#### Highway Safety Improvement Program (HSIP) Michigan Department of Transportation 2015 Annual Report

The 2015 HSIP Annual Report for the Michigan Department of Transportation (MDOT) will be for the one year time period of FY 2014 which commenced on October 1, 2013 and ended on September 30, 2014. This report addresses safety improvements funded through MDOT on both trunkline and non-trunkline roadways including the High Risk Rural Roads Program (HRRRP).

#### HSIP Program Structure Program Administration

#### State Trunkline Program

For the State Trunkline Program, safety funds are administered by the Safety Template Program Manager in Traffic and Safety (Central Office). For FY 2014, \$19 M in safety funding was available, of which \$15.6 M was allocated to the seven MDOT Regions as funding targets. The allocations were based on the percentage of fatalities and serious injuries, lane miles and Vehicle Miles Traveled in each Region. The goal is that all Regions receive a minimum of 5 percent of the Safety Target.

Beyond the allocated \$15.6 M, an additional \$2 M of the safety funds was reserved by Traffic and Safety to apply to projects in any Region at their discretion. The Regions were permitted to submit candidate projects with total costs exceeding their funding targets; the central office review team then selected the projects to be funded in each Region, taking into account priorities expressed by the Regional staffs, and use their discretionary funds to apply to worthy projects that exceeded a particular Region's funding target. All project phases; preliminary engineering, construction engineering, right of way and construction are eligible for safety funding.

In addition to the \$17.6 M of project funding described above, in which project selection was by central office staff, each Region was given \$200 K for low-cost safety improvements to be chosen at the discretion of the Region staff. The Regions use this pot of money for a variety of minor roadside safety improvements which can be performed in a timely manner by state forces or contract agencies. Individual Safety Work Authorizations (SWA) is the most cost effective method of funding these types of improvements and can be initiated quickly throughout the fiscal year in response to safety needs. Federal funds are used for those improvements meeting funding criteria.

Once the FY 2014 program was developed, it was reviewed and approved by the Project Screening Committee (PSC). The PSC consists of Region and central office program managers and Planning staff who help develop the MDOT's Five Year Plan for approval by the Transportation Commission. The PSC ensures coordination between Regions on various corridors and between the programs.

In FY 2014, the use of HSIP funding (\$18.6 M) continued in the administration of the pavement marking program. Under 23 U.S.C. 148(e)(1)(c), HSIP funds may be obligated for any project to maintain minimum levels of retroreflectivity of traffic signs and pavement markings, without regard to whether that project is included in an applicable State SHSP. Prior to FY 2013 Surface Transportation Safety funding was used in the placement of pavement markings in the Annual Pavement Marking Program.

#### Local Roadways Program

For the Local HSIP, the funds (\$15.1 M) are administered by the Local Agency Programs Safety Engineer located in Central Office. Typically, only the construction phase is eligible for federal aid. Preliminary

engineering costs were eligible for federal participation if it was for a projects identified on the Transparency (5%) Report, a project identified by the Local Safety Initiative, a Road Safety Audit (RSA) or a traffic signal optimization project. Otherwise, preliminary engineering is not eligible for federal safety funds. Projects are federally funded at 80 or 90 percent up to an amount not to exceed \$600 K Federal, with a 20 or 10 percent local match, respectively.

All Local Agencies within MPO areas must coordinate with their MPO to ensure inclusion of their project in the area's TIP. Those agencies that are part of a rural task force are to notify their members that they applied for these funds. Rural task force approval is not necessary. Local Agency Programs (LAP) coordinates with MDOT Planning to ensure these projects are included in the STIP.

#### **Program Methodology**

#### State Trunkline Program

The annual process for submitting safety projects starts with a Call for Projects (CFP) issued to the seven MDOT Regions from the Safety Template Program Manager. The FY 2014 and FY 2015 Safety Call request was made to the Regions on December 13, 2010. In response to the CFP, the Regions identify locations where safety improvements (i.e. add a center left turn lane, right turn lane, geometric improvements to accommodate signalization, median protection, etc.) could be made. These locations are to be identified through the current Transparency Report, Fatality and Serious Injury Regionwide Maps, High Crash List, 3R/4R Safety Reviews, customer concerns, and Pavement Friction Analyses. Upon location identification an engineering study is conducted by the Region to determine the appropriate safety improvement.

The emphasis of the Safety Call was to address those locations with correctable fatality and serious injury crashes to support the department's efforts of reducing fatalities and serious injuries and support the vision of Toward Zero Deaths (TZD). All safety projects and proposed candidates must address a focus area of the Michigan Strategic Highway Safety Plan (SHSP). Submitted concepts must meet a maximum Time-of-Return (TOR) to qualify for safety funding. The TOR is a cost benefit analysis of proposed safety improvement which considers all crash types and severity levels that are correctable by the proposed improvement. A minimum of the latest three years of available crash data is to be used in the TOR analysis. For FY 2013 and FY 2015 projects, in which 2007 to 2009 crash data was used, three TOR criteria were established:

- Stand alone safety improvement TOR of 7 years or less
- Stand alone safety improvement for location on the current Transparency Report TOR of 10 years or less.
- Safety improvement in conjunction with a Construction project TOR of 10 years or less.

Each Region's submittal was reviewed by the Central office review team to ensure all criteria were met. The Regions were permitted to submit candidate projects with total costs exceeding their funding targets. The review team, taking into account priorities expressed by the Regions, used the TOR values as a means to develop project rankings (lowest to highest TOR value) within each Region and the TOR values for projects beyond funding targets to allocate the \$2 M funds statewide.

For FY 2014 and FY 2015, funding was included in programmed preliminary engineering for outer year safety projects to conduct a road safety audit (RSA). For guidance, a RSA should be conducted for all proposals exceeding \$750,000 in programmed construction costs. The RSA should be done prior to 30

percent completion of the plans. The purpose of the audit is to ensure the appropriate safety fixes are incorporated into the overall design.

New to the Safety Call starting in FY 2014 is the opportunity for each Region to allocate up to a set percent of their funding target for low cost safety improvements. This amount is in addition to the SWA funding. The focus is to be on systemwide safety improvements done by work authorization or through the letting process. A TOR justification is not be required if the proposed improvement is selected from the list of approved and proven safety systemwide fixes (Eligibility Guidelines for Low Cost Safety Improvement Projects). For FY 2014 through FY 2017, the percentage is 10 percent. For FY 2018 through 2020 this percentage was increased to 25 percent. New for FY 2020 is the allocation of \$1 million toward additional low cost safety improvements for regions meeting or exceeding their target amount in project proposals. To accommodate this change, the \$2 million of discretionary funding as described on page 1 has been reduced from \$2 million to \$1 million. For FY 2021 the percentage submitted shall be a minimum of 25 percent up to a maximum of 50 percent.

In an effort to incorporate the Highway Safety Manual (HSM) into MDOT's business process all safety projects submitted for FY 2019 and 2020, except for freeway improvements, shall have the HSM predictive analysis performed on them. A comparison of future conditions with and without the proposed improvement shall be provided. Starting for FY 2020, all submitted concepts must address two or more fatal and/or serious injury crashes.

#### Local Roadways Program

The planning and selection of projects for the local roadway system is very similar to that of the state trunkline. Local agencies were invited by a June 22, 2012 memorandum to submit proposed projects for consideration as part of an annual call-for projects (CFP).

The emphasis of the local FY 2014 CFP was to address those locations with correctable fatality and injury crashes to support the department's efforts of reducing fatalities and serious injuries. Per the CFP, the local agency was to provide a TOR analysis showing how the proposed improvement would address fatalities and injuries. In the TOR, all crash types and severity levels correctable by the proposed improvement can be included. A maximum of five years of available crash data is to be used in the TOR analysis. For FY 2014 projects, 2007 to 2011 (or the current availability) crash data was used.

Eligible projects must meet current standards and warrants. Project types may include replacement, installation or elimination of guardrail, removal of fixed objects from clear zones, traffic and pedestrian signal optimization, installation and upgrades, access management, horizontal and vertical curve modifications, sight distance and drainage improvements, bridge railing replacement or retrofit, roadway intersection improvements to improve safety, mid-block pedestrian crossings, improvements to school zones, shoulder and centerline rumble strips, and improved permanent signing and pavement markings.

For the FY 2014 CFP, a greater emphasis is placed on the identification of correctable fatalities and serious injuries, both in the selection and prioritization of safety projects. In addition, in FY 2014, a small portion of the local safety funds were allocated to five subprograms: Centerline and Shoulder Rumble Strips (\$200 K), Guardrail Upgrades and Clear Zone Improvements (\$1.5 M), and Traffic Signal Optimization – all red phasing (\$150 K), Road Safety Audits (\$50 K) and Non-motorized Facility/Pedestrian Improvements (\$100 K). Local agencies were informed that this money is reserved for the listed strategic improvements, and encouraged to submit conforming projects.

#### **Progress in Implementing the HSIP Projects**

HSIP State Trunkline Project Funding							
<b>Reporting Period: 10/01/2013 to 09/30/2014</b>							
Funding CategoryProgrammed*Obligated							
HSIP (Section 148)	\$36,259,028	\$32,231,514					
Hazard Elimination (Section 152)							
Penalty Funds (154 and 164)							
Other Federal Funds (STG and RP)	\$107,584	\$36,075					
Incentive Grants (Sections 406, 163)							
State and Local Funds	\$1,785,669	\$2,045,713					
Total	\$38,152,281	\$34,313,302					

#### HSIP Funds Programmed

HSIP Local Roadway Project Funding							
<b>Reporting Period: 10/01/2013 to 09/30/2014</b>							
Funding CategoryProgrammed*Obligated							
HSIP (Section 148)	\$13,093,014	\$10,279,885					
Hazard Elimination (Section 152)							
Penalty Transfer (154 and 164)							
Other Federal Funds							
Incentive Grants (Sections 406, 163)							
State and Local Funds							
Total	\$13,093,014	\$10,279,885					

\* "Available" (Programmed) funds refer to those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) and can be expended on highway safety improvement projects.

During the reporting period 1.1 percent of the programmed and 1.2 percent of the obligated funds for the state trunkline system were directed to non-infrastructure safety items such as road safety audits, SHSP activities, outreach, educational efforts, and data collection. In addition, \$2,657,416 of federal/state funding from the road and bridge programs was transferred into the HSIP to support additional work being incorporated into safety projects. On the local side no HSIP funds were directed toward tribal safety projects. Overall, 26 percent of the programmed and 23 percent of the obligated funds were directed to local safety projects.

#### General Listing of Projects

Attached are the general listings of projects for both the State Trunkline (Attachment A) and Local Roadways Programs (Attachment B). The costs shown are obligated construction costs and other phases obligated for the projects. Not all design or right-of-way costs were accrued in FY 2014.

#### **Progress in Achieving Safety Performance Targets**

The Safety Program is a major component in the department's emphasis of addressing locations with safety concerns as part of the transportation program. More importantly the Safety Program is a means by which the department can support the goals of the SHSP. The purpose of the SHSP is to identify the key safety needs in the state and guide investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roadways. MDOT developed and began the implementation of a SHSP in 2003. Specific focus areas included intersection safety, roadway departure, pedestrian and

bicycle safety, and elderly mobility. In late 2004, the Governor's Traffic Safety Advisory Commission (GTSAC) requested the development of a statewide, multi-disciplinary highway Michigan SHSP. The plan resulted in the identification of 12 strategic focus areas for reducing fatalities to 1.0 per 100 million vehicle miles traveled by 2008. As a result of creating emphasis areas that targeted over 80 percent of Michigan's highway fatalities the goal was met with 0.97 fatalities per 100 million vehicle miles traveled in 2008. In 2008, the SHSP was updated to reflect current needs and number the goals from a rate to a more meaningful goal of an incremental reduction of the frequency of fatalities and serious injuries. The revised goals address both fatalities and serious injuries. The 2008 SHSP goals were to reduce traffic fatalities and serious injuries from 1,084 and 7,485 in 2007 to 850 and 5,900 in 2012.

Since that initial SHSP Michigan is on its third plan with the 2013 SHSP. The new SHSP goals are to reduce statewide traffic fatalities and serious injuries from 889 and 5,706 respectively in 2011 to 750 and 4,800 in 2016. The new SHSP is focused on four broad emphasis areas; High-risk Behaviors, At-risk Road Users, Engineering Infrastructure and System Administration. Within these emphasis areas, the following action teams have been created to provide more targeted guidance:

Traffic Records and Information Systems	Pedestrian and Bicycle Safety	Motorcycle Safety
Traffic Safety Engineering	Traffic Incident Management	Impaired Driving
Commercial Motor Vehicle Safety	Occupant Protection	Distracted Driving
Senior Mobility and Safety	Drivers Age 24 and Younger	

Given the four year SHSP update cycle, each action team is tasked with providing more immediate updates based upon shorter-term changes in traffic crashes, injuries, and fatalities. This is done through annual updates to the action plans, which capture changes in key performance measures, in addition to documenting those policies and programs that have been implemented. In addition to allowing for adaptive responses, these annual updates also provide useful information to the safety stakeholders in Michigan, as well as other states. The primary measures used to evaluate progress with respect to the SHSP process are the changes in the number of traffic-related fatalities and serious injuries that occur on an annual basis. Michigan currently maintains a traffic records system that is among the best in the country, allowing for timely feedback as to how various traffic safety trends are changing over time. Attachment C shows the progress of statewide fatalities and serious in meeting the goals of the 2013 SHSP. The values shown in the graphs are not 5-Year Rolling Averages but year specific.

#### Overview of General Highway Safety Trends

In review of the 5-Year Rolling Average for statewide, state trunkline and local roadways (Attachment D, Table 1), both fatalities and serious injuries have decreased at minimum 4.03 percent from 2006-2010 to 2010-2014. The greatest reductions were for serious injuries, ranging from 17.62 to 21.40 percent. In regard to rates while the fatality and serious injury rates are lower on state trunkline the percent decrease over the analysis time period is consistent between the two roadway networks. For both statewide and state trunkline the fatality rate has been below 1.0 fatality per 100 million vehicle miles traveled since 2006-2010 and below 1.0 for state trunkline during the entire analysis time period. Fatality and serious injury frequencies and rates for the various functional classes are shown in Attachment D, Table 2.

#### SHSP Emphasis Areas

For the analysis time period the 5-Year Rolling Average for fatality and serious injury frequencies and rates has decreased for all the engineering related SHSP Emphasis Areas; Intersections, Lane Departure, and Pedestrian and Bicycle Safety except the fatality and fatality rate for Pedestrian and Bicycle Safety (Attachment E). The number of Pedestrian and Bicycle fatalities has remained virtually unchanged except for the last two 5-Year Rolling Average (2009-2013 and 2010-2014) when the frequency increased

from 154 to 162 and 167 respectfully. The largest gains are in serious injuries for all three emphasis areas. Statewide, the percent reduction is as follows:

SHSP Emphasis Area	Fatalities	Serious Injuries
Intersections	10.11%	18.94%
Lane Departure	10.19%	20.46%
Pedestrian and Bicycle Safety	-8.30%	16.09%

Application of Special Rules - High Risk Rural Road Safety

Per notification from FHWA the High Risk Rural Roads Safety special rule does not apply to Michigan.

#### Application of Special Rules – Older Drivers

23 U.S.C. 148(g)(2) states if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, that State shall be required to include, in the subsequent State SHSP, strategies to address the increases in those rates, taking into account the recommendations included in the FHAW publication entitled 'Highway Design Handbook for Older Drivers and Pedestrians'. Using the 5-Year Rolling Average of fatalities and serious injuries for drivers and pedestrians 65 years of age and older and the number of people 65 Years of age and older (Per 1,000 Total Population), as provided by FHWA, the rate has decreased from 4.45 for 2007-2011 to 3.96 for 2009-2013. With this decrease the special rule does not apply. The calculations are shown in Attachment F.

#### Assessment of the Effectiveness of the Improvements (Program Evaluation)

#### Systemic Treatments

As reported in previous HSIP Reports the department undertook two system wide initiatives in FY 2008: freeway median barrier and non-freeway rumble strips. Both initiatives address lane departure, which is part of one of the 12 focus areas in the SHSP. Lane departure related crashes accounted for at least 396 fatalities statewide in 2014 (45 percent of all fatalities). A primary objective for this focus area is to identify cost effective strategies that help reduce unintentional lane departures, as well as alert the driver should a lane departure occur. The secondary objective is to assist the driver in returning to the travel lane safely and minimize departure consequences by creating roadside clear zones.

Rumble strips are a proven and cost-effective countermeasure to lane departure crashes brought on by driver drowsiness, distraction, and/or inattention. Since the late 1990s, MDOT has been systematically installing rumble strips on freeway shoulders. In 2007, MDOT pursued expanding rumble strips onto the rural, non-freeway system, as part of a three-year funding effort. MDOT's innovation was to make this a network-wide implementation. Rumble strip milling was incorporated in the annual pavement marking program and coordinated with MDOT's pavement engineers. To implement this effort, \$3 M a year of additional funding was added to the pavement marking program for 2008 through 2010. The result is approximately 5,400 miles of centerline rumbles and 2,700 lane miles of shoulder rumbles.

To determine the overall effectiveness of the effort Wayne State University completed the 'Evaluation of Non-Freeway Rumble Strip-Phase II' for the department. The goal was to determine a cost/benefit ratio, estimated crash reduction factors, public acceptance and an implementation guide for local agencies. The safety performance analysis indicated statistically significant reductions in the range of 50 percent in all types of target crashes after centerline rumble strips were installed. Researchers identified 2,488 target crashes in the three years before installation of centerline rumble strips and 1,306 in the three years after installation. They noted a 43 percent to 55 percent reduction in head-on, sideswipe opposite and single-

vehicle run-off-the-road crashes. Overall fatal and injury crashes were cut in half, with a 51 percent reduction in fatal crashes and a 47 percent reduction in injury crashes.

The economic analysis produced equally significant results. Researchers estimated a cost benefit of nearly \$80 million over three years as a result of the crash reductions from centerline rumble strip installation. They estimated that centerline rumble strips on two-lane rural highways will produce benefit-to-cost ratios between 58:1 and 18:1, depending on how the cost is spread out over time. Researchers performed a sensitivity analysis that produced a range of benefit-cost ratio data for state and local agency use. The online road user survey drew responses from 380 drivers, ranging in age from under 20 to over 60. Of these respondents, 79 percent strongly agreed or agreed that centerline rumble strips are an effective safety measure, and the majority would recommend installing rumble strips on additional state roadways.

Rumble strips are proving to be a cost-effective countermeasure to lane-departure crashes on Michigan's state highways. MDOT is reaching out to local agencies to increase their understanding of the benefits of rumble strips and to encourage interest in installing them on county, city and township roads either systemwide or at specific sites. To support this effort, MDOT has developed concise, user-friendly design and installation guidelines for use by local agencies.

Freeway median barriers minimize departure consequences. MDOT staff evaluated the state trunkline to project how many lives might be saved in Michigan through the installation of median barrier on candidate roadways. The crash analysis examined all freeway corridors without median protection which experienced four or more crossover type crashes during 2002 through 2006. Using a 90 percent reduction factor to estimate the benefit of median protection a total of 340 miles was identified. These corridors, with medians widths not requiring protection per MDOT's standards, experienced 66 fatalities and 257 serious injuries. Cable median barrier projects were done in conjunction with road/bridge projects when possible, or as corridor projects. To implement this effort, \$14 M a year of additional funding was added to the safety template for 2008 through 2010. Since this initial funding effort cable barrier projects have been supported in the annual Safety Call for Projects. To date 333 miles of cable median barrier has been installed through 2014.

The goal of 'Study of High Tension Cable Barrier on Michigan Roadways' research project was to determine the effectiveness of MDOT's high tension cable barrier installations in reducing the frequency of cross-median crashes and resultant injuries and fatalities. The results of the research show that cable median barriers have been highly effective at reducing crossover crashes in Michigan. After the barriers were installed, crossover crash rates on those highway segments fell by 87 percent, and the barriers successfully contained 97 percent of the vehicles that hit them. Cable barriers have improved overall safety at the locations where they have been installed. The most serious crash types—fatal and severe injury crashes—decreased by 33 percent after cable median barriers were installed, according to rigorous statistical analysis. Since their installation, cable barriers are estimated to have saved 20 lives and prevented over 100 serious injuries in Michigan. As expected, low-severity crashes increased following the cable barrier installation; crashes involving only property damage or minor injuries increased by 155 percent. Researchers' analysis showed that placing the cable barrier farther from the roadway (toward the center of the median) would result in fewer low-severity crashes, but this can be impractical because of soil conditions, slope grade, drainage characteristics, or increased installation and maintenance costs.

Overall, cable median barriers were slightly more prone to penetration by a vehicle than thrie-beam guardrail or concrete barrier, but they were the most effective in preventing redirection back into the travel lanes. Other findings include:

- Motorcycles: Cable barriers did not significantly impact motorcycle crash trends.
- Winter roadway conditions: Crash frequency increased in times of adverse weather and road conditions, but the cable barriers continued to contain vehicles as intended.
- **Rollovers:** Median rollover crash rates decreased by 50 percent after cable barriers were installed.

MDOT has fully embraced implementation of TZD as a safety program in and of itself and has developed several related action plans. MDOTs North Region analyzed recently implemented safety projects and compared that to crash trends for the region. In an effort to more closely align the problem with the goal, they developed a Region TZD Implementation Plan that heavily emphasizes strategies focused on reducing lane departure and stop-controlled intersection fatal and serious injury crashes. Other regions across the state are also developing plans for their areas. The Traffic & Safety Section created and is actively tracking a TZD Strategic Plan for the purpose of increasing "awareness of MDOT's TZD efforts within the State of Michigan by 1) identifying effective strategies to distribute the TZD logo and create logo recognition, and 2) gaining TZD partnerships. This Strategic Plan is designed to capture a widespread audience including: MDOT Employees and State agencies/employees, Local Agencies (County, City, Village, Township, etc.), private organizations, and the general public."

Communication is a key aspect of implementing TZD and in addition to the action plans, MDOT has developed a number of tools and resources. A sample of the TZD-focused resources include a website, rest area posters, internal and external newsletter articles, crash statistics postcard, safety fact sheet with actionable items for pedestrians, bicyclists, motorcyclists and drivers and a safety programs brochure. MDOT also communicates the year-to-date fatalities across a number of different media including a weekly email listserv, messaging on our digital messaging signs and social media outlets. This effort has let to numerous related news stories by media outlets across the state.

#### High Risk Rural Roads Program (HRRRP)\*

#### **Program Administration**

For the High Risk Rural Roads Program (HRRRP) the funds are administered by the Local Agency Programs (LAP) Safety Engineer located in the Central Office. MDOT allocates funds for this program to only local roadways that qualify.

Only the construction phase is eligible for federal aid. Federal funds are capped at \$400 K per project. Right of way and construction engineering are not eligible for these funds. Preliminary engineering costs for projects identified on the Transparency (5%) Report or by the Local Safety Initiative are eligible for federal participation; otherwise, preliminary engineering is not eligible for federal HRRR funds. Projects are federally funded at 90 percent, with a 10 percent local match, or funded with 100 percent federal funds for projects consisting entirely of traffic control signalization, safety, pavement marking, rail-highway crossing closure, or installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatments, breakaway utility poles, or priority control systems.

Local agencies within MPO areas must coordinate with their MPO to ensure inclusion of their project in the area's TIP. Those agencies that are part of a rural task force are to notify their members that they applied for these funds. Rural task force approval is not necessary. LAP coordinates with MDOT Planning to ensure these projects are included in the STIP.

#### **Program Methodology**

Local agencies were invited by a May 25, 2012 memorandum to submit proposed projects for consideration as part of the FY 2014 CFP.

SAFETEA-LU defined a HRRR as; 1) any roadway functionally classified as rural major or minor collector or a rural local road that the accident rate for fatalities and incapacitating injuries exceeds the statewide average for those functional classes of roadway, or 2) any roadway functionally classified as rural major or minor collector or a rural local road that will likely have increases in traffic volumes that are likely to create an accident rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes.

76, 116Total miles of roadway functionally classified as rural major or minor collector or rural<br/>local road9,646Total number of crashes resulting in fatalities or incapacitating injuries, located on<br/>roadway classified as described above, for the time period, 2004 – 20090.13Statewide average frequency of such accidents per mile of such roadway over a 5 year<br/>time period

MDOT used the following data to determine the required statewide, average accident rate:

This data lead to the calculation of a crash frequency that exceeds the statewide, average accident rate, at a minimum: Within the most recent 5 year time period of available crash data, at least one crash, resulting in fatalities (K) or incapacitating (A) injuries, has occurred within a segment of eligible roadway no longer than 7.70 miles (1/0.13).

The 2014 eligibility requirements for roadways in the HRRR program were:

- 1. The roadway is functionally classified as rural major or minor collector or rural local road.
- 2. Within the most recent 5 year time period of available crash data, at least 1 intersection crash, resulting in fatalities or incapacitating injuries has occurred; or 1 such serious crash has occurred within a 7.70 mile long segment of such roadway.

The proposed projects had to demonstrate a direct correlation to correct an area related to the fatal or incapacitating crashes. The proposed project limits must be relevant to the roadway features attributable to the crashes. Eligible projects must meet current standards and warrants.

The local agency is required to submit a project evaluation form to show the effectiveness of the project when three years of crash data are available after project construction.

#### **Progress in Implementing the HRRRP Projects**

HRRRP Funds Available<sup>1</sup>

HRRRP Project Funding*							
<b>Reporting Period: 10/01/2013 to 09/30/2014</b>							
Funding Category Programmed Obligated*							
HRRRP	\$2,954,187.70	\$41,156.00					
HSIP	\$0.00	2,755,063.97					
State and Local funds							
Total	\$2,954,187.70	\$2,796,219.97					

\* "Available" (Programmed) refers to the HRRRP funds that have been programmed in the Statewide Transportation Improvement Program (STIP) and can be expended on HRRR projects. During the selection process, MAP-21 was approved and the HRRRP was eliminated. MDOT committed to meeting the federal funding offered in the HRRRP CFPs with HSIP money, as needed.

#### General Listing of Projects

The general listing of projects for the HRRRP is shown in Attachment G.

#### Assessment of the Effectiveness of HRRR Improvements (Program Evaluation)

Table 2 of Attachment D summarizes the safety trends for rural major collector, minor collector, and rural local roads in Michigan. The 5-Year Rolling Average for fatality and serious injury frequencies and rates has decreased during the analysis time period for the three National Functional Classes that comprise the HRRR except for the fatality rate on rural major collector which remains relatively unchanged. The greatest reductions are on both rural minor collector and rural local with double digit reductions for all measures. As noted earlier the High Risk Rural Roads Safety special rule does not apply to Michigan.

National Functional Class	2006_2010	2010_2014	% Diff
5 Year Rolling Average Fatalities			
7-Major Collector (Rural)	144	135	6.24%
8-Minor Collector (Rural)	20	17	18.63%
9-Local (Rural)	99	89	10.87%
5 Year Rolling Average Serious Injuries			
7-Major Collector (Rural)	855	677	20.77%
8-Minor Collector (Rural)	111	75	32.55%
9-Local (Rural)	645	479	25.67%
5 Year Rolling Average Fatality Rate			
7-Major Collector (Rural)	1.72	1.76	-2.24%
8-Minor Collector (Rural)	2.11	1.76	16.89%
9-Local (Rural)	4.19	3.77	10.13%
5 Year Rolling Average Serious Injury Rate			
7-Major Collector (Rural)	10.17	8.76	13.85%
8-Minor Collector (Rural)	11.55	7.93	31.32%
9-Local (Rural)	27.20	20.34	25.23%

Attachment C





Michigan Statewide Safety Trends						
5 Year Rolling Average	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014	% Diff
Fatalities	993	953	923	917	918	7.55%
Serious Injuries	6,881	6,492	6,121	5,833	5,511	19.92%
Fatality Rate	0.98	0.96	0.95	0.96	0.97	1.97%
Serious Injury Rate	6.83	6.56	6.33	6.10	5.79	15.13%
MDOT Roads						
5 Year Rolling Average	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014	% Diff
Fatalities	416	409	395	396	400	4.03%
Serious Injuries	2,737	2,585	2,440	2,360	2,255	17.62%
Fatality Rate	0.83	0.83	0.80	0.80	0.80	3.67%
Serious Injury Rate	5.45	5.22	4.98	4.79	4.51	17.28%
Local Roads						
5 Year Rolling Average	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014	% Diff
Fatalities	576	544	528	521	517	10.11%
Serious Injuries	4,121	3,887	3,664	3,458	3,239	21.40%
Fatality Rate	1.14	1.10	1.11	1.13	1.12	1.51%
Serious Injury Rate	8.15	7.88	7.69	7.47	7.02	13.91%

#### Attachment D Overview of General Highway Safety Trends Table 1

National Functional Class					
5 Year Rolling Average Fatalities	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014
1-Principal Arterial - Interstate (Rural)	25	25	23	22	21
2-Principal Arterial - Other (Rural)	64	57	52	52	49
6-Minor Arterial (Rural)	106	100	91	89	90
7-Major Collector (Rural)	144	140	137	137	139
8-Minor Collector (Rural)	20	17	17	16	17
9-Local (Rural)	99	96	94	90	89
11-Principal Arterial - Interstate					
(Urban)	70	69	69	71	77
12-Principal Arterial - Other Freeway					
(Urban)	29	30	29	28	28
14-Principal Arterial - Other (Urban)	183	179	174	181	178
16-Minor Arterial (Urban)	141	137	140	138	138
17-Collector (Urban)	50	48	45	43	41
19-Local (Urban)	56	49	42	38	41

#### Attachment D Overview of General Highway Safety Trends Table 2

National Functional Class					
5 Year Rolling Average Serious					
Injuries	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014
1-Principal Arterial - Interstate (Rural)	166	162	152	142	133
2-Principal Arterial - Other (Rural)	381	348	305	290	242
6-Minor Arterial (Rural)	578	545	517	481	446
7-Major Collector (Rural)	855	806	778	719	704
8-Minor Collector (Rural)	111	104	92	86	75
9-Local (Rural)	645	599	559	524	479
11-Principal Arterial - Interstate					
(Urban)	425	394	367	363	364
12-Principal Arterial - Other Freeway					
(Urban)	138	129	137	138	144
14-Principal Arterial - Other (Urban)	1,468	1,387	1,318	1,267	1,202
16-Minor Arterial (Urban)	1,184	1,136	1,078	1,041	986
17-Collector (Urban)	356	337	310	299	285
19-Local (Urban)	501	463	426	404	377

National Functional Class					
<b>5 Year Rolling Average Fatality Rate</b>	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014
1-Principal Arterial - Interstate (Rural)	0.45	0.46	0.42	0.41	0.41
2-Principal Arterial - Other (Rural)	1.00	0.99	1.01	1.15	1.19
6-Minor Arterial (Rural)	1.50	1.44	1.33	1.34	1.39
7-Major Collector (Rural)	1.72	1.68	1.67	1.71	1.76
8-Minor Collector (Rural)	2.11	1.76	1.83	1.73	1.76
9-Local (Rural)	4.19	4.02	3.93	3.82	3.77
11-Principal Arterial - Interstate					
(Urban)	0.44	0.44	0.45	0.45	0.47
12-Principal Arterial - Other Freeway					
(Urban)	0.52	0.54	0.52	0.50	0.48
14-Principal Arterial - Other (Urban)	0.99	1.00	1.00	1.07	1.04
16-Minor Arterial (Urban)	0.84	0.83	0.89	0.90	0.90
17-Collector (Urban)	0.88	0.88	0.90	0.89	0.84
19-Local (Urban)	0.81	0.72	0.61	0.56	0.59

#### Attachment D Overview of General Highway Safety Trends Table 2 (continued)

National Functional Class					
5 Year Rolling Average Serious					
Injury Rate	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014
1-Principal Arterial - Interstate (Rural)	3.01	2.99	2.83	2.68	2.63
2-Principal Arterial - Other (Rural)	5.96	6.03	5.85	6.26	5.87
6-Minor Arterial (Rural)	8.22	7.84	7.56	7.17	6.84
7-Major Collector (Rural)	10.17	9.66	9.48	8.98	8.76
8-Minor Collector (Rural)	11.55	10.93	9.70	9.11	7.93
9-Local (Rural)	27.20	25.17	23.44	22.11	20.34
11-Principal Arterial - Interstate					
(Urban)	2.68	2.53	2.38	2.30	2.22
12-Principal Arterial - Other Freeway					
(Urban)	2.48	2.33	2.48	2.46	2.45
14-Principal Arterial - Other (Urban)	7.91	7.71	7.59	7.49	7.00
16-Minor Arterial (Urban)	7.00	6.91	6.83	6.76	6.44
17-Collector (Urban)	6.27	6.25	6.18	6.18	5.87
19-Local (Urban)	7.32	6.75	6.21	5.84	5.40

#### Attachment E SHSP Emphasis Areas

SHSP Emphasis Areas Intersection						
5 Year Rolling Average	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014	% Diff
Fatalities	267	251	242	242	240	10.11%
Serious Injuries	2,310	2,183	2,077	2,000	1,872	18.94%
Fatality Rate	0.27	0.25	0.25	0.25	0.25	4.82%
Serious Injury Rate	2.29	2.21	2.15	2.09	1.97	14.16%
SHSP Emphasis Areas						
Lane Departure						
5 Year Rolling Average	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014	% Diff
Fatalities	485	465	450	439	436	10.19%
Serious Injuries	2,681	2,539	2,380	2,262	2,132	20.46%
Fatality Rate	0.48	0.47	0.47	0.46	0.46	4.69%
Serious Injury Rate	2.66	2.57	2.46	2.37	2.24	15.70%
SHSP Emphasis Areas						
Ped and Bike						
5 Year Rolling Average	2006_2010	2007_2011	2008_2012	2009_2013	2010_2014	% Diff
Fatalities	154	154	154	162	167	-8.30%
Serious Injuries	664	633	600	584	557	16.09%
Fatality Rate	0.15	0.16	0.16	0.17	0.18	-14.65%
Serious Injury Rate	0.66	0.64	0.62	0.61	0.59	11.13%

Attachment F	
Application of Special Rules - Older Drivers	S

Occupants/people/parties for	1/1/2007 t	hrough 12/3	31/2013 in t	he state of	Michigan	filtered by	Party Typ	е
(Motor vehicle driver or Pede	strian and	Person Age	65 years ol	d and olde	r)			
v Party Type   Accident Year	2013	2012	2011	2010	2009	2008	2007	
Motor vehicle driver K&A	519	510	460	528	543	594	579	
Motor vehicle driver K only	143	121	105	111	111	125	131	
Motor vehicle driver A only	376	389	355	417	432	469	448	
Pedestrian K&A	54	46	46	53	44	55	63	
Pedestrian K only	17	17	20	26	14	22	24	
Pedestrian A only	37	29	26	27	30	33	39	
Total KA	573	556	506	581	587	649	642	
Total Fatalities	160	138	125	137	125	147	155	
Total Serious Injuries	413	418	381	444	462	502	487	
*Population	150	146	141	138	134	130	127	
fatality & serious injury rate	3.820000	3.808219	3.588652	4.210145	4.380597	4.992308	5.055118	
fatality rate	1.066667	0.945205	0.886525	0.992754	0.932836	1.130769	1.220472	
serious injury rate	2.753333	2.863014	2.702128	3.217391	3.447761	3.861538	3.834646	
		K&A Rates	2007-2011	4.445364				
			2009-2013	3.961523				
		K Rates	2007-2011	1.032671				
			2009-2013	0.964797				
		A Rates	2007-2011	3.412693				
			2009-2013	2.996725				
Special rule does NOT apply to	Michigan							
* Number of people in Michig	an age 65 +	per 1000 p	opulation as	s provided	by FHWA			

Image: control (see Attachment 4)   (i.e. #, miles)   Category   Emphasis Area*     TSC Wide, Brighton TSC   Marking - Other   State Highway Agercy   operation of highway intersection     Region Wide, North Region   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Jackson TSC   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Jackson TSC   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Jackson TSC   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Lansing TSC   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Lansing TSC   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Marshall TSC   Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Marshall TSC   Marking - Other   State Highway Agercy   operation of highway intersection     Region Wide, Supprior Region   Powenot Marking - Other   State Highway Agercy   operation of highway intersection     TSC Wide, Lansing TSC   N	Strategy Reduce Fs and As Reduce Fs and As Reduce Fs and As Reduce Fs and As
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Region Wide, Bay Region Pavement Marking - Remarking 23649577 ft \$2,371,903 HSIP Other Other Other State Highway Agency leaving the road	Reduce Fs and As
Region Wide Metro Region Marking - Other O	Reduce Es and As
Region wide, weire region Marking Other State Highway Agency Operation of Highway Intersection.	
TSC Wide, Lansing TSC Pavement Marking - Remarking 9410838 ft \$1,221,038 \$1,221,038 HSIP Other Other Other State Highway Agency leaving the road	Reduce Fs and As
Statewide Non-infrastructure - Road Safety Audits 18 studies \$164,561 HSIP n/a n/a n/a n/a Other	Reduce Fs and As
M-15, Davison Road to North City Limits of Davison Add Left-Turn Lane 0.5 miles \$1,006,234 \$1,006,234 HSIP Rural Principal Arterial - Other 13000 55 State Highway Agency operation of highway intersections	Reduce Fs and As
M-20, at Leaton Road Roadway - Other 0.5 miles \$2,867,377 \$2,867,377 HSIP Rural Principal Arterial - Other 14400 55 State Highway Agency Keeping vehicles in the roadway	Reduce Fs and As
M-20, at Patrick Road Crossover 1 loc \$1,429,867 \$1,443,872 HSIP,EDA Rural Principal Arterial - Other 21800 45 State Highway Agency operation of highway intersections	Reduce Fs and As
M-90, at Black River Road Add Left-Turn Lane 1 loc \$469,060 \$469,060 HSIP Rural Minor Arterial 8000 45 State Highway Agency operation of highway intersections	Reduce Es and As

I-94 BL, from Water Street to Quav Street	Intersection Traffic Control - Systemic	0.2 miles	\$0	\$366.109	RRRF Urban Principal Arterial - Other	14400	25	State Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
				+,						
I-94 BL, at 10th Avenue and									Improving the design and	
Scott Avenue	Intersection Geometry - Other	2 locs	\$0	\$237,000	RRRF Urban Principal Arterial - Other	26900	35	State Highway Agency	operation of highway intersections	Reduce Fs and As
I-96, Ionia West County Line to									Minimizing the consequences of	
M-66	Roadside - Barrier - Cable	12 miles	\$1,740,677	\$1,740,677	HSIP Rural Principal Arterial - Interstate	37000	70	State Highway Agency	leaving the road	Reduce Fs and As
M 27 of Croste Avenue	Intersection Geometry - Auxiliary lanes -	1 100	¢400,440	¢400,440	LICID Dural Minor Arterial	45400	<b>FF</b>	Ctoto Llinkwow Anonov	Improving the design and	Deduce Fe and Ac
II-196 West of Market Avenue to	Add Left-Tuffi Laffe		<b>Φ430,41</b> ∠	<b></b>		13400	55		Minimizing the consequences of	Reduce FS and AS
East of Butterworth Street	Roadside - Barrier - Cable	2.1 miles	\$314 039	\$314 039	HSIP Urban Principal Arterial - Interstate	44400	70	State Highway Agency	leaving the road	Reduce Es and As
I-196, Chicago Drive east to			<i><b>Q</b></i> <b>( ( ) (</b> ) <b>( ) () ()()() ()(</b>	<i>\\</i> 011,000					Minimizing the consequences of	
Market Avenue	Roadside - Barrier - Metal	0.7 miles	\$452,846	\$452,846	HSIP Urban Principal Arterial - Interstate	44400	70	State Highway Agency	leaving the road	Reduce Fs and As
					· · · · · · · · · · · · · · · · · · ·					
	Intersection Geometry - Auxiliary lanes -								Improving the design and	
M-19, at New Haven Road	Add Left-Turn Lane	1 loc	\$0	\$2,454,232	RRRF Rural Minor Arterial	11700	45	State Highway Agency	operation of highway intersections	Reduce Fs and As
I-94, Hannan Road to west of									Making walking and street	
the Rouge River	Roadside - Barrier - Metal	3.2 miles	\$762,320	\$762,320	HSIP Urban Principal Arterial - Interstate	142200	70	State Highway Agency	crossing easier	Reduce Fs and As
M 40. et Developh Otreet	Pedestrians and Bicyclists - Modify	4.1	<b>#</b> 000.050	<b>\$000.050</b>		00000	00		Making walking and street	
M-10, at Randolph Street	Existing Crosswalk	1 100	\$286,358	\$286,358	HSIP Urban Principal Arterial - Other	29600	30	State Highway Agency	crossing easier	Reduce Fs and As
	Podestrians and Ricyclists - Modify								Improving the design and	
M-39 at Outer Drive	Existing Crosswalk	1 100	\$255.087	\$255 987	HSIP I Irban Principal Arterial - Other Free	130200	55	State Highway Agency	operation of highway intersections	Reduce Es and As
			φ200,007	φ200,007		100200	00		operation of highway intersections	
	Intersection Geometry - Auxiliary lanes -								Improving the design and	
M-66, at M-55 (South Junction)	Add Right-Turn Lane	1 loc	\$236,458	\$236,458	HSIP Rural Principal Arterial - Other	5500	55	State Highway Agency	operation of highway intersections	Reduce Fs and As
									Minimizing the consequences of	
I-94, Puetz Road to I-196	Roadside - Barrier - Cable	11.9 miles	\$3,276,522	\$3,276,522	HSIP Rural Principal Arterial - Interstate	65000	70	State Highway Agency	leaving the road	Reduce Fs and As
M-26, Royce Road to Military	Intersection Geometry - Auxiliary lanes -								Improving the design and	
Road	Add Left-Turn Lane	1.2 miles	\$1,594,937	\$1,594,937	HSIP Rural Minor Arterial	6700	55	State Highway Agency	operation of highway intersections	Reduce Fs and As
I-96, Clinton County line to	Deedeide Deeries Oakla		¢4 407 004	¢4 407 004		50000	70	Otata I Kaburan Amerika	Minimizing the consequences of	
Canal Road	Roadside - Barrier - Cable	6.3 miles	\$1,487,834	\$1,487,834	HSIP Rural Principal Arterial - Interstate	50800	70	State Highway Agency	leaving the road	Reduce Fs and As
	Intersection Geometry - Auxiliary lanes -								Improving the design and	
M-59, at Hacker Road	Add Left-Turn Lane		\$863.097	\$863 097	HSIP Rural Principal Arterial - Other	17500	55	State Highway Agency	operation of highway intersections	Reduce Es and As
		1 100	<i>\\</i>	<i>\\</i> 000,007		11000	00		Increasing seat belt use and	
Statewide, Statewide	Non-infrastructure - Outreach	480 each	\$55,000	\$55,000	HSIP n/a	n/a	n/a	n/a	improving airbag effectivenes	Reduce Fs and As
									Increasing driver safety	
Statewide, Statewide	Non-infrastructure - Outreach	5000 each	\$25,000	\$25,000	HSIP n/a	n/a	n/a	n/a	awareness	Reduce Fs and As
									Improving information and	
Statewide, Statewide	Non-infrastructure - Data/traffic Records	1 each	\$90,000	\$90,000	HSIP n/a	n/a	n/a	n/a	decision support systems	Reduce Fs and As
	Non-infrastructure - Training and								Improving information and	
Statewide, Statewide	Workforce Develoment	1 each	\$0	\$18,000	RP n/a	n/a	n/a	n/a	decision support systems	Reduce Fs and As
						,	,		Improving information and	
Statewide, Statewide	Non-Infrastructure - Data/traffic Records	6093 miles	\$75,000	\$75,000	HSIP n/a	n/a	n/a	n/a	decision support systems	Reduce Fs and As
Countwide Monroe County	Auduway Signs and Traine Control -	1 oach	¢O	¢31 335	STC n/a	n/a	n/a	State Highway Agapay	awareness	Reduce Es and As
	Roadway Signs and Traffic Control -		ΦŪ	<i>\$</i> 34,333		11/d	n/a		Increasing driver safety	NEULUE FS dill AS
US-2. Countywide	Other	62.3 miles	\$0	\$22 237	M Rural Principal Arterial - Other	4500	55	State Highway Agency	awareness	Reduce Es and As
			ψŪ	<i>\\\</i>		1000				
		Total	\$36,367,372	\$39,513,290						
										1

Job Number	Route	Location
	119076 TSC Wide	Brighton TSC
	119079 Region Wide	North Region
	119082 TSC Wide	Jackson TSC
	119084 TSC Wide	Lansing TSC
	119086 TSC Wide	Marshall TSC
	121453 Region Wide	Superior Region
	121455 Region Wide	North Region
	121456 TSC Wide	Coloma TSC
	121457 Region Wide	Metro Region
	121458 TSC Wide	Kalamazoo TSC
	121459 Region Wide	Grand Region
	121462 TSC Wide	Brighton TSC
	121463 TSC Wide	Jackson TSC
	121465 TSC Wide	Marshall TSC
	121454 Region Wide	Bay Region
	119087 Region Wide	Metro Region
	121464 TSC Wide	Lansing TSC
	124154 Statewide	Statewide
	113003 M-15	Davison Road to North City Limits of Davison
	110754 M-20	at Leaton Road
	113512 M-20	at Patrick Road Crossover
	113459 M-90	at Black River Road
	123128 I-94 BL	from Water Street to Quay Street
	124599 I-94 BL	at 10th Avenue and Scott Avenue
	113684 I-96	Ionia West County Line to M-66
	112143 M-37	at Sparta Avenue
	113683 I-196	West of Market Avenue to East of Butterworth Street
	117337 I-196	Chicago Drive east to Market Avenue
	116508 M-19	at New Haven Road
	113818 -94	Hannan Road to west of the Rouge River
	119629 M-10	at Randolph Street
	121292 M-39	at Outer Drive
	113721 M-66	at M-55 (South Junction)
	113461 I-94	Puetz Road to I-196
	113705 M-26	Royce Road to Military Road
	113078 1-96	Clinton County line to Canal Road
	113554 M-59	at Hacker Road
	122726 Statewide	Statewide
	122869 Statewide	Statewide
	124124 Statewide	Statewide
	124595 Statewide	Statewide
	124729 Statewide	Statewide
	105627 Countywide	Monroe County
	124286 US-2	Countywide

#### Work Description

Permanent Pavement Markings - Special Markings **Permanent Pavement Markings** Permanent Pavement Markings **Permanent Pavement Markings Permanent Pavement Markings** Permanent Pavement Markings - Special Markings **Permanent Pavement Markings Road Safety Audits** Install Center Left Turn Lane Construct a Narrow Boulevard Install Roundabout Install Center Left Turn Lane Upgrade Traffic Signal Operations/Pedestrian Facilities Install Intersection Improvements Install Cable Median Barrier Install Indirect Left Turn Lane Install Cable Median Barrier Extend Guardrail Install Center Left Turn Lane and Right Turn tapers Install Guardrail **Improve Pedestrian Facilities** Install Sidewalk Ramp Improvements Install Offset Right Turn Lane Install Cable Median Barrier Install Center Left Turn Lane Install Cable Median Barrier Install Center Left Turn Lane Click It or Ticket It Signs Safety Education Campaigns for the Public Synchro Softward Update Scan of Missouri DDIs/Development of DDI Guidance Non-freeway Speed Limit Study Install Emergency Route Signing Install Mile Markers

#### Improvement Category

Intersection Traffic Control - Pavement Marking - Other	545	each
Intersection Traffic Control - Pavement Marking - Other	1.360	each
Intersection Traffic Control - Pavement Marking - Other	927	each
Intersection Traffic Control - Pavement Marking - Other	357	each
Intersection Traffic Control - Pavement Marking - Other	1.638	each
Roadway Delineation - Longitudinal Pavement Marking - Remarking	25.446.745	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	30.332.702	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	8.124.296	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	15.565.638	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	5.768.173	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	17,427,669	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	7,798,564	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	5,679,476	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	6,071,651	ft
Roadway Delineation - Longitudinal Pavement Marking - Remarking	23,649,577	ft
Intersection Traffic Control - Pavement Marking - Other	4,004	each
Roadway Delineation - Longitudinal Pavement Marking - Remarking	9,410,838	ft
Non-infrastructure - Road Safety Audits	18	studies
Intersection Geometry - Auxiliary lanes - Add Left-Turn Lane	0.5	miles
Roadway - Other	0.5	miles
Intersection Geometry - Other	1	loc
Intersection Geometry - Auxiliary lanes - Add Left-Turn Lane	1	loc
Intersection Traffic Control - Systemic Improvements - Signal Controlled	0.2	miles
Intersection Geometry - Other	2	locs
Roadside - Barrier - Cable	12.0	miles
Intersection Geometry - Auxiliary lanes - Add Left-Turn Lane	1	loc
Roadside - Barrier - Cable	2.1	miles
Roadside - Barrier - Metal	0.7	miles
Intersection Geometry - Auxiliary lanes - Add Left-Turn Lane	1	loc
Roadside - Barrier - Metal	3.2	miles
Pedestrians and Bicyclists - Modify Existing Crosswalk	1	loc
Pedestrians and Bicyclists - Modify Existing Crosswalk	1	loc
Intersection Geometry - Auxiliary lanes - Add Right-Turn Lane	1	loc
Roadside - Barrier - Cable	11.9	miles
Intersection Geometry - Auxiliary lanes - Add Left-Turn Lane	1.2	miles
Roadside - Barrier - Cable	6.3	miles
Intersection Geometry - Auxiliary lanes - Add Left-Turn Lane	1	loc
Non-infrastructure - Outreach	480	each
Non-infrastructure - Outreach	5,000	each
Non-infrastructure - Data/traffic Records	1	each
Non-infrastructure - Training and Workforce Develoment	1	each
Non-infrastructure - Data/traffic Records	6,093	miles
Roadway Signs and Traffic Control - Other	1	each
Roadway Signs and Traffic Control - Other	62.3	miles

Obligated	Obligated	Obligated	Obligated	Obligated	Obligated	Obligated
Construction-Fed	Construction-St	Construction-Lc	Construction	PE	ROW	Total
\$141,045	\$15,672	\$0	\$156,717	\$4,197	\$0	\$160,914
\$395,250	\$43,917	\$0	\$439,166	\$7,024	\$0	\$446,190
\$143,735	\$15,971	\$0	\$159,705	\$43,522	\$0	\$203,227
\$104,029	\$11,559	\$0	\$115,588	\$0	\$0	\$115,588
\$298,926	\$33,214	\$0	\$332,140	\$7,270	\$0	\$339,410
\$1,749,409	\$194,379	\$0	\$1,943,788	\$39,765	\$0	\$1,983,553
\$1,993,763	\$221,529	\$0	\$2,215,293	\$9,698	\$0	\$2,224,991
\$821,843	\$91,316	\$0	\$913,159	\$0	\$0	\$913,159
\$2,334,187	\$270,329	\$0	\$2,604,516	\$48,978	\$0	\$2,653,494
\$522,630	\$58,070	\$0	\$580,700	\$0	\$0	\$580,700
\$1,898,566	\$210,952	\$0	\$2,109,518	\$9,295	\$0	\$2,118,813
\$1,137,528	\$126,392	\$0	\$1,263,920	\$4,807	\$0	\$1,268,727
\$463,422	\$51,491	\$0	\$514,914	\$8,268	\$0	\$523,182
\$568,147	\$63,127	\$0	\$631,275	\$6,143	\$0	\$637,418
\$2,111,513	\$245,829	\$0	\$2,357,342	\$14,561	\$0	\$2,371,903
\$609,639	\$96,928	\$0	\$706,567	\$8,915	\$0	\$715,482
\$1,097,201	\$121,911	\$0	\$1,219,113	\$1,925	\$0	\$1,221,038
\$135,000	\$15,000	\$0	\$150,000	\$14,561	\$0	\$164,561
\$774,886	\$86,098	\$0	\$860,984	\$145,250	\$0	\$1,006,234
\$2,150,686	\$238,965	\$0	\$2,389,651	\$139,326	\$338,400	\$2,867,377
\$1,120,415	\$110,485	\$14,005	\$1,244,906	\$198,966	\$0	\$1,443,872
\$337,461	\$37,896	\$0	\$375,357	\$90,826	\$2,877	\$469,060
\$0	\$316,109	\$0	\$316,109	\$50,000	\$0	\$366,109
\$0	\$60,000	\$0	\$60,000	\$177,000	\$0	\$237,000
\$1,370,547	\$152,283	\$0	\$1,522,829	\$217,848	\$0	\$1,740,677
\$306,177	\$34,020	\$0	\$340,196	\$96,216	\$0	\$436,412
\$238,088	\$23,147	\$3,307	\$264,543	\$49,496	\$0	\$314,039
\$378,958	\$38,253	\$3,853	\$421,064	\$31,782	\$0	\$452,846
\$0	\$1,420,368	\$652,597	\$2,072,964	\$381,268	\$0	\$2,454,232
\$593,270	\$63,994	\$1,925	\$659,189	\$103,131	\$0	\$762,320
\$242,447	\$28,979	\$0	\$271,425	\$14,933	\$0	\$286,358
\$174,267	\$16,943	\$2,420	\$193,630	\$62,357	\$0	\$255,987
\$157,158	\$17,462	\$0	\$174,620	\$61,838	\$0	\$236,458
\$2,588,376	\$287,597	\$0	\$2,875,973	\$400,549	\$0	\$3,276,522
\$1,332,527	\$148,059	\$0	\$1,480,586	\$114,351	\$0	\$1,594,937
\$1,187,850	\$131,983	\$0	\$1,319,834	\$168,000	\$0	\$1,487,834
\$657,493	\$73,055	\$0	\$730,548	\$132,549	\$0	\$863,097
\$49,500	\$5,500	\$0	\$55,000	\$0	\$0	\$55,000
\$22,500	\$2,500	\$0	\$25,000	\$0	\$0	\$25,000
\$81,000	\$9,000	\$0	\$90,000	\$0	\$0	\$90,000
\$14,400	\$3,600	\$0	\$18,000	\$0	\$0	\$18,000
\$67,500	\$7,500	\$0	\$75,000	\$0	\$0	\$75,000
\$18,075	\$0	\$0	\$18,075	\$16,260	\$0	\$34,335
0	\$22,237	\$0	\$22,237	\$0	\$0	\$22,237

Cost Cost Emphasis Area	
\$160,914 \$160,914 Improving the design and operation of highway intersections Reduce Fs	and As
\$446,190 \$446,190 Improving the design and operation of highway intersections Reduce Fs	and As
\$203,227 \$203,227 Improving the design and operation of highway intersections Reduce Fs	and As
\$115,588 \$115,588 Improving the design and operation of highway intersections Reduce Fs	and As
\$339,410 \$339,410 Improving the design and operation of highway intersections Reduce Fs	and As
\$1,983,553 \$1,983,553 Minimizing the consequences of leaving the road Reduce Fs	and As
\$2,224,991 \$2,224,991 Minimizing the consequences of leaving the road Reduce Fs	and As
\$913,159 \$913,159 Minimizing the consequences of leaving the road Reduce Fs	and As
\$2,653,494 \$2,653,494 Minimizing the consequences of leaving the road Reduce Fs	and As
\$580,700 \$580,700 Minimizing the consequences of leaving the road Reduce Fs	and As
\$2,118,813 \$2,118,813 Minimizing the consequences of leaving the road Reduce Fs	and As
\$1,268,727 \$1,268,727 Minimizing the consequences of leaving the road Reduce Fs	and As
\$523,182 \$523,182 Minimizing the consequences of leaving the road Reduce Fs	and As
\$637,418 \$637,418 Minimizing the consequences of leaving the road Reduce Fs	and As
\$2,371,903 \$2,371,903 Minimizing the consequences of leaving the road Reduce Fs	and As
\$715,482 \$715,482 Improving the design and operation of highway intersections Reduce Fs	and As
\$1,221,038 \$1,221,038 Minimizing the consequences of leaving the road Reduce Fs	and As
\$164,561 \$164,561 Other Reduce Fs	and As
\$1,006,234 \$1,006,234 Improving the design and operation of highway intersections Reduce Fs	and As
\$2,867,377 \$2,867,377 Keeping vehicles in the roadway Reduce Fs	and As
\$1,429,867 \$1,443,872 Improving the design and operation of highway intersections Reduce Fs	and As
\$469,060 \$469,060 Improving the design and operation of highway intersections Reduce Fs	and As
\$0 \$366,109 Improving the design and operation of highway intersections Reduce Fs	and As
\$0 \$237,000 Improving the design and operation of highway intersections Reduce Fs	and As
\$1,740,677 \$1,740,677 Minimizing the consequences of leaving the road Reduce Fs	and As
\$436,412 \$436,412 Improving the design and operation of highway intersections Reduce Fs	and As
\$314,039 \$314,039 Minimizing the consequences of leaving the road Reduce Fs	and As
\$452,846 \$452,846 Minimizing the consequences of leaving the road Reduce Fs	and As
\$0 \$2,454,232 Improving the design and operation of highway intersections Reduce Fs	and As
\$762,320 \$762,320 Making walking and street crossing easier Reduce Fs	and As
\$286,358 \$286,358 Making walking and street crossing easier Reduce Fs	and As
\$255,987 \$255,987 Improving the design and operation of highway intersections Reduce Fs	and As
\$236,458 \$236,458 Improving the design and operation of highway intersections Reduce Fs	and As
\$3,276,522 \$3,276,522 Minimizing the consequences of leaving the road Reduce Fs	and As
\$1,594,937 \$1,594,937 Improving the design and operation of highway intersections Reduce Fs	and As
\$1,487,834 \$1,487,834 Minimizing the consequences of leaving the road Reduce Fs	and As
\$863,097 \$863,097 Improving the design and operation of highway intersections Reduce Fs	and As
\$55,000 \$55,000 Increasing seat belt use and improving airbag effectivenes Reduce Fs	and As
\$25,000 \$25,000 Increasing driver safety awareness Reduce Fs	and As
\$90,000 \$90,000 Improving information and decision support systems Reduce Fs	and As
\$0 \$18,000 Improving information and decision support systems Reduce Fs	and As
\$75,000 \$75,000 Improving information and decision support systems Reduce Fs	and As
\$0 \$34,335 Increasing driver safety awareness Reduce Fs	and As
\$0 \$22,237 Increasing driver safety awareness Reduce Fs	and As

Functional Classification\*\*,^

AA

AADT\*\* S

Speed\*\* Roadway Ownership^

Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
Other	Other	Other		State Highway A	Agency	HSIP
n/a	n/a	n/a		n/a		HSIP
Rural Principal Arterial - Other	13,000	)	55	State Highway A	Agency	HSIP
Rural Principal Arterial - Other	14,400	)	55	State Highway A	Agency	HSIP
Rural Principal Arterial - Other	21,800	)	45	State Highway A	Agency	HSIP,EDA
Rural Minor Arterial	8,000	1	45	State Highway A	Agency	HSIP
Urban Principal Arterial - Other	14,400	)	25	State Highway A	Agency	RRRF
Urban Principal Arterial - Other	26,900	1	35	State Highway A	Agency	RRRF
Rural Principal Arterial - Interstate	37,000	)	70	State Highway A	Agency	HSIP
Rural Minor Arterial	15,400	)	55	State Highway A	Agency	HSIP
Urban Principal Arterial - Interstate	44,400	)	70	State Highway A	Agency	HSIP
Urban Principal Arterial - Interstate	44,400	)	70	State Highway A	Agency	HSIP
Rural Minor Arterial	11,700	)	45	State Highway A	Agency	RRRF
Urban Principal Arterial - Interstate	142,200	)	70	State Highway A	Agency	HSIP
Urban Principal Arterial - Other	29,600	)	30	State Highway A	Agency	HSIP
Urban Principal Arterial - Other Freeways	130,200	)	55	State Highway A	Agency	HSIP
Rural Principal Arterial - Other	5,500	)	55	State Highway A	Agency	HSIP
Rural Principal Arterial - Interstate	65,000	)	70	State Highway A	Agency	HSIP
Rural Minor Arterial	6,700	)	55	State Highway A	Agency	HSIP
Rural Principal Arterial - Interstate	50,800	)	70	State Highway A	Agency	HSIP
Rural Principal Arterial - Other	17,500	)	55	State Highway A	Agency	HSIP
n/a	n/a	n/a		n/a		HSIP
n/a	n/a	n/a		n/a		HSIP
n/a	n/a	n/a		n/a		HSIP
n/a	n/a	n/a		n/a		RP
n/a	n/a	n/a		n/a		HSIP
n/a	n/a	n/a		State Highway A	Agency	STG
Rural Principal Arterial - Other	4,500	)	55	State Highway A	Agency	М

Let Status SV	WA
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Let	
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	Other
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Let	
Not Advertised or	
	Other
Let	
Lei	Frc Acct / W/k Order
	Other
	Lump Sum Payment
	Other
	Negotiated Contract
Let	
	Frc Acct / Wk Order

	Improvement Category	Output				Functional		S. J	Des lasse Ormentia	Relationship to SHSP	
Project	(see Attachment 4)	(i.e. #, miles)	HSIP Cost	Total Cost	Funding Category	Classification	AADT	Speed	Roadway Ownership	Emphasis Area	Strategy
					•	• •					
669 (Maple City Highway) between US-31 and Bowers Road	Roadside - Removal of roadside objects (trees, poles, etc.)	1.9 Miles	\$33,778	\$43,359	HSIP	Rural Minor Arterial	2100	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As
Lapeer Road at Charter Oaks Drive	Intersection geometry - Auxiliary lanes - add auxiliary through lane	0.1 Miles	\$133,961	\$148,845	HSIP	Urban Minor Arterial	12458	45	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
South Long Lake Road between Wintergreen Road and Gingerwood Road	Roadside - Barrier - metal	1.9 Miles	\$72,136	\$90,169	HSIP	Rural Major Collector	8800	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As
Williams Road at DeCamp Road	Alignment - Vertical alignment or elevation change	Intersection	\$198,000	\$262,260	HSIP	Rural Local	500	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Shoeman Road at Barry Road	Alignment - Vertical alignment or elevation change	Intersection	\$336,000	\$484,879	HSIP	Urban Major Collector	5300	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Locations on Hanover Road, Kibby Road @ Weatherwax Road, Liberty Road between Gillette and Springport, Springbrook Road E of Horton Road and Springbrook Road at Kimmel Road	Roadside - Barrier - metal	0.8 Miles	\$141,458	\$176,822	HSIP	Rural Major Collector	Varies	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As
Locations along Austin Road, Clear Lake Road, Hewitt Road, Seymour Road, Territorial Road and Trist Road	Roadside - Barrier - metal	1.1 Miles	\$145,188	\$181,486	HSIP	Rural Minor Arterial	Varies	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As
12th Street from Parkview Avenue to 0.6 miles south	Roadway - roadway widening - travel lanes	0.6 Miles	\$413,797	\$459,774	HSIP	Urban Minor Arterial	7013	45	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Shippy Road near Lucas Road	Intersection Geometry - intersection geometry - other	0.7 Miles	\$232,701	\$290,876	HSIP	Rural Major Collector	470	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
68th Street from Plaza Center Drive east to the Plaster Creek	Roadway - roadway widening - add lanes along segment	0.9 Miles	\$600,000	\$1,110,926	HSIP	Urban Minor Arterial	13200	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Wolverine Road at 10 Mile Road	Intersection traffic control - modify traffic signal - modernization/replacement	Intersection	\$69,502	\$86,877	HSIP	Urban Principal Arterial - Other	19153		County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Gratiot Lake Road from approximately 1475' NW of Gratiot Lake Drive to approximately 215' NW of Gratiot Lake Drive	Roadside - Barrier - metal	0.2 Miles	\$106,848	\$133,560	HSIP	Rural Major Collector	150	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As
Lake Pleasant Road at Newark Road	Intersection Traffic Control - Modify control - two- way stop to all-way stop	Intersection	\$636,578	\$706,528	HSIP	Rural Minor Arterial	4425	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
13 Mile Road at Little Mack Avenue	Intersection Geometry - intersection geometry - add right turn lane	Intersection	\$296,037	\$370,391	HSIP	Urban Minor Arterial	25000	35	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Intersections of Metropolitan Parkway at: Ryan, Dodge Park, Utica, Garfield, Moravian, Harper, Union Lake and Jefferson	Intersection traffic control - modify traffic signal - modernization/replacement	Intersection	\$582,835	\$656,634	HSIP	Urban Principal Arterial - Other	Varies	Varies	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Garfield at Moran, 12 Mile at Schoenherr, Harper at Wellington Crescent, 25 Mile Road at Mound, 32 Mile at Romeo Plank and 21 mile at Garfield	Intersection traffic control - modify traffic signal - modernization/replacement	Intersection	\$600,000	\$1,065,510	HSIP	Urban Principal Arterial - Other	Varies	Varies	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Grand River Avenue at Haggerty Road	Intersection Geometry - intersection geometry - add right turn lane	Intersection	\$148,527	\$165,030	HSIP	Urban Principal Arterial - Other	15866	45	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Orchard Lake Road at 14 Mile Road	Intersection Traffic Control - Modify control - traffic signal to roundabout	Intersection	\$480,000	\$9,974,668	HSIP	Urban Principal Arterial - Other	47964		County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Coolidge Highway at W. Thirteen Mile Road	Intersection traffic control - modify traffic signal - modernization/replacement	Intersection	\$71,520	\$138,995	HSIP	Urban Principal Arterial - Other	34240	35	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Williams Lake Road at Airport Road	Intersection Geometry - intersection geometry - add right turn lane	0.4 Miles	\$496,000	\$1,087,152	HSIP	Urban Minor Arterial	14145	45	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
192nd Avenue from 0.25 miles north of Warren Road to Scout Road	Roadway - roadway widening - travel lanes	0.8 Miles	\$368,000	\$637,480	HSIP	Rural Major Collector	1100	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Ottawa Beach Road at 144th Avenue	Intersection Geometry - intersection geometry - add left turn lane	Intersection	\$236,000	\$438,399	HSIP	Urban Principal Arterial - Other	16644	45	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Island Lake Road at Wylie Road	Alignment - Vertical alignment or elevation change	Intersection	\$244,193	\$311,087	HSIP	Urban Major Collector	3600	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Plymouth Road at Curtis Road	Intersection Geometry - intersection geometry - add left turn lane	Intersection	\$194,500	\$293,428	HSIP	Rural Minor Arterial	8216	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Plymouth Road at Ford Road	Intersection Traffic Control - Intersection traffic control - other	Intersection	\$376,000	\$551,816	HSIP	Rural Minor Arterial	12329	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Hayes Street from 8 Mile Rd to Harper Road and Chalmers Street from 7 Mile Rd to Jefferson Avenue	Intersection traffic control - modify traffic signal - modernization/replacement	7.3 Miles	\$427,500	\$552,950	HSIP	Urban Minor Arterial	Varies	30	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Houston Whittier/Whittier from Gratiot to Harper and Fenkell from 200' E of Wyoming to Oakman Blvd	Intersection traffic control - modify traffic signal - modernization/replacement	4.1 Miles	\$596,000	\$798,567	HSIP	Urban Principal Arterial - Other	Varies	30	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Bagley at Clifford, Conant at McNichols E, Evergreen at Schoolcraft, Forest E at VanDyke, Jeffries Fwy Srv Drives at Livernois, John R at McNichols E, Livernois at Tireman and McNichols E at Oakland	Intersection traffic control - modify traffic signal - modernization/replacement	8 Intersections	\$580,500	\$789,420	HSIP	Urban Principal Arterial - Other	Varies	30	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
Wyoming Street from 8 Mile to Tireman Street	Intersection traffic control - modify traffic signal - modernization/replacement	6.5 Miles	\$468,000	\$688,442	HSIP	Urban Principal Arterial - Other	Varies	30	City or Municipal Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As

Pointe Aux Peaux Road between Brest Road and Lagoona Road	Roadside - Roadside - other	0.2 Miles	\$224,937	\$249,930	HSIP	Urban Major Collector	3933	45	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As
GeddesRoad at Gallup park entrance, Fuller Road approximately 400ft east of Cedar Bend (between UM Lots), S. University at Tappan	Pedestrian and bicyclists - Pedestrian beacons	3 Crosswalks	\$33,792	\$47,971	HSIP	Urban Minor Arterial	Varies	25	City or Municipal Highway Agency	Making walking and crossing the street easier	Reduce Fs and As
Deerfield Road from Crawford Road to Mission Road	Roadway - roadway widening - add lanes along segment	1.0 Mile	\$400,000	\$1,147,203	HSIP	Urban Local	6719	45	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Redfield Street at Stateline Road	Intersection Traffic Control - Intersection traffic control - other	Intersection	\$2,344	\$2,930	HSIP	Urban Major Collector	3257	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As
E. Main Street / Stage Road from Prairie Creek northeasterly to Bluewater Hwy (M-21)	Shoulder treatments - Pave existing shoulders	2.3 Miles	\$315,597	\$465,367	HSIP	Rural Local	861		County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As
Safety Program Report	Non-Infrastructre - Data/Traffic Records	N/A	\$17,656	\$19,618	HSIP	N/A	N/A	N/A	N/A	Improving information and decision support systems	Reduce Fs and As

	Improvement Category	Output	tput HPPP/USID Cost T			Functional				<b>Relationship to SHSP</b>		
Project	(see Attachment 4)	(i.e. #, miles)	HKKK/HSIP Cost	1 otal Cost	Funding Category	Classification	AADI	Speed	Roadway Ownership	Emphasis Area	Strategy	
Bamfield Road @ Au Sable Road in Curtis Township	Alignment - Horizontal curve realignment	0.8 Miles	\$355 500 00	\$483 785 00	HSIP	Rural Major Collector	500	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As	
Indian Hill Road from Deadstream Road to Hooker Road	Roadside - Removal of Roadside Objects	2.5 Miles	\$48,784.52	\$57,014.03	HSIP	Rural Major Collector	1,375	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As	
Case Road @Homestead Road, Weldon Road @ Lindy Road and Homestead Road @ Pioneer Road	Roadway signs and traffic control - roadway signs (including post) - new or updated	3 Intersections	\$8,458.45	\$9,768.89	HSIP	Rural Major Collector	Varies	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As	
Morrish Road at Calkins Road	Roadway signs and traffic control - roadway signs (including post) - new or updated	Intersection	\$17,708.00	\$17,708.00	HSIP	Rural Minor Collector	2,631	50	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As	
Seymour Road at Grand Blanc Road	Roadway signs and traffic control - roadway signs (including post) - new or updated	Intersection	\$28,160.00	\$28,160.00	HSIP	Rural Major Collector	4,653	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
Lewis Road at Wilson Road	Roadway signs and traffic control - roadway signs (including post) - new or updated	Intersection	\$27,690.00	\$27,690.00	HSIP	Rural Major Collector	3,410	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
Baldwin Road from Duffield Road to VanVleet Road	Roadside - Barrier - metal	2.0 Miles	\$76,942.00	\$85,492.00	HSIP	Rural Local	321	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As	
McCumsey Road Culvert crossing Pine Run Creek	Roadside - Barrier - metal	0.2 Miles	\$36,802.00	\$40,891.00	HSIP	Rural Local	180	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As	
D Avenue at 2nd Street	Alignment - Vertical alignment or elevation change	0.4 Miles	\$311,146.00	\$345,718.00	HSIP	Rural Major Collector	2,500	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
52nd Street from Aster Road to S Branch Road, S Branch Road from 52nd Street north to W Stevenson Road, W Stevenson Road from S Branch Road to N Tyndall Road	Roadway Delineation - Longitudinal pavement markings - new	12.4 Miles	\$207,627.00	\$204,616.00	HSIP	Rural Major Collector	550	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As	
Baldwin Road from Davison Lake Road to Calley Road	Alignment - Vertical alignment or elevation change	4.0 Miles	\$365,587.00	\$500,536.00	HSIP	Rural Major Collector	700	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
Marathon Road from Klam Road to LeValley Road	Roadway - Rumble Strips - edge or shoulder	4.4 Miles	\$77,636.00	\$86,262.00	HSIP	Rural Major Collector	1,700	55	County Highway Agency	Reducing head-on and across median crashes	Reduce Fs and As	
McDowell Road from Washburn Road to Gray Road	Roadside - Barrier - metal	4.0 Miles	\$146,259.00	\$184,811.00	HSIP	Rural Local	300	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As	
Hollenbeck Road from Marathon Road to Klam Road	Roadway - Rumble Strips - edge or shoulder	1.1 Miles	\$173,144.00	\$223,468.00	HSIP	Rural Minor Collector	550	55	County Highway Agency	Reducing head-on and across median crashes	Reduce Fs and As	
West County Line Road at Kendaville Road	Roadway signs and traffic control - roadway signs (including post) - new or updated	Intersection	\$32,596.00	\$36,218.00	HSIP	Rural Major Collector	1,606	55	County Highway Agency	Keeping vehicles in the roadway	Reduce Fs and As	
Federal Road at Kendaville Road	Intersection Geometry - Auxiliary lanes - add left-turn lane	Intersection	\$270,824.00	\$300,916.00	HSIP	Rural Major Collector	6,602	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
Austin Road from M-52 to Clinton Road	Roadside - Barrier - metal	1.7 Miles	\$379,000.00	\$452,797.00	HSIP	Rural Major Collector	4,103	55	County Highway Agency	Minimizing the consequences of leaving the road	Reduce Fs and As	
Cherry Hill Road at Prospect Road	Roadway signs and traffic control - roadway signs (including post) - new or updated	Intersection	\$191,200.00	\$212,445.00	HSIP	Rural Major Collector	400	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
7 Locations Countywide	Intersection Traffic Control - Intersection traffic control - other	7 Intersections	\$41,156.00	\$41,156.00	HRRRP	Rural Major Collector	Varies	55	County Highway Agency	Improving the design and operation of highway intersections	Reduce Fs and As	
				\$3,339,451.92								

Score 1	Score 2	Average Score	CS	Lead Agency	Contact Person	Project Name
138	126	132	39609	Kalamazoo County Road Commission	Jim Hoekstra	D Avenue/2nd Street
123	121	122	01609	Alcona Road Commission	Jesse Campbell	Bamfield Road
						West County Line Road/Kendaville
121	123	122	59609	Montcalm County Road Commission	Mark Christensen	Road
126	116	121	81609	Washtenaw County Road Commission	Brent Schlack	Cherry Hill Road/Prospect Road
119	116	117.5	44609	Lapeer County Road Commision	Ryan Doyle	Baldwin Road
119	114	116.5	44609	Lapeer County Road Commision	Ryan Doyle	Marathon Road
112	118	115	44609	Lapeer County Road Commision	Ryan Doyle	McDowell Road
108	113	110.5	43609	Lake County Road Commission	Steve Leonard	Various Routes
110	111	110.5	59609	Montcalm County Road Commission	Mark Christensen	Federal Road/Kendaville Road
110	110	110	10609	Benzie County Road Commission	Heather Jamison	Indian Hill Road
						Case Road/Homestead Road,
						Weldon Road/Lindy Road,
113	107	110	10609	Benzie County Road Commission	Heather Jamison	Homestead Road/Pioneer Road
110	110	110	25609	Genesee County Road Commission	Kenneth Johnson	Morrish Road/Calkins Road
111	108	109.5	81609	Washtenaw County Road Commission	Brent Schlack	Austin Road
109	109	109	25609	Genesee County Road Commission	Kenneth Johnson	Seymour Road/Grand Blanc Road
109	109	109	44609	Lapeer County Road Commision	Ryan Doyle	Hollenbeck Road
108	108	108	25609	Genesee County Road Commission	Kenneth Johnson	Lewis Road/Wilson Road
103	105	104	03609	Allegan County Road Commission	Craig Atwood	16th Street
104	103	103.5	25609	Genesee County Road Commission	Kenneth Johnson	McCumsey Road
100	103	101.5	25609	Genesee County Road Commission	Kenneth Johnson	Baldwin Road
102	96	99	70609	Ottawa County Road Commission	Brett Laughlin	120th Avenue
102	95	98.5	22609	Dickinson County Road Commission	Lance Malburg	CR 573 (Hamilton Lakes Road)
98	96	97	25609	Genesee County Road Commission	Kenneth Johnson	Thompson Road/Jennings Road
86	89	87.5	58609	Monroe County Road Commission	Janeen Abar	S Stony Creek Road
49	55	52	72609	Roscommon County Road Commission	Brad Stauffer	St. Helen Road North
-	-	NOT HRRR Eligible - Move to Safety	19609	Clinton County Road Commission	Dan Armentrout	County Wide
-	-	NOT HRRR Eligible - Move to Safety	25609	Genesee County Road Commission	Kenneth Johnson	Morrish Road
-	-	NOT HRRR Eligible - Move to Safety	25609	Genesee County Road Commission	Kenneth Johnson	Seymour Road
		ç ,			Stanley	
-	-	NOT HRRR Eligible - Move to Safety	30609	Hillsdale County Road Commission	Clingerman	East Camden Road
127	120	NOT HRRR Eligible - Move to Safety	33609	Ingham County Road Commission	Robert Peterson	Shoeman Road/Barry Road
-	-	NOT HRRR Eligible - Move to Safety	38609	Jackson County Road Commission	Joseph Michalsky	6 Locations
-	-	NOT HRRR Eligible - Move to Safety	58609	Monroe County Road Commission	Janeen Abar	Ida West road
138	132	NOT HRRR Eligible - Move to Safety	64609	Oceana County Road Commission	Sandra Griffin	192nd Avenue
-	-	DOES NOT MEET WARRANTS	77609	St. Clair County Road Commission	William Hazelton	King Road/Meisner Road

## Local Agency High Risk Rural Roads Program FY2014

Newstern				Product Name	Provide at A line ite	West Town		E. Jacob		1 1	Project	
Number	Cont Sect	JOD NUM Lead Agency	Contact Person	Project Name	Project Limits	Work Type	Project Est	Federal Fed	I HKKK - PE	Local	Length	Split PE Split
1	04 000	110052 Alasna David Commission	Jacob Comphall	Pomfield Deed	Ramfield Road @ Au Sable Road in Curtie Township	Honzontal curve realignment, super correction, rumble strips, guardrall and signing	¢275 000 00	¢227 500 00		¢27 500 00	1	0.00
1	01609	118853 Alcona Road Commission			Barnineid Road @ Au Sable Road in Curlis Township	upgrades around nonzontal curve and tree removal	\$375,000.00	\$337,500.00		\$37,500.00		0.90
2	02600	119971 Allegan County Dood Commission	Croig Atwood	16th Street		Clearing, authorst replacements, vertical alignment and readway widening	¢102 500 00	¢165,150,00		¢10.250.00	00 mi	0.00
2	03609	110071 Allegari County Road Commission		Indian Hill Bood	Indian Hill Dood from Doodetroom Dood to Hooker Dood	Cleaning, curven replacements, venical alignment and roadway widening	\$163,500.00		-	\$10,330.00 \$4,400.00	.20 III	0.90
3	10609	116654 Benzie County Road Commission			Cose Read @Hemesteed Read		\$44,000.00	\$39,600.00	\$2,200.00	<b>ϕ</b> 4,400.00	2.0 111	0.90 0.50
				Case Road/Homestead Road, Weide	Welden Road @ Lindy Road and							
4	10000	110055 Densie County Dood Commission	Heathar Jamiaan	Road/Linuy Road, Homesteau	Weldon Road @ Lindy Road and	Cigning ungraded and vegetation clearing at 2 leastions	¢0,000,00	¢0,100,00	¢450.00	¢000.00	Internetion	0.00 0.50
4	10609	Troops Benzie County Road Commission		Road/Fioneer Road		Signing upgrades and vegetation cleaning at 5 locations	\$9,000.00	\$6,100.00	\$450.00	\$900.00	Intersection	0.90 0.50
F	25600	119956 Concess County Dood Commission	Kannath Jahnaan	Marriah Road/Calking Road	Marriah Bood @ Calking Bood in Flint Township	linstall 12 LED overhead beacon, hashers on stop and warning signs, upgrade	¢21.010.00	\$21,010,00		¢0.00	Interpotion	1.00
5	25609	Troopo Genesee County Road Commission	Kenneth Johnson			Signing and pavement markings	\$21,010.00	\$21,010.00	-	\$0.00	Intersection	1.00
6	25600	119950 Concess County Read Commission	Konnoth Johnson	Sovmour Pood/Grand Plane Pood	Sournour Road @ Grand Plane Road in Gaines Township	reflectorized cheeting on sign posts	¢24 720 00	\$24,720,00		00 0 <b>2</b>	Interception	1.00
0	25009	Tracio Genesee County Road Commission		Seymour Road/Grand Blanc Road		Install 12" LED everhead beccon flashers on advanced warning signs and	\$34,720.00	\$34,720.00	-	φ0.00	Intersection	1.00
7	25600	119961 Concess County Read Commission	Konnoth Johnson	Lowis Road/Wilson Road	Lowis Road @ Wilson Road	reflectorized cheeting on sign posts	¢21 154 00	\$21,154,00		00 0 <b>2</b>	Interception	1.00
/	25009	Troot Genesee County Road Commission			Reldwin Road culvert crossing Atherton Drain from Duffield Road to	New guardrail on culvert over the Atherton Drain and tree removal from Duffield	φ31,134.00	\$31,154.00	-	φ0.00	Intersection	1.00
0	25600	118807 Conocoo County Pood Commission	Kannath Johnson	Baldwin Road	VanVleet Road in Gaines Township	Road to Van Vleet Road	¢05 611 00	\$86.040.00		¢0 561 10	2 mi	0.00
0	25009	Tracer Genesee County Road Commission		Baluwill Koau	McCumsey Road Culvert crossing Pine Pup Creek in Thetford	Install new guardrait between the McCumsey Road culverts over the Pine Run	\$95,011.00	\$80,049.90	-	\$9,501.10	2 111	0.90
0	25600	118806 Concess County Read Commission	Konnoth Johnson	McCumcov Road	Township	Crock on the border of Thetford and Vienna Townships	¢60.052.00	¢62 147 70		¢6 005 20	10 mi	0.00
9	25009	Trade Genesee County Road Commission		Niccullisey Road		Percentruct vortical curve, chaulder widening to 5' payed/2' gravel, tree removal	\$09,055.00	\$02,147.70	-	φ0,905.50	.12111	0.90
10	20600	118862 Kalamazoo County Poad Commission	lim Hookstra	D Avenue/2nd Street	D Avenue @ 2nd Street in Alama Township	and installation of ground mounted flashing beacons	\$265 270 00	\$228 742 00		¢26 527 00	Intersection	0.00
10	39009		Sim noeksira	D Avende/2nd Street	52nd Street from Aster Road to S Branch Road		φ303,270.00	\$520,743.00		ψ <b>30</b> ,327.00	Intersection	0.90
					S Branch Road from 52nd Street north to W Stevenson Road	I lograde payement markings and signs, install reflective sign sheeting on all stop					Various	
11	13600	118863 Lake County Poad Commission	Steve Leonard	Various Poutos	W Stevenson Road from S Branch Road to N Tyndall Road	and curve warning signs	\$175 824 00	\$175 824 00	\$8 702 00	۵ <u>۵</u> ۵۵	Poutos	1 00 0 50
	43009			Various routes	Baldwin Road from Davison Lake Road to Calley Road in Hadley and	Verical curve modifications, removal of fixed objects (trees, beadwall) upgrade	φ175,024.00	\$175,824.00	ψ0,792.00	ψ0.00	Roules	1.00 0.30
12	44600	118864 Labor County Poad Commision	Ryan Doyle	Baldwin Road	Metamora Townshins	signs and install reflective sheeting on sign posts	\$386 208 00	\$347 587 20		\$38 620 80	4 mi	0.90
12	44009			Daidwiit Koad	Marathon Road from Klam Road to LeValley Road in Elba and Oregon	Install centerline corrugations and guardrail remove fixed objects (trees	φ300,200.00	\$547,507.20		ψ30,020.00	4 111	0.90
13	44609	118865 Langer County Road Commision	Ryan Doyle	Marathon Road	Townshins	headwall) upgrade signs and add reflective sheeting on sign posts	\$124 559 00	\$112 103 10	_	\$12 155 90	/1.3 mi	0.90
15	44003				McDowell Road from Washburn Road to Grav Road in Oregon	Incadwail), upgrade signs and add renective sneeting on sign posts	φ124,000.00	ψT12,103.10		ψ12,400.90	4.5 m	0.30
14	44609	118866 Lapeer County Road Commision	Ryan Doyle	McDowell Road	Townshin	and install reflective sheeting on sign posts	\$1/2 510 00	\$128 259 00	_	\$17 251 00	1 mi	0.90
17	4000						φ142,010.00	ψ120,200.00		ψ14,201.00	7111	0.00
						Install flashing beacon at Hollenbeck/Marathon intersection install centerline						
					Hollenbeck Road from Marathon Road to Klam Road in Marathon	corrugations install guardrail remove fixed objects upgrade signs and install						
15	44609	118867 Lapeer County Road Commision	Rvan Dovle	Hollenbeck Road	Townshin	reflective strips on sign posts. HMA paving at 90 degree curve at Klam Road	\$172 382 00	\$155 143 80	-	\$17 238 20	1 1 mi	0.90
10	11000			West County Line Road/Kendaville	Intersection of West County Line Road and Kendaville Road in Pierson		¢112,002.00	\$100,110.00		φ17,200.20		0.00
16	59609	118868 Montcalm County Road Commission	Mark Christensen	Road	Townshin	Overhead flasher, stop ahead flashers, tree and brush clearing, sign replacement	\$30,502,00	\$27 451 80	-	\$3 050 20	Intersection	0.90
10	00000					Adding center left turn lanes/right turn lanes on Federal Road, correcting vertical	\$00,002,000	<i>\\</i> 21,101100		\$0,000120	interecetion	0.00
17	59609	118869 Montcalm County Road Commission	Mark Christensen	Federal Road/Kendaville Road	Federal Road @ Kendaville Road in Pierson Township	curve and improving curb radii/throat widths	\$382 938 00	\$344 644 20	-	\$38 293 80	Intersection	0.90
	00000					Signing upgrades with reflective sheeting on posts, install additional warning signs.	\$002;000100	\$011,011120		<i>\\</i> 00,200100	interecetion	0.00
18	81609	118872 Washtenaw County Road Commission	Brent Schlack	Austin Road	Austin Road from M-52 to Clinton Road	culvert extensions and guardrail upgrades	\$380.000.00	\$342,000,00	\$19,000.00	\$38,000,00	1.8 mi	0.90 0.50
	0.000					Install overhead flashing beacon and ground mounted flashing beacons, upgrade	\$000,000.00	÷;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	<i><i><i>ϕ</i></i>.0,000.00</i>	\$00,000		
						and install additional warning signs, intersection realignment, drainage						
19	81609	118977 Washtenaw County Road Commission	Brent Schlack	Cherry Hill Road/Prospect Road	Cherry Hill Road @ Prospect Road	limprovements	\$230.000.00	\$207.000.00	\$11.500.00	\$23.000.00	Intersection	0.90 0.50
							+====;======	,,	<i> </i>	+=0,000100		
								\$2,954,187.70	\$41,942.00	\$2,996,129.70		

### HRRR PROPOSED PROJECTS

# Local Agency High Risk Rural Roads Program FY2014 February 2013

HRRR	PROPOS	ED PROJE	ECTS									
Numbe	r Cont Sect	Job Num	Obl	Lead Agency	Project Name	Project Limits	Work Type		Project Est	Federal	Fed HRRR - PE	Local
							Horizontal curve realignment, super correction, rumble strips,					
							guardrail and signing upgrades around horizontal curve and tree		<b>*</b>	<b>***</b>		
1	01609	118853	0	Alcona Road Commission	Bamfield Road	Bamfield Road @ Au Sable Road in Curtis Township	removal		\$375,000.00	\$337,500.00	-	\$37,500.00
	00000	440074		Allegen County Deed Commission	10th Chroat	16th Street from 3000' south of 140th Avenue to 1500' south of	Clearing, culvert replacements, vertical alignment and roadway		¢400 500 00	¢405 450 00		¢10.050.00
2	03609	118871		Allegan County Road Commission	Toth Street		widening		\$183,500.00	\$165,150.00	-	\$18,350.00
			0 'C'									
			Phase (					Obligated 'C' Phase 12 05 2013 lmf - Obligated 'A' Phase				
3	10609	118854	'A' Phase	e Benzie County Road Commission	Indian Hill Road	Indian Hill Road from Deadstream Road to Hooker Road	Tree clearing and removal of fixed objects	06.07.2014 lmf	\$44,000,00	\$39,600,00	\$2,200.00	\$4,400.00
									<b>*</b> • • • • • • • • • • • • • • • • • • •	+00,000.00	<i><i><i></i></i></i>	<i> </i>
			O 'C'		Case Road/Homestead Road,	Case Road @Homestead Road,						
			Phase (		Weldon Road/Lindy Road,	Weldon Road @ Lindy Road and		Obligated 'C' Phase 12.05.2013 lmf - Obligated 'A' Phase				
4	10609	118855	'A' Phase	e Benzie County Road Commission	Homestead Road/Pioneer Road	Homestead Road @ Pioneer Road	Signing upgrades and vegetation clearing at 3 locations	06.05.2014 lmf	\$9,000.00	\$8,100.00	\$450.00	\$900.00
							Install 12" LED overhead beacon, flashers on stop and warning					
5	25609	118856	0	Genesee County Road Commission	Morrish Road/Calkins Road	Morrish Road @ Calkins Road in Flint Township	signs, upgrade signing and pavement markings	Obligated 02.13.2014 Imf	\$21,010.00	\$21,010.00	-	\$0.00
							Install 12" LED overhead beacon, flashers on advanced warning			<b>A A A A A A A A A A</b>		
6	25609	118859	0	Genesee County Road Commission	Seymour Road/Grand Blanc Road	Seymour Road @ Grand Blanc Road in Gaines Township	signs and reflectorized sheeting on sign posts	Obligated 02.13.2014 Imf	\$34,720.00	\$34,720.00	-	\$0.00
7	25000	110001		Canada County Dead Commission	Lowie Read/Mileon Read	Lowis Bood @ Wilson Bood	Install 12" LED overnead beacon, flashers on advanced warning	Obligated 02.12.2014 lmf	¢24.454.00	¢04.454.00		¢0.00
/	25609	118801	0	Genesee County Road Commission		Lewis Road @ Wilson Road Reldwin Road culvert crossing Atberton Drain from Duffield Road t	Signs and reliectonized sheeting on sign posts		\$31,154.00	\$31,154.00	-	\$0.00
8	25609	118807	0	Genesee County Road Commission	Baldwin Road	VanVleet Road in Gaines Townshin	from Duffield Road to Van Vleet Road	a	\$95 611 00	\$86 0/0 00	_	\$9.561.10
0	23003	110037			Daidwin Koad		Install new quardrail between the McCumsey Road culverts over		ψ35,011.00	Ψ00,0 <del>4</del> 9.90		\$3,301.10
						McCumsey Road Culvert crossing Pine Run Creek in Thetford	the Pine Run Creek on the border of Thetford and Vienna					
9	25609	118896	0	Genesee County Road Commission	McCumsey Road	Township	Townships	Obligated 04.29.2014 Imf	\$69.053.00	\$62.147.70	-	\$6.905.30
							Reconstruct vertical curve, shoulder widening to 5' paved/2'		<i>+,</i>	<i>v</i> = , · · · · · ·		<i>\</i>
							gravel, tree removal and installation of ground mounted flashing					
10	39609	118862	0	Kalamazoo County Road Commission	D Avenue/2nd Street	D Avenue @ 2nd Street in Alamo Township	beacons	Obligated 01.31.2014 Imf	\$365,270.00	\$328,743.00	-	\$36,527.00
						52nd Street from Aster Road to S Branch Road,						
						S Branch Road from 52nd Street north to W Stevenson Road,	Upgrade pavement markings and signs, install reflective sign					
11	43609	118863	0	Lake County Road Commission	Various Routes	W Stevenson Road from S Branch Road to N Tyndall Road	sheeting on all stop and curve warning signs	Obligated Lump Sum 04.02.2014	\$175,824.00	\$175,824.00	\$8,792.00	\$0.00
							Verical curve modifications, removal of fixed objects (trees,					
						Baldwin Road from Davison Lake Road to Calley Road in Hadley	headwall) upgrade signs and install reflective sheeting on sign					
12	44609	118864	0	Lapeer County Road Commision	Baldwin Road	and Metamora Townships	posts	Obligated Lump Sum 03.25.2014	\$386,208.00	\$347,587.20	-	\$38,620.80
						Marathan Dood from Klam Dood to LoVallov Dood in Elho and	Install centerline corrugations and guardrall, remove fixed objects					
12	44600	119965		Langer County Read Commission	Marathan Road	Oregon Townships	(nees, neadwaii), upgrade signs and add renective sneeting on	Obligated 01 30 2014 lmf	\$124 550 00	¢112 102 10		\$12,455,00
13	44009	110005				Oregon rownships			\$124,559.00	φ112,103.10	-	φ12,455.90
						McDowell Road from Washburn Road to Grav Road in Oregon	   Ipgrade/install guardrail remove fixed objects (trees beadwall)					
14	44609	118866	0	Lapeer County Road Commision	McDowell Road	Township	upgrade signs and install reflective sheeting on sign posts	Obligated 01.30.2014 lmf - lump summed	\$142,510,00	\$128,259,00	-	\$14,251,00
			-				Install flashing beacon at Hollenbeck/Marathon intersection, insta		¢ : : <u></u> _,e : e:ee	¢:=0,=00:00		¢,_000
							centerline corrugations, install guardrail, remove fixed objects,					
						Hollenbeck Road from Marathon Road to Klam Road in Marathon	upgrade signs and install reflective strips on sign posts, HMA					
15	44609	118867	0	Lapeer County Road Commision	Hollenbeck Road	Township	paving at 90 degree curve at Klam Road	Obligated 02.04.2014 Imf - lump summed	\$172,382.00	\$155,143.80	-	\$17,238.20
					West County Line Road/Kendaville	Intersection of West County Line Road and Kendaville Road in	Overhead flasher, stop ahead flashers, tree and brush clearing,					
16	59609	118868	0	Montcalm County Road Commission	Road	Pierson Township	sign replacement		\$30,502.00	\$27,451.80	-	\$3,050.20
							Adding center left turn lanes/right turn lanes on Federal Road,					
1/	59609	118869	0	Montcalm County Road Commission	Federal Road/Kendaville Road	Federal Road @ Kendaville Road in Pierson Township	correcting vertical curve and improving curb radii/throat widths		\$382,938.00	\$344,644.20	-	\$38,293.80
							Signing ungraded with reflective checking on pasts lights"					
			Phase.				additional warning signs, culvert extensions and guardrail	Obligated C Phase on 10 21 2013/A phase on 04 21 2014 Jump				
18	81609	118872	'A' Phase	Washtenaw County Road Commission	Austin Road	Austin Road from M-52 to Clinton Road	upgrades	summed	\$380,000,00	\$342 000 00	\$19,000,00	\$38,000,00
	01000	110072	7.11430				[*F 2: -4400		φ000,000.00	φυ 12,000.00	φ10,000.00	φου,σου.σο
			O 'C'				Install overhead flashing beacon and ground mounted flashing					
			Phase - 0				beacons, upgrade and install additional warning signs, intersection	on				
19	81609	118977	'A' Phase	e Washtenaw County Road Commission	Cherry Hill Road/Prospect Road	Cherry Hill Road @ Prospect Road	realignment, drainage improvements	Obligated C Phase on 10.21.2013/A Phase on 03.31.2014	\$230,000.00	\$207,000.00	\$11,500.00	\$23,000.00
							Total 'HRRR' Selected Amount	=	\$3,253,241.00	\$2,954,187.70	\$41,942.00	\$299,053.30

NON-SELECTED HRRR PROJECTS										
Number	Cont Sect	Job Num	Lead Agency	Project Name	Project Limits	Work Type	Project Est	Federal	Fed HRRR - PE	Local
20	19609		Clinton County Road Commission	County Wide	County Wide	Upgrade advanced warning signs	\$400,000.00	\$400,000.00	-	\$0.00
					CR 573 (Hamilton Lakes Road) from the Canadian Northern RR					
21	22609		Dickinson County Road Commission	CR 573 (Hamilton Lakes Road)	north to US-2	Crush and shape, widen lanes and pave shoulders	\$300,000.00	\$270,000.00	-	\$30,000.00
					Morrish Road Bridge crossing the south branch of the Brent Run					
22	25609		Genesee County Road Commission	Morrish Road	Creek south of Wilson Road in Montrose Charter Township	Install new guardrail on approaches and new bridge railing	\$35,959.00	\$35,959.00	-	\$0.00
						Install 12" LED flashers on advanced warning signs, install larger				
					Seymour Road from Cole Road to Rolston Road in Argentine	signs and install reflectorized sheeting on sign posts on two				
23	25609		Genesee County Road Commission	Seymour Road	Township	horizontal curves	\$23,210.00	\$23,210.00	-	\$0.00
						Install overhead flashing beacon, flashers on advanced warning				
24	25609		Genesee County Road Commission	Thompson Road/Jennings Road	Thompson Road at Jennings Road in Fenton Charter Township	signs and reflectorized sheeting on sign posts	\$35,710.00	\$35,710.00	-	\$0.00
					East Camden Road from Waldron Road to Meridian Road in Wrig	ht 3.03 miles of crush and shape, new HMA, gravel shoulders,				
25	30609		Hillsdale County Road Commission	East Camden Road	Township	culvert replacement and tree removal	\$975,000.00	\$877,500.00	-	\$97,500.00
						Reconstruct intersection and vertical alignment, vegetation				
26	33609		Ingham County Road Commission	Shoeman Road/Barry Road	Shoeman Road @ Barry Road in Williamston Township	clearing	\$400,000.00	\$360,000.00	\$20,000.00	\$40,000.00
					Austin Road in Norvell Township,					
					Clear Lake Road in Waterloo Township,					
					Hewitt Road in Columbia Township,					
					Seymour Road in Leoni & Waterloo Townships,					
07					Territorial Road in Henrietta Township and		<b>*</b> 050 544 00	<b>0050 544 00</b>		<b>*</b> •••••
27	38609		Jackson County Road Commission	6 Locations	Trist Road in Waterloo Township	Upgrade guardrails	\$352,514.00	\$352,514.00	-	\$0.00
	50000				Ide Deed Weet from Commentiald Deed to Usings Deed	Guardrall improvements, signing upgrades, flashers at two	<b>*</b> 444,000,00	<b>\$00.000.00</b>		<b>#</b> 44,400,00
28	58609		Monroe County Road Commission	Ida West road	Ida Road West from Summerfield Road to Haines Road	Intersections, removal of fixed objects in clear zone	\$111,000.00	\$99,900.00	-	\$11,100.00
29	58609		Monroe County Road Commission	S Stony Creek Road	S Stony Creek Road from Steffas Road to Exeter Road	Removal of fixed objects in road clear zone, shoulder widening	\$380,000.00	\$342,000.00	-	\$38,000.00
						Reconstruct roadway including the widening of lanes, correcting				
						cross slope, paving shoulders, flattening slopes, installing				
					192nd Avenue from 0.25 miles north of Warren Road to Scout Ro	ad guardrail, tree clearing and improving vertical sight distance,				
30	64609		Oceana County Road Commission	192nd Avenue	in Newfield and Leavitt Townships.	reconstruct the 192nd and Scout Road intersection	\$440,000.00	\$396,000.00	-	\$44,000.00
					120th Avenue from New Holland Street to Port Sheldon Street in					
31	70609		Ottawa County Road Commission	120th Avenue	Olive Township	Upgrade shoulders to 3' paved, 5' aggregate, resurfacing road	\$700,000.00	\$630,000.00	-	\$70,000.00
					St. Helen Road N from Old 76 to College Drive in Au Sable and	HMA overlay for rutting, place class II shoulder and pavement				
32	72609		Roscommon County Road Commission	St. Helen Road North	Richfield Townships	markings	\$261,844.00	\$235,659.60	-	\$26,184.40
33	77609		St. Clair County Road Commission	King Road/Meisner Road	King Road @ Meisner Road in China Township	Install traffic signal and improve intersection for left turn lanes	\$193,930.00	\$174,537.00	-	\$19,393.00
								<b>A</b> ( 000 000 00	<u> </u>	<u> </u>
						I otal 'HKKK' Non-Selected Amount =	\$4,609,167.00	\$4,232,989.60	\$20,000.00	\$376,177.40