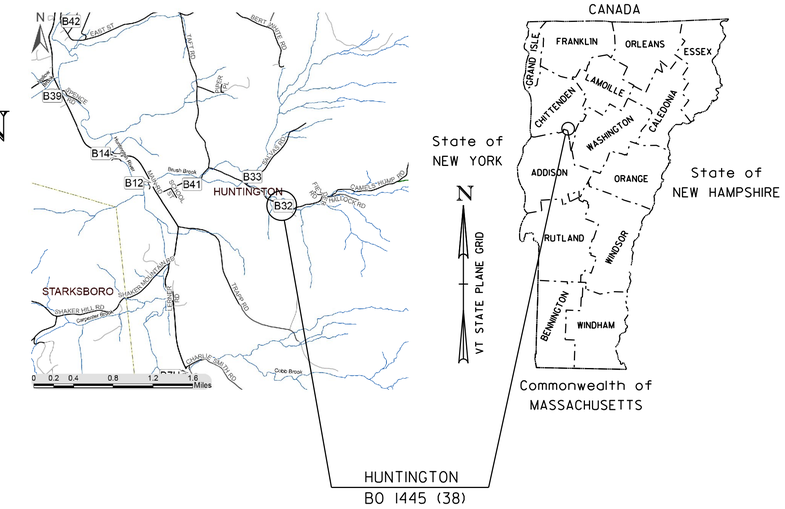
REVIEWER NOTES:

1. TRAFFIC TO BE MAINTAINED ON A ONE WAY TEMPORARY BRIDGE.
2. UTILITIES WILL NEED TO BE RELOCATED FOR BOTH THE TEMPORARY AND PERMANENT BRIDGE PROJECTS.
3. ROW EASEMENT WILL NEED TO BE ACQUIRED.
4. PRELIMINARY ESTIMATE NOT INCLUDED.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



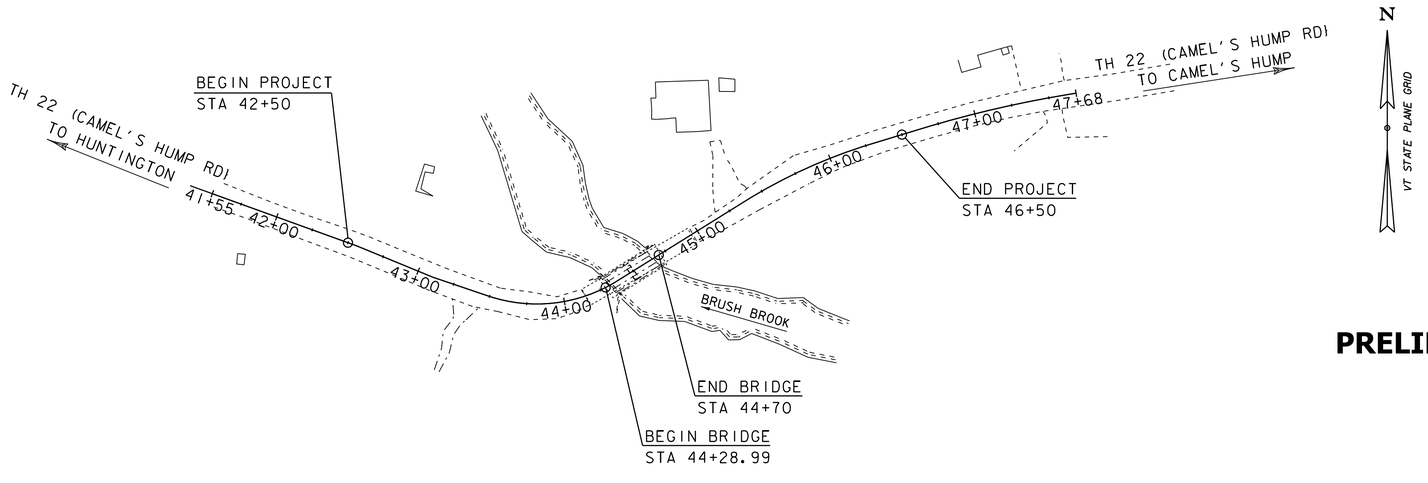
PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF HUNTINGTON
COUNTY OF CHITTENDEN

ROUTE NO : TOWN HIGHWAY 22, (CAMELS HUMP ROAD), CLASS 3, LOCAL BRIDGE NO : 32
PROJECT LOCATION: - 0.9 MILES EAST OF JUNCTION WITH TOWN HIGHWAY 4 (TAFT ROAD) (CLASS 3)

PROJECT DESCRIPTION: REPLACEMENT OF EXISTING BRIDGE WITH A NEW BRIDGE ON EXISTING ALIGNMENT, WITH RELATED CHANNEL AND ROADWAY WORK.

LENGTH OF STRUCTURE:	41.11 FEET
LENGTH OF ROADWAY:	368.89 FEET
LENGTH OF PROJECT:	400.00 FEET



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 :	12/29/2016
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

PRELIMINARY PLANS INHOUSE REVIEW
03-JUN-2020

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE _____

PROJECT MANAGER : ROB YOUNG P.E.

PROJECT NAME : HUNTINGTON
PROJECT NUMBER : BO 1445(38)

SHEET 1 OF 22 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version

LRFD

INDEX OF SHEETS

PLAN SHEETS

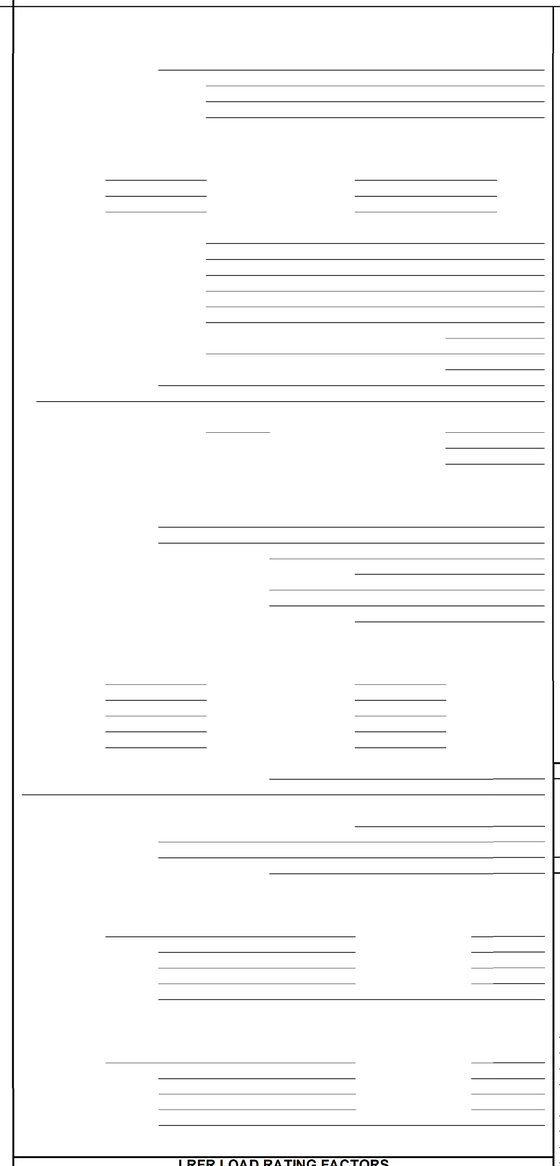
STANDARDS LIST

G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	03-10-2017
S-367A	BRIDGE RAILING, GALVANIZED HDSB/FASCIA MOUNTED/STEEL TUBING	02-02-2017
S-367B	GUARDRAIL APPROACH SECTION, GALVANIZED HD STEEL BEAM	02-02-2017
T-42	BRIDGE NUMBER PLAQUE	04-09-2014

DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	5/7/2010
HSD-621.07A	MGS	4/17/2019
HSD-621.07B	MGS COMPONENTS	4/17/2019
HSD-621.07C	MGS ANCHOR	4/17/2019
HSD-621.07C	MGS ANCHOR COMPONENTS 1	4/17/2019
HSD-621.07E	MGS ANCHOR COMPONENTS 2	4/17/2019
HSD-621.07F	MGS TRANSITION	4/17/2019

FINAL HYDRAULIC REPORT



TRAFFIC MAINTENANCE NOTES

1. MAINTAIN ONE-WAY TRAFFIC ON A TEMPORARY BRIDGE.
2. INSTALL AND MAINTAIN TRAFFIC SIGNALS.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	N/A INCH
3. DESIGN SPAN	L:	38.00 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 PSS	f'_c:	- - -
11. CONCRETE, CLASS C	f'_c:	- - -
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	- - -
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. SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T
2018	15	55	61	7.9
2038	30	60	61	11.3

20 year ESAL for flexible pavement from 2018 to 2038 : 81000

40 year ESAL for flexible pavement from 2018 to 2058 : 189000

Design Speed : 30 mph

AS BUILT "REBAR" DETAIL

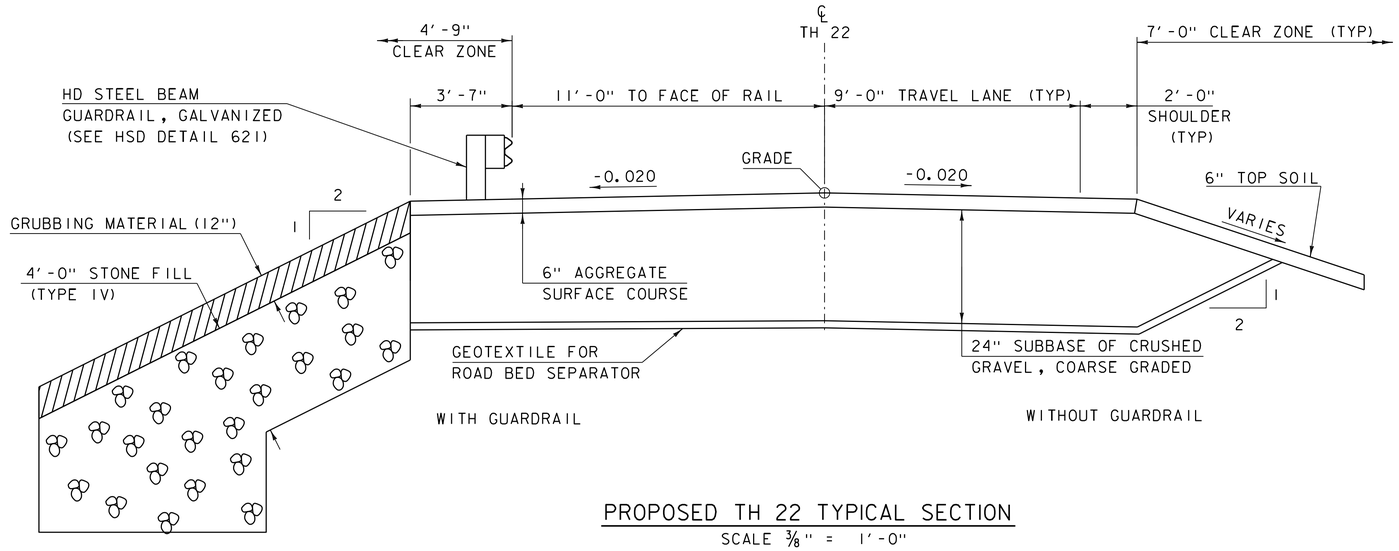
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

PROJECT NAME: **HUNTINGTON**

PROJECT NUMBER: **BO 1445(38)**

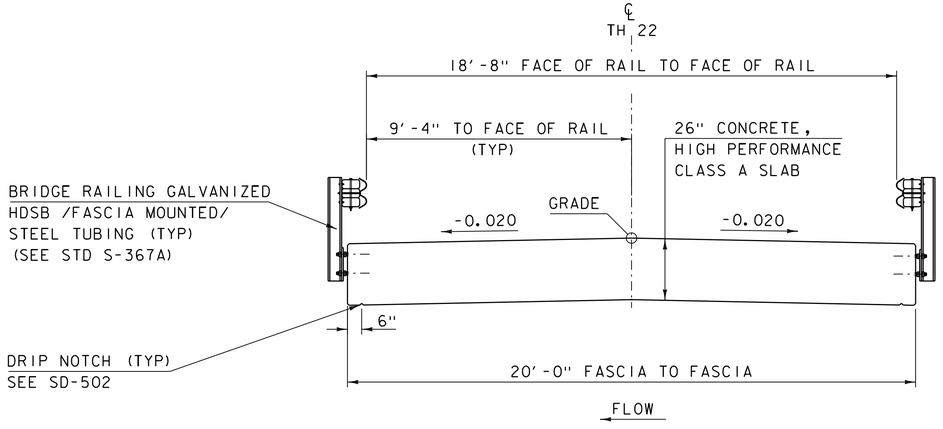
FILE NAME: **s12J630pi.dgn**
PROJECT LEADER: **R. YOUNG**
DESIGNED BY: **C. FRENCH**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 2020
DRAWN BY: **C. FRENCH**
CHECKED BY: **C. MOONEY**



PROPOSED TH 22 TYPICAL SECTION

SCALE 3/8" = 1'-0"



PROPOSED BRIDGE TYPICAL SECTION

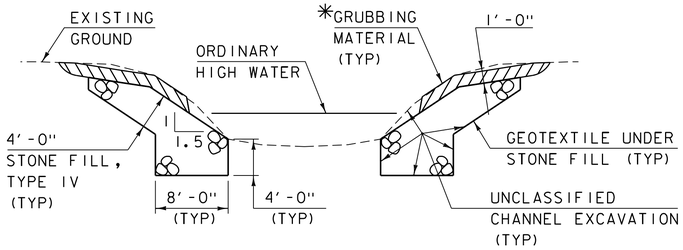
SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
-PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
-AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

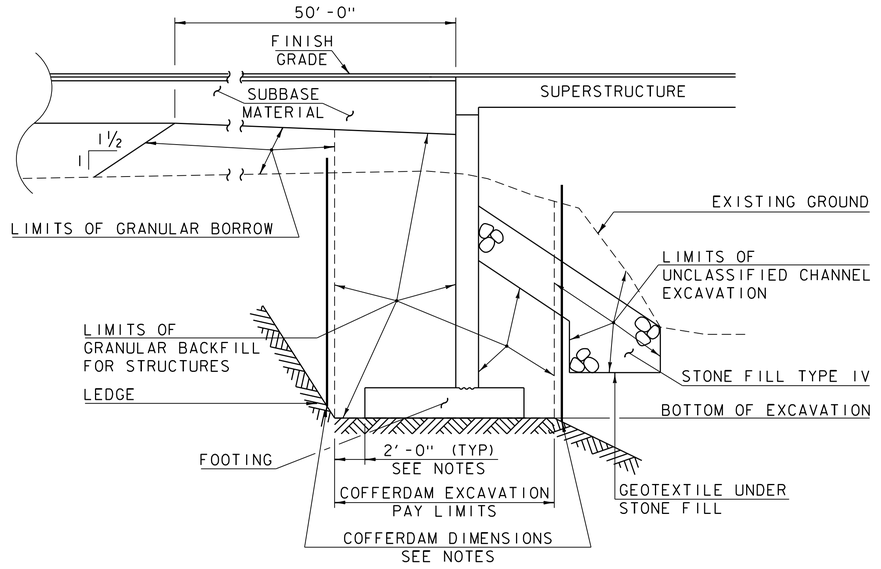
PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: sl2j630typ.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
TYPICAL SECTIONS	SHEET 3 OF 28



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

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



COFFERDAM AND EARTHWORK SECTION

(NOT TO SCALE)

COFFERDAM NOTES

1. COFFERDAM DIMENSIONS TO BE DETERMINED BY THE CONTRACTOR.

2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING AND FROM BOTTOM OF EXCAVATION UP TO THE EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.

3. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION. NO MEASUREMENT AND PAYMENT WILL BE MADE FOR COFFERDAM EXCAVATION AND GRANULAR BACKFILL FOR STRUCTURES OUTSIDE THE PAY LIMITS DEFINED IN NOTE 2.

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: s12j630typ.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
TYPICAL SECTIONS	SHEET 4 OF 28

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: HUNTINGTON
PROJECT NUMBER: BO 1445 (38)

FILE NAME: sl2J630legend.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: C. MOONEY
CONVENTIONAL SYMBOLOGY LEGEND

PLOT DATE: 03-JUN-2020
DRAWN BY: C. FRENCH
CHECKED BY:
SHEET 5 OF 28

GPS CONTROL POINTS

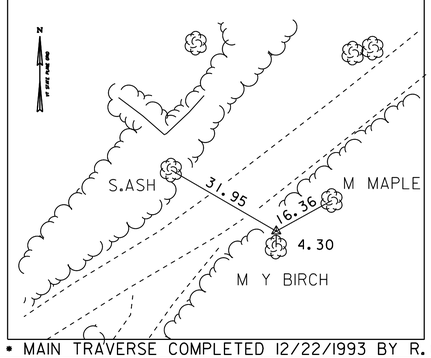
GENERAL LOCATION - THE STATION IS LOCATED IN HUNTINGTON CENTER, VT, 2.1 MI (3.4 KM) SOUTH OF HUNTINGTON VILLAGE, 7.4 MI (11.9 KM) SOUTH OF RICHMOND, AND 10.8 MI (17.4 KM) WEST OF WATERBURY. TO REACH FROM THE JUNCTION OF THE MAIN ROAD (TH1) AND CAMELS HUMP ROAD (TH4) , PROCEED NORTHWESTERLY ALONG TH1 FOR 0.1 MI (0.2 KM) TO A BRIDGE OVER BRUSH BROOK AND THE MARK SET IN THE SOUTHEAST CORNER OF THE BRIDGE. ALSO 2.45 MI (3.94 KM) SOUTHEASTERLY ALONG TH1 FROM ITS INTERSECTION WITH EAST STREET IN HUNTINGTON VILLAGE TO THE MARK ON THE LEFT. IT IS LOCATED 64 FT (19.5 M) NORTHEAST OF POLE 86/122, 17 FT (5.2 M) EAST OF THE CENTERLINE OF TH1, AND 1.5 FT (0.5 M) EAST OF A STEEL GUARDRAIL. OWNERSHIP IS THE TOWN OF HUNTINGTON.

GENERAL LOCATION - THE STATION IS LOCATED IN HUNTINGTON CENTER, VT, 1.7 MI (2.7 KM) SOUTH OF HUNTINGTON VILLAGE, 7.1 MI (11.4 KM) SOUTH OF RICHMOND, AND 11 MI (17.7 KM) WEST OF WATERBURY. TO REACH FROM THE JUNCTION OF THE MAIN ROAD (TH1) AND CAMELS HUMP ROAD (TH4) , PROCEED 0.6 MI (1.0 KM) TO A BRIDGE OVER THE HUNTINGTON RIVER AND THE MARK ON THE RIGHT. THE MARK IS A STATE OF VERMONT DISK SET IN THE NORTHEAST BRIDGE ABUTMENT.
ALSO 2.45 MI (3.94 KM) SOUTHEASTERLY ALONG TH1 FROM ITS INTERSECTION WITH EAST STREET IN IT IS LOCATED 15.5 FT (4.7 M) NORTH OF THE CENTERLINE OF TH 1 AND 2 FT (0.6 M) NORTH OF A BOX BEAM GUARDRAIL.
OWMERSHIP TOWN OF HUNTINGTON.

TRAVERSE TIES

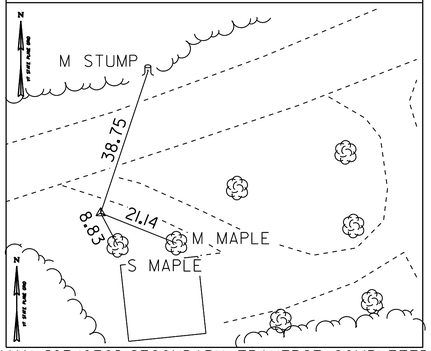
HVCTRL #1

NORTH = 655043.780
EAST = 1526912.200
ELEV. = 1041.574



HVCTRL #2

NORTH = 654865.920
EAST = 1526467.69
ELEV=1003.990



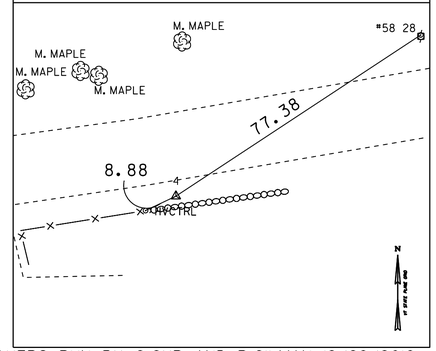
HVCTRL #3

NORTH = 654752.349
EAST = 1525861.871
ELEV. = 974.248

NOT TIED

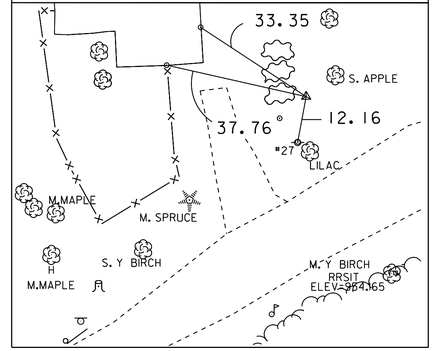
HVCTRL #4

NORTH = 654648.511
EAST = 1525582.523
ELEV. = 962.795



HVCTRL #5

NORTH = 654622.649
EAST = 1525334.004
ELEV. = 951.292



• MAIN TRAVERSE COMPLETED 12/22/1993 BY R. GILMAN [93J030] SECONDARY TRAVERSE COMPLETED 3/20/2012 BY R.GILMAN P.C. & P.WINTERS THIRD TRAVERS RUN BY C.CYR AND R.GILMAN 12/29/2016

ALIGNMENT TIES

CONTROL LINE DATA - TH22_prop_emergency_temp

POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
38	S 70°08'00.00" E	50.96 '	654574.54	1525020.117		75+00.00					
	S 67°38'00.00" E	44.69 '	654555.3678	1525073.177	75+50.96		75+61.87	2°30'00.00"	250.00 '	10.91 '	5.46 '
	S 71°17'00.00" E	45.39 '	654534.7248	1525123.343	76+01.10		76+20.22	3°39'00.00"	-300.00 '	19.11 '	9.56 '
	N 64°45'38.17" E	118.03 '	654509.7983	1525196.915	76+56.05		77+17.42	43°57'21.83"	-80.00 '	61.37 '	32.29 '
	N 54°21'24.42" E	38.47 '	654567.889	1525320.143	78+03.16		78+39.48	10°24'13.75"	-200.00 '	36.32 '	18.21 '
	N 73°05'00.00" E	100.06 '	654614.3279	1525384.905	78+59.74		79+41.45	18°43'35.58"	250.00 '	81.71 '	41.22 '
59			654643.4445	1525480.639		80+00.29					

CONTROL LINE DATA - TH22_prop

POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
38	S 70°08'00.00" E	50.96 '	654574.54	1525020.117		42+00.00					
	S 67°38'00.00" E	44.69 '	654555.3678	1525073.177	42+50.96		42+61.87	2°30'00.00"	250.00 '	10.91 '	5.46 '
	S 71°17'00.00" E	38.41 '	654534.7248	1525123.343	43+01.10		43+20.22	3°39'00.00"	-300.00 '	19.11 '	9.56 '
	N 58°03'00.00" E	146.62 '	654507.2072	1525204.563	43+49.07		44+37.50	50°40'00.00"	-100.00 '	88.43 '	47.34 '
	N 73°05'00.00" E	117.57 '	654609.2341	1525368.157	45+36.78		46+28.61	15°02'00.00"	350.00 '	91.83 '	46.18 '
59			654643.4445	1525480.639		47+00.00					

CONTROL LINE DATA - Br32channel

POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
12	N 46°52'27.67" W	200.00 '	654470.5139	1525328.324		50+00.00					
13			654607.234	1525182.353		52+00.00					

CONTROL LINE DATA - Driveway

POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
104	N 17°59'58.47" W	54.59 '	654572.6862	1525326.374		10+00.00					
105			654624.6044	1525309.505		10+54.59					

NORTH =
EAST =
ELEV. = _____

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)
ADJUSTMENT COMPASS

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BO 1445(38)

FILE NAME: s12j63tie.DGN
PROJECT LEADER: R. YOUNG
DESIGNED BY: C. FRENCH
TIE SHEET

PLOT DATE: 03-JUN-2020
DRAWN BY: H.MCGOWAN
CHECKED BY: C. MOONEY
SHEET 6 OF 28

TEMP - CURVE (1)
DELTA = 43°37′05″
D = 57°17′45″
R = 100.00′
T = 40.02′
L = 76.13′
E = 7.71′

TEMP - CURVE (2)
DELTA = 12°13′04″
D = 38°11′50″
R = 150.00′
T = 16.05′
L = 31.99′
E = 0.86′

TEMP - CURVE (3)
DELTA = 20°51′12″
D = 45°50′12″
R = 125.00′
T = 23.00′
L = 45.50′
E = 2.10′

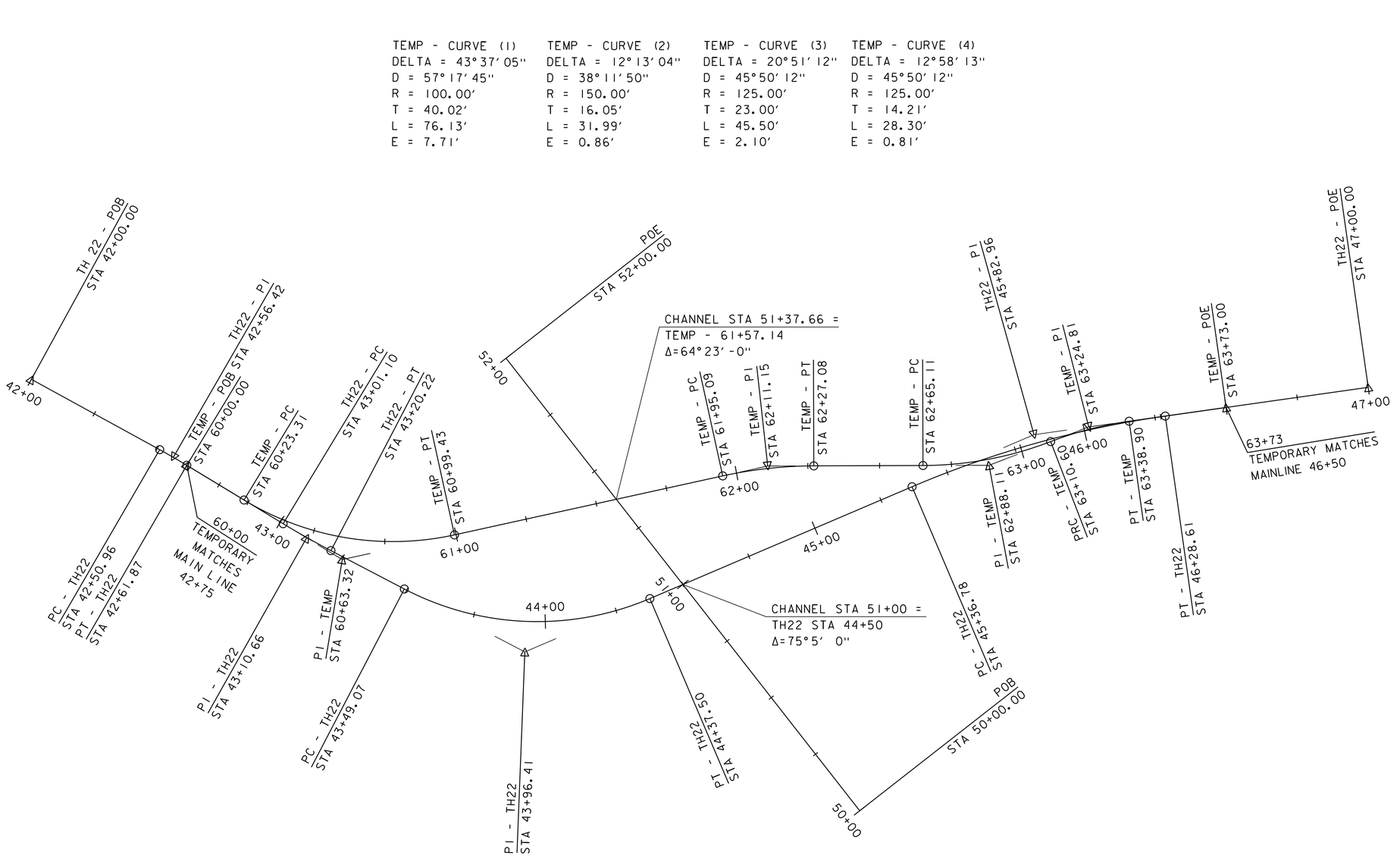
TEMP - CURVE (4)
DELTA = 12°58′13″
D = 45°50′12″
R = 125.00′
T = 14.21′
L = 28.30′
E = 0.81′

TH 22 - CURVE (1)
DELTA = 2°30′00″
D = 22°55′06″
R = 250.00′
T = 5.46′
L = 10.91′
E = 0.06′

TH 22 - CURVE (2)
DELTA = 3°39′00″
D = 19°05′55″
R = 300.00′
T = 9.56′
L = 19.11′
E = 0.15′

TH 22 - CURVE (3)
DELTA = 50°40′00″
D = 57°17′45″
R = 100.00′
T = 47.34′
L = 88.43′
E = 10.64′

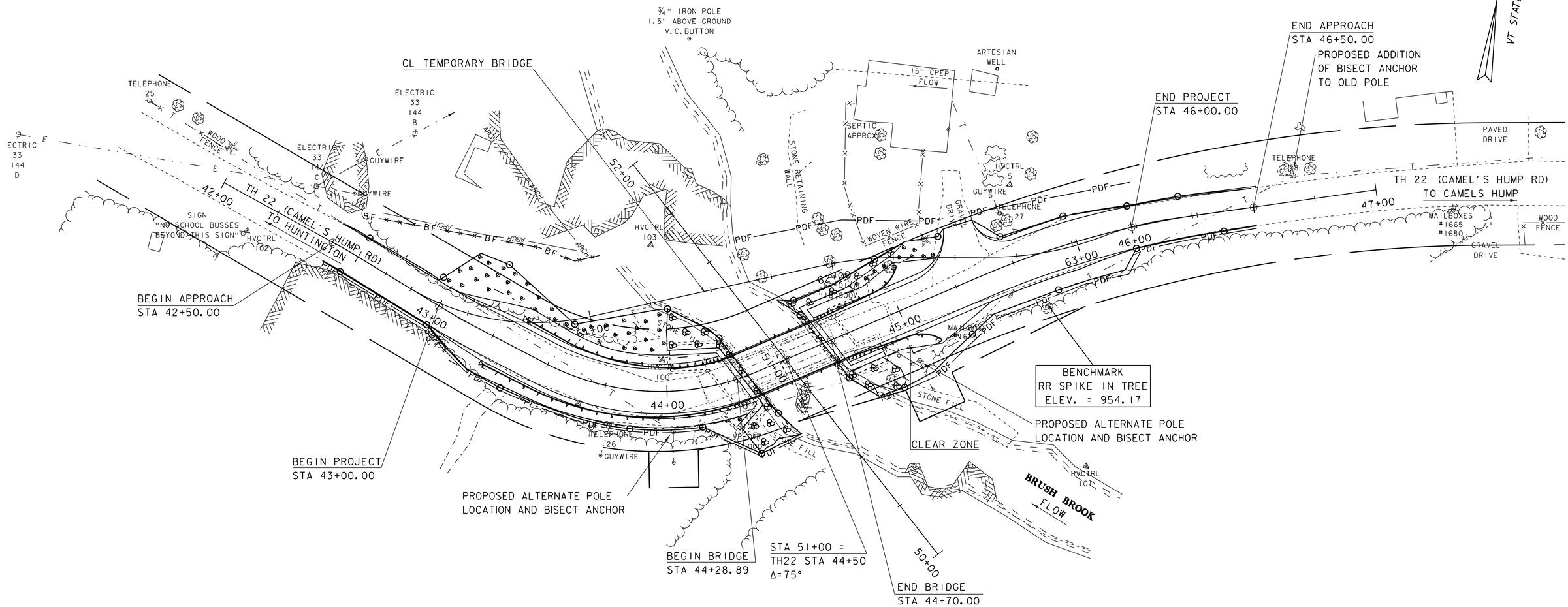
TH 22 - CURVE (4)
DELTA = 15°02′00″
D = 16°22′13″
R = 350.00′
T = 46.18′
L = 91.83′
E = 3.03′



SCALE 1″ = 20′-0″
20 0 20

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: s12j630align.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
ALIGNMENT SHEET	SHEET 7 OF 28

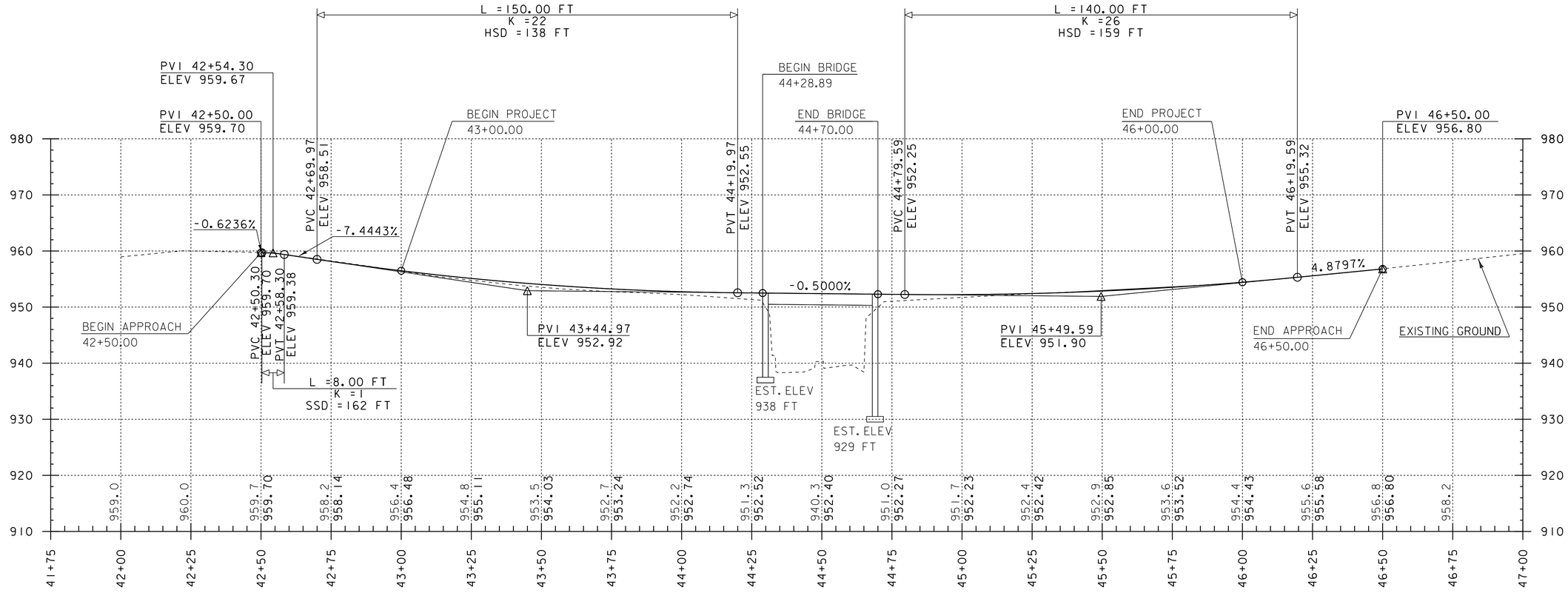
MTS (TANGENT)	HDSB GUARDRAIL	GUARDRAIL APPROACH SECTION	BRIDGE RAIL	REMOVE SIGNS
STA 43+34.48 LT - STA 43+46.98 LT	STA 43+46.98 LT - STA 43+95.81LT	STA 43+95.81LT - STA 44+23.44 LT	STA 44+23.44 LT - STA 44+68.53 LT	STA 44+28.62
STA 43+26.98 RT - STA 43+39.48 RT	STA 43+39.48 RT - STA 44+07.95 RT	STA 44+07.95 RT - STA 44+30.70 RT	STA 44+30.70 RT - STA 44+73.82 RT	STA 44+79.21
	STA 44+93.52 LT - STA 45+04.89 LT	STA 44+68.53 LT - STA 44+93.52 LT		
	STA 44+98.78 RT - STA 45+10.14 RT	STA 44+73.82 RT - STA 44+98.78 RT		



EXISTING BRIDGE INFORMATION
SINGLE SPAN, BUILT 1925
ROLLED BEAM WITH TIMBER DECK
45' STRUCTURE LENGTH
16'-3" FASCIA TO FASCIA WIDTH

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

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: sl2j630nul.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
UTILITY LAYOUT SHEET	SHEET 8 OF 28



TH-22 PROFILE

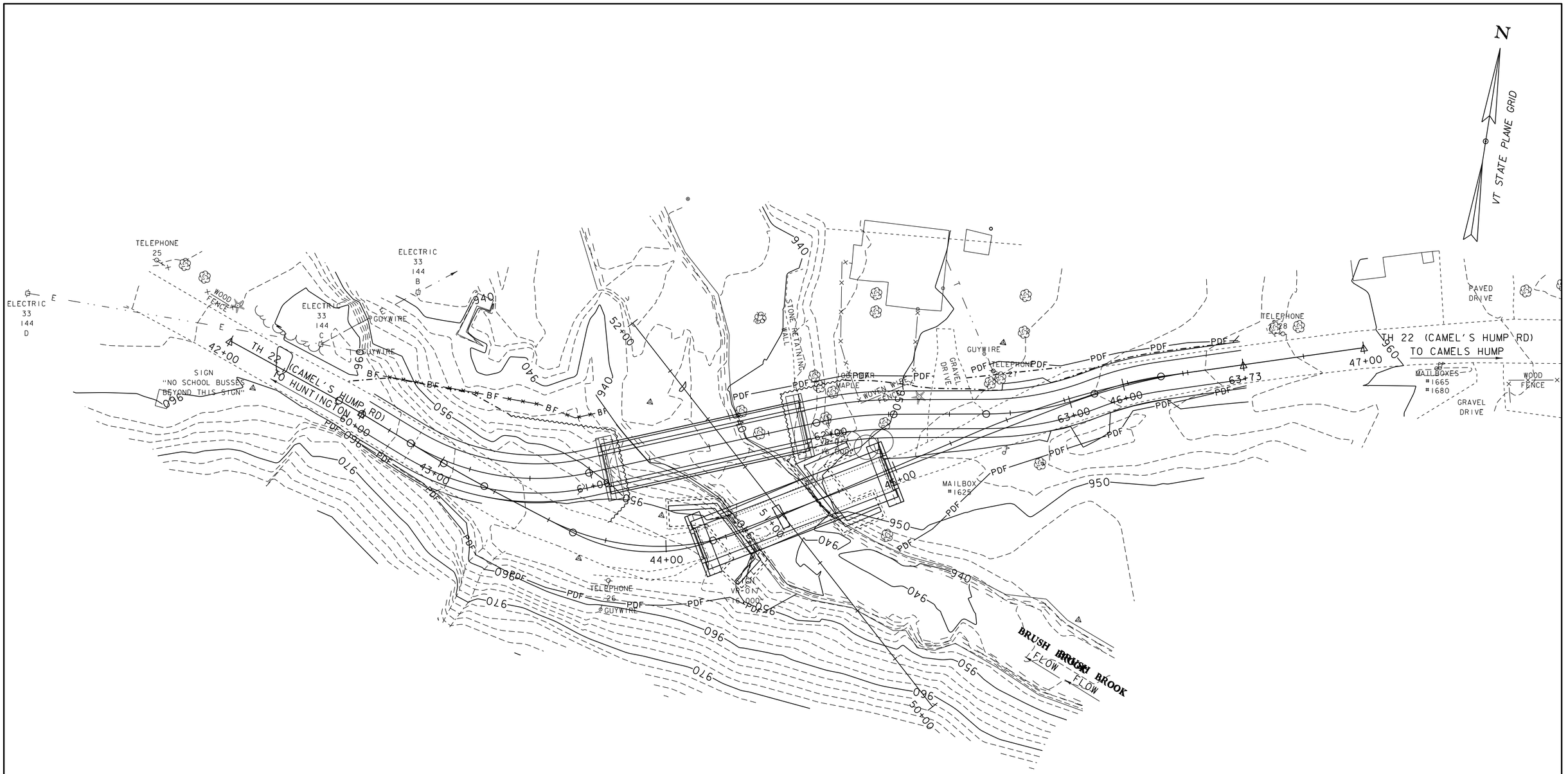
SCALE

1" = 20'-0" HORIZONTAL
1" = 10'-0" VERTICAL

NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)

FILE NAME: sl2j630bdr.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
PROFILE SHEET	SHEET 9 OF 28

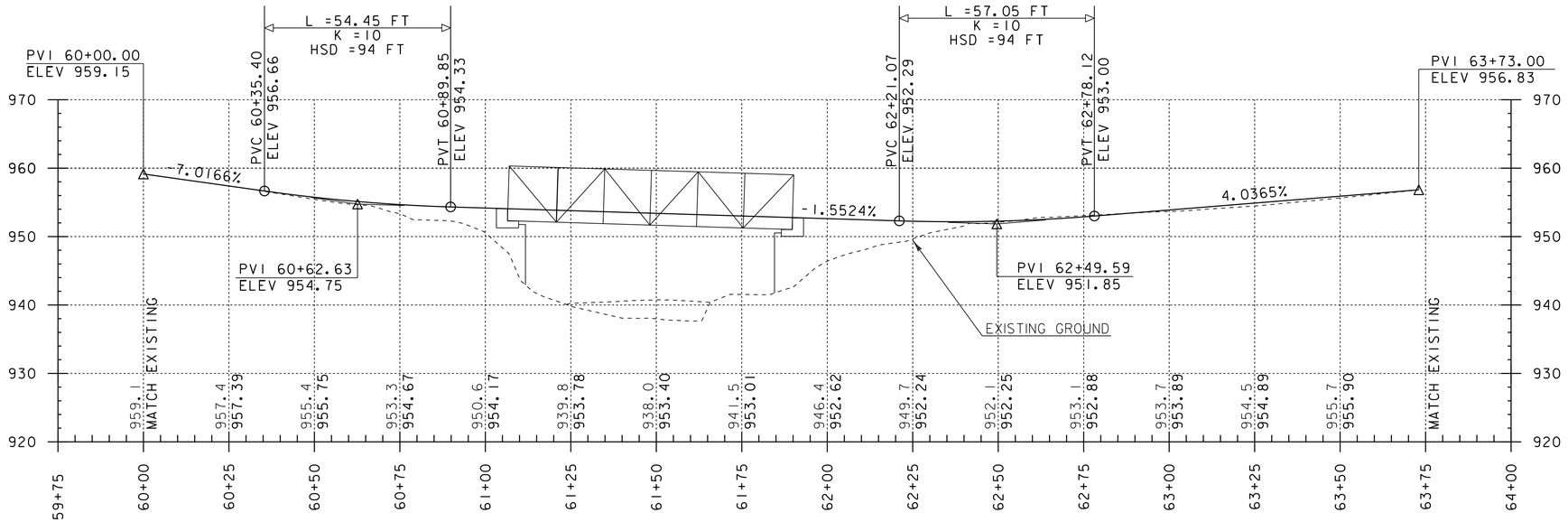


TEMPORARY BRIDGE LAYOUT

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

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)

FILE NAME: s12j630Temporary.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
TEMPORARY BRIDGE LAYOUT	SHEET 10 OF 28



TH-22 TEMPORARY PROFILE

SCALE

1" = 20'-0" HORIZONTAL
1" = 10'-0" VERTICAL

NOTE:
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)

FILE NAME: s12j630Temporary.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
TEMPORARY PROFILE	SHEET 11 OF 28

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

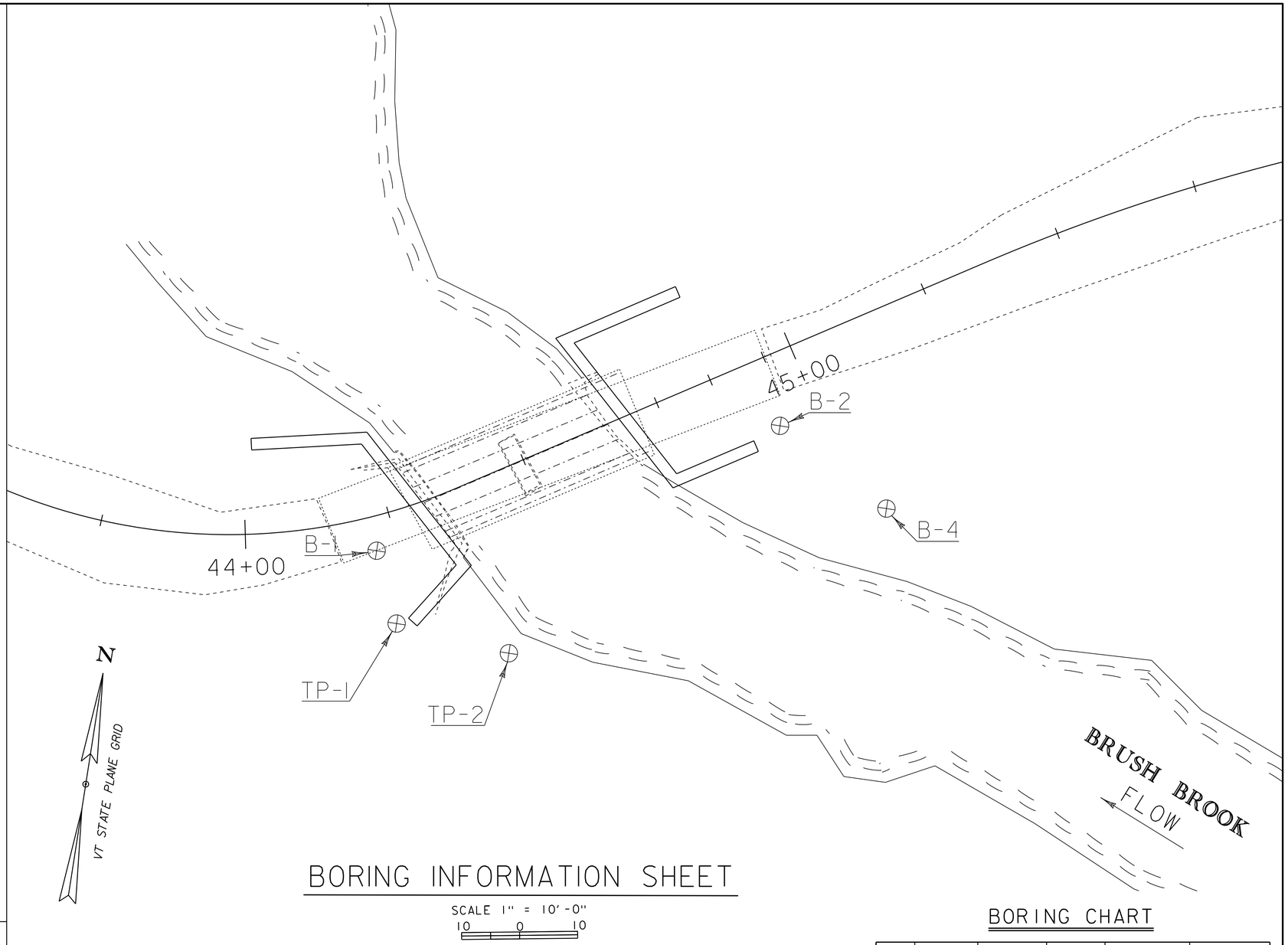
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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		



BORING INFORMATION SHEET

SCALE 1" = 10'-0"

10 0 10

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 11/12/2013 and 12/06/2013 by Terracon (consultant).

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	BEDROCK ELEV.	OFFSET	NORTHING	EASTING
B-1	44+24	938.0 FT	8.5 R	1525232.77	654519.47
B-2	44+93	934.0 FT	12.0 R	1525258.01	654505.53
B-4	45+90	929.0 FT	36.5 R	1525318.49	654540.18
TP-1	44+24	943.6 FT	21.8 R	1525238.11	654507.60
TP-2	44+38	942.0 FT	33.4 R	1525258.01	654505.53

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BO 1445(38)

FILE NAME: s12J630bor.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: C. FRENCH
BORING INFORMATION SHEET

PLOT DATE: 03-JUN-2020
DRAWN BY: C. FRENCH
CHECKED BY: C. MOONEY
SHEET 12 OF 28

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

BORING LOG

Huntington BO 1445(38)

Boring No.: B-1
Page No.: 1 of 1
Pin No.: 12J630
Checked By: ASP

Boring Crew: New Hampshire Boring, Derry, NH, CBR
Date Started: 11/14/13 Date Finished: 11/15/13
VTSPG NAD83: N 1525232.77 ft E 654519.47 ft
Station: 44+24 Offset: 8.5 R
Ground Elevation: 950.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4.25	1.38 in
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:	Manual	
Rig:	CME 45C SKID	CE = 1.3

Groundwater Observations

Date	Depth (ft)	Notes
11/14/13	7.5	WS
11/15/13	8.0	ACR
11/15/13	8.3	BCR

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Rec. = 0.5 ft, 0.0 ft – 0.33 ft, 4-inches topsoil			2-3-6-7 (9)				
		A-1-b, SaGrSi, brn, Moist, FILL							
		A-2-4, GrSiSa, brn, Moist Rec. = 0.5 ft			4-3-4-5 (7)				
5		A-4, SiSaGr, brn, Wet, Rec. = 0.75 ft			3-3-16-15 (19)				
		A-2-4, SaGrSi, red-brn, with organics from 6-8 feet Rec. = 1.16 ft			15-16-8-28 (24)				
		A-2-4, SaSiGr, brn-gry, Rec. = 0.5 ft			5-9-12-20 (21)				
10		A-1-b, GrSaSi, gry-brn, Rec. = 0.75 ft			25-50/3" (50+)				
		A-1-b, GrSaSi, brn, Weathered bedrock							
		10.75 ft – 12.0 ft, Weathered bedrock							
		12.0 ft – 17.0 ft, Bedrock. Gray, greenish gray muscovite-quartz SCHIST, magnetite rich zone at 14.5'. moderately hard, moderately weathered from 15' to 16', remainder of run unweathered	1	90 (51.9)	Top of Bedrock @ 12.0 ft				
15									
		17.0 ft – 22.0 ft, Bedrock. Gray, greenish gray muscovite-quartz SCHIST, moderately hard, unweathered	2	100 (78.3)					
20									
		Hole stopped @ 22.0 ft							
25		Remarks: Elevations are approximate.							
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. CE is the hammer energy correction factor. CE is an estimated value.
3. Water level readings have been made at times and under conditions stated.
Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
4. Ground surface elevations indicated on the boring logs were estimated based on the grading plan provided by VAOT.

Terracon

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

BORING LOG

Huntington BO 1445(38)

Boring No.: B-2
Page No.: 1 of 1
Pin No.: 12J630
Checked By: ASP

Boring Crew: New Hampshire Boring, Derry, NH, CBR
Date Started: 11/11/13 Date Finished: 11/12/13
VTSPG NAD83: N 1525258.01 ft E 654505.53 ft
Station: 44+93 Offset: 12.0 R
Ground Elevation: 950.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4.25	1.38 in
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:	Manual	
Rig:	CME 45C SKID	CE = 1.3

Groundwater Observations

Date	Depth (ft)	Notes
11/12/13	5.0	ACR
11/13/13	8.0	16 hrs

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-2-4, SaGrSi, brn, Moist, Rec. = 1.5 ft, FILL			6-6-7-9 (13)				
		A-2-4, GrSaSi, brn, Moist, Rec. = 0.7 ft			10-6-7-8 (13)				
		A-1-a, GrSaSi, brn-gry, Moist, Rec. = 0.8 ft			5-4-21-42 (25)				
5		A-1-b, GrSaSi							
		A-1-a, GrSaSi, Rec. = 1.3 ft			23-39-44-50 (83)				
		A-1-a, GrSaSi, Rec. = 1.0 ft			40-40-20-41 (60)				
10		A-1-a, GrSaSi, Rec. = 0.5 ft, same as above with probable cobbles or boulder			13-50/1" (50+)				
		10.58 ft – 12.0 ft							
		A-4, SiGrSa, brn-gry, Moist, Rec. = 0.8 ft			22-34-36-100/20" (70)				
		A-4, GrSiSa, Rec. = 0.4 ft			35-25/0" (25+)				
15		14.5 ft – 16.0 ft, Probable weathered bedrock							
		16.0 ft – 21.0 ft, Gray, greenish gray muscovite-quartz SCHIST, moderately hard, unweathered	1	100 (100)	Top of Bedrock @ 16.0 ft				
20									
		21.0 ft – 26.0 ft, Gray, greenish gray muscovite-quartz SCHIST, moderately hard, unweathered	2	85 (90.2)					
25		Hole stopped @ 26.0 ft							
		Remarks: Elevations are approximate.							
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. CE is the hammer energy correction factor. CE is an estimated value.
3. Water level readings have been made at times and under conditions stated.
Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
4. Ground surface elevations indicated on the boring logs were estimated based on the grading plan provided by VAOT.

Terracon

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PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BO 1445(38)

FILE NAME: s12j630bor.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: C. FRENCH
BORING LOG SHEET 1

PLOT DATE: 03-JUN-2020
DRAWN BY: C. FRENCH
CHECKED BY: C. MOONEY
SHEET 13 OF 28

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

BORING LOG

Huntington BO 1445(38)

Boring No.: B-4
Page No.: 1 of 1
Pin No.: 12J630
Checked By: ASP

Boring Crew: New Hampshire Boring, Derry, NH, CBR
Date Started: 11/13/13 Date Finished: 11/13/13
VTSPG NAD83: N 1525318.49 ft E 654540.18 ft
Station: 45+90 Offset: 36.5 R
Ground Elevation: 948.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4.25	1.38 in
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:	Manual	
Rig:	CME 45C SKID	CE = 1.3

Groundwater Observations

Date	Depth (ft)	Notes
11/13/13	7.0	ACR
11/14/13	7.0	16 hrs

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run	(Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Rec. = 1.2 ft, 0.0 ft – 0.33 ft, 4-inches topsoil				2-6-8-4 (14)				
		A-4, SaSiGr, brn, Moist								
		A-1-b, SaGrSi, brn, Rec. = 0.9 ft				3-6-37-22 (43)				
5		A-1-a, GrSaSi, gry-brn, Rec. = 0.5 ft				27-27-19-100 (46)				
		A-1-b, GrSaSi, gry-brn, Rec. = 0.3 ft				8-17-17-34 (34)				
		A-1-b, GrSaSi, brn, Rec. = 1.3 ft				23-35-40-100 (75)				
10		A-1-a, GrSaSi, gry-brn, Rec. = 0.5 ft				22-24-33-45 (57)				
		A-4, SiSaGr, gry-brn, Rec. = 0.4 ft				50 (50+)				
		A-4, SiSaGr, brn, Rec. = 0.4 ft				35-50-100 (150+)				
15		A-4, SiSaGr, gry-brn, Rec. = 0.2 ft, Soil classification for this sample based on visual observation				49-50 (50+)				
		A-1-a, GrSaSi, brn, Rec. = 0.2 ft, Probable weathered bedrock				50 (50+)				
20		19.0 ft – 24.0 ft, Gray, greenish gray muscovite-quartz SCHIST, moderately hard, unweathered	1	57 (68.4)		Top of Bedrock @ 19.0 ft				
25		24.0 ft – 29.0 ft, Gray, greenish gray muscovite-quartz SCHIST, moderately hard, slight weathering along foliation	2	46 (41.3)						
30		Hole stopped @ 29.0 ft								

Remarks:
Elevations are approximate.

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. CE is an estimated value.
3. Water level readings have been made at times and under conditions stated.
Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
4. Ground surface elevations indicated on the boring logs were estimated based on the grading plan provided by VAOT.

Terracon

2010 COPY J:\135159.GPJ VERMONT AOT.GDT 1/10/20

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: s12j630bor.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
BORING LOG SHEET 2	SHEET 14 OF 28

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

BORING LOG

Huntington BO 1445(38)

Boring No.: TP-1
Page No.: 1 of 1
Pin No.: 12J630
Checked By: ASP

Boring Crew: New Hampshire Boring, Derry, NH, RJF
Date Started: 12/06/13 Date Finished: 12/06/13
VTSPG NAD83: N 1525238.11 ft E 654507.60 ft
Station: 44+24 Offset: 21.8 R
Ground Elevation: 949.0 ft

	Casing	Sampler
Type:		
I.D.:		
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:		
Rig:	KX71-3 Excavator	CE =

Groundwater Observations

Date	Depth (ft)	Notes
12/06/13		None observed

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		0.0 ft – 0.8 ft, Topsoil/roots/organics, moist to wet					
		A-4, SiSaGr, brn, trace roots, soil classification for this sample based on visual observation					
5		A-4, SiSaGr, olive-brn, trace weathered rock and occasional boulders ~12", soil classification for this sample based on visual observation					
		5.3 ft, Apparent weathered rock					
		Hole stopped @ 5.4 ft — Top of Bedrock @ 5.4 ft					

Remarks:
Test pit excavated by New Hampshire Boring.
Excavator: Kubota KX71-3
Operator: Mike

Although water was present within excavation, there did not appear to be a static GWL encountered. Water present in excavation appeared to be from surface run-off.

Ground surface elevation at top of test pit 3.5 feet below bridge deck based on visual observation.

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. CE is an estimated value.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
4. Ground surface elevations indicated on the boring logs were estimated based on the grading plan provided by VAOT.

Terracon

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

BORING LOG

Huntington BO 1445(38)

Boring No.: TP-2
Page No.: 1 of 1
Pin No.: 12J630
Checked By: ASP

Boring Crew: New Hampshire Boring, Derry, NH, CBR
Date Started: 11/15/13 Date Finished: 11/15/13
VTSPG NAD83: N 1525258.01 ft E 654505.53 ft
Station: 44+38 Offset: 33.4 R
Ground Elevation: 946.0 ft

	Casing	Sampler
Type:		
I.D.:		
Hammer Wt:	N.A.	N.A.
Hammer Fall:	N.A.	N.A.
Hammer/Rod Type:		
Rig:	Hand dug	CE =

Groundwater Observations

Date	Depth (ft)	Notes
11/15/13		None observed

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		0.0 ft – 0.5 ft, 6-inches topsoil, organics, moist, brown					
		A-4, SiSaGr, brn					
		A-4, SiSaGr, gray, Moist, weathered bedrock					
5		Hole stopped @ 4.0 ft — Top of Bedrock @ 4.0 ft					

Remarks:
Hand dug by New Hampshire Boring.
Metal rod probed throughout approximate 10-foot radius around TP-2, rod hit probable bedrock at approximately 4 feet.
Elevations are approximate.

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. CE is an estimated value.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.
4. Ground surface elevations indicated on the boring logs were estimated based on the grading plan provided by VAOT.

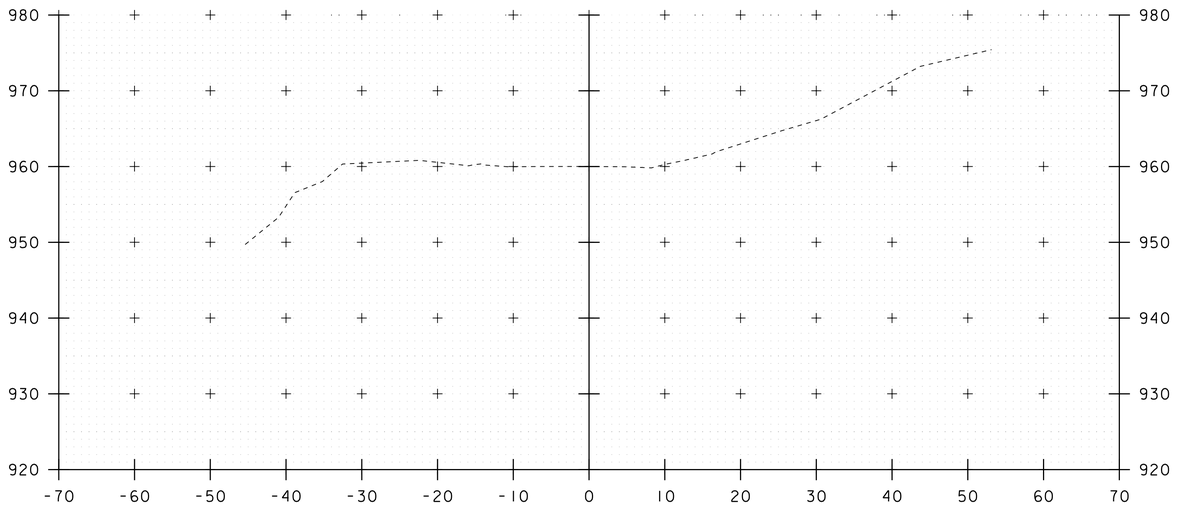
Terracon

2010 COPY J1135159.GPJ VERMONT AOT.GDT 1/10/20

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BO 1445(38)

FILE NAME: s12j630bor.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: C. FRENCH
BORING LOG SHEET 3

PLOT DATE: 03-JUN-2020
DRAWN BY: C. FRENCH
CHECKED BY: C. MOONEY
SHEET 15 OF 28



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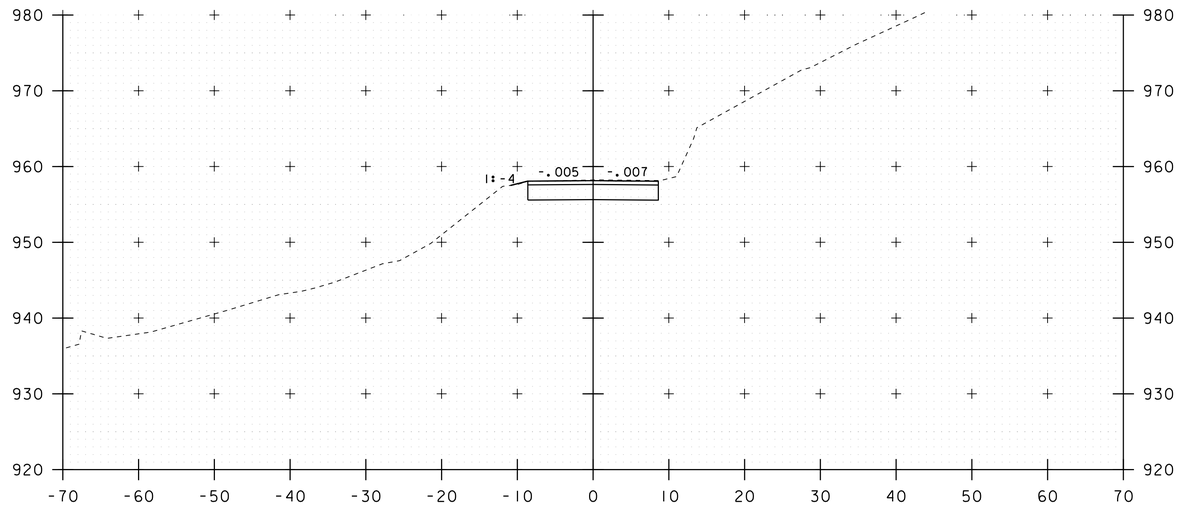

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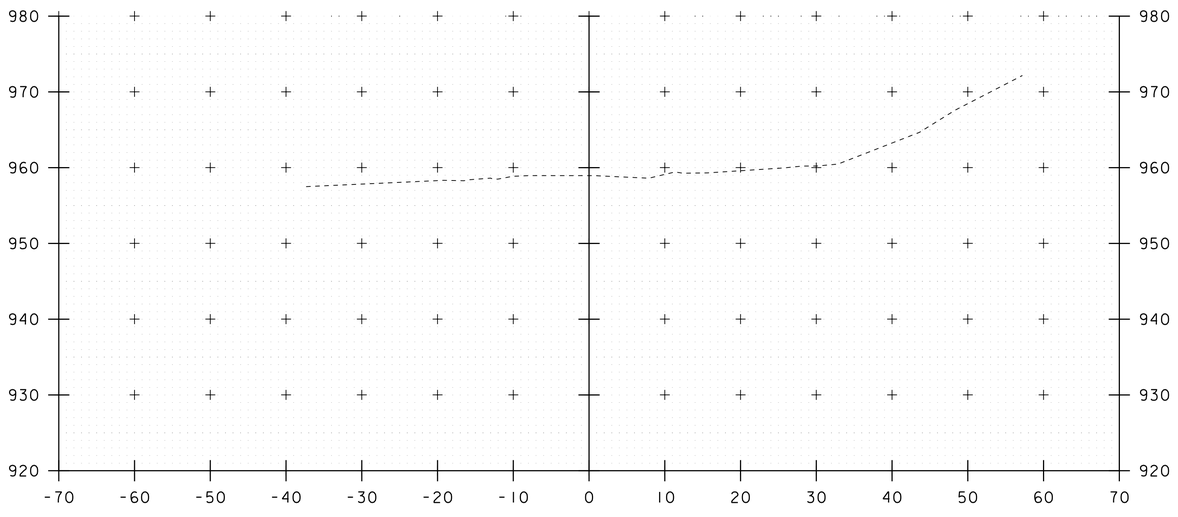

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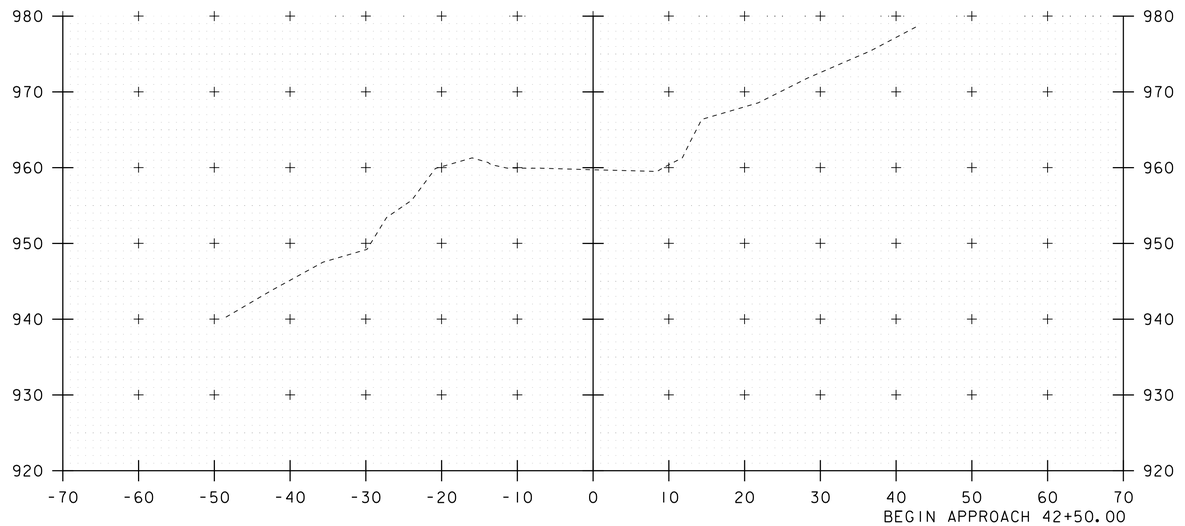
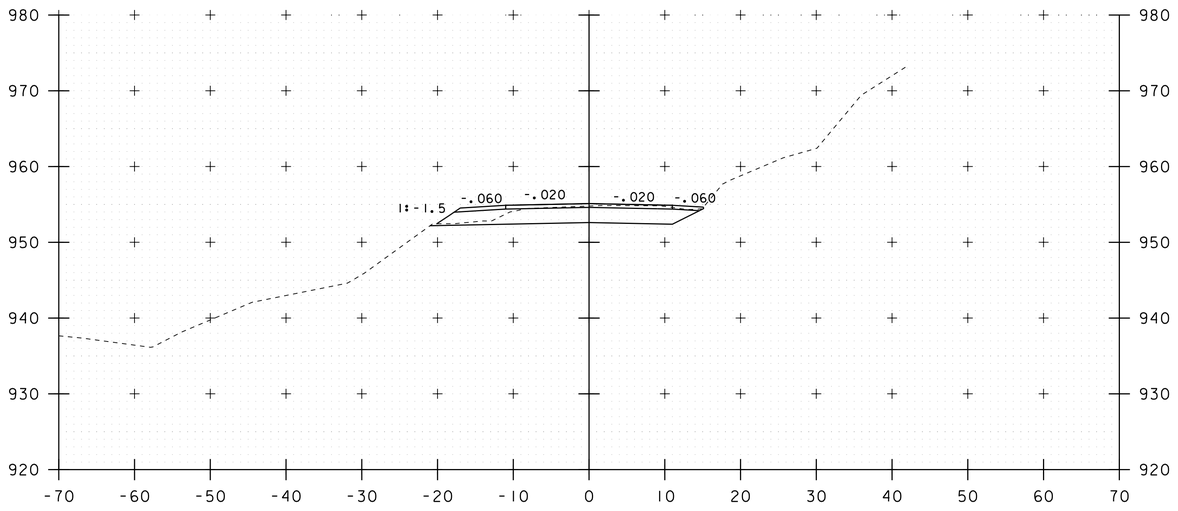


42+50

STA. 42+00 TO STA. 42+75

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CROSS SECTIONS 1	**SHEET** 16 **OF** 28



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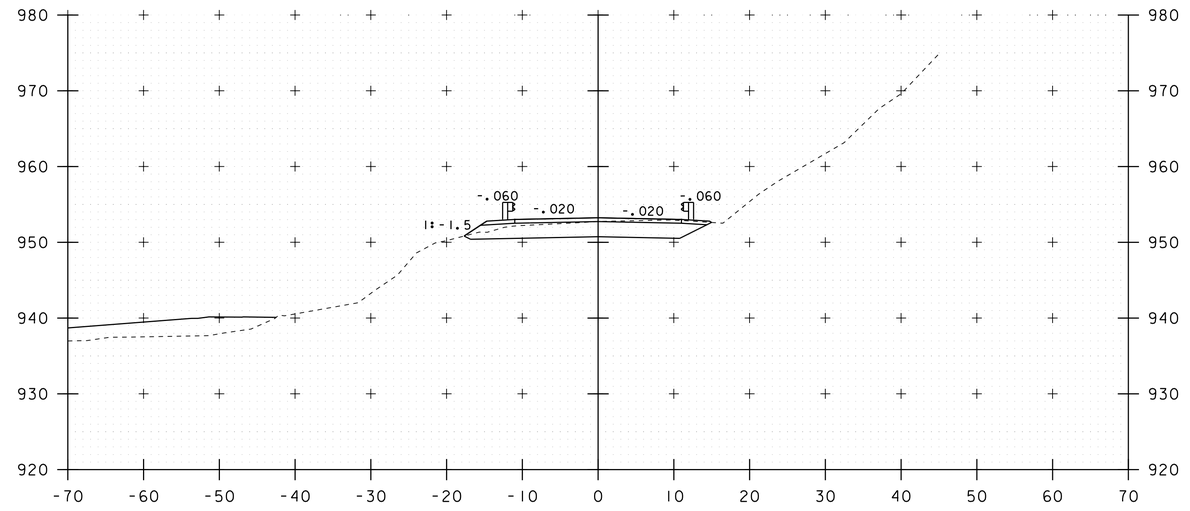

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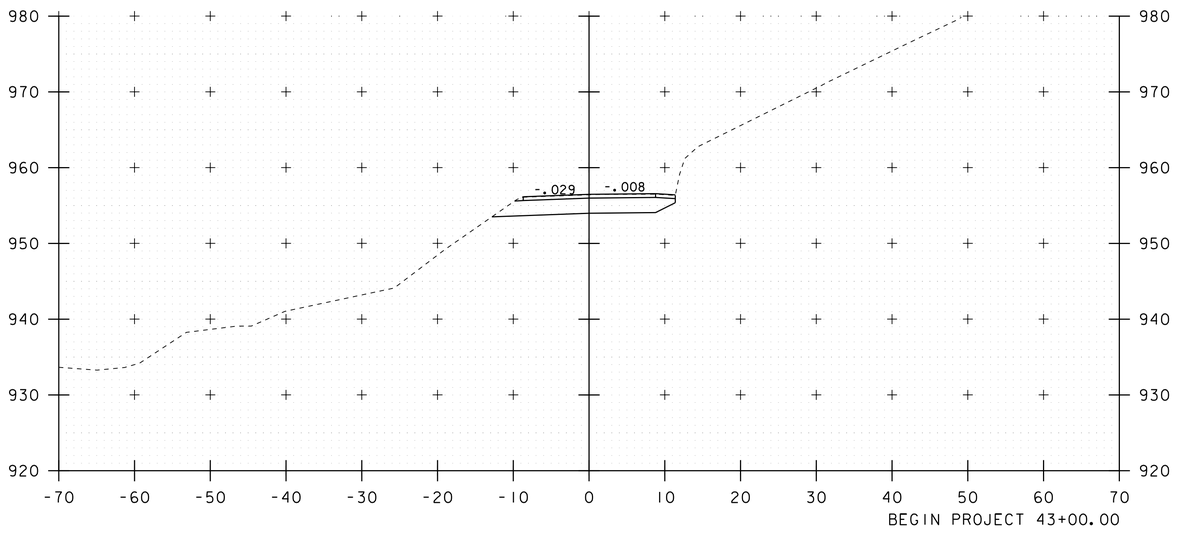

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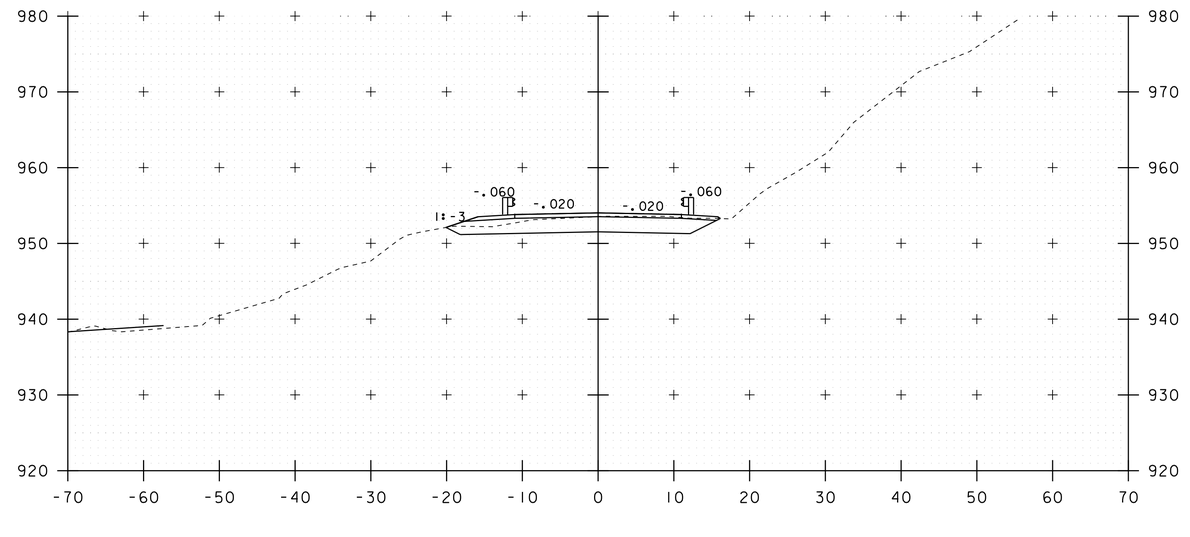
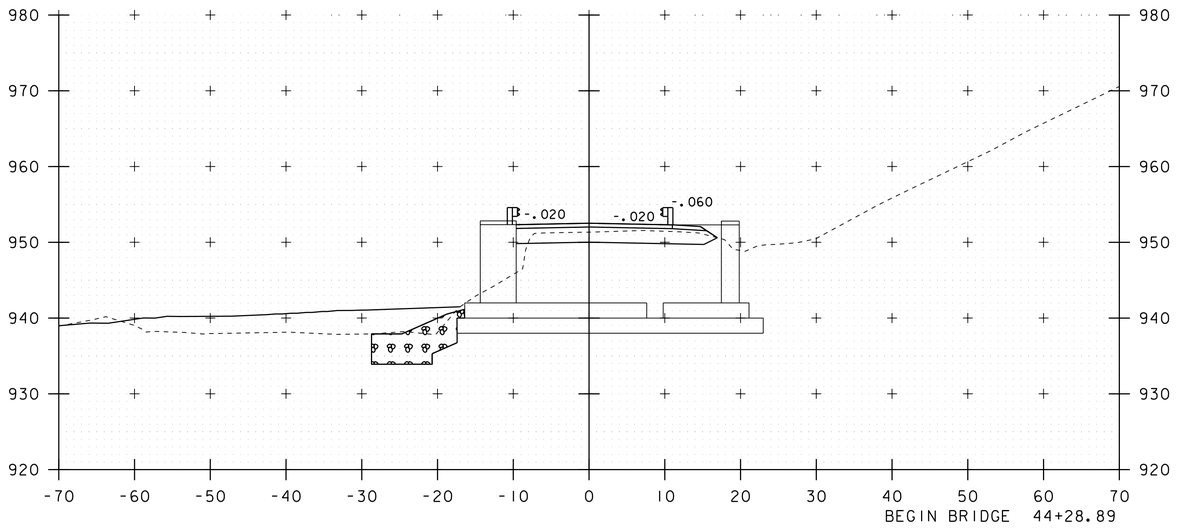


43+50

STA. 43+00 TO STA. 43+75

PROJECT NAME:	HUNTINGTON		
PROJECT NUMBER:	BO 1445(38)		
FILE NAME:	12j630xs.dgn	**PLOT DATE:**	03-JUN-2020
PROJECT LEADER:	R. YOUNG	**DRAWN BY:**	C. FRENCH
DESIGNED BY:	C. FRENCH	**CHECKED BY:**	C. MOONEY
CROSS SECTIONS 2		**SHEET**	17 **OF** 28



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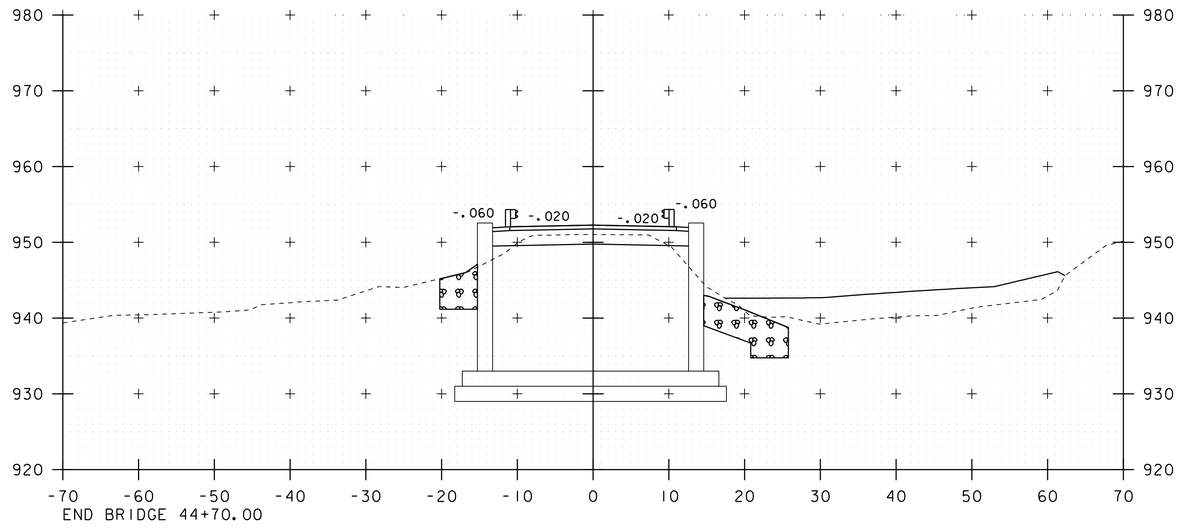

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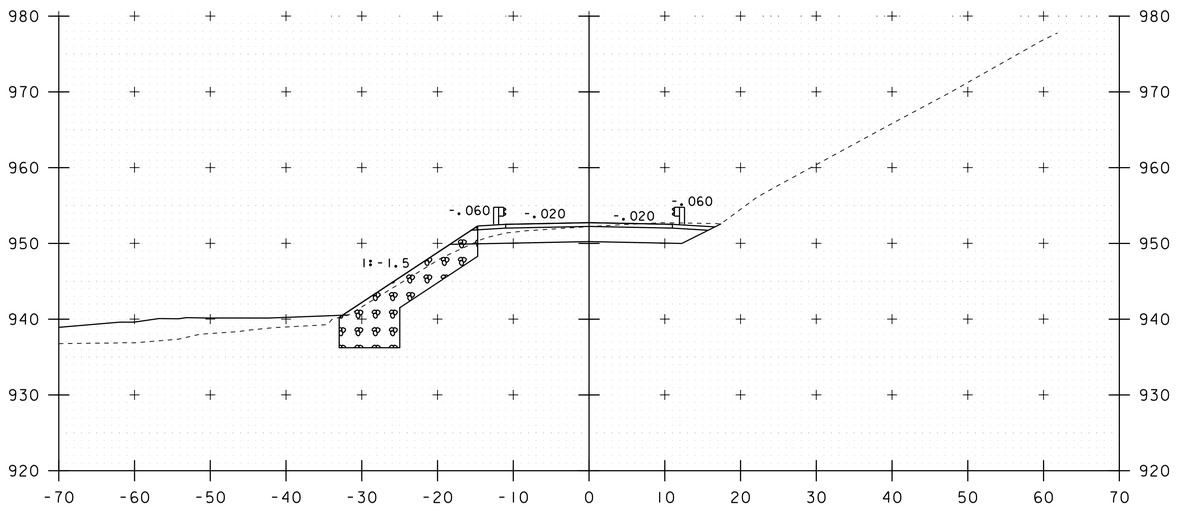

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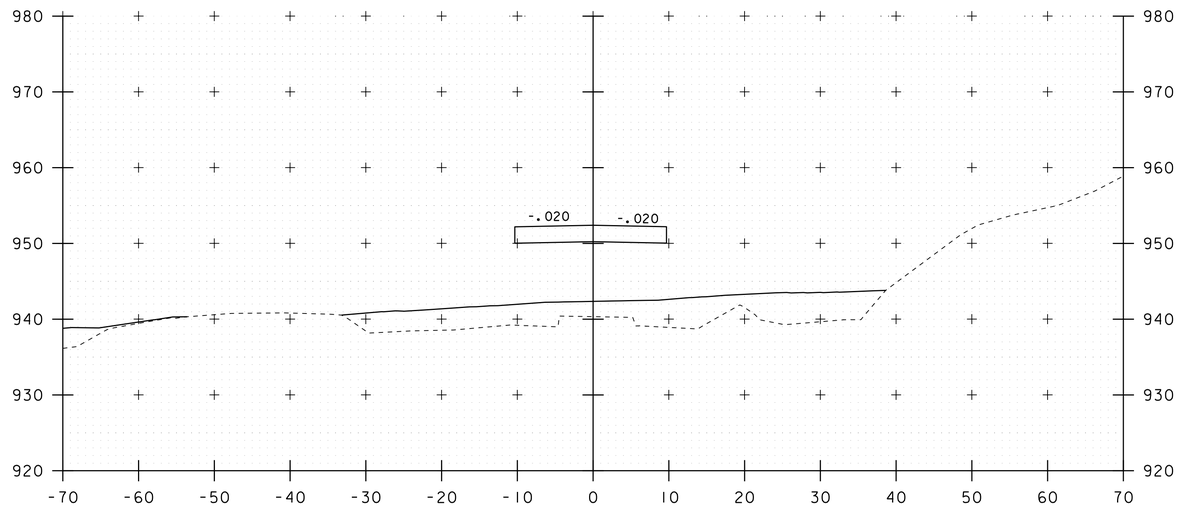
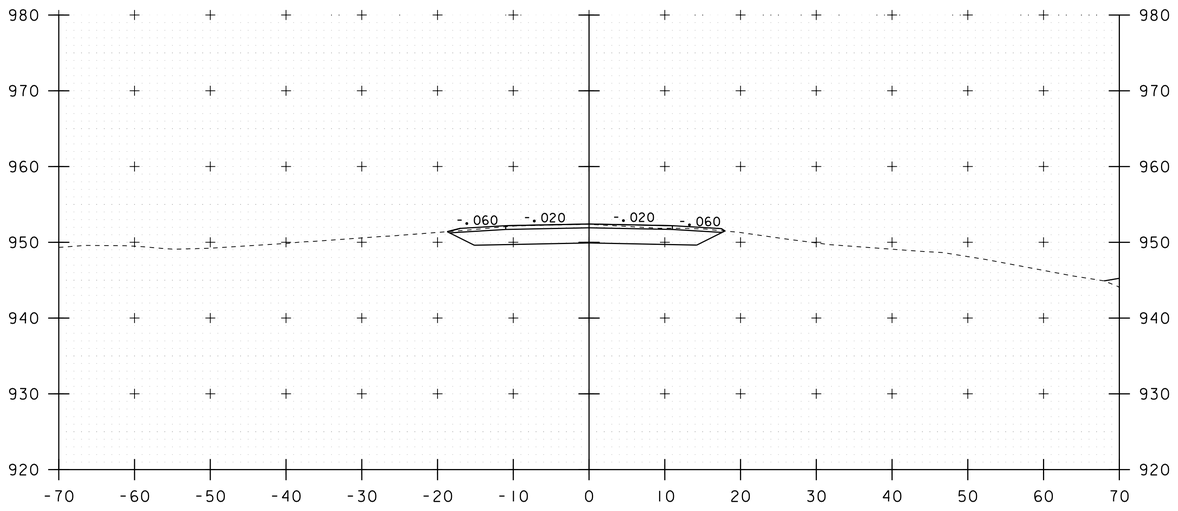


44+50

STA. 44+00 TO STA. 44+75

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CROSS SECTIONS 3	**SHEET** 18 **OF** 28



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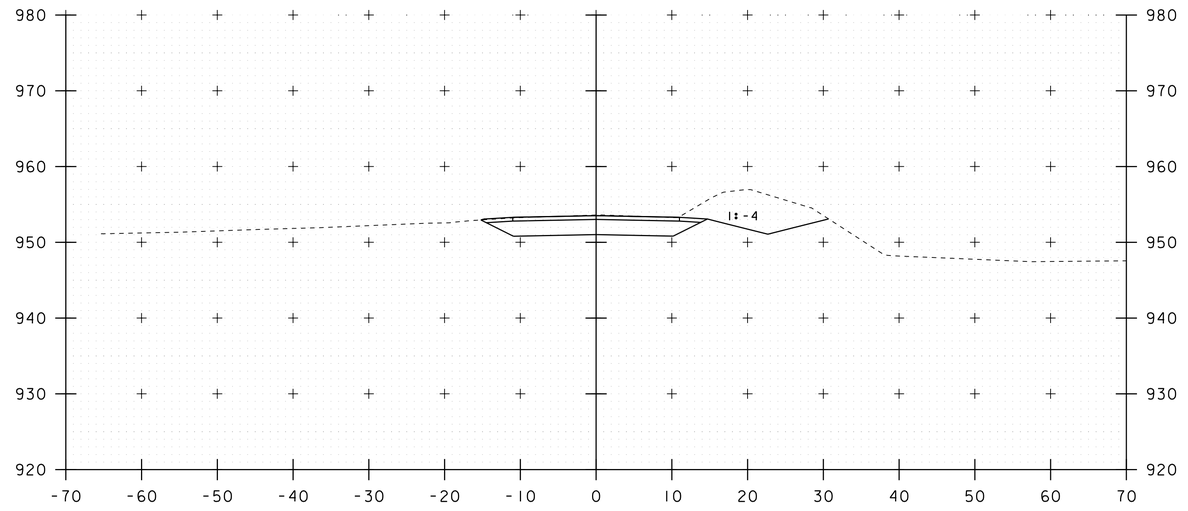

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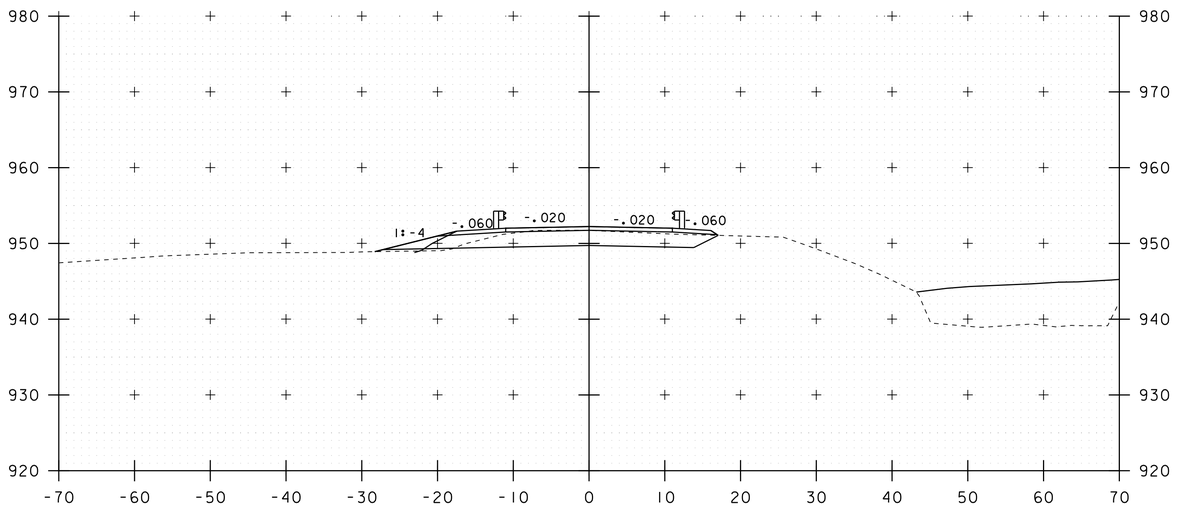

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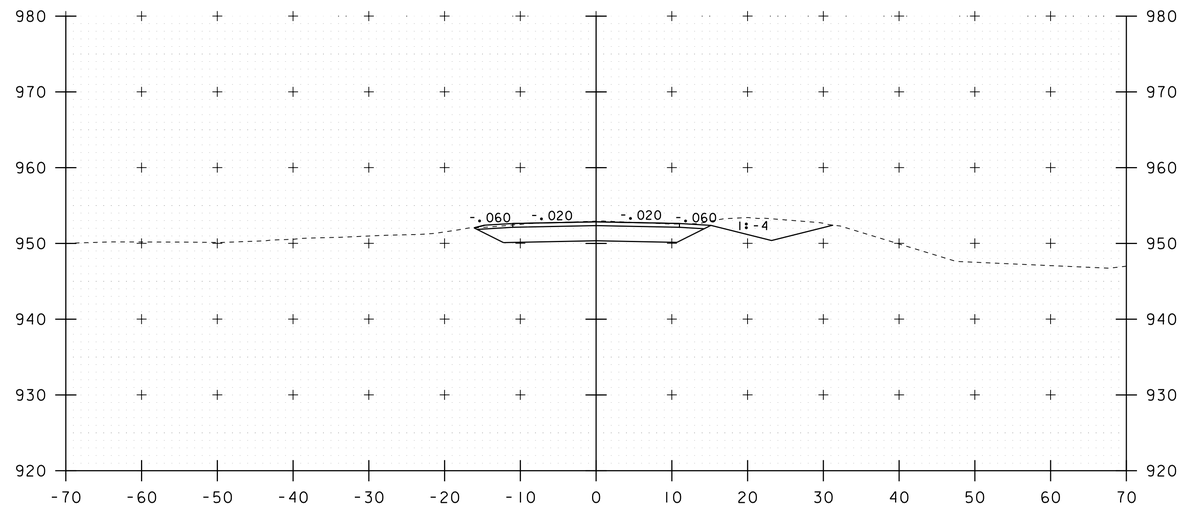
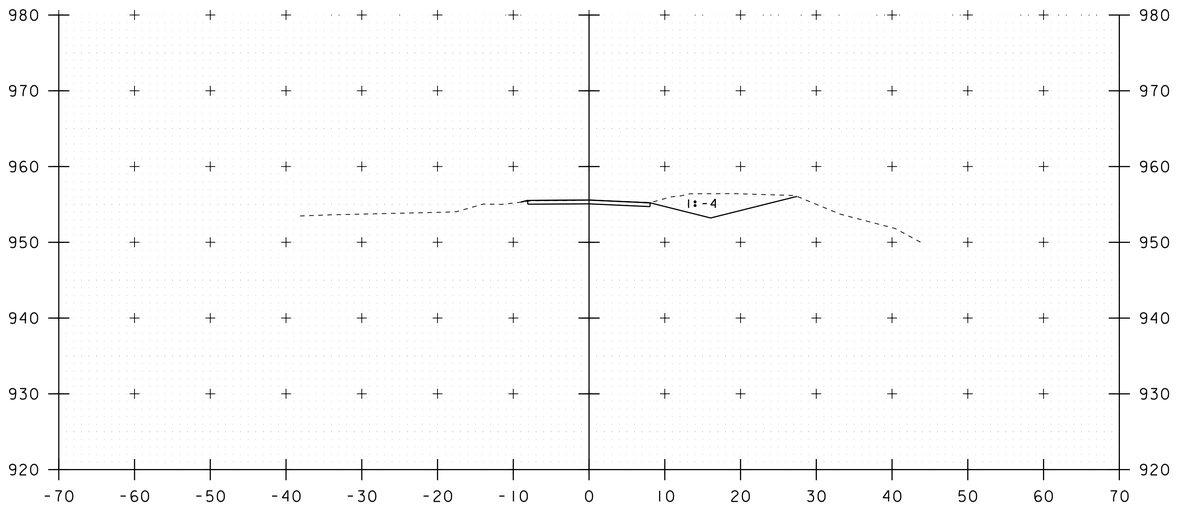


45+50

STA. 45+00 TO STA. 45+75

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CROSS SECTIONS 4	**SHEET** 19 **OF** 28



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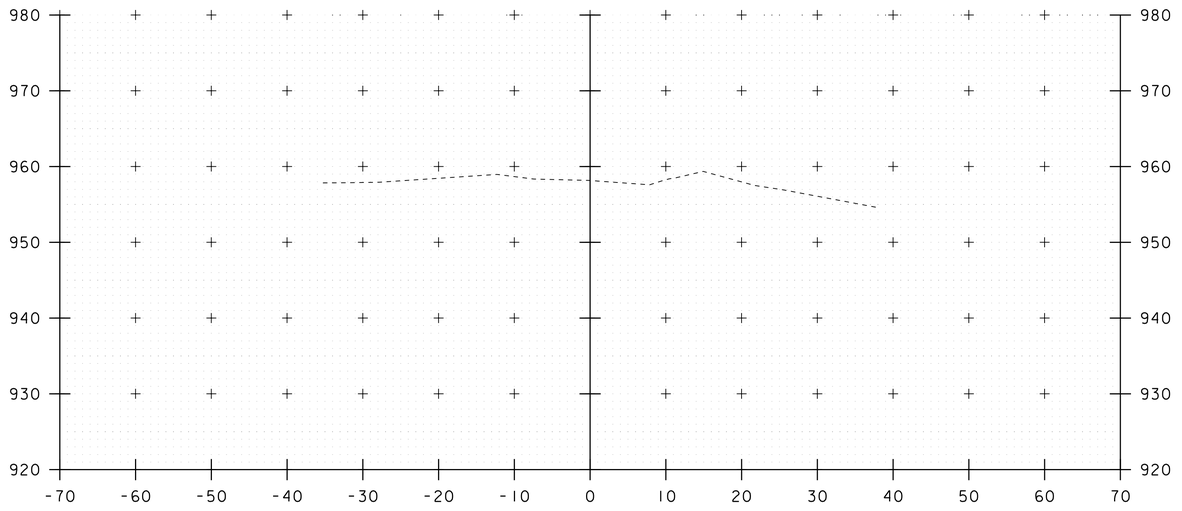

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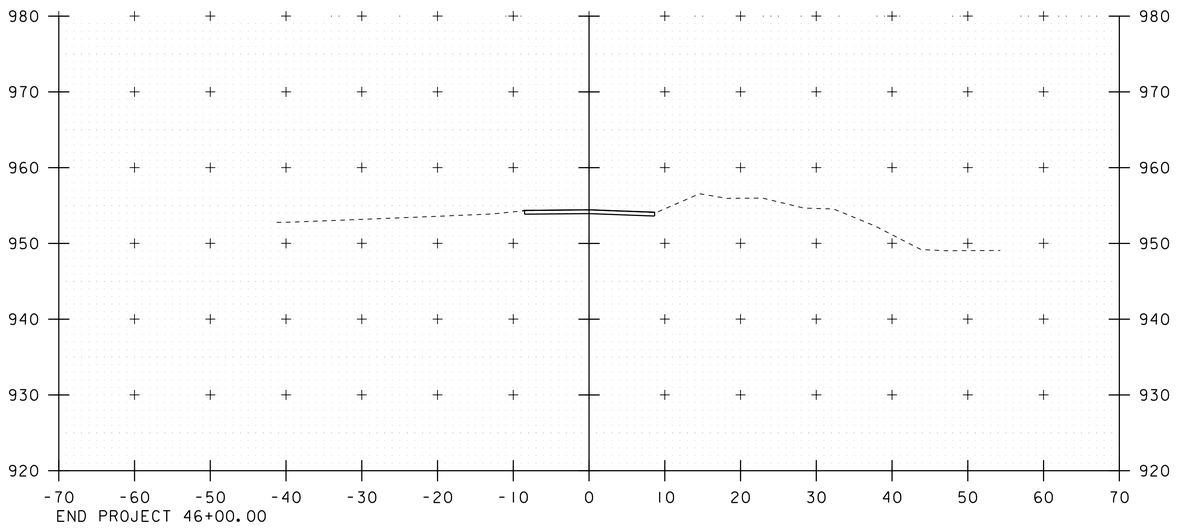

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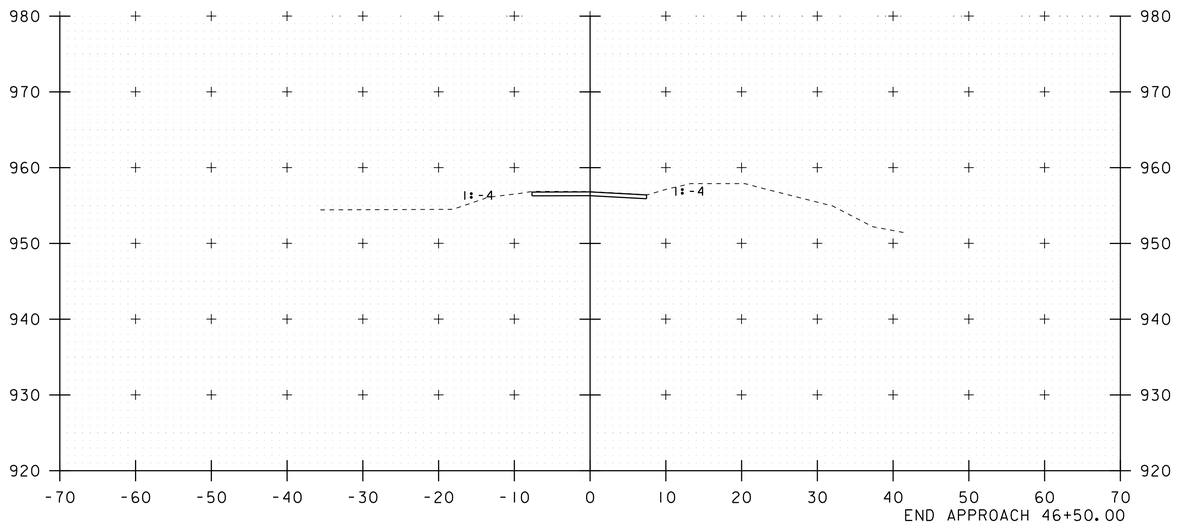
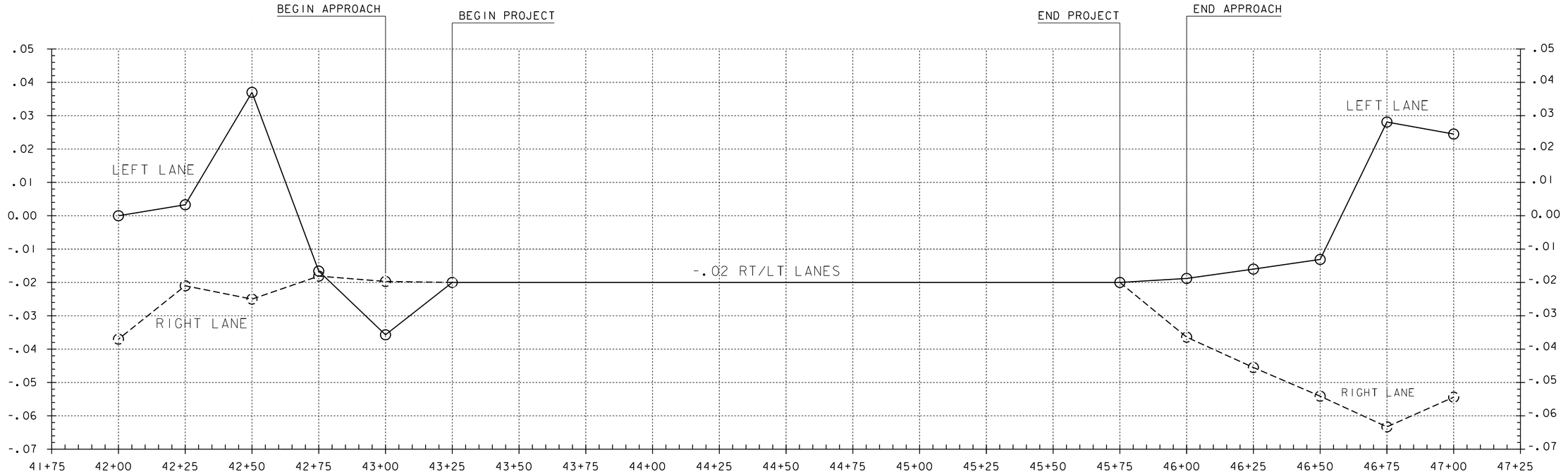


46+50

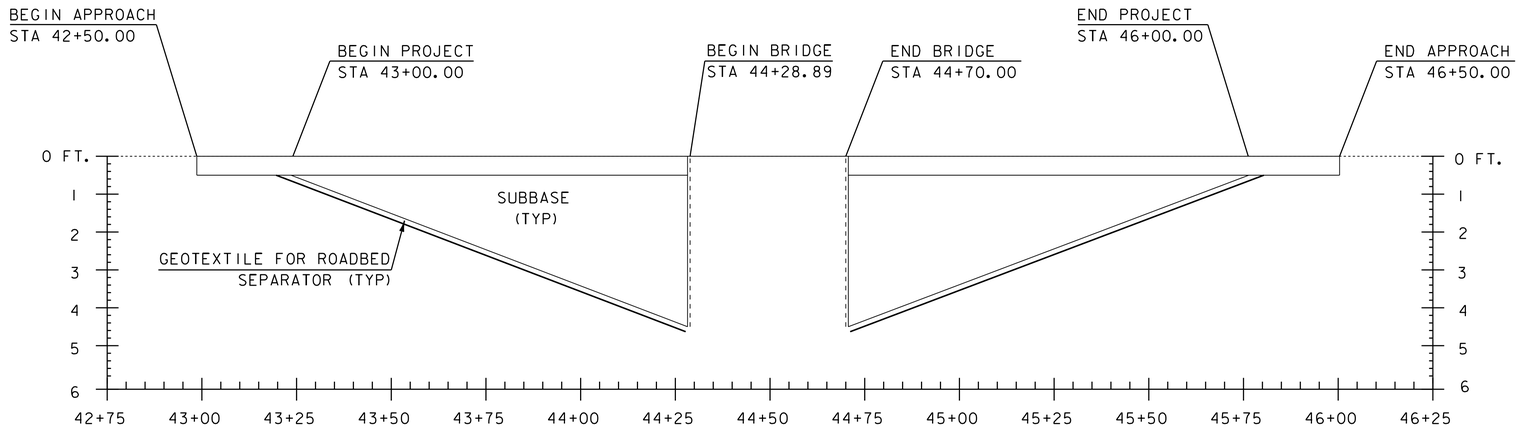
STA. 46+00 TO STA. 46+75

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CROSS SECTIONS 5	**SHEET** 20 **OF** 28



BANKING DIAGRAM

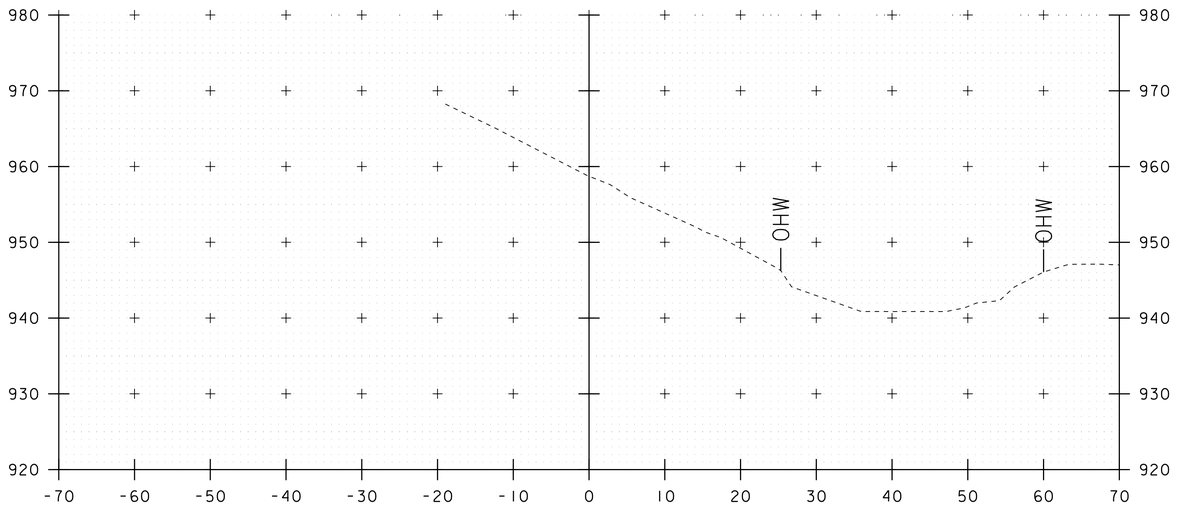
NOT TO SCALE



MATERIAL TRANSITION

NOT TO SCALE

PROJECT NAME: HUNTINGTON	
PROJECT NUMBER: BO 1445(38)	
FILE NAME: sl2j630BankingMaterial.dgn	PLOT DATE: 03-JUN-2020
PROJECT LEADER: R. YOUNG	DRAWN BY: C. FRENCH
DESIGNED BY: C. FRENCH	CHECKED BY: C. MOONEY
BANKING & MATERIAL TRANSITION SHEET	SHEET 21 OF 28



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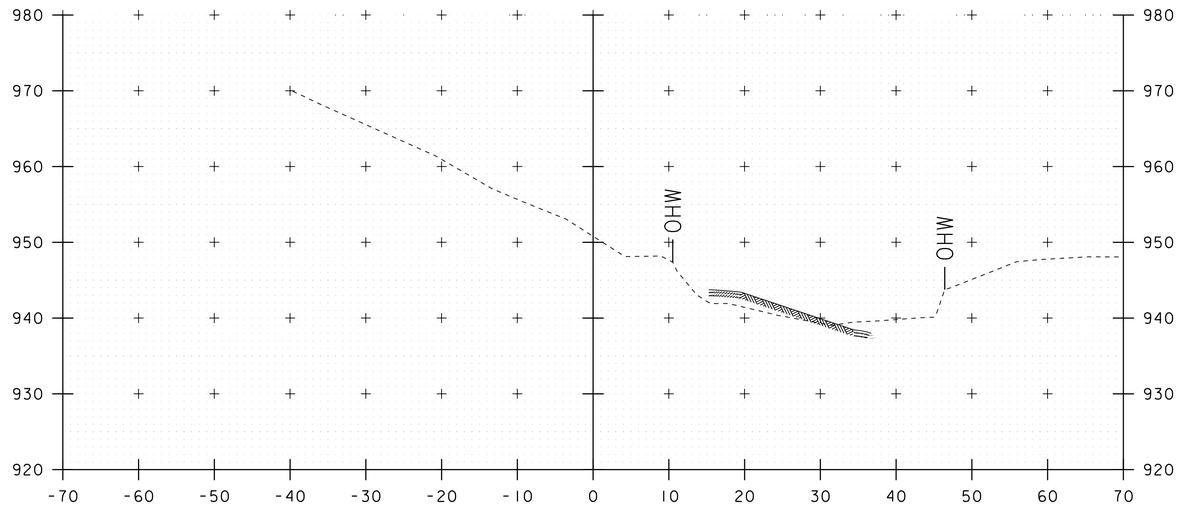

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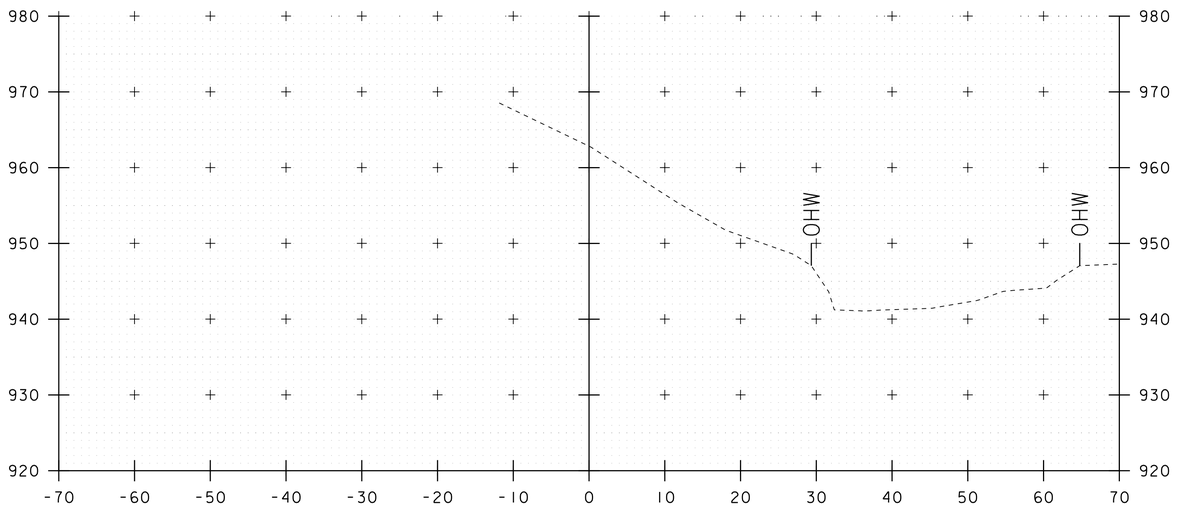

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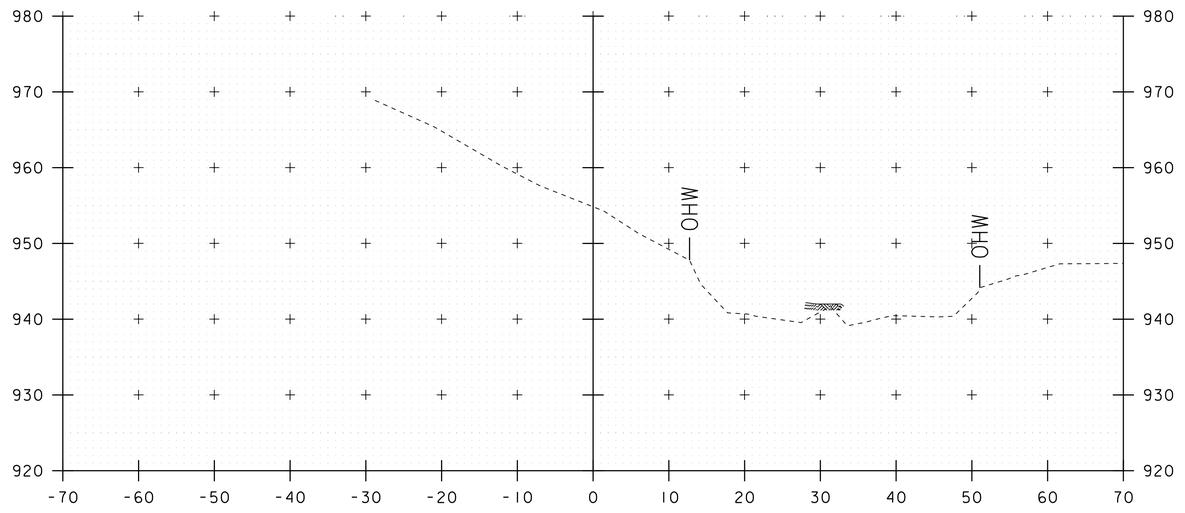
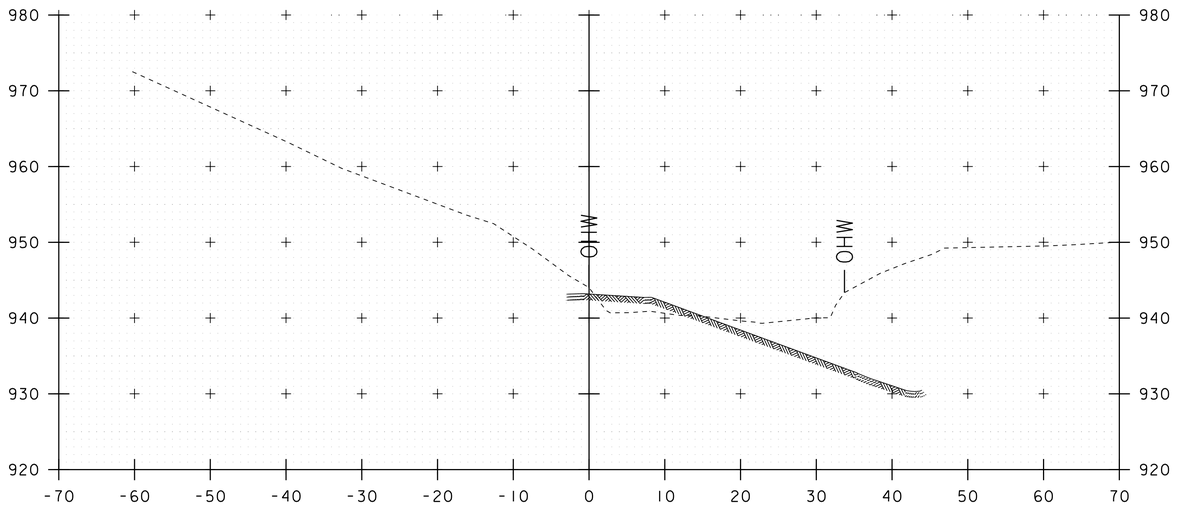


50+20

STA. 50+00 TO STA. 50+30

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME:	12j630xs.dgn
PROJECT LEADER:	R. YOUNG
DESIGNED BY:	C. FRENCH
CHANNEL CROSS SECTIONS 1	
PLOT DATE:	03-JUN-2020
DRAWN BY:	C. FRENCH
CHECKED BY:	C. MOONEY
SHEET	22 **OF** 28



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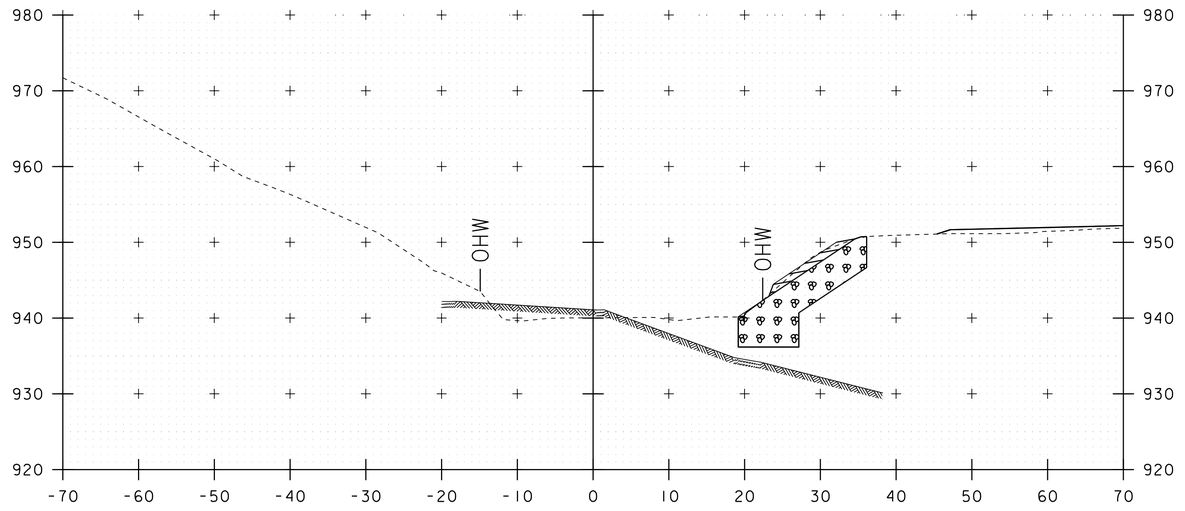
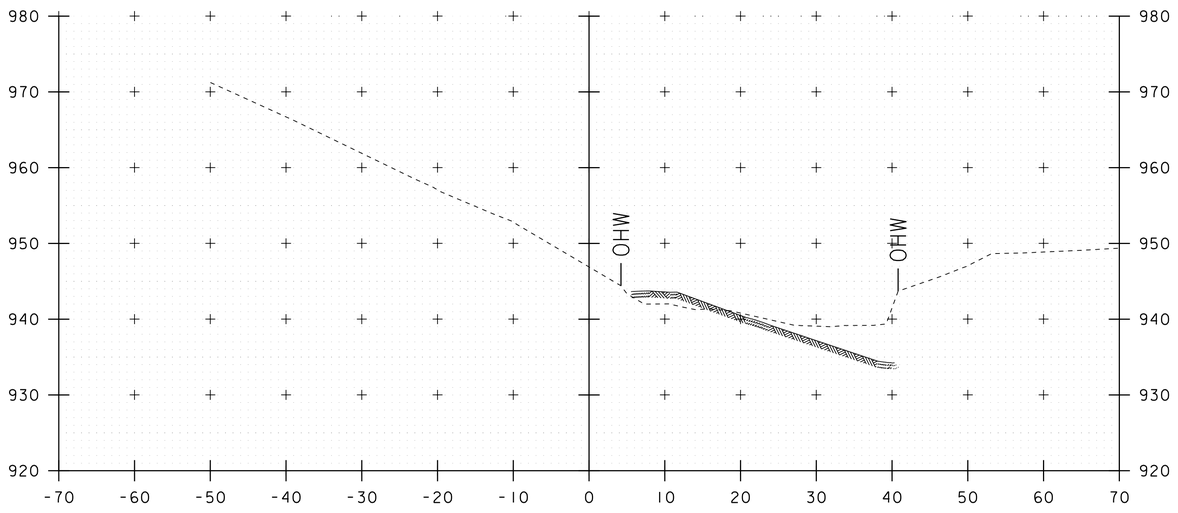


50+70



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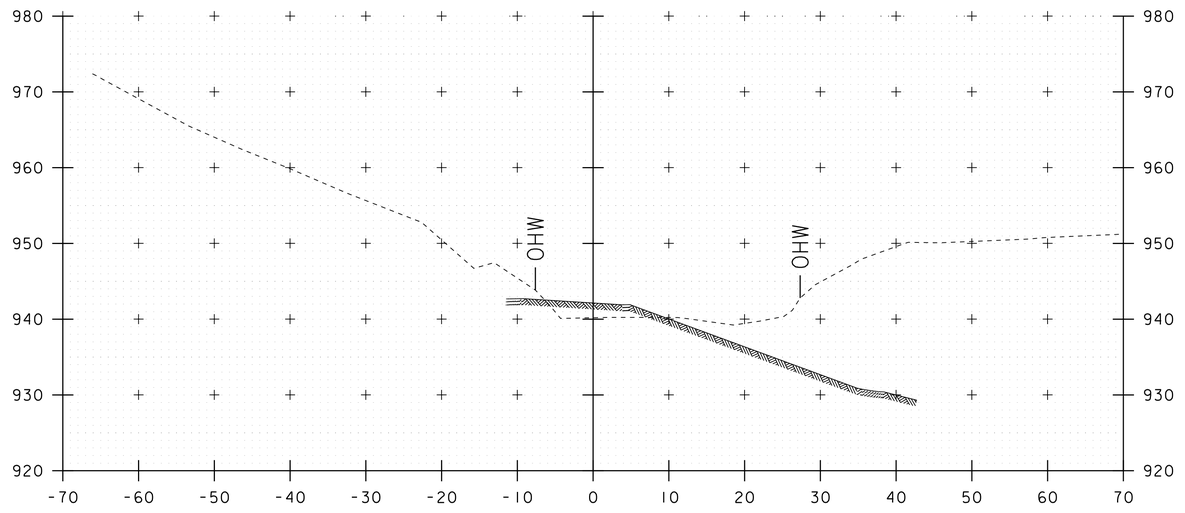
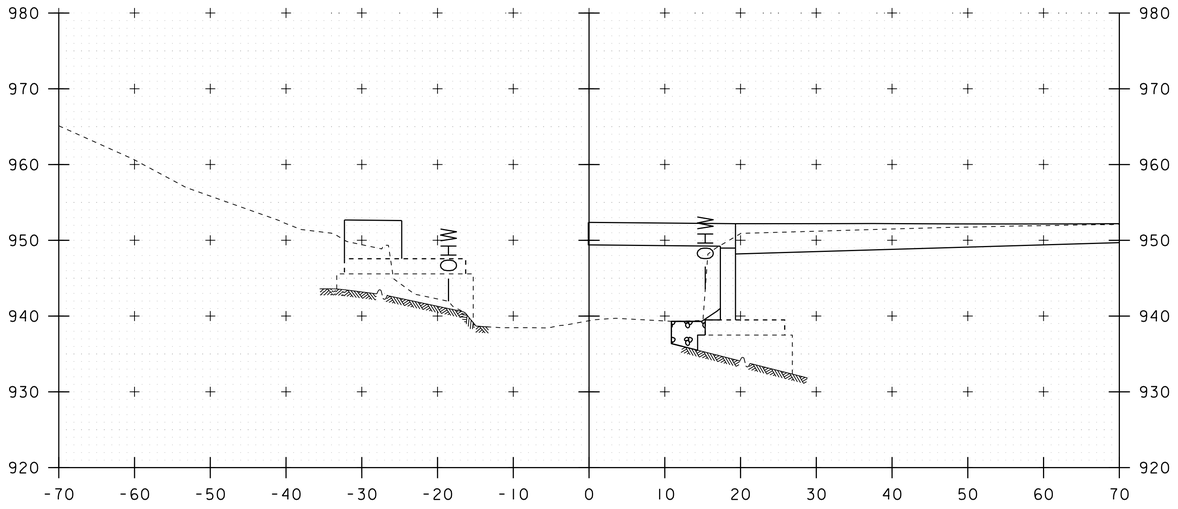


50+60

STA. 50+40 TO STA. 50+70

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CHANNEL CROSS SECTIONS 2	**SHEET** 23 **OF** 28



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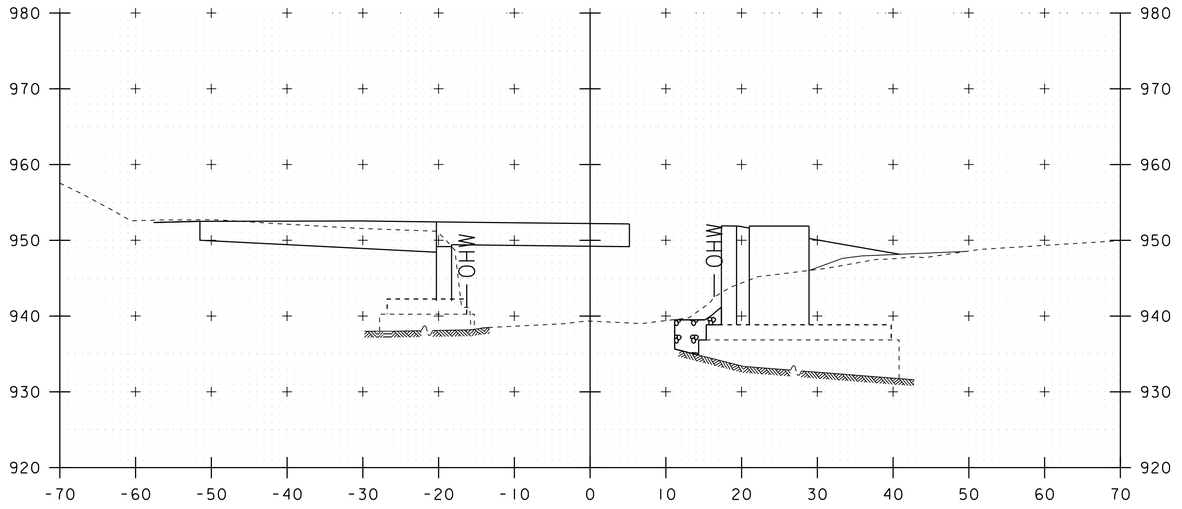

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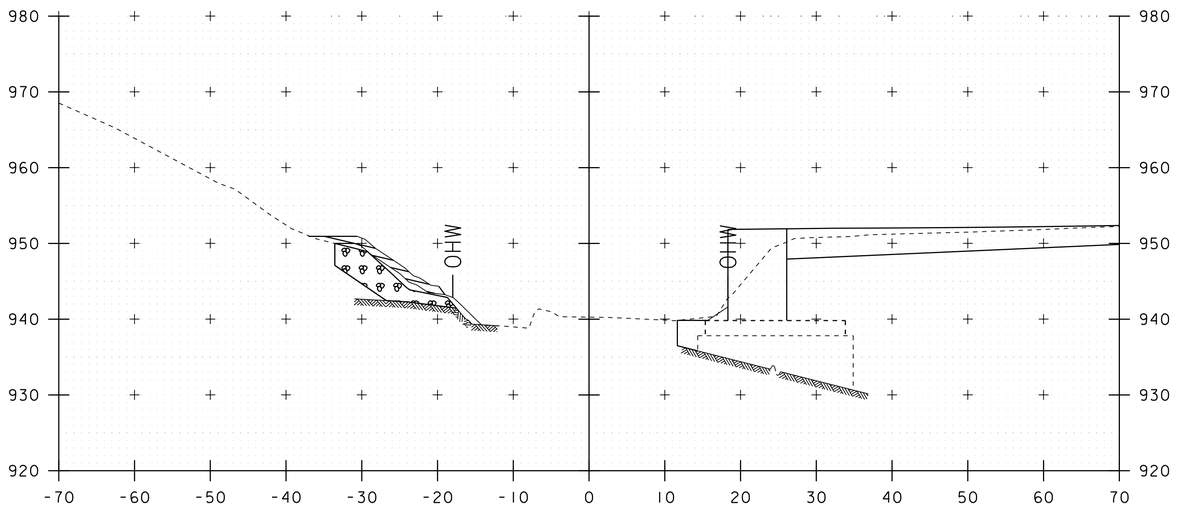

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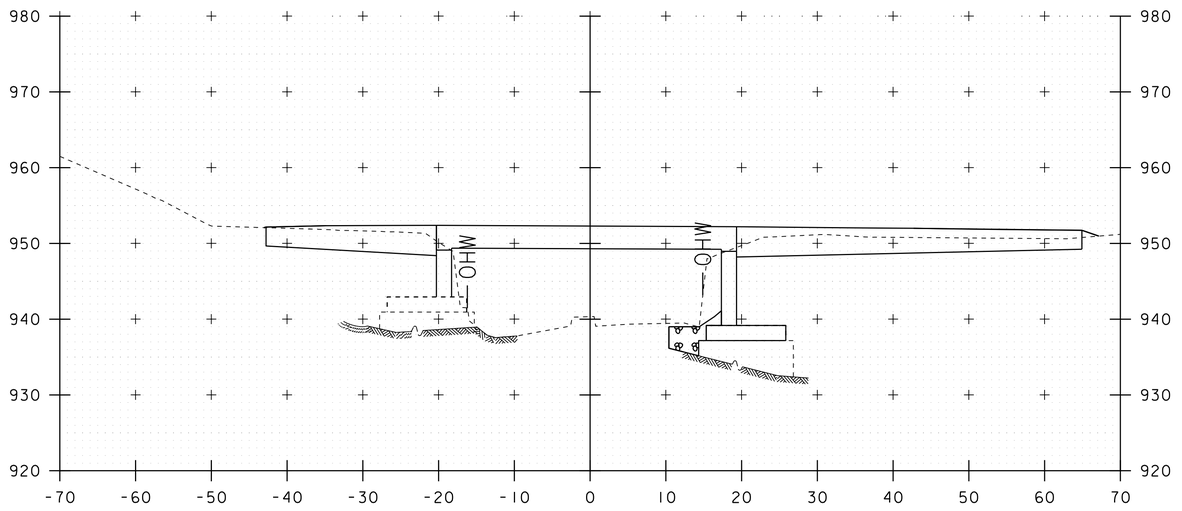
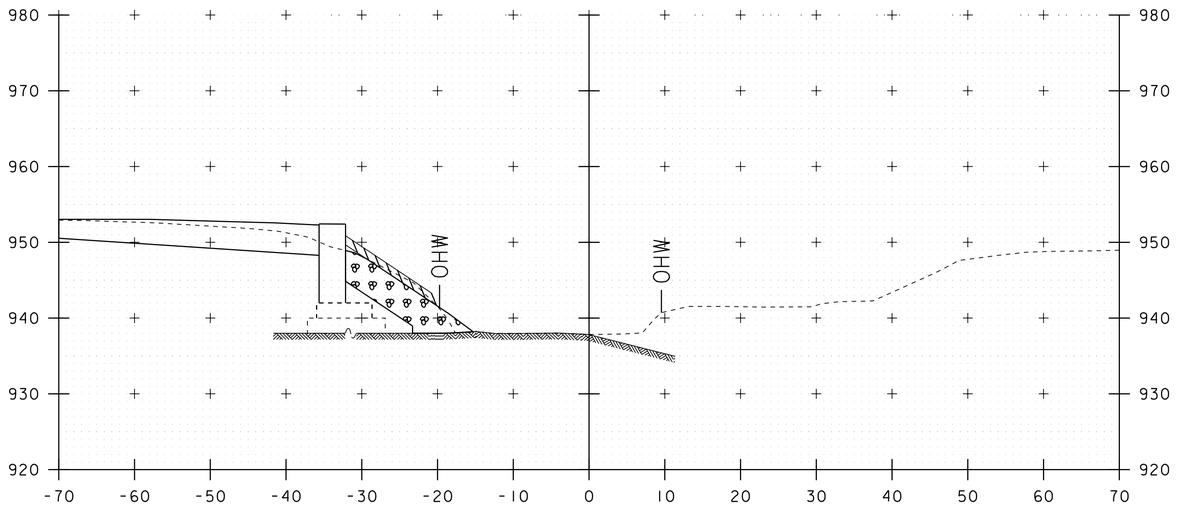


51+00

STA. 50+80 TO STA. 51+10

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CHANNEL CROSS SECTIONS 3	**SHEET** 24 **OF** 28



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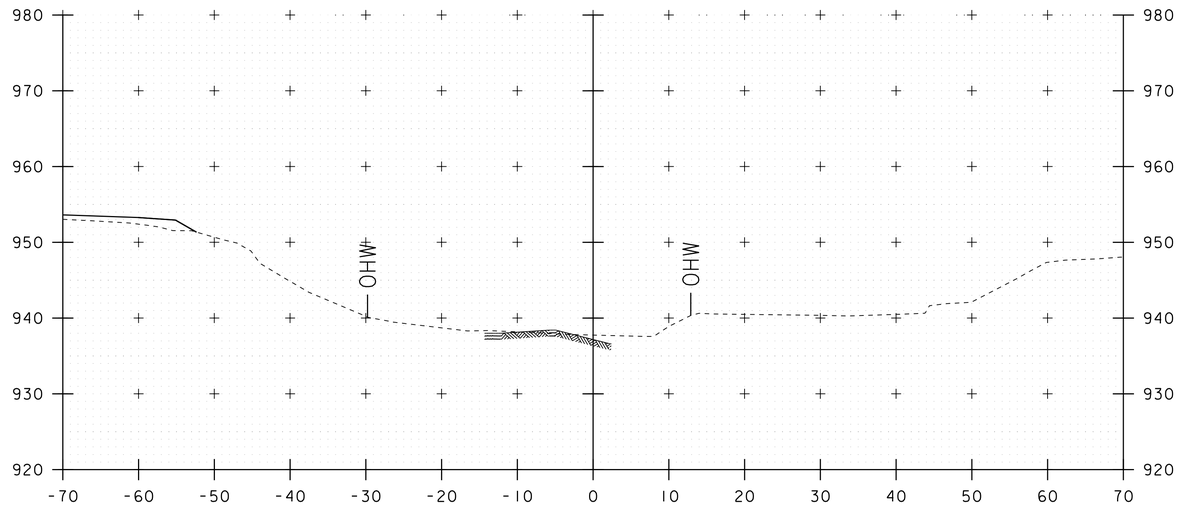

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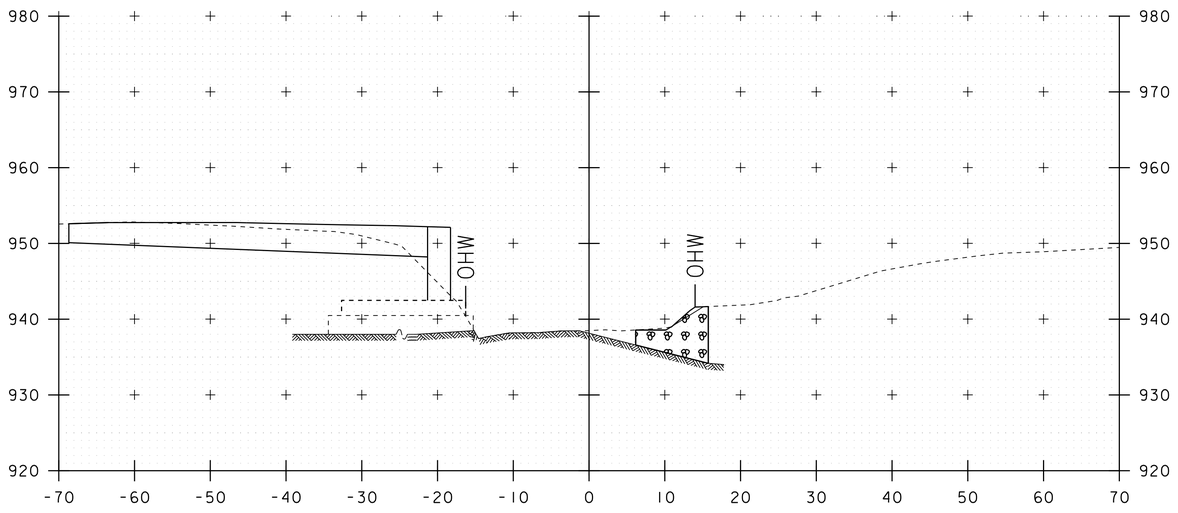

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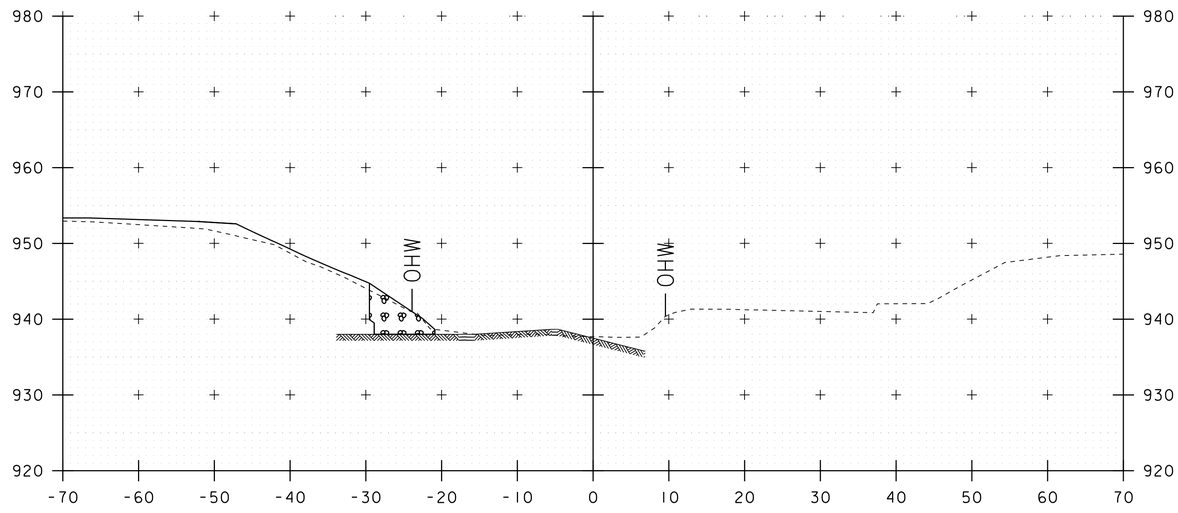
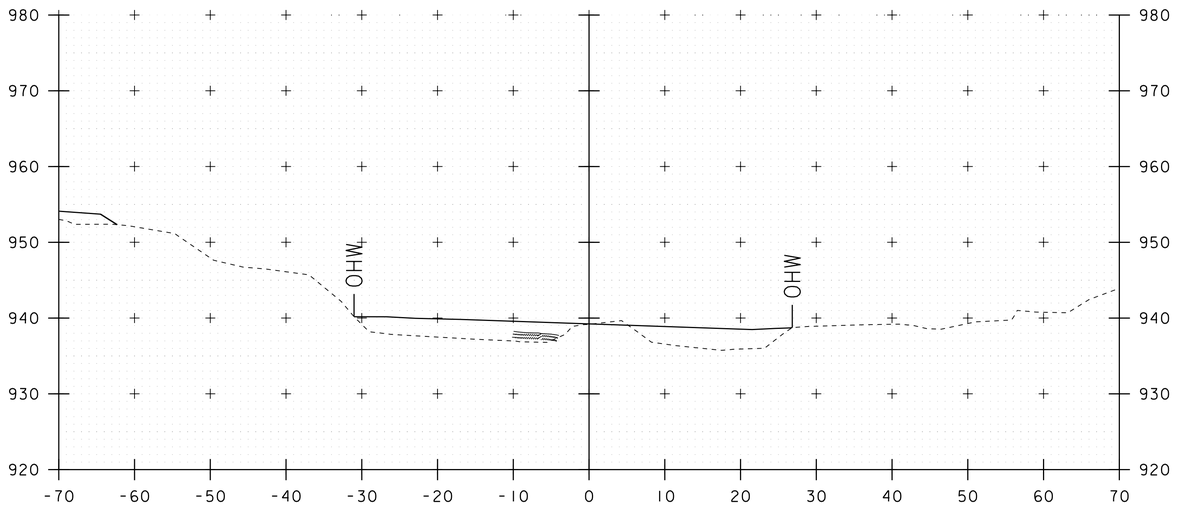


51+40

STA. 51+20 TO STA. 51+50

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CHANNEL CROSS SECTIONS 4	**SHEET** 25 **OF** 28



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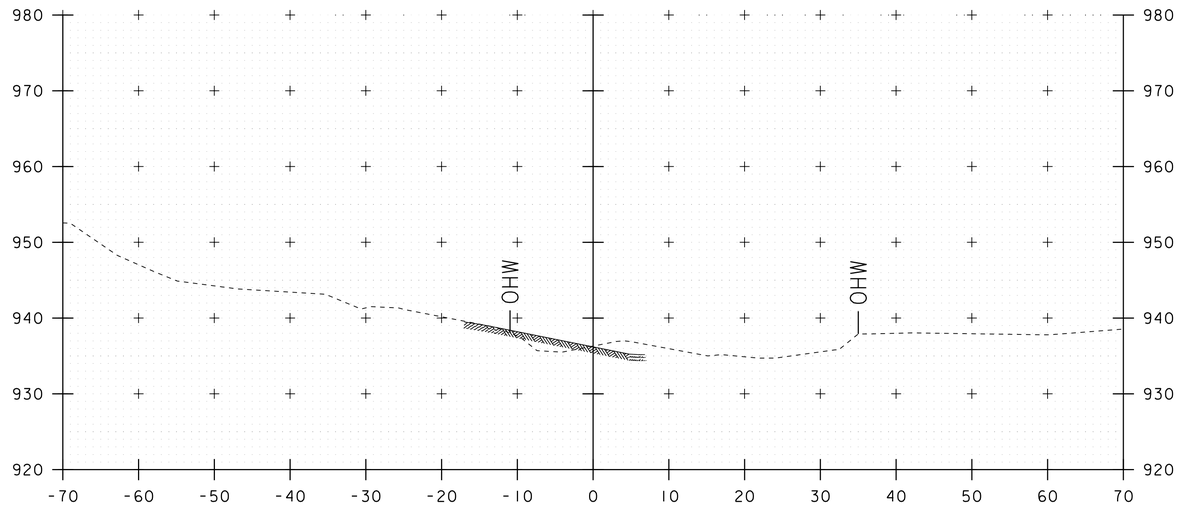
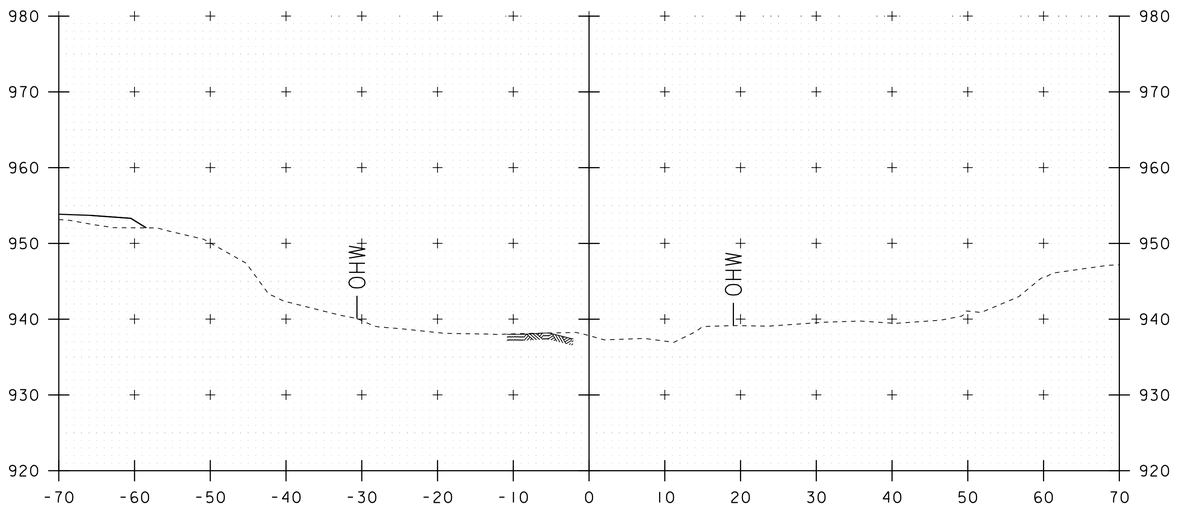
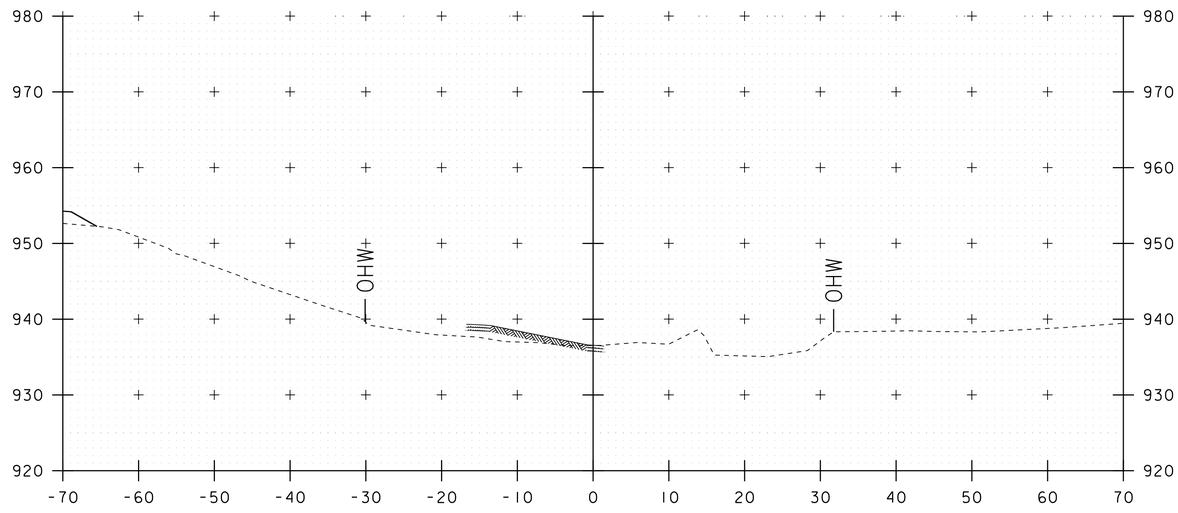


51+90



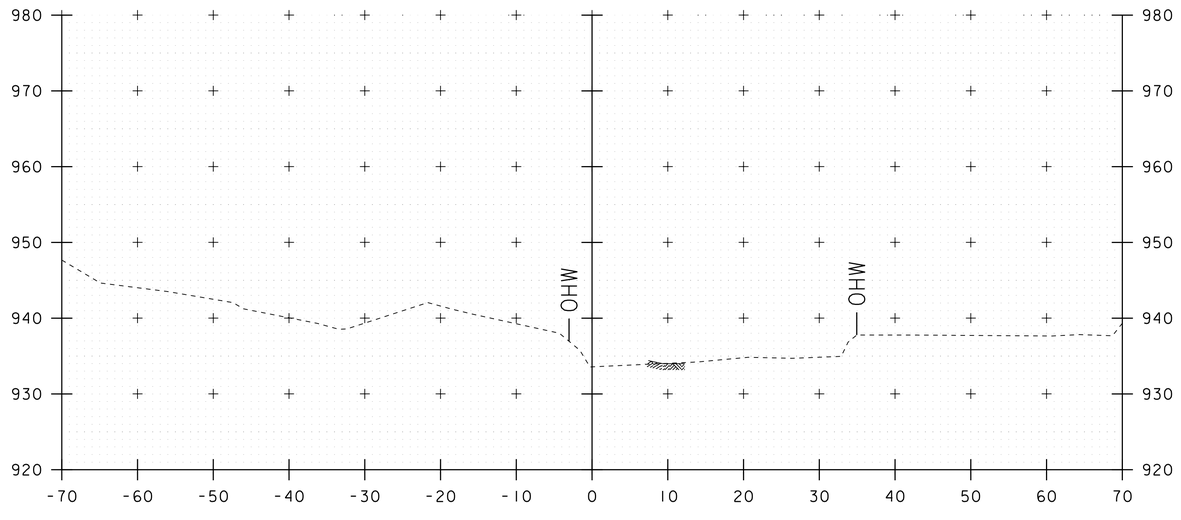
51+60



51+80

STA. 51+60 TO STA. 51+90

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)
FILE NAME: 12j630xs.dgn	**PLOT DATE:** 03-JUN-2020
PROJECT LEADER: R. YOUNG	**DRAWN BY:** C. FRENCH
DESIGNED BY: C. FRENCH	**CHECKED BY:** C. MOONEY
CHANNEL CROSS SECTIONS 5	**SHEET** 26 **OF** 28



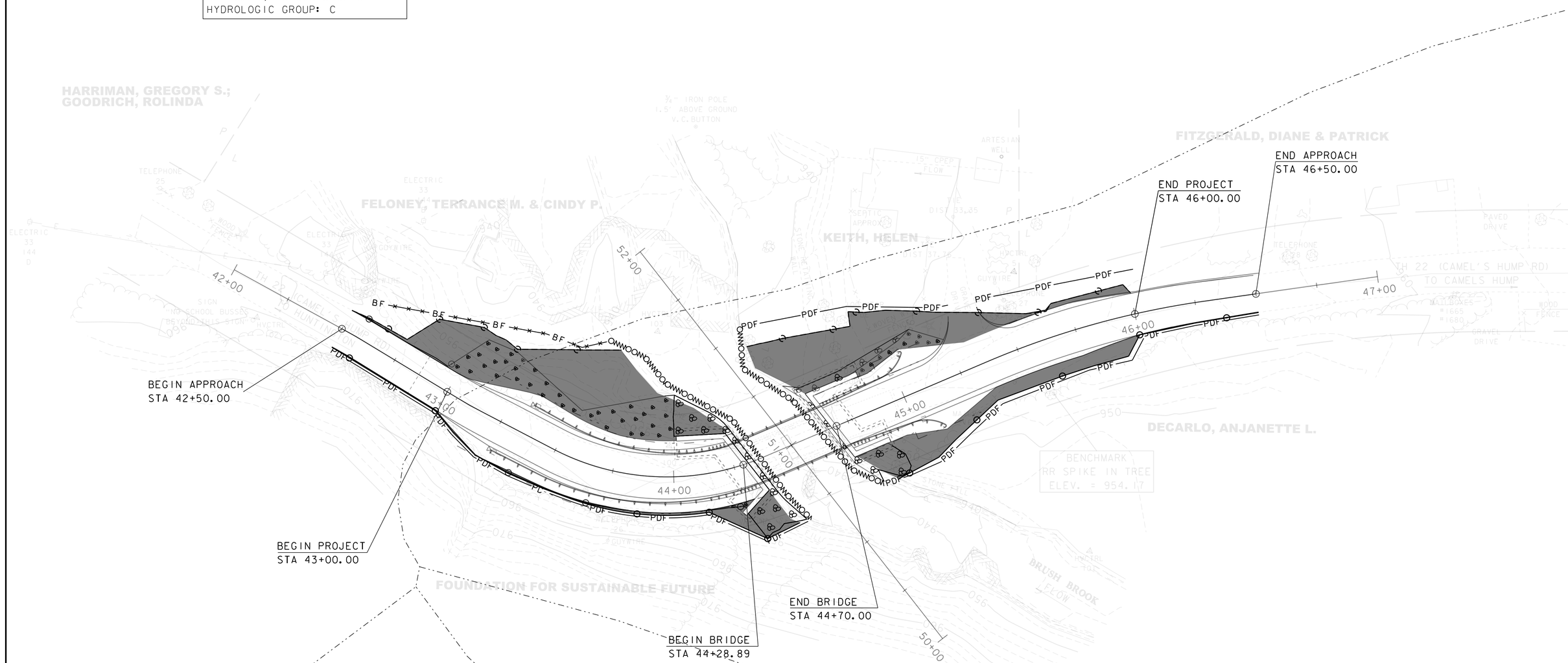
52+00

STA. 52+00 TO STA. 52+00

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BO 1445(38)

FILE NAME:	12j630xs.dgn	**PLOT DATE:**	03-JUN-2020
PROJECT LEADER:	R. YOUNG	**DRAWN BY:**	C. FRENCH
DESIGNED BY:	C. FRENCH	**CHECKED BY:**	C. MOONEY
CHANNEL CROSS SECTIONS 6		**SHEET** 27	**OF** 28

SOIL INFORMATION: MARLOW FINE
SANDY LOAM, VERY STONEY
K = 0.24, 20-60% SLOPES
HYDROLOGIC GROUP: C



SOIL INFORMATION: PERU FINE
SANDY LOAM, VERY STONEY
K = 0.24, 0-20% SLOPES
HYDROLOGIC GROUP: C/D

SOIL INFORMATION: COLTON
GRAVELLY LOAMY SAND
K = 0.17, 5-12% SLOPES
HYDROLOGIC GROUP: A

SOIL INFORMATION: COLTON
AND STETSON SOILS
K = 0.17, 30-60% SLOPES
HYDROLOGIC GROUP: A

EXISTING BRIDGE INFORMATION
SINGLE SPAN, BUILT 1925
ROLLED BEAM WITH TIMBER DECK
45' STRUCTURE LENGTH
16'-3" FASCIA TO FASCIA WIDTH

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BO 1445(38)

FILE NAME: sl2j630epsc.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: C. MOONEY
RESOURCE SHEET

PLOT DATE: 03-JUN-2020
DRAWN BY: C. FRENCH
CHECKED BY: ------
SHEET 28 OF 28