Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Jim Lynch, Director
Brian Schweitzer, Governor

August 28, 2009

MASTER FILE COPY

Lloyd Rue
Federal Highway Administration (FHWA)
585 Shepard Way
Helena MT 59602

Subject: Statewide Programmatic Categorical Exclusion for Pavement Preservation Projects
Chinook-East & West
NH 1-7(41)398
Control Number: 6955000

Dear Lloyd Rue:

The MDT Environmental Services Bureau has reviewed the Preliminary Field Review/Scope of Work Report (PFR/SOW) for the subject project. Based on the completed Environmental Checklist for Pavement Preservation Projects (Checklist), we conclude that the Statewide Programmatic Categorical Exclusion for these types of projects would cover this project. For your information, I have attached a copy of the PFR/SOW (including the location map) and the signed Environmental Checklist. Environmental-related Special Provisions will be included in the contract plans.

If you have questions or concerns, please contact Eric Thunstrom at 444-7648. He will be pleased to assist you.

Sincerely,

Heidy Bruner

Heidy Bruner, P.E.
Environmental Services Bureau Engineering Section Supervisor

Attachments: Environmental Checklist, PFR/SOW Report

copies with attachment (Checklist only, unless noted):

Michael P. Johnson	Great Falls District Administrator
Tom Martin, P.E.	Environmental Services Bureau Chief
Heidy Bruner, P.E.	Environmental Services Bureau Engineering Section Supervisor
Eric Thunstrom	Environmental Services Bureau Project Development Engineer
Paul Ferry, P.E.	Highways Engineer
Christie McOmber, P.E.	Great Falls District Projects Engineer
Kevin Christensen, P.E.	Construction Engineer
Suzy Price	Contract Plans Bureau Chief
David Jensen	Fiscal Programming Section Supervisor
Montana Legislative Branch	Environmental Quality Council (w/ PFR/SOW also)
File	Environmental Services Bureau

HB:ejt: S:\PROJECTS\GREAT-FALLS\6000-6999\6955000\6955000ENCED001.DOC

Environmental Services Unit
Phone: (406) 444-7228
Fax: (406) 444-7245

Web Page: www.mdt.state.mt.us
Road Report: (800) 226-7623
TTY: (800) 335-7592

(FOR PROJECTS WITH NO RIGHT-OF-WAY INVOLVEMENT)

Applicant cannot be authorized to proceed with the proposed work until ALL of the conditions of the checklist have been satisfied.

ENVIRONMENTAL CHECKLIST FOR PAVEMENT PRESERVATION PROJECTS (CRACK SEALING, SEAL & COVER, THIN OVERLAYS, MILL & FILL, PLANT MIX LEVELING, MILL OGFC, MICRO SURFACING, FOG SEAL)

Project No.: NH 1-7(41)398 ID: UPN 6955000 Project Name: Chinook-East & West

Reference Post (Station) RP 398.3 to Reference Post (Station) RP 404.6

Applicants Name: Montana Department of Transportation Address: PO Box 201001, Helena, MT 59620-1001

Type of Proposed Pavement Preservation Activity: Work Type 181 Resurfacing – Asphalt (Thin Lift ≤ 0.20 ft.)

IMPACTS ON THE PHYSICAL ENVIRONMENT (TO BE COMPLETED BY APPLICANT)					
	Impact Questions	[Y/N] There are Potential Impacts; or Item Requires Documentation, Evaluation, Mitigation Measures, and/or (a) Permit(s).			
		Yes	No		Comment or List Documentation, Evaluation, Mitigation Measure, and/or (a) Permit(s) Required for Items 1 through 7.(Use attachments if necessary)
1.	Does the proposed action require work 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. (See listing on page 3)	☐	☒		
2.	Are there any recorded occurrences, and/or critical habitat for Federally-listed Threatened and Endangered Species in the vicinity of the proposed activity?	☐	☒		
3.	Does the proposed action have an impact on water quality? If answer is NO go to question 4.	☐	☒		
3a.	If the answer to number 3 is yes, is a Clean Water Act ' Section 402 permit required? (MPDES issued by MDEQ)	☐	☐	☐ N/A	
4.	Does the proposed project have impacts to wetlands or waters of the U.S.? If answer is NO go to question 5.	☐	☒		
4a.	If the answer to number 4 is yes, is a Clean Water Act ' 404 permit authorization required?	☐	☐	☐ N/A	
4b.	If the answer to number 3 or 4 is yes, is a Stream Protection Act ' 124SPA permit required? (Issued by MDFWP)	☐	☐	☐ N/A	
5.	Does the proposed project involve hazardous waste site[s]? (Superfund, spills, underground storage tanks, etc.)	☐	☒		
6.	Is the proposed activity on and/or within approximately 1.6 Km (1 mile) of an Indian Reservation? If answer is NO go to question 7.	☐	☒		
6a.	Are any Tribal water permits required?	☐	☒	☐ N/A	
7.	Is the proposed project in a "Class I Air Shed" (Some Indian Reservations)?	☐	☒	☐ N/A	

MASTER FILE COPY

8. Magnitude and significance of potential impacts: To be completed by applicant.

Checklist prepared by: Christie McOmber — District Project Engineer — August 14, 2009
Applicant — Title — Date

Approved by: Heidi Brunner — ENGINEERING SECTION SUPERVISOR — 8/28/09
Environmental Services — Title — Date
(when items 1, 2, 3, 3a, 4, 4a, 4b, 5, 6, 6a, or 7 are checked "Yes")

Project Number: UPN 6955000 ID: NH 1-7(41)398 Designation: Chinook-East & West

A. **The applicant shall complete the checklist indicating a "Yes" or "No" for each item, except number 8 which may require a narrative response.**

B. **When a "Yes" is indicated on any number of items 1 through 7, MDT must explain why and provide the appropriate documentation, evaluation, permit, and/or mitigation measures required to satisfy environmental concerns for the project. Use attachments if necessary.**

C. **If the applicant checks "Yes" for any one item, the checklist and MDT's mitigation proposal, documentation, evaluation and/or permit shall be submitted to MDT Environmental Services. Contact Number 444-7228.**

D. **When the applicant checks a "Yes" item, MDT cannot be authorized to proceed with the proposed work until Environmental Services reviews the information and signs the checklist.**

E. **MDT will obtain all necessary permits or authorizations from other entities with jurisdiction prior to beginning the Pavement Preservation Activity.**

Montana's Wild and/or Scenic Rivers system as published by the U.S. DEPARTMENT OF AGRICULTURE (USDA), or the U.S. DEPARTMENT OF THE INTERIOR (USDoI)

1. Middle Fork of the Flathead River (headwaters to South Fork of the Flathead River confluence)
2. North Fork of the Flathead River (Canadian Border to Middle Fork of the Flathead River confluence)
3. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir)
4. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge)

Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Memorandum

To: Distribution

From: Paul R. Ferry, P.E.
Highways Engineer

Date: August 17, 2009

Subject: NH 1-7(41)398
Chinook-East & West
UPN 6955000
Work Type 181 – Resurfacing – Asphalt (Thin Lift ≤ 0.20 ft.) (Scheduled Maintenance)

Attached is the Preliminary Field Review Report/Scope of Work Report, which was approved on August 17, 2009. We request that those on the distribution review this report and submit your concurrence within two weeks of the approval date.

Your comments and recommendations are also requested if you do not concur or concur subject to certain conditions. When all personnel on the distribution list have concurred, and the environmental documentation is approved, we will submit this report to the Chief Engineer for approval.

I recommend approval:
Approved _____ Date _____

Distribution:
Michael Johnson, District Administrator
Tom Martin, Environmental Services Bureau Chief
Duane Williams, Traffic and Safety Engineer
John Horton, Right-of-Way Bureau Chief
Paul Ferry, Highways Engineer
Kent Barnes, Bridge Engineer
Lynn Zanto, Rail, Transit, & Planning Division Administrator
Jake Goettle, Construction Engineering Services Bureau
Matt Strizich, Materials Engineer
Jon Swartz, Maintenance Administrator
Alan Woodmansey, Operations Engineer (full oversight)

cc:
Damian Krings, Road Design Engineer
Dave Jensen, Fiscal Programming Section Supervisor
Dustin Rouse, Road Design Area Engineer
County Commissioners, Blaine County, 420 Ohio, P.O. Box 278, Chinook, MT 59523-0278
William P. Oehmcke, Mayor of Chinook, 300 Ohio St., P.O. Box 1177, Chinook, MT 59523

e-copies:
Jim Walther, Preconstruction Engineer
Lesly Tribelhorn, Highways Design Engineer
Mark Goodman, Hydraulics Engineer
Kurt Marcoux, District Hydraulics Engineer
Tom Martin, Environmental Services Bureau Chief
Bonnie Steg, Env. Bureau Resources Section Supervisor
Paul Sturm, District Biologist
Eric Thunstrom, G.F. District Environmental Eng.
Danielle Bolan, Traffic Engineer
Ivan Ulberg, G.F. District Traffic Project Engineer
Pierre Jomini, Safety Management Engineer
Jon Watson, Pavement Engineer
Lee Grosch, District Geotechnical Manager
Dan Hill, Pavement Design Engineer
Jason Sorenson, Engineering Cost Analyst
Doug Wilmot, G.F. District Construction Engineer
Jerilee Weibel, District R/W Supervisor
James Combs, District Traffic Engineer
Stan Kuntz, G.F. District Materials Lab
Jake Goettle , Construction Engineering Services Bureau
Steve Prinzing, District Preconstruction Engineer
Matt Strizich, Materials Engineer
Michael MacDonald, Havre Maintenance Chief
Walt Scott, R/W Utilities Section Supervisor
James Mullins, R/W Design Manager
Jean Riley, Planner
Greg Pizzini, Acquisition Manager
Joe Zody, Access Management Section Manager
Marty Beatty, Engineering Information Services
Paul Grant, Public Involvement Officer
Gary Larson, Project Analysis Bureau Chief
Susan Sillick, Research Section Supervisor
Alice Flesch, ADA Coordinator
Mark Keeffe, Bicycle/Pedestrian Coordinator
Dennis Ghekiere, District Utility Agent
Christie McOmber, District Projects Engineer
Linda Cline, District R/W Design
Kevin McCray, Bridge Area Engineer, G.F. District

Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Memorandum

To: Paul R. Ferry
Highways Engineer

From: Christie W. McOmber, PE
District Projects Engineer CWM

Date: August 14, 2009

Subject: NH 1-7(41)398
Chinook-East & West
UPN 6955000
Work Type 181 – Resurfacing – Asphalt (Thin Lift ≤ 0.20 ft.) (Scheduled Maintenance)

Please approve the attached Preliminary Field Review Report/Scope of Work Report.

Approved *Signed by Lesly Tribelhorn for* Date *August 17, 2009*

Paul R. Ferry
Highways Engineer

The same report is also being distributed under a separate cover as a Scope of Work Report for comments and approval recommendations.

cc (w/attach.):
Damian Krings, Road Design Engineer
Dustin Rouse, Road Design Area Engineer
County Commissioners, Blaine County, 420 Ohio, P.O. Box 278, Chinook, MT 59523-0278

Introduction

This report was derived from information taken from the Preliminary Field Review conducted on July 22, 2009 with the following individuals in attendance:

Mick Johnson	District Administrator	Great Falls
Christie McOmber	District Projects Engineer	Great Falls
Steve Prinzing	District Preconstruction Engineer	Great Falls
Ed Shea	Pavement Analysis	Helena
Paul Sturm	District Biologist	Helena
Jeania Cereck	District Design Supervisor	Great Falls
Bryce Hove	District Designer	Great Falls

Proposed Scope of Work

The proposed project has been nominated to provide milling and an overlay. This project is anticipated to be let for the 2011 construction season, with the possibility of being let earlier. This uncertainty does not allow use of the millings as traffic gravel on an adjacent project. Most of the millings from this project will be hauled to a designated area provided by Blaine County. The remainder will be hauled to a stockpile site for MDT maintenance.

The majority of the guardrail was updated in 2003 with Federal Aid Project NH 0002 (394). Two bridges located on the east end of the project require guardrail upgrades with this project. ADA features will also be updated throughout Chinook.

The existing horizontal and vertical alignments will be used throughout the project.

Purpose and Need

Significant rutting is present along this project and the limited width does not allow for an overlay without milling. Completing a mill-fill on the driving lanes will correct for the rutting without reducing structure or disturbing slopes and the full width chip seal will address minor cracking on the shoulders.

Project Location and Limits

This project is located in Blaine County on US-2 (N-1) beginning at RP 398.3, just west of Chinook, and proceeding east for approximately 6.3 miles to RP 404.6, just east of Chinook. The ending milepost has been adjusted from the nominated post of 404.1. The Chinook City Limits are from RP 403.595 to 404.087. The functional classification of this route is a Principal Arterial – Non Interstate.

BNSF Railroad parallels US-2 and numerous bridges are located throughout this project. Red Rock Creek and several drainages cross US-2 within the project limits.

Begin: RP 398.3, Section 26 & 27, T. 33 N., R. 18 E., Blaine County
End: RP 404.6, Section 26, T. 33 N, R. 19 E., Blaine County
Length: 6.3 miles

The following table identifies original as-built project location and year built:

Original As-Built Project ID	From		To		Year Built
	Station	RP	Station	RP	
FAP 66	237+13.1	398.277	508+45.6	403.505	1938
F 66(7)403	508+45.6	403.505	513+25.8	403.595	1972
F 221(4)	0+04.1	403.595	26+59.8	404.090	1972
FAP 23 3	0+00.0	404.090	28+15.2	404.601	1944

The following table identifies improvement as-built project location and year built:

Improvement As-Built Project ID	From RP	To RP	Year Built
RTF 1-7(27)391 *	398.277	403.505	1999
FR 1-7(1)404 *	404.090	404.562	1982
SFCN 1-7(29)405	404.562	404.601	2000

* As-built projects were not found.

Other projects in the area include NH 1-7(39)391, Chinook-West, a mill / fill project west of Chinook from RP 393.3 to 397.2. Also, NH 1-7(37)404, Chinook-Dodson, a crack sealing project beginning east of Chinook from RP 404.6 to 446.3, will connect to this project. The three projects will be tied for letting.

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. The plans package will include a Transportation Management Plan (TMP) consisting of a Traffic Control Plan (TCP). These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

The P.T.W. traverses level terrain and is used primarily for farm and ranch land. The majority of the project passes through rural areas, but also includes the City of Chinook.

Existing Surfacing

The FAP 66 as-built project shows that the existing surfacing from RP 398.28 to 403.51 consists of a minimum of 6 ½" loose subbase material, 5 ½" loose Grade "A" top course gravel, and 2 ½" compacted road mix oiled gravel.

The FAP 66(7)403 as-built project shows that the existing surfacing from RP 403.51 to 403.60 consists of 0.35' sand surface – Grade 4, 0.40' compacted crushed base course – Type "A" Grade 5, 0.80' compacted plant mix base – Type 1, 0.25' compacted plant mix base – Type 1, and 0.25' compacted plant mix bituminous surfacing – Type 3.

The F 221(4) as-built project shows that the existing surfacing from RP 403.60 to 404.09 consists of 0.35' sand surfacing – Grade 4, 0.40' compacted crushed base course – Type "A" Grade 5,

0.80' compacted plant mix base – Type 1, 0.25' compacted plant mix base – Type 1, and 0.25' compacted plant mix bituminous surfacing – Type 3.

Pavement Analysis indicated that the RTF 1-7(27)391 as-built project added a 0.20' overlay from RP 398.277 to 403.505.

Pavement Analysis specified that the FR 1-7(1)404 as-built project added a 0.25' overlay from RP 404.090 to 404.601.

The SFCN 1-7(29)405 as-built project added a 0.15' (45 mm) overlay from RP 404.562 to 404.601.

The following information was taken from the preconstruction soil survey data submitted by the Area Lab Supervisor on July 17, 2009.

The surfacing consists of plant mix that ranges from 0.53' to 1.34'. Pavement width varies from 27.0' to 45.2'. Rutting varies from 0.03' (0.36") to 0.05' (0.6") on the inside wheel path and 0.025' (0.3") to 0.06' (0.72") on the outside wheel path.

Horizontal Alignment
The majority of the existing horizontal alignment meets current design standards.

There are a couple of curves throughout the project limits. The minimum radius within the project limits is 5,730 feet, which meets the Geometric Design Criteria for Rural Principal Arterials of 1,810 feet for level terrain and 711 feet for Urban Principal Arterials.

According to as-builts, through the City of Chinook, four angle points within the project limits exist as follows:

$\Delta = 0°16'00"$ RT.
$\Delta = 2°18'47"$ LT.
$\Delta = 2°25'47"$ RT.
$\Delta = 2°18'$ LT.

The majority of these deflection angles are larger than the desired 1° angle for urban areas; however, due to the limited scope of this project, these deflection angles will not be adjusted.

Vertical Alignment
The existing vertical alignment meets current design standards.

The maximum grade of 0.42% meets the Geometric Design Criteria for Rural Principal Arterials of 3% for level terrain and 6% for Urban Principal Arterials. Passing sight distance and stopping sight distance will not be addressed with this pavement preservation project.

PVMS Data
The survey year 2008 and run year 2009 indices for the roadway are listed in the PVMS database:

RP 398.28 to RP 403.51
Recommended Treatment for:
2009 – AC Minor Rehab_Rut
2011 – AC Minor Rehab_Rut

PVMS INDICES	
Ride	75.9 (Fair)
Rut	46.1 (Fair)
Alligator Cracking	100.0 (Good)
Miscellaneous Cracking	96.7 (Good)

RP 403.51 to RP 404.10
Recommended Treatment for:
2009 – AC Minor Rehab_Rut
2011 – AD Minor Rehab_Rut

PVMS INDICES	
Ride	65.2 (Fair)
Rut	44.8 (Fair)
Alligator Cracking	90.0 (Good)
Miscellaneous Cracking	74.9 (Fair)

RP 404.10 to RP 404.60
Recommended Treatment for:
2009 – C_AC Crack Seal & Cover
2011 – C_AC Crack Seal & Cover

PVMS INDICES	
Ride	75.8 (Fair)
Rut	58.5 (Fair)
Alligator Cracking	94.5 (Good)
Miscellaneous Cracking	86.3 (Good)

The following table identifies structures built within the project limits:

Structure Description	Location (RP)	Deck Width (feet)	Length (feet)	Year Built	Structure Status
Irrigation Canal	400.60	29’	21’	1938	Wood
Drainage	401.79	29’	39’	1938	Wood
Red Rock Creek	402.26	29’	59’	1938	Wood
Drainage	402.70	29’	39’	1938	Wood
Red Rock Creek Overflow	404.08	34.7’	60’	1971	Wood
Drainage	404.34	33.3’	39’	1980	Wood
Lodge Creek	404.57	28’	94’	1942	Concrete

Traffic Data

The following engineering study evaluation from RP 398.3 to 404.1 was determined using weigh-in-motion (WIM) sites and reflects a five-year average:

2009 (Current) AADT = 2,700
2010 (Letting Year) AADT = 2,720
2030 (Design Year) AADT = 3,320
DHV = 380
Percent of Trucks = 11.5%
ESAL = 152
Basis of Projected Traffic Growth = 1.0%

Accident Analysis

The following engineering study evaluation from RP 398.3 to 404.1 was taken from January 1, 1999 to December 31, 2008:

Total Recorded Crashes = 56

Truck Crashes = 5

The types of two vehicle crashes included: four rear ends, one sideswipe (in the same direction), one sideswipe (in the opposite direction), three right angle collisions, one right turn collision (in the opposite direction), along with other and unknown types of collisions.

Traffic variations from average occurrence were as follows:

- 85.7% occurred during dry roadway conditions vs. 68.2% statewide average for rural NINHS routes.
- 50.0% dark – not lighted conditions vs. 35.5% statewide average for rural NINHS routes.

	N-P Routes through Urban Areas	Study Area
All Vehicle Crash Rate	1.07	0.95
All Vehicle Severity Index	2.20	2.14
All Vehicle Severity Rate	2.36	2.03
Truck Crash Rate	0.92	0.83
Truck Severity Index	2.29	3.20
Truck Severity Rate	2.11	2.66

During the 1999-2008 period, there have been no recorded safety projects nor crash clusters along this section of roadway.

Remarks supplied by the Safety Management include:

- Due to the low number of two-vehicle collisions within the City of Chinook, the whole corridor was considered rural.
- The main trends of crashes have been single vehicle off-the-road crashes and wild animal-vehicle collisions.
- 22 crashes were single vehicle off-the-road crashes with 9 that overturned
- Of these 22 crashes, 8 hit the guardrail or bridge rail.

- 19 crashes cited wild animal as the first or most harmful event
- Two fatal crashes occurred in this section of roadway.

Recommendations supplied by the Safety Management include:

- Review the guardrail ends by RP 402.7-402.8 as guardrail end treatments were hit three times in 2005-2006.
  - *The majority of the guardrail was updated in 2003 with Federal Aid Project NH 0002 (394). The structure located at RP 402.7 appears to have adequate guardrail in good condition. Two bridges located at RP 404.34 and 404.57, on the east end of the project, require guardrail upgrades with this project.*
- Fencing for domestic animals should be perpetuated or pursued per MDT fencing policy.
  - *Because this project is located in an EIS corridor for future reconstruction, fencing issues will be addressed in future projects.*
- Check if the pipe by RP 399.45 can be covered with 1:10 side slopes.
  - *Due to no crash clusters being defined by the analysis and the limited scope of this project, correcting clear zones is unlikely to be cost effective for this project.*
- Remove trees in the clear zone.
  - *Havre maintenance will be requested to review the clear zone and remove any unnecessary obstructions.*

Major Design Features

Design Speed

The design speed of 70 mph for the rural area was taken from NH 1-7(35)398, which was an adjacent bridge replacement project. The posted speed limit is 70 mph daytime / 65 mph nighttime.

The design speed of 45 mph is the Geometric Design Criteria for Urban Principal Arterials. The posted speed limit is 30 mph.

Horizontal Alignment

The existing horizontal alignment is adequate for a preventative maintenance treatment.

Vertical Alignment

The existing vertical alignment is satisfactory for a preventative maintenance project.

Typical Sections and Surfacing

The minimum roadway width for a rural principal arterial is 28 feet. The existing surface widths according to the road log are as follows:

RP to	RP	Width (ft.)
398.277403.505	28.0	
403.505404.090	47.0	
404.090404.601	28.0	

Slight variations were encountered in the field by survey. Measurements at RP 399.0, 400.0, 401.0, 402.0, 403.0, and 404.0 showed top widths of 27.0 ft., 28.0 ft., 27.0 ft., 27.3 ft., 27.8 ft., and 45.2 ft. respectively. These measurements did not incorporate the usable widths available for the overlay. Because this project is located in an EIS corridor for future reconstruction, no

widening will be used to correct the narrow roadway and only the driving lanes (24.0') will be mill / filled.

There will be two 12' travel lanes throughout the entire project. From RP 403.5 to 404.1, the additional roadway width provides wide shoulders through the town of Chinook. Intersections in town will be milled full width back to the curb radius to correct for rutting. A few deeper sections of mill/fill will be called out for short segments (5'-10') where underground features appear to be settling. Existing curb and gutter accompanies this part of the roadway. Existing sidewalks run approximately from RP 403.6 to 404.1 on the south side of this route.

Milling existing asphalt in the driving lanes 0.20' followed by an overlay of the same thickness will be used on this project. The use of RAP in the top lift is not recommended and the project scope does not allow for disturbance or widening. There are few state maintained routes and little maintenance needs for millings in the area. Therefore, most of the millings will be given to the county for use on adjacent roads. Blaine County is interested in the millings from this project and will provide a designated area for their use. The remainder of the millings will be used for guardrail widening and stockpiled for MDT maintenance needs.

Seal and cover full width, followed by new striping and delineation, will complete the treatment for this roadway.

Milling only the driving lanes (24.0') at the same depth (0.20') over the bridges will take place in order to avoid guardrail plates that attach to the bridge decks.

Geotechnical Considerations
Due to the limited scope of this project, geotechnical recommendations are not necessary.

Hydraulics
Because Chinook has vertical curves running throughout the town with adequate storm drains located in the sags, hydraulic considerations are not anticipated for this project.

Utilities
A storm sewer runs along centerline through Chinook. Manholes to access this facility have been paved over in previous overlays. MDT maintenance will locate these manholes and adjust them as necessary prior to construction activities for this project.

Sanitary sewer with manholes also runs along this project through Chinook. Natural gas and water cross this route in various locations and there are water valves present. Adjustments to manholes and water and gas valves will be completed by the city prior to construction activities for this project.

Bridges
The table located in the physical characteristics section provides the location of each structure within the limits of this project. Timber structures will have driving lanes milled followed by an overlay of the same thickness.

The majority of the guardrail was updated in 2003 with Federal Aid Project NH 0002 (394). The drainage structure at RP 403.34 needs a T-101 guardrail retrofit, including drilled shaft anchor posts. The current length of rail is shorter than the calculated length of need. It is not required to address length of need on an overlay project; however, since this is the only known section in the

project area that is non-standard, we will extend the approach sections to meet the length of need. Some millings may be used for guardrail widening on the shoulder. Area under the new rail will be widened and paved with the project.

The concrete bridge at RP 404.57 needs new curb tapers. The bridge approach sections are immediately adjacent to approaches and there is not a standard rail application that will fit without restricting access into the approaches, so they will remain as-is.

Traffic

New pavement markings will be required throughout this project. A cross walk at Indiana Street will also be restriped. No new signing will be necessary; however, the delineation is in need of replacement and will be included in this project with alternating offsets. Due to the limited shoulder width accompanied by bicycle travel through this area, rumble strips are not proposed for this project.

Pedestrian/Bicycle/ADA

Existing sidewalks and curb and gutter appear to be in usable condition, so these facilities will not be altered with this project. New ADA features at the intersections are necessary through the town of Chinook where existing sidewalk is present. Curb ramps and truncated domes will be included with these ADA features. A laydown curb section for the crosswalk at Indiana Street on the northeast corner will also be included.

Context Sensitive Design Issues

No context sensitive design issues will be addressed with this project; however, there is a historical monument located at RP 403, just west of Chinook in an equipment dealership's lot. This historical monument describes the Battle of Bears Paw. The wide shoulder through this section of the project acts as the pullout for the monument; therefore, seal and cover full width through this section includes seal and cover to serve this monument.

Other Projects

Future projects in the area include NH 1-7(39)391, Chinook-West, a mill / fill project ending west of Chinook from RP 393.3 to 397.2. Also, NH 1-7(37)404, Chinook-Dodson, a crack sealing project beginning east of Chinook from RP 404.6 to 446.3, will tie into this project. The three projects will be tied for letting.

There should be no major effects on this project due to the adjacent projects.

Design Exceptions

No design exceptions are anticipated for this project; although, the deflection angles through Chinook do need to be noted for future reconstruction projects. Deflection angles of 1º or less are desirable through urban areas and the existing deflection angles according to as-built projects exceed these limitations.

Right-of-Way

No new right-of-way will be required for this project.

Right-of-way was purchased under projects FAP 66 and F-221 (3). On the south side of the road it varies from 90' to 300'. On the north side, the right-of-way line is also the south right-of-way line of the railroad, which is about 75' from the centerline of the tracks. Through Chinook, right-of-way is 28' to 43' on the south side and 75' to 110' from the centerline of the mainline track on

the north.

Cold-In-Place Recycle
Cold-In-Place Recycle (CIR) does not appear to be a viable construction activity for this project. Uniform surfacing along with ample pavement thickness, after the milled section is removed, for equipment travel is needed in order for this option to be used. AADT is fairly high throughout this project. Because CIR typically involves an overlay, and due to reconstruction projects planned in this area for the near future, the cost associated with CIR is too expensive and will not be used.

Access Control
The existing access control falls under regulated access for the route included in this project. There will be no modifications to the existing access control.

Utilities/Railroads
Utilities
Due to the nature of this project, minimal utility involvement is anticipated; however, guardrail upgrades on the structure located at RP 404.57 will require utility locates. Some manholes and water and gas valves through Chinook appear to have been paved over and will be adjusted by maintenance or the city prior to construction activities for this project.

Railroads
BNSF railroad runs parallel to the roadway throughout the project; however, no involvement with the railroad is anticipated. The railroad is more than 50 feet away from the roadway throughout this project.

Intelligent Transportation Systems (ITS) Features
There are no ITS solutions that will be designed within this project.

Survey
No additional survey is requested nor needed for the project at this time.

Public Involvement
Due to the limited scope of the project, a level "A" public involvement plan is appropriate. The plan will include a news release, which will explain the project and include a department point of contact.

Environmental Considerations
This project meets the criteria for the Statewide Programmatic Categorical Exclusion. No apparent significant environmental concerns or issues were identified.

Energy Savings/Eco-Friendly Considerations
Due to the nature of this project, extending the useful life of the pavement is aimed directly at minimizing the footprint on the environment. This is accomplished by postponing reconstruction projects through routine maintenance.

Traffic Control
Because this is a fairly rapid moving project, shifting traffic to one lane of travel for short periods of time will be used to maintain working space.

A Transportation Management Plan (TMP) consisting of a Traffic Control Plan (TCP) is appropriate for this project.

Traffic issues that will require special consideration are as follows:

- Swift setup and removal of traffic signing in accordance with the Manual on Uniform Traffic Control Devices will be necessary, as this is a heavily used route during the summer months for tourists.
- Extra caution should be used by the workers to maintain a safe working area as far away from the traveling lanes as possible.

Project Management

The Great Falls District will be responsible for the plans. Christie W. McOmber, P.E., is the Great Falls District Projects Engineer.

This project is not under full FHWA oversight.

Preliminary Cost Estimate

The project was programmed at $1,800,000.

A preliminary estimate based on the adjusted mileposts of 398.3 to 404.6 and finished top widths provide the following costs:

Cost Estimate

			w/o IDC	w/ IDC 17.48%
Road work			$1,233,769	
Traffic Control			$120,000	
Subtotal			**$1,353,769**	
Mobilization		12%	$162,452	
Subtotal			**$1,516,221**	
Contingencies		25%	$379,055	
Subtotal			**$1,895,277**	
Inflation	2.0 years @	3.5%	$134,991	
Total CN			**$2,030,268**	**$2,385,158**
CE		10%	**$203,027**	**$238,516**
Total CN + CE			**$2,233,294**	**$2,623,674**

The construction cost for this project is approximately $322,265 per mile.

Ready Date

The ready date is August 1, 2010, with an anticipated letting date of November 1, 2010.

Site Map

The project site map is attached.

MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT NH 1-7(41)398
MILL, OVERLAY, AND SEAL & COVER
CHINOOK–EAST & WEST
BLAINE COUNTY

LENGTH 6.3 miles