



November 26, 2013

Montana Department of Transportation

2701 Prospect Avenue  
PO Box 201001  
Helena MT 59620-1001

Michael T. Tooley, Director  
Steve Bullock, Governor

Brian Hasselbach  
Federal Highway Administration (FHWA)  
585 Shepard Way, Suite 2  
Helena, Montana 59601

Subject: Statewide Programmatic Categorical Exclusion for Pavement Preservation Project  
Flathead Area Pave Pres  
STPS STWD (229)  
Control Number: 8147000

Dear Brian Hasselbach:

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 are not anticipated at this time.

If you have questions or concerns, please contact Susan Kilcrease at 523.5842 or me at 444.7203. We will be pleased to assist you.

Sincerely,

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

Attachments: PFR/SOW Report, Environmental Checklist

e-copies w/checklist encl.:  
Ed Toavs, Missoula District Administrator  
Tom Martin, P.E., Environmental Service Bureau Chief  
Heidi Bruner, P.E., ESB Engineering Section Supervisor  
Paul Ferry, P.E., Highways Engineer  
Kevin Christensen, P.E., Construction Engineer  
Suzy Price, Contract Plans Bureau Chief  
Lisa Hurley, Fiscal Programming Section Supervisor  
Tom Erving, Fiscal Programming Section  
Susan Kilcrease, Missoula District Project Development Engineer  
Bill Squires, P.E., Project Design Manager  
Montana Legislative Branch Environmental Quality Council  
File  
HB:smk:

(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 Number: STWD(229) Control No 8147000 Project Name: Flathead Area Pave Pres

Reference Post (Station): Various,-see PFR/SOW To Reference Post (Station): Various,-see PFR/SOW

Applicant's Name: Montana Department of Transportation Address: PO Box 201001; Helena, MT 59620-1001

Type of Proposed Pavement Preservation Activity: Seal and cover

Table with 3 columns: Impact Questions, Yes, No, Comment. Contains 14 rows of questions regarding environmental impacts like wetlands, water quality, and air quality.

Checklist prepared by:

William Squires, PE

Applicant

Project Design Engineer

Title

11/13/2013

Date

Approved by:

Bureau Chief

Environmental Services

Title

Date

(When any of the above questions are checked "Yes")

The Applicant is **not** authorized to proceed with the proposed work until the checklist has been reviewed and approved, as necessary, and any requested conditions of approval have been incorporated.

- A. Complete the checklist items 1 through 7, indicating "Yes" or "No" for each item. Include comments, explanations, information sources, and a description of the magnitude/importance of potential impacts in the right hand column. Attach additional and supporting information as needed. The checklist preparer, by signing, certifies the accuracy of the information provided.
- B. When "Yes" is indicated on any item, the checklist preparer 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. **Any proposed mitigation measures will become a condition of approval.**
- 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 Bureau. Electronic format is preferred. 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 Bureau 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.
- F. The links above are provided as a starting point for potential sources of information for completing the checklist. The Applicant is encouraged to consult Environmental Services Bureau and/or other information sources.



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

**Memorandum**

To: Paul Ferry, P.E.  
Highways Engineer

From: Damian Krings, P.E. *Initialed by DMK*  
Road Design Engineer

Date: 11/13/13

Subject: STPS STWD(229)  
Flathead Area Pave Pres  
UPN 8147000  
Work Type 183: Resurfacing – Seal and Cover

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

Approved Paul R. Ferry Date 11/18/13  
Paul R. Ferry, P.E.  
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

## **Preliminary Field Review/Scope of Work Report**

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

Page 1 of 10

### **Introduction**

An on-site field review was conducted on September 24, 2013, with the following people in attendance:

William Squires, PE, Missoula Area Engineer, Road Design - Helena  
Jim Hansen, Designer, Missoula Crew, Road Design – Helena

The review team met briefly with Gary Engman, Kalispell Maintenance Chief, in the Kalispell office to get his input on the project.

### **Proposed Scope of Work**

Full-width seal and cover (Type I) is proposed for all roadways included in this project. Pavement markings will be included.

### **Purpose and Need**

The project purpose is to preserve the asphalt pavement and extend the life of the roadway.

### **Project Location and Limits**

This project includes four roadway segments, totaling approximately 12.2 miles, in the Flathead Lake/Kalispell area:

- S-209 (Flathead and Lake Counties), RP 0.0 to 4.8 (from P-35 to P-83), Sta. 514+50.1 to 256+55.2 (as-built plans' stationing runs in reverse of reference points);
- S-487 (Big Mountain Road, Whitefish, Flathead County), RP 4.0 to 7.2 (from north of Smith Drive to Gelande Street), Sta. 113+59.9 to 282+55.9 (RP 4.0 = Sta. 34+62.5 (metric));
- S-503 (Foys Lake Road, Kalispell, Flathead County), RP 1.2 to 4.9 (from west of Valley View Drive to Foys Canyon Road), Sta. 17+96.00 to 213+60.00 (reference points and stationing run north to south); and
- S-548 (West Reserve Drive, Kalispell, Flathead County), RP 2.9 to 3.3 (from west of Stillwater Road to Reserve Loop), Sta. 256+05.51 to 285+59.91 (metric Sta. 78+04.56 to 87+05.06).

All project segments are functionally classified as major collectors. See attached project location maps.

### **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. Though none of the project segments are designated as Level 2 facilities in the WZSM, portions of the projects are within the Kalispell City limits, and limited alternative routes exist for the traveling public to avoid construction operations. The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP), and limited Public Involvement activities (press releases) will be performed. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

## Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

Page 2 of 10

### Physical Characteristics

Because the project roadways have different physical characteristics, they are discussed separately below.

#### S-209

Secondary 209 is in intermittently forested, rolling terrain. The route passes through the town of Ferndale from RP 2.9± to 3.9±, and connects MT 35 to the west with MT 83 to the east.

The road was constructed through gravel surfacing in 1964 under Project S-65(6), and was paved a year later. The original surfacing included 0.20' of plant mix, 0.15' of crushed top surfacing, and 1.75' of crushed base course. The paved surface was 30' wide. The 5:1 surfacing inslopes extend 15'± beyond the edge of driving lane.

In 1980, the guardrail and delineation was upgraded under project HES 209-1(1)0, Bigfork East.

In 1993, a 0.15' plant mix overlay with seal and cover was placed 30'± wide under RTS 209-1(3)0, Bigfork – Southeast [2229].

In 2000, under project STPS 209-1(4)0, Bigfork – East, [4212], S-209 received a full width seal and cover treatment for the entire length of the roadway. Crack sealing with rubberized asphalt was done prior to the chip seal.

A 0.22-ft. plant mix overlay, followed by a chip seal, was placed in 2008 under STPS 209-1(6)0, Bigfork – East [6201000]. Transverse rumble strips were milled into the eastbound lane on the approach to the T-intersection with P-83 to alert drivers, a feature to be preserved under this project. Guardrail ends at the Swan River bridge were also updated.

Previous seal and cover projects STPS 209-1(4)0 and STPS 209-1(7)0, constructed in 2000 and 2008, respectively, had identical project limits and provided full-width treatment. The existing flashing beacon at the intersection with P-83 was installed in 2012 by project HSIP-STPHS 83-2(15)76, SF 089 Flasher N Swan lake – Jct. 209 [6686000].

Fill slopes appear to be 4:1 or flatter on fills less than 5'. Higher fills are 2 ½:1 or flatter, with approximately 3' of fill widening on fills steeper than 2 ½ :1. The bottom of the V-ditch is 18'± beyond the driving lane. Backslopes vary from 1½:1 to 5:1. Guardrail shields the steep slopes along the north side of the road where the roadway parallels the Swan River.

The horizontal alignment exceeds design criteria for a 60 mph design speed. The two sharpest curves each have a radius of 1910'. None of the curves have spiral transitions.

The vertical alignment generally meets 55 mph design speed criteria. The two exceptions are a 300' sag vertical curve at RP 1.1 that provides desirable stopping sight distance (SSD) at 45 mph and a crest vertical curve at RP 2.0 that provides desirable stopping sight distance at 54 mph. These calculations are based on an object height of 2'. The steepest grade is -5.798% at RP 0.1±.

## Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
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Page 3 of 10

The bridge over Swan River at RP 4.47 is programmed to be replaced by project BR 209-1(8)4, Swan River – 5 M East Big Fork [6848000]. That project's current ready date is August 1, 2015. The plans for [8147000] will include seal and cover treatment through the bridge, unless the reconstruction precedes this project's letting.

### S-487

S-487 is a two-lane rural facility that traverses mountainous terrain to its termination at Whitefish Mountain Resort at Big Mountain. The roadway right of way for this facility, from East Lake Shore Drive to Gelande Street, was quit-claim deeded to the State of Montana in 1971 by Winter Sports, Inc. The horizontal alignment contains several sharp curves, and there are steep cut and fills slopes on both sides of the roadway. Steep fill slopes are generally protected with guardrail, with openings provided for approaches and side streets. The 'Home Again' ski trail crosses over S-487 near RP 6.9.

The project begins at an obvious pavement change near RP 4.0, immediately north of the intersection with Smith Drive. An overlay and seal and coat project, STPS 487-1(13)0, was constructed in 2001 and provided a 0.16' (50 mm) plant mix overlay over the existing 2.1' (625 mm) roadway surface in some areas, in addition to the full width seal and cover treatment of the entire facility.

Original construction plans for this project segment are not available, but the segment from RP 4.0 to RP 6.5 was reconstructed and realigned in 2008 under STPS 487-1(9)4, Big Mountain Road [1436]. The surfacing section was composed of 0.33' of ¾" Grade S plant mix with PG 64-28 binder atop 0.66' of crushed aggregate course.

### S-503

S-503 is a two-lane rural facility; the adjacent terrain is generally level to gently rolling, with the steepest horizontal and vertical curvature where the alignment follows the eastern margin of Foy's Lake. Adjacent utility poles were noted, as was some pedestrian activity on the shoulders. "Fire Trucks Entering" signs were noted in the vicinity of the intersection with Lakeshore Drive.

S-503 within the project limits was originally constructed under projects S-404(4) and S-404(5), completed in 1967 and 1968, respectively. Stationing on these projects ran north to south, in concurrence with current stationing and reference point directionality.

Within the current project's limits, the original typical section consisted of a 28'-wide paved surface constructed of 0.2' plant mix, 0.15' bituminous stabilized top surface, 0.25' bituminous stabilized crushed base course, 0.50' crushed base surface type "A", and 0.40' confined sand surface. Total hinge-to-hinge section width was 46 feet. Fill sections varied from 5:1 to 1.5:1; cut sections constructed a minimum seven foot wide ditch with a 5:1 fore slope and back slopes that varied from 5:1 to 1.5:1. Maximum superelevation was 8%.

Project ARRA 15(92), KBP – Foy's Lake Rd To US 2 [2038010], completed in 2011, constructed a new roundabout at the intersection of Foy's Lake Road and the Kalispell bypass. The western limit of the roundabout reconstruction project is this seal and cover project's eastern limit.

### S-548

Within the project limits, S-548 is a four-lane divided urban section, with sidewalk on the south side of the road, and roadway lighting is present on both sides of the roadway. Terrain is

## Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

Page 4 of 10

generally level. The roadway narrows from two lanes to one lane in each direction through the roundabout at Stillwater Road. The roundabout and associated approaches are constructed of concrete pavement. Pedestrian crosswalks in the roundabout area are constructed of colored concrete pavement. No seal and cover will be performed in the areas of concrete pavement. The work on S-548 as nominated matches the 0.68± mile segment of S-548 that was reconstructed in 2007 to install the roundabout at Stillwater Road, under project MT 15(71), Reserve Loop – Kalispell [2038001]. However, the portion of S-548 from the T-intersection of West Reserve Drive and Reserve Loop to the east limits of [2038001] will be chip sealed in 2014 under UPN 2038019. Therefore, this 0.12-mile portion will be dropped from [8147000].

### Traffic Data

Current traffic data was not requested for this seal and cover project. The 2012 Traffic by Sections data for the project segments is summarized below:

Facility	RP	to	RP	2012 AADT	2012 Commercial Vehicles
S-209	0.0		3.3	2,880	150
S-209	3.3		4.8	1,690	150
S-487	4.0		7.2	1,020	40
S-503	1.2		2.0	3,360	80
S-503	2.0		3.7	1,280	80
S-503	3.7		4.9	590	5
S-548	2.9		3.4	6,510	145

### Crash Analysis

An updated crash history was not requested for this seal and cover project.

### Major Design Features

This project will be developed in accordance with the Guidelines for Pavement Preservation Projects. The project is considered to be preventative maintenance. The Missoula section of Helena Road Design will perform the preconstruction design activities.

- a. **Design Speed:** Design speed is not an applicable design criterion for preventative maintenance projects. The posted speed limits on each segment are as follows:

S-209: 60 mph, except for an approximately 0.9-mile long speed reduction to 50 mph through Ferndale.

S-487: 40 mph from the beginning of the project until the facility enters the ski resort area, near RP 6.9, where the posted speed becomes 15 mph

S-503: 50 mph from the beginning of the project to just east of Roybals Way (RP 3.7±); from this point to the project end, the posted speed is 35 mph.

S-548: 35 mph.

## Preliminary Field Review/Scope of Work Report

- b. **Horizontal Alignment:** For each segment, the existing horizontal alignment is adequate for the proposed preventative maintenance resurfacing.
- c. **Vertical Alignment:** For each segment the existing vertical alignment is adequate for the proposed preventative maintenance resurfacing.
- d. **Typical Section and Surfacing:** There are no proposed changes to the typical sections. The seal and cover treatment will cover the entire paved width of each segment.

Due to the nature of the project, a surfacing design was not requested. We propose a full width Seal Coat - CRS-2P seal oil with Type I chips for the entire project.

Pavement Condition and recommendations from PvMS for the project segments are summarized below:

Facility	RP	to	RP	Ride	Rut	ACI	MCI	Construction Recommendations	
								2013	2015
S-209	0.0		4.8	76	74.2	95.8	99.4	Do Nothing	C_AC Crack Seal & Cover
S-487	4.0		4.1	67	72	99.1	100	C_AC Thin Overlay	C_AC Thin Overlay
S-487	4.1		6.5	76	72.2	99.5	99.9	Do Nothing	C_AC Crack Seal & Cover
S-487	6.5		7.2	27.5	66.5	55.9	94	C_AC Major Rehabilitation	C_AC Major Rehabilitation
S-503	1.2		4.9	80.7	68.7	99.8	99.3		
S-548	2.9		3.4	38.3	55.3	95.9	97.9	C_AC Minor Rehabilitation	C_AC Minor Rehabilitation

Based on our field review and the preponderance of the PvMS data and recommendations, seal and cover is recommended as the appropriate treatment for this project. Crack sealing will be performed as a maintenance activity by MDT forces prior to project letting.

- e. **Geotechnical Considerations:** There are no geotechnical considerations. There will be no geotechnical involvement.
- f. **Hydraulics:** There are no hydraulic considerations.
- g. **Bridges:** There is one bridge structure on S-209, as discussed in the **Physical Characteristics** section above.
- h. **Traffic:** The existing pavement marking layout will be used to re-stripe the roadway. Traffic Engineering will provide the quantities, details, and specifications for interim paint and final epoxy. Road Design will compute the Final Brooming and Sweeping quantities. These items will be included in the road plans package.

## Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

Page 6 of 10

- i. **Pedestrian/Bicycle/ADA**: There are no existing dedicated pedestrian or bicycle facilities on S-209, S-487, and S-503, and none are proposed. No changes are proposed to the existing sidewalk along a portion of the S-548 segment.
- j. **Miscellaneous Features**: No miscellaneous features are being considered. Guardrail will not be upgraded on this project.
- k. **Context Sensitive Design Issues**: Due to the limited scope, no context sensitive solutions will be considered.

### **Other Projects**

As mentioned under the Physical Characteristics section above, the bridge on S-209 over Swan River is programmed for replacement under project BR 209-1(8)4. Plans will be coordinated once letting sequence is certain.

The segment of S-548 programmed for chip seal under [8147000] is adjacent to NH-MT 15(110), KBP – Reserve Loop to US 93 [2039019], currently being constructed. That project includes about 49,000 square yards of Type 2 cover material (to be placed in 2014). Logistically, it seems reasonable to drop the S-548 segment from [8147000] and do the 13,400 square yards of chip seal under a change order for [2039019]. Alas, this concept is probably unworkable since [8147000] must be constructed with Secondary funds, and [2039019] is funded with NH and MT money. Thus, there may be issues regarding fiscal programming, environmental documentation, funding sources, etc. that would make for an unwieldy process to pursue this concept.

We do plan to tie [8147000] for contract to UPP 6799(36), Flathead Cnty Urban Pave Pres [7986000] which includes one location (Two Mile Drive) in the general vicinity of S-548.

### **Location Hydraulics Study Report**

No Location Hydraulics Study Report will be prepared for this preventative maintenance project. No impacts to existing drainage patterns or structures are anticipated.

### **Design Exceptions**

The design exception process does not apply to pavement preservation projects.

### **Right-of-Way**

There will be no right of way involvement.

### **Access Control**

There will be no changes to the existing access control.

### **Utilities/Railroads**

There will be no utilities or railroad involvement on this project.

### **Maintenance Items**

It is recommended that Maintenance crack seal the roadways prior to the chip seal, particularly on S-503.

### **Intelligent Transportation Systems (ITS) Features**

No ITS features will be installed, impacted, or modified as part of this preventative maintenance project.

## Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

Page 7 of 10

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### **Survey**

No survey is required.

### **Public Involvement**

A Level [A] public involvement plan is appropriate. A press release will be distributed to the local media explaining the project and including a department point of contact.

### **Environmental Considerations**

No significant environmental impacts or issues were identified. We reviewed the project and determined it meets the criteria for the Programmatic Agreement as a Categorical Exclusion under the provisions of 23 CFR 771.117(d) as signed by MDT February 18, 2005, and concurred in by the FHWA on March 4, 2005. The Environmental Checklist for Pavement Preservation Projects is attached.

### **Energy Savings/Eco-Friendly Considerations**

No energy-saving or eco-friendly considerations were incorporated into this preventative maintenance project.

### **Experimental Features**

There are no experimental features included in this project.

### **Traffic Control**

Traffic will be maintained through the construction of the project with appropriate signing, flagging, detours, etc., in accordance with the *Manual on Uniform Traffic Control Devices*. There may be periods of single lane closures during working hours.

A Transportation Management Plan (TMP) consisting of a Traffic Control Plan (TCP) and a limited Public Information (PI) component is appropriate for this project.

We will consider using the newly created bid item TRAFFIC CONTROL PER MILE-CHIP SEAL on at least the three segments (S-209, S-503, and S-487) that are similar in lane configuration (virtually all two-lane) and traffic characteristics. It may be better to use the usual TRAFFIC CONTROL DEVICES CB for the S-548 segment, which has much higher traffic and differing lane configurations, compared to the other three segments.

### **Project Management**

Project management responsibilities will be handled by Jennifer Nelson of the Missoula Section of Helena Road Design. This project is not under full FHWA oversight.

## Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

Page 8 of 10

### Preliminary Cost Estimate

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	\$441,900		
New Structure			
Remove Structure			
Detour			
Traffic Control	44,200		
<b>Subtotal</b>	<b>\$486,100</b>		
Mobilization (15%)	66,300		
<b>Subtotal</b>	<b>552,400</b>		
Contingencies (8%)	55,200		
<b>Total CN</b>	<b><u>\$ 607,600</u></b>	<b><u>\$ 25,300</u></b>	<b><u>\$ 688,300</u></b>
<b>CE (8%)</b>	<b><u>\$ 48,600</u></b>	<b><u>\$ 2,000</u></b>	<b><u>\$ 55,000</u></b>
<b>TOTAL CN+CE</b>	<b><u>\$ 656,200</u></b>	<b><u>\$ 27,300</u></b>	<b><u>\$ 683,500</u></b>

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 9.12% for FY 2014.

### Ready Date

The Ready date is February 1, 2014. The tentative letting date in the 2013 TCP is May 8, 2014. Once the PFR/SOW Report is distributed, we expect project development to move along quickly.

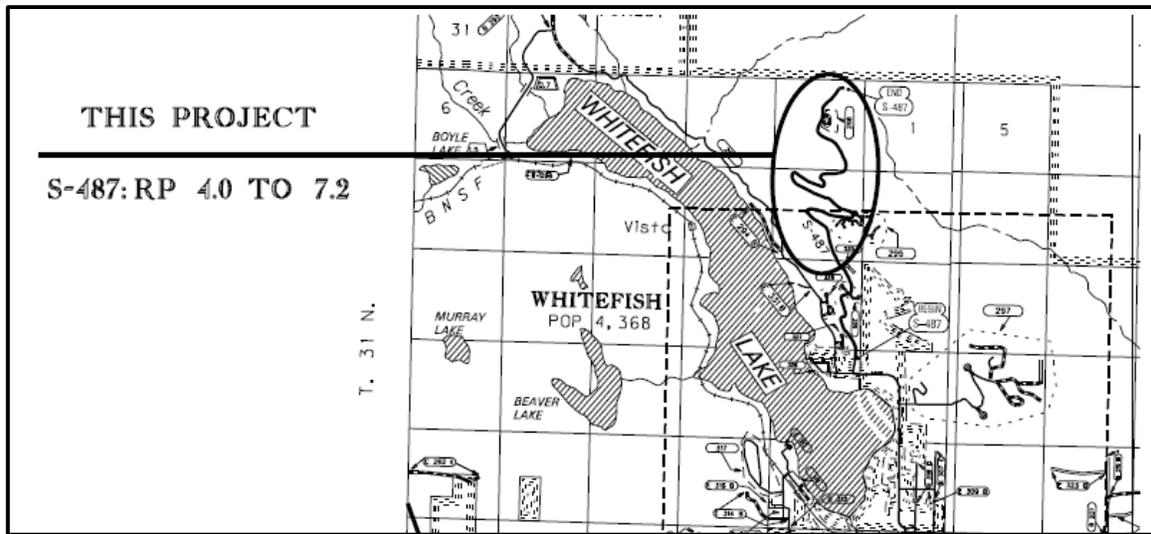
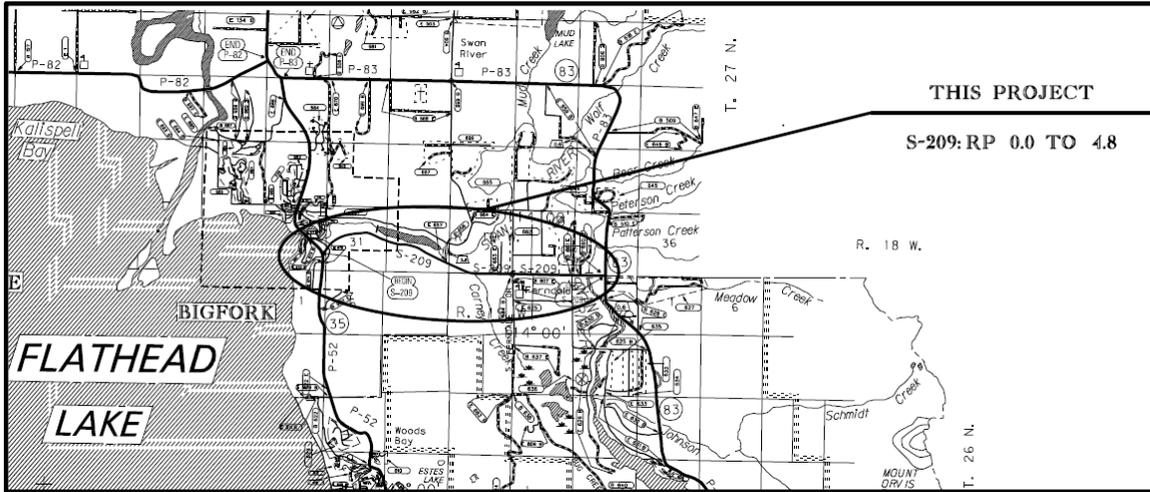
### Site Map

The project site maps are attached.

# Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
Project Manager: Jennifer Nelson

## Project Site Maps



# Preliminary Field Review/Scope of Work Report

STPS STWD (229), Flathead Area Pave Pres  
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## Project Site Maps (cont.)

