

Regional Solicitation Before & After Study Phase II

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**BOLTON
& MENK**



**METROPOLITAN
COUNCIL**

Project Team

Consulting Team



Lance Bernard
HKGi

lance@hkgi.com
320.420.7768



Ashley Hudson
Bolton & Menk

Ashley.Hudson@bolton-menk.com
701.566.2349

Met Council

David Burns

Senior Highway Planner

David.Burns@metc.state.mn.us
651.602.1887

Study Objectives

- Refine the approach for monitoring “after” conditions of projects that have received federal transportation funds
- Research Ways to Streamline the Application Process
 - Focus Groups
 - Bicycle and Pedestrian Usage Measure
 - Projects Not Funded by Regional Solicitation
 - Risk Assessment
 - Best Practices for Crash Modification Factors (CMFs)



Combined, the 2014, 2016, 2018, and 2020 Regional Solicitations have garnered over 538 grant applications



\$1.87 Billion

totaling over \$1.87 billion in federal funding requests



\$782 Million

Regional Solicitation process has awarded nearly half (42%) of these requests granting over \$782 million over the four cycles

Before/After Database Development

Database includes after conditions for:

- Congestion
- Crashes
- RBTN changes
- Transit Ridership
- Connections to
 - Populations
 - Jobs
 - Activity Centers

Measuring Before & After Conditions

- Explored New Methodologies
 - Streamline the reporting process
 - Utilize “Big Data” sets
- Developed How-To Manuals
 - The congestion methodology refined to use StreetLight Data
 - Crash Modifications Factors
 - Developed a tailored crash reporting system (using GIS and MnCMAT data) to monitor after conditions

Congestion Measure: Use of StreetLight Data

Travel Time Reduction

2014 Regional Solicitation: Funded Roadway Expansion Projects	AM	PM	All Day
TH 41 Expansion (Carver County)	14%	29%	20%
70th St and Robert Trail Roundabout (Dakota County)	6%	15%	7%
CSAH 42/52 Interchange (Rosemount)	5%	6%	16%

Safety Measures

- A customized Geographic Information System (GIS) tool was created to automate monitoring and reporting results
- The following is reported for the 2014 Roadway Expansion and Reconstruction/Modernization projects:
 - Total crashes
 - Cost of crashes
 - Fatal and serious crashes
 - Pedestrian/bike crashes
 - Crash rate
 - Fatal and serious crash rate



Developed “How To Guide” for more efficient before and after data collection

Safety: Crash Analysis Tool

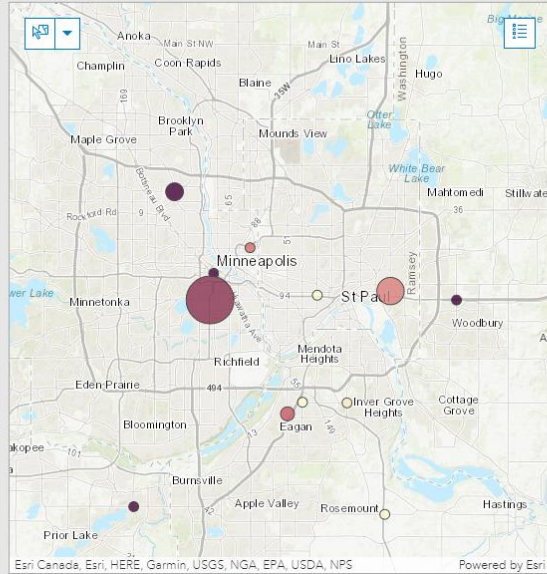
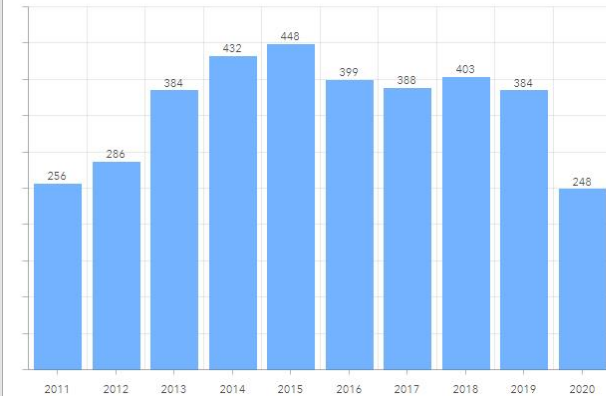
2014 Regional Solicitation Projects - Before & After Analysis

Project: All Projects

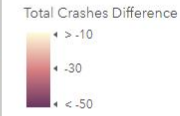
Change in Crash Rate After Reconstruction



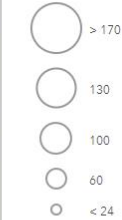
Total Crashes By Year



Crash Rates



Total Crashes After



8th Street South Reconstruction (Construction Finished 2019)

	Before	After	Difference
Total Crashes	232	24	-208
Crash Cost	\$10,259,800	\$1,390,400	-\$8,869,400
Total K&A	1	0	-1
Total Ped&Bike	25	3	-22
Crash Rate	32.08	4.01	-28.07
K&A Crash Rate	13.83	0.00	-13.83

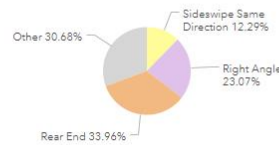
Broadway St NE Reconstruction (Construction Finished 2018)

	Before	After	Difference
Total Crashes	44	16	-28
Crash Cost	\$2,456,800	\$524,600	-\$1,932,200
Total K&A	1	0	-1
Total Ped&Bike	1	0	-1
Crash Rate	4.24	1.52	-2.73
K&A Crash Rate	9.64	0.00	-9.64

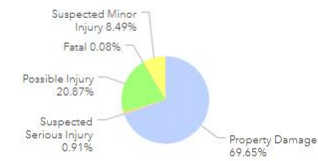
Brooklyn Boulevard Reconstruction (Construction Finished 2019)

	Before	After	Difference
Total Crashes	158	53	-105
Crash Cost	\$11,565,400	\$2,420,000	-\$9,145,400
Total K&A	6	0	-6
Total Ped&Bike	10	0	-10

Crash Types



Crash Severity



Safety: Crash Analysis Summary

2014 Regional Solicitation: Funded Expansion & Modernization Projects	Total Crashes	Crash Cost	Total K & A	Total Ped & Bike	Crash Rate*	K & A Crash Rate**
CSAH 3/Lake Street Reconstruction (Hennepin County)	-40	-\$2.5M	-2	-2	-7.31	-32.61
CSAH 31/Pilot Knob Road (City of Eagan)	-31	-\$400K	0	+1	-4.07	0
CSAH 65/White Bear Ave Reconstruction (Ramsey County)	-26	-\$97K	0	+1	-1.55	0

*Crash rate is per million vehicle miles traveled

**K&A is per 100M vehicle miles traveled

Projects Not Awarded RS Funds

- **42%** of the funding requests fulfilled over past four cycles; amounting to **\$782** million
- **313** projects remain unfunded
- Some projects move forward without Regional Solicitation funding, often projects are being scaled back (e.g., fewer amenities/enhancements) or delayed until funding is secured
- Applications that did not receive funding for a given solicitation but re-submitted at a future Solicitation had varying success in their resubmittal efforts, with approximately **29%** eventually receiving funding.

Non-Motorized Summary

- Total of 74.4 miles of RBTN bikeway miles have been built or programmed using RS funds
- Region could consider changing the bicycle/pedestrian measures by incorporating a scoring criterion that considers the project's design and its ability to improve one's comfort level and safety
- This approach is used by other MPOs (e.g., Dallas and St. Louis)

Risk Assessment Summary

- Since 2014, **25** projects have been delayed or not built
 - **14** program year extensions
 - **11** withdrawals
 - Total includes HSIP funded projects
- Program year extensions are requested to better align awarded projects with other projects.
 - **50%** of the program year extensions were requested to help align a project's delivery/construction schedule with other programmed projects in the area
- There is no need to eliminate the risk assessment measure

Crash Modification Factors

- Applicants are currently using a wide range of CMFs to determine the safety benefits for similar projects
 - Result has led to challenges in scoring projects.
- Recommend using the CMF Guide for future Regional Solicitation and HSIP applications
 - Additional training or directions on how to use this guide will be provided

Key Takeaways

- Provide clarity on the goals of the Regional Solicitation program
- Funding is being spread across too many funding categories, which may make it unclear as to what the Regional Solicitation process is trying to accomplish
- It is also unclear how some of the measures relate to the funding categories
- There may be a need for greater transparency on how projects are scored and selected
- Continue to reevaluate the process to ensure funds are going towards projects with the greatest regional benefit

Questions?

