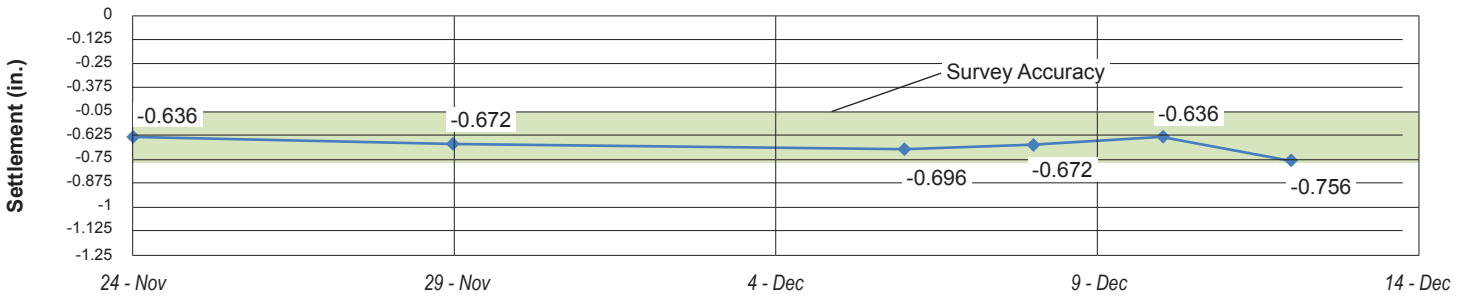


# Alaskan Way Viaduct **REPLACEMENT** PROGRAM



Seattle City Council  
Dec. 15, 2014

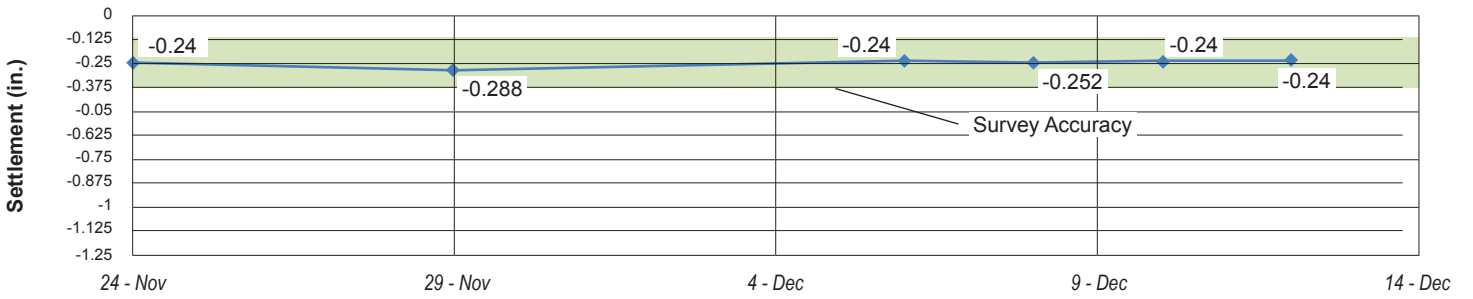
## Surface, Building and Benchmark Settlement Since Nov. 24, 2014



### Deep Benchmark 1 Occidental Ave S and Railroad Way S

Dec 12

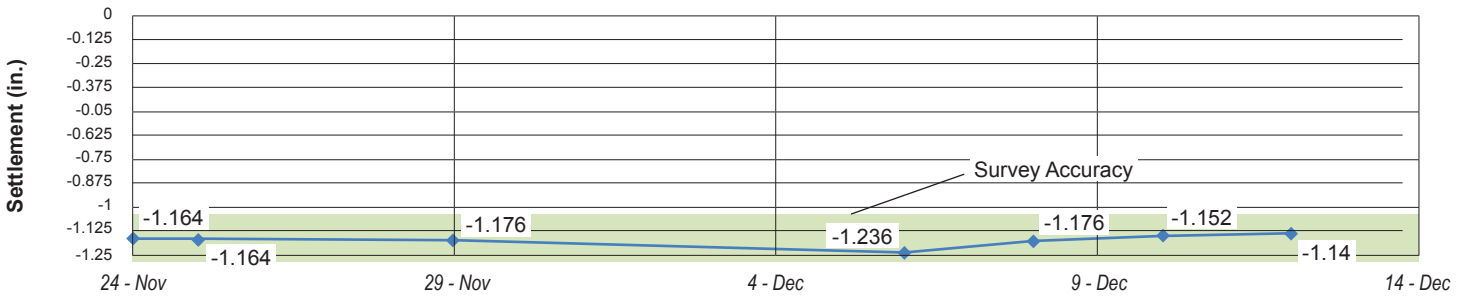
## Surface, Building and Benchmark Settlement Since Nov. 24, 2014



### Deep Benchmark 2 Second Ave and Marion St

Dec 12

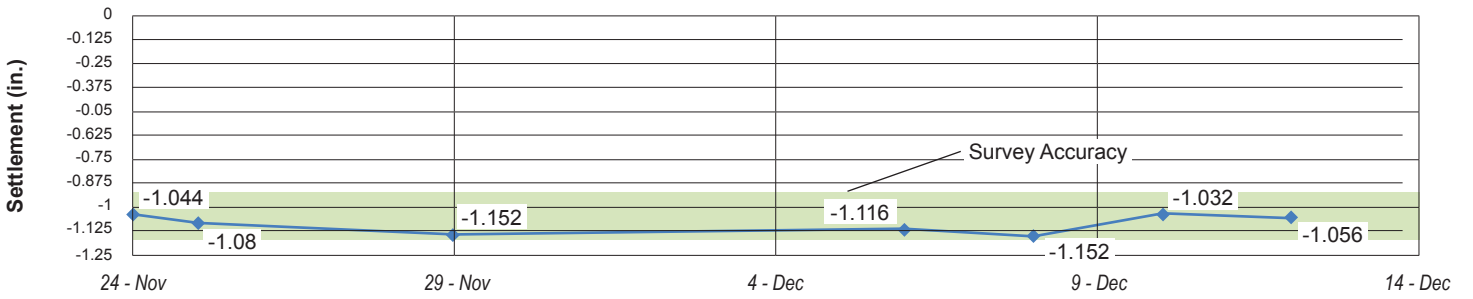
## Surface, Building and Benchmark Settlement Since Nov. 24, 2014



### S Jackson St and First Ave S (Survey Control Point - JACK)

Dec 12

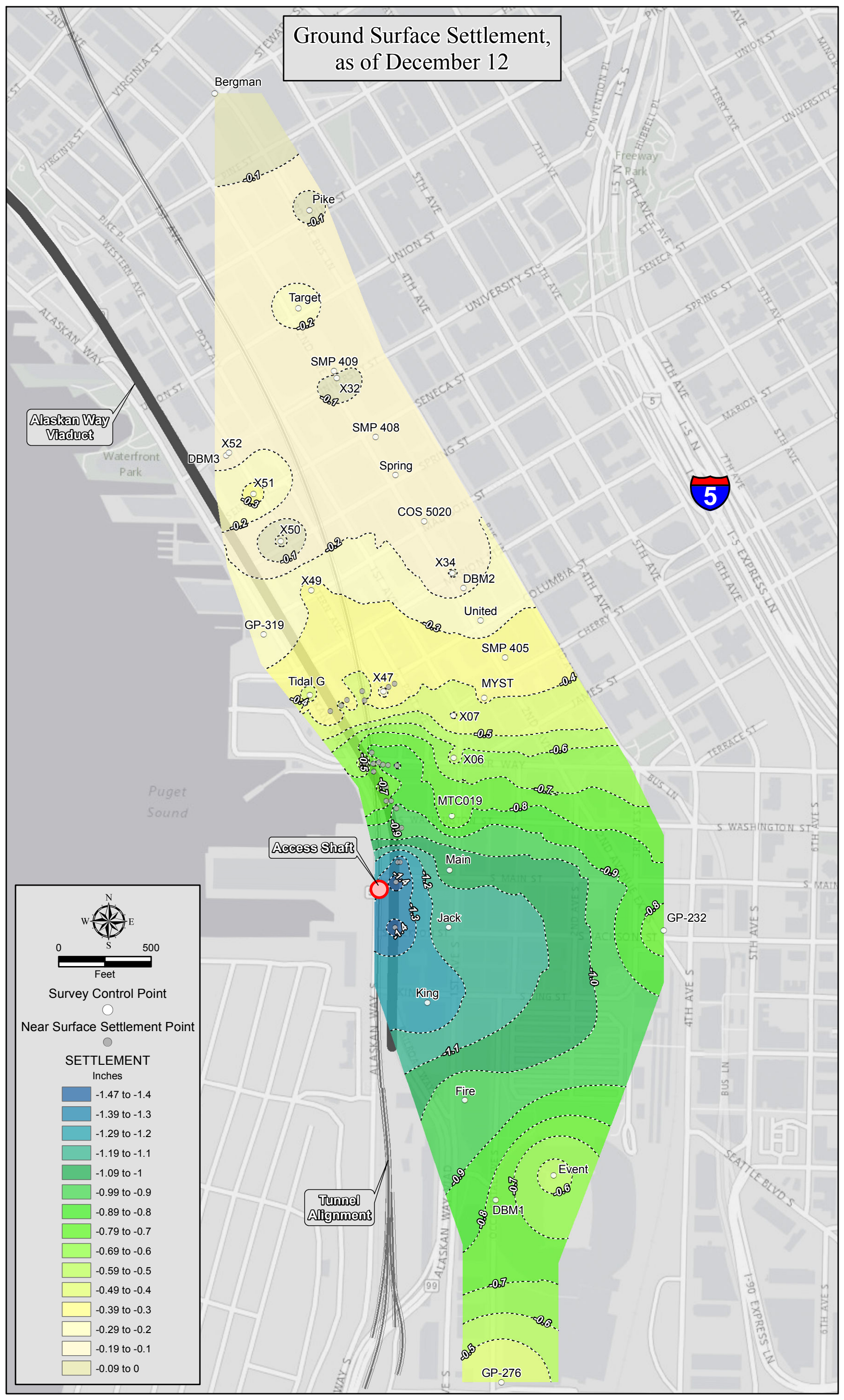
### Surface, Building and Benchmark Settlement Since Nov. 24, 2014



### S Main St and First Ave S (Survey Control Point - MAIN)

Dec 12

# Ground Surface Settlement, as of December 12



Alaskan Way Viaduct

Access Shaft

Tunnel Alignment

0 500  
Feet

Survey Control Point  
○

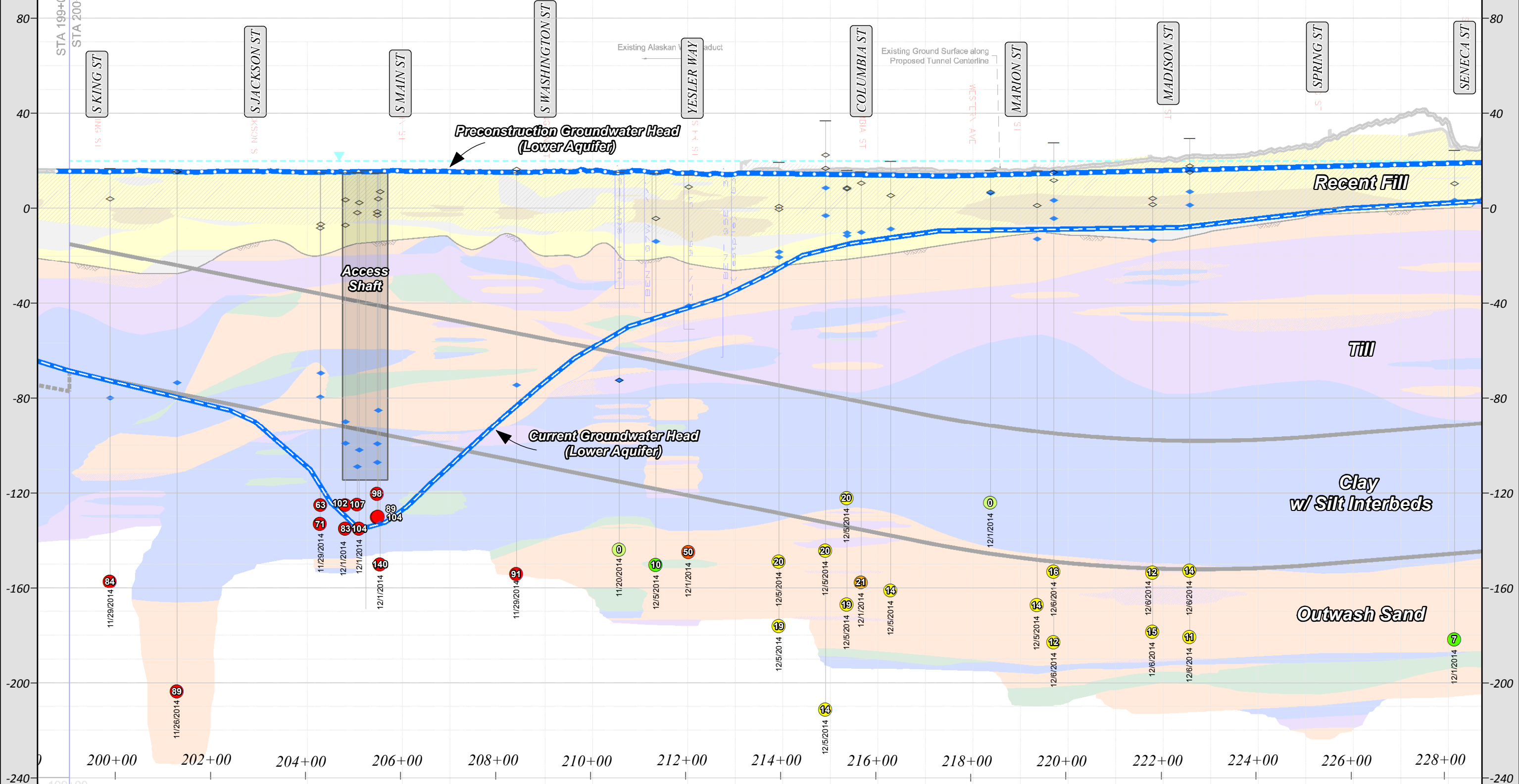
Near Surface Settlement Point  
●

**SETTLEMENT**  
Inches

Dark Blue	-1.47 to -1.4
Blue	-1.39 to -1.3
Teal	-1.29 to -1.2
Green-Teal	-1.19 to -1.1
Green	-1.09 to -1
Light Green	-0.99 to -0.9
Yellow-Green	-0.89 to -0.8
Yellow	-0.79 to -0.7
Light Yellow	-0.69 to -0.6
Yellow-Orange	-0.59 to -0.5
Orange	-0.49 to -0.4
Light Orange	-0.39 to -0.3
Orange-Yellow	-0.29 to -0.2
Yellow	-0.19 to -0.1
Light Yellow	-0.09 to 0

# Groundwater Drawdown from Lower Aquifer Depressurization

NOTE: Vertical Exaggeration = 5X



**NOTES:**

- This plot is intended to present information regarding the effect of dewatering of TBM Access Shaft on groundwater levels in the project area.
- Observations are based on data obtained by STP and downloaded from Geoscope on 12-1-2014.
- ESUs were estimated by WSDOT based on boring logs, where available, or from comparison of the measurement point depth with the Geotechnical Baseline Report centerline profile.
- Drawdown was calculated by subtracting the initial reading of the measurement point (prior to 9-21-2014) from the average of the readings observed between 11-17-2014 and 12-01-2014.

Drawdown Level (ft)	0 - 2	Original Observed Groundwater Level
	3 - 10	Drawdown Observed Groundwater Level
	11 - 20	
	21 - 30	
	31 - 50	
	Over 50	

Horizontal Scale: 0 200 Feet

Vertical Scale: 0 40 Feet

Vertical Datum: NAVD 88

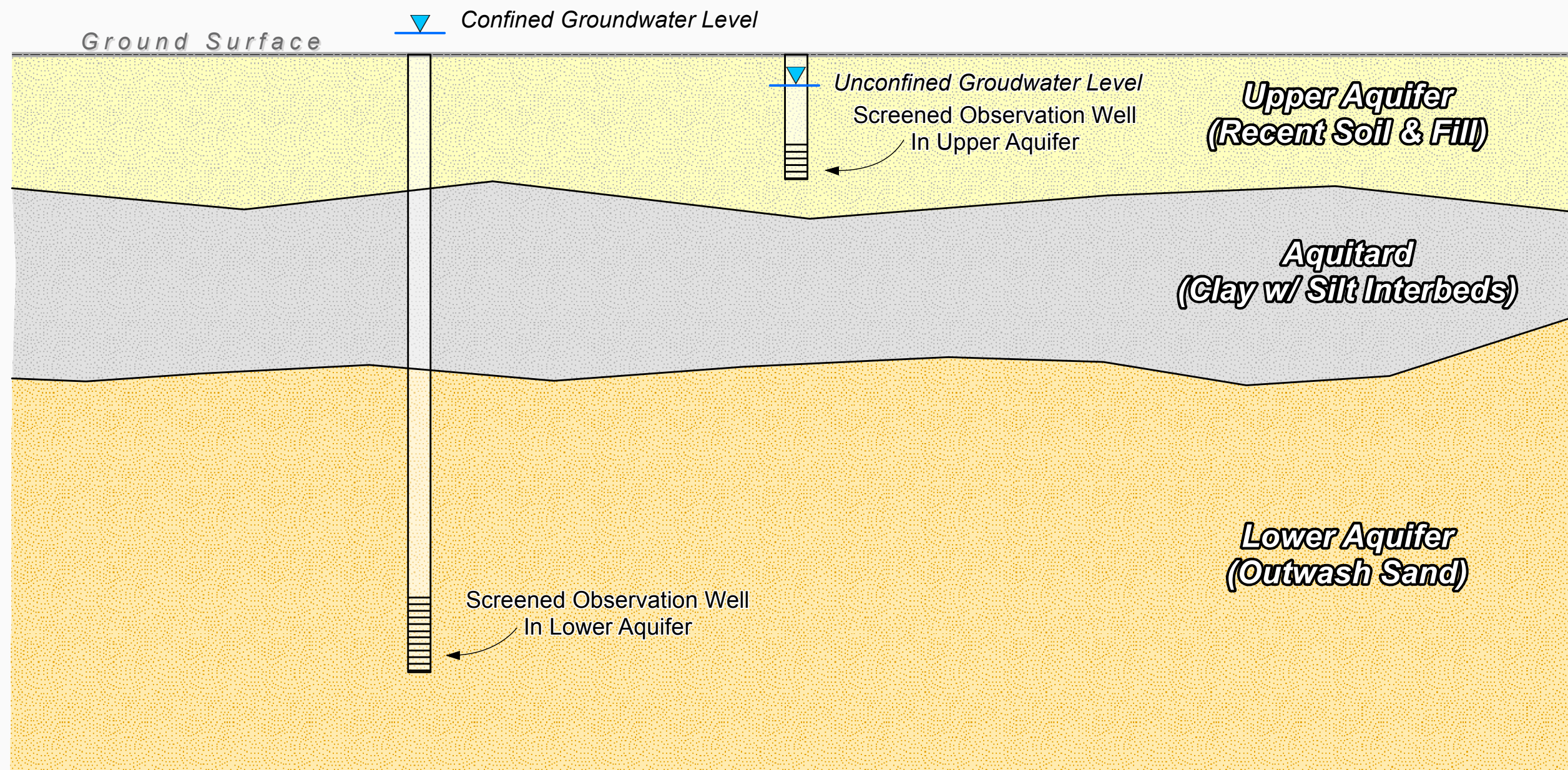
AWV Central Waterfront Bored Tunnel  
TBM Access Shaft

**GROUNDWATER DRAWDOWN FROM LOWER AQUIFER DEPRESSURIZATION**

SHANNON & WILSON, INC.  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

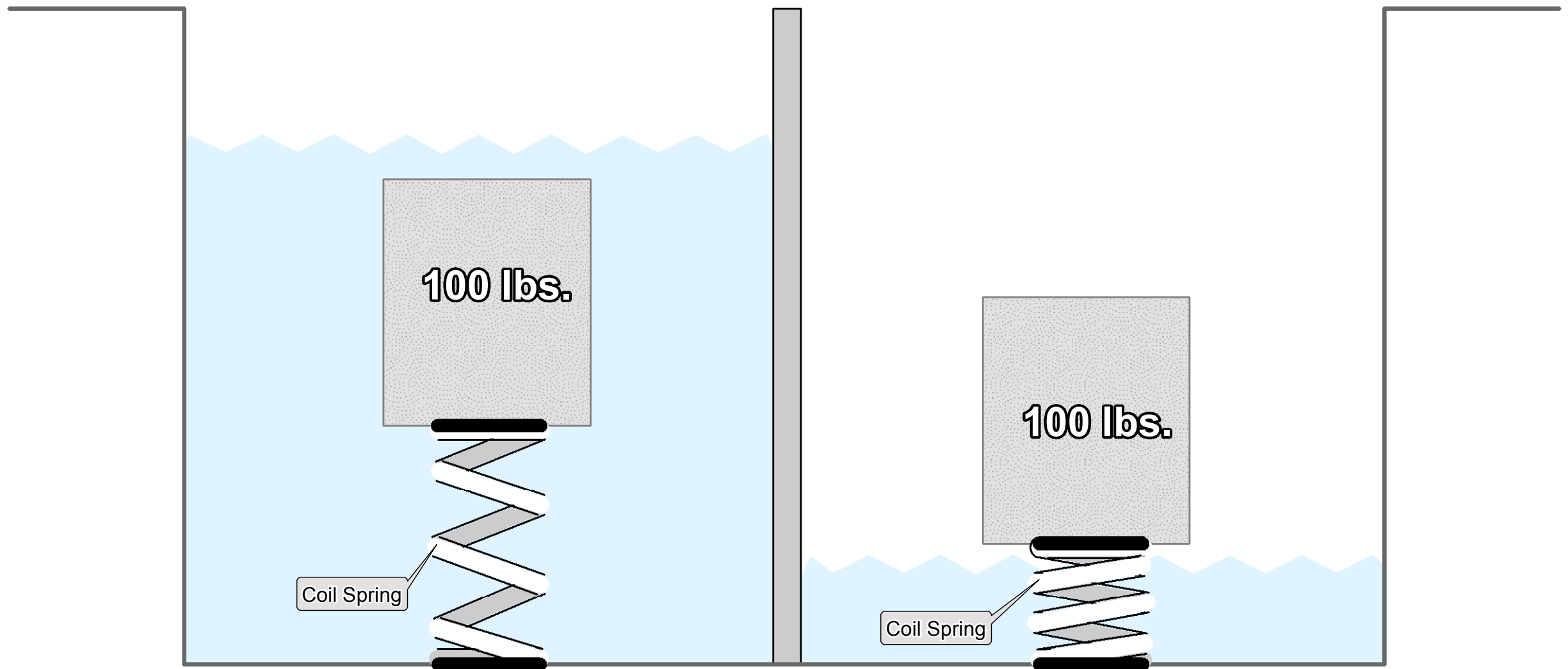
12 DEC 14 21-1-21400-053 **FIG. 1**

Generalized Aquifer Profile with Groundwater Wells





Schematic of Pressure changes due to Dewatering



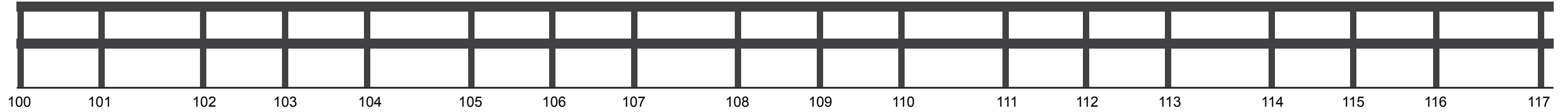
# Alaskan Way Viaduct Survey Results

S Washington Street

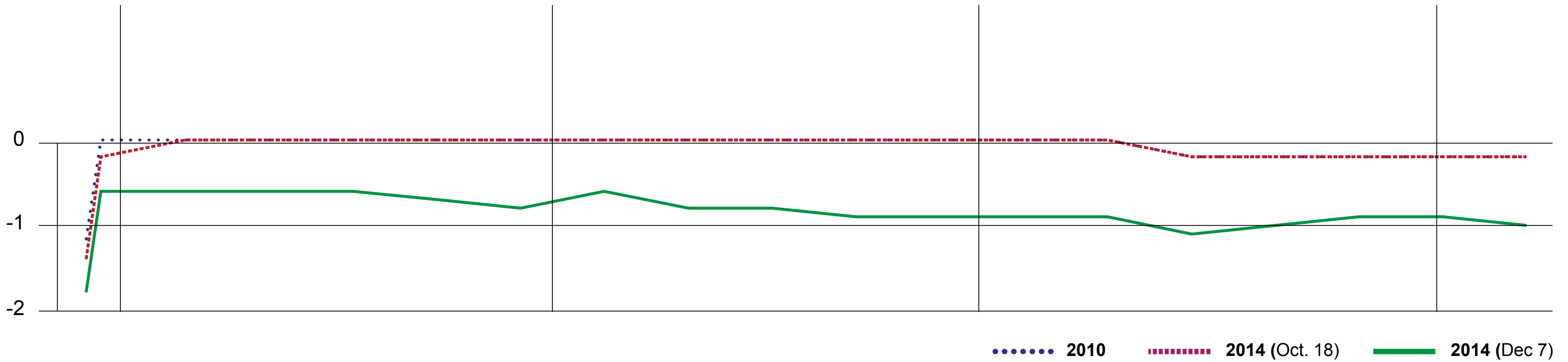
S Main Street

S Jackson Street

S King Street



## Settlement in inches



..... 2010    
 ..... 2014 (Oct. 18)    
 ——— 2014 (Dec 7)

prepared on Dec. 12, 2014