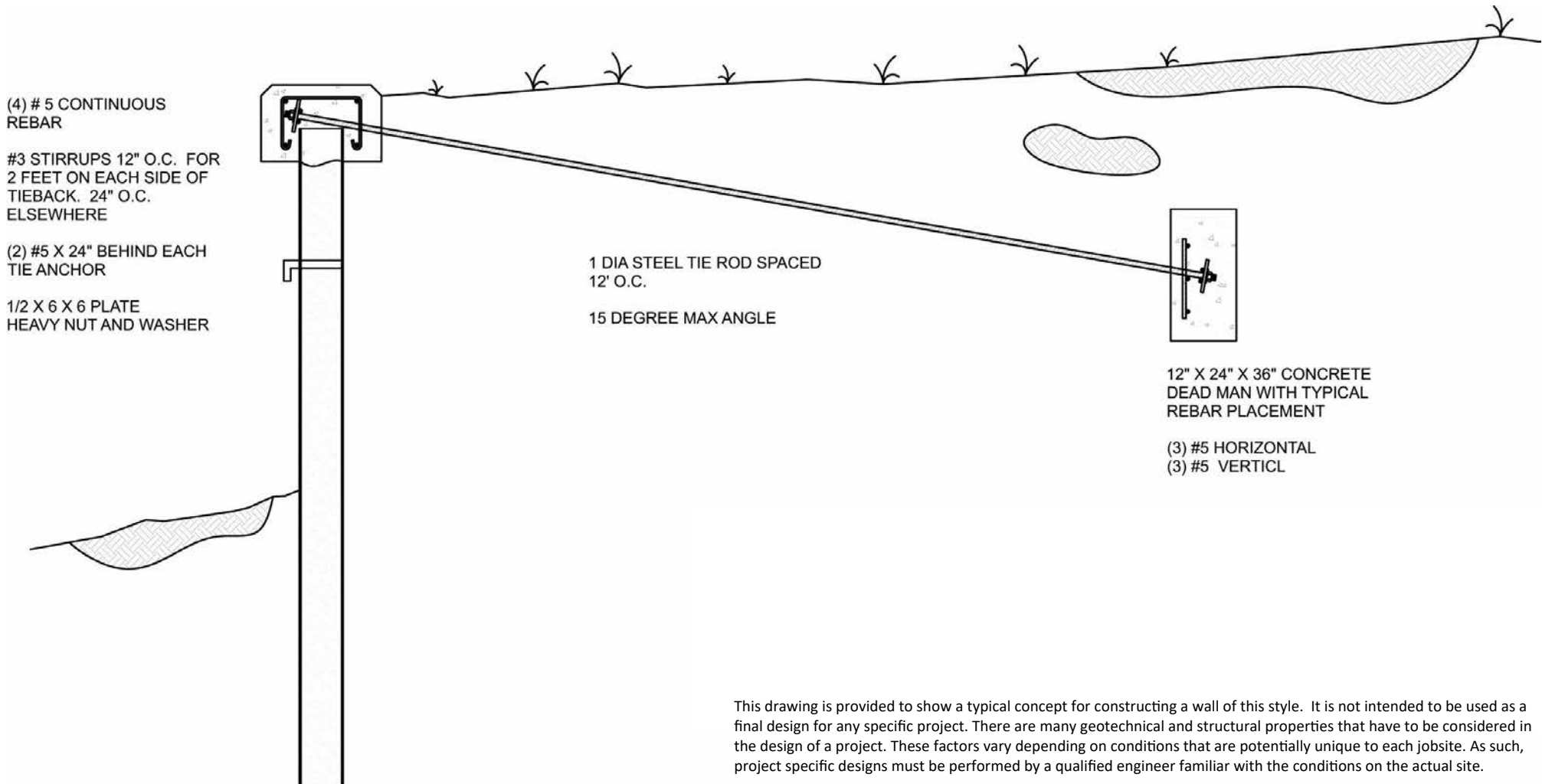


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## Drawing 101

concrete cap, concrete deadman



This drawing is provided to show a typical concept for constructing a wall of this style. It is not intended to be used as a final design for any specific project. There are many geotechnical and structural properties that have to be considered in the design of a project. These factors vary depending on conditions that are potentially unique to each jobsite. As such, project specific designs must be performed by a qualified engineer familiar with the conditions on the actual site.

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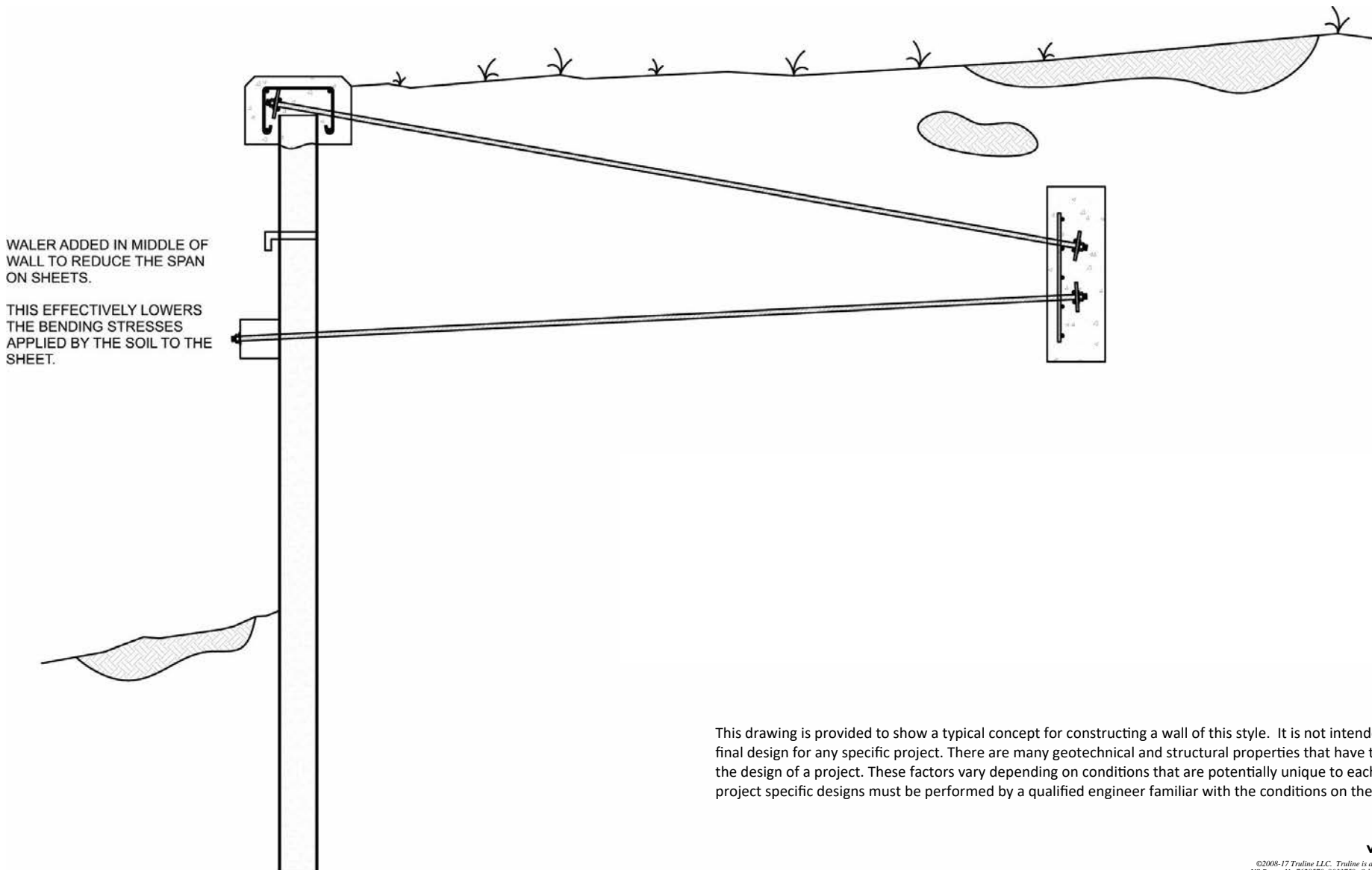
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## Drawing 102

concrete cap, mid waler, concrete deadman



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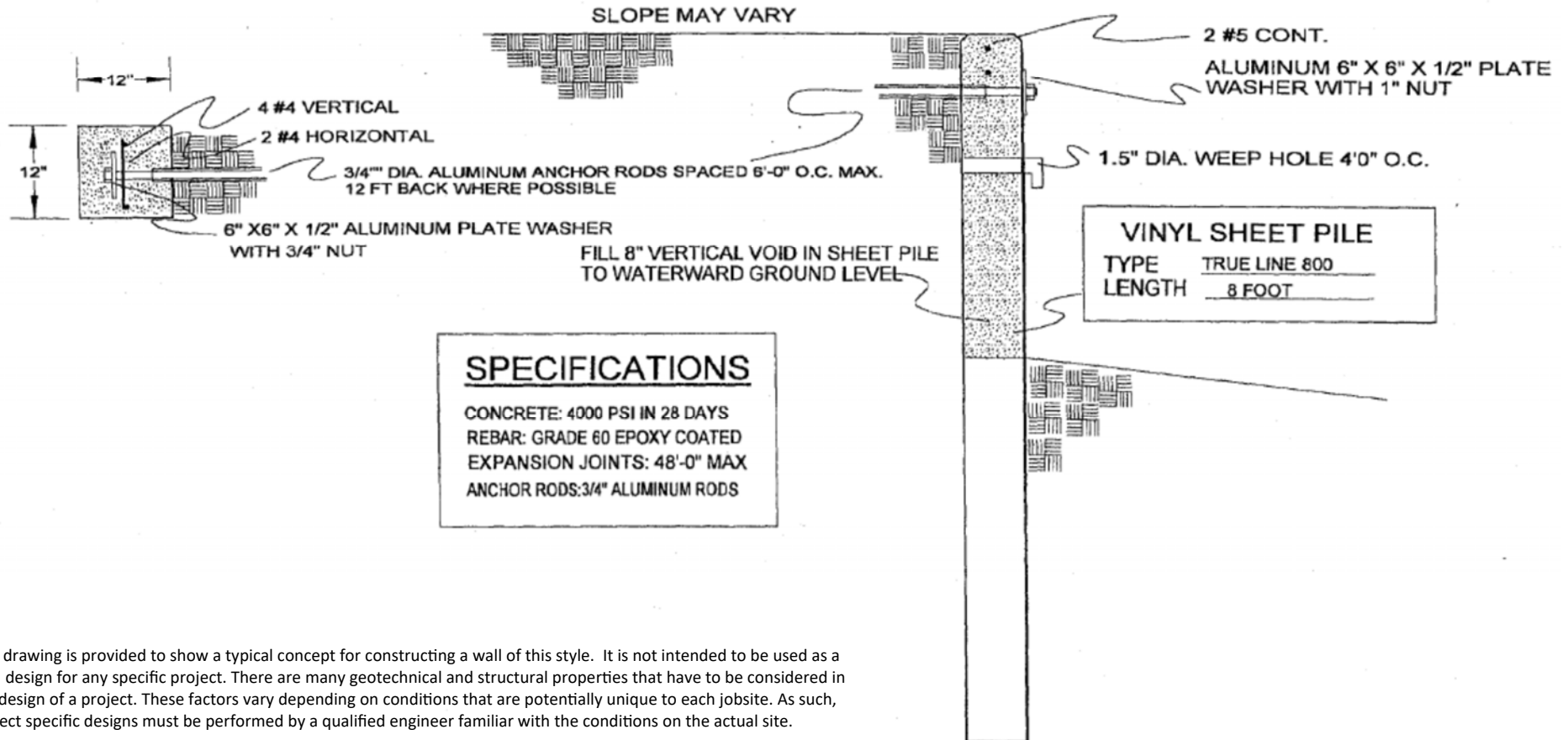
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**Drawing 103**  
no cap, concrete fill & deadman

## ANCHOR BLOCK DIMENSIONS

SINGLE: 3FT WIDE X 1.5FT DEEP X 1FT THICK CONCRETE  
DOUBLE: 4FT WIDE X 1.5FT DEEP X 1FT THICK CONCRETE



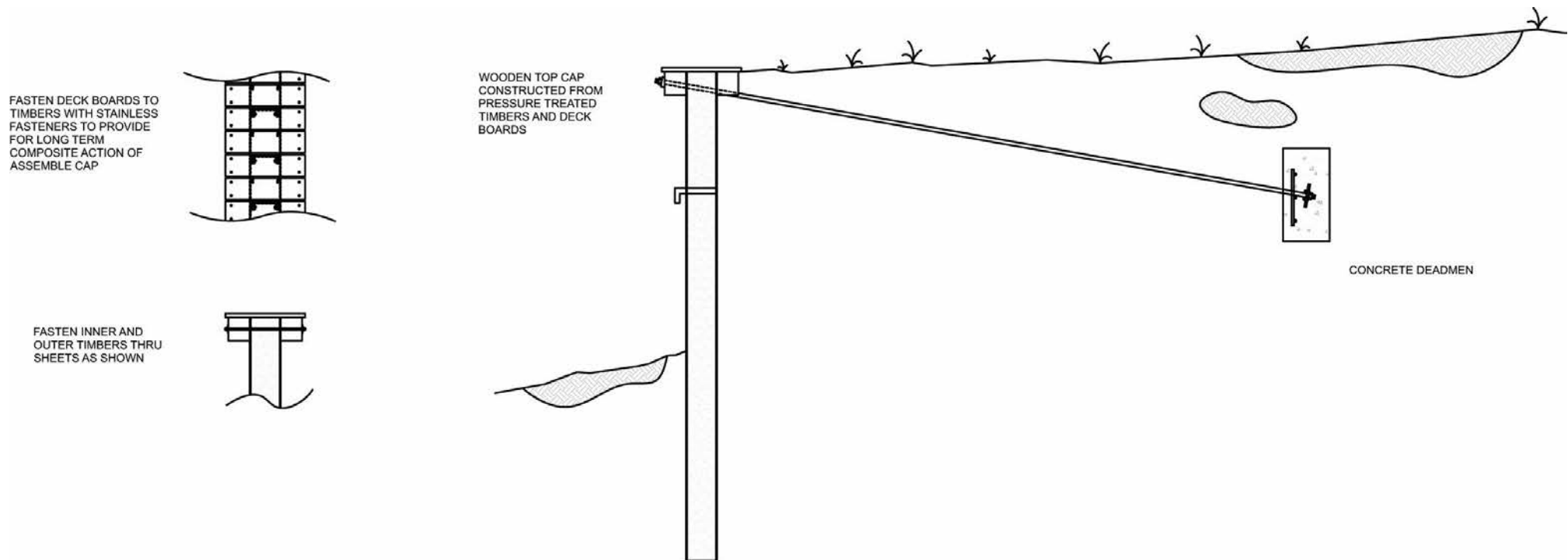
This drawing is provided to show a typical concept for constructing a wall of this style. It is not intended to be used as a final design for any specific project. There are many geotechnical and structural properties that have to be considered in the design of a project. These factors vary depending on conditions that are potentially unique to each jobsite. As such, project specific designs must be performed by a qualified engineer familiar with the conditions on the actual site.

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## Drawing 104

wood composite cap, concrete deadman



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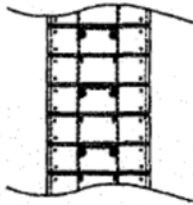
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## Drawing 105

wood composite cap, piling deadman

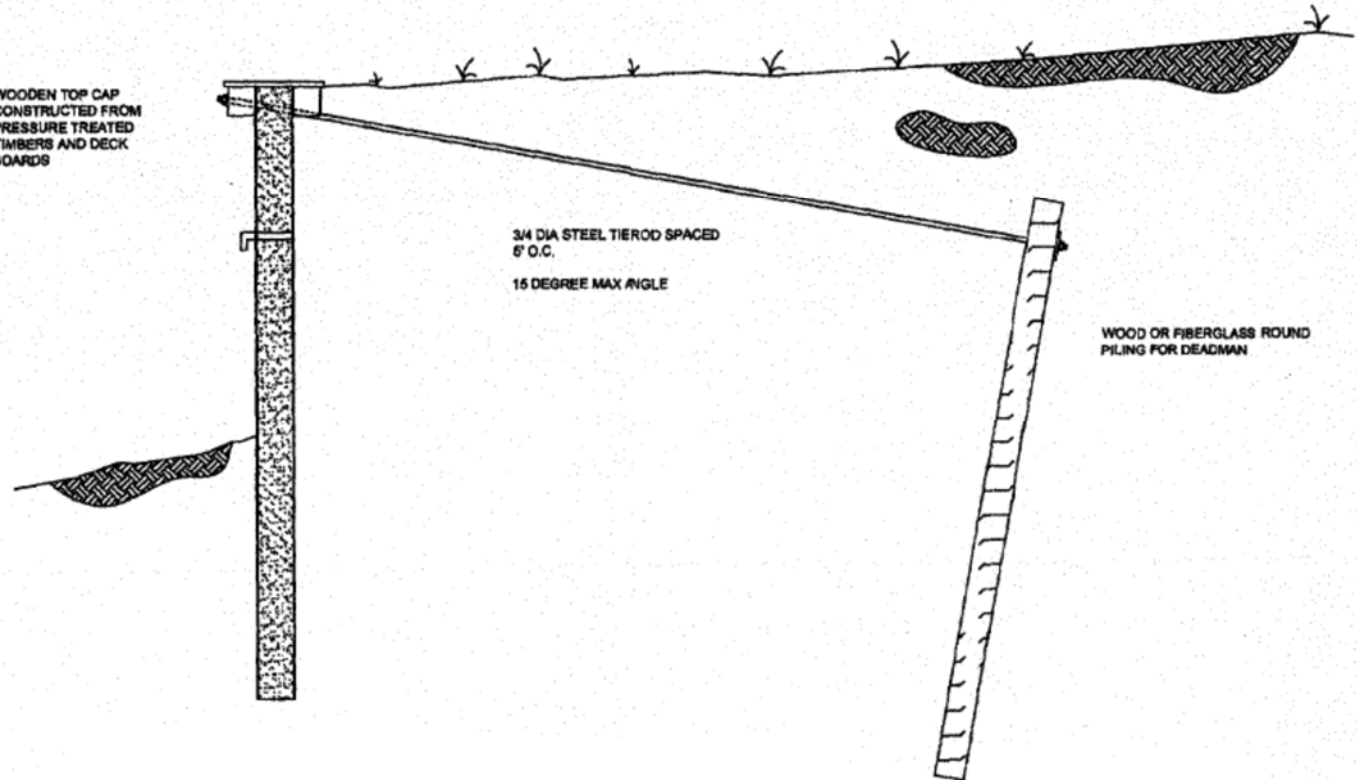
FASTEN DECK BOARDS TO TIMBERS WITH STAINLESS DECK SCREWS TO PROVIDE FOR LONG TERM COMPOSITE ACTION OF ASSEMBLED CAP



FASTEN INNER AND OUTER TIMBERS THRU SHEETS AS SHOWN 24" O.C.



WOODEN TOP CAP CONSTRUCTED FROM PRESSURE TREATED TIMBERS AND DECK BOARDS



3/4 DIA STEEL TIEROD SPACED 6' O.C.

15 DEGREE MAX ANGLE

WOOD OR FIBERGLASS ROUND PILING FOR DEADMAN

This drawing is provided to show a typical concept for constructing a wall of this style. It is not intended to be used as a final design for any specific project. There are many geotechnical and structural properties that have to be considered in the design of a project. These factors vary depending on conditions that are potentially unique to each jobsite. As such, project specific designs must be performed by a qualified engineer familiar with the conditions on the actual site.

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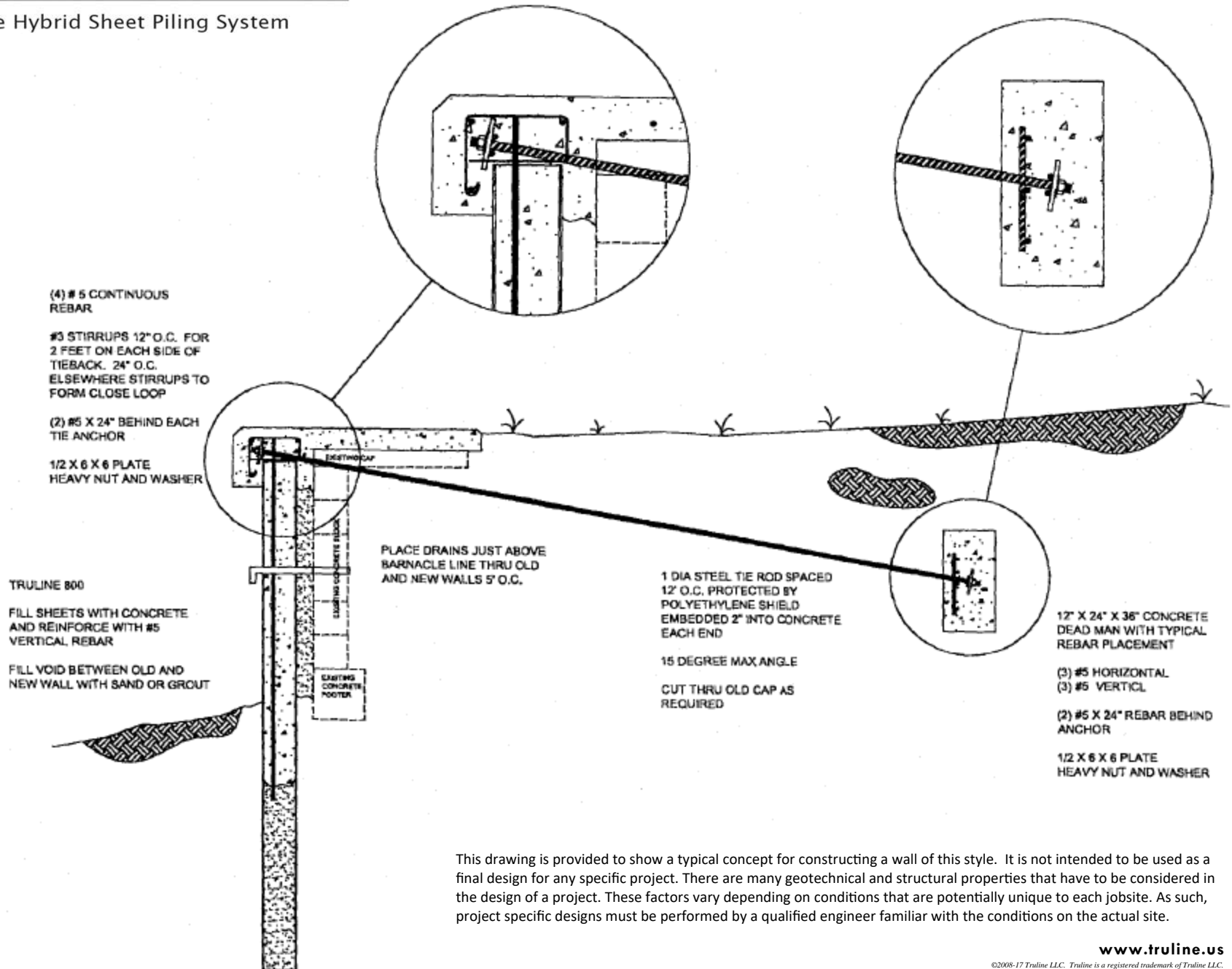
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## Drawing 106

in front of existing block wall, concrete cap & deadman



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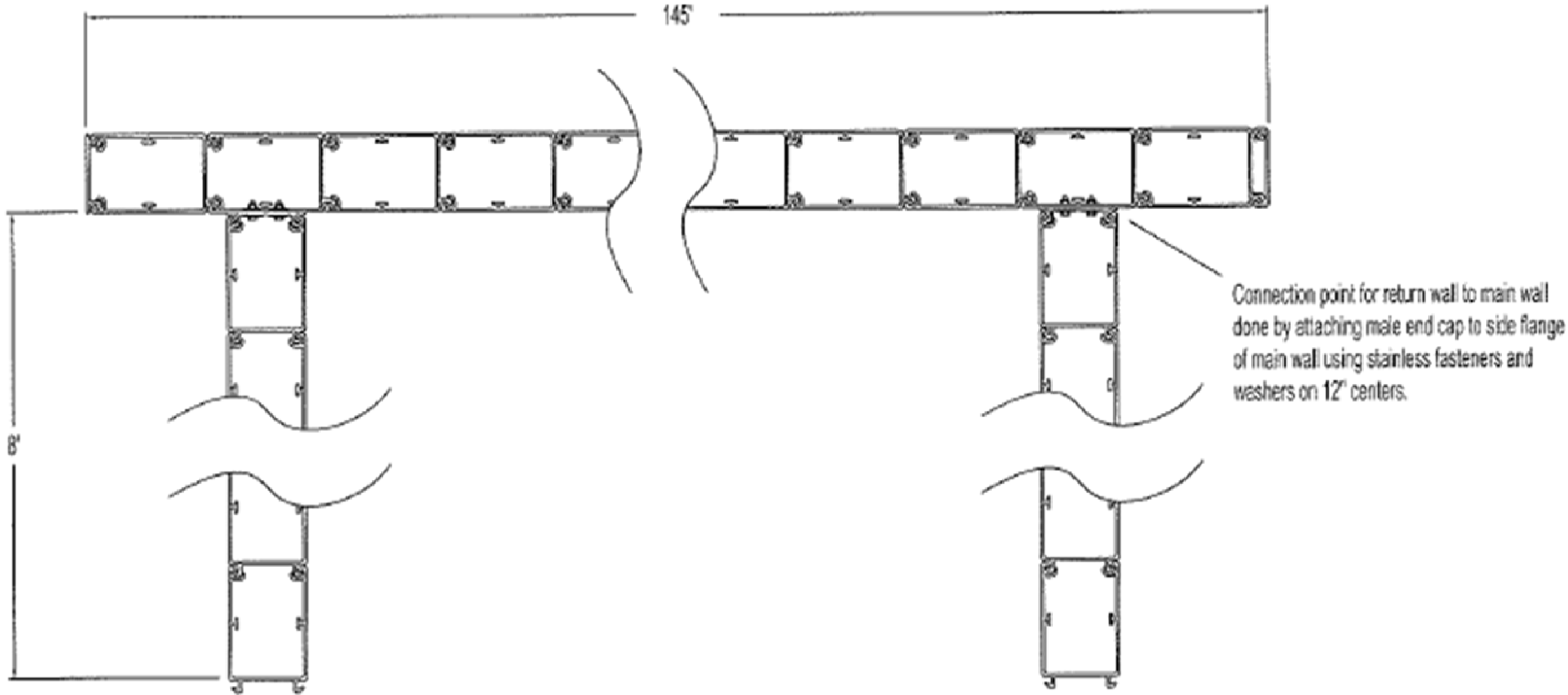
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## Drawing 107

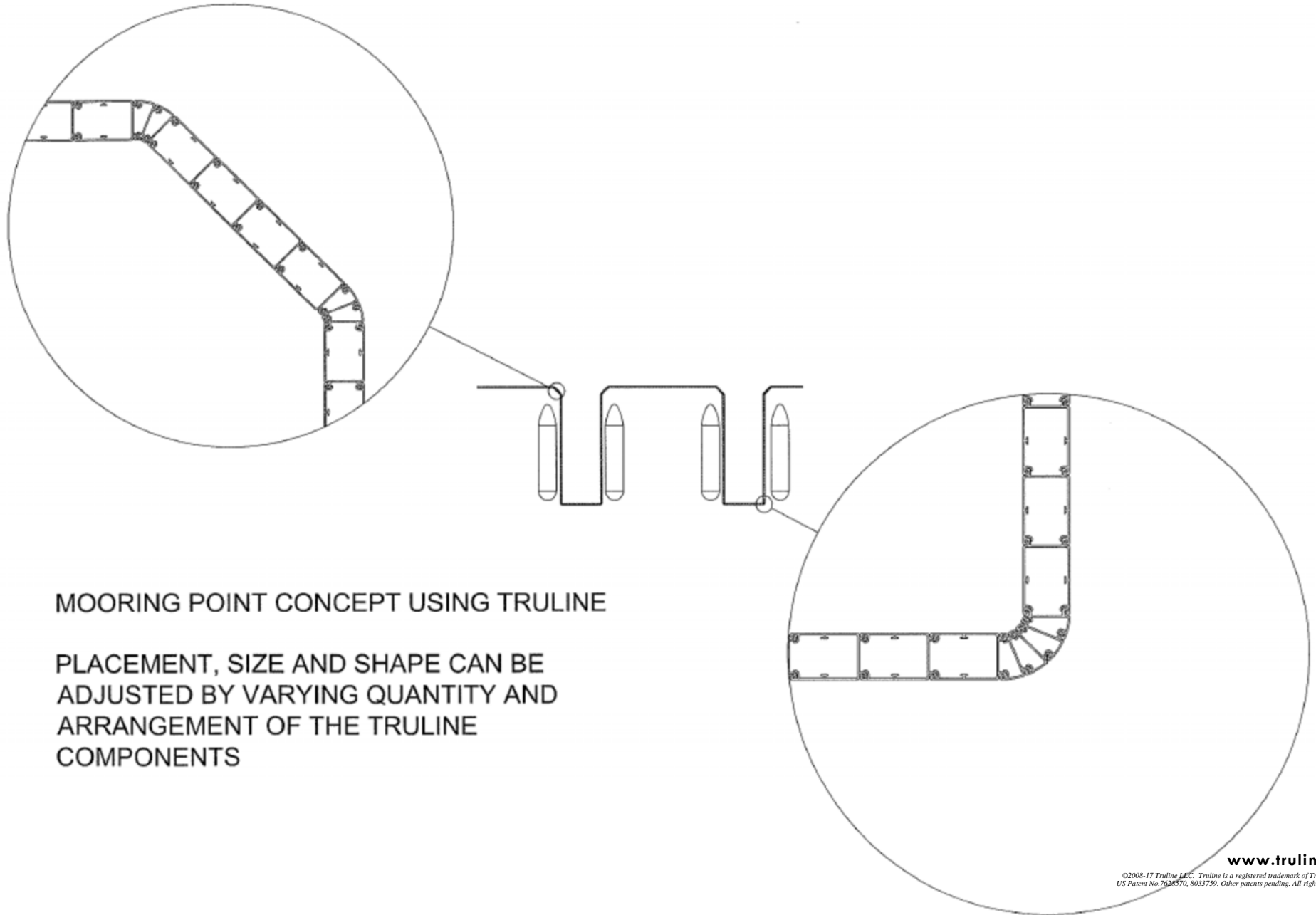
straight wall with two returns



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**Drawing 108**  
mooring point concept-marina



MOORING POINT CONCEPT USING TRULINE

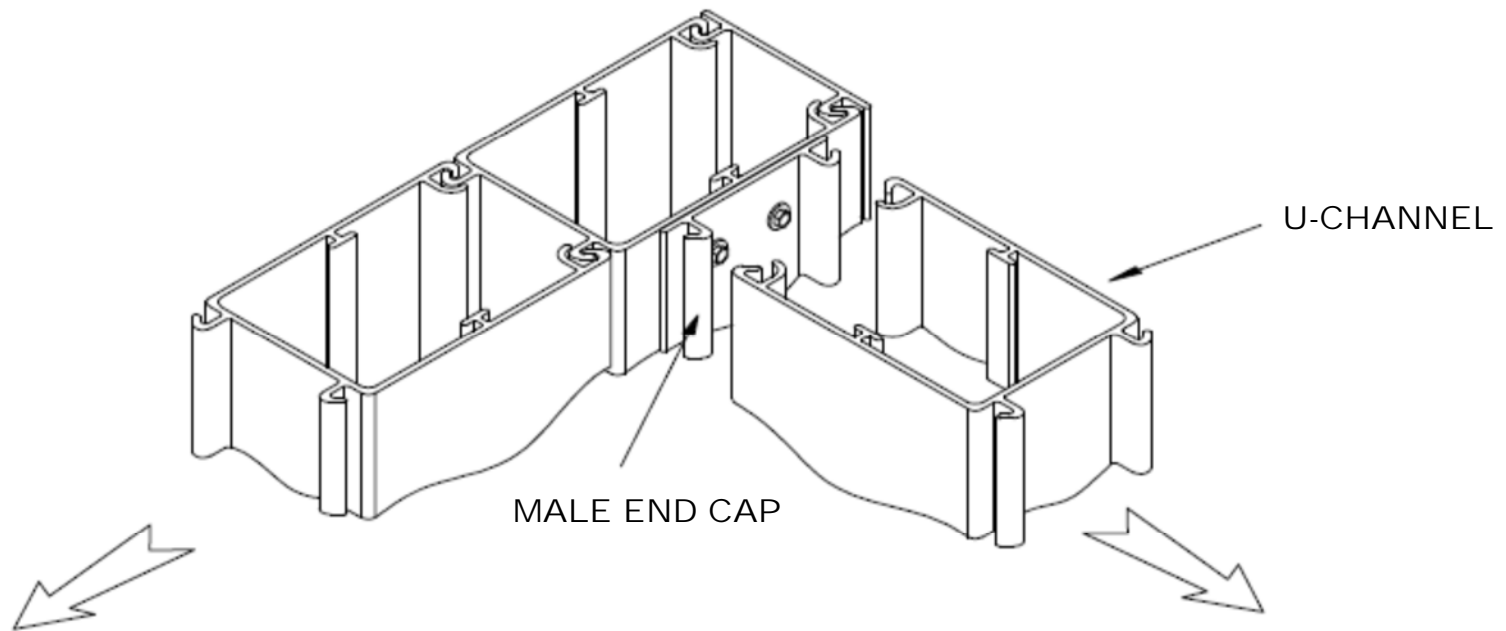
PLACEMENT, SIZE AND SHAPE CAN BE  
ADJUSTED BY VARYING QUANTITY AND  
ARRANGEMENT OF THE TRULINE  
COMPONENTS



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**Drawing 109**  
basic 90 degree corner/return

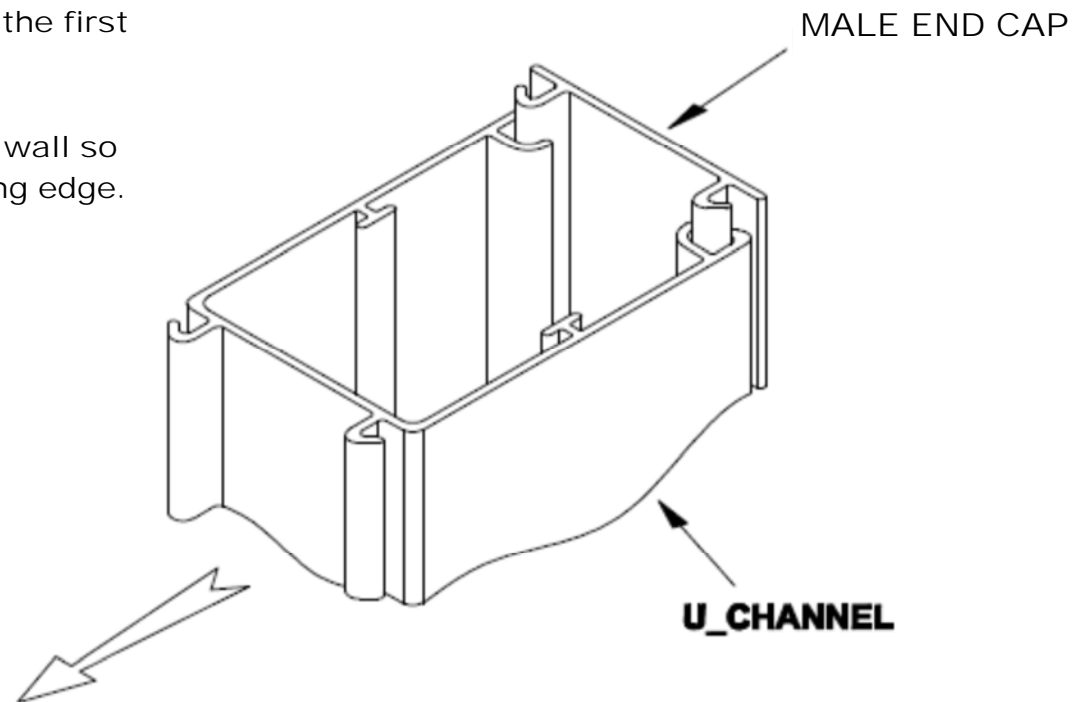


To create a 90 degree corner/ return anywhere on the wall, simply pre-attach a male end cap to the u-channel face with stainless steel bolts, nut and flat washers on 24" centers prior to driving the u-channel. You can then begin driving u-channel parts starting on this end cap as shown.

## IMPORTANT—PRIOR TO INSTALLATION

It is important to pre-attach the male end cap to the FIRST u-channel prior to driving. Simply slide in place and fasten with coarse thread deck screws on 24" spacing to the u-channel. This will close the open end of the first u-channel and provide a rigid box to drive.

To maintain hook spacing, always construct the wall so that the closed end of the u-channel is the leading edge.



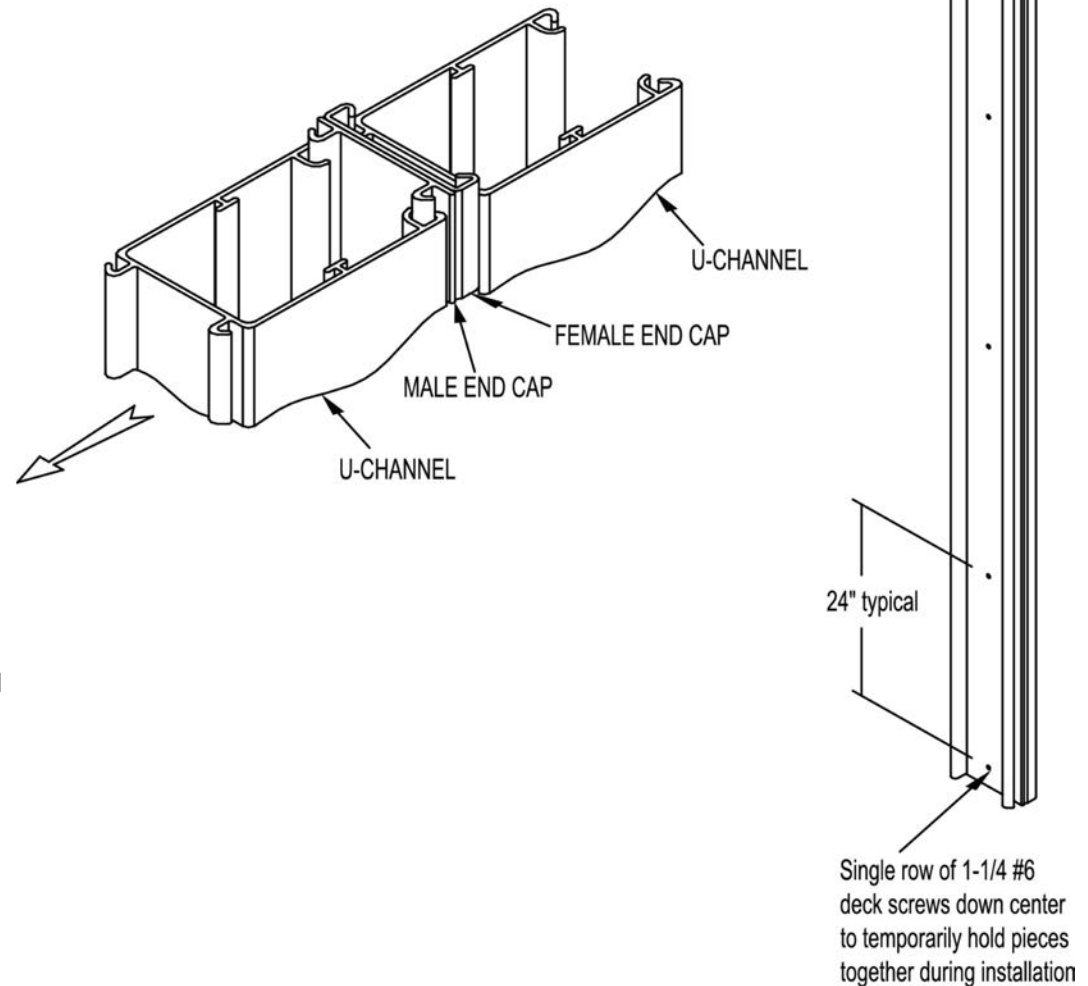
### CREATING TRULINE EXPANSION JOINTS FOR CONCRETE CAPS WITH EXPANSION JOINTS

If the design of the top cap for the wall specifies expansion joints, you must also design expansion joints into the Truline wall. The expansion joint in the wall and the top cap must be at the same location.

An expansion joint in the wall is made by ending a run of continuously engaged hooks with a female end cap and then starting a new run of u-channels with a male end cap.

#### Suggested Method:

1. Fasten together, using 1-1/4 #6 deck screws, one male and one female end cap in the arrangement shown.
2. Install this assembly on the u-channel of a section of continuously hooked pieces.
3. Remove all screws above the mudline except for those that are close enough to the top that they can be removed later after the other u-channels are installed.
4. Install the next u-channel on to the hooks of the male end cap and proceed with the remainder of the wall.
5. Prior to pouring the top cap, remove all remaining screws holding the male and female end caps together to allow for unrestricted movement above the mudline between these parts. While the screws fastening the end caps together remain in place below the mudline, this will not inhibit the movement of the joint. The pullout strength of the small screw is easily exceeded when the wall contracts stripping the threads which allows the wall to move.
6. Prior to backfilling, place filter fabric behind the wall at each expansion joint to prevent soil from entering the joint when it opens up.

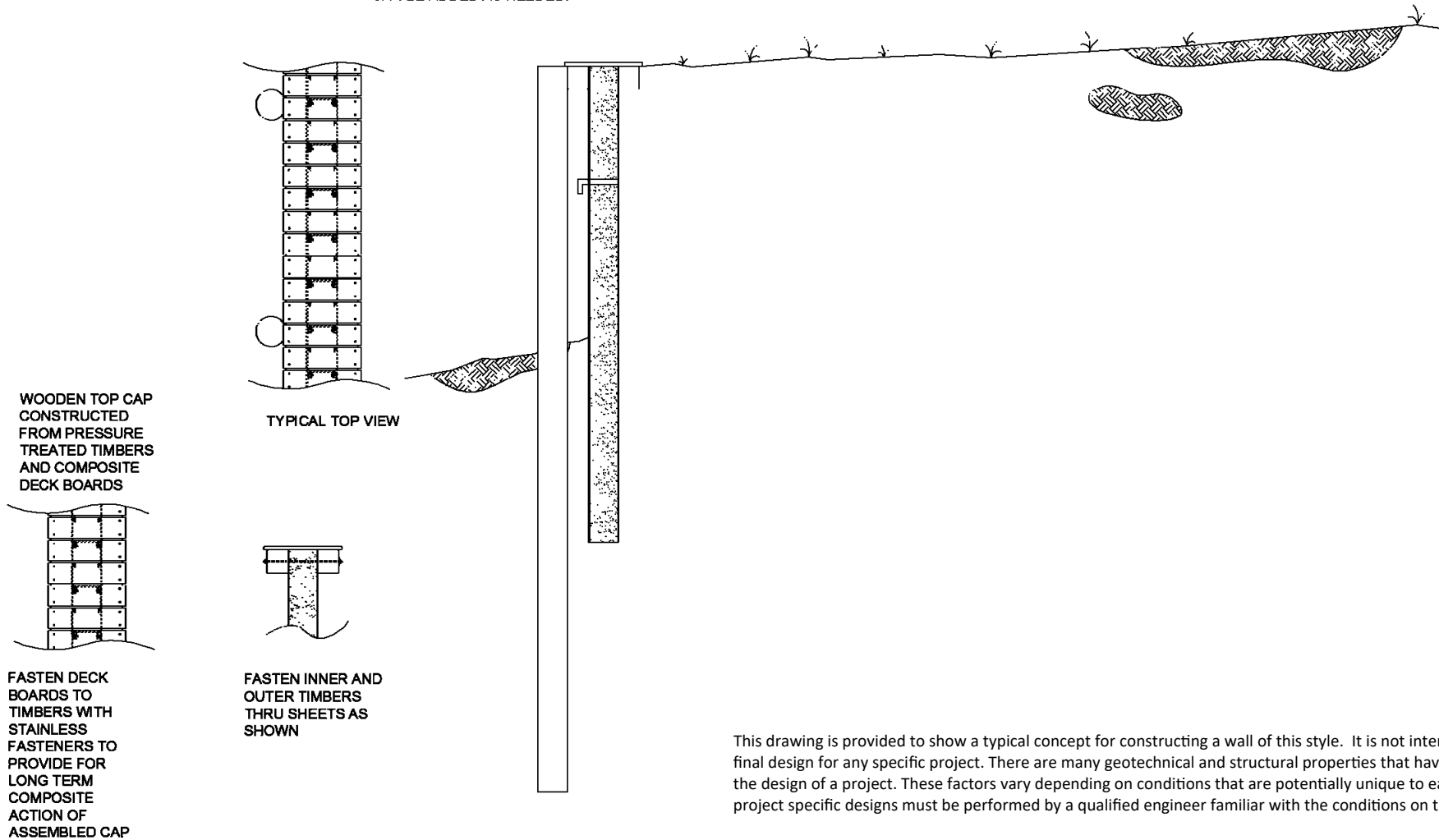


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**Drawing 112**  
navy style installation

WOODEN PILING DRIVEN IN FRONT OF WALL. SIZE, SPACING AND DEPTH OF EMBEDMENT DETERMINED TO SUPPORT WALL IN A CANTILEVERED MANNER. ADDITIONAL MID WALES CAN BE ADDED AS NEEDED.



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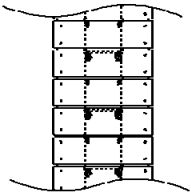
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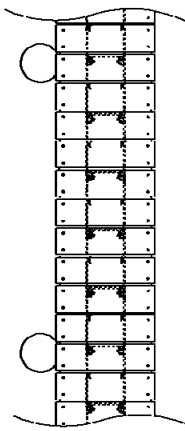
**Drawing 113**  
anchored navy style installation

WOODEN PILING DRIVEN IN FRONT OF WALL. SIZE, SPACING AND DEPTH OF EMBEDMENT DETERMINED TO SUPPORT WALL IN A CANTILEVERED MANNER. ADDITIONAL MID WALES CAN BE ADDED AS NEEDED.

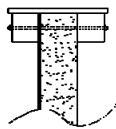
WOODEN TOP CAP  
CONSTRUCTED  
FROM PRESSURE  
TREATED TIMBERS  
AND COMPOSITE  
DECK BOARDS



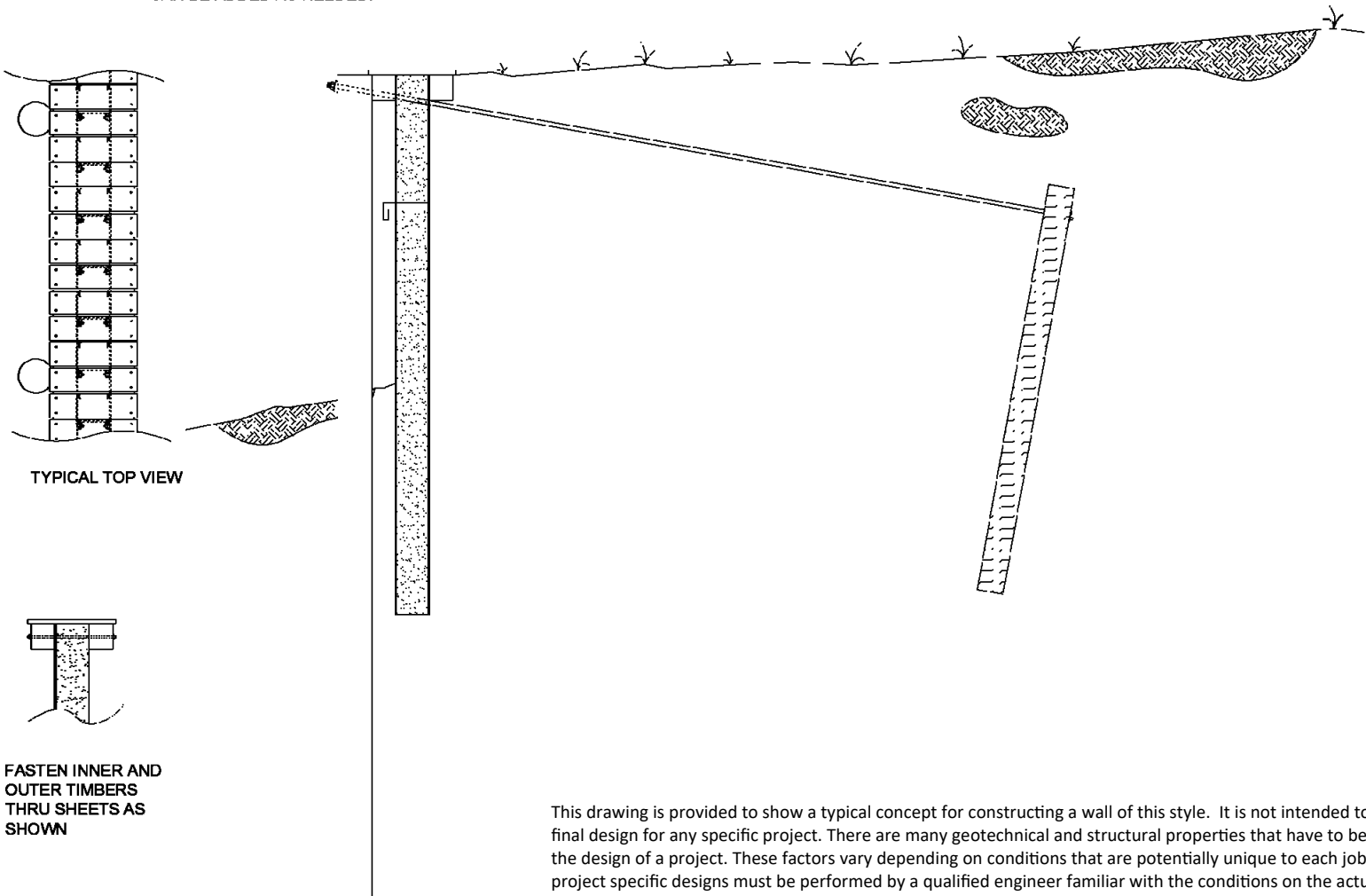
FASTEN DECK  
BOARDS TO  
TIMBERS WITH  
STAINLESS  
FASTENERS TO  
PROVIDE FOR  
LONG TERM  
COMPOSITE  
ACTION OF  
ASSEMBLED CAP



TYPICAL TOP VIEW



FASTEN INNER AND  
OUTER TIMBERS  
THRU SHEETS AS  
SHOWN



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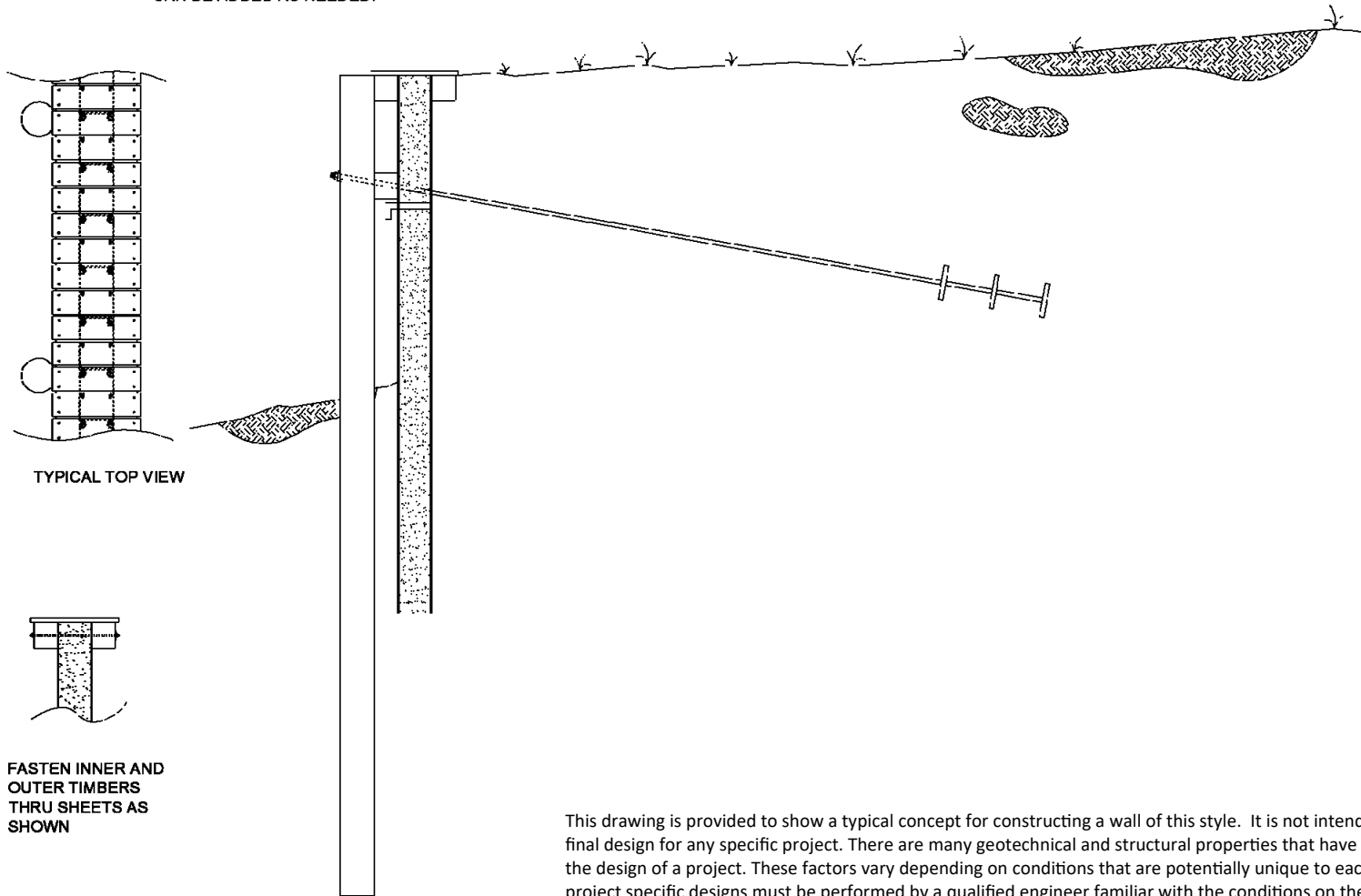
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## Drawing 114

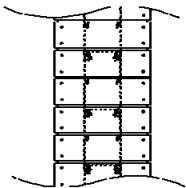
helical anchored navy style installation

WOODEN PILING DRIVEN IN FRONT OF WALL. SIZE, SPACING AND DEPTH OF EMBEDMENT DETERMINED TO SUPPORT WALL IN A CANTILEVERED MANNER. ADDITIONAL MID WALES CAN BE ADDED AS NEEDED.

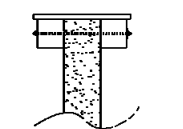


WOODEN TOP CAP  
CONSTRUCTED  
FROM PRESSURE  
TREATED TIMBERS  
AND COMPOSITE  
DECK BOARDS

TYPICAL TOP VIEW



FASTEN DECK  
BOARDS TO  
TIMBERS WITH  
STAINLESS  
FASTENERS TO  
PROVIDE FOR  
LONG TERM  
COMPOSITE  
ACTION OF  
ASSEMBLED CAP



FASTEN INNER AND  
OUTER TIMBERS  
THRU SHEETS AS  
SHOWN

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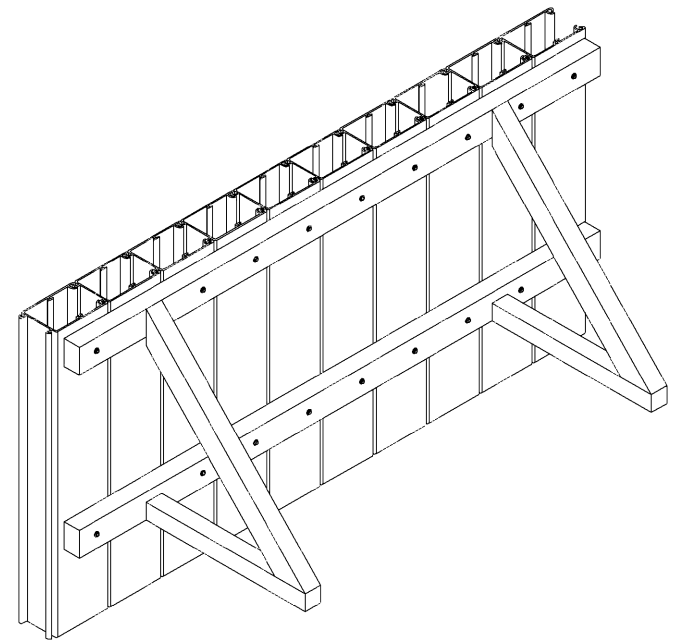
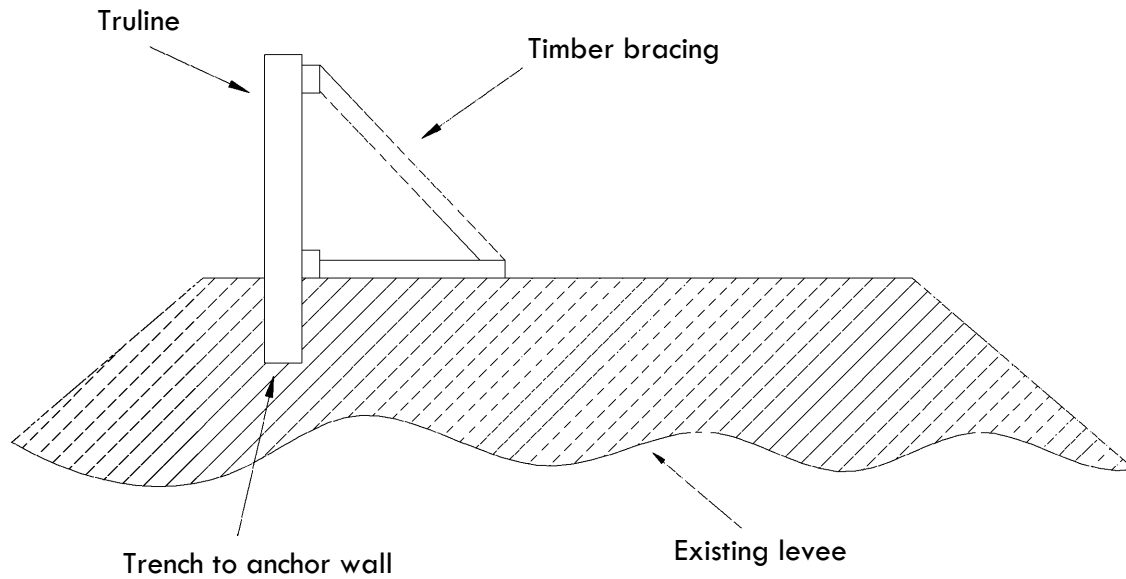
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## Drawing 115

temporary flood diversion wall concept



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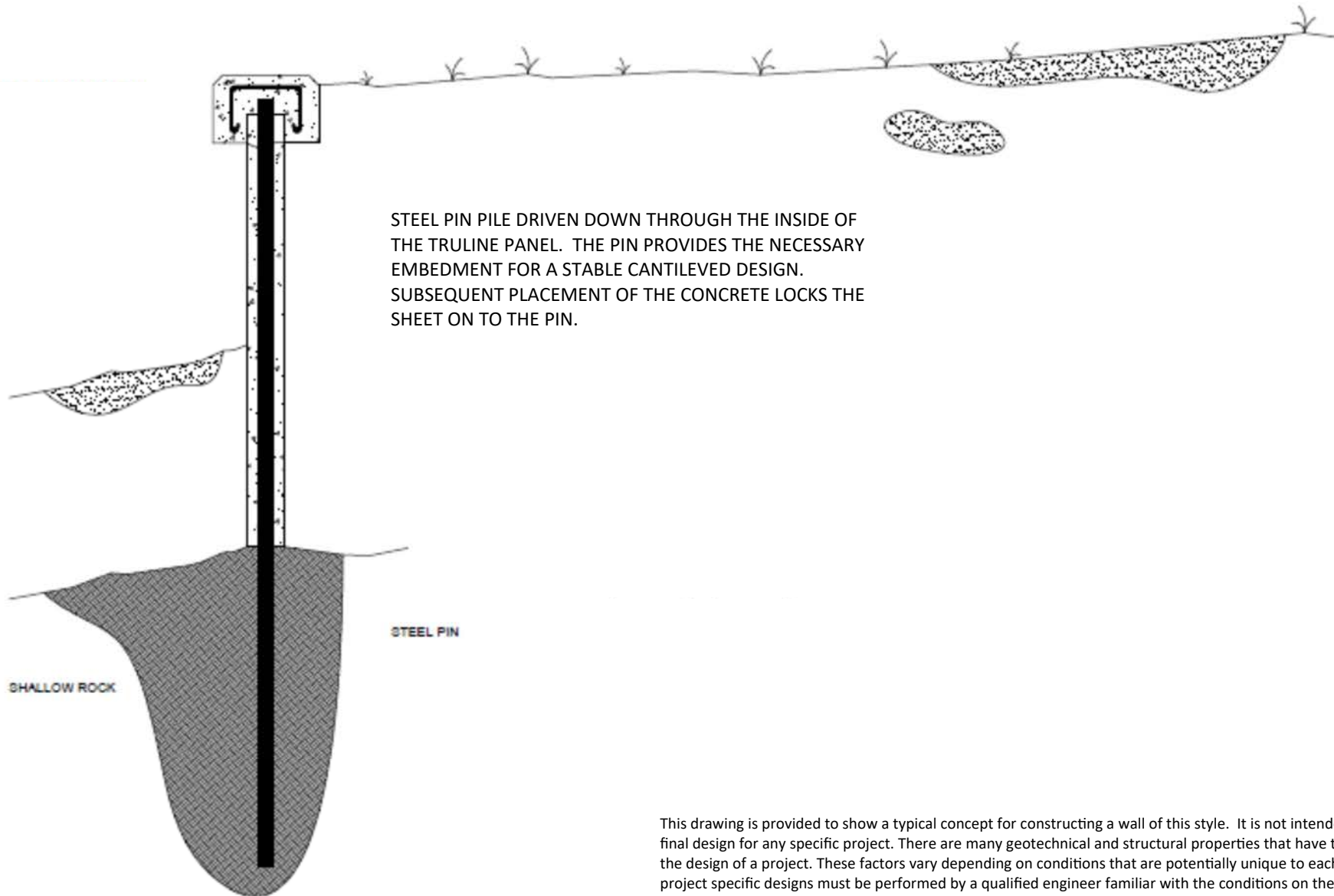
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## Drawing 116

Pin Pile Installation—Cantilevered



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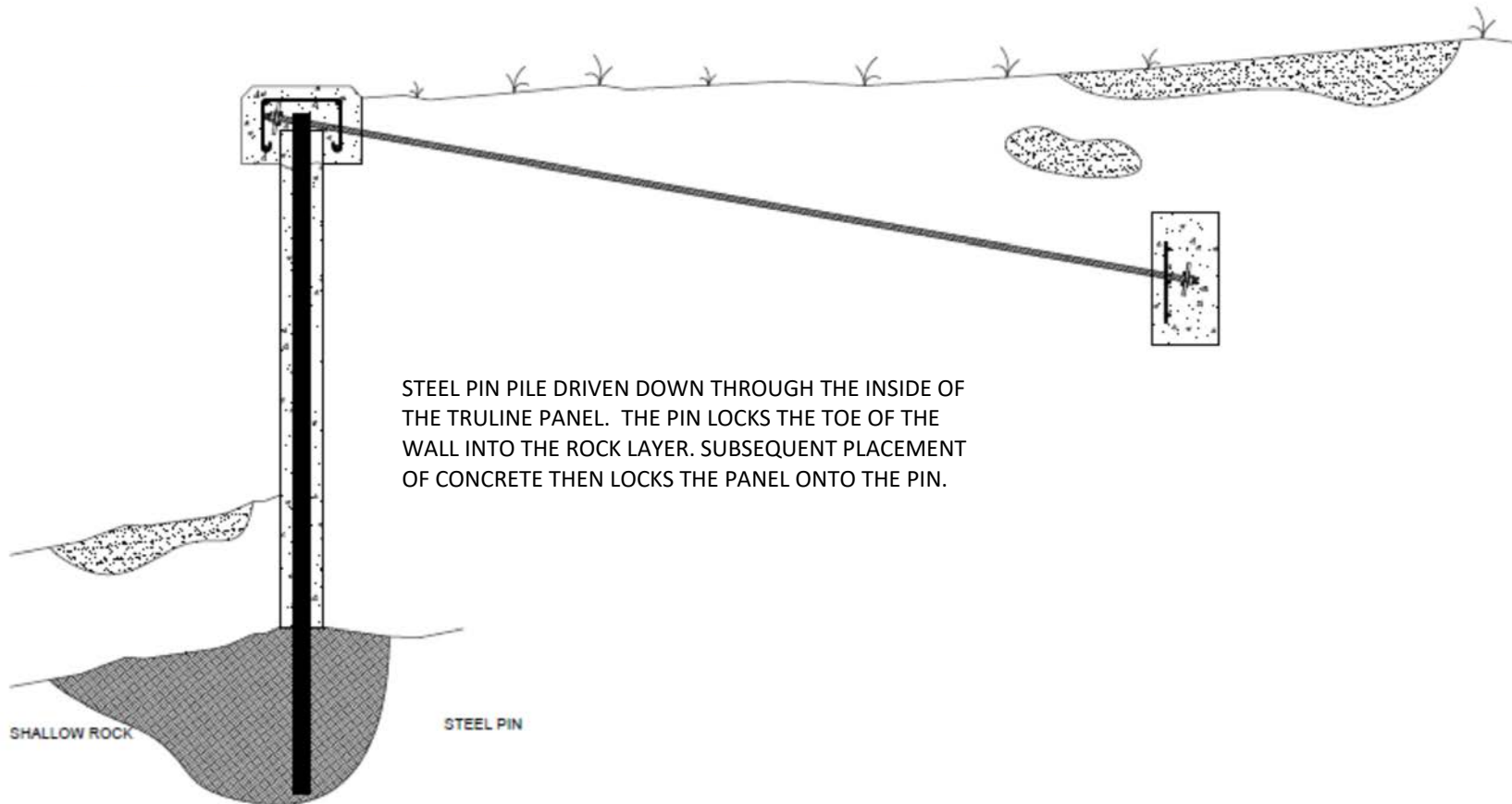


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## Drawing 117

Pin Pile Installation—Anchored



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