NOTE: TRUNCATED DOMES COLORED PER RELEVANT STDS.
TYPICAL RAMP SECTION

TOP VIEW - N.T.S.
**NOTES:**

TO BE USED IN MEDIANs ONLY WHEN SPECIFIED BY THE ENGINEER.

---

2'-0" STD. CONC. CURB & GUTTER

1'-6" STD. CONC. CURB & GUTTER

2'-6" STD. CONC. CURB & GUTTER

---

1'-6" STD. MOUNTABLE CURB & GUTTER

1'-6" STD. MEDIAN CURB & GUTTER

2'-0" STD. VALLEY GUTTER
NOTES: TO BE USED IN MEDIANS ONLY WHEN SPECIFIED BY THE ENGINEER.

1'-6" STD. MOUNTABLE CURB & GUTTER
N.T.S

2'-0" STD. CONC. CURB & GUTTER
N.T.S

2'-6" STD. CONC. CURB & GUTTER
N.T.S

2'-0" STD. MEDIAN CURB & GUTTER
N.T.S

1'-6" STD. MOUNTABLE CURB & GUTTER
N.T.S

2'-0" STD. VALLEY GUTTER
N.T.S

NOTES: TO BE USED IN MEDIANS WHEN LANES ARE SLOPED FROM ISLAND OR AS SPECIFIED BY THE ENGINEER.

1'-6" STD. MEDIAN CURB & GUTTER
N.T.S

2'-0" STD. VALLEY GUTTER
N.T.S

2'-0" STD. VALLEY GUTTER
N.T.S
1. Transition is not to be located within the curb radius.
1. Transition is not to be located within the curb radius.

NOTES:

FACE OF CURB
BACK OF CURB
LIP OF GUTTER / EOP
LIP OF GUTTER / EOP

SECTION A-A
SECTION B-B
SECTION C-C
NOTES:
1. TRANSITION IS NOT TO BE LOCATED WITHIN THE CURB RADIUS.

SECTION A-A

SECTION B-B

SECTION C-C
1. Transition is not to be located within the curb radius.
1. CJs SHALL BE SPACED AT 10' INTERVALS TO PREVENT UNCONTROLLED CRACKING. JOINT SPACING MAY BE ALTERED BY THE ENGINEER.
2. CJs MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. JOINT SPACING MAY BE ALTERED BY THE ENGINEER.
3. ALL EJs SHALL BE SPACED AT 50' INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS W/ JOINTS IN ABUTTING SIDEWALK.
4. CONC. COMPRESSIVE STRENGTH SHALL BE 3,600 P.S.I. IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
6. TOP 6" OF SUBGRADE BENEATH CURB SHALL BE COMPACTED TO 100% STD. PROCTOR DENSITY.
7. DETAIL MAY BE USED FOR PRIVATE DRIVES, PARKING LOTS, AND INTERIOR CIRCULATION DRIVE.

NOTES:

CURB & GUTTER EJ & CJ

1. CJ MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
2. CJ MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
3. ALL EJ MAY BE ALTERED BY THE TOWN ENGINEER TO PREVENT UNCONTROLLED CRACKING.
4. CONC. COMPRESSIVE STRENGTH SHALL BE 3,600 P.S.I. IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ADA RAMPS.
6. TOP 6" OF SUB-GRADE BENEATH CJ MUST BE COMPACTED TO 100% STD. PROCTOR DENSITY.

NOTES:

BASE COURSE
BINDER COURSE
SURFACE COURSE

18" VERTICAL CURB

N.T.S.

J O I N T  S E A L E R
JOINT FILLER
SURFACE OF GUTTER

N.T.S.
1. A groove joint 1" deep with 1/2" radii shall be required in the conc. sidewalk at 6' intervals. One 1/2" expansion joint will be required at 40'. A 1/2" E.J. will be required where the sidewalk joins rigid structures.

2. Conc. compressive strength shall be 3600 PSI in 28 days.

3. See Std. # __ for E. J. & groove joint detail.

4. See Std. # __ for driveway detail.

5. Monolithic curb & sidewalk to be constructed only when replacing granite curb or at locations approved by the appropriate engineer.

NOTES:
A grove joint 1" deep with 1/8" radii shall be required in the concrete sidewalk at 5' intervals. One 1/2" E.J. will be required at 45' intervals not to exceed 50' and matching expansion construction joint in adjacent curb. A sealed 1/2" E.J. will be required where the sidewalk joins any rigid structure. Sidewalk at driveway entrances to be 6" thick. Width of sidewalk on thoroughfare streets shall be a min. of 6'. Width of sidewalks on non-thoroughfare streets shall be a min. of 5'. Sidewalk to be poured to end of radius at intersecting streets. Zoning conditions may require additional width sidewalks which shall supersede these standard dimensions shown.
NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/3" RADII SHALL BE REQUIRED IN THE CONC. SIDEWAL AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 40'. A 1/2" E.J. WILL BE REQUIRED WHERE THE SIDEWAL JOINS RIGID STRUCTURES.

2. CONC. COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.

3. SEE STD. # __ FOR E.J. & GROOVE JOINT DETAIL.

4. SEE STD. # __ FOR DRIVEWAY DETAIL.

5. MONOLITHIC CURB & SIDEWALK TO BE CONSTRUCTED ONLY WHEN REPLACING GRANITE CURB OR AT LOCATIONS APPROVED BY THE APPROPRIATE ENGINEER.
1. 1/2" E.J. REQUIRE INSTALLATION OF 1/2" THICK OF BITUMINOUS FIBER THRU THE ENTIRE SLAB.
2. PRIOR APPROVAL IS REQUIRED ON GRADES EXCEEDING WHAT ARE SHOWN.
3. "A" BREAKOVER SHALL BE 8% OR LESS (A = ALGEBRICA DIFFERENCE).
4. SIDEWALK PANEL = 5'-0"
5. DRIVEWAY WIDTH = L/2
6. RAMP WIDTH = 6'-0"
7. TRAPEZOIDAL E.J. IN SIDEWALK
8. TRANSVERSE E.J. IN SIDEWALK
9. COMPACTED SUBGRADE
10. 4" THICK CONCRETE SIDEWALK
11. 6" THICK CONCRETE DRIVEWAY
12. 4" GRAVEL BASE
13. 6" CURB
14. C&G
15. Section A-A
16. Section B-B

NOTES:
1. 1/2" E.J. REQUIRE INSTALLATION OF 1/2" THICK OF BITUMINOUS FIBER THRU THE ENTIRE SLAB.
2. TO LIMIT STORM WATER FLOW DOWN DRIVEWAYS, USE STD. __ FOR DRIVEWAYS NEAR LOW POINTS.
3. ALL DRIVEWAYS MUST MEET THE CURRENT TOWN DRIVEWAY REGULATIONS & NCDOT REQUIREMENTS
   FOR SPACING, SIGHT DISTANCE, & OFFSETS FROM PROPERTY LINES & INTERSECTIONS.
4. "A" BREAKOVER SHALL BE 8% OR LESS (A = ALGEBRICA DIFFERENCE).
5. PRIOR APPROVAL IS REQUIRED ON GRADES EXCEEDING WHAT ARE SHOWN.
6. ALL CONC. TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
7. ALL CURB, C&G & SIDEWALKS ARE TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION
   OR CUT W/ A SAW & REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXIST. PAVEMENT.
   SEE STD. __ FOR DETAIL OF E.J. AN GROOVE JOINT.

---

<table>
<thead>
<tr>
<th>DRIVEWAY TYPE</th>
<th>MIN (FT)</th>
<th>MAX (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENTIAL</td>
<td>12'</td>
<td>15'</td>
</tr>
<tr>
<td>TWO-WAY</td>
<td>18'</td>
<td>24'</td>
</tr>
<tr>
<td>COMMERCIAL</td>
<td>15'</td>
<td>18'</td>
</tr>
<tr>
<td>ONE-WAY</td>
<td>24'</td>
<td>30'</td>
</tr>
<tr>
<td>TWO-WAY</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

SIDEWALK PANEL = 5'-0"
RAMP WIDTH = 6'-0"
L/2
DRIVEWAY WIDTH = L
L/2
RAMP WIDTH = 6'-0"
SIDEWALK PANEL = 5'-0"

SECTION A-A
SECTION B-B

N.T.S.
NOTES:

1. ALL DETECTABLE WARNING DEVICES USED IN NEW CONSTRUCTION SHALL BE OF A RIGID PRECAST OR EMBEDDED PRODUCT APPROVED BY THE TOWN ENGINEER. RETROFIT MATS WILL ONLY BE ALLOWED ON EXIST. RAMPS W/ PRIOR APPROVAL OF THE TOWN ENGINEER FOR MATERIAL TYPE & INSTALLATION RESURFACING).

2. WIDTH OF DETECTABLE WARNING AREA SHALL BE A MIN. OF 4' AND VARY W/ WIDTH OF RAMP.

3. LENGTH OF DETECTABLE WARNING AREA SHALL BE 2' REGARDLESS OF SECTION WIDTH.

4. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.

5. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

6. DETECTABLE WARNING AREA SHALL BE COLORED BLACK IN ALL LOCATIONS.

7. IF PAVERS ARE TO BE USED, PAVERS SHALL BE 6" THICK & CAST FROM 5000 PSI CONCRETE.

8. MATS ARE TO BE RIGID WITH TURN DOWN EDGES EMBEDDED IN CONCRETE TO ELIMINATE TRIP HAZARD.

ROADWAY PLAN SYMBOL

FOR PROPOSED ACCESSIBLE RAMP

TYPICAL LOCATION OF ADA RAMPS & PEDESTRIAN CROSSWALKS ON INTERSECTIONS

NOTES:

1. RAMP AND WING SLOPES SHALL NOT BE STEEPER THAN 12:1.

2. GUTTER FLOW LINE AND PLAN PROFILE SHALL BE MAINTAINED THROUGH THE RAMP AREA.


4. THE RAMP OPENING (AT THE FULLY DEPRESSED CURB) SHALL BE LOCATED W/IN THE PARALLEL BOUNDARIES OF THE CROSSWALK MARKINGS. THE RAMP CENTERLINE SHALL BE LOCATED AT THE CORNER RADIUS CENTERLINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

5. THE WING AND RAMP SURFACES SHALL BE 3600 PSI CONCRETE WITH A CORNER RADIUS CENTERLINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CURB RADIUS SHALL HAVE A SEGMENT OF STRAIGHT CURB AT LEAST 24" LONG LOCATED ON EACH SIDE OF THE WING SLOPE AND WIN THE CROSSWALK MARKINGS.

6. DRAINAGE STRUCTURES, MAST ARMS, LIGHT POLES AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN LINE W/ RAMPS. LOCATION OF THE RAMP SHALL TAKE PRIORITY OVER LOCATION OF OBSTRUCTIONS EXCEPT WHERE EXIST. OBSTRUCTIONS ARE BEING UTILIZED IN THE NEW CONSTRUCTION.

7. AT ALL LOCATIONS, NOT < 2 FT OF FULL HEIGHT CURB SHALL BE PLACED BETWEEN THE RAMPS.

8. SEE STD. DWG. FOR DETECTABLE WARNING INSTALLATION.
NOTES:
1. All detectable warning devices used in new construction shall be of a rigid precast or embedded product approved by the town engineer. Retro fit mats will only be allowed on exist. ramps w/ prior approval of the town engineer for material type & installation resurfacing.
2. Width of detectable warning area shall be a min. of 4' and vary w/ width of ramp.
3. Length of detectable warning area shall be 2' regardless of section width.
4. Detectable warning area can be square where used in a curb radius.
5. Detectable warning domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between domes.
6. Detectable warning area shall be colored black in all locations.
7. If pavers are to be used, pavers shall be 6" thick & cast from 5000 psi conc.
8. Mats are to be rigid with turn down edges embedded in concrete to eliminate trip hazard.
GENERAL NOTES:
1. ALL CONCRETE TO BE 3,600 P.S.I COMpressive
   strength.
2. TYPE OF PIPE TO BE USED IS 1 5/8 MAX. O.D. BLACK
   IRON, LOW CARBON PIPE OR GALVANIZED.
3. ALL JOINTS TO HAVE A 3/8 FILLET WELD AT ALL
   JOINTS.
4. AFTER INSTALLATION PAINT ASSEMBLY WITH BLACK
   ALL WEATHER ENAMEL.
5. SEE RELEVANT DETAIL FOR WARRANTS.

WARRANTS:
HANDRAIL SHALL BE INSTALLED UNDER ANY OF THE FOLLOWING
CIRCUMSTANCES IN BOTH NEW CONSTRUCTION & IN RETROFITTING
OR RECONSTRUCTION OF EXIST. ROADWAYS OR SITES:
1. WHEN THE CULVERT-CROSSING DETAIL APPLIES.
2. IF THERE IS A 2:1 OR STEEPER FILL SLOPE THAT IS 10 FEET OR
   TALLER THAT BEGINS WITHIN 5 FEET OF A SIDEWALK.
3. IN ANY OF THE FOLLOWING COMBINATIONS OF DROPPOff AND
   OFFSET FROM SIDEWALK:
   a. 18" OR LARGER DROPPOff WITHIN 2 FEET OF THE EDGE OF THE
      SIDEWALK
   b. 36" OR LARGER DROPPOff WITHIN 4 FEET OF THE EDGE OF THE
      SIDEWALK
   c. 60" OR LARGER DROPPOff WITHIN 6 FEET OF THE EDGE OF THE
      SIDEWALK

WARRANTS: (CONTINUED)
THESE CLEARANCES ASSUME THAT THE CROSS-SLOPE OF THE BERM BETWEEN THE
SIDEWALK & THE DROPPOff (PED CLEAR ZONE) IS 6:1 OR FLATTER. AT THE TOP OF ANY
DROPPOff WHERE PED CAN REASONABLY BE EXPECTED IN THE VICINITY.
1. AT THE DIRECTION OF TOWN PUBLIC WORKS OR BASED ON FIELD CONDITIONS. FOR
   PURPOSES OF THIS STD, THE TERM "SIDEWALK" IS USED GENERICALLY AND SHALL MEAN ANY
   PATH OR SURFACE TO BE USED FOR BICYCLE AND/OR PED TRANSPORTATION. EX: INCLUDE,
   BUT ARE NOT LIMITED TO, SIDEWALKS, BIKE PATHS, SHARED-USE PATHS, PED PATHS, &
   GREENWAYS.

DEFINITIONS
DROPPOff: A SLOPE OF 2:1 OR STEEPER. EX: INCLUDE HEADWALLS, RETAINING WALLS, &
CULVERTS.
PED CLEAR ZONE: 10' OF ANY COMBINATION OF SIDEWALK, SLOPE, & SHOULDER SLOPED AT
6:1 OR FLATTER. SIDEWALK DOES NOT NEED TO BE PRESENT.