PAVEMENT MANAGEMENT SYSTEM AND CAPITAL IMPROVEMENT PROJECTS







ASPHALT CONCRETE

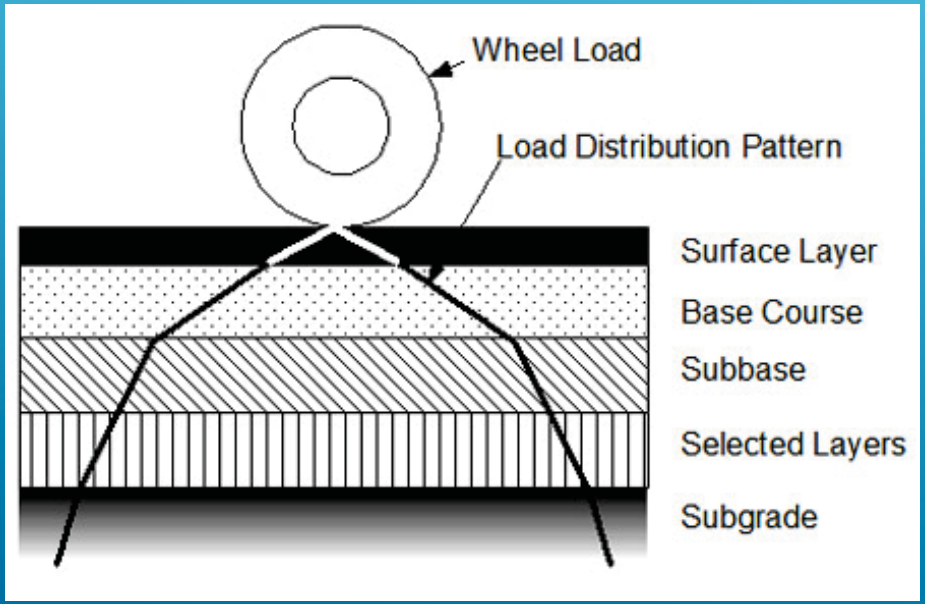
ASPHALT CONCRETE IS COMPRISED OF THE FOLLOWING MATERIALS:

1. AGGREGATE (CRUSHED ROCKS AND SAND)
2. BITUMEN (DERIVED FROM CRUDE OIL)

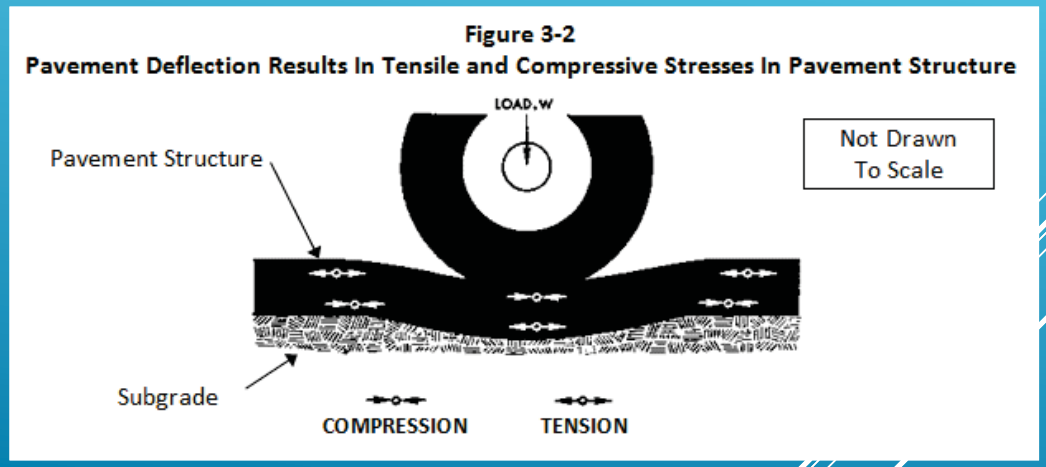
WHY IS ASPHALT CONCRETE UTILIZED OVER CONCRETE?

1. CONCRETE IS NOT FLEXIBLE AND IS PRONE TO CRACKING
2. ASPHALT CONCRETE IS FLEXIBLE WHILE PROVIDING STABILITY TO ENDURE WEIGHT OF A VEHICLE
3. ASPHALT CONCRETE MATERIALS ARE EASIER TO ACCESS AND OBTAIN

HOW DOES ASPHALT FAIL?



WEIGHT TRANSFER DISTRIBUTION
OF WHEEL LOAD ONTO PAVEMENT



PAVEMENT REACTION TO WHEEL LOAD

PAVEMENT MANAGEMENT SYSTEM

1. THE PURPOSE OF THE PAVEMENT MANAGEMENT SYSTEM IS TO DEVELOP A PLAN FOR MAINTAINING ROADWAY PAVEMENT CONDITION.

2. EACH ROAD IS GIVEN A PAVEMENT CONDITION INDEX FROM 0 TO 100 - WHERE 0 IS IDENTIFIED AS DIRT ROAD AND 100 IS IDENTIFIED AS NEW ASPHALT PAVEMENT.

3. COMPONENTS OF PAVEMENT CONDITION INDEX
   a. STREETS ARE BROKEN DOWN INTO BLOCK-SECTIONS
   b. MEASURES THE TYPE, EXTENT, SEVERITY OF PAVEMENT SURFACE DISTRESS, AND SMOOTHNESS & RIDE COMFORT OF THE ROAD
   c. CONSISTS OF VISUAL ROAD SURFACE INSPECTION. DOES NOT TAKE INTO CONSIDERATION OF THE STRUCTURAL SECTION OF THE ROAD
   d. A VISUAL INSPECTION OF SUBJECTIVE BASED ON THE INDIVIDUAL PERCEPTION OF THE ROAD DISTRESS. AUTO INSPECTION IS MORE UNIFORM AND MINIMIZES SUBJECTIVE EVALUATION
   e. INSPECTION SHOULD BE DONE ON AN ANNUAL BASIS

TYPES OF ASPHALT FAILURES

1. ALLIGATOR CRACKING
2. LONGITUDINAL CRACKING
3. TRAVERSE CRACKING
4. PATCHING AND POTHOLES
5. RUTTING
6. ROUGHNESS

TYPES OF ASPHALT FAILURES

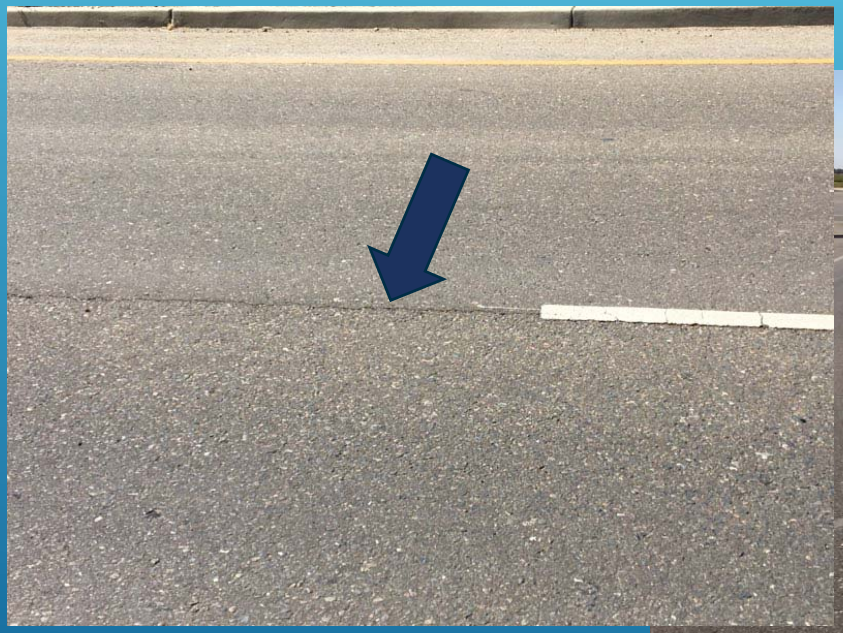
ALLIGATOR CRACKING



ALLIGATOR CRACKING IS EXCESSIVE AC CRACKING

TYPES OF ASPHALT FAILURES

LONGITUDINAL CRACKING







TYPES OF ASPHALT FAILURES

TRAVERSE CRACKING

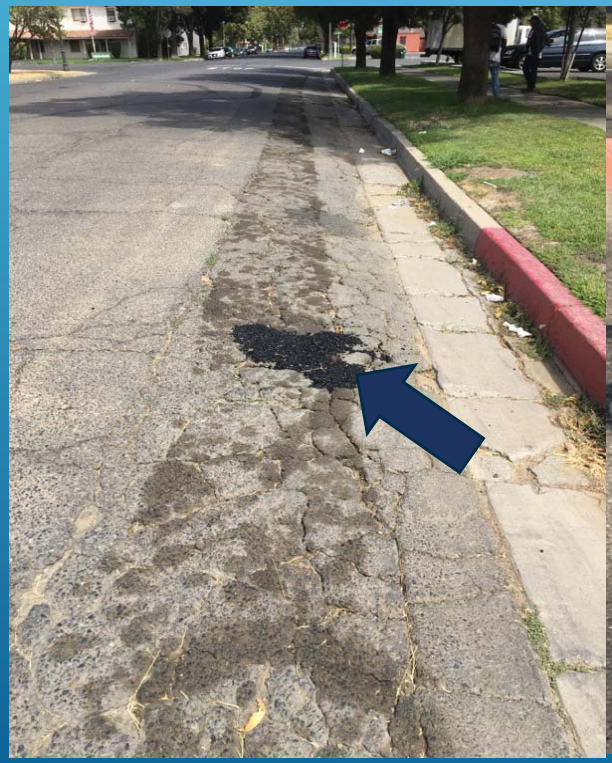






TYPES OF ASPHALT FAILURES

PATCHING AND POTHOLING FAILURE

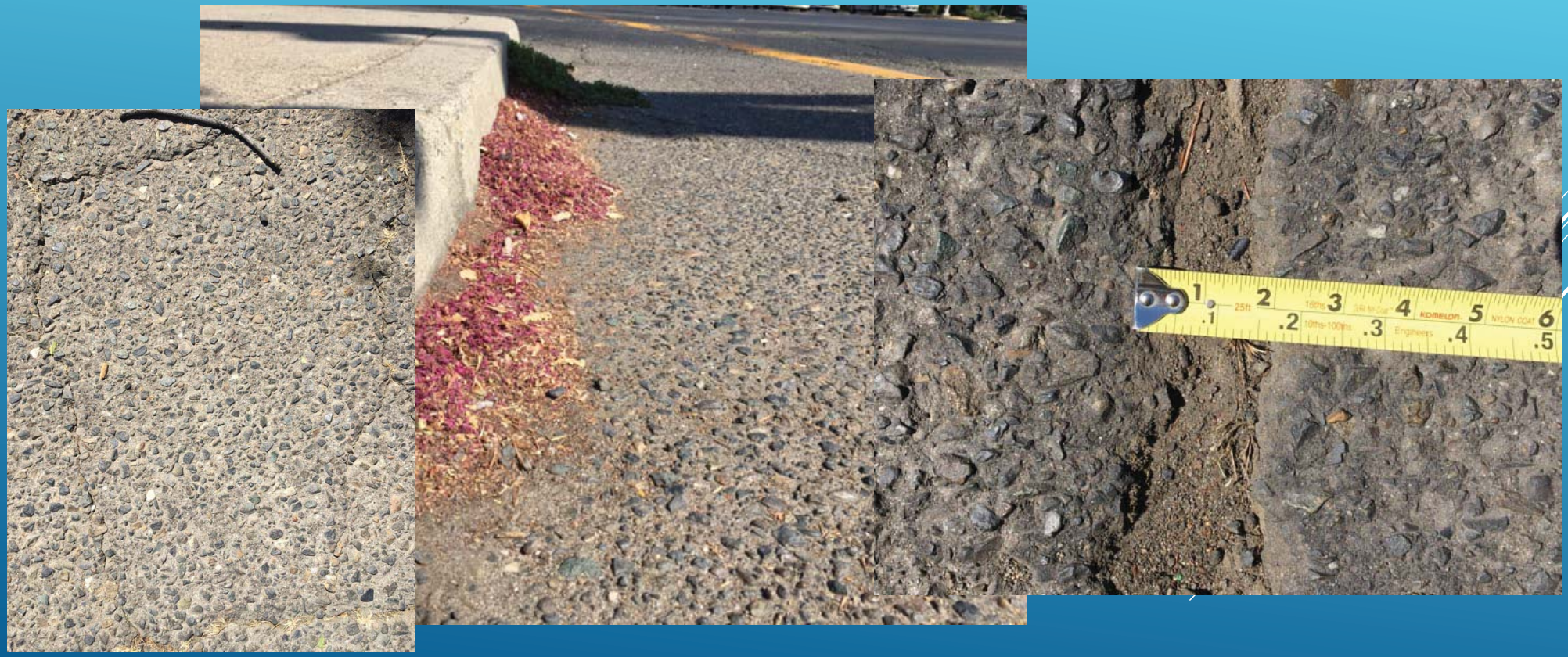






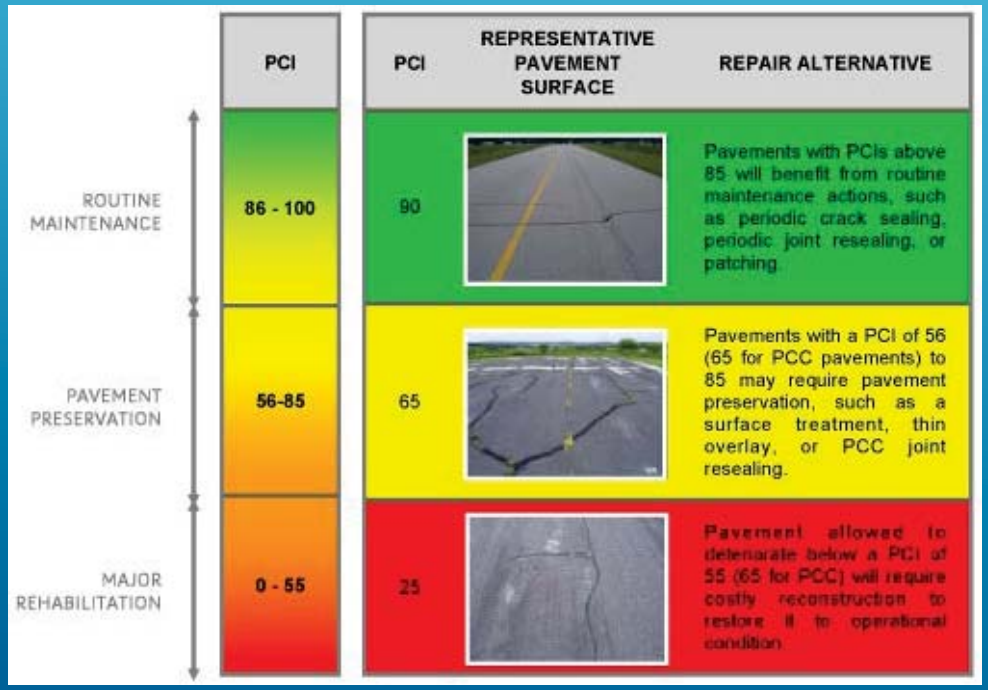
TYPES OF ASPHALT FAILURES

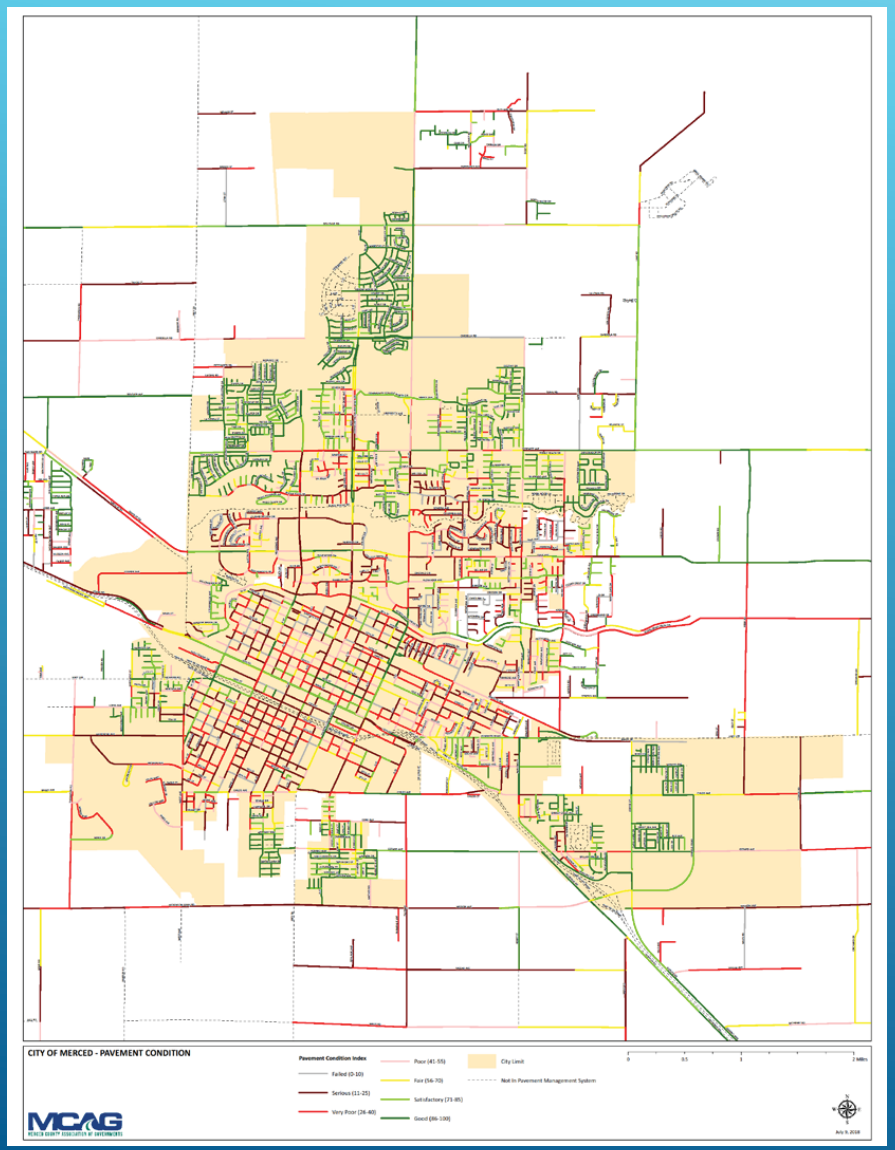
ROUGHNESS FAILURE

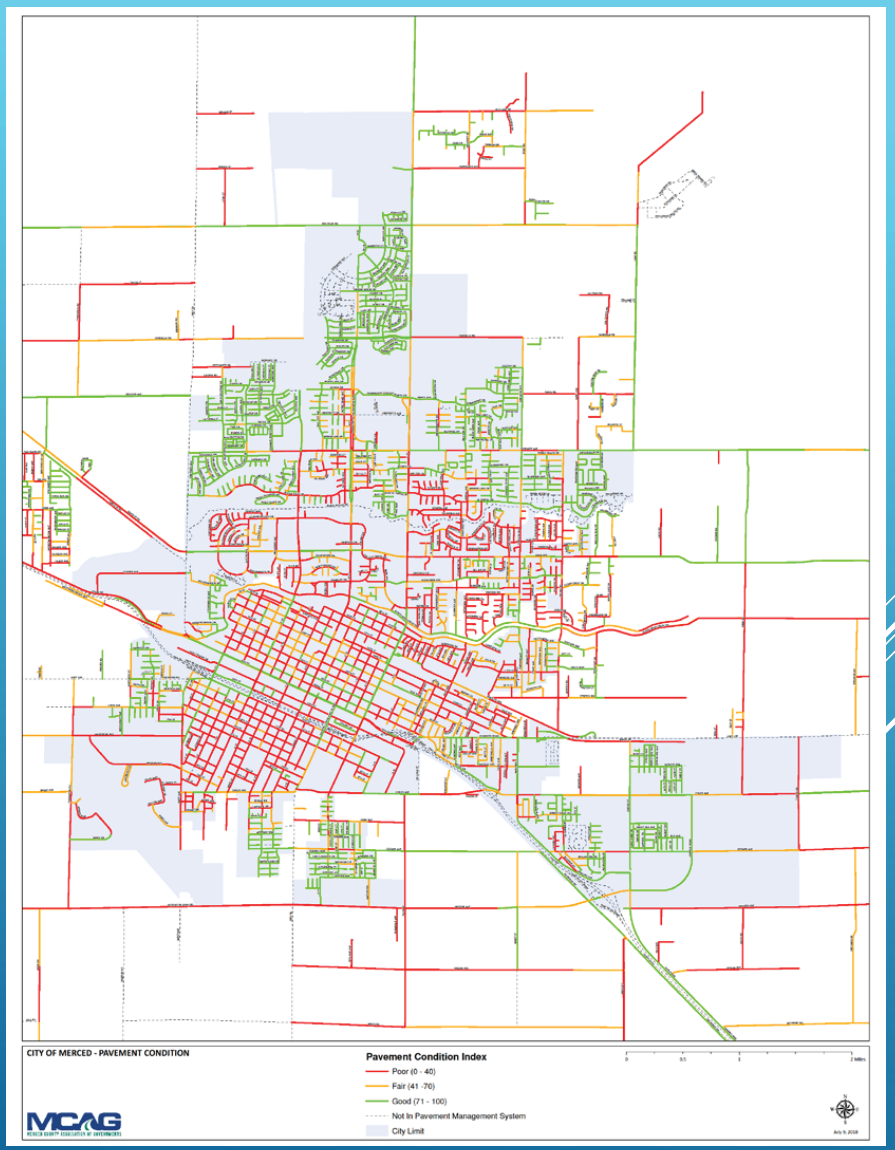


PAVEMENT CONDITION INDEX

BASED ON THE AUTOMATIC PAVEMENT ASSESSEMENT, THE CITY OF MERCED HAS A PAVEMENT CONDITION INDEX (PCI) OF 55. WHY IS THAT IMPORTANT?

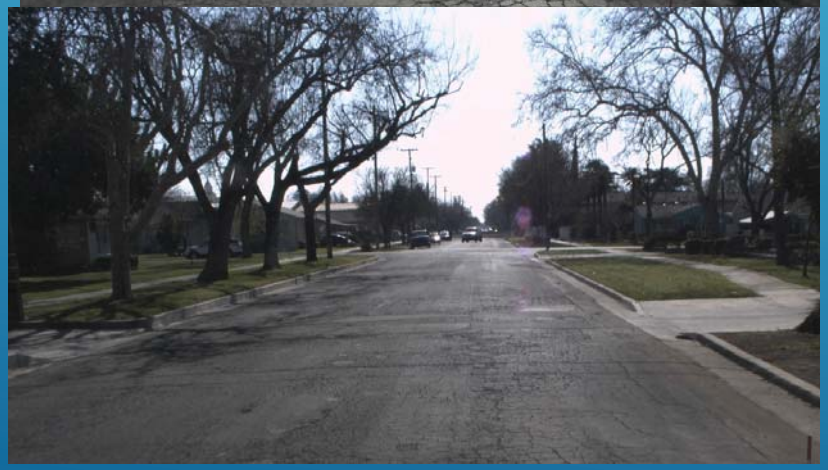



CITY OF MERCED - PAVEMENT CONDITION
Pavement Condition Index
Failed (0-10)
Serious (11-25)
Very Poor (26-40)
Poor (41-55)
Fair (56-70)
Satisfactory (71-85)
Good (86-100)
City Limit
Not In Pavement Management System
MCAG

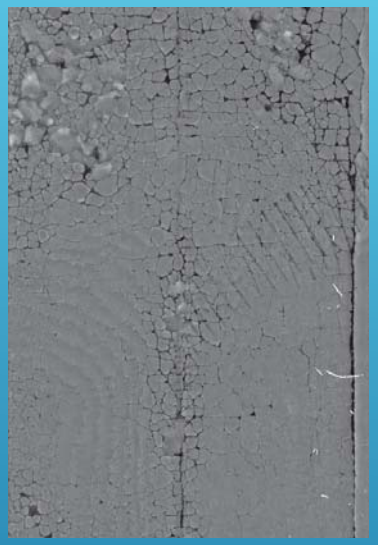

CITY OF MERCED - PAVEMENT CONDITION
Pavement Condition Index
Poor (0 - 40)
Fair (41 - 70)
Good (71 - 100)
Not In Pavement Management System
City Limit
MCAG

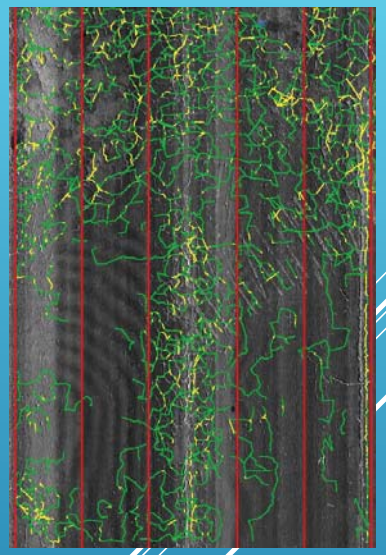
PAVEMENT CONDITION INDEX





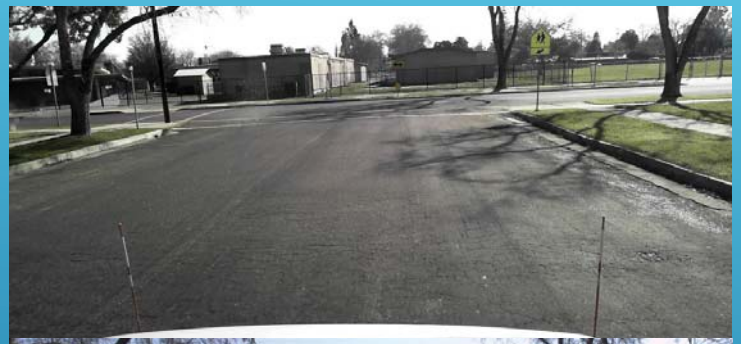






O STREET – 26TH STREET TO 25TH STREET
PCI 0-10

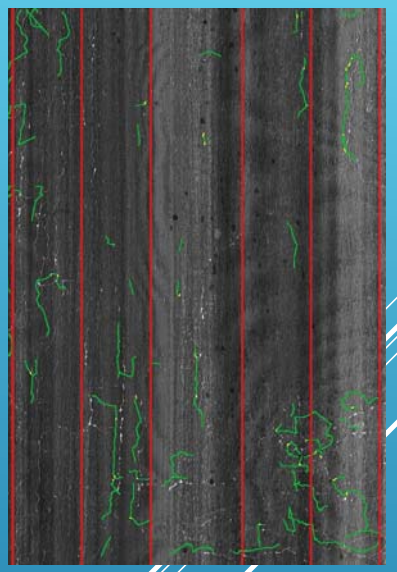
PAVEMENT CONDITION INDEX











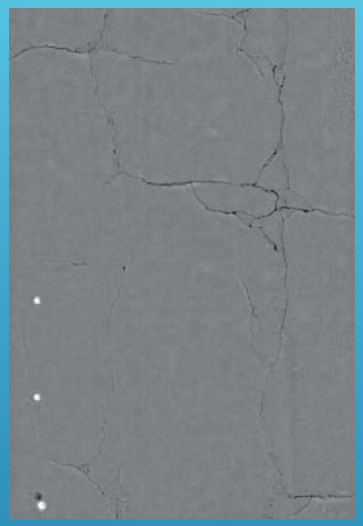
21ST STREET – FROM “S” ST. TO “T” ST.
PCI 11-25

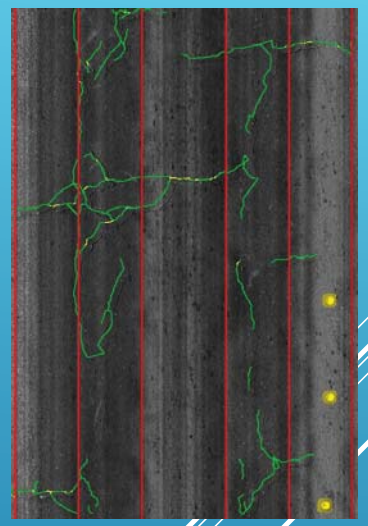
PAVEMENT CONDITION INDEX





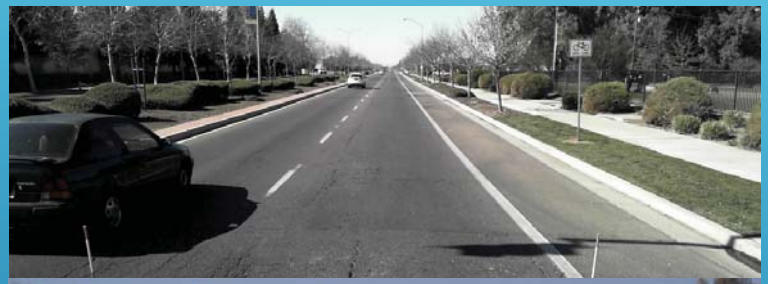


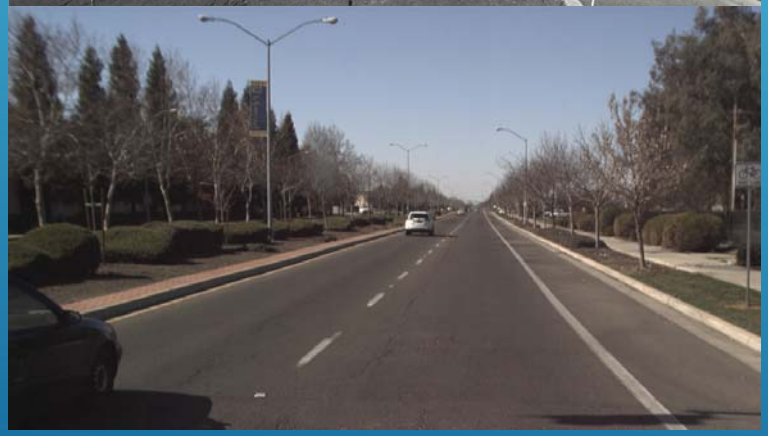


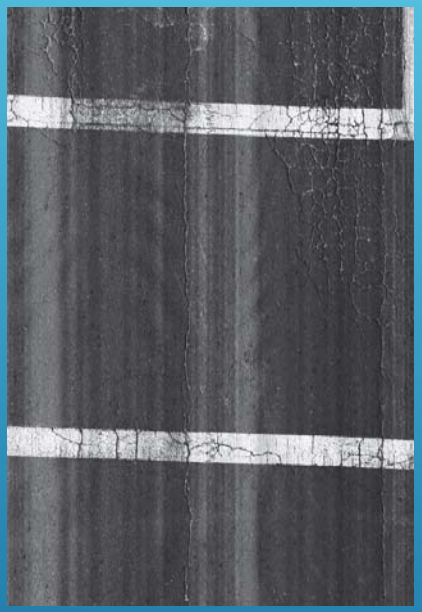


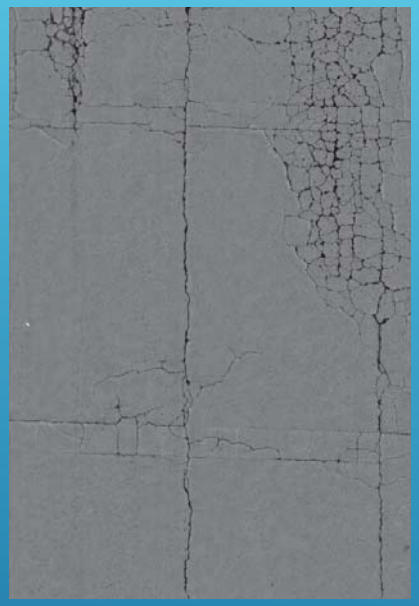
G STREET – FROM OLIVE AVE. TO ALEXANDER AVE.
PCI 26-40

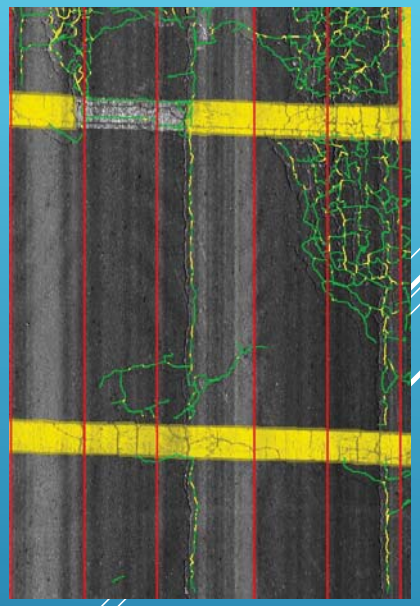
PAVEMENT CONDITION INDEX









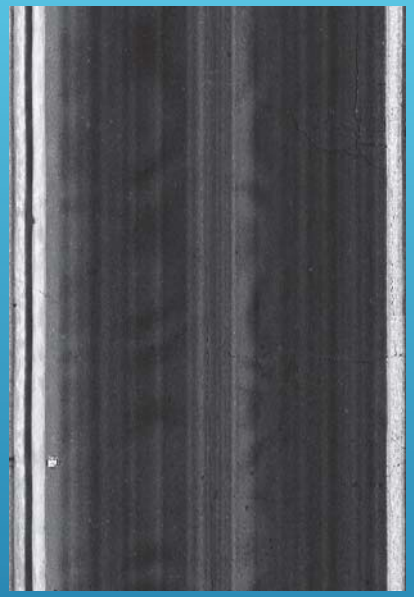


YOSEMITE AVENUE – FROM EL REDONDO TO COMPASS POINT
PCI 41-55

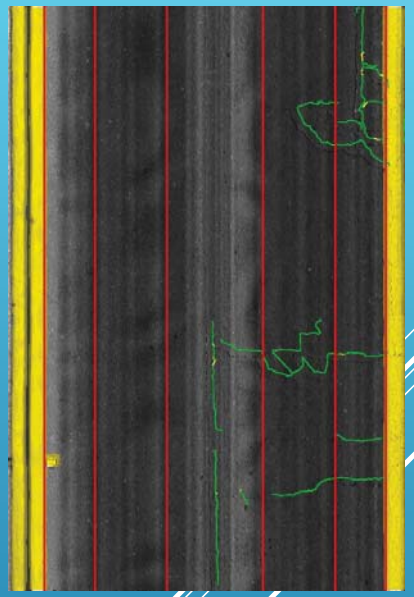
PAVEMENT CONDITION INDEX









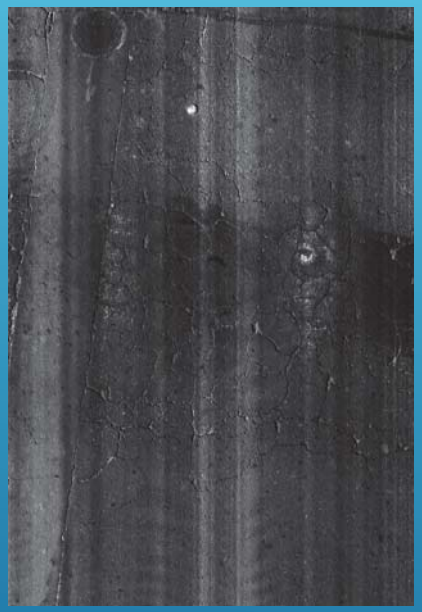


EL REDONDO DRIVE – FROM YOSEMITE AVE TO HERMOSA DR
PCI 56-70

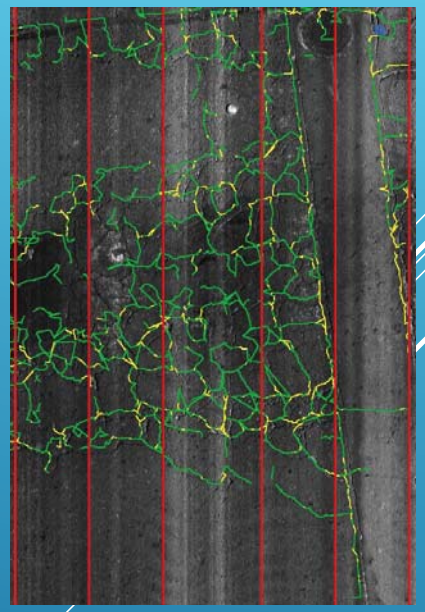
PAVEMENT CONDITION INDEX









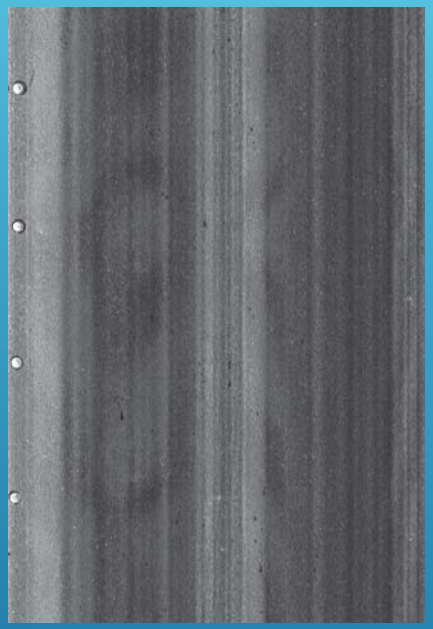


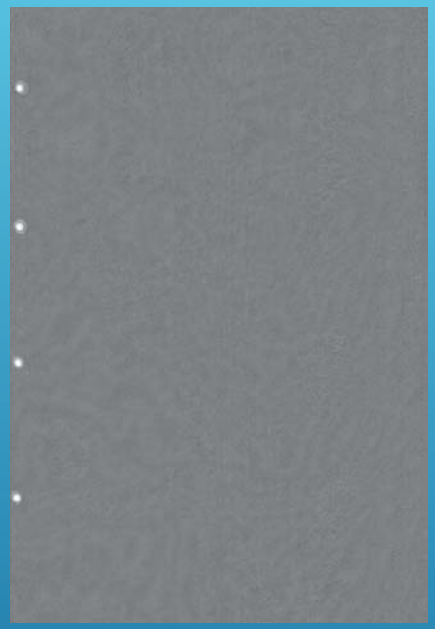
MERCY AVE – FROM G ST. TO MANSIONETTE DR.
PCI 71-85

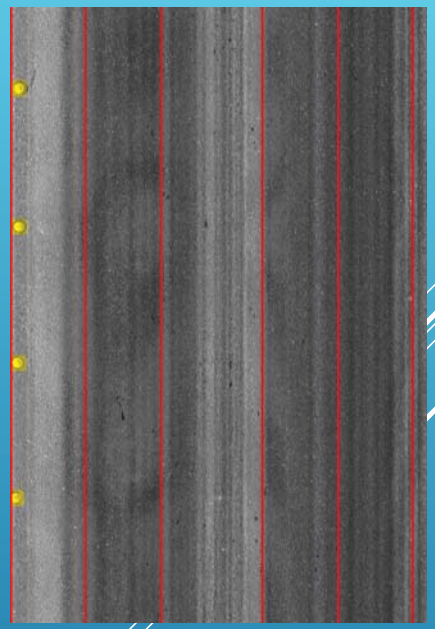
PAVEMENT CONDITION INDEX











M STREET – SOUTH OF BELLEVUE ROAD
PCI 85-100

WHAT DOES ALL OF THIS MEAN?

THE CITY'S AVERAGE PCI IS 55 WHICH IS CONSIDERED POOR PAVEMENT CONDITION.

- WHY IS THIS SIGNIFICANT ?
- HOW WILL THIS IMPACT THE CITY AND THE BUDGET?
- WHAT HAPPENS IF NO ACTION IS TAKEN TO MAINTAIN CITY STREETS?
- WHAT IS A DESIRED PCI LEVEL?
- WHAT ARE SOME OF THE FUNDING SOURCES TO MAINTAIN CITY STREETS?

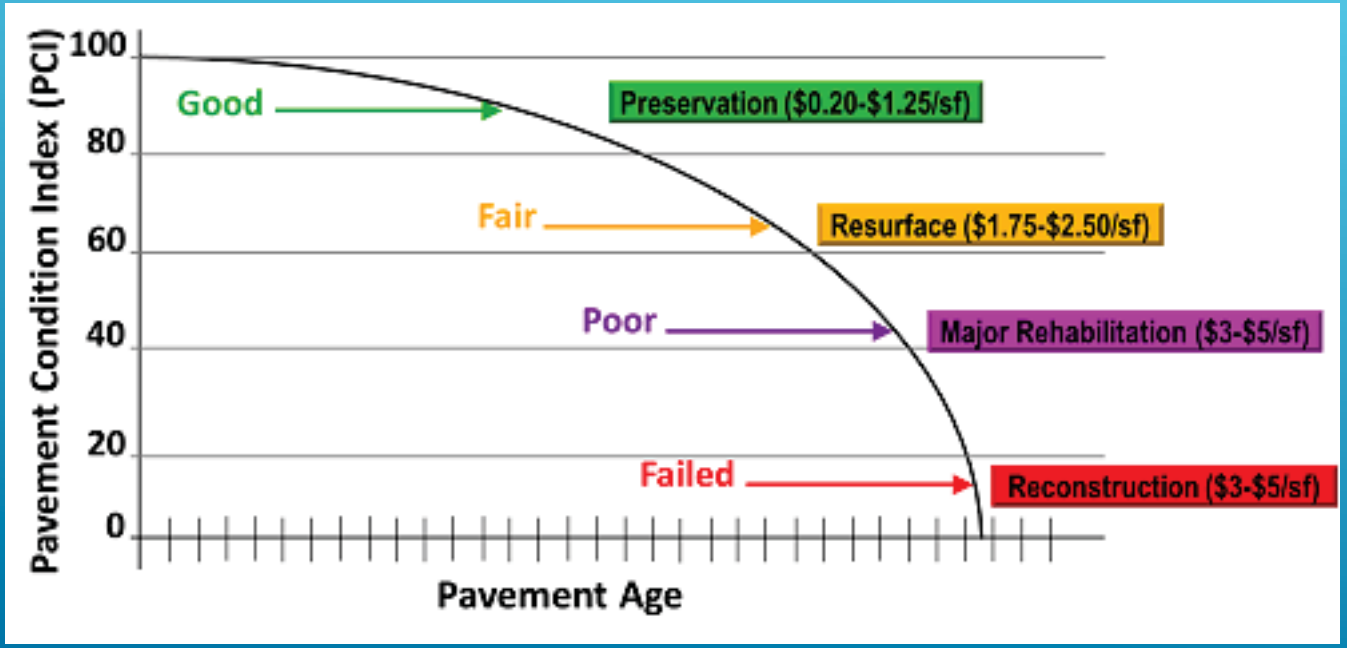
WHAT DOES ALL OF THIS MEAN?





VISUAL OF ROAD CONDITION AT A PCI OF 55

WHY IS THIS SIGNIFICANT?



THE CURRENT PCI OF 55 IS VERY IMPORTANT. THE GRAPH SHOWS WHAT RESOURCES WILL BE NECESSARY TO BRING THE CONDITION OF THE EXISTING PAVEMENT TO A HIGHER LEVEL. WHAT IS THE DESIRED PCI LEVEL THE CITY SHOULD UPHOLD? A PCI OF 60, 65, OR 70?

TYPES OF ROAD TREATMENT

MINOR ROAD TREATMENT

CRACK SEAL – INTENDED TO SEAL CRACKS ON THE STREET





SLURRY SEAL – REJUVENATE THE OIL IN THE ASPHALT AND REINTRODUCE FINE





TYPES OF ROAD TREATMENT

MINOR ROAD TREATMENT

CHIP SEAL – EMULSION IS SPRAYED OVER THE ROAD AND "CHIPS" (SMALL ROCKS) ARE APPLIED ON TOP OF THE STREET







CAPE SEAL – COMBINATION OF A CHIP SEAL AND SLURRY SEAL

TYPES OF ROAD TREATMENT

MAJOR ROAD TREATMENT

OVERLAY – PLACEMENT OF NEW ASPHALT CONCRETE ON TOP OF EXISTING CONCRETE



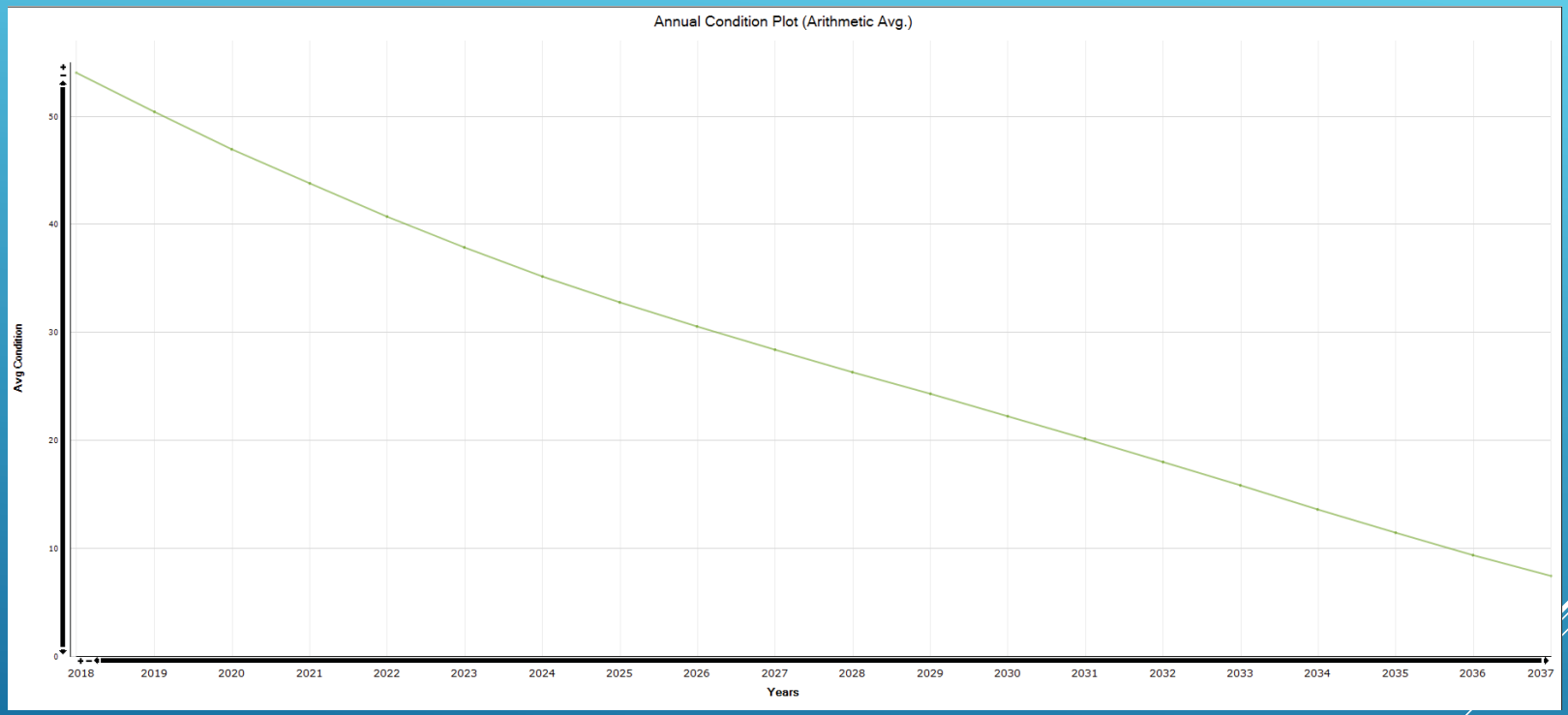


FULL DEPTH RECLAMATION (FDR) – PLACEMENT OF LIME (CEMENT) ONTO THE BASE OF THE ASPHALT





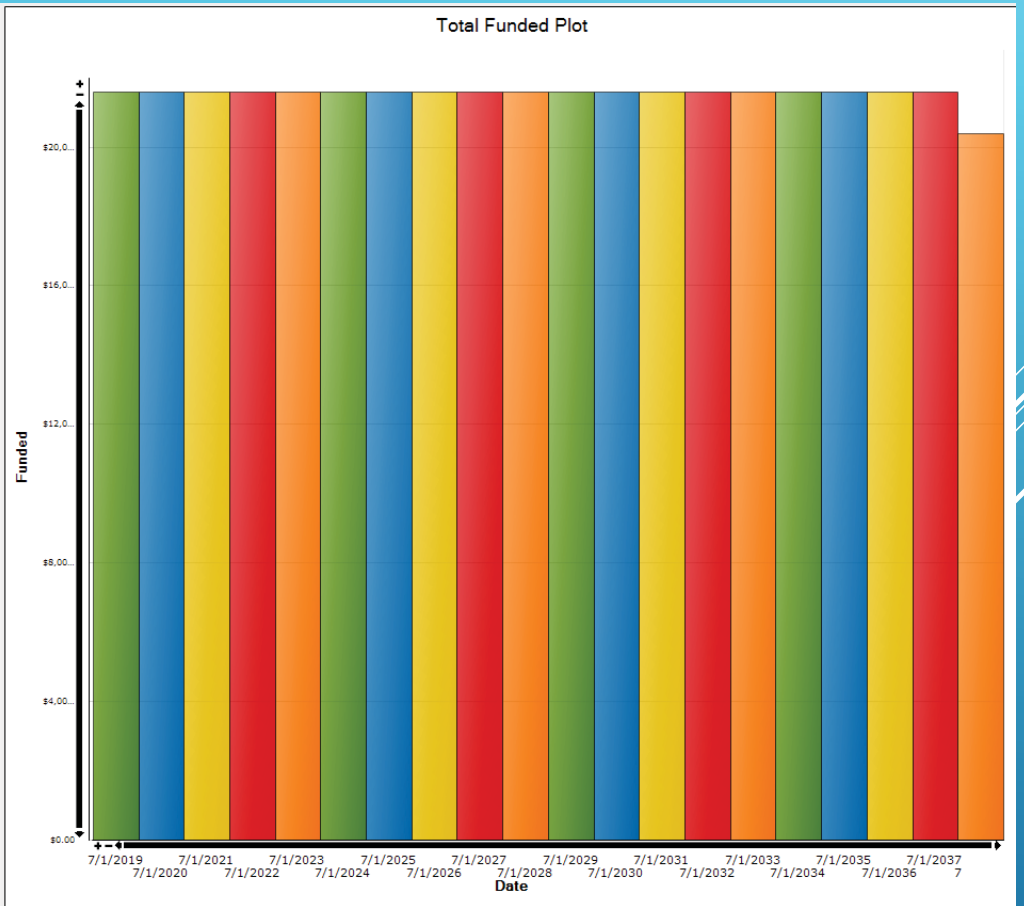
WHAT HAPPENS IF NO ACTION IS TAKEN TO MAINTAIN CITY STREETS?



UNDER CURRENT PAVEMENT CONDITION, THIS IS A REPRESENTATIVE OF THE STREET DETERIORATION RATE.

WHAT WOULD IT TAKE TO FIX THE ACCUMULATION OF STREET REPAIRS?

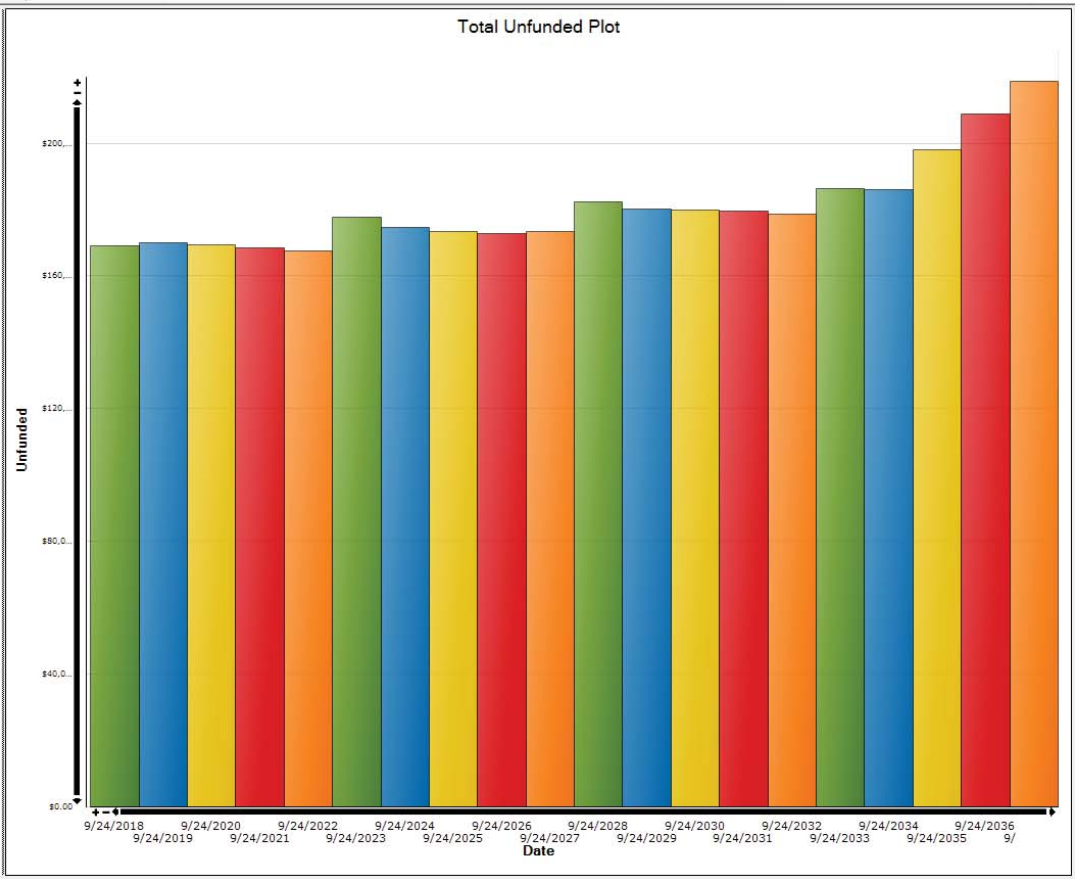
Date	Stop Gap Funded	Preventive Funded	Global Funded	Major Under Critical Funded	Major Above Critical Funded	Layer Construct Funded	Total
7/1/2019	$1,170,032.80	$231,402.08	$0.00	$20,036,087.74	$176,710.09	$0.00	$21,614,232.72
7/1/2020	$1,219,954.75	$240,871.11	$0.00	$20,155,437.17	$0.00	$0.00	$21,616,263.03
7/1/2021	$1,256,216.44	$239,988.20	$0.00	$20,119,085.62	$0.00	$0.00	$21,615,290.26
7/1/2022	$1,249,443.25	$250,948.72	$0.00	$20,113,796.35	$0.00	$0.00	$21,614,188.32
7/1/2023	$1,302,336.97	$283,109.11	$0.00	$20,030,238.58	$0.00	$0.00	$21,615,684.66
7/1/2024	$1,299,841.42	$328,158.21	$0.00	$19,988,616.89	$0.00	$0.00	$21,616,616.51
7/1/2025	$1,252,508.53	$379,635.86	$0.00	$19,984,572.97	$0.00	$0.00	$21,616,717.36
7/1/2026	$1,012,092.70	$420,128.05	$0.00	$20,184,696.09	$0.00	$0.00	$21,616,916.84
7/1/2027	$808,842.24	$498,439.96	$0.00	$20,309,717.53	$0.00	$0.00	$21,616,999.73
7/1/2028	$669,074.44	$586,041.94	$0.00	$20,362,086.05	$0.00	$0.00	$21,617,202.44
7/1/2029	$574,534.94	$631,991.80	$0.00	$20,409,668.69	$0.00	$0.00	$21,616,195.43
7/1/2030	$433,412.43	$725,795.16	$0.00	$20,457,876.76	$0.00	$0.00	$21,617,084.34
7/1/2031	$367,844.54	$770,123.56	$0.00	$20,474,170.14	$0.00	$0.00	$21,612,138.23
7/1/2032	$262,570.26	$844,677.78	$0.00	$20,509,863.19	$0.00	$0.00	$21,617,111.23
7/1/2033	$201,731.70	$925,202.84	$0.00	$20,487,493.56	$0.00	$0.00	$21,614,428.10
7/1/2034	$212,033.82	$906,051.43	$0.00	$20,498,328.04	$0.00	$0.00	$21,616,413.30
7/1/2035	$225,876.42	$855,560.17	$0.00	$20,534,485.90	$0.00	$0.00	$21,615,922.49
7/1/2036	$232,814.12	$817,795.57	$0.00	$20,561,625.28	$0.00	$0.00	$21,612,234.97
7/1/2037	$194,642.28	$889,190.07	$0.00	$20,533,263.05	$0.00	$0.00	$21,617,095.40
7/1/2038	$0.00	$998,959.54	$0.00	$19,387,080.23	$0.00	$0.00	$20,386,039.78



THE CITY WOULD NEED TO SPEND $21,614,232 TO ADDRESS CURRENT BACKLOG OF WORK

WHAT WOULD IT TAKE TO STABILIZE OUR STREETS?

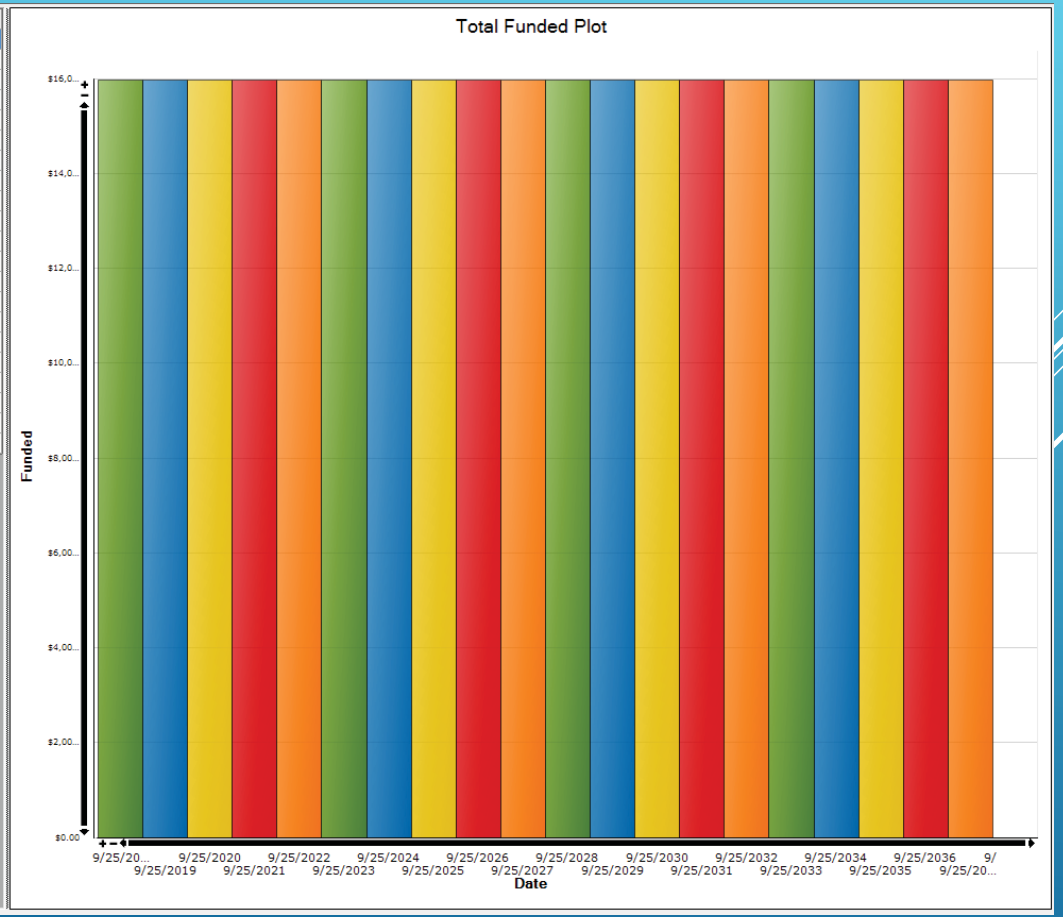
Date	Stop Gap Unfunded	Preventive Unfunded	Global Unfunded	Major Under Critical Unfunded	Major Above Critical Unfunded	Total Unfunded
9/24/2018	$0.00	$0.00	$0.00	$169,048,112.63	$0.00	$169,048,112.63
9/24/2019	$0.00	$0.00	$0.00	$170,008,610.17	$0.00	$170,008,610.17
9/24/2020	$0.00	$0.00	$0.00	$169,510,560.19	$0.00	$169,510,560.19
9/24/2021	$0.00	$0.00	$0.00	$168,467,753.44	$0.00	$168,467,753.44
9/24/2022	$0.00	$0.00	$0.00	$167,620,307.23	$0.00	$167,620,307.23
9/24/2023	$0.00	$0.00	$0.00	$177,770,280.74	$0.00	$177,770,280.74
9/24/2024	$0.00	$0.00	$0.00	$174,712,079.77	$0.00	$174,712,079.77
9/24/2025	$0.00	$0.00	$0.00	$173,482,600.98	$0.00	$173,482,600.98
9/24/2026	$0.00	$0.00	$0.00	$172,824,217.85	$0.00	$172,824,217.85
9/24/2027	$0.00	$0.00	$0.00	$173,409,851.57	$0.00	$173,409,851.57
9/24/2028	$0.00	$0.00	$0.00	$182,422,032.05	$0.00	$182,422,032.05
9/24/2029	$0.00	$0.00	$0.00	$180,285,589.74	$0.00	$180,285,589.74
9/24/2030	$0.00	$0.00	$0.00	$180,027,230.29	$0.00	$180,027,230.29
9/24/2031	$0.00	$0.00	$0.00	$179,737,163.07	$0.00	$179,737,163.07
9/24/2032	$0.00	$0.00	$0.00	$178,745,364.02	$0.00	$178,745,364.02
9/24/2033	$0.00	$0.00	$0.00	$186,494,987.13	$0.00	$186,494,987.13
9/24/2034	$0.00	$0.00	$0.00	$186,068,672.91	$0.00	$186,068,672.91
9/24/2035	$0.00	$0.00	$0.00	$198,031,285.43	$0.00	$198,031,285.43
9/24/2036	$0.00	$0.00	$0.00	$209,010,877.93	$0.00	$209,010,877.93
9/24/2037	$0.00	$0.00	$0.00	$218,956,702.28	$0.00	$218,956,702.28



TO MAINTAIN THE CITY'S PAVEMENT CONDITION INDEX TO A PCI OF 55, WE WOULD NEED TO INVEST IN THE AMOUNT OF $169 MILLION AND INCREASE IT TO $219 MILLION WITHIN 20 YEARS

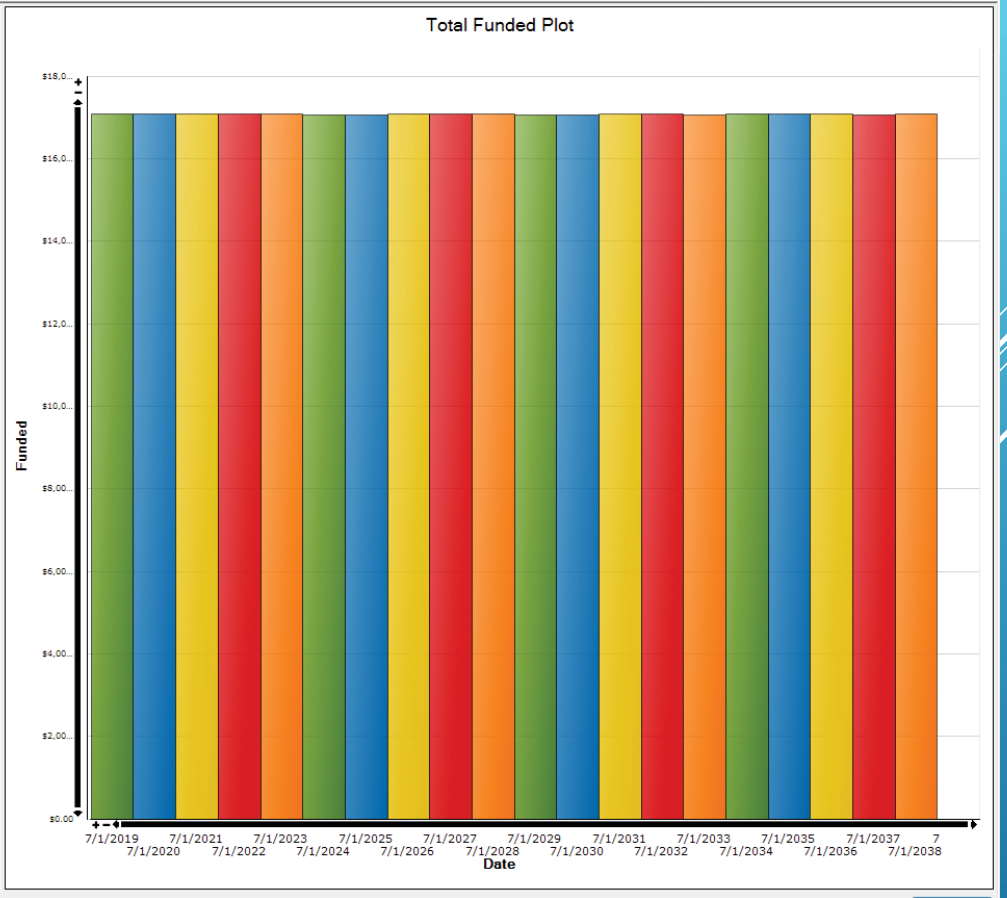
WHAT WOULD IT TAKE TO IMPROVE OUR STREETS TO A PCI OF 60?

Date	Stop Gap Funded	Preventive Funded	Global Funded	Major Under Critical Funded	Major Above Critical Funded	Layer Construct Funded	Total
9/25/2018	$1,144,372.97	$225,385.65	$11,483,258.08	$2,915,258.47	$206,923.18	$0.00	$15,975,198.34
9/25/2019	$1,231,793.17	$159,772.96	$1,924,784.08	$12,658,213.14	$0.00	$0.00	$15,974,563.35
9/25/2020	$1,313,154.72	$211,037.03	$3,421,381.43	$11,033,055.22	$0.00	$0.00	$15,978,628.39
9/25/2021	$1,386,096.21	$267,016.60	$3,992,804.95	$10,329,674.34	$0.00	$0.00	$15,975,592.10
9/25/2022	$1,440,751.17	$262,570.68	$9,862.79	$14,262,448.72	$0.00	$0.00	$15,975,633.37
9/25/2023	$1,562,527.46	$282,219.73	$10,608,680.58	$3,521,599.03	$0.00	$0.00	$15,975,026.81
9/25/2024	$1,587,191.56	$249,443.37	$2,231,352.28	$11,909,647.99	$0.00	$0.00	$15,977,635.21
9/25/2025	$1,591,981.20	$322,563.01	$3,966,318.79	$10,097,992.16	$0.00	$0.00	$15,978,855.17
9/25/2026	$1,648,581.56	$403,353.98	$4,628,755.26	$9,295,139.75	$0.00	$0.00	$15,975,830.55
9/25/2027	$1,653,982.72	$396,441.43	$11,433.68	$13,916,915.34	$0.00	$0.00	$15,978,773.17
9/25/2028	$1,710,410.38	$451,458.15	$9,586,675.30	$4,230,705.88	$0.00	$0.00	$15,979,249.72
9/25/2029	$1,573,490.03	$447,071.35	$2,586,748.85	$11,370,840.34	$0.00	$0.00	$15,978,150.57
9/25/2030	$1,453,227.49	$535,226.04	$4,598,050.55	$9,392,854.83	$0.00	$0.00	$15,979,358.91
9/25/2031	$1,367,946.06	$636,067.78	$5,365,995.97	$8,609,204.92	$0.00	$0.00	$15,979,214.74
9/25/2032	$1,341,712.79	$699,992.34	$13,254.77	$13,921,665.84	$0.00	$0.00	$15,976,625.74
9/25/2033	$1,368,829.76	$824,447.47	$8,819,428.41	$4,962,813.39	$0.00	$0.00	$15,975,519.03
9/25/2034	$1,347,001.42	$847,665.72	$2,998,750.88	$10,785,991.47	$0.00	$0.00	$15,979,409.49
9/25/2035	$1,402,145.64	$863,146.85	$5,330,400.79	$8,381,579.60	$0.00	$0.00	$15,977,272.88
9/25/2036	$1,454,267.48	$909,514.12	$6,220,660.01	$7,393,834.34	$0.00	$0.00	$15,978,275.96
9/25/2037	$1,502,299.78	$904,120.35	$15,365.91	$13,557,512.58	$0.00	$0.00	$15,979,298.62
9/25/2038	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00



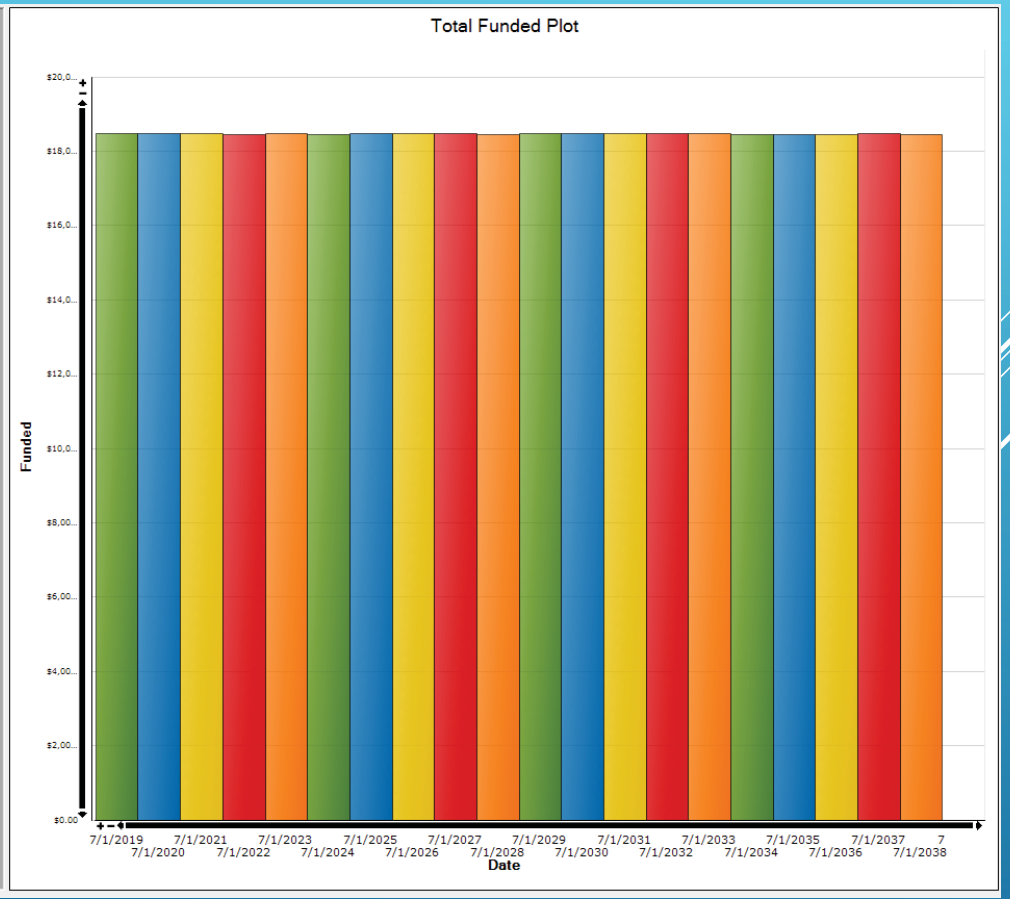
WHAT WOULD IT TAKE TO IMPROVE OUR STREETS TO A PCI OF 65?

Date	Stop Gap Funded	Preventive Funded	Global Funded	Major Under Critical Funded	Major Above Critical Funded	Layer Construct Funded	Total
7/1/2019	$1,186,926.89	$231,402.08	$0.00	$15,490,040.99	$176,710.09	$0.00	$17,085,080.06
7/1/2020	$1,264,791.88	$240,871.11	$0.00	$15,579,242.06	$0.00	$0.00	$17,084,905.04
7/1/2021	$1,324,570.43	$239,988.20	$0.00	$15,519,665.42	$0.00	$0.00	$17,084,224.05
7/1/2022	$1,383,855.49	$250,327.77	$0.00	$15,448,665.97	$0.00	$0.00	$17,082,849.23
7/1/2023	$1,387,738.96	$279,293.75	$0.00	$15,418,379.45	$0.00	$0.00	$17,085,412.16
7/1/2024	$1,454,511.52	$319,997.29	$0.00	$15,306,281.76	$0.00	$0.00	$17,080,790.57
7/1/2025	$1,489,959.96	$367,599.29	$0.00	$15,222,159.00	$0.00	$0.00	$17,079,718.25
7/1/2026	$1,504,213.72	$403,911.05	$0.00	$15,177,199.60	$0.00	$0.00	$17,085,324.38
7/1/2027	$1,455,770.94	$478,015.72	$0.00	$15,151,649.26	$0.00	$0.00	$17,085,435.93
7/1/2028	$1,234,145.56	$556,599.66	$0.00	$15,294,730.94	$0.00	$0.00	$17,085,476.15
7/1/2029	$1,203,175.72	$592,039.41	$0.00	$15,283,493.25	$0.00	$0.00	$17,078,708.39
7/1/2030	$1,098,288.35	$671,457.80	$0.00	$15,311,706.95	$0.00	$0.00	$17,081,453.11
7/1/2031	$1,097,968.54	$697,710.21	$0.00	$15,288,697.06	$0.00	$0.00	$17,084,375.81
7/1/2032	$1,099,541.59	$750,066.32	$0.00	$15,235,656.71	$0.00	$0.00	$17,085,264.63
7/1/2033	$1,103,450.19	$798,920.96	$0.00	$15,171,483.02	$0.00	$0.00	$17,073,854.17
7/1/2034	$1,157,096.13	$735,448.07	$0.00	$15,190,145.88	$0.00	$0.00	$17,082,690.07
7/1/2035	$1,202,727.66	$696,875.38	$0.00	$15,183,363.82	$0.00	$0.00	$17,082,966.87
7/1/2036	$1,242,437.67	$677,455.10	$0.00	$15,163,927.15	$0.00	$0.00	$17,083,819.92
7/1/2037	$1,293,867.25	$649,763.02	$0.00	$15,136,261.29	$0.00	$0.00	$17,079,891.56
7/1/2038	$1,325,925.31	$749,141.87	$0.00	$15,008,513.65	$0.00	$0.00	$17,083,580.83
7/1/2039	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

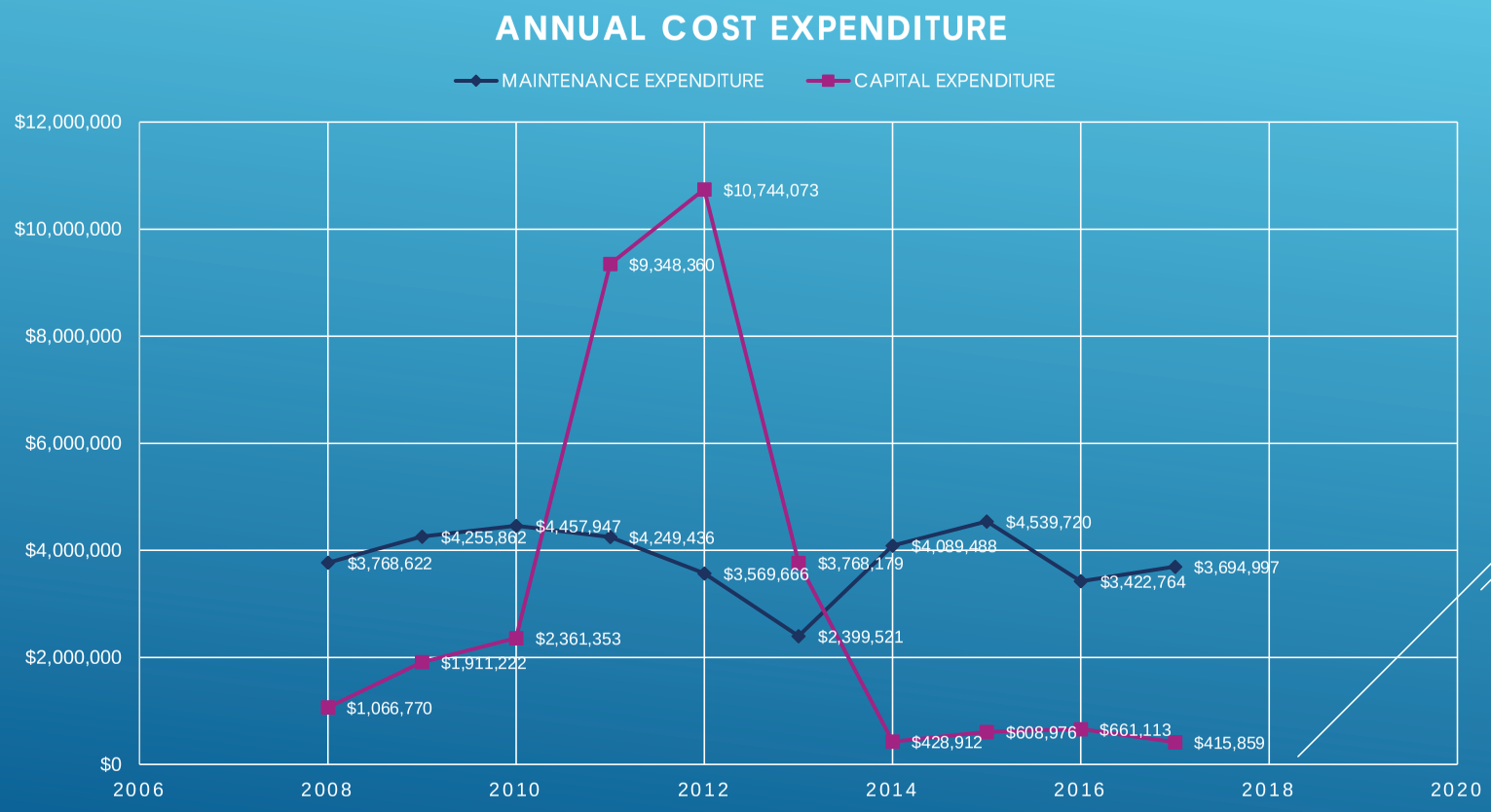


WHAT WOULD IT TAKE TO IMPROVE OUR STREETS TO A PCI OF 70?

Date	Stop Gap Funded	Preventive Funded	Global Funded	Major Under Critical Funded	Major Above Critical Funded	Layer Construct Funded	Total
7/1/2019	$1,181,714.59	$231,402.08	$0.00	$16,888,380.39	$176,710.09	$0.00	$18,478,207.15
7/1/2020	$1,251,386.85	$240,871.11	$0.00	$16,986,114.65	$0.00	$0.00	$18,478,372.61
7/1/2021	$1,295,771.33	$239,988.20	$0.00	$16,941,472.33	$0.00	$0.00	$18,477,231.86
7/1/2022	$1,342,066.59	$250,518.77	$0.00	$16,883,674.29	$0.00	$0.00	$18,476,259.65
7/1/2023	$1,357,979.06	$280,467.83	$0.00	$16,840,466.22	$0.00	$0.00	$18,478,913.10
7/1/2024	$1,420,050.50	$322,870.57	$0.00	$16,733,122.50	$0.00	$0.00	$18,476,043.57
7/1/2025	$1,424,688.63	$371,988.37	$0.00	$16,680,622.60	$0.00	$0.00	$18,477,299.60
7/1/2026	$1,404,773.57	$409,205.72	$0.00	$16,665,533.90	$0.00	$0.00	$18,479,513.19
7/1/2027	$1,173,496.68	$484,280.59	$0.00	$16,821,924.79	$0.00	$0.00	$18,479,702.06
7/1/2028	$1,041,864.06	$565,923.05	$0.00	$16,867,999.48	$0.00	$0.00	$18,475,786.59
7/1/2029	$989,379.63	$604,618.01	$0.00	$16,882,671.92	$0.00	$0.00	$18,476,669.56
7/1/2030	$910,704.75	$688,214.60	$0.00	$16,878,328.53	$0.00	$0.00	$18,477,247.88
7/1/2031	$859,080.63	$720,445.38	$0.00	$16,899,738.84	$0.00	$0.00	$18,479,264.85
7/1/2032	$837,454.70	$779,619.51	$0.00	$16,861,741.56	$0.00	$0.00	$18,478,815.77
7/1/2033	$833,386.22	$838,413.15	$0.00	$16,807,589.55	$0.00	$0.00	$18,479,388.92
7/1/2034	$873,959.77	$788,247.33	$0.00	$16,809,573.70	$0.00	$0.00	$18,471,780.80
7/1/2035	$910,092.60	$749,719.32	$0.00	$16,812,774.08	$0.00	$0.00	$18,472,586.00
7/1/2036	$939,999.99	$723,045.37	$0.00	$16,813,250.90	$0.00	$0.00	$18,476,296.25
7/1/2037	$978,417.09	$689,564.50	$0.00	$16,809,467.51	$0.00	$0.00	$18,477,449.10
7/1/2038	$974,955.29	$862,643.39	$0.00	$16,634,403.60	$0.00	$0.00	$18,472,002.28
7/1/2039	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00



HISTORICALLY, HOW MUCH MONEY HAS THE CITY SPENT ON STREETS?



WHAT FUNDING SOURCES ARE AVAILABLE TO IMPROVE STREET CONDITIONS?

1. SENATE BILL 1 (SB1)
2. MEASURE V – COUNTY WIDE SALES TAX
3. GAS TAX –LTF
4. FEDERAL FUNDS

FUNDING SOURCES & REQUIREMENTS

WHERE CAN SB1 BE USED?

1. THE FUNDS WILL ASSIST WITH THE REPAIRS TO LOCAL STREETS.
2. CAN BE USED AS A MATCHING FUND FOR OTHER GRANTS

WHAT TYPE OF PROJECTS QUALIFY?

1. MAINTENANCE AND REHABILITATION – MINOR MAINTENANCE (POTHOLE, CRACK SEAL, ETC.) AND MAJOR MAINTENANCE (THIN OVERLAY)
2. CAPACITY EXPANSION OF A STREET

WHERE CAN MEASURE V BE USED?

1. THE FUNDS ARE INTENDED TO BE FLEXIBLE AS POSSIBLE TO DEVELOP A PRIORITY LIST OF LOCAL PROJECTS.
2. CAN BE USED FOR MINOR MAINTENANCE TO MAJOR MAINTENANCE OF STREETS. FUNDS CAN ALSO BE USED TO REPAIR SIDEWALKS, SAFE ROUTES TO SCHOOL, AND FREEWAY INTERCHANGE IMPROVEMENTS

WHAT TYPES OF PROJECTS QUALIFY?

1. ANY STREET PROJECT FROM DAILY MAINTENANCE TO CAPITAL IMPROVEMENT PROJECTS WOULD QUALIFY FOR MEASURE V FUNDING

FUNDING SOURCES & REQUIREMENTS (continued)

WHERE CAN GAS TAX (LTF) BE USED?

1. FUNDS ARE PRIMARILY DESIGNATED FOR TRANSIT NEEDS
2. REMAINING FUNDS CAN BE EXPENDED FOR NON-TRANSIT USES, SUCH AS: STREETS & ROADS AND PEDESTRIAN & BICYCLE FACILITIES

WHERE CAN FEDERAL FUNDING BE USED?

1. THE FUNDS CAN ONLY BE USED ON STREETS IDENTIFIED AS ARTERIAL AND COLLECTOR IN THE CITY'S STREET CLASSIFICATION
2. THE PROPOSED PROJECT MUST BE IDENTIFIED IN THE FEDERAL TRANSPORTATION IMPROVEMENT PLAN (FTIP)

WHAT TYPES OF PROJECTS QUALIFY?

1. IF AWARDED, THE REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (RTIP) ALLOWS THE FUNDING TO BE UTILIZED FOR STREET WIDENING AND RECONSTRUCTION. THIS IS THE MOST FLEXIBLE FUNDING SOURCE FROM THE FEDERAL HIGHWAY ADMINISTRATION

ACTION PLAN

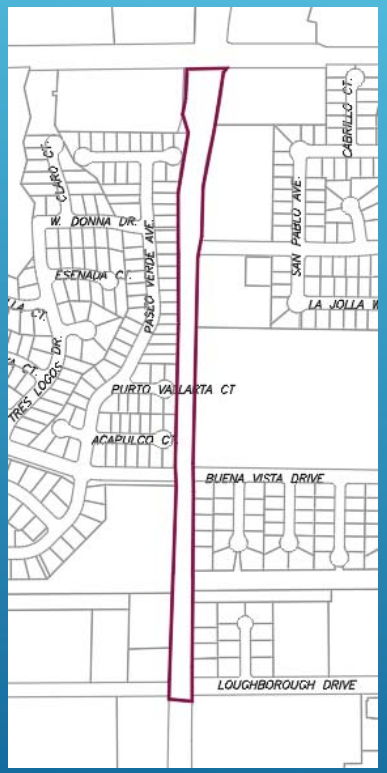
1. **WHAT IS AN ACCEPTABLE PCI WE SHOULD STRIVE FOR?**
2. **HOW DO WE MANAGE STREET DETERIORATION?**
3. **WHAT PROJECTS SHOULD BE PROGRAMED FOR THE NEAR FUTURE?**
4. **WHAT PROJECTS SHOULD BE CONSIDERED IN THE DISTANT FUTURE?**

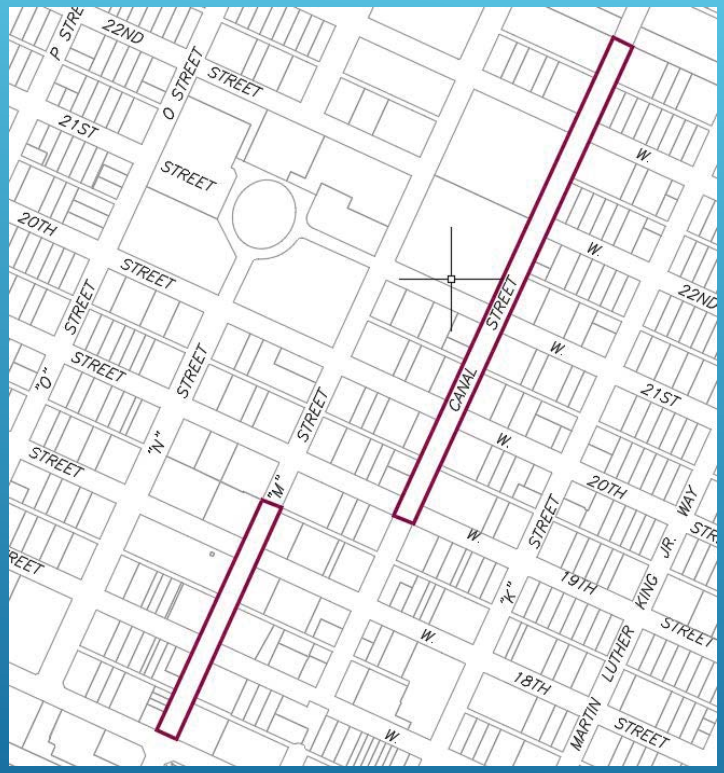
CAPITAL IMPROVEMENT PROJECTS (CIP)

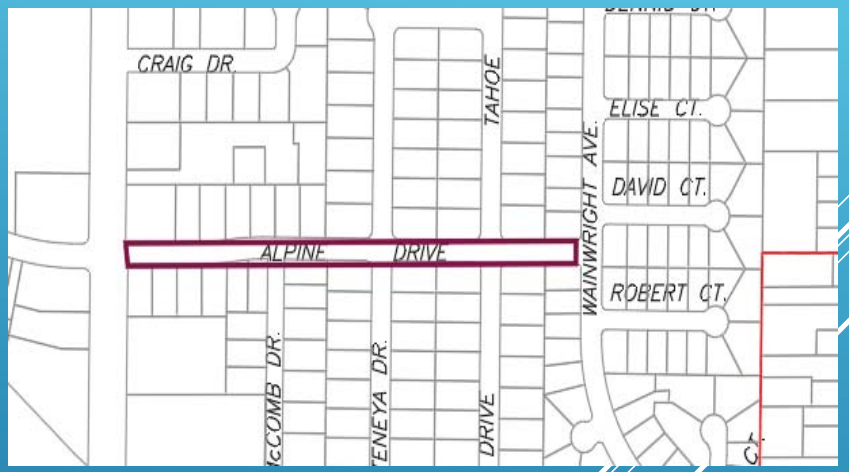
CURRENT ACTIVITIES IN THE ENGINEERING DEPARTMENT

1. CURRENTLY THE ENGINEERING DEPARTMENT HAS 15 ACTIVE CONSTRUCTION PROJECTS AT VARIOUS STAGES OF CONSTRUCTION
2. OUT OF 117 PROPOSED PROJECTS, WE ARE ACTIVELY DESIGNING 29 PROJECTS FOR CONSTRUCTION. THESE PROJECTS VARIES FROM STREETS, WATER, SEWER, AND STORM DRAIN
3. BETWEEN JULY 1, 2018 TO SEPTEMBER 7, 2018, ENGINEERING DEPARTMENT RECEIVED 69 PLANS FOR REVIEW AND APPROVAL FOR VARIOUS TYPES OF PROJECTS. PROJECTS RANGE FROM SUBDIVISION MAPS, SUBDIVISION IMPROVEMENTS, TO INSTALLATION OF POOLS
4. BETWEEN JULY 1, 2018 TO SEPTEMEBER 6, 2018, ENGINEERING DEPARTMENT ISSUED 130 ENCROACHMENT PERMITS TO ALLOW UTILITY COMPANIES AND CONTRACTORS TO WORK WITHIN THE CITY'S RIGHT-OF-WAY

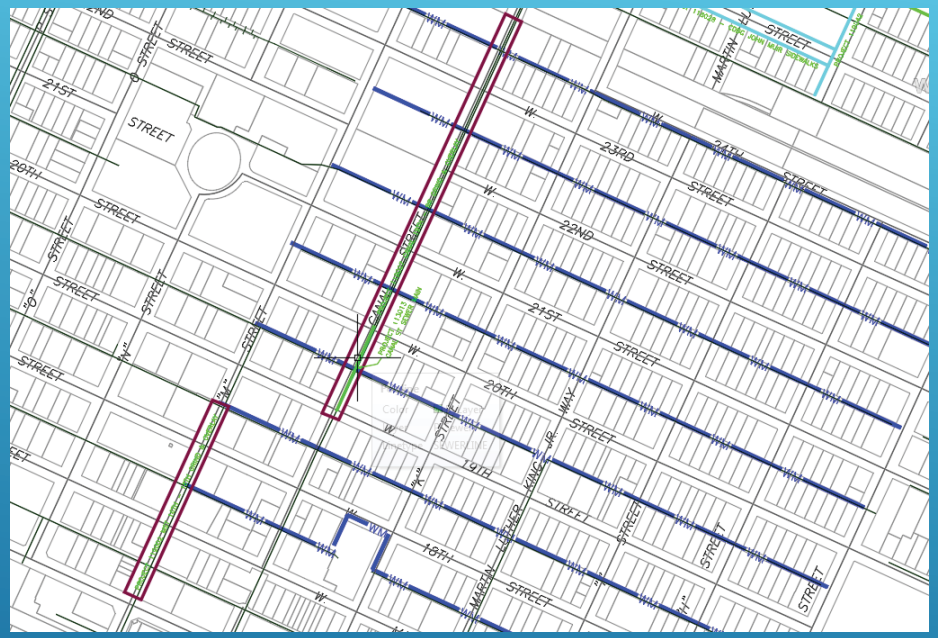
MEASURE V PROJECTS







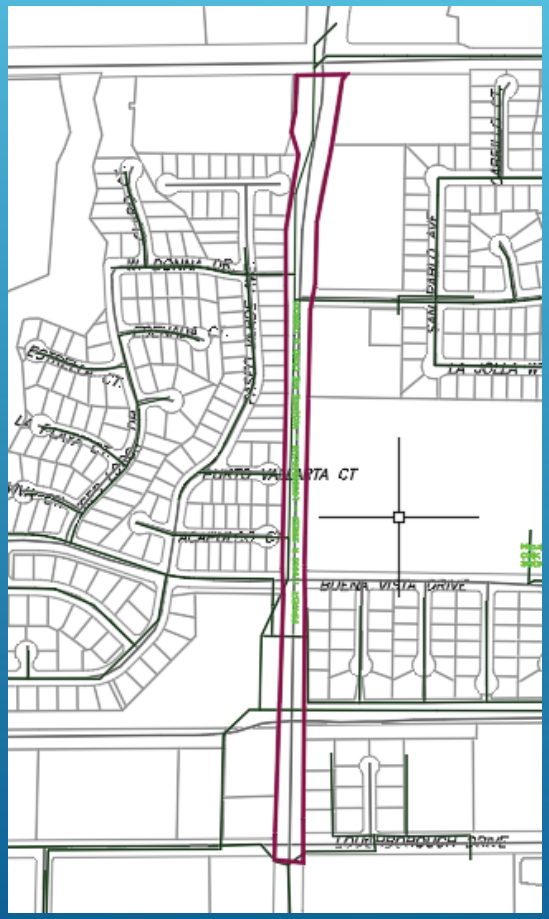
MEASURE V PROJECTS



AFTER MEASURE V PROJECTS WERE INDENTIFIED, IT WAS BROUGHT TO ENGINEERING DEPARTMENT'S ATTENTION THAT THE CITY HAS AGING INFRASTRUCTURES WHICH REQUIRES REPLACEMENT BECAUSE OF REPEATED WATER MAIN BREAKS. FOR THIS REASON, THE WATER MAIN NEEDS TO BE REPLACED BEFORE THE ROAD CAN BE REPAIRED



MEASURE V PROJECTS





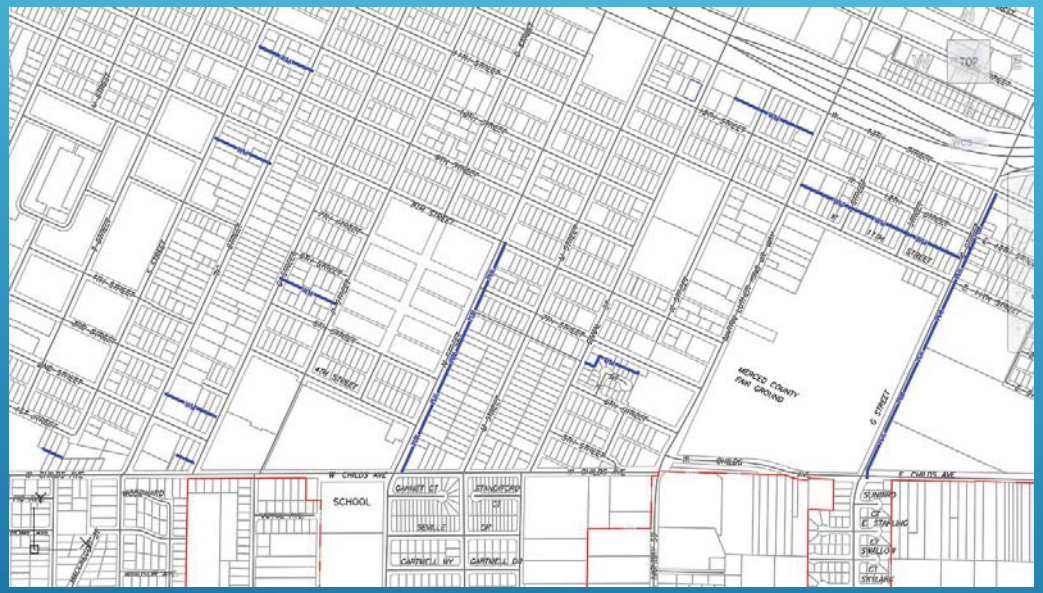




THE CONDITION OF THE ROAD IS SUCH THAT IT CANNOT BE OVERLAYED AS ORIGINALLY INTENDED. DURING THE SITE VISIT, A WATER LEAK WAS DISCOVERED, UNEVEN ROAD SETTLEMENT HAD OCCURRED. BETWEEN THE FINDINGS AND A PCI OF 11 TO 19, A TOTAL RECONSTRUCTION MUST BE PERFORMED.

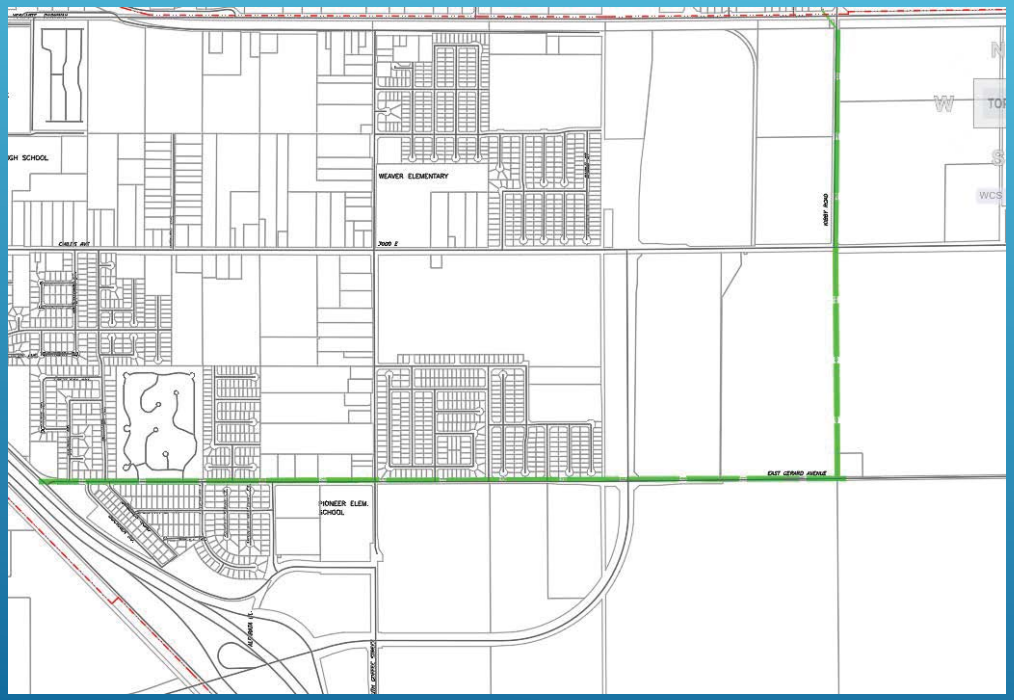


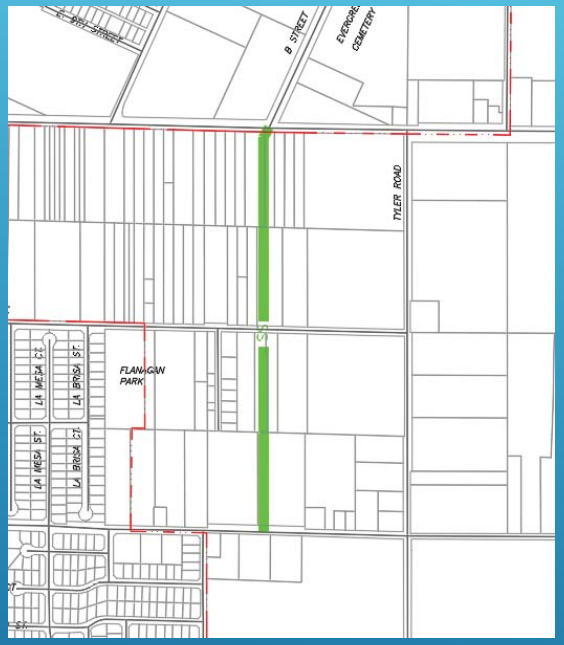
WATER MAIN REPLACEMENT PROJECTS

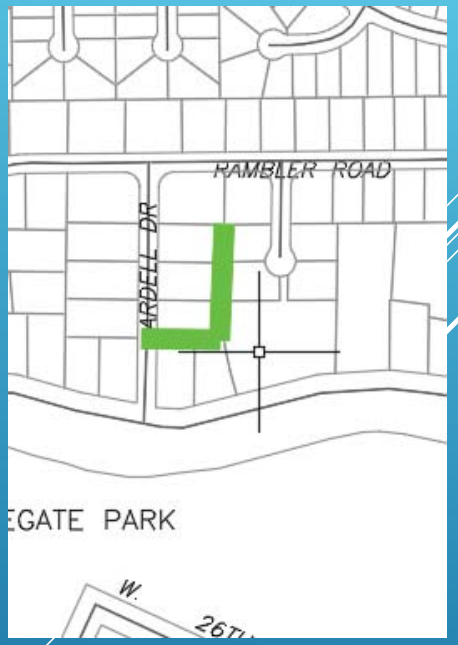




SEWER MAIN REPLACEMENT PROJECTS



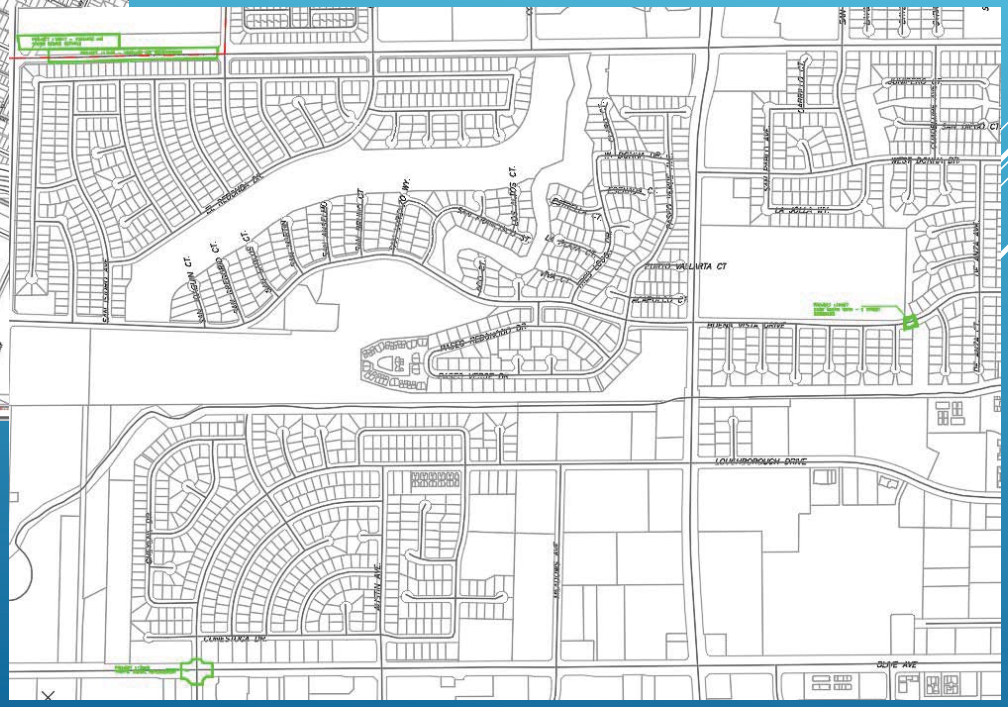




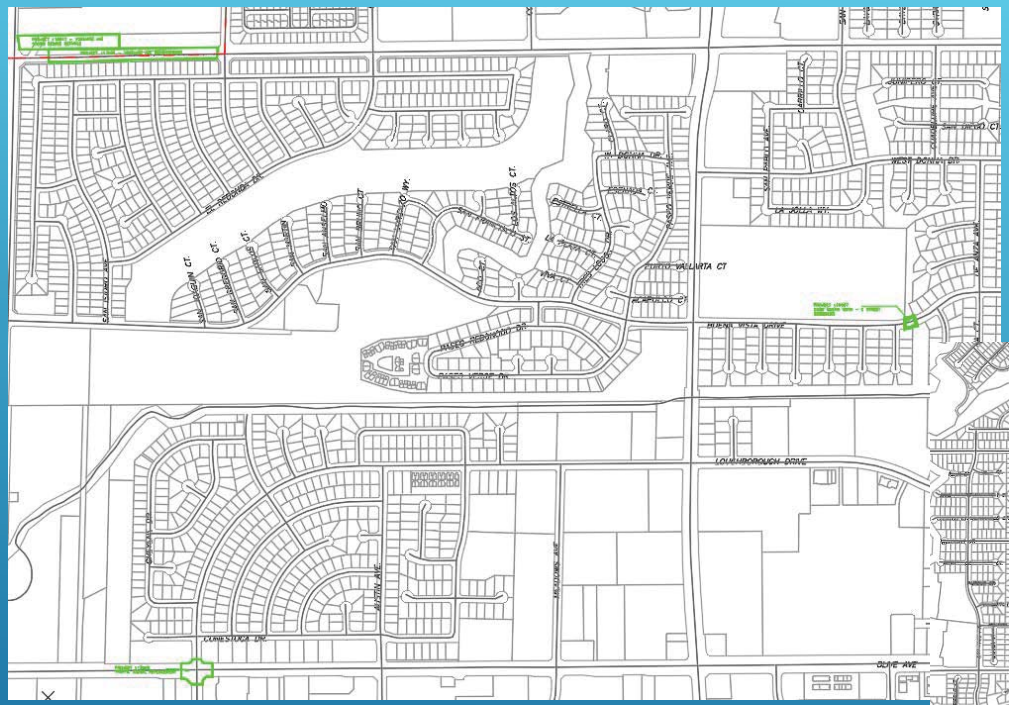
ROAD PROJECTS

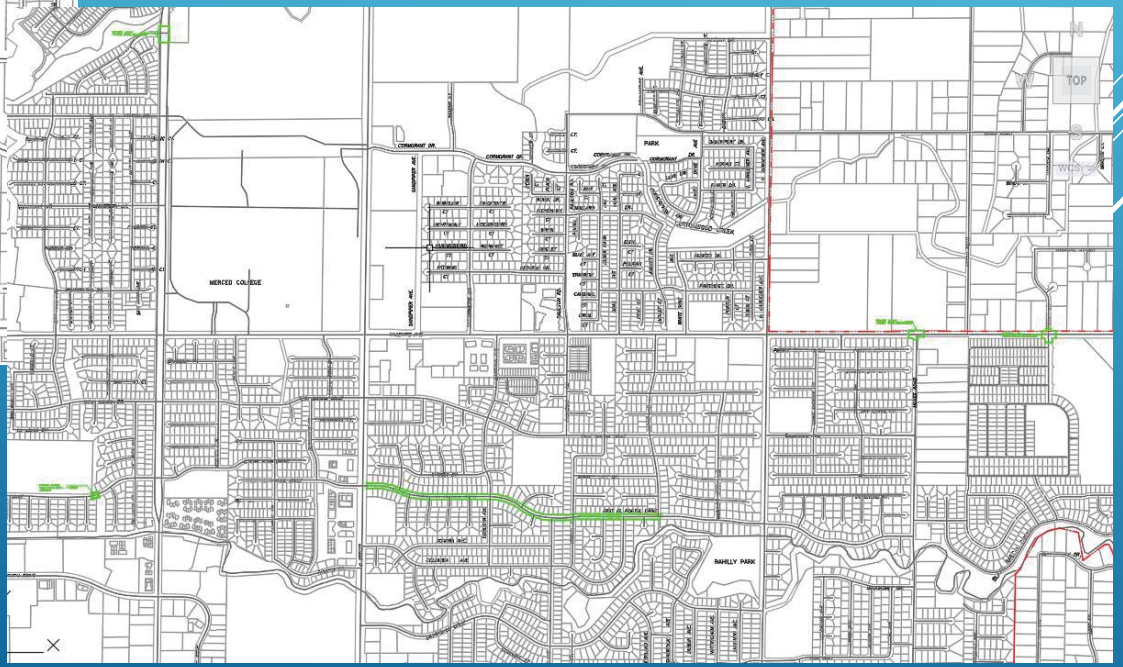




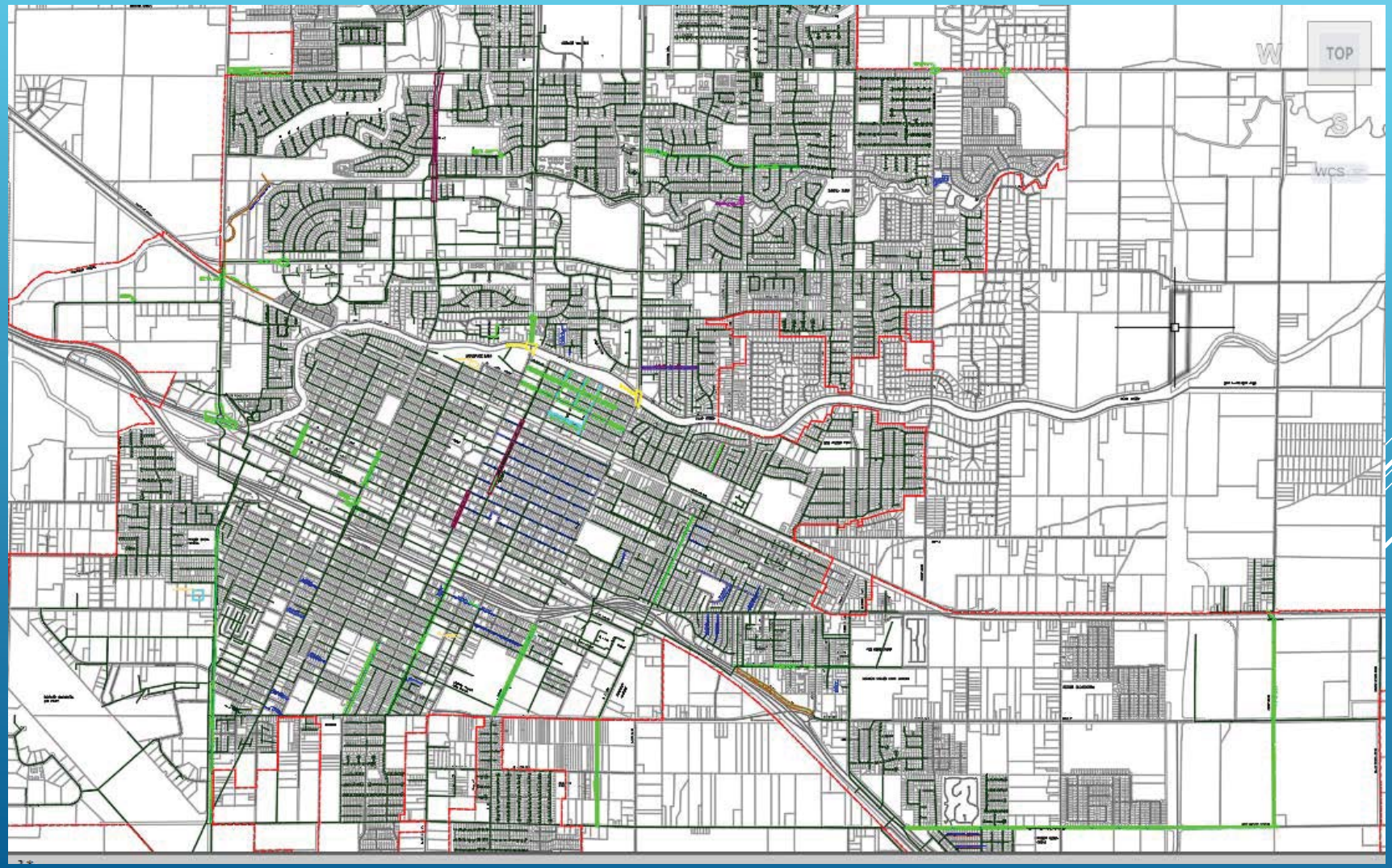

PUERTO VALLARTA CT
LOUGHBOROUGH DRIVE
OLIVE AVE
AUSTIN AVE
MEADOW AVE
CANTERBURY DR
CANTERBURY CT
CONNEMARA CT
CONNEMARA DR
CONNEMARA CIR
CONNEMARA DR.
CONNEMARA CT.
CONNEMARA WAY
CONNEMARA CT
CONNEMARA DR
CONNEMARA CT

ROAD PROJECTS





OVERALL CITY PROJECTS



CAUSES OF PROJECTS DELAYS

WHAT CAUSES DESIGN DELAYS?

1. DURING THE DESIGN PHASE, WE LOOK FOR ANY ISSUES THAT MAY CONFLICT WITH THE SCOPE OF THE PROJECT
2. WE HAVE TO OBTAIN PERMITS OR APPROVAL FROM OUTSIDE AGENCIES
   A. FEDERAL HIGHWAY ADMINISTRATION
   B. CALTRANS
   C. RAILROAD COMPANIES
   D. MERCED COUNTY
3. THE DESIGN WAS NOT PROPERLY SCOPED BECAUSE OF UNKNOWN CIRCUMSTANCES

WHAT CAUSES DELAYS DURING CONSTRUCTION?

1. WAITING ON OTHER AGENCIES TO RELOCATE THEIR FACILITIES
2. MATERIALS NOT AVAILABLE IN A TIMELY MANNER
3. CONTRACTOR COMMITTED TO OTHER PROJECTS
4. UNKNOWN UNDERGROUND UTILITIES CONFLICTS
5. WEATHER CONDITIONS

CONSTRUCTION SEASON

WHAT IS THE CONSTRUCTION SEASON FOR STREETS?

1. TYPICALLY BETWEEN MARCH/APRIL TO OCTOBER/NOVEMBER
2. PER CALTRANS' SPECIFICATIONS, ASPHALT CONCRETE CAN ONLY BE PLACED WHEN THE TEMPERATURE IS AT 50 DEGREES OR HIGHER
3. NO GRADING DURING RAINY SEASON BECAUSE IT WILL BE DIFFICULT TO OBTAIN COMPACTION

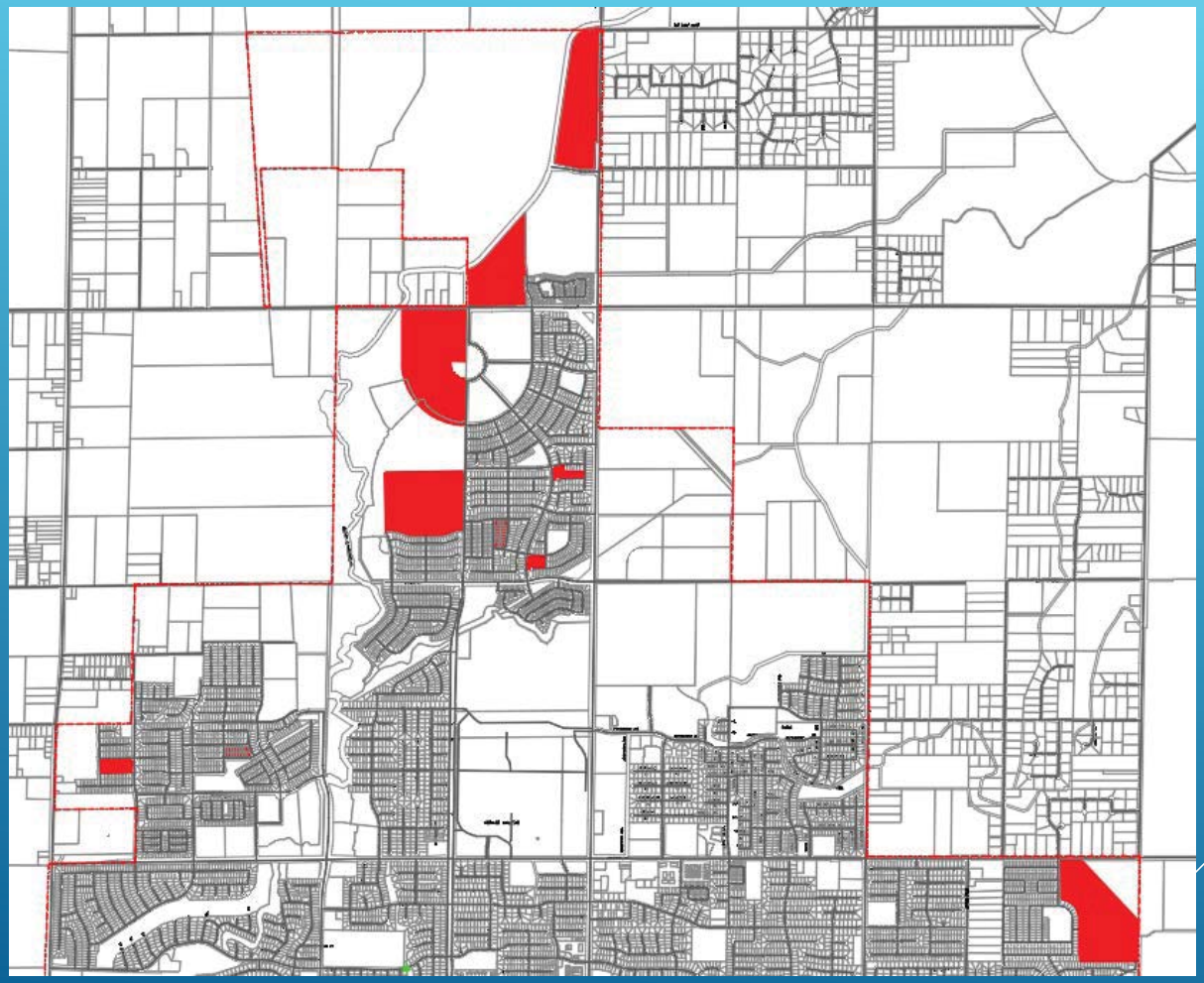
UNDERGROUND UTILITIES

1. CAN BE CONSTRUCTED ANYTIME
2. RAIN MAY CAUSE ISSUES WITH COMPACTION

CONCRETE INSTALLATION

1. CAN BE CONSTRUCTED DURING MOST SEASONS

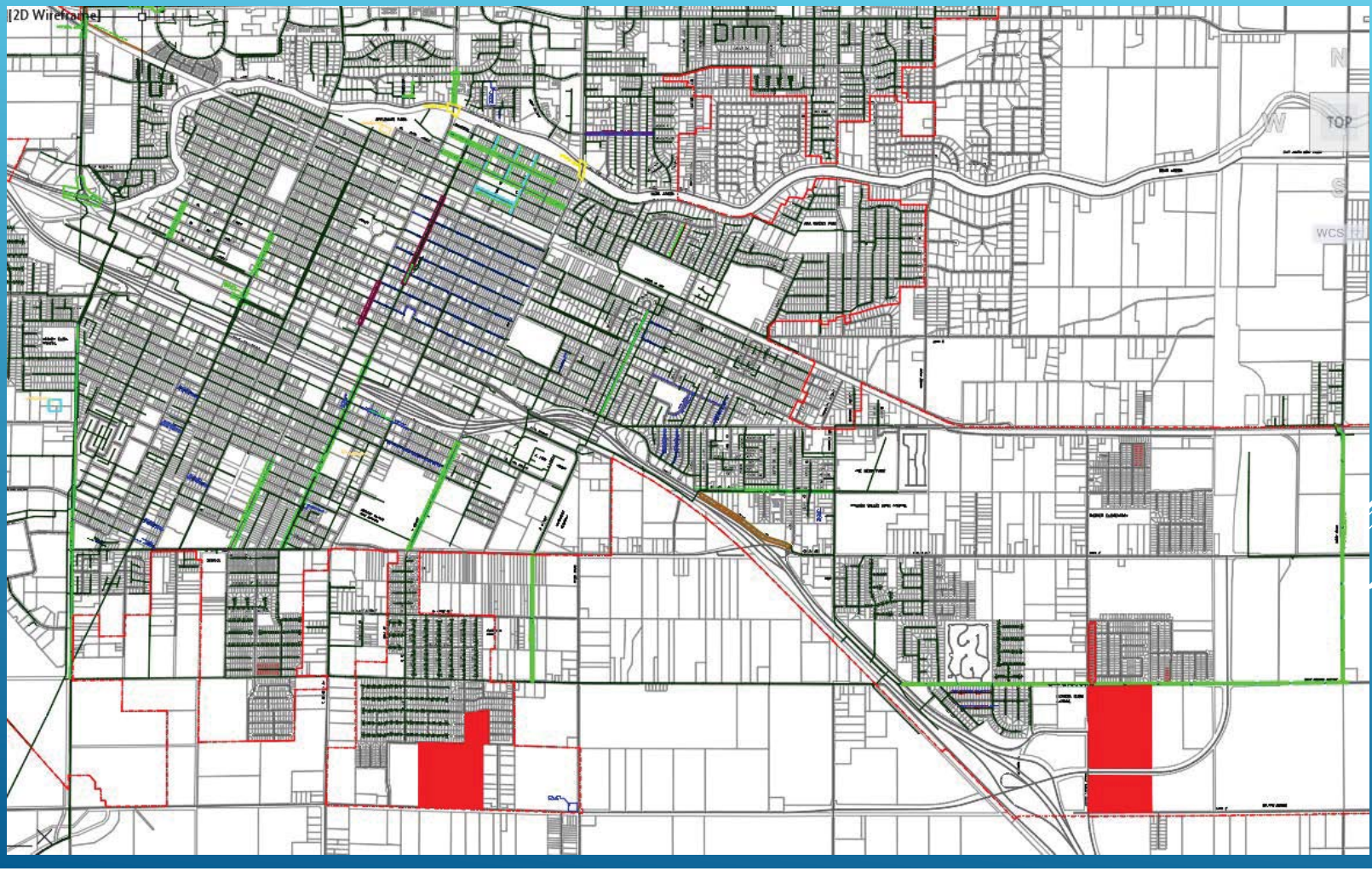
ACTIVE SUBDIVISIONS



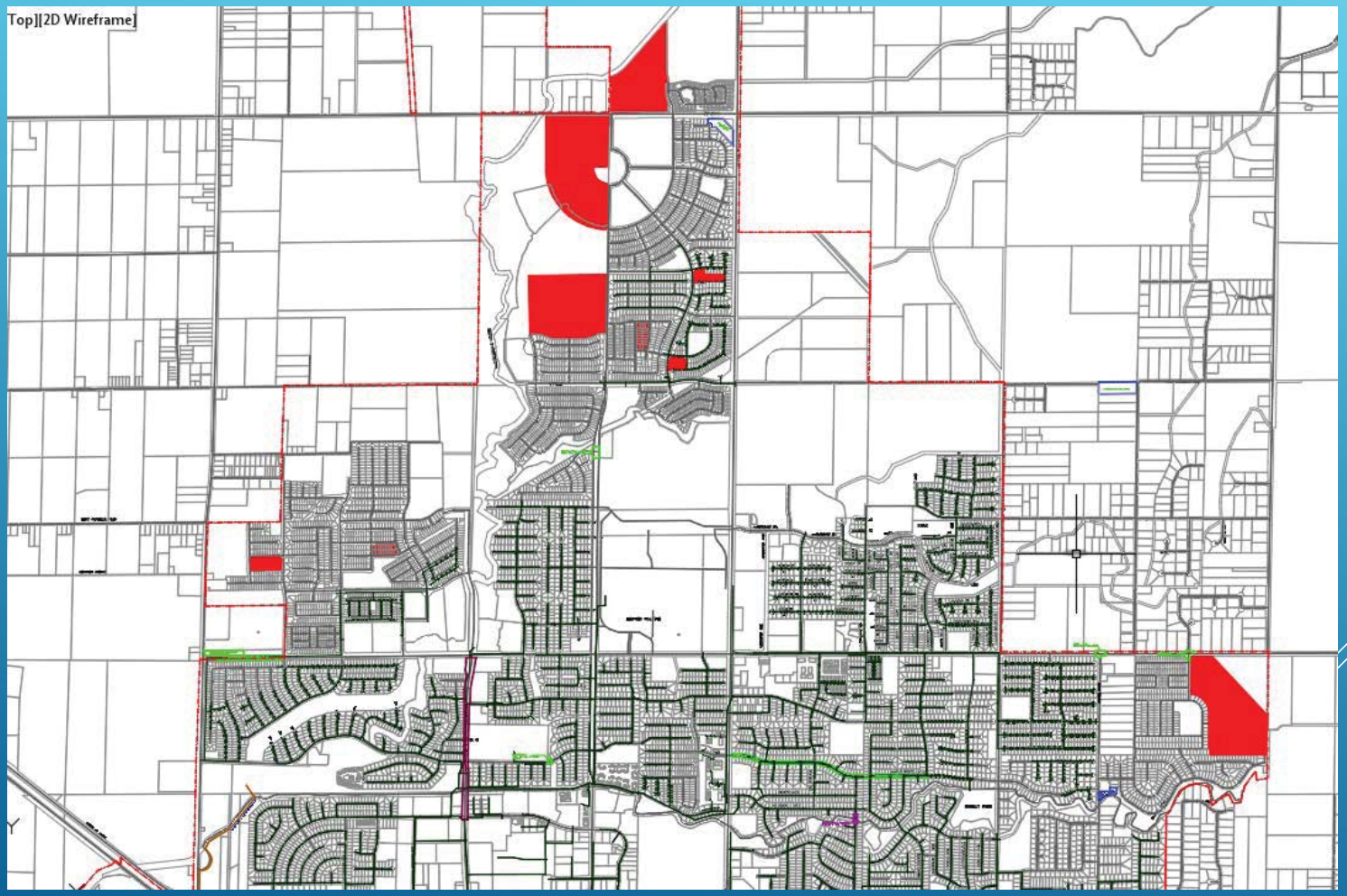
ACTIVE SUBDIVISIONS



DEVELOPMENT AND CIP ACTIVITY



DEVELOPMENT AND CIP ACTIVITY



QUESTIONS?

