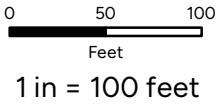




ENOS ROAD - PROPOSED CONDITIONS

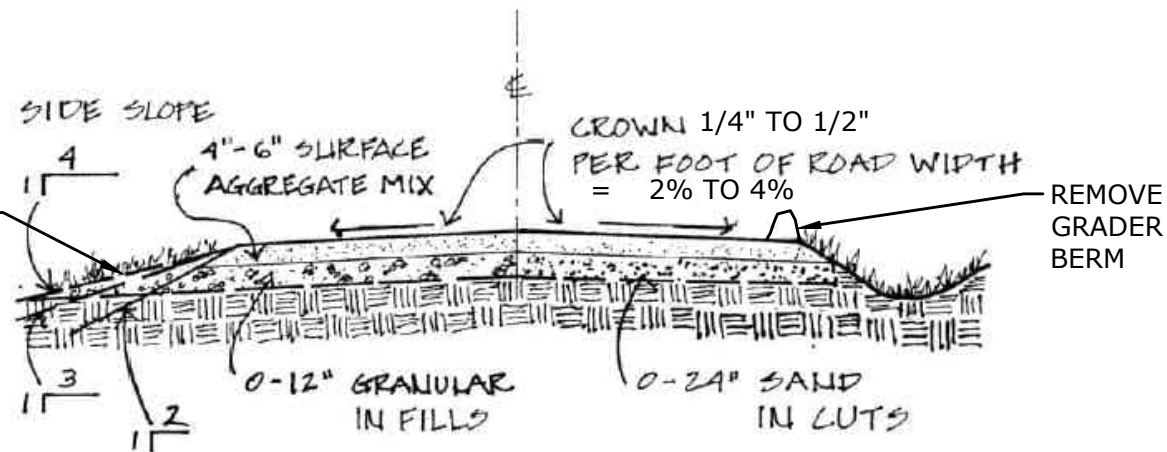
LAKE IROQUOIS - PATRICK BROOK WATERSHED ACTION PLAN
WINOOSKI NATURAL RESOURCES CONSERVATION DISTRICT

Background imagery from Nearmap.



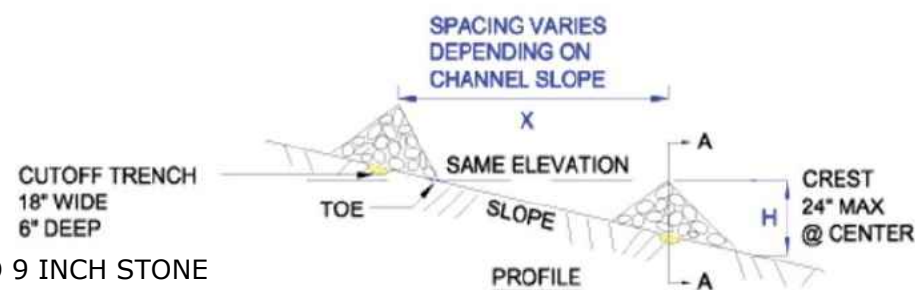
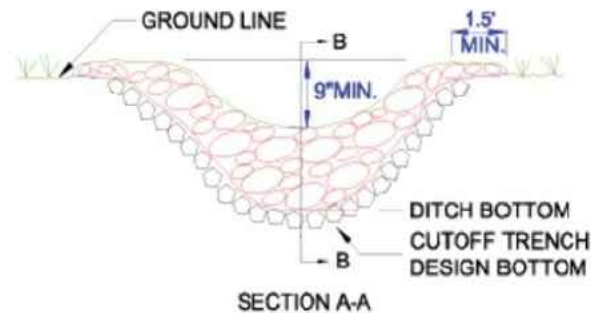
1 SOUTH MAIN STREET
SECOND FLOOR
WATERBURY, VT 05676
802.882.8335

SHOULDER WILL BE LOWER THAN TRAVEL LANE AND RUNOFF SHALL FLOW IN A DISTRIBUTED MANNER TO GRASS OR FORESTED AREA WHERE POSSIBLE

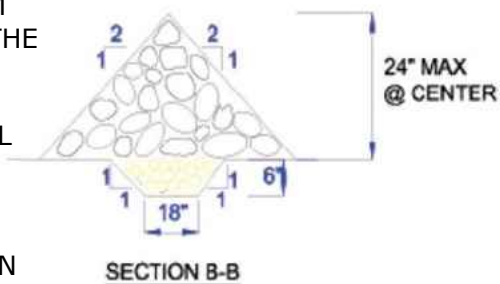


ROAD CROWN & PROFILE

- REGRADE ROAD SURFACE TO REMOVE RUTS, EROSION, AND GRADER/PLOW BERMS
- CROWN SHOULD BE MAINTAINED



- USE MIX OF 2 TO 9 INCH STONE
- SIDE SLOPES 2:1 OR FLATTER
- SPAN WIDTH OF CHANNEL AND UP SIDES OF BANKS
- SPACE SO THAT THE TOE OF THE UPSTREAM DAM IS THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM
- PERIODICALLY REMOVE ACCUMULATED SEDIMENT AND DEBRIS TO ALLOW CHANNEL TO DRAIN THROUGH THE STONE AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM
- IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, A LINER OF STONE SHOULD BE INSTALLED



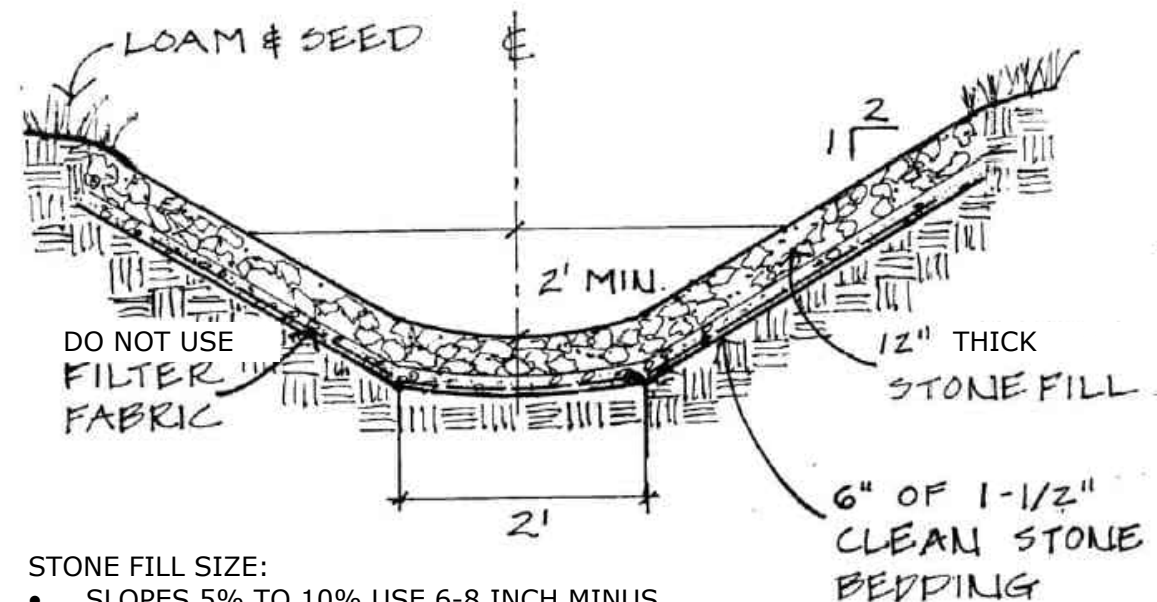
STONE CHECK DAM

OPERATION & MAINTENANCE NOTES:

ANNUALLY IN SPRING AFTER THAW AND AFTER LARGE RAINSTORMS, INSPECT ALL ROAD FEATURES.

NOTE WHERE EROSION IS AFFECTING FEATURE DESIGN.

SPECIFIC OPERATION & MAINTENANCE NOTES LISTED FOR EACH FEATURE.

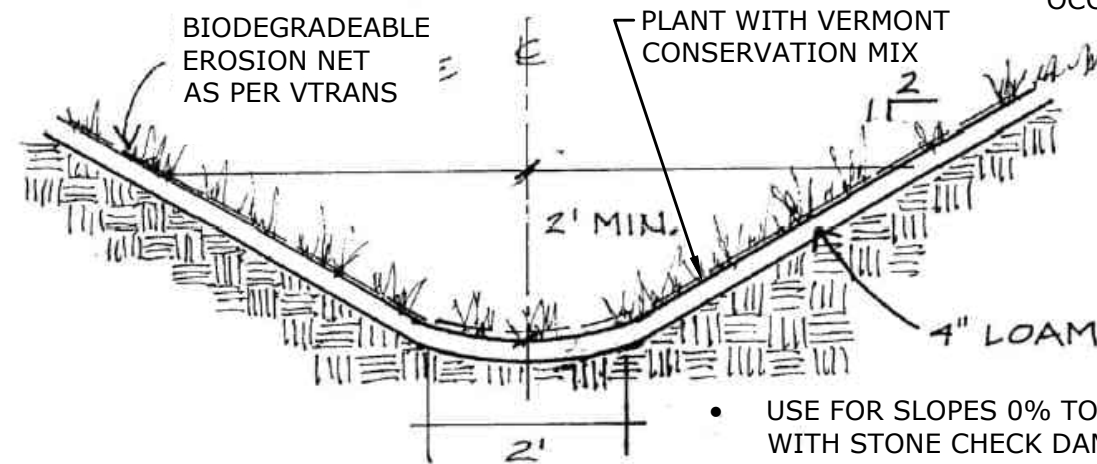


STONE FILL SIZE:

- SLOPES 5% TO 10% USE 6-8 INCH MINUS
- SLOPES MORE THAN 10% USE 12 INCH MINUS

STONE LINED DITCH

- RESHAPE SWALE AND REAPPLY SURFACE TREATMENT WHERE GULLY EROSION (>1 FT DEEP) IS OCCURRING



GRASS LINED DITCH

- USE FOR SLOPES 0% TO 5% OR 5% TO 8% WITH STONE CHECK DAMS OR DISCONNECTION PRACTICES EVERY 164 FEET
- NO BARE SOILS ALLOWED
- USE TRAPEZOIDAL OR PARABOLIC CROSS SECTION

REFERENCE NOTE: ADAPTED FROM "VERMONT BETTER BACKROADS MANUAL, CLEAN WATER YOU CAN AFFORD" A PULICATION OF THE NORTHERN VERMONT & GEORGE D. AIKEN RESOURCE CONSERVATION DEVELOPMENT (R C & D) COUNCILS, NOVEMBER 1995, UPDATED 2002, 2009.

STONE CHECK DAM DETAIL FROM STATE OF VERMONT AGENCY OF NATURAL RESOURCES DEPARTMENT OF ENVIRONMENTAL CONSERVATION VERMONT POLLUTION DISCHARGE ELIMINATION SYSTEM (VPDES) GENERAL PERMIT 3-9040 FOR STORMWATER DISCHARGES FROM MUNICIPAL ROADS, FINAL DRAFT.



1 SOUTH MAIN STREET
WATERBURY, VT 05676
PHONE: 802.244.8888
SLRCONSULTING.COM

REVISIONS

DETAILS - ROAD SECTION

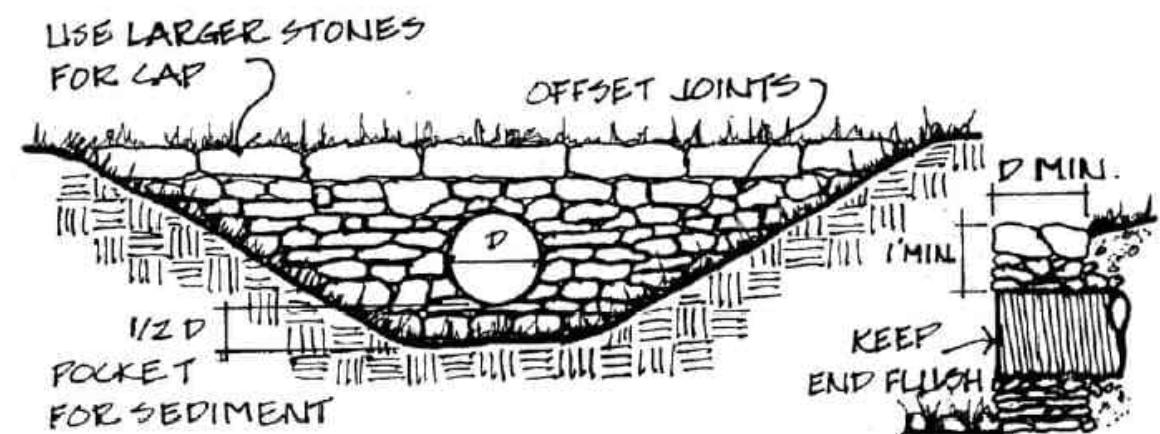
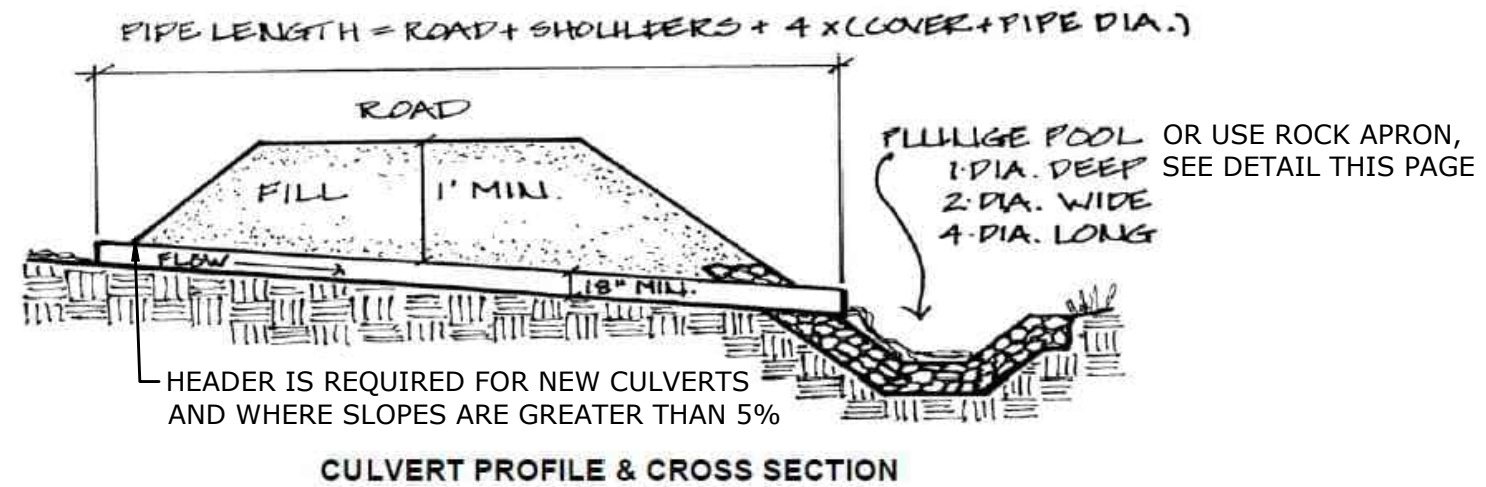
LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN

HINESBURG VERMONT

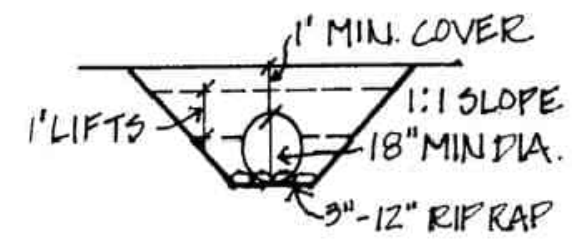
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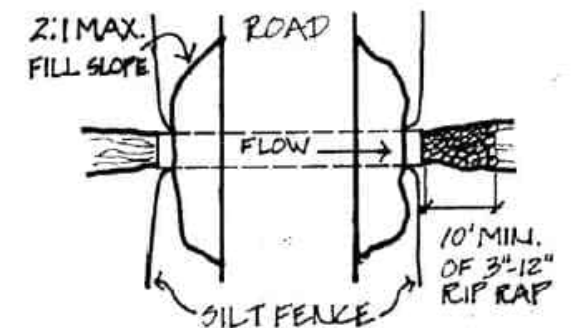
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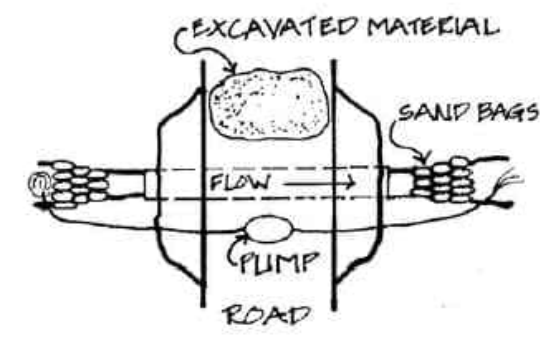
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CULVERT CROSS SECTION



CULVERT PLAN VIEW



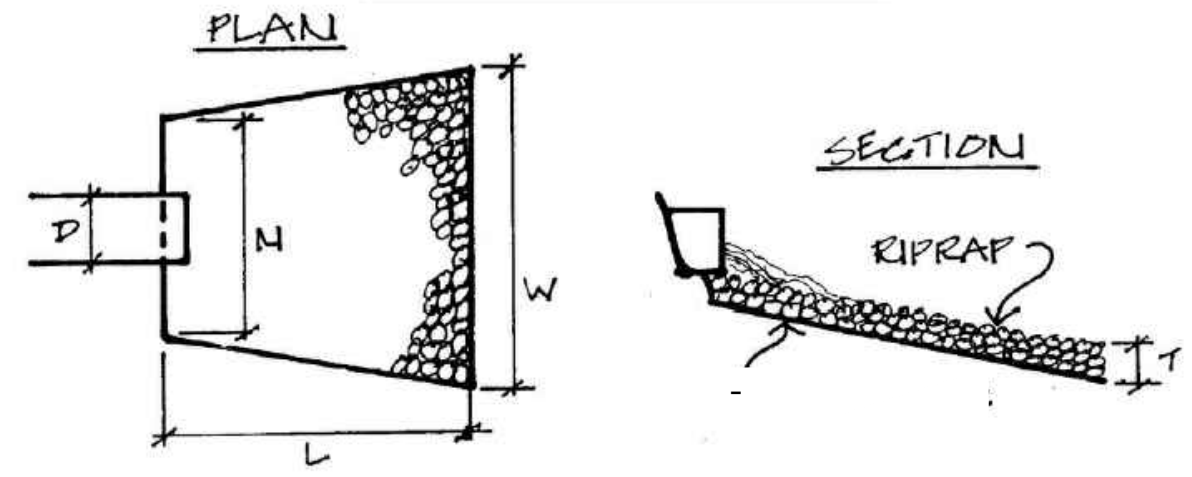
CULVERT INSTALLATION FLOW BYPASS

- CHECK INLET AND OUTLETS TO REMOVE ACCUMULATED DEBRIS BLOCKING OPENING
- REPLACE DISLODGED HEADER OR APRON STONES

REFERENCE NOTE: ADAPTED FROM "VERMONT BETTER BACKROADS MANUAL, CLEAN WATER YOU CAN AFFORD" A PULICATION OF THE NORTHERN VERMONT & GEORGE D. AIKEN RESOURCE CONSERVATION DEVELOPMENT (R C & D) COUNCILS, NOVEMBER 1995, UPDATED 2002, 2009.

| Rock Apron Specifications | | | | | |
|---------------------------|-------------|---------|---------|---------|---------|
| Culvert Diameter (D) | Riprap Size | T (in.) | N (ft.) | W (ft.) | L (ft.) |
| 18 inches | (3-12 inch) | 18 | 4.5 | 14.5 | 10.0 |
| 24 inches | (3-12 inch) | 18 | 6.0 | 20.0 | 14.0 |

D= diameter of culvert
T= depth of stone in apron
N= width of apron near culvert
W= width at downhill end of apron
L= length of apron



ROCK APRON

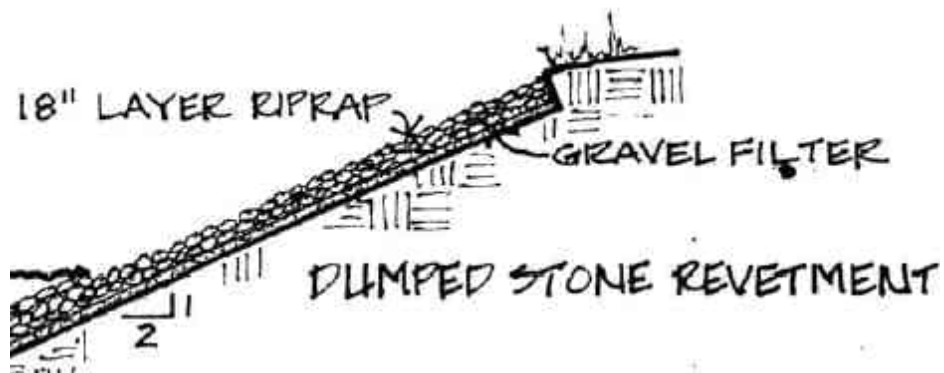


REVISIONS

DETAILS - CULVERT
LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN
HINESBURG, VERMONT

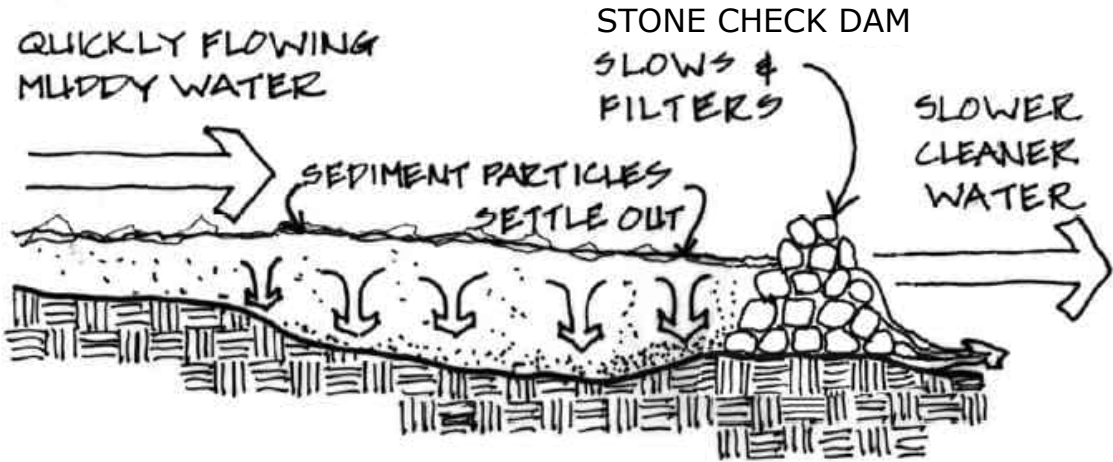
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Drawing: W:\CAD\DESIGN\14439.00006-DE\CAD\VF-DETAILS.DWG Layout: TAP.OTHER



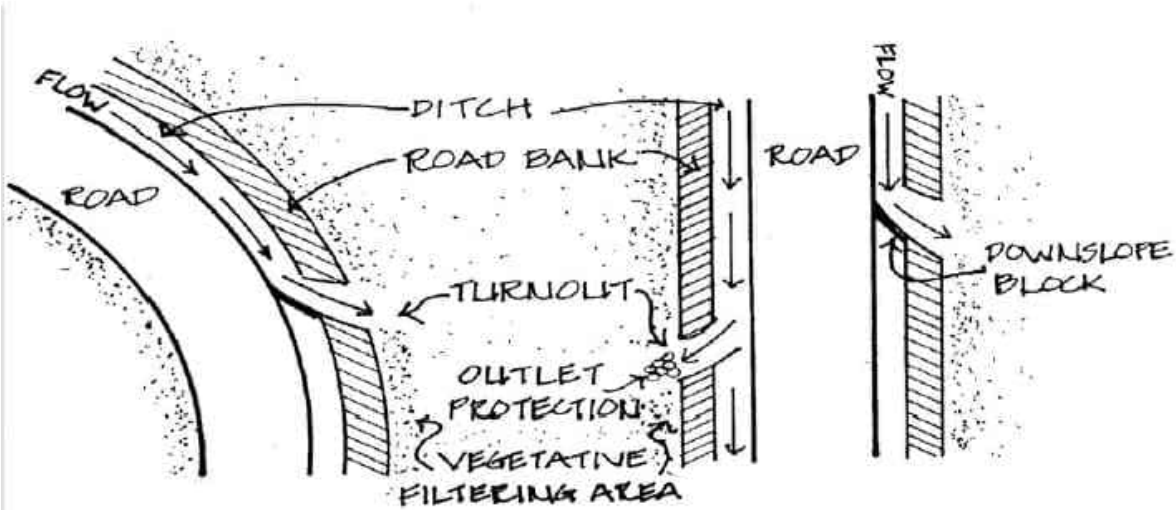
STONE ARMOR OR ROAD EDGE STABILIZATION

- RIPRAP SIZE IS BASED ON QUANTITY AND VELOCITY OF WATER
- ALWAYS CONTACT A STREAM ALTERNATION ENGINEER BEFORE INSTALLING RIPRAP AT A STREAM BANK
- USE ANGULAR STONE
- COVER WITH GRUBBINGS OR TOPSOIL AND SEED. IF ON A STREAM BANK, ONLY APPLY ABOVE ORDINARY HIGH WATER.
- CONSIDER PLANTING WITH ADDITIONAL VEGETATION



SEDIMENT TRAP

- INSPECT ANNUALLY AND AFTER LARGE STORMS
- REMOVE ACCUMULATED SEDIMENT WHEN HALF FULL.



TURN-OUT

- AVOID DIRECT OUTLET TO SURFACE WATERS
- STABILIZE OUTLET BASED ON SLOPE:
 - 0% TO 5% STABILIZE WITH GRASS
 - 5% TO 10% STABILIZE WITH 6-8 INCH MINUS STONE
 - GREATER THAN 10% STABILIZE WITH 12 INCH MINUS STONE
- REMOVE ACCUMULATED SEDIMENT WHEN HALF FULL

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Plotted by: AMARCUCJ On this date: Thu, 2024 February 8 - 2:56pm



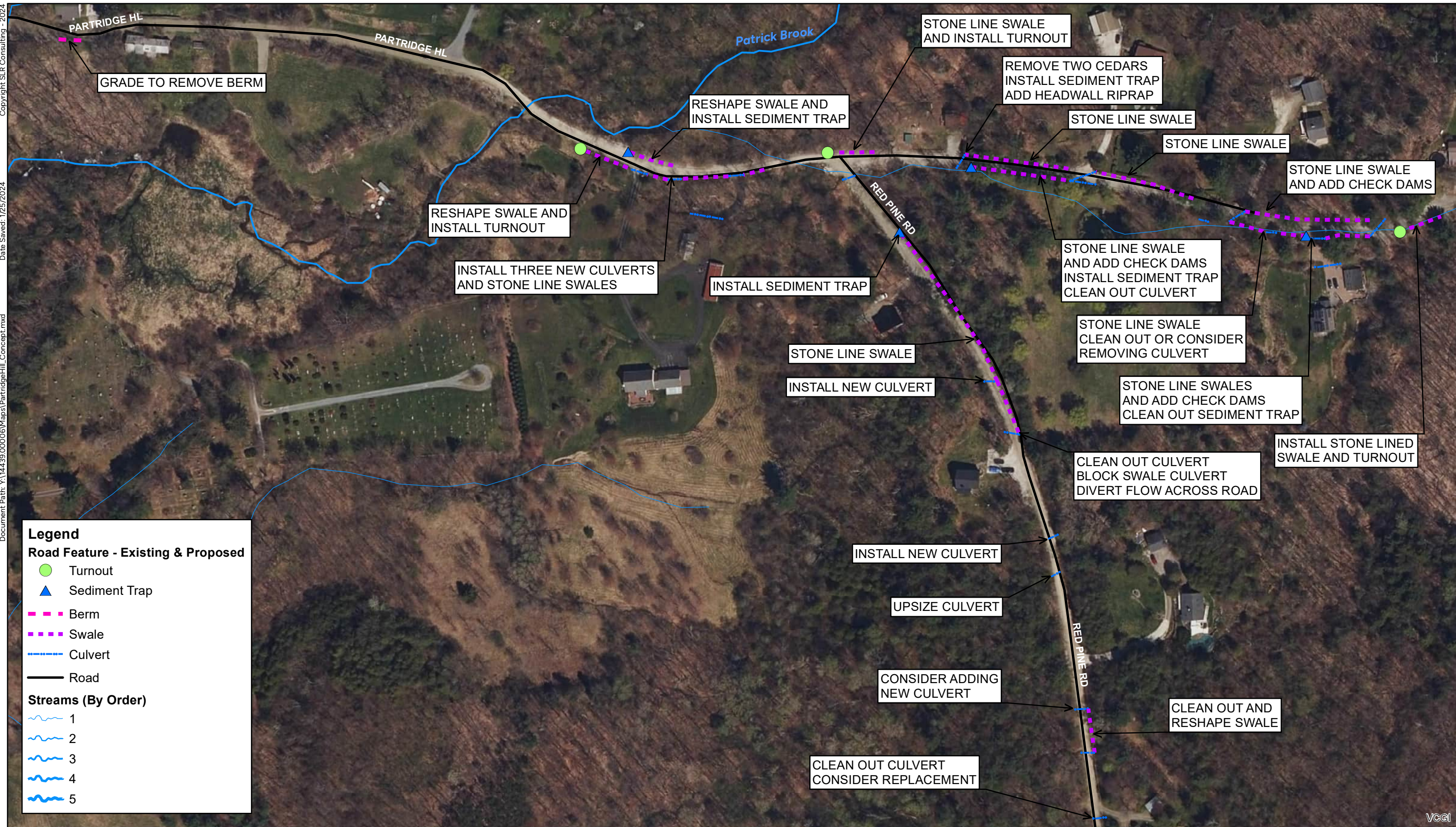
REVISIONS

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DETAILS - OTHER

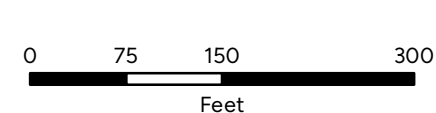
LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN
HINESBURG, VERMONT

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| JCL DESIGNED | AOM DRAWN | JCL CHECKED |
| NOT TO SCALE | | |
| SCALE | | |
| DATE | | |
| FEBRUARY 8, 2024 | | |
| PROJECT NO. | | |
| 14439.00006 | | |
| SHEET NO. | | |
| DET-3 | | |



PARTRIDGE HILL - PROPOSED CONDITIONS

LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN
WINOOSKI NATURAL RESOURCES CONSERVATION DISTRICT

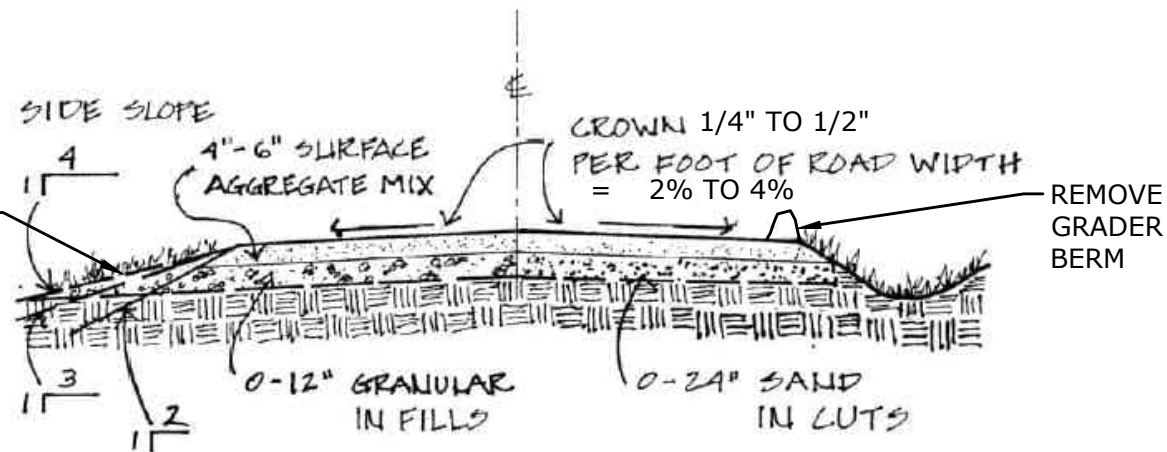


1 in = 150 feet



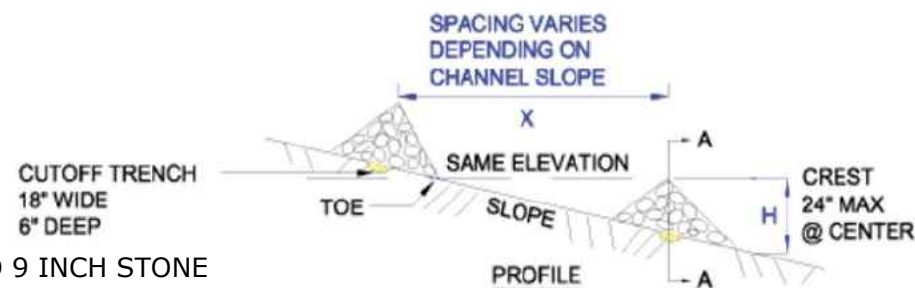
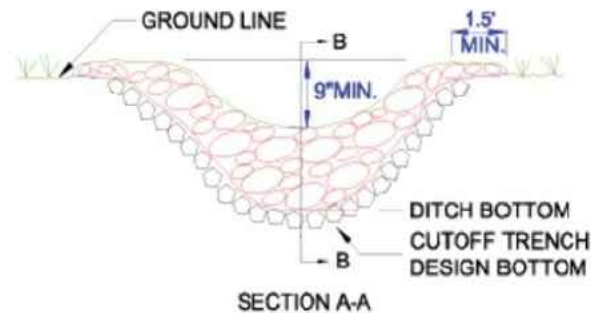
1 SOUTH MAIN ST
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WATERBURY, VT 05676
802.882.8335

SHOULDER WILL BE LOWER THAN TRAVEL LANE AND RUNOFF SHALL FLOW IN A DISTRIBUTED MANNER TO GRASS OR FORESTED AREA WHERE POSSIBLE

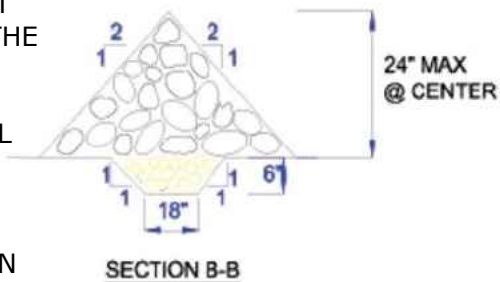


ROAD CROWN & PROFILE

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- USE MIX OF 2 TO 9 INCH STONE
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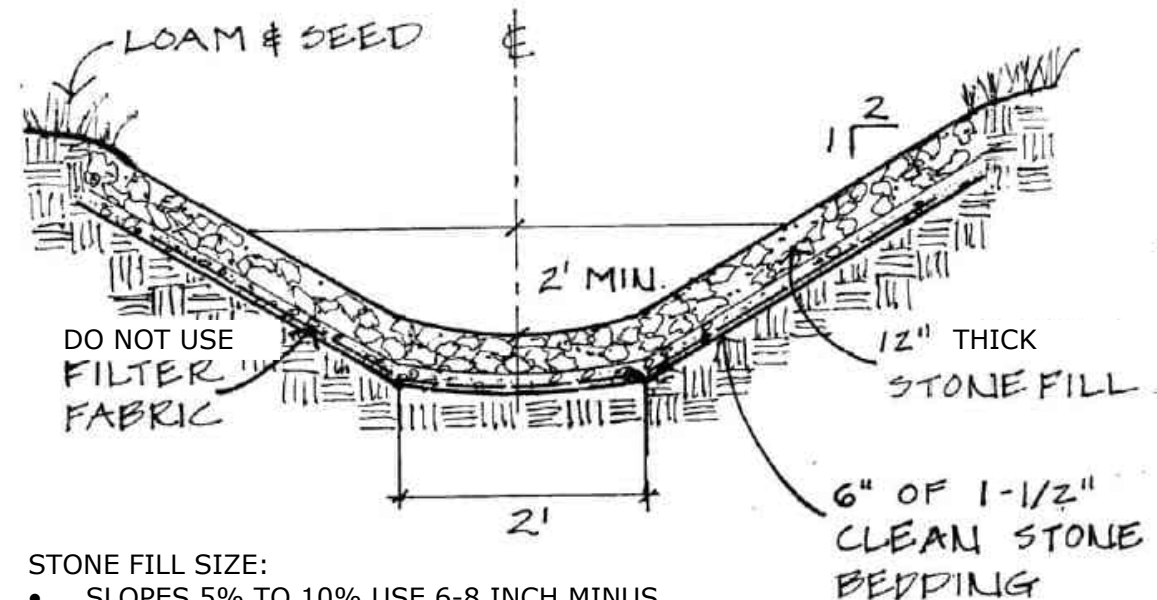
STONE CHECK DAM

OPERATION & MAINTENANCE NOTES:

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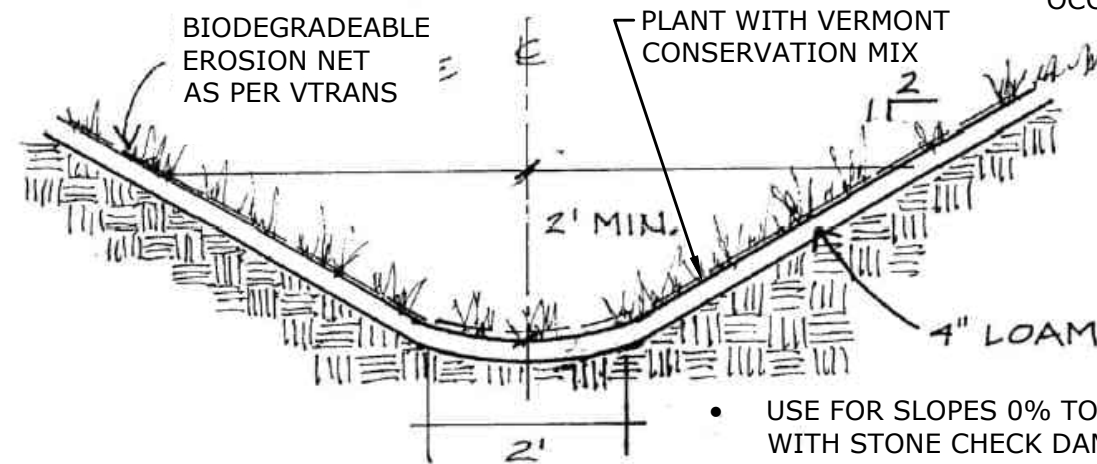


STONE FILL SIZE:

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STONE LINED DITCH

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GRASS LINED DITCH

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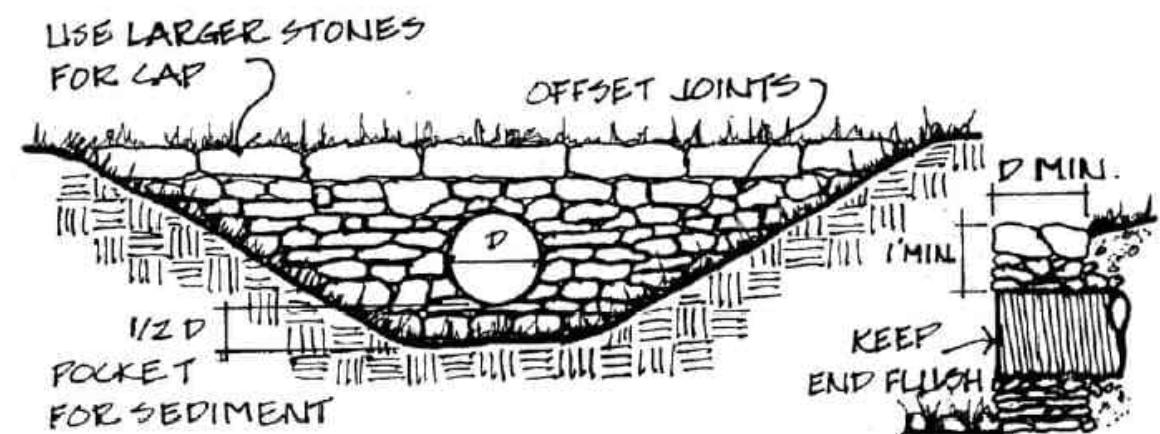
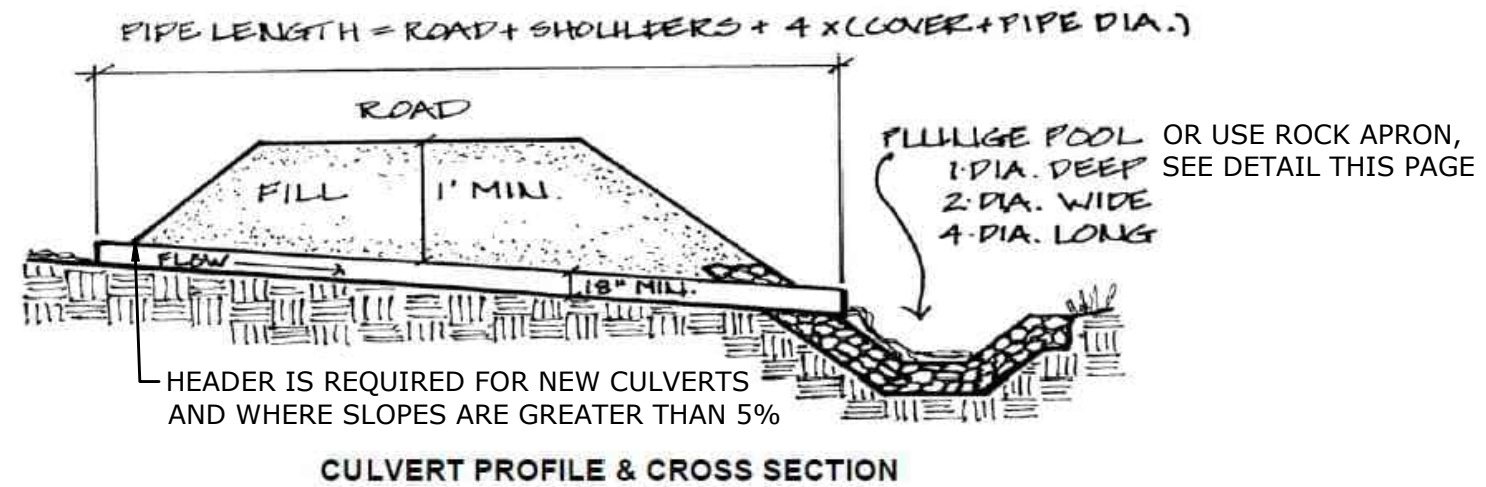
REVISIONS

DETAILS - ROAD SECTION
LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN
HINESBURG VERMONT

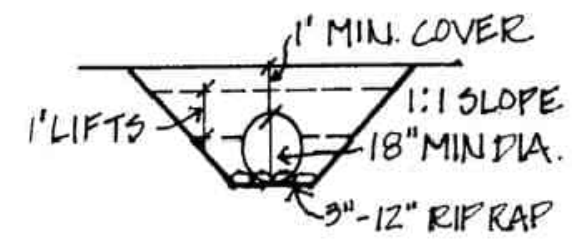
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| PROJECT NO. | | |
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| SHEET NO. | | |

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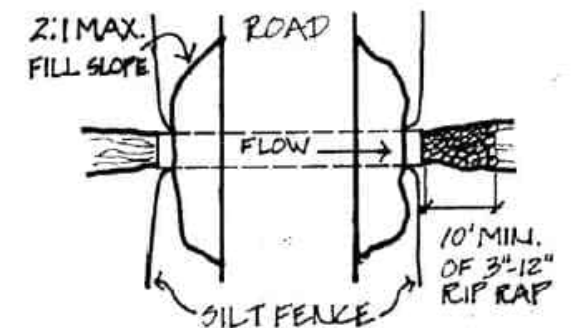
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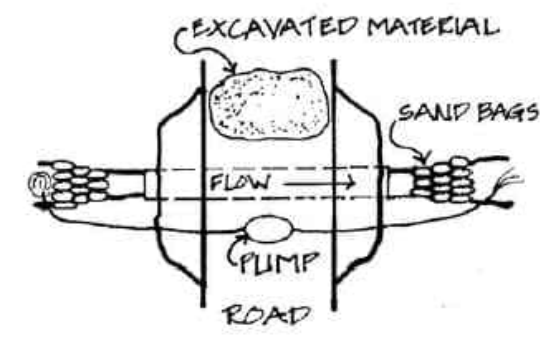
HEADER



CULVERT CROSS SECTION



CULVERT PLAN VIEW



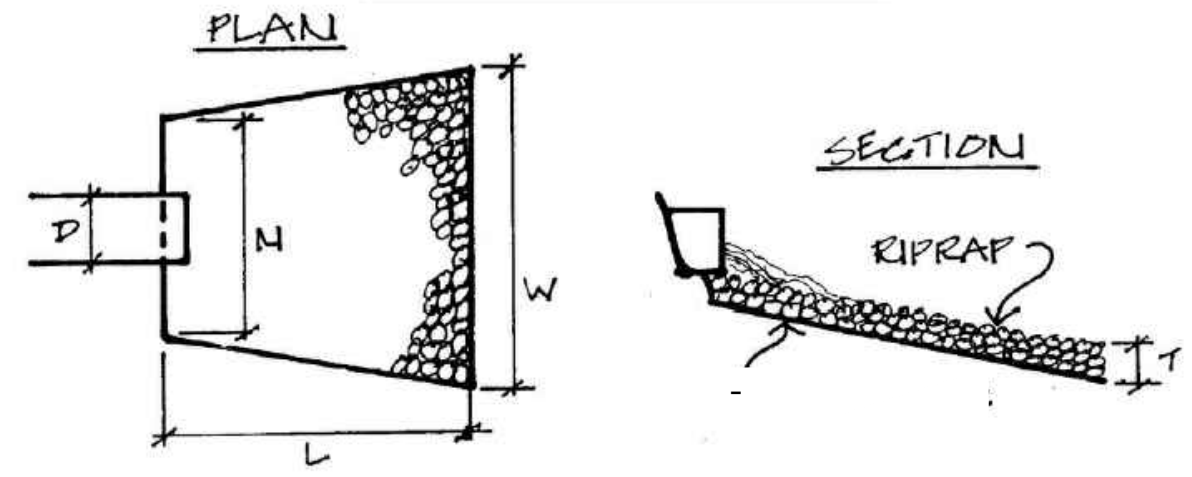
**CULVERT INSTALLATION
FLOW BYPASS**

- CHECK INLET AND OUTLETS TO REMOVE ACCUMULATED DEBRIS BLOCKING OPENING
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D= diameter of culvert
T= depth of stone in apron
N= width of apron near culvert
W= width at downhill end of apron
L= length of apron



ROCK APRON



| REVISIONS |
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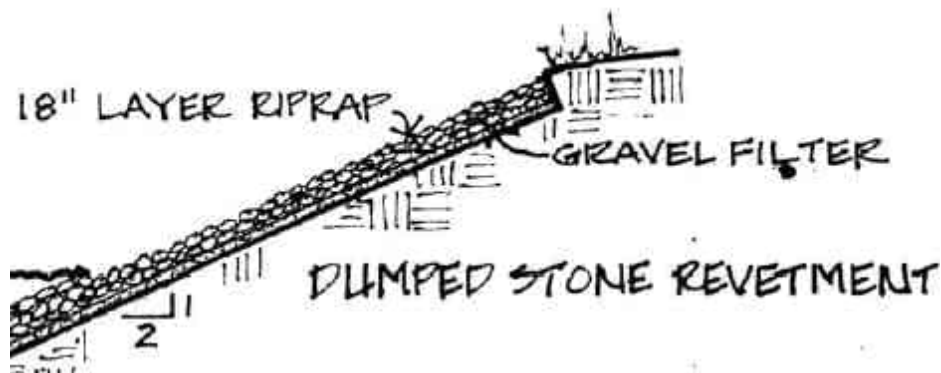
DETAILS - CULVERT

LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN

HINESBURG, VERMONT

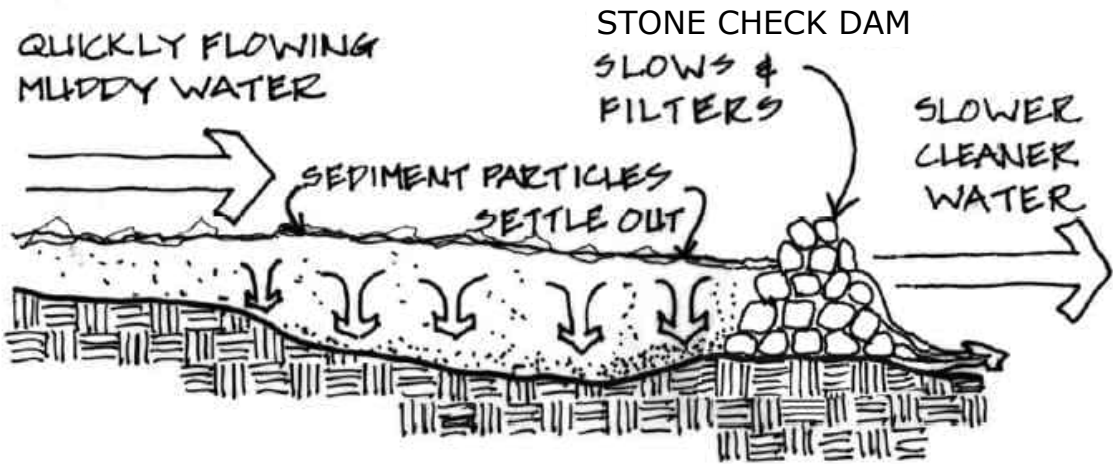
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| PROJECT NO. | | |
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| SHEET NO. | | |

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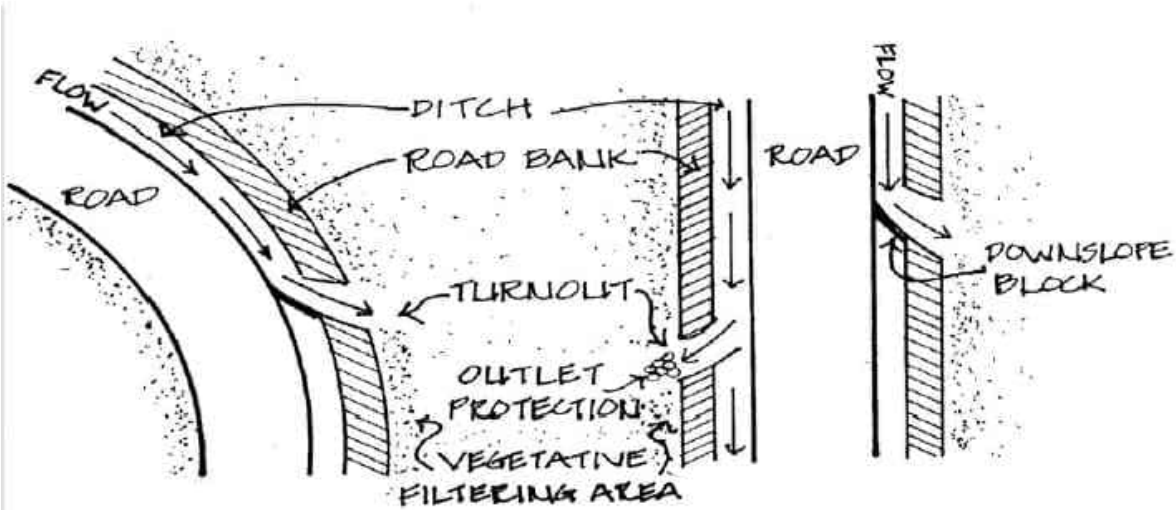
STONE ARMOR OR ROAD EDGE STABILIZATION

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- CONSIDER PLANTING WITH ADDITIONAL VEGETATION



SEDIMENT TRAP

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TURN-OUT

- AVOID DIRECT OUTLET TO SURFACE WATERS
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- REMOVE ACCUMULATED SEDIMENT WHEN HALF FULL

Plotted by: AMARCUCO On this date: Thu, 2024 February 8 - 2:56pm



REVISIONS

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DETAILS - OTHER

LAKE IROQUOIS-PATRICK BROOK WATERSHED ACTION PLAN

HINESBURG, VERMONT

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|----------------------------|--------------|----------------|
| JCL DESIGNED | AOM DRAWN | JCL CHECKED |
| NOT TO SCALE | | |
| DATE FEBRUARY 8, 2024 | | |
| PROJECT NO. 14439.00006 | | |
| SHEET NO. DET-3 | | |

REFERENCE NOTE: ADAPTED FROM "VERMONT BETTER BACKROADS MANUAL, CLEAN WATER YOU CAN AFFORD" A PULICATION OF THE NORTHERN VERMONT & GEORGE D. AIKEN RESOURCE CONSERVATION DEVELOPMENT (R C& D) COUNCILS, NOVEMBER 1995, UPDATED 2002, 2009.