

Pavement Management 101 – History Informational Series

FACILITIES AND TRANSPORTATION COMMISSION

DECEMBER 6, 2023

PUBLIC WORKS DEPARTMENT

Pavement Management Informational Series

December 6, 2023

101 - History

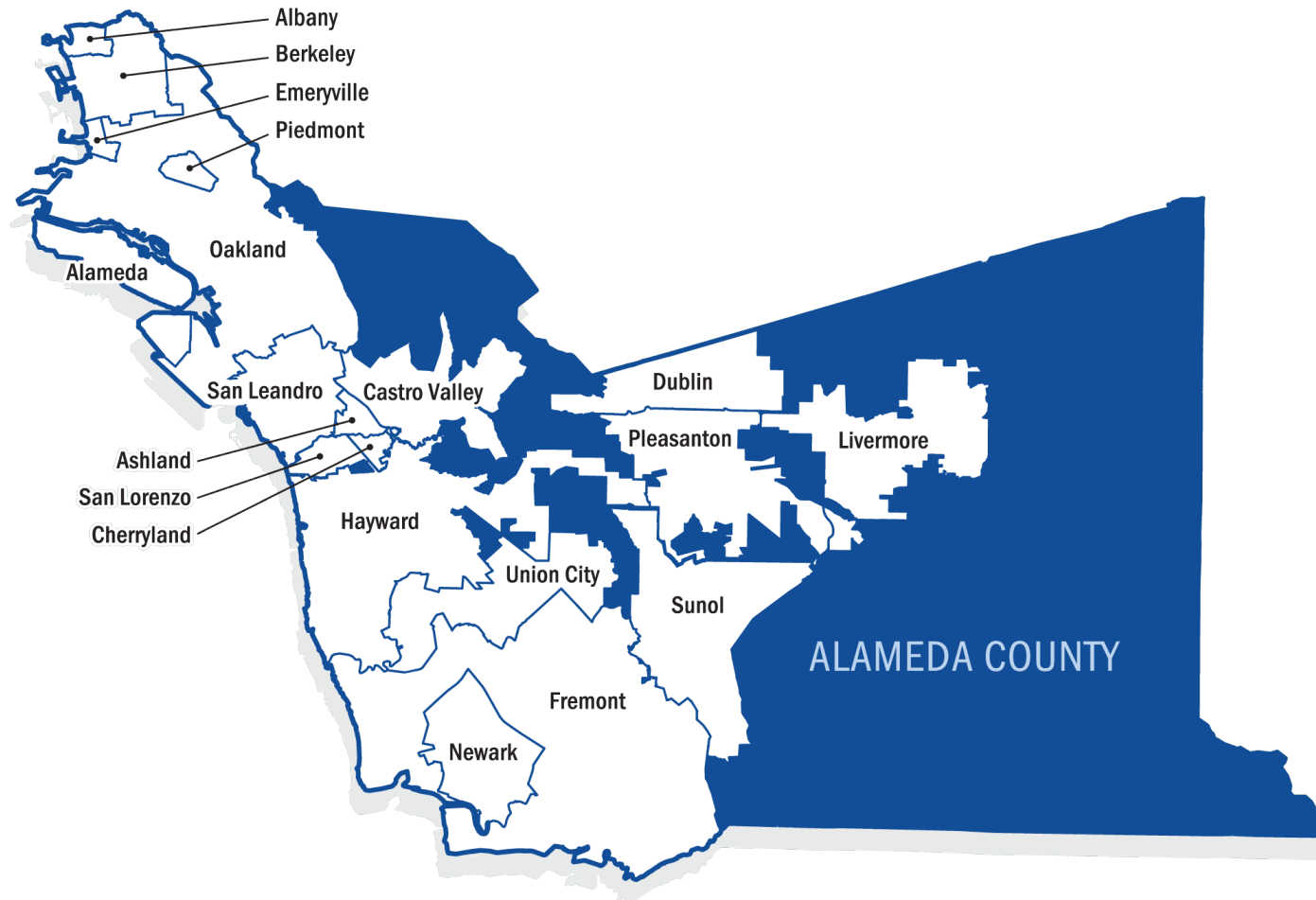
January tbd, 2024

102 – Funding and Design

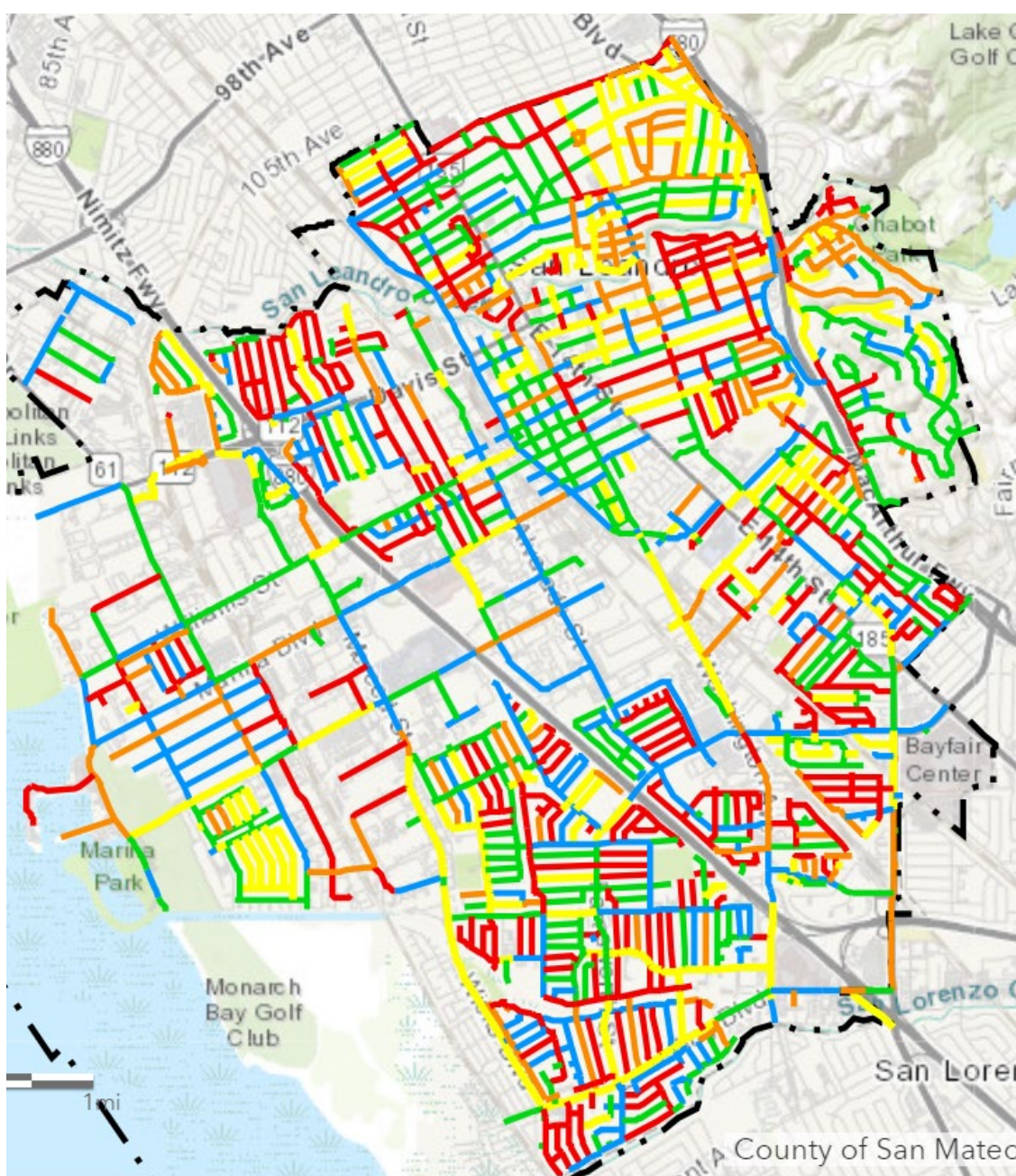
February 7, 2024

103 – Construction and Maintenance

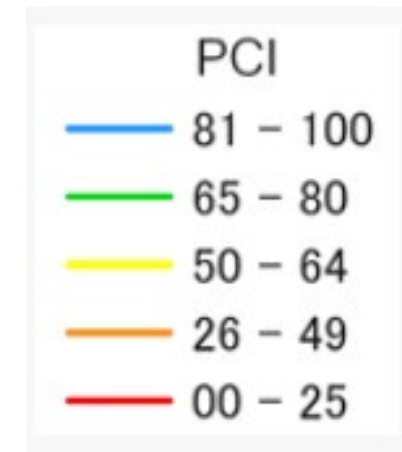
Alameda County



Cities in Alameda County	Age (Incorporated Year)	Total Lane Miles	2021 PCI
Alameda	169 (1854)	278	68
Albany	115 (1908)	59	57
Berkeley	145 (1878)	451	57
Dublin	41 (1982)	327	82
Emeryville	127 (1896)	47	75
Fremont	67 (1956)	1081	72
Hayward	147 (1876)	655	69
Livermore	147 (1876)	725	79
Newark	68 (1955)	256	73
Oakland	171 (1852)	2023	53
Piedmont	116 (1907)	79	64
Pleasanton	129 (1894)	516	78
San Leandro	151 (1872)	394	55
Union City	64 (1959)	329	76



PCI = Pavement Condition Index



ROAD CLASSIFICATION	PCI CATEGORY	TYPICAL ROAD MAINTENANCE	NUMBER OF LANE MILES	PCI PER ROAD CLASSIFICATION (%)	AVERAGE PCI
ARTERIAL (21% of Network)	New (90 or above)	Do Nothing	5.35	7%	67
	Very Good (70 - 89)	Slurry/Micro	31.93	40%	
	Good (40 - 69)	Double Cape	34.44	43%	
	Poor (26 - 39)	AC Rehabilitation	6.56	8%	
	Very Poor/Failed (0 to 25)	Reconstruction	2.35	3%	
COLLECTOR (21% of Network)	New (90 or above)	Do Nothing	9.74	12%	62
	Very Good (70 - 89)	Slurry/Micro	28.65	36%	
	Good (40 - 69)	Double Cape	26.16	33%	
	Poor (26 - 39)	AC Rehabilitation	7.60	10%	
	Very Poor/Failed (0 to 25)	Reconstruction	7.45	9%	
RESIDENTIAL (58% of Network)	New (90 or above)	Do Nothing	15.26	7%	44
	Very Good (70 - 89)	Slurry/Micro	40.93	18%	
	Good (40 - 69)	Double Cape	61.49	28%	
	Poor (26 - 39)	AC Rehabilitation	17.34	8%	
	Very Poor/Failed (0 to 25)	Reconstruction	87.01	39%	

Typical Pavement Layers

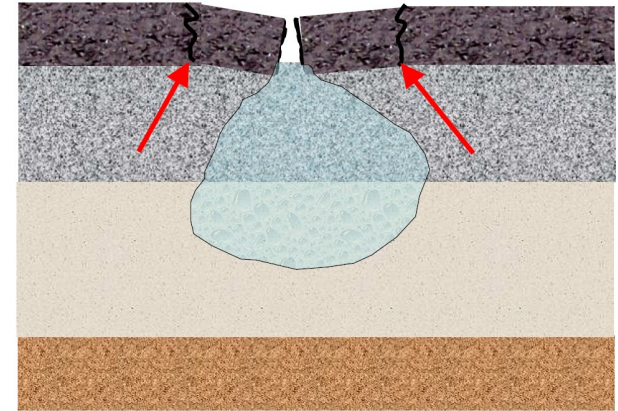
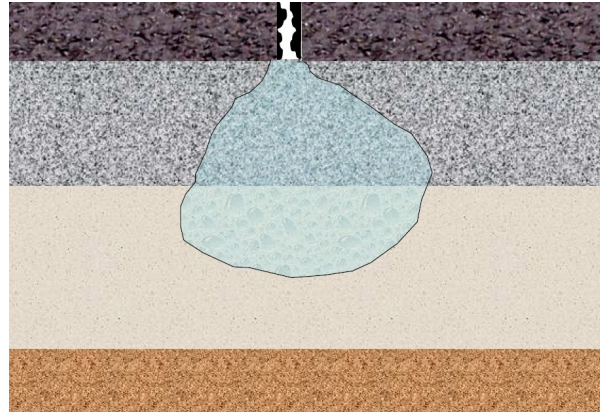


What threatens our pavement?

➤ Water

➤ Traffic

Water weakens the pavement



HISTORIC RAINFALL IN THE BAY AREA

From Dec. 26 to Jan. 15, 17 inches of rain fell on downtown San Francisco – the second-wettest three-week period since daily records began in 1849 during the Gold Rush.

San Francisco's five wettest 21-day periods (1849 – 2023)

Rank	Dates	Rainfall in inches
1	Jan. 5 – 25, 1862	23.01
2	Dec. 26, 2022 – Jan. 15, 2023	17.0
3	Dec. 11 – 31, 1866	14.50
4	Feb 1 – 21, 1986	13.99
5	Jan. 11 – 31, 1911	13.01

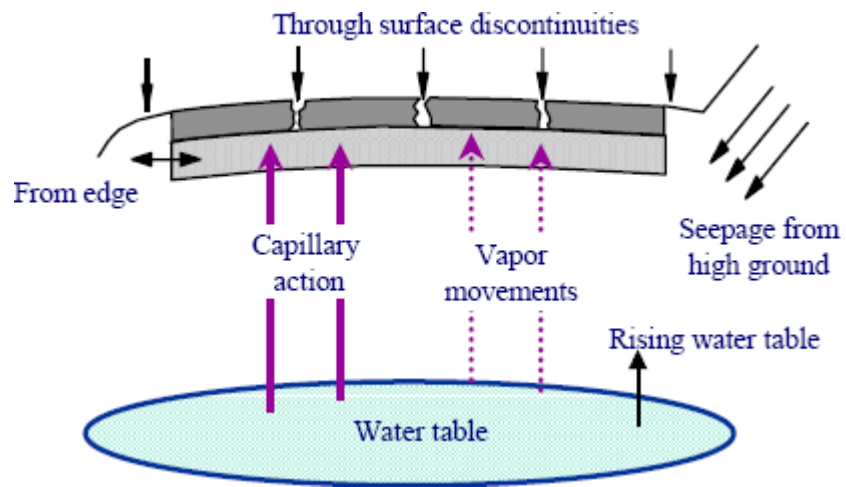
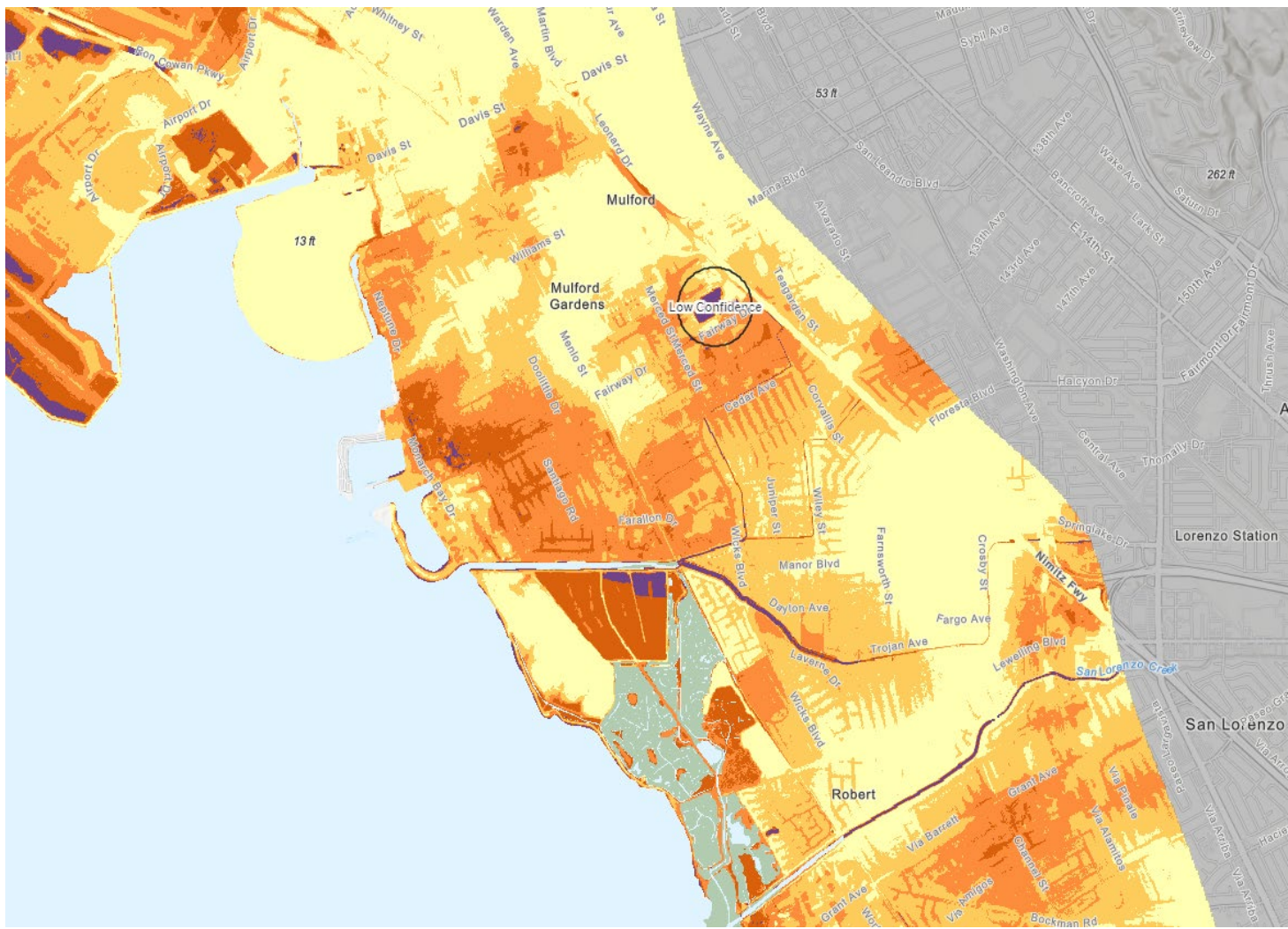
San Francisco's wettest first halves of the rainfall season, July 1 – Jan. 15

Rank	Dates	Rainfall in inches
1	1861 – 1862	27.09
2	1889 – 1890	27.05
3	1852 – 1853	22.97
4	1849 – 1850	21.85
5	2022 – 2023	21.54
6	1871 – 1872	21.19
7	1972 – 1973	21.16
8	1866 – 1867	20.9
9	1981 – 1982	19.97
10	1955 – 1956	19.88

Sources: Golden Gate Weather Services and National Weather Service

BAY AREA NEWS GROUP



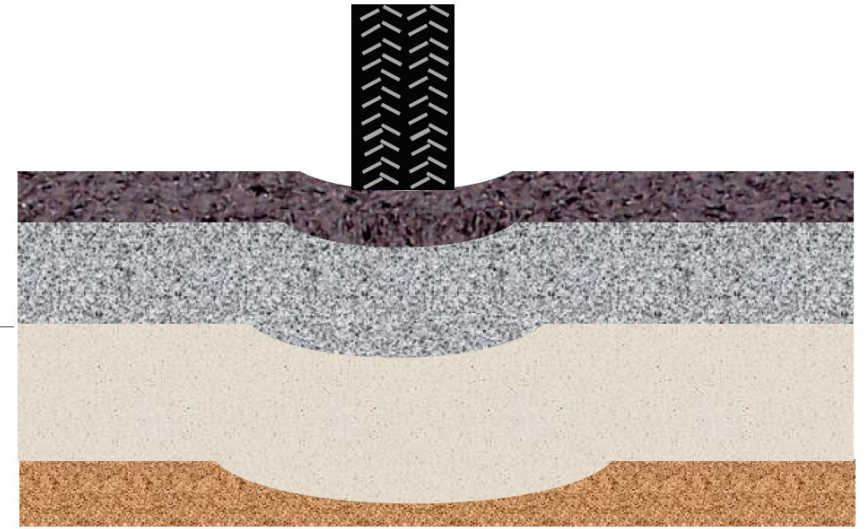


Shallow Groundwater

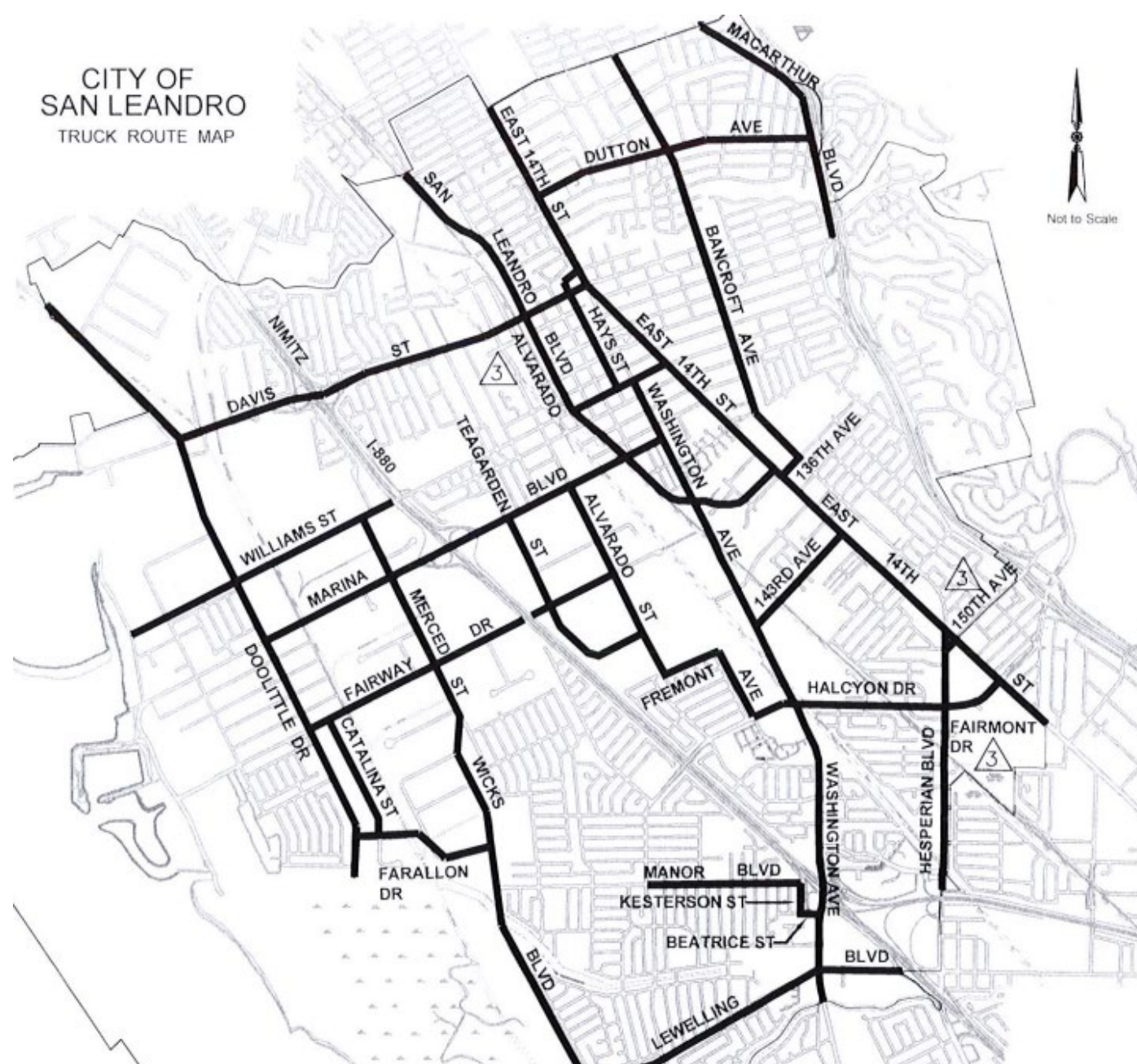
Depth to water (ft)

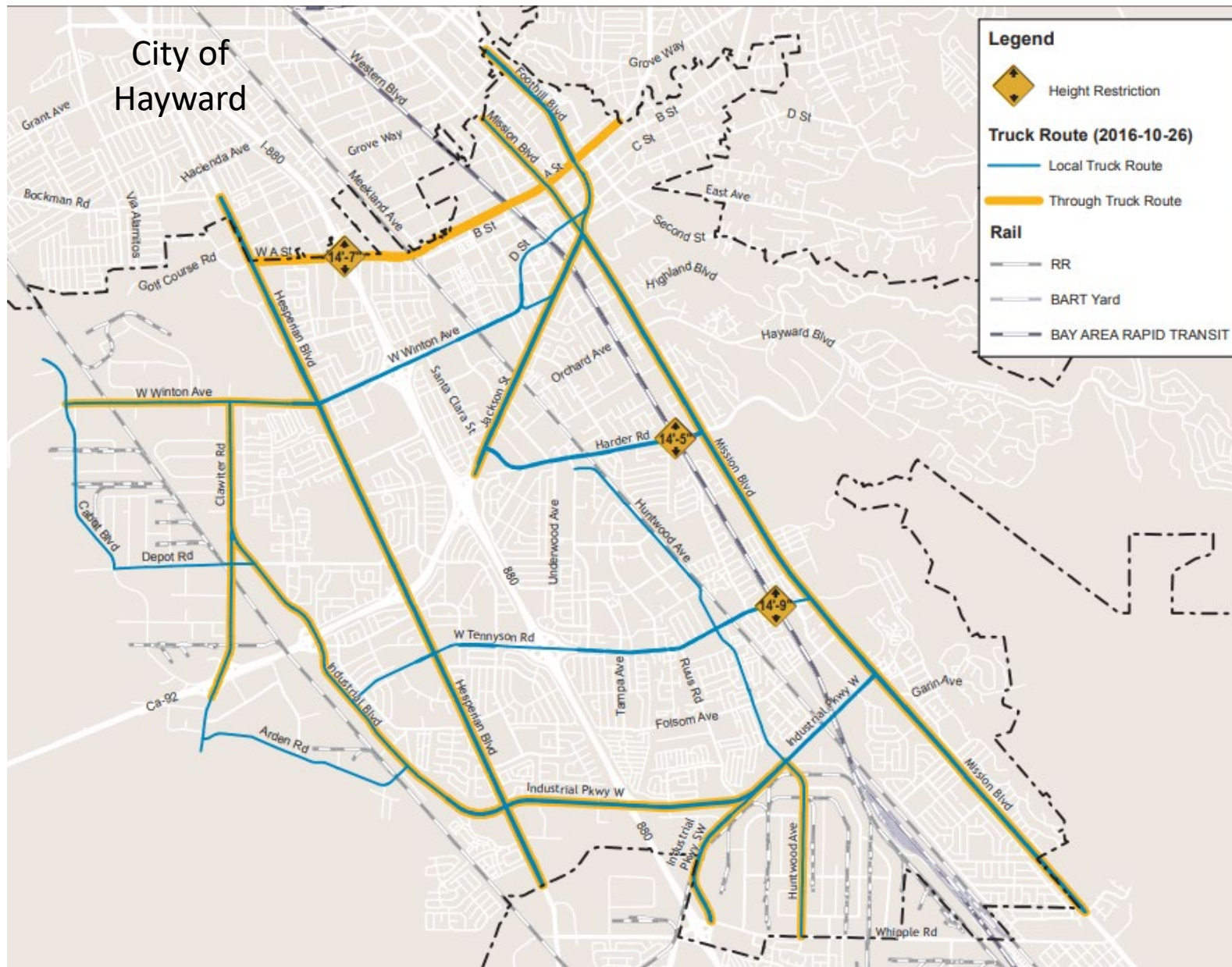
- <0 (Emergent)
- 0 - 3
- 3 - 6
- 6 - 9
- > 9

Traffic Loading Effects



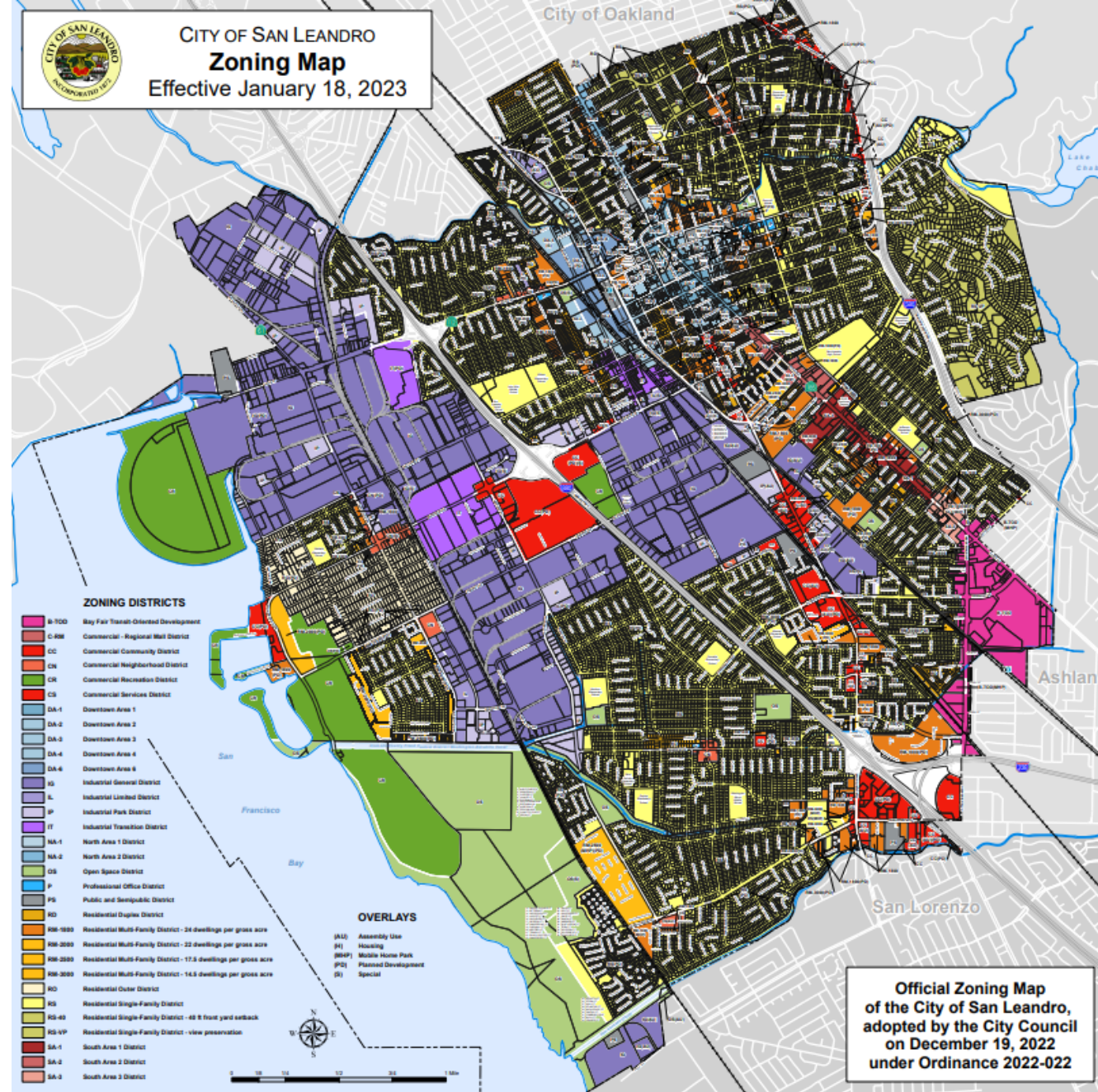
CITY OF
SAN LEANDRO
TRUCK ROUTE MAP

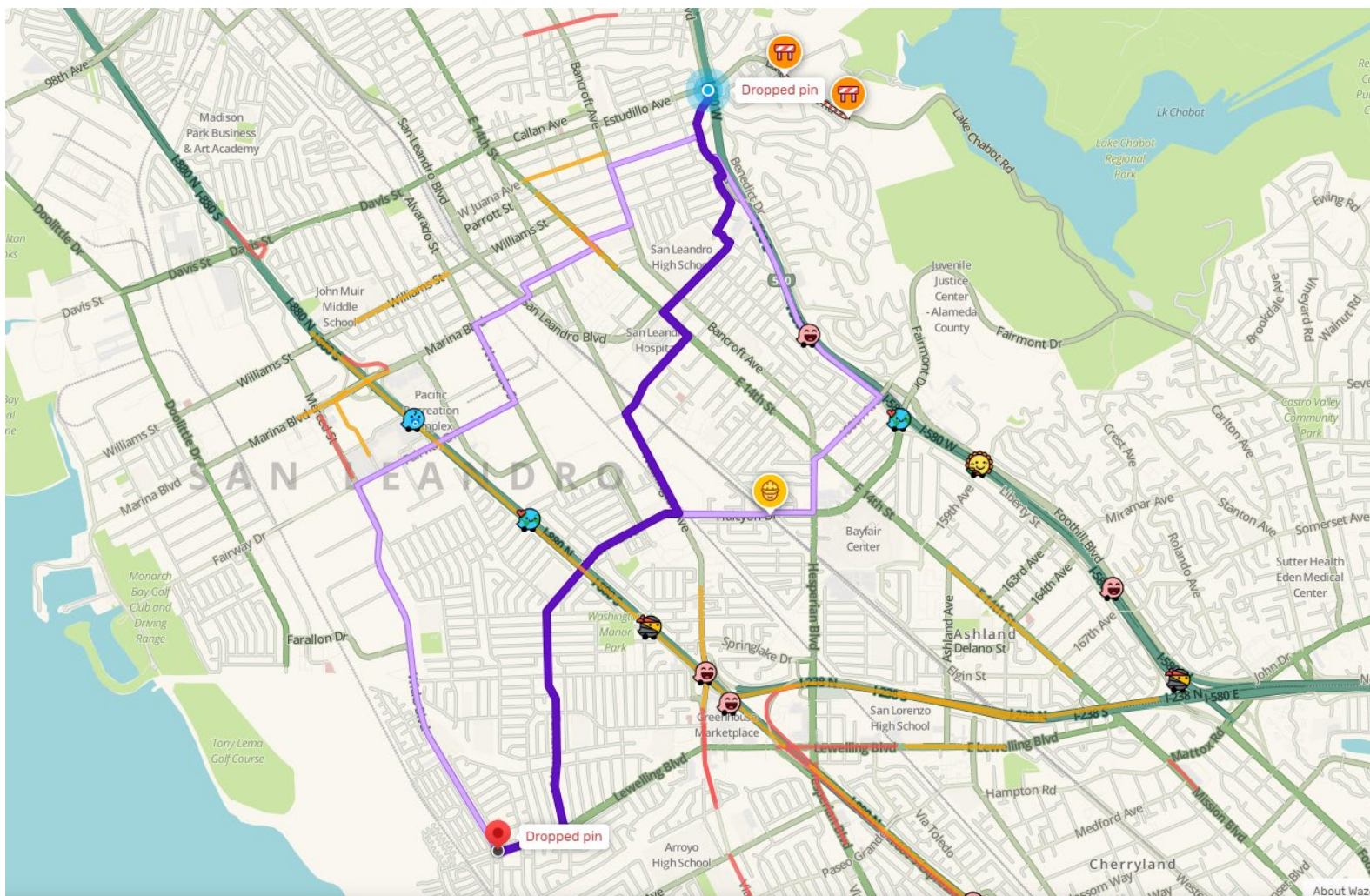






CITY OF SAN LEANDRO
Zoning Map
Effective January 18, 2023





Navigation Apps

Annexed 1957



Shallow Utilities



Utility Repairs and Restoration



Upcoming

January tbd, 2024

102 – Funding and Design

February 7, 2024

103 – Construction and Maintenance