

Vermont Department of Environmental Conservation

Watershed Management Division
Springfield Regional Office
100 Mineral Street, Suite 303
Springfield, VT 05156
www.watershedmanagement.vt.gov

Agency of Natural Resources

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AUTHORIZATION TO CONDUCT STREAM ALTERATION ACTIVITIES

Pursuant to Section C.2.2.5 of the VT Stream Alteration General Permit (Reporting activities not requiring an application)

Project Number: **SA-05-019-2015 Killington Access Rd Culvert**

Applicant Name: Town of Killington DPW, Vermont

Contact: Chet Hagenbarth

Mailing Address: Town of Killington, 2981 River, Killington, VT 05751

Phone: (802) 422-9821

Project Location: Killington Access Road Culvert trib to Roaring Brook

Email: chethagenbarth@killingtontown.com

The Secretary of the Vermont Agency of Natural Resources (VT ANR) has determined that:

1. This project authorizes the replacement of a failed 24" cmp culvert with a 66" x 51" arch pipe and associated drainage work over an unnamed tributary to Roaring Brook under the Killington Access Road TH 2.
2. The proposed activity is eligible for coverage under the VT ANR Stream Alteration General Permit.
3. The proposed activity will meet the terms and conditions of the General Permit provided:
 - a) The project will be completed and approved as shown on the attached plans dated 1/26/15, prepared by Enman Kesselring Engineers, and approved by the VT ANR as attached herein.
 - b) The project will not adversely affect the public safety by increasing flood hazards.
 - c) The project will not significantly damage fish life or wildlife.
 - d) The project will not significantly damage the rights of riparian owners.
 - e) The project will not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
 - f) The project is conducted in a manner which minimizes or avoids any discharge of sediment or other pollutants to surface waters in violation of the VT Water Quality Standards.
 - g) The ANR River Management Engineer is notified by phone or email when construction begins and when the project is complete.
 - h) In-stream working dates for all GP activities are from July 1st through October 1st; any in-stream work outside these dates will require an Individual Stream Alteration Permit authorization by the River Management Engineer.
 - i) This authorization has been posted for three days public comment. This authorization constitutes final approval.

If there are any changes in the project plan or deviation in construction from the plan, the Permittee must notify the River Management Engineer immediately.

If the project is constructed as you have described, as shown on the above referenced approved plans and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.

Signed this 23rd day of June, 2015

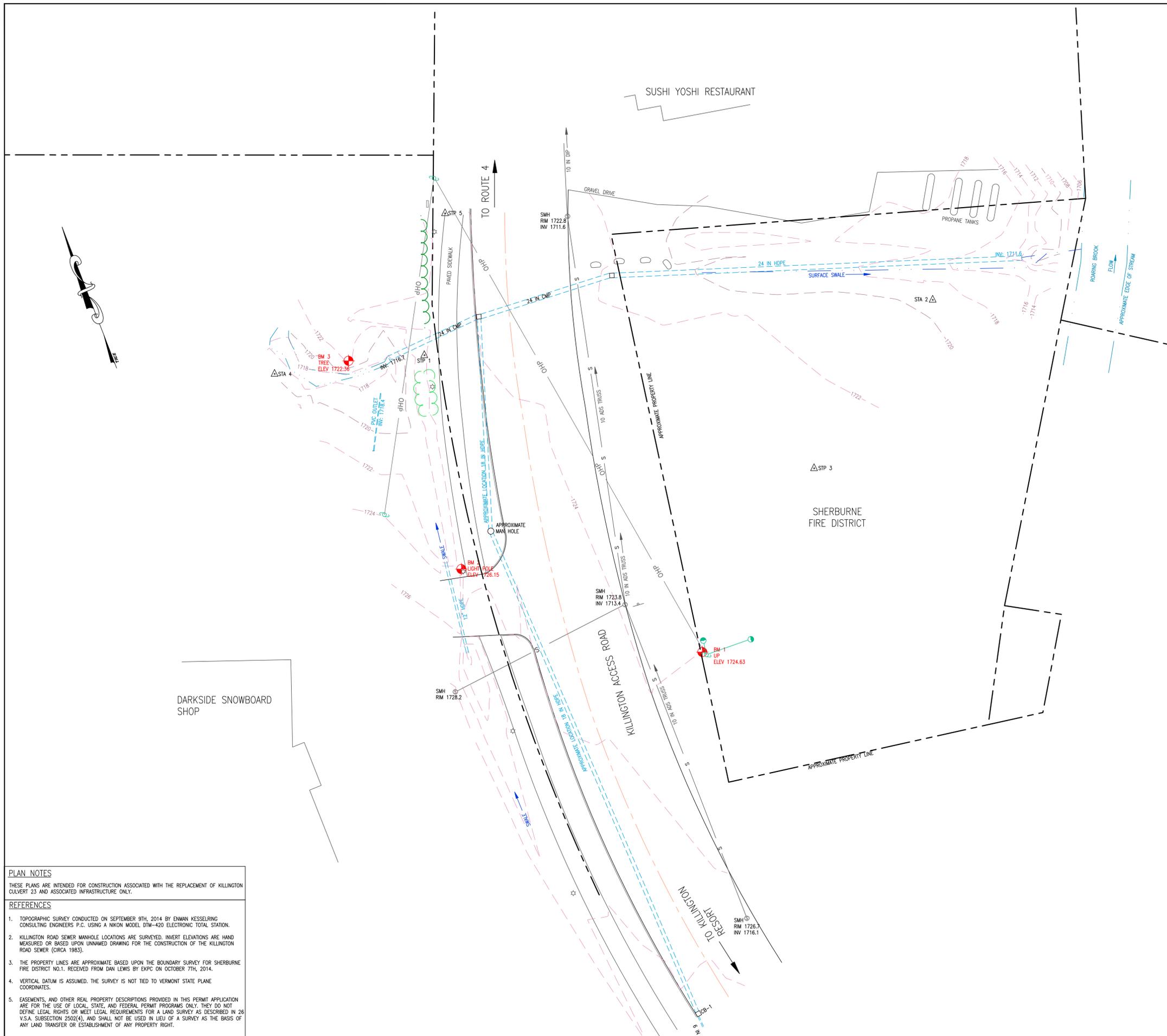
This permit expires October 1, 2015.

David K. Mears, Commissioner

Department of Environmental Conservation

by 

Todd Menees, P.E., P.H., River Management Engineer



LOCATION PLAN

LEGEND

	APPROX. LOCATION OF PROPERTY LINE
	EXISTING CONTOUR
	EXISTING 10' CONTOUR
	EXISTING WATERLINE
	EXISTING SEWER LINE
	EXISTING FORCE MAIN
	EXISTING OVERHEAD UTILITY LINES
	EXISTING BURIED UTILITY LINES
	EXISTING RIVER
	EXISTING TREE LINE
	PROPOSED CULVERT
	STONE WALL
	EXISTING UTILITY POLE
	EXISTING GUY POLE
	EXISTING SIGN
	EXISTING WELL
	EXISTING HYDRANT
	EXISTING WATER SHUTOFF
	EXISTING SEWER MANHOLE
	SURVEY TURNING POINT
	BENCHMARK

CREATION DATE: 10/28/14
 RELEASE DATE: 01/12/15
 ISSUED FOR PERMIT REVIEW

REVISIONS:
 01-12-2015 REVISED DESIGN-CULVERT CONNECTION TO CB-3



THE CERTIFICATION ON THIS DRAWING ONLY INDICATES THE VT REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR PREPARATION AND IS NOT ISSUED FOR CONSTRUCTION UNLESS NOTED IN THE REVISION BOX.

REGULATORY APPROVAL STAMP

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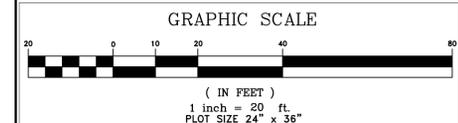
KILLINGTON ACCESS ROAD CULVERT 23 REPLACEMENT
 (BETWEEN SUSHI YOSHI AND DARKSIDE)
 KILLINGTON, VERMONT

THESE PLANS ARE FOR THIS PROJECT ONLY AND ARE NOT FOR REUSE ON THIS PROJECT OR ANY OTHER PROJECT WITHOUT WRITTEN CONSENT OF ENMAN KESSELRING CONSULTING ENGINEERS P.C.

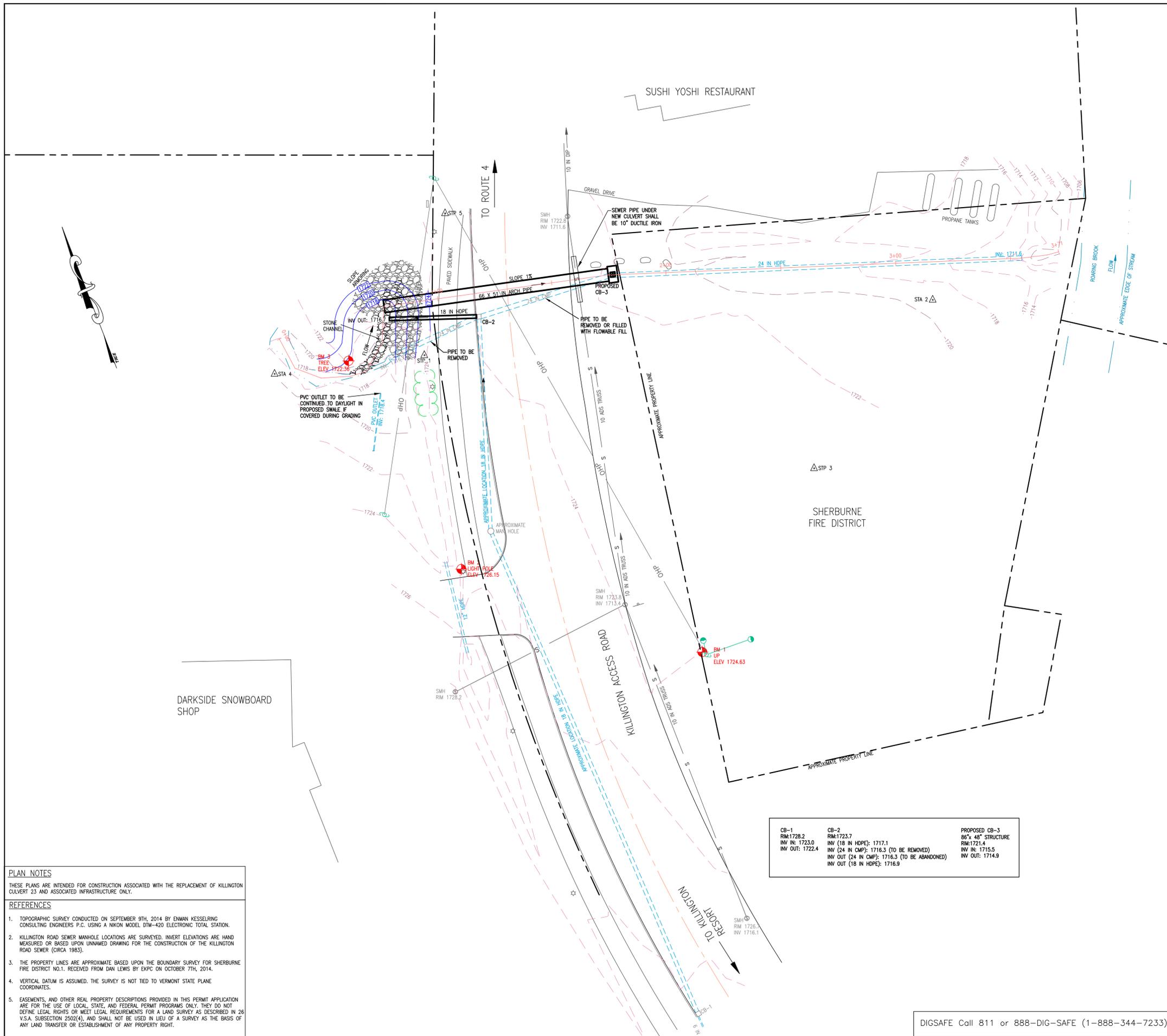
EXISTING CONDITIONS

PLAN NOTES
 THESE PLANS ARE INTENDED FOR CONSTRUCTION ASSOCIATED WITH THE REPLACEMENT OF KILLINGTON CULVERT 23 AND ASSOCIATED INFRASTRUCTURE ONLY.

- REFERENCES**
1. TOPOGRAPHIC SURVEY CONDUCTED ON SEPTEMBER 9TH, 2014 BY ENMAN KESSELRING CONSULTING ENGINEERS P.C. USING A NIKON MODEL DTM-420 ELECTRONIC TOTAL STATION.
 2. KILLINGTON ROAD SEWER MANHOLE LOCATIONS ARE SURVEYED. INVERT ELEVATIONS ARE HAND MEASURED OR BASED UPON UNNAMED DRAWING FOR THE CONSTRUCTION OF THE KILLINGTON ROAD SEWER (CIRCA 1983).
 3. THE PROPERTY LINES ARE APPROXIMATE BASED UPON THE BOUNDARY SURVEY FOR SHERBURNE FIRE DISTRICT NO.1. RECEIVED FROM DAN LEWIS BY EKPC ON OCTOBER 7TH, 2014.
 4. VERTICAL DATUM IS ASSUMED. THE SURVEY IS NOT TIED TO VERMONT STATE PLANE COORDINATES.
 5. EASEMENTS, AND OTHER REAL PROPERTY DESCRIPTIONS PROVIDED IN THIS PERMIT APPLICATION ARE FOR THE USE OF LOCAL, STATE, AND FEDERAL PERMIT PROGRAMS ONLY. THEY DO NOT DEFINE LEGAL RIGHTS OR MEET LEGAL REQUIREMENTS FOR A LAND SURVEY AS DESCRIBED IN 26 V.S.A. SUBSECTION 2502(4), AND SHALL NOT BE USED IN LIEU OF A SURVEY AS THE BASIS OF ANY LAND TRANSFER OR ESTABLISHMENT OF ANY PROPERTY RIGHT.



SCALE: AS NOTED
 DESIGN BY: NSK/AFL
 DRAWN BY: KSM/AFL
 SHEET NO: C1
 PROJECT NO: 1107.05



LEGEND

- APPROX. LOCATION OF PROPERTY LINE
- EXISTING CONTOUR
- EXISTING 10' CONTOUR
- EXISTING WATERLINE
- EXISTING SEWER LINE
- EXISTING FORCE MAIN
- EXISTING OVERHEAD UTILITY LINES
- EXISTING BURIED UTILITY LINES
- EXISTING RIVER
- EXISTING TREE LINE
- PROPOSED CULVERT
- STONE WALL
- EXISTING UTILITY POLE
- EXISTING GUY POLE
- EXISTING SIGN
- EXISTING SEWER MANHOLE
- SURVEY TURNING POINT
- BENCHMARK
- PROPOSED CULVERT
- PROPOSED CONTOUR
- PROPOSED STONE ARMORING
- PROPOSED STONE CHANNEL

- ### CONSTRUCTION NOTES
1. VT LAW REQUIRES CONTRACTOR TO NOTIFY DIG-SAFE AT LEAST 48 HOURS PRIOR TO CONSTRUCTION ON PUBLIC AND PRIVATE PROPERTY, ROW'S AND EASEMENTS. CONTRACTOR SHALL BE RESPONSIBLE TO FOR CONTACTING DIG-SAFE TO MARK ONSITE UTILITIES THAT MAY NOT BE SHOWN ON THE PLANS. DIAL 811 OR 888-DIG-SAFE.
 2. THE PROJECT CONSISTS OF THE INSTALLATION OF A NEW 66 X 51 IN PIPE ARCH AND THE REPLACEMENT OF CATCH BASIN 3. ASSOCIATED WORK INCLUDES SAWCUT AND REPAIR TO THE KILLINGTON ACCESS ROAD AND CHANGING FLOW DIRECTION AT CATCH BASIN 2.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE TO INCORPORATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE DISCHARGE OF SEDIMENT DURING CONSTRUCTION TO THE ROARING BROOK.
 8. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL ON THE KILLINGTON ACCESS ROAD.
 9. ALL STREAM FLOW SHALL BE BYPASSED DURING CONSTRUCTION AND SHALL NOT BE ALLOWED TO FLOW THROUGH WORK AREA.
 14. THE 66 X 51 IN PIPE ARCH CULVERT SHALL BE POLY COATED.
 15. SEE PROFILE FOR PROPOSED 66 X 51 IN PIPE ARCH CULVERT INVERTS.
 17. ALL PAVEMENT CUTS SHALL BE SAWCUT.
 18. CONTRACTOR SHALL CONSTRUCT STONE HEADWALL IF NEEDED AT CULVERT INLET.
 19. AT CB-2 CONTRACTOR SHALL REMOVE AND PLUG 24 IN OUTLET PIPE. THE CMP INLET PIPE SHALL BE REPLACED WITH AN 18 IN HDPE THAT DISCHARGES TO THE SWALE TO THE WEST. SEE INVERTS ON PLAN.
 20. THE CONTRACTOR SHALL REMOVE AND REPLACE CB-3 WITH A NEW VAULT STYLE STRUCTURE AS DETAILED ON SHEET C3.
 21. CONTRACTOR SHALL REPLACE ONE SEWER PIPE LENGTH OF THE EXISTING ADS SEWER TRUSS PIPE CENTERED UNDER THE NEW ARCH PIPE, WITH 10" DI PIPE. HYMAX COUPLINGS SHALL BE USED TO CONNECT THE TWO PIPES. MANUFACTURE SHALL CONFIRM THAT HYMAX COUPLINGS ARE APPROPRIATE FOR USE WITH TRUSS PIPE.
 11. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE TOPSOILED, SEEDED AND MULCHED. STRAW MATTING SHALL BE INSTALLED ON SLOPES 3:1 OR STEEPER.

CREATION DATE: 10/28/14
 RELEASE DATE: 01/26/2015
 ISSUED FOR PERMIT REVIEW

REVISIONS:
 01-26-15 REVISED DESIGN-CULVERT CONNECTION TO CB-3



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REGULATORY APPROVAL STAMP

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**KILLINGTON ACCESS ROAD
 CULVERT 23
 REPLACEMENT**
 (BETWEEN SUSHI YOSHI AND DARKSIDE)
 KILLINGTON, VERMONT

THESE PLANS ARE FOR THIS PROJECT ONLY AND ARE NOT FOR REUSE ON THIS PROJECT OR ANY OTHER PROJECT WITHOUT WRITTEN CONSENT OF ENMAN KESSELRING CONSULTING ENGINEERS P.C.

**PROPOSED
 CULVERT 23**

SCALE: AS NOTED
 DESIGN BY: NSK/AFL
 DRAWN BY: KSM/AFL
 SHEET NO: C2
 PROJECT NO: 1107.05

PLAN NOTES

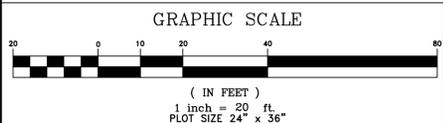
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REFERENCES

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CB-1 RIM:1728.2 INV IN: 1723.0 INV OUT: 1722.4	CB-2 RIM:1723.7 INV (18 IN HDPE): 1717.1 INV (24 IN CMP): 1716.3 (TO BE REMOVED) INV OUT (24 IN HDPE): 1716.9	PROPOSED CB-3 86" x 48" STRUCTURE RIM:1721.4 INV IN: 1715.5 INV OUT: 1714.9
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DIGSAFE Call 811 or 888-DIG-SAFE (1-888-344-7233)



CREATION DATE: 10/28/14

RELEASE DATE: 01/26/15

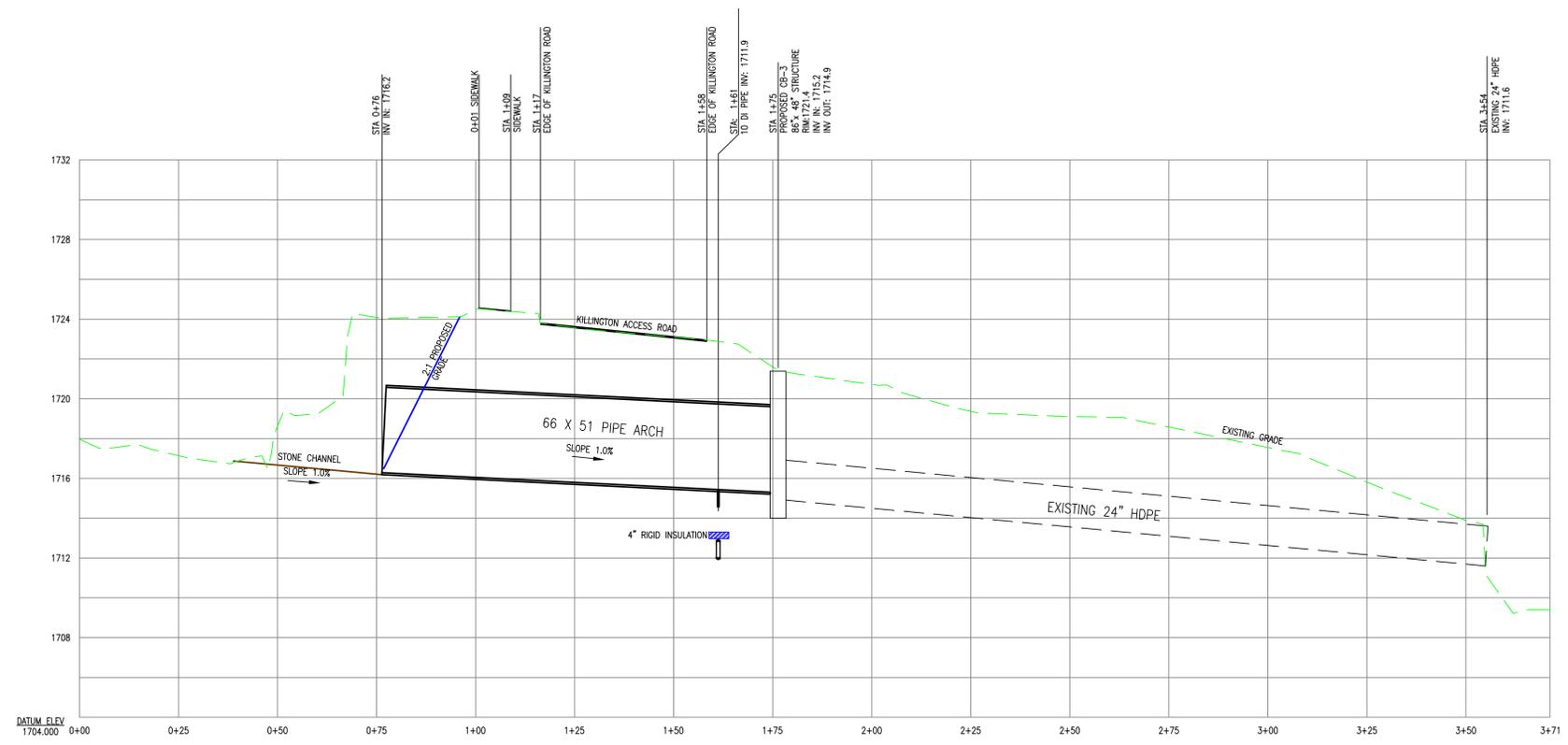
ISSUED FOR PERMIT REVIEW

REVISIONS:
01-26-15 REVISED DESIGN-CULVERT CONNECTION TO CB-3



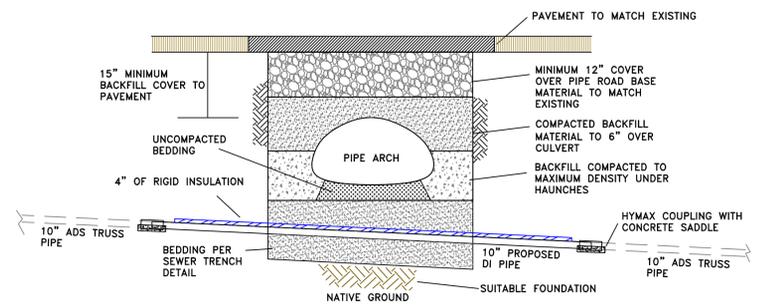
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REGULATORY APPROVAL STAMP



PROPOSED 61" X 55" ARCH PIPE PROFILE

SCALE: HORIZ: 1" = 20'
VERT: 1" = 4'

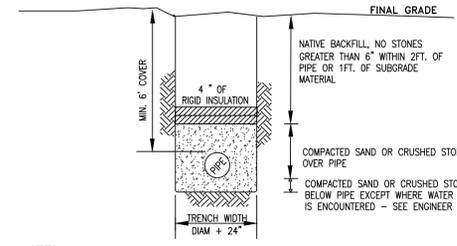


NOTES:

- 1. THE CONTRACTOR SHALL FOLLOW MANUFACTURERS GUIDELINES FOR INSTALLATION OF THE PIPE ARCH CULVERT.
2. THE TRENCH SHALL BE PREPARED SO THAT THE CULVERT MAY BE INSTALLED ON A FIRM, UNIFORM BASE...
3. PIPE SHALL BE BEDDED ON A BLANKET OF LOOSE SAND THAT HAS BEEN GRADED AND SHAPED WITH A TEMPLATE...
4. CONTRACTOR TO TAKE CARE NOT TO TRANSFER EXCESS LOADING ONTO SEWER PIPE.
5. BACKFILL SHALL MEET VTRANS STANDARD 704.08A GRANULAR BACKFILL FOR STRUCTURES.
6. BACKFILL MATERIAL UNDER HAUNCHES SHALL BE COMPACTED/TAMPED TO ELIMINATE ALL VOIDS UNDER STRUCTURE.
7. BACKFILL AROUND STRUCTURE SHALL BE INSTALLED IN 6" LIFTS, UNIFORMLY AROUND STRUCTURE, COMPACTED TO 90% DENSITY PER AASHTO T-180.
8. PAVEMENT REPAIR AND BACKFILL MATERIALS SHALL MEET TOWN STANDARDS.
9. MANUFACTURERS INSTALLATION, BACKFILL, AND BEDDING REQUIREMENT SHALL APPLY IF A SITUATION ARISES WHERE THE ENGINEERS DETAIL DIFFERS FROM THE MANUFACTURERS RECOMMENDATIONS.

TRENCH DETAIL FOR CULVERT REPLACEMENT

NTS

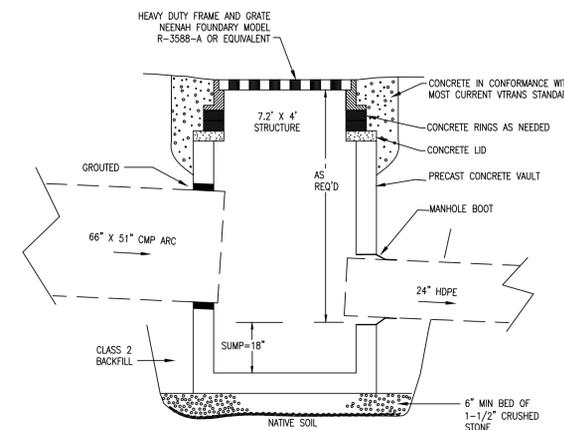


NOTES:

- 1. THE CONTRACTOR SHALL FOLLOW MANUFACTURERS GUIDELINES FOR INSTALLATION.
2. THE TRENCH SHALL BE PREPARED SO THAT THE PIPE MAY BE INSTALLED ON A FIRM, UNIFORM BASE...
3. PIPE SHALL BE INSTALLED WITH A MINIMUM OF 4" OF BEDDING MATERIAL UNDER AND 6" ABOVE PIPE.
4. BACKFILL AROUND STRUCTURE SHALL BE INSTALLED IN LIFTS 6-8" AT A TIME AND COMPACTED TO 90% PROCTOR.
5. PAVEMENT REPAIR SHALL MEET TOWN/CITY STANDARDS.
6. 4" OF RIGID INSULATION SHALL BE INSTALLED.

SEWER TRENCH DETAIL

NTS



NOTES:

- 1. THE CONTRACTOR SHALL FOLLOW MANUFACTURERS GUIDELINES FOR INSTALLATION.
2. REBAR LEFT IN PLACE IN KNOCKOUT FOR 66\"/>

CATCH BASIN VAULT DETAIL

NTS

SEEDING SCHEDULE

Table with 3 columns: MIXTURE, LBS/AC, LBS / 1000 SF. Rows include REDTOP, TALL FESCUE, BIRDSFOOT TREFLOL, and TOTAL.

TEMPORARY SEEDING FERTILIZER

Table with 3 columns: FERTILIZER, GRASS MIX (LBS), GRASS/LEGUME MIX (LBS). Rows include NITROGEN (N), PHOSPHOROUS, and POTASSIUM.

TEMPORARY VEGETATIVE COVER

Table with 3 columns: MIXTURE, LBS/AC, LBS / 1000 SF. Rows include ANNUAL RYEGRASS and SPRING OATS.

MULCHING SPECIFICATIONS:

- 1. STRAW MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE (90 LB/1000 SF) FOR TEMPORARY AND PERMANENT APPLICATIONS.
2. IF SITE WORK IS UNDERTAKEN BETWEEN OCTOBER 15TH AND APRIL 15TH MULCH SHALL BE APPLIED AT A RATE OF DOUBLE THE ABOVE RECOMMENDED RATE...
3. SEEDING SPECIFICATIONS FOR TEMPORARY VEGETATION COVER SHALL BE FOLLOWED FOR PLANTING AFTER SEPTEMBER 15TH.

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KILLINGTON ACCESS ROAD CULVERT 23 REPLACEMENT (BETWEEN SUSHI YOSHI AND DARKSIDE) KILLINGTON, VERMONT

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PROFILE AND DETAILS

SCALE: AS NOTED

DESIGN BY: NSK/AFL

DRAWN BY: AFL/KSM

SHEET NO: C3

PROJECT NO: 1107.05