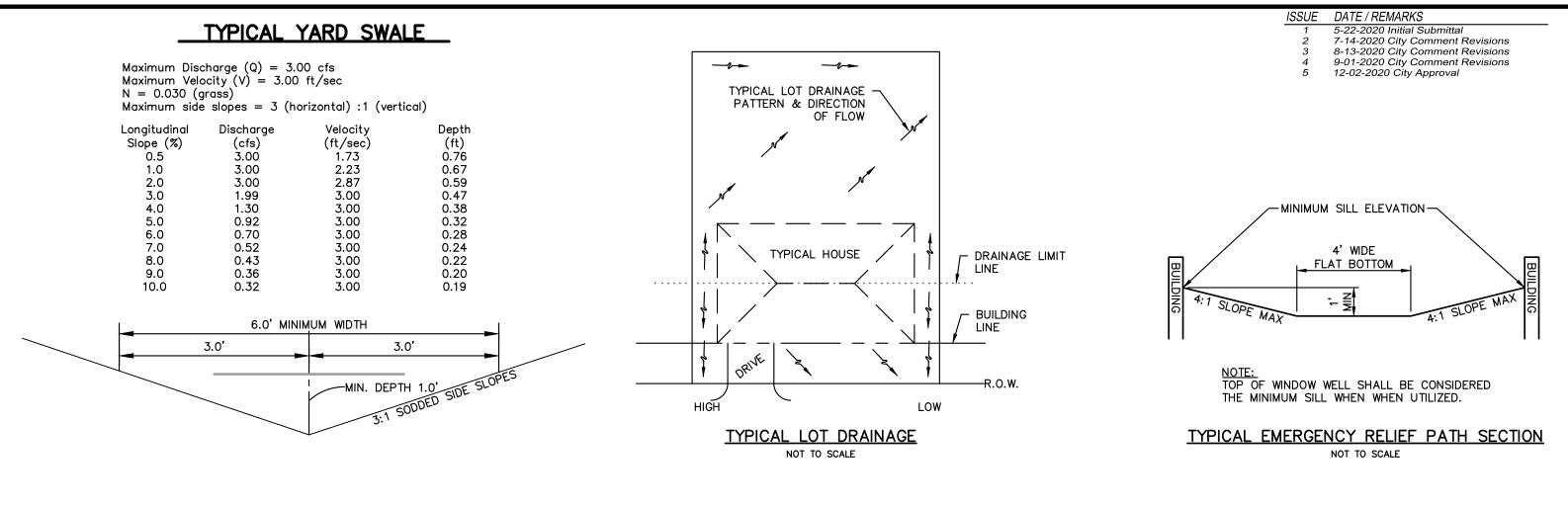
Truck Mounted
Attenuator (TMA)

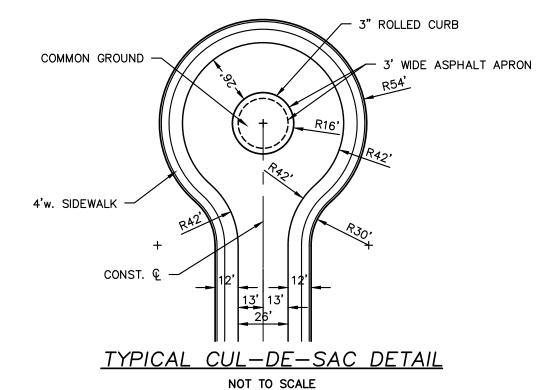
Work Space

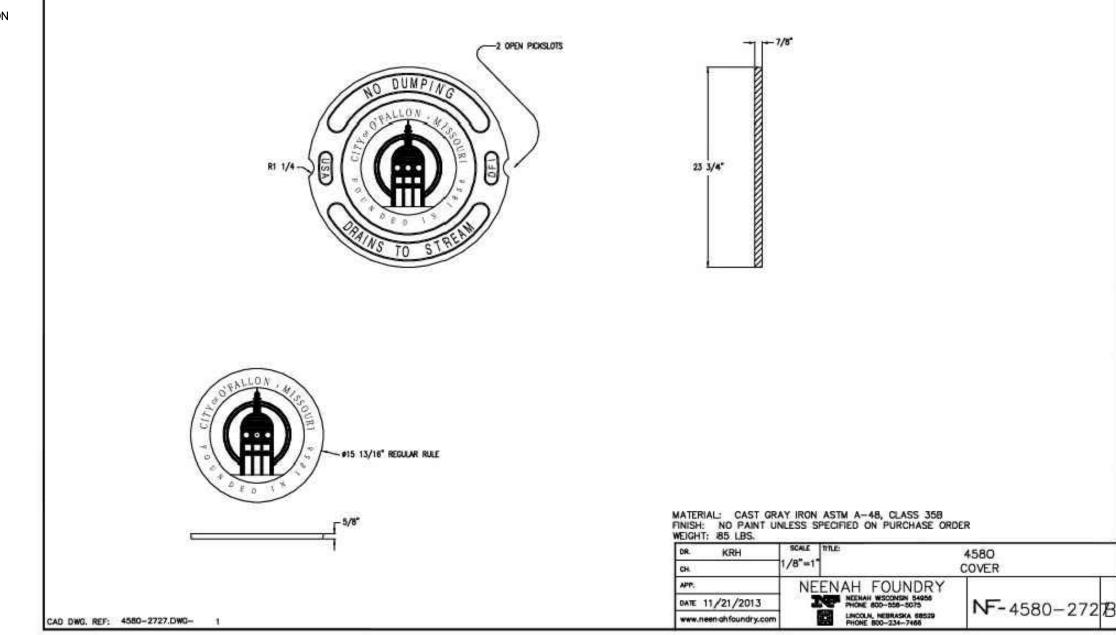
Protective Vehicle Roll-Ahead Space

11/13

Attenuator (TMA)







616.8-3 (TA-3) Shoulder Work on Two-Lane Highways with Edgelines - MT

	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
SPEED	Undivided (S)	Divided (S)	Shoulder ¹ (T1)	Lane ² (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200	-	70	-	250	35	50
40-45	350	-	150	-	360	40	100
50-55	500	-	185	-	495	50	100
60-70	1000	-	235	-	730	60	100
1 Shoulder t	aper length based or	n 10 ft (standard s	houlder width)	offset 2 Lane ta	per length based on	12 ft (standard lane	width) offset

Truck or Trailer

ROADWAY TYPE	SIGN HEIGHT	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' Portable 7' Post	1 Mi.
RURAL UNDIVIDED	1' Portable	3 Mi.

In addition to shoulder work, this typical application is applicable to work beyond shoulder where vehicles and equipment are parked on the shoulder.

A protective vehicle shall be used while work is in progress. The protective vehicle **should** be equipped with a TMA and positioned at least 150 ft. in advance of the work space.

If encroachment onto driving surface occurs and there is not 10 ft. of driving surface available for the lane of traffic, that traffic lane shall be closed. Refer to appropriate lane closure typical applications.

If an arrow panel is used for an operation on the shoulder, the caution mode shall be displayed.

For short duration or mobile operations, signs, channelization devices, and protective vehicles may be reduced or eliminated if a work vehicle with activated rotating lights or strobe lights is used. However, if limited sight distance exists, a protective vehicle **should** be used. This protective vehicle **should** be equipped with a TMA and truck mounted flashing arrow panel and positioned at least 150 ft. in advance of the work space or work vehicle, as applicable. If a protective vehicle is used, a vehicle mounted sign shall be mounted at a recommended height of 48 in. above the road

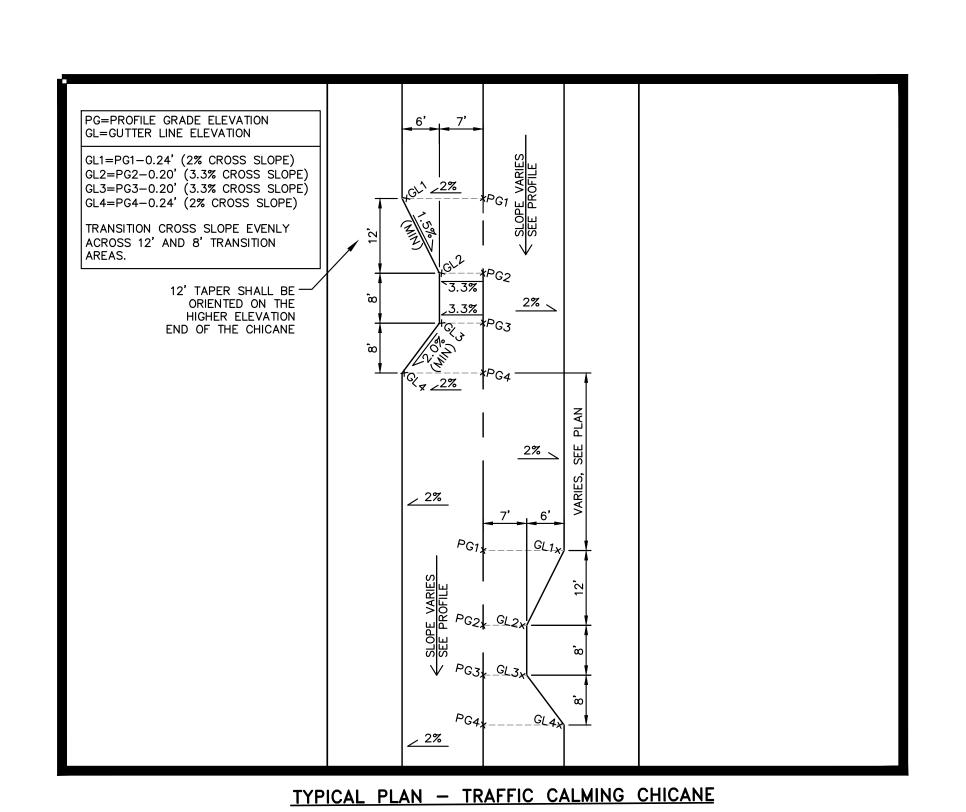
For work beyond shoulder, where vehicles and equipment are parked on the shoulder, the protective vehicle may be eliminated if a work vehicle with activated rotating lights or strobe lights is used.

Vehicle hazard warning signals **shall** not be used instead of the vehicle's rotating lights or strobe lights.

Additional warning signs shall be erected at each intersection with another state highway within the work zone. Upon the discretion of the supervisor, additional warning signs may be erected at other intersections within the work zone.

Other appropriate signs may be used in lieu of SHOULDER WORK AHEAD sign.

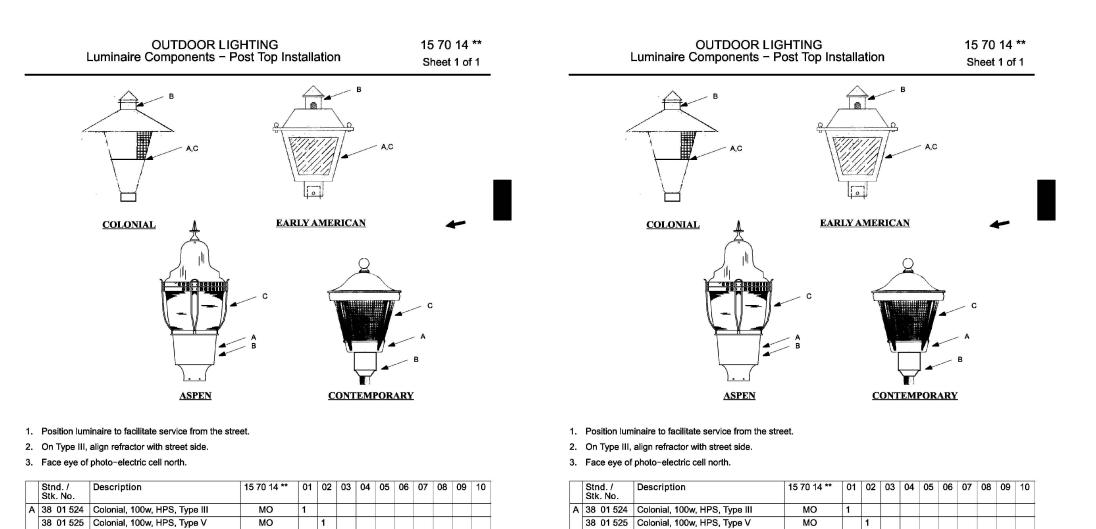
TA-3



CONSTRUCTION
TYPE B JOINT FOR 1/3 WIDTH
CONSTRUCTION
F L₆" P.C. CONCRETE

TYPICAL PAVEMENT SECTION - CHICANE N.T.S. RIGHT-OF-WAY TO BE PUBLIC

STORM SEWER LID DETAIL NOT TO SCALE



38 01 517 Early American, 100w, HPS, Type III 38 01 518 Early American, 100w, HPS, Type V 38 01 942 Early American, 175w, MH, Type III 38 01 513 Contemporary, 100w, HPS, Type III 38 01 514 Contemporary, 100w, HPS, Type V MO 38 01 584 Aspen, 100w, HPS, Type III 38 01 585 Aspen, 100w, HPS, Type V B 38 51 366 Switch, Photo electric Cell C 26 55 260 Lamp, 100w, HPS 26 56 260 Lamp, 175w, MH DISTRIBUTION CONSTRUCTION STANDARDS Ameren REV. NO: 1 REV. DATE: 02/13/07 CONSTRUCTION STANDARDS Ameren REV. NO: 1 REV. DATE: 02/13/07

> TYPICAL STREET LIGHTING NOT TO SCALE

38 01 517 Early American, 100w, HPS, Type III

38 01 518 Early American, 100w, HPS, Type V

38 01 942 Early American, 175w, MH, Type III

38 01 513 Contemporary, 100w, HPS, Type III

38 01 584 Aspen, 100w, HPS, Type III

38 01 585 Aspen, 100w, HPS, Type V

DISTRIBUTION

B 38 51 366 Switch, Photo electric Cell C 26 55 260 Lamp, 100w, HPS 26 56 260 Lamp, 175w, MH

38 01 514 Contemporary, 100w, HPS, Type V MO

RODNEY ARNOLD LICENSE # PE-2002016612 Professional Engineer

P+Z No. P&Z NO City No.

12/02/2020 Date: **Job No.** 14-12-405

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