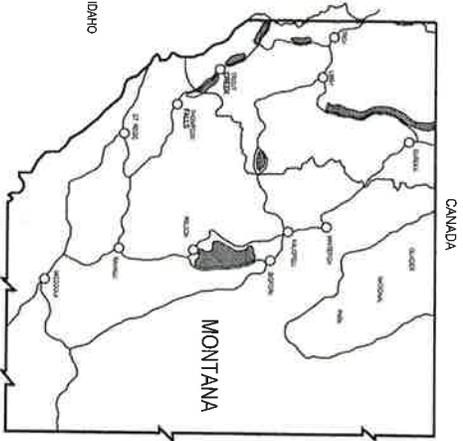


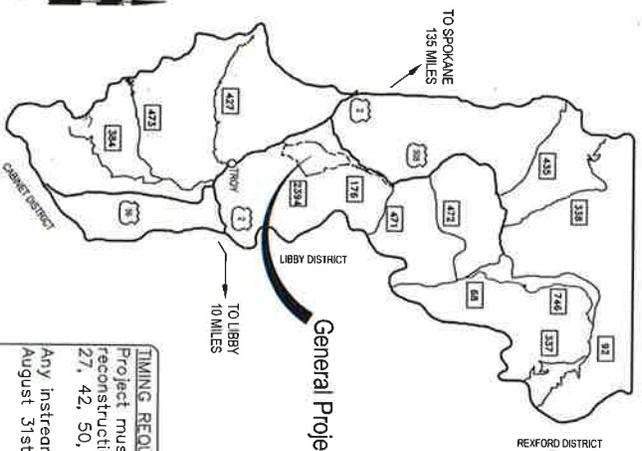


Appendix A, Project 01, Item 1A

UNITED STATES DEPARTMENT OF AGRICULTURE
 FOREST SERVICE - REGION ONE
 ONLY MOLY STEWARDSHIP PLANS FOR
 MANDATORY ROAD STORAGE AND DECOMMISSIONING
 LINCOLN COUNTY, MONTANA
Road Storage & Decommissioning Project
 KOOTENAI NATIONAL FOREST
 THREE RIVERS RANGER DISTRICT



ROAD NO.	ROAD NAME	LENGTH (ft)
4433	North Fork Lynx Creek	6200
4433A	North Fork Lynx A	5550
4433B	North Fork Lynx B	6060
1998	Lower Rabbit	8100
1998A	Lower Rabbit A	2650
4425	Upper Rabbit	0*
2376	Feeder O'Brien	0*
2380	North O'Brien	6700
14347	Northern O'Brien	1140
14349	Gun Barrel	2385
4651	Lost Fork Sludemaker	3270
4650	Unnamed Road	675
4419	South Fk O'Brien	2340
4420	Upper Pulpit	3120
4420A	Unnamed Road	750
4429F	Unnamed Road	345



TIMING REQUIREMENTS:
 Project must be completed prior to any harvest related road construction/reconstruction or harvest EXCEPT for Cutting Units 5, 6, 7, 15, 16, 23, 24, 25, 27, 42, 50, 55, and 55A.
 Any instream work on live, perennial streams must occur between July 15th to August 31st.
 Project must be completed between June 16th and November 30th with a single calendar year, and done in a separate calendar year from the "Road #4407B Storage and Decommissioning Project."

PREPARED BY: Quarabongot 10/11/16
 DISTRICT HYDROLOGIST

REVIEWED BY: [Signature] 10/11/16
 ZONE ENGINEERING SUPERVISOR

MULTIPLE RESOURCE REVIEW BY: Kustantassera 10-11-16
 DISTRICT RANGER

I certify that this project has been designed in accordance with sound engineering practices.
[Signature] 10/11/16
 FOREST ENGINEER

*Work exclusively involves removing gate & construction of double earth berm.

Index & General Notes

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Construction Staking: Stations will be flagged on the ground before work begins.

Project work identified in the Work Logs is stationed from the beginning of each road to the end, but work will generally be accomplished from the end of each road (last station) back to the beginning.

Mobilization (Pay Item 15101): Mobilization cost includes trucking equipment from lowboy drop points to work areas and transporting equipment by lowboy between work areas. Possible drop points for equipment are shown on the project location map. It is the Contractor's responsibility to verify the suitability and accessibility of these locations or any other drop point sites selected.

Incidental work to this Pay Item includes removal of existing earth berms and light clearing unless shown otherwise in the work logs. Existing waterbars and reconstructed stream crossings that require little modification for access will be restored to their original condition if altered or damaged by the Contractor, incidental to this Pay Item, unless shown otherwise in the work logs.

Roadway Clearing (Pay Item 20103): The roads in this contract have been closed to vehicle traffic for many years and have revegetated. Vegetation varies from light (scattered small brush) to heavy (dense 2-3" diameter alder and 4-8" diameter conifers). Logs and rocks in the roadway may need to be removed. Existing earth barriers will need to be removed (if reinstated they will be paid for under Pay Item 20427). Clearing and grubbing for all other required work is included in this pay item.

Culvert and gate disposal (Pay Item 20301): All removed culverts and gates will be disposed of off of National Forest.

Drainage Construction, Stream Channel Categories I&II (Pay Items 20420): The stream category (I or II) was determined during the design by measuring the vertical distance from the road surface to the expected final stream grade elevation below the culvert outlet. Excavate the road fill down to the original stream channel or as directed in the plans. Provide for the channel width shown on the Stream Channel Reconstruction List. The Contractor will determine where to start the excavation and how far back to place the fill so that the finished excavation results in the slopes being laid back to the natural contour or 2:1, whichever is less.

Culverts being excavated at stream crossings will require Special Erosion Control Measures where shown on the Stream Channel Reconstruction List. These sites have legal requirements to protect water quality. In order to minimize sedimentation in flowing streams all possible excavation needs to be completed prior to culvert removal. Rocks of required size and number for grade control structures and armoring will be staged at inlet and outlet areas.

Before the culvert is removed side slopes will be excavated down to the final stream elevation allowing for the required channel width. The last fill material removed before pulling the culvert will be at the inlet and so as to allow the machine to cross over the culvert to the approach side of the stream crossing. The culvert will not be removed from the stream until the CO verifies the excavation beyond the culvert has been completed to specification.

Stream channel reconstruction and stabilization will be paid under Pay Item 62201 Equipment Rental. After completion of the stream channel reconstruction, the remaining finish work at the site will paid for under Pay Items 20420, Drainage Excavation Stream Channel Category I or II.

Road Reconditioning - Ditch and Clearing Culvert Inlet/Outlets (Pay Items 50305, 60708): Where specified ditches and catch basins will be cleared of debris, grubbed of trees and brush and reshaped. This work may include reshaping ditch blocks at ditch relief culverts to allow bypass flow down the ditch. Soil and debris removed will be scattered on downhill side of the roadway and away from culvert outlets. Some culvert inlets and outlets will need to be cleaned by hand because they are beyond the reach of the equipment or cannot be easily cleaned without damaging the culvert. The Contractor will be responsible for repairs to culverts if they are damaged during performance of the work.

Roadway Obliteration, Method 3 (Pay Item 21103): Work includes decompression of all landing areas and turnouts immediately adjacent to the roadway.

Equipment Rental (Pay Item 62201): Only excavators meeting Supplemental Specification 622.02 will be used for hourly work.

Placed Riprap, Class 2 & 3, Placed Channel Rock, Class 2, Method A, and Stream Grade Control Structures (Pay Items 25101, 64801, 64802, and 64808): Rock size is specified by the width or middle dimension which is the minimum sieve size the rock would pass through.

It is anticipated that rock provided under Pay Items 25101, 64801, 64802, and 64808 will be developed and delivered from a commercial source. On site angular rock that meets that meets specifications may be substituted for commercial source material where available. Rock may be sorted from road fill material excavated during the prosecution of the work or excavated and hauled from rock sources found along the project roads. Sites developed for rock borrow must be approved by the CO and shall be left in stable condition following rock collection.

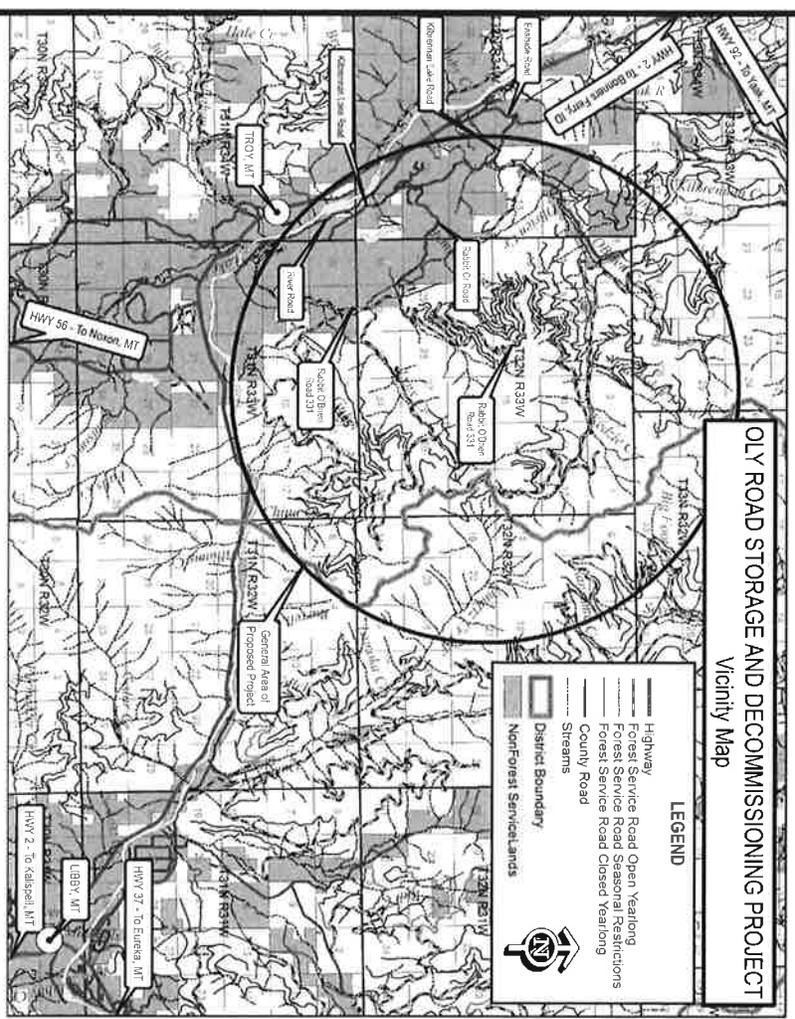
Application of Slush and Duff: Slush and duff application is incidental other pay items. Where slush placement on disturbed soils is required in the plans, use the excavator bucket to collect and scatter a layer of duff material evenly over disturbed soils before applying slush. Obtain duff from undisturbed areas and adjacent to the road above the top of the cut slope or below the toe of the fill slope. Smooth duff collection holes over by knocking down sharp edges and lightly raking adjacent material back into holes.

Seeding (Pay Item 62501): Areas where bare soil is exposed as a result of project activities will be hand seeded at a rate of approximately 25 pounds per acre using Government furnished seed. Seed will be applied uniformly and in a manner that allows supplied seed to cover the outlabeled acreage.

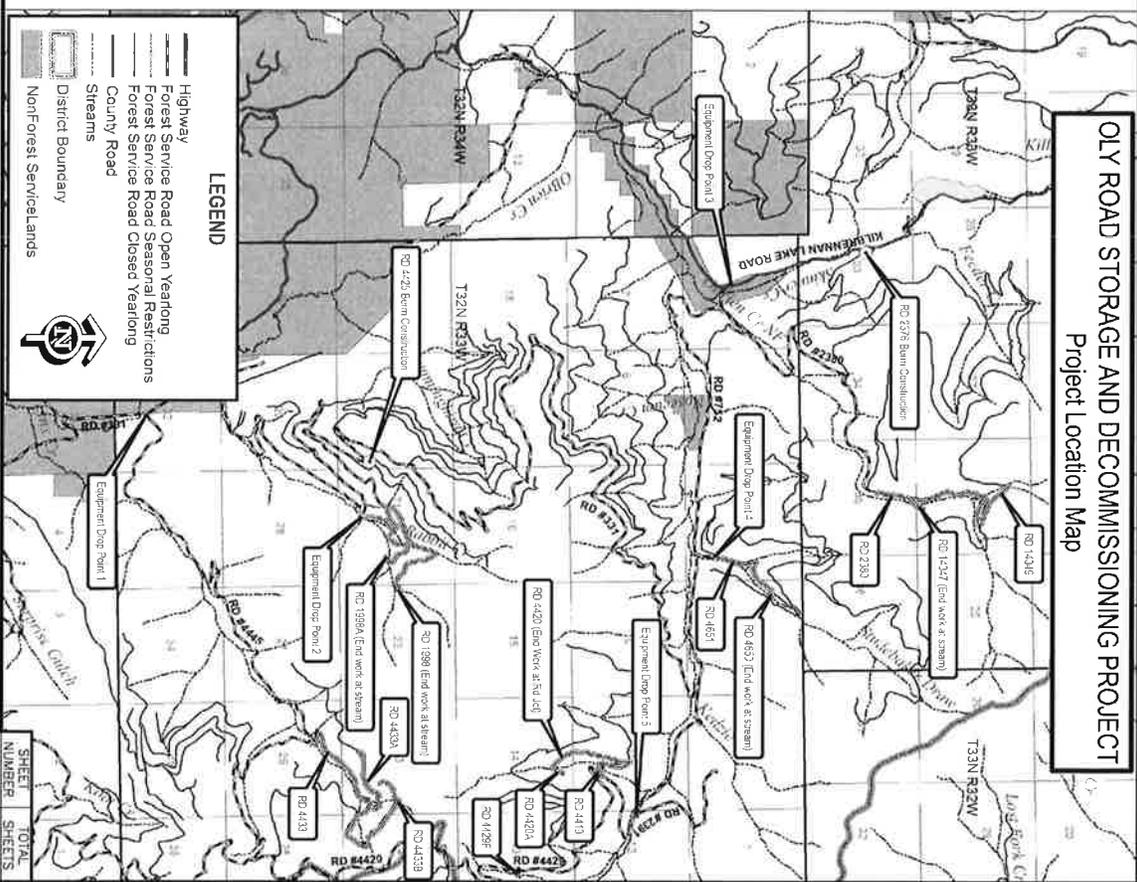
OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
2	19

Project Map



OLY ROAD STORAGE AND DECOMMISSIONING PROJECT
Vicinity Map



OLY ROAD STORAGE AND DECOMMISSIONING PROJECT
Project Location Map

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	3
TOTAL SHEETS	19

Summary of Quantities

ITEM NO	ITEM DESCRIPTION	METHOD OF MEASURE	UNIT OF MEASURE	4433	4433A	4433B	1998	1998A	4425	2376	2380	14347	14349
15101	MOBILIZATION	LSQ	LS	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
20103	CLEARING AND GRUBBING	CQ	LF	6200	1100	6060						1140	
20301	REMOVAL OF GATE AND CULVERTS	AQ	EA	2		2			1	1			1
20420	DRAINAGE EXCAVATION, STREAM CHANNEL CATEGORY I	AQ	EA			1						1	
20420	DRAINAGE EXCAVATION, STREAM CHANNEL CATEGORY II	AQ	EA			1							1
20420	DRAINAGE EXCAVATION, GROSS CHANNEL	AQ	EA			1						1	
20420	DRAINAGE EXCAVATION, DITCH DRAIN WATERBAR	AQ	EA	12		1						1	
20420	DRAINAGE EXCAVATION, NONDRIVEABLE WATERBAR, COMPACTION METHOD B	AQ	EA	5	2	10	27				1		2
20427	DOUBLE EARTH BERM	AQ	EA	1			1		1	1	1		
21103	ROADWAY OBLITERATION, METHOD 1 (FULL RECONTOUR)	CQ	LF									830	
21103	ROADWAY OBLITERATION, METHOD 3 (ROAD DECOMPACTION)	CQ	LF									120	
21103	ROADWAY OBLITERATION, METHOD 5 (PARTIAL RECONTOUR)	CQ	LF										
25101	PLACED RIPRAP, CLASS 2, COMMERCIAL SOURCE	CQ	CY	20									
25101	PLACED RIPRAP, CLASS 3, COMMERCIAL SOURCE	CQ	CY	5									
30305	ROAD RECONDITIONING, DITCH	AQ	LF	225	160	25							
60253	57" x 38" CSPA, INCLUDES EXCAVATION, COMPACTION METHOD B	AQ	LF	62									
60708	CLEANING CULVERTS INLETOUTLET	AQ	EA	3	8	6							
62201	EQUIPMENT RENTAL, HYDRAULIC EXCAVATOR WITH THUMB	AQ	HR	2		4	37	6			2	3	2
62501	SEEDING, DRY METHOD, GOVERNMENT FURNISHED	CQ	ACRE	0.5	0.3	0.5	1	0.2			0.1	0.2	0.5
64801	PLACED CHANNEL ROCK, CLASS 2, METHOD A	CQ	CY	10									
64802	PLACED CHANNEL ROCK, CLASS 2, METHOD A	AQ	EA				52						
64808	STREAM GRADE CONTROL STRUCTURES	AQ	EA	3									

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
4	19

Summary of Quantities (continued)

ITEM NO	ITEM DESCRIPTION	METHOD OF MEASURE	UNIT OF MEASURE	4651	4650	4419	4420	4420A	4429F
15101	MOBILIZATION	LSQ	LS	ALL	ALL	ALL	ALL	ALL	ALL
20103	CLEARING AND GRUBBING	CQ	LF	ALL	275		3120	750	345
20301	REMOVAL OF GATE AND CULVERTS	AQ	EA				1		1
20420	DRAINAGE EXCAVATION, STREAM CHANNEL CATEGORY I	AQ	EA		2			1	1
20420	DRAINAGE EXCAVATION, STREAM CHANNEL CATEGORY II	AQ	EA					1	
20420	DRAINAGE EXCAVATION, CROSS CHANNEL	AQ	EA					1	
20420	DRAINAGE EXCAVATION, DITCH DRAIN WATERBAR	AQ	EA					2	
20420	DRAINAGE EXCAVATION, NONDRIVEABLE WATERBAR, COMPACTION METHOD B	AQ	EA				20		
20427	DOUBLE EARTH BERM	AQ	EA	1					
21103	ROADWAY OBLITERATION, METHOD 1 (FULL RECONTOUR)	CQ	LF						60
21103	ROADWAY OBLITERATION, METHOD 3 (ROAD DECOMPACTION)	CQ	LF		655			575	20
21103	ROADWAY OBLITERATION, METHOD 5 (PARTIAL RECONTOUR)	CQ	LF						195
25101	PLACED RIPRAP, CLASS 2, COMMERCIAL SOURCE	CQ	CY						
25101	PLACED RIPRAP, CLASS 3, COMMERCIAL SOURCE	CQ	CY						
30305	ROAD RECONDITIONING, DITCH	AQ	LF						
60253	57" x 36" CSPA, INCLUDES EXCAVATION, COMPACTION METHOD B	AQ	LF						
60708	CLEANING CULVERTS INLETOULET	AQ	EA						
62201	EQUIPMENT RENTAL, HYDRAULIC EXCAVATOR WITH THUMB	AQ	HR		3			3	2
62301	SEEDING, DRY METHOD, GOVERNMENT FURNISHED	CQ	ACRE	0.4	0.1	.5	.6	.1	0.2
64801	PLACED CHANNEL ROCK, CLASS 2, METHOD A	CQ	CY						
64802	PLACED CHANNEL ROCK, CLASS 2, METHOD A	AQ	EA						
64808	STREAM GRADE CONTROL STRUCTURES	AQ	EA						

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
5	19

Stream Channel Reconstruction List

ROAD NO.	STATION	CULVERT DIAMETER (IN)	CULVERT LENGTH (FT)	INLET ROAD FILL DEPTH (FT)	OUTLET ROAD FILL DEPTH (FT)	ROAD WIDTH (FT)	CHANNEL WIDTH (FT)	SPECIAL EROSION CONTROL REQUIRED*	WORK DETAILS
4433	51+70		SEE SHEET #8 FOR DETAILS.				9	YES	REPLACE EXISTING CULVERT WITH NEW 57" X 36" CULVERT AND PERFORM CHANNEL WORK AS SPECIFIED IN THE PLANS.
4433B	22+70	N/A	N/A	N/A	N/A	N/A	3	YES	EXISTING CULVERT WILL BE LEFT IN PLACE.
4433B	59+20	18	24	3	7	19	4	YES	REMOVE EXISTING CULVERT. LEAVE DITCH OPEN TO STREAM CHANNEL THAT ENTERS DITCH ABOUT 10 FEET FROM CULVERT.
4433B	60+00	18	36	3	11	26	5	YES	REMOVE EXISTING CULVERT. LEAVE DITCH OPEN TO STREAM CHANNEL THAT ENTERS DITCH ABOUT 35 FEET FROM CULVERT. REMOVE AND PLACE MOST OF EXCAVATED FILL MATERIAL BEYOND CROSSING. WASTE MATERIAL CAN BE PLACED BEFORE CROSSING ON ROADWAY TO A MAXIMUM DEPTH OF THREE FEET BETWEEN STA 59+65 AND 60+00 IF NEEDED. ROCK IS AVAILABLE AT STA. 59+20 IF NEEDED FOR CHANNEL STABILIZATION WORK.
1988	54+00	N/A	N/A	N/A	N/A	N/A	10	YES	THIS IS A PREVIOUSLY RECONTOURED STREAM CROSSING THAT IS NOT STABLE. ADDITIONAL FILL MATERIAL WILL BE REMOVED IN ORDER TO ESTABLISH STABLE SLOPES ABOVE THE STREAM. ALL WORK AT THIS SITE WILL BE PAID FOR UNDER PAY ITEM 62201 EXCEPT ROCK DELIVERY, REBUILD CHANNEL AND STABILIZE BANKS AS DIRECTED BY CO. TEMPORARY EXCAVATOR ACCESS ACROSS THIS CHANNEL WILL BE NEEDED TO ACCESS WORK AT STA 81+00 BEFORE COMPLETING THIS WORK.
1988	81+00	N/A	N/A	N/A	N/A	N/A	8	YES	THIS IS A PREVIOUSLY RECONTOURED STREAM CROSSING. ADDITIONAL FILL MATERIAL WILL NEED TO BE REMOVED IN ORDER TO ESTABLISH STABLE SLOPES ABOVE THE STREAM. ALL WORK AT THIS SITE WILL BE PAID FOR UNDER PAY ITEM 62201 EXCEPT ROCK DELIVERY, REBUILD CHANNEL AND STABILIZE BANKS AS DIRECTED BY CO. WORKING SPACE IS LIMITED AND ADDITIONAL EXCAVATION TO CREATE OPERATING ROOM FOR THE EQUIPMENT WILL BE NECESSARY.
1998A	26+50	N/A	N/A	N/A	N/A	N/A	11	YES	THIS IS A PREVIOUSLY RECONTOURED STREAM CROSSING. ALL WORK AT THIS SITE WILL BE PAID FOR UNDER PAY ITEM 62201, REBUILD CHANNEL AND STABILIZE BANKS AS DIRECTED BY CO.
2380	-54+40 SITE 2	48	N/A	N/A	N/A	N/A	8	YES	EXISTING CULVERT WILL BE LEFT IN PLACE. ALL WORK AT THIS SITE WILL BE PAID FOR UNDER PAY ITEM 62201. REMOVE LOG FROM CHANNEL BELOW CULVERT OUTLET AND EXCAVATE DEPOSITIONAL MATERIAL BELOW OUTLET. CONSTRUCT 6' WIDE BY 2' DEEP OVERFLOW CHANNEL ACROSS THE ROAD UPGRADE OF CULVERT AND THE OUTLET INTO EXISTING CHANNEL AS DIRECTED BY CO.
14347	10+70	BURIED LOGS	30	4	10	27	14' CHANNEL, +8' FLOODPLAIN ON EAST SIDE	YES	REMOVE EXISTING DRAINAGE STRUCTURE THAT CONSISTS OF BURIED LOGS COVERED WITH ROAD FILL. CONSTRUCT FLOOD PLAIN ON EAST SIDE AT AN ELEVATION APPROXIMATELY 2' HIGHER THAN THE CHANNEL BOTTOM. PLACE EXCAVATED FILL MATERIAL AT LEAST 30 FEET AHEAD OF CROSSING AND 45 FEET BACK OF CROSSING.
14349	21+90	24	60	10	16	18	10	YES	REMOVE EXISTING CULVERT. CONSTRUCT TRAIL ACROSS RECONTOURED CROSSING AS SHOWN IN THE PLANS. LEAVE DITCH OPEN FOR 35 FEET BEYOND CROSSING (TO STA. 22+25) TO ACCOMMODATE STREAM FLOW.
4650	5+30	BURIED LOGS	30	3.5	4.5	24	3 CHANNEL, +2' FLOODPLAIN ON BOTH SIDES	YES	REMOVE EXISTING DRAINAGE STRUCTURE THAT CONSISTS OF BURIED LOGS COVERED WITH ROAD FILL. REMOVE ENTIRE ROAD FILL FROM STA. 5+10 TO 5+50 AND PLACE IN DESIGNATED WASTE AREA AT STA. 4+80.
4650	6+65	BURIED LOGS	30	5	6.5	24	12	YES	REMOVE EXISTING DRAINAGE STRUCTURE THAT CONSISTS OF BURIED LOGS COVERED WITH ROAD FILL. MOVE FILL MATERIAL TO DESIGNATED WASTE AREA AT STA. 4+80.
4420A	6+40	BURIED LOGS	50	7.5	18	25	18	YES	REMOVE EXISTING DRAINAGE STRUCTURE THAT CONSISTS OF BURIED LOGS COVERED WITH ROAD FILL. LEAVE DITCH OPEN 20'-30' ON BOTH SIDES TO CATCH SEEPS - PLACE WASTE MATERIAL AGAINST OUTSLOPE BEYOND THESE WET AREAS.
4425F	0+60	30	34	4	10	20	8	YES	REMOVE EXISTING CULVERT.

* REQUIRED SPECIAL EROSION CONTROL MEASURES INCLUDE NOTIFYING CO 24 HOURS BEFORE BEGINNING WORK AT THE SITE, PERFORMING STREAM STABILIZATION WORK AS DIRECTED BY THE CO UNDER PAY ITEM 62201, AND COMPLYING WITH MONTANA'S STREAM PROTECTION ACT 124 PERMITS WHICH WILL BE ISSUED BEFORE BEGINNING THE PROJECT.

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
6	19

Road Storage and Decommissioning Log

Road #4433

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
ROAD #4433 STA 0+00					
0+43	20301	BEGIN ROAD #4433 WORK. JUNCTION WITH ROAD #4445. MILL POST 19.0 (4.1 MILES FROM NORTH JUNCTION WITH ROAD 331. EQUIPMENT DROP POINT #1 ON MAP). THE NORTH JUNCTION OF ROAD 333/ROAD #4445 IS APPROXIMATELY 8.6 MILES FROM THE JUNCTION OF RIVER ROAD AND US HIGHWAY 2. BEGIN ROAD WAY CLEARING. ROAD VEGETATION HAS BEEN MOSTLY REMOVED BY HAND SAWING, BUT THERE ARE SHARP STEMS PROTRUDING FROM THE ROADED AND BRUSH EXTENDING INTO ROADWAY.	4+80	20420	INSTALL NONDRIVEABLE WATERBAR. INSTALL DITCH DRAIN WATERBAR.
2+45	20420	REMOVE GATE FROM POSTS AND DISPOSE OFF NATIONAL FOREST. LEAVE POSTS IN PLACE.	4+80	20301	REMOVE AND DISPOSE OF EXISTING 24" CULVERT. INSTALL NEW 57" x 38" CS9. STREAM CHANNEL IS NORMALLY DRY IN THE SUMMER. SEE STREAM STRUCTURE PLAN FOR DETAILS.
3+60	20420	INSTALL NONDRIVEABLE WATERBAR.	5+70	60253	DELIVER AND PLACE 5 CY CLASS 3 RIP RAP FOR ARMORING CULVERT INLET. DELIVER AND PLACE 10 CY CLASS 2 CHANNEL ROCK FOR LINING STREAM CHANNEL AND ARMORING APRON AT CULVERT OUTLET.
4+00	20427	INSTALL DOUBLE EARTH BERMS AS DIRECTED BY CO. CONSTRUCTED BERM WILL NEED TO PROVIDE FOR SNOWMOBILE ACCESS IN THE WINTER, BUT PREVENT ATV ACCESS IN THE SUMMER.	5+80	64801	DELIVER ROCK AND INSTALL 3 STREAM GRADE CONTROL STRUCTURES. STABILIZE STREAM CHANNEL AND BANKS AS DIRECTED BY CO.
5+40	20420	INSTALL DITCH DRAIN WATERBAR.	5+80	30305	RECONDITION DITCH TO STATION 52+80. EXCAVATION DITCH TO ALLOW FOR SPECIFIED DIMENSIONS AS DESCRIBED BELOW (TOTAL=80'). DELIVER AND PLACE 18 CY CLASS 2 RIP RAP TO ARMOR RECONSTRUCTED DITCH. FINAL DITCH DIMENSIONS AFTER ARMORING SHOULD BE APPROXIMATELY 3' WIDE BY 1.5' DEEP.
7+20	20420	INSTALL DITCH DRAIN WATERBAR.	5+80	25101	CONNECT RECONDITIONED DITCH (SEE ABOVE) TO STREAM AT THIS STATION.
10+00	20420	INSTALL DITCH DRAIN WATERBAR.	5+80	30305	INSTALL NONDRIVEABLE WATERBAR.
13+50	30305	RECONDITION DITCH. REMOVE APPROXIMATELY 4 ROCKS (TOTAL=20').	5+80	20420	INSTALL DITCH DRAIN WATERBAR.
14+30	20420	INSTALL DITCH DRAIN WATERBAR.	5+80	25101	DELIVER AND PLACE 1 CY CLASS 2 RIP RAP ON FILL SLOPE BELOW WATERBAR OUTLET.
16+50	30305	RECONDITION DITCH. REMOVE ROOTWAD AND LOG FROM DITCH (TOTAL=30').	60+00	20420	INSTALL NONDRIVEABLE WATERBAR.
17+00	20420	INSTALL DITCH DRAIN WATERBAR.	62+00	20103	JUNCTION WITH ROAD #4433. END ROADWAY CLEARING (TOTAL=6-200') AND ROAD #4433 WORK.
21+70	20420	INSTALL DITCH DRAIN WATERBAR.			
24+40	20420	INSTALL DITCH DRAIN WATERBAR.			
24+90	60708	CLEAN CULVERT INLET. REMOVE VEGETATION ONLY.			
27+80	20420	INSTALL DITCH DRAIN WATERBAR.			
28+80	60708	CLEAN CULVERT INLET. REMOVE VEGETATION ONLY.			
32+20	20420	INSTALL NONDRIVEABLE WATERBAR. OUTLET LOCATION IS FLAGGED. ARMOR OUTLET.			
35+60	30305	RECONDITION DITCH. REMOVE LOG (TOTAL=10').			
36+30	20420	INSTALL DITCH DRAIN WATERBAR. OUTLET LOCATION IS FLAGGED.			
37+00	60708	CLEAN CULVERT INLET.			
37+01	25101	DELIVER AND PLACE 1 CY OF CLASS 2 RIP RAP ON FILL SLOPE BELOW CULVERT OUTLET.			
37+60	30305	RECONDITION DITCH. REMOVE LOG (TOTAL=10').			
37+90	30305	RECONDITION DITCH. REMOVE LOG (TOTAL=5').			
38+70	30305	RECONDITION DITCH. REMOVE LOG (TOTAL=20').			
39+25	30305	RECONDITION DITCH TO CULVERT CATCH BASIN @ STATION 39+50. EXCAVATE DITCH 12" AND DITCH BLOCK 6-8' BELOW ROAD GRADE SO THAT WATER WILL FLOW DOWN THE DITCH, AND NOT ONTO THE ROAD SURFACE IF THE CULVERT PLUGS (TOTAL=25').			
44+10	30305	RECONDITION DITCH TO CULVERT CATCH BASIN @ STATION 44+35. EXCAVATE DITCH 12" AND DITCH BLOCK 6-8' BELOW ROAD GRADE SO THAT WATER WILL FLOW DOWN THE DITCH, AND NOT ONTO THE ROAD SURFACE IF THE CULVERT PLUGS (TOTAL=25').			

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

Road Storage and Decommissioning Log

Road #4433A & #4433B

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
ROAD #4433A STA 0+00	20103	BEGIN ROAD #4433A WORK. JUNCTION WITH ROAD #4433, STATION 60+00. BEGIN ROADWAY CLEARING. REMOVE MODERATE BRUSH FOR EXCAVATOR ACCESS TO STATION 11+00. NO ACCESS FOR HIGHWAY VEHICLES NEEDED ON THIS ROAD.	ROAD #4433B STA 0+40	20103	BEGIN ROAD #4433B WORK. JUNCTION WITH ROAD #4433A, STATION 62+00. BEGIN ROADWAY CLEARING. ROADWAY HAS PREVIOUSLY BEEN CLEARED WITH CHAINSAWS AND IS FAIRLY OPEN. REMOVE SLASH AND GRUB CUT STEMS IN ROADBED AS NECESSARY FOR VEHICLE ACCESS.
5+10	60708	CLEAN 18" CULVERT INLET.	1+65	20420	INSTALL NONDRIVEABLE WATERBAR. TIE INTO CUTBANK.
8+80	60708 30305	CLEAN 18" CULVERT INLET. INLET IS BURIED. RECONDTION DITCH TO STATION 10+40 (TOTAL=160). CLEAN/EXCAVATE MINIMUM 12" DEEP.	6+80	20420	INSTALL NONDRIVEABLE WATERBAR.
11+00	20103	END ROAD WAY/CLEARING (TOTAL=1,100'). CONTRACTOR MAY OPT TO TAKE EQUIPMENT BEYOND THIS STATION, BUT ADDITIONAL CLEARING WILL NOT BE PAID FOR. WORK BEYOND THIS STATION WAS PLANNED TO BE DONE WITH HAND LABOR.	8+25	20420	INSTALL NONDRIVEABLE WATERBAR.
15+35	60708	CLEAN 36" x 24" CULVERT OUTLET.	10+15	20420	INSTALL NONDRIVEABLE WATERBAR (IMPROVE EXISTING DRAIN DIP).
30+00	60708	CLEAN 18" CULVERT INLET. INLET IS BURIED.	11+40	60708	CLEAN CULVERT INLET. DO NOT UNDERCUT SLOPE.
38+50	60708	CLEAN 18" CULVERT INLET WITH DROP INLET. PERMANENTLY REMOVE METAL LID FROM TOP OF DROP INLET WITHOUT DAMAGING THE INLET AND PLACE LID AGAINST BANK DOWNGRADE OF INLET. HAND TOOLS SUCH AS WRENCH, HACK SAW, AND PRY BAR MAY BE NEEDED.	11+90	20420	INSTALL NONDRIVEABLE WATERBAR.
40+20	60708	CLEAN 24" CULVERT INLET AND OUTLET.	13+65	20420	INSTALL NONDRIVEABLE WATERBAR (IMPROVE EXISTING DRAIN DIP).
41+80	60708	CLEAN 24" CULVERT INLET AND OUTLET.	17+00	20420	INSTALL NONDRIVEABLE WATERBAR (IMPROVE EXISTING DRAIN DIP).
55+50	60708	CLEAN 24" CULVERT INLET AND OUTLET. END ROAD #4433A WORK.	18+65	20420	INSTALL NONDRIVEABLE WATERBAR.
			23+90	20420	CLEAN CULVERT INLET. INSTALL ROCK GRADE CONTROL STRUCTURE UPSTREAM OF CULVERT INLET AS DIRECTED BY CO.
			26+00	20420	INSTALL NONDRIVEABLE WATERBAR (IMPROVE EXISTING DRAIN DIP).
			26+80	60708	INSTALL NONDRIVEABLE WATERBAR.
			34+35	60708	CLEAN CULVERT INLET AND OUTLET. OUTLET LOCATION HAS BEEN FLAGGED. DO NO UNDERCUT FILL SLOPE WHEN CLEANING OUTLET. OUTLET MAY NEED TO BE CLEANED BY HAND.
			41+20	30305	RECONDTION DITCH TO CULVERT AT STATION 41+45 (TOTAL=25'). 8-12" DEEP.
			41+45	60708	CLEAN CULVERT INLET AND OUTLET. RESHAPE DITCH BLOCK (IF PRESENT) TO ALLOW WATER TO FLOW DOWN DITCH FROM STATION 41+20 IF CULVERT CAPACITY IS EXCEEDED.
			49+25	60708	CLEAN CULVERT INLET.
			57+60	20103	ROADWAY CLEARING TRANSITIONS FROM LIGHT TO MODERATE CLEARING. 1.3' DIAMETER ALDER SWEEPS INTO ROADWAY FROM DITCH AND 1-4' DIAMETER CONIFERS IN ROADWAY.
			-58+80	20420	INSTALL DITCH DRAIN WATERBAR UPGRADE OF RECONTOURED MATERIAL FROM CULVERT EXCAVATION AT STATION 59+20.
			59+20	20301	EXCAVATE ROAD FILL AND REMOVE 18" CULVERT AT STREAM CROSSING.
			60+00	20420	CONSTRUCT STREAM CHANNEL CATEGORY I. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. SALVAGE AND STOCKPILE ALL ROCK >12" DIAMETER DURING FILL REMOVAL.
			60+80	62201	RECONSTRUCT CHANNEL SO THAT THE NEW GRADE BLENDS INTO EXISTING CHANNEL WHICH IS 2' BELOW EXISTING CULVERT OUTLET. STABILIZE CHANNEL AS DIRECTED BY CO.
				20301	EXCAVATE ROAD FILL AND REMOVE 18" CULVERT AT STREAM CROSSING.
				20420	CONSTRUCT STREAM CHANNEL CATEGORY II. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. SALVAGE AND STOCKPILE ALL ROCK >12" DIAMETER DURING FILL REMOVAL.
				62201	STABILIZE CHANNEL AS DIRECTED BY CO.
				20103	END ROADWAY CLEARING (TOTAL=6,080'). END ROAD #4433B WORK.

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
8	19

Road Storage and Decommissioning Log

Road #1998, #1998A, & #4425

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
ROAD #1998 STA 0+00		BEGIN ROAD #1998 WORK. JUNCTION WITH ROAD #331, MP 8.4 (1.8 MILES FROM JUNCTION OF RIVER ROAD AND US HIGHWAY 2. EQUIPMENT DROP POINT #2 ON MAP). VERY LIGHT CLEARING INCIDENTAL TO MOBILIZATION.	ROAD #1998A STA 0+00		BEGIN ROAD #1998A WORK. JUNCTION WITH ROAD #1998 STATION 11+40. VERY LIGHT CLEARING INCIDENTAL TO MOBILIZATION. REPAIR ANY WATERBARS DAMAGED BY EQUIPMENT TRAFFIC. INCIDENTAL TO MOBILIZATION.
0+25	20420	REMOVE EXISTING EARTH BERM FOR ACCESS. MODIFY APPROXIMATELY 28 EXISTING NONDRIVEABLE WATERBARS TO ALLOW VEHICLE ACCESS TO STATION 54+00. RECONSTRUCT ALL DRIVEABLE WATERBARS AS FLAGGED BY THE CO. INSTALL DOUBLE EARTH BERM.	4+30		NO HIGHWAY VEHICLE ACCESS PAST THIS STATION. WORK ON ROAD ESTIMATED TO BE COMPLETED IN 1-2 DAYS.
11+40	20427	JUNCTION WITH ROAD 1998A.	5+20		EXISTING CROSS CHANNEL WITH PERENNIAL SPRING FLOW.
49+95	20420	INSTALL NONDRIVEABLE WATERBAR TO DIVERT SEASONAL FLOW.	6+60		JUNCTION WITH ROAD #1998A--STAY TO THE LEFT.
51+30		END ROADWAY CLEARING (TOTAL=5,130'). TRUCK TURN-AROUND AND AREA FOR STOCKPILING CONTRACTOR-SUPPLIED ROCK. NO HIGHWAY VEHICLE ACCESS BEYOND THIS POINT.	28+50	62201	STABILIZE STREAM CROSSING AS DIRECTED BY CO. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. END ROAD #1998A WORK.
52+00		PREVIOUSLY RECONToured STREAM CHANNEL. PASSABLE BY EXCAVATOR WITHOUT MODIFICATION.	ROAD #4425 STA 0+00		BEGIN ROAD #4425 WORK. JUNCTION WITH ROAD #331, MP 10.8. REMOVE GATE AND DISPOSE OFF OF NATIONAL FOREST. RECONSTRUCT DOUBLE EARTH BERM AS LOCATED BY CO. END ROAD #4425 WORK.
54+00	64802 62201	REPAIR ANY DAMAGE TO EXISTING WATERBARS BEYOND THIS STATION CAUSED BY EQUIPMENT TRAFFIC. INCIDENTAL TO MOBILIZATION. DELIVER AND PLACE 38 CLASS 2 CHANNEL ROCKS FROM STAGING AREA AT 51+30 WITH EXCAVATOR. MODIFY PREVIOUSLY RECONToured STREAM CROSSING TO ALLOW FOR EXCAVATOR ACCESS TO STATION 81+00. AFTER WORK AT STATION 81+00 IS COMPLETED, RECONSTRUCT AND STABILIZE STREAM CHANNEL AS DIRECTED BY CO. SEE STREAM CHANNEL RECONSTRUCTION NOTES.		20301 20427	
31+00	64802 62201	DELIVER AND PLACE 14 CLASS 2 CHANNEL ROCKS FROM STAGING AREA AT 51+30 WITH EXCAVATOR. STABILIZE STREAM CROSSING AS DIRECTED BY CO. SEE STREAM CHANNEL RECONSTRUCTION NOTES. END ROAD #1998 WORK.			

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
9	19

Road Storage and Decommissioning Log

Road #2376, #2380, #14347, & #14349

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
ROAD #2376 STA 0+00	20301 20427	BEGIN ROAD #2376 WORK. JUNCTION WITH ROAD #2394 AT MILE POST 6.0 (1.2 MILES FROM JUNCTION OF ROAD #752 AND EQUIPMENT DROP POINT #3 ON MAP). REMOVE GATE AND DISPOSE OFF OF NATIONAL FOREST. INSTALL DOUBLE EARTH BERMS AS DIRECTED BY CO. END ROAD # 2376 WORK.	ROAD #14347 STA 0+00	20103 21103 21103	BEGIN ROAD #14347 WORK. JUNCTION WITH ROAD #2380, STATION 18+00. BEGIN ROADWAY CLEARING. MODERATE VEGETATION (1-4" DIAMETER CONIFERS AND SHRUBS INCLUDING ALDER THAT SWEEPS INTO ROADWAY FROM CUTBANK). REMOVE EARTH BERM. IT DOES NOT NEED TO BE REPLACED. BEGIN ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION). END ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION). BEGIN ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). LOCATION IS APPROXIMATE. THE PARTIAL RECONTOUR INTO RECONTOURED FILL FROM STREAM CHANNEL EXCAVATION AT STATION 10+70.
ROAD #2380 S+A 0+00		BEGIN ROAD #2380 WORK. JUNCTION WITH ROAD #2376 (3.2 MILES FROM JUNCTION OF ROAD #752 AND EQUIPMENT DROP POINT 3 ON MAP). THIS ROAD IS NOT FLAGGED EXCEPT AT SITE NUMBERS. VERY LIGHT CLEARING INCIDENTAL TO MOBILIZATION.	8+30	21103 21103	END ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION). BEGIN ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR, 3:1 OUTSLOPE). LOCATION IS APPROXIMATE. THE PARTIAL RECONTOUR INTO RECONTOURED FILL FROM STREAM CHANNEL EXCAVATION AT STATION 10+70.
0+25	20427	REMOVE EXISTING EARTH BERM FOR ACCESS. INSTALL DOUBLE EARTH BERM AT EXISTING LOCATION. MAINTAIN FOOT TRAIL ACCESS AROUND BARRIER.	10+70	20420	CONSTRUCT STREAM CHANNEL CATEGORY I. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. SALVAGE AND STOCKPILE ALL ROCK >12" DIAMETER DURING FILL EXCAVATION. SCATTER WOOD FROM CROSSING STRUCTURE ON DISTURBED AREAS FOLLOWING EXCAVATION. RECONSTRUCT MAIN CHANNEL AND EPHEMERAL CHANNEL ENTERING FROM WEST AS DIRECTED BY CO.
18+00		JUNCTION WITH ROAD #14347			
-64+40	62201	PERFORM STREAM CHANNEL WORK AND CONSTRUCT OVERFLOW CHANNEL ACROSS ROAD. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS.	11+40	20420	INSTALL DITCH DRAIN WATERBAR. ARMOR OUTLET WITH 5 CY OF 6-10" DIAMETER ROCK GENERATED FROM EXCAVATION AT STATION 10+70.
54+70	20420	INSTALL NONDRIVEABLE WATERBAR.		20103	END ROADWAY CLEARING (TOTAL=1,140'). END ROAD #14347 WORK.
67+00		JUNCTION WITH ROAD # 4349 END ROAD #2380 WORK.	ROAD #14349 STA 0+00		BEGIN ROAD #14349 WORK. JUNCTION WITH ROAD #2380, STATION 67+00. VERY LIGHT CLEARING INCIDENTAL TO MOBILIZATION. STREAM CROSSING. NO WORK PLANNED AT THIS SITE. INSTALL NONDRIVEABLE WATERBAR. ADJUST LOCATION SLIGHTLY TO COINCIDE JUST BEFORE WASTE AREA FROM STATION 21+80.
			12+80	20420	CONSTRUCT STREAM CHANNEL CATEGORY II. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. SALVAGE AND STOCKPILE ALL ROCK >12" DIAMETER DURING FILL REMOVAL. CONSTRUCT TRAIL THROUGH STREAM CROSSING. REMOVE CULVERT FROM PROJECT AREA. STABILIZE CHANNEL AS DIRECTED BY CO. INSTALL NONDRIVEABLE WATERBAR. END ROAD #14349 WORK.
			21+20	20420	
			21+80	20420	
			23+85	20301 62201 20420	

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
10	19

Road Storage and Decommissioning Log

Road #4651 & #4650

Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
ROAD #4651 STA 0+00	20427	BEGIN ROAD #4651 WORK, JUNCTION WITH ROAD #2384 (EQUIPMENT DROP POINT #4 ON THE MAP) ROAD #4651 GOES STRAIGHT AHEAD. VERY LIGHT CLEARING INCIDENTAL TO MOBILIZATION INSTALL DOUBLE EARTH BERM. JUNCTION WITH ROAD #4650 ON THE RIGHT. END ROAD #4651 WORK.	ROAD #4650 STA 0+00	21103	BEGIN ROAD #4650 WORK, BEGIN ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION), BEGIN ROADWAY CLEARING, MODERATE VEGETATION WITH TREES UP TO 8" DIAMETER.
32+70			4+00	20103	BEGIN ROADWAY CLEARING, MODERATE VEGETATION WITH TREES UP TO 8" DIAMETER.
			4+80	20420	DESIGNATED WASTE DISPOSAL AREA.
			5+30	62201	CONSTRUCT STREAM CHANNEL CATEGORY 1, SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. EXCAVATE ROAD FILL AND REMOVE BURIED LOG STRUCTURE AT STREAM CHANNEL. STABILIZE STREAM CHANNEL AS DIRECTED BY THE CO.
			6+55	21103 20420	END ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION) (TOTAL=655) CONSTRUCT STREAM CHANNEL CATEGORY 1, SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. EXCAVATE ROAD FILL AND REMOVE BURIED LOG STRUCTURE AT STREAM CHANNEL. HAUL EXCAVATED MATERIAL TO DESIGNATED WASTE SITE AT STATION 4+80. SALVAGE AND STOCKPILE ALL ROCK >8" DURING FILL EXCAVATION. SCATTER LOGS AND OTHER WOOD MATERIAL FROM THE STRUCTURE ON DISTURBED AREAS FOLLOWING EXCAVATION.
			6+75	62201 20103	STABILIZE MAIN CHANNEL AND TRIBUTARY STREAM CHANNEL ENTERING FROM ROAD #4650A AS DIRECTED BY CO. END ROADWAY CLEARING (TOTAL=275), END ROAD #4651 WORK.

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
11	19

Road Storage and Decommissioning Log

Road #4419, #4420, #4420A, & #4429F

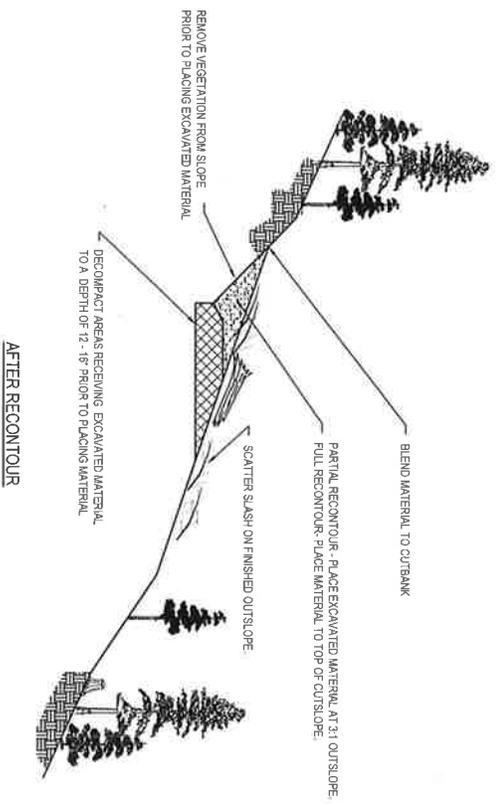
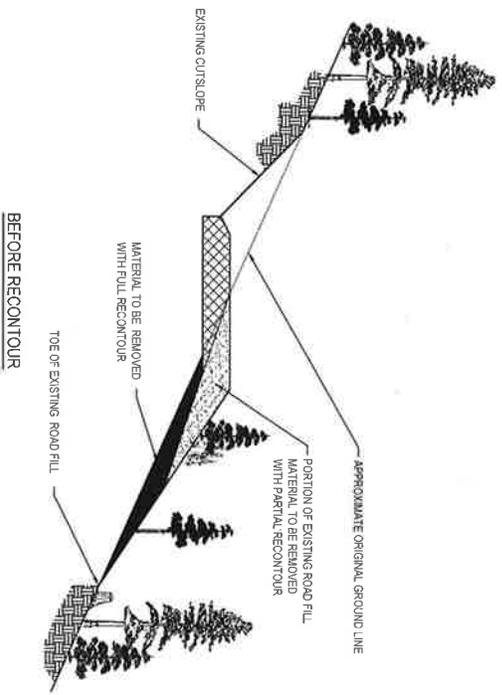
Station or Mile Post	Pay Item Number	Description of Work	Station or Mile Post	Pay Item Number	Description of Work
ROAD #4419 STA 0+00	20427	BEGIN ROAD #4419 WORK. REMOVE EXISTING EARTH BERM FOR ACCESS. JUNCTION WITH ROAD #4429 (0.8 MILES FROM ROAD #2391, EQUIPMENT DROP POINT #5 ON MAP). VERY LIGHT CLEARING INCIDENTAL TO MOBILIZATION. INSTALL DOUBLE EARTH BERM.	ROAD #4429F STA 0+00	20103	BEGIN ROAD #4429F WORK. 2.7 MILES FROM ROAD #2391 (EQUIPMENT DROP POINT #5 ON THE MAP). JUNCTION WITH ROAD #4429. HEAVY VEGETATION WITH 1-4" DIAMETER SHRUBS AND CONIFERS WITH SOME TREES UP TO 8-10" DIAMETER.
23+40		JUNCTION WITH ROAD #4420 ON LEFT. END ROAD #4419 WORK.	-0+20	21103	BEGIN ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION). END ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION) AT EDGE OF WASTE MATERIAL FROM STREAM CHANNEL, CATEGORY 1 CONSTRUCTION AT STATION 0+60.
ROAD #4420 STA 0+00	20103 20420	BEGIN ROAD #4420 WORK. JUNCTION WITH ROAD #4419, STATION 23+40. REMOVE EXISTING EARTH BERM FOR ACCESS. IT DOES NOT NEED TO BE REPLACED. BEGIN ROADWAY CLEARING. MODERATE BRUSH. MODIFY APPROXIMATELY 20 EXISTING NONDRIVEABLE WATERBARS TO ALLOW VEHICLE ACCESS. RECONSTRUCT ALL NONDRIVEABLE WATERBARS AS FLAGGED BY THE CO.	0+60	20420	CONSTRUCT STREAM CHANNEL, CATEGORY 1. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. SALVAGE AND STOCKPILE ALL ROCK >12" DIAMETER DURING FILL REMOVAL. REMOVE CULVERT FROM NATIONAL FOREST. CONSTRUCT AND STABILIZE STREAM CHANNEL WHICH IS 12" BELOW EXISTING CULVERT OUTLET. THAT GRADE BLEND INTO EXISTING CHANNEL WHICH IS 12" BELOW EXISTING CULVERT OUTLET.
30+85	20301	REMOVE DITCH RELIEF CULVERT (8' MAX. DEPTH x 35' LONG). REMOVE FROM NATIONAL FOREST.	-0+90	21103	BEGIN ROADWAY OBLITERATION, METHOD 1 (FULL ROAD RECONTOUR) AT EDGE OF WASTE MATERIAL FROM STREAM CHANNEL, CATEGORY 1 CONSTRUCTION AT STATION 0+60.
31+20	20103	JUNCTION WITH ROAD #4420A ON LEFT. END ROAD ROADWAY CLEARING (TOTAL=3,120') END ROAD #4420 WORK.	1+50	21103 21103	END ROADWAY OBLITERATION, METHOD 1 (FULL ROAD RECONTOUR) (TOTAL=60'). BEGIN ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR).
ROAD #4420A STA 0+00	20103	BEGIN ROAD #4420A WORK. JUNCTION WITH ROAD #420. STATION 31+20. BEGIN ROADWAY CLEARING. HEAVY BRUSH WITH 1-2" ALDER, DOWN LOGS AND SCATTERED 6-18" DIA. METER TREES ALONG ROAD EDGE. BEGIN ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION)	3+45	21103 20103	END ROADWAY OBLITERATION, METHOD 5 (PARTIAL ROAD RECONTOUR) (TOTAL=195'). END ROADWAY CLEARING (TOTAL=345'). END ROAD #4429F WORK.
2+45	20420	INSTALL DITCH DRAIN WATERBAR.			
3+45	20420	CONSTRUCT CROSS CHANNEL, ARMOR OUTLET AND FILL SLOPE (3' WIDE x 60' LONG).			
5+75	21103 20420	END ROADWAY OBLITERATION, METHOD 3 (DECOMPACTION) (TOTAL=575'). INSTALL DITCH DRAIN WATERBAR AS FLAGGED BY CO. LOCATION MAY CHANGE TO ACCOMMODATE WASTE AREA FROM STATION 6+40.			
6+40	20420	CONSTRUCT STREAM CHANNEL, CATEGORY II. SEE STREAM CHANNEL RECONSTRUCTION LIST FOR DETAILS. EXCAVATE AND REMOVE BURIED LOG STRUCTURE. SALVAGE AND STOCKPILE ALL ROCK >16" DIAMETER DURING FILL REMOVAL. SCATTER WOOD FROM CROSSING STRUCTURE ON DISTURBED AREAS FOLLOWING EXCAVATION.			
7+80	62201 20103	CONSTRUCT AND STABILIZE STREAM CHANNEL AS DIRECTED BY THE CO. END ROADWAY CLEARING (TOTAL=750'). END ROAD #4420A WORK.			

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
12	19

Road Obliteration

ITEM 21103, METHOD 1 (FULL RECONTOUR) & METHOD 5 (PARTIAL RECONTOUR)

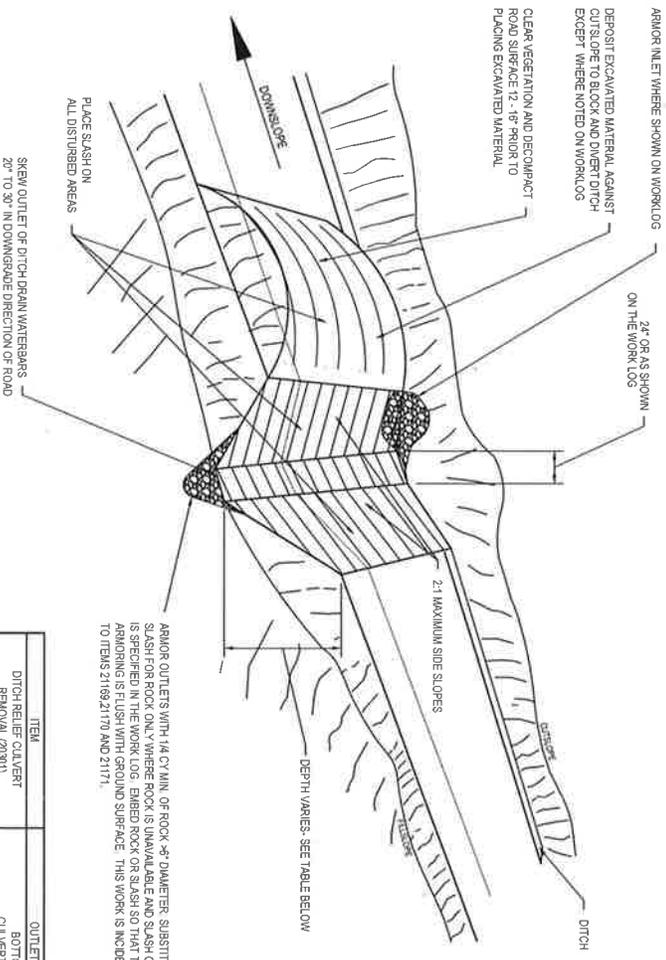


OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
13	19

Cross Drainage Details

ITEM 20301, REMOVAL OF DITCH RELIEF CULVERT
 ITEM 20420, DRAINAGE EXCAVATION, CROSS CHANNEL
 ITEM 20420, DRAINAGE EXCAVATION, DITCH DRAIN WATERBAR



ARMOR OUTLETS WITH 1/4 CY MIN. OF ROCK -6\"/>

ITEM	OUTLET DEPTH*
DITCH RELIEF CULVERT REMOVAL (20301)	BOTTOM OF CULVERT OUTLET
CROSS CHANNEL (20420)	TOP OF ROAD FILL
DITCH DRAIN WATER BAR (20420)	MINIMUM 12\"/>

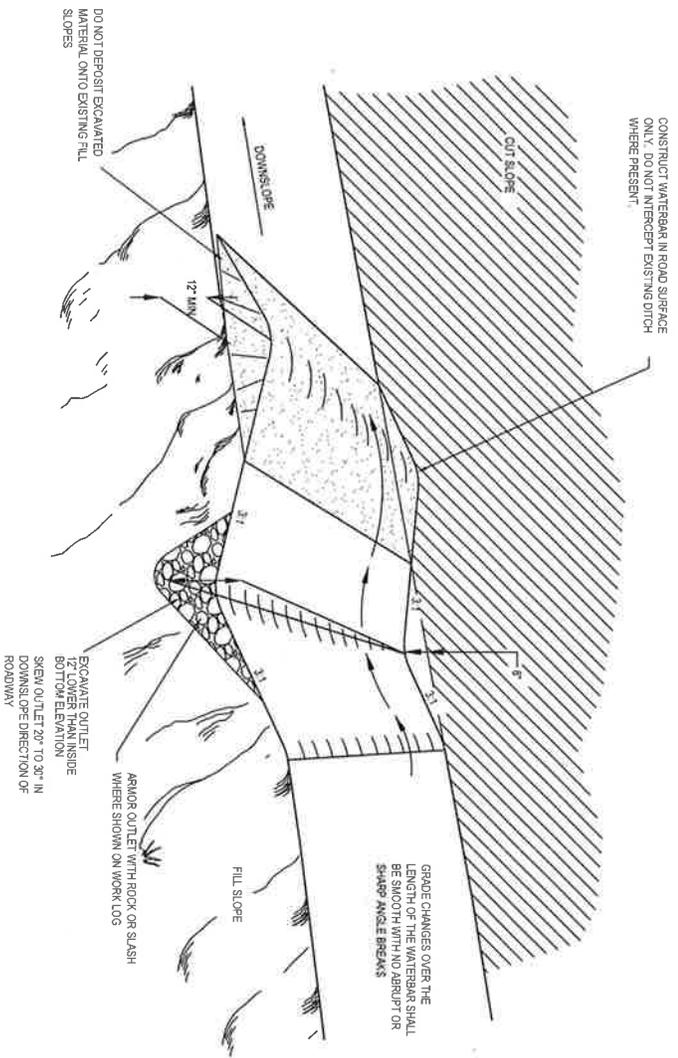
*UNLESS SHOWN OTHERWISE IN WORK LOG

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
14	19

Nondrivable Waterbar

ITEM 20420 DRAINAGE EXCAVATION, NONDRIVABLE WATERBAR

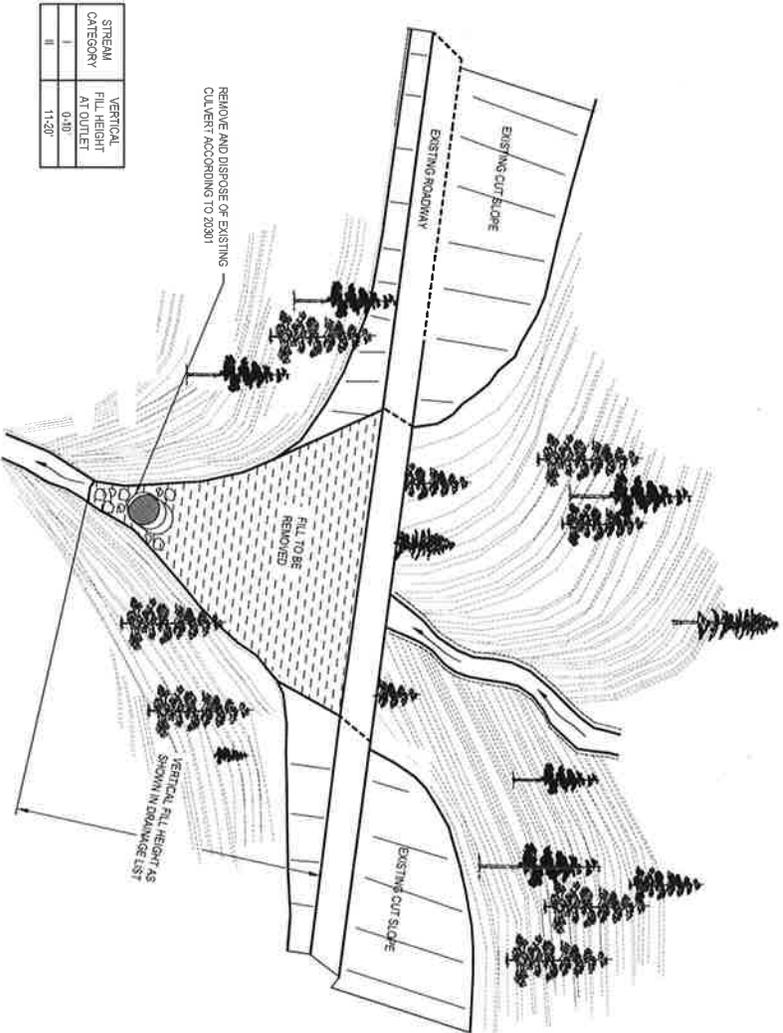


OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
15	19

Stream Channel Restoration - Before

ITEM 20420, DRAINAGE EXCAVATION, STREAM CHANNEL, CATEGORY I & CATEGORY II



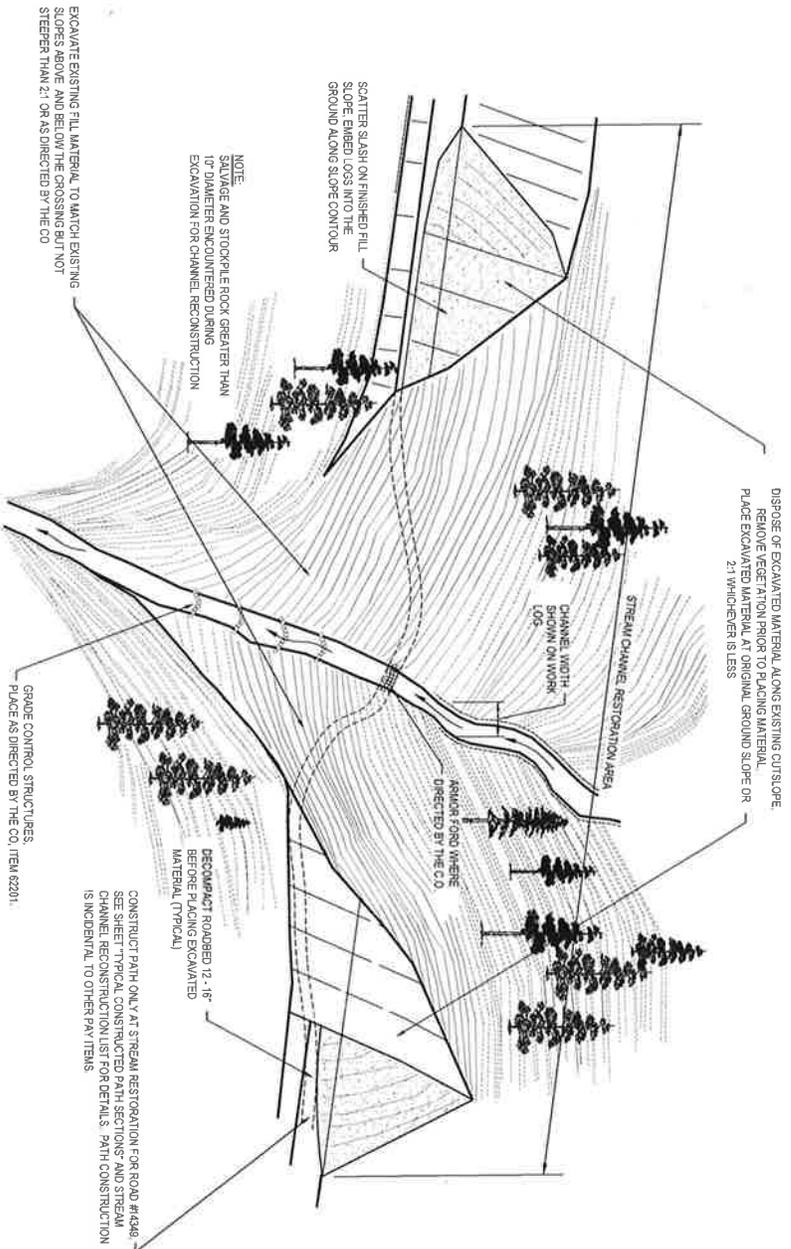
STREAM CATEGORY	VERTICAL FILL HEIGHT AT OUTLET
I	0'-10"
II	1'-20"

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
16	19

Stream Channel Restoration - After

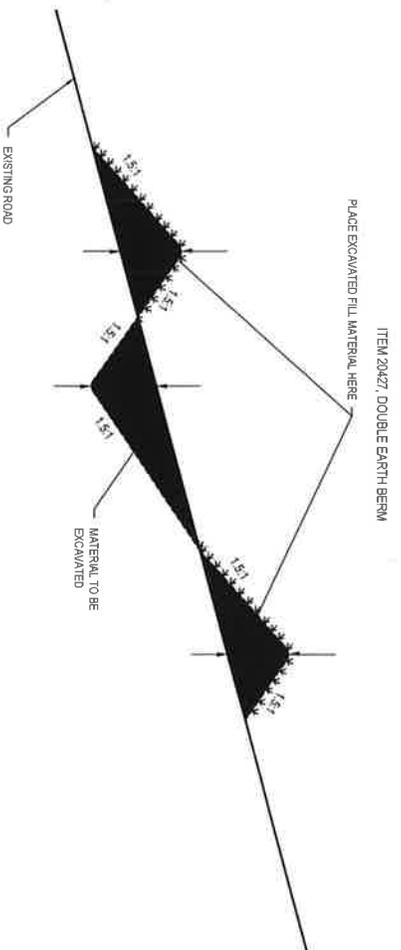
ITEM 20420, DRAINAGE EXCAVATION, STREAM CHANNEL CATEGORY I & CATEGORY II



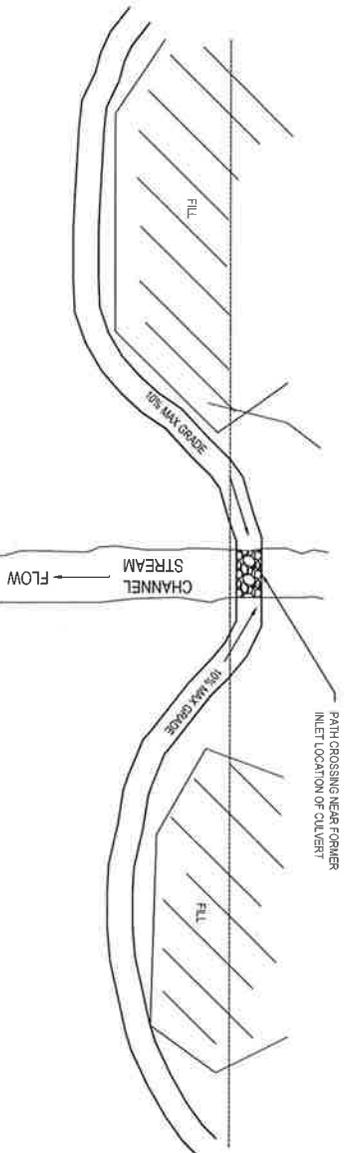
OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
17	19

Double Earth Berm & Path Construction



PATH CONSTRUCTION INCIDENTAL TO OTHER PAY ITEMS.
 PATH CONSTRUCTION ONLY PERTAINS TO STREAM CHANNEL.
 RESTORATION WORK ON ROAD #14349.

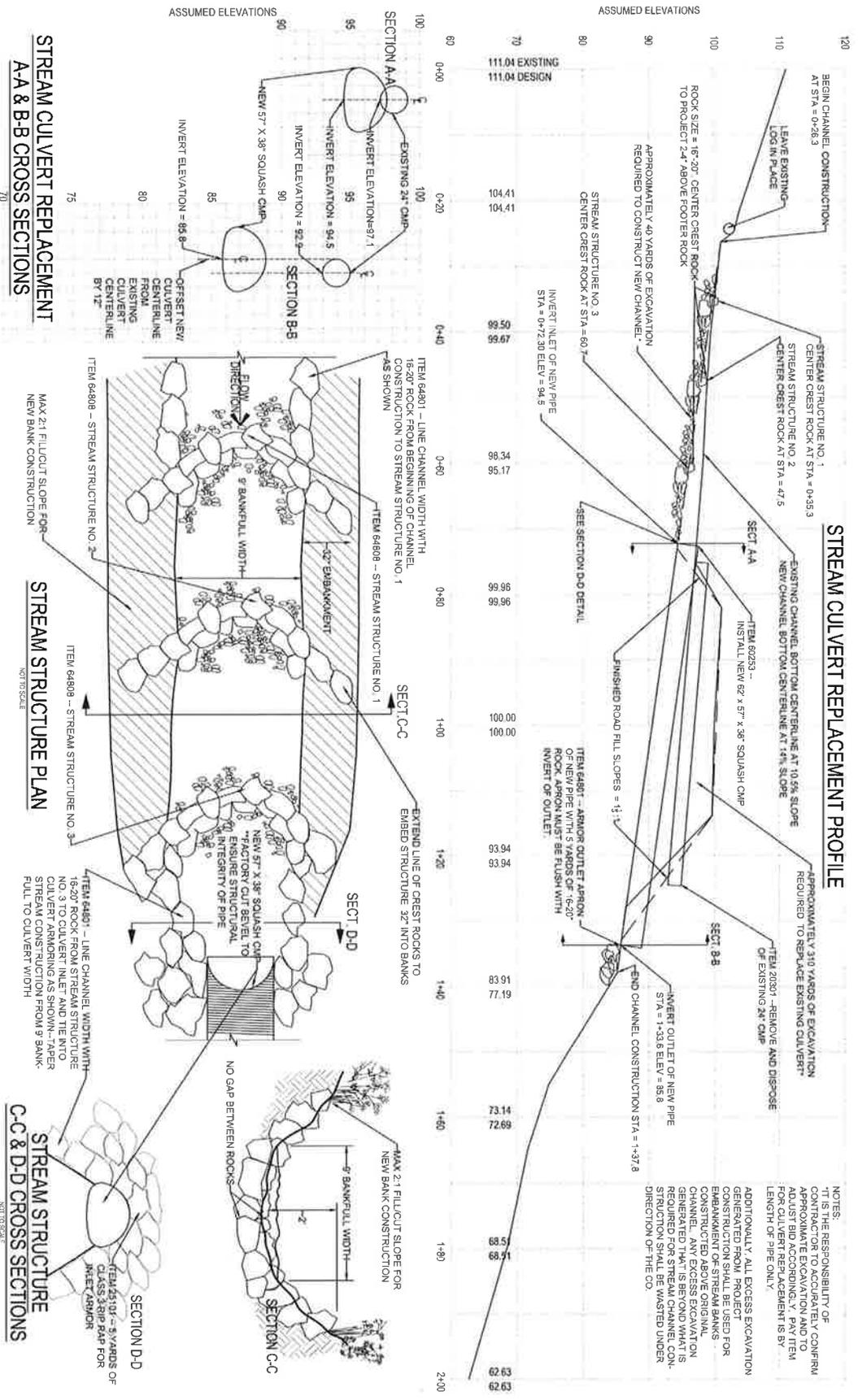


PATH CONSTRUCTION PLAN VIEW

OLY ROAD STORAGE AND DECOMMISSIONING PROJECT

SHEET NUMBER	TOTAL SHEETS
18	19

Road #4433 Squash Pipe Culvert Replacement



STREAM CULVERT REPLACEMENT PROFILE

STREAM CULVERT REPLACEMENT PLAN

STREAM STRUCTURE C-C & D-D CROSS SECTIONS

SHEET NUMBER	TOTAL SHEETS
19	19

Oly Road Storage and Decommissioning Project - Government Cost Estimate 6/22/2016 (Modified by HPerrine)

Pay Item No.	Pay Item Description	Method of Measure	Pay Unit	Total Quantity	Unit Price	Amount
15101	Mobilization	LSQ	LS	1	11697.76	11697.76
20103	Clearing and Grubbing	AQ	LF	18990	0.75	14242.50
20301	Removal of Gate and Culverts	AQ	EA	9	200.00	1800.00
20420	Drainage Excavation, Stream Channel Category I	AQ	EA	5	942.00	4710.00
20420	Drainage Excavation, Stream Channel Category II	AQ	EA	3	2193.00	6579.00
20420	Drainage Excavation, Cross Channel	AQ	EA	1	240.00	240.00
20420	Drainage Excavation, Ditch Drain Waterbar	AQ	EA	16	81.00	1296.00
20420	Drainage Excavation, Nondriveable Waterbar, Compaction Method B	AQ	EA	66	44.33	2925.78
20427	Double Earth Berm	AQ	EA	7	187.00	1309.00
21103	Roadway Obliteration, Method 1 (Full Recontour)	CQ	LF	60	4.50	270.00
21103	Roadway Obliteration, Method 3 (Road Decompaction)	CQ	LF	2080	0.53	1102.40
21103	Roadway Obliteration, Method 5 (Partial Recontour	CQ	LF	315	3.00	945.00
25101	Placed Riprap, Class 2, Commercial Source	CQ	CY	20	146.54	2930.80
25101	Placed Riprap, Class 3, Commercial Source	CQ	CY	5	146.54	732.70
30305	Road Reconditioning, Ditch	AQ	LF	415	1.43	593.45
60253	57"x38" CSPA, Includes Excavation, Compaction Method B	AQ	LF	62	235.00	14570.00
60708	Cleaning Culverts Inlet/Outlet	AQ	EA	17	140.00	2380.00
62201	Equipment Rental, Hydraulic Excavator w/ Thumb	AQ	HR	64	140.00	8960.00
62501	Seeding, Dry Method, Government Furnished	CQ	AC	5.2	260.00	1352.00
64801	Placed Channel Rock, Class 2, Method A	CQ	CY	10	171.54	1715.40
64802	Placed Channel Rock, Class 3, Method A	AQ	EA	52	56.00	2912.00
64803	Stream Grade Control Structures	AQ	EA	3	515.00	1545.00
TOTAL						84808.79

Oly Road Storage and Decommissioning Project - Cost Estimate

Pay Item No.	Pay Item Description	Method of Measurement	Pay Unit	Total Quantity	Unit Price	Amount	Basis for Estimate
15101	Mobilization	LSQ	LS	1	6337.00	6569.39	10% of project cost
20301	Culvert and Gate Disposal	AQ	EA	7	152.00	1064.00	Avg. for low 3 bidders - Madge
20401	Structural Excavation & Backfill	DQ	CY	350	20.00	7000.00	Heath's Estimate
21160	Roadway Clearing and Grubbing	AQ	LF	18990	0.50	9495.00	Add for Rd 4433/Sta. 51+70?
21161	Stream Channel Excavation - Category I	AQ	EA	5	942.00	4710.00	Avg. for low 3 bidders - Madge
21162	Stream Channel Excavation - Category II	AQ	EA	3	2193.00	6579.00	Based on estimated hours at the three crossings.
21165	Full Road Recontour	AQ	LF	60	4.50	270.00	Estimated 50% more work than partial
21166	Partial Road Recontour, 3:1 Outslope	AQ	LF	315	3.00	945.00	Avg. for low 3 bidders - Madge
21167	Road Decompaction	AQ	LF	2080	0.53	1102.40	Avg. for low 3 bidders - Madge
21169	Ditch Relief Culvert Removal	AQ	EA	1	400.00	400.00	SWAG based on Cross Channel bid.
21170	Cross Channel	AQ	EA	1	240.00	240.00	Avg. for low 3 bidders - Madge
21171	Ditch Drain Waterbar	AQ	EA	16	81.00	1296.00	Avg. for low 3 bidders - Madge
21172	Surface Waterbar	AQ	EA	66	44.33	2925.78	Avg. for low 3 bidders - Madge
21174	Double Earth Berm	AQ	EA	5	187.00	935.00	Avg. for low 3 bidders - Madge
25170	Deliver and Place Class 2 Riprap	DQ	CY	20	146.54	2930.80	Assumed similar to Class II?
25171	Deliver and Place Class 3 Riprap (Inlet)	DQ	CY	5	146.54	732.70	Heath's Estimate
25172	Deliver and Place Rock 16" - 20" (Outlet)	DQ	CY	10	171.54	1715.40	Heath's Estimate

Pay Item No.	Pay Item Description	Method of Measurement	Pay Unit	Total Quantity	Unit Price	Amount	Basis for Estimate
25173	Deliver 16" - 20" Rock (Rd 1998)	AQ	EA	52	56.00	2912.00	See detail
30370	Road Reconditioning - Ditch Improvements	AQ	LF	415	1.43	593.45	Avg. for low 3 bidders - Madge
30371	Road Reconditioning - Culvert Inlet/Outlet Cleaning	AQ	EA	17	140.00	2380.00	Avg. for low 3 bidders - Madge
60201	Install 57" x 38" CMP with Beveled Inlet, Compaction Method B	AQ	LF	62	92.00	5704.00	Heath's Estimate
62201	Excavator - Large	AQ	HR	64	140.00	8960.00	Avg. for low 3 bidders - Madge
62501	Seeding - Gov't Furnished?	DQ	AC	5.2	242.00	1258.40	See detail
64803	Stream Grade Control Structure	AQ	EA	3	515.00	1545.00	Heath's Estimate
TOTAL						72263.32	

Item No.	Descrip	Road 4433	Road 4433A	Road 4433B	Road 1998	Road 1998A	Road 2380	Road 14347	Road 14349	Road 4650/4651	Road 4419/4420/4420A	Road 4429F	Total Quantity
15101	Drive - Lowboy Hr	4	0	0	3		3			3	4	3	20
	Walk - Excav Hr	3					3					3	9
	Incid - Excav Hr				2	1	2			1	1		7
21162	Excav			13					16		18		47
30370	Ditch/Culv Clean - Excav (18 sites) Hand (7 sites)	80 min = 1.33 hr	25 min = 0.42 hr	50 min = 0.83 hr									2.6
			480 min = 8 hr	30 min = 0.5 hr									8.5
62201	Excav Hr	8	0	4	36	6	1	2	3	3	3	2	68
62501	Seed Ac Labor Hr	0.5 4	0.3 2	0.5 4	1 3	0.2 2	0.1 1	0.2 2	0.5 3	0.5 2	1.2 4	0.2 1	5.2 28

Lowboy	150/hr
Excav	140/hr
Dump Tr	120/hr
Labor	45/hr

x 140/hr =	/18 sites =	\$29.80 Wt Avg
\$364	\$20/each	
x45/hr = \$382	/7 sites = \$55/each	

Description	Calculation	Cost
Purchase cost from Noble	52 rocks = 6.5 CY x \$10/CY = \$65	65
Avg. rock size	16-20" Rock (avg = 18" cubed = 1.5 feet cubed = 3.375 cf/27 = 0.125 CY/rock	
Rocks / dump truck load	12 yd truck/0.125 CY/rock = 96 rocks packed perfectly Assume 50% voids = 48 rocks, therefore 2 RT loads for 52 rocks.	
Dump truck haul cost	2 RT x 4 hours/RT x \$120/hr = \$960 for haul of 52 rocks	960
Excav haul cost to 54+00	Pack 4 rocks at a time with excavator from 51+00 to 54+00. 0.2 hr RT 38 rocks/4 per bucket load = 9.5 RT = 9.5 hours x \$140/hr = \$1330	1330
Excav haul cost to 81+00	Pack 4 rocks at a time with excavator from 51+00 to 81+00. 1 hr RT 14 rocks/4 per bucket load = 4 RT = 4 hours x \$140/hr = \$560	560
Total Cost		2915
Cost per rock	\$2915/52 rocks = \$56/rock	56

North Lynx Creek Culvert Replacement Cost Estimate

Item No.	Item Description
15101	MOBILIZATION (10% of sum of all other line items)
15713	SOIL EROSION/POLLUTION CONTROL
20102	CLEARING & GRUBBING
20301	REMOVAL OF EXISTING 24" ROUND CMP
20401	STRUCTURAL EXCAVATION & BACKFILL
25101	RIPRAP CLASS 3
25201	CHANNEL ROCK CLASS 1
60202	INSTALL 57" x 38" Squash CMP, COMPACTION METHOD B
62501	Seeding
64803	STREAM STRUCTURES

Method of Measure	Units	Quantities	Unit Price	Amount
LSQ	LS	1	\$1,653.25	\$1,653.25
LSQ	LS	1	\$1,000.00	\$1,000.00
DQ	Acre	0.25	\$3,465.00	\$866.25
AQ	Ea	1	\$303.98	\$303.98
DQ	CY	350	\$20.00	\$7,000.00
DQ	CY	5	\$146.54	\$732.69
DQ	CY	5	\$171.54	\$857.69
AQ	Ft	62	\$91.99	\$5,703.13
DQ	Acre	0.25	\$275.00	\$68.75
AQ	Ea	3	\$514.61	\$1,543.84
Total=				\$18,185.73

Volume= Extra light (0-5 MBF/Acre)
\$/Acre= 2310
Topo Factor= 1.2
Slash/Cleanup Factor= 1.25

Total Cost= \$3,465.00

Approximate time to remove culvert with machinery (hrs)= 2.5
Caterpillar 312C (5 years old) \$/hr= 72.1
Excavator Operator (Montana Zone 3) \$/hr= 49.49

Total Cost= \$303.98

Estimated quantity of excavation (CY)= 350

Costs \$/CY= 20

Total Cost= \$7,000.00

Fixed Cost (\$/CY)= 0.83 (12 CY End Dump)
Haul Miles from Libby, MT= 60 (Round Trip)
Variable Cost (\$/CY/mi)= 1.25 (Average Speed=25 mph; 12 CY End Dump)

Machine Placed-Labor 20%= 1.06
Riprap - Assume Base Cost (\$/CY)= 75
Channel Rock - Assume Base (\$/CY)= 100

Riprap Total Cost/CY= \$146.54
Channel Rock Total Cost/CY= \$171.54

Approximately CY of Rock Per Structure= 3
Channel Structure Cost/ea= \$514.61

Length of pipe (ft)=	62	
Number of Bands=	2	
Convert bands to equivalent feet (ft)=	2	
2.66" x .5" Corrugations, .109 gauge (\$/ft)=	68.25	(For 48" Round Pipe)
Between 30'-100' of arched (squash) factor=	1.25	
Beveled end treatment for 48" equivalent \$=	72.5	

Total Cost= \$5,703.13

Engineer's Estimate (Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
 Road Name N/A

Road No. 4433
 Length (Miles) 1.2

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 4,367.00	\$ 4,367.00
20103	Clearing and Grubbing	CQ	LF	6,200.00	\$ 0.75	\$ 4,650.00
20301	Removal of Gate and Culverts	AQ	EA	2.00	\$ 200.00	\$ 400.00
20420	Drainage Excavation, Ditch Drain Waterbar	AQ	EA	12.00	\$ 81.00	\$ 972.00
20420	Drainage Excavation, Nondrivable Waterbar, Compaction B	AQ	EA	5.00	\$ 44.33	\$ 221.65
20427	Double Earthberm	AQ	EA	1.00	\$ 187.00	\$ 187.00
25101	Placed Riprap, Class 2, Commercial Source	CQ	CY	20.00	\$ 146.54	\$ 2,930.80
25101	Placed Riprap, Class 3, Commercial Source	CQ	CY	5.00	\$ 146.54	\$ 732.70
30305	Road Reconditioning, Ditch	AQ	LF	225.00	\$ 1.43	\$ 321.75
60253	57"x38" CSPA, Includes Excavation, Compaction B	AQ	LF	62.00	\$ 235.00	\$ 14,570.00
60708	Cleaning Culverts, Inlet&Outlet	AQ	EA	3.00	\$ 140.00	\$ 420.00
62201	Equipment Rental, Hydraulic Excavator with Thumb	AQ	HR	2.00	\$ 140.00	\$ 280.00
62501	Seeding, Dry Method, Government Furnished	CQ	ACRE	0.50	\$ 260.00	\$ 130.00
64801	Placed Channel Rock, Class 2, Method A	CQ	CY	10.00	\$ 171.54	\$ 1,715.40
64808	Stream Grade Control Structures	AQ	EA	3.00	\$ 515.00	\$ 1,545.00

SUB-TOTAL: \$ 33,443.30

TOTAL ALL ROADS: \$ 84,808.79

Engineer's Estimate
(Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
Road Name N/A

Road No. 4433A
Length (Miles) 1.9

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 625.00	\$ 625.00
20103	Clearing and Grubbing	CQ	LF	1,100.00	\$ 0.75	\$ 825.00
20420	Drainage Excavation, Nondrivable Waterbar, Compaction B	AQ	EA	2.00	\$ 44.33	\$ 88.66
30305	Road Reconditioning, Ditch	AQ	LF	160.00	\$ 1.43	\$ 228.80
60708	Cleaning Culverts, Inlet&Outlet	AQ	EA	8.00	\$ 140.00	\$ 1,120.00
62501	Seeding, Dry Method, Government Furnished	CQ	ACRE	0.30	\$ 260.00	\$ 78.00

SUB-TOTAL: \$ 2,965.46
TOTAL ALL ROADS: \$ 84,808.79

Engineer's Estimate (Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
 Road Name N/A

Road No. 4433B
 Length (Miles) 1.2

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 1,283.00	\$ 1,283.00
20103	Clearing and Grubbing	CQ	LF	6,060.00	\$ 0.75	\$ 4,545.00
20301	Removal of Gate and Culverts	AQ	EA	2.00	\$ 200.00	\$ 400.00
20420	Drainage Excavation, Stream Channel Category 1	AQ	EA	1.00	\$ 5.00	\$ 5.00
20420	Drainage Excavation, Stream Channel Category 2	AQ	EA	1.00	\$ 3.00	\$ 3.00
20420	Drainage Excavation, Ditch Drain Waterbar	AQ	EA	1.00	\$ 81.00	\$ 81.00
20420	Drainage Excavation, Nondrivable Waterbar, Compaction B	AQ	EA	10.00	\$ 44.33	\$ 443.30
30305	Road Reconditioning, Ditch	AQ	LF	25.00	\$ 1.43	\$ 35.75
60708	Cleaning Culverts, Inlet&Outlet	AQ	EA	6.00	\$ 140.00	\$ 840.00
62201	Equipment Rental, Hydraulic Excavator with Thumb	AQ	HR	4.00	\$ 140.00	\$ 560.00
62501	Seeding, Dry Method, Government Furnished	CQ	ACRE	0.50	\$ 260.00	\$ 130.00

SUB-TOTAL: \$ 8,326.05

TOTAL ALL ROADS: \$ 84,808.79

Engineer's Estimate (Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
 Road Name N/A

Road No. 1998
 Length (Miles) 1.5

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 1,895.00	\$ 1,895.00
20420	Drainage Excavation, Nondrivable Waterbar, Compaction B	AQ	EA	27.00	\$ 44.33	\$ 1,196.91
20427	Double Earthberm	AQ	EA	1.00	\$ 187.00	\$ 187.00
62201	Equipment Rental, Hydraulic Excavator with Thumb	AQ	HR	37.00	\$ 140.00	\$ 5,180.00
62501	Seeding, Dry Method, Government Furnished	CQ	ACRE	1.00	\$ 260.00	\$ 260.00
64802	Placed Channel Rock, Class 2, Method A	AQ	EA	52.00	\$ 56.00	\$ 2,912.00

SUB-TOTAL: \$ 11,630.91

TOTAL ALL ROADS: \$ 84,808.79

Engineer's Estimate (Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
 Road Name N/A

Road No. 1998A
 Length (Miles) 0.5

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 422.00	\$ 422.00
62201	Equipment Rental, Hydraulic Excavator with Thumb	AQ	HR	6.00	\$ 140.00	\$ 840.00
62501	Seeding, Dry Method, Government Furnished	CQ	ACRE	0.20	\$ 260.00	\$ 52.00

SUB-TOTAL: \$ 1,314.00

TOTAL ALL ROADS: \$ 84,808.79

Engineer's Estimate
(Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
Road Name N/A

Road No. 4425
Length (Miles) 1.7

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 351.00	\$ 351.00
20301	Removal of Gate and Culverts	AQ	EA	1.00	\$ 200.00	\$ 200.00
20427	Double Earthberm	AQ	EA	1.00	\$ 187.00	\$ 187.00

SUB-TOTAL: \$ 738.00

TOTAL ALL ROADS: \$ 84,808.79

Engineer's Estimate
(Timber Sale)

Timber Sale OLY MOLY- Appendix A- Project 1
Road Name N/A

Road No. 2376
Length (Miles) 1.5

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
15101	Mobilization	LSQ	LS	1.00	\$ 351.00	\$ 351.00
20301	Removal of Gate and Culverts	AQ	EA	1.00	\$ 200.00	\$ 200.00
20427	Double Earth Berm	AQ	EA	1.00	\$ 187.00	\$ 187.00

SUB-TOTAL: \$ 738.00

TOTAL ALL ROADS: \$ 84,808.79