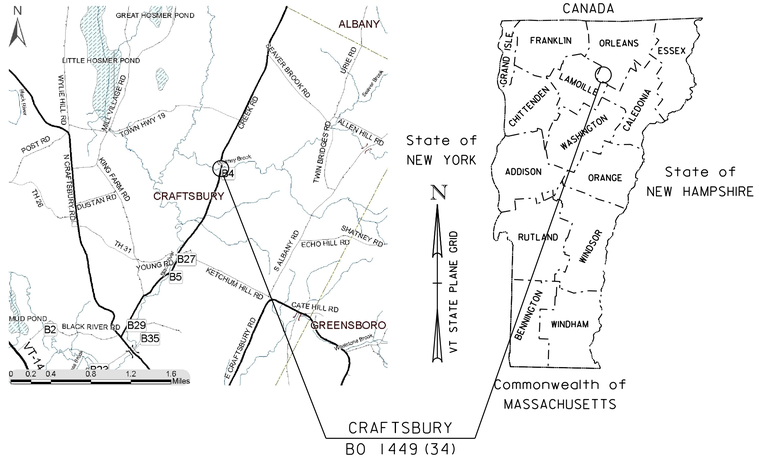
REVIEWER NOTES

1. THIS WILL BE A FOUR WEEK CLOSURE. BRIDGE 4 IS ON A LOCALLY OWNED CLASS 2 TOWN HIGHWAY, THEREFORE IT WILL BE THE RESPONSIBILITY OF THE TOWN OF CRAFTSBURY TO DEVELOP AND INSTALL THE SIGN PACKAGE.
2. RIGHT-OF-WAY WILL BE REQUIRED FOR THIS PROJECT.
3. A SIMPLIFIED PAVEMENT DESIGN HAS BEEN DONE FOR THIS PROJECT.
4. THE APPROACHES ARE AGGREGATE SURFACE COURSE. BITUMINOUS CONCRETE PAVEMENT WILL BE APPLIED FROM BEGIN PROJECT TO END PROJECT. THE BRIDGE DECK WILL BE PAVED.
5. A DESIGN EXCEPTION HAS BEEN REQUESTED FOR SUBSTANDARD VERTICAL GRADE, K VALUE, AND SIGHT DISTANCE.
6. THIS IS AN INTEGRAL ABUTMENT BRIDGE WITH A 6% SLOPE. THE SIMPLIFIED DESIGN METHOD IS NOT VALID DUE TO THE STEEP GRADE. SPECIAL CONSIDERATION WILL BE TAKEN IN DESIGN OF THE SUBSTRUCTURES.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

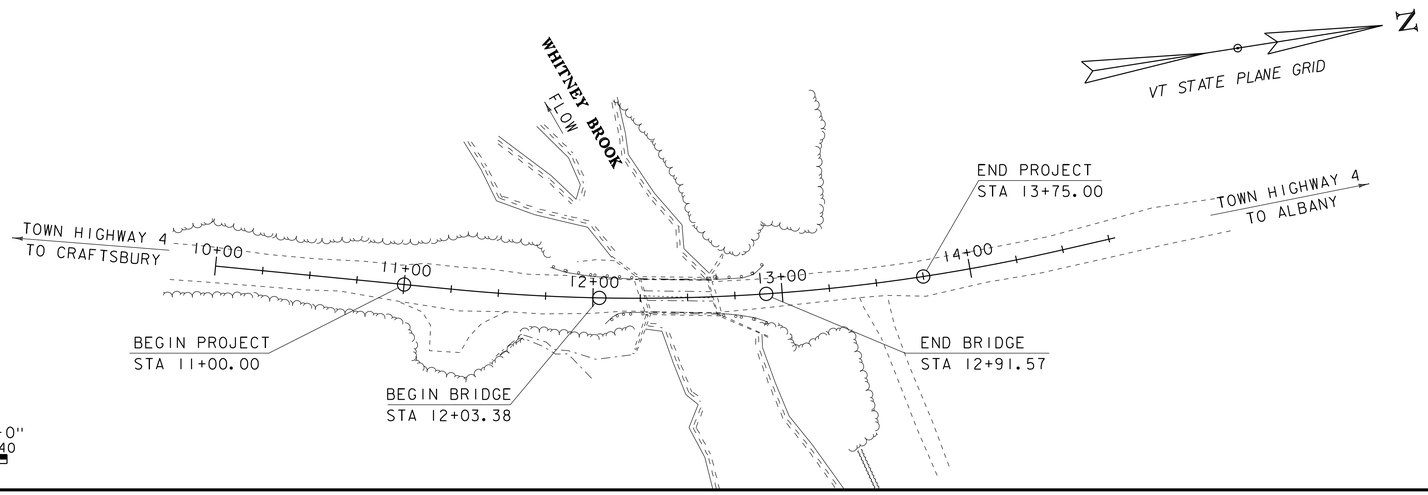
TOWN OF CRAFTSBURY
COUNTY OF ORLEANS

ROUTE NO : TH-4, RURAL MINOR COLLECTOR, CLASS 2 TOWN HIGHWAY

PROJECT LOCATION: ON TH 4, BRIDGE 4 OVER WHITNEY BROOK APPROXIMATELY 0.9 MILES NORTH OF ITS JUNCTION WITH TH 33

PROJECT DESCRIPTION: REPLACEMENT OF THE EXISTING BRIDGE 4 INCLUDING MINOR APPROACH WORK

LENGTH OF STRUCTURE:	88.19 FEET
LENGTH OF ROADWAY:	186.81 FEET
LENGTH OF PROJECT:	275.00 FEET



SCALE 1" = 40'-0"
40 0 40

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 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 :	R. GILMAN
SURVEYED DATE :	05/28/2013
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD 83 (CONUS)

PRELIMINARY PLANS
09-JUN-2014

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE _____

PROJECT MANAGER : C.P. WILLIAMS

PROJECT NAME : CRAFTSBURY
PROJECT NUMBER : BO 1449(34)

SHEET 1 OF 31 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-516.00	BRIDGE JOINT ASHPALTIC PLUG	5/7/2010
SD-516.11a	BRIDGE EXPANSION JOINT, VERMONT	2/24/2011
SD-516.11b	BRIDGE EXPANSION JOINT, VERMONT	2/25/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	5/7/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/7/2010

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: May 29, 2014

DRAINAGE AREA : 13.5 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous, a mixture of forested and open land cover
STREAM CHARACTERISTICS : Incised, alluvial, sinuous with failing banks, high sediment load
NATURE OF STREAMBED : Sand, gravel, cobbles and boulders

PEAK FLOW DATA

Q 2.33 =	450 cfs	Q 50 =	1700 cfs
Q 10 =	1050 cfs	Q 100 =	2000 cfs
Q 25 =	1400 cfs	Q 500 =	2800 cfs

DATE OF FLOOD OF RECORD: Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 10.5 fps
ICE CONDITIONS : Moderate
DEBRIS: High potential with fallen trees in the channel
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: <1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel beam bridge with concrete deck.
YEAR BUILT: 1929
CLEAR SPAN(NORMAL TO STREAM): 33'
VERTICAL CLEARANCE ABOVE STREAMBED: 10'
WATERWAY OF FULL OPENING: 330 sq. ft.
DISPOSITION OF STRUCTURE: Remove and replace with a new bridge
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1013.3'	VELOCITY =	7.1 fps
Q10 =	1015.2'	"	10.7 fps
Q25 =	1016.0'	"	11.7 fps
Q50 =	1016.7'	"	12.5 fps
Q100 =	1018.0'	"	13.2 fps

LONG TERM STREAMBED CHANGES: Unstable channel banks. No other long term changes apparent.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1021.7'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: N.A. - stream divides
HIGHWAY # :
CLEAR SPAN:
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE:
STRUCTURE #:
CLEAR HEIGHT:
FULL WATERWAY:

DOWNSTRUCTURE STRUCTURE

TOWN: N.A. - confluence
HIGHWAY # :
CLEAR SPAN:
YEAR BUILT:
STRUCTURE TYPE:
DISTANCE:
STRUCTURE #:
CLEAR HEIGHT:
FULL WATERWAY:

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge with precast concrete deck.

CLEAR SPAN(NORMAL TO STREAM): 77'
VERTICAL CLEARANCE ABOVE STREAMBED: 10'
WATERWAY OF FULL OPENING: 590 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1013.3'	VELOCITY=	6.8 fps
Q10 =	1015.1'	"	10.2 fps
Q25 =	1015.8'	"	10.7 fps
Q50 =	1016.4'	"	11.2 fps
Q100 =	1016.8'	"	11.8 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1022.4'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1021.1'
VERTICAL CLEARANCE: @ Q50 = 4.7'

SCOUR: Calculated contraction scour = 1' up to Q500.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	30 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	15 cfs	Depth = 1'
ORDINARY HIGH WATER:	200 cfs	Depth = 3'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required. Road wil be closed.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

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:	3.0 INCH
3.	DESIGN SPAN	L:	85.00 FT
4.	MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	- - -
5.	PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6.	PRESTRESSED CONCRETE STRENGTH	f'_c:	6.0 KSI
7.	PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	5.0 KSI
8.	CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	4.0 KSI
9.	CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10.	CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11.	CONCRETE, CLASS C	f'_c:	3.0 KSI
12.	REINFORCING STEEL	f_y:	60 KSI
13.	STRUCTURAL STEEL AASHTO M270	f_y:	- - -
14.	NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
15.	SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	- - -
16.	NOMINAL BEARING RESISTANCE OF ROCK	q_n:	10.0 KSF
17.	ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	- - -
18.	PILE RESISTANCE FACTOR	ϕ:	0.65
19.	LATERAL PILE DEFLECTION	Δ:	- - -
20.	BASIC WIND SPEED	V_{3s}:	- - -
21.	MINIMUM GROUND SNOW LOAD	p_g:	- - -
22.	SEISMIC DATA PGA: 0.65	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. SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

AS BUILT "REBAR" DETAIL

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

TRAFFIC DATA

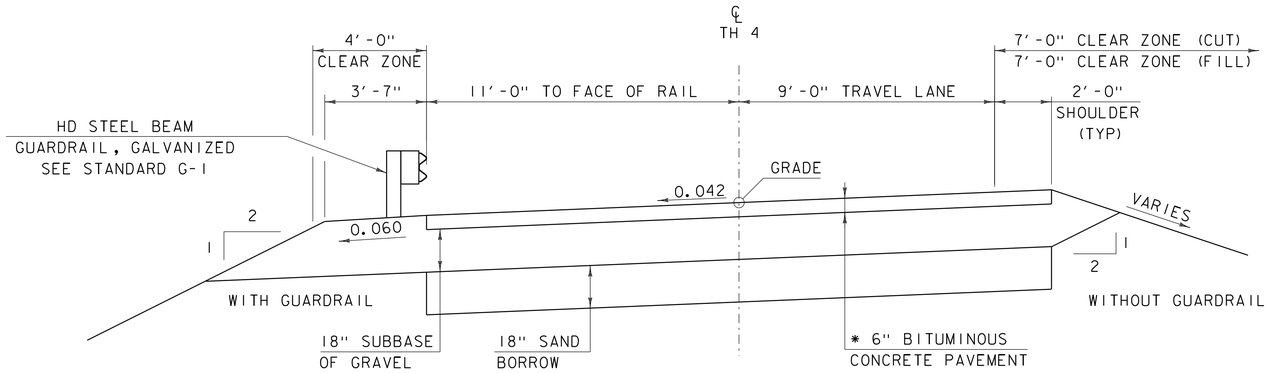
YEAR	ADT	DHV	% D	% T	ADTT
2016	200	50	59	1.5	15
2036	210	50	59	2	20

20 year ESAL for flexible pavement from 2016 to 2036 : 85000
40 year ESAL for flexible pavement from 2016 to 2056 : 199000
Design Speed : 35 mph

PROJECT NAME: **CRAFTSBURY**
PROJECT NUMBER: **BO 1449(34)**

FILE NAME: **13j100/s13j100excel.dgn**
PROJECT LEADER: **C.P.WILLIAMS**
DESIGNED BY: **L.J.STONE**
PRELIMINARY INFORMATION SHEET 1

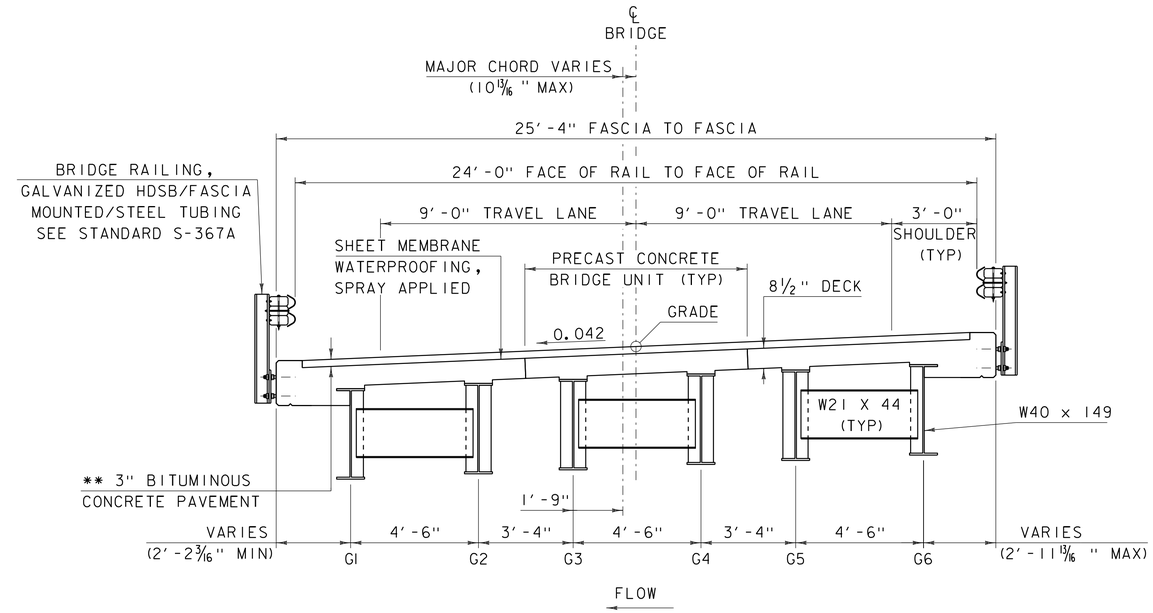
PLOT DATE: 3/6/2014
DRAWN BY: **D.D.BEARD**
CHECKED BY: **T.FILLBACH**
SHEET 2 OF 31



PROPOSED TH 4 TYPICAL SECTION

SCALE 3/8" = 1'-0"

* 1½" TYPE IVS OVER
1½" TYPE IVS OVER
3" TYPE IIS



PROPOSED BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

** 1½" TYPE IVS OVER
1½" TYPE IVS OVER

MATERIAL TOLERANCES

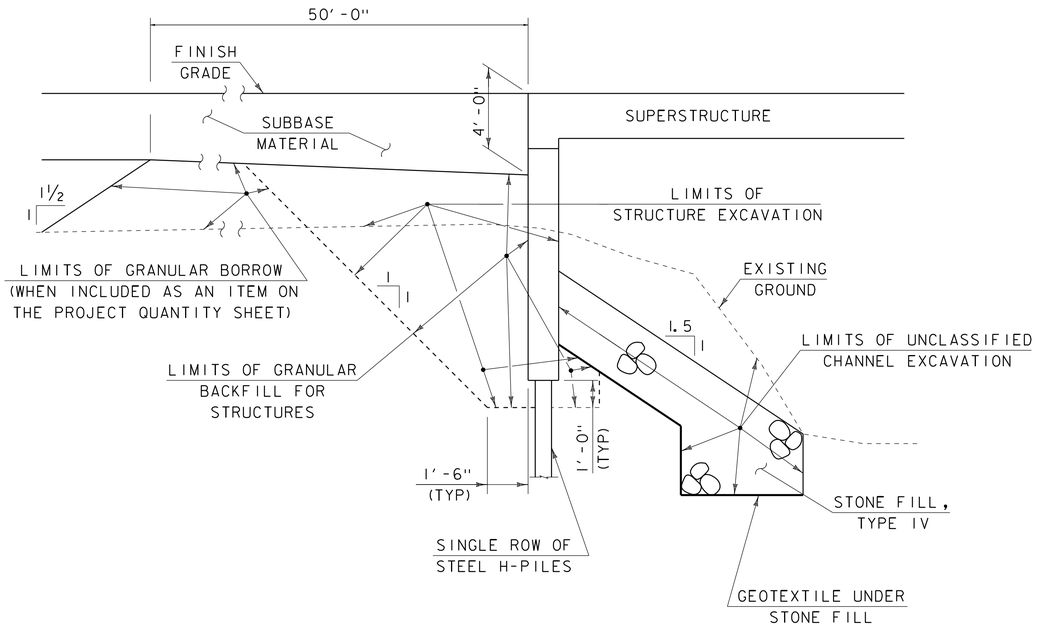
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100\s13J100typical.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
TYPICAL SECTIONS 1

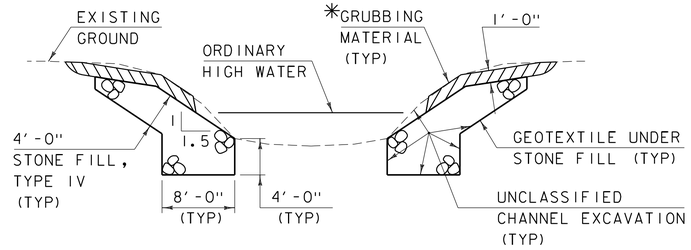
PLOT DATE: 09-JUN-2014
DRAWN BY: O.M.DARISSE
CHECKED BY: O.M.DARISSE
SHEET 3 OF 31



TYPICAL INTEGRAL ABUTMENT SECTION

(NOT TO SCALE)

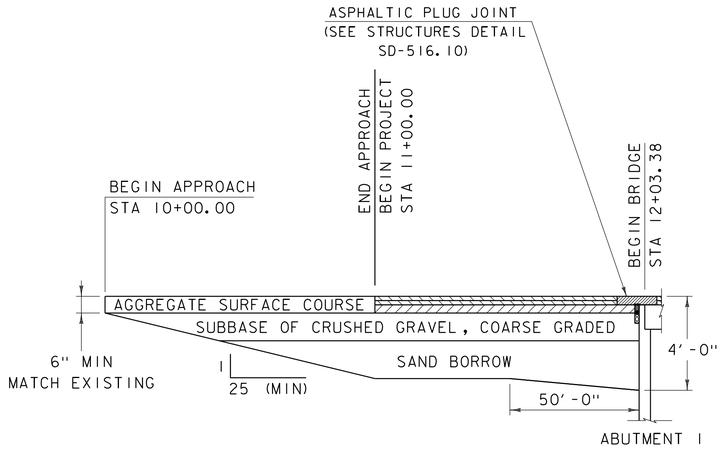
NOTE. ACTUAL EXCAVATION LIMITS SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY THE EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION".



TYPICAL CHANNEL SECTION

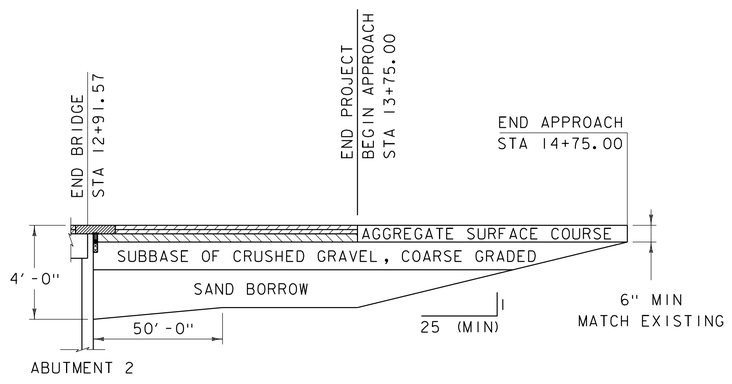
(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



BEGIN PROJECT MATERIAL TRANSITION

NOT TO SCALE



END PROJECT MATERIAL TRANSITION

NOT TO SCALE

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: sl3j100typical.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
TYPICAL SECTIONS 2	SHEET 4 OF 31

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
	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
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	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	BENCH MARK
	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 RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

	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+TELEP.
	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	PROJECT DEMARCATION FENCE
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	SLOPE RIGHTS
6f	6F PROPERTY BOUNDARY
4f	4F PROPERTY BOUNDARY
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

ENVIRONMENTAL RESOURCES

	WETLAND BOUNDARY
	RIPARIAN BUFFER ZONE
	WETLAND BUFFER ZONE
	SOIL TYPE BOUNDARY
T&E	THREATENED & ENDANGERED SPECIES
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:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: 13J100/sl3J100excel.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: M.LONGSTREET
DESIGNED BY: ------	CHECKED BY: ------
LEGEND SHEET	SHEET 5 OF 31

GPS CONTROL POINTS

HVCTRL #1

FAIRMONT AZ MK

NORTH = 792320.218
EAST = 1680762.771
ELEV. = 1212.560

GENERAL LOCATION, CRAFTSBURY, VT.
TO REACH FROM THE INTERSECTION OF VT ROUTE 15 AND VT ROUTE 14 NORTH IN HARDWICK, GO NORTH ALONG VT ROUTE 14 FOR 7.1 MI (11.4 KM) TO THE INTERSECTION OF EAST CRAFTSBURY ROAD RIGHT. TURN RIGHT AND GO EAST ALONG EAST CRAFTSBURY ROAD FOR 1.0 MI (1.6 KM) TO THE INTERSECTION OF SOUTH CRAFTSBURY ROAD LEFT. TURN LEFT AND GO NORTHWEST ALONG SOUTH CRAFTSBURY ROAD FOR 0.7 MI (1.1 KM) TO THE INTERSECTION OF CREEK ROAD RIGHT. TURN RIGHT AND GO NORTHEAST ALONG CREEK ROAD FOR 3.0 MI (4.8 KM) TO THE SITE OF THE MARK ON THE LEFT OPPOSITE A GRAVEL FIELD DRIVE. THE MARK IS SET 5 CM (2 INCHES) BELOW GROUND SURFACE IN THE TOP OF A MASSIVE BURIED CONCRETE SLAB. IT IS 6.3 M (20.7 FT) NORTHWEST OF AND ABOUT 0.4 M (1.3 FT) LOWER THAN THE CENTERLINE OF CREEK ROAD, 15.3 M (50.2 FT) SOUTH OF A WELL PIPE WHICH PROJECTS 0.8 M (2.6 FT) ABOVE GROUND SURFACE AND 38.5 M (126.3 FT) NORTH OF AND ACROSS THE ROAD FROM POLE NO 42A/43.

HVCTRL #2

FAIRMONT

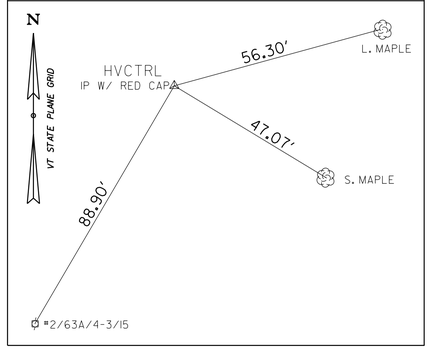
NORTH = 788941.399
EAST = 1679123.394
ELEV. = 1094.105

GENERAL LOCATION, CRAFTSBURY, VT.
TO REACH FROM THE INTERSECTION OF VT ROUTE 15 AND VT ROUTE 14 NORTH IN HARDWICK, GO NORTH ALONG VT ROUTE 14 FOR 7.1 MI (11.4 KM) TO THE INTERSECTION OF EAST CRAFTSBURY ROAD RIGHT. TURN RIGHT AND GO EAST ALONG EAST CRAFTSBURY ROAD FOR 1.0 MI (1.6 KM) TO THE INTERSECTION OF SOUTH CRAFTSBURY ROAD LEFT. TURN LEFT AND GO NORTHWEST ALONG SOUTH CRAFTSBURY ROAD FOR 0.7 MI (1.1 KM) TO THE INTERSECTION OF CREEK ROAD RIGHT. TURN RIGHT AND GO NORTHEAST ALONG CREEK ROAD FOR 2.3 MI (3.7 KM) TO THE SITE OF THE MARK ON THE RIGHT. THE MARK IS SET 15 CM (6 INCHES) BELOW GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT. IT IS 4.9 M (16.1 FT) SOUTHEAST OF AND ABOUT LEVEL WITH THE CENTERLINE OF CREEK ROAD, 5.5 M (18.0 FT) SOUTHWEST OF THE CENTERLINE OF A GRAVEL DRIVE, 23.0 M (75.5 FT) NORTH-NORTHWEST OF POLE NO 42A/60/18 AND 4.3 M (14.1 FT) NORTH-NORTHWEST OF A CEDAR POST WITH A POSTED SIGN. NOTE, DATUM HAS AN INCORRECT DATUM PUNCH, TAKE CARE TO USE THE CORRECT ONE, THE ONE IN THE CENTER.

TRAVERSE TIES

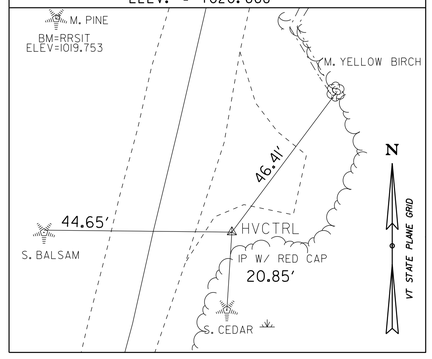
HVCTRL #4

NORTH = 787964.131
EAST = 1678676.111
ELEV. = 1071.281



HVCTRL #5

NORTH = 787403.434
EAST = 1678687.880
ELEV. = 1020.668



_____

NORTH = _____
EAST = _____
ELEV. = _____

_____

NORTH = _____
EAST = _____
ELEV. = _____

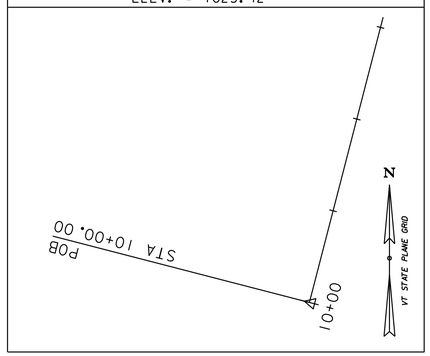
_____

NORTH = _____
EAST = _____
ELEV. = _____

ALIGNMENT TIES

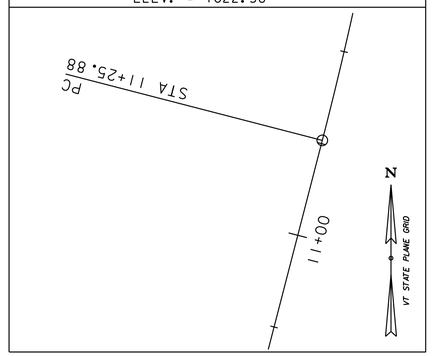
POB STA 10+00.00

NORTH = 787303.2263
EAST = 1678642.4332
ELEV. = 1025.42



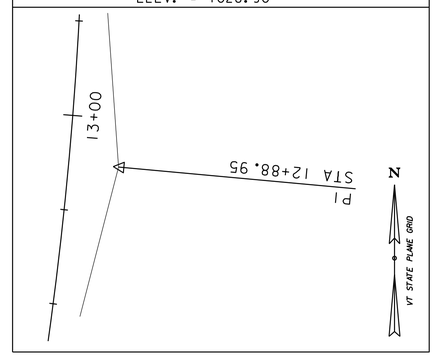
PC STA 11+25.88

NORTH = 787425.0995
EAST = 1678673.9402
ELEV. = 1022.38



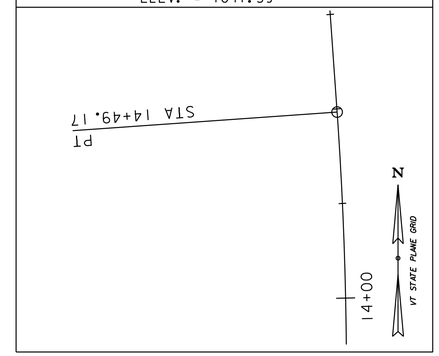
PI STA 12+88.95

NORTH = 787582.9747
EAST = 1678714.7545
ELEV. = 1028.90



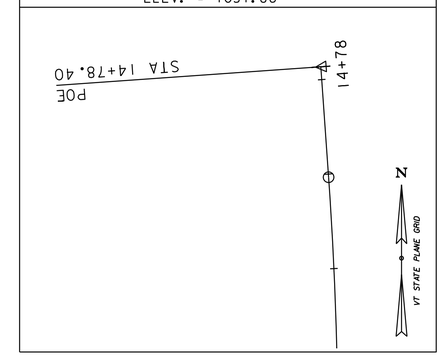
PT STA 14+49.17

NORTH = 787745.6375
EAST = 1678703.3002
ELEV. = 1047.59



POE STA 14+78.40

NORTH = 787774.7950
EAST = 1678701.2470
ELEV. = 1051.86



DATUM

VERTICAL: NAVD 88
HORIZONTAL: NAD 83(CONUS)
ADJUSTMENT: COMPASS

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449 (34)

FILE NAME: 13J100/Survey/x13J100ti
PROJECT LEADER: C. WILLIAMS
DESIGNED BY: C. WILLIAMS
TIE SHEET

PLOT DATE: 09-JUN-2014
DRAWN BY: S. DONOVAN
CHECKED BY: P. BEYOR

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 11+77 LT - STA 12+21 LT
STA 12+06 RT - STA 12+27 RT
STA 12+64 LT - STA 12+91 LT
STA 12+67 RT - STA 12+92 RT

GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM

STA 11+71.4 LT - STA 11+96.7 LT
STA 11+81.8 RT - STA 12+06.5 RT
STA 12+89.5 LT - STA 13+14.8 LT
STA 12+97.2 RT - STA 13+21.9 RT

CONSTRUCT GRAVEL DRIVE PULL-OFF

STA 11+02 RT - STA 11+55 RT

CONSTRUCT GRAVEL DRIVE

STA 13+32 RT - STA 13+67 RT

ANCHOR FOR STEEL BEAM GUARDRAIL

STA 11+66 LT
STA 11+52 RT
STA 13+58 LT
STA 13+27 RT

BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING

STA 11+96.7 LT - STA 12+89.5 LT
STA 12+06.5 RT - STA 12+97.2 RT

BITUMINOUS CONCRETE PAVEMENT

STA 11+00.00 - STA 13+75.00

6" AGGREGATE SURFACE COURSE

STA 10+00.00 - STA 11+00.00
STA 13+75.00 - STA 14+75.00

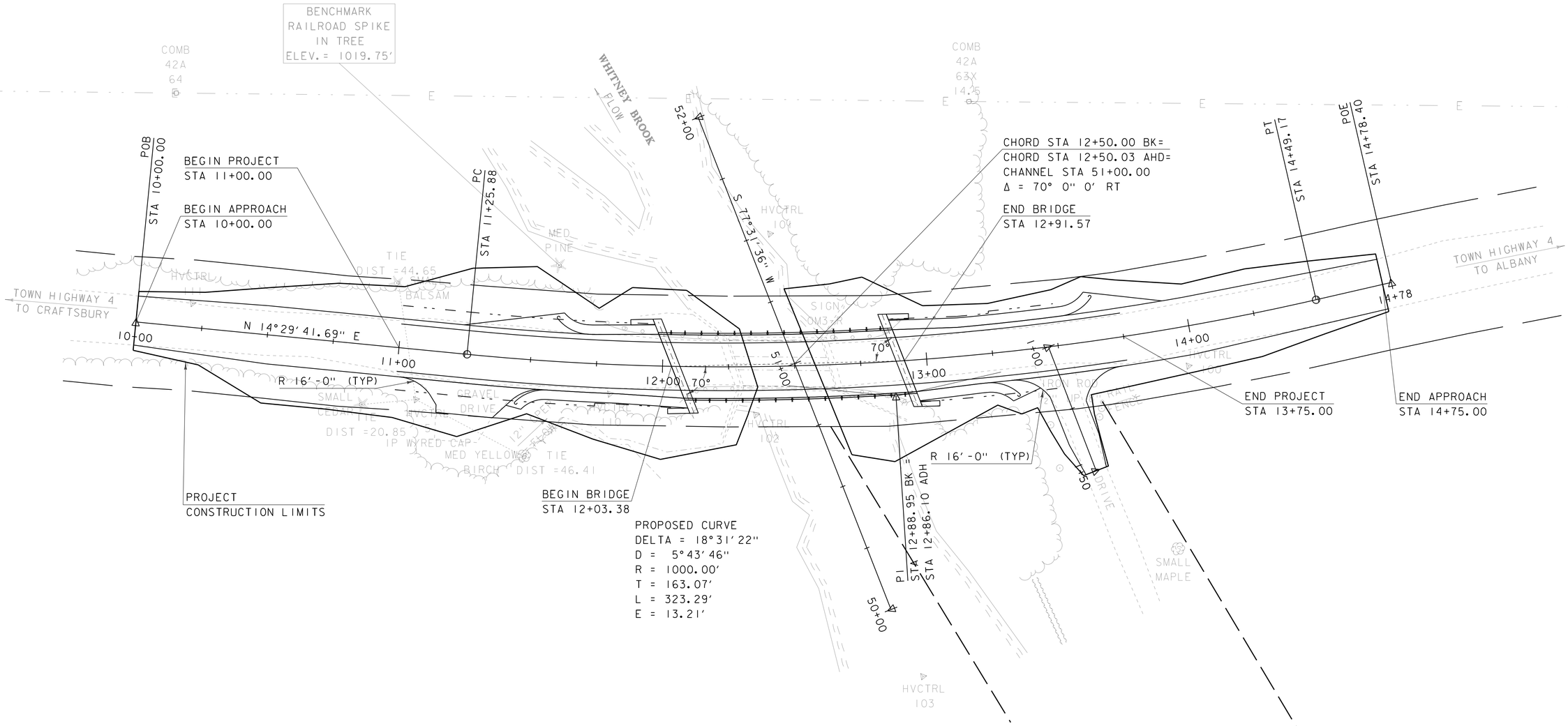
HD STEEL BEAM GUARDRAIL, GALVANIZED

STA 11+57.1 RT - STA 11+81.8 RT
STA 13+14.8 LT - STA 13+52.7 LT

STEEL BEAM GUARDRAIL, APPROACH END TERMINAL

STA 11+59.1 LT - STA 11+71.4 LT
STA 11+45.1 RT - STA 11+57.1 RT
STA 13+52.7 LT - STA 13+64.9 LT
STA 13+21.9 RT - STA 13+33.8 RT

N
VT STATE PLANE GRID



EXISTING BRIDGE DATA
SINGLE SPAN ROLLED BEAM
BUILT 1929
41' SPAN, 17.7' CURB - CURB

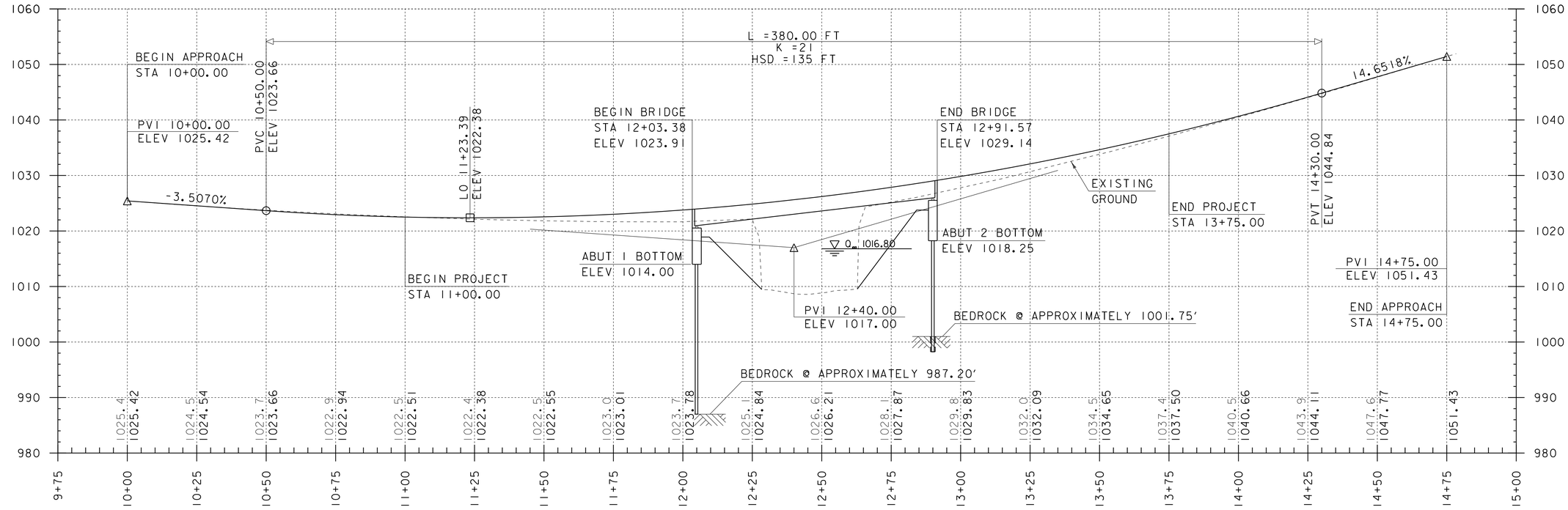
LAYOUT

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

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13j100/sl13j100border.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
LAYOUT SHEET

PLOT DATE: 09-JUN-2014
DRAWN BY: D.D.BEARD
CHECKED BY: O.M.DARISSE
SHEET 7 OF 31



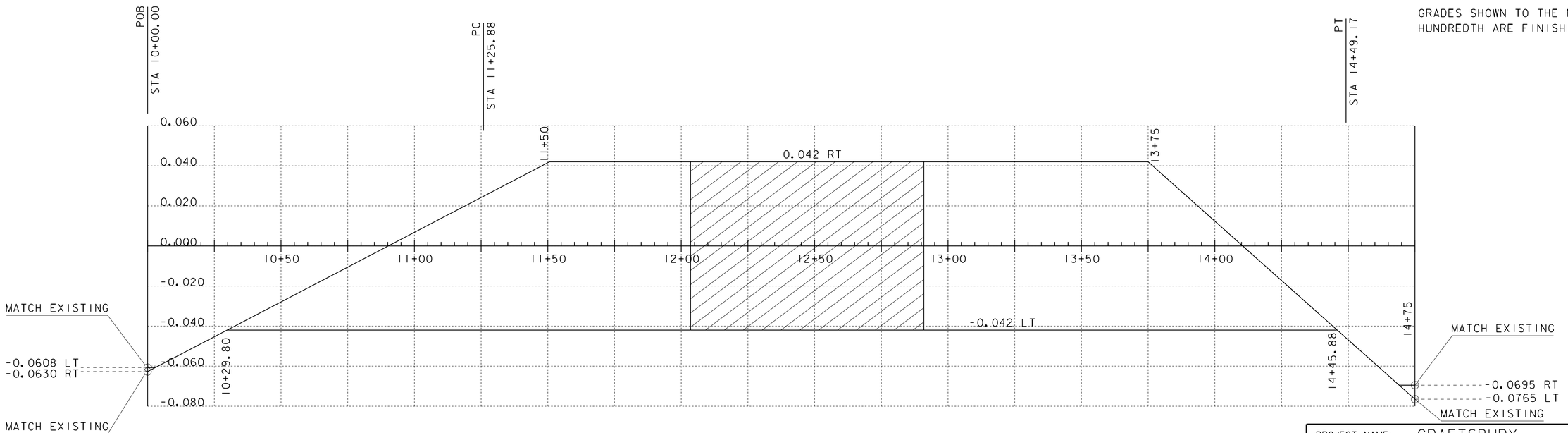
TH-4 PROFILE

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

NOTE:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄



BANKING DIAGRAM

HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: NOT TO SCALE

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: 13J100/s13J100profile.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: O.M.DARISSE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
PROFILE SHEET	SHEET 8 OF 31

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

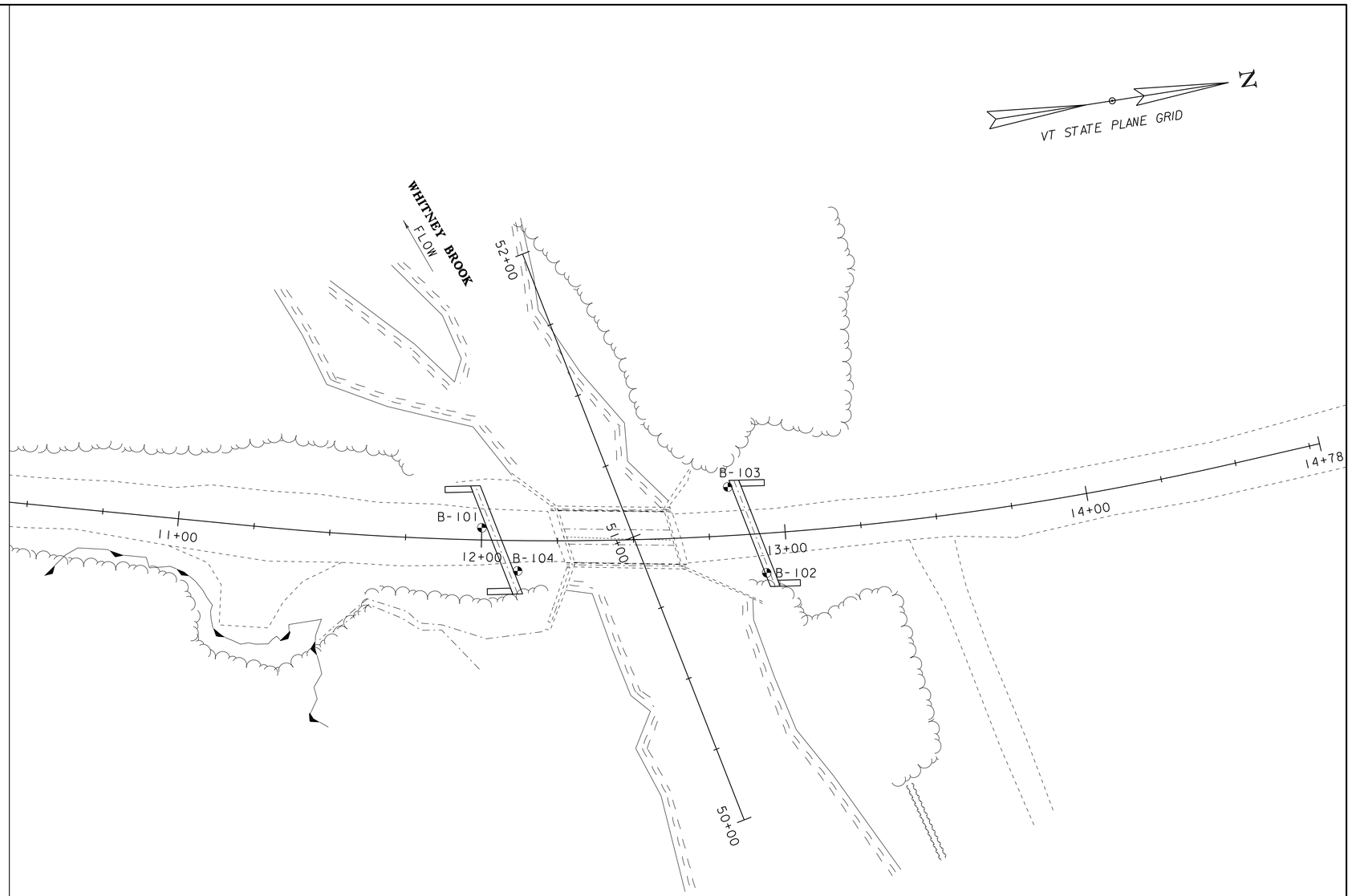
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

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
ROD	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		



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.

1. The subsurface explorations shown herein were made between _____ and _____ 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.

GENERAL NOTES

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	12+00	4.0 LT	1021.5	987.5
B-102	12+93	13.0 RT	1027.0	1002.5
B-103	12+82	16.0 LT	1025.0	1001.0
B-104	12+12	10.0 RT	1022.0	986.9

PROJECT NAME: CRAFTSBURY

PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100/si3J100boring.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
BORING INFORMATION SHEET

PLOT DATE: 09-JUN-2014
DRAWN BY: D.D.BEARD
CHECKED BY: T.FILLBACH
SHEET 9 OF 31

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

CRAFTSBURY
BO 1449(34)
TH-4 BR-4

Boring No.: **B-101**
Page No.: 1 of 1
Pin No.: 13J100
Checked By:

Boring Crew: JUDKINS, HOOK, DAIGNEAULT
Date Started: 2/27/14 Date Finished: 2/27/14
VTSPG NAD83: N 787498.10 ft E 1678685.90 ft
Station: 12+00 Offset: -4.00
Ground Elevation: 1021.5 ft

	Casing	Sampler
Type:	WB	
I.D.:	4 in	
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:		
Rig: CME 45C SKID		C_e = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
03/05/14	12.8	AM

ABUT. 1 BTM. ELEV. 1014.00

EST. LENGTH = 27'

EST. PILE TIP

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 %
		Field Note:, Drilled to find bedrock, No samples were taken.								
35		34.0 ft - 39.0 ft, Dark-bluish-gray, Micaceous quartz-rich Limestone, Moderately hard, Unweathered, Poor rock, NXMDC, Quartz vein at 34.75 feet. RMR = 39	1 (30)	44 (0)	8 10 10 9 10	Top of Bedrock @ 34.0 ft				
		Hole stopped @ 39.0 ft								
		Remarks: 1. Hole collapsed at 17.0 ft.								

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 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
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

CRAFTSBURY
BO 1449(34)
TH-4 BR-4

Boring No.: **B-102**
Page No.: 1 of 1
Pin No.: 13J100
Checked By:

Boring Crew: JUDKINS, HOOK, DAIGNEAULT
Date Started: 3/05/14 Date Finished: 3/05/14
VTSPG NAD83: N 787589.50 ft E 1678714.10 ft
Station: 12+93 Offset: 13.00
Ground Elevation: 1027.0 ft

	Casing	Sampler
Type:	WB	
I.D.:	4 in	
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:		
Rig: CME 45C SKID		C_e = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
03/05/14	2.3	While drilling.

ABUT. 2 BTM. ELEV. 1018.25

EST. LENGTH = 20'

EST. PILE TIP

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 %
		Field Note:, Drilled to find bedrock, No samples were taken.								
25		24.5 ft - 29.5 ft, Dark-bluish-gray, Micaceous quartz-rich Limestone, Moderately hard, Unweathered, Fair rock, NXMDC, Quartz vein at 26.9 feet. RMR = 44	1 (30)	94 (40)	3 4 5 6 4	Top of Bedrock @ 24.5 ft				
		Hole stopped @ 29.5 ft								
		Remarks: 1. Hole collapsed at 11.9 ft.								

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 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 2 CRAFTSBURY BO 1449(34).GPJ VERMONT AOT.GDT 3/20/14

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: Structures/sl3j100boring.dgn PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE CHECKED BY: O.M.DARISSE
BORING LOGS 1 SHEET 10 OF 31

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

CRAFTSBURY
BO 1449(34)
TH-4 BR-4

Boring No.: **B-103**
Page No.: 1 of 1
Pin No.: 13J100
Checked By:

Boring Crew: JUDKINS, HOOK, NIETO
Date Started: 1/31/14 Date Finished: 2/10/14
VTSPG NAD83: N 787581.20 ft E 1678684.90 ft
Station: 12+82 Offset: -16.00
Ground Elevation: 1025.0 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 TRACK	C_e = 1.34	

Groundwater Observations

Date	Depth (ft)	Notes
02/10/14	9.5	AM
02/10/14	4.2	Casing removed.

ABUT. 2 BTM. ELEV. 1018.25
EST. LENGTH = 20'
EST. PILE TIP

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, SiGrSa, Dk/brn, Moist, Rec. = 0.7 ft				2-1-1-1 (2)	28.6	33.2	44.3	22.5
		A-2-4, SiSa, Dk/brn, Moist, Rec. = 0.9 ft, NXDC, Cleaned out casing.				7-4-3-3 (7)	13.4	18.5	53.9	27.6
5		A-2-4, GrSiSa, Dk/brn, MTW, Rec. = 0.6 ft, NXDC, Cleaned out casing.				7-2-2-2 (4)	16.3	23.2	50.2	26.6
		A-4, SiSa, Dk/brn, MTW, Rec. = 0.4 ft				3-8-17-21 (25)	16.6	18.3	41.2	40.5
		A-4, GrSiSa, Dk/brn, Moist, Rec. = 1.0 ft, NXDC, Cleaned out casing.				11-12-15-14 (27)	13.2	20.7	42.1	37.2
10		A-4, SiSa, Dk/brn, Moist, Rec. = 0.6 ft				33-33-31-R@2.5" (64)	11.2	16.4	43.7	39.9
		Field Note:, NXDC, Cleaned out casing.								
		A-4, SaSi (HP), gry, Moist, Rec. = 0.8 ft, Lab Note: A few pieces of Broken Rock were within sample.				33-43-R@2.5" (R)	9.8	19.6	30.9	49.5
		Field Note:, NXDC, Cleaned out casing.								
15		A-4, SaSi (HP), gry, Moist, Rec. = 1.2 ft				25-46-R@5.0" (R)	10.5	18.6	27.1	54.3
		Field Note:, NXDC, Cleaned out casing.								
		A-4, SaSi (HP), gry, Moist, Rec. = 0.7 ft				39-49-R@1.0" (R)	11.7	18.2	28.1	53.7
		Field Note:, NXDC, Cleaned out casing.								
		A-4, SaSi (HP), gry, Moist, Rec. = 0.3 ft				43-R@6.0" (R)	14.8	7.5	21.9	70.6
		Field Note:, NXDC, Cleaned out casing.								
20		A-4, SaSi (HP), gry, Moist, Rec. = 0.8 ft				40-46-R@1.0" (R)	13.0	16.2	24.8	59.0
25		24.0 ft - 25.0 ft, Bluish-gray, Micaceous quartz-rich Limestone, Moderately hard, Unweathered, Fair rock, NXDC, RMR = 44	1 (30)	90 (0)		Top of Bedrock @ 24.0 ft				
		25.0 ft - 29.0 ft, Dark-gray to silvery-gray, Lustrous, carbonaceous muscovite-biotite-quartz (+/- garnet) Phyllite, and Dark-bluish-gray Micaceous quartz-rich Limestone. Medium to moderately hard, Unweathered, Fair rock, NXMDC, RMR = 49	2 (30)	95 (70)	6 4 4 5					
30		29.0 ft - 34.0 ft, Dark-gray to silvery-gray, Lustrous, carbonaceous muscovite-biotite-quartz (+/- garnet) Phyllite, and Dark-bluish-gray Micaceous quartz-rich Limestone. Medium to moderately hard, Unweathered, Fair rock, NXMDC, RMR = 53	3 (30)	98 (86)	4 3 3 4 3					
35		Hole stopped @ 34.0 ft								

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 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 2 CRAFTSBURY BO 1449(34).GPJ VERMONT AOT.GDT 3/20/14

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

CRAFTSBURY
BO 1449(34)
TH-4 BR-4

Boring No.: **B-104**
Page No.: 1 of 1
Pin No.: 13J100
Checked By:

Boring Crew: DAIGNEAULT, HOOK, JUDKINS
Date Started: 2/24/14 Date Finished: 2/26/14
VTSPG NAD83: N 787507.50 ft E 1678701.40 ft
Station: 12+12 Offset: 10.00
Ground Elevation: 1022.0 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	C_e = 1.33	

Groundwater Observations

Date	Depth (ft)	Notes
02/26/14	12.4	While drilling.
02/27/14	13.2	AM, Open Hole.

ABUT. 1 BTM. ELEV. 1014.00
EST. LENGTH = 27'
EST. PILE TIP

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-2-4, GrSiSa, brn, Moist, Rec. = 1.5 ft, Cleaned out casing with roller cone.				8-34-34-R@2.5" (68)	13.9	21.2	57.3	21.5
		A-2-4, SiSa, brn, Moist, Rec. = 0.9 ft				2-5-3-2 (8)	21.5	12.7	65.0	22.3
5		A-2-4, SiSa, brn, Moist, Rec. = 1.1 ft, Cleaned out with roller cone.				2-1-1-2 (2)	16.2	12.1	63.0	24.9
		Field Note:, Appears to be Silty Sand, No Recovery.				3-WR-1-1 (1)				
		Field Note:, Cleaned out casing with roller cone., Casing dropped to 9.5 feet during clean out.								
10		A-2-4, GrSiSa, brn, MTW, Rec. = 0.9 ft				12-2-2-3 (4)	24.8	21.7	51.4	26.9
		Field Note:, NXDC, Lost water return at 12.5 ft.								
		Field Note:, NXDC								
15		Field Note:, NXMDC, Silty Sand (HP), Cleaned out casing.								
20		A-1-a, SaGr (HP), gry, Moist, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.				10-R@3.5" (R)	8.9	60.3	26.2	13.5
		Field Note:, NXDC								
25		Visual Description:, Broken Rock with silt & sand, gry, Moist, Rec. = 0.2 ft, Insufficient sample for testing.				R@3.5" (R)	7.2			
		Field Note:, Cleaned out casing with roller cone.								
30		A-4, SaSi (HP), gry, Moist, Rec. = 1.1 ft				39-49-R@1.0" (R)	15.0	7.2	31.1	61.7
		Field Note:, Cleaned out casing with roller cone.								
						R@1.0" (R)	15.5	60.3	27.7	12.0
35		Visual Classification, Broken Rock with sand, gry, Moist, Rec. = 0.1 ft, Lab Note: Sample was mostly small pieces of Broken Rock. Core bit broke off.	1 (30)	78 (24)	5 6 4 4 6	Top of Bedrock @ 35.1 ft				
		35.1 ft - 40.1 ft, Dark-gray to silvery-gray, Lustrous, carbonaceous muscovite-biotite-quartz (+/- garnet) Phyllite, and Dark-bluish-gray Micaceous quartz-rich Limestone. Medium to moderately hard, Unweathered, Fair rock, NXMDC, RMR = 53	2 (30)	87 (87)	3 3 3					
40		40.1 ft - 43.1 ft, Bluish-gray, Micaceous quartz-rich Limestone, Moderately hard, Unweathered, Fair rock, NXMDC, RMR = 58								
		Hole stopped @ 43.1 ft								
45										

Remarks:
1. Hole collapsed at 23.1 ft.
2. Core barrel bit broke. Bit is still in hole at 43.1 ft.

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 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 2 CRAFTSBURY BO 1449(34).GPJ VERMONT AOT.GDT 3/20/14

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: Structures/sl3j100boring.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
BORING LOGS 2

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 11 OF 31

GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM (TYP) SEE STD S-367-B

BRIDGE RAILING GALVANIZED HDSB/ FASCIA MOUNTED/ STEEL TUBING SEE STD S-367A

STEEL BEAM GUARDRAIL, GALVANIZED (TYP) SEE STD G-1

VT STATE PLANE GRID

CL BRG
STA 12+05.00
F.G. = 1023.97'

11 - SPACES @ 6'-3" = 68'-9" (TYP)

5'-3" (1'-0" TO BE CUT OFF W BEAM PANEL) (TYP)

1'-9 1/16"

END BRIDGE
STA 12+91.57
F.G. = 1029.13'

APPROACH END SECTION (TYP) SEE STD G-1D

1'-7 7/8"

WW1

WW3

5'-3"

1:4

1:2

BEGIN PROJECT
STA 11+00.00

9'-0" TRAVEL LANE (TYP)

11+00

EDGE OF PAVEMENT (TYP)

12+00

70° TO MAJOR CHORD (TYP)

51+00

MAJOR CHORD

1:1.5

EDGE OF TRAVEL LANE (TYP)

13+00

℄ TH 4

EDGE OF AGGREGATE SURFACE COURSE (TYP)

14+00

1:4

WW2

5'-3"

WW4

1'-10 9/16"

BEGIN BRIDGE
STA 12+03.38
F.G. = 1023.91'

1'-9 1/2"

PC STA 11+25.88

4'-0" STONE FILL, TYPE IV (TYP)

CL BRG
STA 12+90.00
F.G. = 1029.01'

END PROJECT
STA 13+75.00

CHORD STA 12+50.00 BK=
CHORD STA 12+50.03 AHD=
CHANNEL STA 51+00.00
Δ = 70° 0" 0' LT

S 77°31'36" W

WHITNEY BROOK FLOW

PLAN

SCALE 1" = 10'-0"

10 0 10

PAY LIMITS GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM = 25'-0" (TYP)

PAY LIMITS BRIDGE RAILING, GALVANIZED HDSB/ FASCIA MOUNTED STEEL TUBING = 91'-9" LT & RT

88'-2" BEGIN BRIDGE TO END BRIDGE

84'-11 11/16" ℄ BRG TO ℄ BRG

PAY LIMITS APPROACH END SECTION (TYP)

1060
1050
1040
1030
1020
1010
1000
990
980

EXISTING GROUND

4'-0" STONE FILL, TYPE IV (TYP)

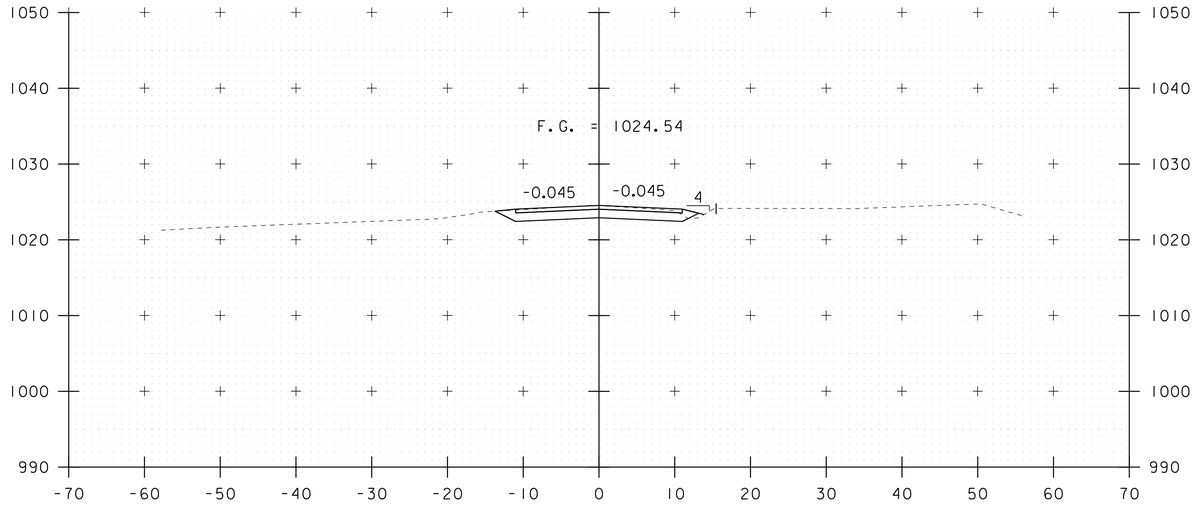
Q_{100} = 1016.80'

ELEVATION @ UPSTREAM FASCIA

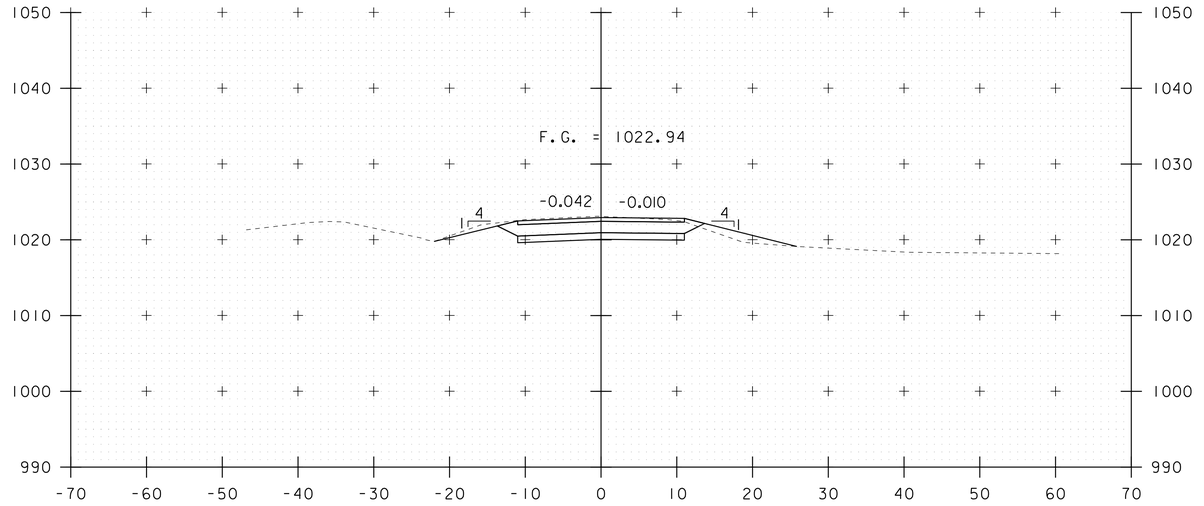
SCALE 1" = 10'-0"

10 0 10

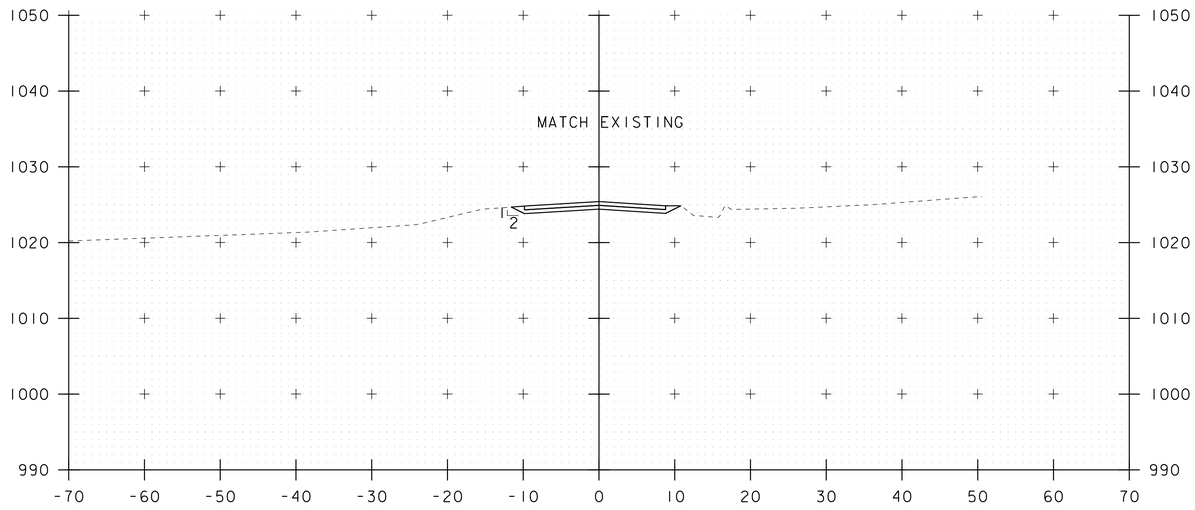
PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: Structures\s13j100pe.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
PLAN AND ELEVATION SHEET	SHEET 12 OF 31



10+25

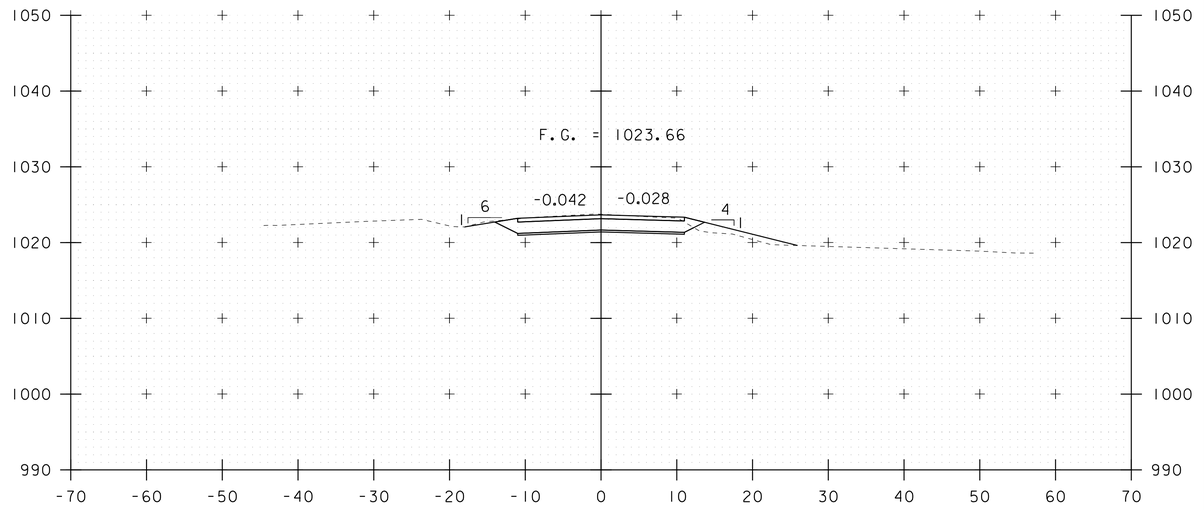


10+75



STA 10+00.00
BEGIN APPROACH

10+00



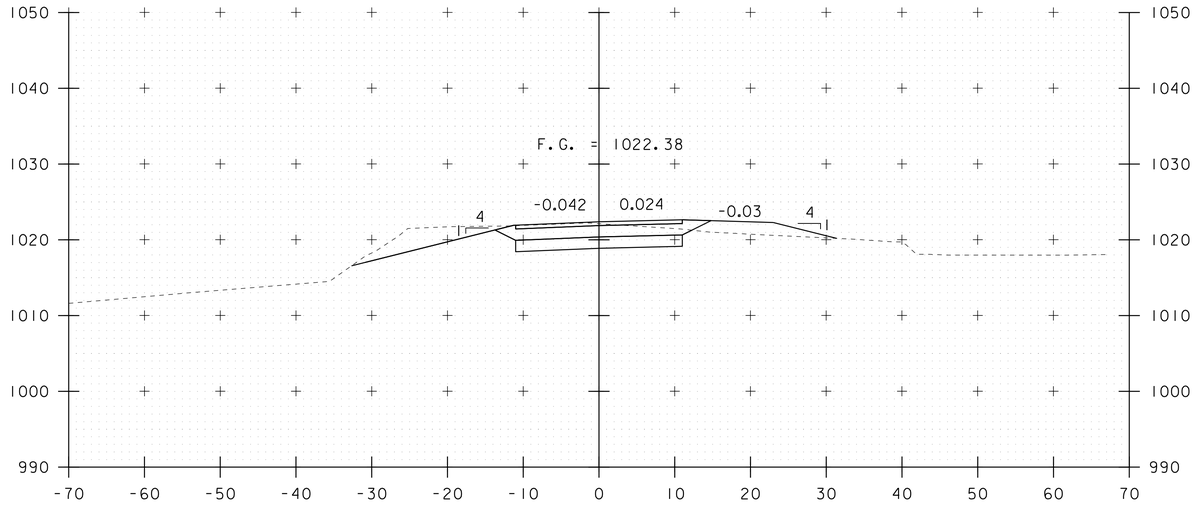
10+50

STA. 10+00 TO STA. 10+75

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

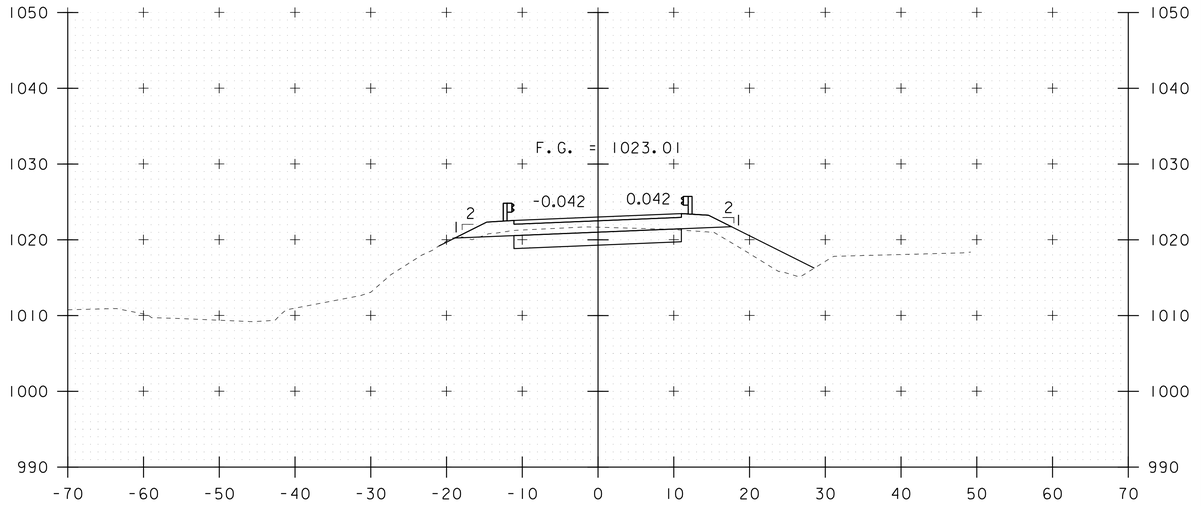
FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
MAINLINE CROSS SECTIONS 1

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 13 OF 31

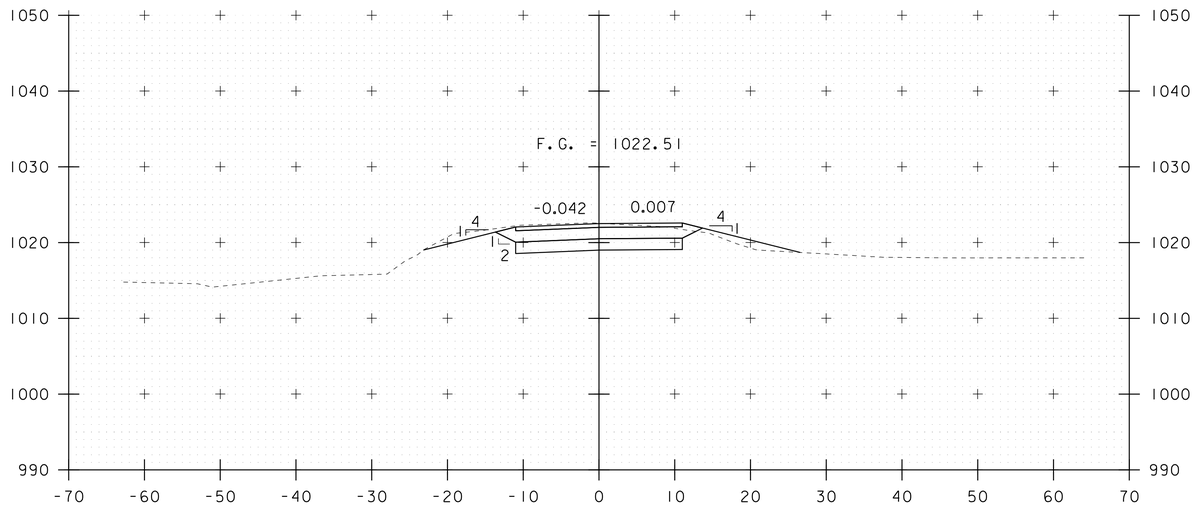


11+25

STA 11+28.50 RT
RECONSTRUCT 12' DRIVE (PULL-OFF AREA)

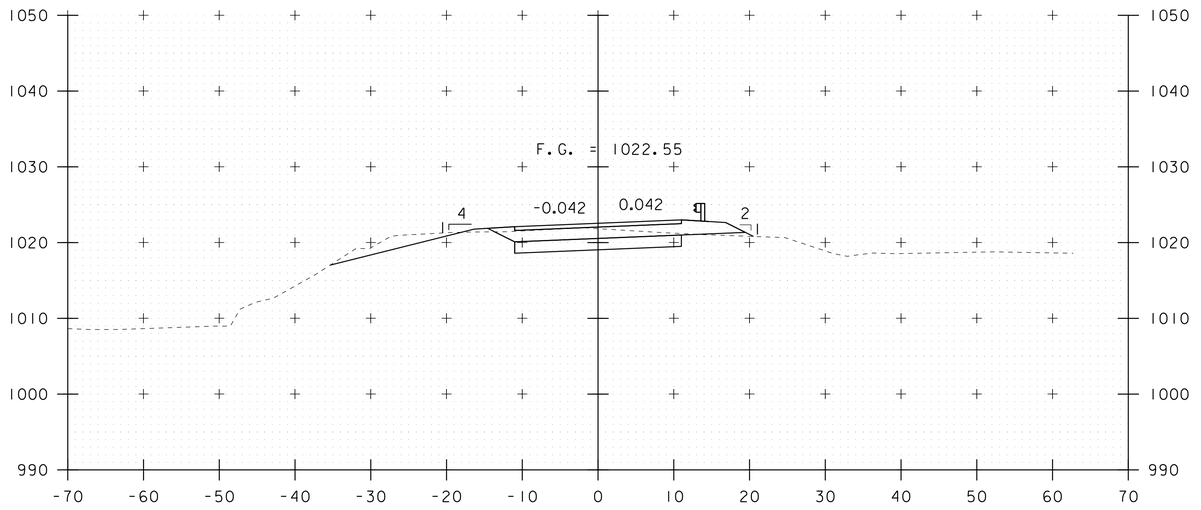


11+75



STA 11+00.00
BEGIN PROJECT

11+00



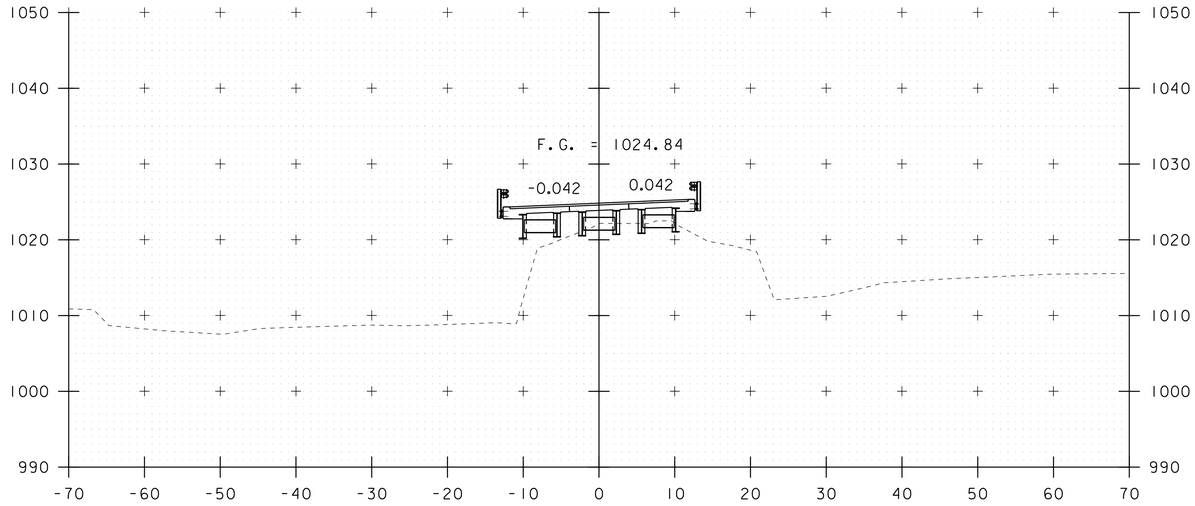
11+50

STA. 11+00 TO STA. 11+75

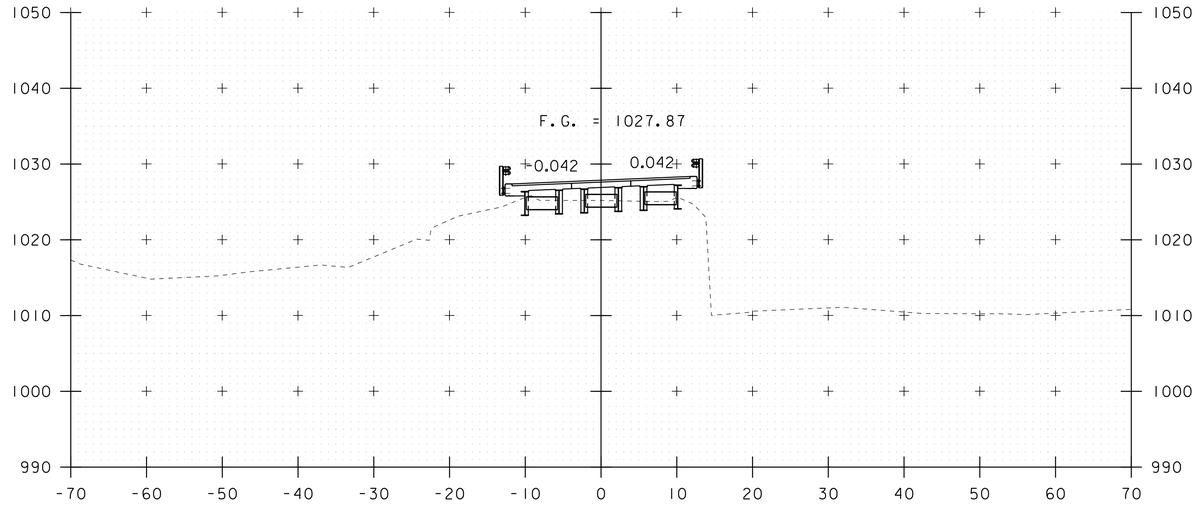
PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
MAINLINE CROSS SECTIONS 2

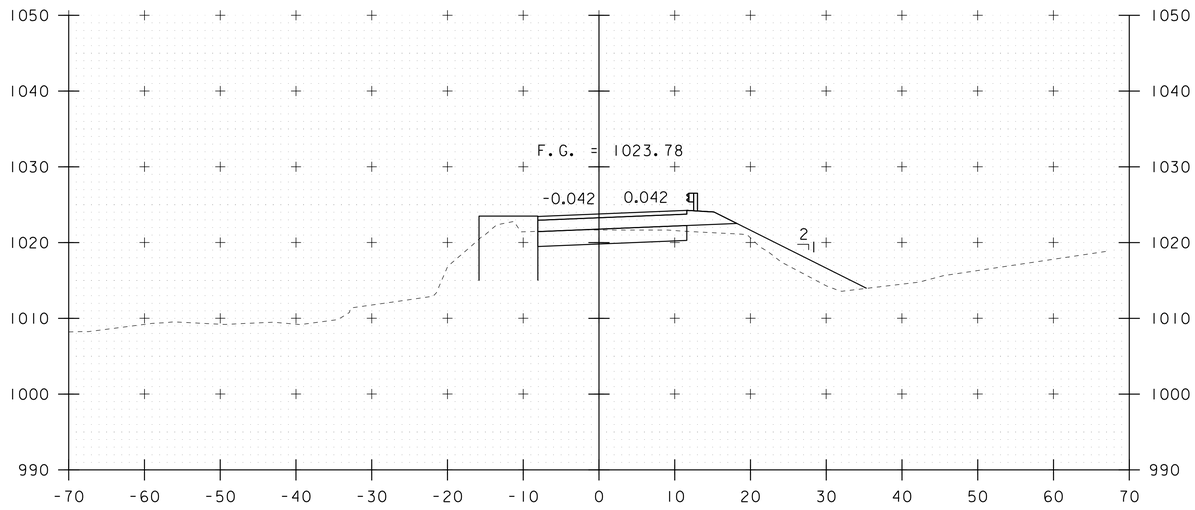
PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 14 OF 31



12+25

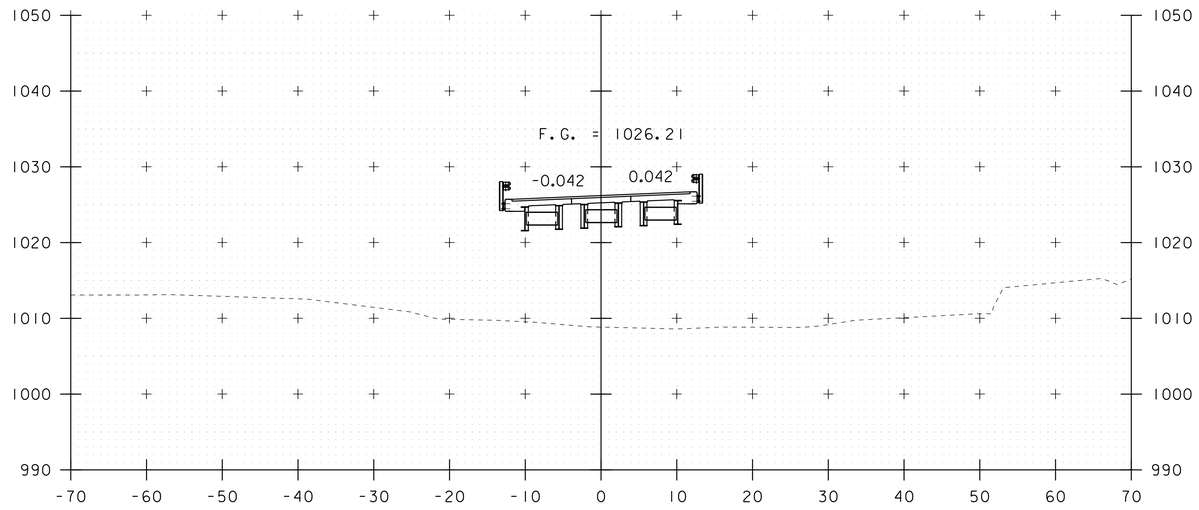


12+75



STA 12+05.00
CL BRG

12+00



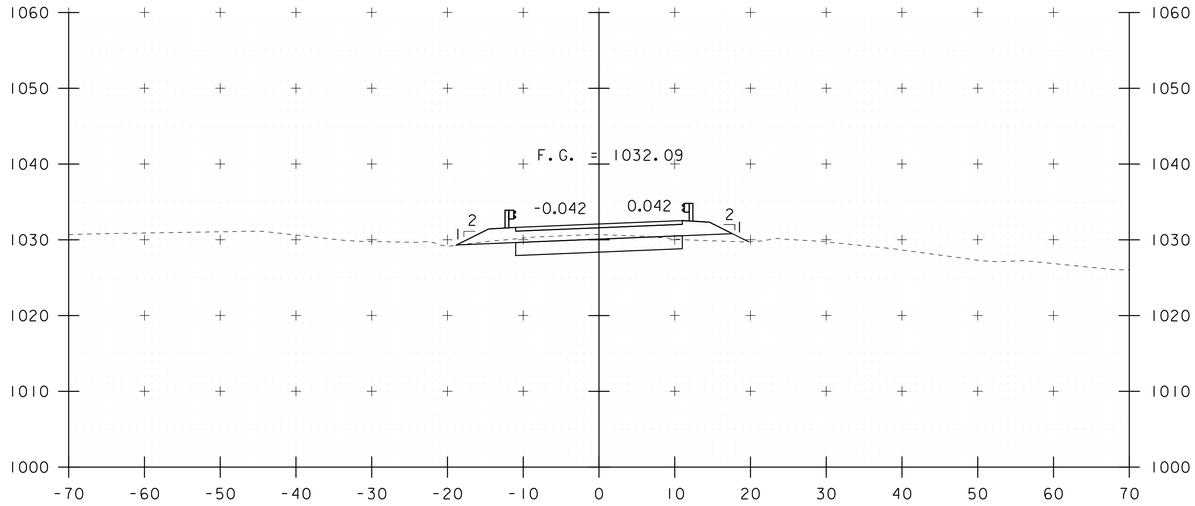
12+50

STA. 12+00 TO STA. 12+75

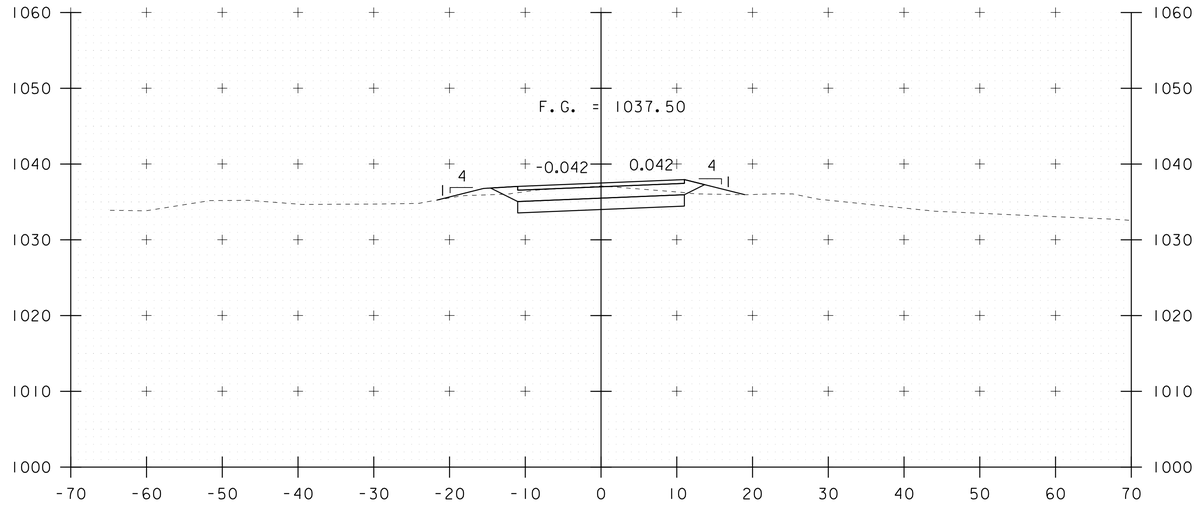
PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER:
DESIGNED BY: L.J.STONE
MAINLINE CROSS SECTIONS 3

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 15 OF 31

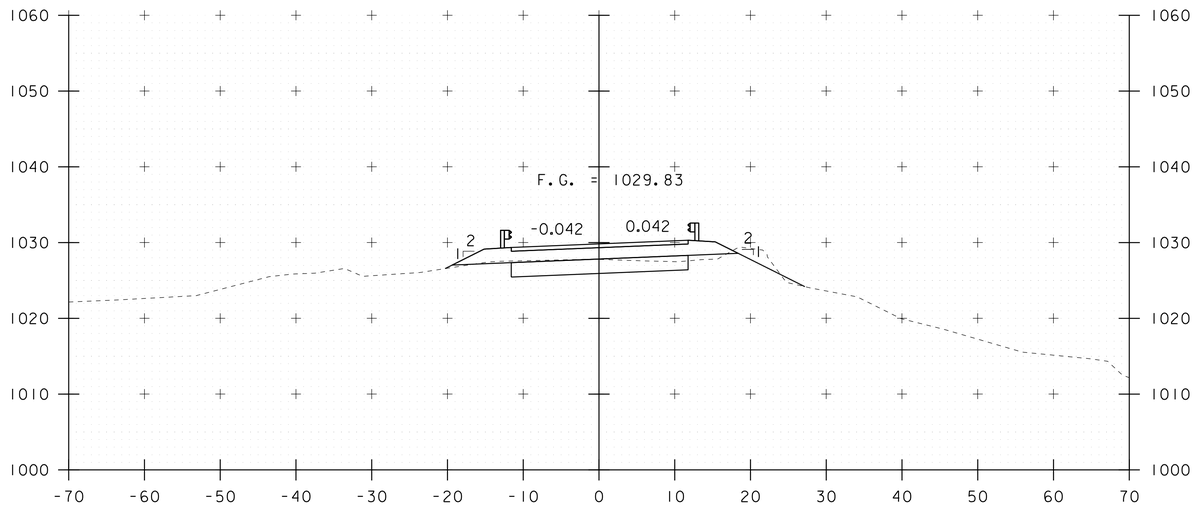


13+25



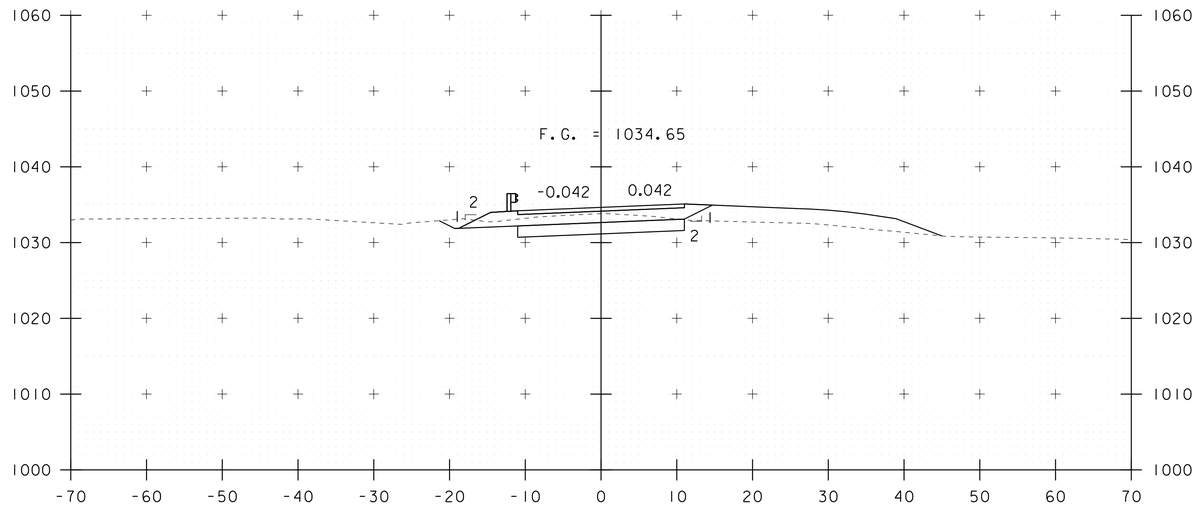
STA 13+75.00
END PROJECT

13+75



STA 12+90.00
CL BRG

13+00



13+50

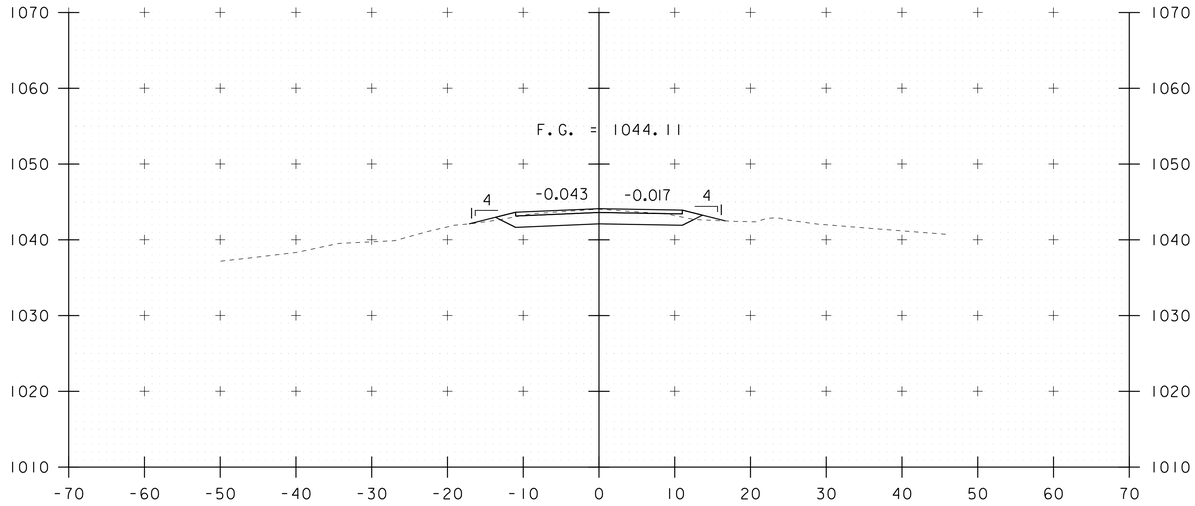
STA 13+49.50 RT
RECONSTRUCT DRIVE

STA. 13+00 TO STA. 13+75

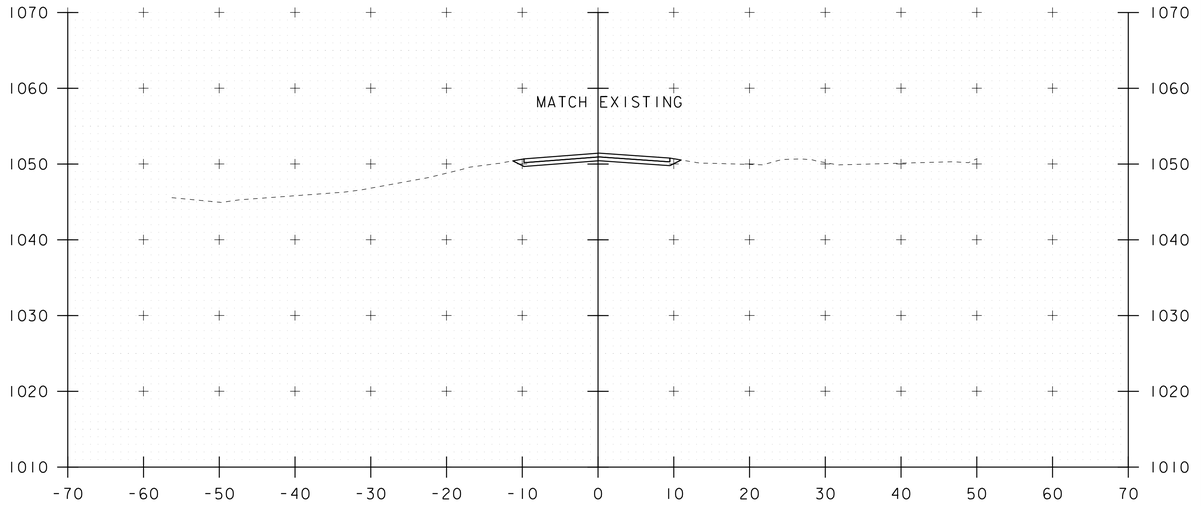
PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13j100/sl3j100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
MAINLINE CROSS SECTIONS 4

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 16 OF 31

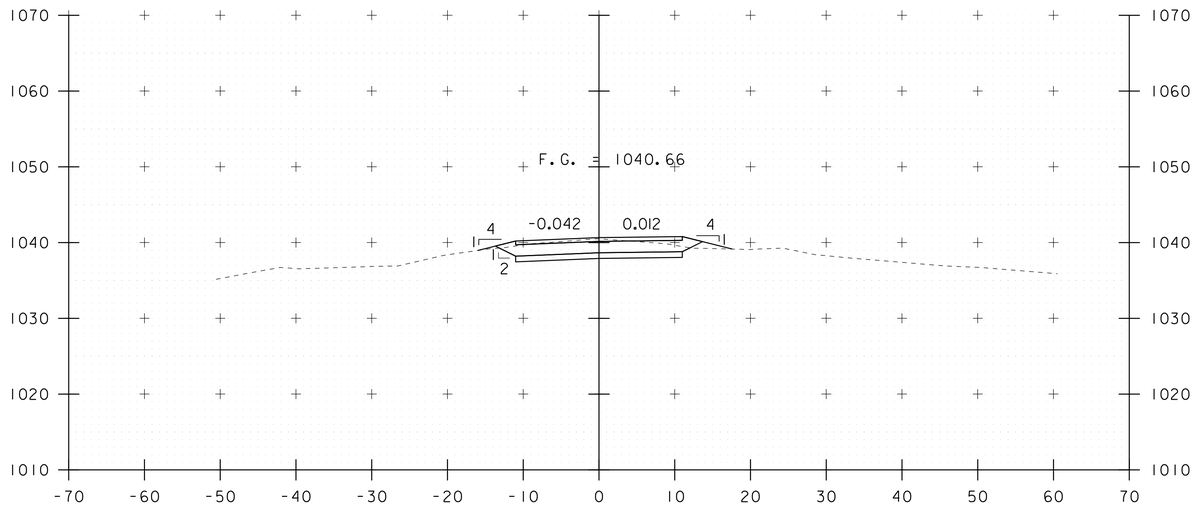


14+25

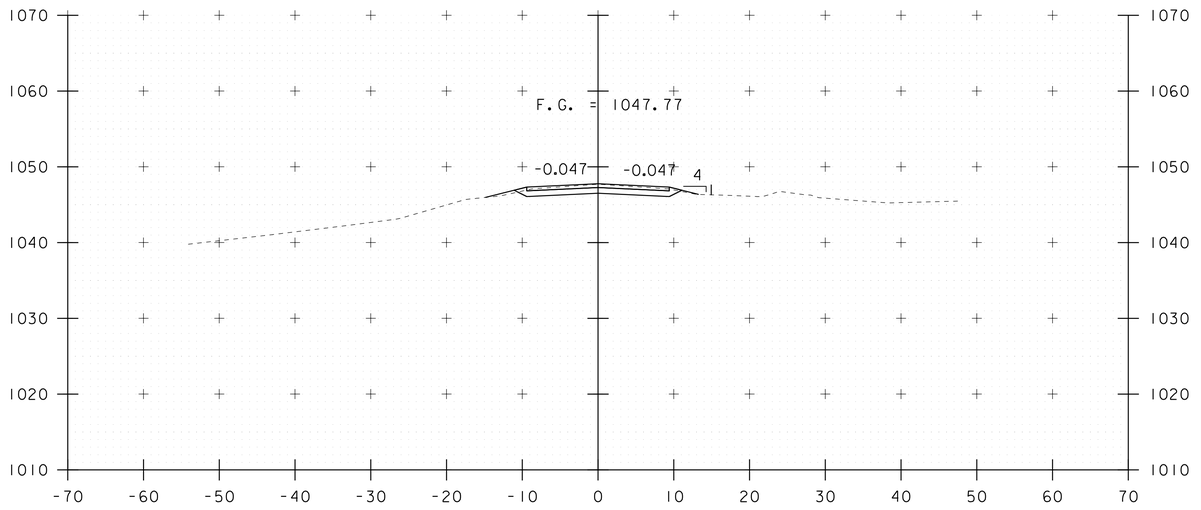


STA 14+75.00
END APPROACH

14+75



14+00



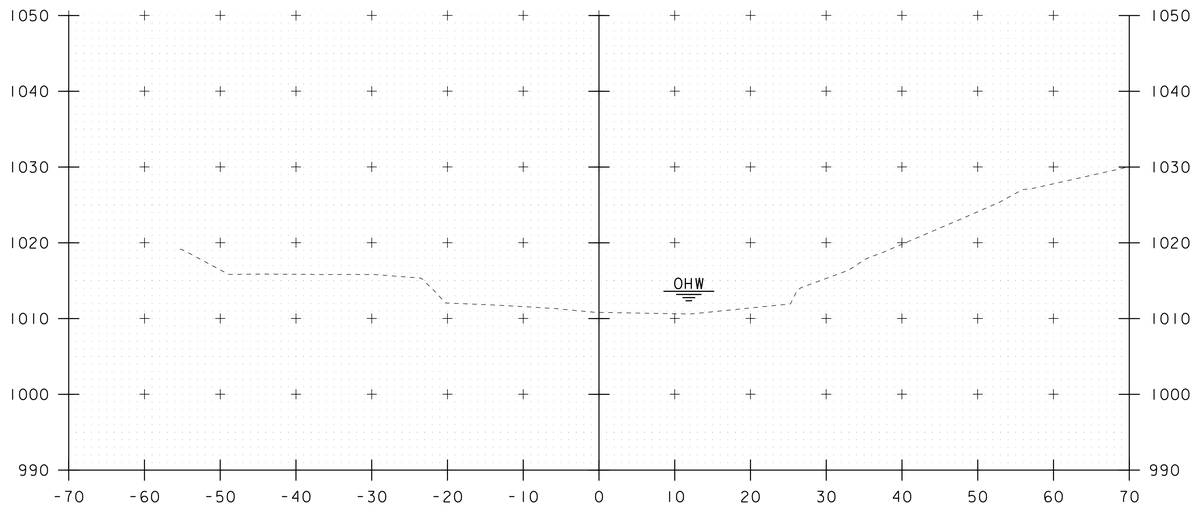
14+50

STA. 14+00 TO STA. 14+75

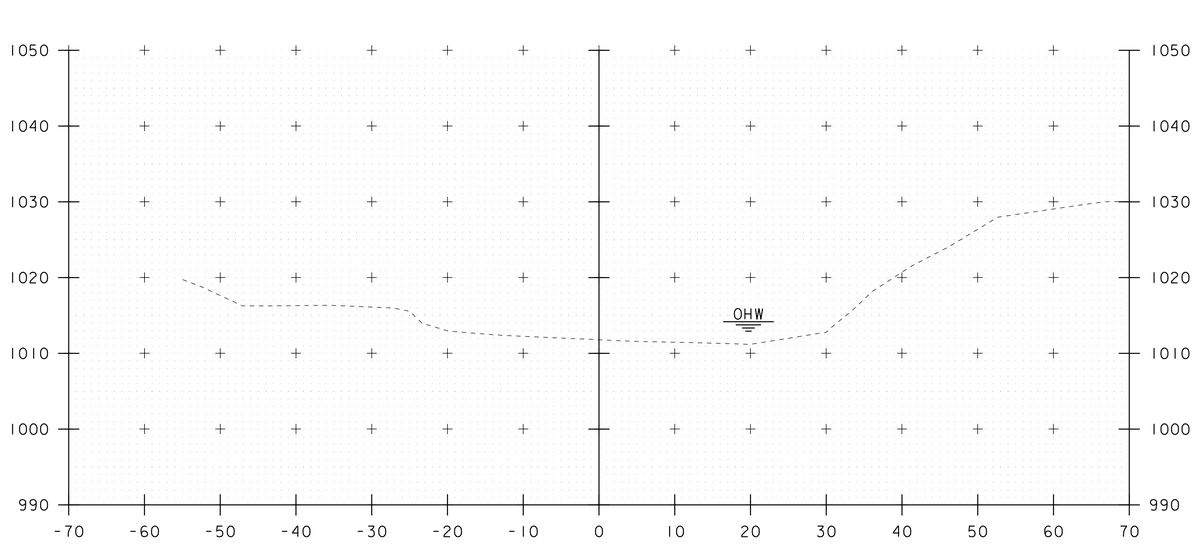
PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
MAINLINE CROSS SECTIONS 5

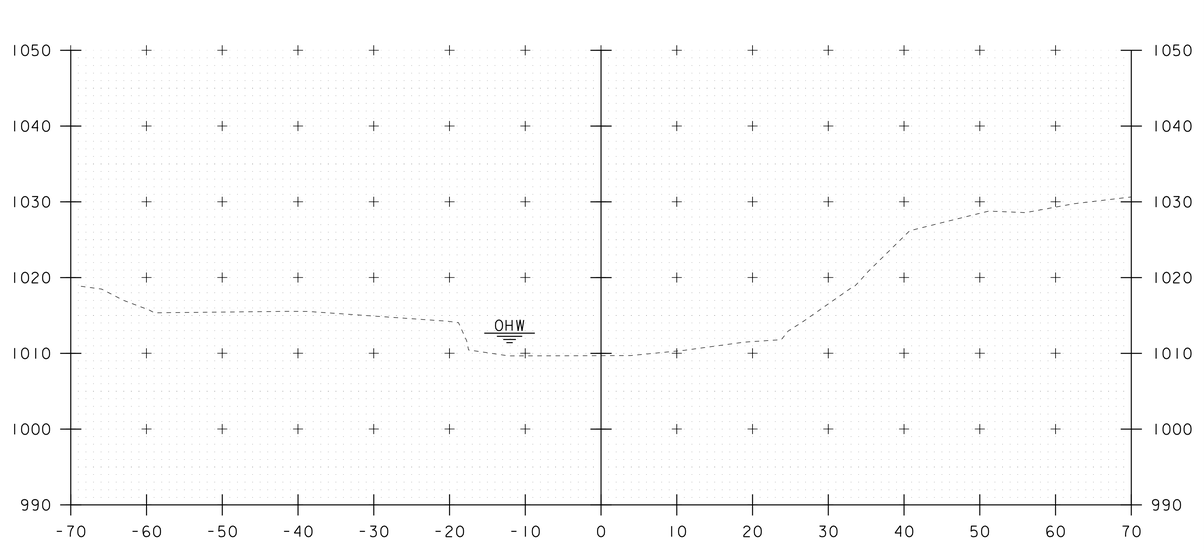
PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 17 OF 31



50+25



50+00



50+50

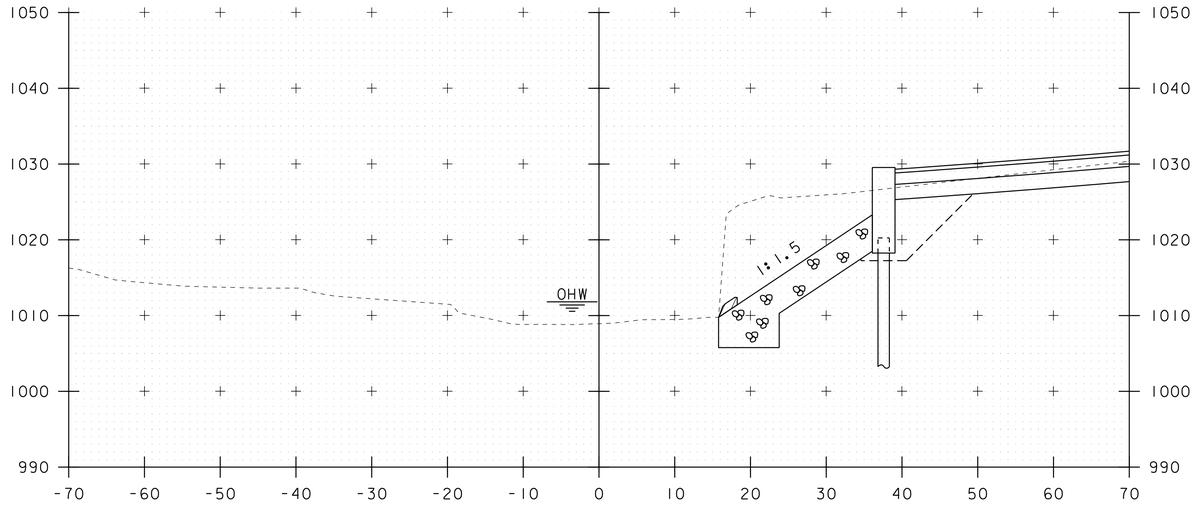
BEGIN STONE FILL, TYPE IV
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION
STA 50+56.00 RT

STA. 50+00 TO STA. 50+50

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

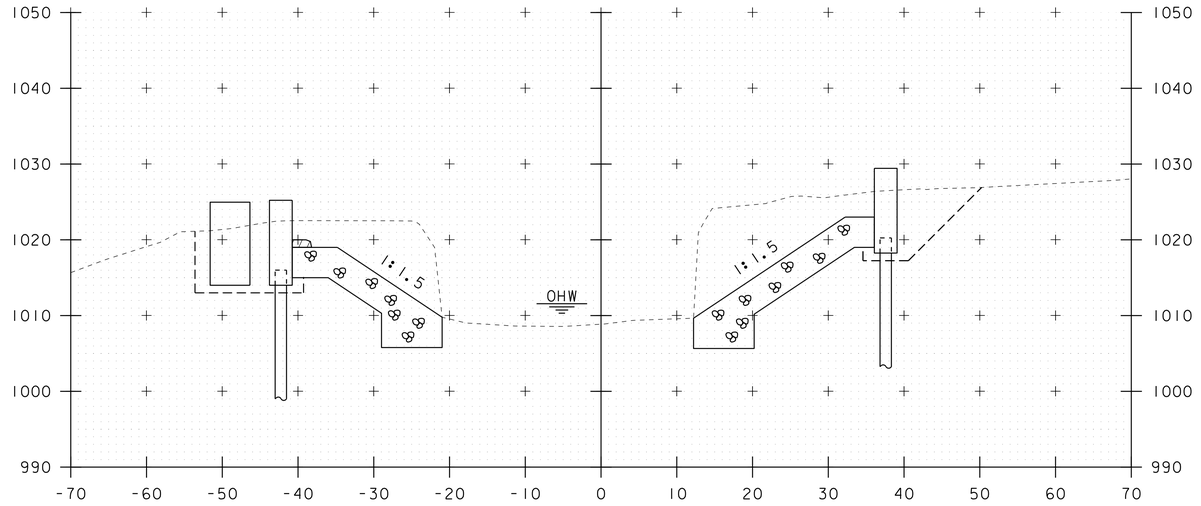
FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
CHANNEL CROSS SECTIONS 1

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 18 OF 31



BEGIN STONE FILL, TYPE IV
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION
STA 50+80.00 LT

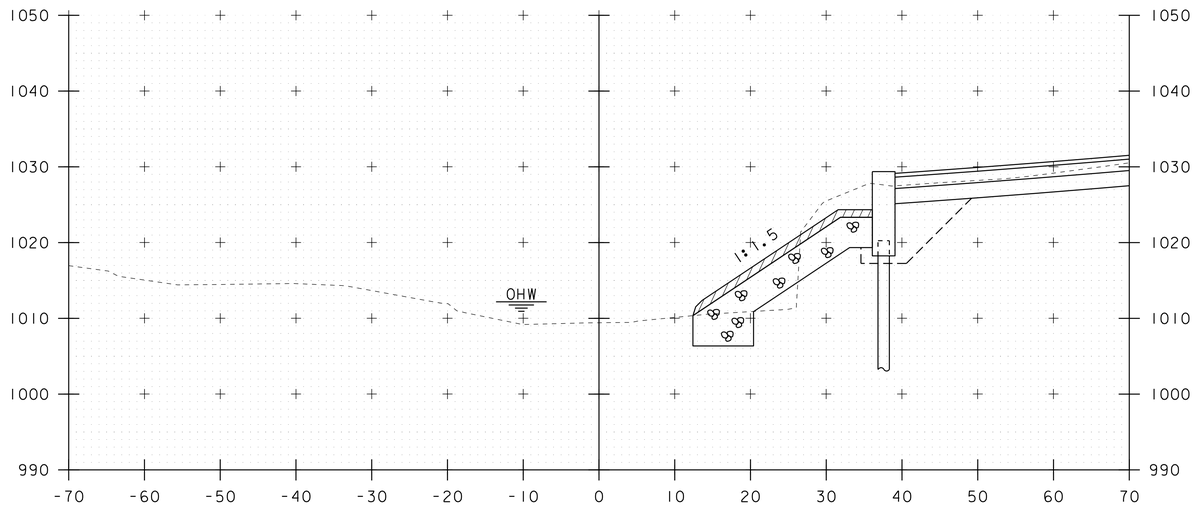
50+80



END GRUBBING MATERIAL
STA 51+01.00 LT

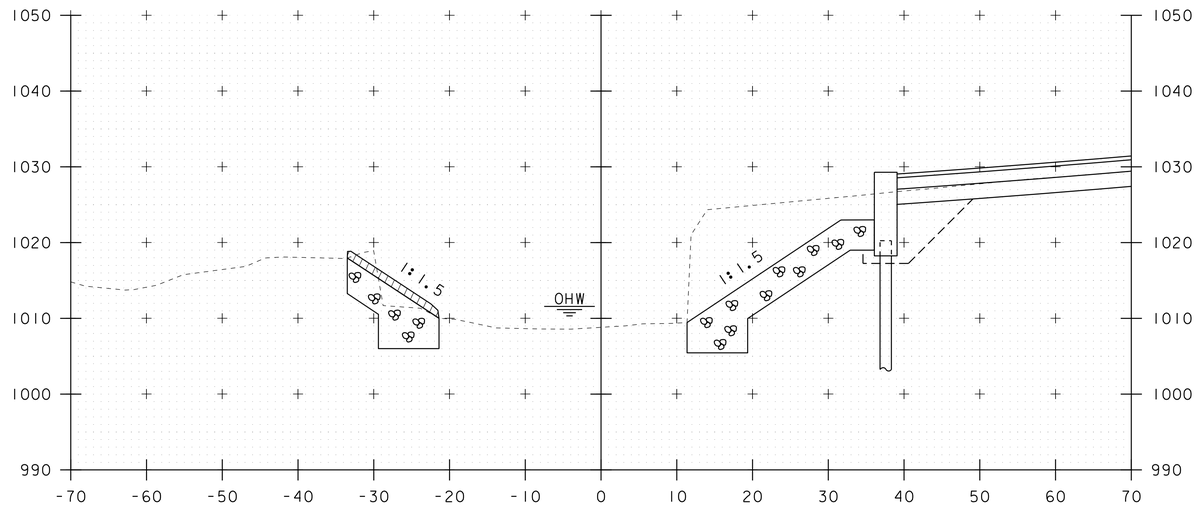
51+00

BEGIN GRUBBING MATERIAL
STA 51+00.00 RT



50+70

END GRUBBING MATERIAL
STA 50+74.00 RT



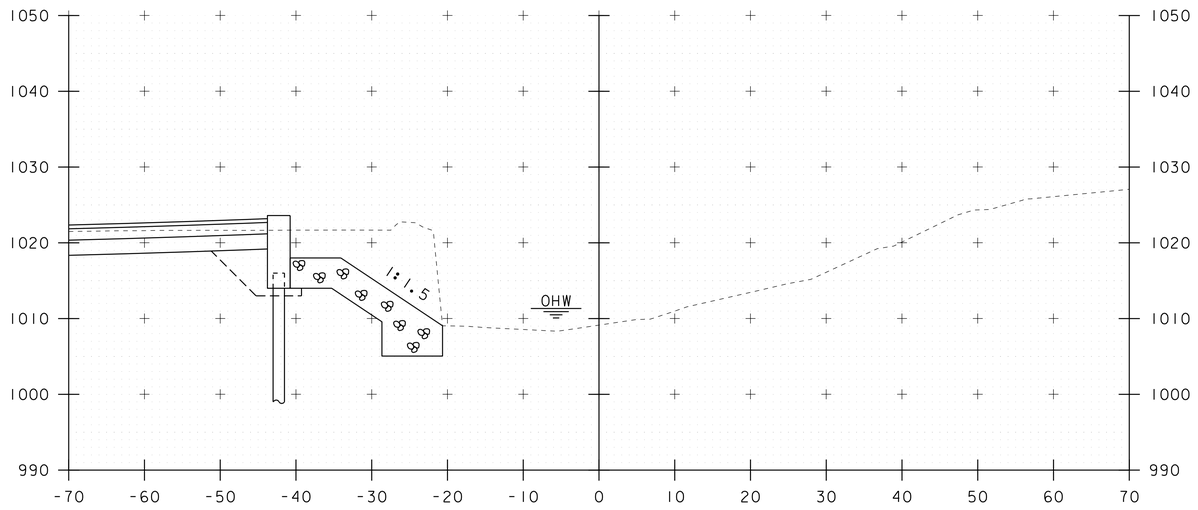
50+90

STA. 50+70 TO STA. 51+00

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

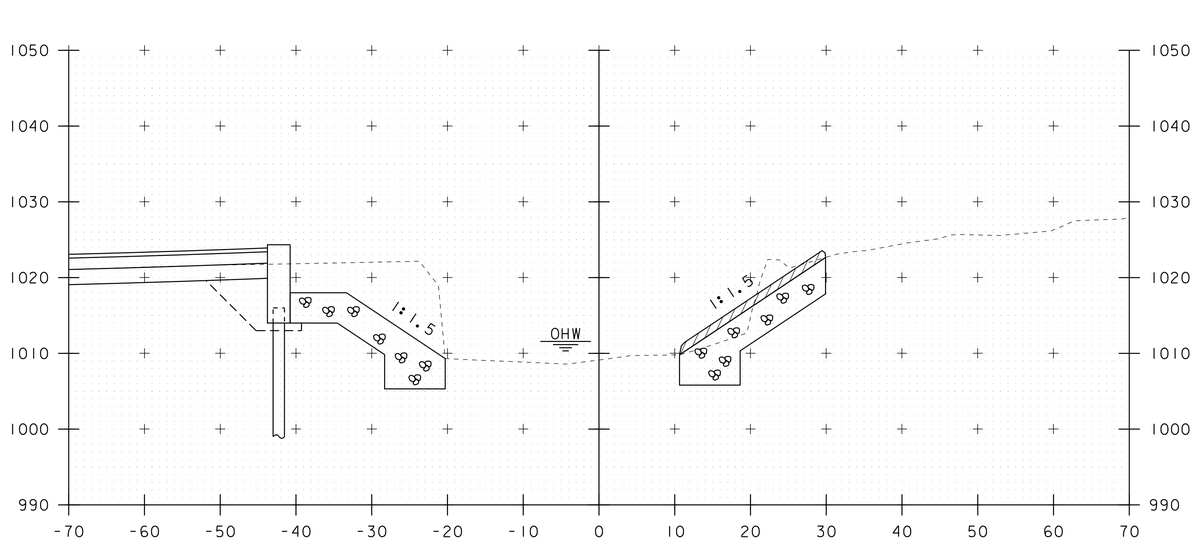
FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
CHANNEL CROSS SECTIONS 2

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 19 OF 31

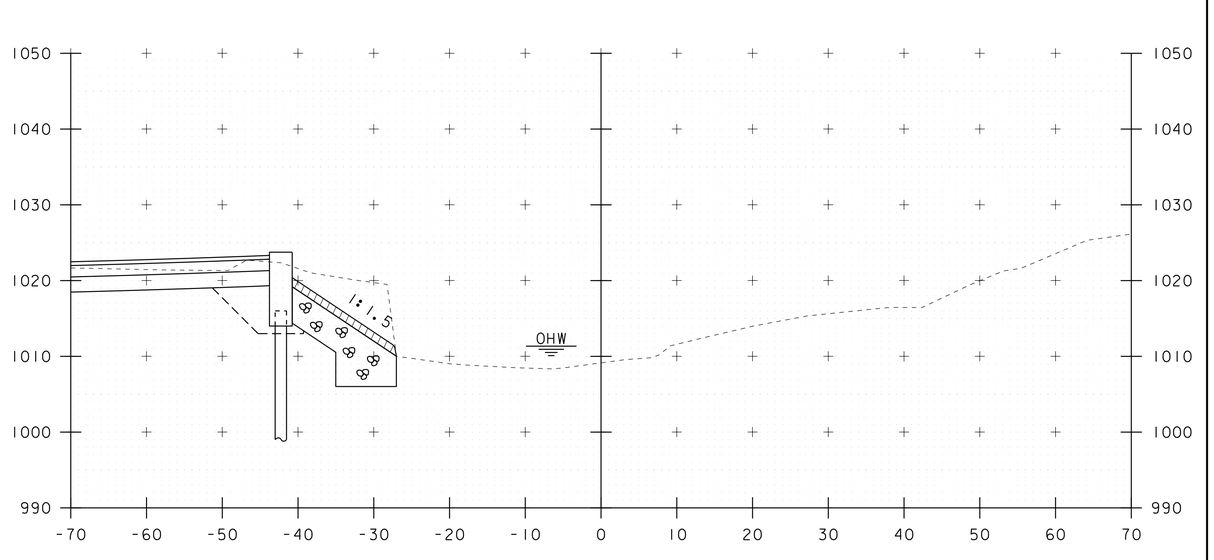


51+20

END STONE FILL, TYPE IV
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION
STA 51+20.00 RT



51+10



BEGIN GRUBBING MATERIAL
STA 51+28.00 LT

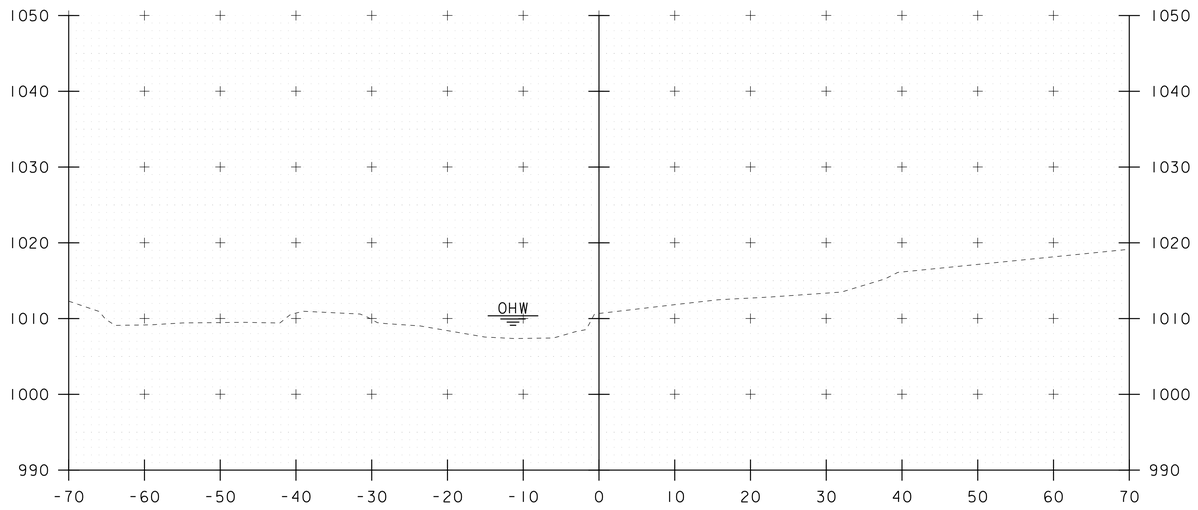
51+30

STA. 51+10 TO STA. 51+30

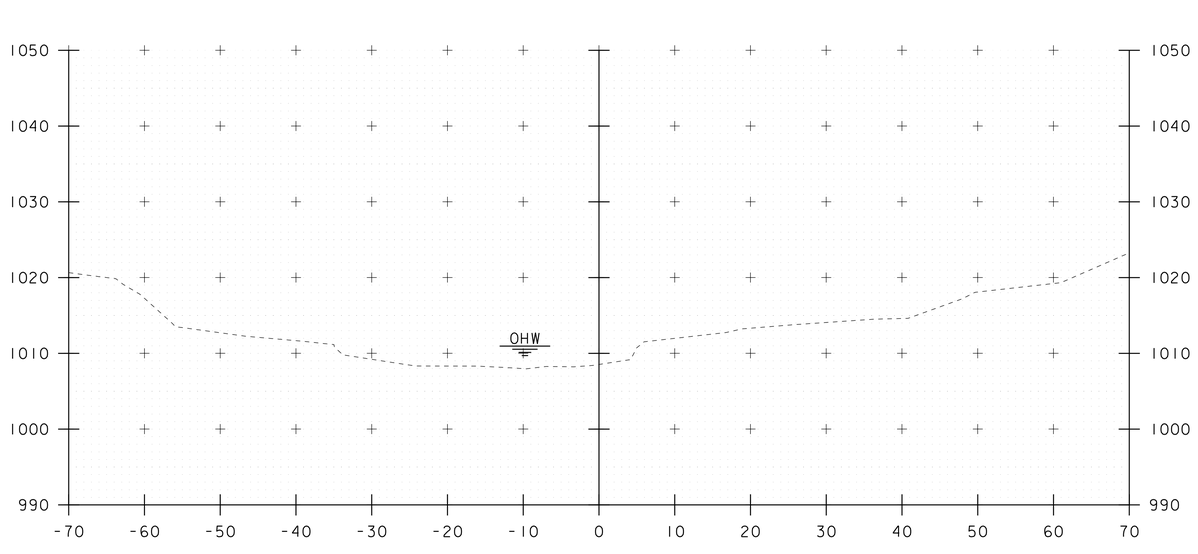
PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100/sl3J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
CHANNEL CROSS SECTIONS 3

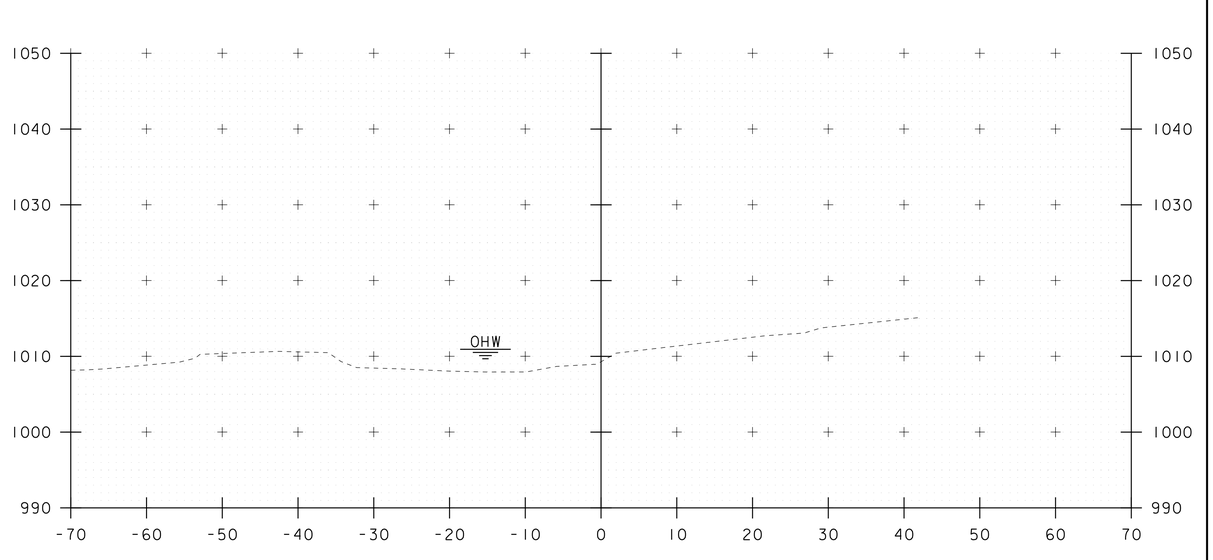
PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 20 OF 31



51+75



51+50



52+00

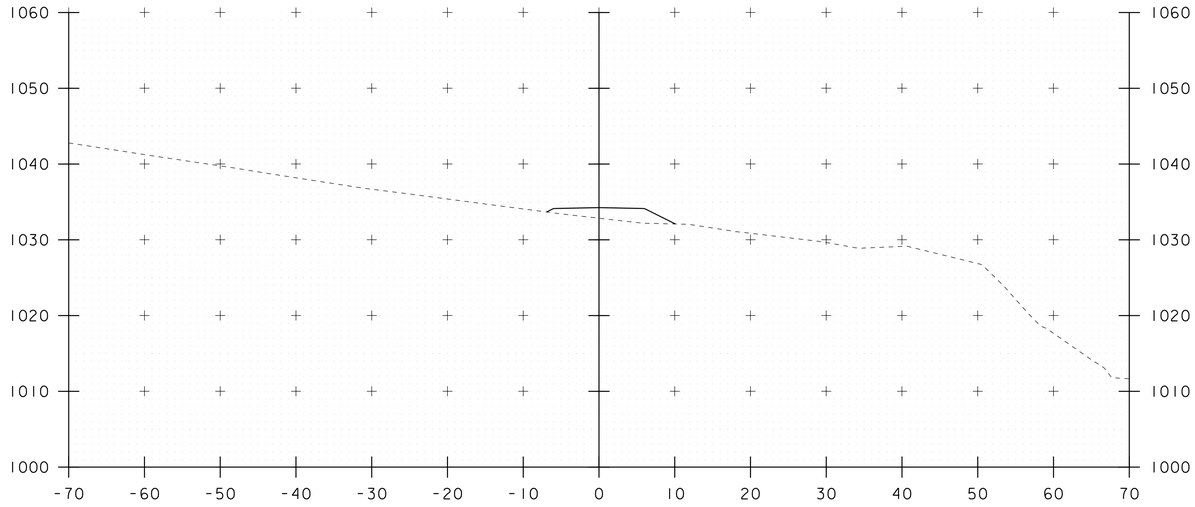
END STONE FILL, TYPE IV
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL
UNCLASSIFIED CHANNEL EXCAVATION
STA 51+48.00 LT

STA. 51+50 TO STA. 52+00

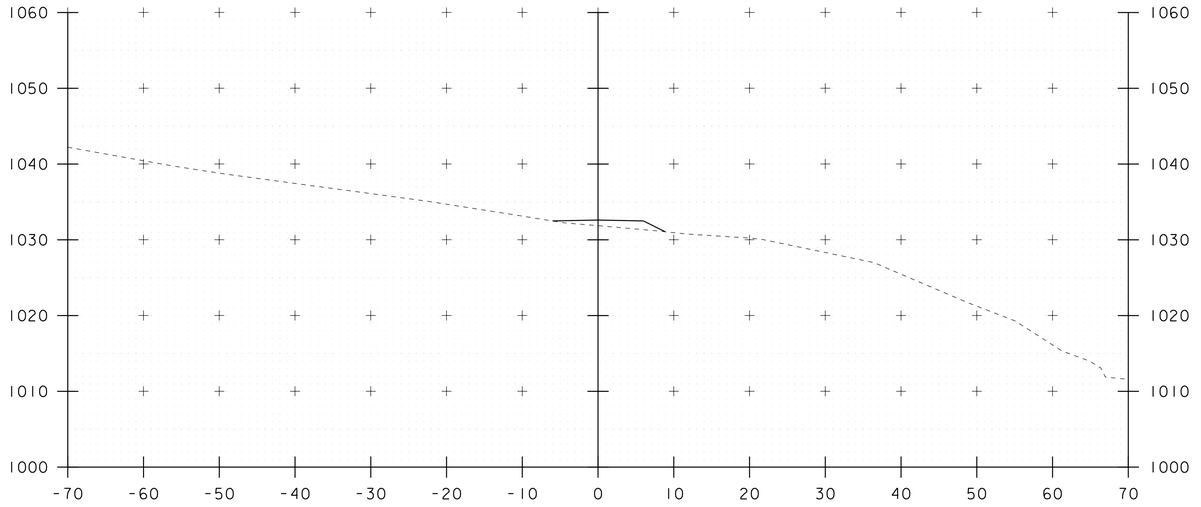
PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: 13J100/s13J100xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
CHANNEL CROSS SECTIONS 4

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 21 OF 31



1+20



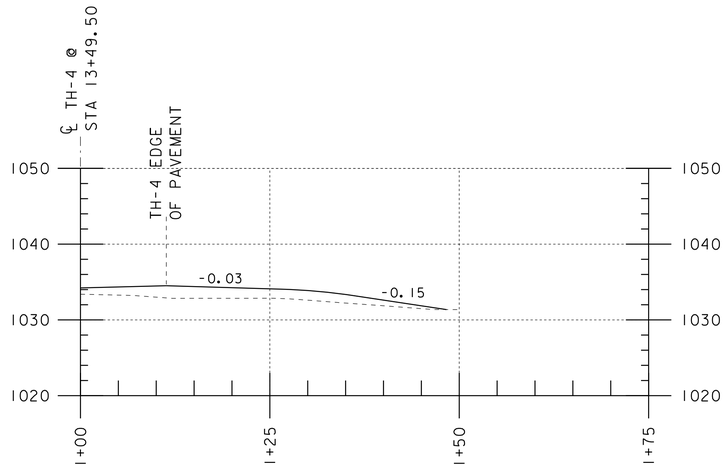
1+40

1+10

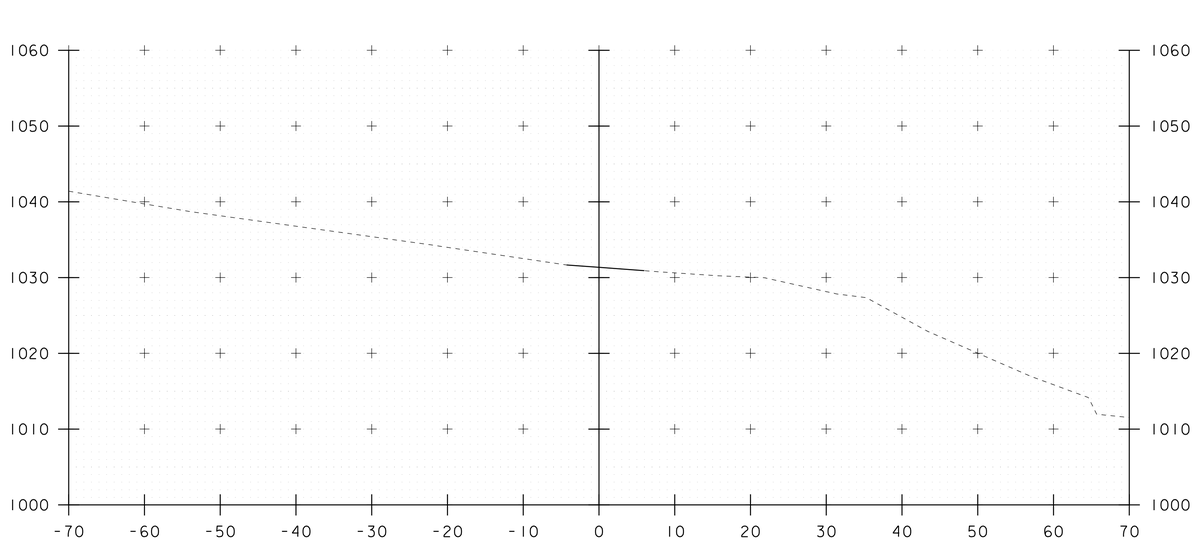
1+30

STA. 1+10 TO STA. 1+40

PROJECT NAME: Craftsbury	
PROJECT NUMBER: BO 1449(34)	
FILE NAME: 13J100/sl3J100xs.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
DRIVE CROSS SECTIONS 1	SHEET 22 OF 31



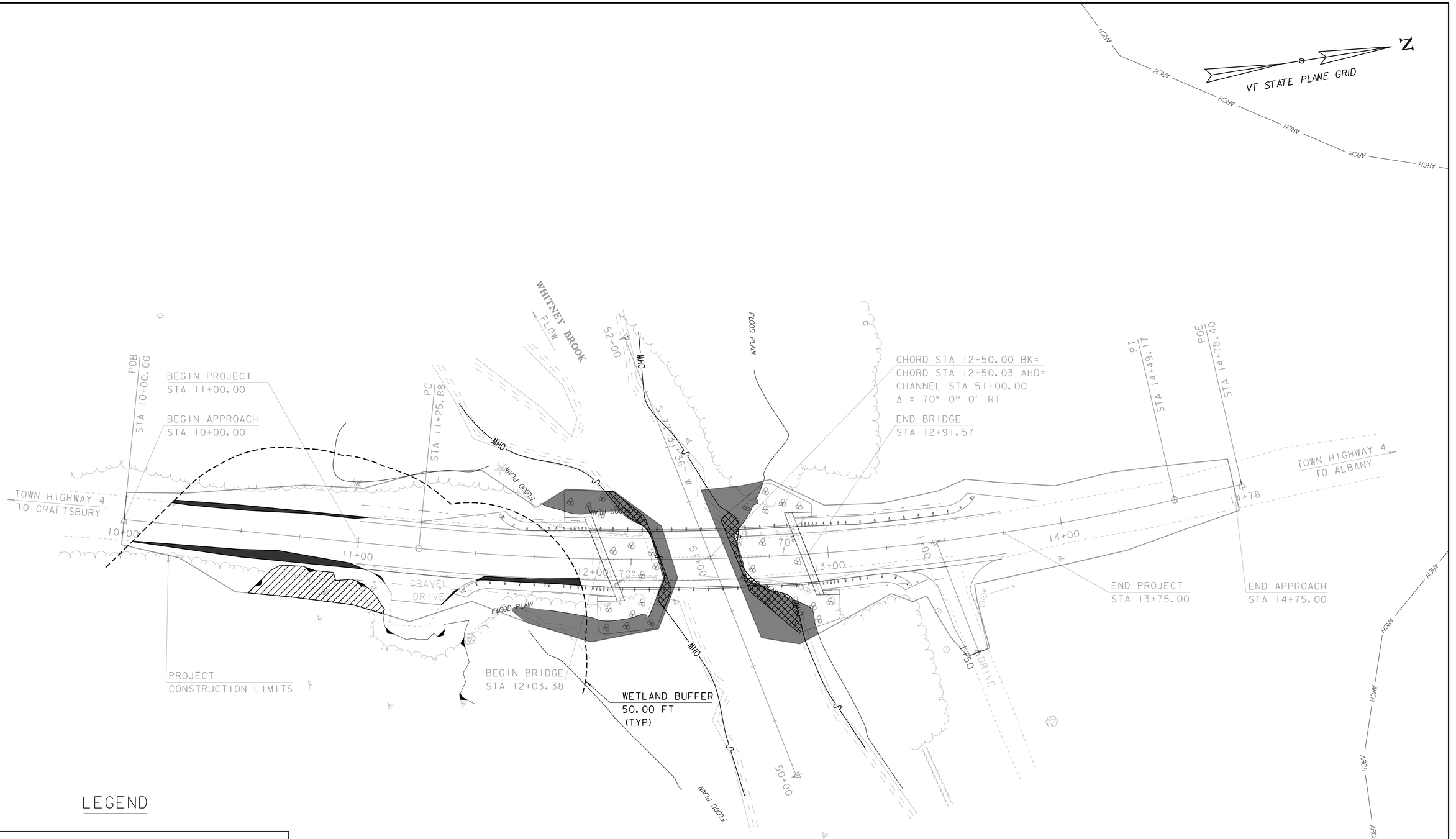
DRIVE PROFILE



1+50

STA. 1+50 TO STA. 1+50

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: 13J100\sl3J100xs.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
DRIVE CROSS SECTIONS 2	SHEET 23 OF 31



LEGEND

- WETALND BOUNDARY
- ORDINARY HIGH WATER (OHW)
- WETLAND BUFFER IMPACT AREA = 437.37 SF
- AREA OF IMPACT IN FLOODPLAIN = 2061.35 SF
- PERMANENT IMPACT BELOW OHW = 426.33 SF
- WETLAND IMPACT AREA = 584.77 SF

RESOURCE IMPACTS

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: sl3j100resourceimpacts.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
RESOURCE IMPACTS

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: O.M.DARISSE
SHEET 24 OF 31

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT ENTAILS THE CONSTRUCTION OF A NEW BRIDGE WITH RELATED APPROACH WORK TO REPLACE BRIDGE 4 ON TOWN HIGHWAY 4 OVER THE WHITNEY BROOK IN CRAFTSBURY, ORLEANS COUNTY, VERMONT.

THE BRIDGE WILL BE CLOSED TO TRAFFIC FOR 4 WEEKS DURING CONSTRUCTION.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.48 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TERRAIN IS HILLY TO MOUNTAINOUS, WITH A MIXTURE OF FORESTED AND OPEN LAND COVER.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE WHITNEY BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS INCISED, ALLUVIAL, AND SINUOUS, WITH FAILING BANKS AND A HIGH SEDIMENT LOAD AND WITH A STREAM BED CONSISTING OF SAND, GRAVEL, COBBLES, AND BOULDERS. THE TRIBUTARY AREA IS 13.5 SQUARE MILES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF MIXED SOFT AND HARDWOOD TREES AND UNDERGROWTH. DISTURBED VEGETATION WILL BE RE-ESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF ORLEANS, VERMONT.

CABOT SILT LOAM, VERY STONY
0-8% SLOPES
HYDRO SOIL GROUP D
K-FACTOR 0.32

COLTON-DUXBURY COMPLEX
15-25% SLOPES
HYDRO SOIL GROUP A
K-FACTOR 0.20/0.32

RUMNEY FINE SANDY LOAM
0-2% SLOPES
HYDRO SOIL GROUP C
K-FACTOR 0.28

BUCKLAND FINE SANDY LOAM, VERY STONY
35-60% SLOPES
HYDRO SOIL GROUP C
K-FACTOR 0.43

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: THE AREA IS A WILDLIFE TRAVEL CORRIDOR FOR WILDLIFE TRAVELING FROM THE BLACK RIVER FLOODPLAIN TO THE WEST AND THE UPLAND/FARMLAND HABITAT TO THE EAST OF THE PROJECT.
ARCHEOLOGICAL AREAS: THERE ARE TWO AREAS OF ARCHAEOLOGICAL SENSATIVITY, LOCATED ON HIGH TERRACES TO THE NORTHWEST AND NORTHEAST OF THE BRIDGE. THESE AREAS ARE WELL OUTSIDE THE PROJECT LIMITS.
HISTORICAL PLACES: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: WHITNEY BROOK
WETLANDS: THERE IS A SMALL WETLAND TO THE SOUTH OF THE BRIDGE AND TO THE EAST OF TOWN HIGHWAY 4, ADJACENT TO THE SMALL PULL-OFF AREA.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONDTRUCTION RESULT IN ONE OR MORE ARCES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC.). THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSIVE EFFECTS.

PROJECT DEMARCATION FENCING AND BARRIER FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

DIVERSIONARY MEASURES ARE NOT ANTICIPATED ON THIS PROJECT.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

CHECK DAMS SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH PERMIT CONDITIONS.

UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV, AS SPECIFIED ON THE PLANS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

WINTER WORK IS NOT ANTICIPATED.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

DEWATERING ACTIVITIES ARE NOT ANTICIPATED ON THIS PROJECT.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)

FILE NAME: SI3JI00EPSC_narrative.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: ----
EPSC NARRATIVE	SHEET 25 OF 31

RUMNEY FINE SANDY LOAM,
FREQUENTLY FLOODED
0% - 2% SLOPES
NOT HIGHLY ERODIBLE
K = 0.28

BUCKLAND FINE SANDY LOAM, VERY STONY
35% - 60% SLOPES
HIGHLY ERODIBLE
K = 0.43

CABOT SILT LOAM, VERY STONY
0% - 8% SLOPES
POTENTIALLY HIGHLY ERODIBLE
K = 0.32

COLTON - DUXBURY COMPLEX
15% - 25% SLOPES
HIGHLY ERODIBLE
K = 0.20/0.32

NELSON FARMS

ATWOOD, EUGENE R. & JEANNETTE I.

GOTTWICK, PAULA

GOODWIN, DENNIS A. & LAURA Q.

N

VT STATE PLANE GRID

BENCHMARK
RAILROAD SPIKE
IN TREE
ELEV. = 1019.75'

WHITNEY BROOK
FLOW

POB
STA 40+00.00

PC
STA 41+13.69

PT
STA 43+31.43

POE
STA 44+60.77

PI
STA 42+23.24

TOWN HIGHWAY 4
TO CRAFTSBURY

TOWN HIGHWAY 4
TO ALBANY

40+00
41+00
42+00
43+00
44+00
44+61

1010
1020
1030
1040
1050

TIE
DIST =44.65

TIE
DIST =20.85

TIE
DIST =46.41

SMALL CEDAR

GRAVEL DRIVE

IRON ROD
1/2" UP 6" RAIL
FENCE

SMALL MAPLE

HVCTRL
100
101
102
103

COMB
42A
64

COMB
42A
63Y

EXISTING CURVE DATA
DELTA = 15°35'41"
D = 7°09'43"
R = 800.00'
T = 109.55'
L = 217.74'
E = 7.47'

EXISTING BRIDGE DATA
SINGLE SPAN ROLLED BEAM
BUILT 1929
41' SPAN, 17.7' CURB - CURB

EPSC EXISTING SITE PLAN

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

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: 13J100/sl3J100ero_border.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
EPSC EXISTING SITE PLAN	SHEET 26 OF 31

N

VT STATE PLANE GRID

BENCHMARK
RAILROAD SPIKE
IN TREE
ELEV. = 1019.75'

COMB
42A
64

COMB
42A
63Y

WHITNEY BROOK
FLOW

TOWN HIGHWAY 4
TO CRAFTSBURY

TOWN HIGHWAY 4
TO ALBANY

52+00

S 77°-21'-36" W

51+00

50+00

10+00

11+00

12+00

13+00

14+00

14+78

70°

HVCTRL
100

HVCTRL
101

HVCTRL
102

HVCTRL
103

SMALL
CEDAR TIE
DIST =20.85

SMALL
MAPLE

GRAVEL
DRIVE

IRON ROD FOUND
1/2" UP 0.2'

1010

1020

1030

1040

1050

PDF

BF

EXISTING BRIDGE DATA
SINGLE SPAN ROLLED BEAM
BUILT 1929
41' SPAN, 17.7' CURB - CURB

EPSC CONSTRUCTION SITE PLAN

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

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: 13J100/sl3J100ero_border.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
EPSC CONSTRUCTION SITE PLAN	SHEET 27 OF 31

N

VT STATE PLANE GRID

BENCHMARK
RAILROAD SPIKE
IN TREE
ELEV. = 1019.75'

COMB
42A
64

COMB
42A
63Y

WHITNEY BROOK
FLOW

52+00

S 77°-31'-36" W

1010

1020

1030

1040

1050

TOWN HIGHWAY 4
TO CRAFTSBURY

TOWN HIGHWAY 4
TO ALBANY

10+00

11+00

12+00

70°

13+00

14+00

14+78

50+00

TIE
DIST =44.65

BALSAM

SMALL
CEDAR TREE
DIST =20.85

GRAVEL
DRIVE

IP WIRED
MEASURED

TIE
BIRCH
DIST =46.4

IRON ROD WITH
ALUMINUM CAP
FLUSH WITH
GROUND

DRIVE

SMALL
MAPLE

HVCTRL
103

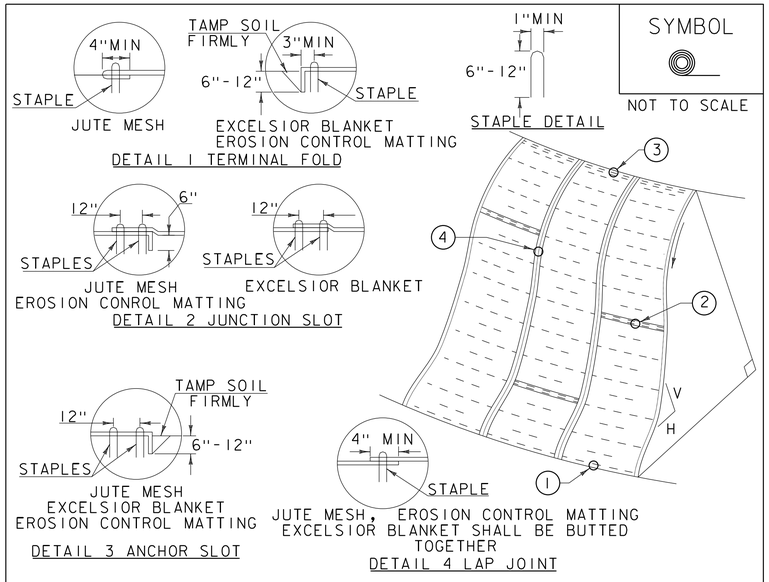
PROJECT
CONSTRUCTION LIMITS

EXISTING BRIDGE DATA
SINGLE SPAN ROLLED BEAM
BUILT 1929
41' SPAN, 17.7' CURB - CURB

EPSC FINAL SITE PLAN

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

PROJECT NAME:	CRAFTSBURY
PROJECT NUMBER:	BO 1449(34)
FILE NAME: 13J100/s13J100ero_border.dgn	PLOT DATE: 09-JUN-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: O.M.DARISSE
EPSC FINAL SITE PLAN	SHEET 28 OF 31



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

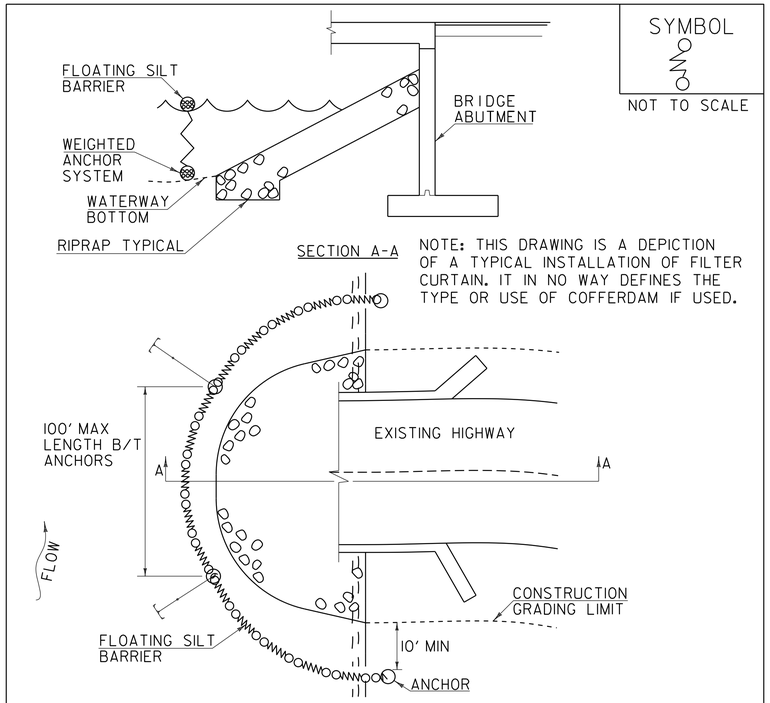
1. APPLY TO SLOPES GREATER THAN 3H: 1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

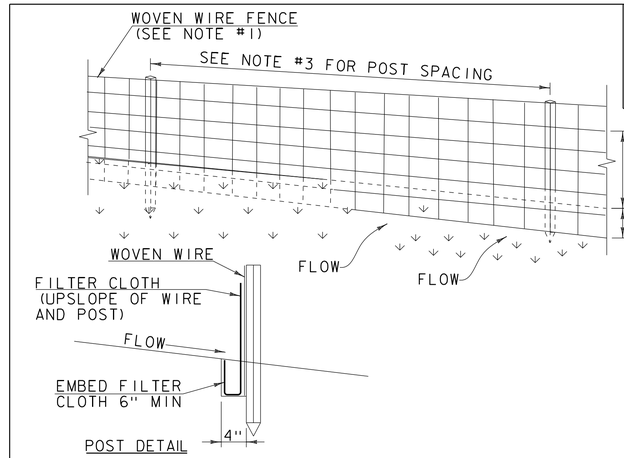
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

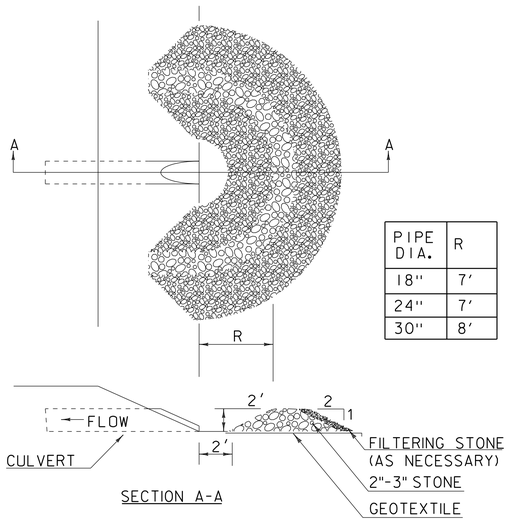
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: sl3JI00erodetails.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
EPSC DETAILS 1

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: -----
SHEET 29 OF 31



PIPE DIA.	R
18"	7'
24"	7'
30"	8'

SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE . (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS

PIPE INLET PROTECTION

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

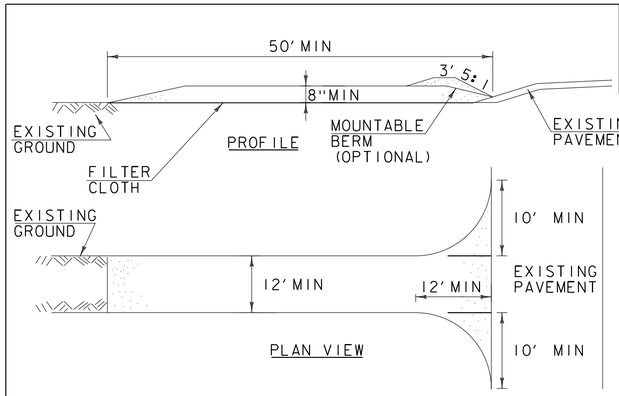
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: sl3JI00erodetails.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
EPSC DETAILS 2

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: ----
SHEET 30 OF 31



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

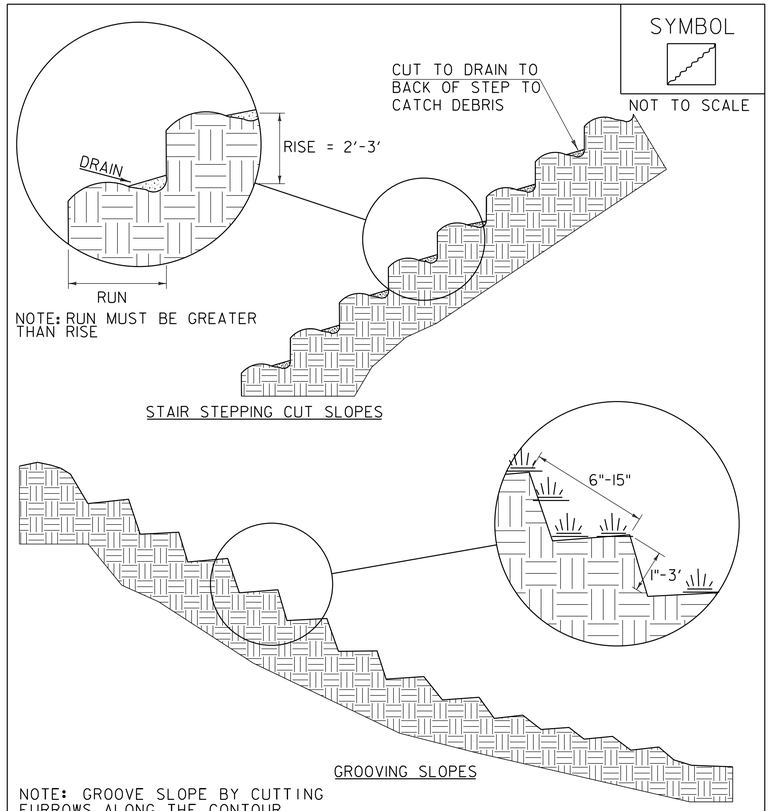
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

STAIR STEPPING CUT SLOPES

GROOVING SLOPES

NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

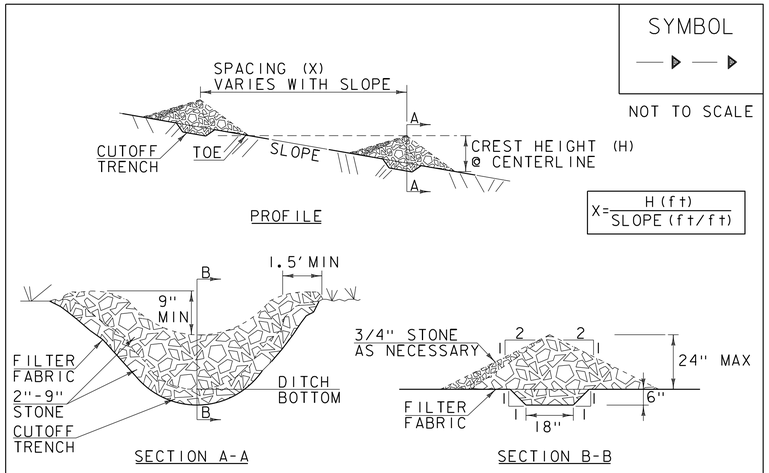
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

PROJECT NAME: CRAFTSBURY
PROJECT NUMBER: BO 1449(34)

FILE NAME: si3JI00erodetails.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
EPSC DETAILS 3

PLOT DATE: 09-JUN-2014
DRAWN BY: L.J.STONE
CHECKED BY: ---
SHEET 31 OF 31