

DESIGN CRITERIA:

AASHTO 7th Edition LRFD with current interims
 PCI Design Handbook 7th Edition

#5 @ 6" (Full height panel)
 #5 @ 12" (Segmental Panel)

Reinforced Concrete
 Class D Concrete: $f'_c = 4,500$ psi
 Reinforcing Steel: $f_y = 60,000$ psi

Unit weight of concrete, $g_c = 150$ pcf

All reinforcing steel shall be epoxy coated unless otherwise noted.

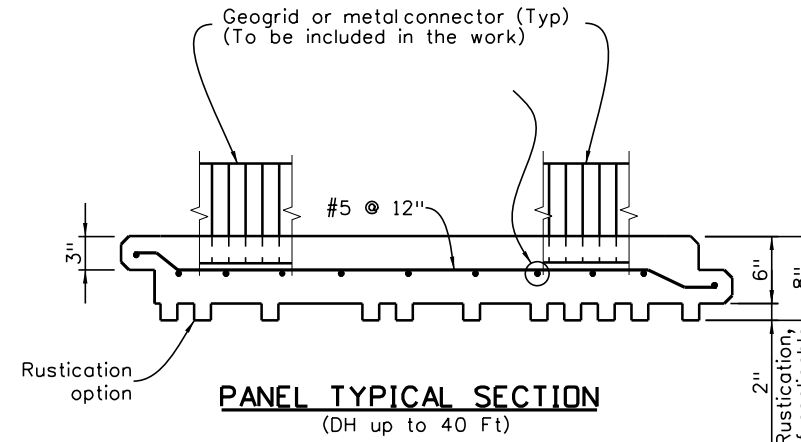
Using LTDS chart in CDDT Worksheet B-504-03 as applied
 Max factored earth pressure 4090 Lb/Ft on panel.

Wind load: 40 psf for setting precast panel, assumed
 providing temporary support shall be at around $\frac{2}{3}$ of panel
 height from the ground.

Four-point pick-up for stripping and yard handling is
 recommended.

Suggested Erection Method:

- Two-Point Pick (Panel Height up to 30')
- Three-Point Pick (Panel Height between 30' and 36')
- Four-Point Pick (Panel Height between 36' and 40')



ITEM NO.	DESCRIPTION	UNIT	QUANTITY
504 Precast Panel Facing	Concrete Class D	CY/SF	0.019
	Reinforcing Steel (Epoxy Coated) $f_y = 60$ KSI		
	Full Height Panel (5'-0" Wide)	Lb/SF	3.13
	Segmental Panel (5'-0" x 5'-0")	Lb/SF	2.09

PRECAST PANEL QUANTITIES

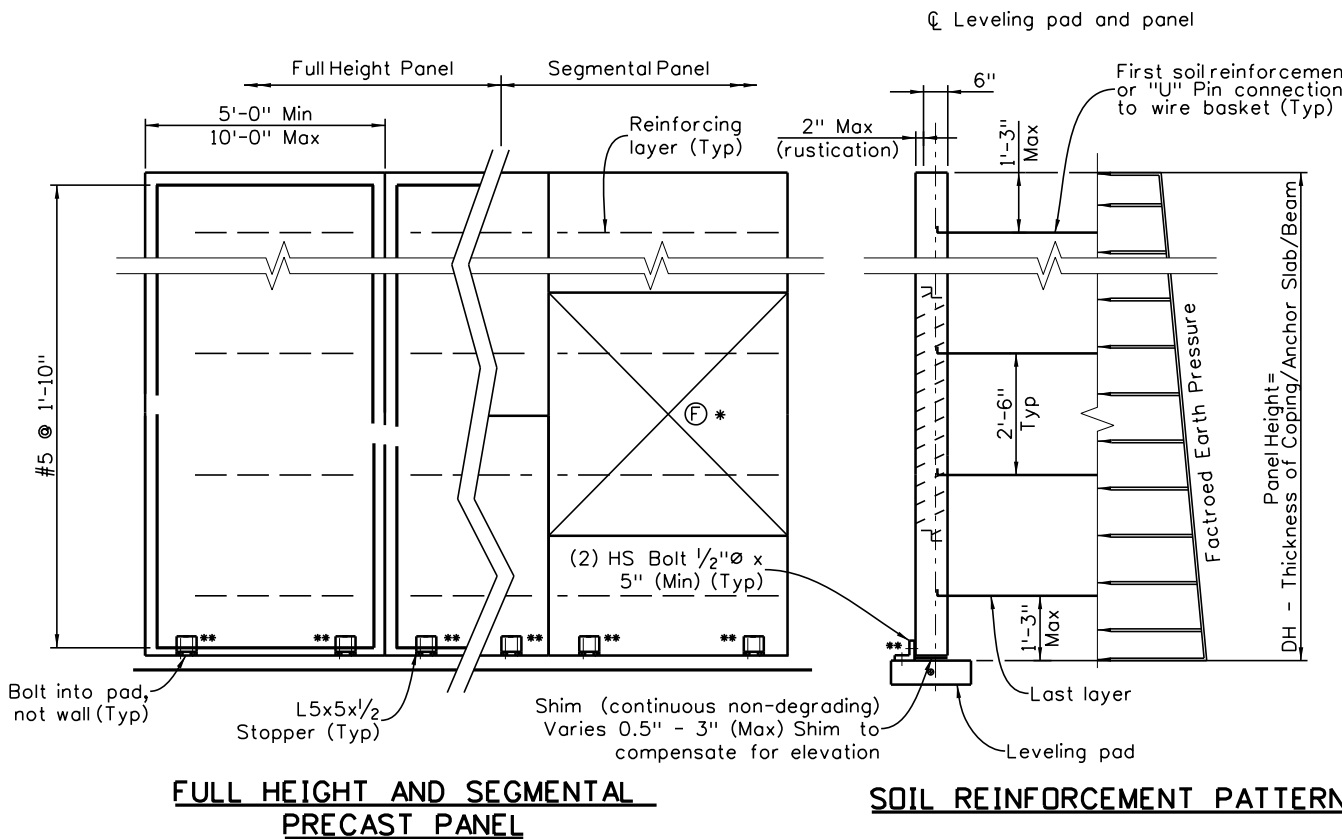
(For information only. Per SQUARE FOOT without rustication.)

NOTES:

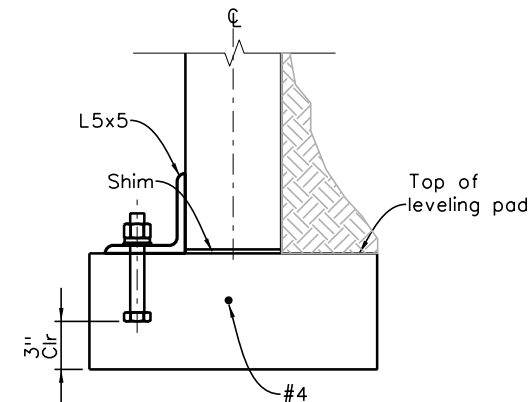
1. Panel lifting hook embedments and related hardware shall be furnished, sized, and placed by fabricator (per Contractor's design) for each individual panel.
2. Each panel connection system includes bolt and angle systems at the bottom of the panel. Contractor shall submit an alternative method for restraining the panel during erection. Work to be included in Item 504 Precast Panel Facing.
3. Test panels as specified in specification shall be included in cost of item 504 Precast Panel Facing provided by the Contractor.
4. Entire concrete coping (front and back) shall have three layers of water resistant or repellent concrete sealer before the wall is opened to traffic. Concrete coating shall be applied before applying the three layers of concrete sealer.
5. 2" clear for rebar is typical, except at ledger and as noted.
6. Sawing of panels is acceptable in areas to meet existing ground if needed with approval of the engineer.
7. The tolerance on panel thickness shall not exceed $\pm \frac{1}{4}$ ".
8. Any flexural cracks, sags, or cambers greater than 0.5" will be considered evidence of mishandling, overloading, or exceeding allowable tolerances, and may be cause for rejecting panels at the Engineer's discretion.
9. Care must be taken to ensure proper cleaning of construction debris off the tops of the panels and consolidation of concrete mortar under the edges of the panels. Water, dirt or other debris on top of the panels will inhibit the bond of the cast-in-place concrete. It is also important that adequate space (Min 1" x 2") is provided for the concrete to fill the space under the panels where the slab concrete is placed. Panel lengths and width shall be determined by the Contractor and shown on the shop plans.
10. The Contractor is responsible for the stability of the panels during shipping, delivery, inspection, and anytime during construction. Erected panels shall be uniformly supported along the length of the panel. The Contractor shall provide geogrid installation, lifting and erection plan to the Engineer for information only at no additional cost.
11. Per stopper location, in lieu of FRP, alternative may be proposed as approved by the Engineer.
12. Product shall conform to PCI MNL 117, 120, 122, and 127 or PCA/NPCA equivalent as applicable for curing, form stripping and erector requirements.
13. Regardless of segmental or full height, panels shall be designed and the connection detailed according to soil reinforcement spacings for 4090 Lb/Ft (Refer to B-504-03) uniformly factored earth pressure.
14. All material and labor for rustication (If applicable) will not be paid separately and will be included in the cost of Item 504 Precast Panel Facing.
15. Alternatives for erection, delivery, stripping, and yard handling methods shall be stamped and sealed by the Contractor for approval by the Engineer. Any additional costs shall not be paid separately but shall be included in the cost of the work.
16. For full height panels between 36' and 40', three-point pick may be used where #5 @ 6" is changed to #5 @ $4\frac{3}{4}$ ".
17. For curved wall alignment the width of the panel shall be limited to 5'-0".

Revision Dates
09-16
10-24

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						



- * Each full-size (F) segmental panel has a minimum of 2 layers of soil reinforcement
- ** Stopper final details per shop plans



CONCEPTUAL STOPPER DETAIL

Alternate stoppers may be submitted for acceptance.

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		PANEL FACING MSE WALL DETAILS (RUSTICATION AND PANEL STOPPER)			Project No./Code		
	File Name: Sheet_B-504-15.dgn	Date:	Comments	Init.	2829 West Howard Place, 3rd Floor Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197			No Revisions:		(3 OF 3)			Designer: XXXXXXXX Detailer: XXXXXXXX Sheet Subset: WALL Subset Sheets: WXX of XXX		
	Horiz. Scale: Vert. Scale: As Noted							Revised:		Structure Numbers		XXXXXXXXXXXXXX			
	Unit Information Unit Leader Initials							Void:		Numbers		XXXXXXXXXXXXXX			
					Staff Bridge Branch			Initials		Sheet Number					