

CONCRETE CURB, GUTTER, SIDEWALK, SIDEWALK RAMPS, DRIVEWAY AND ALLEY ENTRANCE

340.1 DESCRIPTION:

The various types of concrete curb, gutter, sidewalk, sidewalk ramps, driveways, and alley intersections shall be constructed to the dimensions indicated on the plans and standard detail drawings. Joints shall be designated as expansion joints or contraction joints and shall be constructed as per Subsection 340.3.

Municipality	Supplements
SC	<p>DESCRIPTION: <i>Add the following sentence:</i></p> <p>All driveways, alley entrances and sidewalk ramps constructed in the City of Scottsdale shall be a minimum of 8 inches thick.</p> <p>All sidewalks constructed adjacent to roll, ribbon, mountable curb or other curb which may be easily driven over, shall be a minimum of 5 inches thick.</p> <p>All curb and sidewalk at curb returns shall be monolithically poured.</p> <p>MAG Standard Detail 206, Concrete Scupper, shall be the basis of scupper construction unless prior approval is obtained from City staff.</p>

340.2 MATERIALS:

Concrete shall be class B, conforming to the applicable requirements of Section 725.

Expansion joints filler shall comply with Section 729.

Municipality	Supplements
GI	<ul style="list-style-type: none"> ▪ Materials <ol style="list-style-type: none"> 1. Curb and gutter, vertical curb and sidewalk shall be class “B” concrete conforming to the applicable requirements of Section 725 of M.A.G. Specifications. Use of Fly Ash will not be permitted. Use of Calcium Chloride will not be permitted when ambient air temperature is ninety (90) degrees Fahrenheit or above increasing. 2. Valley gutter, aprons and all driveway entrances shall be class “A” concrete conforming to applicable requirements of M.A.G. Section 725. Use of Fly Ash will not be permitted unless approved by the Town Engineer in writing. Calcium Chloride will not be permitted when ambient air temperature is ninety (90) degrees Fahrenheit and rising, or when temperature is ninety (90) degrees Fahrenheit and rising, or when temperature falls below thirty-two (32) degrees Fahrenheit. 3. Driveways and entrances for commercial and industrial buildings and complexes shall be constructed utilizing class “A” concrete a minimum of eight (8) inches in thickness. 4. Private and residential entrances and driveways other than rolled curb shall be constructed per M.A.G. Standard Detail 250. 5. Aprons shall be constructed in accordance with approved plans and specifications utilizing class “A” concrete for commercial and residential projects.

	<p>6. Footings for valley gutters within the apron structures shall be constructed with class “A” concrete in accordance with approved plans and specifications. Footings shall be finished smooth and constructed independent of the apron structure. The use of bond breakers, such as felt, plastic, etc. will not be permitted unless approved in writing by the Town Engineer. Footings shall be constructed a minimum of twenty-four (24) hours prior to placement of concrete within the apron structure unless otherwise approved by the Town Engineer.</p> <p>7. Valley gutters shall be constructed of class “A” concrete and poured continuous</p>
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340.2.1 Detectable Warnings Detectable warnings shall consist of raised truncated domes aligned in a square grid pattern in conformity to the Americans with Disabilities Accessibility Guidelines. Truncated domes shall have the following nominal dimensions: base diameter of 0.9 inches, top diameter of 0.4 inches, height of 0.2 inches, and dome spacing center-to-center spacing of 2.35 inches, measured between the most adjacent domes on the square grid. Detectable warnings shall contrast visually with adjoining surfaces. Visual contrast shall be obtained by color, use safety yellow or other approved color. The color shall be an integral part of the material surface. The material is to be durable with a non-slip surface not subject to spalling, chipping, delamination, or separation. All detectable warnings shall be approved by the jurisdictional agency prior to installation.

Municipality	Supplements
MC	<p>Detectable warnings shall consist of raised truncated domes aligned in a square grid pattern in conformity to the Americans with Disabilities Accessibility Guidelines. Truncated domes shall have the following nominal dimensions: base diameter of 0.9 inches, top diameter of 0.4 inches, height of 0.2 inches, and dome spacing center-to-center spacing of 2.35 inches, measured between the most adjacent domes on the square grid. Detectable warnings shall contrast visually with adjoining surfaces. Visual contrast shall be obtained by color, use safety yellow or other approved color. The color shall be an integral part of the material surface. The material is to be durable with a non-slip surface not subject to spalling, chipping, delamination, or separation. Surface applications dependent on an adhesive bonding agent(s) are not approved for use. All detectable warnings must be approved prior to installation. Request for approval are to be directed to MCDOT’s Operations and Maintenance Division (602) 506-8362</p>

340.3 CONSTRUCTION METHODS:

Existing pavements and concrete, that are joined by new construction, shall be cut in accordance with Section 601.

The subgrade shall be constructed and compacted true to grades and lines shown on the plans and as specified in Section 301. All soft or unsuitable material shall be removed to a depth of not less than 6 inches below subgrade elevation and replaced with material satisfactory to the Engineer. When the Engineer determines that the existing subgrade consists of soils with swelling characteristics, the moisture content shall be brought as close as possible to the optimum required for compaction. This shall be done by the addition of water, by the addition and blending of dry suitable material or by the drying of existing material. The subgrade shall then be compacted to a relative density of 75% minimum to 85% maximum with 80% as ideal.

Material displaced in the construction shall not be placed on the base and/or surfacing material already in place on the roadway nor shall the excavated material be placed in such a manner as to interfere with access to property or traffic flow in the street.

Existing concrete sidewalks and driveways which abut the new sidewalks and driveway entrances shall be removed to a distance required to maintain a slope as indicated by standard details or not to exceed 1 inch per foot where sidewalks are concerned. Sawcutting is required at the match lines and payment will be made under the respective pay items as provided in the proposal.

Concrete curbs, gutters and sidewalks shall be constructed by the conventional use of forms, or may be constructed by means of an appropriate machine when approved by the Engineer.

If machines designed specifically for such work and approved by the Engineer are used, the results must be equal to or better than that produced by the use of forms. If the results are not satisfactory to the Engineer, the use of the machine shall be discontinued and the Contractor shall make necessary repairs at his own expense. All applicable requirements of construction by use of forms shall apply to the use of machines.

Forms conforming to the dimensions of the curb, gutter, sidewalk, sidewalk ramps, driveway, and alley entrance shall be carefully set to line and grade, and securely staked in position. The forms and subgrade shall be watered immediately in advance of placing concrete.

Forms shall be thoroughly cleaned each time they are used, and shall be coated with a light oil, or other releasing agent of a type which will not discolor the concrete.

The concrete shall be thoroughly spaded away from the forms so that there will be no rock pockets next to the forms. The concrete may be compacted by mechanical vibrators approved by the Engineer. Tamping or vibrating shall continue until the mortar flushes to the surface, and the coarse aggregate is below the concrete surface.

Unless otherwise specified, expansion joints shall be installed at all radius points, at both sides of each driveway, at both sides of each alley entrance, at adjoining structures and at every change of depth in the concrete. The maximum distance between expansion joints shall be 50 feet. Expansion joints shall be constructed in a straight line, vertical plane and perpendicular to the longitudinal line of the sidewalk, curb and gutter, single curb, etc., except in cases of curved alignment, where they will be constructed along the radial lines of the curve. Expansion joints shall be placed to match the joints of the adjacent concrete such as sidewalk to the curb and gutter or single curb, etc. Expansion joints shall be constructed to the full depth and width of the concrete with the top of the material one-quarter inch below the top surface as depicted in Detail 230. Unless otherwise specified, all expansion joints installed against newly placed concrete, sawcut or other smooth surfaces shall comply with Section 729.1 - Premolded Joint Filler per ASTM D-1751, 1/2 inch, Bituminous Type. Expansion joints installed against existing uneven surfaces shall be per Section 729.2 - Pour Type Joint Filler.

Contraction joints, unless otherwise specified, shall be constructed in accordance with the standard details, and in a straight line and vertical plane perpendicular to the longitudinal line of the sidewalk, sidewalk ramp or curb and gutter, except in cases of curved alignment when they will be constructed along the radial lines of the curb.

Sidewalk or sidewalk ramp score marks, unless otherwise specified, shall be constructed in accordance with the standard detail.

All edges shall be shaped with a suitable tool so formed as to round the edges to a radius as indicated on the standard details.

The front face form shall not be removed before the concrete has taken the initial set and has sufficient strength to carry its own weight, gutter forms and rear forms shall not be removed until concrete has hardened sufficiently to prevent damage to the edges. Special care shall be taken to prevent any damage. Any portion of concrete damaged while stripping forms shall be repaired or if the damage is severe, replaced at no additional cost to the Contracting Agency. The face, top, back, and flow line of the curb and gutter shall be tested with a 10-foot straightedge or curve template, longitudinally along the surface. Any deviation in excess of 1/4 inch shall be corrected at no additional cost to the Contracting Agency.

The surface of concrete sidewalk or sidewalk ramp shall be tested with a 5-foot straightedge. Any deviation in excess of 1/8 inch shall be corrected at no additional cost to the Contracting Agency.

When required by the Engineer, gutters having a slope of 0.8 foot per hundred feet or less, or where unusual or special conditions cast doubt on the capability of the gutters to drain, they shall be water tested. Water testing shall consist of establishing flow in the length of gutter to be tested by supplying water from a hydrant, tank truck or other source. One hour after the supply of water is shut off, the gutter shall be inspected for evidence of ponding or improper shape. In the event water is found ponded in the gutter to a depth greater than 1/2 inch, or on the adjacent asphalt pavement, the defect or defects shall be corrected in a manner acceptable to the Engineer without additional cost to the Contracting Agency.

Any section of the work deficient in depth or not conforming to the plans or specifications shall be removed and replaced by the Contractor at no additional cost to the Contracting Agency.

Finishing and curing of the concrete shall be done in the manner specified in Section 505.

The Contractor shall stamp his name and year on all work done by him, on each end of the curb, gutter, sidewalk or sidewalk ramp. The letters shall not be less than 3/4 inch in height.

Municipality	Supplements
GI	<p>Subgrade Construction</p> <p>1. Curb subgrade. The subgrade shall be constructed and compacted true to grades and lines as shown on the plans and as specified by the Town of Gilbert. All soft or unsuitable materials shall be removed to a depth of not less than six (6) inches below subgrade elevation and replaced with material satisfactory to the Town Engineer. Subgrade materials shall be moistened or dried to optimum moisture content plus or minus two (2) percent and compacted to a minimum of ninety (90) percent of the maximum density in accordance with ASTM D-698.</p> <p>2. Sidewalk subgrade. Materials having expansive potentials of four (4) percent or less shall be moisture conditioned and compacted to the following specifications. Subgrade materials shall be moisturized to a moisture content of two (2) percent to four (4) percent above optimum for a minimum depth of eight (8) inches and compacted to a density of ninety (90) to ninety-five (95) percent a minimum of twenty-four (24) hours prior to concrete placement. Subgrade conditions shall be maintained in this condition until the time of concrete placement. Subgrade materials having an expansive potential greater than four (4) percent shall be moisture conditioned two (2) percent to five (5) percent above optimum for a minimum depth of twelve (12) inches and compacted to a density of ninety (90) to ninety-five (95) percent, between thirty-six (36) and forty-eight (48) hours prior to concrete placement. These conditions shall be maintained until the time of concrete placement. In no case shall curb subgrade consist of existing base materials and/or surfacing material already in place. Granular base materials or clean sands shall not be permitted for use as curb subgrade or be utilized as fill below bottom of curb, unless approved by the Town Engineer in writing.</p> <p>3. Valley Gutter, Apron and Driveway Subgrade. Materials having expansive potential shall be moistened or dried to optimum moisture content plus or minus two (2) percent for a depth of eight (8) inches and compacted to a density between ninety (90) and ninety-five (95) percent. The subgrade shall be firm and unyielding prior to the placement of concrete. Non-expansive materials shall be moistened or dried to optimum moisture content plus or minus three (3) percent for a depth of eight (8) inches and compacted a density of ninety-five (95) percent.</p> <p>Concrete Curbs, Gutters and Sidewalks Construction.</p> <p>Concrete curbs, gutters and sidewalks shall be constructed by the conventional use of forms, or an appropriate machine upon approval of the Town Engineer. Forms shall be thoroughly cleaned prior to each use and shall be coated with a light oil or other releasing agent of a type which will not discolor the concrete. The concrete shall be thoroughly spaded away from forms so that there will be no rock pockets next to the forms. The concrete may be compacted by mechanical vibrators as approved by the Town Engineer. Tamping or vibrating shall continue until the mortar flushes to the surface and coarse aggregate is below the concrete surface.</p> <p>Expansion joints, unless otherwise specified, shall be constructed in accordance with the Town of Gilbert Standard Details and in a straight line and vertical plane perpendicular to the longitudinal line of the sidewalk or curb and gutter, except in cases of curved alignment, when they will be constructed along the radial lines of the curve. They shall be constructed to the full depth and width of the concrete and shall match the joints in the adjacent pavement, sidewalk or curb and gutter. Joints shall be constructed at all radius points, driveways, alley entrances and at adjoining structures with a maximum interval of fifty (50) feet between joints.</p> <p>Contraction joints, unless otherwise specified, shall be constructed in accordance with the Town of Gilbert Standard Details and in a straight line and vertical plane perpendicular to the longitudinal line of the sidewalk or curb and gutter, except in cases of curved alignment when they will be</p>

	<p>constructed along the radial lines of the curb. They shall be constructed to a depth of one (1) inch and at five-foot intervals on sidewalk and curb & gutter widths of six (6) feet and eight-foot intervals on sidewalk widths of four (4) feet. Sidewalk score marks, at least ½ inch deep, are required every four (4) feet or every five (5) feet matching the width of the sidewalk. The front face form shall not be removed before the concrete has taken its initial set and has sufficient strength to carry its own weight. All gutters will be required to be flow tested.</p> <p>Grinding and/or epoxy patching of curbs-gutters-aprons, valley gutters – driveways- scuppers – manhole bases and inverts of any concrete structure to correct deficiencies that result from improper grade setting, or construction methods, or breakage due to any circumstances shall not be permitted.</p>
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Municipality	Supplements
GI	<p>Curb returns and ramps 3.22 Curb returns and ramps: All street intersections shall be constructed with concrete vertical curb returns and a single sidewalk ramp. For back of curb radius 30' and over, use MAG Std. Det. 231. For back of curb radius less than 30' and a curb height more than 4", use MAG Std. Det. 232. For back of curb radius less than 30' and a 4" curb height, use MAG Std. Det. 234. The radius to back of curb for the return shall be: Glendale Table 3.1</p> <p>Concrete placement and curing 3.27 Concrete placement and curing: All concrete shall be mixed, placed and cured as required by MAG specifications. For curb, gutter and sidewalk, subgrade densities shall be 90% of a Standard Proctor, (ASTM D-698). These specifications require that white-pigmented curing compound be used on all concrete paving items such as streets, curbs, gutter and sidewalks. The particular white-pigmented curing compound selected by the contractor must meet the requirements of either AASHTO M-148, Type 2, Class A, or that of ASTM C 309, Type 2, Class A. It is important to begin the application of curing compound immediately after the surface water has disappeared from the concrete and the surface will support walking workmen. The coverage should be uniform, not spotty or with missed areas. The curing compound should be applied at a rate of 200 square feet per gallon</p>

Municipality	Supplements
ME	<p>Subsection 340.3 – for all concrete sidewalk expansion joints, the following applies: Expansion joints for concrete sidewalk shall be constructed at all radius points, at both sides of each driveway and alley entrance, at adjoining structures, and at every change of depth in the concrete. There shall be a maximum interval of 50-feet between expansion joints. The expansion joint shall be constructed to the full width of the concrete. The depth of the expansion joint material shall be one-inch (1”) greater than the depth of the thickest concrete adjacent to the joint. The expansion joint material shall comply with subsection 729.1 of the M.A.G. Uniform Standard Specifications and shall be installed in a vertical plane with the top of the joint material one-quarter inch (1/4”) below the sidewalk surface as depicted in M.A.G. Detail 230. U. Subsection 401.3 – Add a new sentence to read as follows: Contractor shall use off-duty City of Mesa police officers as required by the City of Mesa Traffic Barricade Manual for work within the City limits.</p>

Municipality	Supplements
PH:	<p>CONSTRUCTION METHODS: change the 3rd, 4th, and 5th paragraphs to read:</p> <p>Expansion joints, unless otherwise specified, shall be constructed in accordance with the City of Phoenix Detail P1230. They shall be in a straight line and vertical plane perpendicular to the longitudinal line of the sidewalk or curb and gutter, except in case of a curved alignment when</p>

	<p>they will be constructed along the radial lines of the curve. The expansion joints shall be constructed to the full depth and width of the concrete and shall match the joints in the adjacent pavement, sidewalk or curb and gutter. The expansion joint material shall extend fully through the concrete from the surface to one inch into the subgrade. Joints shall be constructed at all radius points, driveways, alley entrances and at adjoining structures with a maximum interval of 50 feet between joints.</p> <p>Contraction joints, unless otherwise specified, shall be constructed in accordance with City of Phoenix Detail P1230 and in a straight line and vertical plane perpendicular to the longitudinal line of the sidewalk or curb and gutter, except in case of a curved alignment when they will be constructed along the radial lines of the curb. They shall be constructed to a depth of 1-1/2" at 10' intervals on all sidewalks regardless of the width. Unless an expansion joint is required, a contraction joint will coincide with each form joint. Sidewalk score marks, at least 1/2 inch deep are required at the mid-point of the contraction joint.</p>
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Municipality	Supplements
SC	<p>CONSTRUCTION METHODS: <i>Is modified as follows:</i></p> <p><i>Delete the last sentence of paragraph 10 and insert the following:</i></p> <p>Joints shall be constructed at all radius points, driveways, alley entrances, and at adjoining structures with a maximum interval of 50 feet between joints, and shall provide for complete separation of adjoining structures.</p> <p><i>Add the following paragraph between paragraphs 16 and 17 (Added text is highlighted.):</i></p> <p>In the event water is found ponded in the gutter to a depth greater than 1/2-inch, or on the adjacent asphalt pavement, the defect or defects shall be corrected in a manner acceptable to the Engineer without additional cost to the Contracting Agency.</p> <p>In addition to the straightedge requirements specified herein, all finish concrete elevations shall not deviate from the elevations shown on the plans, or indicated by typical sections or standard details referenced within the construction documents, by more than 1/4 inch as determined by the Engineer. Areas between elevations shown on the plans shall be straight graded or smoothly transitioned through a vertical curve in a manner approved by the Engineer or as otherwise indicated on the construction documents.</p> <p>Sidewalk panels, all gutters, curbs, and aprons with cracks shall be replaced by the Contractor.</p> <p>Any section of the work deficient in depth or not conforming to the plans or specifications shall be removed and replaced by the Contractor at no additional cost to the Contracting Agency.</p>

340.3.1 Detectable Warnings The detectable warning surface shall be located so that the edge nearest the curb line is 6 inches minimum and 8 inches maximum back from the face of curb. Detectable warning surfaces for railroads shall be located so that the edge nearest the rail crossing is 6 inches minimum and 8 inches maximum from the vehicle dynamic envelope.

Detectable warnings shall be installed perpendicular to the direction of pedestrian/wheelchair travel and have a minimum width of 24 inches measured perpendicular to the edge of the roadway or rail crossing. The base surface of detectable warnings shall be installed flush with the adjacent walkway surface, the truncated domes shall extend above the walkway surface. The boundary between detectable warnings and the adjacent walkway shall provide a flush uniform surface that will not cause ponding of water nor present a tripping hazard.

Detectable warnings installed on sidewalk ramps shall modify the sidewalk concrete thickness at the detectable warning to provide a minimum thickness of four-inches (4"). When detectable warnings are modules inset into the sidewalk ramp, the bottom surface of the sidewalk shall be lowered a distance equal to or greater than the module thickness to maintain the minimum sidewalk thickness. The sidewalk bottom surface shall have a minimum transition taper length of 12" between the thickened and normal depth sections of sidewalk.

340.4 BACKFILLING:

Unless otherwise specified the Contractor shall backfill behind the curbs, sidewalk or sidewalk ramps with soil native to the area to the lines and grades shown on the plans.

340.5 MEASUREMENT:

Concrete curbs and gutters of the various types shown on the plans and in the proposal, will be measured along gutter flow line through inlets, catch basins, driveways, sidewalk ramps, etc., by the lineal foot to the nearest foot for each type, complete in place.

Concrete sidewalks, sidewalk ramps, driveways, alley intersections, valley gutters and aprons will be measured to the nearest square foot complete in place. When concrete sidewalk, sidewalk ramps, driveways, alley intersections, valley gutters, and/or aprons are cut during trenching operations, the square foot measurement for payment will be in accordance with Section 336.

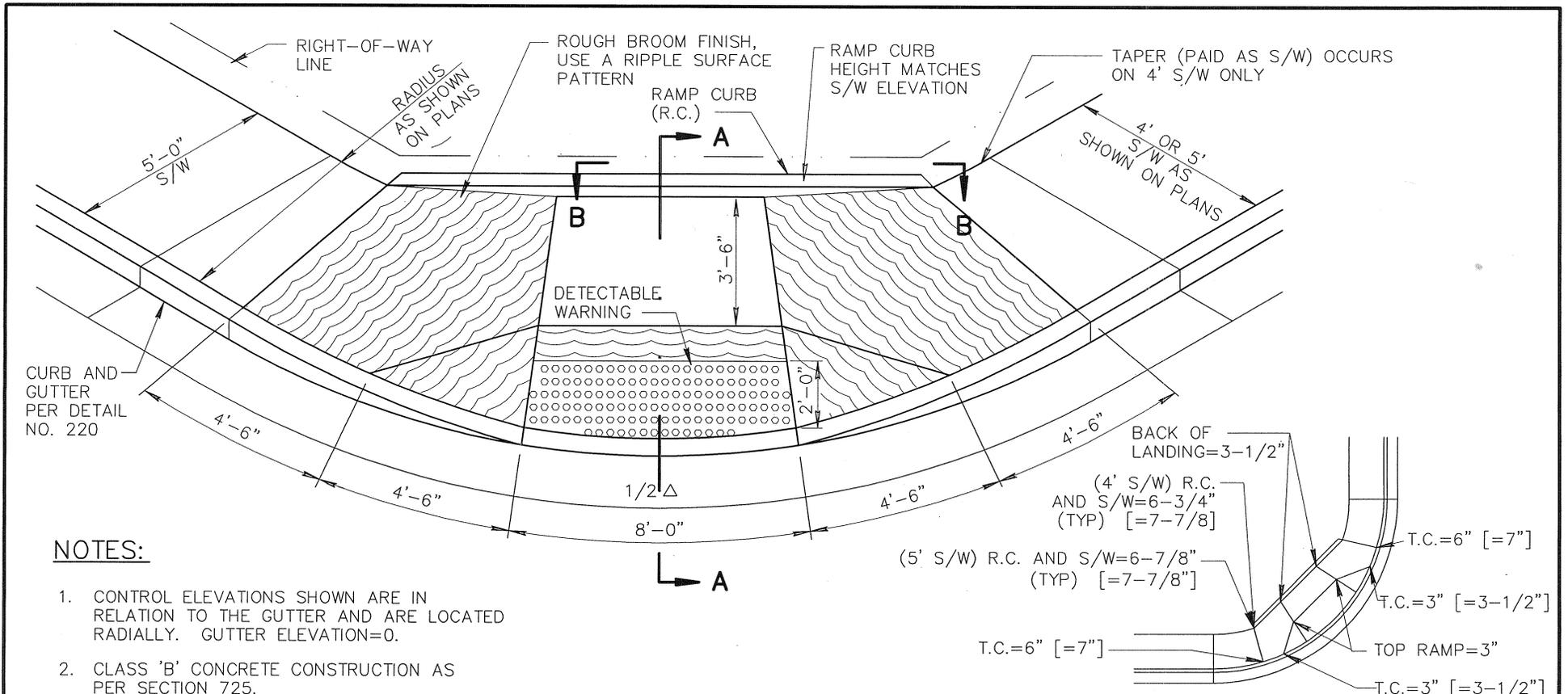
Detectable warnings shall not be measured for payment. Detectable warning are considered integral to the walking surface that they form a part of and the cost is included in the related pay item.

340.6 PAYMENT:

Payment for the above named items will be made in accordance with the unit prices or lump sums as set forth in the proposal. Such payment shall include full compensation for furnishing all labor, material, tools and equipment and accomplishing all work in conformance with the contract documents.

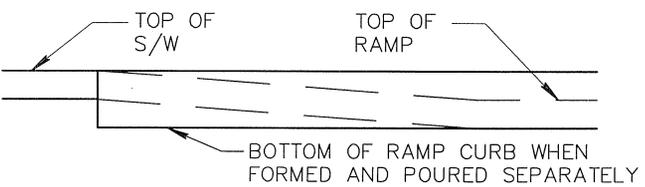
		Traveled Surface	
G-328	GL	Paving Blocks for Medians	06-2002
G-329	GL	Paving Blocks for Public Streets and Crosswalks	06-2002
G-3220	GO	Median Concrete Pavers	
2237	SC	Sidewalk Pavers (Non-Traffic Bearing)	
2238	SC	Concrete Paver Crosswalk	02-21-2001
2239	SC	Median Concrete Pavers	02-26-2001
230	MAG	Sidewalks	01-01-2003
42	GI	Meandering Sidewalk	01-2005
43	ME	Detached Sidewalk on Arterial and Collector Streets	01-10-2006
P1230	PH	Sidewalks	08-08-2003
T-345	TE	Typical Sidewalk Alignment	2005
T-351	TE	South Tempe Overlay District Sidewalk Details	2005
T-353-1	TE	Brick Sidewalk and Tree Grate Sheet 1 of 2	2000
T-353-2	TE	Brick Sidewalk and Tree Grate Sheet 2 of 2	2000
231	MAG	Sidewalk Ramps – Type A	01-01-2006
AJ-PW232	AJ	Sidewalk Ramps with Roll Curb	09-1999
2031-A	MC	Sidewalk Ramp Arterial Intersections	06-01-2005
2031-B	MC	Sidewalk Ramp Residential and Collector Intersections	06-01-05
M-44	ME	Sidewalk Ramps – Type A	02-10-2006
M-44.1	ME	Typical ADA Push Button Access Pad Details	02-17-2005
2235-1	SC	Mid-Block Sidewalk Ramp Type A	05-25-2005
T-324	TE	Diagonal Ramps – Type A	2005
232	MAG	Sidewalk Ramps –Type B	01-01-2006
2232	SC	Directional Sidewalk Ramps	05-25-2005
2235-2	SC	Mid-Block Sidewalk Ramp Type B	05-25-2005
T-326	TE	Blended Transition Ramps – Type B	2005
233	MAG	Sidewalk Ramps – Type C	01-01-2006
AJ-PW233	AJ	Sidewalk Ramp with Roll Curb	04-2000
C-244	CH	Sidewalk Ramp at Intersections for Roll Curbs	11-19-199
2032-A	MC	Sidewalk Ramp Arterial Streets	06-01-2005

2032-B	MC	Sidewalk Ramp Residential and Collector Streets	06-01-2005
P1235	PH	Sidewalk Ramp Detail –Type C	07-19-2004
P1235-1	PH	Sidewalk Ramp Detail (Type C Modified Detached Sidewalk)	08-08-2003
234	MAG	Sidewalk Ramps – Type D	01-01-2006
	AV	Sidewalk Ramp Detail	
	AV	Sidewalk Ramp Detail	
	AV	Depressed S/W & Curb Detail	
C-243	CH	Sidewalk Ramp For Roll Curb	1-11-2002
P1231	PH	Apron Joints	08-08-2003
P1236	PH	Mid-Block Ramp with 4” Roll Curb	08-08-2003
P1238	PH	Sidewalk Ramp Detail 25’ or 30’ Radius Curb Return	07-19-2004
P1240	PH	Sidewalk Ramp Detail 35’ Radius Curb Return	07-19-2004
P1241-1	PH	Sidewalk Ramp Detail 20’ Radius Curb Return	07-19-2004
P1241-2	PH	Sidewalk Ramp Detail with Limited R/W	07-19-2004
P1241-3	PH	Single Sidewalk Ramp Detail 20’ Radius Curb Return	07-19-2004
P1242	PH	Sidewalk Ramp Detail 4” Vertical Curb Return	07-19-2004
2234	SC	Shared Curb Sidewalk Ramp	05-25-2005
T-322	TE	Mid-Block Ramp for 4”, 6” and 7” Curb	2004
T-328	TE	Preferred Directional Sidewalk Ramps Detail 25’, 30’ Radius Curb Returns	2004
T-349	TE	Sidewalk and Ramp at Street Intersections Where Directional Ramps are Not Possible	
240	MAG	Valley Gutter	01-01-2003
C-233	CH	Valley Gutter	11-19-1999
G-340	GL	6’ Wide Valley Gutter	06-28-2002
2240	SC	6’ Valley Gutter and Apron	05-10-2005
250	MAG	Driveway Entrances	01-01-2006
250M-AJ	AJ	Driveway Entrances	09-1999
	AV	Typ. Driveway Locations	
C-228	CH	Typical Driveway Access to Private Gated Community	
C-245	CH	Combined Sidewalk Ramp and	01-11-2002



NOTES:

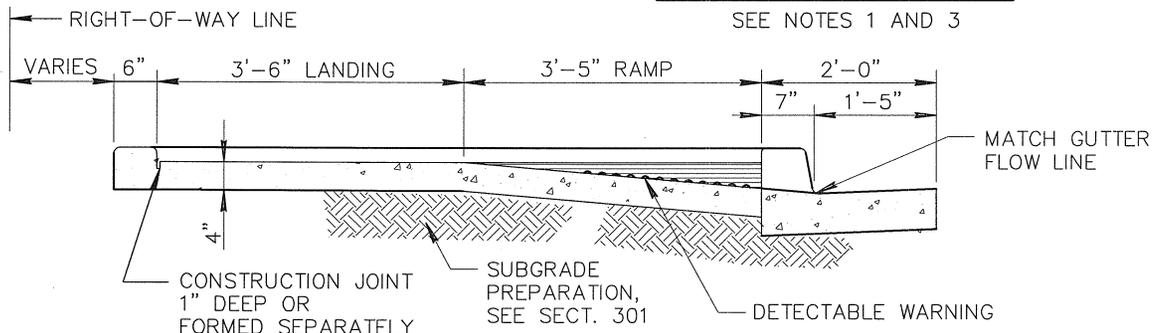
1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEVATION=0.
2. CLASS 'B' CONCRETE CONSTRUCTION AS PER SECTION 725.
3. WHEN CURB HEIGHTS OF 7" ARE SHOWN ON PLANS, USE DIMENSIONS SHOWN IN []'S.
4. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.



SECTION B-B

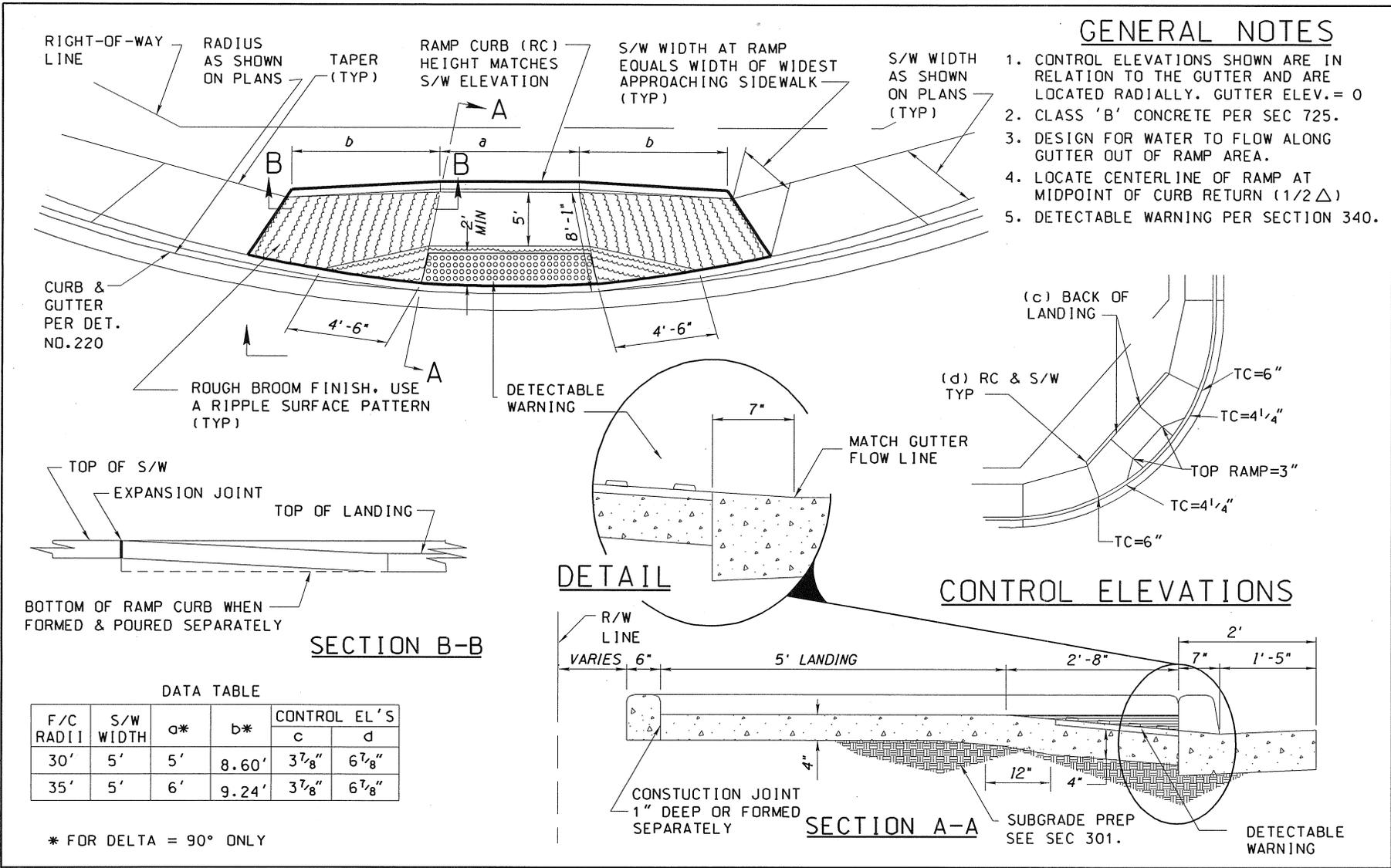
CONTROL ELEVATIONS

SEE NOTES 1 AND 3



SECTION A-A

DETAIL NO. 231	STANDARD DETAIL ENGLISH	SIDEWALK RAMPS - TYPE 'A'	REVISED 01-01-2006	DETAIL NO. 231
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GENERAL NOTES

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALY. GUTTER ELEV. = 0
2. CLASS 'B' CONCRETE PER SEC 725.
3. DESIGN FOR WATER TO FLOW ALONG GUTTER OUT OF RAMP AREA.
4. LOCATE CENTERLINE OF RAMP AT MIDPOINT OF CURB RETURN (1/2Δ)
5. DETECTABLE WARNING PER SECTION 340.

SECTION B-B

CONTROL ELEVATIONS

DETAIL

SECTION A-A

DATA TABLE

F/C RADIUS	S/W WIDTH	a*	b*	CONTROL EL'S	
				c	d
30'	5'	5'	8.60'	3 ⁷ / ₈ "	6 ⁷ / ₈ "
35'	5'	6'	9.24'	3 ⁷ / ₈ "	6 ⁷ / ₈ "

* FOR DELTA = 90° ONLY

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

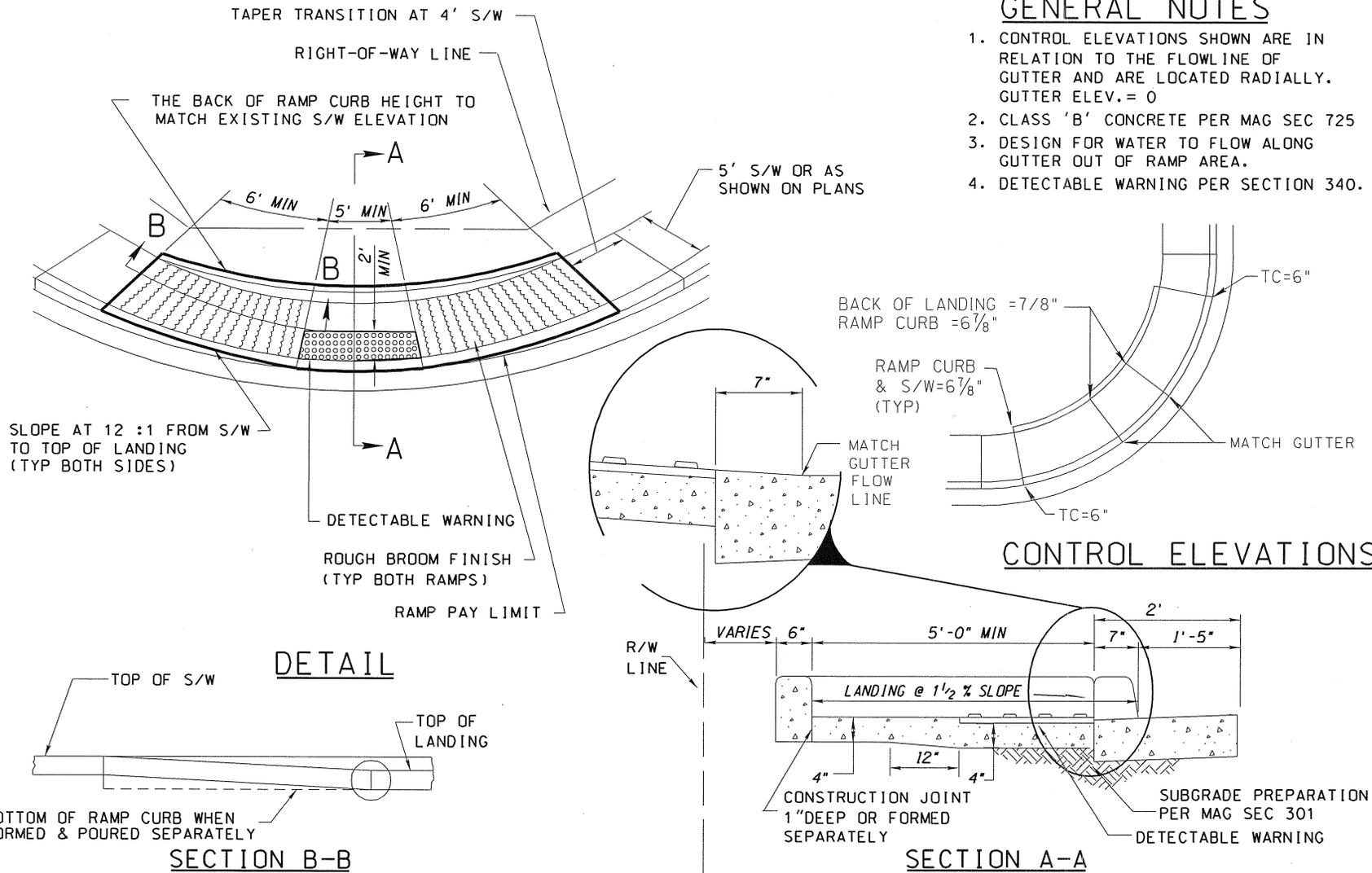
**SIDEWALK RAMP
ARTERIAL INTERSECTIONS**

DATE:
6/1/05

DETAIL NO.
2031-A

GENERAL NOTES

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE FLOWLINE OF GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEV. = 0
2. CLASS 'B' CONCRETE PER MAG SEC 725
3. DESIGN FOR WATER TO FLOW ALONG GUTTER OUT OF RAMP AREA.
4. DETECTABLE WARNING PER SECTION 340.

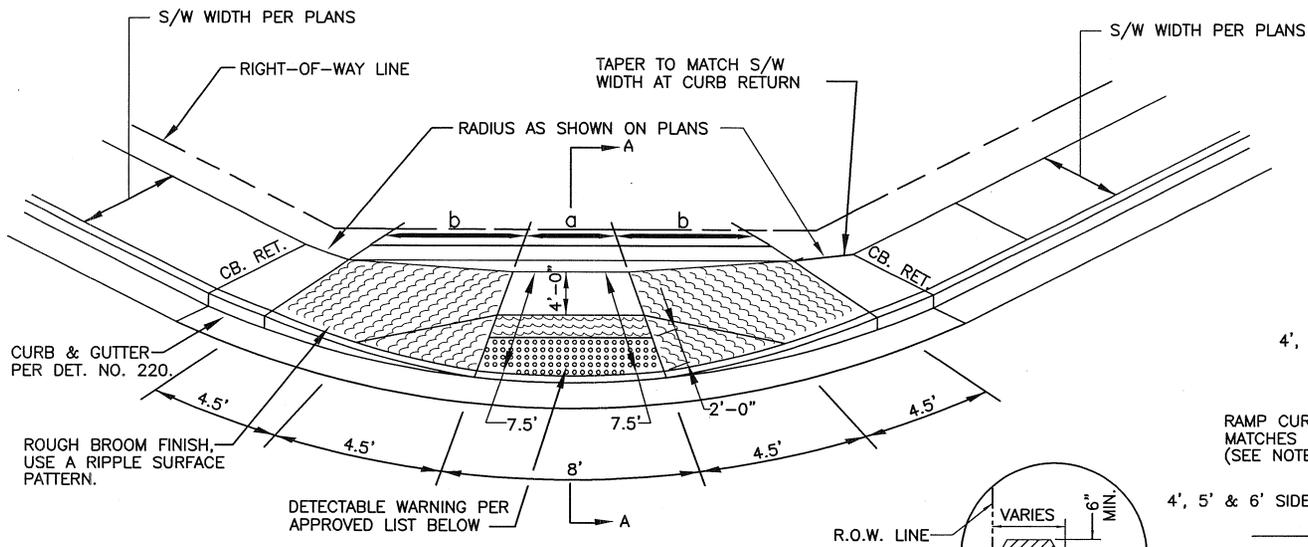


MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

SIDEWALK RAMP
RESIDENTIAL & COLLECTOR INTERSECTIONS

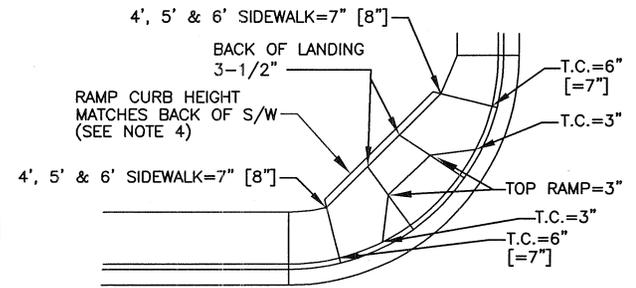
DATE:
6/1/05

DETAIL NO.
2031-B



NOTES

- CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEV. = 0.
- CLASS 'B' CONC. CONSTRUCTION AS PER SECTION 725.
- WHEN CURB HEIGHTS OF 7" ARE SHOWN ON PLANS, USE DIMENSIONS SHOWN IN []'S.
- CONCRETE CURB SHALL BE DELETED AND REPLACED WITH COMPACTED FILL SOILS PER ALTERNATE FILL SOIL DETAIL WHEN IN CONFLICT WITH EXISTING IMPROVEMENTS OR WITH EXISTING R.O.W. LINE.

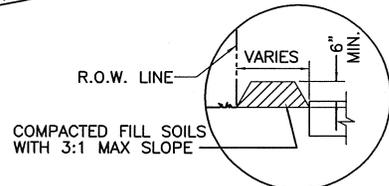


CONTROL ELEVATIONS

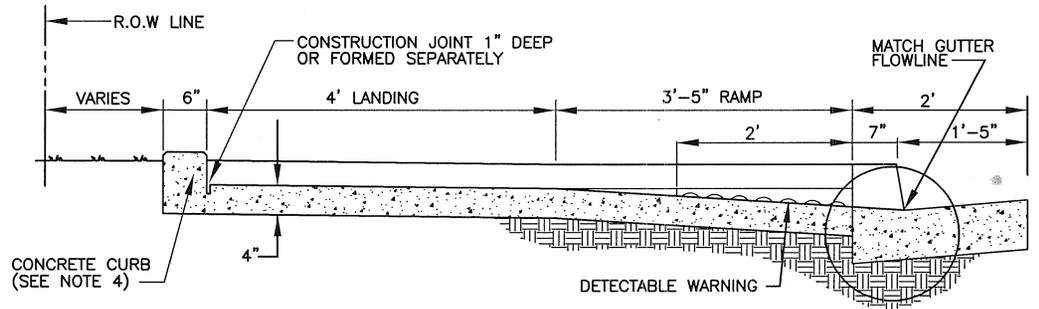
APPROVED DETECTABLE WARNING PRODUCTS (TRUNCATED DOMES)
 APPROVED FOR RETROFIT AND NEW CONSTRUCTION (SAFETY YELLOW).
 INSTALL PER MANUFACTURERS SPECIFICATIONS.

- "TOPMARK PREFORMED THERMOPLASTIC" AS MANUFACTURED BY FLINT TRADING, INC.
- "TEKWAY DOME TILES" AS MANUFACTURED BY STRONGO, LLC.
- "CASTinTACT" TACTILE WARNING PANELS AS MANUFACTURED BY MASCO.

BACK OF CURB RADIUS	SIDEWALK WIDTH	a	b
30'	6'	6'	7.09'
30'	5'	6'	7.50'
20'	6'	5'	4.31'
20'	5'	5'	4.86'
20'	4'	5'	5.56'



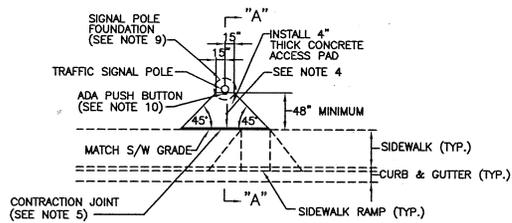
ALTERNATE FILL SOIL DETAIL



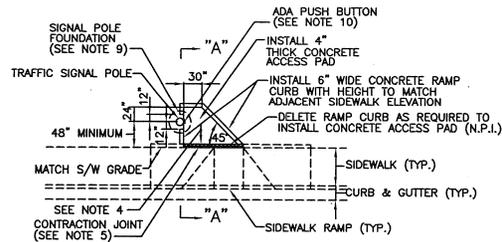
SECTION A-A

SIDEWALK RAMPS - TYPE A

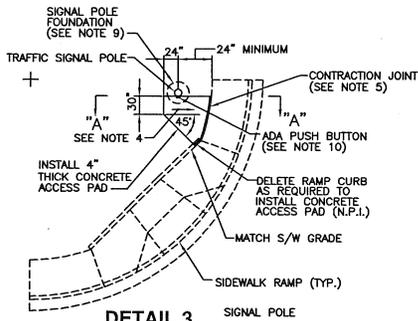
DETAIL NO. M-44



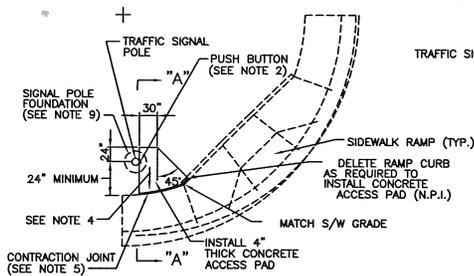
DETAIL 1



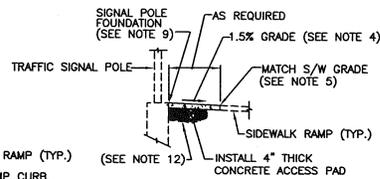
DETAIL 2



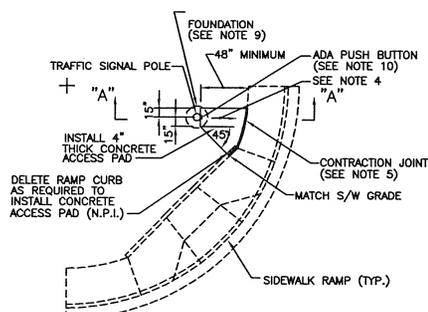
DETAIL 3



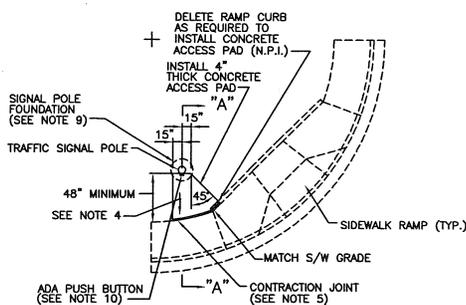
DETAIL 4



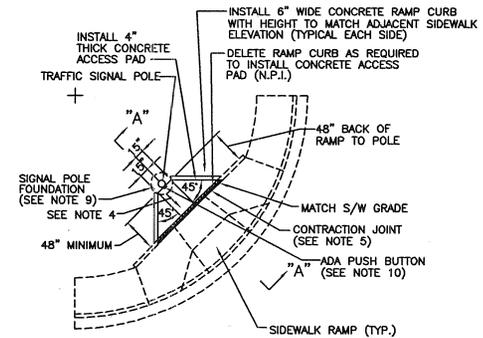
SECTION "A"-"A"



DETAIL 5



DETAIL 6

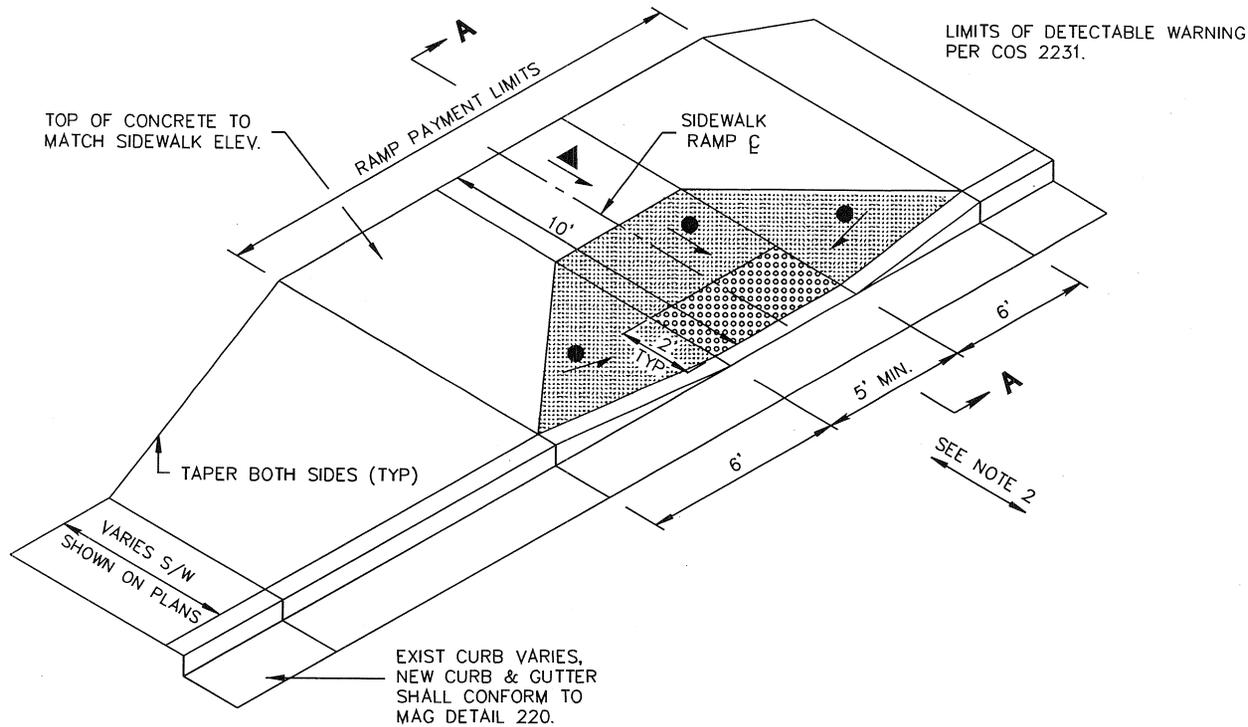


DETAIL 7

NOTES:

1. INSTALL CONCRETE ACCESS PAD IN ACCORDANCE TO THE REQUIREMENTS SPECIFIED IN M.A.G. STD. DETAIL 230 FOR SIDEWALK INSTALLATIONS.
2. THE CONCRETE ACCESS PAD SHALL PROVIDE A MINIMUM 30"x48" CONCRETE SURFACE ADJACENT TO THE ADA PUSH BUTTON AS SHOWN.
3. ALL CONCRETE SHALL BE CLASS "B" PER M.A.G. STANDARD SPECIFICATIONS SECTION 725.
4. SLOPE CONCRETE ACCESS PADS 1.5% TOWARDS SIDEWALK FOR DRAINAGE PURPOSES.
5. INSTALL CONTRACTION JOINT BETWEEN CONCRETE ACCESS PAD AND SIDEWALK RAMP. IF SIDEWALK RAMP IS EXISTING, INSTALL EXPANSION JOINT IN LIEU OF CONTRACTION JOINT.
6. GRADE SOILS AT A 6:1 MAX. SLOPE AT PERIMETER OF CONCRETE ACCESS PAD TO MATCH EXISTING, UNLESS OTHERWISE NOTED.
7. THE TYPICAL DETAILS SHOWN ON THIS SHEET MAY REQUIRE MODIFICATIONS TO ACCOMMODATE EXISTING FIELD CONDITIONS AS DIRECTED BY THE CITY INSPECTOR.
8. NEW CONCRETE ACCESS PAD SHALL NOT COVER OR INTERFERE WITH TRAFFIC SIGNAL OR PEDESTRIAN POLE MOUNTINGS.
9. TOP OF SIGNAL POLE FOUNDATION SHALL MATCH CONCRETE ACCESS PAD (SEE SECTION "A"-"A").
10. SEE CITY OF MESA STANDARD DETAIL M-95.4 FOR ADA PUSH BUTTON DETAIL.
11. PAYMENT FOR ADA PUSH BUTTON ACCESS PADS SHALL BE INCLUDED IN THE BID ITEM FOR SIDEWALK RAMP INSTALLATION, UNLESS OTHERWISE NOTED.
12. SOIL UNDER CONCRETE ACCESS PAD SHALL BE COMPACTED PER SIDEWALK COMPACTION REQUIREMENTS.

REVISED 5/25/05



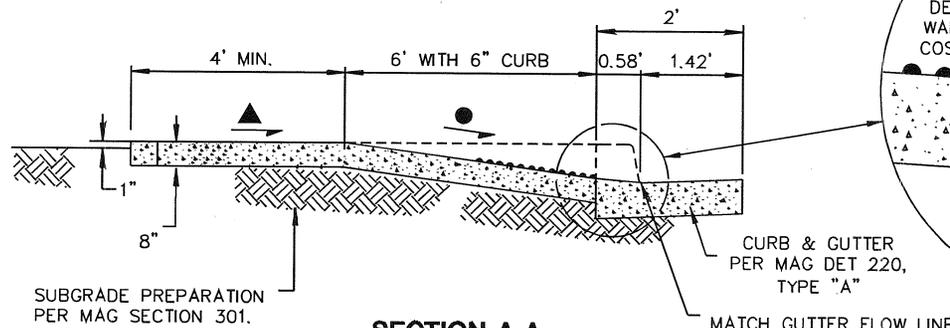
LIMITS OF DETECTABLE WARNING PER COS 2231.

NOTES:

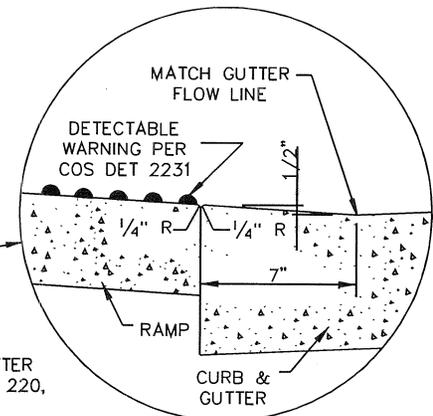
1. ALL CONCRETE TO BE CLASS "B", MAG SECTION 725.
2. ALL RAMP AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON THE OPPOSITE SIDE OF STREET.
3. SEE PLANS FOR LOCATION OF SIDEWALK RAMP CENTERLINE.

LEGEND

- 12:1 MAXIMUM SLOPE, 15:1 DESIRED SLOPE
- 2% MAXIMUM SLOPE, 1.5% MINIMUM SLOPE
- SIDEWALK RAMP PAYMENT LIMITS AND HEAVY ROUGH BROOM FINISH LIMITS



SECTION A-A



DETAIL 1

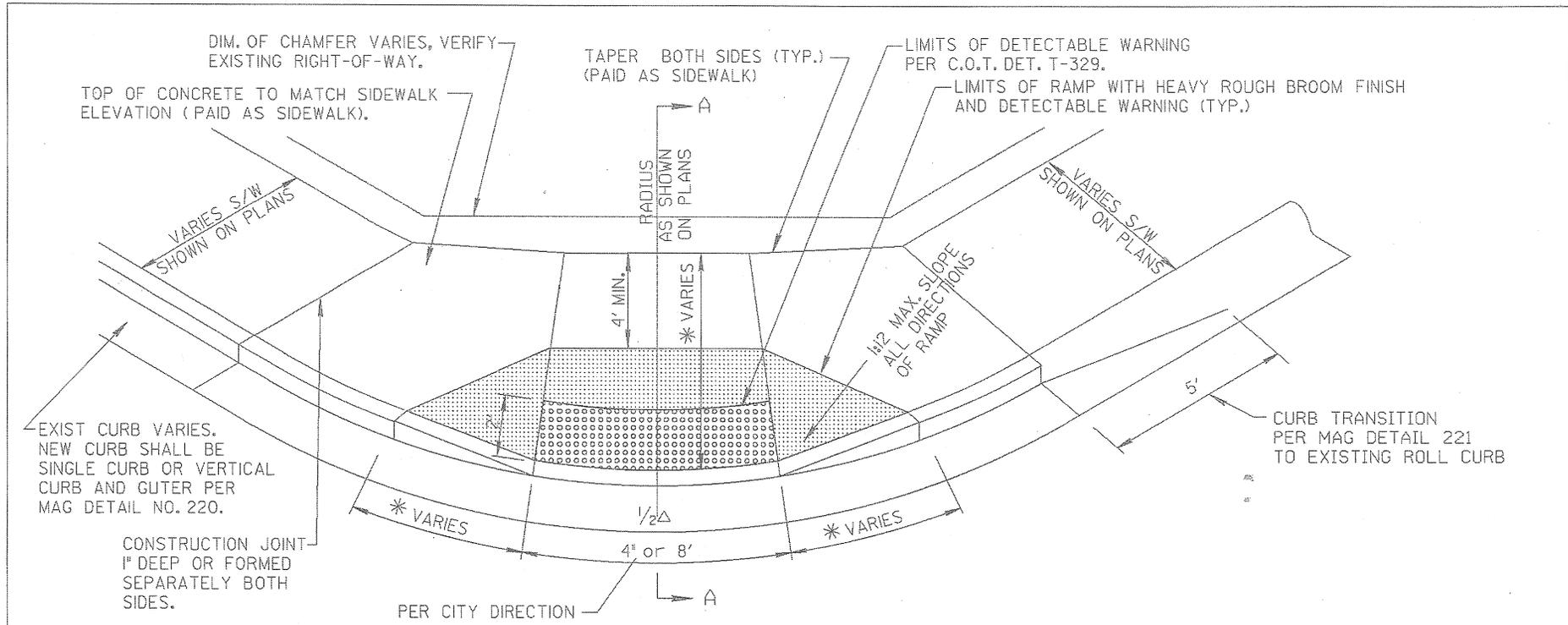
DETAIL NO.
2235-1

City of Scottsdale
Standard Details

APPROVED BY:
Scottsdale Standards & Specifications Committee

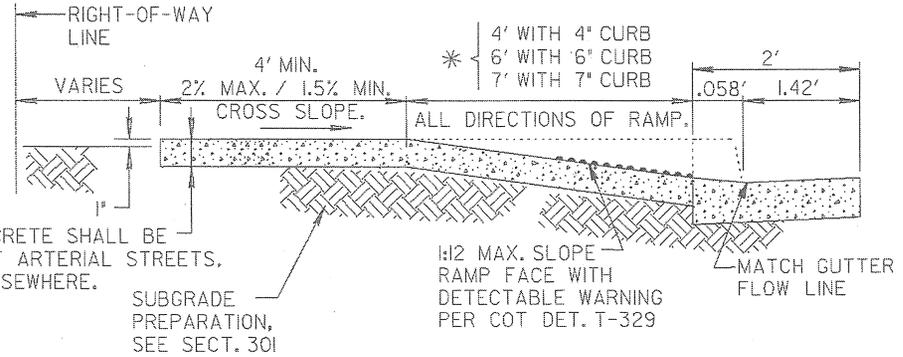
MID-BLOCK SIDEWALK RAMP - TYPE A

DETAIL NO.
2235-1



NOTES:

1. RAMP PREFERENCE SEE NOTE IN DETAIL T-115. UNDER "REFER TO TEMPE STANDARD DETAILS".
2. CLASS 'B' CONC. CONSTRUCTION AS PER SECT. 725.
3. WIDTH OF CONC. SIDEWALK SHALL BE 8' ALONG ARTERIAL STREETS, 6' ELSEWHERE. 5'-6" LOCAL STREETS MAY BE APPROVED BY CITY.
4. SUFFICIENT RIGHT-WAY-OF-WAY MUST BE AVAILABLE TO CONSTRUCT RAMPS.
5. FOR SLOPING TRANSITION FROM RAMP TO CURB SEE C.O.T. DET. T-326.
6. THIS DETAIL IS APPLICABLE WHERE THE GRADE BREAK AT THE GUTTER LINE (COUNTER SLOPE) IS AT OR BELOW 1%, AND IF THE PERCENTAGE WOULD BE GREATER DUE TO AN UNUSUALLY STEEP GUTTER OR STREET CROWN, AN ALTERNATIVE DESIGN MUST BE APPROVED BY CITY.



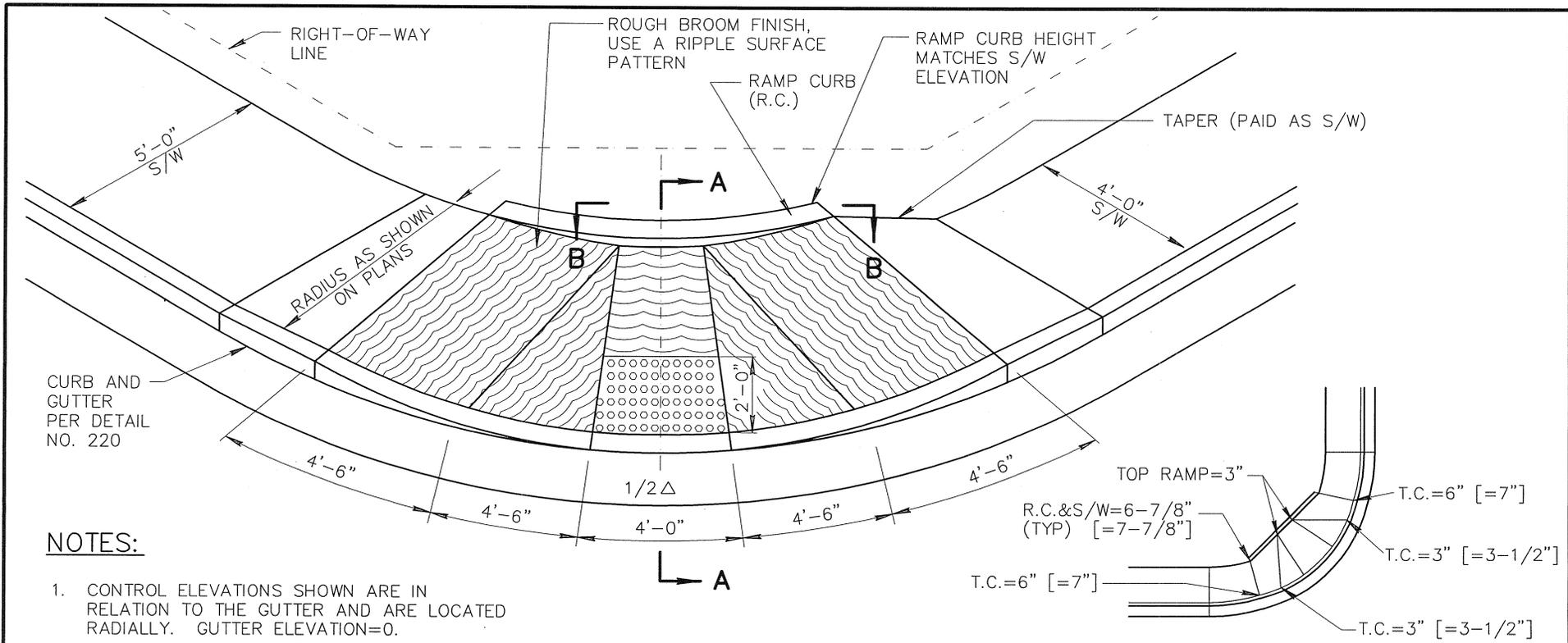
SECTION A-A

APPROVED: _____ DATE _____
 DEPUTY PUBLIC WORKS MANAGER
 CITY ENGINEER



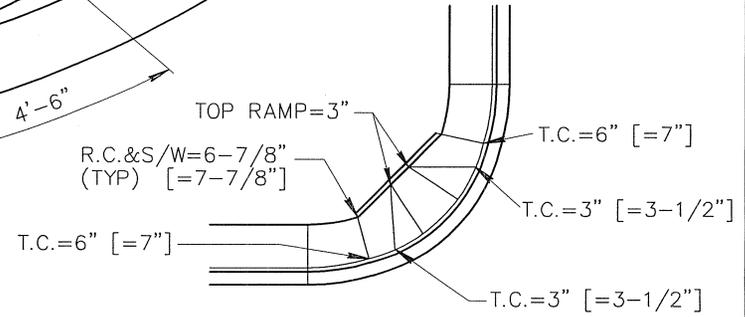
DIAGONAL RAMPS - TYPE 'A'
 NOT PREFERRED - USE ONLY WHERE
 DIRECTIONAL RAMPS ARE NOT POSSIBLE

DETAIL T-324
 REVISED 2005



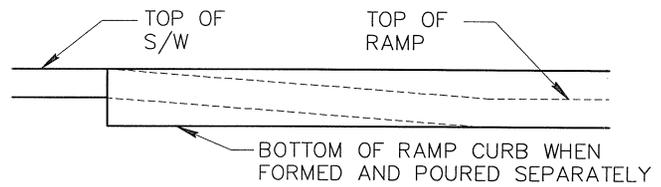
NOTES:

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEVATION=0.
2. CLASS 'B' CONCRETE CONSTRUCTION AS PER SECT. 725.
3. WHEN CURB HEIGHTS OF 7" ARE SHOWN ON PLANS, USE DIMENSIONS SHOWN IN []'S.
4. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.

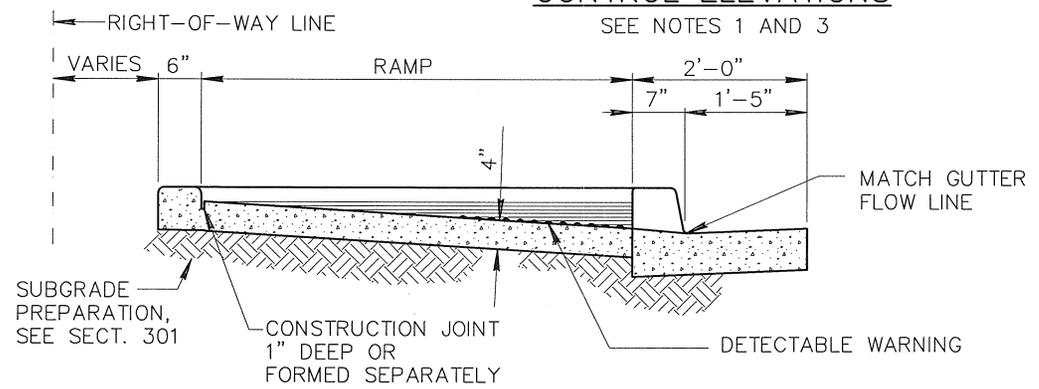


CONTROL ELEVATIONS

SEE NOTES 1 AND 3



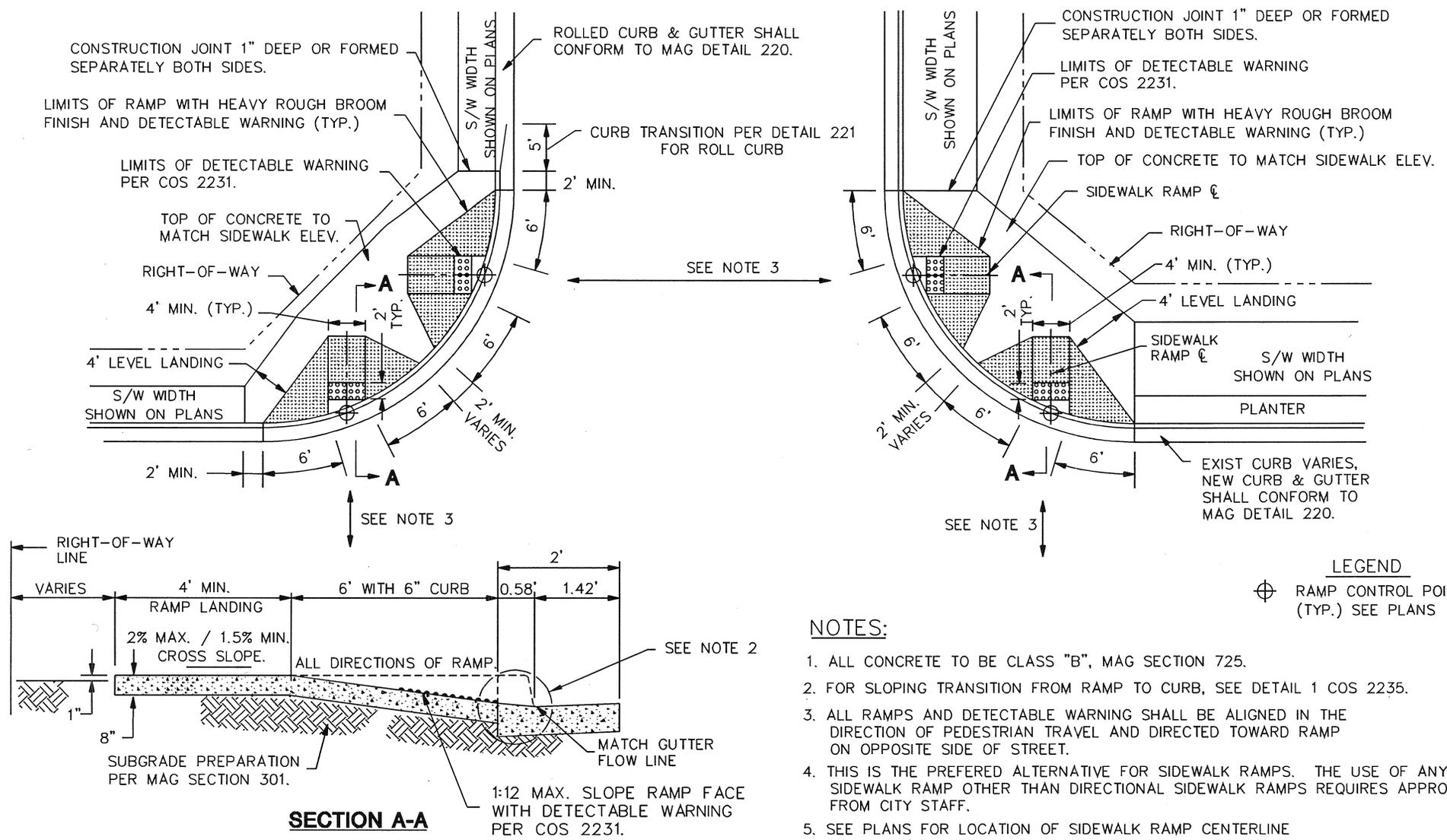
SECTION B-B



SECTION A-A

DETAIL NO. 232	STANDARD DETAIL ENGLISH	SIDEWALK RAMPS - TYPE 'B'	REVISED 01-01-2006	DETAIL NO. 232
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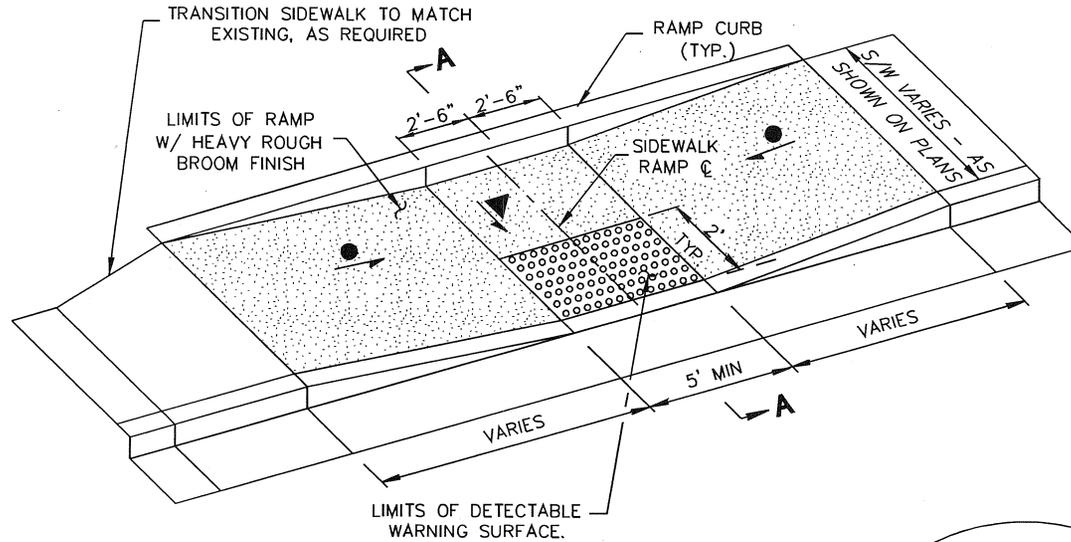
REVISED 5/25/05



LEGEND
 RAMP CONTROL POINT (TYP.) SEE PLANS

- NOTES:**
1. ALL CONCRETE TO BE CLASS "B", MAG SECTION 725.
 2. FOR SLOPING TRANSITION FROM RAMP TO CURB, SEE DETAIL 1 COS 2235.
 3. ALL RAMPS AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON OPPOSITE SIDE OF STREET.
 4. THIS IS THE PREFERRED ALTERNATIVE FOR SIDEWALK RAMPS. THE USE OF ANY SIDEWALK RAMP OTHER THAN DIRECTIONAL SIDEWALK RAMPS REQUIRES APPROVAL FROM CITY STAFF.
 5. SEE PLANS FOR LOCATION OF SIDEWALK RAMP CENTERLINE

REVISED 5/25/05

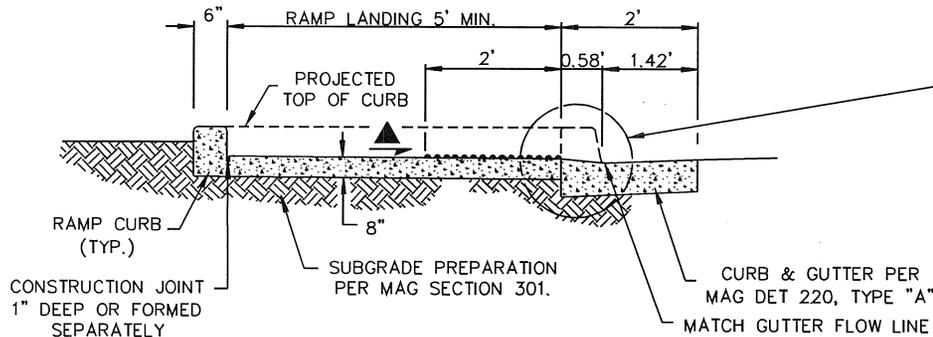


NOTES:

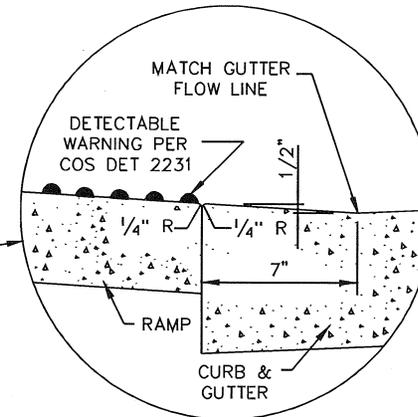
1. ALL CONCRETE TO BE CLASS "B", MAG SECTION 725.
2. ALL RAMP AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON THE OPPOSITE SIDE OF STREET.
3. SEE PLANS FOR LOCATION OF SIDEWALK RAMP CENTERLINE.

LEGEND

-  12:1 MAXIMUM SLOPE,
15:1 DESIRED SLOPE
-  2% MAXIMUM SLOPE,
1.5% MINIMUM SLOPE
-  SIDEWALK RAMP PAYMENT
LIMITS AND HEAVY ROUGH
BROOM FINISH LIMITS



SECTION A-A



DETAIL 1

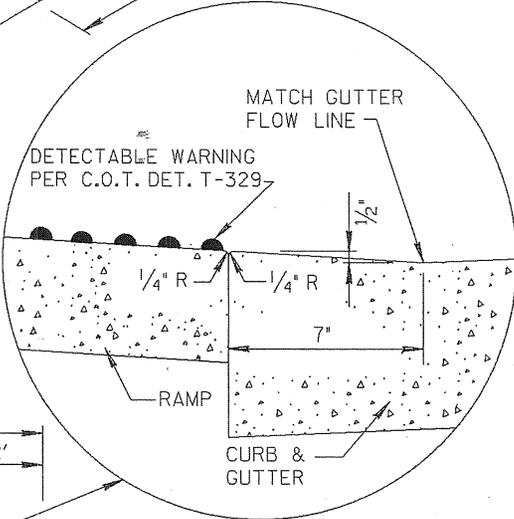
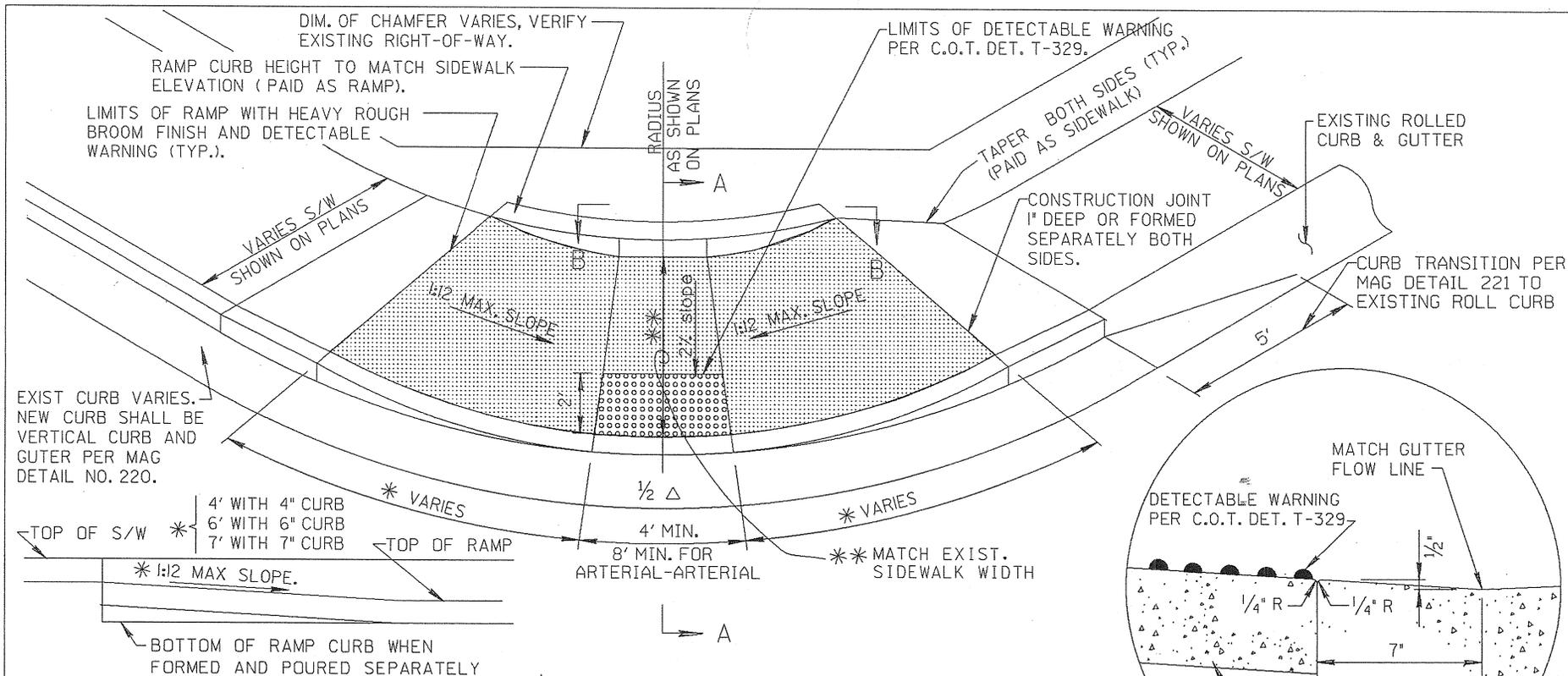
DETAIL NO.
2235-2

**City of Scottsdale
Standard Details**

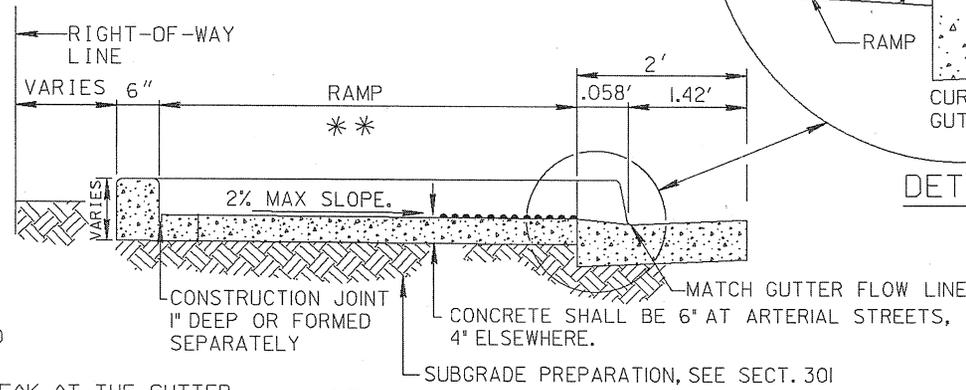
APPROVED BY:
**Scottsdale Standards &
Specifications Committee**

MID-BLOCK SIDEWALK RAMP - TYPE B

DETAIL NO.
2235-2



SECTION B-B

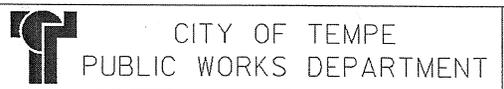


SECTION A-A

NOTES:

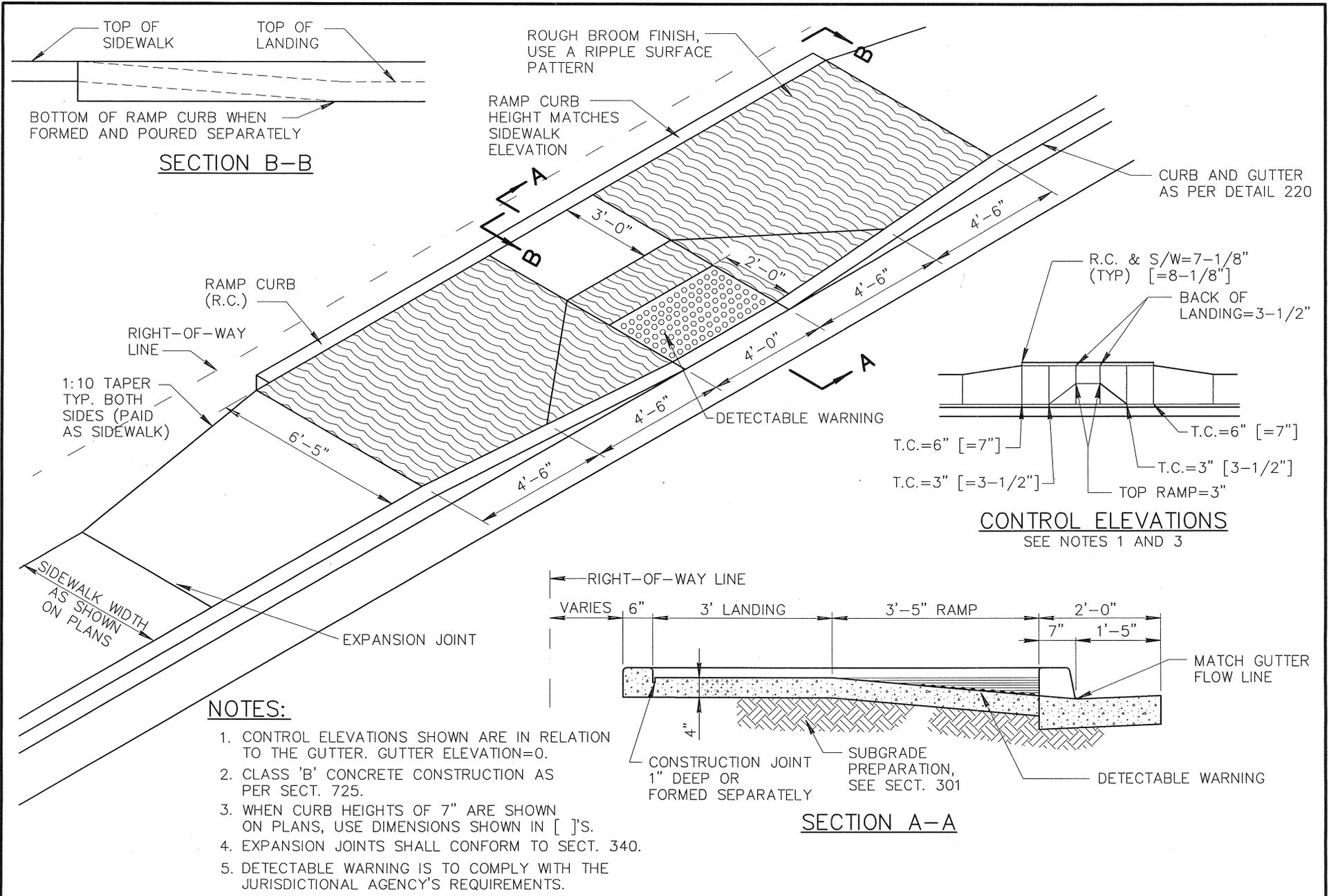
1. RAMP PREFERENCE SEE NOTE IN DETAIL T-115. UNDER "REFER TO TEMPE STANDARD DETAILS".
2. CLASS 'B' CONC. CONSTRUCTION AS PER SECT. 725.
3. WIDTH OF CONC. SIDEWALK SHALL BE 8' ALONG ARTERIAL STREETS, 6' ELSEWHERE. 5'-6" LOCAL STREETS MAY BE APPROVED BY CITY.
4. SUFFICIENT RIGHT-WAY-OF-WAY MUST BE AVAILABLE TO CONSTRUCT RAMPS.
5. THIS DETAIL IS APPLICABLE WHERE THE GRADE BREAK AT THE GUTTER LINE (COUNTER SLOPE) IS AT OR BELOW 11%, AND IF THE PERCENTAGE WOULD BE GREATER DUE TO AN UNUSUALLY STEEP GUTTER OR STREET CROWN, AN ALTERNATIVE DESIGN MUST BE APPROVED BY CITY.

APPROVED: _____
 DEPUTY PUBLIC WORKS MANAGER
 CITY ENGINEER
 _____ DATE

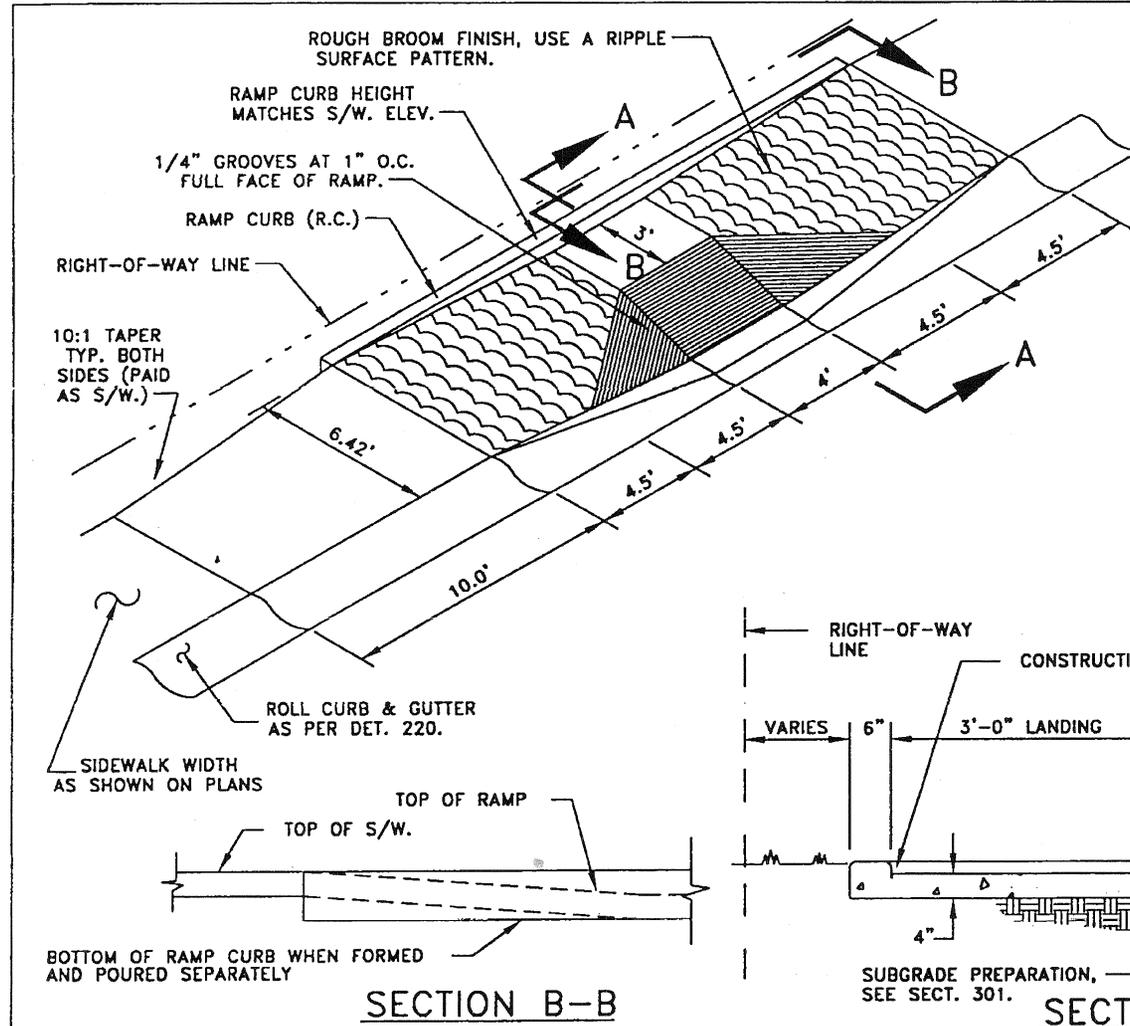


BLENDING TRANSITION RAMPS - TYPE 'B'
 NOT PREFERRED - USE ONLY WHERE
 DIRECTIONAL RAMPS ARE NOT POSSIBLE

DETAIL T-326
 REVISED 2005

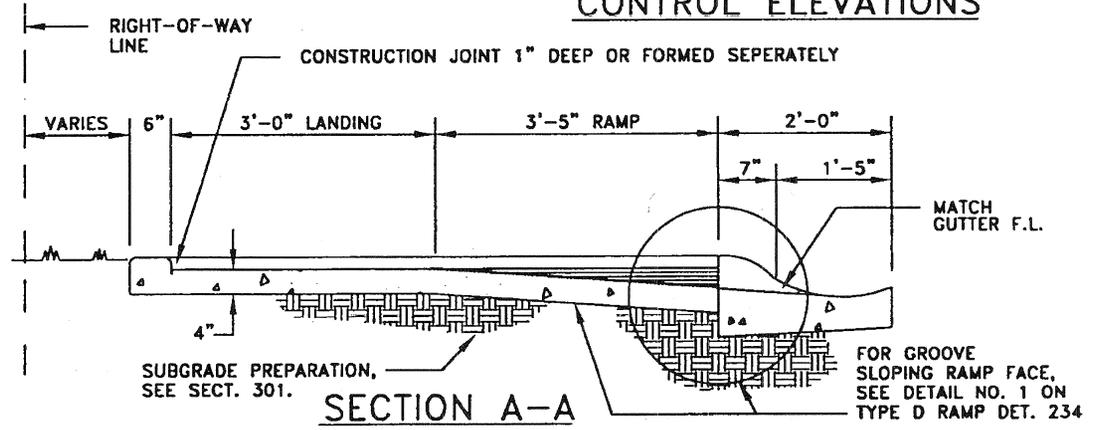
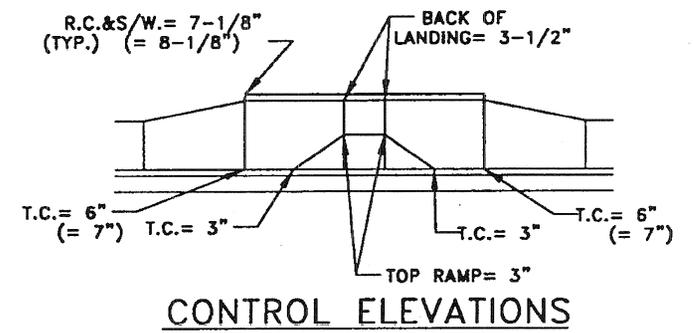


DETAIL NO. 233	 MARICOPA ASSOCIATION OF GOVERNMENTS	STANDARD DETAIL ENGLISH	SIDEWALK RAMPS - TYPE 'C'	REVISED 01-01-2006	DETAIL NO. 233
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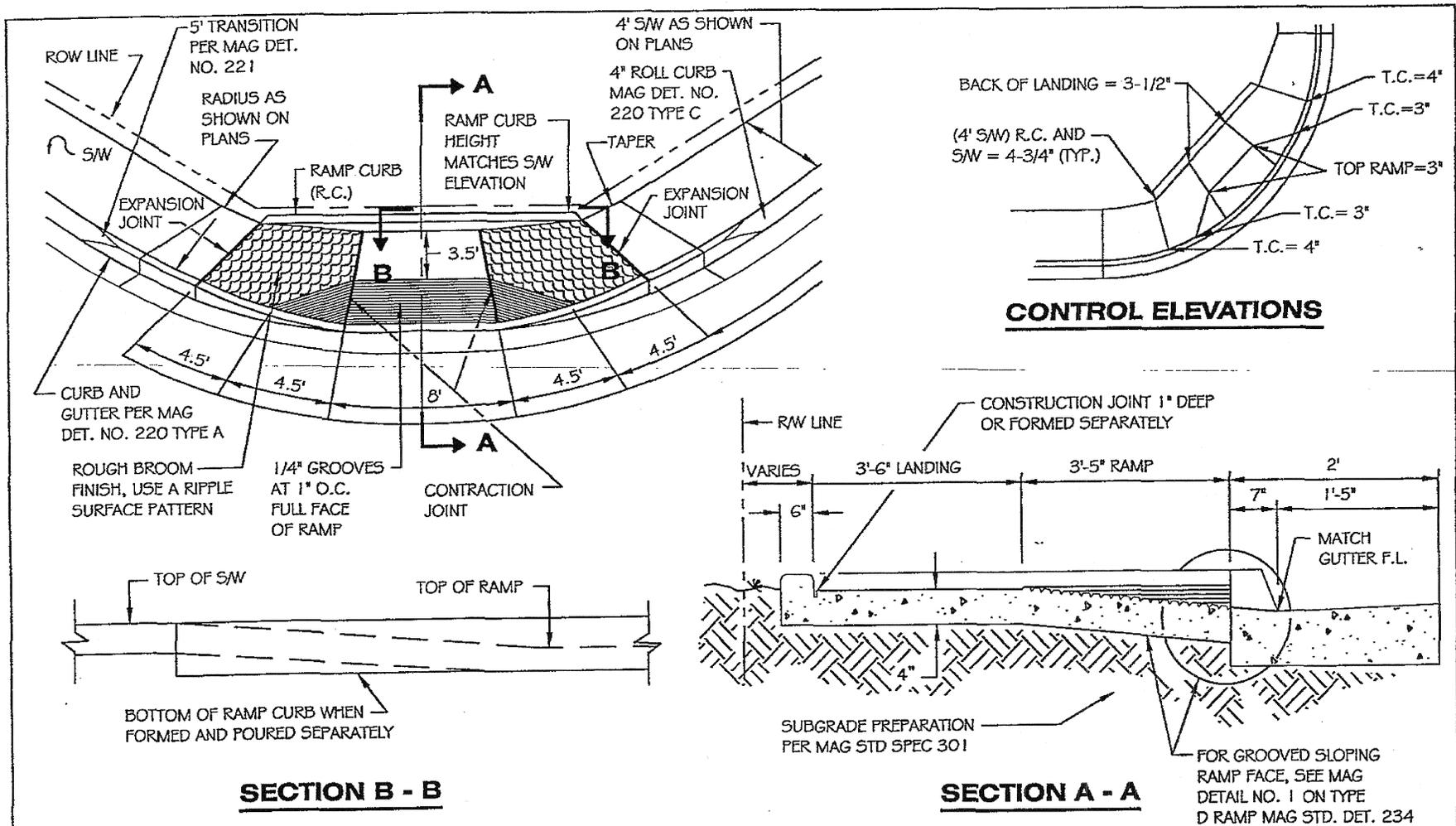


NOTES:

1. CONTROL ELEVATIONS SHOWN HERE ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALY. GUTTER ELEV.= 0.
2. CLASS 'B' CONC. CONSTRUCTION AS PER SECT. 725.
3. WHEN CURB HEIGHTS OF 7" ARE SHOWN ON PLANS, USE DIMENSIONS SHOWN IN ()'S.



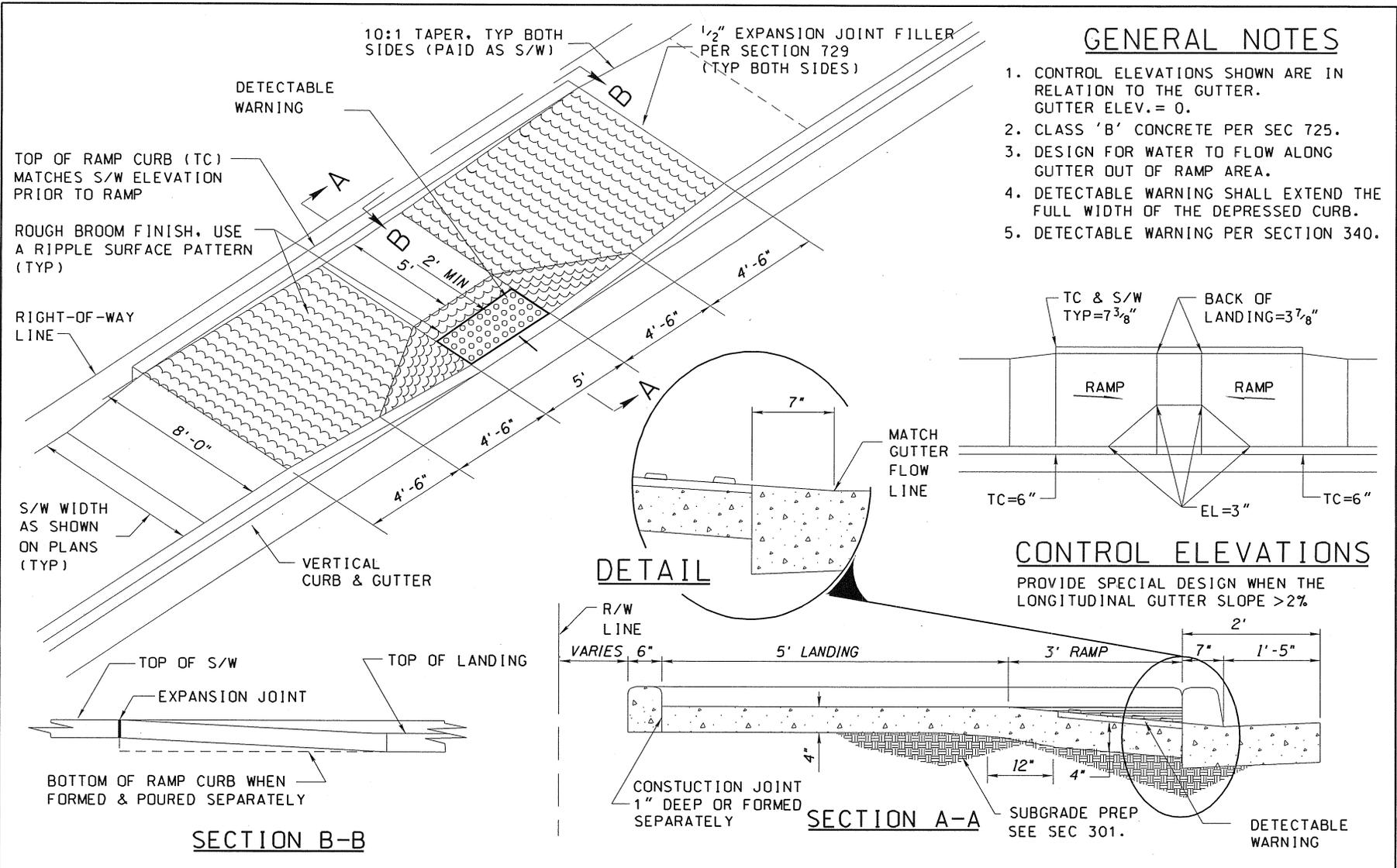
DETAIL NO. AJ-PW233	STANDARD DETAIL Revised April, 2000	SIDEWALK RAMP WITH ROLL CURB	CITY OF APACHE JUNCTION PUBLIC WORKS/ENGINEERING (480) 982-1055	DETAIL NO. AJ-PW233
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NOTES:

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO GUTTER AND ARE LOCATED RADially. GUTTER ELEVATION = 0.00
2. CLASS 'B' CONC. CONSTRUCTION AS PER M.A.G. SECTION 725.
3. WHEN CURB HEIGHTS OF 6" ARE SHOWN ON PLANS, USE MAG STANDARD DETAIL NO. 231.

DETAIL NO. C-244 NTS	 CITY OF CHANDLER STANDARD DETAIL	SIDEWALK RAMP AT INTERSECTIONS FOR ROLL CURB	APPROVED: <i>Bryan D. Johnson</i> CITY ENGINEER DATE: <i>11-19-99</i>	DETAIL NO. C-244 NTS
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GENERAL NOTES

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER. GUTTER ELEV.= 0.
2. CLASS 'B' CONCRETE PER SEC 725.
3. DESIGN FOR WATER TO FLOW ALONG GUTTER OUT OF RAMP AREA.
4. DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE DEPRESSED CURB.
5. DETECTABLE WARNING PER SECTION 340.

CONTROL ELEVATIONS

PROVIDE SPECIAL DESIGN WHEN THE LONGITUDINAL GUTTER SLOPE >2%

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

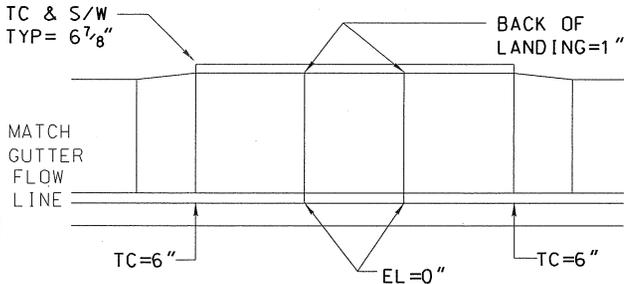
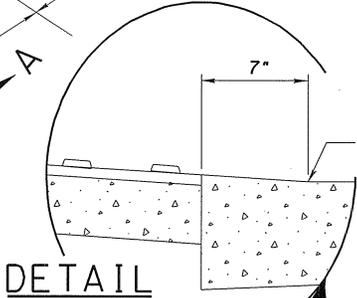
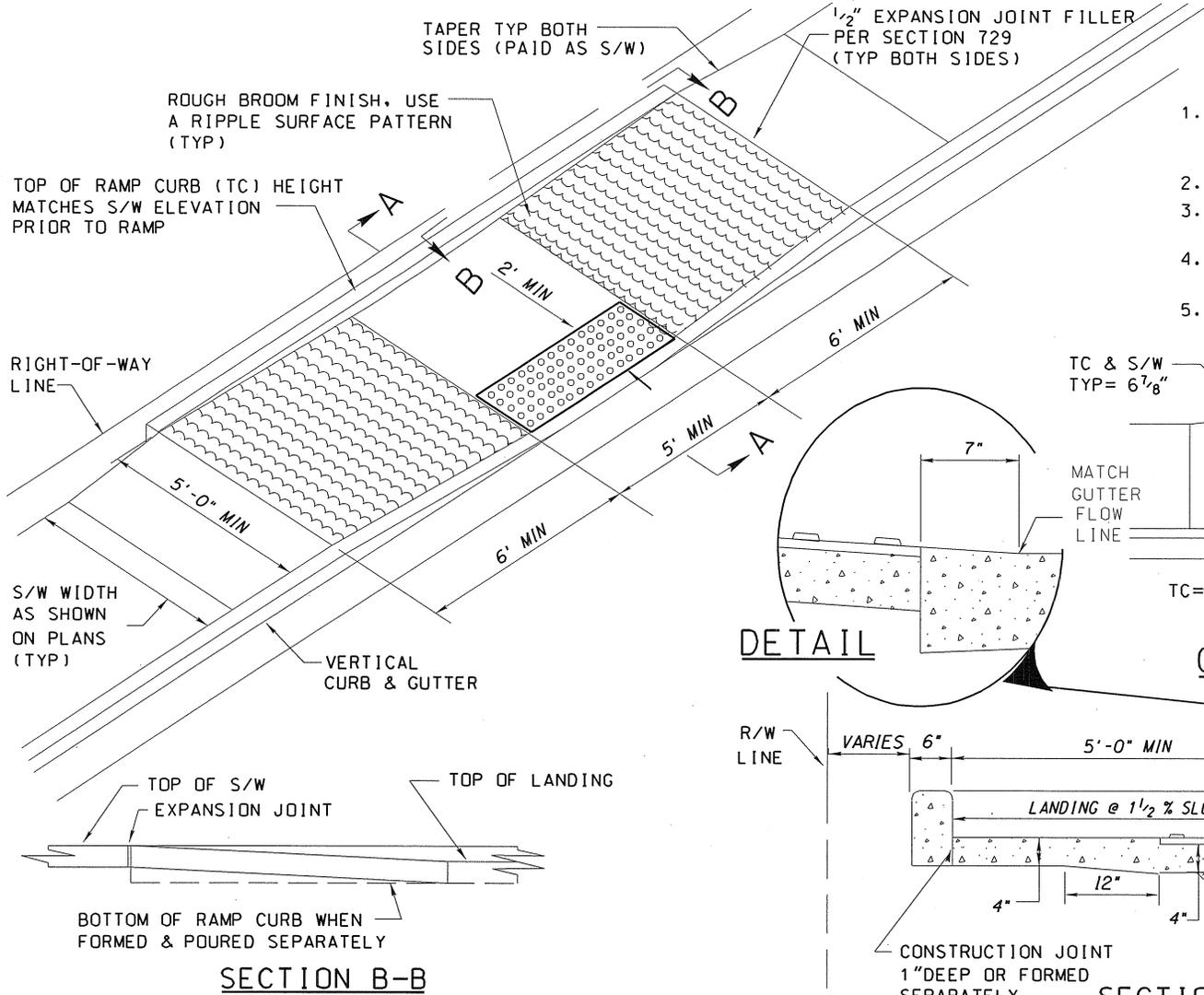
SIDEWALK RAMP
ARTERIAL STREETS

DATE:
6/1/05

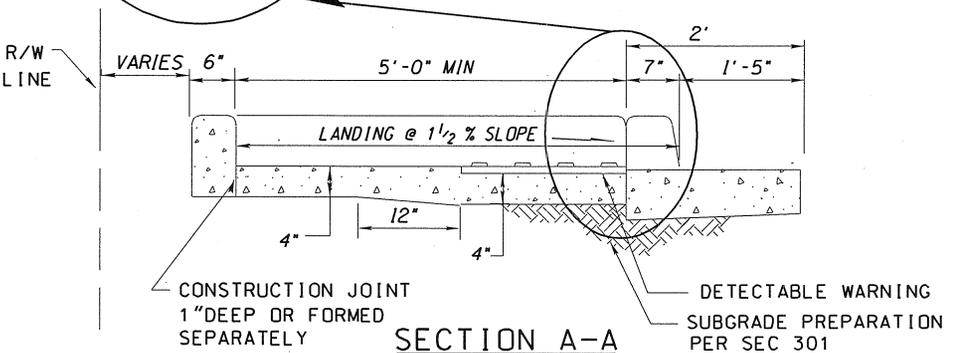
DETAIL NO.
2032-A

GENERAL NOTES

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER. GUTTER ELEV. = 0.
2. CLASS 'B' CONCRETE PER SECTION 725.
3. DESIGN FOR WATER TO FLOW ALONG GUTTER OUT OF RAMP AREA.
4. DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE DEPRESSED CURB.
5. DETECTABLE WARNING PER SECTION 340.



CONTROL ELEVATIONS



SECTION B-B

SECTION A-A

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
STANDARD DETAIL

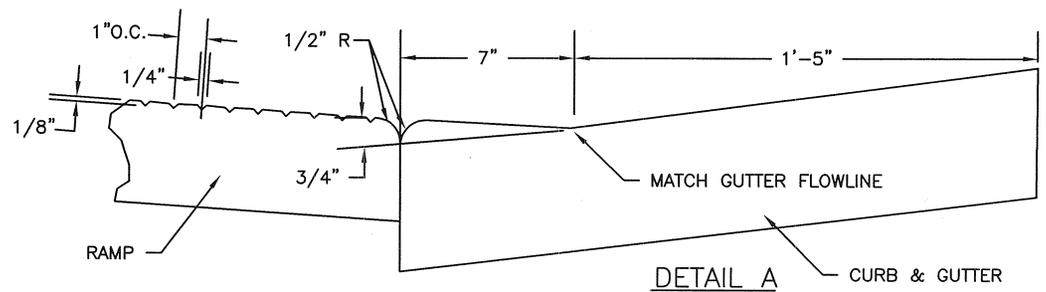
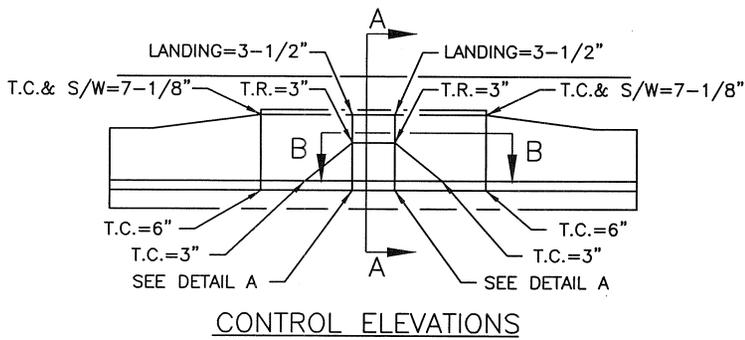
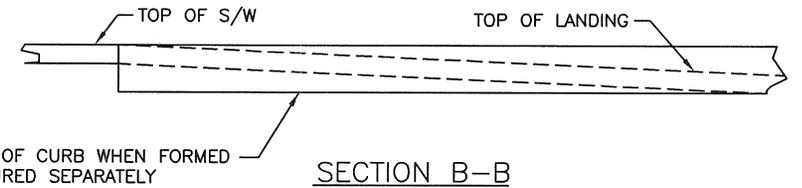
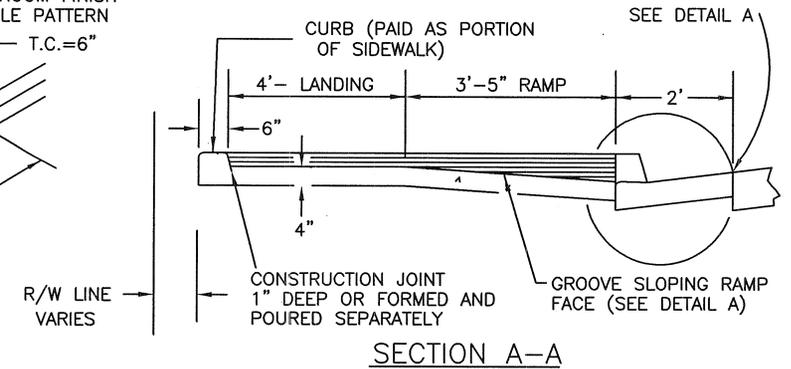
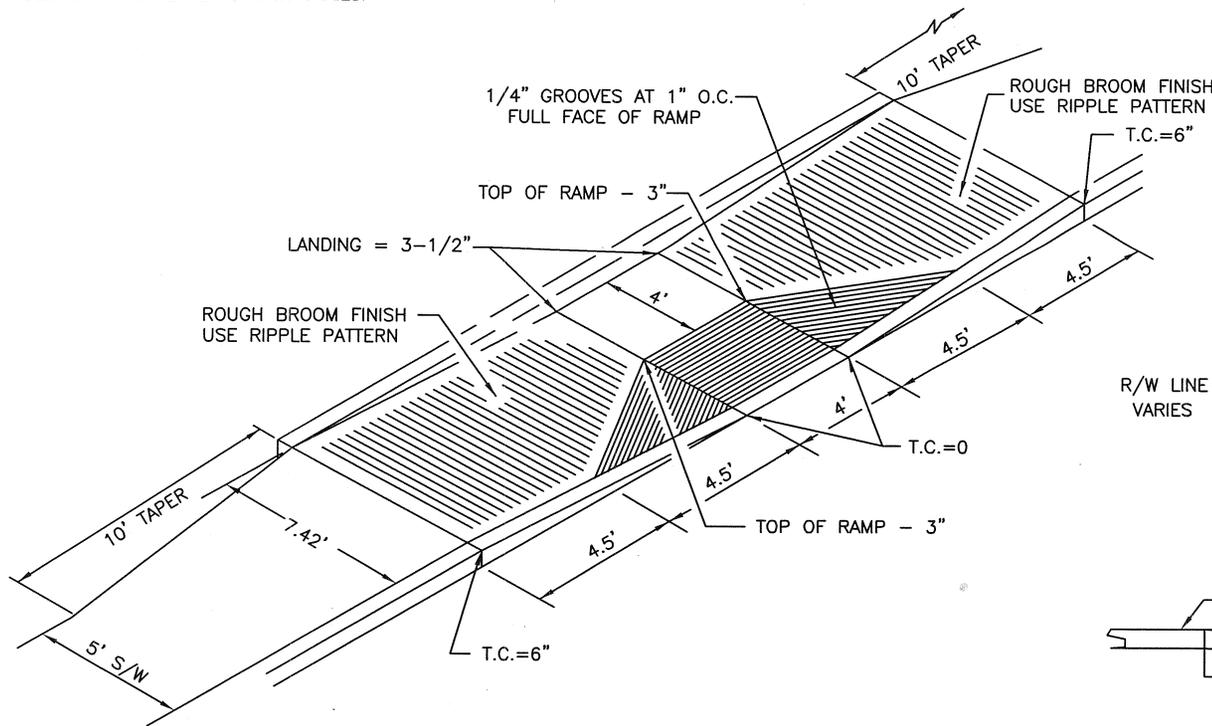
SIDEWALK RAMP
RESIDENTIAL & COLLECTOR STREETS

DATE:
6/1/05

DETAIL NO.
2032-B

NOTES:

- CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER. GUTTER ELEVATION = 0"
- CLASS "B" CONCRETE TO BE USED AS PER SECTION 725.
- USE 8' - 10' LANDING WITH TRAILS.



DETAIL NO.
P1235



City of Phoenix
STANDARD DETAIL

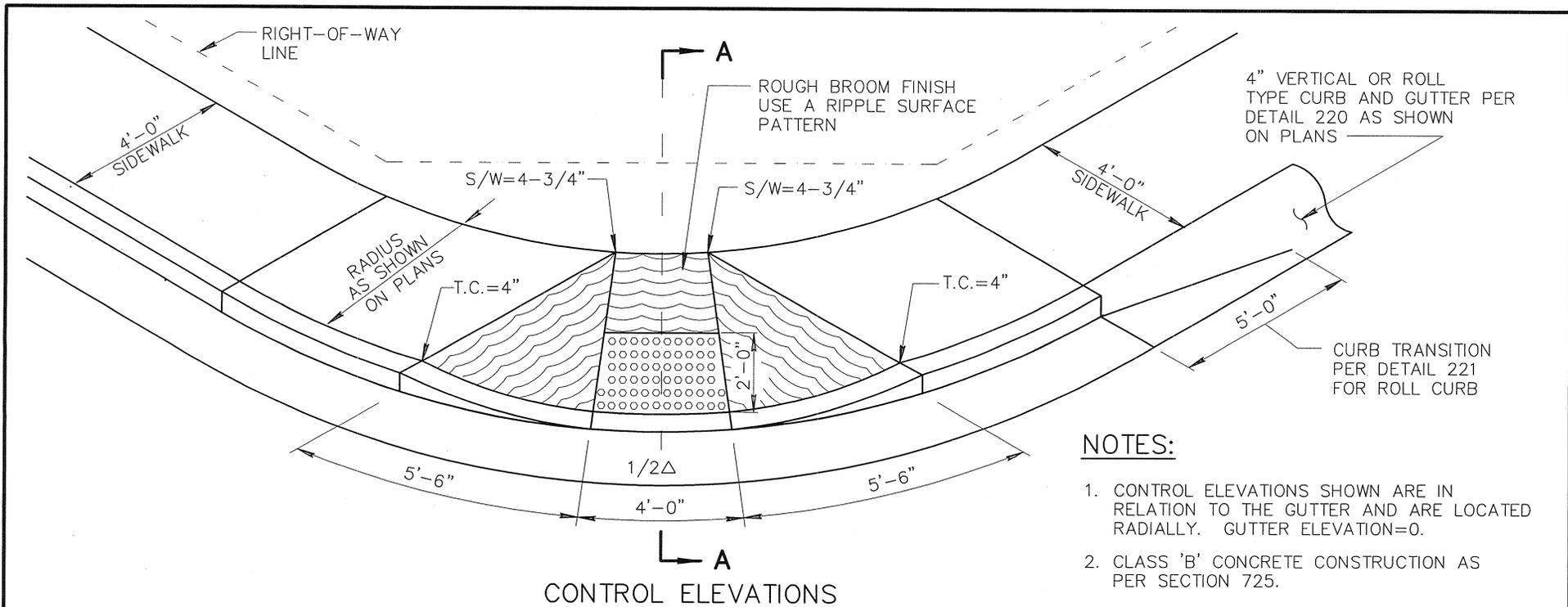
SIDEWALK RAMP DETAIL - TYPE "C"

APPROVED

Mario Saldamando
CITY ENGINEER

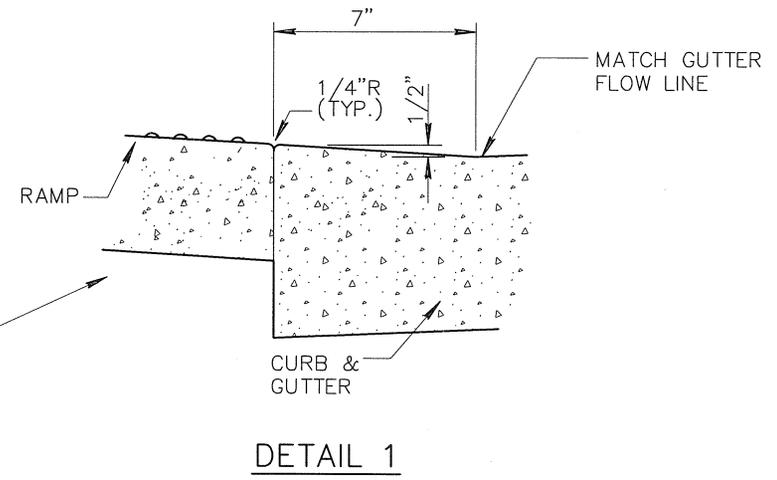
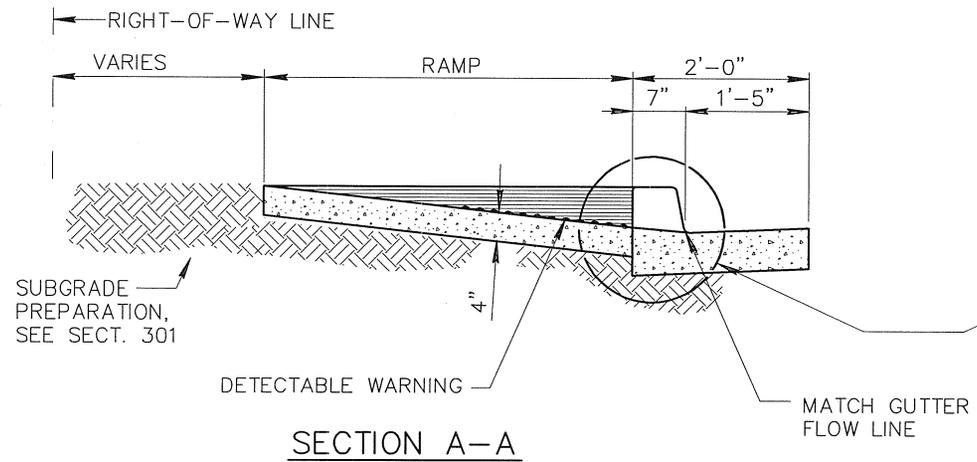
07-19-04
DATE

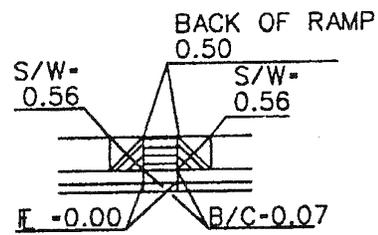
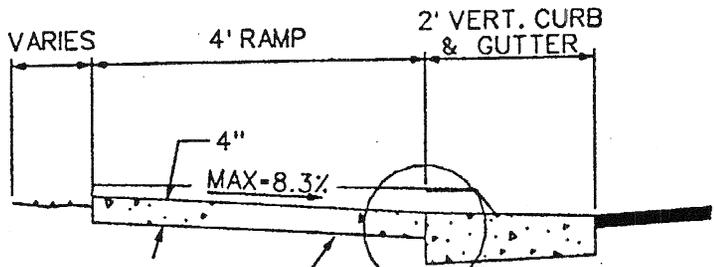
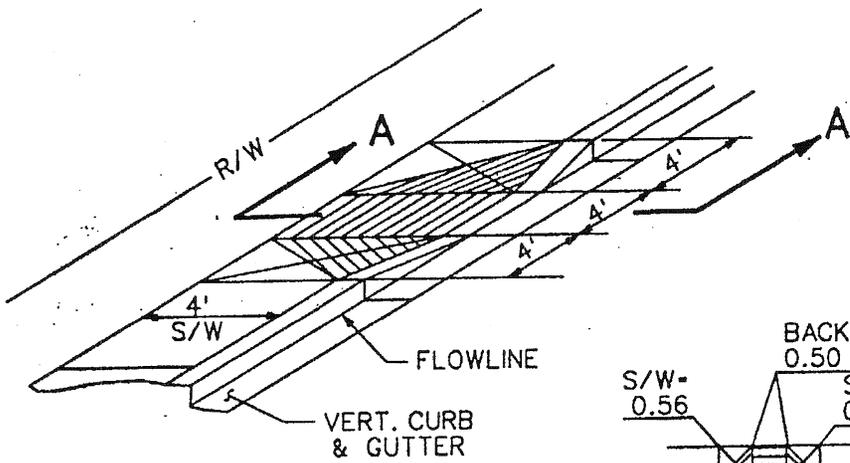
DETAIL NO.
P1235



NOTES:

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALY. GUTTER ELEVATION=0.
2. CLASS 'B' CONCRETE CONSTRUCTION AS PER SECTION 725.
3. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.



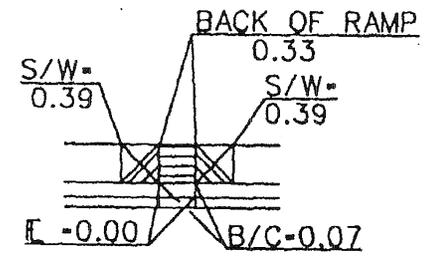
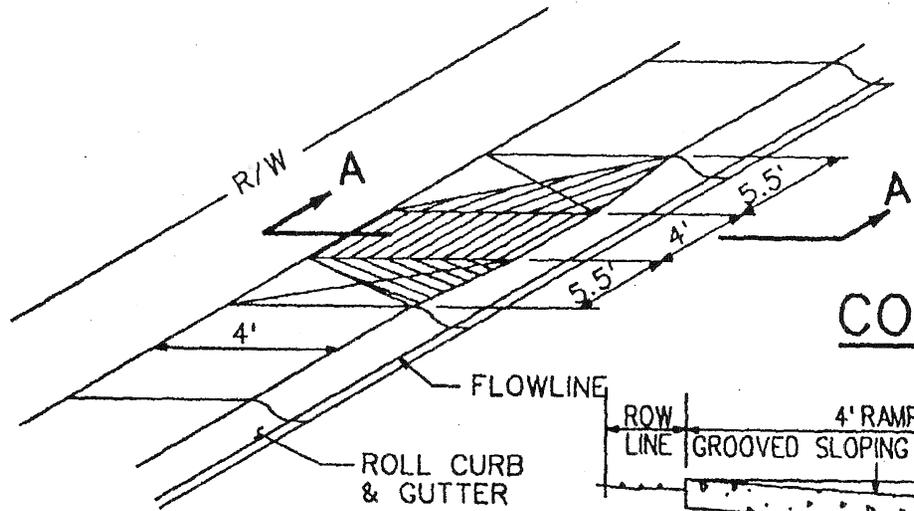


SECTION A-A

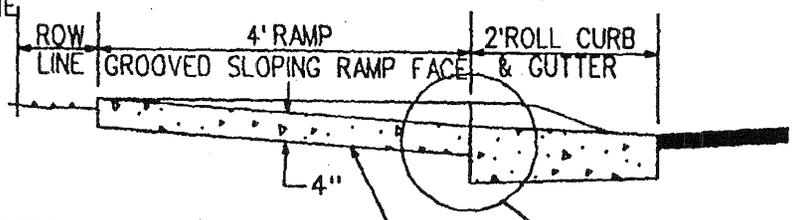
- NOTES:
1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER. GUTTER ELEVATION=0.00
 2. CLASS 'B' CONC. CONSTRUCTION AS PER SECTION 725.

CONTROL ELEVATIONS

SIDEWALK RAMP DETAIL
 VERTICAL CURB & GUTTER M.A.G. STD. DET. 234 MODIFIED



CONTROL ELEVATIONS



SUBGRADE PREPARATION
SEE SECTION 301

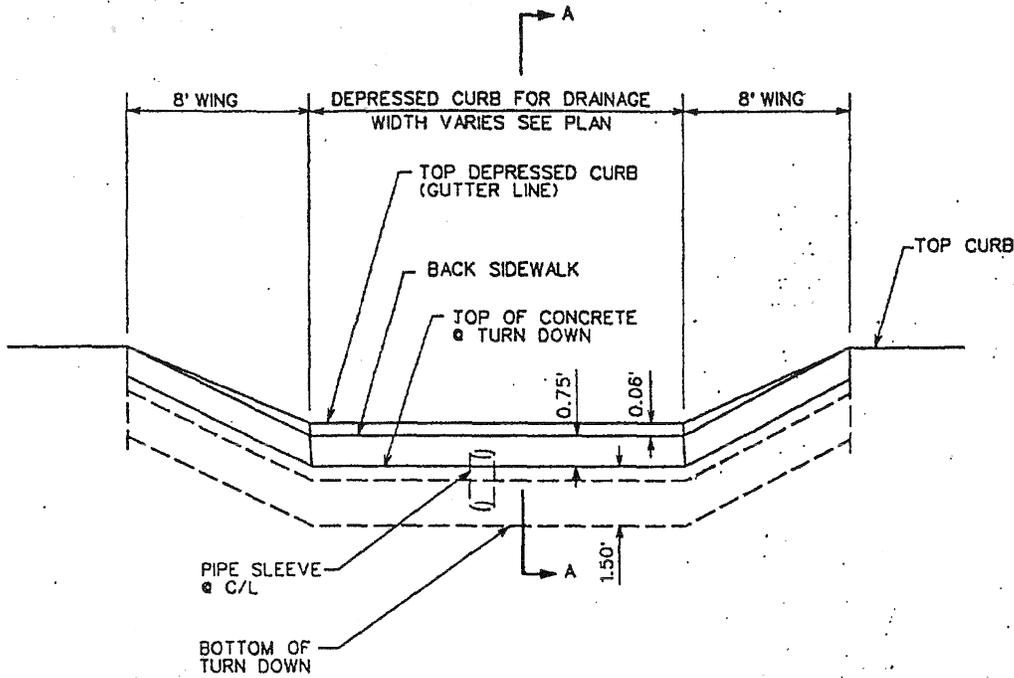
FOR GROOVE SLOPING
RAMP FACE SEE DETAIL 1
ON TYPE 'D' RAMP M.A.G.
STD. DET. 234.

SECTION A-A

- NOTES:
1. CONTROL ELEVATIONS SHOWN ARE IN
RELATION TO THE GUTTER. GUTTER
ELEVATION = 0.00
2. CLASS 'B' CONC. CONSTRUCTION AS PER
SECTION 725.

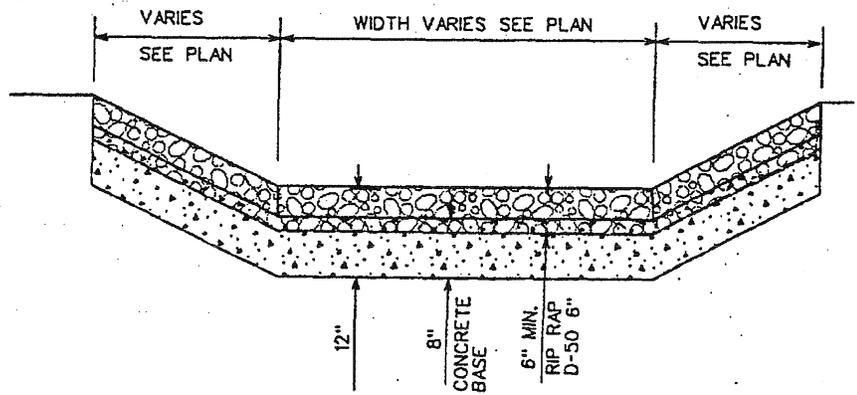
SIDEWALK RAMP DETAIL

ROLL CURB & GUTTER M.A.G. STD. DET. 234 MODIFIED



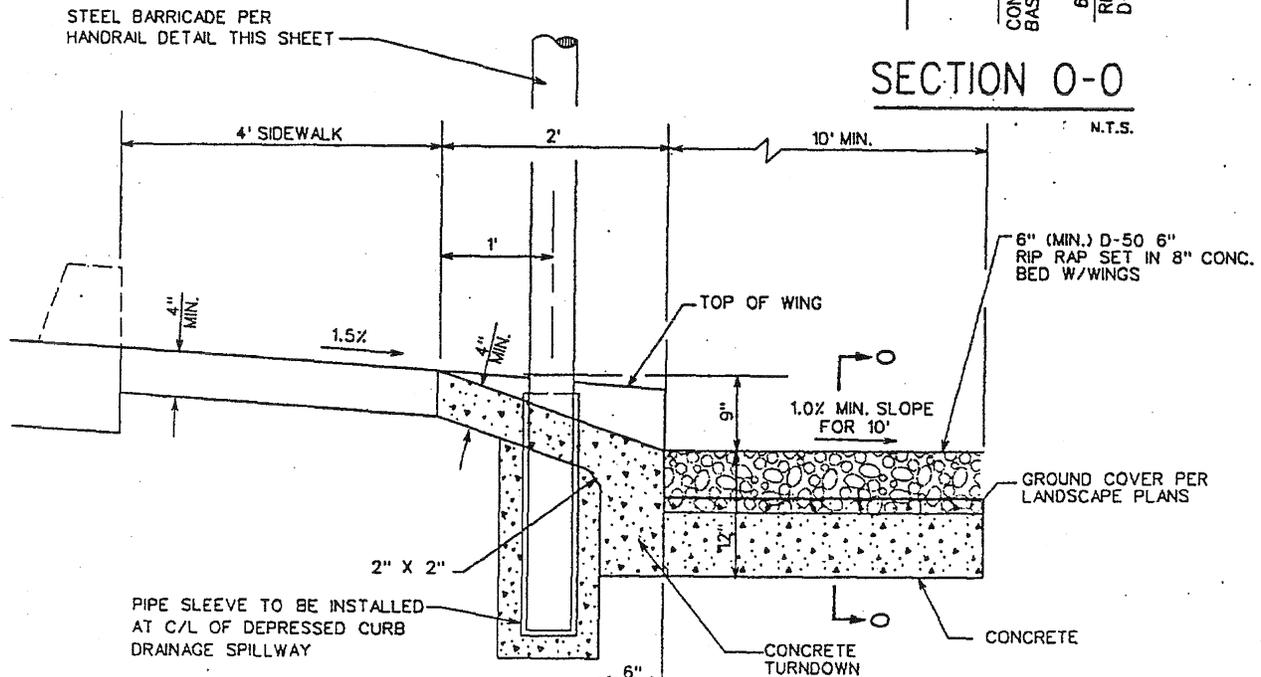
ELEVATION @ BACK OF SPILLWAY

N.T.S.



SECTION 0-0

N.T.S.

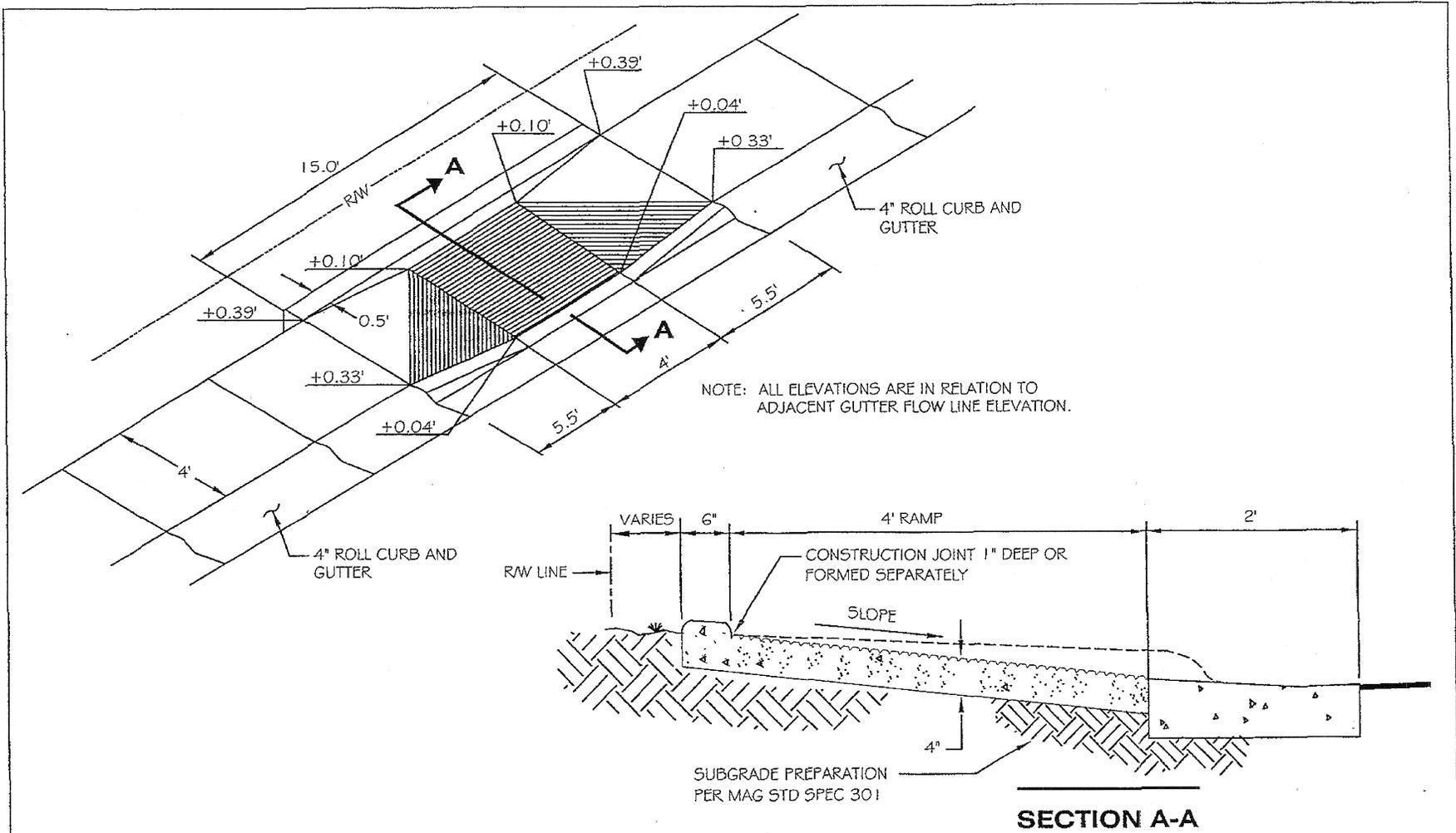


SECTION A-A

N.T.S.

DEPRESSED SW & CURB DETAIL

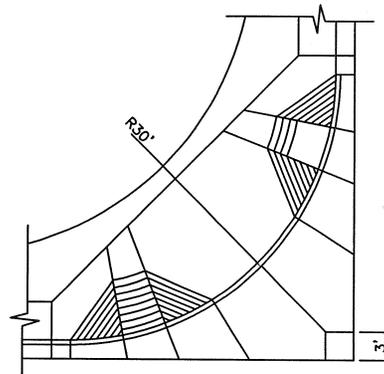
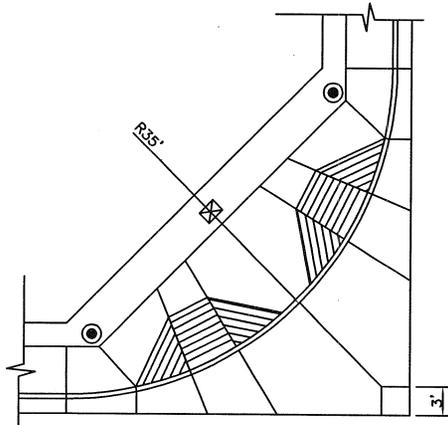
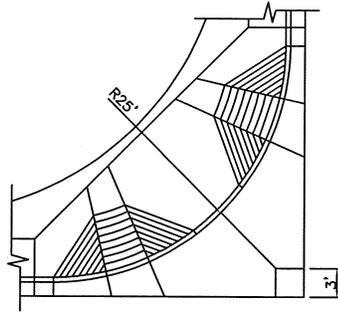
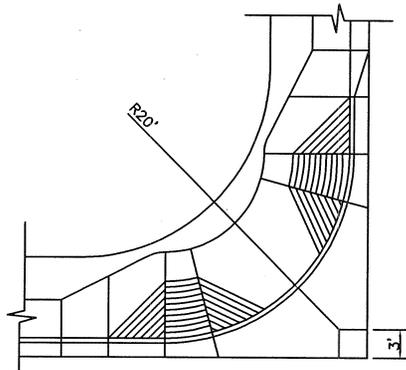
N.T.S.



NOTES:

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO GUTTER FL ELEVATION = 0.00
2. CLASS 'B' CONC. CONSTRUCTION AS PER M.A.G. STD. SPEC. 725.

<p>C-243 REPLACES 48</p>	 <p>CITY OF CHANDLER STANDARD DETAIL</p>	<p>SIDEWALK RAMP FOR ROLL CURB</p>	<p>APPROVED: <i>Elizabeth H. King</i> CITY ENGINEER DATE: <i>January 11, 2002</i></p>	<p>DETAIL NO C-243 NTS</p>
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NOTES:

1. CONSTRUCT THE CONTRACTION JOINTS AS SHOWN ON CONCRETE APRON FOR THE RADIUS REQUIRED.
2. WHEN PLANS CALL FOR A CLASS "A" CONCRETE VALLEY GUTTER THE CONTRACTION JOINTS SHALL BE SPACED SYMMETRICAL WITH AT LEAST ONE JOINT EVERY 10 FEET.
3. WHEN PLANS CALL FOR A 7' VALLEY GUTTER, MAKE A 7' SQUARE INSTEAD OF A 3' SQUARE.

DETAIL NO.
P1231



City of Phoenix
STANDARD DETAIL

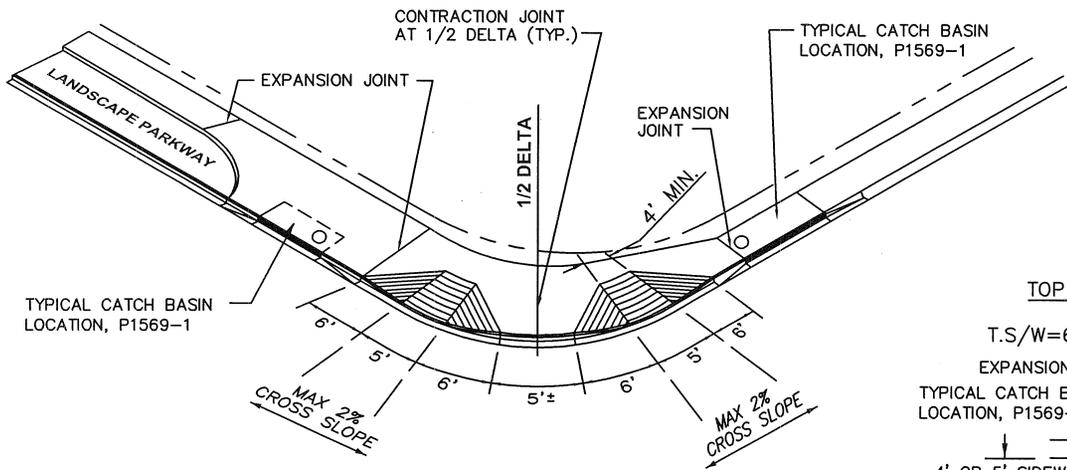
APRON JOINTS

APPROVED

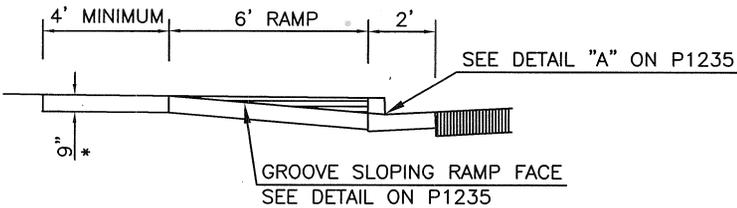
Mario Saldamando
CITY ENGINEER

08-08-03
DATE

DETAIL NO.
P1231



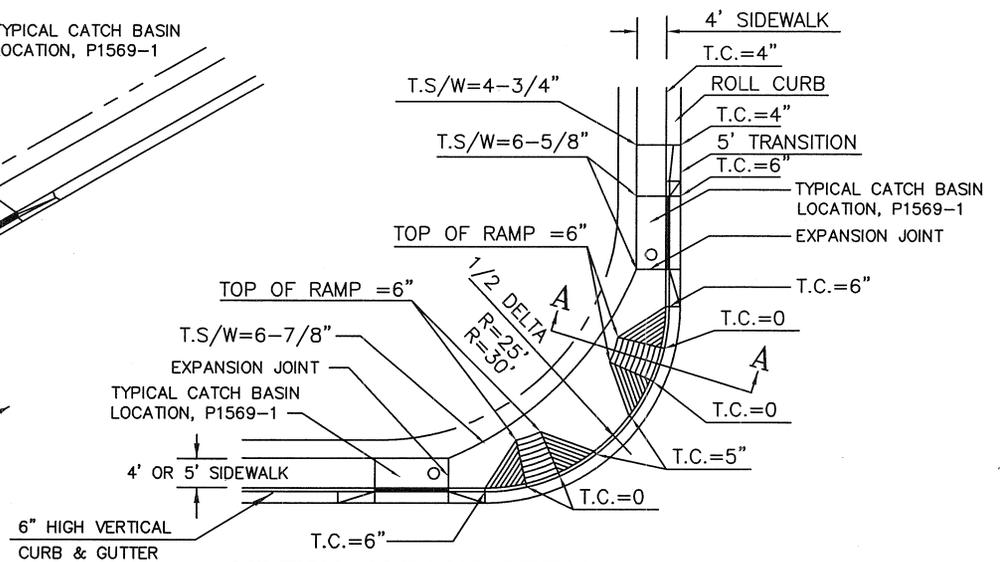
2% MAX.
1.5% MIN.
CROSS SLOPE



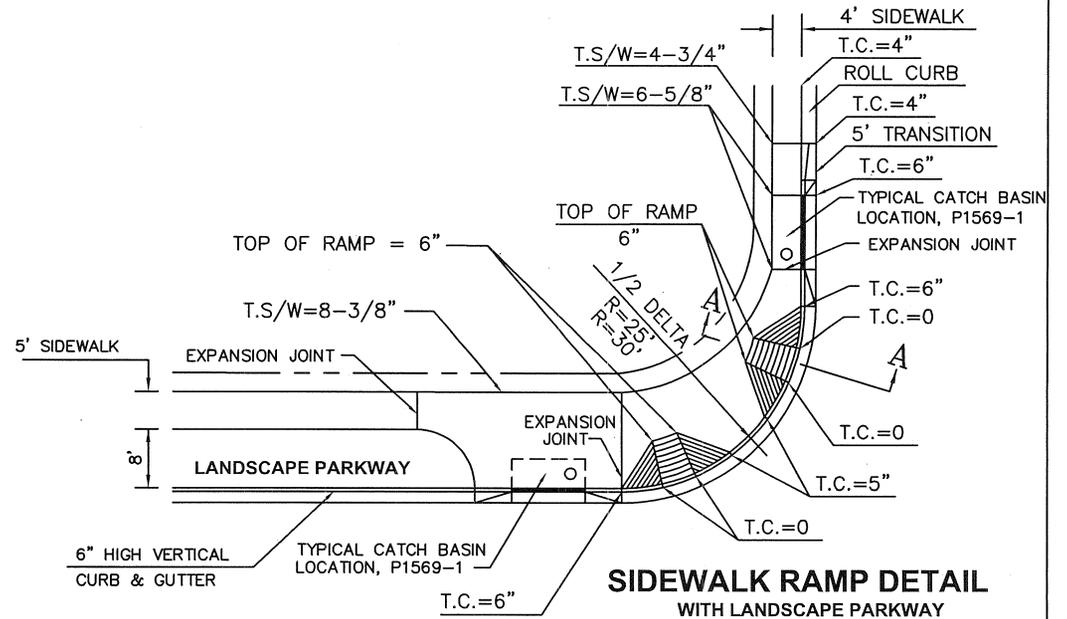
SECTION A-A

NOTES:

- CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADially. GUTTER ELEVATION = 0".
- CONCRETE CURB & GUTTER AT CURB RETURNS WITH RAMPS SHALL BE M.A.G. CLASS A. CONCRETE SIDEWALK AND RAMPS AT CURB RETURNS SHALL BE M.A.G. CLASS A.
- RAMP CURBS MAY BE POURED MONOLITHIC WITH A CONSTRUCTION JOINT.
- EXPANSION JOINT FILLERS SHALL BE PREFORMED 1/2" BITUMINOUS TYPE PER A.S.T.M. D-1751, INSTALLED AS SHOWN ON DET. P1230.
- USE 8' - 10' LANDING WITH TRAILS.
- * 9" LANDING ON MAJOR OR COLLECTOR STREETS AND 4" LANDING ON LOCAL STREETS.



**SIDEWALK RAMP DETAIL
NO LANDSCAPE PARKWAY**



**SIDEWALK RAMP DETAIL
WITH LANDSCAPE PARKWAY**

DETAIL NO.
P1238



City of Phoenix
STANDARD DETAIL

SIDEWALK RAMP DETAIL
25' OR 30' RADIUS CURB RETURN

APPROVED

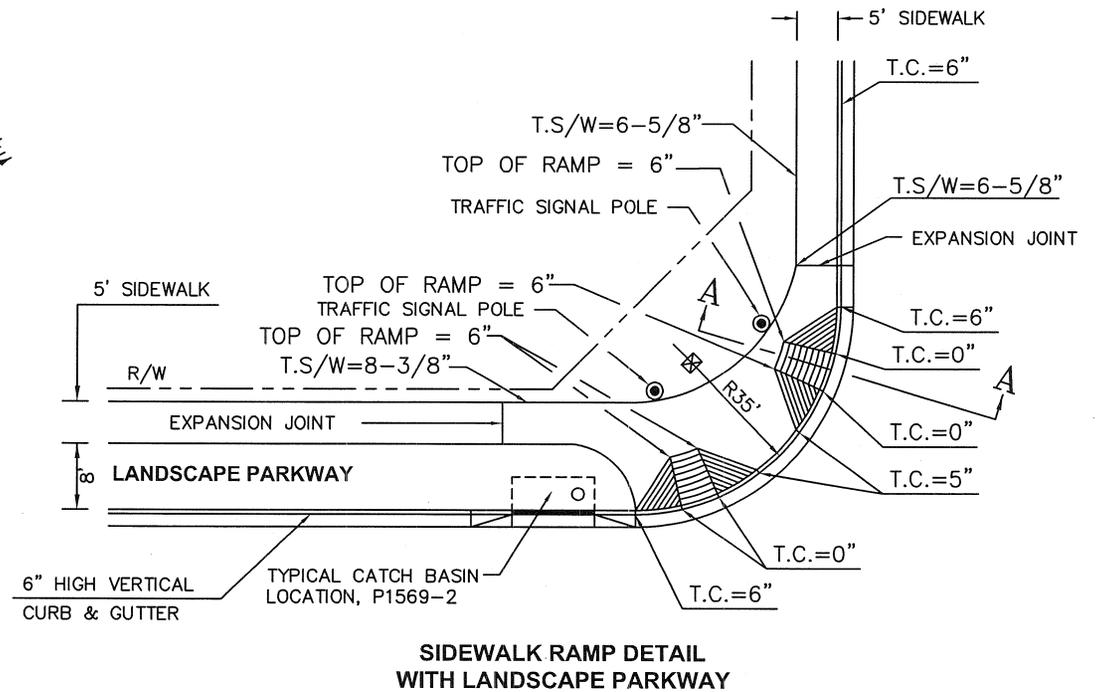
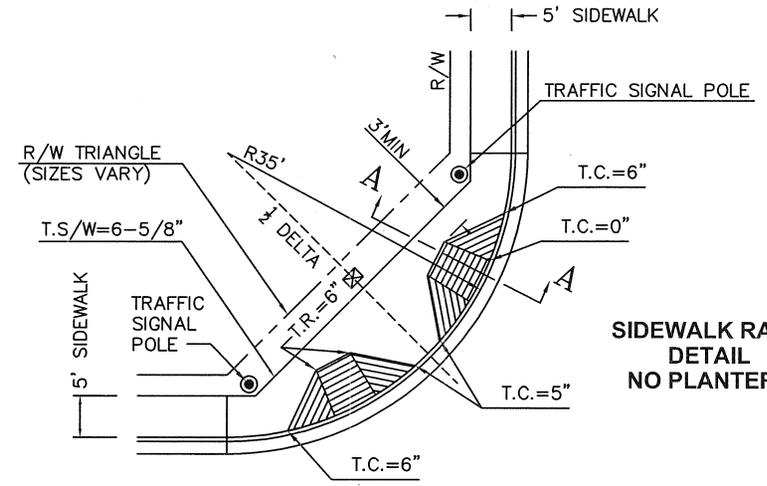
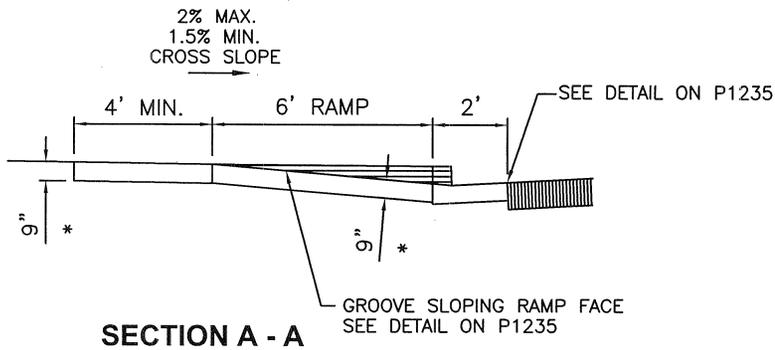
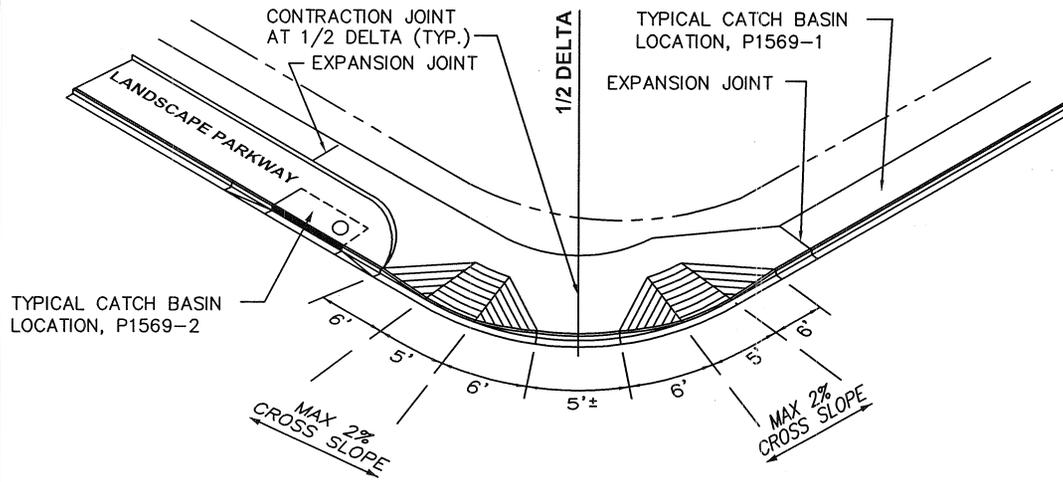
Mario Saldamando
CITY ENGINEER

07-19-04
DATE

DETAIL NO.
P1238

NOTES:

- CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEVATION = 0".
- CONCRETE CURB & GUTTER AT CURB RETURNS WITH RAMPS SHALL BE M.A.G. CLASS A. CONCRETE SIDEWALK AND RAMPS AT CURB RETURNS SHALL BE CLASS A.
- RAMP CURBS MAY BE POURED MONOLITHIC WITH A CONSTRUCTION JOINT.
- EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER A.S.T.M. D-1751.
- USE OF 8' - 10' LANDING WITH TRAILS.
- * 9" LANDING AND RAMPS ON MAJOR OR COLLECTOR STREETS AND 4" LANDING AND RAMPS ON LOCAL STREETS.



DETAIL NO.
P1240



City of Phoenix
STANDARD DETAIL

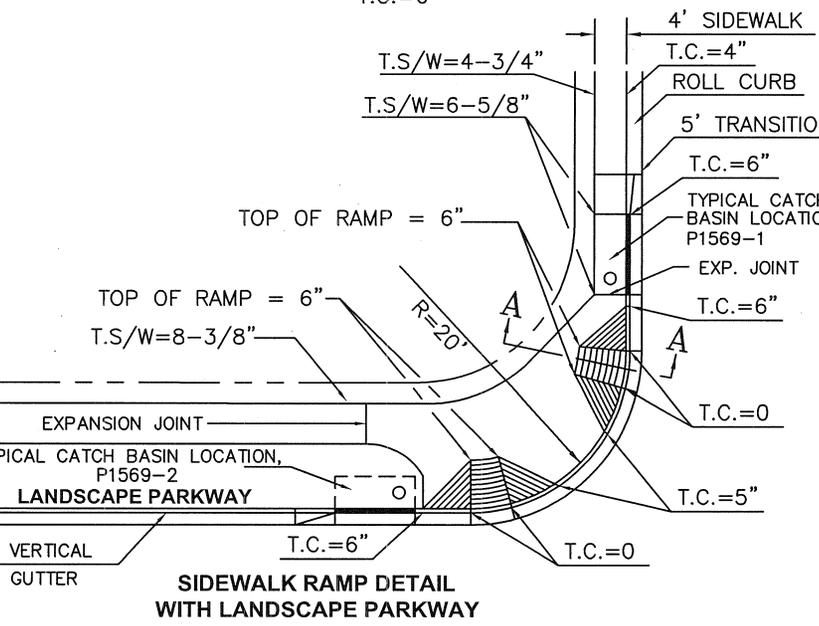
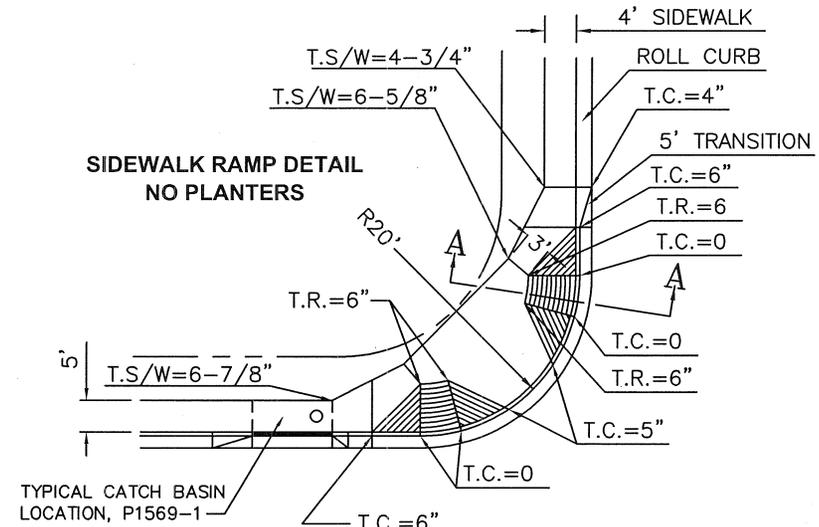
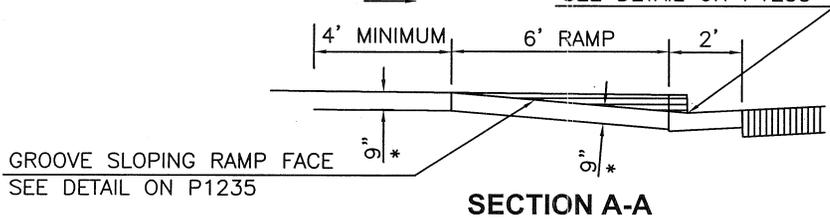
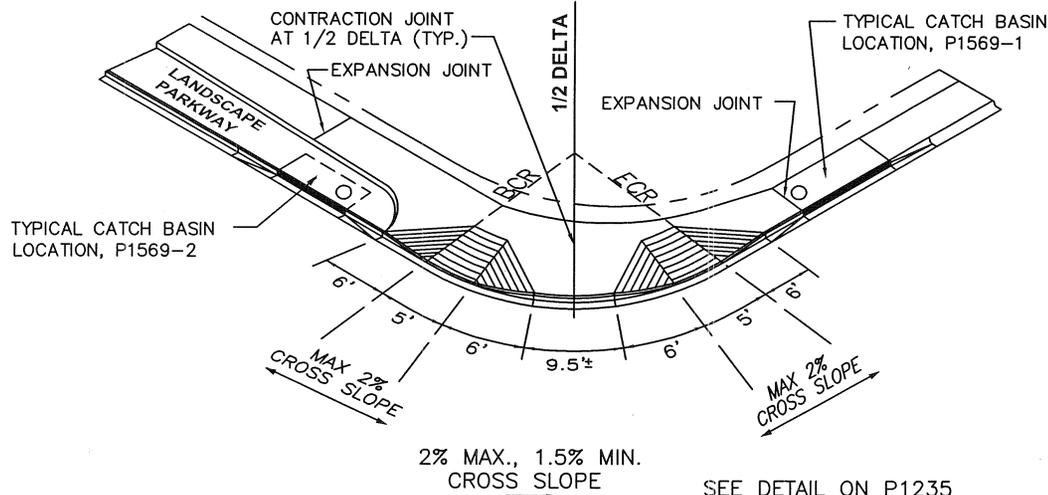
SIDEWALK RAMP DETAIL
35' RADIUS CURB RETURN

APPROVED

Mano Saldamando
CITY ENGINEER

07-19-04
DATE

DETAIL NO.
P1240



- NOTES:
- CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALY. GUTTER ELEVATION = 0".
 - CONCRETE CURB AND GUTTER AT CURB RETURNS WITH RAMPS SHALL BE M.A.G. CLASS A. CONCRETE SIDEWALK AND RAMPS AT CURB RETURNS SHALL BE M.A.G. CLASS A.
 - RAMP CURBS MAY BE POURED MONOLITHIC WITH A CONSTRUCTION JOINT.
 - EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER A.S.T.M. D-1751
 - USE 8' - 10' LANDING WITH TRAILS.
 - * 9" LANDING AND RAMPS ON MAJOR OR COLLECTOR STREETS AND 4" LANDING AND RAMPS ON LOCAL STREETS.

DETAIL NO.
P1241-1

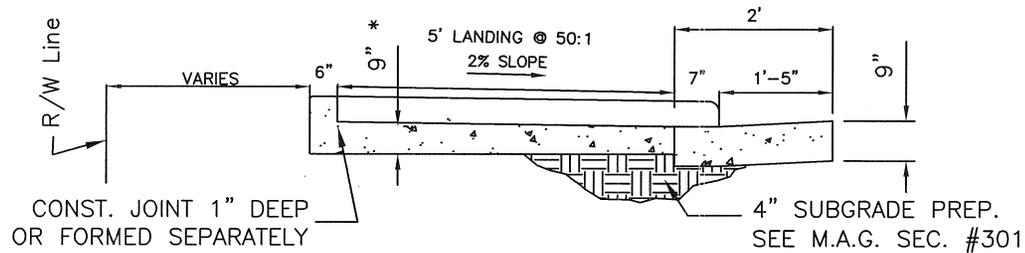


SIDEWALK RAMP DETAIL
20' RADIUS CURB RETURN

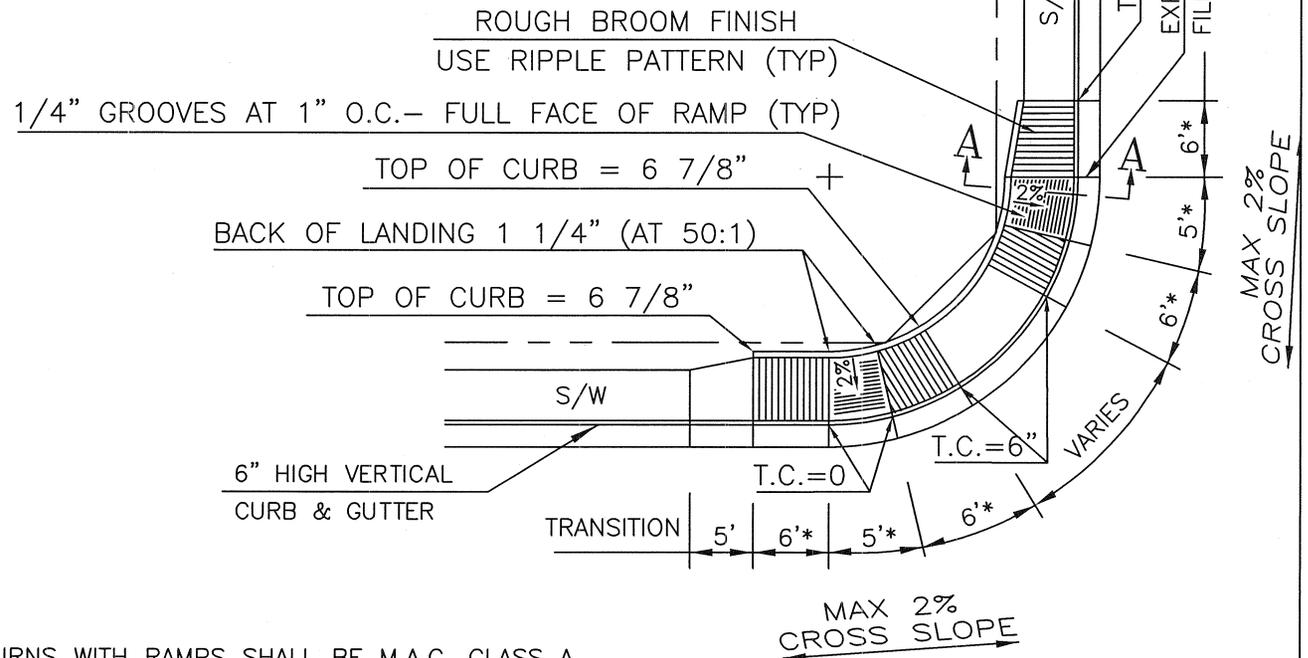
APPROVED
H:\MAG DETAIL Signatures\Signatures\Mario.tff
CITY ENGINEER

07-19-04
DATE

DETAIL NO.
P1241-1



SECTION A-A



- NOTES:
- 1) SEE DETAIL #P1241 FOR CONSTRUCTION.
 - 2) CONCRETE CURB & GUTTER AT CURB RETURNS WITH RAMPS SHALL BE M.A.G. CLASS A. CONCRETE SIDEWALK AND RAMPS AT CURB RETURNS SHALL BE M.A.G. CLASS A.
 - 2) * MINIMUM WIDTH
 - 3) USE 8' - 10' WIDE LANDING WITH TRAILS.
 - 4) * 9" LANDING AND RAMPS ON MAJOR OR COLLECTOR STREETS AND 4" LANDING AND RAMPS ON LOCAL STREETS.

**SIDEWALK RAMP DETAIL
WITH LIMITED R/W**

DETAIL NO.
P1241-2



City of Phoenix
STANDARD DETAIL

SIDEWALK RAMP DETAIL
WITH LIMITED R/W

APPROVED

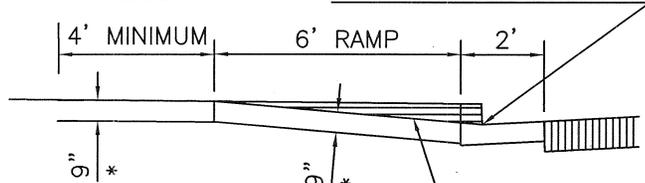
Mario Saldamando
CITY ENGINEER

07-19-04
DATE

DETAIL NO.
P1241-2

2% MAX.
1.5% MIN.
CROSS SLOPE

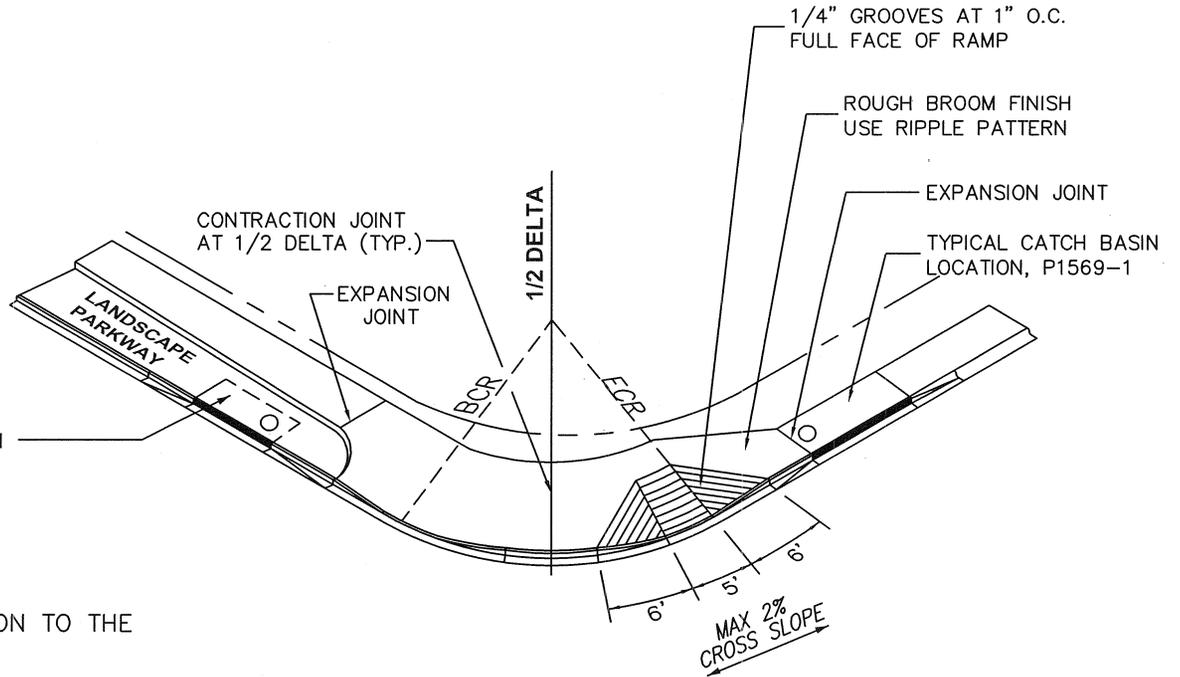
SEE DETAIL ON P1235



GROOVE SLOPING RAMP FACE
SEE DETAIL ON P1235

SECTION A-A

TYPICAL CATCH BASIN
LOCATION, P1569-2



NOTES:

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEVATION = 0".
2. CONCRETE CURB & GUTTER AT CURB RETURNS WITH RAMPS SHALL BE M.A.G. CLASS A. CONCRETE SIDEWALK AND RAMPS AT CURB RETURNS SHALL BE M.A.G. CLASS A.
3. RAMP CURBS MAY BE POURED MONOLITHIC WITH A CONSTRUCTION JOINT.
4. EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER A.S.T.M. D-1751
5. USE 8' - 10' LANDING WITH TRAILS.
6. * 9" LANDING AND RAMPS ON MAJOR OR COLLECTOR STREETS AND 4" LANDING AND RAMPS ON LOCAL STREETS.

DETAIL NO.
P1241-3



City of Phoenix
STANDARD DETAIL

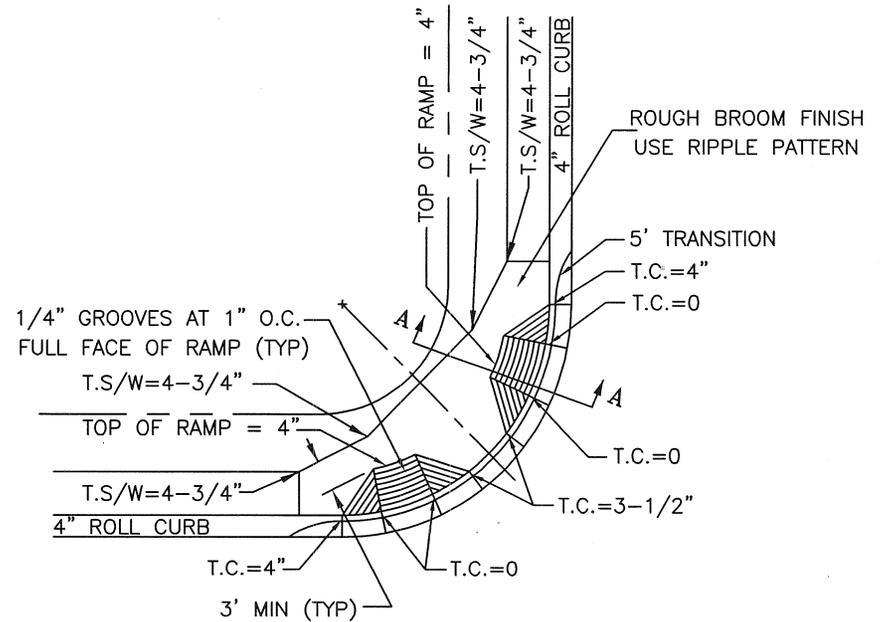
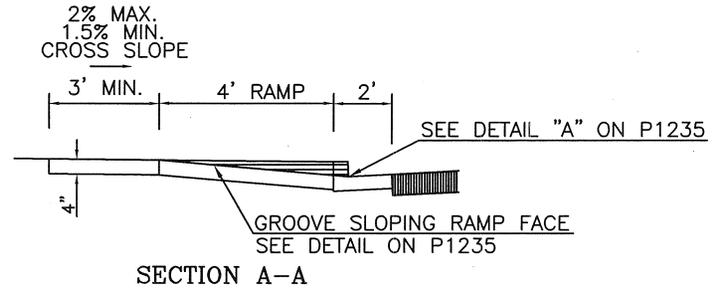
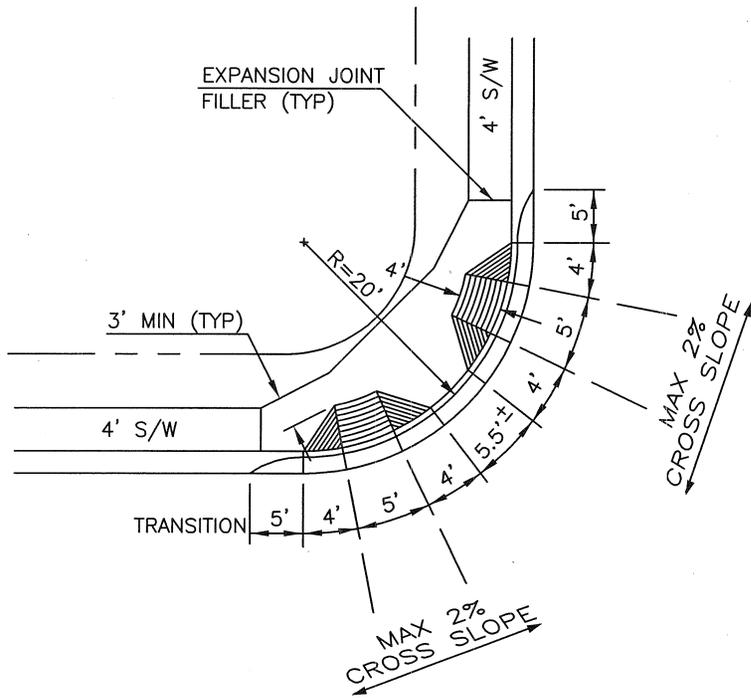
SINGLE SIDEWALK RAMP DETAIL
20' RADIUS CURB RETURN

APPROVED

Mario Saldamando
CITY ENGINEER

07-19-04
DATE

DETAIL NO.
P1241-3



NOTES:

1. CONTROL ELEVATIONS SHOWN ARE IN RELATION TO THE GUTTER AND ARE LOCATED RADIALLY. GUTTER ELEVATION = 0".
2. CONCRETE CURB & GUTTER AT CURB RETURNS WITH RAMPS SHALL BE M.A.G. CLASS A. CONCRETE SIDEWALK AND RAMPS AT CURB RETURNS SHALL BE M.A.G. CLASS A.
3. RAMP CURBS MAY BE POURED MONOLITHIC WITH A CONSTRUCTION JOINT.
4. EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER A.S.T.M. D-1751
5. USE 8' - 10' LANDING WITH TRAILS.

DETAIL NO.
P1242



City of Phoenix
STANDARD DETAIL

SIDEWALK RAMP DETAIL
4" VERTICAL CURB RETURN

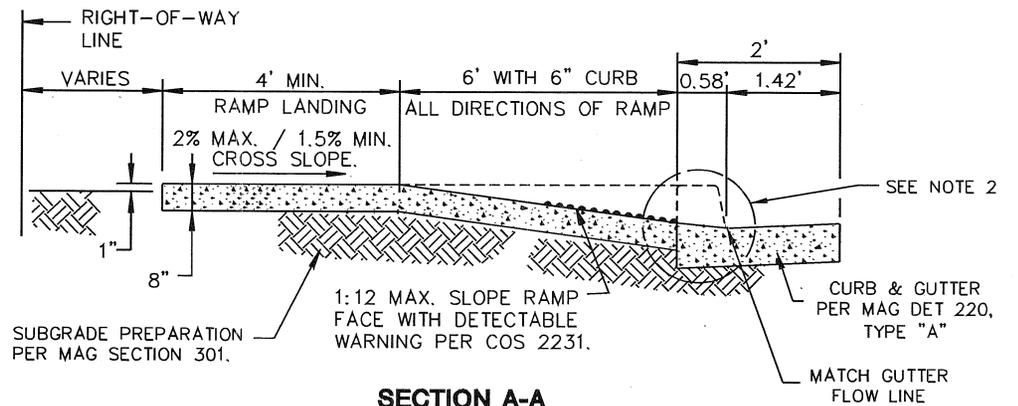
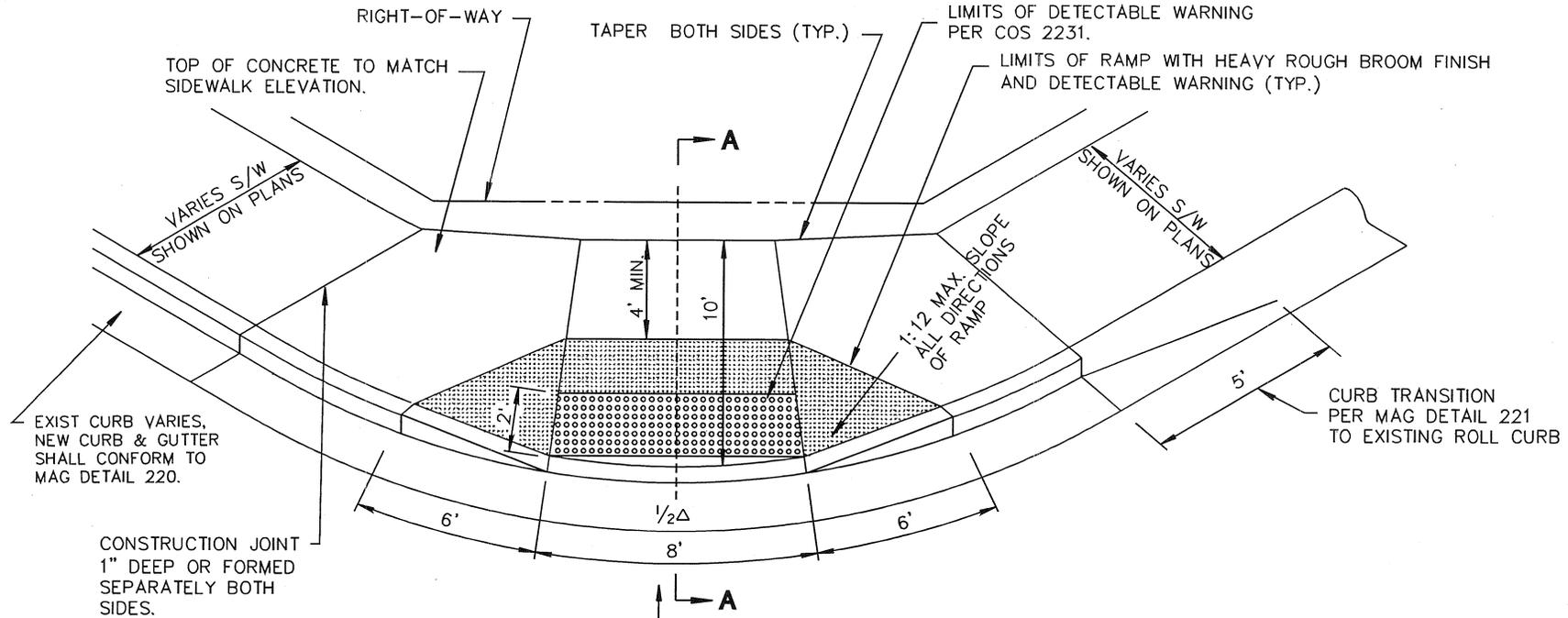
APPROVED

Mario Saldamando
CITY ENGINEER

07-19-04
DATE

DETAIL NO.
P1242

REVISED 5/25/05



NOTES:

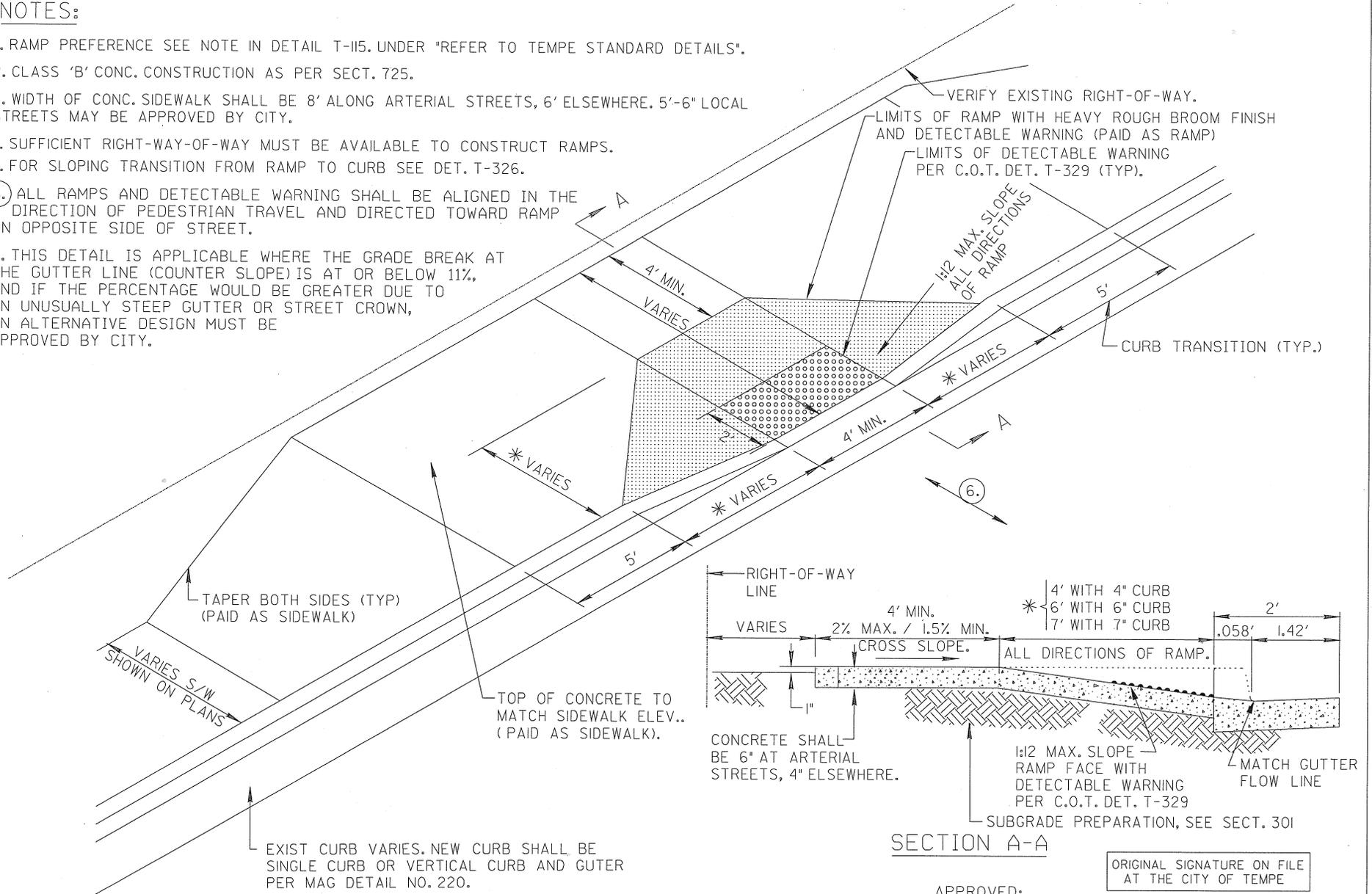
1. ALL CONCRETE TO BE CLASS "B", MAG SECTION 725.
2. FOR SLOPING TRANSITION FROM RAMP TO CURB, SEE DETAIL 1 COS 2235.
3. ALL RAMPS AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON OPPOSITE SIDE OF STREET.
4. USE OF THIS RAMP IS NOT PREFERRED. IT SHALL BE USED ONLY WHERE DIRECTIONAL RAMPS ARE NOT POSSIBLE.

SECTION A-A

DETAIL NO. 2234	City of Scottsdale Standard Details	APPROVED BY: Scottsdale Standards & Specifications Committee	SHARED CURB SIDEWALK RAMP	DETAIL NO. 2234
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NOTES:

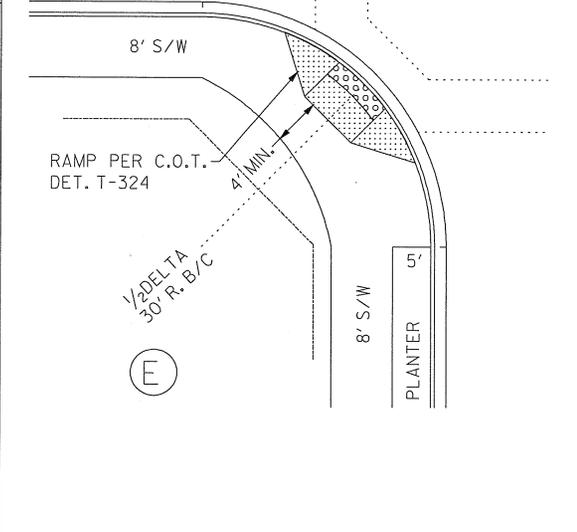
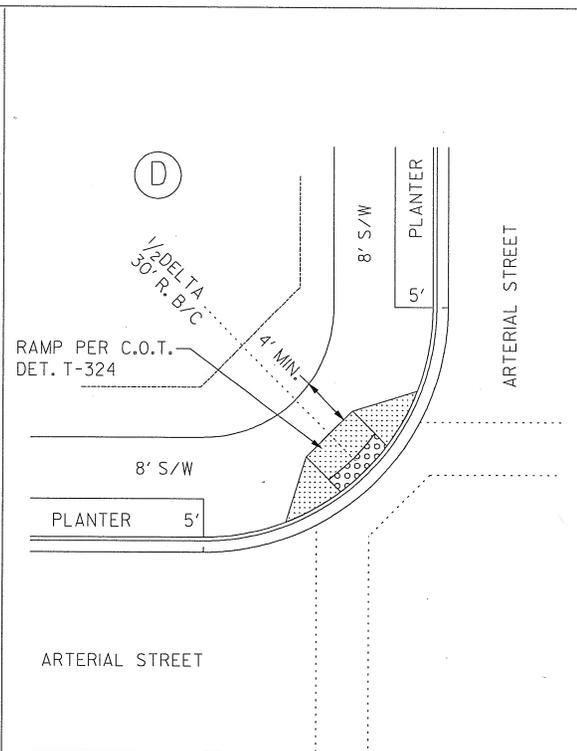
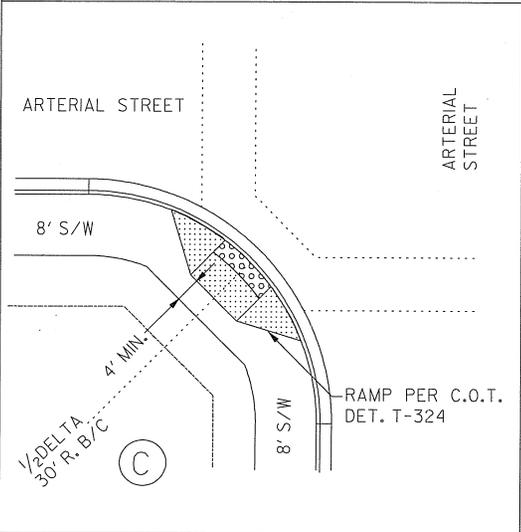
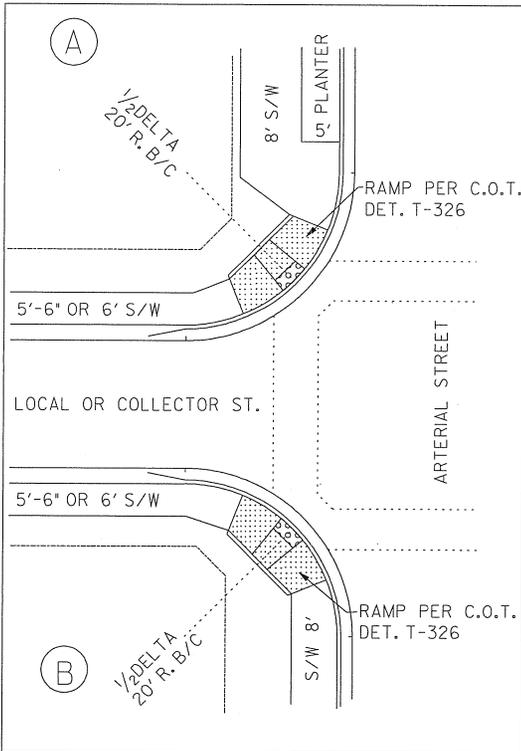
1. RAMP PREFERENCE SEE NOTE IN DETAIL T-115. UNDER "REFER TO TEMPE STANDARD DETAILS".
2. CLASS 'B' CONC. CONSTRUCTION AS PER SECT. 725.
3. WIDTH OF CONC. SIDEWALK SHALL BE 8' ALONG ARTERIAL STREETS, 6' ELSEWHERE. 5'-6" LOCAL STREETS MAY BE APPROVED BY CITY.
4. SUFFICIENT RIGHT-WAY-OF-WAY MUST BE AVAILABLE TO CONSTRUCT RAMPS.
5. FOR SLOPING TRANSITION FROM RAMP TO CURB SEE DET. T-326.
6. ALL RAMPS AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON OPPOSITE SIDE OF STREET.
7. THIS DETAIL IS APPLICABLE WHERE THE GRADE BREAK AT THE GUTTER LINE (COUNTER SLOPE) IS AT OR BELOW 11%, AND IF THE PERCENTAGE WOULD BE GREATER DUE TO AN UNUSUALLY STEEP GUTTER OR STREET CROWN, AN ALTERNATIVE DESIGN MUST BE APPROVED BY CITY.



SECTION A-A

APPROVED: _____
 DEPUTY PUBLIC WORKS MANAGER DATE
 CITY ENGINEER

ORIGINAL SIGNATURE ON FILE
 AT THE CITY OF TEMPE



NOTES:

1. RAMP PREFERENCE SEE NOTE IN DETAIL T-115. UNDER "REFER TO TEMPE STANDARD DETAILS".
2. CLASS 'B' CONC. CONSTRUCTION AS PER SECT. 725.
3. WIDTH OF CONC. SIDEWALK SHALL BE 8' ALONG ARTERIAL STREETS, 6' ELSEWHERE. 5'-6" LOCAL STREETS MAY BE APPROVED BY CITY.
4. SUFFICIENT RIGHT-WAY-OF-WAY MUST BE AVAILABLE TO CONSTRUCT RAMPS.
5. THESE DETAILS OF RAMPS ARE APPLICABLE WHERE THE GRADE BREAK AT THE GUTTER LINE (COUNTER SLOPE) IS AT OR BELOW 11%, AND IF THE PERCENTAGE WOULD BE GREATER DUE TO AN UNUSUALLY STEEP GUTTER OR STREET CROWN, AN ALTERNATIVE DESIGN MUST BE APPROVED BY CITY.
6. EXISTING CONDITIONS MAY REQUIRE MODIFICATION OF THE ABOVE ALTERNATES WITH APPROVAL OF THE CITY ENGINEER.
7. SEE STD. DETAIL T-345 FOR TYPICAL ALIGNMENT OF SIDEWALK APPROACHING INTERSECTION.
8. RAD. TO BACK OF CURB SHOWN ABOVE ARE TYPICAL BUT MAY VARY WHERE CURB RETURN EXISTS.
9. CENTER RAMP ON MID-RETURN UNLESS APPROVED OTHERWISE BY THE TRAFFIC ENGINEER.
10. ADDITIONAL S/W MAY BE REQUIRED TO PROVIDE FULL WIDTH S/W WHERE TRAFFIC FURNITURE OCCUPIES NORMAL S/W.
11. FOR TRAFFIC FURNITURE FOUNDATIONS SEE TRAFFIC SIGNAL FOUNDATIONS DETAILS.
12. 4' MIN. WIDTH OF CONCRETE AT BACK OF RAMP WITH 2% MAX. / 1.5 MIN. CROSS SLOPE.
13. FOR DETECTABLE WARNING SEE C.O.T. DET. T-329, SLOPING TRANSITION FROM RAMP TO CURB SEE C.O.T. DET. T-326.
14. CONCRETE OF RAMPS SHALL BE 6" AT ARTERIAL STREETS, 4" ELSEWHERE.

APPROVED: _____
 DEPUTY PUBLIC WORKS MANAGER DATE
 CITY ENGINEER

ORIGINAL SIGNATURE ON FILE
 AT THE CITY OF TEMPE