CITY OF RIDGECREST
DEPARTMENT OF PUBLIC WORKS
RIDGECREST, CALIFORNIA

ENGINEERING DESIGN STANDARDS

AND

DETAILS

1986

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AND

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1986

APPROVED:

R E Roberts
R. E. ROBERTS
Director of Public Works

These Standard Specifications and Details were approved and adopted by the City Council on December 3, 1986, by Resolution No. 86-93.

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ENGINEERING DESIGN STANDARDS

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ENGINEERING DESIGN STANDARDS

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SECTION 1

GENERAL

1.01 Purpose

The purpose of these Standards is to provide certain minimum standards for the design, roadways, alleys, sewerage facilities and all appurtenances thereunto, within the City of Ridgecrest, where any portion of such improvement is to be turned over to the City of Ridgecrest for operation and/or maintenance. Any items which are not included in these Standards shall be designed in accordance with the Subdivision Ordinance or Zoning Ordinance as defined below, or as directed by the City Engineer.

1.02 Definitions

In these Standards, the intent and meaning of the terms that are used shall be as defined in Section 1 of the City General Provisions except as herein below specifically noted, revised or added.

A. CITY - Shall mean the City of Ridgecrest, a municipal corporation.

B. CITY ENGINEER - Shall mean the City Engineer of the City of Ridgecrest, California.

C. CONSULTING ENGINEER - Any person or persons, firm, partnership, or corporation legally authorized to practice Civil Engineering in the State of California who prepares or submits improvement plans and specifications to the Department of Public Works of the City of Ridgecrest for approval.

D. DESIGN - Shall mean street alignment, grade, geometric section, structural section; sanitary sewer alignment, grade, size; and miscellaneous improvements as required by the City Engineer.

E. DEVELOPER - Shall mean any person, firm, corporation, partnership or association engaged in the development of property in part or in whole by the placing of any improvements thereon, whether the property was previously developed in whole, in part, or at all.

F. EASEMENT - Shall mean an easement dedicated to the City or any Public Utility which shall be continuing and irrevocable unless formally abandoned.

G. IMPROVEMENTS - Refers to street work, sidewalk, curb, gutter, driveways, sanitary sewer, public utilities, landscaping and fences to be installed by the developer on land to be used for public right-of-way.

H. MANUAL OF WARNING SIGNS - Shall mean the "Manual of Warning Signs, Lights and Devices for Use in Performance of Work Upon Highways" of the State of California, Deprtment of Transportation - Current Edition.

I. SOILS REPORT - Shall mean a report as prepared by any person or persons, firm, partnership or corporation legally licensed to prepare "Soils Reports" in the State of California.

J. STANDARD DETAILS AND SPECIFICATIONS - Shall mean the Standard Details and Specifications of the City of Ridgecrest.

K. STATE MATERIALS MANUAL - Shall mean the Materials Manual of Testing and Control Procedures of the State of California, Public Transportation Laboratory Manual of Tests, Department of Transportation, Current Edition and as amended.

L. STATE PLANNING MANUAL - Shall mean the Planning Manual of Instructions of the State of California, Department of Public Works, Department of Transportation, Current Edition and as amended.

M. STATE SPECIFICATIONS - Shall mean the current Standard Specifications of the State of California, Department of Transportation, Current Edition.

N. SUBDIVISION ORDINANCE - Shall mean Chapter XIX, Current Edition of the City Code as adopted by the City Council of the City of Ridgecrest.

O. ZONING ORDINANCE - Shall mean Chapter XX of the City Code as adopted by the City Council of the City of Ridgecrest.

SECTION 2

CONSTRUCTION PLANS

2.01 General

Complete plans and specifications for all proposed improvements including any necessary dedications and easements shall be submitted to the Department of Public Works for approval and must receive the required approval prior to the beginning of construction of any such improvements. This shall apply where it is the intent that any portion of such improvement will be turned over to the City of Ridgecrest. Such plans shall be prepared by or certified by a Registered Civil Engineer in accordance with the provisions of "Civil Engineer's Act", Chapter 7 - Division 3 of the Business and Professions Code, relating to the practice of Civil Engineering.

2.02 Preparation

Construction plans and specifications shall be prepared in accordance with the following requirements:

A. Dimensions - Construction plans shall be clearly and legibly drawn in ink on engineering tracing paper 24 by 36 inches with a 1" margin on all edges.

B. Scale - Horizontal scale shall be 1" = 40'; vertical scale shall be 1" = 4' or as approved.

C. Form

1. Title Sheet

   a. Name of Subdivision or Project.
   b. Vicinity Map with North Arrow.
   c. Index of Sheets
   d. City Engineer's Signature Block.
   e. Submitting Engineer's Signature Block.

2. Sheet No. 2

   a. Plan view showing the entire street right-of-way layout (Scale: 1" = 100'), proposed water and sewer mains, lot numbers and other miscellaneous improvements to be installed.

   b. Complete Legend.

   c. Typical Street Section including alternate designs of rock, treated base and deep lift asphalt.

   d. Title block - located in lower edge or right edge of paper.

e. Temporary and permanent bench marks including their descriptions.

f. General and special notes relating to construction methods.

3. Street Plan and Profile

a. Plan view of each street to be improved shall be shown on separate sheets indicating existing improvements, proposed improvements and future improvements if applicable. Proposed improvements shall include sidewalk, curb, gutter, driveways, sewer mains, water mains, water service and sewer lateral locations, manholes, valves, fire hydrants, fencing, barricades, monuments, survey stationing and other data as required by the City Engineer. The survey stationing shall normally read from left to right with the north arrow pointing either to the top or right edge of the sheet. All stationing shall be a continuation of existing improvements where possible. If room allows, more than one street may be shown on single sheet.

b. Profile view of each street shall be shown immediately below or above its plan view. The profile shall include existing grade lines, sewer mains, storm drains, water mains, public utility mains, and all utility crossings. Elevations shall be shown of gutter flowline at grade break points, manholes and water main crossings with other utilities.

4. Grading Plan

Grading plan shall include building pad, floor and garage elevations, individual lot drainage pattern, adjacent land drainage, driveway size and locations, fencing, existing contours, existing trees, wells, ditches and other landmarks important in the construction of the improvements. In addition, adjacent lot gradings shall be shown.

2.03 Submission

Construction plans shall be submitted in duplicate along with 3 copies of the subdivision final map to the City Engineer for checking to insure compliance with these Standards, City of Ridgecrest Ordinances, and good engineering practice. Submitted plans shall include specifications, test data, drainage calculations, soils report and design, lot closures, easement and right-of-way descriptions, tie to City of Ridgecrest Bench Mark and Monument System, and other material as requested by the City Engineer.

Soils Reports shall be submitted in 8½ X 11 inch bound folders. The analysis must at a minimum include a map of the subject area, showing proposed and existing streets, contours and location and type of soil samples obtained; results of all field data and laboratory tests must be included. Design for proposed street sections shall be a part of the report. Street section design shall encompass recommendations for natural subgrade, treated subgrade and full depth asphalt street section.

Three copies of final parcel maps and record of survey maps shall be submitted to the City Engineer. They will be checked on an as soon as possible basis.

A minimum of 15 working days shall be allowed for review of Construction Plans and Final Subdivision Maps. Should there be required alterations or revisions to the plans submitted, one copy shall be returned with the required corrections marked or indicated thereon. At such time as the consulting engineer has made the necessary revisions, the plans shall again be submitted (2 copies) for final checking. However, plans shall not be considered approved until the City Engineer has signed his name in the approval block on the plans. There shall be no changes permitted to an approved set of plans unless such changes, corrections, or additions are resubmitted to the City Engineer for approval as previously described for original plans. Excepted from approval are any features of the plans that are contrary to, in conflict with, or do not conform to any California State Law, City of Ridgecrest Ordinance or Resolution or generally accepted good engineering practice, in keeping with the standards of the profession; even though such errors, omissions or conflicts may have been overlooked in the Department of Public Works review of the plans.

After formal approval of the plans by the City Engineer has been received, 1 copy plus 1 Mylar (polyester film 3 mil) copy (with matte surface up) shall be filed with the City Engineer's office for City records by the submitting Engineer.

SECTION 3

GRADING

3.01 General

All requirements for Grading Permits, grading and excavation shall conform to Chapter 16 of the Ridgecrest Municipal Code.

SECTION 4

STREET DESIGN

4.01 Classes

For purposes of geometric and structural design, streets shall be classified according to the following. Any deviation from the following standard shall require the approval of the City Engineer.

Class	Right Of Way (Feet)	Width Between Curbs (Feet)	Intersection Radius (Feet)		*Traffic Index	Minimum Section (Inches)	**Minimum Centerline Radius for Horizontal Curve (Feet)
			Prop. Line	Curb Line			
Major (With 20' Median)	110	72	20	30	10	3.00 AC 10.00 AB	1000
Secondary	90	68	20	30	8.5	3.00 AC 8.00 AB	1000
Collector	64	42	20	30	7	3.00 AC 6.00 AB	500
Minor Cul-de-Sac	60	40	20	30	4	2.00 AC 4.00 AB	150
Frontage	44	32	20	30	9	3.00 AC 8.00 AB	500
Private	53	40	20	30	4	2.00 AC 4.00 AB	150

* May be raised at the discretion of the City Engineer if traffic warrants a higher value.

The minimum street section shall be determined from "R" values obtained from material gathered from the level of the proposed subgrade using the State of California Division of Highways design method. In no case shall the minimum street section be less than 2 inches asphalt concrete and 4 inches of aggregate base. Aggregate base section may be comprised of an equivalent section of aggregate base and aggregate subbase, but in no case aggregate base will be less than 4 inches. If deep lift asphalt is used the minimum section shall be 4 inches.

** Actual design of horizontal curves shall be based on the design speed of the street as determined by the City Engineer.

4.02 Geometrics

A. All streets shall intersect at as near right angles as practicable and more than two streets intersecting at or within 150 feet of one point shall be avoided.

B. Curb line radii shall be tabulated in a box shown on the construction plans.

C. Gutter flow line grades shall have a minimum slope of 0.0032 feet per foot and maximum as determined by the City Engineer.

D. Cross slope on all streets shall be as shown on the standard details.

E. The minimum stopping sight distance over any segment of the roadway on residential, collector or arterial street shall be 300 feet unless specific approval is received from the City Engineer.

4.03 Appurtenances

A. Driveways

1. No driveway shall be permitted within 5 feet of a property line on multi-family property and commercial property. Driveway locations for single family property shall not be permitted within 5 feet of a property line unless a property has frontage on a cul-de-sac bulb in which case a driveway may be constructed to within 0 feet of a property line. Special consideration may be given to Major and Minor Street Driveway Configuration.

2. The maximum width for a driveway shall be 44 feet for commercial, except that major street driveways may be greater (see Standard Detail). Residential shall be 24 feet for 2 car and 33 feet for 3 car as measured at the face of curb. The above include transitions at each side of driveway.

3. The minimum distance between driveways serving the same parcel shall not be less than 20 feet as measured at the face of curb.

4. Not more than 40 percent of the frontage of any parcel shall be devoted to driveways. Lots fronting on a cul-de-sac will be exempted from this requirement.

5. Driveways shall be of the standard City of Ridgecrest design, as shown on the Standard Details.

B. Cross Gutters

Cross Gutters shall be in accordance with standard City of Ridgecrest design as shown on the Standard Details.

C. Sidewalks, Curbs and Gutters

1. Sidewalks shall be 4.0 feet wide in residential areas and 5.5 feet wide in collector and commercial areas as measured from back of curb.

2. Sidewalk, curb and gutter shall be of the design as shown on the Standard Details.

3. Handicap ramps shall be installed at all crossings.

D. Redwood Headers

Redwood headers shall be installed at the end of streets where future extension is anticipated and at centerline where future widening is anticipated. In lieu of redwood headers, Developer may pave 1 foot beyond end of street and centerline.

E. Survey Monuments

Survey monuments shall be installed as follows:

1. On centerline at intersections.

2. At all locations as required by the City Engineer.

3. A minimum of 2 monuments shall be installed in all subdivisions.

4. Lot line extensions shall be neatly marked at the top of curb in the concrete.

All monuments set shall be as shown on the Standard Details and shall clearly show the registration number of the licensed Civil Engineer or Land Surveyor who prepared the final or parcel map.

F. Signing and Barricades

1. Street names shall be approved by the Planning Commission.

2. Street name and stop signs shall be supplied and installed by the City at Developer's expense.

3. Regulatory signs to control traffic, such as speed zone signs, will be furnished and installed by the City at Developer's expense.

4. Permanent barricades shall be installed where improvements cover only a portion of the ultimate development or as directed by the City Engineer. The barricade shall be constructed, erected, painted and signed in accordance with the Standard Details.

G. Easements

Public utility, sewer, and drainage easements shall be placed as required by the Utility companies and the City Engineer.

SECTION 5

SANITARY SEWERS

5.01 General

A. Sanitary sewer system design within a development area must include provisions for size and capacity to adequately convey all domestic and industrial waste that can be reasonably anticipated under conditions of full ultimate development. Engineering calculations to support the sewer system design shall be submitted to the City Engineer for approval. The calculations shall include:

1. Map indicating service area within the sewer system with projected land use, zoning and any physical features contributing to the sewer system design.

2. Sanitary sewer waste volumes either existing or proposed within the service area of the system.

3. Size and slope of each pipe between structures.

4. Invert elevations of each pipe and structure.

B. Line Size and Service Policy

The line size and service policy requires that the minimum size of any new public sewer shall be 8 inches in diameter unless otherwise approved by the City Engineer.

All sewer laterals 6" and larger shall be connected by or at a manhole.

Minimum sewer lateral size is 4 inches where grade requirements can be met and the use is to be only for single family residential. 6-inch or larger sewer laterals shall be installed where use is to be industrial, commercial or greater than single family residential. Joint use of side sewers will not be permitted except for multi-family use. When the finish floor elevation of a house or other building is 12" or less above the top elevation of the nearest upstream manhole, cleanout or similar structure, an overflow device shall be installed on the sewer lateral next to the cleanout.

C. Right-of-Way Policy

The right-of-way policy requires that all public sewers be in easements or rights-of-way granted or dedicated for sewers and/or public use. In the case of public right-of-way for streets, further dedication is not necessary.

The minimum width of easements shall be 15 feet for sewer lines less than 15 inches in diameter, and 20 feet for lines over 15 inches in diameter. In all cases, easements shall be centered on the sewer line. In no case shall the width of easement be less than twice the depth of the sewer line.

5.02 Design

A. Flow

The design sanitary sewer flow shall be computed using the following formula:

$$Q_D = Q_P + I$$

Where: Q_D = design flow (gallons per day)
Q_P = peak flow (residential only)
I = infiltration

The peak flow (Q_P) for residential is defined as two and one-half times the average flow, with the average flow for the service area being computed from two basic assumptions:

1. 3½ persons per single family dwelling.

2. 100 gallons per person per day.

Acreage flow estimates for other than residential are as follows:

	Average Flow (Gal/Acre/Day)	Peak Flow (Gal/Acre/Day)
Commercial Areas	1500	4100
Light Industrial Areas	2000	5500
Heavy Industrial Areas -	Sewage flow rate shall be considered on a case by case basis and may require special design.	

Infiltration Inflow (I&I) shall be computed in the following manner:

New sewer installation - 500 gallons per diameter inch mile per day.

Existing sewers - 1500 gallons per diameter inch mile per day.

B. Pipe Capacity

1. Manning's Formula [$Q = A\ (1.49/n)\ R^{2/3}\ S^{1/2}$] shall be used to compute the required size of a sewer line flowing full. The "n" value shall be 0.013 or the pipe manufacturer's recommendation, whichever is greater.

2. Main and Trunk Sewers

   a. Design capacities for sewer mains 8 to 10 inches in diameter shall be based upon sewers flowing full.

b. Design capacities for trunk sewers 12 inches and larger shall be based upon sewers flowing full, without head, unless it is determined by the City Engineer that a less than full capacity factor shall be used. The full tributary area shall be used to arrive at design flows.

C. Velocity

Sewer velocity shall be equal to or greater than 2 feet per second for all sewers when flowing full.

D. Pipe Cover and Clearances

1. Minimum pipe cover and clearance shall be maintained in the design of sanitary sewers. If certain conditions exist which make it impractical to meet the minimum cover and clearance requirements, the conditions and locations shall be specifically noted above the sewer profile on the plans. Each location not meeting the minimum cover and clearance requirements will require special approval. Any planned condition being specially approved with less than minimum cover will require special pipe, bedding and/or backfill as directed by the City Engineer.

   Under no conditions or circumstances shall other utilities be allowed to be installed directly over and parallel to any sanitary sewer installation.

2. Main and trunk sewers shall have a minimum depth of 3 feet from the top of the pipe to the finished grade.

3. Side sewers shall have a minimum depth of 3 feet from the top of the pipe to the top of the curb.

4. Pipe shall be laid with a minimum of 12 inches vertical clearance from water lines and 6 inches clearance from all other improvements and utilities, unless otherwise approved by the City Engineer.

E. Pipe Location and Alignment

1. Except for frontage roads, sewer mains and trunks shall be located 5 feet off centerline.

2. Sanitary sewer mains shall be on a straight line between manholes.

F. Sewer Laterals

Sewer laterals are those portions of sewerage systems between the main sewer and the property line. In all new subdivision work, the house lateral lines from the sewer to the property line shall be installed at the time the sewer is constructed. Whenever an existing house or other building connects to the City sewer system, each such building shall have its own separate sewer lateral. Each house lateral line shall be referenced to the plan stationing. Each individual building site shall be connected by a separate side sewer.

All sewer laterals, from property line or edge of easement to the point of connection with the mainline or a manhole shall have an alignment that provides an angle of intersection with the down stream section of the main sewer of no more than 90°.

The maximum deflection at any one point in a side sewer, not including fittings at saddle or wye connection to main sewer or at angle points having clean outs, shall be 22½°(1/16 bend) and any two consecutive deflections (bends) shall not be less than 2 feet apart.

Building drains shall not be connected to the sanitary sewer system.

Clean outs shall be provided in the lateral sewer system at any single turn greater than 45° and at intervals not to exceed 100 feet along the lateral sewer system.

Backwater overflow devices shall be constructed as specified in Section 5.01 B.

G. Appurtenances

Manholes - Normal maximum spacing for manholes shall be 360 feet. When the location of two manholes is determined by street or main line intersections, the distance between intervening manholes shall be approximately equal.

The spacing of manholes on trunk sewer lines larger than 15 inches in diameter shall be determined for each individual case.

Whenever, at manholes, a change in the size of pipe, or an angle of 20° or more in alignment occurs, the flow line of the incoming pipe shall be a minimum of .17 feet above the flow line of the outgoing pipe, or an amount necessary to match inside pipe crowns. Engineer shall show invert in and invert out of the manhole.

Drop manholes shall not be allowed and no drop more than 2 feet shall be allowed in any manhole unless approved by the City Engineer.

Cleanouts may be used at the termination of cul-de-sac sewers provided only one sewer lateral is tied into the cleanout, if there is more than one sewer lateral, a manhole shall be used.

H. Unusual Design

Special design for unusual features or structures require individual study and approval by the City Engineer.

1. All sewage pump systems, including residential sewage pumps, when proposed, shall be submitted to the Engineer for determination of circumstances necessitating such pump usage and design thereof.

2. Use of submersible type pumps for residential sewer pumping systems will be considered where the installation as a whole will be made in conformance with the general requirements of the California Division of Industrial Safety and any local electrical codes that may be applicable. In general, a raw sewage sump is classified as a hazardous location which requires explosion proof equipment with a UL label and/or equivalent construction. Float control equipment must have positive level control to preclude exposing the motor if the motor is not explosion proof. Where electrical devices are immersed in the sewage, controls must be intrinsically safe with redundant controls and positive cutoff to avoid automatic total pump down that would expose motor where motor is not explosion proof. Use of submersible pumps will not be approved unless the owner provides the City Engineer with information that the proposed pump meets the above requirements.

   Where used, pump requirements insofar as solids handling capacity and pump rate head, must conform to basic standards required for standard wet pit installations.

STREET RIGHT-OF-WAY AND IMPROVEMENT STANDARDS

TYPE OF STREET	RIGHT-OF-WAY WIDTH	PAVING WIDTH & TO &	TRAVEL LANES	PARKING LANES	MEDIAN STRIP(6)	SIDEWALK	CROWN	RADIUS OF CURVATURE	CURB & GUTTER	INTERSECTION TURN RADIUS R/W	TANGENT BETWEEN CURVES	STREET SIGNS
MAJOR (1)	110'	72'	(TWO) 12' (TWO) 14'	(TWO) 10'	20'	(2)	12"	1000	B	20'	(3)	(4)
SECONDARY (7)	90'	70'	(FOUR) 12.5	(TWO) 10'	—	(2)	8"	1000	B	20'	(3)	(4)
COLLECTOR (7)	64'	42	(TWO) 11'	(TWO) 10'	—	5'6"	6"	500	B	20'	(3)	(4)
MINOR & CUL-DE-SAC(7)(8)	60'	40'	(TWO) 10'	(TWO) 10'	—	4'	6"	150'	B	20'	(3)	(4)
FRONTAGE (7)	40'	30'	(ONE) 10' (ONE) 10'	(ONE) 10'	—	4'	6"	(6)	B	20'	(3)	(4)
PRIVATE (7)	53'	40'	(TWO) 10'	(TWO) 10'	—	—	6"	150'	B	20'	(3)	(4)

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REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
STREET
RIGHT - OF - WAY

No. 1

Sht. 1 of 2

LEGEND

(1) Where the Planning Commission and City Council determines that a median strip for left-hand turns and traffic separation is not necessary to preserve major street function, the secondary standards shall be applied.

(2) In commercial areas and other areas of high pedestrian activity, sidewalks greater than 4' in width shall be required, as determined by the Planning Commission.

(3) Suitable tangents shall be provided.

(4) Two street signs shall be provided at 4-way intersections; one street sign shall be provided at tee (T) intersections.

(5) Same as provided for adjacent parallel limited access or major street.

(6) No gutter required with median strip curb.

(7) Requirements and standards for curb and gutter may be modified or waived where estate-style (one acre) residential lots are proposed, with individual lot frontage of 200 feet or more, and where tests indicate that the capacity of the soil to absorb water is sufficient to absorb surface water run-off generated within the subdivision on the basis of a five-year storm.

(8) The right-of-way may be reduced in width upon approval of the Planning Commission and City Council; if so, planter strip width shall be reduced accordingly.

REVISIONS

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R E Roberts
City Engineer

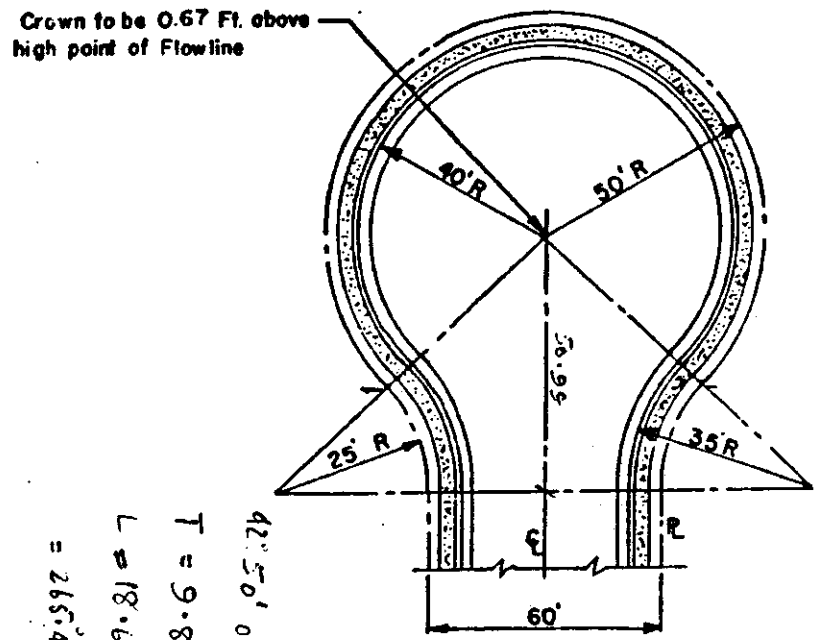
12/11/86
Date

CITY
OF RIDGECREST

STANDARD PLAN
STREET
RIGHT-OF-WAY

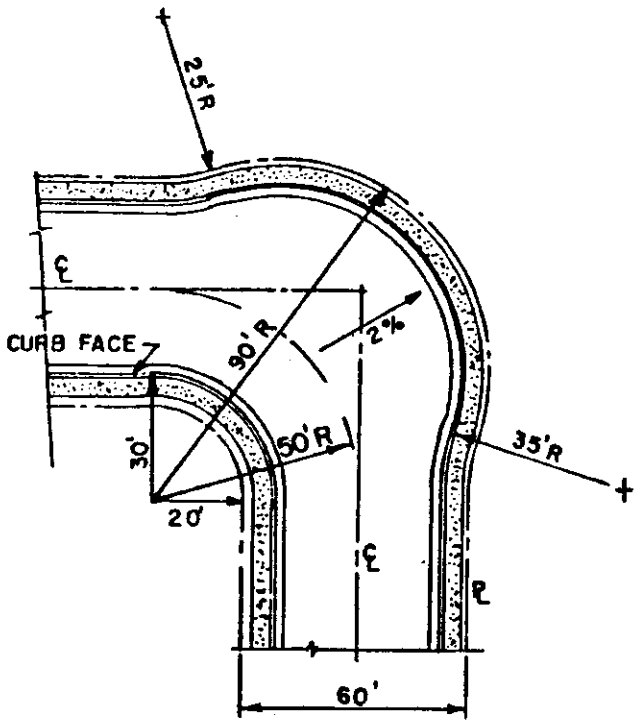
No. 1

Sht. 2 of 2



42° 50' 00" T = 90.86 L = 189.69 = 265.40

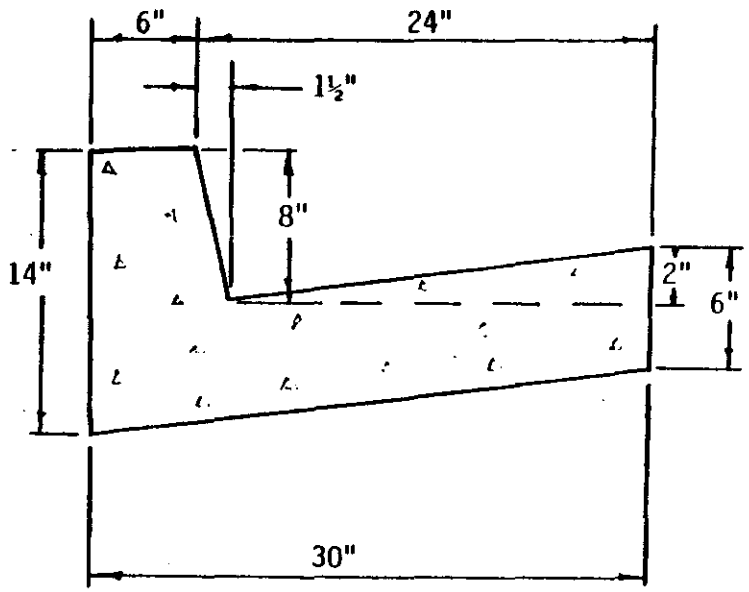
STANDARD RESIDENTIAL CUL-DE-SAC



STANDARD RESIDENTIAL EXPANDED CORNER

REVISIONS							
No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved: R E Roberts, City Engineer — 12/11/86 Date	CITY OF RIDGECREST	STANDARD PLAN CUL-DE-SAC and EXPANDED CORNER	No. 2 Sht. 1 of 1



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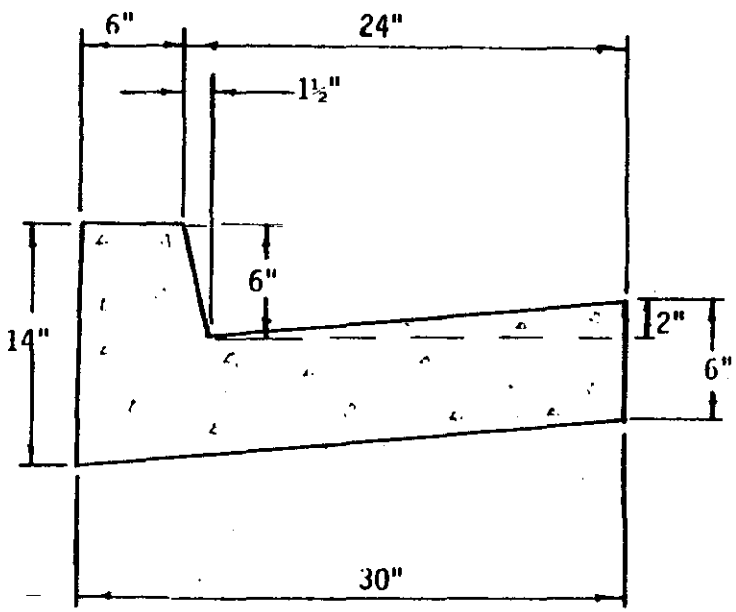

TYPE "B" (6")

See sheet 2 for standard notes.

REVISIONS							
No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

12/11/86
Date

CITY
OF RIDGECREST

STANDARD PLAN
CURB AND GUTTER

No. 3

Sht. 1 of 2

NOTES:

1. Concrete for curbs and gutter shall be Class "B" (5 sack) and to the dimensions shown on Sheet 1.
2. Expansion joints shall be placed at ends of curb returns and 30' intervals.
3. Top and face of curb shall be troweled smooth and finished with a fine broom.
4. Gutters shall be given a broom finish with strokes parallel to the line of the gutter
5. Gutters may not vary more than 1/8" from true grade.
6. Concrete shall be cured by immediate application of a white pigmented sealing compound.
7. Subgrade and forms shall be thoroughly watered before placing concrete.

REVISIONS

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Approved:

R E Roberts
City Engineer

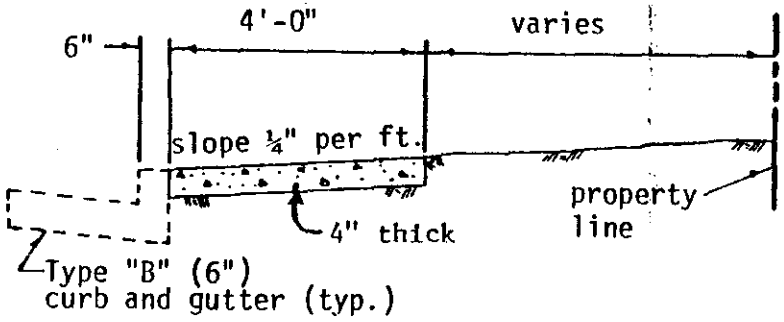
12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
CURB AND GUTTER

No. 3

Sht. 2 of 2



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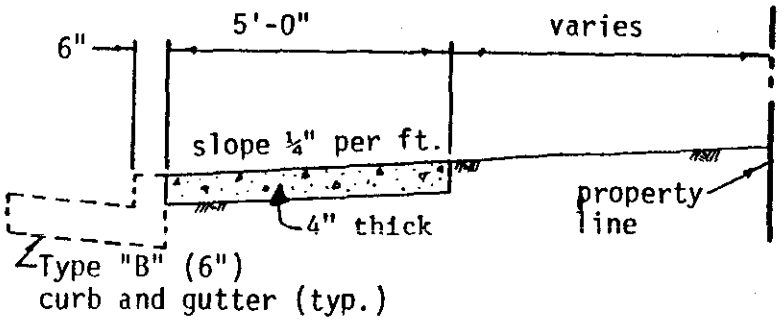

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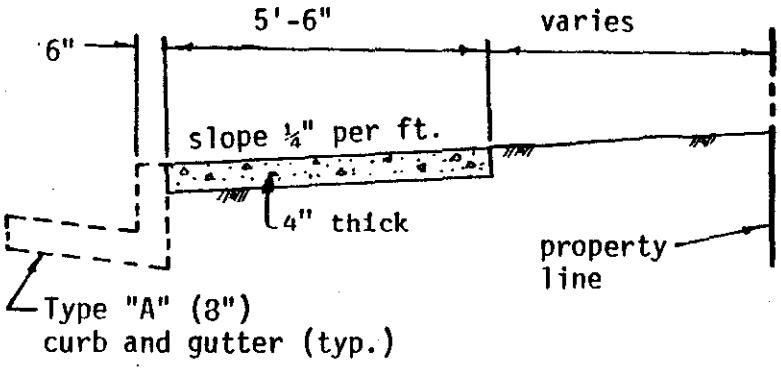

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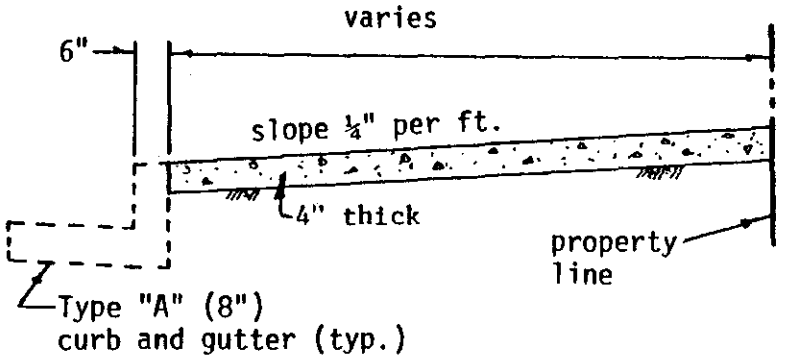


TYPE IV

See sheet 2 for standard notes.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
SIDEWALK

No. 4

Sht. 1 of 2

NOTES:

1. Concrete for sidewalk shall be Class "B" (5 sack) and to the dimension shown on sheet 1.
2. Expanion joints shall be placed at ends of curb returns and 30' intervals.
3. Sidewalk shall be placed on a approved native material compacted to 95% relative compaction.
4. Subgrade and forms shall be throughly watered before placing concrete.
5. Sidewalks shall be compacted with a metal grid to give a layer of mortar 3/8" thick on the surface.
6. Sidewalks shall be finished with a wooden float to a maxiumum variation of 1/4" from the edge of a 12' straight edge.
7. Sidewalks shall be finished with a fine hair push broom traverse to the direction of traffic.
8. Concrete shall be cured by immediate application of a white pigmented sealing compound.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

12/11/86
Date

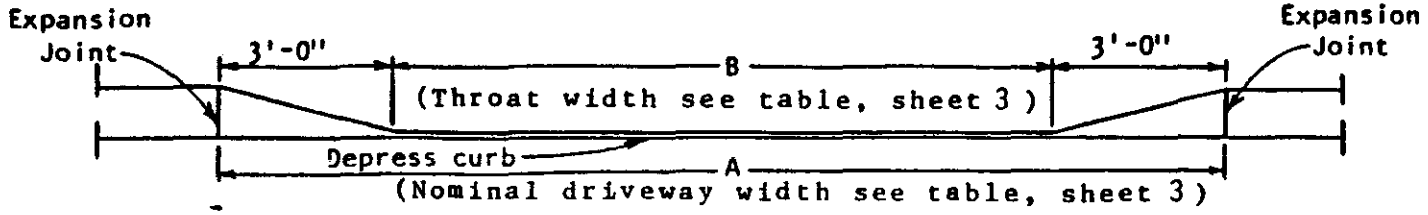
CITY OF RIDGECREST

STANDARD PLAN

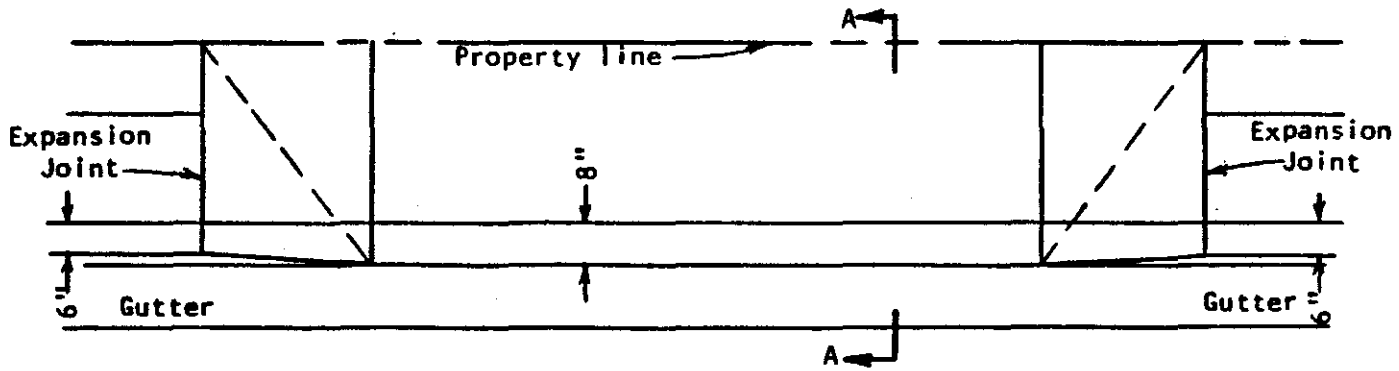
SIDEWALK

No. 4

Sht. 2 of 2



ELEVATION



PLAN

See sheet 2 for standard notes and Section A-A.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

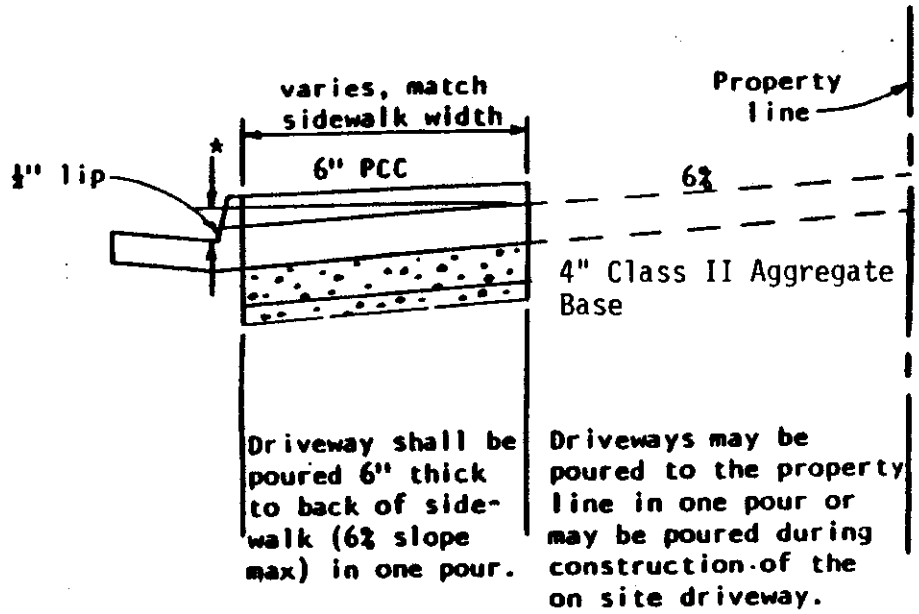
12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
COMMERCIAL AND
RESIDENTAIL DRIVEWAY

No. 5

Sht. 1 of 3



SECTION A-A

* On 6" curb driveways shall be 0.3' above the flowline at the back of sidewalk. On 8" curb driveways shall be 0.4' above the flowline at the back of sidewalk.

NOTES

1. Concrete for driveways shall be Class "B" (5 sack).
2. Concrete shall be cured by immediate application of a white pigmented sealing compound.
3. All slope areas shall be broom finished.
4. Commerical driveways shall be 8" thick with #4 rebar placed at 24" intervals.
5. Driveway shall be placed on 4" Class II aggregate base (residential) and 6" Class II aggregate base (commercial) compacted to 95% relative compaction.
6. Base shall be thoroughly watered prior to placing concrete.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

12/11/86
Date

CITY OF RIDGECREST

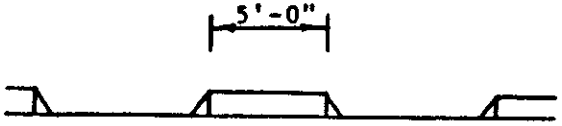
STANDARD PLAN
COMMERCIAL AND
RESIDENTAIL DRIVEWAY

No. 5

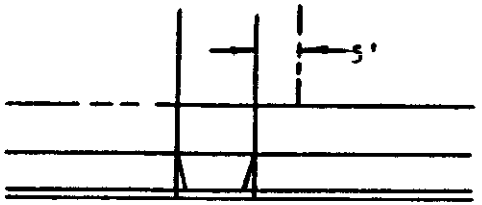
Sht. 2 of 3

DRIVEWAY WIDTH TABLE

Type of Driveway		A Nominal Width max	A Nominal Width min	B Throat Width max	B Throat Width min
Commercial	one way	36'	26'	28'	18'
	two way	44'	26'	36'	18'
Residential		24'	16'	18'	10'
3 Car Garage		33'	16'	27'	10'



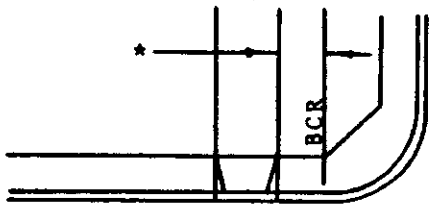
Minimum top distance between driveways shall be 5'-0"



Top of driveways shall be a minimum of 5' from property lines unless provisions are met for a Common Drive

DIRECTION OF TRAFFIC

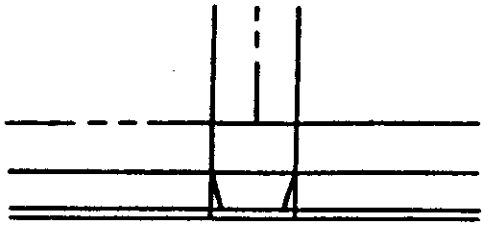
When driveways occur before the curb return, the top of the driveway may be at the start of the BCR.



DIRECTION OF TRAFFIC

* When driveways occur after the curb return, the top of the driveway shall be a minimum of 5' from the BCR on intersecting Residential streets and 10' from the BCR on all other intersections.

DRIVEWAYS IN RELATION TO CURB RETURNS



COMMON DRIVE

Driveways may be on property line when approved by the City Engineer.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

A E Roberts
City Engineer

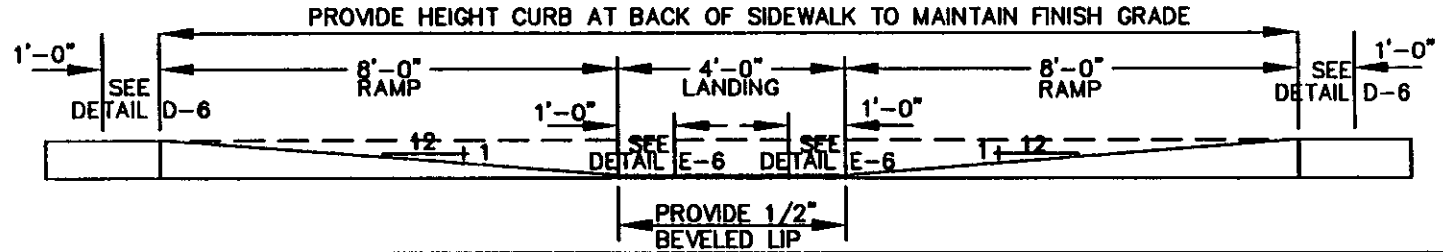
12/11/86
Date

CITY OF RIDGECREST

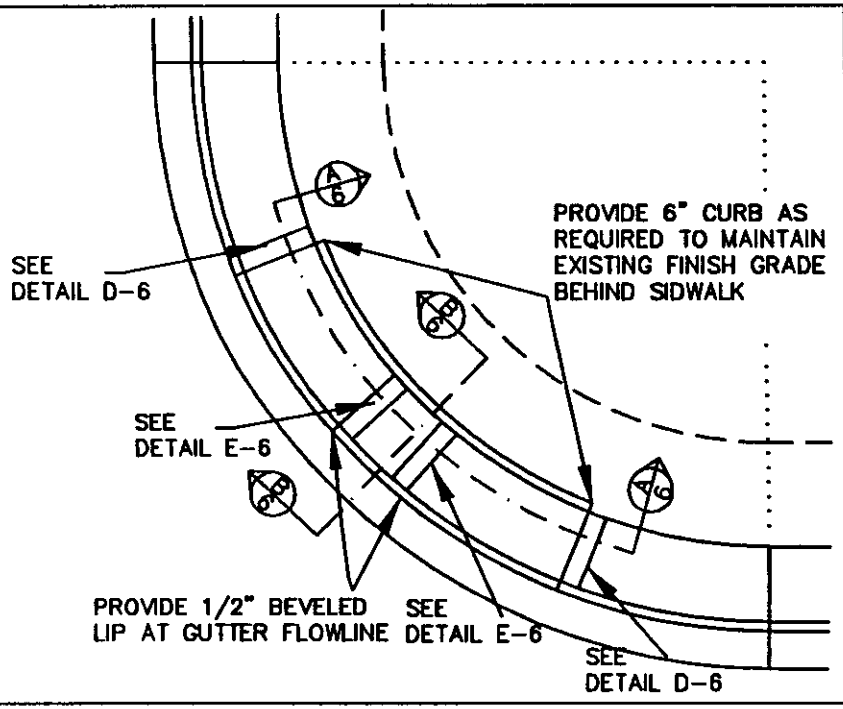
STANDARD PLAN
DRIVEWAY TABLE
and DRIVEWAY LOCATION

No. 5

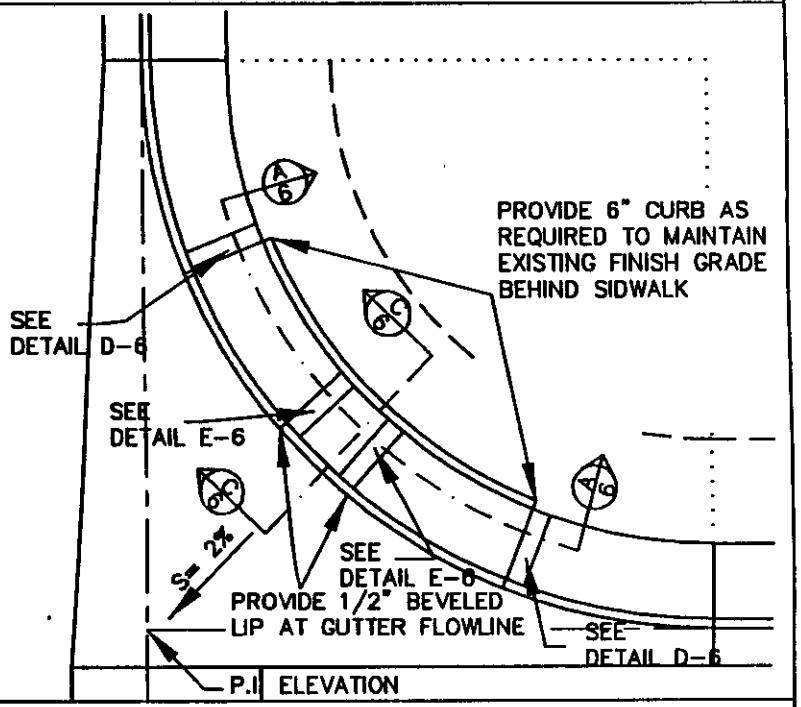
Sht. 3 of 3



DETAIL A-6 WHEEL CHAIR RAMP ELEVATION

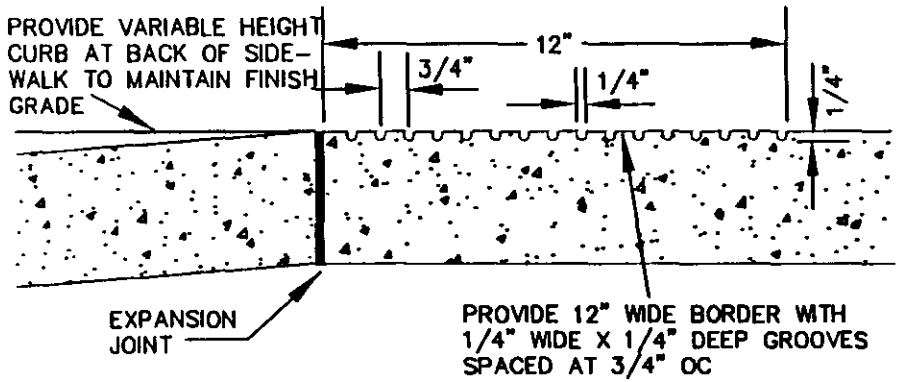


WHEELCHAIR RAMP AT CURB RETURN WITH NO APRON

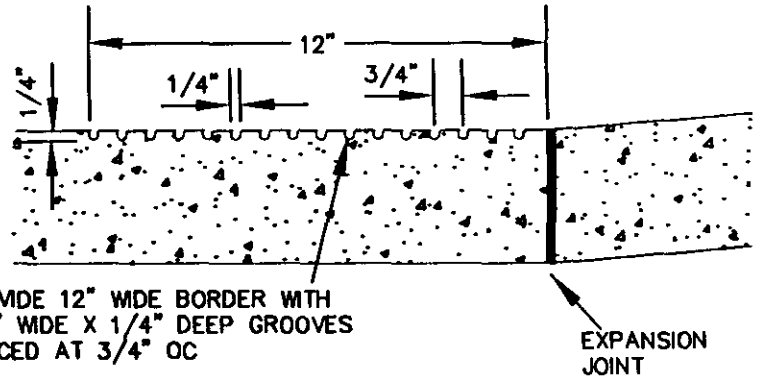


WHEELCHAIR RAMP AT CURB RETURN WITH APRON

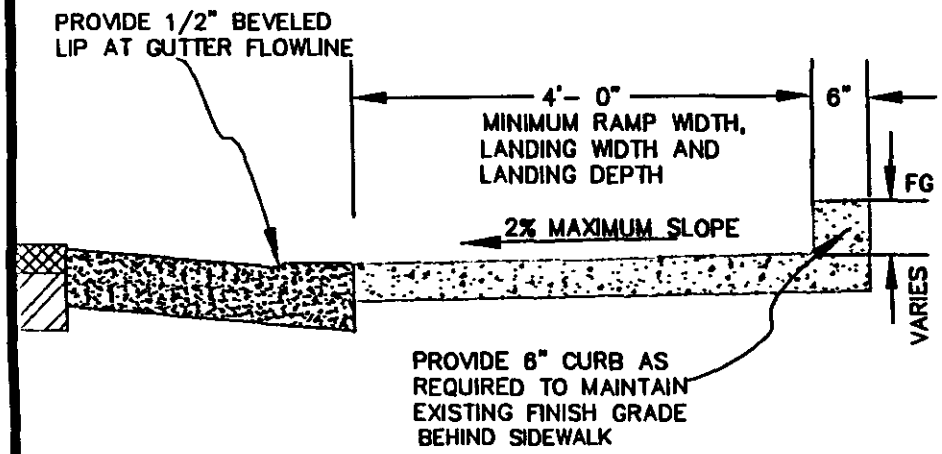
	CITY OF RIDGECREST	STANDARD PLAN WHEELCHAIR RAMP Revised 2005	NUMBER 6 SHEET 1 OF 2



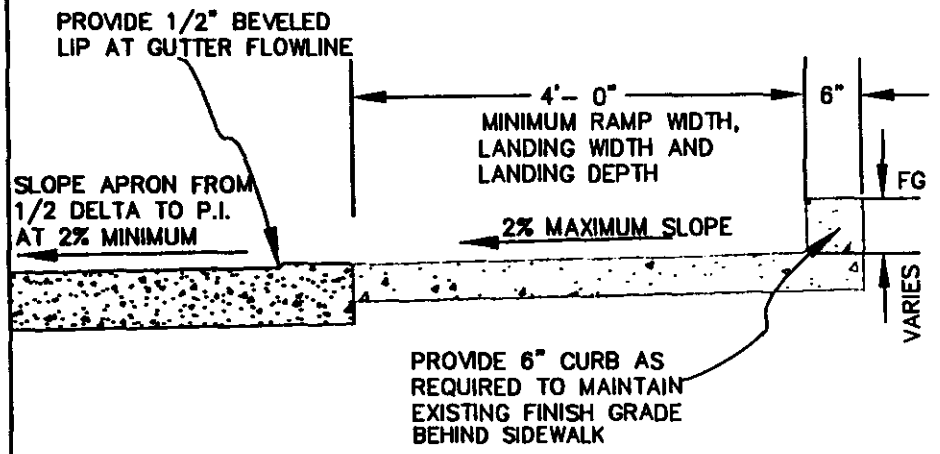
DETAIL D-6 GROOVED BORDER AT TOP OF RAMP



DETAIL E-6 GROOVED BORDER AT BOTTOM OF RAMP



DETAIL B-6 LANDING AT WHEELCHAIR RAMP WITH NO APRON



DETAIL C-6 LANDING AT WHEELCHAIR RAMP WITH CURB RETURN APRON

	CITY OF RIDGECREST	STANDARD PLAN WHEELCHAIR RAMP Revised 2005	NUMBER 6 SHEET 2 OF 2

NOTES:

1. Expansion joints shall be in place before concrete is poured.
2. Existing concrete shall be saw cut before being joined or repaired.
3. All concrete shall be Class "B" (5 sack).
4. All concrete shall be poured to line and grade as shown. All gutter surface shall be given a broom finish with strokes parallel to the gutter line.
5. Base grade shall be compacted to 95% relative compaction.
6. Base and forms shall be throughly watered before placing concrete.
7. Concrete shall be cured by immediate application of a white pigmented sealing compound.
8. All rebar shall be supported by using precast mortarblocks or ferrous metal chairs or other approved devices of sufficient strength to resist crushing under applied loads.
9. Cross gutter and apron shall be placed on a minimum of 4" Class II aggregate base.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

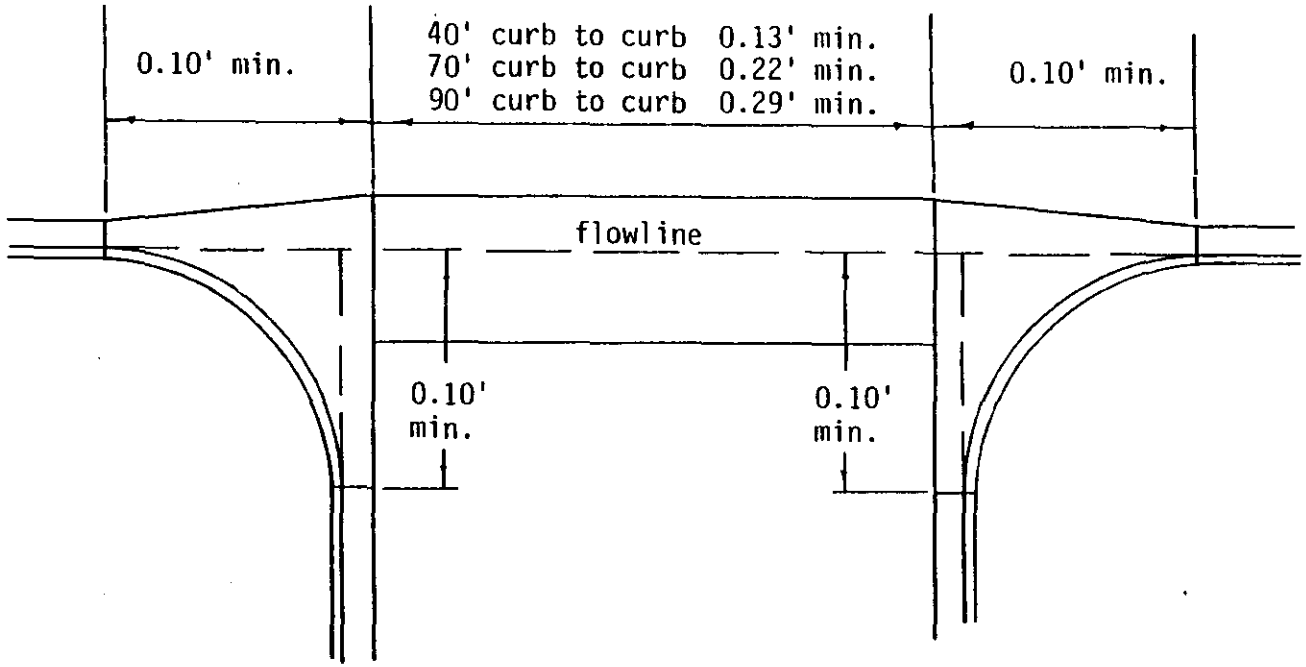
12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
CROSS - GUTTER
& APRONS

No. 7

Sht. 1 of 5



Minimum grade for curb and gutter shall not be less than 0.32' per 100' unless approved by the City Engineer.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

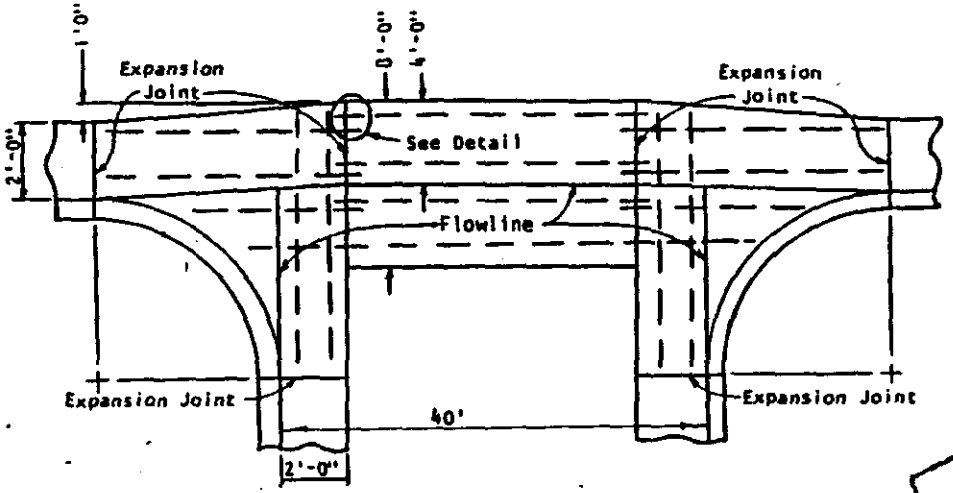
12/11/86
Date

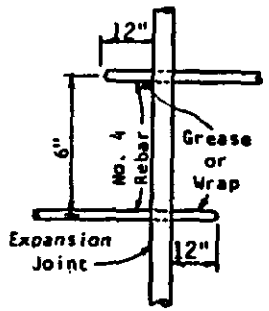
CITY OF RIDGECREST

STANDARD PLAN
CROSS - GUTTER & APRONS

No. 7

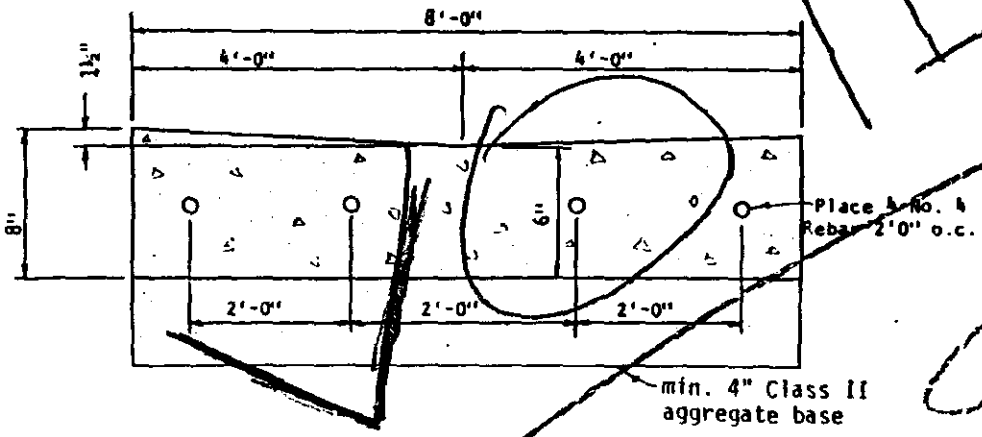
Sht. 2 of 5





DETAIL

NOTE: Rebar shall not be continuous through expansion joint, dowel through 12" past expansion joint. Do not tie (wrap or grease end)



See standard cross-gutter sheet for notes. Sheet 1 of 5

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

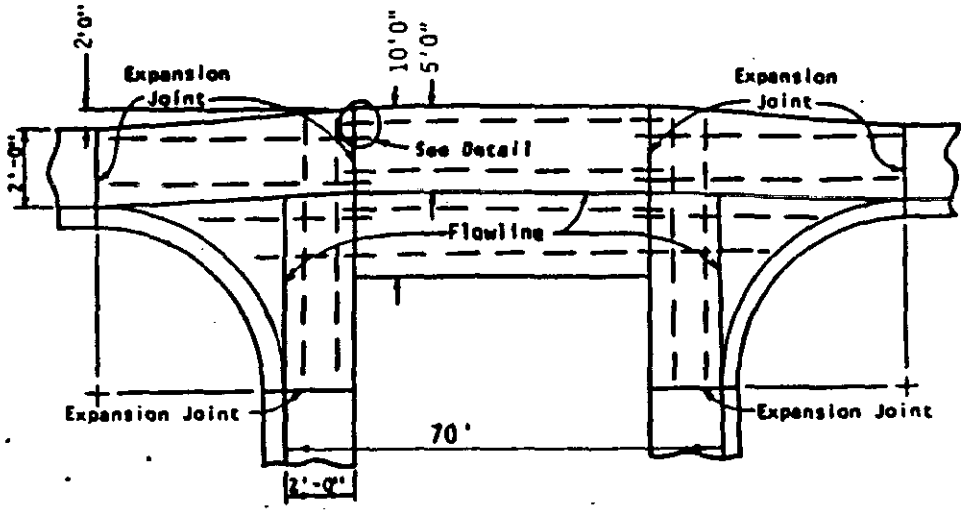
12/11/86
Date

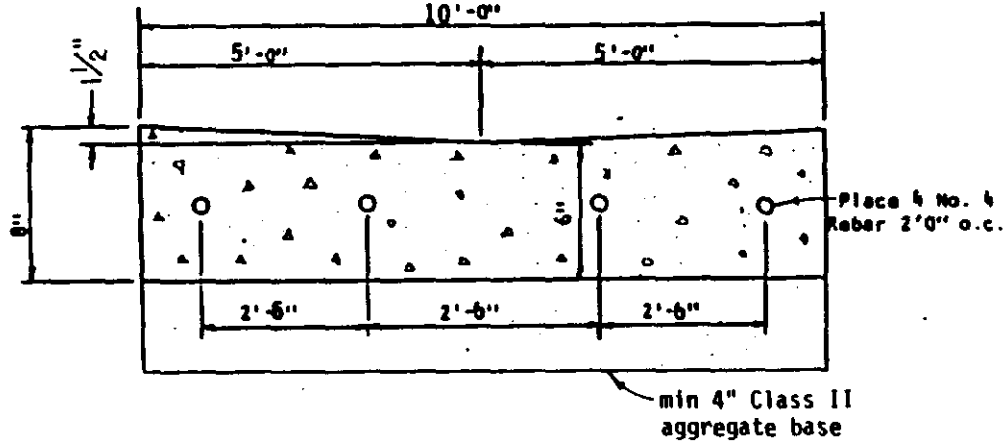
CITY OF RIDGECREST

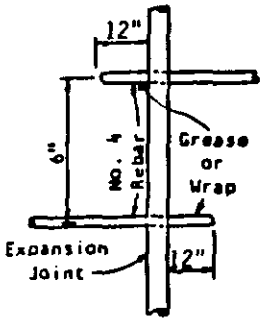
STANDARD PLAN
81 CROSS - GUTTER & APRONS

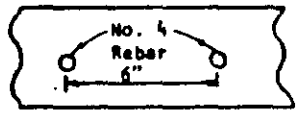
No. 7

Sht. 3 of 5









DETAIL

NOTE: Rebar shall not be continuous through expansion joint, dowel through 12" past expansion joint. Do not tie (wrap or grease end)

See standard cross-gutter sheet for notes. Sheet 1 of 5

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

A E Roberts
City Engineer

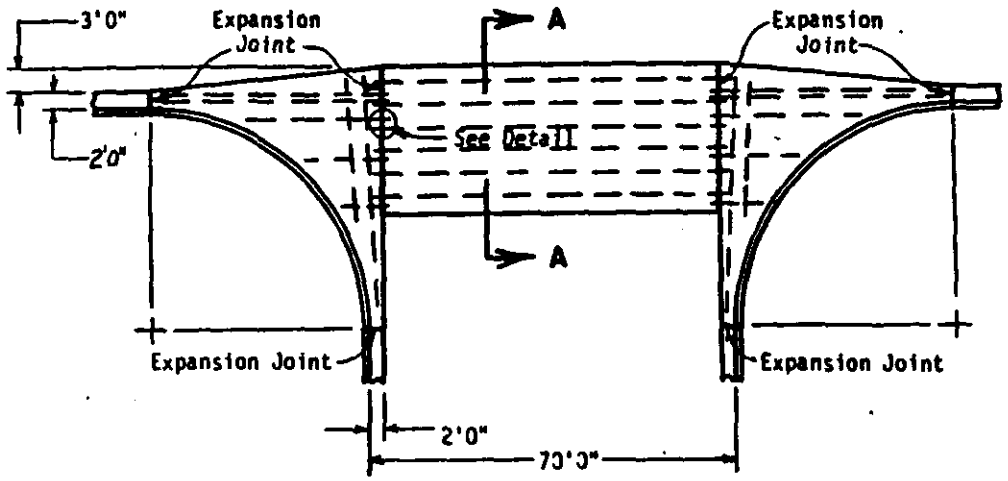
12/11/86
Date

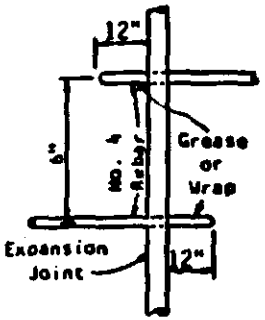
CITY OF RIDGECREST

STANDARD PLAN
10' CROSS - GUTTER & APRONS

No. 7

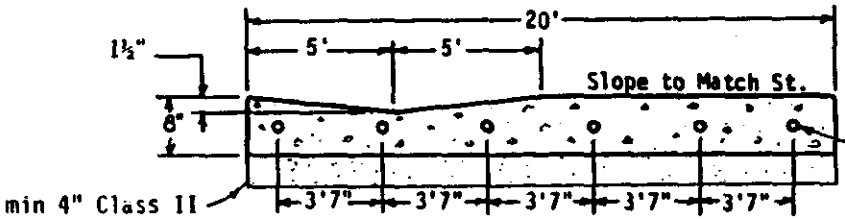
Sht. 4 of 5





DETAIL

NOTE: Rebar shall not be continuous through expansion joint, dowel through 12" past expansion joint. Do not tie (wrap or grease end)



SECTION A-A
ROTATED 90° C.CW.

See Standard
Cross-Gutter Sheet
For Notes, Sht. 1 of 5.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

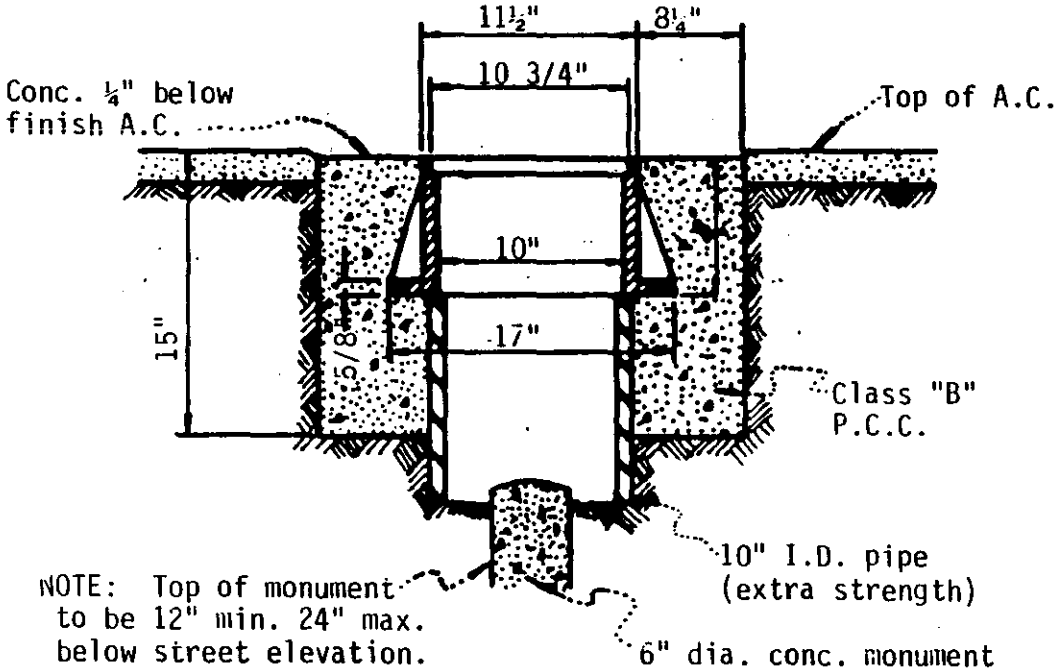
12/11/86
Date

CITY
OF RIDGECREST

STANDARD PLAN
20' CROSS - GUTTER
& APRONS

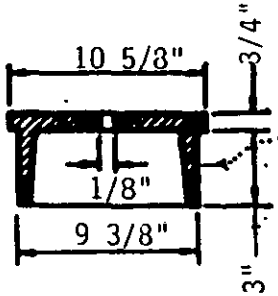
No. 7

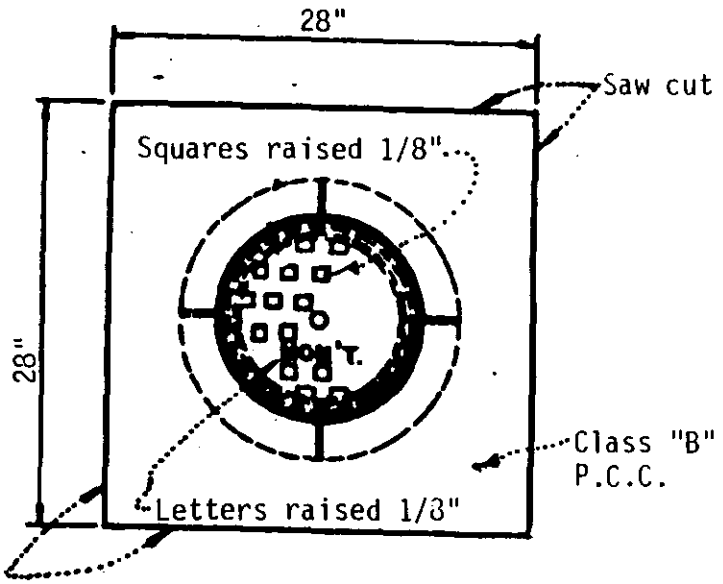
Sht 5
5



NOTE: Top of monument to be 12" min. 24" max. below street elevation.

Cover to be Gray-Iron Castings ASTM: A48-56, Class No. 40 or approved equal, asphalt or coal tar dipped, 2 times.





REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

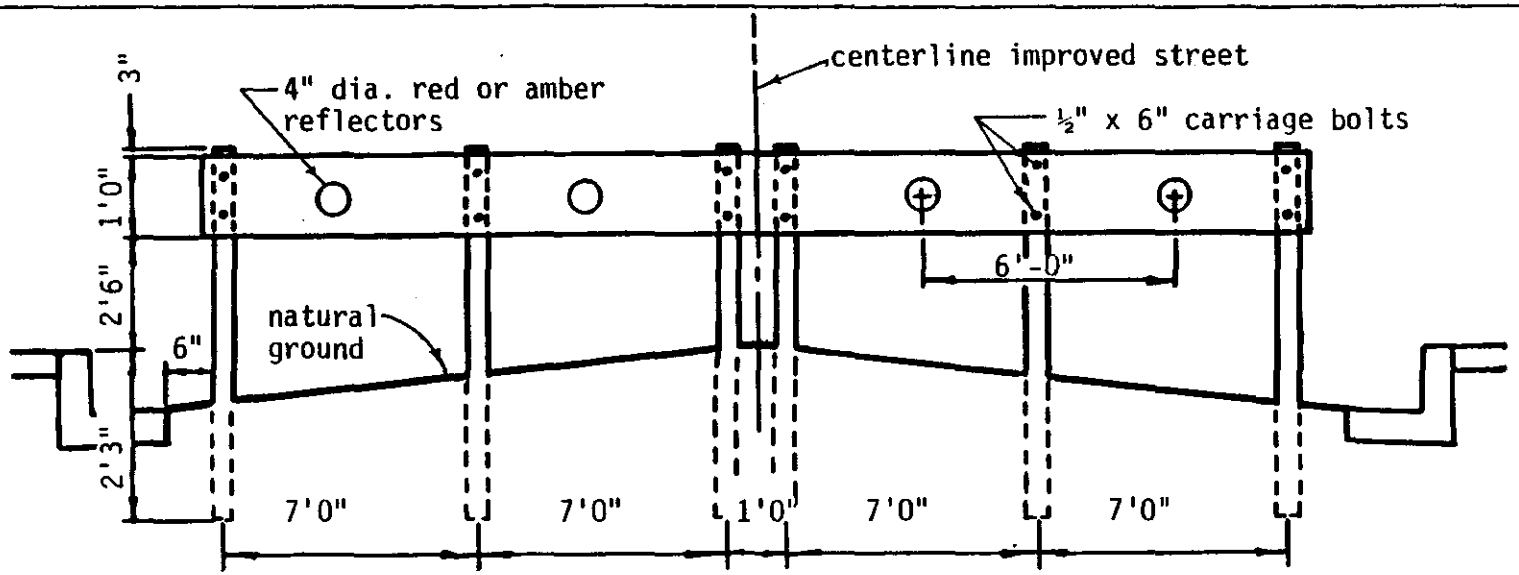
12/11/86
Date

CITY OF RIDGECREST

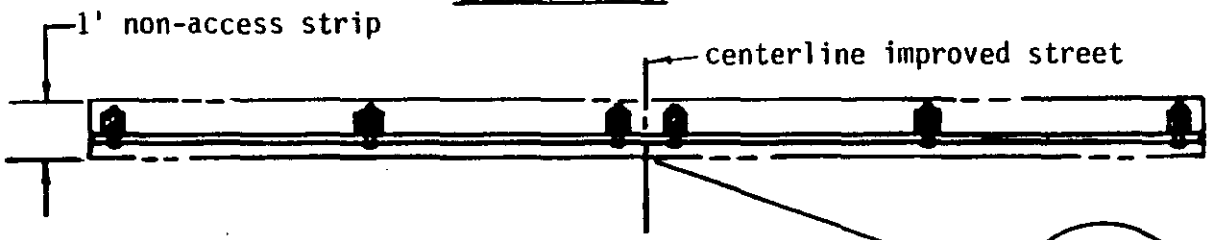
STANDARD PLAN
SURVEY MONUMENT

No. 9

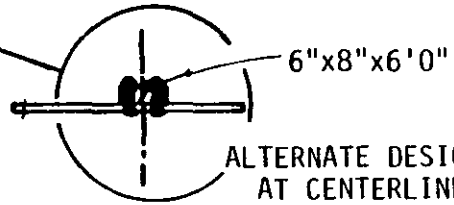
Sht. 1 of 1



ELEVATION



PLAN VIEW



ALTERNATE DESIGN AT CENTERLINE

NOTE: All lumber to be SAHS redwood S4S and painted above ground, with yellow paint. Portion below ground to be treated with standard wood preservative.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

P E Roberts
C , Engineer

12/11/86
Date

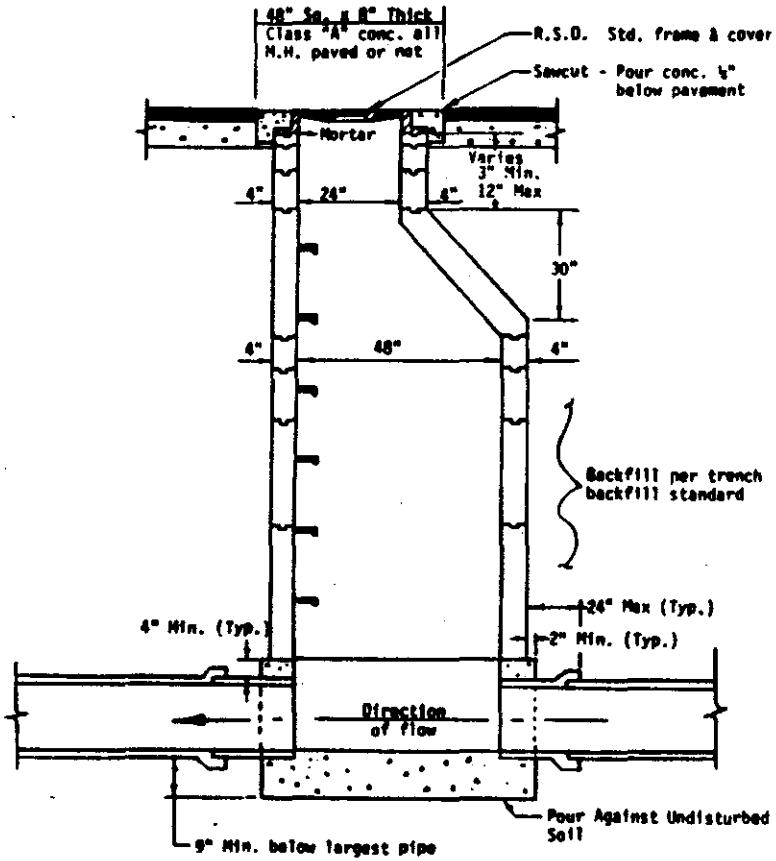
CITY OF RI[illegible]CREST

STANDARD PLAN

STUB STREET BARRICADE

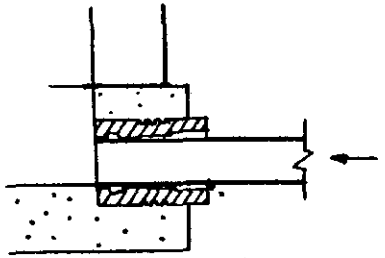
No. 10

1 of 1



NOTES:

1. Class "A" concrete shall be used for Manhole bases.
2. Pipe will stop at inside face of Manhole. Junction and base of Manhole shall be formed and concrete poured against undisturbed soil.
3. Joints may be either keyed or tongue and groove.
4. The vertical side of the Manhole shall be opposite the inlet sewer.
5. Provide 3/4" galv. steps 16" O.C.
6. Manhole rings, cones and sections shall be as manufactured by "Assc. Concrete Products" or approved equal.
7. Precast manhole bases may be used if approved by the City Engineer.



MANHOLE ADAPTER (FOR PVC. PIPE)

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

A E Roberts
City Engineer

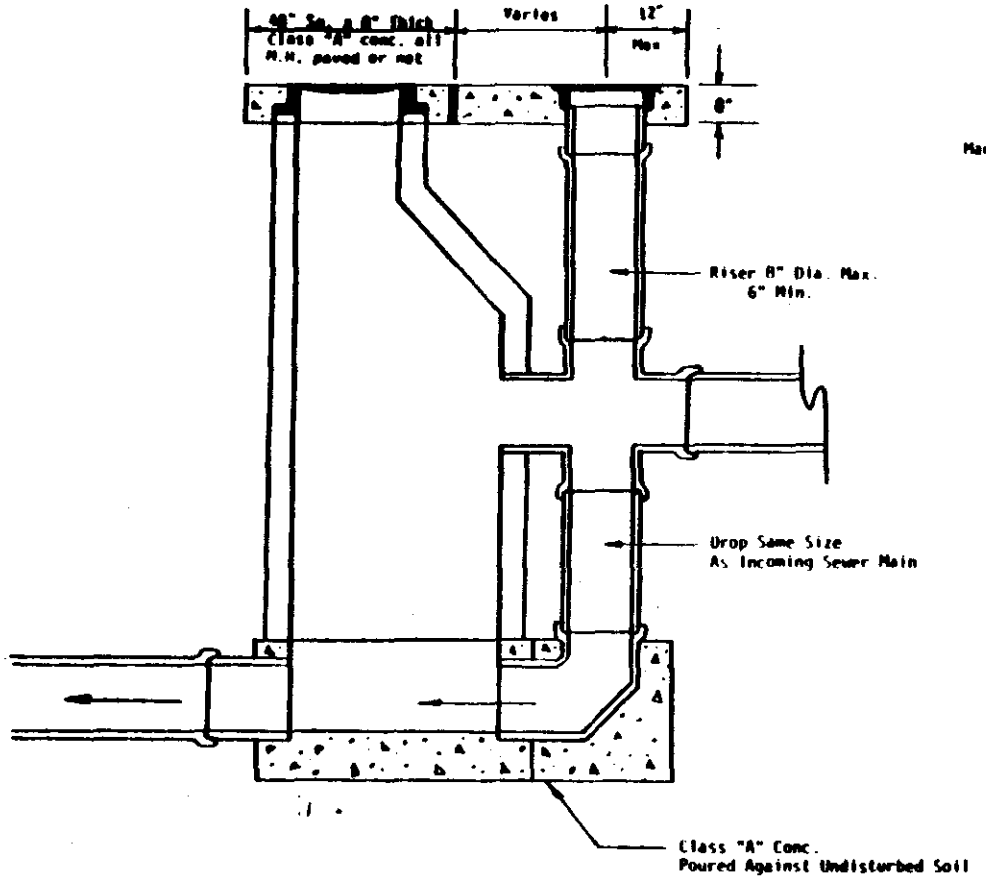
12/11/86
Date

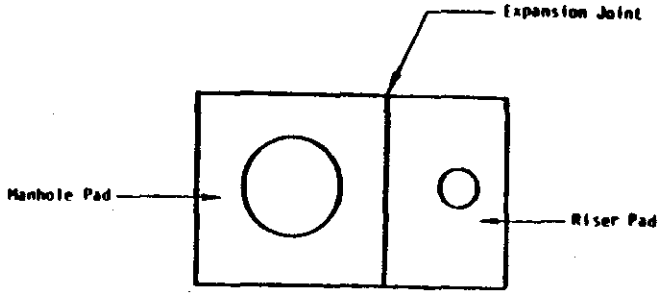
CITY OF RIDGECREST

STANDARD PLAN
MANHOLE

No. 11

Sht. 1 of 2





NOTE: ALL PIPE AND FITTINGS USED IN A DROP M.H. WILL BE V.C.P.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

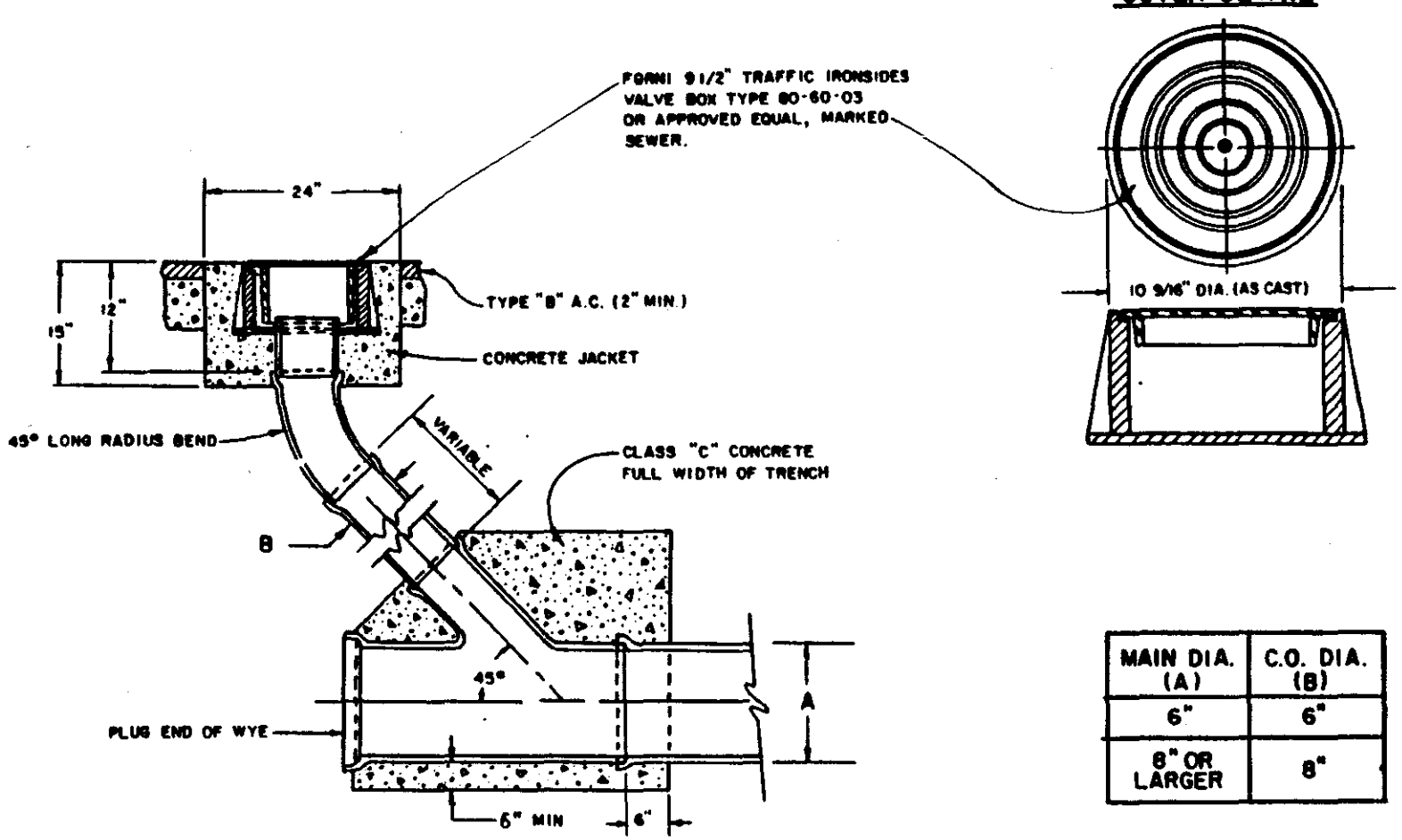
R E Roberts
City Engineer

12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
DROP MANHOLE

No. 11
Sht. 2 of 2



MAIN DIA. (A)	C.O. DIA. (B)
6"	6"
8" OR LARGER	8"

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

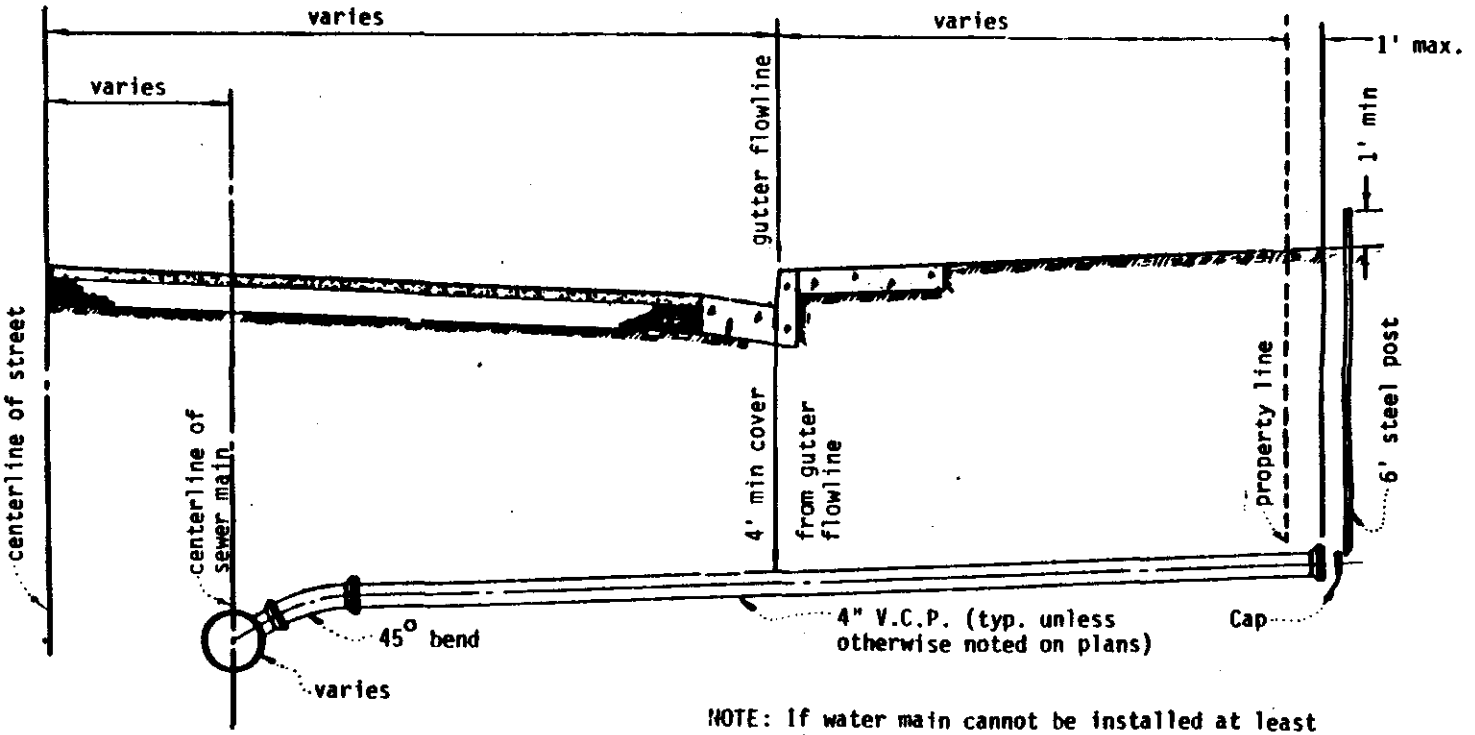
R E Roberts
City Engineer

12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
SEWER CLEANOUT

No. 12
Sht. 1 of 1



NOTE: If water main cannot be installed at least 1' clear above sewer lateral, encase sewer per I.W.V.W.D. Standards.

REVISIONS							
No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

A E Roberts
City Engineer

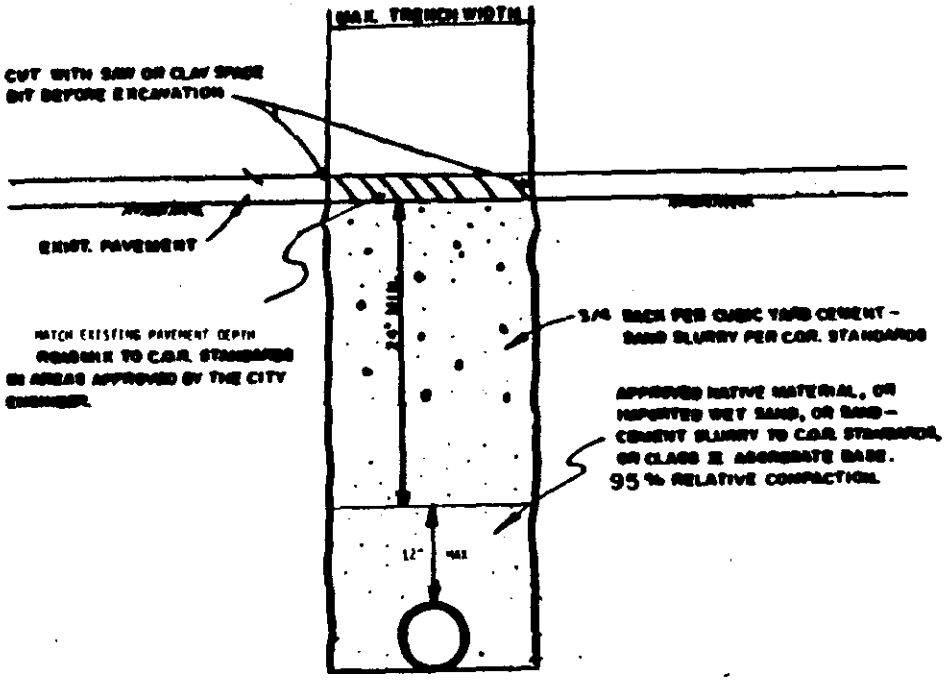
12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
SEWER LATERAL

No. 13

Sht. 1 of 1



NOTES

1. BACKFILL MATERIAL TO BE MOISTENED TO OPTIMUM CONTENT AND COMPACTED IN 8" MAX. LAYERS.
2. TEMPORARY A.C.O. PATCH SHALL BE USED
3. WASTE UNSUITABLE MATERIALS DURING EXCAVATION.
4. COMPACT ENTIRE SURFACE UNDER PATCH.
5. PATCHES LESS THAN 5' FROM EXISTING PATCHES, EDGES OF PAVEMENT, OR GUTTER SHALL BE EXTENDED TO INCLUDE THE INTERMEDIATE ISOLATING STRIP OF EXISTING PAVEMENT.
6. CONTRACTOR WILL PROVIDE WATER AND COMPACTION EQUIPMENT ON SITE DURING THE BACKFILL PROCESS AND WILL PROVIDE FOR COMPACTION TESTS AT LEVELS DIRECTED BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date
				1	PAVEMENT PATCH & ONLY SLURRY	R.E.R	5/30/87

Approved:

R E Roberts
City Engineer

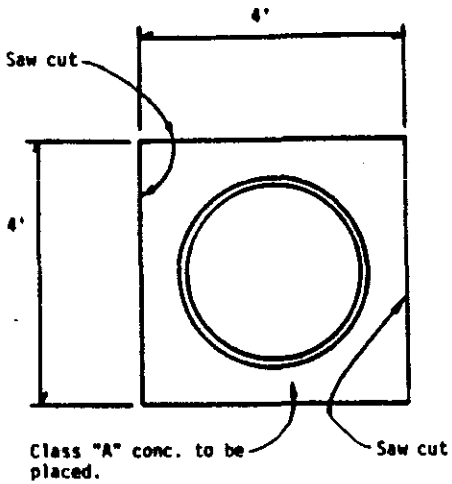
12/11/86
Date

CITY OF RIDGECREST

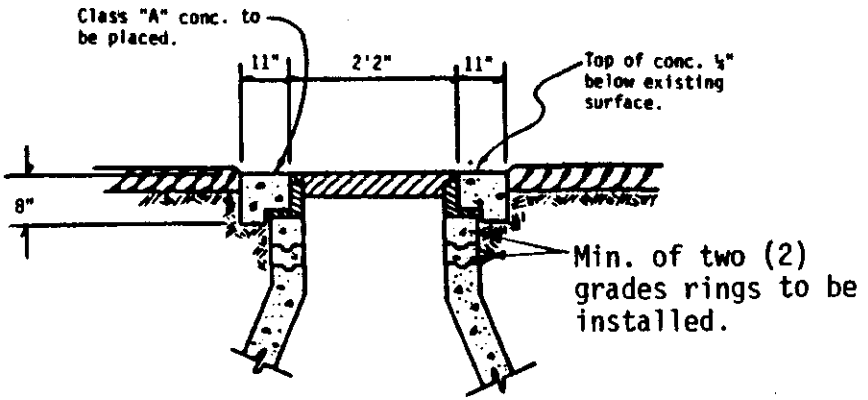
STANDARD PLAN
TRENCHING
on surfaced streets
(AC and Clay pipes)

No. 16

Sht. 1 of 2



PLAN



SECTION

NOTES

1. All cuts to be saw cut.
2. Finished pad to be edged and trowled.
3. Manhole to be grouted inside.
4. All debris to be removed from bottom of the manhole.
5. Manhole cover to be centered in concrete pad.
6. Concrete spacer rings or approved equal to be used to adjust manhole cover to finish grade.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

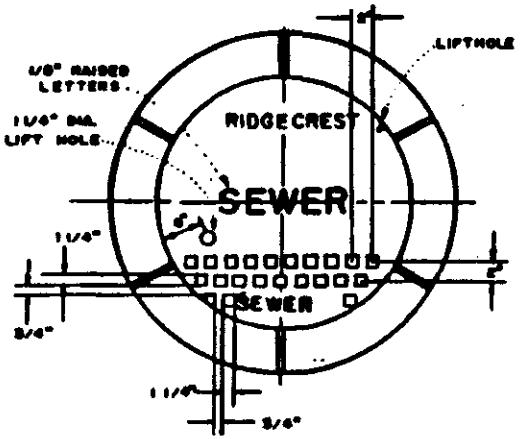
12/11/86
Date

CITY OF RIDGECREST

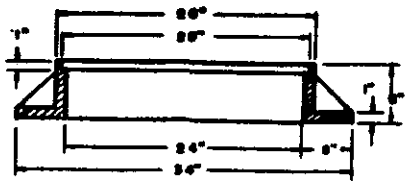
STANDARD PLAN
MANHOLE COVER
ADJUSTMENT PADS

No. 14

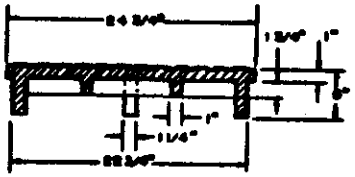
Sht. 1 of 1



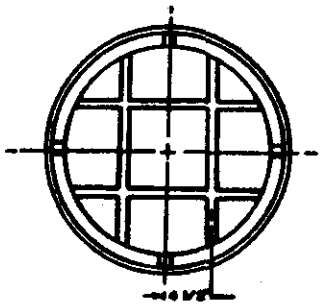
MANHOLE PLAN



FRAME SECTION



COVER SECTION



BOTTOM VIEW

GENERAL NOTES:

ALL CASTINGS SHALL BE TOUGH, GRAY IRON, FREE FROM WARPS, CRACKS, HOLES, SWELLS AND COLD SHEET AND SHALL HAVE A WORKMANLIKE FINISH.

CASTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS FOR GRAY-IRON CASTINGS, SERIAL DESIGNATION ATSM: A48-86, CLASS NO. 40.

THE SEATS OF FRAMES AND BEARING FACES OF THE COVERS SHALL BE MACHINED TO A SMOOTH FIT BETWEEN THE TWO CASTINGS.

CASTINGS SHALL BE THOROUGLY CLEANED AND DIPPED TWICE IN A PREPARATION OF ASPHALT OR COAL TAR AND OIL APPLIED AT 300° FAHRENHEIT TO FORM A FIRM AND TERACIOUS COATING.

MANHOLE FRAME SHALL WEIGH NOT LESS THAN 220 POUNDS AND COVER NOT LESS THAN 180 POUNDS

THE RAISED LETTERS ON COVER SHALL BE

RIDGECREST SEWER

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts 12/11/86

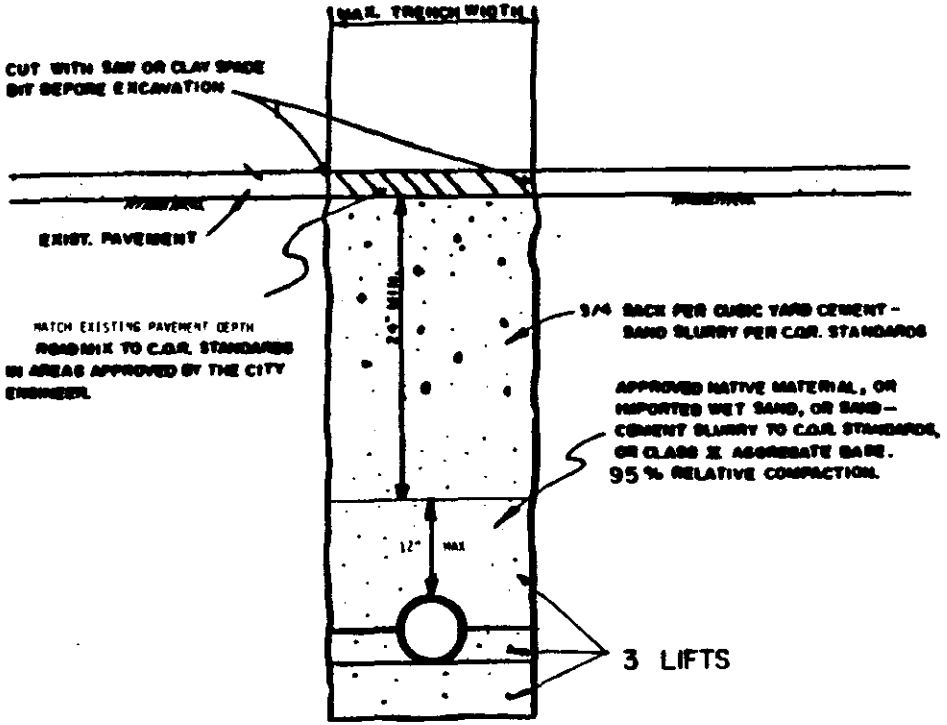
City Engineer — Date

CITY OF RIDGECREST

STANDARD PLAN
MANHOLE FRAME and COVER

No. 15

Sht. 1 of 1



NOTES

1. BACKFILL MATERIAL TO BE MOISTENED TO OPTIMUM CONTENT AND COMPACTED IN 8" MAX. LAYERS.
2. TEMPORARY R.M.S. PATCH SHALL BE USED
3. WASTE UNSUITABLE MATERIALS DURING EXCAVATION.
4. COMPACT ENTIRE SURFACE UNDER PATCH.
5. PATCHES LESS THAN 2' FROM EXISTING PATCHES, EDGES OF PAVEMENT, OR GUTTER SHALL BE EXTENDED TO INCLUDE THE INTERMEDIATE ISOLATING STRIP OF EXISTING PAVEMENT.
6. CONTRACTOR WILL PROVIDE WATER AND COMPACTION EQUIPMENT ON SITE DURING THE BACKFILL PROCESS AND WILL PROVIDE FOR COMPACTION TESTS AT LEVELS DIRECTED BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date
				1	PAVEMENT PATCH & ONLY SLURRY	RBA	5 NOV. 87

Approved:

R E Roberts
City Engineer

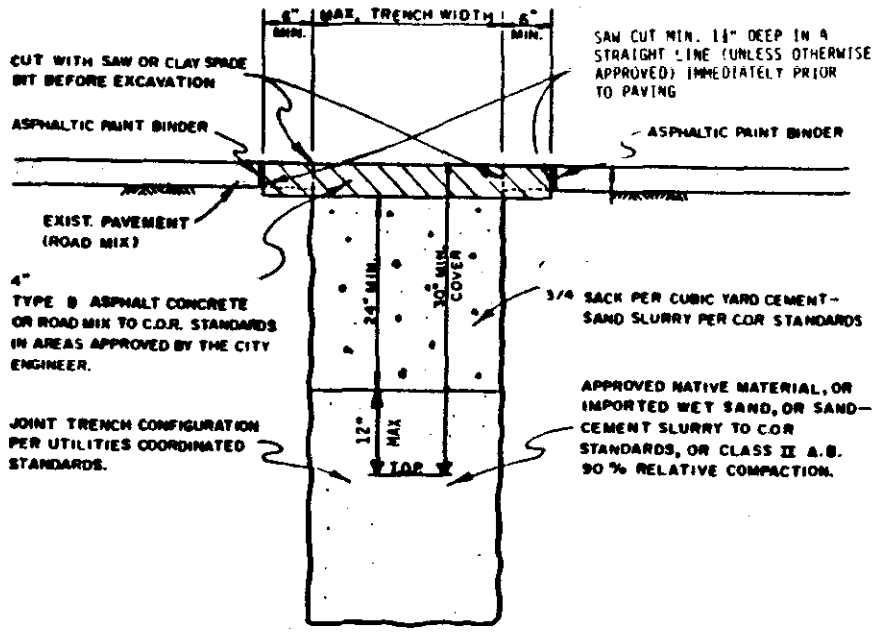
12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN
TRENCHING
on surfaced streets
(P.V.C. pipes)

No. 16 A

Sht. 1 of 1



NOTES

1. BACKFILL MATERIAL TO BE MOISTENED TO OPTIMUM CONTENT AND COMPACTED IN 8" MAX. LAYERS.
2. TEMPORARY R.M.S. PATCH SHALL BE USED IF A/C NOT AVAILABLE.
3. WASTE UNSUITABLE MATERIALS DURING EXCAVATION.
4. COMPACT ENTIRE SURFACE UNDER PATCH.
5. PATCHES LESS THAN 2' FROM EXISTING PATCHES, EDGES OF PAVEMENT, OR GUTTER SHALL BE EXTENDED TO INCLUDE THE INTERMEDIATE ISOLATING STRIP OF EXISTING PAVEMENT.
6. OPEN TRENCH PERMITTED ONLY FOR INSTALLATION OF 3 OR MORE UTILITIES ON ROAD MIX STREETS. BORING REQUIRED FOR OTHER SITUATIONS. THE ENGINEER MAY PERMIT LESS THAN 3 UTILITIES IF SPECIAL CONDITIONS WARRANT.
7. CONTRACTOR WILL PROVIDE WATERING AND COMPACTION EQUIPMENT ON SITE DURING THE BACKFILL PROCESS AND WILL PROVIDE FOR COMPACTION TESTS AT LEVELS DIRECTED BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
8. STEEL PIPES ARE NOT PERMITTED IN JOINT USE TRENCH.

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date
				1	PAVEMENT PATCH & ONLY SLURRY	AER	5NOV.87

Approved:

R E Roberts
City Engineer

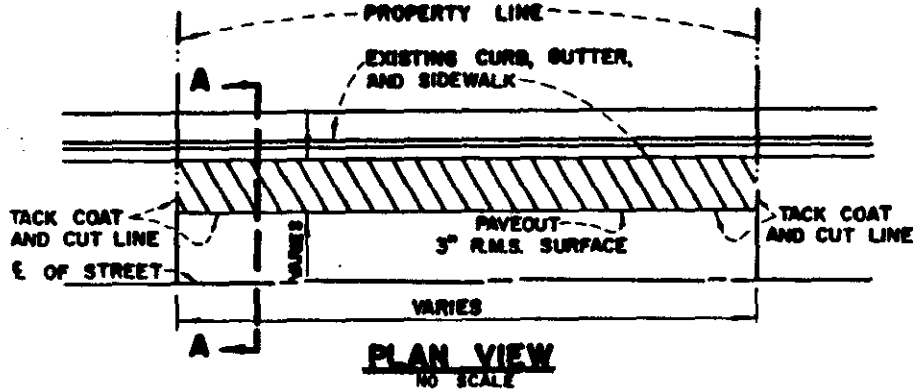
12/11/86
Date

CITY OF RIDGECREST

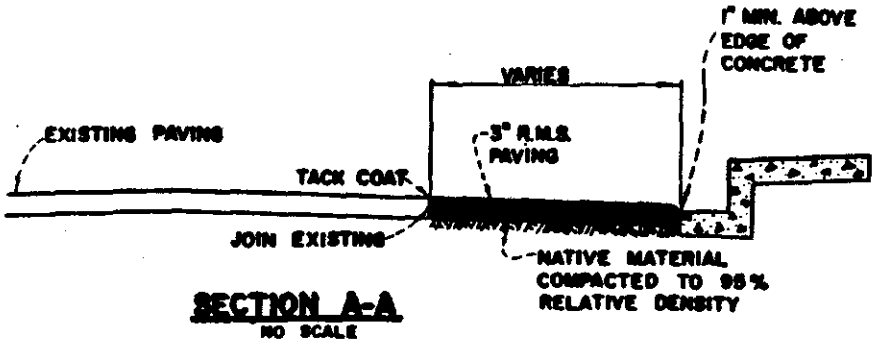
STANDARD PLAN
JOINT TRENCH
ON ROAD MIX SURFACED STREETS FOR SERVICE CROSSINGS

No. 17

Sht. 1 of 1



PLAN VIEW
NO SCALE



SECTION A-A
NO SCALE

NOTE:

1. INSPECTION ON SUBGRADE REQUIRED BEFORE PAVING.
2. COMPACTION TESTING REQUIRED ON SUBGRADE WITH CONTRACTOR TO PAY FOR THE TEST(S).

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

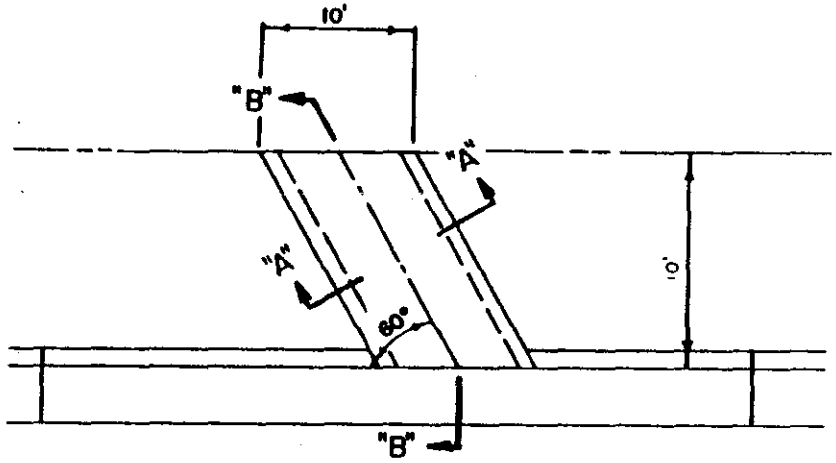
12/11/86
Date

CITY OF RIDGECREST

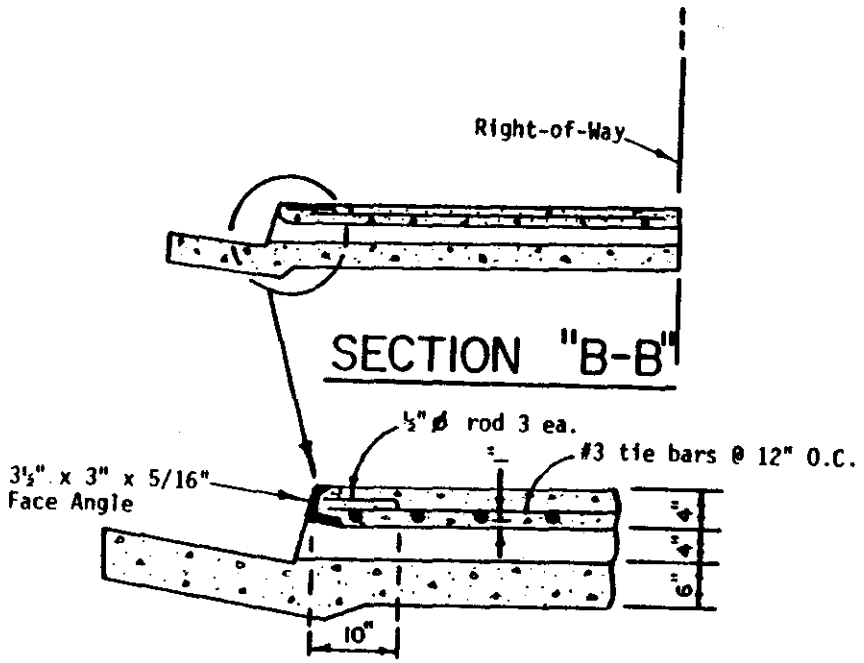
STANDARD PLAN
PAVEOUT
ROAD MIX ASPHALT SURFACE

No. 19

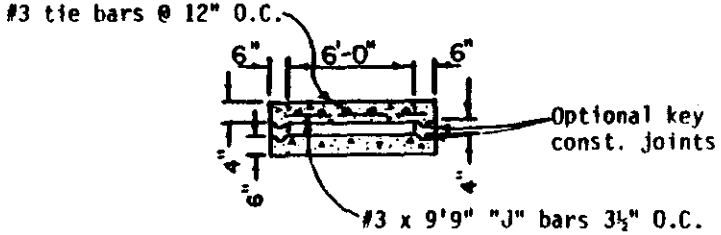
Sht. 1 of 1



PLAN



SECTION "B-B"



SECTION "A-A"

REVISIONS							
No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

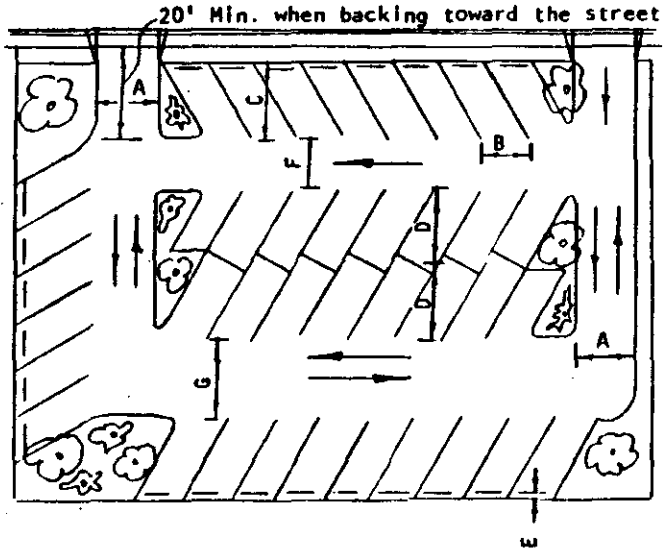
12/11/86
Date

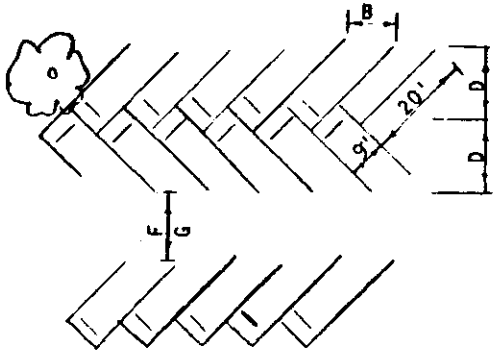
CITY
OF RIDGECREST

STANDARD PLAN
OUTLET BOX

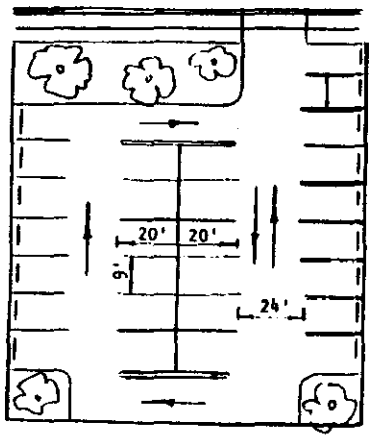
No. 20

Sht. 1 of 1





HERRINGBONE PATTERN



90° PARKING

MINIMUM DIMENSION TABLE

		30°	45°	60°	90°
Driveway and turnaround (one way)	A	14'	14'	14'	14'
Driveway and turnaround (two way)	A	24'	24'	24'	24'
Car space (single stripe)	B	18'	12.7'	10.3'	9'
Car space (double stripe)	B	20'	14.1'	11.5'	10'
Stall depth	C	17.8'	20.5'	21.8'	20'
Stall depth	D	16.5'	18.8'	19.6'	20'
Overhang (wheel stop)	E	1.3'	1.7'	2.2'	2.5'
One way traffic	F	13'	15'	19'	--
Two way traffic	G	20'	24'	24'	24'

*Compact Space. Not more than 20% of all required parking spaces may be reduced to 7'6" in width and 15' in length. Such spaces shall be dispersed throughout the parking lot and marked Compact Parking Only. The resultant area saved is encouraged to be used for landscaping.

STRIPING REQUIREMENTS

Total No. of spaces	Striping Required	Wheel Stops Required
Less than 3 adjacent spaces	NONE	NO
Residential over 3 spaces	SINGLE STRIPE (9' width)	See sheet 2 Typical Layouts
Commercial	DOUBLE STRIPE (10' width)	See sheet 2 Typical Layouts

REVISIONS

No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

R E Roberts
City Engineer

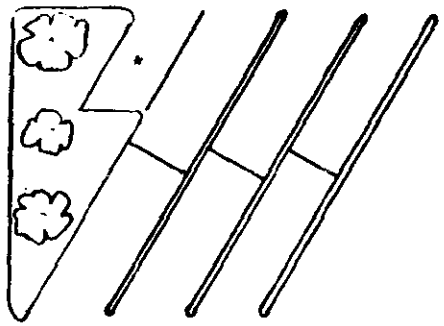
12/11/86
Date

CITY OF RIDGECREST

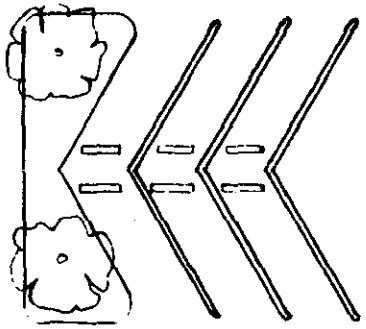
STANDARD PLAN
PARKING

No. 21

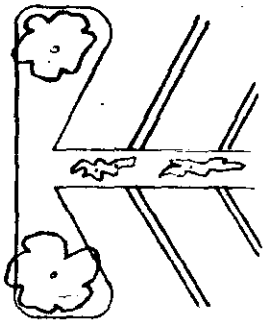
Sht. 1 of 2



* Compact space. Wheel stops not required



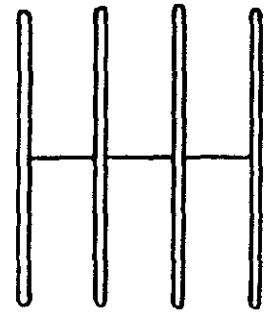
Wheel stops required



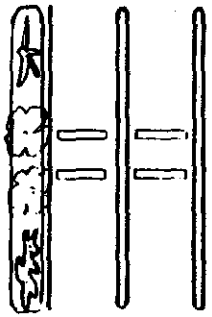
Curbed planter serves as wheel stop

NOTES:

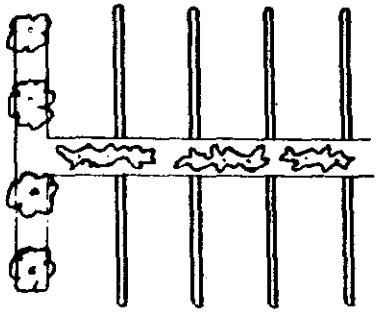
1. See sheet 1 for all dimensions
2. All diagrams apply to single or double striped stalls.



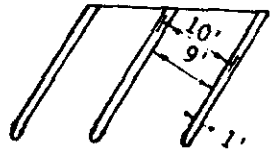
Wheel stops not required



Wheel stops optional



Curbed planter serves as wheel stop



DETAIL

DOUBLE STRIPED PARKING STALL

REVISIONS							
No.	Description	Aprv'd	Date	No.	Description	Aprv'd	Date

Approved:

A E Roberts
City Engineer

12/11/86
Date

CITY OF RIDGECREST

STANDARD PLAN

PARKING
TYPICAL LAYOUTS

No. 21

Sht. 2 of 2