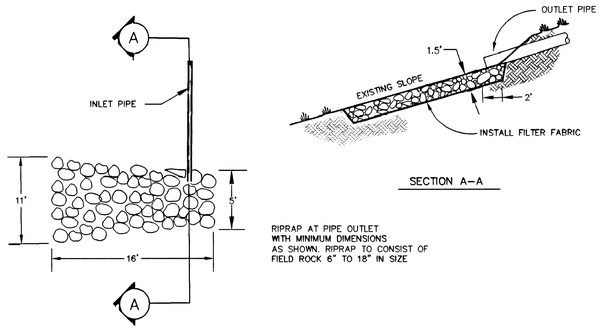
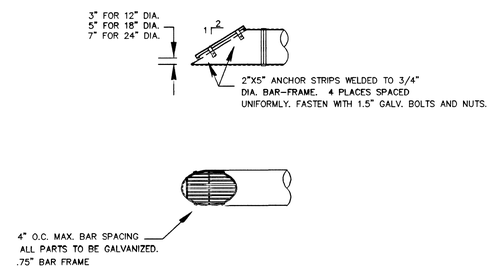


RIPRAP DETAIL

N.T.S.



PIPE INLET AND OUTLET

N.T.S.

CONSTRUCTION NOTES

1. All items of construction shall be completed within the "1991 Standard Specifications for Road, Bridge, and Municipal Construction as promulgated by the Washington State Department of Transportation" and the "Spokane County Standards for Road and Sewer Construction 1994", and as amended.

2. Locations of existing utilities shown on these plans are approximate. The Contractor shall be responsible for locating all underground utilities. Any conflicting utilities shall be relocated prior to construction of road and drainage facilities.

3. The Contractor is required to have a complete set of the approved road and drainage plans on the job site whenever the construction is in progress.

4. For construction of drywells, install filter fabric (Amoco 4545 or approved equivalent) between the drywell barrel and the washed drainrock, and between the washed drainrock and the native soils.

5. If the contractor discovers any discrepancies between the plans and existing conditions encountered, the Contractor shall immediately notify the Design Engineer and the Spokane County Engineer's Office.

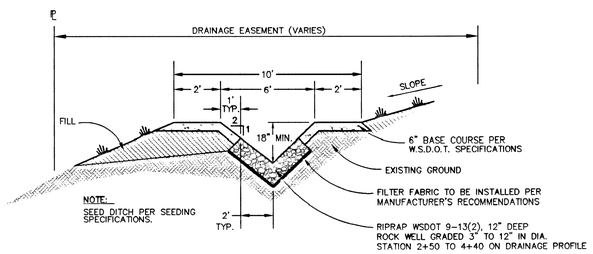
6. Prior to site construction, the Contractor is responsible for locating underground utilities. Call the underground utility location service at 456–8000 before you dig.

7. Curb data is to back of curb dimension.

8. All signage must conform to Manual of Uniform Traffic Control Standards (M.U.T.C.D.).

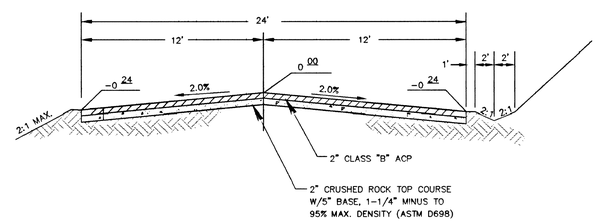
9. All existing areas damaged by construction equipment including excavations and embankments shall be hydroseeded per seeding specifications. Contractor shall be responsible for any damage caused by soil erosion until final acceptance of improvements by Spokane Co.

CONSTRUCTION SPECIFICATIONS



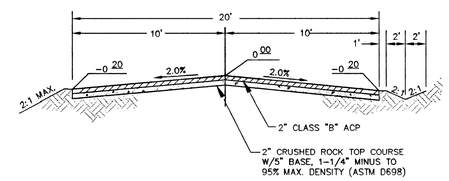
DRAINAGE DITCH SECTION

N.T.S.



24 ft. CENTER CROWN STREET SECTION

N.T.S.



20 ft. CENTER CROWN STREET SECTION

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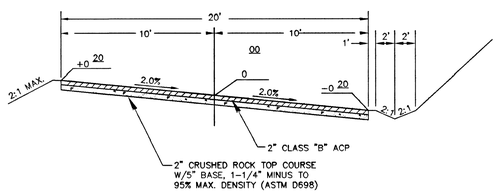
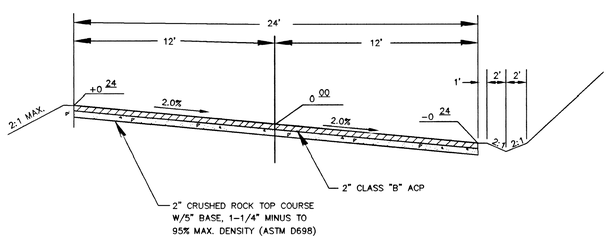


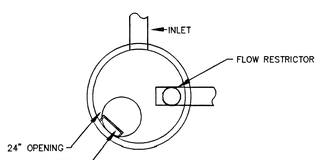
20 ft. CURB CROWN STREET SECTION

N.T.S.

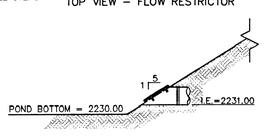


24 ft. CURB CROWN STREET SECTION

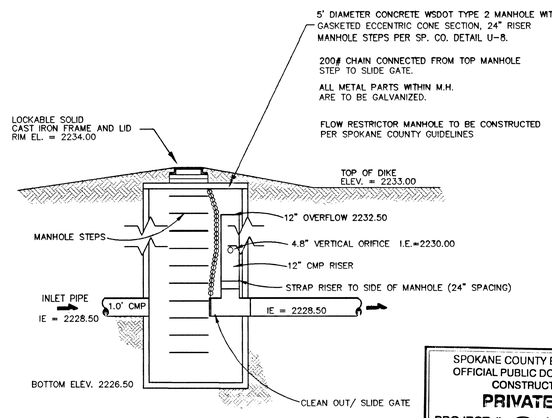
N.T.S.



TOP VIEW – FLOW RESTRICTOR



POND OUTLET DETAIL



FLOW RESTRICTOR M.H.

N.T.S.

PROVIDE FRESH, CLEAN NEW CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSTS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

20 PERCENT ELKA PERENNIAL RYE

20 PERCENT DURAR HARD FESCUE

45 PERCENT COVAR SHEEP/FESCUE

15 PERCENT REUBENS CANADIAN BLUEGRASS

PROVIDE MIXTURE COMPOSED OF GRASS SEED AND FERTILIZER IN PERCENTAGES AS FOLLOWS:

GRASS SEED MIXTURE: 90 LB.S PER ACRE
FERTILIZER: 16:16:16 TIMED RELEASE COMPOSITION, 300 LBS. PER ACRE

ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS OR AS DIRECTED BY A LANDSCAPE ARCHITECT.

SEEDING SPECIFICATIONS

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PRIVATE ROADS
PROJECT #: P-1853
DATE ACCEPTED: 1.4.99
ACCEPTANCE EXPIRES: 1.4.02
PROJECT LANE MILES: 0.44
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS BUILTS" ARE REQUIRED PRIOR TO RELEASE OF INSPECTION BOND.
APPROACH PERMIT REQUIRED! (509) 456-3600
PRIOR TO CONSTRUCTION

NOTE:
ALL ITEMS OF CONSTRUCTION ARE TO BE COMPLETED AND ACCEPTED BY SPOKANE COUNTY WITHIN SIX MONTHS OF DESIGN APPROVAL.

DEVELOPER APPROVAL 1/29/99 DATE

CALL BEFORE YOU DIG 456–8000

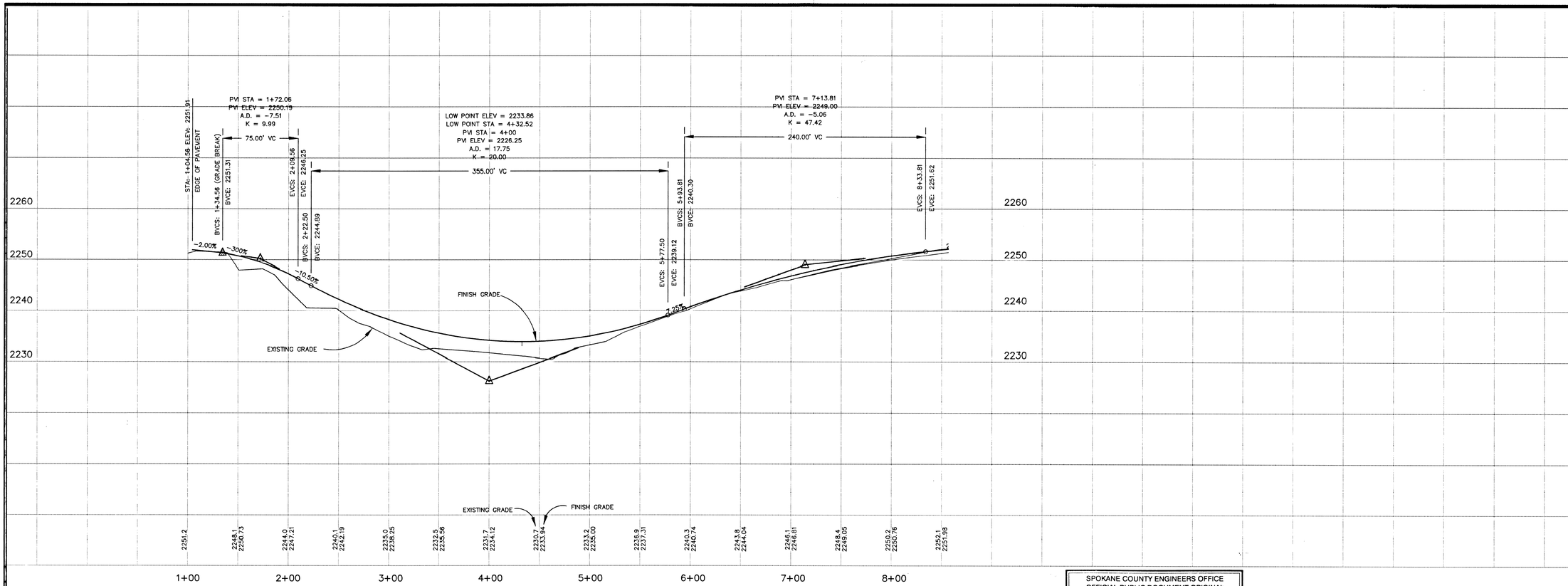
STORHAUG ENGINEERING
E. 9616 MONTGOMERY
SPOKANE, WA 99206
(509) 924–8052

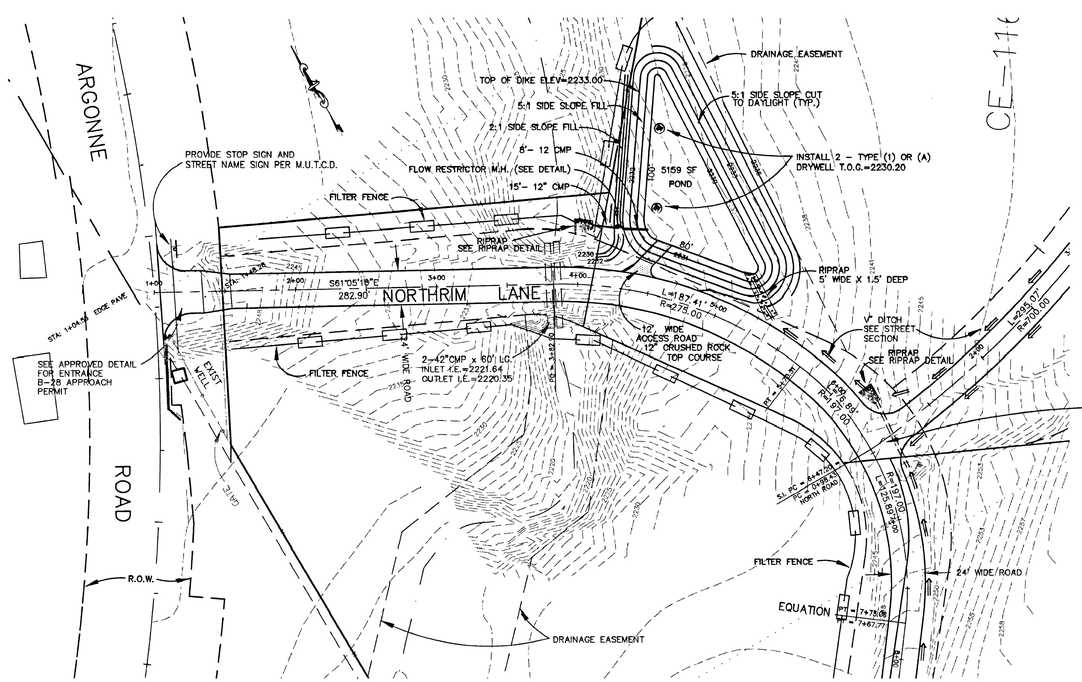
DRAWN BY: GG
CHECKED BY: JS
DATE: 12/17/98
SCALE: AS SHOWN

NORTH RIM ADDITION
STREET AND DRAINAGE
DETAILS

SHEET 4 OF 6
DETAILS

\\Server\d_Projects\1998\98-039 n rim\9803901.dwg Thu Dec 31 15:38:02 1998
9803901DWG





SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PRIVATE ROADS
PROJECT #: P-1853
DATE ACCEPTED: 1.4.99
ACCEPTANCE EXPIRES: 1.2.02
PROJECT LANE MILES: 0.44
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO RELEASE OF INSPECTION BOND.
APPROACH PERMIT REQUIRED! (509) 456-3600
PRIOR TO CONSTRUCTION

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

BENCH MARK

2. T.B.M. NO. 1 - TP-767
1/2" REBAR TOP OF ROCK MOUND S. OF ROAD
ELEVATION = 2267.65 SPOKANE COUNTY DATUM

NOTE:
CONSTRUCT TRANSITION FROM NORMAL CENTER CROWN SECTION 5+50 TO 6+00 TO A 24 FT. CURB CROWN STREET SECTION FROM STATION 6+00 TO 7+00, TRANSITION TO NORMAL CENTER CROWN SECTION 7+00 TO 7+50. CONSTRUCT CENTER CROWN SECTION ON REMAINDER OF ROADWAY.

NOTE:
ALL ITEMS OF CONSTRUCTION ARE TO BE COMPLETED AND ACCEPTED BY SPOKANE COUNTY WITHIN SIX MONTHS OF DESIGN APPROVAL.

DEVELOPER'S APPROVAL DATE

LEGEND

- EXISTING CULVERT
- PROPOSED RIPRAP
- PROPOSED STOP SIGN
- 2240 EDGE OF PAVEMENT
- 2225 EXISTING CONTOURS
- PROPOSED CONTOURS
- BENCH MARK
- DRAINAGE DITCH
- FILTER FENCE OR STRAW BALE BARRIER (SEE DETAIL)

REGISTERED PROFESSIONAL ENGINEER
BRUCE A. MACKINTOSH
STATE OF WASHINGTON
22559
EXPIRES 1/99

ENGINEERS STATEMENT

The design improvements shown in this set of calculations conform to the applicable editions of the Spokane County Standards for Road and Sewer Construction and Spokane County Guidelines for Stormwater Management. The Spokane County Engineer has approved all design deviations. I approve these calculations.

CALL BEFORE YOU DIG 456-8000

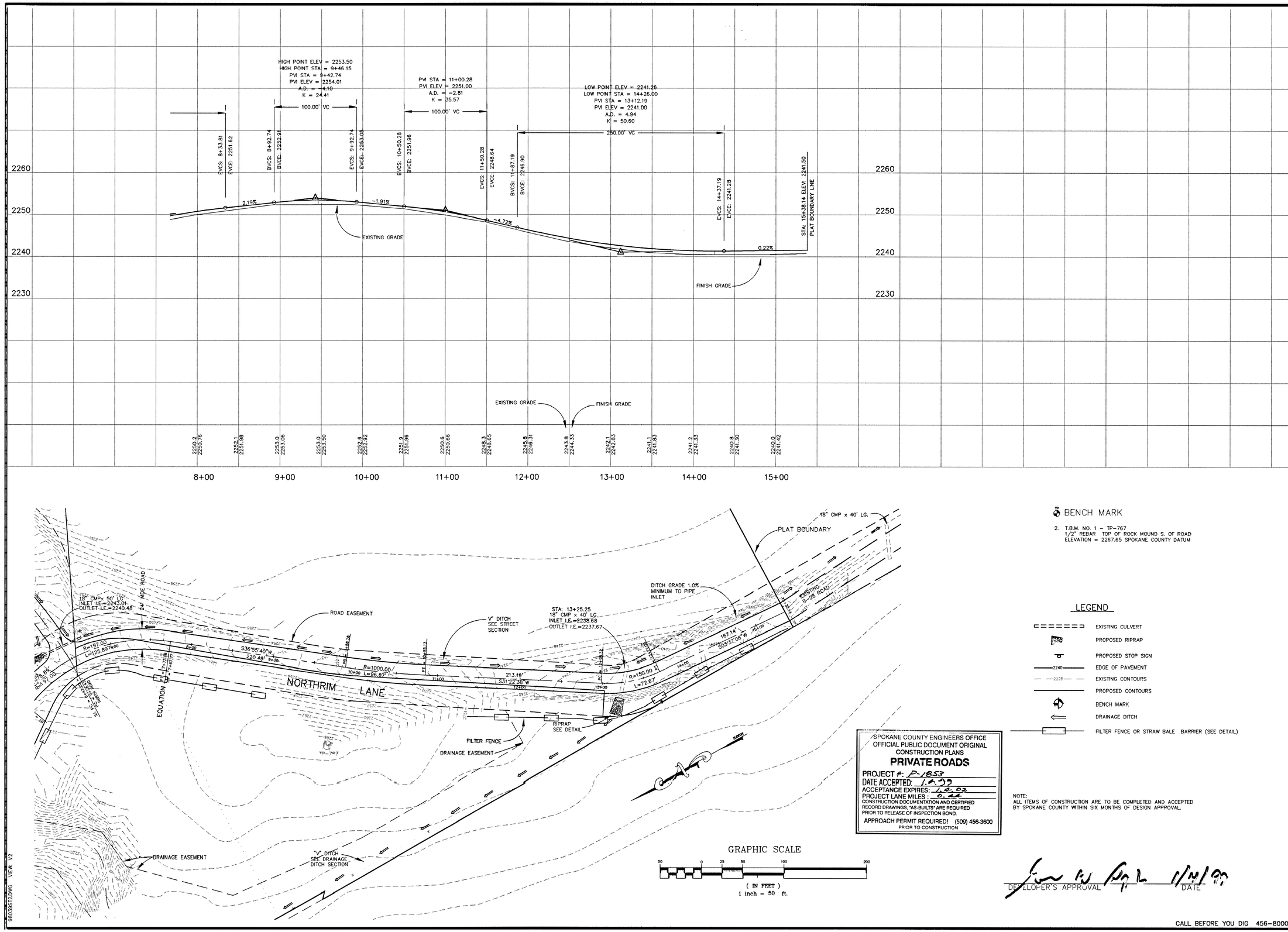
STORHAUG ENGINEERING
E. 9616 MONTGOMERY
SPOKANE, WA 99206
(509) 924-8052

DRAWN BY: GG
CHECKED BY: JS
DATE: 11/6/98
SCALE: 1"=50'

NORTH RIM ADDITION
NORTHRIM LANE PLAN/PROFILE
24 FT. WIDE ROADWAY

SHEET 1 OF 6
STREET

\\Server\d_Projects\1998\98-039 n rim\98039ST2.dwg Thu Dec 31 15:51:14 1998
VIEW: VA



BENCH MARK

2. T.B.M. NO. 1 – TP-767
1/2" REBAR TOP OF ROCK MOUND S. OF ROAD
ELEVATION = 2267.65 SPOKANE COUNTY DATUM

LEGEND

- EXISTING CULVERT
- PROPOSED RIPRAP
- PROPOSED STOP SIGN
- 2240 EDGE OF PAVEMENT
- 2228 EXISTING CONTOURS
- PROPOSED CONTOURS
- BENCH MARK
- DRAINAGE DITCH
- FILTER FENCE OR STRAW BALE BARRIER (SEE DETAIL)

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PRIVATE ROADS
PROJECT #: P-1853
DATE ACCEPTED: 1.6.99
ACCEPTANCE EXPIRES: 1.6.02
PROJECT LANE MILES: 0.42
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO RELEASE OF INSPECTION BOND.
APPROACH PERMIT REQUIRED! (509) 456-3600
PRIOR TO CONSTRUCTION

NOTE:
ALL ITEMS OF CONSTRUCTION ARE TO BE COMPLETED AND ACCEPTED BY SPOKANE COUNTY WITHIN SIX MONTHS OF DESIGN APPROVAL.

DEVELOPER'S APPROVAL 1/21/99 DATE

CALL BEFORE YOU DIG 456-8000

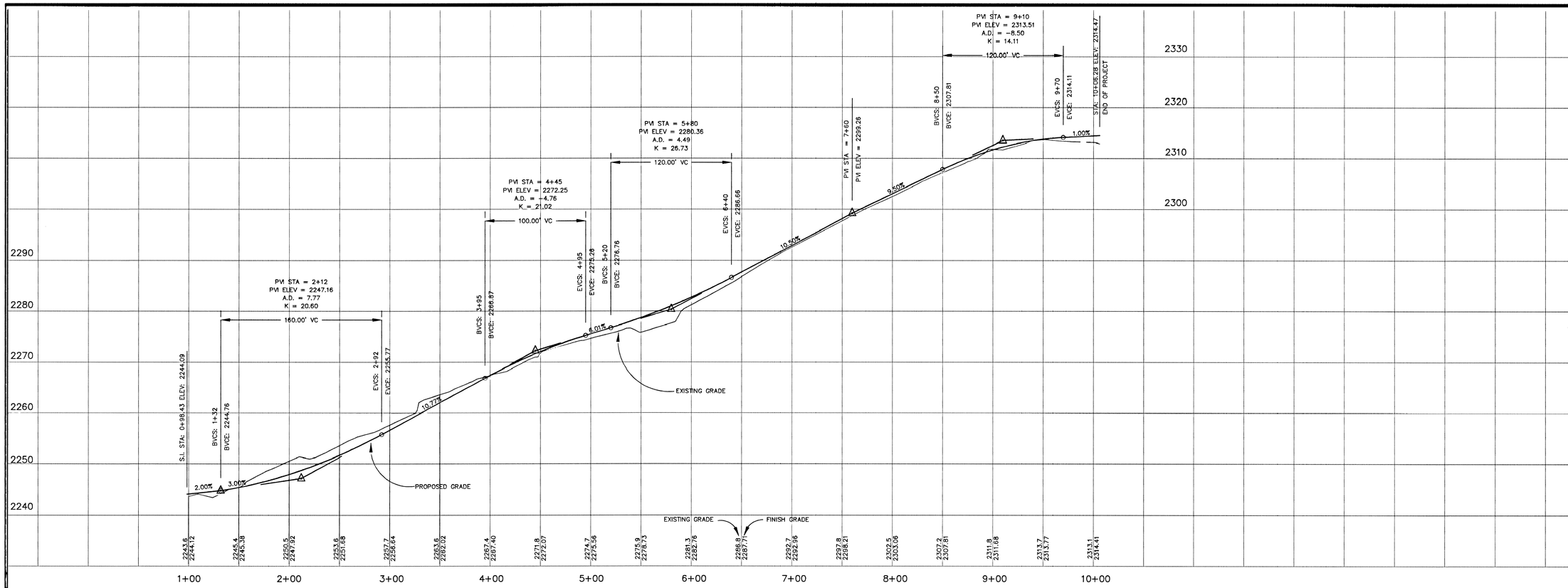
STORHAUG ENGINEERING
E. 9616 MONTGOMERY
SPOKANE, WA 99206
(509) 924-8052

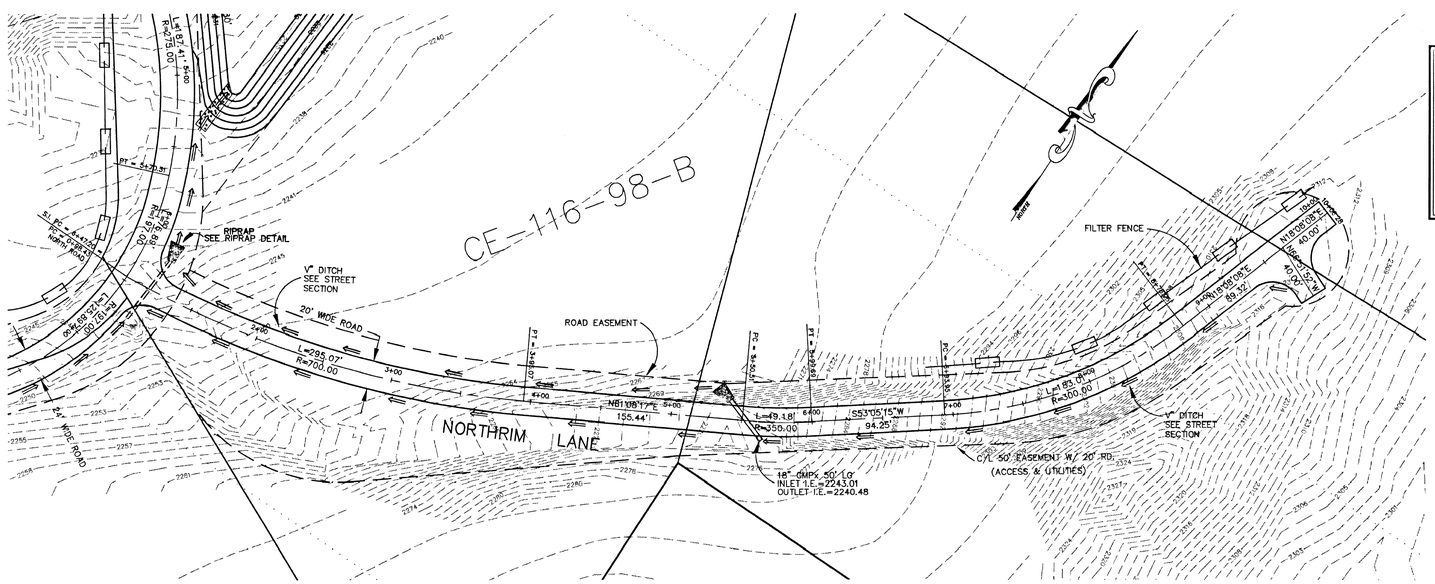
DRAWN BY: GG
CHECKED BY: JS
DATE: 11/6/98
SCALE: 1"=50'

NORTH RIM ADDITION
NORTHRIM LANE PLAN/PROFILE
24 FT. WIDE ROADWAY

SHEET 2 OF 6
STREET

\\Server\d_Projects\1998\98-039 n rim\98039512.dwg Thu Dec 31 15:50:23 1998
98039512DWG VIEW: V2





NOTE:
CONSTRUCT 20 FT. STREET WITH CURB CROWN SECTION FROM STA. 1+00 TO 4+00, TRANSITION TO CENTER CROWN SECTION BETWEEN STA. 4+00 TO 5+00. CONSTRUCT CENTER CROWN SECTION ON REMAINDER OF ROADWAY.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PRIVATE ROADS
PROJECT #: P-1853
DATE ACCEPTED: 1.4.99
ACCEPTANCE EXPIRES: 1.4.02
PROJECT LANE MILES : 0.44
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO RELEASE OF INSPECTION BOND.
APPROACH PERMIT REQUIRED! (509) 456-3600
PRIOR TO CONSTRUCTION

BENCH MARK

2. T.B.M. NO. 1 - TP-767
1/2" REBAR TOP OF ROCK MOUND S. OF ROAD
ELEVATION = 2267.65 SPOKANE COUNTY DATUM

LEGEND

- EXISTING CULVERT
- PROPOSED RIPRAP
- PROPOSED STOP SIGN
- 2240 EDGE OF PAVEMENT
- 2228 EXISTING CONTOURS
- PROPOSED CONTOURS
- BENCH MARK
- DRAINAGE DITCH
- FILTER FENCE OR STRAW BALE BARRIER (SEE DETAIL)

NOTE:
ALL ITEMS OF CONSTRUCTION ARE TO BE COMPLETED AND ACCEPTED BY SPOKANE COUNTY WITHIN SIX MONTHS OF DESIGN APPROVAL.

DEVELOPER'S APPROVAL DATE 1/4/99

CALL BEFORE YOU DIG 456-8000

STORHAUG ENGINEERING
E. 9616 MONTGOMERY
SPOKANE, WA 99206
(509) 924-8052

DRAWN BY: GG
CHECKED BY: JS
DATE: 11/5/98
SCALE: 1"=50'

NORTH RIM ADDITION
NORTHRIM LANE PLAN/PROFILE
20 FT. WIDE ROADWAY

SHEET 3 OF 6
STREET

\\Server\d_Projects\1998\98-039 n rim\98039S12.dwg Thu Dec 31 15:51:49 1998
98039S12DWG

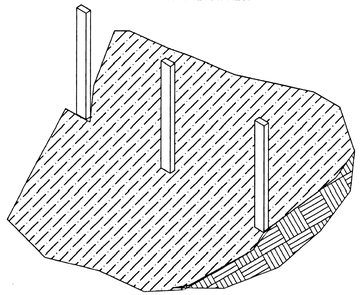
DEFINITION

A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. THERE ARE TWO TYPES. THE SILT FENCE IS A TEMPORARY LINEAR FILTER BARRIER CONSTRUCTED OF SYNTHETIC FILTER FABRIC, POSTS, AND DEPENDING UPON THE STRENGHT OF THE FABRIC USED, WIRE FENCE FOR SUPPORT. THE FILTER BARRIER IS CONSTRUCTED OF STAKES AND BURLAP OF SYNTHETIC FILTER FABRIC.

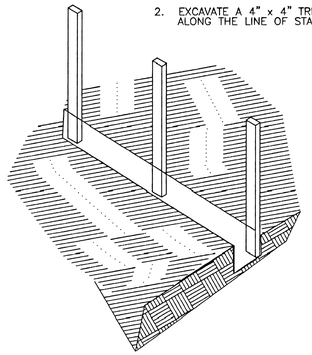
PURPOSES

1. TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATION IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
2. TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE LEVEL CHANNEL FLOWS.

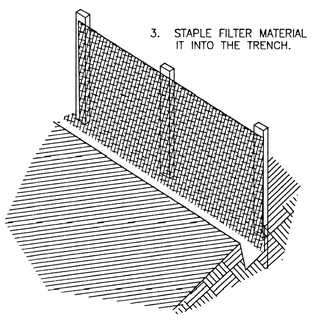
1. SET THE STAKES.



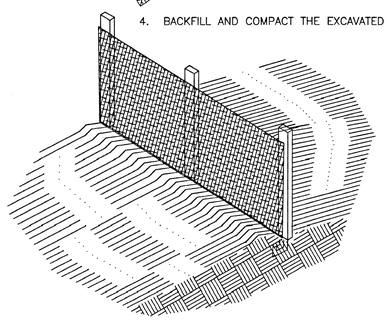
2. EXCAVATE A 4" x 4" TRENCH UP-SLOPE ALONG THE LINE OF STAKES.



3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

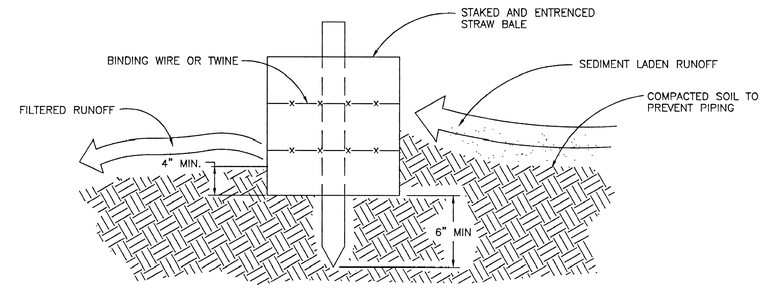


DEFINITION

A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED STRAW BALES.

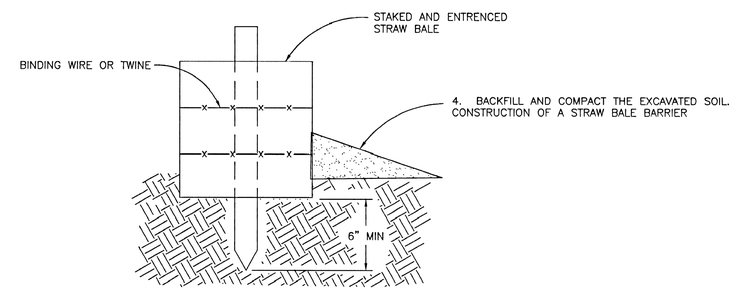
PURPOSES

1. TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS OF LIMITED EXTENT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
2. TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE LEVEL CHANNEL FLOWS.

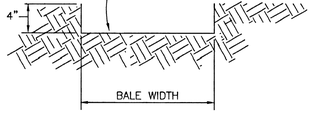


CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

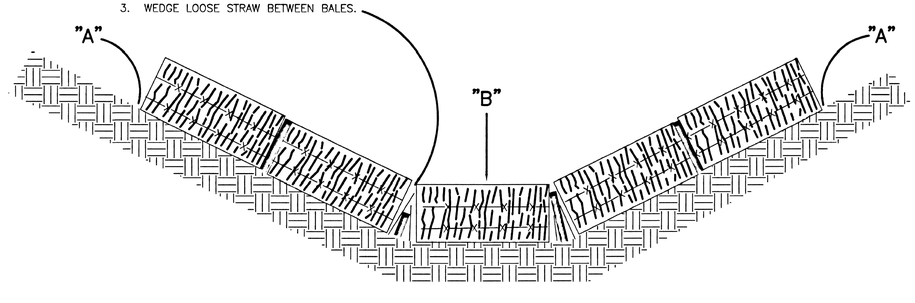
2. PLACE AND STAKE STRAW BALES.



1. EXCAVATE THE TRENCH.



3. WEDGE LOOSE STRAW BETWEEN BALES.



POINT "A" SHOULD BE HIGHER THAN POINT "B"

PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PRIVATE ROADS
PROJECT #: P-1853
DATE ACCEPTED: 1.4.99
ACCEPTANCE EXPIRES: 1.4.02
PROJECT LANE MILES: 0.44
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO RELEASE OF INSPECTION BOND.
APPROACH PERMIT REQUIRED! (509) 456-3600

NOTE:
ALL ITEMS OF CONSTRUCTION ARE TO BE COMPLETED AND ACCEPTED BY SPOKANE COUNTY WITHIN SIX MONTHS OF DESIGN APPROVAL.

DEVELOPER'S APPROVAL DATE 1/5/99

CALL BEFORE YOU DIG 456-8000

98039DR3.DWG

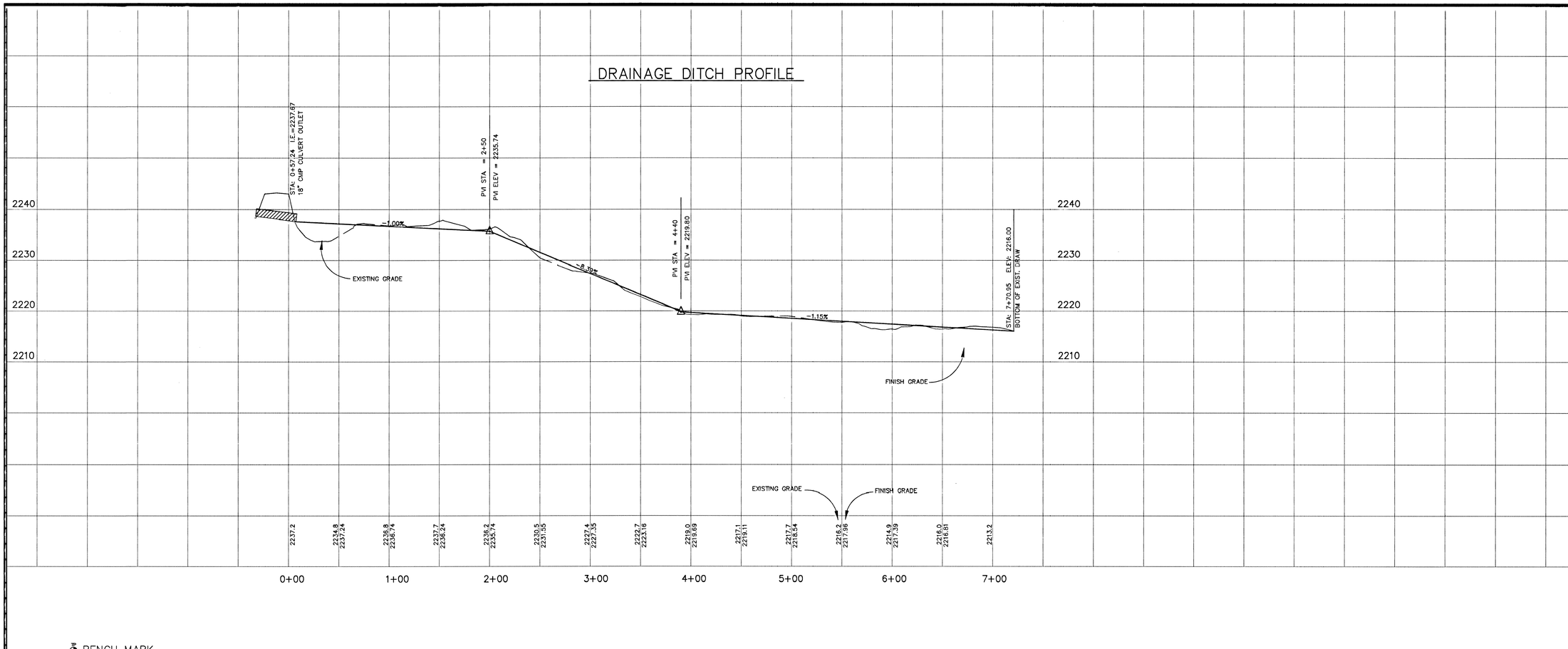
\\Server\d_Projects\1998\98-039 n rim\98039DR3.dwg Thu Dec 31 15:33:13 1998

STORHAUG ENGINEERING
E. 9616 MONTGOMERY
SPOKANE, WA 99206
(509) 924-8052

DRAWN BY: GG
CHECKED BY: JS
DATE: 10/5/98
SCALE: AS SHOWN

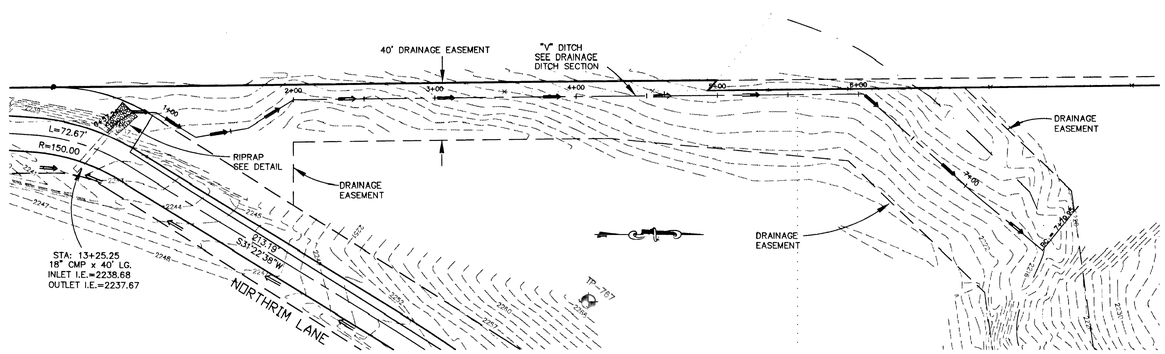
EROSION CONTROL DETAILS
NORTH RIM ESTATES

SHEET 5 OF 6
DRAINAGE



BENCH MARK

2. T.B.M. NO. 1 – TP–767
1/2" REBAR TOP OF ROCK MOUND S. OF ROAD
ELEVATION = 2267.65 SPOKANE COUNTY DATUM



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

- EXISTING CULVERT
- PROPOSED RIPRAP
- PROPOSED STOP SIGN
- 2240 EDGE OF PAVEMENT
- 2228 EXISTING CONTOURS
- PROPOSED CONTOURS
- BENCH MARK
- DRAINAGE DITCH
- FILTER FENCE (SEE DETAIL)

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PRIVATE ROADS
PROJECT #: P-1853
DATE ACCEPTED: 1.4.99
ACCEPTANCE EXPIRES: 1.4.00
PROJECT LANE MILES: 0.44
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO RELEASE OF INSPECTION BOND.
APPROACH PERMIT REQUIRED! (509) 456-3600
PRIOR TO CONSTRUCTION

NOTE:
ALL ITEMS OF CONSTRUCTION ARE TO BE COMPLETED AND ACCEPTED BY SPOKANE COUNTY WITHIN SIX MONTHS OF DESIGN APPROVAL.

DEVELOPER'S APPROVAL 1/20/98 DATE

CALL BEFORE YOU DIG 456–8000

STORHAUG ENGINEERING
E. 9616 MONTGOMERY
SPOKANE, WA 99206
(509) 924-8052

DRAWN BY: GG
CHECKED BY: JS
DATE: 12/17/98
SCALE: 1"=50'

NORTH RIM ESTATES
PLAN AND PROFILE
DRAINAGE SWALE

SHEET
6 OF 6
DRAINAGE

98039DR2.DWG VIEW: V2

\\Server\d_Projects\1998\98-039 n rim\98039DR2.dwg Thu Dec 31 15:35:44 1998