



# IntegraSpec ICF Wall Systems

**POWAY PROJECT**

**FOOTINGS**

**IntegraSpec of San Diego  
Distributor**

**Frost Custom Builders Inc**



# IntegraSpec of San Diego Poway Project CA





- Notes:**
1. All dimensions are in meters.
  2. The site is situated in a flood plain.
  3. The proposed building is to be constructed on a raised platform.
  4. The site is to be landscaped with native plants.
  5. The site is to be surrounded by a perimeter wall.
  6. The site is to be surrounded by a perimeter fence.
  7. The site is to be surrounded by a perimeter gate.
  8. The site is to be surrounded by a perimeter road.
  9. The site is to be surrounded by a perimeter drainage system.
  10. The site is to be surrounded by a perimeter water supply system.
  11. The site is to be surrounded by a perimeter sewerage system.
  12. The site is to be surrounded by a perimeter electricity supply system.
  13. The site is to be surrounded by a perimeter telephone supply system.
  14. The site is to be surrounded by a perimeter gas supply system.
  15. The site is to be surrounded by a perimeter water supply system.
  16. The site is to be surrounded by a perimeter sewerage system.
  17. The site is to be surrounded by a perimeter electricity supply system.
  18. The site is to be surrounded by a perimeter telephone supply system.
  19. The site is to be surrounded by a perimeter gas supply system.
  20. The site is to be surrounded by a perimeter water supply system.

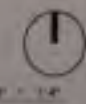
**Symbols**

	Proposed Building
	Main Level Boundary
	Basement Level Boundary
	Flood Plain Boundary
	Perimeter Wall
	Perimeter Fence
	Perimeter Gate
	Perimeter Road
	Perimeter Drainage System
	Perimeter Water Supply System
	Perimeter Sewerage System
	Perimeter Electricity Supply System
	Perimeter Telephone Supply System
	Perimeter Gas Supply System



Basement Level shown in grey  
 the Main Level indicated  
 in red outline

Basement level







Footing outlines in blue and center of wall in yellow help stage the footing process

the first layer of rebar







The first truckload has been delivered to the site to be used for IntegraFootings

Concrete dobbies were used to maintain the required 3" spacing



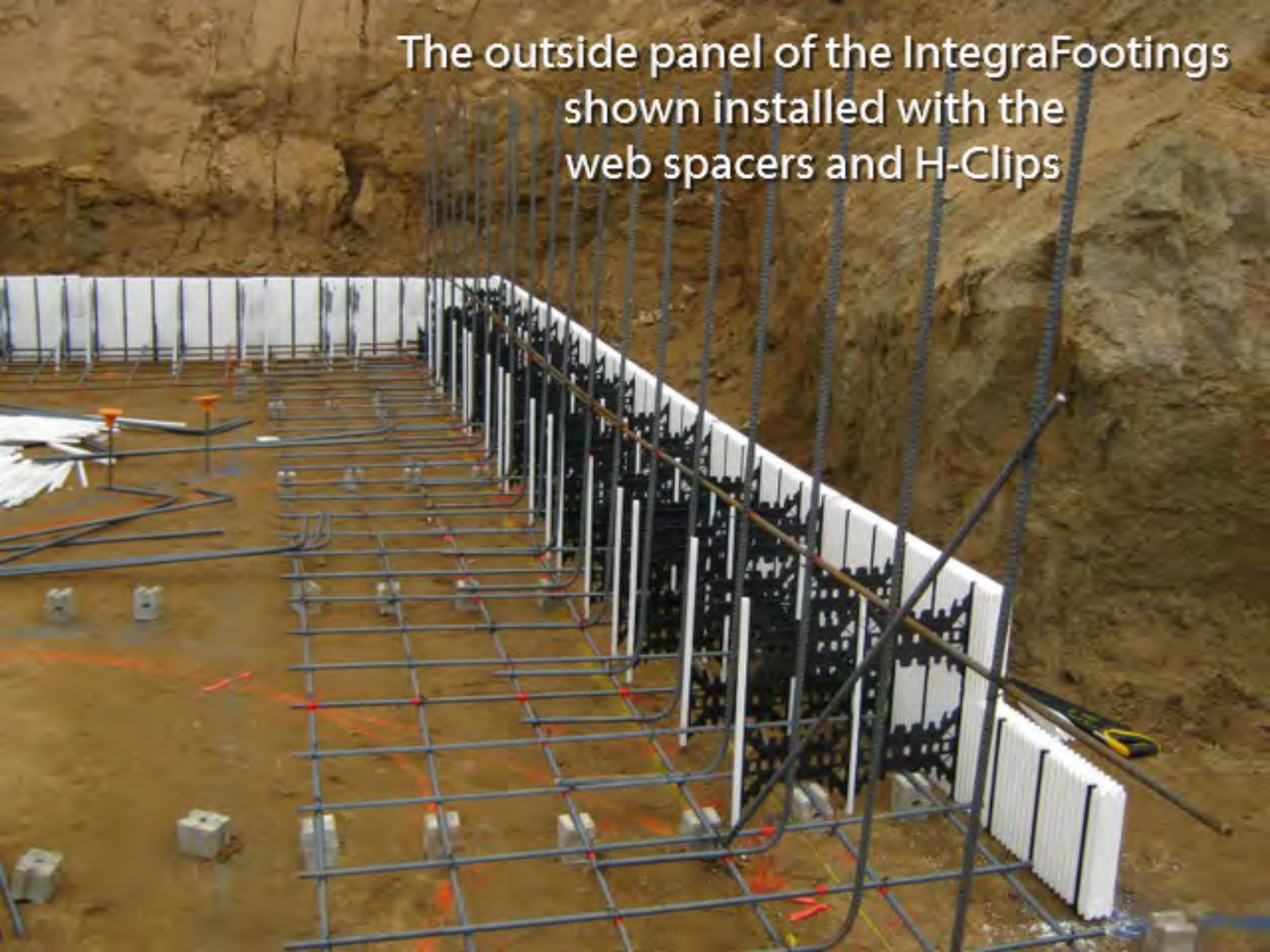


First layer of rebar  
in the required double matt  
for earthquake zones





The outside panel of the IntegraFootings shown installed with the web spacers and H-Clips





Assembling the H-clips and web spacers







Daily inspections were made to confirm layout with engineering drawings



IntegraSpec panels  
now form the outline  
of the footings





Earthquake seismic designs for San Diego require two mats of horizontal rebar and a footing 24" high 5 ft wide



03/16/2011



IntegraWebs with H-Clips provide any width of footing required and help cradle the second matt of rebar



03/15/2011



IntegraFooters  
allow installers to  
assemble footings  
any width or height



03/15/2011




Complicated footings  
can be formed with the  
IntegraFooter system  
eliminating forming waste,  
oil contaminants  
and stripping



IntegraSpec product  
arrives to the site in  
plastic covered  
bundles 2' x 2' x 4'  
Protected from the  
sun's UV and easy  
to handle







IntegraWebs easily  
cradle the rebar

03/02/2011



Challenging geometry was easily accomplished with the IntegraFooter



03/02/2011




IntegraSpec  
independent panels  
make forming  
complex junctions  
easier

03/02/2011





A high-angle photograph of a construction site. The image shows a dense grid of steel rebar (reinforcement bars) laid out on a surface, likely for a concrete slab. Several large, grey, corrugated metal pipes are positioned horizontally, passing through the rebar grid. These pipes are supported by a network of vertical and horizontal wooden or metal bracing. The pipes are intended to pass through a concrete footing. The scene is set within a formwork structure, with white corrugated metal panels visible. The ground is dirt and there are some construction materials scattered around.

IntegraWebs also assist in supporting plumbing pipes required to pass through footings

03/02/2011

IntegraFooting now takes shape  
creating the dynamic geometry of the  
Architect's design



03/02/2011



The first pour to the basement level.



03/03/2011



Finishers smoothing out the surface  
of the footings.

These guys are also the IntegraSpec ICF Installers



03/03/2011



The engineer requested the extended rebar connecting footings to the ICF walls.



IntegraSpec ICF  
independent panel  
allows the wall system to be  
easily installed around the rebar

03/03/2011



The day after the footing pour excavators filled in the areas between the footings.



No time was lost waiting for forms to be stripped



An aerial view of a construction site. In the foreground, a concrete foundation is being prepared with a grid of rebar. To the left, a large area is covered with a black plastic tarp. In the middle ground, there are several tall stacks of white, rectangular Insulated Concrete Form (ICF) blocks. A blue tarp is draped over one of the stacks. In the background, there are trees and rolling hills under a clear sky. The text 'IntegraSpec' is at the top right, followed by '2nd truck of material delivered to begin the ICF wall assemble'. A date stamp '03/24/2011' is in the bottom right corner.

IntegraSpec  
2nd truck of material delivered  
to begin the ICF wall assemble

03/24/2011



IntegraSpec ICF walls form  
the outline of the building



03/16/2011



The versatility of the  
IntegraSpec ICF  
independent panel  
allows the most  
complex shapes  
to be formed



03/16/2011





03/30/





03/30/





03/30/



IntegraSpec ICF panels are 12 1/4" X 48"  
Easily cut on tablesaws or compound miter saws  
to create any shape required







View from the main level area  
overlooking the basement garage



**IntegraSpec independent panels flex to the curve.  
Metal cleats anchored to the concrete  
help hold the shape as the wall is built**





Curved retaining wall.

The IntegraSpec panel is also used here  
as an end buck for this 10" core wall



IntegraSpec ICF wall system  
simplifies  
building retaining walls  
for hillside construction



# IntegraSpec Tapered T - walls







IntegraSpec  
Curved T-Walls



IntegraWebs used  
to support Bucks  
by extending wall  
past the Buck






IntegraSpec independent  
panel and webs  
allow wall assembly around  
in place rebar  
requirements



IntegraSpec Technology  
assists with interesting  
challenges like  
tapers and curves







The IntegraSpec  
ECF system is used  
for the elevator shaft



IntegraSpec ECF system can be used for any core thickness.  
Here a curved outside panel skirts the square  
elevator shaft





8" wide 3/4" plywood panels are placed between the IntegraSpec Inserts. These panels are removed later to create an exposed concrete face.



03/24/2011






Structural columns  
cradled within the  
IntegraSpec ICF wall



Forming  
a curved lintel  
above a door opening







Lintel from below

Curves within curves  
the geometry of this house  
is very circular







These curved walls will form the Theatre Room  
in the lower level basement





Special Inspection is required for seismic designs,  
rebar requirements are very strict









The basement ICF walls are close to completion with the garage footings staged to continue





**Walls shown form part of the lower level basement**



The IntegraSpec ICF wall system using H-clips.  
Any concrete core width can be built for the retaining walls  
to hold back the hillside







Unlimited shapes and designs  
can be accomplished  
with IntegraSpec ICF technology



This will be a 13 ft tall retaining wall with a 10" concrete core

06/14/





**IntegraSpec ICF wall being filled  
with an 8" slump concrete mix  
using a flex hose**



**IntegraSpec ICF walls filled 13 ft high  
without any issues**

**05/05/2011**





The IntegraSpec ICF walls were engineered to perform as retaining walls allowing excavators to waterproof and backfill against the walls before installing the floor system

05/05/2





IntegraSpec curved beams are being installed to carry the ICF floor system





The ICF flooring system is being installed to bridge the basement to the main level

06/14/