

PART 8

GENERAL

Design Standards

Plan 805 Design vehicle 317

Security Fencing

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Miscellaneous

Plan 880 Bus stop pad..... 323

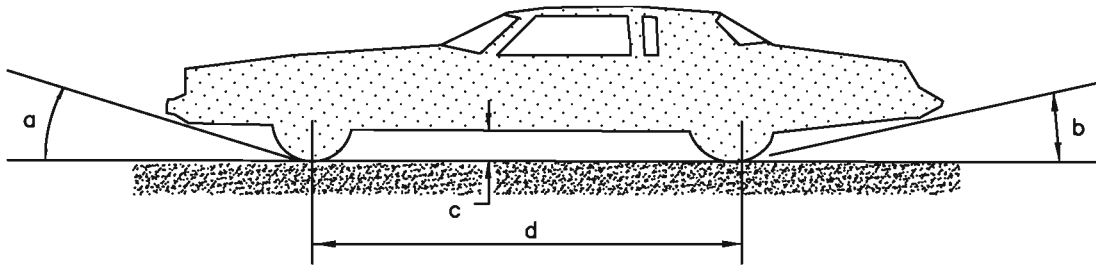
881S Bus Pull-out - Type 1.....Appendix A

882S Bus Pull-out - Type 2.....Appendix A

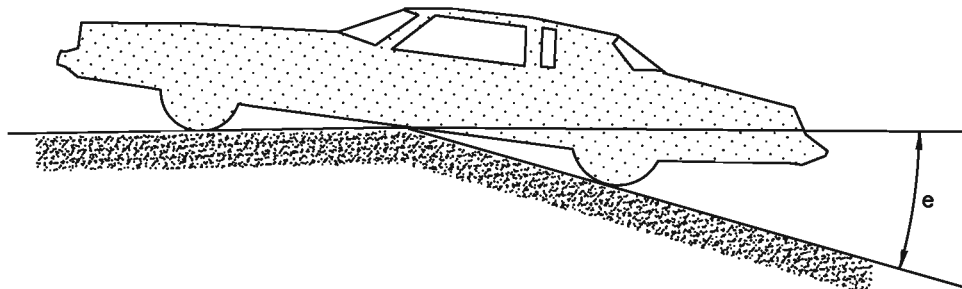
901S Front Load Solid Waste Bin Enclosure.....Appendix A

Design vehicle – type A

1. NARRATIVE: The angles shown on the drawing represent maximum slopes when constructing driveway approaches. Use the following rules when Plan No.'s 215, 221, 225, or 229 cannot be used to construct driveway approaches.
 - A. Slope of driveway approach from gutter to front edge of sidewalk should not exceed 20 percent.
 - B. Slope of driveway beyond the property line should not exceed 16 percent.
 - C. For access for commercial vehicles see drawing No. 2.



VERTICAL SAG ANGLES



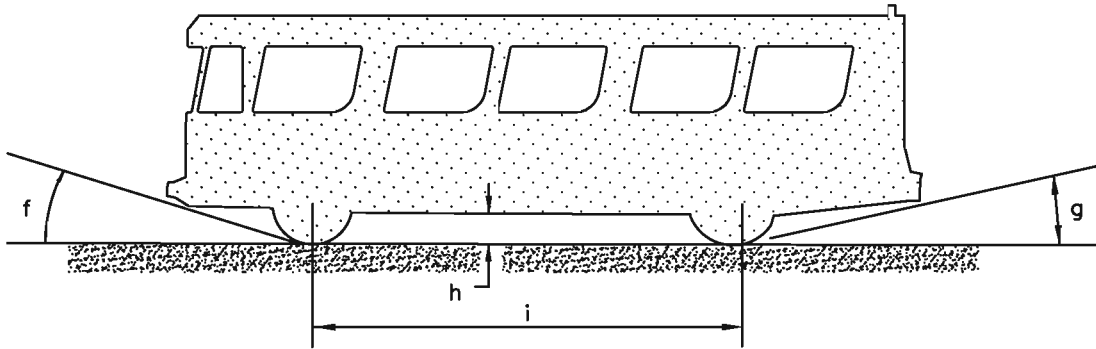
VERTICAL CREST ANGLE

- a = MAXIMUM APPROACH ANGLE = 20.2° = 36.8%
- b = MAXIMUM DEPARTURE ANGLE = 9.2° = 16.2%
- c = MINIMUM RUNNING GROUND CLEARANCE = 4.3'
- d = DESIGN VEHICLE WHEELBASE = 10.8'
- e = MAXIMUM RAMP BREAKOVER ANGLE = 7.6° = 13.25%

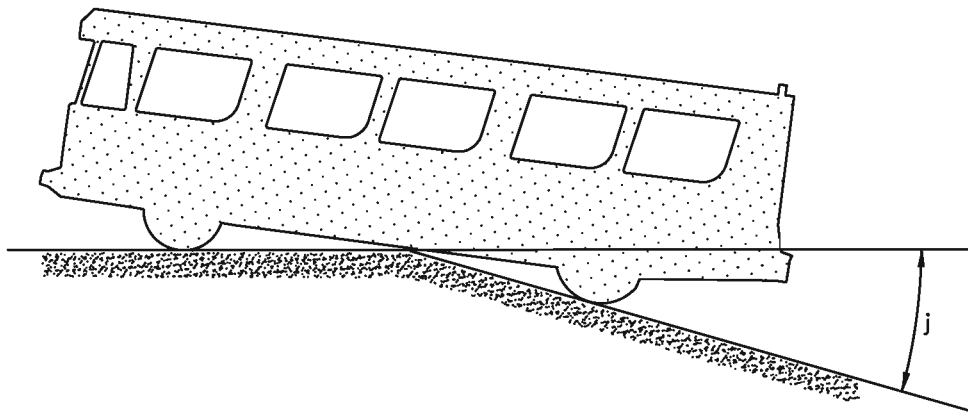
Design vehicle - type A

Design vehicle – type B

1. NARRATIVE: The angles shown on the drawing represent maximum slopes for a “standard commercial vehicle”. To construct slopes for driveway approaches, see driveway approach plans.



VERTICAL SAG ANGLES



VERTICAL CREST ANGLES

- f = MAXIMUM APPROACH ANGLE = 9.5° SLOPE = 16.1%
- g = MAXIMUM DEPARTURE ANGLE = 9.2° SLOPE = 16.2%
- h = MINIMUM RUNNING GROUND CLEARANCE = 12"
- i = DESIGN VEHICLE WHEELBASE LENGTH = 25'-0"
- j = MAXIMUM RAMP BREAKOVER ANGLE = 4.6° = 8%

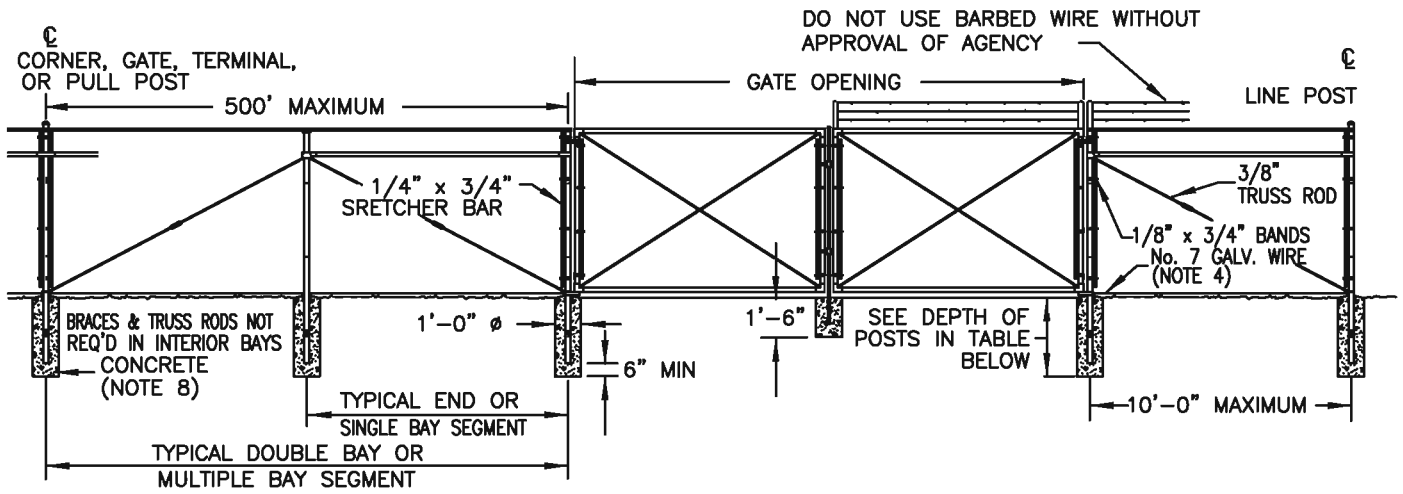
Design vehicle - type B

Plan No.

805

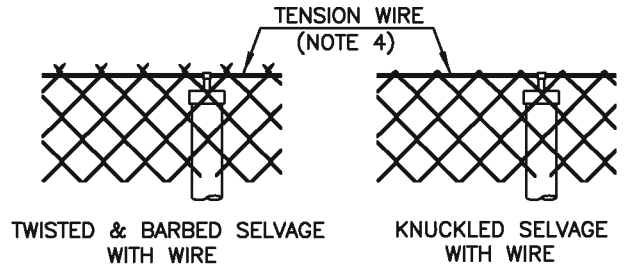
Chain link fence

1. FENCES 5 FEET HIGH OR HIGHER: Use twisted and barbed selvage, top and bottom.
2. FENCES LOWER THAN 5 FEET: Use knuckled selvage on top, and twisted and barbed selvage on bottom.
3. TRUSS RODS AND BRACES: Not required for fabric heights less than 5 feet high.
4. TENSION WIRE: Use zinc coated, galvanized, No. 7 gage spring coil steel. Set wire at 1 inch over natural ground or 6 inches over concrete structures.
5. PIPE: Use ASTM A 120, schedule 40, hot dipped zinc coated steel.
6. POST SPACING: Locate posts at equal spacing for each segment with maximum spacing specified in standard specifications.
7. BARB WIRE ARM: Face arm towards exterior of fenced area.
8. CONCRETE: Class 4000 per APWA Section 03 30 04. Place per APWA Section 03 30 10. Cure per APWA Section 03 39 00.

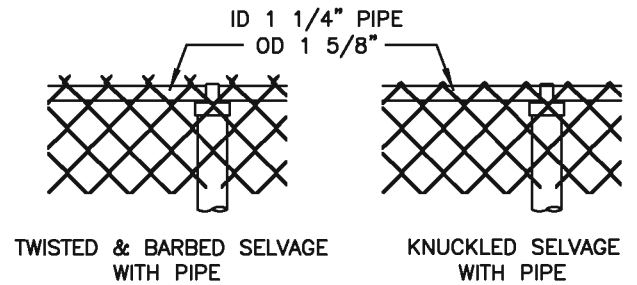


FENCE

FENCE POSTS					
HEIGHT OF FABRIC	DEPTH OF POSTS	LENGTH OF END CORNER, OR PULL POST	LENGTH OF LINE POST	MINIMUM DIAMETER	
				END, CORNER PULL POST	LINE POST
7'	3'	10'	9'-8"	2 1/2"	2"
6'	3'	9'	8'-8"	2 1/2"	2"
5'	3'	8'	7'-8"	2"	1 1/2"
4'	2'	6'	5'-8"	2"	1 1/2"

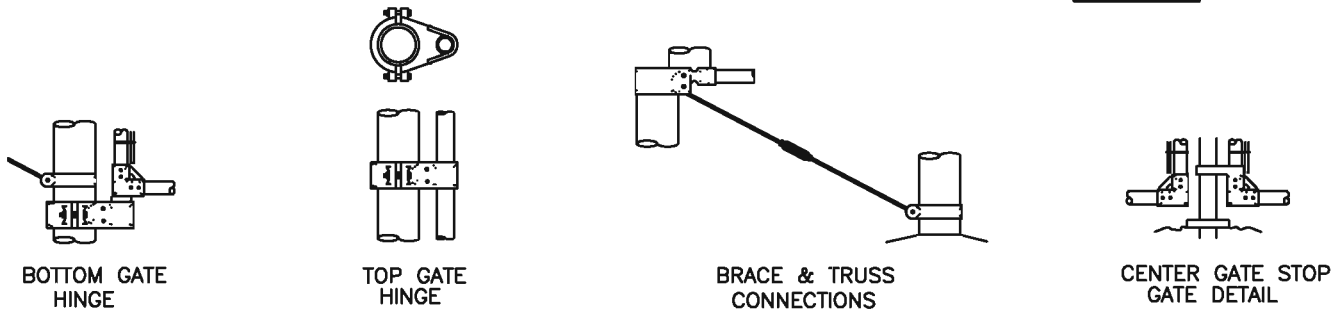


GATE POSTS AND GATE FRAMES			
HEIGHT	FRAME	GATE OPENING	POST
UNDER 6 FEET	1 1/2"	SINGLE TO 6' OR DOUBLE TO 12'	2"
	1 1/2"	SINGLE OVER 6' TO 8' OR DOUBLE OVER 12' TO 16'	2 1/2"
	1 1/2"	SINGLE OVER 8' TO 12' OR DOUBLE OVER 16' TO 24'	3 1/2"
6 FEET AND OVER	1 1/2"	SINGLE TO 6' OR DOUBLE TO 12'	2 1/2"
	1 1/2"	SINGLE OVER 6' TO 13' OR DOUBLE OVER 12' TO 26'	3 1/2"
	1 1/2"	SINGLE OVER 13' TO 18' OR DOUBLE OVER 26' TO 36'	6"
	1 1/2"	SINGLE OVER 18' OR DOUBLE OVER 36'	8"



SEE NOTES 1 AND 2 (TYP)

FABRIC



DETAILS

Chain link fence

Plan No.

831

Bus stop pad

1. UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23.
 - A. Place material per APWA Section 32 05 10. Maximum lift thickness before compaction is 8 inches when using riding compaction equipment or 6 inches when using hand held compaction equipment.
 - B. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater.
 - C. Do not use gravel as a substitute for untreated base course without ENGINEER's permission.

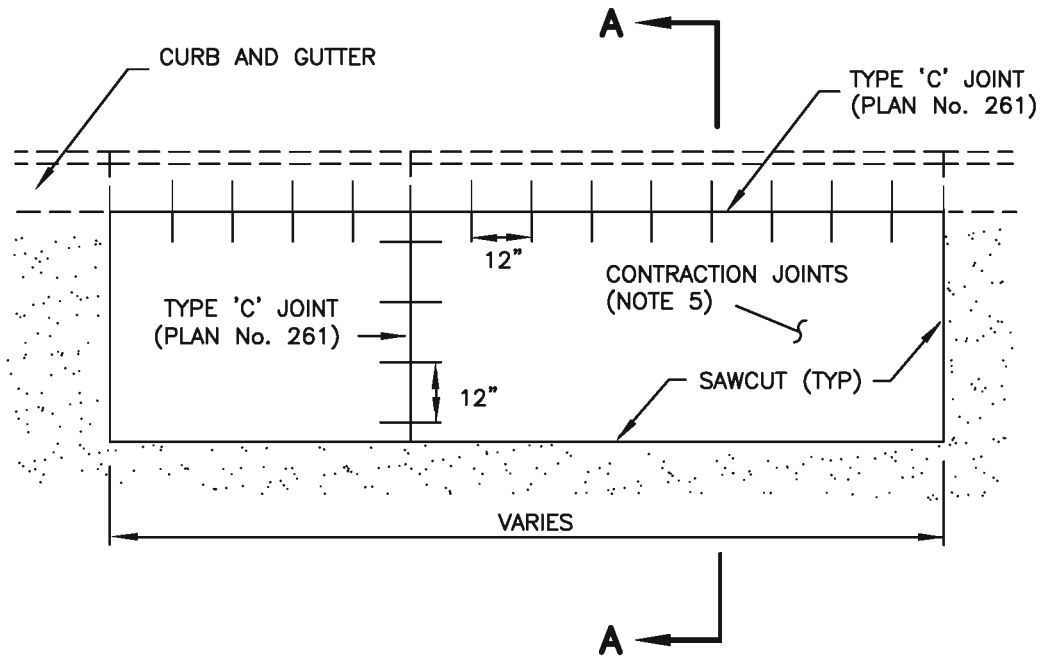
2. CONCRETE: Class 4000 per APWA Section 03 30 04.
 - A. If necessary, provide concrete that achieves design strength in less than 7 days. Caution; concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
 - B. Place concrete per Section 32 16 13.
 - C. Provide 1/2 inch radius on concrete edges exposed to public view.
 - D. Cure concrete per APWA Section 03 39 00 with type II Class A or B (white pigmented) membrane forming compound unless specified otherwise.

3. REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed steel. See APWA Section 03 20 00 requirements.

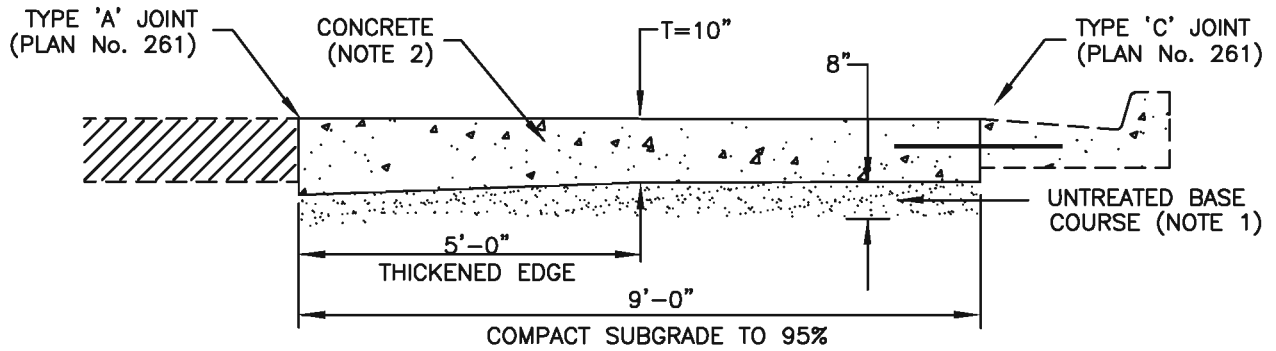
4. EXPANSION JOINT:
 - A. Make joint full depth and vertical.
 - B. Provide F1 joint filler material 1/2 inch wide; APWA Section 32 13 17.
 - C. Set top flush with surface of concrete.

5. CONTRACTION JOINT:
 - A. Make joint vertical.
 - B. Make joint 1/8 inch wide and 2 inch deep or 1/4 slab thickness if slab is greater than 8 inches thick.
 - C. Maximum length to width ratio for non-square panels is 1.5 to 1.
 - D. Maximum panel length (in feet) is 2.5 times the slab thickness (in inches) to a maximum of 15 feet.
 - E. Match location of contraction joints in adjacent concrete roadway pavements.

6. FINISH: Broomed.



PLAN



SECTION A-A

Bus stop pad

Plan No.
880

