

Note: 4" Washed Sand, Crushed Concrete, or NDDOT Class 5 Base needed under concrete.

Refer to the Mandan Construction Specifications for the complete set of specifications on all details.

Scale	Sheet #	<p align="center">DISCLAIMER</p> <p>The specifications represented in this document are in accordance with established City of Mandan Engineering & Planning practices and are an electronic facsimile of the specifications on file in the City of Mandan Engineering & Planning Department. However, neither the City of Mandan nor its employees can or do warranty these specifications to be complete specifications for any or all construction projects. The specification document, together with all addendums listed in each construction project specification, shall be the project specification for the City of Mandan. The user acknowledges and accepts all the data "as is", including the fact that the details are under a constant state of maintenance, correction and revision.</p>	<p align="center">1304 SIDEWALK & DRIVEWAY DETAIL</p>	Engineering & Planning Department
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Date				CITY OF MANDAN WHERE THE WEST BEGINS
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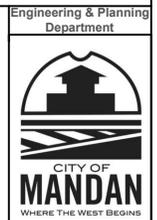
- 1) Expansion joint spacing shall be at 50' intervals, and when abutting existing concrete.
- 2) Concrete for driveways and sidewalks shall meet compressive strength requirements of 3500 P.S.I..
- 3) Concrete for driveways and sidewalks through driveways shall be 6" thick, all other sidewalks shall be 4" thick.
- 4) Driveway apron widths:
 - Residential;
 - 36' Maximum or 10' minimum
 - Driveway aprons to have flares to match curb elevation. Standard flares will require 4' of additional curb removed.
 - All driveways measured at curb.
 - Commercial;
 - 40' Maximum
 - Driveway aprons to have flares to match curb elevation. Standard flares will require 4' of additional curb removed.
 - All driveways measured at curb.
 - If no sidewalk, driveway measured 8.5' from back of curb.
- 5) Where necessary to remove existing curb and gutter it shall be removed to an existing joint or saw cut to a minimum $\frac{1}{3}$ thickness of existing concrete.
- 6) Contraction joint spacing shall be at 5' intervals and be at a minimum 1/4 depth of pour.
- 7) When constructing new driveway aprons or altering existing driveway aprons, the existing curb and gutter shall be removed, replaced and made part of the new construction.
- 8) Curb and gutter may remain in place during driveway apron construction if it is an existing depressed curb and gutter section.
- 9) Sidewalk to slope 1" towards the street. And $\frac{1}{4}$ " per foot from the front side of the sidewalk to backside of curb
- 10) All concrete to have 4" of washed sand, crushed concrete, or NDDOT Class 5 base.

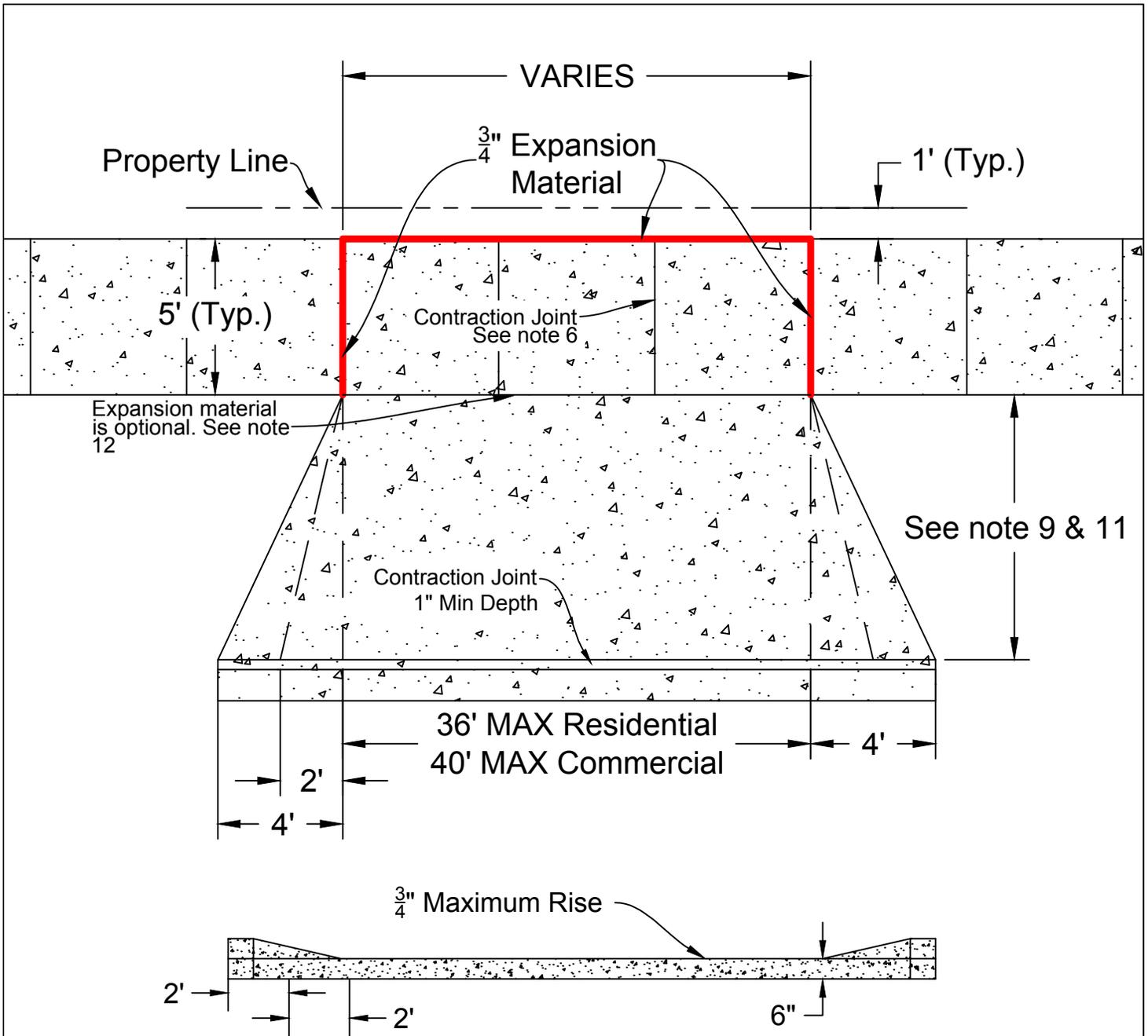
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1304 SIDEWALK & DRIVEWAY DETAIL





Note: 4" Washed Sand, Crushed Concrete, or NDDOT Class 5 Base needed under Concrete.

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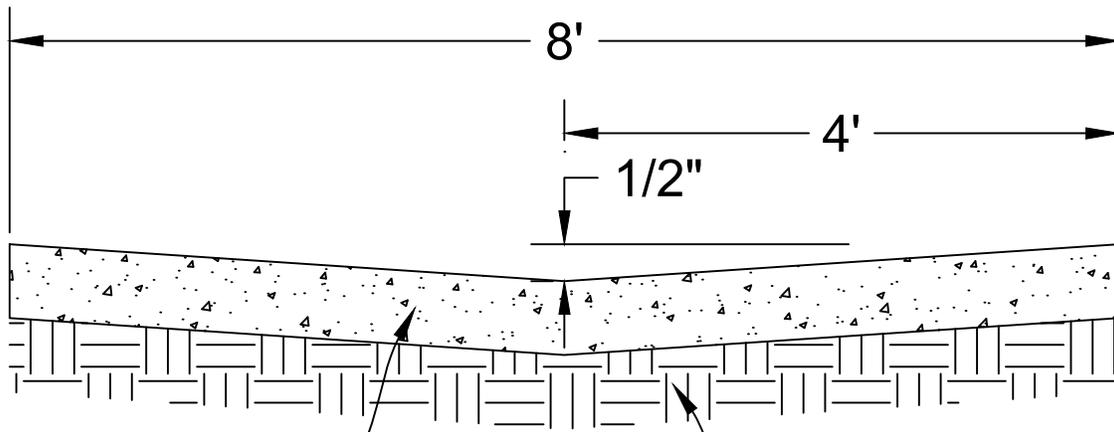
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1304-A SIDEWALK & DRIVEWAY DETAIL



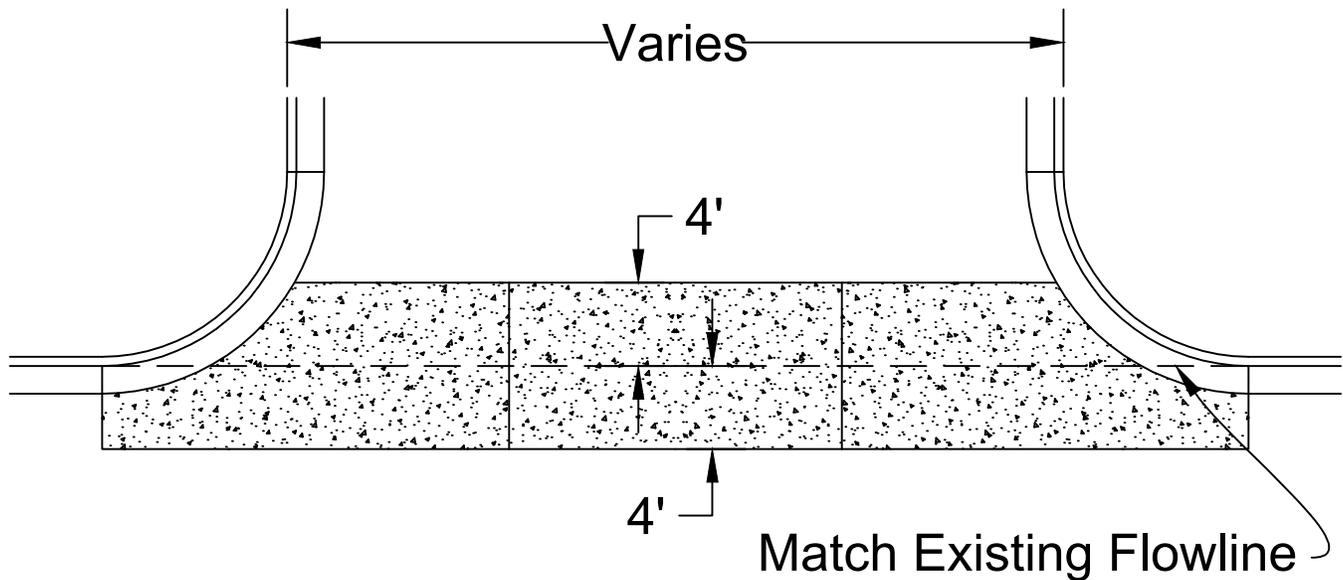
- 1) Expansion joint spacing shall be at 50' intervals, and when abutting existing concrete.
- 2) Concrete for driveways and sidewalks shall meet compressive strength requirements of 3500 P.S.I.
- 3) Concrete for driveways and sidewalks through driveways shall be 6" thick, all other sidewalks shall be 4" thick.
- 4) Driveway apron widths:
 - Residential: 36' maximum or 10' minimum
 Driveway aprons to have flares to match curb elevations. Standard flares will require 4' of additional curb cut.
 All driveway aprons are measured at the curb
 - Commercial: 40' maximum
 Driveway aprons to have flares to match curb elevation. Standard flares will require 4' of additional curb cut.
 All driveway aprons are measured at the curb
 If no sidewalk, driveway apron flare measured 8.5' from back of curb
- 5) Where necessary to remove existing curb and gutter it shall be removed to an existing joint or saw cut to a minimum $\frac{1}{3}$ thickness of existing concrete.
- 6) Contraction joint spacing shall be at 5' intervals and be at a minimum $\frac{1}{4}$ depth of pour
- 7) When constructing a new driveway apron or altering an existing apron, the existing curb and gutter shall be removed, replaced and made part of the new construction
- 8) Curb and gutter may remain in place during driveway apron construction if it is an existing depressed curb and gutter section
- 9) Sidewalk to slope 1" towards the street. And $\frac{1}{4}$ " per foot from the front side of the sidewalk to backside of curb
- 10) All sidewalk and/or driveway aprons to have 4" of washed sand, crushed concrete, or NDDOT Class 5 base.
- 11) On all aprons over 36', contractors may fill in the flare with concrete to make it a straight flare. This will enable an additional 4' on each side of the apron. Where the straight flare meets the existing sidewalk, the sidewalk must be 6" thick
- 12) The expansion material between the 6" sidewalk and the driveway apron is now optional. If the contractor pours the sidewalk and apron on separate days then form work with expansion and/or a keyway will be required. Without the expansion material there is a required saw cut of $\frac{1}{4}$ the depth of pour

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6" Concrete

Compacted Sub-base
As Per Section 302



Match Existing Flowline

Note: Remove adequate asphalt to insure smooth transition.

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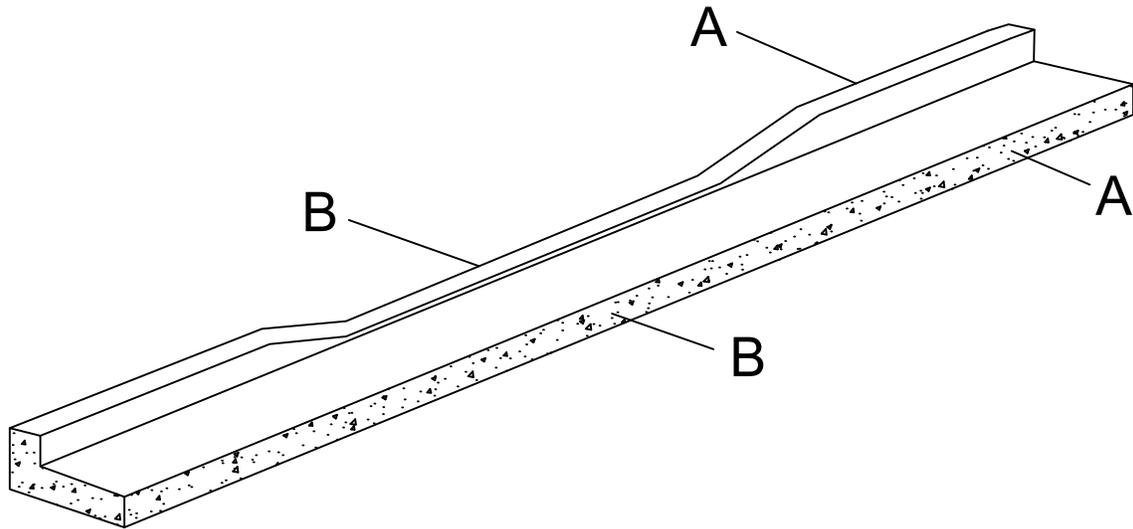
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1303-B TYPICAL VALLEY GUTTER DETAIL

Engineering & Planning
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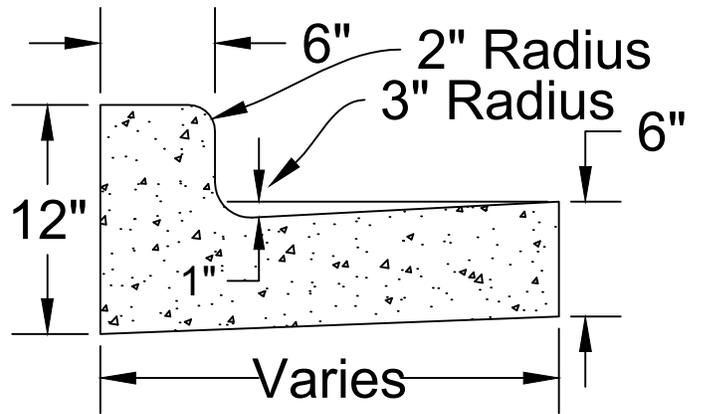
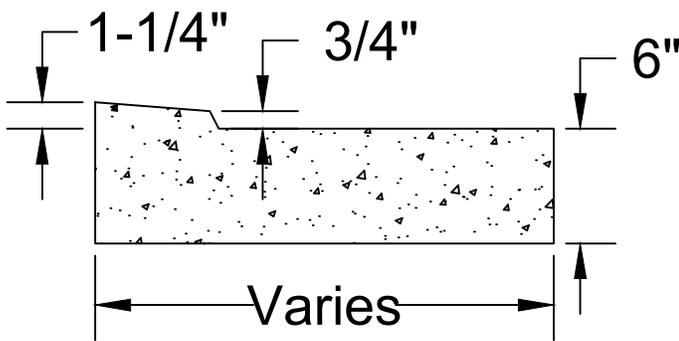


Section B - B

Depressed Curb

Section A - A

Full Curb



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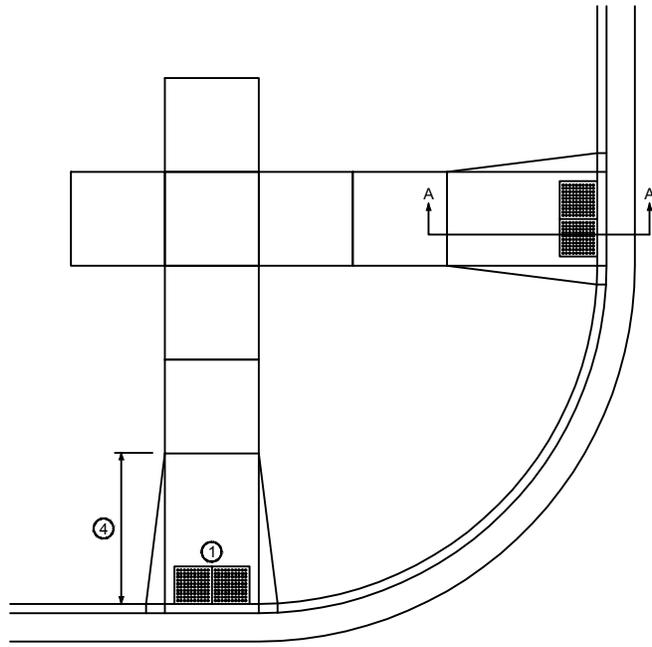
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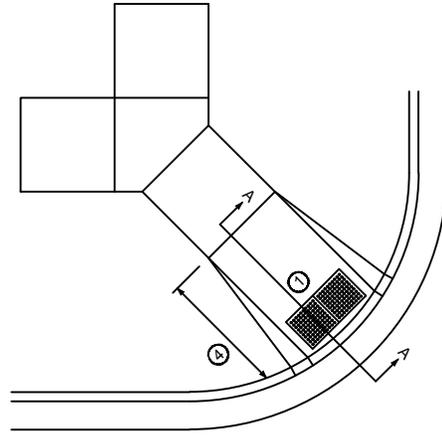
1304-B TYPICAL CURB & GUTTER DETAIL

Engineering & Planning
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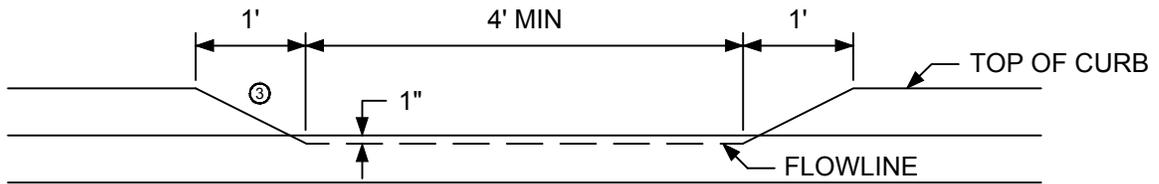




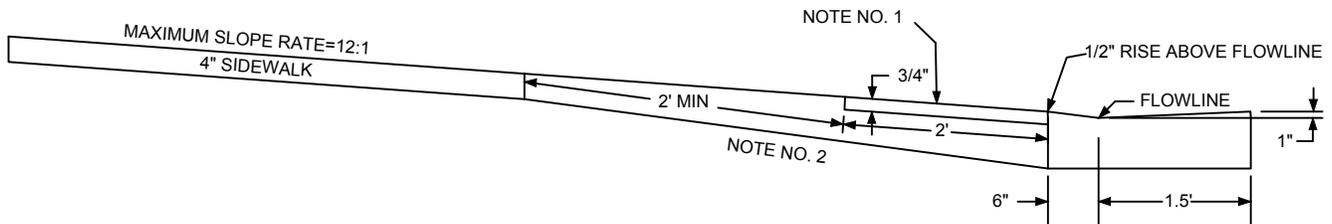
- NOTE NO. ① 2'X2' DETECTABLE WARNING PANEL
- NOTE NO. ② BOTTOM OF LANDING SHALL BE 6" THICK TAPERED TO 4" THICK MIN. 4' UP THE LANDING
- NOTE NO. ③ THIS SLOPE MAY VARY DUE TO CURB HEIGHT
- NOTE NO. ④ LENGTH OF RAMP SHALL BE DETERMINED BY THE ENGINEER



FLARED SIDES OF CURB RAMP



SECTION A-A



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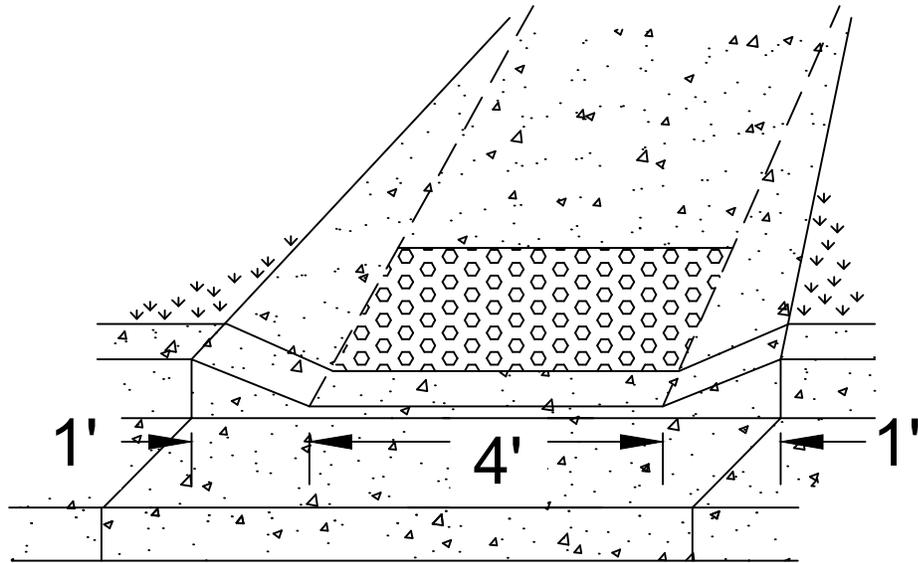
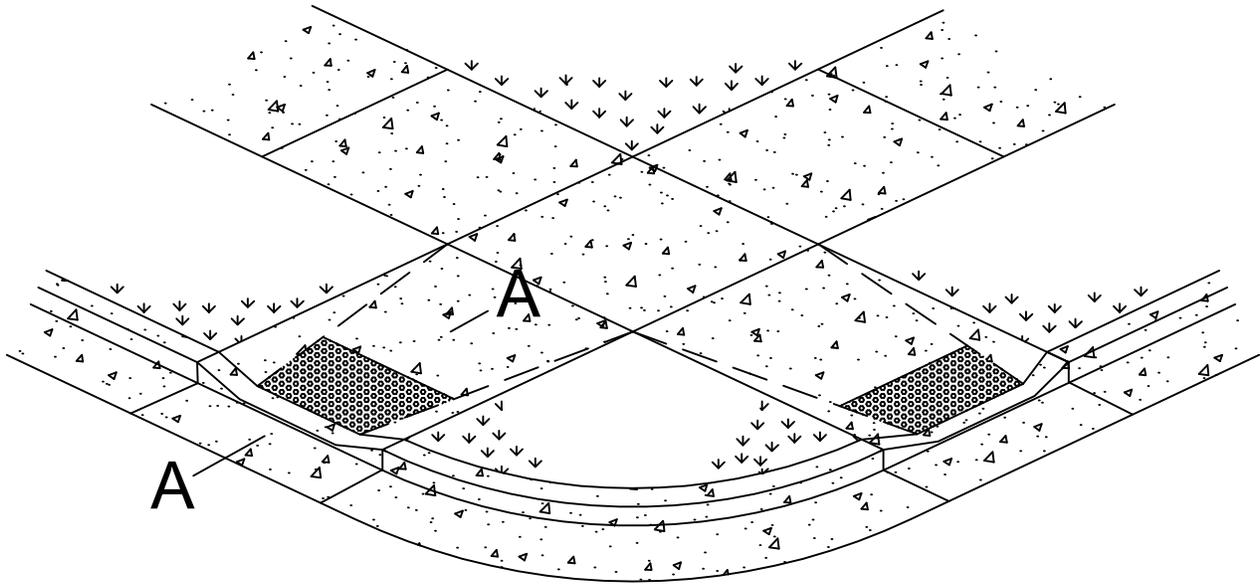
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1304 C-1 HANDICAP RAMP DETAIL

Engineering & Planning
Department





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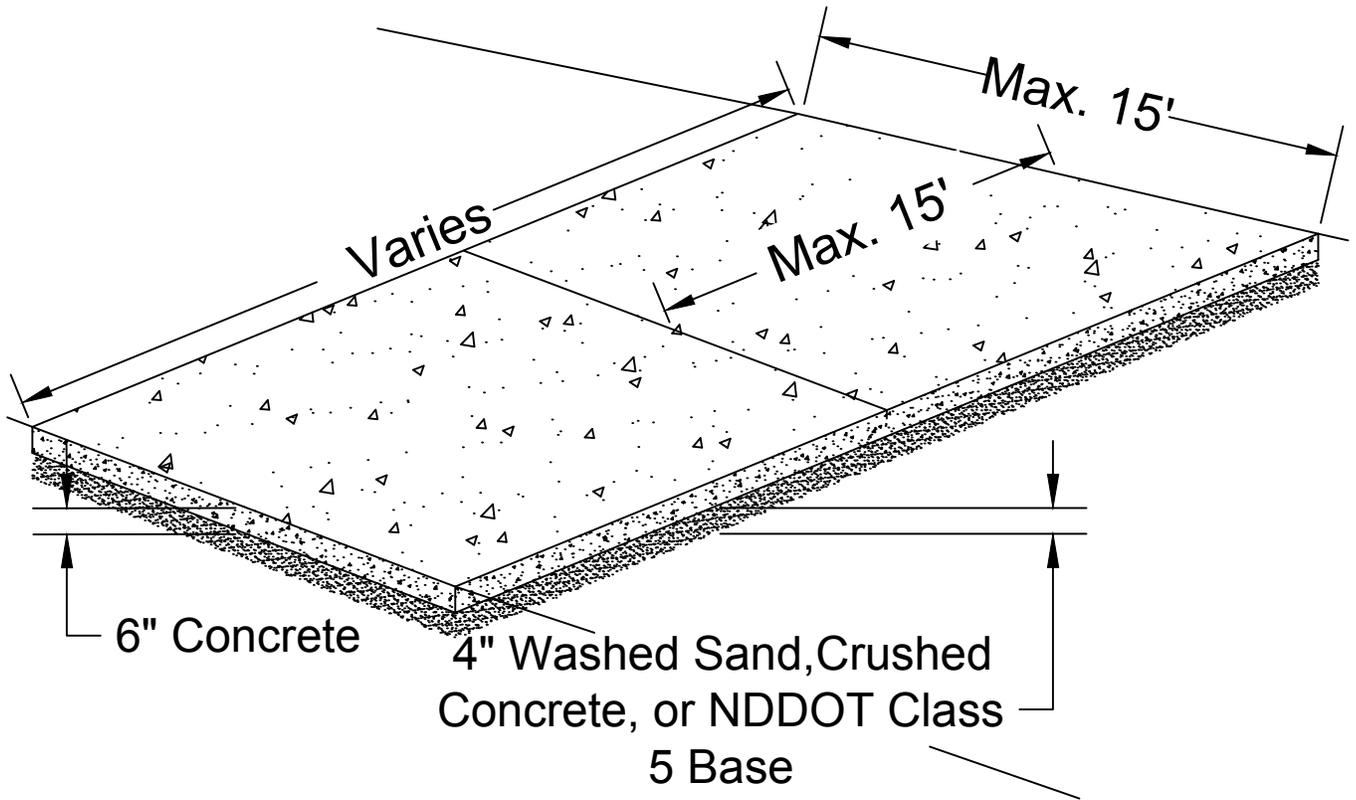
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1304-C HANDICAP RAMP DETAIL

Engineering & Planning
Department





Construction Notes

- 1) Recommended concrete strength is to be 3500 psi.
- 2) Fiber mesh is also recommended for added strength.
- 3) Contraction joints are recommended to be placed no further than 15 feet apart and 1 inch in depth.
- 4) Expansion material is required to be placed along all existing concrete at 50 foot intervals in length.

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