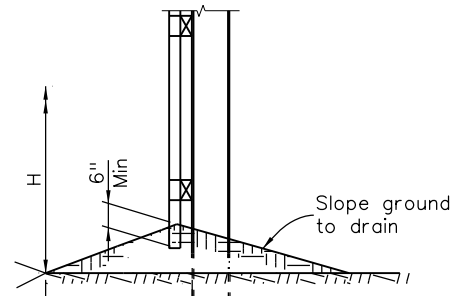


PLAN

S=8' Center-to-center Max for 27 psf  
S=10' Max for 12 psf,  
except S=12' Max alternating with  
S=6' each side allowed for 12 psf



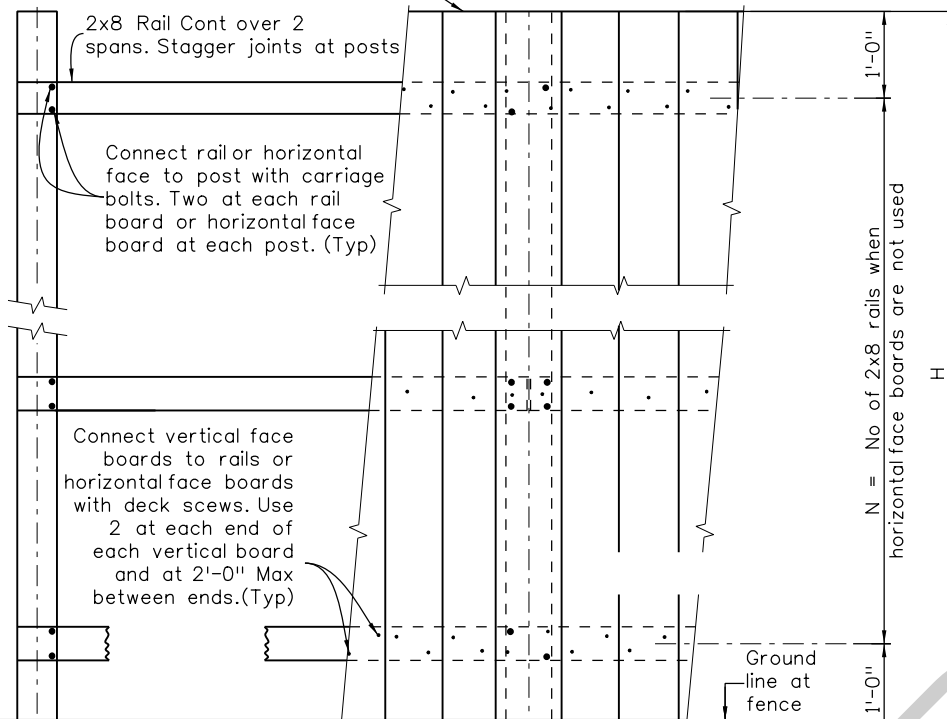
SECTION

2" Nominal tongue & groove fence boards

H and L are determined at distance = post embedment "L"

Revision Dates	(Preliminary Stage Only)
12/95	3/99
11/99	4/02
3/07	10/13
3/23	

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						



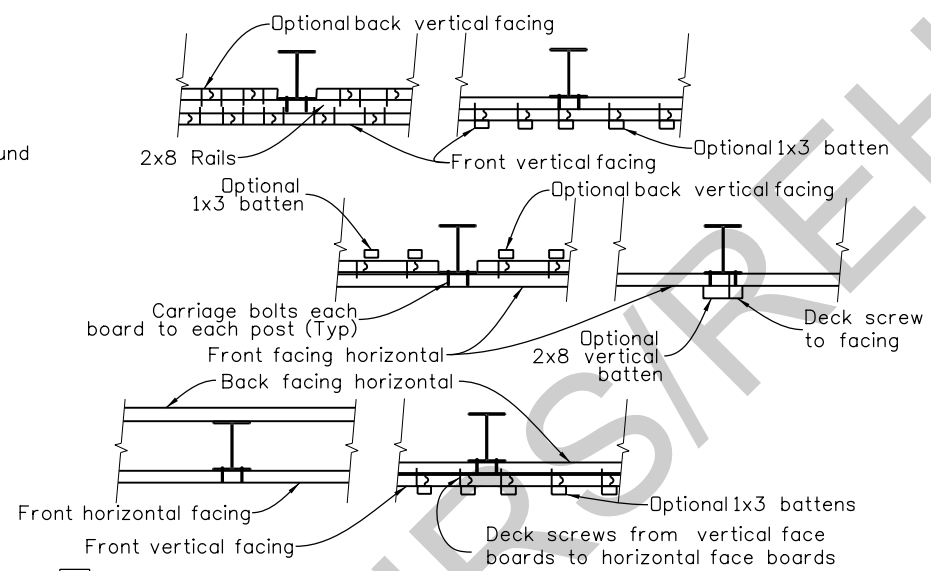
ELEVATION

Backfill posts with a fluid cement treated flowfill

N = No of 2x8 rails when horizontal face boards are not used

Bend post flange and dress vertical boards as needed for good fit

TYPICAL FENCE ANGLE



- Use a horizontal board facing on the front of the fence.
- with 2x8 vertical battens on the front face of post.
- Use a vertical board facing on the front of the fence mounted to 2x8 horizontal rails.
- with 1x3 vertical battens.
- Use a vertical board facing on the back of the fence mounted on the back of the front face rails of front horizontal face boards when available.
- with 1x3 vertical battens.
- Use a horizontal board facing on the back of the fence.
- with 2x8 vertical battens at post.
- Use 12 psf design.
- Use treated wood for rails, fence boards, and battens.
- Point post in addition to galvanizing with a galvanizing compatible paint system. The color shall be -----, equivalent to Federal standard 595B, color No. -----

Unless otherwise selected above use: 27 psf. Face boards horizontal on front of fence. No back facing. No battens. Galvanize only, no paint. All wood untreated.

Designer/Detailer:  
Retain only the above choices  
You are actually calling for.  
Remove those that do not apply.

FENCE POST INSTALLATION

Height H	27 psf Design			12 psf Design		
	L ▲	Post Min	N	L ▲	Post Min	N
6'-0"	4'-8"	W 6x9	4	3'-9"	W 6x9	3
8'-0"	5'-5"	W 6x9	5	4'-4"	W 6x9	3
10'-0"	6'-2"	W 6x12	6	4'-11"	W 6x9	4
12'-0"	6'-2"	W 6x15	7	5'-5"	W 6x9	5
14'-0"	6'-9"	W 8x18	8	5'-11"	W 6x12	6
16'-0"	7'-3"	W 8x18	9	5'-11"	W 6x15	6

▲ Minimum

NOTES:

- Timber shall conform to Section 508 of the Standard Specifications. All wood dimensions are nominal sizes. All horizontal or vertical face boards shall be 2" nominal thickness and tongue and grooved.
- All posts are A36 or A572 steel. All posts, deck screws, carriage bolts, nuts, washers, and nails shall be galvanized.
- Carriage bolts shall be 1/4" diameter and have nuts and lockwashers and peened threads. Tighten carriage bolts to set head flush with the surface of the wood. Deck screws shall be between 2 1/2" and 3" long.
- The entire wood portion of the fence above ground shall receive a coat of boiled linseed oil at the rate of 150 SF Max per gallon to retard weathering.
- Use the 27 psf design in Boulder County, in the Front Range foothills, in exposed open terrain, high exposed locations, or within 10' of a high speed roadway pavement.
- Rails or horizontal face boards shall be placed in accordance with combination simple span and two-span continuous layup of AITC Specification 118.
- For fences with 5 or more rails, vertical facing boards may be full length or may be placed such the each board bears on at least 3 rails, and all butt joints fall over the rails and are staggered by at least one rail in adjacent boards.
- Single-faced fences shall have open knots plugged.
- All timber shall have moisture content no higher than 17% at the time of installation.
- 1x3 vertical battens shall be attached with 10d ring shank nails at 2'-0" Max. 2x8 vertical battens shall be attached with deck screws at 2'-0" Max.
- Top of the post may be flush with the top of the top horizontal rail or top horizontal face board.
- The fence shall not retain more than 1'-0" of fill.

DESIGN DATA:

AASHTO Standard Specifications for Structural Design of Sound Barrier, 1989

Wind load = 27 psf Exposure C

Wind load = 12 psf Exposure B1

Timber: Fb = 1000 psi Min Nom 1769 psi Min for wind  
Fv = 65 psi Min Nom 110 psi for wind

Steel: ASTM A36, fy = 36,000 psi, ASTM A572 may be substituted

ASSUMED SOIL PROPERTIES:

Weight = 120 Lb/CF φ = 32° or compact coarse and fine sand, medium stiff clay, or soil slope of height = post embedment suitable for a 2:1 depth, "L", and construction traffic.

All seals for this set of drawings are applied to the cover page(s)	Print Date: \$DATE\$	Sheet Revisions		Colorado Department of Transportation		As Constructed		WOOD SOUND BARRIER (STEEL POST)		Project No./Code	
	File Name: Sheet_B-607-SB2.dgn	Date:	Comments	Init.	2829 West Howard Place, 3rd Floor Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197		No Revisions:		Project Number		
	Horiz. Scale: Not to Scale Vert. Scale: As Noted				CDOT		Revised:		Designer: XXXXXXXX	Structure Numbers: X-XX-XX	Code
	Unit Information Unit Leader Initials				Staff Bridge Branch		Void:		Detailer: XXXXXXXX	Subset Sheets: BXX of XXX	Sheet Number