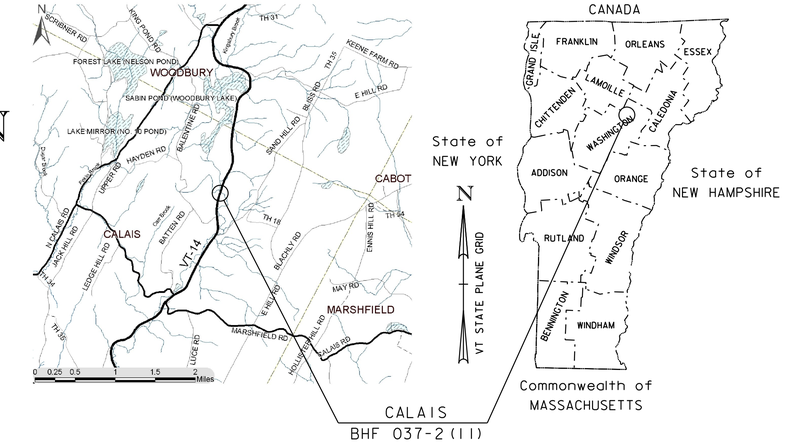
REVIEWER NOTES

1. THIS WILL BE A PHASED PROJECT.
2. ALL WORK IS EXPECTED TO REQUIRE RIGHT OF WAY FOR SLOPE WORK, UTILITY RELOCATION WILL BE NEEDED.
3. A SIMPLIFIED PAVEMENT DESIGN HAS BEEN DONE FOR THIS PROJECT.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF CALAIS
COUNTY OF WASHINGTON

ROUTE NO : VT RTE 14, RURAL MINOR ARTERIAL BRIDGE NO : 82

PROJECT LOCATION: 9.5 MILES NORTH OF JUNCTION WITH US ROUTE 2

PROJECT DESCRIPTION: PHASED REMOVAL OF EXISTING STRUCTURE, AND PHASED REPLACEMENT WITH NEW STRUCTURE

LENGTH OF STRUCTURE: 58.00 FEET
LENGTH OF ROADWAY: 342.00 FEET
LENGTH OF PROJECT: 400.00 FEET

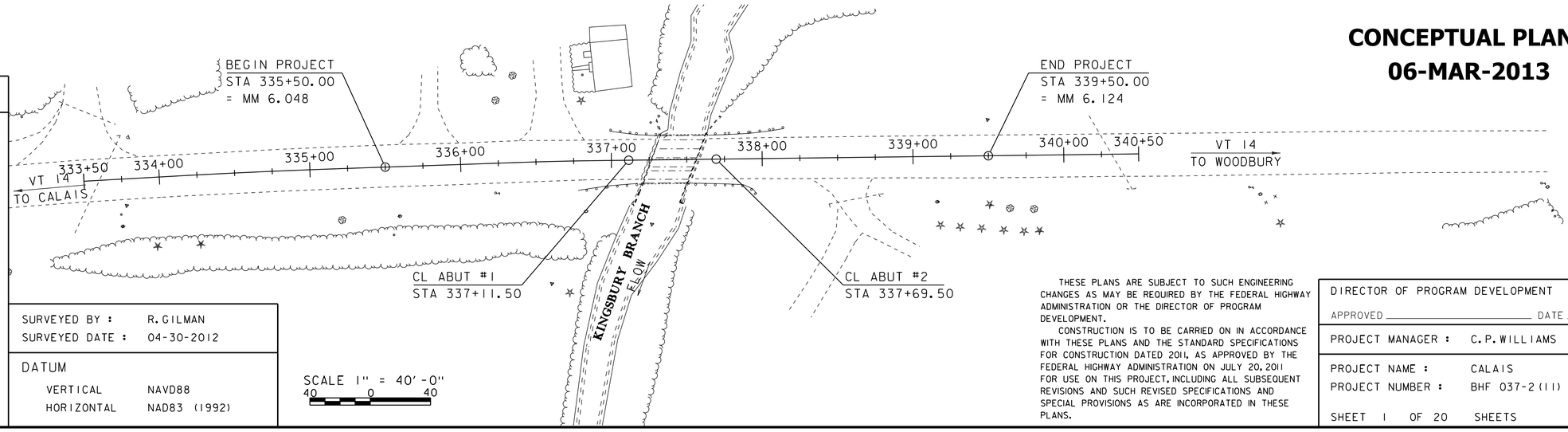
VT STATE PLANE GRID

CONCEPTUAL PLANS
06-MAR-2013

QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS (SR SR SR)
TOP OF CUT
TOE OF SLOPE



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

SURVEYED BY : R. GILMAN
SURVEYED DATE : 04-30-2012

DATUM
VERTICAL NAVD88
HORIZONTAL NAD83 (1992)

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.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE _____

PROJECT MANAGER : C. P. WILLIAMS

PROJECT NAME : CALAIS
PROJECT NUMBER : BHF 037-2(11)

SHEET 1 OF 20 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 12.09.13

LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

FINAL HYDRAULIC REPORT

LRFR LOAD RATING FACTORS

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

AS BUILT "REBAR" DETAIL

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

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2015	2700	320	66	9.1	310
2035	2900	340	66	14.2	510

20 year ESAL for flexible pavement from 2015 to 2035 : 2075000

40 year ESAL for flexible pavement from 2015 to 2055 : 4731000

Design Speed : 50 mph

DESIGN VALUES

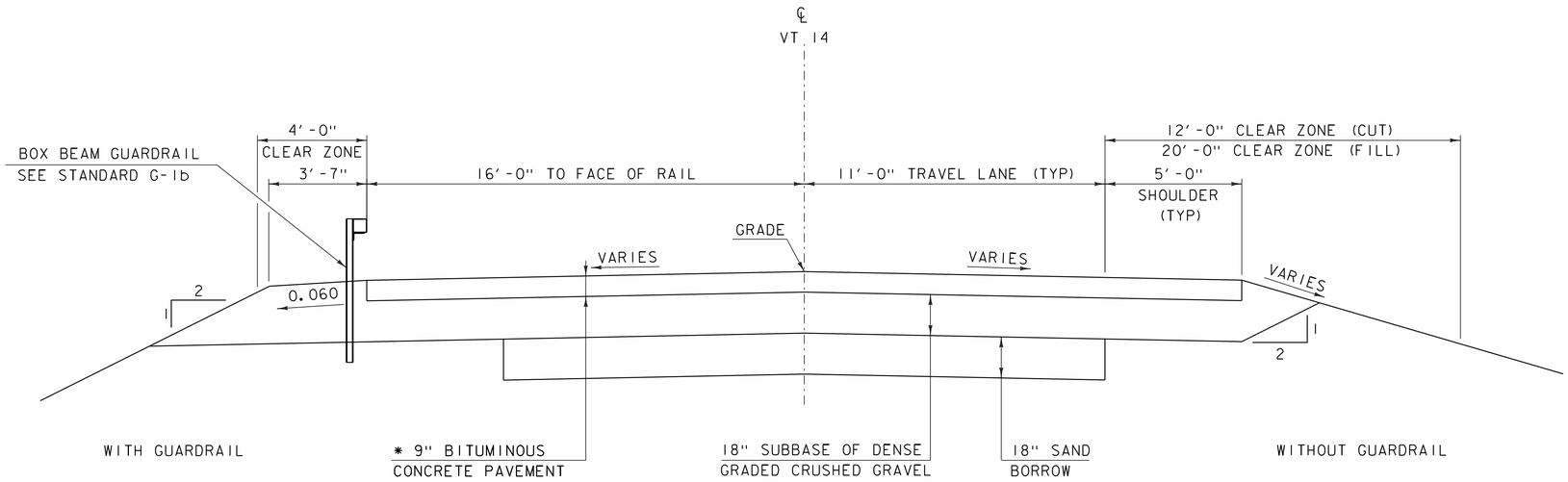
1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	3.0 INCH
3. DESIGN SPAN	L:	58.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	6.0 KSI
7. PRESTRESSED CONCRETE RELEASE 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. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	10.0 KSF
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	---
20. PILE YIELD STRENGTH ASTM A572	f_y:	---
21. PILE SIZE		---
22. EST. PILE LENGTH	L_p:	
23. PILE RESISTANCE FACTOR	ϕ:	---
24. LATERAL PILE DEFLECTION	Δ:	---
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA: ---	S_s:	---
	S_1:	---

PROJECT NAME: **CALAIS**

PROJECT NUMBER: **BHF 037-2(11)**

FILE NAME: **12b146/s12b146excel.dgn**
PROJECT LEADER: **C.P.WILLIAMS**
DESIGNED BY: **T.FILLBACH**
PRELIMINARY INFORMATION SHEET 1

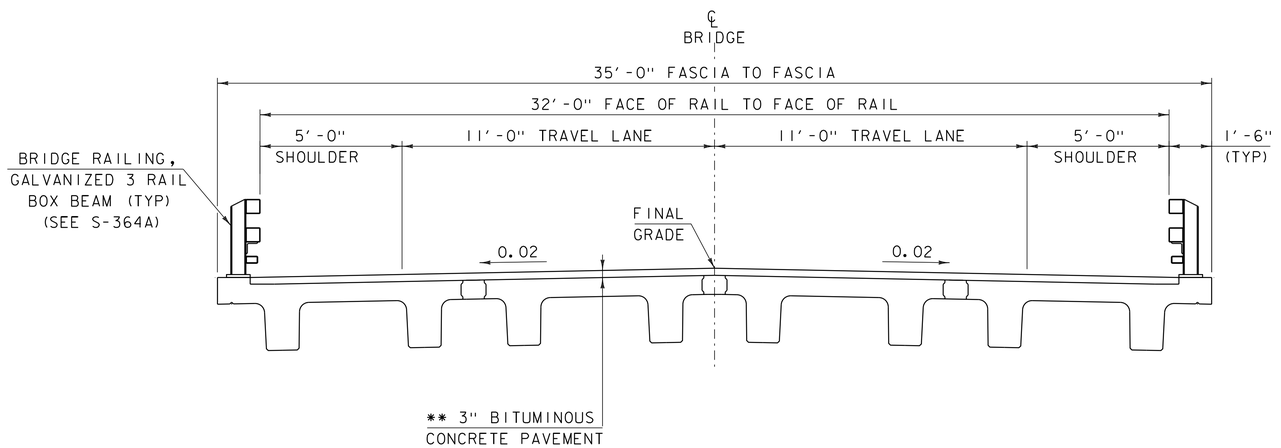
PLOT DATE: 3/4/2013
DRAWN BY: **D.D.BEARD**
CHECKED BY:



* 1½" TYPE III OR IV OVER
1½" TYPE III OR IV OVER
3" TYPE I OR II OVER
3" TYPE I OR II

PROPOSED VT 14 TYPICAL SECTION

SCALE ⅜" = 1'-0"



** 1½" TYPE III OR IV OVER
1½" TYPE III OR IV

PROPOSED BRIDGE TYPICAL SECTION

SCALE ⅜" = 1'-0"

NOTE: SUPERSTRUCTURE NOT DESIGNED.
NEXT 28D SHOWN FOR EXAMPLE

MATERIAL TOLERANCES

(IF USED ON PROJECT)

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

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: 12b146/sl2b146typical.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
TYPICAL SECTIONS

PLOT DATE: 06-MAR-2013
DRAWN BY: L.E.GALIHER
CHECKED BY: D.D.BEARD
SHEET 3 OF 20

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
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	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	CALCULATED ROW POINT
[DISTANCE]		DISTANCE 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 VALUE
	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 — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- 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 — 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

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
- Ⓗ — HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

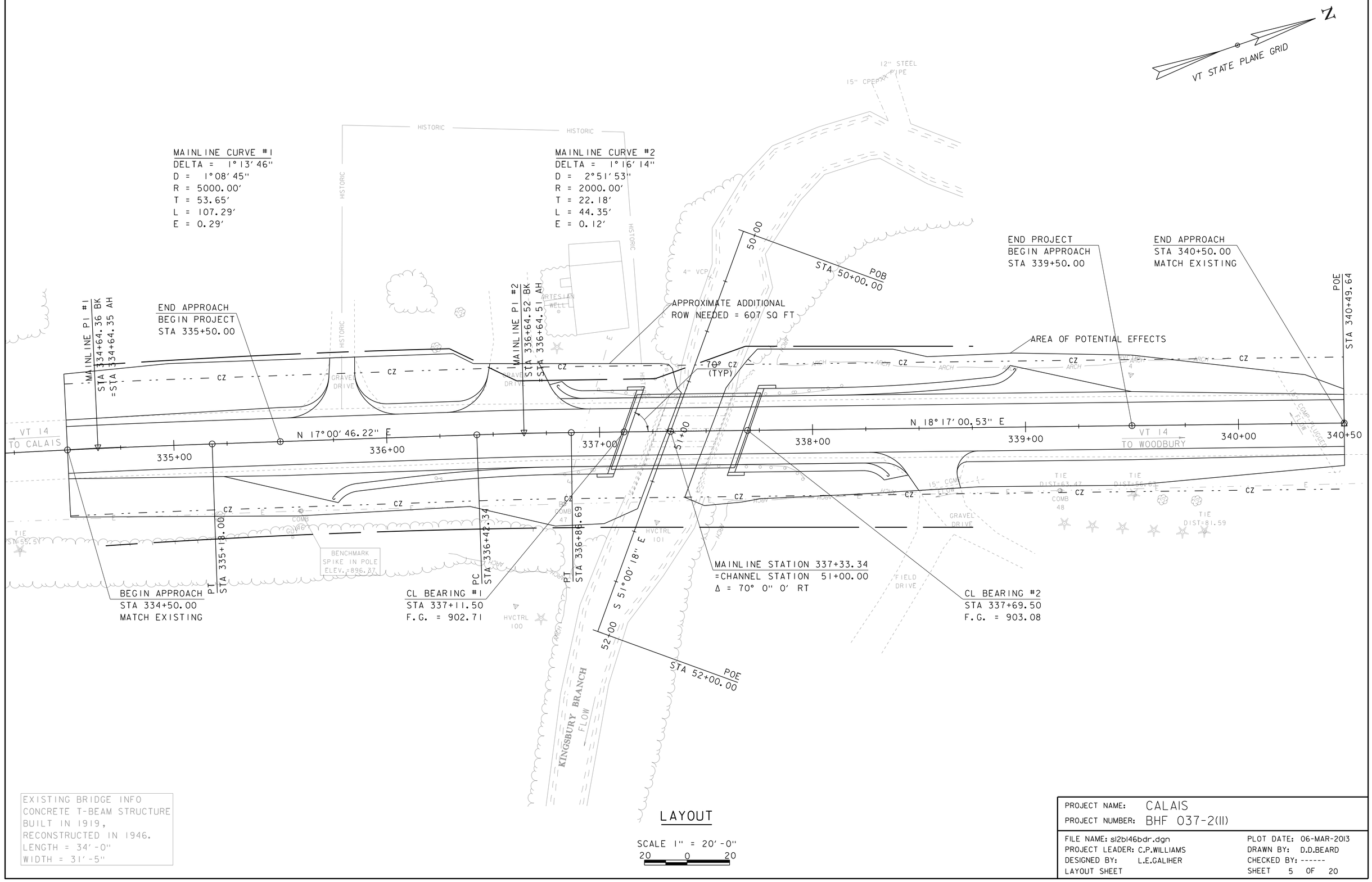
EXISTING FEATURES

- 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: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: l2bl46\sl2bl46excel.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
LEGEND SHEET

PLOT DATE: 06-MAR-2013
DRAWN BY: M.LONGSTREET
CHECKED BY: ------
SHEET 4 OF 20



EXISTING BRIDGE INFO
CONCRETE T-BEAM STRUCTURE
BUILT IN 1919,
RECONSTRUCTED IN 1946.
LENGTH = 34'-0"
WIDTH = 31'-5"

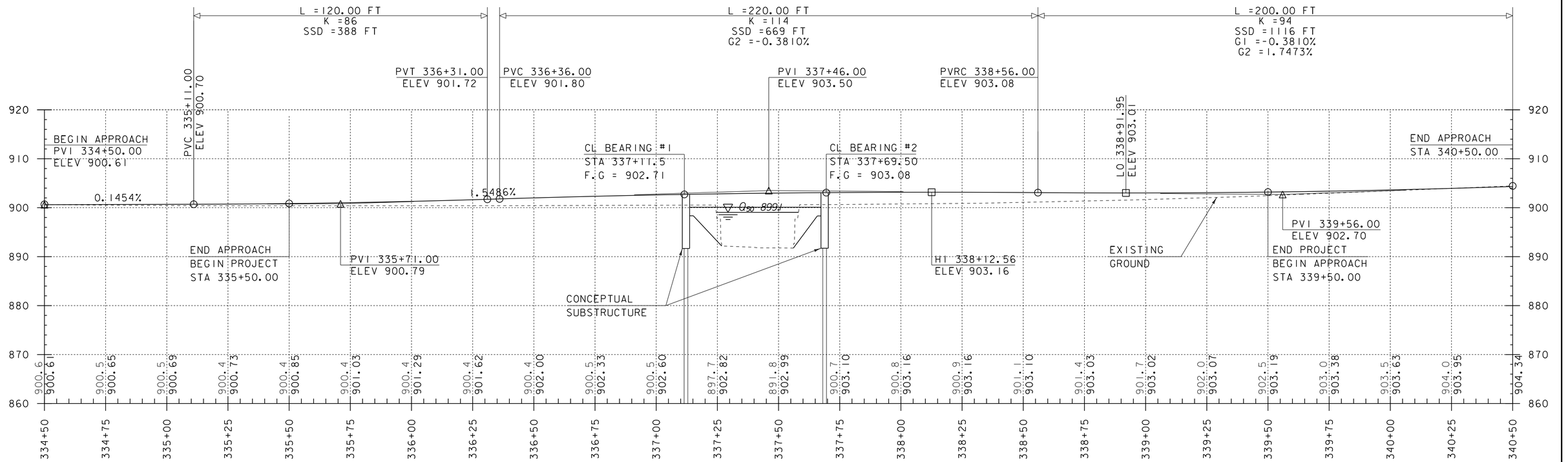
LAYOUT

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

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: s12bl46bdr.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.E.GALIHER
LAYOUT SHEET

PLOT DATE: 06-MAR-2013
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 5 OF 20



VT 14 BRIDGE REPLACEMENT PROFILE

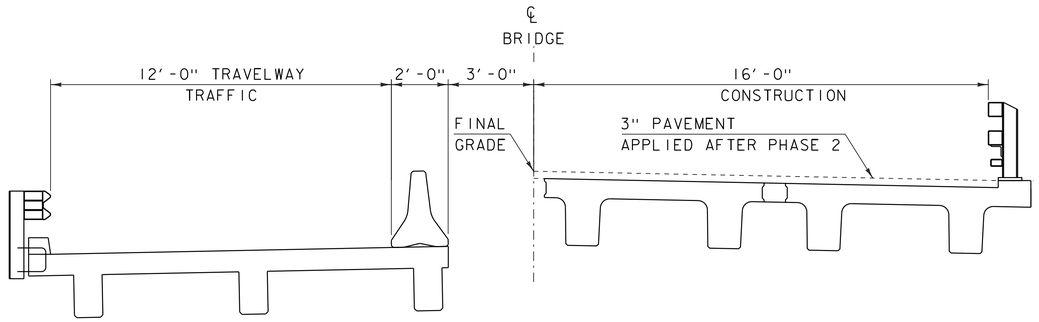
SCALE: HORIZONTAL 1"=20'-0"
VERTICAL 1"=10'-0"

NOTE:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

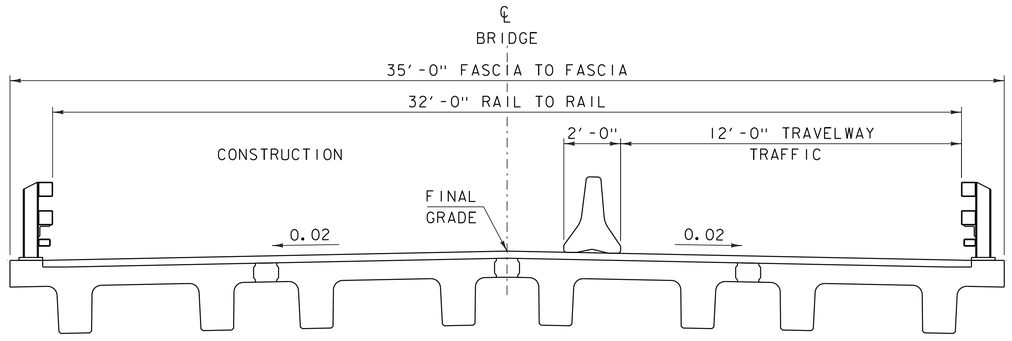
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12bl46profile.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.E.GALIHER
DESIGNED BY: L.E.GALIHER	CHECKED BY: ------
PROFILE SHEET	SHEET 6 OF 20



BRIDGE REPLACEMENT PHASE #1 TYPICAL SECTION

SCALE 3/8" = 1'-0"



BRIDGE REPLACEMENT PHASE #2 TYPICAL SECTION

SCALE 3/8" = 1'-0"

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(11)
FILE NAME: 12bl46/sl2bl46typical.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: L.E.GALIHER	CHECKED BY: ------
PHASING TYPICAL SECTIONS	SHEET 7 OF 20

VT STATE PLANE GRID

MAINLINE CURVE #1
DELTA = 1°13'46"
D = 1°08'45"
R = 5000.00'
T = 53.65'
L = 107.29'
E = 0.29'

MAINLINE CURVE #2
DELTA = 1°16'14"
D = 2°51'53"
R = 2000.00'
T = 22.18'
L = 44.35'
E = 0.12'

HISTORIC

END APPROACH
BEGIN PROJECT
STA 335+50.00

MAINLINE PI #1
STA 334+64.36 BK
=STA 334+64.35 AH

MAINLINE PI #2
STA 336+64.52 BK
=STA 336+64.51 AH

APPROXIMATE ADDITIONAL
ROW NEEDED = 607 SQ FT

50+00

END PROJECT
BEGIN APPROACH
STA 339+50.00

END APPROACH
STA 340+50.00
MATCH EXISTING

POE
STA 340+49.64

AREA OF POTENTIAL EFFECTS

70° CZ
(TYP)

CZ

ARCH

VT 14
TO CALAIS

N 17°00'46.22" E

335+00

336+00

337+00

338+00

N 18°17'00.53" E

339+00

VT 14
TO WOODBURY

340+00

340+50

PT
STA 335+18.00

PC
STA 336+42.34

PT
STA 336+88.69

51+00

S 51°00'18" E

52+00

KINGSBURY BRANCH
FLOW

BEGIN APPROACH
STA 334+50.00
MATCH EXISTING

CL BEARING #1
STA 337+11.50
F.G. = 902.71

MAINLINE STATION 337+33.34
=CHANNEL STATION 51+00.00
Δ = 70° 0' 0" RT

CL BEARING #2
STA 337+69.50
F.G. = 903.08

PHASE I LAYOUT

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

TEMPORARY TRAFFIC BARRIER
ENERGY ABSORPTION ATTENUATOR
TEMPORARY TRAFFIC SIGNAL

PROJECT NAME: CALAIS BR 82
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: 12b146/Sl2b146bdr.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.E.GALIHER
PHASE ILAYOUT

PLOT DATE: 06-MAR-2013
DRAWN BY: L.E.GALIHER
CHECKED BY: ------
SHEET 8 OF 20

N

VT STATE PLANE GRID

MAINLINE CURVE #1
DELTA = 1°13'46"
D = 1°08'45"
R = 5000.00'
T = 53.65'
L = 107.29'
E = 0.29'

MAINLINE CURVE #2
DELTA = 1°16'14"
D = 2°51'53"
R = 2000.00'
T = 22.18'
L = 44.35'
E = 0.12'

HISTORIC

MAINLINE PI #1
STA 334+64.36 BK
=STA 334+64.35 AH

MAINLINE PI #2
STA 336+64.52 BK
=STA 336+64.51 AH

END APPROACH
BEGIN PROJECT
STA 335+50.00

APPROXIMATE ADDITIONAL
ROW NEEDED = 607 SQ FT

50+00

70° CZ
(TYP)

AREA OF POTENTIAL EFFECTS

END PROJECT
BEGIN APPROACH
STA 339+50.00

END APPROACH
STA 340+50.00
MATCH EXISTING

POE
STA 340+49.64

CZ

ARCH

VT 14
TO CALAIS

N 17°00'46.22" E

335+00

336+00

337+00

338+00

N 18°17'00.53" E

339+00

VT 14
TO WOODBURY

340+00

340+50

50+00

BEGIN APPROACH
STA 334+50.00
MATCH EXISTING

PT
STA 335+18.00

PC
STA 336+42.34

PT
STA 336+88.69

CL BEARING #1
STA 337+11.50
F.G. = 902.71

MAINLINE STATION 337+33.34
=CHANNEL STATION 51+00.00
Δ = 70° 0" 0' RT

S 51°00'18" E

52+00

CL BEARING #2
STA 337+69.50
F.G. = 903.08

KINGSBURY BRANCH
FLOW

TEMPORARY TRAFFIC BARRIER
ENERGY ABSORPTION ATTENUATOR
TEMPORARY TRAFFIC SIGNAL

PHASE 2 LAYOUT

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

PROJECT NAME: CALAIS BR 82
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: 12b146/S12b146bdr.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.E.GALIHER
PHASE 2 LAYOUT

PLOT DATE: 06-MAR-2013
DRAWN BY: L.E.GALIHER
CHECKED BY: ------
SHEET 9 OF 20

SOIL INFORMATION
WEIDER VERY FINE SANDY LOAM
0%-3% SLOPES
K VALUE = .32
NOT HIGHLY ERODIBLE

SOIL INFORMATION
RUMNEY FINE SANDY LOAM
0%-2% SLOPES
K VALUE = .24
NOT HIGHLY ERODIBLE

SOIL INFORMATION
STETSON LOAM
3%-8% SLOPES
K VALUE = .17
NOT HIGHLY ERODIBLE

EXISTING BRIDGE INFO
CONCRETE T-BEAM STRUCTURE
BUILT IN 1919,
RECONSTRUCTED IN 1946.
LENGTH = 34'-0"
WIDTH = 31'-5"

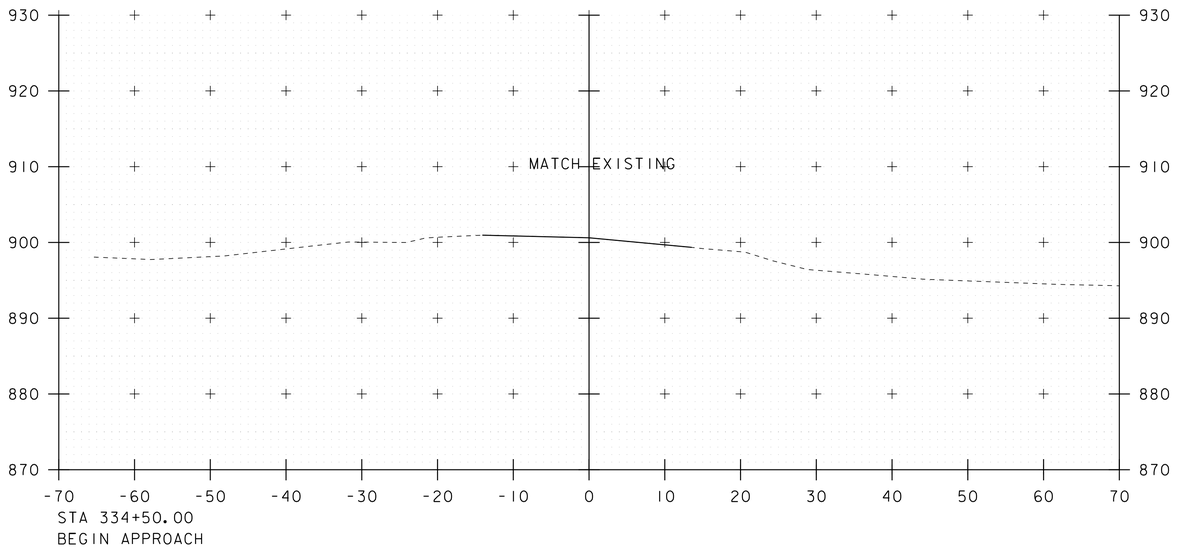
EXISTING CONDITIONS

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

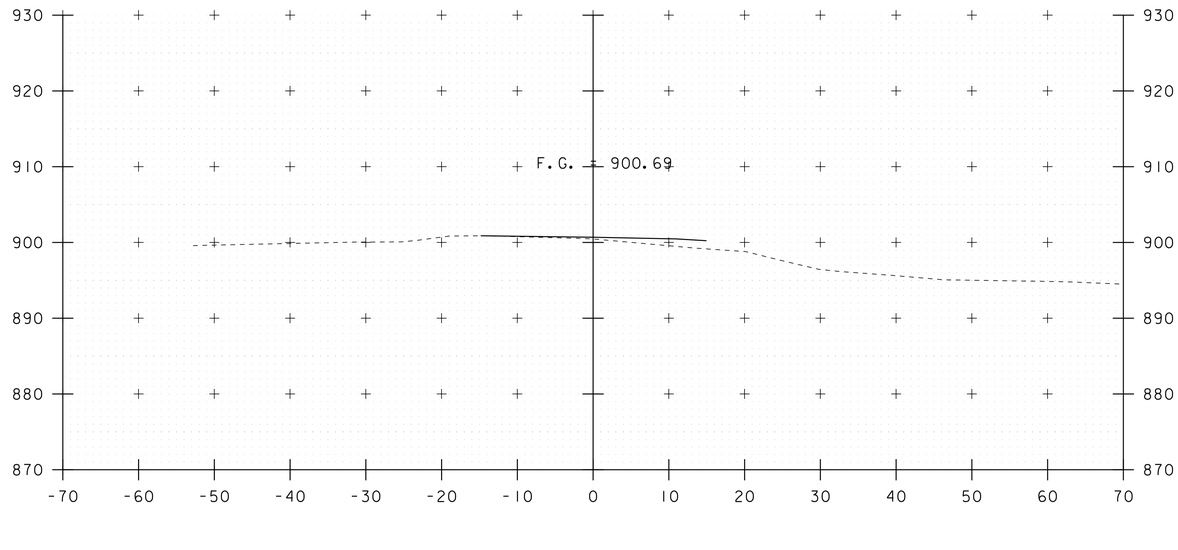
PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: s12b146bdr_ero.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.E.GALIHER
EXISTING CONDITIONS SHEET

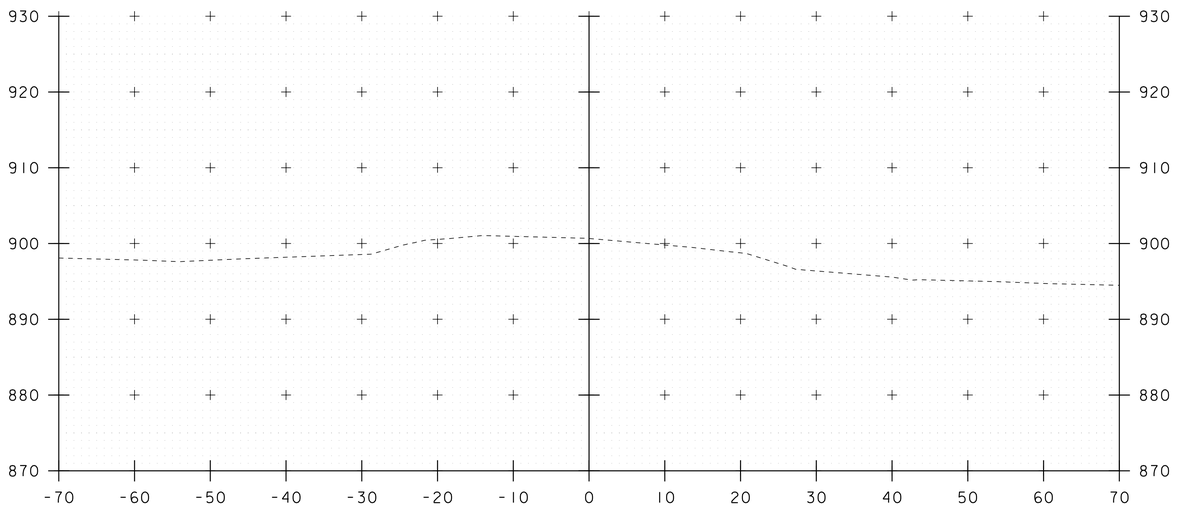
PLOT DATE: 06-MAR-2013
DRAWN BY: D.D.BEARD
CHECKED BY: ------



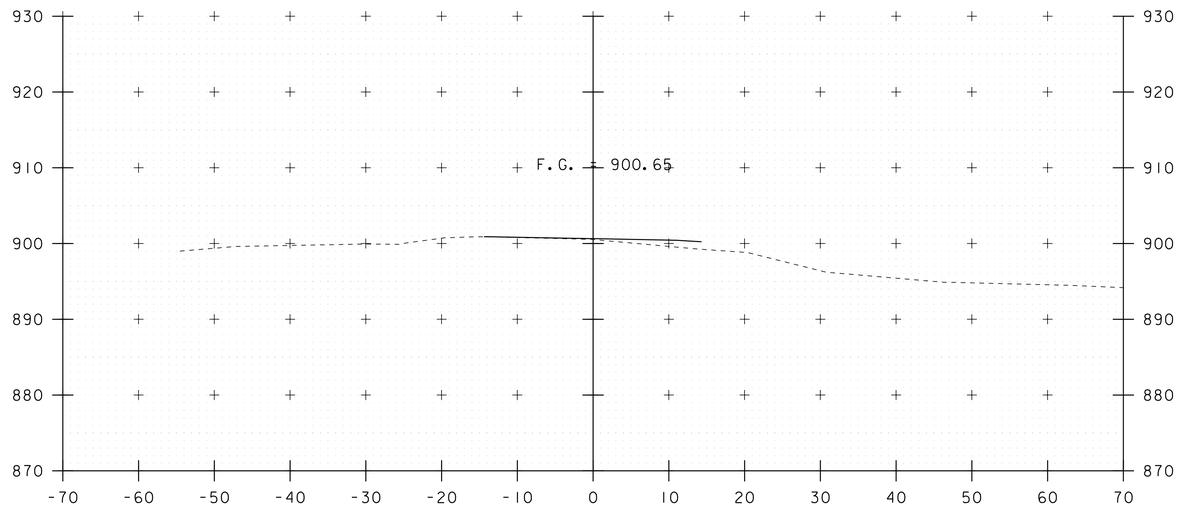
334+50



335+00



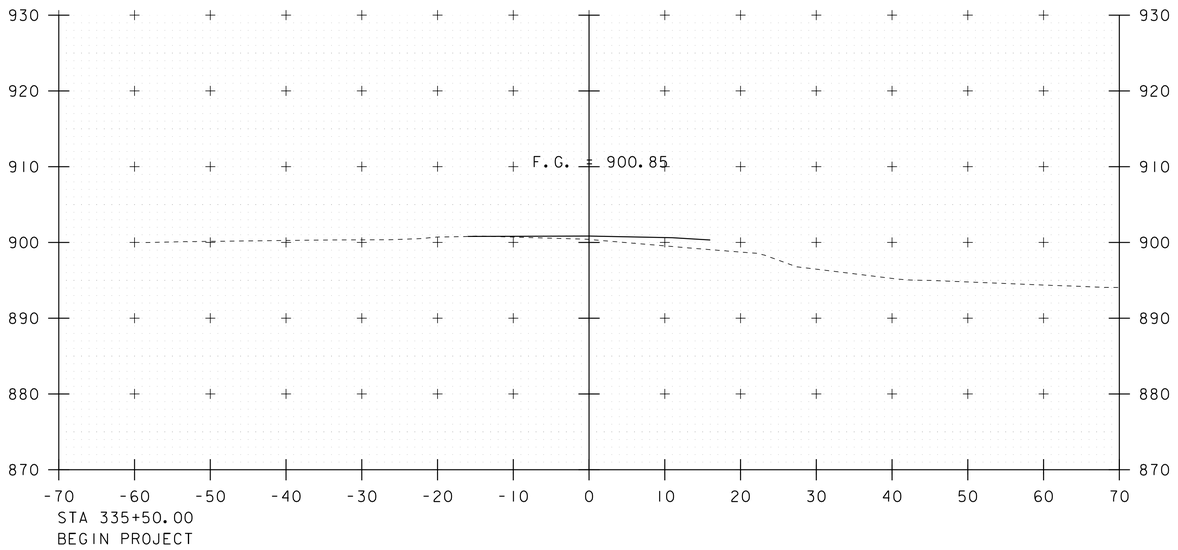
334+25



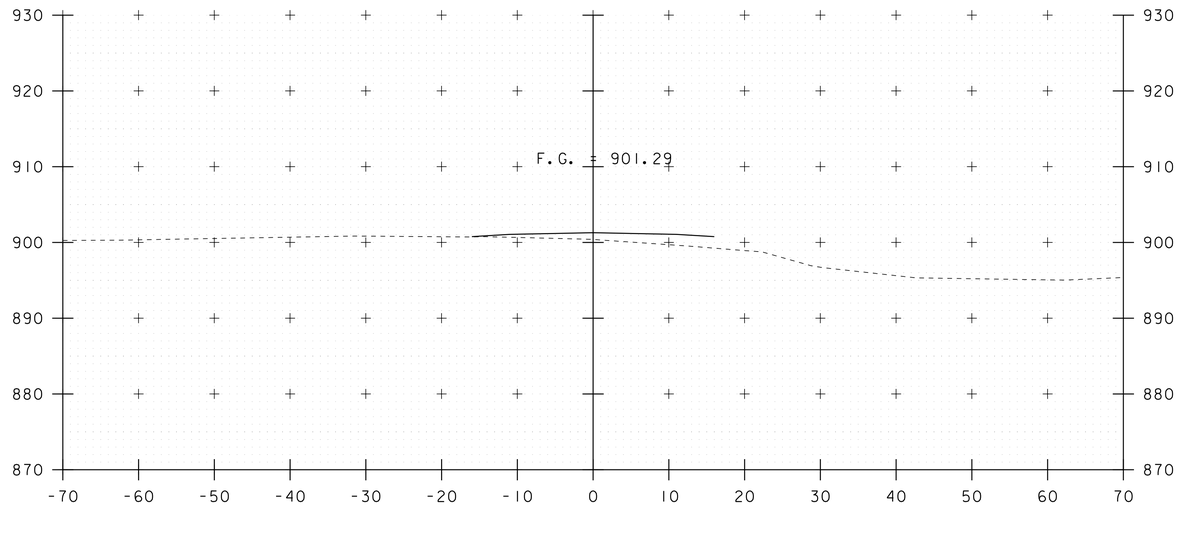
334+75

STA. 334+25 TO STA. 335+00

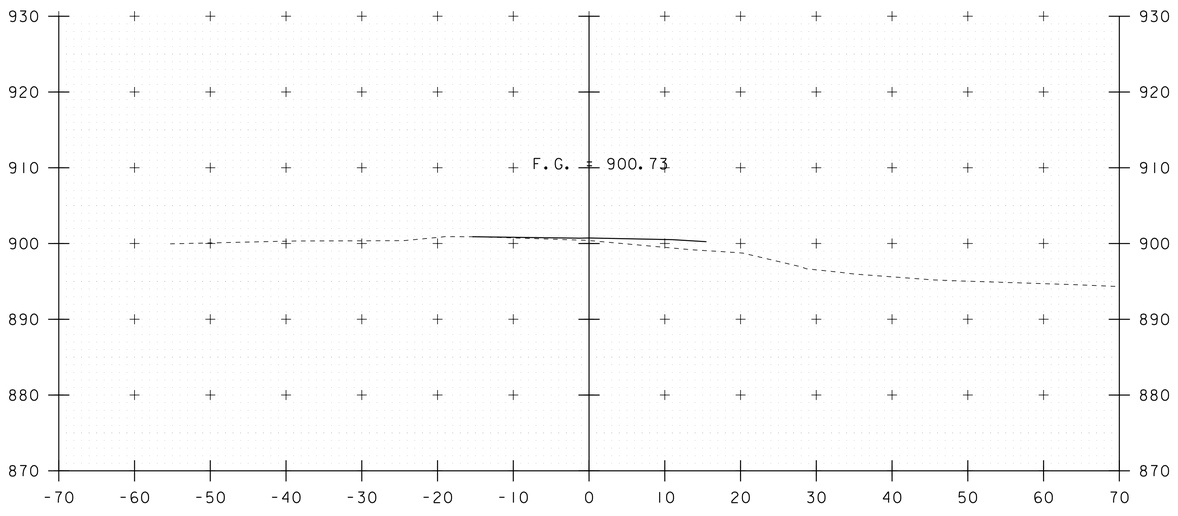
PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12bl46xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
MAINLINE CROSS SECTIONS I	SHEET II OF 20



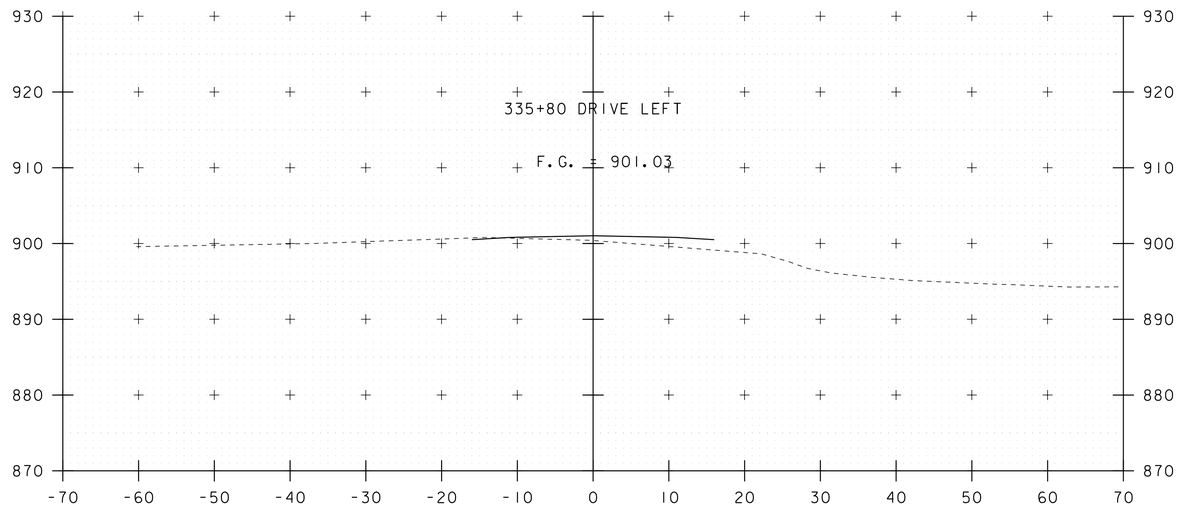
335+50



336+00



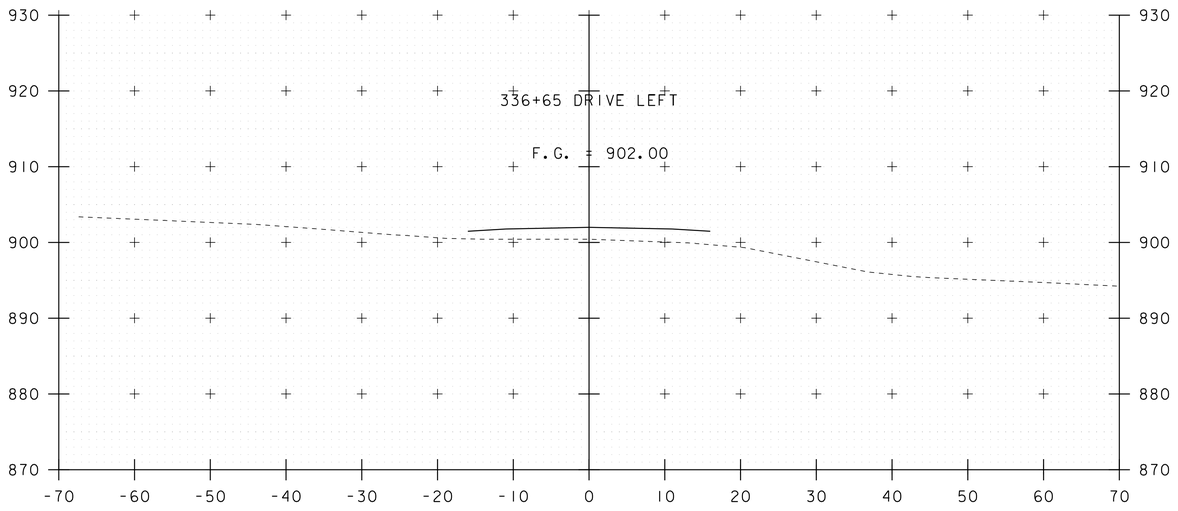
335+25



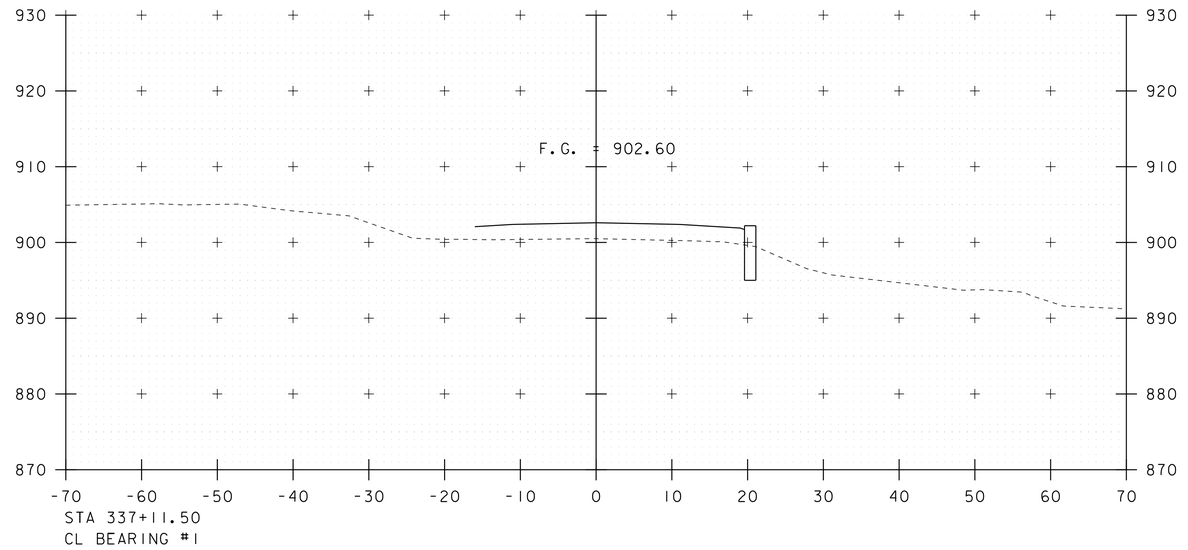
335+75

STA. 335+25 TO STA. 336+00

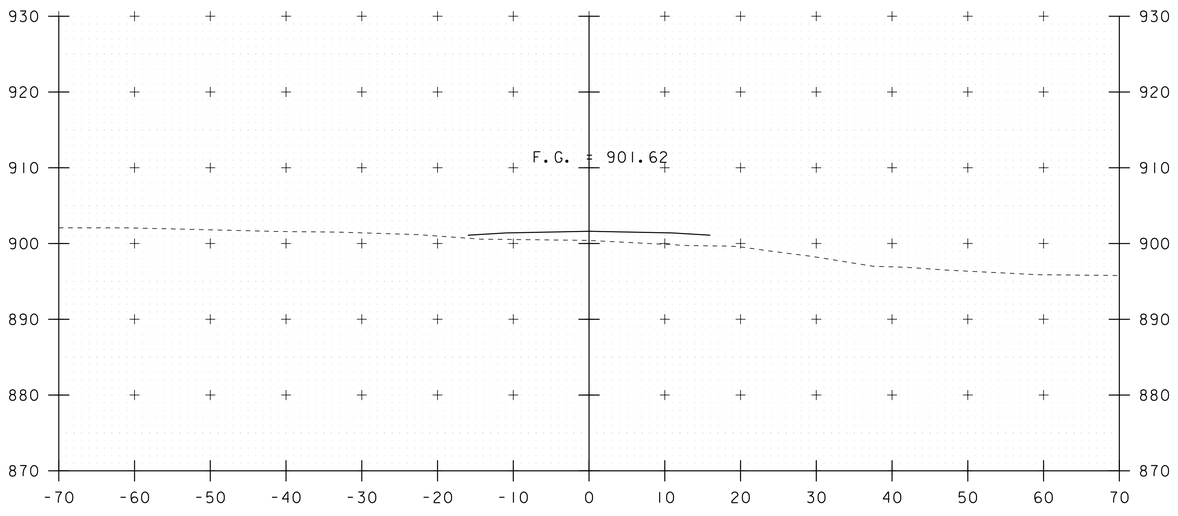
PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12bl46xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
MAINLINE CROSS SECTIONS 2	SHEET 12 OF 20



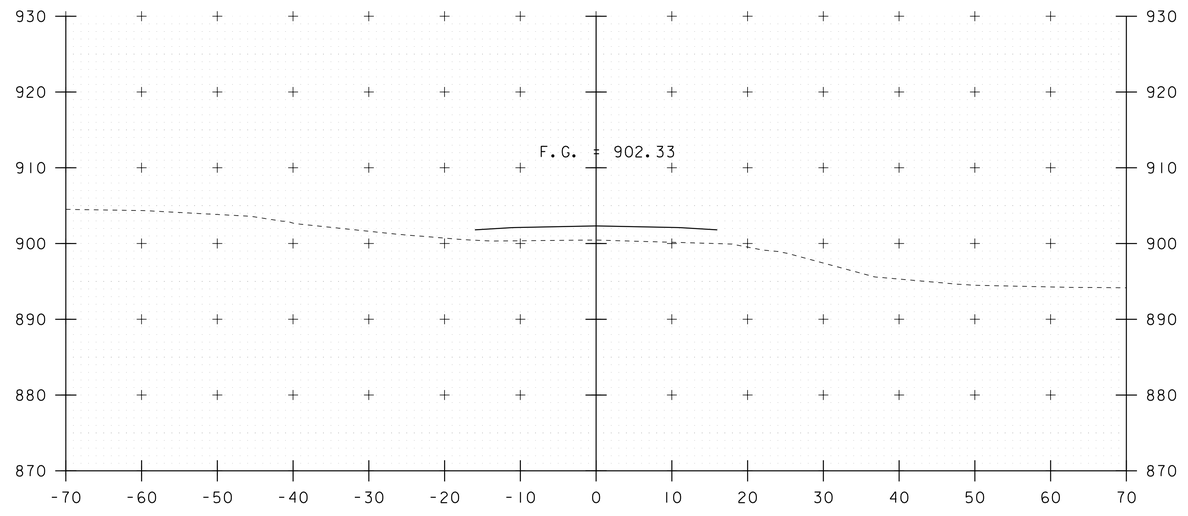
336+50



337+00



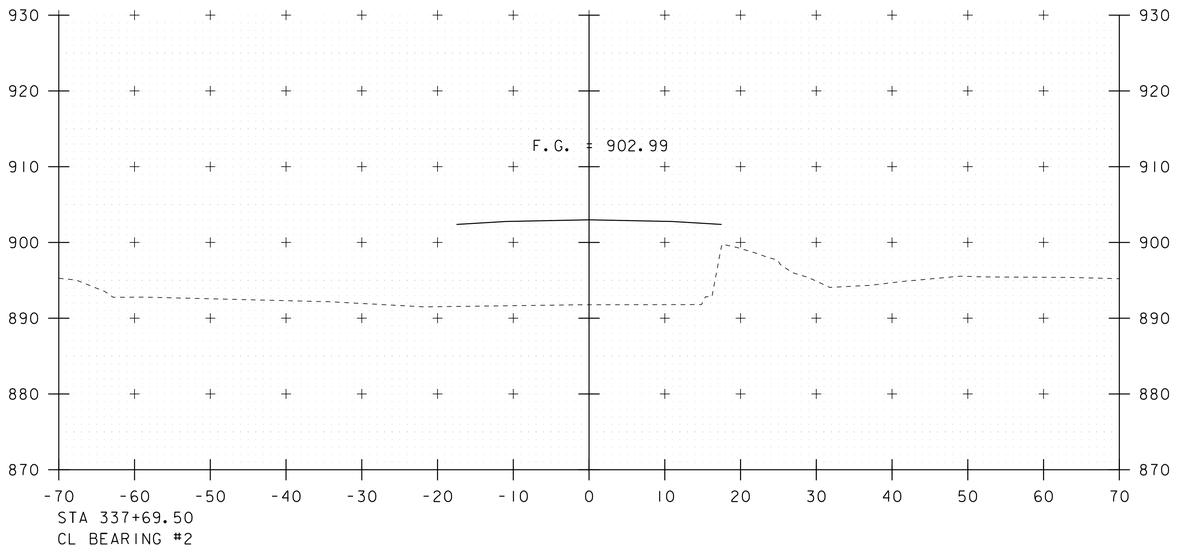
336+25



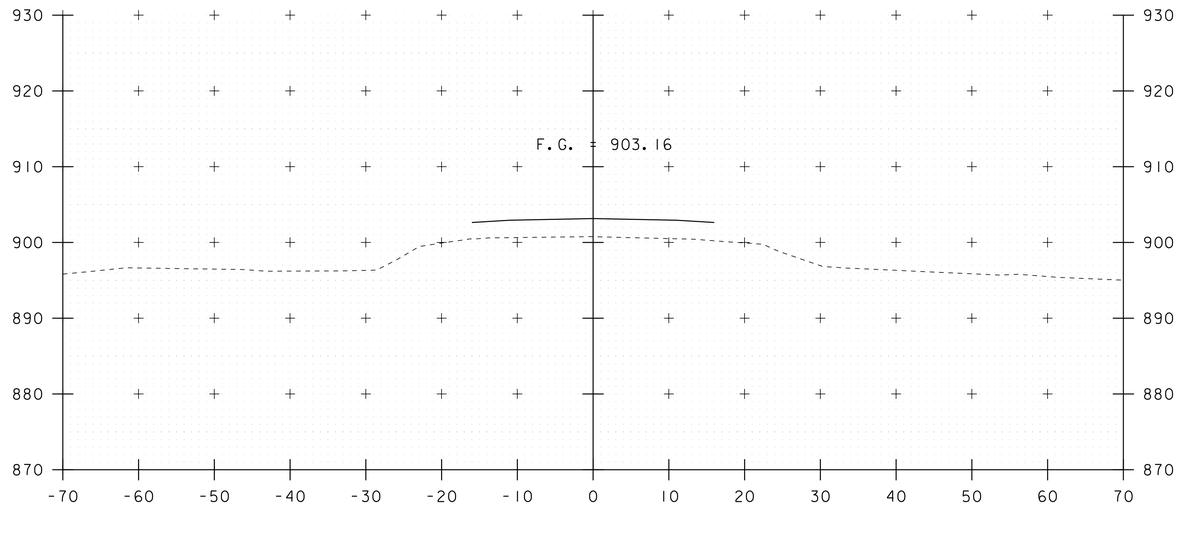
336+75

STA. 336+25 TO STA. 337+00

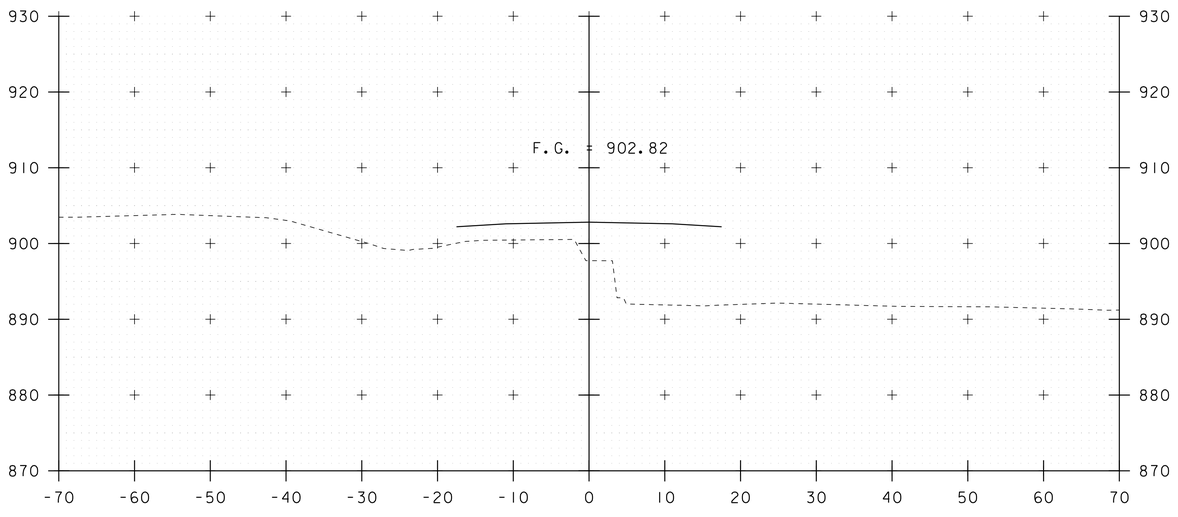
PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12b146xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
MAINLINE CROSS SECTIONS 3	SHEET 13 OF 20



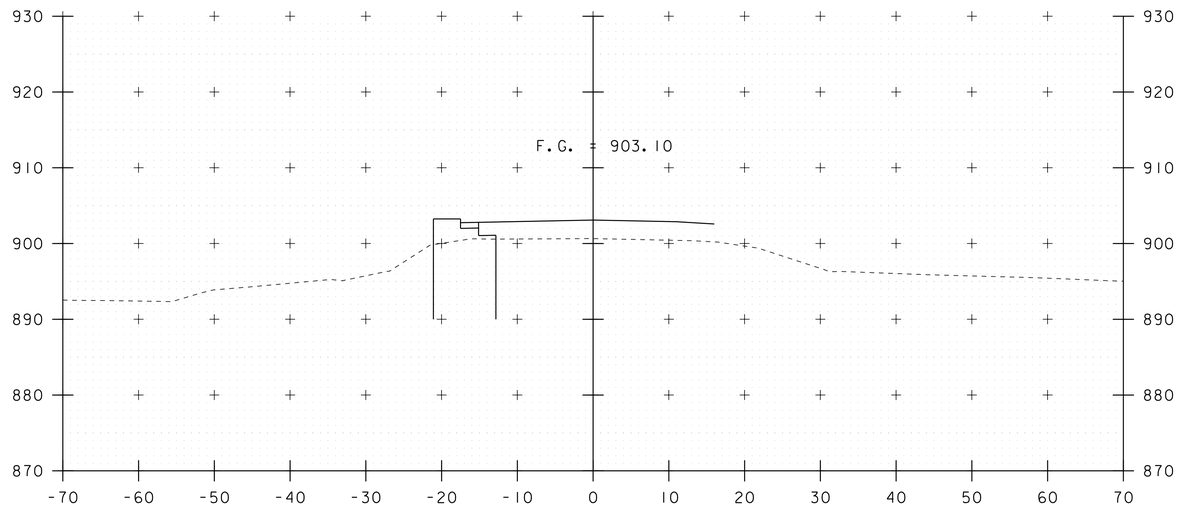
337+50



338+00



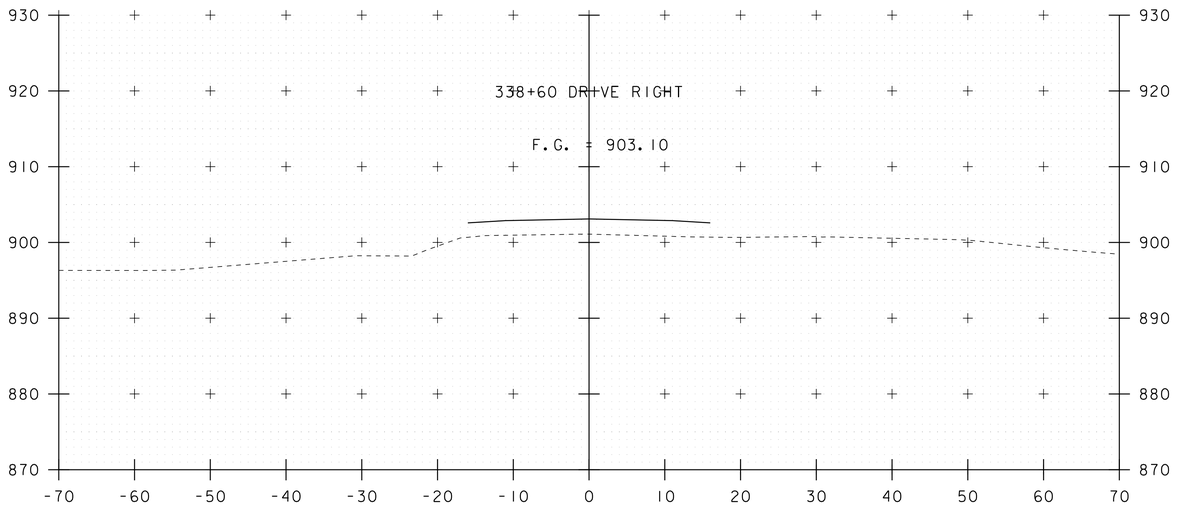
337+25



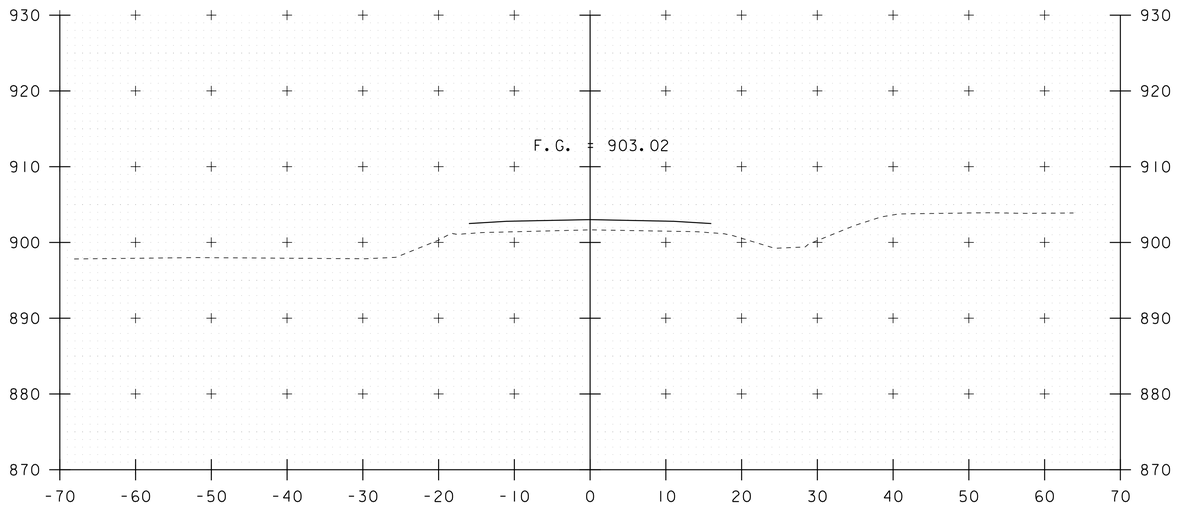
337+75

STA. 337+25 TO STA. 338+00

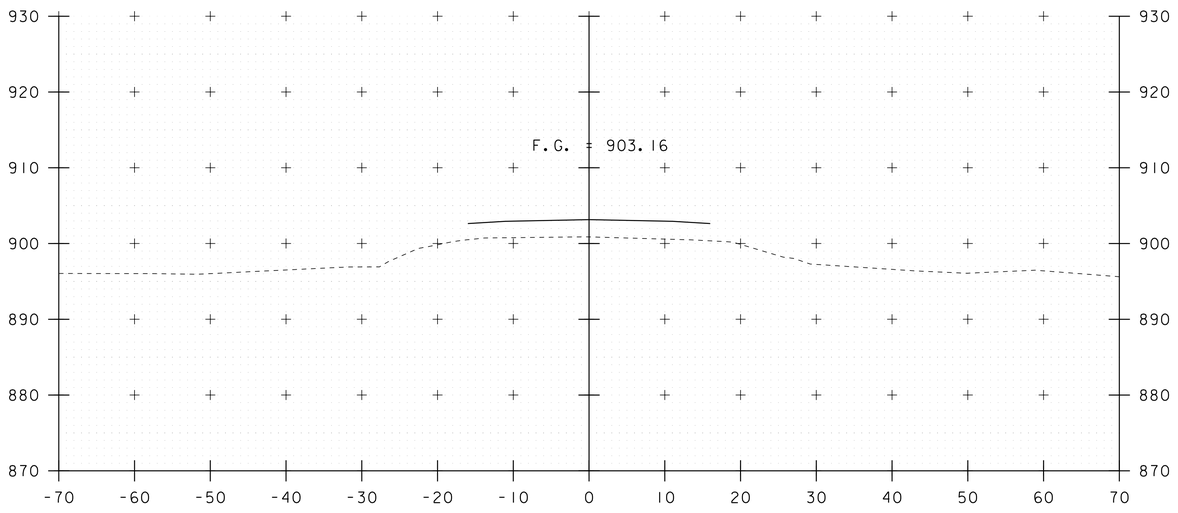
PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12b146xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
MAINLINE CROSS SECTIONS 4	SHEET 14 OF 20



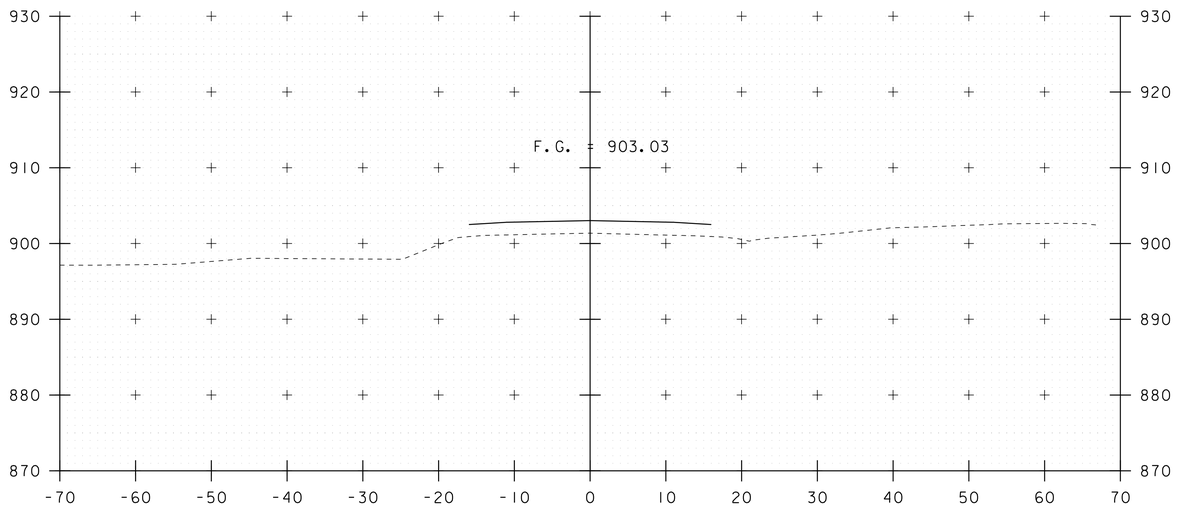
338+50



339+00



338+25



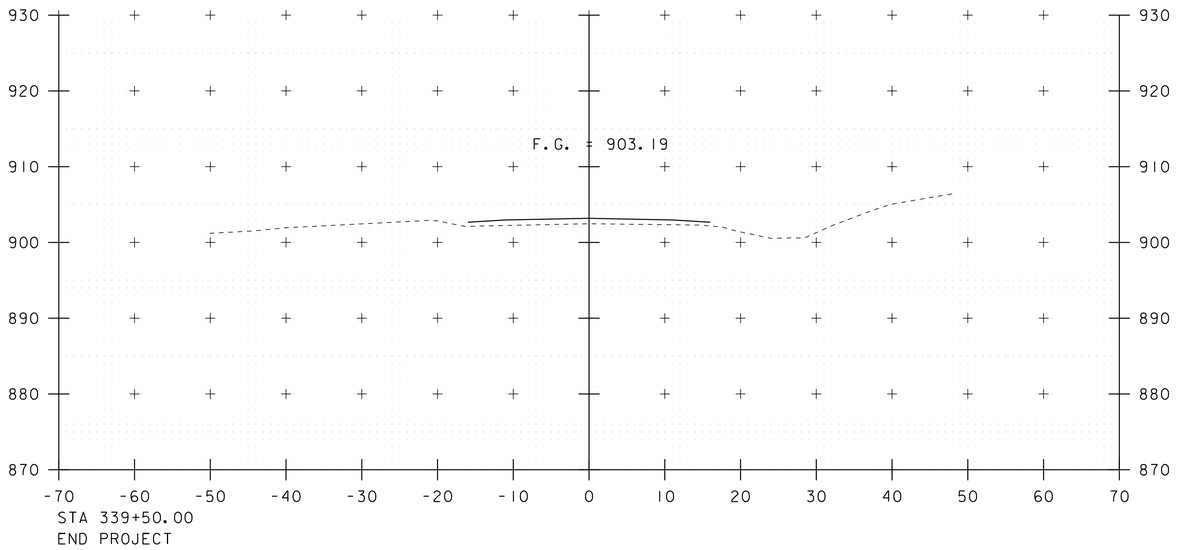
338+75

STA. 338+25 TO STA. 339+00

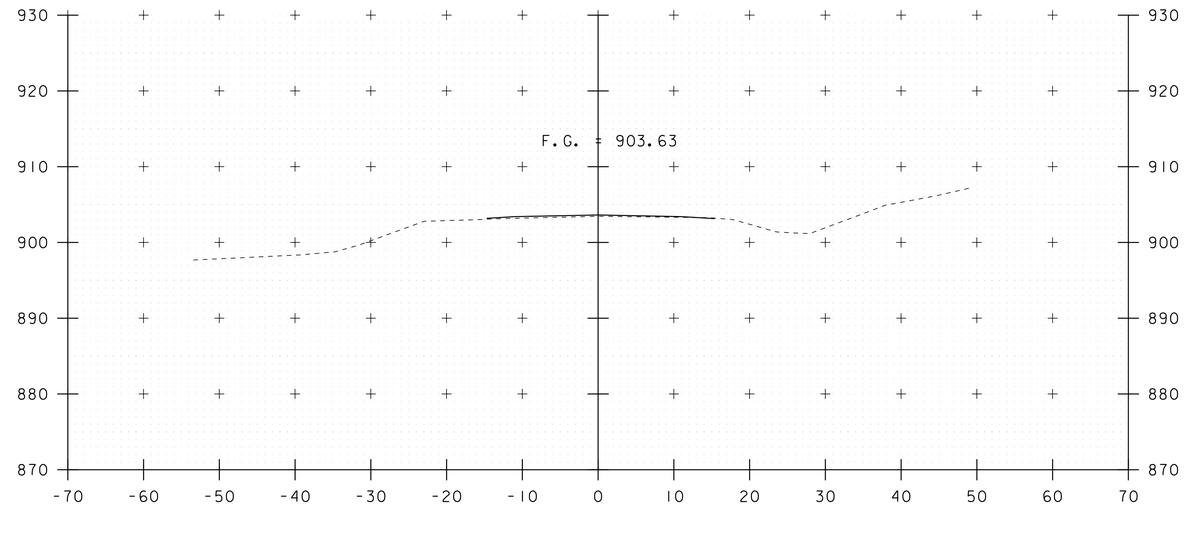
PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: s12b146xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
MAINLINE CROSS SECTIONS 5

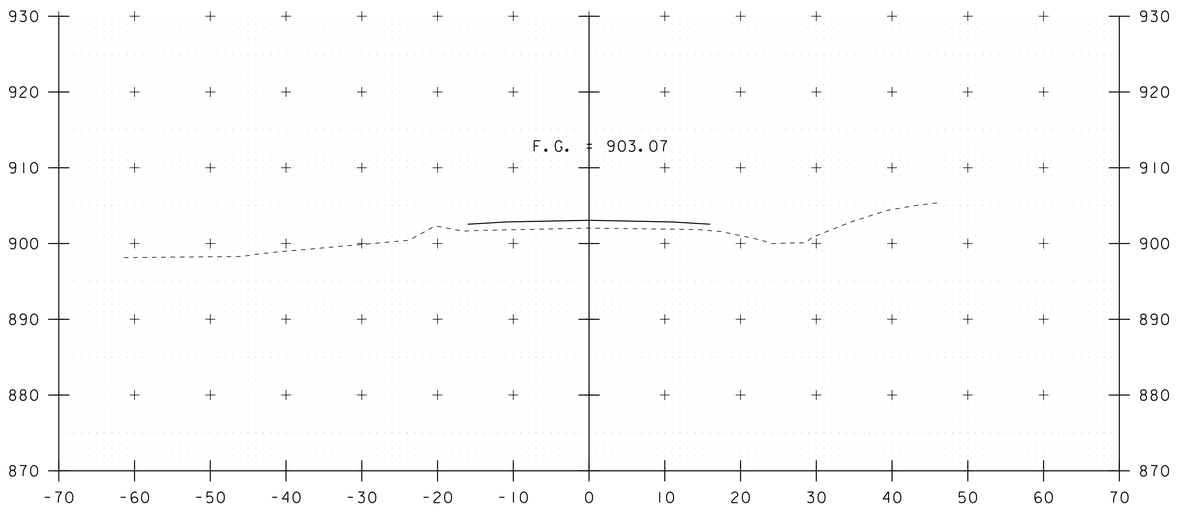
PLOT DATE: 06-MAR-2013
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 15 OF 20



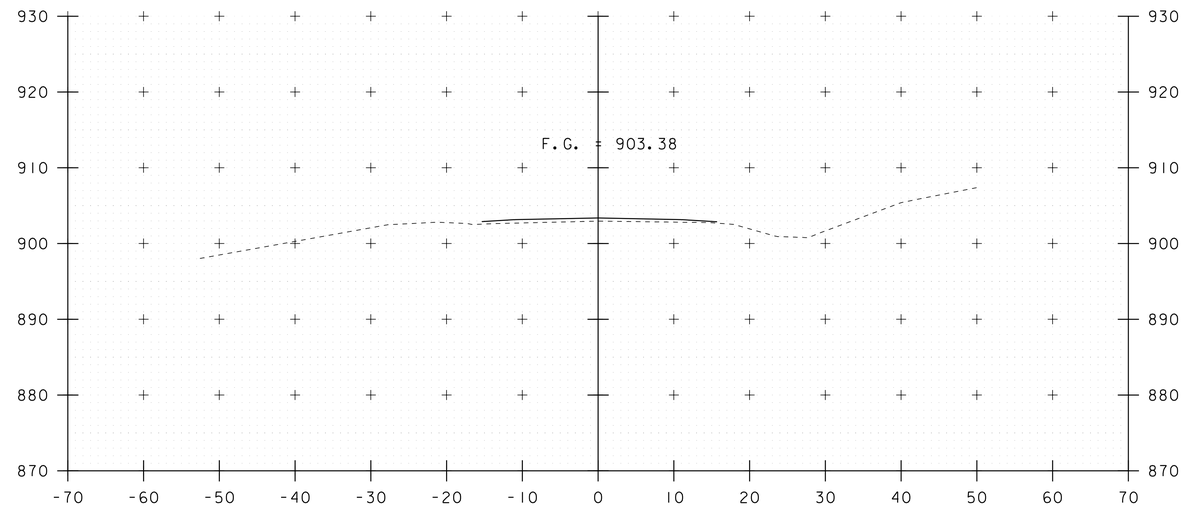
339+50



340+00



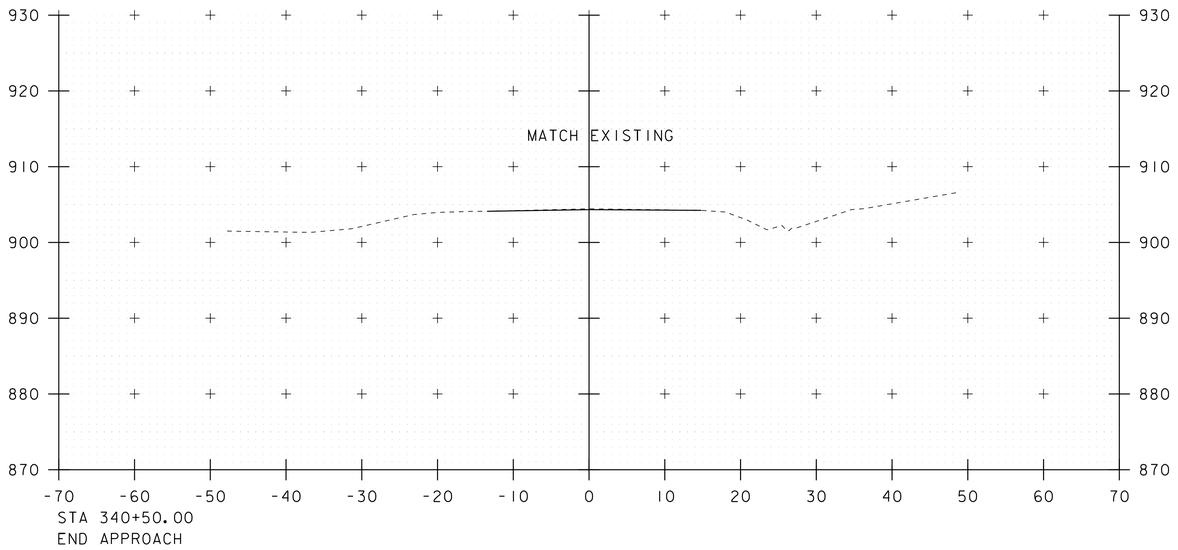
339+25



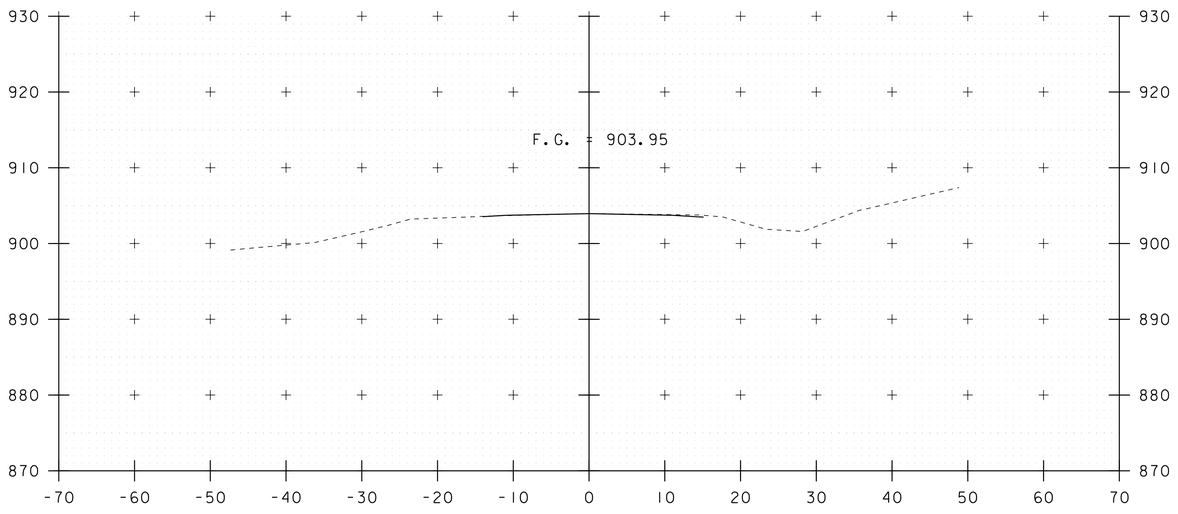
339+75

STA. 339+25 TO STA. 340+00

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12bl46xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
MAINLINE CROSS SECTIONS 6	SHEET 16 OF 20



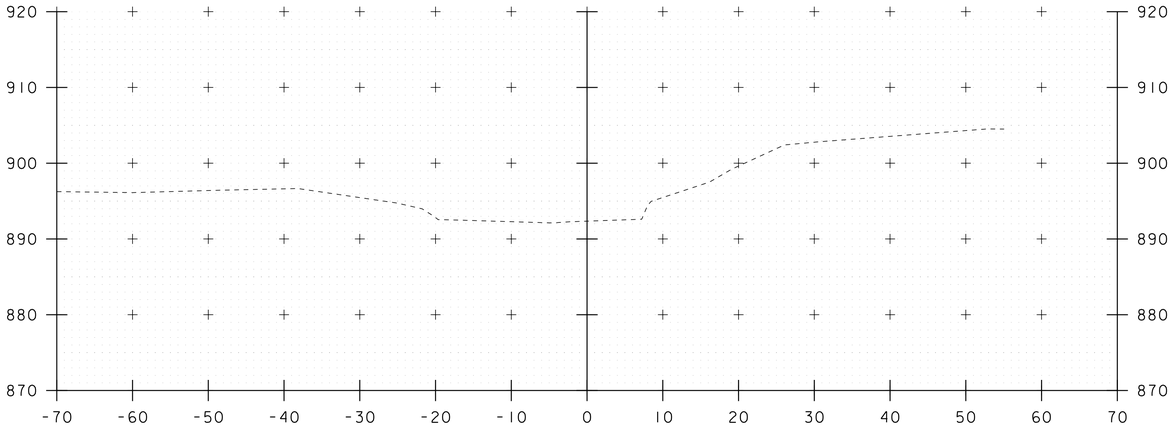
340+50



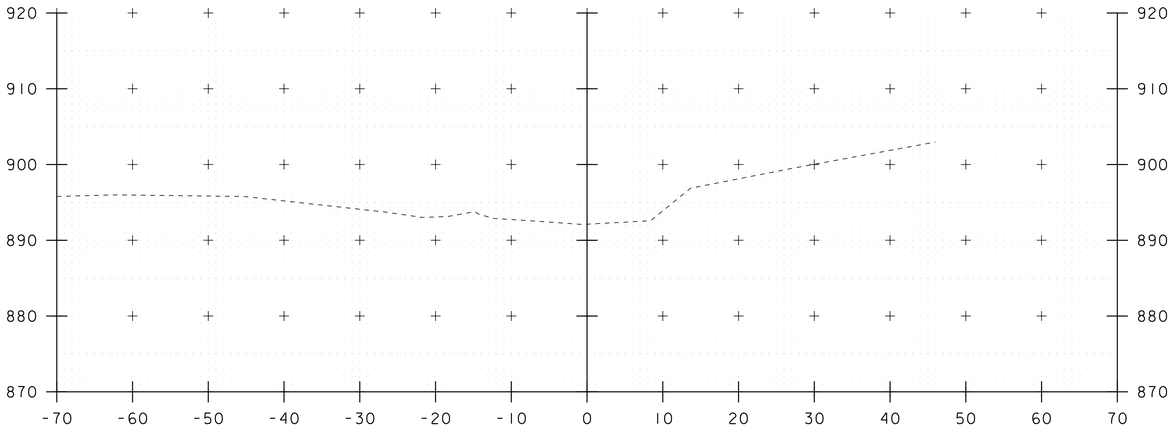
340+25

STA. 340+25 TO STA. 340+50

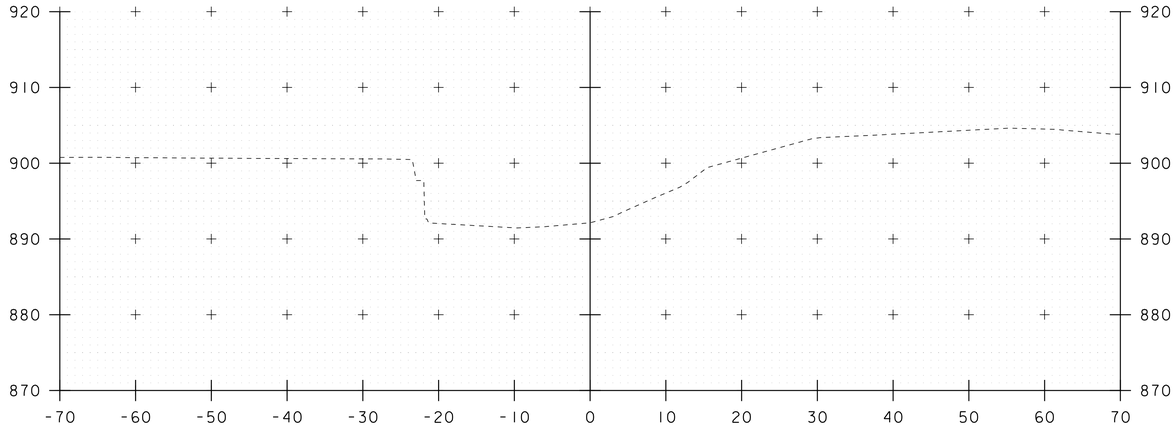
PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: s12bl46xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
MAINLINE CROSS SECTIONS 7	SHEET 17 OF 20



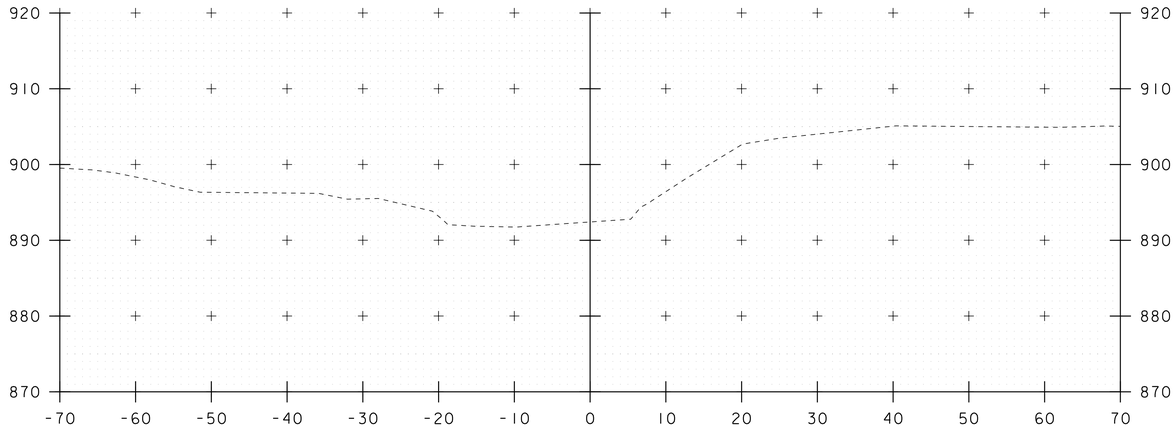
50+25



50+00



50+75



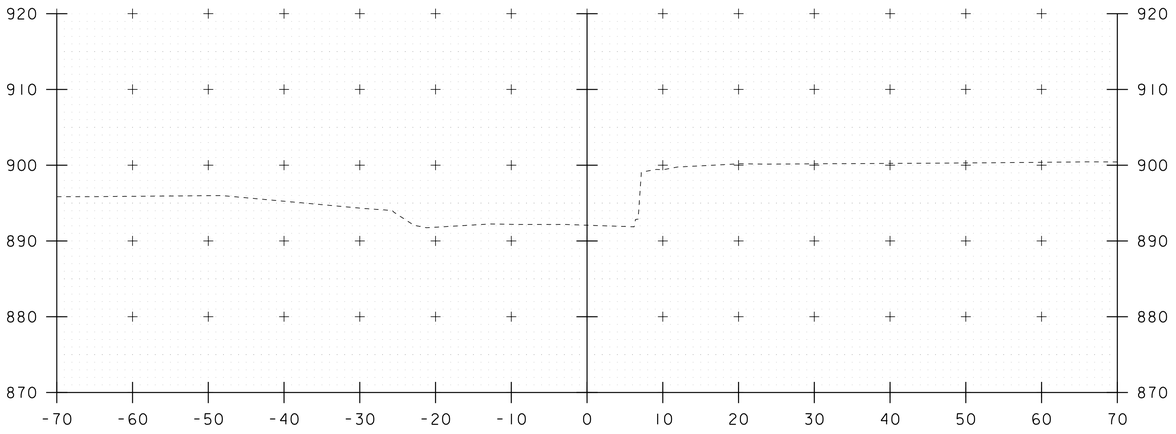
50+50

STA. 50+00 TO STA. 50+75

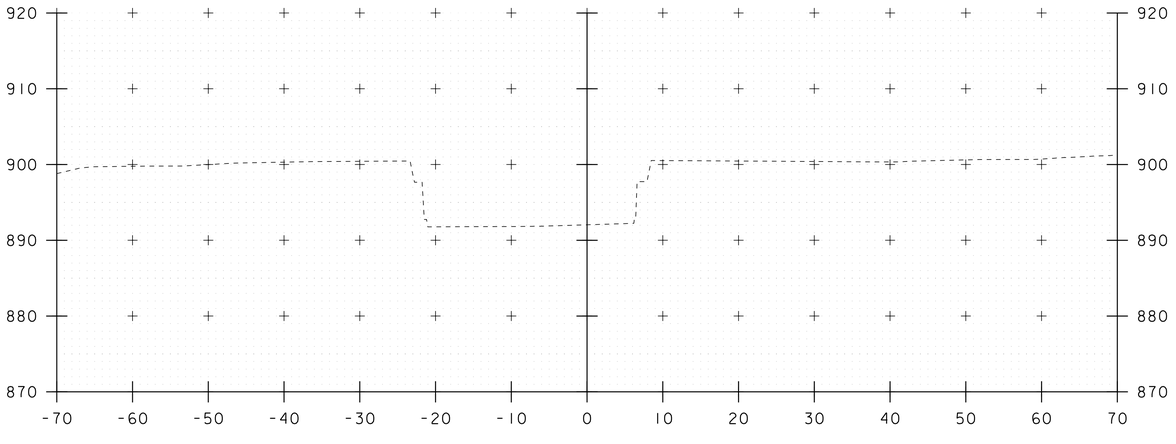
PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: sl2bl46xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
CHANNEL CROSS SECTIONS 1

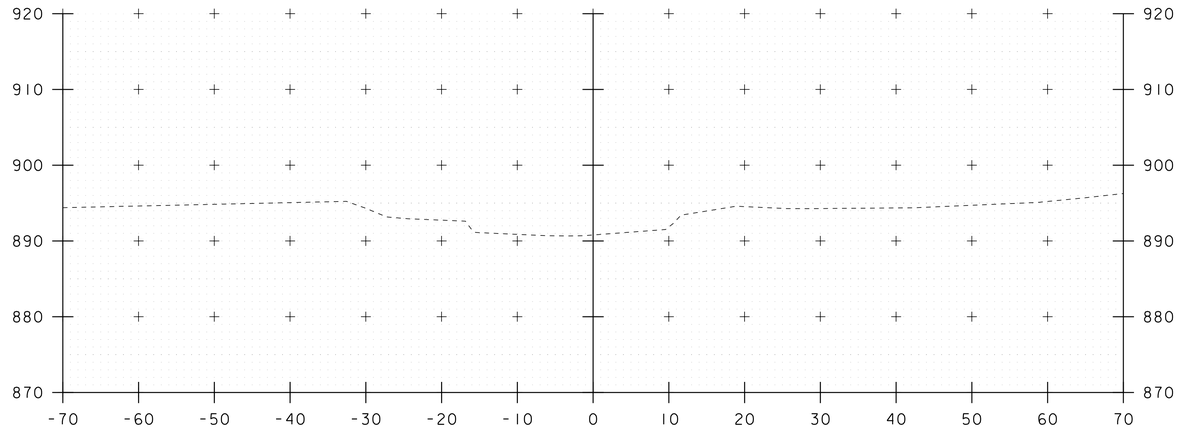
PLOT DATE: 06-MAR-2013
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 18 OF 20



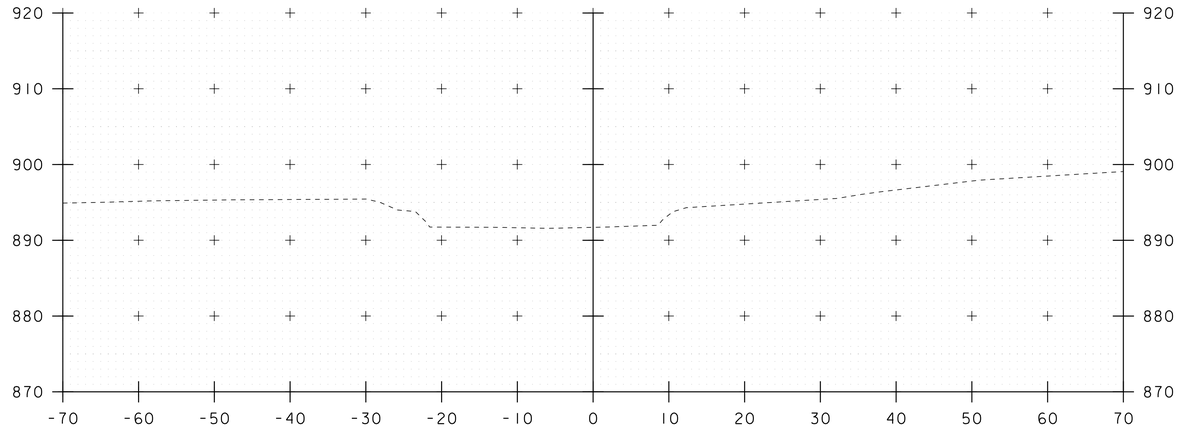
51+25



51+00



51+75



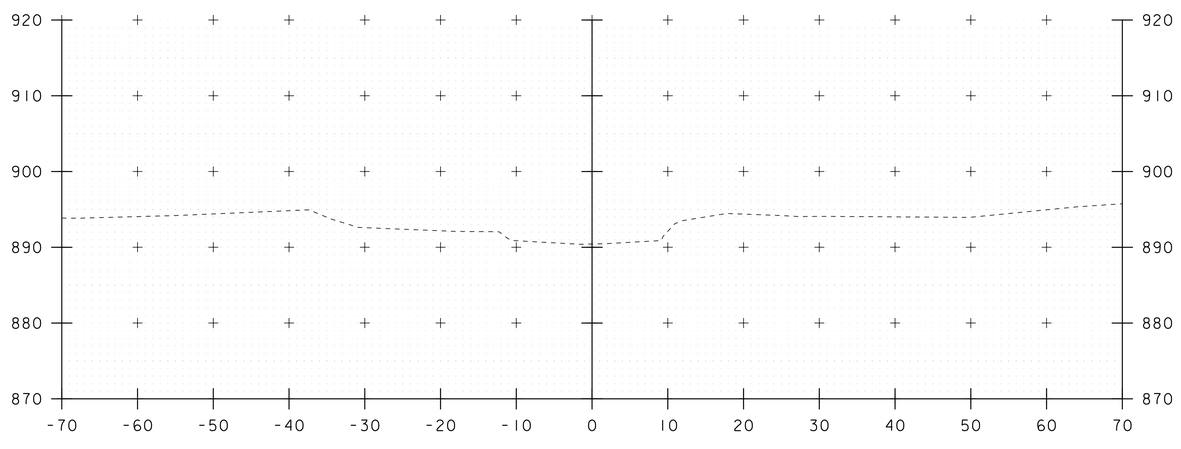
51+50

STA. 51+00 TO STA. 51+75

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(11)

FILE NAME: sl2bl46xs.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
CHANNEL CROSS SECTIONS 2

PLOT DATE: 06-MAR-2013
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 19 OF 20



52+00

STA. 52+00 TO STA. 52+00

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(11)	
FILE NAME: sl2bl46xs.dgn	PLOT DATE: 06-MAR-2013
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
CHANNEL CROSS SECTIONS 3	SHEET 20 OF 20