

Exhibit C-60: Declaration of Ross Tilghman (Cougar Peak)

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**BEFORE THE HEARING EXAMINER AND
THE BOARD OF COUNTY COMMISSIONERS
FOR SKAGIT COUNTY**

In the Matter of the Application for a
Special Use Permit by

**Concrete Nor'West/Miles Sand
and Gravel (Grip Road)**

&

In the Matter of the appeal by
**Cougar Peak LLC and the McLeod
Family**

To the Board of County Commissioners
for Skagit County

Consolidated Appeal Nos.
PL24-0222, PL24-0224

No. PL16-0097
(Special Use Permit Approval)

**DECLARATION OF ROSS
TILGHMAN ON CROSS
EXAMINATION TO REPLACE
LOST TESTIMONY**

I, ROSS TILGHMAN, do hereby declare as follows:

1. I am over 18 years of age, I am competent to testify as to the matters contained herein,
and I do so based on my personal knowledge of the facts in the above-captioned matter.

2. I was designated by the Skagit County Hearing Examiner as an expert witness in the
above-referenced cause.

3. The following questions and answers are provided to replace the cross-examination by
counsel for Cougar Peak LLC and the McLeod Family taken on September 9, 2022 which was
inadvertently lost by the County as part of the record in the above-referenced cause.

4. The questions herein were presented to me in writing by counsel for Cougar Peak in
response to my replacement testimony in declaration form, dated August 8, 2024.

DECLARATION OF ROSS TILGHMAN
Page 1

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1 5. The questions and answers are limited to traffic safety issues on Grip Road at two S-
2 curves, where encroachments by the proposed truck/trailer combinations are likely to occur.

3 6. The proposed truck/trailer combinations are illustrated in Record Exhibit C49, S-13,
4 attached hereto as **“Attachment A.”**

5 7. Following are eight questions presented by Cougar Peak, et al, with my answers:
6

7 **Q1:** Please circle on the attached map, Record Exhibit C49, S-1A, the location of the two S-curves
8 on Grip Road west of the proposed mine that the applicant has proposed to mitigate to
9 prevent encroachments.

10 **A1:** My markup showing the two S-curves is attached hereto as
11 **“Attachment B.”**
12

13 **Q2:** Based upon your review of the applicant’s traffic study submittals and comments from Public
14 Works and their third party reviewers, was any widening of Grip Road in these two locations
15 proposed as part of the application, prior to hearing?

16 **A2:** No.
17

18 **Q3:** Based on your understanding and study of these two Grip Road S-Curves west of the mine
19 entrance, do you believe the project should be conditioned to widen these portions of the road for
20 safety reasons? If so, why is that required for this project?

21 **A3:** Yes. The application should be conditioned to reconstruct the S-curves on Grip Road to
22 current County standard for safety reasons and demonstrate that its trucks will not encroach on the
23 opposing lane. It should also be conditioned to demonstrate that the widening can be accomplished
24 given the steep side slopes. That would entail conceptual drawings to show the road’s plan, profile
25 and cross-section in addition to improvements to stabilize the side slopes.
26
27
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1 The applicant is required by the Mineral Resource Overlay section of the Skagit County
2 Comprehensive Plan to upgrade Grip Road to achieve safety in light of the truck/trailer combinations
3 the applicant proposes to use:

4 Comprehensive Plan Policy 4D-5.3, Roads and Bridges, states:

5 New public roads and bridges accessing designated Mineral Resource Overlay Areas shall be
6 designed to sustain the necessary traffic for mineral extraction operations. Existing roads and
7 bridges shall be improved as needed as each new extraction operation is developed. Cost
8 sharing for the improvement of roads and bridges shall be negotiated between the permitting
9 authorities and the applicant.

10 This policy uses the term “shall.” That means improving the road as needed is a mandatory
11 responsibility. The County clearly anticipated that older, narrower roads would need improvement
12 when proposed for use by long, heavy mining trucks when new mines are opened and that the mining
13 applicant would share in the financial burden to construct necessary improvements.

14 Consistent with Skagit County Road Standards, Paragraph 2.14, Transportation Improvements,
15 the road would have to be reconstructed to current County standards before mining takes place. The
16 process to design, approve and build the road is laid out in SCRS as well as in referenced documents
17 including WSDOT’s Design Manual and Construction Manual.

18 **Q4:** As an expert in evaluating road programs and mitigation for projects, could the truck/trailer
19 combination encroachments at these two curves be solved in concept by widening the road to the
20 County Road Standard shown in Record Exhibit C-49, S-14?

21 **A4:** Yes, that road standard for this classification of a rural road is attached hereto as “**Attachment**
22 **C.**” Meeting that current County road standard would go a long way to resolving the mining trucks’
23 encroachment problems on the roadway’s edge and over the centerline.

24 **Q5:** If so, what are the roadway and shoulder widths called for by that standard?

25 **A5:** For this Rural Minor Arterial with average daily volumes between 401 and 2,000 vehicles,
26 Skagit County Road Standards (“SCRS”) call for a total pavement width of 34 feet (two 11-foot travel
27 lanes with a 6-foot paved shoulder on each side, as illustrated in Figure B-6, included here as
28

1 **“Attachment C”**). That’s 12 to 14 feet wider than Grip Road is now (20 to 22 feet with no
2 shoulders). Nonetheless, a County standard width Grip Road should be tested to see that dump trucks
3 with pup trailers will be able to stay fully in their lanes given the curvature, slopes and travel
4 speeds. Bringing Grip Road up to current standards would be consistent with SCRS Appendix E that
5 addresses Resurfacing, Reconstruction and Rehabilitation (“3-R”) projects; in that Appendix, under
6 the heading “Safety Improvements,” the following is included:

7
8 Upgrading existing substandard roadway design elements – roadway design elements are the
9 physical characteristics of the highway such as alignment, grades, widths, sight distance,
10 clearances, bridges and the pavement structure including surface texture.”

11
12 The text of County Road Standards, Appendix E, is attached hereto as **“Attachment D.”**

13
14 **Q6:** If the goal is to assure the decision maker and the public that the applicant will be
15 required to construct mitigation prior to operation in a manner that cures the encroachment problem,
16 what type of documentation is needed, in your professional opinion?

17 **A6:** As previously noted, the process to design, approve and build the road is laid out in the SCRS
18 as well as in referenced documents, including WSDOT’s Construction Manual. Conceptual drawings,
19 while detailed, do not need to be at the level of detail utilized for construction plans. The elements
20 needed in these conceptual drawings or “plans” are spelled out in the Road Standards, Section 6.02, a
21 copy of which is attached hereto as **“Attachment E.”**

22
23 **Q7:** Summarizing those requirements, what should the record for this application include to specify
24 required mitigation for the two S-curves on Grip Road?

25 **A7:** The basic elements needed in a conceptual design drawing include:
26 • A dimensioned drawing with a legend specifying the drawing’s scale;
27 • Depiction of existing right-of-way limits plus additional area necessary to show side slope and
28 other relevant conditions;
• Accurate depictions of existing centerline, right-of-way and shoulders based on survey;
• Location of project stations and their relation to mileposts;

- Proposed improvements consistent with ASHTO or WSDOT Highway drawings (cross-sections, plan and profile views, etc. showing shoulders, clear zones, lanes, road grades, side slopes, ROW, etc.);
- All topographic features within right-of-way and adjacent areas for steep hillsides; and
- The signature of a professional engineer.

Q8: If, it turns out that the design concept widening the Grip Road curves to the County Road Standard is still insufficient to completely prevent encroachments, should the concept include straightening the curves to some degree?

A8: Realignment of curves is an option if needed to keep mine trucks from tracking outside of their lanes. A County standard width Grip Road, as shown in “Attachment C,” hereto, should be tested with AutoTurn applied to the dimensions of the two S-curves on Grip Road, shown on “Attachment B,” hereto, to see that dump trucks with pup trailers shown in “Attachment A,” hereto, will be able to stay fully in their lanes given the curvature, slopes and travel speeds.

Under penalty of perjury under the laws of the State of Washington, I hereby declare the foregoing to be true and correct to the best of my knowledge,

Executed this 20th day of August 2024, in Seattle, Washington:


Ross Tilghman

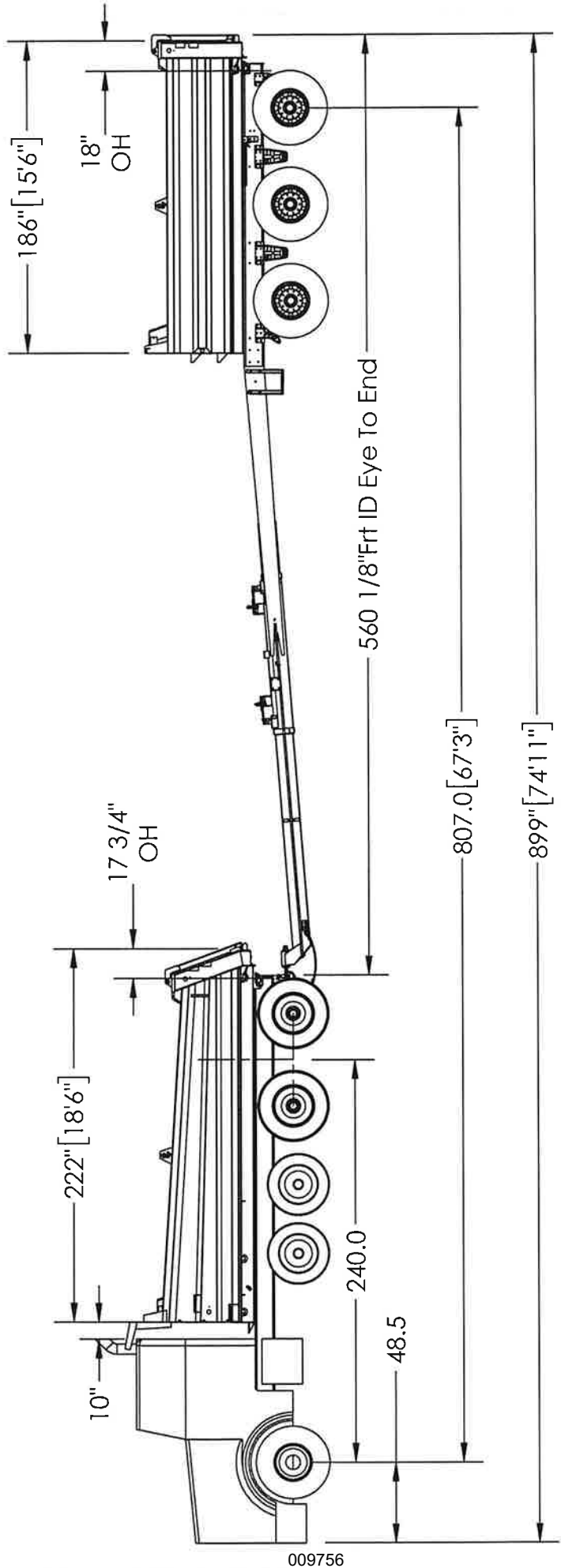
ATTACHMENT “A”

Truck Length grill to tail = 29.72 feet

899" -560.125" + 17.75" = 356.625"

356.625" divided by 12" = 29.72 feet

EXHIBIT C49/S-13



Truck Length = 30 feet

Trailer length adds 45 feet to the length fully extended
74.92' total - 30' truck length = 44.92' ⁵⁰¹⁸⁴⁶ Qty

SEE SPEC FOR BODY DETAILS

See Sht 2 - truck details

See Sht 3 - trlr details

VERIFY TRUCK DIMS

KWNW

TITLE:

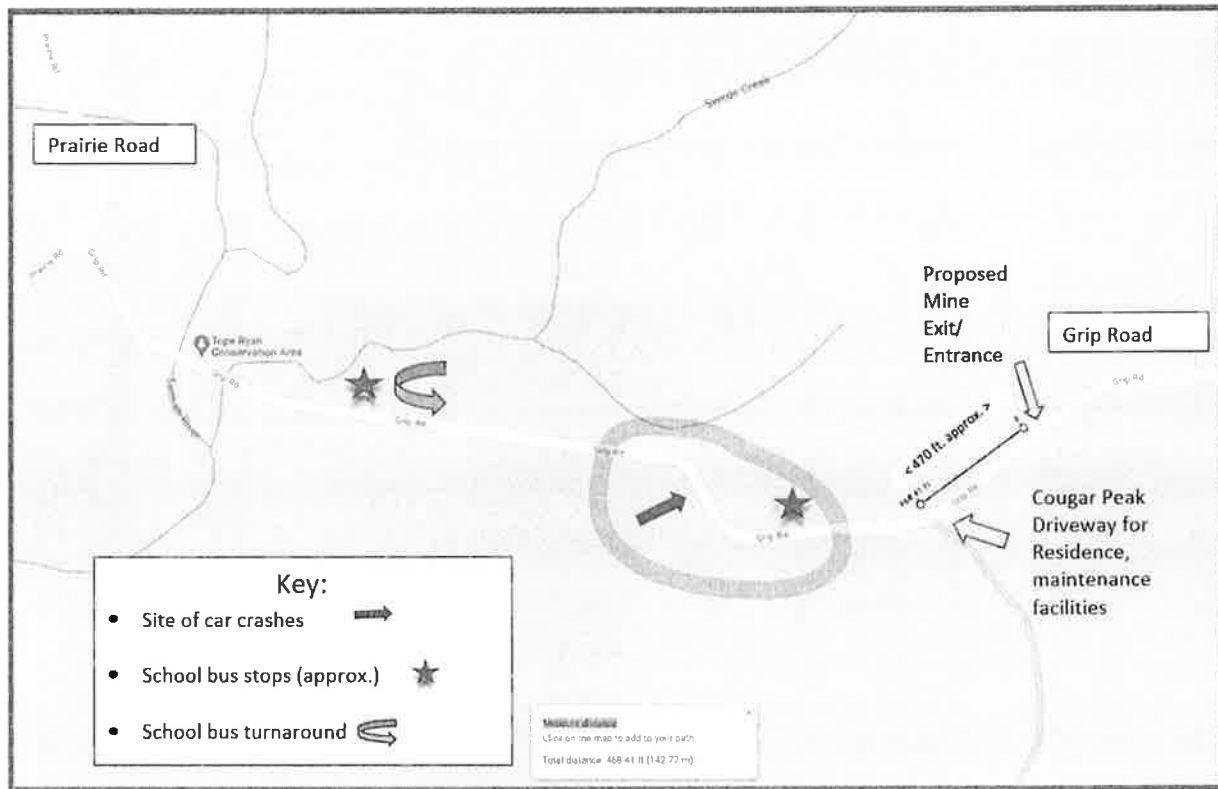
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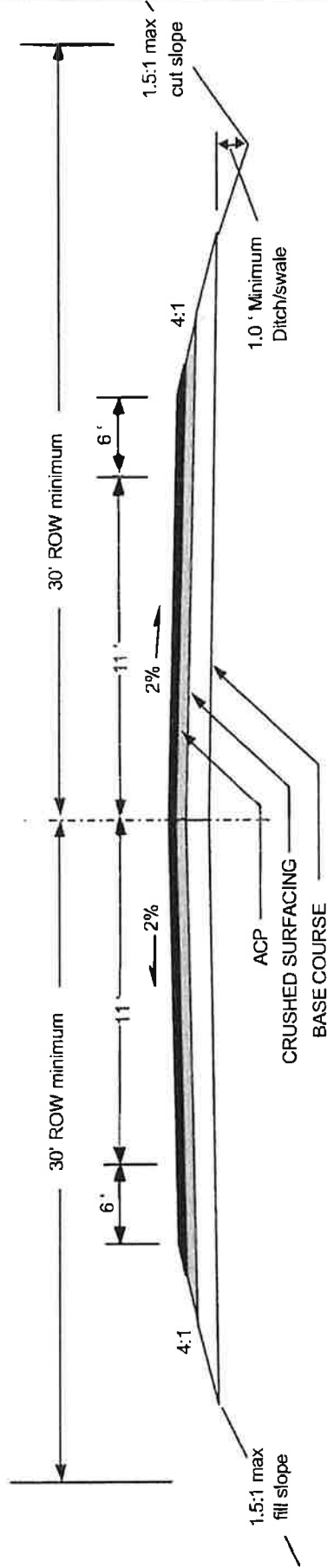
ATTACHMENT “B”



ATTACHMENT “C”

RURAL AREA ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: MAJOR & MINOR COLLECTORS
20-YR PROJECTED AVERAGE DAILY TRAFFIC (ADT): 401 - 2000



DESIGN SPEED (MPH)	Flat=50; Rolling=40; Mountainous=30
MAXIMUM ROAD GRADE (Percent)	Flat=6; Rolling=8; Mountainous=10
MINIMUM ROAD GRADE (Percent)	0.5
MINIMUM ROADWAY WIDTH (Ft)	34
MINIMUM SURFACING WIDTH (Ft)	34
MINIMUM DESIGN LOAD	HS 20-44
MINIMUM RIGHT-OF-WAY WIDTH (Ft)	60
MINIMUM REQUIRED SURFACING:	
ACP	ACP = 2" compacted depth
CRUSHED SURFACING TOP COURSE	2" compacted depth
GRAVEL BASE	10" compacted depth
VERTICAL CLEARANCE	16.5 ft.

Collector401-2000.doc



SKAGIT COUNTY
DEPARTMENT OF
PUBLIC WORKS

REVISIONS	DATE

ROADWAY
STANDARDS

RURAL MAJOR & MINOR
COLLECTOR ROADWAY
SECTION ADT 401 - 2000
FIGURE B - 6

6/26/2000

ATTACHMENT “D”

SKAGIT COUNTY ROAD STANDARDS

APPENDIX E

Resurfacing, Reconstruction and Rehabilitation (“3-R”) Projects

Definitions

Resurfacing. The addition of a layer or layers of paving material to provide additional structural integrity or improved serviceability and rideability.

Restoration. Work performed on pavement or bridge decks to render them suitable for an additional stage of construction. This may include supplementing the existing roadway by increasing surfacing and paving courses to provide structural capability, widening up to a total of 10 feet, and installing localized safety improvements. Restoration will generally be performed within the existing right-of-way.

Rehabilitation. Similar to “Restoration” except the work may include, but is not limited to, the following:

- ?? Reworking or strengthening the base or subbase.
- ?? Recycling or reworking existing materials to improve their structural integrity.
- ?? Adding underdrains.
- ?? Replacing or restoring malfunctioning joints.
- ?? Substantial pavement under-sealing when essential for stabilization.
- ?? Pavement grinding to restore smoothness, providing adequate structural thickness remains.
- ?? Removing and replacing deteriorated materials.
- ?? Crack and joint sealing but only when the required shape factor is established by routing or sawing.
- ?? Improving or widening shoulders.

Rehabilitation may require acquisitions of additional right-of-way.

Safety Improvements. Safety improvements include:

- ?? Upgrading existing substandard roadway design elements — roadway design elements are the physical characteristics of the highway such as alignment, grades, widths, sight distance, clearances, bridges, and the pavement structure including surface texture.
- ?? Improving existing operational features — operational features include traffic control devices, left and right turn lanes, lighting, and pedestrian

accommodations that provide for the safe and efficient movement of vehicles and pedestrians.

- ?? Reducing the potential hazard of existing roadside features — roadside features include sideslopes, ditches, drainage facilities, barrier systems, sign supports, luminaires, trees, utility poles, and other features adjacent to the roadway.
- ?? Upgrading bridge safety features — bridge rails, approach rails, connections, and terminals are considered bridge safety features.

General Discussion

Funding restrictions and other considerations do not always allow improvement of all existing roads and streets to the standards desirable for new construction. Therefore, when pavement condition deteriorates to the level of minimal standards, a cost-effective pavement improvement is needed. A project becomes 3-R when the proposed improvement consists of resurfacing, restoration, or rehabilitation to preserve and extend the service life of the roadway, or enhances the safety of the traveling public. 3-R projects primarily involve work on an existing roadway surface and/or subsurface. Their purpose includes extending the service life, providing additional pavement strength, restoring or improving the original cross-section, increasing skid resistance, decreasing noise, improving the ride of the roadway, and enhancing safety.

Many factors influence the scope of 3-R projects, including:

- ?? Roadside conditions.
- ?? Funding constraints.
- ?? Environmental concerns.
- ?? Changing traffic and land use patterns.
- ?? Deterioration rate of surfacing.
- ?? Accidents or accident rates.

Normally, all 3-R improvements are made within the existing right-of-way, although acquiring right-of-way and/or easements should be considered when practical. Each 3-R project should be considered in context with the entire route between logical termini and within the constraints imposed by limited funding and other considerations.

- I. Any revisions to plans must be made by the Project Engineer and approved by the Engineer prior to any implementation in the field.
- J. All pavement markings shall conform to the requirements of the MUTCD.
- K. Before striping takes place the applicant shall contact the Skagit County traffic office for coordination of the striping.
- L. A copy of the approved plans must be on the job site whenever construction is in progress.
- M. Skagit County shall be notified 72 hours before construction is started. The applicant shall be responsible for scheduling a pre-construction conference with the County. Other jurisdictions, Project Engineer, utility companies, subcontractors and other necessary parties to the project shall be present at the pre-construction conference.
- N. Slopes shall be stabilized to prevent erosion. In case erosion occurs in ditches, ditch lining is to be provided as requested and specified by the County.
- O. Where newly constructed paving meets existing paving, the applicant shall overlay and feather new pavement to provide a smooth transition from existing to proposed paving. Application of a thin paint coat of emulsified asphalt shall be applied to insure proper bonding.
- P. The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than 1/4 inch in 10-feet from the rate of transverse slope shown on the plans.
- Q. Materials sampling and testing shall be at a frequency and magnitude as specified in the Standard Specifications or determined by the County Engineer. In the case of plat roads, a private testing laboratory shall perform testing and sampling. Certified test reports shall be furnished for all tests performed by private testing laboratories.
- R. All utility work within existing pavement requires a minimum roadway reconstruction from the centerline, to include grinding the existing pavement and replacing it with a minimum 0.17' pavement.

ATTACHMENT “E”

6.00 CONSTRUCTION PLANS AND STAKING

When construction of roads is required by a subdivision ordinance, plans for the proposed road and drainage facilities shall include a set of road construction plans. The plans shall be signed, sealed, and submitted by the applicant's Project Engineer to the Department of Public Works for review. Final plans and profile drawings must be approved by the County Engineer prior to start of construction and recording of the subdivision. The applicant's Project Engineer shall be a registered professional engineer, licensed in the State of Washington.

6.01 Submittal Procedure

Plan sheets and profile sheets or a combined plan and profile sheet, and detail sheets shall be good quality reproducibles, mylar or equal, all in sheet sizes 24" by 36".

- A. First submittal shall be two complete sets of prints from reproducibles of the plan and profile, showing all utilities, drainage, drainage plan and other related facilities and detail sheets. One set of drainage calculations shall be included with the submittal. Temporary erosion/sedimentation control details may be incorporated with either or both of the road plans and the drainage plans, or may be submitted separately. A grading/erosion sedimentation control plan, as required, may be incorporated in either the road plans or drainage plans, or may be submitted separately in two full sets. If corrections are required, one set of check prints will be returned to the designing engineer.
- B. Subsequent submittal shall be a complete set of original plans, two complete sets of prints of the plans, and one set of calculations, as corrected and a full set of the check prints

and calculations. Upon final design approval by the County Engineer, the original set of plans will be signed and returned to the designing engineer.

- C. Final submittal shall be a complete set of good quality reproducible mylar or equal copies of the approved plans and two complete sets of prints of the approved plans.
- D. The approval of the construction plans shall be effective for three years. It may be extended at the option of the County Engineer. Prior to an extension of approval, the plans shall be revised to comply with current standards.
- E. As-built drawings shall be submitted prior to final acceptance of any road, structure or facility for maintenance by the county, a complete set of good quality reproducible copies with the corrected plans (mylar or equal) shall be submitted to the County Engineer. Such drawings shall describe any and all revisions or additions to the above plans. Additionally, the Project Engineer and/or builder shall submit a letter of certification stating that the work and materials were inspected and were in conformance to the as-built plans submitted.

6.02 Plan Elements

Plan elements shall include the following:

- A. A vicinity map shall be drawn on the cover sheet in an appropriate scale to show the proximity of the project to major roadways or towns.

- B. Road alignments with 100-foot stationing, reading from west to east/south to north, and stationing at points of curve, tangent, and intersections with ties to sections and/or quarter corners surrounding the improvement.
- C. Section, township, and range with breakdown to subdivision or short plat boundaries.
- D. Retractable bearings and distances on center lines based on the section sub-division.
- E. Curve data, degree of curve, radius, delta, arc length and tangent distances on all horizontal curves.
- F. Right-of-way lines and width for proposed road and intersecting roads.
- G. All topographic features with right-of-way limits and sufficient area beyond to resolve questions of setback, slope, drainage, access onto abutting property, and road continuations. A minimum of 50 feet shall be shown on either side of center line and a minimum of 200 feet shall be shown from the terminus of the road, or such additional terrain as directed by the County Engineer.
- H. All existing and proposed utility locations.
- I. Identification of all proposed roads and adjoining roads and subdivisions.
- J. All traffic control signing, street signing and pavement marking locations.

- K. Existing and proposed drainage features, indicating direction of flow, size, and kind of each drainage channel, pipe, and structure and other requirements as specified by the County Engineer.
- L. Scale one inch equals 50 feet. However, one inch equals 100 feet shall be optional for developments of lots one acre or larger. Details for clarification may be shown on convenient scale.
- M. North Arrow
- N. When the plan view extends over more than one sheet, the first sheet shall show an overall developmental layout, with the relationship of roads, utilities, drainage, lots, and other features clearly indicated, including road names and lot numbers. When more than five sheets, the first sheet shall show a table of contents and an index sheet.
- O. Sidewalk and wheel chair ramp locations shall be shown.
- P. Typical roadway sections of proposed road plus functional road classifications.
- Q. Mailbox locations shall be indicated when concrete sidewalks are to be constructed.
- R. A temporary erosion/sedimentation control plan, showing the location and control measures intended to minimize the effects of erosion due to construction operations shall be submitted with the construction plans.
- S. Other data necessary for the specific project.

- T. The general notes shall list the specification and design standards utilized.

6.03 Profile Elements

Profile elements shall include the following:

- A. Original ground line along center line and right-of-way lines at 100 foot stations and at significant ground breaks and topographic features, with accuracy to within 0.1 feet on unpaved surfaces and 0.02 feet on paved surfaces. When a road extends to the perimeter of the project, ground lines shall be extended at least 200 feet to show any changes in contour which might affect the profile of the proposed road.
- B. Final road, sewer, water and storm drainage profile with stationing, as in the horizontal plan, reading from left to right, to show stationing of points of curve, tangent, and inner section of vertical curves, with elevations to 0.01 feet. Ditch profiles may be required in rural road sections at the discretion of the County Engineer.
- C. Urban road profiles shall be clearly labeled to show both curbs and centerline. Road profiles shall be clearly labeled generally to show only centerline, except as required by the County Engineer. Values for grade and length of vertical curve shall be shown with the profiles on a numbered grid.
- D. Super elevation data shall be required and included for roadways exceeding 35 miles per hour design speed.