

# Items to consider for designating E-470 as a Hazmat Route?

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- Is there a benefit to our community and local jurisdictions if E-470 is designated as a Hazmat Route?
- Does the route provide potential to reduce hazmat travel on the roadways of local jurisdictions?
- Does the route provide potential to reduce distances traveled by hazmat vehicles?
- Does the route meet State Procedural Directive 1903.1?

# E-470 HAZMAT ROUTE ANALYSIS



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- Direction given by E-470 Board to perform a Hazmat Route Analysis
- Study follows State Procedural Directive 1903.1
- Performing the study does not commit the Authority to petition Colorado State Patrol to designate E-470 as a Hazmat Route
- Staff is meeting with select stake holders to present the findings and answer questions

- Colorado State Patrol – part of Colorado Department of Public Safety – regulates hazmat routing in Colorado
- Program goals are accomplished by:
  - Safe and efficient movement of hazardous materials on Colorado roadways through enforcement of permitting and routing.
  - Mutual cooperation with all entities involved in the shipping and transportation of hazardous materials.
  - Providing prompt response and mitigation resources for on-highway hazardous incidents and support of local government through mutual aid agreements or other formal requests for assistance.
  - **Designation and maintenance of hazardous and nuclear materials transportation routes.**
  - Adoption of permitting, routing, and safe transportation rules and regulations.
  - Enforcement of applicable laws, rules, and regulations.



Captain John Hahn,  
Commander

# HAZARDOUS MATERIAL



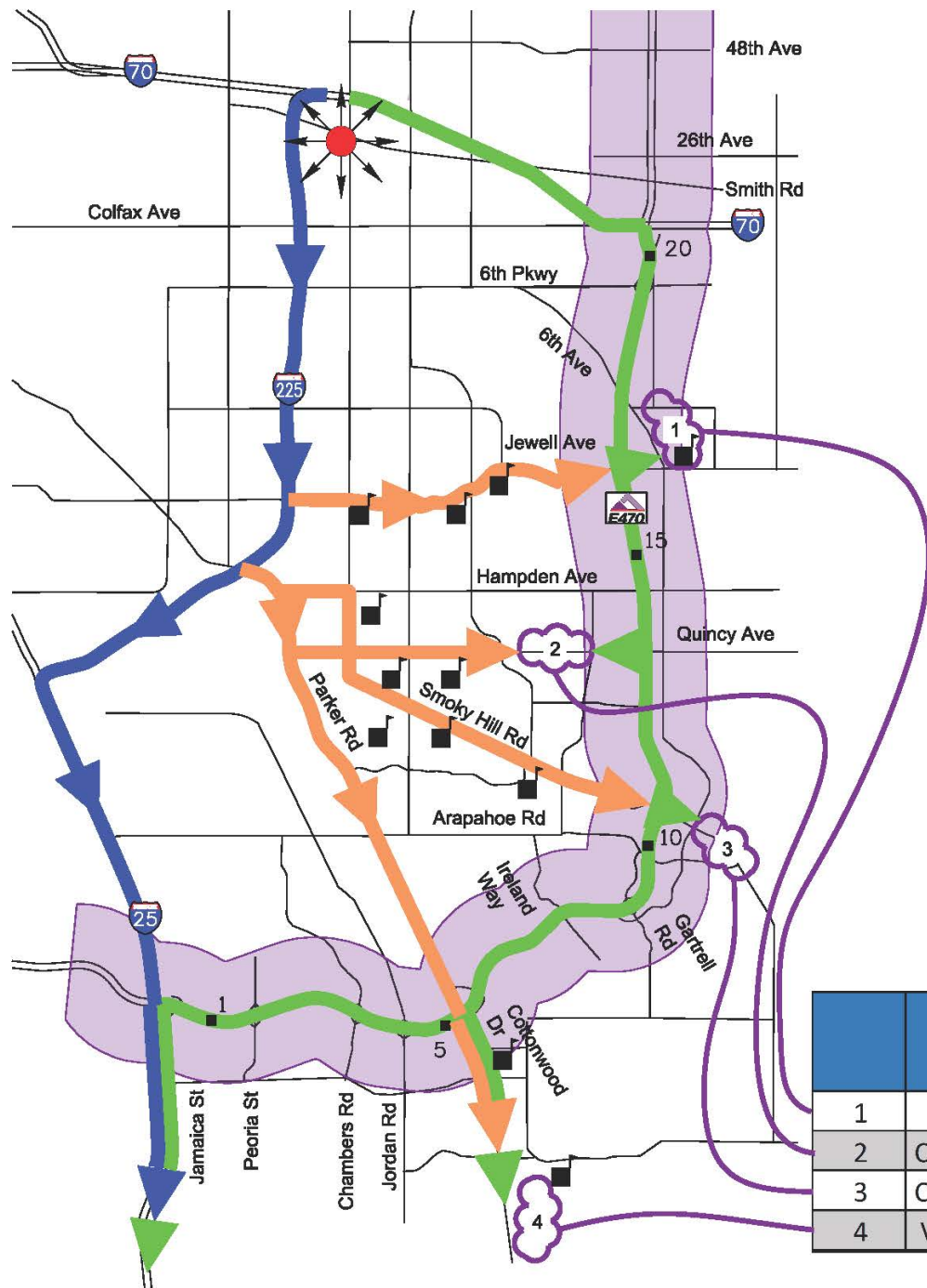
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- Items considered hazardous material include but are not limited to:
  - Fuel (~80% of transported hazmat material)
  - Paint
  - Propane
  - Pesticides
  - Dry Cleaning Supplies
  - Aerosols – such as household clearness and bathroom sprays,
  - Flammable liquids – such as paint thinner, nail polish, some essential oils, varnishes,
  - And so on...
- Thresholds for quantity of material being transported
- Follow hazmat route and use the shortest reasonable route to get to and from hazmat routes for pickup and delivery
- E-470 is not considering designation as a nuclear route

- Shopping centers/supermarkets
- Dry cleaners
- Hardware stores
- Auto repair shops
- Hospitals
- Oil/gas refineries

- Designated Hazmat Route
- Designated Hazmat + Nuclear Route
- E-470

Municipalities that require gasoline, diesel, and liquefied petroleum gas to comply with routing requirements.



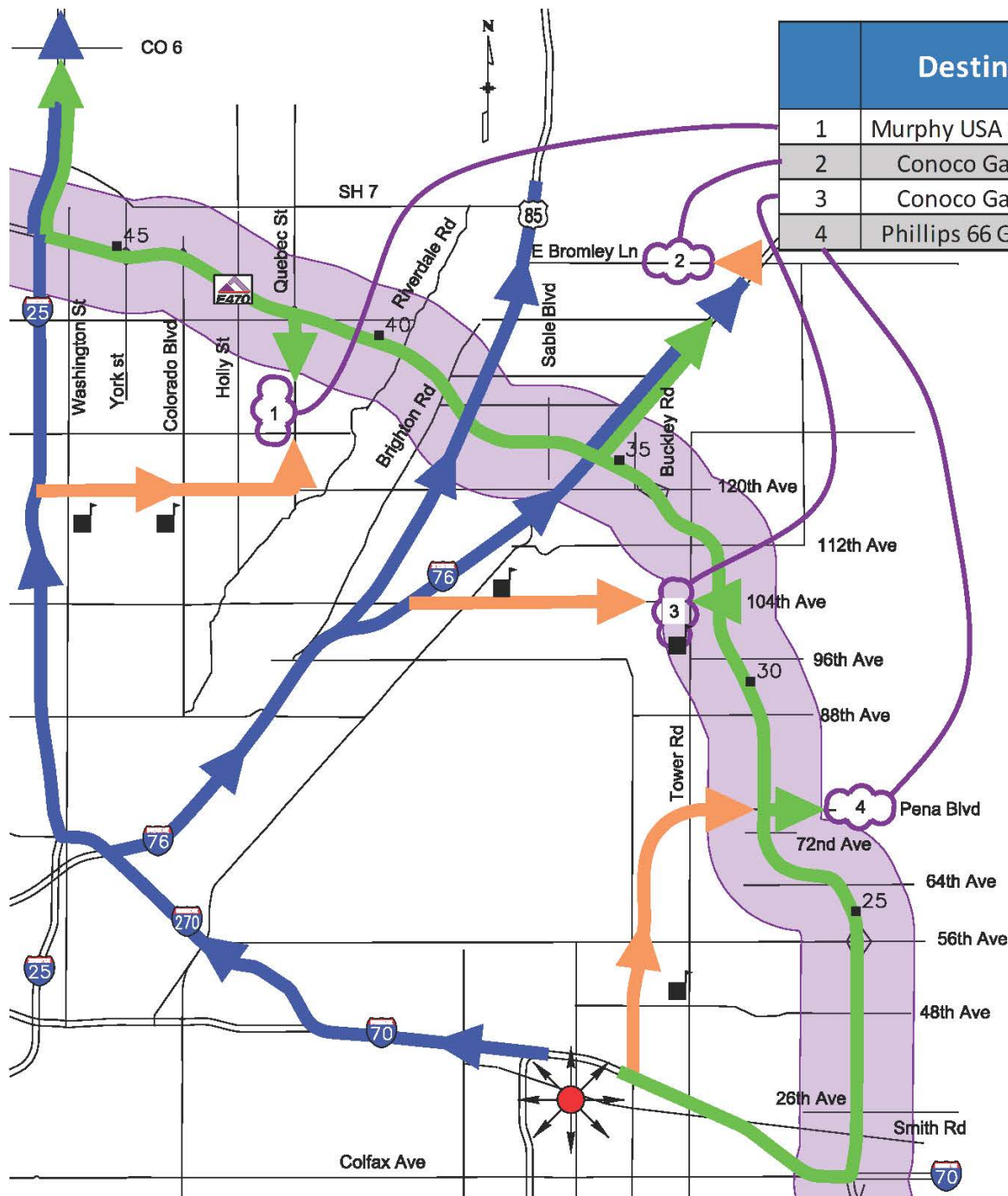
### LEGEND

- Origin (Magellen Fuel Rack)
- Potential Destination Area
- Potential HazMat Pattern with E-470 Designation
- Potential Existing HazMat Pattern
- Potential Existing Destination Route
- Mile Marker (E-470)
- School Location



	Destination	Existing Route Distance (mi)	E-470 Route Distance (mi)
1	Shell Gas Station	15.5	10.7
2	Conoco Gas Station	16.5	14.5
3	Conoco Gas Station	20.3	16.5
4	Valero Gas Station	21.3	23.7





	Destination	Existing Route Distance (mi)	E-470 Route Distance (mi)
1	Murphy USA Gas Station	23.6	29.5
2	Conoco Gas Station	27.5	26.4
3	Conoco Gas Station	22.4	17.9
4	Phillips 66 Gas Station	10.6	14.6



LEGEND	
	- Origin (Magellen Fuel Rack)
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# STATE PROCEDURAL DIRECTIVE 1903.1



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**Per State Procedural Directive 1903.1, at a minimum the route must meet these guidelines:**

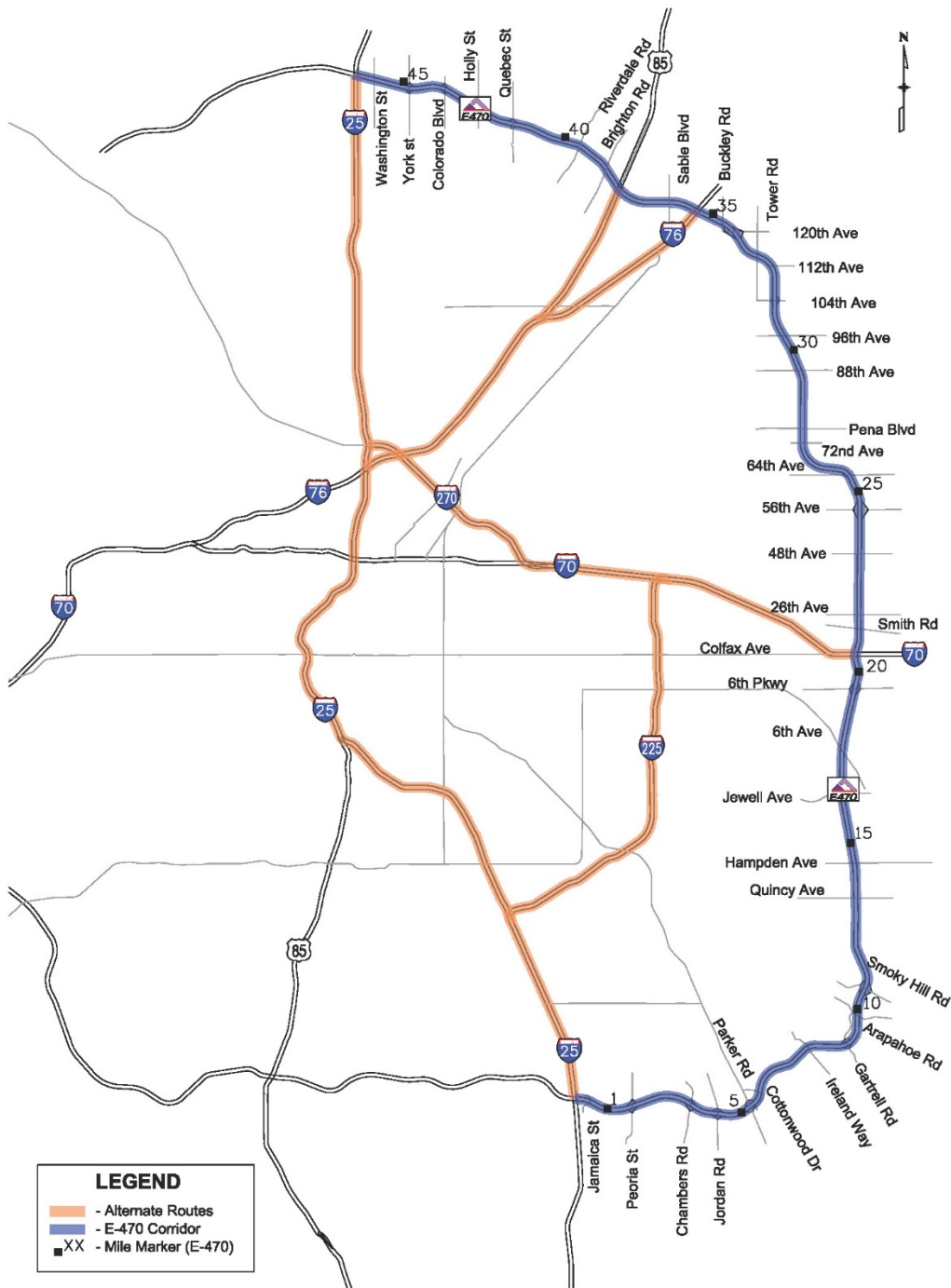
1. Is route feasible, practicable, and not unreasonably expensive for such transportation?
2. Is route continuous within a jurisdiction and from one jurisdiction to another?
3. Does route provide greater safety to the public than other feasible routes?

Considerations:

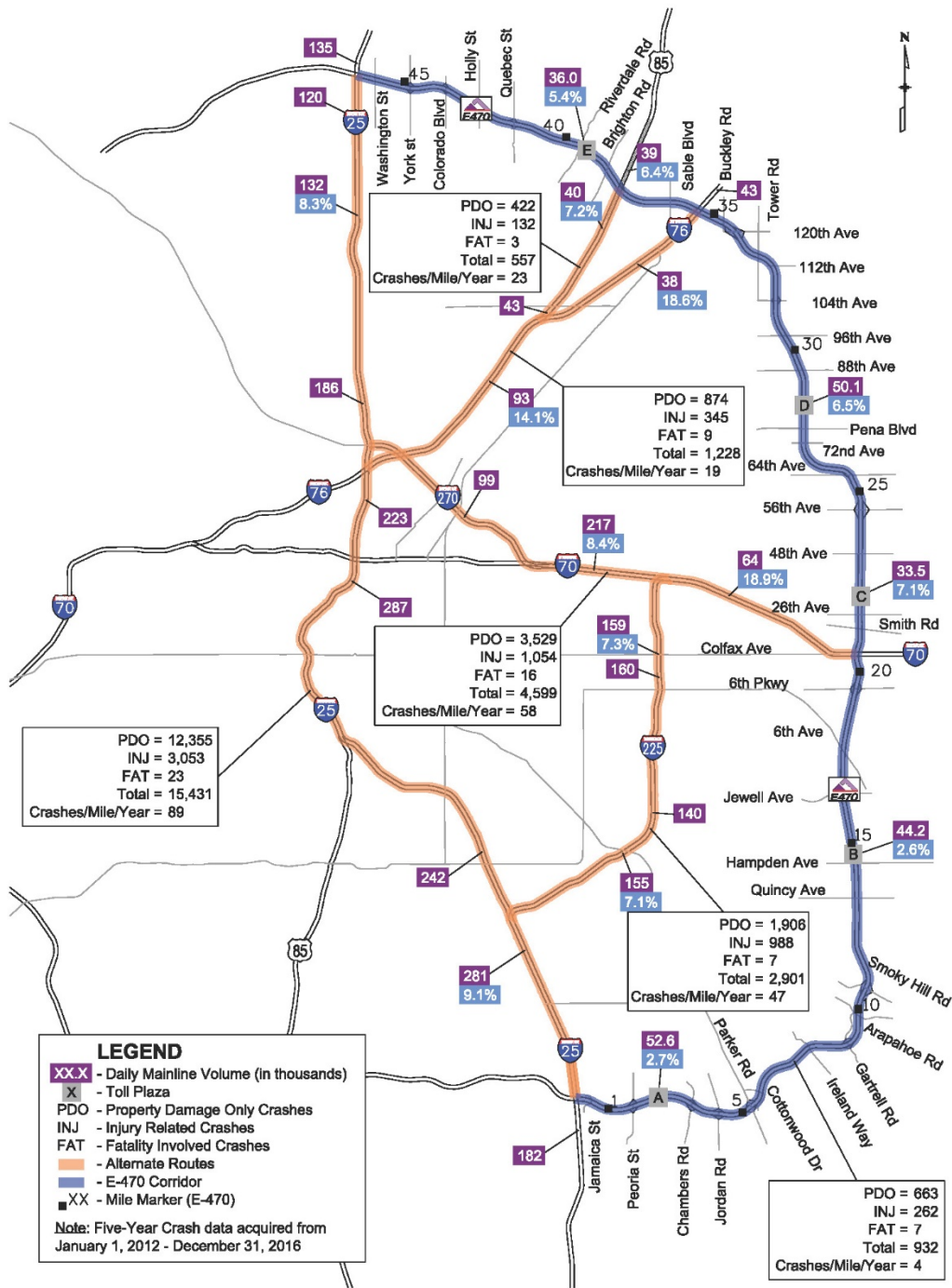
- i. AADT, crash and fatality rates
  - ii. population within a one-mile swath of each side of the highway
  - iii. location of schools, hospitals, sensitive environmental areas, rivers, lakes, etc.
  - iv. emergency response capabilities on the route
  - v. condition of the route, (i.e., vertical and horizontal alignment, pavement condition, level of access to the route, etc.
4. Does route unreasonably burden interstate or intrastate commerce?
  5. Is route arbitrary or intended to divert hazmat materials from one community to another?
  6. Will designation interfere with pickup and delivery of hazardous materials; and
  7. Is designation consistent with all applicable state and federal laws and regulations?



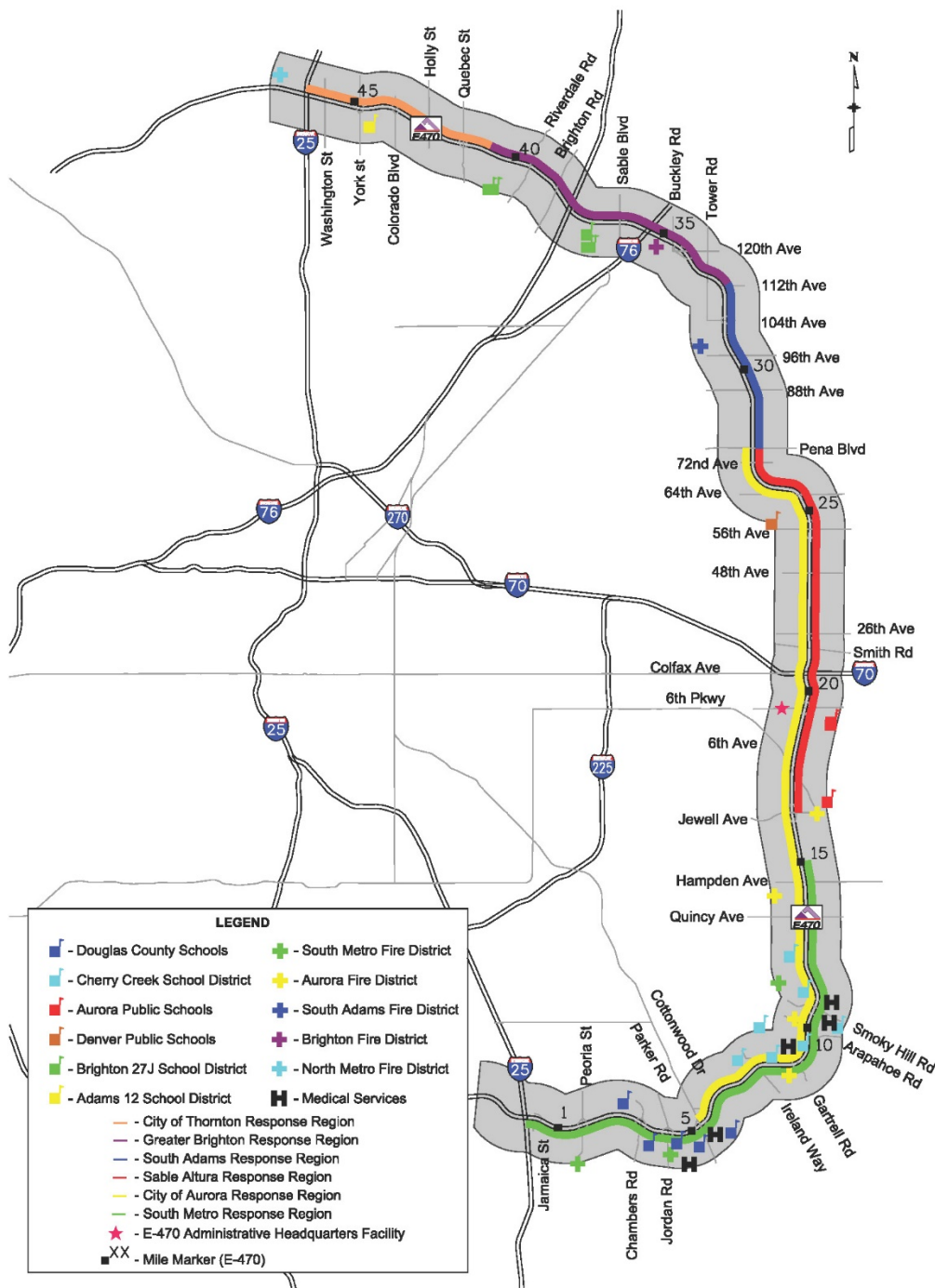
# POTENTIAL ALTERNATE ROUTES



# TRAFFIC & SAFETY SUMMARY



# SCHOOL AND EMERGENCY RESPONSE SUMMARY



Location of Schools and  
Emergency Services within one  
mile swathe either side of E-470

# HAZMAT ROUTE ANALYSIS



Category	Metric	Finding
Traffic Volumes (2019)	E-470 compared to I-25, I-70, I-76, I-225 and US-85	E-470 has lowest % trucks and generally lower AADT <sup>1</sup> compared to alternate routes
Safety Assessment (2012 – 2016)	E-470 crash rates compared to I-25, I-70, I-76, I-225 and US-85	E-470 has lowest crash rate <sup>2</sup>
Physical Condition of Route	Review of E-470's Annual Certification and annual structural inspection reports	E-470's bridges and pavement in excellent condition
Wetland impacts	Document wetlands within one mile of E-470	2050 acres of wetlands
Environmental Justice	Fair treatment of all people regardless of race, income, national origin with respect to potential Hazmat Route designation	E-470's EJ population per mile is less than I-25, I-70 & I-225 but higher than I-76 & US-85
School Districts	Document schools within one mile of E-470	See map
Emergency Response and Medical Services	Document facilities within one mile of E-470	See map

## Notes:

1. I-76 & US-85 segments carry comparable daily traffic volumes (I-76: 40,000 – 43,000; US-85: 38,000; E-470: 33,500 – 52,600)
2. E-470 has average 4 crashes per mile per year compared to 18 – 88 for other corridors

# HAZMAT ROUTE ANALYSIS



## Conclusions:

- There is potential benefit to our community and local jurisdictions if E-470 is designated as a Hazmat Route
- The route provides potential to reduce hazmat travel on the roadways of local jurisdictions
- The route provides potential to reduce distances traveled by hazmat vehicles



# HAZMAT ROUTE ANALYSIS



## Conclusions:

- The route meets State Procedural Directive 1903.1
  - E-470 generally carries less traffic than alternate routes
  - E-470 has less crashes per mile per year than alternate routes
  - E-470 physical condition is excellent
  - E-470 would not disproportionately impact environmental justice populations
  - E-470 is adequately served by Emergency Response and Medical Service facilities