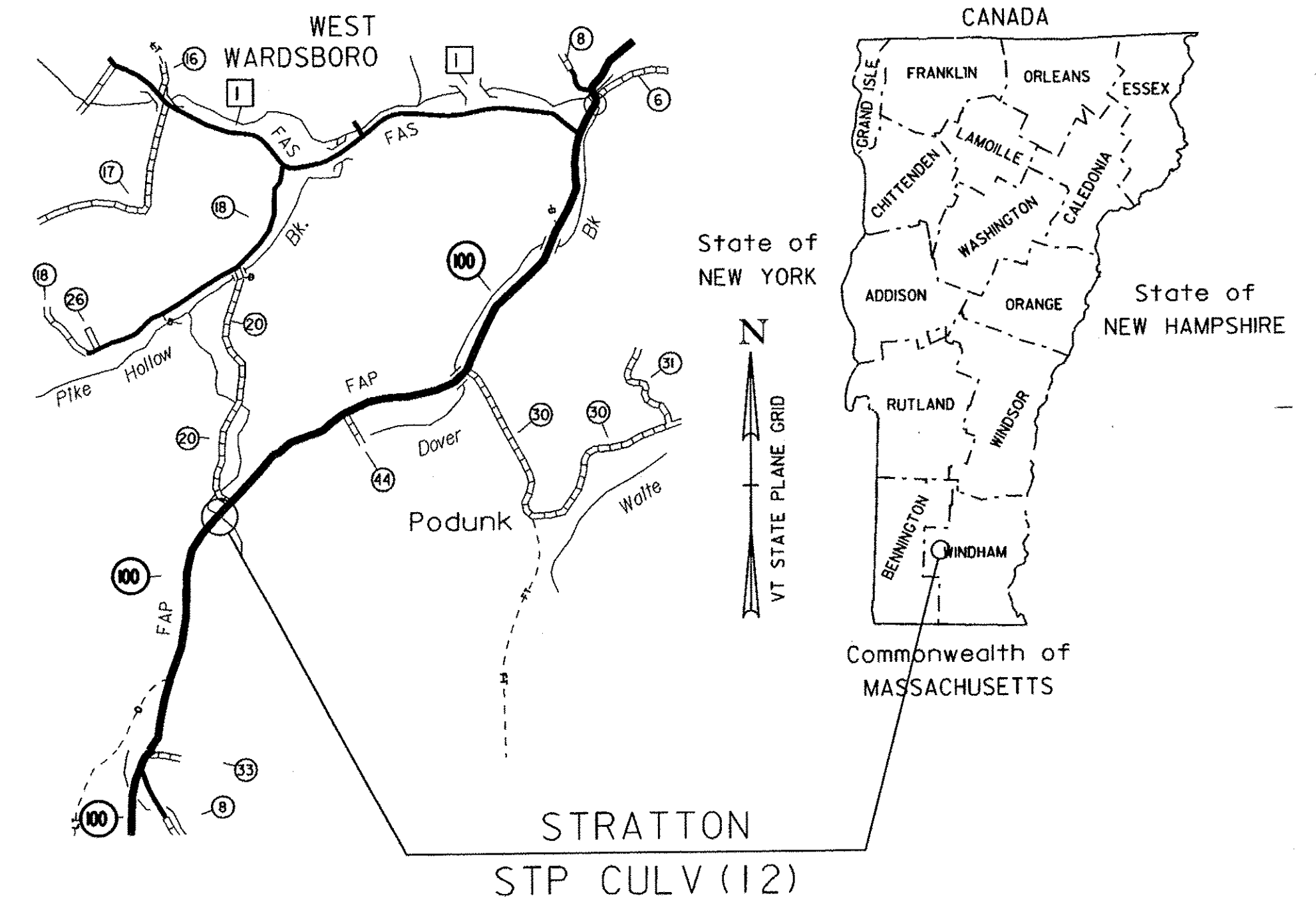


SEE SHEET 2 FOR INDEX AND LIST OF STANDARDS

STATE OF VERMONT AGENCY OF TRANSPORTATION

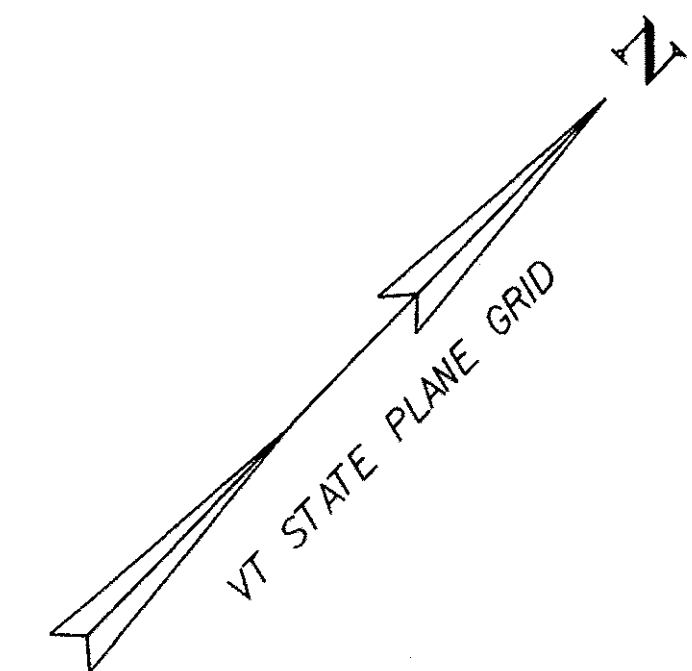


PROPOSED IMPROVEMENT BRIDGE PROJECT



RECORD PLANS	
CONTRACTOR:	ALPINE CONSTRUCTION, LLC- SCHUYLERVILLE, NY
RESIDENT ENGINEER:	MARK HAUGHWOUT
CONSTRUCTION BEGAN:	SEPTEMBER 1, 2010
CONSTRUCTION COMPLETE:	JULY 19, 2011
RECORD PLANS BY:	MARK HAUGHWOUT & C. PIERCE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Mark W. Haughwout</i> RESIDENT ENGINEER
DATE	April 10, 2012
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	

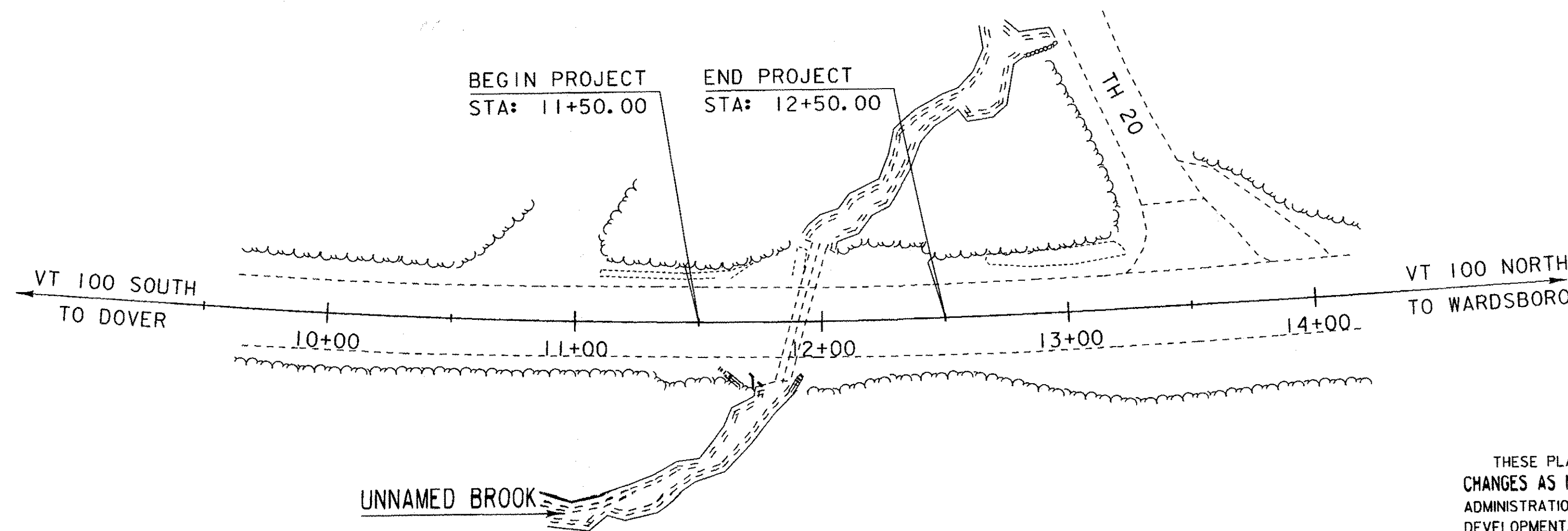
TOWN OF STRATTON
COUNTY OF WINDHAM
ROUTE NO: VT 100, RURAL MINOR ARTERIAL BRIDGE NO: 64
PROJECT LOCATION : 11.5 MILES NORTH OF JUNCTION WITH VT ROUTE 9, MM 1.03
PROJECT DESCRIPTION: THE PROJECT SHALL CONSIST OF LINING THE EXISTING CULVERT,
AND REPLACING THE EXISTING INLET HEADWALL.
LENGTH OF STRUCTURE: N/A
LENGTH OF PROJECT: 100.00'



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	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
SURVEYED DATE : 07-21-2008
DATUM
VERTICAL NAVD88
HORIZONTAL NAD 83 (2007)



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 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 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 <i>Richard Johnson</i> DATE 6-1-10
PROJECT MANAGER : C.P. WILLIAMS	
PROJECT NAME : STRATTON	
PROJECT NUMBER : STP CULV (12)	
SHEET 1 OF 15 SHEETS	

PLOTTED 01-JUN-2010

PRELIMINARY INFORMATION SHEET

INDEX OF SHEETS

INDEX OF SHEETS

- 1. TITLE SHEET
- 2. PISHEET
- 3. QUANTITY SHEET
- 4. TIE SHEET
- 5. CULVERT PROFILE
- 6. GENERAL NOTES
- 7. LAYOUT 20 SCALE
- 8. LAYOUT 10 SCALE
- 9. HEADWALL DETAILS
- 10. REINFORCING STEEL SHEET
- 11. R.O.W. SHEET
- 12-13. MAINLINE CROSS SECTIONS **I2A MAINLINE CROSS SECTION**
- 14-15. CHANNEL CROSS SECTIONS **I4A-C CHANNEL & MAINLINE CROSS SECTIONS**

LIST OF STANDARDS

E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
E-102	CONSTRUCTION SIGN DETAILS	06-30-2003
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	03-01-2004
E-108	CONSTRUCTION ZONE - LONGITUDINAL DROP OFFS	06-08-2009
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	08-08-1995

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: January 2009

DRAINAGE AREA : 0.2 sq. mi.
 CHARACTER OF TERRAIN : Forested, rural, steep
 STREAM CHARACTERISTICS : Sinuous, semi-alluvial
 NATURE OF STREAMBED : Large steps with boulders, cobbles

PEAK FLOW DATA

Q 2.33 =	60 cfs	Q 50 =	125 cfs
Q 10 =	95 cfs	Q 100 =	140 cfs
Q 25 =	110 cfs	Q 500 =	180 cfs

DATE OF FLOOD OF RECORD : Unknown
 ESTIMATED DISCHARGE : Unknown
 WATER SURFACE ELEV. : Unknown
 NATURAL STREAM VELOCITY : @ Q50 = 11.7 fps
 ICE CONDITIONS : Moderate to Heavy
 DEBRIS : Moderate to Heavy
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
 IS ORDINARY RISE RAPID? Yes
 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: 6' Corrugated galvanized metal pipe
 YEAR BUILT: 1919
 CLEAR SPAN(NORMAL TO STREAM): 6'
 VERTICAL CLEARANCE ABOVE STREAMBED: 6'
 WATERWAY OF FULL OPENING: 28.3 sq. ft.
 DISPOSITION OF STRUCTURE: Retain and line
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	2157.6'	VELOCITY =	10.4 fps
Q10 =	2158.6'	"	12.0 fps
Q25 =	2158.9'	"	12.2 fps
Q50 =	2159.3'	"	12.9 fps
Q100 =	2159.7'	"	13.0 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY:
 RELIEF ELEVATION: 2162.2'
 DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

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

DOWNSTREAM STRUCTURE

TOWN: Stratton DISTANCE: 120'
 HIGHWAY #: TH 20 STRUCTURE #:
 CLEAR SPAN: 3' CLEAR HEIGHT: 3'
 YEAR BUILT: FULL WATERWAY: 7.1 sq. ft.
 STRUCTURE TYPE: Corrugated metal pipe

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2010	1300	250	55	16.1	170
2030	1600	310	55	24.1	300

20 year ESAL for flexible pavement from 2010 to 2030 : 883,000
 40 year ESAL for flexible pavement from 2010 to 2050 : 2,154,000
 Design Speed : 50 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Corrugated aluminum plate liner

CLEAR SPAN(NORMAL TO STREAM): 5'
 VERTICAL CLEARANCE ABOVE STREAMBED: 5'
 WATERWAY OF FULL OPENING: 19.6 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	2158.3'	VELOCITY=	9.9 fps
Q10 =	2159.3'	"	11.3 fps
Q25 =	2159.7'	"	11.7 fps
Q50 =	2160.1'	"	12.0 fps
Q100 =	2160.5'	"	12.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY:
 RELIEF ELEVATION: 2162.2'
 DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 2160.3'
 VERTICAL CLEARANCE: @ 50 = 0.2'

SCOUR: Scour is not calculated for culverts

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW: 0.5 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 0.2 cfs 0.5'
 ORDINARY HIGH WATER: 26 cfs 2.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: None required
 CLEAR SPAN (NORMAL TO STREAM):
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO HL-93
2. DESIGN SPAN
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL ON LEDGE
4. ALLOWABLE LOAD FOR PILING TYPE ESTIMATED LENGTH
5. STRUCTURAL STEEL AASHTO M270M/M270 GRADE
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A fc: CONCRETE, CLASS B fc: 3500 psi
8. DESIGN SOIL UNIT WEIGHT 140 pcf
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? YES
 IF YES, ON EXISTING STRUCTURE? YES
 OR ON TEMPORARY BRIDGE?
 ONE OR TWO-WAY TRAVEL?
2. TRAFFIC CONTROL SIGNALS REQUIRED? NO
3. ARE SIDEWALKS REQUIRED? NO
 IF SO, ON WHAT SIDE?

PROJECT NAME: STRATTON
 PROJECT NUMBER: STP CULV(12)
 FILE NAME: 08b058\08b058excel.dgn PLOT DATE: 5/21/2010
 PROJECT LEADER: C.P.WILLIAMS DRAWN BY: D.D.BEARD
 DESIGNED BY: D.D.BEARD CHECKED: H.I. SALLS
 PRELIMINARY INFORMATION SHEET SHEET 2 OF 15

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
							ROADWAY	EROSION CONTROL	BRIDGE	FULL C E ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
									55		55		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
							10				10		CY	GRANULAR BORROW	203.32				
							1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
									65		65		CY	STRUCTURE EXCAVATION	204.25				
									50		50		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
									2110		2110		LB	REINFORCING STEEL (FPQ)	507.15				
									1		1		GAL	WATER REPELLENT, SILANE	514.10				
									20		20		CY	CONCRETE, CLASS B (FPQ)	541.25				
									5		5		CY	CONCRETE, CLASS D	541.31				
							7				7		LF	6 INCH UNDERDRAIN PIPE	605.10				
									10		10		CY	STONE FILL, TYPE I	613.10				
									45		45		CY	STONE FILL, TYPE IV	613.13				
							300				300		HR	FLAGGERS	630.15				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
							1				1		LS	MOBILIZATION/DEMOLITION	635.11				
							1				1		LS	TRAFFIC CONTROL	641.10				
									62		62		SY	GEOTEXTILE UNDER STONE FILL	649.31				
									25		25		SY	GRUBBING MATERIAL	651.40				
								165			165		LF	PROJECT DEMARCATION FENCE	653.55				
									64		64		LF	SPECIAL PROVISION (ALUMNUM PIPE LINER)(60")(EXISTING 72" PIPE)	900.640				
									1		1		LS	SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS, CULVERT)	900.645				
									1		1		LS	SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM)	900.645				

PROJECT NAME: STRATTON
 PROJECT NUMBER: STP CULV(12)
 FILE NAME: s08b058excel.dgn PLOT DATE: 05/21/2010
 PROJECT LEADER: C.P.WILLIAMS DRAWN BY: D.D.BEARD
 DESIGNED BY: H.I.SALLS CHECKED BY: H.I.SALLS
 QUANTITY SHEET #1 SHEET 3 OF 15

GPS CONTROL POINTS

HVCTRL #1

MONTEMAGNI

NORTH = 180054.094
 EAST = 1536475.639
 ELEV. = 2261.59

GENERAL LOCATION, STRATTON, VT. OWNERSHIP, GARY MONTEMAGNI, 617 VT ROUTE 100, STRATTON, VT.

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 30 IN EAST JAMAICA, GO SOUTHWEST ALONG VT ROUTE 100 FOR 4.3 MI (6.9 KM) TO THE INTERSECTION OF SOUTH WARDBORO ROAD LEFT AND VT ROUTE 100 RIGHT. TURN RIGHT AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 4.4 MI (7.1 KM) TO THE INTERSECTION OF STRATTON ARLINGTON ROAD RIGHT. BEAR LEFT AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 2.9 MI (4.7 KM) TO THE INTERSECTION OF A GRAVEL DRIVE RIGHT LEADING TO THE TRIPLE TREE LODGE. CONTINUE STRAIGHT AHEAD AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 45 M (147.6 FT) TO THE SITE OF THE MARK ON THE RIGHT.

THE MARK IS SET IN THE TOP OF A 1.4 M (4.6 FT) X 1.1 M (3.6 FT) SLOPING ROCK OUTCROP.

IT IS 8.4 M (27.6 FT) NORTHWEST OF AND ABOUT 0.1 M (0.3 FT) HIGHER THAN THE CENTERLINE OF VT ROUTE 100, 13.7 M (44.9 FT) NORTH-NORTHEAST OF POLE NO 69/3 WITH BRACE, 15.5 M (50.9 FT) NORTHEAST OF A GRANITE RIGHT-OF-WAY BOUND, 35.8 M (117.5 FT) SOUTH-SOUTHWEST OF THE MOST SOUTHEASTERLY SIGNPOST WITH MAILBOX FOR THE LODGE, 31.9 M (104.7 FT) SOUTH OF THE SOUTHEAST CORNER OF AN ELL ON A TWO-STORY HOUSE WITH DECK, 39.1 M (128.3 FT) SOUTHWEST OF THE CENTER OF THE SOUTHWEST (OUTLET) END OF A 35 CM (14 INCHES) DIAMETER PLASTIC CULVERT WHICH RUNS BENEATH THE GRAVEL DRIVE, AND 34.5 M (113.2 FT) SOUTH OF THE SOUTHEAST CORNER OF A WELL WITH A 1.0 M (3.3 FT) SQUARE CONCRETE COVER.

HVCTRL #4

FAR BEYOND

NORTH = 182603.794
 EAST = 1537058.723
 ELEV. = 2357.78

GENERAL LOCATION, STRATTON, VT.

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 30 IN EAST JAMAICA, GO SOUTHWEST ALONG VT ROUTE 100 FOR 4.3 MI (6.9 KM) TO THE INTERSECTION OF SOUTH WARDBORO ROAD LEFT AND VT ROUTE 100 RIGHT. TURN RIGHT AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 4.4 MI (7.1 KM) TO THE INTERSECTION OF STRATTON ARLINGTON ROAD RIGHT. BEAR LEFT AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 2.9 MI (4.7 KM) TO THE SITE OF THE MARK ON THE RIGHT, JUST NORTHEAST OF A WOODS ROAD.

THE MARK IS SET IN THE TOP OF A MASSIVE SLOPING ROCK OUTCROP.

IT IS 6.7 M (22.0 FT) NORTHWEST OF AND ABOUT 1.0 M (3.3 FT) HIGHER THAN THE CENTERLINE OF VT ROUTE 100, 10.6 M (34.8 FT) SOUTHWEST OF POLE NO 1-2/60, 17.8 M (58.4 FT) NORTH-NORTHEAST OF THE CENTER OF THE NORTH (OUTLET) END OF A 45 CM (18 INCHES) DIAMETER PLASTIC CULVERT AND STEEL MARKER POST, 8.7 M (28.5 FT) NORTHEAST OF THE CENTERLINE OF THE WOODS ROAD, 0.35 M (1.1 FT) NORTHWEST OF THE SOUTHEAST EDGE OF THE ROCK OUTCROP, AND 43.0 M (141.1 FT) NORTHEAST OF THE CENTERLINE OF ANOTHER WOODS ROAD WITH PAVED APRON.

GPS CONTROL POINTS

HVCTRL #13

SCHWIPPERT

NORTH = 185902.558
 EAST = 1540611.066
 ELEV. = 2008.69

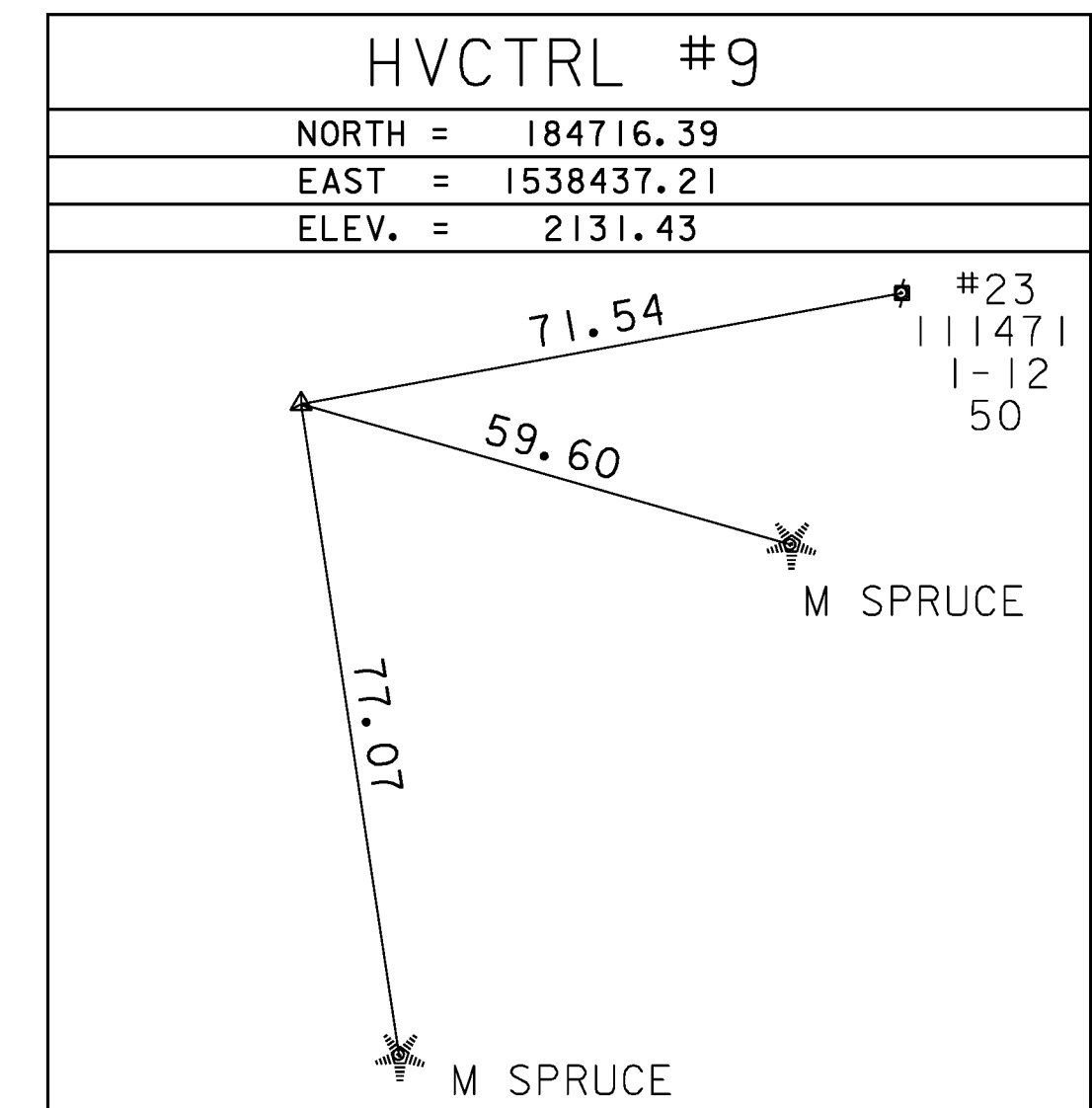
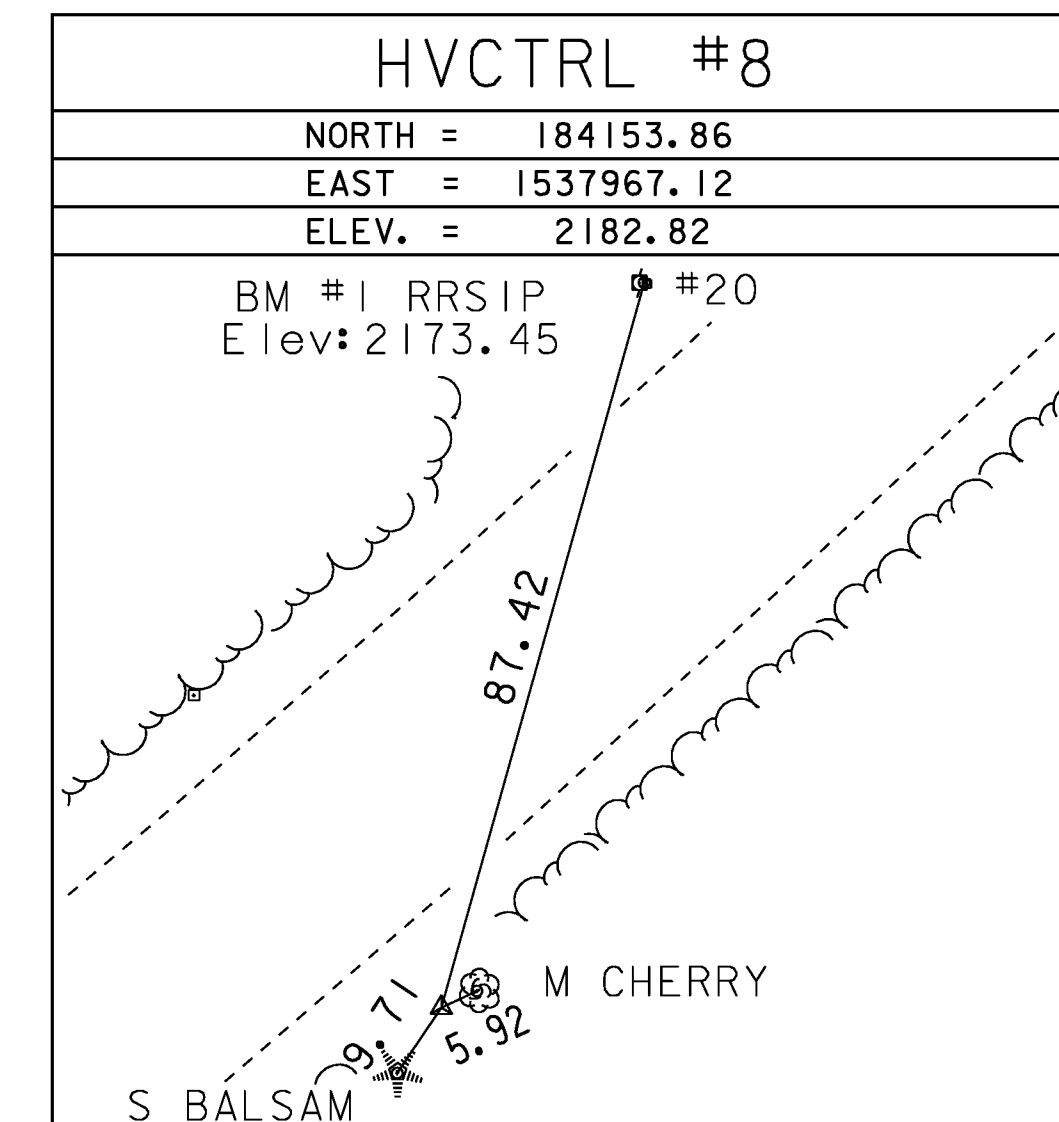
GENERAL LOCATION, STRATTON, VT. OWNERSHIP, BRUCE GARCIA, POST OFFICE BOX 454, BUCKINGHAM, PA 18912, PHONE NO 610-275-2727. CONTACT, PAUL SCHWIPPERT, PROPERTY MANAGER.

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 30 IN EAST JAMAICA GO SOUTHWEST ALONG VT ROUTE 100 FOR 4.3 MI (6.9 KM) TO THE INTERSECTION OF SOUTH WARDBORO ROAD LEFT AND VT ROUTE 100 RIGHT. TURN RIGHT AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 4.4 MI (7.1 KM) TO THE INTERSECTION OF STRATTON ARLINGTON ROAD RIGHT. BEAR LEFT AND GO SOUTHWEST ALONG VT ROUTE 100 FOR 1.9 MI (3.1 KM) TO THE SITE OF THE MARK ON THE RIGHT, JUST SOUTHWEST OF THE SOUTHWEST EDGE OF A GRAVEL DRIVE.

THE MARK IS SET 8 CM (3 INCHES) BELOW GROUND SURFACE IN THE TOP OF A ROCK OUTCROP.

IT IS 6.5 M (21.3 FT) NORTH-NORTHWEST OF AND ABOUT 0.4 M (1.3 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 100, 1.2 M (3.9 FT) SOUTHWEST OF THE SOUTHWEST EDGE OF THE GRAVEL DRIVE, 16.6 M (54.5 FT) NORTHWEST OF AND ACROSS THE ROAD FROM POLE NO 39 1/4 /43, 41.8 M (137.1 FT) SOUTHWEST OF POLE NO 73/42A/39 1/3, 3.0 M (9.8 FT) EAST OF THE MOST EASTERLY POST FOR A WOODEN SIGN (TURKWOOD 100 NORTH), 24.7 M (81.0 FT) SOUTH-SOUTHWEST OF THE CENTER OF THE DOOR ON A 3-STORY HOUSE, 46.5 M (152.6 FT) NORTHEAST OF THE CENTERLINE OF MEADOW WOOD LANE, AND 2.5 M (8.2 FT) EAST OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES



* Main Traverse Completed 7/21/08 by R.Gilman & P.Winters & T.Parker

ALIGNMENT TIES

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

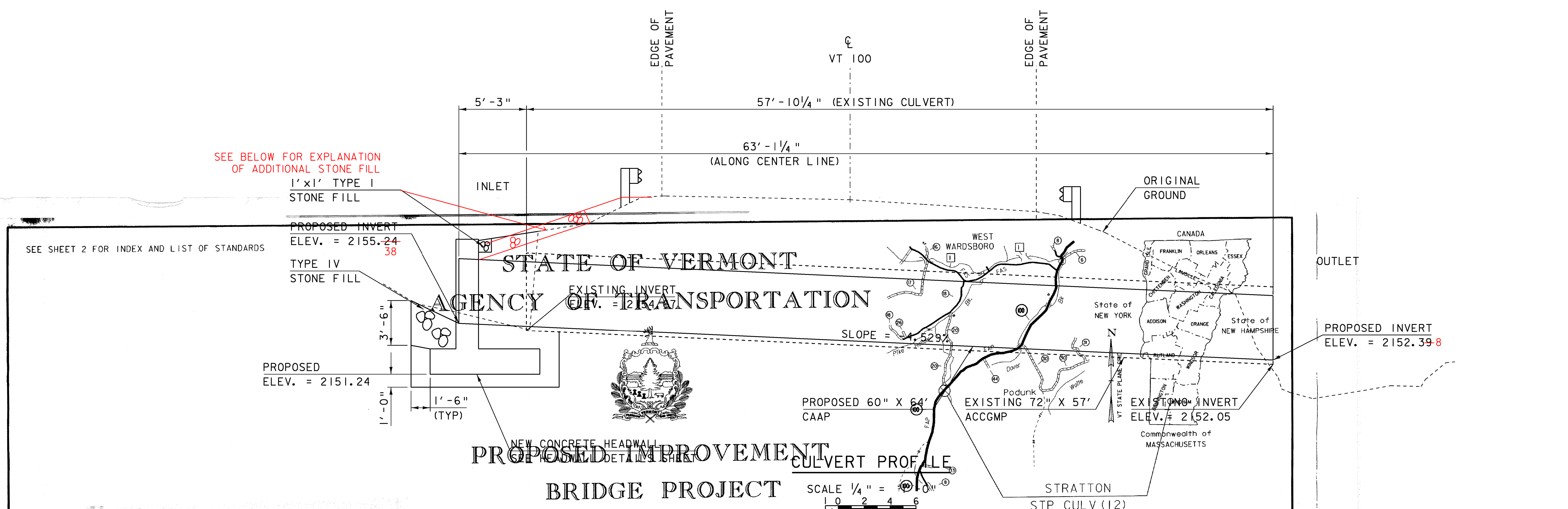
NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

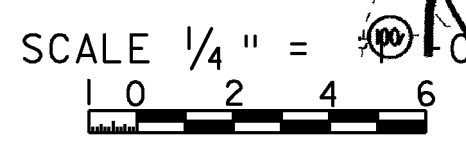
NORTH =
EAST =
ELEV. =

DATUM
VERTICAL <u>NAVD 88</u>
HORIZONTAL <u>NAD 83 (07)</u>
ADJUSTMENT <u>COMPASS</u>

PROJECT NAME: Stratton
PROJECT NUMBER: STP CULV (12)
FILE NAME: 08b058\survey\08b058t1.dg
PROJECT LEADER: C. P. WILLIAMS
DESIGNED BY: R. S. YOUNG
TIE SHEET
PLOT DATE: 01-JUN-2010
DRAWN BY: R. Bullock
CHECKED BY: H. I. SALLS
SHEET 4 OF 15



**PROPOSED IMPROVEMENT
BRIDGE PROJECT
CULVERT PROFILE**



TOWN OF STRATTON
COUNTY OF WINDHAM
ROUTE NO: VT 100, RURAL MINOR ARTERIAL BRIDGE NO: 64

PROJECT LOCATION: 11.5 MILES NORTH OF JUNCTION WITH VT ROUTE 9, MM 1.03
PROJECT DESCRIPTION: THE PROJECT SHALL CONSIST OF LINING THE EXISTING CULVERT,
AND REPLACING THE EXISTING INLET HEADWALL.
LENGTH OF STRUCTURE: N/A
LENGTH OF PROJECT: 100.00'

RECORD PLANS

CONTRACTOR:	ALPINE CONSTRUCTION, LLC, SCHUYLERVILLE, NY
RESIDENT ENGINEER:	MARK HAUGHWOUT
CONSTRUCTION BEGAN:	SEPTEMBER 1, 2010
CONSTRUCTION COMPLETE:	TYPE I
RECORD PLANS BY:	STONE FILL - THIS WAS EXTENDED UPHILL DUE TO THE PROJECT LOCATION AND STEEP SLOPE. SEE ABOVE DRAWING ALSO. MARK HAUGHWOUT & C. PIERCE
DATE:	APRIL 17, 2012

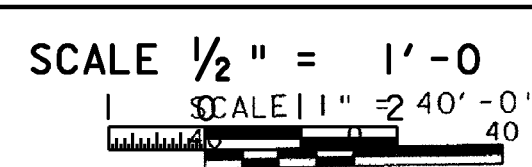
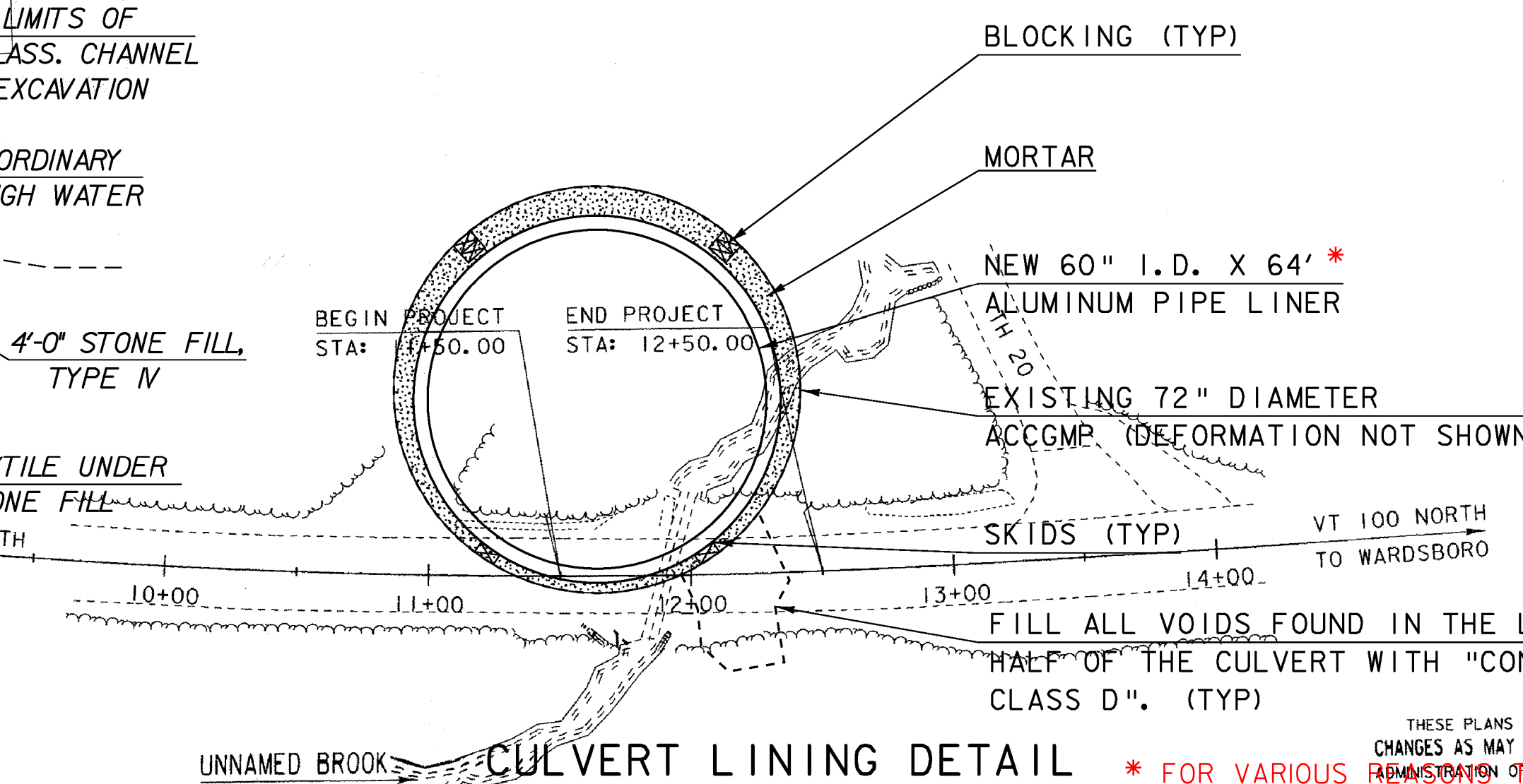
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

CONVENTIONAL SYMBOLS

COUNTY LINE	---
TOWN LINE	- - -
LIMITS OF ACCESS	---
POINT OF ACCESS	X
FENCE LINE	X X X X
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
TOP OF CUT	▲
TOE OF SLOPE	○

TYPICAL HEADWALL SECTION
(NOT TO SCALE)

SURVEYED BY:	R. GILMAN
SURVEYED DATE:	07-21-2008
DATUM	VERTICAL NAVD88
	HORIZONTAL NAD 83 (2007)



4'-0" STONE FILL, TYPE IV
INDIVIDUAL STONES MAY PROJECT 12" ±
ABOVE CHANNEL GRADE TO RETARD
VELOCITY

GRUBBING MATERIAL FROM
2'-0" ABOVE CULVERT
INVERT ELEVATION

STONE FILL SHALL EXTEND TO
1/2 HEIGHT OF THE CULVERT

LIMITS OF UNCLASSIFIED
CHANNEL EXCAVATION

INSTALL GEOTEXTILE
UNDER STONE FILL

STONE FILL DETAIL
N. T. S.

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DESIGN PROGRAM DEVELOPMENT. CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2009, 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	PROJECT NAME: STRATTON
PROJECT LEADER: C.P. WILLIAMS	PROJECT NUMBER: STP CULV(12)
PROJECT MANAGER: C.P. WILLIAMS	FILE NAME: s08b058+yp.dgn
PROJECT NUMBER: STP CULV(12)	PROJECT LEADER: C.P. WILLIAMS
DESIGNED BY: H.I. SALLS	CHECKED BY: H.I. SALLS
CULVERT PROFILE	PLOT DATE: 01-JUN-2010
	DRAWN BY: D.D. BEARD
	CHECKED BY: H.I. SALLS
	SHEET 5 OF 15

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOURTH EDITION, DATED 2007, AND ITS LATEST REVISIONS. ALSO THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, SECOND EDITION 2004 AND ALL ITS INTERIMS.
2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68° FAHRENHEIT, UNLESS NOTED OTHERWISE.
3. IT IS EXPECTED THAT CULVERT LINING, HEADWALL AND STONE FILL WILL BE THE EXTENT OF THE WORK. DURING THE COURSE OF CONSTRUCTION, IF THE CONTRACTOR SEES AN AREA OF CONCERN, SUCH AS VOIDS AROUND THE EXISTING CULVERT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER SHALL MAKE A DETERMINATION AS TO THE NEED FOR FURTHER EXPLORATION. ANY FURTHER EXCAVATION SHALL BE EXTRA WORK.
4. AN ESTIMATED AMOUNT OF 5 CY OF ITEM 541.30 "CONCRETE CLASS D" HAS BEEN ADDED FOR THE FILLING OF VOIDS FOUND IN THE BACKFILL MATERIAL BELOW THE EXISTING PIPE.
5. IF ANY TEMPORARY BRACING, SHEETING, OR OTHER MEANS OF SUPPORTING THE EXCAVATION ARE NEEDED. IT SHALL BE CONSIDERED INCIDENTAL TO 204.25 "STRUCTURE EXCAVATION".
6. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION ESPECIALLY THE DISCHARGE OF RAW CONCRETE INTO THE WATERS OF THE STATE AS DIRECTED BY THE RESIDENT ENGINEER AND STANDARD SPECIFICATIONS SECTION 105. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN A TOTAL SITE DISTURBANCE OF MORE THAN ONE ACRE OR SHOULD THE PROJECT BECOME PART OF A LARGER DEVELOPMENT PLAN THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

PIPE RESTORATION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ACCESS TO THE CULVERT RESTORATION SITE. ACCESS ROAD AND STAGING AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 105.23(L). ALL RESULTING DISTURBED EARTH SHALL BE STABILIZED AND RESTORED UPON COMPLETION OF CONSTRUCTION. PAYMENT FOR WORK SHALL BE PAID FOR UNDER ITEM 900.645 "SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS, CULVERT)".
2. THE EXISTING LAID UP STONE HEADWALL AT THE INLET SHALL BE REMOVED AND A NEW CONCRETE HEADWALL SHALL BE CONSTRUCTED. SEE "HEADWALL DETAILS" SHEET FOR NEW HEADWALL DETAILS.
3. THE EXISTING CRADLE HEADWALL AT THE OUTLET SHALL BE RETAINED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EXISTING PIPE TO THE SATISFACTION OF THE ENGINEER. IT IS ANTICIPATED THAT IT WILL BE NECESSARY FOR THE CONTRACTOR TO REMOVE SEDIMENT, LARGE STONES, AND/OR DEBRIS FROM INSIDE THE EXISTING CULVERT PRIOR TO INSTALLING THE NEW PIPE. ALL WORK ASSOCIATED WITH PREPARING EXISTING PIPE WILL BE INCIDENTAL TO PAY ITEM 900.640 "SPECIAL PROVISION (ALUMINUM PIPE LINER) (60)".
5. THE CONTRACTOR SHALL DEVELOP A SYSTEM OF SKIDS AND BLOCKING TO HOLD THE LINER IN PROPER POSITION DURING GROUTING OPERATIONS. THIS SHALL BE INCIDENTAL TO PAY ITEM 900.640 "SPECIAL PROVISION (ALUMINUM PIPE LINER) (60)".
6. THE NEW ALUMINUM PIPE SHALL BE COATED ON THE EXTERIOR WITH CHROMATE FREE PRIMER, THE COST FOR THIS SHALL BE INCIDENTAL TO PAY ITEM 900.640 "SPECIAL PROVISION (ALUMINUM PIPE LINER) (60)".
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PRIMER COATING ON THE PIPE EXTERIOR. ANY DAMAGE TO THE COAT SHALL BE REPAIRED BY THE CONTRACTOR, AND SHALL BE AT THE SOLE COST OF THE CONTRACTOR.
8. THE INSTALLATION OF THE PIPE LINER AND CONSTRUCTION OF THE NEW HEADWALL SHALL BE DONE IN THE DRY. CONTROL OF WATER SHALL BE PAID UNDER PAY ITEM 900.645 "SPECIAL PROVISION, (TEMPORARY RELOCATION OF STREAM)". STANDING OR FLOWING WATER SHALL NOT BE PRESENT DURING GROUTING OR THE FILLING OF VOIDS.

9. STONE FILL; TYPE IV SHALL BE USED TO REPLACE THE EXCAVATED CHANNEL AT THE INLET.
10. FABRICATION DRAWINGS, CONFORMING TO SECTION 105.03, FOR THE CULVERT LINER SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO THE WORK COMMENCING.

CONCRETE NOTES

1. CONCRETE FOR THE INLET HEADWALL SHALL BE ITEM 541.25, "CONCRETE, CLASS B".
2. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS NOTED
3. THE CONCRETE CONSTRUCTION JOINT SHALL HAVE A RAKED FINISH. SEE SHEET 9 FOR DETAILS.
4. WATER REPELLANT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, PAYMENT SHALL BE MADE AS ITEM 514.10 "WATER REPELLANT, SILANE"
5. MINIMUM CLEAR COVER FOR THE REINFORCING STEEL SHALL BE 2" FOR ANY STEEL ALONG BACK FACES OF WALLS AGAINST EARTH, 3" ELSEWHERE UNLESS OTHERWISE INDICATED.
6. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
SPACING: +/- 1"
CLEARANCE: +/- 1/4"

TRAFFIC CONTROL NOTES

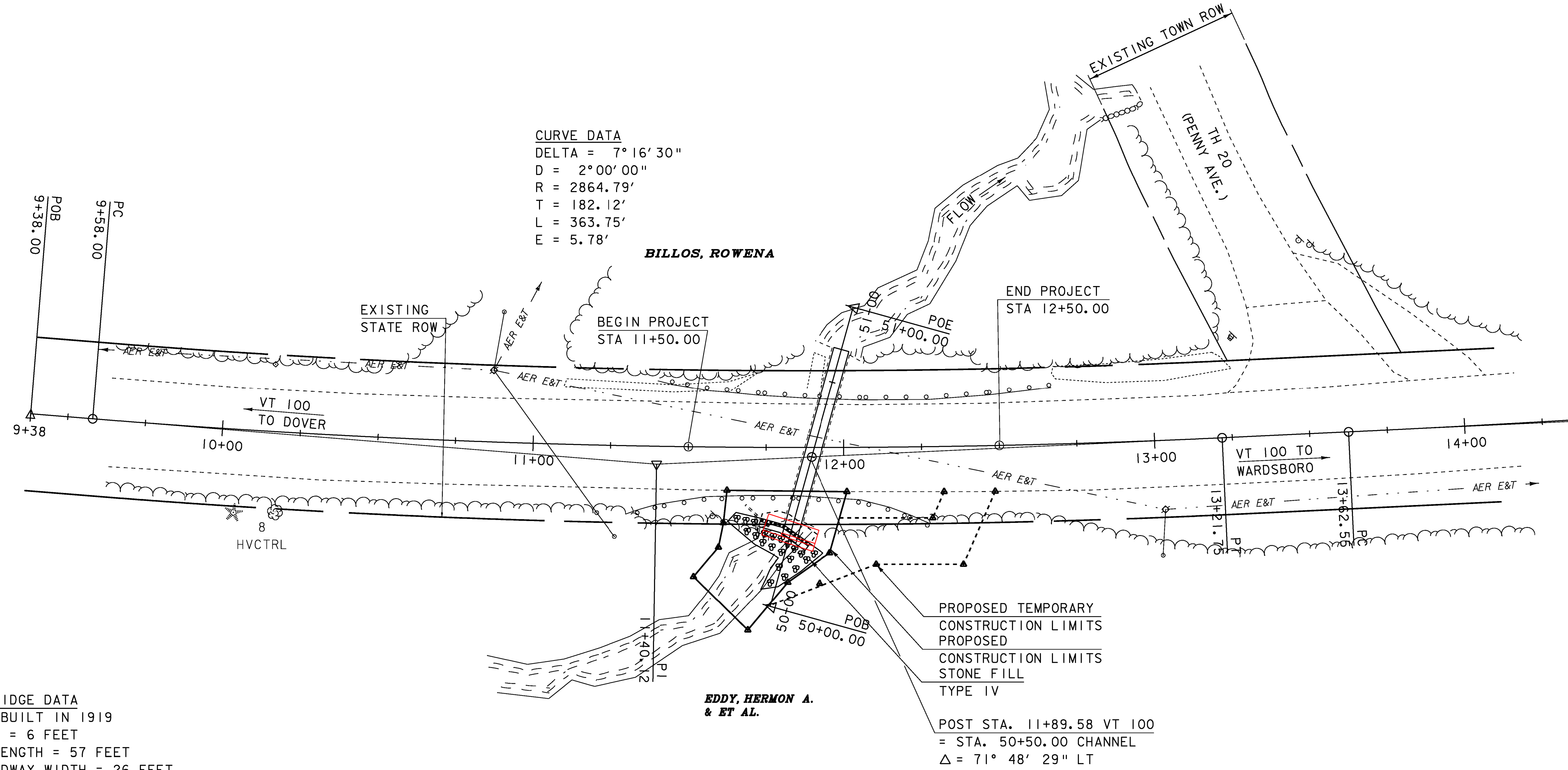
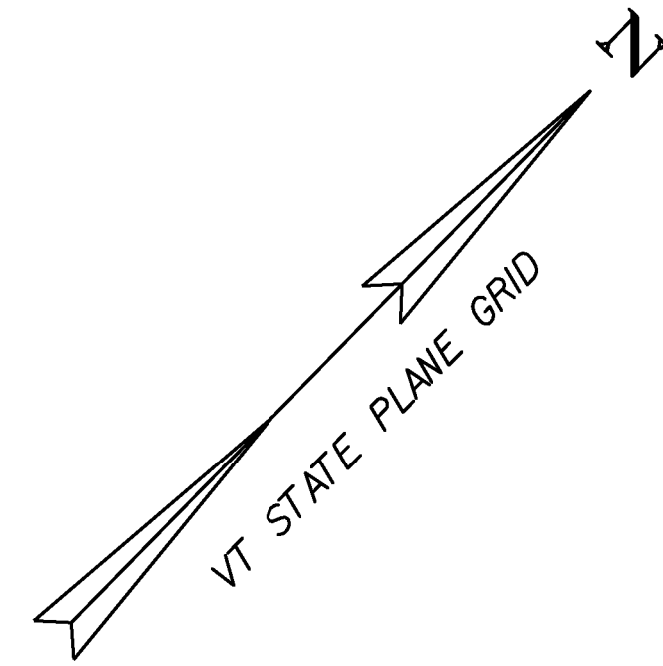
1. ALL TRAFFIC CONTROL FOR THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE VERMONT STATE STANDARD DRAWINGS.
2. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE ROADWAY, TRAFFIC, AND SAFETY ENGINEER FOR APPROVAL PER SUBSECTION 105.03 PRIOR TO CONSTRUCTION. THE PLANS SHALL INCLUDE DETAILS FOR MAINTAINING ACCESS TO THE TOWN HIGHWAY (PENNY AVE.), AND PLACEMENT OF FLAGGER STATIONS WITH CONSIDERATION OF SIGHT DISTANCE TO THE FLAGGER AND THE EXPECTED BACK OF QUEUE DUE TO THE HORIZONTAL AND VERTICAL CURVES NEAR THE WORK AREA.
3. TEMPORARY LANE AND/OR SHOULDER CLOSURES WILL BE ALLOWED DURING WORKING HOURS ONLY. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE ENGINEER STATING HOW TWO-WAY TRAFFIC WILL BE MAINTAINED. PAYMENT FOR THIS WILL BE MADE UNDER ITEM 641.10 "TRAFFIC CONTROL" THE ROADWAY SHALL BE RESTORED TO TWO LANE CAPACITY AT THE CLOSE OF DAILY CONSTRUCTION ACTIVITIES. THIS NOTE ONLY PERTAINS TO DAILY CLOSURES.
4. IF DEEMED NECESSARY BY THE ENGINEER, PROLONGED SHOULDER CLOSURE WILL BE ALLOWED, WITH PAYMENT FOR INSTALLING, RESETING AND REMOVING ANY TEMPORARY TRAFFIC BARRIERS INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL". IF USED, TEMPORARY TRAFFIC BARRIER SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 621.
5. IF PROLONGED SHOULDER CLOSURES ARE DEEMED NECESSARY, PAYMENT FOR INSTALLING AND REMOVING ANY ENERGY ABSORPTION ATTENUATORS SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL". IF USED, ENERGY ABSORPTION ATTENUATORS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 621. A BACK UP ATTENUATOR SHALL BE PROVIDED ON SITE IN ACCORDANCE WITH THE SPECIFICATIONS.
6. SIGNS, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE CLEANED WEEKLY AND THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 641.10 "TRAFFIC CONTROL".

EROSION CONTROL NOTES

1. PAYMENT FOR EROSION CONTROL AND SEDIMENT CONTROL MEASURES REQUIRED TO TEMPORARILY OR PERMANENTLY STABILIZE DISTURBED SOILS INCLUDING BUT NOT LIMITED TO TOPSOIL, SEED, FERTILIZER, LIMESTONE, EROSION MATTING, MULCH, AND SILT FENCE NOT PAID UNDER A SEPARATE CONTRACT ITEM WILL BE CONSIDERED INCIDENTAL TO ALL OTHER CONTRACT ITEMS. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH SECTION 105 OF THE VTRANS STANDARD SPECIFICATIONS.

PROJECT NAME:	STRATTON
PROJECT NUMBER:	STP CULV(12)
FILE NAME:	s08b058notes.dgn
PROJECT LEADER:	C.P.WILLIAMS
DESIGNED BY:	H.J.SALLS
GENERAL NOTES	
PLOT DATE:	01-JUN-2010
DRAWN BY:	D.D.BEARD
CHECKED BY:	H.J. SALLS
SHEET	6 OF 15

LOCATION	NORTHING	EASTING
MAIN LINE		
PC	184136.2738'	1537908.5965'
PI	184252.6498'	1538048.6830'
PT	184385.8284'	1538172.9049'
CHANNEL LINE		
POB	184245.3628'	1538106.8427'
POE	184332.9927'	1538058.6659'



EXISTING BRIDGE DATA
 72" ACCGMP BUILT IN 1919
 SPAN LENGTH = 6 FEET
 STRUCTURE LENGTH = 57 FEET
 APPROX. ROADWAY WIDTH = 26 FEET

NEW RE-DESIGNED HEADWALL DRAWN IN RED.
 SEE NEXT 2 SHEETS.

LAYOUT (20 SCALE)

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

PROJECT NAME: STRATTON
 PROJECT NUMBER: STP CULV(12)

FILE NAME: s08b058bdr.dgn
 PROJECT LEADER: C.P.WILLIAMS
 DESIGNED BY: H.J.SALLS
 LAYOUT (20 SCALE)

PLOT DATE: 01-JUN-2010
 DRAWN BY: D.D.BEARD
 CHECKED BY: H.J. SALLS
 SHEET 7 OF 15

BILLOS, ROWENA

CURVE DATA
 DELTA = 7° 16' 30"
 D = 2° 00' 00"
 R = 2864.79'
 T = 182.12'
 L = 363.75'
 E = 5.78'

BEGIN PROJECT
 STA 11+50.00

END PROJECT
 STA 12+50.00

STOP
 1000
 1316
 0106

EXISTING STATE ROW

RR SPIKE
 IN POLE
 ELEV =
 2173.45

SEE SHEET 2 FOR INDEX AND LIST OF STANDARDS

STATE OF VERMONT
 AGENCY OF TRANSPORTATION

VT 100
 TO DOVER

100
 HCVTRL

VT 100 TO
 WARDSBORO

NEW HEADWALL WAS RE-DESIGNED.
 SEE NEXT SHEET.

**PROPOSED IMPROVEMENT
 BRIDGE PROJECT**

CONTRACTOR: ALPINE CONSTRUCTION, LLC - SCHUYLVILLE, NY
 RESIDENT ENGINEER: MARK HAUGHWOLT
 CONSTRUCTION BEGAN: SEPTEMBER 1, 2010
 TRIM AND BEND EXISTING UNDERDRAIN PIPE AS NEEDED, DRAIN ONTO STONE FILL TYPE IV
 I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
 BY *Mark W. Haughwolt* RESIDENT ENGINEER
 DATE: April 10, 2012
 NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

ROUTE NO. 100, RURAL MINOR ARTERIAL BRIDGE NO: 64

PROJECT LOCATION: 11.5 MILES NORTH OF JUNCTION WITH VT ROUTE 9, MM 1.03
 PROJECT DESCRIPTION: THE PROJECT SHALL CONSIST OF LINING THE EXISTING CULVERT, AND REPLACING THE EXISTING INLET HEADWALL.

LENGTH OF STRUCTURE: 64'-00"
 LENGTH OF PROJECT: 100'-00"

PROPOSED TEMPORARY CONSTRUCTION LIMITS

PROPOSED CONSTRUCTION LIMITS

STONE FILL TYPE IV

UNNAMED BROOK

**EDDY, HERMON A.
 & ET AL**

BEGIN PROJECT STA: 11+50.00
 END PROJECT STA: 12+50.00

POST STA. 11+89.58 VT 100
 = STA. 50+50.00 CHANNEL
 Δ = 71° 48' 29" LT

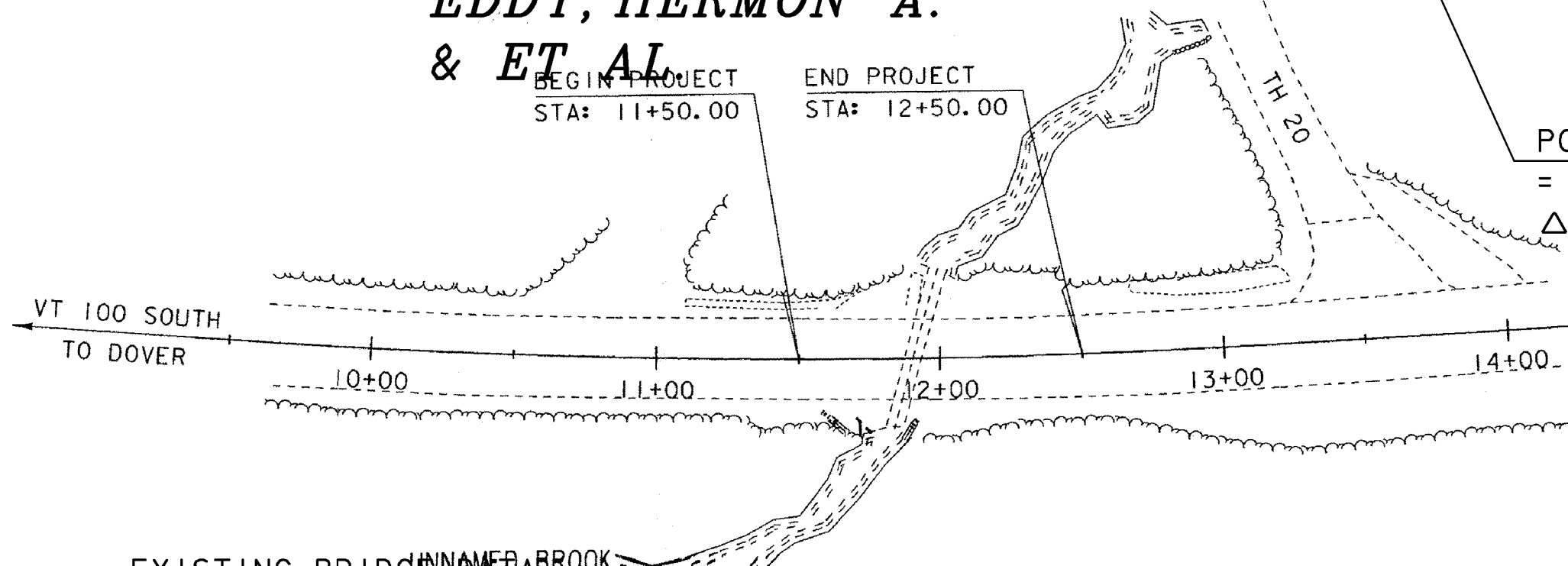
QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	LIMITS OF ACCESS
POINT OF ACCESS	POINT OF ACCESS
FENCE LINE	FENCE LINE
STONE WALL	STONE WALL
TRAVELED WAY	TRAVELED WAY
GUARD RAIL	GUARD RAIL
RAILROAD	RAILROAD
SURVEY LINE	SURVEY LINE
CULVERT	CULVERT

LEGEND

POWER POLE	SR
TELEPHONE POLE	SR
TREES	SR
PROPERTY LINE	SR
RIGHT-OF-WAY	SR
SLOPE RIGHTS	SR
TOP OF CUT	SR
TOE OF SLOPE	SR



EXISTING BRIDGE UNNAMED BROOK
 72" AC6GMP BUILT IN 1919
 SPAN LENGTH = 6 FEET
 STRUCTURE LENGTH = 57 FEET
 APPROX. ROADWAY WIDTH = 26 FEET

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

LAYOUT (10 SCALE)

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

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 THE STANDARD SPECIFICATIONS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

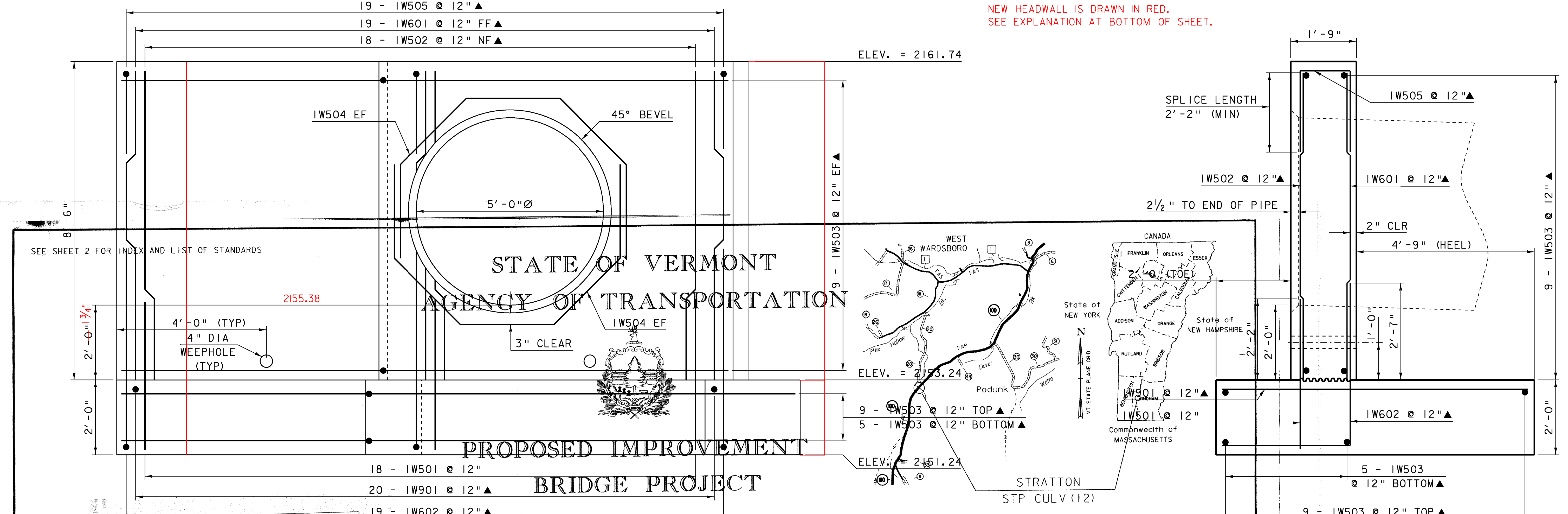
DIRECTOR OF PROGRAM DEVELOPMENT
 APPROVED: *Richard Stewart* DATE: 6/1/12
 PROJECT MANAGER: C.P. WILLIAMS
 PROJECT NAME: STRATTON
 PROJECT NUMBER: STP CULV (12)
 SHEET 1 OF 15 SHEETS

PROJECT NAME: STRATTON
 PROJECT NUMBER: STP CULV (12)
 FILE NAME: s08b058bdr.dgn
 PROJECT LEADER: C.P. WILLIAMS
 DESIGNED BY: H.J. SALLS
 LAYOUT (10 SCALE)

PLOT DATE: 01-JUN-2010
 DRAWN BY: D.D. BEARD
 CHECKED BY: H.J. SALLS
 SHEET 8 OF 15

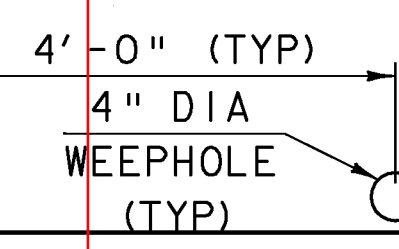
NEW HEADWALL IS DRAWN IN RED.
SEE EXPLANATION AT BOTTOM OF SHEET.

ELEV. = 2161.74



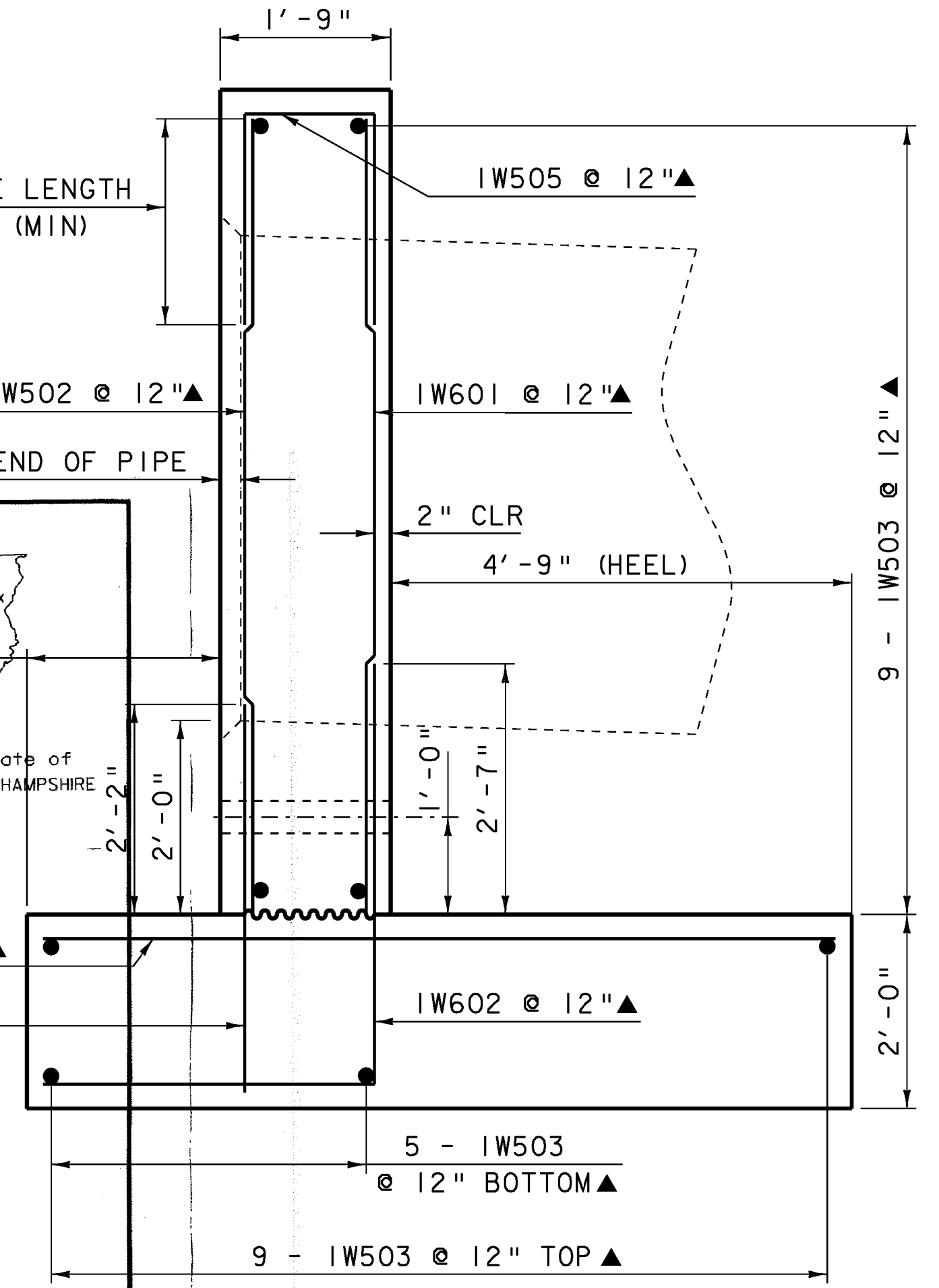
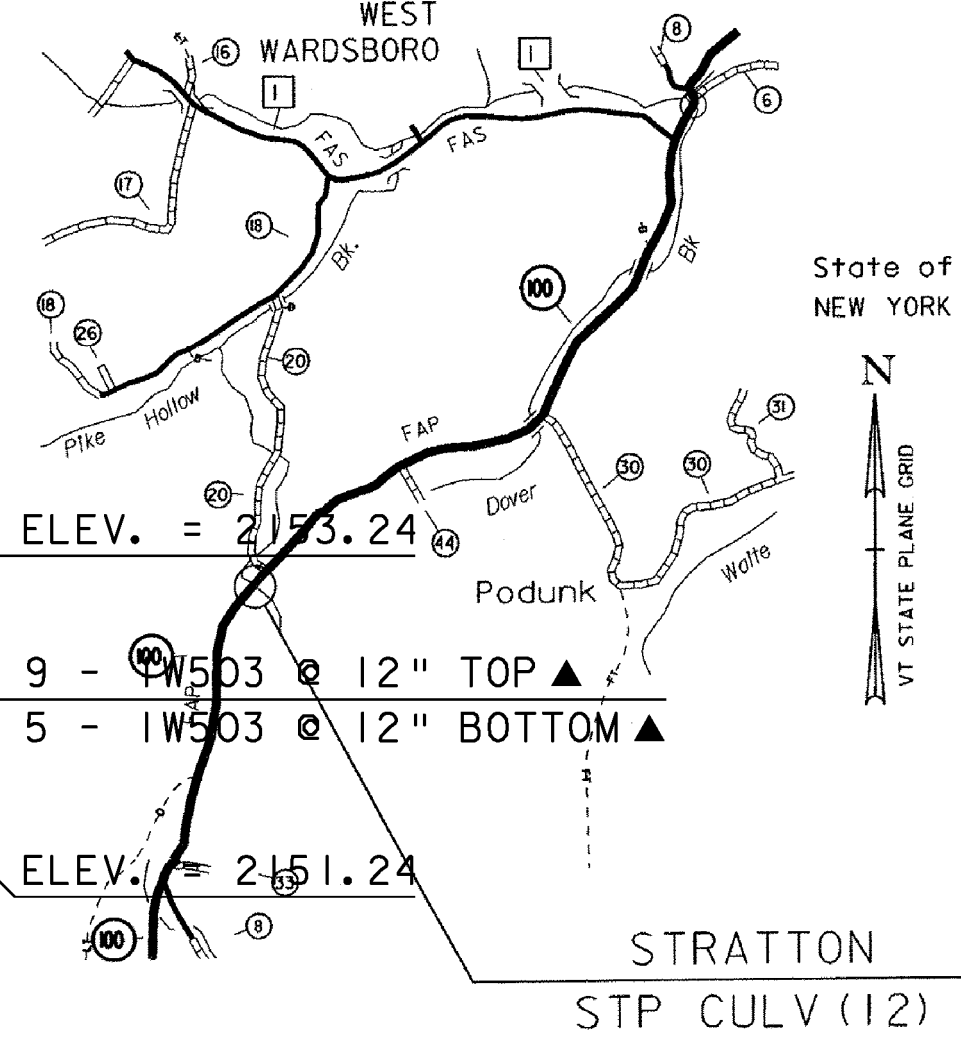
SEE SHEET 2 FOR INDEX AND LIST OF STANDARDS

2155.38



STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT



HEADWALL SECTION
SCALE 3/4" = 1'-0"

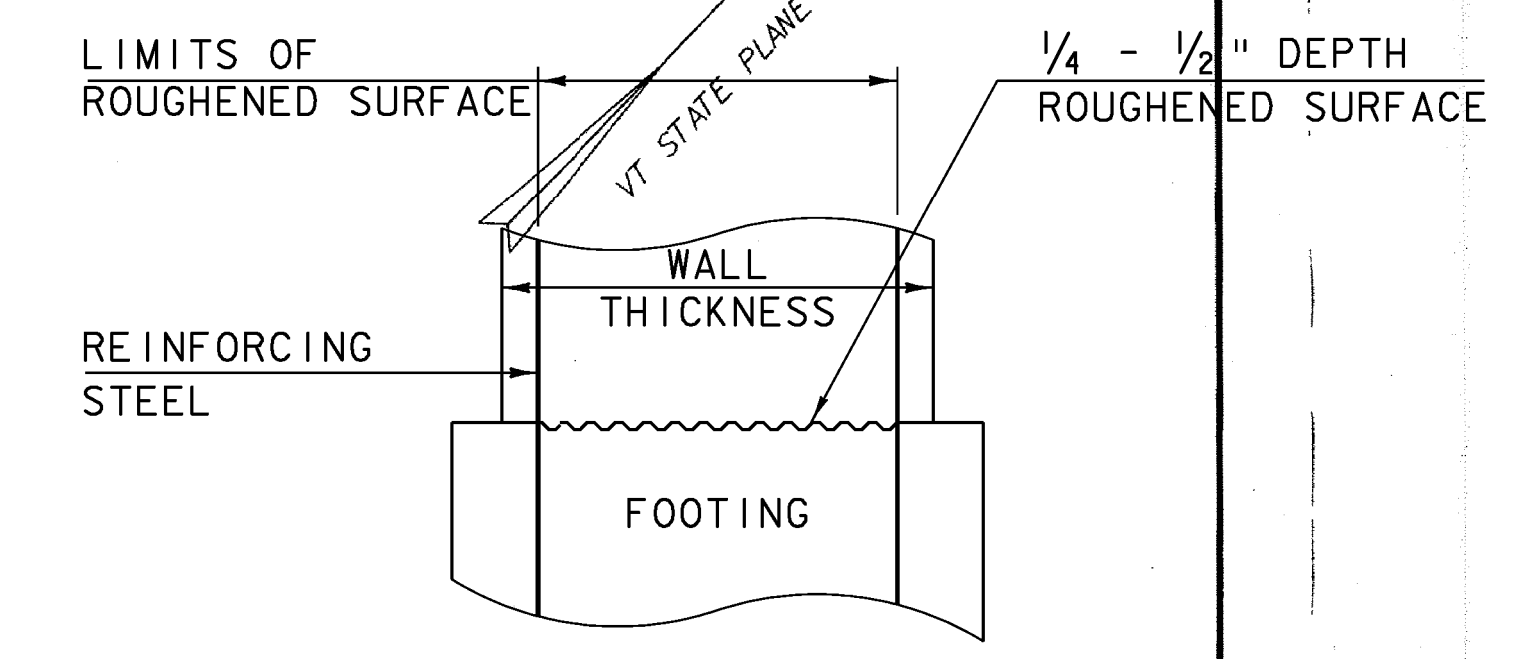
RECORD PLANS

CONTRACTOR: ALPINE CONSTRUCTION, LLC - SCHUYLVILLE, NY
 RESIDENT ENGINEER: MARK HAUGHWOUT
 CONSTRUCTION BEGAN: SEPTEMBER 1, 2010
 CONSTRUCTION COMPLETE: JULY 19, 2011
 RECORD PLANS BY: MARK HAUGHWOUT & C. PIERCE
 I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
 DATE: April 10, 2012

TOWN OF STRATTON
COUNTY OF WINDHAM
SCALE 3/4" = 1'-0"
ROUTE NO: VT 100, RURAL MINOR ARTERIAL BRIDGE NO: 64

PROJECT LOCATION: 11.5 MILES NORTH OF JUNCTION WITH VT ROUTE 9, MM 1.03
 PROJECT DESCRIPTION: THE PROJECT SHALL CONSIST OF LINING THE EXISTING CULVERT, AND REPLACING THE EXISTING INLET HEADWALL.

LENGTH OF STRUCTURE: N/A
 LENGTH OF PROJECT: 100.00'



TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)

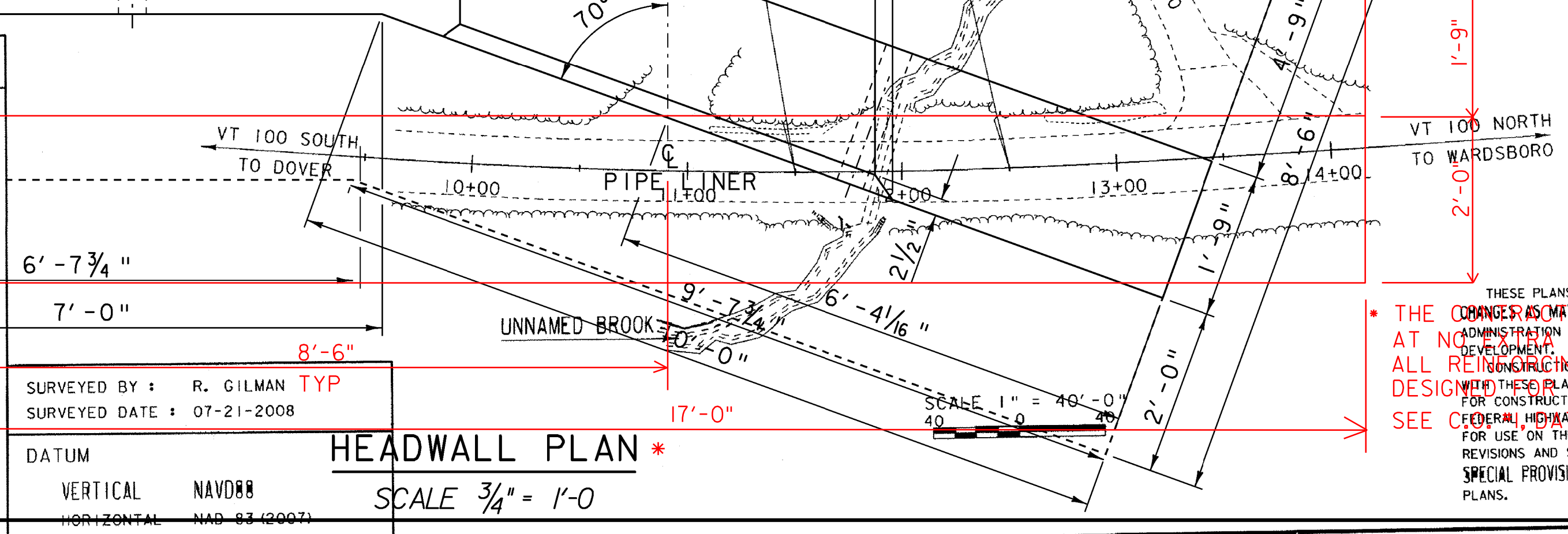
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS

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



HEADWALL PLAN *
SCALE 3/4" = 1'-0"

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT AT NO COST TO THE PROJECT FOR EAST OF VERMONT DESIGN. THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PROJECT NAME:	STRATTON
PROJECT NUMBER:	STP CULV(12)
FILE NAME:	s08b058sub.dgn
PROJECT LEADER:	C.P. WILLIAMS
DESIGNED BY:	H.I. SALLS
HEADWALL DETAILS:	
PLOT DATE:	01-JUN-2010
DRAWN BY:	D.D. BEARD
CHECKED BY:	H.I. SALLS
SHEET 9 OF 15	

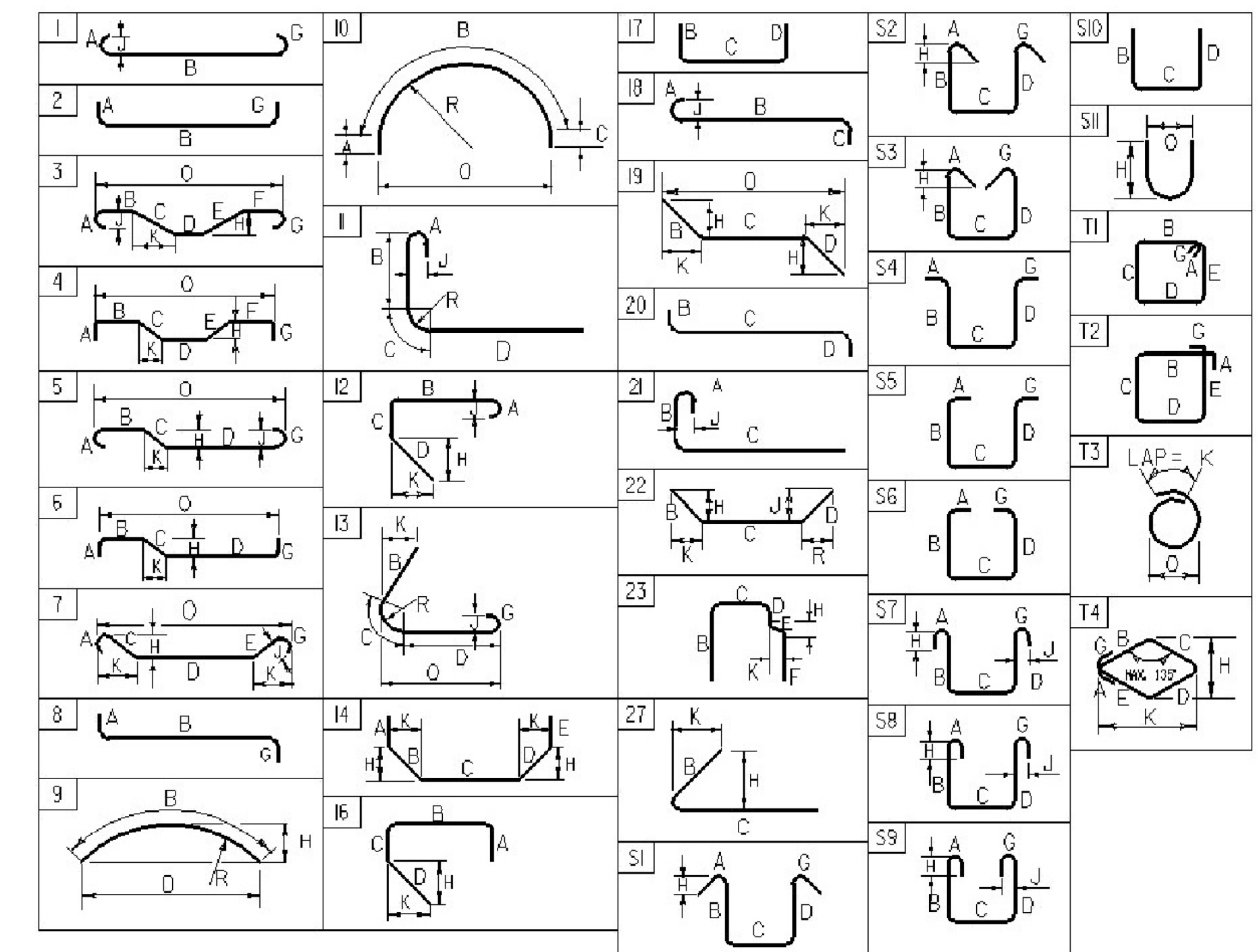
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
INLET HEADWALL																																			
	18	5	3'- 11"	1W501	STR																														
* ▲	19	5	8'- 3"	1W502	STR																														
* ▲	33	5	18'- 10"	1W503	22																														
* ▲	4	5	12'- 6"	1W504	14	2'- 6"	7'- 11"	10'- 11"	---				2'- 8"	---	7'- 5"	---																			
▲	19	5	6'- 2"	1W505	S10	2'- 2"	2'- 6"	2'- 6"	2'- 6"				1'- 9"	---	1'- 9"	---																			
* ▲	20	6	8'- 3"	1W601	STR																														
* ▲	20	6	7'- 8"	1W602	17		3'- 4"	4'- 4"	---																										
* ▲	21	9	8'- 0"	1W1901	STR																														

ALL REINFORCING STEEL DESIGNED ABOVE WAS USED IN THE NEW HEADWALL.

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- ✦ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS				
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: **STRATTON**
 PROJECT NUMBER: **STP CULV(12)**
 FILE NAME: s08b058excel.dgn PLOT DATE: 2/18/2010
 PROJECT MANAGER: C.P.WILLIAMS DRAWN BY: D.D.BEARD
 DESIGNED BY: D.D.BEARD CHECKED BY: H.I.SALLS
 REINFORCING STEEL SCHEDULE SHEET SHEET 10 OF 15

R.O.W. PLANS

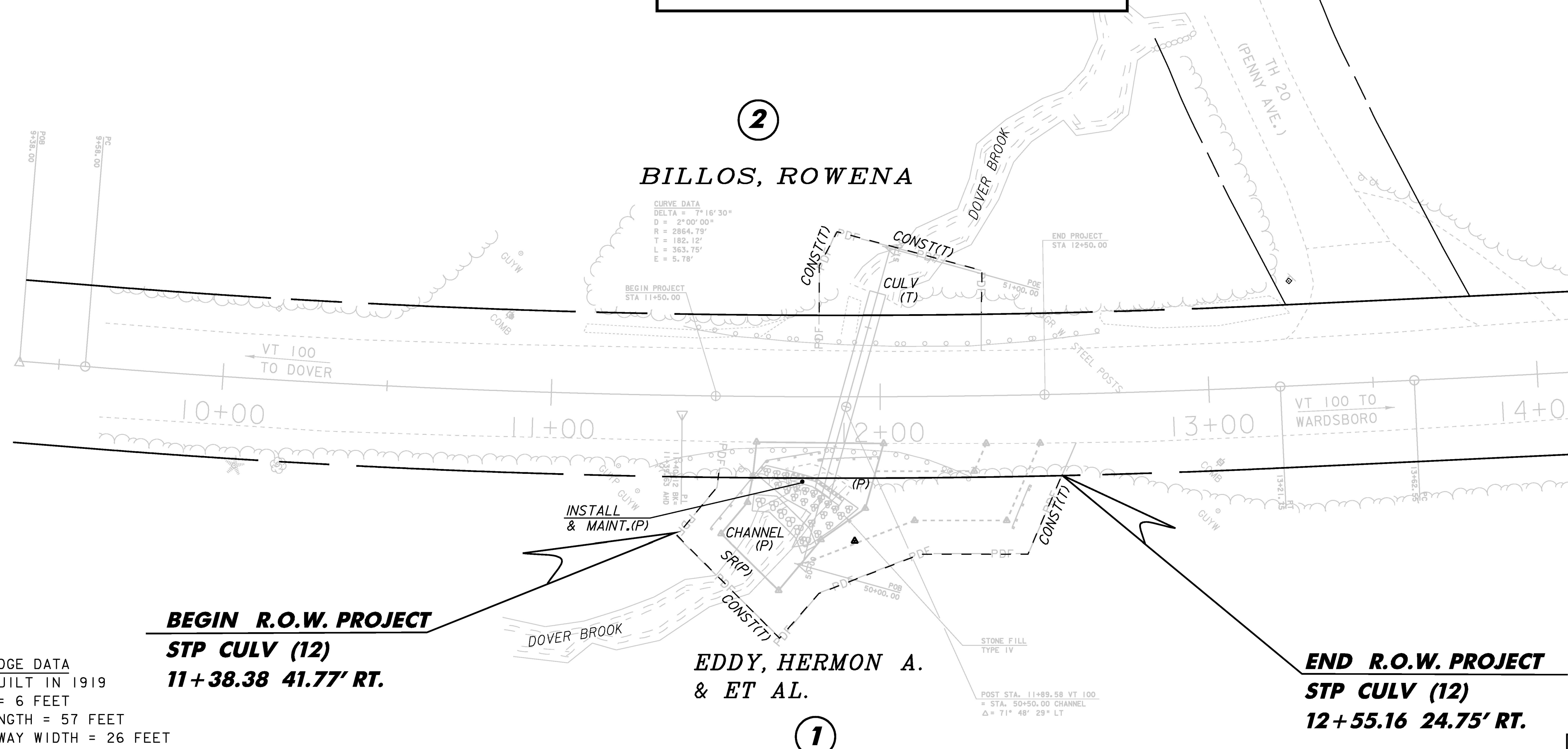
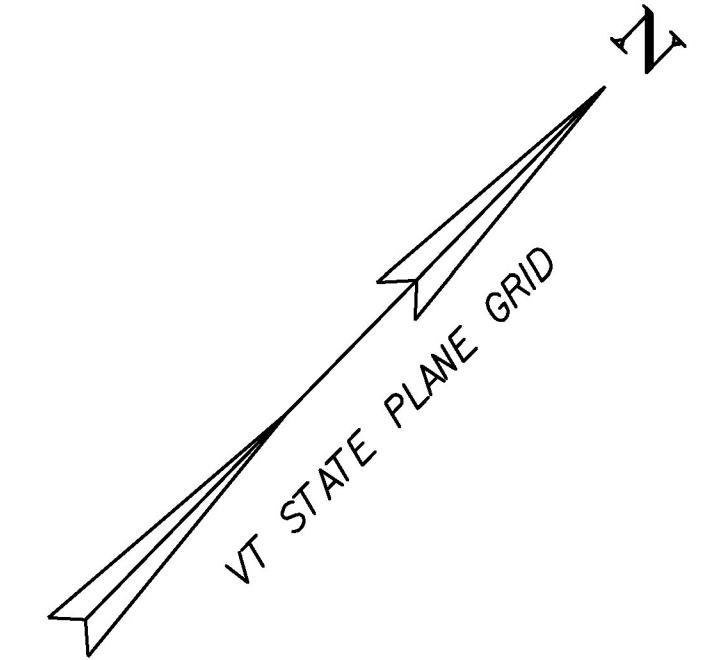
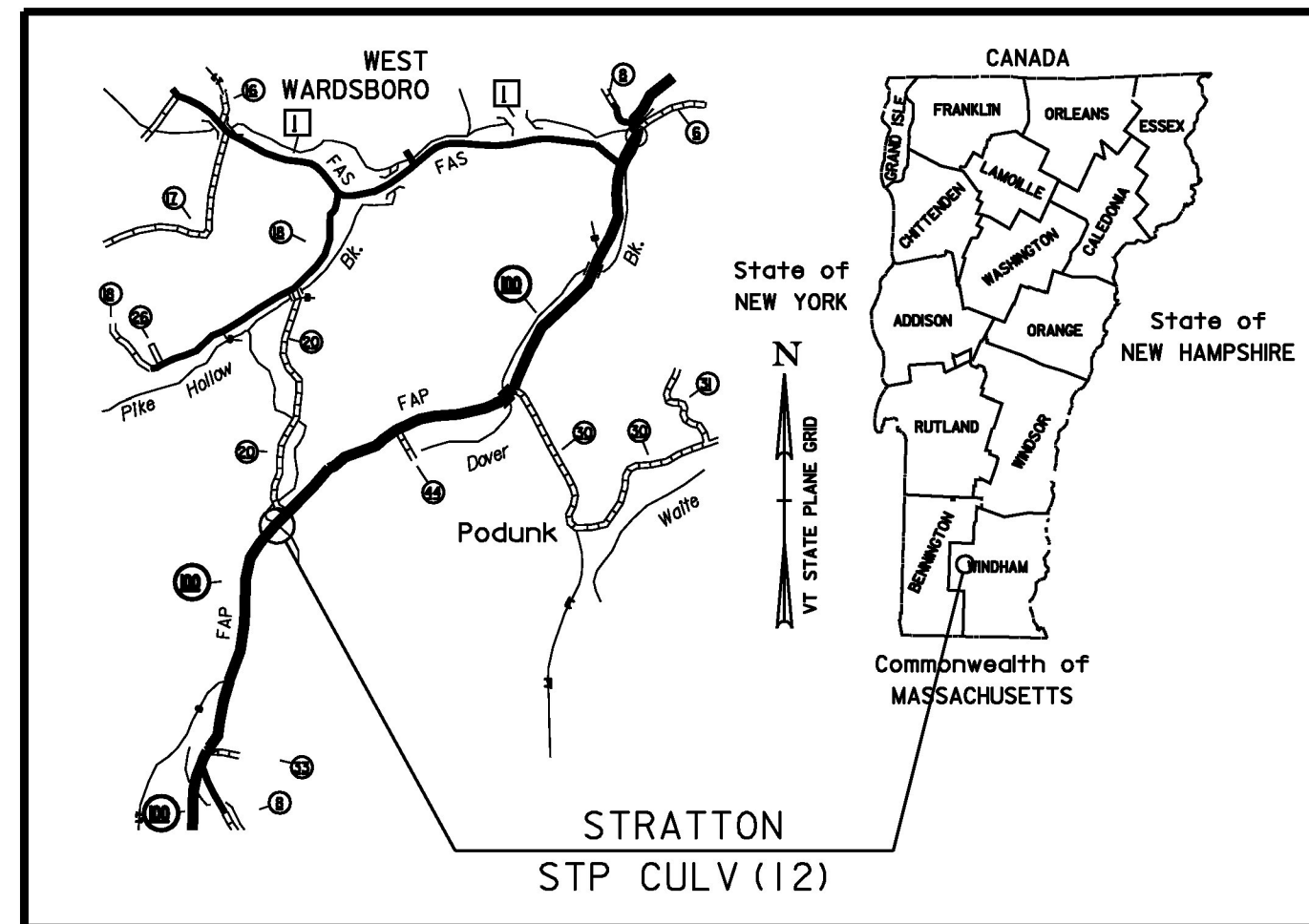


TABLE OF REVISIONS			
REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	1	PARCEL NO. 2 BILLOS, CHANGE CULVERT (P) TO CULVERT (T) PER C.O. 9612 MADE BY: HR.	05/20/10
		APPROVED BY: HP	
		ELECTRONIC FILES TO STRUCTURES	6-1-10

EXISTING BRIDGE DATA
 72" ACCGMP BUILT IN 1919
 SPAN LENGTH = 6 FEET
 STRUCTURE LENGTH = 57 FEET
 APPROX. ROADWAY WIDTH = 26 FEET

BEGIN R.O.W. PROJECT
STP CULV (12)
11 + 38.38 41.77' RT.

END R.O.W. PROJECT
STP CULV (12)
12 + 55.16 24.75' RT.

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA				REMARKS		
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK		PAGE	
1	EDDY, HERMON A. ET AL.	1	11+38.38 RT.	12+55.16 RT.			CONST.	(T)	2,389 SF	WD	04/21/10	STRATTON	143	394	INCLUDES EROSION CONTROL & PDF	
			11+52.25 RT.	11+98.19 RT.			SLOPE	(P)	921 SF							
			11+62.90 RT.	11+93.28 RT.			CHANNEL	(P)	442 SF							
			11+72.44 RT.	11+91.28 RT.			INSTALL & MAINT.	(P)	119 SF							HEADWALL & FOOTING & CULVERT
2	BILLOS, ROWENA	1	11+81.14 LT.	12+31.75 LT.			CONST.	(T)	910 SF			STRATTON			INCLUDES EROSION CONTROL & PDF	
			11+94.81 LT.	12+01.85 LT.			CULVERT	(T)								

FOR R.O.W. USE ONLY

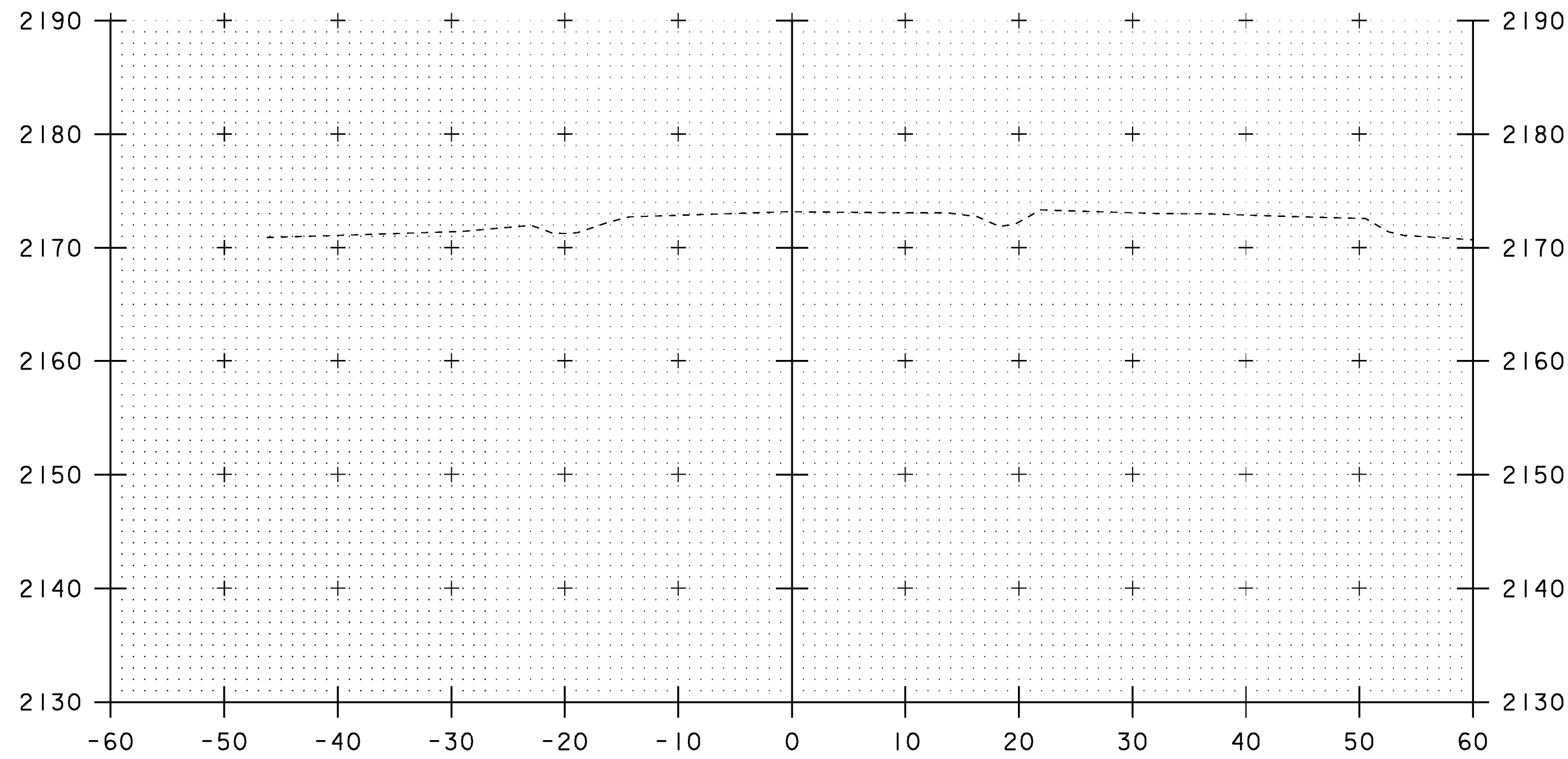
LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

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

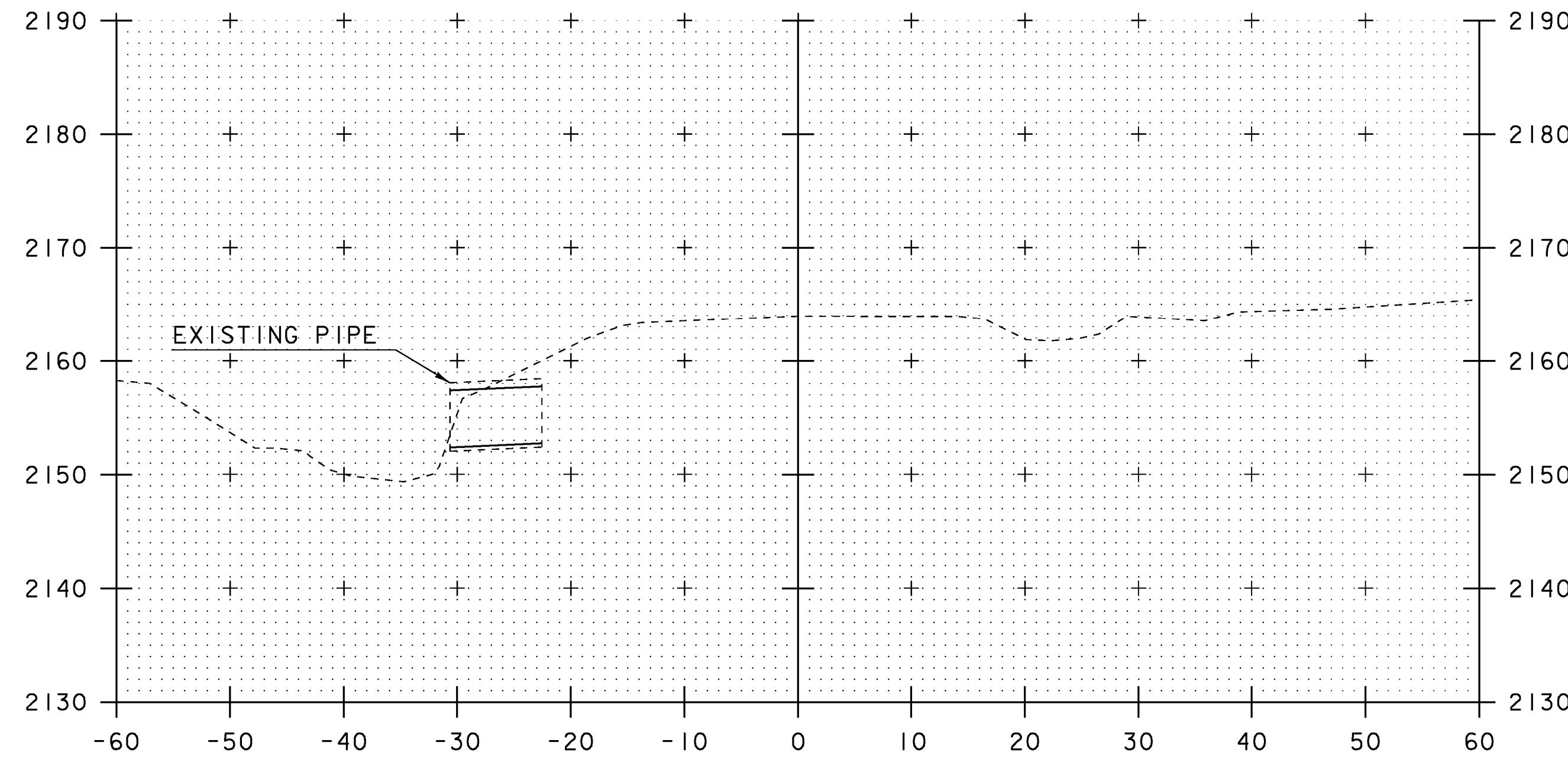
PROJECT NAME: STRATTON
 PROJECT NUMBER: STP CULV(12)

FILE NAME: s08b058bdr.dgn
 PROJECT LEADER: C.P.WILLIAMS
 DESIGNED BY: H.J.SALLS
 ROW SHEET 1 OF 1

PLOT DATE: 01-JUN-2010
 DRAWN BY: D.D.BEARD
 CHECKED BY: H.J. SALLS
 SHEET 11 OF 15

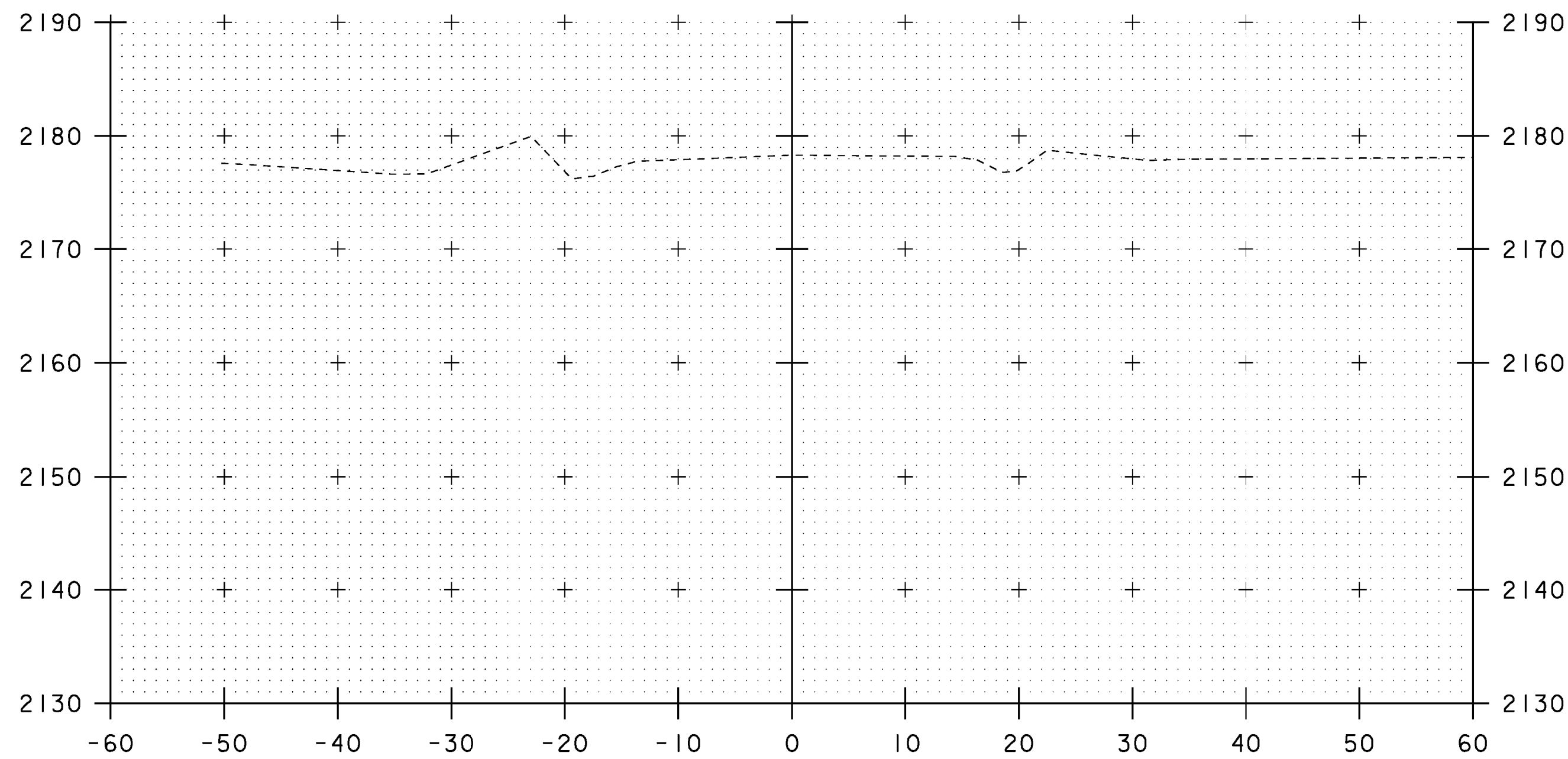


11+00

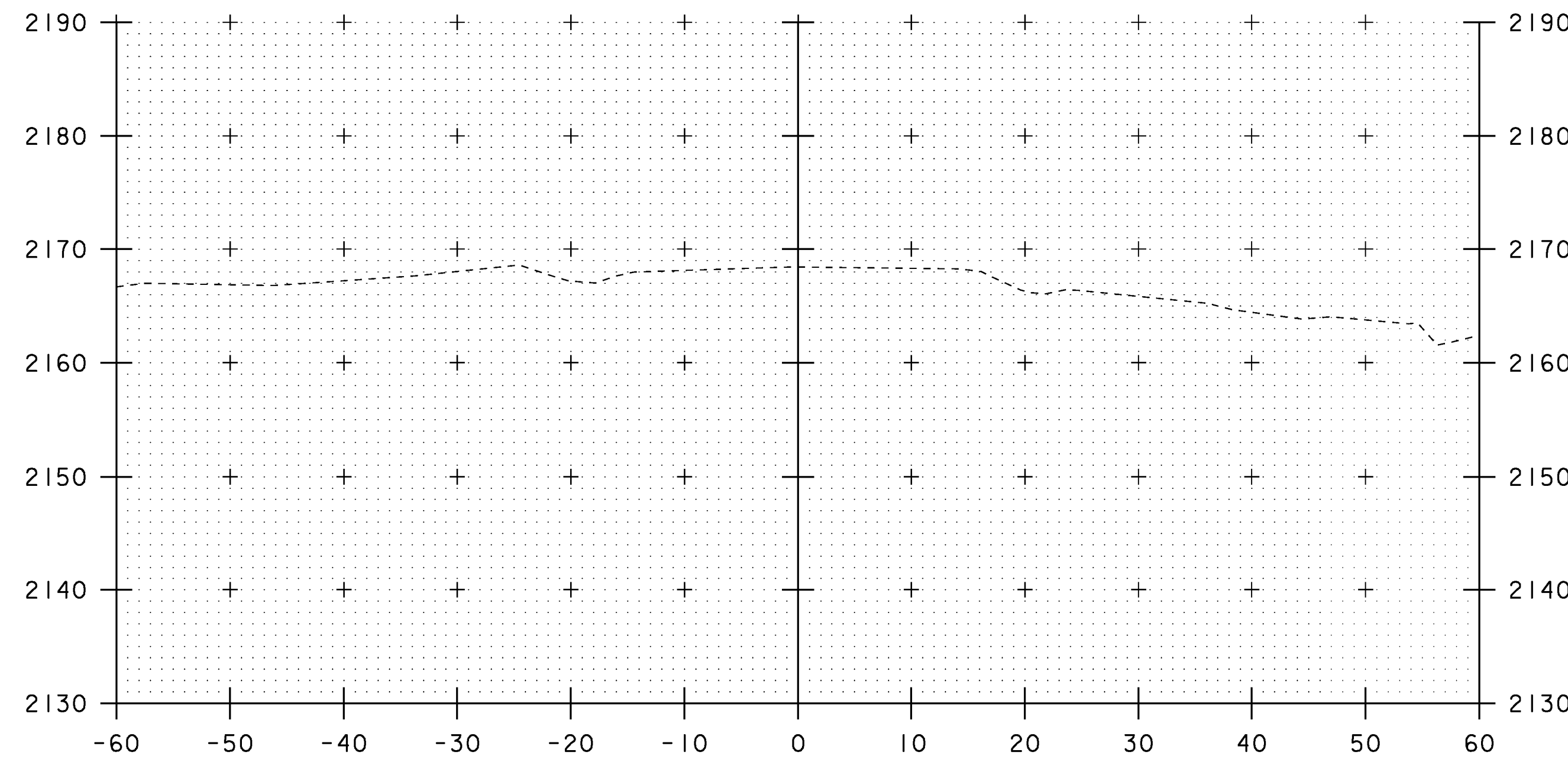


12+00

STA 11+90 SEE NEXT SHEET
STA 11+75 SEE SHEET 14B



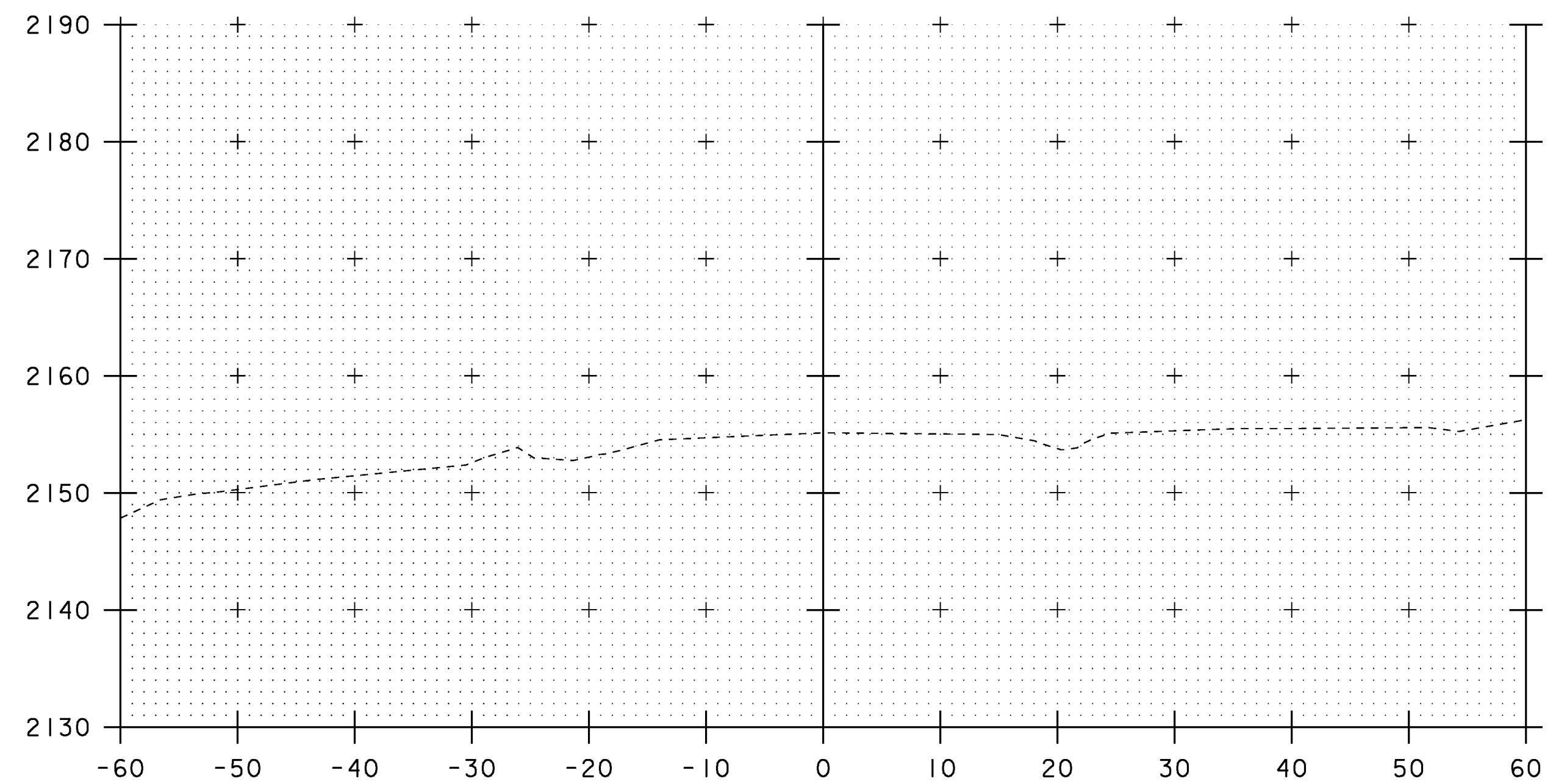
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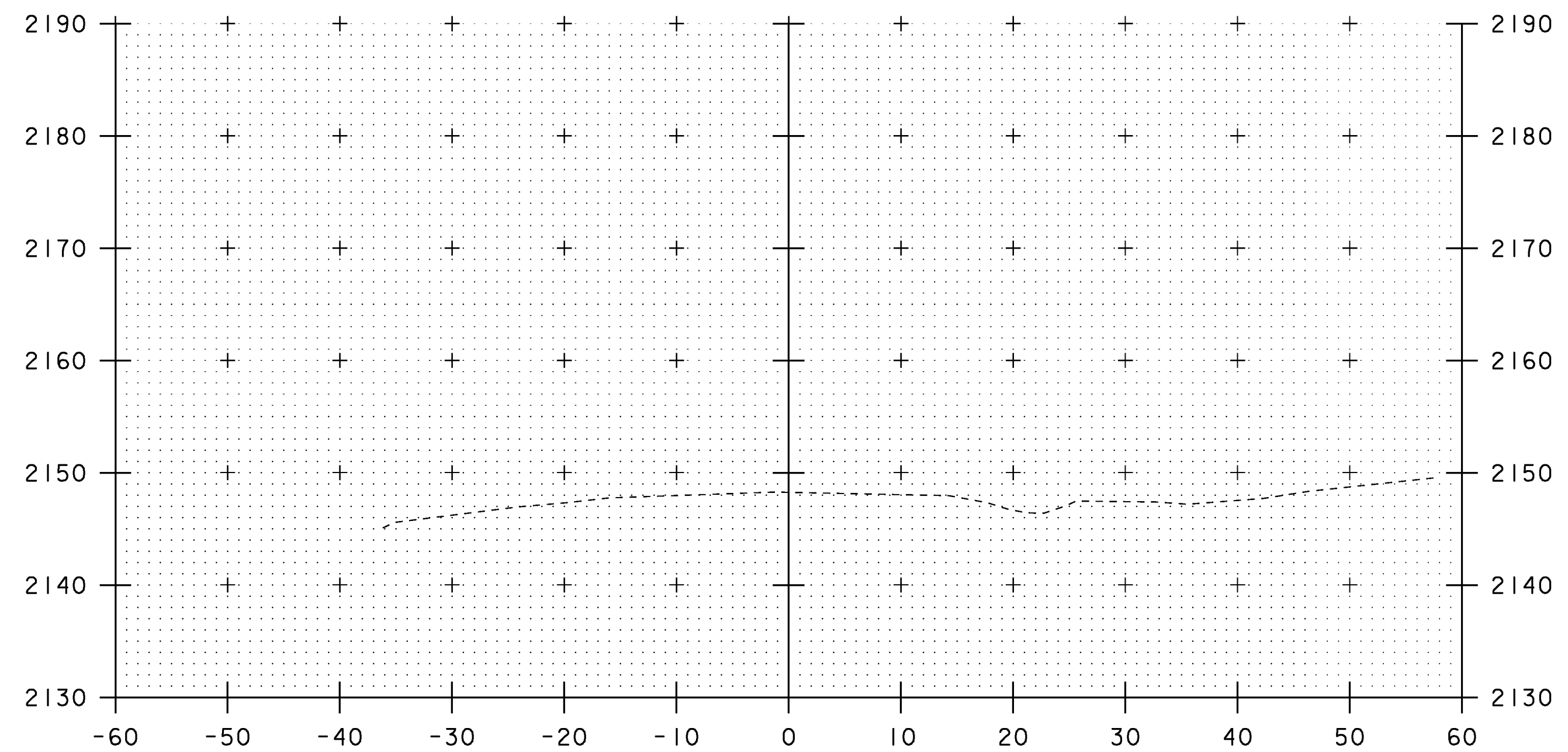
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BEGIN PROJECT

STA. 10+50 TO STA. 12+00

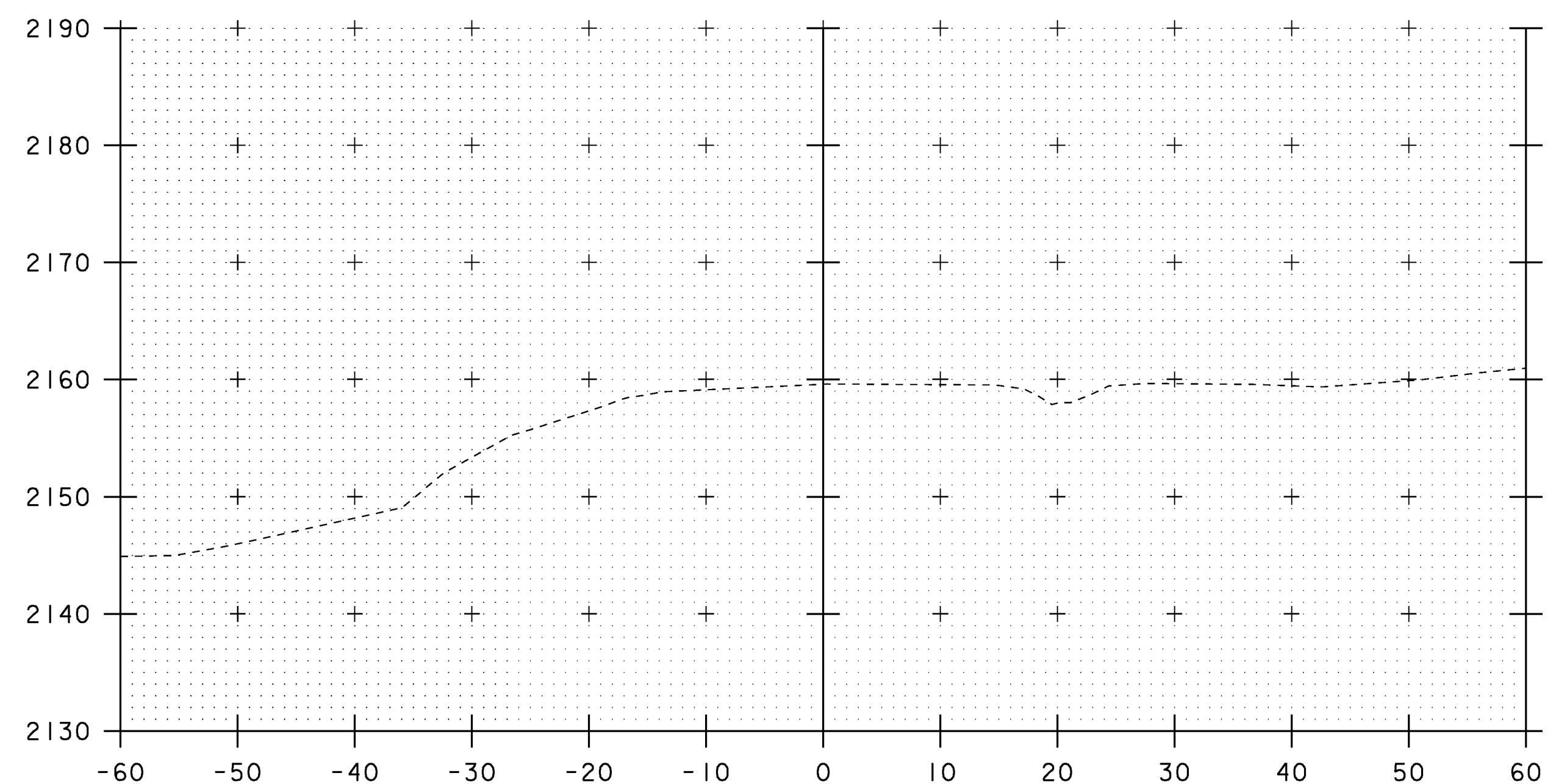
PROJECT NAME:	STRATTON	PLOT DATE:	01-JUN-2010
PROJECT NUMBER:	STP CULV(12)	DRAWN BY:	D.D.BEARD
FILE NAME:	s08b058xsl.dgn	DESIGNED BY:	H.I.SALLS
PROJECT LEADER:	C.P.WILLIAMS	CHECKED BY:	H.I.SALLS
MAINLINE CROSS SECTIONS 1		SHEET 12 OF 15	



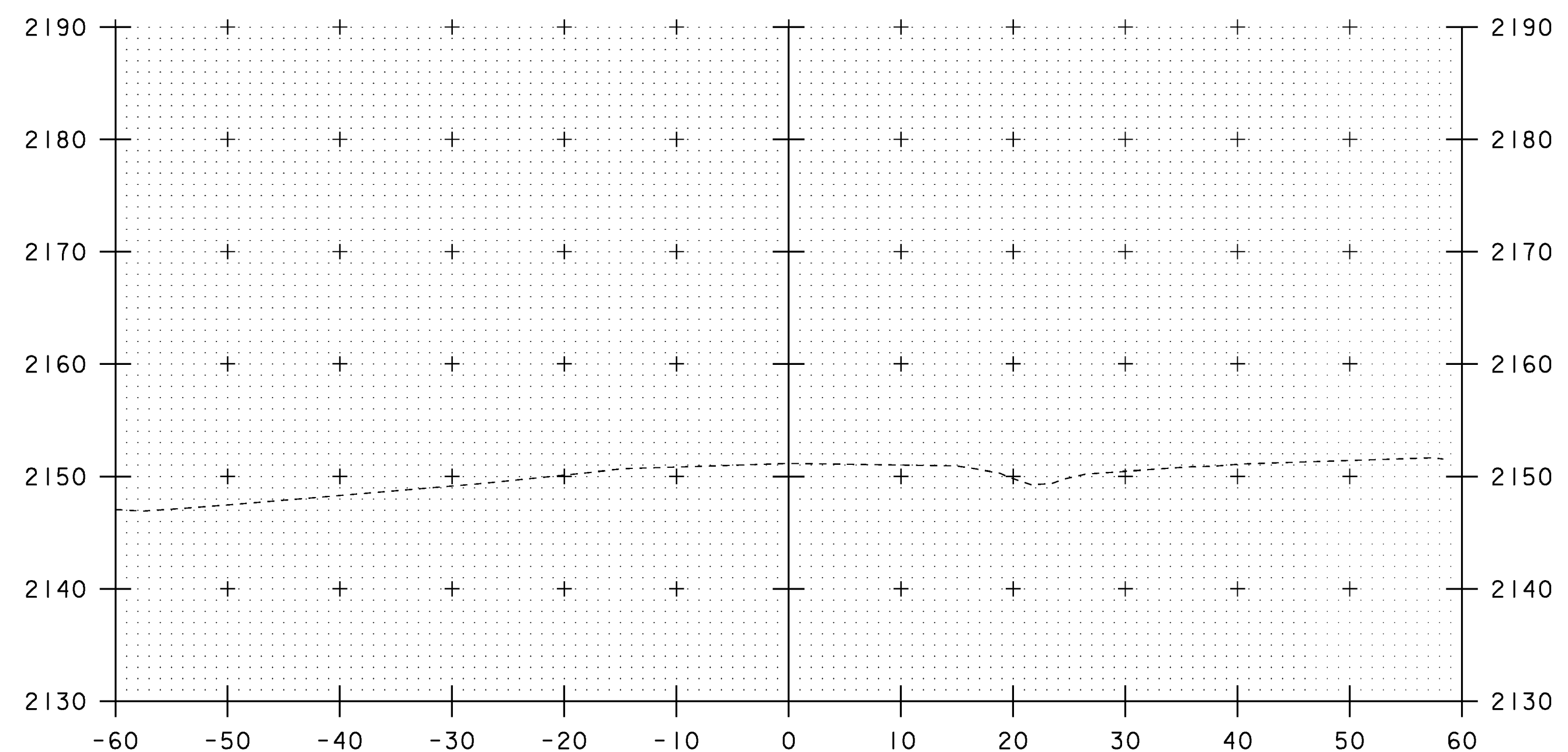
13+00



14+00



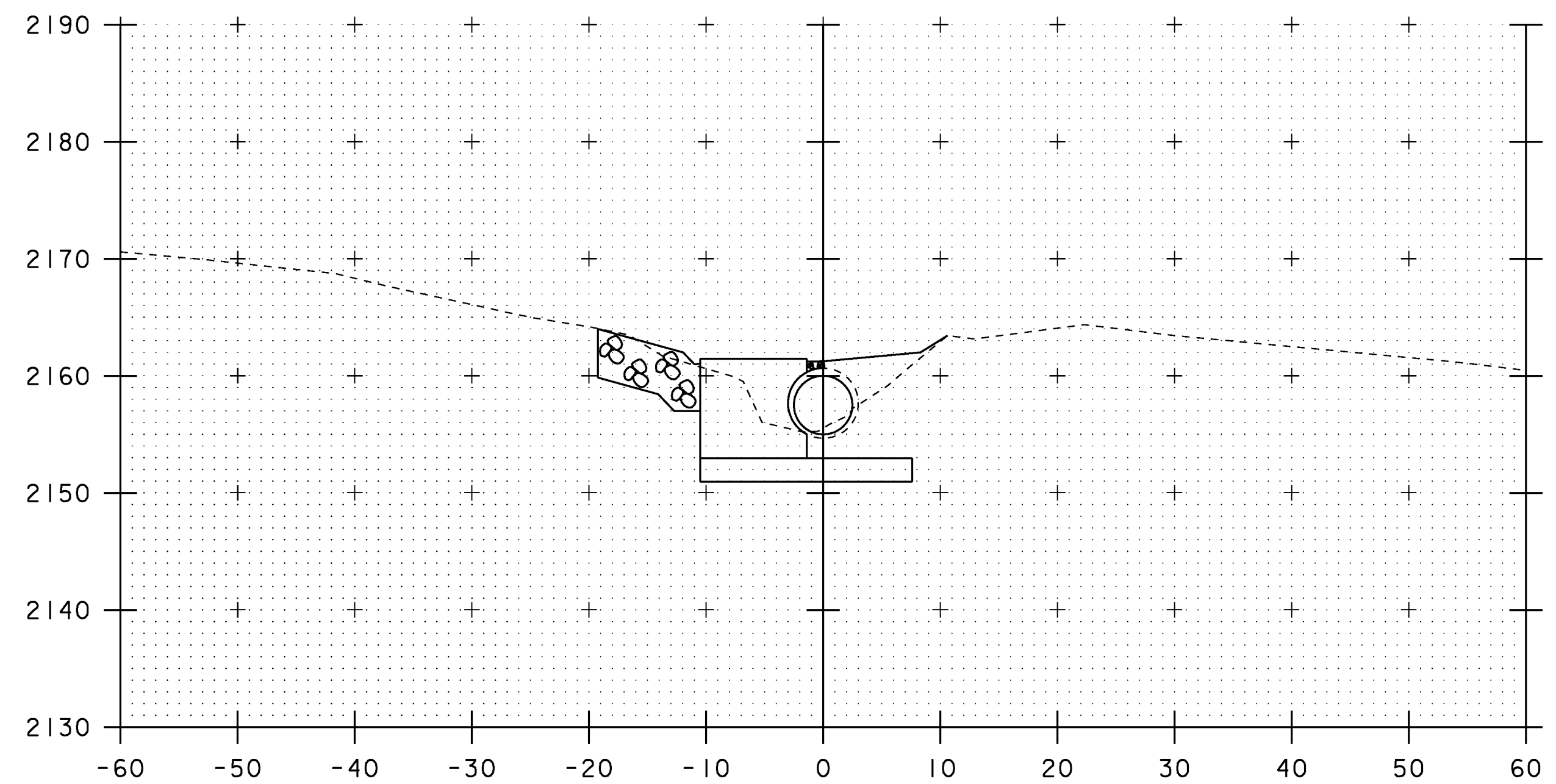
12+50
END PROJECT



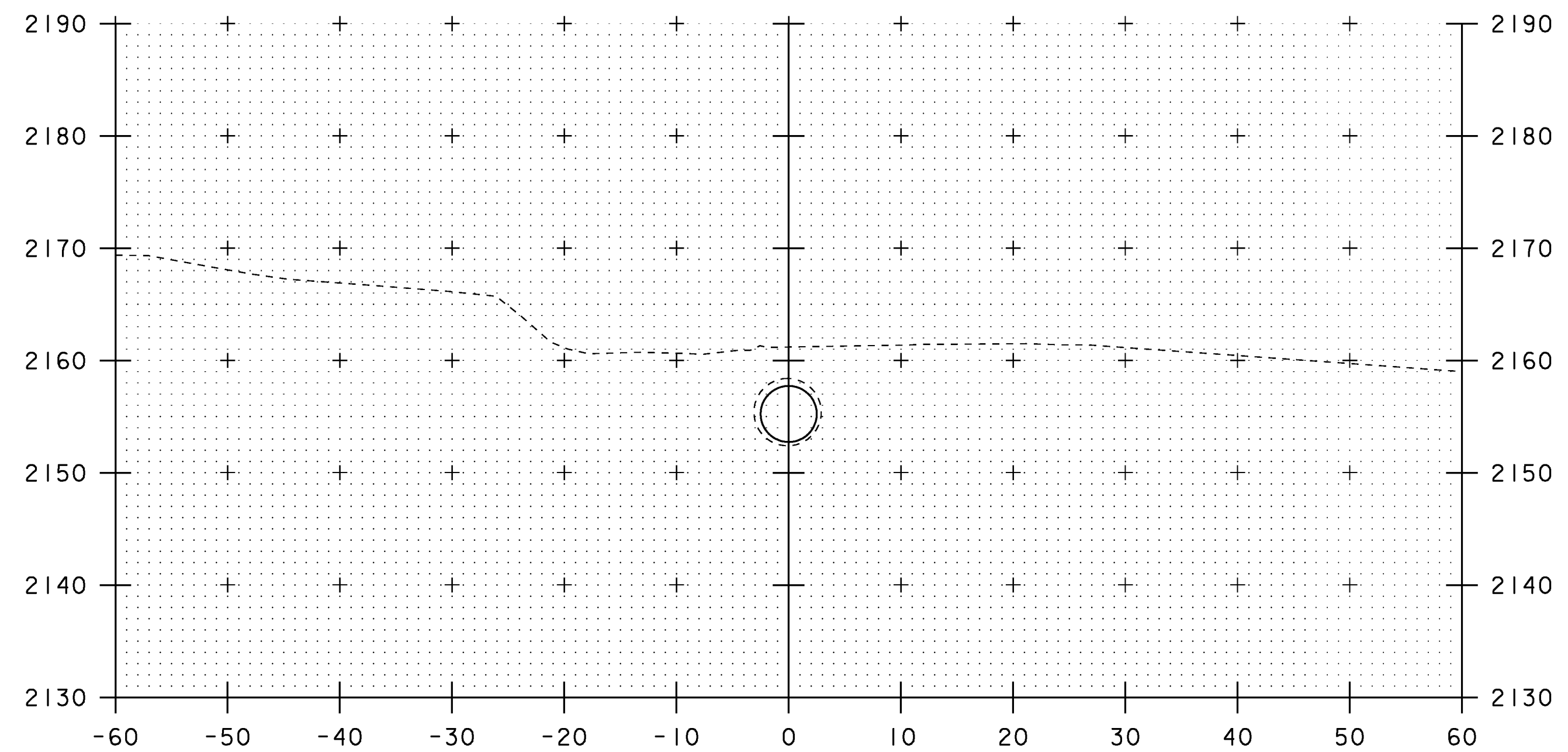
13+50

STA. 12+50 TO STA. 14+00

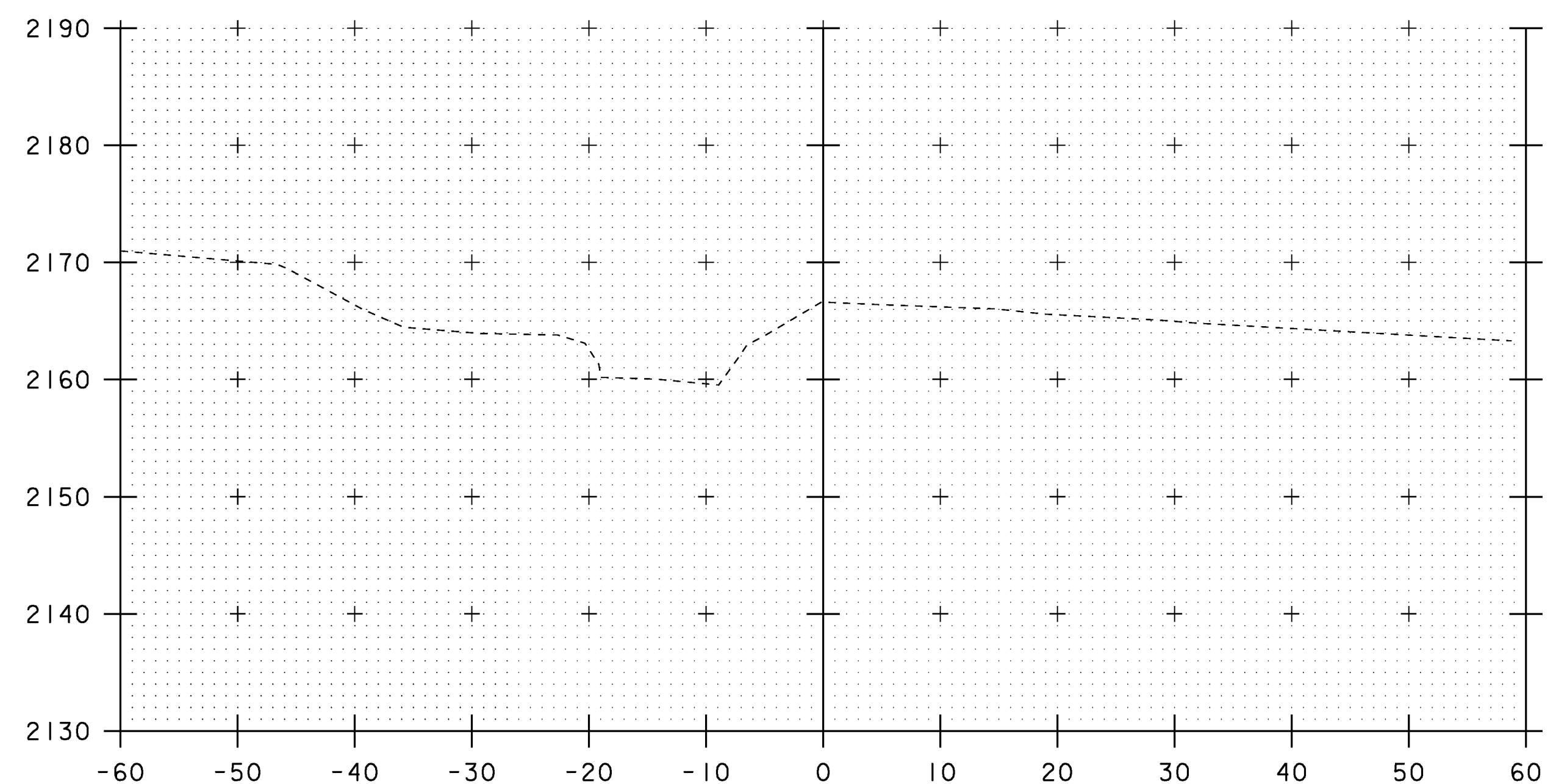
PROJECT NAME:	STRATTON	PLOT DATE:	01-JUN-2010
PROJECT NUMBER:	STP CULV(12)	DRAWN BY:	D.D.BEARD
FILE NAME:	s08b058xsl.dgn	DESIGNED BY:	H.I.SALLS
PROJECT LEADER:	C.P.WILLIAMS	CHECKED BY:	H.I.SALLS
MAINLINE CROSS SECTIONS 2		SHEET 13 OF 15	



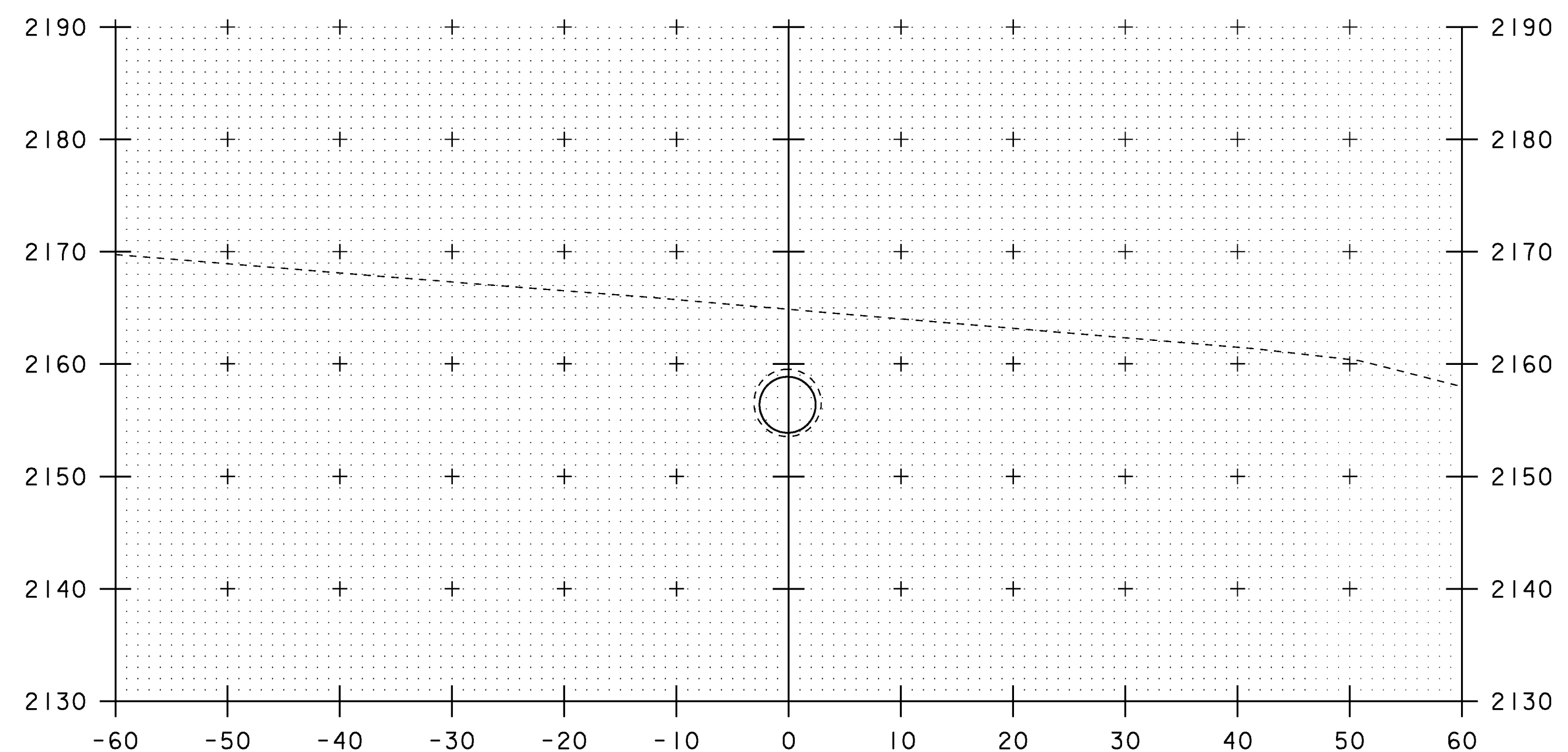
50+25



50+75



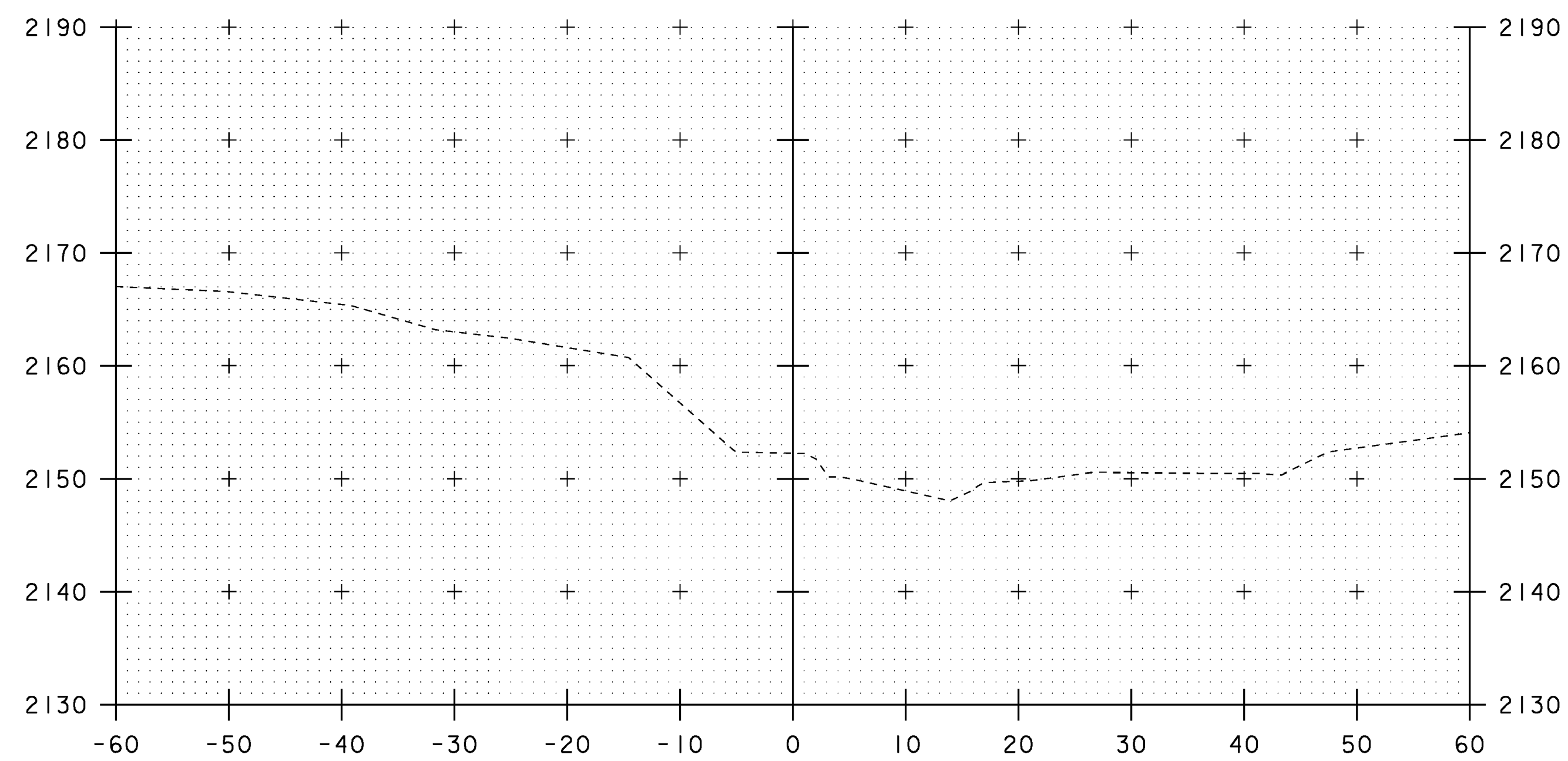
50+00



50+50

STA. 50+00 TO STA. 50+75

PROJECT NAME:	STRATTON	PLOT DATE:	01-JUN-2010
PROJECT NUMBER:	STP CULV(12)	DRAWN BY:	D.D.BEARD
FILE NAME:	s08b058xsl.dgn	DESIGNED BY:	H.I.SALLS
PROJECT LEADER:	C.P.WILLIAMS	CHECKED BY:	H.I.SALLS
CHANNEL CROSS SECTIONS 1		SHEET 14	OF 15



51+00

STA. 51+00 TO STA. 51+00

PROJECT NAME: STRATTON	PLOT DATE: 01-JUN-2010
PROJECT NUMBER: STP CULV(12)	DRAWN BY: D.D.BEARD
FILE NAME: s08b058xsl.dgn	DESIGNED BY: H.I.SALLS
PROJECT LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
CHANNEL CROSS SECTIONS 2	SHEET 15 OF 15