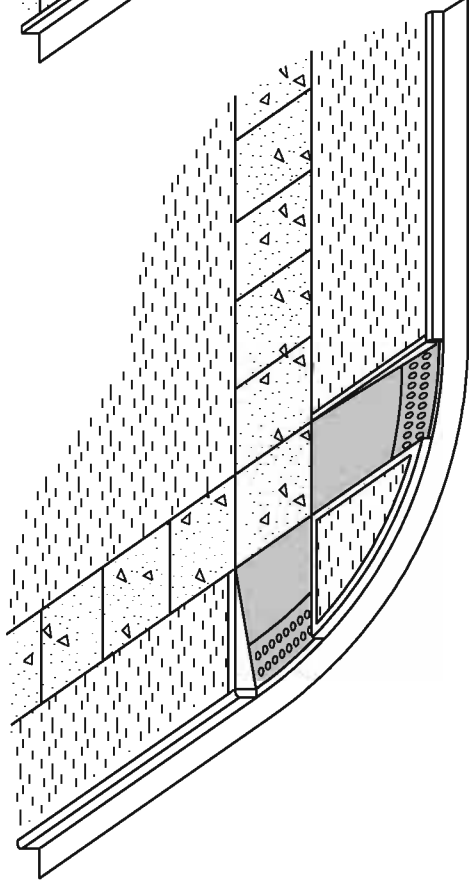
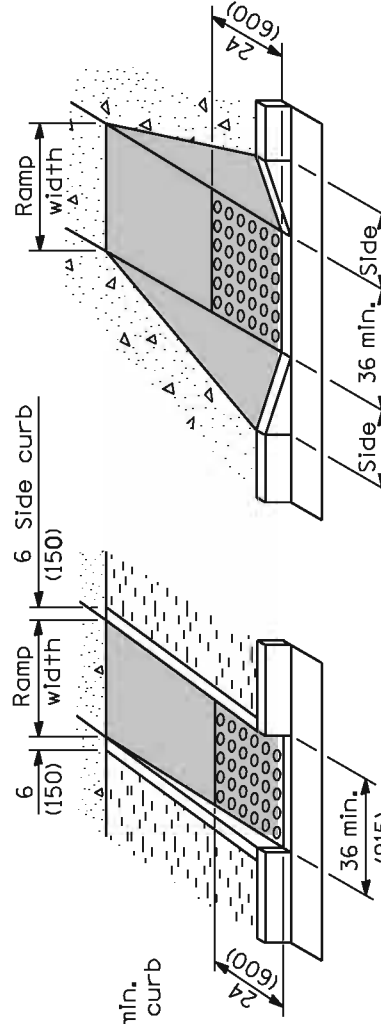


**RECOMMENDED LOCATION OF RAMPS**



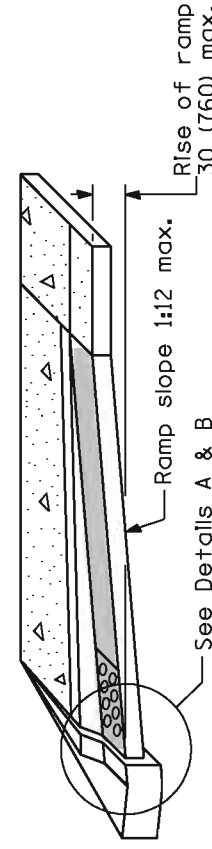
**TYPE A RAMPS**



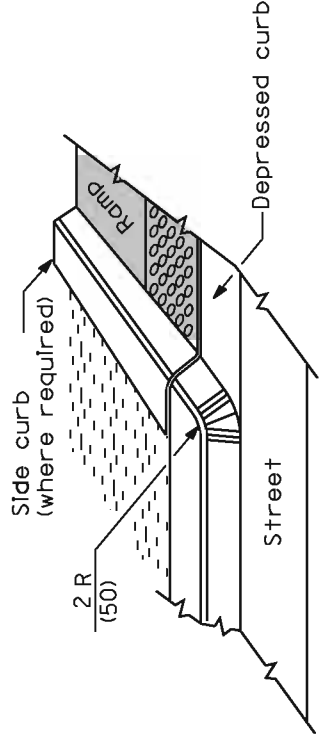
**TYPE A**

**TYPE B**

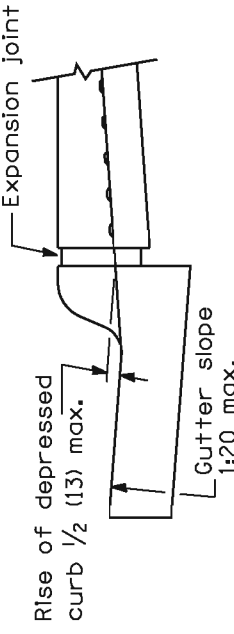
**DETAILS OF RAMPS**



**RAMP PROFILE**



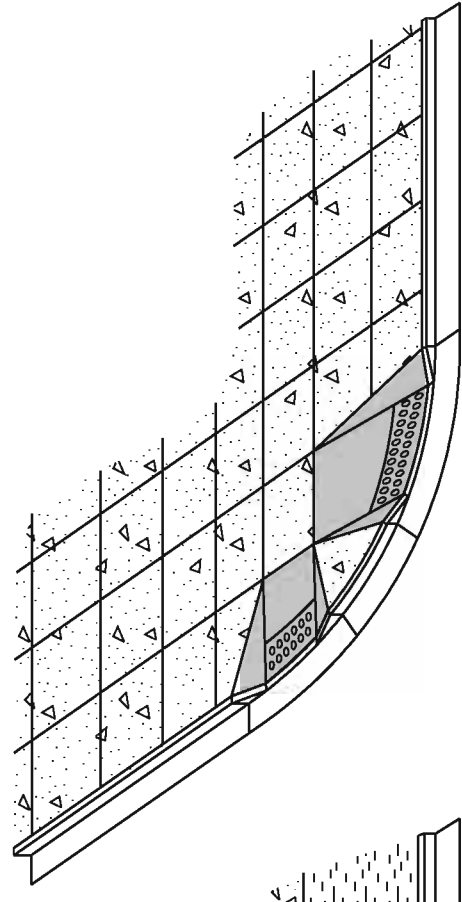
**DETAIL B**



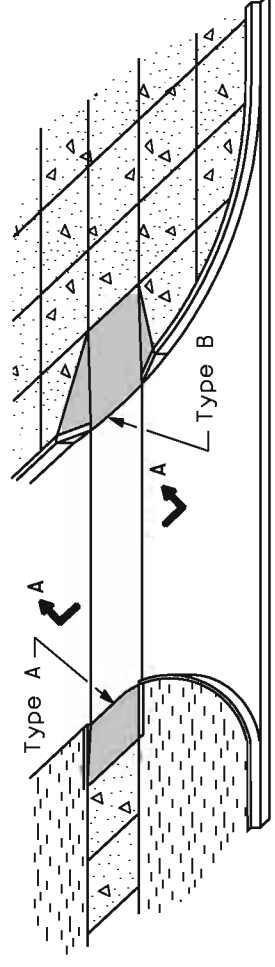
**DETAIL A**

**LEGEND**

- Sidewalk
- Ramp
- Detectable Warnings
- Non walking area



**TYPE B RAMPS**



**RAMPS AT ALLEYS OR ENTRANCES**

**GENERAL NOTES**

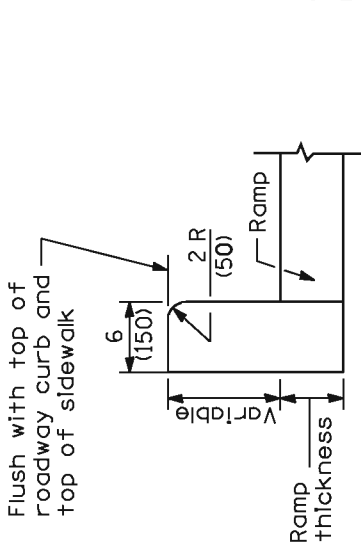
Detectable warnings shall be installed at curb ramps, medians and pedestrian refuge islands, at-grade railroad crossings, transit platform edges, and other locations where pedestrians are required to cross a hazardous vehicular way. Detectable warnings shall also be installed at alleys and commercial entrances when permanent traffic control devices are present.

The maximum slope of the side flare for Type B ramps shall be 1:10; however, if the width of the landing area between the top of the ramp and an obstruction is less than 4'-0" (1.22 m) then the maximum slope shall be 1:12.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

**SECTION A-A**



**DETAIL OF SIDE CURB**

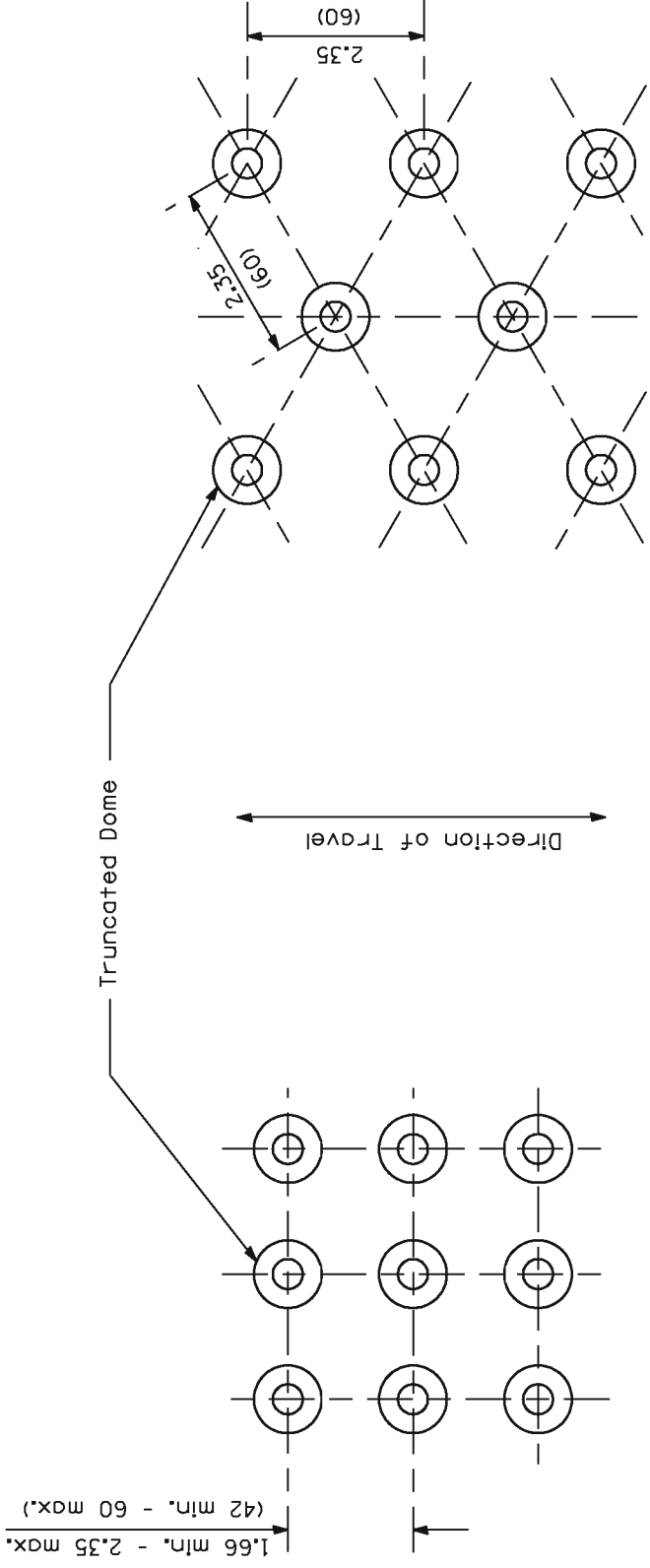
(Side curb may be constructed monolithically with ramp)

DATE	REVISIONS
1-1-08	Switched units to English (metric).
8-1-05	Revised placement of detectable warnings.
	title.

**CURB RAMPS FOR SIDEWALKS**

**STANDARD 424001-05**

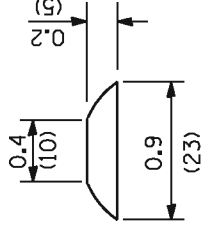
Illinois Department of Transportation  
 PASSED January 1, 2008  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2008  
 ENGINEER OF DESIGN AND ENVIRONMENT



**SQUARE PATTERN**  
(Parallel Alignment)

**TRIANGULAR PATTERN**

**DETECTABLE WARNINGS DETAIL**



**TRUNCATED DOME DETAIL**

Illinois Department of Transportation  
 PASSED January 1, 2008  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2008  
 ENGINEER OF DESIGN AND ENVIRONMENT

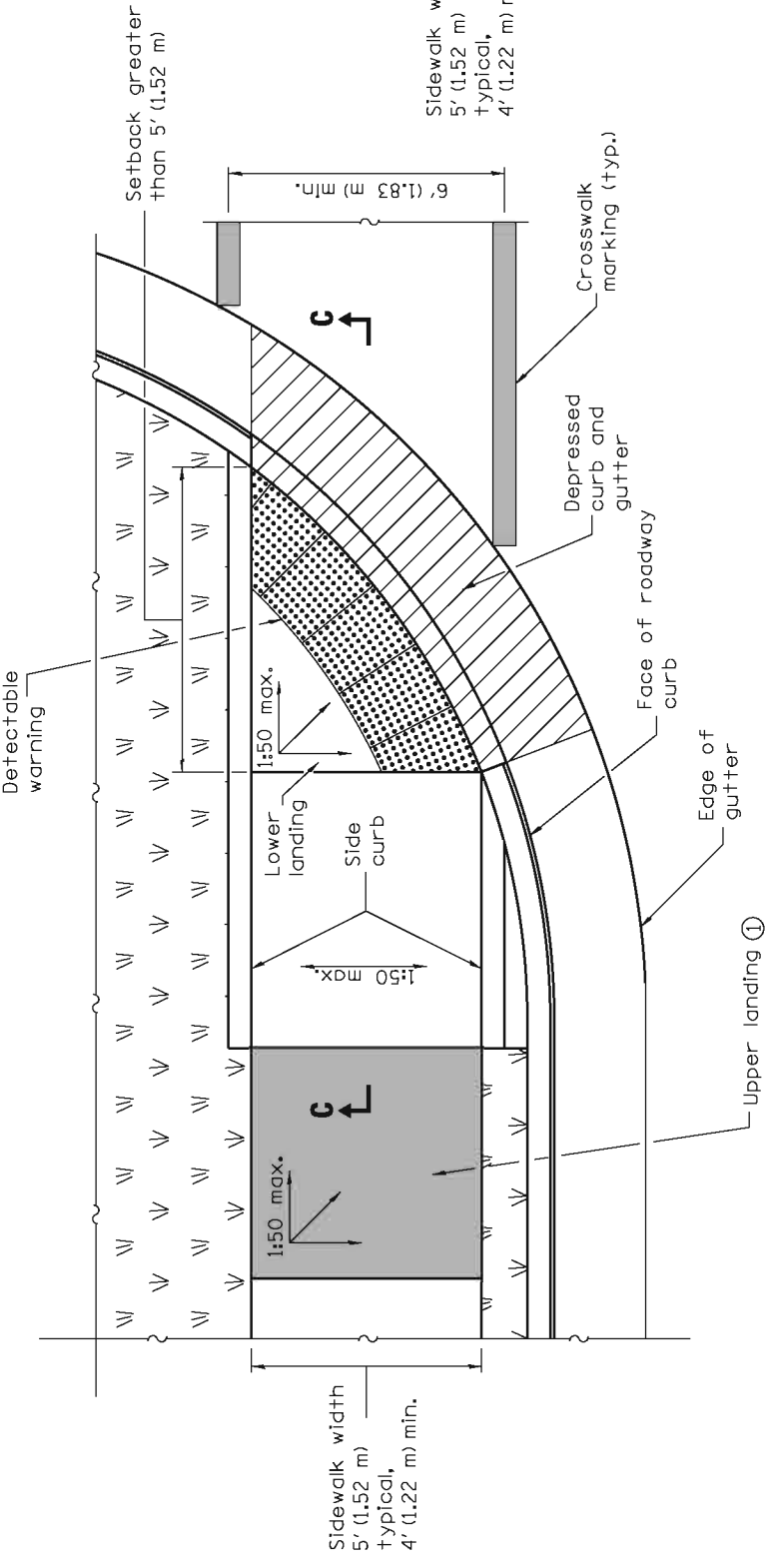
ISSUED 1-1-97

**CURB RAMPS  
FOR SIDEWALKS**

(Sheet 2 of 2)

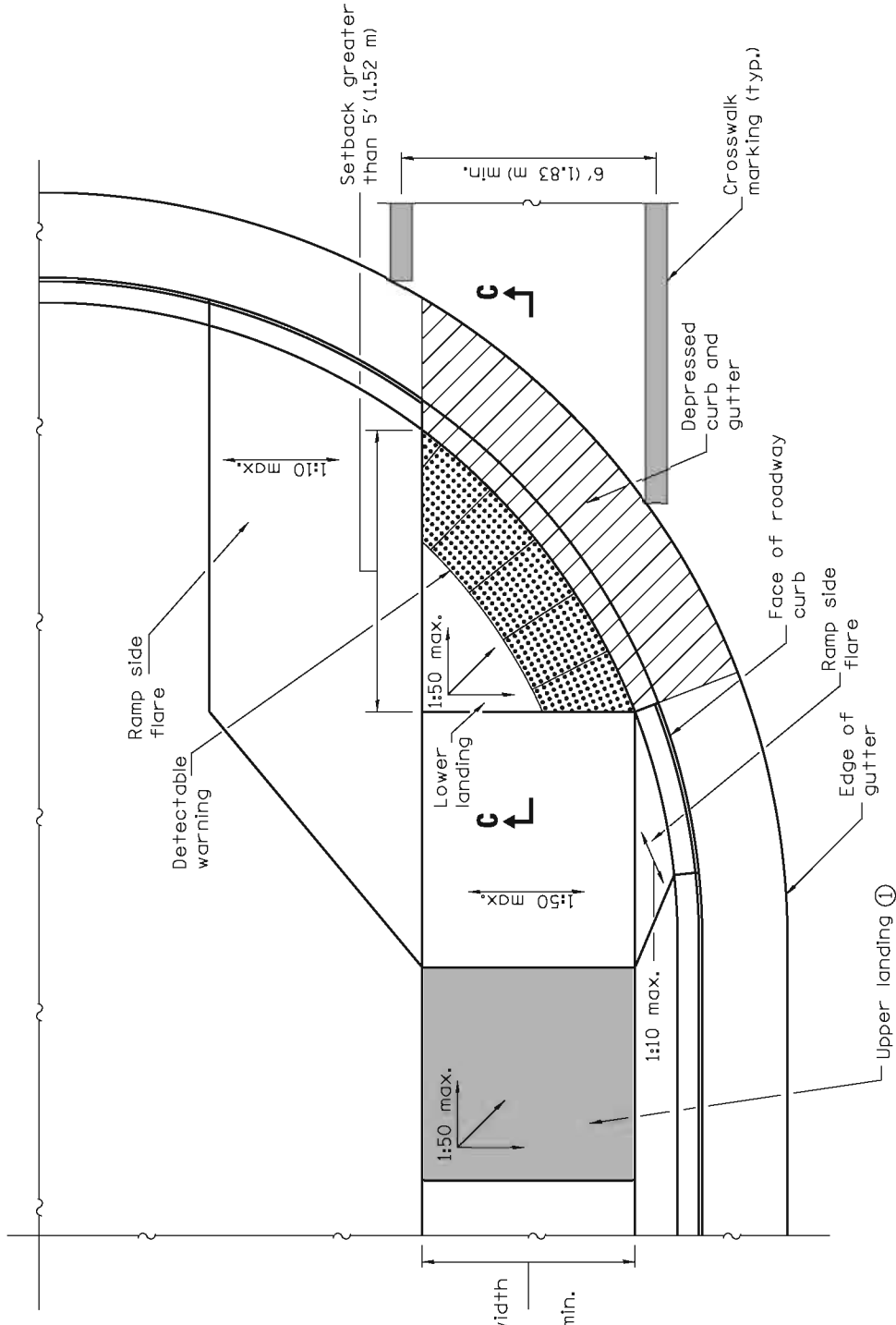
**STANDARD 424001-05**





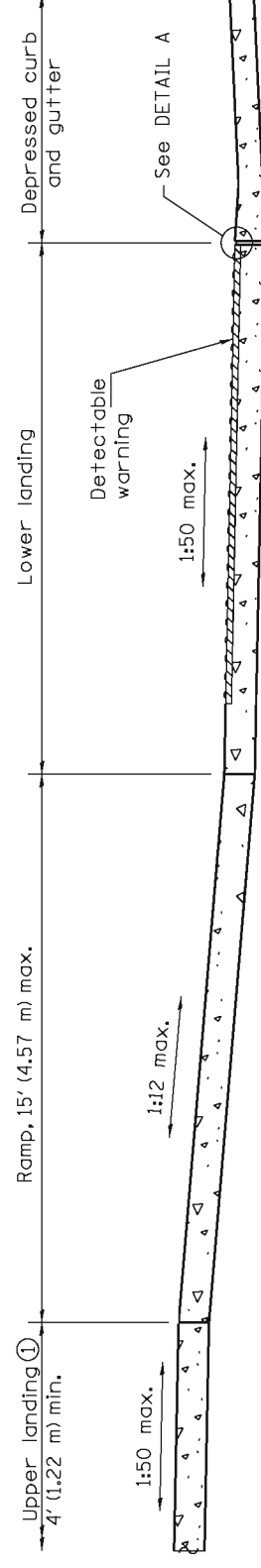
**RAMP IN LANDSCAPED AREA**

**SETBACK > 5'**



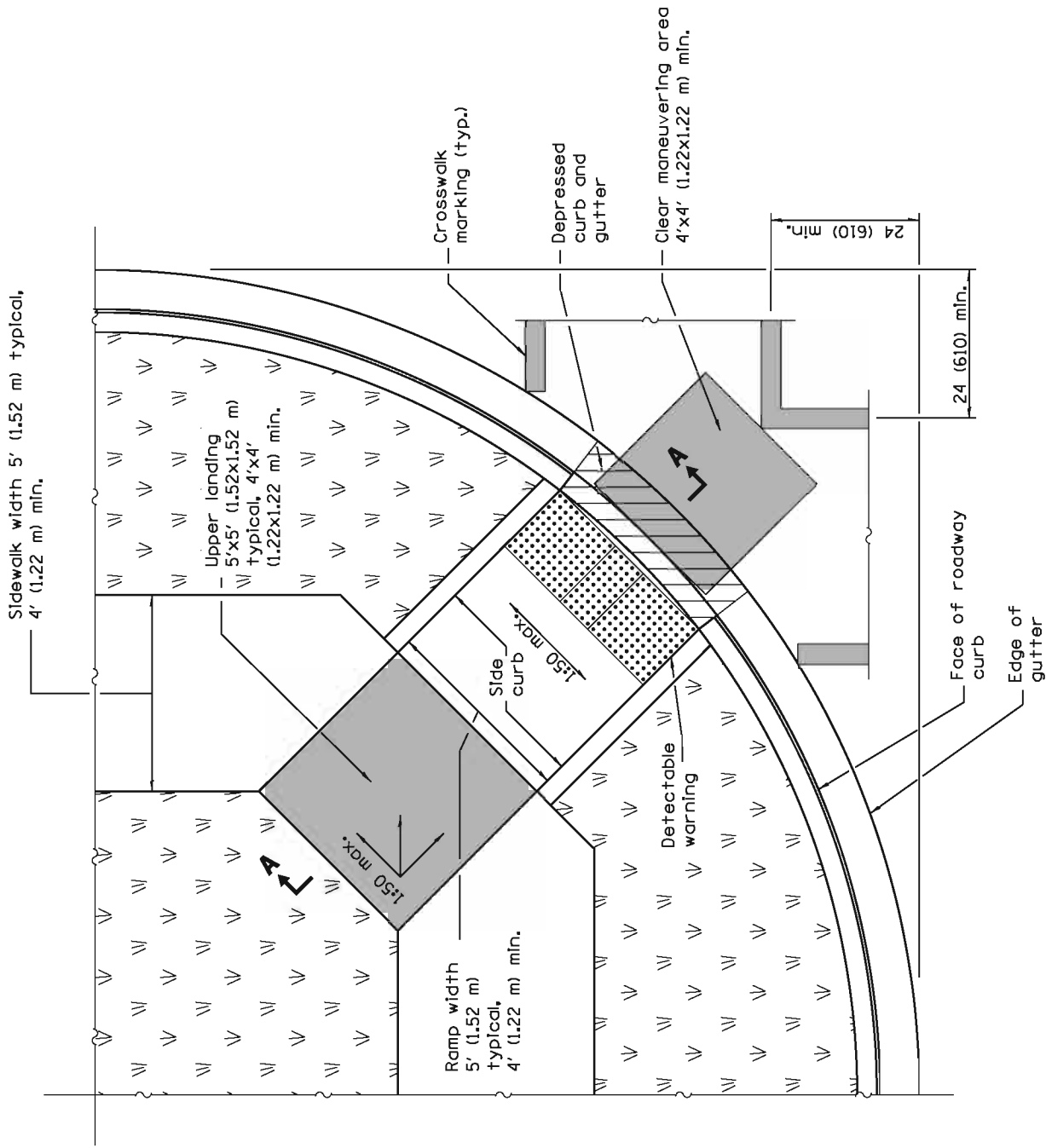
**RAMP IN PAVED AREA**

**SETBACK > 5'**

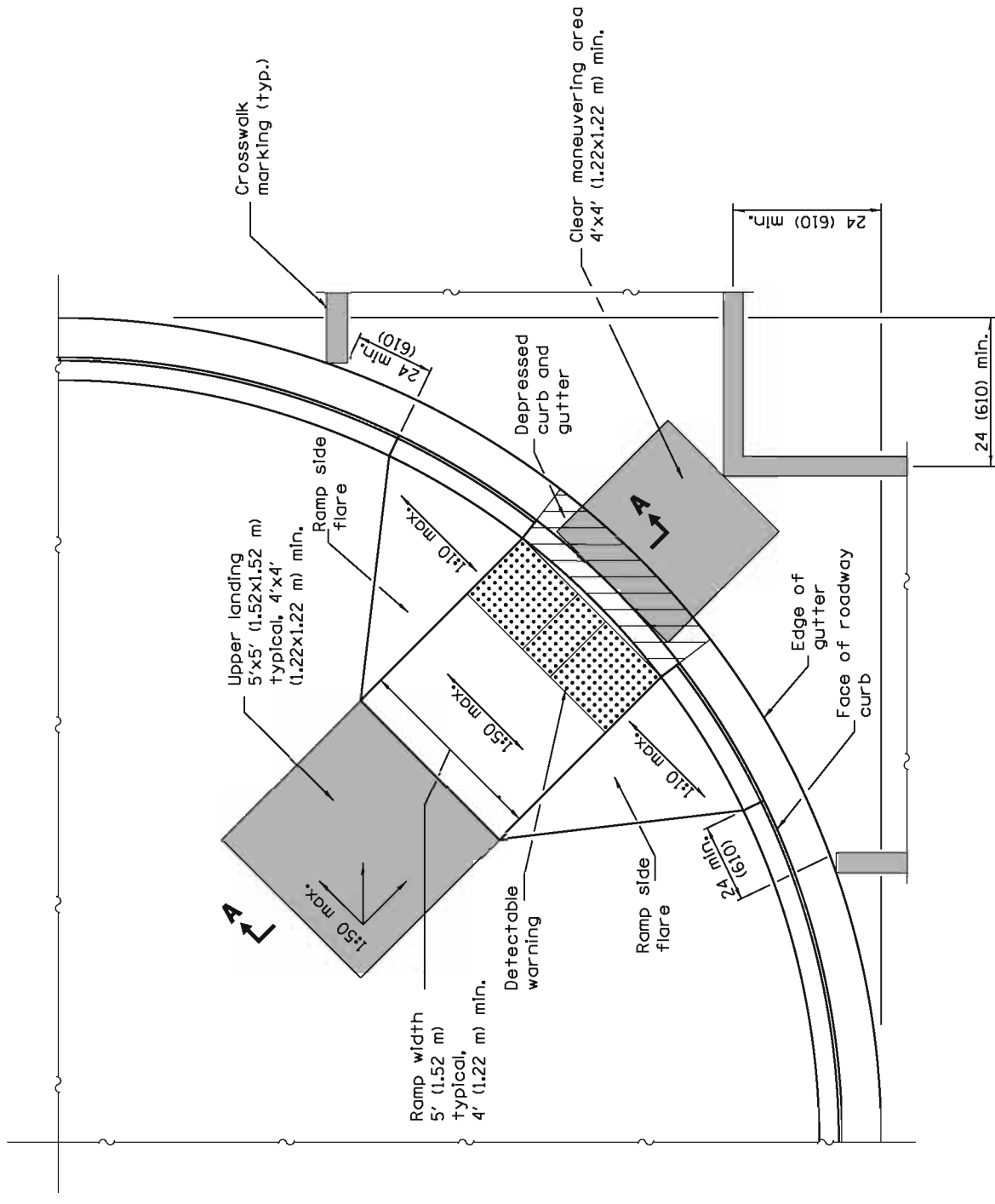


**SECTION C-C**

① Upper landing not required for ramp slopes flatter than 1:20.

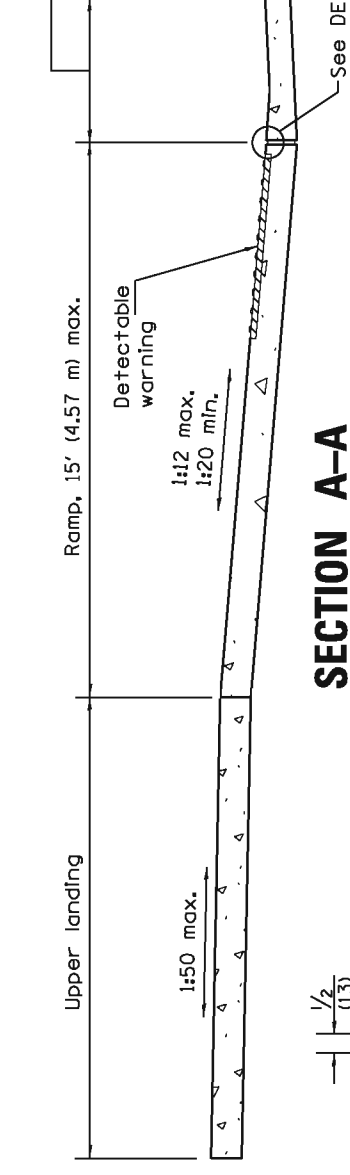


**RAMP IN LANDSCAPED AREA**

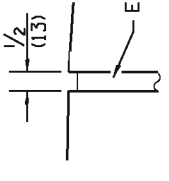


**RAMP IN PAVED AREA**

Depressed curb and gutter



**SECTION A-A**

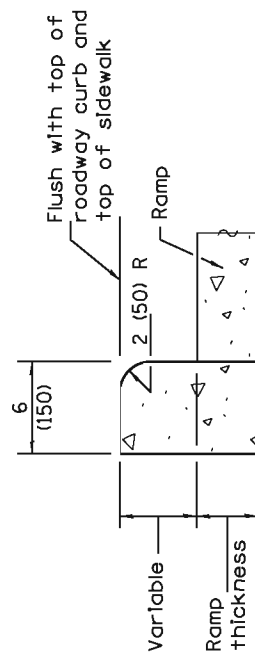


**DETAIL A**

**GENERAL NOTES**

This Standard shall only be used for curb radii of 20 ft. (6.1 m) or greater.  
 Where 1:50 maximum slope is shown, 1:64 is preferred.  
 All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V/H).  
 See Standard 606001 for details of depressed curb adjacent to curb ramp.  
 All dimensions are in inches (millimeters) unless otherwise shown.

**SIDE CURB DETAIL**



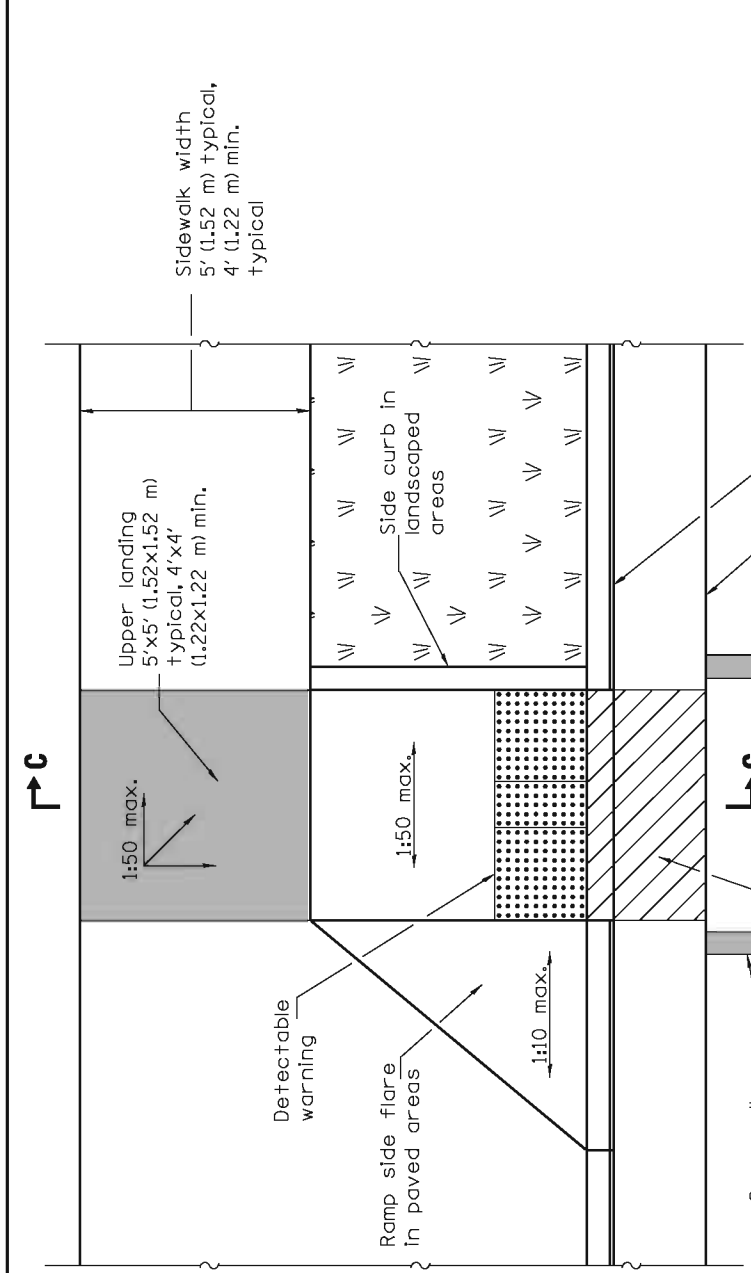
Illinois Department of Transportation  
 PASSED January 1, 2013  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2013  
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-13	Revised General Notes.
1-1-12	New standard.

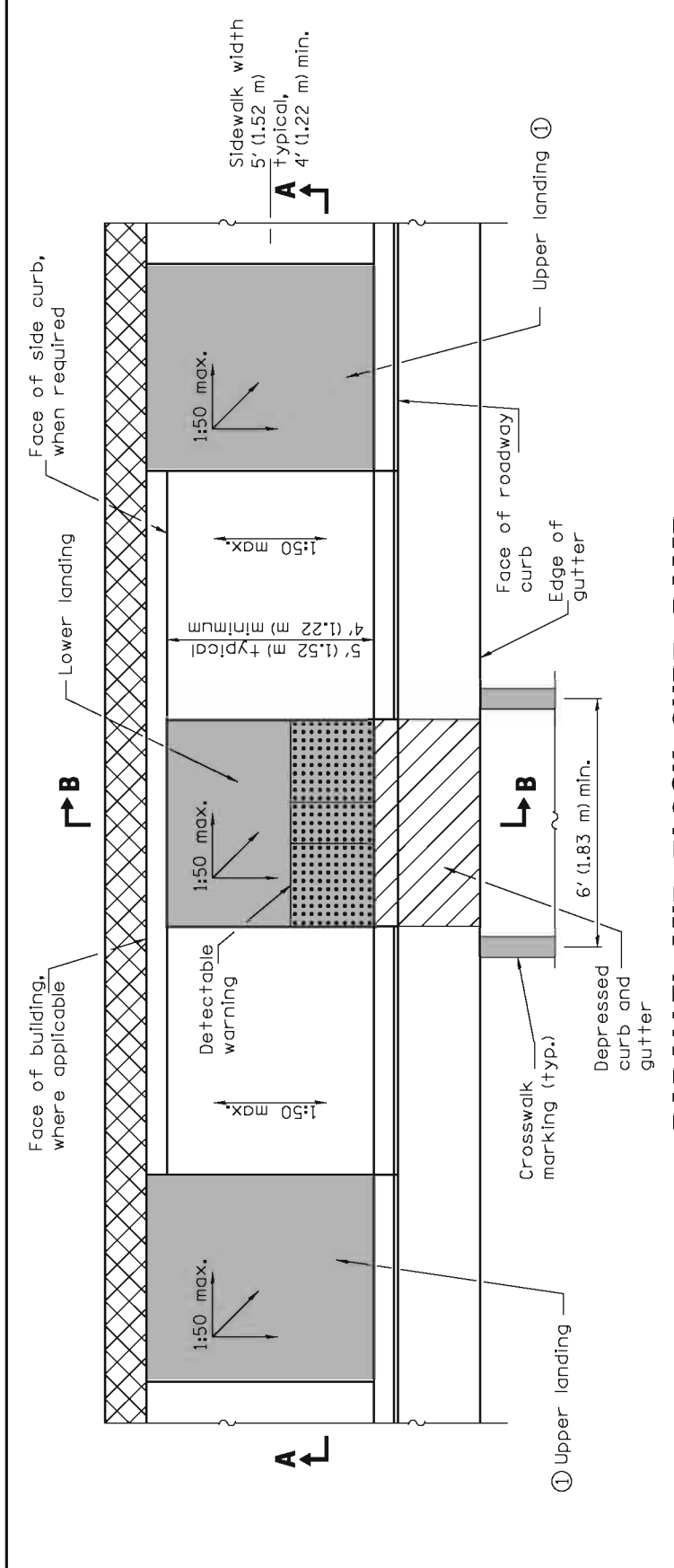
**DIAGONAL CURB RAMPS FOR SIDEWALKS**

STANDARD 424006-01

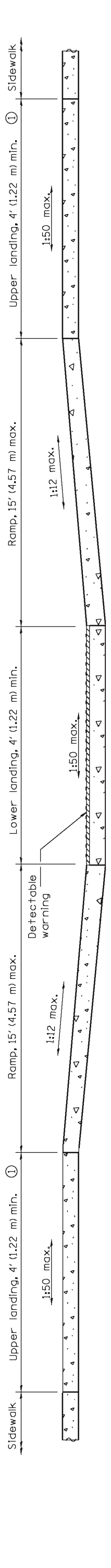




**PARALLEL MID-BLOCK CURB RAMP**

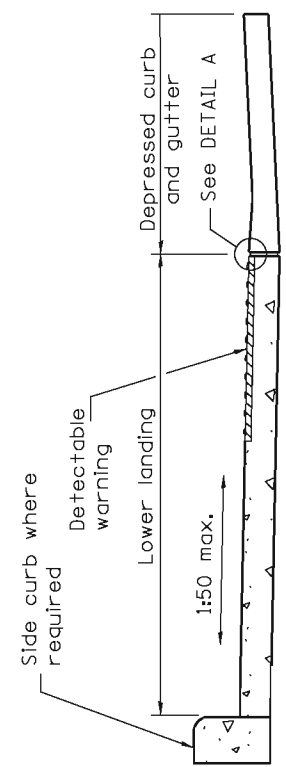


**PERPENDICULAR MID-BLOCK CURB RAMP**

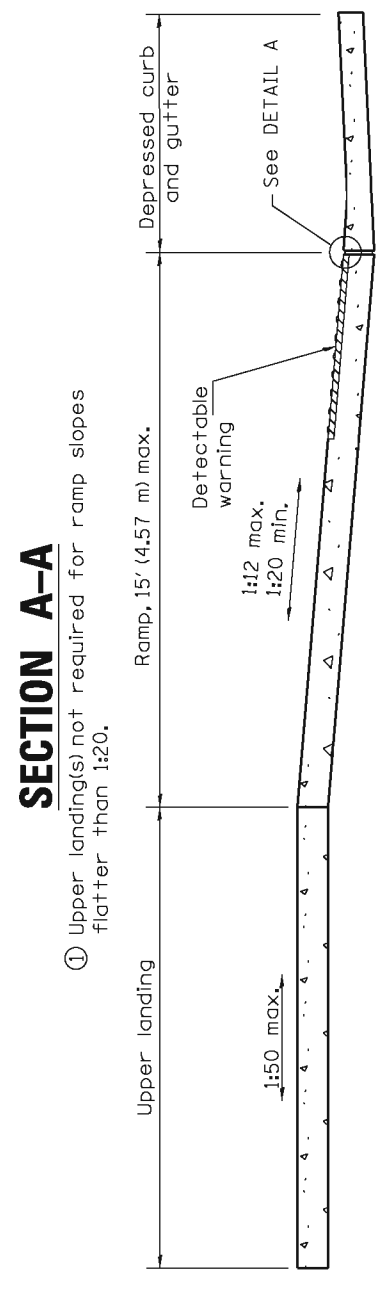


**SECTION A-A**

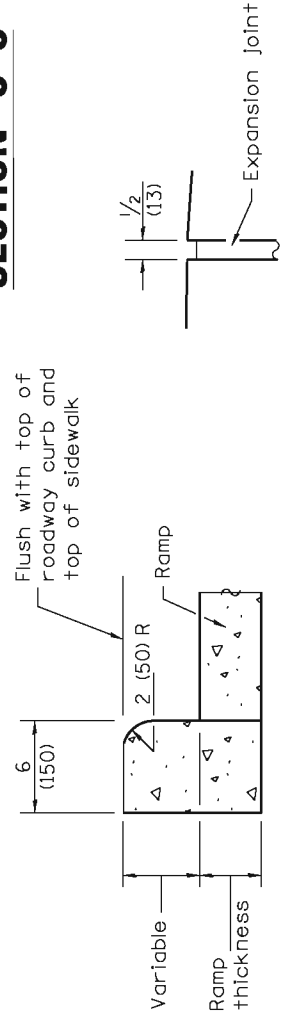
① Upper landing(s) not required for ramp slopes flatter than 1:20.



**SECTION B-B**



**SECTION C-C**



**SIDE CURB DETAIL**

**DETAIL A**

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).  
See Standard 606001 for details of depressed curb adjacent to curb ramp.  
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation  
 PASSED January 1, 2012  
*Michael Beard*  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2012  
*Scott Spink*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12

DATE	REVISIONS
1-1-12	New standard.

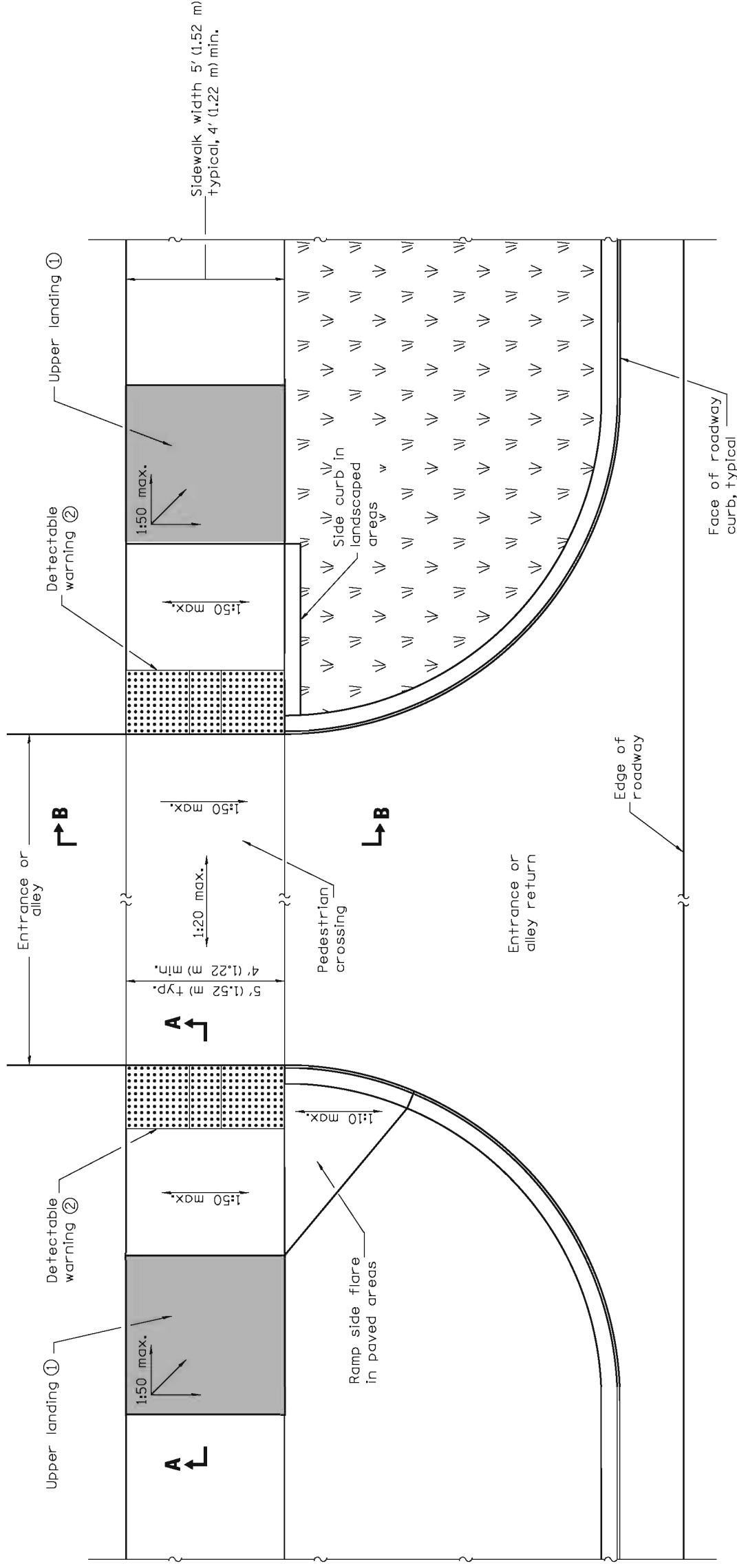
**MID-BLOCK CURB RAMPS FOR SIDEWALKS**

STANDARD 424016

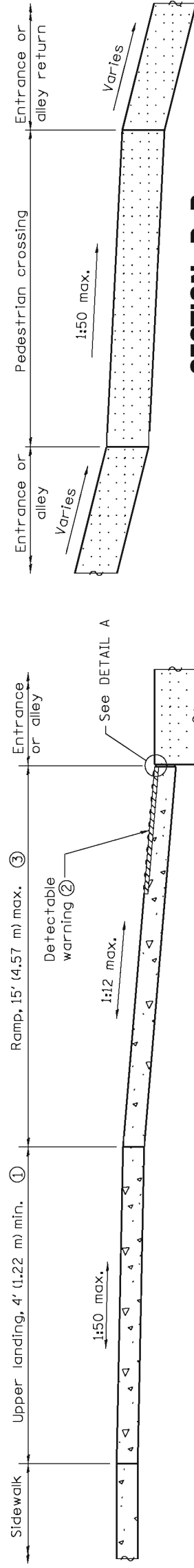




- ② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e. stop signs, signals).
- ③ Where possible, maintain the grade of the sidewalk across the entrance/alley to avoid the need for ramps and upper landings.

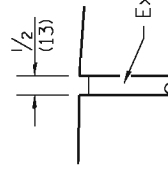


### ENTRANCE /ALLEY PEDESTRIAN CROSSING



### SECTION A-A

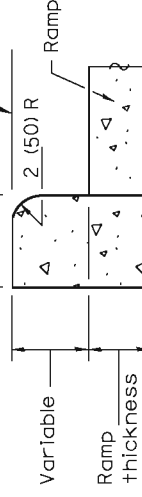
- ① Upper landing not required for ramp slopes flatter than 1:20.



### DETAIL A

### SECTION B-B

Flush with top of roadway curb and top of sidewalk



### SIDE CURB DETAIL

### GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

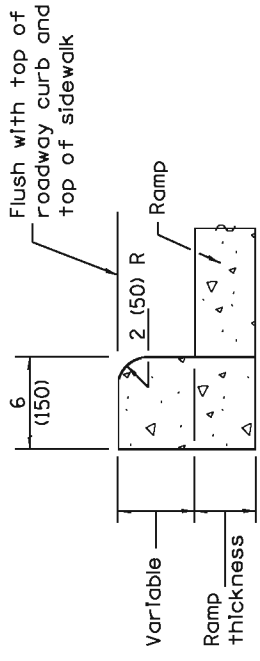
DATE	REVISIONS
1-1-12	New standard.

## ENTRANCE /ALLEY PEDESTRIAN CROSSINGS

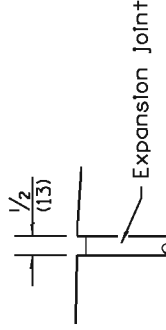
STANDARD 424026

Illinois Department of Transportation  
 PASSED January 1, 2012  
 Michael Beard  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2012  
 Geoff Smith  
 ENGINEER OF DESIGN AND ENVIRONMENT

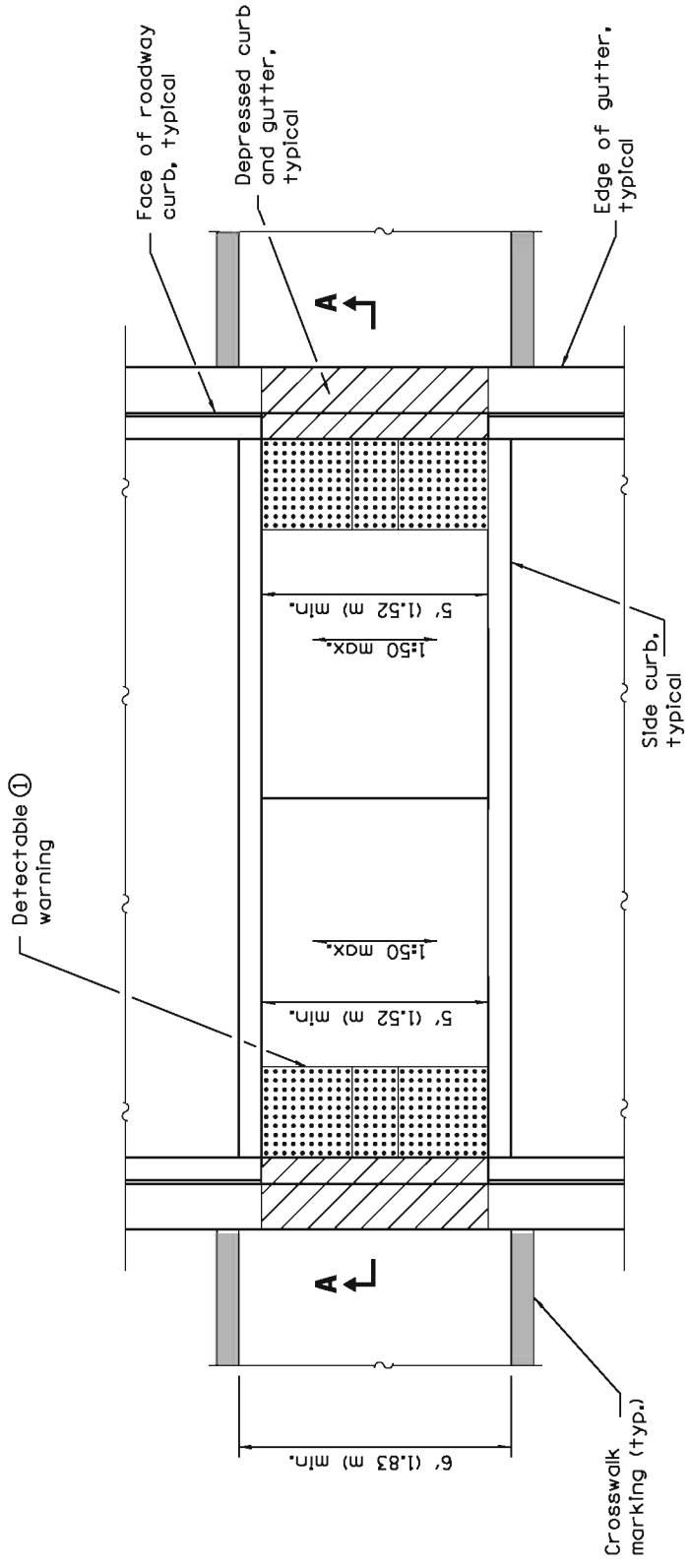
ISSUED 1-1-12



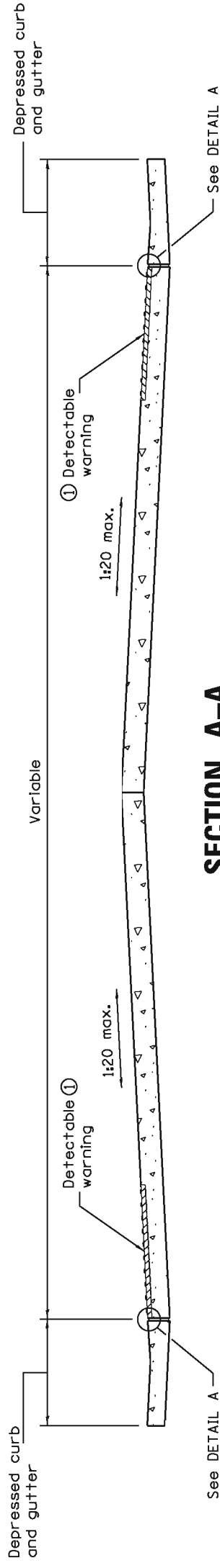
**SIDE CURB DETAIL**



**DETAIL A**



**MEDIAN PEDESTRIAN CROSSING**



**SECTION A-A**

① Omit detectable warnings when distance between back of curbs is less than 6' (1.83 m).

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where 1:50 maximum slope is shown, 1:64 is preferred.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

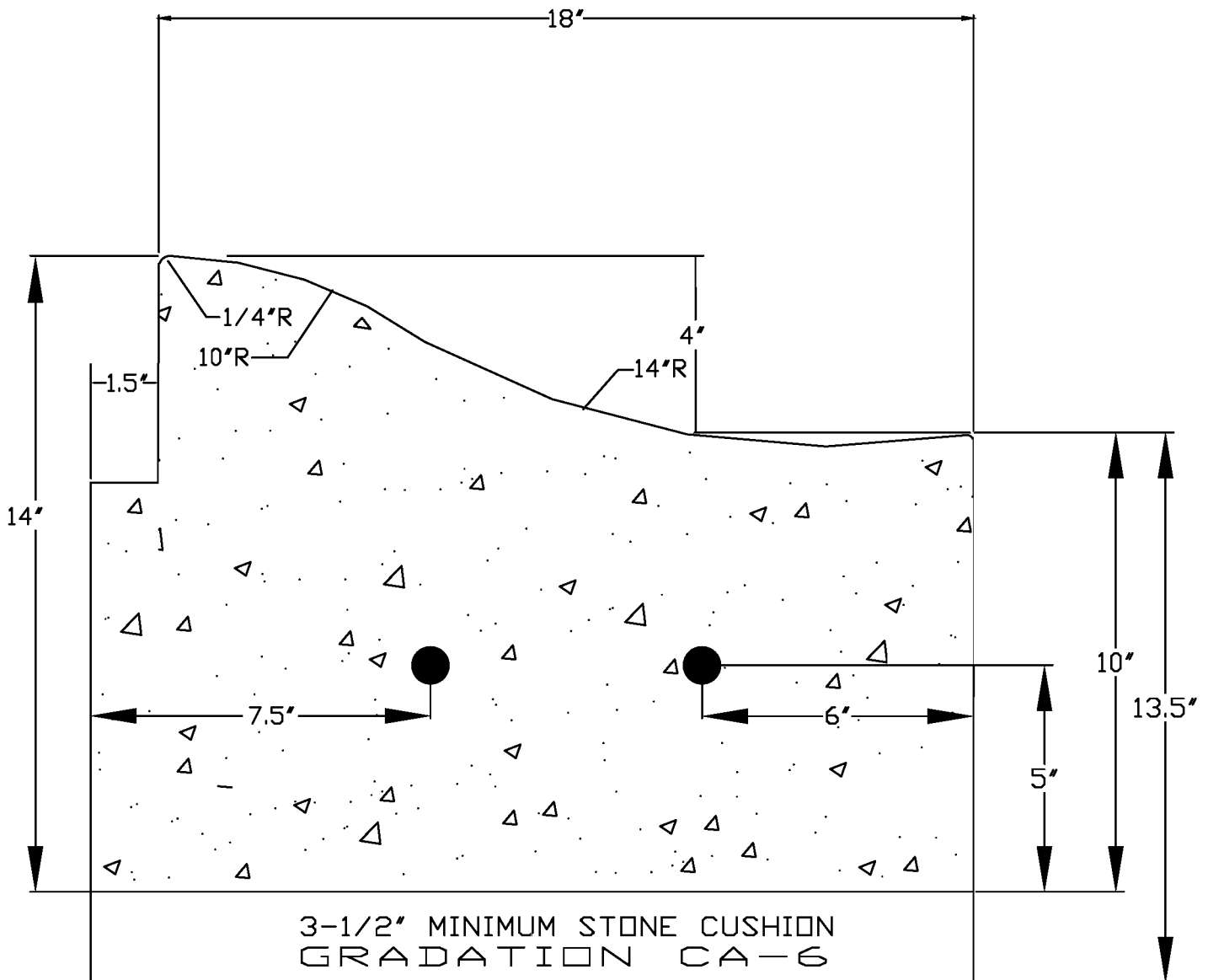
Illinois Department of Transportation  
 PASSED January 1, 2013  
*Michael Beard*  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2013  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12

DATE	REVISIONS
1-1-12	Widened crosswalk to 6' (1.83 m) min. inside dimension.
	Revised General Notes.
1-1-12	New standard.

**MEDIAN PEDESTRIAN CROSSINGS**

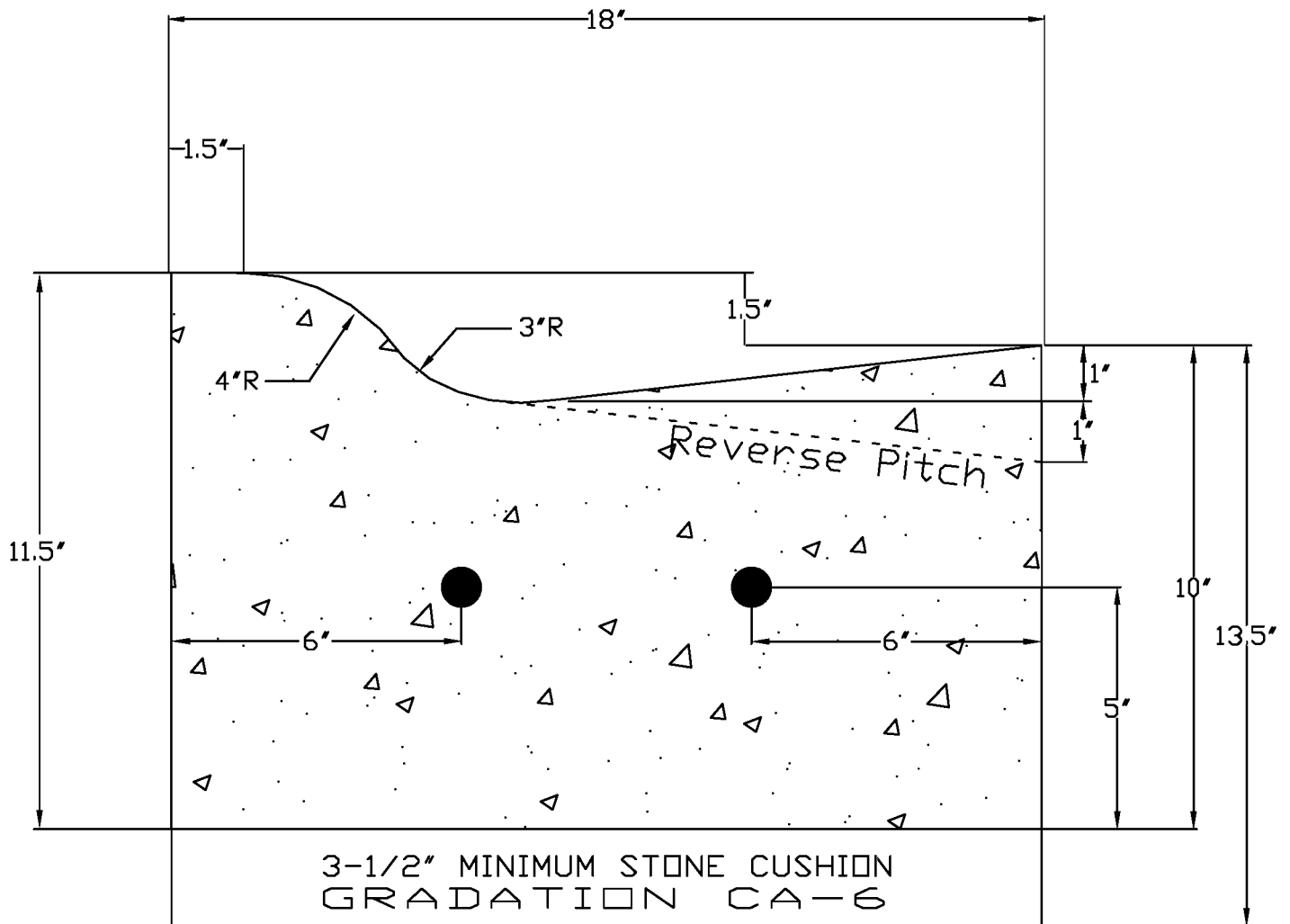
**STANDARD 424031-01**



**NOTES:**

1. REINFORCEMENT: PROVIDE TWO (2) #4 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
2. EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
3. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
4. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

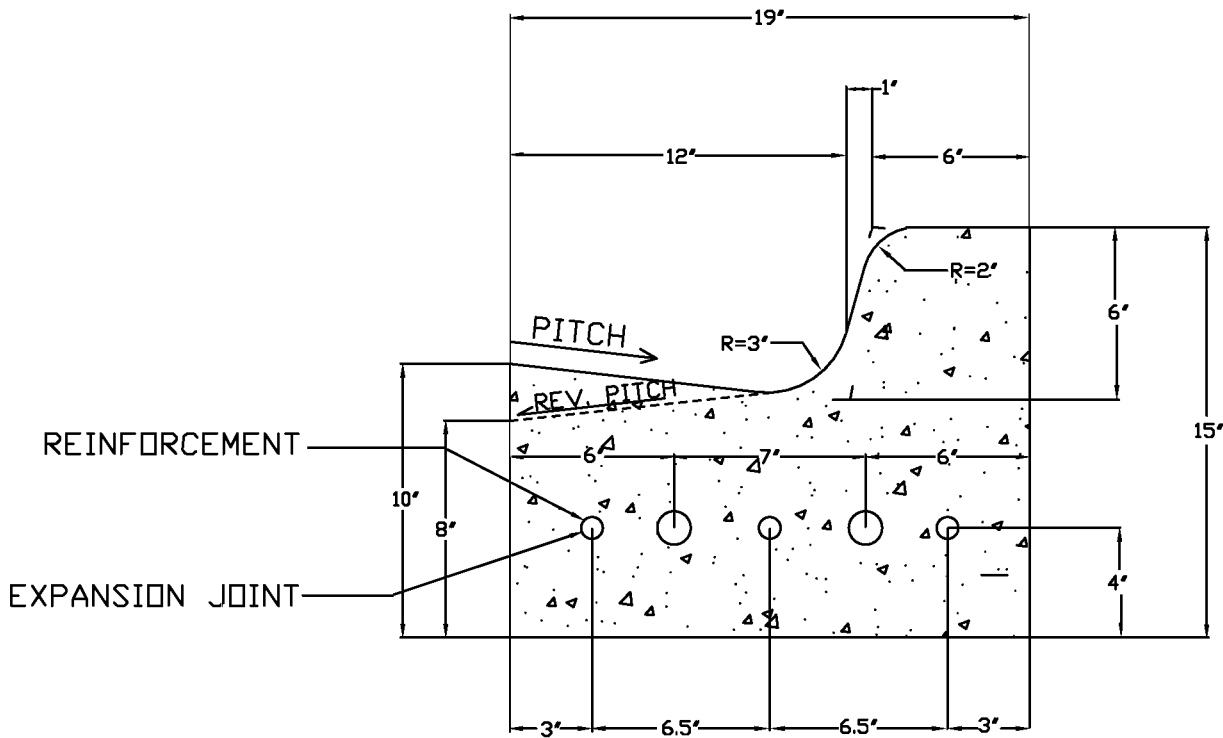
<b>CURB AND GUTTER DETAIL (ORLAND HILLS GARDENS)</b>		
VOP Orland Hills Curb.dwg	<b>STREET &amp; PAVEMENT</b>	DATE:
DRAWN BY:		REVISED: 1-23-13 wdc
<b>Village of ORLAND PARK</b>		REVISED: 2-14-08 rjr
<b>Engineering Department</b>		REVISED: 8-27-07 ktd
		DRAWING NO.



**NOTES:**

1. REINFORCEMENT: PROVIDE TWO (2) #4 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
2. EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
3. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
4. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

<b>CURB AND GUTTER DETAIL (RESIDENTIAL)</b>		
<small>CURB.DWG</small>	<b>STREET &amp; PAVEMENT</b>	<small>DATE:</small>
<small>DRAWN BY:</small>		<small>REVISED:</small>
<b>Village of ORLAND PARK</b>		<small>REVISED: 2-14-06 rjr</small>
<b>Engineering Department</b>		<small>REVISED: 8-27-07 ktj</small>
		<small>DRAWING NO.</small> <b>STR-03</b>

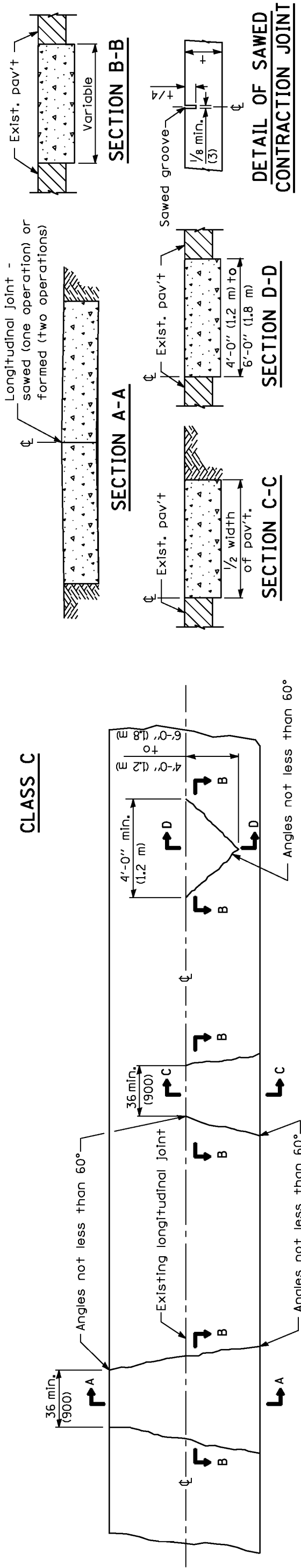


**NOTES:**

1. REINFORCEMENT SHALL BE THREE (3) #5 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
2. EXPANSION JOINT: 3/4" THICK BITUMINOUS FILLER MATERIAL— PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
3. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW— CUT IN THE UPPER ONE—THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
4. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

<b>B - 6.12 CURB AND GUTTER</b>		
B-612.DWG	<b>STREET &amp; PAVEMENT</b>	DATE:
DRAWN BY:		REVISED: 1-3-12 wdc
<b>Village of ORLAND PARK</b>		REVISED: 2-14-08 rjr
<b>Engineering Department</b>		REVISED: 2-8-08 KTL
		DRAWING NO. <b>STR-04</b>

**CLASS C**

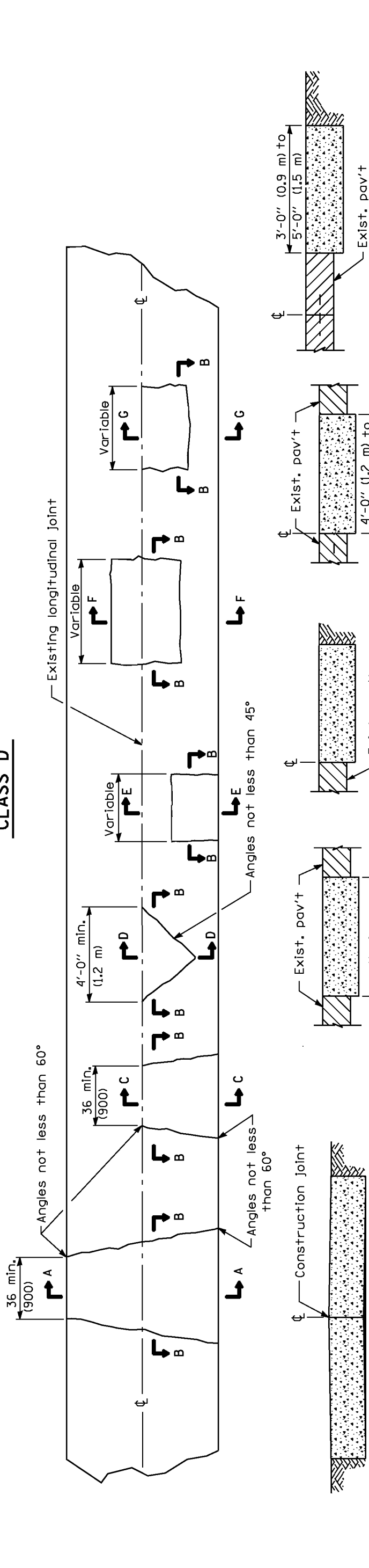


**DETAIL OF SAWED CONTRACTION JOINT**

**NOTE**

Longitudinal joints shall be as detailed on Standard 420001, except tie bars are not required for patches 20'-0" (6.0 m) or less in length.

**CLASS D**



**SECTION A-A**  
(Built in two operations)

**SECTION B-B**

**SECTION C-C**

**SECTION D-D**

**SECTION E-E**

**SECTION F-F**  
(Built in two operations)

**SECTION G-G**

**GENERAL NOTES**

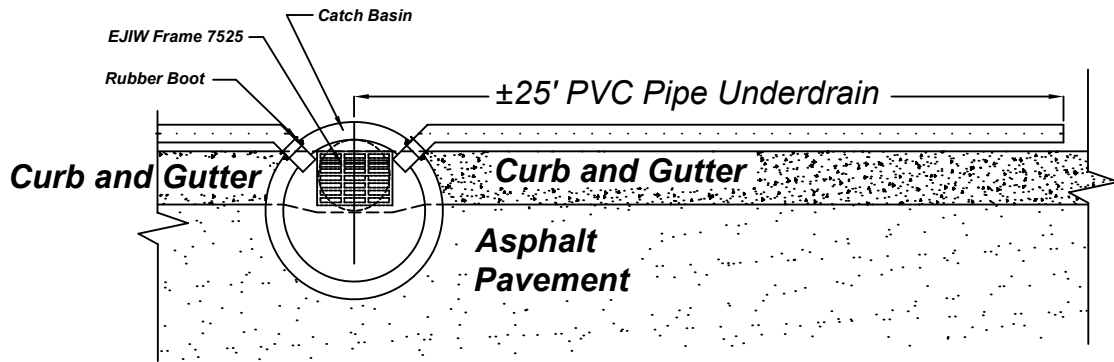
Existing tie bars shall be either cut or removed. Marginal bars shall be cut.  
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation	ISSUED 1-1-97
PASSED January 1, 2008	
ENGINEER OF POLICY AND PROCEDURES	
APPROVED January 1, 2008	
ENGINEER OF DESIGN AND ENVIRONMENT	

DATE	REVISIONS
1-1-08	Switched units to English (metric).
1-1-07	Revised Note for Class C patches.

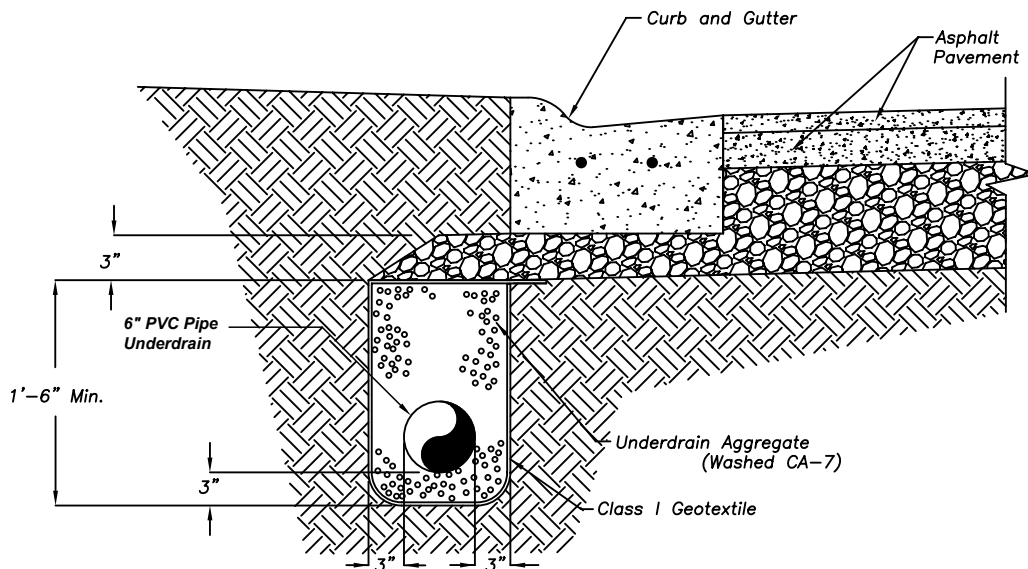
**CLASS C and D PATCHES**

**STANDARD 442201-03**



PLAN VIEW

SCALE: N.T.S.



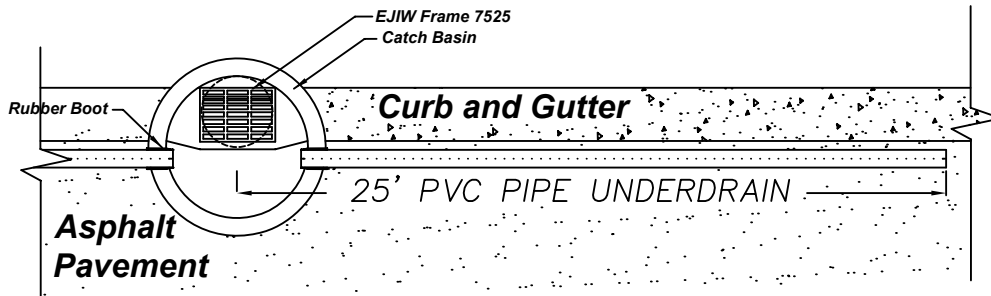
PIPE UNDERDRAIN BEHIND CURB

SCALE: N.T.S.

Underdrain Notes:

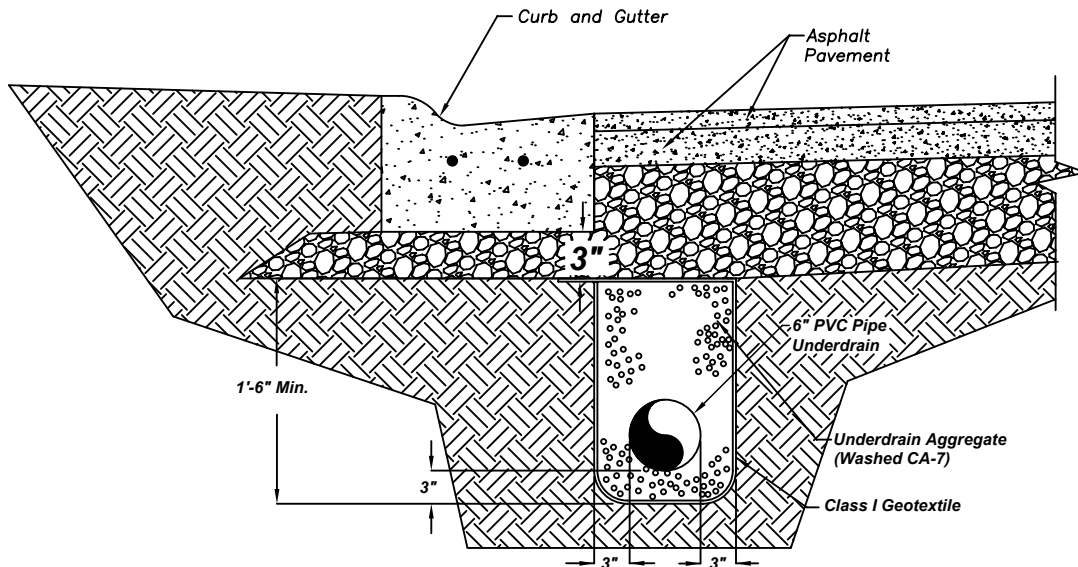
1. The installation of the underdrains shall conform to section 601.04 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Pipe material shall be 6" perforated PVC, per article 1040.03 of the IDOT Standard Specifications.
3. The underdrains shall be installed with the drain perforations down. All underdrains shall be held in the center of the trench by mechanical means while placing compacted trench backfill of washed CA-7.
4. After the underdrain pipe is installed, the geotextile shall be folded over the underdrain aggregate and overlapped a minimum of 12".
5. The underdrains shall have watertight joints, and be tied into the nearest storm sewer inlet. The connection to the inlet structure shall conform to ASTM C-923.

CURB UNDERDRAIN DETAIL – Back of Curb		
Underdrain-bc.dwg	<b>STREET &amp; PAVEMENT</b>	DATE: 11/20/2006
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Public Works Department		REVISED: 2-14-08 rjr
		DRAWING NO. STR-20



PLAN VIEW

SCALE: N.T.S.



PIPE UNDERDRAIN FRONT OF CURB

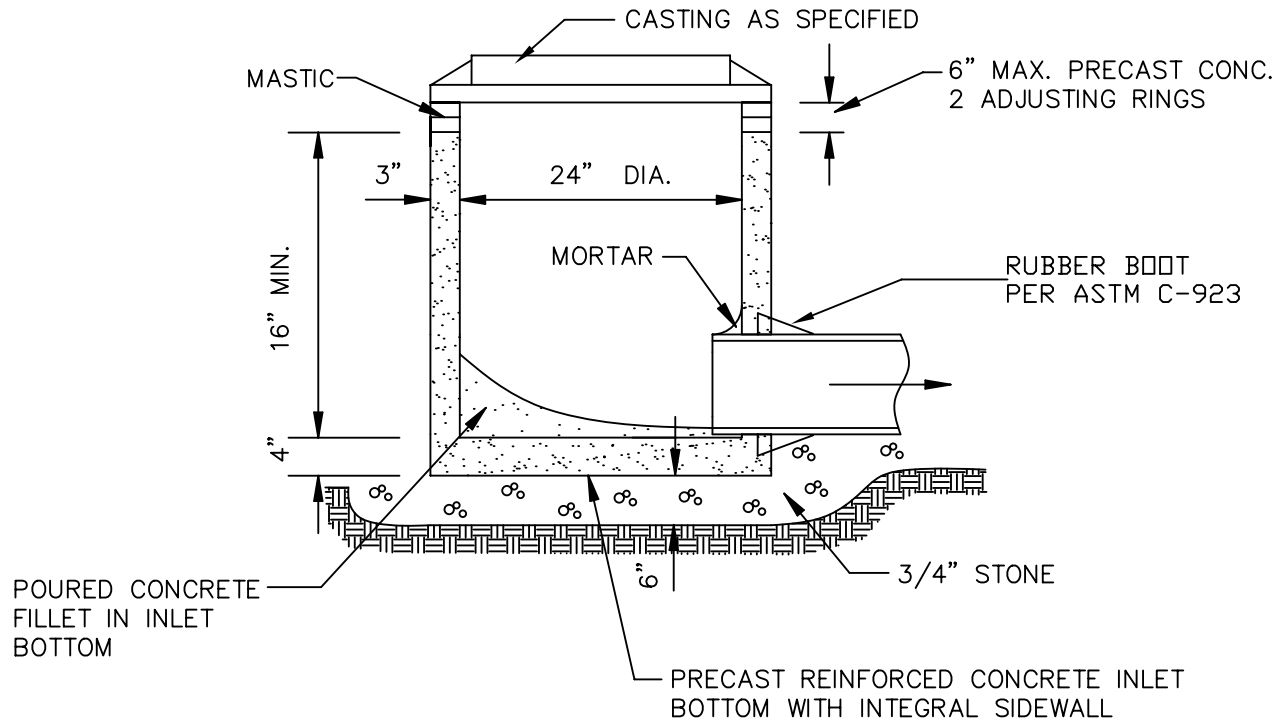
SCALE: N.T.S.

Underdrain Notes:

1. The installation of the underdrains shall conform to section 601.04 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Pipe material shall be 6" perforated PVC, per article 1040.03 of the IDOT Standard Specifications.
3. The underdrains shall be installed just below the bottom of the existing curb (or as necessary to provide positive flow), with the drain perforations down. All underdrains shall be held in the center of the trench by mechanical means while placing compacted trench backfill of washed CA-7.
4. After the underdrain pipe is installed, the geotextile shall be folded over the underdrain aggregate and overlapped a minimum of 12".
5. The underdrains shall have watertight joints, and be tied into the nearest storm sewer inlet, as designated by the Village.

CURB UNDERDRAIN DETAIL – Front of Curb		
Underdrain-fe.dwg	STREET & PAVEMENT	DATE: 11/15/2006
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Public Works Department		REVISED: 2-14-08 rjr
		DRAWING NO. STR-____

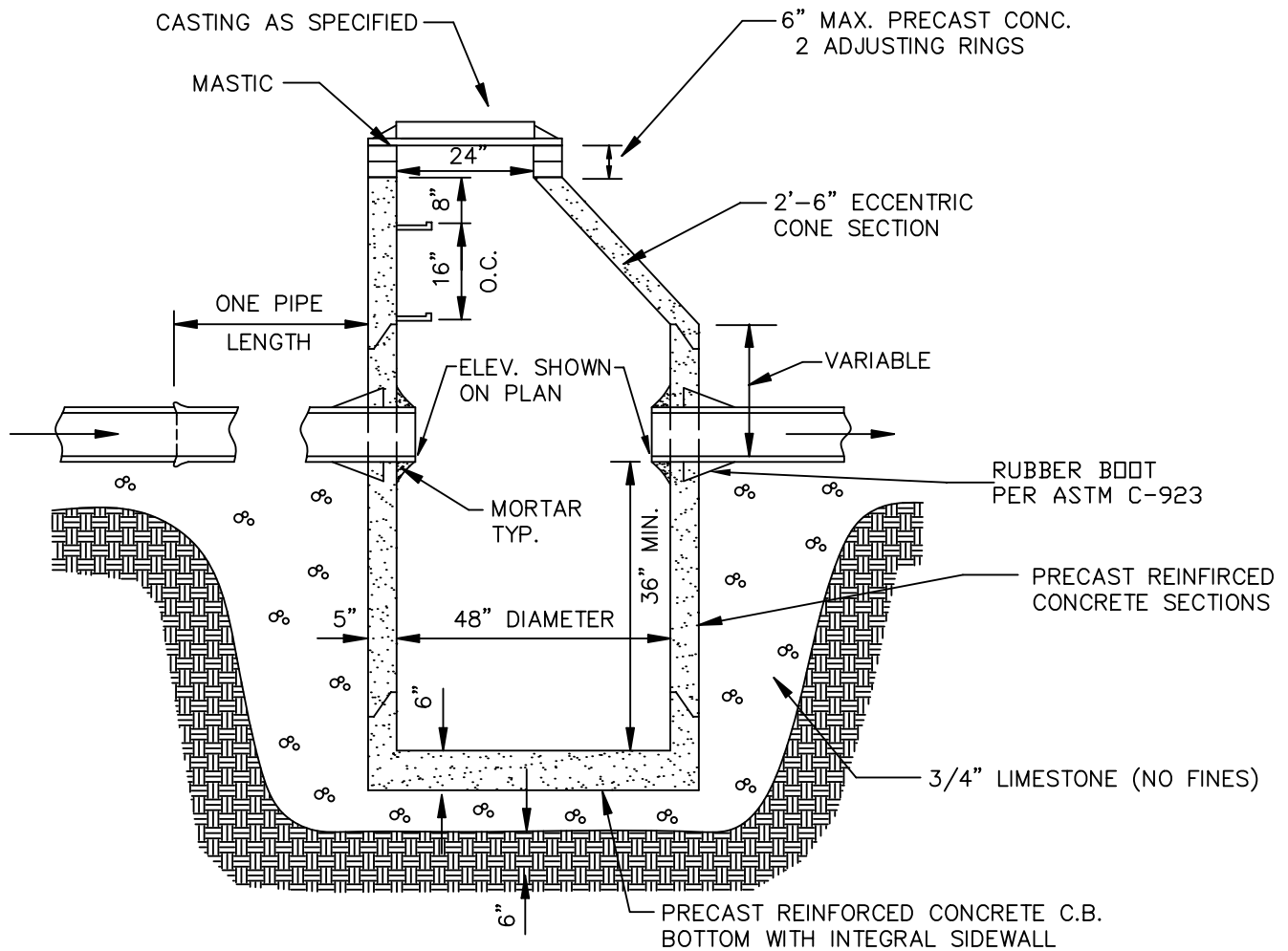




**NOTES:**

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
3. Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber Adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around inlet to subgrade elevation in paved areas.for subgrade.

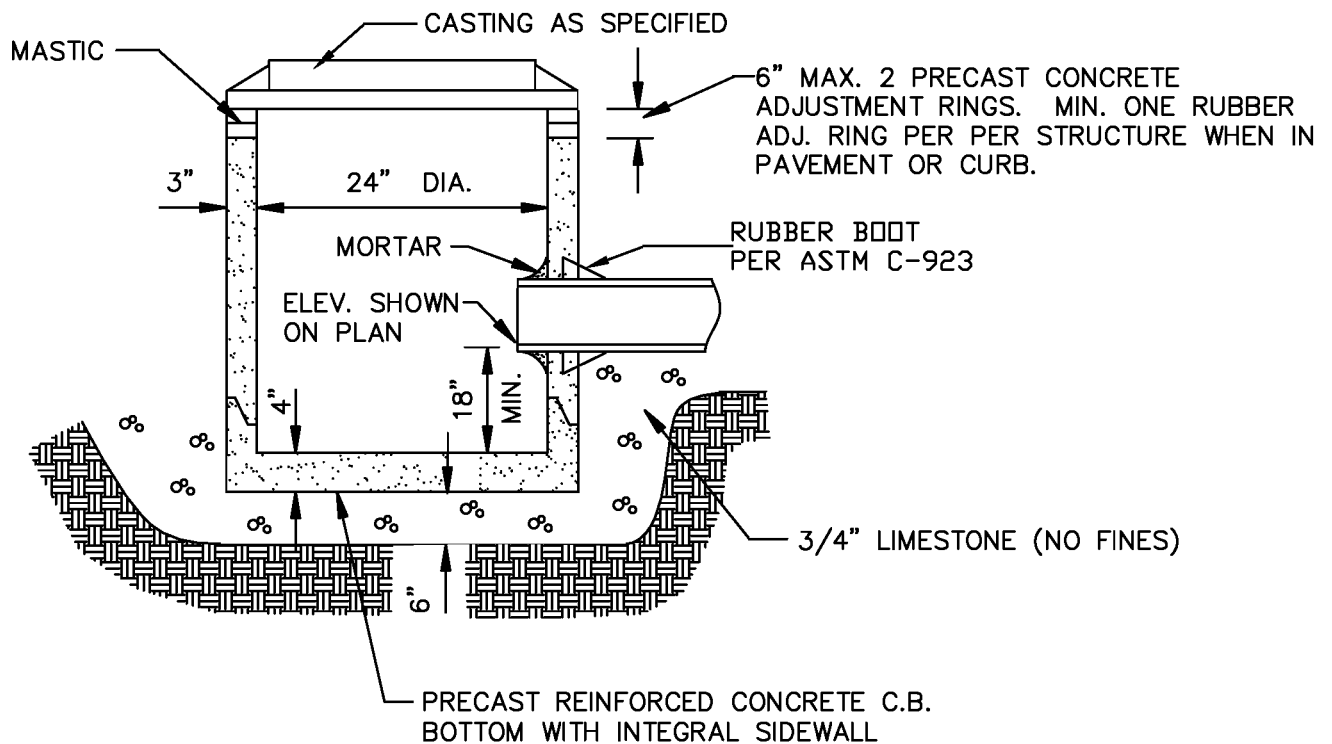
<b>INLET TYPE A</b>		
INLET_A.DWG	<b>STORM SEWER IMPROVEMENT</b>	DATE:
DRAWN BY:		REVISED:
<b>Village of ORLAND PARK</b>		REVISED:
<b>Engineering Department</b>		REVISED:
		DRAWING NO. <b>STS-05</b>



**NOTES:**

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas for subgrade.

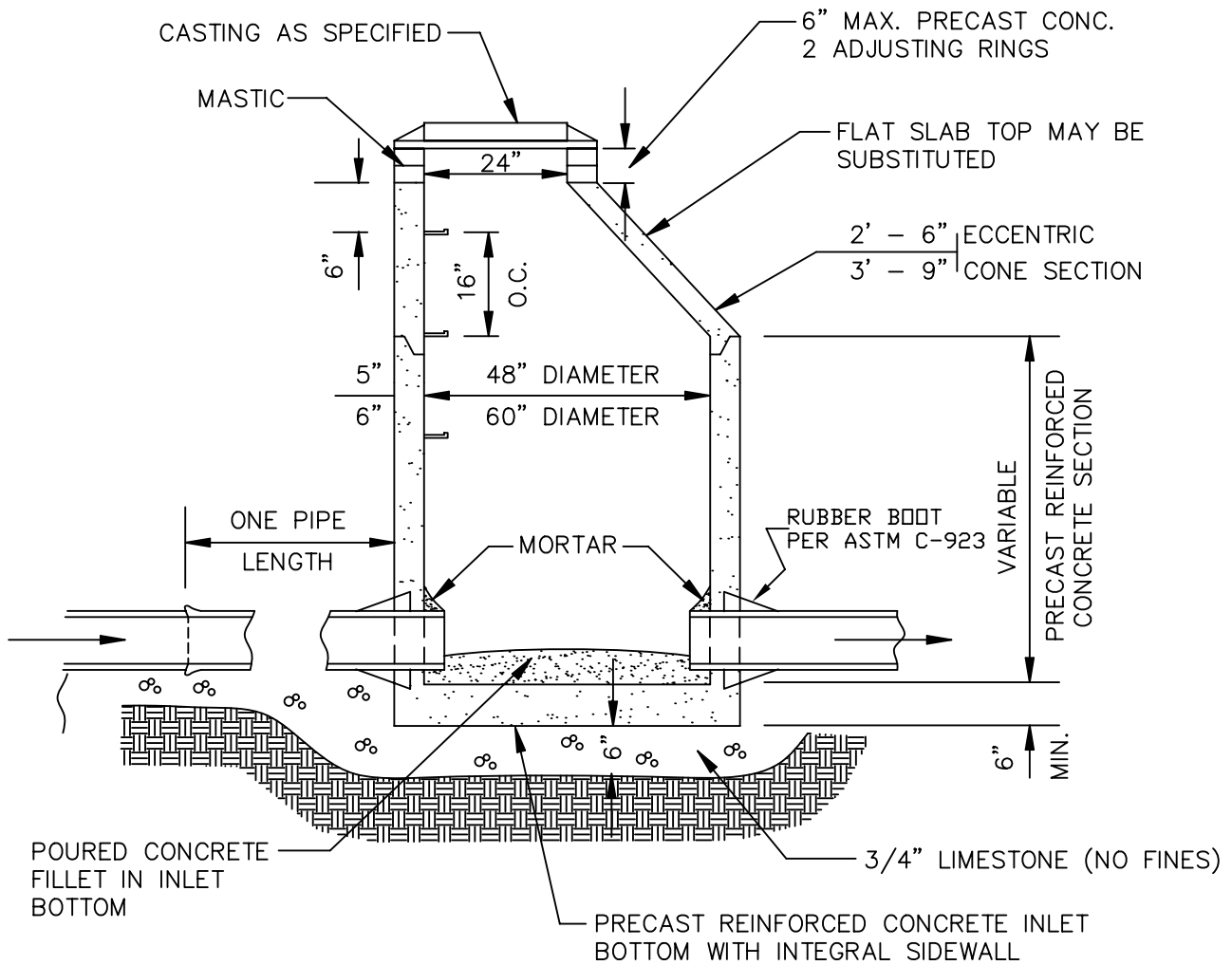
<b>CATCHBASIN TYPE A</b>		
<small>CBASIN_A.DWG</small>	<b>STORM SEWER IMPROVEMENT</b>	<small>DATE:</small>
<small>DRAWN BY:</small>		<small>REVISED:</small>
<b>Village of ORLAND PARK</b>		<small>REVISED:</small>
<b>Engineering Department</b>		<small>DRAWING NO.</small> <b>STS-02</b>



## NOTES:

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas for subgrade.

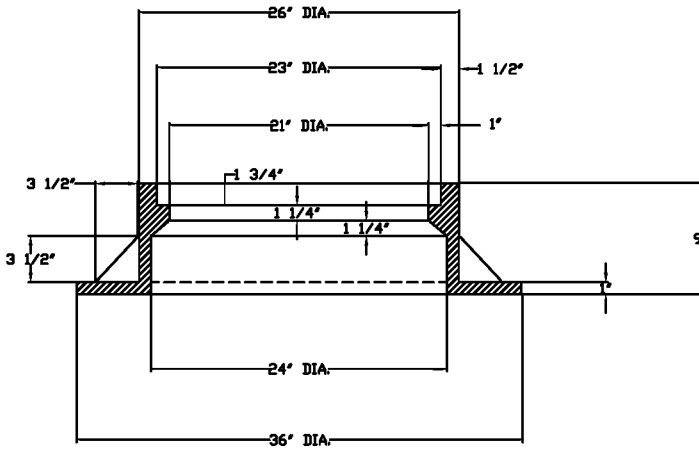
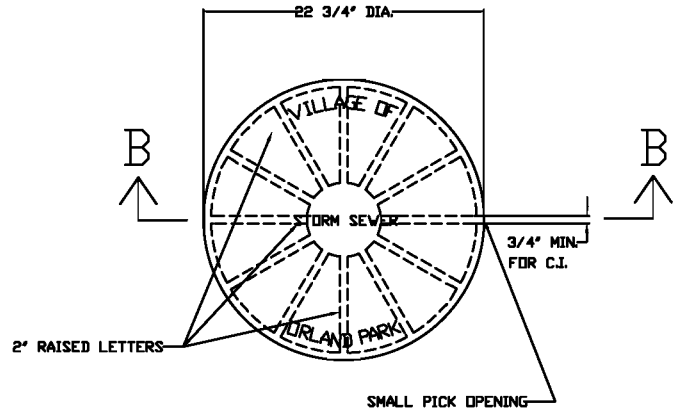
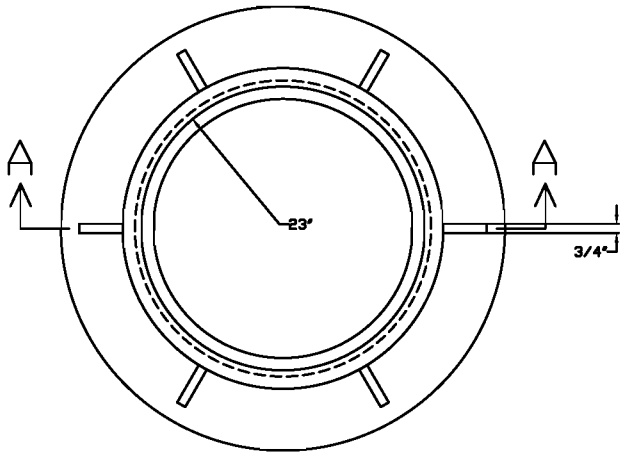
CATCHBASIN TYPE C		
CBASIN_C.DWG	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of <del>ORLAND PARK</del>		REVISED: wdo 01-05-12
Engineering Department		DRAWING NO. STS-04



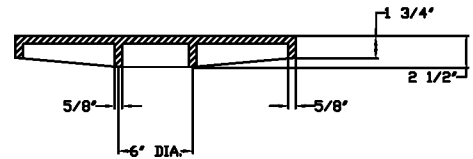
**NOTES:**

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around manhole to subgrade elevation in paved areas for subgrade.

<b>STORM MANHOLE</b>		
STORMMH.DWG	<b>STORM SEWER IMPROVEMENT</b>	DATE:
DRAWN BY:		REVISED:
Village of <b>ORLAND PARK</b>		REVISED:
Engineering Department		DRAWING NO. <b>STS-01</b>



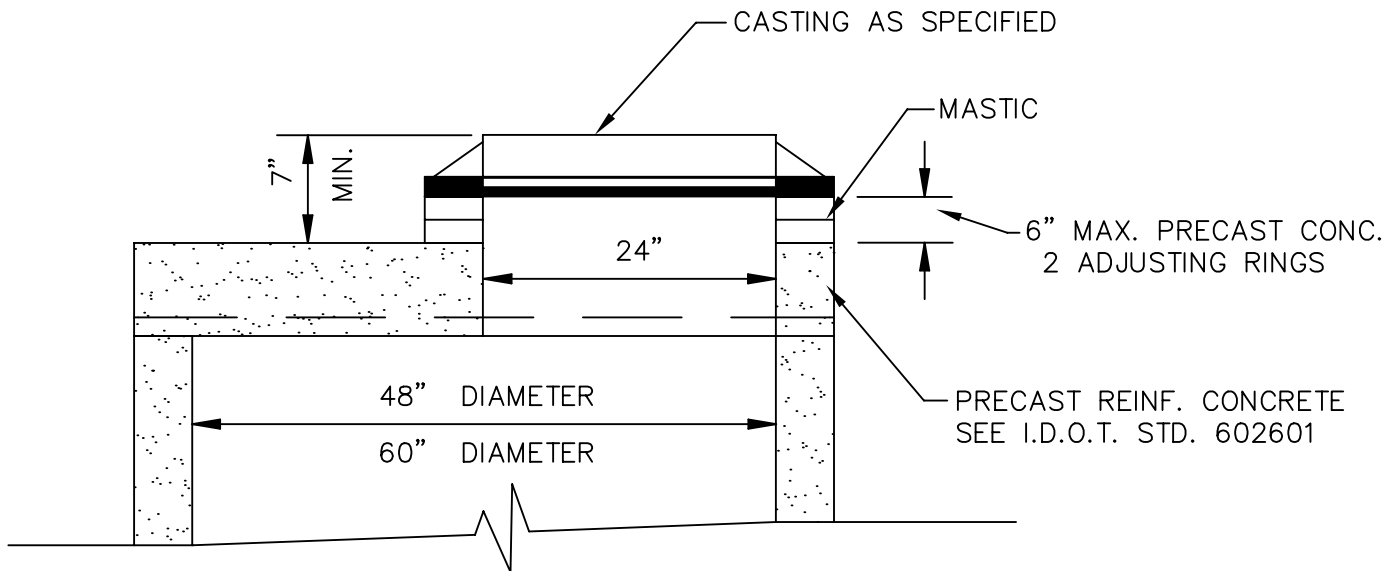
SECTION A-A  
CAST FRAME



SECTION B-B  
CAST CLOSED LID

- NOTES:
1. DUCTILE IRON CASTINGS SHALL BE GRADE 60-40-18 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
  2. ALL LIDS AND COVERS SHALL BE MACHINED.
  3. THE MANHOLE COVERS SHALL HAVE RAISED LETTERS AS SHOWN.
  4. ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED.
  5. MINIMUM WEIGHTS FOR CASTINGS AS SHOWN.
  6. CASTINGS SHALL BE EAST JORDAN IRON WORKS 1050Z1 FRAME AND 1020A COVER.

<b>STORM SEWER FRAME &amp; COVER</b>		
FRAME&CO.DWG	<b>STORM SEWER IMPROVEMENT</b>	DATE:
DRAWN BY:		REVISED:
<b>Village of <del>ORLAND PARK</del></b>		REVISED:
<b>Engineering Department</b>		DRAWING NO. <b>STS-14</b>



NOTES:

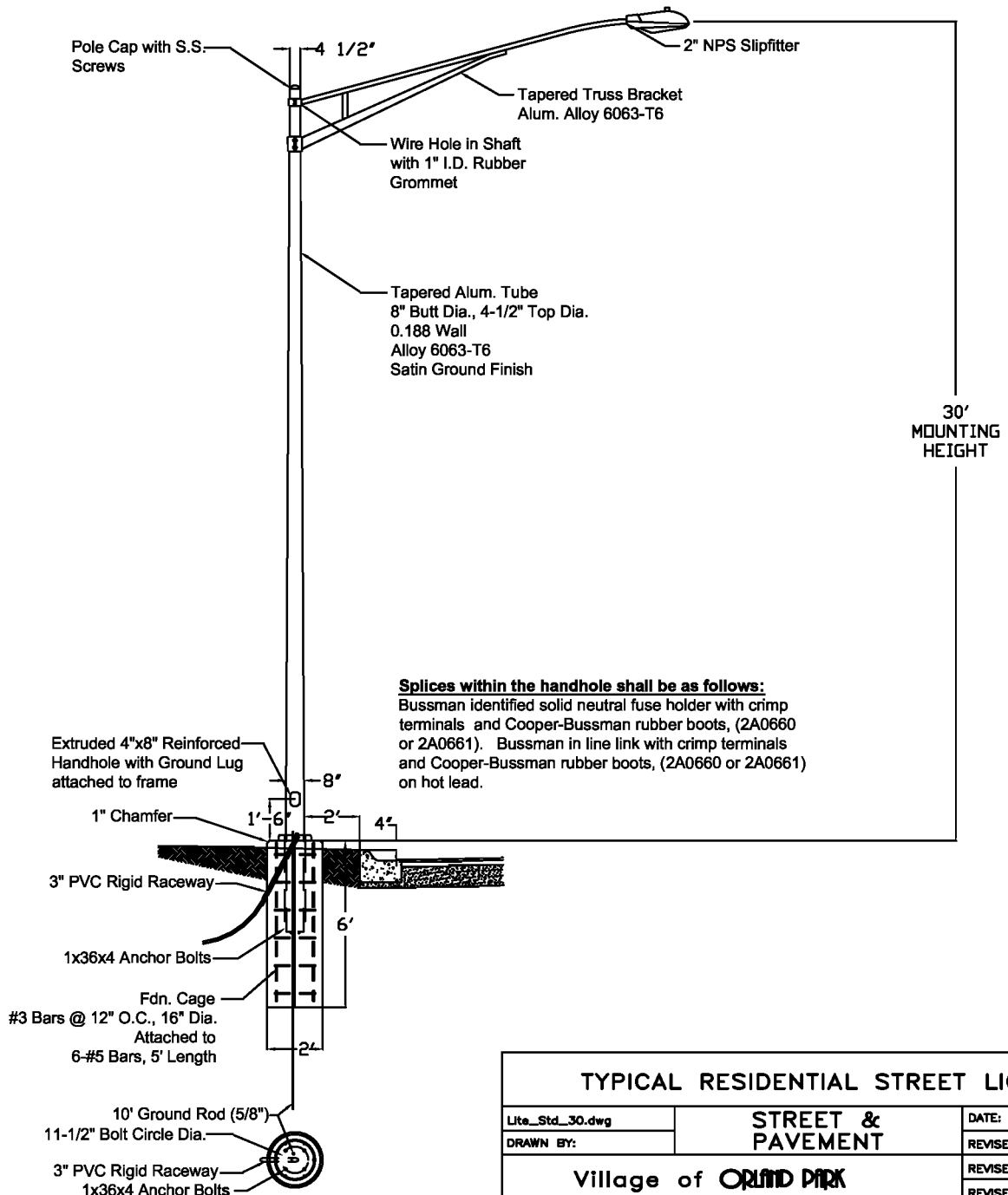
1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames.

<b>FLAT SLAB TOP</b>		
FLTSLAB.DWG	<b>STORM SEWER IMPROVEMENT</b>	DATE:
DRAWN BY:		REVISED:
<b>Village of <del>ORLAND PARK</del></b>		REVISED:
<b>Engineering Department</b>		REVISED:
		DRAWING NO. <b>STS-06</b>

# RESIDENTIAL STREET LIGHT

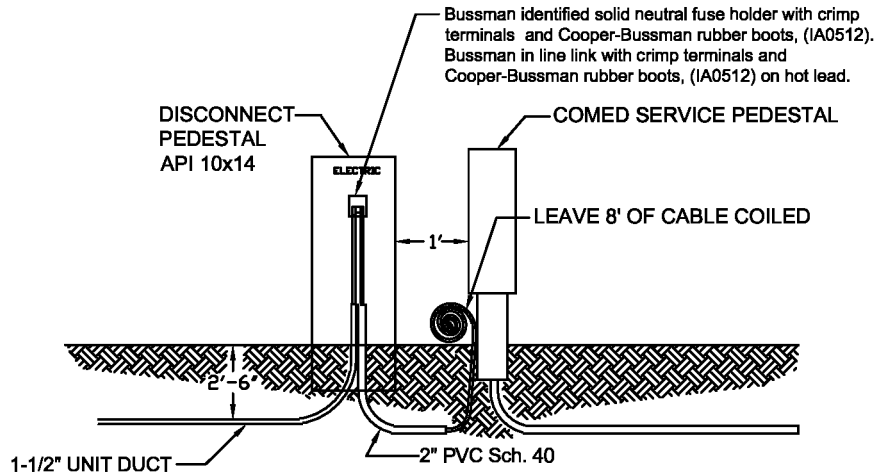
## ROUND TAPERED ALUMINUM SINGLE TRUSS ARM-CLAMP ON

WATTAGE	VOLTAGE	MOUNTING HEIGHT	LOCATION	ARM LENGTH	LUMINAIRE LENS TYPE
250 w	120 volt	30'	Major Intersections w/County & State roadways.	12'-15'	Cobra Head (drop bowl)
150 w	120 volt	30'	All local roadway intersection in Subdivisions.	12'	Sharp Cutoff (flat lens)
150 w	120 volt	30'	Curves of Street	12'	Sharp Cutoff (flat lens)
150 w	120 volt	30'	Mid-block	12'	Sharp Cutoff (flat lens)

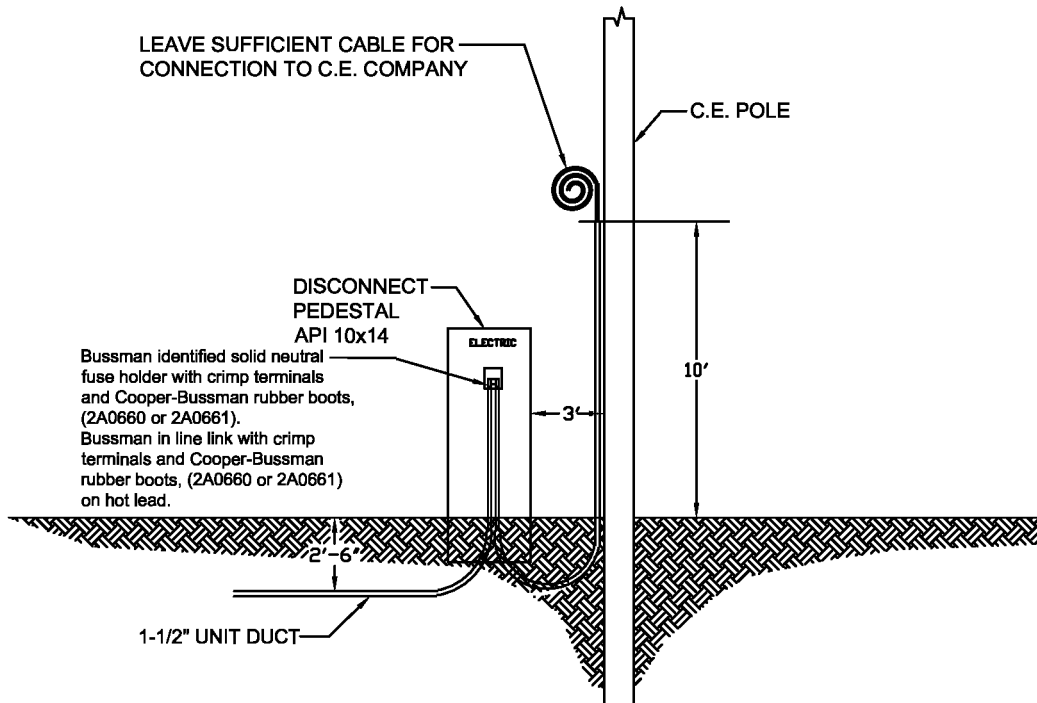


TYPICAL RESIDENTIAL STREET LIGHT		
Lite_Std_30.dwg	<b>STREET &amp; PAVEMENT</b>	DATE: 08/17/2006
DRAWN BY:		REVISED:
<b>Village of ORLAND PARK</b>		REVISED:
Engineering Department		REVISED:
		DRAWING NO. <b>STR-06</b>

# RESIDENTIAL STREET LIGHT ELECTRICAL SUPPLY CONNECTION



## PEDESTAL



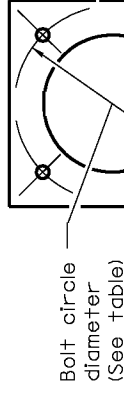
## POWER POLE

RESIDENTIAL STREET LIGHT CONNECTION		
Uta_Connection.DWG	STREET & PAVEMENT	DATE: 08-16-08
DRAWN BY:		REVISED:
Village of <b>ORLAND PARK</b>		REVISED:
Engineering Department		REVISED:
		DRAWING NO. <b>STR-07</b>



METAL FOUNDATION			CONCRETE FOUNDATION				
LIGHT POLE MOUNTING HEIGHT	BOLT CIRCLE DIAMETER	SHAFT DIAMETER	SHAFT DEPTH	TOP PLATE (min)	SHAFT DIAMETER	SHAFT DEPTH	ANCHOR ROD LENGTH
30' (9.1 m)	11 1/2" (292)	8 5/8" (220)	6' (1.83 m)	12 x 12 x 1 (300 x 300 x 25)	24 (610)	5'-0" (1.52 m)	4'-9" (1.45 m)
31'-35' (9.4 m - 10.7 m)	11 1/2" (292)	8 5/8" (220)	6' (1.83 m)	12 x 12 x 1 (300 x 300 x 25)	24 (610)	5'-6" (1.67 m)	5'-3" (1.60 m)
36'-40' (10.9 m - 12.2 m)	15 (381)	8 5/8" (220)	6' (1.83 m)	15 x 15 x 1 1/4 (375 x 375 x 31)	30 (762)	6'-0" (1.83 m)	5'-9" (1.75 m)
41'-45' (12.5 m - 13.7 m)	15 (381)	8 5/8" (220)	6' (1.83 m)	15 x 15 x 1 1/4 (375 x 375 x 31)	30 (762)	6'-6" (1.98 m)	6'-3" (1.90 m)
46'-50' (14.0 m - 15.2 m)	15 (381)	8 5/8" (220)	8' (2.44 m)	15 x 15 x 1 1/4 (375 x 375 x 31)	30 (762)	7'-0" (2.13 m)	6'-9" (2.00 m)

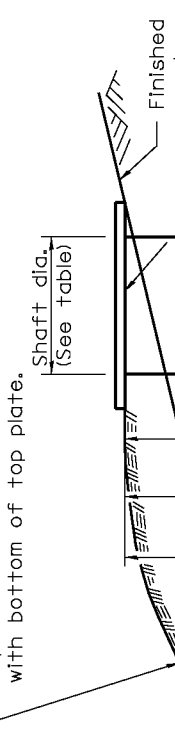
- ① Length does not include 4 (100) hook.
- ② 8 5/8 x 8'-0" (220 x 2.44 m) for twin luminaires.
- ③ Bolt circle diam. shall be 17 (430) when a transformer base is used.



Provide dirt as needed to meet 5' (1.52 m) chord fill around foundation top. Grade dirt level with bottom of top plate.

Wiring window location identification marks shall be notched in side of plate or stamped on top.

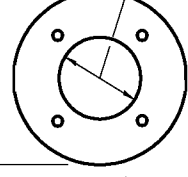
Use dirt removed from foundation to meet 5' (1.52 m) chord fill around foundation top. Grade dirt level with bottom of concrete chamfer.



Two, 2 1/2 x 12 (65x305) wiring windows 180° apart.

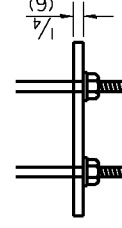
1/4 (6) Thick min.

15 (380) O.D.  
18 (450) O.D.  
20 (508) O.D.



TOP VIEW

**METAL FOUNDATION**

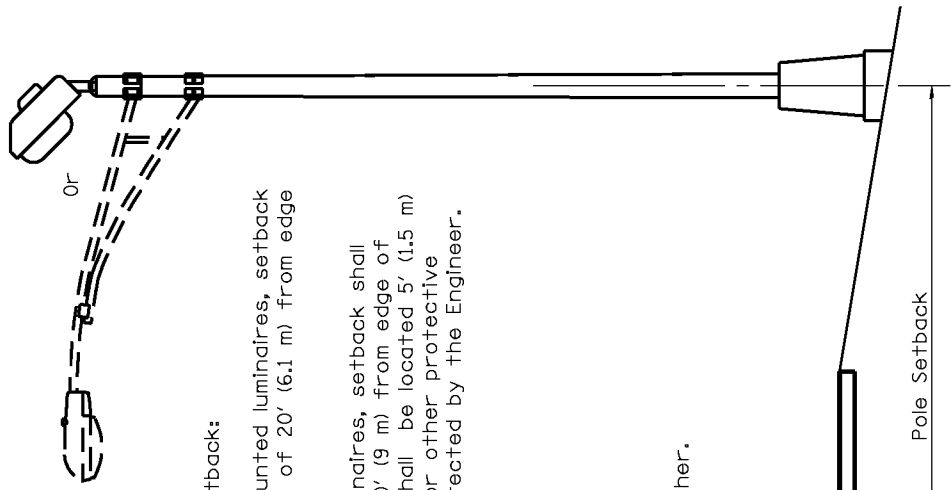


**RING PLATE DETAIL**

(When rock is encountered and foundation is shallower)

Illinois Department of Transportation  
 PASSED January 1, 2010  
 ENGINEER OF PRELIMINARY ENGINEERING  
 APPROVED January 1, 2010  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-10



**Pole Foundation Setback:**

For horizontal mounted luminaires, setback shall be a minimum of 20' (6.1 m) from edge of pavement.

For multimount luminaires, setback shall be a minimum of 30' (9 m) from edge of pavement. Poles shall be located 5' (1.5 m) behind guardrail or other protective barriers, or as directed by the Engineer.

Top of wiring window shall be flush with top of foundation.

Plate to be installed when required (See ring plate detail)

Schedule 40 5 (125) I.D. P.V.C. wiring window (grounding electrode not shown).

No. 6 bare copper grounding electrode conductor.

Anchor rod 1 (25) diameter with 9 (230) threads. Anchor rod shall extend through nut 1 (25). For barrier or foundation behind guardrail, use self-locking nut and flat washer. Do not use lock washer.

Length above foundation shall be adjusted to accommodate breakaway devices furnished by the contractor for a specific installation.

Finished grade

3/4 (19) Chamfer

24 (610) Min.

15 (381) Formed

Shaft depth (See table)

Anchor rod length (See table)

See Ring Plate Detail

**GENERAL NOTES**

All foundations are designed to be located on slopes not exceeding 2:1 where soils have an unconfined compressive strength of at least 1.0 TSF. The Contractor shall verify the soil strength during drilling for concrete foundations or by monitoring installation resistance of metal foundations and notify the Engineer if other conditions are encountered.

Anchor rod shall be increased in diameter as needed for 50' (15.2 m) mounting height or above. The Contractor shall match the breakaway device size or slotted hole size in the pole base plate to accommodate larger rod sizes.

Transformer bases shall not be used on metal foundations.

All dimensions are in inches (millimeters) unless otherwise shown.

**REVISIONS**

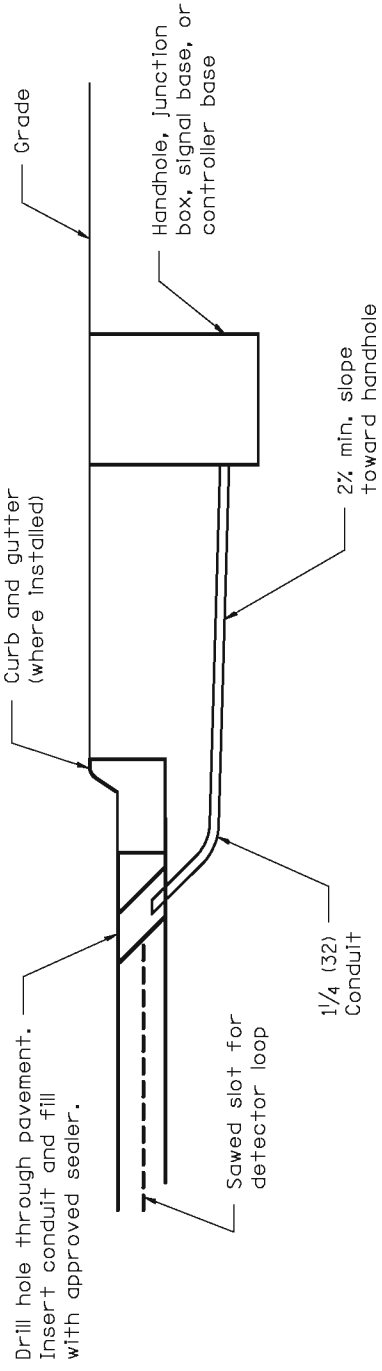
DATE	REVISIONS
1-1-10	New standard.

\* If the required anchor rod length above top of foundation is less than 3 (75), anchor rods may be lowered below 6 (150).

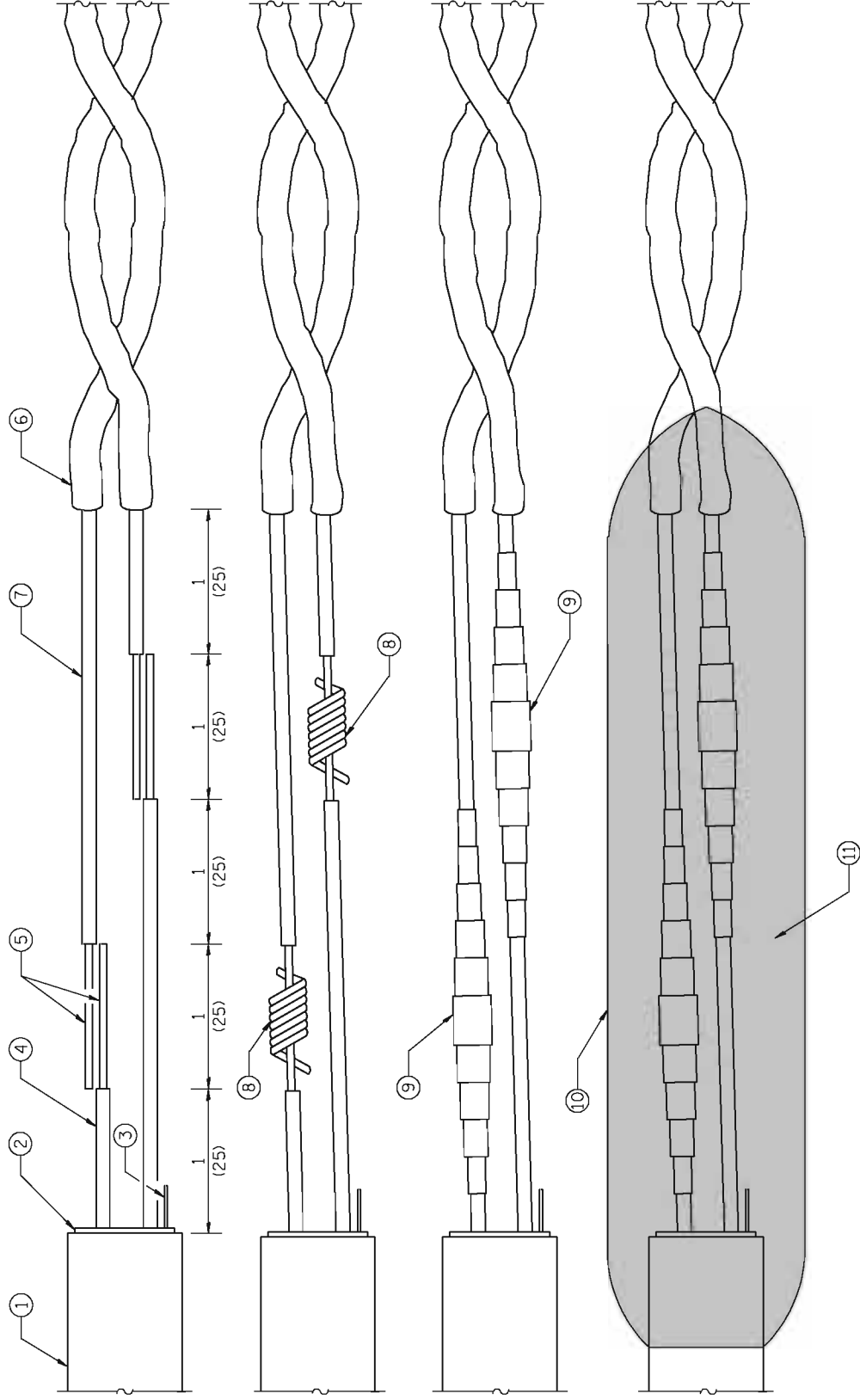
**CONCRETE FOUNDATION**

**LIGHT POLE FOUNDATION**

STANDARD 836001



**DETECTOR LOOP LEAD-IN**



- ① = Lead-in cable (single pair or multipair)
- ② = Lead-in cable shield
- ③ = Lead-in cable shield drain-wire
- ④ = Lead-in cable insulated conductor
- ⑤ = Bare conductor
- ⑥ = Loop wire in tube
- ⑦ = Loop wire insulated conductor
- ⑧ = Twisted and resin soldered conductor
- ⑨ = Electrical tape insulated splice
- ⑩ = Rigid mold
- ⑪ = Waterproof and dielectric resin

Illinois Department of Transportation  
 APPROVED January 1, 2009  
 ENGINEER OF OPERATIONS  
 APPROVED January 1, 2009  
 ENGINEER OF DESIGN AND ENVIRONMENT

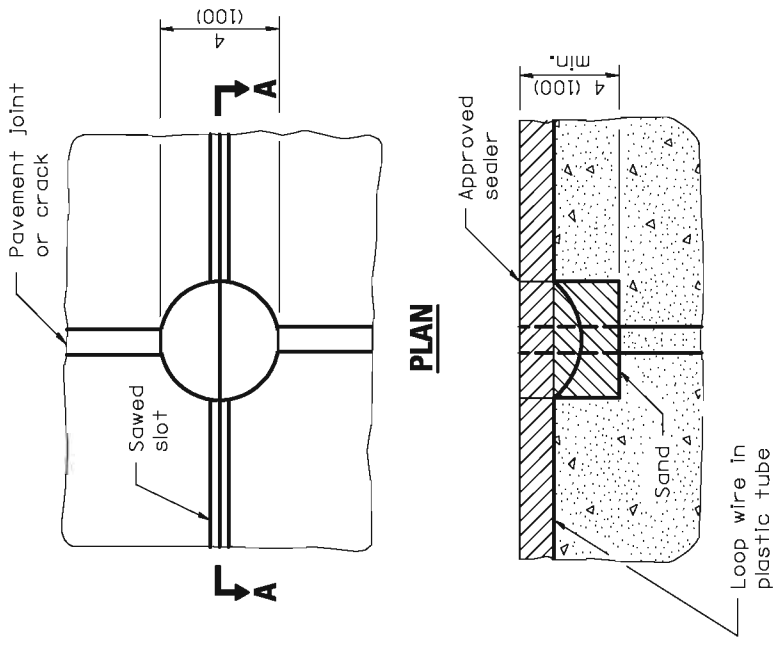
**LOOP WIRE AND LEAD-IN CABLE SPLICE**

DATE	REVISIONS
1-1-09	Switched units to English (metric)
1-1-02	Renum. Standard 846001.

All dimensions are in inches (millimeters) unless otherwise shown.

**DETECTOR LOOP INSTALLATIONS**

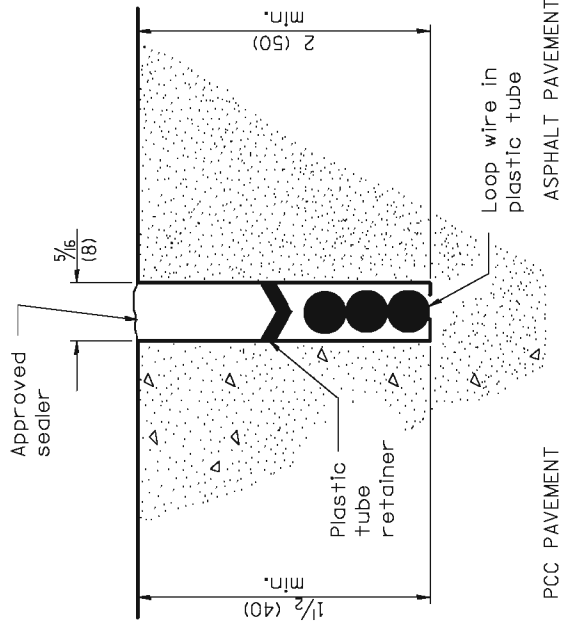
**STANDARD 886001-01**



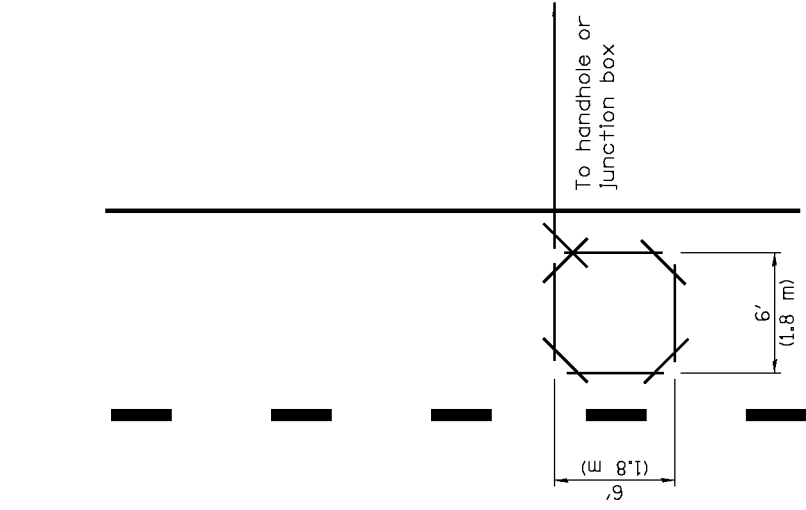
**SECTION A-A**

NOTE  
 Loop wire shall follow saw cut to bottom, forming slack section at joint.

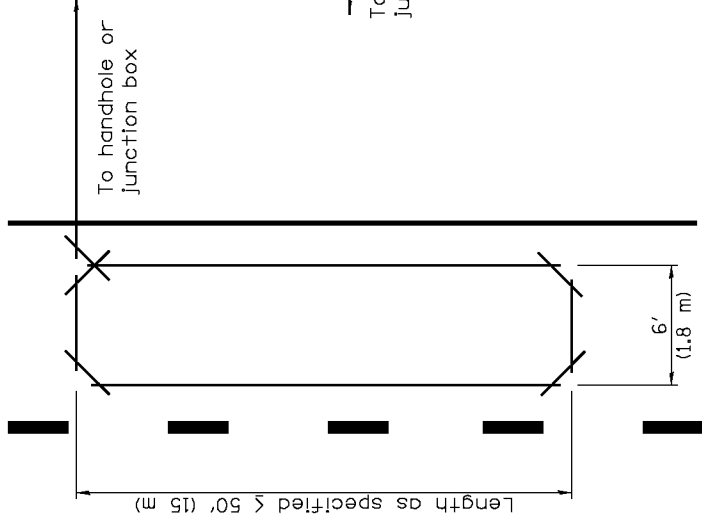
**DETECTOR LOOP AT PAVEMENT JOINT OR PAVEMENT CRACK**



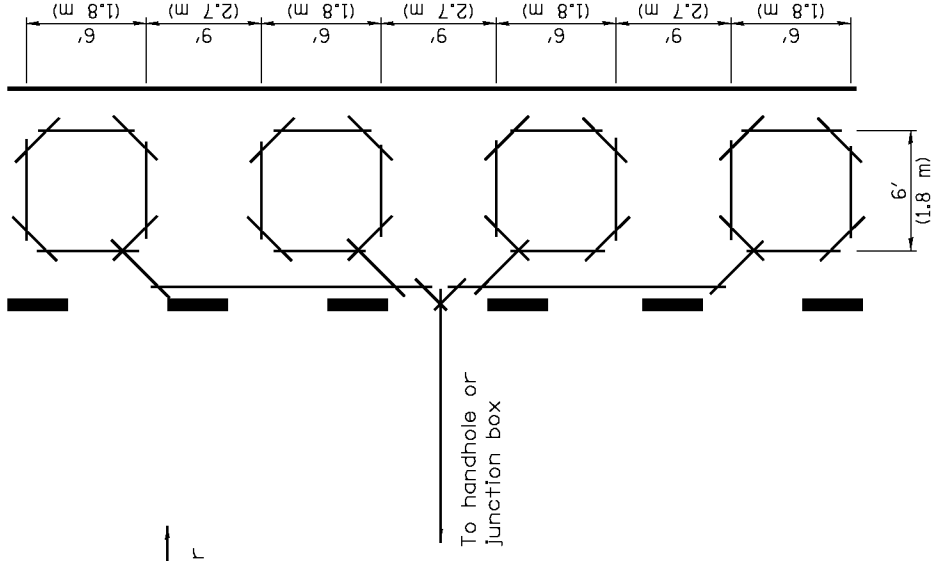
**DETECTOR LOOP INSTALLATION**



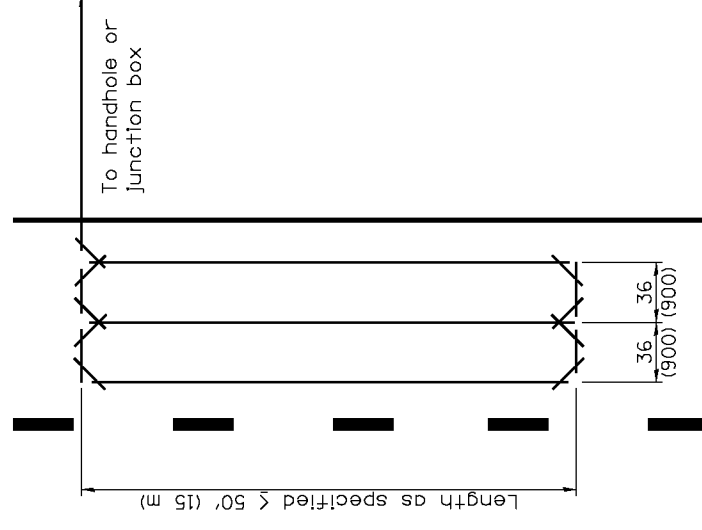
FOR POINT DETECTION SHORT LOOP



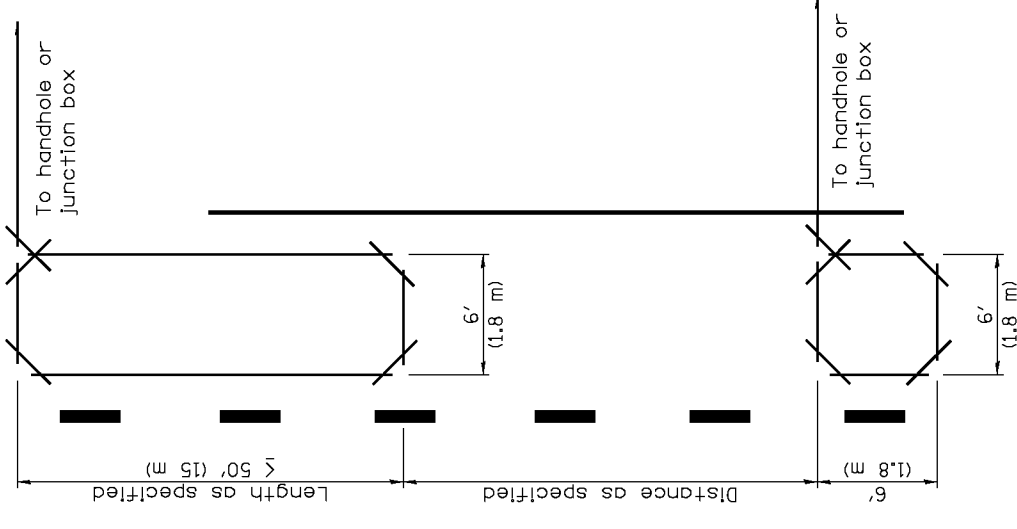
FOR PRESENCE DETECTION LONG LOOP



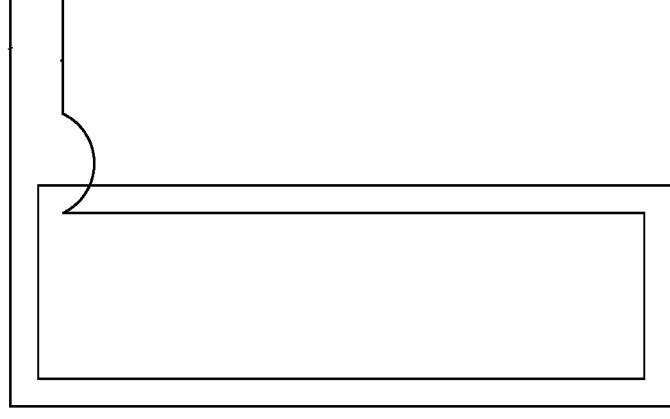
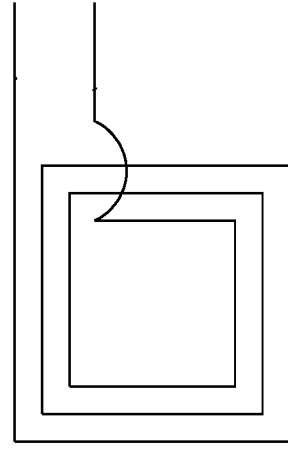
FOR PRESENCE DETECTION MULTIPLE LOOP IN SERIES



FOR PRESENCE DETECTION QUADRUPOLE LOOP



**SLOT PLAN**



**WIRING DIAGRAM**

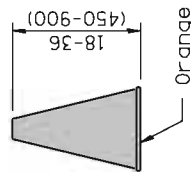
Illinois Department of Transportation	ISSUED	1-1-02
APPROVED January 1, 2009		
ENGINEER OF OPERATIONS		
APPROVED January 1, 2009		
ENGINEER OF DESIGN AND ENVIRONMENT		

All dimensions are in inches (millimeters) unless otherwise shown.

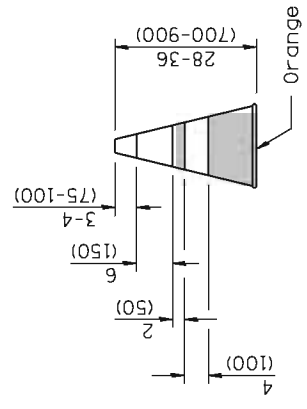
DATE	REVISIONS
1-1-09	Switched units to English (metric)
1-1-02	Renum. Standard 846006.

**TYPICAL LAYOUTS FOR DETECTION LOOPS**

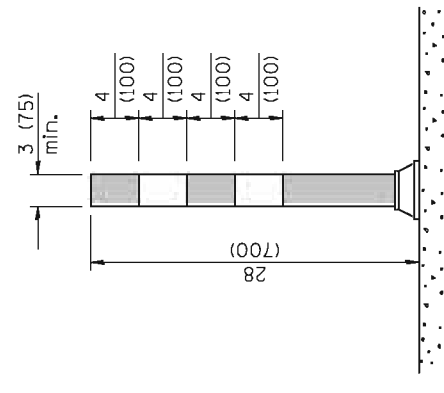
STANDARD 886006-01



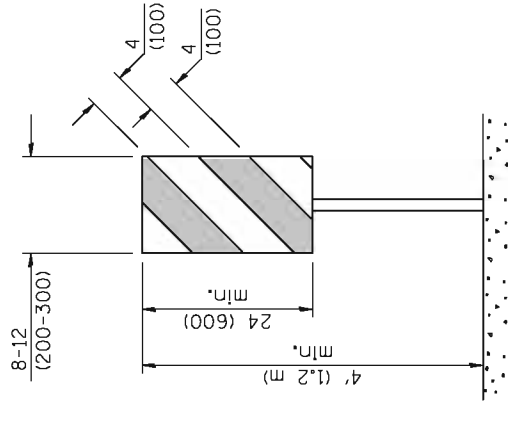
**CONE**



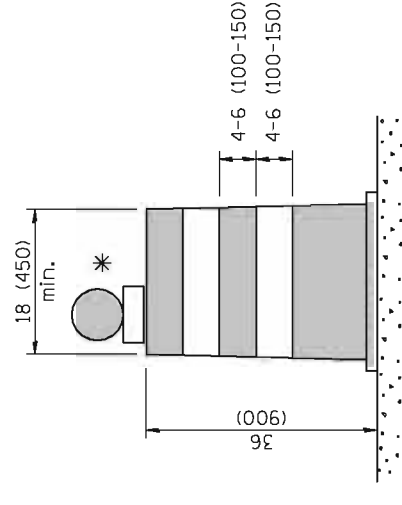
**REFLECTORIZED CONE**



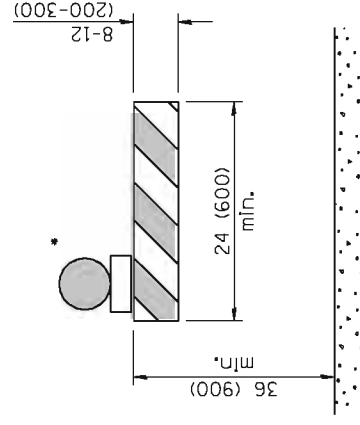
**FLEXIBLE DELINEATOR**



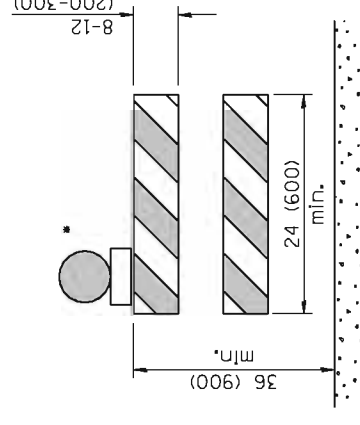
**VERTICAL PANEL**  
POST MOUNTED



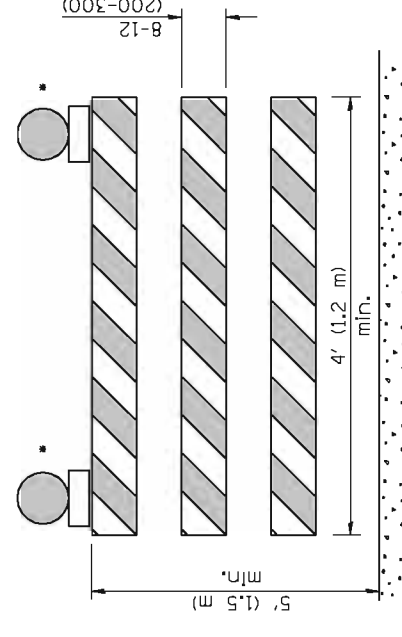
**DRUM**



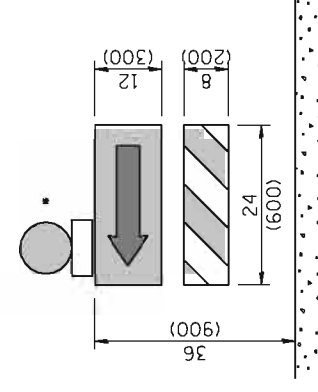
**TYPE I BARRICADE**



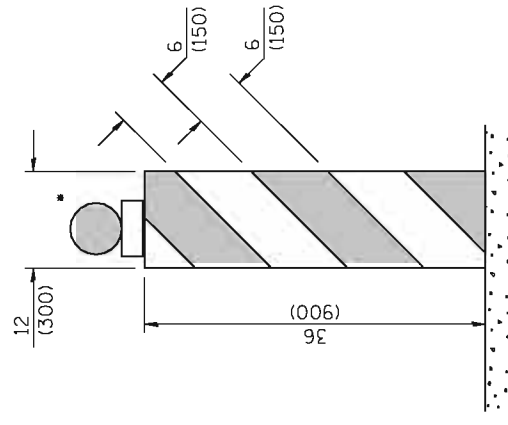
**TYPE II BARRICADE**



**TYPE III BARRICADE**



**DIRECTION INDICATOR**  
**BARRICADE**



**VERTICAL BARRICADE**

• Warning lights (if required)

**GENERAL NOTES**

All heights shown shall be measured above the pavement surface.

All dimensions are in inches (millimeters) unless otherwise shown.

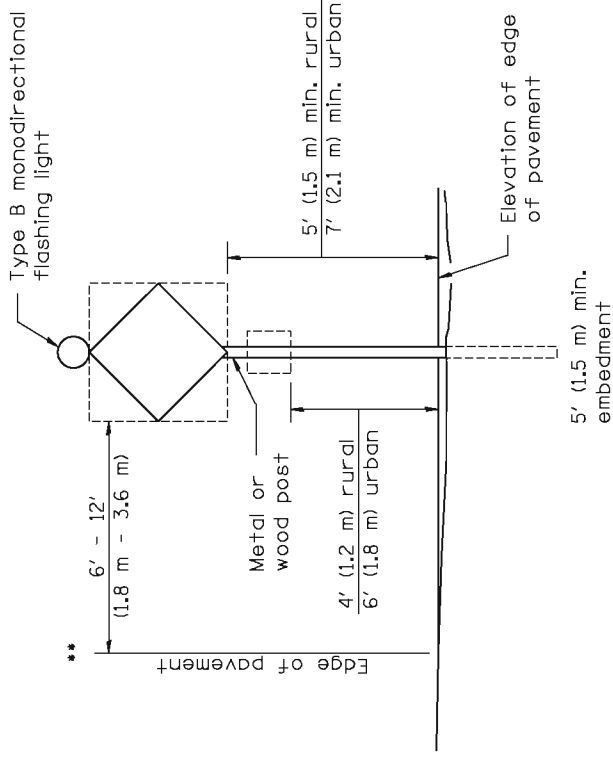
Illinois Department of Transportation	ISSUED	1-1-97
APPROVED January 1, 2009		
ENGINEER OF OPERATIONS		
APPROVED January 1, 2009		
ENGINEER OF DESIGN AND ENVIRONMENT		

DATE	REVISIONS
1-1-09	Switched units to English (metric). Omitted light on vertical panel.
1-1-08	Renumbered Standard 702001-06. Rev. note for temp. signs on Sheet 2.

**TRAFFIC CONTROL DEVICES**

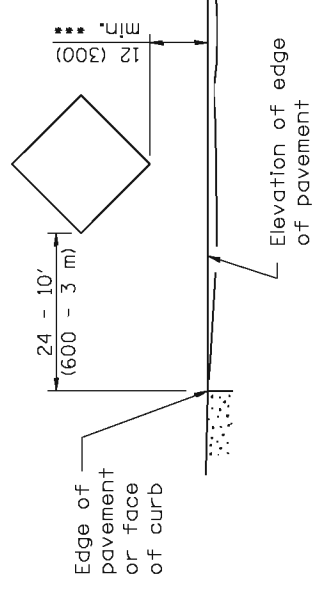
(Sheet 1 of 3)

**STANDARD 701901-01**



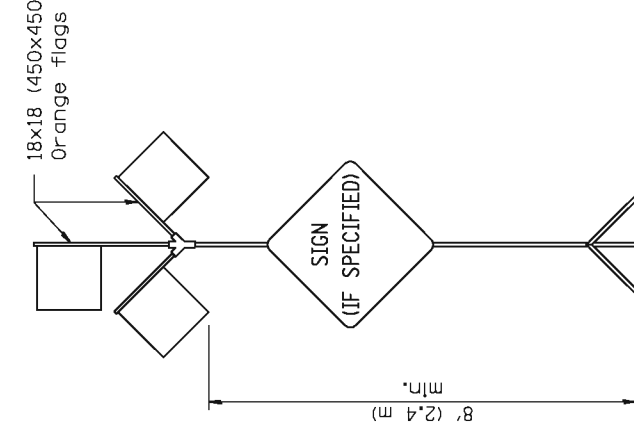
**POST MOUNTED SIGNS**

\*\* When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



**SIGNS ON TEMPORARY SUPPORTS**

\*\*\* When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen by motorists.



**HIGH LEVEL WARNING DEVICE**

ROAD CONSTRUCTION NEXT X MILES

G20-1(0)-6036

END CONSTRUCTION

G20-2a(0)-6024

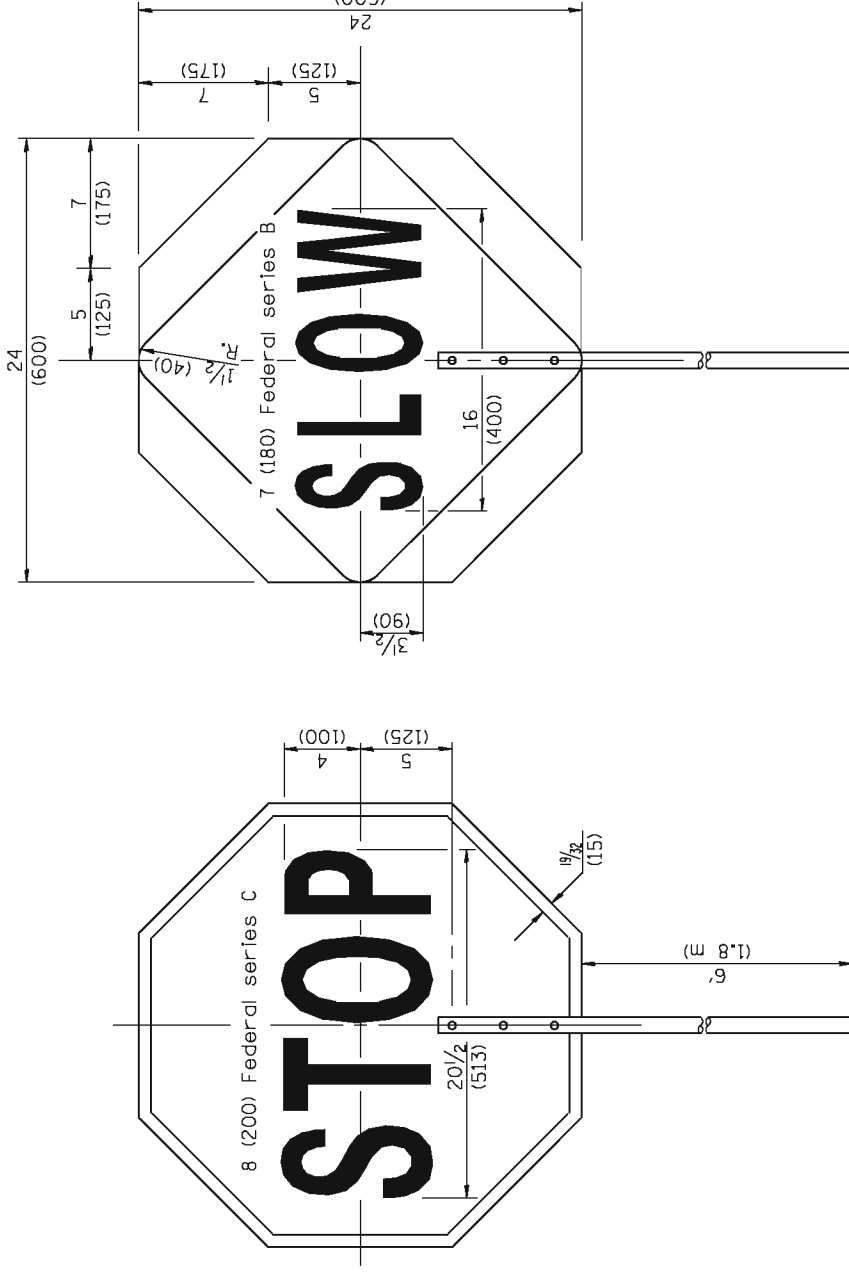
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

**WORK LIMIT SIGNING**



FRONT SIDE

REVERSE SIDE

Illinois Department of Transportation

ISSUED 1-1-97  
 APPROVED January 1, 2009  
 ENGINEER OF OPERATIONS  
 APPROVED January 1, 2009  
 ENGINEER OF DESIGN AND ENVIRONMENT

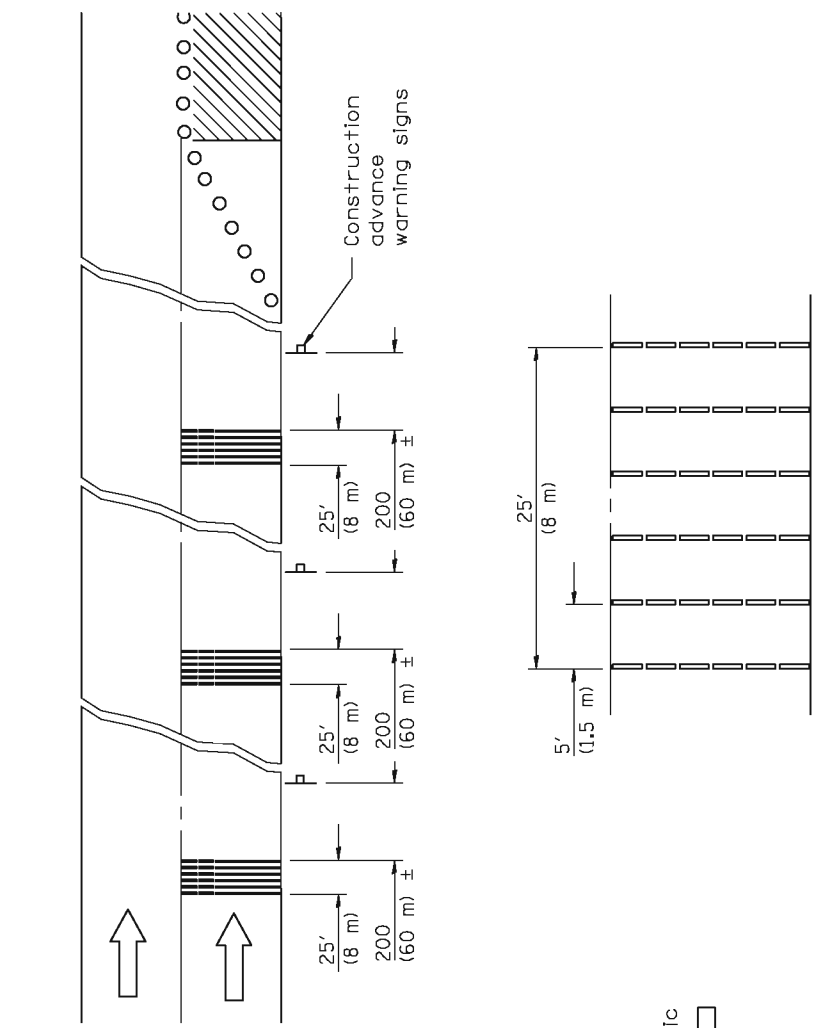
All dimensions are in inches (millimeters) unless otherwise shown.

**TRAFFIC CONTROL DEVICES**

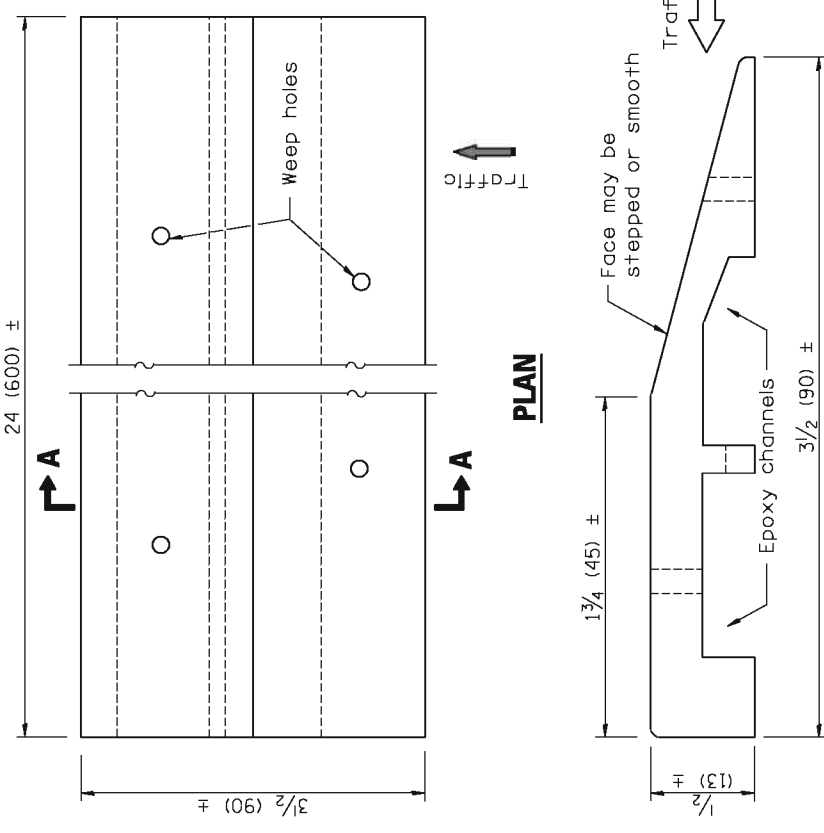
**FLAGGER TRAFFIC CONTROL SIGN**

(Sheet 2 of 3)

STANDARD 701901-01

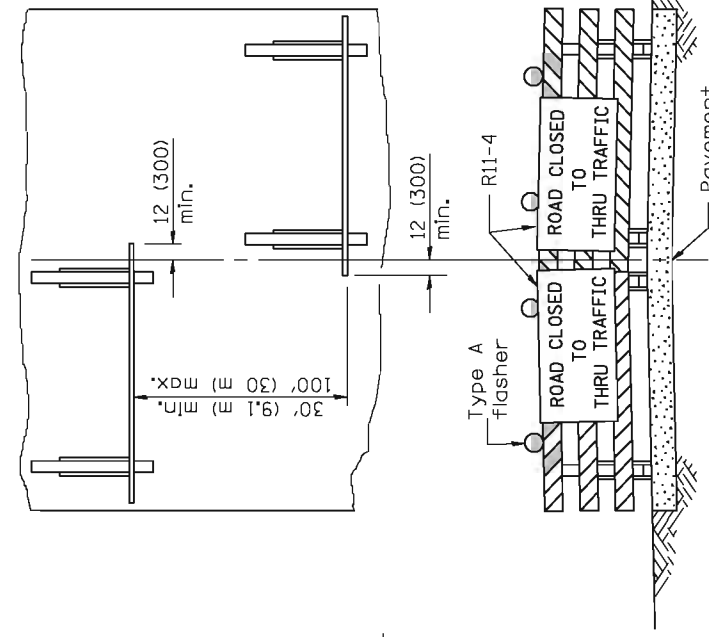


**TYPICAL INSTALLATION**



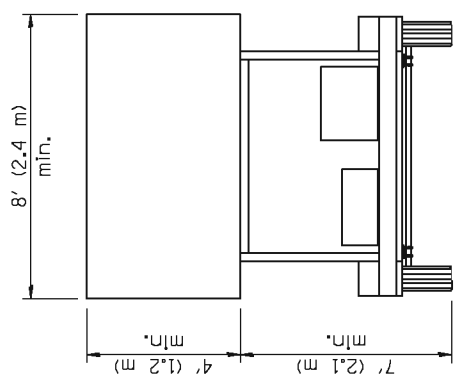
**SECTION A-A**

**TEMPORARY RUMBLE STRIPS**

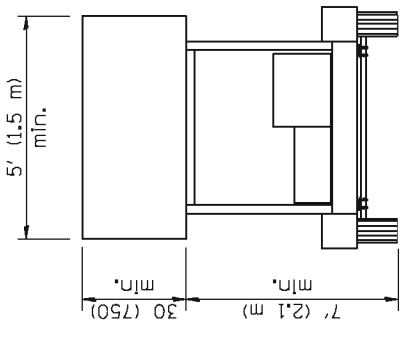


ROAD CLOSED TO THRU TRAFFIC

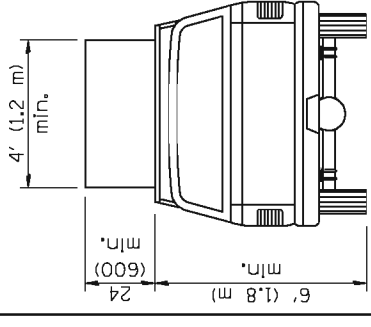
ReflectORIZED striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.



**TYPE C  
TRAILER  
MOUNTED**

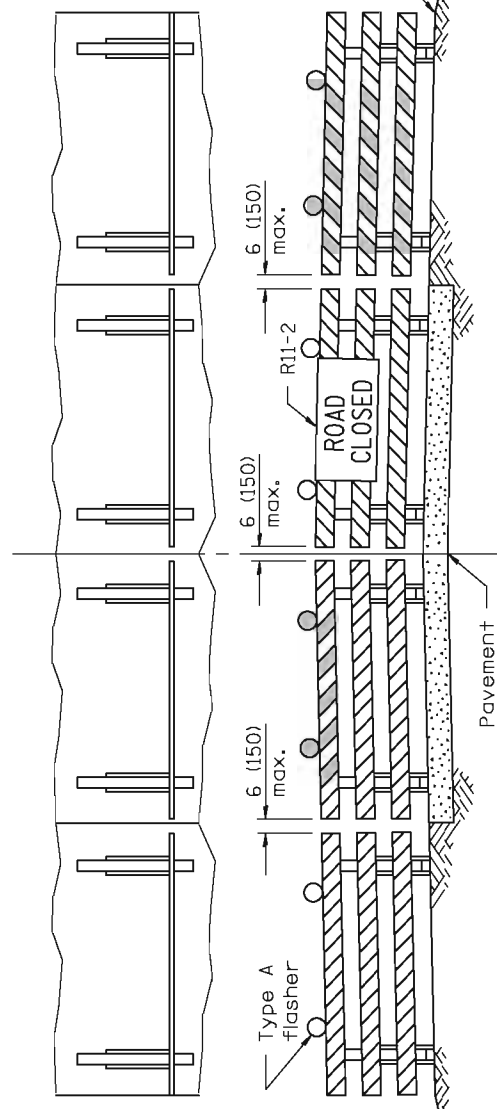


**TYPE B  
ROOF OR TRAILER  
MOUNTED**



**TYPE A  
ROOF  
MOUNTED**

**ARROW BOARDS**



ROAD CLOSED TO ALL TRAFFIC

ReflectORIZED striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.

**TYPICAL APPLICATIONS OF  
TYPE III BARRICADES CLOSING A ROAD**

Illinois Department of Transportation

APPROVED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**TRAFFIC CONTROL  
DEVICES**

(Sheet 3 of 3)

**STANDARD 701901-01**

All dimensions are in inches (millimeters) unless otherwise shown.