



City of

PORTLAND, OREGON

Bureau of Development Services
Site Development

1900 SW 4th Avenue, Suite 5000

Portland, Oregon 97201

(503) 823-6892

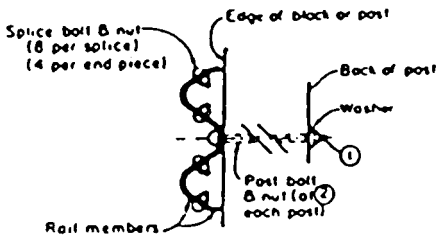
FAX: (503) 823-5433

TDD: (503) 823-6868

<http://www.bds.ci.portland.or.us>

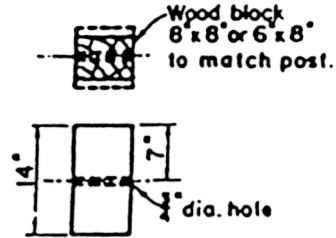
Appendix A

Referenced Standard Plans



- ① Post bolts to extend beyond the tightened nuts within limits of 2" to 3"
- ② When steel posts are used see "POSTS" for modified bolt details, Drg No 2126A
- ③ All post bolt threads to be set after assembly for wrench removal only

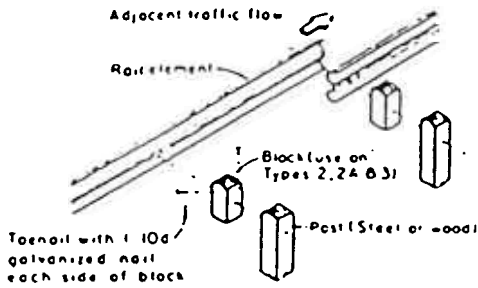
FITTINGS



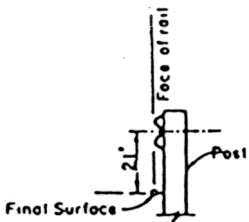
BLOCK

USE ON TYPES 2, 2A & 3 GUARD RAIL & ON MEDIAN BARRIER.

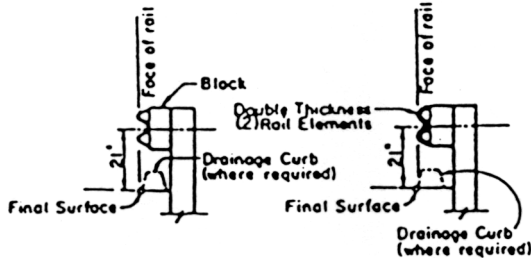
ASSEMBLY DETAILS



RELATION OF PARTS

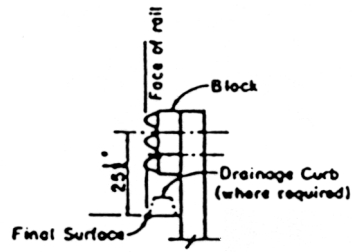


TYPES 1 & 1A



TYPES 2 & 2A

TYPE 3



TYPE 4

TABLE OF POST SPACING

TYPE	SPACING
1 & 2	12'-6"
1A & 2A	6'-3"
3	3'-1 1/2"
4	6'-3"

GUARDRAIL TYPES

DEPARTMENT OF PUBLIC WORKS

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

GUARDRAIL - Types & Assembly Details

STANDARD PLAN NO.

3-20

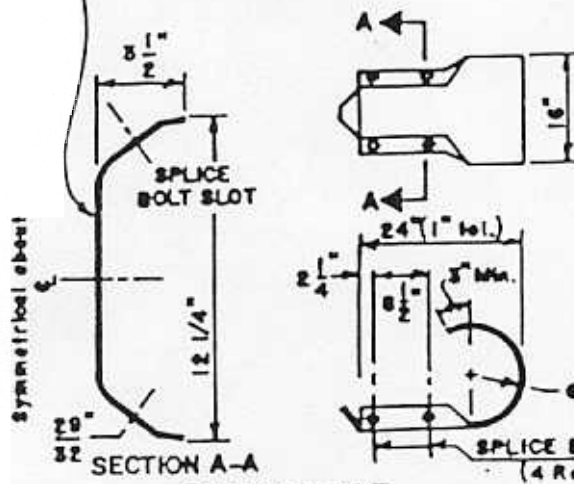
APPROVED

Richard O. Schmidt
CITY ENGINEER

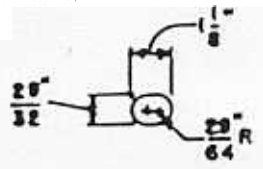
DATE

NO.	REVISIONS	DATE	BY

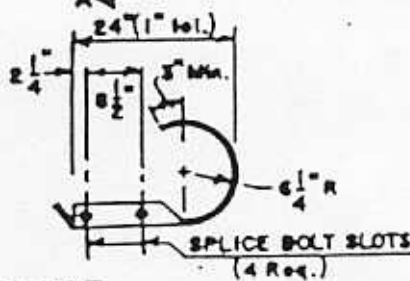
Base Metal Thickness
0.105" Nominal plus Galv.



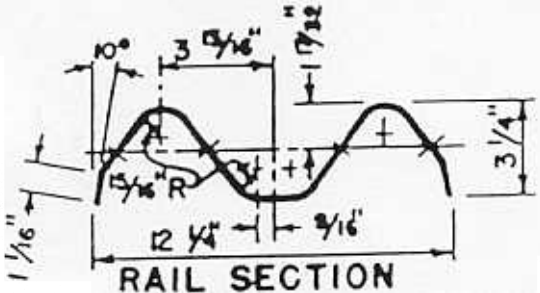
END PIECE



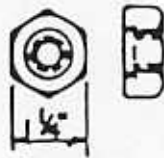
SPLICE BOLT SLOT



Oval Shoulder

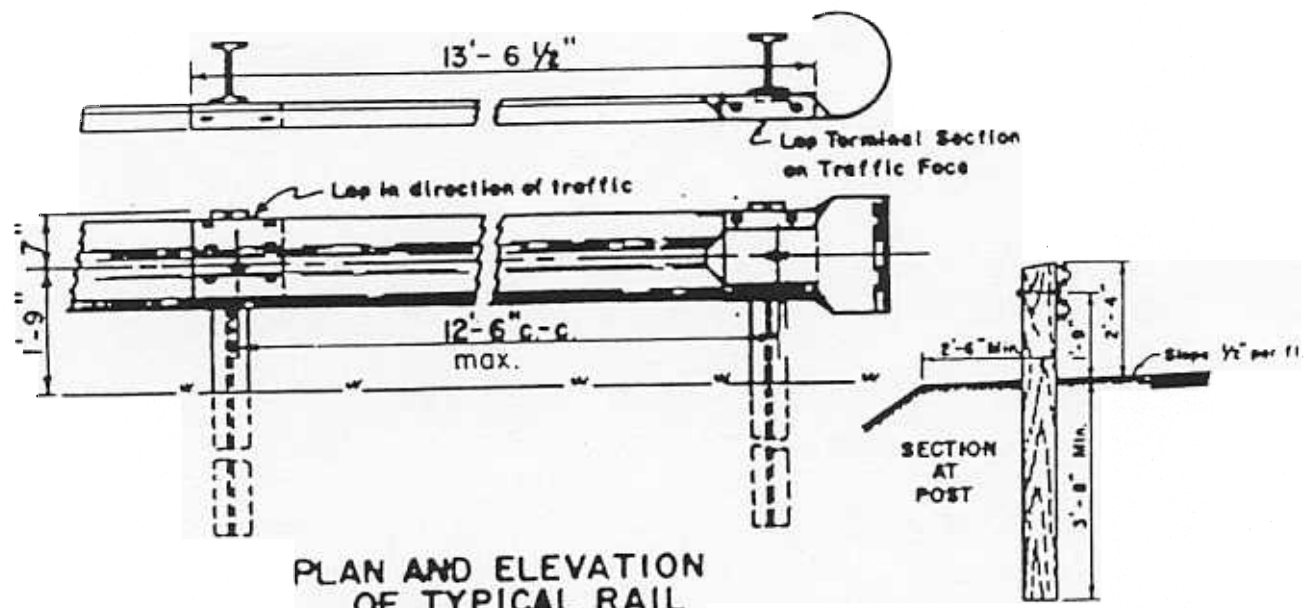


RAIL SECTION



5/8" SPLICE BOLT & NUT

Pool Bolt Similar Except for Length



PLAN AND ELEVATION OF TYPICAL RAIL

DEPARTMENT OF PUBLIC WORKS

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

GUARDRAIL - General Details

STANDARD PLAN NO.

3-21

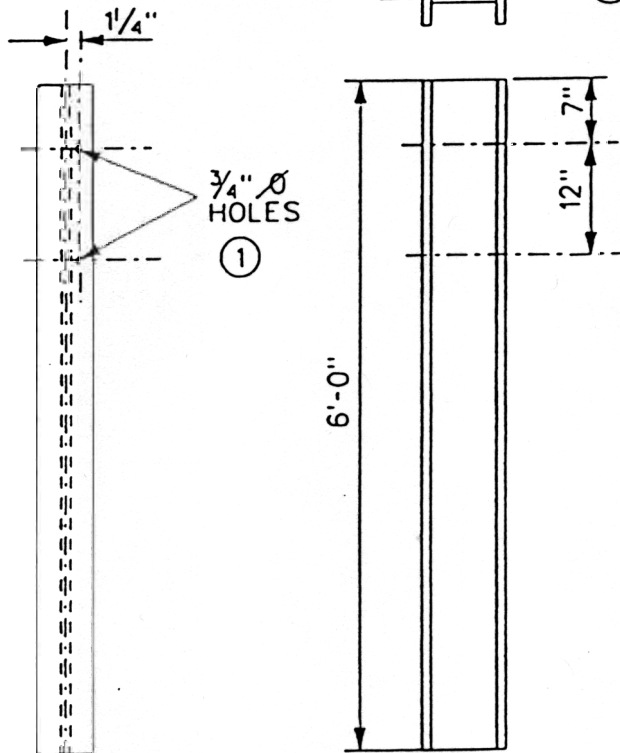
APPROVED

Richard A. Schmitt
CITY ENGINEER

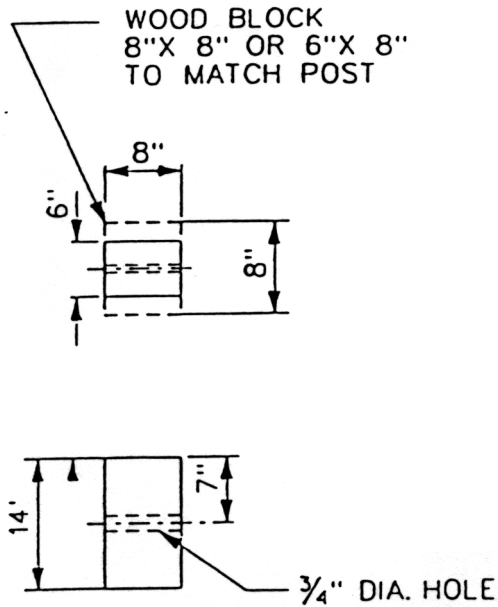
DATE

NO.	REVISIONS	DATE	BY

- ① LOWER HOLE OPTIONAL. REQUIRED ONLY WHERE CHANNEL RAIL IS TO BE INSTALLED
- ② REPLACES W6X8.5 WHICH IS ACCEPTABLE AS AN ALTERNATE.

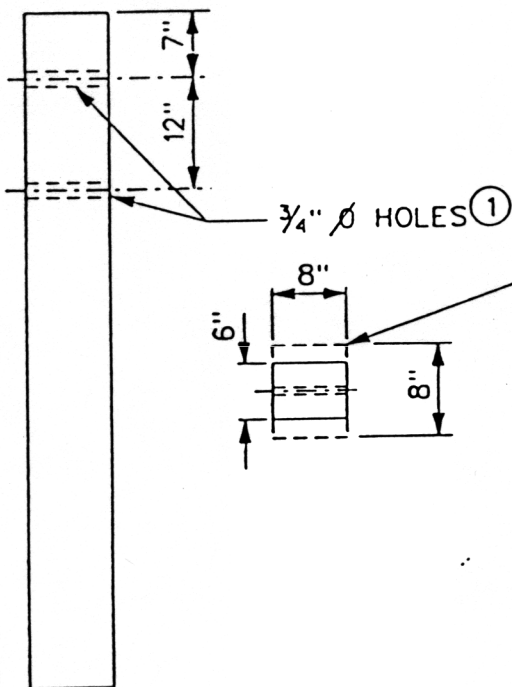


STEEL



BLOCK

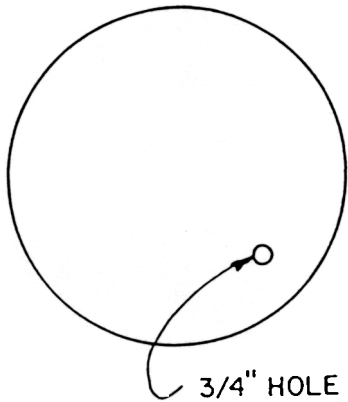
USE ON TYPE 2. 2A. 3 & TRANSITION GUARDRAIL & ON MEDIAN BARRIER



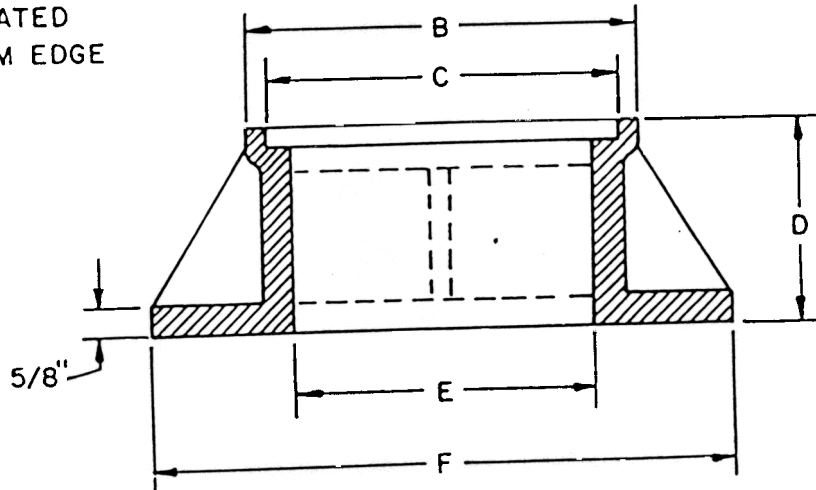
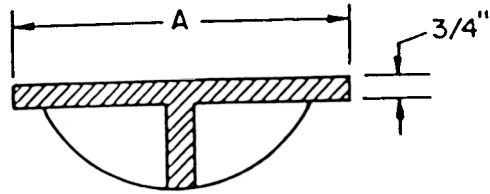
WOOD

FOR TYPE 1.1A.2 & 2A GUARDRAIL POSTS MAY BE 6"X 8" OR 8"X 8". FOR TYPE 3 GUARDRAIL, MEDIAN BARRIER OR TRANSITION GUARDRAIL, POSTS WILL BE 8"X 8" TREATED TIMBER, S4S OR ROUGH SAWN.

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
GUARDRAIL-POST DETAILS	
APPROVED	STANDARD PLAN NO.
<i>W. E. R. M.</i>	3-22
CITY ENGINEER	



3/4" HOLE
CENTER OF HOLE
TO BE LOCATED
2 1/2" FROM EDGE
OF COVER



NOTE:
MATERIAL SHALL CONFORM
TO REQUIREMENTS FOR
GRAY IRON CASTINGS,
ASTM A-48

CLASS	A	B	C	D	E	F	APPROX. WT.
AA	6 7/8"	8 1/4"	7 1/8"	6"	6"	10 1/2"	60 LBS.
A	9 7/8"	11 1/2"	10 1/8"	6 3/8"	9"	17 1/8"	90 LBS.
B	13 1/4"	15"	13 1/2"	7 3/4"	12"	20"	125 LBS.

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

SURVEY MONUMENT FRAME AND COVER

STANDARD PLAN NO.

3-36

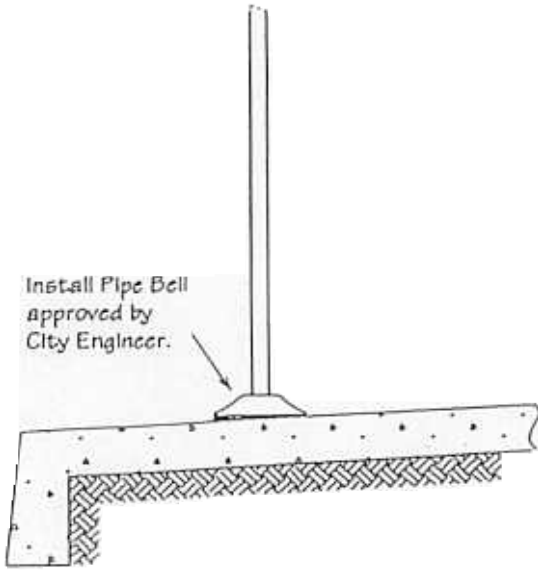
APPROVED

Robert A. Schmidt

NO.	REVISIONS	DATE	BY

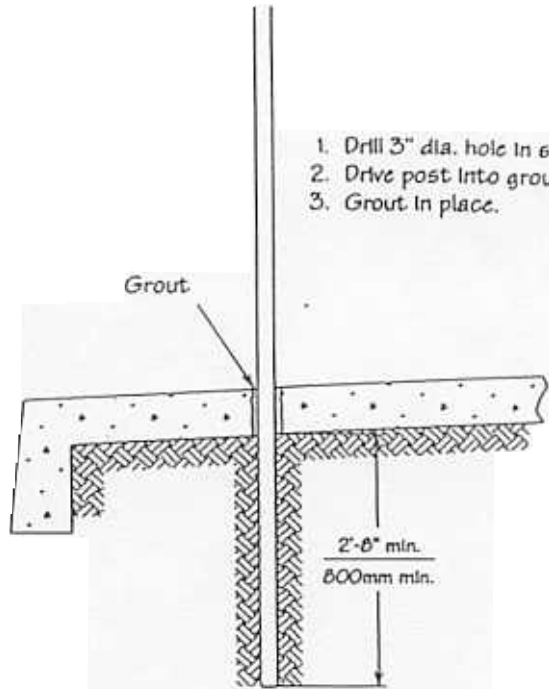
CITY ENGINEER

DATE



Install Pipe Bell approved by City Engineer.

VAULTED SIDEWALK

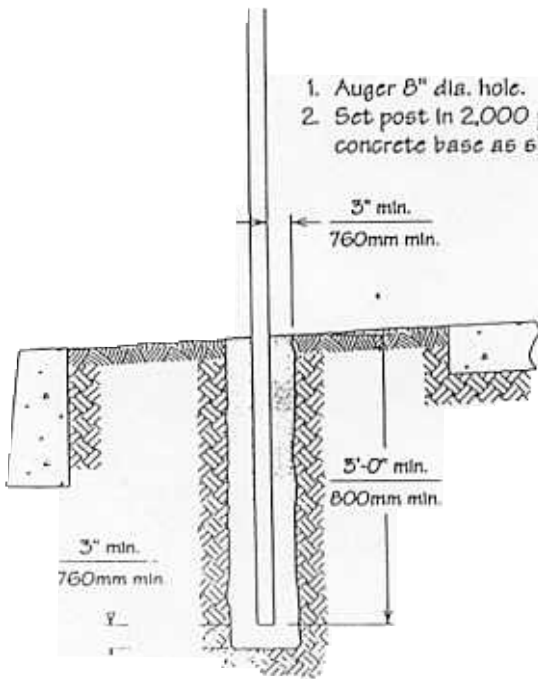


1. Drill 3" dia. hole in sidewalk.
2. Drive post into ground.
3. Grout in place.

Grout

2'-8" min.
800mm min.

COMBINATION SIDEWALK



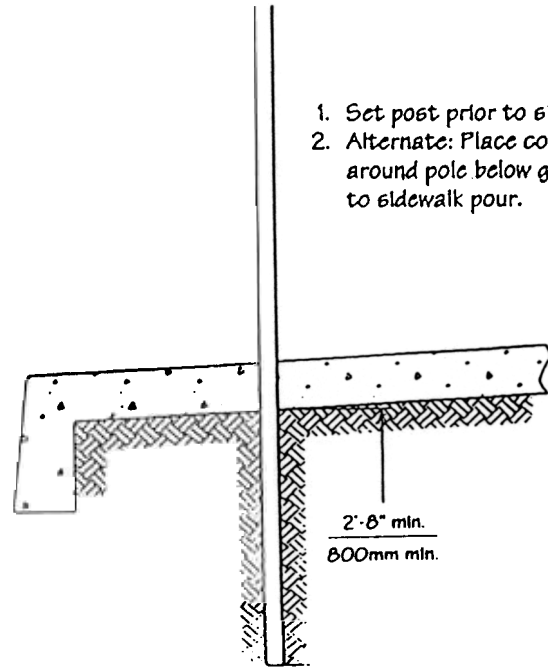
1. Auger 8" dia. hole.
2. Set post in 2,000 psi concrete base as shown.

3" min.
760mm min.

5'-0" min.
800mm min.

3" min.
760mm min.

SEPARATE CURB AND SIDEWALK



1. Set post prior to sidewalk pour.
2. Alternate: Place concrete around pole below grade prior to sidewalk pour.

2'-8" min.
800mm min.

COMBINATION SIDEWALK-NEW CONSTRUCTION

All posts shall be 2" (50.80mm) I.D. galvanized standard steel pipe.
ASTM A120-65 unless otherwise specified on plan.

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN:

Traffic Control Sign Post Installation

STANDARD PLAN

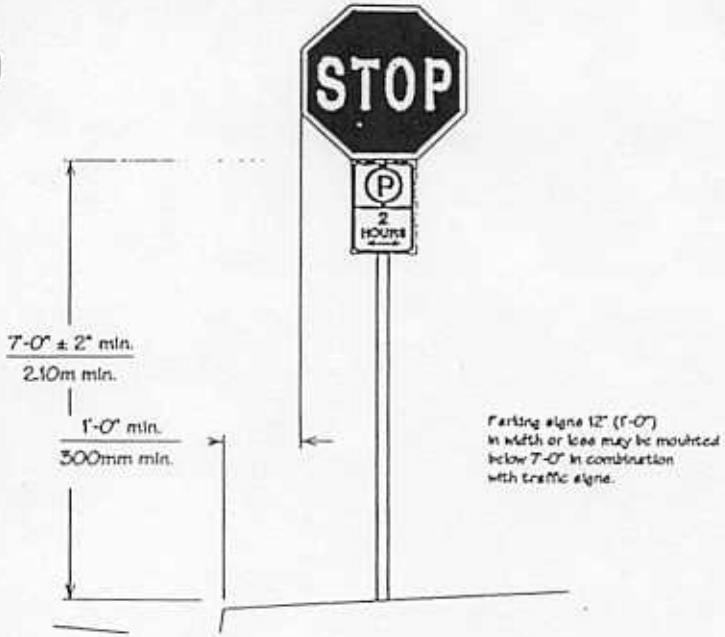
3-48

APPROVED
CITY ENGINEER

B. Hill

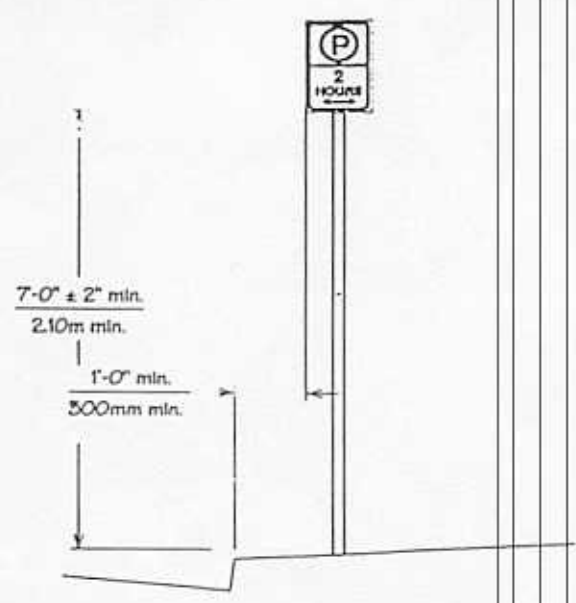
10/23/98
DATE

NO.	REVISIONS	DATE	BY

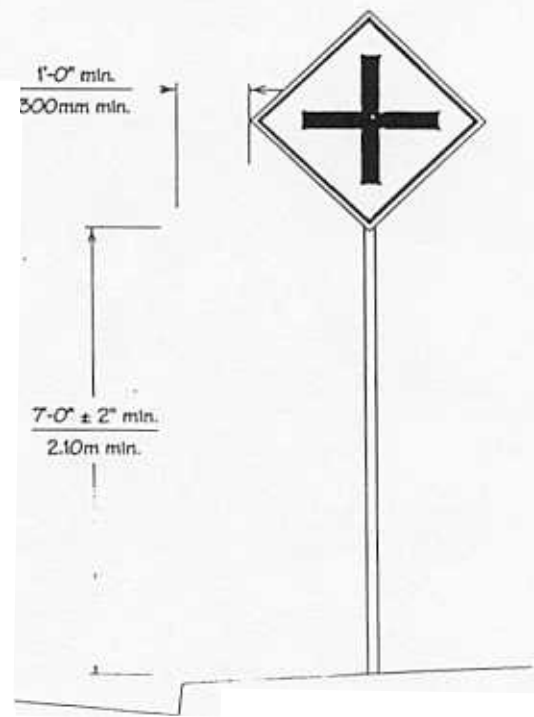


Facing sign 12" (1'-0") in width or less may be mounted below 7'-0" in combination with traffic sign.

TYP. TRAFFIC SIGN WITH PRK. SIGN PLACEMENT



TYPICAL PARKING SIGN PLACEMENT



TYPICAL WARNING SIGN PLACEMENT

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN:

Traffic Control Sign Installation

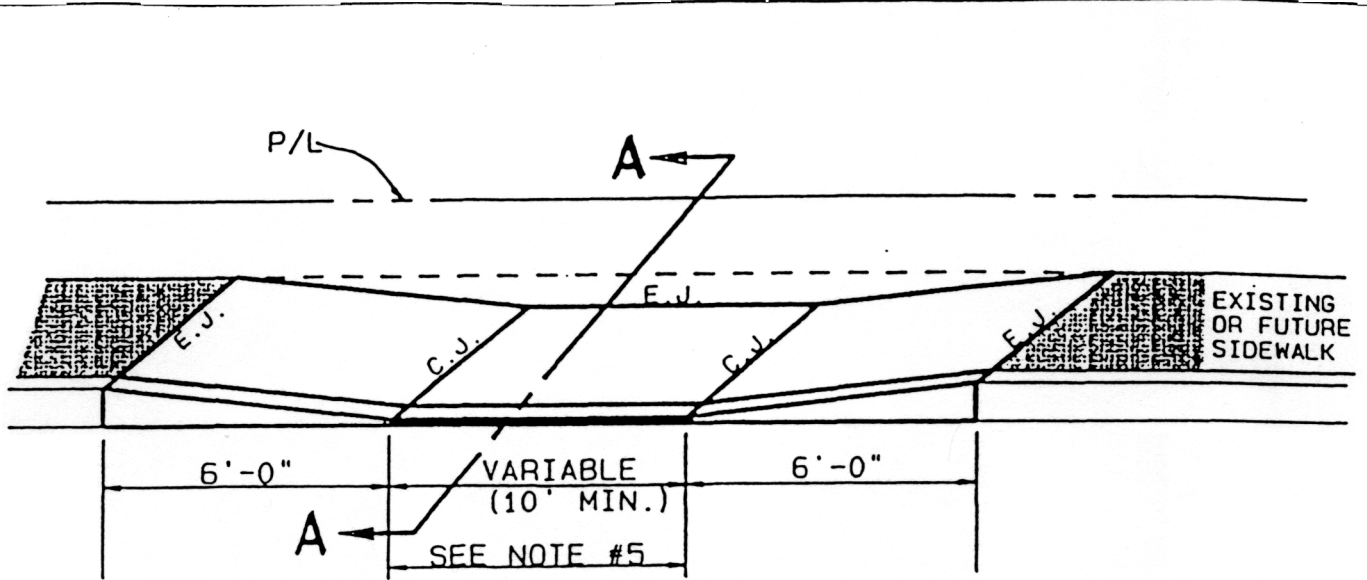
STANDARD PLAN NO:

3-49A

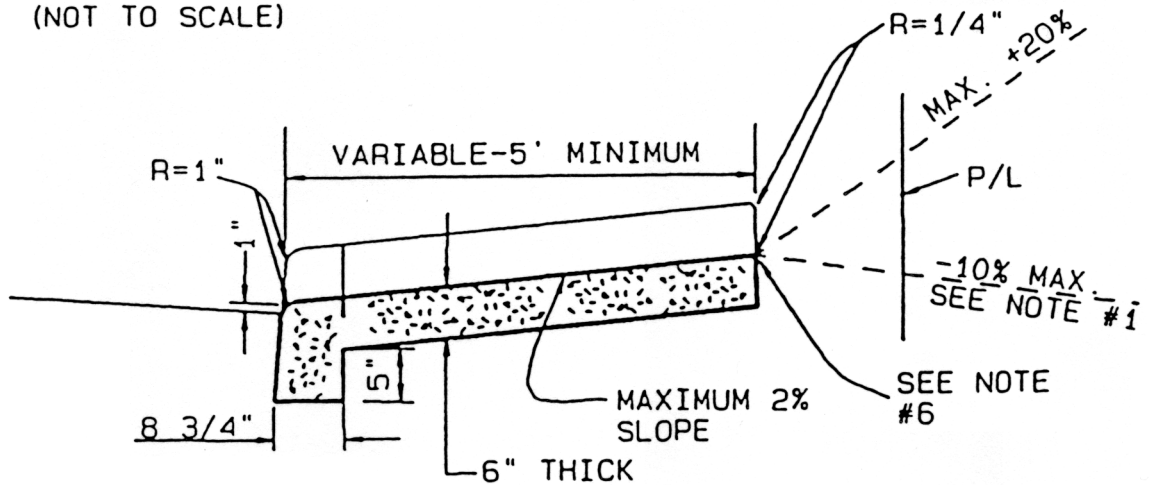
APPROVED *[Signature]*
CITY ENGINEER

10/22/98
D.A.'11

NO.	REVISIONS	DATE	BY



(NOT TO SCALE)



SECTION A-A

NOTES:

E.J. - EXPANSION JOINT
C.J. - CONTRACTION JOINT

1. TO PREVENT POTENTIAL FLOOD DAMAGE TO PRIVATE PROPERTY WITH A DRIVEWAY RUNNING DOWNHILL FROM THE STREET SURFACE, DO NOT USE THIS DRIVEWAY WITHIN 50 FEET OF A STORM DRAIN IN A SAG CONDITION WHERE THE STREET GUTTER GRADE IS LESS THAN 2%. (USE 3-105B OR C.)

2. CONSTRUCT ONLY IN COMBINATION CURB AND SIDEWALK AREAS.

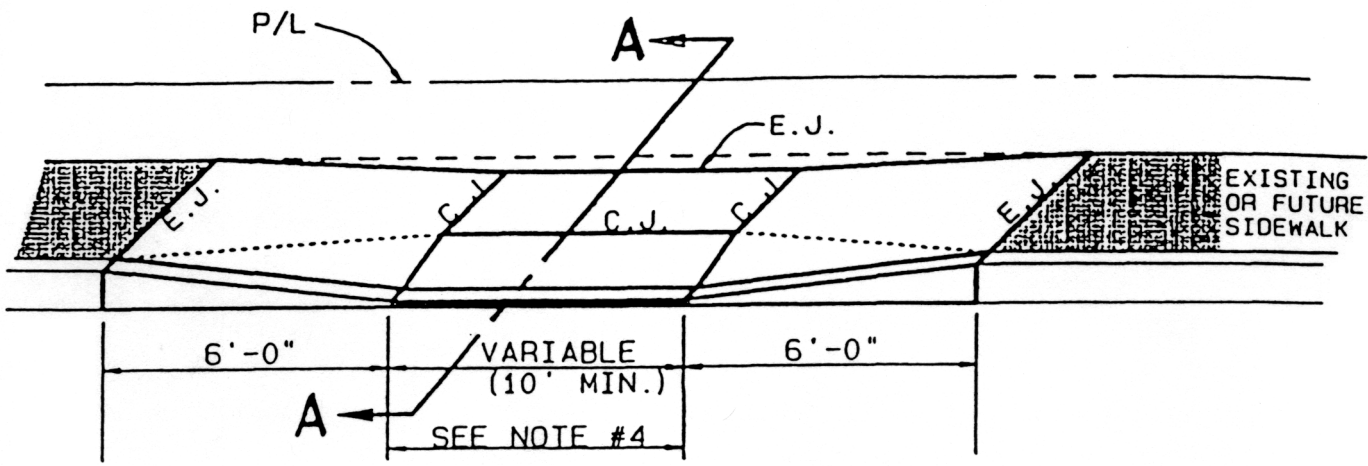
3. CONCRETE: 3000 P.S.I. (6.1 SACK), 2"-4" SLUMP, 6" THICK (MINIMUM).

4. FOR CONTRACTION JOINT SPACING, SEE STD.SPEC. 308.3.06.

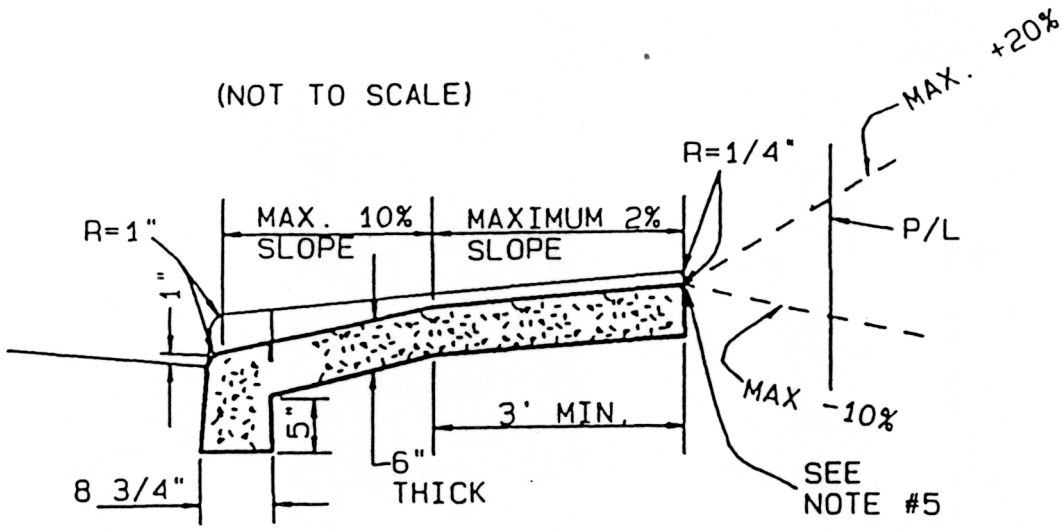
5. PAYMENT FOR FLATWORK ONLY; CURB QUANTITY EXCLUDED.

6. NOTE THAT THE COMBINATION OF CROSS-SLOPE & WING-SLOPE LOWERS THE REAR EDGE OF THE SIDEWALK.

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
RESIDENTIAL DRIVEWAY DROP RAMP	
APPROVED	STANDARD PLAN NO.
<i>[Signature]</i>	3-105A
CITY ENGINEER	DATE
8-26-94	



(NOT TO SCALE)

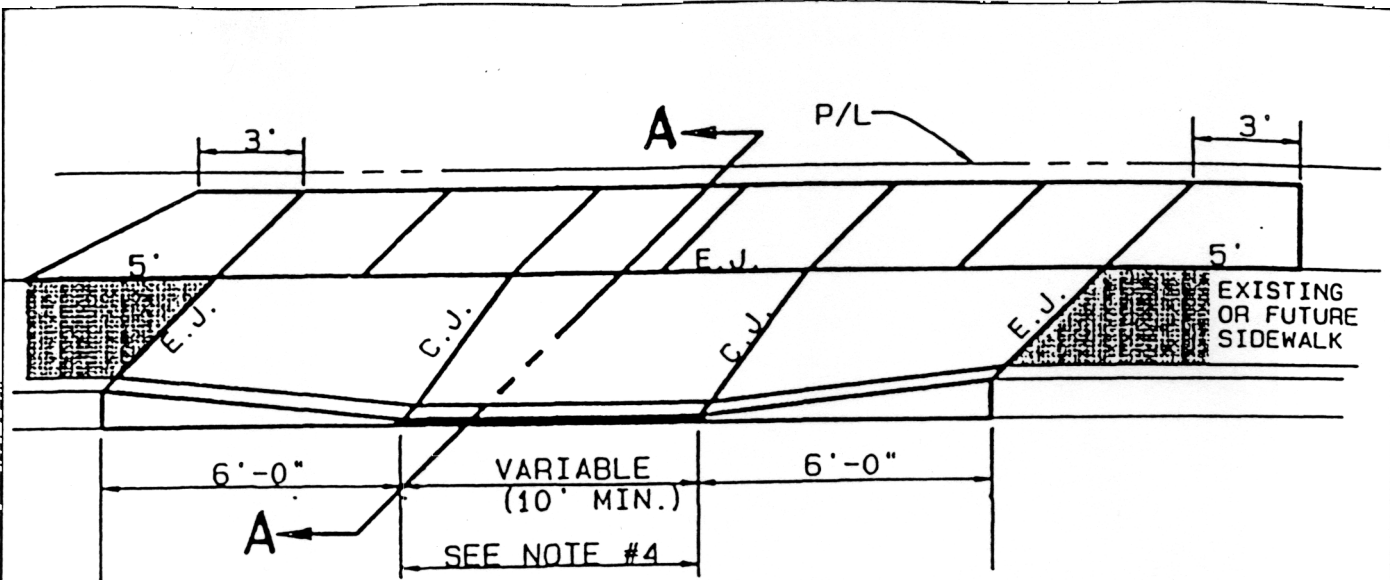


SECTION A-A

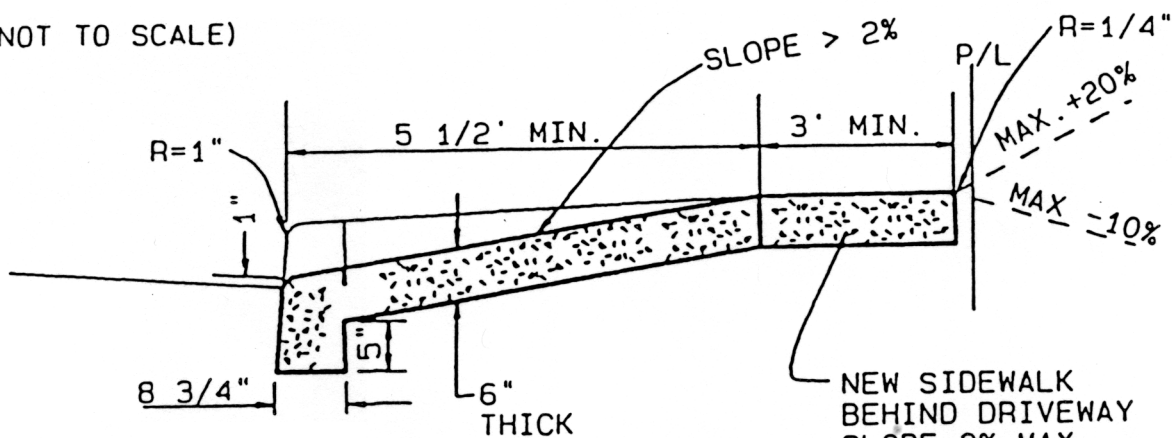
NOTES:

1. CONSTRUCT ONLY IN COMBINATION CURB AND SIDEWALK AREAS.
 2. CONCRETE: 3000 P.S.I. (6.1 SACK), 2"-4" SLUMP, 6" THICK (MINIMUM).
 3. FOR CONTRACTION JOINT SPACING, SEE STD. SPEC. 308.3.06.
 4. PAYMENT FOR FLATWORK ONLY; CURB QUANTITY EXCLUDED.
 5. NOTE THAT THE COMBINATION OF CROSS-SLOPE & WING-SLOPE LOWERS THE REAR EDGE OF THE SIDEWALK.
- E.J. - EXPANSION JOINT
C.J. - CONTRACTION JOINT

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
RESIDENTIAL DRIVEWAY SPLIT RAMP	
APPROVED 	STANDARD PLAN NO.
CITY ENGINEER	8-26-94 DATE
3-105B	



(NOT TO SCALE)



SECTION A-A

NOTES:

1. CONSTRUCT ONLY IN COMBINATION CURB AND SIDEWALK AREAS.

2. CONCRETE: 3000 P.S.I. (6.1 SACK), 2"-4" SLUMP, 6" THICK (MINIMUM).

3. FOR CONTRACTION JOINT SPACING, SEE STD. SPEC. 308.3.06.

4. PAYMENT FOR FLATWORK ONLY; CURB QUANTITY EXCLUDED.

E.J.-EXPANSION JOINT
C.J.-CONTRACTION JOINT

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
RESIDENTIAL DRIVEWAY WITH BY-PASS WALK	
APPROVED <i>[Signature]</i>	STANDARD PLAN NO.
CITY ENGINEER	DATE
8-26-94	3-105C

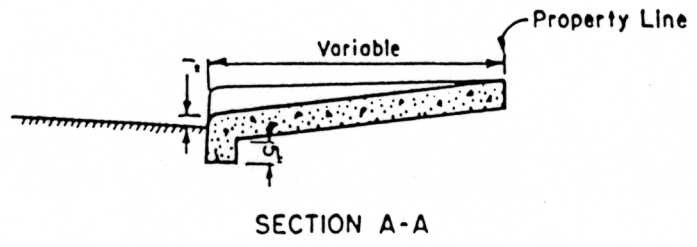
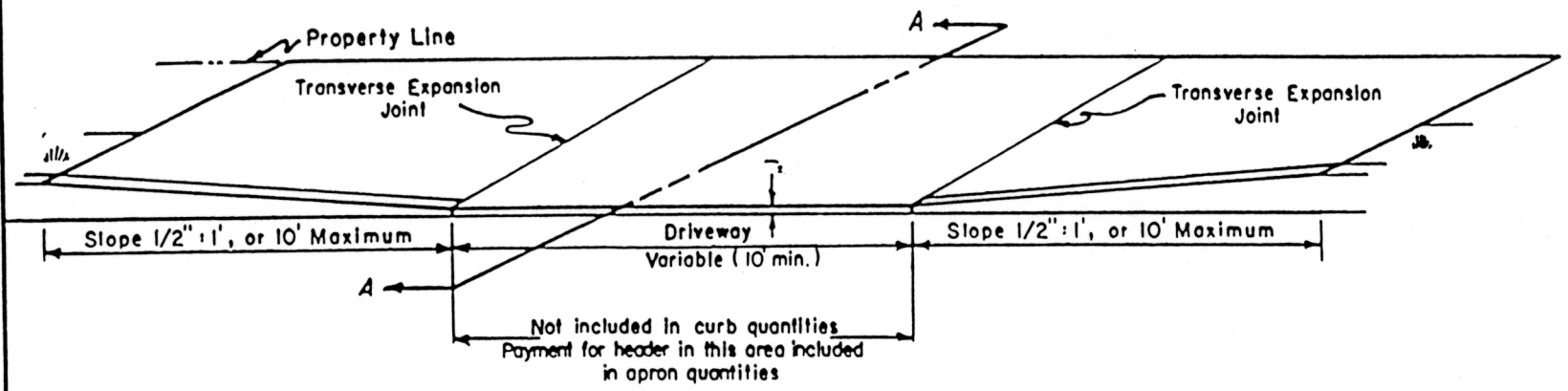
TITLE OF STANDARD PLAN
COMMERCIAL DRIVEWAY
 CITY OF PORTLAND, OREGON

APPROVED
Robert O. Schmidt
 CITY ENGINEER

NO.	REVISIONS	DATE	BY

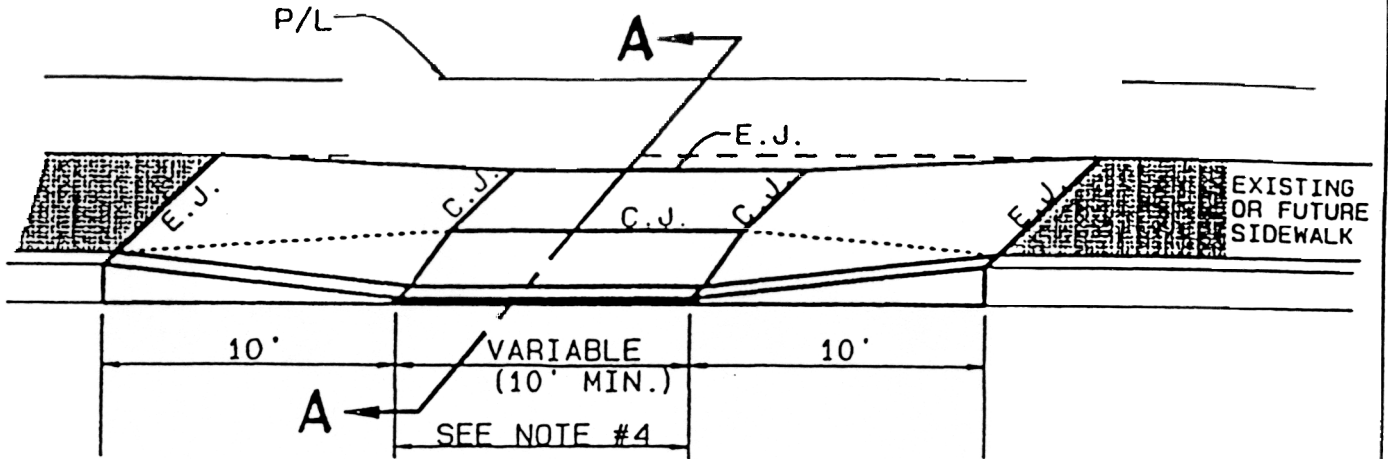
DATE

STANDARD PLAN NO.
3-107

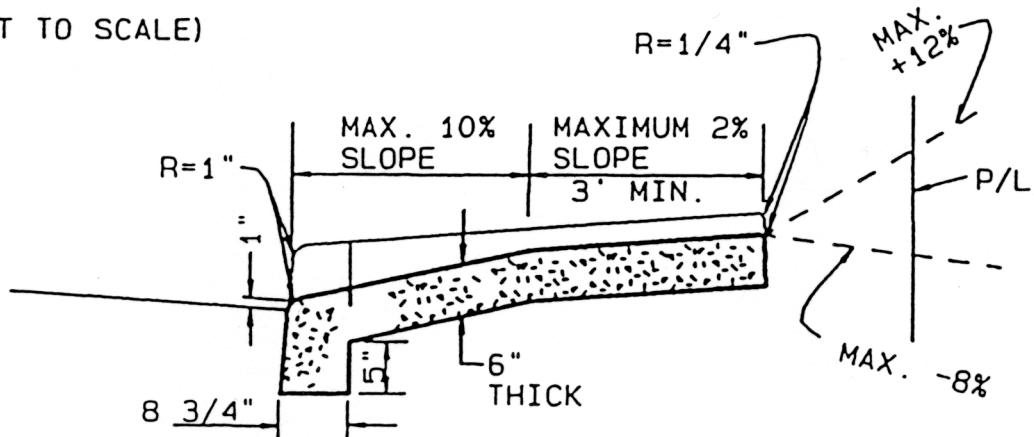


Note:
 Driveway to be constructed of 3000 psi (6.1 sack) 2" to 4" slump concrete 6" thick. Concrete to extend to Property Line. Place contraction joints so that no section is over 12' (see Specifications, sec. 308.3.06).

NOTE:
 INSTALL UNDER ANY OF THE FOLLOWING CONDITIONS:
 1 DESIGNATED COMBINATION CURB AND SIDEWALK AREA;
 2 TRUCK USE ANTICIPATED;
 3 REQUESTED BY PROPERTY OWNER.



(NOT TO SCALE)




SECTION A-A

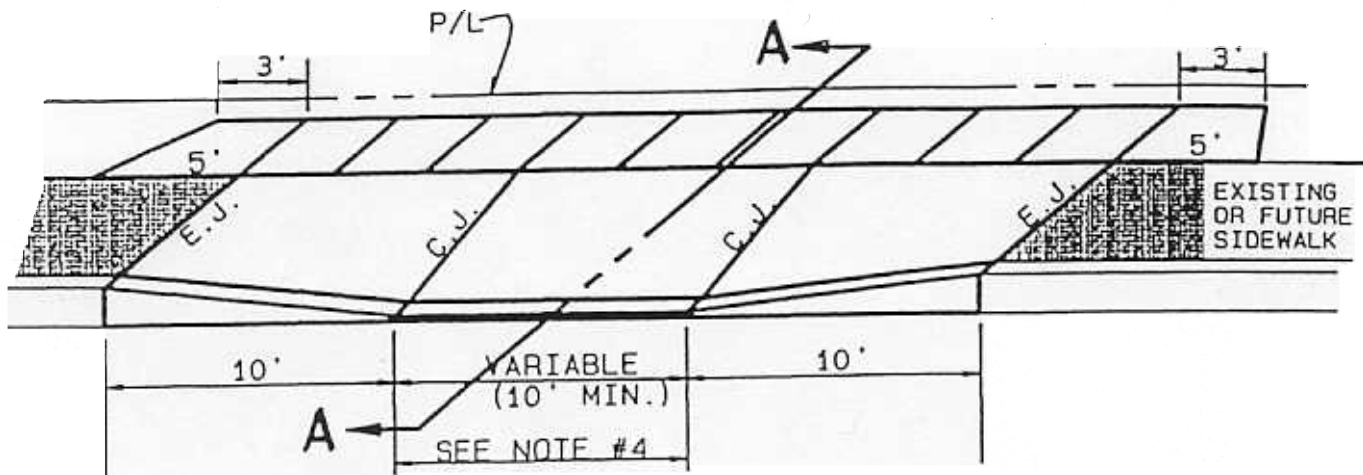
NOTES:

1. CONSTRUCT ONLY IN COMBINATION CURB AND SIDEWALK AREAS.
2. CONCRETE: 3000 P.S.I. (6.1 SACK), 2"-4" SLUMP, 6" THICK (MINIMUM).
3. FOR CONTRACTION JOINT SPACING, SEE STD. SPEC. 308.3.06.
4. PAYMENT FOR FLATWORK ONLY; CURB QUANTITY EXCLUDED.

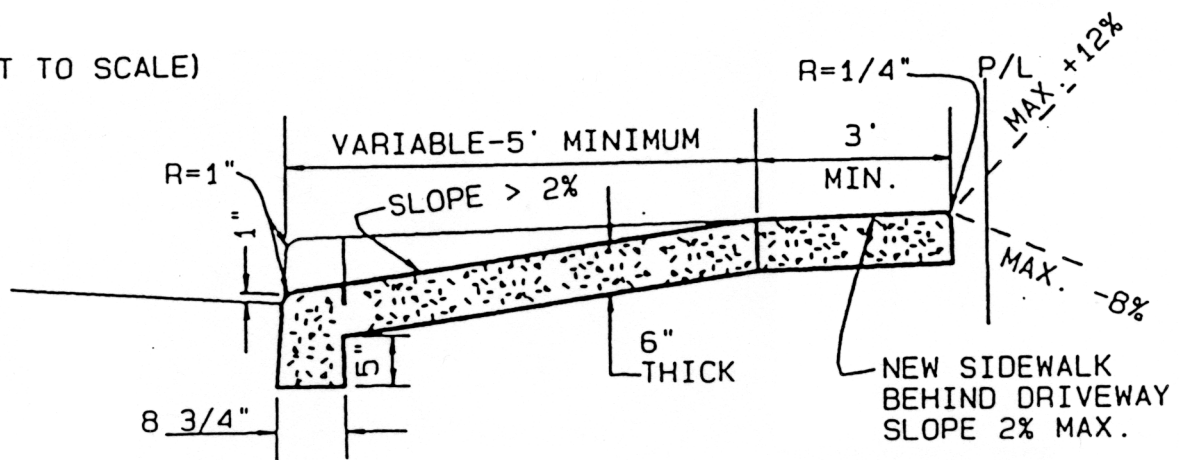
E.J.-EXPANSION JOINT
C.J.-CONTRACTION JOINT

5. NOTE THAT THE COMBINATION OF CROSS-SLOPE & WING-SLOPE LOWERS THE REAR EDGE OF THE SIDEWALK.

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
COMMERCIAL DRIVEWAY SPLIT RAMP	
APPROVED 	STANDARD PLAN NO.
CITY ENGINEER	3-107B
DATE	8-26-94



(NOT TO SCALE)



SECTION A-A

NOTES:

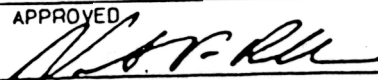
1. CONSTRUCT ONLY IN COMBINATION CURB AND SIDEWALK AREAS.

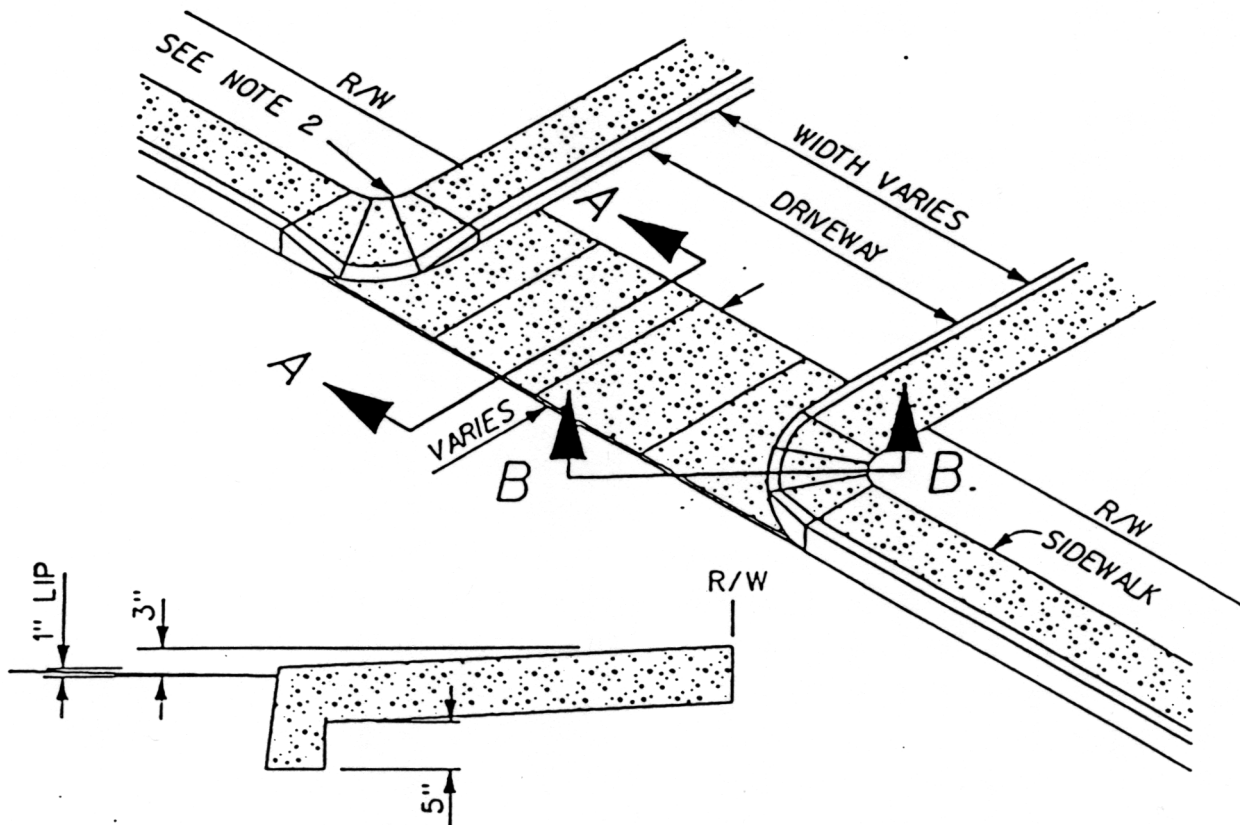
2. CONCRETE: 3000 P.S.I. (6.1 SACK), 2"-4" SLUMP, 6" THICK (MINIMUM).

3. FOR CONTRACTION JOINT SPACING, SEE STD. SPEC. 308.3.06.

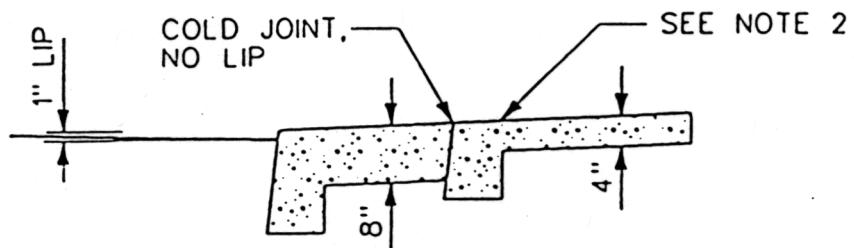
4. PAYMENT FOR FLATWORK ONLY; CURB QUANTITY EXCLUDED.

E.J.-EXPANSION JOINT
C.J.-CONTRACTION JOINT

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
COMMERCIAL DRIVEWAY BY-PASS	
APPROVED 	STANDARD PLAN NO.
CITY ENGINEER	DATE 8-26-94
3-107C	

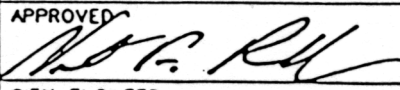


SECTION A-A



SECTION B-B

1. USE CONCRETE WITH 2" TO 4" SLUMP WHICH YIELDS A 28 DAY FIELD STRENGTH OF 3000 PSI PER APPROVED MIX DESIGN 602.3.02B.
2. CONSTRUCT CURB RAMPS PER STD. PLAN 3-122 OR 3-124.
3. PLACE CONTRACTION JOINTS IN ACCORDANCE WITH STANDARD SPECIFICATION 308.3.06.
4. SIDEWALK EASEMENTS WILL BE NEEDED IF THE PUBLIC SIDEWALK IS ON PRIVATE PROPERTY.
5. CURB RETURN RADIUS TO BE 20' UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
SIGNALIZED COMMERCIAL DRIVE WAY	
APPROVED 	STANDARD PLAN NO.
CITY ENGINEER	3-109

SIDEWALK SCORING

SIDEWALK WIDTH	SCORING GRID
5'	5' x 5'
6'	3' x 3'
7'	3.5' x 3.5'
8'	4' x 4'
10'	5' x 5'
12'	4' x 4'
15'	5' x 5'

NOTES:

1. USE 3000 PSI (28 DAYS) AIR-ENTRAINED CONCRETE, 2" TO 4" SLUMP.
2. TRANSVERSE SLOPE SHALL BE 2% (1/4" PER FOOT) TOWARD CURB, UNLESS OTHERWISE DIRECTED.
3. MAXIMUM CONTRACTION JOINT SPACING SHALL BE 12 FT., AND AS REQUIRED IN STANDARD SPECIFICATIONS SEC. 308.3.06.
4. MINIMUM THICKNESS SHALL BE 4" (6" IN DRIVEWAYS).
5. PROVIDE LIGHT BROOM FINISH TRANSVERSE TO THE LINE OF TRAFFIC.
6. PLACE CONTRACTION JOINTS AS REQUIRED IN STANDARD SPECIFICATIONS SEC. 308.3.06.

MATCH EXISTING GRID IN BLOCKS WHERE THERE ARE EXISTING SIDEWALKS, UNLESS OTHERWISE DIRECTED.

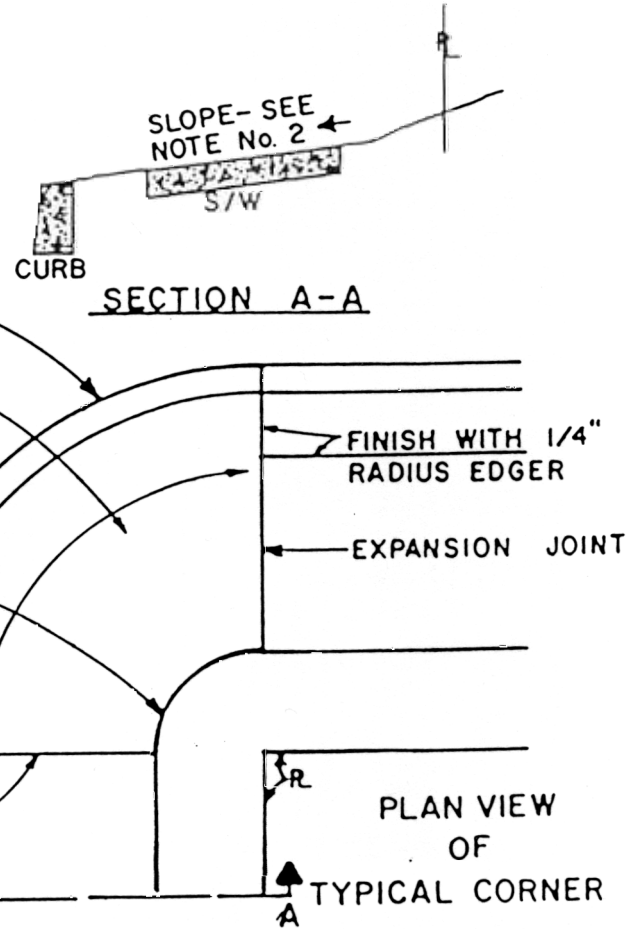
FINISH CURB WITH 6" EDGER WITH 1" RADIUS

CONSTRUCT CURB RAMP AS SPECIFIED

CONSTRUCT CURVE INSIDE WALK CORNER FROM BACK EDGE OF SIDEWALK TO BACK EDGE OF SIDEWALK

OMIT SCORING GRID IN CORNER AREA, UNLESS OTHERWISE SPECIFIED. BROOM IN CIRCULAR PATTERN, PARALLEL TO CURB.

EXPANSION JOINT



CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

CONCRETE SIDEWALK,
SCORING & CORNER DETAILS

STANDARD PLAN NO.

APPROVED

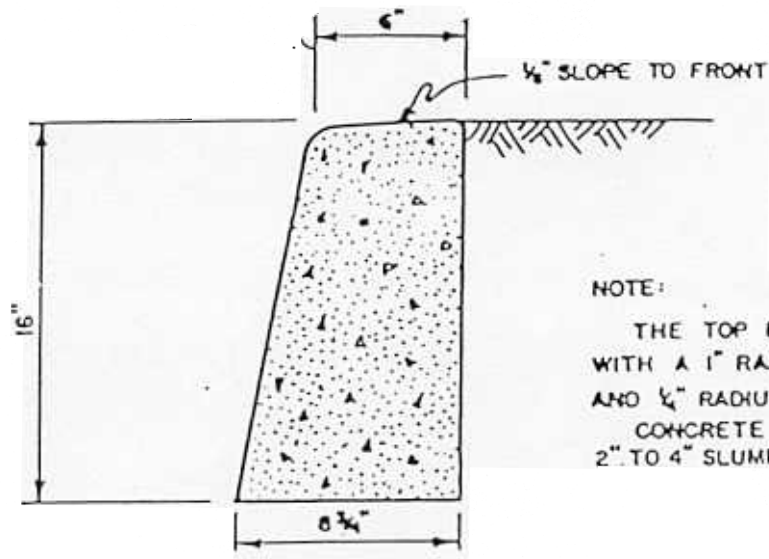
Richard A. Schmitt

CITY ENGINEER

DATE

NO.	REVISION	DATE	BY

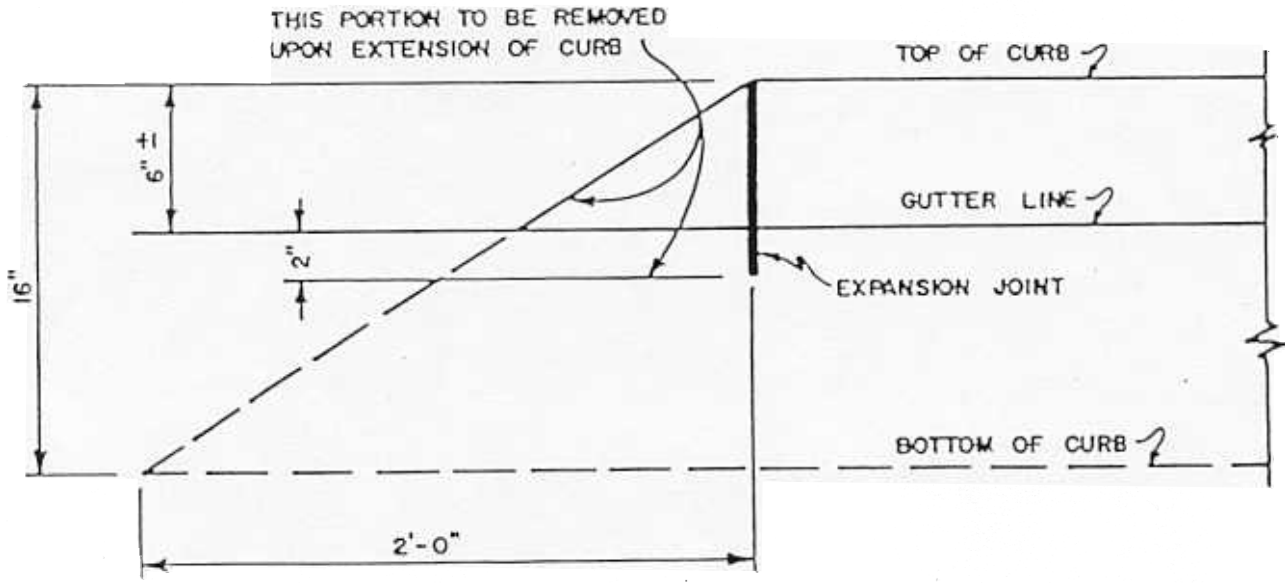
3-125



NOTE:
 THE TOP EDGE TO BE ROUNDED OFF
 WITH A 1" RADIUS ON THE STREET SIDE
 AND 1/4" RADIUS ON THE PROPERTY SIDE.
 CONCRETE SHALL BE 3000 P.S.I., (6.1 SACK)
 2" TO 4" SLUMP.

CONCRETE CURB SECTION

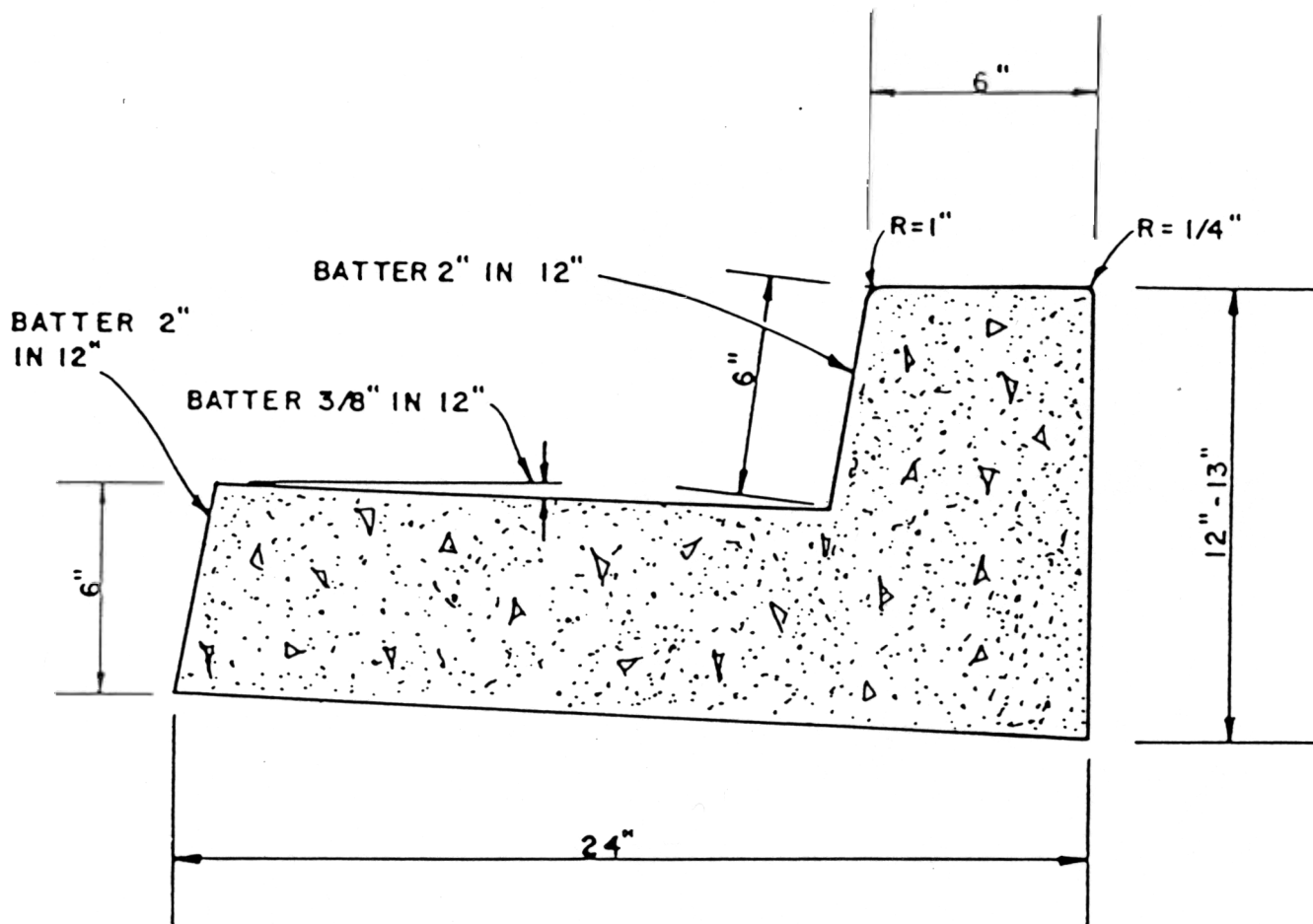
⚠ **NOTE:** This standard is not allowed for street grades of less than 1%. See details 3-131 and 3-132.



CURB ENDING
 TO BE PAID FOR AS 1 ft.
 OF STANDARD CURB

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN		STANDARD PLAN NO.	
CONCRETE CURB		3-130	
APPROVED	NO.	DATE	BY
<i>Richard A. Schmidt</i>	1	5/98	SDT
CITY ENGINEER	REVISION		
DATE	NOTE		



NOTE :

- (1) CURB TO BE CONSTRUCTED OF 3000 PSI (6.1 SACK) 2" - 4" SLUMP CONCRETE.
- (2) FOR COMMERCIAL / INDUSTRIAL AREAS USE 7" CURB EXPOSURE AND 13" TOTAL CURB HEIGHT.
- (3) TRANSVERSE CONTRACTION JOINTS TO BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 12'.

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

24" COMBINATION CURB & GUTTER

STANDARD PLAN NO.

3-132

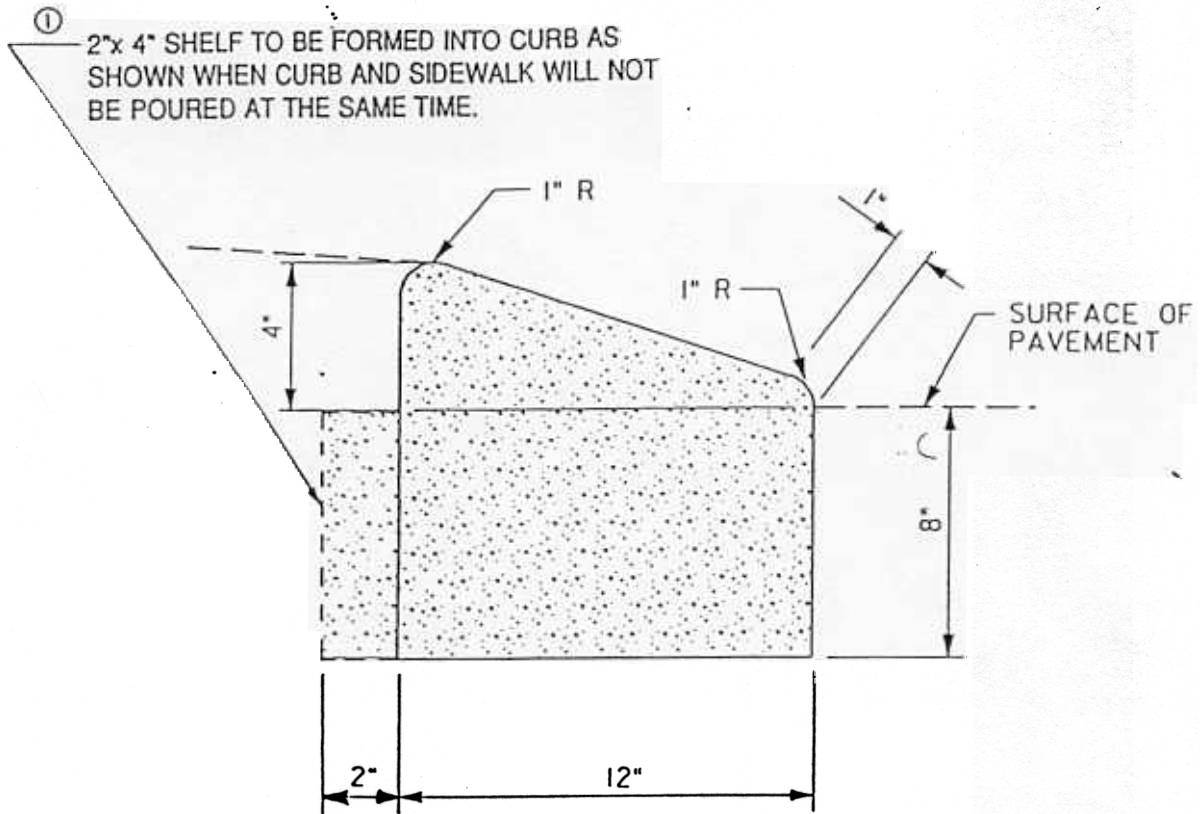
APPROVED

Richard O. Schmidt

CITY ENGINEER

DATE

NO.	REVISIONS	DATE	BY



MOUNTABLE CURB

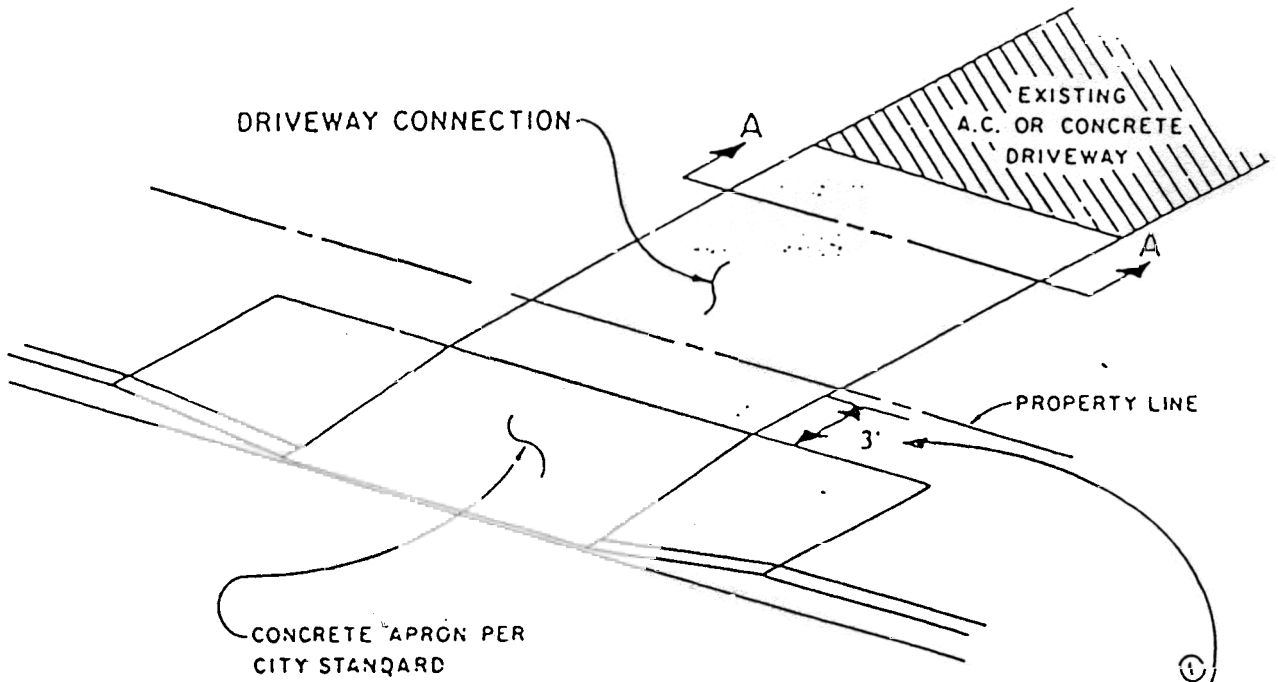
NOTE:

1. TO BE USED ONLY IN RESIDENTIAL CUL-DE-SACS
2. TRANSITIONS SHALL BE USED IN CONNECTING CURBS OF DIFFERENT EXPOSURES. MINIMUM DESIRABLE TRANSITION LENGTH SHALL BE 5 FEET.
3. TRANSVERSE CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 12 FEET. CONCRETE SHALL BE 3000 PSI, 2-4 INCH SLUMP PER 602.3.028.
- ② 4. ROOF DRAINS SHALL NOT BE PLACED THROUGH A MOUNTABLE CURB.

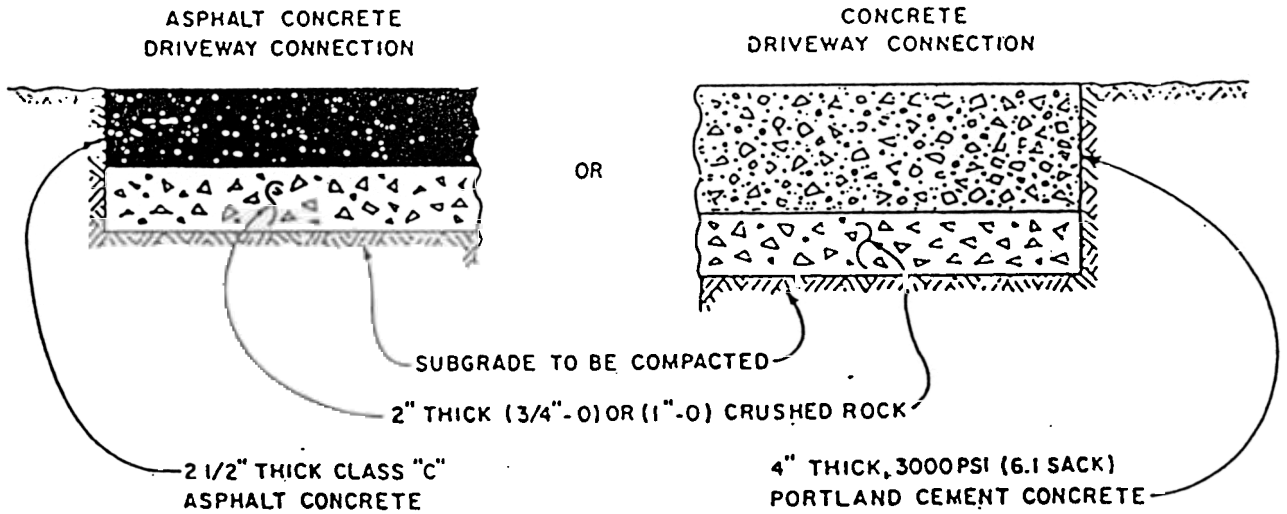
REVISION:

- ① KEYWAY 12/26/95 CAD
- ② NOTE 4 12/27/95 CAD

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
MOUNTABLE CURB	
APPROVED	STANDARD PLAN NO.
<i>[Signature]</i>	3-133
CITY ENGINEER	



ALL DRIVEWAYS REQUIRED TO HAVE A MINIMUM 3 FOOT PAD BEHIND THE CONCRETE APRON. CONSTRUCT THE PAD ACCORDING TO SECTION A-A.



SECTION A-A

NOTE: CONSTRUCT CONTRACTION JOINTS AS REQUIRED BY STD. SPECS. SEC. 308.3.06.

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

DRIVEWAY CONNECTION

STANDARD PLAN NO.

3-138

APPROVED

Richard O. Schmitt
CITY ENGINEER

DATE

NO.

REVISIONS

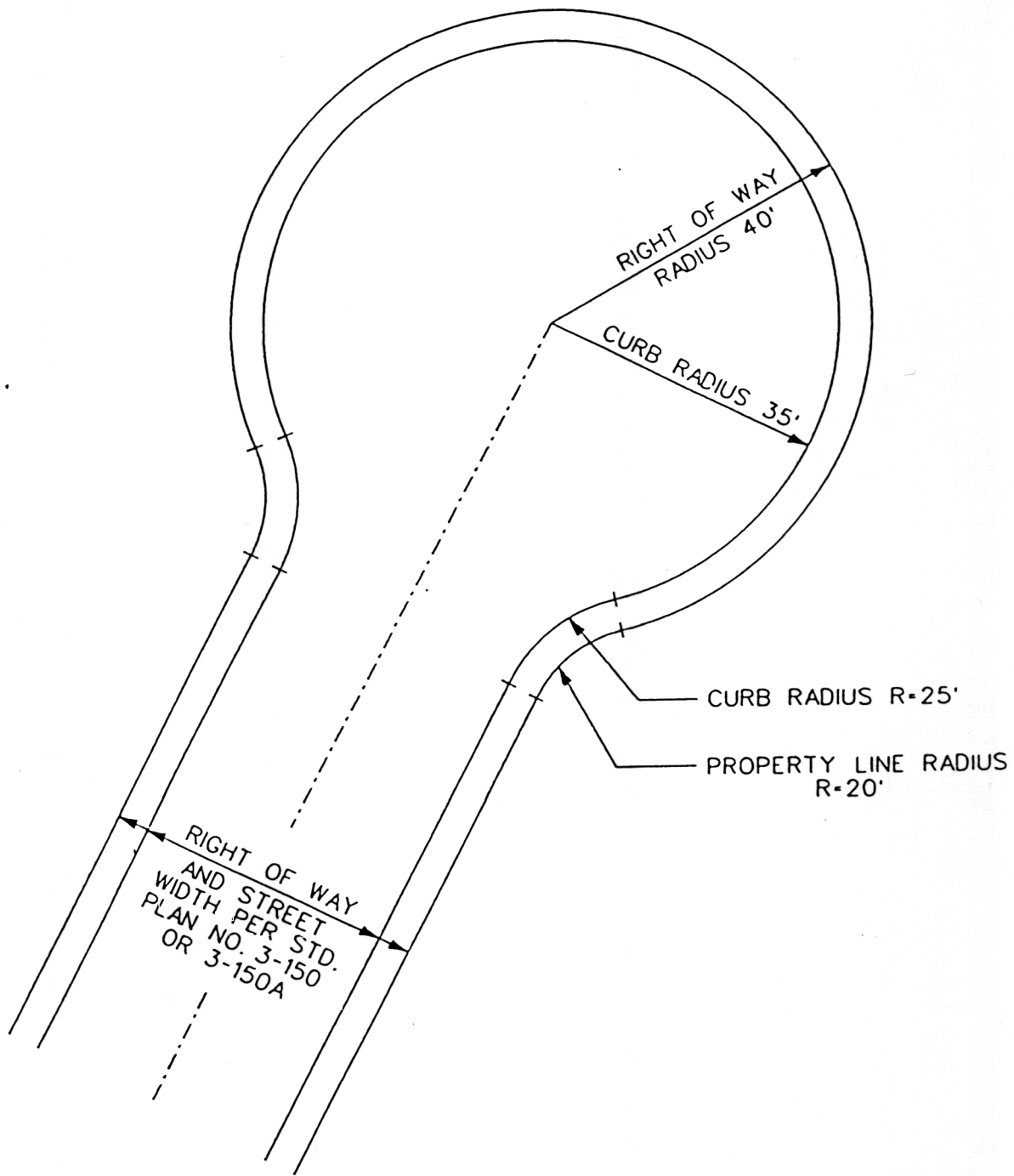
DATE

BY

1 PAD BEHIND CONC. APRON

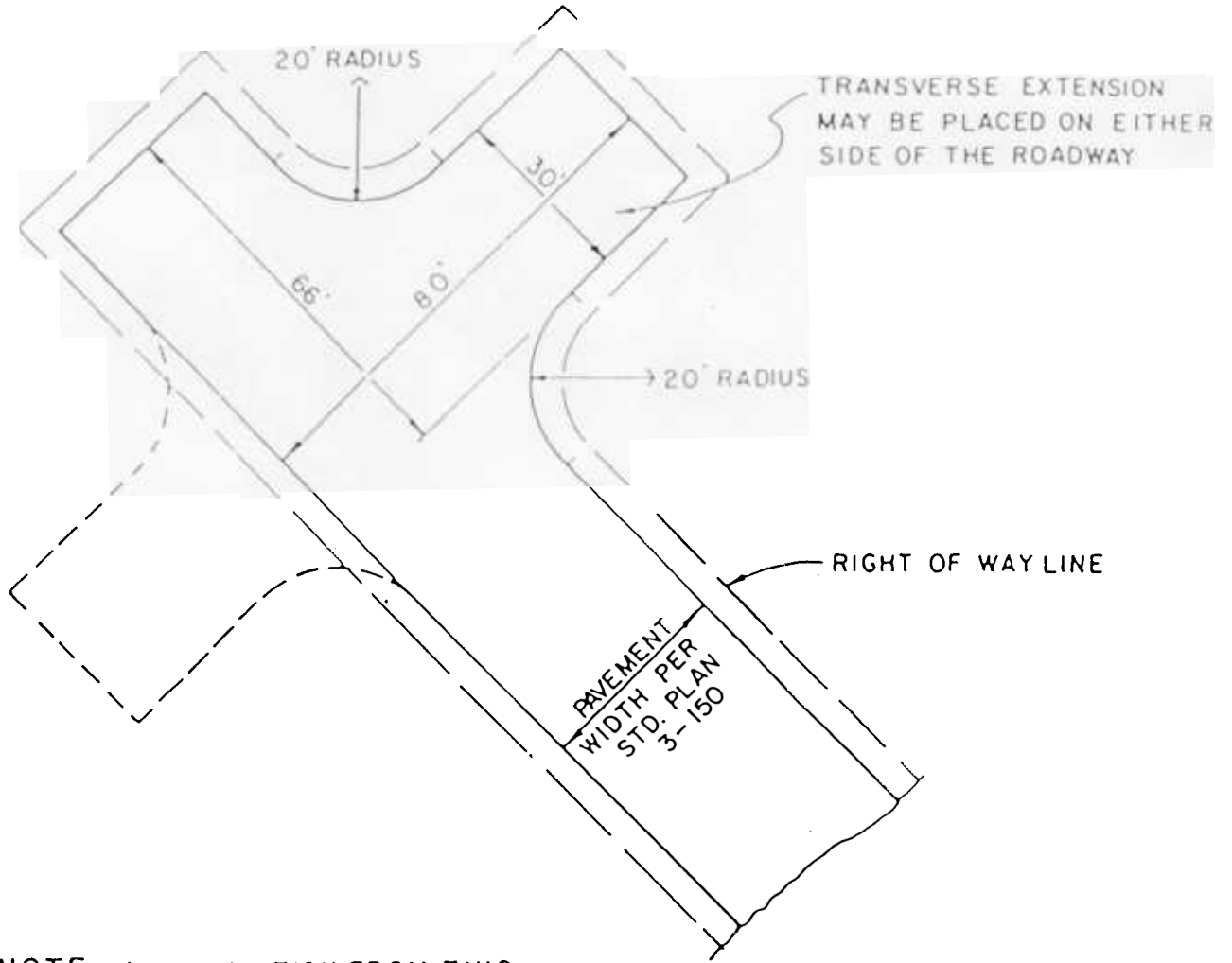
12/21/85

CAO



NOTE: ANY VARIATION FROM THIS DESIGN MUST BE APPROVED BY THE CITY ENGINEER.

CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN	
RESIDENTIAL CUL-DE-SAC	
APPROVED	STANDARD PLAN NO.
<i>[Signature]</i> CITY ENGINEER	3-154



NOTE: ANY VARIATION FROM THIS DESIGN OR USE OF THIS TURNAROUND AT ANY SPECIFIC SITE MUST BE APPROVED BY THE CITY ENGINEER. APPROPRIATE SIGNING SHALL BE DETERMINED BY THE CITY TRAFFIC ENGINEER.

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

FIRE DEPARTMENT TURNAROUND

STANDARD PLAN NO.

3-156

APPROVED

Richard A. Schmitt
CITY ENGINEER

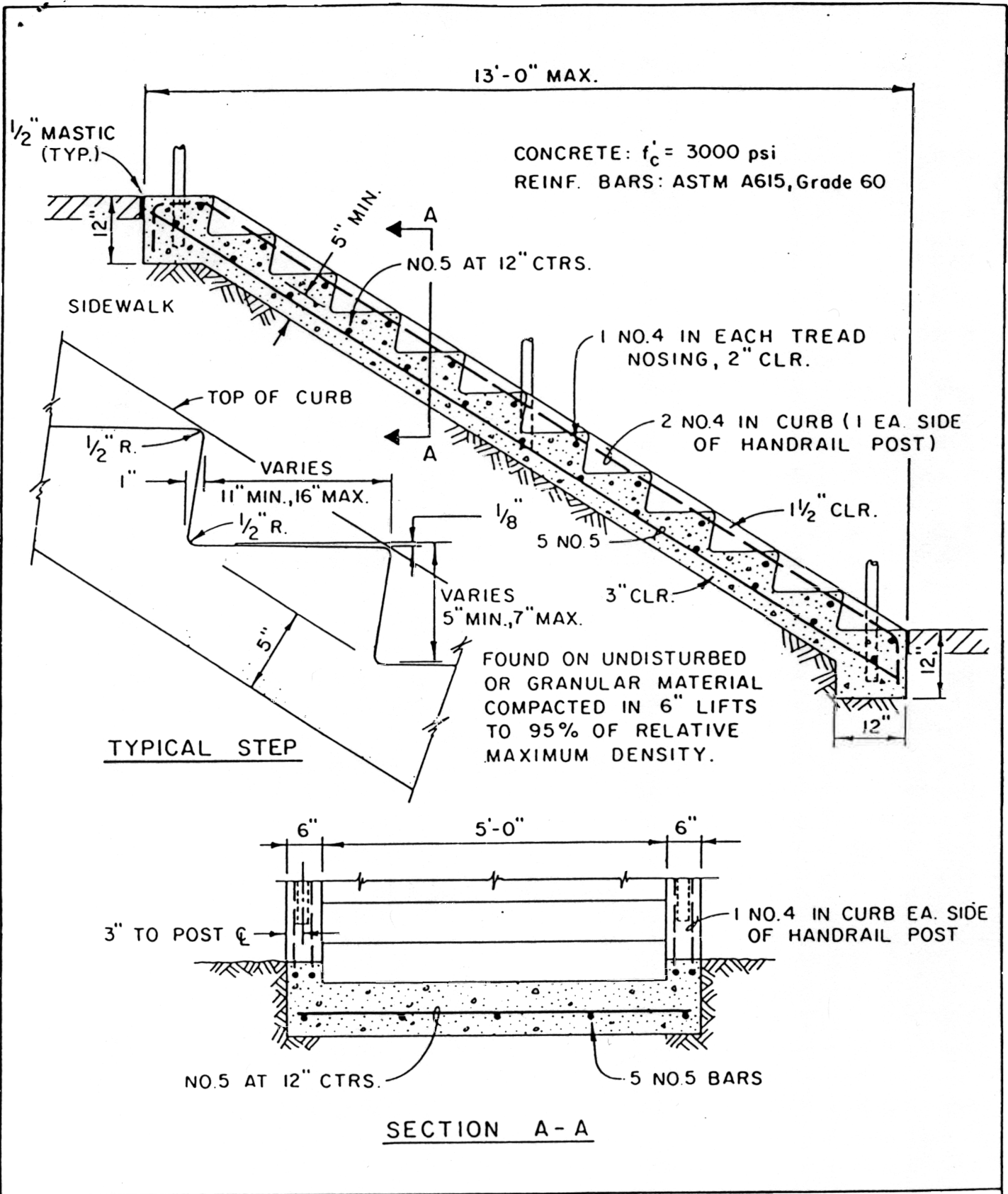
DATE

NO.

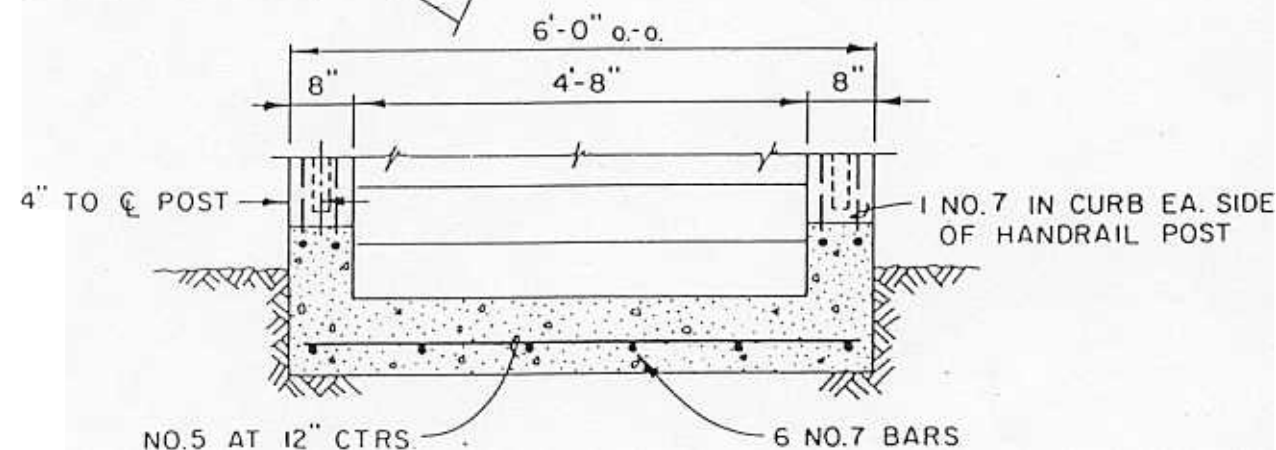
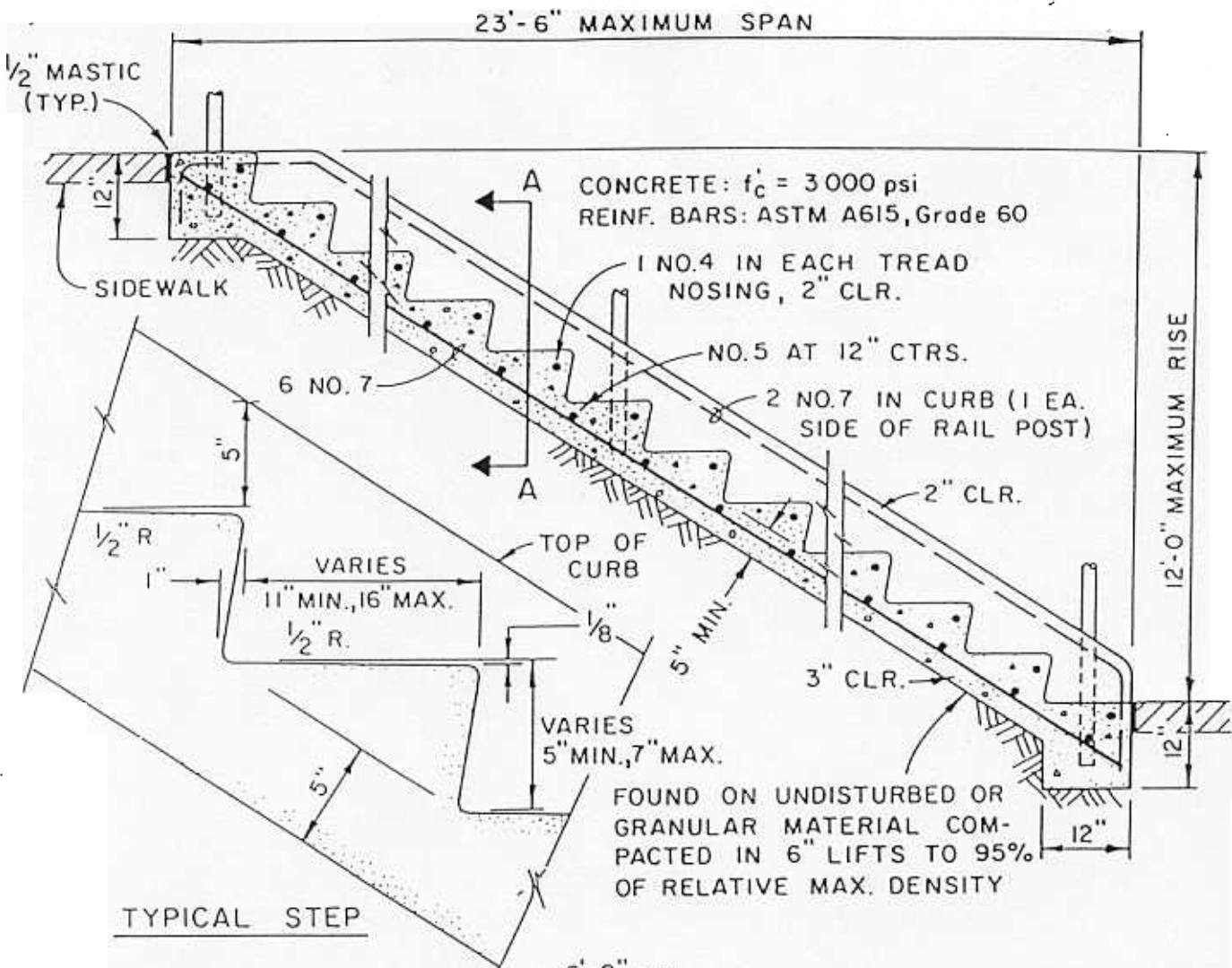
REVISIONS

DATE

BY



DEPARTMENT OF PUBLIC WORKS		CITY OF PORTLAND, OREGON	
TITLE OF STANDARD PLAN STAIRWAY - Reinforced (Spans to 13'-0")			STANDARD PLAN NO. 3-171
APPROVED <i>Richard O. Schmitt</i> CITY ENGINEER	NO.	REVISIONS	DATE
DATE			



SECTION A - A

DEPARTMENT OF PUBLIC WORKS

CITY OF PORTLAND, OREGON

TITLE OF STANDARD PLAN

STAIRWAY - Reinforced (Spans over 13'-0")

STANDARD PLAN NO.

3-172

APPROVED
Richard O. Schmitt
CITY ENGINEER

NO.	REVISIONS	DATE	BY