serving you with pride

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

Jim Lynch, Director
Brian Schweitzer, Governor

August 26, 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-West
NH 1-7(39)391
Control Number: 6956000

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\6956000\6956000ENCED001.DOC

(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(39)391 ID: UPN 6956000 Project Name: Chinook-West

Reference Post (Station) RP 393.3 to Reference Post (Station) RP 397.2

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

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

Checklist prepared by: Christie McOmber District Project Engineer August 10, 2009

Applicant Title Date

Approved by: [signature] ENG SECTION SUPERVISOR 8/26/09

Environmental Services Title Date

(when items 1, 2, 3, 3a, 4, 4a, 4b, 5, 6, 6a, or 7 are checked "Yes")

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

Memorandum

To: Distribution

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

Date: August 11, 2009

Subject: NH 1-7(39)391
Chinook-West
UPN 6956000
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 11, 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

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 10, 2009

Subject: NH 1-7(39)391
Chinook-West
UPN 6956000
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 11, 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. Millings from this project will be hauled to a designated area provided by Blaine County. Guardrail was updated in 2003 with Federal Aid Project NH 0002 (394).

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

Purpose and Need

Severely distressed pavement exists throughout this portion of US-2. Significant rutting is present, and leveling will be required if only an overlay is completed.

Project Location and Limits

This project is located in Blaine County on US-2 (N-1) beginning at RP 393.3, east of Havre, and proceeding east for approximately 3.9 miles to RP 397.2, west of Chinook. The functional classification of this route is a Principal Arterial – Non Interstate.

BNSF Railroad is close to US-2 in a few places. Numerous bridges are located throughout this project. Clear Creek and several drainages cross US-2 within the limits of this project.

Begin: RP 393.3, Section 36, T. 33 N, R. 17 E., Blaine County
End: RP 397.2, Section 28, T. 33 N., R. 18 E., Blaine County
Length: 3.9 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 3	543+27.0	393.334	570+36.9	393.855	1946
FAP 66	0+00.0	393.855	226+84.8	397.198	1938

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 *	393.334	397.122	1999
NH 1-7(35)398	397.122	397.198	2005

* As-built projects were not found.

Other projects in the area include NH 1-6(58)384, Havre-East, a reconstruct project east of Havre from RP 386.38 to 393.33, which will tie into this project.

NH 1-7(41)398, Chinook-East & West, a mill/fill project beginning west of Chinook from RP 398.3 to 404.6, NH 1-7(37)404, Chinook-Dodson, a crack sealing project beginning east of Chinook from RP 404.6 to 446.3, and this project 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 with a few residential areas. Primarily, the project passes through rural areas.

Existing Surfacing
The FAP 66 3 as-built project shows that the existing surfacing from RP 393.334 to 393.855 consists of 12” compacted selected material, 6” compacted base course, and 2” compacted Grade “A” top course.

The FAP 66 as-built project shows that the existing surfacing from RP 393.855 to 397.198 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.

Pavement Analysis indicated that the RTF 1-7(27)391 as-built project added a 0.20’ overlay from RP 393.334 to 397.122.

The NH 1-7(35)398 as-built reconstruct project shows that the existing surfacing from RP 397.122 to 397.198 consists of 2.00’ (600 mm) subgrade cap, 1.60’ (480 mm) crushed aggregate course, and 0.40’ (125 mm) plant mix bituminous surfacing (2 lifts).

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 0.42’ to 0.68’. Pavement width varies from 27.8’ to 42.0’. Rutting varies from 0.00’ to 0.04’ (0.48”) on the inside wheel path and 0.00’ to 0.07’ (0.84”) on the outside wheel path.

Horizontal Alignment
The existing horizontal alignment meets current design standards for a 70 mph design speed.

There are a couple of curves within the project limits. The minimum radius within the project limits is 3,820 feet, which meets the Geometric Design Criteria for Rural Principal Arterials of 1,810 feet for level terrain.

Vertical Alignment
The existing vertical alignment meets current design standards.

The maximum grade of 1.1% meets the Geometric Design Criteria for Rural Principal Arterials of 3% for level terrain. 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 393.33 to RP 393.86
Recommended Treatment for:
2009 – C_AC Crack Seal & Cover
2011 – AC Minor Rehab_Rut

PVMS INDICES	
Ride	80.2 (Good)
Rut	51.2 (Fair)
Alligator Cracking	98.8 (Good)
Miscellaneous Cracking	99.4(Good)

RP 393.86 to RP 397.20
Recommended Treatment for:
2009 – C_AC Crack Seal & Cover
2011 – AC Minor Rehab_Rut

PVMS INDICES	
Ride	80.5 (Good)
Rut	51.9 (Fair)
Alligator Cracking	99.5 (Good)
Miscellaneous Cracking	98.7 (Good)

The following table identifies structures built within the project limits:

Structure Description	Location (RP)	Deck Width (feet)	Length (feet)	Year Built	Structure Status
Stockpass, Drainage	393.45	33’	21’	1946	Wood
Clear Creek	395.96	29’	59’	1938	Wood
Drainage	397.08	29’	58’	1938	Wood

Traffic Data

The following engineering study evaluation from RP 391.0 to 397.2 was determined using weigh-in-motion (WIM) sites and reflects a five-year average:

2009 (Current) AADT = 2,710
2010 (Letting Year) AADT = 2,730
2030 (Design Year) AADT = 3,340
DHV = 380
Percent of Trucks = 11.5%
ESAL = 153
Basis of Projected Traffic Growth = 1.0%

Accident Analysis

The following engineering study evaluation from RP 391.0 to 397.2 was taken from January 1, 1999 to December 31, 2008:

Total Recorded Crashes = 64

Truck Crashes = 8

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

Traffic variations from average occurrence were as follows:

- 50.0% dark – not lighted conditions vs. 35.5% statewide average for NINHS routes.

	N-P Routes through Urban Areas	Study Area
Crash Rate	1.07	1.02
Severity Index	2.20	2.00
Severity Rate	2.36	2.04

There have been no crash clusters or safety projects within this section during the study period.

Remarks supplied by the Safety Management include:

- 51 crashes were single vehicle crashes
- 26 crashes cited wild animal as the first or most harmful event
- 8 crashes cited overturn as the first or most harmful event
- 7 rear end collisions
- Under contributing circumstances, alcohol was cited in four crashes and falling asleep in three crashes

Recommendations supplied by the Safety Management include:

- Upgrade signing, delineation, and pavement markings.
  - *Signing will not be upgraded with this pavement preservation project as it will be addressed in a future reconstruct project.*
  - *Delineation and pavement markings will be upgraded through this project.*
- Check clear zones.

- *Maintenance will be requested to check the clear zones and remove any unnecessary obstructions.*
- Upgrade mail box supports.
  - *Due to the limited scope of this project, mail box supports will not be updated.*
- Verify need for fencing per MDT fencing policy.
  - *Because this project is located in an EIS corridor for future reconstruction, fencing issues will be addressed in future projects.*

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 a bridge replacement project located within the limits of this project. The posted speed limit is 70 mph daytime / 65 mph nighttime.

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.)
393.334	393.855	30.0
393.855	397.122	28.0
397.122	397.198	29.0

Slight variations were encountered in the field by survey. A measurement at RP 393.5 showed a 29.0 ft. top width. Measurements between RP 394.0 and 396.0 varied from 27.8 ft. to 28.2 ft. A measurement at RP 398.0 showed a 28.6 ft. top width. There is adequate useable width on the gravel shoulder to maintain a 28' minimum top after milling.

The new designed widths will be as follows:

RP to	RP	Bottom Width (ft.)	FTW (ft.)
393.334	393.855	31.4	30.0
393.855	397.122	29.4	28.0
397.122	397.198	30.4	29.0

There will be two 12' travel lanes throughout the entire project.

Milling existing asphalt 0.15' full width 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 also no state maintained routes or maintenance needs for millings in the area. Therefore, 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. Seal and cover, followed by new striping and delineation,

will complete the treatment for this roadway.

Only driving lanes (24.0') at the same depth (0.15') will be milled over the bridges 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
Due to the nature of this project, hydraulic considerations are not anticipated.

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.

All guardrail was updated in 2003 with Federal Aid Project NH 0002 (394).

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

Pedestrian/Bicycle/ADA
Due to the limited scope of this project, no new ADA features or impacts to existing features are anticipated.

Context Sensitive Design Issues
No context sensitive design issues will be addressed with this project.

Other Projects
Future projects in the area include NH 1-6(58)384, Havre-East, a reconstruct project east of Havre from RP 386.38 to 393.33, which will tie into this project.

NH 1-7(41)398, Chinook-East & West, a mill/fill project beginning west of Chinook from RP 398.3 to 404.6, NH 1-7(37)404, Chinook-Dodson, a crack sealing project beginning east of Chinook from RP 404.6 to 446.3, and this project will be tied for letting.

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

Design Exceptions
No design exceptions are anticipated for this project.

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

The majority of the right-of-way was purchased under projects FAP 66(3) and FAP 66. On the south side of the highway, right-of-way is 70' to 220'. 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. Some additional right-of-way was acquired around the Milk River bridge with project NH 1-7(35)398.

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 costs associated with CIR are unreasonable.

Access Control
The existing access control falls under limited 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, no utility involvement is anticipated.

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 $1,550,000.

A preliminary estimate based on RP and finished top widths provide the following costs:

Cost Estimate (Mill / Fill Section)

				w/o IDC	w/ IDC 17.48%
Road work				$701,117	
Traffic Control				$100,000	
Subtotal				**$801,117**	
Mobilization			12%	$96,134	
Subtotal				**$897,251**	
Contingencies			25%	$224,313	
Subtotal				**$1,121,564**	
Inflation	2.0	years @	3.5%	$79,883	
Total CN				**$1,201,447**	**$1,411,460**
CE			10%	**$120,145**	**$141,146**
Total CN + CE				**$1,321,592**	**$1,552,606**

The construction cost for this project is approximately $308,063 per mile.

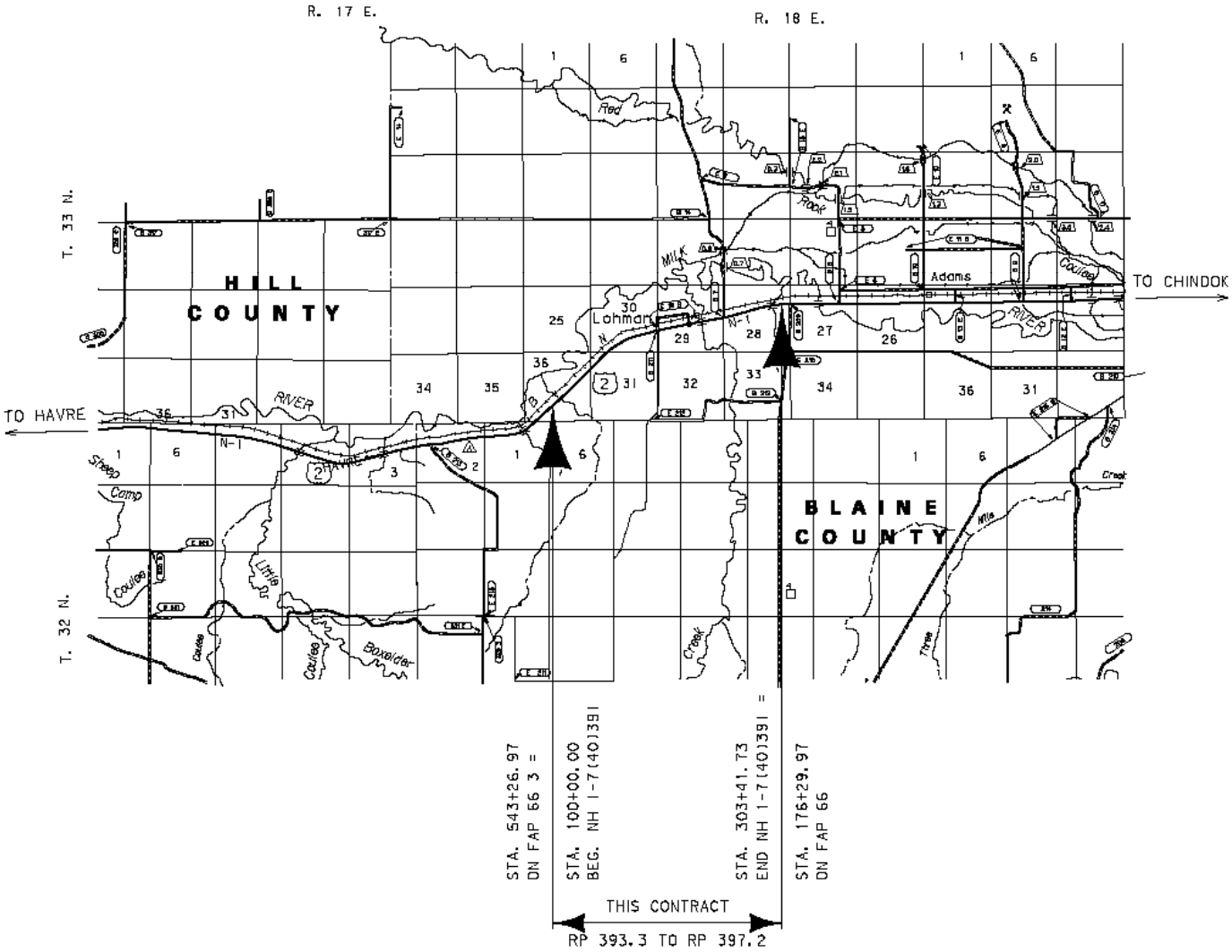
Ready Date

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(39)391
MILL, OVERLAY, AND SEAL & COVER
CHINOOK-WEST
BLAINE COUNTY

LENGTH 3.9 miles