

City of Las Cruces[®]

PEOPLE HELPING PEOPLE

Council Action and Executive Summary

Item # 11Ordinance/Resolution# 2688For Meeting of August 5, 2013
(Ordinance First Reading Date)For Meeting of August 19, 2013
(Adoption Date)

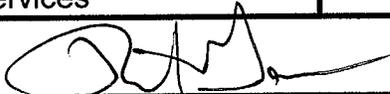
Please check box that applies to this item:

 QUASI JUDICIAL LEGISLATIVE ADMINISTRATIVE

TITLE: AN ORDINANCE AMENDING ARTICLE II. STANDARDS FOR PUBLIC RIGHTS-OF-WAY, SECTION 32-36 OF CHAPTER 32 OF THE LAS CRUCES MUNICIPAL CODE, AS AMENDED.

PURPOSE(S) OF ACTION:

To amend the Design Standards.

COUNCIL DISTRICT: ALL		
<u>Drafter/Staff Contact:</u> Robert Kyle	<u>Department/Section:</u> Community Development/Building & Development Services	<u>Phone:</u> 528-3106
<u>City Manager Signature:</u>		

BACKGROUND / KEY ISSUES / CONTRIBUTING FACTORS:

The proposed amendment is being brought forward based on direction from administration and the City Council due to the rescission of the major road and stormwater impact fees. As part of the discussions regarding the fees the Council was informed that staff would return with an "interim" amendment to the Design Standards (Chapter 32, LCMC) that would essentially require all major infrastructure to be built at the onset of a development or construction project with the option for a Development Agreement to be explored in order to offset, delay or otherwise negotiate on the timing or provision of infrastructure.

This amendment is intended to be utilized until such time as staff has completed the ongoing rewrite of the Design Standards in which the issues can be more fully addressed.

SUPPORT INFORMATION:

1. Ordinance.
2. Exhibit "A", Amended Article II, Section 32-36.
3. Attachment "A", Proposed amendment in legislative format.

SOURCE OF FUNDING:

Is this action already budgeted? N/A	Yes	<input type="checkbox"/>	See fund summary below	
	No	<input type="checkbox"/>	If No, then check one below:	
	<i>Budget Adjustment Attached</i>	<input type="checkbox"/>	Expense reallocated from: _____	
	<input type="checkbox"/>	<input type="checkbox"/>	Proposed funding is from a new revenue source (i.e. grant; see details below)	
			<input type="checkbox"/>	Proposed funding is from fund balance in the _____ Fund.
Does this action create any revenue? N/A	Yes	<input type="checkbox"/>	Funds will be deposited into this fund: _____ in the amount of _____ for FY _____.	
	No	<input type="checkbox"/>	There is no new revenue generated by this action.	

BUDGET NARRATIVE

N/A

FUND EXPENDITURE SUMMARY:

Fund Name(s)	Account Number(s)	Expenditure Proposed	Available Budgeted Funds in Current FY	Remaining Funds	Purpose for Remaining Funds
N/A	N/A	N/A	N/A	N/A	N/A

OPTIONS / ALTERNATIVES:

1. Vote "Yes"; this will amend the City's Design Standards regarding the provision of infrastructure for development projects.
2. Vote "No"; this will result in the status quo. The current provisions will remain in place and roadway improvements will occur in accordance with the present Design Standards.
3. Vote to "Amend"; the City Council could amend the proposed language to address concerns they may have regarding the subject matter.
4. Vote to "Table"; the City Council could table the action in order for staff to explore other options related to the provision of infrastructure as it relates to development and building activities.

REFERENCE INFORMATION:

The resolution(s) and/or ordinance(s) listed below are only for reference and are not included as attachments or exhibits.

1. N/A

COUNCIL BILL NO. 14-003
ORDINANCE NO. 2688

AN ORDINANCE AMENDING ARTICLE II. STANDARDS FOR PUBLIC RIGHTS-OF-WAY, SECTION 32-36 OF CHAPTER 32 OF THE LAS CRUCES MUNICIPAL CODE, AS AMENDED.

The City Council is informed that:

WHEREAS, the City Council rescinded the Major Road and Stormwater impact fees on June 17, 2013;

WHEREAS, staff was directed by administration to revise the existing Standards For Public Rights-of-Way to address the impact fee rescission.

NOW, THEREFORE, Be it ordained by the governing body of the City of Las Cruces:

(I)

THAT the existing Article II. Standards For Public Right-of-Way, Section 32-36 of Chapter 32, Las Cruces Municipal Code, as amended is hereby amended as shown in Exhibit "A" attached hereto and made part of this Ordinance.

(II)

THAT City staff is hereby authorized to do all deeds necessary in the accomplishment of the herein above.

DONE AND APPROVED this ____ day of _____, 2013.

APPROVED:

ATTEST:

City Clerk

Mayor

(SEAL)

Mayor Miyagishima: _____
Councillor Silva: _____
Councillor Smith: _____
Councillor Pedroza: _____
Councillor Small: _____
Councillor Sorg: _____
Councillor Thomas: _____

Moved by: _____

Seconded by: _____

APPROVED AS TO FORM:



City Attorney

ARTICLE II. STANDARDS FOR PUBLIC RIGHTS-OF-WAYSec. 32-36. City Infrastructure.

Sec. 32-36. City Infrastructure.

- (a) *Purpose of this article.* The purpose of article II is to provide information for the establishment of public rights-of-way. This involves right-of-way requirements and general design specifications for city streets, design criteria for sidewalks, and specifications for the installation of street lights. General information regarding utility improvements is also provided. These shall be considered the minimum standards and nothing shall prevent the development review committee from imposing greater standards to achieve the purposes outlined in section 32-3 of these design standards.
- (b) *Right-of-way and roadway requirements for city streets.* It shall be the policy of the city that major thoroughfares, collectors and arterials with medians, be built from the outside edge of the right-of-way in towards the center. This prevents the dismantling of previously constructed infrastructure in order to accommodate future street improvements such as widening. The location of collector and arterial streets shall be generally guided by the MPO transportation plan and specifically located as development occurs. Coordination between the city staff, development review committee and the developer will occur to provide the appropriate classification and alignment of all major and minor roadways within and abutting developments to encourage appropriate and efficient transportation circulation patterns.

Subdivision/Development Requirements

In order to provide adequate infrastructure to developing areas, all major infrastructure (roads, utilities, drainage structures and parks) shall be provided to developing areas at the earliest possible time. A subdivider or developer shall be responsible for 100% of the infrastructure improvements to and within the boundaries of the subdivision or development area. Phased development or zoning boundaries shall not be used to delay or otherwise negate required improvements to the point of development. When improvements are required on streets providing access to, or adjacent to a subdivision or property as indicated by street classification, as determined by the MPO transportation plan, transportation element of the comprehensive plan and/or the development review committee, the subdivider or developer shall construct the full cross-section of the roadway or pay for the cost of these improvements, as approved by the city to the city or make other acceptable provisions for the construction of the infrastructure.

Access requirements for subdivisions shall consist of the following:

- (1) Minimum access to the subdivision or development shall be from a dedicated and accepted public right-of-way. In instances where the access to a subdivision is unimproved or not up to present or acceptable standard it shall be the responsibility of the subdivider, developer or builder to obtain and dedicate the necessary right-of-way and construct the appropriate cross-section

depending on the classification of the roadway from the subdivision or property boundary to the nearest paved and accepted public roadway.

- (2) Access to lots within a commercial or industrial subdivision shall be from either a dedicated and accepted improved public right-of-way or an improved access established by a 50 foot (15.24m) wide permanent private road and/or access easement. Exceptions to allow a narrower lot access may be considered by the DRC.
- (3) Access to lots within a residential subdivision shall be from a dedicated and accepted improved public right-of-way or private improved road if approved as part of a Planned Unit Development or Development Agreement.

General Improvement Requirements

All other developing parcels of real property shall provide any additional right-of-way necessary to conform to the MPO transportation plan for all roads classified collector and above and 100 percent of the required right-of-way for local streets. These rights-of-way shall be improved to the full cross-section and connected to an existing improved and accepted right-of-way. One and two family homes and their accessory structures are exempt from the improvements required of this section. A permanent right-of-way easement may be granted in lieu of dedicated right-of-way. The decision to accept a permanent easement in lieu of dedicated right-of-way may be determined by the development review committee. Legal lots of record existing as of the date of this amendment and being used for one and two family residential purposes are exempt from the right-of-way provisions of this section, provided they are served by an existing legal road or access easement. The development review committee may waive all additional right-of-way requirements in instances where expansion of a specific roadway is neither feasible nor planned.

Waivers and Deviations

Certain waivers to these provisions may be considered by the Development Review Committee. The DRC has the authority to grant deviations to right-of-way width(s) or requirements and cross-section deviations corresponding to right-of-way adjustments. The DRC may refer any request to the City Council for consideration. This provision shall supersede LCMC 37, Article XI as it pertains to the subject matter.

Waivers to the General Improvement Requirements of this section shall be considered by the City Council after recommendation by the Development Review Committee.

All other waivers to these requirements shall be considered by the City Council or in accordance with LCMC 37, Article XI as applicable.

Development Agreements

Any deviations other than those addressed above, including changes in level of improvement or phasing of improvements shall be considered by the City Council through Development Agreements (DA).

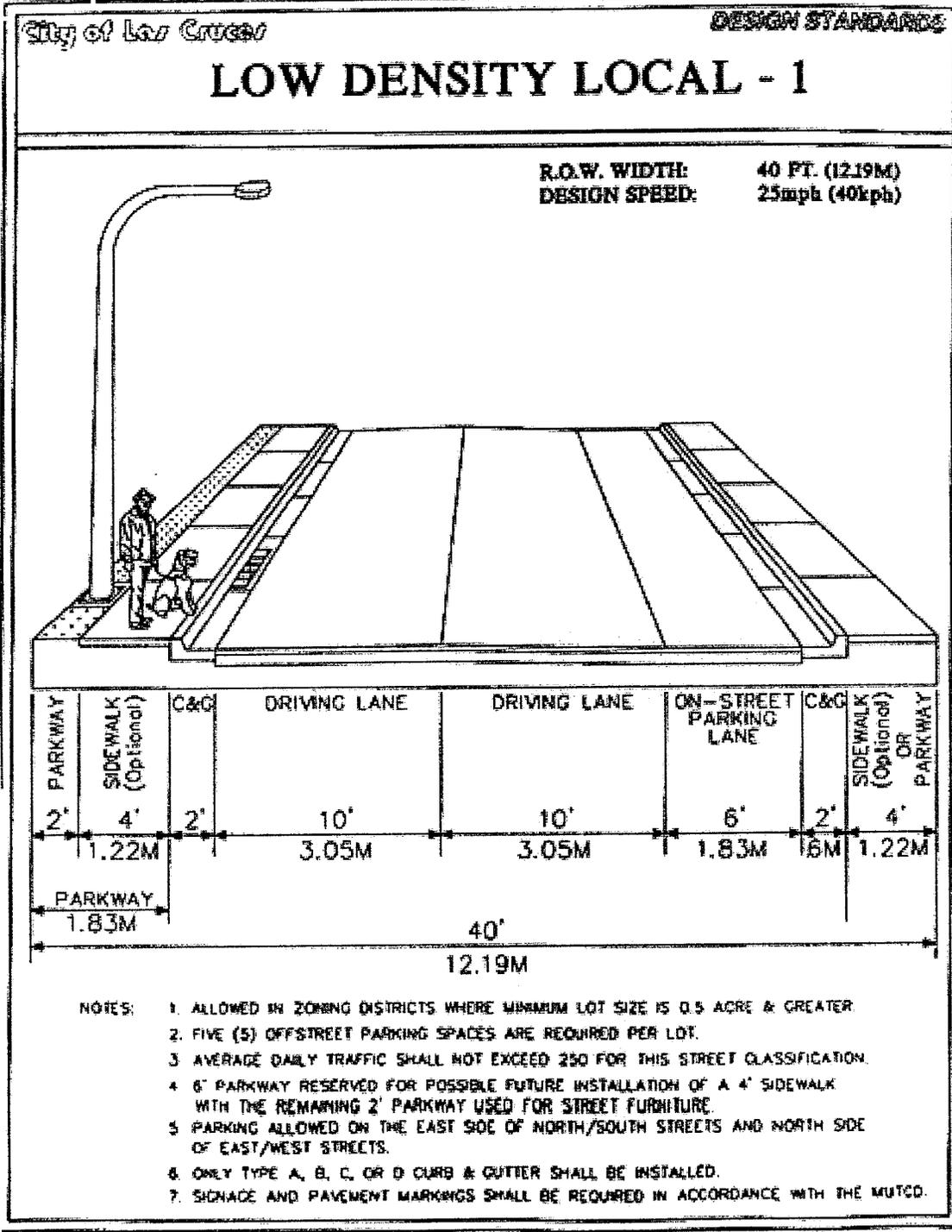
The DA shall be considered a binding agreement between the City of Las Cruces and applicant(s) regarding the type, timing, phasing or provision of infrastructure related to development within the City of Las Cruces. The draft DA shall be submitted by the applicant at the earliest portion of development, i.e., Annexation, Master Plan, PUD Concept Plan. The DA will be reviewed by appropriate staff during the development review process. The DRC shall review the DA and make a recommendation to the City Council regarding the proposed DA. Once approved, the DA will run with the development unless amended.

The Development Agreement shall address, at a minimum, the following items:

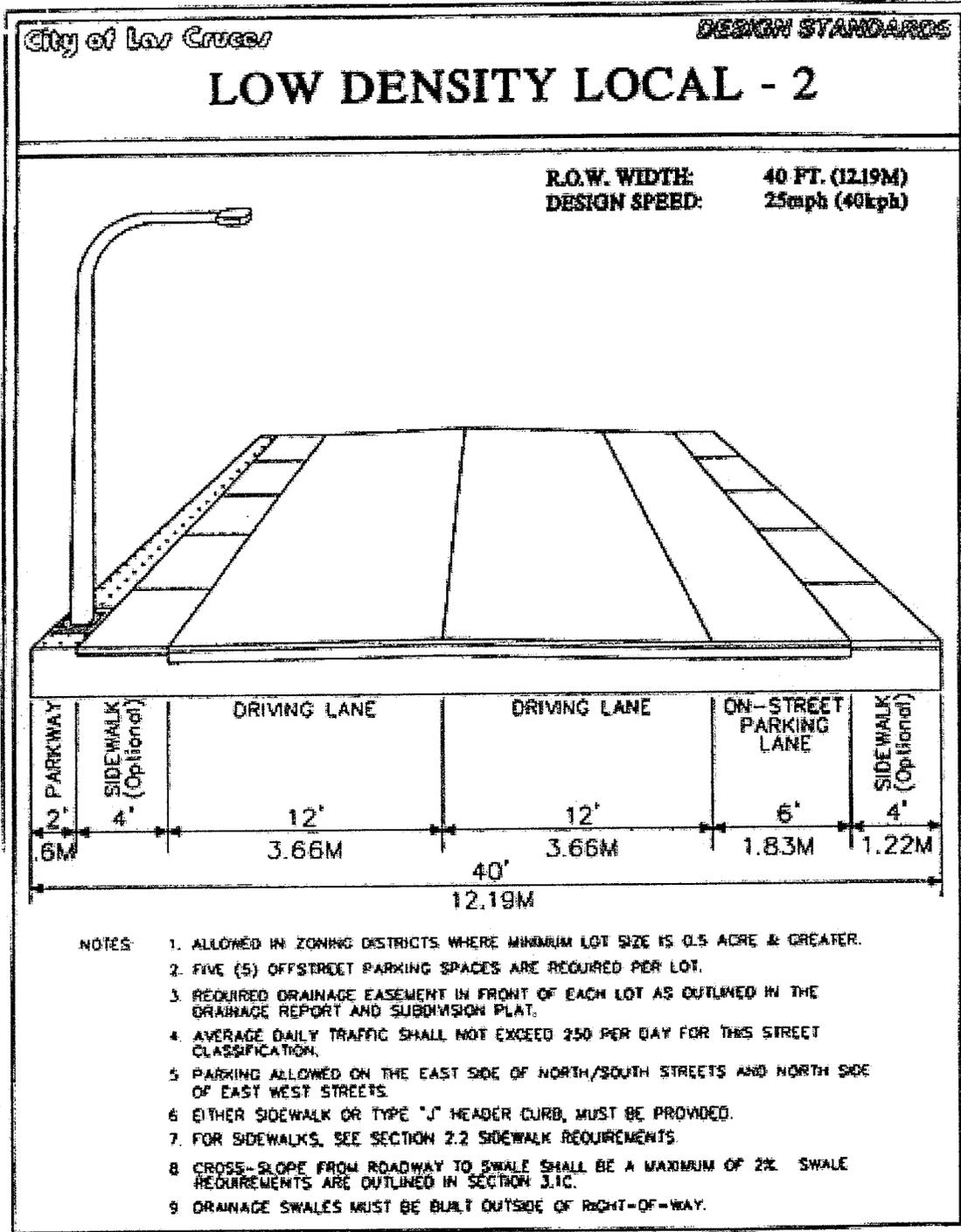
1. Definitions
2. Parties
3. Relationship of the Parties
4. Property
5. Authorization
6. Intent of the Parties
7. Recitation of Benefits and Burdens
8. Consistency with Plans
9. Administrative Act/Legislative Act
10. Applicable Land Use Regulations
11. Status of Applicable Land Use Regulations and Plans
12. Approval and Permit Requirements
13. Dedications and Reservations
14. Utility Connections
15. Duration of the Agreement
16. Amendments, Cancellations or Terminations
17. Periodic Review
18. Progress Reports
19. Remedies

20. Enforcement
21. Hold Harmless Clause
22. Insurance, Bonds
23. Severability Clause
24. Merger Clause
25. Statements of Incorporation by Reference
26. Cooperation
27. Subsidiary of Collateral Agreements
28. Conflict of Laws

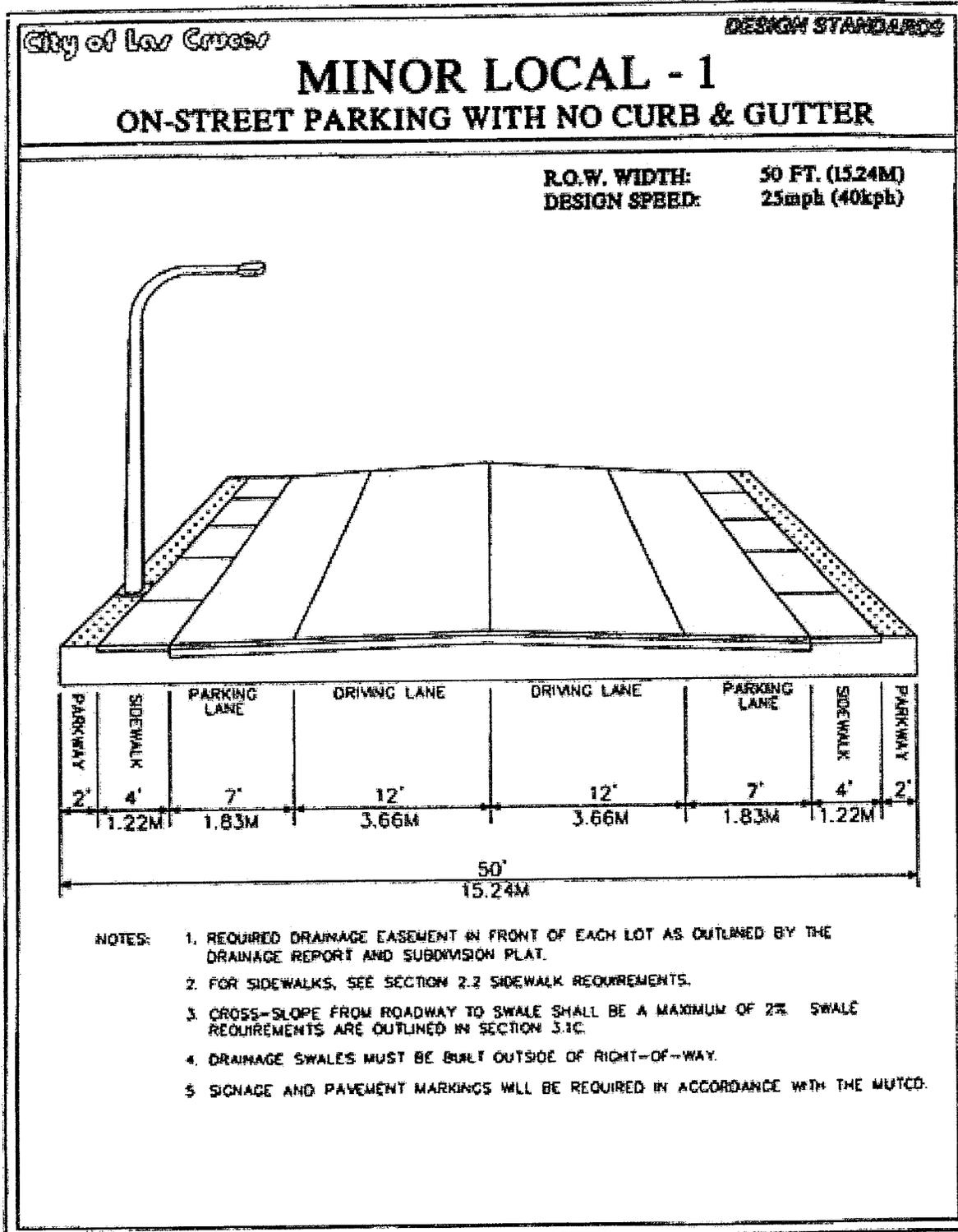
The following cross-section (14 pages) provide the requirements for right-of-way, paving width, parkways, and general use criteria for all acceptable city street classifications. Deviations or modifications to design may be acquired through the engineering review committee.



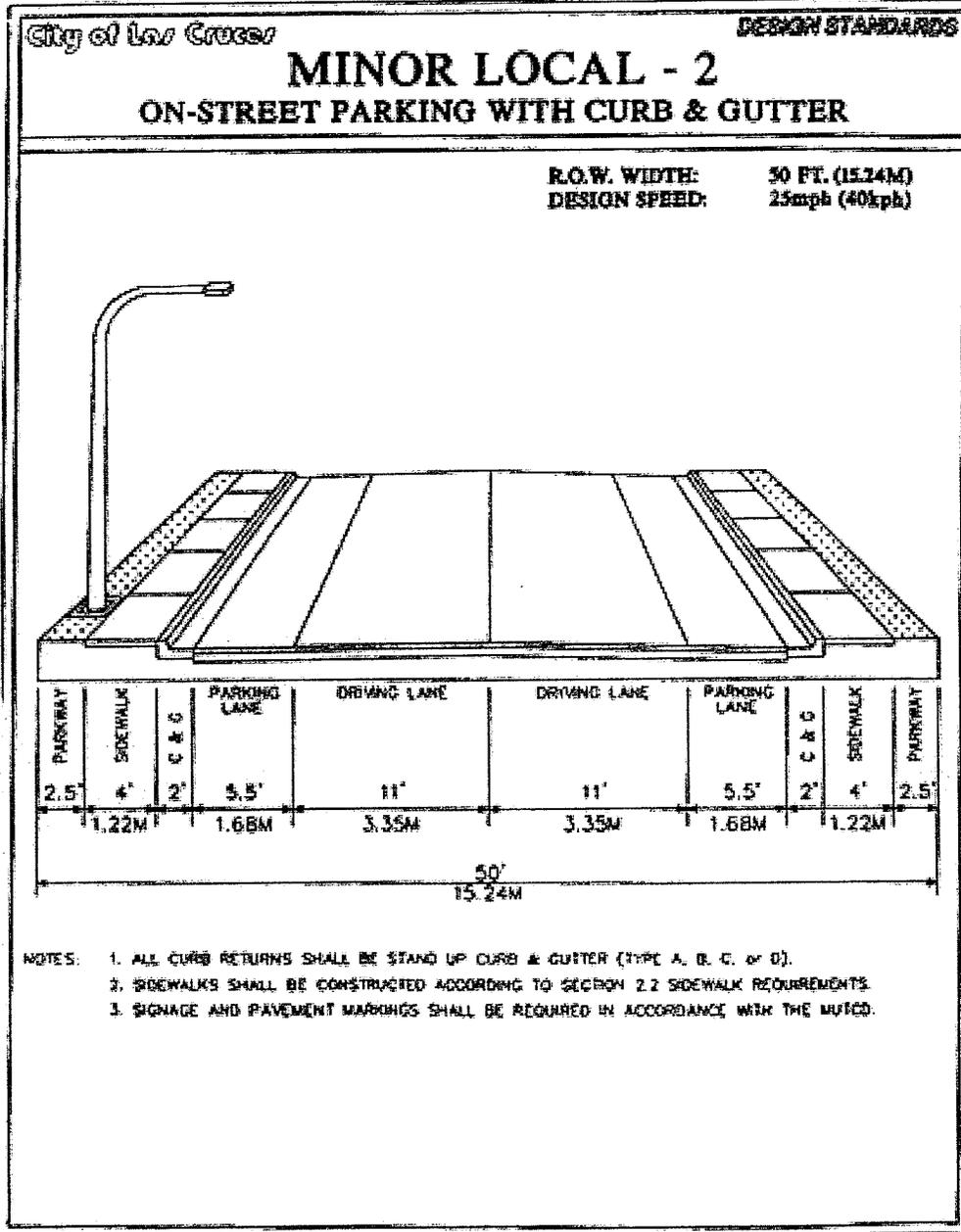
Low Density Local 1



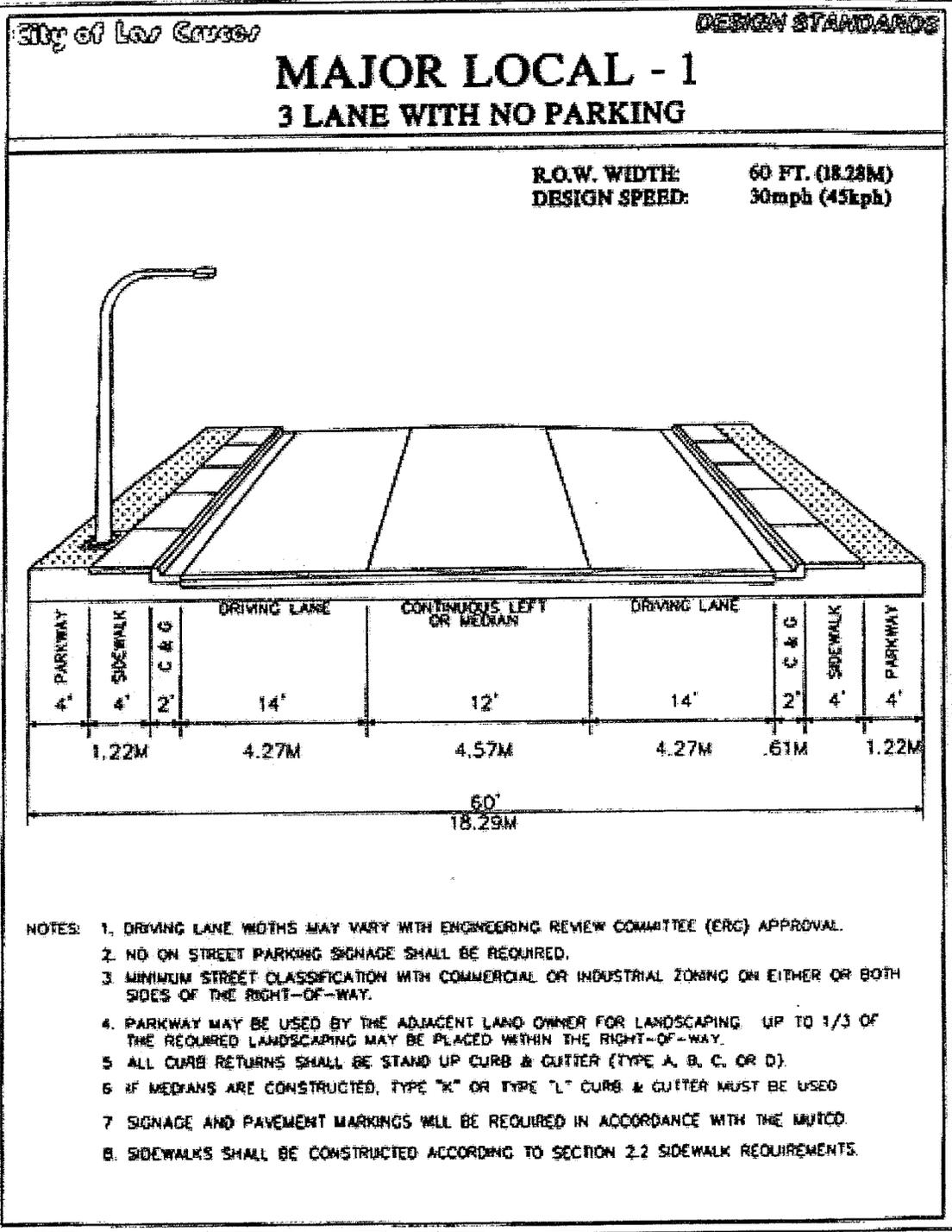
Low Density Local 2



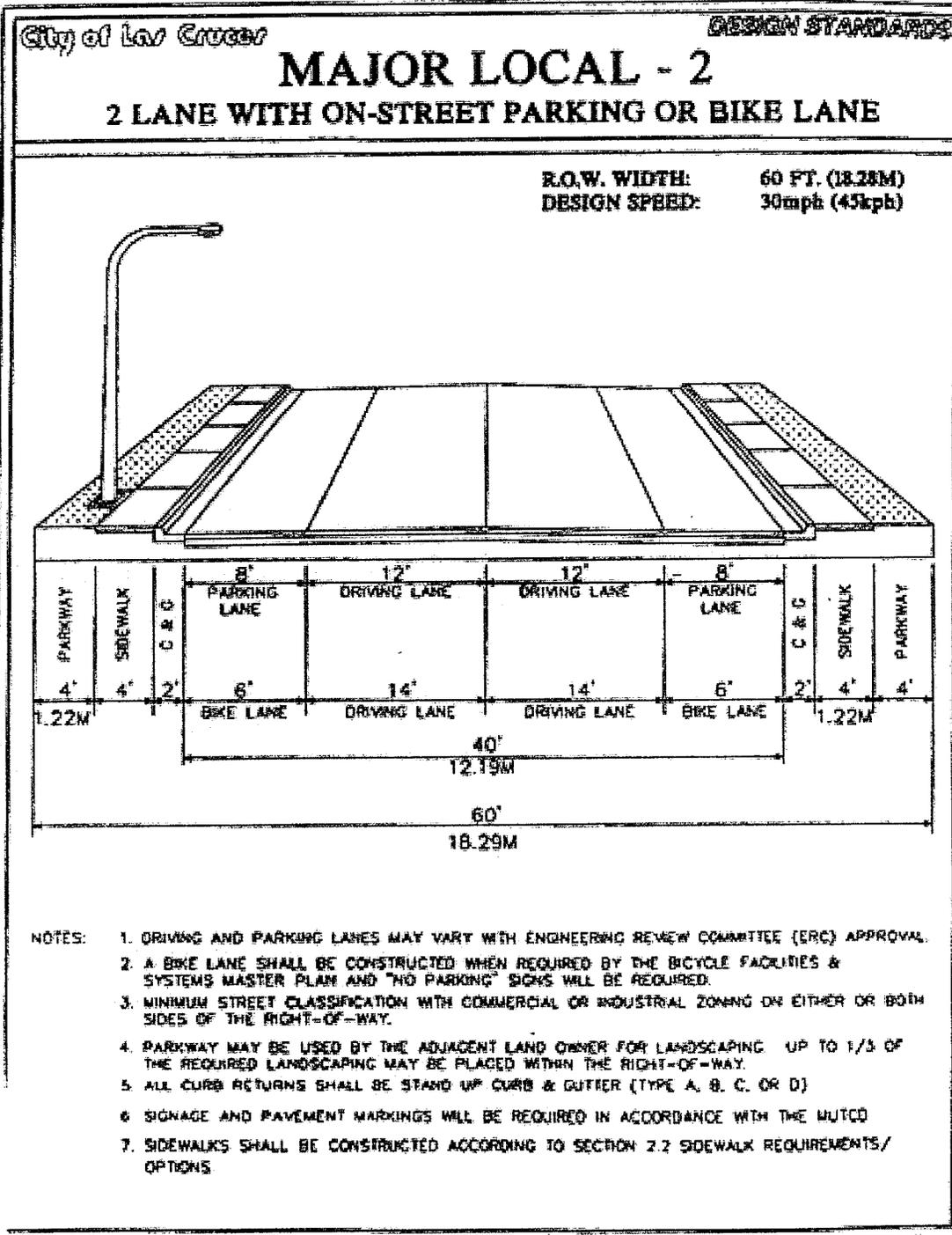
Minor Local 1



Minor Local 2



Major Local 1



Major Local 2

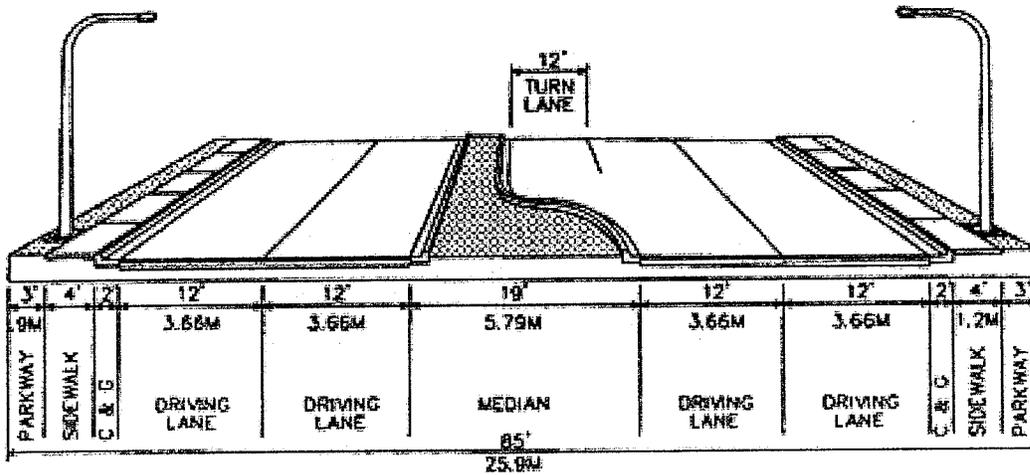
City of Las Cruces

DESIGN STANDARDS

COLLECTOR - 1

R.O.W. WIDTH: 85 FT. (25.91M)
 DESIGN SPEED: 35mph (55kph)

NO BICYCLE FACILITIES



- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER STUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 4. SIGNAGE AND PAVEMENT MARKINGS WILL BE REQUIRED IN ACCORDANCE WITH MUTCO.

Collector 1

City of Las Cruces

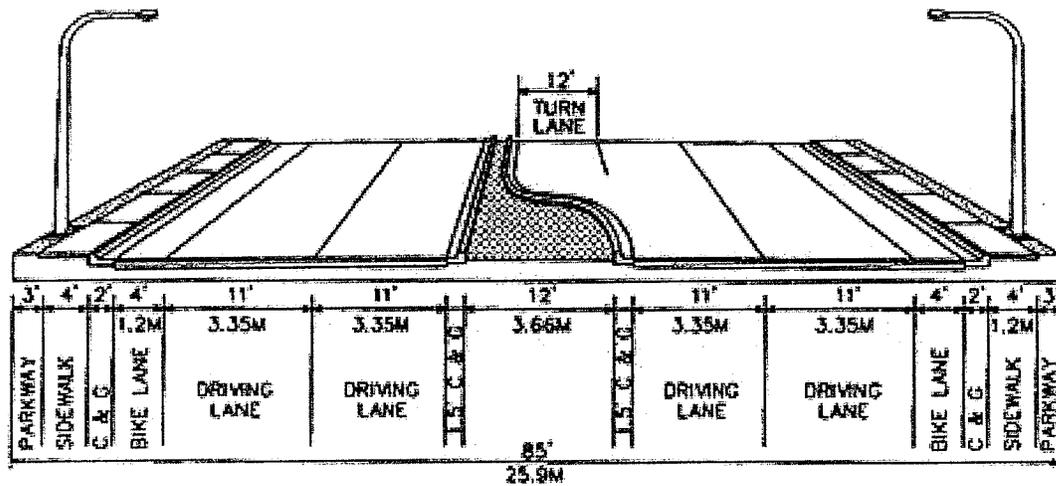
DESIGN STANDARDS

COLLECTOR - 2

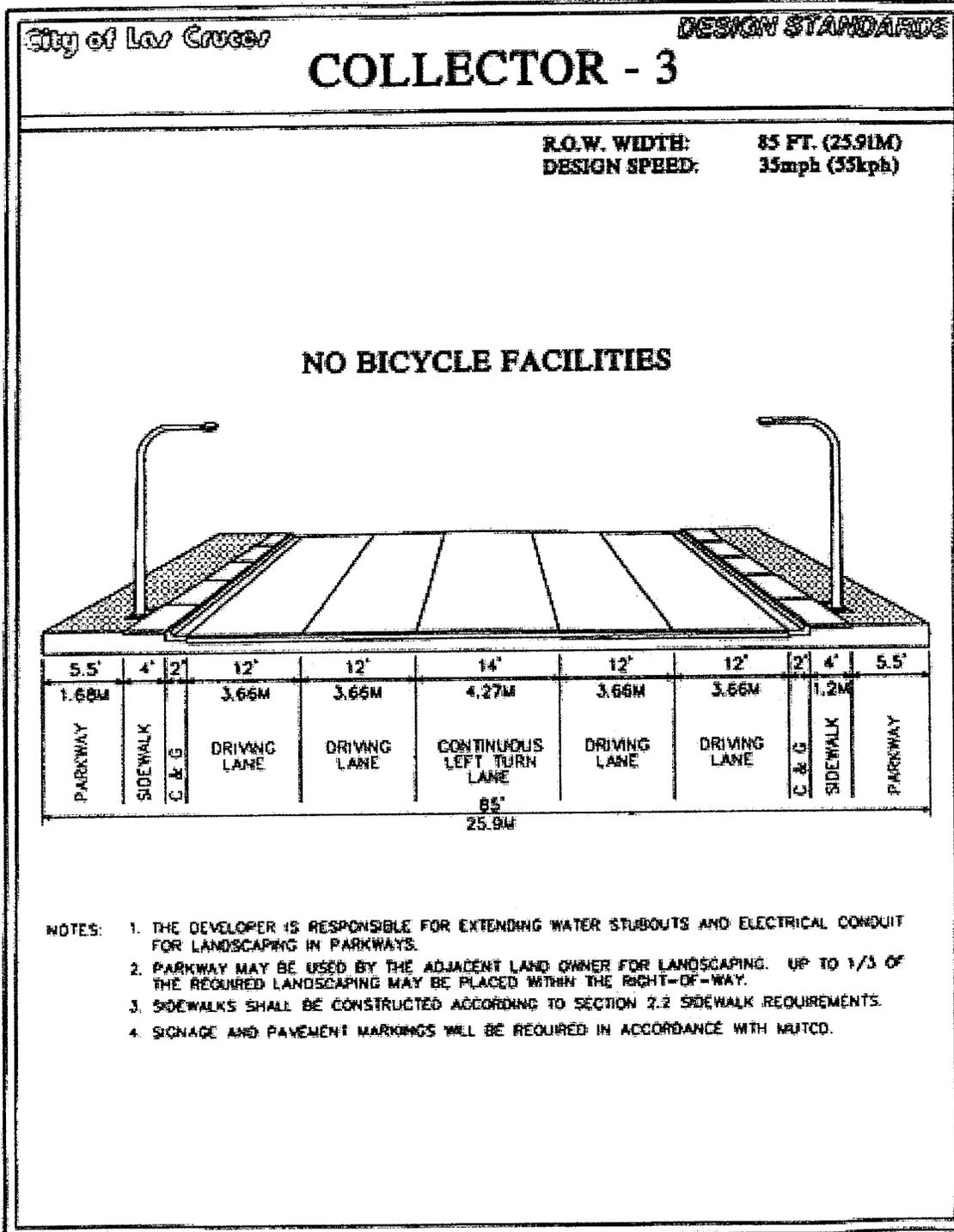
R.O.W. WIDTH: 85 FT. (25.91M)

DESIGN SPEED: 35mph (55kph)

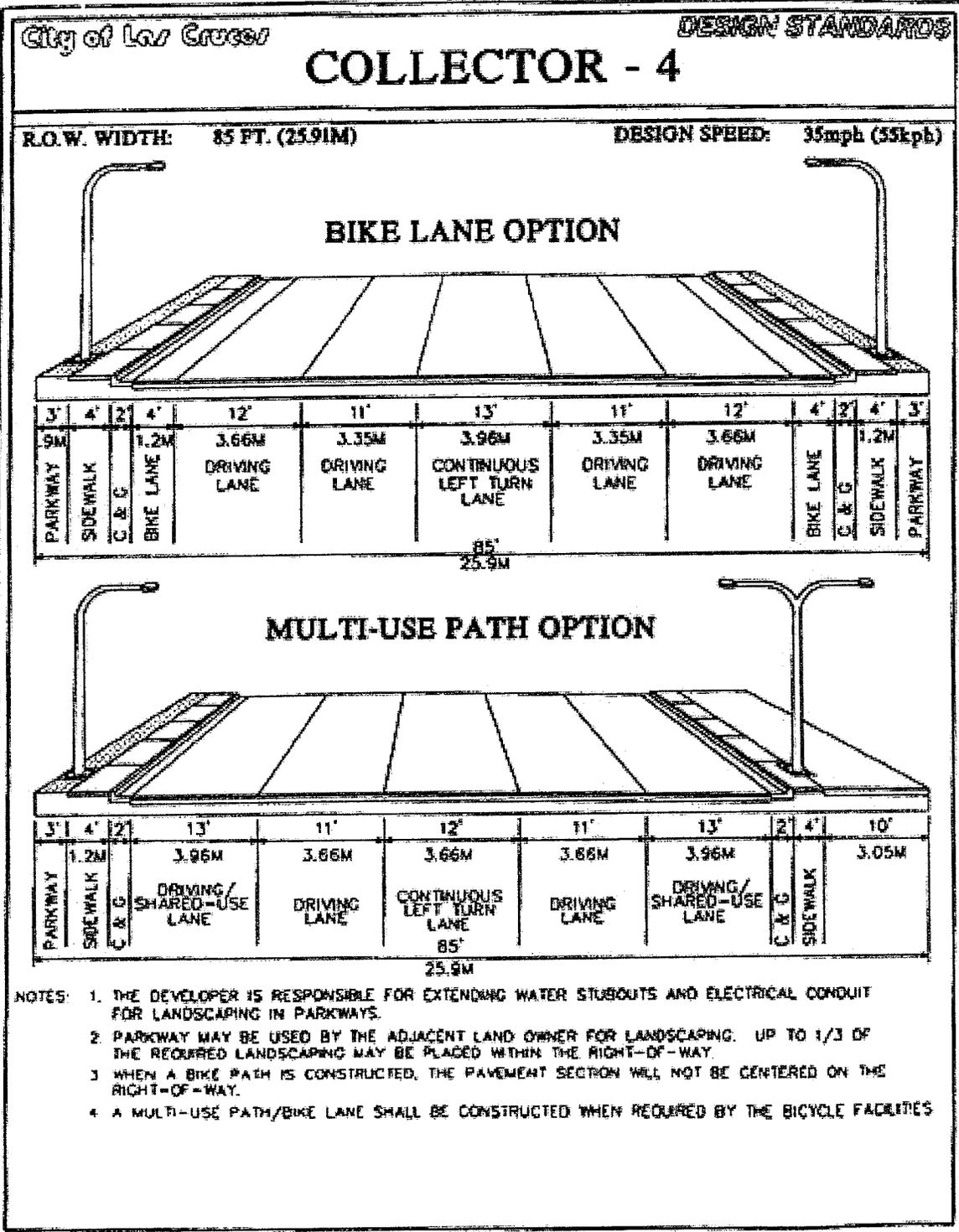
BIKE LANE OPTION



- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER STUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. A BIKE LANE SHALL BE CONSTRUCTED WHEN REQUIRED BY THE BICYCLE FACILITIES & SYSTEMS MASTER PLAN.
 4. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 5. SIDEWALKS SHALL BE CONSTRUCTED ACCORDING TO SECTION 2.2 SIDEWALK REQUIREMENTS.
 6. SIGNAGE AND PAVEMENT MARKINGS WILL BE REQUIRED IN ACCORDANCE WITH MUTCD.



Collector 3



Collector 4

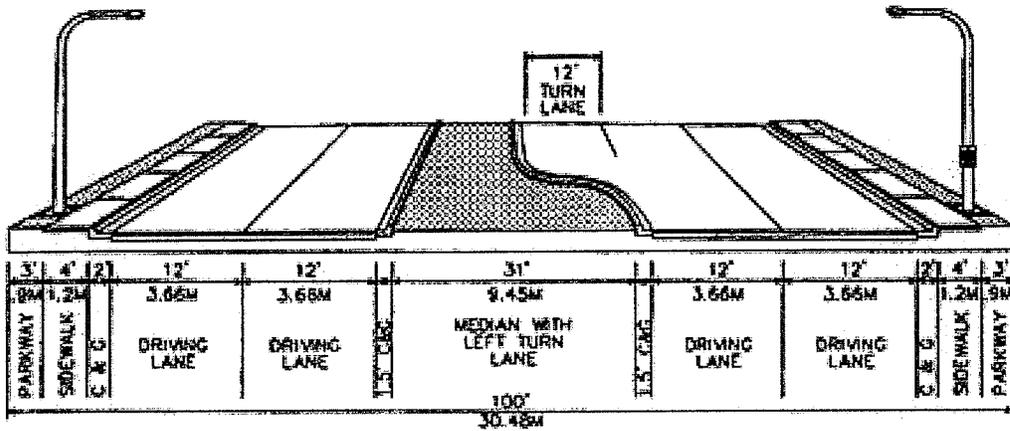
City of Las Cruces

DESIGN STANDARDS

MINOR ARTERIAL - 1

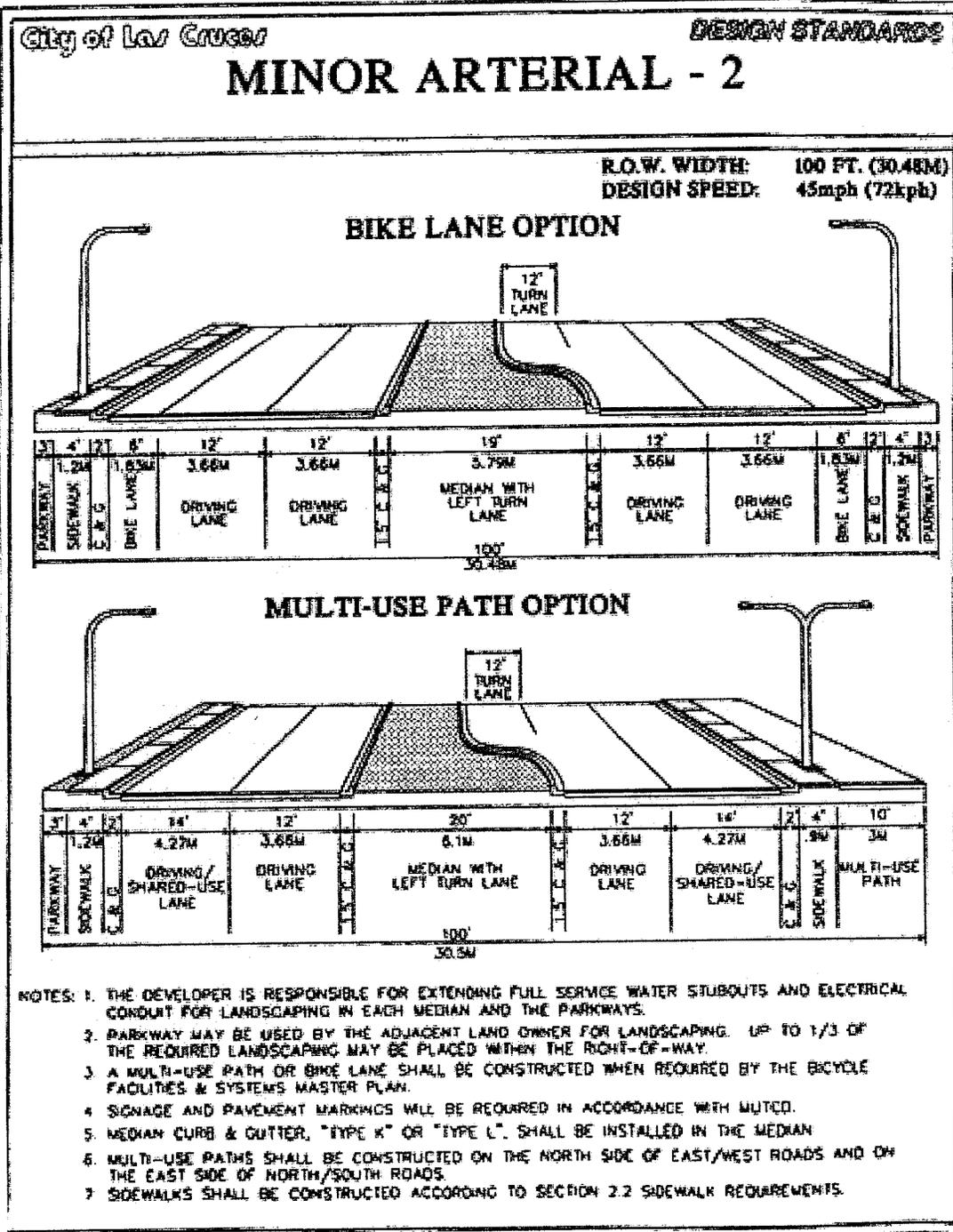
R.O.W. WIDTH: 100 FT. (30.48M)
 DESIGN SPEED: 45mph (72kph)

NO BICYCLE FACILITIES

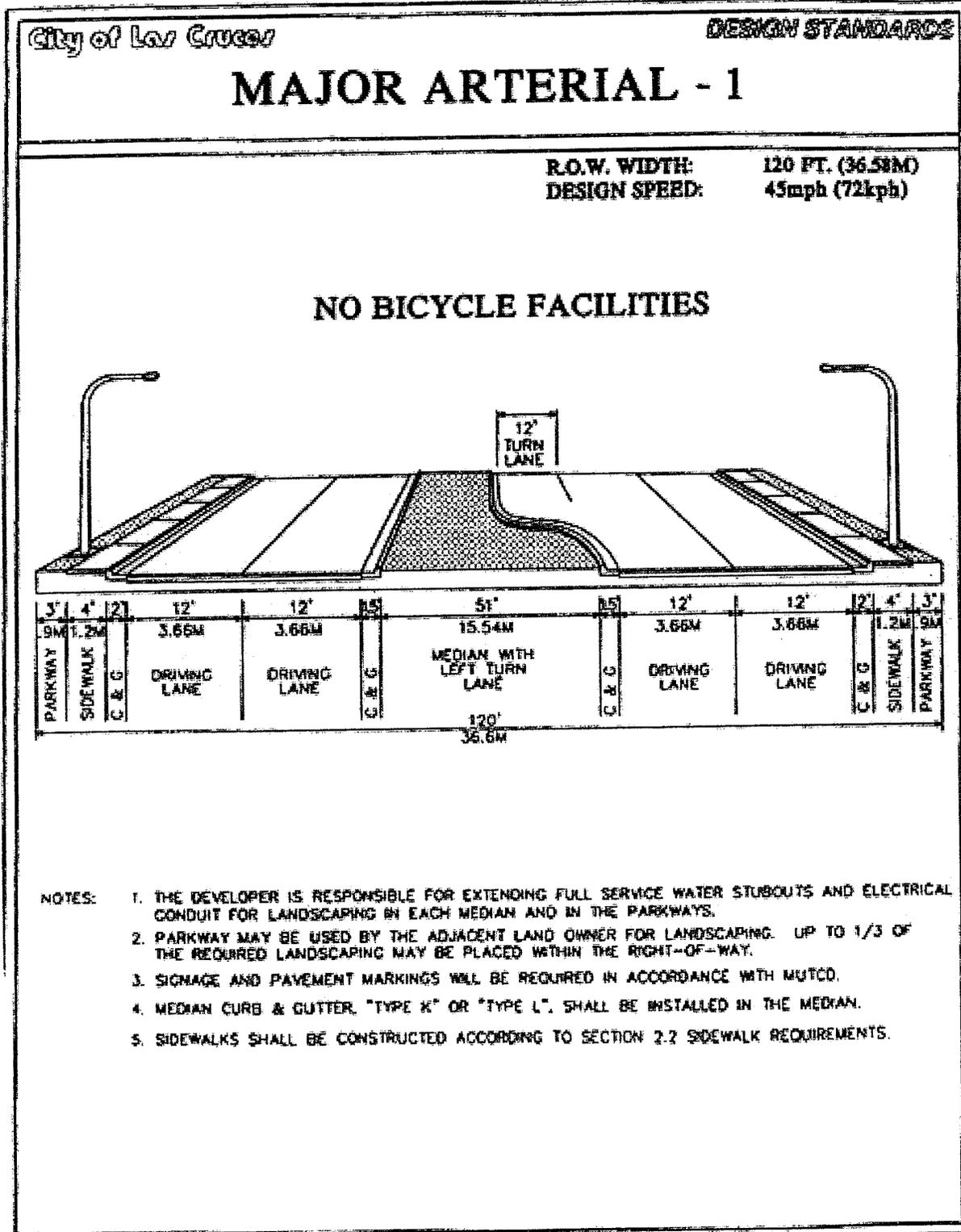


- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER STUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. SIGNAGE AND PAVEMENT MARKINGS SHALL BE REQUIRED IN ACCORDANCE WITH MUTCD.
 4. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 5. SIDEWALKS SHALL BE CONSTRUCTED ACCORDING TO SECTIONS 2.2 SIDEWALK REQUIREMENTS.

Minor Arterial 1



Minor Arterial 2

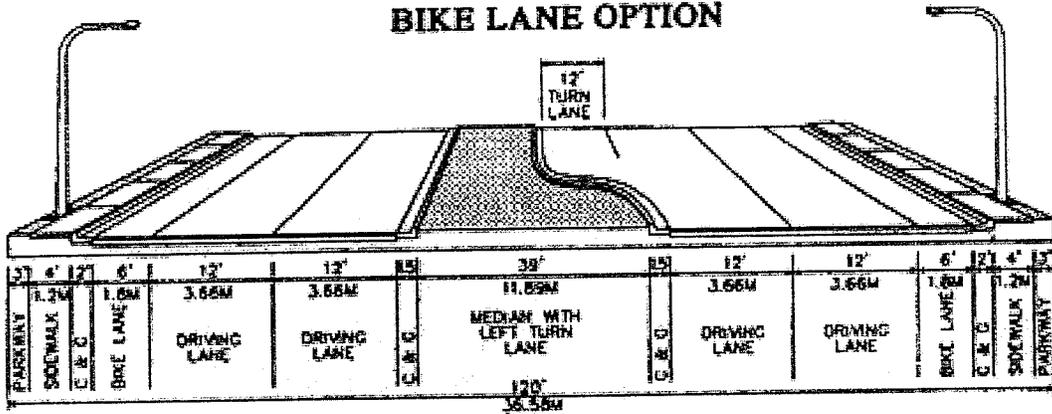


Major Arterial 1

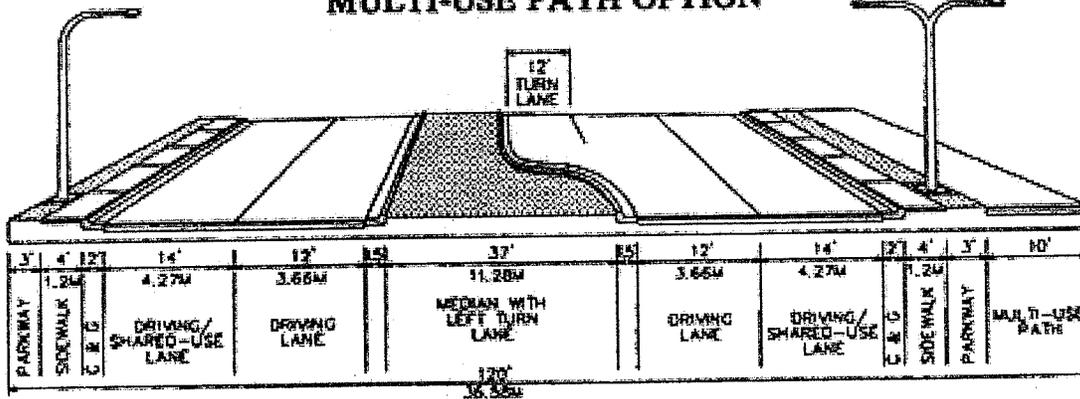
MAJOR ARTERIAL - 2

R.O.W. WIDTH: 120 FT. (36.58M)
 DESIGN SPEED: 45mph (72kph)

BIKE LANE OPTION



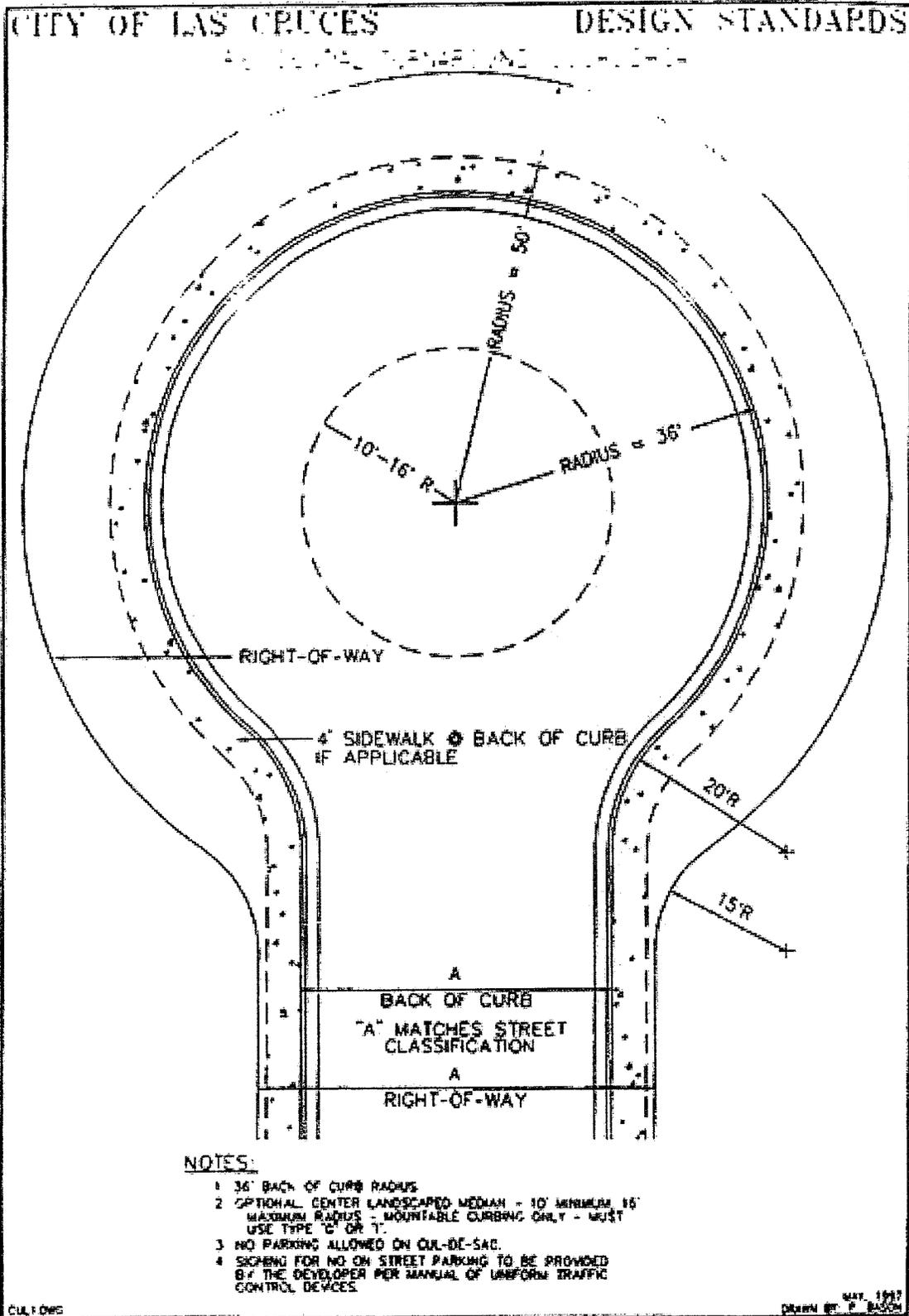
MULTI-USE PATH OPTION



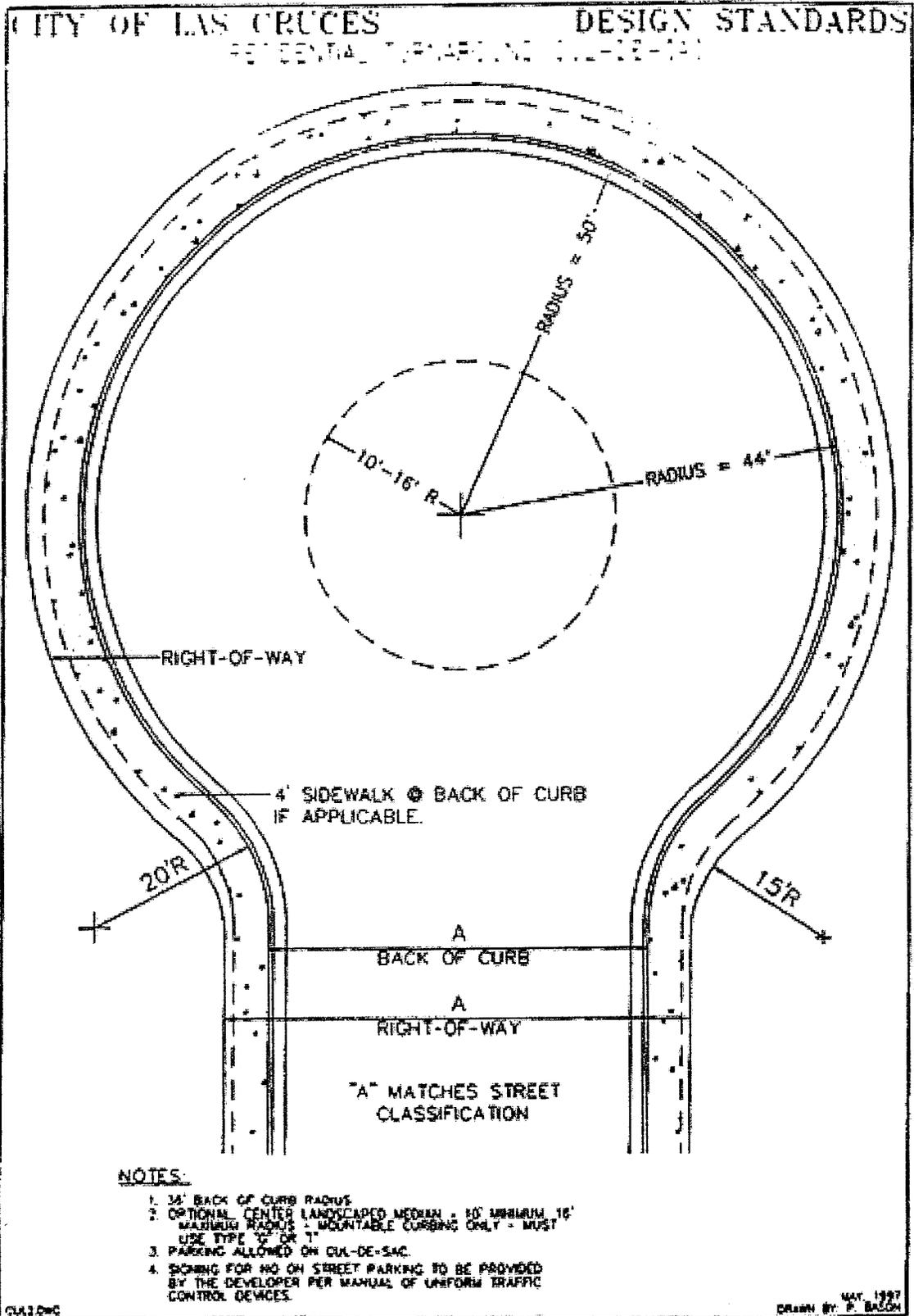
- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER STUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND IN THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. A MULTI-USE PATH OR BIKE LANE SHALL BE CONSTRUCTED WHEN REQUIRED BY THE BICYCLE FACILITIES & SYSTEMS MASTER PLAN.
 4. SIGNAGE AND PAVEMENT MARKINGS WILL BE REQUIRED IN ACCORDANCE WITH MUTCD.
 5. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 6. MULTI-USE PATHS SHALL BE CONSTRUCTED ON THE NORTH SIDE OF EAST/WEST ROADS AND ON THE EAST SIDE OF NORTH/SOUTH ROADS.
 7. SIDEWALKS SHALL BE CONSTRUCTED ACCORDING TO SECTION 2.2 SIDEWALK REQUIREMENTS/OPTIONS.

- (c) *Cul-de-sac requirements.* The use of cul-de-sacs in residential and commercial/industrial developments are permitted by these design standards;
- (1) A traditional bulb shaped cul-de-sac shall be considered the approved standard and its length shall be measured from the center line of the intersecting street to the center point of the cul-de-sac.
 - (2) Hammerhead cul-de-sac length will be measured from the center line of the intersecting street to the back of curb at the end of the cul-de-sac.
 - (3) *Cul-de-sac dimension requirements.*
 - a. Maximum cul-de-sac length will be 750 feet (228.6m) in residential or commercial subdivisions. An additional 750 foot (228.6m) of length which allows up to a 1500 feet (457.2m) cul-de-sac may be applied for through the development review committee when topography or land/lot configuration indicate the need for a longer cul-de-sac. A request for a cul-de-sac in excess of 750 feet (228.6m) shall be submitted to the subdivision administrator at the time of preliminary plat submittal. The subdivision administrator will process the request with the preliminary plat to the development review committee following the initial staff review. The development review committee will consider the request for additional length in light of peak hour traffic, number of units, size of lots, fire flow requirements, and any other considerations the development review committee may believe affects safety. Mitigation techniques such as, but not limited to, sprinkled fire suppression systems, additional hydrants, additional water lines to provide looped systems, increased street widths, and/or a secondary emergency vehicle access into the cul-de-sac at a remote point from the intersecting street may be required by the development review committee. In no case shall a waiver be granted to allow a cul-de-sac in excess of 1500 feet (457.2m).
 - b. The right-of-way and paving width of the stem of the cul-de-sac shall be the same width as the street classification given to the cul-de-sac. For example, if the cul-de-sac is serving a commercial development, it shall follow the requirements for a major local street.
 - c. A traditional bulb shaped cul-de-sac turnaround shall have a minimum radius of fifty (50) feet (15.24m). The minimum paving radius shall be thirty-six (36) feet (10.67m) including curbing.
 - (4) *Alternative turn-around criteria.*
 - a. Developments using hammerhead turnarounds shall be required to provide three off-street parking spaces per unit located along the turn-around as measured from the point of curvature to the point of curvature (PC/PC). The cul-de-sac shall be limited to a maximum length of 250 feet (76.2m) and a maximum of 16 single story dwelling units.
 - b. Cul-de-sacs with other alternative turnaround designs, i.e. offset bulb, tear-drop shaped, "Y" shaped, eyebrows, etc., shall be reviewed on a case by case basis by the development review committee.
 - (5) In cases where on-street parking is not allowed in the cul-de-sac turnaround areas, signing of the cul-de-sac no parking areas shall be accomplished at the time of subdivision construction and in accordance with the manual on uniform traffic control devices for urban parking and stopping signs.

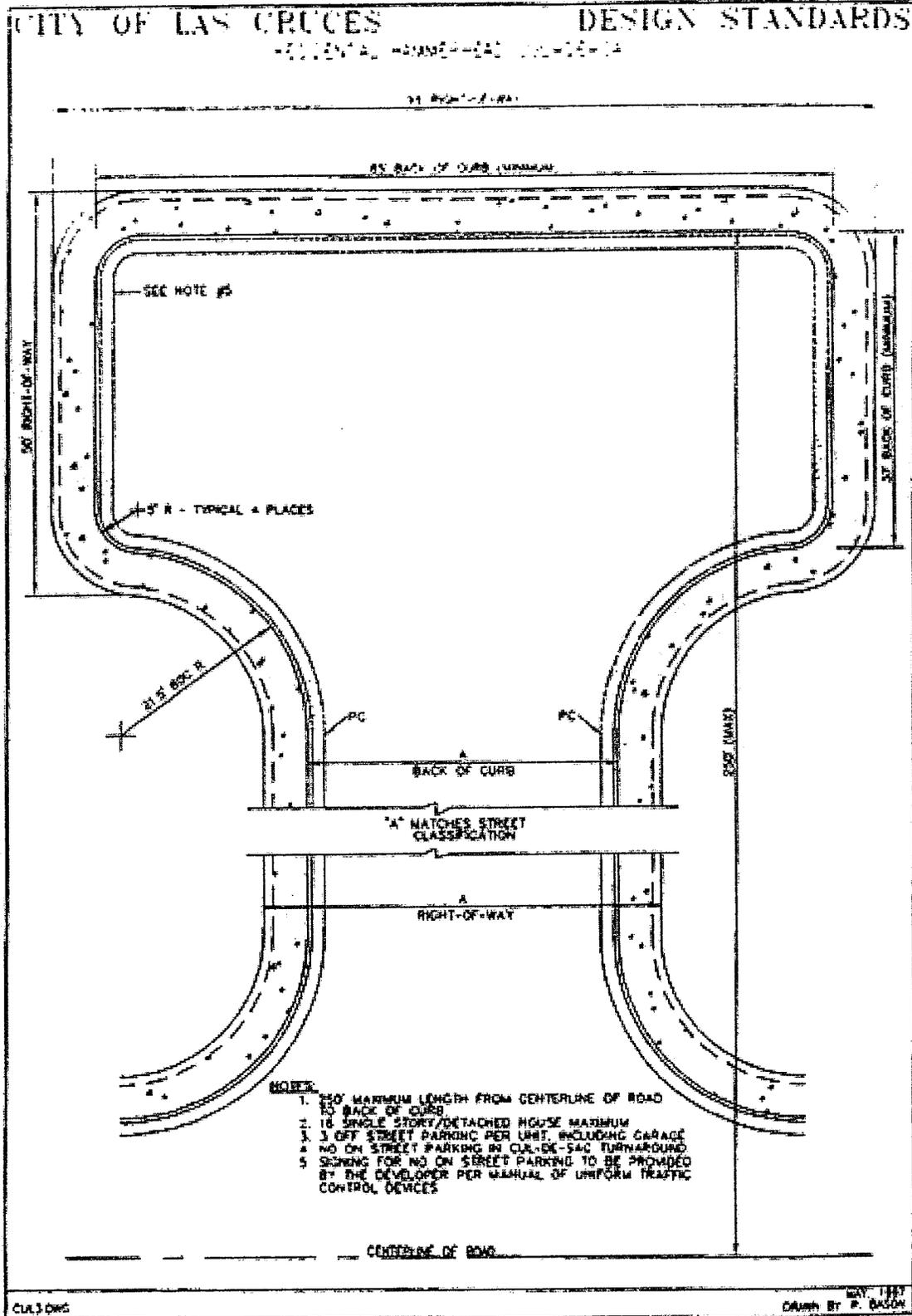
See next three pages for cul-de-sac details.



Design Standards 1



Design Standards 2



Design Standards 3

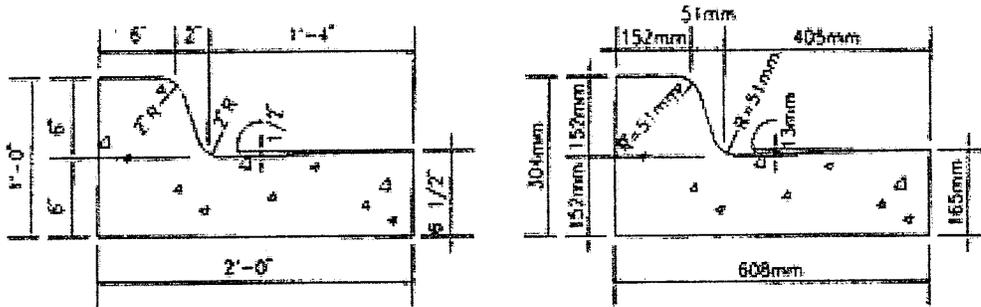
(d) *Curbing.* All city streets require some form of approved curbing. Curb and gutter use is primarily dictated by drainage conveyance needs as well as traffic safety concerns. The following pages detail the approved curbing types as well as outline under what conditions the various curb types are applicable:

- (1) Type A, six-inch stand-up curb and gutter.
- (2) Type B, six-inch modified stand-up curb and gutter.
- (3) Type C, eight-inch stand-up curb and gutter.
- (4) Type D, eight-inch modified stand-up curb and gutter.
- (5) Type E, rollover curb and gutter.
- (6) Type F, modified rollover curb and gutter.
- (7) Type G, rollover curb and gutter.
- (8) Type H, drive over curb and gutter.
- (9) Type I, drive over curb and gutter.
- (10) Type J, header curb.
- (11) Type K, median curb and gutter.
- (12) Type L, modified median curb and gutter.
- (13) Type M, rundown gutter, four feet.
- (14) Type N, rundown gutter, two feet.
- (15) Type O, temporary asphalt curb.
- (16) Type P, temporary extruded concrete median curb.
- (17) Type Q, valley gutter.
- (18) Type R, drivepad curb.

See next 9 pages for curb details.

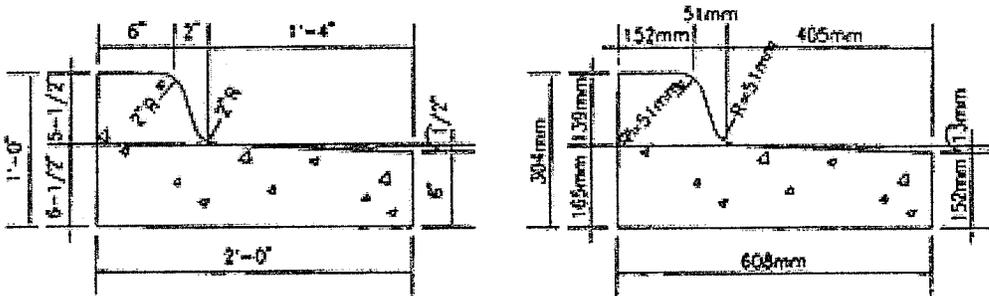
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON ALL CITY STREET CLASSIFICATIONS AS A FUNCTION OF DRAINAGE AND TRAFFIC CONTROL



TYPE "A" CURB & GUTTER
N.T.S.

FOR USE ON ALL CITY STREETS WHERE THE ROADWAY IS SUPERELEVATED, I.E. THE PAVEMENT SLOPES AWAY FROM THE CURB AND DRAINAGE IS TO BE DIVERTED FROM THE GUTTER SECTION.



TYPE "B" MODIFIED CURB & GUTTER
N.T.S.

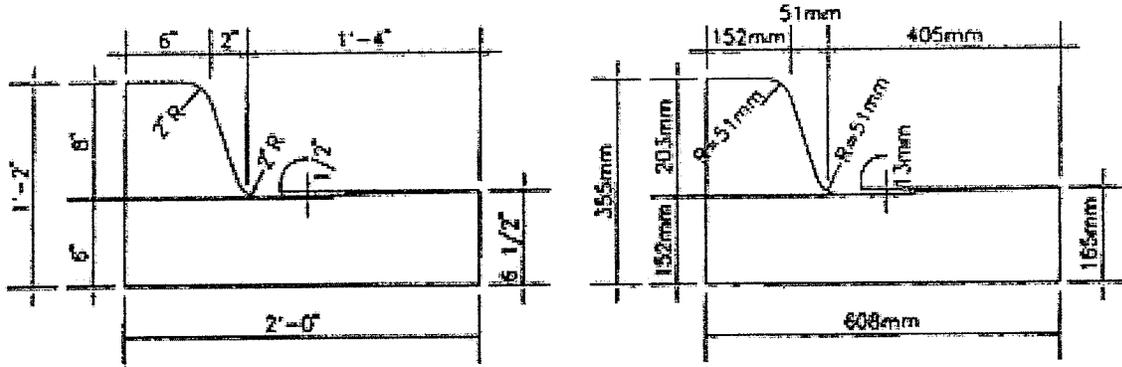
CURB_48.DWG

MAY 1997
DRAWN BY P. BASSON

CITY OF LAS CRUCES

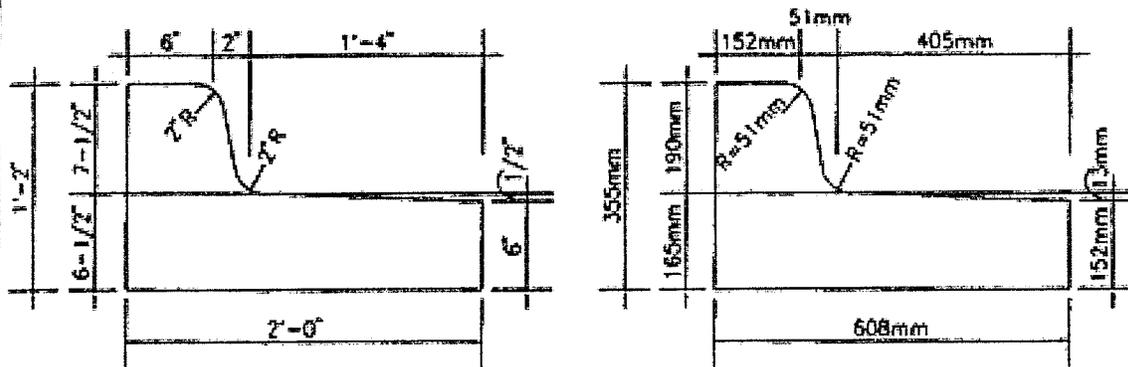
DESIGN STANDARDS

FOR USE ON ALL CITY STREET CLASSIFICATIONS AS A FUNCTION OF DRAINAGE AND TRAFFIC CONTROL IT IS PERMISSIBLE TO MIX CURB HEIGHTS OF 6" & 8" WHEN APPROPRIATE FOR PROPER DRAINAGE CONVEYANCE. MINIMUM TRANSITION LENGTH OF 12' FROM 6" TO 8" CURB.
 8" CURB NOT RECOMMENDED FOR STREETS WITH ON-STREET PARKING.



TYPE "C" 8" CURB & GUTTER
 N.T.S.

FOR USE ON CITY STREETS WHERE THE ROADWAY IS SUPERELEVATED, I.E. THE PAVEMENT SLOPES AWAY FROM THE CURB AND DRAINAGE IS TO BE DIVERTED.

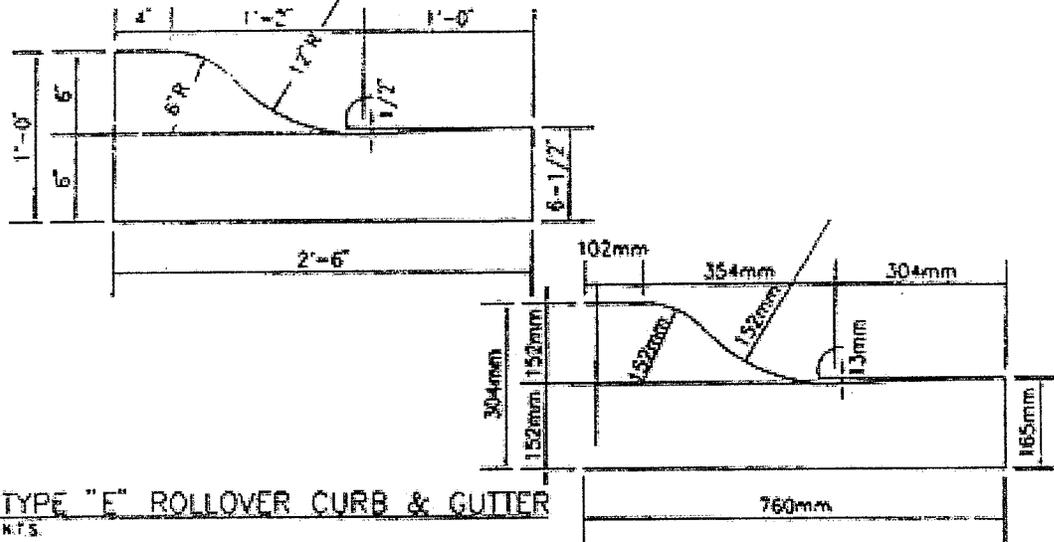


TYPE "D" 8" MODIFIED CURB & GUTTER
 N.T.S.

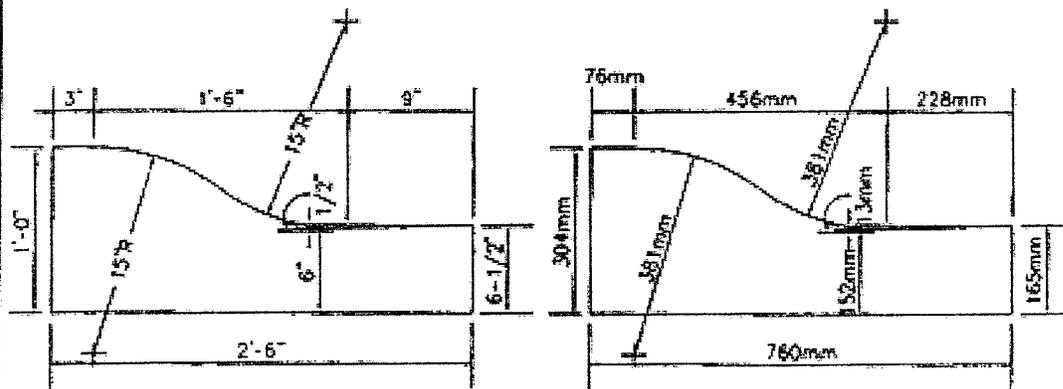
Design Standards 5

CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "E" CURBING.

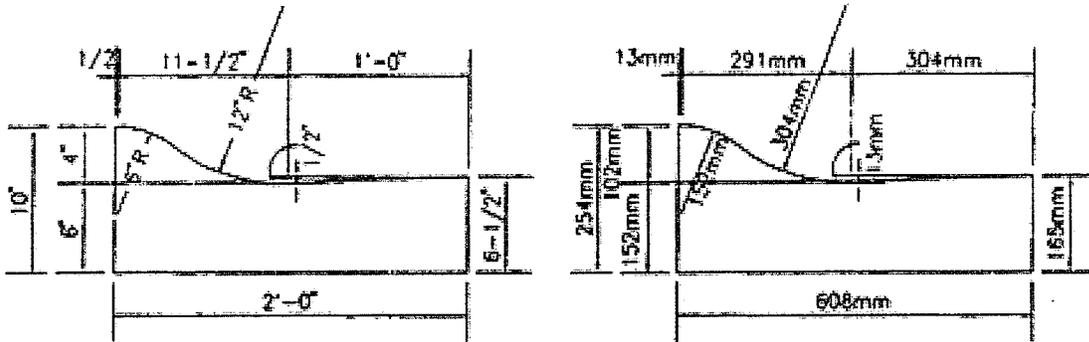


FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "F" CURBING.



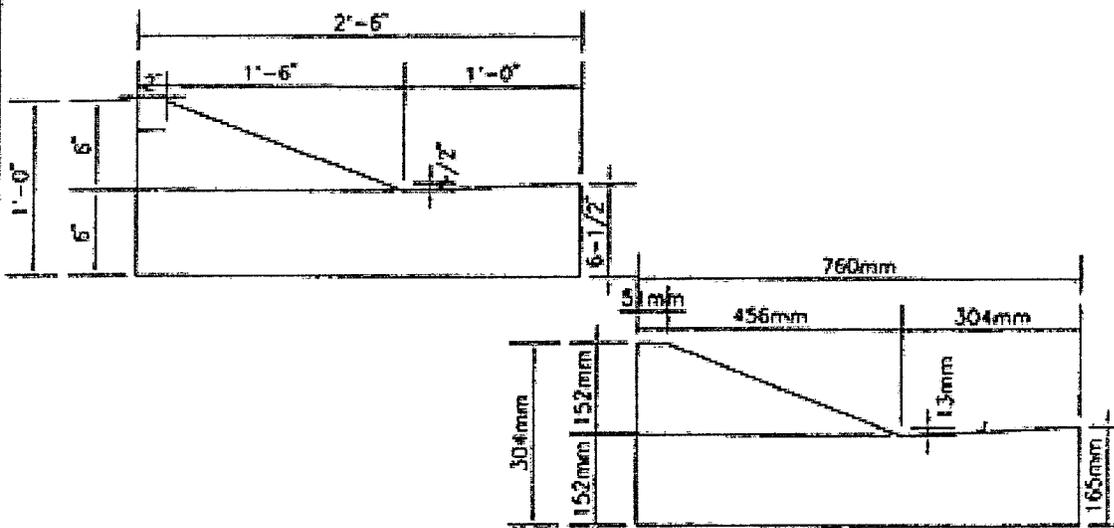
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "C" CURBING.



TYPE "G" ROLLOVER CURB & GUTTER
N.T.S.

FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "H" CURBING.

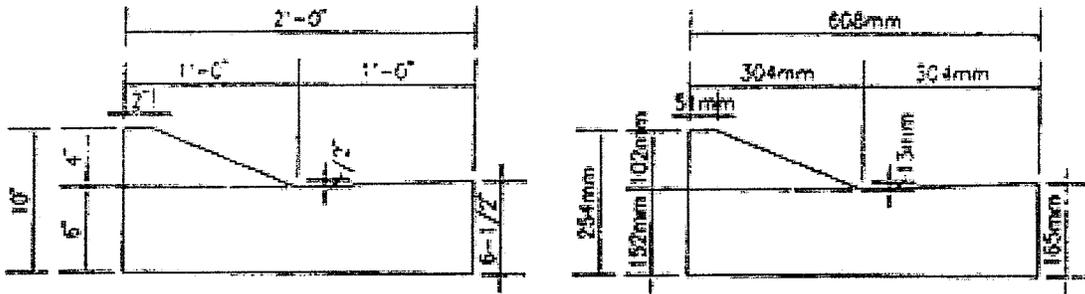


TYPE "H" DRIVE OVER CURB & GUTTER
N.T.S.

CITY OF LAS CRUCES

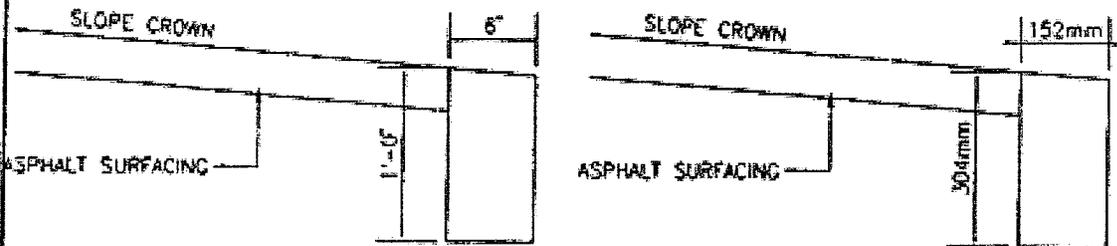
DESIGN STANDARDS

FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS AND TO BE USED FOR DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBSECTION TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MAXIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "I" CURBING.



TYPE "I" DRIVE OVER CURB & GUTTER
N.T.S.

TO BE USED TO MAINTAIN THE STREET EDGE AND WHEN SIDEWALKS ARE NOT REQUIRED. FOR USE ON THE VALLEY FLOOR TO CONVEY DRAINAGE OFF THE STREET.

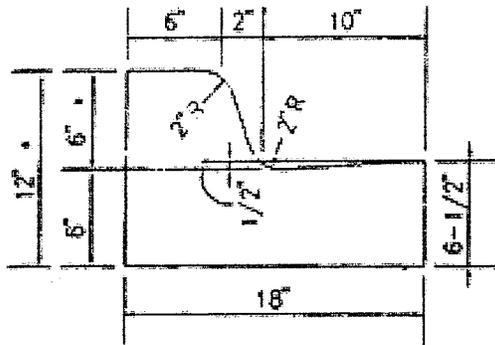


TYPE "J" HEADER CURB
N.T.S.

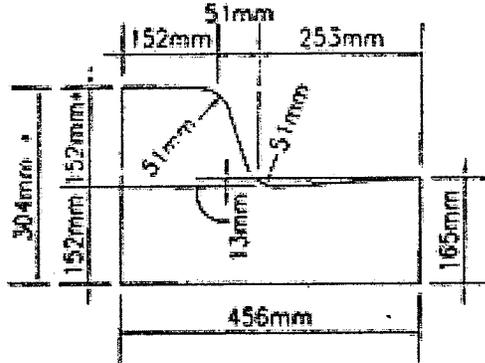
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON CENTER LANE MEDIANS ON COLLECTOR OR ARTERIAL STREET SECTIONS TO CONVEY DRAINAGE. THE SLOPE OF THE GUTTER SHALL BE REQUIRED TO MATCH THE SLOPE OF THE STREET. TO BE USED ON SUPERELEVATED MEDIANS. 8" CURBING MAY BE REQUIRED AS DICTATED BY DRAINAGE NEEDS.

- CURB HEIGHT = 8". TOTAL CURB THICKNESS = 14"



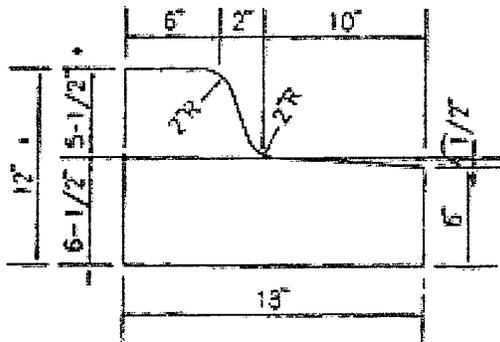
- CURB HEIGHT = 203mm. TOTAL CURB THICKNESS = 355mm



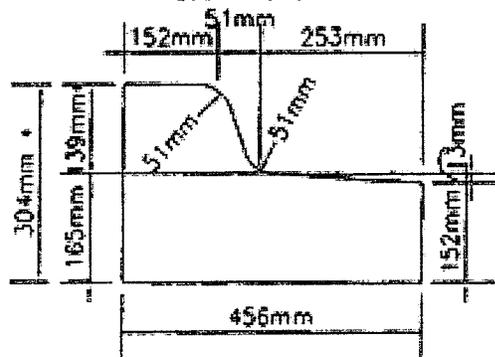
TYPE "K" MEDIAN CURB & GUTTER
R.T.S.

FOR USE ON CENTER LANE MEDIANS ON COLLECTOR OR ARTERIAL STREET SECTIONS TO CONVEY DRAINAGE. THE SLOPE OF THE GUTTER SHALL BE REQUIRED TO MATCH THE SLOPE OF THE STREET. TO BE USED ON SUPERELEVATED MEDIANS. 8" CURBING MAY BE REQUIRED AS DICTATED BY DRAINAGE NEEDS.

- CURB HEIGHT = 7-1/2". TOTAL CURB THICKNESS = 14"



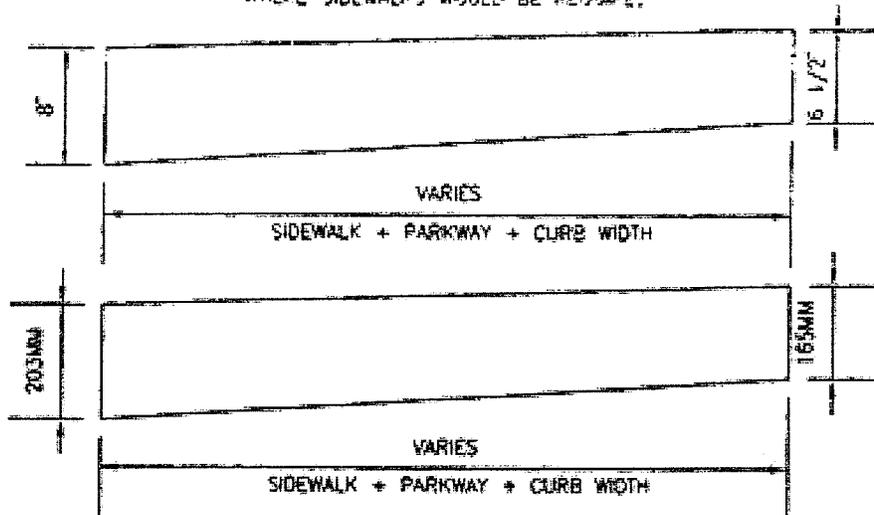
- CURB HEIGHT = 190mm. TOTAL CURB THICKNESS = 355mm



TYPE "L" MODIFIED MEDIAN CURB & GUTTER
R.T.S.

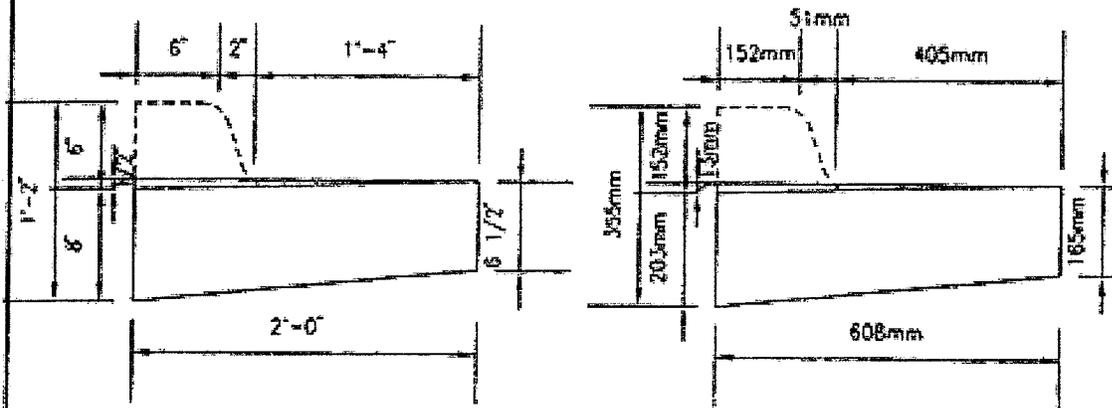
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE IN RELATIVELY FLAT AREAS IN CONJUNCTION WITH STOPWATER DRAINAGE FACILITIES ONLY. THIS SECTION IS INTENDED TO TAKE THE PLACE OF SIDEWALKS IN LOCATIONS WHERE SIDEWALKS WOULD BE REQUIRED.



TYPE "M" RUNDOWN
RTS

FOR USE IN RELATIVELY FLAT AREAS IN CONJUNCTION WITH STORMWATER DRAINAGE FACILITIES ONLY. THIS SECTION IS NOT INTENDED TO TAKE THE PLACE OF SIDEWALKS IN LOCATIONS WHERE SIDEWALKS WOULD BE REQUIRED.

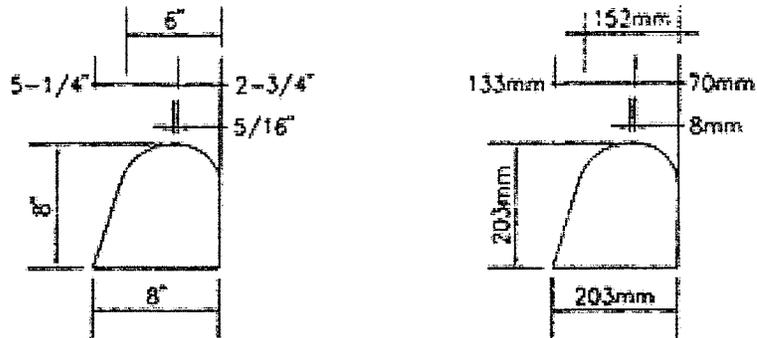


TYPE "N" RUNDOWN
RTS

Design Standards 10

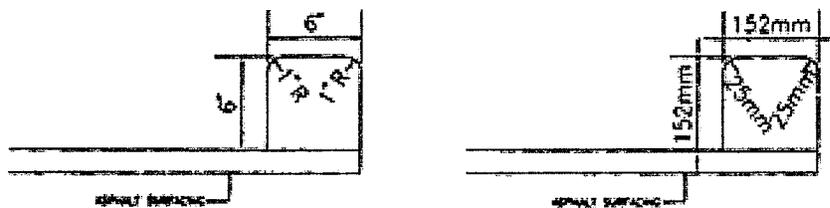
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON STREETS WHERE THE ESTIMATED EXPANSION OF THE ROAD IS TO OCCUR WITHIN THE NEXT TEN (10) YEARS



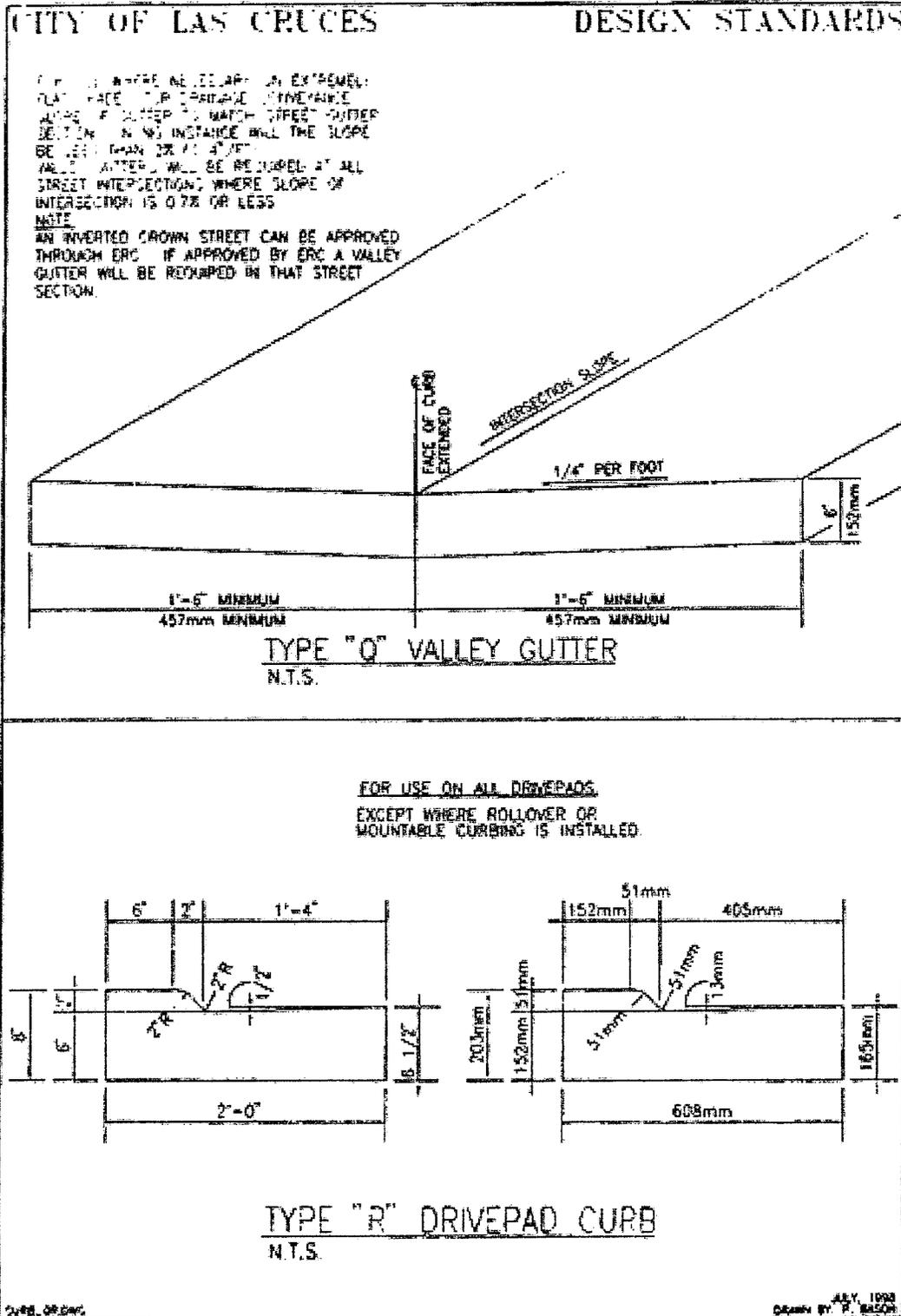
TYPE "O" TEMPORARY ASPHALT CURB
N.T.S.

FOR USE ON STREETS WHEN EXPANSION TO THE CENTER IS PLANNED IN EXCESS OF TEN (10) YEARS. NO DRAINAGE IS TO BE CONVEYED IN OR ON THE MEDIAN. CURB IS TO BE REMOVED.



TYPE "P" TEMPORARY EXTRUDED CONCRETE MEDIAN CURB
N.T.S.

Design Standards 11



(e) *General design criteria for streets.*

- (1) Minimum right-of-way radius at intersections:
 - a. Rights-of-way 15 feet (4.57m) at property line for minor local roads.
 - b. Rights-of-way 25 feet (7.62m) at property line for all classifications higher than minor local.
- (2) Minimum side slope outside right-of-way (steepest slope), two (horizontal) to one (vertical).
- (3) Street logs with centerline offsets of less than 125 feet (38. 10m) shall not be permitted on local streets. Street logs shall not be permitted for collectors or arterials.
- (4) Streets shall be laid out so as to intersect as nearly as possible at right angles, and no street shall intersect any collector or arterial street at less than 75 degrees and no local or light commercial streets at less than 60 degrees.

TABLE I
STANDARD UNITS
GENERAL DESIGN CRITERIA FOR STREETS
(NUMBER IN PARENTHESES APPLY TO FOOTNOTES)

Street Classification	Minimum Centerline Radius (Feet)(10)				Vertical Curve Requirement(4), (7) Vertical Curvature Design Value(2)			
	Design Speed mph	0.02 Feet/Feet Super-elevation (feet)	With Normal Crown(6), (8) (feet)	Min. Length Vertical Curve (feet)(1)	K Value For Crest Stopping Sight Distance(5)	K Value For SAG Stopping Sight Distance(5)	Change Allowed Without Vertical Curve (percentage)(7)	Maximum Grade Allowed (percentage)(9)
Major arterial	50	1,050	1,400	150	160	110	0.4	<u>7</u>
Minor arterial	45	800	1,100	135	120	90	0.4	<u>7</u>
Collector	<u>35</u>	450	600	100	50	50	0.7	<u>8</u>
Major Local	<u>30</u>	380	380	50	<u>30</u>	40	1.0	<u>10</u>
Minor Local	25	180	* 180	50	20	<u>30</u>	1.0	<u>10</u>
Low Density Local	<u>15</u>	180	* 180	50	20	<u>30</u>	1.0	<u>10</u>

METRIC UNITS
GENERAL DESIGN CRITERIA FOR STREETS
(NUMBER IN PARENTHESES APPLY TO FOOTNOTES)

Street Classification	Minimum Centerline Radius (Feet)(10)				Vertical Curve Requirement(4),(7) Vertical Curvature Design Value(2)			
	Design Speed (km/h)	0.02 m/m Super-elevation (m)	With Normal Crown (m)(6), (8)	Min. Length Vertical Curve (m)(1)	K Value For Crest Stopping Sight Distance(5)	K Value For SAG Stopping Sight Distance(5)	Change Allowed Without Vertical Curve (percentage)(7)	Maximum Grade Allowed (percentage)(9)
Major arterial	80	320	425	50	160	110	0.4	<u>7</u>
Minor arterial	70	245	335	40	120	90	0.4	<u>7</u>
Collector	55	135	185	<u>30</u>	50	50	0.7	<u>8</u>
Major Local	45	115	115	<u>15</u>	<u>30</u>	40	1.0	<u>10</u>
Minor Local	40	70	55	<u>15</u>	20	<u>30</u>	1.0	<u>10</u>
Low Density Local	25	70	55	<u>15</u>	20	<u>30</u>	1.0	<u>10</u>

Major local, minor local, and low density local street intersections(10)

Major arterial, minor arterial and collector street intersections with or without traffic signals(11)

* Cul-de-Sacs R=120 feet

Footnotes for table 1

1. Controlling limit only when algebraic grade difference A times the design value K is less than minimum shown: in all other cases, $L = KA$ shall control.
2. The values for K shown are to be used in determining the minimum length of vertical curve required by the use of the relationship $L = KA$.

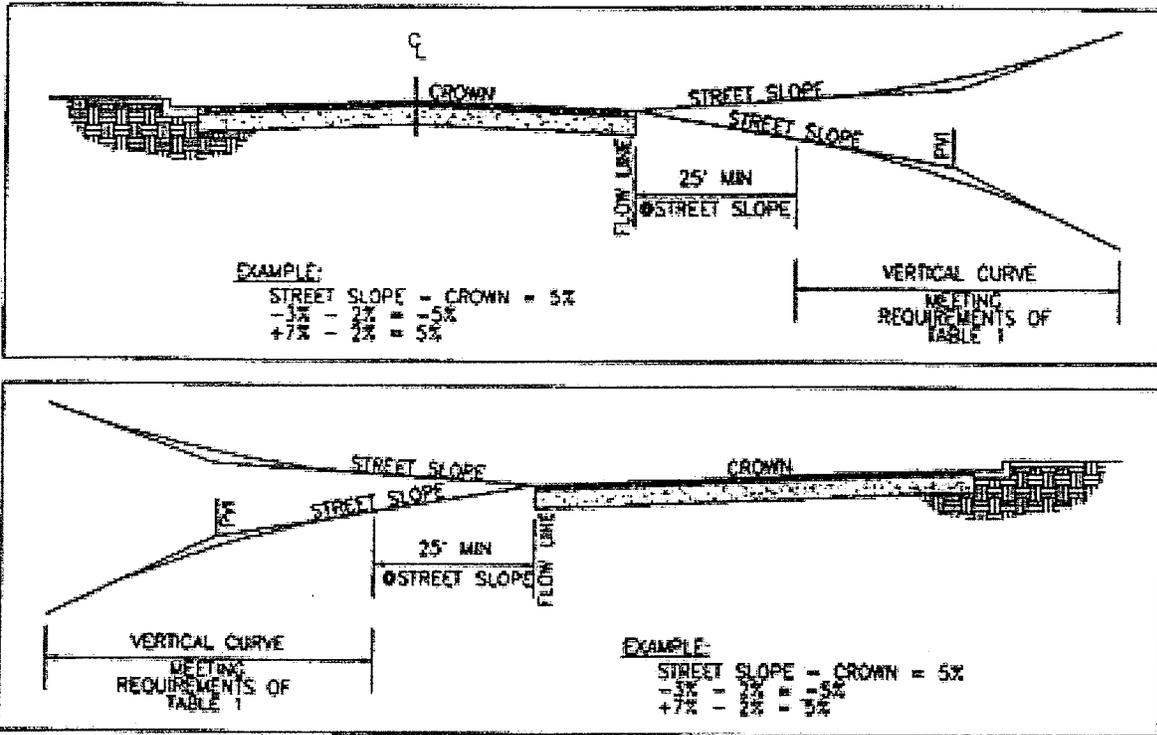
Where:

L = Length of vertical curve in feet

A = Algebraic difference in grades expressed in percent

K = Design value indicate of rate of curvature

3. Lengths of vertical curves longer than the minimums resulting from the use of K values shown should be used wherever possible; however, K should not exceed 167 feet (50.90m) per percent change in grade when curb and gutter is used for drainage considerations.
4. Crest vertical curves are based on eye height of three feet, three inches, object height of six inches and AASHTO minimum stopping distances. SAG vertical curves are based on AASHTO standards. If AASHTO standards are revised to more restrictive values, the more restrictive values shall supersede the values of this table.
5. The crown will be a minimum of one-half percent and maximum 2½ percent. Streets with cross slope shall not exceed five percent. Greater cross slopes may be allowed only with the express written permission of the public works director or at street intersections. Calculations shall be submitted for review and approval for cross slopes greater than five percent indicating the conveyance capacity of the street section for drainage runoff.
6. A minimum of 50 feet (15.24m) distance equal to the minimum length vertical curve must be maintained between vertical points of intersection.
7. Local residential streets with 90-degree or near 90-degree (interior angle between 80 degrees and 110 degrees) turns may be designed with a minimum centerline radius of 50 feet (15.24m) with the express written permission of the public works director. Appropriate advisory signs may be required.
8. Minimum slope in streets with standard curb and gutter shall be one-half percent. Minimum slope in streets with header curb or rundown curb shall be zero percent. The crown on a zero-percent to one-half percent street shall be a minimum two percent.
9. Major local, minor local and low density local street intersections shall have a maximum algebraic difference in grades expressed in percent of five (street slope minus crown slope). All nonthrough streets shall have a minimum 25 feet (7.62m) landing from the flowline of the intersecting street with vertical curves, meeting the criteria listed in table I for the different street classifications, beginning at the end of the landing. All through streets shall meet the criteria listed In Table I for the different street classifications for vertical curves. See drawings below.
10. Major arterial, minor arterial and collector street intersections with or without traffic signals shall meet the criteria listed in Table I for the different street classifications for vertical curves. Design of vertical curves within the street Intersection shall accommodate all drainage conveyance runoff.
11. Source: Design of Urban Streets, Federal Highway Administration; U.S. Department of Transportation.



Vertical Curves

(Ord. No. 949, § 2.1, 9-8-87; Ord. No. 1048, 1-17-89; Ord. No. 1224, § 1, 3-18-91; Ord. No. 1575, § 1, 9-3-96; Ord. No. 1745, § 1, 6-7-99; Ord. No. 1929, §§ I, II, 8-5-02)

Sec. 32-37. Sidewalk requirements.

Sidewalks for pedestrian traffic are required when a street is built in the city. The only exception to this requirement shall be a low density local street with stand-up curb and gutter. Sidewalks shall be required along all streets where the average residential lot size of adjacent lots is one-half acres (2023.44m²) and less.

- (1) When this requirement is applied, it shall be the responsibility of the developer, at the time of subdivision construction, to prepare all sidewalk subgrade and to construct the sidewalks along all collector and arterial streets or any other street classified higher than a minor local. The construction of sidewalks along all local streets shall be the responsibility of the building contractor or the homeowner if they are not provided by the developer. The sidewalk may have a minimum thickness of four inches (101.6mm) if the sidewalk is built at the time of roadway construction and the subgrade and base course under the sidewalk is the same as under the roadway and if the sidewalk is built flush with the street without curb and gutter, or if a mountable type curb is used. A minimum thickness of six inches (152.4mm) is required if the sidewalk is not constructed at the time of roadway construction and is abutting a mountable type curb. Sidewalks shall be built in accordance with current concrete specifications as per the City of Las Cruces Standard Specifications for Road Construction, as amended.
- (2) Standards for sidewalk construction.
 - a. Sidewalks shall be adjacent to curb or pavement. When a sidewalk is built flush with the street, utilizing a mountable type curb, then the sidewalk shall have a minimum thickness of four inches (101.6mm) if constructed at the same time as roadway construction or six

inches (152.4mm) If not built at the time of the roadway. The four-inch (101.6mm) sidewalk when adjacent to mountable type curbing shall be designed as a rigid pavement (concrete) based on twenty of the street average daily load (ADL). Sidewalk in lieu of curb and gutter shall be designed as a rigid pavement (concrete) using street ADL. A minimum thickness of six inches (152.4mm) is required if the sidewalk is not constructed at the same time as roadway construction or if the sidewalk abuts the pavement.

- b. Wheelchair ramps with sidewalk from point of curve (PC) to point of tangency (PT) shall be constructed in accordance with applicable sections of the Americans With Disabilities Act (ADA) at the time of roadway construction.
- c. Sidewalks shall have a minimum width of four unobstructed feet (1.22m). Street lights, power poles, fire hydrants, street signs or other types of obstructions shall not be permitted in the sidewalks. If street obstructions are in the way of proposed sidewalks, the obstructions shall be relocated prior to construction of the sidewalk or the sidewalk shall be widened to allow four feet (1.22m) of unobstructed width.
- d. The material under the sidewalk shall be a minimum of six inches (152.4mm) of A-2-4 material (pursuant to AASHTO Soil Classification) with a minimum compaction of 95 percent.

(Ord. No. 949, § 2.2, 9-8-87; Ord. No. 1745, § 1, 6-7-99)

Sec. 32-38. Street lights—Specifications for installation.

- (a) *Conduit.* Conduit shall be one and one-half inch (38.10mm) PVC Type, Schedule 40. Installation depth shall be 18 inches (457.20mm) minimum and 24 inches (609.60mm) maximum. Variation from these depths, when crossing other utilities to maintain twelve inches (604.80mm) separation, is allowable when approved by the public works director or his/her designee. Location and alignment shall be as shown on standard construction drawing, unless otherwise specified on the subdivision construction plans.
- (b) *Backfill.* Backfill shall be as stated in the city standard specifications for road construction, as amended.
- (c) *Foundations for street lights.*

STREET LIGHT FOUNDATION REQUIREMENTS

Street Light Pole Height	Foundation Size Specifications
25' (7.62m) pole with 6' (1.83m) arm	2' x 2' x 3' (0.61m x 0.61m x 0.91m)
35'(10.66m) pole with 8' (2.43m) arm	3' x 3' x 4' (0.91m x 0.91m x 1.22m)
Dual arm pole	3' x 3' x 5' (0.91m x 0.91m x 1.52m)

All poles shall require bolts with nuts and washers (furnished by the city with bolt template); a ground rod five-eighths of an inch x eight feet (15.88mm x 2.44m); one-half inch (12.70mm) rebar reinforcement, approximately forty linear feet (12.19m), as shown on construction plans; one and one-half inch (38.10mm) PVC conduit for continuous circuit; and, Class A 3,000 PSI (20,684.27kPa) concrete. Material test of concrete shall be made, when specified by the public works director or his/her designee.

- d. *Joint use of underground trench.* Joint use of trench for the installation of electrical service by El Paso electric company, and/or for street light circuits, is acceptable when approved by both the city and El Paso electric company.
- e. *Completion of street light system.* When development of housing begins, and subject to notification given to the city public works department by the contractor/developer, the city shall complete the installation of the street light system to full operation.

(Ord. No. 949, § 2.3, 9-8-87; Ord. No. 1224, § 1, 3-18-91; Ord. No. 1745, § I, 6-7-99; Ord. No. 1929, §§ I, II, 8-5-02)

Note—For further information, refer to the street lighting policy and ground rules for installation of street lighting.

Sec. 32-39. Utility improvements.

(a) *General.*

- (1) Subdivider shall be responsible for all design and construction costs.
- (2) All water, sewer, and gas construction shall meet or exceed utilities department and Rio Grande natural gas association standard specifications for construction of water, sewer, and gas utilities, hereinafter called "city specifications" as adopted by the city council from time to time.
- (3) City specifications shall apply to all water, sewer, and gas construction in subdivisions within the planning and platting jurisdiction of the city, to include required fire flows.

(b) *Water and sewer.* When a community water and/or sewer system is to be constructed, the subdivider shall include deed restrictions on the final plat requiring that any individual water supply system or wastewater treatment system comply with requirements of the NMED.

(c) *Gas.* If the subdivider desires to install a natural gas system within the subdivision, the system must meet or exceed city specifications.

(Ord. No. 949, § 2.4, 9-8-87; Ord. No. 1048, 1-17-89; Ord. No. 1745, § I, 6-7-99; Ord. No. 1929, §§ I, II, 8-5-02)

Cross reference— Utilities, ch. 28.

Sec. 32-39.1. Bicycle facilities.

Bicycles are legally classified as vehicles and may be ridden on all public roadways, except where prohibited by law. The following list identifies the types of bicycle facilities that can be installed:

- (1) Signed shared roadway;
- (2) Bicycle lane; and,
- (3) Separated, multiple-use path.

A signed shared roadway is a wide curb lane or a roadway with a paved shoulder which has been designated as a preferred bicycle route. A bicycle lane is a portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. A multiple-use path is a facility that is physically separated from motor vehicle traffic by an open space or barrier. The path may be located within the road right-of-way or an independent right-of-way. Multiple-use paths shall be constructed on the north side of east/west roadways and on the east side of north/south roadways, unless otherwise directed by the development review committee. Separated, multiple-use paths may be appropriate either in corridors not served by other bikeways or in corridors where there are

few motor vehicle conflict points. Paths should not be used to preclude on-road bicycle facilities, but rather supplement an on-road bicycle facility system.

The requirement for the provision of bicycle facilities shall be guided by the bicycle facilities plan, as amended, and the bicycle element of the city metropolitan planning organization transportation plan, as amended. Construction of bicycle facilities shall conform to the AASHTO Guide for the Development of Bicycle Facilities, as amended, and the Manual on Uniform Traffic Control Devices, as amended. When the provision of bicycle facilities is required, the subdivider shall be responsible for 100 percent of the required improvements within the boundaries of the development and 50 percent of any required improvements adjacent to the development.

(Ord. No. 1745, § I, 6-7-99; Ord. No. 2302, § I, 4-24-06)

Sec. 32-40. Details.

Details referred to in this division shall be as follows:

Title	No.
Standard Street Section:	
Minor local for residential lots less than 0.5 acre (1A and 1B)	S-1
Minor local for residential lots less than 0.5 acre (1C)	S-2
Minor local for residential lots of 0.51 to 1.00 acre	S-3
Minor local for residential lots 1.01 to 4.99 acres	S-4
Minor local for residential lots 5 acres or greater	S-5
Major local	S-6
Minor and major collector	S-7
Cul-de-sac detail	S-8
Curb and gutter details	S-9
Curb and gutter details	S-10
Typical wheelchair ramp detail	S-11

(Ord. No. 949, § 2.5, 9-8-87)

Secs. 32-41—32-70. Reserved.

ARTICLE II. STANDARDS FOR PUBLIC RIGHTS-OF-WAY

Sec. 32-36. City Infrastructure streets.

- (a) *Purpose of this article.* The purpose of article II is to provide information for the establishment of public rights-of-way. This involves right-of-way requirements and general design specifications for city streets, design criteria for sidewalks, and specifications for the installation of street lights. General information regarding utility improvements is also provided. These shall be considered the minimum standards and nothing shall prevent the ~~engineering review committee or the development review committee~~ from imposing greater standards to achieve the purposes outlined in section 32-3 of these design standards.
- (b) *Right-of-way and roadway requirements for city streets.* It shall be the policy of the city that major thoroughfares, collectors and arterials with medians, be built from the outside edge of the right-of-way in towards the center. This prevents the dismantling of previously constructed infrastructure in order to accommodate future street improvements such as widening. The location of collector and arterial streets shall be generally guided by the MPO transportation plan and specifically located as development occurs. Coordination between the city staff, development review committee and the developer will occur to provide the appropriate classification and alignment of all major and minor roadways within and abutting developments to encourage appropriate and efficient transportation circulation patterns.

Subdivision/Development Requirements

In order to provide adequate infrastructure to developing areas, all major infrastructure (roads, utilities, drainage structures and parks) shall be provided to developing areas at the earliest possible time. A subdivider or developer shall be responsible for 100% of the street infrastructure improvements to and within the boundaries of the subdivision or development area. Phased development or zoning boundaries shall not be used to delay or otherwise negate required improvements to the point of development. When improvements are required on streets providing access to, or adjacent to a subdivision or property boundaries as indicated by street classification, as determined by the MPO transportation plan, transportation element of the comprehensive plan and/or the development review committee, the subdivider or developer shall provide-construct the full cross-section of the roadway the following street improvements or pay for the cost of these improvements, as approved by the city -to the city or make other acceptable provisions for the construction of the infrastructure.:

Adjacent Street Classification	Street Improvement Requirements
Low Density Local	full street section
Minor Local	full street section

ARTICLE II. STANDARDS FOR PUBLIC RIGHTS-OF-WAY

Sec. 32-36. City Infrastructure streets.

- (a) *Purpose of this article.* The purpose of article II is to provide information for the establishment of public rights-of-way. This involves right-of-way requirements and general design specifications for city streets, design criteria for sidewalks, and specifications for the installation of street lights. General information regarding utility improvements is also provided. These shall be considered the minimum standards and nothing shall prevent the ~~engineering review committee or the development review committee~~ from imposing greater standards to achieve the purposes outlined in section 32-3 of these design standards.
- (b) *Right-of-way and roadway requirements for city streets.* It shall be the policy of the city that major thoroughfares, collectors and arterials with medians, be built from the outside edge of the right-of-way in towards the center. This prevents the dismantling of previously constructed infrastructure in order to accommodate future street improvements such as widening. The location of collector and arterial streets shall be generally guided by the MPO transportation plan and specifically located as development occurs. Coordination between the city staff, development review committee and the developer will occur to provide the appropriate classification and alignment of all major and minor roadways within and abutting developments to encourage appropriate and efficient transportation circulation patterns.

Subdivision/Development Requirements

In order to provide adequate infrastructure to developing areas, all major infrastructure (roads, utilities, drainage structures and parks) shall be provided to developing areas at the earliest possible time. A subdivider or developer shall be responsible for 100% of the street-infrastructure improvements to and within the boundaries of the subdivision or development area. Phased development or zoning boundaries shall not be used to delay or otherwise negate required improvements to the point of development. When improvements are required on streets providing access to, or adjacent to a subdivision or property boundaries-as indicated by street classification, as determined by the MPO transportation plan, transportation element of the comprehensive plan and/or the development review committee, the subdivider or developer shall provide-construct the full cross-section of the roadway the following street improvements or pay for the cost of these improvements, as approved by the city -to the city or make other acceptable provisions for the construction of the infrastructure.:

Adjacent Street Classification	Street Improvement Requirements
Low Density Local	full street section
Minor Local	full street section

Major Local	½ street section, including sidewalk, curb and gutter
Collector	½ street section, including sidewalk, curb and gutter
Minor Arterial	½ street section, including sidewalk, curb and gutter
Major Arterial	½ street section, including sidewalk, curb and gutter

Access requirements for subdivisions shall consist of the following:

- (1) Minimum access to the subdivision or development shall be from a dedicated and accepted public right-of-way. In instances where the access to a subdivision ~~is~~ is unimproved or not up to present or acceptable standard it shall be the responsibility of the subdivider, developer or builder to obtain and dedicate the necessary right-of-way and construct the appropriate cross-section depending on the classification of the roadway ~~to construct a minor local roadway from the subdivision or property boundary to the nearest paved and accepted public roadway. If the roadway to the proposed development is classified as a major thoroughfare by the MPO transportation plan (e.g., a collector or arterial), the developer shall provide the equivalent of a minor local roadway, designed and constructed to a cross section approved by the city from the boundary of the subdivision to the nearest paved public roadway.~~
- (2) Access to lots within a commercial or industrial subdivision shall be from either a dedicated and accepted improved public right-of-way or an improved access established by a 50 foot (15.24m) wide permanent private road and/or access easement. Exceptions to allow a narrower lot access may be considered by the DRC.
- (3) Access to lots within a residential subdivision shall be from a dedicated and accepted improved public right-of-way or private improved road if approved as part of a Planned Unit Development or Development Agreement.

General Improvement Requirements

All other developing parcels of real property shall provide any additional right-of-way include a minimum of 50 percent of the necessary additional right-of-way to conform to the MPO transportation plan for all roads classified collector major local and above and 100 percent of the required right-of-way shall be required for low density and minor local streets. These rights-of-way shall be improved to the full cross-section and connected to an existing improved and accepted right-of-way. One and two family homes and their accessory structures are exempt from the improvements required of this section. A

permanent right-of-way easement may be granted in lieu of dedicated right-of-way. The decision to accept a permanent easement in lieu of dedicated right-of-way may be determined by rests with the development review committee. Legal lots of record existing as of the date of this amendment and being used for one and two family residential purposes are exempt from the right-of-way provisions of this section, provided they are served by an existing legal road or access easement. The development review committee may waive all additional right-of-way requirements in instances where expansion of a specific roadway is neither feasible nor planned.

Waivers and Deviations

Certain waivers to these provisions may be considered by the Development Review Committee. The DRC has the authority to grant deviations to right-of-way width(s) or requirements and cross-section deviations corresponding to right-of-way adjustments. The DRC may refer any request to the City Council for consideration. This provision shall supersede LCMC 37, Article XI as it pertains to the subject matter.

Waivers to the General Improvement Requirements of this section shall be considered by the City Council after recommendation by the Development Review Committee.

All other waivers to these requirements shall be considered by the City Council or in accordance with LCMC 37, Article XI as applicable.

Development Agreements

Any deviations other than those addressed above, including changes in level of improvement or phasing of improvements shall be considered by the City Council through Development Agreements (DA).

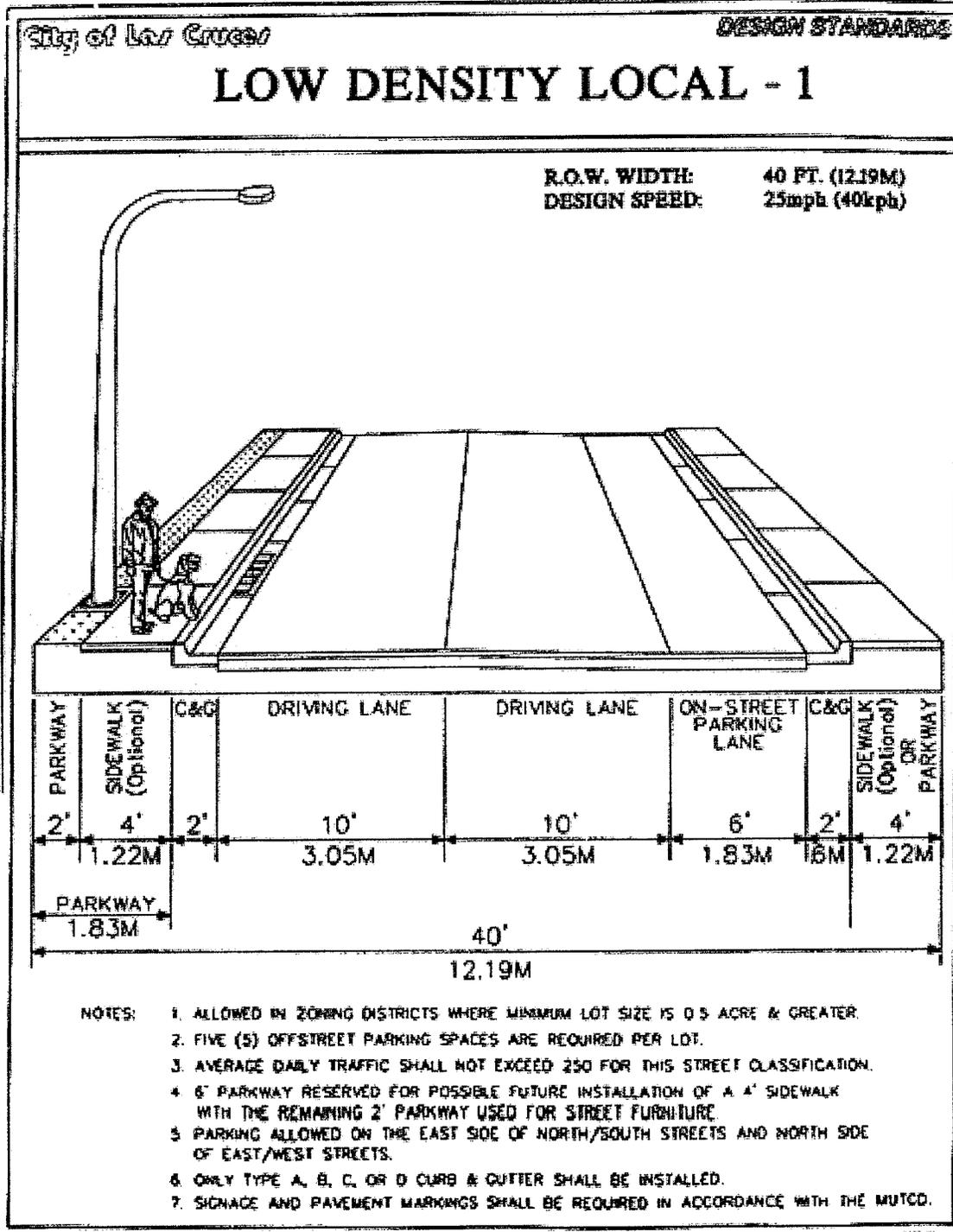
The DA shall be considered a binding agreement between the City of Las Cruces and applicant(s) regarding the type, timing, phasing or provision of infrastructure related to development within the City of Las Cruces. The draft DA shall be submitted by the applicant at the earliest portion of development, i.e., Annexation, Master Plan, PUD Concept Plan. The DA will be reviewed by appropriate staff during the development review process. The DRC shall review the DA and make a recommendation to the City Council regarding the proposed DA. Once approved, the DA will run with the development unless amended.

The Development Agreement shall address, at a minimum, the following items:

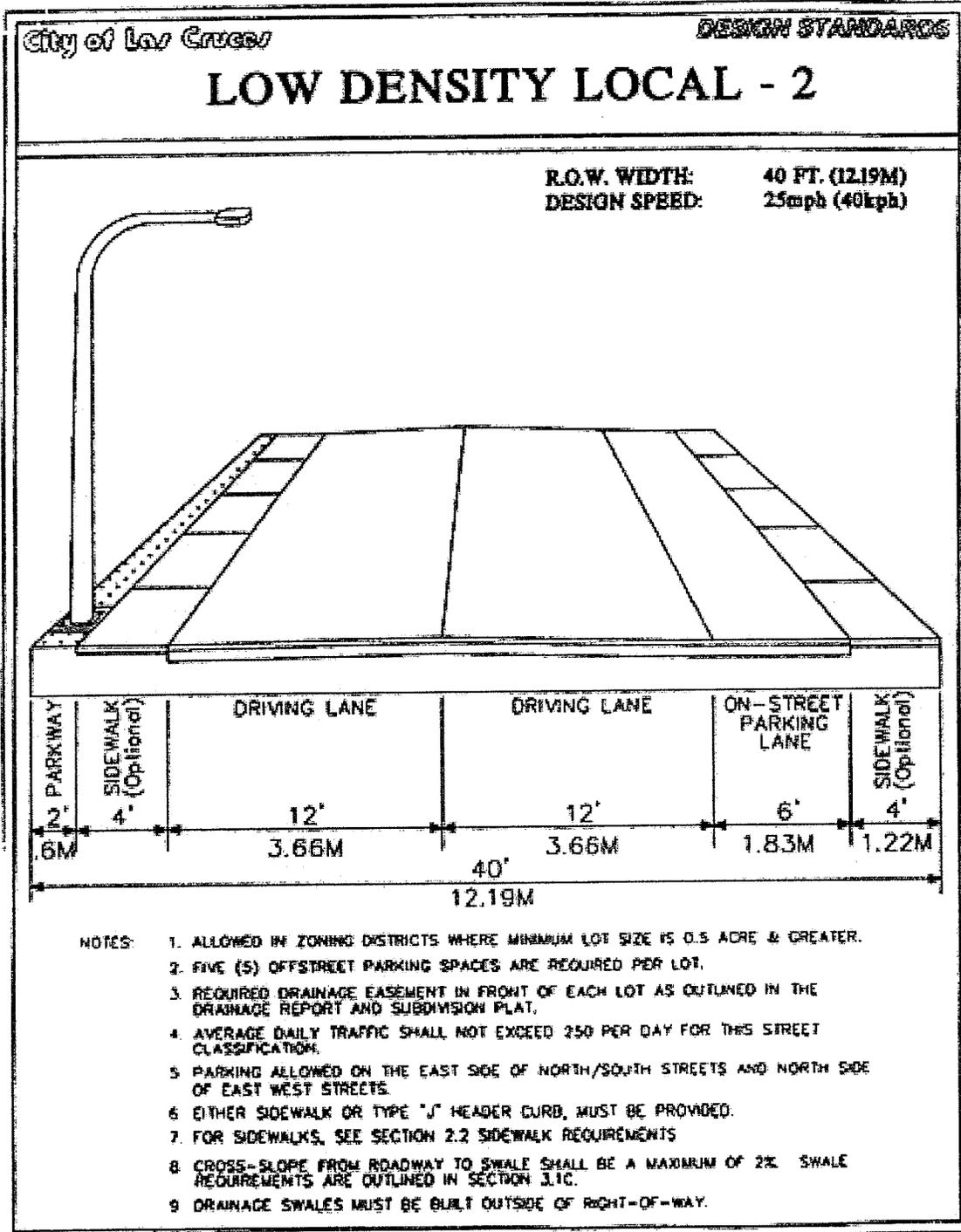
1. Definitions
2. Parties
3. Relationship of the Parties
4. Property

5. Authorization
6. Intent of the Parties
7. Recitation of Benefits and Burdens
8. Consistency with Plans
9. Administrative Act/Legislative Act
10. Applicable Land Use Regulations
11. Status of Applicable Land Use Regulations and Plans
12. Approval and Permit Requirements
13. Dedications and Reservations
14. Utility Connections
15. Duration of the Agreement
16. Amendments, Cancellations or Terminations
17. Periodic Review
18. Progress Reports
19. Remedies
20. Enforcement
21. Hold Harmless Clause
22. Insurance, Bonds
23. Severability Clause
24. Merger Clause
25. Statements of Incorporation by Reference
26. Cooperation
27. Subsidiary of Collateral Agreements
28. Conflict of Laws

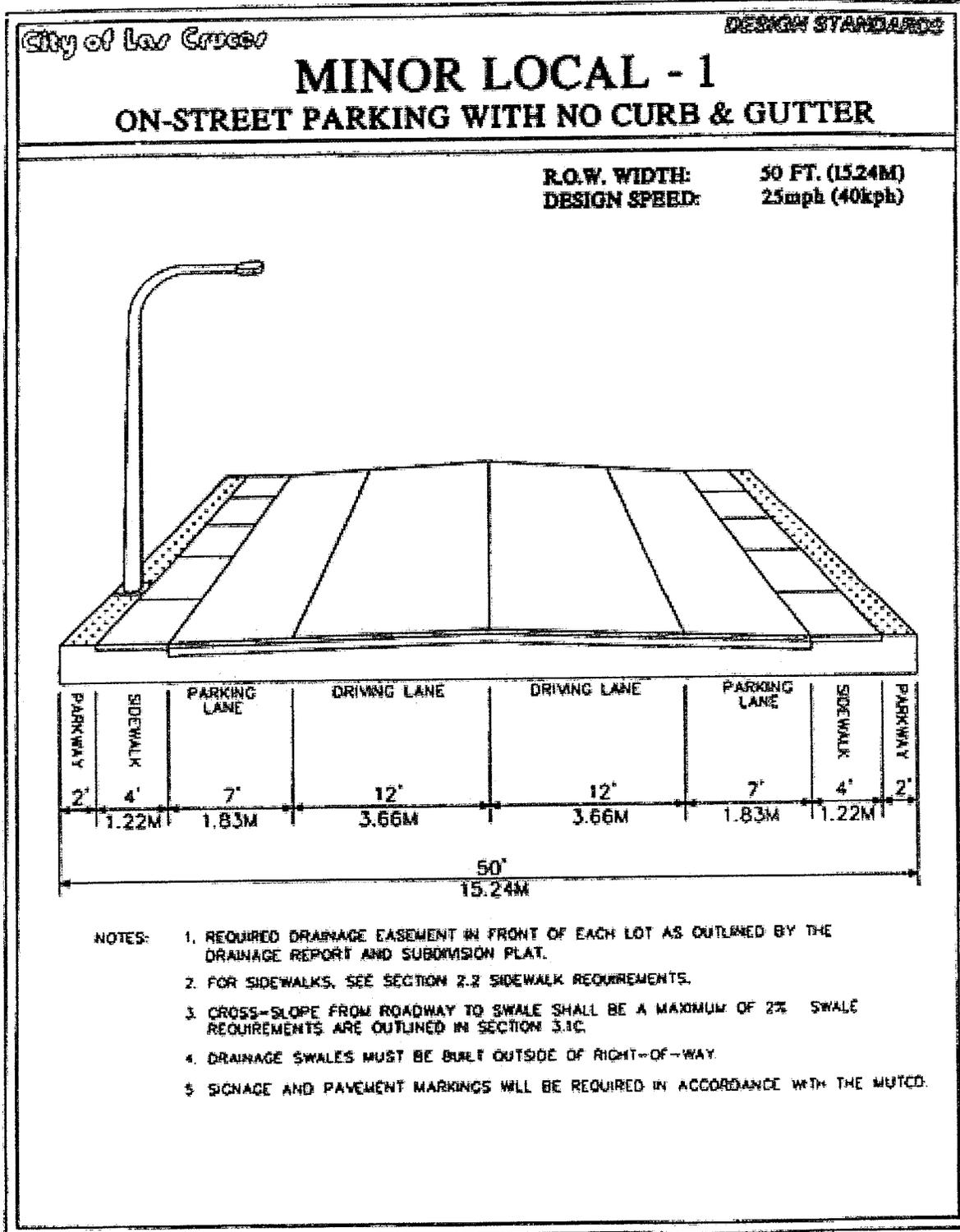
The following cross-section (14 pages) provide the requirements for right-of-way, paving width, parkways, and general use criteria for all acceptable city street classifications. Deviations or modifications to design may be acquired through the engineering review committee.



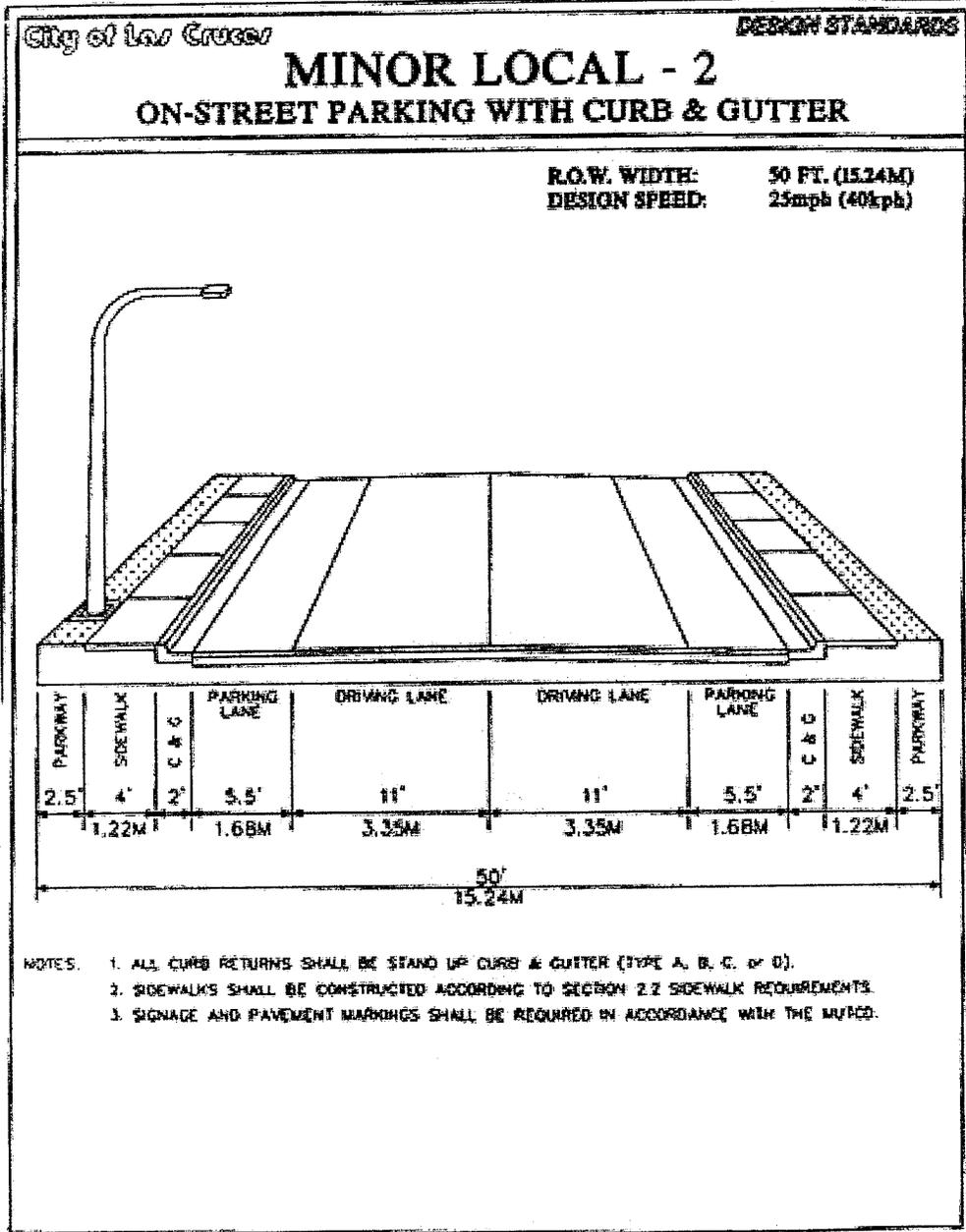
Low Density Local 1



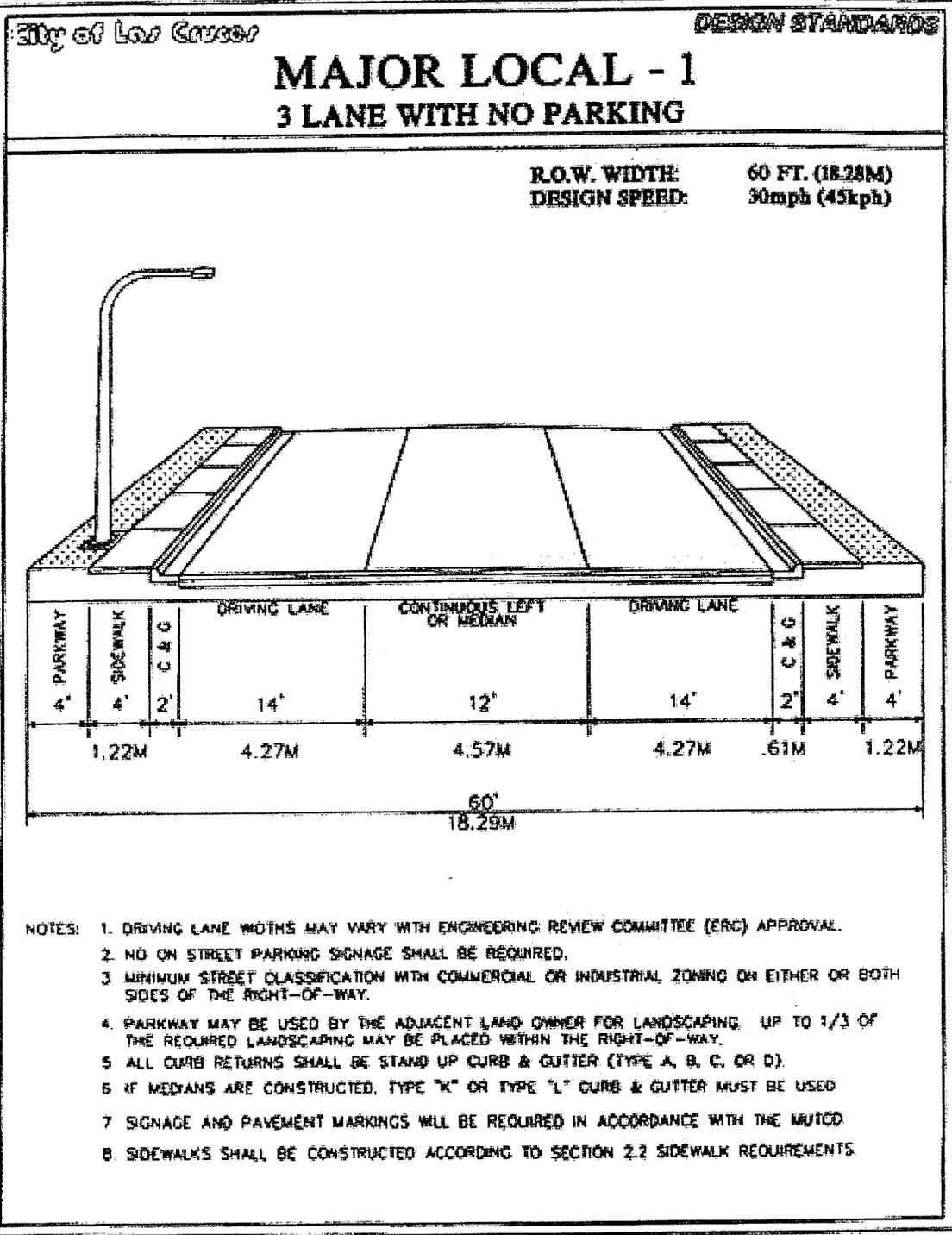
Low Density Local 2



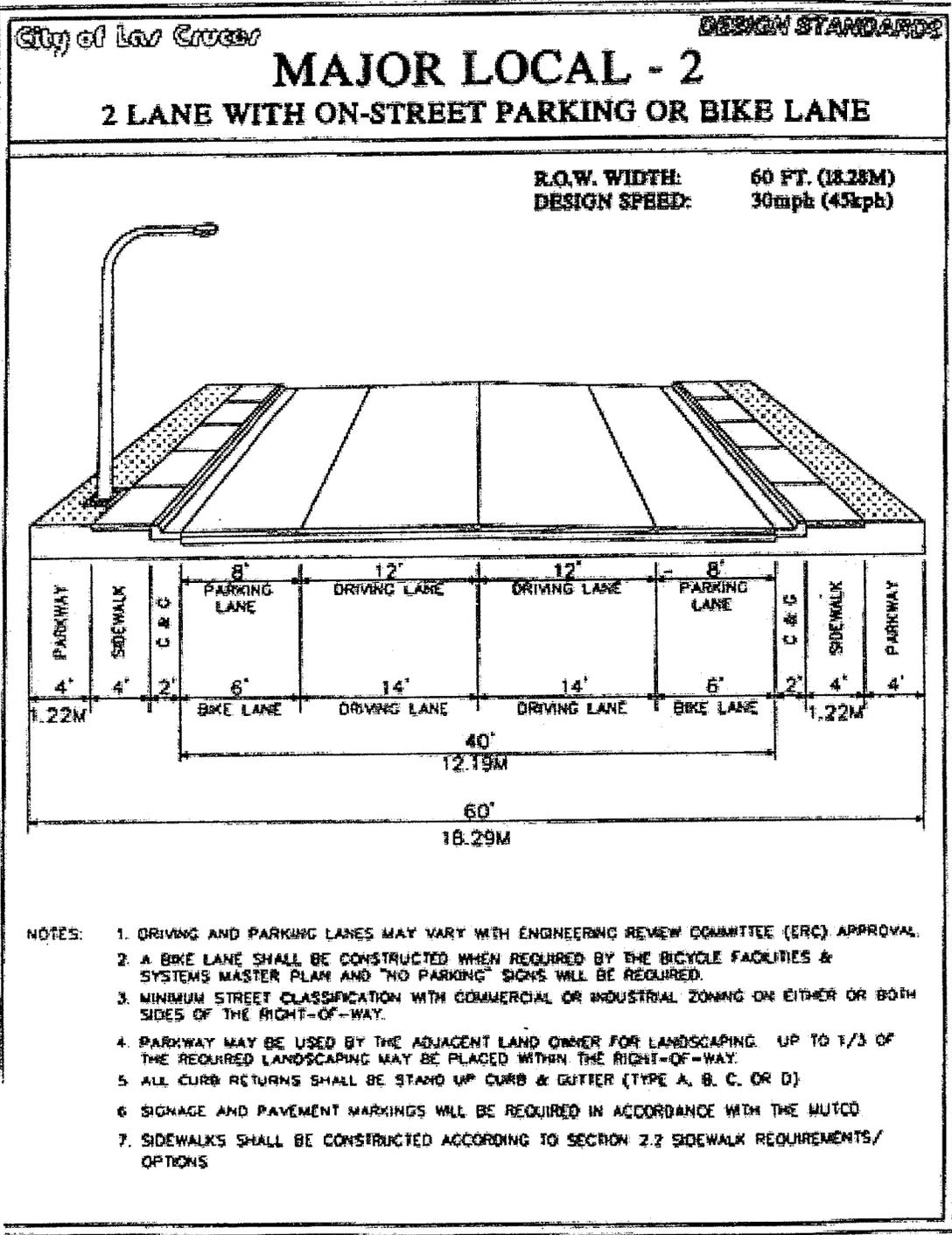
Minor Local 1



Minor Local 2



Major Local 1

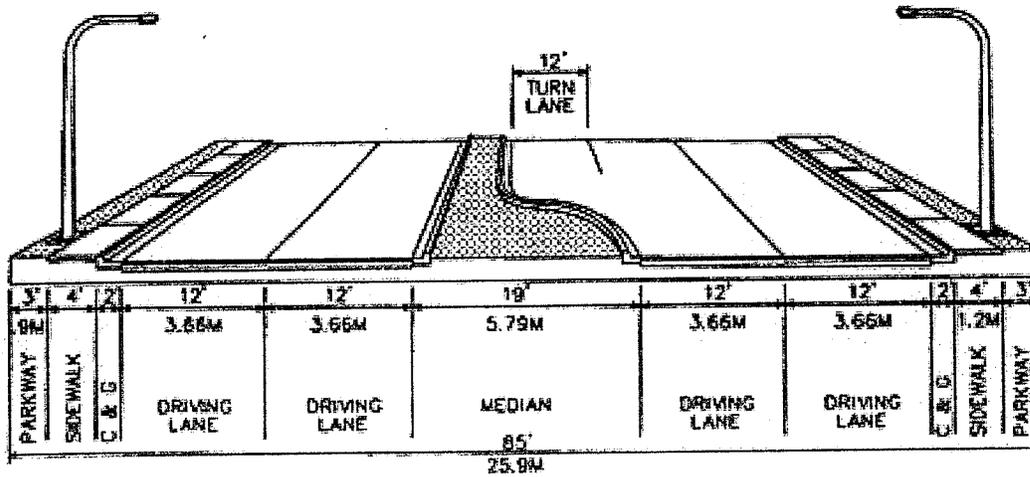


Major Local 2

COLLECTOR - 1

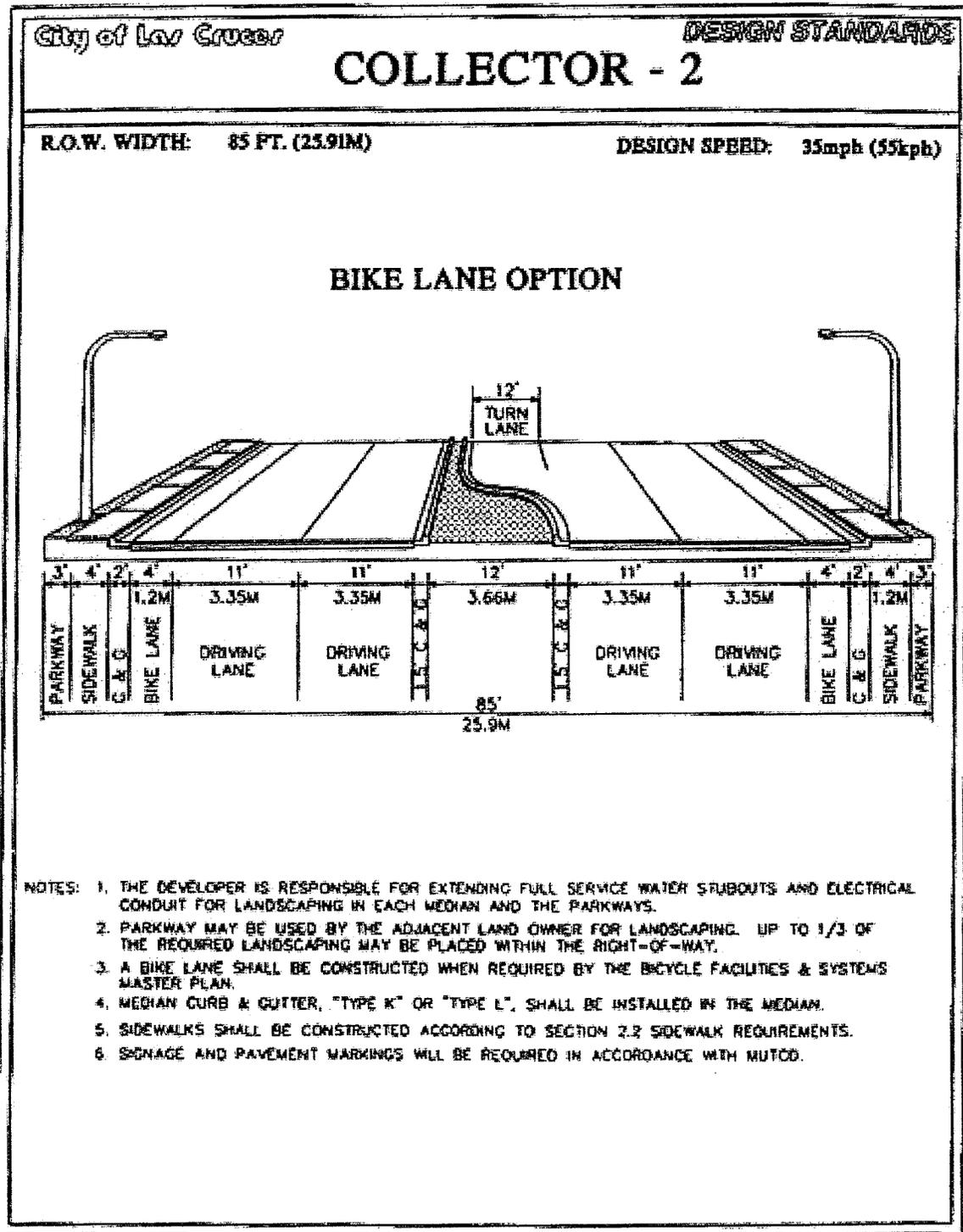
R.O.W. WIDTH: 85 FT. (25.91M)
 DESIGN SPEED: 35mph (55kph)

NO BICYCLE FACILITIES



- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER STUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 4. SIGNAGE AND PAVEMENT MARKINGS WILL BE REQUIRED IN ACCORDANCE WITH MUTCD.

Collector 1

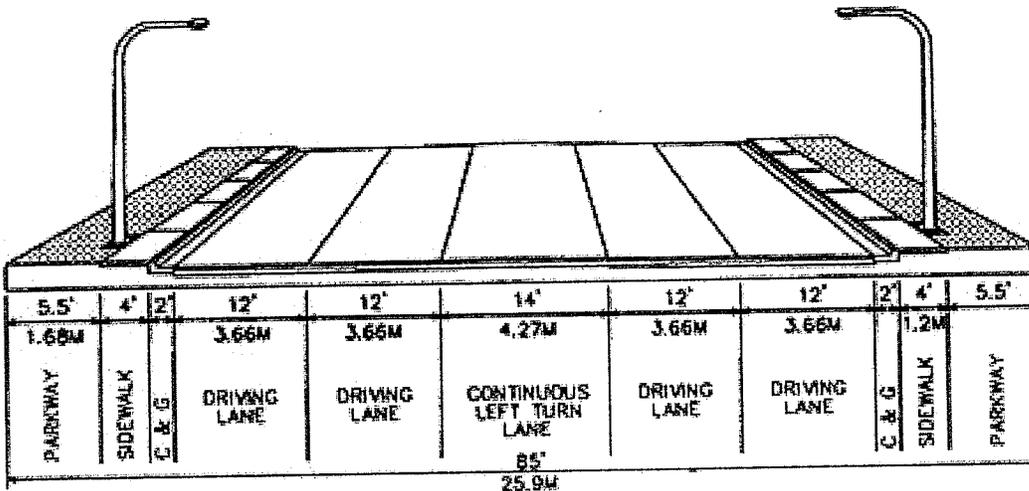


Collector 2

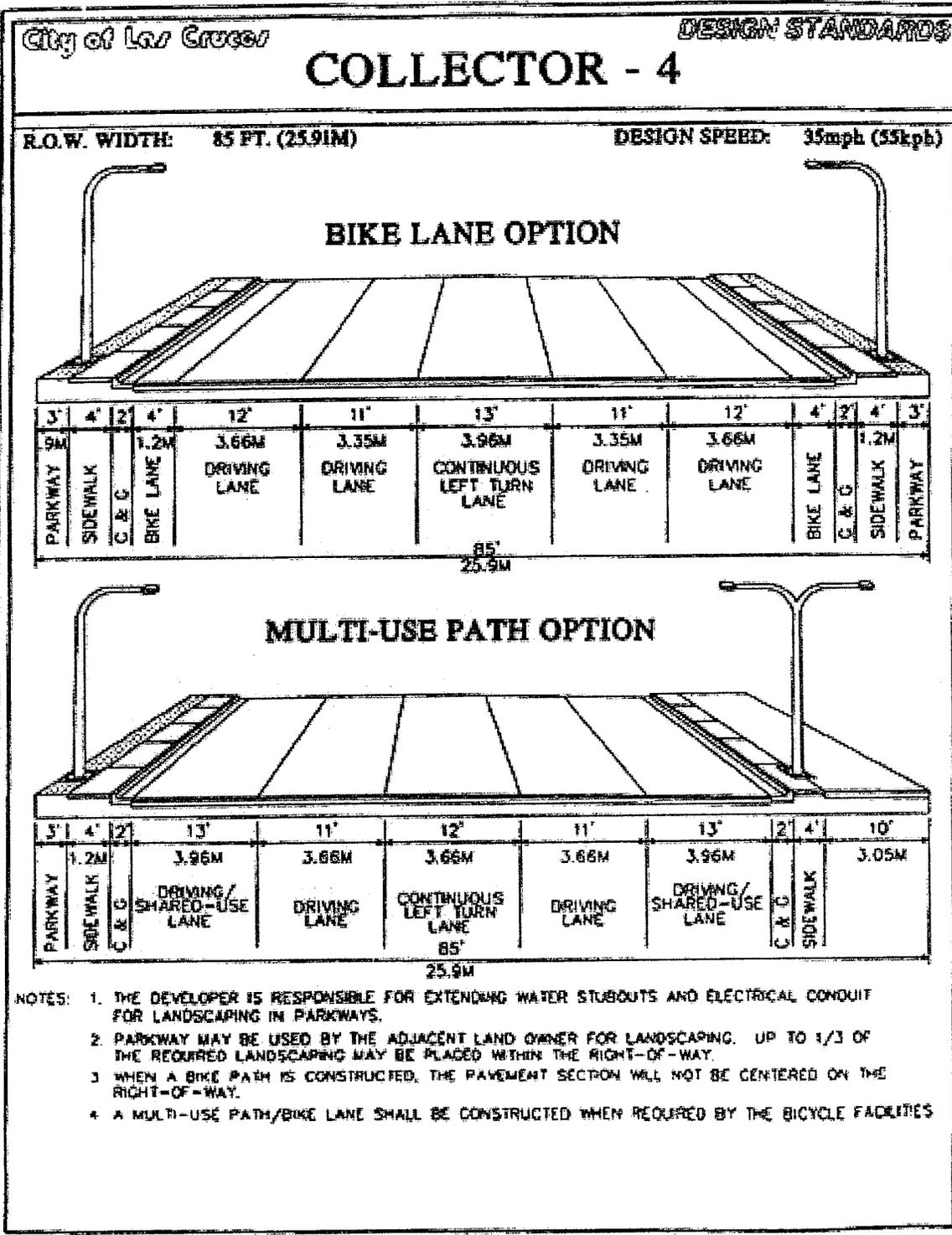
COLLECTOR - 3

R.O.W. WIDTH: 85 FT. (25.91M)
 DESIGN SPEED: 35mph (55kph)

NO BICYCLE FACILITIES



- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING WATER STUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. SIDEWALKS SHALL BE CONSTRUCTED ACCORDING TO SECTION 2.2 SIDEWALK REQUIREMENTS.
 4. SIGNAGE AND PAVEMENT MARKINGS WILL BE REQUIRED IN ACCORDANCE WITH MUTCD.



Collector 4

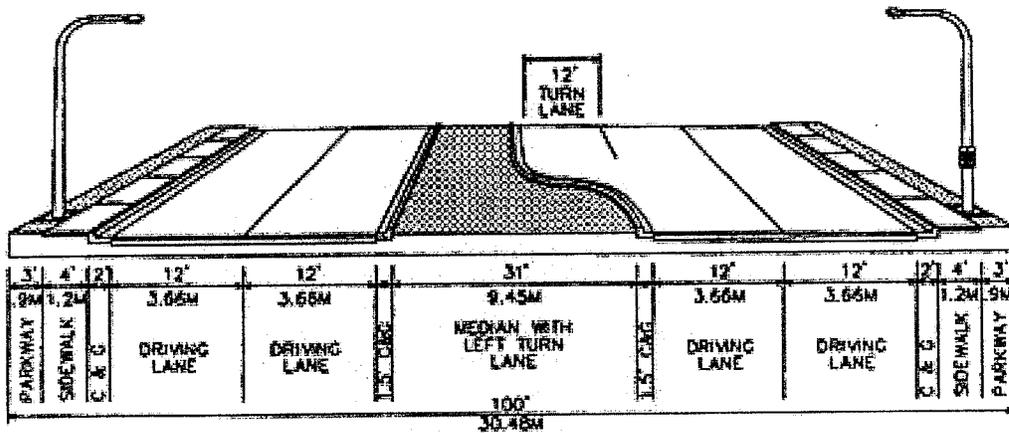
City of Las Cruces

DESIGN STANDARDS

MINOR ARTERIAL - 1

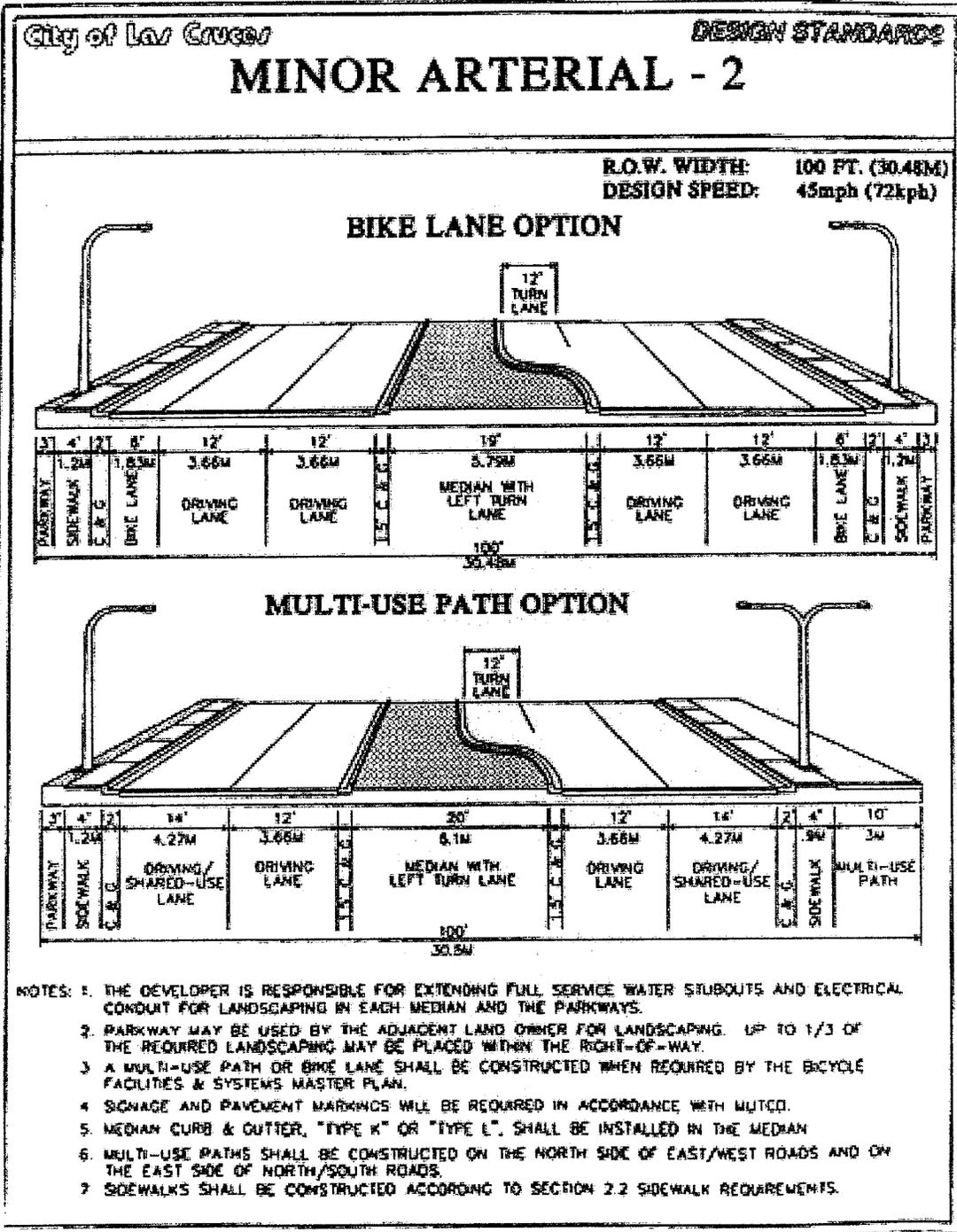
R.O.W. WIDTH: 100 FT. (30.48M)
 DESIGN SPEED: 45mph (72kph)

NO BICYCLE FACILITIES



- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER SUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. SIGNAGE AND PAVEMENT MARKINGS SHALL BE REQUIRED IN ACCORDANCE WITH MUTCD.
 4. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 5. SIDEWALKS SHALL BE CONSTRUCTED ACCORDING TO SECTIONS 2.2 SIDEWALK REQUIREMENTS.

Minor Arterial 1



Minor Arterial 2

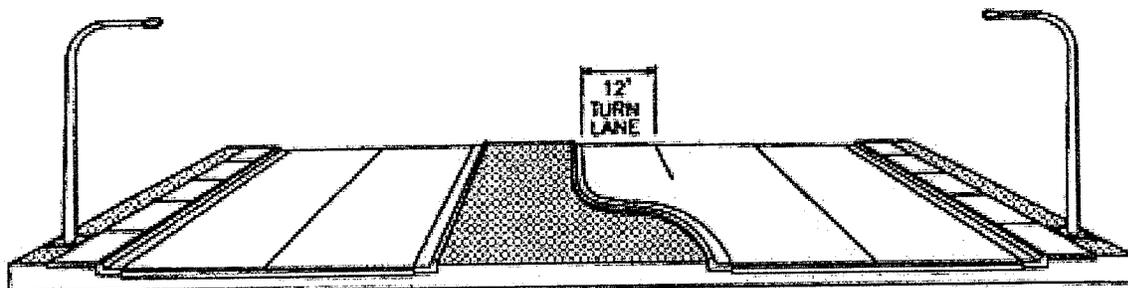
City of Las Cruces

DESIGN STANDARDS

MAJOR ARTERIAL - 1

R.O.W. WIDTH: 120 FT. (36.58M)
 DESIGN SPEED: 45mph (72kph)

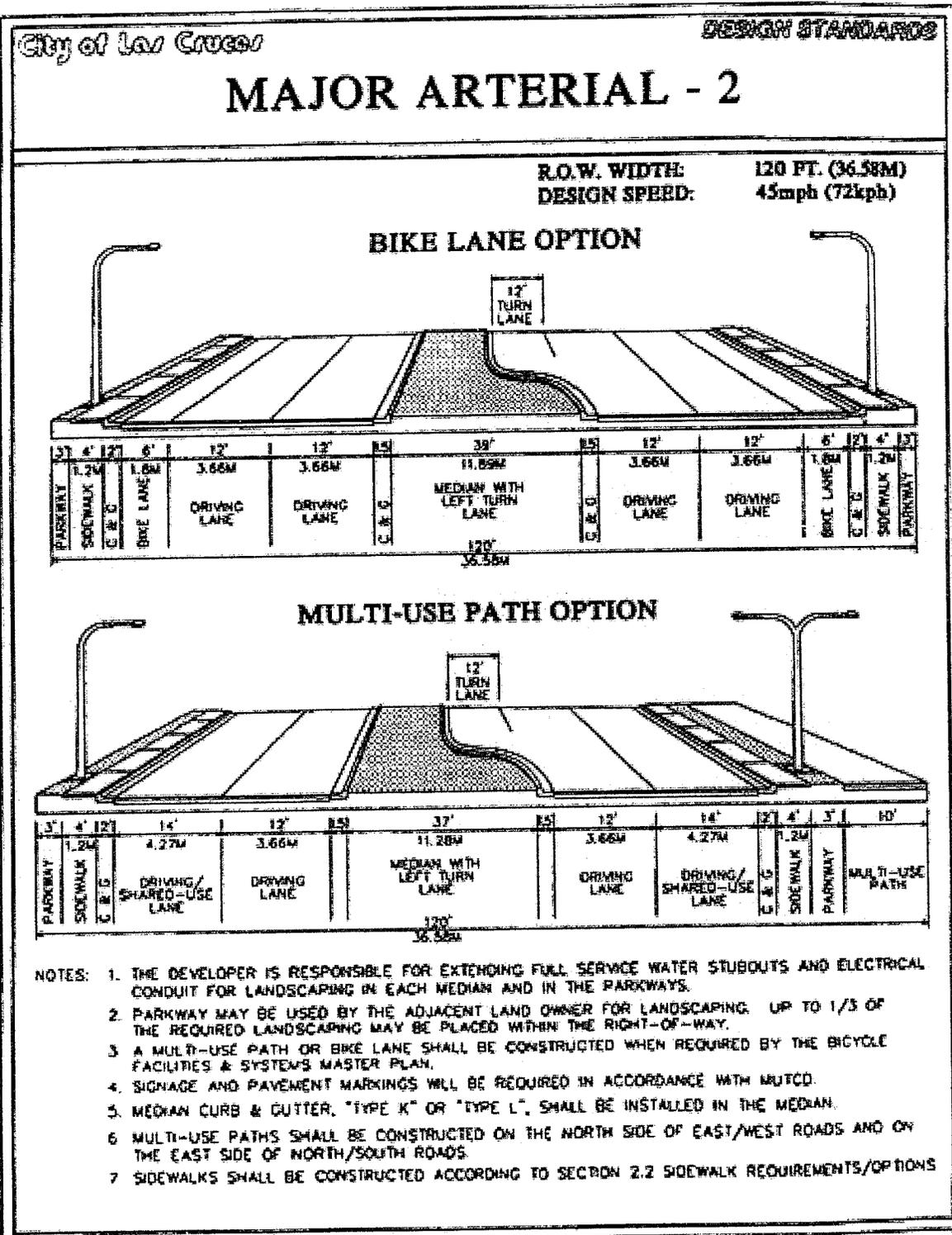
NO BICYCLE FACILITIES



3'	4'	2'	12'	12'	15'	51'	15'	12'	12'	2'	4'	3'
0.9M	1.2M		3.65M	3.65M		15.54M		3.65M	3.65M		1.2M	0.9M
PARKWAY	SIDEWALK	C & G	DRIVING LANE	DRIVING LANE	C & G	MEDIAN WITH LEFT TURN LANE	C & G	DRIVING LANE	DRIVING LANE	C & G	SIDEWALK	PARKWAY
120' 36.58M												

- NOTES:
1. THE DEVELOPER IS RESPONSIBLE FOR EXTENDING FULL SERVICE WATER SUBOUTS AND ELECTRICAL CONDUIT FOR LANDSCAPING IN EACH MEDIAN AND IN THE PARKWAYS.
 2. PARKWAY MAY BE USED BY THE ADJACENT LAND OWNER FOR LANDSCAPING. UP TO 1/3 OF THE REQUIRED LANDSCAPING MAY BE PLACED WITHIN THE RIGHT-OF-WAY.
 3. SIGNAGE AND PAVEMENT MARKINGS WILL BE REQUIRED IN ACCORDANCE WITH MUTCD.
 4. MEDIAN CURB & GUTTER, "TYPE K" OR "TYPE L", SHALL BE INSTALLED IN THE MEDIAN.
 5. SIDEWALKS SHALL BE CONSTRUCTED ACCORDING TO SECTION 2.2 SIDEWALK REQUIREMENTS.

Major Arterial 1



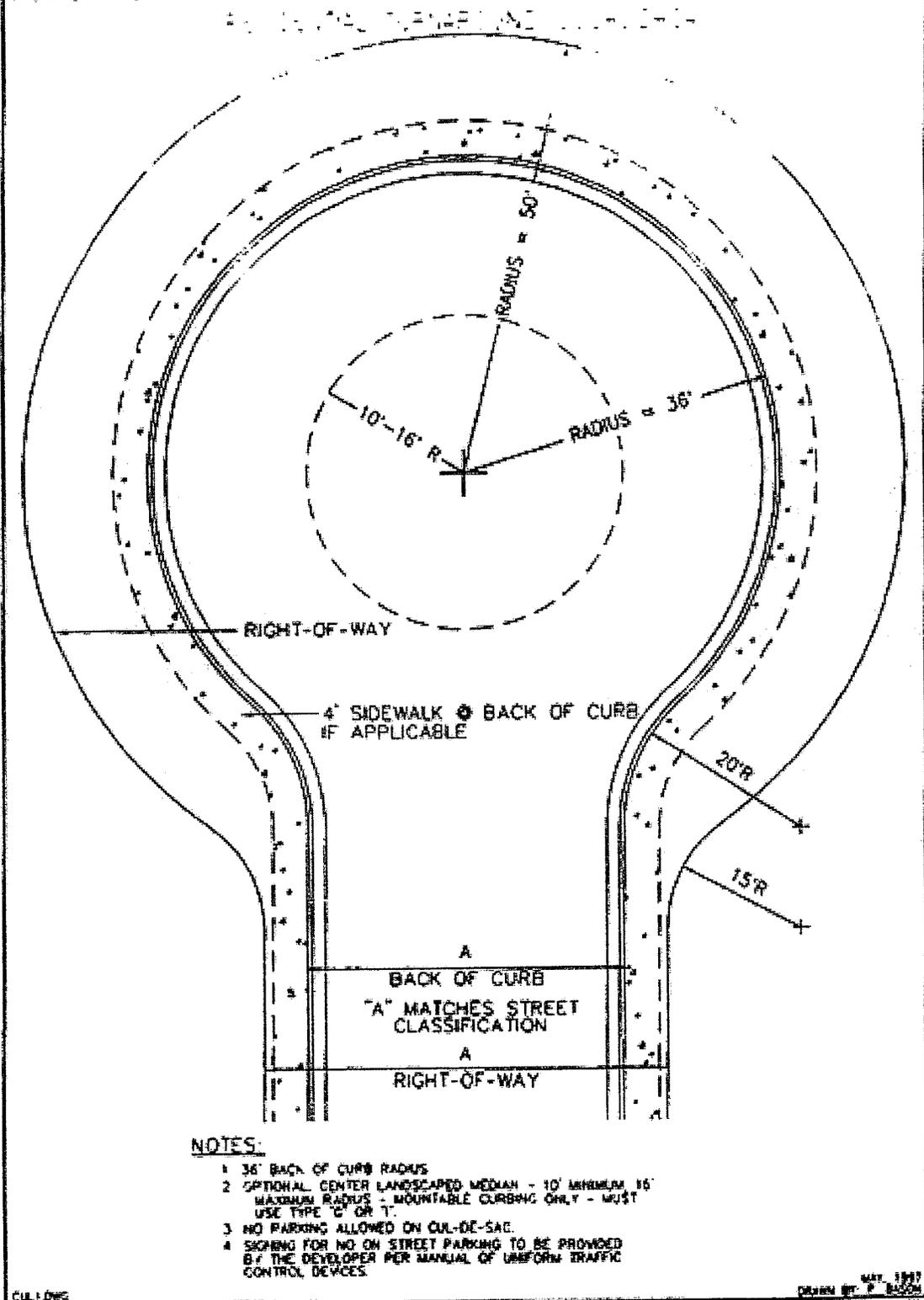
Major Arterial 2

(c) *Cul-de-sac requirements.* The use of cul-de-sacs in residential and commercial/industrial developments are permitted by these design standards;

- (1) A traditional bulb shaped cul-de-sac shall be considered the approved standard and its length shall be measured from the center line of the intersecting street to the center point of the cul-de-sac.
- (2) Hammerhead cul-de-sac length will be measured from the center line of the intersecting street to the back of curb at the end of the cul-de-sac.
- (3) *Cul-de-sac dimension requirements.*
 - a. Maximum cul-de-sac length will be 750 feet (228.6m) in residential or commercial subdivisions. An additional 750 foot (228.6m) of length which allows up to a 1500 feet (457.2m) cul-de-sac may be applied for through the development review committee when topography or land/lot configuration indicate the need for a longer cul-de-sac. A request for a cul-de-sac in excess of 750 feet (228.6m) shall be submitted to the subdivision administrator at the time of preliminary plat submittal. The subdivision administrator will process the request with the preliminary plat to the development review committee following the initial staff review. The development review committee will consider the request for additional length in light of peak hour traffic, number of units, size of lots, fire flow requirements, and any other considerations the development review committee may believe affects safety. Mitigation techniques such as, but not limited to, sprinkled fire suppression systems, additional hydrants, additional water lines to provide looped systems, increased street widths, and/or a secondary emergency vehicle access into the cul-de-sac at a remote point from the intersecting street may be required by the development review committee. In no case shall a waiver be granted to allow a cul-de-sac in excess of 1500 feet (457.2m).
 - b. The right-of-way and paving width of the stem of the cul-de-sac shall be the same width as the street classification given to the cul-de-sac. For example, if the cul-de-sac is serving a commercial development, it shall follow the requirements for a major local street.
 - c. A traditional bulb shaped cul-de-sac turnaround shall have a minimum radius of fifty (50) feet (15.24m). The minimum paving radius shall be thirty-six (36) feet (10.67m) including curbing.
- (4) *Alternative turn-around criteria.*
 - a. Developments using hammerhead turnarounds shall be required to provide three off-street parking spaces per unit located along the turn-around as measured from the point of curvature to the point of curvature (PC/PC). The cul-de-sac shall be limited to a maximum length of 250 feet (76.2m) and a maximum of 16 single story dwelling units.
 - b. Cul-de-sacs with other alternative turnaround designs, i.e. offset bulb, tear-drop shaped, "Y" shaped, eyebrows, etc., shall be reviewed on a case by case basis by the development review committee.
- (5) In cases where on-street parking is not allowed in the cul-de-sac turnaround areas, signing of the cul-de-sac no parking areas shall be accomplished at the time of subdivision construction and in accordance with the manual on uniform traffic control devices for urban parking and stopping signs.

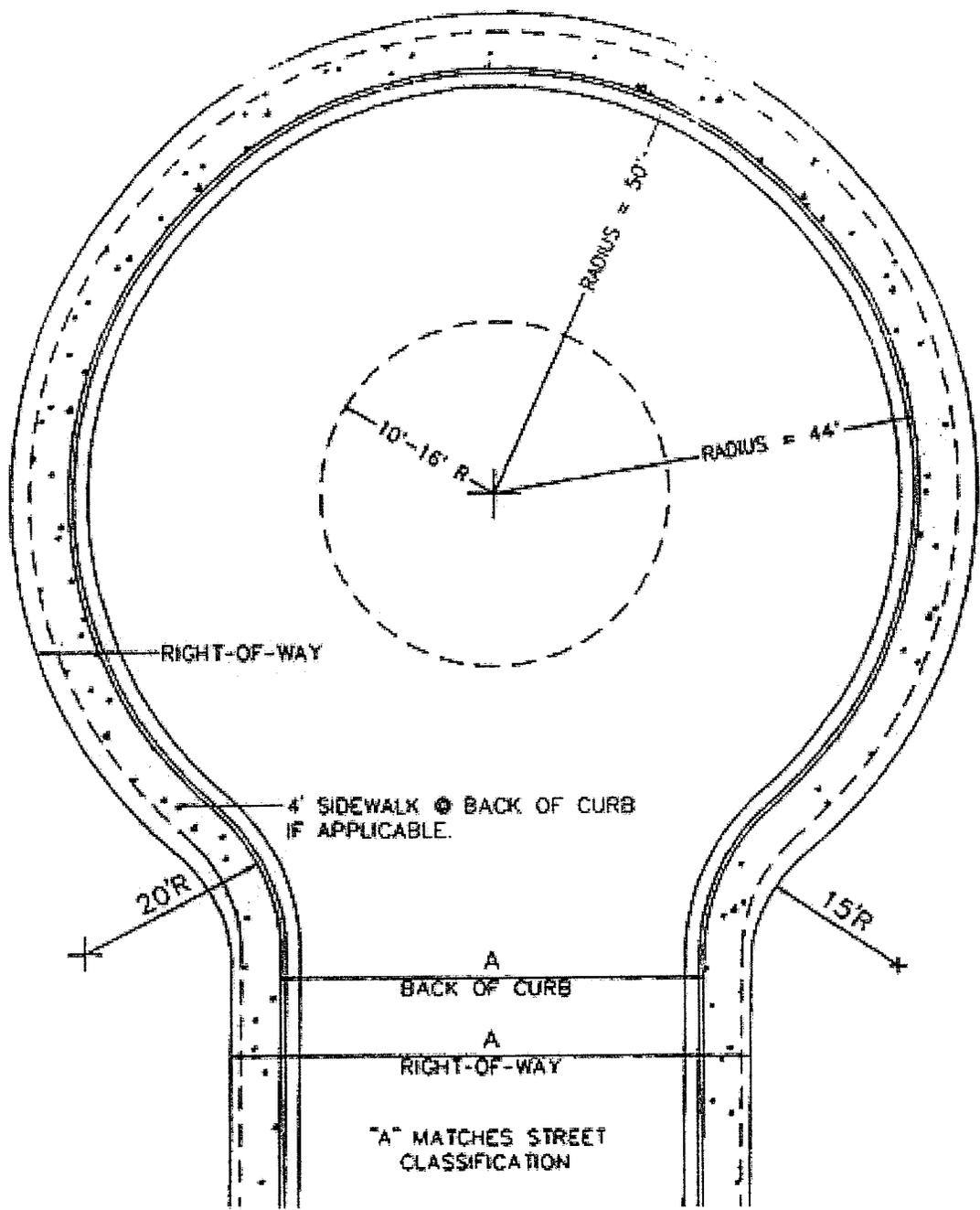
See next three pages for cul-de-sac details.

CITY OF LAS CRUCES DESIGN STANDARDS



Design Standards 1

CITY OF LAS CRUCES DESIGN STANDARDS
 RESIDENTIAL TRAFFIC CAL-DE-SAC



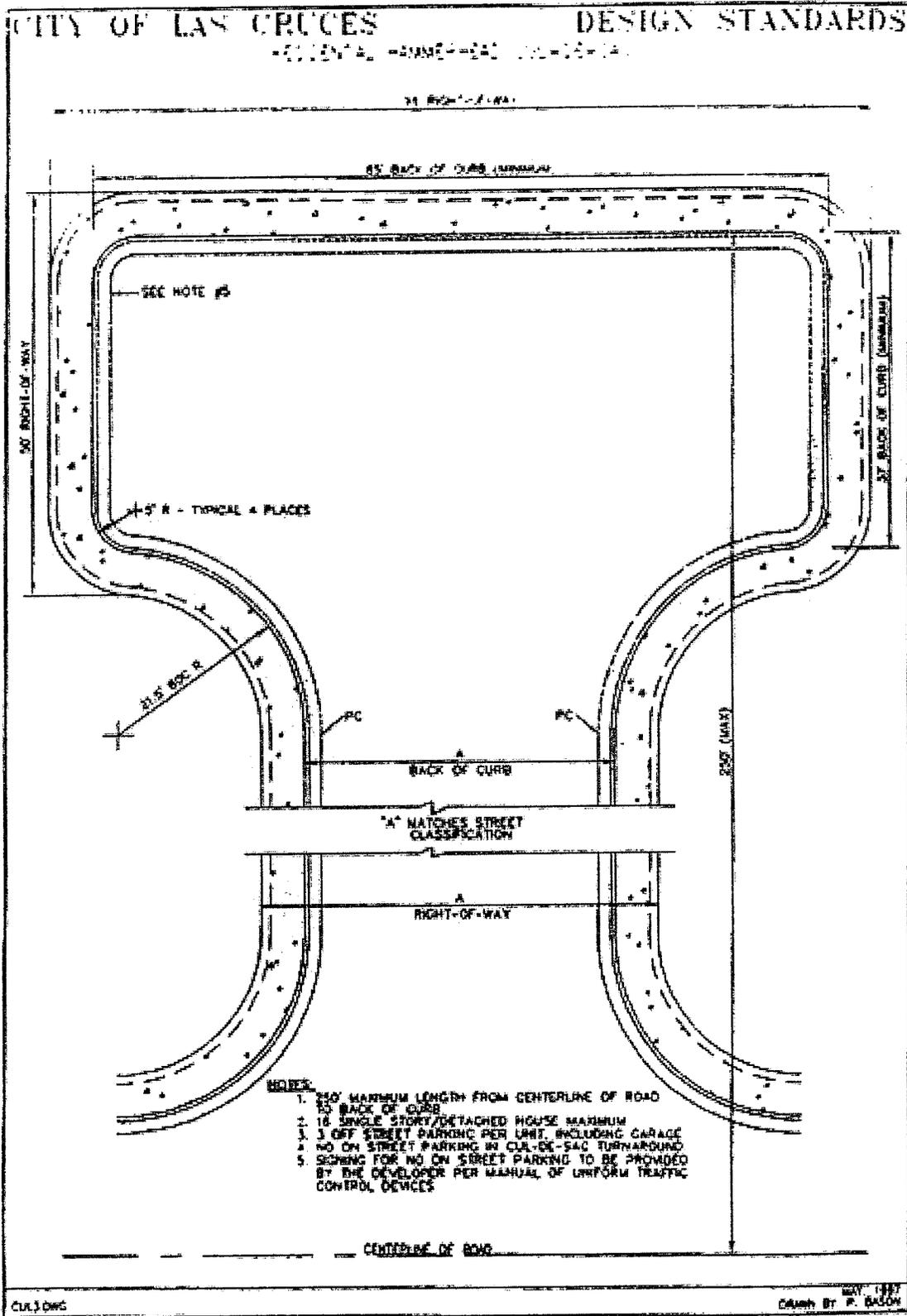
NOTES:

1. 24' BACK OF CURB RADIUS
2. OPTIONAL CENTER LANDED MEDIAN - 10' MINIMUM 16' MAXIMUM RADIUS - MOUNTABLE CURBING ONLY - MUST USE TYPE 'C' OR 'T'
3. PARKING ALLOWED ON CAL-DE-SAC
4. SIGNING FOR NO ON STREET PARKING TO BE PROVIDED BY THE DEVELOPER PER MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

CAL-DE-SAC

MAY 1997
 DRAWN BY: P. BAUGH

Design Standards 2



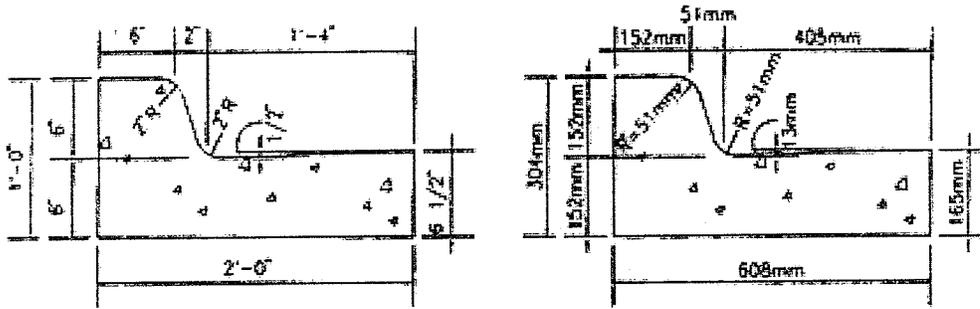
Design Standards 3

- (d) *Curbing.* All city streets require some form of approved curbing. Curb and gutter use is primarily dictated by drainage conveyance needs as well as traffic safety concerns. The following pages detail the approved curbing types as well as outline under what conditions the various curb types are applicable:
- (1) Type A, six-inch stand-up curb and gutter.
 - (2) Type B, six-inch modified stand-up curb and gutter.
 - (3) Type C, eight-inch stand-up curb and gutter.
 - (4) Type D, eight-inch modified stand-up curb and gutter.
 - (5) Type E, rollover curb and gutter.
 - (6) Type F, modified rollover curb and gutter.
 - (7) Type G, rollover curb and gutter.
 - (8) Type H, drive over curb and gutter.
 - (9) Type I, drive over curb and gutter.
 - (10) Type J, header curb.
 - (11) Type K, median curb and gutter.
 - (12) Type L, modified median curb and gutter.
 - (13) Type M, rundown gutter, four feet.
 - (14) Type N, rundown gutter, two feet.
 - (15) Type O, temporary asphalt curb.
 - (16) Type P, temporary extruded concrete median curb.
 - (17) Type Q, valley gutter.
 - (18) Type R, drivepad curb.

See next 9 pages for curb details.

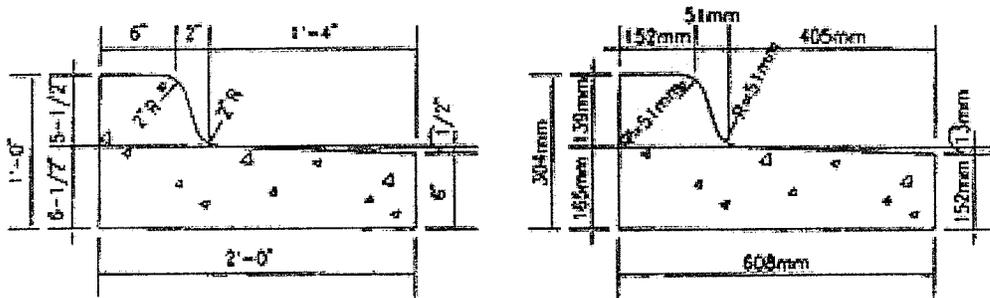
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON ALL CITY STREET CLASSIFICATIONS AS A FUNCTION OF DRAINAGE AND TRAFFIC CONTROL



TYPE "A" CURB & GUTTER
A.T.S.

FOR USE ON ALL CITY STREETS WHERE THE ROADWAY IS SUPERELEVATED, I.E. THE PAVEMENT SLOPES AWAY FROM THE CURB AND DRAINAGE IS TO BE DIVERTED FROM THE GUTTER SECTION.



TYPE "B" MODIFIED CURB & GUTTER
R.T.S.

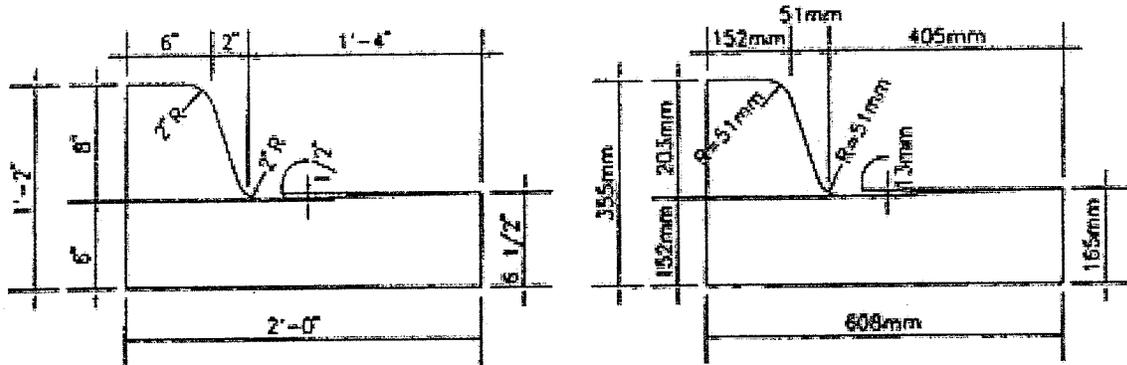
CURB_A8.DWG

MAY 1997
DRAWN BY P. BAZZAN

CITY OF LAS CRUCES

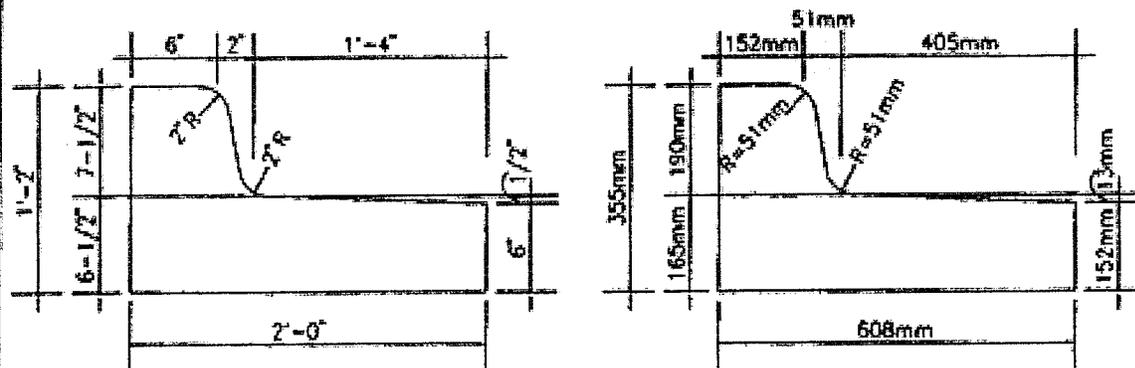
DESIGN STANDARDS

FOR USE ON ALL CITY STREET CLASSIFICATIONS AS A FUNCTION OF DRAINAGE AND TRAFFIC CONTROL IT IS PERMISSIBLE TO MIX CURB HEIGHTS OF 6" & 8" WHEN APPROPRIATE FOR PROPER DRAINAGE CONVEYANCE. MINIMUM TRANSITION LENGTH OF 10' FROM 6" TO 8" CURB.
 8" CURB NOT RECOMMENDED FOR STREETS WITH ON-STREET PARKING.



TYPE "C" 8" CURB & GUTTER
 N.T.S.

FOR USE ON CITY STREETS WHERE THE ROADWAY IS SUPERELEVATED, I.E. THE PAVEMENT SLOPES AWAY FROM THE CURB AND DRAINAGE IS TO BE DIVERTED.

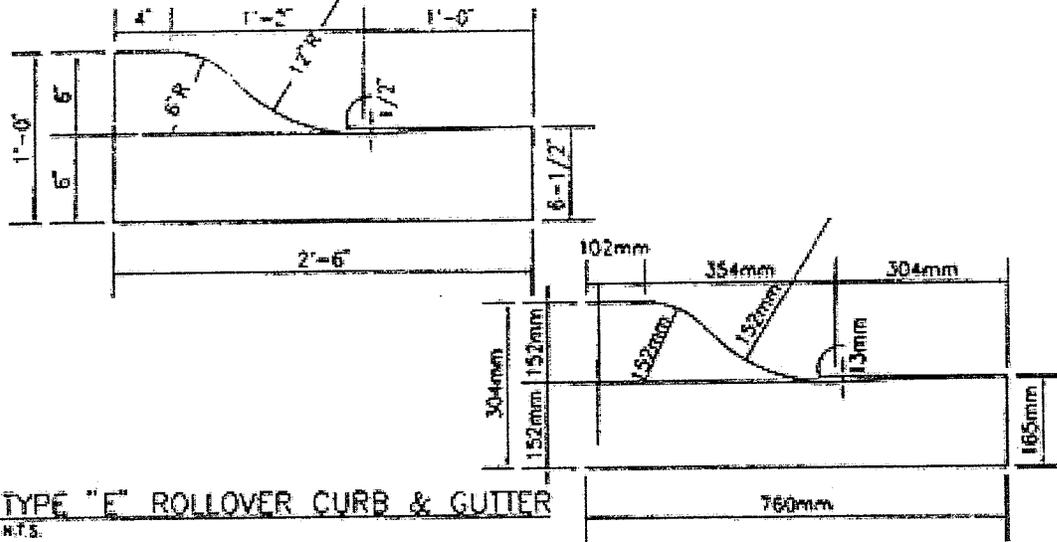


TYPE "D" 8" MODIFIED CURB & GUTTER
 N.T.S.

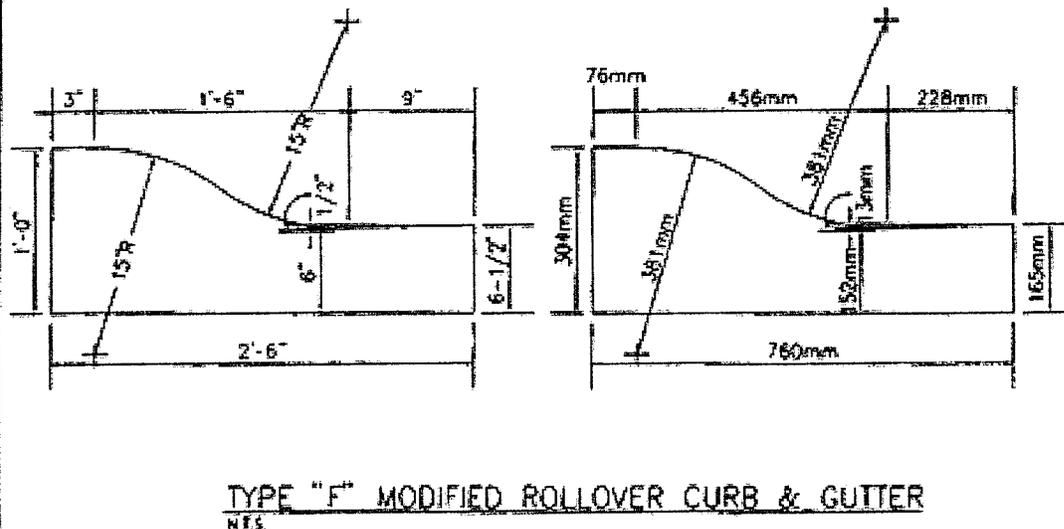
Design Standards 5

CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "E" CURBING.



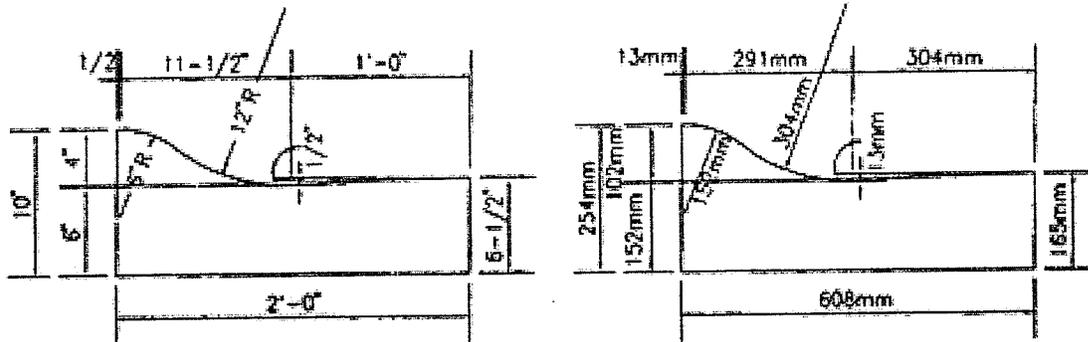
FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "F" CURBING.



CITY OF LAS CRUCES

DESIGN STANDARDS

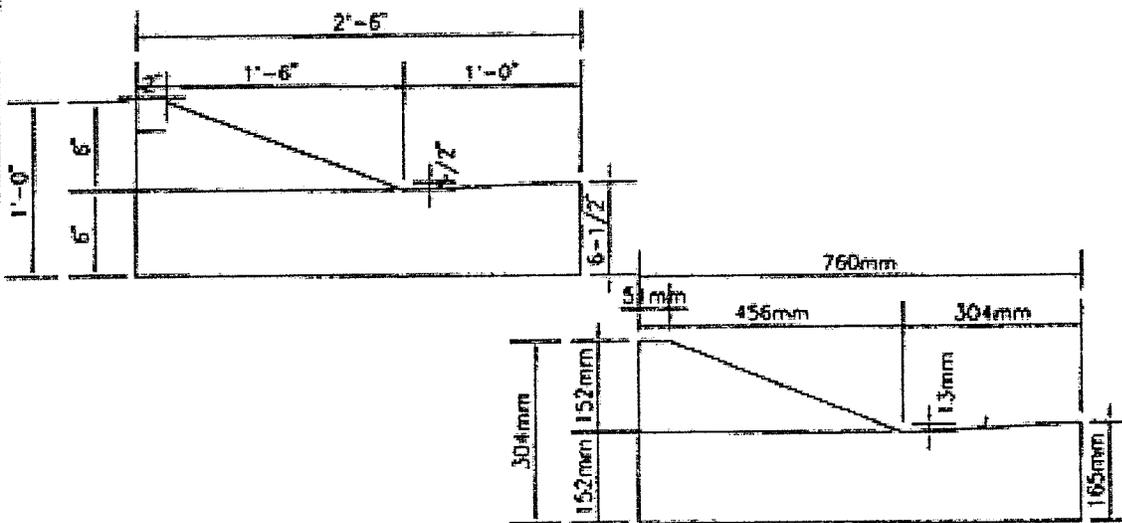
FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "G" CURBING.



TYPE "G" ROLLOVER CURB & GUTTER

N.T.S.

FOR USE ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS HAVING ACCESS OF INDIVIDUAL DRIVEWAYS TO STREETS. ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION. ALL CURB RETURNS SHALL BE A TYPE "A" OR "B" CURB AS REQUIRED FOR DRAINAGE WITH A MINIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "H" CURBING.



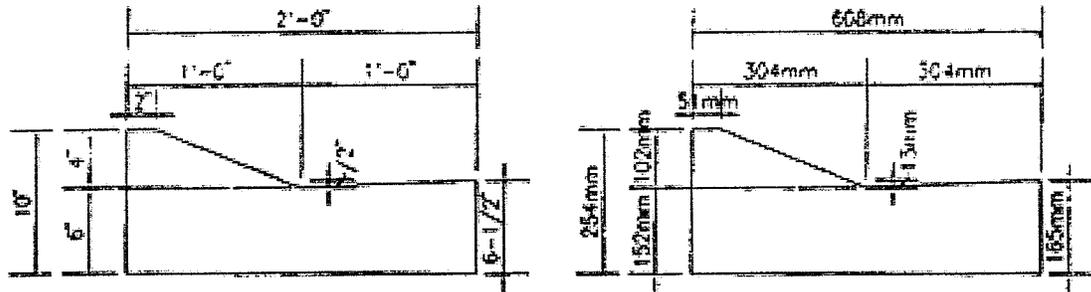
TYPE "H" DRIVE OVER CURB & GUTTER

N.T.S.

CITY OF LAS CRUCES

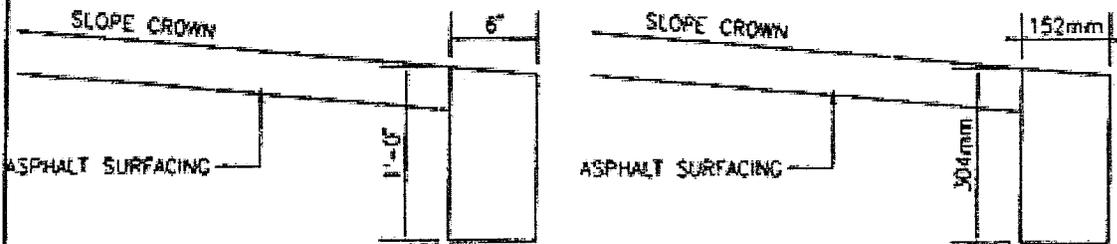
DESIGN STANDARDS

TO BE USED ON MINOR LOCAL STREETS IN RESIDENTIAL DEVELOPMENTS (R-1, R-2) - 1/2" CURB AND SIDEWALKS TO STREETS (ONCE USED, IT SHALL BE CONTINUED THROUGHOUT THE SUBDIVISION, TO INCLUDE EXTENDING TO THE NEXT STREET INTERSECTION). ALL CURB RETURNS SHALL BE A TYPE "A" OR "E" CURB AS REQUIRED FOR DRAINAGE WITH A MAXIMUM 10' TRANSITION FROM THE PC & PT OF THE CURB RETURN TO THE TYPE "I" CURBING.



TYPE "I" DRIVE OVER CURB & GUTTER
N.T.S.

TO BE USED TO MAINTAIN THE STREET EDGE AND WHEN SIDEWALKS ARE NOT REQUIRED. FOR USE ON THE VALLEY FLOOR TO CONVEY DRAINAGE OFF THE STREET.



TYPE "J" HEADER CURB
N.T.S.

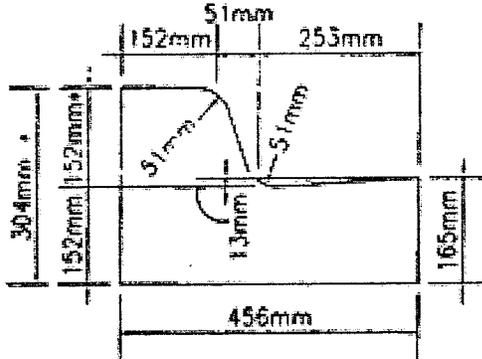
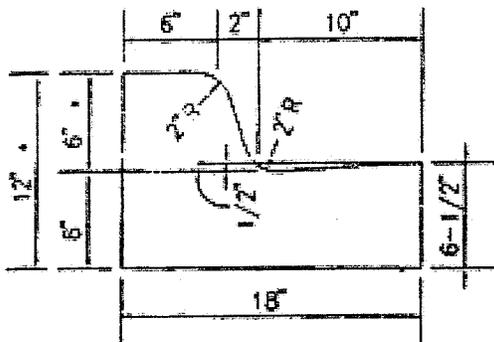
CITY OF LAS CRUCES

DESIGN STANDARDS

FOR USE ON CENTER LANE MEDIANS ON COLLECTOR OR ARTERIAL STREET SECTIONS TO CONVEY DRAINAGE. THE SLOPE OF THE GUTTER SHALL BE REQUIRED TO MATCH THE SLOPE OF THE STREET. 8" CURBING MAY BE REQUIRED AS DICTATED BY DRAINAGE NEEDS.

- CURB HEIGHT = 8". TOTAL CURB THICKNESS = 14"

- CURB HEIGHT = 203mm. TOTAL CURB THICKNESS = 355mm

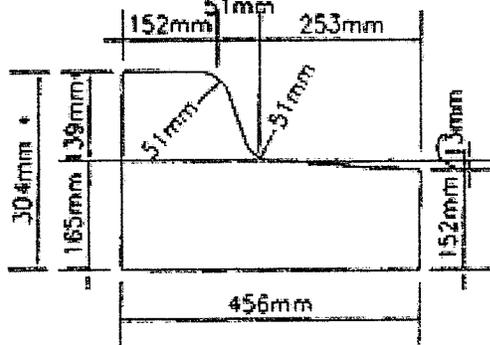
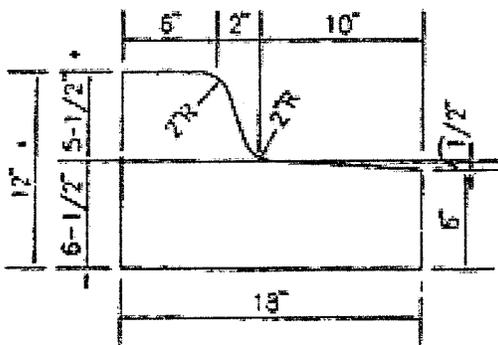


TYPE "K" MEDIAN CURB & GUTTER
N.T.S.

FOR USE ON CENTER LANE MEDIANS ON COLLECTOR OR ARTERIAL STREET SECTIONS TO CONVEY DRAINAGE. THE SLOPE OF THE GUTTER SHALL BE REQUIRED TO MATCH THE SLOPE OF THE STREET. TO BE USED ON SUPERELEVATED MEDIANS, 8" CURBING MAY BE REQUIRED AS DICTATED BY DRAINAGE NEEDS.

- CURB HEIGHT = 7-1/2". TOTAL CURB THICKNESS = 14"

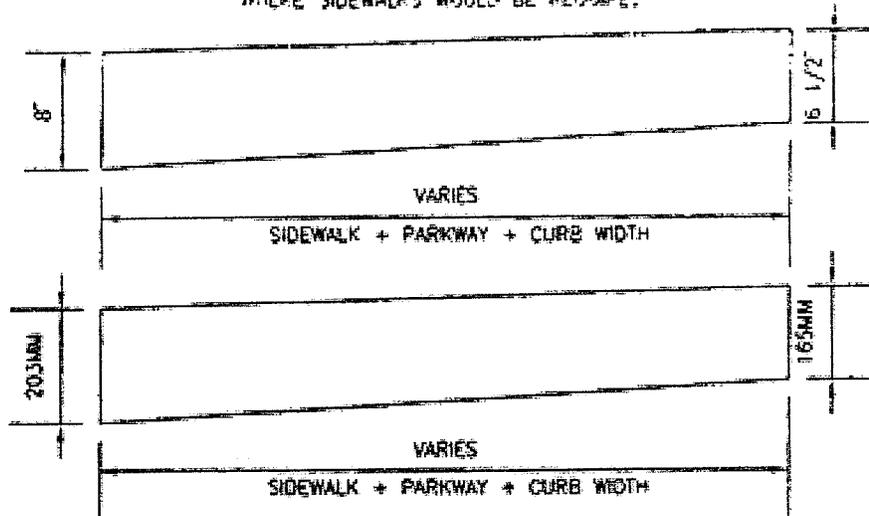
- CURB HEIGHT = 190mm. TOTAL CURB THICKNESS = 355mm



TYPE "L" MODIFIED MEDIAN CURB & GUTTER
N.T.S.

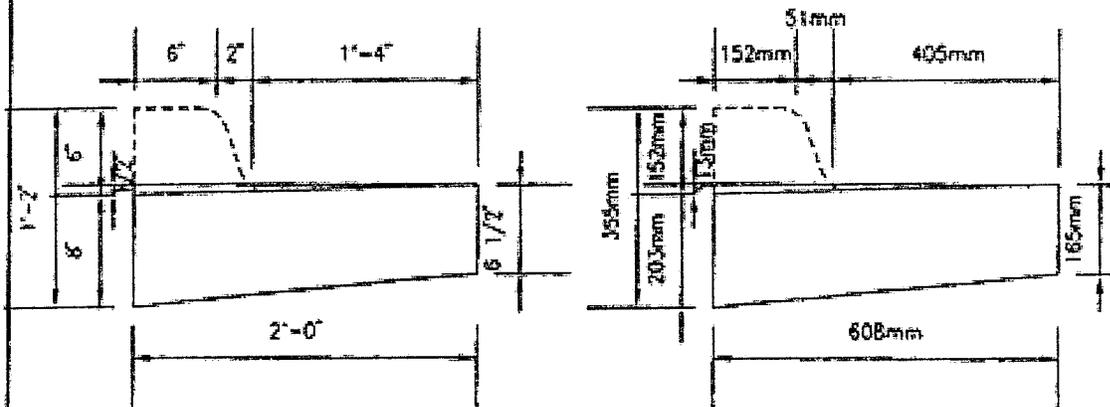
CITY OF LAS CRUCES DESIGN STANDARDS

FOR USE IN RELATIVELY FLAT AREAS IN CONJUNCTION WITH STOPWATER DRAINAGE FACILITIES ONLY. THIS SECTION IS INTENDED TO TAKE THE PLACE OF SIDEWALKS IN LOCATIONS WHERE SIDEWALKS WOULD BE REQUIRED.



TYPE "M" RUNDOWN
N.T.S.

FOR USE IN RELATIVELY FLAT AREAS IN CONJUNCTION WITH STORMWATER DRAINAGE FACILITIES ONLY. THIS SECTION IS NOT INTENDED TO TAKE THE PLACE OF SIDEWALKS IN LOCATIONS WHERE SIDEWALKS WOULD BE REQUIRED.



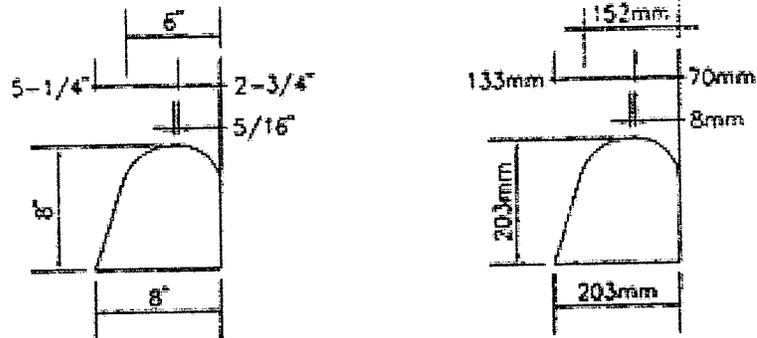
TYPE "N" RUNDOWN
N.T.S.

Design Standards 10

CITY OF LAS CRUCES

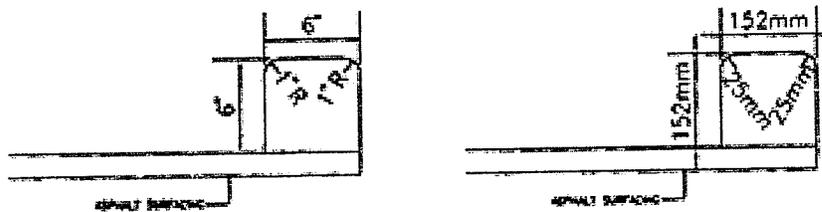
DESIGN STANDARDS

FOR USE ON STREETS WHERE THE ESTIMATED EXPANSION OF THE ROAD IS TO OCCUR WITHIN THE NEXT TEN (10) YEARS



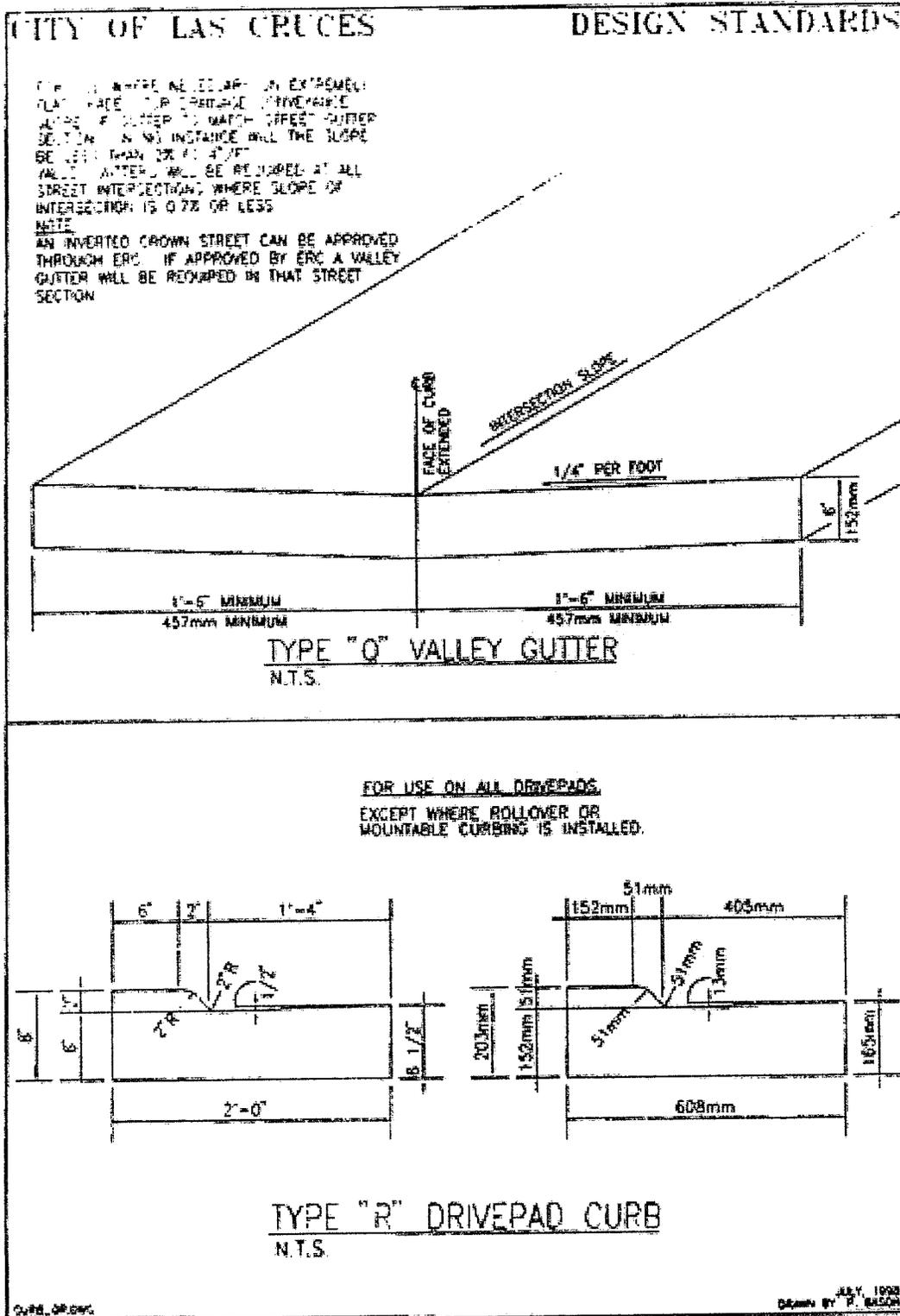
TYPE "O" TEMPORARY ASPHALT CURB
N.T.S.

FOR USE ON STREETS WHEN EXPANSION TO THE CENTER IS PLANNED IN EXCESS OF TEN (10) YEARS. NO DRAINAGE IS TO BE CONVEYED IN OR ON THE MEDIAN. CURB IS TO BE REMOVED.



TYPE "P" TEMPORARY EXTRUDED CONCRETE MEDIAN CURB
N.T.S.

Design Standards 11



(e) *General design criteria for streets.*

- (1) Minimum right-of-way radius at intersections:
 - a. Rights-of-way 15 feet (4.57m) at property line for minor local roads.
 - b. Rights-of-way 25 feet (7.62m) at property line for all classifications higher than minor local.
- (2) Minimum side slope outside right-of-way (steepest slope), two (horizontal) to one (vertical).
- (3) Street logs with centerline offsets of less than 125 feet (38.10m) shall not be permitted on local streets. Street jogs shall not be permitted for collectors or arterials.
- (4) Streets shall be laid out so as to intersect as nearly as possible at right angles, and no street shall intersect any collector or arterial street at less than 75 degrees and no local or light commercial streets at less than 60 degrees.

TABLE I
STANDARD UNITS
GENERAL DESIGN CRITERIA FOR STREETS
(NUMBER IN PARENTHESES APPLY TO FOOTNOTES)

Street Classification	Minimum Centerline Radius (Feet)(10)				Vertical Curve Requirement(4), (7) Vertical Curvature Design Value(2)			
	Design Speed (mph)	0.02 Feet/Feet Super-elevation (feet)	With Normal Crown(6), (8) (feet)	Min. Length Vertical Curve (feet)(1)	K Value For Crest Stopping Sight Distance(5)	K Value For SAG Stopping Sight Distance(5)	Change Allowed Without Vertical Curve (percentage)(7)	Maximum Grade Allowed (percentage)(9)
Major arterial	50	1,050	1,400	150	160	110	0.4	<u>7</u>
Minor arterial	45	800	1,100	135	120	90	0.4	<u>7</u>
Collector	<u>35</u>	450	600	100	50	50	0.7	<u>8</u>
Major Local	<u>30</u>	380	380	50	<u>30</u>	40	1.0	<u>10</u>
Minor Local	25	180	* 180	50	20	<u>30</u>	1.0	<u>10</u>
Low Density Local	<u>15</u>	180	* 180	50	20	<u>30</u>	1.0	<u>10</u>

METRIC UNITS
GENERAL DESIGN CRITERIA FOR STREETS
(NUMBER IN PARENTHESES APPLY TO FOOTNOTES)

Street Classification	Minimum Centerline Radius (Feet)(10)				Vertical Curve Requirement(4),(7) Vertical Curvature Design Value(2)			
	Design Speed (km/h)	0.02 m/m Super-elevation (m)	With Normal Crown (m)(6), (8)	Min. Length Vertical Curve (m)(1)	K Value For Crest Stopping Sight Distance(5)	K Value For SAG Stopping Sight Distance(5)	Change Allowed Without Vertical Curve (percentage)(7)	Maximum Grade Allowed (percentage)(9)
Major arterial	80	320	425	50	160	110	0.4	<u>7</u>
Minor arterial	70	245	335	40	120	90	0.4	<u>7</u>
Collector	55	135	185	<u>30</u>	50	50	0.7	<u>8</u>
Major Local	45	115	115	<u>15</u>	<u>30</u>	40	1.0	<u>10</u>
Minor Local	40	70	55	<u>15</u>	20	<u>30</u>	1.0	<u>10</u>
Low Density Local	25	70	55	<u>15</u>	20	<u>30</u>	1.0	<u>10</u>

Major local, minor local, and low density local street intersections(10)

Major arterial, minor arterial and collector street intersections with or without traffic signals(11)

* Cul-de-Sacs R=120 feet

Footnotes for table 1

1. Controlling limit only when algebraic grade difference A times the design value K is less than minimum shown: in all other cases, $L = KA$ shall control.
2. The values for K shown are to be used in determining the minimum length of vertical curve required by the use of the relationship $L = KA$.

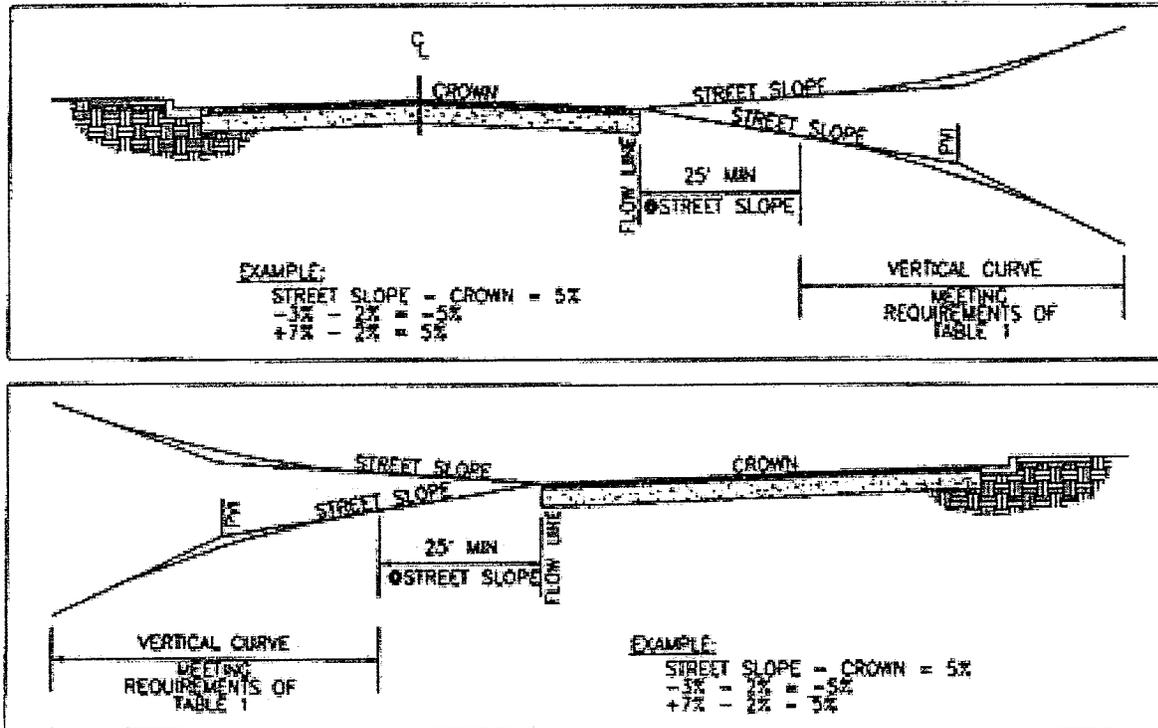
Where:

L = Length of vertical curve in feet

A = Algebraic difference in grades expressed in percent

K = Design value indicate of rate of curvature

3. Lengths of vertical curves longer than the minimums resulting from the use of K values shown should be used wherever possible; however, K should not exceed 167 feet (50.90m) per percent change in grade when curb and gutter is used for drainage considerations.
4. Crest vertical curves are based on eye height of three feet, three inches, object height of six inches and AASHTO minimum stopping distances. SAG vertical curves are based on AASHTO standards. If AASHTO standards are revised to more restrictive values, the more restrictive values shall supersede the values of this table.
5. The crown will be a minimum of one-half percent and maximum 2½ percent. Streets with cross slope shall not exceed five percent. Greater cross slopes may be allowed only with the express written permission of the public works director or at street intersections. Calculations shall be submitted for review and approval for cross slopes greater than five percent indicating the conveyance capacity of the street section for drainage runoff.
6. A minimum of 50 feet (15.24m) distance equal to the minimum length vertical curve must be maintained between vertical points of intersection.
7. Local residential streets with 90-degree or near 90-degree (interior angle between 80 degrees and 110 degrees) turns may be designed with a minimum centerline radius of 50 feet (15.24m) with the express written permission of the public works director. Appropriate advisory signs may be required.
8. Minimum slope in streets with standard curb and gutter shall be one-half percent. Minimum slope in streets with header curb or rundown curb shall be zero percent. The crown on a zero-percent to one-half percent street shall be a minimum two percent.
9. Major local, minor local and low density local street intersections shall have a maximum algebraic difference in grades expressed in percent of five (street slope minus crown slope). All nonthrough streets shall have a minimum 25 feet (7.62m) landing from the flowline of the intersecting street with vertical curves, meeting the criteria listed in table I for the different street classifications, beginning at the end of the landing. All through streets shall meet the criteria listed in Table I for the different street classifications for vertical curves. See drawings below.
10. Major arterial, minor arterial and collector street intersections with or without traffic signals shall meet the criteria listed in Table I for the different street classifications for vertical curves. Design of vertical curves within the street Intersection shall accommodate all drainage conveyance runoff.
11. Source: Design of Urban Streets, Federal Highway Administration; U.S. Department of Transportation.



Vertical Curves

(Ord. No. 949, § 2.1, 9-8-87; Ord. No. 1048, 1-17-89; Ord. No. 1224, § 1, 3-18-91; Ord. No. 1575, § 1, 9-3-96; Ord. No. 1745, § 1, 6-7-99; Ord. No. 1929, §§ I, II, 8-5-02)

Sec. 32-37. Sidewalk requirements.

Sidewalks for pedestrian traffic are required when a street is built in the city. The only exception to this requirement shall be a low density local street with stand-up curb and gutter. Sidewalks shall be required along all streets where the average residential lot size of adjacent lots is one-half acres (2023.44m²) and less.

- (1) When this requirement is applied. It shall be the responsibility of the developer, at the time of subdivision construction, to prepare all sidewalk subgrade and to construct the sidewalks along all collector and arterial streets or any other street classified higher than a minor local. The construction of sidewalks along all local streets shall be the responsibility of the building contractor or the homeowner if they are not provided by the developer. The sidewalk may have a minimum thickness of four inches (101.6mm) if the sidewalk is built at the time of roadway construction and the subgrade and base course under the sidewalk is the same as under the roadway and if the sidewalk is built flush with the street without curb and gutter, or if a mountable type curb is used. A minimum thickness of six inches (152.4mm) is required if the sidewalk is not constructed at the time of roadway construction and is abutting a mountable type curb. Sidewalks shall be built in accordance with current concrete specifications as per the City of Las Cruces Standard Specifications for Road Construction, as amended.
- (2) Standards for sidewalk construction.
 - a. Sidewalks shall be adjacent to curb or pavement. When a sidewalk is built flush with the street, utilizing a mountable type curb, then the sidewalk shall have a minimum thickness of four inches (101.6mm) if constructed at the same time as roadway construction or six

inches (152.4mm) if not built at the time of the roadway. The four-inch (101.6mm) sidewalk when adjacent to mountable type curbing shall be designed as a rigid pavement (concrete) based on twenty of the street average daily load (ADL). Sidewalk in lieu of curb and gutter shall be designed as a rigid pavement (concrete) using street ADL. A minimum thickness of six inches (152.4mm) is required if the sidewalk is not constructed at the same time as roadway construction or if the sidewalk abuts the pavement.

- b. Wheelchair ramps with sidewalk from point of curve (PC) to point of tangency (PT) shall be constructed in accordance with applicable sections of the Americans With Disabilities Act (ADA) at the time of roadway construction.
- c. Sidewalks shall have a minimum width of four unobstructed feet (1.22m). Street lights, power poles, fire hydrants, street signs or other types of obstructions shall not be permitted in the sidewalks. If street obstructions are in the way of proposed sidewalks, the obstructions shall be relocated prior to construction of the sidewalk or the sidewalk shall be widened to allow four feet (1.22m) of unobstructed width.
- d. The material under the sidewalk shall be a minimum of six inches (152.4mm) of A-2-4 material (pursuant to AASHTO Soil Classification) with a minimum compaction of 95 percent.

(Ord. No. 949, § 2.2, 9-8-87; Ord. No. 1745, § 1, 6-7-99)

Sec. 32-38. Street lights—Specifications for installation.

- (a) *Conduit.* Conduit shall be one and one-half inch (38.10mm) PVC Type, Schedule 40. Installation depth shall be 18 inches (457.20mm) minimum and 24 inches (609.60mm) maximum. Variation from these depths, when crossing other utilities to maintain twelve inches (604.80mm) separation, is allowable when approved by the public works director or his/her designee. Location and alignment shall be as shown on standard construction drawing, unless otherwise specified on the subdivision construction plans.
- (b) *Backfill.* Backfill shall be as stated in the city standard specifications for road construction, as amended.
- (c) *Foundations for street lights.*

STREET LIGHT FOUNDATION REQUIREMENTS

Street Light Pole Height	Foundation Size Specifications
25' (7.62m) pole with 6' (1.83m) arm	2' x 2' x 3' (0.61m x 0.61m x 0.91m)
35'(10.66m) pole with 8' (2.43m) arm	3' x 3' x 4' (0.91m x 0.91m x 1.22m)
Dual arm pole	3' x 3' x 5' (0.91m x 0.91m x 1.52m)

All poles shall require bolts with nuts and washers (furnished by the city with bolt template); a ground rod five-eighths of an inch x eight feet (15.88mm x 2.44m); one-half inch (12.70mm) rebar reinforcement, approximately forty linear feet (12.19m), as shown on construction plans; one and one-half inch (38.10mm) PVC conduit for continuous circuit; and, Class A 3,000 PSI (20,684.27kPa) concrete. Material test of concrete shall be made, when specified by the public works director or his/her designee.

- d. *Joint use of underground trench.* Joint use of trench for the installation of electrical service by El Paso electric company, and/or for street light circuits, is acceptable when approved by both the city and El Paso electric company.
- e. *Completion of street light system.* When development of housing begins, and subject to notification given to the city public works department by the contractor/developer, the city shall complete the installation of the street light system to full operation.
- (Ord. No. 949, § 2.3, 9-8-87; Ord. No. 1224, § 1, 3-18-91; Ord. No. 1745, § I, 6-7-99; Ord. No. 1929, §§ I, II, 8-5-02)

Note—For further information, refer to the street lighting policy and ground rules for installation of street lighting.

Sec. 32-39. Utility improvements.

- (a) *General.*
- (1) Subdivider shall be responsible for all design and construction costs.
 - (2) All water, sewer, and gas construction shall meet or exceed utilities department and Rio Grande natural gas association standard specifications for construction of water, sewer, and gas utilities, hereinafter called "city specifications" as adopted by the city council from time to time.
 - (3) City specifications shall apply to all water, sewer, and gas construction in subdivisions within the planning and platting jurisdiction of the city, to include required fire flows.
- (b) *Water and sewer.* When a community water and/or sewer system is to be constructed, the subdivider shall include deed restrictions on the final plat requiring that any individual water supply system or wastewater treatment system comply with requirements of the NMED.
- (c) *Gas.* If the subdivider desires to install a natural gas system within the subdivision, the system must meet or exceed city specifications.
- (Ord. No. 949, § 2.4, 9-8-87; Ord. No. 1048, 1-17-89; Ord. No. 1745, § I, 6-7-99; Ord. No. 1929, §§ I, II, 8-5-02)

Cross reference— Utilities, ch. 28.

Sec. 32-39.1. Bicycle facilities.

Bicycles are legally classified as vehicles and may be ridden on all public roadways, except where prohibited by law. The following list identifies the types of bicycle facilities that can be installed:

- (1) Signed shared roadway;
- (2) Bicycle lane; and,
- (3) Separated, multiple-use path.

A signed shared roadway is a wide curb lane or a roadway with a paved shoulder which has been designated as a preferred bicycle route. A bicycle lane is a portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. A multiple-use path is a facility that is physically separated from motor vehicle traffic by an open space or barrier. The path may be located within the road right-of-way or an independent right-of-way. Multiple-use paths shall be constructed on the north side of east/west roadways and on the east side of north/south roadways, unless otherwise directed by the development review committee. Separated, multiple-use paths may be appropriate either in corridors not served by other bikeways or in corridors where there are

few motor vehicle conflict points. Paths should not be used to preclude on-road bicycle facilities, but rather supplement an on-road bicycle facility system.

The requirement for the provision of bicycle facilities shall be guided by the bicycle facilities plan, as amended, and the bicycle element of the city metropolitan planning organization transportation plan, as amended. Construction of bicycle facilities shall conform to the AASHTO Guide for the Development of Bicycle Facilities, as amended, and the Manual on Uniform Traffic Control Devices, as amended. When the provision of bicycle facilities is required, the subdivider shall be responsible for 100 percent of the required improvements within the boundaries of the development and 50 percent of any required improvements adjacent to the development.

(Ord. No. 1745, § I, 6-7-99; Ord. No. 2302, § I, 4-24-06)

Sec. 32-40. Details.

Details referred to in this division shall be as follows:

Title	No.
Standard Street Section:	
Minor local for residential lots less than 0.5 acre (1A and 1B)	S-1
Minor local for residential lots less than 0.5 acre (1C)	S-2
Minor local for residential lots of 0.51 to 1.00 acre	S-3
Minor local for residential lots 1.01 to 4.99 acres	S-4
Minor local for residential lots 5 acres or greater	S-5
Major local	S-6
Minor and major collector	S-7
Cul-de-sac detail	S-8
Curb and gutter details	S-9
Curb and gutter details	S-10
Typical wheelchair ramp detail	S-11

(Ord. No. 949, § 2.5, 9-8-87)

Secs. 32-41—32-70. Reserved.