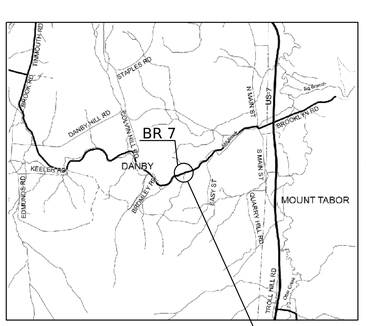
REVIEWER NOTES:

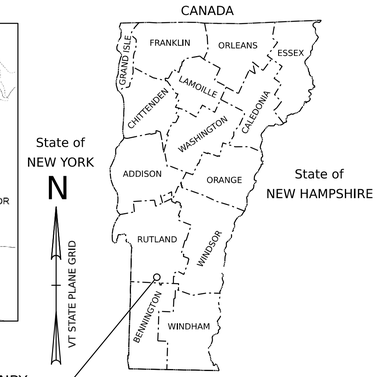
1. R.O.W. WILL BE REQUIRED FOR THE PROJECT.

2. TRAFFIC CONTROL FOR THE DETOUR ROUTE IS THE RESPONSIBILITY OF THE TOWN OF DANBY. THE SITE SPECIFIC TRAFFIC CONTROL PLAN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. THIS PROJECT MEETS THE CRITERIA FOR A NON-JURISDICTIONAL TYPE II PROJECT PER THE VTRANS EPSC PROTOCOL.

STATE OF VERMONT
AGENCY OF TRANSPORTATION





DANBY
BF 0130(4)

PROPOSED IMPROVEMENT
BRIDGE PROJECT

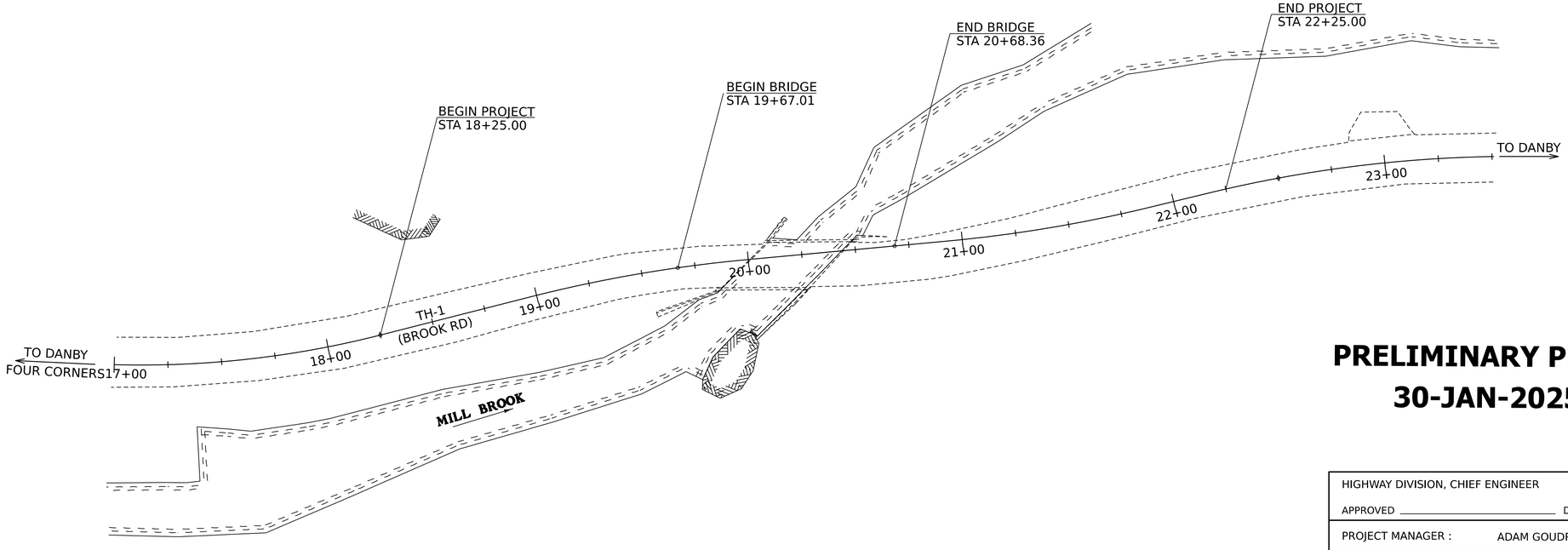
TOWN OF DANBY
COUNTY OF RUTLAND

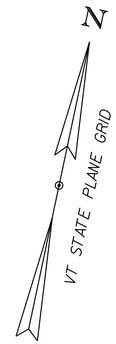
ROUTE NO : TOWN HIGHWAY 1, MAJOR COLLECTOR, (FAS ROUTE 0130) BRIDGE NO : 7

PROJECT LOCATION : LOCATED APPROXIMATELY 1.0 MILES WEST OF THE JUNCTION WITH SOUTH MAIN ST, CROSSING THE MILL BROOK.

PROJECT DESCRIPTION : WORK TO BE PERFORMED INCLUDES BRIDGE REPLACEMENT AND RELATED ROADWAY APPROACH WORK.

LENGTH OF STRUCTURE:	101.35 FEET
LENGTH OF ROADWAY:	298.65 FEET
LENGTH OF PROJECT:	400.00 FEET





SCALE 1" = 30'-0"
30 0 30

PRELIMINARY PLANS
30-JAN-2025

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2024, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 27, 2023 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL	2
SURVEYED BY :	DUBOIS & KING
SURVEYED DATE :	06-23-2021
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83(2011)

HIGHWAY DIVISION, CHIEF ENGINEER

APPROVED _____ DATE _____

PROJECT MANAGER : ADAM GOUDREAU, P.E.

PROJECT NAME : DANBY
PROJECT NUMBER : BF 0130(4)

SHEET 1 OF 29 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

PLAN SHEETS

DETAIL SHEETS

STANDARDS LIST

FINAL HYDRAULIC REPORT

FINAL HYRDRAULICS PENDING

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	2.5 INCH
3. DESIGN SPAN	L:	100.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. HIGH PERFORMANCE CONCRETE, CLASS PCD	f'_c:	4.0 KSI
9. HIGH PERFORMANCE CONCRETE, CLASS PCS	f'_c:	3.5 KSI
10. CONCRETE HIGH PERFORMANCE, CLASS SCC	f'_c:	---
11. CONCRETE, CLASS C	f'_c:	3.0 KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	50 KSI
14. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	---
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
16. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
18. PILE RESISTANCE FACTOR	ϕ:	---
19. LATERAL PILE DEFLECTION	Δ:	---
20. BASIC WIND SPEED	V_{3s}:	---
21. MINIMUM GROUND SNOW LOAD	p_g:	---
22. SEISMIC DATA PGA: ---	S_s:	---
	S_1:	---
23.		
24.		---
25.		---
26.		---

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
TONNAGE	**20**	**36**	**36**	**66**	**30**	**34.5**	**38**
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2025	430	70	55	6.6	30
2045	470	75	55	9.3	45

20 year ESAL for flexible pavement from 2025 to 2045 : 152000

40 year ESAL for flexible pavement from 2025 to 2065 : 345000

Design Speed : 30 mph

AS BUILT "REBAR" DETAIL

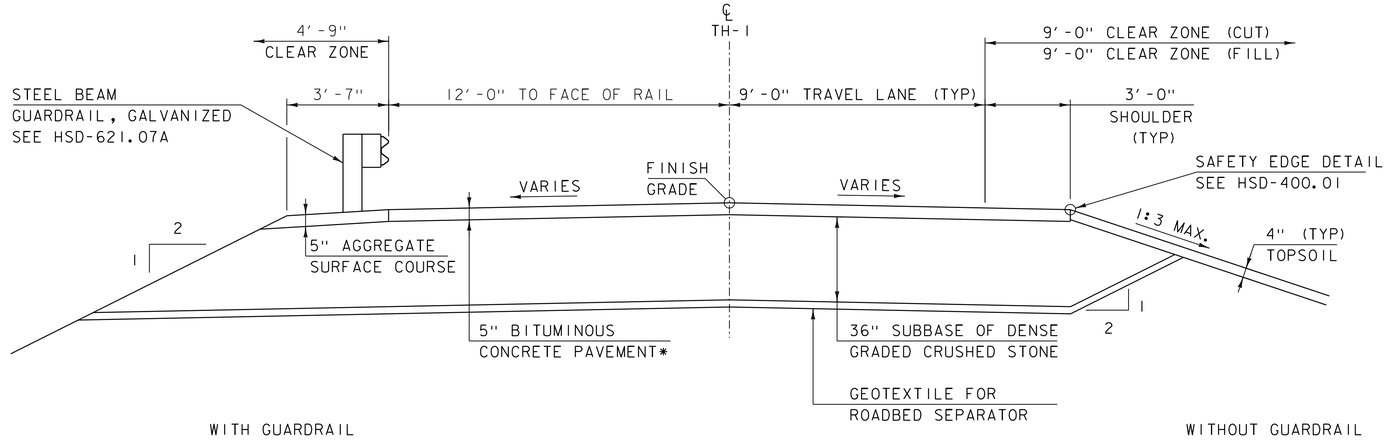
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

PROJECT NAME: DANBY

PROJECT NUMBER: BF 0130(4)

FILE NAME: sl2j6l8pi.dgn
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. VAN BUSKIRK
PI SHEET

PLOT DATE: 30-JAN-2025
DRAWN BY: A. VAN BUSKIRK
CHECKED BY: A. LEMIEUX
SHEET 2 OF 29



PROPOSED TH-1 TYPICAL SECTION

SCALE 3/8" = 1'-0"

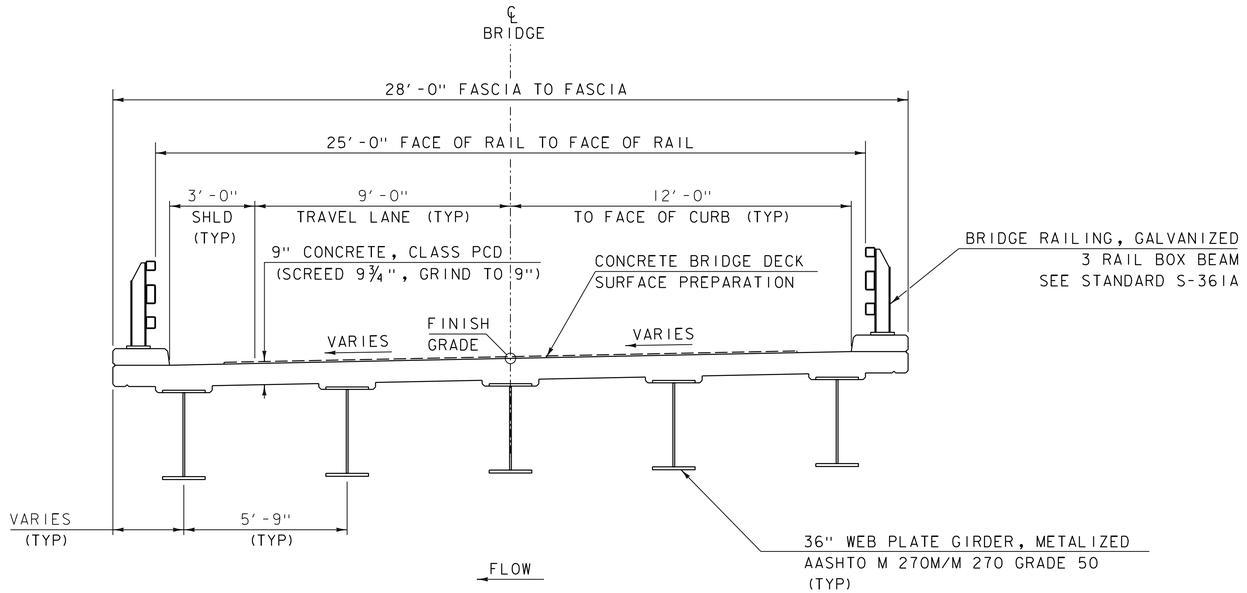
*(2) 1½" LIFTS TYPE IVS OVER
(1) 2" LIFT TYPE IIIS

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	± ¼"
- AGGREGATE SURFACE COURSE	± ½"
SUBBASE	± 1"
SAND BORROWS	± 1"

PAVEMENT SPECIFICATIONS

	DESIGN VALUE	DESCRIPTION
DESIGN LANE/DESIGN LIFE ESALs	83,600	
PERFORMANCE GRADED ASPHALT BINDER - PAVER PLACED	58E-28	PERFORMANCE GRADE ASPHALT BINDER
PERFORMANCE GRADED ASPHALT BINDER - NON-PAVER PLACED AND U-TURNS	58S-28	PERFORMANCE GRADE ASPHALT BINDER
GYRATION	50	DESIGN GYRATIONS



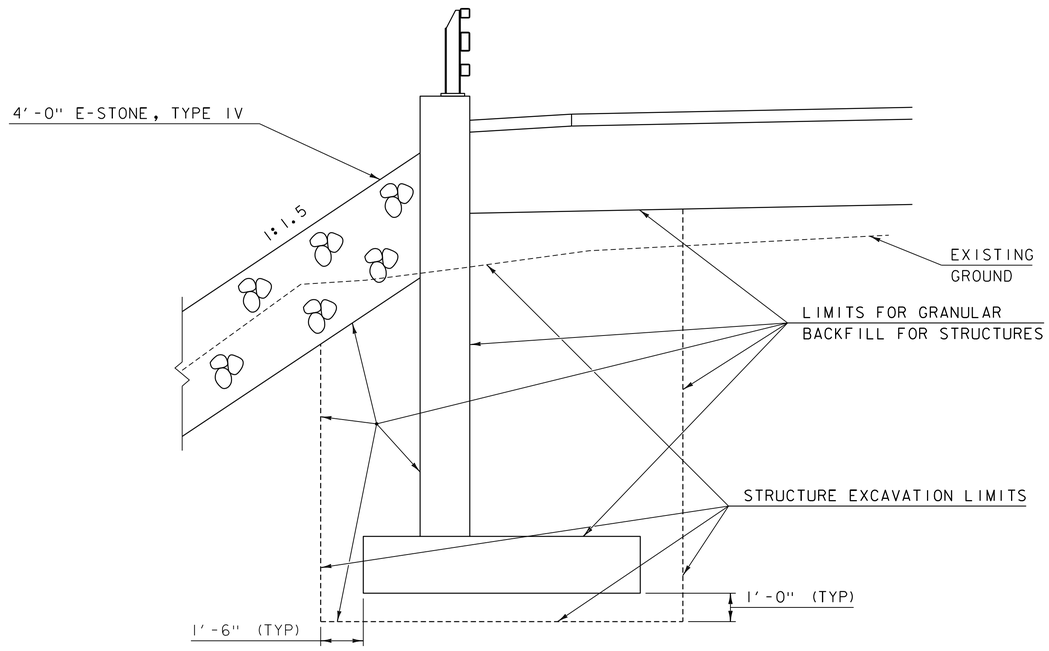
PROPOSED BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

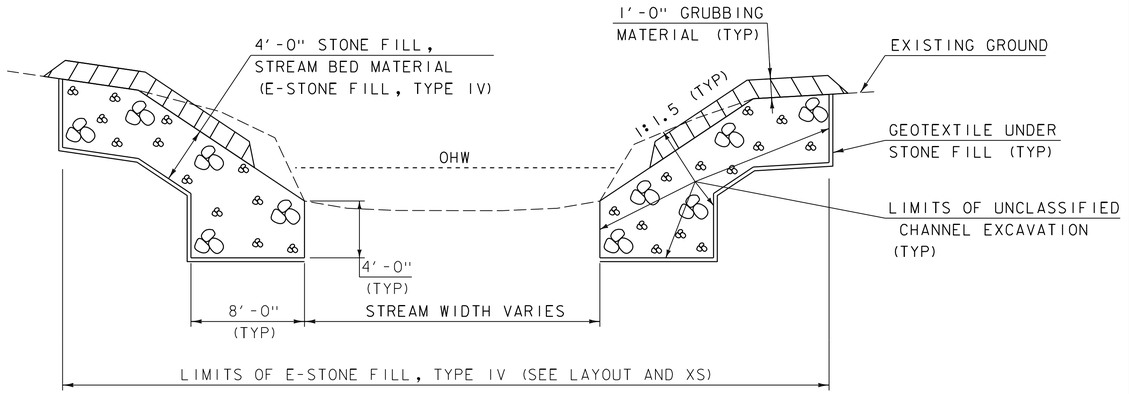
FILE NAME: s12J618typ.dgn
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
TYPICAL SECTIONS 1

PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK
SHEET 3 OF 29



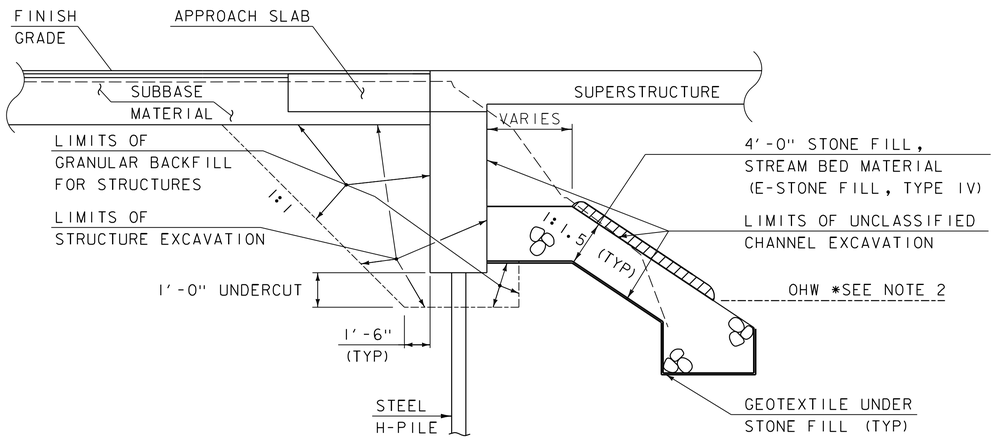
RETAINING WALL EARTHWORK TYPICAL

NOT TO SCALE



CHANNEL TYPICAL SECTION

NOT TO SCALE



EARTHWORK TYPICAL SECTION ABUTMENT

NOT TO SCALE

NOTES

1. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT BOTTOM OF SUBBASE.

2. GRUBBING MATERIAL SHALL BE PLACED UNDERNEATH STRUCTURES WHERE THERE IS MORE THAN 6 FEET VERTICALLY FROM ORDINARY HIGH WATER (OHW) TO THE BOTTOM OF SUPERSTRUCTURE AND MORE THAN 6 FEET HORIZONTALLY FROM OHW LINE TO FRONT FACE OF ABUTMENT. THIS MATERIAL SHALL START JUST ABOVE THE OHW ELEVATION AND TERMINATE 3 FEET HORIZONTALLY FROM THE FRONT FACE OF THE ABUTMENT. THIS MATERIAL SHALL NOT BE PLACED IN AREAS THAT WILL SEE CONCENTRATED FLOWS RESULTING FROM SURFACE WATER RUNOFF. GRUBBING MATERIAL MAY BE OMITTED IF LESS THAN 3 FEET IN WIDTH BENEATH A STRUCTURE.

3. STONE FILL SHALL BE PLACED OVER THE GEOTEXTILE BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC.

4. THE CONTRACTOR MAY SUBSTITUTE STONE FILL, TYPE IV FOR E-STONE, TYPE IV ABOVE THE ORDINARY HIGH WATER LINE.

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: sl2J618typ.dgn
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
TYPICAL SECTIONS 2

PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK
SHEET 4 OF 29

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	BF	BARRIER FENCE
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	PDF	PROJECT DEMARCATION FENCE
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	R.T. & I.	RIGHT, TITLE, AND INTEREST
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
◎	IPNF	IRON PIN FOUND
●	IPNS	IRON PIN TO BE SET
☒	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALVE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UGU — UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEPHONE
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEPHONE
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PDF — PROJECT DEMARCATION FENCE
- BF — BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6f — 6f — 6F PROPERTY BOUNDARY
- 4f — 4f — 4F PROPERTY BOUNDARY
- HAZ — HAZ — HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) — HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: sl2j618legend.dgn
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: VTRANS
CONVENTIONAL SYMBOLOGY LEGEND

PLOT DATE: 30-JAN-2025
DRAWN BY: A. VAN BUSKIRK
CHECKED BY: A. LEMIEUX
SHEET 5 OF 29

NETWORK CONTROL

BENCHMARK
NORTH = 306080.5493
EAST = 1503770.5881
ELEV. = 931.297

GENERAL LOCATION, DANBY, VT

TO REACH FROM THE INTERSECTION OF TINMOUTH ROAD, DANBY PAWLET ROAD, AND BROOK ROAD GO SOUTH IN DANBY FOR 0.33 MILES TO THE INTERSECTION WITH BROOK ROAD. GO EAST ON BROOK ROAD FOR APPROXIMATELY 2.8 MILES TO BRIDGE 7. THE BENCHMARK IS A SPIKE IN A MEDIUM MAPLE TREE APPROXIMATELY 125 FEET WEST OF THE BRIDGE, 7 FEET OFF THE SOUTH SIDE OF BROOK ROAD.

BENCHMARK
NORTH = 306111.1197
EAST = 1503906.3576
ELEV. = 925.754

GENERAL LOCATION, DANBY, VT

TO REACH FROM THE INTERSECTION OF TINMOUTH ROAD, DANBY PAWLET ROAD, AND BROOK ROAD GO SOUTH IN DANBY FOR 0.33 MILES TO THE INTERSECTION WITH BROOK ROAD. GO EAST ON BROOK ROAD FOR APPROXIMATELY 2.8 MILES TO BRIDGE 7. THE BENCHMARK IS A SPIKE IN A MEDIUM ASH TREE AT THE SOUTHEAST QUADRANT OF THE BRIDGE, 17 FEET EAST OF THE END OF THE WINGWALL.

TRAVERSE TIES

HVCTRL #1

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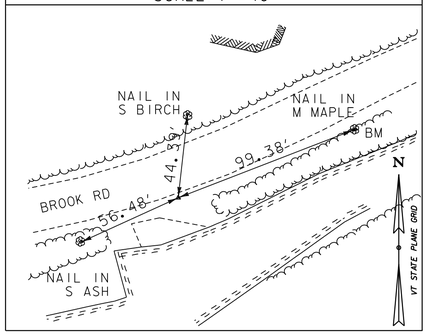
E: 1503677.1700
EL.=934.155
SCALE: 1"=40'



HVCTRL #2

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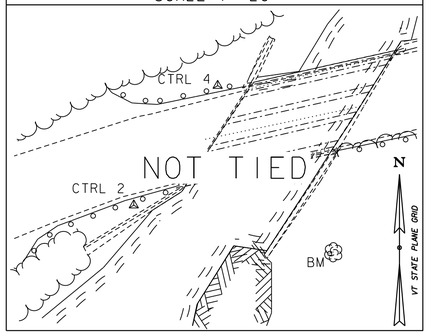

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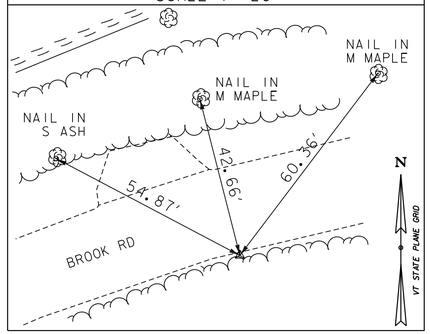

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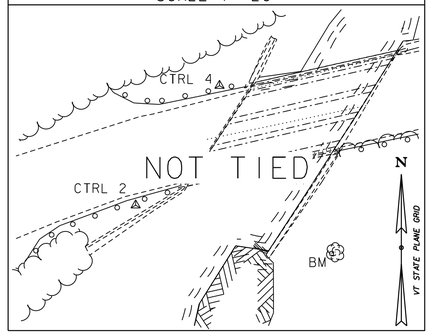

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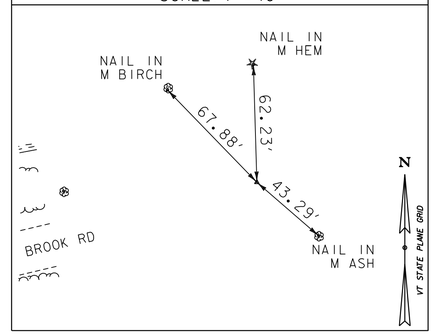

TRAVERSE TIES

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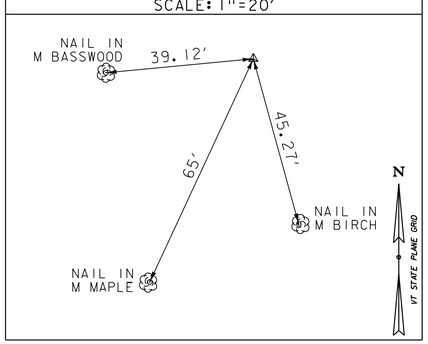

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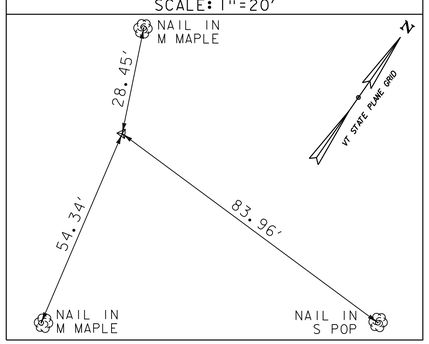


DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (2011)
ADJUSTMENT COMPASS

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: z12j618ti.dgn
PROJECT LEADER: R. OTIS
DESIGNED BY: T. MATTHEWS
TIE SHEET

PLOT DATE: 30-JAN-2025
DRAWN BY: T. MATTHEWS
CHECKED BY: T. COMSTOCK
SHEET 6 OF 29

FARMINGTON-GALWAY-GALOO
SLOPE 25%-50%
K=0.32
HIGH EROSION POTENTIAL

N/F
MACHESKI, MARGARET & DONALD

APPROX. EXISTING TOWN R.O.W.

RIPARIAN BUFFER

17+00

18+00

19+00

20+00

21+00

2+00

1+00

MATCHLINE @ STA 21+25

EXISTING STONE FILL

MILL BROOK
FLOW

CHANNEL STA 1+50.00
AT FAS130 STA 20+17.685
Δ = 70.00°

N/F
MERROW, GLORIA JEAN
AND HELEBA, DANA & MICHELLE

RIPARIAN BUFFER

N/F
MACHESKI, MARGARET & DONALD

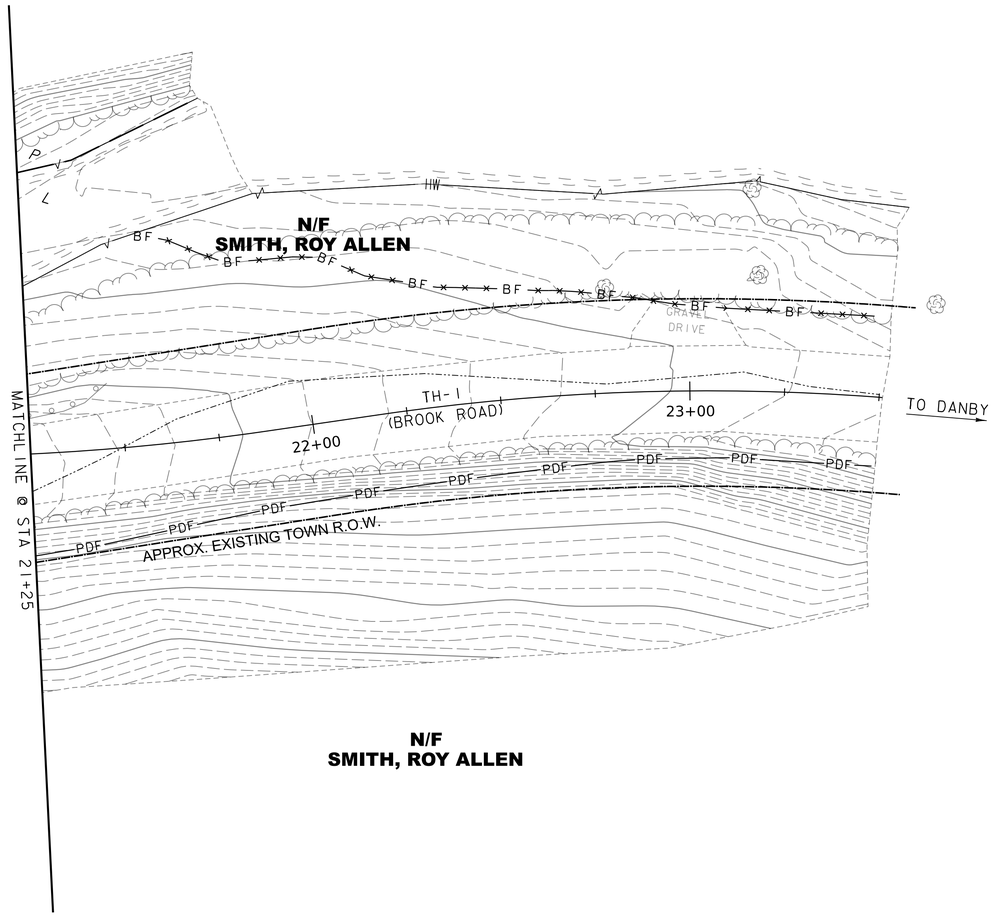
N

VT STATE PLANE GRID

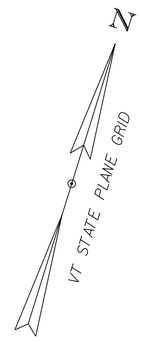
SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME: s12j618bdr.dgn	PLOT DATE: 30-JAN-2025
PROJECT LEADER: A. GOUDREAU	DRAWN BY: A. VAN BUSKIRK
DESIGNED BY: A. VAN BUSKIRK	CHECKED BY: A. LEMIEUX
EXISTING CONDITIONS 1	SHEET 7 OF 29



FARMINGTON-GALWAY-GALOO
SLOPE 25%-50%
K=0.32
HIGH EROSION POTENTIAL



SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

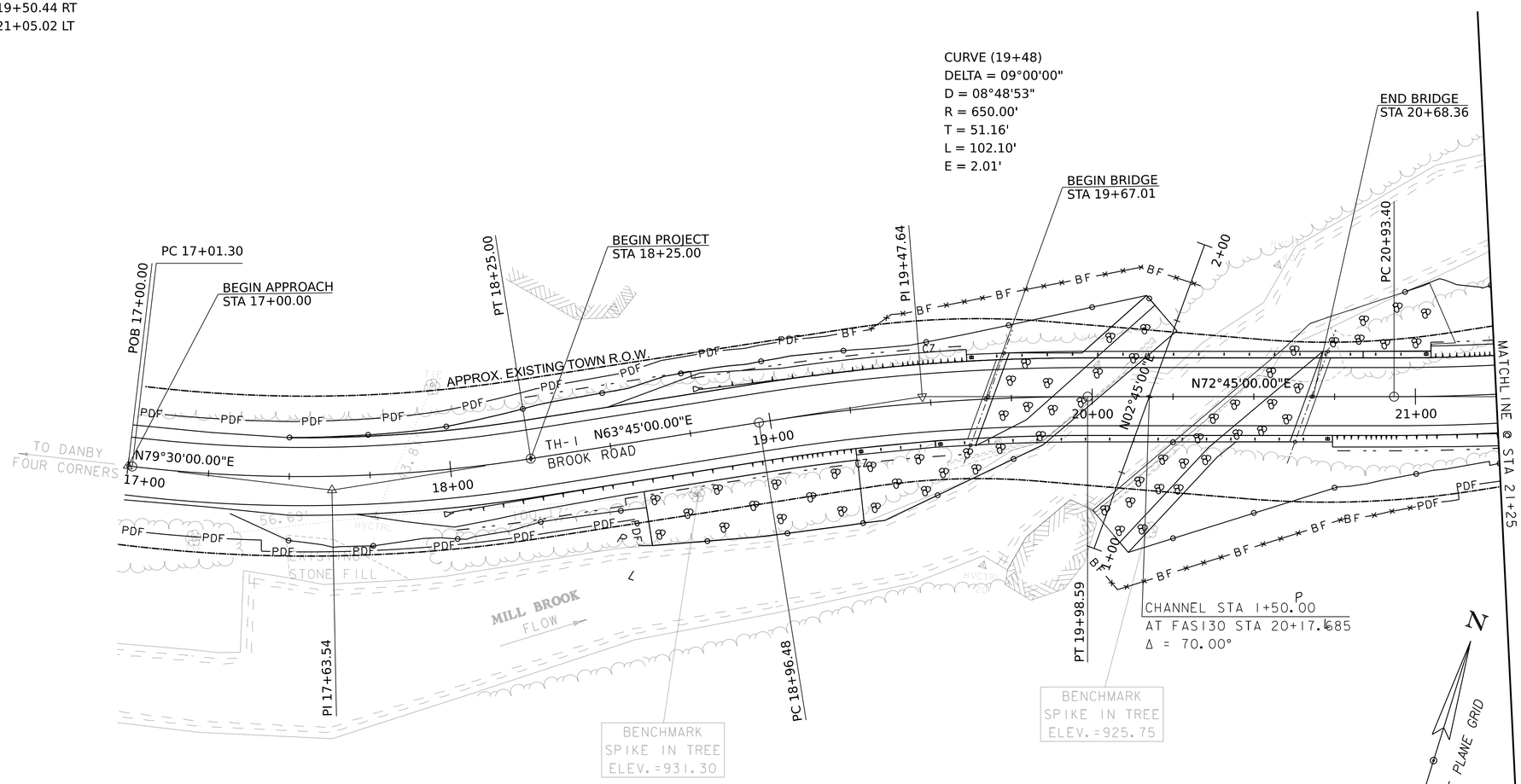
FILE NAME: sl2j6l8bdr.dgn
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. VAN BUSKIRK
EXISTING CONDITIONS 2

PLOT DATE: 30-JAN-2025
DRAWN BY: A. VAN BUSKIRK
CHECKED BY: A. LEMIEUX
SHEET 8 OF 29

ITEM 613.1004 E-STONE FILL, TYPE IV
STA 18+58 TO 19+25 RT

ITEM 210.1000 COARSE-MILLING, BITUMINOUS PAVEMENT
STA 17+00 TO 17+50
STA 23+00 TO 23+50

RETAINING WALLS
STA 19+25.38 TO 19+50.44 RT
STA 20+83.80 TO 21+05.02 LT



CURVE (17+64)
DELTA = 15°45'00"
D = 12°43'57"
R = 450.00'
T = 62.24'
L = 123.70'
E = 4.28'

EXISTING BRIDGE INFORMATION:
SINGLE SPAN CONCRETE T-BEAM
BUILT 1928
40' CLEAR SPAN

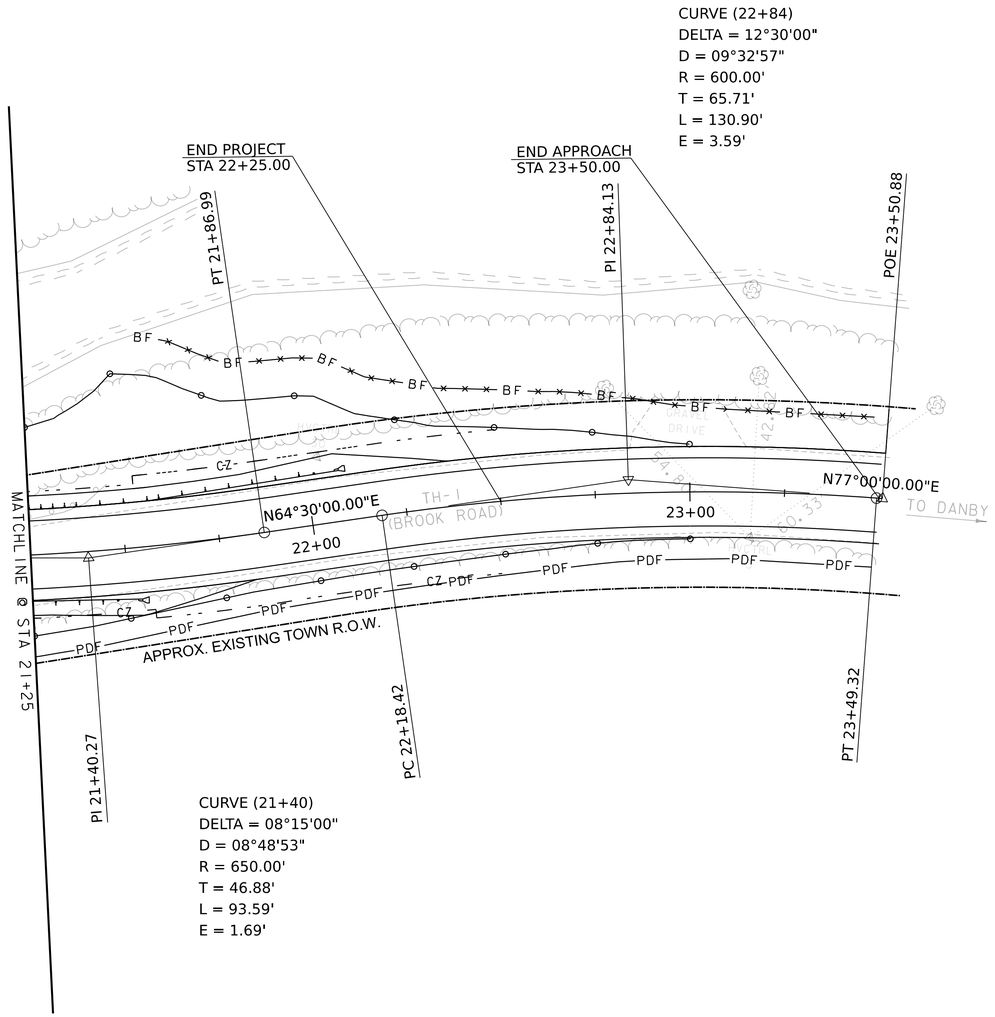
SCALE 1" = 20'-0"
20 0 20

CONTROL LINE DATA - TH-1 Horizontal

POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
POB	N79.500°E	1.2953885 '	306036.5950340	1503599.5397278		1700.0000000					
PI	N63.750°E	133.7318156 '	306048.1739022	1503662.0137098	1701.2953890	1763.5379310	1824.9955990	15.750	-450.0000000 '	123.7002107 '	62.2425420 '
PI	N72.750°E	145.9647492 '	306129.9477404	1503827.8346500	1896.4848730	1947.6409824	1998.5866340	9.000	650.0000000 '	102.1017612 '	51.1561094 '
PI	N64.500°E	78.3117447 '	306187.1335326	1504012.0029984	2093.3952740	2140.2729355	2186.9885550	8.250	-650.0000000 '	93.5932811 '	46.8776615 '
PI	N77.000°E	67.2679434 '	306249.1367876	1504141.9955259	2218.4226380	2284.1333250	2349.3223320	12.500	600.0000000 '	130.8996939 '	65.7106870 '
POE			306264.2687824	1504207.5393962		2350.8795880					

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

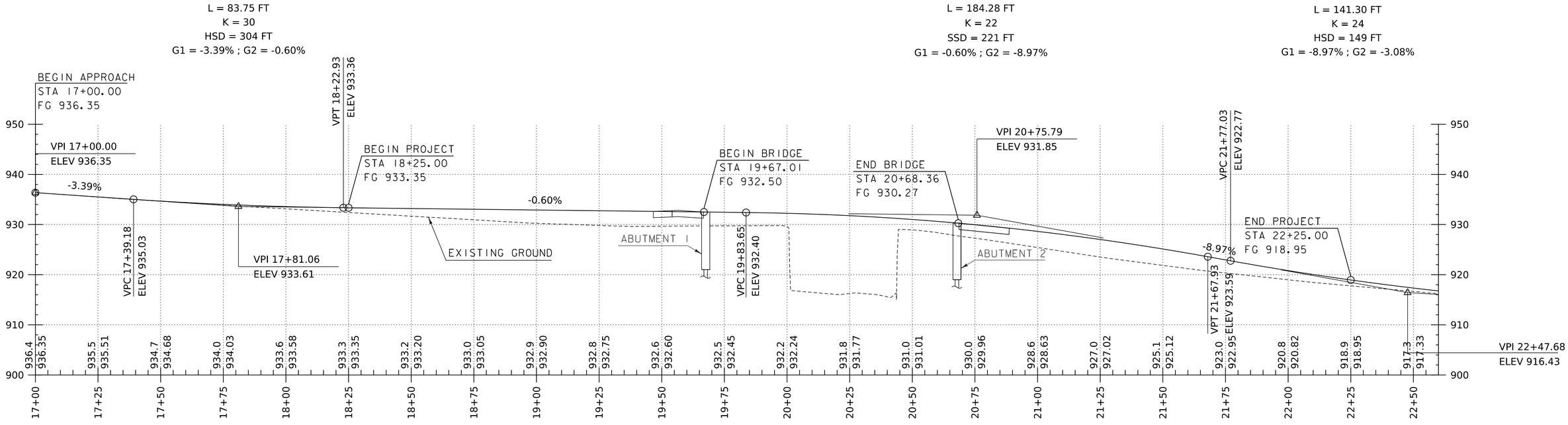
FILE NAME: s12j618bdr.dgn
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. VAN BUSKIRK
LAYOUT 1
PLOT DATE: 30-JAN-2025
DRAWN BY: A. VAN BUSKIRK
CHECKED BY: A. LEMIEUX
SHEET 9 OF 29

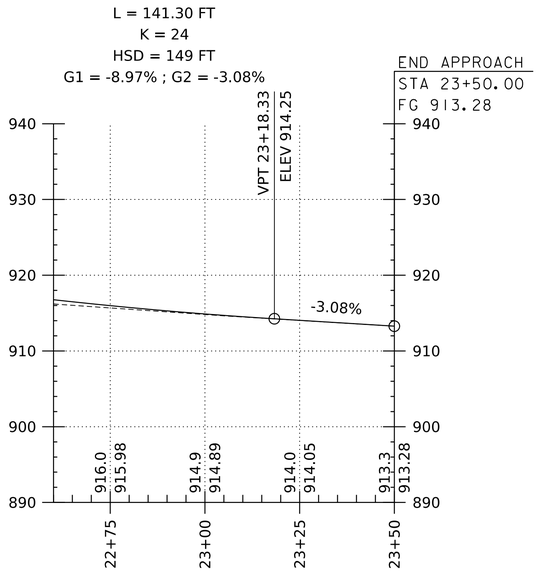


SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME: sl2j618bdr.dgn	PLOT DATE: 30-JAN-2025
PROJECT LEADER: A. GOUDREAU	DRAWN BY: A. VAN BUSKIRK
DESIGNED BY: A. VAN BUSKIRK	CHECKED BY: A. LEMIEUX
LAYOUT 2	SHEET 10 OF 29





TH-1 PROFILE

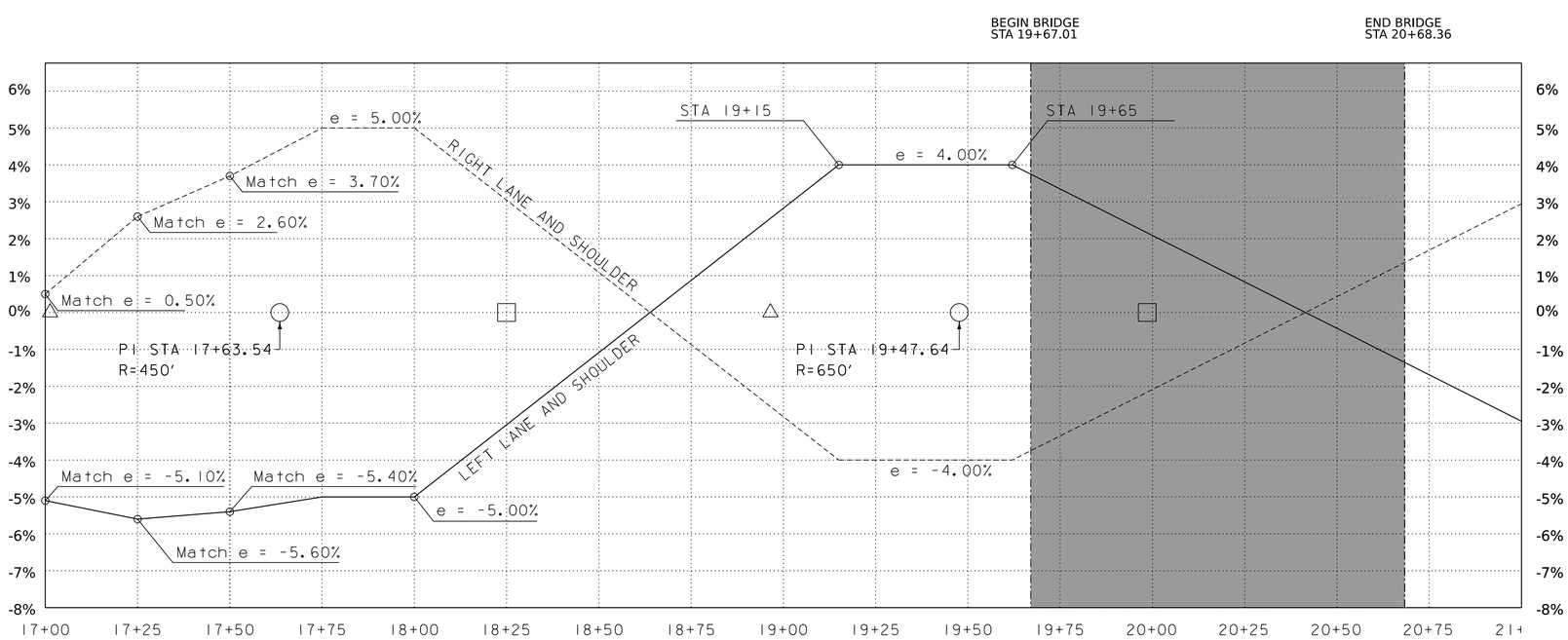
SCALE
1" = 20' HORIZONTAL
1" = 10' VERTICAL

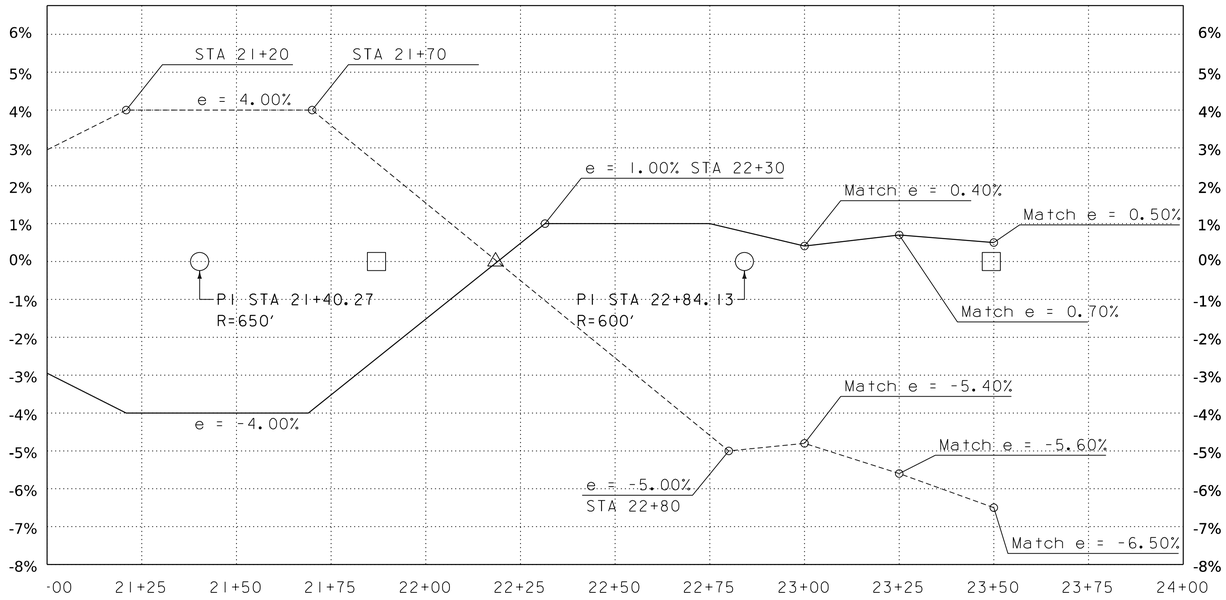
NOTES:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)
FILE NAME: s12j618pro.dgn	PLOT DATE: 30-JAN-2025
PROJECT LEADER: A. GOUDREAU	DRAWN BY: A. VAN BUSKIRK
DESIGNED BY: A. LEMIEUX	CHECKED BY: A. LEMIEUX
PROFILE SHEET	SHEET 11 OF 29





KEY

△ = PC

◯ = PI

□ = PT

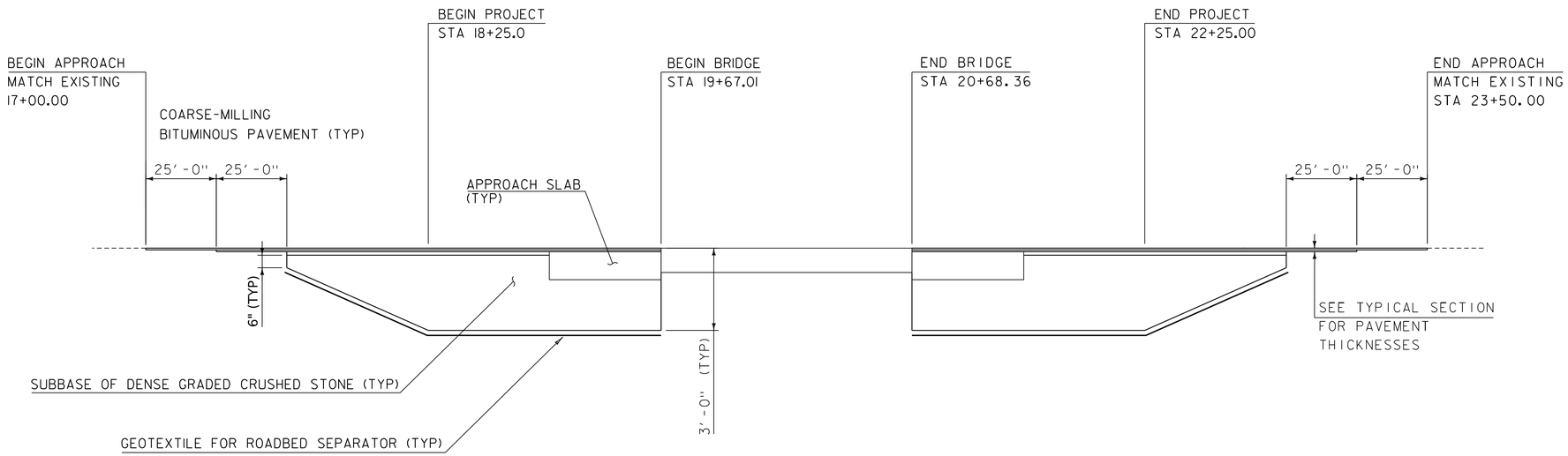
SCALE

HORIZONTAL 1" = 20'

VERTICAL 1" = 2 % CROSS SLOPE

BANKING DIAGRAM STA 17+00 TO STA 21+00

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)
FILE NAME: s12j618superRT130.dgn	PLOT DATE: 30-JAN-2025
PROJECT LEADER: A. GOUDREAU	DRAWN BY: A. VAN BUSKIRK
DESIGNED BY: A. VAN BUSKIRK	CHECKED BY: A. LEMIEUX
BANKING DIAGRAM SHEET 1	SHEET 12 OF 29



TH1 MATERIAL TRANSITION DIAGRAM

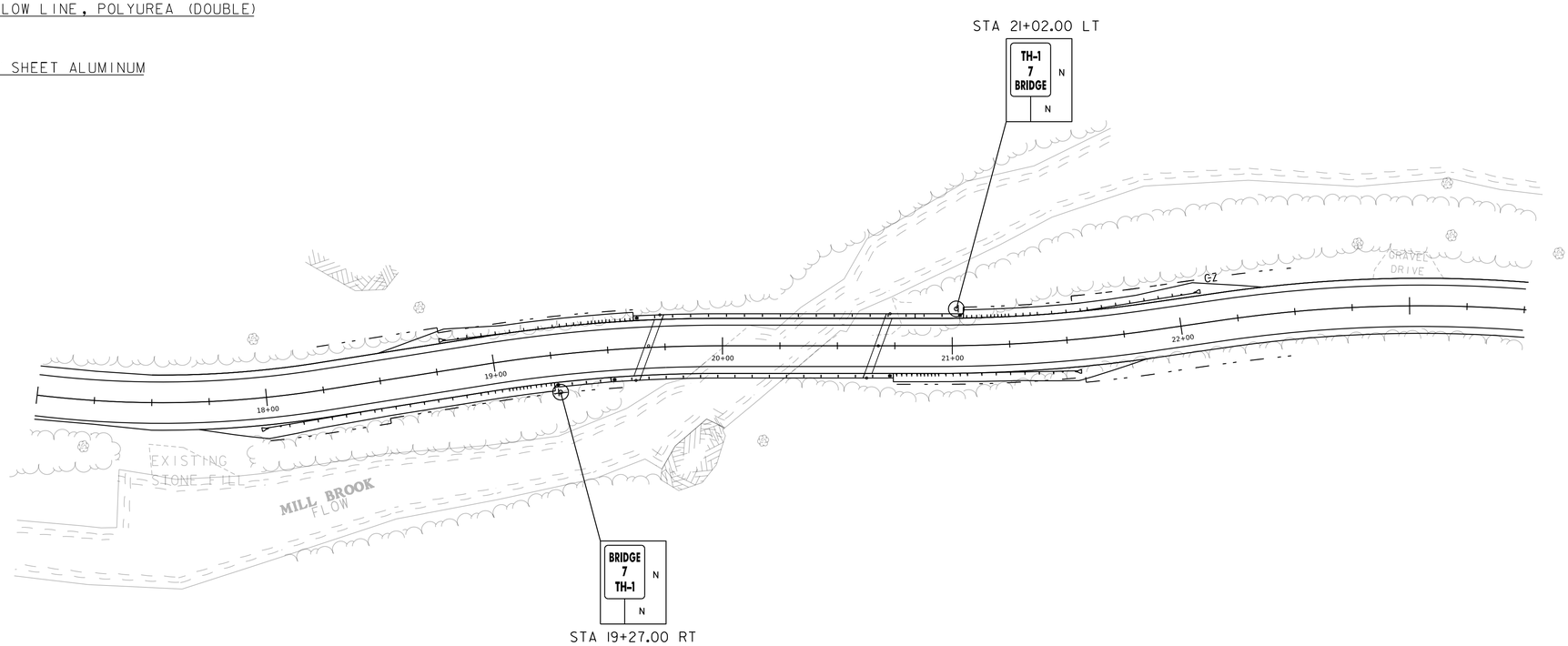
NOT TO SCALE

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)
FILE NAME: s12J618pro.dgn	PLOT DATE: 30-JAN-2025
PROJECT LEADER: A. GOUDREAU	DRAWN BY: A. VAN BUSKIRK
DESIGNED BY: A. LEMIEUX	CHECKED BY: A. LEMIEUX
MATERIAL TRANSITION DIAGRAM	SHEET 13 OF 29

ITEM 646.4040 DURABLE 4 INCH WHITE LINE, POLYUREA
STA 17+00.00 - 23+50.00 LT AND RT

ITEM 646.4140 DURABLE 4 INCH YELLOW LINE, POLYUREA (DOUBLE)
STA 17+00.00 - 23+50.00 CL

ITEM 675.2000 TRAFFIC SIGN, FLAT SHEET ALUMINUM
STA 19+57.00 RT
STA 20+77.00 LT



EXISTING SIGNS

NEW SIGNS

SIGN LEGEND
N = NEW
R = REMOVE

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW SIGN	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
STA 19+27.00 RT	BRIDGE 1 TH-1	6	10	0.42	1	7					VD-701	T-42	
STA 21+02.00 LT	BRIDGE 1 TH-1	6	10	0.42	1	7					VD-701	T-42	
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS & THE VTRANS "SIGN POST DESIGN GUIDELINE."						FT	FT	FT		EA			
	TOTAL			SF 0.84			FT				SHSM = FHWA STANDARD HIGHWAY SIGNS & MARKINGS BOOK		

N

VT STATE PLANE GRID

SCALE 1" = 30'-0"
30 0 30

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: s12j618signs.dgn
PROJECT LEADER: A. LEMIEUX
DESIGNED BY: A. VAN BUSKIRK
SIGNS AND LINES LAYOUT

PLOT DATE: 30-JAN-2025
DRAWN BY: A. VAN BUSKIRK
CHECKED BY: A. LEMIEUX
SHEET 14 OF 29

ITEM# 621.8130 GUARDRAIL APPROACH SECTION, 3 RAIL BOX BEAM
STA 19+30.16 TO STA 19+61.87 LT
STA 18+95.66 TO STA 19+25.38 RT
STA 21+05.05 TO STA 21+34.75 LT
STA 20+74.33 TO STA 21+03.33 RT

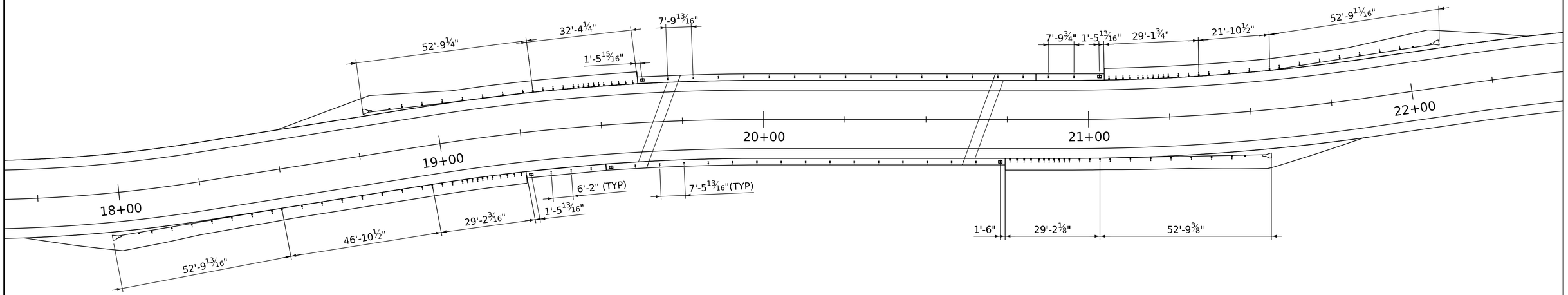
ITEM#621.1060 STEEL BEAM GUARDRAIL
STA 18+48.79 TO STA 18+95.66 RT
STA 21+34.75 TO STA 21+57.03 LT

ITEM#621.3030 MTS, MGS, TANGENT, TL-3
STA 18+78.17 TO STA 19+30.16 LT
STA 17+96.77 TO STA 18+48.79 RT
STA 21+53.85 TO STA 22+10.40 LT
STA 21+03.33 TO STA 21+56.12 RT

ITEM#525.3130 BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
STA 19+61.87 TO STA 21+05.05 LT
STA 19+25.38 TO STA 20+74.33 RT

N

VT STATE PLANE GRID



SCALE 1" = 15'-0"
15 0 10

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618rail.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
GUARDRAIL LAYOUT		SHEET	15 OF 29

SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

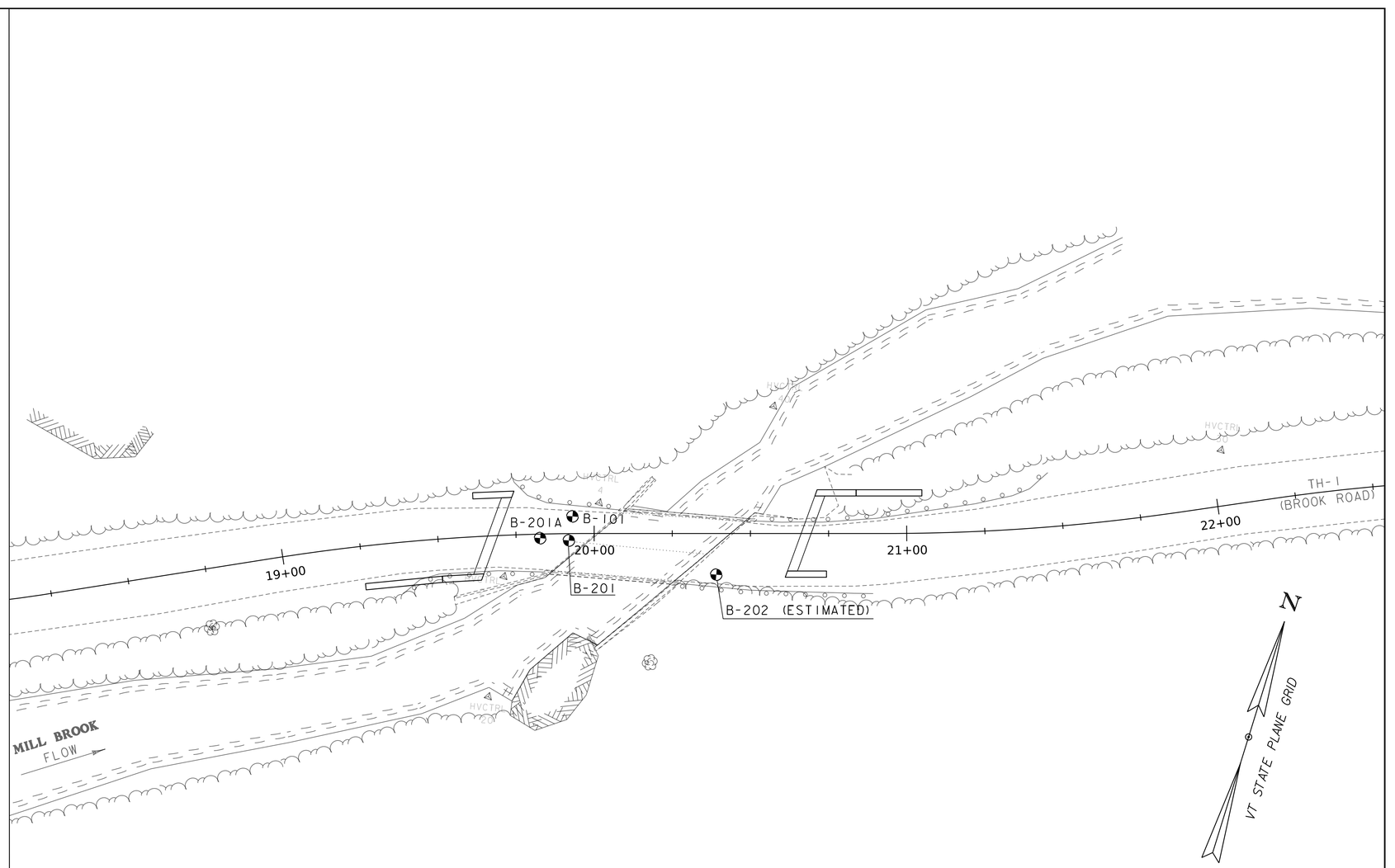
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR			
blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		



SCALE 1" = 20'-0"
20 0 20

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 4/7/2022 and 11/21/2023 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-101	19+93.2	5.5 LT	929.8	881.3
B-201	19+93.9	3.1 LT	929.8	N/A
B-201A	19+84.2	4.0 LT	929.8	875.5
B-202	20+36.9	19.3 RT	927.5	N/A

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: s12j618BDR_Borings
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
BORING LAYOUT

PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK
SHEET 16 OF 29

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Danby
BF 0130 (4)
FAS RT 0130 BR 7

Boring No.: B-101
Page No.: 1 of 2
Pin No.: 12J618
Checked By: END

Boring Crew: McGinley, Monette, Zottola
Date Started: 4/07/22 Date Finished: 4/08/22
VTSPG NAD83: N 306148.70 ft E 1503869.80 ft
Station: 86+25.00 Offset: -7.60
Ground Elevation: 929.8 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID AUTO	CE = 1.56

Groundwater Observations		
Date	Depth (ft)	Notes
04/07/22	11.1	WT after drilling
04/08/22	12.2	WT before drilling
04/08/22	13.6	WT after drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, SiSaGr, gry/white, Moist, Rec. = 1.0 ft				7-12-16-18 (18)	6.9	45.0	34.8	20.2
		A-1-b, SaGr, brn, Moist, Rec. = 0.5 ft, Rollercone cleanout 4.2-5.0'				10-9-11-6 (20)	8.4	54.0	27.6	18.4
5		A-1-b, GrSa, brn, Wet, Rec. = 0.2 ft				4-3-4-5 (7)	17.6	41.1	45.4	13.5
		A-1-a, SaGr, brn, Wet, Rec. = 0.7 ft, Rollercone cleanout 7.5-9.0'				7-6-14-19 (20)	10.2	63.9	26.1	10.0
10		Field Note:, No Recovery, Rock in end of sampler. Rollercone cleanout 14.0-15.0'				6-9-2-1 (11)				
						2-2-1-7 (3)				
15		A-1-b, SiGrSa, brn, MTW, Rec. = 1.0 ft, Rollercone cleanout 18.7-20.0'				6-13-12-14 (25)	15.0	24.8	55.1	20.1
20		A-4, SaSi, brn, MTW, Rec. = 0.7 ft, NXDC cleanout 24.0-24.5'.				5-14-12-17 (26)	21.0	5.9	55.3	38.8
25		Field Note:, Attempted bedrock core NXMDC 24.5-29.5'. No recovery. Not Bedrock								
30		A-1-b, SiSaGr, gry, Wet, Rec. = 0.8 ft, Refusal @ 31.8' (100 blows) Rollercone cleanout 34.0-35.0'				7-35-39-17 (74)	11.5	45.7	30.6	23.7
35		Field Note:, No recovery, Refusal @ 35.4' (50 blows/6")				R				
		Field Note:, Attempted bedrock core NXMDC 35.0-40.0'. Nested cobbles				(R)				
40		Field Note:, Attempted Bedrock core. No recovery, Rollercone cleanout 44.5-45.5'								
45		Field Note:, No recovery, Refusal at 45.9' (50 blows/6") BXDC cleanout 46.5-48.5'				R				

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

DANBY BF (4).GPJ VERMONT AOT.GDT 6/2/22
2010 COPY

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Danby
BF 0130 (4)
FAS RT 0130 BR 7

Boring No.: B-101
Page No.: 2 of 2
Pin No.: 12J618
Checked By: END

Boring Crew: McGinley, Monette, Zottola
Date Started: 4/07/22 Date Finished: 4/08/22
VTSPG NAD83: N 306148.70 ft E 1503869.80 ft
Station: 86+25.00 Offset: -7.60
Ground Elevation: 929.8 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID AUTO	CE = 1.56

Groundwater Observations		
Date	Depth (ft)	Notes
04/07/22	11.1	WT after drilling
04/08/22	12.2	WT before drilling
04/08/22	13.6	WT after drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
50		48.5 ft - 53.5 ft, Light gray, QUARTZITE, and Cream DOLOSTONE Fine-grained. Little rust colored discoloration on open joints. At 1.1' - 1.4' recovered portion, small fragments and pebbles some that do not match lithology of core. Very close joint spacing and slightly rough. Moderately hard, Fresh to very slightly weathered, Poor rock, BXDC, RMR = 37	R-4 of(0)	54 (0)	7 1 2 3 1	Top of Bedrock @ 48.5 ft				
55		53.5 ft - 58.0 ft, BXDC cleanout 56.0-58.0'								
60		58.0 ft - 63.0 ft, Light to medium gray, Micaceous quartz-biotite QUARTZITE, with few occurances of PHYLLITE. Fine-grained. Little rust colored discoloration on open joints. Very close joint spacing and slightly rough. Hard, Fresh to very slightly weathered, Poor rock, BXDC, RMR = 39	R-5 (0)	96 (0)	3 3 5 4 4					
65		63.0 ft - 68.0 ft, Gray, Micaceous quartz-biotite QUARTZITE, with few occurances of PHYLLITE. Fine-grained. Some rust-colored discoloration on open joints. Few discontinuous bands of calcitic quartz and biotite rich phyllite. Very close joint spacing and slightly rough. Hard, Slightly to moderately weathered, Poor rock, BXDC, RMR = 39	R-6 (0-5)	100 (0)	3 2 2 2 3					
70		Hole stopped @ 68.0 ft								
75		Remarks: 1. Hole collapsed at 8.2'. 2. Began telescoping 3" casing inside 4" casing at 45.5'. 3. Removed 4" casing on 4/12/22 and backfilled hole								
80										
85										
90										
95										

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

DANBY BF (4).GPJ VERMONT AOT.GDT 6/2/22
2010 COPY

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: s12j618BDR_Borings
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
BORING LOGS 1

PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Brook Road over Mill Brook BR 7
0208735
Danby BF 0130 (4)

Boring No.: **B-201**
Page No.: 1 of 1
Pin No.: 12J618
Checked By: MLS

Boring Crew: P. Schofield, J. Ilunga
Date Started: 8/02/23 Date Finished: 8/02/23
VTSPG NAD83: N 306141 ft E 1503871 ft
Station: 19+98 (est.) Offset: 6 ft LT (est.)
Ground Elevation: 929.8 ft

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in.	1.38 in.
Hammer Wt:	140 lb.	140 lb.
Hammer Fall:	30 in.	30 in.
Hammer/Rod Type:	Auto	
Rig: MOBILE B-48 TRUCK C_E = 1.40		

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		(Fill) A-1-b, Silty GRAVEL with Sand, very dense, gray-brown, moist, no structure, no odor, mps 1.0 in., PID 0 ppm, 0.0 ft - 2.0 ft Rec. = 0.6 ft	9-64-41 (105)		44.0	35.0	21.0
		(Fill) A-1-b, Silty SAND with Gravel, medium dense, dark brown, wet, no structure, no odor, mps 1.0 in., PID 0 ppm, Rec. = 0.7 ft, 2.0 ft - 4.0 ft	4-7-7-8 (14)		34.0	48.0	18.0
5		(Fill) A-1-a, Poorly-graded GRAVEL with Sand, loose, brown, wet, no structure, no odor, mps 1.0 in., PID 0 ppm, Rec. = 0.25 ft, 4.0 ft - 6.0 ft	6-6-4-9 (10)				
		(Fill) A-1-b, Well-graded SAND with Gravel, medium dense, brown, wet, no structure, no odor, mps 1.0 in., PID 0 ppm, Rec. = 0.3 ft, 6.0 ft - 8.0 ft	8-8-7-9 (15)				
		(Fill) ROCK fragments, PID 0 ppm, Rec. = 0.4 ft, 8.0 ft - 10.0 ft	19-22-15-3 (37)				
10		(Fill) A-1-b, Silty GRAVEL with Sand, medium dense, dark brown, wet, no structure, no odor, mps 1.0 in., brown silt layers, trace roots, PID 0.3 ppm, Rec. = 0.6 ft, 10.0 ft - 12.0 ft	12-17-8-20 (25)		48.0	29.0	23.0
15		Note: Casing refusal. Advanced borehole with roller bit 1.0 ft through boulder. Cored from 13.0 to 16.2 ft. Recovered 3.0 ft of boulder and 3.0 in. wood., 13.0 ft - 16.2 ft					
		Hole stopped @ 16.2 ft					
20		Remarks: AASHTO classifications are based on visual description of sample recovery at depths where lab testing is not performed. Unable to advance borehole through wood. Boring terminated at 16.2 ft.					
25							
30							

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Brook Road over Mill Brook BR 7
0208735
Danby BF 0130 (4)

Boring No.: **B-201A**
Page No.: 1 of 2
Pin No.: 12J618
Checked By: MLS

Boring Crew: P. Schofield, J. Ilunga
Date Started: 8/03/23 Date Finished: 8/07/23
VTSPG NAD83: N 306139 ft E 1503862 ft
Station: 19+88 (est.) Offset: 6 ft LT (est.)
Ground Elevation: 929.8 ft

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in.	1.38 in.
Hammer Wt:	140 lb.	140 lb.
Hammer Fall:	30 in.	30 in.
Hammer/Rod Type:	Auto	
Rig: MOBILE B-48 TRUCK C_E = 1.40		

Groundwater Observations

Date	Depth (ft)	Notes
08/07/23	13.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Note: Refer to test boring B-201 between 0 to 12.0 ft., 0.0 ft - 12.0 ft								
5										
10		A-2-4, Silty GRAVEL with Sand, dense, gray-brown, wet, no structure, no odor, mps 1.0 in., PID 0.3 ppm (Glacial Deposits), Rec. = 0.6 ft, 12.0 ft - 14.0 ft				19-22-18-16 (40)		42.0	33.0	25.0
15		A-1-b, Silty SAND with Gravel, medium dense, gray-brown, wet, no structure, no odor, mps 1.0 in., PID 0.1 ppm (Glacial Deposits), Rec. = 1.17 ft, 14.0 ft - 16.0 ft				17-12-15-18 (27)		31.0	46.0	23.0
20		A-1-b, Silty GRAVEL with Sand, very dense, gray-brown, wet, cemented, no odor, mps 1.5 in., PID 0 ppm (Glacial Deposits), Rec. = 0.7 ft, 19.0 ft - 21.0 ft				21-28-41-31 (69)		44.0	32.0	24.0
25		A-1-a, Well-graded GRAVEL with Sand, very dense, light gray, wet, no structure, no odor, mps 1.0 in., PID 0 ppm (Glacial Deposits), 24.0 ft - 24.7 ft Note: Encountered cobbles from 24.7 to 29.0 ft., 24.7 ft				49-53/3"				
30		A-1-b, Silty SAND with Gravel, very dense, gray-brown, moist, cemented, no odor, mps 1.0 in. (Glacial Deposits), Rec. = 0.75 ft, 29.0 ft - 31.0 ft				30-50-50-48 (100)				

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOGS 0208735_V1_DANBY.GPJ VERMONT_AOT.GDT 1/17/25

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: s12j618BDR_Borings
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
BORING LOGS 2

PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK
SHEET 18 OF 29

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Brook Road over Mill Brook BR 7
0208735
Danby BF 0130 (4)

Boring No.: **B-201A**
Page No.: 2 of 2
Pin No.: 12J618
Checked By: MLS

Boring Crew: P. Schofield, J. Ilunga
Date Started: 8/03/23 Date Finished: 8/07/23
VTSPG NAD83: N 306139 ft E 1503862 ft
Station: 19+88 (est.) Offset: 6 ft LT (est.)
Ground Elevation: 929.8 ft

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in.	1.38 in.
Hammer Wt:	140 lb.	140 lb.
Hammer Fall:	30 in.	30 in.
Hammer/Rod Type:	Auto	
Rig: MOBILE B-48 TRUCK C_E = 1.40		

Groundwater Observations

Date	Depth (ft)	Notes
08/07/23	13.0	During drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
35		Similar to previous sample., Rec. = 0.6 ft, 34.0 ft - 35.7 ft				36-61-72-51/3" (133)				
40		Note: Encountered cobble layer from 35.7 to 44.0 ft. Cored from 38.5 to 42.0 ft and recovered medium gray and white marble rock. Core barrel jammed. Washed ahead and broke through at 44.0 ft. Recovery 15 in., 38.5 ft - 44.0 ft								
45		Note: Washed ahead to 49.5 ft and telescoped 3-in. casing to 49.0 ft., 44.0 ft								
50		A-2-4, Silty SAND, very dense, gray-brown, moist, cemented, no odor, fragment of quartz, mps 1.0 in. (Glacial Deposits), Rec. = 0.7 ft, 49.5 ft - 51.5 ft				32-36-38-42 (74)				
55		A-1-b, Silty SAND with Gravel, very dense, gray, wet, no structure, no odor, mps 0.25 in. (Glacial Deposits), Rec. = 0.17 ft, 54.0 ft - 54.3 ft Note: Split spoon refusal at 54.3 ft., 54.3 ft - 54.5 ft Top of Bedrock @ 54.3 ft				50/4"				
60		54.5 ft - 59.5 ft, Gray, light brown and green, interbedded QUARTZITE, DOLOSTONE AND SCHIST, Quartz layers, fine to medium grained, hard, slightly weathered, slight rust discoloration.. Primary joints dipping at low to moderate angles, smooth to rough, open, planar to undulating, close to moderate spacing, soil infilling observed from drilling wash water. Fair Rock, NX, RMR=42 (Winooski Dolostone). Hole stopped @ 59.5 ft	R1	57 (25)	8.25 13.75 5 12.25 8.6					

Remarks:
AASHTO classifications are based on visual description of sample recovery at depths where lab testing is not performed.
B-201A located approximately 10 ft east of B-201.

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 0208735_VT_DANBY.GPJ VERMONT AOT.GDT 21/12/23

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Brook Road over Mill Brook BR 7
0208735
Danby BF 0130 (4)

Boring No.: **B-202**
Page No.: 1 of 3
Pin No.: 12J618
Checked By: TJE

Boring Crew: P. Michaud, S. Shay
Date Started: 11/20/23 Date Finished: 11/21/23
VTSPG NAD83: N 306138 ft E 1503919 ft (est.)
Station: 20+44 (est.) Offset: 7 ft RT (est.)
Ground Elevation: 929.0 (est.)

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in.	1.38 in.
Hammer Wt:	140 lb.	140 lb.
Hammer Fall:	30 in.	30 in.
Hammer/Rod Type:	Auto	
Rig: MOBILE B-57 TRACK C_E = 1.37		

Groundwater Observations

Date	Depth (ft)	Notes
11/21/23	13.0	before drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		ASPHALT ROADWAY, 0.0 ft - 0.85 ft					
5		(Fill) Poorly-graded SAND with Silt and Gravel, loose, dark brown, moist, no structure, no odor, PID 0.5 ppm, Rec. = 1.1 ft, 1.0 ft - 3.0 ft	4-4-4-4 (8)				
		(Fill) Poorly-graded SAND with Silt and Gravel, medium dense, dark brown, wet, no structure, no odor, PID 0.3 ppm, Rec. = 1.0 ft, 3.0 ft - 5.0 ft	5-6-11-11 (17)		39.2	45.6	15.2
		(Fill) Poorly-graded SAND with Gravel, medium dense, dark brown, moist, no structure, no odor, PID 0.2 ppm, Rec. = 0.5 ft, 5.0 ft - 7.0 ft	30-7-7-4 (14)				
		(Fill) Well-graded SAND with Gravel, dense, dark brown, moist, no structure, no odor, PID 0.8 ppm, Rec. = 0.4 ft, 7.0 ft - 8.6 ft	20-20-19-50/1.2" (39)		32.2	60.1	7.7
10		Split spoon refusal. Switch to spin casing., 8.6 ft					
		(Fill) Poorly-graded GRAVEL with Silt and Sand, dense, gray-brown, wet, intermixed, no odor, PID 0.2 ppm, Possible boulder indicated by drilling effort from 9 to 10.5 ft, Rec. = 0.3 ft, 11.0 ft - 12.6 ft Difficult drilling from 12.5 to 14.5 ft, 12.6 ft	6-17-20-50/1.2" (37)				
15		Split spoon refusal, Rec. = 0.0 ft, 15.0 ft - 15.1 ft Possible nested cobbles from 15.2 to 16 ft, 15.2 ft	50/1.2"				
		Approximate strata change 16.0 ft., Rec. = 0.7 ft, 16.0 ft - 18.0 ft A-1-b, Silty GRAVEL with Sand, very dense, light brown with olive-brown, wet, no structure, no odor, PID 0.0 ppm (Glacial Deposits), 16.5 ft	29-41-69-25 (110)				
20		A-2-4, Silty GRAVEL with Sand, dense, light brown, wet, no structure, no odor, PID 0.0 ppm, colluvium (Glacial Deposits), Rec. = 1.3 ft, 20.0 ft - 22.0 ft	21-22-14-16 (36)		40.3	33.5	26.2
		Possible boulder indicated by drilling effort from 22.5 to 23.5 ft, 22.5 ft					
25		A-1-b, Silty SAND with Gravel, dense, light brown, wet, no structure, no odor, PID 0.0 ppm, colluvium (Glacial Deposits), Rec. = 1.75 ft, 25.0 ft - 27.0 ft	17-20-11-32 (31)		35.9	42.6	21.5
30		A-2-4, Silty SAND with Gravel, very dense, light brown, wet, no structure, no odor, PID 0.0 ppm, colluvium (Glacial Deposits), Rec. = 1.0 ft, 30.0 ft - 32.0 ft	32-55-60 (115)				

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 0208735_VT_DANBY.GPJ VERMONT AOT.GDT 21/12/23

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: s12j618BDR_Borings
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
BORING LOGS 3
PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK
SHEET 19 OF 29

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Brook Road over Mill Brook BR 7
0208735
Danby BF 0130 (4)

Boring No.: **B-202**
Page No.: 2 of 3
Pin No.: 12J618
Checked By: TJE

Boring Crew: P. Michaud, S. Shay
Date Started: 11/20/23 Date Finished: 11/21/23
VTSPG NAD83: N 306138 ft E 1503919 ft (est.)
Station: 20+44 (est.) Offset: 7 ft RT (est.)
Ground Elevation: 929.0 (est.)

	Casing	Sampler
Type:	HW	SS
I.D.:	4 in.	1.38 in.
Hammer Wt:	140 lb.	140 lb.
Hammer Fall:	30 in.	30 in.
Hammer/Rod Type:	Auto	
Rig: MOBILE B-57 TRACK	C_E = 1.37	

Groundwater Observations

Date	Depth (ft)	Notes
11/21/23	13.0	before drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
35		A-2-4, Silty SAND with Gravel, very dense, gray, wet, bonded, no odor, PID 0.0 ppm (Glacial Deposits), Rec. = 1.1 ft, 35.0 ft - 37.0 ft	15-30-65 (95)				
40		A-2-4, Silty SAND with Gravel, very dense, gray and brown, wet, bonded, no odor, PID 0.0 ppm (Glacial Deposits), Rec. = 0.2 ft, 40.0 ft - 40.8 ft Large boulder indicated by drilling effort from 41 to 43 ft, 41.0 ft	15-100/3" (100/3")				
45		A-2-4, Silty SAND with Gravel, very dense, gray and brown, wet, bonded, no odor, PID 0.0 ppm (Glacial Deposits), Rec. = 1.7 ft, 45.0 ft - 47.0 ft	21-26-26-32 (52)				
50		Possible boulder indicated by drilling effort from 49 to 51 ft, 49.0 ft					
		A-2-4, Silty SAND with Gravel, very dense, gray and brown, wet, bonded, no odor (Glacial Deposits), Rec. = 1.3 ft, 51.0 ft - 53.0 ft	55-36-32-55 (68)				
55		A-2-4, Silty SAND with Gravel, very dense, gray and brown, wet, bonded, no odor (Glacial Deposits), Rec. = 1.8 ft, 55.0 ft - 56.8 ft	34-49-40-50/3" (89)				
60		57.0 ft - 81.0 ft, Several core advancements to recover gravel, cobbles, and boulders from 57 to 81 ft					
		62.0 ft, Recovered 6 in. of boulder. 62.0 ft - 67.0 ft Note: Cored from 62.0 to 81.0 across 4 separate coring attempts. Rock types cored from 62.0 to 81.0 ft are variable and do not match the mapped Winooski Dolostone bedrock at the site.. Core runs may have washed					

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Brook Road over Mill Brook BR 7
0208735
Danby BF 0130 (4)

Boring No.: **B-202**
Page No.: 3 of 3
Pin No.: 12J618
Checked By: TJE

Boring Crew: P. Michaud, S. Shay
Date Started: 11/20/23 Date Finished: 11/21/23
VTSPG NAD83: N 306138 ft E 1503919 ft (est.)
Station: 20+44 (est.) Offset: 7 ft RT (est.)
Ground Elevation: 929.0 (est.)

Type: HW SS
I.D.: 4 in. 1.38 in.
Hammer Wt: 140 lb. 140 lb.
Hammer Fall: 30 in. 30 in.
Hammer/Rod Type: Auto
Rig: MOBILE B-57 TRACK C_E = 1.37

Groundwater Observations

Date	Depth (ft)	Notes
11/21/23	13.0	before drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
65		out fines and sand. The deposit is likely glacial deposits from 62.0 to 81.0 ft.					
70		67.0 ft, Recovered 22 in. of boulder. 67.0 ft - 72.0 ft					
75		72.0 ft, Recovered 34 in. of boulder. 72.0 ft - 77.0 ft					
80		77.0 ft, Recovered 18 in. of boulder. 77.0 ft - 81.0 ft					
		Hole stopped @ 81.0 ft					

Remarks:
AASHTO classifications are based on visual description of sample recovery at depths where lab testing is not performed.

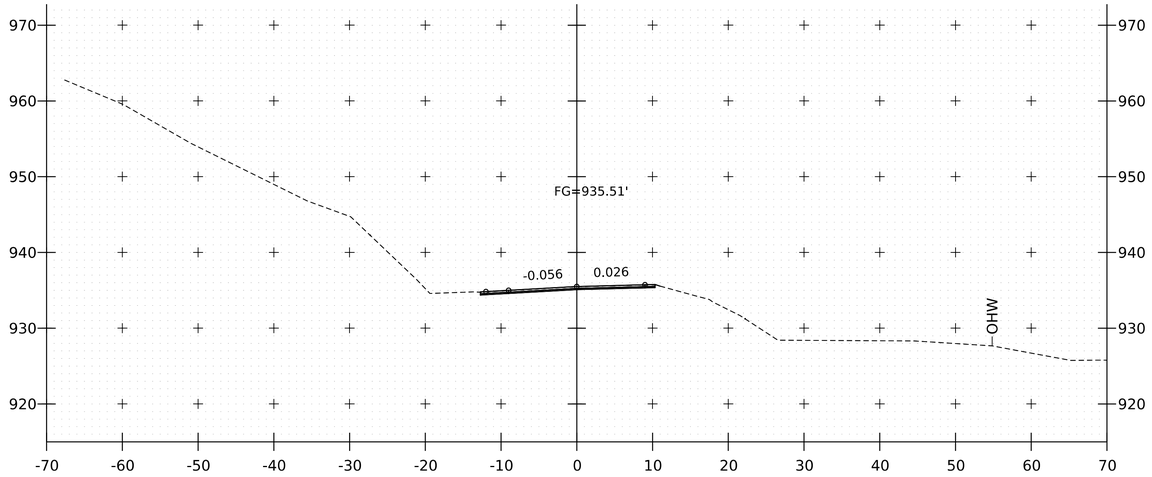
Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 0208735_V1_DANBY.GPJ VERMONT_AUTOGPJ 2/11/25

PROJECT NAME: DANBY
PROJECT NUMBER: BF 0130(4)

FILE NAME: s12j618BDR_Borings
PROJECT LEADER: A. GOUDREAU
DESIGNED BY: A. LEMIEUX
BORING LOGS 4

PLOT DATE: 30-JAN-2025
DRAWN BY: A. LEMIEUX
CHECKED BY: A. VAN BUSKIRK
SHEET 20 OF 29



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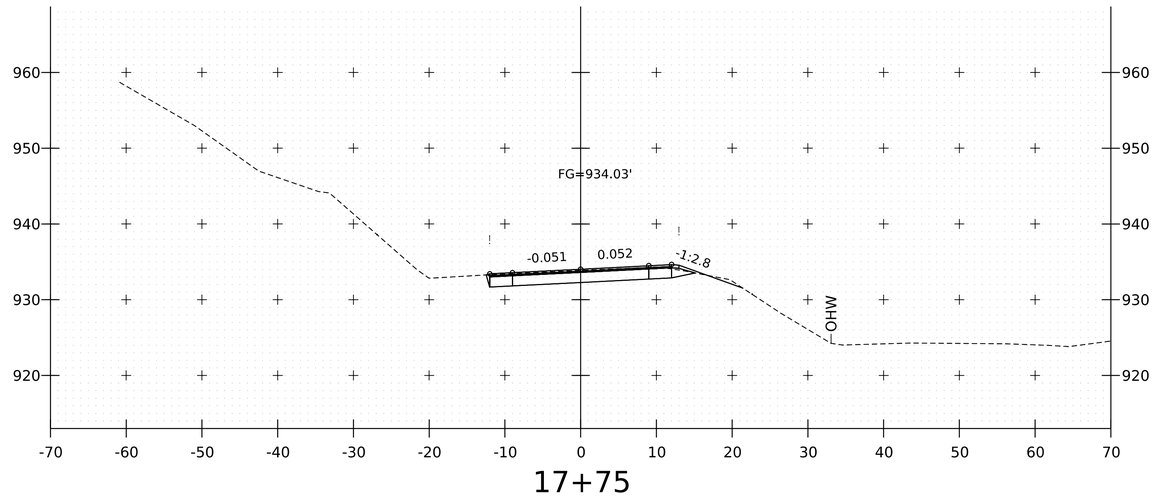

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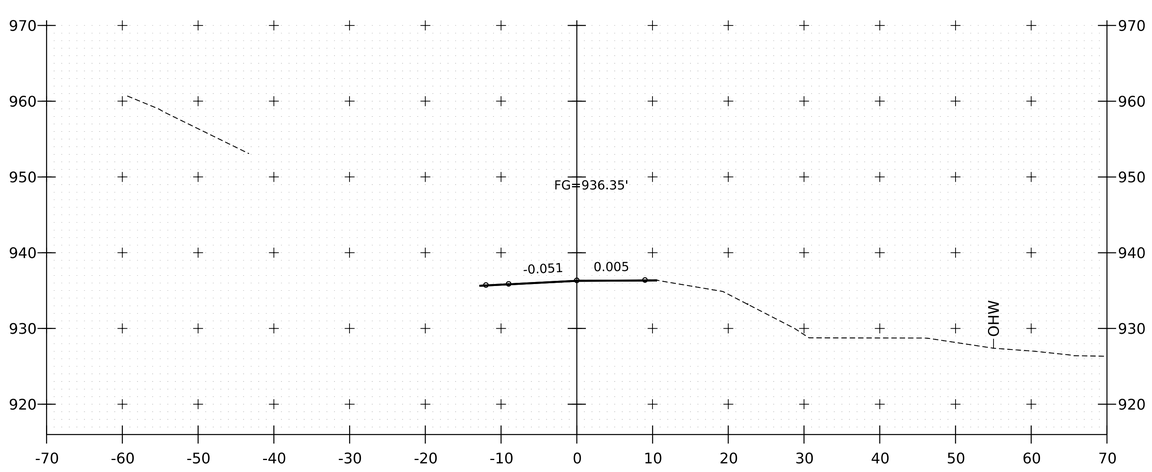

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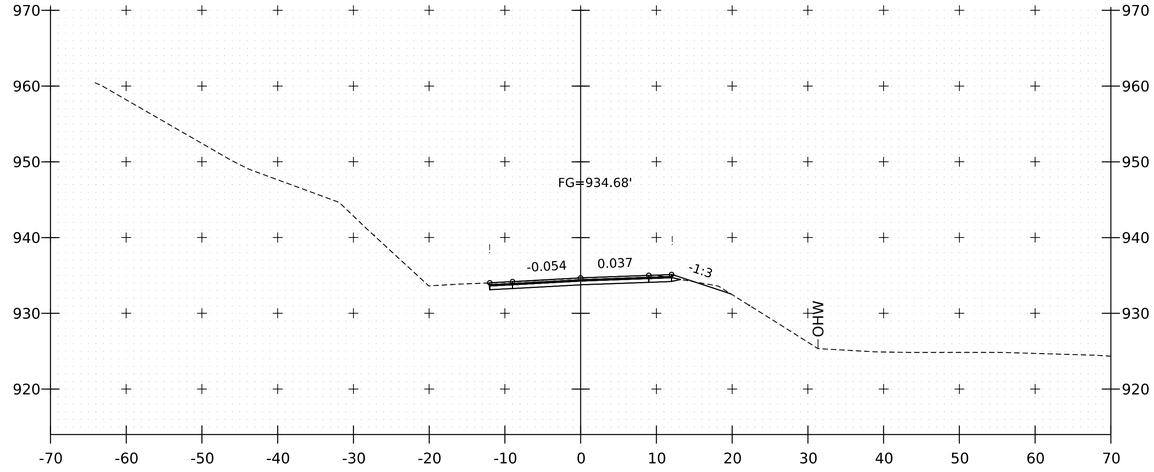

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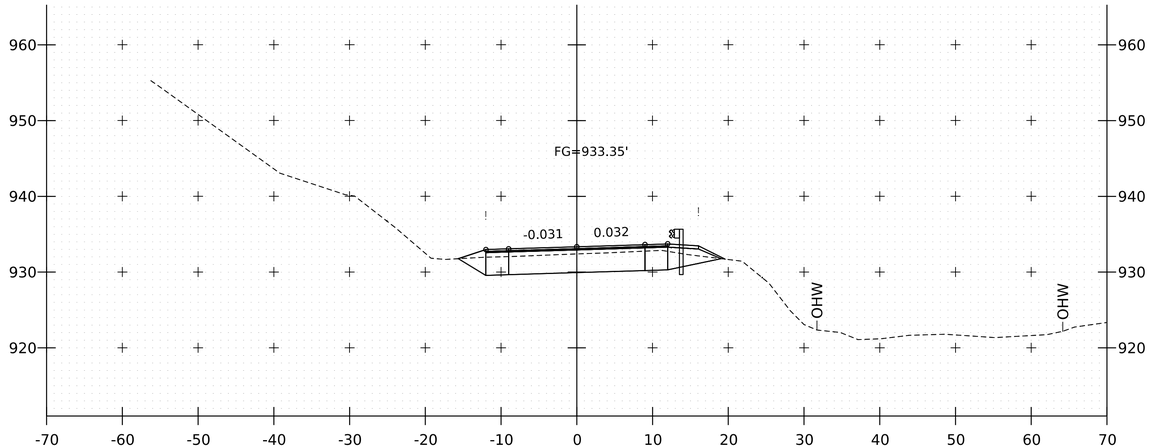
PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsFAS130.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CROSS SECTIONS 1		SHEET	21 OF 29



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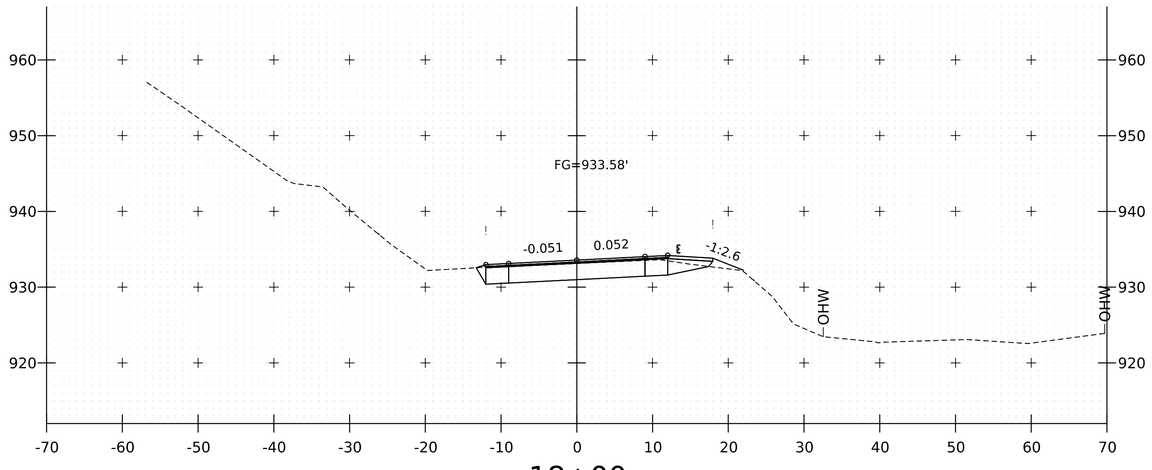

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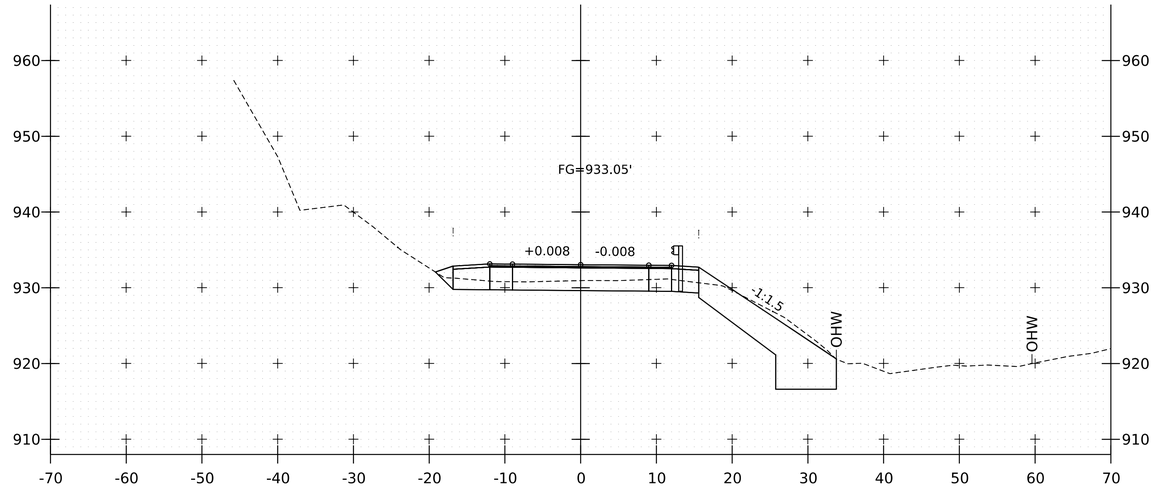

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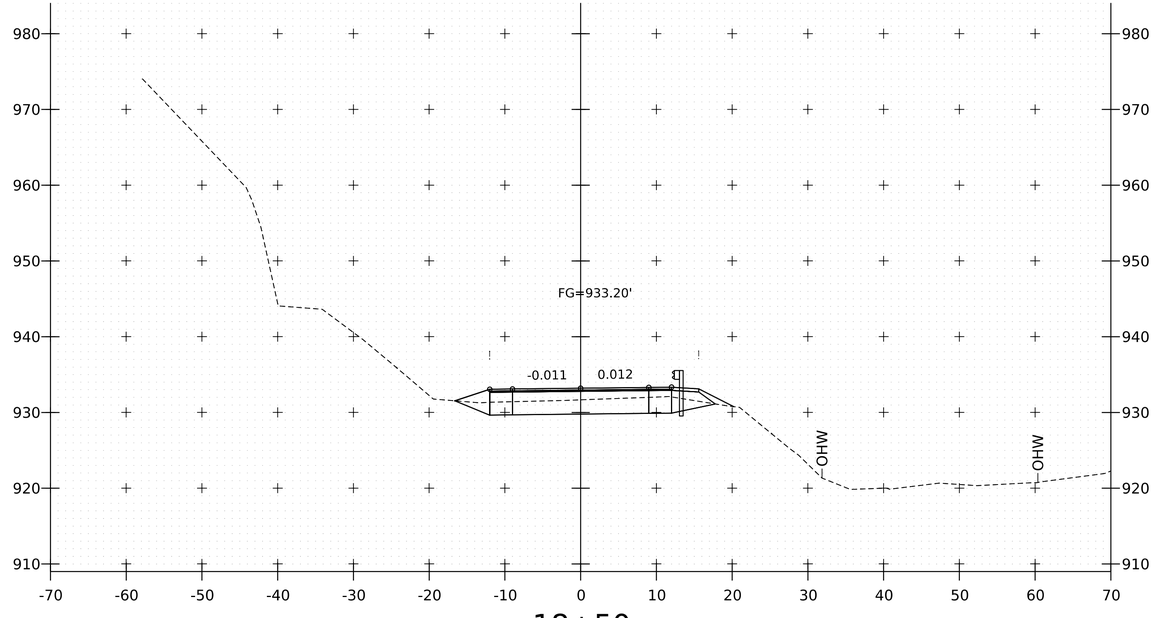
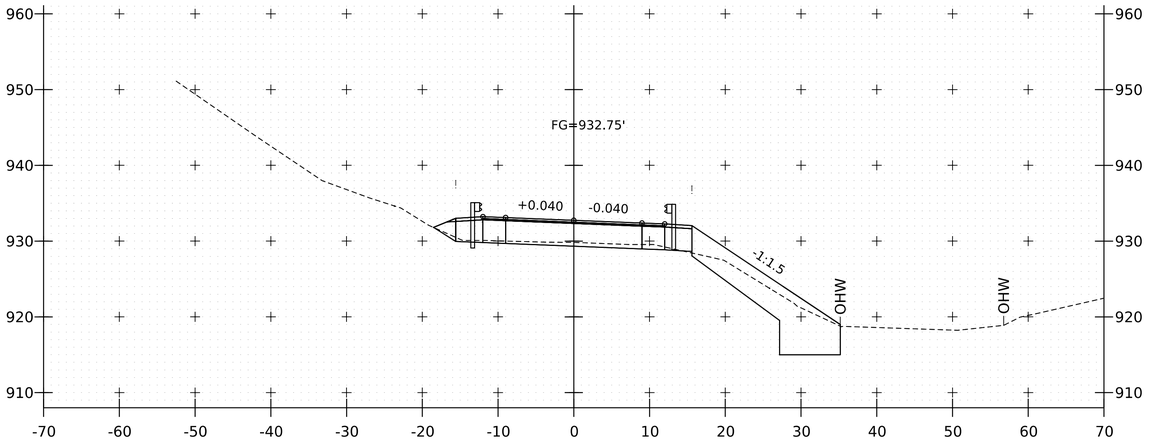


18+50

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsFAS130.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CROSS SECTIONS 2		SHEET	22 OF 29



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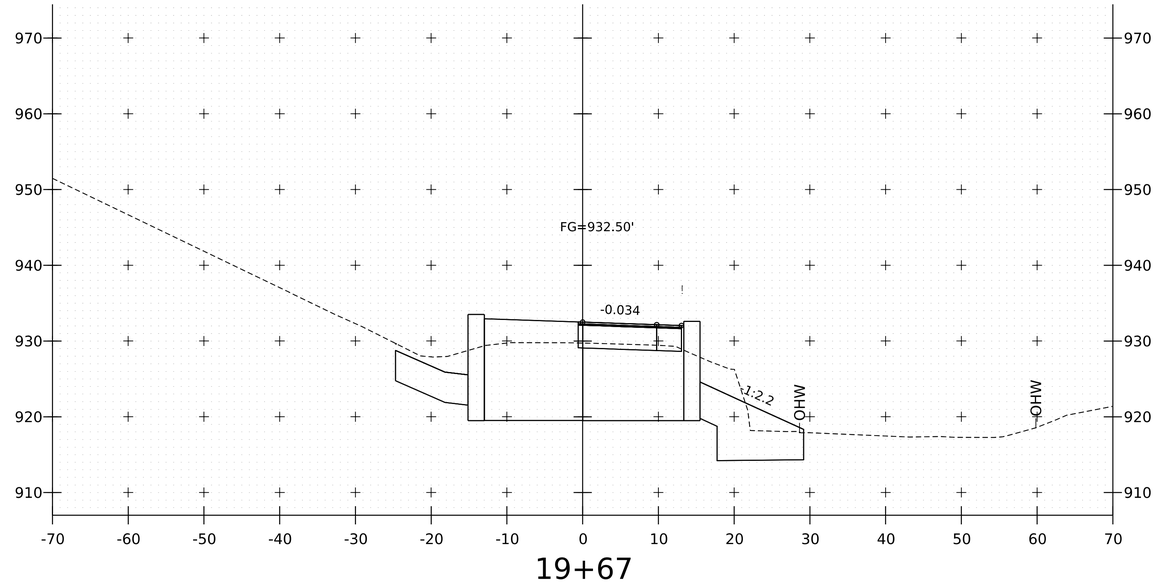

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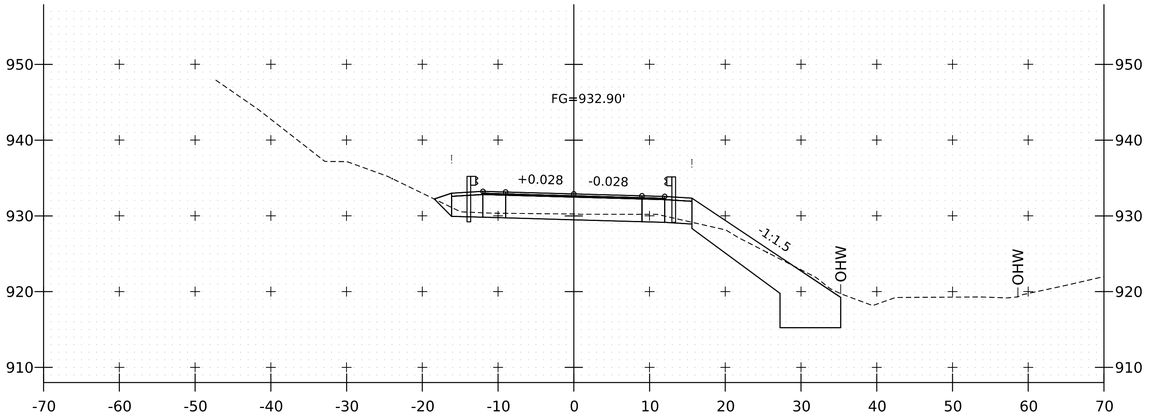

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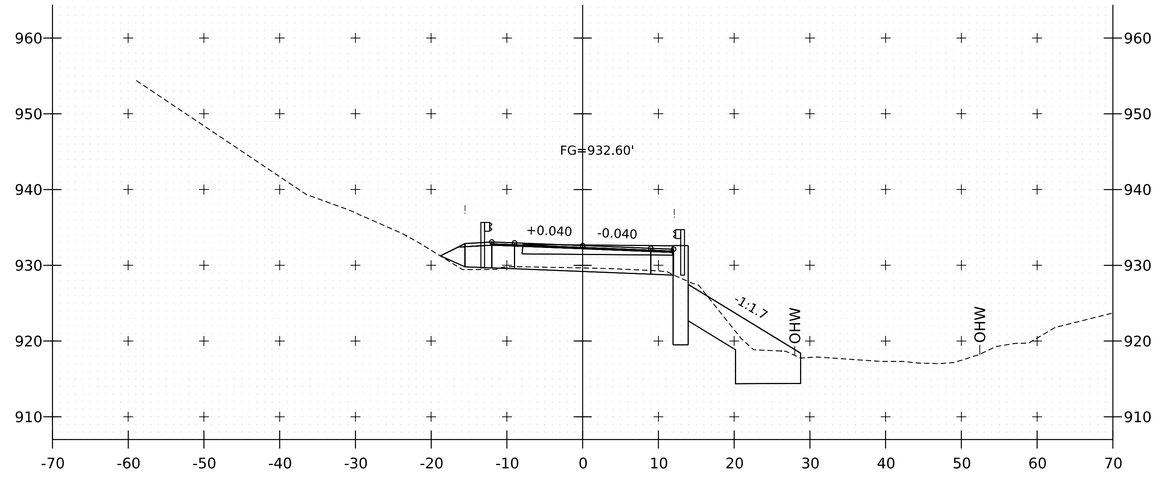
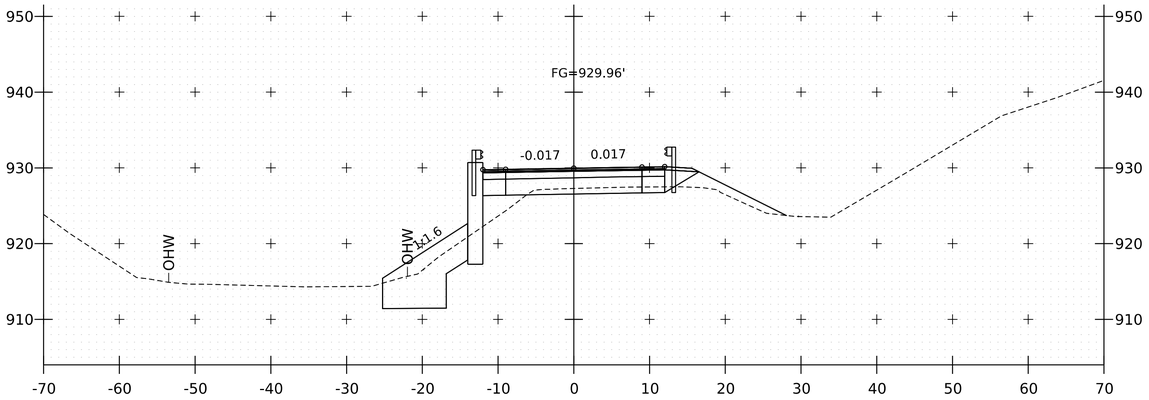


19+50

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsFAS130.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CROSS SECTIONS 3		SHEET	23 OF 29



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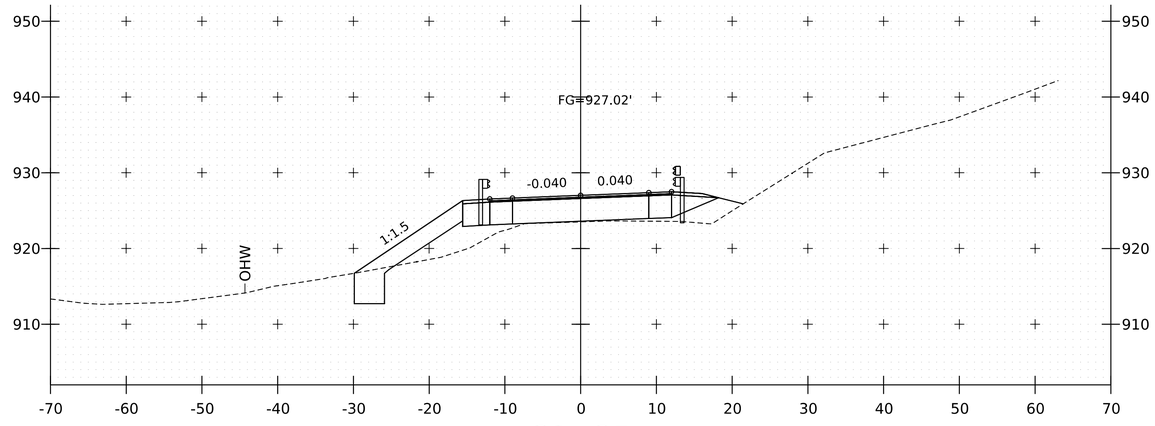

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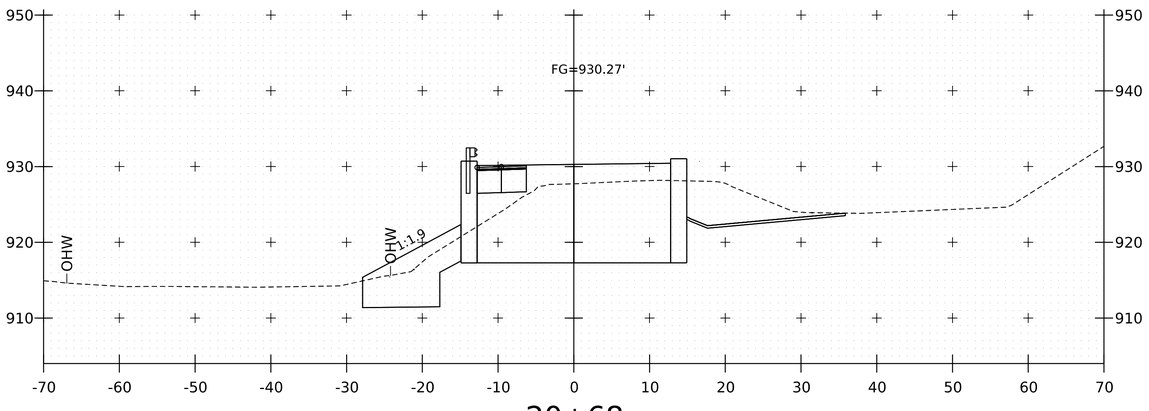

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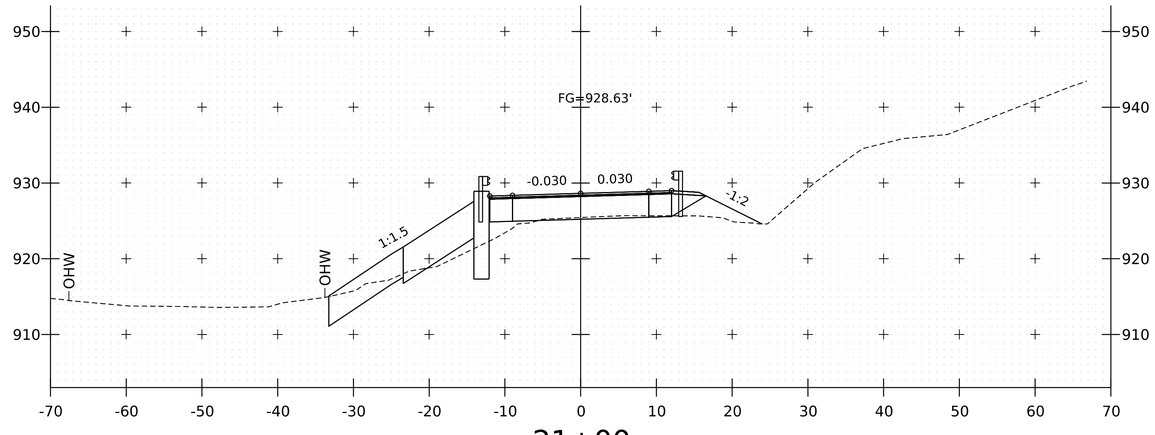
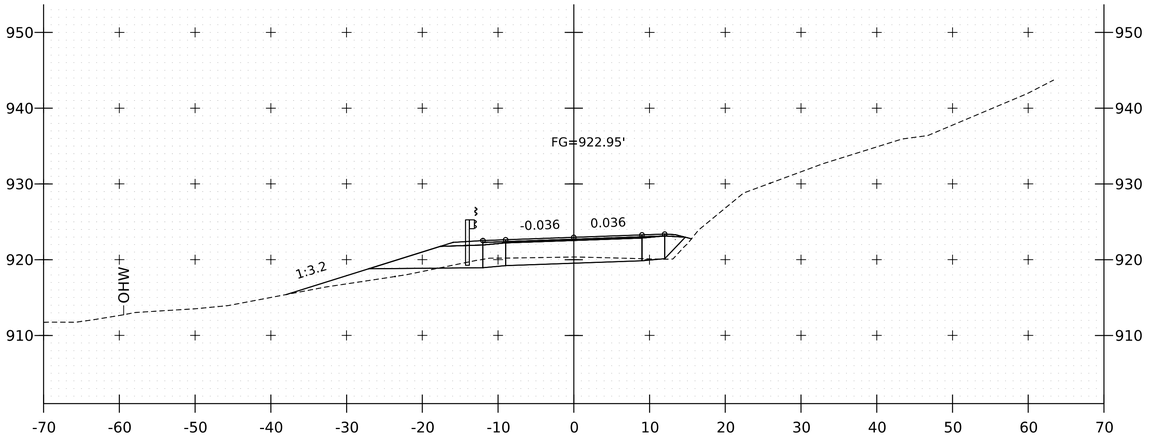


21+00

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsFAS130.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CROSS SECTIONS 4		SHEET	24 OF 29



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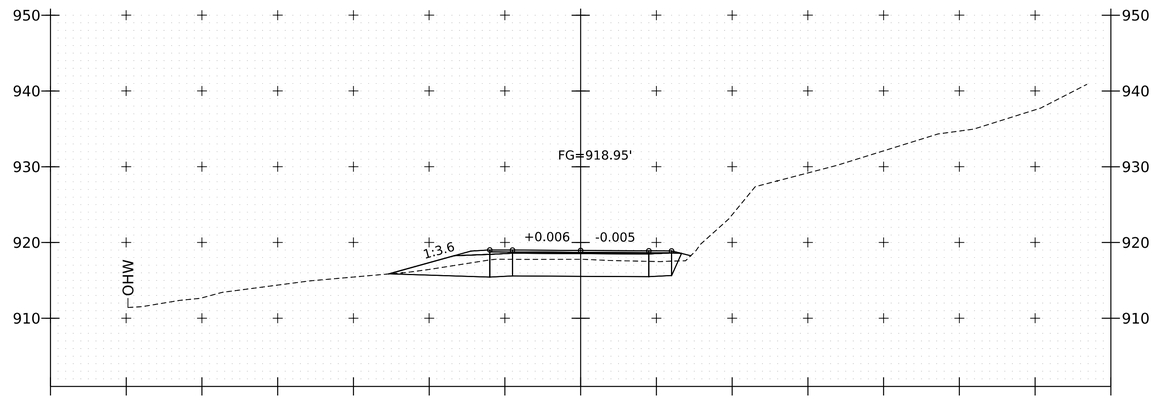

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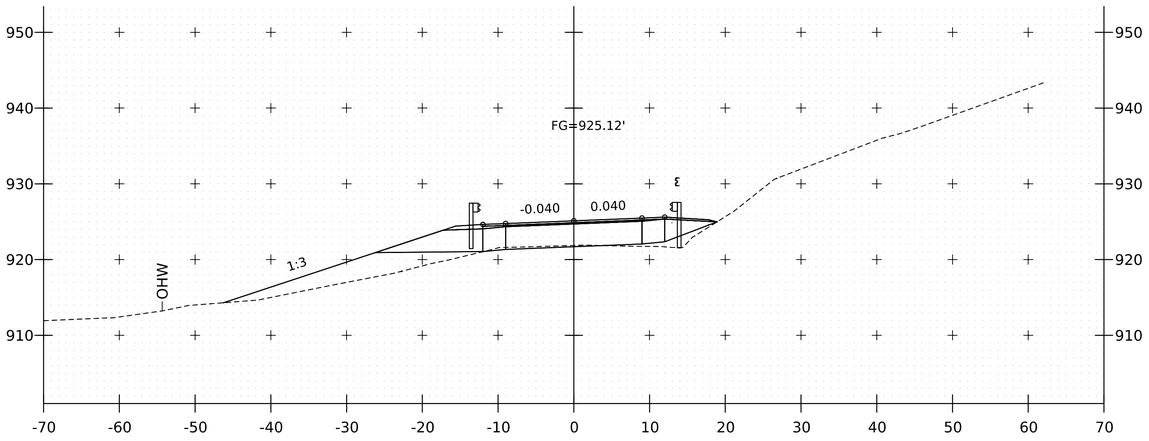

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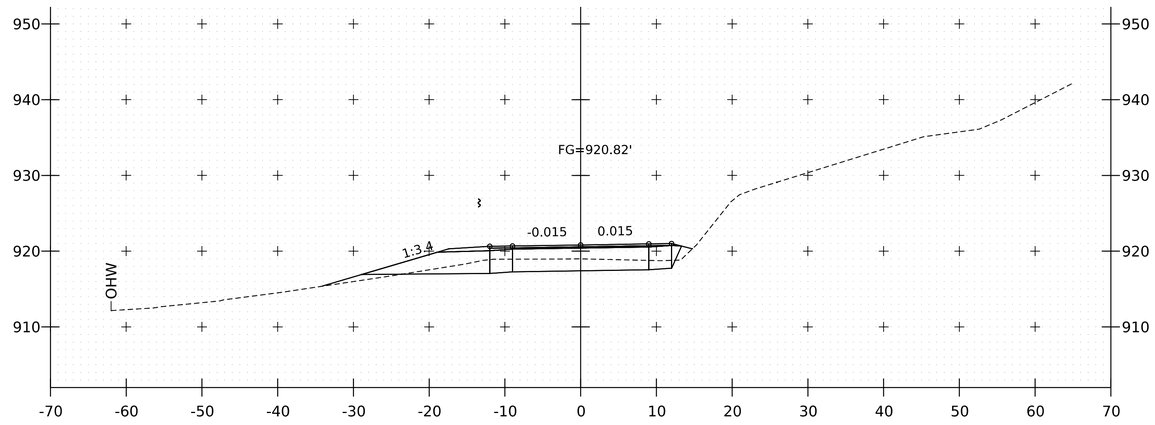
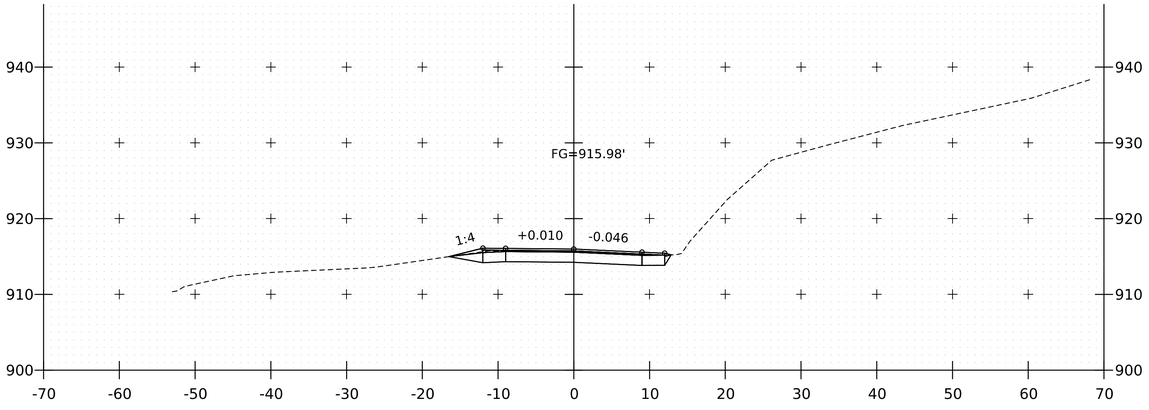


22+00

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsFAS130.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CROSS SECTIONS 5		SHEET	25 OF 29



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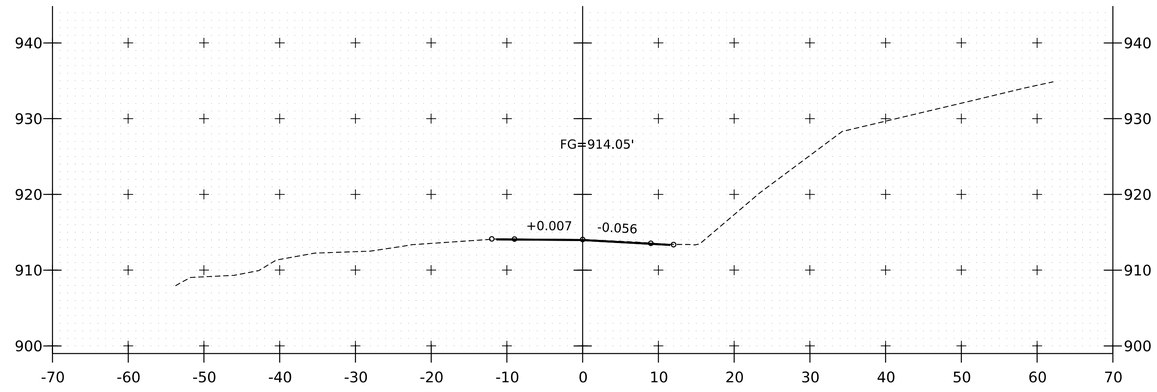

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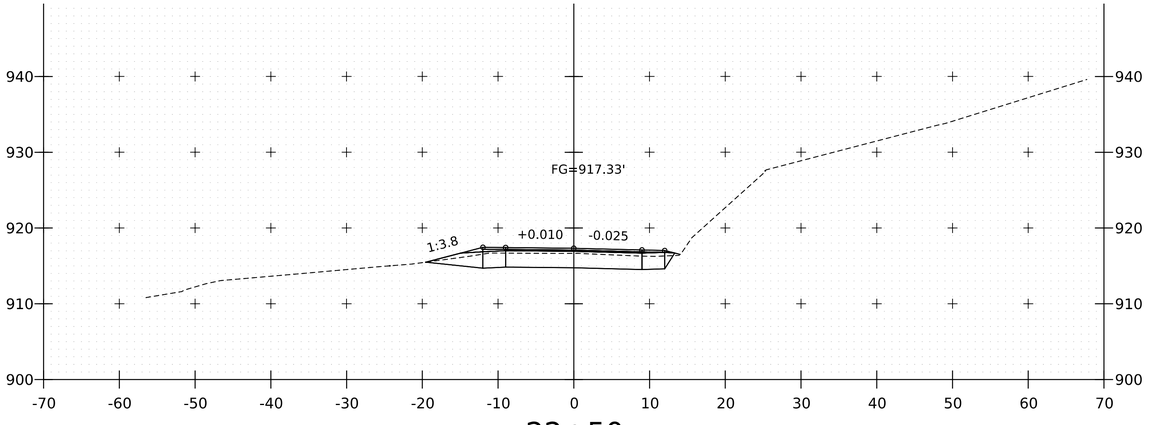

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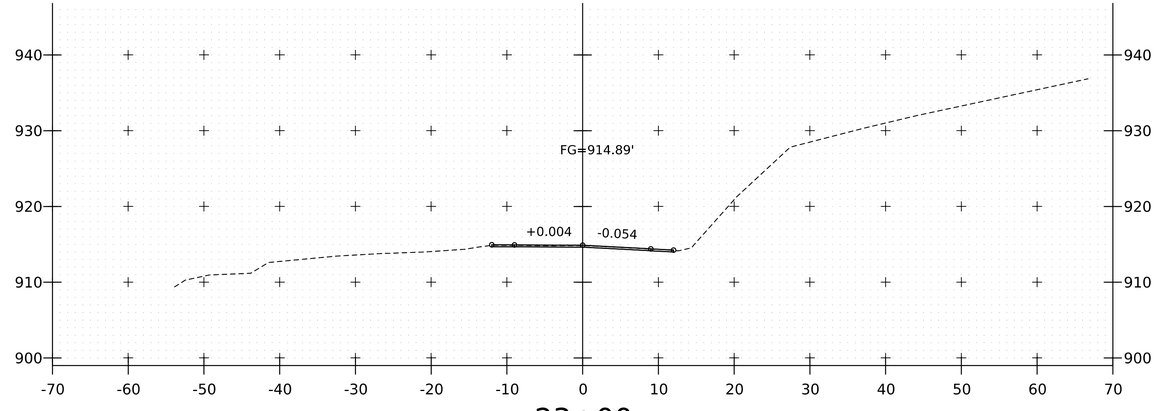
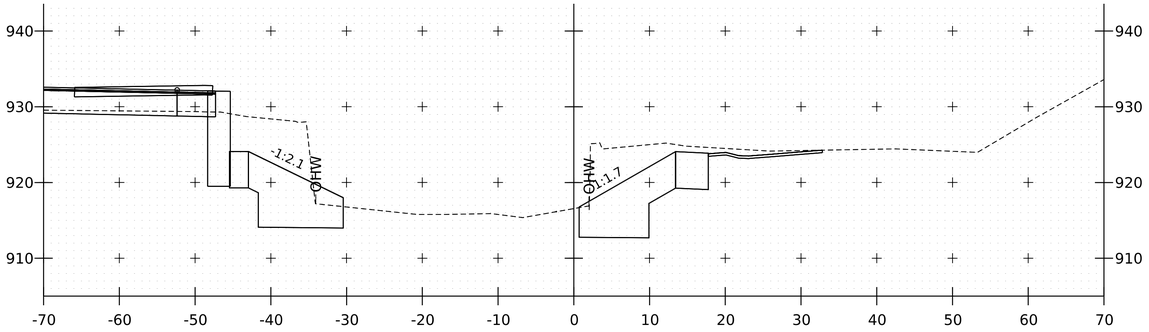


23+00

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsFAS130.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CROSS SECTIONS 6		SHEET	26 OF 29



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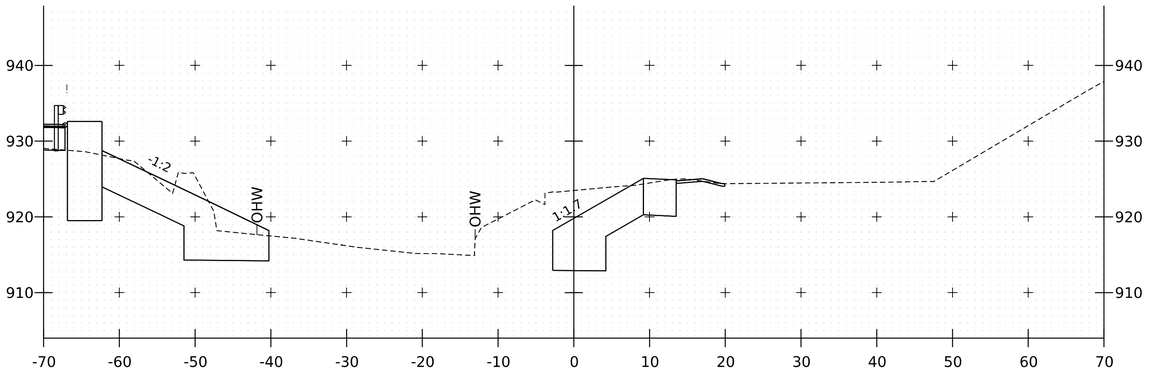

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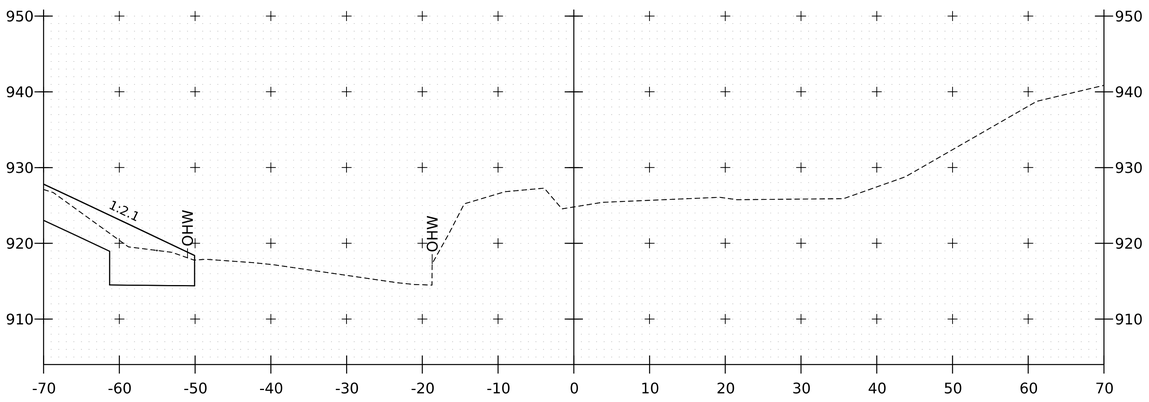

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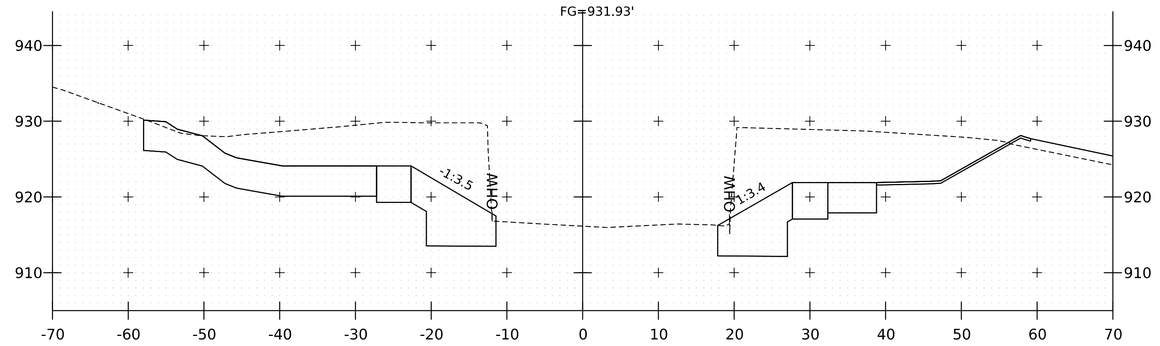

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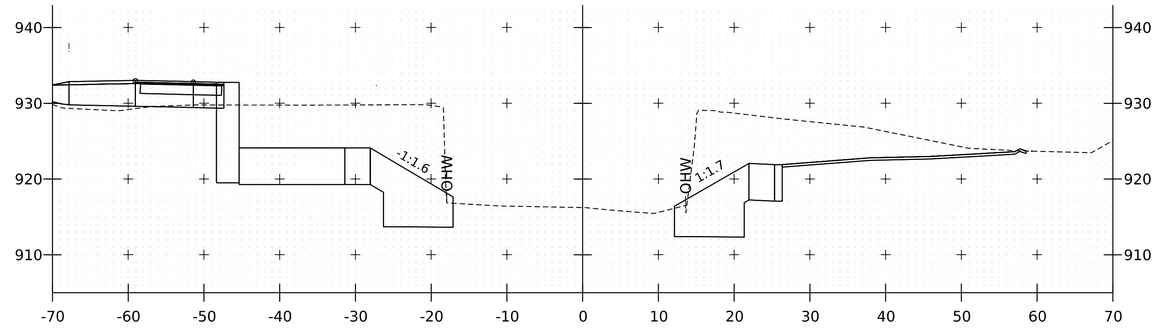

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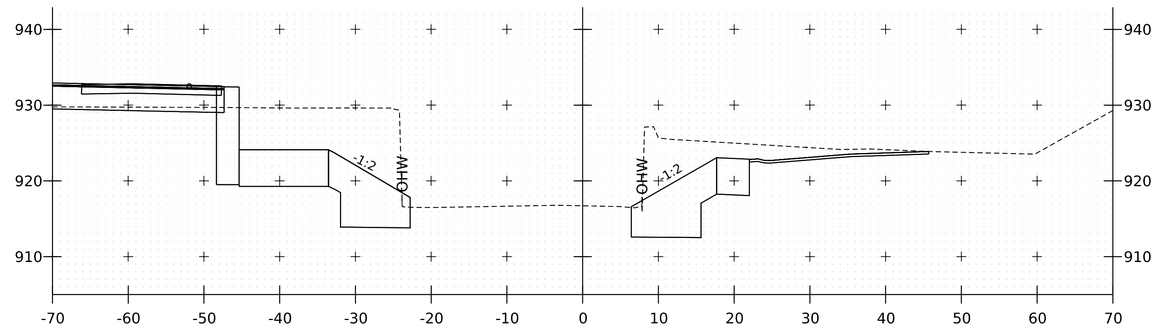

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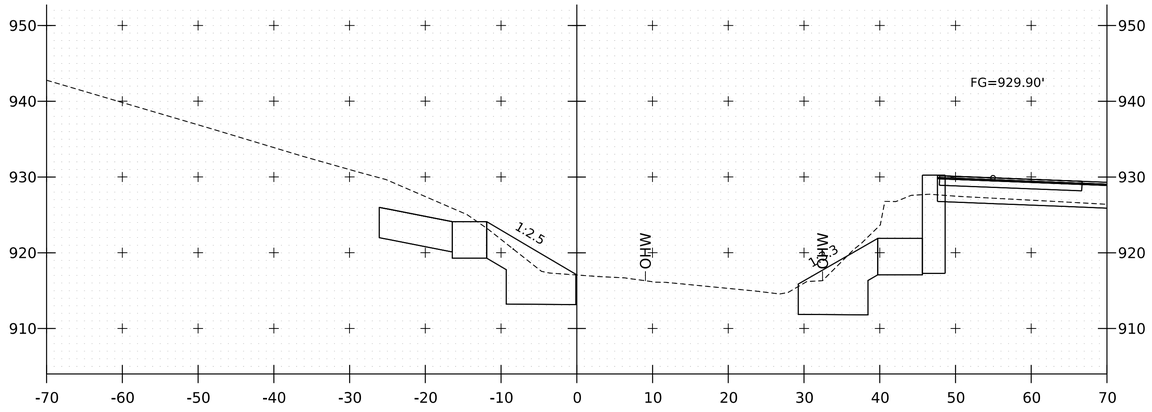
PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsChan.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CHANNEL XS SHEET 1		SHEET	27 OF 29



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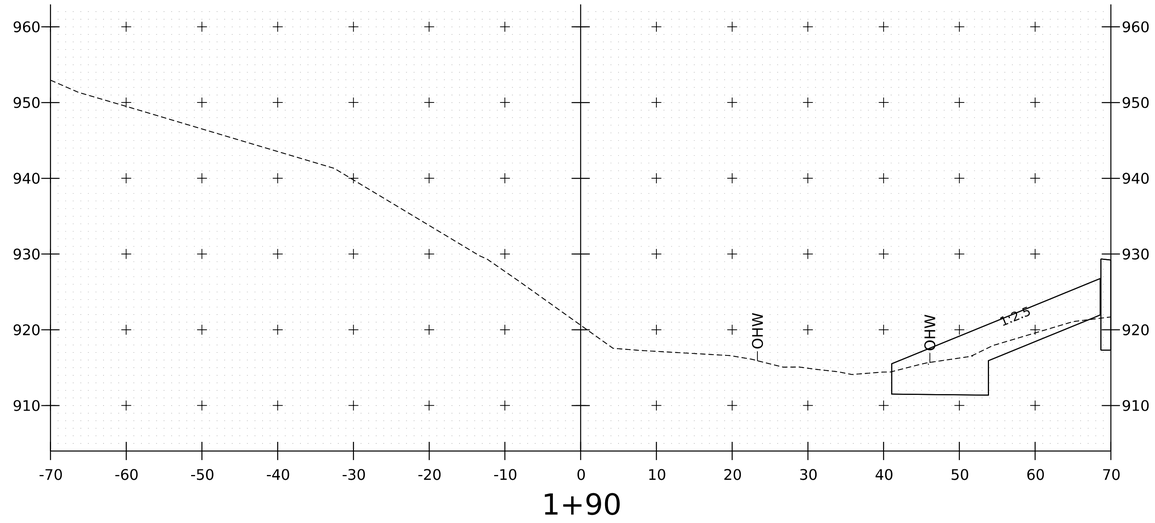

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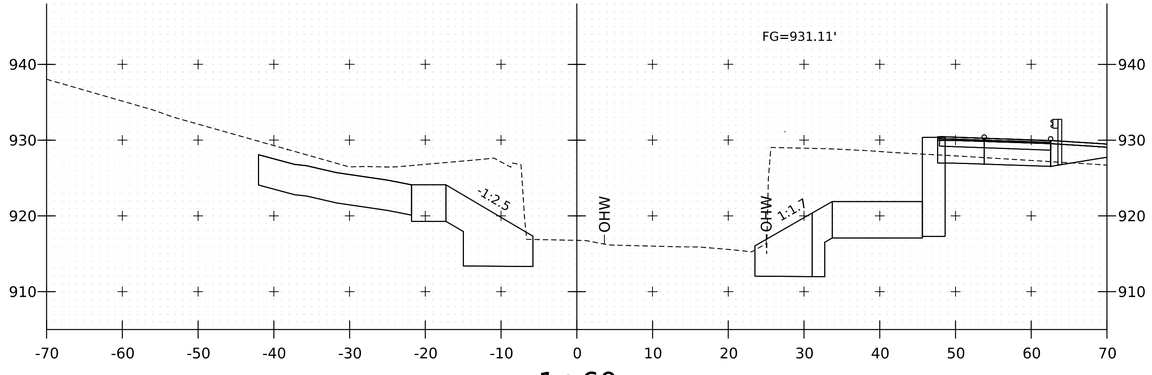

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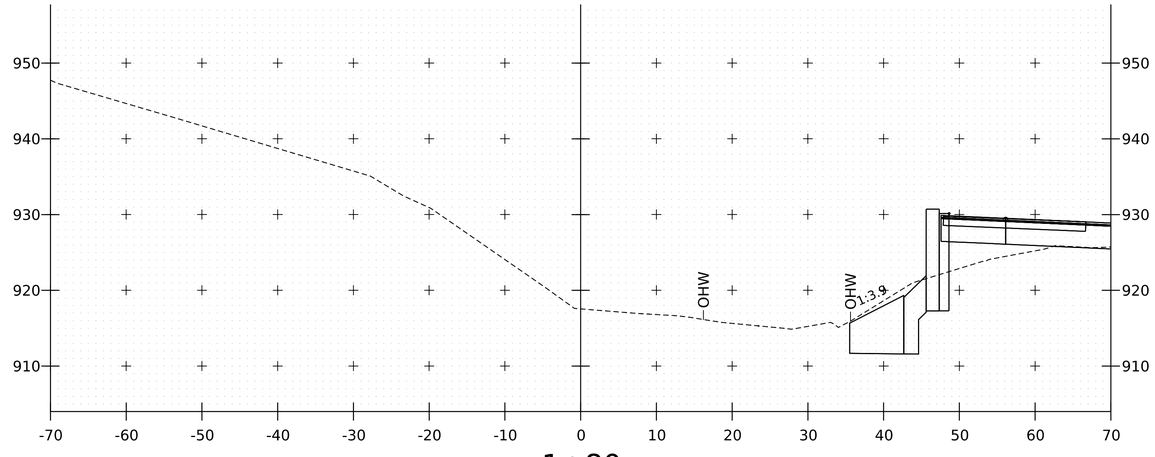
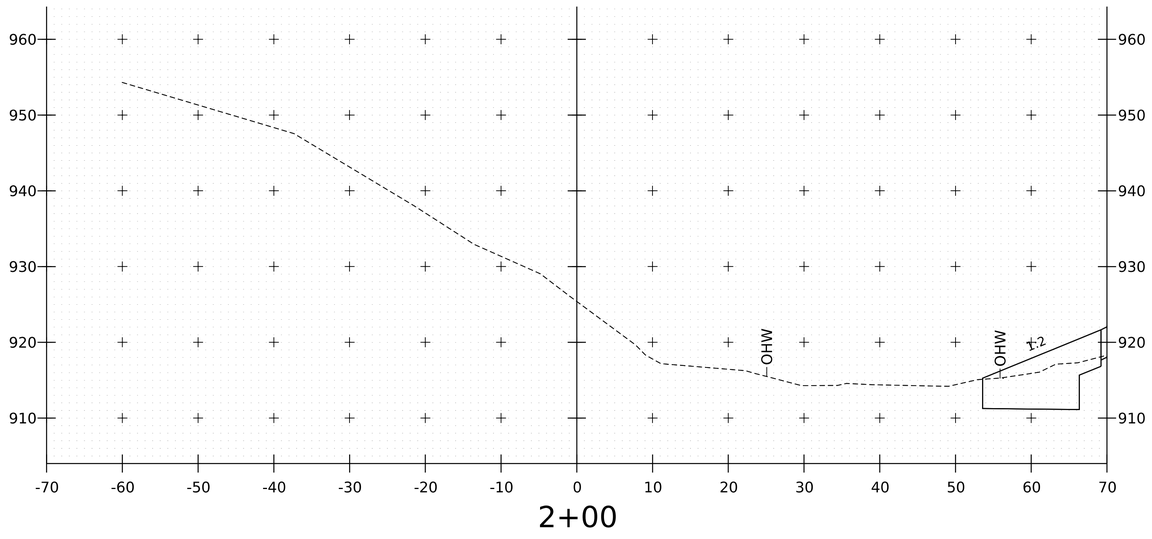


1+80

PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsChan.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CHANNEL XS SHEET 2		SHEET	28 OF 29



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PROJECT NAME:	DANBY
PROJECT NUMBER:	BF 0130(4)

FILE NAME:	s12j618xsChan.dgn	PLOT DATE:	30-JAN-2025
PROJECT LEADER:	A. GOUDREAU	DRAWN BY:	A. VAN BUSKIRK
DESIGNED BY:	A. VAN BUSKIRK	CHECKED BY:	A. LEMIEUX
CHANNEL XS SHEET 3		SHEET	29 OF 29