

Defender Wall

Installation Guide



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This Installation Manual is intended to assist in the preparation and installation of Security Wall manufactured by Oldcastle Infrastructure. The Security Wall technology and design is proprietary to Oldcastle Infrastructure and this installation manual should not be used for any other products.

Your project will have a layout and plans supplied by Oldcastle Infrastructure which shall be referred to while using this Installation Manual. Any questions regarding installation of this product should be directed to a Security Wall technical support member at 450-444-5181.

1. Foundation Work

1.1. Excavation

The customer is responsible for excavation of the Security Wall foundation and disposal of all excavated material.

The foundation (engineering and drawings provided by others) will support the weight of the Security Wall and any loads from wind or seismic activity. Therefore, it is critical the footing be constructed on well compacted solid ground, and the excavation does not disturb the soil under the foundation.

The project plans will give the size and depth of footing. Ensure your excavation is at least 6" wider and deeper to allow placement of the foundation. The bottom of the excavation shall be prepared by placing and compacting at least 6" of clean crushed granular $\frac{3}{4}$ " rock. Level the rock to within $\frac{1}{4}$ " of the final grade.

1.2. Form Setup

Formwork shall be constructed to match the foundation as per project plans. Care shall be taken to ensure that reinforcing matches the plan details with proper clearances to all faces of the concrete.

The piers shall contain the supplemental reinforcement around the anchors bolts as shown on the plans.

1.3. Anchor Bolt Setting

Anchor Bolts shall be of the size and grade shown on the plans. It is critical that the bolts shall be plumb, at the proper spacing and projection, and protected during casting to prevent fouling of the bolt threads. A template shall be used to ensure the bolts meet these requirements. Templates, and Anchor Bolts, can be supplied by Oldcastle, upon request, to help ensure your project is successful.

1.4. Cast in Place Concrete

Concrete for the foundation shall meet or exceed the strength and properties called out in the project plans. Placement of the concrete shall be continuous, with consolidation required to ensure no voids exist. The bolt spacing from column to column shall be checked after placement of concrete to ensure they have not moved.

1.5. Replacement and Compaction of Soil

Once the forms have been removed, and the concrete has cured to adequate strength, the soil can be backfilled over the foundation. The backfill materials and compaction shall meet the requirements of the specifications. The foundation shall be backfilled to the grade as shown on the plans.

1.6. Final Preparation for Wall Columns and Panels

Remove the anchor bolt templates and double-check the bolt spacing between bolts, and from column to column. Place the column leveling nuts to the proper elevation for setting the columns. Clean the panel groove between the columns to accept the panels.

2. Delivery Setup

2.1. Scheduling

Oldcastle shall be notified at least 10 working days in advance of the required delivery date. Contact Oldcastle Infrastructure at 450-444-5181 to schedule the delivery.

2.2. Crane and Personnel Lift Requirements

The site conditions and access points will determine the placement of the Crane, Personnel Lift and Truck entrance to allow the Security Wall to be installed.

The product weights are shown on the plans. The crane used shall be capable of lifting the product weights at the radius required to pick them off the truck and set them in place on the foundation.



A Personnel Lift will be required to disconnect the lift gear, and guide the panels into place at the top of the columns.

2.3. Site Assistance

A sales representative or Oldcastle Technician will be available upon request to oversee the installation of the Security Wall product. A two-week notice is required for a technician to be on site.

3. Setting and Handling of Components

3.1. Offloading and Storage

Panels will arrive on a flatbed. Multiple panels will be stacked on a pallet depending on spans, widths and thickness. They will be offloaded with a fork lift. Pallets shall be placed on level ground and remain on the pallet with banding in place until ready for setting. Do not move pallets once banding has been removed.



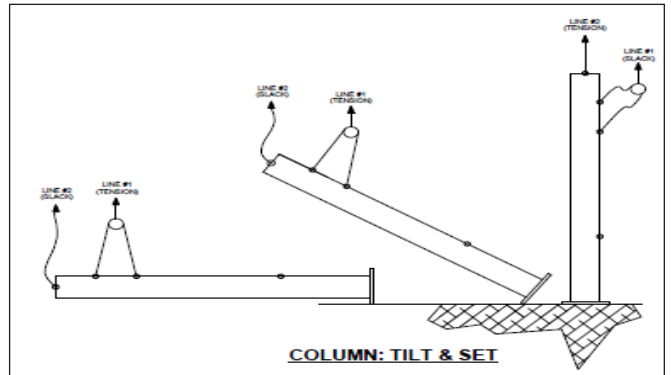
Columns should be off loaded and set on the ground. Multiple lifter inserts inside the panel cavity allow for the column to be lifted off the truck horizontally and set on the ground.



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The columns are tilted up at the installation location, as long as there are no overhead obstructions. The column is lifted utilizing the lifter inserts on the side of the column and on the very top of the column. The contractor will provide adequate rigging and clutches.



3.2. Setting Columns

Place the column on the anchor bolts and use the nuts and washers to secure them. Check the columns for plumb in both directions and adjust the leveling nuts to plumb the column. Check the center to center spacing of the columns at the bases, and the tops to ensure the columns are plumb, and adjust as necessary.

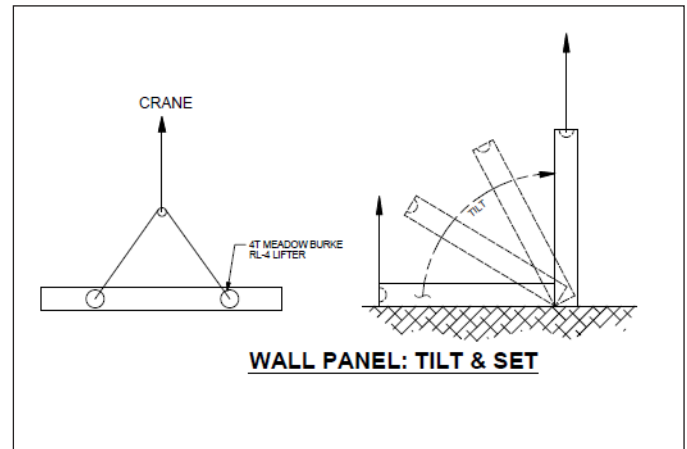


3.3. Leveling and Torqueing Anchor Bolts

When the column is in its proper location, torque the anchor bolts to 100-150 Ft. Lbs. to secure the column.

3.4. Setting Panels

Raise the panels from the storage location using lifting brackets attached to the top of each panel. Panels should be attached to crane and tilted slowly upward before transporting. The first panel set will have notches at the bottom to clear the column base plates. Set this panel into the column slots and slide it until it engages into the foundation panel slot. The panel must rest in the slot, and not on the column bases. Continue setting panels according to the order shown on the plans. There should never be a gap between the panels. The following images will help guide you with any questions. *site specific lifting requirements will be listed per the lifting diagrams.



Attaching lifting hooks to brackets





Tilting the Panel



First Panel with notches



Continue setting panels and ensure no gaps between panels



Follow drawings to ensure panels are in correct location



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