

EXHIBIT "B"

FOREST ROAD SPECIFICATIONS

| SUBGRADE WIDTH | SURFACED WIDTH | POINT TO POINT | STATION TO STATION | DRAINAGE |
|----------------|----------------|----------------|--------------------|-----------|
| 14 feet | N/A | 2A to 2B | 0+00 to 11+60 | OUTSLOPED |
| 14 feet | N/A | 2C to 2D | 0+00 to 5+50 | OUTSLOPED |
| 16 feet | 12 feet | 3A to 3B | 0+00 to 23+60 | DITCH |
| 16 feet | 12 feet | 3C to 3D | 0+00 to 2+00 | DITCH |
| 16 feet | 12 feet | 3E to 3F | 0+00 to 1+80 | DITCH |
| 16 feet | 12 feet | 3G to 3H | 0+00 to 7+30 | DITCH |
| 14 feet | N/A | 3I to 3J | 0+00 to 1+20 | OUTSLOPED |
| 16 feet | 12 feet | 5A to 5B | 0+00 to 5+50 | DITCH |
| 16 feet | 12 feet | 5C to 5D | 0+00 to 14+40 | DITCH |
| 14 feet | N/A | 5E to 5F | 0+00 to 0+70 | OUTSLOPED |
| 16 feet | 12 feet | 5G to 5H | 0+00 to 2+75 | DITCH |
| 14 feet | N/A | 5J to 5K | 0+00 to 1+25 | OUTSLOPED |
| 16 feet | 12 feet | 6A to 6B | 0+00 to 4+00 | DITCH |
| 16 feet | 12 feet | 6C to 6D | 0+00 to 2+65 | DITCH |
| 16 feet | 12 feet | 6E to 6F | 0+00 to 0+90 | DITCH |
| 16 feet | 12 feet | 6G to 6H | 0+00 to 2+80 | DITCH |
| 16 feet | 14 feet | I1 to I2 | 0+00 to 132+60 | DITCH |
| 16 feet | 12 feet | I3 to I4 | 0+00 to 52+80 | DITCH |
| 16 feet | 12 feet | I5 to I6 | 0+00 to 6+00 | DITCH |
| 16 feet | 12 feet | I7 to I7A | 0+00 to 3+00 | DITCH |
| 16 feet | 12 feet | I8 to I11 | 87+30 to 112+80 | DITCH |
| 16 feet | 12 feet | I9 to I10 | 0+00 to 1+50 | DITCH |
| 16 feet | 12 feet | I11 to I12 | 0+00 to 25+78 | DITCH |
| 16 feet | 12 feet | I11 to I13 | 112+80 to 167+45 | DITCH |

CLEARING. This work shall consist of clearing, removing, and disposing of all trees, snags, down timber, brush, surface objects, and protruding obstructions within the clearing limits.

Where clearing limits have not been staked, the clearing limits shall extend 10 feet back of the top of the cutslope and 10 feet out from the toe of the fill slope, or as directed by STATE. Clearing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing debris shall not be left lodged against standing trees.

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CLEARING. All danger trees, leaners, and snags outside the clearing limits which could fall and hit the road shall be felled.

GRUBBING. This work shall consist of the removal or digging out of stumps and protruding objects.

All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cutslopes shall be removed. Grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Grubbing debris shall not be left lodged against standing trees.

CLEARING AND GRUBBING DISPOSAL. Scatter through openings in the timber outside of the cleared right-of-way, except areas where end-haul is required. In areas where end-haul is required, clearing and grubbing debris shall be fully contained and hauled to a designated waste area.

EXCAVATION. Excavation and grading shall not be done when weather and/or ground conditions are such that damage will result to existing subgrade or cause excessive erosion.

Excavation shall conform to STATE- engineered lines, grades, dimensions, and plans when provided.

All suitable excavated material shall be used where possible for the formation of fills, shoulders, and drainage structure backfill. Embankment materials shall be free of woody debris, brush, muck, sod, frozen material, and other deleterious materials. All fills and drainage structure backfill shall be machine compacted in lifts not to exceed 8 inches in depth, according to the specifications in Exhibit B.

Unless road design plans show otherwise, all roads shall be on a balanced cross section, except when the slope is over 50 percent, the road shall be on full bench for the width specified.

Excess excavation shall not be sidecast where material will enter a stream course or where material will accumulate in areas deemed a high landslide hazard location by STATE.

ROAD WIDTH LIMITATIONS. PURCHASER shall obtain advance written approval from STATE to construct the road to a greater width than specified. Extra subgrade width shall be required for:

Fill Widening. Add to each fill shoulder 1 foot for fills 3 feet to 6 feet high; 2 feet for fills over 6 feet high.

Curve Widening. Widen the inside shoulder of all curves as follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

Ditch. Construct "V" ditch 3 feet wide and to a depth of 1 foot below subgrade. Subgrade shall be crowned at 4 to 6 percent.

Outslope. Road subgrade shall be outsloped at 4 to 6 percent.

Ditchouts. Construct ditchouts as marked in the field or as directed by STATE.

TURNOUTS. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 25 feet, or as staked on the ground, plus 25-foot approaches at each end.

Location: As marked in the field.

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GRADING

Back Slopes

Fill Slopes

| | | |
|------------------------------------|-------------------|-------------|
| Rock | Vertical to 1/4:1 | Not steeper |
| Common - side slopes 50% and over | 3/4:1 | than 1½:1 |
| Common - side slopes less than 50% | 1:1 | |
| Common - turnpike (level) section | 2:1 | |

Top of cutslope shall be rounded.

LANDINGS. Landings shall be constructed no less than 50 feet wide and no more than 70 feet wide. Surface is to be crowned for drainage, with general grade no more than 3 percent. Surface as shown on Exhibit B.

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet at locations marked in the field.

SEASONAL WINTERIZATION. All unrocked roads (2A to 2B, 2C to 2D, 3I to 3J, 5E to 5F, and 5J to 5K) or unfinished subgrades shall be waterbarred in accordance with Specifications in Exhibit G, and blocked from vehicular traffic prior to November 1, annually and as directed by STATE.

GENERAL ROAD CONSTRUCTION INSTRUCTIONS

- (1) Excavated Materials. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit B.
- (2) Fill Armor and Energy Dissipator Construction. Where rock is used for fill armor, rock shall be placed and tamped at a 1½:1 slope, beginning at the fill toes. Where rock is used for an energy dissipator, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit H.

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FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS

- (1) Timber Removal. Remove all trees within the posted Right-of-Way Boundary, as specified in Section 55, Designated Timber.
- (2) Excavated Materials. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit B.
- (3) Culvert Replacement and Culvert Installation. All woody debris encountered during fill excavation shall be removed. All waste materials shall be hauled to nearby waste areas and shall be uniformly sloped and compacted for drainage. Fill construction backfill shall consist of select materials and be obtained from borrow pits, as directed by STATE. Backfill materials shall be hauled in where necessary and thoroughly compacted in accordance with Exhibit B. Crushed rock shall be used for backfilling excavation trenches less than 3 feet deep. Removed culverts shall be hauled to an approved refuse site off of STATE land.
- (4) Drainage Ditches. Restore or construct ditchlines, including ditchouts, as directed by STATE. Clean out all culvert inlets and outlets for a 10-foot radius. Re-establish or construct culvert sediment basins. Waste materials from drainage ditches and sediment basins shall not be pulled across existing surfacing rock, but shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels. Install a culvert marker at each newly installed culvert and at each existing culvert that is missing a marker that could be reached by a grader blade.
- (5) Fill Armor and Energy Dissipator Construction. Where rock is used for fill armor, rock shall be placed and tamped at a 1½:1 slope, beginning at the fill toes. Where rock is used for an energy dissipator, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit H.
- (6) Ditch Armoring. Where ditch armoring is required, 6" pit-run rock will be hauled in and used for surfacing the bottom and sides of the ditch, as directed by STATE.
- (7) Equipment. All excavation and riprap placement shall be performed using a minimum 1½ cubic yard, track-mounted excavator.
- (8) Subgrade Preparation and Application of Surfacing Rock.
 - (a) Complete culvert installations, drainage ditches, and other specified work prior to the application of new surfacing rock.
 - (b) Cut out all potholes and/or washboard sections from the existing surfacing.
 - (c) Apply required 1½"-0" or 4"-0" base patching and leveling rock, as directed by STATE.
 - (d) Process (grade and mix) the existing surfacing and added base rock. Provide for a crown of 4 to 6 percent, (½ inch per foot), and compact in accordance with Exhibit B. Subgrade shall be crowned at 4 to 6 percent.

- (e) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in Exhibit B.

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FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS

- (9) Additional Clearing Instruction for Road I11 to I13, I11 to I12 and I9 to I10.
- (a) Clear broken trees, limbs and woody debris from roads and fill slopes.
 - (b) The upper clearing limit has been staked (posted) from station 117+92 to 126+04, and station 128+03 to 147+49 for road section I11 to I13, are posted with Right-of-way Boundary Signs. Stumps requiring grubbing and removal that are located on the downhill side of these road sections are marked with orange paint.
 - (c) For Road I11 to I12, stumps located on the downhill side that require grubbing and removal are marked with orange paint.
 - (d) All clearing and grubbing debris shall be hauled to the Lost Quarry Stockpile Site and disposed of by burning.
- (10) Roadside Brushing. Complete brushing requirements according to specifications in Exhibit J.

EXHIBIT "B"
FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

| <u>Segment</u> | <u>Station</u> | <u>Work Description</u> |
|----------------|----------------|---|
| I1 to I2 | 0+00 | Begin road improvement. |
| | 83+65 | Culvert replacement. Utilize 20 cubic yards of 1½" -0" crushed rock for culvert bedding and backfill. |
| | 132+60 | End road improvement. |
| I3 to I4 | 0+00 | Begin road improvement. |
| | 4+80 | Culvert replacement. Utilize 20 cubic yards of 1½" -0" crushed rock for culvert bedding and backfill. |
| | 35+80 | Fill reconstruction. Utilize 30 cubic yards of 1½" -0" crushed rock for culvert bedding and backfill. Utilize 40 cubic yards of 4"-0" for base rock replacement. Utilize 70 cubic yards of 24"-6" riprap rock for fill armor and energy dissipator construction. |
| | 52+80 | End road improvement. |
| I5 to I6 | 0+00 | Begin road improvement. |
| | 6+00 | End road improvement. |
| I7 to I7A | 0+00 | Begin construction of 55 foot radius curve and widen road junction. Widen inside of curve by an additional 8 feet. Remove culvert at existing junction, and backfill with 4"-0" crushed rock. Construct new ditch to drain water away from junction. |
| | 1+00 | End 50 foot radius curve. |
| I8 to I11 | 87+30 | Begin road improvement. |
| | 89+50 | Improve existing turnout left to include 25' approaches, a turnout length of 50', and a width of 8'. |
| | 91+56 | Culvert replacement, install with 30° skew and at a 3% gradient. Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction. |
| | 95+41 | Culvert replacement, install at a 6% gradient. Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction. Existing fill width is too narrow, reconstruct fill width to allow for a 16' subgrade. |

EXHIBIT "B"
FOREST ROAD SPECIFICATIONS

SPECIFIED ROAD IMPROVEMENT INSTRUCTIONS

| <u>Segment</u> | <u>Station</u> | <u>Work Description</u> |
|----------------|----------------|---|
| I8 to I11 | 96+51 | End fill width reconstruction. |
| | 97+25 | Existing fill width is too narrow. Reconstruct fill width to allow for a 16' subgrade. |
| | 97+78 | Construct new turnout left with 25' approaches, 100' in length, and 8' in width. |
| | 102+56 | Culvert replacement, install with a 30° skew and at a 6% gradient. Construct ditch leading from the culvert outlet to daylight point. Utilize 20 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction.. Existing fill width is too narrow, reconstruct fill width to allow for a 16' subgrade. |
| | 103+05 | Construct new turnout left with 25' approaches, a turnout length of 50' and 8' in width. |
| | 106+95 | Waste Area. |
| | 112+38 | Culvert replacement, install with a 3% gradient . Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill.. Construct ditch leading from the culvert outlet to daylight point. Begin removal of berms and stumps from outer road edge. |
| | 112+80 | End Road Improvement. |
| I9 to I10 | 0+00 | Begin road improvement. Straighten existing alignment. Install culvert. Utilize 15 cubic yards of 1"-0" Crushed rock for culvert bedding and backfill. Improve road prism as described in Exhibit B. |
| | 1+00 | Construct new turnout left with 25' approaches, a turnout length of 50' and 8' in width. |
| | 1+50 | End road improvement. |
| I11 to I13 | 112+80 | Begin Road Improvement. |
| | 113+07 | Culvert replacement, install with a 3% gradient. Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Construct ditch leading from the culvert outlet to daylight point. |
| | 113+61 | Begin application of subgrade reinforcement rock. End removal of berms and stumps from outer edge of road. |
| | 114+61 | End application of subgrade reinforcement rock. |

115+63

Install culvert, install with a 30° skew and at a 4% gradient.. Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill.

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SPECIFIED ROAD IMPROVEMENT INSTRUCTIONS

| <u>Segment</u> | <u>Station</u> | <u>Work Description</u> |
|----------------|----------------|--|
| 111 to 113 | 115+82 | Improve existing turnout left to include 25' approaches, a turnout length of 50', and a width of 8'. |
| | 117+41 | Begin improvement of curve to a 125' radius with 3.2' of curve widening. |
| | 117+92 | Begin road re-alignment. Move centerline into the hillside, and construct road according to ODF plans and to obtain the road widths specified in Exhibit B. |
| | 118+34 | Culvert replacement , install with a 30° skew and at a 6% gradient . Utilize 20 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 20 cubic yards of 24"-6" riprap rock for energy dissipator construction. Remove and dispose of old culvert laying on outer edge of road. |
| | 118+85 | End improvement of curve with 125' radius. |
| | 119+02 | Improve existing turnout left to include 25' approaches, a turnout length of 50', and a width of 8'. |
| | 119+26 | Begin improvement of curve to a 100' radius with 4.0' of curve widening. |
| | 120+12 | End improvement of curve with 100' radius. |
| | 120+66 | Begin improvement of curve to a 85' radius with 4.7' of curve widening. |
| | 121+36 | End improvement of curve to a 85' radius. |
| | 124+86 | Begin improvement of curve to a 100' radius with 4.0' of curve widening. |
| | 124+93 | Install culvert with a 30° skew and at a 6% gradient . Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction.. |
| | 125+04 | Improve existing turnout left to include 25' approaches, a turnout length of 100', and a width of 8'. |
| | 125+43 | End improvement of curve to a 100' radius. |
| | 126+04 | End road re-alignment. |
| | 128+03 | Begin road re-alignment. Move centerline into the and construct road according to ODF plans and to obtain the road widths specified in Exhibit B. |
| | 128+32 | Improve existing turnout left to include 25' tapers, a turnout length of 100', and a width of 8'. |

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SPECIFIED ROAD IMPROVEMENT INSTRUCTIONS

| <u>Segment</u> | <u>Station</u> | <u>Work Description</u> |
|----------------|----------------|--|
| 111 to 113 | 128+36 | Begin improvement of curve to a 125' radius with 3.2' of curve widening. |
| | 129+35 | End improvement of curve with a 125' radius. |
| | 130+65 | Begin improvement of curve to a 95' radius with 4.2' of curve widening. |
| | 131+15 | End improvement of curve with a 95' radius. |
| | 131+22 | Begin improvement of curve to a 125' radius with 3.2' of curve widening. |
| | 131+79 | End improvement of curve to a 125' radius. |
| | 131+86 | Culvert replacement, install with a 30° skew and at a 6% gradient . Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction.. |
| 135+58 | | Construct new turnout left with 25' approaches, a turnout length of 50' and 8' in width. |
| | 139+78 | Begin improvement of curve with a 100' radius with 4' of curve widening. |
| | 140+18 | Remove and dispose of old culvert. |
| | 140+22 | End improvement of curve to a 100' radius. |
| | 140+32 | Construct new turnout left with 25' approaches, a turnout 50' in length and 8' in width. |
| | 140+77 | Begin improvement of curve to a 200' radius with 2' of curve widening. |
| | 141+55 | End improvement of curve to a 200' radius. |
| | 142+14 | Install culvert. Utilize 20 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction. |
| | 142+60 | Begin construction of 150' radius curve with 2.7' of curve widening. |
| | 143+14 | End improvement of curve to a 150' radius. Improve existing turnout left to include 25' approaches, a turnout 50' in length, and a width of 8'. |
| | 143+95 | Install culvert with a 30° skew and at a 6% gradient . Utilize 20 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction.. |

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FOREST ROAD SPECIFICATIONS

SPECIFIED ROAD IMPROVEMENT INSTRUCTIONS

| <u>Segment</u> | <u>Station</u> | <u>Work Description</u> |
|----------------|----------------|--|
| I11 to I13 | 145+89 | Culvert replacement, install with a 30° skew and at a 6% gradient. Utilize 20 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction. |
| | 146+55 | Improve existing turnout left to include 25' approaches, a turnout length of 100', and a width of 8'. |
| | 146+75 | Begin improvement of curve to a 125' radius with 3.2' of curve widening. |
| | 147+49 | End road re-alignment. |
| | 148+30 | End improvement of 125' radius curve. |
| | 151+34 | Install culvert with a 30° skew and at a 7% gradient. Utilize 20 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Construct ditch leading from the culvert outlet to daylight point. |
| | 153+56 | Construct new turnout left with 25' approaches, a turnout length of 75' and 8' in width. |
| | 155+92 | Culvert replacement, install with a 30° skew and at a 7% gradient. Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill. Utilize 10 cubic yards of 24"-6" riprap rock for energy dissipator construction. |
| | 159+10 | Improve existing turnout left to include 25' approaches, a turnout length of 100', and a width of 8'. |
| | 163+26 | Culvert replacement, install with a 30° skew and at a 7% gradient. Utilize 15 cubic yards of 1"-0" crushed rock for culvert bedding and backfill.. |
| | 165+77 | Construct new turnout left with 25' approaches, a turnout length of 75' and 8' in width. |
| | 167+66 | End road improvement. |
| | I11 to I12 | 0+00 |
| 3+31 | | Construct turnout right. |
| 6+37 | | Construct turnout right. |
| 7+58 | | Existing culvert location. |

9+38 Improve existing turnout right.

11+10 Existing culvert location.

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| <u>Segment</u> | <u>Station</u> | <u>Work Description</u> |
|----------------|----------------|----------------------------|
| I11 to I12 | 14+88 | Existing culvert location. |
| | 18+47 | Construct turnout right. |
| | 25+78 | End road improvement. |

EXHIBIT "B"
END-HAULING REQUIREMENTS

| POINT TO POINT | STA. TO STA. | CONTAINMENT | WASTE AREA LOCATION | WASTE AREA TREATMENT |
|----------------|------------------|-------------|---------------------|----------------------|
| I11 to I13 | 117+92 to 126+04 | See Below | See Below | See Below |
| I11 to I13 | 128+03 to 147+49 | See Below | See Below | See Below |

End-Haul Areas General Requirements

Material shall not be intentionally sidecast.

Clearing and grubbing debris shall be end-hauled.

When blasting is required, it shall be controlled, it shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain as much material as possible within the road prism.

Containment

Full containment: The amount of material lost over the outside edge of the road shall not exceed 6 inches in depth measured perpendicular to the natural ground slope. Pioneer excavation shall be removed by digging, loading, and hauling rather than by pushing or scraping methods.

Trees and stumps may have up to 12 inches of material directly above them. Any amount of material exceeding the containment requirements shall be removed by whatever means necessary and end-hauled to a designated waste area.

Waste Area Location

Road Improvement common waste will be spread and compacted evenly over the newly cleared, grubbed and leveled Lost Quarry stockpile site. Woody waste material from road improvement, stockpile site construction and quarry development will be burned over the compacted common waste material. After burning, excavated shot rock from road improvement will be evenly spread and compacted over the stockpile site.

Waste Area Treatment

Deposit at waste area, spread evenly, compact, and provide adequate drainage. Pile woody debris separate from other waste material, and dispose of by burning.

EXHIBIT "B"
 ROAD SURFACING

| ROAD SEGMENT: 3A to 3B | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
|------------------------------|--------------------|----------|------------------------|-----------------|----|---------------|------|-------------------|
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 3A to 3B | | 0+00 to 23+60 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | Station | 50 | Stations | 23.6 | 1,180 |
| Turn Outs | 4"-0" Crushed | | 8 | Turnout | 22 | Turnouts | 6 | 132 |
| Landings | 6"-0" Pit-run | 3B | N/A | landing | 80 | landings | 1 | 80 |
| Turnaround | 4"-0" Crushed | | N/A | TA | 20 | TA's | 1 | 20 |
| Junctions | 4"-0" Crushed | | 8 | Junction | 24 | Junctions | 2 | 48 |
| Total Rock for Road Segment: | | | | 3A to 3B | | | | 1,460 |
| ROAD SEGMENT: 3C to 3D | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 3C to 3D | | 0+00 to 2+00 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | Station | 50 | Stations | 2.0 | 100 |
| Landings | 6"-0" Pit-run | 3D | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 3C to 3D | | | | 180 |
| ROAD SEGMENT: 3E to 3F | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 3E to 3F | | 0+00 to 1+80 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 1.8 | 90 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 3F | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 3E to 3F | | | | 194 |
| ROAD SEGMENT: 3G to 3H | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 3G to 3H | | 0+00 to 7+30 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 7.3 | 365 |
| Turn Outs | 4"-0" Crushed | | 8 | turnout | 22 | turnouts | 2 | 44 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 3H | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 3G to 3H | | | | 513 |
| ROAD SEGMENT: 4F to 4G | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 5A to 5B | | 0+00 to 5+50 | | |
| | | | | Volume (CY) per | | Number Of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | Stations | 5.50 | 275 |
| Turn Outs | 4"-0" Crushed | | 8 | turnout | 22 | Turnouts | 1 | 22 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | Junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 5B | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 5A to 5B | | | | 401 |
| ROAD Points: 1A and 5I | | | | | | | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | | Volume (CY) Per | | Number OF | | |
| | | | | | | | | |
| Landings | 6"-0" Pit-run | 1A, 5I | | landing | 80 | landings | 2 | 160 |

EXHIBIT "B"
 ROAD SURFACING

| ROAD SEGMENT: 5C-5D | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
|-----------------------------------|--------------------|----------|------------------------|-----------------|----|---------------|-------|-------------------|
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 5C-5D | | 0+00 to 14+40 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 14.40 | 720 |
| Turn Outs | 4"-0" Crushed | | 8 | turnout | 22 | turnouts | 2 | 44 |
| Turnaround | 4"-0" Crushed | | N/A | TA | 20 | TA | 1 | 20 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 5D | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 5C-5D | | | | 888 |
| ROAD SEGMENT: 5G-5H, 5G-5H, 5G-5H | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 5G-5H | | 0+00 to 2+75 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 2.75 | 138 |
| Turnaround | 4"-0" Crushed | | N/A | TA | 20 | TA | 1 | 20 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 5H | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 5G-5H | | | | 262 |
| ROAD SEGMENT: 6A-6B, 6A-6B | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 6A-6B | | 0+00 to 4+00 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 4.00 | 200 |
| Turn Outs | 4"-0" Crushed | | 8 | turnout | 22 | turnouts | 1 | 22 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 6B | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 6A-6B | | | | 326 |
| ROAD SEGMENT: 6A-6B, 6C-6D | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 6C-6D | | 0+00 to 2+65 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 2.65 | 133 |
| Turnaround | 4"-0" Crushed | | N/A | TA | 20 | TA | 1 | 20 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 6D | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 6C-6D | | | | 257 |
| ROAD SEGMENT: 6A-6B, 6E-6F | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 6E-6F | | 0+00 to 0+90 | | |
| | | | | Volume (CY) per | | Number of | | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 0.90 | 45 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 6F | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 6E-6F | | | | 149 |

EXHIBIT "B"

ROAD SURFACING

| ROAD SEGMENT: 6A-6B, 6G-6H | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
|-----------------------------------|--------------------|----------|------------------------|-----------------|-----------|----------------|----------|-------------------|
| Application | Rock Size and Type | Location | Depth of Rock (inches) | 6G-6H | | 0+00 to 2+80 | | |
| | | | | Volume (CY) per | Number of | stations | turnouts | |
| Base Rock | 4"-0" Crushed | | 8 | station | 50 | stations | 2.80 | 140 |
| Turn Outs | 4"-0" Crushed | | 8 | turnout | 22 | turnouts | 1 | 22 |
| Junctions | 4"-0" Crushed | | 8 | junction | 24 | junctions | 1 | 24 |
| Landings | 6"-0" Pit-run | 6H | N/A | landing | 80 | landings | 1 | 80 |
| Total Rock for Road Segment: | | | | 6G-6H | | | | 264 |
| ROAD SEGMENT: I1-I2, 6A-6B, I1-I2 | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | I1-I2 | | 0+00 to 132+60 | | |
| | | | | Volume (CY) per | Number of | stations | turnouts | |
| Subgrade Leveling | 1½"-0" Crushed | | N/A | | | | N/A | 800 |
| Surfacing | ¾"-0" Crushed | | 3 | station | 22 | station | 132.6 | 2,917 |
| Turn Outs | ¾"-0" Crushed | | 3 | turnout | 11 | turnouts | 20 | 220 |
| Junctions | ¾"-0" Crushed | | 3 | junction | 11 | junctions | 11 | 121 |
| Curve Widening | ¾"-0" Crushed | | 3 | | | | | 200 |
| Culvert Backfill | 1½"-0" Crushed | | N/A | culvert | 20 | culverts | 1 | 20 |
| Total Rock for Road Segment: | | | | I1-I2 | | | | 4,278 |
| ROAD SEGMENT: I3-I4, 6A-6B, II | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | I3-I4 | | 0+00 to 52+80 | | |
| | | | | Volume (CY) per | Number of | stations | turnouts | |
| Culvert Backfill | 1½"-0" Crushed | | N/A | | | | | 50 |
| Base Rock | 4"-0" Crushed | 35+80 | N/A | | | | | 40 |
| Fill Armor | 24"-6" Riprap | 35+80 | N/A | | | | | 70 |
| Total Rock for Road Segment: | | | | I3-I4 | | | | 160 |
| ROAD SEGMENT: I5-I6, 6A-6B, II | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | I5-I6 | | 0+00 to 6+00 | | |
| | | | | Volume (CY) per | Number of | stations | turnouts | |
| Base Rock | 4"-0" Crushed | | 6 | station | 38 | stations | 6.0 | 228 |
| Turn Outs | 4"-0" Crushed | | 6 | turnout | 1 | turnouts | 1 | 20 |
| Total Rock for Road Segment: | | | | I5-I6 | | | | 248 |
| ROAD SEGMENT: I7, 6A-6B, I7 | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | I7-I7A | | 0+00 to 3+00 | | |
| | | | | Volume (CY) per | Number of | stations | turnouts | |
| Base Rock | 4"-0" Crushed | | 10 | station | 63 | stations | 3.0 | 189 |
| Curve Widening | 4"-0" Crushed | | 10 | | | | | 46 |
| Backfill Rock | 4"-0" Crushed | | N/A | | | | | 20 |
| Total Rock for Road Segment: | | | | I7-I7A | | | | 255 |

Total Rock Project No. 1

| | 24"-6" | 6"-0" | 4"-0" | 1 1/2"-0" | 3/4"-0" | TOTAL |
|--|--------|-------|-------|-----------|---------|-------|
| | 70 | 1,040 | 4,559 | 870 | 3,458 | 9,995 |

EXHIBIT "B"
 ROAD SURFACING

| ROAD SEGMENT: I8 to I11 | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
|------------------------------|--------------------|----------|------------------------|-----------------|-----|-----------------|-------|-------------------|
| Application | Rock Size And Type | Location | Depth of Rock (inches) | I8 to I11 | | 87+30 to 112+80 | | |
| | | | | Volume (CY) per | | Number Of | | |
| Surfacing | 1"-0" Crushed | | 3 | Station | 19 | Stations | 25+50 | 485 |
| Turnouts (100') | 1"-0" Crushed | | 3 | Turnout | 14 | Turnouts | 1 | 14 |
| Turnouts (50') | 1"-0" Crushed | | 3 | Turnout | 8 | Turnouts | 2 | 16 |
| Curve Widening | 1"-0" Crushed | | 3 | Curve | n/a | Curves | 11 | 24 |
| Junctions | 1"-0" Crushed | | 3 | Junction | 10 | Junctions | 3 | 30 |
| Leveling Rock | 1"-0" Crushed | | | | | | | 150 |
| Turnouts (100') | 4"-0" Crushed | | 8 | Turnout | 37 | Turnouts | 1 | 37 |
| Turnouts (50') | 4"-0" Crushed | | 8 | Turnout | 22 | Turnouts | 2 | 44 |
| Curve Widening | 4"-0" Crushed | | 8 | Curve | n/a | Curves | 11 | 65 |
| Fill Widening | 4"-0" Crushed | | 8 | Fill | 21 | Fills | 4 | 84 |
| Culvert Bedding | 1"-0" Crushed | | n/a | n/a | | Culverts | 4 | 65 |
| Dissipator Rock | 24"-6" Riprap | | n/a | n/a | | Dissipators | 3 | 30 |
| Total Rock for Road Segment: | | | | I8 to I11 | | | | 1,044 |
| ROAD SEGMENT: I9 to I10 | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | I9 to I10 | | 0+00 to 1+50 | | |
| | | | | Volume (CY) per | | Number Of | | |
| Base Rock | 4"-0" Crushed | | 10 | Station | 63 | Stations | 1+50 | 95 |
| Turnouts (50') | 4"-0" Crushed | | 10 | Turnout | 28 | Turnouts | 1 | 28 |
| Junctions | 4"-0" Crushed | | 10 | Junction | 32 | Junctions | 1 | 32 |
| Surfacing | 1"-0" Crushed | | 5 | Station | 31 | Stations | 1+50 | 47 |
| Turnouts | 1"-0" Crushed | | 5 | Turnout | 14 | Turnouts | 1 | 14 |
| Culvert Bedding | 1"-0" Crushed | | n/a | n/a | | Culverts | 1 | 15 |
| Junctions | 1"-0" Crushed | | 5 | Junction | 16 | Junctions | 1 | 16 |
| Total Rock for Road Segment: | | | | I9 to I10 | | | | 247 |
| ROAD SEGMENT: I11 to I12 | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
| Application | Rock Size and Type | Location | Depth of Rock (inches) | I11 to I12 | | 0+00 to 25+78 | | |
| | | | | Volume (CY) per | | Number of | | |
| Surfacing | 1"-0" Crushed | | 3 | Station | 19 | Stations | 25+78 | 490 |
| Turnouts (50') | 1"-0" Crushed | | 3 | Turnout | 8 | Turnouts | 4 | 32 |
| Curve Widening | 1"-0" Crushed | | 3 | Curve | n/a | Curves | 2 | 10 |
| Junctions | 1"-0" Crushed | | 3 | Junction | 10 | Junctions | 1 | 10 |
| Turnouts (50') | 4"-0" Crushed | | 8 | Turnout | 37 | Turnouts | 4 | 148 |
| Total Rock for Road Segment: | | | | I11 to I12 | | | | 690 |

EXHIBIT "B"
 ROAD SURFACING

| ROAD SEGMENT: I11 to I13 | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
|------------------------------|--------------------|----------|------------------------|-------------------|-----------|------------------|-------|-------------------|
| Application | Rock Size And Type | Location | Depth of Rock (inches) | I11 to I13 | | 112+80 to 167+45 | | |
| | | | | Volume (CY) per | Number of | | | |
| Surfacing | 1"-0" Crushed | | 3 | Station | 19 | Stations | 54+65 | 1,038 |
| Turnouts (100') | 1"-0" Crushed | | 3 | Turnout | 14 | Turnouts | 2 | 28 |
| Turnouts (75') | 1"-0" Crushed | | 3 | Turnout | 11 | Turnouts | 1 | 11 |
| Turnouts (50') | 1"-0" Crushed | | 3 | Turnout | 8 | Turnouts | 8 | 64 |
| Curve Widening | 1"-0" Crushed | | 3 | Curve | n/a | Curves | 33 | 67 |
| Culvert Bedding | 1"-0" Crushed | | n/a | n/a | | Culverts | 11 | 190 |
| Junctions | 1"-0" Crushed | | 3 | Junction | 10 | Junctions | 2 | 20 |
| Leveling Rock | 1"-0" Crushed | | | | | | | 350 |
| Turnouts (100') | 4"-0" Crushed | | 8 | Turnout | 37 | Turnouts | 2 | 74 |
| Turnouts (75') | 4"-0" Crushed | | 8 | Turnout | 30 | Turnouts | 1 | 30 |
| Turnouts (50') | 4"-0" Crushed | | 8 | Turnout | 22 | Turnouts | 8 | 176 |
| Curve Widening | 4"-0" Crushed | | 8 | Curve | n/a | Curves | 33 | 180 |
| Subg Reinforcement | 4"-0" Crushed | | 8 | Station | 50 | Stations | 1 | 50 |
| Dissipator Rock | 24"-6" Riprap | | n/a | | n/a | Dissipators | 7 | 80 |
| Total Rock for Road Segment: | | | | I11 to I13 | | | | 2,358 |

| Stockpile Site | | | | POINT TO POINT | | Sta. to Sta. | | TOTAL VOLUME (CY) |
|------------------------------|--------------------|----------|------------------------|-----------------------|-----------|--------------|--|-------------------|
| Application | Rock Size And Type | Location | Depth of Rock (inches) | Stockpile Site | | N/a | | |
| | | | | Volume (CY) per | Number Of | | | |
| Base Rock | 6"-0" Pit-run | | 10 | n/a | | n/a | | 2,475 |
| Total Rock for Road Segment: | | | | Stockpile Site | | | | 2,475 |

Total Rock Project No. 2 and Stockpile Site Construction

| 1"- 0" Crushed | 1½"- 0" Crushed | 4"- 0" Crushed | 6"- 0" Pit Run | 24"- 6" Riprap | Total Rock |
|----------------|-----------------|----------------|----------------|----------------|------------|
| 3,186 | 0 | 1,043 | 2,475 | 110 | 6,814 |

Roads shall be uniformly graded and approved by STATE prior to rocking. For typical cross section, see Forestry Department Drawing Nos. 351-C and 351-D at the Forestry Department district office.

Subgrades must be approved by STATE prior to rocking. Rocking must be done only when weather conditions are acceptable to STATE, and must be suspended when muddy water could enter streams from runoff.

EXHIBIT "B"

ROCK ACCOUNTABILITY

Subgrades must be approved by STATE prior to rocking. Rocking must be done only when weather conditions are acceptable to STATE, and must be suspended when muddy water could enter streams from runoff.

Rock accountability shall be determined by the following methods, as directed by STATE. STATE shall be given 24 hours' notice prior to rocking.

Rock Checking. All rock spreading shall be done only when a STATE representative is present. STATE shall issue a receipt for each load delivered, and rock shall be measured without allowance for shrinkage or shakedown during hauling. Total truck measure volume for each road segment shall be as shown on Exhibit B. Deliver at least 600 cubic yards per 8-hour shift, unless otherwise approved by STATE. A penalty of \$10 for each 10 cubic yards which are not delivered during a single shift shall be billed, and payment shall be required prior to final acceptance of the project by STATE.

Depth Measurement. Rock shall be spread and compacted according to the depths specified in Exhibit B. Truck measure volumes are given, but shall not limit the amount of rock spread.

Depth shall be determined in the most compacted area of the surface cross section. If additional rock is required because of insufficient depth, it shall be added by truck measure to those areas that were slighted. The conversion from compacted yardage to truck yardage is 1.3 multiplied by the compacted yardage equals truck yardage.

The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in Exhibit B. The average depth for each road segment shall be the specified depth or greater. Surfacing areas shall be staked by STATE.

Load Records. Notify STATE before spreading the rock and maintain a record of all rock delivered for spreading. Make the record available for STATE inspection. A report listing the amount of rock delivered the prior month must be submitted no later than the 15th of each month.

EXHIBIT "B"
COMPACTION AND PROCESSING REQUIREMENTS

Subgrade. Subgrade surfaces of the road segments listed below shall be graded and compacted prior to rocking. Compaction shall be accomplished by traveling all surfaces from shoulder to shoulder until visible deformation ceases, or in the case of a sheepsfoot roller, the roller "walks out." A minimum of 3 passes shall be made over the entire width and length of the road. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

| ROAD SEGMENT | COMPACTION EQUIPMENT OPTIONS |
|--|------------------------------|
| All road segments that require rock surfacing. | 1 |
| Project No. 3 Stockpile Site Construction | 1 or 5 |

Fills. Embankments and fills shall be placed in (approximately) horizontal layers not more than 8 inches in depth. Each layer shall be separately, and thoroughly, compacted. Compaction equipment shall be operated over the entire width of each layer until visible deformation of the layers ceases or, in the case of a sheepsfoot roller, the roller "walks out." At least of 3 passes shall be made over the entire width and length of each layer. A pass is defined as traveling a fill layer in one direction and then back over that same layer again.

Placing individual rocks or boulders with more depth than the allowed layer thickness shall be permitted, provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below the subgrade. They shall be carefully distributed and the voids filled with finer material, forming a dense and compacted mass. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

| ROAD SEGMENT | COMPACTION EQUIPMENT OPTIONS |
|---|------------------------------|
| Project No. 3 Stockpile Site Construction | 1 or 5 |
| All road segments | 1, 2, or 3 and 4 |

Crushed Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of crushed rock shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 8 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any 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 material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

| ROAD SEGMENT | COMPACTION EQUIPMENT OPTIONS |
|--|------------------------------|
| All road segments requiring crushed rock | 1 |

EXHIBIT "B"

COMPACTION AND PROCESSING REQUIREMENTS

Pit-Run Rock. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of pit-run rock shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 8 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any 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 material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

| ROAD SEGMENT | COMPACTION EQUIPMENT OPTIONS |
|---|------------------------------|
| Project No. 3 Stockpile Site Construction | 1 or 5 |

COMPACTION EQUIPMENT OPTIONS

- (1) Vibratory Rollers. The drum shall have a smooth surface, a diameter not less than 48 inches, a width not less than 58 inches, and a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 VPM, corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 VPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled and operated at speeds ranging from 0.9 mile to 1.8 miles per hour, as directed by STATE.
- (2) Rubber-Tired Skidders. A rubber-tired skidder weighing a minimum of 20,000 pounds shall be operated over the fill layers so that the entire layered surface comes in contact with the tires. Skidders with oversized tires (high flotation) are not acceptable for compaction.
- (3) Tampingfoot Compactors. Tampingfoot or sheepsfoot compactors shall exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet. The compactor shall cover a minimum width of 60 inches per pass and weigh a minimum of 16,000 pounds.
- (4) Vibratory Hand-Operated or Backhoe-Mounted Tamper. Vibratory hand-held or hydraulic tampers shall be used for compaction of backfill materials around culverts (and/or bridge approach embankment materials around abutments). The tamper shoe dimensions shall be a minimum of 10" X 13" and capable of a centrifugal force of 2,250 pounds.
- (5) Vibratory Grid Compactors. The roller shall have a grid surface and have an operating weight of 32,000 pounds or more. The rock shall be worked with a grader weighing at least 20,000 pounds during the grid rolling process. All rock shall come in contact with the vibratory grid compactor.

EXHIBIT "C"
CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the contract. Culverts shall conform to the material and fabricating requirements of Sections 2410 and 2420 of the "Standard Specifications for Highway Construction" prepared by the Highway Division of the Oregon State Department of Transportation. Double-walled polyethylene pipe shall meet the requirements of AASHTO M-294-901, Type S. Corrugation types and shapes other than those meeting the above minimum Highway requirements, shall be approved in writing by STATE. This specification applies to high density polyethylene corrugated pipe with an integrally formed smooth interior. Clean, reworked material may be used.

Culverts shall be located according to the alignment and grade as shown on the Plan and Profile, and/or as staked in the field, or as stipulated in special instructions.

The STATE Representative shall determine final culvert locations and stake the locations in the field prior to installation.

Culvert grade shall slope away from ditch grade at least 2 percent unless otherwise specified.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones over 3 inches, and other objects which would dent or damage the pipe during installation or use. If tamping is required, the trench shall be excavated wide enough to permit working on each side of pipe. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

A bedding of granulated material or job-excavated soil shall be placed to provide a wide band of support and to transmit the load from above evenly over the entire length of the pipe.

Backfill shall consist of granulated material or job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the pipe.

Transporting of the pipe shall be done carefully. Dragging or allowing free fall from trucks or into trenches shall not be permitted. Damage to bituminous coating shall be repaired before the pipe is covered.

On new installations, joining shall be done with bands of like material and corrugations. Manufacturers' instructions shall be followed for prefabricated pipe assembly.

Joints shall be made with split couplings, corrugated to engage the pipe corrugations, and shall engage a minimum of 4 corrugations, 2 on each side of the pipe joint.

Backfill shall consist of granulated material or job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the pipe.

Tamping is required and shall be done in 8-inch lifts, 1 pipe diameter each side of the pipe to 85 percent density or over, and to the minimum fill height as specified below. Additional fill shall be embankment material.

Fill heights, if not shown on a road plan and profile, shall be in accordance with those shown in Drawing No. 2094, "Fill Height Tables," prepared by the Highway Division of the Oregon State Department of Transportation. Any deviation must be approved by STATE.

A manufacturer's certification that the product was manufactured, tested, and supplied in accordance with this specification shall be furnished to the Project Engineer upon request.

All removed culverts shall be hauled to an approved refuse site off of State land.

EXHIBIT "C"

CULVERT SPECIFICATIONS

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be 12 inches for polyethylene culverts. Minimum vertical cover for other steel or aluminum designs shall be as specified by STATE.

Lengths of individual culvert sections shall be not less than 10 feet, unless otherwise provided for in special instructions.

The ends of each culvert shall be free of logs and debris which would restrict the free flow of water. Culverts in Type F streams must allow free passage of fish as provided in the Oregon Forest Practice Rules. The intake end of relief culverts shall be provided with a sediment catching basin 3 feet in diameter at the bottom. The outlet end of any culvert which would allow water to erode embankment soil into waters of the State shall be provided with a downspout or other approved slope protection device.

EXHIBIT "C"
 CULVERT LIST

| CULVERT NO. | DIAMETER (Inches) | LENGTH (Feet) | MATERIAL TYPE | ROAD SEGMENT POINT TO POINT | STATION |
|-------------|-------------------|---------------|---------------|-----------------------------|---------|
| 1 | 18 | 40 | CPP | 3A to 3B | 0+00 |
| 2 | 18 | 40 | CPP | 3A to 3B | 20+80 |
| 3 | 18 | 40 | CPP | 3G to 3H | 0+00 |
| 4 | 18 | 40 | CPP | 5A to 5B | 2+50 |
| 5 | 18 | 30 | CPP | 5G to 5H | 1+90 |
| 6 | 18 | 40 | CPP | 6A to 6B | 0+00 |
| 7 | 18 | 40 | CPP | 6C to 6D | 0+00 |
| 8 | 18 | 30 | CPP | I1 to I2 | 83+65 |
| 9 | 18 | 30 | CPP | I3 to I4 | 4+80 |
| 10 | 18 | 70 | CPP | I3 to I4 | 35+80 |
| 11 | 18 | 32 | CPP | I8 to I11 | 91+56 |
| 12 | 18 | 30 | CPP | I8 to I11 | 95+41 |
| 13 | 18 | 40 | CPP | I8 to I11 | 102+56 |
| 14 | 18 | 32 | CPP | I8 to I11 | 112+38 |
| 15 | 18 | 30 | CPP | I11 to I13 | 113+07 |
| 16 | 18 | 34 | CPP | I11 to I13 | 115+63 |
| 17 | 18 | 44 | CPP | I11 to I13 | 118+34 |
| 18 | 18 | 42 | CPP | I11 to I13 | 124+93 |
| 19 | 18 | 32 | CPP | I11 to I13 | 131+86 |
| 20 | 18 | 40 | CPP | I11 to I13 | 142+14 |
| 21 | 18 | 40 | CPP | I11 to I13 | 143+95 |
| 22 | 18 | 38 | CPP | I11 to I13 | 145+89 |
| 23 | 18 | 36 | CPP | I11 to I13 | 151+34 |
| 24 | 18 | 30 | CPP | I11 to I13 | 155+92 |
| 25 | 18 | 32 | CPP | I11 to I13 | 163+26 |
| 26 | 18 | 40 | CPP | I9 to I10 | 0+00 |

The intake ends of culverts in fills less than 3 feet shall be marked by driving white fiberglass posts within 6 inches of the downgrade side. Posts shall be a minimum of 6 feet long and 2 ½ inches wide, with the spade driven 2 feet into the ground.

EXHIBIT "D"

ROCK PIT DEVELOPMENT AND USE

- (1) PURCHASER shall prepare a written development plan for both the Lost Lake Quarry and the Northrup Quarry for the area to be used to extract riprap and pit-run material. The plan shall be submitted to the STATE for approval prior to conducting any operation in the pit area. The plan shall include, but not be limited to:
 - (a) Location of benches and roads to benches.
 - (b) Disposal site for debris and overburden.
 - (c) Time lines for rock quarry use.
 - (d) Erosion Control measures.
- (2) PURCHASER shall schedule and coordinate quarry and stockpile usage in both Quarries with other existing or planned STATE contracts requiring quarry and stockpile usage.
- (3) Pit sites shall be left in a condition free from overburden and debris. Access roads to the pit, and the pit floor, shall be cleared at the termination of use. Overburden shall be removed for a distance of 20 feet beyond the developed rock source. Trees removed for Quarry development will be felled, bucked, and decked at a site acceptable to the STATE adjacent to the quarry.
- (4) Controlled blasting techniques shall be utilized for any blasting operations, and shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain as much material as possible within the quarry development area. PURCHASER shall maintain a comprehensive blasting log that contains all pertinent data for all blasting operations. The blasting log shall be submitted to the STATE after the completion of all blasting activity. The blasting log is intended for STATE record keeping purposes only.
- (5) PURCHASER shall conduct the operations relative to the disposal of waste material in such manner that silt, rock, debris, dirt, or clay shall not be washed, conveyed, or otherwise deposited in any stream.
- (6) All overburden and reject material shall be hauled to the designated waste area shown on Exhibit "D" for the Northrup Quarry and Exhibit "D" for the Lost Quarry and disposed of as directed by STATE.
- (7) Clear and grub the rock source area. All woody debris, including stumps and slash shall be burned in the quarry floor, as directed by STATE.
- (8) PURCHASER shall obtain a FPA Burn Permit prior to debris disposal.
- (9) Benches shall be constructed at intervals of 40 feet or less in height and shall be a minimum of 20 feet in width. Any gravel or talus slopes shall be left with a working face at an angle of 60 degrees or less. Said bench shall be easily accessible with tractors.
- (10) Pit face shall be developed in a uniform manner.
- (11) Oversized material that is produced or encountered during development shall be broken down and utilized for crushing or utilized for pit run rock as required in Exhibit B, or stored on site as directed by the STATE.

EXHIBIT "D"

ROCK PIT DEVELOPMENT AND USE

- (12) Proper winterization and storm-water control measures such as water barring, drainage, utilization of filter bales, mulching and/or blocking access shall be utilized and such measures maintained to protect the watershed and project work, as directed by STATE.
- (13) PURCHASER shall notify STATE 5 days prior to the start of quarry development activities.
- (14) The quarry floor shall be developed to provide for drainage away from the quarry. All quarry and stockpile site drainage ditches shall be maintained. Quarry bench access road shall be cleared, water barred and blocked upon completion of quarry use as directed by STATE.

STOCKPILE SITE CONSTRUCTION INSTRUCTIONS

- (1) The dimensions of the stockpile site to be constructed are 330' (running along the Lost Lake road) x 200' in depth. The approximate perimeter of the stockpile site has been flagged with pink and white ribbons tied together.
- (2) The shot rock excavated from the road improvement on Road Segment I11 to I13 shall be incorporated into the construction of the stockpile site. The stockpile site construction stages will be as follows:
 - (a) Clear and grub the stockpile site.
 - (b) Burn all cleared and grubbed material from the stockpile site and from the required road improvements at the cleared and grubbed stockpile site.
 - i. Purchaser shall obtain a FPA Burn Permit prior to debris disposal.
 - (c) Level and compact the stockpile site.
 - (d) Evenly spread and compact the common excavation over the stockpile site.
 - (e) Evenly spread and compact the shot rock excavation over the stockpile site.
 - (f) Apply the specified 6"-0" pit-run rock evenly over the stockpile site.

EXHIBIT "E"

CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be fragments of rock or other hard, durable particles crushed to the required size and a filler of finely crushed stone, sand, or other finely divided mineral matter. The material shall be free from vegetation and lumps of clay. Prior to entering the rock crusher, materials used for rock crushing shall be screened, and all materials less than one inch in size shall be rejected. State may require screening and/or rejecting of materials utilized for production of the ¾"-0", 1"-0", and 1½"-0" crushed rock for the purpose of removing excess fines or dirt.

Quality and Grading Requirements. The stone base materials shall be crushed rock, including sand. River gravel shall not be used.

The material from which base material is produced or manufactured shall conform to the general requirements of Section 2630 of the "Standard Specifications for Highway Construction" prepared by the Highway Division, Oregon Department of Transportation, and shall meet the following test requirements:

Hardness - Test Method AASHTO T 96 35% Maximum

Durability - Test Method OSHD Standard
Passing No. 20 Sieve: 30% Maximum
Sediment Height: 3" Maximum

| | | | |
|------------------|---------|----------|---------|
| <u>For ¾"-0"</u> | Passing | 1" sieve | 100% |
| | Passing | ¾" sieve | 90-100% |
| | Passing | ⅜" sieve | 55-75% |
| | Passing | ¼" sieve | 40-60% |

Of the fraction passing ¼" sieve, 40% to 60% shall pass the No. 10 sieve.

| | | | |
|------------------|---------|-----------|---------|
| <u>For 1"-0"</u> | Passing | 1½" sieve | 100% |
| | Passing | 1" sieve | 90-100% |
| | Passing | ½" sieve | 55-75% |
| | Passing | ¼" sieve | 40-55% |

Of the fraction passing ¼" sieve, 40% to 60% shall pass the No. 10 sieve.

| | | | |
|-------------------|---------|-----------|---------|
| <u>For 1½"-0"</u> | Passing | 2" sieve | 100% |
| | Passing | 1½" sieve | 95-100% |
| | Passing | ¾" sieve | 55-80% |
| | Passing | ¼" sieve | 35-50% |

Of the fraction passing ¼" sieve, 40% to 60% shall pass the No. 10 sieve.

| | | | |
|------------------|---------|----------|---------|
| <u>For 4"-0"</u> | Passing | 5" sieve | 100% |
| | Passing | 4" sieve | 90-100% |
| | Passing | 2" sieve | 60-90% |
| | Passing | ¼" sieve | 15-35% |

The referenced sieve shall have square openings as set forth in AASHTO M 92, Woven Cloth Series. The determinations of size and gradings shall be as set forth in AASHTO T 27.

EXHIBIT "E"

PIT-RUN AND RIPRAP ROCK SPECIFICATIONS

Grading Requirements

| | | | |
|--------------------------|---------|-----------|------|
| <u>For 6"-0" Pit-Run</u> | Passing | 10" sieve | 100% |
| | Passing | 6" sieve | 65% |

For 24"-6" Riprap A minimum of 50 percent of the material shall measure a minimum of 24 inches, measured in one dimension. Material shall be clean, well graded, and free of 2"-0" fines. Control of gradation shall be by visual inspection by STATE.

EXHIBIT "F"

FILL REMOVAL SPECIFICATIONS: V1 and V2

* Points V1 and V2 are located in NE ¼ Section 8, T6N, R6W, as shown on Exhibit "A".

- (1) Culvert Removal. Remove drainage structures and culverts. Work will be performed only during dry weather periods, low water stream flows, and between July 1 and August 31, annually. Removed culverts shall be hauled to an approved refuse site off State land.
- (2) Fill Removal and Stream Channel Development. Machine activity in stream channels will be minimized. Dewatering of existing fills and development of the stream channel will be accomplished by use of coffer dams, temporary diversion ditches, or drainage structures and/or damming and pumping. Disturbance of existing vegetation will be minimized. Trees removed within the RMA will not be removed as designated timber and will be left in the RMA, in stable locations. Remove fills to the natural stream course level(s). Stream channel(s) shall be excavated/developed to specified minimum width(s). Developed stream banks shall be sloped at natural contours or no steeper than 1 1/2:1, as directed by STATE.
- (3) Use of Excavated Materials
 - (a) Fill Excavation. Points V1 and V2. Excavated materials shall be placed on the old road subgrade located on both sides of the fill. This material shall be "keyed" into the cutbank a minimum of 10 feet from the top of the developed stream bank, then compacted to natural slope contours. Debris entering the RMA or aquatic area will be removed by the end of operations each day or as soon as possible and placed in a stable location, unless an alternate practice is approved by STATE.
 - (b) Woody Debris may be incorporated in embankment material and/or placed on the surface of compacted embankment material.
- (4) Erosion Control

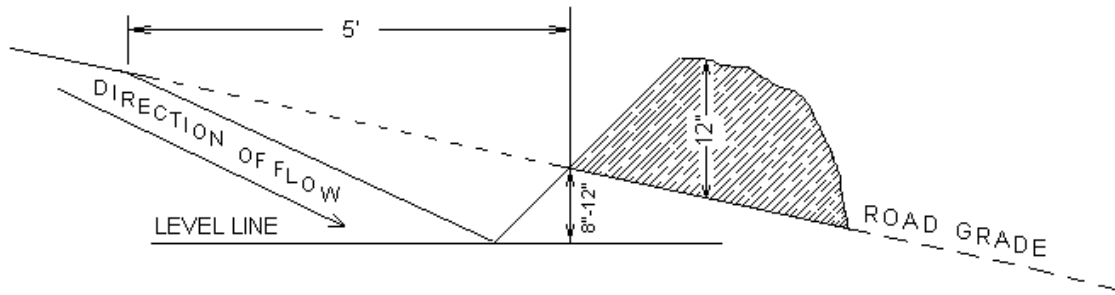
Fill Removals. All exposed excavation areas and waste materials shall be seeded and mulched with a straw mulch approved by STATE. Applied mulch shall be a minimum of 2 inches deep and provide a uniform cover, in accordance with Exhibit I.
- (5) Equipment. A minimum 1 1/2 cubic-yard, track mounted excavator shall be used for all excavation, culvert removal, streambed preparation, and road blocking, unless otherwise approved in writing by STATE. All work shall be performed during dry conditions acceptable to STATE.

Specific Instructions:

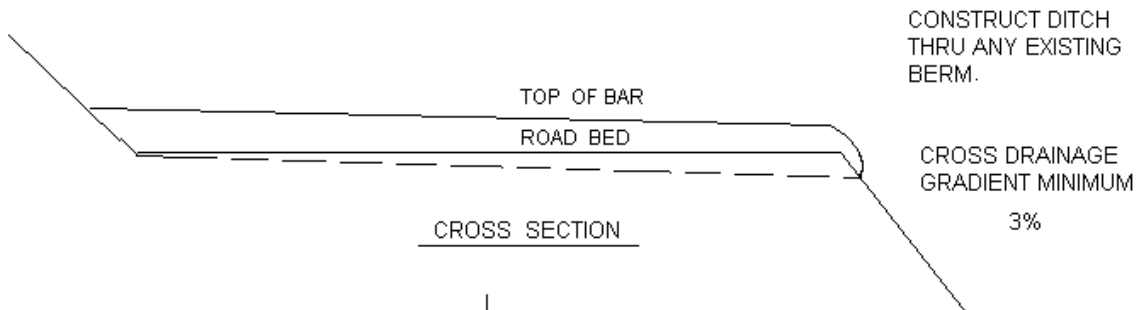
| <u>Location</u> | <u>Work Description</u> |
|-----------------|---|
| Point V1 | Fill removal. Develop 8-foot wide stream channel. |
| Point V2 | Fill/culvert removal. Develop 6-foot wide stream channel. |

EXHIBIT "G"

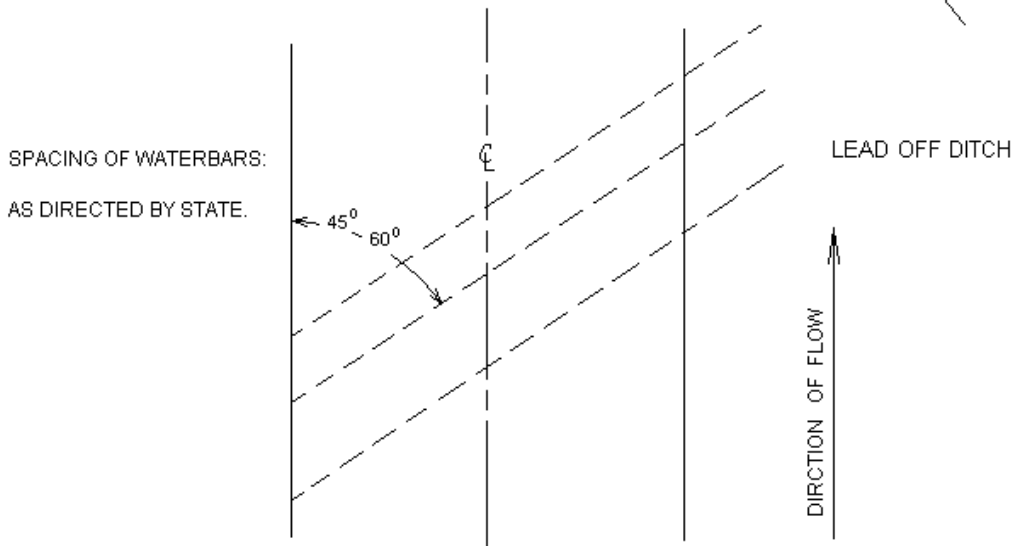
WATERBAR SPECIFICATIONS



PROFILE



CROSS SECTION



SPACING OF WATERBARS:
AS DIRECTED BY STATE.

PLAN VIEW

EXHIBIT "H"

TYPICAL EMBEDDED ENERGY DISSIPATOR

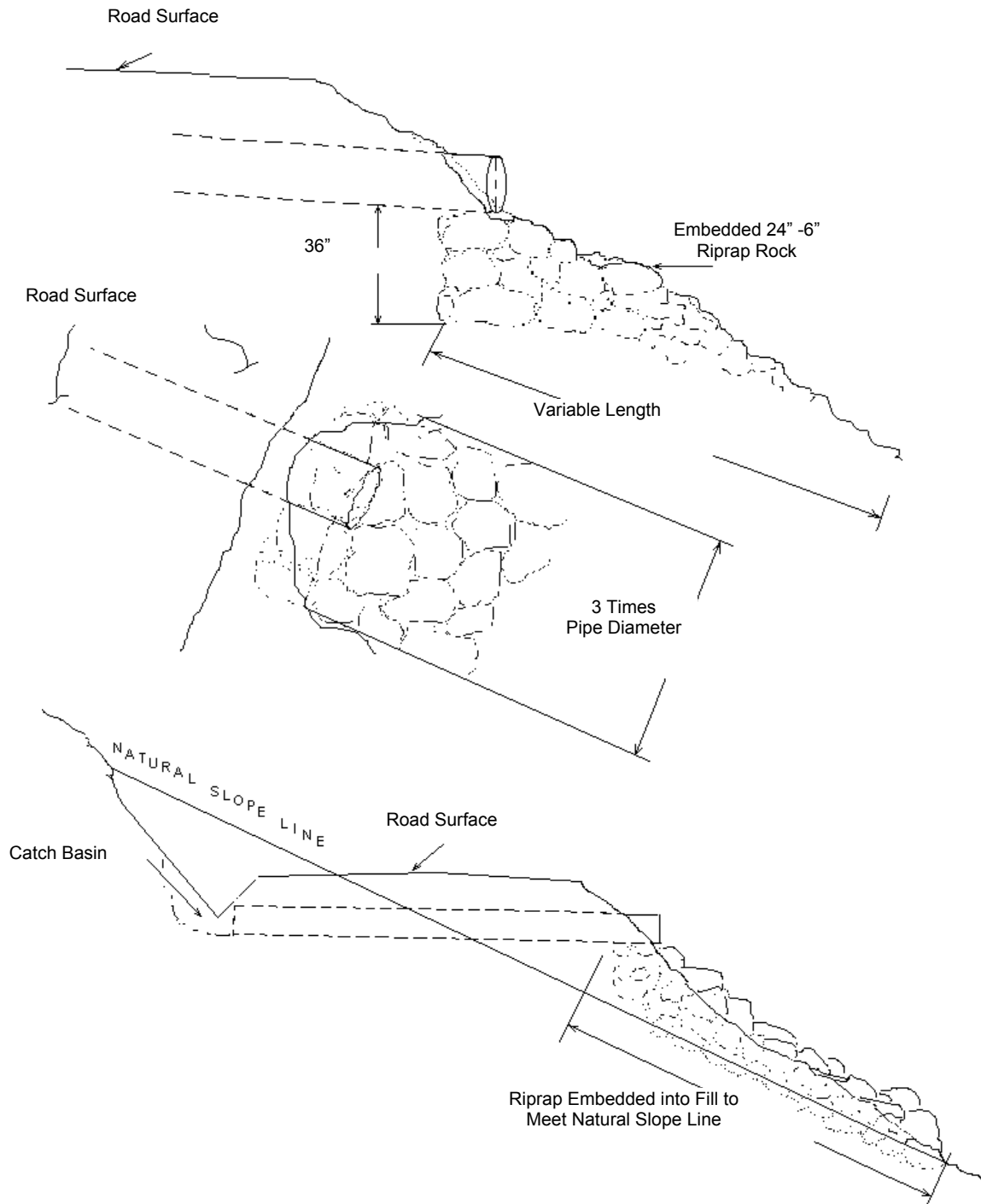


EXHIBIT "I"

GRASS SEEDING AND MULCHING

This work shall consist of furnishing and placing required grass seed, and straw mulch.

Seeding Seasons. Seeding shall be performed only from March 1 through June 15 and August 15 through October 31. Seeding materials shall not be applied during windy weather or when the ground is excessively wet or frozen. Work shall be performed during each specified seeding season on all completed and previously untreated sections. PURCHASER shall notify STATE 24 hours prior to seeding.

Application Methods for Grass Seed

Dry Method. Hand-operated seeding devices may be used when seed is applied in dry form.

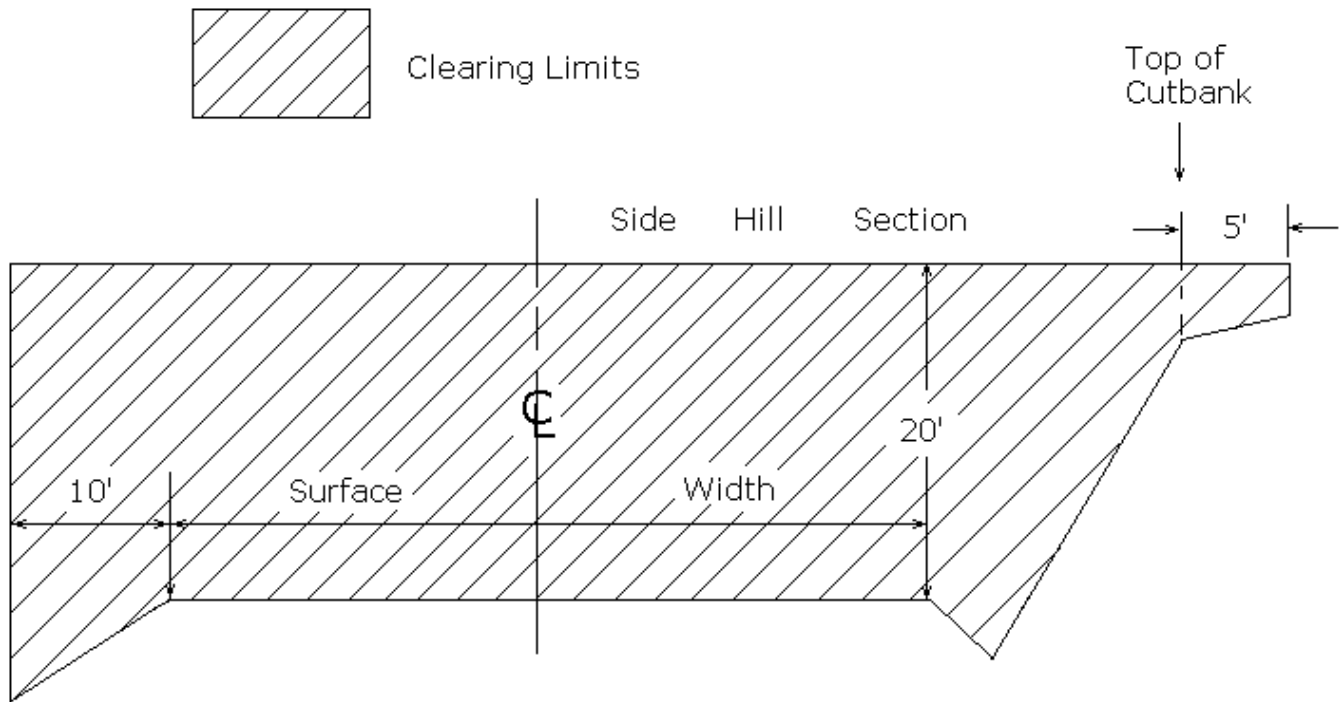
APPLICATION RATES FOR SEED

Seed listed below shall be applied at the following rate per acre: 100 lbs.

| SPECIES | MIXTURE | PURE LIVE SEED | POISON AND/OR REPELLENT | GERMINATION |
|--------------------------|---------|----------------|-------------------------|-------------|
| Annual Rye | 26% | 95% | 0 | >90% |
| Orchard Grass | 25% | 95% | 0 | >90% |
| New Zealand White Clover | 17% | 95% | 0 | >90% |
| Perennial Rye | 15% | 95% | 0 | >90% |
| Birdsfoot Trifol | 07% | 95% | 0 | >90% |
| Red Clover | 06% | 95% | 0 | >90% |
| Alsike Clover | 04% | 95% | 0 | >90% |

Seeding and Mulching. Apply grass seed and straw mulch to all waste areas, and bare soils resulting from Project No. 5. Applied straw mulch shall be a minimum of 2 inches deep and provide a uniform cover.

EXHIBIT "J"
LOGGING ROAD BRUSHING SPECIFICATIONS



REQUIREMENTS

The minimum height of clearing shall be 20 feet from the road surface, and the minimum width of clearing on the cutslope side(s) of the road shall be 15 feet horizontal distance from the shoulder of the road, 5 feet beyond the top of the cutbank, and 10 feet horizontal on the down slope side from the road shoulder.

Brush and trees shall be cut to a maximum height of 6 inches above the ground surface or obstructions such as rocks or existing stumps.

Debris resulting from the brushing operation shall be removed from the roadway, cutslope, ditches, and water courses and may be scattered downslope from the road or placed in other stable locations. Large debris, 6 inches or larger in diameter, shall be cut into lengths of 6 feet or less to facilitate rapid decay, unless otherwise approved by STATE.

Conifer trees larger than 6 inches in diameter at stump height, located within clearing limits but outside of the ditchline or shoulder, shall not be cut down, but shall be limbed for road visibility.

EXHIBIT "K"

SPECIFICATIONS FOR BRUSH AND SLASH SHOVEL PILING

Description of Work to be Done

Areas designated for work under the contract shall be treated according to the specifications given below:

Clearing - Brush, logging slash, and other debris shall be cleared from planting sites and piled in windrows or piled so that 80 percent or more of the soil organic layer is exposed. All woody vegetation (other than conifer trees) is defined as brush in this exhibit.

Piles - shall be located at least 75 feet apart and shall be no more than 75 feet long. Piles shall be located inside the project area designated for piling and shall be more than 75 feet from any edge or standing conifer tree. Piles shall be built to a height of 3 to 4 feet and then covered to prevent water from reaching the slash. STATE shall supply the materials used for covering the slash. Additional woody debris shall be piled on top of the covered piles to complete the piling, as directed by STATE. Logs and chunks which are suitable for firewood shall be piled separately from slash, near roads and landings and alongside the road in locations designated by STATE.

Conifer Trees - shall be saved, unless otherwise directed by STATE.

Skid Trails - shall be ripped to a depth of 12 inches.

Residual Logs - An average of 600 cubic feet of hard conifer logs per acre. Log shall contain a minimum of 10 cubic feet of volume and be no shorter than 6 feet in length. Two logs per acre shall be at least 24 inches in diameter, on the large end, where available. Hard conifer logs must be in decay class one or two as indicated by intact bark and original wood color. Trees or logs shall be left well distributed across the unit.

Protective Measures - shall comply with Oregon Forest Practice Rules issued per ORS 527.610 to 527.992. Examples of protective measures are: (1) waterbarring tractor trails where necessary to prevent runoff toward streams; (2) not windrowing in streams or streamways; and (3) leaving stream buffers along designated streams.

Work specifications may be modified or waived only upon written notice from STATE.

EXHIBIT "K"

SPECIFICATIONS FOR BRUSH AND SLASH SHOVEL PILING

Equipment Type, Equipment Operation, and Conduct of Work

The specifications given below are requirements for equipment type, equipment operation, and conduct of work under the contract.

Shovel - shall be a track-mounted machine with a ground-pressure rating of not more than 6.8 PSI and a net horsepower of 85 or more. The machine shall be capable of a minimum horizontal reach of 26 feet and a minimum vertical reach of 16 feet.

- Excavator-shovel: Bucket shall be a hydraulically controlled, 4 to 5-foot wide, "clamshell-style bucket with rake arms," with a 360-degree continuous rotation, and tooth length on rake arm shall be greater than 14 inches long, unless otherwise approved in writing by STATE. "Clamshell-style bucket with rake arms" shall be hydraulically controlled to operate bucket in a horizontal position (**fixed position: positive control**) for piling slash.
- Log Loader – shovel: Bucket shall be a hydraulically controlled, 4 to 5 foot wide, "clamshell-style bucket with rake arms," with a 360-degree continuous rotation, and tooth length on rake arm shall be greater than 14 inches long, unless other wise approved in writing by STATE. "Clamshell-style bucket with rake arms" shall be hydraulically controlled to operate bucket in a vertical position (**free swinging**) for piling slash.

| Equipment | Rate | Hours | Appraised Value |
|------------|-----------------|-------|-----------------|
| Excavator | \$ 95.00 / hour | 59 | \$ 5,614.50 |
| Log Loader | \$ 70.00 / hour | 80 | \$ 5,614.50 |

Operator - must be experienced in operating similar equipment on land clearing operations, be able to operate the equipment proficiently, and pile the debris on the area as directed by STATE.

Support - including transport, other equipment, replacements, supplies, maintenance, and repairs shall be furnished as required to complete work; and shall be furnished without cost to STATE, other than as agreed under the contract terms.

Work Scheduling - work shall be accomplished only during dry weather conditions, and started within 14 calendar days after completion of yarding activities on Areas 1 and 2. Operations shall provide for continual operation until contract work is completed, unless interrupted by poor weather, fire closures, or other uncontrollable circumstances. Equipment breakdowns shall be repaired without undue delay, and provision shall be made for replacement of equipment to prevent prolonged delays. Piling operation shall not be allowed when operations might damage sites or affect stream flows. Any exception to these instructions must be authorized in writing by STATE.

STATE Representative - shall provide directions for the conduct of work according to specifications.

EXHIBIT "L"
OREGON DEPARTMENT OF FORESTRY

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

- (1) ORIGINAL REGISTRATION Date _____
 REVISION NUMBER _____ Date _____
 CANCELLATION Date _____
- (2) TO: _____
 (Third Party Scaling Organization)
- (3) FROM: Astoria Phone (503) 325-5451
 (State Forestry District)
 Address 92219 Highway 202, Astoria, OR 97103
- (4) PURCHASER: _____
 Address _____

- (12) SALE NAME Bovine Mainline Combination
 COUNTY Clatsop
- (13) STATE CONTRACT NUMBER 341-04-48
- (14) SCALE: westside eastside cubic foot
- (15) STATE BRAND REGISTRATION NUMBER _____
- (16) BUREAU BRAND CODE NUMBER _____
- (17) STATE BRAND INFORMATION:
 (COMPLETE) ↓

| (5) MINIMUM SCALING SPECIFICATIONS | | | CLASS | | |
|------------------------------------|-------------------------|-------------------|---------|--------|-----|
| SPECIES | SCALING DIAMETER INCHES | *NET SCALE VOLUME | PER MBF | ** SUM | SUB |
| Conifers | -- | 10 | X | | |
| Hardwoods | -- | 10 | X | | |
| | | | | | |
| | | | | | |

* Apply minimum volume test to whole logs over 40' Westside; 20' Eastside.
 ** Sum (if indicated): see instructions and explain in Item (20).

- (6) WESTSIDE SCALE: YES NO
 Actual taper all logs over 40' scaling length
- (7) EASTSIDE SCALE: YES NO
 *Actual taper butt logs over 40' scaling length
- (8) PENCIL BUCK YES NO
 back to Minimum Scaling Diameter _____
- (9) ADD-BACK VOLUME -- YES NO
 Deductions due to delay

- (18) PAINT REQUIRED: YES
 COLOR Orange

| (19) SPECIAL SCALES |
|--|
| PEELABLE CULL (all species) |
| UTILITY/PULP (all species) |
| NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE |
| OTHER: _____ |
| OTHER: _____ |

| (10) APPROVED SCALING LOCATIONS | Species | Yard | Truck |
|---------------------------------|---------|------|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

(20) REMARKS: _____

Operator's Name (Optional inclusion by District): _____

(21) SIGNATURES:

(11) NOTICE OF CANCELLATION OF BRAND:
 Effective Date: _____

 Purchaser or Authorized Representative Date

 State Forester Representative Date

 State Forester's Representative

EXHIBIT "L"

INSTRUCTIONS FOR FORM 343-307 (rev. 5/01)

- (1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires Item (21). Complete date.
- (2) Designate Third Party Scaling Organization (TPSO). Send 4 copies to TPSO, 1 to purchaser, 1 to Salem, and keep such copies as to district needs.
- (3) State District office, address and phone.
- (4) Enter Purchaser's business name and address as it appears on the contract.
- (5) Minimum Scaling Specifications. Review Section 45, "Log Removal," of the contract. Species, or combined species can be separate entries. Information serves as a basis for scaling (see also Items (13) thru (17)), and is required to show existence on the sale. **PerM** (per mbf). **SUM** (lump sum material). **SUB** (submerchantable material). SUB, as used by the State, references that material containing at least 10 bf (net) but less than the lower merchantable net volume limit or grade requirements for other merchantable (PerM) entries. PerM, SUM, and SUB must be indicated by checking the appropriate column. Species with the same specifications and value are combined into one entry. PerM and SUB require scaling therefore complete specifications. SUM need not be scaled, hence no specifications. Loads containing only SUM are to be ticketed if so instructed in Item (19). Mixed loads of SUM, PERM and/or SUB species will always be scaled.
- (6) Westside -- actual taper segment scale. Check Yes or No. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs -- All Species -- State Forestry Department Scaling Practices (Westside).
- (7) Eastside -- actual taper/taper table segment scale. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs -- All Species -- State Forestry Department Scaling Practices (Eastside). Items with * follow U.S. Forest Service Eastside rules.
- (8) Pencil Buck. Check NO if a westside sale, optional for eastside sales.
- (9) Add-Back Volume. Add-Back is normally checked YES. Scaler records deductions (sap rot, weather checks, etc.) caused by an abnormal delay in removal. Enter separately on scale ticket. TPSO provides State with summaries that include this as a net volume by species. Salvage sales and certain other circumstances may require that "NO" be checked.
- (10) Show scaling locations only applicable to TPSO. Not necessary to list markets. If all species are scaled at same location, enter "ALL."
- (11) When logging is complete, recall branding hammers, date and sign where indicated, check CANCELLATION box at top of form, and send to TPSO.
- (12) Enter sale name and county.
- (13) Enter sale contract number.
- (14) Check Westside or Eastside log scale. Cubic foot refers to Northwest Log Rules Cubic Foot Scale.
- (15) Oregon Forest Products Brand Registry Number (optional).
- (16) DO NOT USE -- TPSO will fill in when applicable.
- (17) Show one brand only. Complete drawing. If more than one brand is assigned to the sale, (1) make separate form for each brand, and (2) on each form, explain and show other brand(s) under REMARKS, Item 19.
- (18) Check YES and designate orange.
- (19) Special Scales. These are the Special Scales that will be applied. If "Other" is indicated, please describe. Give comments in Item (19).
- (20) Use this space to designate weight conversion factors, or any other explanations to clarify scaling requirements. If additional scaling locations are approved, prepare another form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.
- (21) Require purchaser to sign and date completed form.