



February 26, 2014

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FHWA
MONTANA DIVISION

Kevin L. McLaury
Division Administrator
Federal Highway Administration
585 Shepard Way, Suite 2
Helena, MT 59601-9785

Attention: Gene Kaufman

Subject: Programmatic Categorical Exclusion (PCE) Concurrence Request
Main/Marcus Sig Upgrade-Hamilton
NH 7-1(136)47
CN 7930000

Dear Kevin McLaury:

This submittal requests approval of the above-mentioned proposed project as a Categorical Exclusion under the provisions of 23 CFR 771.117(d) and the Programmatic Agreement as signed by the Montana Department of Transportation (MDT) and the Federal Highway Administration (FHWA) on April 12, 2001. This proposed action also qualifies as a Categorical Exclusion under ARM 18.2.261 (Sections 75-1-103 and 75-1-201, MCA).

The following form provides the documentation required to demonstrate that all of the conditions are satisfied to qualify for a PCE. A copy of the Preliminary Field Review Report is attached. In the following form, "N/A" indicates not applicable; "UNK" indicates unknown.

NOTE: A response in a large box will require additional documentation for a Categorical Exclusion request in accordance with 23 CFR 771.117(d).

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> | <u>UNK</u> |
|---|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 1. This proposed project would have (a) significant environmental impact(s) as defined under 23 CFR 771.117(a). | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. This proposed project involves (an) unusual circumstance(s) as described under 23 CFR 771.117(b). | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. This proposed project involves one (or more) of the following situations where: | | | | |
| A. Right-of-Way, easements, and/or construction permits would be required. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> | <u>UNK</u> |
|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 1. The context or degree of the Right-of-Way action would have (a) substantial social, economic, or environmental effect(s). | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. There is a high rate of residential growth in this proposed project's area. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. There is a high rate of commercial growth in this proposed project's area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Work would be on and/or within approximately 1.6 kilometers (1± mile) of an Indian Reservation. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. There are parks, recreational, or other properties acquired/improved under <i>Section 6(f)</i> of the <i>1965 National Land & Water Conservation Fund Act</i> (16 USC 460L, <i>et seq.</i>) on or adjacent to proposed the project area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The use of such <i>Section 6(f)</i> sites would be documented and compensated with the appropriate agencies. (<i>e.g.</i> : MDFWP, local entities, etc.). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Are there any sites either on, or eligible for the National Register of Historic Places with concurrence in determination of eligibility or effect under <i>Section 106</i> of the <i>National Historic Preservation Act</i> (16 USC 470, <i>et seq.</i>) by the State Historic Preservation Office (SHPO), which would be affected by this proposed project. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. There are parks, recreation sites, school grounds, wildlife refuges, historic sites, historic bridges, or irrigation that might be considered under <i>Section 4(f)</i> of the <i>1966 US DEPARTMENT OF TRANSPORTATION Act</i> (49 USC 303) on or adjacent to the project area. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| a. The proposed project would not impact the site(s), so a 4(f) evaluation is not necessary. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. De minimis finding(s) is/are necessary for this project. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. "Nationwide" Programmatic <i>Section 4(f)</i> Evaluation forms for these sites are attached. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. This proposed project requires a full (<i>i.e.</i> : DRAFT & FINAL) <i>Section 4(f)</i> Evaluation. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. The activity would involve work in a streambed, wetland, and/or other waterbody(ies) considered as "waters of the United States" or similar (<i>e.g.</i> , "state waters"). | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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| | <u>YES</u> | <u>NO</u> | <u>N/A</u> | <u>UNK</u> |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 1. Conditions set forth in <i>Section 10</i> of the <i>Rivers and Harbors Act</i> (33 USC 403) and/or <i>Section 404</i> under 33 CFR Parts 320-330 of the <i>Clean Water Act</i> (33 USC 1251-1376) would be met. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Impacts in wetlands, including but not limited to those referenced under Executive Order (E.O.) #11990, and their proposed mitigation would be coordinated with the US Army Corps of Engineers and other Resource Agencies (Federal, State and Tribal) as required for permitting | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. A 124SPA Stream Protection Authorization would be obtained from the MDFWP? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. There is a delineated floodplain in the proposed project area under FEMA's Floodplain Management criteria. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The water surface at the 100-year flood limit elevation would exceed floodplain management criteria due to an encroachment by the proposed project. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Tribal Water Permit would be required. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Work would be required in, across, and/or adjacent to a river which is a component of, or proposed for inclusion in Montana's Wild and/or Scenic Rivers system as published by the US Department of Agriculture, or the US Department of the Interior. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The designated National Wild & Scenic River systems in Montana are: | | | | |
| a. Middle Fork of the Flathead River (headwaters to South Fork confluence). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. North Fork of the Flathead River (Canadian Border to Middle Fork confluence). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| In accordance with <i>Section 7</i> of the <i>Wild and Scenic Rivers Act</i> (16 USC 1271 – 1287), this work would be coordinated and documented with either the Flathead National Forest (Flathead River), or US Bureau of Land Management (Missouri River). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> | <u>UNK</u> |
|---|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| C. This is a "Type I" action as defined under 23 CFR 772.5(h), which typically consists of highway construction on a new location or the physical alteration of an existing route which substantially changes its horizontal or vertical alignments or increases the number of through-traffic lanes. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1. If yes, are there potential noise impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. A Noise Analysis would be completed. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. There would be compliance with the provisions of both 23 CFR 772 for FHWA's Noise Impact analyses and MDT's Noise Policy. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. There would be substantial changes in access control involved with this proposed project. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, would they result in extensive economic and/or social impacts on the affected locations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. The use of a temporary road, detour, or ramp closure having the following conditions when the action(s) associated with such facilities: | | | | |
| 1. Provisions would be made for access by local traffic, and be posted for same. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Adverse effects to through-traffic dependant businesses would be avoided or minimized. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Interference to local events (e.g. festivals) would be minimized to all possible extent. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Substantial controversy associated with this pending action would be avoided. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Hazardous wastes /substances, as defined by the US Environmental Protection Agency (EPA) and/or the Montana Department of Environmental Quality (MDEQ), and/or (a) listed "Superfund" (under CERCLA or CECRA) site(s) are currently on and/or adjacent to this proposed project. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| All reasonable measures would be taken to avoid and/or minimize substantial impacts from same. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G. The Stormwater Discharge conditions (ARM 17.30.1101-1117), including temporary erosion control features for construction would be met. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| H. Permanent desirable vegetation with an approved seeding mixture would be established on exposed areas. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> | <u>UNK</u> |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| I. Documentation of an “invasive species” review to comply with both EO #13112 and the <i>County Noxious Weed Control Act</i> (7-22-2152, MCA), including directions as specified by the county(ies) wherein its intended work would be done. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| J. There are “Prime” or “Prime if Irrigated” Farmlands designated by the Natural Resources Conservation Service on or adjacent to the proposed project area. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If the proposed work would affect Important Farmlands, then a CPA 106 Farmland Conversion Impact Rating form would be completed in accordance with the <i>Farmland Protection Policy Act</i> (7 USC 4201, <i>et seq.</i>). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| K. Features for the <i>Americans with Disabilities Act</i> (PL 101-336) compliance would be included. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| L. A written Public Involvement Plan would be completed in accordance with MDT’s Public Involvement Handbook. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. This proposed project complies with the <i>Clean Air Act’s Section 176(c)</i> (42 USC 7521(a), as amended) under the provisions of 40 CFR 81.327 as it’s either in a Montana air quality: | | | | |
| A. “Unclassifiable/Attainment” area. This proposed project is <u>not</u> covered under the EPA’s September 15, 1997 Final Rule on air quality conformity. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| and/or | | | | |
| B. “Nonattainment” area. However, this type of proposed project is either exempted from the conformity determination requirements (under EPA’s September 15, 1997 Final Rule), or a conformity determination would be documented in coordination with the responsible agencies (Metropolitan Planning Organizations, MDEQ’s Air Resources Management Bureau, etc.). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Is this proposed project in a “Class I Air Shed” under 40 CFR 52.1382(c)(2-4) and 40 CFR 81.417? (Northern Cheyenne, Flathead, and Fort Peck Indian Reservations; Glacier and Yellowstone National Parks; Anaconda-Pintlar, Bob Marshall, Cabinet Mountains, Gates of the Mountains, Medicine Lake, Mission Mountain, Red Rock Lakes, Scapegoat, Selway-Bitterroot, and U.L. Bend Wilderness Areas) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Federally listed Threatened or Endangered (T/E) Species: | | | | |
| A. There are recorded occurrences and/or critical habitat in this proposed project’s vicinity. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

B. Would this proposed project result in a "jeopardy" opinion (under 50 CFR 402) from the Fish & Wildlife Service on any Federally listed T/E Species? YES NO N/A UNK

The proposed project would not induce significant land use changes, nor promote unplanned growth. There would be no significant effects on access to adjacent property, nor to present traffic patterns.

This proposed project would not create disproportionately high and/or adverse impacts on the health or environment of minority and/or low-income populations (EO #12898). It also complies with the provisions of Title VI of the Civil Rights Act of 1964 (42 USC 2000d) under the FHWA's regulations (23 CFR 200).

In accordance with the provisions of 23 CFR 771.117(a), this pending action would not cause any significant individual, secondary, or cumulative environmental impacts. Therefore, the FHWA's concurrence is requested that this proposed project is properly classified as a Categorical Exclusion.

Susan Kilcrease, Date: Feb 26, 2014
Susan Kilcrease - Missoula District Project Development Engineer
MDT Environmental Services Bureau

Concur Heidy Bruner, Date: 3/4/14
Heidy Bruner, P.E. - Engineering Section Supervisor
MDT Environmental Services Bureau

Concur M. P. Hanfman, Date: 3/12/14
Federal Highway Administration

MDT attempts to provide accommodation for any known disability that may interfere with a person participating in any service, program or activity of the Dept. Alternative accessible formats of this information will be provided upon request. For further information, call 406-444-7228 or TTY (800-335-7592), or call Montana Relay at 711.

Attachment: Preliminary Field Review Report (February 4, 2013)

- Copy (w/o attach.):
- | | |
|----------------------------|---------------------------------------|
| Ed Toavs | Missoula District Administrator |
| Roy Peterson, P.E. | Traffic & Safety Engineer |
| Tom S. Martin, P.E. | Environmental Services Bureau Chief |
| Heidy Bruner, P.E. | Environmental Services Bureau |
| Suzy Price | Contract Plans Bureau Chief |
| Lisa Hurley | Fiscal Programming Section Supervisor |
| Tom Erving | Fiscal Programming Section |
| Robert Stapley | Right-of-Way Bureau Chief |
| Susan Kilcrease | Environmental Services Bureau |
| File | Environmental Services Bureau |
| Montana Legislative Branch | Environmental Quality Council (EQC) |



Memorandum

To: Roy Peterson, P.E.
 Traffic & Safety Engineer

From: Gabe Priebe, P.E. [GBP]
 Traffic Project Engineer

Thru: Ivan Ulberg, P.E. [IBU]
 Traffic Design Engineer

Date: February 4, 2013

Subject: Main/Marcus Sig Upgrd-Hamilton
 NH 7-1(136)47
 UPN 7930000
 Work Type 410 – Traffic Signals & Lighting

Please approve the attached Preliminary Field Review Report.

Approved [signed by RAP] Date [February 6, 2013]
 Roy Peterson, P.E.
 Traffic & Safety Engineer

We are requesting comments from those on the distribution list. We will assume their concurrence if we receive no comments within two weeks of the approval date.

Distribution:

- | | |
|---|--|
| Ed Toavs, District Administrator | Tom Martin, Environmental Services Bureau Chief |
| Kent Barnes, Bridge Engineer | Lynn Zanto, Rail, Transit, & Planning Division Administrator |
| Paul Ferry, Highways Engineer | Jake Goettle, Construction Engineering Services Bureau |
| Robert Stapley, Right-of-Way Bureau Chief | Matt Strizich, Materials Engineer |

cc:

- | | |
|---|---|
| Gabe Priebe, Project Design Engineer | Dawn Stratton, Fiscal Programming Section |
| Traffic and Safety file | Damian Krings, Road Design Engineer |
| Keith Smith, Hamilton City Public Works | |

e-copies:

- | | |
|--|---|
| Jim Walther, Engineering, Preconstruction Engineer | Jake Goettle, Construction Bureau – VA Engineer |
| Lesly Tribelhorn, Highways Design Engineer | Shane Stack, District Preconstruction |
| Mark Goodman, Hydraulics Engineer | Ben Nunnallee, District Projects Engineer |
| KC Yahvah, District Hydraulics Engineer | Darin Reynolds, District Materials Lab |
| Jon Axline, Acting Env. Resources Section Supervisor | Gary Engman, District Maintenance Chief - Kalispell |
| Pat Basting, District Biologist | Maureen Walsh, District Right of Way Supervisor |
| Susan Kilcrease, District Project Development Engineer | Phillip Inman, Utilities Engineering Manager |
| Danielle Bolan, Traffic Operations Engineer | David Hoerning, R/W Engineering Manager |
| Ivan Ulberg, Traffic Design Engineer | Greg Pizzini, Acquisition Manager |
| William Squires, Project Engineer | Joe Zody, R/W Access Management Section Manager |
| Kraig McLeod, Safety Engineer | Matt Strizich, Materials Engineer |
| Chris Hardan, Bridge Area Engineer, Missoula District | Daniel Hill, Pavement Analysis Engineer |
| Mike Grover, Engineering Cost Analyst | Bret Boundy, District Geotechnical Manager |
| Marty Beatty, Engineering Information Services | Bryce Larsen, Supervisor, Photogrammetry & Survey |
| Paul Grant, Public Involvement Officer | Paul Johnson, Project Analysis Bureau |
| Sue Sillick, Research Section Supervisor | Jean Riley, Planner |
| Alyce Fisher, Fiscal Programming Section | Dawn Stratton, Fiscal Programming Section |
| Mark Keeffe, Bicycle/Pedestrian Coordinator | |

Preliminary Field Review Report

NH 7-1(136)47; Main/Marcus Sig Upgrd-Hamilton
Project Manager: Gabe B. Priebe

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Introduction

A preliminary field review was held on December 12, 2012. The following attended the field review.

Danielle Bolan, Operations Engineer, Traffic & Safety - Helena
Gabe Priebe, Traffic Project Engineer, Traffic & Safety – Helena
Allen Levens, Electrical, Traffic & Safety - Helena
Alice Flesch, ADA Coordinator, Civil Rights – Helena
Shane Stack, District Preconstruction Engineer – Missoula
Ben Nunnallee, District Projects Engineer – Missoula
Glen Cameron, District Traffic Engineer – Missoula
Keith Smith, Public Works Director – City of Hamilton

Proposed Scope of Work

The proposed project has been nominated to provide upgraded signal facilities at nine locations in the Hamilton and Lolo areas. Proposed enhancements vary from site to site, but generally include some or all of the following upgraded or new elements: flashing yellow arrow (FYA) indications, controllers, cabinets, mast-arm signing, ADA upgrades, detection and communication.

The project will also include an upgraded crosswalk, crosswalk signing and a new pedestrian refuge island at the State Street and US-93 pedestrian crossing location.

For a detailed breakdown of each scope items at each location see the Pedestrian/Bicycle/ADA and Traffic headings under the Major Design Features section.

Purpose and Need

The purpose of this project was to add left-turn phasing at the Main/Marcus intersection in Hamilton and the Glacier/Ridgeway intersection in Lolo. Addition of left-turn phasing requires new FYA signal indications for those signal heads that correspond with exclusive left turn lanes. It was later decided, in order to provide consistency, FYA indications would need to be added at all other appropriate locations at the other signalized intersections in the Hamilton and Lolo areas. The additions of FYA indications require controller and cabinet upgrades. Since all signalized intersections will be affected to some degree, communication upgrades and pedestrian accommodations will also be implemented where feasible within the project.

Project Location and Limits

The project is located in Missoula and Ravalli Counties at the locations outlined below and shown on the location maps at the end of this report.

Location 1 (Hamilton): US-93 & Golf Course Road/Hope Avenue, RP 46.6.

Location 2 (Hamilton): US-93 & Ravalli Street, RP 47.0.

Location 3 (Hamilton): US-93 & State Street, RP 47.2.

Location 4 (Hamilton): Main Street (Secondary 531) & Second Street, RP 6.2.

Location 5 (Hamilton): US-93 & Main Street/Marcus Street, RP 47.3.

Location 6 (Hamilton): US-93 & Pine Street, RP 47.6.

Location 7 (Hamilton): US-93 & Adirondac Avenue/Fairground Road, RP 47.9.

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Location 8 (Lolo): US-93 & US-12 (Lolo Creek Road), RP 83.4.

Location 9 (Lolo): US-93 & Tyler Way, RP 83.8.

Location 10 (Lolo): US-93 & Glacier Drive/Ridgeway Drive, RP 84.0.

Work Zone Safety and Mobility

At this time, Level 2 construction zone impacts are anticipated for this project as defined in the Work Zone Safety and Mobility (WZSM) guidance. Although the project is located in a Level 1 Corridor and is within a high-crash corridor as defined in the WZSM guidance, it is anticipated the impacts to the traveling public will be limited to very short durations during off-peak hours. It is also important to note these short-term impacts will occur at low speed locations on US-93. The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). A limited Transportation Operations (TO) component and a limited Public Information (PI) component to address short-term lane closures and/or localized detours during off-peak hours. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

Locations 1 -3 and 5-7: The section of US-93 from RP 46.464 to 47.092 was reconstructed in 2011 under project NH 7-1(127)46 and the section of US-93 from RP 47.092 to 48.173 was reconstructed in 2003 under project NH 7-1(97)45. Both segments contain curb and gutter with integral sidewalk on both sides of the roadway. The predominant paved width on US-93 within these segments is 62 feet: four 12 foot driving lanes and a 14 foot two-way-left-turn lane away from the intersections and 14 foot left turn bays at the intersections. According to the TIS Road Log, the surfacing within these segments consists of 7.76 inches of plant mix over 16.2 inches of base course. The minor legs on all these locations except both Main/Marcus minor legs and the west leg of Fairgrounds/Adirondac consist of two lanes immediately at the intersections. Both minor legs of Main/Marcus consist of separate right only, thru only, and left only bays and the west leg of Fairgrounds/Adirondac consists of separate left only and thru/right bays.

Location 4: The section of Main Street (S-531) between RP 6.037 and RP 6.308 was reconstructed in 1990 under project RTS 531-1(3). This section contains curb and gutter with integral sidewalk on both sides of the roadway. The predominant paved width on Main Street at this location is 74 feet: two 12 foot driving lanes, two approximately 8 foot shoulders with the balance of width comprised of diagonal parking on both sides of the roadway. Immediately at the intersection all legs consist of two lanes. According to the TIS Road Log, the surfacing within this segment consists of 2 inches of plant mix over 3 inches of base course.

Locations 8-10: The section of US-93 from RP 83.35 to RP 85.922 was reconstructed in 2008 under project NH 7-2(49)83. In the immediate vicinity of each intersection, the roadway contains curb and gutter and intermittent sidewalk. The predominant paved width on US-93 within these segments is 84 feet. At both the US-12 and the Tyler Way intersections, the typical consists of two 12 foot driving lanes (outside), two 14 foot driving lanes (inside), 8 foot shoulders, and a 16 foot raised median approaching each intersection and 14 foot left turn bays with a two foot center median at each intersection. At the Glacier/Ridgeway intersection, the typical consists of two 12 foot driving lanes (outside), two 14 foot driving lanes (inside), 8 foot shoulders and a 16 foot TWLT lane approaching the intersection and a 16 foot left turn bay at the intersection. According to the TIS Road Log, the surfacing within these segments consists of 8.14 inches of plant mix over 17 inches of base course. The west leg of US-12 and both legs of Glacier/Ridgeway consist of separate thru/left and right only bays. The other minor legs at these locations consist of two lanes.

The surrounding terrain at all locations is generally level with very gentle vertical curves. The horizontal alignment of US-93 is either tangent or, considering the posted speed, contains very gentle horizontal curves on the major legs approaching each intersection. With the exception of the east leg of

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Project Manager: Gabe B. Priebe

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Main/Marcus, all minor approach legs are on a tangent or contain gentle horizontal curves. The east leg of the Main/Marcus intersection contains a sharp curve to the left (proceeding eastbound) with a PC immediately east of the intersection; while as-built plans for Marcus Street were not readily available, the curve's radius is approximately 150 feet and deflection angle approximately 46 degrees.

The intersections within the project are urban or semi-urban/transitional settings. Land use is primarily business and some residential adjacent to each intersection within the project.

Traffic Data

Location 1a: South leg of US-93 & Golf Course Road/Hope Avenue:

2012 (Present) AADT = 7,450
2014 (Letting) AADT = 7,630
2034 (Design) AADT = 9,680
DHV = 1160
Truck% = 2.3%
Equivalent Single Axle Load = 73
Annual Growth Rate = 1.2%

Location 1b: North leg of US-93 & Golf Course Road/Hope Avenue:

2012 (Present) AADT = 15,040
2014 (Letting) AADT = 15,340
2034 (Design) AADT = 18,720
DHV = 1500
Truck% = 2.8%
Equivalent Single Axle Load = 154
Annual Growth Rate = 1.0%

Location 2a: South leg of US-93 & Ravalli Street:

2012 (Present) AADT = 15,040
2034 (Letting) AADT = 15,340
2034 (Design) AADT = 18,720
DHV = 1500
Truck% = 2.8%
Equivalent Single Axle Load = 154
Annual Growth Rate = 1.0%

Location 2b: North leg of US-93 & Ravalli Street:

2012 (Present) AADT = 16,570
2014 (Letting) AADT = 16,910
2034 (Design) AADT = 20,630
DHV = 1650
Truck% = 2.5%
Equivalent Single Axle Load = 157
Annual Growth Rate = 1.0%

Location 3: North and South legs of US-93 & State Street:

2012 (Present) AADT = 16,570
2014 (Letting) AADT = 16,910
2034 (Design) AADT = 20,630
DHV = 1650
Truck% = 2.5%
Equivalent Single Axle Load = 157
Annual Growth Rate = 1.0%

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Location 5a: South leg of US-93 & Main Street/Marcus Street:

2012 (Present) AADT = 16,570
2014 (Letting) AADT = 16,910
2034 (Design) AADT = 20,630
DHV = 1650
Truck% = 2.5%
Equivalent Single Axle Load = 157
Annual Growth Rate = 1.0%

Location 5b: North leg of US-93 & Main Street/Marcus Street:

2012 (Present) AADT = 16,750
2014 (Letting) AADT = 17,080
2034 (Design) AADT = 20,840
DHV = 1670
Truck% = 3.1%
Equivalent Single Axle Load = 174
Annual Growth Rate = 1.0%

Location 5c: East leg of US-93 & Main Street/Marcus Street:

2012 (Present) AADT = 7,210
2014 (Letting) AADT = 7,360
2034 (Design) AADT = 8,980
DHV = 990
Truck% = 1.9%
Equivalent Single Axle Load = 59
Annual Growth Rate = 1.0%

Location 5d: West leg of US-93 & Main Street/Marcus Street:

2012 (Present) AADT = 5,720
2014 (Letting) AADT = 5,830
2034 (Design) AADT = 7,120
DHV = 780
Truck% = 1.2%
Equivalent Single Axle Load = 18
Annual Growth Rate = 1.0%

Location 6: North and South legs of US-93 & Pine Street:

2012 (Present) AADT = 16,750
2014 (Letting) AADT = 17,080
2034 (Design) AADT = 20,840
DHV = 1670
Truck% = 3.1%
Equivalent Single Axle Load = 174
Annual Growth Rate = 1.0%

Location 7: North and South legs of US-93 & Adirondac Avenue/Fairground Road:

2012 (Present) AADT = 18,300
2014 (Letting) AADT = 18,670
2034 (Design) AADT = 22,780
DHV = 1820
Truck% = 1.1%
Equivalent Single Axle Load = 88
Annual Growth Rate = 1.0%

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Location 8a: South leg of US-93 & US-12 (Lolo Creek Road):

2012 (Present) AADT = 19,720
2014 (Letting) AADT = 20,550
2034 (Design) AADT = 31,140
DHV = 3270
Truck% = 2.8%
Equivalent Single Axle Load = 203
Annual Growth Rate = 2.1%

Location 8b: North leg of US-93 & US-12 (Lolo Creek Road):

2012 (Present) AADT = 21,250
2014 (Letting) AADT = 22,020
2034 (Design) AADT = 31,460
DHV = 3300
Truck% = 3.0%
Equivalent Single Axle Load = 150
Annual Growth Rate = 1.8%

Location 8c: West leg of US-93 & US-12 (Lolo Creek Road):

2012 (Present) AADT = 3,760
2014 (Letting) AADT = 3,830
2034 (Design) AADT = 4,680
DHV = 750
Truck% = 4.9%
Equivalent Single Axle Load = 89
Annual Growth Rate = 1.0%

Locations 9 & 10: North and South legs of US-93 & Tyler Way, US-93 & Glacier Drive/Ridgeway Drive:

2012 (Present) AADT = 21,250
2014 (Letting) AADT = 22,020
2034 (Design) AADT = 31,460
DHV = 3300
Truck% = 3.0%
Equivalent Single Axle Load = 150
Annual Growth Rate = 1.8%

Crash Analysis

The following analysis is for the dates January 1, 2007 through June 30, 2012.

Location 1: US-93 & Golf Course Road/Hope Avenue. A total of 12 crashes occurred at this intersection during the study period. The main observed crash trends are left turning conflicts between through vehicles (6) and rear end collisions (3). For instance, there have been three crashes involving southbound vehicles turning east onto Golf Course Road and being struck by northbound through vehicles. Also, three crashes involved vehicles running a red light resulting in a right angle collision (2 northbound/1 westbound). Two of these red light running crashes were left turning-through vehicle conflicts.

Location 2: US-93 & Ravalli Street. A total of 14 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (6) and left turning conflicts between through vehicles (5). The rear end crashes are pretty evenly split between northbound and southbound lanes of travel. Also, four crashes involved vehicles running a red light resulting in a right angle collision (2 westbound 1 eastbound/1 southbound). One of these red light running crashes were left turning-through vehicle conflicts.

Location 3: US-93 & State Street. A total of 16 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (8) and left turning conflicts between through

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vehicles (4). Six of the eight rear end crashes were related to the crosswalk. The majority (5) of these crashes involved southbound vehicles being rear-ended after stopping for pedestrians in the crosswalk. To address the crashes in this area, the Safety Engineering Section recommends that enhanced pedestrian crossing signing be installed.

Location 4: Main Street (Secondary 531) & Second Street. Crash data was not analyzed at this location due to the limited crash data available and limited scope of improvements planned; see the Traffic heading under the Major Design Features section for more information on the proposed work at this intersection.

Location 5: US-93 & Main Street/Marcus Street, RP 47.3. A total of 21 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (11) and left turning conflicts between through vehicles (4). The crashes are evenly distributed based on direction of travel. Two of the crashes at the intersection also involved vehicles running a red light resulting in a right angle collision (1 eastbound/1 southbound). Also, there was one crash involving a bicycle. The crash involved an eastbound vehicle making a right turn to travel southbound on US 93 and striking a northbound bicycle.

Location 6: US-93 & Pine Street. A total of 13 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (7) and left turning conflicts between through vehicles (2). The majority (5) of the rear end crashes involve vehicles traveling southbound.

Location 7: US-93 & Adirondac Avenue/Fairground Road. A total of 29 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (17) and left turning conflicts between through vehicles (2). The majority (9) of the rear end crashes involve vehicles traveling southbound. Also, three crashes involved vehicles running a red light resulting in a right angle collision (2 westbound/1 eastbound).

Location 8: US-93 & US-12 (Lolo Creek Road). A total of 18 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (10) and left turning conflicts between through vehicles (3). The rear end crashes are pretty evenly split between northbound and southbound lanes of travel. Two of the crashes at the intersection also involved vehicles running a red light resulting in a right angle collision (1 northbound/1 southbound). Also, there was a crash involving a vehicle making a left turn from US 12 to travel southbound on US 93, while performing the turn struck a pedestrian in the crosswalk.

Location 9: US-93 & Tyler Way. A total of eight crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (6) and left turning conflicts between through vehicles (2). The majority (4) of the rear end crashes involve vehicles traveling southbound.

Location 10: US-93 & Glacier Drive/Ridgeway Drive. A total of 19 crashes occurred at this intersection during the study period. The main observed crash trends are rear end crashes (9) and left turning conflicts between through vehicles (3). The majority (4) of the rear end crashes involve vehicles traveling northbound. Also, four crashes involved vehicles running a red light resulting in a right angle collision (3 southbound/1 westbound).

The Safety Engineering Section recommends installing retroreflective borders on the backplates for the signals. The project will include retroreflective backplate borders for all signals.

Major Design Features

a. Design Speed.

- i. Location 1: the design speed for north and south legs (multi-lane curbed urban principal arterial) is 50 mph; the posted speed is 35 mph.

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- ii. Locations 2-3 and 5-7: The design speed for north and south legs (multi-lane curbed urban principal arterial) is 50 mph; the posted speed is 25 mph.
- iii. Location 4: The design speed for all legs (curbed urban collector streets) is 30 mph; the posted speed is 25 mph.
- iv. Locations 8-10: The design speed for the north and south legs (multi-lane curbed urban principal arterial) is 50 mph; the posted speed is 35 mph. During either end of the school day, the posted speed changes to 25 mph at location 9. The design speed of the west leg of location 8 (2-lane curbed urban principal arterial) is 45 mph; the posted speed is 35 mph.

Note: Unless otherwise mentioned above, the minor (east/west) legs at each intersection are assumed to be urban collector streets with design and posted speeds of 30 mph.

- b. **Horizontal Alignment.** The horizontal alignment will not be changed for this project.
- c. **Vertical Alignment.** The vertical alignment will not be changed for this project.
- d. **Typical Sections and Surfacing.** Typical sections and surfacing will not change with this project. Minor pavement saw cutting and patching will be required in areas requiring pedestrian ramp work and new conduit trenching at Main St./Marcus St.
- e. **Geotechnical Considerations.** No Geotechnical involvement.
- f. **Hydraulics.** Hydraulic involvement will be limited to perpetuating existing drainage patterns. In the locations requiring minor curb and gutter and pedestrian ramp work, curb inlets will be avoided or perpetuated as necessary.
- g. **Bridges.** No bridge involvement.
- h. **Traffic.** The following table summarizes the decisions related to traffic components made at the PFR; this information is subject to change as the design progresses. All signal mast arm signing will be reviewed and replaced where appropriate.

| **Location | Movements w/ Exclusive Left Turn Lanes | Number of Flashing Yellow Arrows | Upgrade Cabinet to Type | Number of New Signal Heads | New Controller Type | *Movements requiring new detection | New Accessible Pedestrian Signals (APS) | New Countdown Ped Signals | Ped Ramp upgrades |
|------------------------------------|--|----------------------------------|-------------------------|----------------------------|---------------------|------------------------------------|---|---------------------------|-------------------|
| 1: US-93 & Golf Course Rd/Hope | NB, SB | 2 | P | 2 | M50 | NB, SB | yes | reuse existing | N/A |
| 2: US-93 & Ravalli St | NB, SB | 2 | P | 2 | M50 | NB, SB | yes | reuse existing | N/A |
| 3: US-93 & State St | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 4: Main Street (S-531) & Second St | none | N/A | N/A | N/A | M50 | N/A | yes | reuse existing | N/A |
| 5: US-93 & Main St/Marcus St | NB, SB, EB, WB | 4 | P | 4 | M50 | NB, SB, EB, WB | yes | reuse existing | all four quads |
| 6: US-93 & Pine St | NB | 1 | Stretch M | 1 | M50 | NB, SB | yes | reuse existing | N/A |
| 7: US-93 & Adirondac | NB, SB, EB | 3 | P | 3 | M50 | NB, SB | yes | reuse existing | N/A |
| 8: US-93 & US-12 (Lolo Creek Rd) | NB, SB | 2 | P | 2 | M50 | NB, SB | yes | yes | N/A |
| 9: US-93 & Tyler Wy | EB, SB | 2 | P | 2 | M50 | NB, SB | reuse existing | reuse existing | N/A |
| 10: US-93 & Glacier | NB, SB, EB | 2 | P | 2 | M50 | NB, SB | yes | yes | N/A |

*Movements shown are based on a preliminary assessment and are the minimum currently expected. During preliminary design a cost comparison between radar and video detection will be completed which also considers the cost of panoramic cameras. The cost of replacing existing below-ground detection with radar or video will also be considered where feasible.

**All signalized intersections will receive communication upgrades. All signals will receive retroreflective backplate borders.

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- i. **Pedestrian/Bicycle/ADA.**
 - i. ADA features for the signal upgrades include APS, Countdown Ped Signals and Ped Ramp upgrades as shown in the table above. New crosswalks and stop bars will be required at Main St/Marcus St (location 5) and may be repainted at other locations where paint condition warrants.
 - ii. US-93 and State Street intersection (location 3) will include an upgraded crosswalk, crosswalk signing and a new pedestrian refuge island.
- j. **Miscellaneous Features.** There are no miscellaneous features.
- k. **Context Sensitive Design Issues.** There are no known context sensitive design issues.

Other Projects

No other project will affect the delivery of this project.

Location Hydraulics Study Report

No Location Hydraulic Study Report is required.

Design Exceptions

No design exceptions are required.

Right-of-Way

New right-of-way is likely required at Main St./Marcus St. (location 5) to accommodate the new signal equipment. Other locations may require construction permits.

Access Control

There are no changes in access control.

Utilities/Railroads

A phase I SUE will be required at Main St. Marcus/St. (location 5); water lines and other underground utilities occupy the right-of-way at this location. Pole locations and conduit runs may be designed to avoid the existing utilities; however some utility involvement is expected.

Maintenance Items

No known special maintenance considerations apply to this project.

Intelligent Transportation Systems (ITS) Features

All signal locations will receive communications and detection upgrades as shown in the Table under the Traffic heading. Opticom emergency pre-emption will be perpetuated or upgraded as appropriate after updated emergency service usage information is obtained.

Survey

Survey will be required at State Street, Main/Marcus and the Southeast quadrant of Fairgrounds/Adirondac. A survey request will be transmitted during overrides.

Public Involvement

Level A public involvement is required. A news release will be sent to the local media which identifies an MDT point-of-contact.

Environmental Considerations

No significant environmental impacts or issues were identified. A Categorical Exclusion is anticipated for this project.

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Energy Savings/Eco-Friendly Considerations

There are no Energy Saving/Eco-Friendly considerations on this project.

Experimental Features

There are no Experimental Features on this project.

Traffic Control

A Transportation Management Plan (TMP) consisting of a Traffic Control Plan (TCP), a limited Transportation Operations (TO) component and a limited Public Information (PI) component is appropriate for this project. The final traffic control plan (TCP) will be discussed at the plan-in-hand with district personnel and Hamilton City staff in attendance. The TCP will include a sequencing special provision that will provide a safe route for the travelling public at all times. All signing and/or flagging operations will be in accordance with the Manual on Uniform Traffic Control Devices.

Project Management

Gabe Priebe will be the Project Design Engineer. This project does not require full FHWA oversight.

Preliminary Cost Estimate

The estimate below is based on information provided during nomination and will be refined as design progresses.

| | Estimated cost | Inflation (INF) (from PPMS) | TOTAL costs w/INF + IDC (from PPMS) |
|--------------------------------|-------------------------|--------------------------------|---|
| Signal Upgrades & Ped Crossing | \$287,273 | | |
| Mobilization (20%) | \$57,455 | | |
| Subtotal | \$344,728 | | |
| Contingencies (25%) | \$86,182 | | |
| Total CN | <u>\$430,910</u> | <u>\$61,347</u> | <u>\$553,441</u> |
| CE (10%) | <u>\$43,091</u> | <u>\$6,732</u> | <u>\$55,344</u> |
| TOTAL CN+CE | <u>\$474,001</u> | <u>\$68,079</u> | <u>\$608,785</u> |

Note: Inflation is calculated in PPMS to the letting date. If there is no letting date, the project is assumed to be inside the current TCP and is given a maximum of 5 years until letting. IDC is calculated at 11.08% as of FY 2013.

Ready Date

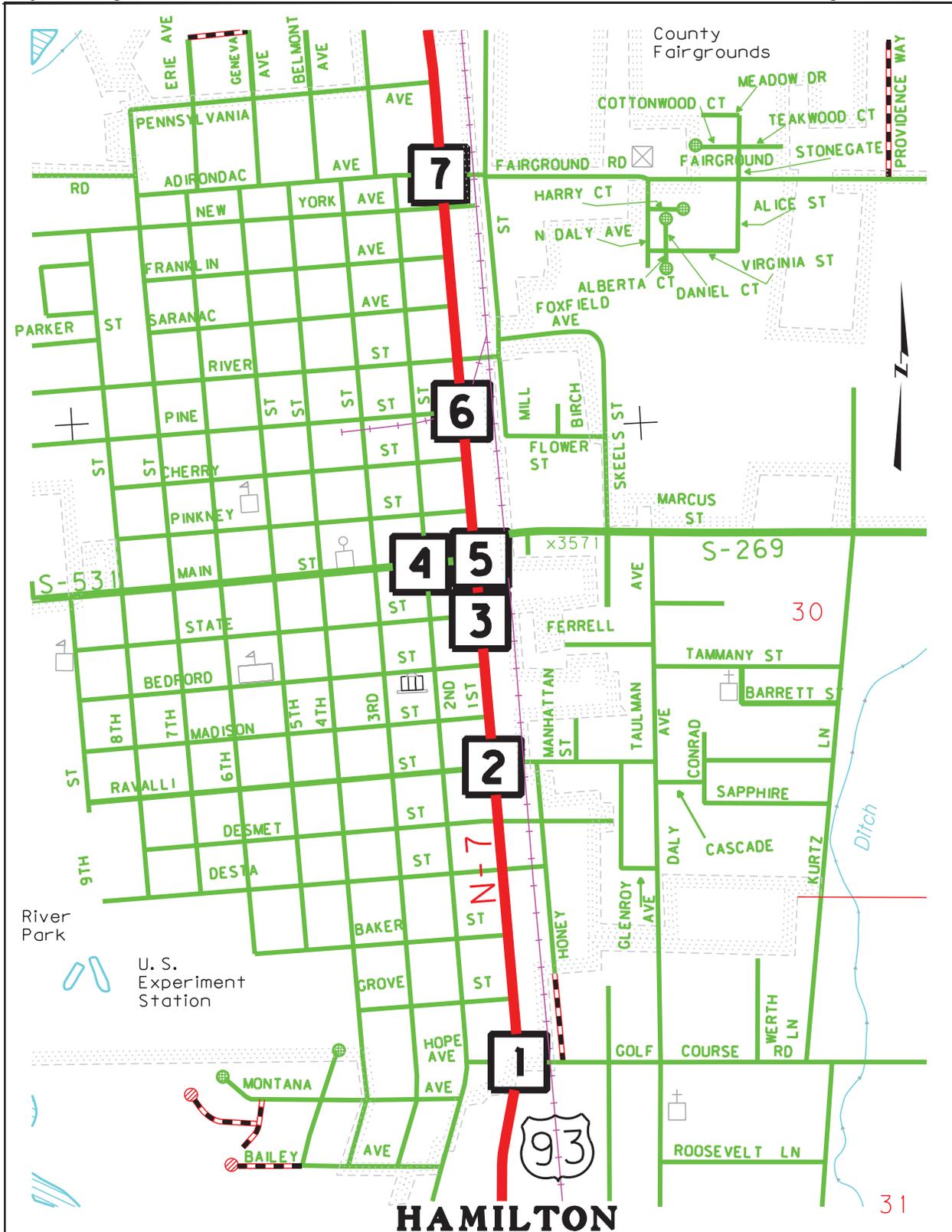
A ready date will be set once the project is sent for overrides.

Site Map

The project site map is attached.

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