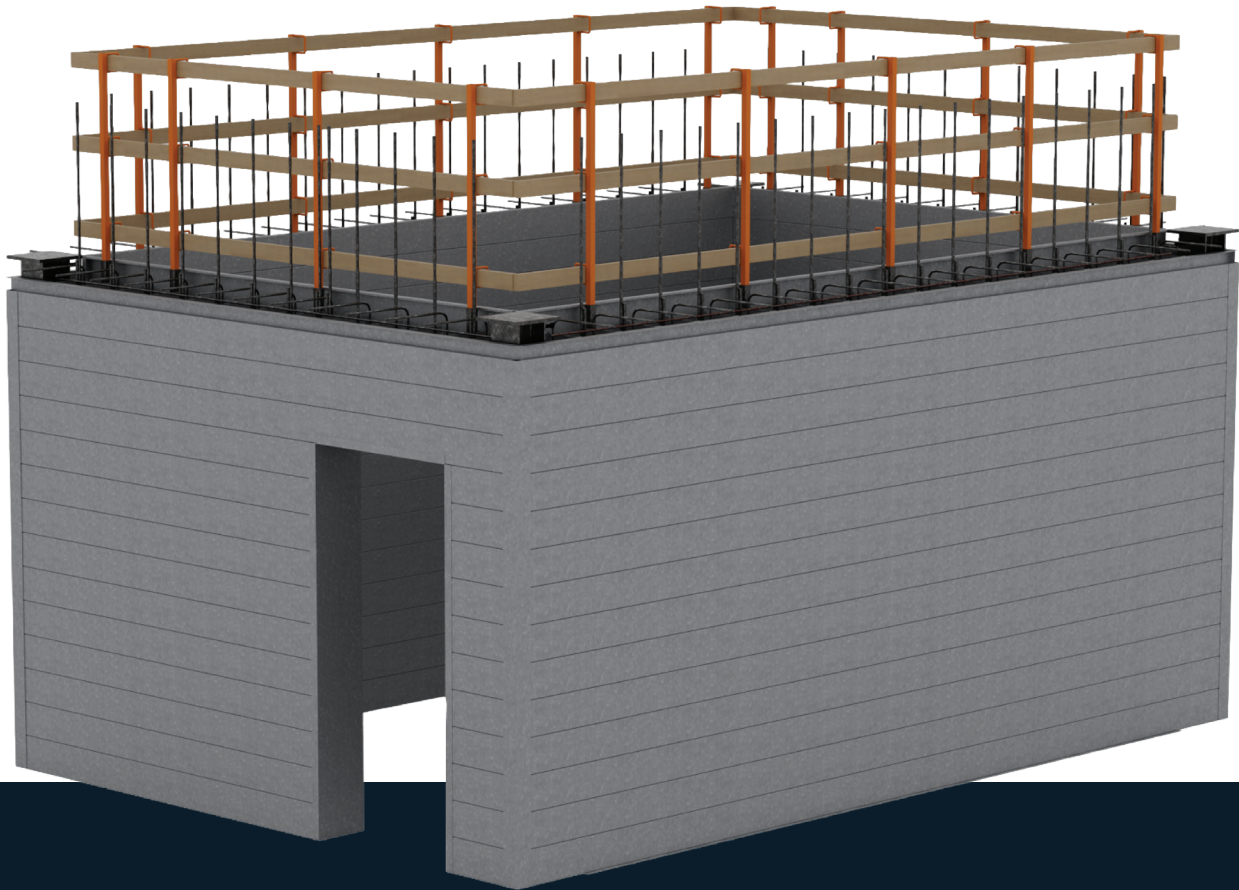


*SPEED*SHAFT

Lateral System for Mid-Rise Construction



SpeedShaft™ is an **innovative prefabricated, stay-in-place concrete wall formwork system** engineered for mid-rise, cold-formed steel construction. Delivered as panelized wall assemblies, each unit is precision-built with cold-formed steel and includes factory-installed reinforcing steel, **reducing field labor, accelerating installation, and ensuring consistent quality.**

Once installed, SpeedShaft walls serve as the primary vertical elements of the building's lateral force-resisting system (shear walls) providing strength, reliability, and code-compliant performance. By seamlessly **integrating structural performance with offsite prefabrication**, SpeedShaft streamlines construction, shortens schedules, and delivers a fully integrated lateral system.

ELEVENTEN

Systems

DETAILS & BENEFITS

01 Accelerated Schedule Installation takes place concurrently with elevated floor framing. Eliminating the need to “top out” shafts before vertical construction continues.

02 Concrete Efficiency Designed for same-day placement with slab-on-metal deck pours.

03 Predictable Production Reinforcing steel is pre-installed in the factory, reducing field labor, layout risk and on-site materials and handling. The panelized system allows repeatable installation and reduced variability.

04 No-Ledge Shaft Condition Simplify compliance and elevator inspection conflicts. The smooth linear plank finish makes a cleaner substrate for guide rail and component installation.

05 Aesthetic Finish A clean architectural finish makes this system suitable for exposed interior shaft conditions, by eliminating rough cast-in-place wall finishes and providing a linear plank appearance on exposed surfaces.

06 Integrated System Expect integrated structural components such as built-in deck support angles, guardrail system, and coordination with slab and framing system.

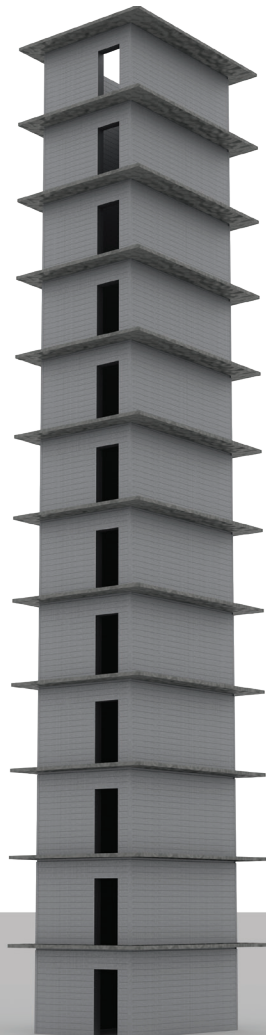
07 Labor Reduction The wall panel crew will install the lateral system, eliminating a trade. No separate formwork contractor is required on CFS framing levels which reduces coordination issues.

08 Improved Jobsite Safety Removes sequencing bottlenecks that can delay floor framing progress, by reducing the stacking of trades within the same vertical zone.

09 Reduced Crane Demand No formwork or masonry stacking; fewer lifts and less hook time.

10 2-Hour Fire Rating Code-compliant assembly without additional build-up

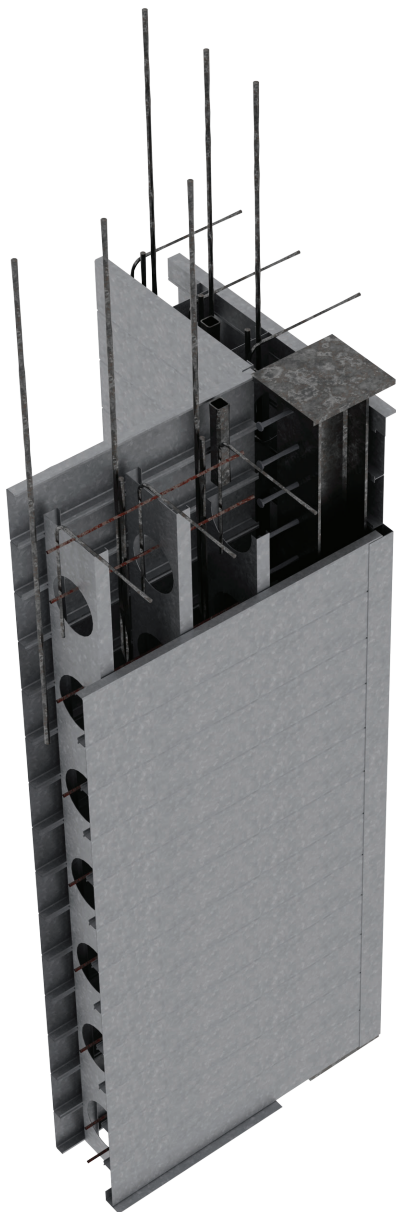
11 Eliminates Vertical Trade Stacking No crews working above framing levels or above one another, reducing fall risk and falling object exposure. Creates a safer environment for field personnel and inspectors with more controlled and predictable work zones.



Intended Use

The SpeedShaft lateral system serves as the building's **Lateral Force Resisting System** and elevator/stair core in Type IB construction buildings. The system is designed specifically for **mid-rise cold-formed steel (CFS) structures** utilizing load-bearing walls.

It is fully integrated with **CFS floor framing systems** for a unified structural solution and optimized for **multi-family, student housing, hospitality, and senior living** projects. SpeedShaft is most effective where **CMU shear walls reach practical limits** and higher-capacity lateral systems are required. The typical application range is **~6 to 12-story CFS structures**.



Prescriptively rated for 2-hour fire resistance; 3-hour assemblies require project-specific design

Linear plank finish is aesthetically pleasing with no ledge condition

Exposed use limited to stair shafts unless otherwise specified

May require proper field priming/prep if painted (G60 is standard finish)

Elevator shafts and occupied-side stair walls may require other finish materials per architectural requirements

Requires certified welders and continuous inspection of critical connections (corner posts)

Designed to be watertight on stair shaft side only; minor cleanup may be required

Intended for use within the building envelope (not exposed exterior wall system)

Concrete placement must follow sequencing requirements to avoid panel deformation or blowout

Requires adequate temporary bracing during erection until system is stabilized

Coordination required with MEP penetrations and embeds prior to concrete placement

Not intended for low-rise applications where simpler shear systems are more economical

Performance dependent on proper installation sequencing and field quality control

SpeedShaft Wall Core & Assembly Table

Wall Design Thickness	SpeedShaft Wall Thickness	Rebar Layers	Concrete Volume (CU YD) /100 SF
8	11.25	1	3.47
10	13.25	1	4.09
12	15.25	2	4.71
14	17.25	2	5.32
16	19.25	2	5.94

SpeedShaft Capacity Tables

11.25" wall (8" Core) - Seismic Design Category A, B, & C

GOVERNING TOP LATERAL LOAD Vu (kips)

		LENGTH (ft)									
		8	10	12	14	16	18	20	22	24	26
HEIGHT	9	26.8	41.9	60.3	82.1	107.3	135.7	167.6	202.8	241.3	283.2
	10	24.1	37.7	54.3	73.9	96.5	122.2	150.8	182.5	217.2	254.9
	11	21.9	34.3	49.4	67.2	87.8	111.1	137.1	165.9	197.4	231.7
	12	20.1	31.4	45.2	61.6	80.4	101.8	125.7	152.1	181.0	212.4
	13	18.6	29.0	41.8	56.8	74.3	94.0	116.0	140.4	167.1	196.1
	14	17.2	26.9	38.8	52.8	68.9	87.3	107.7	130.4	155.1	182.1
	15	16.1	25.1	36.2	49.3	64.4	81.4	100.5	121.7	144.8	169.9
	16	15.1	23.6	33.9	46.2	60.3	76.4	94.3	114.1	135.7	159.3

13.25" wall (10" Core) - Seismic Design Category A, B, & C

GOVERNING TOP LATERAL LOAD Vu (kips)

		LENGTH (ft)									
		8	10	12	14	16	18	20	22	24	26
HEIGHT	9	33.5	52.4	75.4	102.6	134.1	169.7	209.5	253.5	301.6	354.0
	10	30.2	47.1	67.9	92.4	120.7	152.7	188.5	228.1	271.5	318.6
	11	27.4	42.8	61.7	84.0	109.7	138.8	171.4	207.4	246.8	289.6
	12	25.1	39.3	56.6	77.0	100.5	127.3	157.1	190.1	226.2	265.5
	13	23.2	36.3	52.2	71.1	92.8	117.5	145.0	175.5	208.8	245.1
	14	21.5	33.7	48.5	66.0	86.2	109.1	134.7	162.9	193.9	227.6
	15	20.1	31.4	45.2	61.6	80.4	101.8	125.7	152.1	181.0	212.4
	16	18.9	29.5	42.4	57.7	75.4	95.4	117.8	142.6	169.7	199.1

15.25" wall (12" Core) - Seismic Design Category A, B, & C
GOVERNING TOP LATERAL LOAD Vu (kips)

		LENGTH (ft)									
		8	10	12	14	16	18	20	22	24	26
HEIGHT	9	40.2	62.8	90.5	123.2	160.9	203.6	251.4	304.2	362.0	424.8
	10	36.2	56.6	81.4	110.9	144.8	183.3	226.2	273.7	325.8	382.3
	11	32.9	51.4	74.0	100.8	131.6	166.6	205.7	248.9	296.2	347.6
	12	30.2	47.1	67.9	92.4	120.7	152.7	188.5	228.1	271.5	318.6
	13	27.8	43.5	62.7	85.3	111.4	141.0	174.0	210.6	250.6	294.1
	14	25.9	40.4	58.2	79.2	103.4	130.9	161.6	195.5	232.7	273.1
	15	24.1	37.7	54.3	73.9	96.5	122.2	150.8	182.5	217.2	254.9
	16	22.6	35.3	50.9	69.3	90.5	114.5	141.4	171.1	203.6	239.0

17.25" wall (14" Core) - Seismic Design Category A, B, & C
GOVERNING TOP LATERAL LOAD Vu (kips)

		LENGTH (ft)									
		8	10	12	14	16	18	20	22	24	26
HEIGHT	9	46.9	73.3	105.6	143.7	187.7	237.5	293.3	354.9	422.3	495.6
	10	42.2	66.0	95.0	129.3	168.9	213.8	263.9	319.4	380.1	446.1
	11	38.4	60.0	86.4	117.6	153.6	194.4	239.9	290.3	345.5	405.5
	12	35.2	55.0	79.2	107.8	140.8	178.2	220.0	266.1	316.7	371.7
	13	32.5	50.8	73.1	99.5	129.9	164.5	203.0	245.7	292.4	343.1
	14	30.2	47.1	67.9	92.4	120.7	152.7	188.5	228.1	271.5	318.6
	15	28.2	44.0	63.3	86.2	112.6	142.5	176.0	212.9	253.4	297.4
	16	26.4	41.2	59.4	80.8	105.6	133.6	165.0	199.6	237.5	278.8

19.25" wall (16" Core) - Seismic Design Category A, B, & C
GOVERNING TOP LATERAL LOAD Vu (kips)

		LENGTH (ft)									
		8	10	12	14	16	18	20	22	24	26
HEIGHT	9	53.6	83.8	120.7	164.2	214.5	271.5	335.2	405.5	482.6	566.4
	10	48.3	75.4	108.6	147.8	193.1	244.3	301.6	365.0	434.4	509.8
	11	43.9	68.6	98.7	134.4	175.5	222.1	274.2	331.8	394.9	463.4
	12	40.2	62.8	90.5	123.2	160.9	203.6	251.4	304.2	362.0	424.8
	13	37.1	58.0	83.5	113.7	148.5	187.9	232.0	280.8	334.1	392.1
	14	34.5	53.9	77.6	105.6	137.9	174.5	215.5	260.7	310.3	364.1
	15	32.2	50.3	72.4	98.5	128.7	162.9	201.1	243.3	289.6	339.9
	16	30.2	47.1	67.9	92.4	120.7	152.7	188.5	228.1	271.5	318.6

Note:

This table is provided for preliminary planning and budgeting purposes only. Final design values will be established through project-specific engineering analysis. Values are based on minimum reinforcing steel assumptions.

All values shown correspond to Strength Design (LRFD) loads (per ASCE 7).

For Allowable Stress Design (ASD) seismic loads, divide the tabulated values by 0.7 (per ASCE 7 load combinations).

For Allowable Stress Design (ASD) wind loads, divide the tabulated values by 0.6 (per ASCE 7 load combinations).

This table is not intended for use in high seismic regions. Please contact ElevenTen for project-specific guidance in such cases.

Gravity and axial load effects are not included in these values.

Engineering

- Classified as part of the LFRS (shear wall system) under International Building Code
- Constructed from cold-formed steel panels with concrete infill
- Factory-installed reinforcing steel and embeds ensure repeatable performance
- Compatible with standard slab-on-metal deck floor systems
- Panel geometry and connections engineered to resist:
 - In-plane shear forces (wind/seismic)
 - Axial loads from overturning
 - Out-of-plane pressures during concrete placement
- Typical design governed by:
 - AISI S100 AISI S240 ACI 318 AWS D1.3 AISC 360
- Engineering provided on a project-specific basis including load paths, overturning, and connection design

Installation

- Set SpeedShaft panels, temporarily brace, and fasten to base structure.
- Install metal deck at adjacent floor framing
- Weld corner posts to embeds or preceding posts; install cover plates at access holes (2 per corner)
- Install and tie reinforcing steel per project details
- Install closure angles at each corner
- Place concrete within SpeedShaft panels
- Panels over 12'-0" may require multi-lift placement
- Prepare top surface for next lift:
- Leave concrete roughened per details
- Maintain approximately 1/4" low for plumbing and leveling of next panel set

Concrete Placement Guidance (Panels >12'-0")

Option 1:

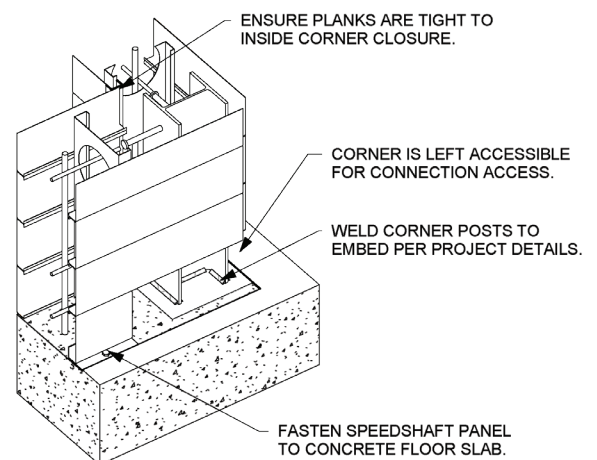
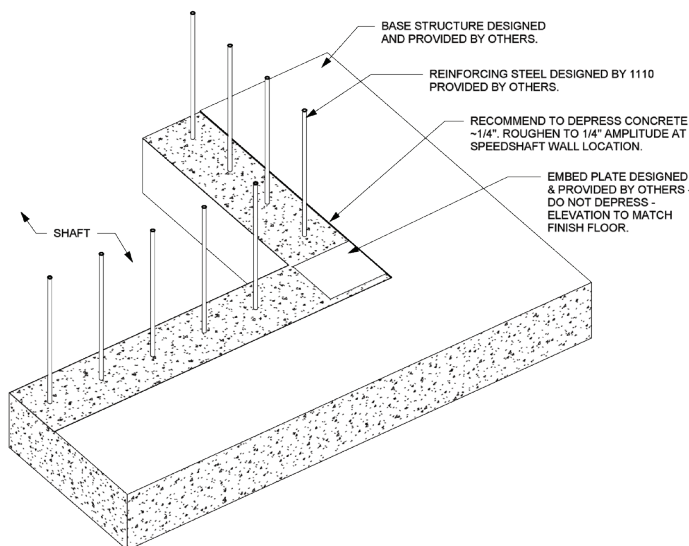
Place concrete in minimum two lifts to control pressure and deflection.

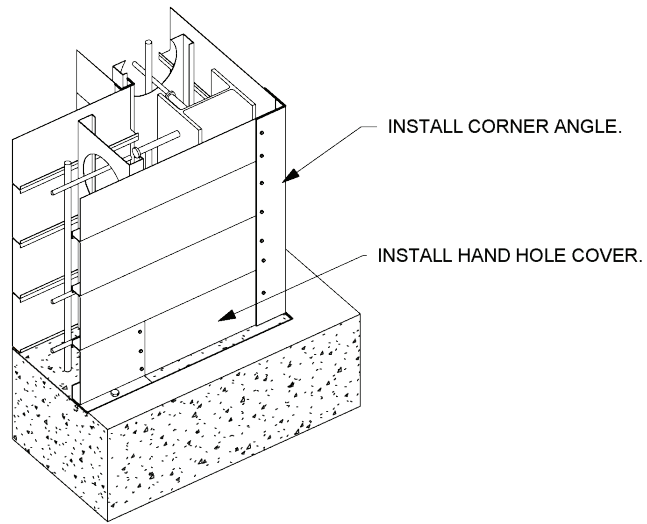
Option 2:

First Pour ~4' -0" height
(early set mix may be required).

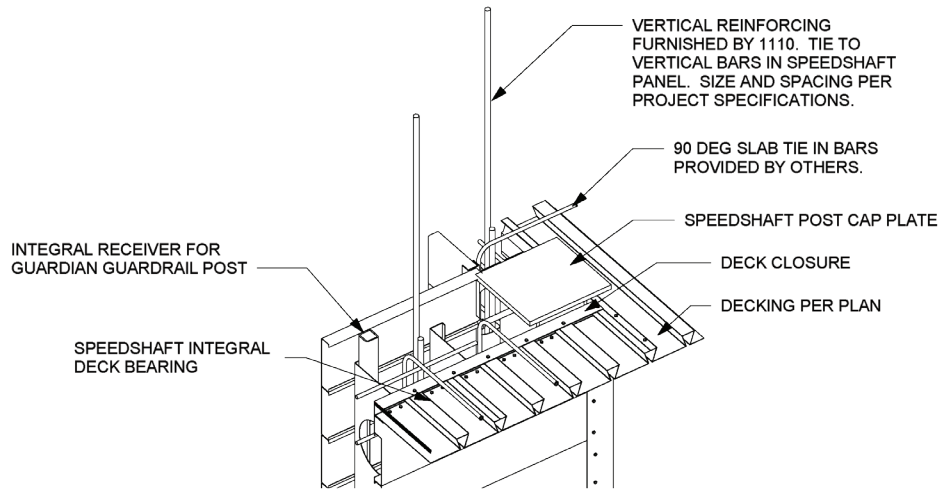
Place slab concrete working away from shaft

Final Pour returns to complete SpeedShaft panels after initial set

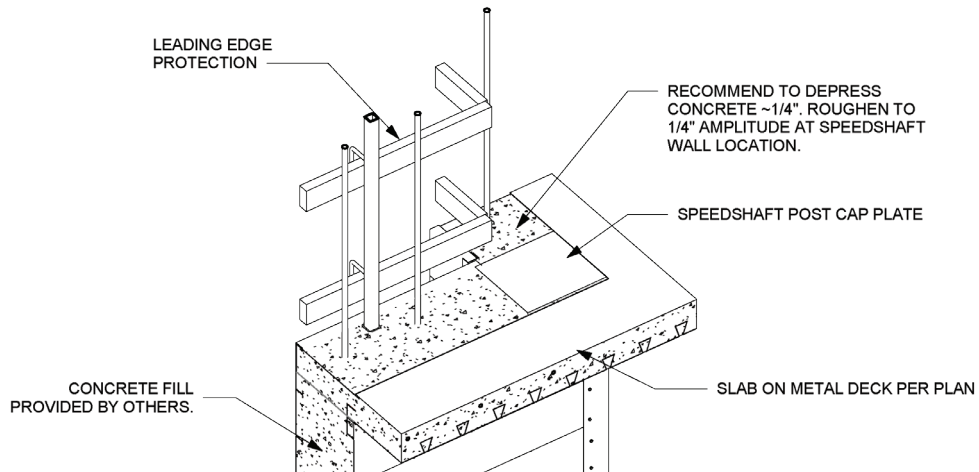




3 Fig.3 - SPEEDSHAFT BTM COMPLETE
SS



4 Fig.4 - TOP OF SPEEDSHAFT CORNER
SS



5 Fig.5 - TOP OF SPEEDSHAFT CORNER COMPLETE
SS

A large, dark grey sign with the words 'ELEVEN' and 'TEN' in large, white, sans-serif letters. The sign is mounted on a stone base. The background shows a building with a similar logo and a clear sky.

ElevenTen Systems®

913.914.0009

www.eleventensystems.com

21945 W. 83rd Street
Shawnee, KS 66227