

Equation	Analysis of Settlements at Mission Street	Future Settlements														
$\Delta = c_{\alpha} H \log \left(\frac{T_2 - T_0}{T_1 - T_0} \right)$ <p>c_{α} = Coefficient of Secondary Compression</p> <p>c_{α} = 1.5 - 2.0%</p> <p>H = Thickness of Bay Mud</p>	<ol style="list-style-type: none"> ① End of Filling: $T_0 = 1859$ ② End of Primary Consolidation $T_1 = 1965$ ③ Secondary Consolidation from 1965 to 1985 ④ Measurements <table border="1" data-bbox="787 755 1155 1006"> <thead> <tr> <th>Point</th> <th>Settlement, in</th> </tr> </thead> <tbody> <tr><td>1</td><td>1.2</td></tr> <tr><td>2</td><td>1.9</td></tr> <tr><td>3</td><td>1.6</td></tr> <tr><td>4</td><td>1.4</td></tr> <tr><td>5</td><td>1.6</td></tr> <tr><td>Average</td><td>1.5</td></tr> </tbody> </table> ⑤ Estimate Settlements from 1965 to 1985 $H = 90 \text{ ft}$ $T_1 = 1965$ $T_2 = 1985$ $\Delta = 0.02 \times 90 \times 12 \times \log(126/106) = 1.6 \text{ in}$ 	Point	Settlement, in	1	1.2	2	1.9	3	1.6	4	1.4	5	1.6	Average	1.5	<ol style="list-style-type: none"> ① 30 Years after Construction: 1995 to 2025 $\Delta = 0.02 \times 90 \times 12 \times \log(166/136) = 1.9 \text{ in}$ ② 50 Years after Construction: 1995 to 2045 $\Delta = 0.02 \times 90 \times 12 \times \log(186/136) = 3.0 \text{ in}$
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