
2018 CAMP FIRE RECOVERY & RESILIENCY EFFORTS

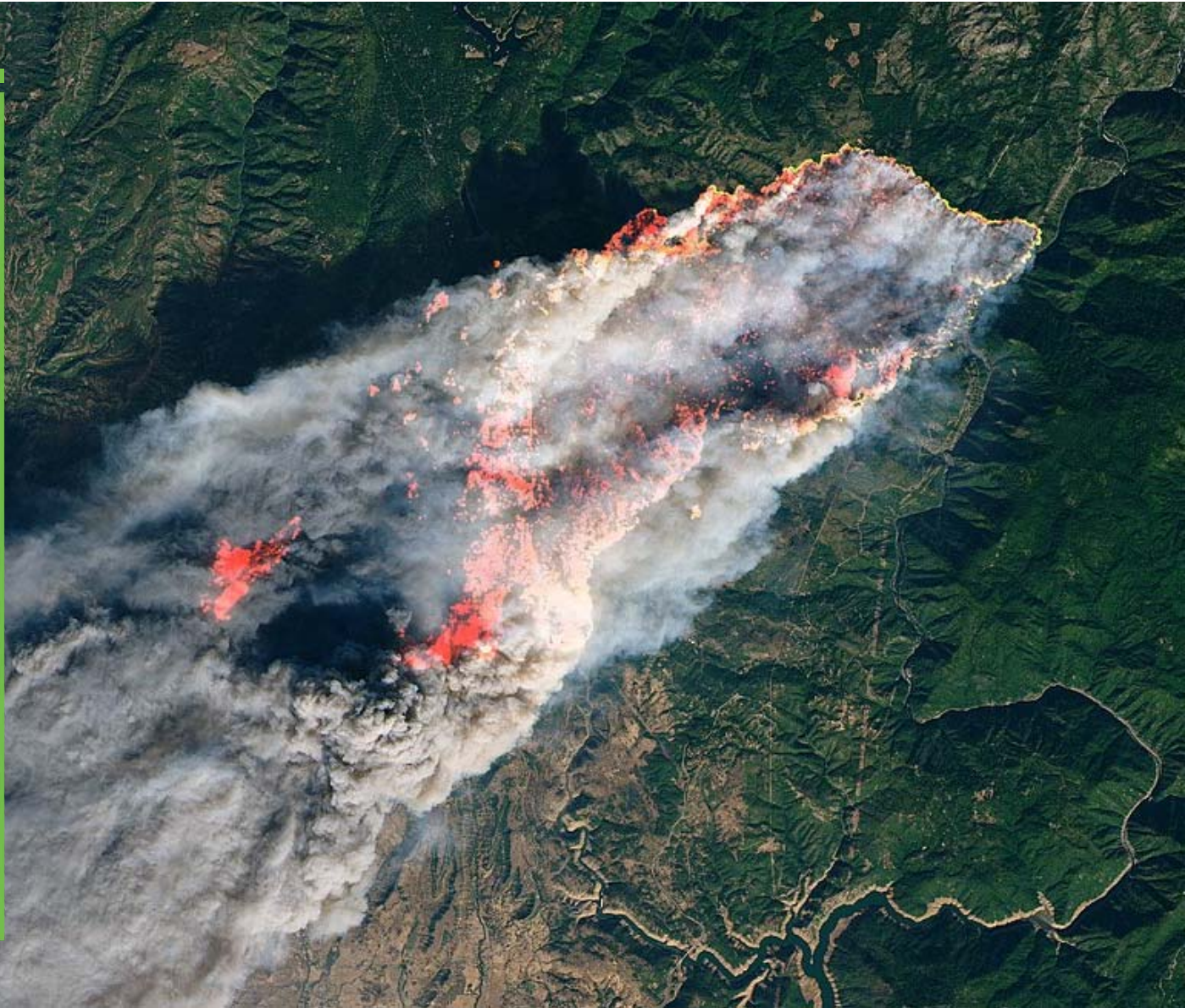
MARC MATTOX, PUBLIC WORKS DIRECTOR / TOWN ENGINEER

5/12/22



2018 CAMP FIRE

- Most destructive wildfire in California history
- Globe's most expensive disaster of 2018
- At least 85 fatalities
- 153,336 acres burned and 18,000 structures destroyed, most of which occurring in the first 12 hours
- Paradise lost 90-95% of all structures
- 2018 population reduced from 27,000 to about 4,000 overnight





INFRASTRUCTURE ASSESSMENT

- Items we could see
 - Hazard trees
 - Fire debris
 - Road scars
 - Utility poles
 - Signs
 - Traffic Signals
 - Sidewalks



Town of Paradise

November 24, 2018 · 🌐



SAFETY ALERT: The Town of Paradise has discovered a creek culvert was compromised due to fire damage on Wagstaff Road at Clark Road. Please be advised that in addition to the closure of Wagstaff Road, crews are working to assess and identify additional culverts and roads within Town limits that may be compromised.



ADVISORY

MELTED CULVERTS



TOWN EVACUATION ORDERS MAINTAINED



MORE MELTED CULVERTS



Figure 4 - Collapsed Culvert on Roe Road

As a wind-driven fire with low-flying embers, miniature fires were ignited inside open-ended culverts and, depending on the construction material type (HDPE, metal, etc.), completely burned out several pipes, collapsing and undermining the roadway...

LESSONS LEARNED: MORE RESOURCES IN ASSESSMENT



Subject: EO On-System Culvert Repairs DAF No. SKM-PRDS-007-0 Revision Request

[illegible]

Unfortunately, the CalOES/Caltrans/Town of Paradise investigation effort never fully materialized. This development occurred after my departure from the Town in July 2019. It was understood by all that additional damages will be discovered during the winter season and will require mitigation thereafter.

Map ID	Location	COM Date	DAP	Contractor	Estimated Cost	Actual Cost	Status
6	Valley View	3/15/2020	Revised	Violonzi	\$71,380.00	\$43,380.00	Emergency Resolution 30-40
7	Valley View	3/15/2020	Revised	Violonzi	\$14,175.00	\$14,175.00	Emergency Resolution 30-40
8	Penta and Stearns	3/15/2020	Revised	Violonzi	\$14,490.00	\$14,490.00	Emergency Resolution 30-40
9	Penta and Stearns	3/15/2020	Revised	Violonzi	\$22,830.00	\$22,830.00	Emergency Resolution 30-40
10	Penta and Stearns	3/15/2020	Revised	Violonzi	\$14,475.00	\$14,475.00	Emergency Resolution 30-40
11	Pearson and Recreation Drive	3/15/2020	Revised	Violonzi	\$50,425.00	\$50,425.00	Emergency Resolution 30-40
12	Wagstaff and Mill	11/13/2019	Revised	Omni	\$29,525.42	\$29,525.42	Emergency E-mail
13	Pearson and Recreation Drive	3/15/2020	Revised	Violonzi	\$21,993.00	\$21,993.00	Completed - 100% Disaster
14	Penta and Stearns	3/26/2020	Revised	Violonzi	\$12,315.00	\$12,315.00	Emergency Resolution 30-40
15	Beils and Skyring	In Progress	Revised	Violonzi	\$25,999.00	\$26,995.00	Identified as a Hazard, Repair in Progress

- In late 2019/2020, additional culverts were discovered to be missing
- Found evidence of fire damage
- Emergency repairs were made -> however, did not qualify as Emergency Opening work or Permanent Restoration
- Determined to be ineligible costs
- RECOMMENDATION: Assign more resources to assessments, video camera **every** storm drain line



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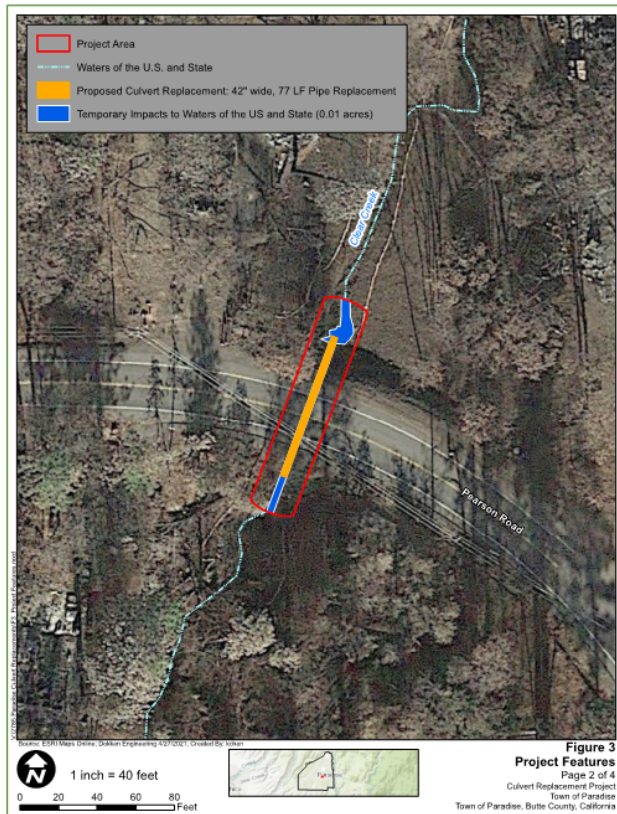
QUICK PLANNING, FORWARD THINKING.

- Safer
- Better
- Stronger
- Welcoming
- Greener

LONG RANGE INFRASTRUCTURE RECOVERY PROJECTS

- FHWA: On-System Roads
- FHWA: On-System Signs
- FHWA: On-System Culverts
- FEMA: Off-System Roads
- FEMA: Off-System Culverts
- HMGP: Storm Drain Master Plan
- HMGP: Reseeding Plan
- HMGP: Early Warning System
- Pre-Fire Capital Budget
 - \$4 million annually
- Current Capital Budget
 - \$40 million annually
- Recently submitted \$800m in project applications through CDBG-DR Infrastructure Program, pending July 2022

CULVERT REPLACEMENT PROJECTS UNDERWAY











WOOD RODGERS

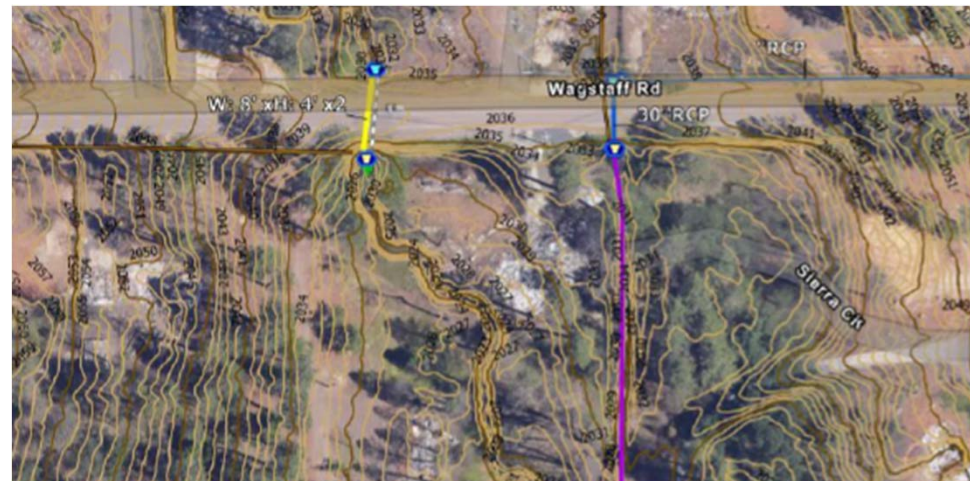
Town of Paradise
Storm Drainage Master Plan

May 2022 | DRAFT



STORM DRAINAGE MASTER PLAN

- Anticipated June 2022
- Used LiDAR flights to assist with new hydraulic model
- Identifies 42 additional projects exceeding \$14M focused on capacity

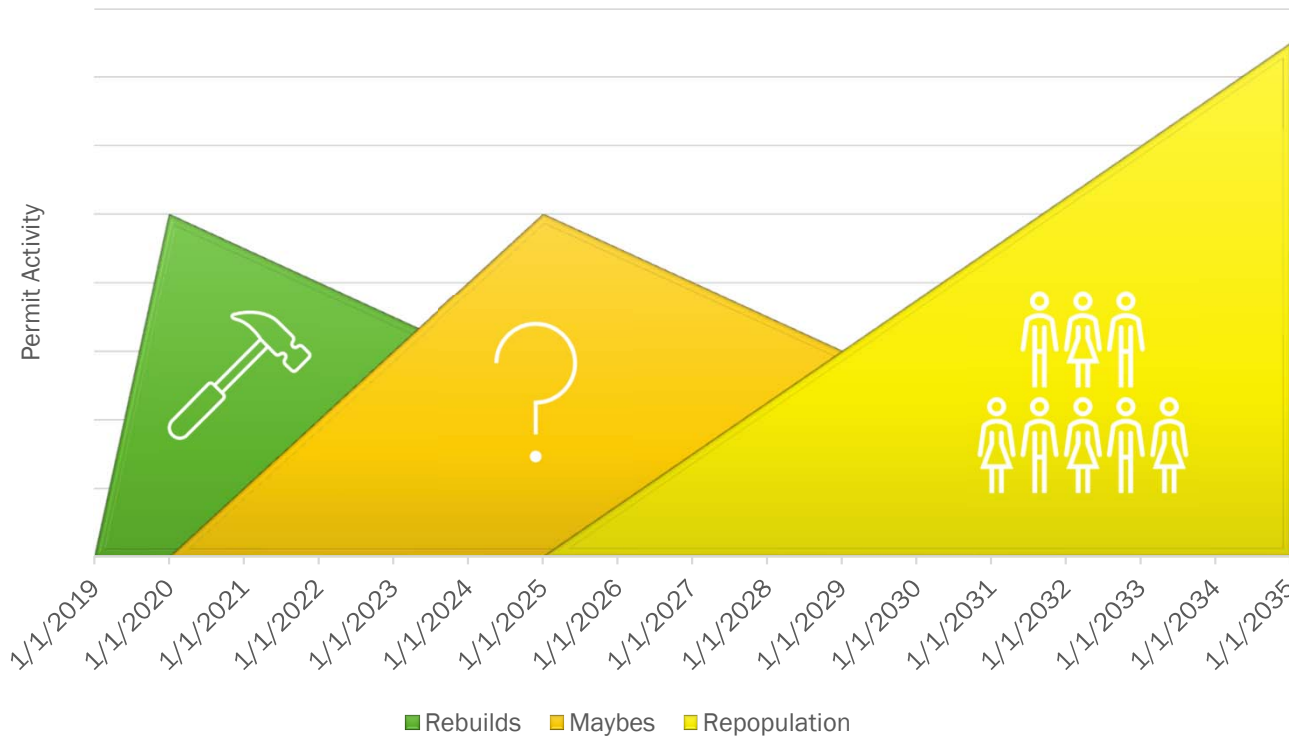


PARADISE'S CHALLENGES AHEAD

- Inflation
- Local resource/labor economy
- Insurability
- Need for more resiliency projects
 - Culverts
 - Evacuation Routes
 - Early Warning System
 - Road conditions
 - Fuel reductions



WHO ARE WE WORKING FOR?



Today
Matters.

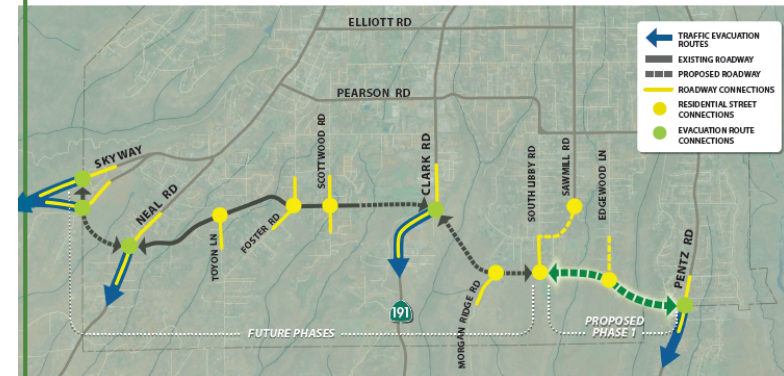
SO, WHAT ARE WE WORKING ON TODAY?

- Undergrounding utilities town-wide
- Early warning system
- Defensible space projects (public and private)
- Road rehabilitation
- Sewer connection to the City of Chico
- Evacuation planning and multi-jurisdictional coordination
- State and federal advocacy
- Engaging the public

PROJECT FACT SHEET

ROE ROAD EXTENSION PROJECT - PHASE 1

Implementing Agency: Town of Paradise



PROJECT BENEFITS

- Provides new access to Pentz Road traffic evacuation route
- Avoids 3-6 miles out of way travel during traffic evacuation
- Provides second route option for 4 residential dead-end streets
- Transportation grid network supports First Responders daily operations and emergency evacuation events

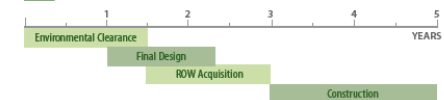
PROJECT INFORMATION

- Phase 1 introduces the concept of an eventual cross-town connection between Skyway and Pentz Road. The future 5-mile roadway will address circulation system deficiencies, build transportation options, add on-street bicycle lanes, and improve disaster evacuation route access.
- Phase 1 will close gap to 4 north-south roadways which serve disconnected residential areas.
- Directly benefits evacuation corridors which experienced a high concentration of traffic-related fatalities during the Camp Fire.
- Phase 1 prioritizes new roadway link serving long dead-end streets including South Libby, Edgewood, and Sawmill.

PHASE 1 COST

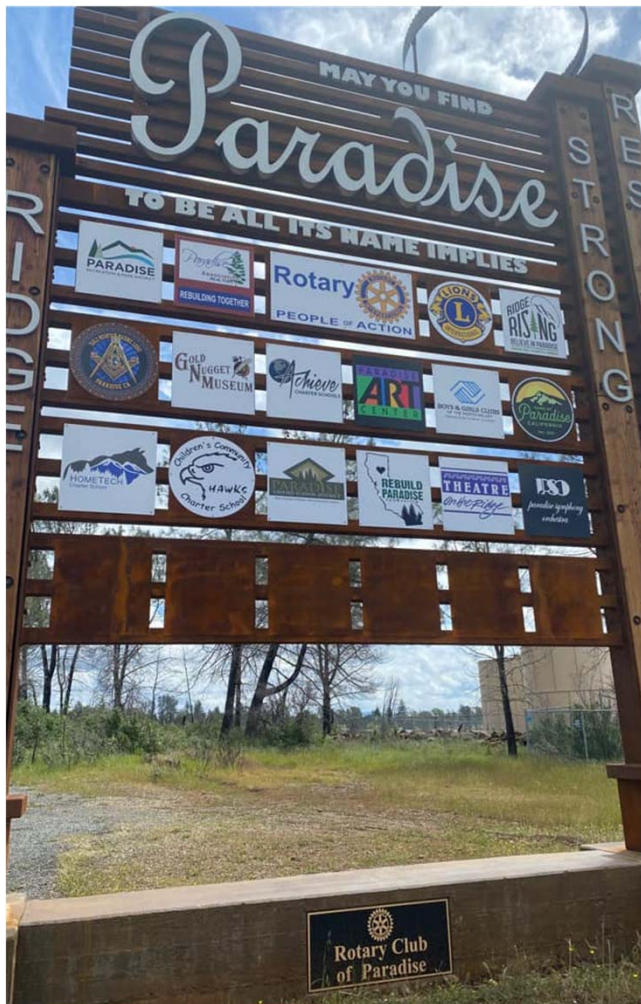
Environmental	\$2,700,000
Design	\$5,400,000
Right of Way	\$6,400,000
Construction	\$45,900,000
TOTAL	\$60,400,000

PHASE 1 SCHEDULE



PROJECT OUTCOMES





REBUILDING PARADISE BY THE NUMBERS

SINGLE FAMILY HOMES

2,313 BUILDING PERMIT APPLICATIONS RECEIVED
1,628 STICK BUILT / 684 MANUFACTURED
2,139 BUILDING PERMIT BUILDING PERMITS ISSUED
1,358 HOMES REBUILT (CERTIFICATE OF OCCUPANCY)



TOWN OF PARADISE
WEEKLY RECOVERY UPDATE
MAY 11TH, 2022



THANK YOU!

