

CITY OF ADELANTO



STANDARD DRAWINGS AND SPECIFICATIONS

City of Adelanto Street Standards

Updated 11/27/06

Curb and Sidewalk Guard

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**NOTE: When specifying or ordering grates—
Please refer to "CHOOSING THE PROPER INLET GRATE" on pages 108 and 109.**

R-4994 Curb and Sidewalk Guards—Renumbered to R-4985 Series

R-4995 - R-4996 Type M Trench Frame with Solid or Grated Cover

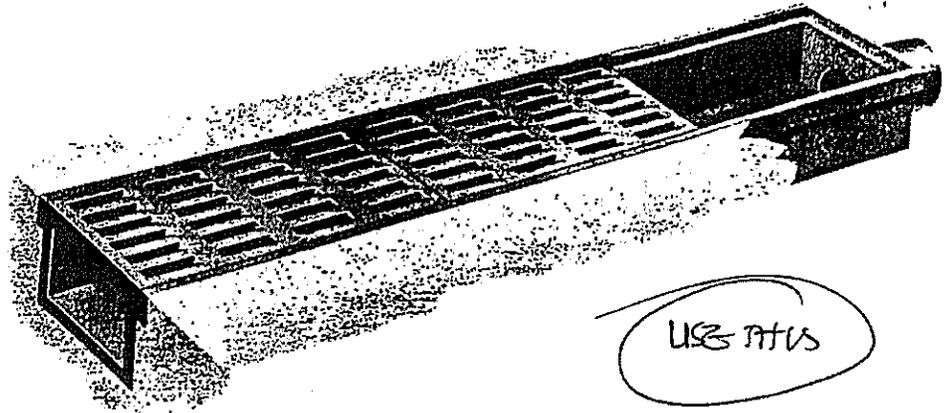
Heavy Duty

Cast Iron Trench Assemblies—Light or Heavy Duty—For Use in Sidewalks, Driveways, Garages, Loading Docks, etc.

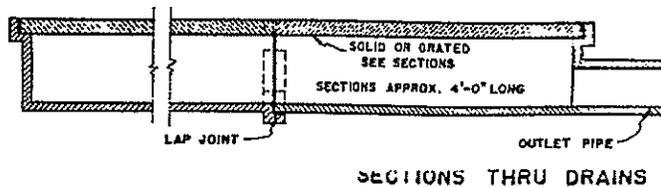
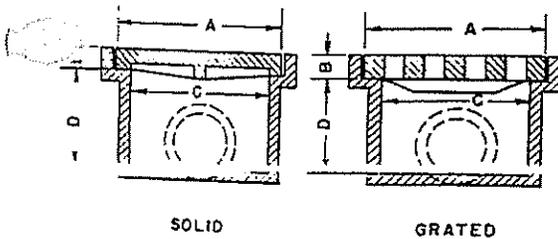
Read Carefully Before Ordering

Specify:

1. Complete catalog number.
2. Light or heavy duty.
3. Overall length of cover required.
4. Lid solid, flat grated, or diagonally barred convex grate.
5. Location of outlet, side, bottom or end (give dimensional location and pipe size).
6. Whether one end or both ends are to be open or closed.



Illustrating Type M frame with grated cover. Standard with 4-inch outside caulk outlet. Can be equipped for inside caulk if specified.

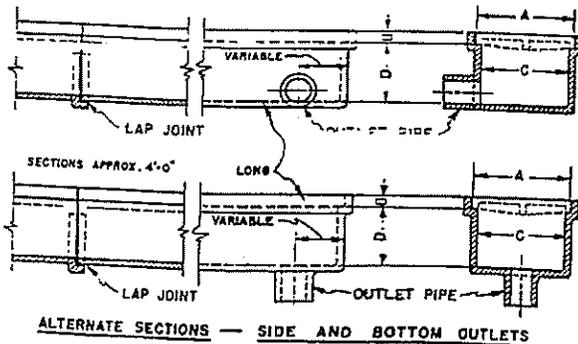


SECTIONS THRU DRAINS

Trench covers are used over areas requiring long drainage assemblies. Can be supplied in a variety of sizes and lengths to meet special needs. For trenches of irregular pattern, arrangements can be made to furnish cover to fit.

Standard 4-inch outlet at end of drain. Special size outlets are available on special order. Side and bottom outlets optional and furnished only when specified.

Sections: Thru Drains, Type M

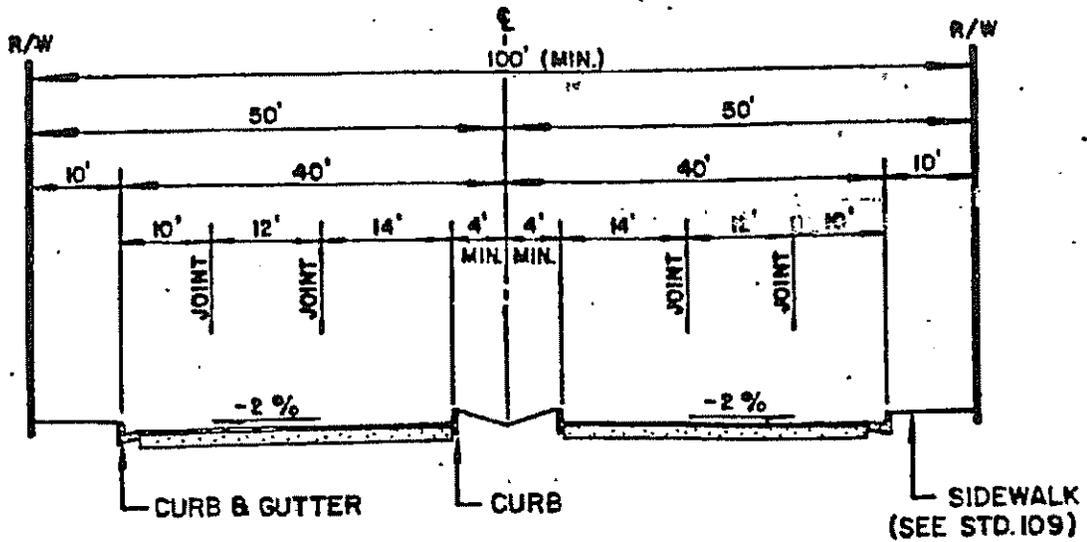


Catalog No.	Description	Dimensions in inches				
		A	B	C	D	Length
Standard Sizes—Light Duty						
R-4995-A1**	with grated cover	11 1/2	3/4	10	6 3/4	as ordered
R-4995-A2*	with grated cover	7	3/4	5	4 3/4	as ordered
R-4995-B1	with solid cover	11 1/2	3/4	10	6 3/4	as ordered
R-4995-B2	with solid cover	7	3/4	5	4 3/4	as ordered
Standard Sizes—Heavy Duty						
R-4996-A1**	with grated cover	11 1/2	1 1/2	10	6	as ordered
R-4996-A2*	with grated cover	7	1 1/4	5	4 1/4	as ordered
R-4996-B1	with solid cover	11 1/2	1 1/2	10	6	as ordered
R-4996-B2	with solid cover	7	1 1/4	5	4 1/4	as ordered

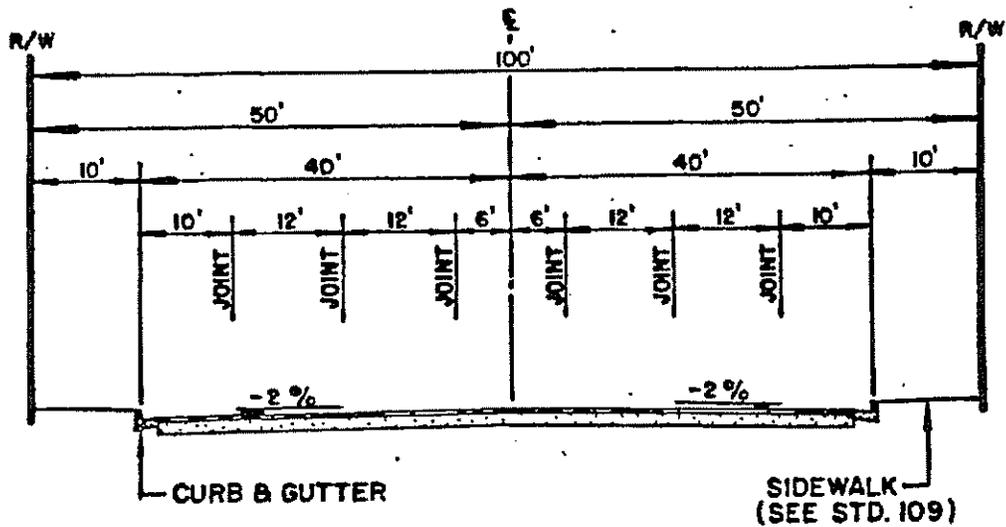
Above Standard Frames made in 4 ft. sections, covers in 2 ft. lengths.

*Available with Type B grate only (see page 268).

**Also available with Type P grate (see page 283).



**TYPICAL SECTION
WITH RAISED MEDIAN**

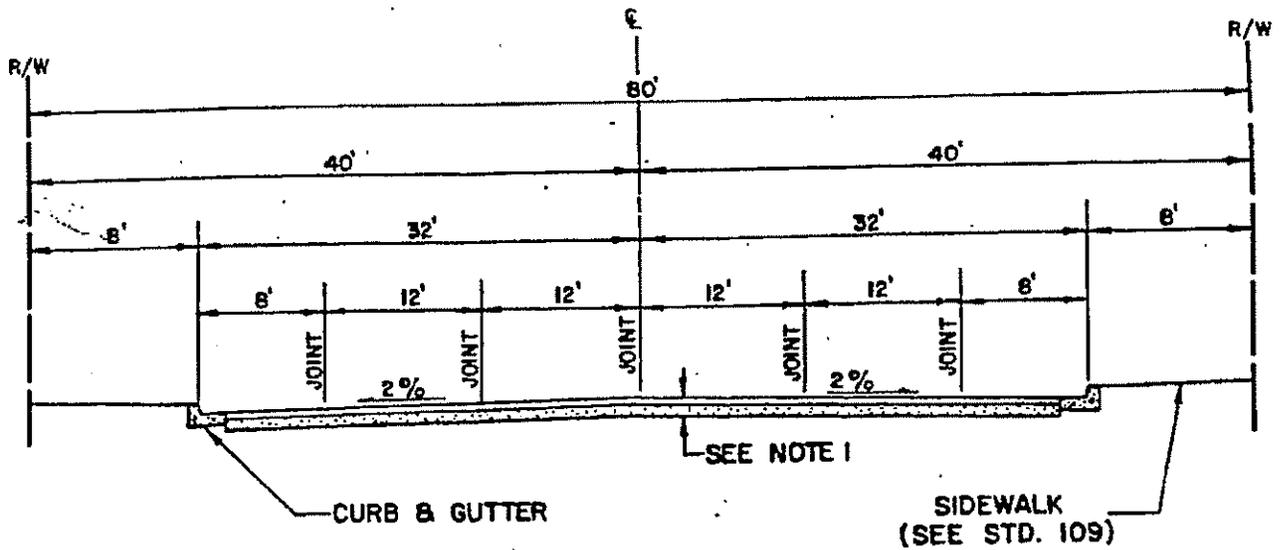


**TYPICAL SECTION
WITH CONTINUOUS LEFT TURN LANE**

NOTES:

1. STRUCTURAL SECTION OF ROADWAY SHALL BE DETERMINED FROM SOILS TESTS AND SO INDICATED ON CONSTRUCTION PLANS.
2. DRAINAGE FACILITIES SHALL BE PROVIDED TO DEWATER RAISED MEDIAN AREAS.
3. 10' SHOULDER AREAS MAY BE DESIGNATED AS A BIKE LANE AND EMERGENCY PARKING ONLY.

CITY OF ADELANTO		MAJOR HIGHWAY	101
DATE: 100 12 81 SCD 9/84	RICHARD S. TITERA CITY ENGINEER		



TYPICAL SECTION

NOTES:

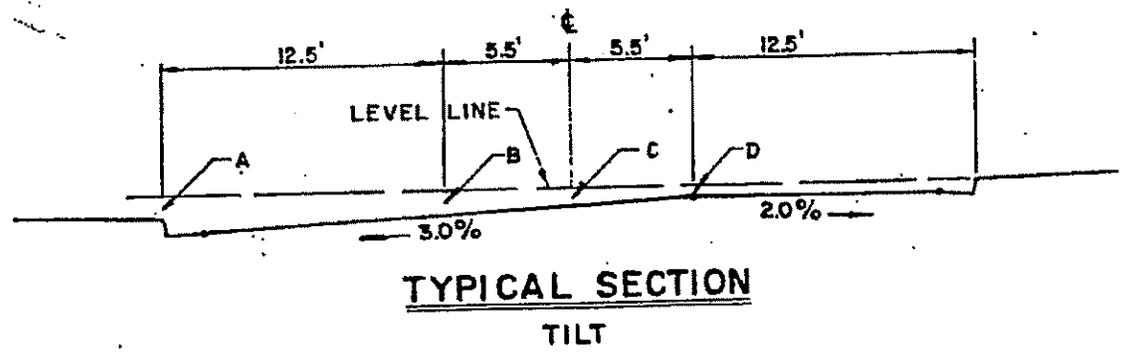
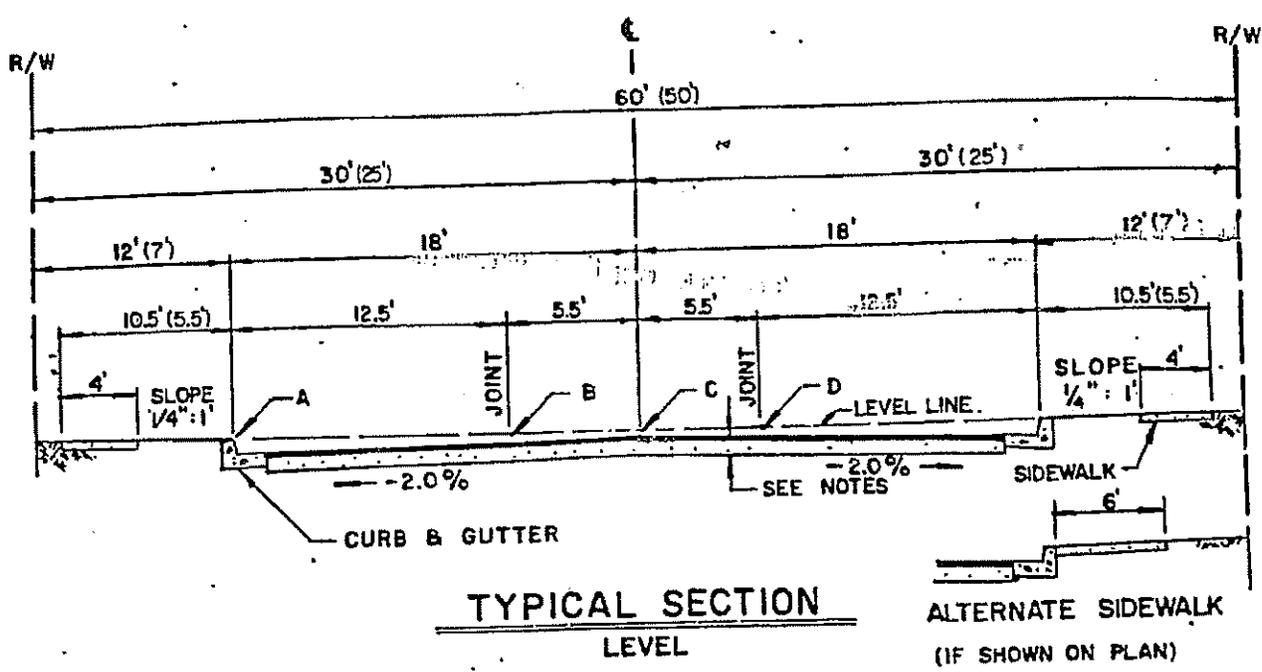
1. STRUCTURAL SECTION OF ROADWAY SHALL BE DETERMINED FROM SOILS TESTS AND SO INDICATED ON CONSTRUCTION PLANS.
2. 8' SHOULDER AREAS MAY BE DESIGNATED AS A BIKE LANE AND EMERGENCY PARKING ONLY.

CITY OF ADELANTO

DATE: *VRK 4 '77*
S.C.D. 9/84

RICHARD S. TITERA
CITY ENGINEER

SECONDARY HIGHWAY 102



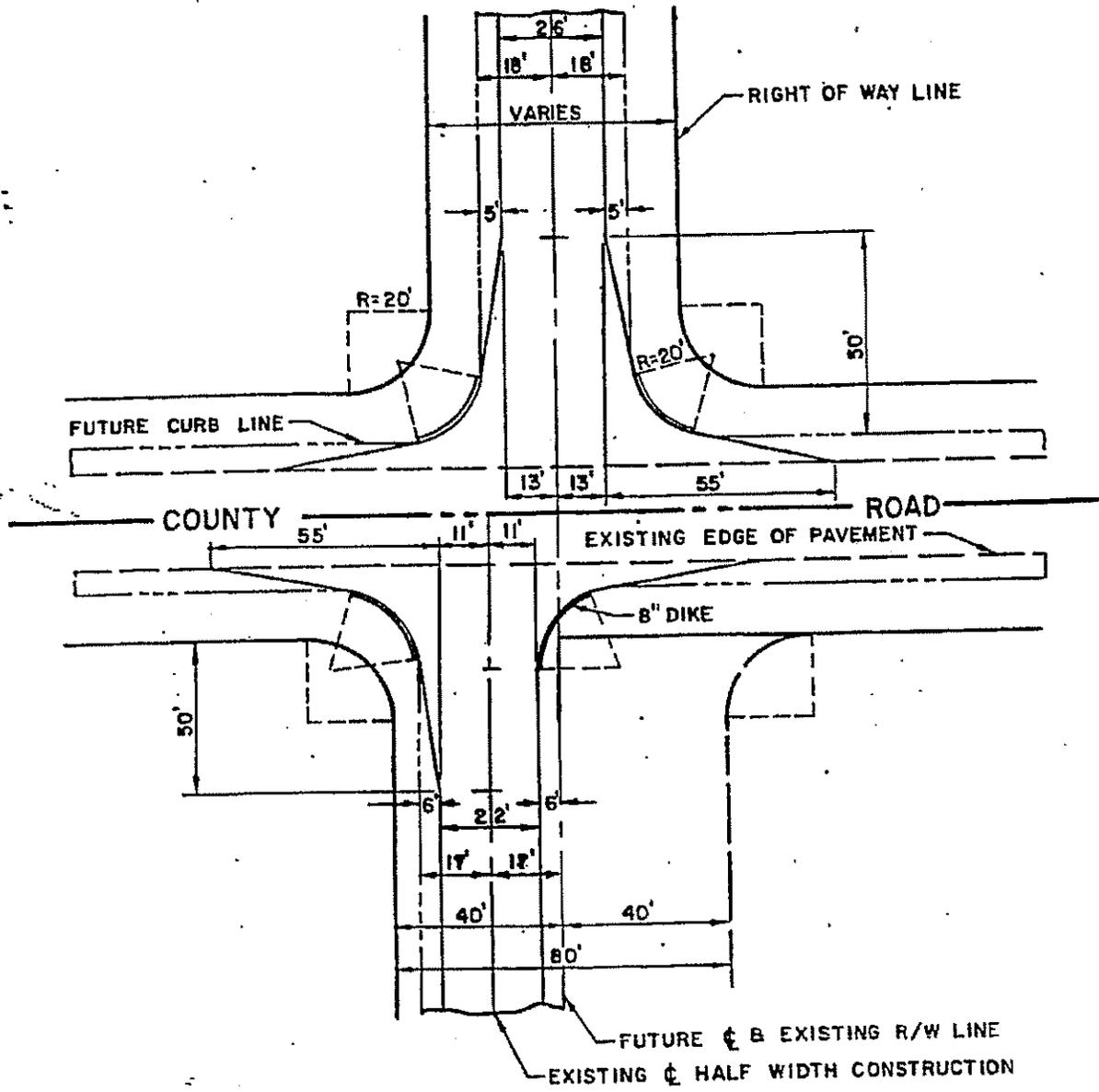
		A	B	C	D
8" CURB	LEVEL	0.00'	0.33'	0.22'	0.33'
	TILT	0.44'	0.66'	0.50'	0.33'
6" CURB	LEVEL	0.00	0.16'	0.05'	0.16'
	TILT	0.44'	0.49'	0.33'	0.16'

NOTE

1. STRUCTURAL SECTION OF ROADWAY SHALL BE DETERMINED FROM SOILS TESTS AND SO INDICATED ON CONSTRUCTION PLANS.
2. MINIMUM DESIGN PAVING THICKNESS SHALL BE 0.20' ASPHALT CONCRETE.
3. CONSTRUCTION OUTSIDE R/W WILL REQUIRE SLOPE EASEMENTS
4. WHEN PREPARING SUBGRADE FOR PAVING, CENTERLINE CROWN ON THE "LEVEL SECTION" SHALL BE RELOCATED EITHER LEFT OR RIGHT 0.50' TO MATCH CROWN BREAK IN PAVING MACHINE.

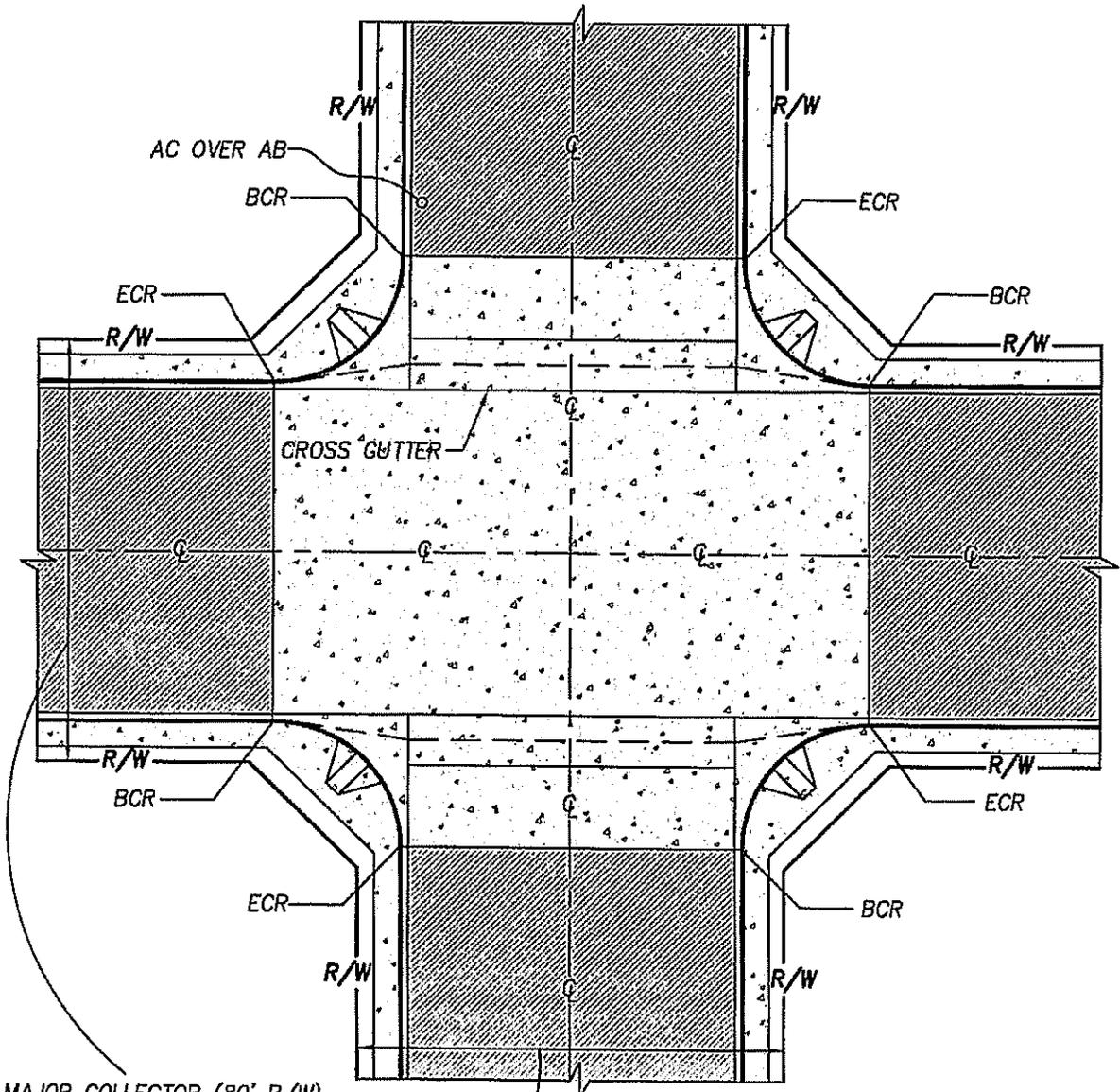
CITY OF ADELANTO		LOCAL STREET	104
DATE P.V.C. 9-65	RICHARD S. TITERA CITY ENGINEER		
Rev. 5-74			
S.C.D. 8/84			

FULL WIDTH CONSTRUCTION



HALF WIDTH CONSTRUCTION

CITY OF ADELANTO		INTERSECTION DESIGN DESERT ROAD	107
DATE: <i>REV. 8-65</i> S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



MAJOR COLLECTOR (80' R/W)
 SUPER ARTERIAL (124' R/W)
 MAJOR ARTERIAL (100' R/W)

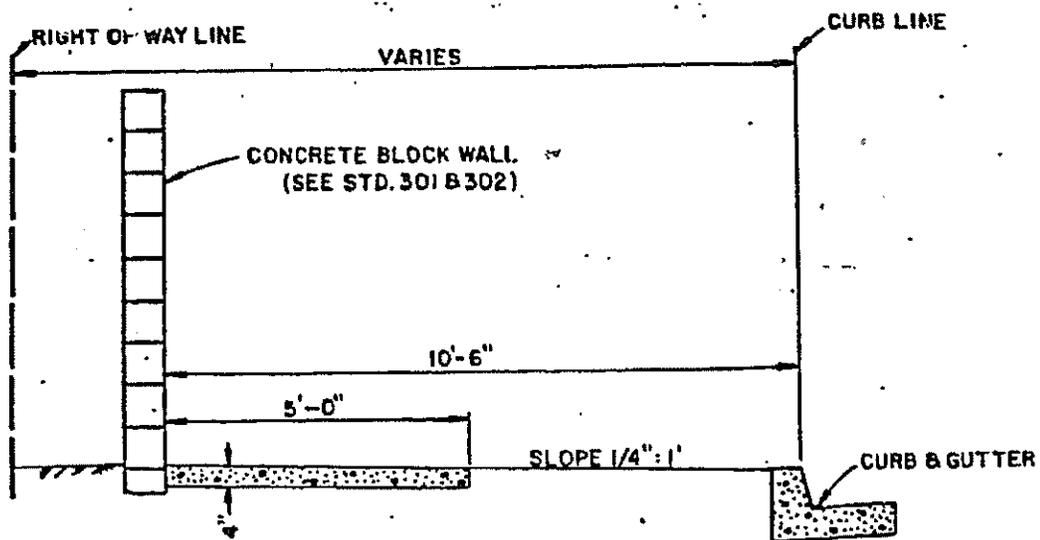
ASPHALT CONCRETE PAVEMENT
 CONCRETE PAVEMENT

NOTES:

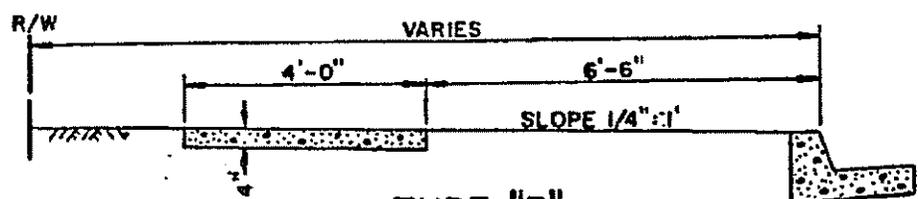
1. THIS STANDARD IS APPLICABLE WHERE STREET IS DESIGNATED AS WATER CARRIER
2. PAVEMENT DESIGN THICKNESS PER TRAFFIC INDEX AND UNDERLYING SOILS CONDITIONS

SCALE: 1"=40'

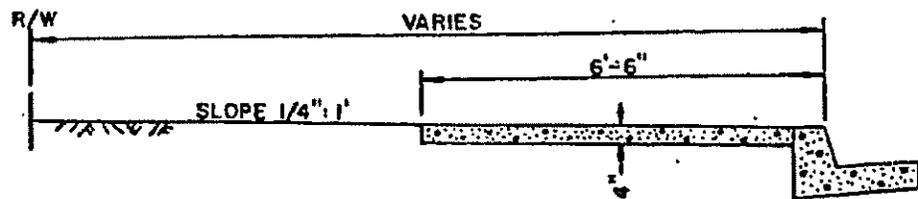
CITY OF ADELANTO		MAJOR INTERSECTION	108
MAY, 2006	WILSON F. SO R.C.E. 21,651 CITY ENGINEER		



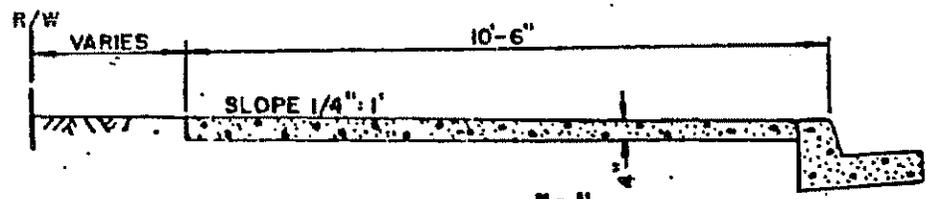
TYPE "A"



TYPE "B"



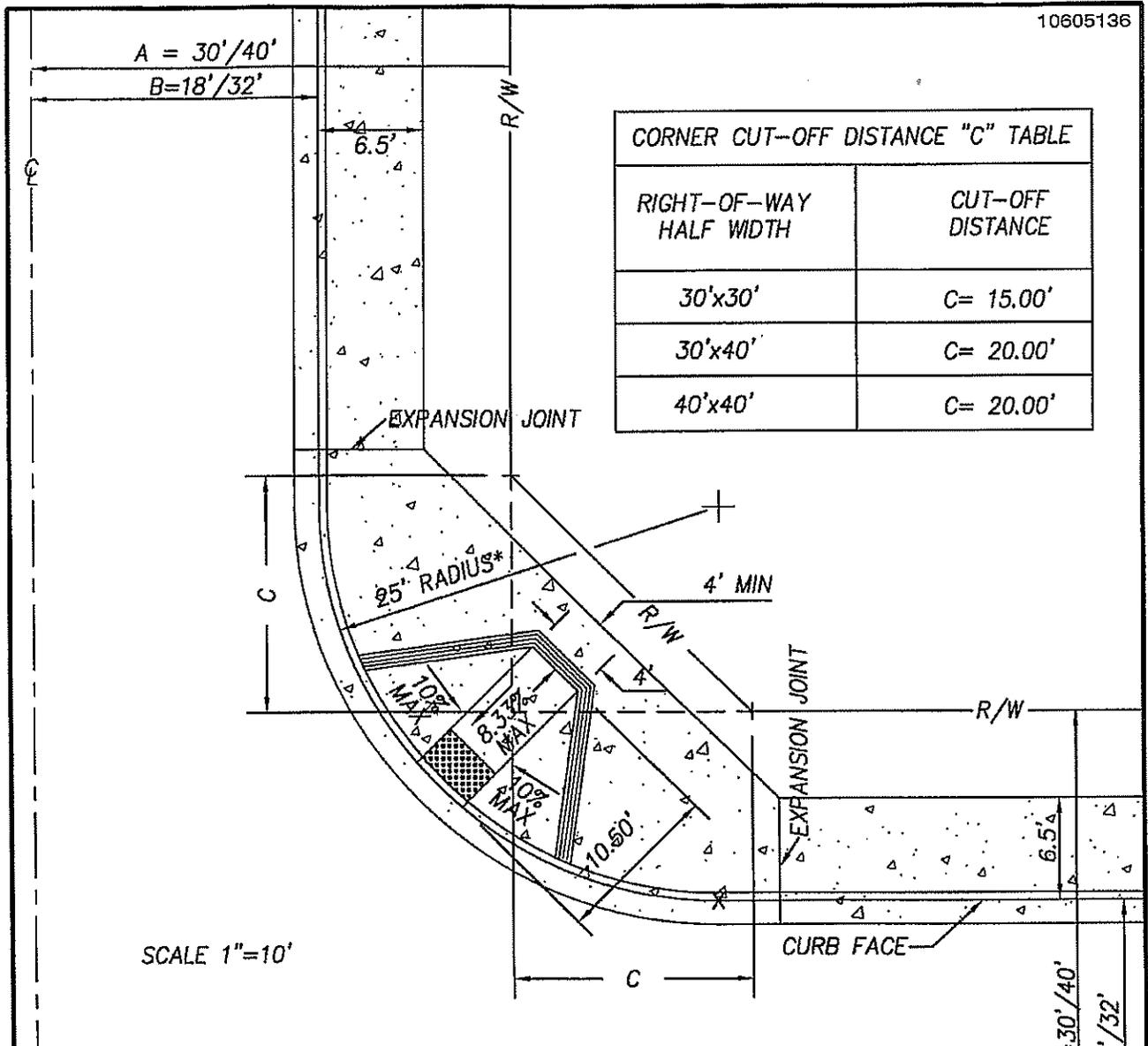
TYPE "C"



TYPE "D"

1. TYPE "C" SIDEWALKS ADJACENT TO CURB SHALL ONLY BE USED ON LOCAL AND COLLECTOR STREETS AND ONLY UPON APPROVAL OF THE CITY OF ADELANTO
2. SIDEWALK SHALL BE CONSTRUCTED OF CLASS "B" CONCRETE.
3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED ON 10' SPACING.
4. SCORING SIDEWALK WILL BE PERMITTED.
5. INEXPANSIVE SOIL AREAS, REFER TO SECTION 7.3 OF THE CITY SPECIFICATIONS.

CITY OF ADELANTO		SIDEWALK	109
APP MAR 1975 SCD 9/84	RICHARD S. TITERA CITY ENGINEER		



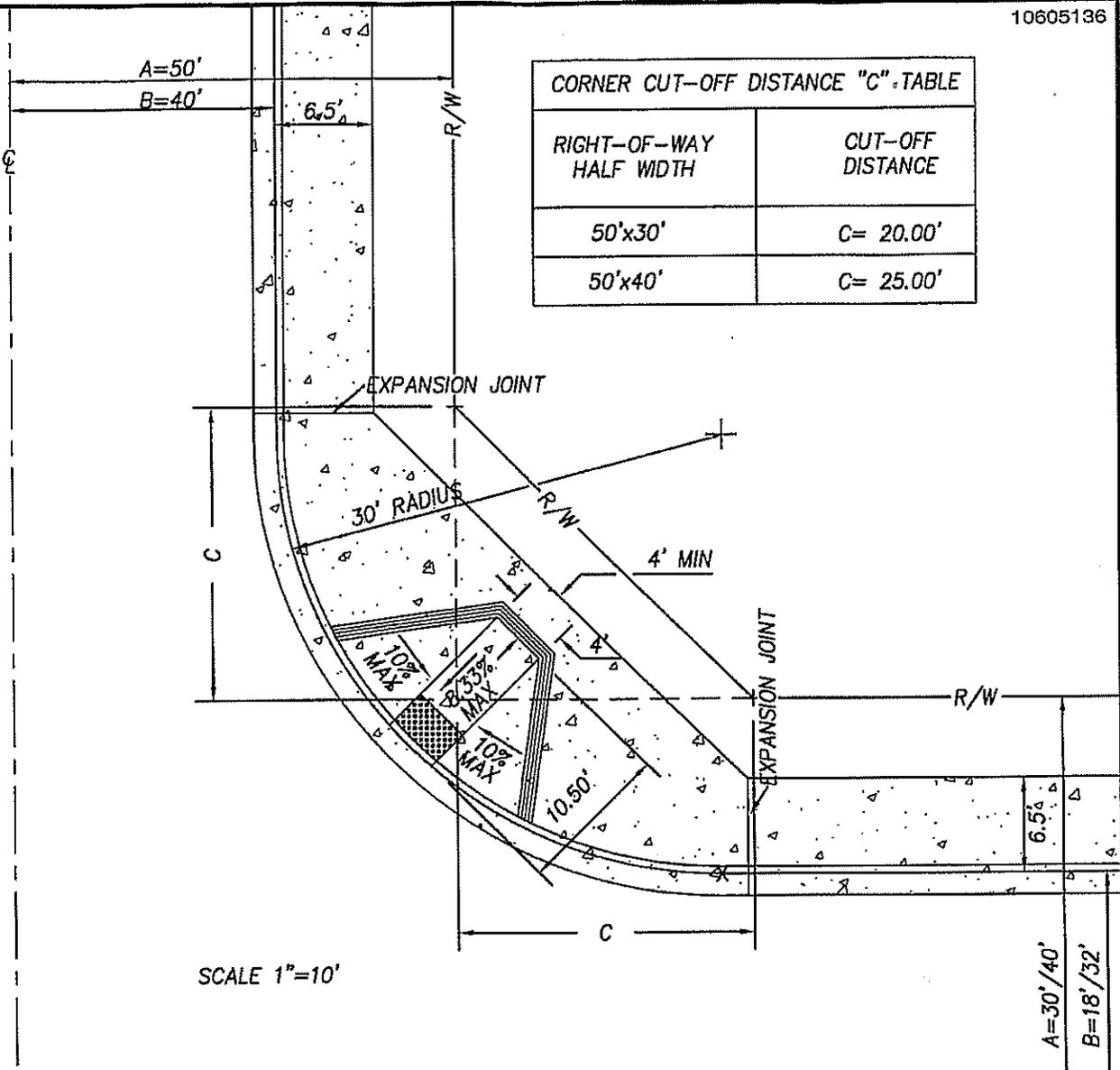
SCALE 1"=10'

NOTES:

1. Ramps shall be built and finished so that there are no abrupt changes in elevation or angle of slope.
2. Ramps shall be constructed with a heavy broom finish transverse to the axis of the ramp.
3. Sidewalk ramps are required at all corners where curbs and/or sidewalks are to be constructed or reconstructed and shall be as shown on the improvement plans.
4. Modifications to location or dimensions of ramp shall require approval of City Engineer and be shown on approved plan.
5. Thickness of concrete: 4" minimum.
6. Ramps shall meet A.D.A. requirements and Caltrans standard plan No. A88A.

* For half width R-O-W of 40/40 ft. radius shall be 30 ft.

CITY OF ADELANTO		25 FT. RADIUS CURB RETURN, SIDEWALK RAMP & CUT-OFF CORNER DETAILS	110 C
NOV. 2005	WILSON F. SO R.C.E. 21,651 CITY ENGINEER		

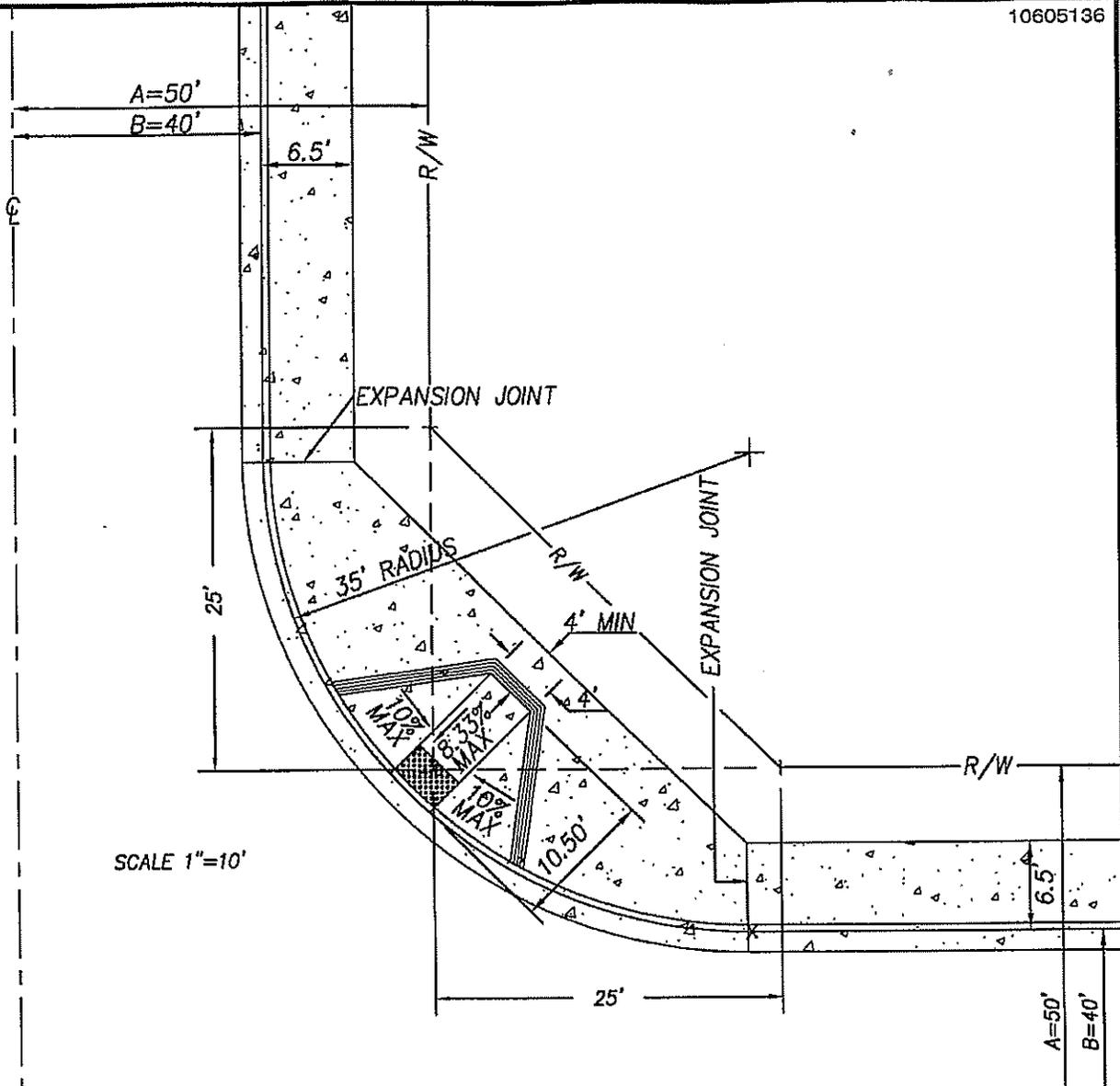


SCALE 1"=10'

NOTES:

1. Ramps shall be built and finished so that there are no abrupt changes in elevation or angle of slope.
2. Ramps shall be constructed with a heavy broom finish transverse to the axis of the ramp.
3. Sidewalk ramps are required at all corners where curbs and/or sidewalks are to be constructed or reconstructed and shall be as shown on the improvement plans.
4. Modifications to location or dimensions of ramp shall require approval of City Engineer and be shown on approved plan.
5. Thickness of concrete: 4" minimum.
6. Ramps shall meet A.D.A. requirements and Caltrans standard plan No. A88A.

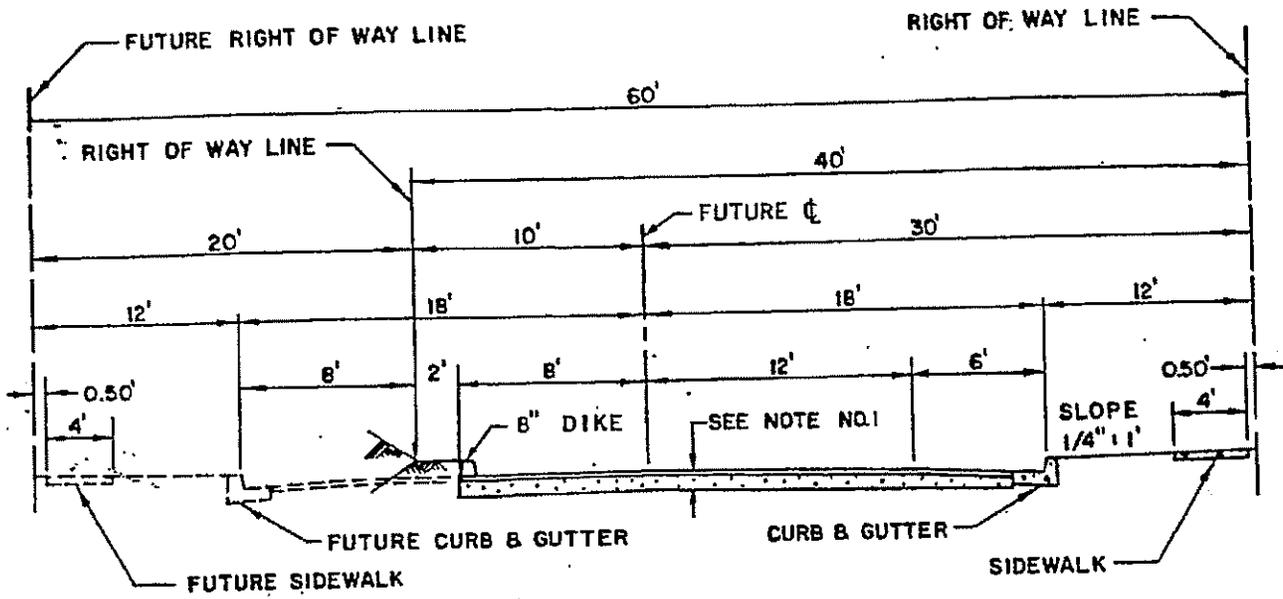
CITY OF ADELANTO		30 FT. RADIUS CURB RETURN, SIDEWALK RAMP & CUT-OFF CORNER DETAILS	110 D
NOV. 2005	WILSON F. SO R.C.E. 21,651 CITY ENGINEER		



NOTES:

1. Ramps shall be built and finished so that there are no abrupt changes in elevation or angle of slope.
2. Ramps shall be constructed with a heavy broom finish transverse to the axis of the ramp.
3. Sidewalk ramps are required at all corners where curbs and/or sidewalks are to be constructed or reconstructed and shall be as shown on the improvement plans.
4. Modifications to location or dimensions of ramp shall require approval of City Engineer and be shown on approved plan.
5. Thickness of concrete: 4" minimum.
6. This standard is applicable for intersections with right-of-ways equal or greater than major arterial (half width of 50 feet or more), except for connection to State Highway.
7. Ramps shall meet A.D.A. requirements and Caltrans standard plan No. A88A.

CITY OF ADELANTO		35 FT. RADIUS CURB RETURN, SIDEWALK RAMP & CUT-OFF CORNER DETAILS	110 E
NOV. 2005	WILSON F. SO R.C.E. 21,651 CITY ENGINEER		

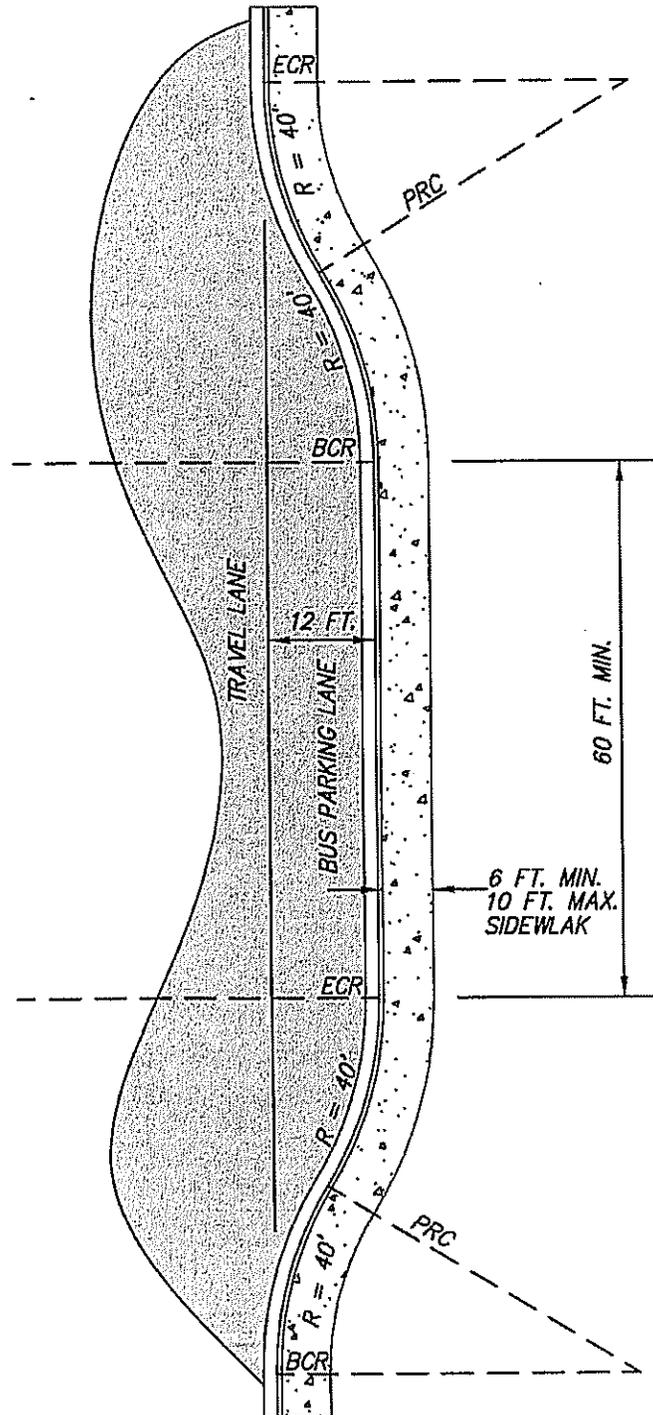


TYPICAL SECTION

NOTES

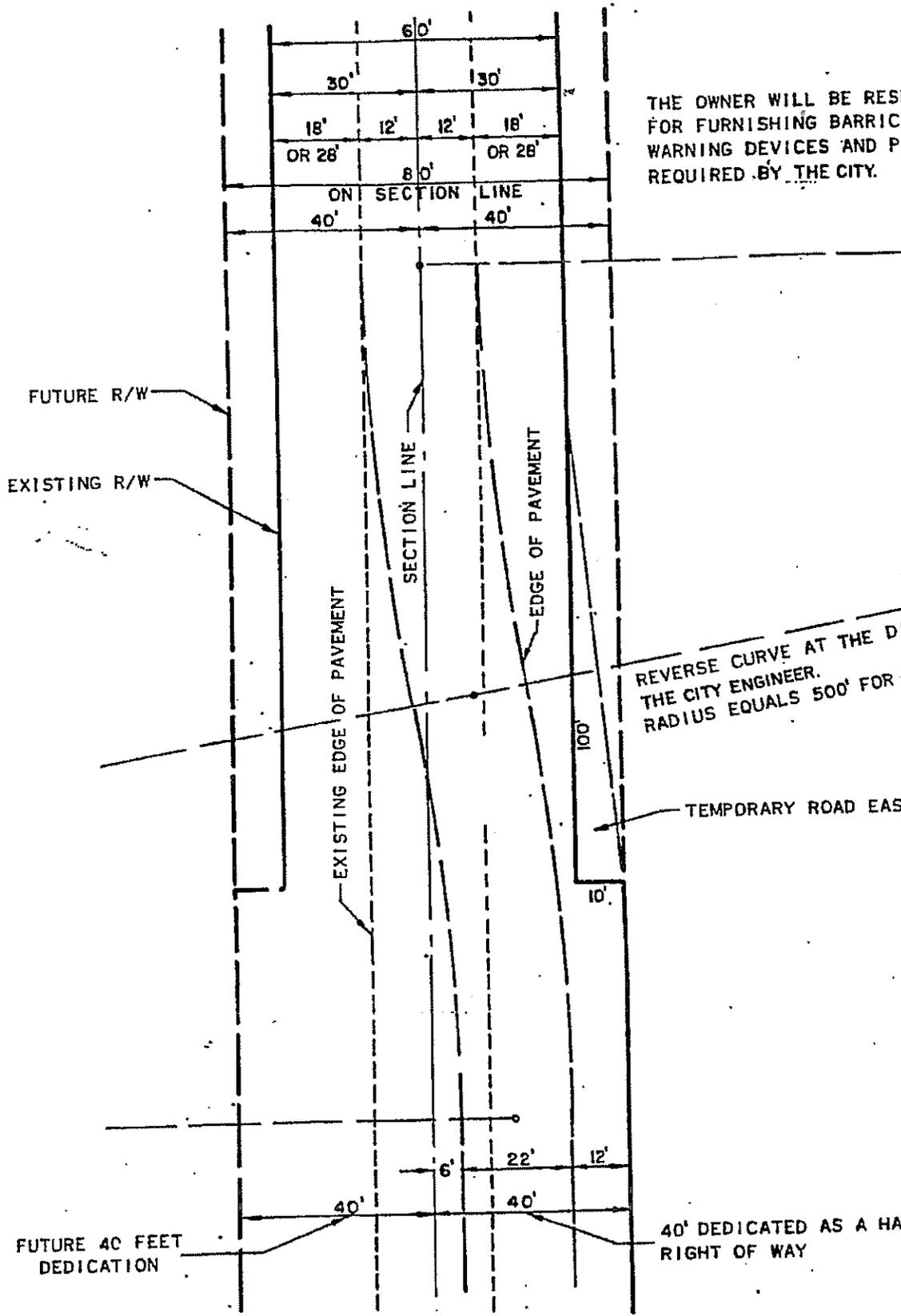
1. STRUCTURAL SECTION OF ROADWAY SHALL BE DETERMINED FROM SOILS TESTS AND SO INDICATED ON CONSTRUCTION PLANS.
2. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 1 1/2:1.
3. CONSTRUCTION OUTSIDE R/W LINE SHALL REQUIRE SLOPE EASEMENTS
4. ALL SECTIONS SHALL CONFORM TO STANDARD NO. 104.
5. SLOPE REQUIREMENT MAY BE VARIED BY SUBMISSION OF SOILS REPORT.

CITY OF ADELANTO		HALF WIDTH LOCAL STREET.	111
DATE: P.V.C. 5-69 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



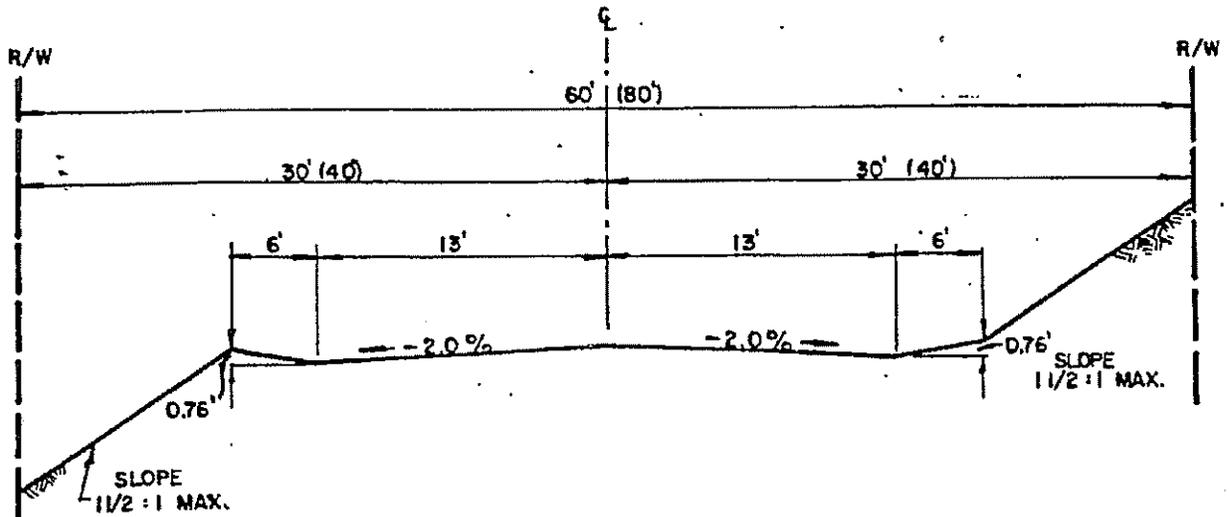
SCALE: 1" = 20'

CITY OF ADELANTO		BUS PARKING STANDARD	112
DEC. 28, 2004	WILSON F. SO R.C.E. 21,651 CITY ENGINEER		



THE OWNER WILL BE RESPONSIBLE FOR FURNISHING BARRICADES, WARNING DEVICES AND PAVING AS REQUIRED BY THE CITY.

CITY OF ADELANTO		HALF WIDTH DESERT ROAD	113
DATE: <u>2.21.05</u> <u>SCD 9/04</u>	RICHARD S. TITERA CITY ENGINEER		

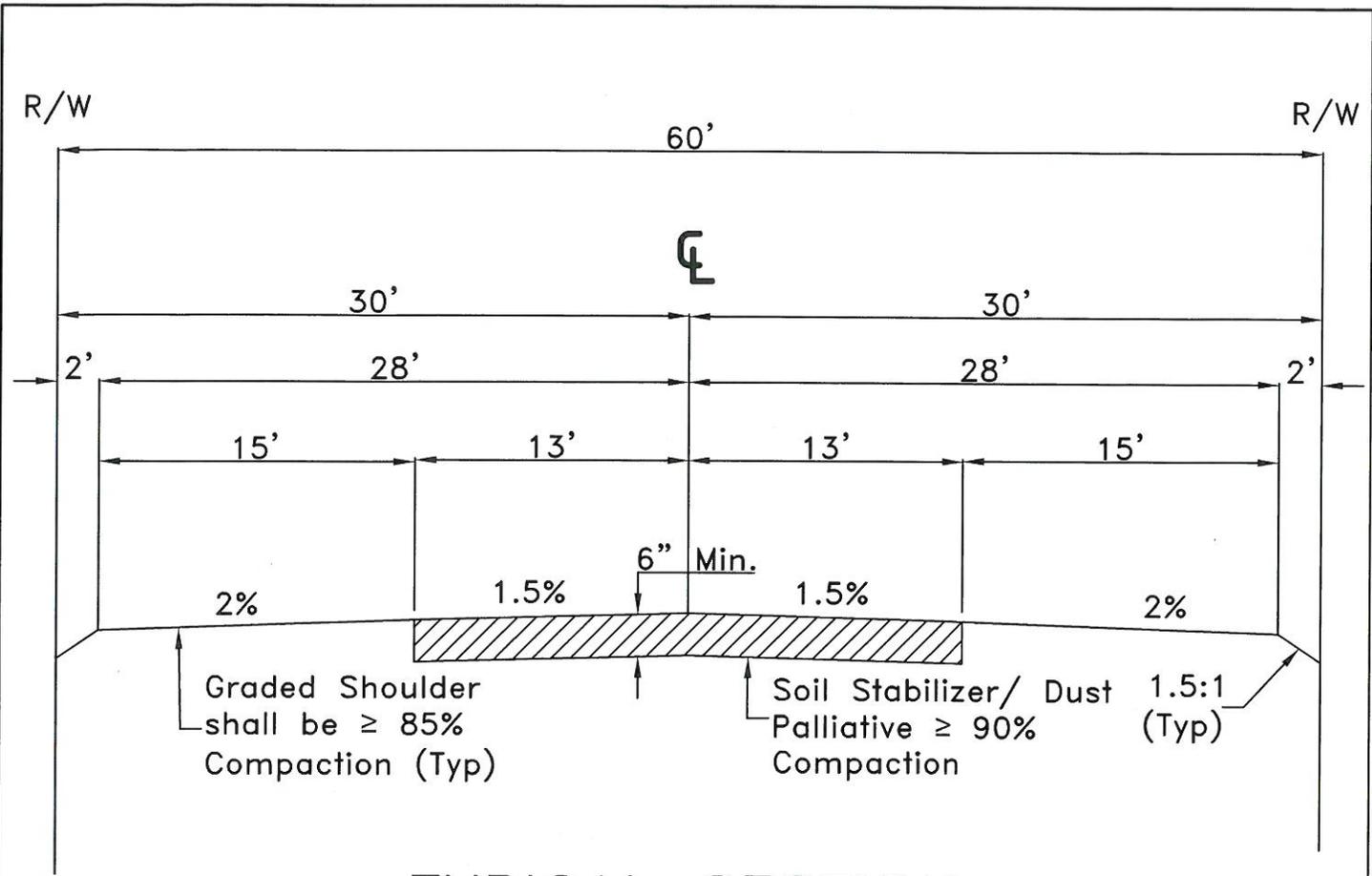


TYPICAL SECTION.

NOTES:

1. DRAINAGE IMPROVEMENTS TO BE PLACED WHERE REQUIRED BY PLAN.
2. EMBANKMENTS PLACED WITHIN AREA OF THE TRAVELLED WAY SHALL PROVIDE A STABLE ROADWAY.
3. PLANS SHALL INDICATE AREAS WHERE IMPORTED MATERIAL IS REQUIRED TO PROVIDE A STABLE ROADWAY.
4. CONSTRUCTION OUTSIDE R/W LINE SHALL REQUIRE SLOPE EASEMENTS.

CITY OF ADELANTO		GRADED ROAD	114
Rev. D-74 S.C.D. 8/84	RICHARD S. TITERA CITY ENGINEER		

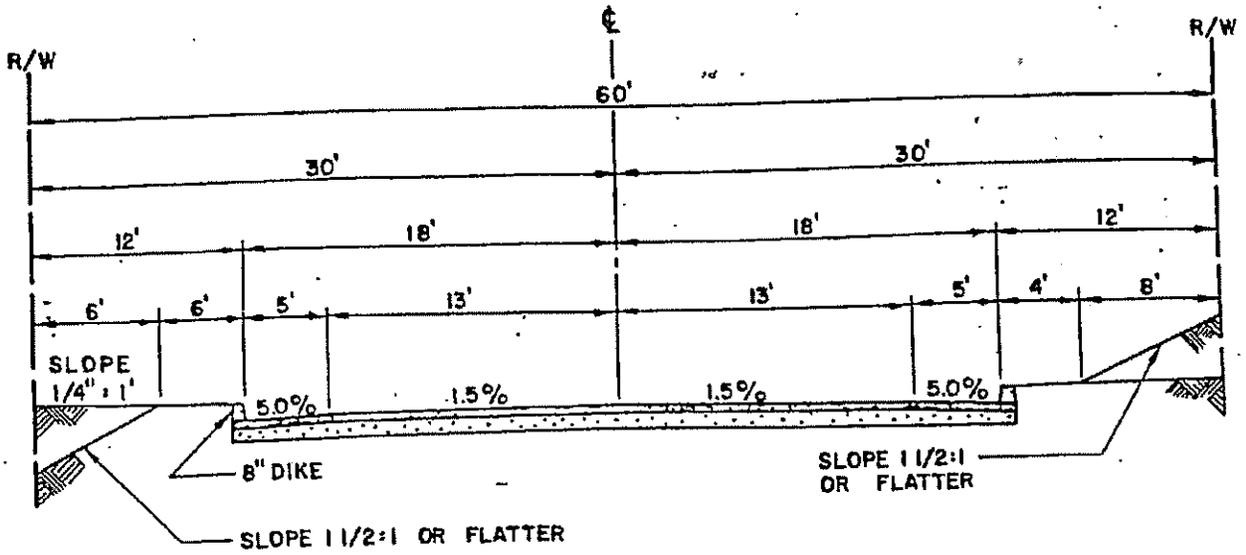


TYPICAL SECTION

NOTES:

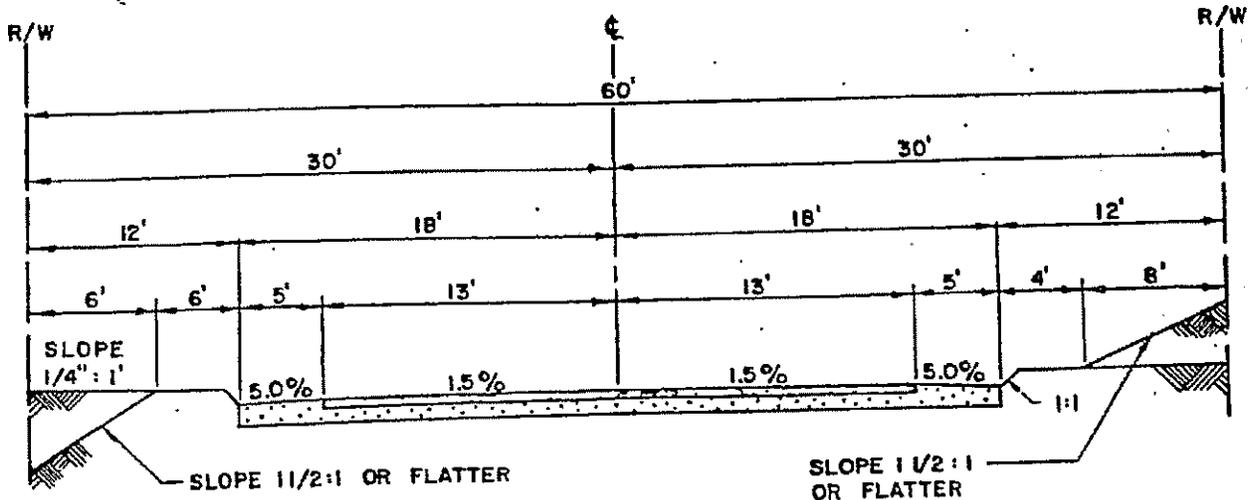
1. Drainage improvements to be placed where required by plan.
2. Graded Shoulders placed within the area of the traveled way shall provide a stable roadway $\geq 90\%$ compaction.
3. Plans shall indicate areas where imported material is required to provide a stable roadway.
4. Construction outside of the R/W line shall require slope easements.
5. Driveways shall maintain a minimum width of 24' with 6" minimum thickness treated with soil stabilizer/ dust palliative as shown above.
6. There shall be no planted trees, shrubs, or any other obstructions within 60' Taxi Road.
7. There shall be NO PARKING within 60' Taxi Roads
8. Taxiing aircraft shall have primary Right-of-Way. All Vehicles & Pedestrians shall move to the Right-of-Way Limits.

CITY OF ADELANTO – ENGINEERING					
REV.	BY	DATE		ADELANTO AIRPARK- AAPOA GRADED TAXI ROAD SECTION	114A
				WILSON SO, CITY ENGINEER	
SHEET 1 OF 1					



TYPICAL SECTION

WHERE REQUIRED FOR DRAINAGE PURPOSES



TYPICAL SECTION

NOTES:

1. STRUCTURAL SECTION OF ROADWAY SHALL BE DETERMINED FROM SOILS TESTS AND SO INDICATED ON CONSTRUCTION PLANS.
2. CONSTRUCTION OUTSIDE R/W LINE SHALL REQUIRE SLOPE EASEMENTS.
3. SLOPE REQUIREMENT MAY BE VARIED BY SUBMISSION OF SOILS REPORT.

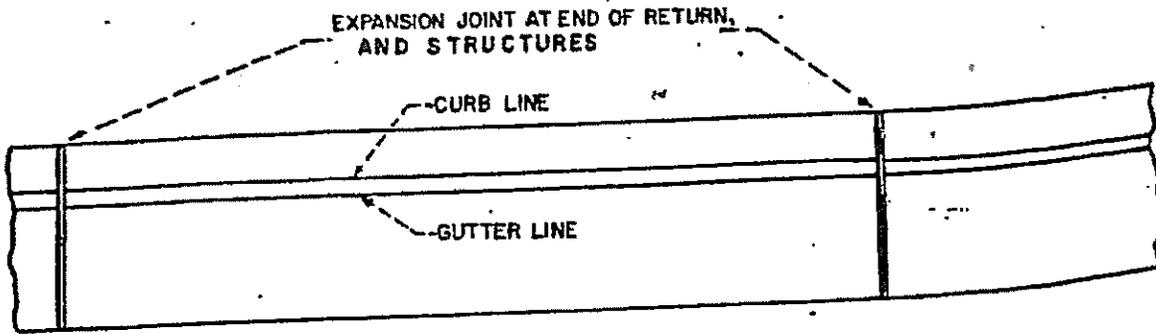
CITY OF ADELANTO

DATE: R.V.C. 5-83
SCD 9/84

RICHARD S. TITERA
CITY ENGINEER

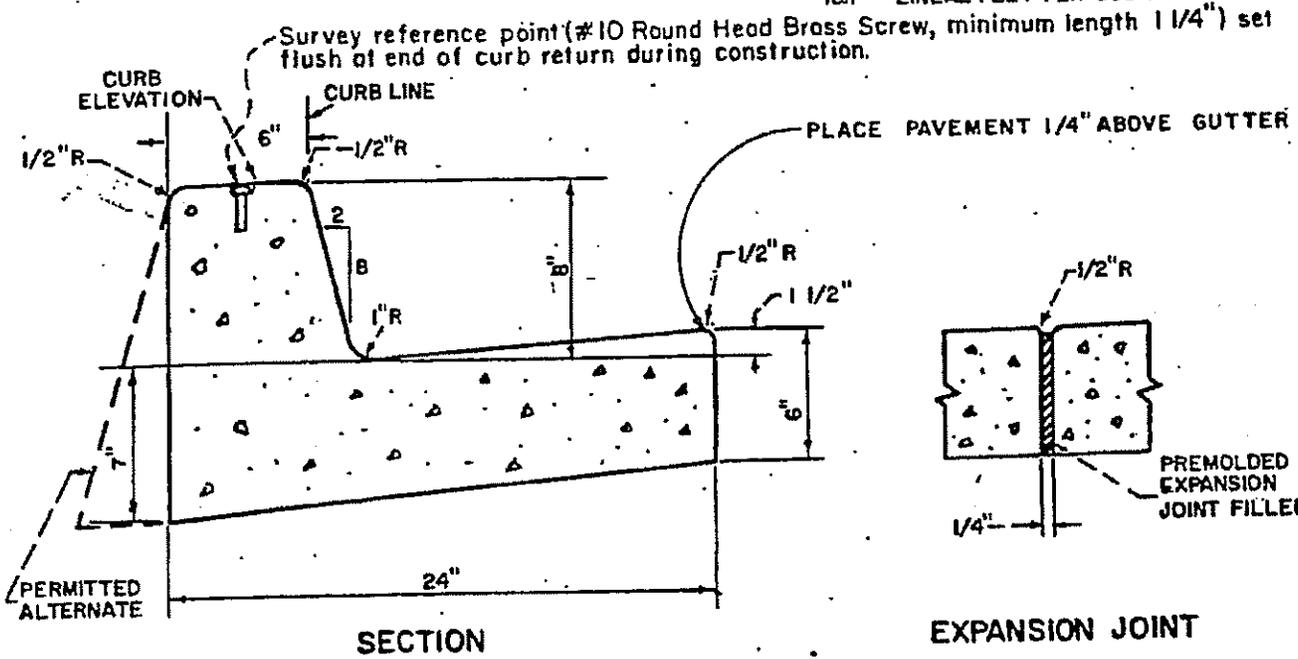
PAVED ROAD

114a



PLAN

0.0535 CUBIC YARDS PER LINEAL FOOT.
18.7 LINEAL FEET PER CUBIC YARD.



NOTES:

1. CURB AND GUTTER SHALL BE CONSTRUCTED MONOLITHICALLY OF CLASS "B" CONCRETE.
2. WIDTHS OF STANDARD STREET SECTIONS SHOWN ON PLANS ARE TO CURB LINE UNLESS OTHERWISE INDICATED.
3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 10-FOOT INTERVALS, EXCEPT THAT THE INTERVAL SHALL BE VARIED TO ALLOW MATCHING OF JOINTS IN ADJACENT EXISTING IMPROVEMENTS
4. CURING COMPOUND SHALL BE SPRAYED UNIFORMLY ON EXPOSED SURFACES.
5. WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE MINOR FINISHING MAY BE DONE TO PROVIDE AN ACCEPTABLE FINISH AND THE WEAKENED PLANE JOINTS MAY BE SAWCUT.

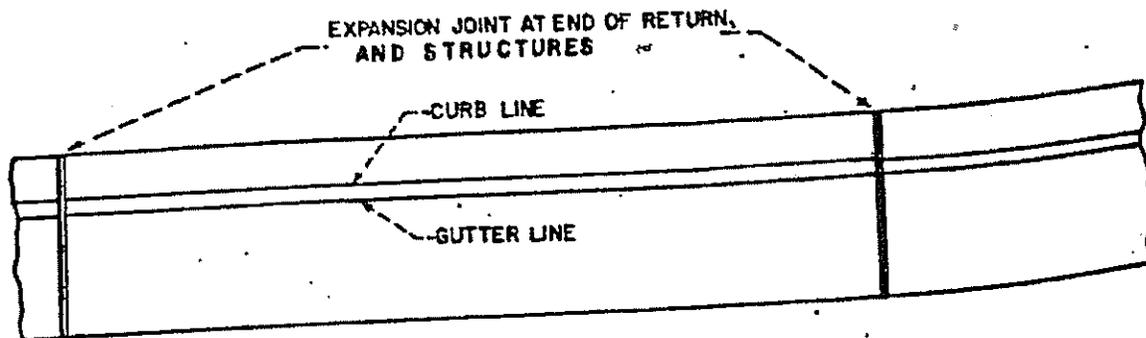
CITY OF ADELANTO

REV. V.E.H. 3-74
REV. V.E.H. 7-76
REV. V.E.H. 2-79
SED 9/84

RICHARD S. TITERA
CITY ENGINEER

8"
CURB AND GUTTER

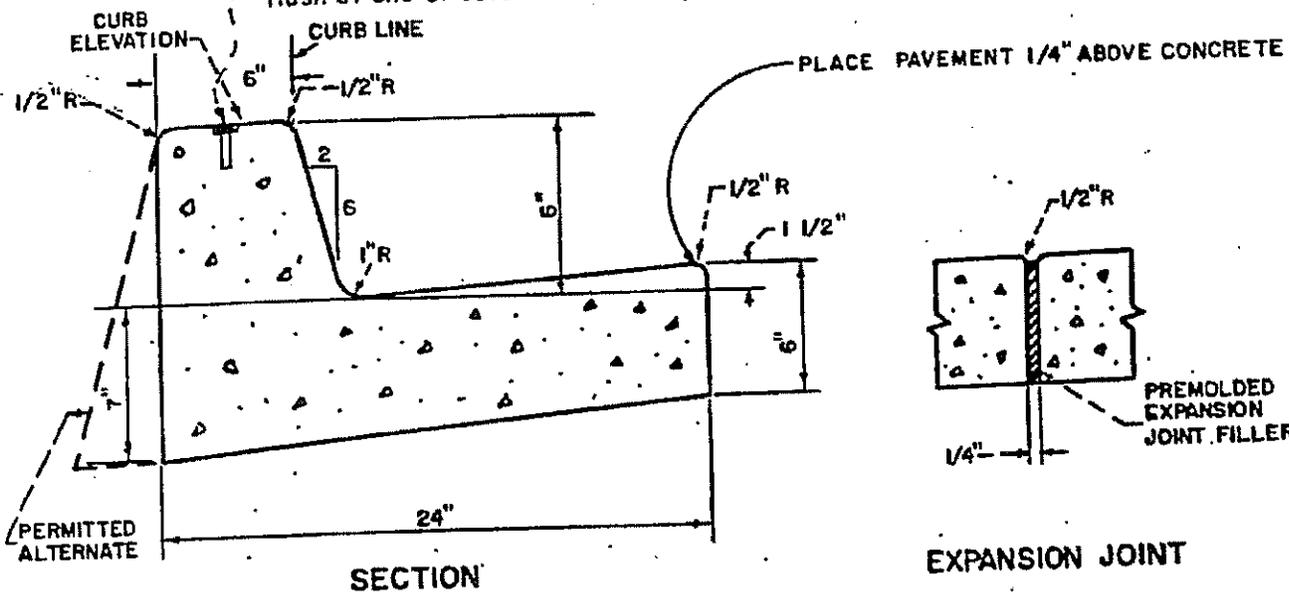
115



PLAN

0.0495 CUBIC YARDS PER LINEAL FOOT.
20.2 LINEAL FEET PER CUBIC YARD.

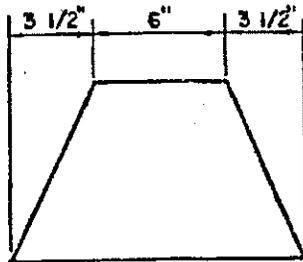
Survey reference point (#10 Round Head Brass Screw, minimum length 1 1/4") set flush at end of curb return during construction.



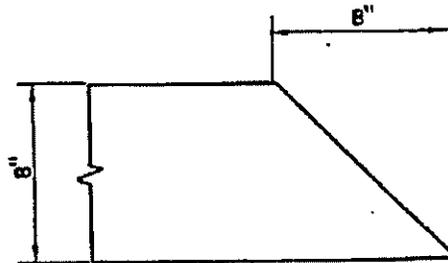
NOTES:

1. 6" CURB SHALL ONLY BE USED ON LOCAL STREETS WHERE DRAINAGE PERMITS.
2. CURB AND GUTTER SHALL BE CONSTRUCTED MONOLITHICALLY OF CLASS "B" CONCRETE.
3. WIDTHS OF STANDARD STREET SECTIONS SHOWN ON PLANS ARE TO CURB LINE UNLESS OTHERWISE INDICATED.
4. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 10-FOOT INTERVALS, EXCEPT THAT THE INTERVAL SHALL BE VARIED TO ALLOW MATCHING OF JOINTS IN ADJACENT EXISTING IMPROVEMENTS.
5. CURING COMPOUND SHALL BE SPRAYED UNIFORMLY ON EXPOSED SURFACES.
6. WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE MINOR FINISHING MAY BE DONE TO PROVIDE AN ACCEPTABLE FINISH AND THE WEAKENED PLANE JOINTS MAY BE SAWCUT.

CITY OF ADELANTO		6" CURB AND GUTTER	116
APPR 3-75 REV. VEH 2-79 SCD. 9/84	RICHARD S. TITERA CITY ENGINEER		



SECTION



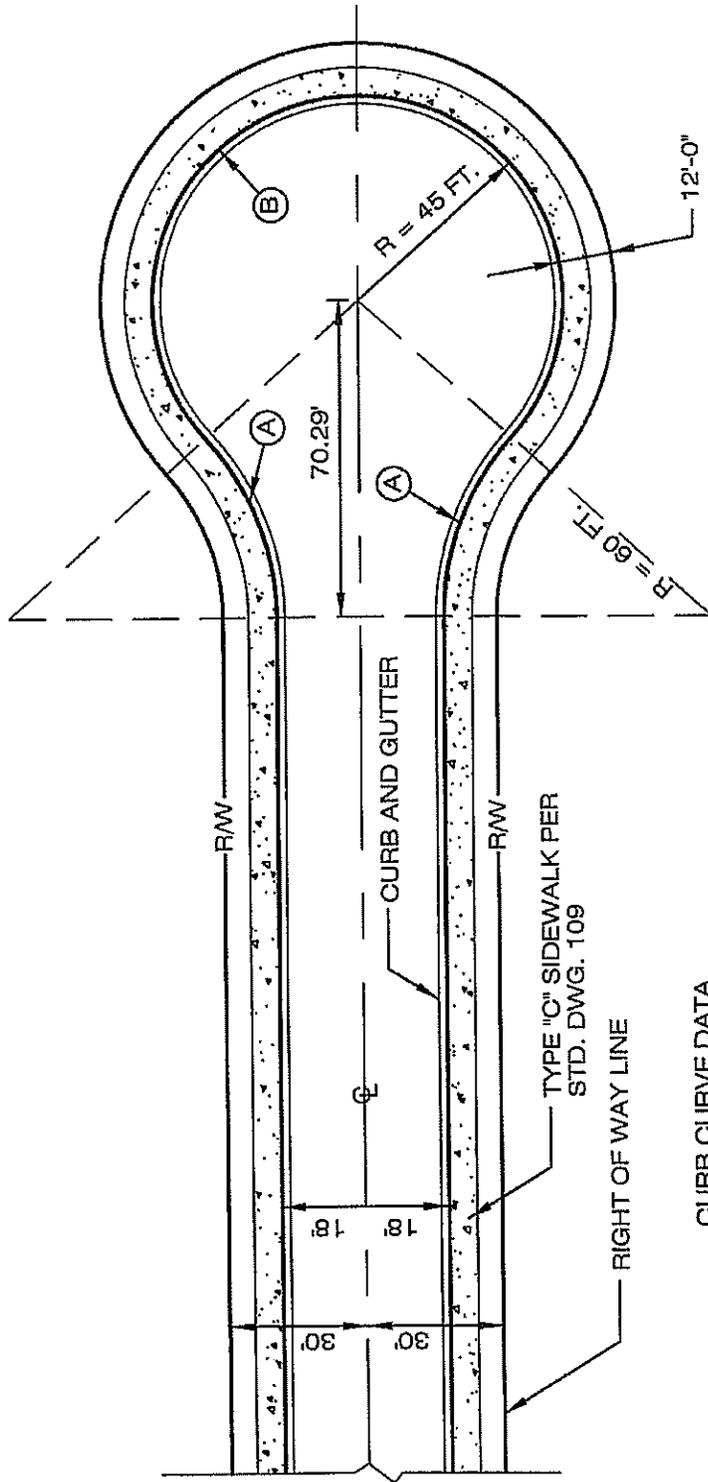
END CUTOFF

8" DIKE

NOTES:

1. DIKE SHALL BE CONSTRUCTED OF TYPE B ASPHALT CONCRETE.
2. PAINT BINDER SHALL BE PLACED ON EXISTING ASPHALT CONCRETE PAVEMENT PRIOR TO THE INSTALLATION OF THE DIKE.

CITY OF ADELANTO		ASPHALT CONCRETE DIKE	117
DATE F.V.C. 6-85 SCD 9/84	RICHARD S. TITERA CITY ENGINEER		



CURB CURVE DATA

- (A) $\Delta = 42^\circ 1' 29''$
 $R = 60.00 \text{ FT.}$
 $T = 23.05 \text{ FT.}$
 $L = 44.01 \text{ FT.}$
- (B) $\Delta = 264^\circ 2' 57''$
 $R = 45.00 \text{ FT.}$
 $L = 207.39 \text{ FT.}$

PLAN

SCALE: 1" = 40'-0"

NOTES:

1. 0.6% GRADE MIN. ON GUTTER OF BULB.

CITY OF ADELANTO

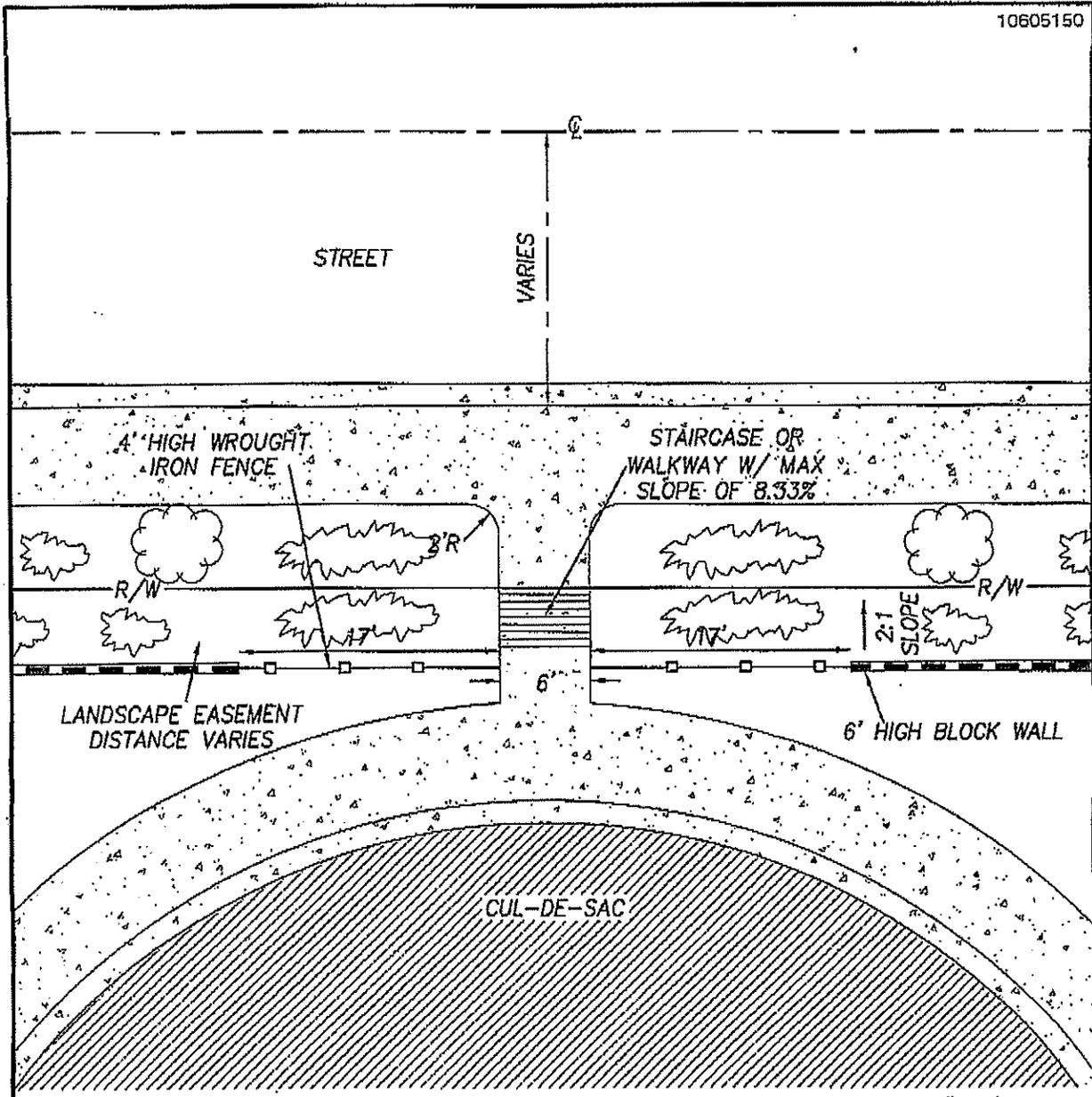
AUG. 2005

WILSON F. SO
 R.C.E. 21,651 CITY ENGINEER

CUL-DE-SAC

120A

10605150

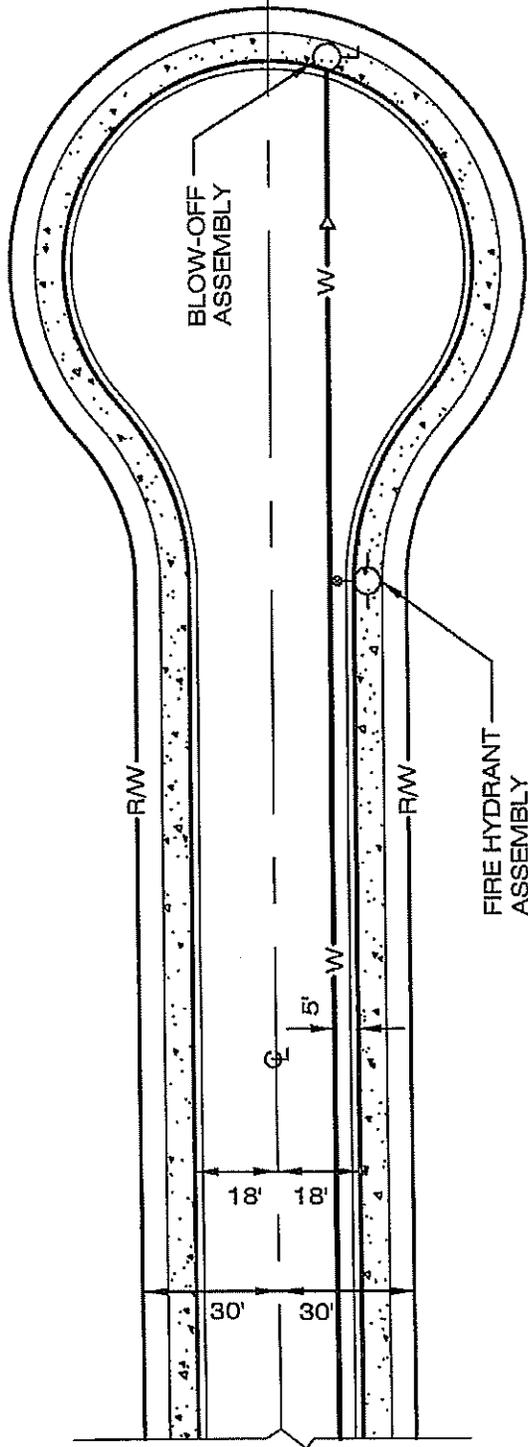


NOTES:

1. Walkway shall be built and finished so that there are no abrupt changes in elevation or angle of slope.
2. Walkway shall be constructed with a heavy broom finish transverse to the axis of the ramp.
3. Modifications to location or dimensions of ramp shall require approval of City Engineer and be shown on approved plan.
4. Thickness of concrete: 4" minimum.

SCALE: 1"=10'

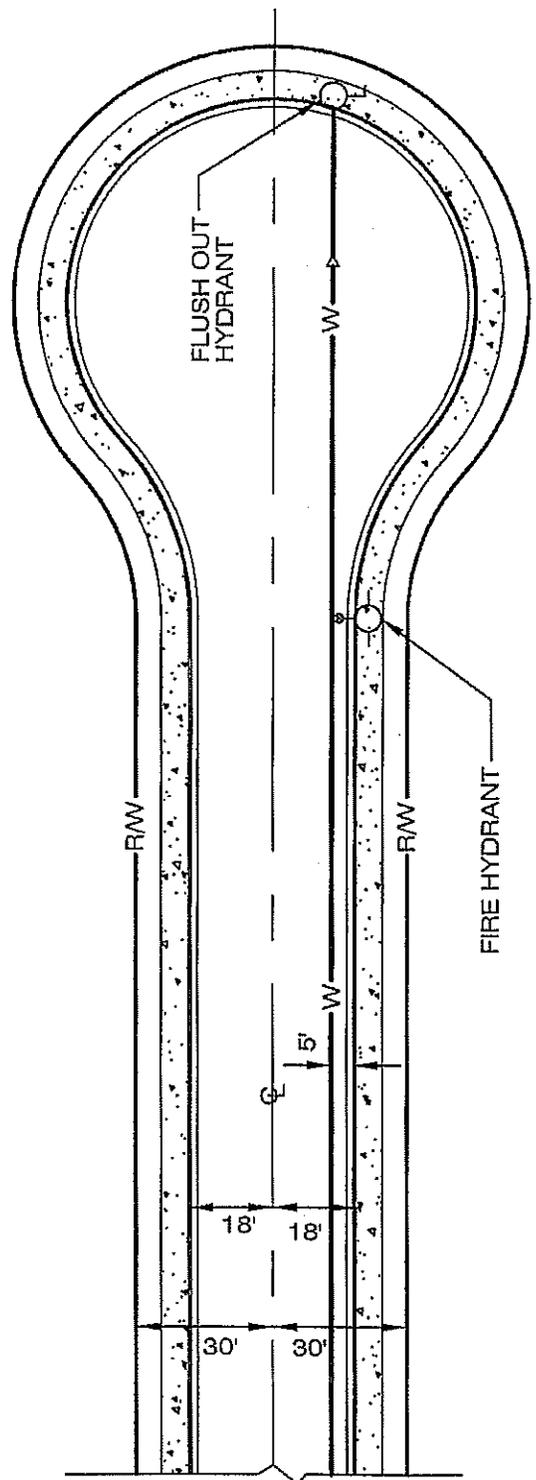
CITY OF ADELANTO		OPENING AT CUL-DE-SAC	120 B
DEC. 2005	WILSON F. SO R.C.E. 21,651 EXP. 9/30/07 CITY ENGINEER		



NOTES:

- 1. LOCATE FIRE HYDRANT OUTSIDE CUL-DE-SAC ON LOT LINE.
- 2. PROVIDE BLOW-OFF ASSEMBLY PER CITY STD. PLATE 3 AT END OF WATER MAIN ON LOT LINE.

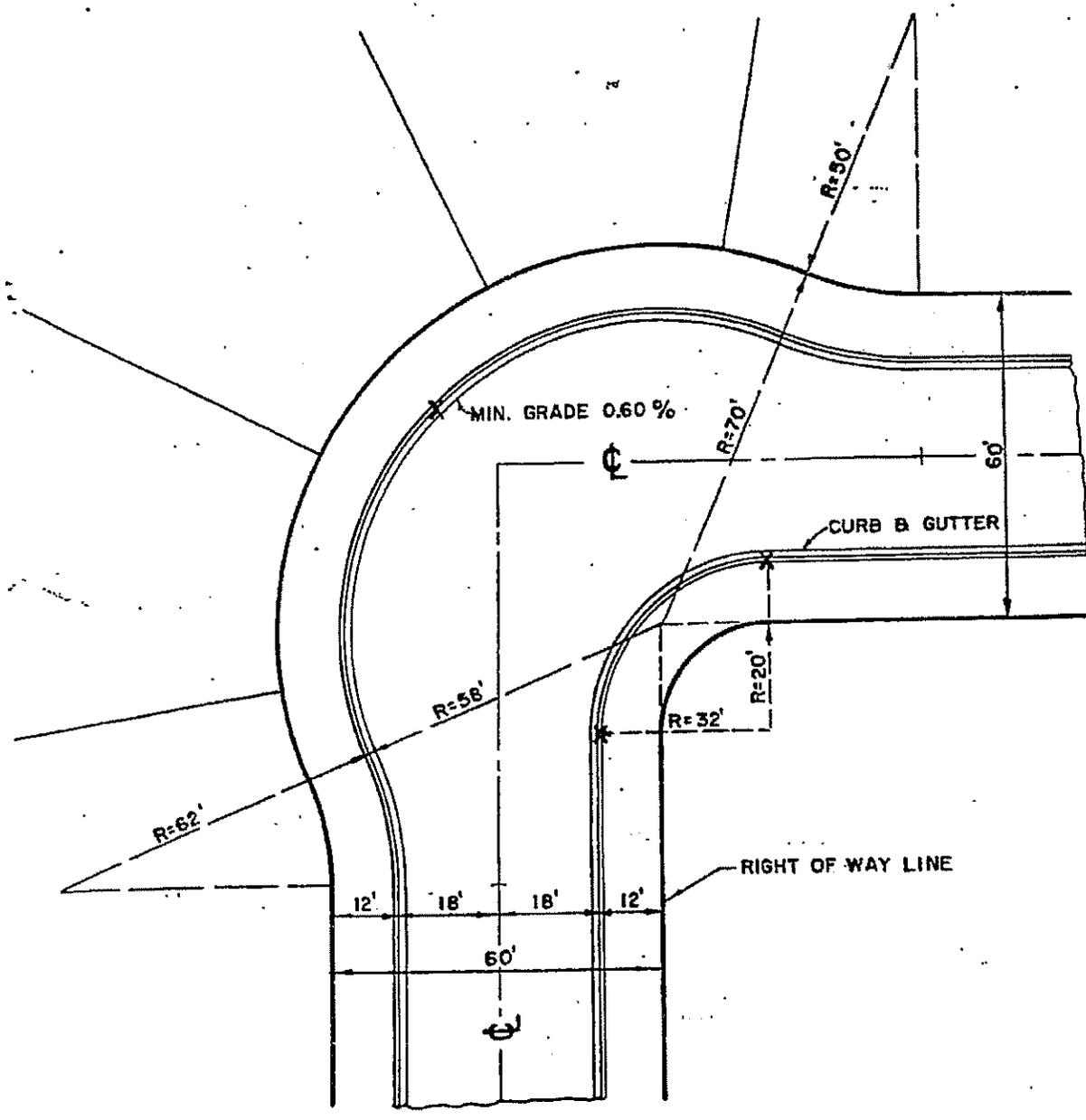
CITY OF ADELANTO		HYDRANT LOCATION IN CUL-DE-SAC	120C
FEB. 2006	WILSON F. SO R.O.E. 21,651 CITY ENGINEER		



NOTES:

- 1. LOCATE FIRE HYDRANT OUTSIDE CUL-DE-SAC ON LOT LINE.
- 2. PROVIDE FLUSH OUT FIRE HYDRANT AT END OF WATER MAIN ON LOT LINE.

CITY OF ADELANTO		HYDRANT LOCATION IN CUL-DE-SAC	120D
FEB. 2006	WILSON F. SO CITY ENGINEER		

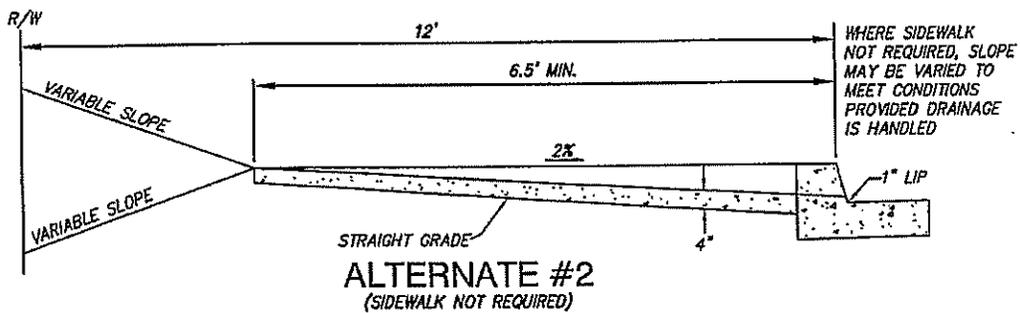
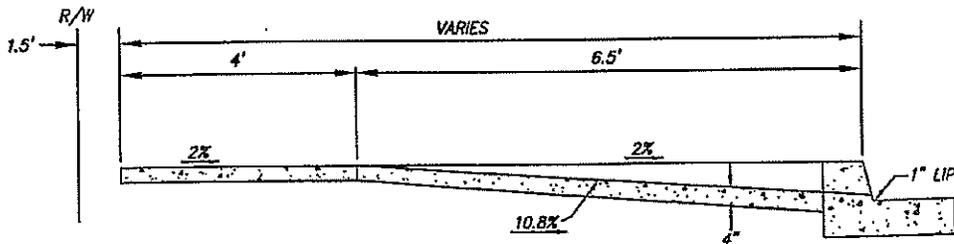
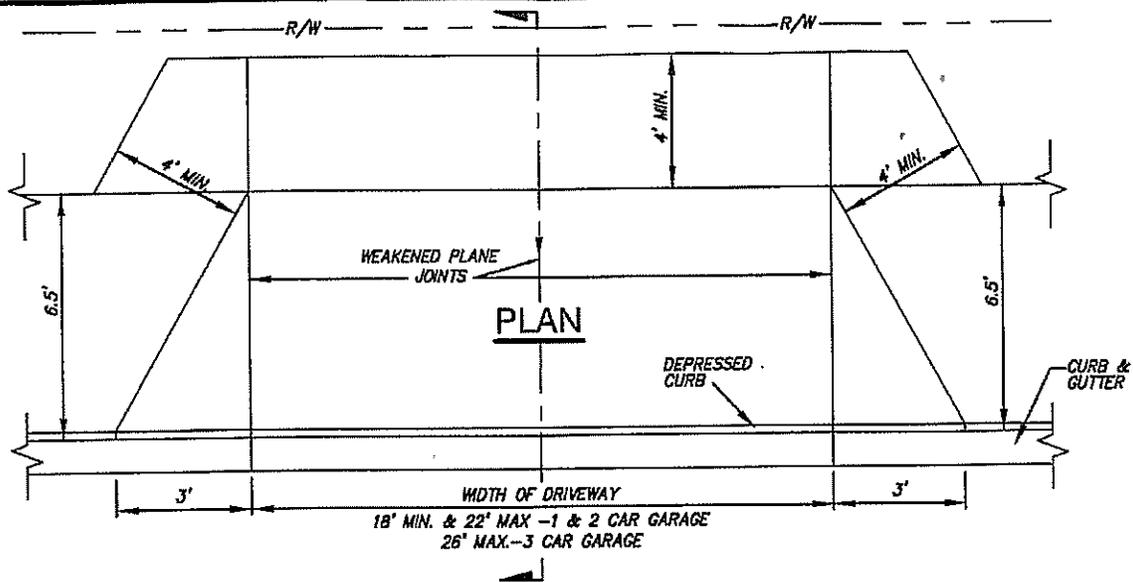


PLAN

NOTES:

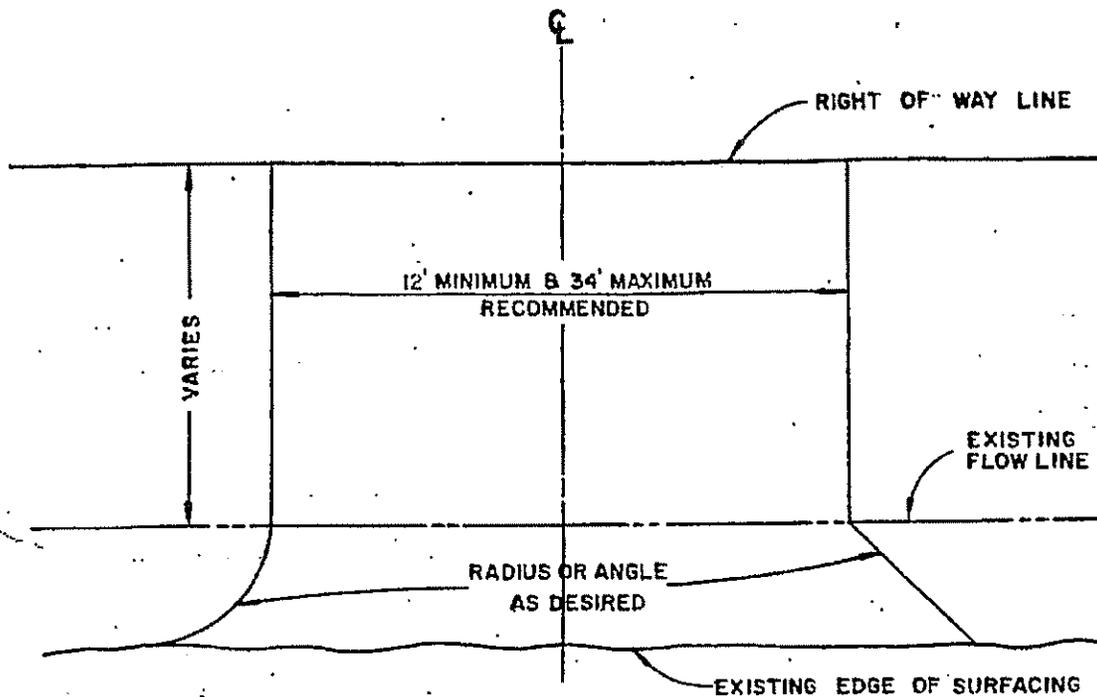
1. MINIMUM 0.60% ON ALL HORIZONTAL CURVE GRADES.
2. SEE STANDARD NO. 104 FOR TYPICAL SECTION.
3. X Indicates position of survey reference point (#10 Round Head Brass Screw, minimum length 1/4") set flush with top of curb during construction.

CITY OF ADELANTO		INTERSECTION DESIGN "L" SHAPE	121
DATE: E.V.C. 4-69 Rev. V.F.H. 2-79 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		

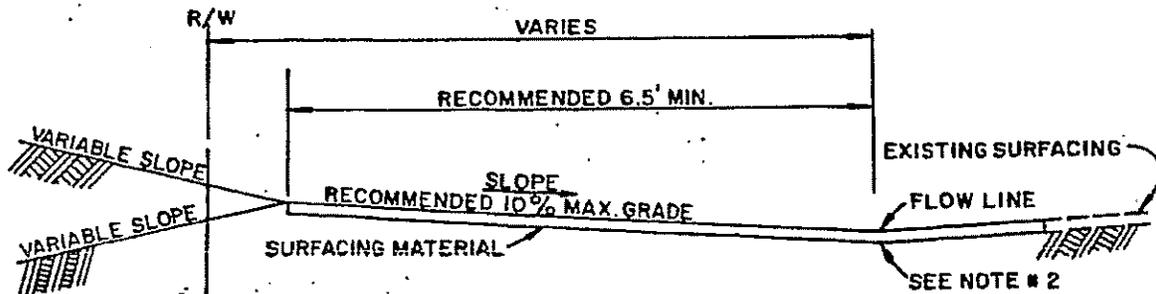


1. DRIVEWAY APPROACHES SHALL BE CONSTRUCTED OF CLASS "B" CONCRETE (5 SACK CEMENT) FOUR INCHES THICK.
2. BROOM FINISH IS REQUIRED.
3. DRIVEWAY APPROACH CONSTRUCTION IS REQUIRED FOR ALL DEPRESSED CURB OPENINGS.
4. ON A SINGLE LOT WHEN MORE THAN ONE DRIVEWAY APPROACH IS TO BE CONSTRUCTED, THE MINIMUM DISTANCE BETWEEN DRIVEWAY APPROACHES SHALL BE TEN FEET AND THE MINIMUM DISTANCE BETWEEN CURB RETURN AND DRIVEWAY SHALL BE FIVE FEET.
5. TO PROVIDE DRIVEWAY APPROACH THROUGH EXISTING CURB AND GUTTER, THE EXISTING CURB AND GUTTER SHALL BE SAW CUT AND REMOVED FOR THE NECESSARY WIDTH, OR REMOVED AND REBUILT TO THE NEAREST JOINT.
6. ASPHALT OR BITUMINOUS MATERIALS (MINIMUM 2 1/2" THICKNESS) MAY BE PERMITTED IN LIEU OF PORTLAND CEMENT CONCRETE; BUT ONLY TO CONFORM TO ESTABLISHED NEIGHBORHOOD PATTERNS, AND ONLY FOR SINGLE LOT DEVELOPMENT.
7. ON EXISTING CITY MAINTAINED ROADS, DRIVEWAYS WIDER THAN STANDARD MAY BE APPROVED BY PERMIT.

CITY OF ADELANTO		RESIDENTIAL DRIVEWAY WITH CURB & GUTTER FOR LOCAL STREET	128
APR. 3-75	WILSON F. SO		
MAY 1976	R.C.E. 21,651 CITY ENGINEER		
JUNE 5, 1978			
APR 5, 2006			



PLAN



SECTION

1. DRIVEWAY APPROACH MAY BE PAVED WITH BITUMINOUS PAVING (MINIMUM 2 1/2" THICKNESS) OR MAY BE UNPAVED.
2. EXISTING DRAINAGE FLOWLINE GRADE SHALL BE MAINTAINED. DRIVEWAY APPROACH CONSTRUCTION SHALL NOT CAUSE CUTTING OR FILLING INTO ANY PORTION OF THE MAINTAINED ROADWAY.
3. WHERE EXISTING BITUMINOUS BERM IS REMOVED, DRIVEWAY APPROACH SHALL BE GRADED AND PAVED TO AN ELEVATION EQUAL TO THE HEIGHT OF BERM REMOVED TO CONTROL DRAINAGE.
4. PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTAINING DRIVEWAY APPROACHES.

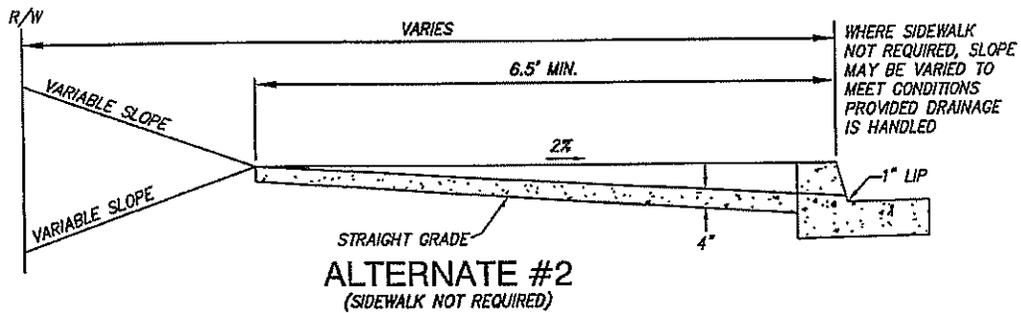
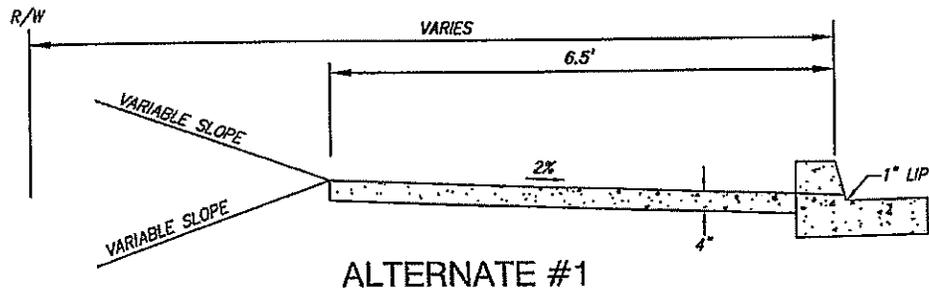
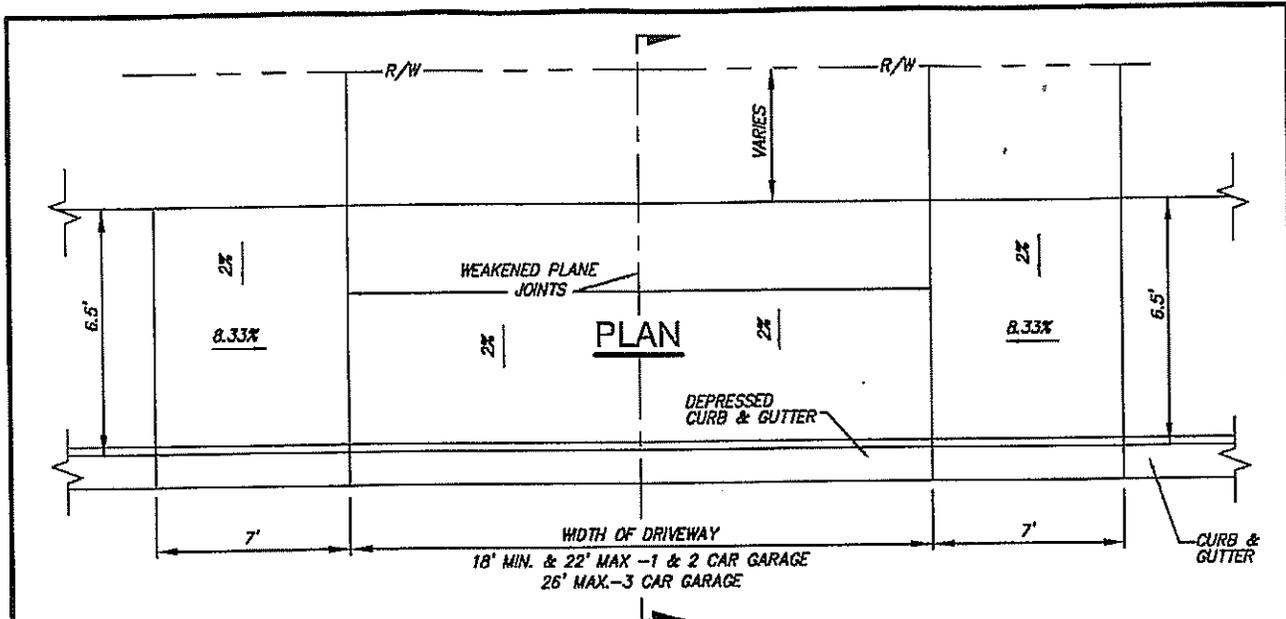
CITY OF ADELANTO

DATE: J.E.M. 7-66
L.J.F. 7-74
L.J.F. 9-74
S.C.D. 9/84

RICHARD S. TITERA
CITY ENGINEER

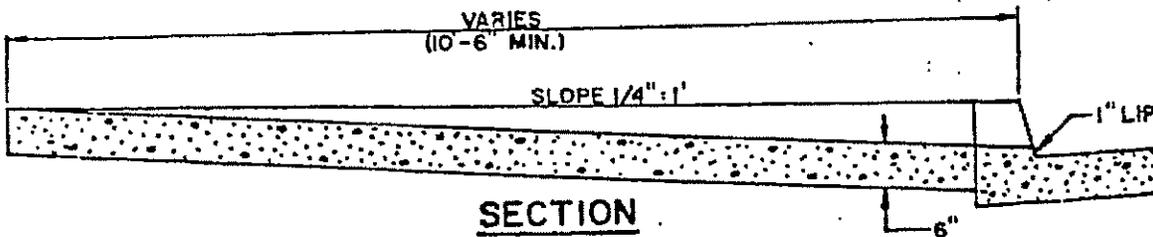
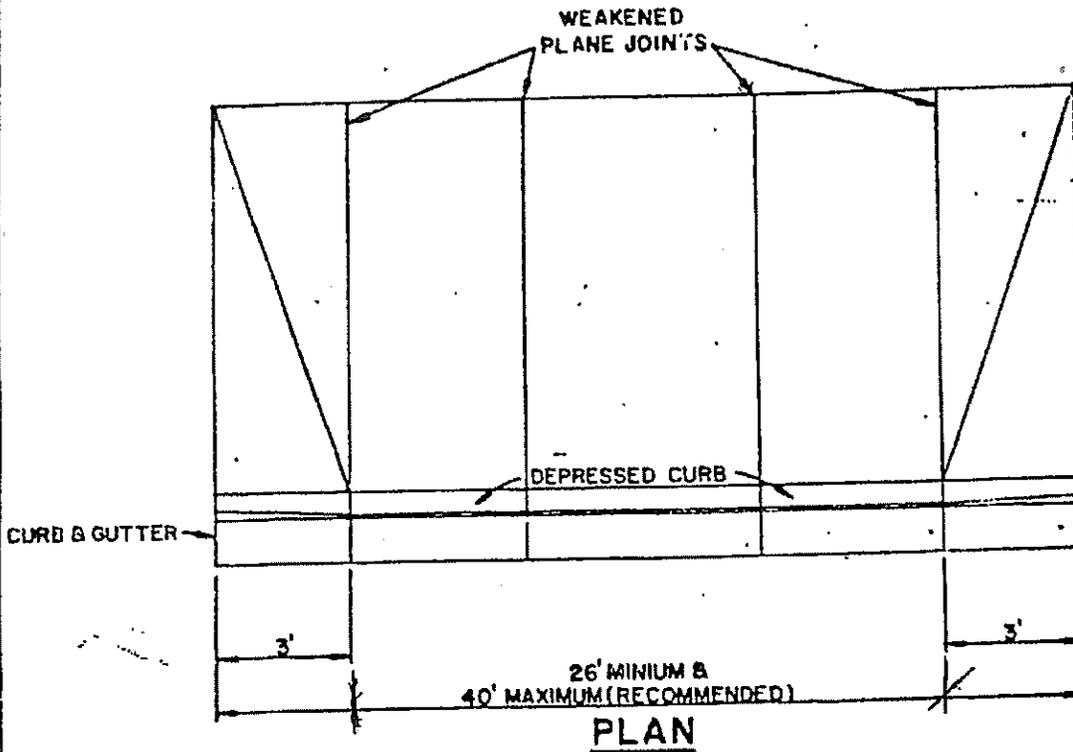
**RESIDENTIAL DRIVEWAY
WITHOUT CURB & GUTTER**

128 0



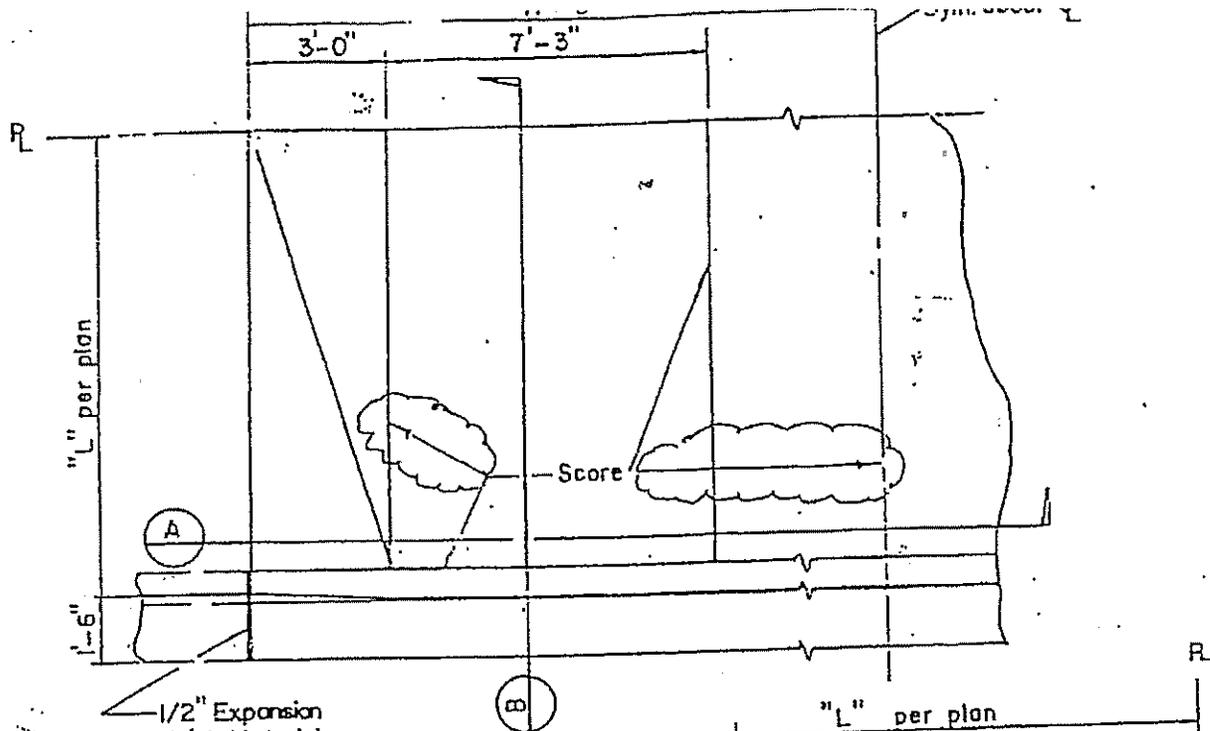
1. DRIVEWAY APPROACHES SHALL BE CONSTRUCTED OF CLASS "B" CONCRETE (5 SACK CEMENT) FOUR INCHES THICK.
2. BROOM FINISH IS REQUIRED.
3. DRIVEWAY APPROACH CONSTRUCTION IS REQUIRED FOR ALL DEPRESSED CURB OPENINGS.
4. ON A SINGLE LOT WHEN MORE THAN ONE DRIVEWAY APPROACH IS TO BE CONSTRUCTED, THE MINIMUM DISTANCE BETWEEN DRIVEWAY APPROACHES SHALL BE TEN FEET AND THE MINIMUM DISTANCE BETWEEN CURB RETURN AND DRIVEWAY SHALL BE FIVE FEET.
5. TO PROVIDE DRIVEWAY APPROACH THROUGH EXISTING CURB AND GUTTER, THE EXISTING CURB AND GUTTER SHALL BE SAW CUT AND REMOVED FOR THE NECESSARY WIDTH, OR REMOVED AND REBUILT TO THE NEAREST JOINT.
6. ASPHALT OR BITUMINOUS MATERIALS (MINIMUM 2 1/2" THICKNESS) MAY BE PERMITTED IN LIEU OF PORTLAND CEMENT CONCRETE; BUT ONLY TO CONFORM TO ESTABLISHED NEIGHBORHOOD PATTERNS, AND ONLY FOR SINGLE LOT DEVELOPMENT.
7. ON EXISTING CITY MAINTAINED ROADS, DRIVEWAYS WIDER THAN STANDARD MAY BE APPROVED BY PERMIT.

CITY OF ADELANTO		RESIDENTIAL DRIVEWAY WITH CURB & GUTTER FOR 80' & 100' R/W STREET	128B
APR 5, 2006	WILSON F. SO R.C.E. 21,651 CITY ENGINEER		



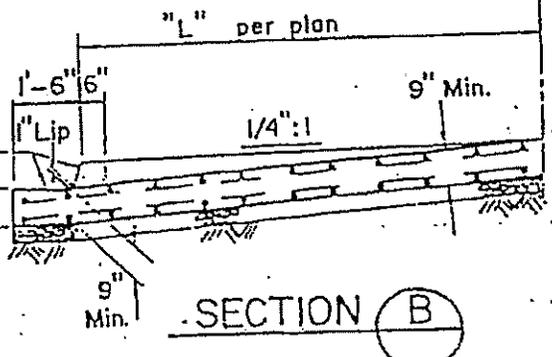
1. DRIVEWAY APPROACHES SHALL BE CONSTRUCTED OF CLASS "B" CONCRETE (5 SACK CEMENT) SIX INCHES THICK.
2. BROOM FINISH REQUIRED.
3. DRIVEWAY APPROACH CONSTRUCTION IS REQUIRED FOR ALL DEPRESSED CURB OPENINGS.
4. ON A SINGLE LOT WHEN MORE THAN ONE DRIVEWAY APPROACH IS TO BE CONSTRUCTED, THE MINIMUM DISTANCE BETWEEN DRIVEWAY APPROACHES SHALL BE TEN FEET AND THE MINIMUM DISTANCE BETWEEN CURB RETURN AND DRIVEWAY APPROACH SHALL BE FIVE FEET EXCEPT MAJOR & SECONDARY HIGHWAYS.
5. TO PROVIDE DRIVEWAY APPROACH THROUGH EXISTING CURB AND GUTTER; THE EXISTING CURB AND GUTTER SHALL BE SAW CUT AND REMOVED FOR THE NECESSARY WIDTH OR REMOVED AND RE-BUILT TO THE NEAREST JOINT.
6. ON MAJOR AND SECONDARY HIGHWAYS THE MINIMUM DISTANCE BETWEEN CURB RETURN AND DRIVEWAY APPROACH SHALL BE THIRTY FEET.

CITY OF ADELANTO		COMMERCIAL DRIVEWAY	129
APPR 3-75 SCD 9, '84	RICHARD S. TITERA CITY ENGINEER		



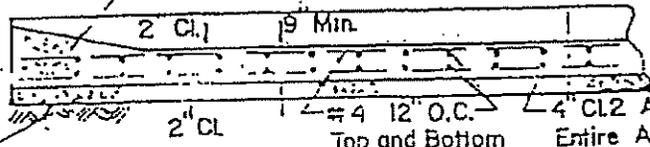
PLAN VIEW

Curb Face and Gutter Profile Same as City Std. 115



SECTION B

Class 'A' Conc.



SECTION A

95% Compacted Subgrade Typical Entire Area of Driveway ((L+1.5') x 35'-0" min.)

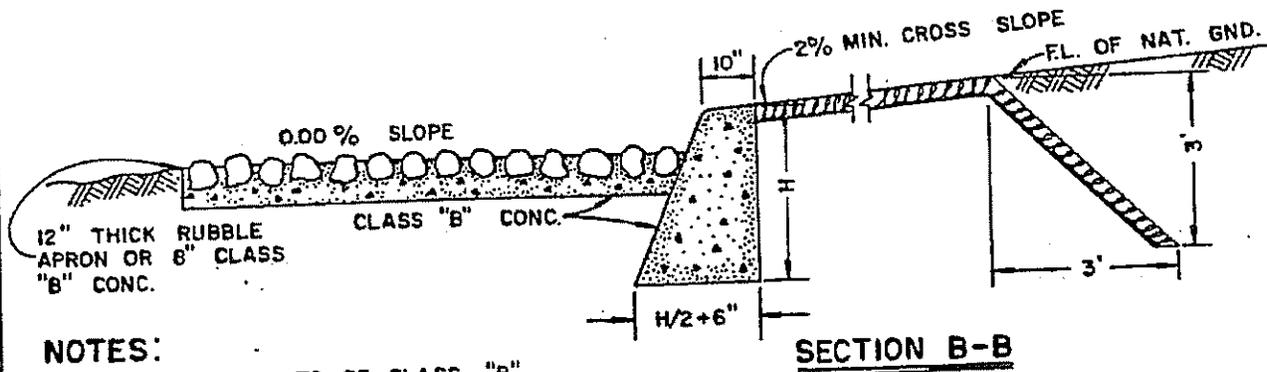
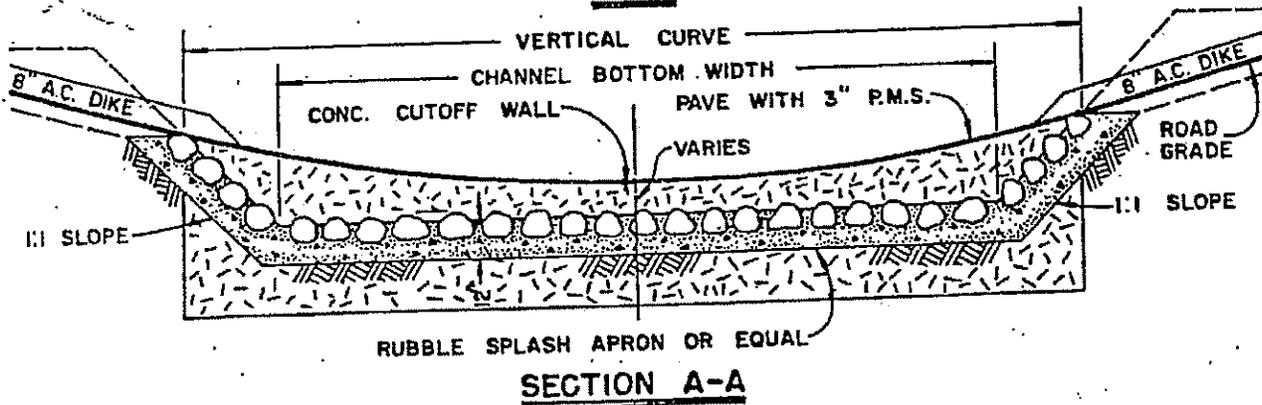
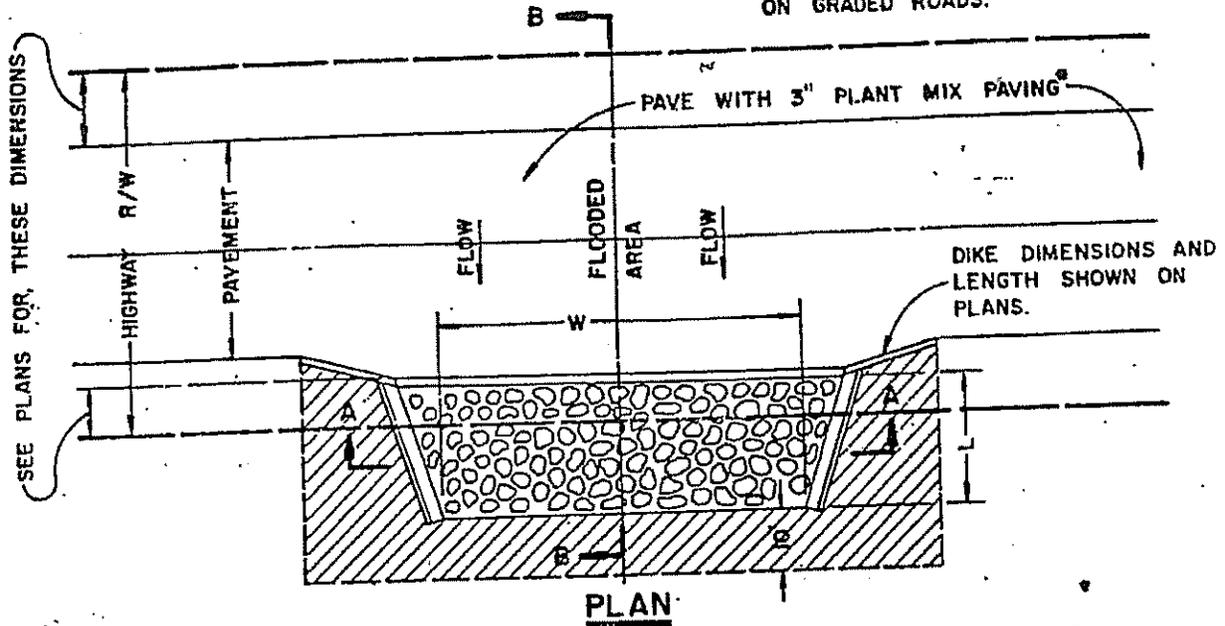
4" CL2 Agg. Base Typical Entire Area of Driveway ((L+1.5') x 35' Min.)

General Notes

1. This plan is a modification of City of Adelanto Standard Plan 129.
2. Concrete shall be Class A per City of Adelanto Standard Specifications.
3. Rebar shall be grade 40 or better. Lap bars 40 diameters and offset all splices 10 feet.
4. Driveway, except for curb and gutter, shall have broom finish. Curb and gutter finish per City Standard 115.
5. Driveway spacing shall be in accordance with City Standard 129.

CITY OF ADELANTO		INDUSTRIAL DRIVEWAY	129a
ROBERT M. BEERS CITY ENGINEER			

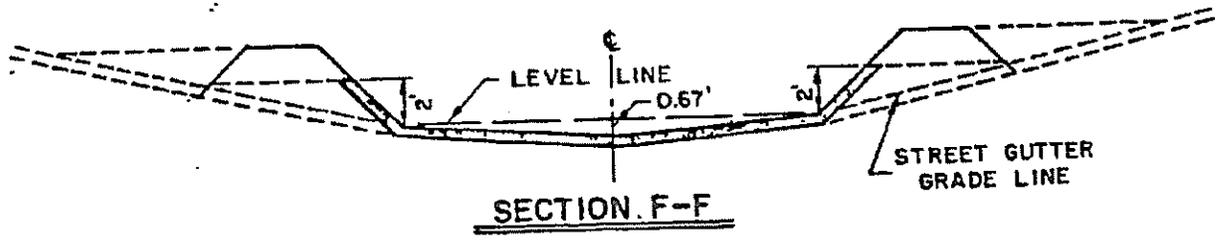
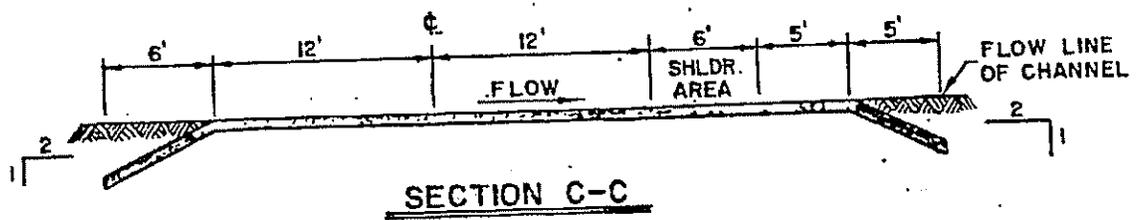
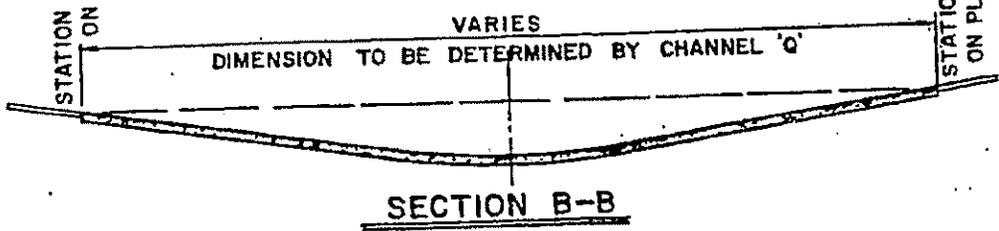
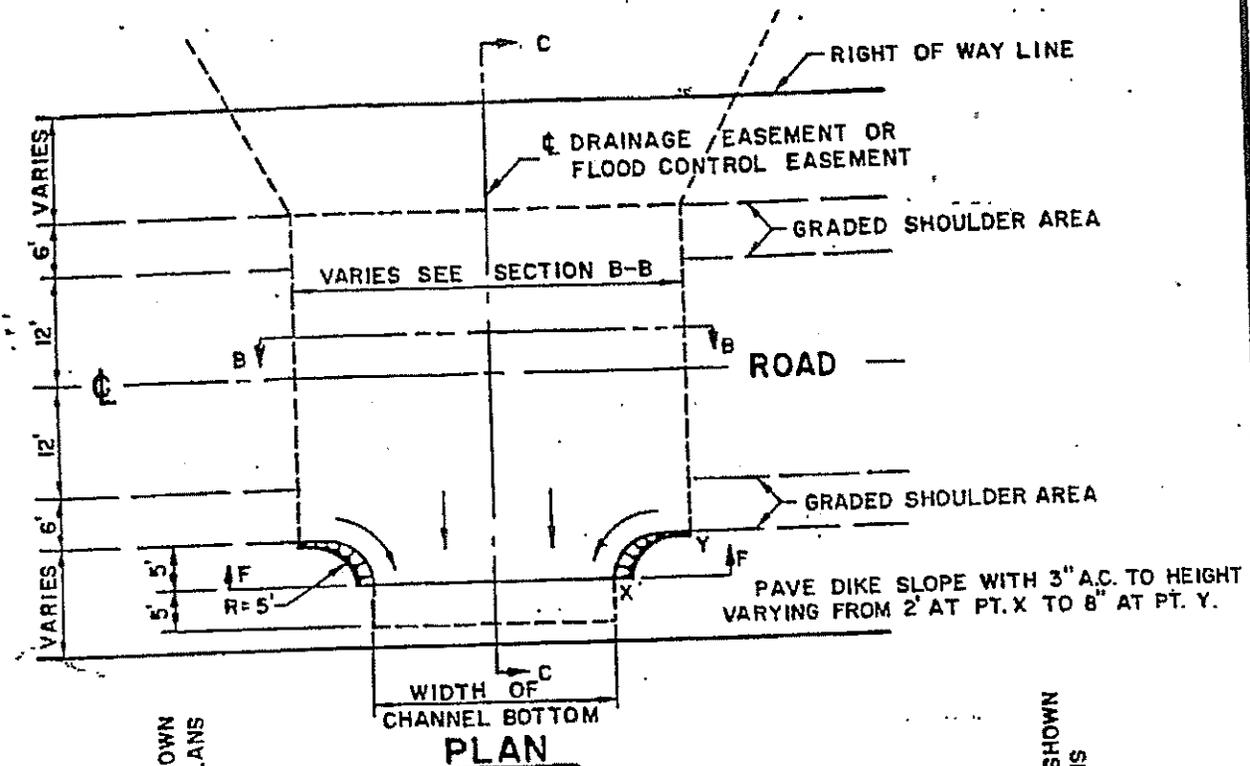
NOTE: 12" OF AGGREGATE BASE. REQUIRED ON GRADED ROADS.



NOTES:

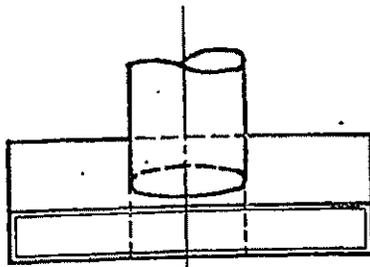
1. ALL CONCRETE TO BE CLASS "B".
2. L = SHOWN ON PLANS; H = 3' MIN., 6' MAX.
3. DRAINAGE EASEMENT REQUIRED.
4. AREA SHOWN THUS SHALL BE COMPACTED TO 90% RELATIVE DENSITY PER STANDARD SPECIFICATION 3.04.03.
5. REINFORCED BLOCK WALL AND FOOTING PERMITTED.

CITY OF ADELANTO		CUTOFF WALL FOR DRAINAGE CHANNEL	200
DATE: J.E.M. 7-66 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		

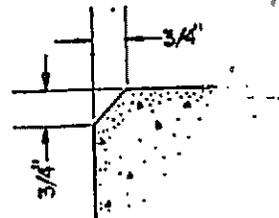


NOTE
PAVEMENT SHALL BE CONSTRUCTED OF 3" MIN. THICK ASPHALT CONCRETE.

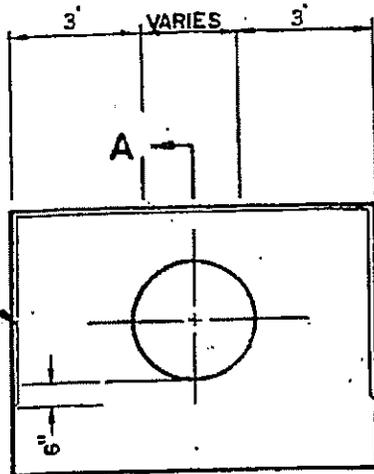
CITY OF ADELANTO		CHANNEL CROSSING	2000
DATE: 7 VC 7-65 SED 9/84	RICHARD S. TITERA CITY ENGINEER		



PLAN

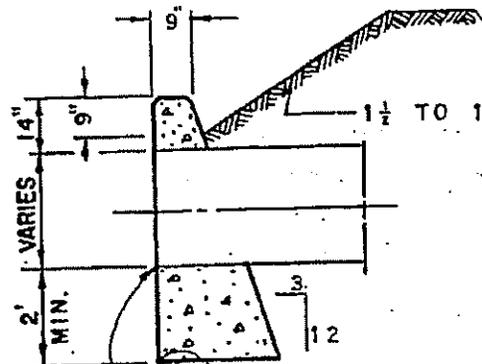


CHAMFER
DETAIL



CHAMFER

A
ELEVATION



FOR ELEVATIONS
SEE PROFILE

SECTION A-A

NOTES:

1. ALL CONCRETE SHALL BE CLASS B CONCRETE.
2. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
3. DESIGN FEATURES SHALL CONTROL THE INSTALLATION OF THIS HEADWALL.

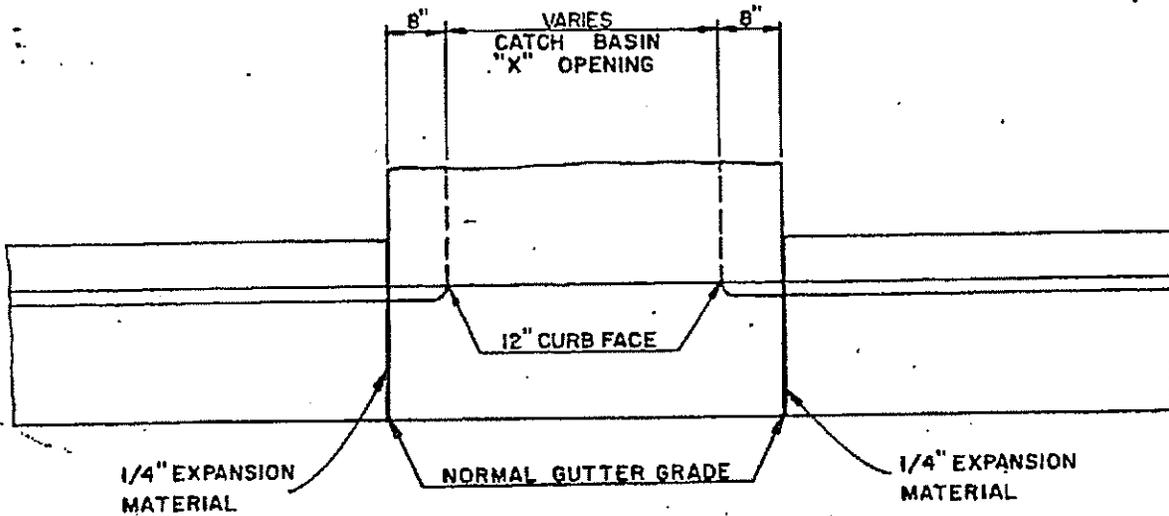
CITY OF ADELANTO

DATE: F.V.C. 7-65
S.C.D. 9/84

RICHARD S. TITERA
CITY ENGINEER

GRAVITY HEADWALL

201



NOTES:

1. LOCAL DEPRESSION SHALL BE CONSTRUCTED OF CLASS B CONCRETE 6" THICK.
2. CURB AND GUTTER SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTING TOP OF CATCH BASIN AND CURB TRANSITIONS.

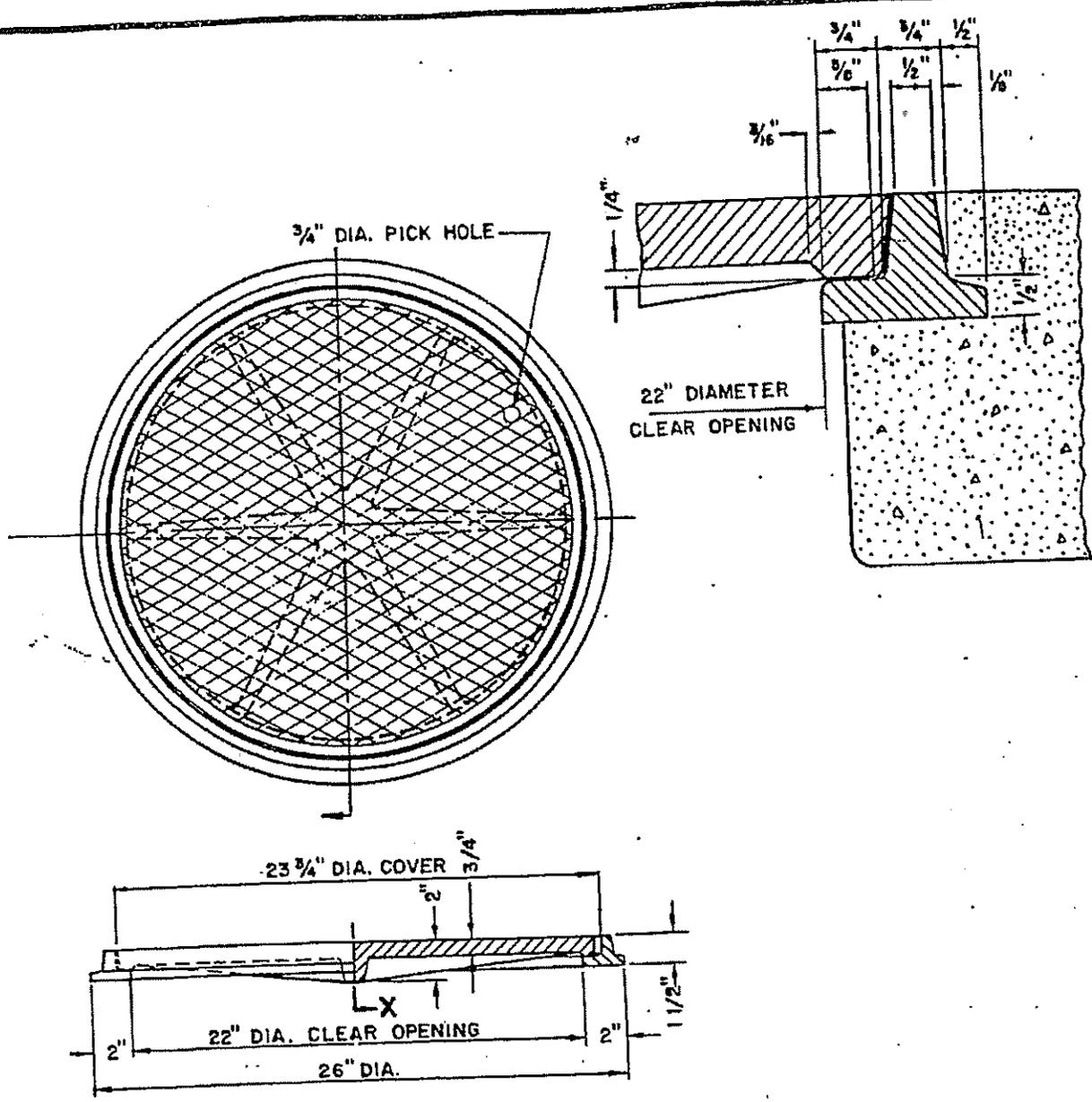
CITY OF ADELANTO

L.V.F. 12-74
S.C.D. 9/84

RICHARD S. TITERA
CITY ENGINEER

LOCAL DEPRESSION

203

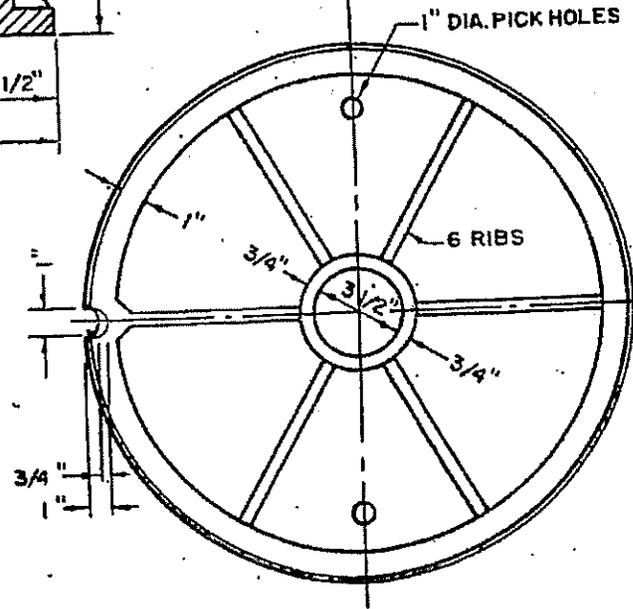
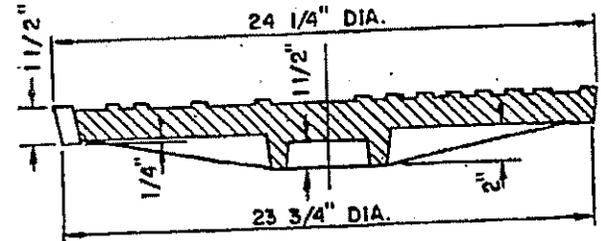
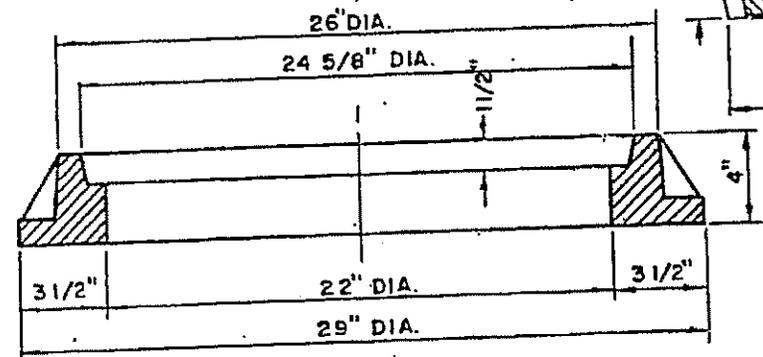
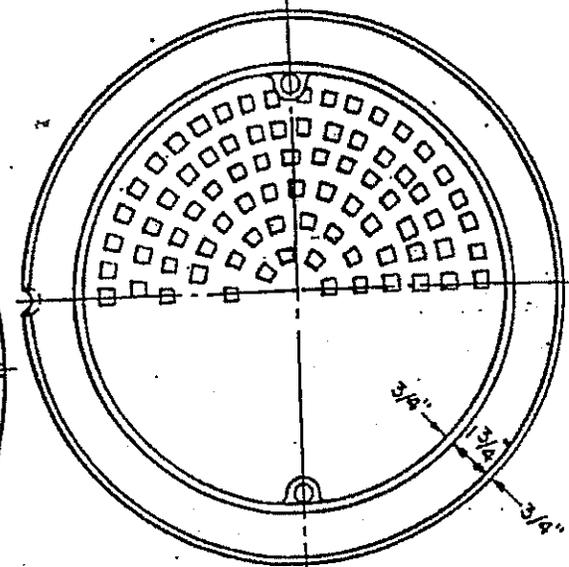
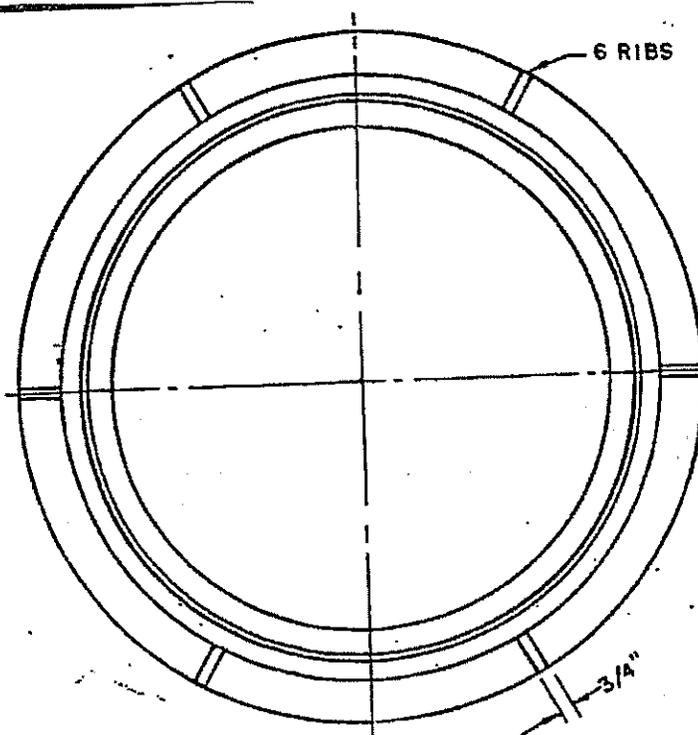


MATERIAL: CAST IRON (ASPHALT COATED OR GALVANIZED)

NOTES

1. SEATS OF FRAME AND COVER SHALL BE MACHINED TO PREVENT NOISE.
2. TOTAL WEIGHT OF FRAME AND COVER APPROX. 130 LBS.
3. MINIMUM CLEAR OPENING 22" DIAMETER. ALL OTHER DIMENSIONS ARE NOMINAL.

ALHAMBRA A-1530 OR EQUIVALENT		MANHOLE FRAME & COVER - PARKWAY	204
CITY OF ADELANTO			
DATE: P.V.C. 7-85	RICHARD S. TITERA CITY ENGINEER		
L.J.F. 7-74			
5 CD. 9/84			

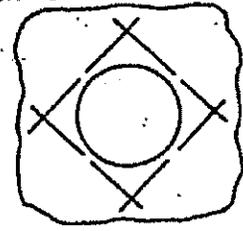
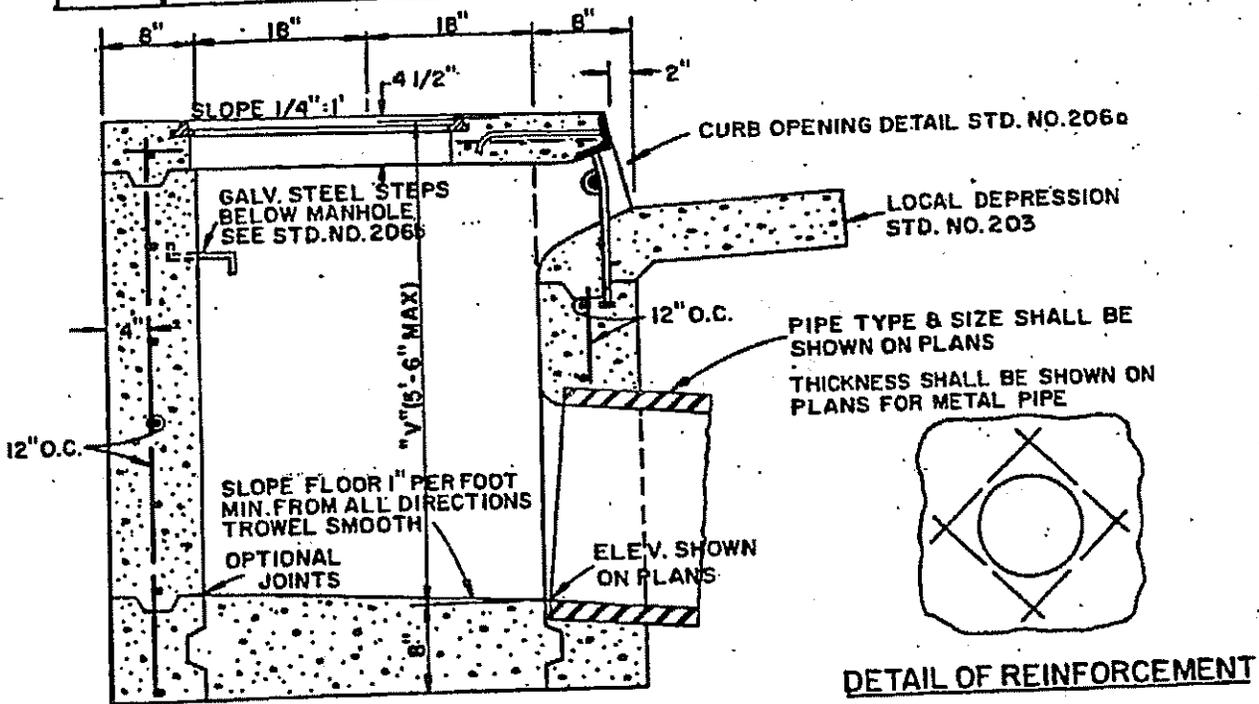
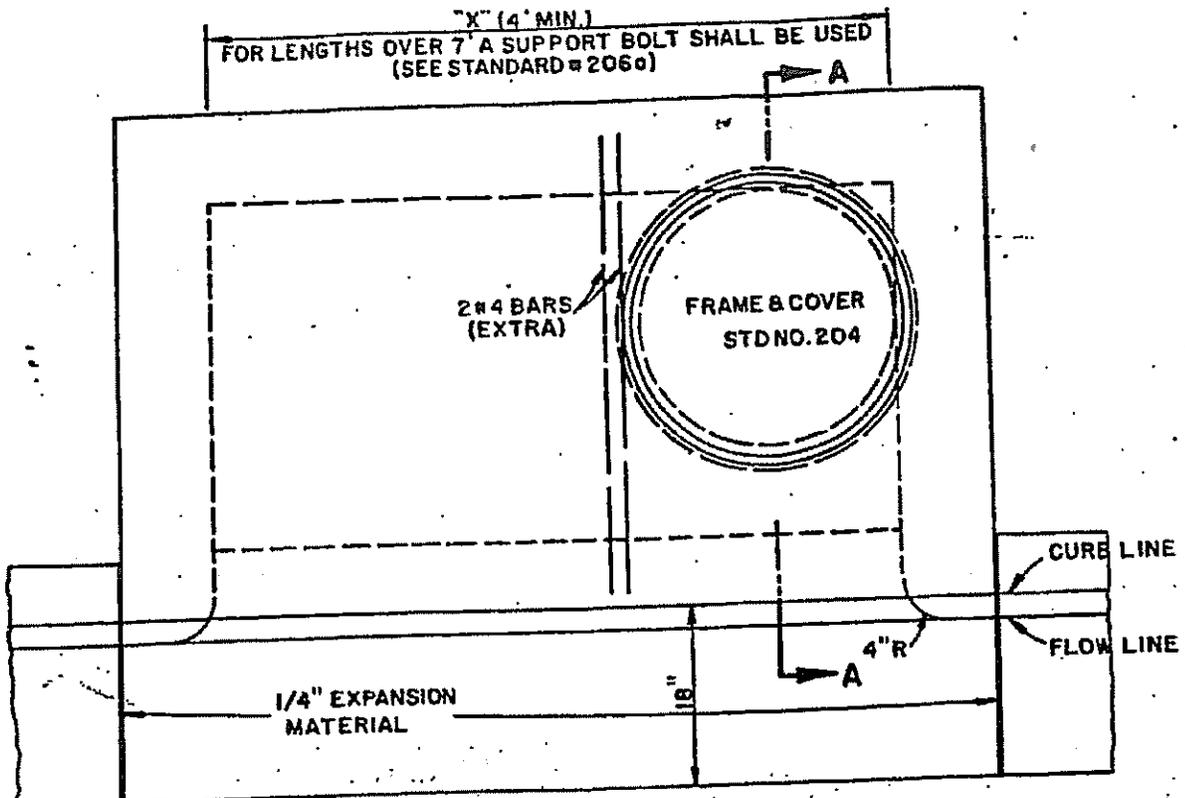


NOTES

1. SEATS OF FRAME AND COVER SHALL BE MACHINED TO PREVENT NOISE.
2. TOTAL WEIGHT OF FRAME AND COVER APPROX. 380 LBS.
3. MINIMUM CLEAR OPENING 22" DIA. ALL OTHER DIMENSIONS ARE NOMINAL.

MATERIAL: CAST IRON (ASPHALT COATED)

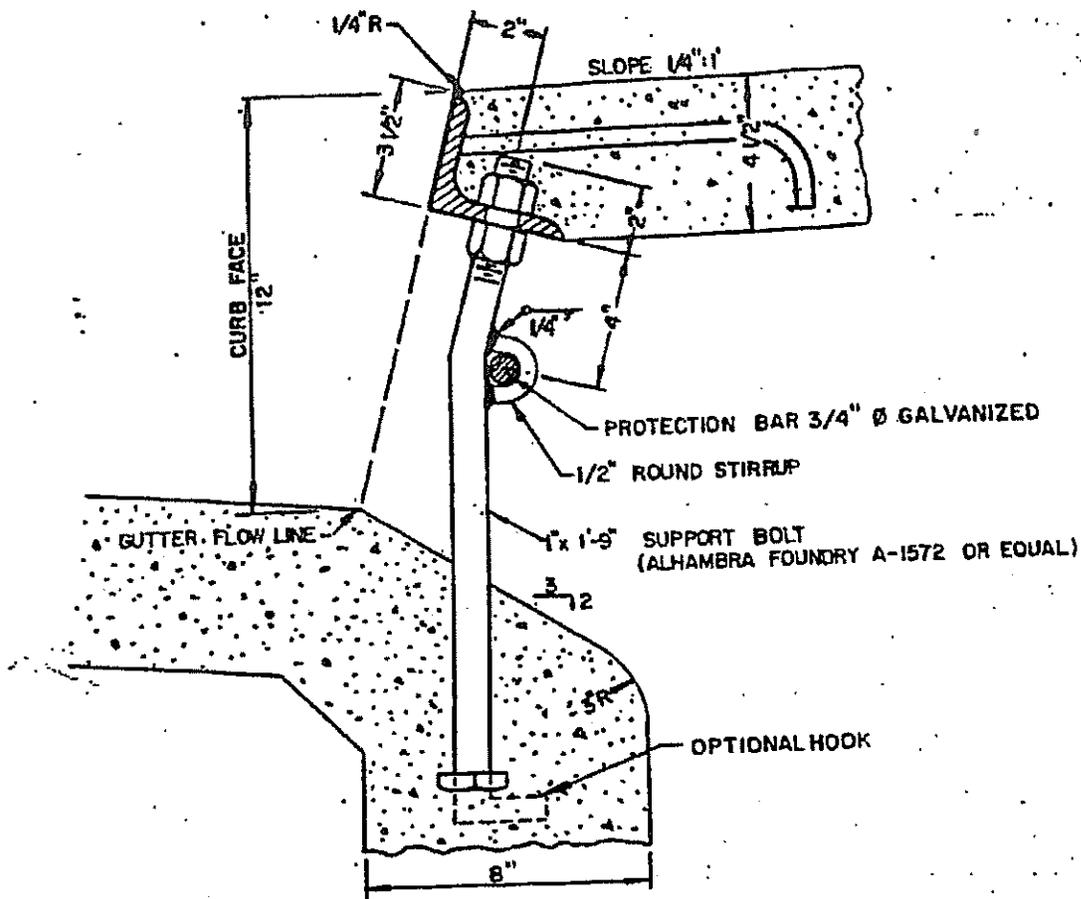
ALHAMBRA A-1310 OR EQUIVALENT		MANHOLE FRAME & COVER-ROADWAY	205
CITY OF ADELANTO			
DATE: F.V.C. 7-65	RICHARD S. TITERA CITY ENGINEER		
L.V.F. 7-74			
S.C.D. 9/84			



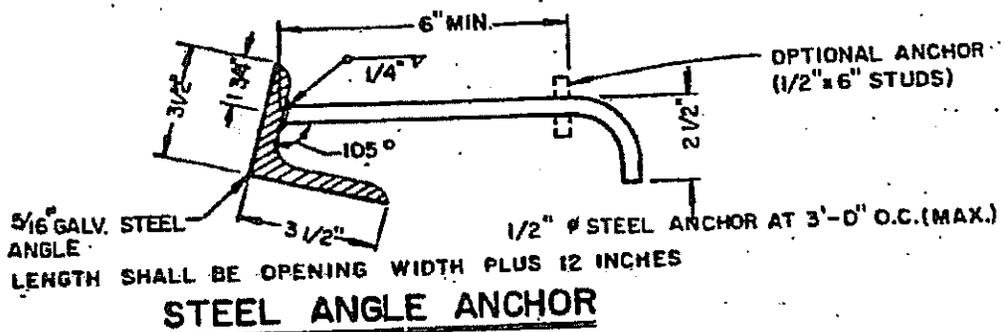
**DETAIL OF REINFORCEMENT
AROUND PIPE**

1. ALL REINFORCING SHALL BE # 4 BARS at 12" O.C. BOTH WAYS IN TOP SLAB AND WALLS.
2. CATCH BASIN SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE.
3. CURB & GUTTER ADJOINING CATCH BASIN SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTING TOP OF CATCH BASIN.

L.J.F. 12-74 SCD 9/84	CITY OF ADELANTO RICHARD S. TITERA CITY ENGINEER	TYPE "A" CATCH BASIN	206
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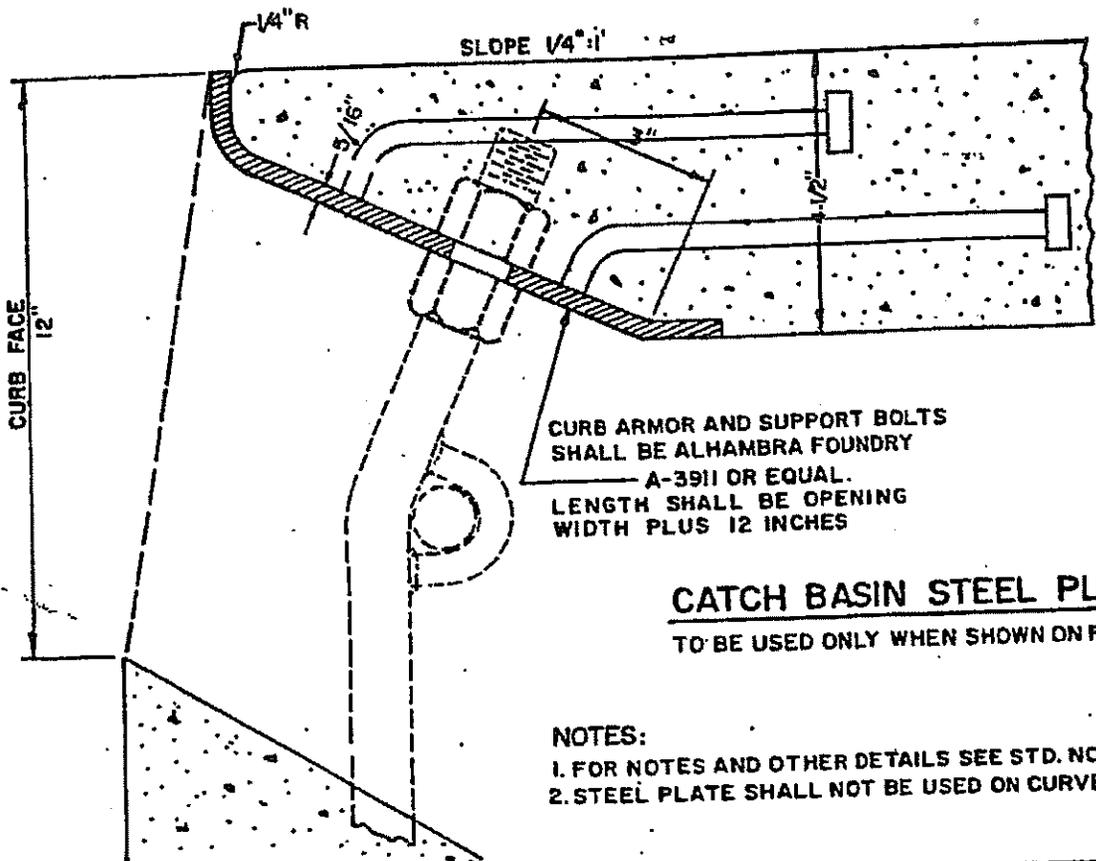
STEEL ANGLE & SUPPORT BOLT DETAIL



NOTES:

1. A PLAIN ROUND GALVANIZED STEEL PROTECTION BAR 3/4" IN DIA. SHALL BE INSTALLED AND EMBEDDED 6" AT EACH END.
2. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED. (EXCEPT FRAME AND COVER)
3. SUPPORT BOLTS SHALL BE UNIFORMLY SPACED BUT NOT TO EXCEED 7' ON CENTER.
4. STEEL ANGLE SHALL BE BENT TO MATCH CURB ALIGNMENT.

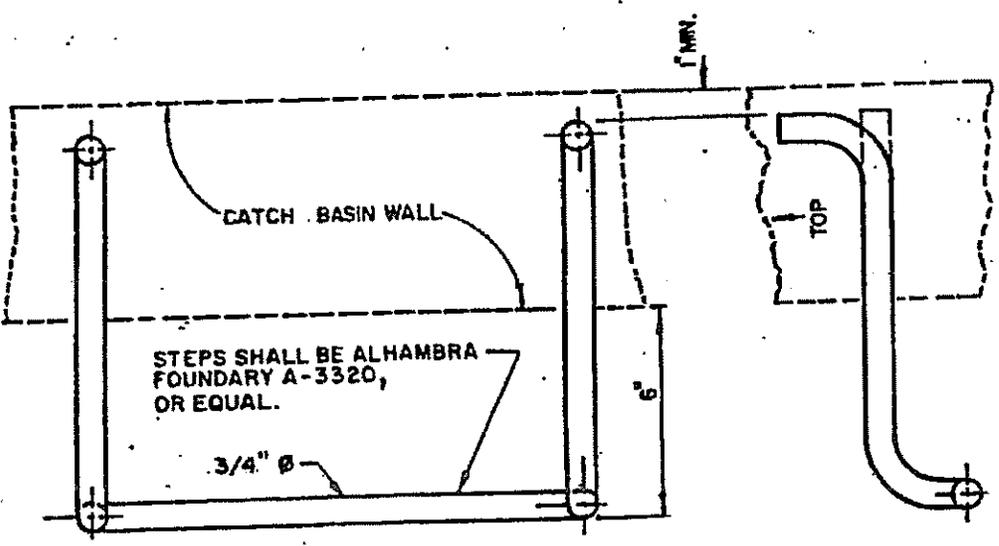
CITY OF ADELANTO		CATCH BASIN OPENING	206a
L. J.F. 12-74 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



CURB ARMOR AND SUPPORT BOLTS SHALL BE ALHAMBRA FOUNDRY A-3911 OR EQUAL. LENGTH SHALL BE OPENING WIDTH PLUS 12 INCHES

CATCH BASIN STEEL PLATE
TO BE USED ONLY WHEN SHOWN ON PLANS

- NOTES:
1. FOR NOTES AND OTHER DETAILS SEE STD. NO. 206.
2. STEEL PLATE SHALL NOT BE USED ON CURVES.

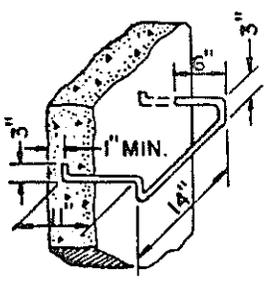
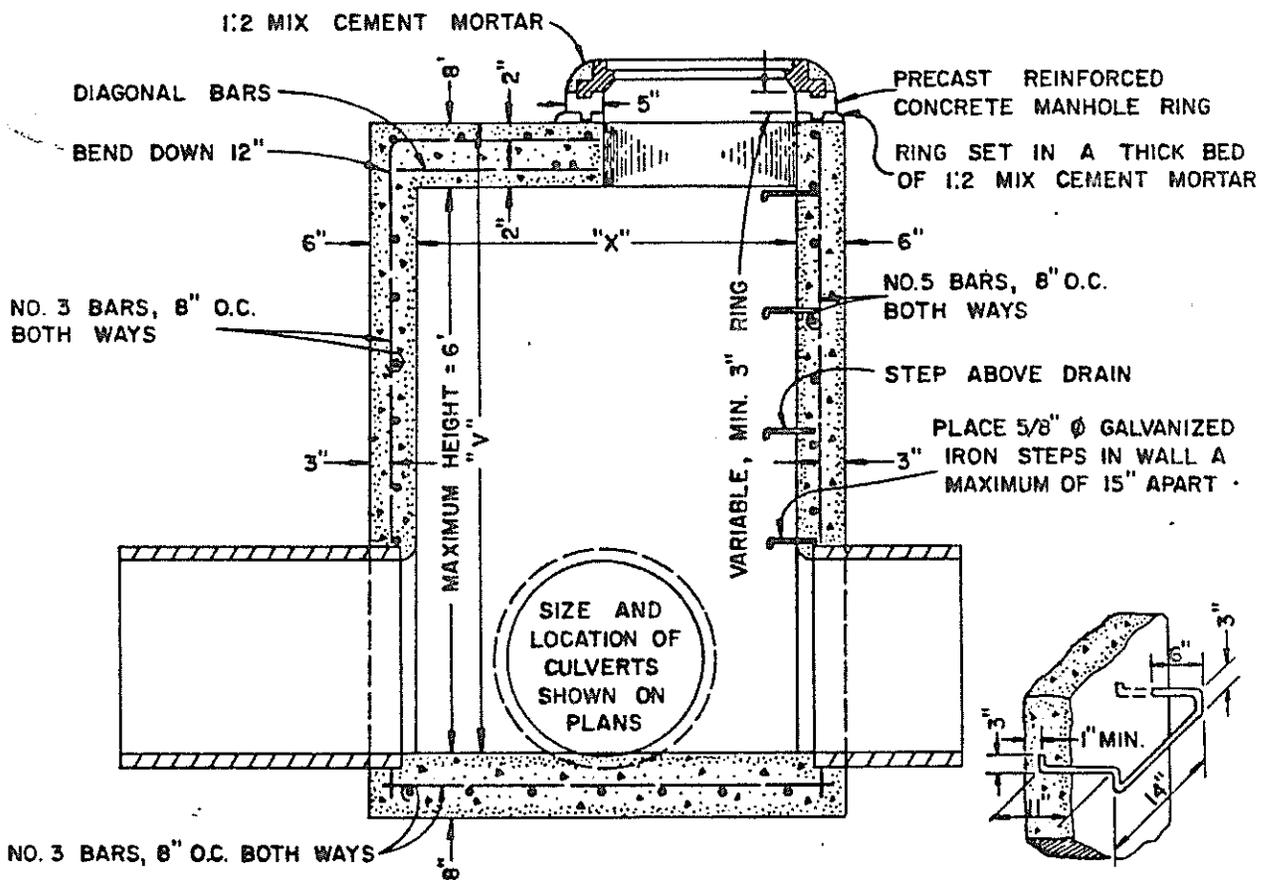
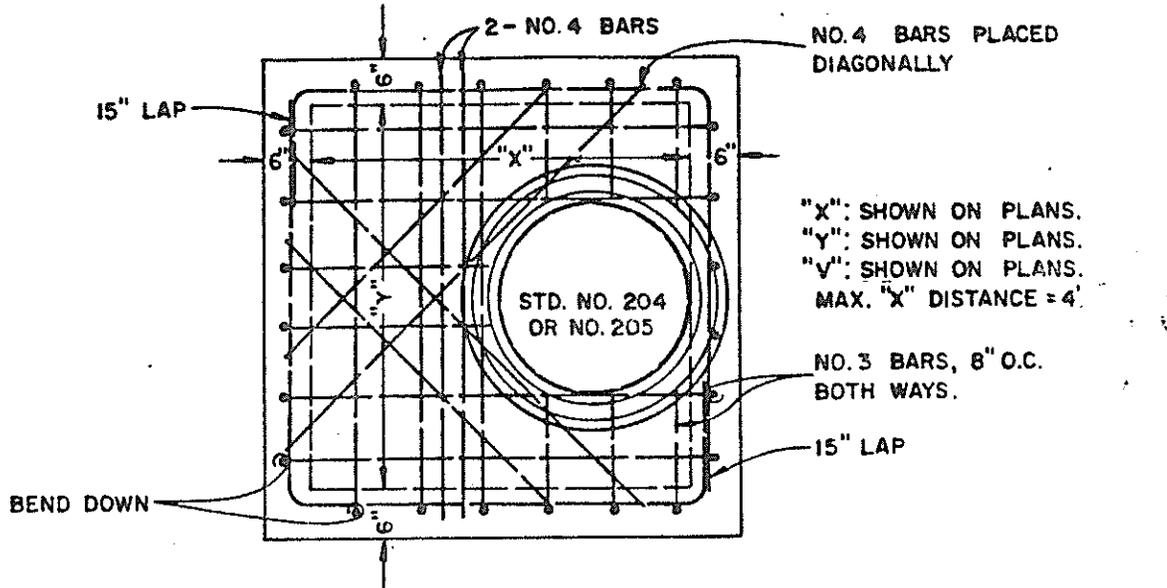


STEPS SHALL BE ALHAMBRA FOUNDRY A-3320, OR EQUAL.

- NOTES:
1. STEPS - NONE REQUIRED WHERE 'V' IS 3'-6" OR LESS. INSTALL ONE STEP 16" ABOVE FLOOR WHEN 'V' IS MORE THAN 3'-6" & LESS THAN 5'-0". WHERE 'V' IS MORE THAN 5'-0" STEPS SHALL BE EVENLY SPACED @ 12" INTERVALS FROM 16" ABOVE THE FLOOR TO WITHIN 12" FROM THE TOP OF THE BOX. PLACE STEPS IN WALL WITHOUT PIPE OPENINGS AND UNDER MANHOLE.

GALVANIZED STEEL STEP

CITY OF ADELANTO		CATCH BASIN STEEL PLATE GALVANIZED STEEL STEP	206b
LJF 12-79 SCD 9/84	RICHARD S. TITERA CITY ENGINEER		

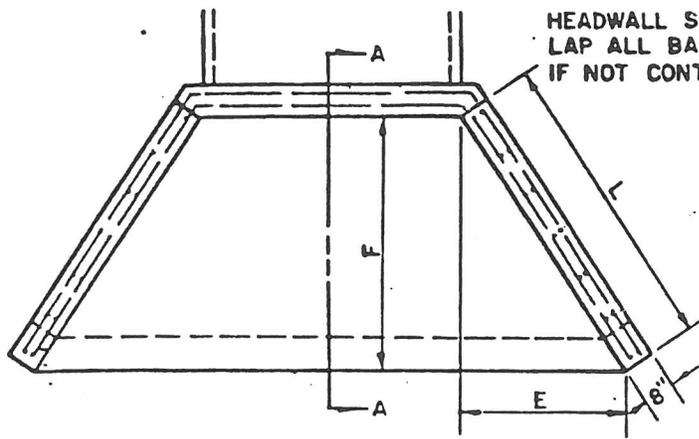


STEP DETAIL

NOTES:

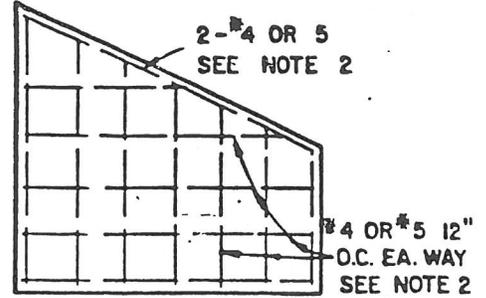
1. STORM DRAIN CLEANOUT SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE.
2. CLEARANCE FROM I.D. OF PIPE TO CLEANOUT WALL SHALL BE 4" MIN.
3. APPROVED PRECAST CONCRETE MANHOLE SHAFT RINGS WILL BE ACCEPTED IN LIEU OF CAST-IN-PLACE SHAFT

CITY OF ADELANTO		STORM DRAIN CLEANOUT	208
DATE: J.E.M. 7-65 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		

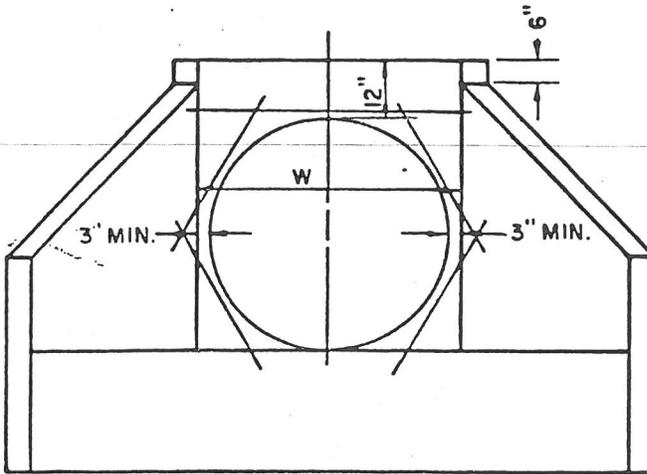


PLAN

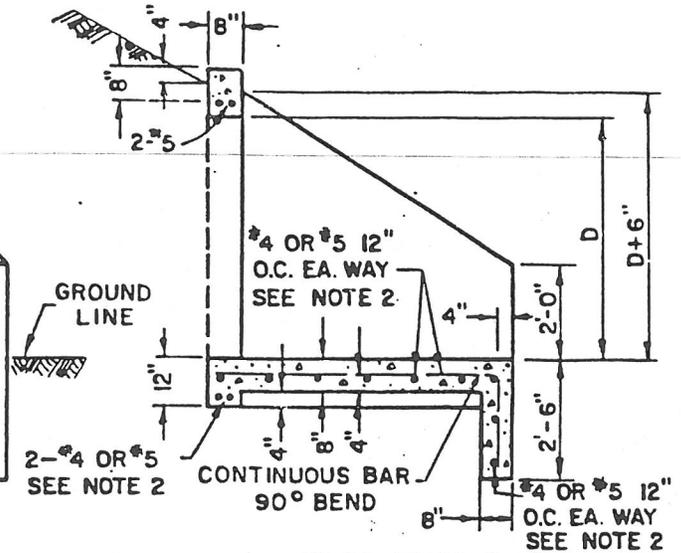
HEADWALL SHALL BE MONOLITHIC.
LAP ALL BARS AT CORNERS 30 DIAMETERS
IF NOT CONTINUOUS.



REINFORCING DETAIL



ELEVATION



SECTION A-A

DIMENSIONS				
PIPE DIAM	L	E	F	W
24"	4'-9"	2'-8"	4'-0"	2'-6"
30"	5'-5"	3'-0"	4'-6"	3'-0"
36"	6'-0"	3'-4"	5'-0"	3'-8"
42"	6'-7"	3'-8"	5'-6"	4'-2"
48"	7'-3"	4'-0"	6'-0"	4'-10"
54"	8'-2"	4'-6"	6'-9"	5'-4"

NOTES:

1. HEADWALL SHALL BE CONSTRUCTED OF CLASS A CONCRETE.
2. REINFORCING STEEL SHALL BE NO. 4 BARS FOR "W" UP TO 60". ABOVE "W"=60" NO. 5 BARS SHALL BE USED. 2" MIN CLEARANCE, 30 DIAMETER LAP, ALL STEEL.
3. ADJACENT SLOPES SHALL BE 1½ TO 1 OR FLATTER.
4. MULTIPLE PIPES TO BE SET WITH LONGITUDINAL CENTERS 1 2/3 DIAMETERS APART.
5. ALL EXPOSED CORNERS TO BE ROUNDED 3/4" RADIUS.
6. W SHALL BE INCREASED WHEN MULTIPLE PIPES OR PIPES ON SKEW ARE USED.

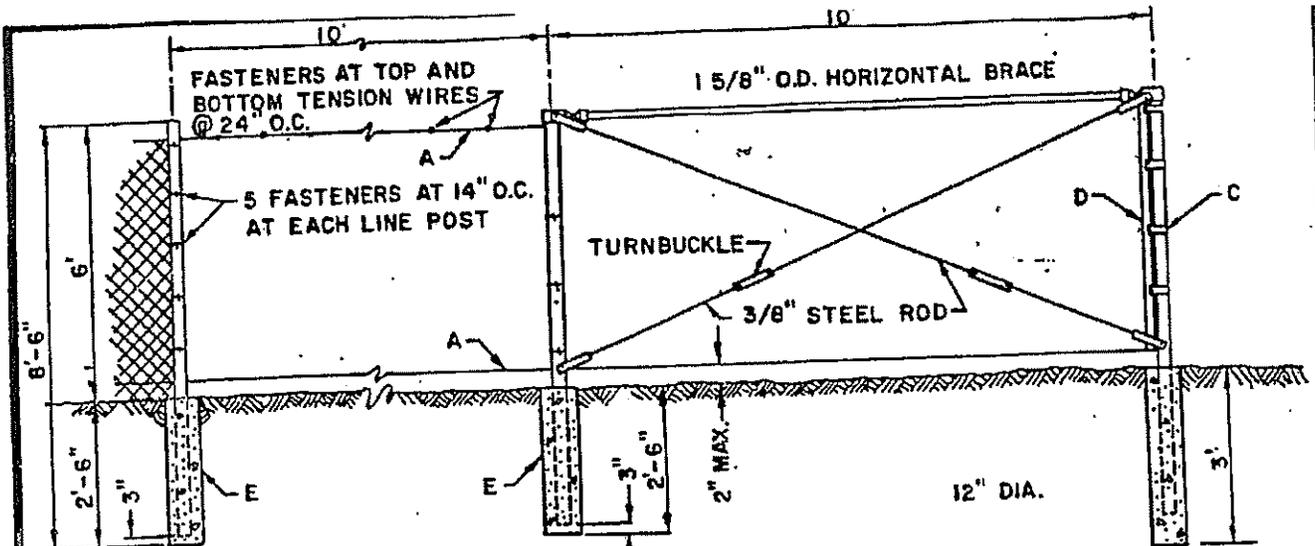
CITY OF ADELANTO

DATE 3.VL. 7-65
SCD 8/84

RICHARD S. TITERA
CITY ENGINEER

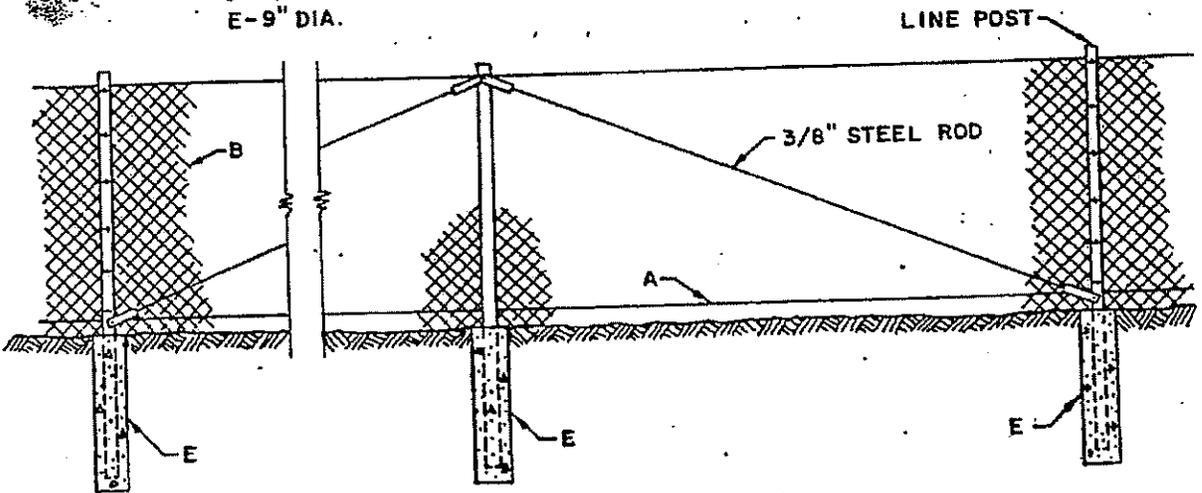
HEADWALL
WING - TYPE

209

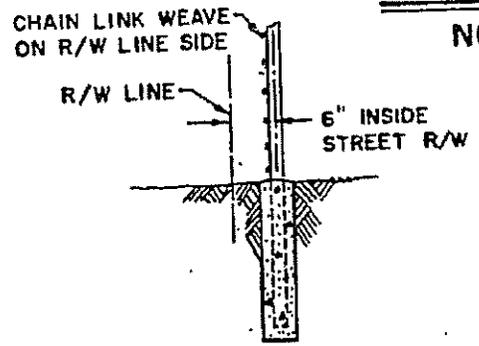


END BRACE

- A-TENSION WIRE NUMBER 10 GAGE MINIMUM
- B-CHAIN LINK FENCE FABRIC NUMBER 9 GAGE MINIMUM
- C-1/8" X 1" BAND AT 1' INTERVAL
- D-3/16" X 3/4" X 6' STEEL TENSION BAR
- E-9" DIA.



BRACE EVERY 500'

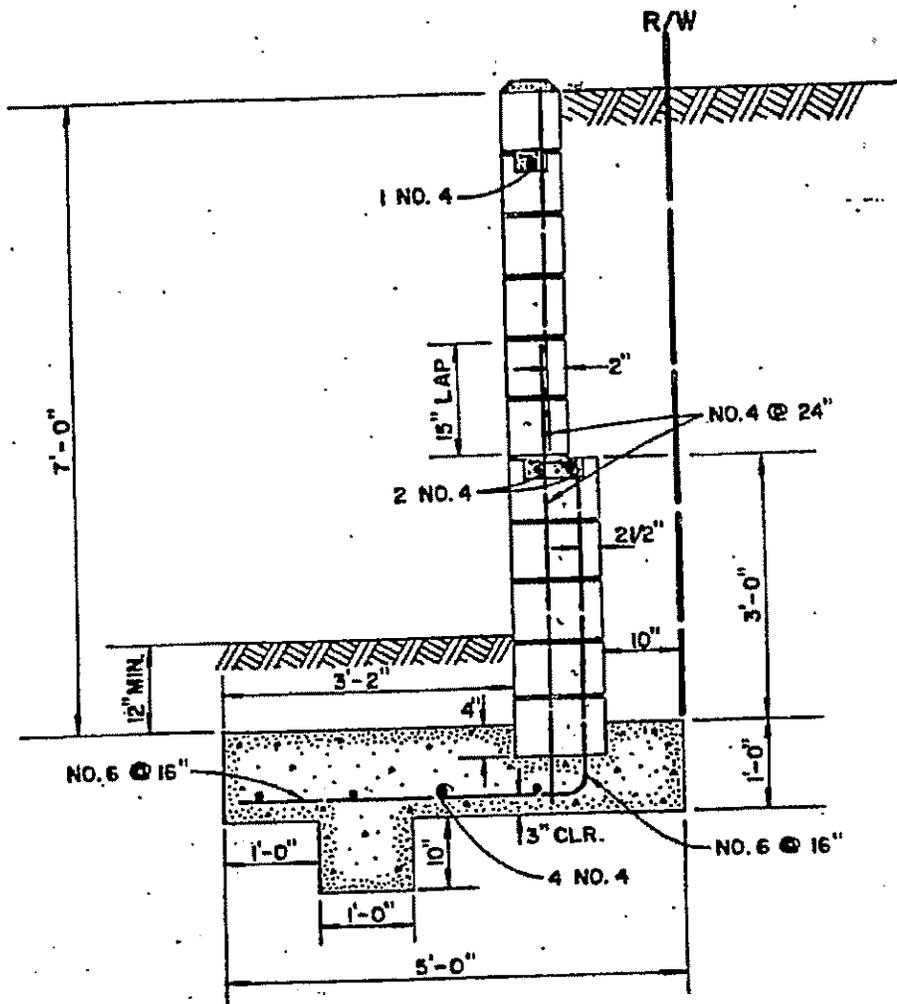


DETAIL

NOTES:

1. EACH POST SHALL BE CAPPED WITH A MALLEABLE IRON POST CAP, EXCEPT WHERE BARBED WIRE IS TO BE USED. THEN EACH POST SHALL BE CAPPED WITH A GALVANIZED MALLEABLE IRON 3 STRAND BARBED WIRE ARM & CAP.
2. MATERIALS AND CONSTRUCTION OF FENCE SHALL CONFORM TO STATE OF CALIFORNIA, STANDARD SPECIFICATIONS, UNLESS SHOWN OTHERWISE.

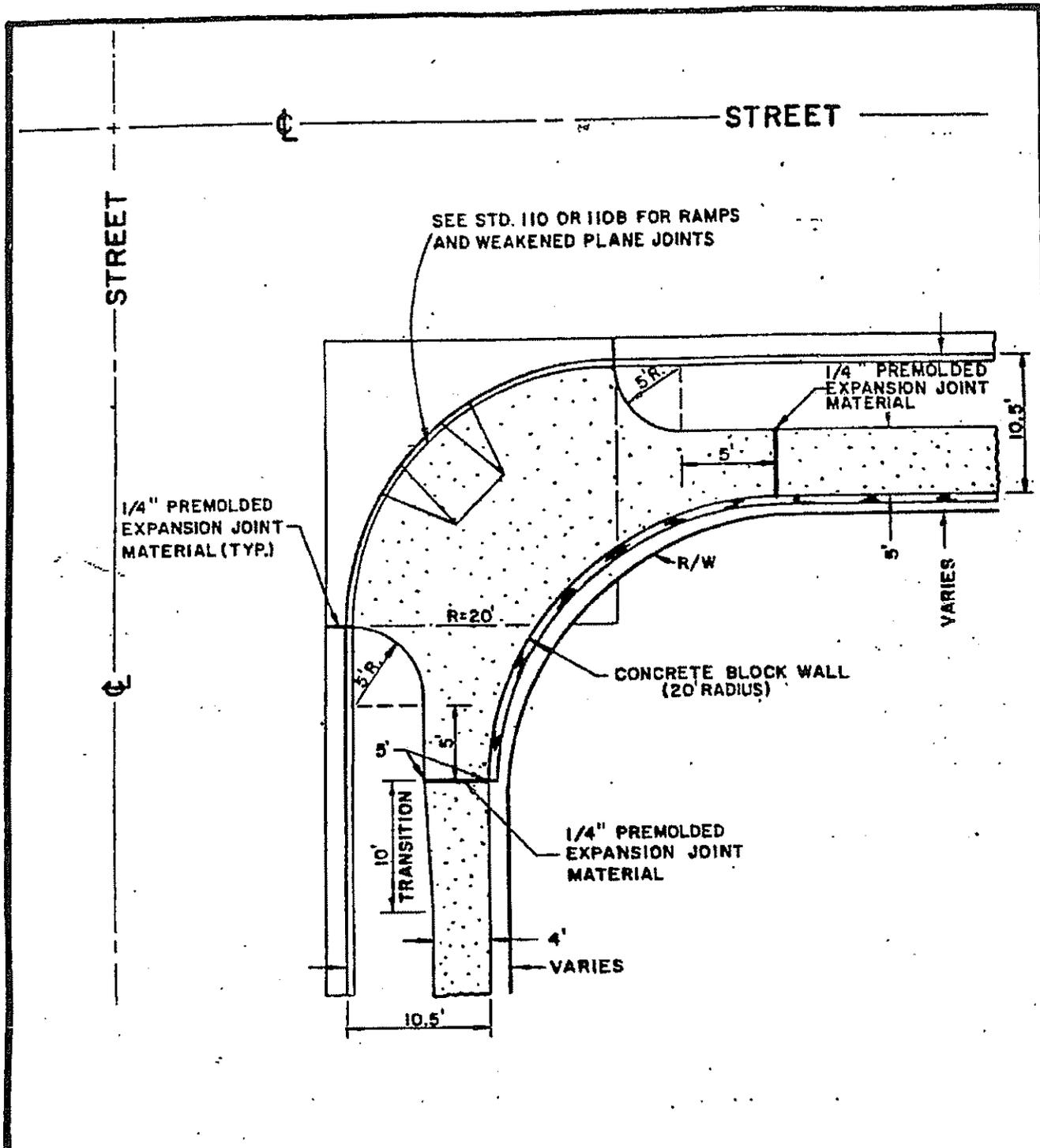
CITY OF ADELANTO		RIGHT OF WAY FENCE	300
DATE: F.V.C. 7-65 5.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



NOTES:

1. ALL VERTICAL CELLS CONTAINING BAR STEEL SHALL BE FILLED WITH GROUT.
2. TOP OF WALL AND FOOTINGS SHALL BE STEPPED TO CONFORM WITH SLOPE OF GROUND.
3. ALL WALLS SHALL BE PLUMB AND ALL BLOCK COURSES SHALL BE LEVEL.
4. BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY.
5. FOOTING SHALL BE CLASS 'A' CONCRETE.
6. CONCRETE BLOCK SHALL BE GRADE A UNITS, CONFORMING TO A.S.T.M. DESIGNATION NO. C90.
7. REINFORCING STEEL, GROUT, MORTAR AND CLASS 'A' CONCRETE SHALL CONFORM TO THE STANDARD SPECIFICATIONS. LAP STEEL 20 DIAMETERS.
8. MORTAR TO BE ELIMINATED FROM VERTICAL JOINTS OF ROW OF BLOCKS AT PARKWAY LEVEL.
9. THIS WALL SHALL BE USED WHERE A SCREENING WALL IS REQUIRED ON NON-ACCESS STREET AND THE POSSIBILITY OF BACKFILL ON PRIVATE LOT BY OWNER IS ACCOMPLISHED OR POSSIBLE.
10. DESIGN OF RETAINING WALLS UNDER OTHER CONDITIONS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

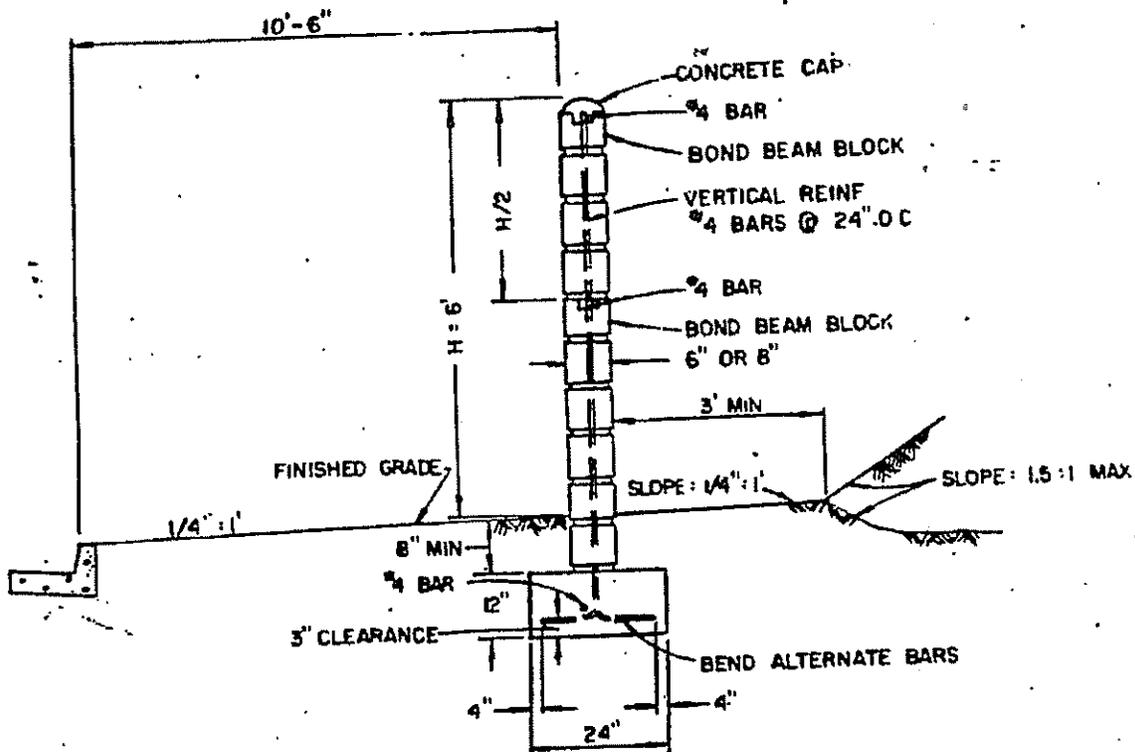
CITY OF ADELANTO		RETAINING CONCRETE BLOCK WALL	301 a
DATE: J.E.M. 7-66 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



NOTE:

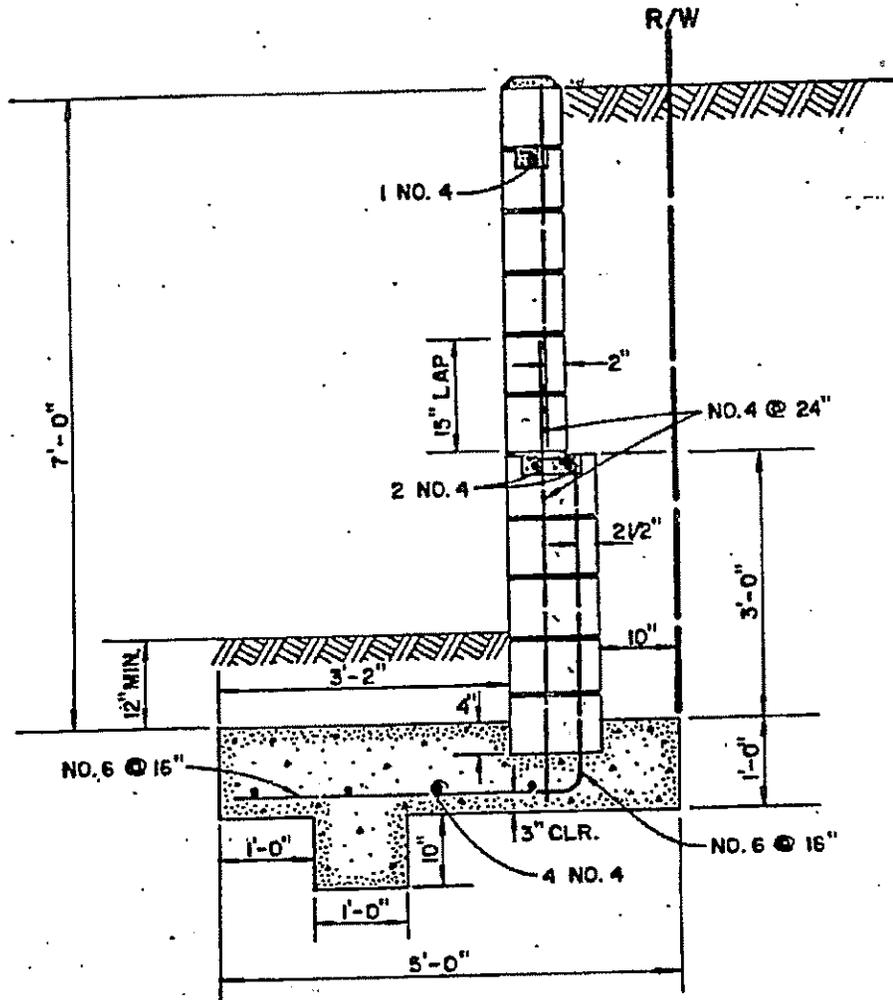
1. THE BLOCK WALL HEIGHT MAY BE VARIED AROUND THE RETURN IF SHOWN ON THE IMPROVEMENT PLANS.

CITY OF ADELANTO		BLOCKWALL LOCATION AT INTERSECTION	302
DATE P.V.C. 6-69 APP. MAR. 1975 SCD 9/84	RICHARD S. TITERA CITY ENGINEER		



1. ALL VERTICAL CELLS CONTAINING REINFORCING STEEL SHALL BE FILLED WITH GROUT IN ADDITION, WHERE 6" BLOCKS ARE USED ALL CELLS WITHOUT VERTICAL REINFORCING STEEL SHALL BE FILLED WITH GROUT TO TOP OF BOND BEAM AT MIDHEIGHT OF WALL.
2. THE BLOCK WALL COURSES AND FOOTINGS MAY BE BUILT PARALLEL WITH THE STREET GRADE (7% MAX.) OR STEPPED.
3. ALL WALLS SHALL BE PLUMB.
4. BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 90%
5. FOOTING SHALL BE CLASS B CONCRETE.
6. CONCRETE BLOCK SHALL BE GRADE A UNITS, CONFORMING TO ASTM DESIGNATION NO. C90
7. REINFORCING STEEL, GROUT MORTAR, AND CLASS B CONCRETE SHALL CONFORM TO THE STANDARD SPECIFICATIONS
8. ELIMINATE MORTAR IN ALL VERTICAL JOINTS IN FIRST COURSE ABOVE FINISH GRADE.
9. 1/2" OPEN JOINTS EXTENDING THROUGH THE ENTIRE HEIGHT OF THE BLOCK WALL, SHALL BE SPACED AT A MAXIMUM OF 50'.
10. ELIMINATE MID-HEIGHT BOND BEAM IN WALLS WHERE H=4' OR LESS.

CITY OF ADELANTO		NON RETAINING CONCRETE BLOCK WALL	30
REVISION - MAY '73 APP. MAR. 1975 C.D. 8/84	RICHARD S. TITERA CITY ENGINEER		



NOTES:

1. ALL VERTICAL CELLS CONTAINING BAR STEEL SHALL BE FILLED WITH GROUT.
2. TOP OF WALL AND FOOTINGS SHALL BE STEPPED TO CONFORM WITH SLOPE OF GROUND.
3. ALL WALLS SHALL BE PLUMB AND ALL BLOCK COURSES SHALL BE LEVEL.
4. BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY.
5. FOOTING SHALL BE CLASS 'A' CONCRETE.
6. CONCRETE BLOCK SHALL BE GRADE A UNITS, CONFORMING TO A.S.T.M. DESIGNATION NO. C90.
7. REINFORCING STEEL, GROUT, MORTAR AND CLASS 'A' CONCRETE SHALL CONFORM TO THE STANDARD SPECIFICATIONS. LAP STEEL 20 DIAMETERS.
8. MORTAR TO BE ELIMINATED FROM VERTICAL JOINTS OF ROW OF BLOCKS AT PARKWAY LEVEL.
9. THIS WALL SHALL BE USED WHERE A SCREENING WALL IS REQUIRED ON NON-ACCESS STREET AND THE POSSIBILITY OF BACKFILL ON PRIVATE LOT BY OWNER IS ACCOMPLISHED OR POSSIBLE.
10. DESIGN OF RETAINING WALLS UNDER OTHER CONDITIONS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

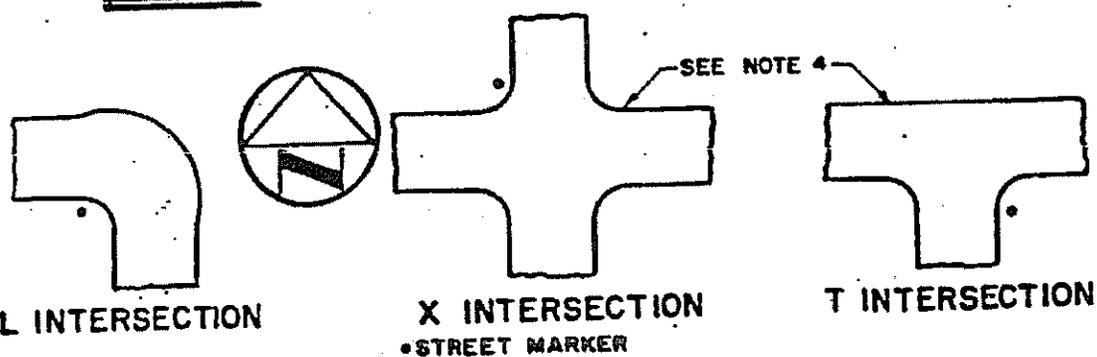
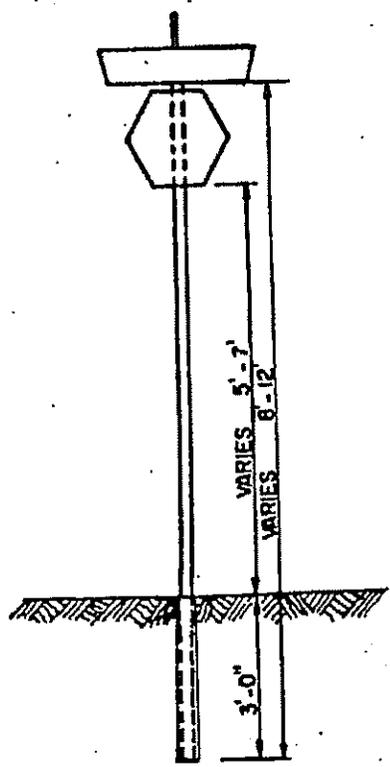
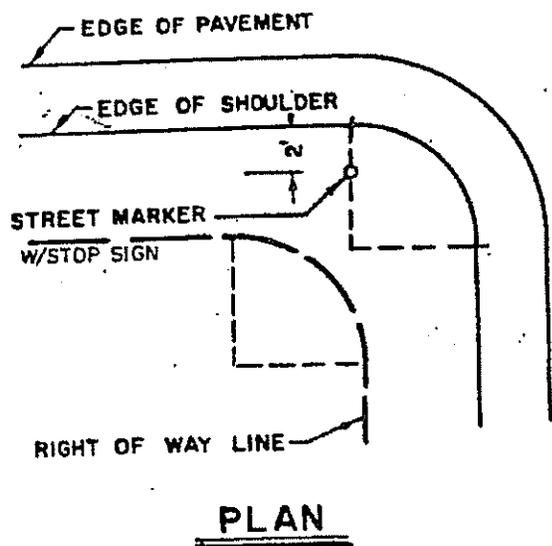
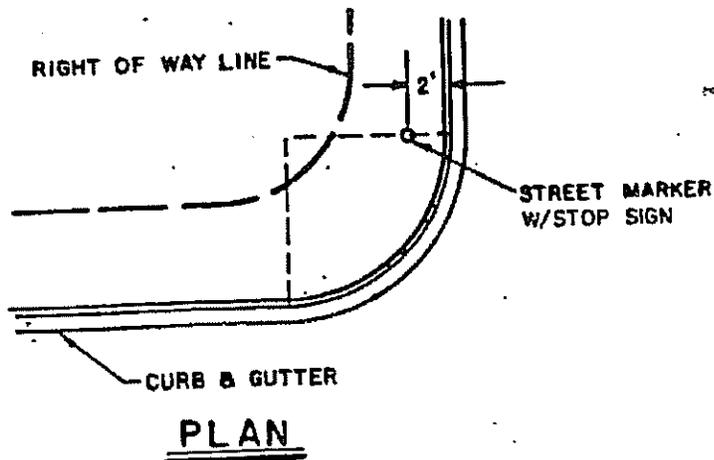
CITY OF ADELANTO

DATE: J.E.M. 7-66
S.C.D. 9/84

RICHARD S. TITERA
CITY ENGINEER

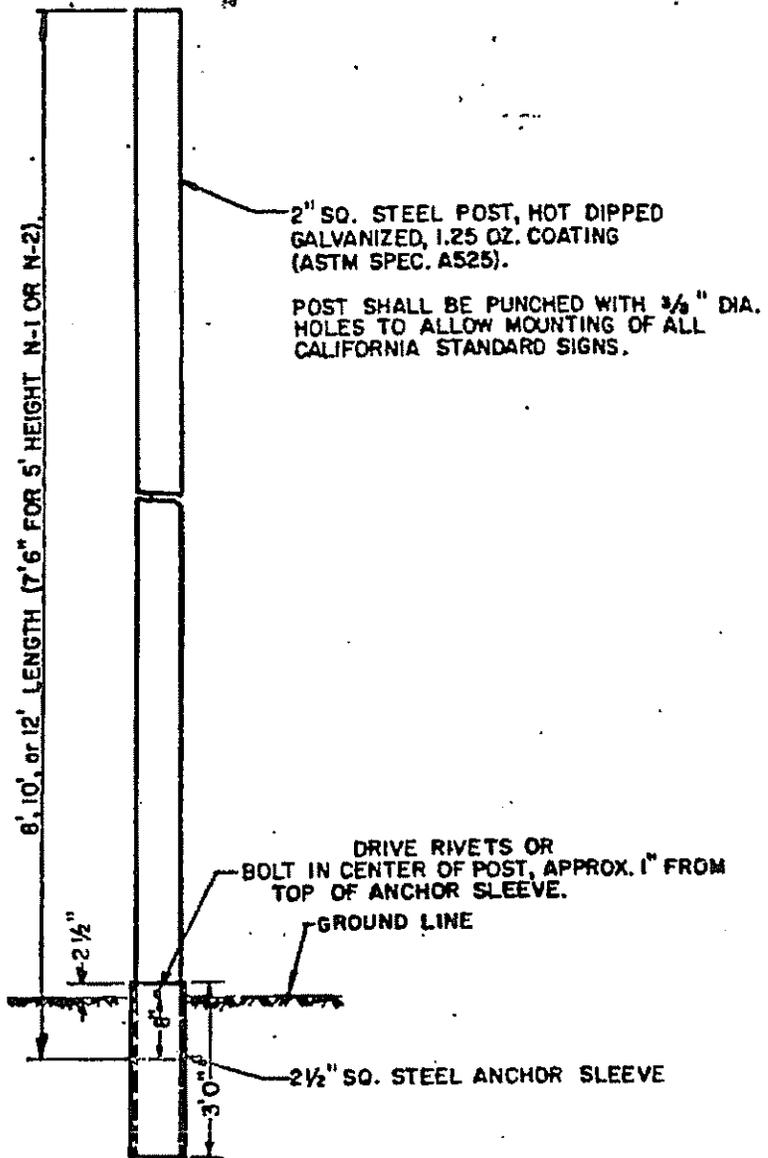
**RETAINING
CONCRETE BLOCK WALL**

301a



- NOTES:**
1. MARKER TO BE SET ON CITY RIGHT OF WAY.
 2. LOCATION OF MARKER SHOWN IS APPROXIMATE.
 3. MARKERS TO BE VISIBLE FOR A DISTANCE OF 150 FEET.
 4. IF EITHER ROAD IS DIVIDED INTO 4 LANES OR MORE, ADDITIONAL MARKERS WILL BE REQUIRED.
 5. STREET MARKERS LOCATED AT MAJOR ROADS WILL BE MOUNTED ON 12' POSTS TO ACCOMMODATE A STOP SIGN.

CITY OF ADELANTO		STREET MARKER	303a
DATE: F.V.C. 6-65 R.S. 10-81 SCD 9/84	RICHARD S. TITERA CITY ENGINEER		



NOTES:

1. SEE STANDARD NO. 303c FOR MARKER LOCATIONS.
2. POST SHALL BE 2" SQ. STEEL AS SHOWN AND STATED.
3. ANCHOR SLEEVE SHALL BE 2 1/2" SQ. STEEL HOT DIPPED GALVANIZED AFTER FABRICATION (ASTM SPEC. A-123).
4. SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY STANDARD 303.

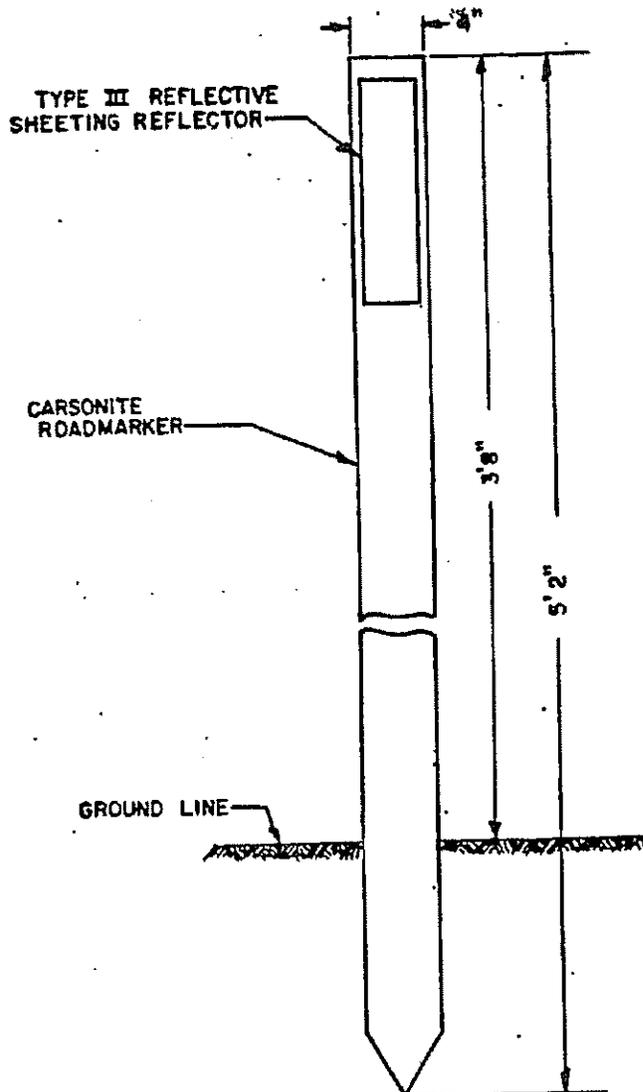
CITY OF ADELANTO

H.G. 1-71
R.G. 10-20
SCD 9/84

RICHARD S. TITERA
CITY ENGINEER

**STREET MARKER
POST INSTALLATION**

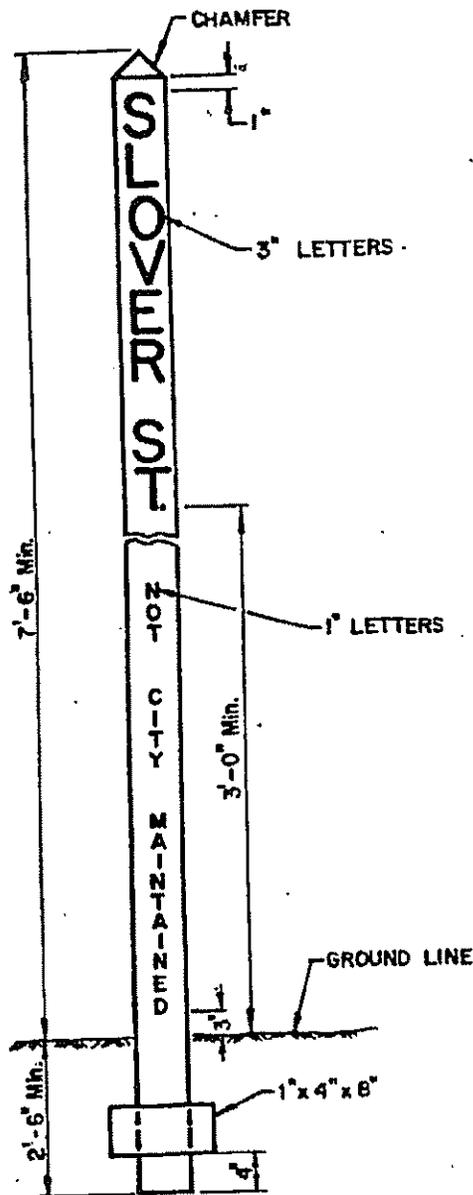
303b



NOTES:

1. MARKER SHALL BE A CARSONITE ROADMARKER CONSISTING OF A CARSONITE POST WITH A 3" X 12" FHWA TYPE III REFLECTIVE SHEETING REFLECTOR.

CITY OF ADELANTO		MARKERS	304
DATE P.V.C. 7-89 R.A.J. 10-81 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



NOTES:

1. SEE STANDARD NO 303c FOR MARKER LOCATIONS.
2. POST SHALL BE 4" x 4" CONSTRUCTION HEART STRUCTURAL REDWOOD, S. 4 S. AND/OR EQUIVALENT AS APPROVED BY STANDARD SPECIFICATIONS.
3. ALL WOOD SURFACES SHALL BE GIVEN ONE COAT OF WOOD PRIMER AND TWO COATS OF ENAMEL; SIGN POST YELLOW, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
4. LETTERS SHALL BE STENCILED WITH BLACK PAINT ON ALL SIDES.
5. STREET NAME LETTERS SHALL BE 3" HIGH AND NOT CITY MAINTAINED LETTERS 1" HIGH ROUNDED TYPE STYLE CONFORMING WITH THE STANDARD ALPHABET FOR HIGHWAY SIGNS DESIGNED BY THE U.S. PUBLIC ROADS ADMINISTRATION.

CITY OF ADELANTO

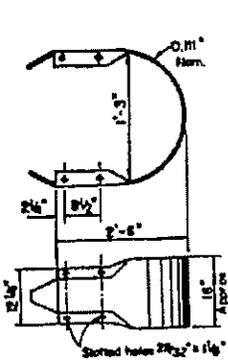
STREET MARKER

HG. 1-71
SCD 9/84

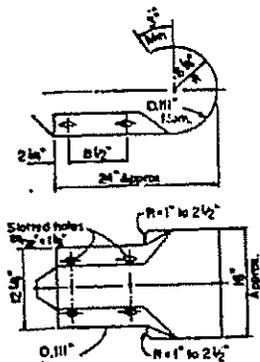
RICHARD S. TITERA
CITY ENGINEER

DESERT ROAD - 2 1/2 ACRE

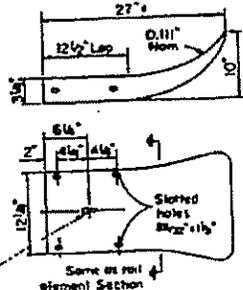
303c



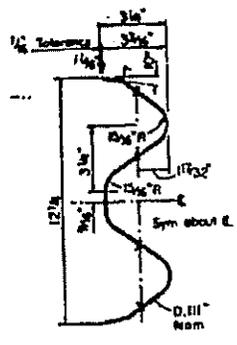
RETURN SECTION



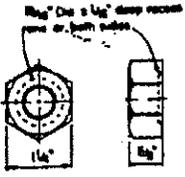
TERMINAL SECTION TYPE "A"



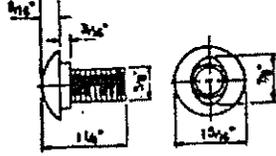
TERMINAL SECTION TYPE "B"



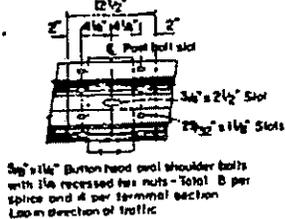
SECTION THRU RAIL ELEMENT



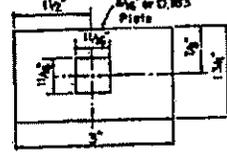
5/8\"/>



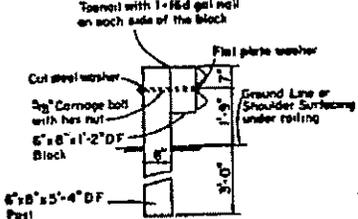
5/8\"/>



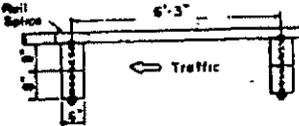
RAIL SPLICE



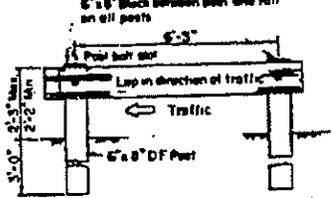
FLAT PLATE WASHER



LINE POSTS



PLAN



ELEVATION

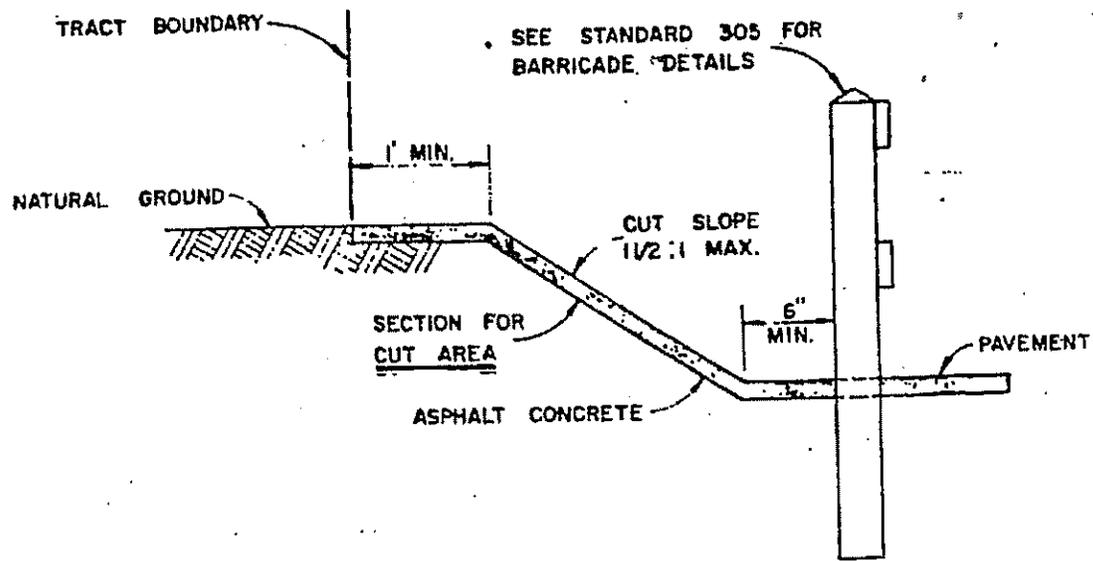
NOTES:

1. CENTER TO CENTER OF POSTS SHALL BE 6'-3" UNLESS SHOWN OTHERWISE.
2. BACKFILL IN POST HOLES TO BE COMPACTED TO ORIGINAL DENSITY OF SOIL.
3. EQUIVALENT DESIGN MAY BE ACCEPTABLE.
4. MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF CALIFORNIA STANDARD SPECIFICATION PLAN A77-CW.

DATE	1.01
REV	RA 10-B/
SEC	9/84

CITY OF ADELANTO
RICHARD S. TITERA
 CITY ENGINEER

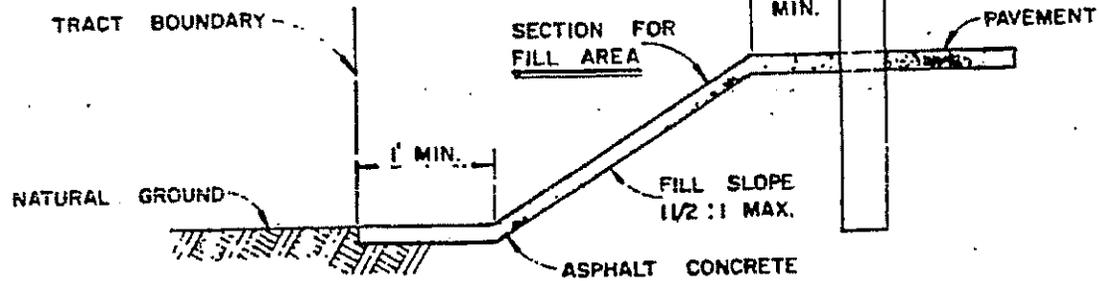
METAL BEAM
GUARDRAIL



SEE STANDARD 305 FOR BARRICADE DETAILS

SECTION FOR CUT AREA

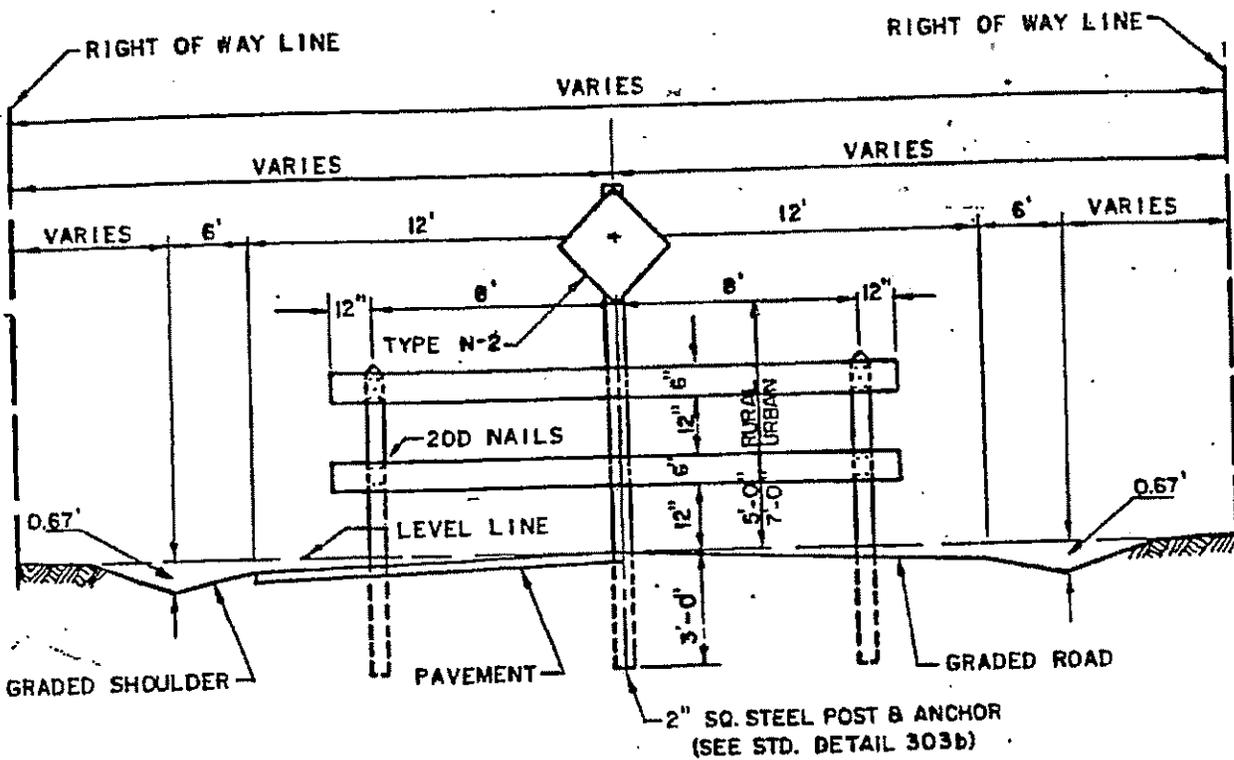
SEE STANDARD 305 FOR BARRICADE DETAILS



NOTES:

- 1 ASPHALT CONCRETE SHALL BE MINIMUM 3 INCHES THICKNESS ON CUT OR FILL AREA.

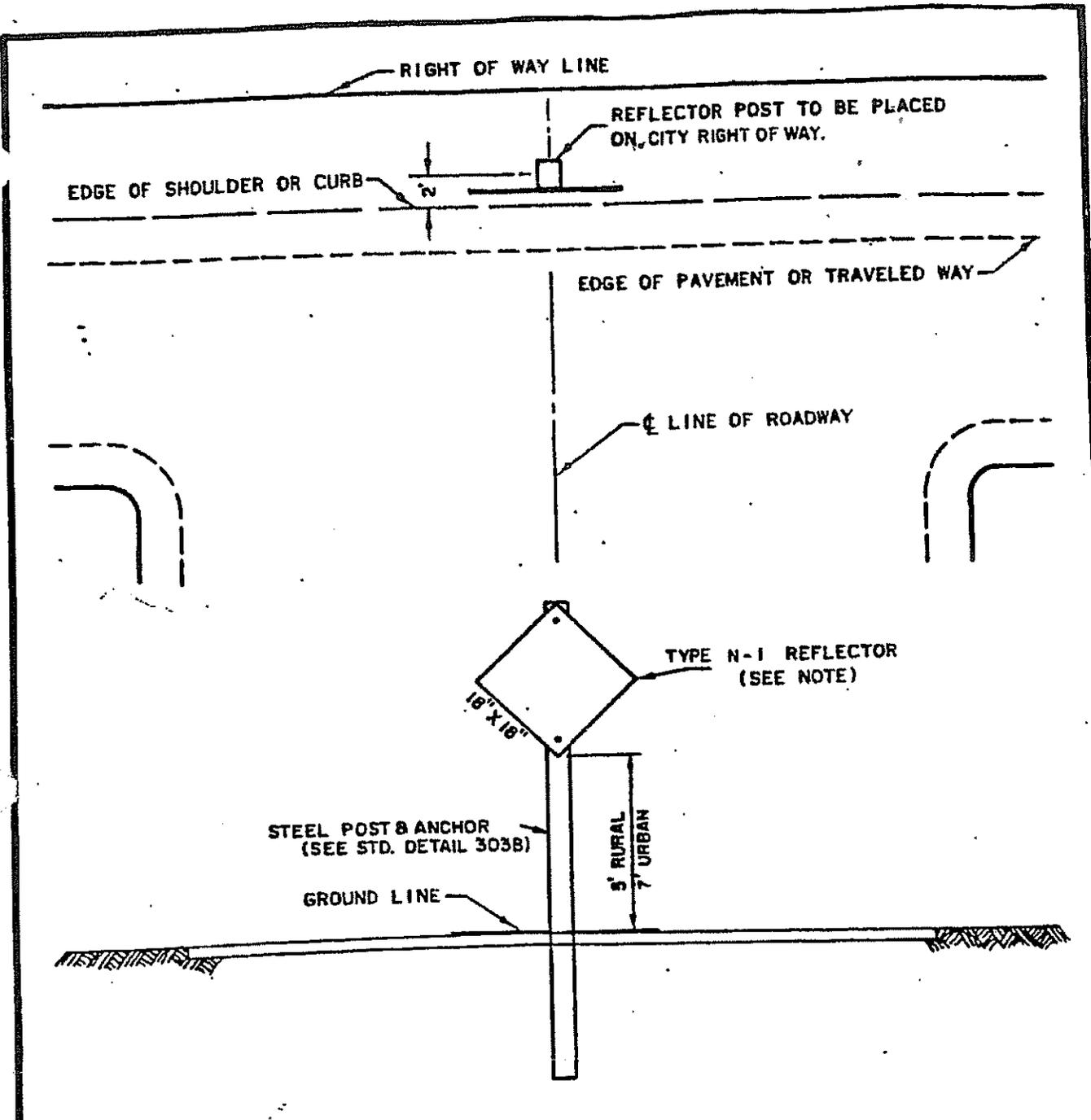
CITY OF ADELANTO		END OF STREET TEMPORARY PAVEMENT	305a
DATE, J.E.M. 10-65 R.A.T. 12-81 S.C.D. 8/84	RICHARD S. TITERA CITY ENGINEER		



WIDTH OF ROADWAY	NUMBER OF EIGHT FOOT SECTIONS	TOTAL LENGTH OF PANELS
36'	4	34'-0"
64'	7	58'-0"
DESERT ROAD	VARIES	VARIES

NOTES:

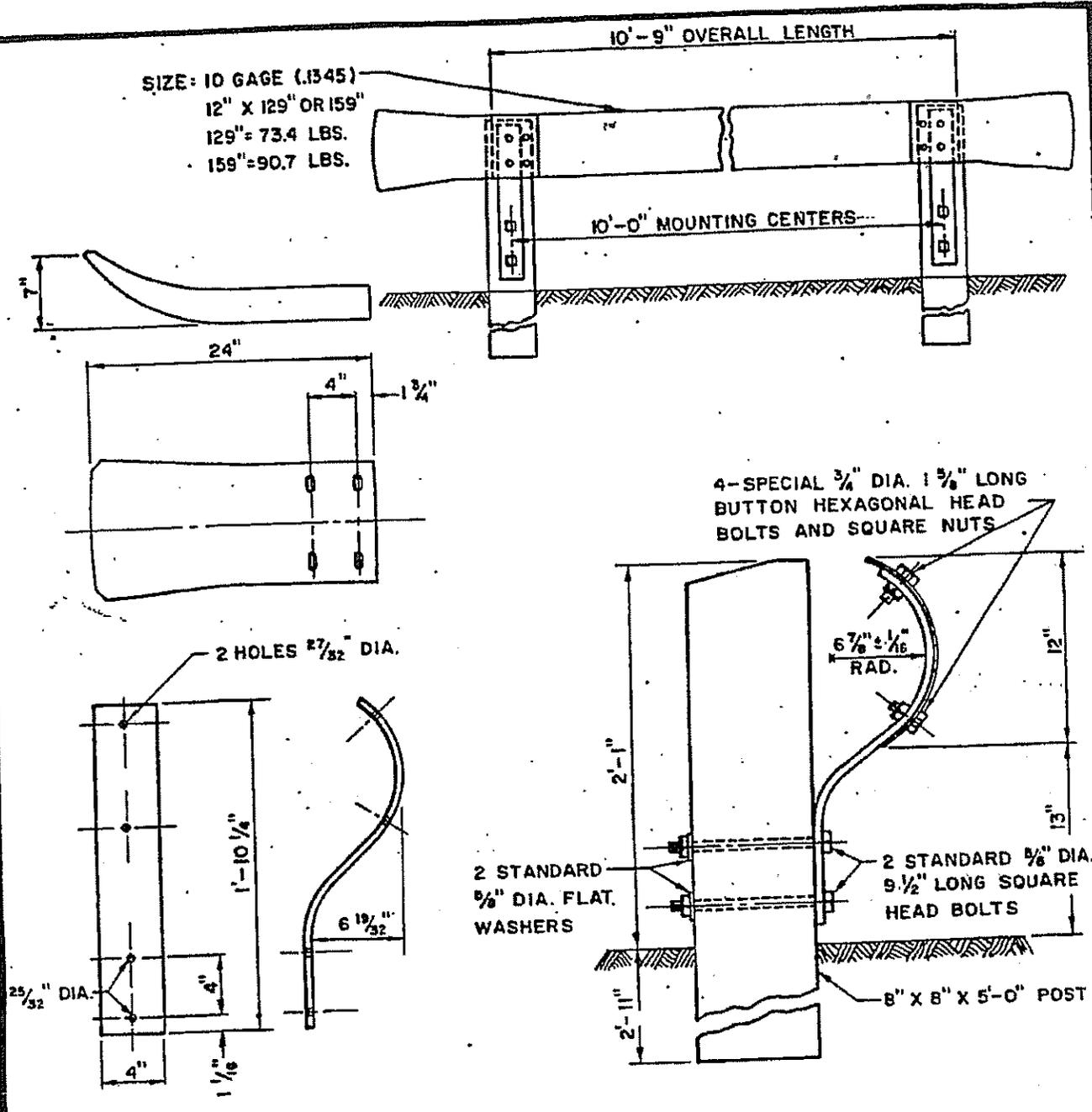
1. POSTS ARE TO BE CHAMFERED 6" X 6" X 5'-0" CONST. HEART REDWOOD, S.45. TWO CROSS PLANKS ARE TO BE 2" X 6" DOUGLAS FIR, CONSTRUCTION GRADE.
2. BARRICADE MATERIALS AND N-2 REFLECTOR SHALL CONFORM TO STATE OF CALIFORNIA, STANDARD SPECIFICATIONS. N-2 SHALL BE RED FHWA TYPE III REFLECTIVE SHEETING.
3. ALL EXPOSED WOOD SURFACES SHALL BE GIVEN 2 BRUSH COATS OF FUME-RESISTANT EXTERIOR WHITE PAINT CONFORMING TO STATE OF CALIFORNIA SPECIFICATION 58-0-06.
4. METAL BEAM GUARDRAIL CONFORMING TO STANDARD NO. 308 MAY BE USED IN LIEU OF WOODEN BARRICADE MATERIAL.



NOTES:

1. POST SHALL BE 2" x 2" SQUARE STEEL IN ACCORDANCE WITH STD NO. 303B.
2. MATERIALS AND TYPE N-1 REFLECTOR SHALL CONFORM TO STATE OF CALIFORNIA, STANDARD SPECIFICATIONS. TYPE N-1 SHALL BE YELLOW FHWA TYPE III REFLECTIVE SHEETING.

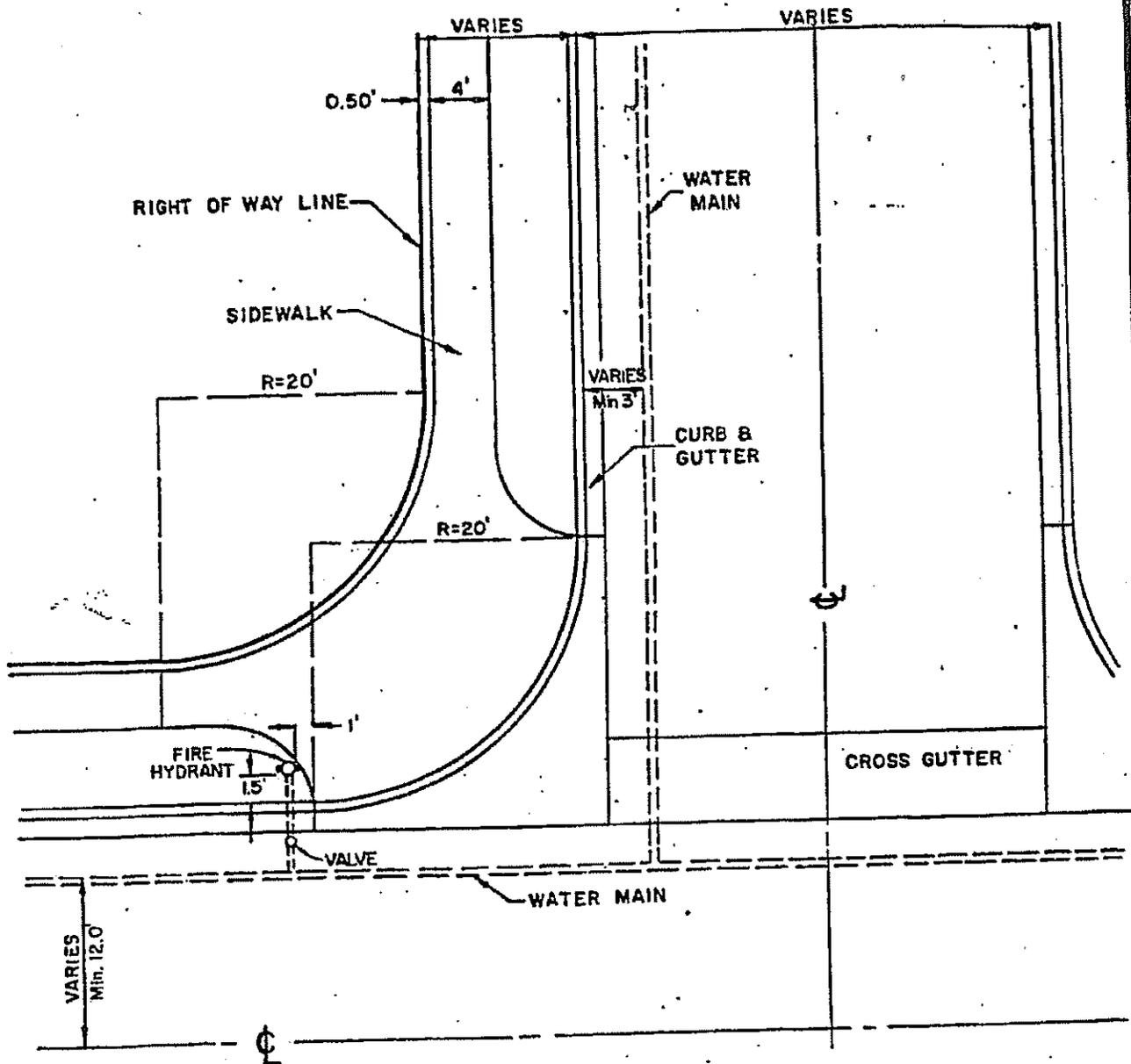
CITY OF ADELANTO		POST WITH REFLECTOR	306
DATE: F.V.C. 7-65 R.S.T. 10-81 S.C.D. 8/84	RICHARD S. TITERA CITY ENGINEER		



NOTES:

1. POSTS ARE TO BE SET IN SUCH A POSITION THAT THE TOP OF THE GUARD RAIL SHALL BE LEVEL WITH THE TOP OF THE POSTS.
2. BACKFILL IN POST HOLES TO BE COMPACTED TO ORIGINAL DENSITY OF SOIL.
3. EQUIVALENT DESIGN MAY BE ACCEPTABLE.
4. MATERIAL AND CONSTRUCTION SHALL CONFORM TO APPLICABLE SECTIONS OF STATE OF CALIFORNIA, STANDARD SPECIFICATIONS, UNLESS SHOWN OTHERWISE.

CITY OF ADELANTO		METAL PLATE GUARDRAIL	309
DATE: F.V.C. 7-65 S.C.D. 9/84	RICHARD S. TITERA CITY ENGINEER		



NOTES:

1. LOCATION OF WATER LINES AND VALVES SHALL BE SHOWN ON THE PLAN VIEW, FOR SUBDIVISION IMPROVEMENT PLANS. SEE HEALTH DEPARTMENT STANDARDS, SECTION 7, DISTRIBUTION SYSTEMS, FOR MINIMUM DEPTH.
2. HYDRANT TO BE SET PLUMB, WITH NOZZLE A MINIMUM OF EIGHTEEN (18") INCHES ABOVE GROUND LEVEL. WHEN HYDRANTS ARE PLACED BEFORE GRADING IS COMPLETED, THE FINAL GRADE LINE, AND ACCESSIBILITY SHOULD BE CONSIDERED.
3. NO OBSTRUCTIONS SUCH AS POLES, GUY LINES, ETC. SHOULD BE PLACED CLOSER THAN (5') FEET TO HYDRANT.

CITY OF ADELANTO

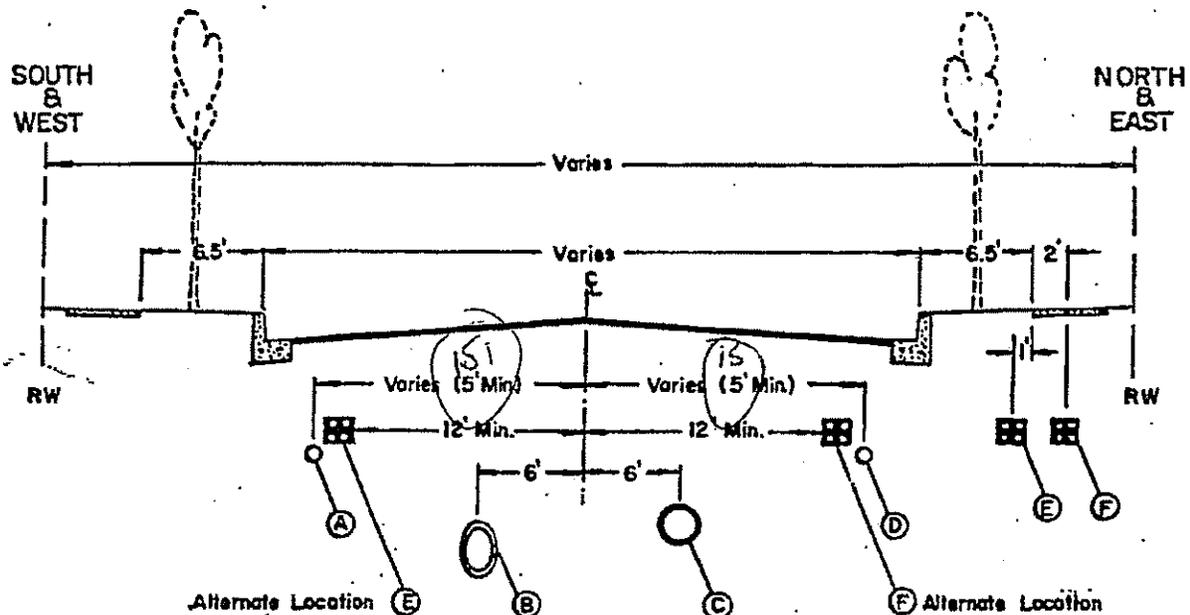
RICHARD S. TITERA
CITY ENGINEER

**FIRE HYDRANT
LOCATION**

310

DATE: I.V.C 7-65
DATE: 7-17-72
SCD 8/84

RECOMMENDED UTILITY LOCATION



UTILITY	MIN. COVER
(A) WATER	30"
(B) STORM DRAIN	Varies
(C) SEWER	Varies (5' Min)
(D) GAS	30"
(E) POWER	36"
(F) TELEPHONE-CATV	30"

RECOMMENDED UTILITY INSTALLATION SCHEDULE

1. STORM DRAIN
2. SEWER
3. POWER & TELEPHONE
4. CURB & GUTTER
5. WATER
6. GAS
7. PAVING

NOTES:

1. WHERE ULTIMATE STREET IMPROVEMENTS ARE TO BE CONSTRUCTED, MINIMUM COVER OF UTILITY LINES MAY BE VARIED TO FACILITATE INSTALLATION.
2. THE UTILITY COMPANIES SHALL MAKE EVERY EFFORT TO LOCATE THEIR FACILITIES IN THE RECOMMENDED LOCATIONS, PARTICULARLY IN NEW SUBDIVISIONS.
3. EDISON & TELEPHONE UTILITIES MAY USE A COMMON TRENCH. ALTERNATE LOCATION MAY BE EITHER THE EDISON POSITION OR THE TELEPHONE POSITION.
4. VARIES 3' FROM THE CURB FACE TO 14' FROM C.
5. THE CENTER 24' OF THE STREET SHALL BE RESERVED FOR SEWER AND STORM DRAIN INSTALLATION.
6. SURFACE OF VAULT OR MANHOLE MUST MATCH PAVEMENT AND PARKWAY GRADES.
7. REPAIR OF TRENCHES AND REPLACEMENT OF PAVED SURFACING IN EXIST CITY ROADS SHALL BE IN ACCORDANCE WITH CURRENT SPECIFICATIONS FOR TRENCH REPAIR.
8. WHENEVER POSSIBLE, MANHOLE COVERS SHALL NOT BE PLACED WITHIN THE SIDE-WALKS.

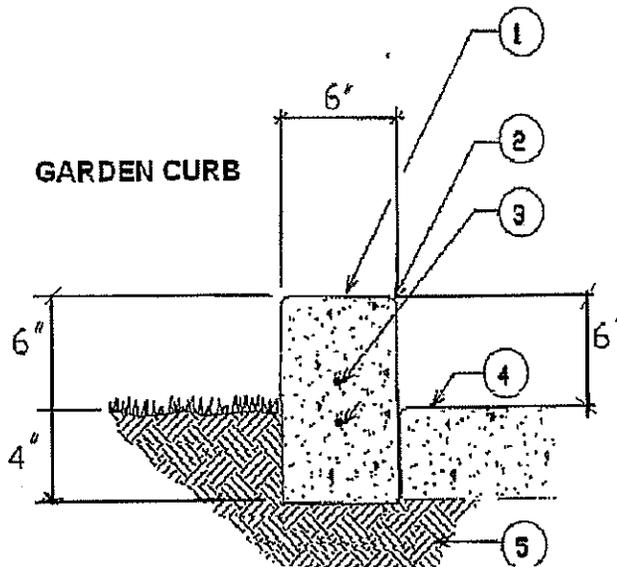
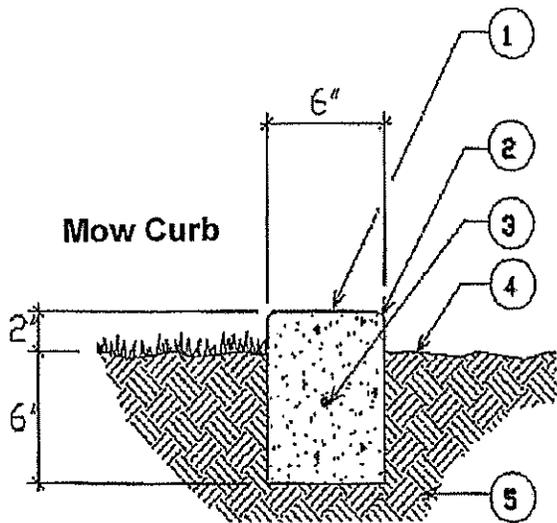
CITY OF ADELANTO

DATE: 7/17/72
S.E.O. 7/84

RICHARD S. TITERA
CITY ENGINEER

UNDERGROUND
UTILITY LOCATION

311



1- CONCRETE HEADER. NATURAL COLOR, SMOOTH TROWL FINISH

2- 1/2' RADIUS TYPICAL

3- #3 REBAR CONTINOUS

4- FINISH GRADE

5- COMPACTED SUBGRADE PER SOILS ENGINEER'S SPECS.

NOTE: INSTALL FELT EXPANSION JOINT @ 10' O.C. MAX

1- CONCRETE HEADER. NATURAL COLOR, SMOOTH TROWL FINISH

2- 1/2' RADIUS TYPICAL

3- #3 REBAR CONTINOUS

4- PEDESTRIAN WALKWAY

5- COMPACTED SUBGRADE PER SOILS ENGINEER'S SPECS.

NOTE: INSTALL FELT EXPANSION JOINT @ 10' O.C. MAX

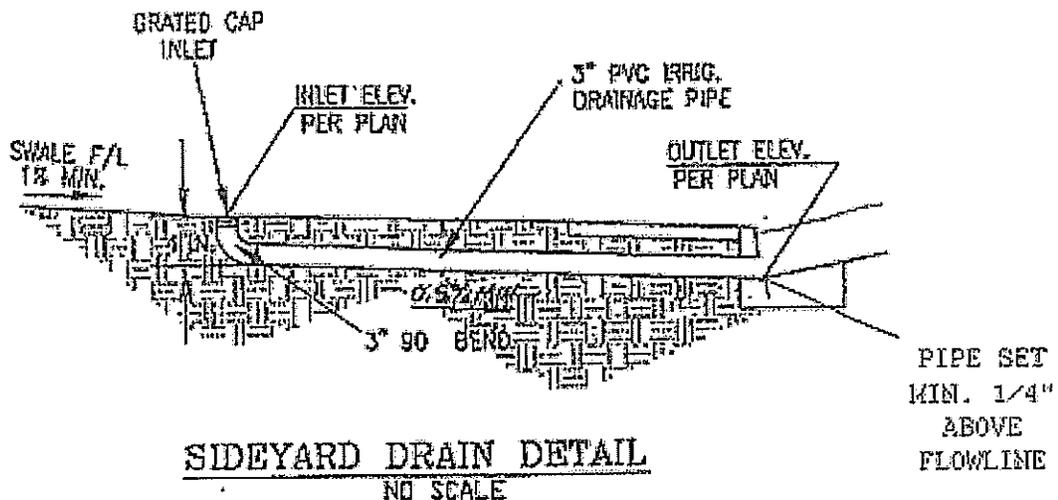
NOTE: REQUIRED FOR ALL AREAS WHERE PEDESTRIAN WALKWAYS ARE ADJACENT TO LMD AREAS.

CITY OF ADELANTO

WILSON SO
CITY ENGINEER

Garden and Mow Curb

Standard
Plan
312



NOTES:

1. SIDEYARD DRAIN CUT THROUGH CURB SHALL BE ONLY PERMITTED ON 8" CURBS.
2. CURB CORE CUT FOR PIPE SHALL BE MIN. 1/4" ABOVE FLOWLINE AND MAX. 1/2".
3. PIPE USED FOR DRAINAGE SHALL BE PVP PIPE AND MAX. 3".
4. FLOWLINE IN PIPE SHALL BE MIN 0.5%.

CITY OF ADELANTO	SIDEYARD DRAIN CUT THROUGH CURB	555
WILSON SO CITY ENGINEER		
6/24/2004		



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Adelanto, CA 92301

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CUSTOMER City Of Adelanto

CUSTOMER CODE SNS ADELANTO-002

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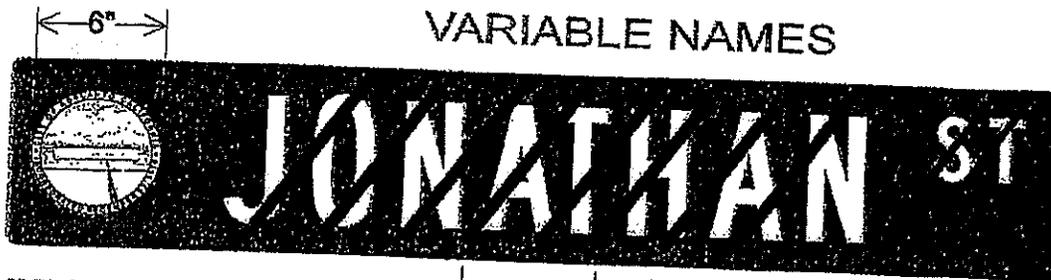
DRAWING # 2-081301-PC

REV. DATE: 2-18-02

DRAWING NOT TO SCALE

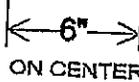
Yellow Letters PMS # 124
Blue Background PMS # 287

* WITH 1150A FILM ON LOGOS ONLY*



6" DIAM. LOGO, MAKE DECALS

FULL FOUR COLOR PROCESS



* FOR LOGO DETAIL REFER TO SPEC SHEET "FD ADELANTO-001"

SHEETING LOGO-3290, SIGN-3275, NAME-3271 SUBSTRATE Alum. GAUGE .125 ALLOY _____ SIZE VAR x 9"
HOLES QTY 4 DIA 3/8" C.R. 1/2" E.D. 3/8" SPECIAL N/A (SEE DRAWING) INK COLOR VAR P.O.P. _____ MARGIN N/A
SCREEN HAND APPLY FRAMED N/A S/FACE D/FACE BOX BORDER Y N PANELS X REFLECTOR R A W

PREFERRED ABBREVIATIONS

AVENUE: AV OR (AVE)	PARK: PK
BOULEVARD: BL OR (BLVD)	PARKWAY: PKY OR (PKWY)
CANYON: CYN	PLACE: PL
CIRCLE: CIR	ROAD: RD
DRIVE: DR	STREET: ST
HEIGHTS: HTS	TERRACE: TER
HIGHWAY: HWY	TRAIL: TR
LANE: LN	WAY: WY OR (WAY)

SNS
VAR X 9"
MIN. 30" MAX. 48"
FLAT _____
BOX _____
EXTRUSION _____

LINE	SIZE	SERIES	COLOR	FONT	UC	LC
1	6"	B	YELLOW		X	
2	3"	C	YELLOW		X	

SPL NOTE:
LOGO IS A DECAL AND
NAME HAND APPLY.

REV. DATE: 4/18/01

SPEC SHEET PREPARED BY [Signature] DATE 2/13/02 SSC. CUST. SRV. APPROVAL [Signature] DATE 2-18-02 PROC. MGR. APPROVAL _____ DATE _____ CUSTOMER APPROVAL _____ DATE _____

STYLE # 812 BOLT THRU

**MADE
IN
USA**

For ~~Flat~~ or Extruded Blades (Please Specify)

12" Blade Holder Drilled and Tapped on 6" Centers

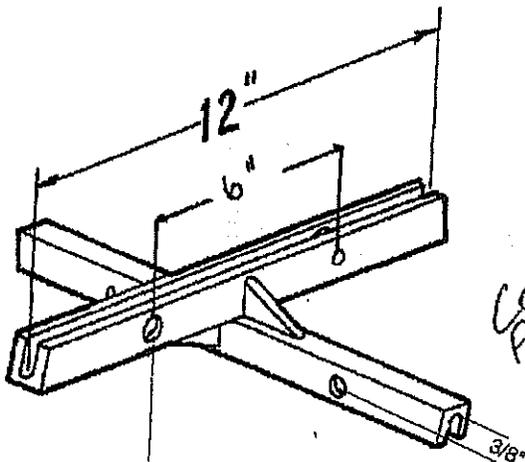
For Superior Sign Holding Strength



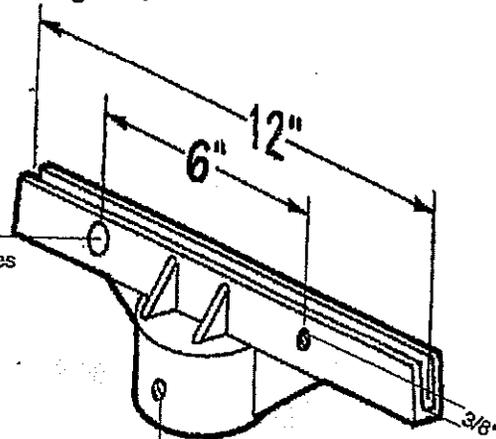
- SAME SIDE or OPPOSITE SIDE ACCESS DRILLING
- Drilled for Set Screw or Bolt thru Fasteners
- For Bolt thru Application, bolt goes completely thru sign, bolt head presses firmly against sign

For Flat Blade

CROSSES AVAILABLE
90°



9/16" Clearance Hole opposite side of 5/16" threaded Hole — 2 Places



Cap used For Adelanto

CAPS AVAILABLE

- 2" (For 2 3/8" O.D. Post)
 - 2" Square (For 2" x 2" Sq. Post)
- Please Specify for Round or Square Post
- U-Channel Cap 180°
 - U-Channel Cap 90°

Hardware used For Adelanto

HARDWARE AVAILABLE

- Standard set screws
- Vandal Proof (VP) set screws
- TS12 Bolts and set screws
- Vandal Proof Bolts and VP set screws

NOTE:

- O.D. (Outside Diameter of post)
- For set screw application 25-40 inch pounds pressure is sufficient to secure sign blank in bracket

TELESPAR

Sign Support System

14 Gauge Specifications

I. PURPOSE

The purpose of this specification is to describe the manufacture of square steel tubular posts, including a telescopic system, for the mounting of various traffic type signs.

II. GENERAL REQUIREMENTS

A. Material

Steel posts shall conform to the standard specification for hot rolled carbon sheet steel, structural quality, ASTM designation A570, Grade 50. Yield strength after cold-forming is 60,000 psi minimum.

B. Shape

The cross section of the post shall be square tube formed of 14 gauge (.083 U.S.S. gauge) steel, carefully rolled to size and shall be welded directly in the corner by high frequency resistance welding and externally scarfed to agree with corner radii.

C. Finish

Signposts shall be manufactured from hot-dipped galvanized steel conforming to ASTM A653, G90, Structural Quality, Grade 50, Class 1. The corner weld is zinc coated after scarfing operation. The steel is also coated with a chromate conversion coating and a clear organic polymer topcoat. Both the interior and the exterior of the post shall be galvanized.

D. Cross Section

Perforated sign posts shall be one or more of the following sizes:

<u>Size</u>	<u>U.S.S. Gauge</u>	<u>Weight (lbs./foot)</u>
1 1/4" x 1 1/4"	14	1.71
2" x 2"	14	1.99

E. Holes

Holes shall be 7/16 ± 1/64 inches in diameter on one (1) inch centers on all four sides down the entire length of the post. On square tubing, holes shall be on centerline of each side in true alignment and opposite each other directly and diagonally.

F. Length

The length of each post shall have a permissible length tolerance of ± 1/4".

G. Telescoping Properties

The finished posts shall be straight and have a smooth, uniform finish. It shall be possible to telescope all consecutive sizes of square tubes freely

and for not less than ten feet of their length without the necessity of matching any particular face to any other face. All holes and ends shall be free from burrs and ends shall be cut square.

H. *Tolerances*

Tolerances on outside sizes:

<u>Nominal Outside Dimensions</u>	<u>Outside Tolerances at All Sides at Corners</u>
1 3/4" x 1 3/4"	± .008"
2" x 2"	± .008"

Note: Measurements from outside dimensions shall be made at least 2 inches from the end of the tube.

Wall Thickness Tolerances:

Permissible variation in wall thickness is ± .008".

Convexity and Concavity:

Measured in the center of the flat sides, tolerance in ± .010", determined at the corner.

Squareness of Sides and Twist:

<u>Nominal Outside Dimensions</u>	<u>Squareness Tolerance</u>	<u>Twist Permissible in 3' Length</u>
1 3/4" x 1 3/4"	± .010"	.062"
2" x 2"	± .012"	.062"

Note: A sample shall be considered to fail if its sides are not 90° to each other within the squareness tolerance listed above.

Straightness Tolerance:

Permissible variation in straightness is 1/16 of an inch in 3 feet.

Corner Radii:

Standard outside corner radius shall be 5/32 of an inch ± 1/64 inch.

CITY OF ADELANTO
ENGINEERING DEPARTMENT
STANDARD SPECIFICATIONS

For construction of City Roads to be accomplished
under the provisions of a City Engineering Department permit.

CITY OF ADELANTO
ENGINEERING DEPARTMENT

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STANDARD SPECIFICATIONS

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STANDARD SPECIFICATIONS

The work shall be done in accordance with the current Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, Division of Highways, insofar as the same may apply and in accordance with the Standard Specifications of the City of Adelanto Engineering Department.

These Standard Specifications cover the usual construction requirements for work specified on a City Engineering Department permit; however, in the event it is determined that the specific work to be done is of such a nature that the method of construction, type and/or kind of material is not defined by the Standard specifications; such work shall be performed in accordance with Special Provisions prepared for the specific work and made a part of the approved plans.

Section numbers in these City Engineering Department Standard Specifications correspond with like numbered sections in the State Standard Specifications. (All sections of the State Standard Specifications will govern except those sections specifically modified herein.)

SECTION 1. DEFINITIONS AND TERMS

1(a) General - State Specifications

Whenever in the State Standard Specifications the following terms are used, they shall be understood to mean and refer to the following:

1. "Department of Transportation", "Department", "Division of Highway", or "Division" shall be construed to mean City of Adelanto Engineering Department.
2. "State Highway Engineer" or "Engineer" shall be construed to mean the City Engineer acting either directly or through properly authorized agents, engineers, assistants, inspectors and superintendents, acting severally within the scope of the particular duties delegated to them.
3. "Contractor" shall be construed to mean the agency or individual doing the work and furnishing the materials herein discussed or the agency or individual securing a City Engineering Department permit to do work on or improve a portion of City right of way.
4. "Attorney General" shall be construed to mean the City of Adelanto.
5. "Plans -- Those construction plans prepared under the direction of the City Engineer or a Registered Civil Engineer and approved by the City Engineer or an authorized assistant. City of Adelanto Engineering Department Standard Drawings are to be included in this category.

1(b) General - City of Adelanto Engineering Department

Whenever in these City of Adelanto Engineering Department Standard Specifications the following terms are used, they shall be understood to mean and refer to the following:

1. "Standard Specifications" shall be construed to mean the State of California, Business and Transportation Agency, Department of Transportation current Standard Specifications.
2. "Subdivider" shall be construed to mean a person, firm, corporation partnership, or association who proposed to divide, divides or causes to be divided any real property into a subdivision for himself or for others.
3. "Testing Laboratory" shall be construed to mean a Materials Laboratory where all reports submitted to the Engineering Department shall be prepared by or under the supervision of a Civil Engineer, registered in the State of California.
4. "Private Engineer" shall be construed to mean a Civil Engineer, registered in the State of California employed by a Subdivider or Developer to prepare road improvement plans.

SECTIONS 2 AND 3

Sections 2 and 3 of the Standard Specifications are not applicable.

SECTION 4. SCOPE OF WORK

4(a) General

The scope of the work shall be set forth in the special provisions, the improvement plans, these City Engineering Department Standard Specifications and Drawings and the Standard Specifications.

4(b) Precedence

1. Special Provisions (City Approved).
2. Improvement Plans (City Approved).
3. City Engineering Department Standard Specifications and Drawings.
4. Standard Specifications.

4(c) Extra Work

When any Extra Work is performed the City shall not be held liable for payment of such work and the Standard Specifications shall not be construed to imply that additional compensation is to be provided for such extra work.

SECTION 5. CONTROL OF WORK

5(a) General

The work to be performed under these City Engineering Department Standard Specifications shall be controlled in accordance with the provisions in Section 5 of the Standard Specifications and as hereinafter specified.

5(b) Lines and Grades

Where construction plans have been prepared by other than the City Engineer's staff, all lines and grades will be set and established under the direction of the Private Engineer who prepared the plans or an engineer or surveyor acting on his behalf.

1. Adequate stakes shall be set by the Private Engineer to enable the contractor to construct the work to the plan grades.
2. Stakes shall not be destroyed until the work has been reviewed by the City Engineering Department Inspection Personnel.
3. Sub-grade stakes, driven to the pavement sub-grade elevation, shall be set by the contractor or private engineer. The stakes shall be set at all hinge, edge of pavement and crown points within 0.01 foot of sub-grade elevation and at not more than 50 foot intervals. Additional stakes may be needed at warped or vertical curve areas. Sub-grade stakes shall be in place prior to paving to permit spot checking of sub-grade by inspection personnel.

SECTION 6. CONTROL OF MATERIALS

6(a) General

The materials to be furnished under these specifications shall be controlled in accordance with the provisions of Section 6 of the Standard Specifications and as hereinafter specified.

6(b) Testing

Testing of materials shall be in accordance with the schedule in Section 6(d).

Written reports of these tests and a plat showing locations shall be submitted by the Testing Laboratory to the Construction Inspection Section of the City Engineering Department prior to proceeding with the next construction operation.

6(c) Certificates of Compliance

If other manufactured products are used which are not listed in Section 6(d), a Certificate of Compliance from the manufacturer may be provided to verify quality of materials unless otherwise required by the plans.

SECTION 6. CONTROL OF MATERIALS (Continued)

6(d) REQUIRED CONSTRUCTION TESTING & SAMPLING
FREQUENCY AND LOCATION

<u>Material</u>	<u>Test For</u>	<u>Test No.</u>	<u>Frequency and Location</u>
Embankment	Relative Compaction	Calif. 231*	Varying depths of fill area per (1000) one thousand cubic yards
Trench of Structure Backfill	Relative Compaction	Calif. 231*	Approx. 250' interval and at varying depths and on 20% of utility laterals
** Basement Materials	Relative Compaction	Calif. 231*	Approx. 500' interval
Class II Aggregate Base	Relative Compaction	Calif. 231*	Approx. 500' interval
	*** Sieve Analysis	Calif. 202	Approx. 4000' interval Sampled after spreading
	*** Sand Equivalent	Calif. 217	Approx. 4000' interval Sampled after spreading
	***R Value	Calif. 301	Approx. 4000' interval Sampled after spreading
	(R Value Test Req'd. only if sand equivalent is less than 35)		
Class III Aggregate Base or SubBase	Relative Compaction	Calif. 231*	Approx. 500' interval
	Sieve Analysis	Calif. 202	Approx. 1000' interval Sampled after spreading
	R Value	Calif. 301	Approx. 1000' interval Sampled after spreading
	Sand Equivalent	Calif. 217	Approx. 1000' interval Sampled after spreading

6(d) REQUIRED CONSTRUCTION TESTING & SAMPLING
FREQUENCY AND LOCATION

<u>Material</u>	<u>Test For</u>	<u>Test No.</u>	<u>Frequency and Location</u>
Lime Treatment	Relative Compaction Thickness R Value	Calif. 231* ----- Calif. 301	Approx. 500' interval Approx. 250' interval Approx. 1000' interval Sampled immediately after final mixing
Native Soil (For determination of Structural Section)	Sieve Analysis	Calif. 202	Approx. 1000' interval at rough grade
	Sand Equivalent	Calif. 217	Approx. 1000' interval at rough grade
	R-Value	Calif. 301	Approx. 5000' interval on material with lowest sand equivalent from above tests. Additional tests as required to isolate poor soil areas.

SECTION 6. CONTROL OF MATERIALS (Continued)

SECTION 6. CONTROL OF MATERIALS (Continued)

6(d) REQUIRED CONSTRUCTION TESTING & SAMPLING
FREQUENCY AND LOCATION

<u>Material</u>	<u>Test For</u>	<u>Test No.</u>	<u>Frequency and Location</u>
Cement Treated Base	Relative Compaction	Calif. 231*	Approx. 500' interval
	Thickness	-----	Approx. 250' interval
	R Value	Calif. 301	Approx. 1000' interval Sampled immediately after final mixing

*Latest revision of Test No. ASTM D-1556 and D-1557 may also be used.

**Layer defined in Sections 19(d)1, 19(d)2 and 24(d)5 requiring 95 and 90 percent compaction.

***Test Report not required on projects less than 800' in length when purchased from commercial plant.

6(d) REQUIRED CONSTRUCTION TESTING & SAMPLING
FREQUENCY AND LOCATION (Continued)

SECTION 6. CONTROL OF MATERIALS (Continued)

<u>Material</u>	<u>Test For</u>	<u>Test No.</u>	<u>Frequency and Location</u>
Asphalt Concrete	***Stabilometer	Calif. 304	Approx. 4000' interval Sampled from project
	***Sieve Analysis	Calif. 202	Approx. 4000' interval Sampled from project
	Extraction & Moisture	*Calif. 309 or 310	Approx. 4000' interval Sampled from project
Road-Mixed Asphalt Surfacing	Sieve Analysis	Calif. 202	Approx. 500' interval
	Sand Equivalent	Calif. 217	Approx. 500' interval
	Extraction & Moisture	****Calif. 309 or 310	Approx. 500' interval
Liquid Asphalt	Kinematic Viscosity at 140° F	AASHTO T 201	****
	Water	AASHTO T55	****
	Distillation	AASHTO T78	****
	Asphalt Residue of 100 Pen.	AASHTO T56	****
	Ductility of asphalt Residue at 77° F	AASHTO T51	****

*** Test Report not required on projects less than 800' in length.

**** Two pint samples from each shipment - submit one pint from each shipment to Construction Inspection Section of the City Engineering Department, and retain other pint for one year.

**** Latest revision of Test No. ASTM D 2172 may also be used.

SECTION 7. LEGAL RELATIONS AND RESPONSIBILITY

7(a) General

The Contractor's legal relationship and responsibilities shall be as specified in Section 7 of the Standard Specifications and as hereinafter specified.

7(b) Permits and Licenses

A permit from the San Bernardino County Flood Control District shall be procured prior to any construction operations within Flood Control District rights of way, whether such rights of way be easement or fee-owned.

A permit from the City Engineering Department shall be procured prior to any construction operations within public rights of way or within subdivision tracts where such rights of way have been dedicated on a final tract map or are proposed to be so dedicated. Accompanying each application for a permit shall be a listing of construction and/or excavation contractors and the name of an authorized representative who will be responsible for the construction work undertaken under the terms of the permit. Also, accompanying each application for an excavation permit shall be a drawing(s) (size: 8-1/2" x 11", 11" x 17" or 24" x 36") showing location of the utility work (gas, water, sewer, telephone, electrical, CATV, and irrigation systems) within public road right of way.

SECTION 8. PROSECUTION AND PROGRESS

8(a) General

The provisions of Section 8 of the Standard Specifications, "Prosecution and Progress", will not apply. Beginning of work and time of completion shall be in accordance with the current City Subdivision Ordinance, Subdivision Agreement and/or in accordance with the City Engineering Department Permits issued for the work.

8(b) Relocation

The City of Adelanto shall have no responsibility in making arrangements for the installation, relocation, alteration or removal of any utility or non-highway facilities necessary for the completion of the work. All non-highway facility work shall be completed at no cost to the City of Adelanto Engineering Department.

SECTION 9. MEASUREMENT AND PAYMENT

9(a) General

The provisions of Section 9 of the Standard Specifications, "Measurement and Payment" will not apply.

9(b) Responsibilities

The City of Adelanto does not assume any responsibility for the methods of measurement or for the methods of payment for work completed in accordance with these specifications when the City is not the contracting agency.

SECTION 10. DUST CONTROL

10(a) General

Dust control shall conform to the provisions in Section 10 of the Standard Specifications and in compliance with City "Dust Control" Ordinances.

10(b) Application of Control

When in the opinion of the City Engineer's Representative, the operations of the Contractor are such as to unduly endanger the public health or safety, the Representative may direct the Contractor to apply water or other palliative measures to areas of excavation, embankment, or haul roads to control and minimize dust.

SECTION 15. EXISTING HIGHWAY FACILITIES

15(a) General

The removal or protection of existing highway facilities shall conform to the provisions in Section 15 of the Standard Specifications and as hereinafter specified.

15(b) Removal and Protection

The Contractor shall be responsible for the removal and/or protection of existing signs, fences curb and gutter, and other highway facilities which may be encountered in the roadway; but the Contractor shall not remove or replace regulatory signs. The replacement or repair of any facilities which the City Engineer's representative deems necessary, as a result of the Contractor's operations, shall be done by the Contractor as directed by the City Engineer's representative. The placement of new stop signs will be done by City forces at the expense of the Subdivider.

15(c) Cleanup

Debris and damage caused by drainage and/or traffic in the work area shall be promptly cleaned up or repaired if such is necessary for the protection of the roads, or for the safety and convenience of the public.

15(d) Preservation of Property

All pipe lines or substructures of any kind shown or not shown on the improvement plan within the limit of improvement work shall be removed or relocated as required at no expense to the City of Adelanto.

15(e) Manholes, Valves etc.

All work required to adjust manhole covers, valves and other utility facilities to finished grade and repair of paving shall be accomplished at no expense to the City of Adelanto. Adjustment shall be accomplished after completion of roadway paving. All facilities within the roadway shall remain a minimum of 6" below the grading plane until after paving is completed.

SECTION 19. EARTHWORK

19(a) General

Earthwork shall conform to the provisions of Section 19 of the Standard Specifications and as hereinafter specified.

19(b) Grade Tolerance

Immediately prior to placing subsequent layers of material thereon, the grading plane shall conform to the following:

1. The grading plane at any point shall not vary more than 0.05 foot above or below the grade established by the Improvement Plans if the structural section indicates placing surfacing on native material.
2. The grading plane at any point shall not vary more than 0.05 foot above the grade established by the Improvement Plans if the structural section indicates placing an aggregate base or sub-base material on native materials.

19(c) Structure Backfill

Structure backfill shall be compacted to a relative compaction of not less than 90 percent in lieu of the 95 percent required in the State Standard Specifications. Also, the State Standard Specifications for sand equivalent of not less than 20 will not apply provided the property compaction is attained.

19(d) Relative Compaction

1. Relative compaction of not less than 95 percent shall be obtained for a minimum depth of 0.5 foot below the grading plane for the width of the surfacing or of base materials whichever is greater, whether in excavation or embankment.
2. In addition, relative compaction of not less than 90 percent shall be obtained for a minimum depth of 1.0 foot below the grading plane for the width of the surfacing or of base materials whichever is greater, whether in excavation or embankment.
3. In addition, relative compaction of not less than 90 percent shall be obtained in all material in embankment.

19(e) Foundation Preparation

Preparation of the foundation to receive material shall be the responsibility of the Contractor. Basement material, that is unsuitable for the planned use, shall be excavated and disposed of.

Subgrade which is not firm and unyielding shall be considered to be unsuitable material. The unsuitable material shall be removed. The

resulting space shall be filled with reprocessed material or a material suitable for the planned use.

19(f) Testing

Testing and submittal of test results shall be in accordance with Section 6, "Control of Materials" of these City Engineering Department Standard Specifications.

SECTION 24. LIME TREATMENT

24(a) General

Lime treatment shall conform to the provisions of Section 24 of the Standard Specifications and as hereinafter specified.

24(b) Materials

Lime shall be a commercial granular quicklime conforming to the definition in A.S.T.M. C-51. The quicklime shall contain not less than 95% total available Calcium Oxide and Magnesium Oxide (CaO & MgO) and not less than 90% total available Calcium Oxide (CaO) as determined by A.S.T.M. C-25.

Granular quicklime shall conform to the following gradations:

<u>Sieve Size</u>	<u>Percent Passing</u>
#4	100%
#100	0-20%

A Certification of Compliance shall be furnished with delivery of lime and shall be submitted to the Construction Inspection Section of the Engineering Department.

24(c) Spreading and Mixing

1. The granular quicklime shall be placed on the prepared roadway in such a manner as to insure the proper percentage of lime when mixed with the soil
2. The granular quicklime shall be scarified with the underlying soil following the spreading. Scarifying shall be done in such a manner as to minimize the shifting of the lime.
3. The exact spread rate of lime to be mixed shall not be less than that as shown on the approved plans.
4. Primary mixing shall be done with a rotary type machine with the capacity to mix the full depth of the lime treatment for all mixing operations. Sufficient water to hydrate the lime shall be introduced from the mixing machine during primary mixing.
5. Primary mixing shall be completed on the same day the quicklime has been applied. Secondary mixing shall begin the following day and shall be completed within 24 hours following the completion of primary mixing.

24(d) Compacting

1. The treated material shall not be compacted until at least 24 hours after the first pass of the mixer and not later than the day following completion of the final mixing.

2. Water shall be added to maintain the optimum moisture content of the treated material until the curing seal has been applied.
3. In areas where the depth of typical sections for lime treatment is 0.75' or less, the mixture may be compacted in one course with any type of roller other than a steel-wheeled tandem roller.
4. For those grades steeper than 10%, final compaction shall be accomplished with a sheeps foot or segmented type roller. On all roadways, final rolling shall be accomplished by means of a pneumatic-tired roller conforming to the provisions in Section 39-5.02 "Rolling Equipment."
5. The untreated material for a depth of 0.5' beneath the lime treated material, shall be compacted to not less than 90% relative compaction.
6. Surfacing or Base Material shall not be placed upon lime treated material until compaction tests and thickness determinations are obtained and a written report submitted to the Construction Inspection Section of the City Engineering Department and approval is given.

24(e) Curing

1. SS1-H Curing seal shall be applied immediately following compaction.
2. Curing seal shall be applied at a rate of 0.15 gal. per square yard of surface.

24(f) Grade Tolerance

The surface of the finished lime treated material shall not vary more than 0.05 foot above or below the grade established by the Engineer.

24(g) Testing

Testing and submittal of test results shall be in accordance with Section 6 "Control of Materials" of these County Transportation Department Standard Specifications.

SECTION 25. AGGREGATE SUB-BASES

25(a) General

Aggregate sub-bases shall conform to the requirements of Section 25 of the Standard Specifications and as hereinafter specified.

25(b) Materials

Aggregate sub-base shall be clean and free from vegetable matter and other deleterious substances and shall conform to the gradation and quality requirements set forth in the Standard Specifications under Class 2 Aggregate Sub-base or as specified on the improvement plans.

25(c) Testing

Testing and submittal of test results shall be in accordance with Section 6 "Control of Materials" of these City Engineering Department Standard Specifications.

SECTION 26. AGGREGATE BASES

26(a) General

Aggregate base shall conform to the provisions of Section 26 of the Standard Specifications and as hereinafter specified.

26(b) Materials

Class 2 Aggregate Base

Aggregate for Class 2 Aggregate Base shall conform to the latest provisions of the Standard Specifications.

Class 3 Aggregate Base

Aggregate for Class 3 Aggregate Base shall be clean and free from vegetable matter and other deleterious substances and be of such character that it will form a stable base when compacted to the required density. The material shall be of such sizes that the percentage composition by weight of material shall conform to the following grading at the time that the material is deposited on the roadbed when determined by test method No. Calif. 202.

<u>Sieve Size</u>	<u>Percentage Passing</u>	
	<u>Coarse</u>	<u>Fine</u>
1½"	100	-
1"	-	100
#4	45-75	70-100
#30	22-57	35-75
#200	5-25	6-30

The material shall conform to the following quality requirements after processing:

<u>Test</u>	<u>Test Method No. Calif.</u>	<u>Requirements</u>
R-Value.	301	70 minimum
Sand Equivalent	217	30 minimum

26(c) Adding Water

The requirements for adding water will not apply for Class 3 Aggregate Base.

26(d) Spreading

The use of motor graders will be permitted for spreading all aggregate bases.

26(e) Testing

Testing and submittal of test results shall be in accordance with Section 6, "Control of Materials" of these City Engineering Department Standard Specifications.

SECTION 38. ROAD-MIXED ASPHALT SURFACING

38(a) General

Road mixed asphalt surfacing shall conform to the provisions in Section 38 of the Standard Specifications and as hereinafter specified.

38(b) Materials

Asphalts

Bituminous binder to be mixed with the aggregate shall be liquid asphalt conforming to the latest provisions in Section 93, "Liquid Asphalts" and shall be of the grade and amount as specified on the approved set of plans.

Aggregate

The aggregate shall be free from decomposed materials, vegetable matter and other deleterious substances and shall consist of any one or a mixture of the following materials.

1. Broken or crushed stone or crushed gravel.
2. Natural material having sufficient roughness to meet the design stabilometer requirements.

The aggregate shall conform to the following gradation immediately prior to mixing with the asphalt binder.

AGGREGATE GRADING REQUIREMENTS FOR R.M.S.

<u>Sieve Sizes</u>	<u>1" Maximum Individual Test Results</u>	<u>Moving Average</u>
1"	100	100
3/4"	80-100	95-100
3/8"	80-100	85-100
No. 4	62-95	70-95
No. 8	45-90	50-90
No. 30	15-60	20-60
No. 200	4-20	6-18

Sand Equivalent Test

Individual Test Result. 25 min.
 Moving Average 30 min.

Immediately prior to spreading and compacting, the combined mix shall be sampled for conformance to the specified oil content on the plans.

38(c) Thickness Tolerance

Thicknesses shown on the plans are minimum. Paving thinner than that specified must be corrected.

38(b) Mixing

Mixing may be done either by "Road Mixing" or "Central Plant Mixing":

Road Mixing

Mixing shall be done as specified in Section 38-4 of the Calif. State Standards except for the following:

- (1) Mixing shall be accomplished with a road mixing machine equipped with a spray system which applies the asphalt while mixing.
- (2) The mixing machine shall make four (4) or more passes, after the final application of asphalt, as necessary to insure a thorough mix.
- (3) A motor grader shall follow each pass of the mixing machine to aerate the mixed material. The aggregate material and asphalt shall be thoroughly mixed until the asphalt is uniformly distributed throughout and all aggregate particles are completely coated.

Central Plant Mixing

- (1) Should the Contractor elect to mix the materials at a central mixing plant by the plant mixed method, the mixing shall be done in accordance with Sections 38-4 and 39-3 of the current State Standard Specifications.
- (2) The R.M.S. shall be spread by a self propelled asphalt paver which conforms with the provisions outlined in Section 39-5 Spreading and Compacting Equipment in the current State Standard Specifications.
- (3) The thickness of any one lift may be increased to 0.33' providing the completed surface conforms to Section 38-4.07 "Compacting" in the current State Standard Specifications.

The method of mixing shall be submitted and acknowledged by the Construction Inspection Section of the City Engineering Department prior to paving.

38(e) Testing

Testing and submittal of test results shall be in accordance with Section 6, "Control of Materials" of these City Engineering Department Standard Specifications.

38(f) Utilities

All water, gas and sewer mains and laterals if required in the Subdivision shall be constructed to each individual lot, prior to paving.

SECTION 39. ASPHALT CONCRETE

39(a) General

Asphalt concrete shall conform to the provisions in Section 39 of the Standard Specifications and as hereinafter specified.

39(b) Materials

Asphalts

Paving asphalt to be mixed with aggregate shall be a steam refined asphalt with a Viscosity grade of A.R. 4000 except A.R. 8000 shall be used for asphalt concrete dikes.

Aggregate

The combined aggregate shall be Type B and shall conform to the grading specified for $\frac{1}{2}$ " maximum medium grading.

When thin overlays are required, a grading of $\frac{3}{8}$ " maximum may be used.

39(c) Thickness Tolerance

Thicknesses shown on the plans are minimum. Paving, thinner than that specified, must be overlaid by a self-propelled paving machine.

39(d) Paint Binder

Paint binder shall be applied to all vertical surfaces and existing pavement to receive surfacing and to any other surfaces designated by the City Engineer's representative.

39(e) Rocky Subgrade

When Asphalt Concrete is to be placed on native soil which consists of a rocky material the subgrade shall be prepared by removing all rocks which protrude above the subgrade and all voids or depressions shall be filled with a fine graded material having an R-Value equal to or greater than the native material, except that the fine graded material will not be required to exceed an R-Value of 78.

39(f) Utilities

All water, gas and sewer mains and laterals if required in the Subdivision shall be constructed to each individual lot, prior to paving.

39(g) Spreading and Compacting

For those grades steeper than 10%, final compaction on that plane directly under the surfacing shall be accomplished with a sheeps foot or segmented type roller.

In lieu of the rolling equipment required in the latest provisions of the Standard Specifications, the Contractor shall furnish a minimum of one 8-ton, 2-axle tandem roller for each 50 tons, or fraction thereof, of asphalt concrete placed per hour by each paver or motor grader.

39(h) Testing

Testing and submittal of test results shall be in accordance with Section 6, "Control of Materials" of these City Engineering Department Standard Specifications.

SECTION 51. CONCRETE STRUCTURES

51(a) General

Concrete structures shall conform to the provisions in Section 51 of the Standard Specifications except for the following:

- (1) Forms for drainage inlets shall be required for both the inside and the outside for the full height of the structure.

SECTION 66. CORRUGATED METAL PIPE

66(a) General

Corrugated metal pipe shall conform to the provisions in Section 66 of the Standard Specifications and as hereinafter specified.

66(b) Materials

Materials for corrugated metal products shall conform to the latest provisions of the Standard Specifications, except that, when approved and shown on the improvement plans, aluminum corrugated metal pipe may be used outside the roadbed when the flow and soil conditions meet the minimum criteria as set forth in the latest provisions of Section 7-821 of the State Division of Highways Planning Manual, Part 7-Design, for a service life of 25 years.

66(c) End Finish

The ends of 0.060 inch and 0.075 inch thickness installations which are not fully protected by concrete structures or flared ends shall be reinforced in accordance with the provisions of Sub-section 66-3.04 of the State Standard Specifications except that it shall not be necessary to specify this on the plans.

SECTION 73. CONCRETE CURBS, SIDEWALKS AND DRIVEWAYS

73(a) General

Concrete curbs, sidewalks and driveways shall conform to the provisions in Section 73 of the Standard Specifications and as hereinafter specified.

73(b) Curb Construction 90% COMPACTION ALSO ON SIDEWALK

Curb shall be constructed in accordance with the latest provisions of the Standard Specifications, except weakened plane joints shall be placed at not more than 10' intervals. Weakened plane joints shall be formed to a minimum depth of one inch to insure control of shrinkage cracking.

73(c) Curb Depressions

When curb depressions are provided for driveways, complete driveway construction will be required in accordance with City of Adelanto Engineering Department Standard Drawings and related specifications.

73(d) Quality of Workmanship

All work shall be structurally sound and neat in appearance. Joints shall be accurately placed and properly constructed.

73(e) Repairs and Replacement

Upon completion of all road work any curb and gutter, sidewalk and driveway which is damaged or cracked at locations other than random, widely spaced shrinkage cracks shall be removed and replaced. Slight surface blemishes may be repaired with an approved cement-epoxy compound.

Damaged concrete shall be removed to nearest joint or shall be saw-cut.

Any concrete surface which exhibits rough texture, spalling or multiple checking or crazing due to defective material, improper curing, or other reasons, shall be removed and replaced to the full extent of the defective work. Weakened plane joints which are not properly located or formed, and as a result of their ineffectiveness contribute to random cracking, shall be considered defective and shall be saw-cut and the cracked areas removed and replaced. Minimum length of curb or sidewalk replacement is 4'.

73(f) Expansive Soils

In expansive soil areas, the subgrade under sidewalks and driveway approaches shall be scarified to a depth of at least eight (8) inches and moisture shall be applied to maintain free water on the surface for at least 24 hours prior to placing concrete and the subgrade shall then be prepared without compactive effort.