City of Lawrence
TRAFFIC ENGINEERING DIVISION

MEMORANDUM

TO: Shoeb Uddin, City Engineer

FROM: David Woosley, Transportation/Traffic Engineer

DATE: 16 February 2011

SUBJECT: 2010 Year End Report – Traffic Engineering Division

The Traffic Engineering Division is responsible for maintenance of 93 traffic signals, 32 flashing school beacons, approximately 15,100 traffic signs, pavement markings, and city-owned street lights; in addition, the division is responsible for the collection of traffic engineering field data and administration of the Traffic Safety Commission. This division has eight full time employees: Transportation/Traffic Engineer, Traffic Supervisor, Traffic Signal Systems Technician, Senior Traffic Signal Technician (vacant during 2010 for approximately seven (7) months), Traffic Signal Technician and three (3) Traffic Control Technicians.

2010 Traffic Engineering Division highlights include:

- Traffic Signals.

  Converted 320 traffic signal head incandescent bulb sections to LED modules, bringing the total percentage converted to approximately 80%. Lawrence was the first city in Kansas to start using LED modules, dating back to the mid 1990's. It is estimated that the city is currently saving approximately $100,000 per year in electricity costs due to this conversion and it is anticipated that another $33,000 per year will be saved when the entire traffic signal system is converted.

  Installed video detection systems at two (2) intersections, bringing the total to 38 installations. Video detection systems cost approximately the same as inductive loop systems in the pavement, but saves money in the long-run; loops are usually destroyed and have to be replaced when the road surface is "milled and overlayed."

  Installed battery backup systems at eight (8) intersections, bringing the total to 42 installations (map attached). Battery backup systems saves money for the city and for motorists; the traffic signal continues to operate during a power outage, keeping the traffic flowing and city personnel do not have to install temporary stop signs to control the intersection until power is restored.

Installed two (2) new pedestrian signals on the Burroughs Creek Trail at the 15th Street and 19th Street crossings.

Installed new mast arms and a new controller cabinet at the intersection of 9th Street & Vermont Street in conjunction with the Carnegie Building renovation.

Performed eight (8) traffic signal preventive maintenance inspections.

Responded to 664 traffic signal service calls.

- Intelligent Transportation System.

  Began construction of the city's first intelligent transportation system project. The project includes construction of a Traffic Operations Center at the traffic engineering offices; and the installation of fiber optic cable connecting the traffic engineering building with ten (10) traffic signals along 6th Street from Massachusetts Street to Iowa Street and along Iowa Street from 6th Street to 23rd Street.

- Traffic Signs.

  Manufactured and installed 245 new traffic control signs.

  Upgraded 172 traffic control signs.

  Repaired 1467 traffic control signs. Insured that 100% of signs reported being knocked-down were repaired within 24 hours of underground utilities being located.

  Note: New regulations established in 2000, 2003 and 2009 by the *Manual on Uniform Traffic Control Devices* made significant changes in standards for traffic control signs. These regulations cover reflectivity and size of signs. Lawrence is in good shape with respect to reflectivity; we have been using reflective material on all signs for over a decade and have purchased a retroreflectometer to measure the signs; we plan on starting measurements this summer, beginning with regulatory signs such as stop signs, yield signs, etc. However, the regulations on sign size could have some impact. The U. S. Department of Transportation is reviewing these regulations in light of the current economic climate for states and cities, and may delay the effective dates for compliance or eliminate the requirements altogether.

- Pavement Markings.

  Maintained 55 school crosswalks. These crosswalks have been established in accordance with the city's *School Crossing Control Policy* in order to provide a safer route for students to travel to-and-from school.

- Traffic Safety Commission.

  Administered ten (10) Traffic Safety Commission meetings; collected traffic data and prepared staff reports for 30 action items.

- Traffic Counts.

  Conducted 109 electronic traffic counts throughout the city in support of traffic studies for the Traffic Safety Commission and citizen request.

  Conducted eight (8) manual peak-hour turning-movement counts at signalized intersections in order to fine-tune the traffic signal timing.

If additional information is needed or if you have any questions please advise.


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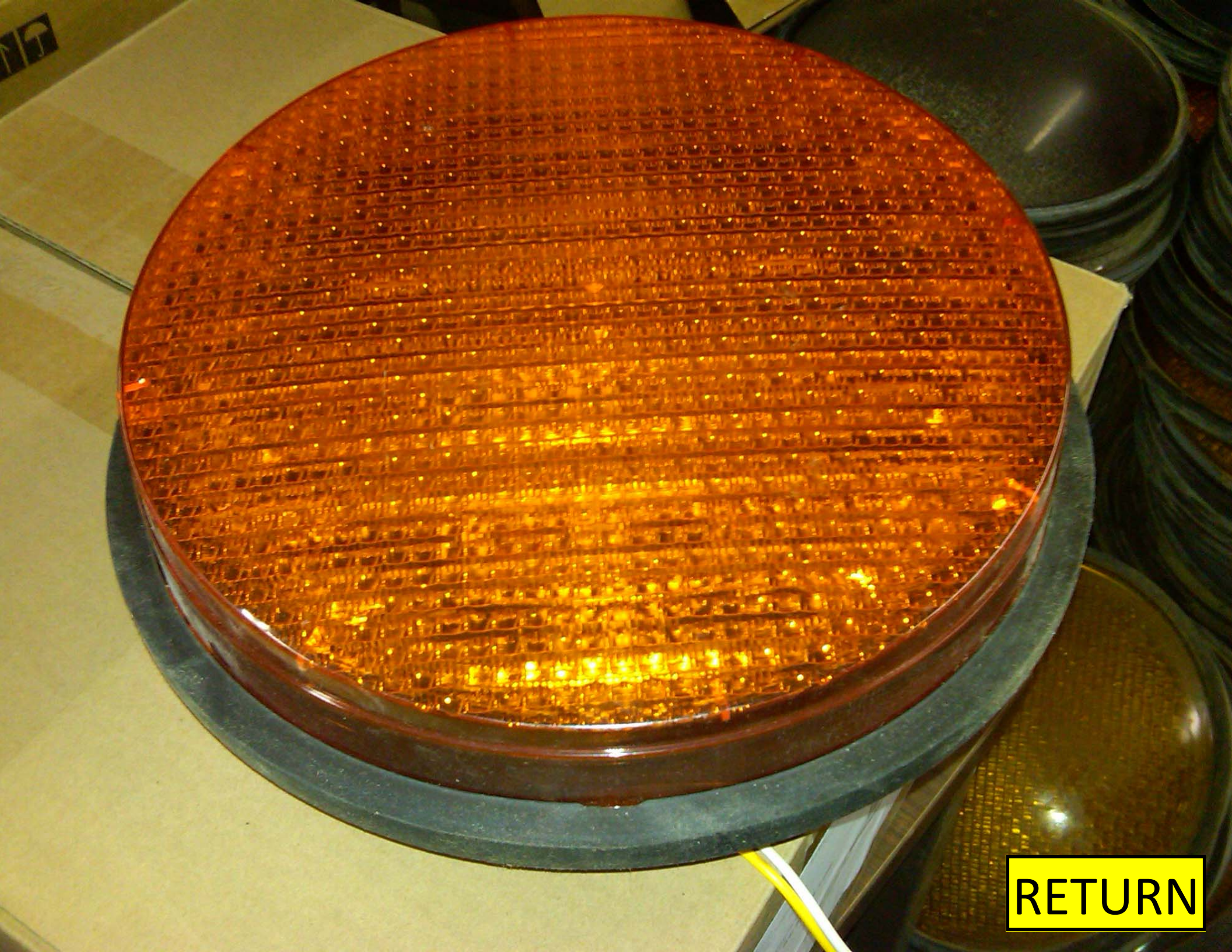
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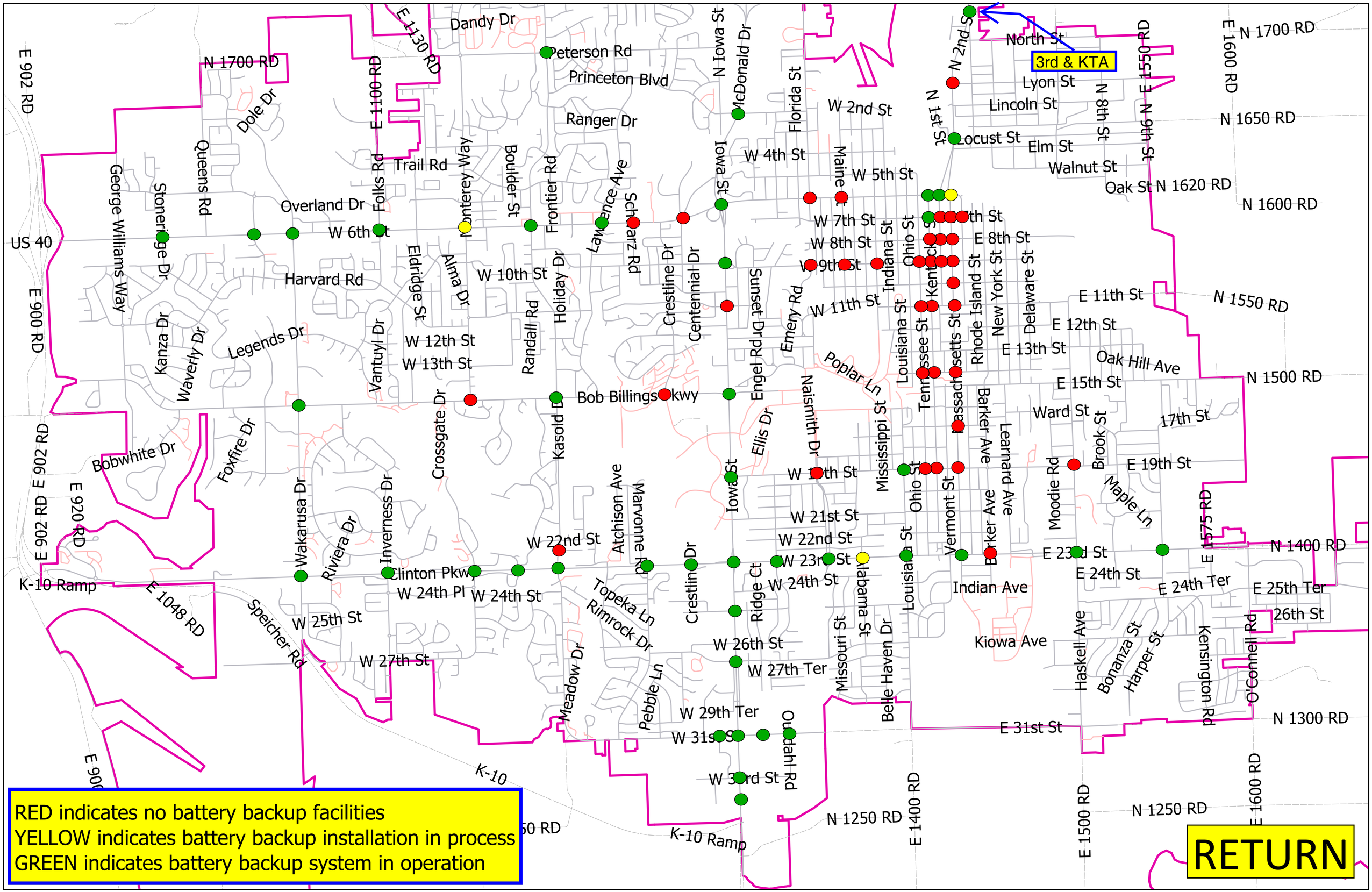
3rd & KTA
RED indicates no battery backup facilities
YELLOW indicates battery backup installation in process
GREEN indicates battery backup system in operation
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K-10 Ramp
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Dandy Dr
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Princeton Blvd
Ranger Dr
Trail Rd
Overland Dr
W 6th St
Harvard Rd
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Legends Dr
Bob Billings Pkwy
Dole Dr
Queens Rd
George Williams Way
Stoneridge Dr
Kanza Dr
Waverly Dr
Folks Rd
Vantuyl Dr
Eldridge St
Alma Dr
Monterey Way
Boulder St
Frontier Rd
Randall Rd
Holiday Dr
Lawrence Ave
Schwarz Rd
Crestline Dr
Centennial Dr
Sunset Dr
Engel Rd
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Barker Ave
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Moodie Rd
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Indian Ave
Kiowa Ave
Haskell Ave
Bonanza St
Harper St
Kensington Rd
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North St
Lyon St
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Elm St
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Clinton Pkwy
Wakarusa Dr
Riviera Dr
Inverness Dr
Foxfire Dr
Crossgate Dr
Kasold Dr
Atchison Ave
Marvonne Rd
Topeka Ln
Rimrock Dr
Meadow Dr
Pebble Ln
Crestline Dr
Ridge Ct
Missouri St
Oklahoma St
Belle Haven Dr
Ouchah Rd
Bobwhite Dr
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