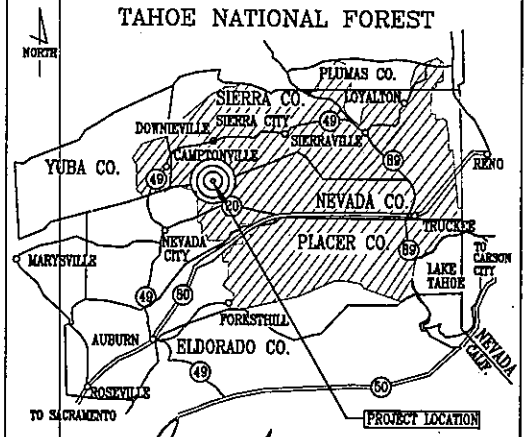
UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE

PLUM TIMBER SALE

PLANS FOR PROPOSED
FOREST DEVELOPMENT ROADS

TAHOE NATIONAL FOREST
SIERRA COUNTY

TAHOE NATIONAL FOREST



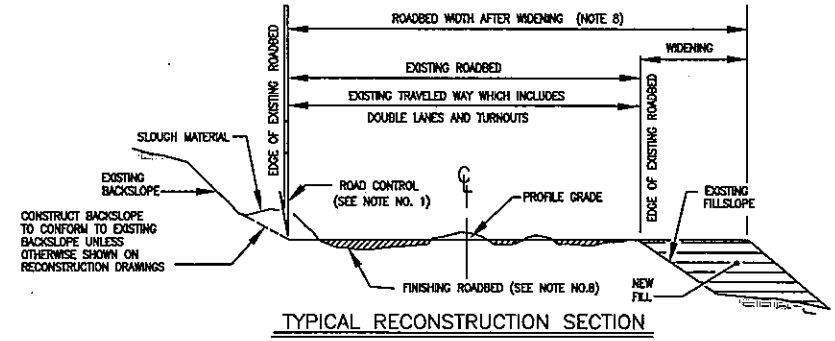
ROAD(S) INDEX

ROAD NO.	ROAD NAME	RECONST. MILES	NEV RECONST. MILES	DESIGN STANDARD
180-13	COE		0.89	S-5
309-02	PLIOCENE RIDGE SPUR		0.63	S-5

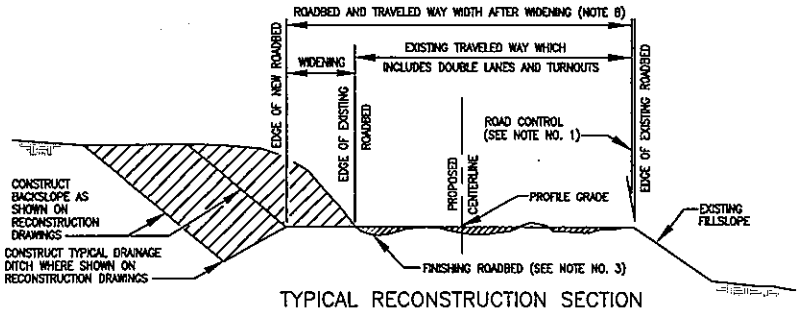
SHEET(S) INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SALE AREA MAP
3	RECONSTRUCTION REQUIREMENTS
4&5	180-13 RECONSTRUCTION LOG
6	309-02 RECONSTRUCTION LOG
7	WATERBAR DETAILS
8	LEADOFF DITCH
9	CONSTRUCTION SIGNS

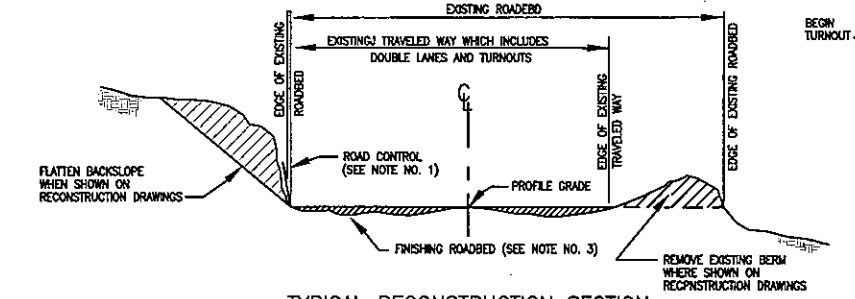
DRAWN BY:								
REVIEWED BY:	DISTRICT RANGER — DATE 7/17/2012	ENGINEERING DESIGN — DATE 7/17/2012	FOREST ENGINEER — DATE 7/17/12	STATE	FOREST	PROJECT NAME	SHEET NUMBER	OF SHEETS
				CALIF.	TAHOE	PLUM TIMER SALE	1	8



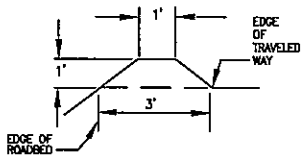
TYPICAL RECONSTRUCTION SECTION



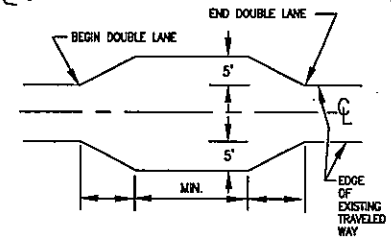
TYPICAL RECONSTRUCTION SECTION
SHOWING WIDENING AND DRAINAGE DITCH



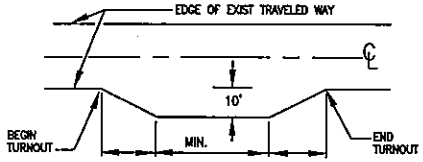
TYPICAL RECONSTRUCTION SECTION
SHOWING FLATTER BACKSLOPE AND BERM REMOVAL



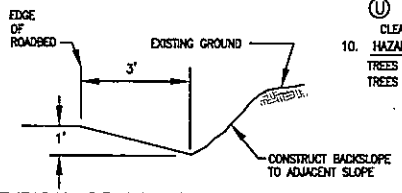
TYPICAL ROADWAY
BERM DETAIL



DOUBLE LANE DETAIL



TURNOUT DETAIL



TYPICAL DRAINAGE DITCH DETAIL

CONSTRUCTION SCHEDULE

ROAD NUMBER	SLASH TREATMENT METHODS			EMBANKMENT PLACEMENT METHODS	TOLERANCE CLASS	PAVEMENT STRUCTURE			
	TOPS & LIMBS	LOGS	STUMPS			STA. TO STA.		DEPTH	TYPE
180-13 309-02	CHIPPING	DECK	METHOD F	SIDE CAST END DUMP OR LAYER PLACEMENT.					

NOTES:

1. ROAD CONTROL
   WHEN SHOWN ON THE RECONSTRUCTION DRAWINGS, ROAD CONTROL SHALL BE THE POINT FROM WHICH ALL WIDTH MEASUREMENTS ARE MADE.
2. CLEARING
   CLEARING WIDTH SHALL BE AS SPECIFIED ON THE RECONSTRUCTION DRAWINGS.
3. FINISHING ROADBED
   ALL AREAS SHOWN ON THE RECONSTRUCTION DRAWINGS WHERE WORK IS REQUIRED SHALL BE SHAPED AND DRESSED.
4. TRAVELED WAY WIDTH
   TRAVELED WAY WIDTH SHALL REMAIN AS EXISTING UNLESS SPECIFIED OTHERWISE ON THE RECONSTRUCTION DRAWINGS.
5. CROSS SLOPE
   CROSS SLOPE SHALL REMAIN AS EXISTING UNLESS SPECIFIED OTHERWISE ON THE RECONSTRUCTION DRAWINGS.
6. EXCESS EXCAVATION
   UNLESS SPECIFIED OTHERWISE ON THE RECONSTRUCTION DRAWINGS, EXCESS EXCAVATION FROM WIDENING ROADBED, FLATTENING BACKSLOPES, TURNOUTS, DOUBLE LANES, DITCHES, DIPS, SLOUGH MATERIAL AND BERM REMOVAL SHALL BE PLACED AND SPREAD ON ROADBED.
7. BERM REMOVAL
   WHEN SPECIFIED ON THE RECONSTRUCTION DRAWINGS, BERMS SHALL BE REMOVED TO THE EXISTING SUBGRADE ELEVATION AND SHALL CONFORM TO EXISTING CROSS SLOPE.
8. WIDENING
   WIDENING DISTANCE AND WIDTH AFTER WIDENING IS SHOWN ON THE RECONSTRUCTION PLANS.
9. SLASH TREATMENT AREAS
   CONSTRUCTION SLASH REMAINING AFTER BURNING SHALL BE SCATTERED WITHIN THE BURN SITE. SLASH TREATMENT AREAS ARE SHOWN ON THE RECONSTRUCTION DRAWINGS BY THE FOLLOWING SYMBOLS:
   - (B) BURNING SITE: SHALL BE USED FOR PILING AND BURNING ONLY.
   - (S) STUMP PILE: SHALL BE USED FOR PILING STUMPS ONLY.
   - (M) MERCHANTABLE DECK: SHALL BE USED FOR DECKING MERCHANTABLE TIMBER ONLY.
   - (U) UNMERCHANTABLE DECK: SHALL BE USED FOR DECKING UNMERCHANTABLE MATERIAL ONLY.

   CLEARING LIMITS FOR SLASH TREATMENT AREAS SHALL BE FLAGGED BY THE FOREST SERVICE.
10. HAZARD TREES
    TREES ARE DESIGNATED FOR INDIVIDUAL REMOVAL WHEN MARKED WITH AN HR
    TREES ARE DESIGNATED FOR INDIVIDUAL FELLING WHEN MARKED WITH AN HL

RECONSTRUCTION REQUIREMENTS		
PROJECT NAME	SHEET NUMBER	OF SHEETS
PLUM T.S.	3	9

File Name TAHOE =:\ACAD11\LIBRARY\RECONSTQ

Reconstruction Plans

Road Number: 180-13 Backslope, 0. 75:1

Road Name: COE Fillslope, 1.50: 1

Minimum Traveled Way = 14 Feet

Station M.P.	Description of work
0.00	Begin Project, Intersection with Sierra County Road S-180, begin paved apron, Begin Pre-Haul Road Maintenance.
0.01	End paved apron.
0.02	Intersection road left, 180-13-01.
0.04	Existing Gate, Protect Gate.
0.14	Existing dip with leadoff ditch, both working.
0.15	United States Property Boundary sign on tree left.
0.18	Existing dip, working.
0.24	Existing dip, working.
0.27	Existing dip with leadoff ditch, both working, Intersection with Forest Road 180-13-2 left, End Pre-Haul Road Maintenance, Begin Reconditioning 180-13 ahead, begin roadside brushing left and right, begin blading and shaping road, remove two logs off the road and place 150 feet ahead on the fillslope left.
0.29	Remove logs from road place on the fillslope left.
0.34	Construct waterbar.
0.52	Construct waterbar.
0.63	Construct waterbar.
0.65	Construct waterbar.
0.70	Construct waterbar.
0.76	Centerline wide area left, clear for turnout left.
0.80	Construct waterbar.
0.83	Old skid road right to log landing.
0.84	Construct waterbar.

State	Forest	Project Number	Project Name	Sheet Number
CA	Tahoe	180-13	Coe	4

Reconstruction Plans

Road Number: 180-13 Backslope, 0. 75:1

Road Name: COE Fillslope, 1.50: 1

Minimum Traveled Way = 14 Feet

0.93	Construct waterbar.
0.97	Construct waterbar.
1.07	Construct waterbar.
1.12	Construct waterbar.
1.16	Unit Boundary Right, end reconditioning road, end clearing left and right, end blading and shaping road, end of project.

Note: Roadside clearing limits shall be 4 feet beyond the traveled way. The minimum clearing width shall be 22 feet and the maximum shall be 32 feet. Clearing shall include trees up to 8" dia. Clearing limits for leadoff ditches are shown on the drawings.

State	Forest	Project Number	Project Name	Sheet Number
CA	Tahoe	180-13	Coe	5

Reconstruction Plans

Road Number: 309-02 Backslope, 0. 75:1

Road Name: Pliocene Ridge Spur Fillslope, 1.50: 1

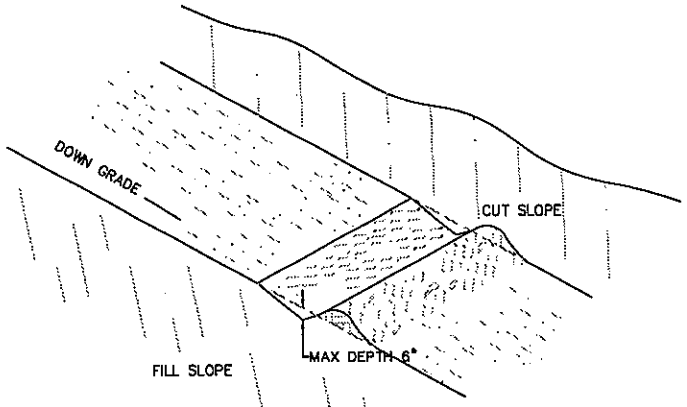
Minimum Traveled Way = 14 Feet

Station M.P.	Description of work
0.00	Begin Project, Intersection with Sierra County Road S-309, Begin Pre-Haul Road Maintenance.
0.35	End Pre-Haul Road Maintenance, Begin Reconditioning 309-02 road ahead, begin roadside brushing left and right, begin blading and shaping road, begin reconditioning existing waterbars and leadoff ditches.
0.98	End reconditioning road, end clearing left and right, end blading and shaping road, End reconditioning existing waterbars and leadoff ditches, end of project.

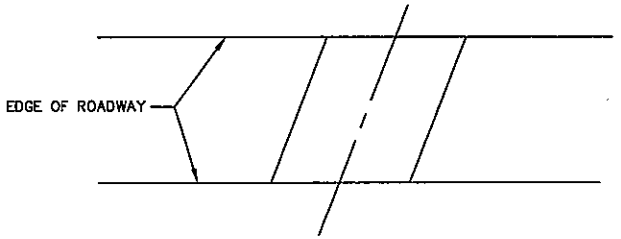
Note: Roadside clearing limits shall be 4 feet beyond the traveled way. The minimum clearing width shall be 22 feet and the maximum shall be 32 feet. Clearing shall include trees up to 8" dia. Clearing limits for leadoff ditches are shown on the drawings.

WATER BAR DETAIL

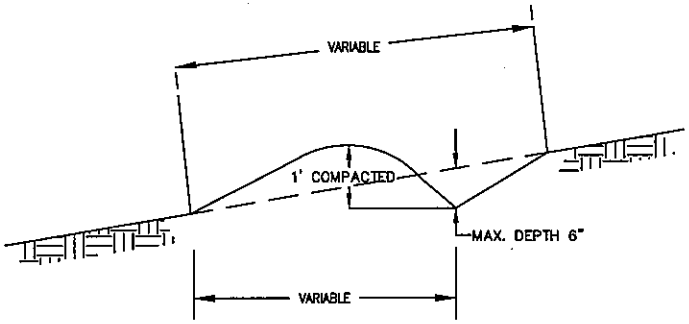
For Use on Open Roads
NO SCALE



PERSPECTIVE VIEW



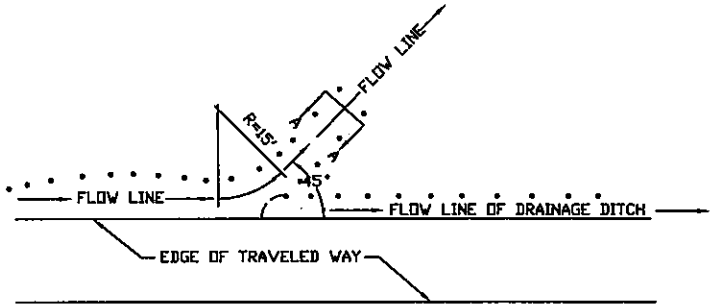
PLAN VIEW



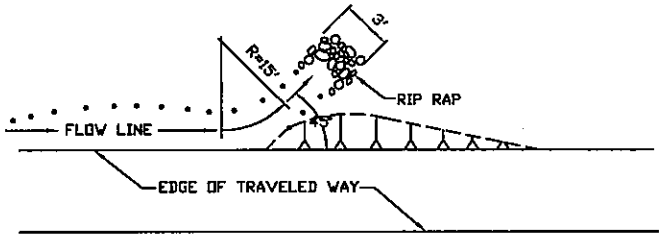
PROFILE VIEW

NOTES
1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.
3. WHEN STAKES ARE USED, THEY SHALL DESIGNATE THE OUTLET LOCATION.

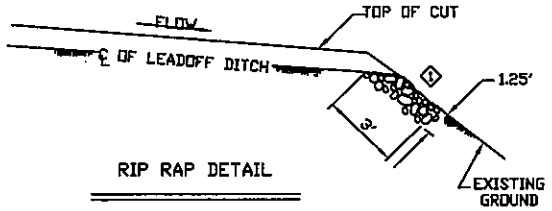
WATER BAR DETAIL		
PROJECT NAME	SHEET NUMBER	OF SHEETS
PLUM T.S.	7	9



LEADOFF DITCH IN CUT - PLAN VIEW



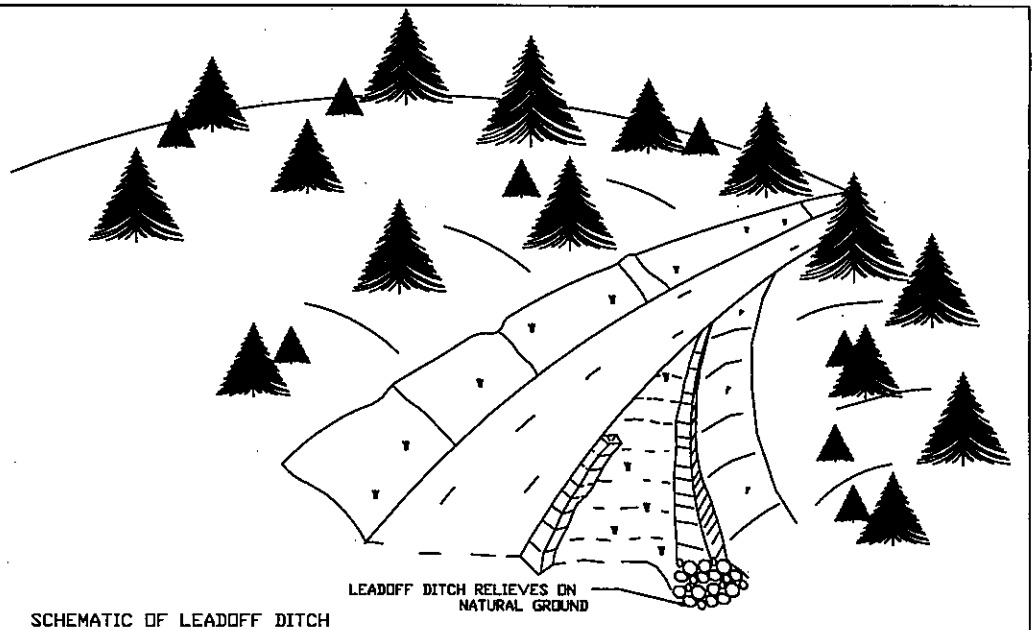
LEADOFF DITCH AT THE END OF CUT - PLAN VIEW



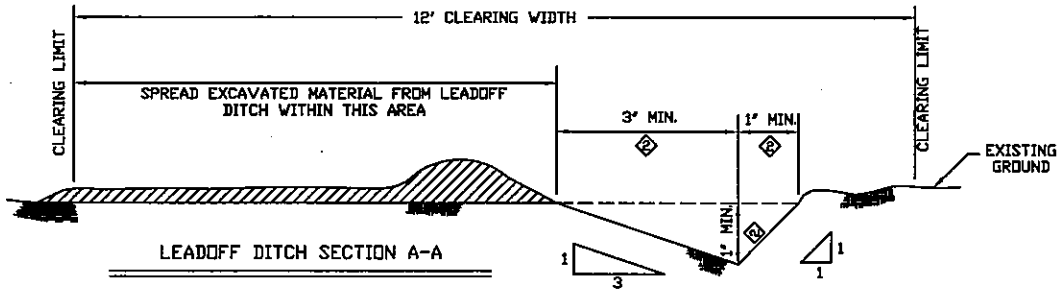
RIP RAP DETAIL

CONSTRUCTION LIMITS

TOE OF FILL - - - -
TOP OF CUT • • • •



SCHEMATIC OF LEADOFF DITCH



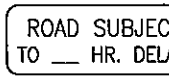
LEADOFF DITCH SECTION A-A

NOTES:

1. PROVIDE OUTLET PROTECTION WHEN SHOWN ON THE DRAWINGS.
   A. WHEN RIPRAP IS SPECIFIED THE AMOUNT SHALL BE AS SHOWN ON THE DRAWINGS, AND THE CLASS AND/OR SIZE SHALL BE AS SHOWN ON THE SCHEDULE OF ITEMS OR SPECIAL PROJECT SPECIFICATIONS.
2. THESE DIMENSIONS MAY BE LARGER THAN SHOWN IF NECESSARY TO DRAIN PROPERLY.
3. THE FLOW LINE SHALL BE CONSTRUCTED TO A GRADE WHICH IS WITHIN ±2% OF THE ROADWAY DITCH GRADE AND NOT FLATTER THAN A -2% GRADE.

LEADOFF DITCH DETAILS

STATE	FOREST	PROJECT NAME	SHEET NO.	
CALIF.	TAHOE	PLUM 7.5.	B	9



FG 20-5-36
FG 20-5-48
24" x 12"

M4-10L
30" x 9"
RIGHT OR LEFT

G-20-2
36" x 18" MIN.

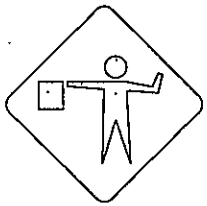
FW20-1
24" x 24" MIN.

FW20-2d
24" x 24" MIN.

FW20-2
24" x 24"

W21-2
24" x 24"

W21-1a
30" x 30" MIN.



W21-7a
30" x 30" MIN.

W8-8
24" x 24"

FW 21-4a
24" x 24" MIN.

FW5-3
24" x 24" MIN.

W8-6
24" x 24"

W8-7
24" x 24"

GENERAL NOTES:

1. DESIGNS FOR SIGNS AND BARRICADES SHOWN ABOVE ARE IN ACCORDANCE WITH MINIMUM STANDARDS IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" LATEST EDITION.

2. SIGNS SHALL BE MADE FROM SUITABLE MATERIALS WHICH ARE IN ACCORDANCE WITH ALL STATE AND FEDERAL SPECIFICATIONS.

3. ALL CONSTRUCTION SIGNS SHALL BE BLACK ON ORANGE.

4. SIGNS THAT ARE INTENDED TO BE USED DURING THE HOURS OF DARKNESS SHALL BE EITHER REFLECTORIZED OR ILLUMINATED.

5. SIGN SUBSTRATE MAY BE WOOD, METAL, POLYPLATE, FABRIC OR OTHER APPROVED MATERIAL.

6. SIGNS SHALL BE LOCATED WHERE THEY WILL BE CONSPICUOUSLY VISIBLE DAY AND NIGHT ON THE RIGHT HAND SIDE OF APPROACHING TRAFFIC. THEY SHALL BE FACING TRAFFIC AND LOCATED WHERE THEY CAN BE SEEN AT ALL TIMES BY APPROACHING DRIVERS.

7. WHEN A SIGN IS REQUIRED FOR AN EXTENDED PERIOD, IT SHALL BE FASTENED TO 4 X 4 POSTS WITH 2-3/8" CARRIAGE BOLTS. PORTABLE SUPPORTS ARE PERMITTED FOR SHORT PERIODS PROVIDED THE CONSTRUCTION IS SUCH THAT WIND OR OTHER AGENTS CANNOT READILY UPSET THE SIGN.

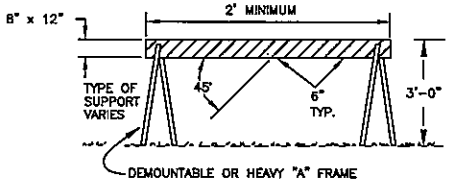
8. ADVANCE WARNING SIGNS OF CONSTRUCTION ACTIVITIES SHOULD BE LOCATED BETWEEN 500 AND 1500 FEET IN ADVANCE OF CONSTRUCTION, DEPENDING UPON THE PREVAILING SPEED ON THE ROAD.

9. OTHER SIGNS, NOT SHOWN, THAT BETTER DESCRIBE THE CONSTRUCTION ACTIVITY MAY BE USED PROVIDED THEY ARE IN CONFORMANCE WITH MUTCD STANDARDS AND COMMONLY USED BY OTHER AGENCIES.

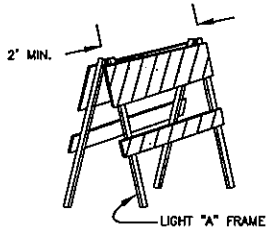
10. SELECTION AND PLACEMENT OF ALL SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

11. LIGHTING DEVICES SUCH AS FLASHERS, TORCHES, LANTERNS AND ELECTRIC LIGHTS SHALL BE PLACED AND MAINTAINED FROM SUNSET TO SUNRISE AT ALL POINTS OF HAZARD AND AT ALL SIGNS INDICATING CAUTION.

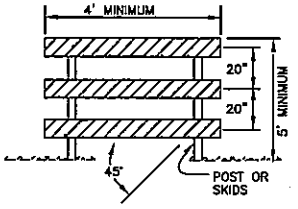
12. DIAMOND WARNING SIGNS SHALL BE 24" X 24" OR LARGER.



TYPE I BARRICADE

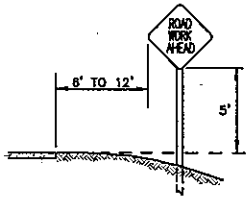


TYPE II BARRICADE

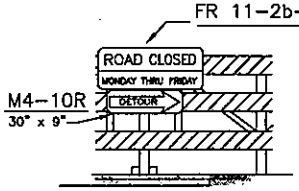


TYPE III BARRICADE

FW 21-4a



FR 11-2b-20 MIN.



M4-10R
30" x 9"

CONSTRUCTION SIGNS		
PROJECT NAME	SHEET NUMBER	OF SHEETS
PLUM T.S.	9	9

Schedule of Items Applicable to A7 and B5.2

Sale Name: Plum		**Road Name:**	Pliocene Sp.	**Road Number:**	309-02	**Segment No.**	
New construction:	No	**Recondition:**	Yes	**Design Class:**	S-5	**Survey Class:**	IV
Station:	M.P.0.35 to M.P.0.98			**Equations:**	No	**Length:**	0.63 Miles
Estimated By:		**Checked By:**		**DE Review:**		**SO Review:**	
Cost Guide Date:		**Estimation Date:**		**Tahoe National Forest**		**Page:**	1 of 1

1 Item No.	2 Description	3 Method of Measure	4 Unit of Measure	5 Base Unit Cost	6 Projection Factor	7 Estimated Unit Cost	8 Red. Factor	9 Reduced Unit Cost	10 Estimated Quanitity	11 Road Const. Cost	12 P.W. Road Const. Cost
PRISM											
299(02)	Composite Road Reconstruction	DQ	Mile	15,000.00	1.15	17,250.00	0.70	12,075.00	0.63	7,607.25	10,867.50
151(01)	Mobilization	LSQ	LS	5,000.00	1	5,000.00	1.00	5,000.00	1	5,000.00	5,000.00
								SUBTOTAL		12,607.25	15,867.50
								TOTAL		12,607.25	15,867.50

DQ = Design Quanitity | VQ = Vehicle Quantity | LSQ = Lump Sum Quantity | AQ = Actual Quantity | SQ = Staked Quantity

Schedule of Items Applicable to A7 and B5.2

Sale Name: Plum		Road Name:	Coe	Road Number:	180-13	Segment No.	
New construction:	No	Recondition:	Yes	Design Class:	S-5	Survey Class:	IV
Station:	M.P.0.27 to M.P.1.16			Equations:	No	Length:	0.89 Miles
Estimated By:		Checked By:		DE Review:		SO Review:	
Cost Guide Date:		Estimation Date:		Tahoe National Forest		Page:	1 of 1

1 Item No.	2 Description	3 Method of Measure	4 Unit of Measure	5 Base Unit Cost	6 Projection Factor	7 Estimated Unit Cost	8 Red. Factor	9 Reduced Unit Cost	10 Estimated Quanitity	11 Road Const. Cost	12 P.W. Road Const. Cost
PRISM											
299(02)	Composite Road Reconstruction	DQ	Mile	15,000.00	1.15	17,250.00	0.70	12,075.00	0.89	10,746.75	15,352.50
								SUBTOTAL		10,746.75	15,352.50
								TOTAL		10,746.75	15,352.50

DQ = Design Quanitity VQ = Vehicle Quantity LSQ = Lump Sum Quantity AQ = Actual Quantity SQ = Staked Quantity

Applicable Project Constructuction Specification List

Plum Timber Sale

Section		Title	Date
	101	Terms, Format, And Definitions	2003
	101	Terms, Format, And Definitions	04/2004
	102	Bid, Award, And Execution Of Contract	2003
	102	Bid, Award, And Execution Of Contract	04/2004
	103	Scope Of Work	2003
	103	Scope Of Work	04/2004
	104	Control Of Work	2003
	104	Control Of Work	04/2004
	105	Control Of Material	2003
	105	Control Of Material	04/2004
	106	Acceptance Of Work	2003
	106	Acceptance Of Work	04/2004
	107	Legal Relations & Responsibility To Public	2003
	107	Legal Relations & Responsibility To Public	04/2004
	108	Prosecution And Progress	2003
	108	Prosecution And Progress	04/2004
	109	Measurement And Payment	2003
	109	Measurement And Payment	04/2004
	151	Mobilization	2003
R5-SPS	299	Composite Road Reconstruction	06/2006

R5-SPS is Region 5 Special Project Specification

SPECIAL PROJECT SPECIFICATION

SECTION 299-COMPOSITE ROAD RECONSTRUCTION

DESCRIPTION

299.01 WORK. This work shall consist of clearing and grubbing, excavation and embankment. Clearing and grubbing shall include treatment of merchantable timber, and disposal of construction slash, including all designated trees. Excavation and embankment shall include drainage excavation, shaping the roadway, including approaches, turnarounds, ditches, and drainage dips, and disposal of all excavated material. Construction of the roadway shall be in conformance with the dimensions SHOWN ON THE DRAWINGS and DESIGNATED on the ground.

CONSTRUCTION

299.02 CLEARING AND DISPOSAL. All trees, snags, downed timber, brush and stumps within the clearing limits shall be removed and disposed of by:

(a)Decking or removing timber meeting utilization standards (merchantable timber).

(b)Decking unmerchantable timber. Logs not meeting utilization standards that are more than 6 inches in diameter and 10 feet or more in length which are suitable for use as firewood, shall be limbed and bucked into lengths not to exceed 32 feet, and placed in stable decks free of brush and soil. Decks shall be located in areas SHOWN ON THE DRAWINGS or DESIGNATED on the ground. Material not suitable for firewood shall be treated under slash treatment methods.

(c)Purchaser shall treat the construction slash by one or more of the following methods as SHOWN ON THE DRAWINGS:

Method A - Incorporation. Construction slash may be incorporated as part of the embankment provided it is distributed to avoid concentrations or matting, and is covered with a minimum of 18 inches of excavated material. Slash that cannot be incorporated shall be treated by other methods SHOWN ON THE DRAWINGS.

Method B - Windrowing construction slash. When slash is windrowed, it shall be placed approximately parallel to the roadway. The toe of the fill slope may catch or cover the finished windrow,must be covered with a minimum of 18" of excavated material. The windrow shall not hinder equipment during maintenance of the roadway.

Method C - Scattering. Construction slash shall be scattered outside the clearing limits in areas SHOWN ON THE DRAWINGS. Slash shall not be piled higher than 18" above the ground. Limbs having a diameter of between 3" and 6" shall be bucked into lengths not exceeding 6 feet. Material over 6" shall not be scattered, but shall be treated under other slash treatment methods.

Method D - Piling for future disposal. Construction slash shall be piled in locations SHOWN ON THE DRAWINGS. Piles shall be free of soil and constructed with smaller slash well mixed with larger slash.

Method E - Piling and Burning. Construction slash shall be deposited in areas SHOWN ON THE DRAWINGS and DESIGNATED on the ground. Piles shall be constructed so that burning does not damage standing trees. If burning is incomplete, the slash remaining shall be repiled and burned until reduced to 20% or less of their original volume and no individual piece remaining shall be greater than four cubic feet in volume. These pieces shall then be scattered, buried, removed or left in place as SHOWN ON THE DRAWINGS.

Method F - Stump placement. Stumps shall be placed at locations SHOWN ON THE DRAWINGS or DESIGNATED IN THE FIELD, and placed on ground that is level or has been leveled in a manner that the stumps will not roll downhill. Stumps shall then be covered with excavated material a minimum of one quarter of the stump volume to prevent their dislodgement. When steep sideslopes prevent the successful placement of stumps, the designated disposal sites shall be used.

Method G - Bury. Construction slash may be buried within the roadway at locations SHOWN ON THE DRAWINGS, or DESIGNATED IN THE FIELD. Buried material shall be covered with a minimum of 24 inches of excavated material and shall not be buried within 25 feet of culverts. Slash that cannot be buried shall be treated by other methods SHOWN ON THE DRAWINGS.

Method H - Chipping. Construction slash up to at least 4 inches in diameter and longer than 3 feet shall be processed through a chipping machine. Chips shall be deposited on embankment slopes or outside the roadway to a loose depth not exceeding 6 inches. Minor amounts of chips may be permitted within the roadway if they are thoroughly mixed with soil and do not form a layer.
Chipping may also be accomplished by use of a roadside brushing machine designed for this specific type of work and capable of chipping trees to 10" diameter. The engineer shall approve in writing the type of brushing machine to be used in lieu of a chipping machine.

All piles created under Methods D and E shall have a 15 foot fire break cleared between the piles and the adjacent vegetation.

Slash shall not be deposited within 25 feet of stream courses.

Branches on remaining trees or shrubs shall be trimmed to give a clear height of 14 feet above the roadbed unless otherwise SHOWN ON THE DRAWINGS. Tree limbs shall be trimmed as near flush with the trunk as practicable.

Hazard trees which are outside the clearing limits, marked on the ground, and SHOWN ON THE DRAWINGS, shall be felled and disposed in accordance with (a), (b), or (c).

299.04 EXCAVATION AND EMBANKMENT. The roadway shall be constructed to conform to the typical sections SHOWN ON THE DRAWINGS. Embankment shall be placed by side-casting, end-dumping, or layer placement, as SHOWN ON THE DRAWINGS.
Backslopes shall not be undercut.

Embankment material designated to be layer placed may be end dumped to the minimum depth needed for operation of spreading equipment. Each embankment layer shall be leveled and smoothed before placement of subsequent layers. Hauling and spreading equipment shall be operated uniformly over the full width of each layer, a minimum of three complete passes.

Suitable material shall be placed in layers no more than 12 inches thick, except when the material contains rock more than 9 inches in diameter, in which case layers may be of sufficient thickness to accommodate the material involved. No layer shall exceed 24 inches before compaction.

Rocks too large to be incorporated in the embankment shall be placed on the downhill side, outside the traveled way. Rocks shall be places so that they will not roll or obstruct drainage. Rocks may not be placed against trees, nor hinder the use and the maintenance of the roadbed.

The location and use of borrow material, and any requirements for the removal and disposal of unsuitable or excess material, will be SHOWN ON THE DRAWINGS.

Unless otherwise SHOWN ON THE DRAWINGS, the roadbed shall be shaped to provide drainage of surface water, and finished to the standard ordinarily accomplished by a motor grader. Individual rocks within the roadbed shall not protrude over two inches above the subgrade. The road bed shall be visibly moist during shaping.

Unless otherwise SHOWN ON THE DRAWINGS, the traveled way width shall not exceed the specified dimension by more than two feet.

MEASUREMENT

299.05 METHOD. The method of measurement will be "Designed Quantities" (DQ) in accordance with Section 109.

PAYMENT

299.06 BASIS. The accepted quantities will be paid for at the Contract unit price for each pay item shown in the SCHEDULE OF ITEMS.

Payment will be made under:

Pay Item		Pay Unit
299(01)	Composite Road Reconstruction	STA
299(02)	Composite Road Reconstruction	MI
299(03)	Composite Road Reconstruction	L.S.

Instructions. This special project specification will be used on those projects which require chipping of slash, roadway compaction and Lump Sum payment.

CT5.101# - ROAD COMPLETION DATE. (4/99) Construction of Specified Roads shall be completed no later than 06/30/2013 ; except for earlier construction completion dates for roads listed below:

Road Number	Road Name	Station		Completion Date
		From	To	
	N/A			

Completion date is binding on party that constructs road, whether Purchaser or Forest Service. The Contracting Officer shall modify the completion date in writing to conform to the approved plan of operations under C6.3 at the request of the Purchaser.

When Purchaser elects Forest Service construction of Specified Roads shown in sale advertisement, construction completion date may be adjusted by Forest Service when road construction is interrupted or delayed for causes which qualify for an adjustment of the completion date of the road construction contract. When qualifying interruptions or delays of road construction occur, Forest Service shall evaluate such occurrences and document any findings. The current status of any adjustment shall be available to Purchaser on request. Promptly after the end of Normal Operating Season in which qualifying days occur, Forest Service shall give Purchaser written notice of (a) number of qualifying days claimed, and (b) new construction completion dates. After all road construction is complete, Forest Service shall grant Contract Term Adjustment under B8.21. Such adjustment shall be limited to road completion date delays which occurred during Normal Operating Season.

If Forest Service is responsible for road construction and the actual date of road completion is one year or more after the completion date stated above, Purchaser may request a rate redetermination under B3.31 for remaining volume. Such request must be made within 30 days of notification that road construction has been completed. Upon receipt of such request, Forest Service shall redetermine rates using standard methods in effect on the completion date of road construction. Rates to be established shall apply to all unscaled timber removed from Sale Area after the effective date of the rate redetermination.

Forest Service shall in no way be responsible for any delay or damage caused by road contractor in performing the road construction except such delay as may be the fault or negligence of Forest Service.

When Purchaser constructs Specified Roads and requests Contract Term Adjustment under B8.21, completion dates shall be adjusted by number of days which qualify for such adjustment, provided such qualifying days occur before specified construction completion date. Completion date shall be adjusted where a design change, or physical changes necessitate a modification of Specified Road construction work which increases the scope or magnitude of the required work.

When Purchaser constructs Specified Roads and desires to construct an alternate facility under B5.26, Forest Service and Purchaser shall agree in writing, on a construction completion date for alternate facility. Provisions applicable to construction completion dates shown above shall also apply to construction completion dates agreed to for alternate facilities.

If Purchaser fails to complete construction of any or all Specified Roads by applicable completion date, as adjusted, Contract Term Extension under C8.23 shall not be granted.

As used in this provision, construction of a road is completed when:

(a) Purchaser constructs Specified Roads and Forest Service furnishes Purchaser with written notice of acceptance under B6.35, or

(b) Forest Service constructs road and furnishes Purchaser with written notice authorizing use of road.

Notwithstanding B5.1, Purchaser shall not use a road which Purchaser has elected for Forest Service to construct, until construction is completed and Forest Service furnishes Purchaser with written notice authorizing use of road.

CT5.121# - DEPOSIT FOR RECONSTRUCTION ENGINEERING SERVICES. (4/99)
Purchaser shall make a cash deposit for Engineering Services (preconstruction and construction) provided by Forest Service for reconstruction of a forest development transportation facility necessary to accommodate Purchaser's use under this contract, pursuant to Public Law 88-657, 78 Stat. 1089, 16 U.S.C. 532-537.

The total amount to be deposited under this contract by Purchaser for reconstruction related Engineering Services to be completed by Forest Service personnel or by public works contract is $5,693.17. Purchaser shall make this deposit at the end of the first full normal operating season or 12 months from contract award, whichever occurs first. In the event a different deposit schedule is agreed to, such deposit shall be due within 30 days after the date of issue as indicated on the initial Bill for Collection, pursuant to C4.41.

The amount of the required deposit will be shown as an associated charge on the Purchaser's Timber Sale Statement of Account. Any unexpended deposit for reconstruction related Engineering Services shall be retained by Forest Service.

The deposit for reconstruction related Engineering Services shall be commensurate with project need and Purchaser's road use. Forest Service shall complete Reconstruction related Engineering Services on the following schedule unless a different completion schedule is agreed in writing:

Road or Facility No.	Termini		Engineering Services Completion Date
	From	To	
All roads			06/30/2013

Reconstruction related Engineering Services may consist of some or all of the engineering work and expense of: preparing, setting out, controlling, inspecting, and measuring the reconstruction of a forest development transportation facility.

Unless agreed otherwise, roads or other facilities listed in above schedule shall not be used by Purchaser for log hauling prior to completion of actual reconstruction work.

A9 - Specified Roads, applicable to B5.2 PLUM TIMBER SALE

Project No.	Project Name	Design Class	Approxim Length *(Miles)*	Sheet Numbers And Approval Date	Survey Class	Performance Responsibility: Survey	Performance Responsibility: Design	Performance Responsibility: Construction Staking 1/
180-13 (R)	Coe	S-5	0.89	Sheet Numbers 1 to 9 Approval Date: 07/20/2012	IV	FS	FS	Pur(BC)
309-02 (R)	Pliocene Ridge Spur	S-5	0.63		IV	FS	FS	Pur(BC)
Total Miles=1.52								
Estimate 20 Days	To Complete All Reconst.							

(R) ***Denotes Reconstruction;*** **(N)** ***Denotes New Construction***

A10 - Estimated Cost of Specified Roads, applicable to B5.24

Project Segment Number Station From - To	Construction Phases *(Entries In Dollars)* Survey	Design	Staking	Clearing	Excavation	Culverts	Base Course	Surfacing	Stabilization	Other	Total	Road Construction Cost $

For Project Segments and Applicable Road construction costs, See Schedule of Items

SUMMARY OF ESTIMATED ROAD CONSTRUCTION COSTS

Specified Roads:		$23,354.00
Summary of Deposits (CT5.213#)		
Prism =	100 %	$23,354.00
Culverts =	-0- %	$-0-
Surface =	-0- %	$-0-
Sub Total =		$23,354.00
Total Reconstruction Engineering Deposits (CT5.213#)		$5,963.17
Total Construction costs		**$31,220.00**

Public Works Engineering road construction cost Estimate = $

1/ Indicates timing, i.e. before clearing (BC), after clearing (AC). Applicable to BT5.212.

A7 – Specified Roads, applicable to B5.2

Name and Date of Governing Road Specifications: Standard Specifications for Construction of Roads and Bridges FP-03 & FSSS

Project		Design Class	Approx. Length *(mi./km.)*	Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name				Survey	Design	Const. Staking 1/
180-13 (R)	Coe	S-5	0.89	Sheets 1 thru 9	FS	FS	Purchaser (BC)
309-02 (R)	Pliocene Ridge Spur	S-5	0.63	Date: 07/20/12	FS	FS	Purchaser (BC)

1/ Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to B5.212.

A8 – Forest Service Engineering Completion Schedule, applicable to B5.21

Road No.	Road Name	Type of Work	Completion Date
180-13 (R)	Coe	Reconstruction	06/30/2013
309-02 (R)	Pliocene Ridge Spur	Reconstruction	06/30/2013

Schedule of Items Applicable to A7 and B5.2

Sale Name: Plum		Road Name:	Pliocene Sp.	Road Number:	309-02	Segment No.	
New construction:	No	Recondition:	Yes	Design Class:	S-5	Survey Class:	IV
Station:	M.P.0.35 to M.P.0.98			Equations:	No	Length:	0.63 Miles
Estimated By:		Checked By:		DE Review:		SO Review:	
Cost Guide Date:		Estimation Date:		Tahoe National Forest		Page:	1 of 1

1 Item No.	2 Description	3 Method of Measure	4 Unit of Measure	5 Base Unit Cost	6 Projection Factor	7 Estimated Unit Cost	8 Red. Factor	9 Reduced Unit Cost	10 Estimated Quanitity	11 Road Const. Cost	12 P.W. Road Const. Cost
PRISM											
299(02)	Composite Road Reconstruction	DQ	Mile	15,000.00	1.15	17,250.00	0.70	12,075.00	0.63	7,607.25	10,867.50
151(01)	Mobilization	LSQ	LS	5,000.00	1	5,000.00	1.00	5,000.00	1	5,000.00	5,000.00
								SUBTOTAL		12,607.25	15,867.50
								TOTAL		12,607.25	15,867.50

DQ = Design Quanitity | VQ = Vehicle Quantity | LSQ = Lump Sum Quantity | AQ = Actual Quantity | SQ = Staked Quantity

Schedule of Items Applicable to A7 and B5.2

Sale Name: Plum		Road Name:	Coe	Road Number:	180-13	Segment No.	
New construction:	No	Recondition:	Yes	Design Class:	S-5	Survey Class:	IV
Station:	M.P.0.27 to M.P.1.16			Equations:	No	Length:	0.89 Miles
Estimated By:		Checked By:		DE Review:		SO Review:	
Cost Guide Date:		Estimation Date:		Tahoe National Forest		Page:	1 of 1

1 Item No.	2 Description	3 Method of Measure	4 Unit of Measure	5 Base Unit Cost	6 Projection Factor	7 Estimated Unit Cost	8 Red. Factor	9 Reduced Unit Cost	10 Estimated Quanitity	11 Road Const. Cost	12 P.W. Road Const. Cost
PRISM											
299(02)	Composite Road Reconstruction	DQ	Mile	15,000.00	1.15	17,250.00	0.70	12,075.00	0.89	10,746.75	15,352.50
								SUBTOTAL		10,746.75	15,352.50
								TOTAL		10,746.75	15,352.50

DQ = Design Quanitity VQ = Vehicle Quantity LSQ = Lump Sum Quantity AQ = Actual Quantity SQ = Staked Quantity

CT5.101# - ROAD COMPLETION DATE. (4/99) Construction of Specified Roads shall be completed no later than 06/30/2013 ; except for earlier construction completion dates for roads listed below:

Road Number	Road Name	Station		Completion Date
		From	To	
	N/A			

Completion date is binding on party that constructs road, whether Purchaser or Forest Service. The Contracting Officer shall modify the completion date in writing to conform to the approved plan of operations under C6.3 at the request of the Purchaser.

When Purchaser elects Forest Service construction of Specified Roads shown in sale advertisement, construction completion date may be adjusted by Forest Service when road construction is interrupted or delayed for causes which qualify for an adjustment of the completion date of the road construction contract. When qualifying interruptions or delays of road construction occur, Forest Service shall evaluate such occurrences and document any findings. The current status of any adjustment shall be available to Purchaser on request. Promptly after the end of Normal Operating Season in which qualifying days occur, Forest Service shall give Purchaser written notice of (a) number of qualifying days claimed, and (b) new construction completion dates. After all road construction is complete, Forest Service shall grant Contract Term Adjustment under B8.21. Such adjustment shall be limited to road completion date delays which occurred during Normal Operating Season.

If Forest Service is responsible for road construction and the actual date of road completion is one year or more after the completion date stated above, Purchaser may request a rate redetermination under B3.31 for remaining volume. Such request must be made within 30 days of notification that road construction has been completed. Upon receipt of such request, Forest Service shall redetermine rates using standard methods in effect on the completion date of road construction. Rates to be established shall apply to all unscaled timber removed from Sale Area after the effective date of the rate redetermination.

Forest Service shall in no way be responsible for any delay or damage caused by road contractor in performing the road construction except such delay as may be the fault or negligence of Forest Service.

When Purchaser constructs Specified Roads and requests Contract Term Adjustment under B8.21, completion dates shall be adjusted by number of days which qualify for such adjustment, provided such qualifying days occur before specified construction completion date. Completion date shall be adjusted where a design change, or physical changes necessitate a modification of Specified Road construction work which increases the scope or magnitude of the required work.

When Purchaser constructs Specified Roads and desires to construct an alternate facility under B5.26, Forest Service and Purchaser shall agree in writing, on a construction completion date for alternate facility. Provisions applicable to construction completion dates shown above shall also apply to construction completion dates agreed to for alternate facilities.

If Purchaser fails to complete construction of any or all Specified Roads by applicable completion date, as adjusted, Contract Term Extension under C8.23 shall not be granted.

As used in this provision, construction of a road is completed when:

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CT5.121# - DEPOSIT FOR RECONSTRUCTION ENGINEERING SERVICES. (4/99)
Purchaser shall make a cash deposit for Engineering Services (preconstruction and construction) provided by Forest Service for reconstruction of a forest development transportation facility necessary to accommodate Purchaser's use under this contract, pursuant to Public Law 88-657, 78 Stat. 1089, 16 U.S.C. 532-537.

The total amount to be deposited under this contract by Purchaser for reconstruction related Engineering Services to be completed by Forest Service personnel or by public works contract is $5,693.17. Purchaser shall make this deposit at the end of the first full normal operating season or 12 months from contract award, whichever occurs first. In the event a different deposit schedule is agreed to, such deposit shall be due within 30 days after the date of issue as indicated on the initial Bill for Collection, pursuant to C4.41.

The amount of the required deposit will be shown as an associated charge on the Purchaser's Timber Sale Statement of Account. Any unexpended deposit for reconstruction related Engineering Services shall be retained by Forest Service.

The deposit for reconstruction related Engineering Services shall be commensurate with project need and Purchaser's road use. Forest Service shall complete Reconstruction related Engineering Services on the following schedule unless a different completion schedule is agreed in writing:

Road or Facility No.	Termini		Engineering Services Completion Date
	From	To	
All roads			06/30/2013

Reconstruction related Engineering Services may consist of some or all of the engineering work and expense of: preparing, setting out, controlling, inspecting, and measuring the reconstruction of a forest development transportation facility.

Unless agreed otherwise, roads or other facilities listed in above schedule shall not be used by Purchaser for log hauling prior to completion of actual reconstruction work.

C5.213 Deposits for Reconstruction Engineering Services

Plum Timber Sale

7/20/2012

		Recon		Survey		Design/Prep		Design changes	
Name	Cost/hour	Hour	Cost	Hour	Cost	Hour	Cost	Hour	Cost
FE	$55.46		$0.00		$0.00	8	$443.68	8	$443.68
			$0.00		$0.00		$0.00		$0.00
Husmann	$37.56		$0.00		$0.00	40	$1,502.40	16	$600.96
Draper	$37.64	40	$1,505.60	80	$3,011.20	160	$6,022.40	20	$752.80
			$0.00		$0.00		$0.00		$0.00
Lowe	$37.44		$0.00	40	$1,497.60	20	$748.80		$0.00
			$0.00		$0.00		$0.00		$0.00
			$0.00		$0.00		$0.00		$0.00
Vehicle #	Cost/mile	Miles		Miles		Miles		Miles	
2434	0.37	150	$55.50	150	$55.50	300	$111.00	150	$55.50
3271	0.33	150	$49.50	300	$99.00	150	$49.50	100	$33.00
4051	0.41		$0.00		$0.00		$0.00		$0.00
Supplies									
	Total		$1,610.60		$4,663.30		$8,877.78		$1,885.94

Total from above		########
Future Design Changes	0%	$0.00
Engineering	10%	$1,703.76
S.O. Overhead	14%	$2,385.27
Multi-Line	11%	$1,874.14
Grand Total		########

Prism	100%	########
Culvert	0%	$0.00
Surface	0%	$0.00

Note: Employee cost to government as of pay period #15 2009.

A9 - Specified Roads, applicable to B5.2 PLUM TIMBER SALE

Project No.	Project Name	Design Class	Approxim Length *(Miles)*	Sheet Numbers And Approval Date	Survey Class	Performance Responsibility: Survey	Performance Responsibility: Design	Performance Responsibility: Construction Staking 1/
180-13 (R)	Coe	S-5	0.89	Sheet Numbers 1 to 9 Approval Date: 07/20/2012	IV	FS	FS	Pur(BC)
309-02 (R)	Pliocene Ridge Spur	S-5	0.63		IV	FS	FS	Pur(BC)
Total Miles=1.52								
Estimate 20 Days	To Complete All Reconst.							

(R) ***Denotes Reconstruction;*** **(N)** ***Denotes New Construction***

A10 - Estimated Cost of Specified Roads, applicable to B5.24

Project Segment Number Station From - To	Construction Phases *(Entries In Dollars)* Survey	Design	Staking	Clearing	Excavation	Culverts	Base Course	Surfacing	Stabilization	Other	Total	Road Construction Cost $

For Project Segments and Applicable Road construction costs, See Schedule of Items

SUMMARY OF ESTIMATED ROAD CONSTRUCTION COSTS

Specified Roads:		$23,354.00
Summary of Deposits (CT5.213#)		
Prism =	100 %	$23,354.00
Culverts =	-0- %	$-0-
Surface =	-0- %	$-0-
Sub Total =		$23,354.00
Total Reconstruction Engineering Deposits (CT5.213#)		$5,963.17
Total Construction costs		**$31,220.00**

Public Works Engineering road construction cost Estimate = $

1/ Indicates timing, i.e. before clearing (BC), after clearing (AC). Applicable to BT5.212.

A7 – Specified Roads, applicable to B5.2

Name and Date of Governing Road Specifications: Standard Specifications for Construction of Roads and Bridges FP-03 & FSSS

Project		Design Class	Approx. Length *(mi./km.)*	Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name				Survey	Design	Const. Staking 1/
180-13 (R)	Coe	S-5	0.89	Sheets 1 thru 9	FS	FS	Purchaser (BC)
309-02 (R)	Pliocene Ridge Spur	S-5	0.63	Date: 07/20/12	FS	FS	Purchaser (BC)

1/ Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to B5.212.

A8 – Forest Service Engineering Completion Schedule, applicable to B5.21

Road No.	Road Name	Type of Work	Completion Date
180-13 (R)	Coe	Reconstruction	06/30/2013
309-02 (R)	Pliocene Ridge Spur	Reconstruction	06/30/2013