

**CITY OF WEST HOLLYWOOD
DEPARTMENT OF PUBLIC WORKS**



**MANUAL FOR
PREPARATION OF PLANS
STREET & PARKWAY IMPROVEMENTS**

**LOCATED IN THE
PUBLIC RIGHT OF WAY**

Prepared by
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City Engineer
Updated: March 2015

Street & Parkway Improvement Plan

This manual is intended to serve as an informational guide in your preparation of design plans for improvements to street and parkway areas located within the public right of way. By following the guidelines recommended by this manual, you will be submitting a project that complies with City of West Hollywood standards and will move through the plan check process in the most expeditious manner.

The following is a summary of items which you should be sure to include on the plan for your project.

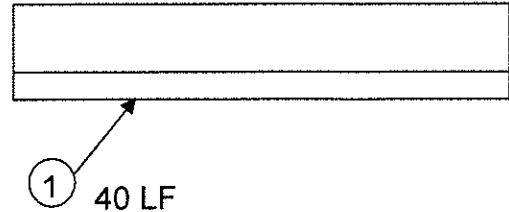
- **Title.** The title of the sheet(s) shall be "Street & Parkway Improvement Plan" and labeled as such on the sheet index.
- **Engineer of Record.** The Street & Parkway Improvement Plan must be signed and stamped by a Civil Engineer licensed to practice in the State of California
- **North Arrow.** Should be shown on each plan sheet. Generally north is up or to the left.
- **Scale.** Generally plans are drawn at 1"=20' or 1"=10'. Either scale is acceptable.
- **Existing and Proposed Facilities.** Show locations of existing facilities to be removed or protected in place, and proposed facilities in the public right of way. Facilities include but are not limited to: street trees, street lights, traffic signal poles, parking meters, parkway drains, curb drains, storm drains, fire hydrants, sign posts, bus benches, catch basins, utility boxes, utility vaults, sidewalks, curbs, gutters, planted parkways, driveways, curb ramps, etc.
- **Dimensions.** Show widths and/or locations of existing and proposed facilities within the public right of way (i.e. sidewalks, curbs, gutters, planted parkways, driveways, curb ramps, cross gutters, etc.)
- **Notice to Contractor.** The set of ten (10) standard notes shown in the appendix should be included on all plan sheets.
- **Reference Standard Drawings.** For most design features, the City of West Hollywood has adopted the American Public Works Association (APWA) Standard Plans for Public Works Construction (latest edition). A complete set of APWA Standard Drawings may be purchased from BNI Building News, 990 Park Center Drive, Suite E, Vista, CA 92081 or their **website www.bnibooks.com**

- **Construction Notes.** Using circled numbers, note on the plan and list details related to the various facilities to be affected by the project construction.

Example:

CONSTRUCTION NOTES

- ① SAWCUT AND REMOVE EXISTING CONCRETE CURB AND GUTTER AND CONSTRUCT NEW CONCRETE CURB AND GUTTER PER APWA STANDARD PLAN 120-2 A2-150(6).



- **Driveways.** The location of any new driveway access points to a property shall be reviewed and approved by the City Engineer prior to preparation of improvement plans for the project frontage. Also, any abandoned or unused driveways along a project frontage shall be removed and replaced with APWA standard sidewalk, curb, and gutter. The design for driveways should follow the APWA Standard Plan 110-2 “Driveway Approaches.” Construction notes shall be included on the project plans showing the following:
 1. Location of the centerline of the proposed driveway.
 2. Dimension for W, X, and Y for the driveway apron.
 3. Residential driveways shall be four inch (4”) thick Portland Cement Concrete.
 4. Commercial driveways shall be six inch (6”) thick Portland Cement Concrete.
- **Driveway Slopes.** Design details shall be submitted showing the proposed driveway slope have been designed to prevent vehicles from scraping when entering and exiting from the apron. The profile of the vehicular travel path should be plotted on a sheet of paper at a scale of ½” = 1’. Then using the template provided in the appendix, the plotted profile should show that the driveway is able to accommodate vehicular entrance and exit without hitting the points on a vehicle front, tail, and undercarriage. Grade break elevations for the driveway apron should be called out on the project’s Street & Parkway Improvement Plan
- **Curb Ramps.** The City of West Hollywood uses APWA Standard Plans for American with Disabilities Act (ADA) compliant curb ramps. The appendix has a detail for detectable warning surfaces, and they shall have the “Federal Yellow” color.
- **Curb Drains.** Whenever possible, on-site storm water drainage systems shall outlet directly into the adjacent underground public storm drain system. Connection to the public drainage system shall be in compliance with any required permits of the jurisdictional agency. If there is no adjacent underground public storm drain system, on-site storm water may be outlet into the street gutter using curb drains. The

design for curb drains should follow APWA Standard Plan 150-3 "Curb Drain." The standard pipe for a curb drain is a four inch (4") diameter Cast Iron Pipe and shall be labeled as such on the plan view. Hydrology calculations shall be prepared to demonstrate that the design and layout of the curb drains meet the following requirements:

1. Maximum flow from one set of curb drains is nine cubic feet per second (9 cfs).
 2. Maximum number of pipes at any one location is three (3).
 3. Maximum flow from each pipe is 1.25 cubic feet per second (1.25 cfs).
- **Storm Water Construction Notes.** The standard stormwater construction notes shown in the appendix must be included on the plans.
 - **Tree Planting.** Unless directed otherwise by the City Engineer and Landscape Manager, the following guidelines should be used to layout the placement of any proposed street tree:

Trees may not be planted within:

1. 30 feet to another tree
2. 15 feet to any utility pole light standard
3. 15 feet to a driveway
4. A parkway strip which is less than 30 inches in width between the sidewalk and curb.
5. A location that may block the view of traffic controls.

Trees may not be planted closer than:

1. 10 feet to a sewer lateral
2. 5 feet to a fire hydrant
3. 5 feet to a water meter
4. 5 feet to a gas meter
5. 45 feet from curb radius center of any street intersection.

The species of trees proposed for an area in the public right of way shall be reviewed and approved by the City's Landscape Manager.

- **Tree Grates.** Tree grates shall be Neenah Foundry R-8708, 48"x48", Boulevard pattern. These grates have a 16" diameter expandable opening. It is also available to be cast with 20" and 24" diameter opening. Be sure to specify and order the appropriate frame for the tree grate.
- **Decomposed Granite.** The contractor shall install four inches (4") of decomposed granite with a 3/8" maximum gradation, on four inches (4") of compacted crushed miscellaneous base material. The decomposed granite shall be blended with stabilizing compound at a rate of 12 pounds per ton. Color of the decomposed granite shall be California Gold.

APPENDIX A

Notice to Contractor

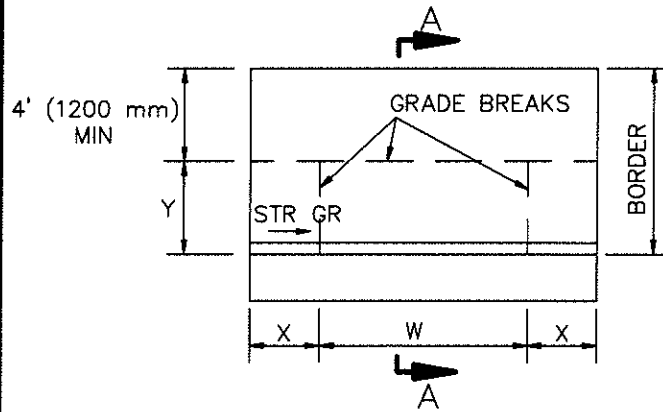
The following statements should be included on all plans for construction within the public right of way:

NOTICE TO CONTRACTOR

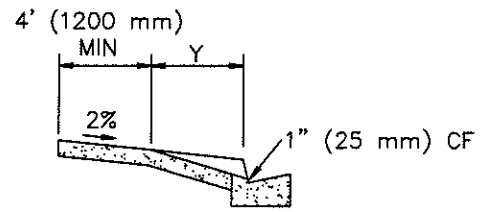
1. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS.
2. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION TO ARRANGE FOR FIELD LOCATIONS OF UTILITY LINES. CALL 1-800-422-4133 FOR THIS SERVICE. ANY UTILITY NOT SUBSCRIBING TO THIS SERVICE SHALL BE CONTACTED DIRECTLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHETHER ALL UTILITIES HAVE BEEN NOTIFIED.
3. THE CONTRACTOR SHALL OBTAIN A CITY OF WEST HOLLYWOOD ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS PRIOR TO PERFORMING ANY WORK IN THE CITY RIGHT-OF-WAY. ALL EXCAVATIONS, CONSTRUCTION, AND INSTALLATIONS IN THE CITY RIGHT OF WAY REQUIRE INSPECTION BY THE CITY PUBLIC WORKS INSPECTOR. CONTACT THE CITY AT LEAST 48 HOURS IN ADVANCE FOR INSPECTION. FAILURE TO HAVE INSPECTION WILL RESULT IN REOPENING OF THE EXCAVATION AND POSSIBLE RECONSTRUCTION.
4. PRIOR TO EXERCISING ANY RIGHT OR PERFORMING ANY OBLIGATION PURSUANT TO ANY PERMIT ISSUED BY THE CITY OF WEST HOLLYWOOD, THE CONTRACTOR SHALL OBTAIN, FILE, AND MAINTAIN WITH THE CITY OF WEST HOLLYWOOD A POLICY OF INSURANCE OR CERTIFICATE OF INSURANCE TO COVER ANY AND ALL LIABILITY THAT MAY ARISE FROM THE PERFORMANCE OF ANY WORK PERMITTED BY THE CITY IN THE RIGHT-OF-WAY.
5. ALL CONSTRUCTION ACTIVITIES WITHIN CITY RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE 2015 EDITION OF THE AMERICAN PUBLIC WORKS ASSOCIATION STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
6. ALL TRAFFIC CONTROL, BARRICADING, AND CONSTRUCTION SIGNING SHALL BE IN CONFORMANCE WITH THE WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH).
7. A MINIMUM OF 72 HOURS PRIOR TO THE TIME A STREET HAS RESITRICTED PARKING, THE CONTRACTOR SHALL POST TEMPORARY "NO PARKING" SIGNS AS APPROVED BY THE CITY ENGINEER. THESE TEMPORARY SIGNS MAY BE ATTACHED TO PORTABLE BARRICADES OR BY ANY OTHER METHOD APPROVED BY THE CITY ENGINEER. SIGNS SHALL NOT BE POSTED ON ANY TREE OR TRAFFIC SIGN AND NOT BE SPACED MORE THAN 75 FEET APART. AT THE END OF CONSTRUCTION, SIGNS SHALL BE REMOVED IMMEDIATELY FOR VEHICLES TO PARK.
8. NO WATER SHALL BE TAKEN FROM FIRE HYDRANTS WITHOUT APPROVAL FROM THE JURISDICTIONAL WATER AGENCY.
9. DUST SHALL BE CONTROLLED BY SWEEPING AND WATERING.
10. ALL NONSTORMWATER DISCHARGES FROM THE CONSTRUCTION PHASE ACTIVITIES AT THE PROJECT SITE (I.E. MIXING AND CLEANING OF CONSTRUCTION MATERIALS, CONCRETE AND PLASTER WASHOUT, DISPOSAL OF PAINTS, ADHESIVES, SOLVENTS, AND LANDSCAPE PRODUCTS) SHALL BE PROHIBITED FROM ENTERING THE PUBLIC STORM DRAINAGE SYSTEM (INCLUDING MUNICIPAL STREETS, CATCH BASINS, CURBS, GUTTERS, DITCHES, MAN-MADE CHANNELS, OR UNDERGROUND STORM DRAINS).

APPENDIX B

Standard Plans

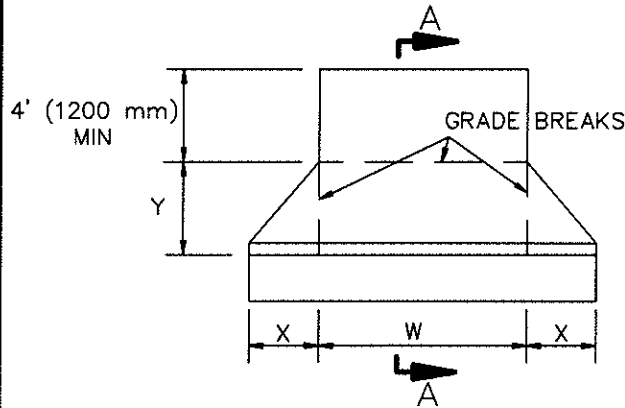


TYPE A

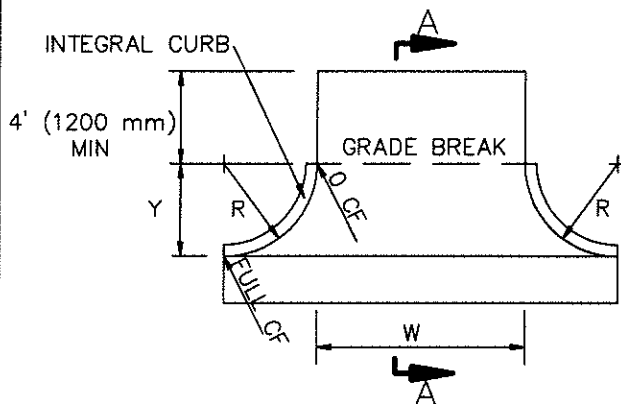


SECTION A-A

CURB FACE, inches (mm)	X, inches (mm)	Y, inches (mm)
6" (150) or less	3'-0" (900)	4'-0" (1200)
7" (175)	3'-6" (1050)	4'-9" (1425)
8" (200)	4'-0" (1200)	5'-8" (1700)
9" (225)	4'-6" (1350)	6'-6" (1950)
10" (250)	5'-0" (1500)	7'-3" (2175)
11" (275)	5'-6" (1650)	8'-0" (2400)
12" (300) or more	6'-0" (1800)	8'-9" (2625)



TYPE B



TYPE C

NOTES:

1. RESIDENTIAL DRIVEWAYS SHALL BE 4" (100 mm) THICK PCC.
2. COMMERCIAL DRIVEWAYS SHALL BE 6" (150 mm) THICK PCC.
3. WEAKENED PLANE JOINTS SHALL BE INSTALLED AT BOTH SIDES OF A DRIVEWAY AND AT 10' (3.0 m) INTERVALS.
4. CURB FOR TYPE C DRIVEWAY SHALL BE INTEGRAL AND MATCH ADJACENT CONSTRUCTION.
5. REFER TO LOCAL DEVELOPMENT REGULATIONS FOR AMERICANS WITH DISABILITIES ACCESS REQUIREMENTS AND MAXIMUM PERMITTED DRIVEWAY WIDTHS.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1984
REV. 1996, 2009

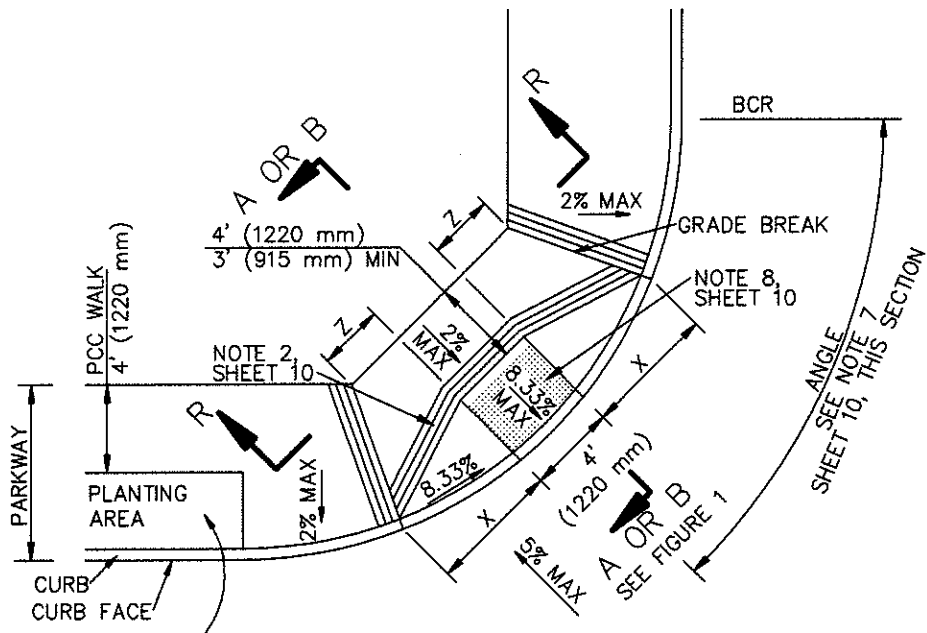
DRIVEWAY APPROACHES

STANDARD PLAN

110-2

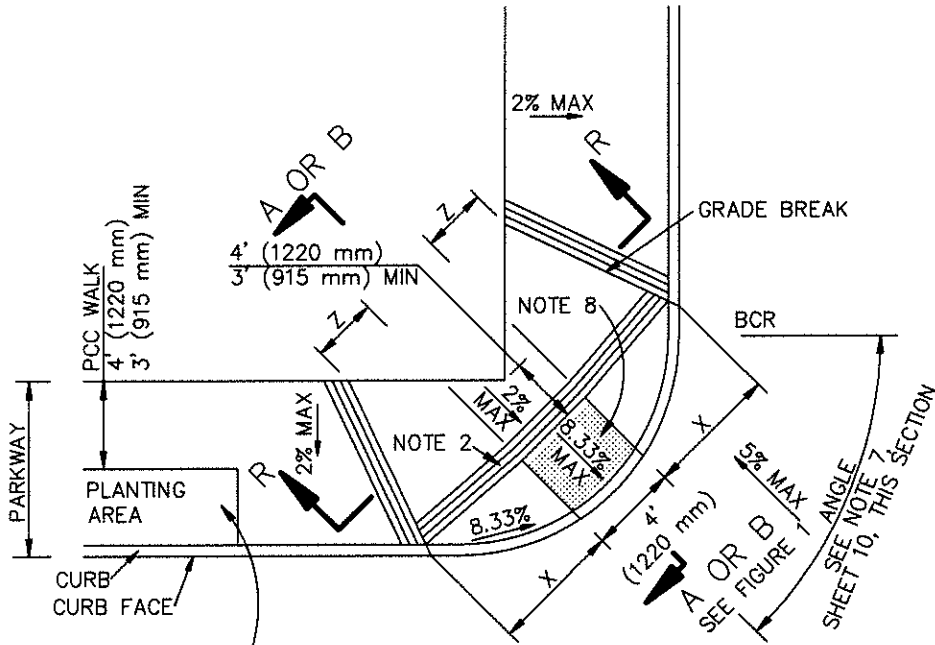
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

SHEET 1 OF 1



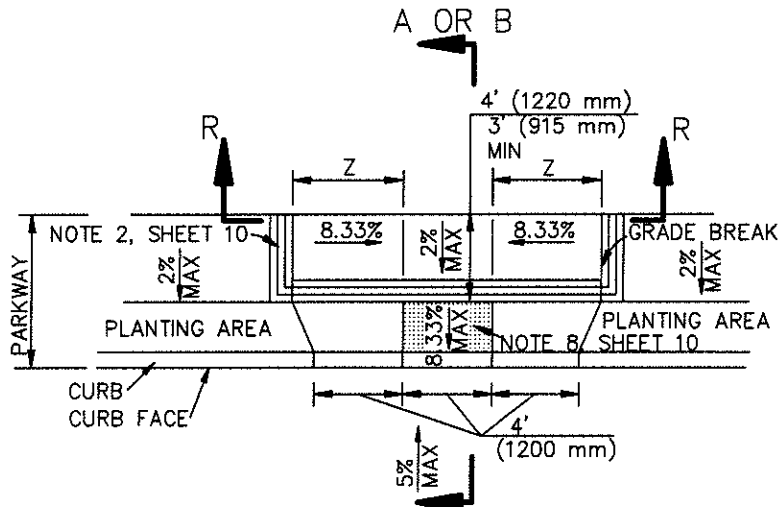
WHERE PLANTING AREA IS ADJACENT TO THE CURB RAMP, USE CASE A, TYPE 6

TYPE 3



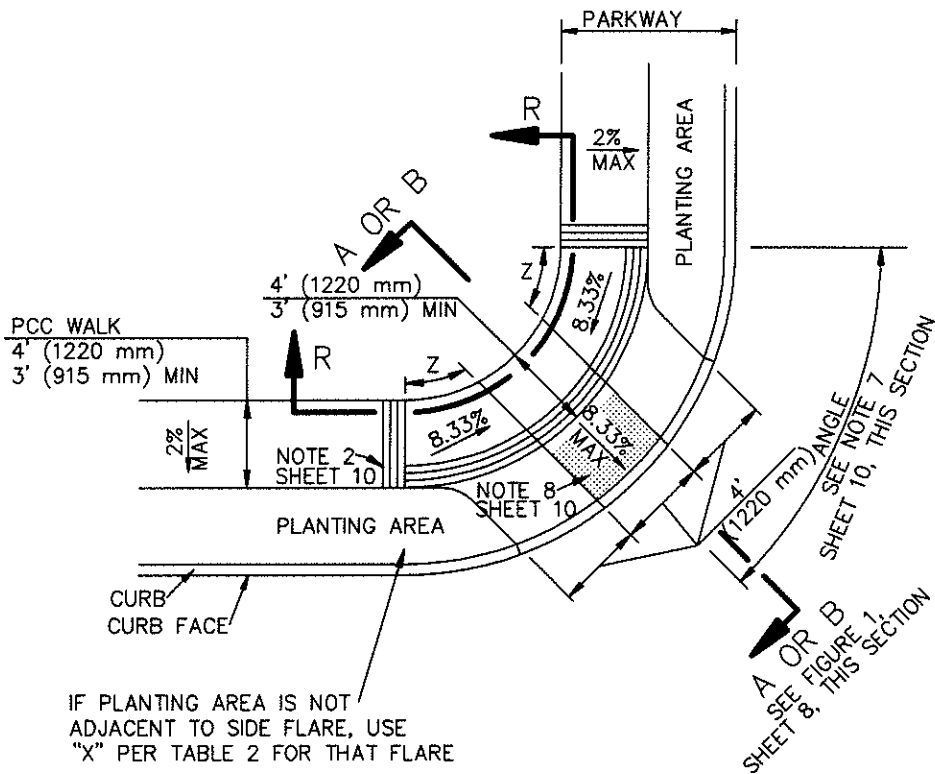
WHERE PLANTING AREA IS ADJACENT TO THE CURB RAMP, USE CASE A, TYPE 6

TYPE 4
CASE A



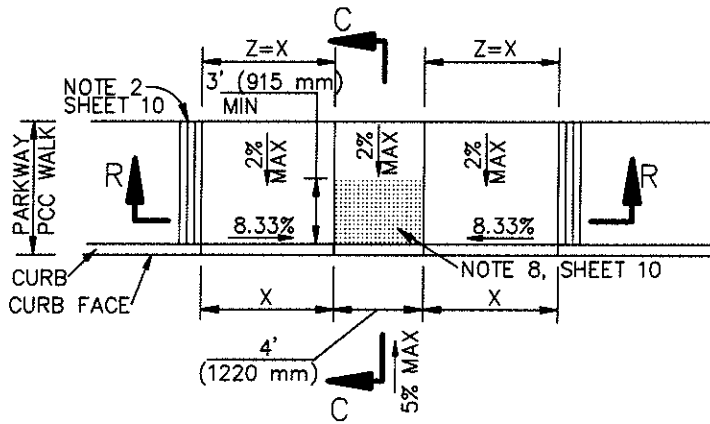
A OR B
SEE FIGURE 1, SHEET 8, THIS SECTION

TYPE 5

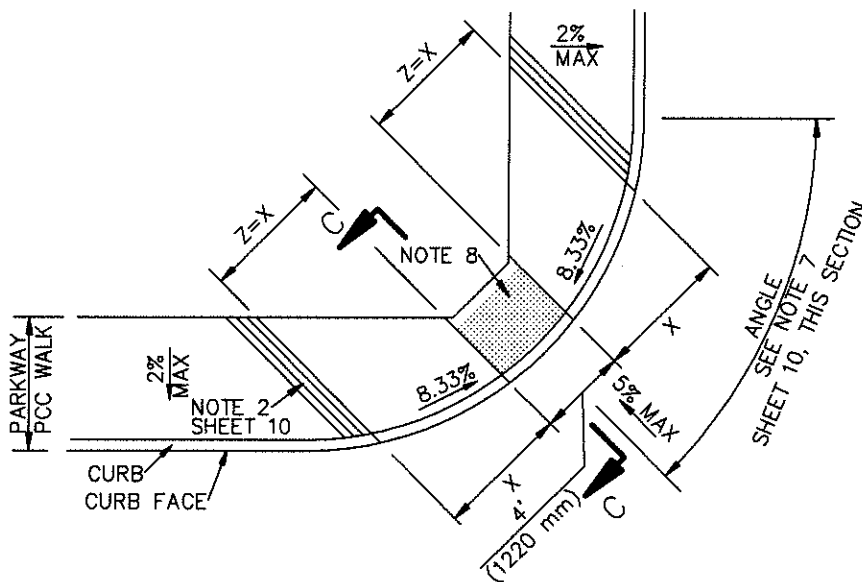


IF PLANTING AREA IS NOT
ADJACENT TO SIDE FLARE, USE
"X" PER TABLE 2 FOR THAT FLARE

TYPE 6
CASE A

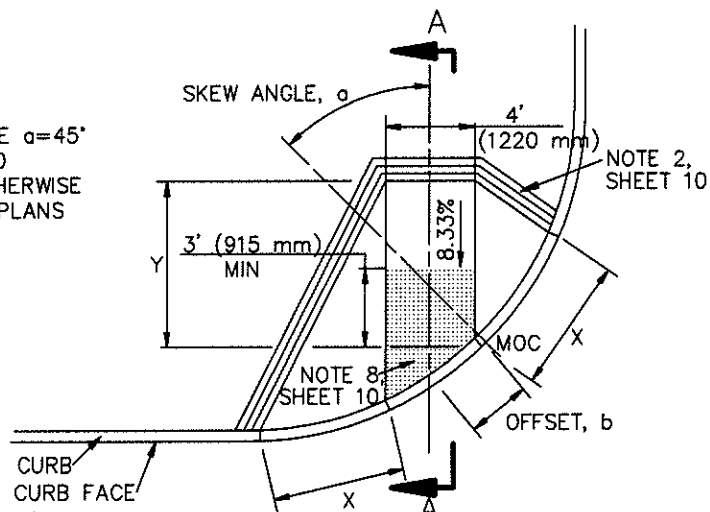


TYPE 1

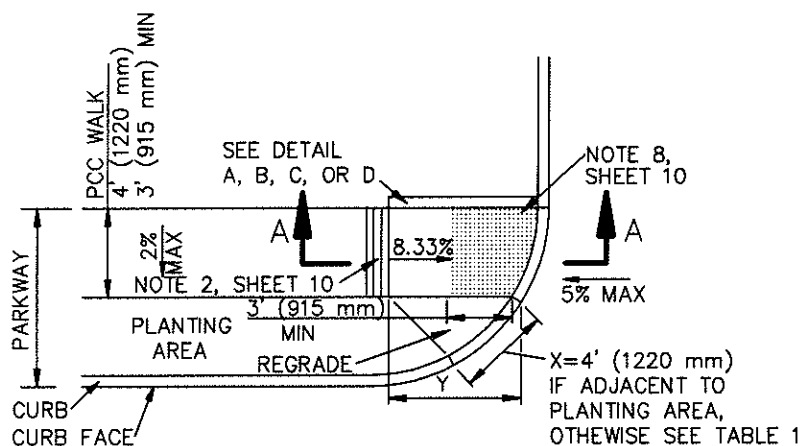


TYPE 2
CASE B

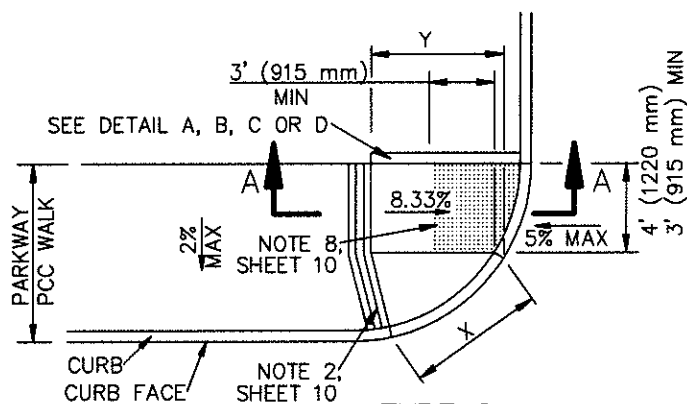
SKEW ANGLE $\alpha=45^\circ$
 OFFSET $b=0$
 UNLESS OTHERWISE
 NOTED ON PLANS



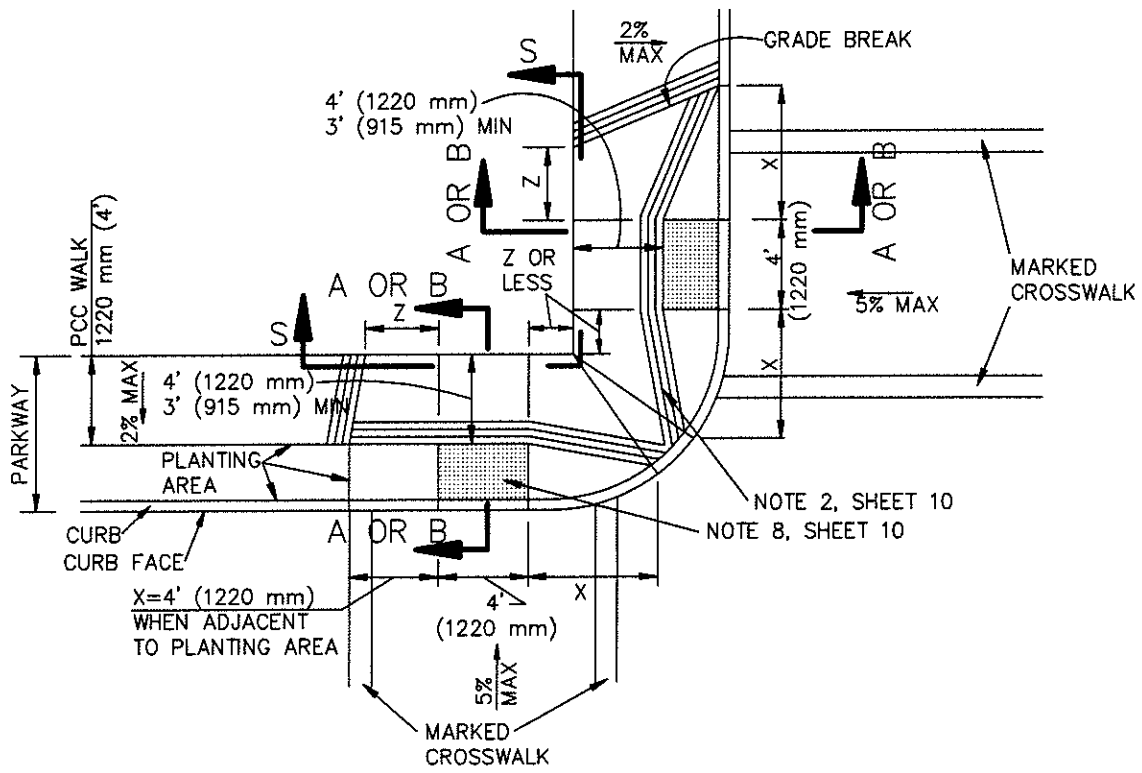
CASE C



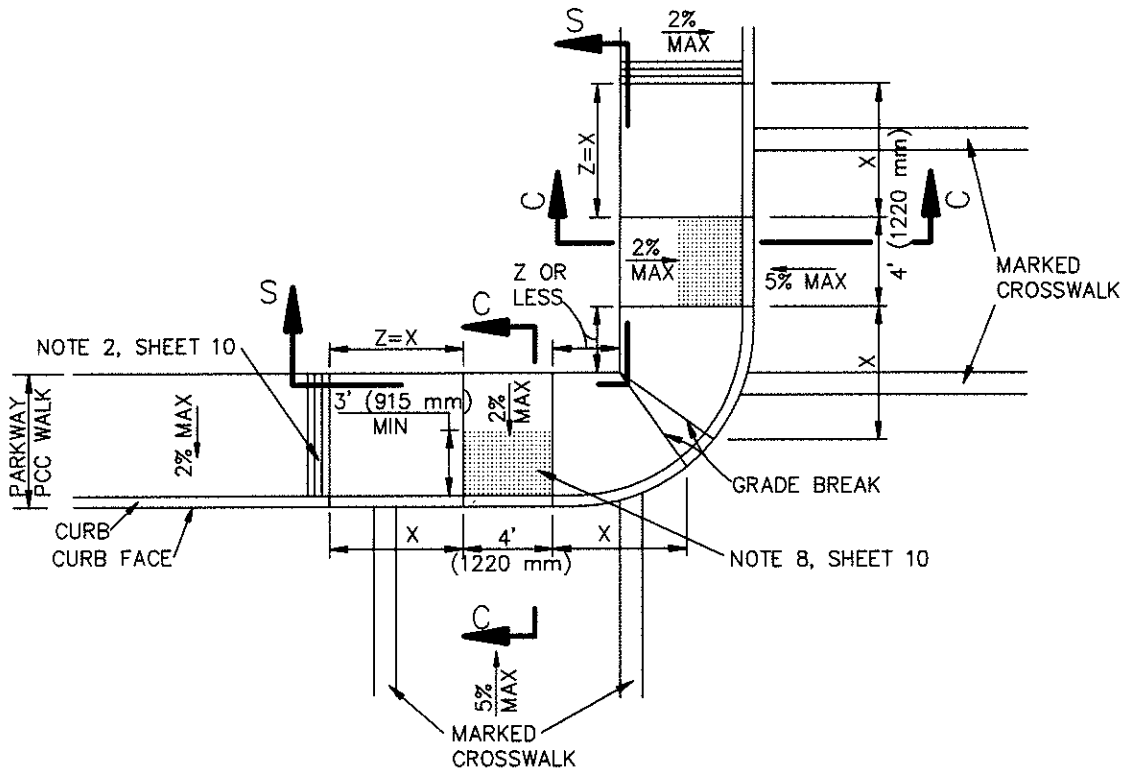
TYPE 1



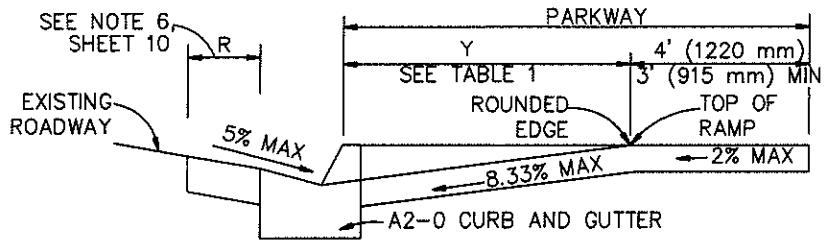
TYPE 2
 CASE D



TYPE 1

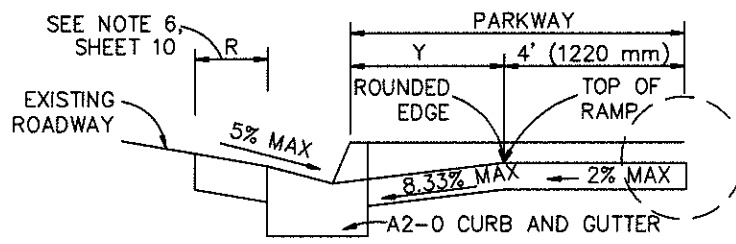


TYPE 2
CASE E



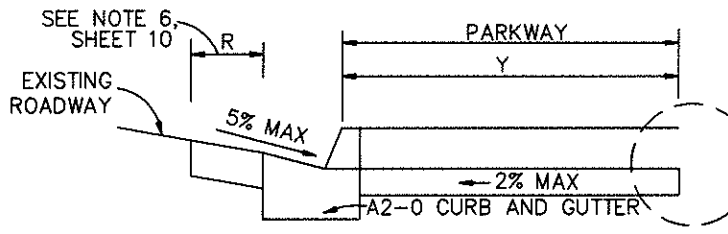
SECTION A-A

USE FIGURE 1 TO DETERMINE WHICH OF SECTIONS A-A, B-B OR C-C IS APPROPRIATE.



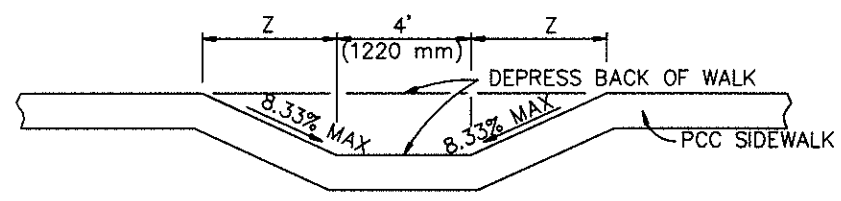
SECTION B-B

DEPRESS BACK OF WALK SEE DETAIL A, B, C OR D, SHEET 10.

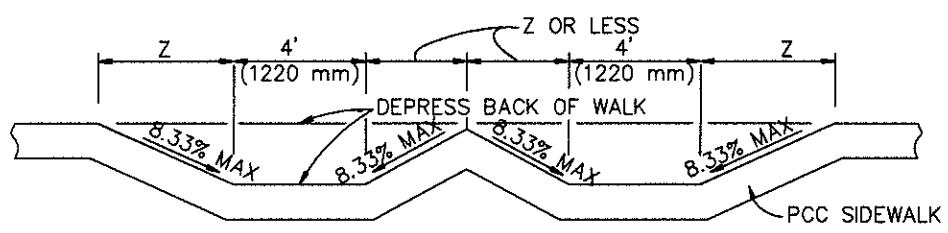


SECTION C-C

DEPRESS BACK OF WALK SEE DETAIL A, B, C OR D, SHEET 10.



SECTION R-R



SECTION S-S

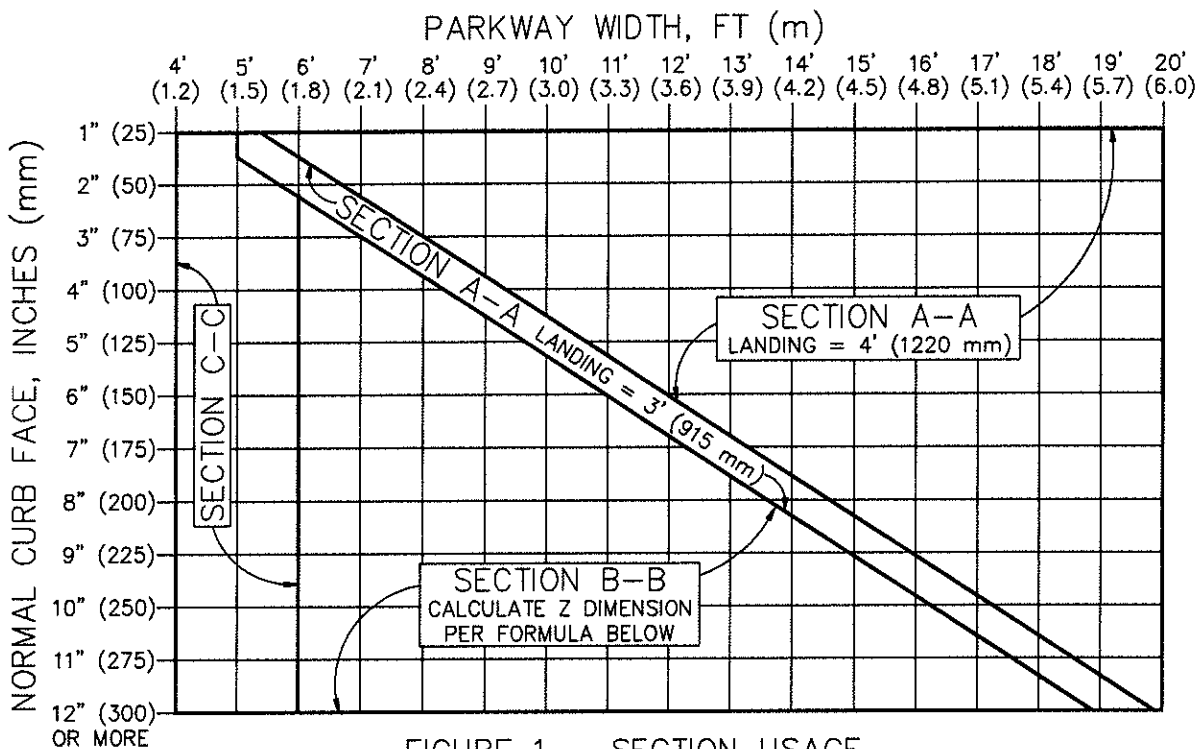


FIGURE 1 - SECTION USAGE

NORMAL CURB FACE, INCHES (mm)	X, FT (mm)	SECTION Y-Y Y, FT (mm)
2" (50)	4.00' (1200) MIN	2.63' (790)
3" (75)	4.00' (1200) MIN	3.95' (1185)
4" (100)	4.00' (1200)	5.26' (1580)
5" (125)	5.00' (1500)	6.58' (1975)
6" (150)	6.00' (1800)	7.90' (2370)
7" (175)	7.00' (2100)	9.21' (2765)
8" (200)	8.00' (2400)	10.53' (3160)
9" (225)	9.00' (2700)	11.84' (3555)
10" (250)	10.00' (3000)	13.16' (3950)
11" (275)	11.00' (3300)	14.47' (4340)
12" (300)	12.00' (3600)	15.79' (4735)

WHERE FIGURE 1 SHOWS USE OF SECTION B-B, FIGURE Z DIMENSION AS FOLLOWS:

W = PARKWAY WIDTH
L = LANDING WIDTH, 4' (1220 mm) TYP, 3' (915 mm) MIN

$$Z = [(Y+L)-W] \times 0.760$$

IF $(Y+L) < W$, THEN $Z = 0$

TABLE 1 SHOWS X FOR A FLARE SLOPE OF 8.33% AT THE CURB FACE. IF L IS 4' (1220 mm) OR MORE, X MAY BE MULTIPLIED BY 0.833 FOR A MAXIMUM FLARE SLOPE OF 10% AT THE CURB FACE.

SEE SHEET 9 FOR STREET SLOPE
ADJUSTMENT FACTORS, ALL STREETS

TABLE 1 - X AND Y VALUES

TABLE 1 REFERENCE FORMULAS:

$$X = CF / 8.333\%$$

$$Y = CF / (8.333\% - 2\% \text{ WALK CROSS SLOPE})$$

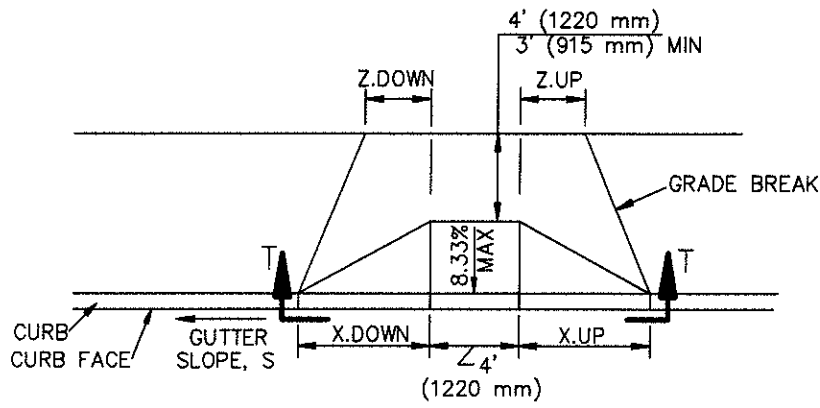
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

CURB RAMP

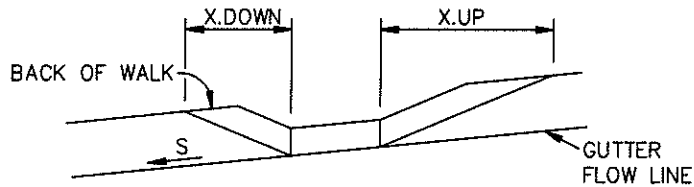
STANDARD PLAN

111-4

SHEET 8 OF 10



TYPICAL CURB RAMP



SECTION T-T
SLOPED STREET

FOR SLOPED STREETS, MULTIPLY THE DIMENSIONS PARALLEL TO THE STREET, X AND Z, UPSTREAM AND DOWNSTREAM OF THE RAMP, BY THE FACTORS IN THE FOLLOWING TABLE.

FOR EXAMPLE, $X.DOWN = X \times K.DOWN$

S	K.DOWN	K.UP
0%	1.000	1.000
0.2%	0.977	1.025
0.5%	0.943	1.064
1%	0.893	1.136
2%	0.806	1.316
3%	0.735	1.563
4%	0.676	1.923
5%	0.625	2.500

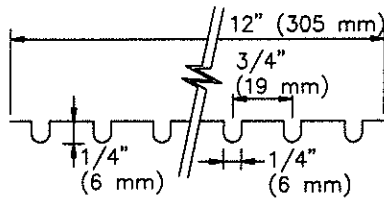
TABLE 2 - SLOPE ADJUSTMENTS

TABLE 2 REFERENCE FORMULAS:

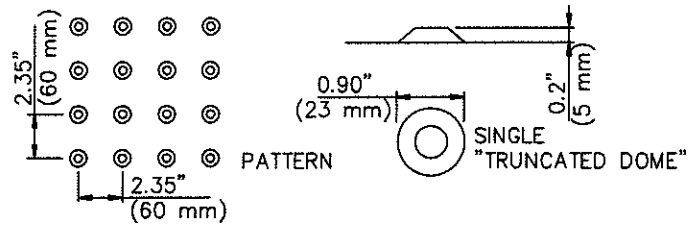
$$K.DOWN = 8.333\% / (8.333\% + S)$$

$$K.UP = 8.333\% / (8.333\% - S)$$

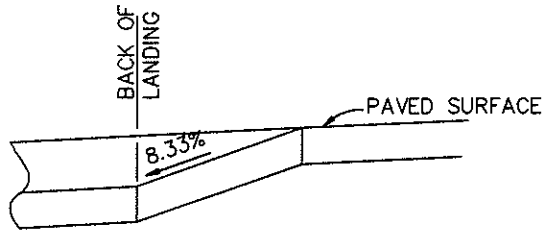
STREET SLOPE ADJUSTMENTS



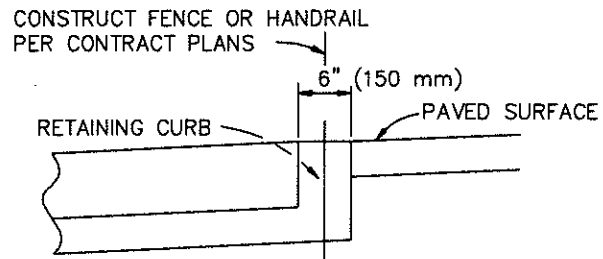
GROOVING DETAIL



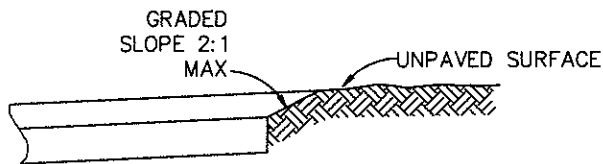
DETECTABLE WARNING DETAIL



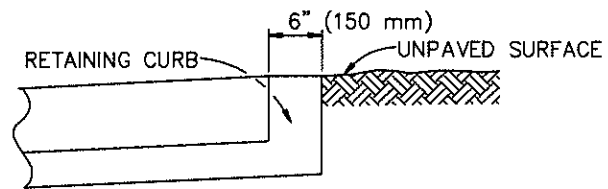
DETAIL A



DETAIL B



DETAIL C



DETAIL D

GENERAL NOTES:

1. CONCRETE SHALL BE CLASS 520-C-2500 (310-C-17) CONFORMING TO SSPWC 201-1.1.2 AND SHALL BE 4" (100 mm) THICK.
2. THE RAMP SHALL HAVE A 12" (305 mm) WIDE BORDER WITH 1/4" (6 mm) GROOVES APPROXIMATELY 3/4" (19 mm) OC. SEE GROOVING DETAIL.
3. THE RAMP SURFACE SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE CONFORMING TO SSPWC 303-1.9.
4. USE DETAIL "A" OR B" IF EXISTING SURFACE BEHIND LANDING IS PAVED.
5. USE DETAIL "C" OR D" IF EXISTING SURFACE BEHIND LANDING IS UNPAVED.
6. R = 3' (900 mm) UNLESS OTHERWISE SHOWN ON PLAN.
7. ANGLE = $\Delta/2$ UNLESS OTHERWISE SHOWN ON PLAN.
8. CONSTRUCT DETECTABLE WARNING SURFACE PER DETAIL THIS SHEET. MATERIALS SHALL BE PER CONTRACT DOCUMENTS.



© 2006 ENGINEERED PLASTICS
 CONFIDENTIAL AND PROPRIETARY DOCUMENT
 ANY ONE OR MORE OF THE FOLLOWING
 PATENTS MAY APPLY
 U.S. PATENT NO. 5,303,668; 5,775,835;
 6,448,780; AND 6,896,822; 6,855,855
 CAN. PATENT NO. 2,032,232; 2,070,984
 US PATENTS PENDING.
 © KENNETH E. SZENEKLY

MATERIAL LIST	
DESCRIPTION	PART No.
1 ARMOR-TILE	ADA-S-3648-01
QTY	1

** COLOR CODE
 YELLOW (Y), RED (RD), BLACK (BK),
 DARK GREY (DG), LIGHT GREY (LG),
 WHITE (WH), CORE YELLOW (CY),
 BLUE (BL), COLONIAL RED (CR)
 CUSTOM COLORS AVAILABLE

No.	DATE	REVISION	APPR.

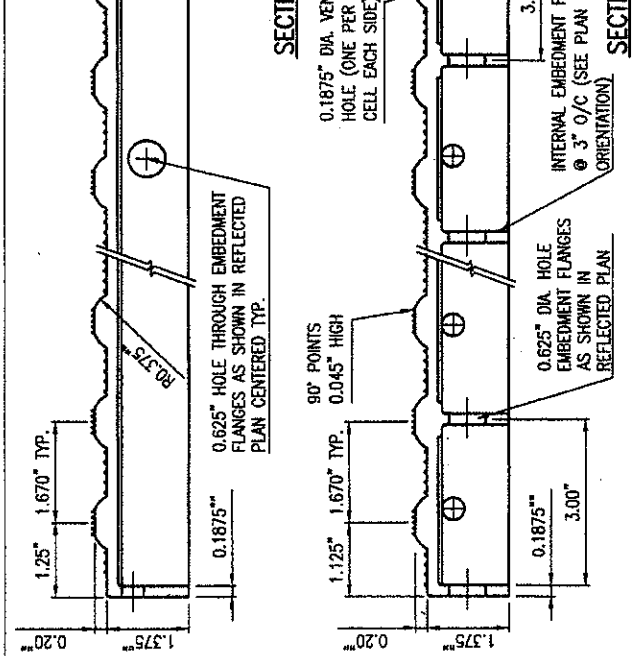
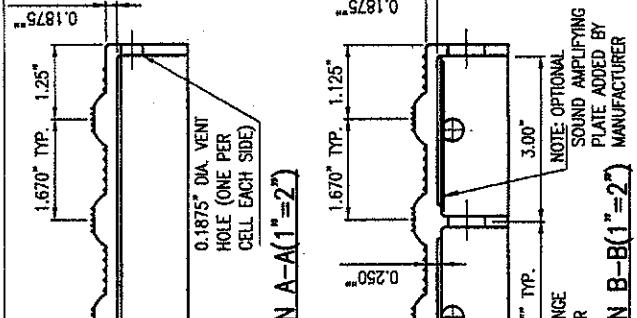
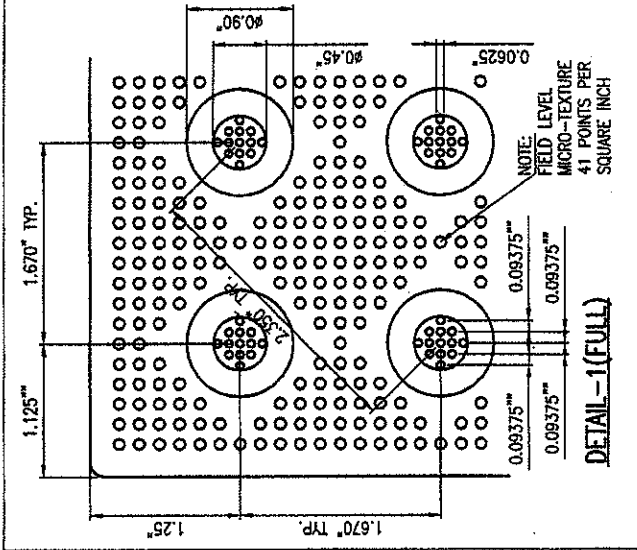
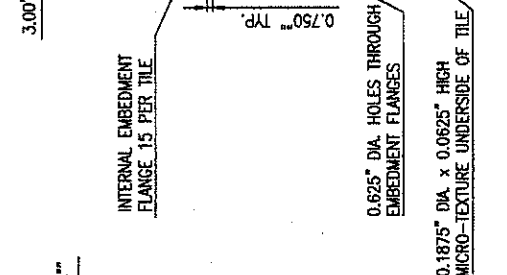
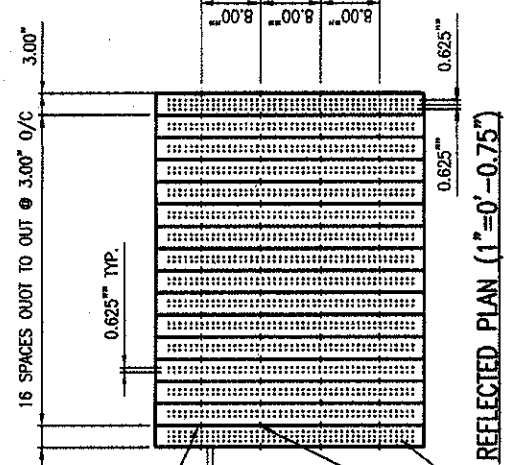
DATE	BY	CHKD	DATE
06/30	K.S.	06/30	
2/27/2006	D.G.	2/27/2006	

PROJECT NUMBER: ADA-C-3648-01
 TITLE: DETECTABLE WARNING SURFACE ADA-C-3648-01
 MATERIAL: VITRIFIED POLYMER COMPOSITE

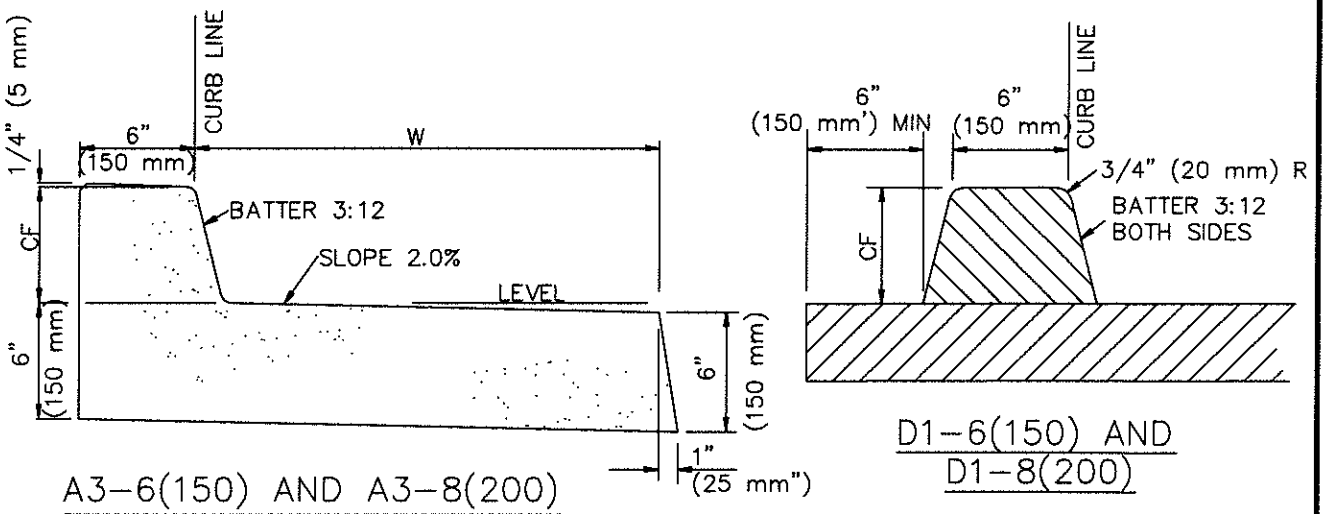
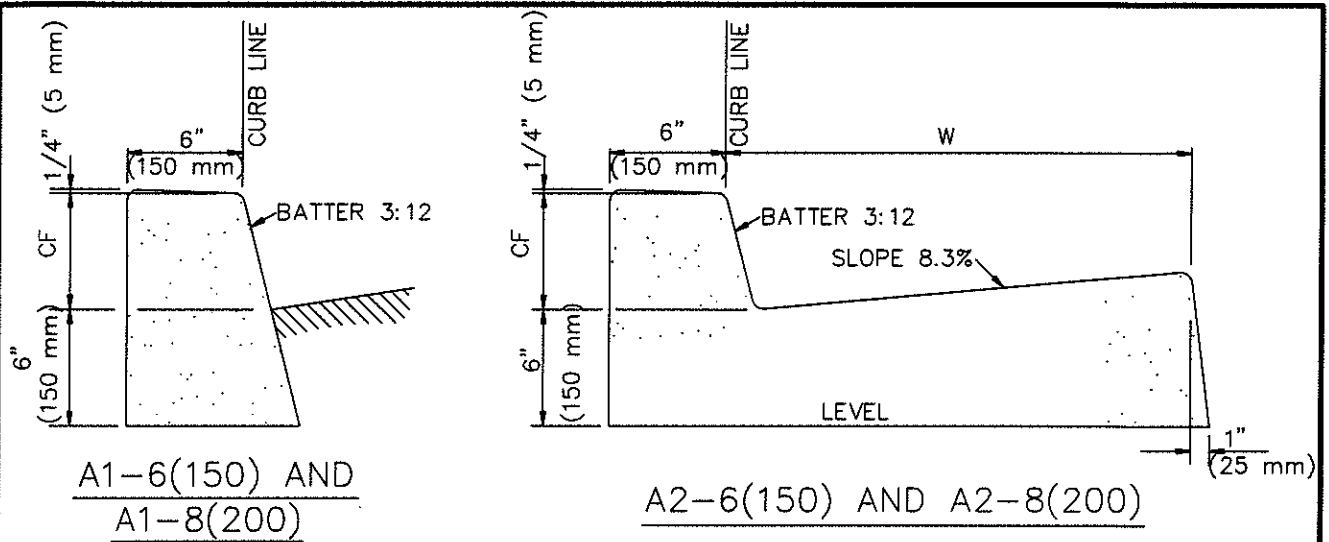
Armor-Tile™ ADA
 SOUND APPLICABLE DETECTABLE/TACTILE
 WARNING SURFACE TILE

Armor-Tile™
 DETECTABLE/TACTILE
 WARNING SURFACE TILE
 36" x 48" CAST IN PLACE
 INLINE DOME TACTILE TILE
 PLANS AND DETAILS

REV. NO.	0
REV. DATE	

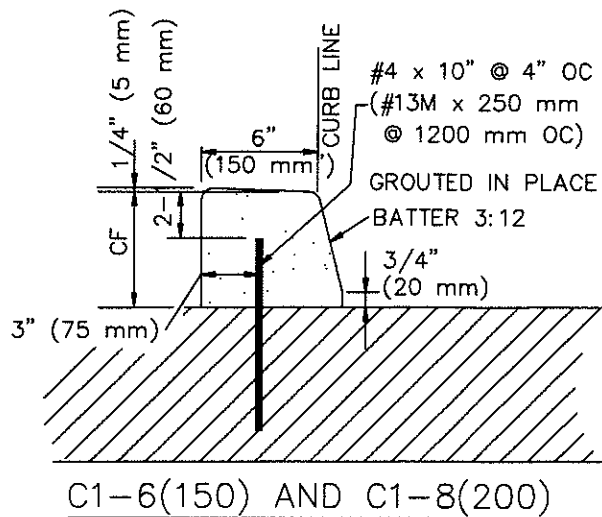


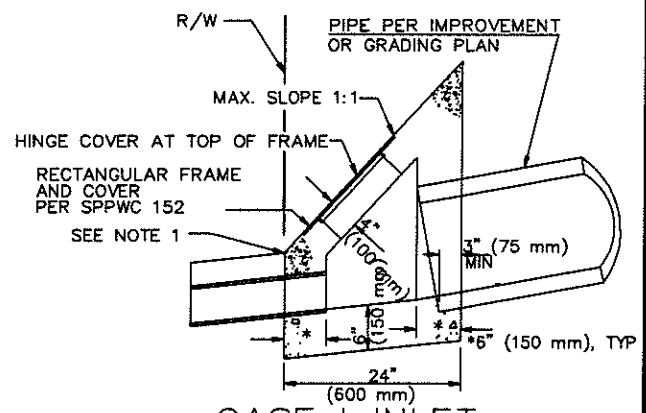
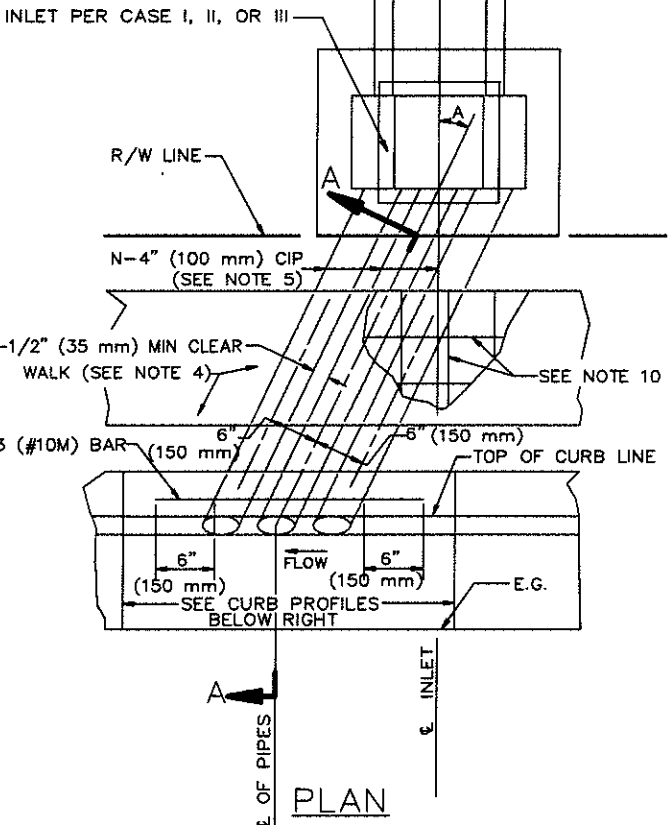
*Color: Federal Yellow



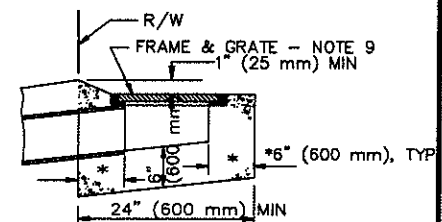
NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES (mm).
2. GUTTER WIDTH, W, IS 24" (600 mm) UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND C1 SHALL BE CONSTRUCTED FROM PCC.
4. TYPE D1 CURB SHALL BE CONSTRUCTED FROM ASPHALT CONCRETE.
5. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS AS SHOWN OR WITH AN EPOXY APPROVED BY THE ENGINEER.
6. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" (15 mm) RADIUS.

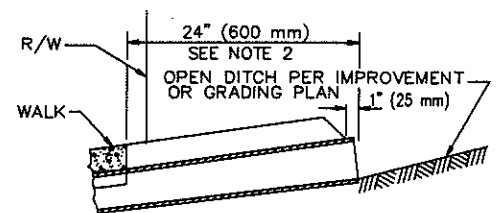




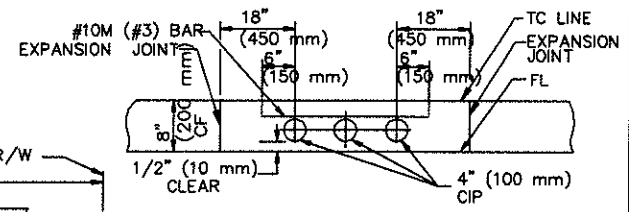
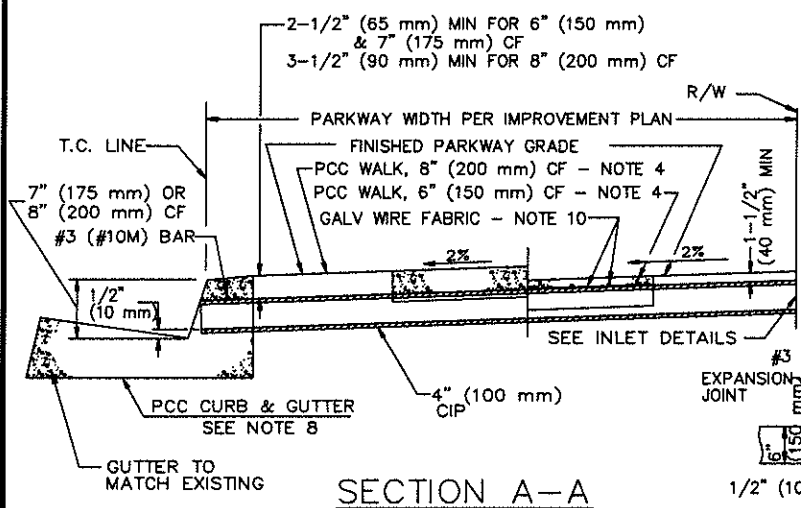
CASE I INLET
TRANSITION STRUCTURE SECTION



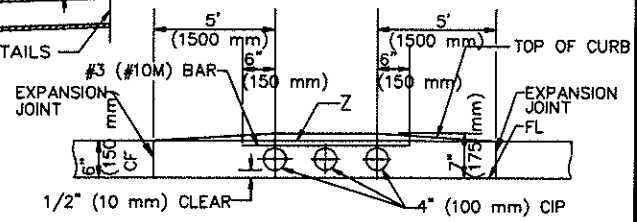
CASE II INLET
DROP INLET CATCH BASIN SECTION



CASE III INLET
GRADED DITCH SECTION



NOTE: APPLIES TO ANY NUMBER OF PIPES
CURB PROFILE
8" (200 mm) CURB FACE



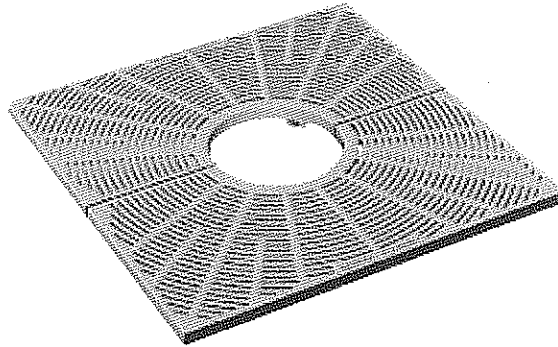
NOTE: APPLIES TO ANY NUMBER OF PIPES
Z = TOP-OF-CURB LINE SHOWN ON PROFILE
CURB PROFILE
6" (150 mm) CURB FACE

Boulevard Collection Tree Grates

R-8708

Boulevard Collection Tree Grate

48" x 48"



16" diameter expandable tree opening. Available with cast 20" and 24" tree opening upon request. .25" slot openings. 290 pounds per set. Available with light openings.

R-8708 is a Los Angeles approved grate.

TREE GRATE INSTALLATION PROCEDURES

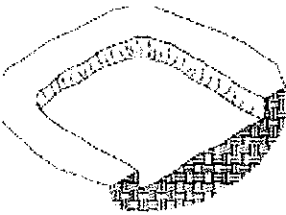
Neenah's tree grate frames are designed to make the installation job easy and accurate. Our frames can be incorporated into your forms in just minutes. The seat of the frame should be cleaned prior to setting the grate. Grate halves are to be bolted together on the underside using the bolt slots provided.

FOR POURED CONCRETE INSTALLATIONS

Neenah tree grates and R-8500 Type U frames

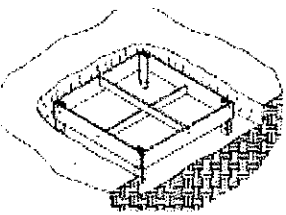
STEP 1

Excavate tree pit.



STEP 2

Place wood frame within excavation. Set at proper grade. Make form outside dimension 45.75" x 45.75" for 48" x 48" grate, 57.75" x 57.75" for 60" x 60" grate or 69.75" x 69.75" for 72" x 72" grate.



STEP 3

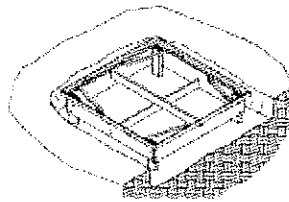
Assemble the R-8500 Type U tree grate frame using the hardware provided. Make sure to tighten the countersunk flathead screws so they are flush or below the bearing surface of the frame.

2 FLAT HEAD
CAP SCREWS
(4 PLACES)



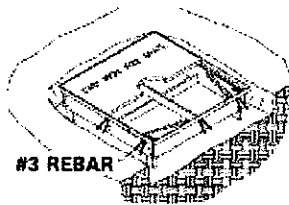
STEP 4

Place frame on wood form. Place both tree grate halves within the frame.



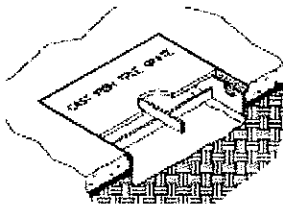
STEP 5

IMPORTANT: Wire grates, frames and form together. Check and adjust frame alignment and elevation if needed. Install #3 rebar through lugs on frame and support as required. Ensure there is a .1875" spacing between vertical faces of the frame and grate.



STEP 6

Pour and finish concrete. Do not remove tree grate or trim alignment wires until concrete has set up.



NOTE: Failure to follow these forming procedures could result in an unsatisfactory installation.

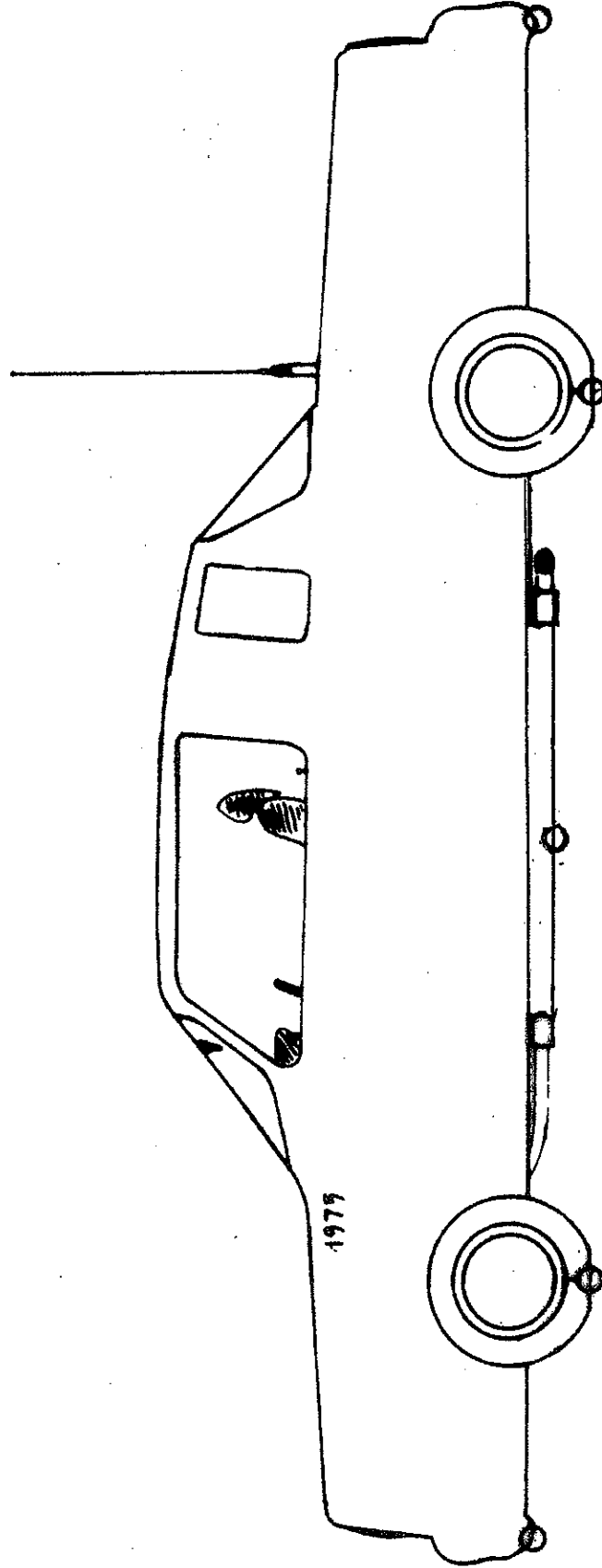
If you have any questions regarding installation or if you must deviate from the above instructions, contact the Neenah Product Engineering Department.

Additional detailed installation information is available from your Neenah sales representative.

APPENDIX C

Driveway Design Template

SCALE: 1/2" = 1'-0"
 O = INDICATES POINT OF INVESTIGATION



1975	1975	WHEEL BASE 136.3"	WHEEL CIRCUMF. 7'	LOS ANGELES COUNTY ROAD DEPARTMENT
1976	1976	4 of Approach - 19.7"	4 of Rollovers - 9"	
		1977	1977	LIMITS LCS
				HIGHWAY DIVISION

APPENDIX D

Storm Water Construction Notes

Storm Water Construction notes

Minimum BMP Requirements for Construction Activities for All Development Construction Projects

- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales area drains, natural drainage courses or wind.
- Stockpiles or earth and other construction related materials must be protected from being transported from the site by the force of wind and water.
- Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
- Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site.
- Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
- Any slope with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
- Additional BMPs will be implemented as deemed necessary by City inspectors.

WM-1 MATERIAL DELIVERY AND STORAGE

Provide a material storage area with secondary containment and/or weather protection. Note the maintenance practices and schedule proposed for this area.

WM-2 MATERIAL USE

Hazardous materials, fertilizers, pesticides, plasters, solvents, paints, and other compounds must be properly handled in order to reduce the risk of pollution or contamination. Training and information on procedures for the proper use of all materials must be available to the employees that apply such materials.

WM-4 SPILL PREVENTION AND CONTROL

Identify spill prevention and control measures that will be taken for all proposed materials. Identify the methods, by which accidental spills will be cleaned and properly disposed of.

WM-5 SOLID WASTE MANAGEMENT

Provide designated waste collection areas and containers. Arrange for regular disposal. Provide covered storage with secondary containment. Containers are required to protect waste from rain to prevent water pollution and prevent wind dispersal.

WM-6 HAZARDOUS WASTE MANAGEMENT

Hazardous materials must be disposed of in accordance with State and Federal regulations. Identify the proposed methods of disposal and any special handling contracts that may be applicable.

WM-7 CONTAMINATED SOIL MANAGEMENT

Prevent or reduce the discharge of pollutants to stormwater from contaminated soil and highly acidic or alkaline soils by conducting pre-construction surveys, inspecting excavations regularly, and remediating contaminated soil promptly.

WM-8 CONCRETE WASTE MANAGEMENT

Store dry and wet materials under cover. Avoid on-site washout except in designated areas away from drains, ditches, streets, and streams. Concrete waste deposited on site shall set-up, be broken apart, and disposed of properly. Containment and proper disposal is required for all concrete waste.

WM-9 SANITARY / SEPTIC WASTE MANAGEMENT

Untreated raw wastewater is not to be discharged or buried. Sanitary sewer facilities on site are required to be in compliance with local health agency requirements. Sanitary or septic wastes must be treated or disposed of in accordance with State and local requirements.

TC-1 STABILIZED CONSTRUCTION ENTRANCE

A stabilized entrance is required for all construction sites to ensure that dirt and debris are not tracked onto the road or adjacent property. Maintenance of such a system is required for the duration of the project. Such stabilization may be of rock or paved.

**SE-1 SILT FENCE
SE-3 SEDIMENT TRAP
SE-8 SAND BAGS**

Eroded sediments must be retained on site and not permitted to enter the drainage system. May be waived at the sole discretion of the City Inspector if other erosion control BMPs are deemed sufficient.

These notes must appear on plans