

From: Susan [REDACTED]
To: McDonnell, Kevin; Barnacle, Brian; Cader-Thompson, Janice; Healy, Mike; Karen Nau; Shribbs, John; -- City Clerk; Ellis, Evelyn
Subject: Scott Ranch – Wildfire – Consultant Jason Neuman
Date: Friday, February 24, 2023 2:41:33 PM
Attachments: Jason Neuman CV 2021.pdf
Scott Ranch Comments RDEIR NFC 2021.pdf

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Dear Mayor McDonnell and City Council members,

After reviewing the Wildfire section of the Scott Ranch RDEIR and FEIR Appendix about Wildfire, we had a number of technical fire questions.

Our organization contracted with Jason Neuman to review the wildfire sections. Mr. Neuman's Curriculum Vitae is attached.

Mr. Neuman is a retired Assistant Chief from CA FIRE, Southern Region Headquarters. Mr. Neuman's past experience includes being a firefighter, fire investigator, fire captain, battalion chief, and senior fire planner. Mr. Neuman has written fire protection plans for new development projects, conducted fire behavior analysis and risk assessments. He has reviewed CEQA documents dealing with wildland impacts for long range planning and development projects.

RDEIR wildfire:

<https://cityofpetaluma.org/documents/rdeir-appendix-4-15-wildfire/>

FEIR APPENDIX RTC-D WILDFIRE

<https://cityofpetaluma.org/documents/feir-appendix-rtc-d-wildfire/>

Mr. Neuman posed a number of questions about the Davidon development wildfire plans.

Below are a few quotes from Mr. Neuman's report, which is attached.

"The EIR identifies the projects site within a Wildland Urban Interface Area according to Figure 4.15-2. The City of Petaluma Fire Prevention Bureau identifies this area as a Very High Fire Hazard Severity Zone (VHFHSZ) as identified on the city website and defined in Section 17.20.020 of the Petaluma Municipal Fire Code."

"Figure 4.15-2 in the EIR has the VHFHSZ designation removed. This information is inconsistent with adopted documents and the EIR should reflect accurate information."

"The question for the lead agency, will actions W-1, W-2 & W-5 become part of the conditions of approval or a form of mitigation? Should these programs/plans be in

place prior to approving a new development project?”

“Section 4.12 Public Services of the Revised Draft EIR did not provide an accurate response time to the project area. The only information that was provided was a response time based on national standard thresholds. The EIR did not provide the total response time to the proposed project. This information could be confusing to the public reading the document.”

“The Wildfire Evacuation Transportation Assessment did not provide a contingency plan for the residents fleeing the area if egress was compromised or completely blocked to the north and south of Windsor Drive. The proposed development has one point of ingress and one point of egress with a cul du sac dead end road. The analysis also did not address persons without vehicles or access to vehicles and how they would evacuate safely.”

Thank you for considering this additional fire-related information in analyzing the Scott Ranch FEIR.

Susan Jaderstrom

On behalf of Petalumans for Responsible Planning

www.PetRP.org

Curriculum Vitae

2021

Jason Paul Neuman

Assistant Chief (Retired)

December 2018

CAL FIRE

Southern Region Headquarters

Land Use Planning & Pre-Fire Management

[REDACTED]
Riverside, CA 92501

[REDACTED]

[REDACTED]

EXPERIENCE:

Approximate Number of Cause and Origin Determinations

Type of fire:
Structure: 52
Vehicle: 81
Debris: 113
Vegetation: 90
Other/Miscellaneous 8____

Total: 344

Approximate Number of Cause and Origin Determinations (Assists)

Type of fire:
Structure: 15
Vehicle: 0
Debris: 0
Vegetation: 2
Other/Miscellaneous ____

Total: 17

Approximate Number of Cause and Origin Determinations (Assists)

Advanced Analysis Inc.

Type of fire:
Structure: 15

Total: 15

Senior Fire Planner

February 2020-September 2020

Dudek

605 3rd Street

Encinitas, CA 92024

Serve as a member of an interdisciplinary team, prepare, and write fire protection plans for new development projects, review and comment on wildfire mitigation plans for the utility industry, conduct fire behavior analysis, risk assessment. Review CEQA documents dealing with wildland impacts for long range planning and development projects. Work with client and government officials to ensure code compliance. Provides input and recommends strategies for fire management, prevention, and mitigation. Participate in the development, review, and modification fire protection plans. Review environmental documents, and fire management plans of other agencies and stakeholders, conduct research, including field surveys, computer modeling, specific literature and adopted codes. Evaluate fire impacts, identify potential problems, and makes appropriate recommendations to the team.

Liaison Officer

May 2019 to August 2020

Wildfire Defense Systems- Southern CA Region

580 Zoot Enterprises Lane

Bozeman, MT 59718

Provide structure fire defense, prevention, and mitigation services for the insurance industry. Coordinate and work closely with the IMT or AHJ to ensure access is granted and maintained on a wildfire incident, assess property of insured clients. Provide situational fire incident updates to the Duty Officer. Attend cooperator meetings and briefings; gather intelligence on IMT mission, other insurer response activities and sensitive issues. Develop work-flow strategies; ensure insurance engine accountability and performance. Train fire personnel, conduct safety briefings. Present insurer response service capabilities to client agencies,

designated representatives, and local fire officials. Participate in After Action Reviews (AAR), Ensure compliance with all safety practices and procedures.

Assistant Chief

September 2017 to December 2018

CAL FIRE

Southern Region Headquarters

Land Use Planning & Pre-Fire Management

2524 Mulberry Street

Riverside, CA 92501

Assigned as the Program Manager providing oversight and direction to CSR's Land Use Planning, Pre-Fire Engineering, Fuels Reduction Activity Reporting and SRA Implementation Programs. Oversee and coordinates safety element review of County General Plans, prepare annual program reports as needed for CAL FIRE Executive Staff and/or the California State Board of Forestry and Fire Protection. Oversee delivery of the CSR Pre-Fire Engineering Program, budget preparation and review. Assist in the review of Unit Fire Plans and provide input regarding the Contract County Annual Operating Plans as it relates to the Fire Plan. Coordinate and manage the Fuels Reduction Activity Reporting for the Southern Region Units and Contract Counties. Function as the Region Duty Chief for CSR ensuring Units and Contract Counties Fire/Emergency Management are supported according to contractual and interagency agreements. Maintain CAL FIRE training standards and qualifications. Respond to wildland fires, structure fires and other emergency incidents as needed or required.

Assistant Chief

February 2016 to September 2017

CAL FIRE

Strategic Planning Division

210 West San Jacinto Ave

Perris, CA 92570

Assigned to the Strategic Planning Bureau, Program Manager member of the Unit Executive Staff responsible for Supervising and providing direction and program management assistance to the Facilities Maintenance Supervisor, Fire Facilities Planner, Statistics Bureau staff, Facility Design and Construction, Facility Management and Maintenance, Facility Planning, Response Studies and Mapping, Strategic and Master Plan development, review and approve purchases within authorized spending authority, budget preparation and review, assume operational division coverage as scheduled for purposes of emergency response to incidents per the unit's standard response plan. As assigned, acts as the Unit's Duty Chief to manage the Department in the Chief's Absence. Cooperates with provides technical assistance to the Fire Chief and the Fire Department Executive Staff and various local government entities, Department Operations Section, County Executive Office, Board of Supervisors, and the public.

Battalion Chief

August 2012 to October 2012

CAL FIRE

Southern Region Headquarters

Land Use Planning

2524 Mulberry Street

Riverside, CA 92501

Assigned to the Region's Land Use Planning Program. Coordinate, the planning, training, and reporting of activities associated with land use planning in wildland areas. Conduct General Plan and subdivision/parcel review in coordination with Unit Staff for a predetermined area. Supervise Fire Captains, Act as the liaison on CAL FIRE's responsibilities related to Fire Hazard Severity Zone (FHSZ). Prepare reports. Assist in statewide training and develop regional FHSZ reviews. Participate in SRA boundary and FHSZ classification review in the Southern Region.

Battalion Chief

August 2012 to October 2012

CAL FIRE

Southern Region Headquarters

Operations Coordination Center

2524 Mulberry Street

Riverside, CA 92501

Assigned to the Operations Coordination Center, prioritize and make decisions generally established through guidelines and agreements regarding and resources orders for aircraft, fire crews, fire apparatus, specialized equipment and overhead personnel as required by nine (9) Cal Fire Units and 5 contract counties located within the Southern Region, coordinates resource orders with the Northern Region, prioritizes and makes decisions about resource requests from the U. S. Forest Service (USFS), Department of Interior (DOI) and mutual aid request for the California Emergency Management Agency (Cal EMA) Fire and Rescue Mutual Aid Regions. Prepares emergency incident activity reports on resource and situation status for review by department management; ensures that statistical reports on resource status, incident

activity and routine business such as rainfall, fire and acres are submitted by Cal Fire Units and Contract Counties and are processed by the OCC. Supervise Region Communication Operators.

Fire Captain- Assistant Fire Marshal

September 2007 to August 2012

CAL Fire Riverside County Fire Department

Strategic Planning

210 West San Jacinto Avenue

Perris, CA 92570

Assigned to the Strategic Planning Bureau, responsible for reviewing Specific Plans and Environmental Impact Reports based on proposed development throughout the western half of Riverside County. Participate in development agreements with various county agencies, Land Developers, Realtors, Architects and Contractors. Provide response studies for future fire station placement, fire facility planning and design, new master plan developments, assist with annexation and incorporations, regional integrated fire protection, liaison to City departments and Executive Staff for current and long-range planning. Monitor the progress of plans, statistical analysis, long-range problem-solving dealing with fire station location and response. Prepare reports, information and presentations related to fire station land use criteria. Updating the department's Fire Master Plan.

Fire Captain

September 2011 to December 2018 (Seasonal)

Capstone Fire Management Inc.

2110 Auto Park Way

Escondido, CA 92029

Assigned to an ICS Type VI wildland fire engine as the company officer. Conduct fire patrol, fire prevention, fire suppression/EMS standby in San Diego and Orange Counties serving utility companies.

Account for on-scene utility resources, personnel and work with Agency Representatives and Fire Coordinators. Complete daily logs and incident reports. Responsible for mentoring, training, and evaluating Driver Operators. Maintain cooperative relationships with other organizations and agency professionals. Function as the on-scene Incident Commander. Supervise the preventive maintenance of assigned emergency fire apparatus and station grounds. Responsible for the care and maintenance of fire tools and equipment. Promote the policies, regulations, and philosophies of Capstone Fire Management.

Fire Captain

February 2006 to September 2007

CA Dept. of Forestry & Fire Protection

Riverside County Fire Department Station 17

10400 San Sevaine Way

Assigned to an engine & truck company. Manage the station's fire and life safety inspection and pre-fire plan program. Complete month-end reports investigate fire causes. Battalion Training Coordinator for apprentice Firefighters & Fire Engineers. Battalion Scheduling Coordinator.

Fire Investigator

August 2006 to August 2007

Advanced Analysis Inc.

31879 Corydon Road

Lake Elsinore, CA 92530 Suite 130

(951) 674-4140

Responsible for performing origin and cause investigations on residential and commercial structures. Collect and preserve physical evidence in fire investigations. Diagram and photograph the fire scene, conduct investigations of fire loss property, interview witnesses and suspects. Interact and communicate with the local Authority Having Jurisdiction Fire Investigator's to obtain records and reports. Conduct supplemental research on products involved in fires. Prepare and maintain reports of investigation results.

Deputy Fire Marshal

September 2002 to February 2006

City of Temecula

43200 Business Park Dr.

Temecula, CA 92589

951-6940-6405

Responsible for managing and administering fire prevention programs: fire & life safety inspections, plan review, hazard abatement, public education, and public information. Coordinate the activities of the Fire Prevention Bureau with other programs of the Fire Dept; make presentations before the City Council, Planning Commission, and the Traffic Safety Commission on fire activities, which affect the City's Fire Prevention program. Review detailed plans and written specifications of all buildings proposed to be constructed or remodeled to ensure code compliance, consult, correspond and meet with contractors, architects, and developers on projects to ensure code compliance with approved plans and specifications.

and

Fuel Crew/Fire Safety Officer

January 2005 to present

Sunoco (Automotive Racing Events)

West Coast Fuel Crew

Phoenix, AZ, Fontana, CA, Las Vegas, NV,

Salt Lake City, UT, Sonoma, CA, Newton, IA

Kansas City, KS.

Inspect, test, and dispense race fuel to NASCAR teams. Set up remote fueling stations and auxiliary fuel pumps during race event. Inspect dump cans and race cars for proper Sunoco decals. Return fuel to underground storage tanks and fuel transport carrier. Perform fire safety standby while race fuel is dispensed. Inventory pit cart, assist NASCAR officials, maintain tools and equipment, and provide site access control/security during fueling operations.

Firefighter

California Speedway

April 2003 to January 2007

Fontana, CA

Respond to on track incidents as a member of the Fire Safety/Rescue Team. Provide Fire Safety standby for all NAC SAR, NHRA, IRL and private auto sports events. Provide immediate fire suppression response in the pits during actual pit stops. Provide fire prevention (standby) duties at all times racing fuel is present. Provide immediate rescue and BLS care to the driver, gasman & catch can man if necessary. Trained to NFPA 610 standards.

Fire Captain

Highgrove, CA

August 2002 to September 2002

Assigned as station manager. Responsible for developing, training, and evaluating staff. Prepare and present fire prevention programs to the public. Maintain cooperative relationships with other organizations and agencies. Direct and participate in the suppression of fires & the mitigation of other emergency & non-emergency incidents. Function as the on-scene Incident Commander. Supervise the preventive maintenance of all emergency equipment and station grounds. Manage the station's fire and life safety inspection and pre-fire plan program. Complete month-end and fire reports promote the policies, regulations and philosophies of CDF and the Riverside County Fire Department.

Fire Apparatus Engineer

CDF Riverside/County Fire Department

Glen Avon, CA

July 1996 to August 2002

Responsibilities include maintaining the fire apparatus, training fire personnel, and conducting fire life safety inspections. Prepare and present fire prevention programs to the public, investigate fire causes, and prepare month end reports.

Firefighter II

CDF/Riverside County Fire Department

Temecula, CA

October 1990 to July 1996

Assigned to a truck and engine company where I responded to alarms within the city. Coordinated city weed abatement program, and CDF power line inspection program. Advisor for explorer post. Responsible for the extinguishment of structure, vehicle, and vegetation fires. Protect life and property, preliminary fire scene examination, training, emergency medical responses.

Firefighter

Disneyland Fire Department

Anaheim, CA

May 1995 to October 1996

Conducted fire inspections and responded to emergency alarms within the park. Oversaw fire safety standby for construction maintenance and repair. Performed fire safety standby for pyrotechnics, and theatrical performances.

Firefighter I

CDF San Diego Unit

Fallbrook, CA

June 1986 to September 1990

Responsible for the extinguishment of structure, vehicle, and vegetation fires. Protect life and property, preliminary fire scene examination, training, emergency medical responses. Maintain station, equipment, conduct property inspections, and enter false alarm report data into the computer.

Paid Call Firefighter

Orange County Fire department

Olive, CA

April 1989 to May 1990

Responsible for the extinguishment of structure, vehicle, and vegetation fires. Protect life and property, preliminary fire scene examination, training, emergency medical responses. Maintain station and equipment.

Reserve Firefighter

29 Palms Fire Department

29 Palms, CA

July 1988 to February 1989

Responsible for the extinguishment of structure, vehicle, and vegetation fires. Protect life and property, preliminary fire scene examination, training, emergency medical responses. Maintain station and equipment

Fire Explorer

Buena Park Fire Department

October 1984 to June 1986

Responded to alarms, maintained station and equipment, attended weekly training sessions.

EDUCATION

Degrees:

Bachelor of Science
Major: Fire Protection Adm & Technology
Minor: Public Administration
California State University Los Angeles
June 1993

Associate of Science
Fire Technology
Rancho Santiago College
May 1990

Associate in Science
Chief Officer
Santa Ana College
August 2008

Associate in Science
Fire Administration
Santa Ana College
December 2008

Associate in Science
Hazardous Materials Specialist
Palo Verde College
July 2014

Schools

National Fire Academy-Emergency Mgt. Institute
Emmitsburg, MD
1996-Present
Units completed: **37.7**
(Major: Fire Prevention & Emergency Mgt)

Santa Ana College
Santa Ana, California
January 2007
Units completed: **176.6**
(Major: Fire Technology & Criminal Justice)

Schools Cont.

University of Wisconsin-Stevens Point
Stevens Point, Wisconsin
Currently Enrolled
(Major: Utility Vegetation Management)

University of California Riverside
Riverside, California
2004 to 2006
Units completed: **28.5**
(Major: Land Use & Environmental Planning)

Palo Verde College
Blythe, California
2006
Units completed: **16.75**
(Major: Fire Science)

Riverside Community College
Riverside, California
2004
Units completed: **20.50**
(Major: Fire Science)

Victor Valley College
Victorville, California
1996
Units completed: **3.0**
(Major Fire Technology)

Mt. San Antonio College
Walnut, California
1992
Units completed: **4.0**
(Major: Fire Science)

Schools Cont.

Crafton Hills College
Yucaipa, California
1991
Units completed: **6.50**
(Major: Fire Science)

Hacienda La Puente Adult Education
Sacramento, California
1990
Units completed: **12.0**
(Major: Fire Science)

Miramar College
Miramar, California
1984
Units completed: **2.0**
(Major: Fire Science)

LICENSES & CERTIFICATIONS:

Emergency Medical Technician # RE-4023
CA State Fire Marshal *Chief Officer*
CA State Fire Marshal *Fire Officer*
CA State Fire Marshal *Firefighter I & II*
CA State Fire Marshal *Fire Investigator I*
CA State Fire Marshal *Driver Operator I*
CA State Fire Marshal *Fire Instructor I*
CA State Fire Marshal *Public Education Officer I*
CA State Fire Marshal *Haz Mat Technician*
CA State Fire Marshal *Fire Marshal*
CA State Fire Marshal *Plans Examiner*
CA State Fire Marshal *Fire Protection Specialist*
CA State Fire Marshal *Fire Prevention Officer I*
CSTI Hazardous Materials Operational
CSTI Hazardous Materials Operational Decon
CSTI Haz Mat FRO NBC Agents
CSTI Hazardous Materials Technician A-D
CSTI Clan Meth Lab & Compressed Gas Cylinder
CSTI Haz Mat Technician Refresher
Joint Apprenticeship Committee Firefighter I & II
Joint Apprenticeship Committee Driver Operator I
Santa Ana College Fire Administration
Santa Ana College Fire Technology- Chief Officer

University of CA Riverside *Land use and
Environmental Planning*

National Code Service Ass. *CA Fire Code Inspector*
Palo Verde College-Firefighter I
Palo Verde College- Fire Instructor I
OSHA-10 Construction Industry

TRAINING:

Over 2000 hours of documented training regarding
fire behavior, fire origin and cause investigation,
fire suppression, tactics, strategy, basic life support,
fire prevention, fire engineering, public education,
hazardous materials, emergency management
search and rescue, weapons of mass destruction,
vehicle extrication, terrorism, explosives, law
enforcement and related fields.

COURT TESTIMONY:

Riverside County Superior Court
Indio, California
June 12, 1997
Case # ICR 24781
District Attorney: Christl
Public Defender: Cavanaugh

California Energy Commission
Sacramento, California
October 29, 2010
Case # 09-AFC-10 Rice Solar Energy Plant
Attorney: Scott Galati
Evidentiary Hearing

APPENDIX A

SPECIAL TRAINING CLASSES

FIRE INVESTIGATION

Fire Investigation

1A- 40 hours (3.0 units)

Fire Origin and Cause Determination

Mt. San Antonio College—1991

Topics: Chemistry of fires, ignition and combustion, fire travel, sources of ignition (accidental, incendiary, electrical), origin determination, building construction, investigation of structure vehicle and wildland fires, fire fatalities, evidence recognition and documentation, evidence preservation, documenting the fire scene and the concepts of law.

Primary Instructor: William Alexander
Kern County Fire Dept.
Arson Investigator

Fire Investigation

1B-40 hours (3.0 units)

Techniques of Fire Investigation

Mt. San Antonio College—1992

Topics: Chemistry & Physics of fire, fire causes, fire scene search and identification, collection, and preservation of evidence.

Primary Instructor: William Alexander
Kern County Fire Dept.
Arson Investigator

Fire Investigation

2A-40 hours (2.0 units)

Criminal and Legal Procedures

Santa Ana College---2007

Topics: Legal preparation to develop the arson case, investigate, apprehend, and convict arsonists, interviewing and interrogating suspects; search and seizure; search warrants; courtroom demeanor; working with the district attorney's office.

Instructors: Roger Domen
Fire Investigator
Anaheim Fire Department
Tim Adams
Fire Investigator
Anaheim Fire Department

Fire Investigation

2B-40 hours (2.0 units)

Field Case Studies

Santa Ana College ---2007

Topics: Advanced instruction in fire scene investigation, case preparation and courtroom testimony, review of fire scene photography, sketching, evidence collection, interviewing and interrogation, and extensive use of simulations for developing and presenting an arson case.

Instructors: Roger Domen
Fire Investigator
Anaheim Fire Department
Tim Adams
Fire Investigator
Anaheim Fire Department

Special Training Classes Cont.

Administration of Justice-PC 832 Level III – 64 hours, 4.0 units

Riverside Community College – 1999
Topics: Peace Officers Basic Training part 1.
Powers of Arrest. Search and Seizure.
Instructors: Varied

Administration of Justice-PC 832 Level III - 104 hours 6.0 units

Riverside Community College – 2000
Topics: Peace Officers Basic Training part 2.
Powers of Arrest. Search and Seizure.
Instructors: Varied

Explosives and Booby Traps – 8 hours

Riverside County Sheriff's Department
December 2000
Riverside, CA
Topics: Explosive awareness for emergency first responders, identification of improvised devices.
Instructors: Varied

California Conference of Arson Investigators

December 2005
Roundtable 12
Topic: Fire Investigation; The Scientific Method.
Speaker: John DeHaan, Ph.D.

Special Training Classes Cont.

Certificate of Participation- 3 hours – tested
Ethics and the Fire Investigator
October 29, 2006
International Association of Arson Investigators

Certificate of Participation- 4 hours – tested
Investigating Motor Vehicle Fires
October 31, 2006
International Association of Arson Investigators

Certificate of Participation- 3 hours – tested
Fire Investigator Scene Safety
November 9, 2006
International Association of Arson Investigators

Certificate of Completion- 3 hours
Prevention & Response to Suicide Bombing
Incidents (PER-231)
New Mexico Tech
Energetic Materials Research & Testing
Corona, CA
June 20, 2008
Instructor: Greg Smith

Certificate of Completion- 4 Hours
Incident Response to Terrorist Bombings (PER 230)
New Mexico Tech
Energetic Materials Research & Testing
Corona, CA
June 20, 2008
Instructor: Marge Yarbrough

Special Training Classes Cont.

Certificate of Completion- 4 Hours - tested

Understanding & Planning for School Bomb
Incidents

New Mexico Tech

Energetic Materials Research & Testing

February 25, 2014

APPENDIX B

SPECIAL TRAINING CLASSES

FIRE TECHNOLOGY AND RELATED TRAINING

Basic Forest Firefighter Academy- 40 hours

California Department of Forestry.

San Diego Ranger Unit

June 1986

Topics: Introduction to fire service, wildland fire control, incident command system, strategy and tactics, handling construction, tools and equipment, water supply, fire prevention, public education and resource management, urban interface structure protection.

Instructor: Paul Smith

Basic Fire Academy Course- 814 hours

Rancho Santiago College

March 1988

Topics: Introduction to the fire service, breathing apparatus, water supply systems, incident command, search and rescue, hose, ladders, emergency medical training, tools and equipment, ropes and knots, salvage, overhaul, rescue, fire prevention, public education, fire chemistry, extinguishment, building construction, fire investigation, wildland fire control vehicle fires, forcible entry, vehicle extrication, vehicle fires, flammable liquid fires, ventilation.

Instructor: Varied

Special Training Classes Cont.

Paid Call Firefighter Academy- 60 hours

Orange County Fire Department

April 1989

Topics: Introduction to the fire service, breathing apparatus, water supply systems, incident command, search and rescue, hose, ladders, emergency medical training, tools and equipment, ropes and knots, salvage, overhaul, rescue, fire prevention, public education, fire chemistry, extinguishment, building construction, fire investigation, wildland fire control

Instructor: Varied

Basic Firefighter Academy- 200 hours

California Department of Forestry & Fire Protection

CDF Fire Academy Ione, CA

October 1990

Topics: Introduction to the fire service, structural firefighting, breathing apparatus, water supply systems, incident command, search and rescue, hose, ladders, emergency medical training, tools and equipment, ropes and knots, salvage, overhaul, rescue, fire prevention, public education, fire chemistry, extinguishment, building construction, fire investigation, wildland fire control, commanding the initial response basic map reading.

Instructor: Varied

Multi Agency Truck Academy- 88 hours

Crafton Hills College

October 1991

Topics: Introduction to truck company operations, aerial physics, salvage, overhaul, ventilation, search and rescue, rescue systems, forcible entry, rapid intervention, ladders, aerial fire apparatus, tools and equipment, elevator rescue, fire protection systems for emergency operations.

Instructor: Varied

Special Training Classes Cont.

Fire Apparatus Engineer Academy- 80 hours

Riverside County Fire Department

Indio, CA

December 1995

Introduction to fire apparatus operations, basic fire engine driving, pumping, water supply systems, hose evolutions, hydraulics, pump theory, equipment identification, emergency vehicle operations, incident command, commanding the initial response, preventative maintenance

Instructor: Varied

Basic Fire Engine Operation- 109 hours

San Bernardino Ranger Unit

May 1996

Introduction to fire apparatus operations, basic fire engine driving, pumping, water supply systems, hose evolutions, hydraulics, pump theory, equipment identification, emergency vehicle operations, incident command, commanding the initial response, preventative maintenance, basic map reading, off road driving.

Instructor: Varied

Driver Operator Module- 160 hours

California Department of Forestry & Fire Protection

CDF Fire Academy Ione, CA

June 1997

Introduction to fire apparatus operations, basic fire engine driving, pumping, water supply systems, hose evolutions, hydraulics, pump theory, equipment identification, emergency vehicle operations, incident command, commanding the initial response, preventative maintenance, fire investigation, fire prevention, resource management, progressive discipline, human resource management, department safety and substance abuse off road driving.

Instructor: Varied

Special Training Classes Cont.

Fire Control III- 8 hours

Structure Fire Control
Fallbrook, CA
April 1985
Instructor: Ron Newport

Incident Command Systems I- 220 16 hours

CDF/Riverside County Fire Department
National Fire Academy Course
January 1992
Instructor: Mike Weddington

Certificate of Training- 8 hours tested

I- 248 Check – In Status Recorder
May 1993
CDF Riverside Unit

Low Angle Rescue- 24 hours

CDF/Riverside County Fire Department
May 1993
Instructor: Debra Zimmerman

Auto Extrication- 8 hours

Santa Ana College
April 1994
Topics: Tools and equipment, procedures, scene control, safety, traffic control, incident command, medical transportation, and coordination.
Instructor: Mark Early

Fire Information Officer- 6 hours

CDF/Riverside County Fire Department
March 1995
Instructor: Joanne Evans

Special Training Classes Cont.

Fire Control VII- 16 hours

Wildland Fire Control
San Bernardino, CA
May 1995
Instructor: Jake Goetz

Rescue Systems I -40 hours

CDF/Riverside County Fire Department
October 1995
Instructor: Brad Harris

River and Flood Water Rescue- 30 hours

CDF/Riverside County Fire Department
October 1995
Instructor: Jim Yazloff

Certificate of Achievement- 8 hours- tested

IS-7 Disaster Assistance
March 1996
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

IS-120 An Orientation to Community Disaster Exercises
September 1996
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 3 hours

Metrolink Fire & Rescue Safety Training
September 1996
Riverside County Fire Training Officers Association

Special Training Classes Cont.

Certificate of Achievement- 8 hours- tested

IS-275 Emergency Operations Center Management and Operations
January 1997
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

IS-1 Emergency Program Manager
February 1997
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 3 hours

Substance Abuse Training
November 1997
CDF Riverside Unit
Instructor: Dave Petrinovich

Certificate of Achievement- 8 hours- tested

IS-2 Emergency Preparedness
November 1997
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

IS-3 Radiological Emergency Management
December 1997
Federal Emergency Management Agency
Emergency Management Institute

Supervision II/Fire Management 1- 32 hours

Management/Supervision for Company Officers
CDF/San Diego Unit
January 1998
Instructor: Dave Golder

Special Training Classes Cont.

Incident Management II/Fire Command 2E- 32 Hours

Wildland Fire Fighting Tactics
CDF/Riverside Unit
January 1998
Instructor: Dennis Dawson

Certificate of Achievement- 8 hours- tested

IS-5 Hazardous Materials A Citizen's Orientation
March 1998
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 32 hours

S-290 Intermediate Fire Behavior
April 1998
CDF Riverside Unit
Instructor: Tim Chavez

Certificate of Training- 8 hours

Line EMT
April 1998
Riverside County Fire Chief's Association

Certificate of Training- 8 hours

I- 359 Medical Unit Leader
April 1998
Riverside County Fire Chief's Association

Certificate of Achievement- 8 hours- tested

IS-8 Building for the Earthquakes of Tomorrow
June 1998
Federal Emergency Management Agency
Emergency Management Institute
Riverside County Fire Chief's Association

Special Training Classes Cont.

Certificate of Training- 8 hours

Backfire and Burnout
June 1998
CDF Riverside Unit
Instructor: Tim Chavez

Pipeline Safety for Emergency Service Agencies-6 hours

CDF Riverside Unit
June 1998
Instructor: Bob Lukcaciey

Certificate of Completion-8 hr. tested

Emergency Response to Terrorism
June 1998
National Fire Academy

Certificate of Completion-8 tested

Emergency Response to Terrorism: Basic Concepts
November 1998
National Fire Academy

Incident Command Systems I-300 24 hours

CDF/Riverside County Fire Department
January 1999
Instructor: Jim Toy

Fire Command 1A-40 hours

Command Principles for Company Officers
Riverside Community College
January 1999
Instructor: Ken Norton

Special Training Classes Cont.

Fire Instructor 1A-40 hours

Instructional Techniques, Part 1
Riverside Community College
January 1999
Instructor: Bill Melendez

Incident Command Systems S-334 16 hours

Strike Team Leader
March 1999
Riverside Community College
Instructor: Jim Toy

Fire Instructor 1B-40 hours

Instructional Techniques, Part 2
Riverside Community College
March 1999
Instructor: Bill Melendez

Certificate of Achievement- 8 hours- tested

IS-301 Radiological Emergency Response
April 1999
Federal Emergency Management Agency
Emergency Management Institute

Confined Space Awareness- 8 hours

Riverside Community College
April 1999
Instructor: Debra Parker

Incident Command Systems S-236-8 hours

Staging Area Manager
Riverside Community College
April 1999
Instructor: Mike Paulette

Special Training Classes Cont.

Fire Command 1B-40 hours

Hazardous Materials Command Principles for Company Officers
Riverside Community College
April 1999
Instructor: Ken Norton

Certificate of Achievement- 8 hours- tested

IS-279 Retrofitting Flood-Prone Structures
June 1999
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 3 hours tested

I-256 Tool and equipment Specialist
July 1999
CDF/Riverside Unit

Certificate of Training- 3 hours tested

I-252 Ordering Manager
July 1999
CDF/Riverside County Fire Department

Certificate of Achievement- 8 hours- tested

IS-195 Basic Incident Command
August 1999
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

IS-10 Animals in Disasters: Awareness and Preparedness
September 1999
Federal Emergency Management Agency
Emergency Management Institute

Special Training Classes Cont.

Incident Command Systems S-339- 16 hours

Division/Group Supervisor
Riverside Community College
February 2000
Instructor: Jim Toy

Certificate of Achievement- 8 hours- tested

IS-11 Animals in Disasters Community Planning
April 2000
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

IS-346 Haz Mat for Medical Personnel
May 2000
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 24 hours

Highrise Operations
May 2000
Riverside County Fire Department

Certificate of Achievement- 10 hours- tested

IS-288 Role of Voluntary Agencies in Emergency Management
August 2000
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 10 hours- tested

IS-393 Introduction to Mitigation
October 2000
Federal Emergency Management Agency

Special Training Classes Cont.

Certificate of Training- 3 hours tested

Incident Command System I-100
November 2000
CDF/Riverside Unit

Certificate of Achievement- 10 hours- tested

IS-394 Mitigation for Homeowners
December 2000
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 10 hours- tested

IS-513 Professional in Emergency Management
February 2001
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 3 hours tested

I -253 Receiving and Distribution Manager
March 2001
CDF/Riverside Unit

Certificate of Training- 3 hours tested

I- 272 Helispot Manager
March 2001
CDF/Riverside Unit

Certificate of Training- 3 hours tested

I- 259 Security Manager
March 2001
CDF/Riverside Unit

Special Training Classes Cont.

Certificate of Achievement- 10 hours- tested

IS-208 State Disaster Management
July 2001
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 10 hours- tested

IS-600 Special Considerations for FEMA PA Projects
October 2001
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

Fire Service Supervision
November 2001
National Fire Academy Course

Incident Command Systems I-400 24 hours

Advanced Incident Command
CDF/Riverside County Fire Department
December 2001
Instructor: Mike Weddington

Certificate of Achievement- 2 hours- tested

IS- 630 Introduction to Public Assistance Process
June 2002
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Completion- 4 hours

Standardized Emergency Management System
January 2004
Riverside County Fire Department
Instructor: Phil Bardos

Special Training Classes Cont.

Incident Command Systems I-401 -24 hours

Safety Officer
CDF/Riverside County Fire Department
February 2004
Instructor: Mike Weddington

Certificate of Attendance- 40 hours

Fire Prevention Workshop
Buellton, CA
March 2004
California Fire Prevention Institute

Incident Command Systems S-403 Adv. Public Info Officer 40 hours

CDF/Riverside County Fire Department
April 2004
Instructor: Doug Allen

Fire Management 2D- 40 hours

Master Planning
Santa Ana College
August 2004
Instructor: Craig Halker

Certificate of Attendance- 16 hours

NASCAR Advanced Fire and Rescue Training
Las Vegas Motor Speedway Las Vegas, NV
August 2004
Instructor: Lee Watson

Certificate of Attendance- 16 hours

NASCAR Advanced Fire and Rescue Training
California Speedway Fontana, California
January 2005
Instructor: Lee Watson

Special Training Classes Cont.

Fire Management 2A- 40 hours

Organizational Development and Human Behavior
Santa Ana College
February 2005
Instructor: Craig Halker

Certificate of Attendance- 20 hours

Hazardous Materials Continuing Challenge
Emergency Response Workshop
Sacramento, California
September 2005

Fire Management 2C- 40 hours

Personnel and Labor Relations
Santa Ana College
November 2005
Instructor: Craig Halker

Fire Management 2E- 40 hours

Contemporary Issues and Concepts
Santa Ana College
January 2006
Instructor: Craig Halker

Fire Command 2B- 40 hours

Management of Hazardous Materials Incidents
Santa Ana College
June 2006
Instructor: Craig Halker

Special Training Classes Cont.

Fire Command 2A- 40 hours

Command Tactics at Major Fires
Santa Ana College
July 2006
Instructor: Craig Halker

Certificate of Achievement- 3 hours- tested

IS-700 National Incident Management System, an Introduction
September 2006
Federal Emergency Management Agency
US Department of Homeland Security

Certificate of Attendance- 24 hours

Hazardous Materials Continuing Challenge
Emergency Response Workshop
Sacramento, California
September 2006

Certificate of Achievement- 3 hours- tested

IS-800 National Response Plan, an Introduction
September 2006
Federal Emergency Management Agency
US Department of Homeland Security

Certificate of Achievement- 3 hours- tested

IS-900 Nat. Disaster Med. Sys. Federal Coordinating Center Ops
October 2006
Federal Emergency Management Agency
US Department of Homeland Security

Special Training Classes Cont.

Fire Command 2C- 40 hours

High-Rise Firefighting Tactics
Santa Ana College
December 2007
Instructor: Craig Halker

Certificate of Completion-8 Hours

Safety and Operational Procedures
Sunoco Automotive Racing Division
Ontario, CA
January 2008
Instructors: Bill Joyner & Jim Daniels

Fire Command 2D- 40 hours

Planning for Large Scale Disasters
Santa Ana College
February 2008
Instructor: Craig Halker

Certificate of Completion- 4 Hours tested

Q-494 National Fire Incident Reporting System
September 8, 2008
National Fire Academy
US Department of Homeland Security

Certificate of Completion- 4 hours tested

IS-241 Decision Making and Problem Solving
January 25, 2009
National Fire Academy
US Department of Homeland Security

Special Training Classes Cont.

Fire Instructor 2B-40 hours

Problem Solving and Group Dynamics
Riverside Community College
February 12, 2009
Instructor: Bill Melendez

Certificate of Training- 32 hours

S-346 Situation Unit Leader
March 20, 2009
CDF/Riverside Unit
Instructor: Tim Chavez

Certificate of Training- 16 hours

Basic Peer Support Class
April 14, 2009
Clark Training Center Riverside, CA
California Peer Support Association
Instructor: Maxine Lynch

Certificate of Training- 14 hours

Critical Incident Stress Management: Group Crisis Intervention
April 16, 2009
Clark Training Center Riverside, CA
International Critical Incident Stress Foundation
Instructor: Maxine Lynch

Certificate of Completion-3 Hours- tested

National Environmental Policy Act Concepts
Modules 1& 2
January 25, 2011
U.S. Department of the Interior
Bureau of Land Management

Special Training Classes Cont.

Certificate of Completion-1 Hours- tested

National Environmental Policy Act Concepts
Module 3
January 28, 2011
U.S. Department of the Interior
Bureau of Land Management

Certificate of Completion-16 Hours- tested

ROSS Dispatcher *NWCG*
August 28, 2012
CAL FIRE Southern Region Headquarters
Riverside, CA
Instructor: Shayne Canady

Certificate of Completion-16 Hours- tested

D-110 Expanded Dispatch Recorder *NWCG*
November 2, 2012
CAL FIRE Southern Region Headquarters
Riverside, CA
Instructor: Brandell Patterson

Certificate of Training-32 Hours

Emergency Command Center Chiefs Training
December 14, 2012
CAL FIRE Academy
Ione, CA
Instructor: Varied

Certificate of Training-140 Hours

Emergency Command Center Academy
March 15, 2013
CAL FIRE Academy
Ione, CA
Instructor: Varied

Special Training Classes Cont.

Certificate of Achievement- 16 hours- tested

NIMS ICS All Hazards Liaison Officer
March 25-26, 2013
Moreno Valley, CA
Federal Emergency Management Agency
Emergency Management Institute
Instructor: Varied

Certificate of Training- 40 Hours

CAL FIRE Supervision 3
November 8, 2013
CAL FIRE Academy
Ione, CA
Instructor: Mike Kaslin

Certificate of Training- 40 Hours

S-390 Intro to Wildland Fire Behavior Calculations
January 24, 2014
San Bernardino Unit HQ
San Bernardino, CA
Instructor: Tim Chaves

Certificate of Achievement- 2 hours- tested

Q-890 Intro to Emergency Response to Terrorism
January 31, 2014
Federal Emergency Management Agency
National Fire Academy
Instructor: Varied

Certificate of Training- 24 Hours

ECC Chief Training
February 13, 2014
CAL FIRE Academy
Ione, CA
Instructor: Varied

Special Training Classes Cont.

Certificate of Appreciation- 24 Hours

Hired Equipment Coordinator Training
February 21, 2014
CAL FIRE Academy
Ione, CA
Instructor: Varied/Neuman

Certificate of Achievement- 2 hours- tested

IS-00100.b ICS-100 Intro to Incident Command System
March 5, 2014
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 40 hours- tested

Incident Management 3
December 5, 2014
CAL FIRE Academy
Ione, CA
Instructor: Brian Estes

Certificate of Training- 40 hours

Supervision 4
December 12, 2014
CAL FIRE Academy
Ione, CA
Instructor: David Shew

Certificate of Achievement- 2 hours- tested

Q-463 ICS-200 Basic NIMS ICS for Operational First Responders
May 23, 2015
Federal Emergency Management Agency
National Fire Academy

Certificate of Training- 4 hours- tested

L-180 Human Factors in the Wildland Fire Service
May 30, 2015
National Wildfire Coordinating Group

Special Training Classes Cont.

Certificate of Training- 24 hours

Damage Inspection Technical Specialist
October 14, 2015
CAL FIRE Office of the State Fire Marshal
Sacramento, CA
Instructor: Matt Lee

Certificate of Achievement- 2 hours- tested

IS-772 Individual Assistance Pre-Damage Assessment
October 27, 2015
Federal Emergency Management Agency
National Fire Academy

Certificate of Achievement- 2 hours- tested

IS-200.b ICS-200 ICS for Single Res. & Initial Action Incident
October 31, 2015
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 2 hours- tested

IS-559 Local Damage Assessment
November 10, 2015
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 2 hours- tested

IS-556 Damage Assessment Planning for Public Works
November 22, 2015
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Training- 4 hours

Labor and Human Resource Management
December 9, 2015
CAL FIRE
Riverside, CA
Instructor: Andrea Clayton

Special Training Classes Cont.

Certificate of Achievement- 32 hours

Battalion Chief Academy # 4
Mach 18, 2016
CAL FIRE Riverside Unit
Riverside, CA
Instructor: Varied

Certificate of Training- 32 hours

C-234 Intermediate Firing Methods
May 20, 2016
CAL FIRE Riverside Unit
Riverside, CA
Instructors: Varied

Certificate of Completion-16 Hours- tested

Hazardous Materials Incident Commander
January 25, 2017
California Specialized Training Institute
Riverside, CA
Instructor: Dan Talbot

Certificate of Training- 32 hours tested

S-430 Operations Section Chief
May 25, 2017
Cal Fire Riverside Unit
Riverside, CA
Instructor: Varied

Certificate of Completion- 2 hours tested

Navigating the National Weather Service Fire Weather Program
April 20, 2020
University Corporation for Atmospheric Research
Boulder, CO
Instructors: Varied

Special Training Classes Cont.

Certificate of Achievement- 3 hours- tested

IS-120.c An Introduction to Exercise
October 12, 2020
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 6 hours- tested

IS-230.d Fundamentals of Emergency Management
October 16, 2020
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 5 hours- tested

IS-235.c Emergency Planning
October 21, 2020
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 3 hours- tested

IS-240.b Leadership and Influence
October 28, 2020
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 2 hours- tested

IS-241.b Decision and Problem-Solving
October 28, 2020
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- 8 hours- tested

IS-242.b Effective Communication
October 29, 2020
Federal Emergency Management Agency
Emergency Management Institute

Special Training Classes Cont.

Certificate of Achievement- 4 hours- tested

IS-244.b Developing and Managing Volunteers
October 29, 2020
Federal Emergency Management Agency
Emergency Management Institute

Certificate of Achievement- Completion of 7 Core Classes- tested

Professional Development-Emergency Management
October 29, 2020
Federal Emergency Management Agency
Emergency Management Institute

APPENDIX C

SPECIAL TRAINING CLASSES

FIRE PREVENTION ENGINEERING

AND EDUCATION

Fire Prevention 1A- 40 hours

Introduction to Fire Prevention
Rancho Santiago College
January 1992
Instructor: Wayne Eddar

Fire Prevention 1B- 40 hours

Code Enforcement
Rancho Santiago College
March 1992
Instructor: Craig Halker

Hazardous Materials 1A- 40 hours

Basic Chemistry of Hazardous Materials
Palo Verde College
December 1995
Instructor: Staff

Hazardous Materials 1B- 40 hours

Applied Chemistry- Field Identification of Chemicals
Palo Verde College
December 1995
Instructor: Staff

Fire Prevention Engineering and Education Cont.

Hazardous Materials 1C- 40 hours

Incident Organization, Protective and Monitoring Equipment
Palo Verde College
February 1996
Instructor: Staff

Hazardous Materials 1D- 40 hours

Tactical Field Operations, Tools and Equipment
Palo Verde College
February 1996
Instructor: Staff

Certificate of Training- 16hours

Fire Prevention Education and Enforcement
February 1998
CDF Riverside Unit

Fire Prevention 1C- 40 hours

Flammable Liquids and Gases
Riverside Community College
December 2000
Instructor: Tom Armstrong

Certificate of Training- 8 hours tested

Community Safety Educators
November 2001
National Fire Academy Course

Underground Piping for Fire Protection Systems – 4 hours

Apple Valley, CA
October 2002
National Fire Sprinkler Association, Inc.

Seismic Protection for Sprinkler Systems- 4 hours

Apple Valley, CA
October 2002
National Fire Sprinkler Association, Inc.

Fire Prevention Engineering and Education Cont.

Fire Alarm System Testing & Inspections Seminar- 8 hours

Anaheim, CA
November 2002
Automatic Fire Alarm Association, Inc.
Instructor: Michael B. Baker

Fire Prevention 2A- 40 hours

Fire Protection & Building Components
Santa Ana College
June 2003
Instructor: Craig Halker

Fire Prevention 2B- 40 hours

Uniform Building Code & CA Code of Regulations T-19 & T-24
Santa Ana College
August 2003
Instructor: Craig Halker

Fire Prevention 2C- 40 hours

Special Hazards Occupancies
Santa Ana College
August 2003
Instructor: Craig Halker

Fireworks Training – 6 hours

Outdoor Public Display Fireworks
California State Fire Marshal
May 30, 2007
Instructor: Marge Yarbrough

Fire Prevention 3B- 40 hours

Fire and Building Plan Checking
Santa Ana College
June 27, 2008
Instructor: Craig Halker

Fire Prevention Engineering and Education Cont.

Certificate of Completion- 4 Hours tested

Q-840 Fire Prevention Engineering Coffee Break Training Vol. 1
September 8, 2008
National Fire Academy
US Department of Homeland Security

Certificate of Completion- 4 Hours tested

Q-841 Fire Prevention Engineering Coffee Break Training Vol. 2
September 14, 2008
National Fire Academy
US Department of Homeland Security

Fire Prevention 3A- 40 hours

Fire Sprinkler Hydraulics
Apple Valley Fire Department
April 3, 2009
Instructor: Massoud Araghi

Certificate of Completion- 6 hours

Outdoor Public Display Fireworks
Riverside County Fire department
May 27, 2009
Instructor: Greg Smith

Certificate of Completion- 16 hours tested

2010 California Fire Code Overview
Poway Fire Department
December 21, 2011
Instructor: Gary Fisher

Certificate of Completion-1 hour tested

Asbestos Awareness
January 8, 2012
Target Solutions Occupational & Environmental Courseware

Fire Prevention Engineering and Education Cont.

Certificate of Completion–1 hour tested

Electrical Transformer Fire & Explosion Protection
May 20, 2012
McGraw Hill Construction

Certificate of Completion– 3 hours

NFPA 70E Electrical Training
Riverside County Fire Department
June 5, 2012
Instructor: C.J. Hamilton

Certificate of Achievement- 2 hours- tested

Q-228 Foundational Concepts of Chemistry
March 5, 2014
Federal Emergency Management Agency
National Fire Academy

Certificate of Completion– 8 hours tested

National Code Services Association, INC.
2013 California Fire Code Overview
October 25, 2014

Certificate of Completion– 2 hours

Wildland Fire Ignition Pathways
April 21, 2015
National Fire Protection Association

Certificate of Completion– 40 hours-tested

Sustainable Land Use Planning
May 12, 2015
World Bank Group
Instructor: Cara Bulavoc

Fire Prevention Engineering and Education Cont.

Certificate of Achievement- 2 hours- tested

Q-2100 Wildland Urban Interface Preparedness /Mitigation
May 23, 2015
National Fire Academy

Certificate of Achievement- 2 hours- tested

IS-320 Wildland Mitigation Basics for Mitigation Staff
May 23, 2015
FEMA/ Emergency Management Institute

Certificate of Achievement- 4 hours- tested

IS-328 Plan Review for Local Mitigation Plans
May 23, 2015
FEMA/ Emergency Management Institute

Certificate of Achievement- 3 hours- tested

IS-922 Applications of GIS for Emergency Management
June 5, 2015
FEMA/ Emergency Management Institute

Certificate of Completion- 8 hours

Leveraging Tools for Conducting Damage Assessment
January 14, 2016
National Disaster Preparedness Training Center/FEMA
San Diego, CA
Instructor: Karl Kim

Certificate of Completion- 8 hours tested

Statutes and Regulations
February 2, 2016
California State Fire Marshal
Riverside, CA
Instructor: Ernie Piaz

Fire Prevention Engineering and Education Cont.

Certificate of Training- 4 hours tested

2016 California Fire and Building Code Key Changes
April 12, 2017
Riverside County Fire Department
Riverside, CA
Instructor: James Frater

Certificate of Attendance- 4 hours tested

2016 CFC/CBC Code Key Changes for the Fire Official
April 12, 2017
KH Scott and Associates LLC
Riverside, CA
Instructor: Kevin Scott

Certificate of Training- 8 hours tested

2016 Fire and Life Safety Fundamentals
April 13, 2017
Riverside County Fire Department
Riverside, CA
Instructor: James Frater

Certificate of Completion- 48 hours tested

Wildland Urban Interface Planning: Evacuation, Land Use & Fire Codes
April 28, 2017
National Fire Academy
Emmitsburg, MD
Instructors: Varied

Certificate of Completion- 48 hours tested

Wildland Urban Interface: Fire Adaptive Communities
December 8, 2017
National Fire Academy
Emmitsburg, MD
Instructors: Varied

Fire Prevention Engineering and Education Cont.

Certificate of Attendance– 14 hours tested

Assessing Structure Ignition Potential from Wildfire
February 21, 2018
National Fire Protection Association
San Diego, CA
Instructor: Gary Marshal

Certificate of Completion– 6 hours tested

Q-218 Testing & Evaluating of Water Supplies for Fire Protection
September 21, 2020
National Fire Academy
Emmitsburg, MD
Instructors: Varied

Certificate of Completion– 6 hours tested

Q-217 Alternative Water Supply: Planning & Implementing
Programs
September 24, 2020
National Fire Academy
Emmitsburg, MD
Instructors: Varied

Certificate of Completion– 4 hours tested

Q-841 Introduction to Strategic Community Risk Reduction
September 24, 2020
National Fire Academy
Emmitsburg, MD
Instructors: Varied

Certificate of Completion– 4 hours tested

Electrical Safety for First Responders
October 1, 2020
National Grid Utility
Newark, NJ
Instructors: Varied

Fire Prevention Engineering and Education Cont.

Certificate of Completion– 1 hours tested

Addressing Aging Stormwater Infrastructure in the Face of
Climate Change & Extreme Weather Events
November 12, 2020
Forester University
Santa Barbara, CA
Instructors: Erin Zaske

Certificate of Attendance–1.5 hours tested

Planning for Wildfire: From Assessing Risk to
Long Term Mitigation
November 20, 2020
Planning Information Exchange In cooperation with APA
Chicago, IL
Instructors: Dr. Kimiko Barrett

Certificate of Completion– 10 hours tested

OSHA-10 Construction Industry Safety
November 23, 2020
Career Safe
College Station, TX
Instructors: Andrea Forest Mack

Certificate of Completion– 2 hours tested

Fire Adapted Communities for the Fire Service
January 1, 2021
International Association of Fire Chiefs
Fairfax, VA
Instructors: J. Robert Brown, Jr

Certificate of Completion– 8 hours tested

AWR-362 Flooding Hazards: Science & Preparedness
March 9, 2021
National Disaster Preparedness Training Center
Honolulu, HI
Instructors: Bronlea Mishler & Ted Buehner

Fire Prevention Engineering and Education Cont.

Certificate of Completion– 1 hour tested

Creating Your County Pipeline Plan

March 25, 2021

National Association of State Fire Marshals

Maitland, FL

Instructors: Varied

Appendix D

Professional Associations and Organizations

International Association of Fire Fighters: Professional Wildland Firefighters Local I-96
December 1999- August 2020

California Department of Forestry Firefighters L-2881
1986 to present

California Conference of Arson Investigators
November 2006 to 2008

National Association of Fire Investigators
December 2006 to 2008

National Fire Protection Association
January 2004 to 2006

Parent Teacher Association
January 2006 to 2010

Surfrider Foundation
January 2010 to January 2012

NASCAR (National Association of Stock Car Auto Racing)
January 2010 to December 2019

California Fire Chiefs- Fire Prevention Officers Section
December 2020 to present

International Society of Arboriculture
March 2021-present

American Planning Association
March 2021-present

International Association of Wildland Fire
March 2021-present

Association of Fire Ecology
March 2021-present

Professional Associations and Organizations

Utility Arborists Association

March 2021 to present

Appendix E

Periodicals Reviewed

Firehouse (Monthly)

California Fire/Arson Investigator CCAI (Quarterly)

National Fire Investigator NAFI (Quarterly)

National Fire Prevention Association Journal (Monthly)

Fire Protection Engineering (Quarterly)

Sprinkler Age (Monthly)

Fire Chief (Monthly)

Storm Water (Monthly)

Water Efficiency (Monthly)

ArcUser ESRI (Quarterly)

Governing (Monthly)

Straight Tip *Utah Fire & Rescue Academy Magazine* (Quarterly)

EHS Today (Monthly)

International Firefighter (Bi-monthly)

Public Works (Monthly)

Incident Prevention (Bimonthly)

Wildfire (Quarterly)

Appendix F

Informational Reading/Research Materials

IFSTA Fire Cause Determination First Edition
(Published 1982)

NFPA Fire Protection Handbook
(Published 1984)

NFPA Building Construction
(Published 1982)

NFPA 921 (Published 2004)

NWCG Wildfire Cause Determination Handbook
(Published 1978)

U.S. Dept of Justice Fire and Arson Scene Evidence
(Published 2000)

U.S. Dept of Justice A Guide for Explosion and Bombing Scene Investigation
(Published 2000)

Factory Mutual Arson and Fire Investigation Third Edition
(Published 1992)

Factory Mutual Automatic Sprinklers Third Edition
(Published 2001)

Factory Mutual Property Inspections Third Edition
(Published 2003)

Jensen, Sara. L and McPherson. R, *Living with Fire, Fire Ecology and Policy in The Twenty-First Century*, (California, University of California Press, 2008)

Schwab, James & Meck, Stewart, *Planning for Wildfires* (American Planning Association, 2005)

Kennedy, Roger, *Wildfire and American, How to Save Lives, property & Your Tax Dollar*, (New York, Douglas & McIntyre Ltd., 2006)

Appendix G

Presentations and Awards

Presentations

“No Mitigation No Cry” 2018. Association of Environmental Professionals, Rancho Mirage, California

“Strategic Planning” 2017, Riverside County FD/CAL FIRE Battalion Chief’s Academy, Riverside, California

“Fire and Land Use Planning” 2016. American Planning Association, Riverside, California

“The Safety Element and SB1241” 2016. American Planning Association, Glendale, California

“Fire Code Amendment, T-14 1270 Requirements” 2016. Calaveras CO. Board of Supervisors, San Andreas, California

“Land Use Planning and the Safety Element, SB1241” 2015. Orange Co. City Managers and Orange County Fire Authority Meeting. Orange County Fire Authority HQ, Orange, California

Awards

California Fire Service Award, Office of the State Fire Marshal, Planning and Risk Analysis, Land Use Planning 2018. Presented for Vision and Leadership.

CAL FIRE Director’s Award, 2017. Superior Accomplish in Land Use Planning.

Appendix H

Committee Involvement

2012 Riverside County Fire Department, Strategic Plan-Committee Member

2016 Riverside County Fire Department, Uniform Standards and Policy Implementation - Committee Member

2016 Riverside County Fire Department, Insurance Service Organization: Public Protection Classification Amendment-Chairman

2016 County of Riverside Emergency Management Department, Local Hazard Mitigation Plan Update-Committee Member

2019 International Association of Firefighters, Local I-96 Union Shop Steward, Wildfire Defense Systems



City of Petaluma Scott Ranch Development Project

Date: June 6, 2021

To: Chris Cort

From: Jason Neuman, Neuman Fire Consulting

Subject: Scott Ranch: Draft Environmental Impact Report (EIR)

This memorandum summarizes the evaluation of fire and life safety concerns for the proposed development located in the City of Petaluma, CA. The analysis is based on my professional opinion and industry standards as a fire service professional with over 32 years of service in planning, operations, command and control and fire prevention fields. The comments submitted are directed primarily at impacts and discrepancies with fire prevention planning, response and evacuation related issues contained in the Revised EIR and *Wildfire Evacuation Transportation Assessment*. Reference material utilized was from various public sources.

Project Description

The Scott Ranch project consists of a residential component and the Putnam Park Extension Project. The residential component proposes development on approximately 15 acres of the project site and includes 28 single-family residences, streets, common open space, and other infrastructure improvements including a roundabout at Windsor Drive cross of D Street, pedestrian and bicycle facilities, and sewer, water, and storm drainage facilities. The proposed Putnam Park Extension Project component proposes to extend the existing Helen Putnam Regional Park eastward to D Street by developing a park area on approximately 44-acres of the project site. The Putnam Park Extension portion of the project proposes development of a barn center that includes renovation of the existing barn complex and cleaning shed, installation of pathways, bicycle parking, information kiosks, vegetable gardens, demonstration and working corrals, antique farm equipment, and an amphitheater for outdoor learning activities. This project component includes a multi-use loop trail network of approximately one mile, north and south of Kelly Creek. A 300-foot Urban Separator will be maintained between the proposed development and the southern boundary of the project site. The project also includes the off-site Helen Putnam Regional Park Trail project; a 0.5-mile-long trail segment proposed by Sonoma County Regional Parks.

Scott Ranch Project Revised Draft EIR. 4.14 Wildfire December 2020

While I find the *Revised Environmental Impact Report (EIR)* to be very well written, the document did not appear to clearly address the wildfire building, evacuation or fire related response objectives. The EIR referenced partial information from the adopted General Plan and the Local Hazard Mitigation Plan.

The EIR identifies the projects site within a Wildland Urban Interface Area according to **Figure 4.15-2**. The City of Petaluma Fire Prevention Bureau identifies this area as a Very High Fire Hazard Severity Zone as identified on the city website and defined in Section 17.20.020 of the Petaluma Municipal Fire Code.

The City Fire Department has the authority to expand its fire hazard boundaries to be more restrictive than the CAL FIRE minimum recommendations. The 2020 Local Hazard Mitigation Plan, Chapter 4, Section 4.3.4 Wildfire, Figure 4-20 depicts Fire Hazard Severity Zones in the Local Responsibility Areas (LRA) in Petaluma. The map is not consistent with the fire prevention map identifying VHFHSZ. No Fire Hazard maps were found in the 2025 General Plan revised on January 11, 2012.

The Scott Ranch EIR Section 4.15 Fire Hazard Severity Zones provides a reference to visually identify the project site in Figure 4.15-2, City of Petaluma Wildland Urban Interface Areas. *Figure 4.15-2, City of Petaluma Wildland Urban Interface Areas* that is referenced in the EIR is different than the land designation from the fire department and referenced in Petaluma Municipal Code. The Fire Department utilizes a similar map. However, the city fire department map is labeled as a Very High Fire Hazard Severity Zone. Figure 4.15-2 in the EIR has the VHFHSZ designation removed. This information is inconsistent with adopted documents and the EIR should reflect accurate information.

The Scott Ranch Fire Protection Plan submitted as part of the Revised Draft Environmental Impact Report was very well written and apparently addressed the items within the firm's scope of work. Based on the findings and fire run scenarios the report did not identify additional or proposed mitigation to reduce potential impacts to the proposed development.

The question for the lead agency, will actions W-1, W-2 & W-5 become part of the conditions of approval or a form of mitigation. Should these programs/plans be in place prior to approving a new development project?

The Revised EIR references the City of Petaluma General Plan Policies relating to Fire Protection along with the Sonoma County Community Wildfire Protection Plan (CWPP) below:

The Revised EIR Section 4.15 references the Sonoma County Community Wildfire Protection Plan (CWPP) and provides an overview of the plan. It does not identify the significance or the relationship to the proposed development for planning purposes and entitlements.

4.15.4 IMPACTS AND MITIGATION MEASURES

4.15.4.1 Thresholds of Significance

The revised EIR did not address the applicable fire and life safety concerns in Appendix G of the State CEQA Guidelines sections with the determination of significant impacts. It is presumed the proposed project would have significant impacts requiring the need for a Fuel Management Plan. As mentioned previously, the Fuel Management Plan was professionally written and addressed

the concerns based on the scope of work for fire behavior and risk potential. However, the Fuel Management Plan did not provide additional mitigation measures to harden the dwellings that would be impacted the most based on the worst-case fire scenario. Incorporating additional mitigation above the minimum standards may be essential to ensure survivability and reduce cumulative impacts and the potential for structure ignition. The EIR mentioned Ignition Resistant Structures based on the Petaluma Municipal Fire Code which appeared to be the minimum standard. No information was provided to increase the requirements above the minimum standards.

Section 4.12 Public Services of the Revised Draft EIR did not provide an accurate response time to the project area. The only information that was provided was a response time based on national standard thresholds. The EIR did not provide the total response time to the proposed project. The total response time would include Alarm Answer Time + Alarm Processing Time + Apparatus Turnout Time + Travel Time to equal the actual response time of the first arriving fire apparatus. This information could be confusing to the public reading the document.

The EIR also states “currently the department is not able to meet the four-minute response goal.” In section 4.12 Public Services. The Petaluma General Plan 2025 is referenced indicating the following policies would apply to the proposed project with respect to fire protection services and provides conflicting information adding to the confusion of response times. The General Plan Policies list, fire services will maintain a four-minute travel time for emergencies in the city and transportation improvements will be provided not to adversely impact response times.

The Revised EIR did not mention fire department response capabilities or define what a fire response consists of to the project area or outline the initial and ongoing fire prevention and education initiatives. The Local Hazard Mitigation Plan (LHMP) outlines risks associated with wildfires and identifies deficiencies with operational performance objectives.

The LHMP continues to address the likelihood of wildfires occurring due to climate change and the importance of adjusting emergency preparedness. The wildfire section of the LHMP outlines the areas with highest risk to life and property is located near Windsor Drive and that the city must account for areas where future occurrence of major wildfires will significantly affect the city through mandated evacuation and poor air quality.

The 2020 LHMP outlines the deficiencies with program objectives in wildland fire suppression and wildfire planning, engineering, and education. This is by no means a reflection of the Petaluma Fire Department or its operational readiness. The information obtained from the LHMP is presumably factual and the insufficient staffing of vital programs and essential fire apparatus is possibly based on budgetary constraints and limitations within city government, not the Petaluma Fire Department. The LHMP states, “*The Petaluma Fire Department wildland apparatus is limited to a Type VI pick-up mounted pumper.*”

The information identified in the Revised EIR which references the 2020 LHMP update provides information relating to challenges implementing the Fire Protection Policies 7P-18 and P-27 in the General Plan. These challenges may place constraints on the proposed development and the service delivery throughout the construction phase and at buildout.

The 2020 LHMP Update identifies, the use of a Type VI fire engine. A Type VI fire engine may not have the capabilities to sustain an effective and desired fire flow to contain a wildfire in the project area or provide the needed protection to fire personnel in an emergency situation. Type VI fire engines have limitations compared to Type III engines listed in the LHMP. At this point, it is not confirmed if the Petaluma FD has a Type VI engine in service, staffed full time or cross staffed with other fire apparatus. Cross staffing an engine will add to the total response time to the project area as crews remove essential personnel protective equipment, essential gear and respond to the incident. The EIR also did not differentiate response times based on a full alarm assignment arriving at scene or a single engine arriving at the scene. A full alarm assignment will add to the overall response time and would possibly exceed the four-minute response target objective identified in the General Plan Policy and add to the overall response based on national standards. It is assumed the Petaluma FD has a standard response plan based on incident type and the types of fire apparatus that would respond to various types of incidents along with augmented resources from adjacent jurisdictions. Although the Revised EIR appears to focus on the wildfire impacts, every incident type should be considered. No fire response plan or Emergency Operation Plan was available for public view to verify.

In the first draft of the EIR, correspondence from the previous Fire Marshal Michael Ginn indicated:

“The existing staffing levels are minimally adequate. Any new additions can create some measurable impacts on our delivery. Especially in the area of EMS response.”

“Increases in call volume create proportional increases in equipment usage and maintenance as well as increases in corresponding risks for accidents and lost time to employees due to injuries associated with EMS response.”

“With the proposed increase in growth, the numbers of simultaneous incidents will also increase.”

The former Fire Marshal also indicated and identified cumulative impacts to the fire departments level of service dealing with the proposed development of Scott Ranch. The EIR did not adequately address or explain the impacts in relation to response capabilities to the project area. In a city announcement describing Measure U Petaluma’s Local Recovery, Emergency Preparedness and Essential City Services bulletin placing the measure on the November 3, 2020 ballot. The intent of Measure U is to prepare for any future wildfire, public health and safety, or other natural disaster. The bulletin describes the fire related impacts from previous fire incidents in the surrounding areas and current road conditions. The section below describes the importance of response capabilities to meet service demands.

HOW DOES MEASURE U ADDRESS FIRE PROTECTION AND EMERGENCY RESPONSE?

Petaluma has been fortunate and spared from recent fires but calls for emergency response to the Fire Department continue to increase to record levels – an increase of 95% in the past decade which has also increased emergency response times. Measure U will ensure our firefighters can respond quickly to any emergency with adequate staffing and equipment that protects our city and residents.

The cumulative impact of fire response capabilities was not addressed in the Revised EIR. Measure U indicates impacts currently exist. These impacts could place constraints on the proposed development and adverse impacts to response times. The status of Measure U is unknown and may take years to analyze the successful performance of the fire departments operational capabilities.

Additional information on Measure “U” from the City of Petaluma website.

DOES MEASURE U IMPACT ROAD SAFETY AND REPAIR?

Petaluma’s 396 miles of roads are rated the worst in the Bay Area and are pitted with potholes and cracks and in dire need of maintenance. Measure U will repair existing hazards and properly maintain our streets, which will only get more expensive to fix the longer they go without repair and repaving. Measure U will fix our streets and potholes and make our roads safer, including for first responders who need to reach people quickly that need help.

The information regarding Petaluma’s current roadways network indicates safety related issues. The current status of the roadways was not identified in the revised EIR. These roadway conditions will greatly affect emergency response capabilities by increasing response time. Emergency service vehicles will need to slow down to prevent unwanted damage to expensive fire apparatus. The previous Fire Marshal M. Ginn also addressed maintenance, usage, increased corresponding risks for accidents etc. in a previous correspondence.

On August 12, 2018, a news article in the Argus-Courier reported that “Petaluma sees Increased Workload.” The article points out an increase in call volume, the need for additional emergency personnel, increase in commuter traffic and accidents. It is unknown if the fire department added additional staff and equipment to meet service demands. The increase in call volume may create delays with simultaneous incidents in the city and impact response capabilities to the proposed development. The increased traffic volume with daily commuter traffic could also impact evacuations from the project area.

The Revised EIR Section 4.15 references the Sonoma County Community Wildfire Protection Plan (CWPP) and provides an overview of the plan. It does not identify the significance or the relationship to the proposed development for planning purposes and entitlements.

The City of Petaluma 2020 LHMP Update provides an overview of the Sonoma County CWPP and the adoption process meeting AB-2140 compliance. The Sonoma County CWPP references the City of Petaluma in Chapter 16 and identifies the City of Petaluma as a Community at Risk. According to the LHMP approximately 2,466 people may be at risk of wildfire.

Within the Sonoma County CWPP local CAL FIRE Battalion Chiefs were asked to rank their level of concern about wildfire issues outlined below. The survey results identify key operational impacts from emergency vehicle access to evacuation routes. The CAL FIRE Battalion 1412 covers the geographic area of southern Sonoma County, Petaluma and Sonoma Mountain. Most of the area has significant wildland urban interface risks.

CWPP Survey Results

Wildfire Issue	Ranking	Comment
1. Fuels build up in areas around your community	Moderate / high	Fuels vary considerably from the western area to east. Petaluma's fuels moderate, Sonoma Valley area high
2. Fuels build up and lack of defensible space around homes.	High / Very High	
3. Increasing tree mortality due to disease or drought.	Moderate / High	SOD and pine beetles
4. Local residents lack understanding about wildfire risks & mitigation strategies.	High	Pre attack maps help, but difficult to make sure information is getting to the public.
5. Availability and safety of evacuation routes.	Very High	Pre attack maps help, but difficult to make sure information is getting to the public.
6. Emergency Vehicle Access/clearances/turnouts	High / Very High	Public roads high. Private driveways very high.
7. Addressing/Signage	High	
8. Power line issues	Moderate	
9. Specific Concern #1: Add a specific concern not already noted.	Very High	We need to be able to find peoples properties, be able to safely get there, and have the defensible space to be able to do something.
10. Specific Concern #2: Add a specific concern not already noted.		
Community Wildfire Planning		Response
11. Does your community (or communities) have a disaster plan in place?		Most of the communities need locally based plans.
12. Is there critical infrastructure in your community that is at particular risk to wildfire?		Towers, high tension lines, municipal water supplies
13. Are there areas outside your community (e.g., Open Space, Parks, etc.) that you see as posing a fire risk to your response area? 13		No.
14. 13. Are there significant fire-prone invasive species present in your response area?		Eucalyptus, non-native grasses.

Roadways throughout Battalion 1412 pose significant risks. State Routes 37 and 116, which run through the southern portion of the area, are major truck routes and vehicle accidents frequently result in vehicle fires that spread into the grasslands. Additionally, the Sonoma Raceway is located within Battalion 1412. The raceway hosts prestigious racing series like NASCAR, The Indy Racing League and NHRA, and draws over 750,000 spectators annually, representing the largest day crowds for any Northern California sporting event. Sonoma Raceway operates an average of 340 days per year.

Battalion 1412 is characterized by some densely populated urban areas along the 101 corridor and along the Highway 12 corridor in the Sonoma Valley.

The information contained in the CWPP provided by CAL FIRE indicating the potential for traffic related impacts which could create delays in response and challenges during evacuation.

The Scott Ranch Evacuation Transportation Assessment

The Scott Ranch Wildfire Evacuation Transportation Assessment summarized the local roadways serving the proposed development of 28 residential dwelling units and is not considered an evacuation plan as indicated in the assessment. The assessment describes consultation with city staff which include representatives from the fire department. The assessment did not indicate if the police department was present during the discussion to provide comment dealing with diverting traffic away from evacuation routes and establishing traffic control officers under emergency conditions.

The assessment raises several questions that could be confusing to a public audience. The assumption is law enforcement participated in the development of the assessment. However, the assessment does not provide the mechanism or the nexus of police department notification to initiate the evacuation process. It was also not determined which city department would implement Penal Code 409.5.

The Revised EIR Section 4.12.2.2 indicates the police department has a recommended emergency response time of three minutes. The response provided in the Revised EIR does not specify if police response would be a Priority I or Priority II etc. type of call. Police response may be a factor assisting the fire department in effectively evacuating residents out of the hazardous area in a safe and timely manner. In addition, actual police response times to the project were not clearly defined.

The assessment describes the means of egress based on the fire scenarios with traffic leading to various portions of the city away from the project area. Although the assessment is not considered an Evacuation Plan it may formulate questions from the residents in the Scott Ranch and the public. The Revised EIR did not appear to reference connectivity with the Mobility Element in the 2012 General Plan or reference the 2020 LHMP Update in relation to traffic and evacuation.

In addition, the Revised EIR did not appear to address in detail the cumulative impacts associated with the proposed project in relation to adopted policies in the Mobility Element of

the 2025 General Plan. The two policies below may be confusing to the public and the nexus to Wildfire Evacuation Transportation Assessment.

5-P-4 New development and/or major expansion or change of use may require construction of off-site mobility improvements to complete appropriate links in the network necessary for connecting the proposed development with existing neighborhoods and land uses.

5-P-5 Consider impacts on overall mobility and travel by multiple travel modes when evaluating transportation impacts.

The Wildfire Evacuation Transportation Assessment did not provide information in reference to evacuation notification nor did the assessment identify evacuation of residents with disabilities, special needs or account for the evacuation of pets and or service animals. The assessment also did not address signage indicating escape routes or provide alternate egress routes.

The 2020 LHMP Update did not have revised evacuation maps for the public to view in the event of an emergency specific to the geographic area. The Wildfire Evacuation Transportation Assessment did not address Public Safety Power Shut Offs (PSPS) as a possible constraint as residents evacuate. The loss of power in conjunction with a wildfire scenario has the potential to impact egress, create stacking of vehicles at intersections causing confusion to motorists from inoperable traffic signals. The out of service traffic signals would cause heavy congestion and extended response times for emergency first responders.

The results of the analysis describe volume to capacity (V/C) ratios of under 1.0. However, it does not provide clarification if the ratios were heavy or medium and what affect they will have on the adjacent road network during peak operating times and during local events. Nearby Sonoma Raceway holds several events during the summer months that attract upwards of over 100,000 spectators per event. At the conclusion of each sporting event the roadways are inundated with heavy traffic. In addition, emergency vehicle access is compromised, and response times are extended. The analysis indicates vehicles will evacuate the area only to end up in a congested area(s) of the city and surrounding roadways. The ratio of 0.86 in the Wildfire Evacuation Transportation Assessment appears to be heavy volume of traffic flow.

The City of Petaluma interactive website identifies the project area is in evacuation Zone PTL-0040. The Wildfire Evacuation Transportation Assessment does not reference this evacuation zone or provide a means of public notification or establish a threshold or an evacuation trigger perimeter when residents should evacuate the project area.

The Wildfire Evacuation Transportation Assessment references the Highway Capacity Manual 6th edition as a baseline for Capacity per Lane. Are those numbers based on a national standard or are they a reflection and or average of the existing road network capacity? Will *the Wildfire Transportation Assessment* evolve into a needed evacuation plan with a nexus to the Mobility Element and the Local Hazard Mitigation Plan?

As mentioned previously, the Wildfire Evacuation Transportation Assessment was professionally written. The focus of the document was based on a predetermined scope of work, that produced an analysis and not an evacuation plan. The analysis appears to be based on probability,

likelihood and assumptions incorporating scientific data utilizing fire scenarios as a base layer. Scientific data and analysis in comparison to actual real time events are two different factors to analyze. Each one will deliver a different set of unique characteristics with different outcomes. The analysis appears to present a partial evacuation outcome. The analysis may create confusion with the public and provide a false sense of security upon exiting the proposed development.

The Wildfire Evacuation Transportation Assessment did not provide a contingency plan for the residents fleeing the area if egress was compromised or completely blocked to the north and south of Windsor Drive. The proposed development has one point of ingress and one point of egress with a cul du sac dead end road. The analysis also did not address persons without vehicles or access to vehicles and how they would evacuate safely.

The Wildfire Evacuation Transportation Assessment did not provide details on the human element dealing with evacuations during an emergency. The human element will create anxiety with evacuees. Anxiety will ensue fear. Fear will lead to panic. At that point the fire suppression mission will transition to rescue and evacuations of people from the project area. This description highlights an operational reality.

Wildland fires can require evacuation of portions of the population, revised traffic patterns to accommodate emergency response vehicle operations, and restrictions on water usage during the emergency. Health hazards may exist for elderly or disabled persons who cannot evacuate or succumb to smoke and heat. The loss of utilities, and increased demand on medical services, can also be anticipated.

There is recent legislation related to emergency access and fire prevention that will be required upon the next revision of the Safety Element. Assembly Bill -747 and Sennet Bill - 99.

AB-747 Requires that the safety element be reviewed and updated to identify evacuation routes and evaluate their capacity, safety and viability under a range of emergency scenarios.

SB-99 Requires cities, upon the next revision of the housing element on or after January 1, 2020, to review and update their safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.