COOS BAY SALE NO. ORC03-TS-2020.0001
Nest Egg CT

COOS BAY DISTRICT OFFICE
UMPQUA RESOURCE AREA

SALE DATE: November 22, 2019
SALE TIME: 10:00 a.m.

SALE NO. ORC03-TS-2020.0001, Nest Egg CT

DOUGLAS COUNTY: OREGON: O&C: ORAL AUCTION: Bid deposit required: $38,200.00

All timber designated for cutting on: T. 19 S., R. 9 W., Sec. 35 E1/2, E1/2 NW1/4,
T. 20 S., R. 9 W., Sec. 1, Lots 18, 19, 20, 21, 28, and 29, T. 20 S., R. 9 W., Sec. 2, Lots 5 and 6. Will. Mer.

Approx. No. Merch. Trees	Est. Vol. MBF 32' Log	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Estimated Vol. Times Appraised Price
16,757	4,150.0	Douglas-fir	5,128.0	$69.10	$354,344.80
5,779	479.0	Red Alder	644.0	$41.10	$26,468.40
6	0.8	Western Hemlock	1.0	$38.10	$38.10
4	0.8	Western Red Cedar	1.0	$230.70	$230.70
22,546	**4,630.6**	**Totals**	**5,774.0**		**$381,082.00**

THIS TIMBER SALE HAS BEEN CRUISED, APPRAISED, AND ADVERTISED BASED UPON SCRIBNER BOARD FOOT MEASURE (16 FOOT LOG). THE MINIMUM BID FIGURES SHOWN BY SPECIES ARE DOLLARS PER THOUSAND BOARD FEET (MBF). THE MINIMUM BID INCREMENT WILL BE $0.50 PER MBF. SCRIBNER BOARD FOOT VOLUMES (32 FOOT LOG) BY SPECIES ARE DISPLAYED FOR INFORMATIONAL PURPOSES.

LOG EXPORT AND SUBSTITUTION: All timber sales, including timber from Federal rights-of-ways, shall be subject to the restrictions relating to the export and substitution of unprocessed timber from the United States in accordance with P.L. 94-165 and 43 CFR 5400 and 5424 as amended.

LOG EXPORT AND SUBSTITUTION RESTRICTIONS: Accepting Port-Orford-cedar, all timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and is prohibited from being used as a substitute for exported private timber.

CRUISE INFORMATION: With respect to merchantable trees of all species in all cruise strata: the average DBHOB is 15.0 inches: the average gross merchantable log contains 60 bd. ft.; the total gross volume is approximately 6,066 thousand bd. ft.; and 95% recovery is expected. The average DBHOB for Douglas-fir is 16.0 inches; and the average gross merchantable log contains 64 bd. ft. The following cruise methods were used for volume determination:

VARIABLE PLOT: Timber volumes in the thinning portion of Units 1-3, were based on a variable plot cruise. Using a 20 basal area factor (BAF), 194 plots were measured and 92 trees were randomly selected to be sampled. The sample trees have been cruised and their volumes computed using form class tables for estimating

board foot volumes of trees in 16-foot logs. The volumes are then expanded to a total sale volume.

3P: The Douglas-fir and Red Alder in the right-of-way and group selection areas have been cruised using the 3P system to select 121 sample trees. The sample trees have been cruised and the volumes computed using form class tables for estimating board foot volumes of trees in 16-foot logs. The volumes are then expanded to a total sale volume. Maps showing the approximate locations of the sample trees are available at the Coos Bay District Office.

100% CRUISE: Timber volumes for tree species other Douglas-fir and Red Alder within the road right-of-way and group selection areas, were based on a 100% cruise using form class tables for estimating board foot volume of trees in 16-foot logs.

CUTTING AREA: Units 1-3 contain 262 acres of partial cut. Within the partial cut area there are 9 group select areas totaling 32 acres to cut. There are 4 acres of road right-of-way to be cut. Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

ACCESS: Access to the sale area is provided via: Oregon State highways, Douglas County Roads, government controlled roads, and privately controlled roads. A gate restricts access to this sale.

DIRECTIONS TO SALE AREA: From Coos Bay, travel north on Highway 101. Turn right on Smith River Road heading east 35 miles, turn left on West Fork Smith River Rd for 9 miles turn left on Road 20-9-1.0 and refer to Exhibits A and A-1 for unit locations.

ROAD USE & MAINTENANCE: Purchaser shall pay a maintenance and rockwear obligation totaling $78,764.71 to the Government. Road use fees totaling $13,038.00 are payable to Roseburg Resources Co. Refer to Exhibit E summary attached.

ROAD CONSTRUCTION: Road construction and improvement estimates include the following

18.10 stations Class SN-16 road
50.05 stations Class SN-12 road

Refer to Exhibit C

Surfacing:

1044 cu. yds. of 1½-inch minus crushed hardrock
2939 cu. yds. of 3-inch minus crushed hardrock
3365 cu. yds. of 6-inch minus crushed hardrock
145 cu. yds. of Rip Rap

Drainage:

215 linear feet of 18-inch CPP culvert
60 linear feet of 24-inch CPP culvert
40 linear feet of 18-inch CPP single wall culvert downspouts

DURATION OF CONTRACT: Will be 36 months for cutting and removal of timber. The contract will contain special stipulations regarding logging, road construction, road use and maintenance, fire prevention, hazard reduction and logging residue reduction, log export and substitution, optional scale check of lump sum sales, equal opportunity in employment, cultural resource protection, and sensitive, threatened, or endangered plants

or animals.

SPECIAL PROVISIONS:

1. Snags that are felled for safety reasons will be left on site. 41c
2. All Pacific yew are reserved from cutting, except within road right-of-ways. 41d
3. All existing down coarse woody debris is reserved from cutting and removal. 41e
4. Seasonal restrictions or daily timing restrictions will apply in the Seasonally Restricted Area, as shown on Exhibit A. 42b3
5. Directional felling is required away from roads, property lines, posted boundaries, orange-painted reserve trees, and snags. 42b4
6. Cutting or yarding during high sap flow, March 31 through July 1, may be restricted by the Authorized Officer. 42b5
7. In the Partial Cut Area, conifer trees will be bucked to a maximum of 41-foot lengths. 42b7
8. All trees eight (8) inches DBHOB and larger designated for cutting in the Group Select Area shall be felled and yarded concurrently with all other trees designated for cutting in the Group Select Area. 42b9
9. In the Cable Yarding Area, yarding shall be completed with cable-type equipment capable of lateral yarding 75 feet each side of the skyline road. 42b11
10. In the Cable Yarding Area, one-end suspension is required. Lift trees and/or intermediate support trees may be necessary to achieve suspension. 42b13
11. No-harvest zones will be maintained adjacent to stream channels. Corridor trees felled within the no-harvest zone shall be left on site. Trees within 120 feet of any draw shown on exhibit A shall be directional felled toward the draw. 42b17
12. Full-log suspension will be required over stream channels. Where full suspension cannot be achieved, yarding will occur during the dry season. 42b17
13. Within safety standards, harvest trees will be directionally felled away from any stream channels; however, trees that must be felled toward or parallel to the stream channel should be temporarily retained on site to provide bank armament if other trees need to be yarded across the channel. 42b18
14. The yarding machine shall utilize slash on skid trail as directed. 42b20
15. All Harvesting equipment must be approved in writing by the Authorized Officer prior to any operations. 42b20a
16. Ground-based operations shall be conducted when soil moisture content is below 25% plastic limit, as determined by the Authorized Officer. 42b20b
17. The location and use of yarding roads and harvester roads in the Cable Yarding Area and Ground Based Yarding Area shall be approved by BLM prior to use by the Purchaser. 42b21
18. Skyline corridors will be no wider than 12 feet as measured between reserve trees and 150 feet apart on one end as measured perpendicular to the proceeding corridor. 42b21a, 42b14
19. Road building and logging equipment will be washed prior to moving into the Contract Area to minimize the spread of noxious weeds. 42b25 and Exhibit F
20. Hauling on dirt surfaced roads will be permitted between July 1 and October 15, unless dry conditions extend the hauling season. 42b26
21. Any required construction, improvement, or renovation of structures and roads shall occur during the dry season, June 1 through October 15, both days inclusive, of the same calendar year unless dry conditions extend the construction season. 42c2
22. Road use fees totaling $13,038.00 are payable to Roseburg Resources Co. Refer to Exhibit E summary attached.

23. Purchaser shall enter into a license agreement with Roseburg Resources Co. prior to any use of any of their roads.
24. BLM will assume supervisory responsibility for disposal of logging slash.42e1
25. Hand or machine piling is required in Roadside Hazard Reduction Area. 42e3b
26. Slashing, loping, and scattering is required on approximately 32 acres in the Group Select Area. 42e3w
27. Within 1 year following the completion of yarding operations, create approximately 1,130 snags as directed by the Authorized Officer. See section 42.f.1.
28. Within 1 year following the completion of yarding operations, the Purchaser shall mechanically sever approximately 180 orange marked leave trees. Trees marked with an "S" have been predesignated for snag trees. 42f2

SCHEDULE I

Sec. 41. TIMBER RESERVED FROM CUTTING. The following timber on the Contract Area, shown on Exhibit A, which is attached hereto and made a part hereof, is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the Government:

a. All timber on the Reserve Area, shown on Exhibit A, and all blazed, orange painted and/or posted trees which are on or mark the boundaries of the Reserve Area.

b. All orange painted reserve trees marked above and or below stump height within the Partial Cut Area, as shown on Exhibit A.

c. Pacific yew are reserved from cutting, except within road right-of-ways.

d. All hardwoods, except Red Alder, are reserved from cutting.

e. All existing standing dead trees within the Partial Cut Area except those trees which must be felled to permit safe working operations. Snags felled for safety reasons shall be left on site.

f. All existing coarse woody debris within the Contract Area, unless the Authorized Officer determines the volume to be included in the Exhibit B, which is attached hereto and made a part hereof.

g. All Bearing Trees with metal tags which mark property corners.

Sec. 42. SPECIAL PROVISIONS. Purchaser shall comply with the special provisions which are attached hereto and made a part hereof unless otherwise authorized, in writing, by the Authorized Officer:

a. Periodic Payment and First Installment Adjustment

(1) Notwithstanding the provisions of Sec. 3(b), the amount of the first installment may be reduced by the Government when the Contracting Officer requests the Purchaser to interrupt or delay operations for a period expected to last more than thirty days during the operating season. Such interruption or delay must be beyond the

Purchaser's control. Operating Season shall be defined, for this purpose, as the time of year in which operations of the type required are normally conducted and not specifically restricted under the contract. The first installment may be reduced to five percent of the installment amount listed in Sec. 3(b), during the delay period. The Purchaser must request such a reduction in writing. When the Contracting Officer notifies the Purchaser that operations may proceed, the purchaser shall have fifteen days after such notification to return the first installment to the full value specified in Sec. 3(b). Failure to return the first installment to the full value within the allotted time will be considered a material breach of contract. No timber shall be cut or removed from the contract area until the first installment is restored to the full amount.

(2) Notwithstanding the provisions of Sec. 3(b), adjustments in the due dates for periodic payments may be made by the Government if the Contracting Officer interrupts or delays contract operations for a period expected to last at least thirty days, and the interruption or delay is beyond the Purchasers control. Any adjustment made shall provide the Purchaser with an equal amount of operating time as would have been available without the delay. The Purchaser shall request such adjustment in writing before the due date for a periodic payment contained in Sec. 3(b).

b. Logging

(1) Prior to commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer's representative must be held at a location designated by the Authorized Officer before the logging plan will be approved.

(2) Before beginning operations on the contract area for the first time, or after a shutdown of ten or more days, the Purchaser shall notify the Authorized Officer in writing of the date he plans to begin operations. He shall also notify the Authorized Officer in writing if he intends to cease operations for any period of ten or more days.

(3) In the Seasonal and Timing Restriction areas, as shown on Exhibit A, falling, bucking, yarding, and new road construction operations shall cease between April 1 and August 5 of the same calendar year, both days inclusive. Daily timing restrictions (work is limited to two hours after sunrise to two hours before sunset) will apply from August 6 through September 15 of the same calendar year, both days inclusive.

(4) Directional felling is required away from roads, property lines, posted boundaries, orange-painted reserve trees, no-harvest areas and snags.

(5) Cutting or yarding during high sap flow, March 31 through July 1, may be restricted by the Authorized Officer.

(6) All trees designated for cutting shall be felled to the lead of the pre-marked yarding corridors or pre-marked skid roads.

(7) All trees designated for cutting in the Partial Cut Area shall be felled, limbed, topped, and cut into log lengths not to exceed 41 feet before yarding.

(8) Rub trees may be cut and yarded after all lateral yarding is complete on each setting, as directed by Authorized Officer.

(9) All trees eight (8) inches DBHOB and larger designated for cutting in the Group Select Area shall be felled and yarded concurrently with all other trees designated for cutting in the Group Select Area.

(10) All trees designated for cutting in the Group Select Area shall not be topped or limbed prior to reaching the landing. If the Authorized Officer determines that this stipulation is not being met, the purchaser will be required to gross yard any bucked tops and/or bucked limbs within the Group Select Areas as shown on the Exhibit A.

(11) Yarding shall be completed with cable-type equipment. A carriage capable of yarding in a fixed position 75 feet in either direction from the skyline corridor will be required.

(12) Complete re-spooling of lines is required in making cable yarding road changes.

(13) One-end suspension will be required for in-haul of logs during cable yarding operations. Lift trees and or intermediate supports may be required to obtain the required suspension.

(14) Cable yarding corridors will be 150 feet apart, as measured from the tail hold, or where the skyline reaches the far edge of the unit, perpendicular to the preceding corridor.

(15) Where yarding road locations allow, cable yarding will be done so that corridors are parallel rather than radiating from one central landing, and are placed to avoid a stream channel, shown on Exhibit A. Where yarding is to occur over a stream channel, the yarding roads will be kept as perpendicular to the stream channel as possible.

(16) A minimum 120 foot slope distance no-harvest zone shall be maintained on either side of intermittent stream channel and perennial stream channels. Corridor trees felled within the no-harvest zone will be felled toward the stream channel and left in place.

(17) Where cable yarding must occur over any stream channel with visible flow, logs will be fully suspended to protect stream banks. Where full suspension is not feasible, operations will occur only during the dry season, as designated by the Authorized Officer. Bare mineral soil within 50 feet of a stream channel, which has been exposed by yarding, shall be covered with slash to trap sediment and prevent erosion.

(18) Harvest trees will be directionally felled away from any stream channels; however, trees that must be felled toward or parallel to the stream channel should be temporarily retained on site to provide bank armament if other trees need to be yarded across the channel.

(19) Prior to attaching any logging equipment to a reserve tree, the Purchaser shall obtain written approval from the Authorized Officer and shall take precautions to protect the tree from damage as directed in writing by the Authorized Officer.

(20) In the Ground-based Yarding Area, as shown on the Exhibit A:

(a) All Harvesting equipment must be approved in writing by the Authorized Officer prior to any operations.

(b) Ground-based operations shall be conducted when soil moisture content is below 25% plastic limit, as determined by the Authorized Officer. Unseasonably dry or wet weather may shorten or extend the operating season. The Purchaser shall be notified in writing when weather conditions extend the operating season. The Purchaser may be required to suspend ground-based operations during periods of rain, as directed by the Authorized Officer.

(c) Trees shall be felled manually or by a mechanized harvester utilizing a "cut-to-length" system capable of directionally felling, cutting to length, and depositing slash along the harvesting path.
The yarding machine shall utilize slash on skid trails and continually place slash on trails so as to not expose bare mineral soil.

(d) The yarding machine must be approved by the Authorized Officer. It must be equipped with a grapple or an extendable and retractable arch and fairlead which is an integral part of the machine that is capable of lifting the leading end of the turn clear of the ground. All logs in the Ground-based Yarding Area shall be yarded with their leading end clear of the ground. A forwarder or tracked log loader may also be used to yard logs within the Ground-based Yarding Area.

(f) Primary skid trails shall use existing trails wherever possible, be spaced at least 100 feet apart, and be no wider than 12 feet as measured between reserve trees.

(g) Primary skid trails shall be blocked with slash or cull material after completion of harvest where the Authorized Officer determines vehicle access is possible.

(h) All ground-based equipment shall be restricted to operating on slopes less than 35% and shall not operate within 120 feet of a stream channel.

(i) Any skid trail with more than 100 feet of continuous bare ground shall have water bars installed and or be covered with slash for erosion control prior to October 15th of the same calendar year.

(21) Before cutting and removing any trees necessary to facilitate logging in the Partial Cut Area, the Purchaser shall identify the location of the harvester roads, cable yarding roads and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser's identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding the following conditions must be met:

(a) All cable yarding roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with minimum damage to reserve trees, however, unless otherwise approved in writing by the Authorized Officer, the width of each cable yarding corridor shall be limited to 12 feet.

(b) The Purchaser may immediately cut and remove additional timber to clear cable yarding corridors; and provide tailhold, tieback, guyline, lift and intermediate support trees; and clear danger trees when the trees have been marked with blue paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Sec. 3(b) of the contract or sufficient bonding has been provided in accordance with Sec. 3(d) of the contract.

(c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Authorized Officer and that such timber shall be sold at the unit prices shown in the Exhibit B of this contract unless the value of the timber must be reappraised subject to the terms for contract extension set forth in Sec. 9 of the contract; or, the Authorized Officer determines that any tree that exceeds 24 inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Sec. 8 of the contract.

(d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer which, under Sec. 10 of the contract, constitutes a violation of the contract, and, under Sec. 13 of the contract, may constitute a trespass rendering the Purchaser liable for damages under applicable law.

(e) If authorization is withdrawn, the Authorized Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least three working days prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in the Exhibit B of the contract or in accordance with Sec. 8 or Sec. 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Authorized Officer may

issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.

(f) The Government may reserve trees previously designated for cutting and removal by applying orange paint as replacements for additional trees cut and removed for skid roads and/or cable yarding road corridors when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription. This may include the replacement of trees damaged by storm events, insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price stated in Sec. 2 of this contract shall be reduced accordingly through a unilateral modification to the contract executed by the Authorized Officer.

(22) In accordance with the requirements of Sec. 8, it has been determined that it is in the best interest of the government and within the provisions of 43 CFR 5402.0-6 to sell additional timber located in the Contract Area that is: obstructing needed cable yarding corridors, hazardous to workers in accordance with applicable State safety laws, codes, or regulations and must be cut or removed so that the Purchaser can continue active falling or yarding operations; needed for guyline trees to meet all applicable State safety laws, codes or regulations and must be cut or removed so the Purchaser can continue active yarding operations; or are severely damaged from the normal conduct of felling or yarding operations. The Purchaser is therefore authorized to cut and remove such additional timber in accordance with the provisions of Sec. 8; provided, however, that:

(a) the Purchaser shall identify each tree sold and cut in accordance with this provision by marking the surface of the stump immediately after cutting with a large "X", cut with a chain saw, and by painting the stump with fluorescent red paint so that the stump can be visually located from a distance of not less than 100 feet;

(b) concurrently with falling, paint the butt of each tree with fluorescent red paint. When butt logs are yarded, deck separately for inspection by Authorized Officer;

(c) The Purchaser conforms to all requirements of Sec. 8 of this contract; provided that (1) the unit prices for additional timber within unit boundaries shall be the unit prices shown in Exhibit B of this contract, or the reappraised unit prices arrived at in accordance with Sec. 9 of this contract, and (2) timber outside of unit boundaries shall be sold at fair market value;

(d) no timber may be cut or removed under the terms of this provision if all contract payments required by Sec. 3. (b) or 3.(d) have not been made; and,

(e) permission to cut and remove additional timber contained in this provision may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser:

(1) failed to properly mark any stump with the "X" mark.
(2) failed to properly mark any butt log with the "X" mark.

(3) cut any tree that was reserved for tree improvement and/or wildlife habitat.
(4) cut any tree in or adjacent to cable yarding corridors that was not necessary to facilitate cable yarding.
(5) cut any reserve tree in or adjacent to tractor skid roads that was not necessary to facilitate ground-based yarding.
(6) cut any reserve tree that was not severely (as defined during the pre-work conference and documented in the approved logging plan) damaged from felling and yarding operations.
(7) cut more than the minimum number of trees necessary to properly serve as guyline anchor stumps.
(8) cut or topped more than the minimum number of trees necessary to properly serve as tailhold trees.
(9) cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tailhold trees.

Failure to perform any of the conditions listed above may be considered a trespass.

(23) As directed by Authorized Officer, for a distance of 100 feet from the perimeter of each landing, all logs more than eight inches diameter at the large end and longer than eight feet in length shall be decked or windrowed at the location designated by the Authorized Officer except logs removed from the contract area. If a log or a piece of a log meeting or exceeding the above specifications is bucked all portions of that log shall be yarded and decked at the above described location.

(24) In the Partial Cut Area, significant damage to residual trees shall be kept to a minimum. Significant damage is defined as any tree having greater than twelve square inches of the bark removed from the circumference of the tree, any tree with top diameter broken at three inches in diameter or greater, or any tree being visually root-sprung. If the Authorized Officer determines that damage has become commonplace due to a lack of caution or operator negligence, a written warning of non-compliance will immediately be issued to the Purchaser. The Authorized Officer may suspend operations until safeguards are put in place to protect the reserve trees. If the damage continues, it will result in a violation of Sec. 13 of the contract, Timber Trespass, and the Purchaser will be held liable for damages. Any reserved trees significantly damaged or destroyed by the Purchaser shall be valued at current market value of the merchantable volume for purposes of determining damages.

(25) To control the spread of noxious weeds, the Purchaser shall conduct all operations involving the transportation and use of equipment and vehicles in strict accordance with the requirements shown on Exhibit F, which is attached hereto and made part hereof. All road building and logging equipment which will be used off of existing roads will be washed prior to moving into the Contract Area to minimize the spread of noxious weeds.

(26) Hauling on dirt surfaced roads will be permitted between July 1 and October 15 unless dry conditions extend the hauling season, as directed by Authorized Officer.

(27) To minimize the risk of attracting predators to activity areas, **all garbage** (especially food products)

must be contained and removed daily from the Contract Area.

(28) The bituminous road surface at roadside landing locations will be protected by applying a layer of wood chips, hog fuel, or other material (excluding rock or soil) to a depth sufficient to prevent damage from yarding and loading activities. If rubber-mounted equipment is used, protection material may not be required.

(29) Road No. 20-9-1.0, shall be kept clear of trees, rock, dirt and other debris so far as is practicable and shall not be blocked by operations for more than 20 minutes. Multiple operators may be using these roads simultaneously. Coordinating with other operators when using Road No. 20-9-1.0, will be required.

(30) Signs and flaggers are required to control traffic when falling timber within 200 feet of any road, or conducting any operations requiring flagging under Section 29 of this contract.

c. Road Construction

(1) The Purchaser shall construct, improve, or renovate a road in strict accordance with the road plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof.

(2) Any required construction, improvement, or renovation of structures and roads shall occur during the dry season, June 1 through October 15, unless dry conditions exist that may extend those dates as approved by the authorized officer.

(3) Any required construction, improvement, or renovation of structures and roads shall be completed and accepted prior to the haul of any timber, except right-of-way timber, over that road.

(4) In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall complete erosion control and soil stabilization measures on all cuts, fills, waste areas, and scarified areas, as designated by the Authorized Officer, along all sections of roadway disturbed during the year prior to October 15 of each year. The Authorized Officer may set time limits for the beginning and completion of erosion control and soil stabilization measures and modify seasonal dates to conform to existing weather conditions and changes in the construction schedule. Such work shall be accomplished in accordance with Erosion Control and Soil Stabilization, 1700 and 1800 Series, contained in Exhibit C.

d. Road Use and Maintenance

(1) The Purchaser shall be required to secure written approval to use or haul equipment over Government owned or controlled structures when that equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit.

Tracked type equipment shall not be allowed to cross over concrete bridge decks, other concrete surfaced

structures or asphalt surfaced roads without the proper protection of that surface. Prior approval shall be obtained from the Authorized Officer when crossing with protective devices.

Details of such equipment shall be furnished to the Authorized Officer for evaluation of load characteristics, at least 15 days prior to proposed move in. Details shall include:

(a) axle weights when fully loaded;
(b) axle spacing;
(c) transverse wheel spacing;
(d) tire size;
(e) outside width of vehicle;
(f) operating speed;
(g) frequency of use; and,
(h) special features (e.g. running tracks, overhang loads, etc.).

The Purchaser shall be responsible for repair of any damage to structures caused by the use of overweight or over-dimension vehicles: (1) without written approval, (2) in violation of the conditions of a written approval or (3) in a negligent manner. The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

(2) At all times during the period of his operations on the contract area, and upon completion of said operations, the Purchaser shall be liable for maintenance and repair of such roads shown on Exhibit D, which is attached hereto and made a part hereof, resulting from wear or damage in accordance with the maintenance specifications as shown on Exhibit D

(3) The Purchaser is authorized to use the roads shown on Exhibit E, which is attached hereto and made a part hereof, for the removal of Government timber sold under the terms of this contract and for haul of mineral material required under the terms of this contract; provided, that the Purchaser shall pay a Maintenance Obligation to the Government totaling $78,764.71 as shown on Exhibit E. Unless the total Maintenance Obligation due to the BLM is paid prior to commencement of operations on the contract area, payments shall be made in installments payable in the same manner as and together with payments required by Sec. 3 of this contract. Timber modification volume will be assessed at a rate of $13.64/MBF for removal of timber over Government controlled roads.

(4) With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of any BLM controlled road included in Secs. 42(c)(1) and 42(d)3 of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.

USE IF OTHER THAN ROSEBURG RESOURCES CO IS PURCHASER

(5) In the use of required Roseburg Resources CO roads, shown on Exhibit E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement C-89, between the United States and Roseburg Resources Co, available for inspection at the Bureau of Land Management, North Bend, Oregon. Prior to commencement of operations, the Purchaser shall enter into and furnish to the Authorized Officer a copy of the required executed License Agreement.

Default by the Purchaser of said Right-of-Way and Road Use Agreement, of any License Agreement executed pursuant thereto shall be considered a violation of this contract. Road Use Fees totaling $13,038.00 is payable to Roseburg Resources Co.

USE ONLY IF ROSEBURG RESOURCES CO IS PURCHASER

(6) In accordance with 43 CFR 2812.6, 2(a)(5) the following allowances have been made for amortization of capital investment of the roads covered by Road Agreement C-89, with the Purchaser: Road Use Fees totaling $13,038.00. It is understood that the Total Purchase Price stated in Sec. 2 of this contract is the net price and that no deduction will be made from the contract price because of such allowance.

e. Fire Prevention, Hazard Reduction and Logging Residue Reduction

(1) BLM will assume supervisory responsibility for disposal of logging slash. The assumption by the Government of all obligations for the disposal or reduction of fire hazard under state law does not relieve the Purchaser of the obligations to perform the fire prevention, hazard reduction and logging residue reduction measures required by this contract.

(2) Fire Prevention and Hazard Reduction. Primarily for purposes of fire prevention and fire hazard reduction, the Purchaser shall comply with the following provisions:

(a) Prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, the Purchaser shall, on an annual basis during the term of this contract, prepare fire prevention and control plans to the satisfaction of the Authorized Officer.

(b) Slash shall be disposed of in accordance with the written instructions of the Authorized Officer.

(3) Logging Residue Reduction. Primarily for hazardous fuel reduction, watershed protection and silvicultural purposes, the Purchaser shall comply with the following provisions:

(a) In addition to the requirements of Section 15 of this contract, the Purchaser shall be responsible for logging residue reduction at all landing sites in the sale area, and within the Roadside Hazard Reduction Areas (RHRA) as shown on the Exhibit A.

Specifications for RHRA and Landing Piling

(b) Within the RHRA's, the Purchaser shall (1) remove logging residue for offsite utilization or (2)

pile on site for burning. Within the RHRA, all logging residue one-half inch to four inches (small end diameter) which is greater than two feet in length and is within twenty feet slope distance of the outside edge of the road shoulder shall be removed or piled. Logging residue includes slash from the harvest operations and related road construction, renovation or improvement. Removal/piling shall be accomplished by hand or with mechanized equipment capable of reaching the required twenty feet without leaving the road surface.

(c) At all landing sites within the sale area, the Purchaser shall either (1) remove from the site for offsite utilization or (2) pile for burning, all logging residue that is presently on and around the immediate vicinity of the landing site.

(d) Any logs or useable residue identified in the contract as reserved shall remain the property of the Government and may not be shipped for offsite utilization.

(e) Prior to commencement of logging residue removal, the Purchaser shall provide advanced notification to the Authorized Officer in order to arrange for on-site inspections of the removal operations. Upon completion of residue removal, the Purchaser shall notify the Authorized Officer to arrange for a final inspection of the RHRA's and landing sites.

(f) Unless approved in advance by the Authorized Officer, landing piling shall be completed at each yarding location (setting) at the conclusion of yarding operations at that setting while logging equipment is on site. Machine piling of the RHRA concurrently with logging operations is recommended but shall be completed at the conclusion of harvest operations.

(g) Unless directed or approved by the Authorized Officer, no landing or RHRA piles shall be constructed within twenty feet of any reserved green trees, snags, marked wildlife trees, corrugated plastic pipes (CPP's) or other constructed feature or improvement that could be damaged by fire.

(h) Logging residue within the immediate vicinity of the landing and any residue that overhangs the landing sites that can be reached with the logging equipment on site shall be pulled completely back up onto the landing surface and either piled for burning or segregated for other uses.

(i) Logging residue meeting the criteria set forth in Sec. 42.b.(23), shall not be piled for burning but shall be segregated into separate piles that are no closer than twenty feet from residue piles that will be burned.

(j) If during the course of pile construction or during a final acceptance inspection, the Authorized Officer determines that landing or RHRA piles contain excessive amounts of logging residue that meets the specifications as described in Sec. 42.b.(23), the purchaser may be required to remove the specified residue from the burn piles.

(k) Root wads from road and landing construction activities shall not be included in the landing or RHRA piles. Piling of slash on top of root wad piles is not permitted. Any root wad piles found by the Authorized Officer to be capped by slash will require the removal and re-piling of the slash by the Purchaser.

(l) To promote efficient and complete burning, landing and RHRA piles shall be constructed as upright as possible and have a solid base to promote stability and prevent toppling. Construction of low-profile, flat topped piles is generally considered as unacceptable. The Purchaser is responsible for ensuring that properly shaped; contoured and stable landing piles are constructed.

(m) During or after pile construction, landing and RHRA piles shall be shaped and contoured in such a manner that will allow for polyethylene sheeting (PE) to lay in a smooth and uniform manner completely across the top and partially down the sides of the pile to promote shedding of water, prevent pooling of water and to reduce the possibility of PE being ripped or torn by underlying slash or from wind. Landing and RHRA piles found by the Authorized Officer not meeting this shaping requirement shall be reconstructed or reshaped by the Purchaser.

(n) The Purchaser shall request an inspection of landing and RHRA piles before equipment used in piling is moved off site. If piling equipment is moved off site before inspection and the piles are subsequently found to be noncompliant with the specifications and require a re-work, the Purchaser shall be responsible for costs associated with move-in of piling equipment to rework piles. Unless approved by the Authorized Officer, all requests for inspection of landing and RHRA piling shall be made in writing (email is acceptable) at least ten days in advance of planned equipment removal.

Specifications for RHRA and Landing Pile Covering

(o) Only landing and RHRA piles that have been inspected and approved by the Authorized Officer shall be covered. Pile covering shall be completed no later than September 15 of the current year at all RHRA segments and landing sites where yarding activities have been completed. This applies to each year that the timber sale is active.

(p) The Purchaser shall place polyethylene sheeting (PE), minimum four MIL thickness and black in color over the pile so as to provide an adequate level of protection from fall/winter rains. PE sheeting shall lie uniformly and as smoothly as possible across the top of the pile and shall extend partially down the sides. For small properly constructed piles with base dimensions of approximately 10 ft. x 10 ft. or less, the size of the PE sheeting should be a minimum of 100 square feet.

(q) To meet ignition and combustion needs, larger piles will require additional PE sheeting to adequately cover the pile and protect it from wetting fall/winter rains. The Purchaser shall contact the Authorized Officer before any pile covering begins to receive specific direction on which piles will require additional covering. At that time, the Authorized Officer will identify all piles that shall have additional PE covering. If piles are covered without the advice and consent of the Authorized Officer and are subsequently found to be inadequately covered, the Purchaser may be required to re-cover or add additional covering to the piles before acceptance is made.

(r) At landing sites with excessive logging residue that overhangs the landing which cannot be

reached and pulled back up onto the landing with equipment on site, the Purchaser shall place additional PE sheeting over the residue concentrations below the landings.

(s) On roads that have been closed and/or decommissioned, decks of Purchaser owned logs that were not shipped by the Purchaser shall be covered with PE for burning. The Authorized Officer may waive this requirement if future utilization is determined to be feasible. Decks of reserved logs belonging to the Government are exempt from this requirement.

(t) All PE sheeting shall be weighted down with slash or logging debris in order to prevent blowing off or sliding. An adequate amount of anchoring material should be placed on top of the pile but no more than 20 percent of the material to be piled may be placed on top of the PE.

(u) Piles of root wads generated from road and landing construction activities and piles of residue identified by the Authorized Officer for other uses shall not be covered with PE sheeting. If root wad piles are found to be covered the Authorized Officer may require the removal and disposal of PE sheeting.

Specifications Applicable to Landing and RHRA Pile Burning

(v) In accordance with verbal or written instructions to be issued by the Authorized Officer at least ten days in advance of the earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his/her designated representative, assist in burning and fire control, at the Purchaser's expense, provide the services of personnel and equipment as follows:

1. The Purchaser shall begin pile burning within fourteen hours of notification by the Authorized Officer.

2. The Purchaser shall dispose of removed polyethylene sheeting in accordance with any applicable Federal, State, and municipal laws. Removed polyethylene sheeting shall not be disposed of in burn piles

3. All personnel directly involved in burning operations must have a current qualification card for FFT2 or higher. All qualifications are defined according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1. Qualifications and equipment levels are the minimum and may exceed those stated above. All listed personnel shall be physically fit, experienced and fully capable of functioning as required. All personnel shall arrive at the project area with the following personal safety equipment: lug-soled leather boots with minimum eight (8) inch uppers that provide ankle support; an approved hardhat; leather gloves; long pants and a long sleeve shirt made of approved aramid fabric (Nomex or equivalent); and an approved fire shelter.

4. For each entry, the Purchaser may provide more personnel, equipment and materials

than indicated but no less than the minimum requirements below unless approved in advance by the Authorized Officer. Minimum personnel, equipment and materials requirements for burning landing and RHRA piles are:

a. One English-speaking foreman for crew supervision.
b. Five people to assist the foreman in pile burning.
c. Six drip torches and sufficient mixed fuel to complete all pile burning.

5. A minimum of ninety percent consumption of each pile is required. Stoking of piled material around pile edges may be required to meet the 90% consumption requirement. Stoking can be accomplished by hand or the Purchaser will be allowed to use heavy equipment (if onsite) to facilitate stoking or re-piling of residue during pile burn operations. If used, the heavy equipment shall not be allowed to operate off of all-weather road surfaces.

6. No mop-up is required of the Purchaser.

7. Multiple entries over the life of the contract may be required to complete pile burning. Purchaser provided personnel; equipment and materials requirements will remain the same as No. 4 above for each entry. Any change in the requirements must be approved in advance by the Authorized Officer.

Specifications for Slashing, Lopping and Scattering (SLS) in the Group Select Areas (GSA)

(w) In accordance with oral, email or written instructions to be issued by the Authorized Officer at least ten days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or their designated representative, assist in site preparation of the Group Select Areas (GSA). The Purchaser, at their own expense, shall provide the services of personnel and equipment as follows:

(x) The Purchaser shall perform logging residue reduction and site preparation work on approximately thirty two (32.0) acres of GSA as directed by the Authorized Officer.

1. The required work shall consist of the treatment listed in the table below. The locations of Slash, Lop, and Scatter (SLS) treatments shall be determined by the Authorized Officer as harvest activity progresses. The final number of treatment acres shall be determined by the Authorized Officer and specified in writing by the Contracting Officer before contract termination. Final treatment acreage shall be determined using the same methods that were used for calculating the sale unit acreage. The following treatment and estimated treatment acres was assumed for appraisal purposes on this contract:

Treatment Type	GSA Treatment Acres (estimated)	Cost per Acre	Total Cost
Slash, Lop and Scatter (SLS)	32.0	$283.70	$9,078.40
Total Appraised Cost			$9,078.40

2. The total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of the site preparation treatments designated pursuant to Section 42(e.)(3)(x)1. differs from: nine thousand seventy eight dollars and forty cents ($9,078.40) as calculated by using the final acreage as determined by the Authorized Officer and the per acre cost listed in Section 42(e.)(3)(x)1. An increase of treatment acres would result in a purchase price reduction whereas a decrease of treatment acres would result in a purchase price increase.

(y) The required work shall consist of post-harvest slashing, lopping and scattering (SLS) of residual vegetation (brush and damaged trees) and logging residue. Multiple entries over the life of the contract may be required in order to meet critical silvicultural objectives. SLS work shall comply with the following:

1. All brush species one foot or greater in height, damaged conifer reproduction and hardwoods, and hardwoods not marked or otherwise identified for retention, shall be completely severed from the stumps. Brush species consist of shrubs with single or multiple stems originating at or near ground level and not normally reaching twenty feet in height. Examples include (but are not limited to) vine maple, salmonberry, hazel, huckleberry, thimbleberry, manzanita, ocean spray, ceanothus species, broom species, blackberry species and rhododendron.

2. Stump heights shall not exceed four inches measured on the uphill side.

3. No live limbs will be left on stumps.

4. Slashed hardwoods shall be bucked every four feet and the limbs will be completely severed from the bole of the cut hardwood.

5. Except for felled or existing down trees identified by the Authorized Officer as coarse wood, conifers (including blowdown) and hardwoods felled but not yarded during harvest operations shall be bucked sufficiently to bring the bole down to the ground. All limbs will be severed from the bole of the trees.

6. All slashed vegetation and logging debris (brush, limbs and boles) shall be sufficiently cut and/or scattered in such a manner that will reduce the average slash depth in any given location to no more than twelve inches (1 foot).

(z) Time is of the essence in complying with these provisions. In the event the Purchaser fails to

provide the personnel, equipment and materials required herein, the Purchaser shall be responsible for all additional costs incurred by the Government in disposing of slash including but not limited to the wages and other costs of providing federal employees and others as substitute labor force, the cost of providing substitute equipment, materials and appropriate additional overhead expenses. If the Purchaser's failure results in deferral of treatments and conditions necessitate additional site preparation work and/or the use of additional personnel and equipment to accomplish the planned treatments, the Purchaser also shall be responsible for such additional costs.

f. Snag Creation

(1) The Purchaser shall, within 1 year following the completion of yarding operations, create 1,130 snags, as directed by the Authorized Officer and in accordance with the following stipulations:

(a) The Purchaser shall create 1,000 snags in the Snag Group and Snag Creation Area locations in quantities indicated on the Exhibit I, as directed by the Authorized Officer. Snags shall be greater than 10 inches. If trees are not available in the size class specified, 10-20 inches in diameter or greater than 20 inches in diameter, use trees from the next largest size class available.

(b) The Purchaser shall create 130 snags dispersed in the Riparian Reserve Snag Creation Area as shown on the Exhibit I. The Riparian Reserve Snag Creation area is defined by a distance equivalent to approximately two hundred (200) feet slope distance from the stream. Snags created shall be no closer than 2 live green trees apart.

(c) The Purchaser may meet snag creation requirements with trees of any species, except western redcedar (Thùja plicàta).

(d) Snags shall generally be created by girdling live, green trees at three and one-half (3½) feet above the root collar; girdling will consist of completely severing the cambial tissue around the bole of the tree, without cutting into the sapwood more than one and one-half (1½) inches, and removing a four (4) inch band of bark. Alternatively, girdling may be achieved through use of three (3) parallel-unbroken cuts into the cambial tissue around the tree as specified within Exhibit I.

(e) The Purchaser shall number each snag created; the number shall be painted on the bole of the snag using high visibility paint such that the number is visible

(2) The Purchaser mechanically sever (one hundred and eighty) 180 orange marked leave trees greater than 10 inches DBH. When mechanically severing trees, trees shall be severed at the maximum height safely possible within reach of approximately 2.6 miles of road segments identified on the Exhibit I, or as directed by the Authorized Officer. Where manually severing trees, trees shall be topped at a height of 20’ or greater. Trees severed less than 7’ from the ground shall not count towards the total.

g. Optional Scale Check of Lump Sum Sales

(1) The Government, at its option, may administratively check scale any portion of the timber removed

from the contract area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed.

(2) In the event that BLM elects to administratively check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows. If the entire sale is check scaled by yard scale, the purchase price of this contract shall be reduced by $4,330.50. In the event only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of $4,330.50 which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with the Eastside Scribner Scaling Rules by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

h. Log Export and Substitution

All timber sales, including timber from Federal rights-of-ways, shall be subject to the restrictions relating to the export and substitution of unprocessed timber from the United States in accordance with P.L. 94-165 and 43 CFR 5400 and 5424 as amended.

(1) All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export under the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as (1) any logs except those of utility grade or below, such as saw logs, peeler logs, and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end-product uses; or (4) western redcedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacturing of eight and three-quarters inches in thickness or less; (6) shakes and shingles.

Substitution will be determined under the definition found in 43 CFR 5400.0-5(n).

The Purchaser is required to maintain and upon request to furnish the following information:

(a) date of last export sale;

(b) volume of timber contained in last export sale;
(c) volume of timber exported in the past 12 months from the date of last export sale;
(d) volume of Federal timber purchased in the past 12 months from the date of last export sale;
(e) volume of timber exported in succeeding 12 months from date of last export sale; and,
(f) volume of Federal timber purchased in succeeding 12 months from date of last export sale.

(2) In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a "Certificate as to Nonsubstitution and the Domestic Processing of Timber" (Form 5460-16). The original of such certification shall be filed with the Authorized Officer. Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

(3) In the event an affiliate of the Purchaser has exported private timber within twelve months prior to purchasing or otherwise acquiring Federal timber sold under this contract, the Purchaser shall, upon request, obtain from the affiliate information in a form specified by the Authorized Officer and furnish the information to the Authorized Officer.

(4) Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer a "Log Scale and Disposition of Timber Removed Report" (Form 5460-15) which shall be executed by the Purchaser. In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

(5) Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over ten inches, prior to the removal of timber from the contract area. All loads of eleven logs or more will have a minimum of ten logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of ten logs or less. One end of all branded logs to be processed domestically will be marked with a three square inch spot of highway yellow paint. The Purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

If multiple trailers (mule trains) are used, each bunked load shall be considered an individual load, and these guidelines will apply to each bunked load. If a flatbed stake trailer is used, each bundle will be treated as a separate load.

At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

(6) In the event of the Purchaser's noncompliance with this subsection of the contract, the Authorized Officer may take appropriate action as set forth in Sec. 10 of this contract. In addition, the Purchaser may be declared ineligible to receive future awards of Government timber for a period of one year.

i. Cultural Resource Protection

(1) If in connection with operations under this contract, the Purchaser, his contractors, sub-contractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural value on the contract area such as historical or prehistorical ruins, fossils, or artifacts, the Purchaser shall immediately suspend all operations in the vicinity of the cultural value and notify the Authorized Officer of the findings. Operations may resume at the discovery site upon receipt of written instructions and authorization by the Authorized Officer.

(2) Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the Authorized Officer, by telephone, with written confirmation, immediately upon discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer.

j. Sensitive, Threatened, or Endangered Plants or Animals

The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:

(a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;

(b) when, in order to comply with the Endangered Species Act or to protect occupied marbled murrelet sites in accordance with the Standards and Guidelines of the Coos Bay District Record of Decision (ROD) and Resource Management Plan (RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

(c) federal proposed, federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;

(d) when, in order to comply with a court order which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;

(e) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

(f) when, in order to protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP,

(g) the Contracting Officer determines it may be necessary to modify or terminate the contract.

Those operations necessary for a safe removal of personnel and equipment from the contract area and those directed by the Contracting Officer which are required in order to leave the contract area in an acceptable condition will be permitted. Discontinued operations may be resumed upon receipt of written instructions and authorization by the Contracting Officer.

During any period of suspension, the Purchaser may withdraw performance and payment bond coverage aside from that deemed necessary by the Authorized Officer to secure cut and/or removed timber for which the Bureau of Land Management has not received payment, and/or unfulfilled contract requirements associated with harvest operations that have already occurred and associated post-harvest requirements.

In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond 30 days, the First Installment on deposit may be reduced to five percent of the First Installment amount listed in Sec. 3.b. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, *et seq.*). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the

First Installment to the full amount shown in Sec. 3.b. of the contract within fifteen days after the bill for collection is issued, subject to Sec. 3.h. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

In the event of a suspension period or a combination of suspension periods that exceed a total of thirty days, the unamortized Out-of-Pocket Expenses for road or other construction required pursuant to Exhibit C of the contract shall be refunded or transferred to another BLM contract at the request of the Purchaser. Upon written notice from the Contracting Officer lifting the suspension, the Purchaser shall reimburse the Government the amounts refunded or transferred. The Purchaser may choose to pay this reimbursement at once or in installments payable at the same time as payments are due for the timber under the contract and in amounts approximately equal to the expenses associated with the timber for which payment is due.

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, or court-ordered injunctions, the Purchaser agrees that an extension of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

The Contracting Officer may determine that it is necessary to terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect occupied marbled murrelet sites in accordance with the ROD and RMP, protect species that have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or comply with a court order. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, marbled murrelet occupied site protection in accordance with the ROD and RMP, survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or court order requirements necessitating the modification or termination.

In the event cutting and removal rights are terminated under this subsection, the Purchaser agrees that the liability of the United States shall be limited to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area. This calculation of liability shall utilize actual Purchaser costs and Government estimates of timber volumes. At the Authorized Officer's request, the Purchaser agrees to provide documentation of the actual costs incurred in the performance of the contract. In addition, the Purchaser shall be released from the obligation to pay the contract price for any timber which is not authorized to be removed from the contract area.

The Purchaser specifically and expressly waives any right to claim damages, other than those described in the preceding paragraphs, based on an alleged breach of any duty to the Purchaser, whether express or implied, in regard to the manner in which the Government defended the litigation which resulted in the court order affecting the operation of the contract. This waiver also extends to any claims based on effects on the operation of the contract that arise from litigation against another agency. Furthermore, the Purchaser specifically acknowledges and agrees that a court ruling that the Government violated the Administrative

Procedures Act cannot be interpreted, in itself, to mean that the Government had not acted reasonably in regard to its duties to the Purchaser under this contract.

k. Safety

Purchaser's operations shall facilitate BLM's safe and practical inspection of Purchaser's operations and BLM's conduct of other official duties on Contract Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser's employees, contractors and subcontractors.

In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature ($2,000.00 or more), the Purchaser may request, in writing, an adjustment in the total contract purchaser price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions.

Unless otherwise specified in writing, when operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations. Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations. Traffic control devices shall be appropriate to current operating and/or weather conditions and shall be covered or removed when not needed. Flagmen and devices shall be as specified in state OSHA and Transportation standards for logging roads or the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) published by the U.S. Department of Transportation – Federal Highway Administration. Included in the Traffic Control Plan, Purchaser shall note traffic control device locations on a Purchaser produced copy of the contract Exhibit "A" Map.

Exhibit F

SPECIAL PROVISIONS TO CONTROL THE SPREAD OF NOXIOUS WEEDS

Vehicle and Equipment Cleaning

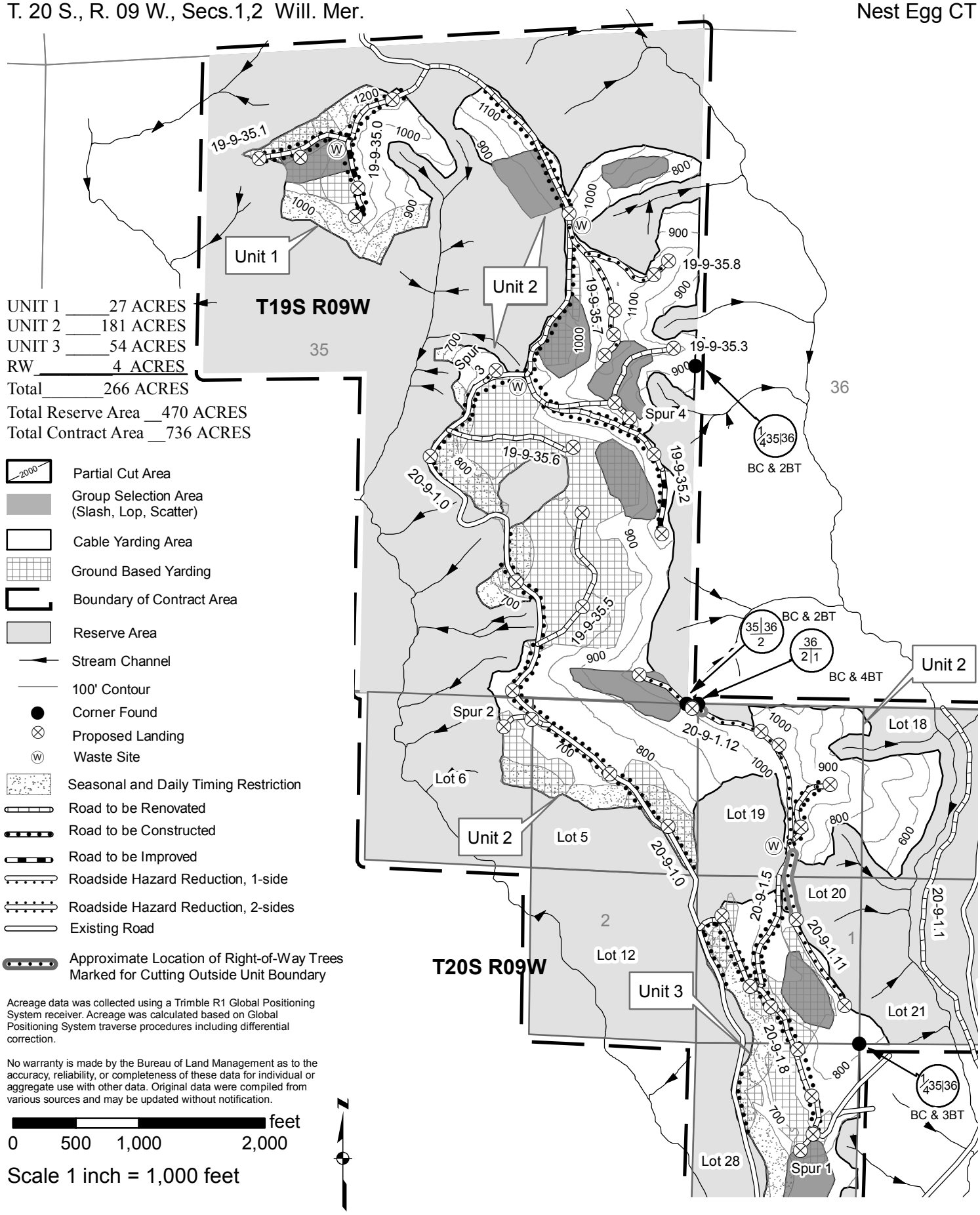
1. Cleaning shall consist of the removal of soil and debris by washing with a high pressure hose or steam cleaning. Cleaning and inspection sites will be agreed to by Purchaser and BLM. All petroleum product residues shall be contained at wash sites and dealt with in accordance to DEQ standards. Contractor shall provide an approved plan for the cleaning station that demonstrates that the station meets all DEQ and water quality regulations. All necessary permits shall be obtained by the contractor.

2. All equipment parts shall be cleaned as designated by the Authorized Officer, including removal of tractor belly plates, in accordance with Sec. 1 above.

All construction, logging and slash disposal equipment shall be cleaned prior to entering the contract area. The Authorized Officer will determine if log trucks and vehicles used for transportation of personnel shall be cleaned, based upon the location of use immediately prior to current timber sale. If the vehicles have been in a weed-infested area, they shall be washed before entering Contract Area, as shown on Exhibit A.

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 19 S., R. 09 W., Sec.35
T. 20 S., R. 09 W., Secs.1,2 Will. Mer.

SALE NO. ORC03-TS-2020.0001
EXHIBIT A
Page 1 of 2
Nest Egg CT



UNIT 1 _____27 ACRES
UNIT 2 ____181 ACRES
UNIT 3 _____54 ACRES
RW_____4 ACRES
Total_____266 ACRES
Total Reserve Area __470 ACRES
Total Contract Area __736 ACRES

- Partial Cut Area
- Group Selection Area (Slash, Lop, Scatter)
- Cable Yarding Area
- Ground Based Yarding
- Boundary of Contract Area
- Reserve Area
- Stream Channel
- 100' Contour
- Corner Found
- Proposed Landing
- Waste Site
- Seasonal and Daily Timing Restriction
- Road to be Renovated
- Road to be Constructed
- Road to be Improved
- Roadside Hazard Reduction, 1-side
- Roadside Hazard Reduction, 2-sides
- Existing Road
- Approximate Location of Right-of-Way Trees Marked for Cutting Outside Unit Boundary

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

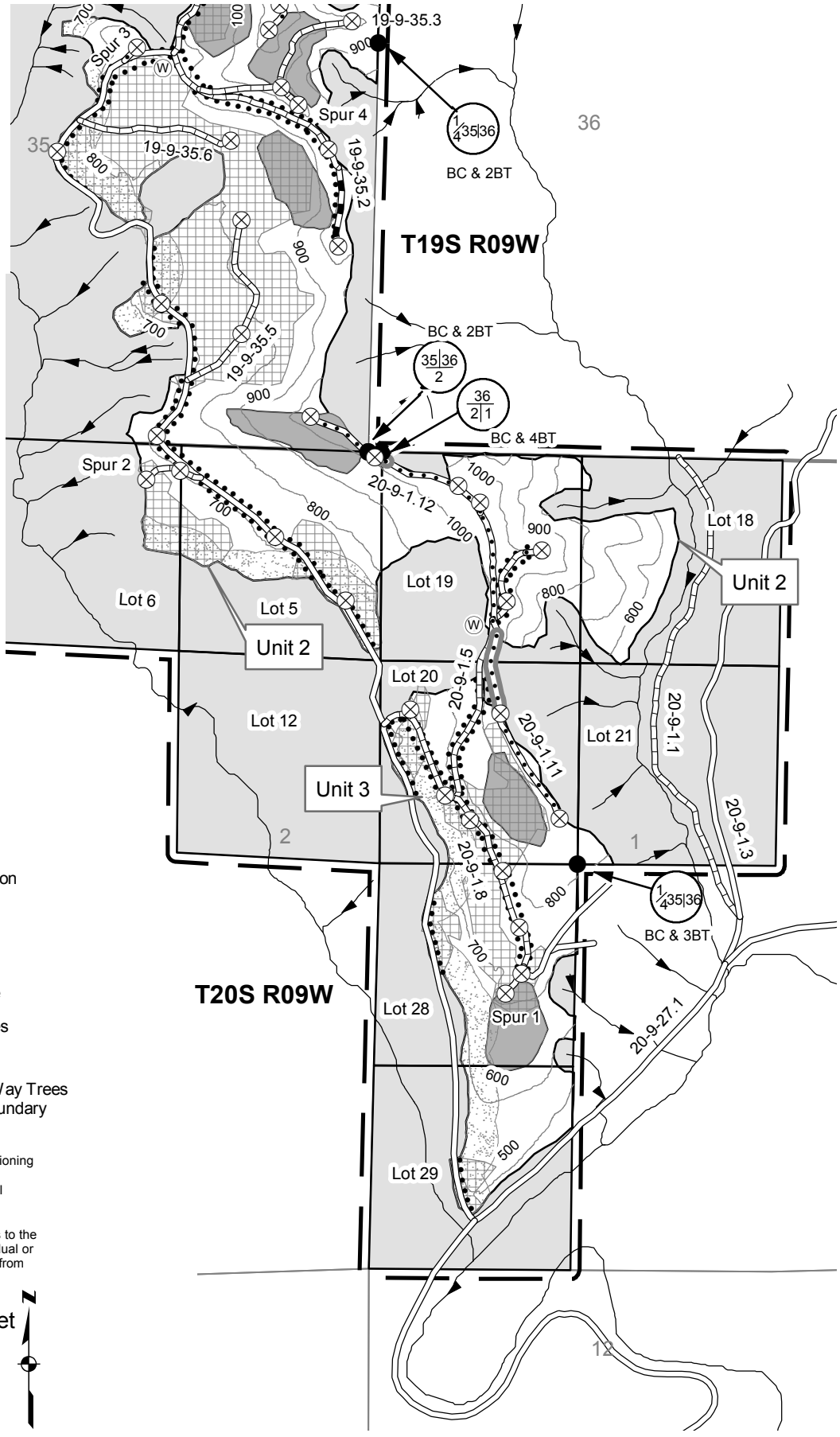
feet
0 500 1,000 2,000

Scale 1 inch = 1,000 feet

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT
T. 19 S., R. 09 W., Sec.35
T. 20 S., R. 09 W., Secs.1,2 Will. Mer.

SALE NO. ORC03-TS-2020.0001
EXHIBIT A
Page 2 of 2
Nest Egg CT

UNIT 1 _____27 ACRES
UNIT 2 ____181 ACRES
UNIT 3 _____54 ACRES
RW _____4 ACRES
Total_____266 ACRES
Total Reserve Area _470 ACRES
Total Contract Area _736 ACRES



Partial Cut Area
Group Selection Area (Slash, Lop, Scatter)
Cable Yarding Area
Ground Based Yarding
Boundary of Contract Area
Reserve Area
Stream Channel
100' Contour
Corner Found
Proposed Landing
Waste Site
Seasonal and Daily Timing Restriction
Road to be Renovated
Road to be Constructed
Road to be Improved
Roadside Hazard Reduction, 1-side
Roadside Hazard Reduction, 2-sides
Existing Road
Approximate Location of Right-of-Way Trees Marked for Cutting Outside Unit Boundary

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

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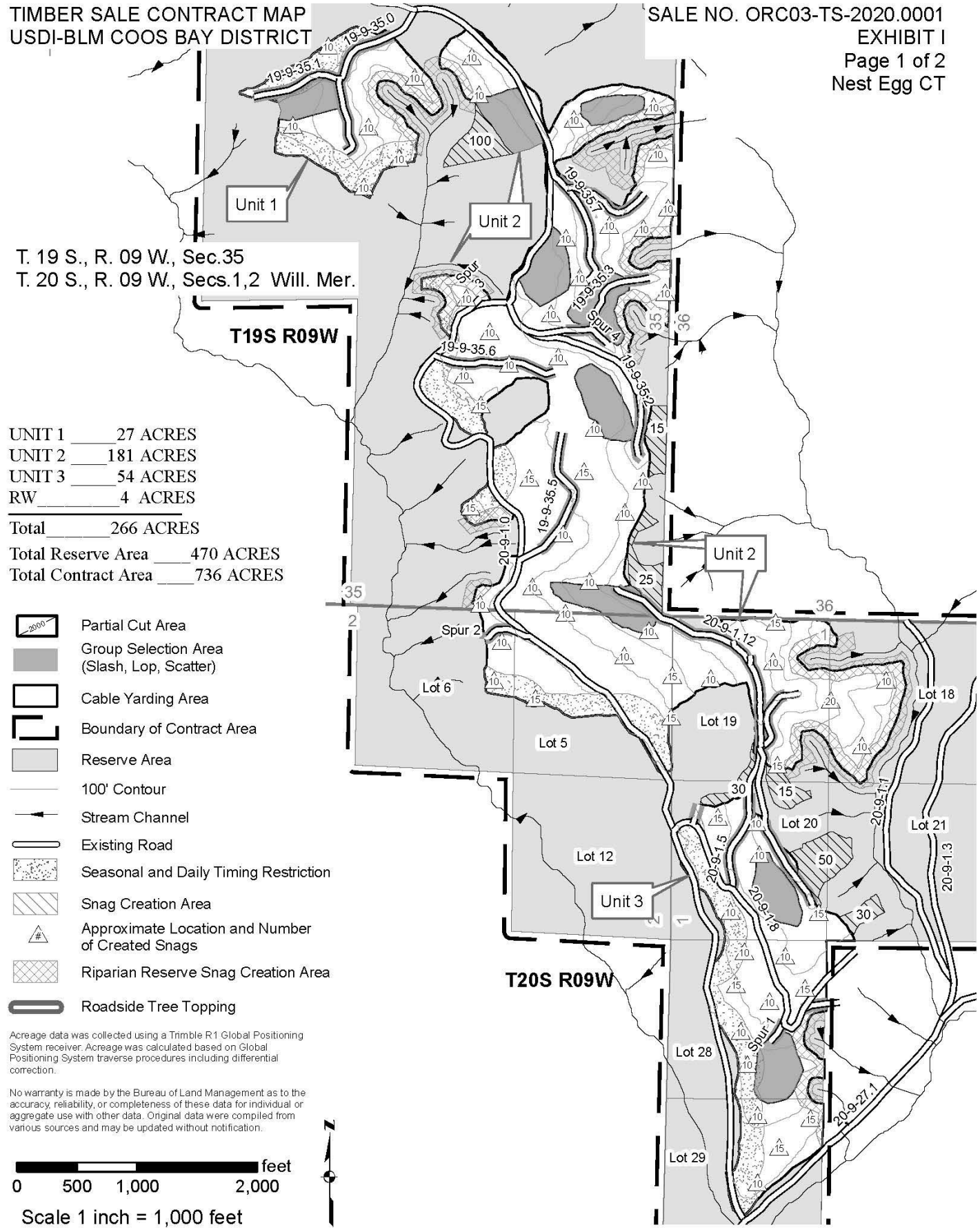
feet
0 500 1,000 2,000

Scale 1 inch = 1,000 feet

TIMBER SALE CONTRACT MAP
USDI-BLM COOS BAY DISTRICT

SALE NO. ORC03-TS-2020.0001
EXHIBIT I
Page 1 of 2
Nest Egg CT



UNIT 1 _____27 ACRES
UNIT 2 ____181 ACRES
UNIT 3 _____54 ACRES
RW_____4 ACRES
Total_____266 ACRES

Total Reserve Area ____470 ACRES
Total Contract Area ____736 ACRES

- Partial Cut Area
- Group Selection Area (Slash, Lop, Scatter)
- Cable Yarding Area
- Boundary of Contract Area
- Reserve Area
- 100' Contour
- Stream Channel
- Existing Road
- Seasonal and Daily Timing Restriction
- Snag Creation Area
- Approximate Location and Number of Created Snags
- Riparian Reserve Snag Creation Area
- Roadside Tree Topping

Acreage data was collected using a Trimble R1 Global Positioning System receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

0 500 1,000 2,000 feet

Scale 1 inch = 1,000 feet

EXHIBIT I
Page 2 of 2

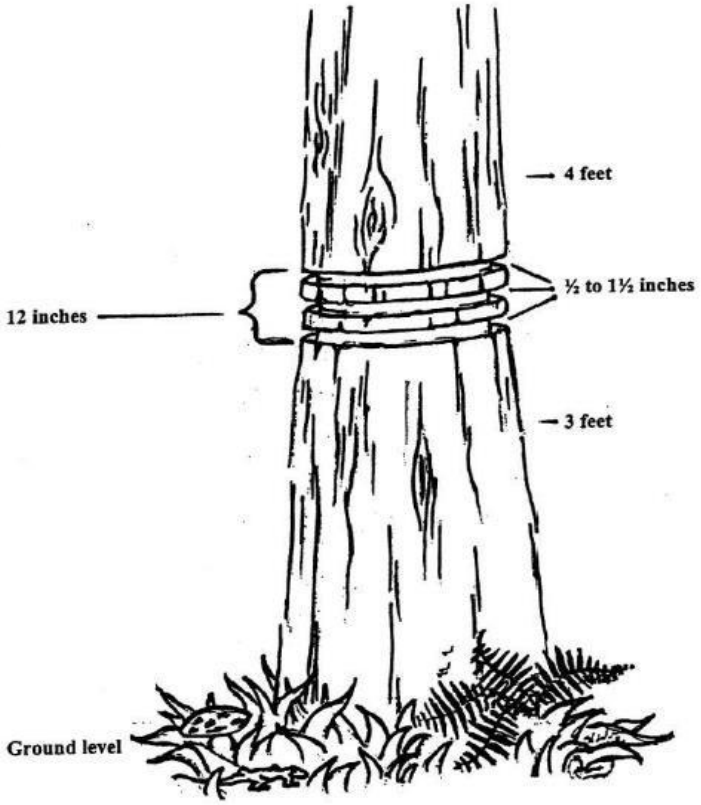
SPECIFICATIONS FOR BASAL GIRDLING

GENERAL:

(1) Cut around the tree. Each cut must connect with itself completely around the tree and penetrate through the cambium layer into the wood at least ½ inch, but not more than 1 ½ inch. The distance between the top cut and the bottom cut shall not exceed twelve (12) inches. Trees shall be girdled between three (3) and four (4) feet above ground level measured from the uphill side of the tree.

Illustration 1- Basal girdling

Basal-Girdling example: make three (3) parallel unbroken cuts around the tree. The distance between the top and bottom of the cut shall not exceed twelve inches. Cuts must penetrate at least 1/2 inch, but not more than 1 1/2 inches into the wood of the tree. Trees shall be girdled between 3 and 4 feet from the ground.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Contract No: ORC030-TS-2020.0001

Nest Egg CT

EXHIBIT B
LUMP SUM SALE

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11, (2) when payments are due; and (3) value of timber subject to any special bonding provisions. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on Exhibit A.

SPECIES	ESTIMATED VOLUME in MBF	PRICE PER UNIT	AMOUNT OF ESTIMATED VOLUME OR QUANTITY x UNIT PRICE	
Douglas-fir	5128 MBF	$69.10		$354,344.80
grand fir	0 MBF	$0.00		$0.00
western hemlock	1 MBF	$38.10		$38.10
Port-Orford-cedar	0 MBF	$0.00		$0.00
incense cedar	0 MBF	$0.00		$0.00
western redcedar	1 MBF	$230.70		$230.70
red alder	644 MBF	$41.10		$26,468.40
bigleaf maple	0 MBF	$0.00		$0.00
Oregon myrtle	0 MBF	$0.00		$0.00
tanoak	0 MBF	$0.00		$0.00
Totals	5774 MBF			$381,082.00

The apportionment of the total purchase price is as follows:

Approx. No. of Trees	UNIT NO. 1	EST. NET MBF VOL.			
1303	Douglas-fir	386	$69.10		$26,672.60
0	grand fir	0	$0.00		$0.00
6	western hemlock	1	$38.10		$38.10
0	Port-Orford-cedar	0	$0.00		$0.00
0	incense cedar	0	$0.00		$0.00
4	western redcedar	1	$230.70		$230.70
712	red alder	92	$41.10		$3,781.20
0	bigleaf maple	0	$0.00		$0.00
0	Oregon myrtle	0	$0.00		$0.00
0	tanoak	0	$0.00		$0.00
2025	TOTALS	480			
			27	Acres =	$1,137.87 /Ac.
				Unit Total	$30,722.60

Approx. No. of Trees	UNIT NO. 2	EST. NET MBF VOL.			
10367	Douglas-fir	3083	$69.10		$213,035.30
0	grand fir	0	$0.00		$0.00
0	western hemlock	0	$38.10		$0.00
0	Port-Orford-cedar	0	$0.00		$0.00
0	incense cedar	0	$0.00		$0.00
0	western redcedar	0	$230.70		$0.00
3697	red alder	412	$41.10		$16,933.20
0	bigleaf maple	0	$0.00		$0.00
0	Oregon myrtle	0	$0.00		$0.00
0	tanoak	0	$0.00		$0.00
14064	TOTALS	3495			
			181	Acres =	$1,270.54 /Ac.
				Unit Total	$229,968.50

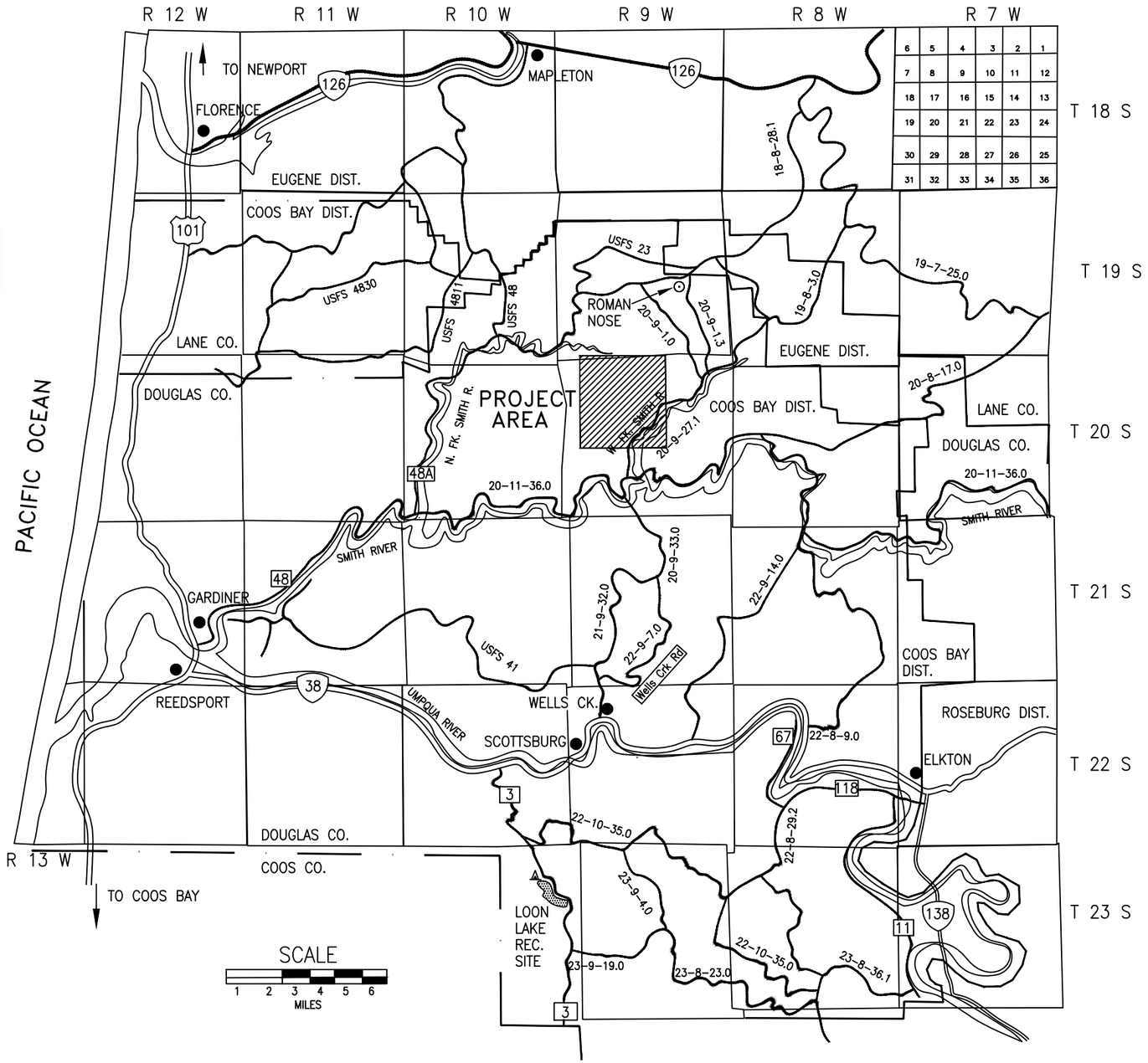
Approx. No. of Trees	UNIT NO. 3	EST. NET MBF VOL.			
3628	Douglas-fir	559	$69.10		$38,626.90
0	grand fir	0	$0.00		$0.00
0	western hemlock	0	$38.10		$0.00
0	Port-Orford-cedar	0	$0.00		$0.00
0	incense cedar	0	$0.00		$0.00
0	western redcedar	0	$230.70		$0.00
538	red alder	56	$41.10		$2,301.60
0	bigleaf maple	0	$0.00		$0.00
0	Oregon myrtle	0	$0.00		$0.00
0	tanoak	0	$0.00		$0.00
4166	TOTALS	615			
			54	Acres =	$757.94 /Ac.
					Unit Total $40,928.50

Approx. No. of Trees	UNIT NO. RW	EST. NET MBF VOL.			
1459	Douglas-fir	559	$69.10		$38,626.90
0	grand fir	0	$0.00		$0.00
0	western hemlock	0	$38.10		$0.00
0	Port-Orford-cedar	0	$0.00		$0.00
0	incense cedar	0	$0.00		$0.00
0	western redcedar	0	$230.70		$0.00
538	red alder	56	$41.10		$2,301.60
0	bigleaf maple	0	$0.00		$0.00
0	Oregon myrtle	0	$0.00		$0.00
0	tanoak	0	$0.00		$0.00
1997	TOTALS	615			
			4	Acres =	$10,232.13 /Ac.
					Unit Total $40,928.50

EXHIBIT C

TIMBER SALE NAME: NEST EGG CT
TIMBER SALE NUMBER: ORC03-TS-2020.0001

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OFFICE
UMPQUA RESOURCE AREA



SHEET NO.	CONTENTS
1	TITLE SHEET
2-3	WORK LOCATION MAPS
4-5	TYPICAL CROSS SECTION DETAIL
6-7	ESTIMATE OF QUANTITIES
8	CULVERT INSTALLATION DETAIL
9	ROADSIDE BRUSHING DETAIL
10	SLOPE STAKING DETAIL
11-12	DESIGN PLAN AND PROFILE
13	SPECIAL PROVISIONS
14-22	SPECIAL DETAILS
23-29	CONSTRUCTION DETAILS
30-56	ROAD CONSTRUCTION SPECIFICATIONS

ALWAYS THINK SAFETY

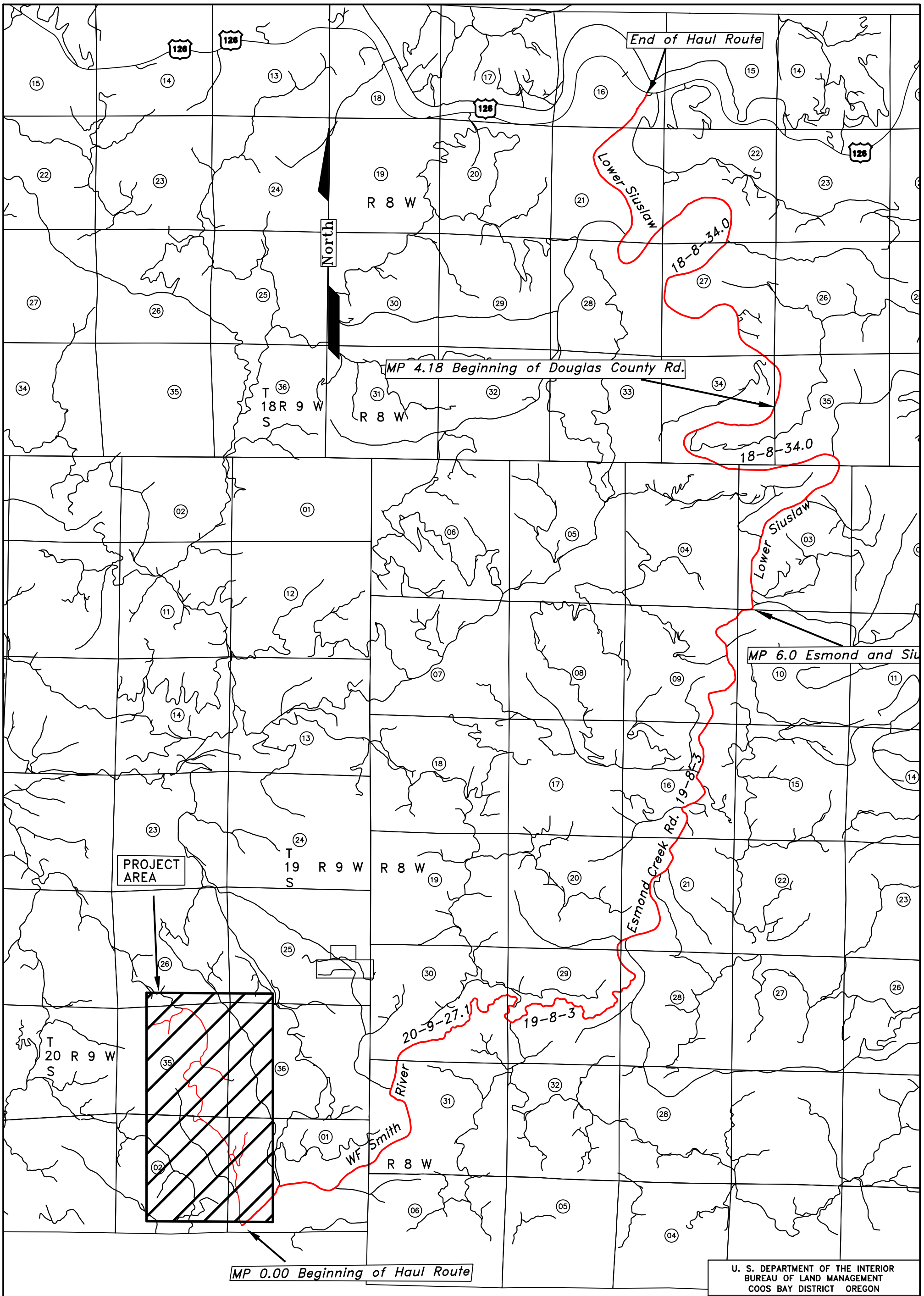
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

TITLE SHEET

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 1 OF 56
DRAWING NO.

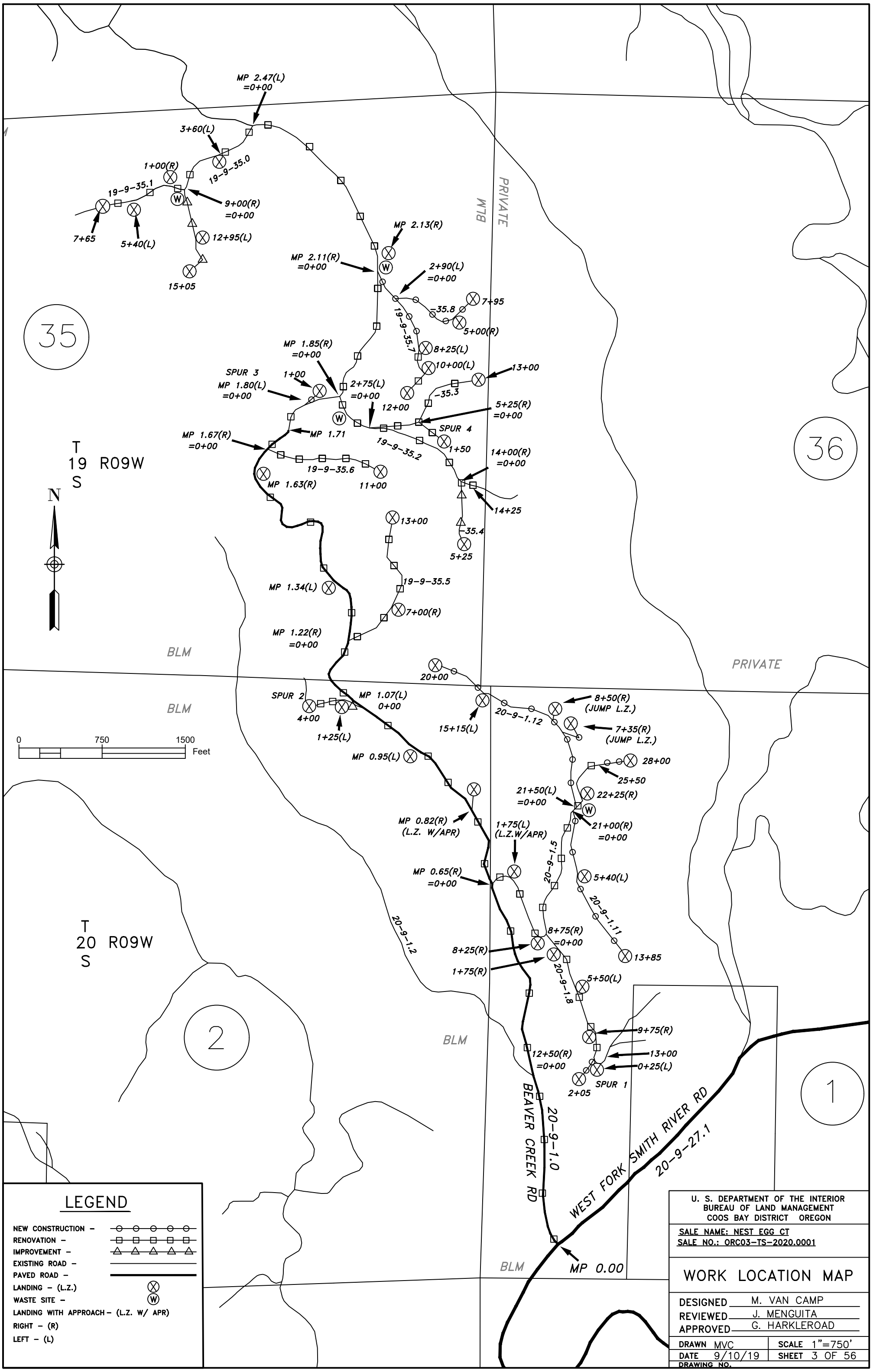


U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

WORK LOCATION MAP

DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN MVC	SCALE N/A
DATE 9/10/19	SHEET 2 OF 56
DRAWING NO.	



LEGEND

- NEW CONSTRUCTION –
- RENOVATION –
- IMPROVEMENT –
- EXISTING ROAD –
- PAVED ROAD –
- LANDING – (L.Z.)
- WASTE SITE –
- LANDING WITH APPROACH – (L.Z. W/ APR)
- RIGHT – (R)
- LEFT – (L)

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

WORK LOCATION MAP

DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN MVC	SCALE 1"=750'
DATE 9/10/19	SHEET 3 OF 56
DRAWING NO.	

ROAD NUMBER **	FROM MILEPOST /STATION	TO MILEPOST /STATION	LENGTH MILES/ STATIONS	TYPICAL SECTION TYPE	ROAD WIDTH[1]		CLEARING WIDTH		BRUSHING WIDTH		SURFACING									REMARKS
							BEYOND		EXISTING ROADS		BASE COURSE					SURFACE COURSE				
					SUBGRADE	DITCH	TOP CUT	TOE FILL	L	R	Min Top Width	Comp. Depth	Type[2]	Grading		Min Top Width	Comp. Depth	Type[2]	Grading	
19-9-35.0 R	0+00	9+00	9.00	3	16'	2'			10'	10'	12'	8"	D	3-0"						CROWNED 2% W/ DITCH
19-9-35.0 I	9+00	15+05	6.05	5	16'	0			10'	10'	13.3'	8"	D	6-0"		12'	4"	D	3-0"	OUTSLOPE/INSLOPE @ 2%
19-9-35.1 R	0+00	7+65	7.65	5	16'	0			10'	10'	13.3'	8"	D	6-0"		12'	4"	D	3-0"	OUTSLOPE/INSLOPE @ 2%
19-9-35.2 R	0+00	14+25	14.25	3	16'	2'			10'	10'	12'	10"	D	3-0"						CROWNED 2% W/ DITCH
19-9-35.3 R	0+00	13+00	13.00	1	12'	0			10'	10'										OUTSLOPE/INSLOPE @ 2%
19-9-35.4 I	0+00	5+25	5.25	5	16'	0			10'	10'	13.3'	8"	D	6-0"		12'	4"	D	3-0"	OUTSLOPE/INSLOPE @ 2%
19-9-35.5 R	0+00	13+00	13.00	1	12'	0			10'	10'										OUTSLOPE/INSLOPE @ 2%
19-9-35.6 R	0+00	11+00	11.00	1	12'	0			10'	10'										OUTSLOPE/INSLOPE @ 2%
19-9-35.7 C	0+00	8+25	8.25	1	12'	0	10'	5'												OUTSLOPE/INSLOPE @ 2%
19-9-35.7 R	8+25	12+00	3.75	1	12'	0			10'	10'										OUTSLOPE/INSLOPE @ 2%
19-9-35.8 C	0+00	7+95	7.95	1	12'	0	10'	5'												OUTSLOPE/INSLOPE @ 2%

NOTES

1. **EXTRA SUBGRADE WIDTHS**
   ADD TO EACH FILL SHOULDER 1 FT. FOR FILLS OF 1-6 FT. AND 2 FT. FOR FILLS OVER 6 FT. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS: WHEN THE RADIUS OF CURVE EQUALS
   270-800 ADD 1 FT.
   165-270 ADD 2 FT.
   120-165 ADD 3 FT.
   90-120 ADD 4 FT
   60-90 ADD 5 FT.
   OR AS SHOWN ON PLANS

MATERIALS	CUT SLOPE	FILL SLOPE
COMMON	1/2:1	1&1/2:1
SOFT ROCK&SHALE	1/2:1	1&1/2:1
SOLID ROCK	1/4:1	REPOSE

   FULL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES EXCEEDING 60%

2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL.
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. CLASS 'C' ASPHALT MIX.

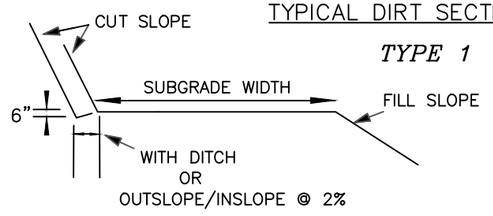
3. SURFACING
   A. TURNOUTS, CURVE WIDENING AND ROAD APPROACH APRONS SHALL BE SURFACED.

4. DITCHES
   A. 4:1 SLOPE FROM SUBGRADE, OR AS OTHERWISE NOTED. DEPTH MAY BE EXCEEDED TO OBTAIN REQUIRED DRAINAGE

5. TURNOUTS
   A. WIDTH 10 FT. IN ADDITION TO SUBGRADE WIDTH, OR AS SHOWN ON THE PLANS.
   B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS OR NARRATIVE.

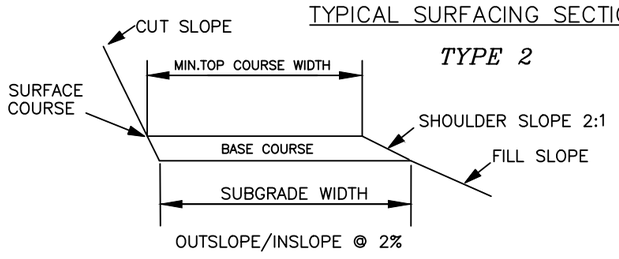
TYPICAL DIRT SECTION

TYPE 1



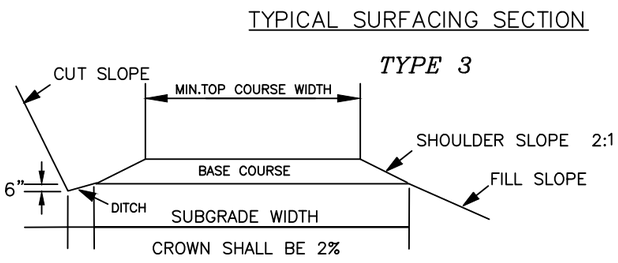
TYPICAL SURFACING SECTION

TYPE 2



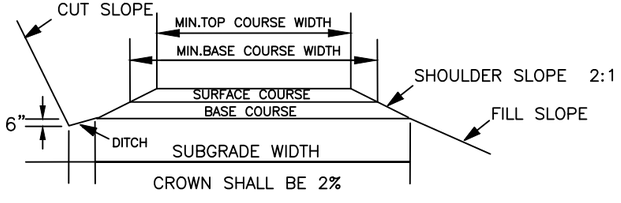
TYPICAL SURFACING SECTION

TYPE 3



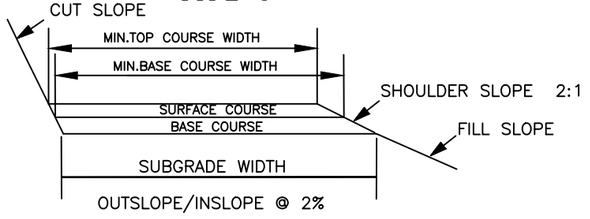
TYPICAL SURFACING SECTION

TYPE 4

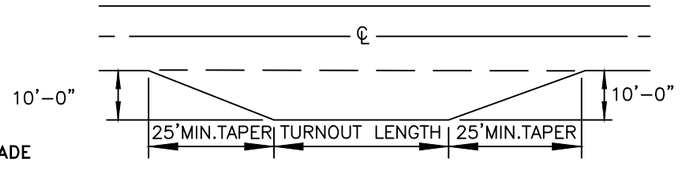


TYPICAL SURFACING SECTION

TYPE 5

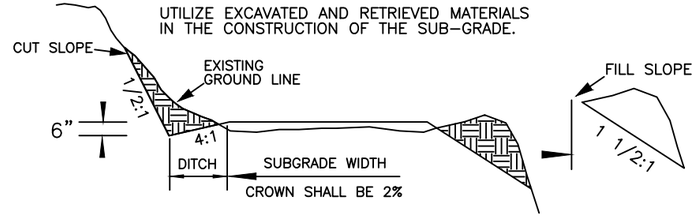


PLAN TYPICAL TURNOUT



TYPICAL GRADING SECTION

UTILIZE EXCAVATED AND RETRIEVED MATERIALS IN THE CONSTRUCTION OF THE SUB-GRADE.



** RENOVATION = R
IMPROVEMENT = I
CONSTRUCTION = C

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

TYPICAL CROSS SECTION

DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN	MVC
SCALE	N/A
DATE	9/10/19
SHEET	4 OF 56
DRAWING NO.	

ROAD NUMBER **	FROM MILEPOST /STATION	TO MILEPOST /STATION	LENGTH MILES/ STATIONS	TYPICAL SECTION TYPE	ROAD WIDTH[1]		CLEARING WIDTH		BRUSHING WIDTH		SURFACING									REMARKS
							BEYOND		EXISTING ROADS		BASE COURSE					SURFACE COURSE				
					SUBGRADE	DITCH	TOP CUT	TOE FILL	L	R	Min Top Width	Comp. Depth	Type[2]	Grading		Min Top	Comp. Depth	Type[2]	Grading	
20-9-1.0 R PAVE	0	1.71	1.71	4	20'	2'			10'	10'										CROWNED 2% W/ DITCH
20-9-1.0 R	1.71	2.47	0.79	3	16'	2'			10'	10'						12'	4"	D	1.5-0"	CROWNED 2% W/ DITCH
20-9-1.5 R	0+00	8+75	8.75	3	16'	2'			10'	10'	12'	4"	D	3-0"						CROWNED 2% W/ DITCH
20-9-1.5 R	8+75	25+50	16.75	4	16'	2'			10'	10'	13.3'	8"	D	6-0"		12'	4"	D	3-0"	CROWNED 2% W/ DITCH
20-9-1.5 C	25+50	28+00	2.50	5	16'	0	10'	5'			13.3'	8"	D	6-0"		12'	4"	D	3-0"	OUTSLOPE/INSLOPE @ 2%
20-9-1.8 R	0+00	13+50	13.50	3	16'	2'			10'	10'	12'	4"	D	3-0"						CROWNED 2% W/ DITCH
20-9-1.11 C	0+00	13+85	13.85	1	12'	0	10'	5'												OUTSLOPE/INSLOPE @ 2%
20-9-1.12 C	0+00	20+00	20.00	1	12'	0	10'	5'												OUTSLOPE/INSLOPE @ 2%
SPUR 1 C	0+00	2+05	2.05	5	16'	0	10'	5'			13.3'	8"	D	6-0"		12'	4"	D	3-0"	OUTSLOPE/INSLOPE @ 2%
SPUR 2 I	0+00	1+25	1.25	4	16'	2'			10'	10'	13.3	8"	D	6-0"		12'	4"	D	3-0"	CROWNED 2% W/ DITCH
SPUR 2 R	1+25	4+00	2.75	1	12'	0			10'	10'										OUTSLOPE/INSLOPE @ 2%
SPUR 3 C	0+00	1+00	1.00	5	16'	0	10'	5'			13.3'	8"	D	6-0"		12'	4"	D	3-0"	OUTSLOPE/INSLOPE @ 2%
SPUR 4 R	0+00	1+50	1.25	1	12'	0			10'	10'										OUTSLOPE/INSLOPE @ 2%

NOTES

1. **EXTRA SUBGRADE WIDTHS**
   ADD TO EACH FILL SHOULDER 1 FT. FOR FILLS OF 1-6 FT. AND 2 FT. FOR FILLS OVER 6 FT. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS: WHEN THE RADIUS OF CURVE EQUALS
   270-800 ADD 1 FT.
   165-270 ADD 2 FT.
   120-165 ADD 3 FT.
   90-120 ADD 4 FT
   60-90 ADD 5 FT.
   OR AS SHOWN ON PLANS

MATERIALS	CUT SLOPE	FILL SLOPE
COMMON	1/2:1	1&1/2:1
SOFT ROCK&SHALE	1/2:1	1&1/2:1
SOLID ROCK	1/4:1	REPOSE

FULL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES EXCEEDING 60%

2. SURFACING TYPE
   A. PIT RUN ROCK MATERIAL.
   B. GRID ROLLED ROCK MATERIAL.
   C. SCREENED ROCK MATERIAL.
   D. CRUSHED ROCK MATERIAL.
   E. CLASS 'C' ASPHALT MIX.

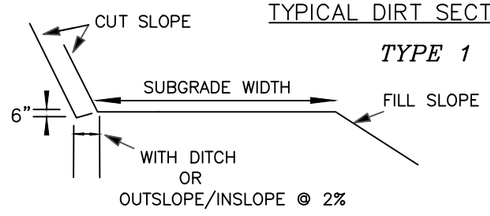
3. SURFACING
   A. TURNOUTS, CURVE WIDENING AND ROAD APPROACH APRONS SHALL BE SURFACED.

4. DITCHES
   A. 4:1 SLOPE FROM SUBGRADE, OR AS OTHERWISE NOTED. DEPTH MAY BE EXCEEDED TO OBTAIN REQUIRED DRAINAGE

5. TURNOUTS
   A. WIDTH 10 FT. IN ADDITION TO SUBGRADE WIDTH, OR AS SHOWN ON THE PLANS.
   B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS OR NARRATIVE.

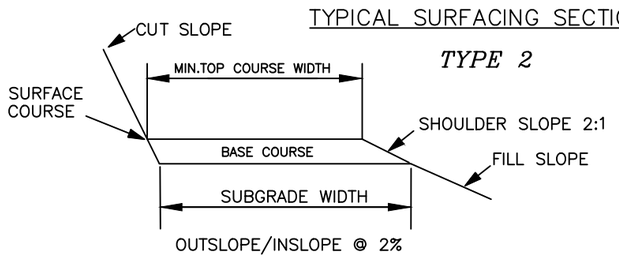
TYPICAL DIRT SECTION

TYPE 1



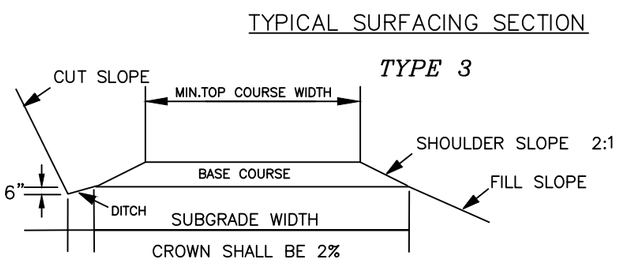
TYPICAL SURFACING SECTION

TYPE 2



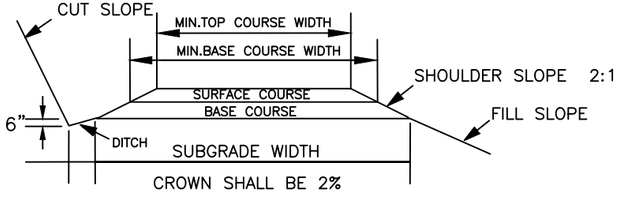
TYPICAL SURFACING SECTION

TYPE 3



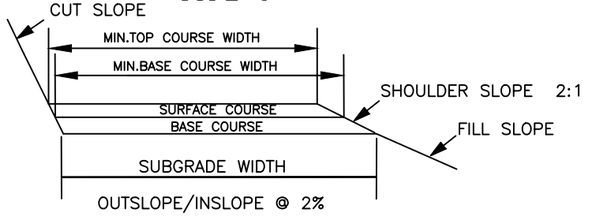
TYPICAL SURFACING SECTION

TYPE 4

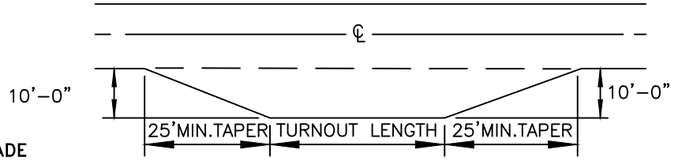


TYPICAL SURFACING SECTION

TYPE 5

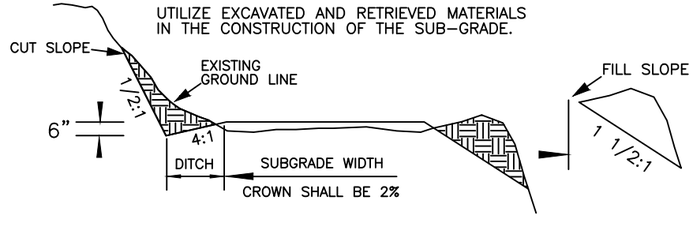


PLAN TYPICAL TURNOUT



TYPICAL GRADING SECTION

UTILIZE EXCAVATED AND RETRIEVED MATERIALS IN THE CONSTRUCTION OF THE SUB-GRADE.



** RENOVATION = R
IMPROVEMENT = I
CONSTRUCTION = C

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

TYPICAL CROSS SECTION

DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN	MVC
SCALE	N/A
DATE	9/10/19
SHEET	5 OF 56
DRAWING NO.	

ROAD NUMBER **	NEW CONSTRUCTION	RENOVATION	IMPROVEMENT	SLASH TREATMENT	GRUBBING	ROADSIDE BRUSHING	SLOPE STAKING	EARTH WORK (DESIGNED						CPP *1		CMP *2				DOWNSPOUTS *3					MARKERS
																				FULL ROUND					
								COMMON	RIPPABLE ROCK	ROCK CUT	FILL	SHORT HAUL 200–5000'	LONG HAUL 5000' +	18"	24"	12"	18"	24"	36"	18" CPP (SW)	24" CPP (SW)	18" CMP (SW)	24" CMP (SW)	36" CMP	
SECTION NO.	300	500	500	200	200	2100	2300	300						400											
UNITS	STATION/MILEPOST			ACRES		ACRES	SIDES	CUBIC YARDS			YARDS	STA.YD.	YD.MI.	LINEAR FEET											EA.
19–9–35.0 R		9.00				0.40																			
19–9–35.0 I			6.05	0.2	0.1	0.30																			
19–9–35.1 R		7.65				0.40																			
19–9–35.2 R		14.25				0.70								30											
19–9–35.3 R		13.00				0.60																			
19–9–35.4 I			5.25	0.2	0.1	0.20																			
19–9–35.5 R		13.00				0.60																			
19–9–35.6 R		11.00				0.50																			
19–9–35.7 C	8.25			0.4	0.2			1800	430		0	2230													
19–9–35.7 R		3.75				0.20																			
19–9–35.8 C	7.95			0.4	0.2			1600			150	1600													
20–9–1.0 R PAVE		90.29				4.10														20					
20–9–1.0 R		41.71				1.80								185	60					20					
20–9–1.5 R		25.50				1.30																			
20–9–1.5 C	2.50			0.2	0.1																				
20–9–1.8 R		13.00				0.60																			
20–9–1.11 C	13.85			0.6	0.3																				
20–9–1.12 C	20.00			0.8	0.4																				
SPUR 1 C	2.05			0.2	0.1																				
SPUR 2 I			1.25																						
SPUR 2 R		2.75				0.20																			
SPUR 3 C	1.00			0.2	0.1																				
SPUR 4 R		1.50				0.10																			
Total	55.60	246.90	12.55	3.2	1.6	12.00	0.00	3400	430	0	150	3830	0	215	60	0	0	0	0	40	0	0	0	0	0

*1 CPP – CORRUGATED POLYETHYLENE PIPE
*2 CMP – CORRUGATED METAL PIPE
*3 SEE CULVERT INSTALLATION SHEET
(SW) – SINGLE WALL CORRUGATED PIPE

FOR INFORMATIONAL USE ONLY. QUANTITIES SHOWN ARE NOT PAY ITEMS.

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03–TS–2020.0001

ESTIMATE OF QUANTITIES

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 6 OF 56
DRAWING NO.

ROAD NUMBER	SURFACING					OTHER			SEED, FERTILIZER, AND MULCH		OTHER (SEDIMENT CONTROL DEVICES)
	(3–0") BASE ROCK	(3–0") DRAIN ROCK	(6–0") JAW RUN	(1.5–0") SURFACE ROCK	(1.5–0") SPOT ROCK	CULVERT ROCK	RIPRAP CLASS IV	GEO–TEXTILE	DRY	HYDRO	
SECTION NO.	1000			1200		400	1400	N/A	1800		N/A
UNITS	CUBIC YARDS			CUBIC YARDS				S.Y.	ACRES		EACH
GRADE	A	B	D	C			A	N/A			
19–9–35.0 R	395		50						0.2		
19–9–35.0 I	126		391						0.1		
19–9–35.1 R	159		538						0.2		
19–9–35.2 R	798						10		0.3		
19–9–35.3 R									0.3		
19–9–35.4 I	109		303						0.1		
19–9–35.5 R									0.3		
19–9–35.6 R									0.3		
19–9–35.7 C									0.2		
19–9–35.7 R									0.1		
19–9–35.8 C									0.2		
20–9–1.0 R PAVE			300		10		65				
20–9–1.0 R			230	834			30				
20–9–1.5 R	530		906						0.6		
20–9–1.5 C	52		190						0.1		
20–9–1.8 R	280		50								
20–9–1.11 C									0.3		
20–9–1.12 C									0.5		
SPUR 1 C	43		199						0.1		
SPUR 2 I	26		110						0.1		
SPUR 2 R									0.1		
SPUR 3 C	21		98						0.1		
SPUR 4 R									0.1		
TOTAL	2539	0	3365	834	10	0	105		4.3		

SECTION	GRADE	SIZE
400	C	1 1/2"
700	B	PITRUN
	A	3"
	B	3" OPEN GRADE
	C	2"
	D	6"
1100	B	4"
1200	C	1 1/2"
	D	1"
1400	A	10"-34"
CHIP SEAL ROCK	S	3/4"

* FOR INFORMATIONAL USE ONLY.
QUANTITIES SHOWN ARE NOT PAY ITEMS.

ALL ROCK QUANTITIES ARE TRUCK (LOOSE) MEASUREMENT QUANTITIES.

** 6" OPEN GRADED CRUSHED AGGREGATE.
N–W = NON–WOOVEN (MIRAFIN 1120N)
W = WOOVEN (POPEX 200ST)

*** RENOVATION = R
IMPROVEMENT = I
CONSTRUCTION = C

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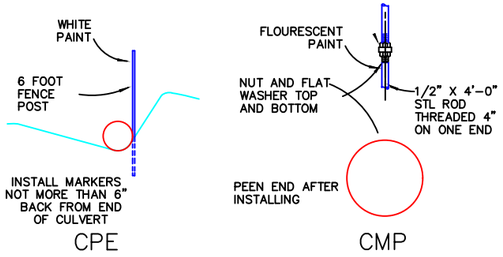
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03–TS–2020.0001

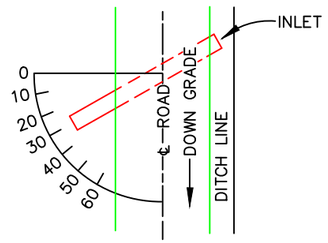
ESTIMATE OF QUANTITIES

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 7 OF 56
DRAWING NO.



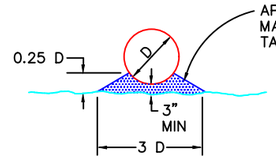
CULVERT MARKERS



SKEW DIAGRAM

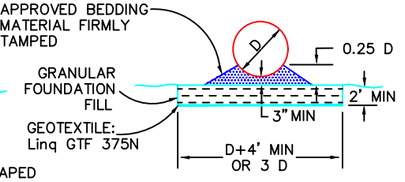
HORIZONTAL SKEW SHALL BE AS SHOWN, OR PERPINDICULAR TO DITCH LINE IN GRADE DIPS.
THE GRADE OF CROSSDRAINS SHALL BE AT LEAST 2% GREATER THAN THE GRADE OF THE DITCH, WITH A MAXIMUM GRADIENT OF 5%.

BEDDING OF CULVERTS



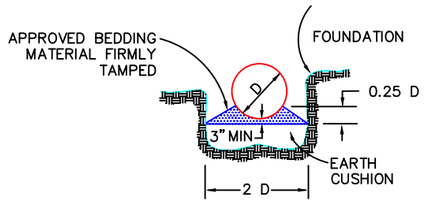
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT



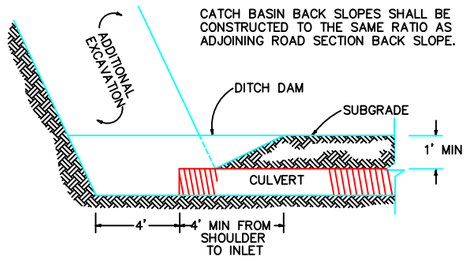
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

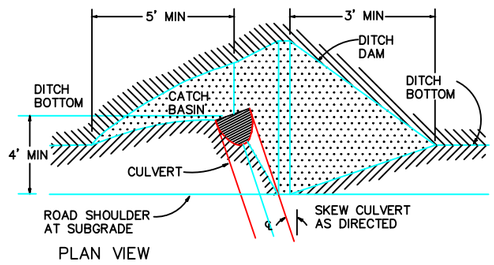


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. iF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" MIN. DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT.

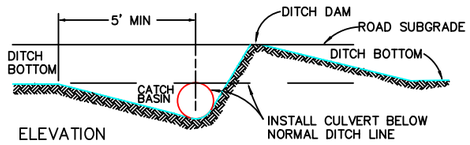
BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION



CROSS SECTION AT CATCH BASIN

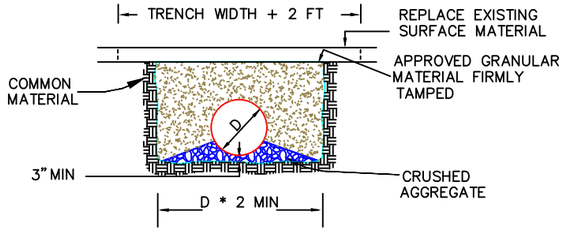


PLAN VIEW



ELEVATION

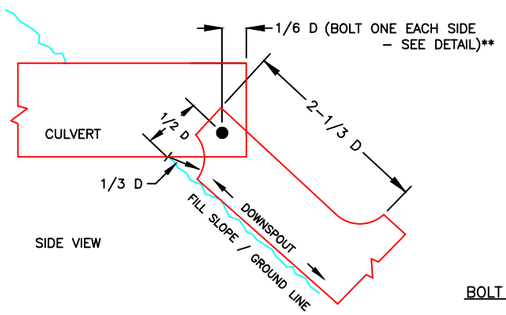
CATCH BASIN



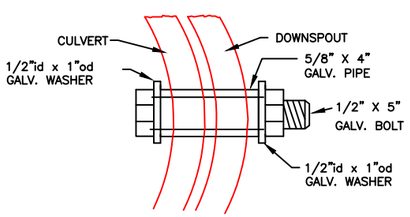
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. BACKFILL MATERIAL SHALL BE APPROVED GRANULAR MATERIAL.

BEDDING OF CULVERTS ON EXISTING SURFACED ROADS

USE "ADJUSTABLE ELBOW" FOR CPE AND CMP DOWNSPOUTS



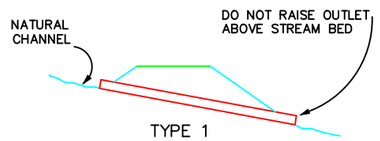
BOLT ASSEMBLY DETAIL**

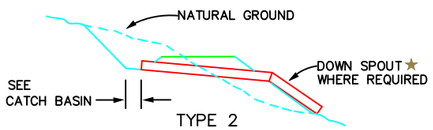


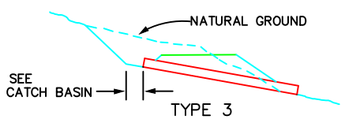
★ NOTE: ANCHOR DOWNSPOUTS ACCORDING TO SECTION 407b OF THE ROAD CONSTRUCTION SPECIFICATIONS

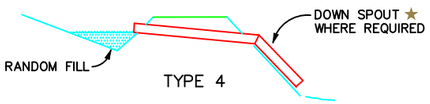
BANDS SHALL MEET MANUFACTURER'S SPECIFICATIONS

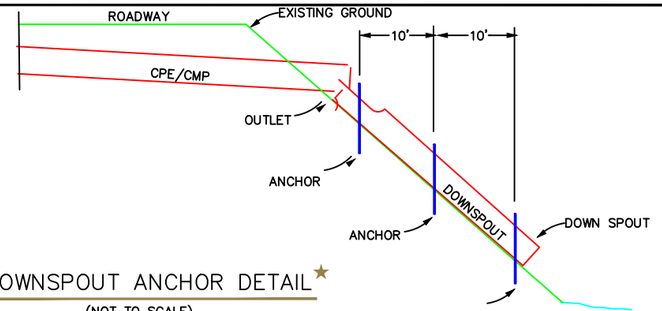
CULVERT INSTALLATION TYPES











DOWNSPOUT ANCHOR DETAIL ★

(NOT TO SCALE)

★INSTALL DOWNSPOUT ANCHORS IN ACCORDANCE WITH SECTION 407b OF THE SPECIFICATIONS.

ALWAYS THINK SAFETY

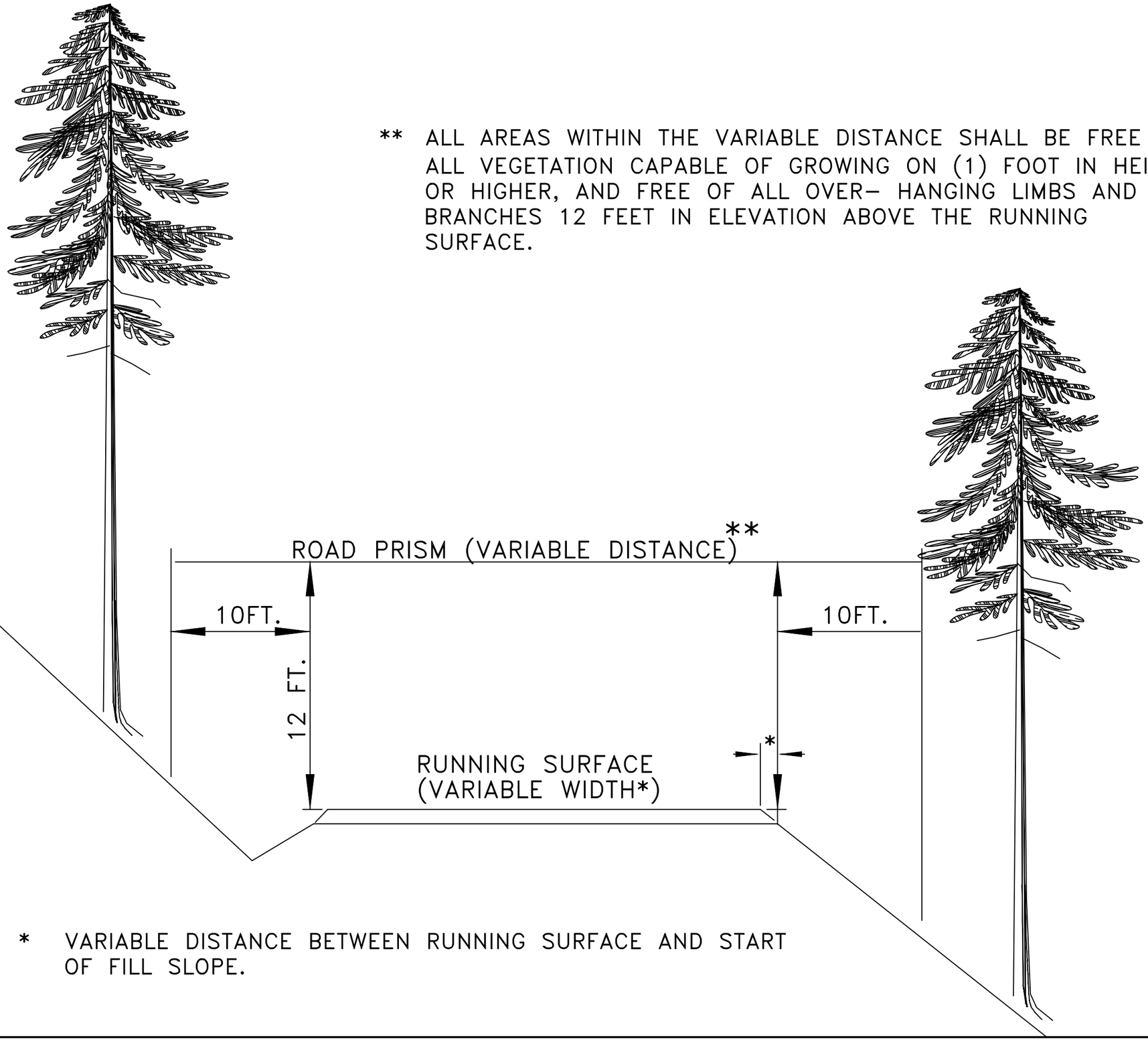
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

CULVERT INSTILLATION DETAILS

DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN	MVC
SCALE	N/A
DATE	9/10/19
SHEET	8 OF 56
DRAWING NO.	

** ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL VEGETATION CAPABLE OF GROWING ON (1) FOOT IN HEIGHT OR HIGHER, AND FREE OF ALL OVER– HANGING LIMBS AND BRANCHES 12 FEET IN ELEVATION ABOVE THE RUNNING SURFACE.



* VARIABLE DISTANCE BETWEEN RUNNING SURFACE AND START OF FILL SLOPE.

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BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

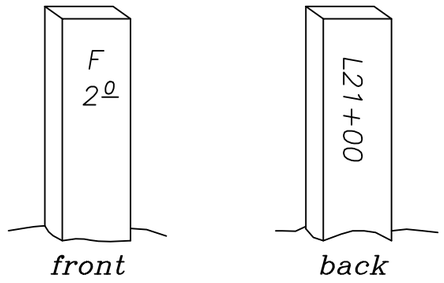
SALE NAME: NEST EGG CT
SALE NO.: ORC03–TS–2020.0001

ROADSIDE BRUSHING DETAILS

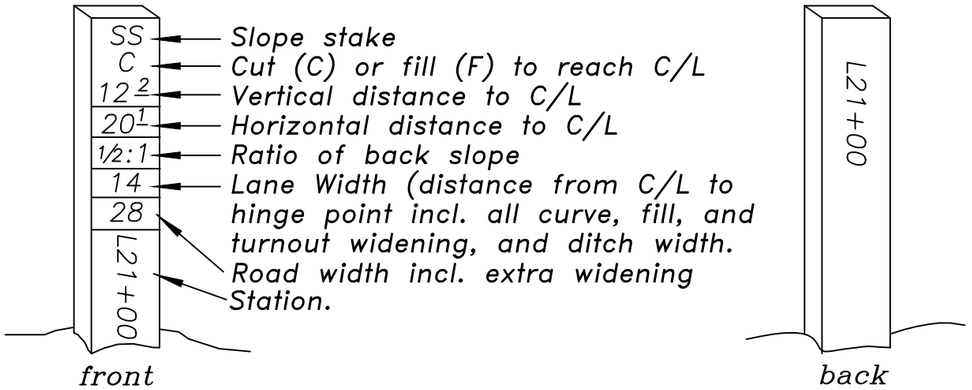
DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 9 OF 56
DRAWING NO.

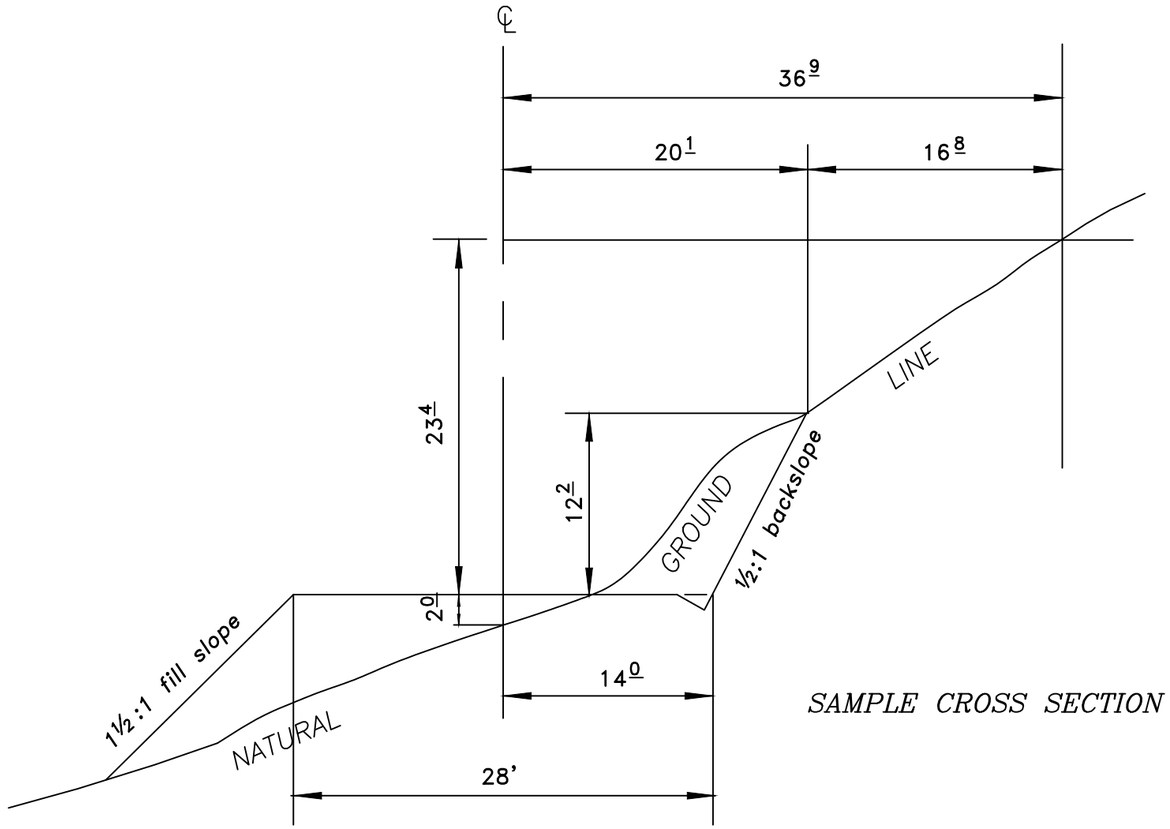
Minimum information on stakes shall be as follows:



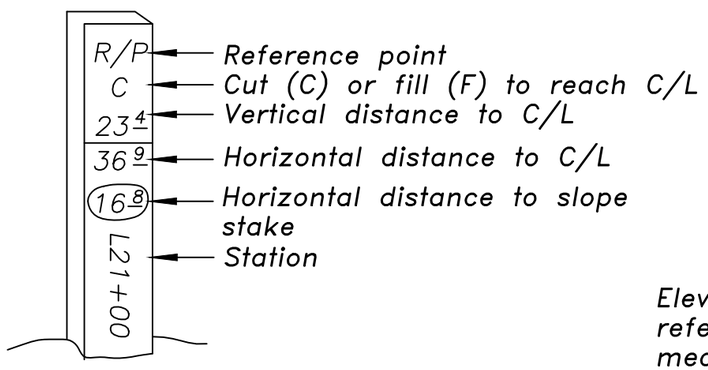
CENTERLINE STAKE



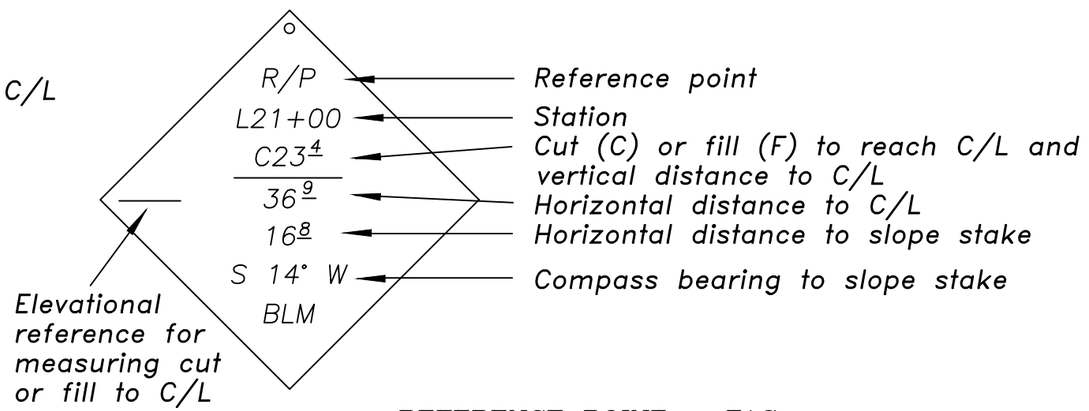
SLOPE STAKE



SAMPLE CROSS SECTION



REFERENCE POINT – STAKE



REFERENCE POINT – TAG

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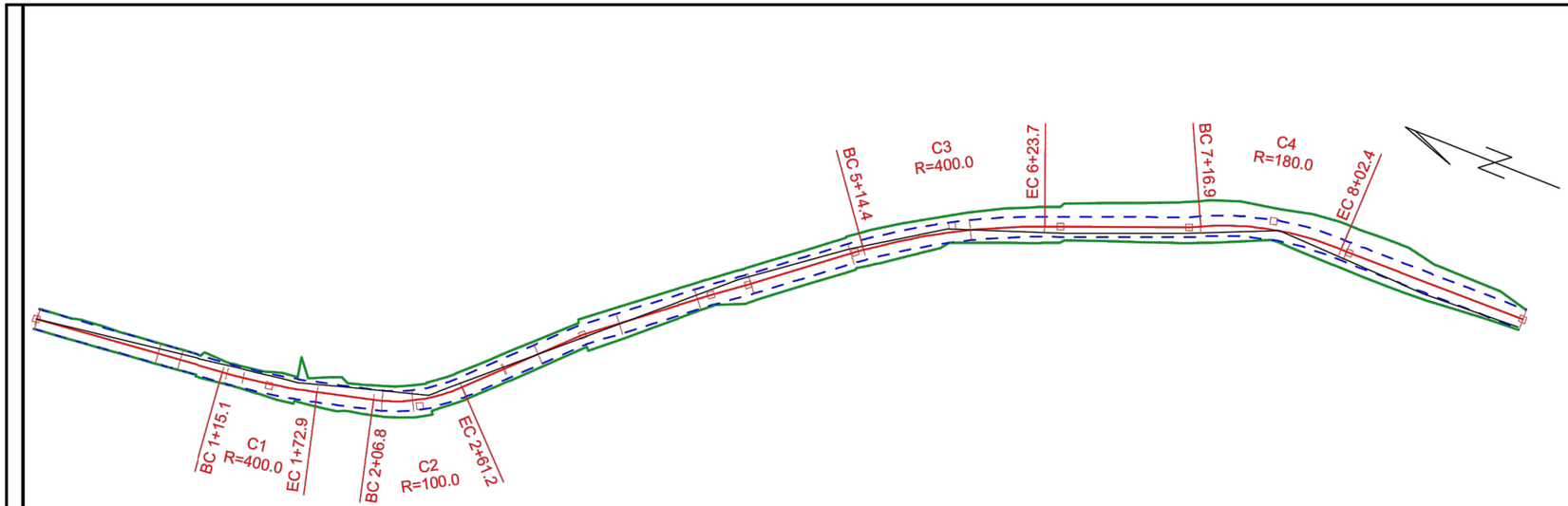
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

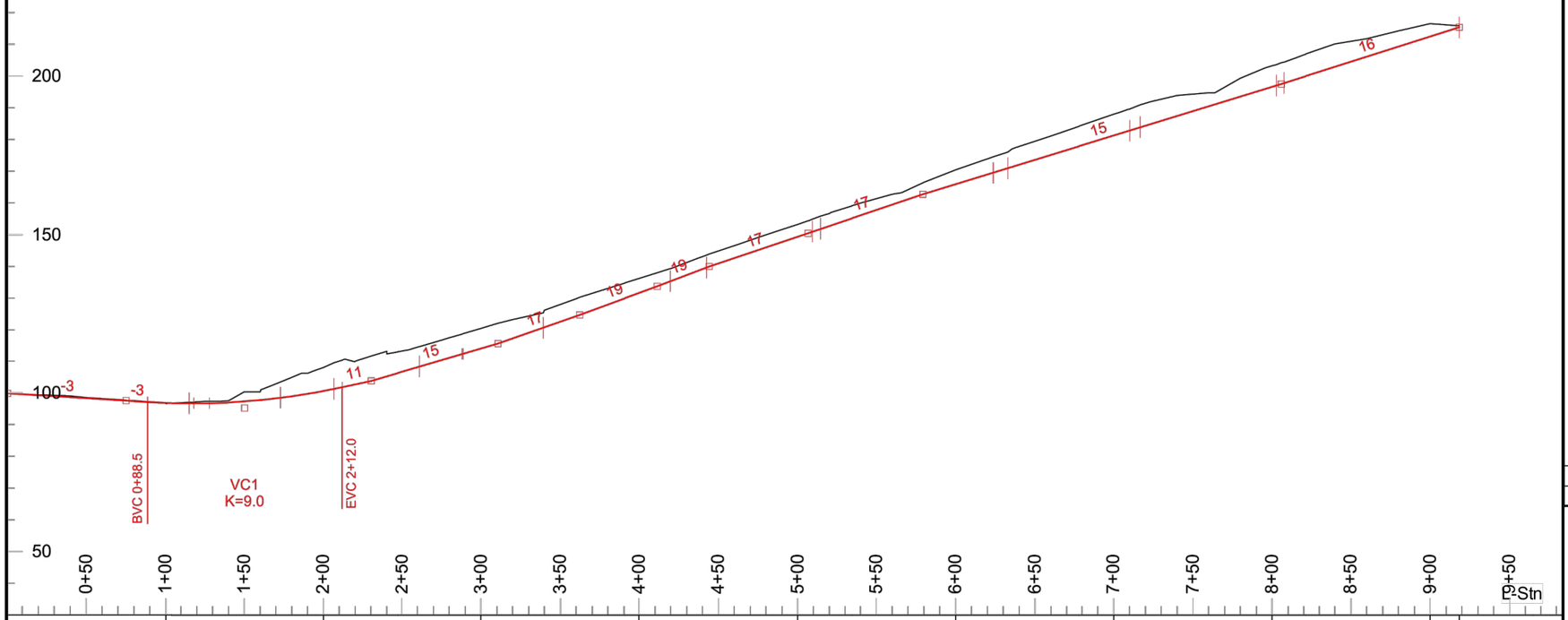
SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

SLOPE STAKING DETAILS

DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN MVC	SCALE N/A
DATE 9/10/19	SHEET 10 OF 56
DRAWING NO.	

PLAN AND PROFILE





CL Elkev	96.9		100.7		114.1		131.7		149.4		165.9		181.2		196.6	212.4	215.3
Gnd Elev	96.9		108.2		120.5		136.2		153.3		170.5		187.9		203.3	216.6	215.8

Legend

Plan L-line Location	Profile Subgrade
Plan P-line Location	Profile Stripped Surface
Plan Slope Stakes	Culverts
Plan Road Edges	Bridge Abutments
Profile Topo	

Horizontal Curves

	C1	C2	C3	C4
Angle	8.3	31.2	15.7	27.2
Tangent	29.0	27.9	55.0	43.6
Arc. Len.	57.8	54.4	109.3	85.5
Radius	400.0	100.0	400.0	180.0

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.
0+00.0	0.0			0.0
1+00.0	0.1	7.6	0.9	6.6
2+00.0	7.5	109.7	1.5	114.8
3+00.0	6.4	310.4	0.0	425.2
4+00.0	4.5	234.5	0.0	659.7
5+00.0	3.9	203.1	0.0	862.7
6+00.0	4.6	205.1	0.0	1067.8
7+00.0	6.7	359.1	0.0	1426.9
8+00.0	6.7	401.4	0.0	1828.3
9+00.0	4.2	382.6	0.0	2210.8
9+18.4	0.5	22.1	0.0	2233.0
Pg. Tot.		2235.5	2.5	
Cum. Tot.		2235.5	2.5	

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

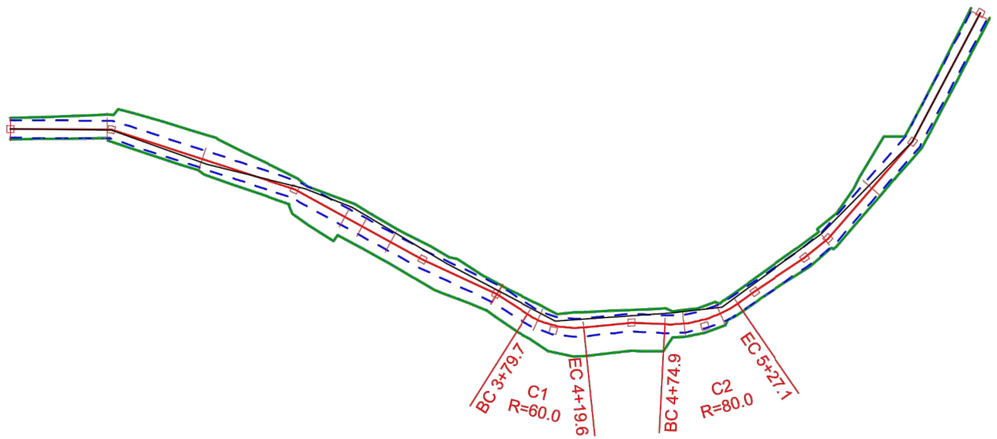
SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

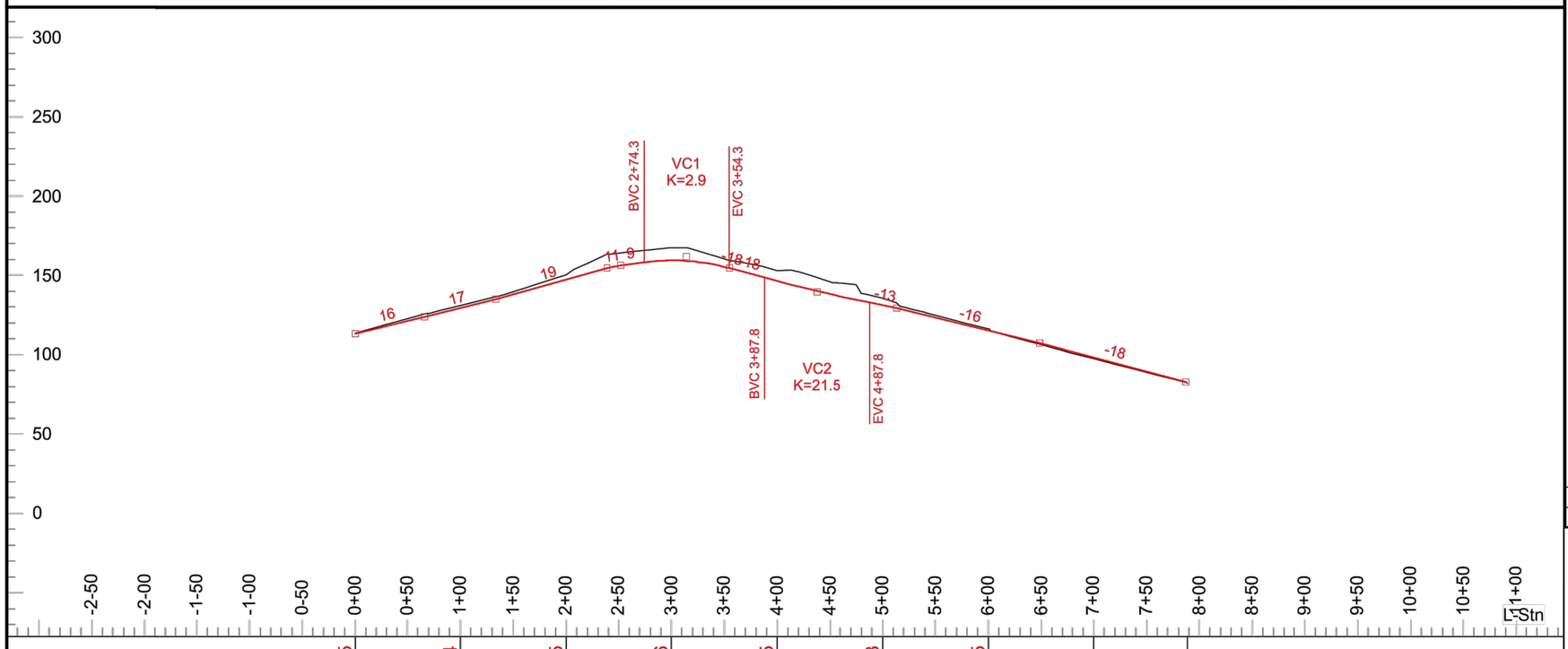
PRELIMINARY PLAN AND PROFILE RD. 19-9-35.7

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 11 OF 56
DRAWING NO.

PLAN AND PROFILE





CL Elkev	113.5	129.4	147.5	159.6	146.5	131.3	115.5	98.4	82.4
Gnd Elev	113.8	131.0	150.4	167.7	153.3	135.6	116.4	97.5	82.4

Legend

Plan L-line Location	Profile Subgrade
Plan P-line Location	Profile Stripped Surface
Plan Slope Stakes	Culverts
Plan Road Edges	Bridge Abutments
Profile Topo	

Curve Table

	C1	C2
Radius	60.0	80.0
Angle	38.1	37.4
Arc. Len.	39.9	52.3

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.
0+00.0	0.3			0.0
1+00.0	1.6	53.9	13.9	40.0
2+00.0	2.9	112.2	22.9	129.4
3+00.0	8.1	498.5	0.0	627.9
4+00.0	6.8	422.6	0.0	1050.5
5+00.0	4.3	581.6	0.0	1632.1
6+00.0	1.0	70.6	1.4	1701.3
7+00.0	-0.9	5.2	70.9	1635.7
7+88.8	0.0	1.9	35.4	1602.1
Pg. Tot.		1746.7	144.6	
Cum. Tot.		1746.7	144.6	

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

PRELIMINARY PLAN AND PROFILE RD. 19-9-35.8

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 12 OF 56
DRAWING NO.

SPECIAL PROVISIONS

Bituminous surfaced roads

The Purchaser shall avoid damaging any bituminous surfaced roads, and will be responsible for the repair of any road damaged as a result of the activity. Bituminous roads shall be left in the same condition that they were prior to logging operations.

The bituminous road surface at any roadside landing locations will be protected by applying a layer of wood chips, hog fuel, or other material (excluding rock or soil) approved by the Authorized Officer, to a depth sufficient to prevent damage from yarding and loading activities.

Roadwork restrictions

All road construction, renovation, and decommissioning work shall be done during the dry construction season, avoiding precipitation periods, between June 1 and October 15.

Seasonal restrictions apply to summer haul roads.

Native Seed

The Government will furnish native seed mix. The Purchaser shall pick up the native seed mix at the North Bend, BLM warehouse. The Purchaser shall give the Authorized Officer, or Jeanne Standley at (541) 751- 4283, a 3 day notice in advance before pick up. The native seed mix shall be applied at the rate of 20 pounds per acre. Sand can be mixed with the native seed to aid broadcast seeding.

Also, a generic fertilizer of 16-20-16 NPK shall be used at a rate of 200 pounds per acre. Approved mulch material shall be applied at the rate of 3000 pounds per acre. Seeding shall be applied according to the dates specified in road specification 1803.

Over-wintering

All natural-surfaced new construction shall not over-winter without being either decommissioned, as specified in the Exhibit D, or winterized, in accordance with the 1700 Erosion Control specifications, prior to the first rains of the wet season, but no later than October 15 in the year of construction.

When haul road grades exceed 20 percent slope

The vehicle or machine must be approved by the manufacturer for operation on the steeper grades. Additional precautions must be taken, such as assisting or snubbing the vehicle or machine down the slope.

SPECIAL DETAILS

RENOVATION OF ROAD NO. 20-9-1.0 (Beaver Creek Road)
MP 0.00 to MP 2.47

Milepost	Remarks
0.0	Begin Renovation. Junction with Road No. 20-9-27.1, West Fork Smith River Road.
	Begin roadside brushing, slope protecting, slough and slide removal, surfacing, grading and shaping in accordance with sections 500, 1000, 1200,1400, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Reastablish ditch out where necessary or as directed by Authorized Officer. Apply 10 CY of 1.5-0” spot rock allocated for road surface irregularities (potholes) repair conforming to Sections 500 and 1200 of the Specifications and as directed by the Authorized Officer from milepost 0.00 to 1.71.
0.07	Existing 18” CMP, clean inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.
0.14	Existing 18” CMP, clean inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.
0.23	Existing 18” CMP, clean inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.
0.35	Existing 18” CMP, clean inlet, place 10 CY of class IV riprap as energy dissipating rock blanket.
0.47	Existing 18” CMP, clean inlet.
0.63	Existing 18” CMP, clean inlet.
0.65	Junction, renovate Road No. 20-9-1.5 right.
0.70	Truck turnout left, 50 CY 6-0” crushed aggregate allocated.
0.74	Existing 18” CMP, clean inlet and restablish inlet ditch.
0.82	Construct landing with approach right, natural surface. Grade of landing shall not exceed 5%.
0.83	Existing 18” CMP, clean inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.
0.95	Construct landing left. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.
1.07	Junction, improve Spur 2 left.
1.14	Construct landing left. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.

1.22 Existing 18” CMP, inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.

1.22 Junction, renovate Road No. 19-9-35.5 right.

1.26 Existing 18” CMP, clean inlet, place 10 CY of class IV riprap as energy dissipating rock blanket.

1.30 Existing 18” CMP, clean inlet, place 10 CY of class IV riprap as energy dissipating rock blanket.

1.34 Construct landing left. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.

1.38 Existing 18” CMP, clean inlet.

1.44 Existing 18” CMP, clean inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.

1.56 Existing 18” CMP, clean inlet. Install a 20’ fullround downspout in accordance with Section 400 of the Road Specifications and Culvert Installation Detail Sheet 7.

1.63 Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.

1.66 Existing 18” CMP, clean inlet, place 5 CY of class IV riprap as energy dissipating rock blanket.

1.67 Junction, renovate Road No. 19-9-35.6 right.

1.70 Truck turnout left, 50 CY 6-0” crushed aggregate allocated.

1.71 End Asphalt. Continue brushing, slope protection, culvert replacement, slough and slide removal, surfacing, grading and shaping in accordance with sections 400, 500, 1000, 1200, 1800, and 2100 of the Road specifications, Typical Cross Section Sheet , Culvert Installation Detail Sheet, and Roadside Brushing Detail Sheet .

NOTE: Reastablish ditch out where necessary or as directed by Authorized Officer. Place 4” lift of 1.5-0” crushed aggregate surfacing from MP 1.71 to MP 2.47 conforming to Section 500 and 1200 of the Road Specifications.

1.76 Remove existing CMP and dispose of in a legal manner off U.S. Government lands. Install a new 18" x 100' CPP and 10 CY of class IV riprap as energy dissipating rock blanket. 30 CY of 6-0” crushed aggregate base course allocated for road surfacing.

1.80 Junction, construct Spur 3 left.

1.85 Junction, renovate Road No. 19-9-35.2 right.

1.86 Remove existing CMP and dispose of in a legal manner off U.S. Government lands. Install a new 24" x 60' CPP and 5 CY of class IV riprap as energy dissipating rock blanket. 30 CY of 6-0” crushed aggregate base course allocated for road surfacing.

1.93	Remove existing failed CMP and dispose of in a legal manner off U.S. Government lands. Install a new 18" x 40' CPP and 5 CY of class IV riprap as energy dissipating rock blanket. 10 CY of 6-0” crushed aggregate base course allocated for road surfacing.
1.95	Truck turnout left, 50 CY 6-0” crushed aggregate allocated.
1.98	Remove existing CMP and dispose of in a legal manner off U.S. Government lands. Install a new 18" x 45' CPP and 10 CY of class IV riprap as energy dissipating rock blanket. 10 CY of 6-0” crushed aggregate base course allocated for road surfacing.
2.11	Junction, construct Road No. 19-9-35.7 right.
2.12	Utilize waste site as needed, right. Seed, mulch, and shape to drain as directed by the Authorized Officer.
2.13	Construct landing right. Grade of landing shall not exceed 5%. 100 CY 6-0” crushed aggregate allocated.
2.47	Junction, renovate Road No. 19-9-35.0 left. End renovation.

RENOVATION OF ROAD NO. 20-9-1.5
Station 0+00 to 25+50 Station

Station	Remarks
0+00	Junction with Road No. 20-9-1.0, Beaver Creek Rd at Milepost 0.65. Begin brushing, slough and slide removal, surfacing, grading and shaping in accordance with Sections 500, 1200, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Place a 4” lift of compacted 3-0” crushed aggregate conforming to Section 1000 of the Road Specifications from station 0+00 to 8+75. Reestablish ditch out where necessary or as directed by Authorized Officer. Cut trees along ditchline, cutbank, and top of cutbank from station 9+00 to 21+00 to achieve clearing and daylighting. Conform to Sections 200, 500, and 2100 of the Road Specifications and/or as directed by the Authorized Officer.
1+75	Construct landing with approach left, natural surface. Grade of landing shall not exceed 5%.
8+25	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.
8+75	Junction, renovate Road No. 20-9-1.8 right.
NOTE:	Place a 8” lift of compacted 6-0” crushed aggregate base course and a 4” lift of compacted 3-0” crushed aggregate surface course conforming to Section 1000 and 1200 of the Road Specifications from station 8+75 to 25+50.
21+00	Junction, construct Road No. 20-9-1.11 right.

21+25	Waste site, utilize as needed and in accordance with Section 321 of the Road Specifications. Seed, mulch, and shape to drain as directed by the Authorized Officer.
21+50	Junction, construct Road No. 20-9-1.12 left.
22+25	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0" crushed aggregate allocated.
25+50	End renovation. Begin new construction.

RENOVATION OF ROAD NO. 20-9-1.8
Station 0+00 to 13+00 Station

Station	Remarks
0+00	Junction with Road No. 20-9-1.5 at station 8+75. Begin brushing, slough and slide removal, surfacing, grading and shaping in accordance with Sections 400, 500, and 1000 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Place a 4" lift of compacted 3-0" crushed aggregate conforming to Section 1000 of the Road Specifications from station 0+00 to 13+00.
0+25	Existing 18" CPP.
1+75	Construct landing right, natural surface. Grade of landing shall not exceed 5%.
5+50	Construct landing left, natural surface. Grade of landing shall not exceed 5%.
9+75	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0" crushed aggregate allocated.
12+50	Junction, construct Spur 1 right.
13+00	End renovation.

RENOVATION OF ROAD NO. 19-9-35.0
Station 0+00 to Station 9+00

Station	Remarks
0+00	Junction with Road No. 20-9-1.0, Beaver Creek Road at milepost 2.47. Begin brushing, slough and slide removal, surfacing, grading and shaping in accordance with Sections 500, 1000, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Place an 8" lift of compacted 3-0" crushed aggregate conforming to Section 1000 of the Road Specifications.
3+60	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0" crushed aggregate allocated.

4+80	Remove bank slough and utilize junction with 19-9-35.1 at station 9+00 for waste site in accordance with Section 321 of the Road Specifications.
9+00	Junction, renovate 19-9-35.1 right. End renovation. Begin improvement.

IMPROVEMENT OF ROAD NO. 19-9-35.0
Station 9+00 to Station 15+05

Station	Remarks
9+00	Begin improvement, brushing, surfacing, grading and shaping in accordance with Sections 500, 1000, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Place an 8” lift of compacted 6-0” crushed aggregate base course with a 4” lift of compacted 3-0” crushed aggregate surface course conforming to Section 1000 of the Road Specifications from station 9+00 to 15+05.
13+00	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.
15+05	Construct end landing. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated. End improvement.

RENOVATION OF ROAD NO. 19-9-35.1
Station 0+00 to Station 7+65

Station	Remarks
0+00	Junction with Road No. 19-9-35.0 at station 9+00. Begin improvement, brushing, surfacing, grading and shaping in accordance with Sections 500, 1000, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Place an 8” lift of compacted 6-0” crushed aggregate base course with a 4” lift of compacted 3-0” crushed aggregate surface course conforming to Section 1000 of the Road Specifications from station 0+00 to 7+65.
1+00	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.
2+00	Maintain ditchout right.
5+40	Construct landing left. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated.
6+00	Construct truck turnaround left, 20 CY 6-0” crushed aggregate allocated.
7+65	Construct end landing. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated. End renovation.

RENOVATION OF ROAD NO. 19-9-35.2
Station 0+00 to 14+25 Station

Station	Remarks
0+00	Junction with Road No. 19-9-35.0 at station 9+00. Begin brushing, slough and slide removal, grading and shaping in accordance with sections 500, 1000, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Place a 10” lift of compacted 3-0” crushed aggregate conforming to Section 1000 of the Road Specifications from Station 0+00 to 14+25.
1+00	Waste site right, utilize as needed and in accordance with Section 321 of the Road Specifications. Seed, mulch, and shape to drain as directed by the Authorized Officer.
2+75	Junction, renovate Road No. 19-9-35.3 left.
4+00	Remove and replace existing CMP and dispose of in a legal manner off U.S. Government lands. Install an 18" x 30’ CPP with a marker in accordance with Section 400 of the Road Specifications. Place 10 CY of class IV riprap as energy dissipating rock blanket.
9+00	Remove slide material and utilize waste area at station 1+00 in accordance with Section 321 of the Road Specifications.
14+00	Junction, improvement Road No. 19-9-35.4 right.
14+25	End renovation, utilize as truck turnaround.

RENOVATION OF ROAD NO. 19-9-35.3
Station 0+00 to Station 13+00

Station	Remarks
0+00	Junction Road No. 19-9-35.2 at station 2+75. Begin clearing and grubbing, brushing, slough and slide removal, grading and shaping in accordance with Sections 200, 500, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
NOTE:	Cut trees along ditchline, cutbank, and top of cutbank to achieve clearing and daylighting Conform to Sections 200, 500, and 2100 of the Road Specifications and/or as directed by the Authorized Officer.
5+25	Junction, renovate Spur 4 right.
6+75	Slough and slide removal.
13+00	End landing. Grade of landing shall not exceed 5%. End renovation.

IMPROVEMENT OF ROAD NO. 19-9-35.4
Station 0+00 to Station 5+25

Station	Remarks
0+00	Junction with Road No. 19-9-35.2 at station 14+00. Begin clearing and grubbing, slough and slide removal, subgrade preparation, surfacing, grading and shaping in accordance with Sections 500, and 1000 of the Road Specifications, Typical Cross Section Sheet.
NOTE:	Place an 8” lift of compacted 6-0” crushed aggregate base course with a 4” lift of compacted 3-0” crushed aggregate surface course conforming to Section 1000 of the Road Specifications from station 0+00 to 5+25.
5+25	End landing. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated. End improvement.

RENOVATION OF ROAD NO. 19-9-35.5
Station 0+00 to Station 13+00

Station	Remarks
0+00	Junction Road No. 20-9-1.0 Beaver Creek Road at milepost 1.22. Begin brushing, slough and slide removal, rocking, grading and shaping in accordance with Sections 500 and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
6+50	Construct truck turnout left.
7+00	Construct landing right. Grade of landing shall not exceed 5%.
9+00	Construct truck turnout right.
13+00	Construct end Landing. Grade of landing shall not exceed 5%. End renovation.

RENOVATION OF ROAD NO. 19-9-35.6
Station 0+00 to Station 11+00

Station	Remarks
0+00	Junction Road No. 20-9-1.0 Beaver Creek Road at milepost 1.67. Begin brushing, slough and slide removal, rocking, grading and shaping in accordance with Sections 500, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
11+00	Construct end Landing. Grade of landing shall not exceed 5%. End renovation.

RENOVATION OF ROAD NO. 19-9-35.7
Station 8+25 to Station 12+00

Station	Remarks
8+25	Begin renovation. Begin brushing, slough and slide removal, grading and shaping in accordance with Sections 500, and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
10+00	Construct truck turnout left.
12+00	Construct end landing. End renovation.

IMPROVEMENT OF SPUR NO. 2
Station 0+00 to Station 1+25

Station	Remarks
0+00	Junction with Road No. 19-9-35.2 at station 14+00. Begin clearing and grubbing, slough and slide removal, subgrade preparation, surfacing, grading and shaping in accordance with Sections 500, 1000 of the Road Specifications, Typical Cross Section Sheet.
NOTE:	Place an 8” lift of compacted 6-0” crushed aggregate base course with a 4” lift of compacted 3-0” crushed aggregate surface course conforming to Section 1000 of the Road Specifications from station 0+00 to 1+25.
1+25	Construct landing right. Grade of landing shall not exceed 5%. 50 CY 6-0” crushed aggregate allocated. End improvement.

RENOVATION OF SPUR NO. 2
Station 1+25 to Station 4+00

Station	Remarks
1+25	Junction Road No. 20-9-1.0 Beaver Creek Road. Begin brushing, slough and slide removal, culvert installation, grading and shaping in accordance with Sections 500 and 2100 of the Road Specifications, Typical Cross Section Sheet, and Roadside Brushing Detail Sheet.
4+00	Construct end Landing. Grade of landing shall not exceed 5%. End renovation.

RENOVATION OF SPUR 4

Station 0+00 to Station 1+50

Station	Remarks
0+00	Junction with Road No. 19-9-35.3. Begin slough and slide removal, subgrade preparation, grading and shaping in accordance with Sections 500, 1800, and 2100 of the Road Specifications, Typical Cross Section Sheet.
1+50	Construct end landing. Grade of landing shall not exceed 5%. End renovation.

EQUIPMENT WASHING

The Purchaser is responsible for conforming to the Exhibit F.

CONSTRUCTION DETAIL SHEET

ROAD NO. 20-9-1.5
CONTROL POINT ROAD

GENERAL

Purchaser shall construct Road No. 20-9-1.5 from station 25+50 to 28+00 as shown on the location map. This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING

The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 5.

TURNOUTS

None.

SUBGRADE

The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES

Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING

Place a 8" lift of 6-0” crushed aggregate base rock and cap with a 4” lift of 3-0” crushed aggregate surface course in accordance with Section 1000 of the Road Specifications and Typical Cross Section Sheet .

ALIGNMENT

Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

GRADE

Grade shall not exceed 18% favorable and 16% adverse grade.

TRUCK TURNAROUND

Construct truck turnaround at 26+00, left.
20 CY of landing rock allocated.

LANDINGS

Construct end landing at 28+00.
Grade of landing shall not exceed 5%.
50 CY of landing rock allocated.

SOIL STABILIZATION

Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

CONSTRUCTION DETAIL SHEET
ROAD NO. 19-9-35.7
DESIGNED ROAD

GENERAL
Purchaser shall construct Road No. 19-9-35.7 from station 0+00 to 8+25 as shown on the location map. New construction beginning on road 20-9-1.0, Beaver Creek Road, at milepost 2.11 right. This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 4.

TURNOUTS
None.

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES
Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING
None.

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

Purchaser will be responsible for construction staking from the BLM provided design. See Sheet No. 11 for design plan and profile.

Junction, station 2+90 construct 19-9-35.8 left.

GRADE
Grade shall not exceed 20% favorable.

TRUCK TURNAROUND
None.

LANDINGS
Construct landing left at station 8+25.
Grade of landing shall not exceed 5%.

SOIL STABILIZATION
Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

CONSTRUCTION DETAIL SHEET
ROAD NO. 19-9-35.8
DESIGNED ROAD

GENERAL
Purchaser shall construct Road No. 19-9-35.8 from station 00+00 to 7+95 as shown on the location map. New construction beginning on road 19-9-35.7 station 2+90 left. This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 4.

TURNOUTS
None.

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES
Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING
None.

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

Purchaser will be responsible for construction staking from the BLM provided design. See Sheet No. 12 for design plan and profile.

GRADE
Grade shall not exceed 20% adverse.

TRUCK TURNAROUND
Construct truck turnaround station 5+00, right.

LANDINGS
Construct end landing at station 7+95.
Grade of landing shall not exceed 5%

SOIL STABILIZATION
Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

CONSTRUCTION DETAIL SHEET
ROAD NO. 20-9-1.11
CONTROL POINT ROAD

GENERAL
Purchaser shall construct Road No. 20-9-1.11 from station 00+00 to 13+85 as shown on the location map. New construction beginning on road 20-9-1.5 station 21+00 right. This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 5.

TURNOUTS
Construct 50’ turnout right at station 8+15.

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES
Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING
None.

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

Construct and utilize waste site at junction with 20-9-1.5 in accordance with Section 300 of the Road Construction Specifications as needed or as directed by Authorized Officers.

GRADE
Grade shall not exceed 20% favorable.
Cut 5’ beginning at 2+40 and drift excavation back to 1+00 to attain specified grade.

TRUCK TURNAROUND
Construct truck turnaround right at station 12+50.

LANDINGS
Construct end landing at Station 5+40.
Grade of landing shall not exceed 5%.

SOIL STABILIZATION
Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

CONSTRUCTION DETAIL SHEET
ROAD NO. 20-9-1.12
CONTROL POINT ROAD

GENERAL
Purchaser shall construct Road No. 20-9-1.12 from station 00+00 to 20+00 as shown on the location map. New construction beginning on road 20-9-1.5 station 21+50 left. This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 5.

TURNOUTS
Construct 50’ turnout right at station 10+15.

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES
Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING
None.

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

Construct and utilize waste site at junction with 20-9-1.5 in accordance with Section 300 of the Road Construction Specifications as needed.

GRADE
Grade shall not exceed 17% favorable and 15% adverse.

Cut 2’ to 3’ from 6+25 and drift excavation back to 0+00 to achieve specified grade.

Cut 3’ to 5’ from 6+80 and drift excavation forward to 10+30 to achieve specified grade.

Cut 2’ to 3’ from 13+85 and drift excavation forward to 15+15 to achieve specified grade.

TRUCK TURNAROUND
None.

LANDINGS
Construct jump landing at station 8+50 left.
Grade of landing shall not exceed 5%.

Construct jump landing at station 15+15 left.
Grade of landing shall not exceed 5%.

Construct end landing at station 20+00.
Grade of landing shall not exceed 5%.

SOIL STABILIZATION

Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

CONSTRUCTION DETAIL SHEET
SPUR 1
CONTROL POINT ROAD

GENERAL

Purchaser shall construct Spur No. 1 from station 0+00 to 2+05 as shown on the location map. New construction beginning on road 20-9-1.8 station 12+50 right. This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING

The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 5.

TURNOUTS

None.

SUBGRADE

The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES

Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING

Place a 8" lift of 6-0” crushed aggregate base rock and cap with a 4” lift of 3-0” crushed aggregate surface course in accordance with Section 1000 and 1200 of the Road Specifications and Typical Cross Section Sheet.

ALIGNMENT

Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

GRADE

Grade shall not exceed 15% adverse.

TRUCK TURNAROUND

Utilize junction for truck-turnaround.

LANDINGS

Construct landing at station 00+30 left.
50 CY of landing rock allocated.
Grade of landing shall not exceed 5%.

Construct end landing at station 2+05.
50 CY of landing rock allocated.
Grade of landing shall not exceed 5%.

SOIL STABILIZATION

Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

CONSTRUCTION DETAIL SHEET
SPUR 3
CONTROL POINT ROAD

GENERAL
Purchaser shall construct Spur No. 3 from station 0+00 to 1+00 as shown on the location map. New construction beginning on road 20-9-1.0 Beaver Creek Road milepost 1.80 left.This work shall be accomplished in accordance with details and road specifications which follow:

SHAPING
The roadway shall be constructed and shaped to conform to standards shown on Sheet No. 5.

TURNOUTS
None.

SUBGRADE
The subgrade shall be excavated and compacted in accordance with the Road Specifications, 200 and 300 Sections.

DRAINAGE FEATURES
Outslope &/or inslope at 2% with no ditch to achieve drainage.

SURFACING
Place a 8" lift of 6-0” crushed aggregate base rock and cap with a 4” lift of 3-0” crushed aggregate surface course in accordance with Section 1000 and 1200 of the Road Specifications and Typical Cross Section Sheet .

ALIGNMENT
Roadway shall be constructed within posted or painted right-of-way boundaries. Minimum curve radius shall be sixty (60) feet.

GRADE
Grade shall not exceed 18% favorable.

TRUCK TURNAROUND
Utilize junction for truck turnaround.

LANDINGS
Construct end landing at station 1+00.
50 CY of landing rock allocated.
Grade of landing shall not exceed 5%.

SOIL STABILIZATION
Apply seed, fertilizer, and mulch in accordance with Section 1800 of the Road Construction Specifications.

ROAD CONSTRUCTION SPECIFICATIONS

General road construction specifications are designated by numeric symbols according to the type of road work to be performed, as follows:

Section	
100	GENERAL
200	CLEARING AND GRUBBING
300	EXCAVATION AND EMBANKMENT
400	PIPE CULVERTS
500	RENOVATION AND IMPROVEMENT OF EXISTING ROADS
600	WATERING
1000	AGGREGATE BASE COURSE (CRUSHED ROCK)
1200	AGGREGATE SURFACE COURSE (CRUSHED ROCK)
1400	SLOPE PROTECTION
1700	EROSION CONTROL
1800	SOIL STABILIZATION
2100	ROADSIDE BRUSHING

GENERAL - 100

101 Pre-work Conference(s):

A pre-work conference will be held prior to the start of operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

The purpose will be to review the required work, exhibits and specifications, and to establish a work schedule and a list of the Purchaser's representatives and subcontractor(s).

102 Definitions:

AASHTO - American Association of State Highway and Transportation Officials. Current editions of tests and specifications.

Abrasion Resistance - The ability of a fabric surface to resist wear by friction.

ACI - American Concrete Institute

Apparent Opening Size (AOS) - Number of the U.S. Bureau of Standard sieve (or its opening size in millimeters or inches) having openings closest in size to the diameter of uniform particles which will allow 5 percent by weight to pass through the geotextile material when shaken in a prescribed manner. Also referred to as Equivalent Opening Size (EOS).

ASTM - American Society for Testing and Materials.

Base Course - Surfacing structure consisting of crushed gravel or stone, crushed sandstone, pitrun rock, bank or river-run gravels, etc., to provide support and, in the event no surface course is placed, the running surface for traffic load.

BLM - Bureau of Land Management

Borrow - Excavated material required for embankments and other portions of the work.

Burst Strength - The resistance of a geotextile material to rupture from pressure applied at right angles to the plane of the geotextile material under specified conditions, usually expressed as the amount of pressure causing failure. Rupture or burst results from tensile failure of the geotextile material.

Culvert - A pipe, pipe-arch, arch, or box structure constructed of metal, concrete, plastic or wood which provides an opening under the roadway primarily for the conveyance of liquids, pedestrians or livestock.

Curve Widening - Widening required on inside of curves to accommodate long log and equipment hauling trucks.

Embankment - A structure of soil, aggregate, or rock material placed on a prepared ground surface and constructed to subgrade.

End Haul - Excavated material moved, other than by dozer, to an embankment or waste area to prevent sidecasting material outside of the road prism.

Excess Excavation - Material from the roadway in excess of that needed for construction of the designed roadway (waste).

Grab Tensile Strength - A modified tensile strength of a geotextile material. The strength of a specific width of geotextile material together with the additional strength contributed by adjacent areas. Typically, grab strength is determined on a 12-inch-wide strip of geotextile material, with the tensile load applied at the midpoint of the geotextile material width through 1-inch-wide jaw faces.

Grading - Leveling to grade, shaping and smoothing of a road subgrade; the shaping of roadside ditches as to grade and contour. In some instances includes smoothing of the cut bank.

Nonwoven Geotextile Material - A textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical or chemical means.

Overhaul - Distance excavated material is transported in excess of the distance included in the cost for excavation.

Pioneer Road - Temporary construction access built along the route of the project.

Penetration Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a sharp pointed object. Initial penetration is by separating the fibers. Further penetration is essentially a tearing process.

Percent Open Area - The net area of a geotextile material that is not occupied by geotextile material filaments, normally determinable only for woven and nonwoven geotextile material having distinct, visible, and measurable openings that continue directly through the geotextile material.

Permeability - The geotextile material property which permits water to be transmitted in the longitudinal or transverse planes of the geotextile material.

Piping - The process by which soil particles are washed in or through pore spaces in drains and filters or poorly compacted fill/backfill material.

Plans - The approved drawings, or exact reproductions thereof which show the locations, character, dimensions, and details of the work to be done.

Pore Size - The size of an opening between geotextile material filaments; apparent opening size (AOS) is used to quantify this geotextile material property.

Puncture Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a blunt object. Failure results in a tearing of the geotextile material.

Purchaser - The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through their, or its agents, employees, or contractors.

Reasonably Close Conformity - Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified.

Reinforcement - Strengthening of concrete with iron bars or mesh: geotextile with geotextile material inclusion: subgrade with aggregate: etc.

Roadbed - The graded portion of the road within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Road Centerline - Longitudinal center of roadbed.

Road Improvement - Work done to an existing road which improves it over its original design standard.

Road Renovation - Work done to an existing road which restores it to its original design.

Roadway - The portion of a road within limits of construction. Usually from the toe of the fill slope to a point where the cut slope intersects natural ground line. Synonym - road prism.

Scale - In quarrying, consists of the removal of loose or overhanging rock adhering to the solid face after a shot or a round of shots has been fired.

Scarification - The process of loosening or breaking up of the surface layer of soil or road, usually to a specified depth.

Separation - Function of geotextile material as a partition between adjacent materials to prevent mixing of those materials.

Shoulder - The portion of the roadbed contiguous with the traveled way designed for accommodation of stopped vehicles, safety, and lateral support of base and surface courses.

Spalls - Flakes or chips of stone.

Specifications - A general term applied to all directions, provisions, and requirements pertaining to performance of the work.

Specific Gravity - The ratio of the density of a material to the density of water obtained by weighing known volumes of both items in air. A specific gravity less than one implies that the material will float.

Structures - Bridges, culverts, catch basins, retaining walls, underdrains, flumes, splash pads, downspouts, and other project features which may be involved in the work and not otherwise classified in these specifications.

Subbase - Reinforcement of the subgrade with large particles of pitrun or crushed stone. Usually confined to roads having wet subgrades or subgrades with weak support characteristics.

Surface Course - Top layer of a road structure consisting of finely crushed gravels or asphalt designed to provide a smooth running surface for traffic load.

Subgrade - The top surface of a roadbed upon which the traveled way and shoulders are constructed.

Tackifier - A compound which penetrates into the earth and assists in creating a crust through the cohesive bonding of the surface materials to a depth sufficient to stabilize the soil surface and/or a compound used to mat together mulching material.

Tensile Strength - The strength shown by a geotextile material subjected to tension as distinct from torsion, compression, or shear.

Tensile Stress - Strain Modulus - A measure of the resistance to elongation under stress. The ratio of the change in tensile stress to the corresponding change in strain.

Tensile Test - A test which subjects geotextile material to tensile forces and measures resultant stresses and strains.

Timber - Standing trees, downed trees, or logs, or portions thereof, which are capable of being measured in board feet.

Traveled Way - The portion of the roadbed used for the movement of vehicles, exclusive of shoulders.

Typical Cross Sections - Cross-sectional plane of a typical roadway; showing natural ground line and designed roadway in relation to cut and fill, through cut, and through fill.

Turnout - Extra widening of the roadbed at appropriate intervals on single-lane roads for passing purposes.

Ultraviolet (UV) Radiation Stability - The ability of geotextile material to resist deterioration from exposure to sunlight.

Unaged Cloth - Cloth in condition received from the manufacturer or distributor.

Woven Geotextile Material - A textile structure comprising two or more sets of filaments of yarns interlaced in such a way that the elements pass each other at essentially right angles with one set of elements parallel to the geotextile material axis.

102a - Tests Used in These Specifications:

AASHTO T 11 Quantity of rock finer than No. 200 sieve.

AASHTO T 27 Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.

AASHTO T 89 Liquid limit of material passing the 0 sieve. Water content at which the soil passes from a plastic to a liquid state.

AASHTO T 90 Plastic limits and plasticity index of soil.

a. Plastic limit - lowest water content at which the soil remains plastic.

b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.

AASHTO T 96 Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.

AASHTO T 99 Relationship between soil moisture and maximum density of soil.

- Method A - 4" mold, soil passing a Sieve. 25 blows/layer & 3 layers.

- Method D - 6" mold, soil passing a 19.00 mm (3/4 inches) sieve. 56 blows/layer & 5 layers.

AASHTO T 176 Shows relative portions of fine dust or clay-like materials in soil or graded aggregate.

AASHTO T 180 (OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop.

AASHTO T 191 Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.

AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.

AASHTO T 210 Durability of aggregates based on resistance to produce fines.

AASHTO T 224 Correction for coarse particles in the soil.

AASHTO T 238 Determination of density of soil and soil-aggregates in place by nuclear methods.

AASHTO T 248 Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.

DES. E-12 Determination of relative density of cohesionless soils.

DMSO (dimethyl sulfide) - Determines volume of expanding clays in aggregates. Usually associated with marine basalts.

103 Compaction equipment shall meet the following requirements:

103e Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5 feet 6 inches of which not more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of woven open-mesh made by interlacing bars of not less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be not less than 3-inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not less than 27,000 pounds. The grid roller shall be drawn by a power unit capable of propelling the fully loaded roller at a speed of at least 4 miles per hour.

103f Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer. The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.

103i Other. Compaction equipment approved by the Authorized Officer.

CLEARING AND GRUBBING - 200

201 This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections as shown on the plans.

202 Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.

203 Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsection 202 and as shown on the plans.

203a Brush under 2 feet in height need not be cut within the limits established for clearing.

203b Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.

204 Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsection(s) 204a, 204b, 204c, 204d, 204e between the top of the cut slope and the toe of the fill slope. Undisturbed stumps, roots and other solid objects which will be a minimum of 3 feet below subgrades or slope surfaces or embankments are excepted.

204a Stumps, including those overhanging cut banks, shall be removed within the required excavation limits.

204b Stumps and other protruding objects shall be completely removed within the limits of required embankments having heights of less than 4 feet. When authorized, stumps and other nonperishable objects may be left provided they do not extend more than 6 inches above the existing ground line.

204c On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.

204d On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.

204e Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.

205 Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.

206 Clearing and grubbing debris shall be disposed of by scattering in accordance with Subsection 210.

210 Disposal of clearing and grubbing debris shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.

213 No clearing or grubbing debris shall be left lodged against standing trees.

EXCAVATION AND EMBANKMENT - 300

301 This work shall consist of excavating, overhaul, placement of embankments, backfilling, borrowing, leveling, ditching, grading, insloping, outsloping, crowning and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

302 Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

303 Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.

303a **Excavated material shall not be wasted as sidecast or perched. All material perched or sidecast as waste shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.**

305 Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

305a Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials and shall be placed and compacted as specified.

305b Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.

305c Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent of rock not larger than 12 inches, in the greatest dimension, shall be placed in successive layers not exceeding 2 feet in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct 2-foot embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.

305d Where embankments are constructed predominantly of blasted rock material, depth of layers shall not exceed 4 feet. Rock fragments having dimensions greater than 4 feet will be permitted provided that they have no dimensions greater than 6 feet and that clearance between adjacent fragments is adequate for the placing and compacting of material in

horizontal layers as specified, and that no part of the larger fragments comes within 4 feet of subgrade.

306 Layers of embankment and final subgrade material as specified under Subsection(s) 305a and 305b shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsection 103f and in accordance with the following table:

Road No.	From Station/M.P.	To Station/M.P.
19-9-35.7	0+00	8+25
19-9-35.8	0+00	7+95
20-9-1.5	25+50	28+00
20-9-1.11	0+00	13+85
20-9-1.12	0+00	20+00
Spur 1	0+00	2+05
Spur 3	0+00	1+00

306d Compacted materials within 1 foot of the established subgrade elevation shall have a density in place of not less than 95 percent of maximum density, and below the 1-foot limit, these materials shall have a density in place of not less than 90 percent of maximum density. Maximum density shall be determined by AASHTO T 99, Method A or Method D.

306f Compaction of embankment layers placed as specified under Subsection 305b above shall be accomplished by routing construction equipment over full width of embankment structures except as specified in Subsection 306.

306g **The face of all fill slopes shall be compacted to 85% of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.**

311 In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade and backfilling to grade and compacting both the pockets and the ditch with rock fragments, gravel, or other suitable porous material.

312 When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with Subsection 306.

313 In cut areas where solid rock is encountered at or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.

314 When heavy clays, muck, clay shale, or other deleterious material for forming the roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected borrow material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306. Unsuitable material shall be disposed of as directed by the Authorized Officer.

320 Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.

321 Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsection 321c.

NOTE: Any material being hauled over gravel or bituminous surfaced roads will be done in vehicles which meet legal highway weight requirements while hauling.

321c End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Placement in layers is required. Materials placed shall be sloped, shaped, and otherwise brought to a neat and sightly condition, acceptable to the Authorized Officer.

324 Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.

327 The finished grading shall be approved in writing by the Authorized Officer. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

328 The Purchaser shall adopt methods and procedures in using explosives which will prevent damage to adjacent landscape features and which will minimize scattering rocks and other debris outside the road prism.

PIPE CULVERTS - 400

401 This work shall consist of furnishing and installing pipe culverts, pipe arch culverts, half rounds flume(s), perforated pipe culverts, downspout(s), elbow(s), and other erosion control device(s) in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost SchedulE.

403 Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade and shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.

404 Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.

405 Corrugated steel riveted and helical pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 as specified on the plans.

405a Corrugated-steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 as specified on the plans.

405e Corrugated-polyethylene pipe for culverts 12-inch through 24-inch diameter shall meet the requirements of AASHTO M 294 for type S. Installation will be subject to the same specification as other pipe materials.

406 Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on the plans.

406a "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of 2 annular corrugations.

406b Coupling bands produced from flat galvanized steel sheets with impressed dimples will be permitted only for connecting annular corrugated steel pipe to helically corrugated steel pipe. Such coupling bands shall conform to the width requirements shown on the plans.

406f Channel-type or flanged-end coupling bands may be used on helical pipe with reformed rolled ends and flanged specifically to receive these bands. Such coupling bands shall conform to the requirements shown on the plans.

407 Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge as the pipe to which they are joined and shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.

407b Full round culvert downspouts conforming to the material and construction requirements as shown on the plans shall be anchored with two six-foot steel fence posts (one on each side of the pipe) wired together with No. 12 galvanized wire in a manner approved by the Authorized Officer. These anchors shall be placed every ten feet along the pipe beginning at the outlet of the culvert pipe.

408 Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.

409 Structural-plate pipe culverts and pipe-arch culverts shall be installed in accordance with the plans and detailed erection instructions furnished by the manufacturer. One copy of the erection instructions shall be furnished the Authorized Officer prior to erection.

410 Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.

411 Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions, and typical diagram included in the plans shown on Exhibit C and the Culvert Installation Detail Sheet.

412 Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with selected granular or fine readily compactable soil material.

413 Pipe culverts and pipe-arch culverts shall be bedded on a selected granular or fine readily compactable soil material. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

413a Bedding material for pipe culverts on existing surfaced roads shall be 1½ inch minus crushed aggregate meeting the requirements of Sections 1204, 1205, 1206, 1207, and 1208 of these specifications.

414a - The invert grade of the bedding shall be cambered at the middle ordinate a minimum of 1 percent of the total length of the drainage structure. Camber shall be developed on a parabolic curve.

415 - Inspection of pipe culverts having a diameter of 48 inches and pipe-arch culverts having a height of 40 inches or a cross sectional area of 13 square feet or larger shall be made before backfill is placed. Culverts found to be out of alignment or damaged shall be replaced, reinstalled, or repaired as directed by the Authorized Officer at the Purchaser's expense.

416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel and to 1 foot over the pipe with fine, readily compactable soil or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

417 - For pipe culvert(s) side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe in layers not exceeding 6 inches in depth and 1 pipe diameter/span or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 95 percent of the maximum density is attained as determined by AASHTO T 99, Method C.

418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.

423 - Construction of catch basins and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for grade culverts.

425 - Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.

426 - Culvert marker(s) consisting of ½-inch round steel bars 4 feet in length bolted to the culvert at the inlet or 6 foot steel fence posts painted white, shall be furnished, fabricated, and installed by the Purchaser at all grade culverts.

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications and as shown on the plans.

501a - This work shall include the removal and disposal of slides in accordance with these specifications.

502 - The existing road surface shall be scarified to its full width and to a sufficient depth to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans at the following location(s):

Road No.	From Station/M.P.	To Station/M.P.
20-9-1.0	1.71	2.50
20-9-1.5	0+00	25+50
20-9-1.8	0+00	13+00
19-9-35.0	0+00	15+05
19-9-35.1	0+00	7+65
19-9-35.2	0+00	14+25
19-9-35.3	0+00	13+00
19-9-35.4	0+00	5+25
19-9-35.5	0+00	13+00
19-9-35.6	0.00	11+00
19-9-35.7	8+25	12+00
Spur 2	0+00	4+00
Spur 4	0+00	1+50

502a Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.

502b Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
Drainage ditches that are vegetated, capable of adequate water flow, and are in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans shall not be bladed.

503 Debris from slides shall be disposed of as directed by the Authorized Officer.

504 Scarified material and existing road surface shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with

equipment conforming to requirements of Subsection 103f and in accordance with the following table:

Road No.	From Station/M.P.	To Station/M.P.
20-9-1.0	1.71	2.50
20-9-1.5	0+00	25+50
20-9-1.8	0+00	13+00
19-9-35.0	0+00	15+05
19-9-35.1	0+00	7+65
19-9-35.2	0+00	14+25
19-9-35.3	0+00	13+00
19-9-35.4	0+00	5+25
19-9-35.5	0+00	13+00
19-9-35.6	0+00	11+00
19-9-35.7	8+25	12+00
Spur 2	0+00	4+00
Spur 4	0+00	1+50

504a Minimum compaction required shall be 1 hour of continuous rolling for each 4 stations of road, or fraction thereof, as measured along the centerline per layer of material.

506 The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of designated pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

507 The finished grading shall be approved in writing by the Authorized Officer. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

WATERING - 600

601 This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds laying dust, or for other uses in accordance with these specifications.

602 Water, when needed for compaction shall be applied at the locations in the amounts and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications.

603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.

AGGREGATE BASE COURSE AND LANDING ROCK - 1000
CRUSHED ROCK MATERIAL

1001 - This work shall consist of furnishing, hauling, and placing one or more lifts of crushed rock material on roadbeds and landings approved for placing crushed rock material, in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road.

1002a - Crushed rock materials may be obtained from commercial sources selected by the Purchaser at his option and expense providing that the rock materials selected comply with the specifications in this section.

1003 - Crushed rock material produced from gravel shall have 3 manufactured fractured face(s) on 75 percent, by weight, of the material retained on the sieve.

1004 - Crushed rock materials shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1004
AGGREGATE BASE COURSE
CRUSHED ROCK MATERIAL
Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 11 & T 27)
GRADATION

Sieve Designation	A	D
6-inch	-	100
3-inch	100	45-65
2-inch	90-95	-
12-inch	-	-
1-inch	45-75	-
3/4-inch	-	-
2-inch	-	-
3/8-inch	-	-
	15-45	0-10
	-	-
	-	-
No. 30	-	-
0	5-25	-
No. 200	2-15	-

1005 Crushed rock material retained on the sieve shall have a percentage of loss of not more than 35 at 500 revolutions, as determined by AASHTO T 96.

1006 Crushed rock material shall show durability value of not less than 35 as determined by AASHTO T 210.

1007 That portion of crushed rock material passing the 0 sieve, including blending filler, shall have liquid limits of not more than 35 and a plasticity index of not less than 4 and not more than 12, as determined by AASHTO T 89 and AASHTO T 90.

1007a That portion of crushed rock material passing sieve, including blending filler, shall have a sand equivalent of not less than 35 as determined by AASHTO T 176, except where that portion exhibits a sand equivalent of less than 35, the aggregate will be accepted if it complies with the additional requirement as follows:

Sand Equivalent AASHTO T 176 Maximum	Percentage Passing No. 200 Sieve AASHTO T 27 Maximum
34	9
33	8
32	7
31	6
30	5
29 or less	4

1008 If additional binder or filler is necessary in order to meet the grading or plasticity requirements, or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

1008a Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading to full depth until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.

1009 The roadbed, as shaped and compacted under Sections 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of crushed rock materials. Notification for subgrade approval prior to rocking shall be 3 days prior to that approval and shall be 6 days prior to start of rocking operations.

1010 Crushed rock materials shall be placed and processed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and compacted in layers not to exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, and compacted, before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing crushed rock material until the surface is smooth and uniform.

1010a Crushed rock material used to repair or reinforce a soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing under this specification.

1012 Each layer of crushed rock material shall be placed, processed, shaped, moistened, or dried to a uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 103f. Minimum compaction shall be one (1) hour of continuous compacting for each 150 cubic yards, or fraction thereof, of crushed rock material placed per layer.

AGGREGATE SURFACE COURSE, SPOT, AND MAINTENANCE ROCK - 1200
CRUSHED ROCK MATERIAL

1201 This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock material on roadbeds and base courses approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road.

1202a Crushed rock materials used in this work may be obtained from commercial source(s) selected by the Purchaser at his option and expense, providing rock materials furnished comply with the specifications in this section.

1203 When crushed rock material is produced from gravel, not less than 75 percent by weight of the particles retained on the sieve will have 3 manufactured fractured face(s).

1204 Crushed rock material shall consist of hard durable rock fragments conforming to the following gradiation requirements:

TABLE 1204

AGGREGATE SURFACE COURSE
CRUSHED ROCK MATERIAL

Percentage by weight passing square mesh sieves
AASHTO T 11 & T 27

GRADIATION

Sieve Designation	C
1-1/2-inch	100
1-inch	-
3/4-inch	50-90
½-inch	-
	25-50
	-
No. 30	-
0	5-25
No. 200	2-15

1205 Crushed rock material retained on the sieve shall have a percentage of loss of not more than 35 at 500 revolutions, as determined by AASHTO T 96.

1206 Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.

1206a The crushed rock material shall show a loss of not more than 20 percent by weight, when submerged in DMSO, dimethyl sulfoxide, for five days, according to Federal Highway Administration Region 10 Accelerated Weathering Test Procedure.

1207 That portion of crushed rock material passing the 0 sieve, including blending filler, shall have liquid limits of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.

1207a That portion of crushed rock material passing sieve, including blending filler, shall have a sand equivalent of not less than 35, as determined by AASHTO T 176, except where that portion exhibits a sand equivalence of less than 35, the aggregate will be accepted if it complies with the additional requirement as follows:

Sand Equivalent AASHTO T 176 Maximum	Liquid Limit AASHTO T 89 Maximum	Plasticity Index AASHTO T 90 Maximum	Percentage Passing No. 200 Sieve AASHTO T 27 Maximum
34	25	9	9
33	25	8	8
32	25	7	7
31	25	6	6
30	25	5	5
29 or less	25	4	4

1208 If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

1208a Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.

1209 Shaping and compacting of roadbed shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the requirements of Subsections 500 for placing on the roadbeds. Notification for roadbed inspection, prior to rocking, shall be 3 days prior to that inspection and shall be 6 days prior to start of rocking operations.

1210 Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be

corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.

1210a Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification.

1212 Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsection 103i. Minimum compaction shall be 1 hour of continuous compacting for each 150 cubic yards or fraction thereof, of crushed rock material placed per layer.

GEOTEXTILES – 1300

1301 This work shall consist of furnishing, hauling, and installing geotextile material at the locations and in accordance with these specifications and the lines, grades, dimensions, and typical cross sections shown on the plans.

1302 Use long-chain, synthetic polymers, composed of at least 95 percent by mass of polyolefins or polyesters, to manufacture geotextile or the threads used to sew geotextile.

1303 Furnish to the Authorized Officer a commercial certification including the name of the manufacturer, product name, style number, chemical composition of the filaments or yarns, and other pertinent information to fully describe the geotextile.

1303a Each roll of geotextile material shall be labeled to provide for identification of the material. Elevate and protect rolls with a waterproof cover if stored outdoors.

1303b When using a geotextile for a permanent installation limit material exposure to ultraviolet radiation to less than 10 days. (Geotextile material deemed to have been overexposed to sunlight by the Authorized Officer shall be rejected.)

1307 Where subgrade reinforcement or material separation is required, clearing, grubbing, and excavation of the subgrade shall be completed prior to the placement of geotextile material. The subgrade shall be leveled and smoothed to remove lumps and depressions which exceed (6) inches in height and depth. Small pieces of woody debris shall be removed. Light vegetation, i.e., grasses, weeds, leaves, and other small woody debris, may be left in place.

1308 The geotextile material shall be installed directly on the prepared surface. Place the geotextile smooth and free of tension, stress, or wrinkles. Fold or cut the geotextile to conform to curves. Overlap in the direction of construction. Overlap the geotextile a minimum of (2) feet at the ends and sides of adjoining sheets, or sew the geotextile joints according to manufacturer's recommendations. Do not place longitudinal overlaps below anticipated wheel loads. Hold the geotextile in place with pins, staples, or piles of cover material.

1309 End-dump the cover material onto the geotextile from the edge of the geotextile or from previously placed cover material. Do not operate equipment directly on the geotextile. Spread the end-dumped pile of cover material maintaining a minimum lift thickness of (4) inches. Compact the cover material with rubber-tired or non-vibratory smooth drum rollers. Avoid sudden stops, starts, or turns of the construction equipment. Fill all ruts from construction equipment with additional cover material. Do not re-grade ruts with placement equipment.

1310 Repair or replace all geotextile that is torn, punctured, or muddy. Remove the damaged area and place a patch of the same type of geotextile overlapping 3 feet beyond the damaged area.

1311 Geotextile material used for slope reinforcement or material separation shall meet the following requirements:

TABLE 1311a

Physical Requirements for Slope reinforcement or Material Separation Geotextile

Property	Test Method ASTM	Units	Specifications[1]
			Type II-B
Grab strength	D 4632	N	1100/700
Sewn seam strength	D 4632	N	990/630
Tear strength	D 4533	N	400[3]/250
Puncture strength	D 4833	N	400/250
Burst strength	D 3786	kPa	2700/1300
Permittivity	D 4491	s^{-1}	0.02
Apparent opening size	D 4751	mm	0.60[2]
Ultraviolet stability	D 4355	%	50% after 500 hours of exposure

1) The first values in a column apply to geotextiles that break at < 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at ≥ 50 percent elongation (ASTM D 4632).
2) Maximum average roll value.
3) The minimum average tear strength for woven monofilament geotextile is 245 N.

1312 Where geotextile material is specified as filter wrap for underdrains it shall be inert to commonly encountered chemicals, mildew and rot resistant, resistant to ultraviolet light exposure, and insect and rodent resistant.

1313 Trenches for underdrains shall be excavated to the dimensions and grades shown on the plans and adjusted to meet field conditions. Smooth the trench surfaces by removing all projections that may damage the geotextile. Minimum slope of trenches shall be one percent. **The Authorized Officer shall have a minimum of 3 days of notice in which to approve trenches prior to installation of the geotextile material, pipe, drain rock, or other backfill.**

1314 Geotextile material used as a filter shall be placed in a manner and at the locations shown on the plans. Place the long dimension of the geotextile parallel to the centerline of the trench. Position the geotextile, without stretching, in contact with the trench surface. Overlap the joints a minimum of 24 inches with the upstream geotextile placed over the downstream geotextile. Replace geotextile damaged during installation.

1315 Geotextile materials used for subsurface drainage shall meet the following requirements:

TABLE 1315

Physical Requirements for Subsurface Drainage Geotextile

Property	Test Method ASTM	Units	Specifications(1)
			Type I-A
Grab strength	D 4632	N	1100/700
Sewn seam strength	D 4632	N	990/630
Tear strength	D 4533	N	400(3)/250
Puncture strength	D 4833	N	400/250
Burst strength	D 3786	kPa	2750/1350
Permittivity	D 4491	s^{-1}	0.5
Apparent opening size	D 4751	mm	0.43(2)
Ultraviolet stability	D 4355	%	50% after 500 hours of exposure

(1) The first values in a column apply to geotextiles that break at < 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at ≥ 50 percent elongation (ASTM D 4632).
(2) Maximum average roll value.
(3) The minimum average tear strength for woven monofilament geotextile is 245 N.

SLOPE PROTECTION - 1400

1401 This work shall consist of furnishing, hauling, and placing stone materials (riprap) for slope protection structures (energy dissipaters at culvert outlets) in accordance with these specifications. Material not conforming to these specifications will be rejected, and shall be removed from the slope protection structure as directed by the Authorized Officer.

1402 **Riprap shall be hard, durable, angular in shape, and resistant to weathering and water action.** Thickness of a single stone should be more than one-third its length. Do not use rounded rock or boulders. Stone shall be free from overburden, spoil, shale, and organic material and conforming to the following:

a. Apparent Specific Gravity (AASHTO T85) 2.50 Min.

b. Absorption (AASHTO T85) 4.2% Max.

c. Coarse Durability Index (AASHTO T210) 20 Min.

1403 Loose riprap shall meet the following gradation:

Equivalent Cubic Dimensions	Total Size Smaller Than Given
34 inches	100
27 inches	80
22 inches	50
10 inches	10

1404 The placement of slope protection riprap by the end dumping method is not permitted.

1405 **Riprap shall be placed to produce a well keyed mass of rock with the least practical amount of void spaces.** The foundation course is the course placed in contact with the

ground surface, and shall be placed on a stable key bench. Bearing shall not be on smaller rocks that may be used for filling voids.

1405a Riprap shall be placed directly under the culvert outlet and extend to the point where a 45-degree angle from the outlet invert intersects the key bench. Riprap shall extend a minimum distance equal to the culvert diameter on all sides.

1406 Determination of the acceptability of the slope protection structure will be by visual inspection and / or physical measurements by the Authorized Officer.

EROSION CONTROL - 1700

1701 This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

1702 The Purchaser shall construct dike(s), dam(s), diversion channel(s), settling basin(s) and other erosion control structure(s) as directed by the Authorized Officer.

1704 The erosion control provisions specified under this subsection shall be coordinated with the soil stabilization requirement(s) of Section 1800.

1705 The surface area of erodible earth material exposed at any one time by clearing and grubbing shall not exceed 25,000 square feet without prior approval by the Authorized Officer.

1706 The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 25,000 square feet without prior approval by the Authorized Officer.

1706a The Purchaser shall perform, during the same construction season, erosion control measures specified in the plans on all exposed excavation, borrow, and embankment areas.

1707 Completed and partially completed segments of road(s) to be carried over the winter and early spring periods shall be stabilized by mulching exposed areas at the rate of 2,000 pounds per acre.

1708a Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway by water barring, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.

SOIL STABILIZATION - 1800

1801 This work shall consist of seeding, fertilizing and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is not required for road acceptance under Section 18 of this contract.

1802a Soil stabilization work consisting of seeding, fertilizing and mulching shall be performed on new road construction, road renovation, improvements, landings and disturbed areas in accordance with these specifications and as shown on the plans.

1803 Soil stabilization work as specified under Subsection 1802a shall be performed during the following seasonal periods:

From:	March 15	To:	April 30
From:	September 1	To:	October 15

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Section 1707 and then complete the requirements of Soil Stabilization 1800 the next construction season.

The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

1806 The Purchaser shall apply the seed mixtures specified under Special Provisions to the corresponding seeding projects as shown on Sheet No. 7.

1806a Additional soil stabilization work consisting of seeding, fertilizing and mulching may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Section 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.

1808 Fertilizer shall be a standard commercial grade of fertilizer conforming to all State and Federal regulations and to the standards of the Association of Official Agricultural Chemists. Fertilizer furnished shall provide the minimum percentage of available nutrients as specified below:

Available nitrogen	16%
Available phosphoric acid	20%
Potassium	16%

The Authorized Officer will take what samples he deems necessary for determining compliance with the above requirements.

Fertilizer shall be furnished in new sealed and properly labeled containers with name, weight, and guaranteed analysis of contents clearly marked. Material failing to meet these requirements, or that which has become wet or otherwise damaged in transit or storage, will be subject to rejection by the Authorized Office.

1809 Mulch materials conforming to the requirements of Subsections 1809b, 1809d or 1809e shall be furnished by the Purchaser in the amounts specified under Subsection 1812.

1809b Natural wood cellulose or grass fiber shall have the property of dispersing readily in water and shall have no toxic effect when combined with seed or other materials. The homogeneous slurry or mixture shall be capable of application with power spray equipment. A green-colored dye which is non-injurious to plant growth shall be used. Processed wood cellulose or grass fiber shall be packaged in new, labeled containers in an air dry condition. Processed wood cellulose or grass fiber furnished by the Purchaser shall be one of the following brand names or approved equal :

Silva Fiber	-	Weyerhaeuser Timber Co.
Conweb Fiber	-	Wood Conversion Co.
Spra-Mulch	-	Spra-Mulch Industries, Inc.
Grass-Mulch	-	Grass Mulch, Inc.

If the Purchaser proposes using a wood or grass fiber other than those listed above, he shall furnish a sample and descriptive literature to the Authorized Officer for approval prior to application. Processed wood cellulose or grass fiber furnished by the Purchaser which has become wet or otherwise damaged in transit or storage will not be accepted.

1809d Straw mulch shall be from oats, wheat, rye, or other approved grain crops which are free from noxious weeds, mold, or other objectionable materials. Straw mulch shall be in an air-dry condition and suitable for placing with power spray equipment.

1809e Grass straw mulch shall be from perennial grass or, if specified, an annual rye grass, from which the seed has been removed. The straw shall be free from noxious weed seed, mold, or other objectionable materials.

1810 Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it be maintained in a dry state and has the approval of the Authorized Officer.

1811 Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string, or hemp rope. Wire binding and plastic twine will not be permitted.

1812 The Purchaser shall furnish and apply to approximately **4.3** acres designated for treatment as shown on the plans and as specified under Subsection 1806, a mixture of water, fertilizer and mulch material, or a mixture of grass seed and fertilizer material at the following rate of application:

a. Single Stage (Hydraulic):

Water	3,000	gals./acre
Grass Seed	60	lbs./acre
Fertilizer	200	lbs./acre
Mulch	3,000	lbs./acre

b. Dry Application:

Grass Seed	60	lbs./acre
Fertilizer	200	lbs./acre
Mulch/Straw	3,000	lbs./acre

The above proportion and application rate are subject to adjustment by the Authorized Officer during the application operation.

1815 The Purchaser may reduce the application rate on partially covered slopes and no application on areas already well stocked with grass or on rock surfaces.

1816 The seed, fertilizer and mulch materials shall be placed by the hydraulic or dry method in accordance with the requirements set forth in Subsection 1816a and 1816b.

1816a Hydraulic Method - The seed, fertilizer and mulch materials shall be mixed with water to form a slurry and then applied under pressure by hydroseeder. When processed wood cellulose or grass fiber mulch material is to be incorporated as an integral part of the slurry mix, it shall be added after the seed and fertilizer have been thoroughly mixed.

1816b Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.

1817 Hydraulic equipment used for the application of slurry shall meet the following requirements: The equipment shall have a built-in agitation system. The slurry distribution lines shall be large enough to prevent stoppage. Discharge line shall be equipped with a set of hydraulic spray nozzles which will provide even distribution of the slurry on the various slopes to be treated. The slurry tank shall have a minimum operation capacity of 1,300 gallons and shall be mounted on a traveling unit which will place the slurry tank and spray nozzles within sufficient proximity to the areas to be treated so as to provide uniform distribution without waste. Lug- or track-type units are not authorized. The hydroseeder must be capable of spraying the slurry a minimum distance of 100 feet. The nozzle, mounted on a stand, must be capable of traversing 360 degrees on a horizontal plane and a minimum of 70 degrees on a vertical plane.

1817a Hydromulch slurry mixing shall be with water and seed first, followed by fertilizer, and finally fiber. The time between mixing and application shall not exceed 1 hour.

1819 The maximum distance to be seeded, fertilized and mulched from the road centerline shall be 100 feet for the cut slopes and 150 feet for the fill slopes.

1820 The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.

1822 Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.

1823 No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.

1826 Twine, rope, sacks, and other debris resulting from the soil-stabilization operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

ROADSIDE BRUSHING – 2100

2101 This work shall consist of cutting and the removal of vegetation from the road prism - variable distance and inside curves in accordance with these specifications. This work shall conform to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet, at designated locations as shown in the plans.

2102 Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chainsaws.

2103 Vegetation cut manually or mechanically less than 6 inches in diameter at D.B.H. shall be cut to a maximum height of 6 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill sloped and all limbs will be severed from the trunk.

2103a Vegetation shall be cut and removed from the road bed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. All limbs will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.

2104 Trees in excess of 6 inches in diameter at D.B.H. shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 12 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to

within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 6 inches in diameter for sight distance or safety may be directed by the Authorized Officer.

2105 Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 12 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.

2106 Vegetative growth capable of growing 1 foot in height or higher shall be cut within the road prism/variable distance or as directed by the Authorized Officer.

2108 Self propelled equipment shall not be permitted on cut and fill slopes or in ditches.

2109 Debris resulting from roadside brushing shall be scattered downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

2113 Roadside brushing shall be accomplished as specified on the roads listed on Sheet No. 6.

2116 Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.

2117 Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 6.1.0.14

Summary of All Roads and Projects Updated: 6/14/2017

T.S. Contract Name: Nest Egg CT Tract No: Sale Date:
Prepared by: Van Camp Ph: Print Date: 10/8/2019 5:42:44 PM
Construction: 55.60 sta
Improve: 12.55 sta Renov: 246.40 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 0.0 acres $0.00

300 Excavation: 3,830 cy $39,206.99
Haul < 500 ft: 0 sta-yds
Haul > 500 ft: 0 yd-mi

400 Drainage: $17,527.81
Culvert: 0 lf DownSpout: 40 lf
PolyPipe: 275 lf

500 Renovation: $38,420.39
Blading 9.58 mi

700-1200 Surfacing: $236,271.63
Commercial Quarry Name: Hale Valley 1.5-0" 844 LCY
Commercial Quarry Name: Hale Valley 3-0" 2,539 LCY
Commercial Quarry Name: Hale Valley 6-0" 3,365 LCY

1300 Geotextiles: $0.00

1400 Slope Protection: $7,750.10
Gradation Class 4: 105 cy

1800 Soil Stabilization: 4.3 acres $3,712.41
Includes Small Quantity Factor of 1.34

1900 Cattleguards: $0.00

2100 RoadSide Brushing: $6,749.52
Mechanical Brushing: 12.0 acres

2300 Engineering: 0.00 sta. $0.00

2400 Minor Concrete: $0.00

2500 Gabions: $0.00

8000 Miscellaneous: $0.00

Mobilization: Const. $6,683.00 Surf. $0.00..... $6,683.00

Quarry Development: $0.00

Total = $356,321.84

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.0 I Road Name:
Road Improvement: 0.11 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$1,073.45
Blading 0.11 mi	
700-1200 Surfacing:	$17,954.20
Quarry Name: Hale Valley 3-0" 126 LCY	
Quarry Name: Hale Valley 6-0" 391 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.3 acres	$122.13
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $367.69 Surf. $0.00	$367.69
Quarry Development:	$0.00
Total:	$19,604.63

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.0 I Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.11 mi = $77.84
  Compaction: $330.78/mi x 0.11 mi = $36.39
  cat time fdor improvement
   Tractor: D7 with rippers 6 hr x $159.87/hr = $959.22

Subtotal: $1,073.45

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.11mi	12ft	13.3ft	4in						

  Rock Volume = 126 LCY
  Purchase Price / Royalty: $14.91/LCY x 126 LCY = $1,878.66
  Processing: $0.90/LCY x 126 LCY = $113.40
  Compaction: $1.10/LCY x 126 LCY = $138.60
  Basic Rock Haul cost: $0.59/LCY x 126 LCY = $74.34
  Rock Haul -15% grades: $0.89/LCY-mi x 126 LCY x 8.00 mi= $897.12
  Rock Haul St& Co Roads: $0.39/LCY-mi x 126 LCY x 25.00 mi= $1,228.50
  Basic Water Haul cost: $0.54/LCY x 126 LCY = $68.04
  Water Haul -15% grades: $0.13/LCY-mi x 126 LCY x 2.00 mi= $32.76
  Water Haul St&Co Roads: $0.07/LCY-mi x 126 LCY x 2.00 mi= $17.64

Commercial Quarry Name: Hale Valley 6-0"
 Comment: L.Z. STA. 13+00 & 15+05

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									100 LCY

  Rock Volume = 100 LCY
  Purchase Price / Royalty: $14.14/LCY x 100 LCY = $1,414.00
  Processing: $0.90/LCY x 100 LCY = $90.00
  Compaction: $1.10/LCY x 100 LCY = $110.00
  Basic Rock Haul cost: $0.59/LCY x 100 LCY = $59.00
  Rock Haul -15% grades: $0.89/LCY-mi x 100 LCY x 8.00 mi= $712.00
  Rock Haul St& Co Roads: $0.39/LCY-mi x 100 LCY x 25.00 mi= $975.00
  Basic Water Haul cost: $0.54/LCY x 100 LCY = $54.00
  Water Haul -15% grades: $0.13/LCY-mi x 100 LCY x 2.00 mi= $26.00
  Water Haul St&Co Roads: $0.07/LCY-mi x 100 LCY x 2.00 mi= $14.00

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.11mi	13.3ft	16ft	8in						

  Rock Volume = 291 LCY
  Purchase Price / Royalty: $14.14/LCY x 291 LCY = $4,114.74
  Processing: $0.90/LCY x 291 LCY = $261.90
  Compaction: $1.10/LCY x 291 LCY = $320.10
  Basic Rock Haul cost: $0.59/LCY x 291 LCY = $171.69
  Rock Haul -15% grades: $0.89/LCY-mi x 291 LCY x 8.00 mi= $2,071.92
  Rock Haul St& Co Roads: $0.39/LCY-mi x 291 LCY x 25.00 mi= $2,837.25
  Basic Water Haul cost: $0.54/LCY x 291 LCY = $157.14
  Water Haul -15% grades: $0.13/LCY-mi x 291 LCY x 2.00 mi= $75.66
  Water Haul St&Co Roads: $0.07/LCY-mi x 291 LCY x 2.00 mi= $40.74

Subtotal: $17,954.20

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Medium: $407.09/acre x 0.30 acres = $122.13

Subtotal: $122.13

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 5.50% of total Costs = $367.69
  Surfacing - 7.66% by rock volume = $0.00

Subtotal: $367.69

Quarry Development:
  Based on 7.66% of total rock volume

Subtotal: $0.00

Total: $19,604.63

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.0 R Road Name:
Road Renovation: 0.17 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$1,238.20
Blading 0.17 mi	
700-1200 Surfacing:	$15,674.45
Quarry Name: Hale Valley 3-0" 395 LCY	
Quarry Name: Hale Valley 6-0" 50 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.2 acres	$174.32
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.4 acres	$97.70
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $328.47 Surf. $0.00.....	$328.47
Quarry Development:	$0.00
Total:	$17,513.14

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.0 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Blading: $707.64/mi x 0.17 mi = $120.30
Compaction: $330.78/mi x 0.17 mi = $56.23
Subgrade Renovation
Excavator - Large (3 CY) 3 hr x $135.70/hr = $407.10
Dump Truck 10 cy 3 hr x $75.47/hr = $226.41
Motor Grader 14M 3 hr x $142.72/hr = $428.16

Subtotal: $1,238.20

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.17mi	12ft	14.7ft	8in						

Rock Volume = 395 LCY
Purchase Price / Royalty: $14.91/LCY x 395 LCY = $5,889.45
Processing: $0.90/LCY x 395 LCY = $355.50
Compaction: $1.10/LCY x 395 LCY = $434.50
Basic Rock Haul cost: $0.59/LCY x 395 LCY = $233.05
Rock Haul -15% grades: $0.89/LCY-mi x 395 LCY x 8.00 mi= $2,812.40
Rock Haul St& Co Roads: $0.39/LCY-mi x 395 LCY x 25.00 mi= $3,851.25
Basic Water Haul cost: $0.54/LCY x 395 LCY = $213.30
Water Haul -15% grades: $0.13/LCY-mi x 395 LCY x 2.00 mi= $102.70
Water Haul St&Co Roads: $0.07/LCY-mi x 395 LCY x 2.00 mi= $55.30

Commercial Quarry Name: Hale Valley 6-0"
Comment: 3+60 L.Z.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									50 LCY

Rock Volume = 50 LCY
Purchase Price / Royalty: $14.14/LCY x 50 LCY = $707.00
Processing: $0.90/LCY x 50 LCY = $45.00
Compaction: $1.10/LCY x 50 LCY = $55.00
Basic Rock Haul cost: $0.59/LCY x 50 LCY = $29.50
Rock Haul -15% grades: $0.89/LCY-mi x 50 LCY x 8.00 mi= $356.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 50 LCY x 25.00 mi= $487.50
Basic Water Haul cost: $0.54/LCY x 50 LCY = $27.00
Water Haul -15% grades: $0.13/LCY-mi x 50 LCY x 2.00 mi= $13.00
Water Haul St&Co Roads: $0.07/LCY-mi x 50 LCY x 2.00 mi= $7.00

Subtotal: $15,674.45

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Dry Method with Mulch: $517.58/acre x 0.20 acres = $103.52
Includes Small Quantity Factor of 1.34
+ Fertilizer Cost: $34.00/acre x 0.20 acres = $6.80

Road Number: 19-9-35.0 R Continued

+ Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $174.32

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
Brushing width Left: 10ft. Right: 10ft.
RoadSide Brushing Light: $244.25/acre x 0.40 acres = $97.70

Subtotal: $97.70

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 4.91% of total Costs = $328.47
Surfacing - 6.59% by rock volume = $0.00

Subtotal: $328.47

Quarry Development:
Based on 6.59% of total rock volume

Subtotal: $0.00

Total: $17,513.14

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.1 R Road Name:
Road Renovation: 0.14 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$1,744.08
Blading 0.14 mi	
700-1200 Surfacing:	$24,196.81
Quarry Name: Hale Valley 3-0" 159 LCY	
Quarry Name: Hale Valley 6-0" 538 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.2 acres	$174.32
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.4 acres	$260.54
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $504.15 Surf. $0.00	$504.15
Quarry Development:	$0.00
Total:	$26,879.89

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.1 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Blading: $707.64/mi x 0.14 mi = $99.07
Compaction: $330.78/mi x 0.14 mi = $46.31
Heavy Renovation
Tractor: D7 with rippers 10 hr x $159.87/hr = $1,598.70

Subtotal: $1,744.08

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.14mi	12ft	13.3ft	4in						

Rock Volume = 159 LCY
Purchase Price / Royalty: $14.91/LCY x 159 LCY = $2,370.69
Processing: $0.90/LCY x 159 LCY = $143.10
Compaction: $1.10/LCY x 159 LCY = $174.90
Basic Rock Haul cost: $0.59/LCY x 159 LCY = $93.81
Rock Haul -15% grades: $0.89/LCY-mi x 159 LCY x 8.00 mi= $1,132.08
Rock Haul St& Co Roads: $0.39/LCY-mi x 159 LCY x 25.00 mi= $1,550.25
Basic Water Haul cost: $0.54/LCY x 159 LCY = $85.86
Water Haul -15% grades: $0.13/LCY-mi x 159 LCY x 2.00 mi= $41.34
Water Haul St&Co Roads: $0.07/LCY-mi x 159 LCY x 2.00 mi= $22.26

Commercial Quarry Name: Hale Valley 6-0"
Comment: L.Z.x3, TTA

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									170 LCY

Rock Volume = 170 LCY
Purchase Price / Royalty: $14.14/LCY x 170 LCY = $2,403.80
Processing: $0.90/LCY x 170 LCY = $153.00
Compaction: $1.10/LCY x 170 LCY = $187.00
Basic Rock Haul cost: $0.59/LCY x 170 LCY = $100.30
Rock Haul -15% grades: $0.89/LCY-mi x 170 LCY x 8.00 mi= $1,210.40
Rock Haul St& Co Roads: $0.39/LCY-mi x 170 LCY x 25.00 mi= $1,657.50
Basic Water Haul cost: $0.54/LCY x 170 LCY = $91.80
Water Haul -15% grades: $0.13/LCY-mi x 170 LCY x 2.00 mi= $44.20
Water Haul St&Co Roads: $0.07/LCY-mi x 170 LCY x 2.00 mi= $23.80

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.14mi	13.3ft	16ft	8in						

Rock Volume = 368 LCY
Purchase Price / Royalty: $14.14/LCY x 368 LCY = $5,203.52
Processing: $0.90/LCY x 368 LCY = $331.20
Compaction: $1.10/LCY x 368 LCY = $404.80
Basic Rock Haul cost: $0.59/LCY x 368 LCY = $217.12
Rock Haul -15% grades: $0.89/LCY-mi x 368 LCY x 8.00 mi= $2,620.16
Rock Haul St& Co Roads: $0.39/LCY-mi x 368 LCY x 25.00 mi= $3,588.00
Basic Water Haul cost: $0.54/LCY x 368 LCY = $198.72
Water Haul -15% grades: $0.13/LCY-mi x 368 LCY x 2.00 mi= $95.68
Water Haul St&Co Roads: $0.07/LCY-mi x 368 LCY x 2.00 mi= $51.52

Subtotal: $24,196.81

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.20 acres = $103.52
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.20 acres = $6.80
        + Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $174.32

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Heavy: $651.34/acre x 0.40 acres = $260.54

Subtotal: $260.54

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 7.54% of total Costs = $504.15
  Surfacing - 10.33% by rock volume = $0.00

Subtotal: $504.15

Quarry Development:
  Based on 10.33% of total rock volume

Subtotal: $0.00

Total: $26,879.89

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.2 R Road Name:
Road Renovation: 0.27 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$1,267.50
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 30 lf	
500 Renovation:	$4,693.49
Blading 0.27 mi	
700-1200 Surfacing:	$28,177.38
Quarry Name: Hale Valley 3-0" 798 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$739.97
Gradation Class 4: 10 cy	
1800 Soil Stabilization: 0.3 acres	$261.47
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.7 acres	$284.96
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $677.11 Surf. $0.00	$677.11
Quarry Development:	$0.00
Total:	$36,101.89

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.2 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Poly Pipe STA 4+00 18 inch 30 lf x $42.25/lf = $1,267.50

Subtotal: $1,267.50

Section 500 Renovation:

Blading: $707.64/mi x 0.27 mi = $191.06

Compaction: $330.78/mi x 0.27 mi = $89.31

HEAVY RENO

Tractor: D7 with rippers 21 hr x $159.87/hr = $3,357.27

Excavator - Large (3 CY) 5 hr x $135.70/hr = $678.50

Dump Truck 10 cy 5 hr x $75.47/hr = $377.35

Subtotal: $4,693.49

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.27mi	12ft	15.3ft	10in						

Rock Volume = 798 LCY

Purchase Price / Royalty: $14.91/LCY x 798 LCY = $11,898.18

Processing: $0.90/LCY x 798 LCY = $718.20

Compaction: $1.10/LCY x 798 LCY = $877.80

Basic Rock Haul cost: $0.59/LCY x 798 LCY = $470.82

Rock Haul -15% grades: $0.89/LCY-mi x 798 LCY x 8.00 mi= $5,681.76

Rock Haul St& Co Roads: $0.39/LCY-mi x 798 LCY x 25.00 mi= $7,780.50

Basic Water Haul cost: $0.54/LCY x 798 LCY = $430.92

Water Haul -15% grades: $0.13/LCY-mi x 798 LCY x 2.00 mi= $207.48

Water Haul St&Co Roads: $0.07/LCY-mi x 798 LCY x 2.00 mi= $111.72

Subtotal: $28,177.38

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Comment: STA 4+00 Culvert energy dissipating rock blanket

Rock Source: Hale Valley IV RR

Purchase Price / Royalty: $49.00/cy x 10cy = $490.00

Furnish Class 4 type rock

Basic Rock Haul cost: $1.06/cy x 10cy = $10.60

Rock Haul -15% grades: $1.06/cy-mi x 10cy x 8.00 mi= $84.80

Rock Haul St& Co Roads: $0.47/cy-mi x 10cy x 25.00 mi= $117.50

Placement of Buttress height < 20 ft: 10cy x ($3.53/cy x 1.05) = $37.07

Subtotal: $739.97

Section 1800 Soil Stabilization:

Dry Method with Mulch: $517.58/acre x 0.30 acres = $155.27

Includes Small Quantity Factor of 1.34

+ Fertilizer Cost: $34.00/acre x 0.30 acres = $10.20

+ Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $261.47

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Medium: $407.09/acre x 0.70 acres = $284.96

Subtotal: $284.96

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 10.13% of total Costs = $677.11
  Surfacing - 11.83% by rock volume = $0.00

Subtotal: $677.11

Quarry Development:
  Based on 11.83% of total rock volume

Subtotal: $0.00

Total: $36,101.89

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.3 R Road Name:
Road Renovation: 0.25 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$4,598.77
Blading 0.25 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$261.47
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.6 acres	$390.80
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $100.37 Surf. $0.00.....	$100.37
Quarry Development:	$0.00
Total:	$5,351.41

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.3 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.25 mi = $176.91
  Compaction: $330.78/mi x 0.25 mi = $82.70
  Subgrade preperation
   Tractor: D7 with rippers 20 hr x $159.87/hr = $3,197.40
   Motor Grader 14M 8 hr x $142.72/hr = $1,141.76

Subtotal: $4,598.77

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.30 acres = $155.27
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.30 acres = $10.20
        + Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $261.47

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Heavy: $651.34/acre x 0.60 acres = $390.80

Subtotal: $390.80

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.50% of total Costs = $100.37
  Surfacing - 0.00% by rock volume = $0.00

Subtotal:	$100.37

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$5,351.41

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.4 I Road Name:
Road Improvement: 0.10 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$2,416.14
Blading 0.10 mi	
700-1200 Surfacing:	$14,314.41
Quarry Name: Hale Valley 3-0" 109 LCY	
Quarry Name: Hale Valley 6-0" 303 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.2 acres	$81.42
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $323.01 Surf. $0.00	$323.01
Quarry Development:	$0.00
Total:	$17,222.14

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.4 I Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.10 mi = $70.76
  Compaction: $330.78/mi x 0.10 mi = $33.08
  Subgrade Preperation
   Tractor: D7 with rippers 10 hr x $159.87/hr = $1,598.70
   Motor Grader 14M 5 hr x $142.72/hr = $713.60

Subtotal: $2,416.14

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.10mi	12ft	13.3ft	4in						

  Rock Volume = 109 LCY
  Purchase Price / Royalty: $14.91/LCY x 109 LCY = $1,625.19
  Processing: $0.90/LCY x 109 LCY = $98.10
  Compaction: $1.10/LCY x 109 LCY = $119.90
  Basic Rock Haul cost: $0.59/LCY x 109 LCY = $64.31
  Rock Haul -15% grades: $0.89/LCY-mi x 109 LCY x 8.00 mi= $776.08
  Rock Haul St& Co Roads: $0.39/LCY-mi x 109 LCY x 25.00 mi= $1,062.75
  Basic Water Haul cost: $0.54/LCY x 109 LCY = $58.86
  Water Haul -15% grades: $0.13/LCY-mi x 109 LCY x 2.00 mi= $28.34
  Water Haul St&Co Roads: $0.07/LCY-mi x 109 LCY x 2.00 mi= $15.26

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.10mi	13.3ft	16ft	8in						

  Rock Volume = 253 LCY
  Purchase Price / Royalty: $14.14/LCY x 253 LCY = $3,577.42
  Processing: $0.90/LCY x 253 LCY = $227.70
  Compaction: $1.10/LCY x 253 LCY = $278.30
  Basic Rock Haul cost: $0.59/LCY x 253 LCY = $149.27
  Rock Haul -15% grades: $0.89/LCY-mi x 253 LCY x 8.00 mi= $1,801.36
  Rock Haul St& Co Roads: $0.39/LCY-mi x 253 LCY x 25.00 mi= $2,466.75
  Basic Water Haul cost: $0.54/LCY x 253 LCY = $136.62
  Water Haul -15% grades: $0.13/LCY-mi x 253 LCY x 2.00 mi= $65.78
  Water Haul St&Co Roads: $0.07/LCY-mi x 253 LCY x 2.00 mi= $35.42

Commercial Quarry Name: Hale Valley 6-0"
 Comment: END L.Z.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									50 LCY

  Rock Volume = 50 LCY
  Purchase Price / Royalty: $14.14/LCY x 50 LCY = $707.00
  Processing: $0.90/LCY x 50 LCY = $45.00
  Compaction: $1.10/LCY x 50 LCY = $55.00
  Basic Rock Haul cost: $0.59/LCY x 50 LCY = $29.50
  Rock Haul -15% grades: $0.89/LCY-mi x 50 LCY x 8.00 mi= $356.00
  Rock Haul St& Co Roads: $0.39/LCY-mi x 50 LCY x 25.00 mi= $487.50
  Basic Water Haul cost: $0.54/LCY x 50 LCY = $27.00
  Water Haul -15% grades: $0.13/LCY-mi x 50 LCY x 2.00 mi= $13.00

Road Number: 19-9-35.4 I Continued

  Water Haul St&Co Roads: $0.07/LCY-mi x 50 LCY x 2.00 mi= $7.00

Subtotal: $14,314.41

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Medium: $407.09/acre x 0.20 acres = $81.42

Subtotal: $81.42

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 4.83% of total Costs = $323.01
  Surfacing - 6.11% by rock volume = $0.00

Subtotal: $323.01

Quarry Development:
  Based on 6.11% of total rock volume

Subtotal: $0.00

Total: $17,222.14

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.5 R Road Name:
Road Renovation: 0.25 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$4,416.23
Blading 0.25 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$261.47
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.6 acres	$390.80
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $96.88 Surf. $0.00	$96.88
Quarry Development:	$0.00
Total:	$5,165.38

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.5 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.25 mi = $176.91
  Compaction: $330.78/mi x 0.25 mi = $82.70
  Subgrade Preperation
   Tractor: D7 with rippers 26 hr x $159.87/hr = $4,156.62

Subtotal: $4,416.23

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.30 acres = $155.27
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.30 acres = $10.20
        + Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $261.47

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Heavy: $651.34/acre x 0.60 acres = $390.80

Subtotal: $390.80

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.45% of total Costs = $96.88
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $96.88

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$5,165.38

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.6 R Road Name:
Road Renovation: 0.21 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$3,415.47
Blading 0.21 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$261.47
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.5 acres	$325.67
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $76.51 Surf. $0.00.....	$76.51
Quarry Development:	$0.00
Total:	$4,079.12

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.6 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.21 mi = $148.60
  Compaction: $330.78/mi x 0.21 mi = $69.46
  Subgrade preperation
   Tractor: D7 with rippers 20 hr x $159.87/hr = $3,197.40

Subtotal: $3,415.47

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.30 acres = $155.27
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.30 acres = $10.20
        + Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $261.47

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Heavy: $651.34/acre x 0.50 acres = $325.67

Subtotal: $325.67

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.14% of total Costs = $76.51
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $76.51

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$4,079.12

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.7 C Road Name:
Road Construction: 0.16 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation: 2,230 cy	$12,179.39
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.2 acres	$174.32
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $236.13 Surf. $0.00	$236.13
Quarry Development:	$0.00
Total:	$12,589.83

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.7 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
  Excavation - Common: $2.03/cy x 1,800 cy = $3,654.00
  Excavation - Rippable: $4.08/cy x 430 cy = $1,754.40
  Subgrade Compaction: 4 Sta/hr $27.57/sta. x 8.3 sta = $227.45
  End Hauling > 500 ft - Fixed Cost (CY): $2.89/cy x 2,230 cy = $6,444.70
  Blading without ditch: $11.98/station x 8.25 stations = $98.84

Subtotal: $12,179.39

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.20 acres = $103.52
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.20 acres = $6.80
        + Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $174.32

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 3.53% of total Costs = $236.13
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $236.13

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $12,589.83

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.7 R Road Name:
Road Renovation: 0.07 mi 12 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$3,490.97
Blading 3.75 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.2 acres	$130.27
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $70.88 Surf. $0.00	$70.88
Quarry Development:	$0.00
Total:	$3,779.28

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.7 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
  Subgrade Compaction: 4 Sta/hr $27.57/sta. x 0.0 sta = $0.00

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading w/o Ditches: $434.19/mi x 3.75 mi = $1,628.21
  Compaction: $330.78/mi x 3.75 mi = $1,240.43
  Subgrade Reno
   Tractor: D7 with rippers 3 hr x $159.87/hr = $479.61
   Motor Grader 14M 1 hr x $142.72/hr = $142.72

Subtotal: $3,490.97

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Heavy: $651.34/acre x 0.20 acres = $130.27

Subtotal: $130.27

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.06% of total Costs = $70.88

Surfacing - 0.00% by rock volume = $0.00

Subtotal: $70.88

Quarry Development:
Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $3,779.28

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 19-9-35.8 C Road Name:
Road Construction: 0.15 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation: 1,600 cy	$8,223.92
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.2 acres	$174.32
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $160.52 Surf. $0.00	$160.52
Quarry Development:	$0.00
Total:	$8,558.76

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 19-9-35.8 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
  Excavation - Common: $2.03/cy x 1,600 cy = $3,248.00
  Embankment Placement & Compaction 306.f - Common: $0.25/cy x 150 cy = $37.50
  Subgrade Compaction: 4 Sta/hr $27.57/sta. x 8.0 sta = $219.18
  End Hauling > 500 ft - Fixed Cost (CY): $2.89/cy x 1,600 cy = $4,624.00
  Blading without ditch: $11.98/station x 7.95 stations = $95.24

Subtotal: $8,223.92

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.20 acres = $103.52
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.20 acres = $6.80
        + Mulch Cost: $320.00/acre x 0.20 acres = $64.00

Subtotal: $174.32

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 2.40% of total Costs = $160.52
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $160.52

Road Number: 19-9-35.8 C Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal: $0.00

Total: $8,558.76

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.0 R Road Name: Beaver Creek
Road Renovation: 0.79 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$15,904.91
Culvert: 0 lf	
DownSpout: 20 lf	
PolyPipe: 245 lf	
500 Renovation:	$1,079.17
Blading 0.76 mi	
700-1200 Surfacing:	$37,976.54
Quarry Name: Hale Valley 1.5-0" 834 LCY	
Quarry Name: Hale Valley 6-0" 230 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$2,200.37
Gradation Class 4: 30 cy	
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.8 acres	$1,172.41
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,114.99 Surf. $0.00	$1,114.99
Quarry Development:	$0.00
Total:	$59,448.38

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.0 R Road Name: Beaver Creek

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Full Round - Poly	MP 1.98	18 inch 20 lf x $17.77/lf = $355.40
Poly Pipe	MP 1.76	18 inch 100 lf x $42.25/lf = $4,225.00
Poly Pipe	MP 1.86	24 inch 60 lf x $60.54/lf = $3,632.40
Poly Pipe	MP 1.93	18 inch 40 lf x $42.25/lf = $1,690.00
Poly Pipe	MP 1.98	18 inch 45 lf x $42.25/lf = $1,901.25

MP 1.76 Culvert
- Excavator - Large (3 CY) 4 hr x $135.70/hr = $542.80
- Water Truck 3000 Gal 2 hr x $79.82/hr = $159.64
- Tamper - handheld 3 hr x $45.97/hr = $137.91
- Vibratory roller, Steel Drum 2 hr x $110.26/hr = $220.52

MP 1.86 Culvert
- Excavator - Large (3 CY) 4 hr x $135.70/hr = $542.80
- Water Truck 3000 Gal 2 hr x $79.82/hr = $159.64
- Tamper - handheld 3 hr x $45.97/hr = $137.91
- Vibratory roller, Steel Drum 2 hr x $110.26/hr = $220.52

MP 1.98 Culvert
- Tractor: D7 with rippers 4 hr x $159.87/hr = $639.48
- Vibratory roller, Steel Drum 2 hr x $110.26/hr = $220.52
- Tamper - handheld 2 hr x $45.97/hr = $91.94
- Water Truck 3000 Gal 2 hr x $79.82/hr = $159.64

MP 1.93 Culvert
- Tractor: D7 with rippers 3 hr x $159.87/hr = $479.61
- Tamper - handheld 2 hr x $45.97/hr = $91.94
- Dump Truck 10 cy 1 hr x $75.47/hr = $75.47
- Vibratory roller, Steel Drum 2 hr x $110.26/hr = $220.52

Subtotal: $15,904.91

Section 500 Renovation:
- Blading: $707.64/mi x 0.76 mi = $537.81
- Compaction: $330.78/mi x 0.76 mi = $251.39
- Clean Culverts: $381.54/mi x 0.76 mi = $289.97

Subtotal: $1,079.17

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 1.5-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.76mi	12ft	13.3ft	4in						

- Rock Volume = 834 LCY
- Purchase Price / Royalty: $15.61/LCY x 834 LCY = $13,018.74
- Processing: $0.90/LCY x 834 LCY = $750.60
- Compaction: $1.10/LCY x 834 LCY = $917.40
- Basic Rock Haul cost: $0.59/LCY x 834 LCY = $492.06
- Rock Haul -15% grades: $0.89/LCY-mi x 834 LCY x 8.00 mi= $5,938.08
- Rock Haul St& Co Roads: $0.39/LCY-mi x 834 LCY x 25.00 mi= $8,131.50
- Basic Water Haul cost: $0.54/LCY x 834 LCY = $450.36
- Water Haul -15% grades: $0.13/LCY-mi x 834 LCY x 2.00 mi= $216.84
- Water Haul St&Co Roads: $0.07/LCY-mi x 834 LCY x 2.00 mi= $116.76

Commercial Quarry Name: Hale Valley 6-0"
Comment: TRUCK TURNOUT MP 1.95

Road Number: 20-9-1.0 R Beaver Creek Continued

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									50 LCY

Rock Volume = 50 LCY
Purchase Price / Royalty: $14.14/LCY x 50 LCY = $707.00
Processing: $0.90/LCY x 50 LCY = $45.00
Compaction: $1.10/LCY x 50 LCY = $55.00
Basic Rock Haul cost: $0.59/LCY x 50 LCY = $29.50
Rock Haul -15% grades: $0.89/LCY-mi x 50 LCY x 8.00 mi= $356.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 50 LCY x 25.00 mi= $487.50
Basic Water Haul cost: $0.54/LCY x 50 LCY = $27.00
Water Haul -15% grades: $0.13/LCY-mi x 50 LCY x 2.00 mi= $13.00
Water Haul St&Co Roads: $0.07/LCY-mi x 50 LCY x 2.00 mi= $7.00

Commercial Quarry Name: Hale Valley 6-0"
Comment: MP 2.13 L.Z.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									100 LCY

Rock Volume = 100 LCY
Purchase Price / Royalty: $14.14/LCY x 100 LCY = $1,414.00
Processing: $0.90/LCY x 100 LCY = $90.00
Compaction: $1.10/LCY x 100 LCY = $110.00
Basic Rock Haul cost: $0.59/LCY x 100 LCY = $59.00
Rock Haul -15% grades: $0.89/LCY-mi x 100 LCY x 8.00 mi= $712.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 100 LCY x 25.00 mi= $975.00
Basic Water Haul cost: $0.54/LCY x 100 LCY = $54.00
Water Haul -15% grades: $0.13/LCY-mi x 100 LCY x 2.00 mi= $26.00
Water Haul St&Co Roads: $0.07/LCY-mi x 100 LCY x 2.00 mi= $14.00

Commercial Quarry Name: Hale Valley 6-0"
Comment: MP 1.76 CPP Replacement

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									30 LCY

Rock Volume = 30 LCY
Purchase Price / Royalty: $14.14/LCY x 30 LCY = $424.20
Processing: $0.90/LCY x 30 LCY = $27.00
Compaction: $1.10/LCY x 30 LCY = $33.00
Basic Rock Haul cost: $0.59/LCY x 30 LCY = $17.70
Rock Haul -15% grades: $0.89/LCY-mi x 30 LCY x 8.00 mi= $213.60
Rock Haul St& Co Roads: $0.39/LCY-mi x 30 LCY x 25.00 mi= $292.50
Basic Water Haul cost: $0.54/LCY x 30 LCY = $16.20
Water Haul -15% grades: $0.13/LCY-mi x 30 LCY x 2.00 mi= $7.80
Water Haul St&Co Roads: $0.07/LCY-mi x 30 LCY x 2.00 mi= $4.20

Commercial Quarry Name: Hale Valley 6-0"
Comment: MP 1.86 CPP Replacement

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									30 LCY

Rock Volume = 30 LCY
Purchase Price / Royalty: $14.14/LCY x 30 LCY = $424.20
Processing: $0.90/LCY x 30 LCY = $27.00
Compaction: $1.10/LCY x 30 LCY = $33.00
Basic Rock Haul cost: $0.59/LCY x 30 LCY = $17.70
Rock Haul -15% grades: $0.89/LCY-mi x 30 LCY x 8.00 mi= $213.60
Rock Haul St& Co Roads: $0.39/LCY-mi x 30 LCY x 25.00 mi= $292.50
Basic Water Haul cost: $0.54/LCY x 30 LCY = $16.20
Water Haul -15% grades: $0.13/LCY-mi x 30 LCY x 2.00 mi= $7.80
Water Haul St&Co Roads: $0.07/LCY-mi x 30 LCY x 2.00 mi= $4.20

Commercial Quarry Name: Hale Valley 6-0"
Comment: MP 1.93 CPP Replacement

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									10 LCY

Rock Volume = 10 LCY
Purchase Price / Royalty: $14.14/LCY x 10 LCY = $141.40

Processing: $0.90/LCY x 10 LCY = $9.00

Compaction: $1.10/LCY x 10 LCY = $11.00
Basic Rock Haul cost: $0.59/LCY x 10 LCY = $5.90
Rock Haul -15% grades: $0.89/LCY-mi x 10 LCY x 8.00 mi= $71.20
Rock Haul St& Co Roads: $0.39/LCY-mi x 10 LCY x 25.00 mi= $97.50
Basic Water Haul cost: $0.54/LCY x 10 LCY = $5.40
Water Haul -15% grades: $0.13/LCY-mi x 10 LCY x 2.00 mi= $2.60
Water Haul St&Co Roads: $0.07/LCY-mi x 10 LCY x 2.00 mi= $1.40

Commercial Quarry Name: Hale Valley 6-0"
Comment: MP 1.98 CPP Replacement

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									10 LCY

Rock Volume = 10 LCY
Purchase Price / Royalty: $14.14/LCY x 10 LCY = $141.40
Processing: $0.90/LCY x 10 LCY = $9.00
Compaction: $1.10/LCY x 10 LCY = $11.00
Basic Rock Haul cost: $0.59/LCY x 10 LCY = $5.90
Rock Haul -15% grades: $0.89/LCY-mi x 10 LCY x 8.00 mi= $71.20
Rock Haul St& Co Roads: $0.39/LCY-mi x 10 LCY x 25.00 mi= $97.50
Basic Water Haul cost: $0.54/LCY x 10 LCY = $5.40
Water Haul -15% grades: $0.13/LCY-mi x 10 LCY x 2.00 mi= $2.60
Water Haul St&Co Roads: $0.07/LCY-mi x 10 LCY x 2.00 mi= $1.40

Subtotal: $37,976.54

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:
Comment: Culvert Energy Dissapating Rock
Rock Source: Hale Valley IV RR
Purchase Price / Royalty: $49.00/cy x 30cy = $1,470.00
Furnish Class 4 type rock
Basic Rock Haul cost: $1.06/cy x 30cy = $31.80
Rock Haul -15% grades: $1.06/cy-mi x 30cy x 8.00 mi= $254.40
Rock Haul St& Co Roads: $0.47/cy-mi x 30cy x 25.00 mi= $352.50
Placement on Fill slopes: 30cy x ($2.91/cy x 1.05) = $91.67

Subtotal: $2,200.37

Section 1800 Soil Stabilization:
Comment: Culvert Replacment Fill Prism Mulching

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Heavy: $651.34/acre x 1.80 acres = $1,172.41

Subtotal: $1,172.41

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Road Number: 20-9-1.0 R Beaver Creek Continued

Mobilization:
  Construction - 16.68% of total Costs = $1,114.99
  Surfacing - 15.77% by rock volume = $0.00

Subtotal: $1,114.99

Quarry Development:
  Based on 15.77% of total rock volume

Subtotal: $0.00

Total: $59,448.38

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.0 R Pave Road Name: Beaver Creek
Road Renovation: 1.71 mi 20 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$355.40
Culvert: 0 lf	
DownSpout: 20 lf	
PolyPipe: 0 lf	
500 Renovation:	$1,712.52
700-1200 Surfacing:	$10,722.10
Quarry Name: Hale Valley 1.5-0" 10 LCY	
Quarry Name: Hale Valley 6-0" 300 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$4,809.77
Gradation Class 4: 65 cy	
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):4.1 acres	$2,670.49
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $387.45 Surf. $0.00	$387.45
Quarry Development:	$0.00
Total:	$20,657.74

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.0 R Pave Road Name: Beaver Creek

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Full Round - Poly MP 1.56 18 inch 20 lf x $17.77/lf = $355.40

Subtotal: $355.40

Section 500 Renovation:

Clean Culverts: $381.54/mi x 1.71 mi = $652.43

Ditchline Cleaning

Motor Grader 14M 4 hr x $142.72/hr = $570.88

Backhoe 3 hr x $87.60/hr = $262.80

Dump Truck 10 cy 3 hr x $75.47/hr = $226.41

Subtotal: $1,712.52

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 1.5-0"

Comment: Pothole Fill Material

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									10 LCY

Rock Volume = 10 LCY

Purchase Price / Royalty: $15.61/LCY x 10 LCY = $156.10

Processing: $0.90/LCY x 10 LCY = $9.00

Compaction: $1.10/LCY x 10 LCY = $11.00

Basic Rock Haul cost: $0.59/LCY x 10 LCY = $5.90

Rock Haul -15% grades: $0.89/LCY-mi x 10 LCY x 8.00 mi= $71.20

Rock Haul St& Co Roads: $0.39/LCY-mi x 10 LCY x 25.00 mi= $97.50

Basic Water Haul cost: $0.54/LCY x 10 LCY = $5.40

Water Haul -15% grades: $0.13/LCY-mi x 10 LCY x 2.00 mi= $2.60

Water Haul St&Co Roads: $0.07/LCY-mi x 10 LCY x 2.00 mi= $1.40

Commercial Quarry Name: Hale Valley 6-0"

Comment: L.Z. MP .95,1.14,1.34,1.63

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									200 LCY

Rock Volume = 200 LCY

Purchase Price / Royalty: $14.14/LCY x 200 LCY = $2,828.00

Processing: $0.90/LCY x 200 LCY = $180.00

Compaction: $1.10/LCY x 200 LCY = $220.00

Basic Rock Haul cost: $0.59/LCY x 200 LCY = $118.00

Rock Haul -15% grades: $0.89/LCY-mi x 200 LCY x 8.00 mi= $1,424.00

Rock Haul St& Co Roads: $0.39/LCY-mi x 200 LCY x 25.00 mi= $1,950.00

Basic Water Haul cost: $0.54/LCY x 200 LCY = $108.00

Water Haul -15% grades: $0.13/LCY-mi x 200 LCY x 2.00 mi= $52.00

Water Haul St&Co Roads: $0.07/LCY-mi x 200 LCY x 2.00 mi= $28.00

Commercial Quarry Name: Hale Valley 6-0"

Comment: Turnouts MP 0.7, 1.70

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
			12in		2	10ft	50ft	52ft	

Rock Volume = 100 LCY

Purchase Price / Royalty: $14.14/LCY x 100 LCY = $1,414.00

Processing: $0.90/LCY x 100 LCY = $90.00

Compaction: $1.10/LCY x 100 LCY = $110.00

Basic Rock Haul cost: $0.59/LCY x 100 LCY = $59.00

Rock Haul -15% grades: $0.89/LCY-mi x 100 LCY x 8.00 mi= $712.00

Road Number: 20-9-1.0 R Pave Beaver Creek Continued

Rock Haul St& Co Roads: $0.39/LCY-mi x 100 LCY x 25.00 mi= $975.00
Basic Water Haul cost: $0.54/LCY x 100 LCY = $54.00
Water Haul -15% grades: $0.13/LCY-mi x 100 LCY x 2.00 mi= $26.00
Water Haul St&Co Roads: $0.07/LCY-mi x 100 LCY x 2.00 mi= $14.00

Subtotal: $10,722.10

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:
Comment: Multiple Culvert Energy Dissipating Rock
Rock Source: Hale Valley IV RR
Purchase Price / Royalty: $49.00/cy x 65cy = $3,185.00
Furnish Class 4 type rock
Basic Rock Haul cost: $1.06/cy x 65cy = $68.90
Rock Haul -15% grades: $1.06/cy-mi x 65cy x 8.00 mi= $551.20
Rock Haul St& Co Roads: $0.47/cy-mi x 65cy x 25.00 mi= $763.75
Placement of Buttress height < 20 ft: 65cy x ($3.53/cy x 1.05) = $240.92

Subtotal: $4,809.77

Section 1800 Soil Stabilization:
Comment: Seeding/Mulching Energy Dissapating Rock Placement

Subtotal: $0.00

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Heavy: $651.34/acre x 4.10 acres = $2,670.49

Subtotal: $2,670.49

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 5.80% of total Costs = $387.45
Surfacing - 4.59% by rock volume = $0.00

Subtotal: $387.45

Quarry Development:
Based on 4.59% of total rock volume

Subtotal: $0.00

Total: $20,657.74

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.11 C Road Name:
Road Construction: 0.26 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$6,485.63
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.3 acres	$261.47
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $128.96 Surf. $0.00	$128.96
Quarry Development:	$0.00
Total:	$6,876.07

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.11 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
  Subgrade Compaction: 4 Sta/hr $27.57/sta. x 13.9 sta = $381.84
  Blading without ditch: $11.98/station x 13.85 stations = $165.92
  Subgrade Constuction
   Tractor: D7 with rippers 30 hr x $159.87/hr = $4,796.10
   Motor Grader 14M 8 hr x $142.72/hr = $1,141.76

Subtotal: $6,485.63

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.30 acres = $155.27
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.30 acres = $10.20
        + Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $261.47

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.93% of total Costs = $128.96
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $128.96

Road Number: 20-9-1.11 C Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$6,876.07

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.12 C Road Name:
Road Construction: 0.38 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$8,754.65
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.5 acres	$435.79
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $175.67 Surf. $0.00	$175.67
Quarry Development:	$0.00
Total:	$9,366.11

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.12 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
  Subgrade Compaction: 4 Sta/hr $27.57/sta. x 20.0 sta = $551.40
  Blading without ditch: $11.98/station x 20.00 stations = $239.60
  Subgrade Construction
   Excavator - Large (3 CY) 15 hr x $135.70/hr = $2,035.50
   Dump Truck 10 cy 15 hr x $75.47/hr = $1,132.05
   Tractor: D7 with rippers 30 hr x $159.87/hr = $4,796.10

Subtotal: $8,754.65

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.50 acres = $258.79
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.50 acres = $17.00
        + Mulch Cost: $320.00/acre x 0.50 acres = $160.00

Subtotal: $435.79

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 2.63% of total Costs = $175.67
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $175.67

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$9,366.11

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.5 C Road Name:
Road Construction: 0.05 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$943.45
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$8,398.72
Quarry Name: Hale Valley 3-0" 52 LCY	
Quarry Name: Hale Valley 6-0" 190 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $180.23 Surf. $0.00	$180.23
Quarry Development:	$0.00
Total:	$9,609.56

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.5 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
Subgrade Compaction: 4 Sta/hr $27.57/sta. x 0.1 sta = $1.38
Subgrade Preperation
Tractor: D7 with rippers 5 hr x $159.87/hr = $799.35
Motor Grader 14M 1 hr x $142.72/hr = $142.72

Subtotal: $943.45

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.05mi	12ft	13.3ft	4in						

Rock Volume = 52 LCY
Purchase Price / Royalty: $14.91/LCY x 52 LCY = $775.32
Processing: $0.90/LCY x 52 LCY = $46.80
Compaction: $1.10/LCY x 52 LCY = $57.20
Basic Rock Haul cost: $0.59/LCY x 52 LCY = $30.68
Rock Haul -15% grades: $0.89/LCY-mi x 52 LCY x 8.00 mi= $370.24
Rock Haul St& Co Roads: $0.39/LCY-mi x 52 LCY x 25.00 mi= $507.00
Basic Water Haul cost: $0.54/LCY x 52 LCY = $28.08
Water Haul -15% grades: $0.13/LCY-mi x 52 LCY x 2.00 mi= $13.52
Water Haul St&Co Roads: $0.07/LCY-mi x 52 LCY x 2.00 mi= $7.28

Commercial Quarry Name: Hale Valley 6-0"
Comment: END L.Z. & TTA 26+00

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									70 LCY

Rock Volume = 70 LCY
Purchase Price / Royalty: $14.14/LCY x 70 LCY = $989.80
Processing: $0.90/LCY x 70 LCY = $63.00
Compaction: $1.10/LCY x 70 LCY = $77.00
Basic Rock Haul cost: $0.59/LCY x 70 LCY = $41.30
Rock Haul -15% grades: $0.89/LCY-mi x 70 LCY x 8.00 mi= $498.40
Rock Haul St& Co Roads: $0.39/LCY-mi x 70 LCY x 25.00 mi= $682.50
Basic Water Haul cost: $0.54/LCY x 70 LCY = $37.80
Water Haul -15% grades: $0.13/LCY-mi x 70 LCY x 2.00 mi= $18.20
Water Haul St&Co Roads: $0.07/LCY-mi x 70 LCY x 2.00 mi= $9.80

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.05mi	13.3ft	16ft	8in						

Rock Volume = 120 LCY
Purchase Price / Royalty: $14.14/LCY x 120 LCY = $1,696.80
Processing: $0.90/LCY x 120 LCY = $108.00
Compaction: $1.10/LCY x 120 LCY = $132.00
Basic Rock Haul cost: $0.59/LCY x 120 LCY = $70.80
Rock Haul -15% grades: $0.89/LCY-mi x 120 LCY x 8.00 mi= $854.40
Rock Haul St& Co Roads: $0.39/LCY-mi x 120 LCY x 25.00 mi= $1,170.00
Basic Water Haul cost: $0.54/LCY x 120 LCY = $64.80
Water Haul -15% grades: $0.13/LCY-mi x 120 LCY x 2.00 mi= $31.20
Water Haul St&Co Roads: $0.07/LCY-mi x 120 LCY x 2.00 mi= $16.80

Subtotal: $8,398.72

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
    Includes Small Quantity Factor of 1.34
    + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
    + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 2.70% of total Costs = $180.23
  Surfacing - 3.59% by rock volume = $0.00

Subtotal: $180.23

Quarry Development:
  Based on 3.59% of total rock volume

Subtotal: $0.00

Total: $9,609.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.5 R Road Name:
Road Renovation: 0.48 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$3,949.98
Blading 0.53 mi	
700-1200 Surfacing:	$50,007.54
Quarry Name: Hale Valley 3-0" 530 LCY	
Quarry Name: Hale Valley 6-0" 906 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.6 acres	$522.95
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):1.3 acres	$529.22
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,051.46 Surf. $0.00.....	$1,051.46
Quarry Development:	$0.00
Total:	$56,061.14

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.5 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.53 mi = $375.05
  Compaction: $330.78/mi x 0.53 mi = $175.31
  Clean Culverts: $381.54/mi x 0.53 mi = $202.22
  Heavy Renovation
   Tractor: D7 with rippers 20 hr x $159.87/hr = $3,197.40

Subtotal: $3,949.98

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"
 Comment: STA8+75-25+50

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.32mi	12ft	13.3ft	4in						

  Rock Volume = 348 LCY
  Purchase Price / Royalty: $14.91/LCY x 348 LCY = $5,188.68
  Processing: $0.90/LCY x 348 LCY = $313.20
  Compaction: $1.10/LCY x 348 LCY = $382.80
  Basic Rock Haul cost: $0.59/LCY x 348 LCY = $205.32
  Rock Haul -15% grades: $0.89/LCY-mi x 348 LCY x 8.00 mi= $2,477.76
  Rock Haul St& Co Roads: $0.39/LCY-mi x 348 LCY x 25.00 mi= $3,393.00
  Basic Water Haul cost: $0.54/LCY x 348 LCY = $187.92
  Water Haul -15% grades: $0.13/LCY-mi x 348 LCY x 2.00 mi= $90.48
  Water Haul St&Co Roads: $0.07/LCY-mi x 348 LCY x 2.00 mi= $48.72

Commercial Quarry Name: Hale Valley 3-0"
 Comment: STA 00+00-8+75

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.17mi	12ft	13.3ft	4in						

  Rock Volume = 182 LCY
  Purchase Price / Royalty: $14.91/LCY x 182 LCY = $2,713.62
  Processing: $0.90/LCY x 182 LCY = $163.80
  Compaction: $1.10/LCY x 182 LCY = $200.20
  Basic Rock Haul cost: $0.59/LCY x 182 LCY = $107.38
  Rock Haul -15% grades: $0.89/LCY-mi x 182 LCY x 8.00 mi= $1,295.84
  Rock Haul St& Co Roads: $0.39/LCY-mi x 182 LCY x 25.00 mi= $1,774.50
  Basic Water Haul cost: $0.54/LCY x 182 LCY = $98.28
  Water Haul -15% grades: $0.13/LCY-mi x 182 LCY x 2.00 mi= $47.32
  Water Haul St&Co Roads: $0.07/LCY-mi x 182 LCY x 2.00 mi= $25.48

Commercial Quarry Name: Hale Valley 6-0"
 Comment: STA 8+75-25+50

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.32mi	13.3ft	16ft	8in						

  Rock Volume = 806 LCY
  Purchase Price / Royalty: $14.14/LCY x 806 LCY = $11,396.84
  Processing: $0.90/LCY x 806 LCY = $725.40
  Compaction: $1.10/LCY x 806 LCY = $886.60
  Basic Rock Haul cost: $0.59/LCY x 806 LCY = $475.54
  Rock Haul -15% grades: $0.89/LCY-mi x 806 LCY x 8.00 mi= $5,738.72
  Rock Haul St& Co Roads: $0.39/LCY-mi x 806 LCY x 25.00 mi= $7,858.50

Road Number: 20-9-1.5 R Continued

Basic Water Haul cost: $0.54/LCY x 806 LCY = $435.24
Water Haul -15% grades: $0.13/LCY-mi x 806 LCY x 2.00 mi= $209.56
Water Haul St&Co Roads: $0.07/LCY-mi x 806 LCY x 2.00 mi= $112.84

Commercial Quarry Name: Hale Valley 6-0"
Comment: L.Z. @ STA 8+25 & 22+25

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									100 LCY

Rock Volume = 100 LCY
Purchase Price / Royalty: $14.14/LCY x 100 LCY = $1,414.00
Processing: $0.90/LCY x 100 LCY = $90.00
Compaction: $1.10/LCY x 100 LCY = $110.00
Basic Rock Haul cost: $0.59/LCY x 100 LCY = $59.00
Rock Haul -15% grades: $0.89/LCY-mi x 100 LCY x 8.00 mi= $712.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 100 LCY x 25.00 mi= $975.00
Basic Water Haul cost: $0.54/LCY x 100 LCY = $54.00
Water Haul -15% grades: $0.13/LCY-mi x 100 LCY x 2.00 mi= $26.00
Water Haul St&Co Roads: $0.07/LCY-mi x 100 LCY x 2.00 mi= $14.00

Subtotal: $50,007.54

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
Dry Method with Mulch: $517.58/acre x 0.60 acres = $310.55
Includes Small Quantity Factor of 1.34
+ Fertilizer Cost: $34.00/acre x 0.60 acres = $20.40
+ Mulch Cost: $320.00/acre x 0.60 acres = $192.00

Subtotal: $522.95

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
RoadSide Brushing Medium: $407.09/acre x 1.30 acres = $529.22

Subtotal: $529.22

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
Construction - 15.73% of total Costs = $1,051.46
Surfacing - 21.28% by rock volume = $0.00

Subtotal: $1,051.46

Quarry Development:
Based on 21.28% of total rock volume

Subtotal: $0.00

Total: $56,061.14

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: 20-9-1.8 R Road Name:
Road Renovation: 0.25 mi 16 ft Subgrade 2 ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$1,225.51
Blading 0.26 mi	
700-1200 Surfacing:	$11,613.80
Quarry Name: Hale Valley 3-0" 280 LCY	
Quarry Name: Hale Valley 6-0" 50 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.0 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.6 acres	$146.55
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $248.21 Surf. $0.00.....	$248.21
Quarry Development:	$0.00
Total:	$13,234.07

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 20-9-1.8 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
Subgrade Compaction: 4 Sta/hr $27.57/sta. x 0.0 sta = $0.00

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
Blading: $707.64/mi x 0.26 mi = $183.99
Compaction: $330.78/mi x 0.26 mi = $86.00
Clean Culverts: $381.54/mi x 0.26 mi = $99.20
Subgrade preperation
Motor Grader 14M 6 hr x $142.72/hr = $856.32

Subtotal: $1,225.51

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.26mi	12ft	13.3ft	4in						

Rock Volume = 280 LCY
Purchase Price / Royalty: $14.91/LCY x 280 LCY = $4,174.80
Processing: $0.90/LCY x 280 LCY = $252.00
Compaction: $1.10/LCY x 280 LCY = $308.00
Basic Rock Haul cost: $0.59/LCY x 280 LCY = $165.20
Rock Haul -15% grades: $0.89/LCY-mi x 280 LCY x 8.00 mi= $1,993.60
Rock Haul St& Co Roads: $0.39/LCY-mi x 280 LCY x 25.00 mi= $2,730.00
Basic Water Haul cost: $0.54/LCY x 280 LCY = $151.20
Water Haul -15% grades: $0.13/LCY-mi x 280 LCY x 2.00 mi= $72.80
Water Haul St&Co Roads: $0.07/LCY-mi x 280 LCY x 2.00 mi= $39.20

Commercial Quarry Name: Hale Valley 6-0"
Comment: L.Z. 9+75

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									50 LCY

Rock Volume = 50 LCY
Purchase Price / Royalty: $14.14/LCY x 50 LCY = $707.00
Processing: $0.90/LCY x 50 LCY = $45.00
Compaction: $1.10/LCY x 50 LCY = $55.00
Basic Rock Haul cost: $0.59/LCY x 50 LCY = $29.50
Rock Haul -15% grades: $0.89/LCY-mi x 50 LCY x 8.00 mi= $356.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 50 LCY x 25.00 mi= $487.50
Basic Water Haul cost: $0.54/LCY x 50 LCY = $27.00
Water Haul -15% grades: $0.13/LCY-mi x 50 LCY x 2.00 mi= $13.00
Water Haul St&Co Roads: $0.07/LCY-mi x 50 LCY x 2.00 mi= $7.00

Subtotal: $11,613.80

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:

Subtotal: $0.00

Road Number: 20-9-1.8 R Continued

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  Brushing width Left: 10ft. Right: 10ft.
  RoadSide Brushing Light: $244.25/acre x 0.60 acres = $146.55

Subtotal: $146.55

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 3.71% of total Costs = $248.21
  Surfacing - 4.89% by rock volume = $0.00

Subtotal: $248.21

Quarry Development:
  Based on 4.89% of total rock volume

Subtotal: $0.00

Total: $13,234.07

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: SPUR 1 C Road Name:
Road Construction: 0.04 mi 16 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$1,278.96
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$8,391.79
Quarry Name: Hale Valley 3-0" 43 LCY	
Quarry Name: Hale Valley 6-0" 199 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$51.76
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $185.84 Surf. $0.00	$185.84
Quarry Development:	$0.00
Total:	$9,908.34

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: SPUR 1 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
  Subgrade Construction
   Tractor: D7 with rippers 8 hr x $159.87/hr = $1,278.96

Subtotal: $1,278.96

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.04mi	12ft	13.3ft	4in						

  Rock Volume = 43 LCY
  Purchase Price / Royalty: $14.91/LCY x 43 LCY = $641.13
  Processing: $0.90/LCY x 43 LCY = $38.70
  Compaction: $1.10/LCY x 43 LCY = $47.30
  Basic Rock Haul cost: $0.59/LCY x 43 LCY = $25.37
  Rock Haul -15% grades: $0.89/LCY-mi x 43 LCY x 8.00 mi= $306.16
  Rock Haul St& Co Roads: $0.39/LCY-mi x 43 LCY x 25.00 mi= $419.25
  Basic Water Haul cost: $0.54/LCY x 43 LCY = $23.22
  Water Haul -15% grades: $0.13/LCY-mi x 43 LCY x 2.00 mi= $11.18
  Water Haul St&Co Roads: $0.07/LCY-mi x 43 LCY x 2.00 mi= $6.02

Commercial Quarry Name: Hale Valley 6-0"
 Comment: L.Z. @ 00+30 & 2+05

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									100 LCY

  Rock Volume = 100 LCY
  Purchase Price / Royalty: $14.14/LCY x 100 LCY = $1,414.00
  Processing: $0.90/LCY x 100 LCY = $90.00
  Compaction: $1.10/LCY x 100 LCY = $110.00
  Basic Rock Haul cost: $0.59/LCY x 100 LCY = $59.00
  Rock Haul -15% grades: $0.89/LCY-mi x 100 LCY x 8.00 mi= $712.00
  Rock Haul St& Co Roads: $0.39/LCY-mi x 100 LCY x 25.00 mi= $975.00
  Basic Water Haul cost: $0.54/LCY x 100 LCY = $54.00
  Water Haul -15% grades: $0.13/LCY-mi x 100 LCY x 2.00 mi= $26.00
  Water Haul St&Co Roads: $0.07/LCY-mi x 100 LCY x 2.00 mi= $14.00

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.04mi	13.3ft	16ft	8in						

  Rock Volume = 99 LCY
  Purchase Price / Royalty: $14.14/LCY x 99 LCY = $1,399.86
  Processing: $0.90/LCY x 99 LCY = $89.10
  Compaction: $1.10/LCY x 99 LCY = $108.90
  Basic Rock Haul cost: $0.59/LCY x 99 LCY = $58.41
  Rock Haul -15% grades: $0.89/LCY-mi x 99 LCY x 8.00 mi= $704.88
  Rock Haul St& Co Roads: $0.39/LCY-mi x 99 LCY x 25.00 mi= $965.25
  Basic Water Haul cost: $0.54/LCY x 99 LCY = $53.46
  Water Haul -15% grades: $0.13/LCY-mi x 99 LCY x 2.00 mi= $25.74
  Water Haul St&Co Roads: $0.07/LCY-mi x 99 LCY x 2.00 mi= $13.86

Subtotal: $8,391.79

Road Number: SPUR 1 C Continued

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34

Subtotal: $51.76

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 2.78% of total Costs = $185.84
  Surfacing - 3.59% by rock volume = $0.00

Subtotal: $185.84

Quarry Development:
  Based on 3.59% of total rock volume

Subtotal: $0.00

Total: $9,908.34

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: SPUR 2 I Road Name:
Road Improvement: 0.02 mi 16 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$833.81
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$4,717.46
Quarry Name: Hale Valley 3-0" 26 LCY	
Quarry Name: Hale Valley 6-0" 110 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.1 acres	$40.71
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $108.55 Surf. $0.00	$108.55
Quarry Development:	$0.00
Total:	$5,787.69

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: SPUR 2 I Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
Subgrade Compaction: 4 Sta/hr $27.57/sta. x 1.3 sta = $34.46
Subgrade Improvement
Tractor: D7 with rippers 5 hr x $159.87/hr = $799.35

Subtotal: $833.81

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.02mi	12ft	13.3ft	4in						

Rock Volume = 26 LCY
Purchase Price / Royalty: $14.91/LCY x 26 LCY = $387.66
Processing: $0.90/LCY x 26 LCY = $23.40
Compaction: $1.10/LCY x 26 LCY = $28.60
Basic Rock Haul cost: $0.59/LCY x 26 LCY = $15.34
Rock Haul -15% grades: $0.89/LCY-mi x 26 LCY x 8.00 mi= $185.12
Rock Haul St& Co Roads: $0.39/LCY-mi x 26 LCY x 25.00 mi= $253.50
Basic Water Haul cost: $0.54/LCY x 26 LCY = $14.04
Water Haul -15% grades: $0.13/LCY-mi x 26 LCY x 2.00 mi= $6.76
Water Haul St&Co Roads: $0.07/LCY-mi x 26 LCY x 2.00 mi= $3.64

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.02mi	13.3ft	16ft	8in						

Rock Volume = 60 LCY
Purchase Price / Royalty: $14.14/LCY x 60 LCY = $848.40
Processing: $0.90/LCY x 60 LCY = $54.00
Compaction: $1.10/LCY x 60 LCY = $66.00
Basic Rock Haul cost: $0.59/LCY x 60 LCY = $35.40
Rock Haul -15% grades: $0.89/LCY-mi x 60 LCY x 8.00 mi= $427.20
Rock Haul St& Co Roads: $0.39/LCY-mi x 60 LCY x 25.00 mi= $585.00
Basic Water Haul cost: $0.54/LCY x 60 LCY = $32.40
Water Haul -15% grades: $0.13/LCY-mi x 60 LCY x 2.00 mi= $15.60
Water Haul St&Co Roads: $0.07/LCY-mi x 60 LCY x 2.00 mi= $8.40

Commercial Quarry Name: Hale Valley 6-0"
Comment: L.Z. 1+25

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									50 LCY

Rock Volume = 50 LCY
Purchase Price / Royalty: $14.14/LCY x 50 LCY = $707.00
Processing: $0.90/LCY x 50 LCY = $45.00
Compaction: $1.10/LCY x 50 LCY = $55.00
Basic Rock Haul cost: $0.59/LCY x 50 LCY = $29.50
Rock Haul -15% grades: $0.89/LCY-mi x 50 LCY x 8.00 mi= $356.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 50 LCY x 25.00 mi= $487.50
Basic Water Haul cost: $0.54/LCY x 50 LCY = $27.00
Water Haul -15% grades: $0.13/LCY-mi x 50 LCY x 2.00 mi= $13.00
Water Haul St&Co Roads: $0.07/LCY-mi x 50 LCY x 2.00 mi= $7.00

Subtotal: $4,717.46

Road Number: SPUR 2 I Continued

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Medium: $407.09/acre x 0.10 acres = $40.71

Subtotal: $40.71

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.62% of total Costs = $108.55
  Surfacing - 2.02% by rock volume = $0.00

Subtotal: $108.55

Quarry Development:
  Based on 2.02% of total rock volume

Subtotal: $0.00

Total: $5,787.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: SPUR 2 R Road Name:
Road Renovation: 0.05 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$2,855.66
Blading 2.75 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.1 acres	$40.71
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $57.03 Surf. $0.00	$57.03
Quarry Development:	$0.00
Total:	$3,040.55

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: SPUR 2 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 2.75 mi = $1,946.01
  Compaction: $330.78/mi x 2.75 mi = $909.65

Subtotal: $2,855.66

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Medium: $407.09/acre x 0.10 acres = $40.71

Subtotal: $40.71

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 0.85% of total Costs = $57.03
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $57.03

Quarry Development:

Road Number: SPUR 2 R Continued

Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$3,040.55

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: SPUR 3 C Road Name:
Road Construction: 0.02 mi 16 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$507.18
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$4,126.43
Quarry Name: Hale Valley 3-0" 21 LCY	
Quarry Name: Hale Valley 6-0" 98 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.0 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $90.23 Surf. $0.00	$90.23
Quarry Development:	$0.00
Total:	$4,811.00

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: SPUR 3 C Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:
Subgrade Compaction: 4 Sta/hr $27.57/sta. x 1.0 sta = $27.57
Subgrade Construction
Tractor: D7 with rippers 3 hr x $159.87/hr = $479.61

Subtotal: $507.18

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:

Subtotal: $0.00

Section 700-1200 Surfacing:

Commercial Quarry Name: Hale Valley 3-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.02mi	12ft	13.3ft	4in						

Rock Volume = 21 LCY
Purchase Price / Royalty: $14.91/LCY x 21 LCY = $313.11
Processing: $0.90/LCY x 21 LCY = $18.90
Compaction: $1.10/LCY x 21 LCY = $23.10
Basic Rock Haul cost: $0.59/LCY x 21 LCY = $12.39
Rock Haul -15% grades: $0.89/LCY-mi x 21 LCY x 8.00 mi= $149.52
Rock Haul St& Co Roads: $0.39/LCY-mi x 21 LCY x 25.00 mi= $204.75
Basic Water Haul cost: $0.54/LCY x 21 LCY = $11.34
Water Haul -15% grades: $0.13/LCY-mi x 21 LCY x 2.00 mi= $5.46
Water Haul St&Co Roads: $0.07/LCY-mi x 21 LCY x 2.00 mi= $2.94

Commercial Quarry Name: Hale Valley 6-0"
Comment: END L.Z.

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
									50 LCY

Rock Volume = 50 LCY
Purchase Price / Royalty: $14.14/LCY x 50 LCY = $707.00
Processing: $0.90/LCY x 50 LCY = $45.00
Compaction: $1.10/LCY x 50 LCY = $55.00
Basic Rock Haul cost: $0.59/LCY x 50 LCY = $29.50
Rock Haul -15% grades: $0.89/LCY-mi x 50 LCY x 8.00 mi= $356.00
Rock Haul St& Co Roads: $0.39/LCY-mi x 50 LCY x 25.00 mi= $487.50
Basic Water Haul cost: $0.54/LCY x 50 LCY = $27.00
Water Haul -15% grades: $0.13/LCY-mi x 50 LCY x 2.00 mi= $13.00
Water Haul St&Co Roads: $0.07/LCY-mi x 50 LCY x 2.00 mi= $7.00

Commercial Quarry Name: Hale Valley 6-0"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.02mi	13.3ft	16ft	8in						

Rock Volume = 48 LCY
Purchase Price / Royalty: $14.14/LCY x 48 LCY = $678.72
Processing: $0.90/LCY x 48 LCY = $43.20
Compaction: $1.10/LCY x 48 LCY = $52.80
Basic Rock Haul cost: $0.59/LCY x 48 LCY = $28.32
Rock Haul -15% grades: $0.89/LCY-mi x 48 LCY x 8.00 mi= $341.76
Rock Haul St& Co Roads: $0.39/LCY-mi x 48 LCY x 25.00 mi= $468.00
Basic Water Haul cost: $0.54/LCY x 48 LCY = $25.92
Water Haul -15% grades: $0.13/LCY-mi x 48 LCY x 2.00 mi= $12.48
Water Haul St&Co Roads: $0.07/LCY-mi x 48 LCY x 2.00 mi= $6.72

Subtotal: $4,126.43

Road Number: SPUR 3 C Continued

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
    Includes Small Quantity Factor of 1.34
    + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
    + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:

Subtotal: $0.00

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 1.35% of total Costs = $90.23
  Surfacing - 1.76% by rock volume = $0.00

Subtotal: $90.23

Quarry Development:
  Based on 1.76% of total rock volume

Subtotal: $0.00

Total: $4,811.00

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Nest Egg CT Sale Date:
Road Number: SPUR 4 R Road Name:
Road Renovation: 0.03 mi 12 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	$510.76
Blading 0.03 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.1 acres	$87.16
Includes Small Quantity Factor of 1.34	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Mechanical):0.1 acres	$65.13
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $12.67 Surf. $0.00.....	$12.67
Quarry Development:	$0.00
Total:	$675.73

Notes:
Quantities shown are estimates only and not pay items.
Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: SPUR 4 R Road Name:

Section 200 Clearing and Grubbing:

Subtotal: $0.00

Section 300 Excavation:

Subtotal: $0.00

Section 400 Drainage:

Subtotal: $0.00

Section 500 Renovation:
  Blading: $707.64/mi x 0.03 mi = $21.23
  Compaction: $330.78/mi x 0.03 mi = $9.92
  Subgrade Renovation
   Tractor: D7 with rippers 3 hr x $159.87/hr = $479.61

Subtotal: $510.76

Section 700-1200 Surfacing:
Surfacing:

Subtotal: $0.00

Section 1300 Geotextiles:

Subtotal: $0.00

Section 1400 Slope Protection:

Subtotal: $0.00

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $517.58/acre x 0.10 acres = $51.76
        Includes Small Quantity Factor of 1.34
        + Fertilizer Cost: $34.00/acre x 0.10 acres = $3.40
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00

Subtotal: $87.16

Section 1900 Cattleguards:

Subtotal: $0.00

Section 2100 Roadside Brushing:
Mechanical Brushing
  RoadSide Brushing Heavy: $651.34/acre x 0.10 acres = $65.13

Subtotal: $65.13

Section 2300 Engineering:

Subtotal: $0.00

Section 2400 Minor Concrete:

Subtotal: $0.00

Section 2500 Gabions:

Subtotal: $0.00

Section 8000 Miscellaneous:

Subtotal: $0.00

Mobilization:
  Construction - 0.19% of total Costs = $12.67
  Surfacing - 0.00% by rock volume = $0.00

Subtotal: $12.67

Road Number: SPUR 4 R Continued

Quarry Development:
  Based on 0.00% of total rock volume

Subtotal:	$0.00
Total:	$675.73

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Nest Egg CT Sale Date:

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction

Fire Equipment:	1 ea x (1.00 x $75.00/ea + 0 mi x $4.16/mi)	= $75.00
Graders-all:	1 ea x (1.00 x $414.00/ea + 0 mi x $14.27/mi)	= $414.00
Brush Cutter:	1 ea x (1.00 x $414.00/ea)	= $414.00
Rollers & Comp:	1 ea x (1.00 x $414.00/ea + 0 mi x $22.05/mi)	= $414.00
Excavators:	1 ea x (1.00 x $892.00/ea	= $892.00
RTBackhoes 24/30:	1 ea x (1.00 x $308.00/ea + 0 mi x $5.77/mi)	= $308.00
Tractors <= D7:	1 ea x (1.00 x $653.00/ea + 0 mi x $31.35/mi)	= $653.00
Dump Truck<=15cy:	1 ea x (1.00 x $91.00/ea + 0 mi x $3.77/mi)	= $91.00
Dump Truck >15cy:	2 ea x (1.00 x $115.00/ea + 0 mi x $4.79/mi)	= $230.00
Water Truck:	2 ea x (1.00 x $96.00/ea + 0 mi x $3.99/mi)	= $192.00
Equipment Washing:	12 ea x ($250.00) /ea	= $3,000.00

Subtotal: $6,683.00

Mobilization: Surfacing

Subtotal: $0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Nest Egg CT Sale Date:

Road Number	Const	Improv	Renov	Decomm	Temp
19-9-35.0 I		6.05			
19-9-35.0 R			9.00		
19-9-35.1 R			7.65		
19-9-35.2 R			14.25		
19-9-35.3 R			13.00		
19-9-35.4 I		5.25			
19-9-35.5 R			13.00		
19-9-35.6 R			11.00		
19-9-35.7 C	8.25				
19-9-35.7 R			3.75		
19-9-35.8 C	7.95				
20-9-1.0 R			41.71		
20-9-1.0 R Pave			90.29		
20-9-1.11 C	13.85				
20-9-1.12 C	20.00				
20-9-1.5 C	2.50				
20-9-1.5 R			25.50		
20-9-1.8 R			13.00		
SPUR 1 C	2.05				
SPUR 2 I		1.25			
SPUR 2 R			2.75		
SPUR 3 C	1.00				
SPUR 4 R			1.50		
Total Sta:	55.60	12.55	246.40		

200 Clearing and Grubbing	Clearing acres
19-9-35.0 I	0.0
19-9-35.0 R	0.0
19-9-35.1 R	0.0
19-9-35.2 R	0.0
19-9-35.3 R	0.0
19-9-35.4 I	0.0
19-9-35.5 R	0.0
19-9-35.6 R	0.0
19-9-35.7 C	0.0
19-9-35.7 R	0.0
19-9-35.8 C	0.0
20-9-1.0 R	0.0
20-9-1.0 R Pave	0.0
20-9-1.11 C	0.0
20-9-1.12 C	0.0
20-9-1.5 C	0.0
20-9-1.5 R	0.0
20-9-1.8 R	0.0
SPUR 1 C	0.0
SPUR 2 I	0.0
SPUR 2 R	0.0
SPUR 3 C	0.0
SPUR 4 R	0.0
Totals:	0.0

Continuation of Construction Quantities

300 Excavation

	Excav LCY.s	Haul sta-yds	Haul yd-mi
19-9-35.7 C	2,230	0	0
19-9-35.8 C	1,600	0	0
Totals:	3,830	0	0

Subgrade Construction SPUR 3 C
Tractor: D7 with rippers . . . . . 3 hr
Subgrade Construction SPUR 1 C
Tractor: D7 with rippers . . . . . 8 hr
Subgrade Construction 20-9-1.12 C
Excavator - Large (3 CY) . . . . . 15 hr
Dump Truck 10 cy . . . . . 15 hr
Tractor: D7 with rippers . . . . . 30 hr
Subgrade Constuction 20-9-1.11 C
Tractor: D7 with rippers . . . . . 30 hr
Motor Grader 14M . . . . . 8 hr
Subgrade Improvement SPUR 2 I
Tractor: D7 with rippers . . . . . 5 hr
Subgrade Preperation 20-9-1.5 C
Tractor: D7 with rippers . . . . . 5 hr
Motor Grader 14M . . . . . 1 hr

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
19-9-35.2 R	0 lf	30 lf	0 lf
20-9-1.0 R	0 lf	245 lf	20 lf
20-9-1.0 R Pave	0 lf	0 lf	20 lf
Total Drainage:		275 lf	40 lf

Culvert Qty	Aluminized	Galvanized	Poly Pipe
12 inch	0 lf	0 lf	
18 inch	0 lf	0 lf	215 lf
24 inch	0 lf	0 lf	60 lf
30 inch	0 lf	0 lf	0 lf
36 inch	0 lf	0 lf	0 lf
42 inch	0 lf	0 lf	
48 inch	0 lf	0 lf	

Downspout Qty	Half Round	Full (poly)	Full (galv)
18 inch	0 lf	0 lf	40 lf
21 inch	0 lf		
24 inch	0 lf	0 lf	0 lf
30 inch		0 lf	

MP 1.76 Culvert 20-9-1.0 R
Excavator - Large (3 CY) . . . . . 4 hr
Water Truck 3000 Gal . . . . . 2 hr
Tamper – handheld . . . . . 3 hr
Vibratory roller, Steel Drum . . . . . 2 hr
MP 1.86 Culvert 20-9-1.0 R
Excavator - Large (3 CY) . . . . . 4 hr
Water Truck 3000 Gal . . . . . 2 hr
Tamper – handheld . . . . . 3 hr
Vibratory roller, Steel Drum . . . . . 2 hr
MP 1.93 Culvert 20-9-1.0 R

Continuation of Construction Quantities

Tractor: D7 with rippers . . . . . 3 hr
Tamper – handheld . . . . . 2 hr
Dump Truck 10 cy . . . . . 1 hr
Vibratory roller, Steel Drum . . . . . 2 hr

MP 1.98 Culvert 20-9-1.0 R

Tractor: D7 with rippers . . . . . 4 hr
Vibratory roller, Steel Drum . . . . . 2 hr
Tamper – handheld . . . . . 2 hr
Water Truck 3000 Gal . . . . . 2 hr

500 Renovation	Blade Miles	Slide cy
19-9-35.0 I	0.11	0
19-9-35.0 R	0.17	0
19-9-35.1 R	0.14	0
19-9-35.2 R	0.27	0
19-9-35.3 R	0.25	0
19-9-35.4 I	0.10	0
19-9-35.5 R	0.25	0
19-9-35.6 R	0.21	0
19-9-35.7 R	3.75	0
20-9-1.0 R	0.76	0
20-9-1.5 R	0.53	0
20-9-1.8 R	0.26	0
SPUR 2 R	2.75	0
SPUR 4 R	0.03	0
Totals:	9.58	0

Subgrade Renovation 19-9-35.0 R

Excavator - Large (3 CY) . . . . . 3 hr
Dump Truck 10 cy . . . . . 3 hr
Motor Grader 14M . . . . . 3 hr

cat time fdor improvement 19-9-35.0 I

Tractor: D7 with rippers . . . . . 6 hr

Ditchline Cleaning 20-9-1.0 R Pave

Motor Grader 14M . . . . . 4 hr
Backhoe . . . . . 3 hr
Dump Truck 10 cy . . . . . 3 hr

HEAVY RENO 19-9-35.2 R

Tractor: D7 with rippers . . . . . 21 hr
Excavator - Large (3 CY) . . . . . 5 hr
Dump Truck 10 cy . . . . . 5 hr

Heavy Renovation 20-9-1.5 R

Tractor: D7 with rippers . . . . . 20 hr

Heavy Renovation 19-9-35.1 R

Tractor: D7 with rippers . . . . . 10 hr

Subgrade preperation 19-9-35.6 R

Tractor: D7 with rippers . . . . . 20 hr

Subgrade Preperation 19-9-35.5 R

Tractor: D7 with rippers . . . . . 26 hr

Subgrade Preperation 19-9-35.4 I

Tractor: D7 with rippers . . . . . 10 hr
Motor Grader 14M . . . . . 5 hr

Subgrade preperation 19-9-35.3 R

Tractor: D7 with rippers . . . . . 20 hr
Motor Grader 14M . . . . . 8 hr

Subgrade preperation 20-9-1.8 R

Motor Grader 14M . . . . . 6 hr

Subgrade Reno 19-9-35.7 R

Tractor: D7 with rippers . . . . . 3 hr
Motor Grader 14M . . . . . 1 hr

Subgrade Renovation SPUR 4 R

Tractor: D7 with rippers . . . . . 3 hr

Surfacing (Loose Cubic Yards)
Note: Due to slight rounding differences between total LCY vs. subtotaled LCY,
Totals shown here may not be exactly as shown in the road summaries and worksheets.

Quarry Name: Hale Valley 1.5-0"

Commercial	Roadway	Turnouts	Other	
20-9-1.0 R	834	0	0	834
20-9-1.0 R Pave	0	0	10	10
Totals:	834	0	10	844

Quarry Name: Hale Valley 3-0"

Commercial	Roadway	Turnouts	Other	
SPUR 1 C	43	0	0	43
SPUR 2 I	26	0	0	26
SPUR 3 C	21	0	0	21
20-9-1.5 R	348	0	0	348
19-9-35.0 I	126	0	0	126
19-9-35.0 R	395	0	0	395
20-9-1.5 R	182	0	0	182
20-9-1.5 C	52	0	0	52
20-9-1.8 R	280	0	0	280
19-9-35.2 R	798	0	0	798
19-9-35.1 R	159	0	0	159
19-9-35.4 I	109	0	0	109
Totals:	2,539	0	0	2,539

Quarry Name: Hale Valley 6-0"

Commercial	Roadway	Turnouts	Other	
SPUR 1 C	0	0	100	100
SPUR 1 C	99	0	0	99
SPUR 2 I	60	0	0	60
SPUR 2 I	0	0	50	50
SPUR 3 C	0	0	50	50
SPUR 3 C	48	0	0	48
19-9-35.0 I	0	0	100	100
20-9-1.0 R Pave	0	0	200	200
20-9-1.0 R	0	0	50	50
20-9-1.0 R Pave	0	100	0	100
20-9-1.0 R	0	0	100	100
19-9-35.0 R	0	0	50	50
19-9-35.1 R	0	0	170	170
19-9-35.0 I	291	0	0	291
20-9-1.5 R	806	0	0	806
20-9-1.5 R	0	0	100	100
20-9-1.5 C	0	0	70	70
20-9-1.5 C	120	0	0	120
20-9-1.8 R	0	0	50	50
19-9-35.1 R	368	0	0	368
19-9-35.4 I	253	0	0	253
19-9-35.4 I	0	0	50	50
20-9-1.0 R	0	0	30	30
20-9-1.0 R	0	0	30	30
20-9-1.0 R	0	0	10	10
20-9-1.0 R	0	0	10	10
Totals:	2,045	100	1,220	3,365

Quarry Name: Hale Valley IV RR

Commercial	Roadway	Turnouts	Other

Continuation of Construction Quantities

Totals:	0	0	0	0

1300 Geotextiles

Totals: No Quantities

1400 Slope Protection

19-9-35.2 R	Gradation Class 4:	10 cy
20-9-1.0 R	Gradation Class 4:	30 cy
20-9-1.0 R Pave	Gradation Class 4:	65 cy
Totals:		105 cy

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
19-9-35.0 I	0.0	0.1	
19-9-35.0 R	0.0	0.2	
19-9-35.1 R	0.0	0.2	
19-9-35.2 R	0.0	0.3	
19-9-35.3 R	0.0	0.3	
19-9-35.4 I	0.0	0.1	
19-9-35.5 R	0.0	0.3	
19-9-35.6 R	0.0	0.3	
19-9-35.7 C	0.0	0.2	
19-9-35.7 R	0.0	0.1	
19-9-35.8 C	0.0	0.2	
20-9-1.11 C	0.0	0.3	
20-9-1.12 C	0.0	0.5	
20-9-1.5 C	0.0	0.1	
20-9-1.5 R	0.0	0.6	
SPUR 1 C	0.0	0.1	
SPUR 2 I	0.0	0.1	
SPUR 2 R	0.0	0.1	
SPUR 3 C	0.0	0.1	
SPUR 4 R	0.0	0.1	
Totals:	0.0	4.3	0.0

Small Quantity Factor of 1.34 used

1900 Cattleguards

Totals: No Quantities

2100 RoadSide Brushing	acres
19-9-35.0 I - Mechanical Brushing	0.3
19-9-35.0 R - Mechanical Brushing	0.4
19-9-35.1 R - Mechanical Brushing	0.4
19-9-35.2 R - Mechanical Brushing	0.7
19-9-35.3 R - Mechanical Brushing	0.6
19-9-35.4 I - Mechanical Brushing	0.2
19-9-35.5 R - Mechanical Brushing	0.6
19-9-35.6 R - Mechanical Brushing	0.5
19-9-35.7 R - Mechanical Brushing	0.2
20-9-1.0 R - Mechanical Brushing	1.8
20-9-1.0 R Pave - Mechanical Brushing	4.1
20-9-1.5 R - Mechanical Brushing	1.3
20-9-1.8 R - Mechanical Brushing	0.6
SPUR 2 I - Mechanical Brushing	0.1

Continuation of Construction Quantities

SPUR 2 R - Mechanical Brushing		0.1
SPUR 4 R - Mechanical Brushing		0.1
	Totals:	12.0

2300 Engineering stations

Totals:	0.00

2400 Minor Concrete

Totals: No Quantities

2500 Gabions

Totals: No Quantities

8000 Miscellaneous

Totals: No Quantities

LEGEND		
OPERATOR MAINTAINED	BLM ROAD	
	RRC ROAD	
CONSTRUCT BARRIER		

MAINTENANCE ROCK:

200 CY 1–1/2" AGGREGATE*

400 CY 3–0" AGGREGATE**

* 1–1/2" AGGREGATE SURFACED ROADS ONLY

** 3–0" AGGREGATE SURFACE ROADS ONLY

35

T 19 R09W S

36

N

0 750 1500 Feet

19–9–35.0

19–9–35.1

19–9–35.8

19–9–35.7

19–9–35.3

19–9–35.2

19–9–35.6

19–9–35.4

19–9–35.5

SPUR 3

SPUR 4

SPUR 2

SPUR 1

00+25

1+25

BLM

PRIVATE

20–9–1.12

20–9–1.5

20–9–1.11

20–9–1.2

20–9–1.8

20–9–1.0

20–9–27.1

BEAVER CREEK RD

WEST FORK SMITH RIVER RD

20–9–1.0 MP 0.0

T 20 R09W S

2

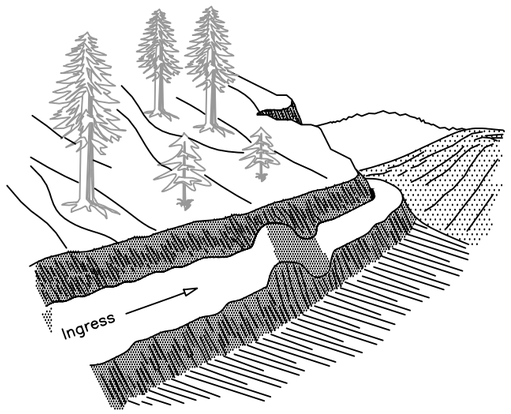
1

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

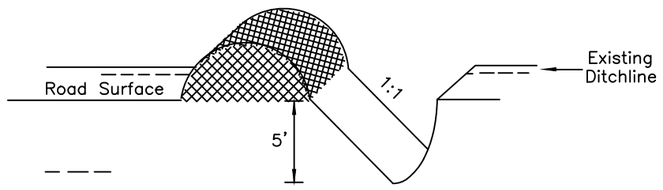
SALE NAME: NEST EGG CT
SALE NO.: ORC03–TS–2020.0001

EXHIBIT D MAINTENANCE DETAIL

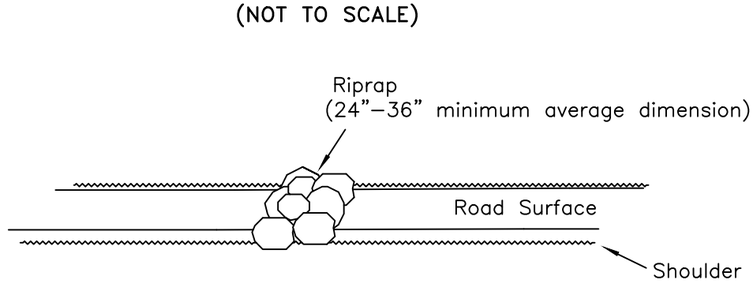
DESIGNED	M. VAN CAMP
REVIEWED	J. MENGUITA
APPROVED	G. HARKLEROAD
DRAWN MVC	SCALE 1"=750'
DATE 9/10/19	SHEET 1 OF 9
DRAWING NO.	

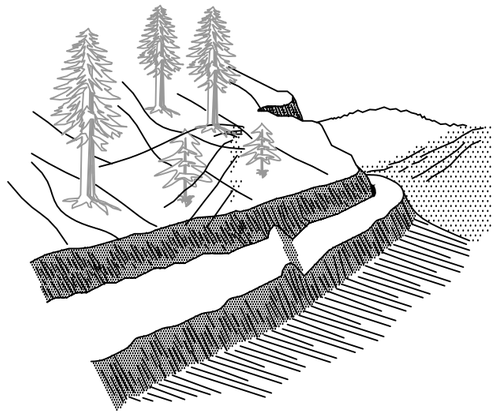


BARRIERS

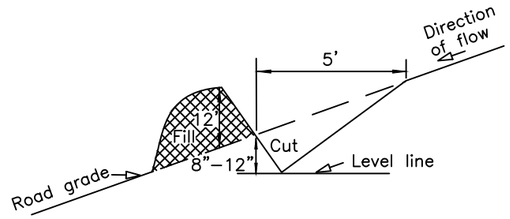


(NOT TO SCALE)





WATER BAR



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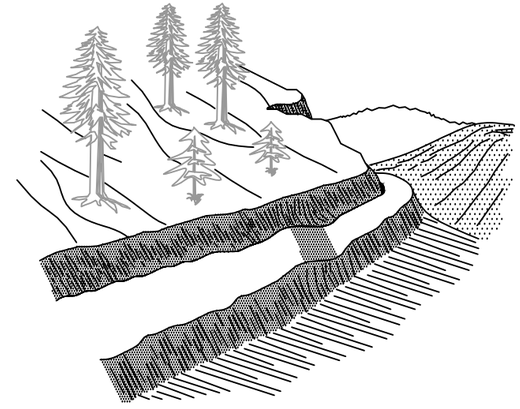
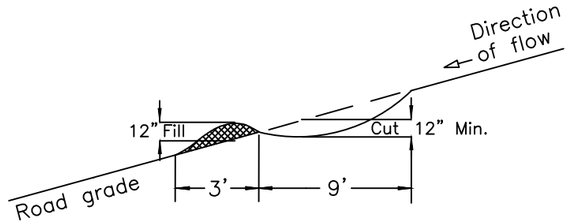


WATER DIP

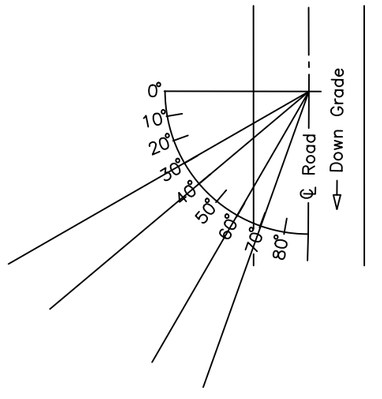


(NOT TO SCALE)

NOTES

1. ALL BARRIERS, WATER BARS, AND WATER DIPS AS REQUIRED SHALL BE CONSTRUCTED AS SHOWN.
2. LOCATIONS WILL BE AS DIRECTED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER BARS SHALL BE SKEWED 30° – 40°.
4. ALL WATER DIPS SHALL BE SKEWED 60° – 70°.
5. ALL WATER BARS AND WATER DIPS SHALL BE CUT INTO THE ROADBED FROM THE BOTTOM OF THE DITCHLINE.
6. DITCHLINES SHALL BE BLOCKED WITH EXCAVATED MATERIAL (DITCH DAM) DOWNGRADE FROM ALL WATER BARS AND WATER DIPS.
7. EXCAVATED MATERIAL FROM BARRIER TRENCH SHALL BE PLACED ON THE SIDE NEAREST THE BEGINNING OF THE ROAD.
8. OUTLETS OF WATER DIPS MUST BE ROCKED ON FILL SLOPE.
9. RIPRAP BARRIERS SHALL BE AT LEAST 4' HIGH, 4' DEEP, AND OF SUFFICIENT WIDTH TO COMPLETELY BLOCK THE ROADWAY AND ANY ADJACENT SHOULDERS THAT CAN BE TRAVELED WITH A VEHICLE.
10. ALL BERMS INCLUDING WATER BARS, WATER DIPS, AND EARTHEN BARRIERS SHALL BE COMPACTED TO 85% OF MAXIMUM DENSITY.

SKEW DIAGRAM



WATER DIP/BAR SPACING

ROAD GRADE	MAXIMUM SPACING
%	FEET
0–4	500
5–6	400
7–9	300
10–14	100
15–20	50

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03–TS–2020.0001

EROSION CONTROL DETAIL

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC | SCALE N/A
DATE 9/10/19 | SHEET 2 OF 9
DRAWING NO.

EXHIBIT D ESTIMATE OF QUANTITIES*

ROAD NUMBER	SURFACING				OTHER			SOIL STABILIZATION		OTHER	
	TOP **	AGG. MAINT. ROCK **	AGG. MAINT. ROCK **	WATER DIP ARMOR. **	RIPRAP BARRIER **	RIPRAP ARMOR **	JAWRUN ROCK **	DRY	HYDRO-MULCH		
SPEC. NO.	1200	1200	1000	1000	1400			1800	1800		
UNITS	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	ACRES	ACRES		
19-9-35.0	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
19-9-35.1	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
19-9-35.2	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
19-9-35.3	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.5			
19-9-35.4	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
19-9-35.5	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.5			
19-9-35.6	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.4			
19-9-35.7	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.4			
19-9-35.8	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.3			
20-9-1.0	(C)	**(C)**	(A)	(B)	(A)	(B)	(A)				
20-9-1.5	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
20-9-1.8	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
20-9-1.11	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.5			
20-9-1.12	(C)	(C)	(A)	(B)	(A)	(B)	(A)	0.7			
Spur 1	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
Spur 2	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)	0.2			
Spur 3	(C)	(C)	**(A)**	(B)	(A)	(B)	(A)				
Spur 4	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
	(C)	(C)	(A)	(B)	(A)	(B)	(A)				
TOTALS	(C)	200 (C)	400 (A)	(B)	40 (A)	(B)	(A)	5.2			

* FOR INFORMATIONAL USE ONLY. QUANTITIES SHOWN ARE NOT PAY ITEMS.

** ROCK QUANTITES ARE TRUCK MEASUREMENT.

ITEM	SIZE	GRADE
PITRUN		
1000 (Base)	3"	A
	TBD	B
1100	4"	B
1200 (Top)	1 ½"	C
1400 (RIPRAP)	34"	A
	28"	B
CHIP SEAL ROCK	¾"	S

GRADE INDICATED IN CIRCLE ○

ALWAYS THINK SAFETY

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OREGON

SALE NAME: NEST EGG CT
SALE NO.: ORC03-TS-2020.0001

EXHIBIT D
ESTIMATE OF QUANTITIES

DESIGNED M. VAN CAMP
REVIEWED J. MENGUITA
APPROVED G. HARKLEROAD

DRAWN MVC	SCALE N/A
DATE 7/31/19	SHEET 3 OF 9

DRAWING NO.

ROAD MAINTENANCE SPECIFICATIONS

General road maintenance specifications are designated by numeric symbols according to the type of road work to be performed, as follows:

Section	
3000	GENERAL
3100	OPERATIONAL MAINTENANCE
3200	SEASONAL MAINTENANCE
3300	FINAL MAINTENANCE
3400	OTHER MAINTENANCE

GENERAL - 3000

3001 The Purchaser shall be required to maintain all roads as shown on the Exhibit D map of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.

3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. **Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the standards required in Exhibit C of this contract.**

3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.

3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any road(s) with logging units substantially completed prior to moving operations to other roads. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

3101 The Purchaser shall blade and shape the road surface and shoulders with a motor patrol grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.

3102 **The Purchaser shall place 400 yds^3 of crushed aggregate, conforming to the requirements in Section 1000 of Exhibit C of this contract, and 200 yds^3 of crushed aggregate, conforming to the requirements in Section 1200 of Exhibit C of this contract, on the roadway at locations and in the amounts designated by the Authorized Officer.**

This crushed aggregate shall be used to repair surface failures, and areas of depleted surface depth, excluding damages covered by Section 12 of this contract. The aggregate shall be furnished, hauled, placed, spread, and compacted by use of dump trucks, water trucks, roller, and motor patrol grader.

3103 The Purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed by the Authorized Officer.

3104 The Purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor patrol grader, rubber-tired front-end bucket loader, rubber-tired backhoe or comparable equipment, and by the use of hand tools.

3104a Removal of bank slough and slide material includes placement of material at the nearest suitable turnout or disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion

3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen (15) station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser.

Prior to removal of any slough or slide material exceeding fifteen (15) station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, method of disposal, and the disposal site. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of work, based on current BLM Timber Appraisal Production Cost Schedules.

Adjustments in purchase price for completed work shall be made as necessary as and no less than once per year when actual work is ongoing.

3105 The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe and maintaining water dips and water bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.

3106 The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to fifteen (15) station yards in quantity, at any one site. The work includes unlimited multiple sites on all roads required to be maintained by the Purchaser. Prior to repair and replacement of eroded material exceeding fifteen (15) station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, borrow source, and method of repair. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based upon current BLM Timber Sale Appraisal Production Cost Schedules. Adjustments in purchase price for completed work shall be made as necessary, and no less than once per year when actual work is ongoing.

3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way, when directed by the Authorized Officer.

The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of their activities or winter damage during the contract period. Disposal of such vegetative material shall be by scattering below the road.

3108 The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides, or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required by such skidding activity is not considered maintenance and shall be performed at the Purchaser's expense.

3108a The Purchaser shall perform logging operations on gravel and/or bituminous roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer.

SEASONAL MAINTENANCE - 3200

3201 The Purchaser shall perform preventive maintenance at the end of Purchaser's hauling each season and during no haul periods which occur between other operations on the contract area. This includes cross ditching, blockage, removing ruts or other surface irregularities, and all other requirements specified in Section 3100.

3202 The Purchaser shall perform and complete maintenance, specified in Sections 3000, 3100, and 3200, on all roads maintained by him, prior to October 1 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the preceding operating seasons.

3203 The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any road(s) located in an area separate from the area where logging activities will resume.

3204 The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE 3300

3301 The Purchaser shall complete final maintenance and/or damage repairs on all roads used under terms of their contract within 30 calendar days following the expiration of Purchaser's right to cut and remove timber (Sec. 4) and in accordance with Sec.16 (b) of this contract. This work shall include any maintenance and/or damage repairs specified in Sections 3000, 3100, and 3200 necessary to meet the conditions specified in Subsection 3002 and shall be executed in accordance with Subsection 3302 of this section.

The Authorized Officer may grant acceptance of Purchaser's maintenance responsibility in part where certain individual roads or road segments are no longer of any use to the Purchaser's remaining removal operations, providing that all contract requirements as specified under Section 16(b), Special Provisions Sections 3000, 3100, 3200, and 3300 of the maintenance specifications have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

3302 The Purchaser shall perform final road maintenance only when weather or soil moisture conditions are suitable for normal maintenance equipment operations as determined by the Authorized Officer.

If final maintenance is delayed after the date required in Subsection 3301 of this contract by adverse soil moisture or unsuitable equipment operating conditions, the Purchaser will be notified by the Authorized Officer when soil moisture and equipment operating conditions are suitable. The Purchaser shall then be required to complete final maintenance within 30 days.

OTHER MAINTENANCE - 3400

3401 The Purchaser shall repair any damage to road surfaces that was specified under Subsections 3108 and 3108a. **This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material.** This repair is not limited to use of equipment specified in Subsection 3104.

3402 The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

3420 The Purchaser shall perform the following work:

Road No.	Work
19-9-35.3	Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer. Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer. Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation. Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.
19-9-35.5	Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer. Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer. Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation. Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.
19-9-35.6	Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer. Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer. Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation. Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.
19-9-35.7	Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer. Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer. Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation. Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.
19-9-35.8	Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer. Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer. Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation. Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.

20-9-1.11

Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer.

Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer.

Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation.

Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.

20-9-1.12

Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer.

Construct earthen barrier at Sta. 0+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer.

Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation.

Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.

SPUR 2

Construct water bars in accordance with Sheet No. 2 of the Exhibit D and as directed by the Authorized Officer from Sta. 1+25 to 4+00.

Construct earthen barrier at Sta. 1+25 in accordance with Sheet No. 3 of the Exhibit D and as directed by the Authorized Officer.

Scarify full width of subgrade to a depth of 12" and pullback any bermed excavation from Sta. 1+25 to 4+00.

Seed, fertilize, and mulch all scarified and disturbed areas in accordance with Section 1800 of the Exhibit C.

ROAD MAINTENANCE APPRAISAL

SALE NO.
ORC03-TS-2020.0001

SALE NAME:
NEST EGG CT

ROAD NUMBE	MILES
19-9-35.0	0.29
19-9-35.1	0.14
19-9-35.2	0.27
19-9-35.4	0.10
20-9-1.0	0.79
20-9-1.5	0.53
20-9-1.8	0.26
Spur 1	0.04
Spur 2	0.02
Spur 3	0.02
Total	**2.5**

-SUMMARY-

1.	MOVE IN:	$1,214.00
2.	CULVERTS, SLOUGH, SLUMPS, & MISC	$1,493.65
3.	GRADING FOR TIMBER HAUL	$2,869.39
4.	GRADING FOR AGGREGATE HAUL	$0.00
5.	MAINTENANCE ROCK	$17,092.00
6.	OTHER MAINTENANCE	$7,896.59
	TOTAL MAINTENANCE:	**$30,565.63**

ROAD MAINTENANCE APPRAISAL

SALE NO. ORC03-TS-2020.0001

SALE NAME: NEST EGG CT

-APPRAISAL WORKSHEET-

1. MOVE-IN:

EQUIPMENT	MOVE-INS	COST/MOVE	
DUMP TRUCK	1	$89.00	$89.00
COMPACTOR	1	$410.00	$410.00
GRADER	1	$410.00	$410.00
BACKHOE W/ FE LOADER	1	$305.00	$305.00
		TOTAL =	**$1,214.00**

2. CULVERT MAINT., SLOUGH REMOVAL, SLUMP REPAIRS, ETC.

MAINT. OBLIGATION		AVE. COST		
2.5	MILES	$608.00 / MILE =		**$1,493.65**

3. GRADING FOR TIMBER HAUL

	2	2.5	4.9
		TOTAL MILE	4.9
4.9	MILES @	$584.00 / MILE	**$2,869.39**

4. GRADING FOR AGGREGATE HAUL:

MILES @ / MILE =

5. MAINTENANCE ROCK: HALE VALLEY ROCK PRODUCTS

SIZE 1.5-0" APPR FROM

				MILES	
ROYALTY	200	CU. YDS.	$11.15		$2,230.00
PROCESSING	200	CU. YDS.	$0.88		$176.00
SLOW HAUL		CU. YDS.	$0.58		$0.00
MED. HAUL	200	CU. YDS.	$0.88	8.0	$1,408.00
FAST HAUL	200	CU. YDS.	$0.39	25.0	$1,950.00
				TOTAL =	**$5,764.00**

MAINTENANCE ROCK: HALE VALLEY ROCK PRODUCTS

SIZE 3-0" APPR FROM

				MILES	
ROYALTY	400	CU. YDS.	$10.65		$4,260.00
PROCESSING	400	CU. YDS.	$0.88		$352.00
SLOW HAUL	0	CU. YDS.	$0.58		$0.00
MED. HAUL	400	CU. YDS.	$0.88	8.0	$2,816.00
FAST HAUL	400	CU. YDS.	$0.39	25.0	$3,900.00
				TOTAL =	**$11,328.00**

ROAD MAINTENANCE APPRAISAL

SALE NO. ORC03-TS-2020.0001

SALE NAME: NEST EGG CT

6. OTHER MAINTENANCE:

19-9-35.3	Length: 0.25 mi	
Scarification	$422	
Soil Stabilization	$222	
Earthen Barrier	$165	
Waterbars	$330	
		$1,139
19-9-35.5	Length: 0.25 mi	
Scarification	$422	
Soil Stabilization	$222	
Earthen Barrier	$165	
Waterbars	$330	
		$1,139
19-9-35.6	Length: 0.21 mi	
Scarification	$355	
Soil Stabilization	$186	
Earthen Barrier	$165	
Waterbars	$277	
		$983
19-9-35.7	Length: 0.23 mi	
Scarification	$389	
Soil Stabilization	$204	
Earthen Barrier	$165	
Waterbars	$304	
		$1,061
19-9-35.8	Length: 0.15 mi	
Scarification	$253	
Soil Stabilization	$133	
Earthen Barrier	$165	
Waterbars	$198	
		$750
20-9-1.11	Length: 0.26 mi	
Scarification	$439	
Soil Stabilization	$231	
Earthen Barrier	$165	
Waterbars	$343	
		$1,178

20-9-1.12	Length: 0.38 mi	
Scarification	$642	
Soil Stabilization	$337	
Earthen Barrier	$165	
Waterbars	$502	
		$1,646
SPUR 2	Length: 0.1 mi	
Scarification	$169	
Soil Stabilization	$89	
Earthen Barrier	$165	
Waterbars	$132	
		$555
	TOTAL	$7,896.59

SALE NAME Nest Egg CT

NET MBF 5774

EXHIBIT E

ORC03-TS-2020.0001

A. ROAD USE FEES - Payable to Private Company:

COMPANY NAME:	AGREEMENT NUMBER:	ROAD NUMBER	NET MBF	USE FEE per MBF	TOTAL FEES:
Roseburg Resources	C-89	19-9-35.2	366	$ 6.00	$ 2,196.00
Roseburg Resources	C-89	20-9-1.8	834	$ 13.00	$ 10,842.00
			TOTAL USE FEE:		$13,038.00

B. MAINTENANCE FEES:

1. Maintenance and Rockwear Fees Payable to the U.S. (BLM Maintained Roads):

a. Timber Haul:

Surface Type	ROAD NUMBER:	NET MBF	ROAD MILES:	SURFACE REPLACEMENT /MBF/Mile	REGULAR MAINTENANCE Subtotal	/MBF/Mile	Subtotal	TOTAL FEE:
Pavement	20-9-27.1	5774	4.0		$0.00	$0.92	$21,248.32	$21,248.32
Pavement	19-8-3.0	5774	0.16		$0.00	$0.92	$849.93	$849.93
Pavement	19-8-3.0	5774	0.23		$0.00	$0.92	$1,221.78	$1,221.78
Pavement	19-8-3.0	5774	6.2		$0.00	$0.92	$32,934.90	$32,934.90
Pavement	18-8-34.0	5774	4.0		$0.00	$0.92	$21,248.32	$21,248.32
			14.59		$0.00		$77,503.25	$77,503.25

NOD Roads

SALE NAME Nest Egg CT

NET MBF 5774

EXHIBIT E

OR00-TS-

2. ROCKWEAR Fees Payable to the U.S. (OPERATOR Maintained Roads):

a. Timber Haul:

Surface Type	ROAD NUMBER:	NET MBF	ROAD MILES:	SURFACE REPLACEMENT /MBF/Mile	ROCKWEAR Subtotal
Pavement	20-9-1.0	2234	0.07	$0.00	$0.00
Pavement	20-9-1.0	2562	0.33	$0.00	$0.00
Pavement	20-9-1.0	2716	0.12	$0.00	$0.00
Pavement	20-9-1.0	2948	0.07	$0.00	$0.00
Pavement	20-9-1.0	3006	0.06	$0.00	$0.00
Pavement	20-9-1.0	3103	0.12	$0.00	$0.00
Pavement	20-9-1.0	3200	0.3	$0.00	$0.00
Pavement	20-9-1.0	5774	0.7	$0.00	$0.00
Rock	19-9-35.0	195	0.11	$0.60	$12.87
Rock	19-9-35.1	89	0.14	$0.60	$7.48
Rock	19-9-35.0	373	0.10	$0.60	$22.38
Rock	19-9-35.0	480	0.07	$0.60	$20.16
Rock	20-9-1.0	480	0.17	$0.60	$48.96
Rock	20-9-1.0	731	0.17	$0.60	$74.56
Dirt	19-9-35.7	232	0.07	$0.00	$0.00
Dirt	19-9-35.7	597	0.10	$0.00	$0.00
Dirt	19-9-35.8	366	0.15	$0.00	$0.00
Dirt	19-9-35.7	963	0.05	$0.00	$0.00
Rock	20-9-1.0	1791	0.26	$0.60	$279.40
Rock	19-9-35.4	154	0.10	$0.60	$9.24
Dirt	19-9-35.3	77	0.15	$0.00	$0.00
Dirt	Spur 4	58	0.03	$0.00	$0.00
Dirt	19-9-35.3	135	0.10	$0.00	$0.00
Rock	20-9-1.0	2157	0.05	$0.60	$64.71
Rock	Spur 3	77	0.05	$0.60	$2.31
Rock	20-9-1.0	2234	0.07	$0.60	$93.83
Dirt	19-9-35.6	328	0.21	$0.00	$0.00
Dirt	19-9-35.5	135	0.11	$0.00	$0.00
Dirt	19-9-35.5	232	0.13	$0.00	$0.00
Dirt	Spur 2	97	0.08	$0.00	$0.00
Rock	Spur 1	439	0.04	$0.60	$10.54
Dirt	20-9-1.12	328	0.09	$0.00	$0.00
Dirt	20-9-1.12	560	0.15	$0.00	$0.00
Dirt	20-9-1.12	888	0.14	$0.00	$0.00
Rock	20-9-1.5	348	0.13	$0.60	$27.14
Dirt	20-9-1.11	351	0.16	$0.00	$0.00
Dirt	20-9-1.11	504	0.10	$0.00	$0.00
Rock	20-9-1.5	1740	0.24	$0.60	$250.56
Rock	20-9-1.5	2574	0.16	$0.60	$247.10
Rock	19-9-35.2	154	0.05	$0.60	$4.62
Rock	19-9-35.2	231	0.05	$0.60	$6.93
Rock	19-9-35.2	366	0.05	$0.60	$10.98
Rock	20-9-1.8	439	0.20	$0.60	$52.68
Rock	20-9-1.8	834	0.03	$0.60	$15.01
			4.06		$1,261.46

PVT Roads

3. ROAD MAINTENANCE AND/OR ROCKWEAR FEES - Payable to Private Company:

Surface Type	COMPANY NAME:	AGREEMENT NUMBER:	ROAD NUMBER	NET MBF	ROAD MILES:	MAINTENANCE AND/OR ROCKWEAR FEE /MBF/MILE	TOTALS:
							$0.00
							$0.00
					0		$0.00

4. OPERATOR MAINTENANCE WILL BE REQUIRED ON APPROX. 2.5 MILES OF ROAD. (SEE EXHIBIT D)

SALE VOLUME: 5774 MBF.

SUMMARY OF ROAD USE & ROAD MAINTENAN	ROAD USE FEES: TOTAL:	$ /MBF	ROCKWEAR FEES TOTAL:	$/MBF	MAINTENANCE FEES TOTAL:	$/MBF:
1. COMPANY-OWNED ROADS:	$13,038.00	$2.26	$0.00	$0.00		$0.00
2. BLM-MAINTAINED ROADS:			$0.00	$0.00	$77,503.25	$13.42
3. OPERATOR-MAINTAINED ROADS:			$1,261.46	$0.22		$0.00
	$13,038.00	$2.26	$1,261.46	$0.22	$77,503.25	$13.42

MAINTENANCE OBLIGATION PAYABLE TO BLM $78,764.71 $13.64/MBF

Coos Bay BLM $23,359.71

NOD BLM $55,405.00

United States
Department of the Interior
Bureau of Land Management

Timber Appraisal

Sale Name:	Nest Egg CT	**Sale Date:**	Friday, November 22, 2019
BLM District:	Coos Bay DO	**Unit of Measure:**	16' MBF
Contract #:	ORC03-TS-2020.0001	**Contract Term:**	36 months
Sale Type:	Advertised	**Contract Mechanism:**	5450-3 Sale of Timber - Lump Sum

Content

Timber Appraisal Summary
Stumpage Summary
Unit Summary
Stump to Truck
Transportation
Engineering Allowances
Other Allowances

Prepared By: Kirkland, Travis S - 10/10/2019
Approved By: Davis, Brian P - 10/15/2019

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Douglas	19S	9W	35	E1/2, NE1/4NW1/4, SE1/4NW1/4	Willamette
O&C	Douglas	20S	9W	1	Lots 18-21, 28, 29	Willamette
O&C	Douglas	20S	9W	2	Lots 5, 6	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	5,128.0	5,316.0	5,332.0	82,676	1,059	16,757
Red Alder	644.0	715.0	732.0	15,952	1,025	5,779
Western Hemlock	1.0	1.0	1.0	15	2	6
Western Redcedar	1.0	1.0	1.0	4	0	4
Totals	**5,774.0**	**6,033.0**	**6,066.0**	**98,647**	**2,086**	**22,546**

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
32.0	230.0	4.0	266.0	21.7

Comments:

Logging Costs

Stump to Truck	$993,898.02
Transportation	$364,038.81
Road Construction	$356,321.84
Maintenance/Rockwear	$109,330.34
Road Use	$13,038.00
Other Allowances	$83,344.97
Total:	**$1,919,971.98**
Total Logging Cost per MBF:	**$332.52**

Utilization Centers

Location	Distance	% of Net Volume
Eugene	54.0 miles	15 %
Noti	38.0 miles	85 %

Profit & Risk

Profit	9 %
Risk	3 %
Total Profit & Risk	**12 %**

Tract Features

Quadratic Mean DBH	15.0 in
Average GM Log	60 bf
Average Volume per Acre	21.7 mbf
Recovery	95 %
Net MBF volume:	
Green	5,774.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	28 %
Average Yarding Slope	20 %
Average Yarding Distance	250 ft
Cable Logging:	
Percent of Sale Volume	72 %
Average Yarding Slope	55 %
Average Yarding Distance	406 ft
Aerial Logging:	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft

Cruise

Cruise Completed	August 2019
Cruised By	Kirkland, Herron, Murphy

Cruise Method

Thinning Portion was cruised with a variable plot cruise using a 20 basal area factor. 194 plots were put in and 92 trees were measured. The group selection and RW were cruised with a combination of 3P and BLM 100. DF and RA were 3P'd with 121 sample trees. WH and WRC were cruised with BLM 100.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF		Appraised Value
Douglas Fir	16,757	5,128.0	$456.36	$54.76	$332.52	$0.00	$69.10		$354,344.80
Red Alder	5,779	644.0	$410.09	$49.21	$332.52	$0.00	$41.10	*	$26,468.40
Western Hemlock	6	1.0	$380.86	$45.70	$332.52	$0.00	$38.10	*	$38.10
Western Redcedar	4	1.0	$640.00	$76.80	$332.52	$0.00	$230.70		$230.70
Totals	**22,546**	**5,774.0**							**$381,082.00**

* Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value)

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir				66.0 %	30.0 %	4.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill		Camp Run
Red Alder		22.0 %	43.0 %	35.0 %			

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Western Hemlock				78.0 %	19.0 %	3.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill			Camp Run
Western Redcedar							100.0 %

Unit: 1

Net Volume/Acre: 17.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	386.0	400.0	402.0	1,303
Red Alder	92.0	103.0	105.0	712
Western Hemlock	1.0	1.0	1.0	6
Western Redcedar	1.0	1.0	1.0	4
Totals:	**480.0**	**505.0**	**509.0**	**2,025**

Regeneration Harvest	3.0
Partial Cut	24.0
Right of Way	0.0
Total Acres:	**27.0**

Unit: 2

Net Volume/Acre: 19.3 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	3,083.0	3,196.0	3,205.0	10,367
Red Alder	412.0	456.0	468.0	3,697
Totals:	**3,495.0**	**3,652.0**	**3,673.0**	**14,064**

Regeneration Harvest	22.0
Partial Cut	159.0
Right of Way	0.0
Total Acres:	**181.0**

Unit: 3

Net Volume/Acre: 21.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1,100.0	1,140.0	1,144.0	3,628
Red Alder	84.0	94.0	96.0	832
Totals:	**1,184.0**	**1,234.0**	**1,240.0**	**4,460**

Regeneration Harvest	7.0
Partial Cut	47.0
Right of Way	0.0
Total Acres:	**54.0**

Unit: RW

Net Volume/Acre: 153.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	559.0	580.0	581.0	1,459
Red Alder	56.0	62.0	63.0	538
Totals:	**615.0**	**642.0**	**644.0**	**1,997**

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	4.0
Total Acres:	**4.0**

Comments:
Thinning and Group Selection\RW were cruised in separate units and added together to calculate total sale volume.

Total Stump To Truck	Net Volume	$/MBF
$993,898.02	5,774.0	$172.13

Stump to Truck: Falling, Bucking, Yarding, & Loading

Yarding System	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Cable: Small Yarder	GM MBF	4,231.0	$189.82	$803,128.42	fuel $3.00/gal, 4500 bf/load, 2 saws @$350/day, 3.5 loads/day
Wheel Skidder	GM MBF	1,712.0	$107.05	$183,269.60	Fuel $3.00/gal, 4500 bf/load, 6 loads/day
Subtotal				**$986,398.02**	

Additional Costs

Item	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Lift Tree	Tree	50.0	$150.00	$7,500.00	Lift trees to avoid hanging over main roads or avoid extra long spans
Subtotal				**$7,500.00**	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Subtotal				**$0.00**	

Comments:
ground based and RW logging included in wheel skidder

Total	Net Volume	$/MBF
$364,038.81	5,774.0	$63.05

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	$/Unit of Measure	Total Cost	% of Sale Volume
Eugene	54.0	Hardwood Saw Logs	GM MBF	715.0	$78.35	$56,020.25	15 %
Noti	38.0	Conifer Saw Logs	GM MBF	5,318.0	$57.92	$308,018.56	85 %

Engineering Allowances

Total	Net Volume	$/MBF
$478,690.18	5,774.0	$82.90

Cost Item	Total Cost
Road Construction:	$356,321.84
Road Maintenance/Rockwear:	$109,330.34
Road Use Fees:	$13,038.00

Comments:
Ex E= $78764.71
Ex D= $30,565.63
Total = $ 109,330.34

Total	Net Volume	$/MBF
$83,344.97	5,774.0	$14.43

Environmental Protection

Cost item	Total Cost
Equipment Washing	$1,625.00
Subtotal	**$1,625.00**

Logging

Cost item	Total Cost
asphalt protection	$1,950.00
Flaggers	$37,683.00
Subtotal	**$39,633.00**

Miscellaneous

Cost item	Total Cost
Snag creation mechanical	$1,850.40
Snag creation girdling	$18,837.10
Subtotal	**$20,687.50**

Slash Disposal & Site Prep

Cost item	Total Cost
Landing Pullback	$2,455.20
pile burning	$3,489.63
Landing piling\covering	$6,376.37
slash, lop and scatter	$9,078.27
Subtotal	**$21,399.47**

Comments:
Vehicle washing - Yarder, shovel, processor, dozer, feller/buncher. Flaggers-15 acres Yarding over w. fork smith rd, avg. 21 mbf per acre = 315 mbf, 4.5 mbf per load at 3 loads per day = 23 days x 8 hours days = 184 hours for yarding. 41 acres falling beside roads. avg 21 mbf per acre= 861 mbf * 8.5 mbf cut per day=101 days * 6 hrs a day= 606 hrs for cutting. 184+606=790 hrs * 23.85/hr * 2 flaggers = $37683.00. Snag creation girdling- 1130 trees/24 trees per day=47.1 days * $400 a day for cutter = 18833.33. Converted to per tree = 16.67$*1130=$18837.10. Snag Creation mechanical-180trees / 20 trees per hr= 9 hrs *$150/hr +$500 move in = $1850.40. See slash appraisal for SD stip costs. wood chips for asphalt protection- $37.50 per ton*36 tons=$1350.00. chip transportation $150 per load * 4 loads =$600.00. $1350+$600=$1950.00

Form 5440-9
(November 2011)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEPOSIT AND BID FOR

☑ **TIMBER or TIMBER AND OTHER WOOD PRODUCTS**

☐ **VEGETATIVE RESOURCES (Other Than Timber)**

Name of Bidder	
Tract Number	ORC03-TS-2020.0001
Sale Name	Nest Egg CT
Sale Notice *(dated)*	10/24/2019
BLM District	Coos Bay

☐ Sealed Bid for Sealed Bid Sale	☑ Written Bid for Oral Auction Sale
Time for opening sealed bids ☐ a.m. ☐ p.m.	Sale commences 10:00 ☑ a.m. ☐ p.m.
On *(date)* Place	On *(date)* 11/22/2019 Place Coos Bay District Office

In response to the above dated Sale Notice, the required deposit and bid are hereby submitted for the purchase of designated timber/vegetative resource on the tract specified above.

Required bid deposit is $38,200.00 and is enclosed in the form of:

☐ cash ☐ money order ☐ cashier's check ☐ certified check ☐ bank draft

☐ bid bond of corporate surety on approved list of the United States Treasury ☐ guaranteed remittance approved by the authorized officer.

IT IS AGREED That the bid deposit shall be retained by the United States as liquidated damages if the bid is accepted and the undersigned fails to execute and return the contract, together with any required performance bond and any required payment within 30 days after the contract is received by the successful bidder. It is understood that no bid for less than the appraised price on a unit basis per species will be considered. If the bid is rejected the deposit will be returned.

BID SCHEDULE – LUMP SUM SALE

NOTE: Bidders should carefully check computations in completing the Bid Schedule

BID SUBMITTED					ORAL BID MADE	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir		5,128	x 69.10	= 354,344.80	x	=
Red Alder		644	x 41.10	= 26,468.40	x	=
Western Hemlock		1	x 38.10	= 38.10	x	=
Western Red Cedar		1	x 230.70	= 230.70	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
			x	=	x	=
TOTAL PURCHASE PRICE				381,082.00		

(Continued on page 2)

If sale contract is executed, undersigned is liable for total purchase price even though the quantity cut, removed, or designated for taking is more or less than the total estimated volume or quantity shown above. Undersigned certifies bid was arrived at by bidder or offeror independently, and was tendered without collusion with any other bidder or offeror. In submitting or confirming this bid, undersigned agrees to the foregoing provisions, applicable regulations, and certifies that he is authorized to act as, or on behalf of, the bidder.

Bid submitted on *(date)*

(Check appropriate box, sign in ink, and complete the following)

☐ Signature, if firm is individually owned	Name of firm *(type or print)*
☐ Signatures, if firm is a partnership or L.L.C.	Business address, include zip code *(type or print)*
☐ Corporation organized under the state laws of	*(To be completed following oral bidding)*
Signature of Authorized Corporate Signing Officer	I HEREBY confirm the above oral bid By *(signature)*
Title	Date

Submit bid, in *duplicate*, to qualify for either an oral auction or sealed bid sale together with the required bid deposit made payable to the Department of the Interior – BLM. Oral Auction – Submit to Sales Supervisor prior to closing of qualifying period for tract.	Sealed Bid – Send to District Manager, who issued the sale notice, in a sealed envelope marked on the outside: (1) "Bid for Timber" or (1a) "Vegetative Resources Other Than Timber" (2) Time bids are to be opened (3) Legal description

NOTICES

The Privacy Act and 43 CFR 2.48(d) require that you be furnished with the following information in connection with the information required by this form.

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

PRINCIPAL PURPOSE: To qualify an oral auction bidder, and then if successful, to bind bidder to certain contract conditions.

ROUTINE USES: To determine that an individual is qualified to participate in oral auction bidding, and, as surety that bidder will fulfill contract requirements.

EFFECT OF NOT PROVIDING INFORMATION: Filing this deposit and bid information is necessary only when an individual wishes to participate in a sealed or auction bid sale for timber or vegetative resources.

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INSTRUCTIONS TO BIDDERS

1. *AUTHORITY* – Timber located on the revested Oregon and California Railroad Grant Lands and on the reconveyed Coos Bay Wagon Road Grant Lands is administered and sold pursuant to authority of the Act of August 28, 1937 (50 Stat. 874, 43 U.S.C. 1181a), timber located on other lands and other vegetative resources on all public lands of the United States under jurisdiction of the Bureau of Land Management are administered and sold pursuant to authority of the Act of July 31, 1947 (61 Stat. 681), as amended, by the Act of July 23, 1955 (69 Stat. 367; 30 U.S.C. 601 et. seq.). Regulations of the Secretary of the Interior governing sale of timber are codified in 43 CFR Group 5400.

2. *QUALIFICATIONS OF BIDDERS* – A bidder for sale of timber/vegetative resources must be either (a) a citizen of the United States, (b) a partnership composed wholly of such citizens, (c) an unincorporated association composed wholly of such citizens, or (d) a corporation authorized to transact business in the State in which the timber/vegetative resource is located.

3. *INSPECTION OF TIMBER/VEGETATIVE RESOURCES* – Bidder is invited, urged, and cautioned to inspect the timber/vegetative resource prior to submitting a bid. By executing the timber/vegetative resource sale contract, bidder warrants that the contract is accepted on the basis of his examination and inspection of the timber/vegetative resource and his opinion of its value.

4. *DISCLAIMER OF WARRANTY* – Government expressly disclaims any warranty of the fitness of the designated timber/vegetative resource for any purpose of the bidder; all timber/vegetative resources are to be sold "As Is" without any warranty of merchantability by Government. Any warranty as to the quantity or quality of timber/vegetative resource to be sold is expressly disclaimed by Government.

5. *BIDS* – Sealed or written bids for not less than the advertised appraised price, per timber/vegetative resource must be submitted in duplicate to the District Manager who issued *Timber/Vegetative Resource Sale Notice*.

(a) *Sealed Bid Sales* – Bids will be received until time for opening which is set out in the Notice. Enclose both copies of bid with required bid deposit in a sealed envelope marked on the outside *Bid for Timber/Vegetative Resources*, time bid is to be opened, tract number, and legal description of land on which timber/vegetative resource is located. In event of a tie, the high bidder shall be determined by lot from among those who submitted the tie bids.

(b) *Auction Sales* – Submission of the required bid deposit and a written bid is required to qualify for oral bidding. Oral bidding shall begin from the highest written bid. No oral bid will be considered which is not higher than the preceding bid. In the event there is a tie in high written bids, and no oral bidding occurs, the bidder who was the first to submit his bid deposit and written bid shall be declared the high bidder. If the officer conducting the sale cannot determine who made the first submission of high tie written bids, the high bidder shall be determined by lot. High bidder must confirm his bid, in writing, immediately upon being declared high bidder.

(c) Except as otherwise provided in 43 CFR 5442.2, bids will not be considered in resale of timber/vegetative resource remaining from an uncompleted contract from any person or affiliate of such person who failed to complete the original contract because of (1) cancellation for the purchaser's breach or (2) through failure to complete payment by expiration date.

(d) When it is in the interest of the Government to do so, it may reject any and all bids and may waive minor deficiencies in bids or in sale advertisement.

6. *BID FORMS* – All sealed, written bids, and confirmation of oral bids shall be submitted on forms provided by Government.

(a) *Lump Sum Sales* – Bids shall specify (1) Bureau of Land Management estimated volume, (2) price per unit, and (3) total purchase price. Estimated volume and price per unit are to be used for administrative and appraisal purposes only. Upon award of contract, high bidder shall be liable for total purchase price, including any adjustment which may be made as a result of reappraisal if an extension of time is granted, even though quantity of timber/vegetative resource actually cut, removed, or designated for taking is more or less than the estimated volume or quantity listed.

(b) *Timber Scale Sales* – Bids must state price per thousand board feet that will be paid for each species. High bidder will be determined by multiplying bid price per thousand board feet per species by Bureau of Land Management estimate of volume of each species. Purchaser shall be liable for purchase price of all merchantable timber sold under contract even though all such timber is not actually cut and removed prior to expiration of time for cutting and removal as specified in contract.*

7. *BID DEPOSIT* – All bidders must make a deposit of not less than the amount specified in the *Timber/Vegetative Resource Notice*. Deposit may be in the form of cash, money orders, bank drafts, cashiers or certified checks made payable to the Department of the Interior – BLM, bid bonds of a corporate surety shown on the approved list of the United States Treasury Department*, or any approved guaranteed remittance approved by the Contracting Officer. Upon conclusion of bidding, the bid deposit of all bidders, except high bidder, will be returned. The cash deposit of the successful bidder may be applied toward the required sale deposit and/or the purchase price. Cash not applied to the sale deposit or the purchase price, or a corporate surety bid bond, will be returned at the time the contract is signed by the Government.

8. *AWARD OF CONTRACT* – Government may require high bidder to furnish such information as is necessary to determine the ability of bidder to perform the obligation of contract. Contract will be awarded to high bidder, unless he is not qualified or responsible or unless all bids are rejected. If high bidder is not qualified or responsible or fails to sign and return the contract together with required performance bond and any required payment, contract may be offered and awarded to the highest bidders qualified, responsible, and willing to accept the contract.

9. *TIMBER/VEGETATIVE RESOURCE SALE CONTRACT* – To be executed by purchaser, has been prepared by Government, and may be examined in the District Manager's office.

10. *PERFORMANCE BOND* –

(a) A performance bond in an amount of not less than 20 percent of total purchase price is required, but the amount of the bond shall not be in excess of $500,000, except when the purchaser opts to increase the minimum bond to permit cutting prior to payment as provided in 43 CFR 5451.2, or in the event the purchaser is a holder of an unresolved default the bond may be increased as provided in 43 CFR 5450.1(b). Performance bond may be (1) bond of a corporate surety shown on approval list issued by the United States Treasury Department and executed on an approved standard form, (2) personal surety bond executed on an approved standard form if Government determines principals and bondsman are capable of carrying out the terms of the contract, (3) cash bonds, (4) negotiable securities of the United States, or (5) any guaranteed remittance approved by the Contracting Officer.

(b) If purchaser elects to cut timber without skidding or yarding it to a loading point or removing it prior to the payment of the second or subsequent installments, Government shall require an increase in amount of performance bond initially required by an amount equal to the value of timber to be cut. Such increase must be on a bond rider form supplied by Government and be approved, in writing, by Government prior to cutting timber covered by the bond increase. This increased amount of bond shall be used to assure payment for timber cut in advance of payment.*

11. *PAYMENT BOND* – If purchaser elects to (a) cut and remove timber, or (b) remove timber already cut which has been secured by an increased performance bond as provided in paragraph 10(b) above, before payment of the second or subsequent installments, Government shall require a payment bond on a form supplied by Government. Purchaser shall obtain written approval from Government of payment bond prior to cutting and/or removal of timber covered by the bond. Payment bond shall be used to assure payment for timber cut and/or removed in advance of payment.*

12. *PAYMENT OF PURCHASE PRICE* – For sales of $500 or more, Government may allow payment by installments. Except as discussed in paragraphs 10 and 11 above, no part of any timber/vegetative resource sold may be severed, cut, or removed unless advance payment has been made as provided in contract.

13. *LIQUIDATED DAMAGES* – Within thirty (30) days from receipt of *Timber/Vegetative Resources Sale Contract*, the successful bidder shall sign contract and return it to Government, together with required bond and any required payment. If successful bidder fails to comply within the stipulated time, his bid deposit shall be retained by Government as liquidated damages.

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(*Applies to Timber Only)

14. *NINETY-DAY SALES* – If no bid is received within time specified in the advertisement of sale and if Government determines that there has been no significant rise in the market value of timber/vegetative resource, it may, in its discretion, keep the sale open, not to exceed ninety (90) days.

15. *UNAUTHORIZED USE OF GOVERNMENT PROPERTY* – A sale may be refused to high bidder who has been notified that he has failed to make satisfactory arrangements for payment of damages resulting from unauthorized use of, or injury to, property of the United States.

16. *EQUAL OPPORTUNITY CLAUSE* – This contract is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the nondiscrimination clauses. Copies of this order may be obtained from the District Manager. 43 CFR 60-1.7(b) requires that the Equal Opportunity *Compliance Report Certification* will be completed by prospective contractors. Certification may be obtained from District Manager.

17. *LOG EXPORT* – All timber offered for sale except as noted in the *Timber Sale Notice* is restricted from export from the United States in the form of unprocessed timber and cannot be used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs, and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three quarters (8-3/4) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end product use; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimensions or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 common or better. Timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacture of eight and three quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles. In event purchaser wishes to sell any or all of timber restricted from export in the form of unprocessed timber, the buyer, exchanges, or recipient shall be required to comply with contractual provisions relating to "*unprocessed timber*". Special reporting, branding and painting of logs may be included in contract provisions.*

18. *DETAILED INFORMATION* – Detailed information concerning contract provisions, bid, performance bond forms, tract location maps, and access conditions may be obtained from the District Manager. All persons interested in bidding on the products listed are encouraged to familiarize themselves with all such detailed information.