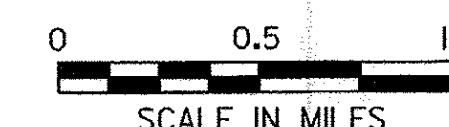
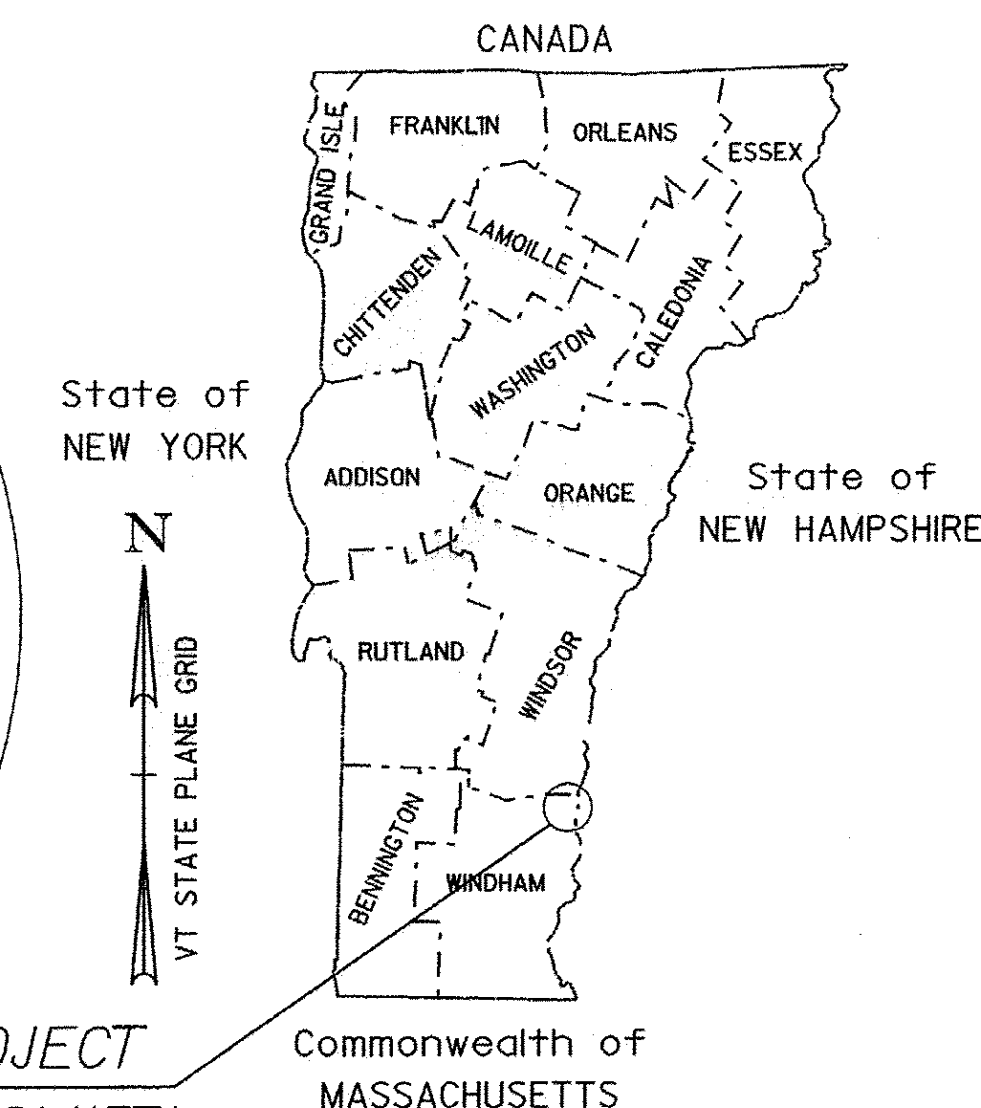
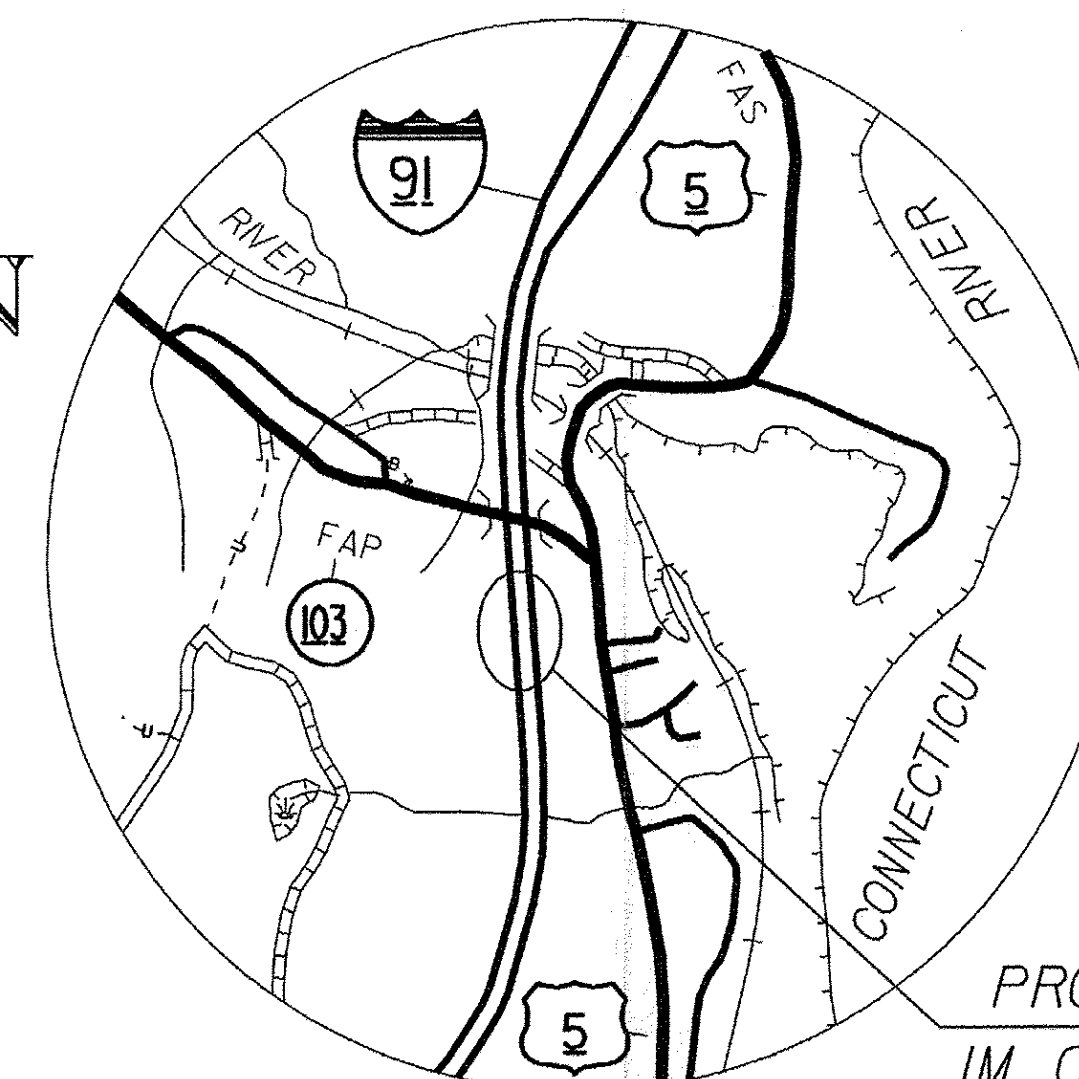
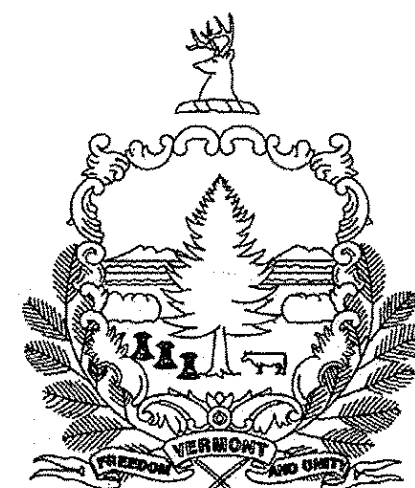


INDEX OF SHEETS
(SEE SHEET 2)

STATE OF VERMONT
AGENCY OF TRANSPORTATION



RECORD PLANS	
CONTRACTOR:	WINTERSET, INC. - LYNDONVILLE, VT
RESIDENT ENGINEER:	PAUL PERRY
CONSTRUCTION BEGAN:	SEPTEMBER 7, 2010
CONSTRUCTION COMPLETE:	DECEMBER 2, 2010
RECORD PLANS BY:	PAUL PERRY & NICK GARBACIK
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Paul K. Perry</i> RESIDENT ENGINEER
DATE	6-12-13
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.	

PROPOSED IMPROVEMENT
TOWN OF ROCKINGHAM
COUNTY OF WINDHAM
PRINCIPLE ARTERIAL - INTERSTATE 91 (NORTHBOUND)

PROJECT LOCATION: BEGINNING AT APPROXIMATELY MM 34.70 AND EXTENDING NORTHERLY 0.42 MILES TO APPROXIMATELY MM 35.12, ADJACENT TO THE NORTHBOUND LANE.

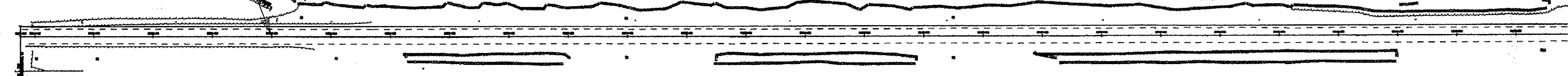
PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES ROCK SCALING, ROCK DOWELING, TRIM BLASTING, SHOTCRETING, DITCHING, DRAINAGE, TRAFFIC CONTROL AND OTHER RELATED ITEMS.

LENGTH OF PROJECT: 2,200 FT 0.42 MILES

STATION 1860+00
END PROJECT
IM 091 - 1(57)

STATION 1838+00
BEGIN PROJECT
IM 091 - 1(57)

1-91
TO SPRINGFIELD

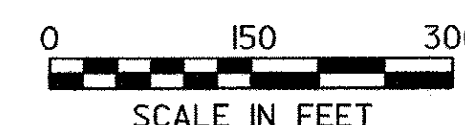


CONVENTIONAL SYMBOLS

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 : VTRANS
SURVEYED DATE : 2008

DATUM
VERTICAL NAVD88
HORIZONTAL NAD83(CORS96)



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 J. Stewart</i>	DATE 5-25-10
PROJECT MANAGER : KEN ROBIE	
PROJECT NAME : ROCKINGHAM	
PROJECT NUMBER : IM 091-1 (57)	
SHEET 1 OF 78 SHEETS	

INDEX OF SHEETS

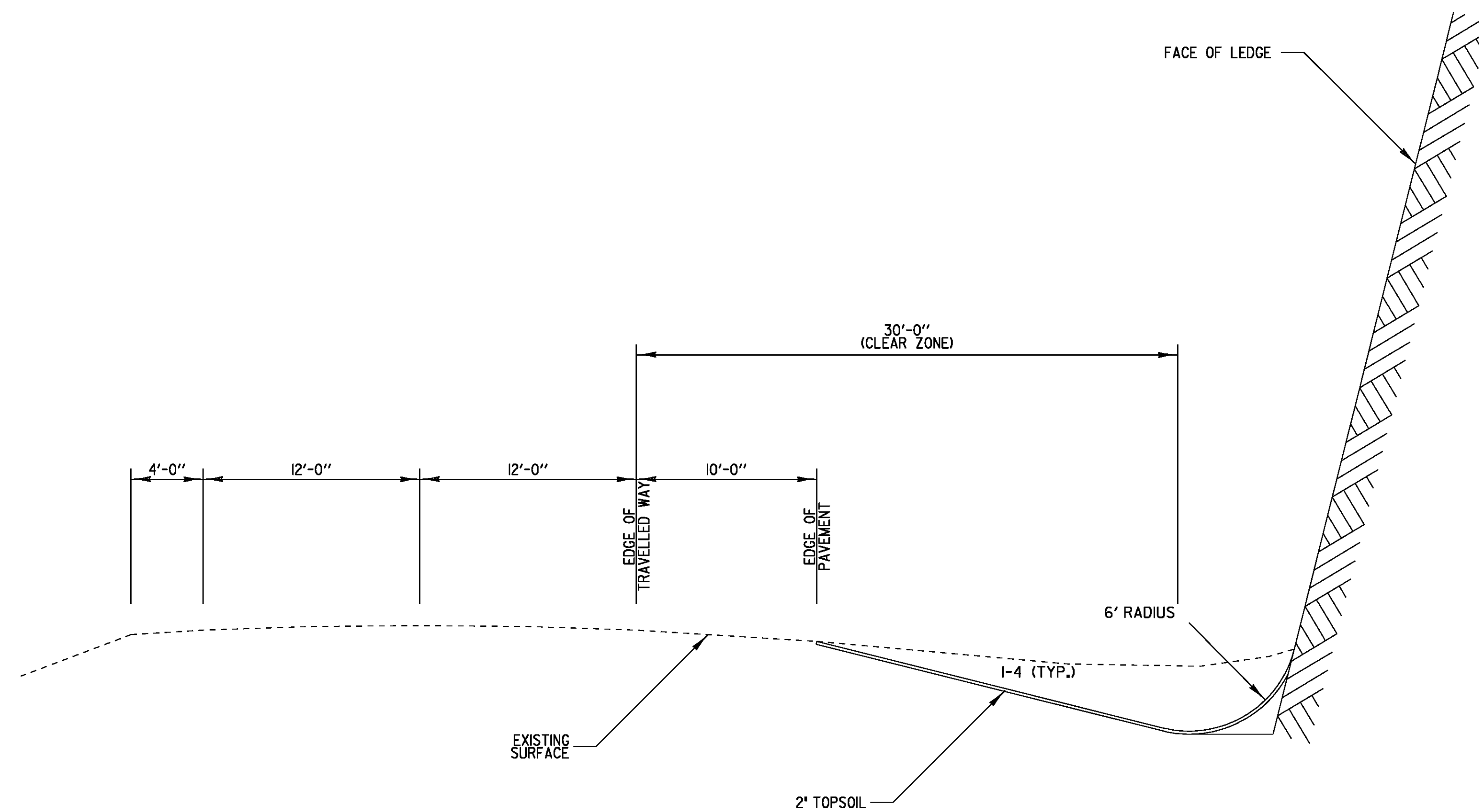
INDEX OF SHEETS

1.	TITLE SHEET
2.	INDEX OF SHEETS
3.	TYPICAL SECTION SHEET
4.-7.	TYPICAL DETAIL SHEETS
8.-9.	QUANTITY SHEETS
10.	DRAINAGE DETAIL SHEET
11.	EARTHWORKS SHEET
12.	GENERAL NOTES
13.	TIE SHEET
14.-26.	LAYOUT SHEETS
27.-65.	CROSS SECTION SHEETS
66.-68.	EPSC LAYOUT SHEETS
69.-71.	EXISTING CONDITIONS LAYOUT SHEETS
72.-75.	EPSC DETAIL SHEETS
76.	EPSC NARRATIVE
77.-78.	TRAFFIC CONTROL SHEETS

VAOT DESIGN STANDARDS

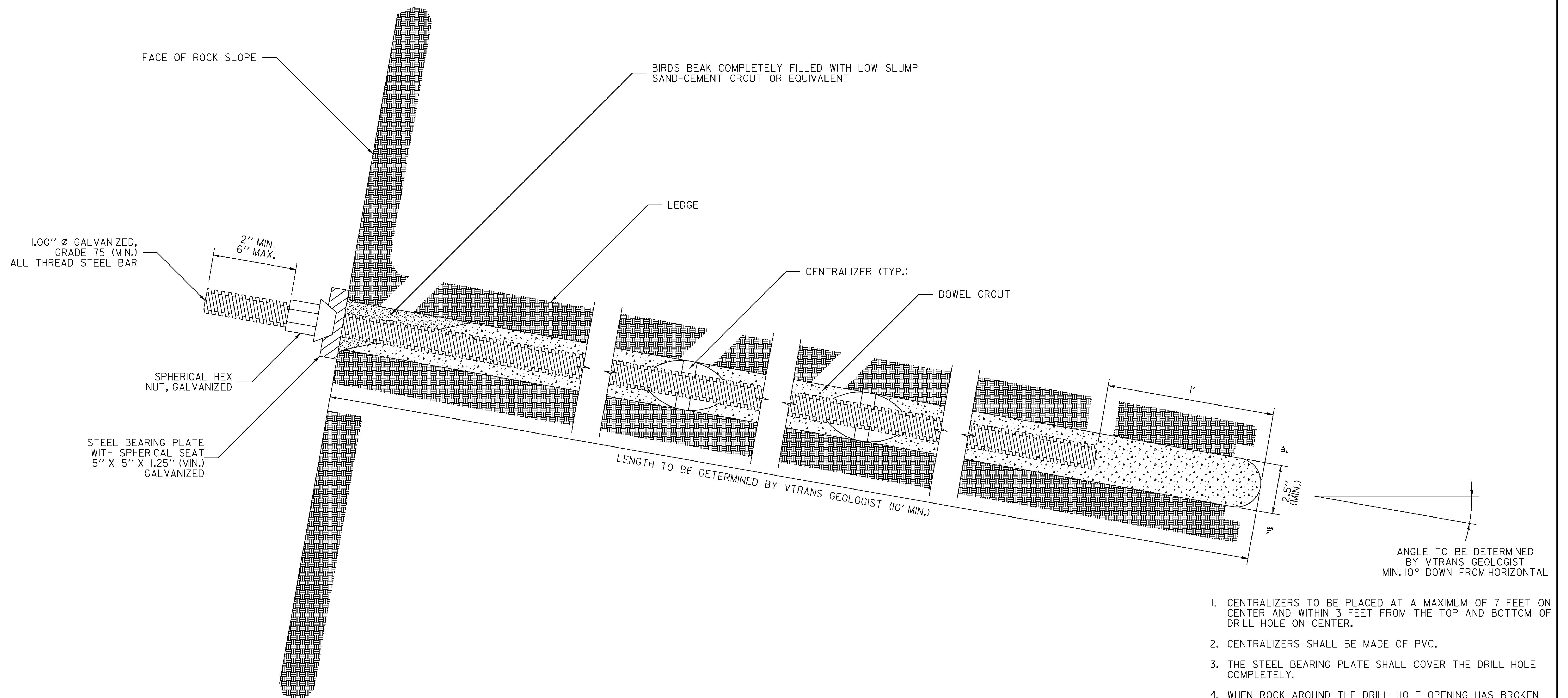
A-60	STANDARD TYPICAL FOR SLOPES IN SOLID ROCK EXCAVATION DRILLING AND BLASTING OF SOLID ROCK SUBGRADE	06-01-94
B-5	EMBANKMENT ON EARTH SLOPE, EMBANKMENT ON ROCK SLOPE MUCK EXCAVATION, TYPICAL SLOPE ROUNDING	06-01-94
D-4	VARIOUS DRAINAGE DETAILS	08-13-07
D-8	REINFORCED CONCRETE DROP INLET WITH PRECAST COVER AND GRATE	01-03-00
E-100	CONSTRUCTION APPROACH SIGNS	01-02-04
E-101	CONSTRUCTION SIGN DETAILS	05-30-03
E-102	CONSTRUCTION SIGN DETAILS	06-30-03
E-102A	CONSTRUCTION SIGN DETAILS	05-01-04
E-106	TRAFFIC CONTROL MISCELLANEOUS DETAILS	03-01-04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-03
E-109	TRAFFIC CONTROL DEVICES FOR TEMPORARY TERMINATION OF FREEWAY FACILITIES	08-08-95
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	08-08-95
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	01-03-00

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 09I-1(57)	
FILE NAME: 07a158/Design/d07a158frm.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
INDEX OF SHEETS	SHEET 2 OF 78



I-91 TYPICAL DITCHING DETAIL

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158frm.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBBE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
TYPICAL SECTION SHEET	SHEET 3 OF 78

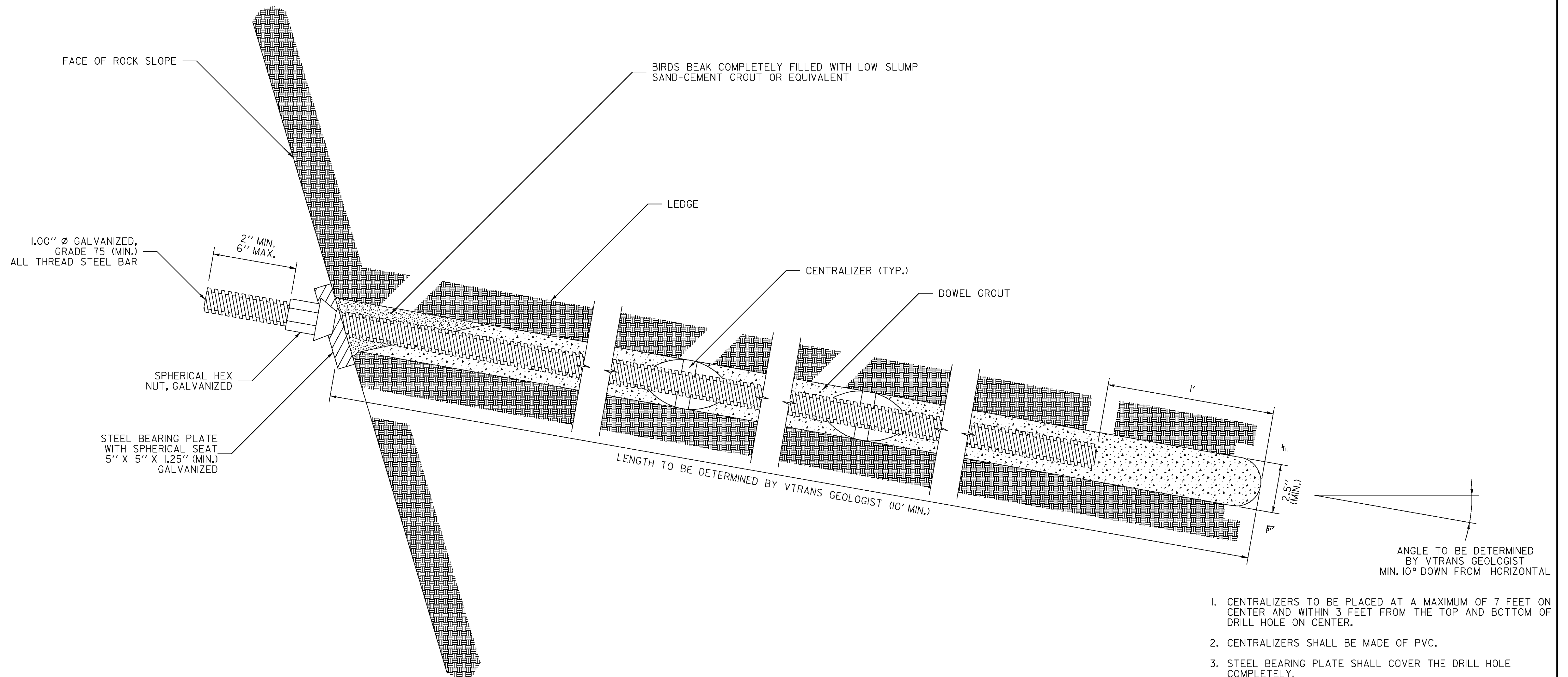


TYPICAL ROCK DOWEL DETAIL

NOT TO SCALE

1. CENTRALIZERS TO BE PLACED AT A MAXIMUM OF 7 FEET ON CENTER AND WITHIN 3 FEET FROM THE TOP AND BOTTOM OF DRILL HOLE ON CENTER.
2. CENTRALIZERS SHALL BE MADE OF PVC.
3. THE STEEL BEARING PLATE SHALL COVER THE DRILL HOLE COMPLETELY.
4. WHEN ROCK AROUND THE DRILL HOLE OPENING HAS BROKEN A CEMENT PAD FOR THE STEEL BEARING PLATE SHALL BE MADE AS NEEDED.
5. THE TOTAL LENGTH OF THE STEEL BAR TO BE PAID FOR SHALL BE EQUAL TO THE LENGTH OF THE DRILL HOLE, THE BAR CAN BE TRIMMED AFTER INSTALLATION.
6. ALL DRILL HOLES SHALL BE OVERDRILLED BY ONE FOOT (ONE FOOT BETWEEN END OF BAR AND BOTTOM OF DRILL HOLE).
7. PAY ITEM 900.640 SPECIAL PROVISION (ROCK DOWELING).

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-K(57)
FILE NAME:	07A158/Design/d07a158det.dgn
PROJECT LEADER:	K. ROBIE
DESIGNED BY:	P. PELOQUIN
TYPICAL DETAIL SHEET 1	
PLOT DATE:	26-MAY-2010
DRAWN BY:	P. PELOQUIN
CHECKED BY:	S. MENARD
SHEET	4 OF 78

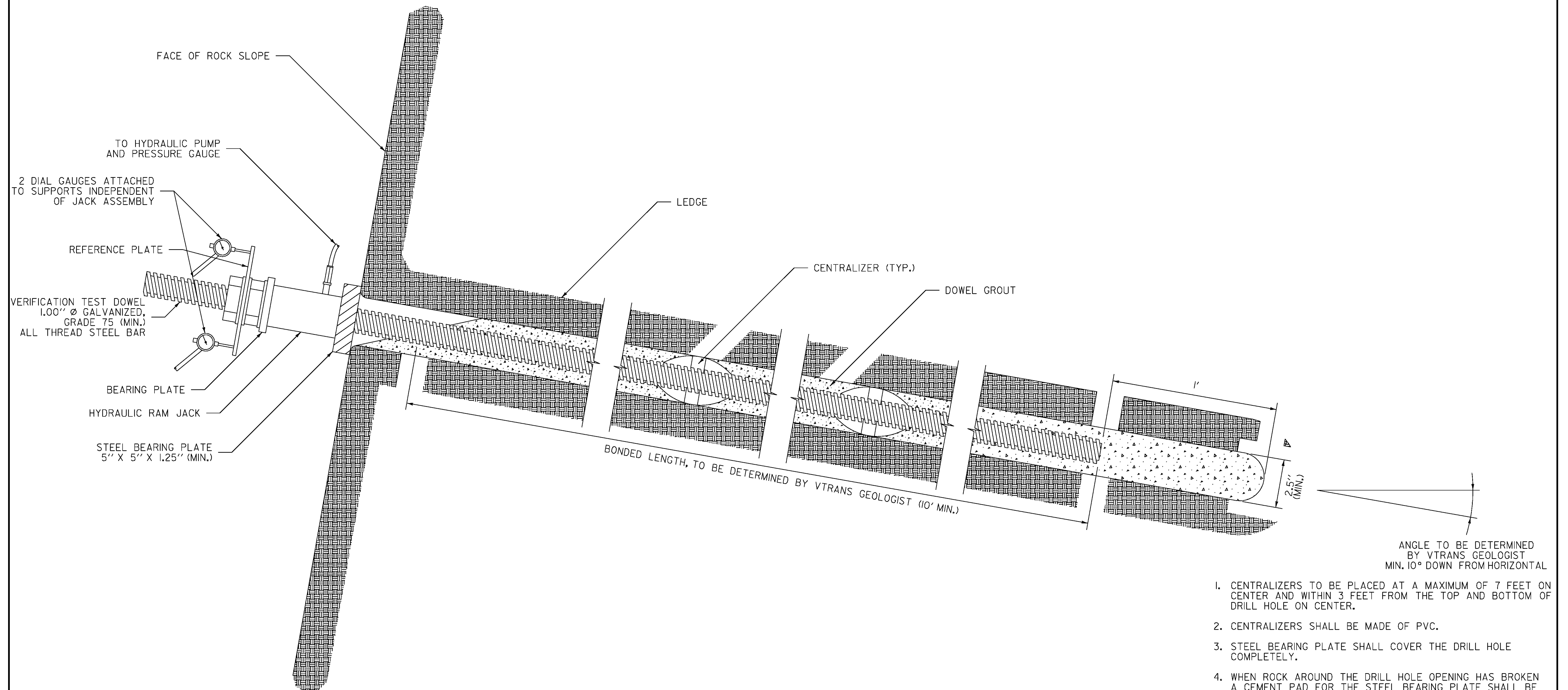


TYPICAL ROCK DOWEL DETAIL OVERHANGING CONDITION

NOT TO SCALE

1. CENTRALIZERS TO BE PLACED AT A MAXIMUM OF 7 FEET ON CENTER AND WITHIN 3 FEET FROM THE TOP AND BOTTOM OF DRILL HOLE ON CENTER.
2. CENTRALIZERS SHALL BE MADE OF PVC.
3. STEEL BEARING PLATE SHALL COVER THE DRILL HOLE COMPLETELY.
4. WHEN ROCK AROUND THE DRILL HOLE OPENING HAS BROKEN A CEMENT PAD FOR THE STEEL BEARING PLATE SHALL BE MADE AS NEEDED.
5. THE TOTAL LENGTH OF THE STEEL BAR TO BE PAID FOR SHALL BE EQUAL TO THE LENGTH OF THE DRILL HOLE, THE BAR CAN BE TRIMMED AFTER INSTALLATION.
6. ALL DRILL HOLES SHALL BE OVERDRILLED BY ONE FOOT. (ONE FOOT BETWEEN END OF BAR AND BOTTOM OF DRILL HOLE).
7. PAY ITEM 900.640 SPECIAL PROVISION (ROCK DOWELING).

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-1(57)
FILE NAME:	07a158/Design/d07a158det.dgn
PROJECT LEADER:	K. ROBBIE
DESIGNED BY:	P. PELOQUIN
TYPICAL DETAIL SHEET	2
PLOT DATE:	26-MAY-2010
DRAWN BY:	P. PELOQUIN
CHECKED BY:	S. MENARD
SHEET	5 OF 78

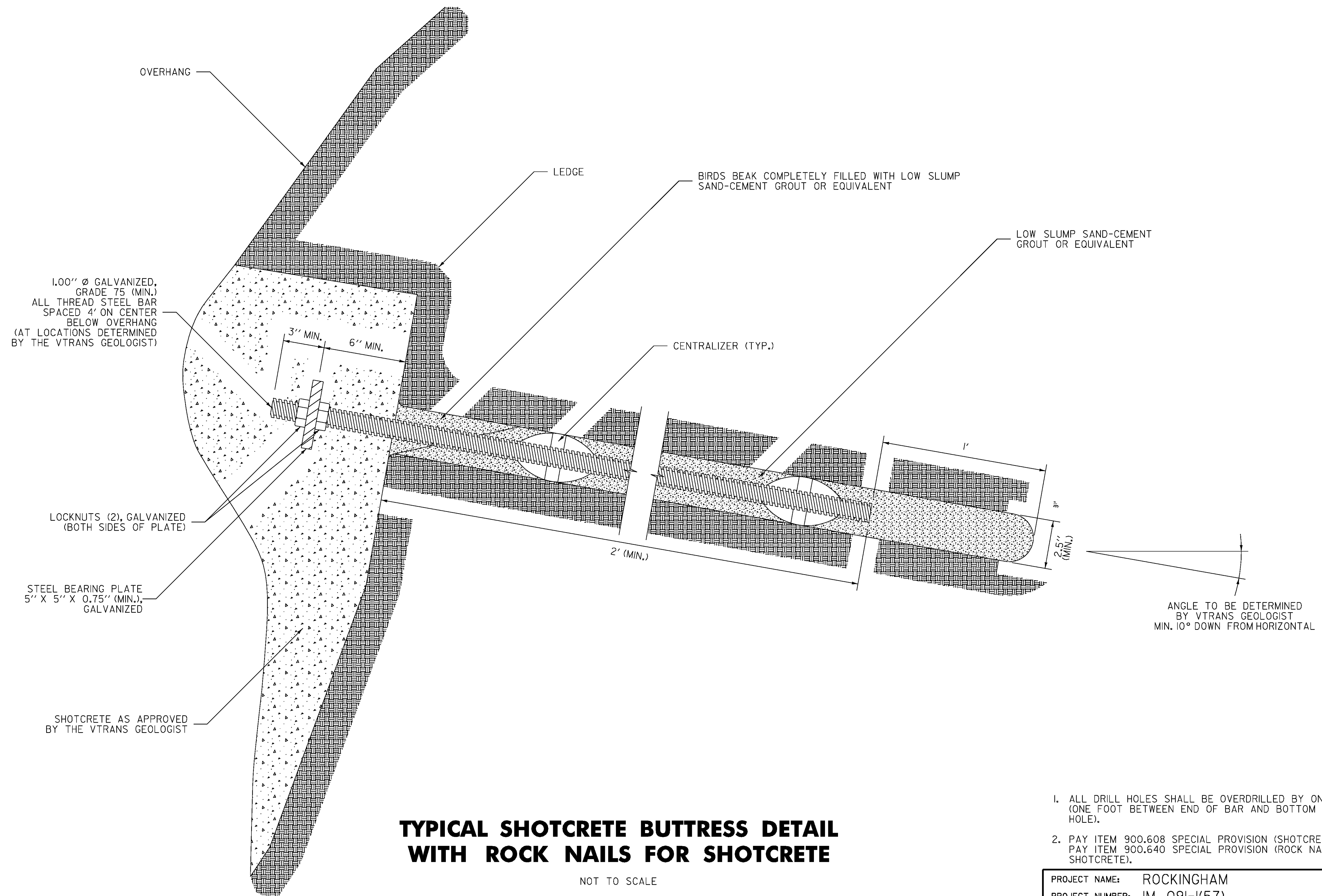


TYPICAL ROCK DOWEL PULL-OUT TEST DETAIL

NOT TO SCALE

- CENTRALIZERS TO BE PLACED AT A MAXIMUM OF 7 FEET ON CENTER AND WITHIN 3 FEET FROM THE TOP AND BOTTOM OF DRILL HOLE ON CENTER.
- CENTRALIZERS SHALL BE MADE OF PVC.
- STEEL BEARING PLATE SHALL COVER THE DRILL HOLE COMPLETELY.
- WHEN ROCK AROUND THE DRILL HOLE OPENING HAS BROKEN A CEMENT PAD FOR THE STEEL BEARING PLATE SHALL BE MADE AS NEEDED.
- THE TOTAL LENGTH OF THE STEEL BAR TO BE PAID FOR SHALL BE EQUAL TO THE LENGTH OF THE DRILL HOLE, THE BAR CAN BE TRIMMED AFTER INSTALLATION.
- ALL DRILL HOLES SHALL BE OVERDRILLED BY ONE FOOT. (ONE FOOT BETWEEN END OF BAR AND BOTTOM OF DRILL HOLE).
- PAY ITEM 900.645 SPECIAL PROVISION (ROCK DOWEL TESTING).

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-1(57)
FILE NAME: 07a158/Design/d07a158det.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
TYPICAL DETAIL SHEET 3	SHEET 6 OF 78



1. ALL DRILL HOLES SHALL BE OVERDRILLED BY ONE FOOT. (ONE FOOT BETWEEN END OF BAR AND BOTTOM OF DRILL HOLE).
2. PAY ITEM 900.608 SPECIAL PROVISION (SHOTCRETE) AND PAY ITEM 900.640 SPECIAL PROVISION (ROCK NAIL FOR SHOTCRETE).

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-K(57)	
FILE NAME: 07A158/Design/d07a158det.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
TYPICAL DETAIL SHEET 4	SHEET 7 OF 78

QUANTITY SHEET

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 09I-I(57)	
FILE NAME: 07a158/Design/d07a158frm.dgn	PLOT DATE: 08-JUL-2010
PROJECT LEADER: K. ROBBE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
QUANTITY SHEET I	SHEET 8 OF 78

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

QUANTITY SHEET

[illegible]

DRAINAGE DETAIL SHEET

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-(157)
FILE NAME: 07a158/Design/d07a158frm.dgn	PLOT DATE: 01-JUN-2010
PROJECT LEADER: K. ROBE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
DRAINAGE DETAIL SHEET	SHEET 10 OF 78

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

SUMMARY AND BALANCES

[illegible]

GENERAL NOTES

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.
2. EXISTING DIMENSIONS SHOWN IN THE PLANS WERE DEVELOPED FROM LIMITED FIELD SURVEY AND ORIGINAL DESIGN PLANS AND ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD CHECKING ALL DIMENSIONS APPLICABLE TO THIS WORK.
3. IN ACCORDANCE WITH SUBSECTION 107.12 THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING PAVEMENT, PAVEMENT MARKINGS, GUARDRAIL, PIPES, DROP INLETS, CONCRETE SIGN FOUNDATIONS AND HEADWALLS. THE CONTRACTOR, AT NO ADDITIONAL COMPENSATION, SHALL REPAIR ALL EXISTING PAVEMENT, PAVEMENT MARKINGS, GUARDRAIL, PIPES, DROP INLETS, CONCRETE SIGN FOUNDATIONS AND HEADWALLS DAMAGED DURING CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE ENGINEER.
4. THE CONTRACTOR SHALL REMOVE, STOCKPILE, AND REINSTALL SIGNS, MILE MARKER POSTS, AND DELINEATORS WHERE REQUIRED WORK MAY CAUSE DAMAGE TO THEM. THIS WORK SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF BURIED CABLE THROUGH DIG SAFE PRIOR TO THE START OF CONSTRUCTION.

LEDGE REMOVAL NOTES

1. PRIOR TO SUBMITTING A BID IT WILL BE REQUIRED THAT ALL BIDDING CONTRACTORS ATTEND A PRE BID MEETING ON SITE, WITH VTRANS STAFF, TO FAMILIARIZE THEMSELVES WITH THE CURRENT SITE CONDITIONS AND ACCESSIBILITY PRIOR TO PREPARATION OF A BID. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. FOR ALL LEDGE CUT SLOPES THROUGHOUT THE PROJECT AREA (MM. 34.70 TO MM. 35.12) THE LIMITS OF CLEARING SHALL START AT THE DITCH LINE, EXTEND UP THE FACE OF THE LEDGE AND CONTINUE FOR A DISTANCE UP TO 20 FEET BEYOND THE FINAL CREST OF THE LEDGE (NOT TO EXTEND PAST EXISTING STATE ROW) AS DIRECTED BY THE VTRANS GEOLOGIST OR ENGINEER.
3. THE LIMIT OF LEDGE REMOVAL IS SHOWN IN THESE PLANS. THE CONTRACTOR SHALL PERFORM ANY ADDITIONAL WORK AT THE UNIT PRICES PROVIDED IN THE CONTRACT. LEDGE REMOVAL SHALL BE COMPLETED THROUGH MEANS OF TRIM BLASTING, HAND SCALING AND MACHINE SCALING.

A. ALL LEDGE REMOVAL SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS BY PERSONNEL EXPERIENCED WITH THE REMOVAL METHODS BEING USED.

B. LEDGE REMOVAL USING METHODS OF TRIM BLASTING AND HAND SCALING SHALL BE PAID FOR UNDER CONTRACT ITEMS "900.608 SPECIAL PROVISION (TRIM BLASTING, TRUCK MEASUREMENT)" AND "900.630 - SPECIAL PROVISION (HAND SCALING)".
4. PERIODS OF BLASTING OPERATIONS SHALL BE LIMITED TO MONDAY THROUGH SATURDAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. ALL "REMOVAL OF LEDGE SALVAGE MATERIAL" AND "COMMON EXCAVATION" SHALL BE SALVAGED TO THE STATE OF VERMONT. THE FIRST 750 TONS OF "REMOVAL OF LEDGE SALVAGE MATERIAL" AND/OR "COMMON EXCAVATION" SHALL BE DELIVERED TO THE VERMONT AGENCY OF TRANSPORTATION DISTRICT 2 SPRINGFIELD FACILITY. ALL MATERIAL OVER 750 TONS SHALL BE DELIVERED TO APPROXIMATELY MM 34.60 ON THE SOUTHBOUND SHOULDER OF INTERSTATE 91. COORDINATION SHALL BE MADE TWO WEEKS IN ADVANCE OF THE INITIAL DELIVERY, AND AS NEEDED, TO IDENTIFY THE LOCATION AND COORDINATE TRAFFIC CONTROL. TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF DISTRICT 2 FOR THE WASTE AREA ONLY. COORDINATION SHALL BE MADE THROUGH JOSEPH RUZZO, DISTRICT 2 PROJECT MANAGER [TEL.: (802)251-2002].
6. THE CONTRACTOR SHALL TAKE CARE DURING THE LEDGE REMOVAL NOT TO DAMAGE OR DISTURB EXISTING UTILITIES WITHIN THE PROJECT AREA.

CLEARING NOTES:

1. CLEARING SHALL CONSIST OF REMOVAL OF ALL TREES AND SHRUBS FROM THE EDGE OF PAVEMENT UP THE FACE OF THE LEDGE CUT AND 20 FEET PAST THE FINAL CREST OF THE LEDGE. THE FINAL CREST OF THE LEDGE IS THE CREST LINE AFTER ALL LEDGE REMOVAL WHERE THE LEDGE CHANGES FROM PRIMARILY VERTICAL TO PRIMARILY HORIZONTAL. THE FINAL CREST OF THE LEDGE SHALL BE DETERMINED BY THE RESIDENT ENGINEER AND THE VTRANS GEOLOGIST.
2. ALL VEGETATION SHALL BE CLEARED AND DISPOSED OF IN ACCORDANCE WITH SECTION 201. PAYMENT SHALL BE MADE UNDER CONTRACT ITEM 201.11 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS".
3. INDIVIDUAL TREES THAT ARE DEEMED TO BE AT RISK OF FALLING BY THE RESIDENT ENGINEER, OUTSIDE OF THE CLEARING AREA IDENTIFIED ON THE PLANS, SHALL BE REMOVED. THIS WORK SHALL BE INCIDENTAL TO ITEM 201.11 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS".
4. VEGETATION TO BE REMOVED ON THE FACE OF THE LEDGE CUT SHALL BE INCIDENTAL TO ITEM 201.11 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS".
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A NEAT TREE LINE ALONG THE AREA TO BE CLEARED TO THE SATISFACTION OF THE ENGINEER.

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158frm.dgn	PLOT DATE: 10-JUN-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
GENERAL NOTES	SHEET 12 OF 78

GPS CONTROL POINTS	HVCTRL #1 I 91 EXIT 6 AZ MK NORTH = 249990.88 EAST = 1650387.59 ELEV. = 383.95 General location, Rockingham, VT. To reach from the I-91 northbound bridge over VT route 103 at exit 6, go north along I-91 for 0.5 mi to the north bound mile marker 35.60, at U-turn, and the site of the mark on the left of the median just south of the U-turn. The mark is set flush with the ground surface in the top of a 12" diameter concrete monument. It is 8.5' east of and about 0.3' lower than the east edge of pavement of the I-91 south bound lane, 36.4' west of and about 1.3' lower than the west edge of pavement of the north bound lane. 30.2' south of the centerline of the U-turn, 21.3' northwest of the center of a 24" square metal drain grate, and 1' north of a fiberglass witness post.		HVCTRL #2 I 91 EXIT 6 NORTH = 247458.07 EAST = 1650238.24 ELEV. = 504.26 General location, Rockingham, VT. The mark is located in the median at the north end of the I-91 Bridges over VT route 103 at exit 6. It is between I-91 northbound mile marker's 35.20 and 35.25. The mark is set flush with ground surface in the top of a 12" diameter concrete monument. It is 20' east of and about level with the east edge of pavement of the southbound lane, 23.3' west of and about level with the west edge of pavement of the northbound lane, 21.7' northeast corner of the concrete curb of the southbound bridge, 29.5' northwest of the northwest corner of the concrete curb of the north bound bridge, 15' south of a steel beam guard rail, and 1' north of a fiberglass witness post.	
	TRAVERSE TIES		TRAVERSE TIES	
ALIGNMENT TIES	HVCTRL #3 NORTH = 245861.21 EAST = 1650291.29 ELEV. = 577.43 3 Not Tied		HVCTRL #4 NORTH = 245151.49 EAST = 1650347.99 ELEV. = 585.99 4 Not Tied	
	ALIGNMENT TIES		ALIGNMENT TIES	

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83(CORS96)

ADJUSTMENT Compass

PROJECT NAME: ROCKINGHAM

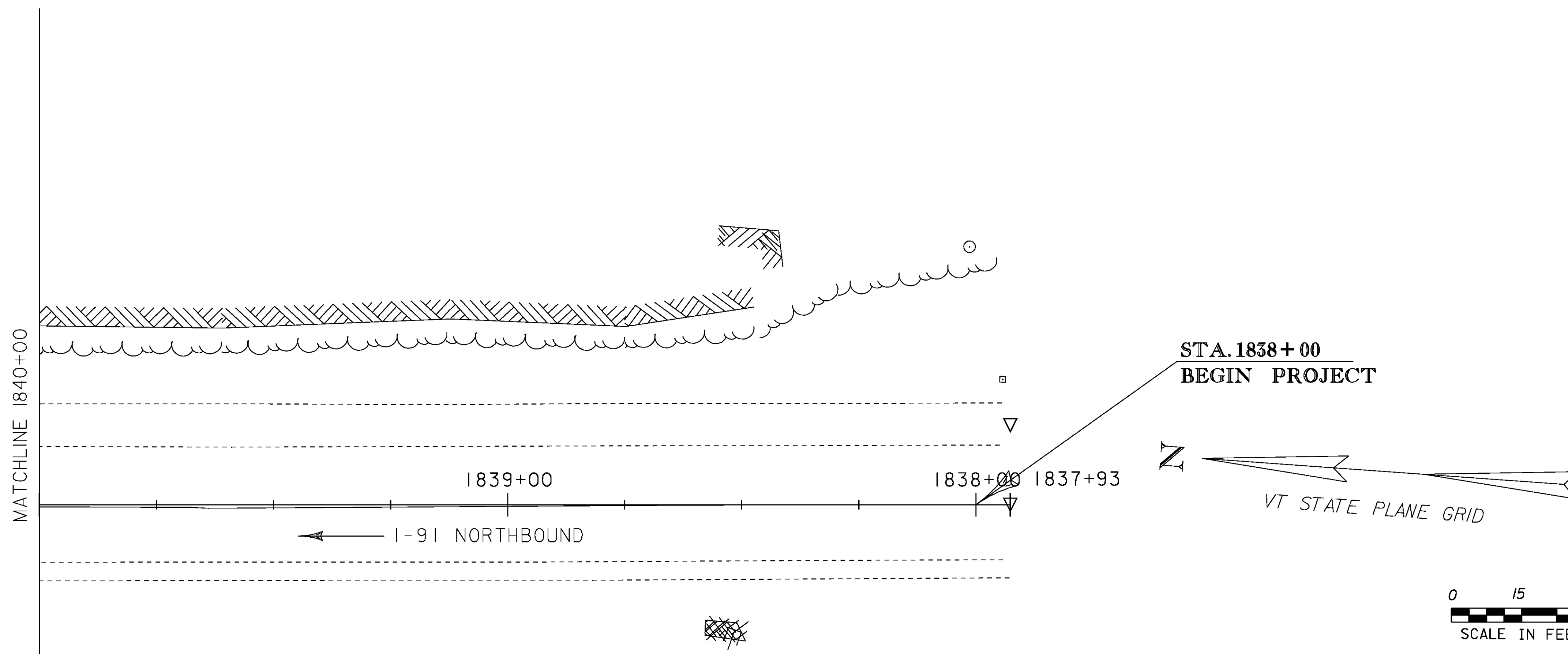
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FILE NAME: 07A158/Design/d07A158+1e.dgn PLOT DATE: 26-MAY-2010

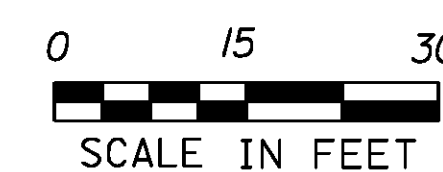
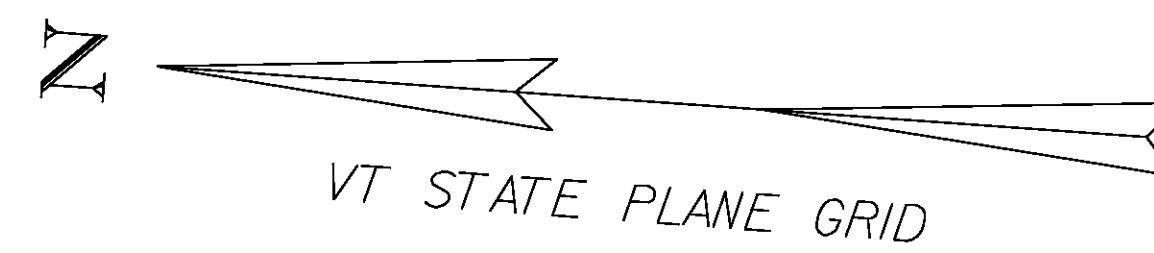
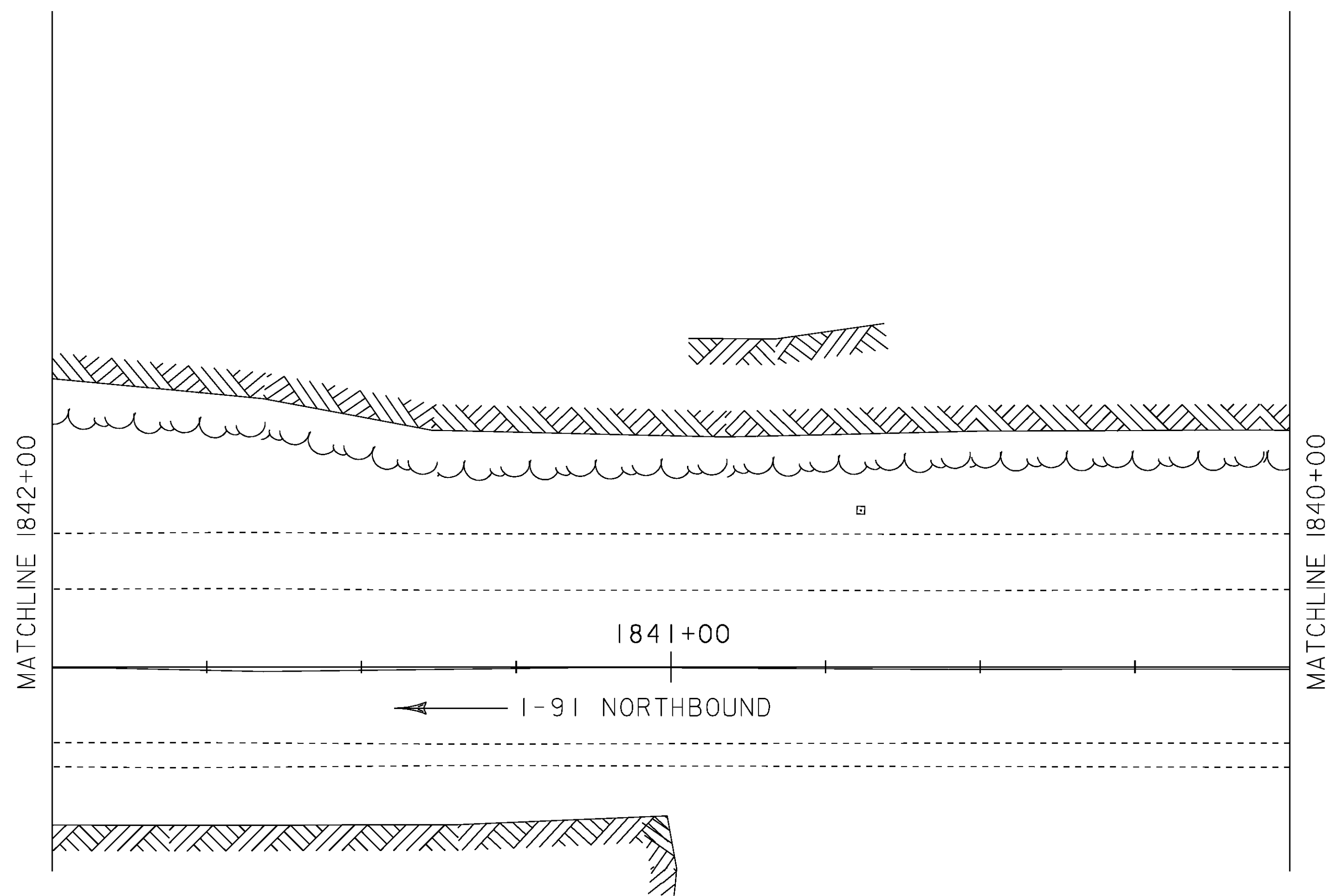
PROJECT LEADER: K. ROBIE DRAWN BY: R. BULLOCK

DESIGNED BY: R. BULLOCK CHECKED BY: S. MENARD

TIE SHEET SHEET 13 OF 78



PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158lo.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
LAYOUT SHEET 1	SHEET 14 OF 78



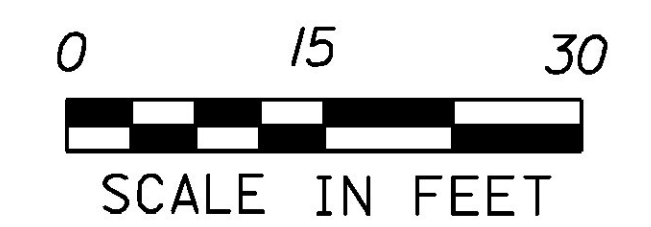
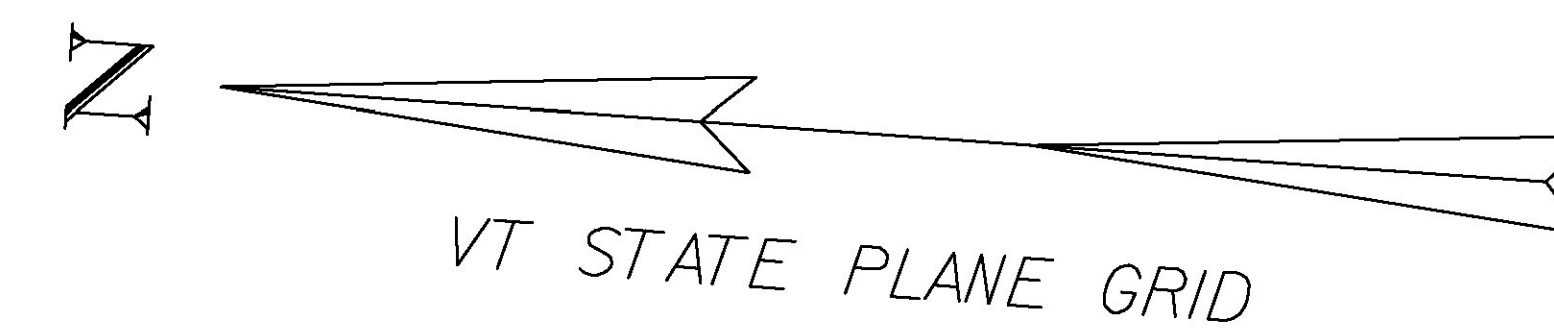
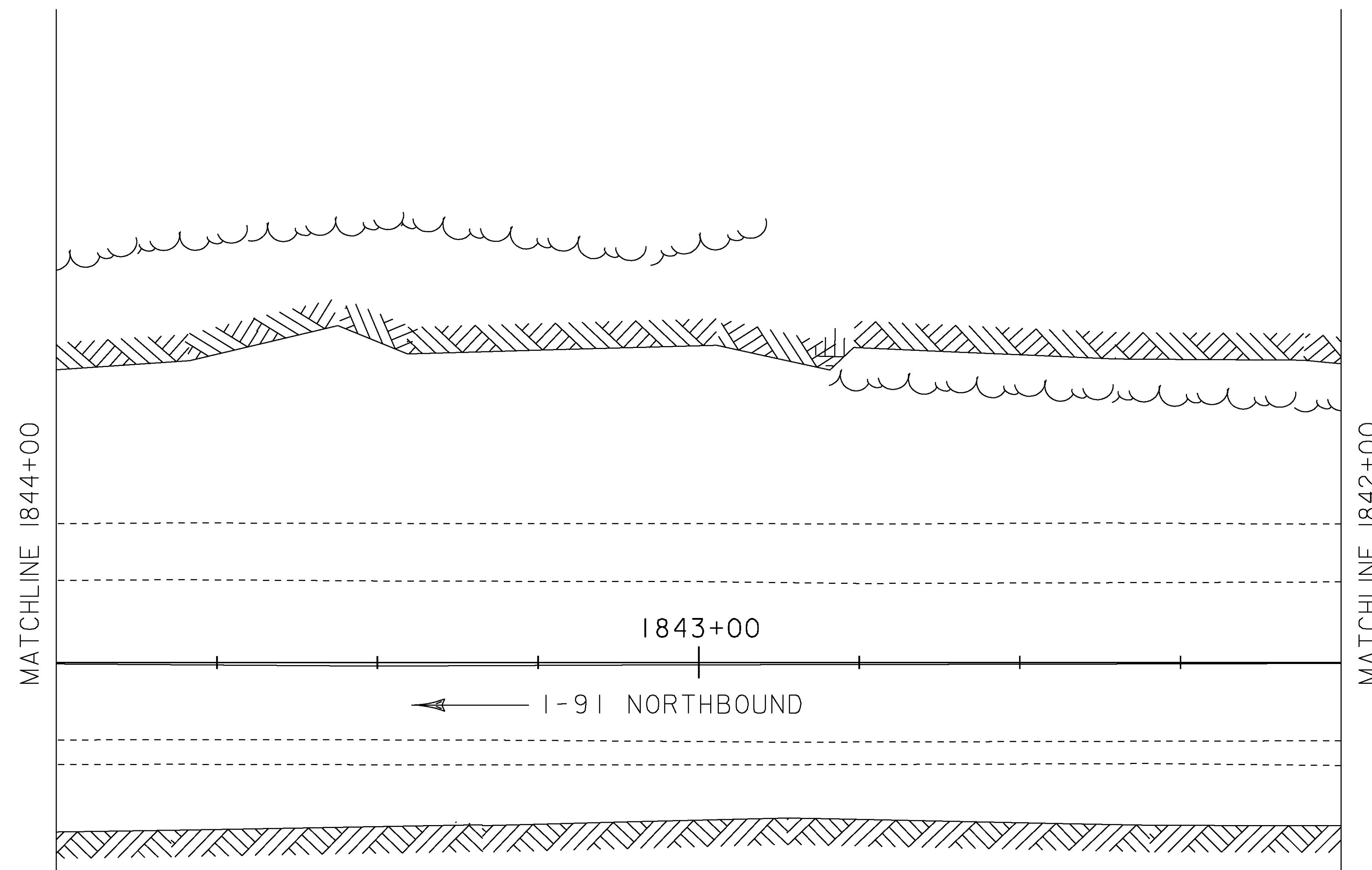
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PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158lo.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
LAYOUT SHEET 2	SHEET 15 OF 78



STA. 1844+00



STA. 1843+50



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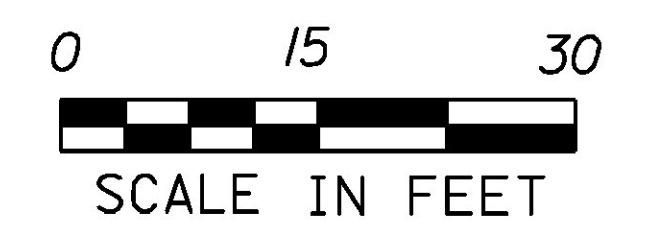
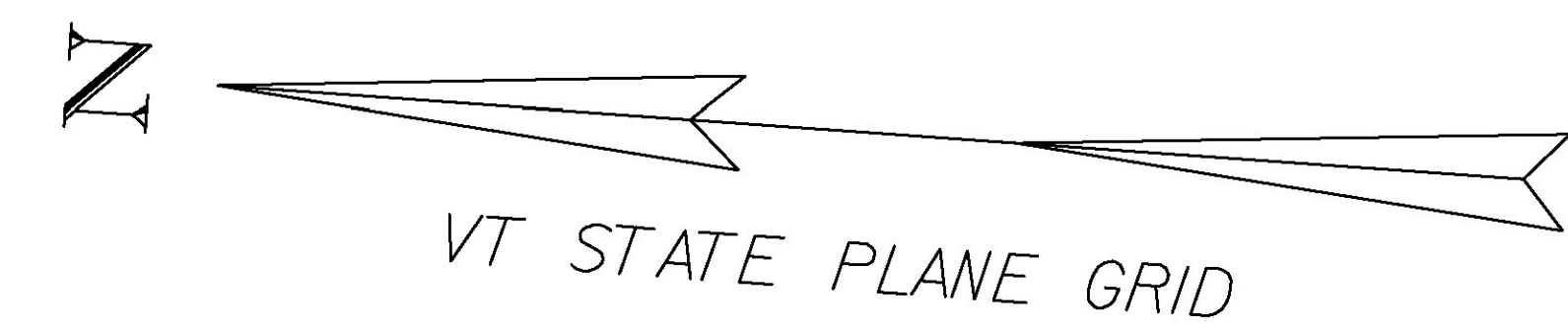
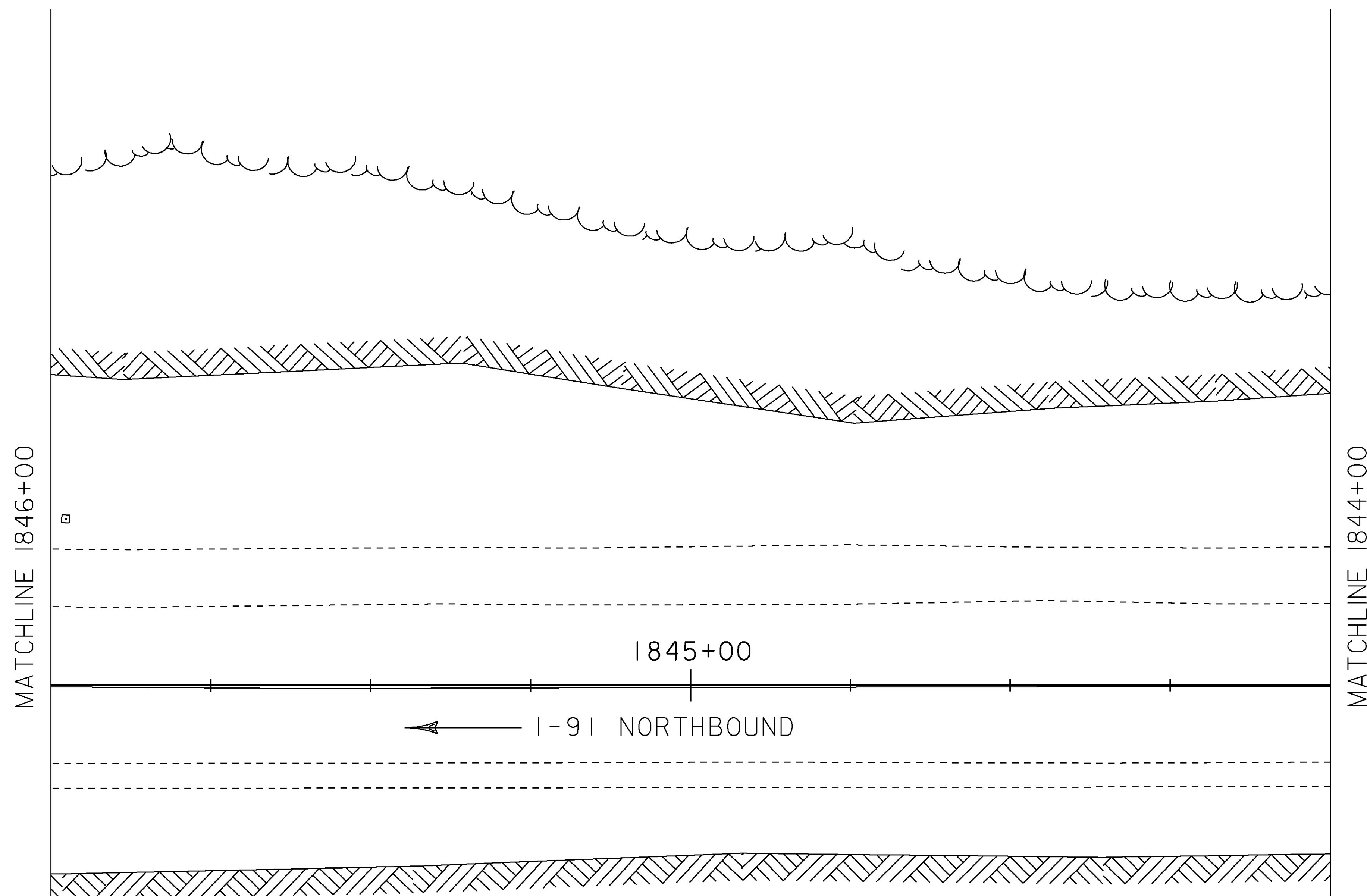
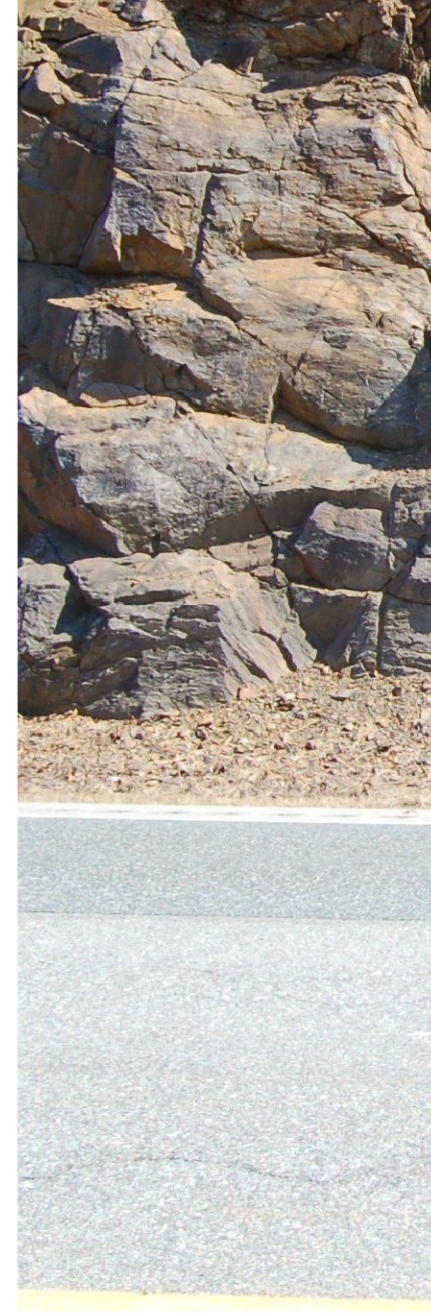
STA. 1846+00



STA. 1845+50



STA. 1845+00



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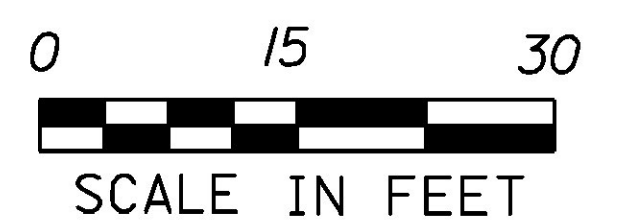
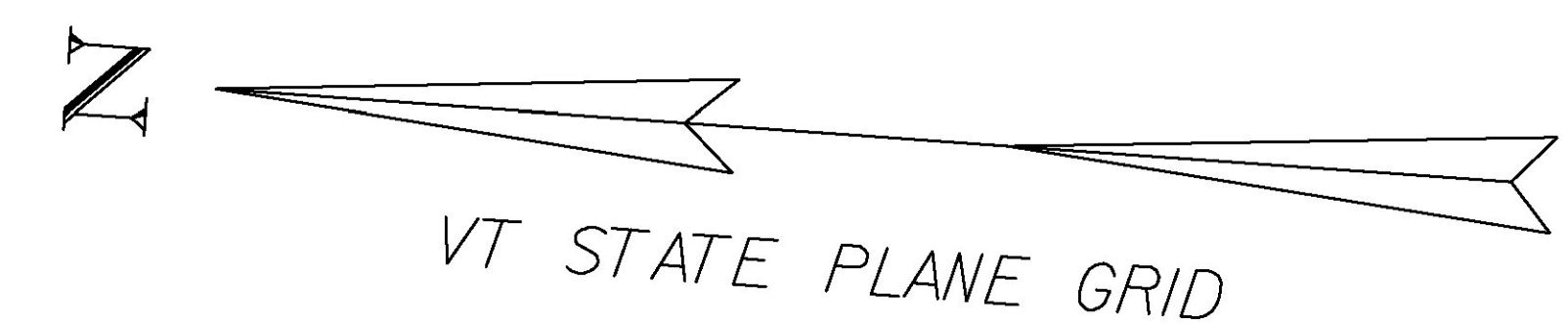
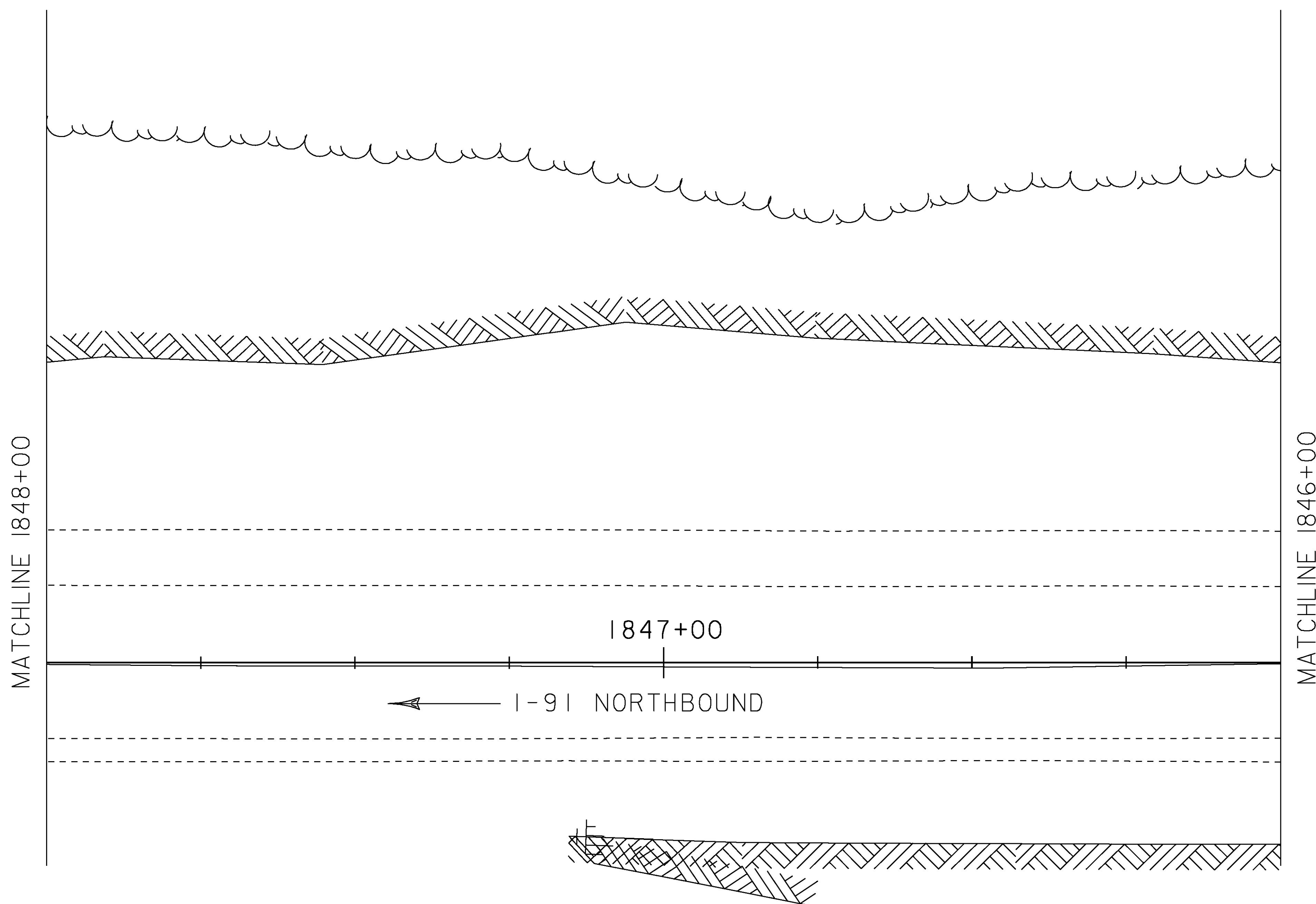
STA. 1848+00
MACHINE SCALING AT TOP ONLY



STA. 1847+50



STA. 1847+00
MACHINE SCALING AT TOP ONLY



900.640
STA. 1847
STA. 1848

STAT
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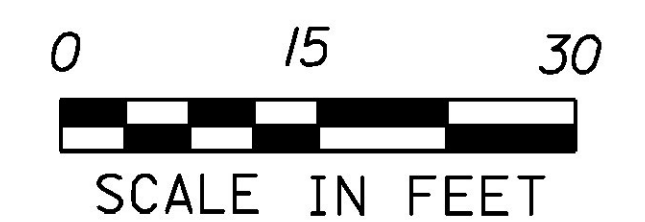
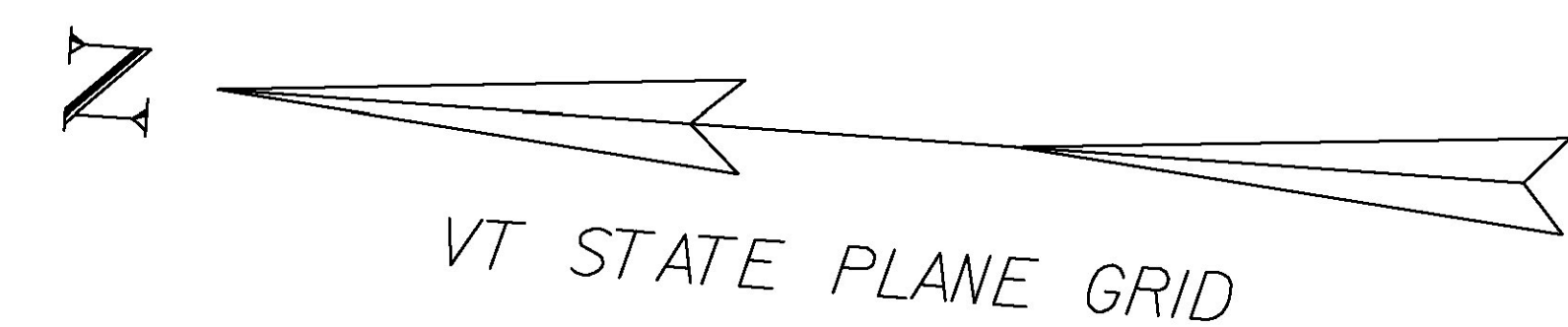
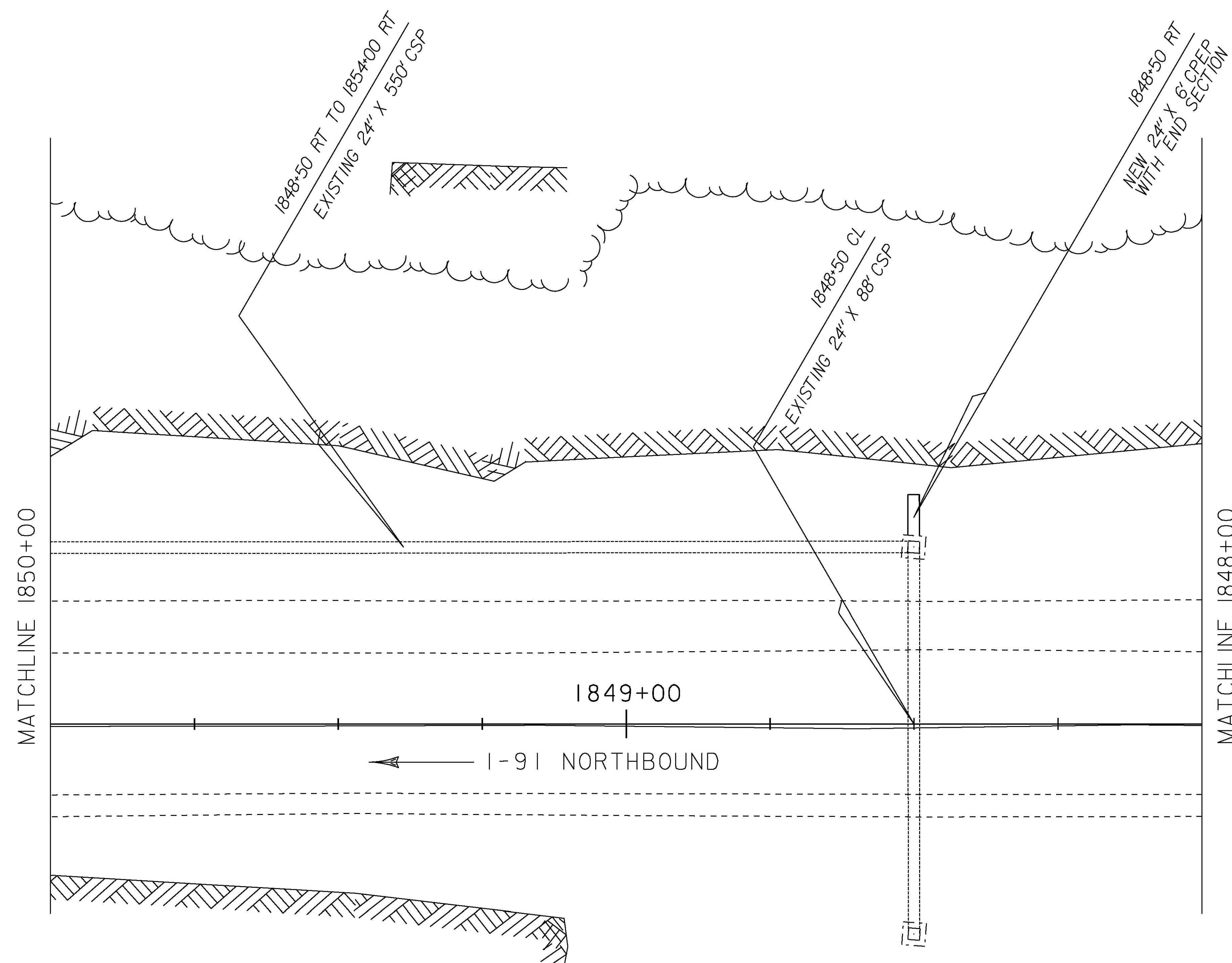
STA. 1850+00
MACHINE SCALING AT TOP ONLY



STA. 1849+50
MACHINE SCALING AT TOP ONLY



STA. 1849+00
MACHINE SCALING AT TOP ONLY



900.640
STA. 1848+
STA. 1849+
STA. 1850+

STAT
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PROJ
PROJ
DESIG
LAYO



STA. 1852+00



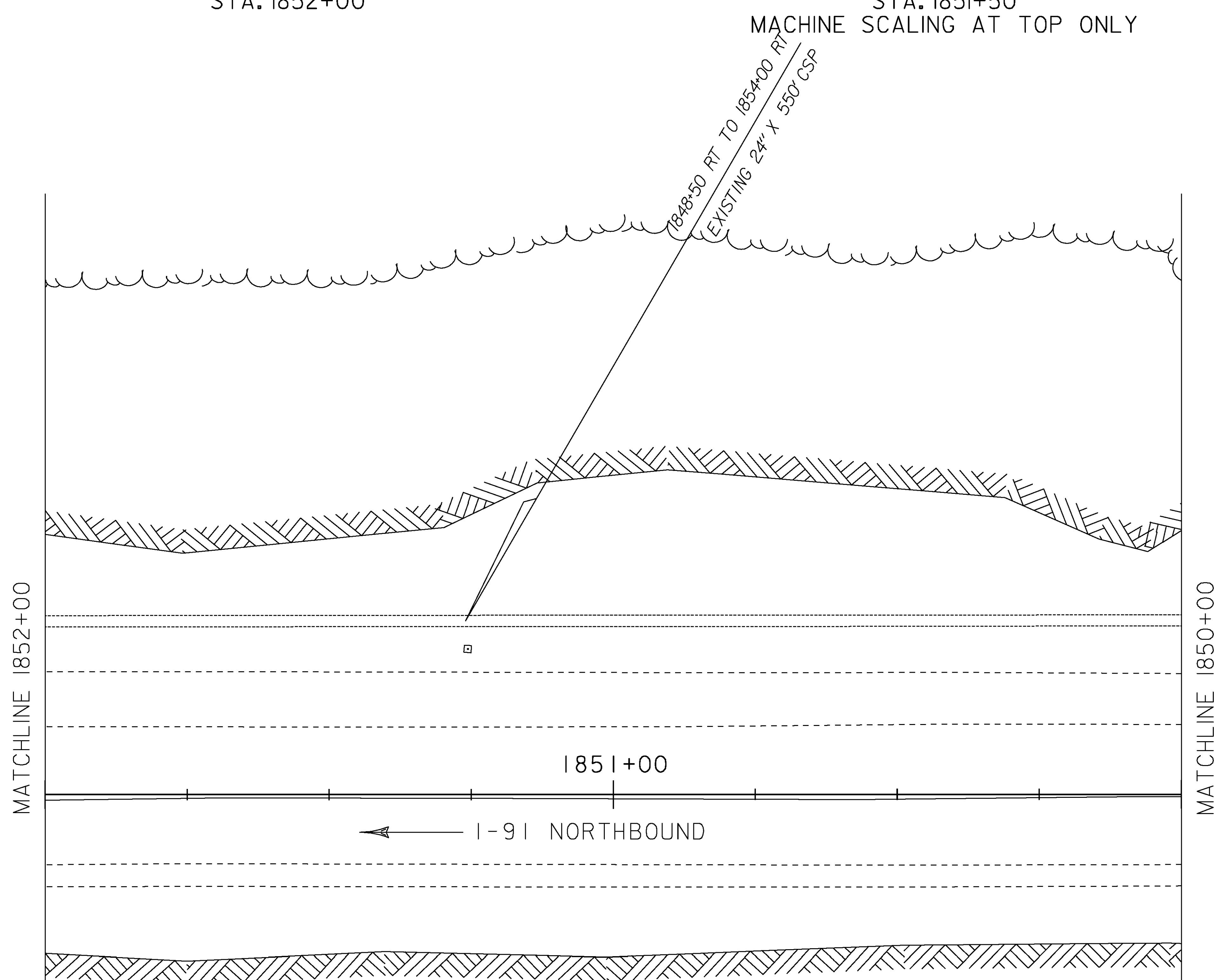
STA. 1851+50
MACHINE SCALING AT TOP ONLY



STA. 1851+00
MACHINE SCALING AT TOP ONLY



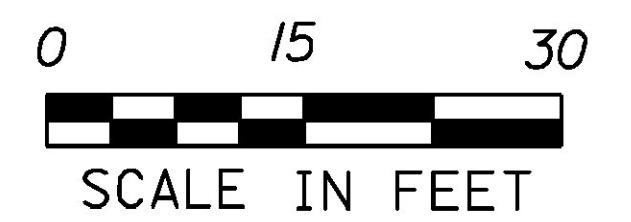
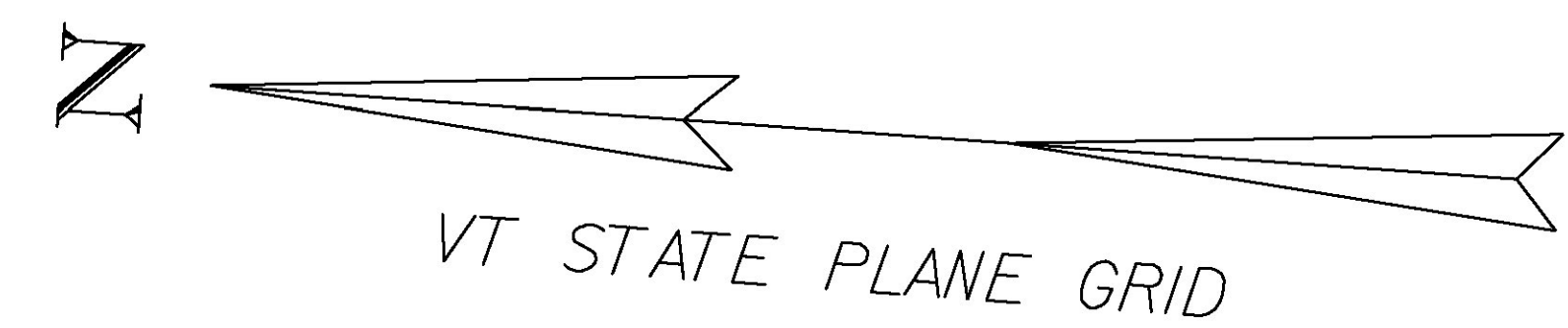
M



900.640 -
STA. 1850+50
STA. 1851+50
STA. 1852+00

900.640 - SPECI

900.608



STAT
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PROJE
FILE
PROJE
DESIG
LAYO



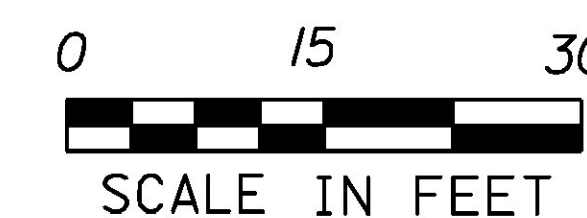
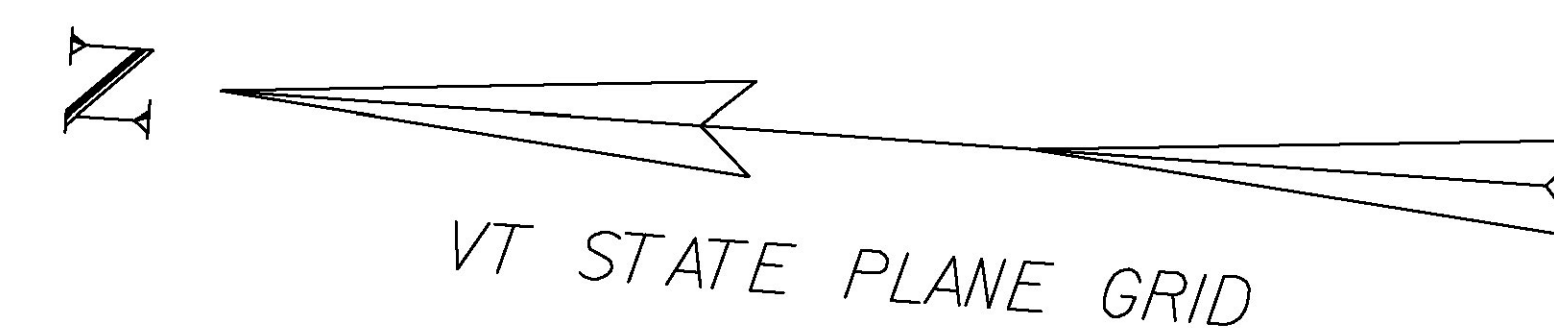
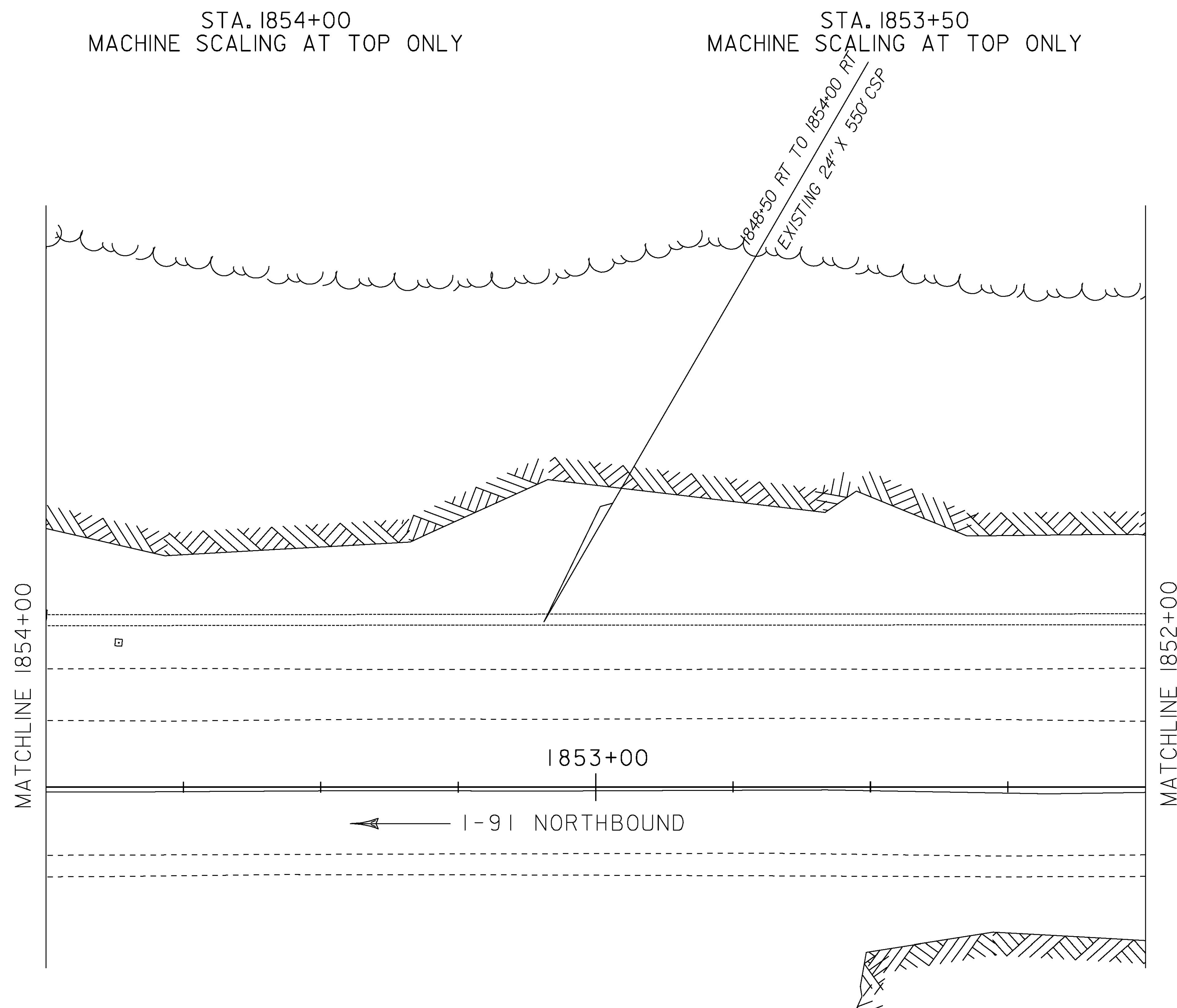
STA. 1854+00
MACHINE SCALING AT TOP ONLY



STA. 1853+50
MACHINE SCALING AT TOP ONLY



STA. 1853+00
MACHINE SCALING AT TOP ONLY

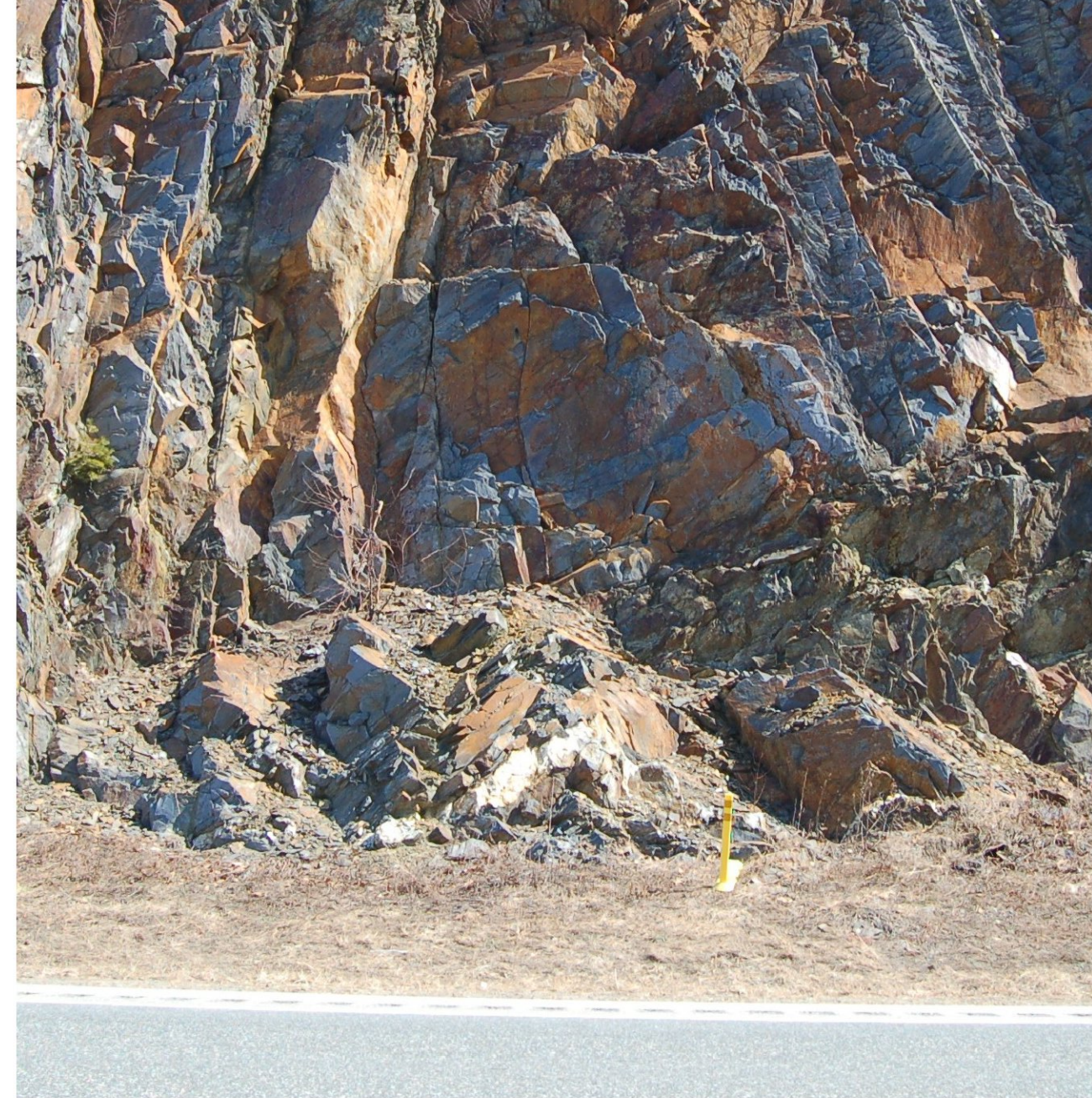


900.641
STA. 1852+00
STA. 1853+00
STA. 1853+50
STA. 1854+00

STAT
CENT
PROJ
PROJ
FILE
PROJ
DESIG
LAYO



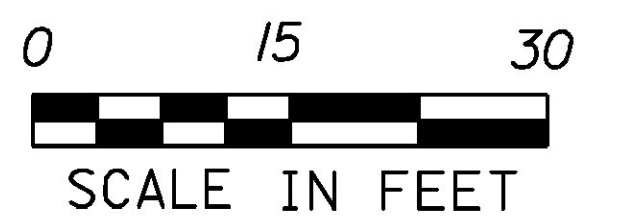
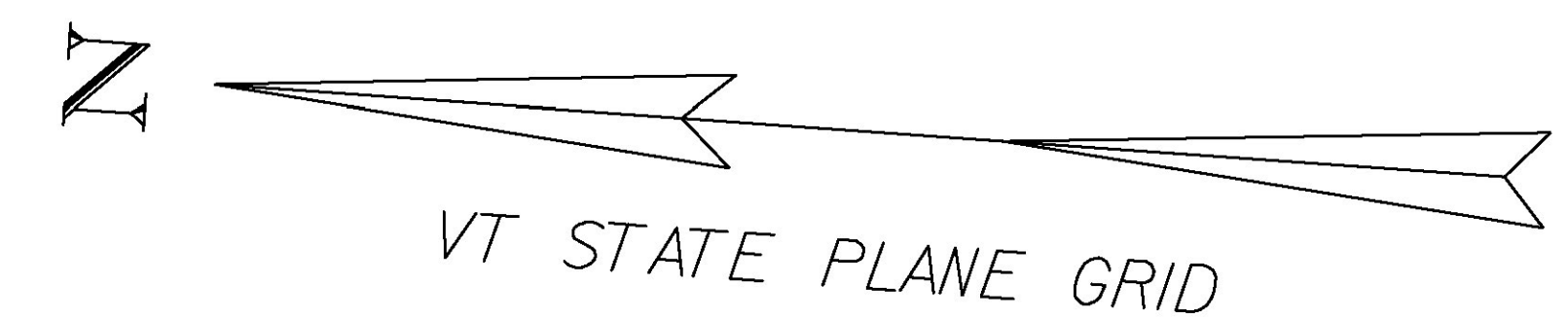
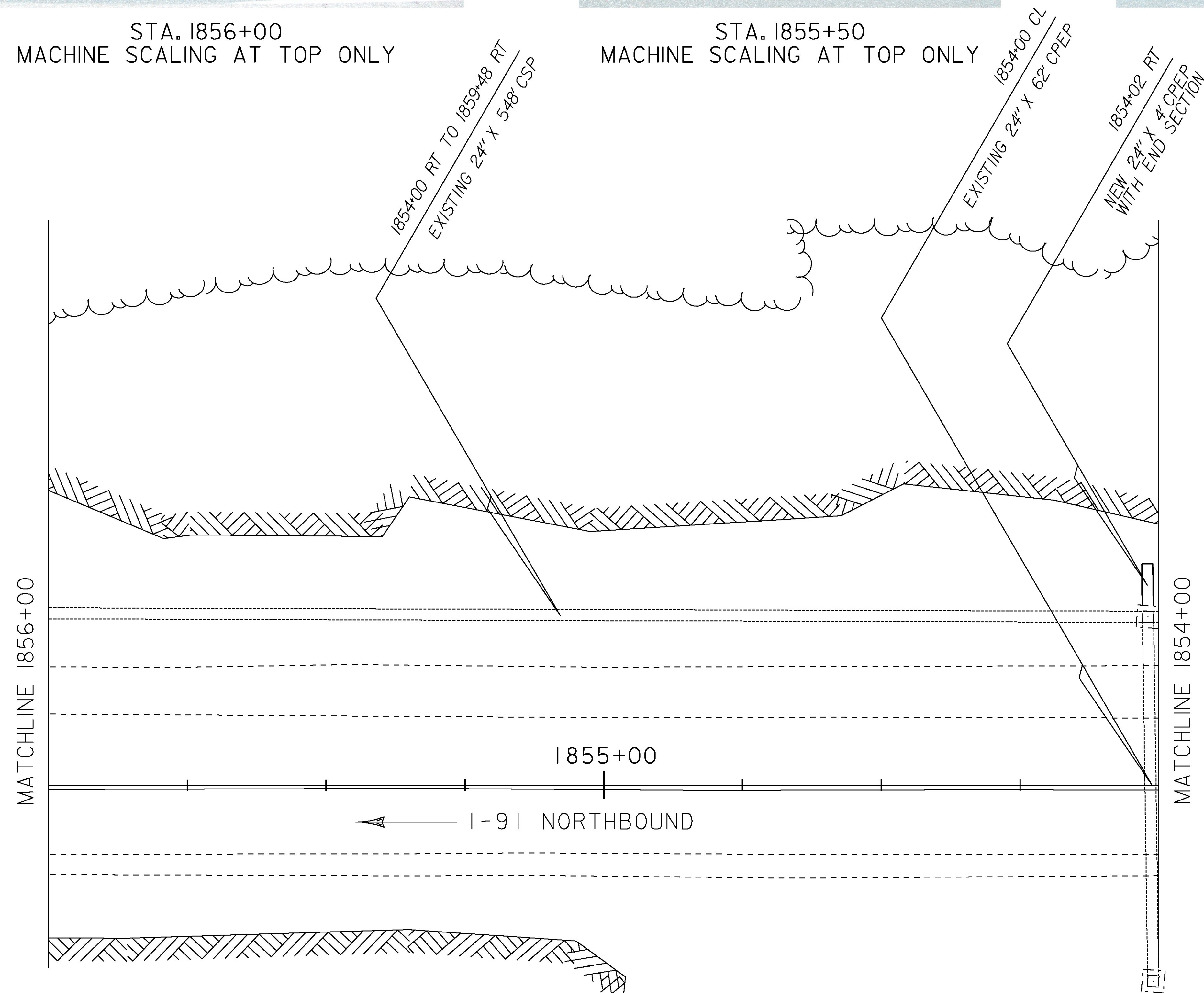
STA. 1856+00
MACHINE SCALING AT TOP ONLY



STA. 1855+50
MACHINE SCALING AT TOP ONLY



STA. 1855+00
MACHINE SCALING AT TOP ONLY



900.640
STA. 1854+00
STA. 1855+00
STA. 1855+50
STA. 1856+00

STAT
CENT
PROJ
PROJ
FILE
PROJ
DESIG
LAYO



STA. 1858+00
MACHINE SCALING AT TOP ONLY



STA. 1857+50
MACHINE SCALING AT TOP ONLY

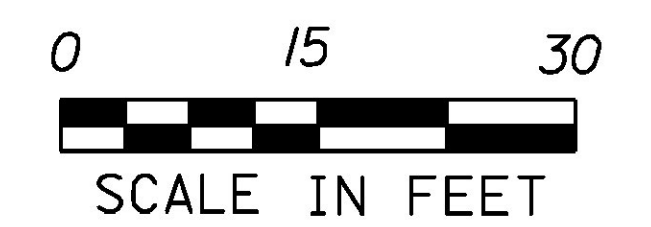
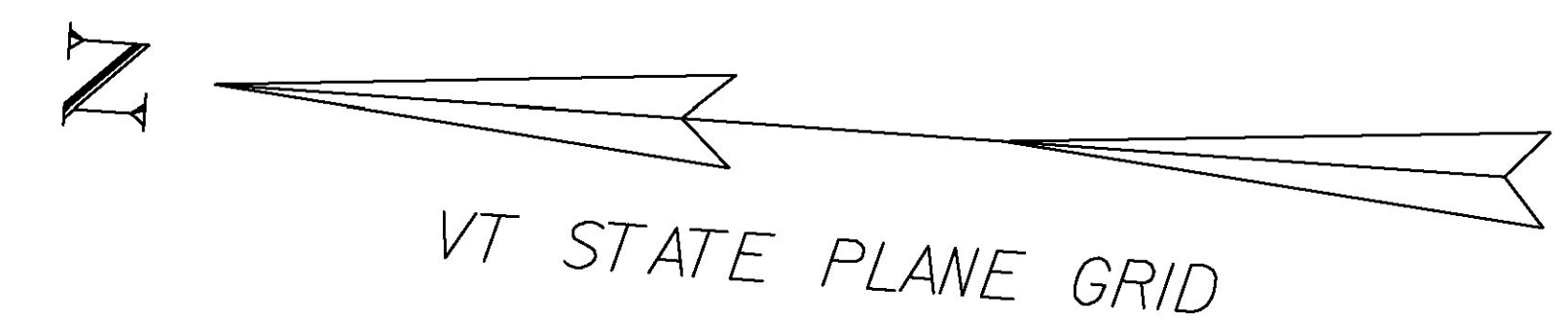
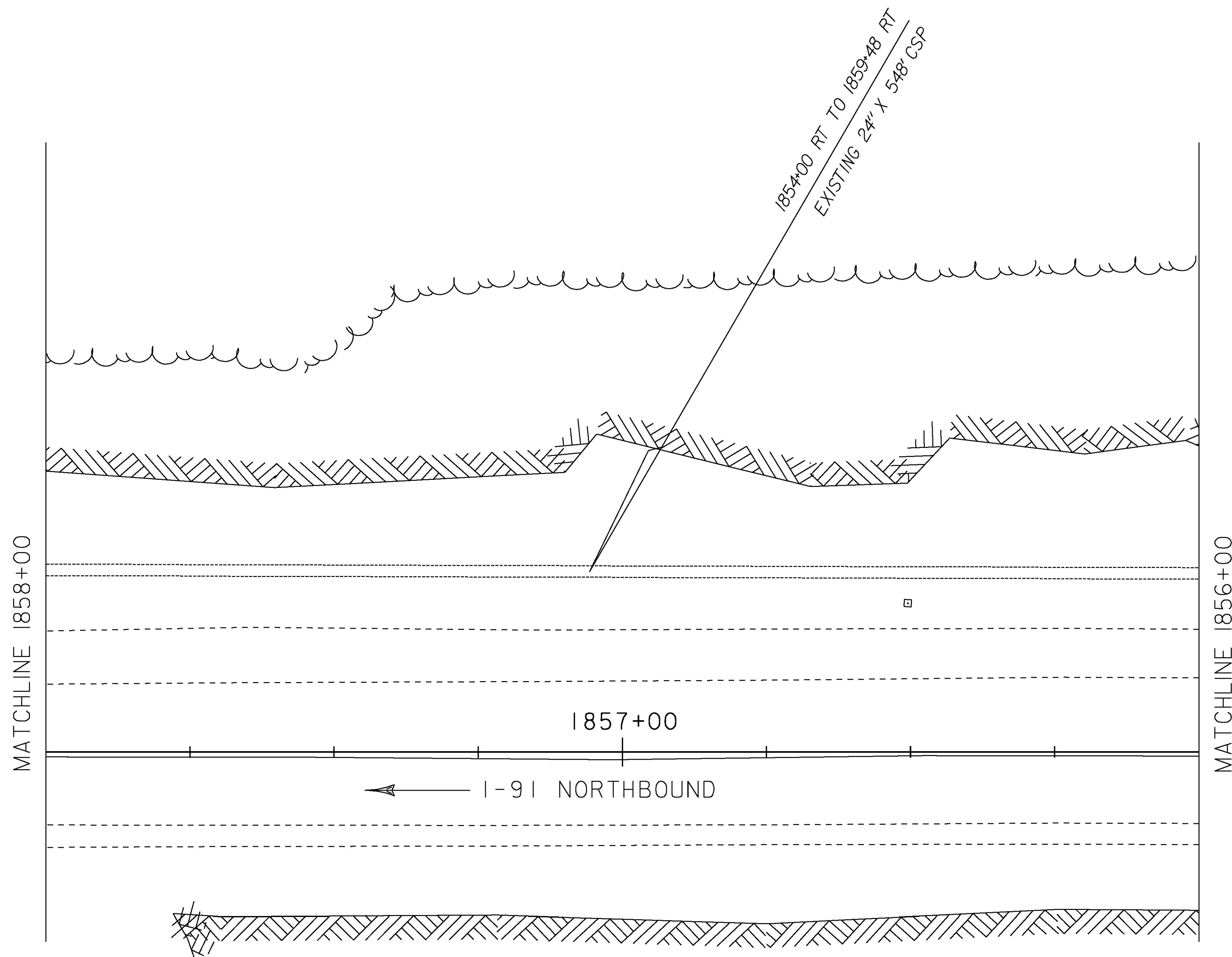


STA. 1857+00
MACHINE SCALING AT TOP ONLY



MA

900.64
STA. 1856



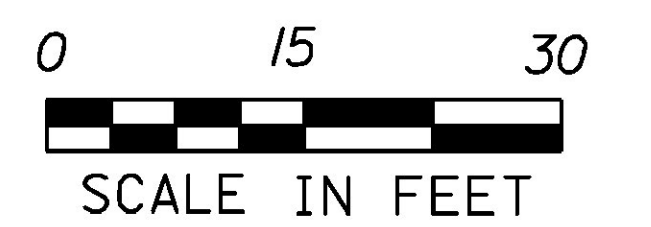
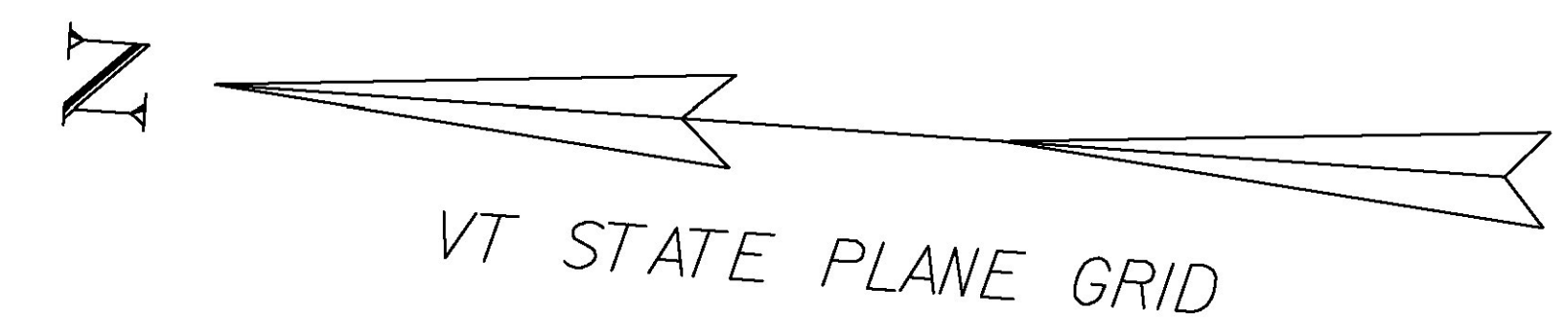
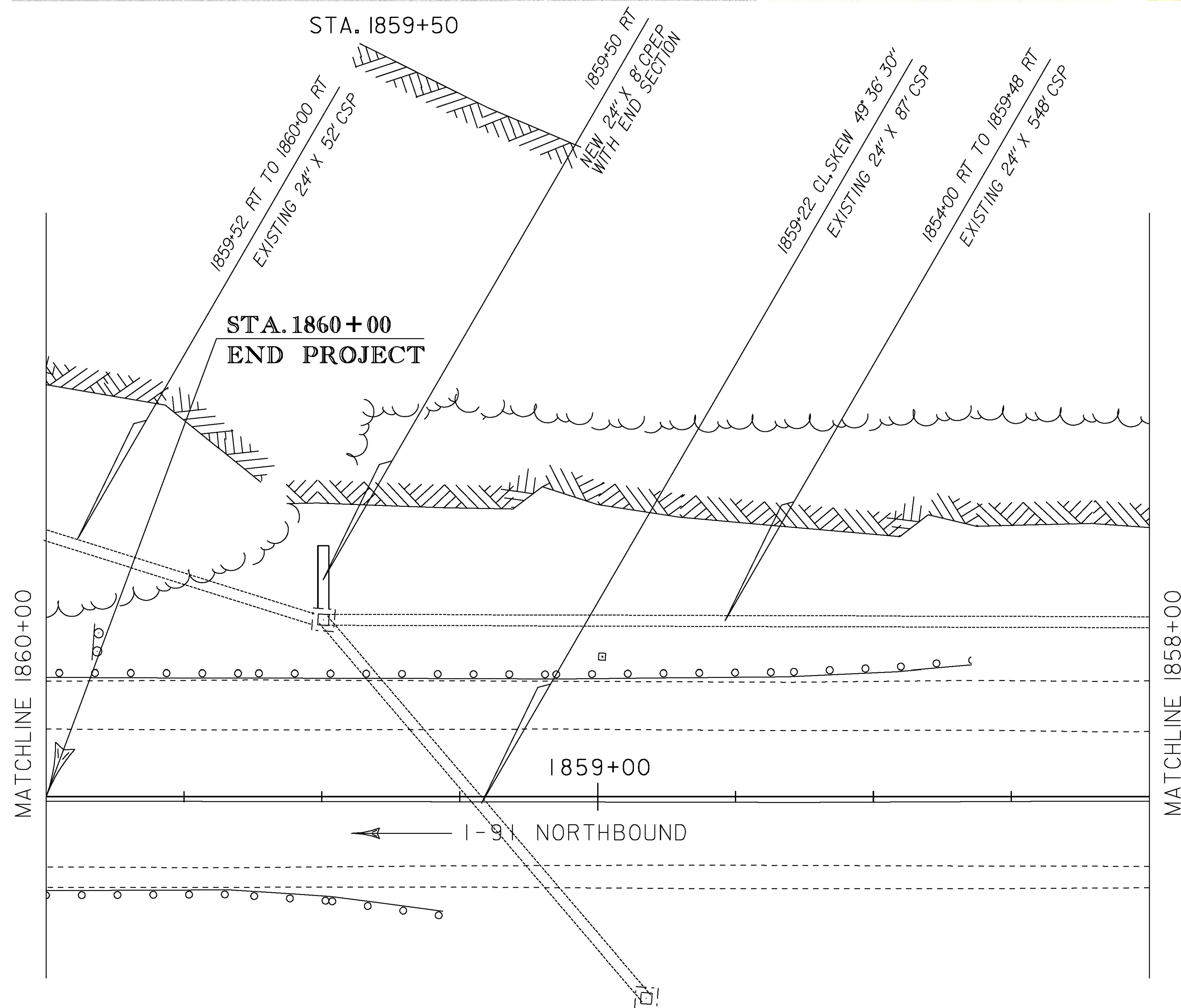
STAT
CENT
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PROJ
FILE
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LAYO



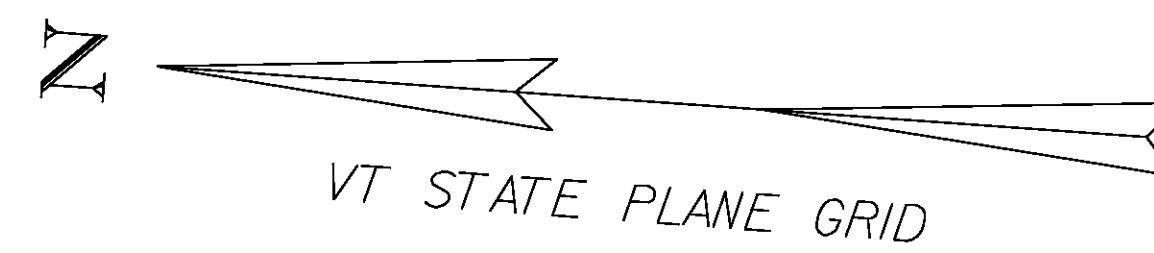
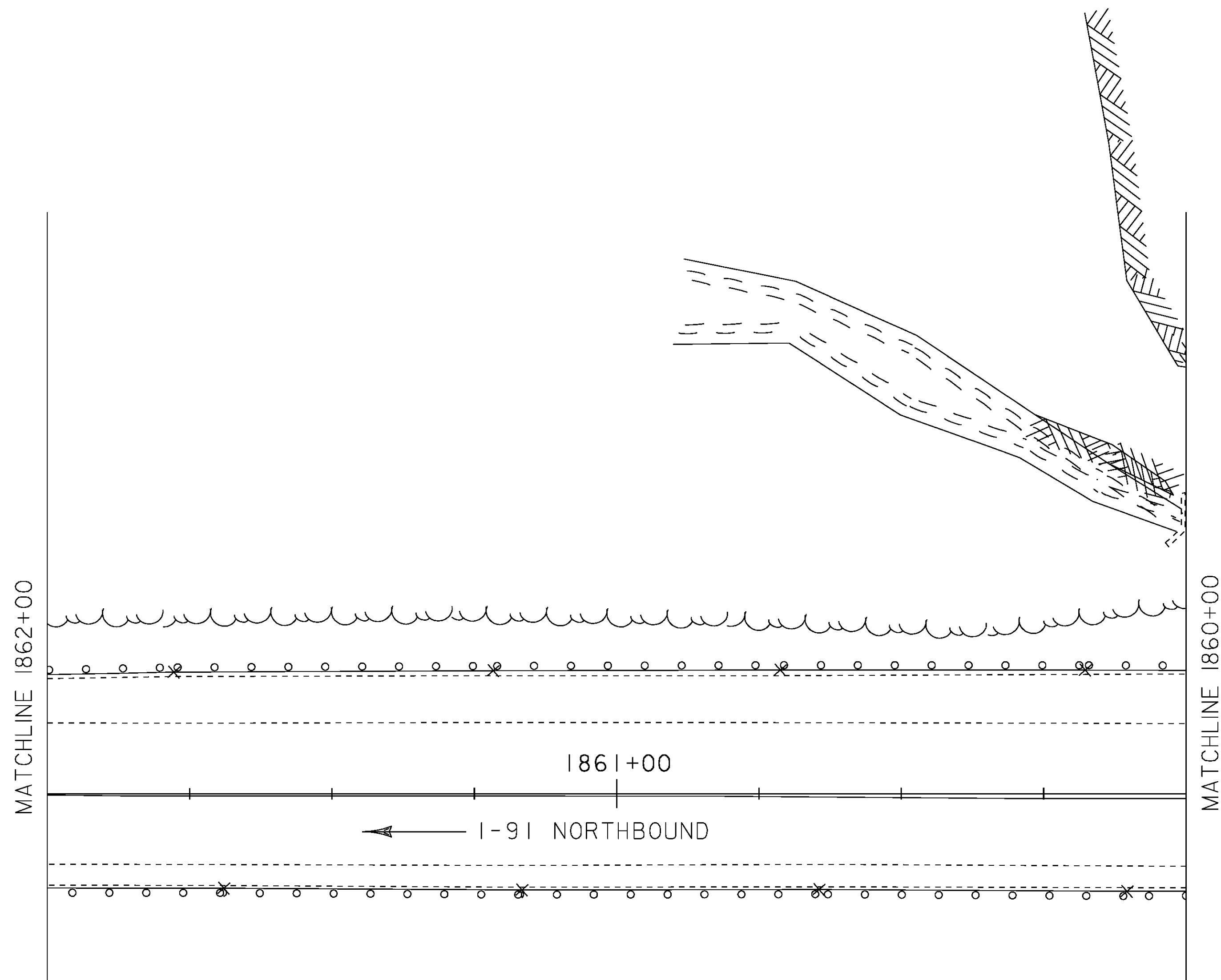
STA. 1859+50



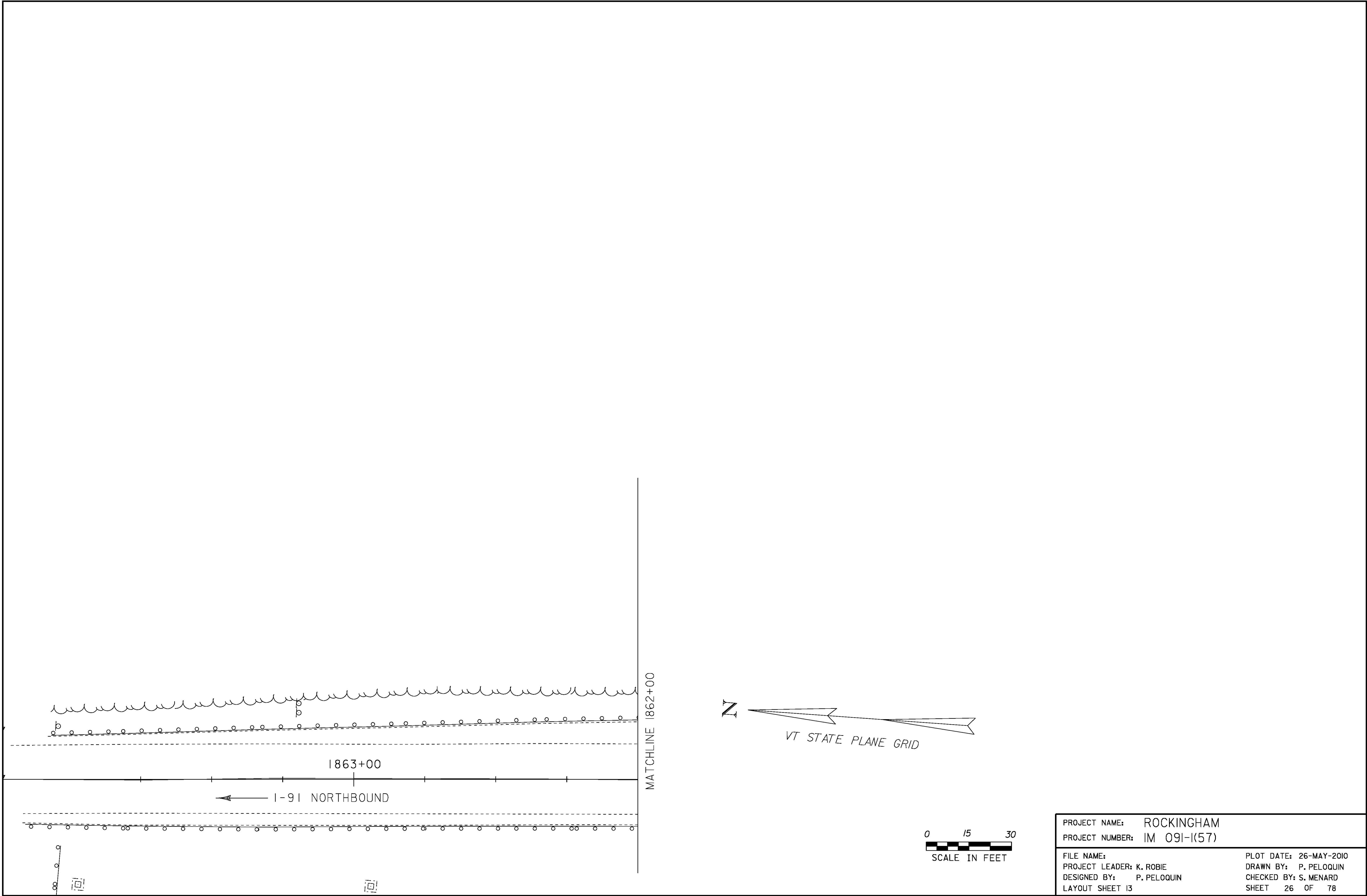
STA. 1859+00

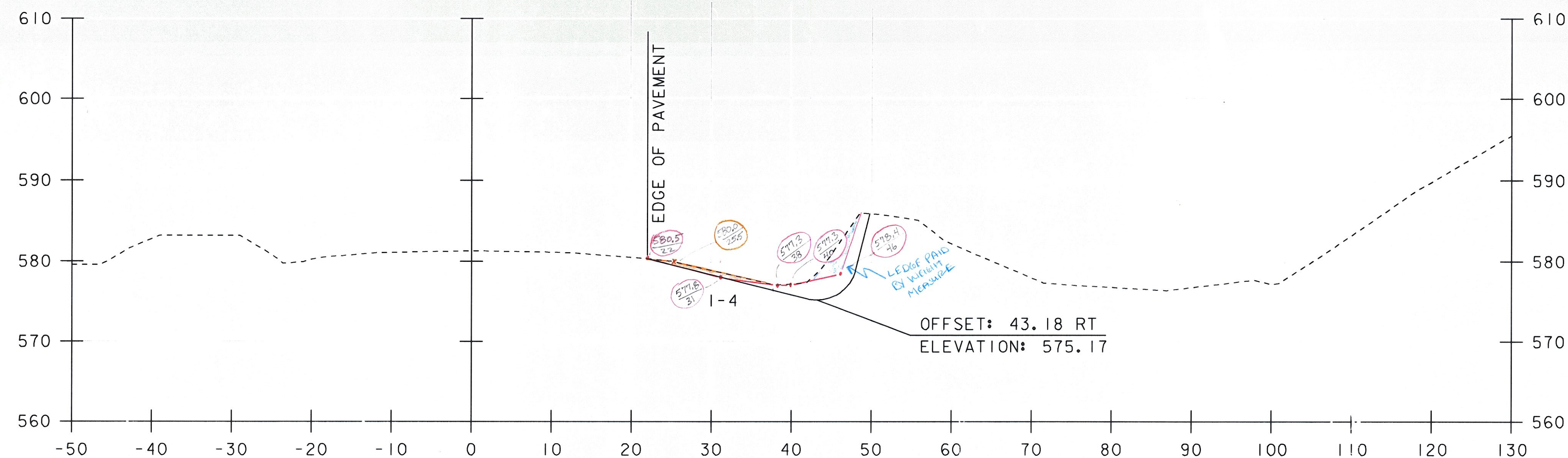


STAT
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LAYO

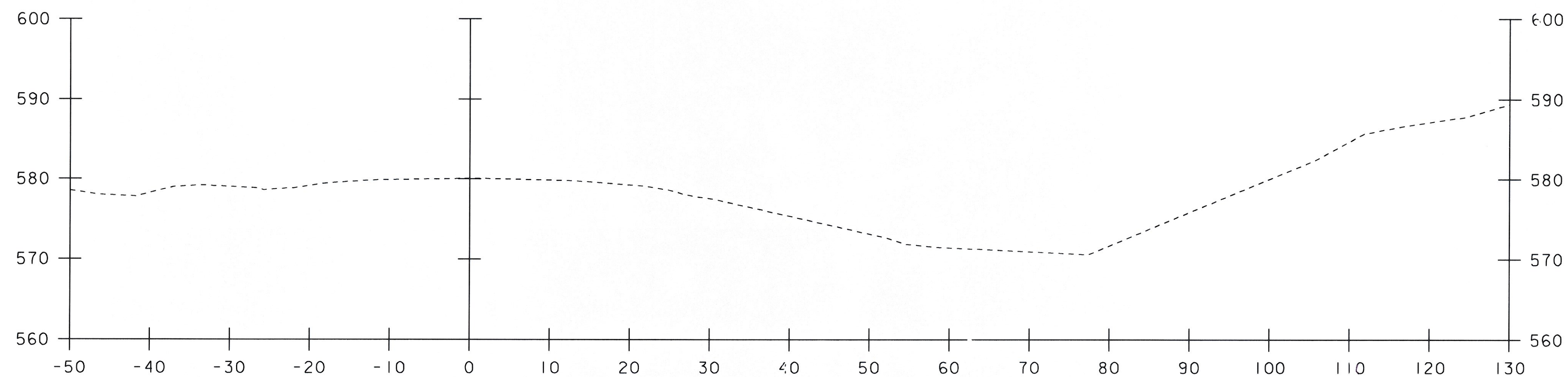


PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158lo.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
LAYOUT SHEET 12	SHEET 25 OF 78

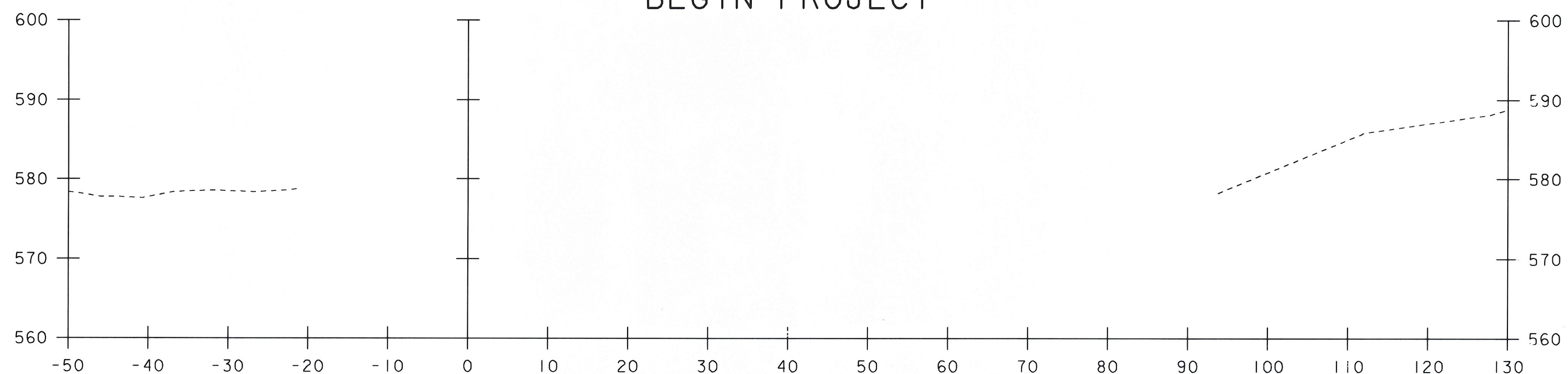




1838+50 ✓



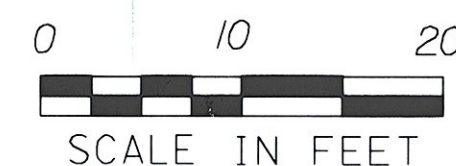
1838+00
BEGIN PROJECT



1837+93

- see "Field Notebook" (small orange book) for Final X-Section shots and elevations.
- see "Quantity Computation" Binder for Item 203.15 Common Excavation calculations.
- original ground coordinates were scaled.

FINAL X-SECTIONS



SCALE IN FEET

STA. 1837+93 TO STA. 1838+50

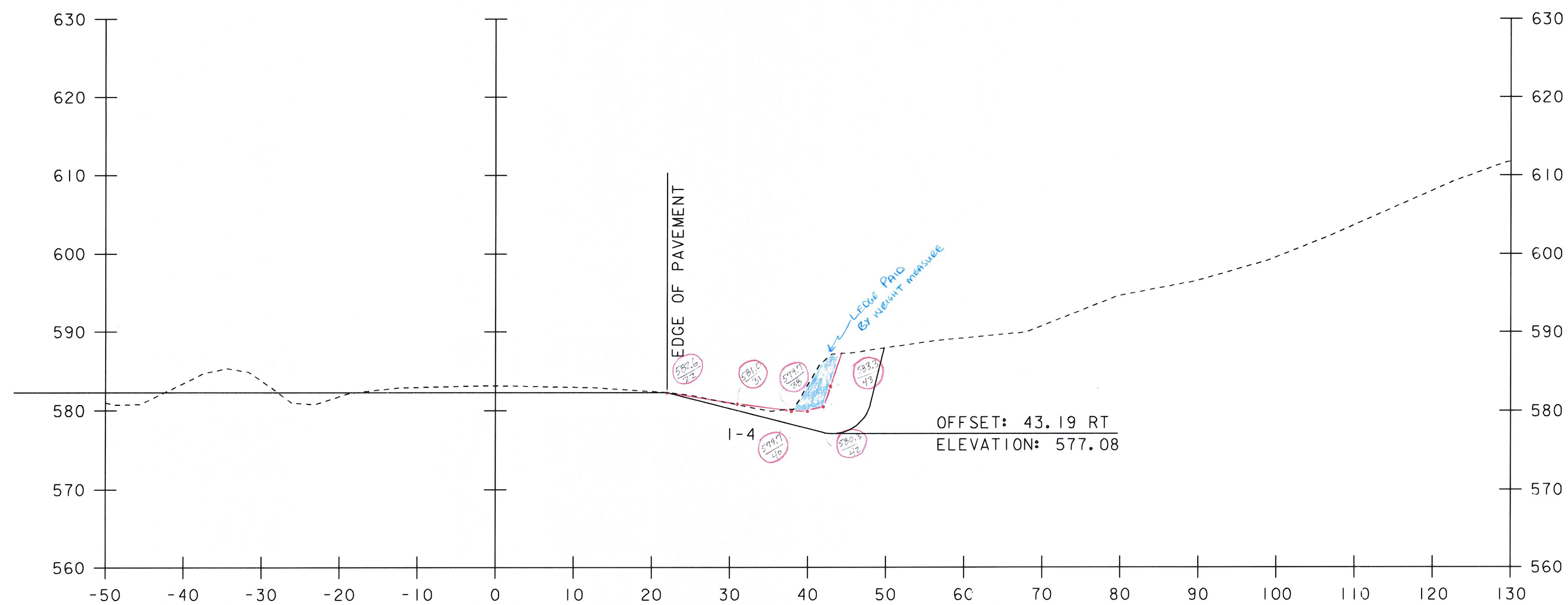
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158xs.dgn PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
CROSS SECTION SHEET 1 SHEET 27 OF 78

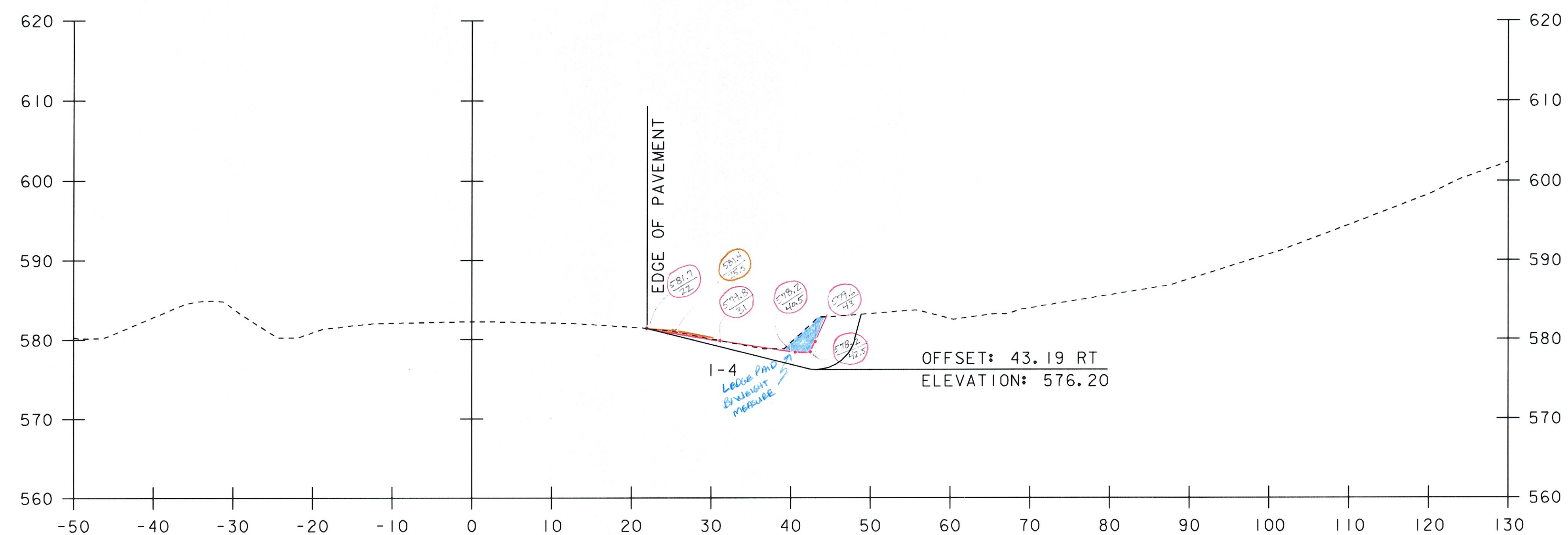
FINAL X-SECTIONS

IM 091-1(57)

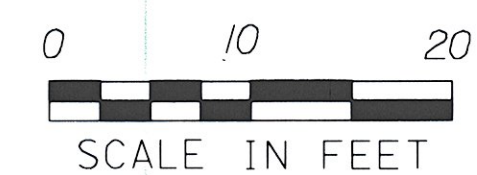
Rockingham



1839+50 ✓



1839+00 ✓



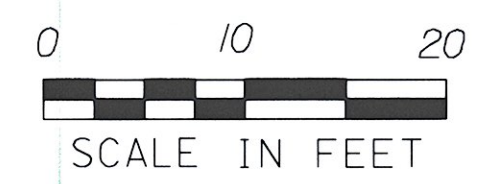
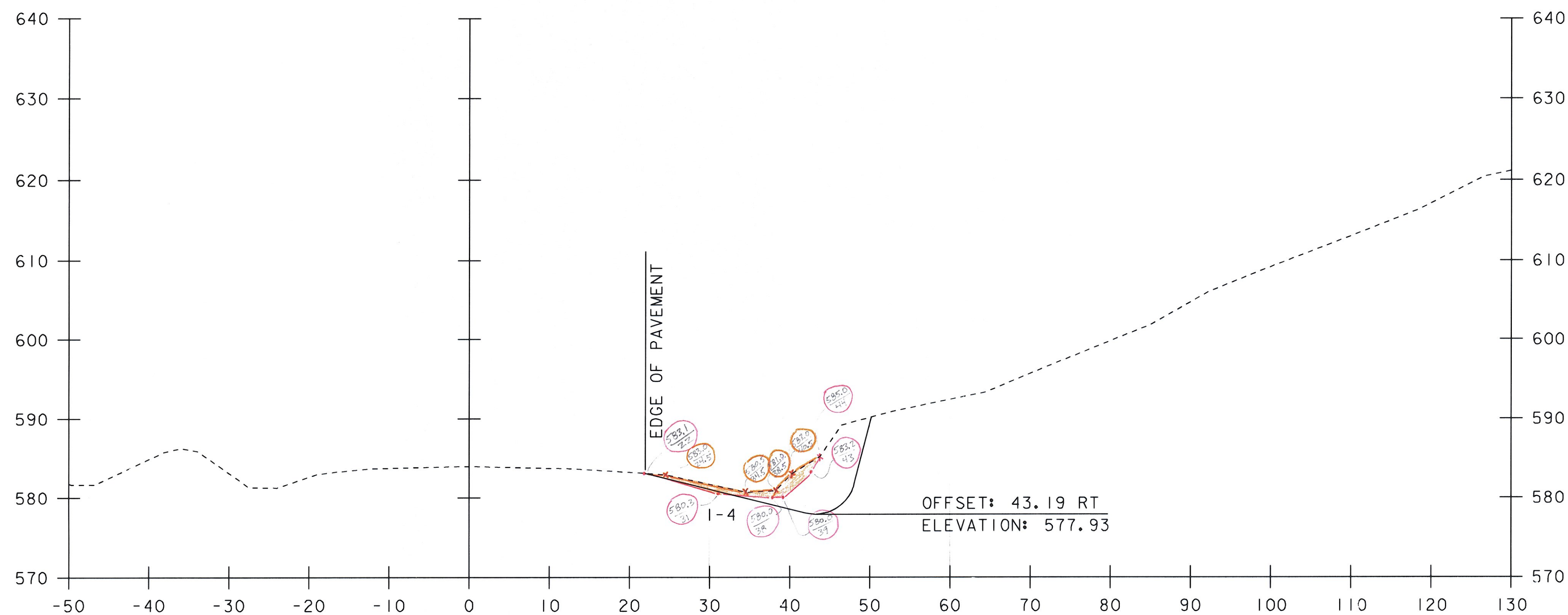
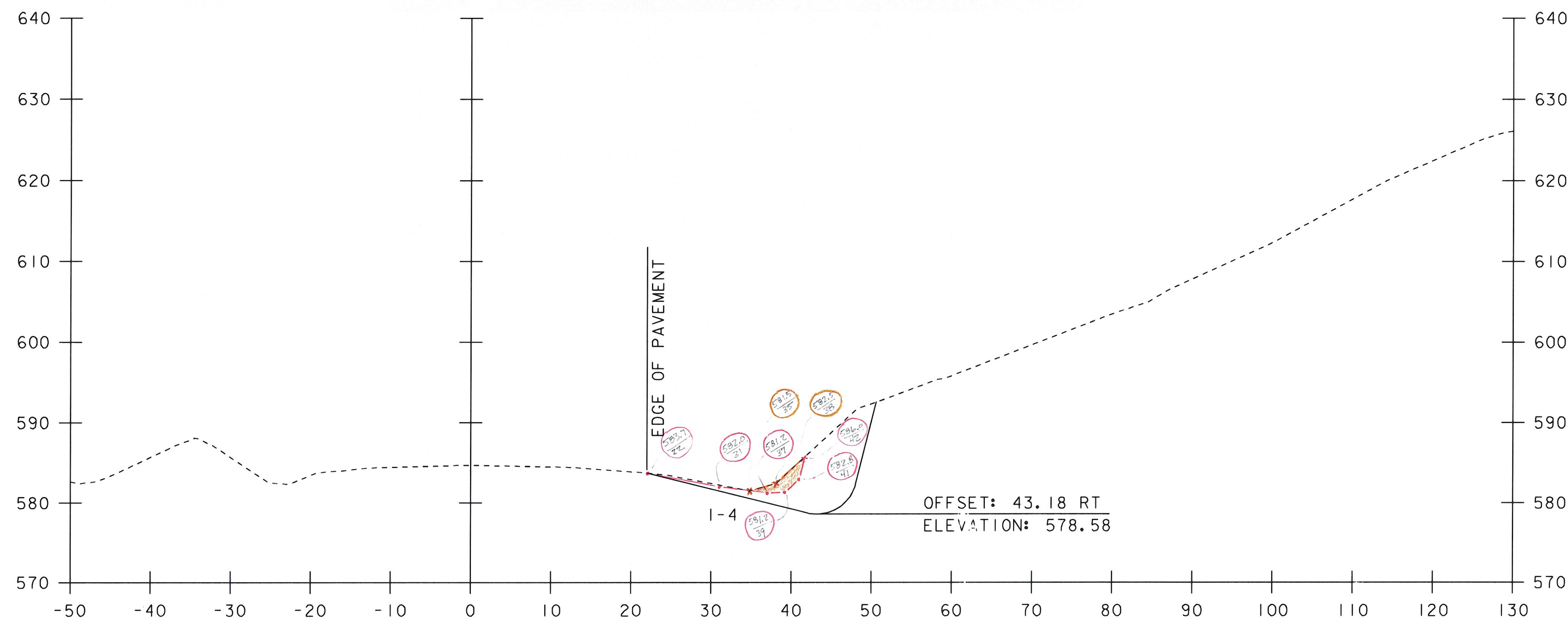
STA. 1839+00 TO STA. 1839+50

PLP
2-8-11 ECD
3/16/11

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(57)

FILE NAME: 07a158/Design/d07a158xs.dgn
PROJECT LEADER: K. ROBIE
DESIGNED BY: P. PELOQUIN
CROSS SECTION SHEET 2

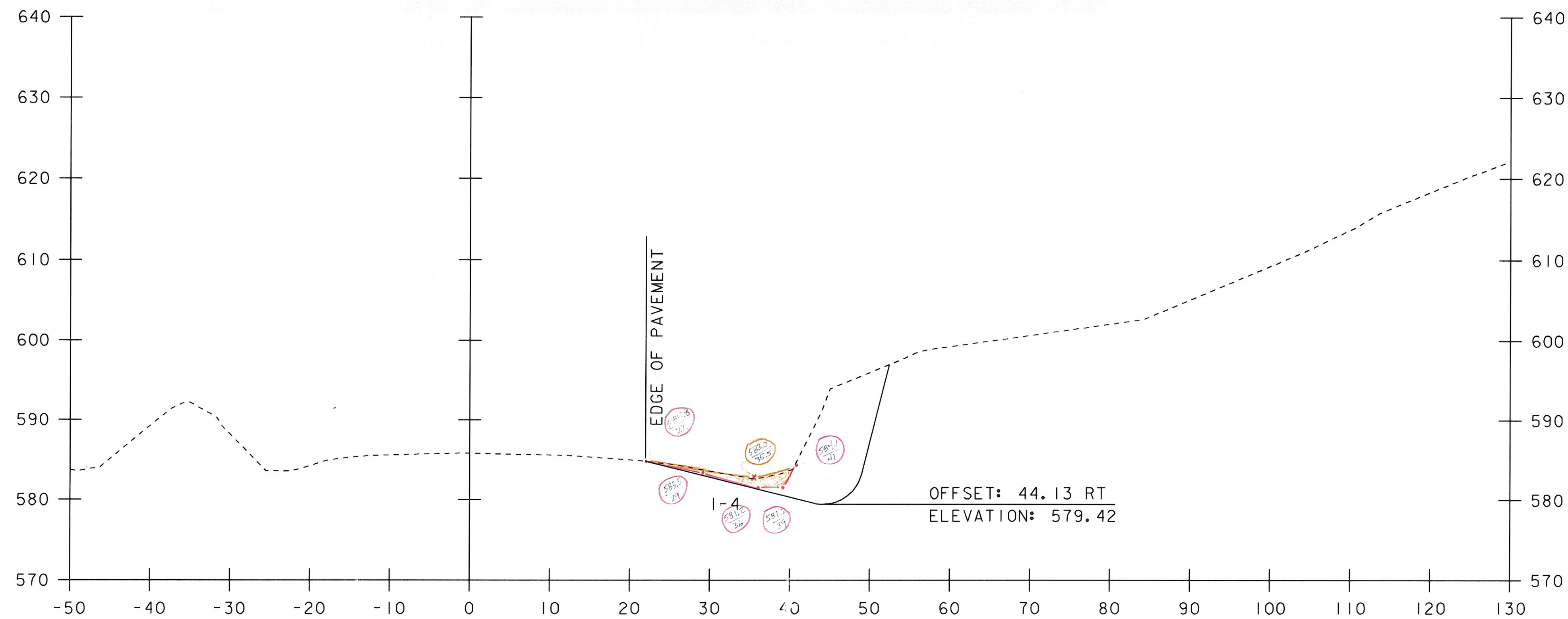
PLOT DATE: 26-MAY-2010
DRAWN BY: P. PELOQUIN
CHECKED BY: S. MENARD
SHEET 28 OF 78



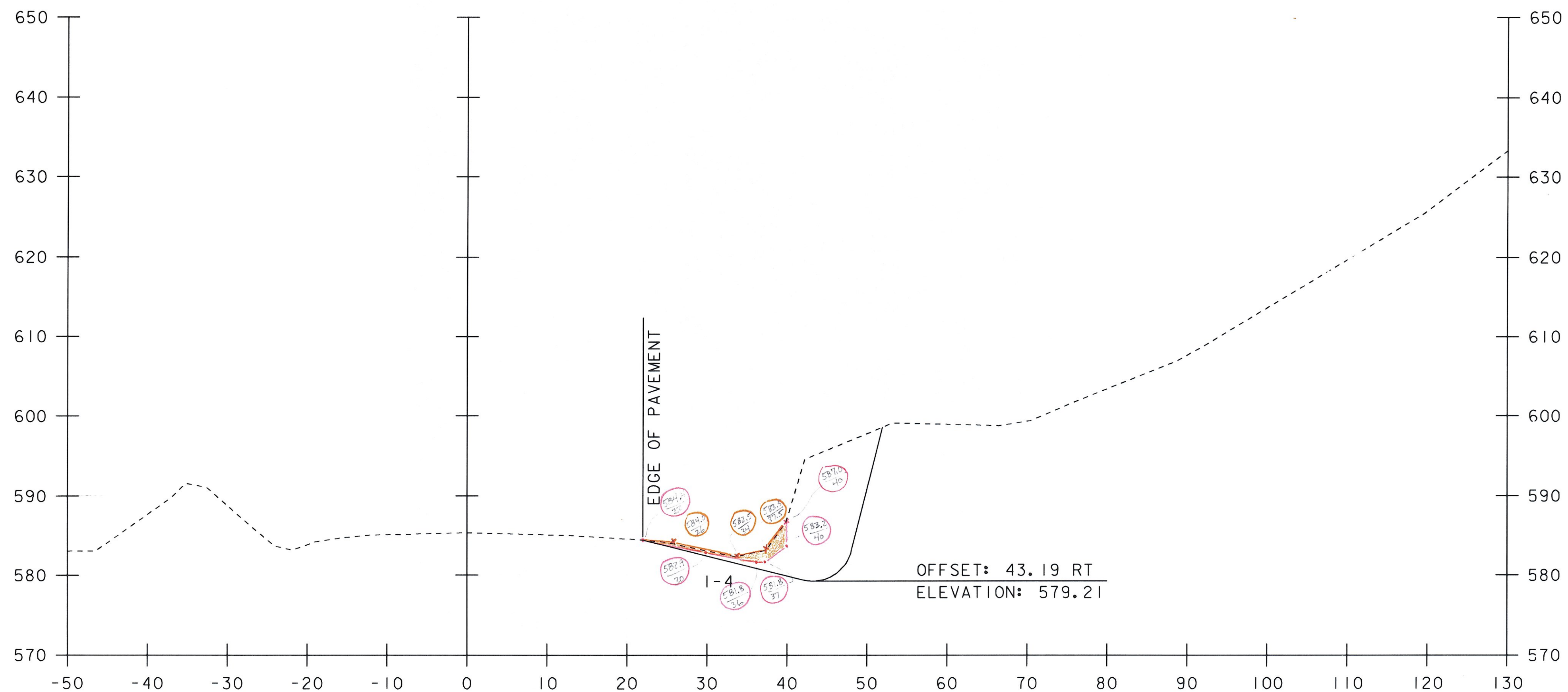
STA. 1840+00 TO STA. 1840+50

PLP
2-6-11 *RCD* *3/16/11*

PROJECT NAME: ROCKINGHAM		PLOT DATE: 26-MAY-2010	
PROJECT NUMBER: IM 091-I(57)		DRAWN BY: P. PELOQUIN	
FILE NAME: 07a158/Design/d07a158xs.dgn		CHECKED BY: S. MENARD	
PROJECT LEADER: K. ROBIE		SHEET 29 OF 78	
DESIGNED BY: P. PELOQUIN		CROSS SECTION SHEET 3	



1841+50 ✓



1841+00 ✓

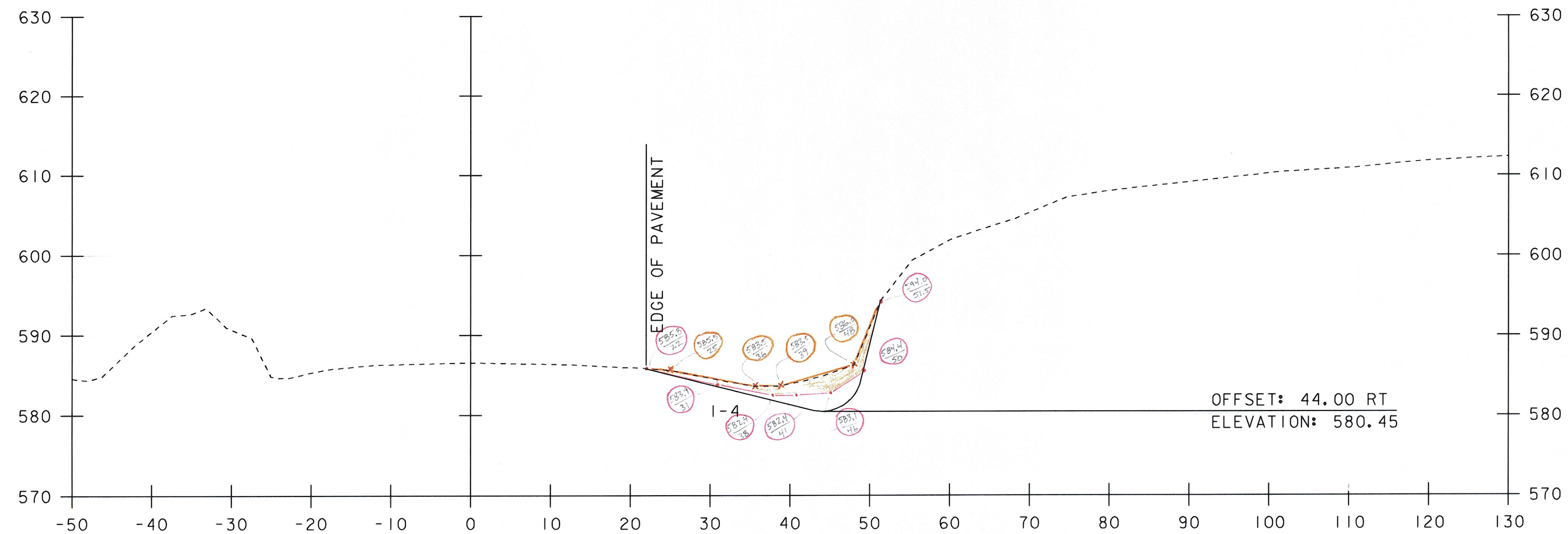


STA. 1841+00 TO STA. 1841+50

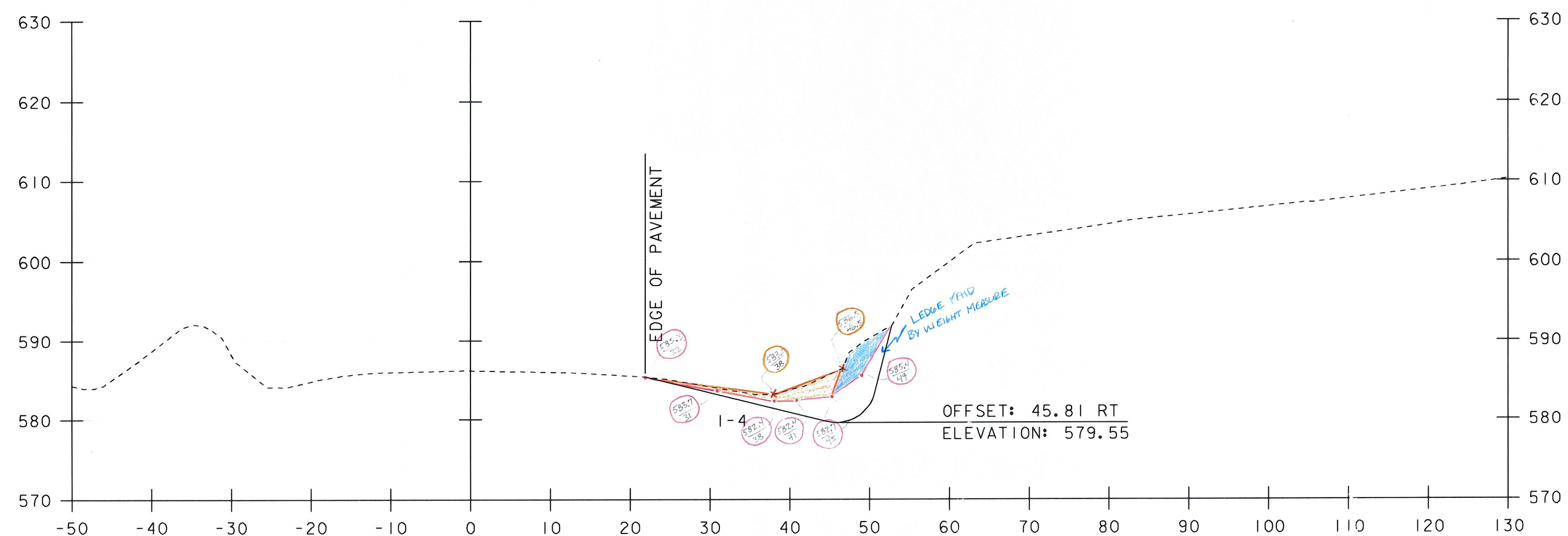
Pul *RED*
2-8-11 3/16/11

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-(57)

FILE NAME: 07a158/Design/d07a158xs.dgn PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
CROSS SECTION SHEET 4 SHEET 30 OF 78



1842+50 ✓



1842+00 ✓

0 10 20
SCALE IN FEET

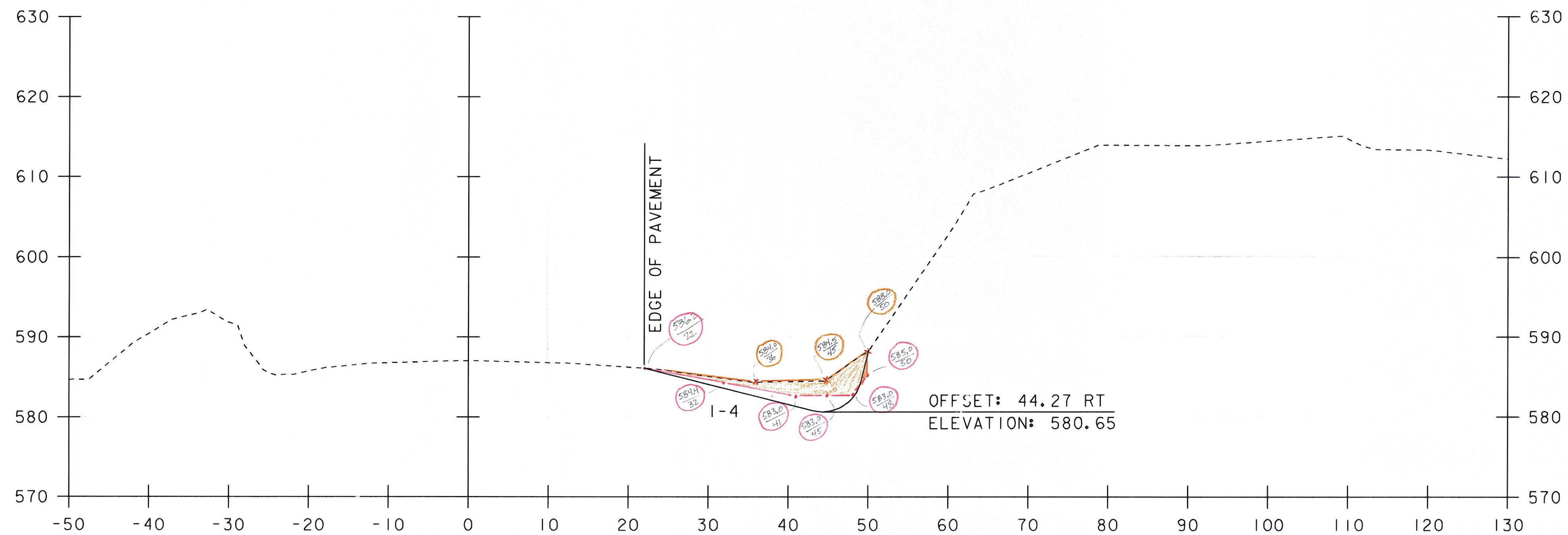
STA. 1842+00 TO STA. 1842+50

AP 2-6-11 RCD 3116111

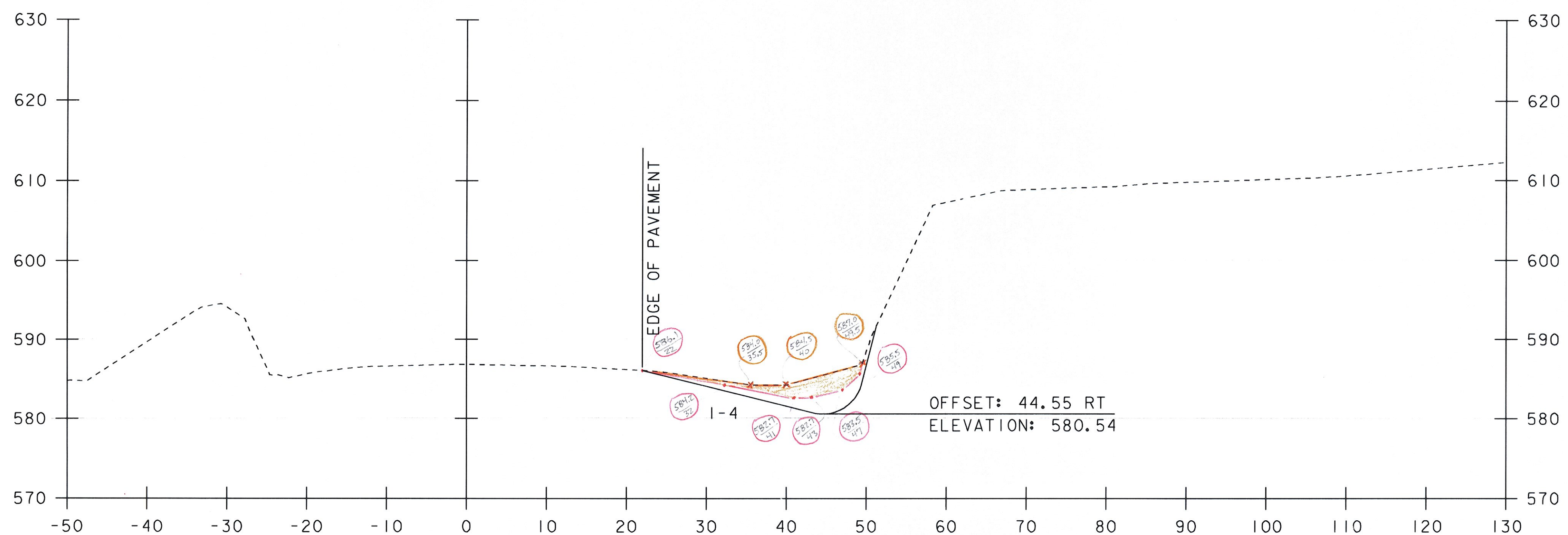
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 09I-I(57)

FILE NAME: 07a158/Design/d07a158xs.dgn
PROJECT LEADER: K. ROBIE
DESIGNED BY: P. PELOQUIN
CROSS SECTION SHEET 5

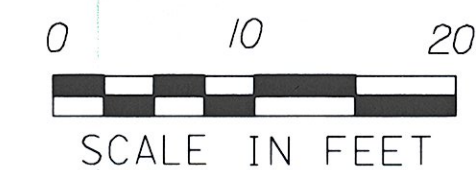
PLOT DATE: 26-MAY-2010
DRAWN BY: P. PELOQUIN
CHECKED BY: S. MENARD
SHEET 31 OF 78



1843+50 ✓



1843+00 ✓



STA. 1843+00 TO STA. 1843+50

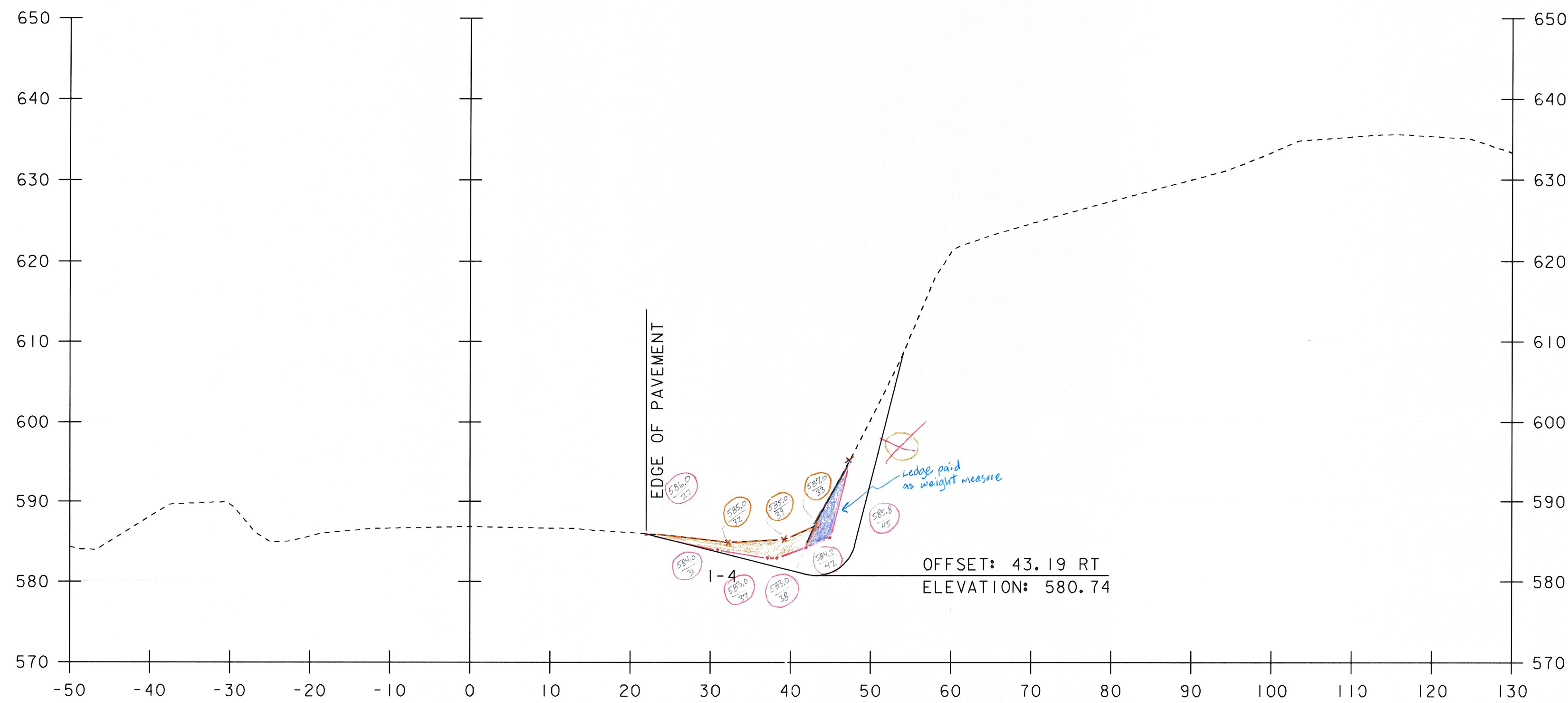
MLP
2-8-11

RCD
3/16/11

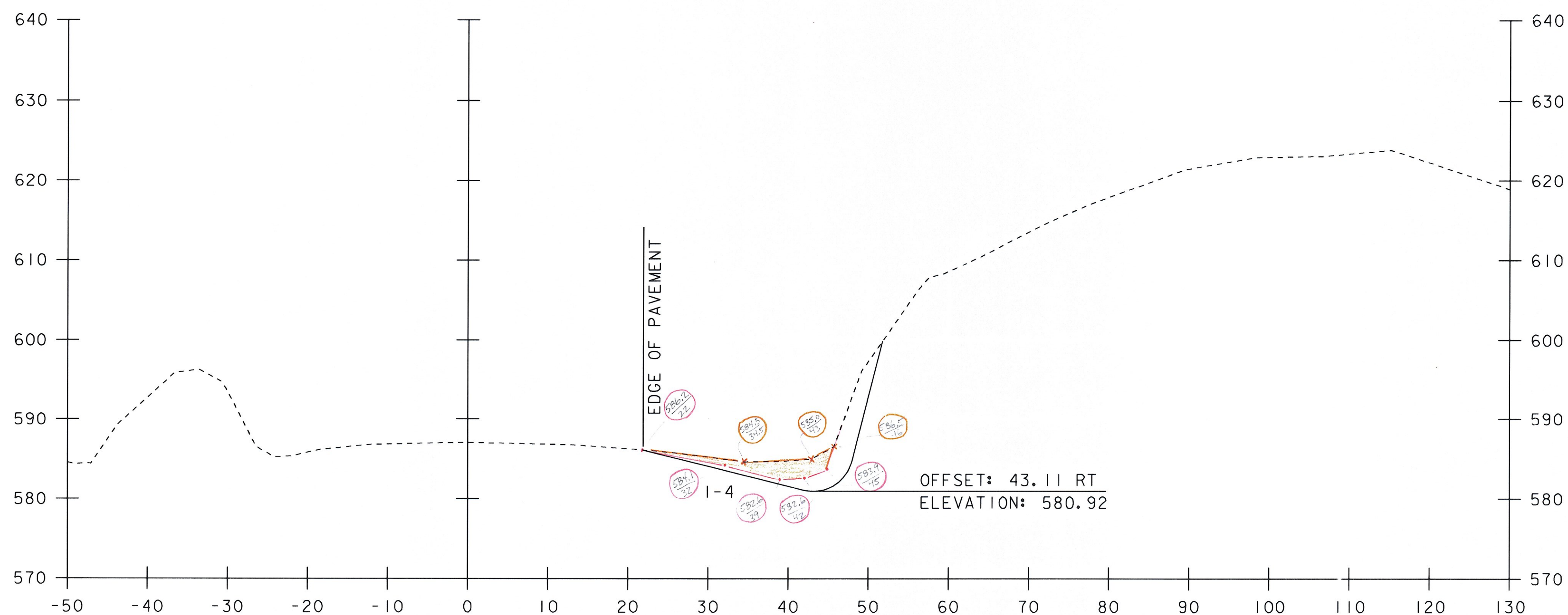
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-I(57)

FILE NAME: 07a158/Design/d07a158xs.dgn
PROJECT LEADER: K. ROBIE
DESIGNED BY: P. PELOQUIN
CROSS SECTION SHEET 6

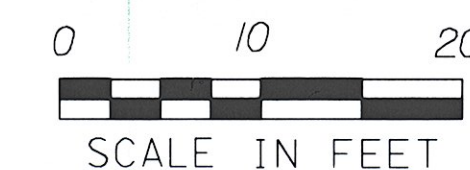
PLOT DATE: 26-MAY-2010
DRAWN BY: P. PELOQUIN
CHECKED BY: S. MENARD
SHEET 32 OF 78



1844+50 ✓



1844+00 ✓

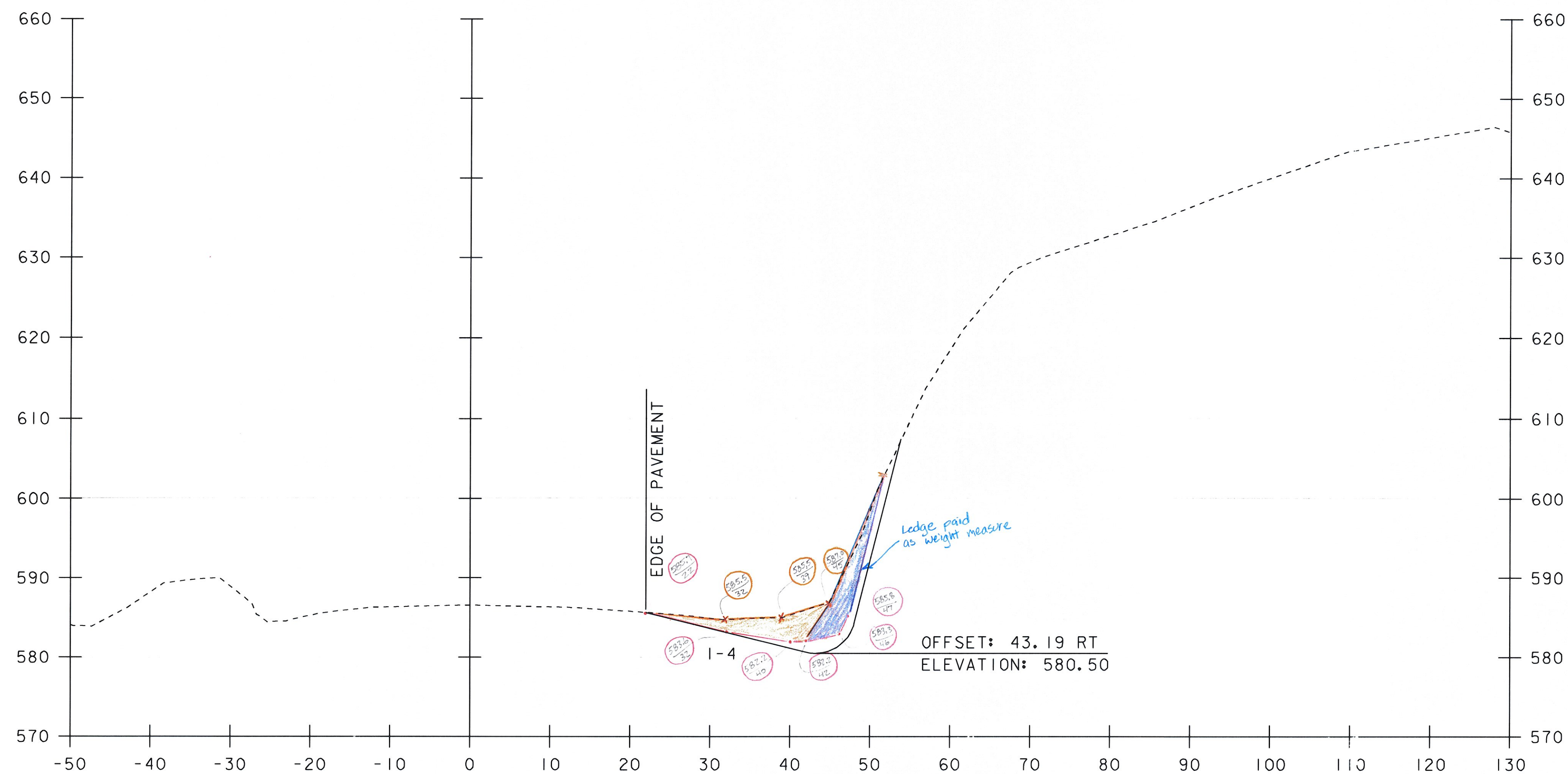


STA. 1844+00 TO STA. 1844+50

MP
2-8-11 RCD
3110/11

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-(57)

FILE NAME: 07a158/Design/d07a158xs.dgn PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
CROSS SECTION SHEET 7 SHEET 33 OF 78



1845+00 ✓

AP 2-B-11
RCD 3/16/11

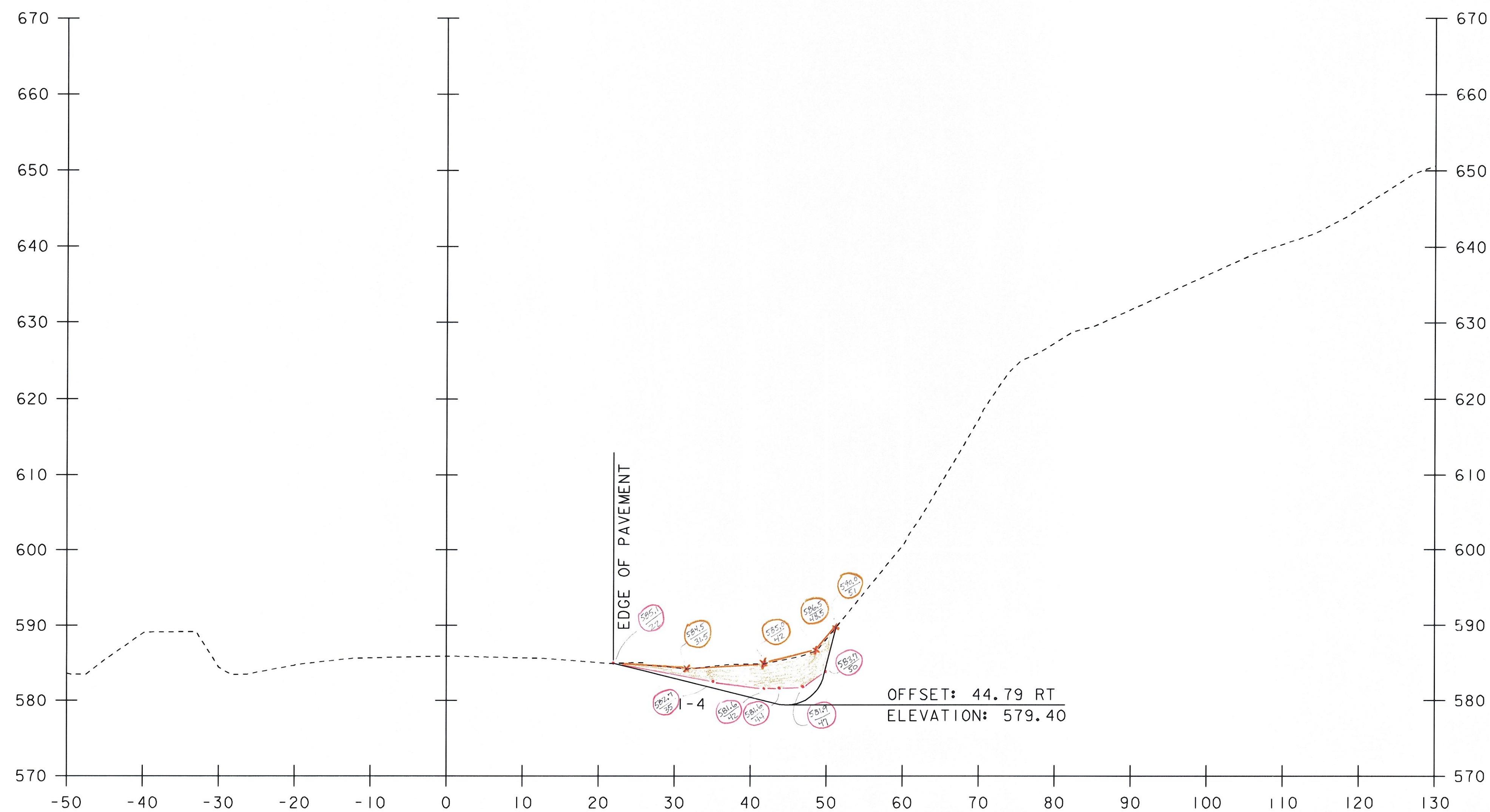
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a159xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 8	SHEET 34 OF 78



STA. 1845+50 TO STA. 1845+50

FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 9	SHEET 35 OF 78

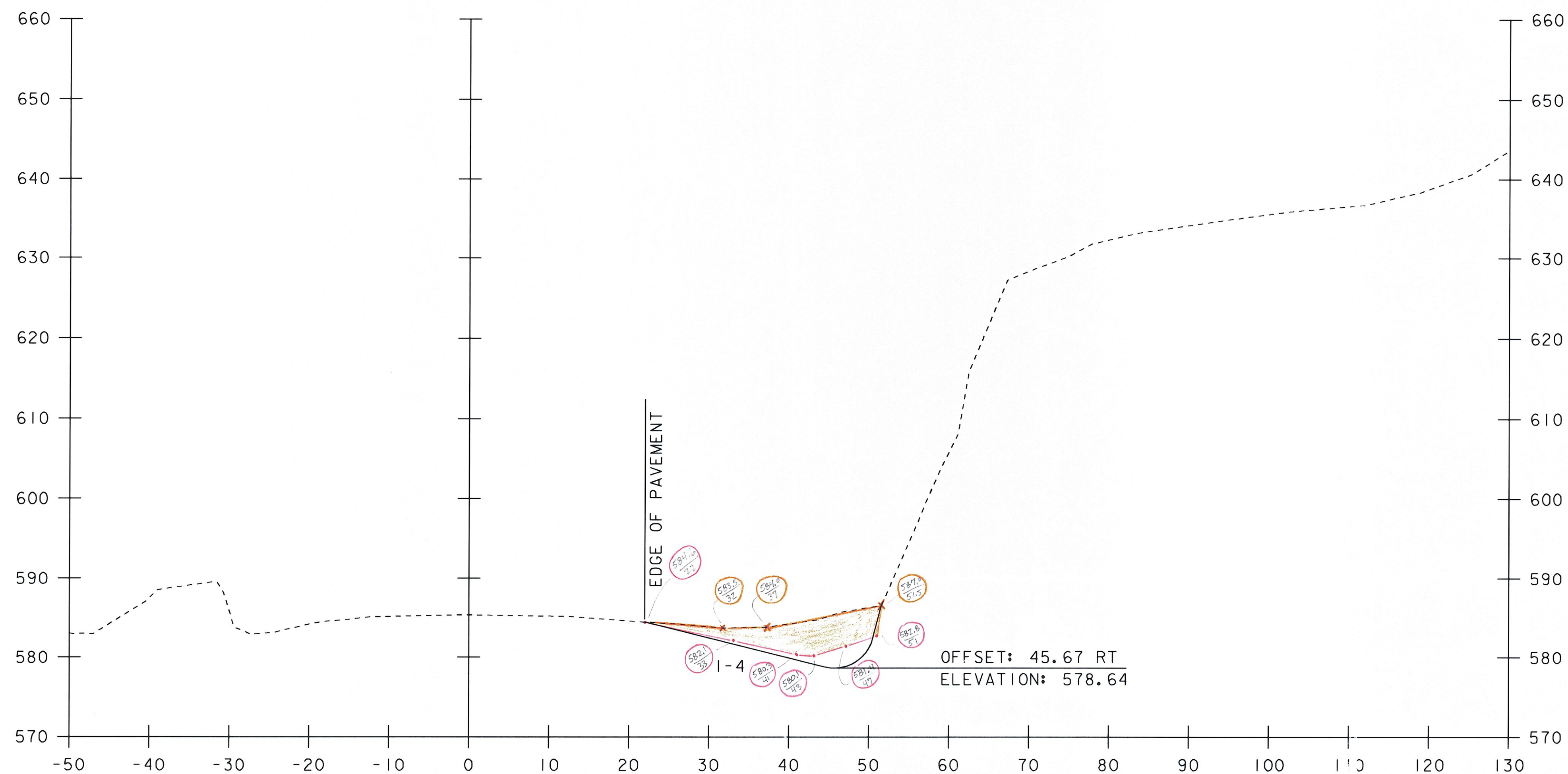


APL
2-8-11

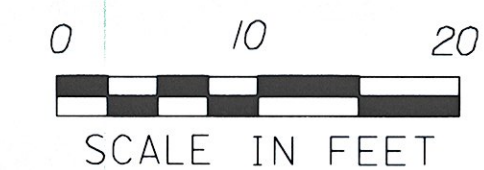
RCO
3/16/11

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-(57)

FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 10	SHEET 36 OF 78



1846+50 ✓



STA. 1846+50 TO STA. 1846+50

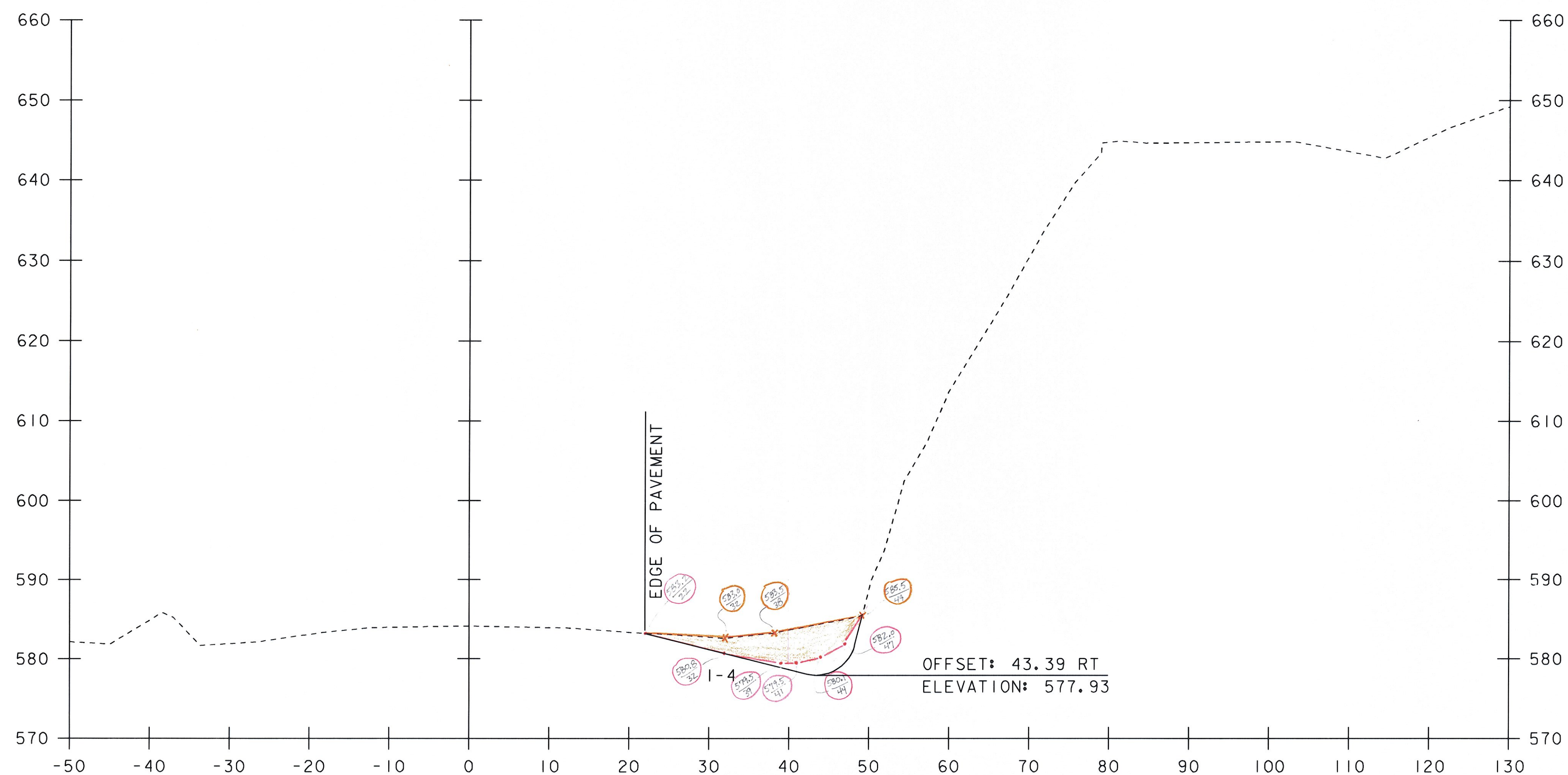
MP
2-8-11 *RCD*
8/16/11

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07d158/Design/d07d158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET II	SHEET 37 OF 78

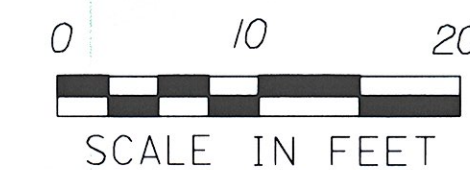


STA. 1847+00 TO STA. 1847+00

FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 12	SHEET 38 OF 78



1847+50 ✓

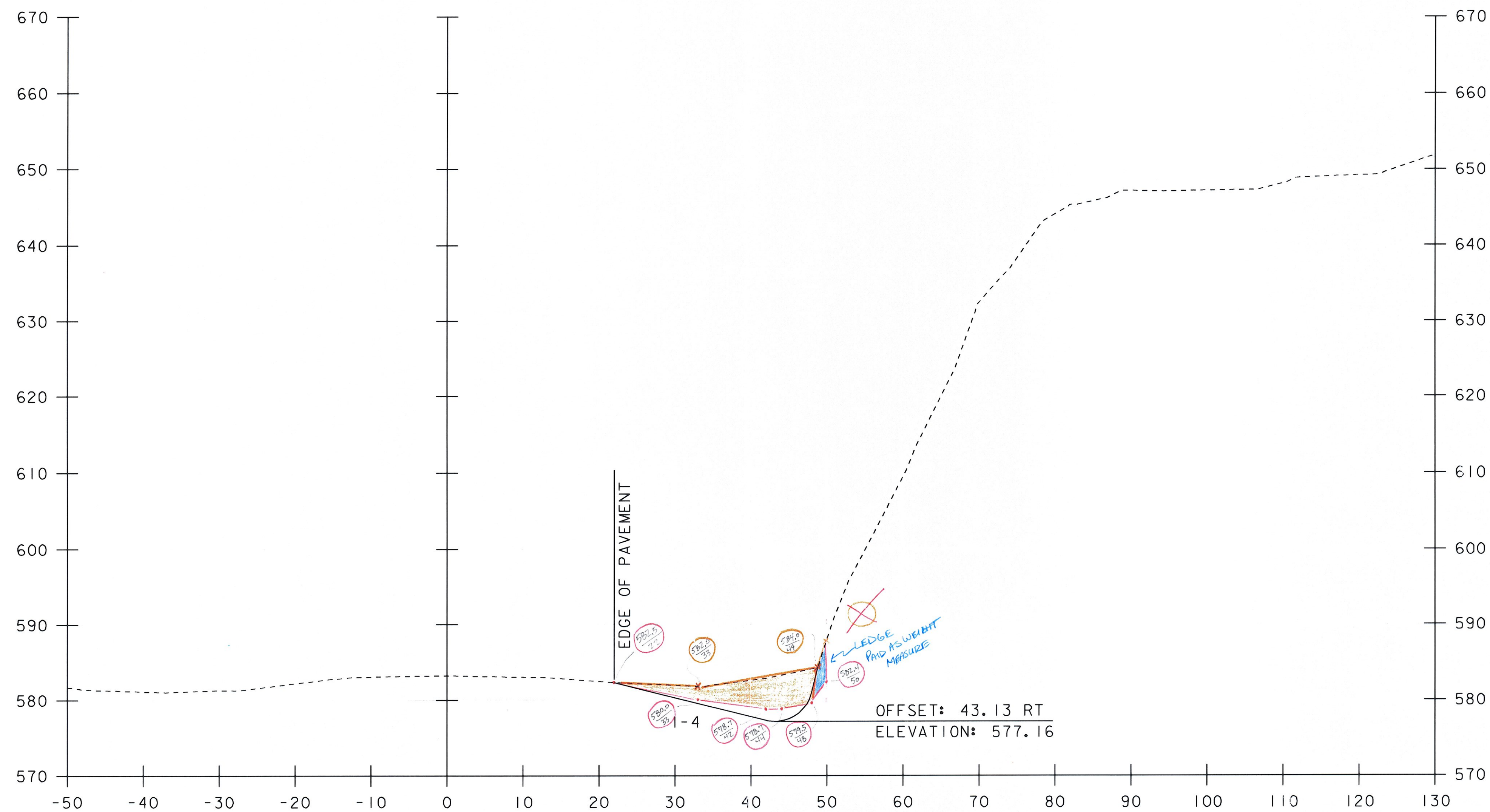


STA. 1847+50 TO STA. 1847+50

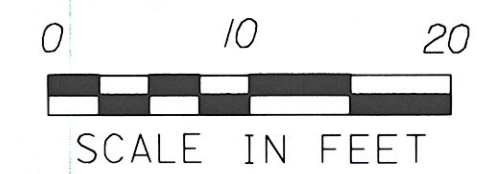
AP 2-B-11 RCD 3/16/11

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 13	SHEET 39 OF 78



1848+00 ✓



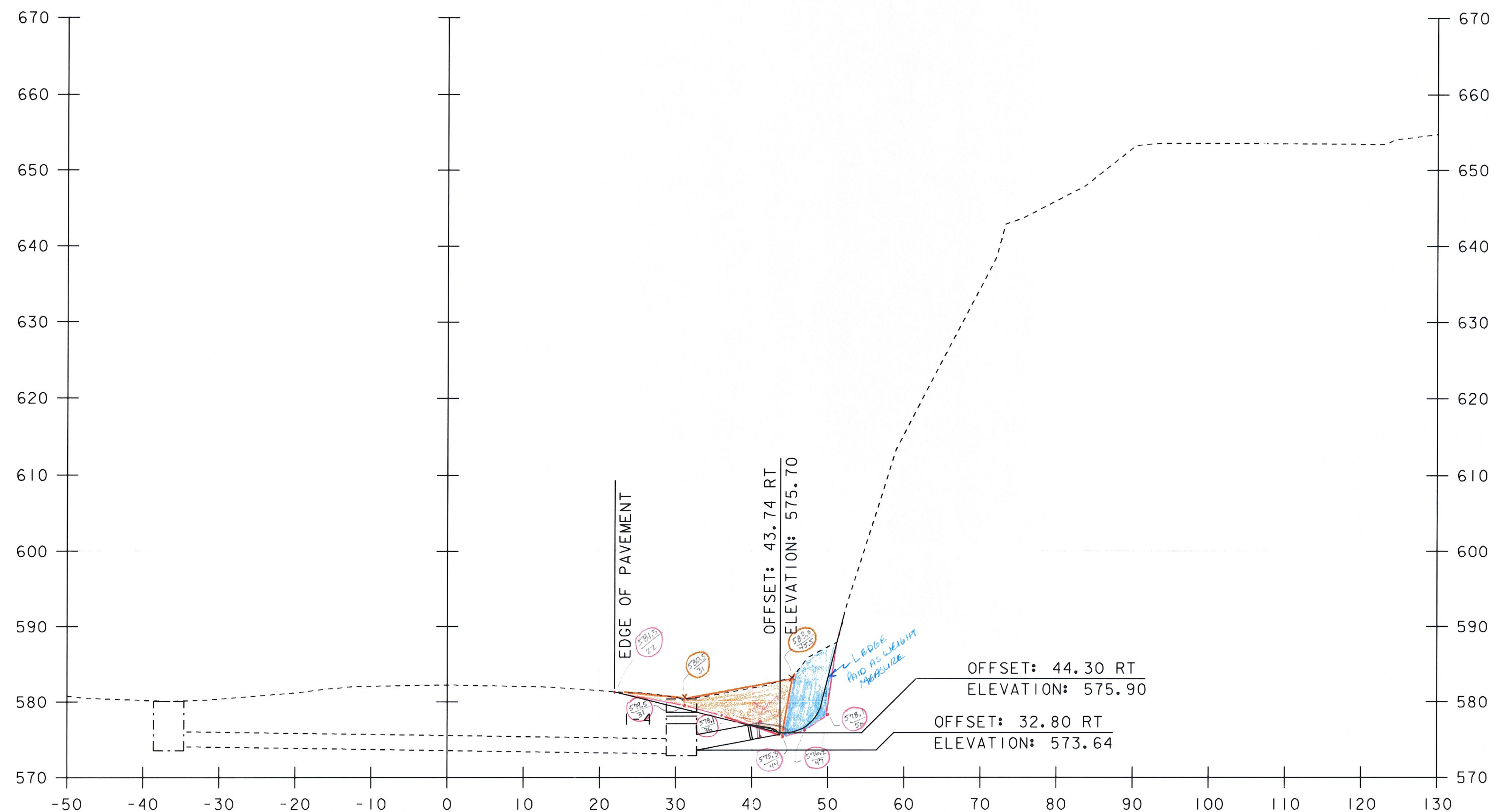
STA. 1848+00 TO STA. 1848+00

MP 2-8-11
RCO 3/16/11

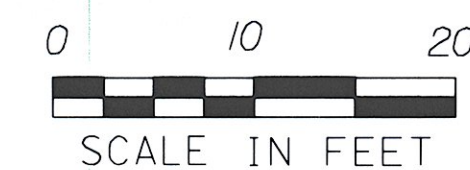
PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07d158/Design/d07d158xs.dgn
PROJECT LEADER: K. ROBIE
DESIGNED BY: P. PELOQUIN
CROSS SECTION SHEET 14

PLOT DATE: 26-MAY-2010
DRAWN BY: P. PELOQUIN
CHECKED BY: S. MENARD
SHEET 40 OF 78



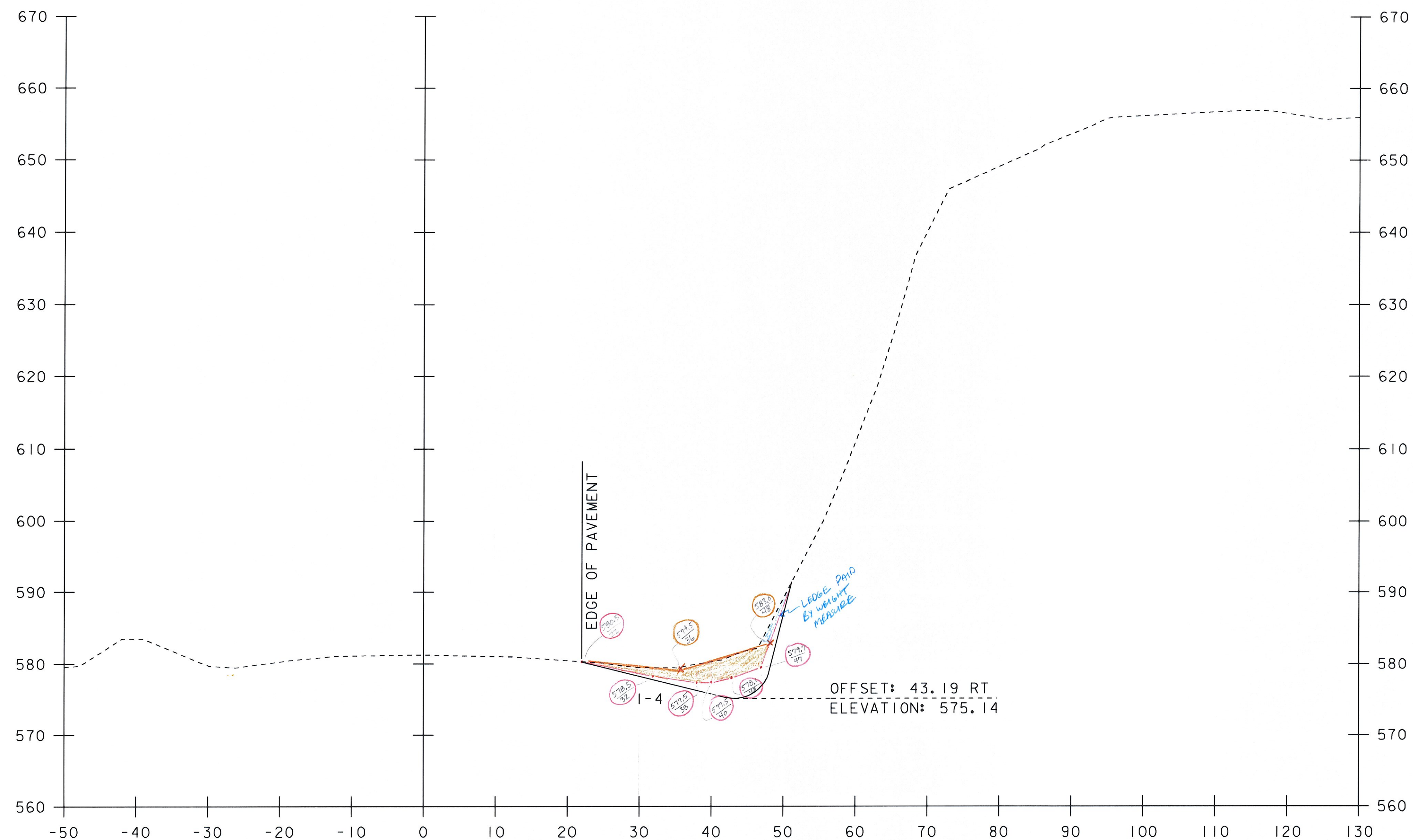
1848+50 ✓
 EXISTING 24' X 64' CSP
 NEW 24' X 6' CEP WITH END SECTION



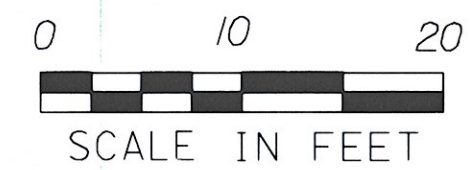
STA. 1848+50 TO STA. 1848+50

Plp
2-8-11 *RCD*
3/16/11

PROJECT NAME: ROCKINGHAM	PLAT DATE: 26-MAY-2010
PROJECT NUMBER: IM 091-1(57)	DRAWN BY: P. PELOQUIN
FILE NAME: 07a158/Design/d07a158xs.dgn	CHECKED BY: S. MENARD
PROJECT LEADER: K. ROBIE	SHEET 41 OF 78
DESIGNED BY: P. PELOQUIN	
CROSS SECTION SHEET 15	



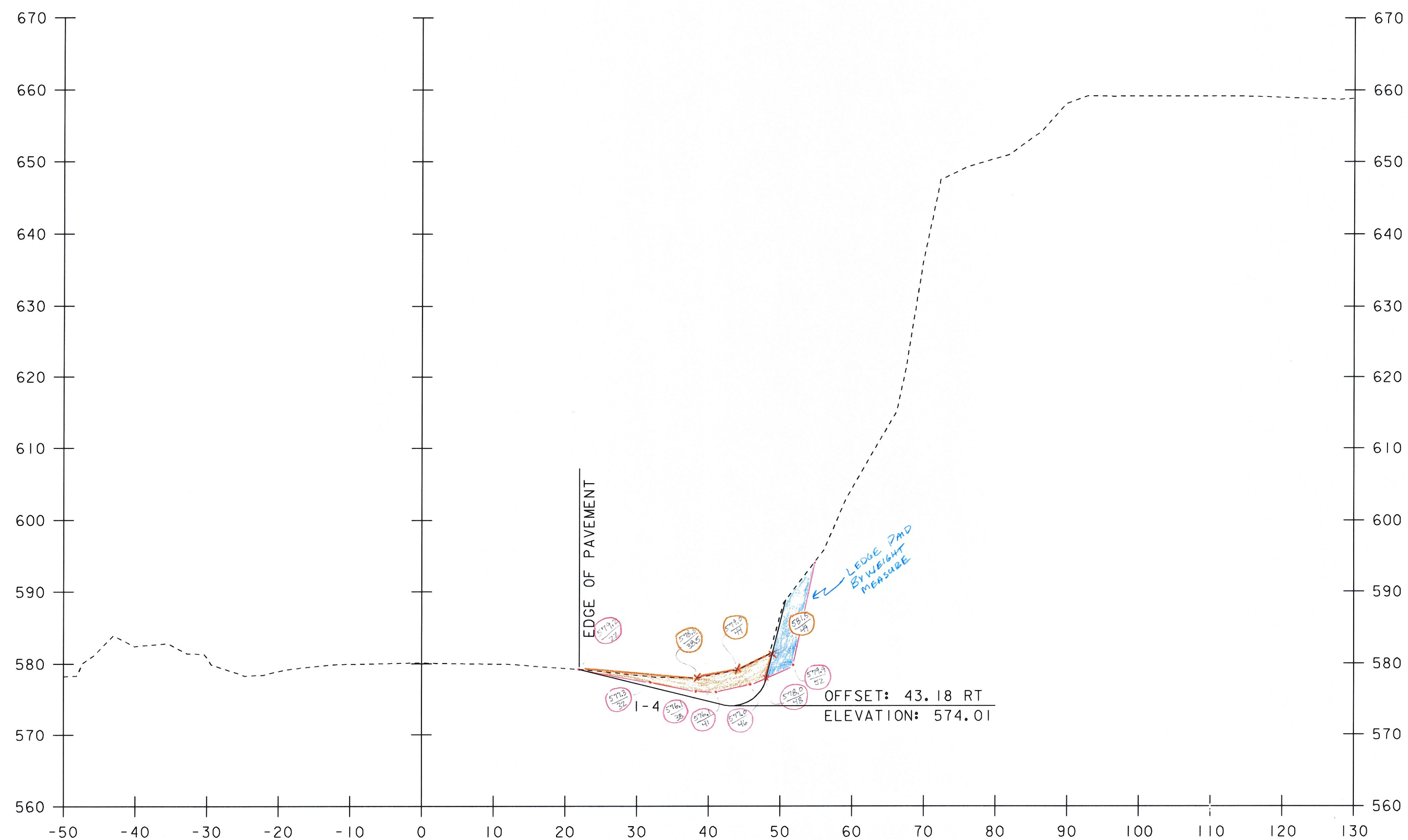
1849+00 ✓

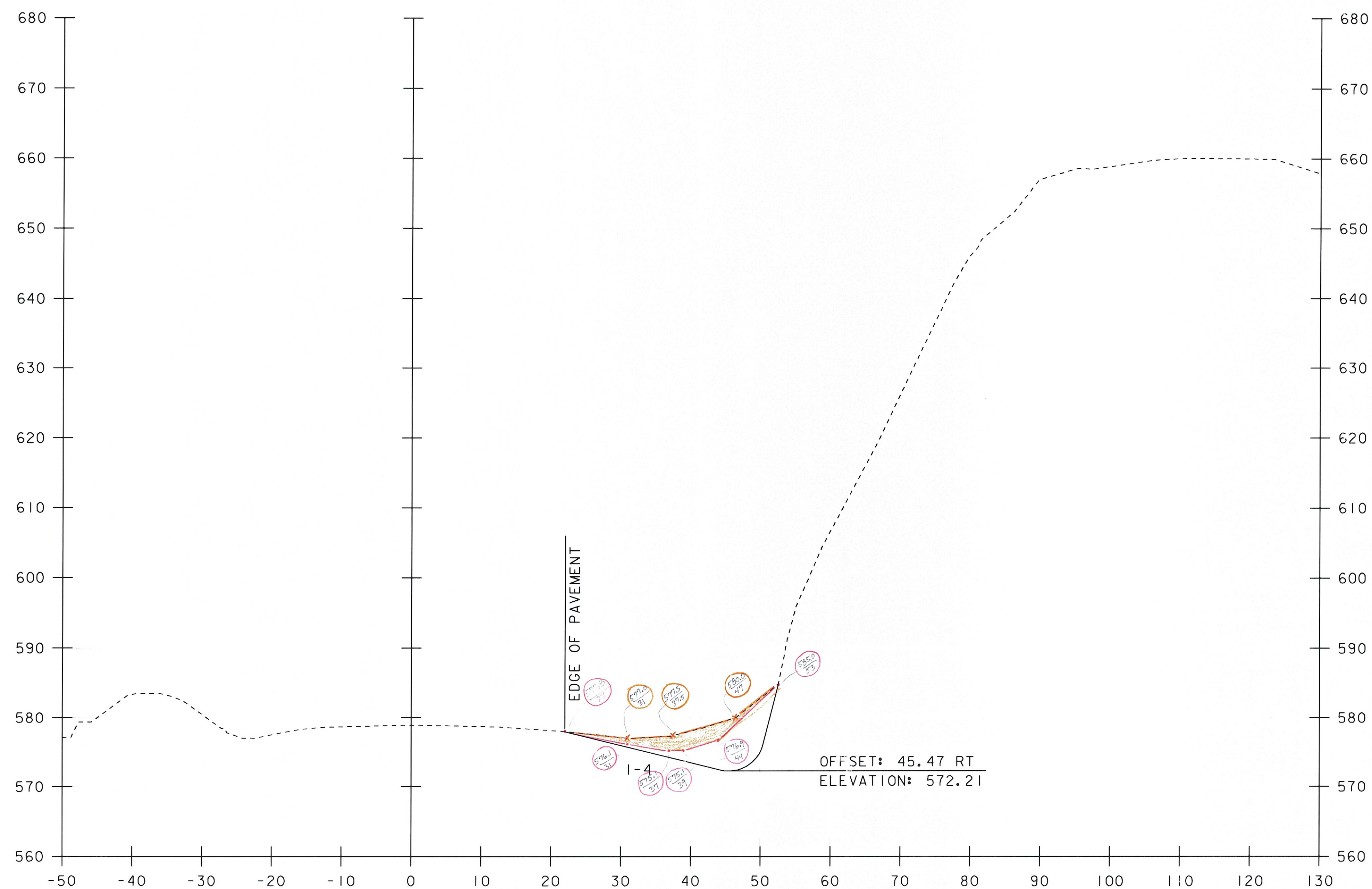


STA. 1849+00 TO STA. 1849+00

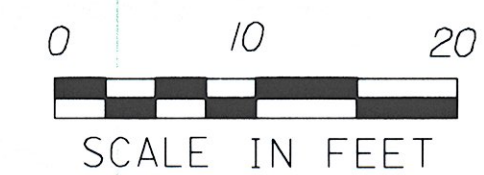
Ref
2-8-11 *ROD*
3/16/11

PROJECT NAME: ROCKINGHAM		PLOT DATE: 26-MAY-2010	
PROJECT NUMBER: IM 091-(57)		DRAWN BY: P. PELOQUIN	
FILE NAME: 07d158/Design/d07d158xs.dgn		CHECKED BY: S. MENARD	
PROJECT LEADER: K. ROBIE		SHEET 42 OF 78	
DESIGNED BY: P. PELOQUIN		CROSS SECTION SHEET 16	





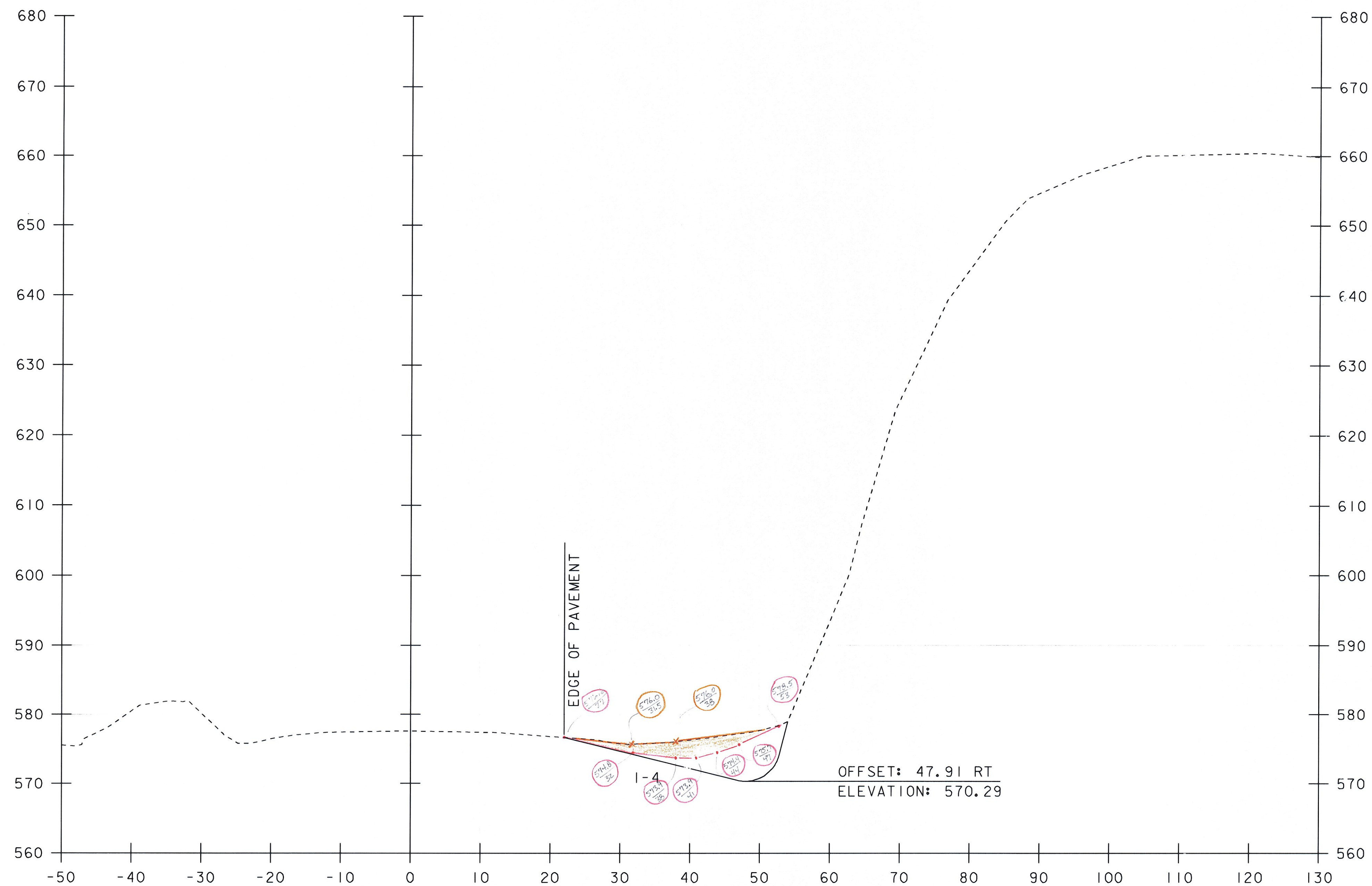
1850+00 ✓



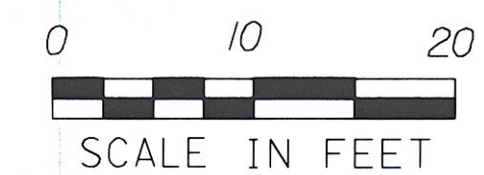
STA. 1850+00 TO STA. 1850+00

Ref
2-8-11 *RCD*
3/16/11

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07d158/Design/d07d158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 18	SHEET 44 OF 78



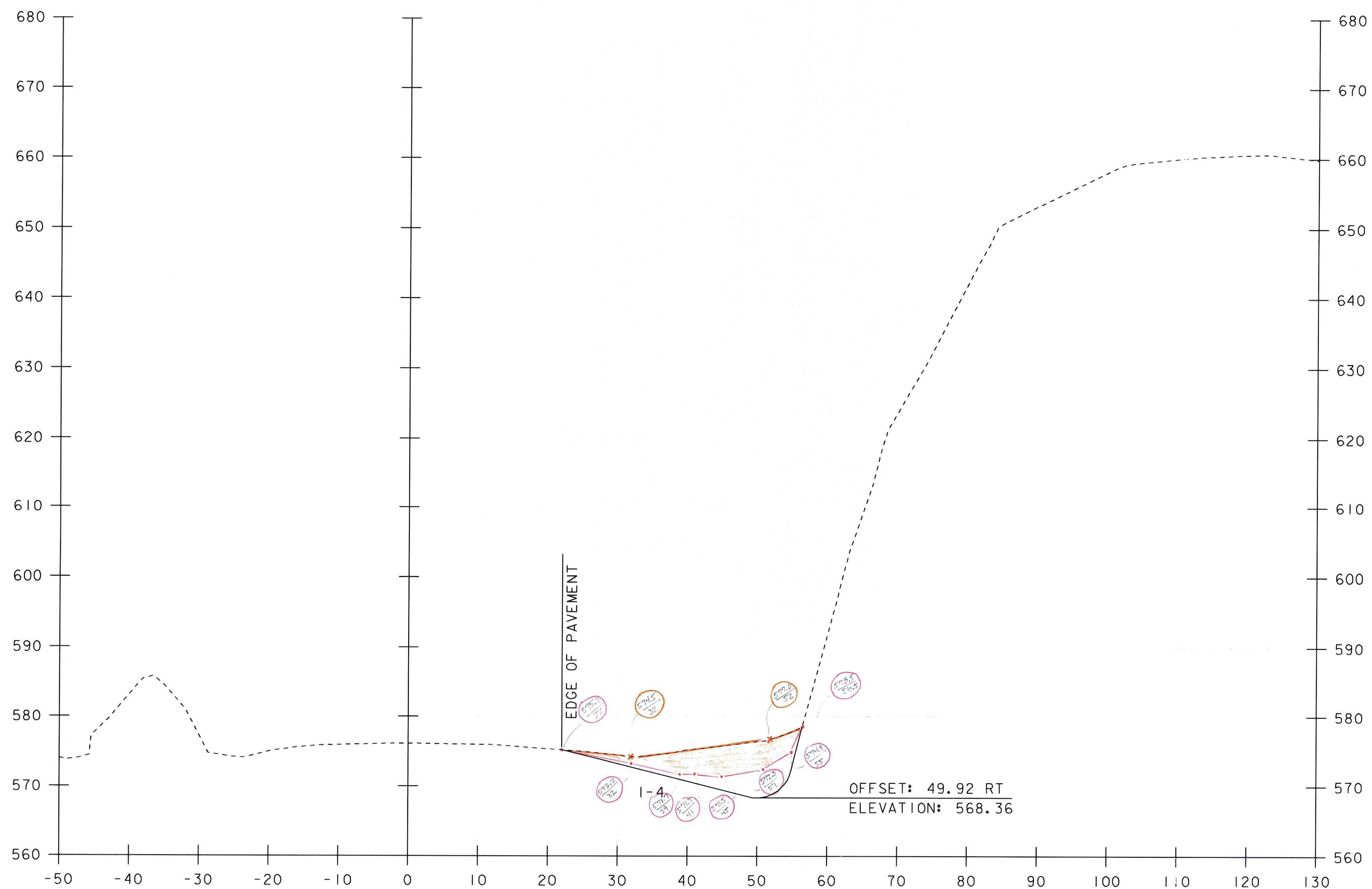
1850+50 ✓



STA. 1850+50 TO STA. 1850+50

1/10 RCD
2-8-11 3116111

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 19	SHEET 45 OF 78



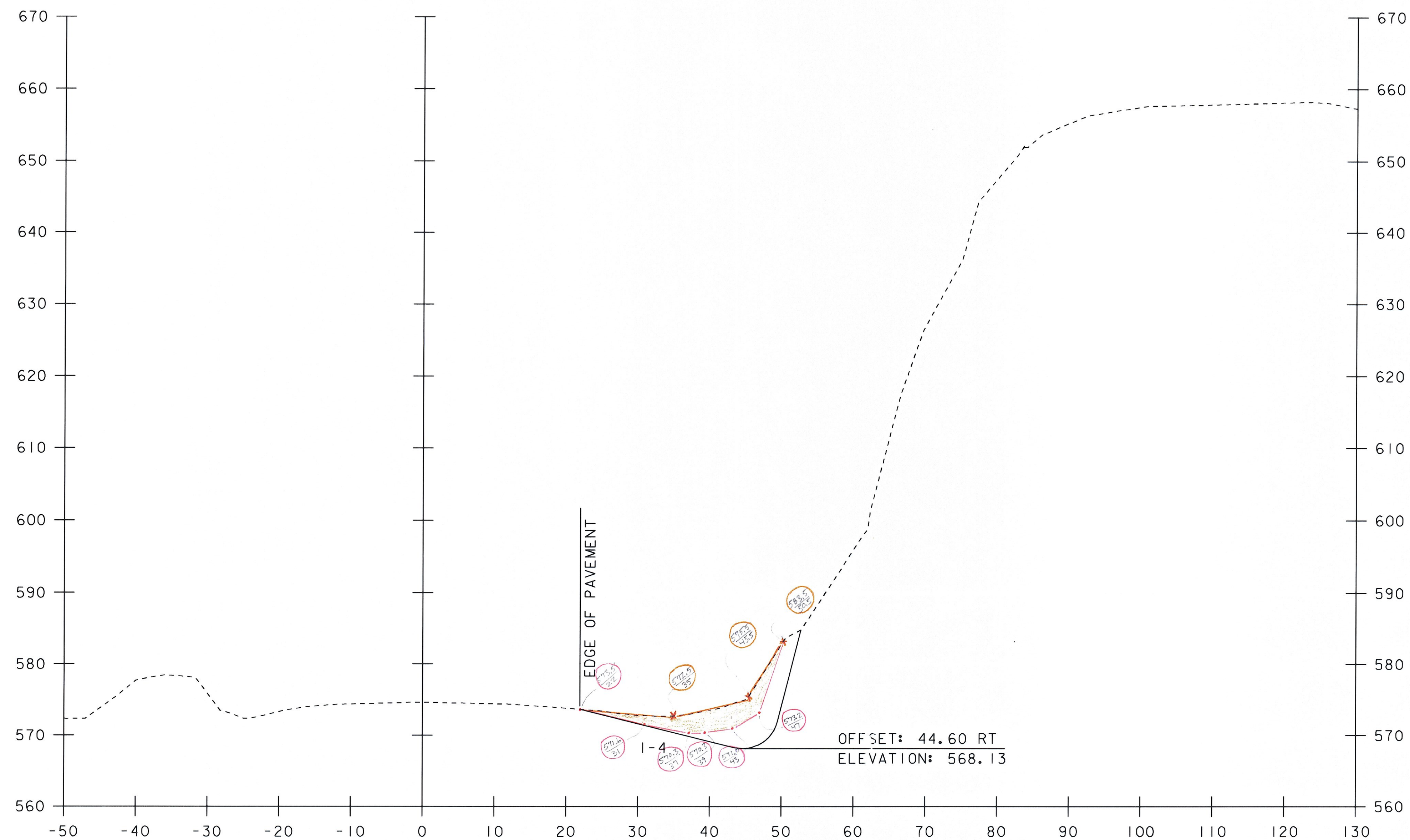
1851+00 ✓

0 10 20
SCALE IN FEET

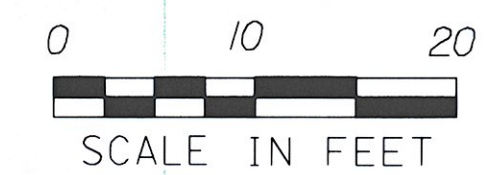
STA. 1851+00 TO STA. 1851+00

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 20	SHEET 46 OF 78

ful RCD
2-8-11 3/16/11



1851+50 ✓



STA. 1851+50 TO STA. 1851+50

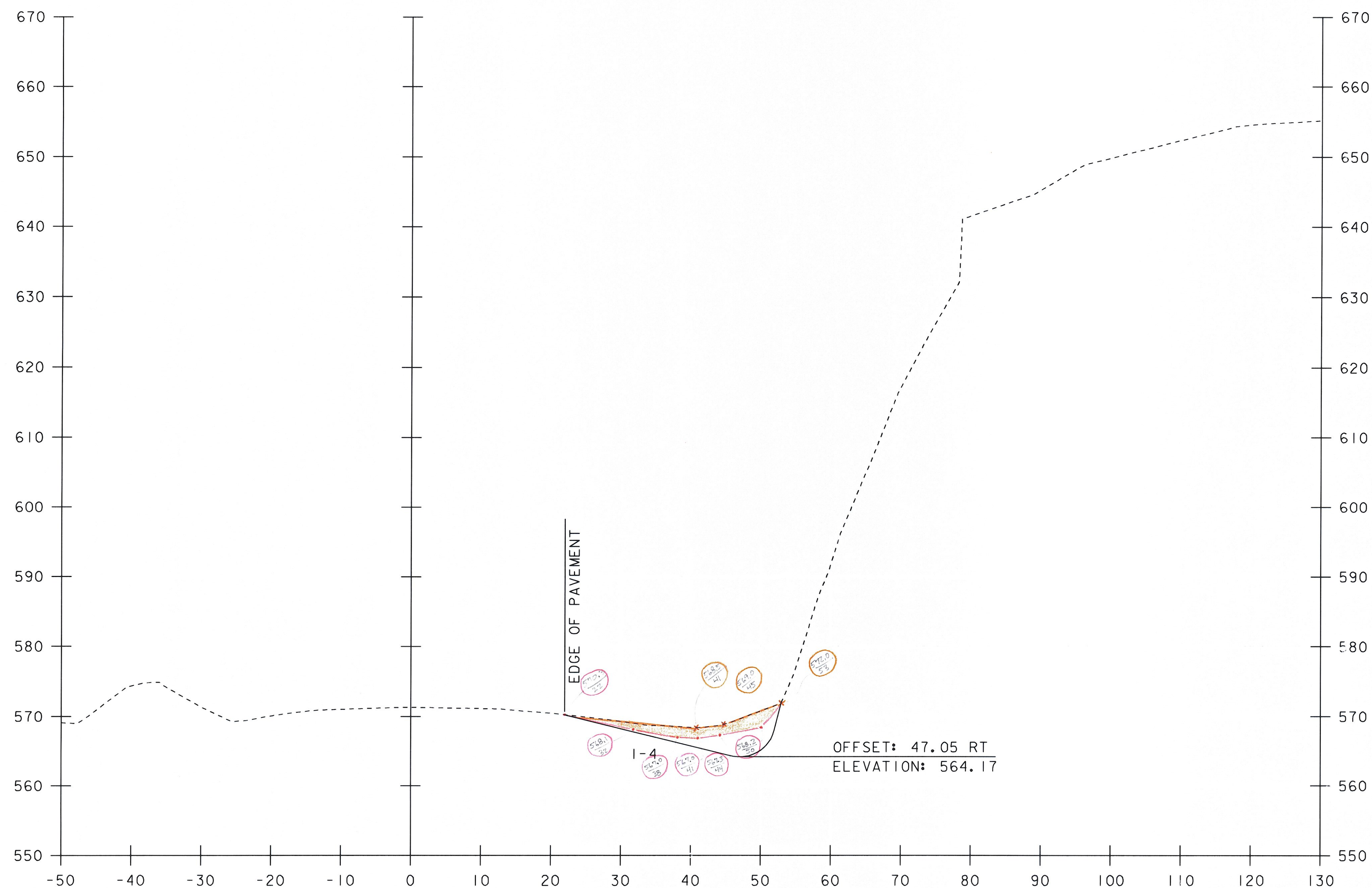
PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 21	SHEET 47 OF 78

114P
2-8-11
RCD
3/16/11

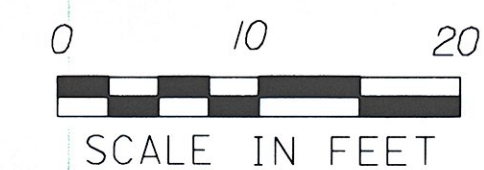


STA. 1852+00 TO STA. 1852+00

FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 22	SHEET 48 OF 78

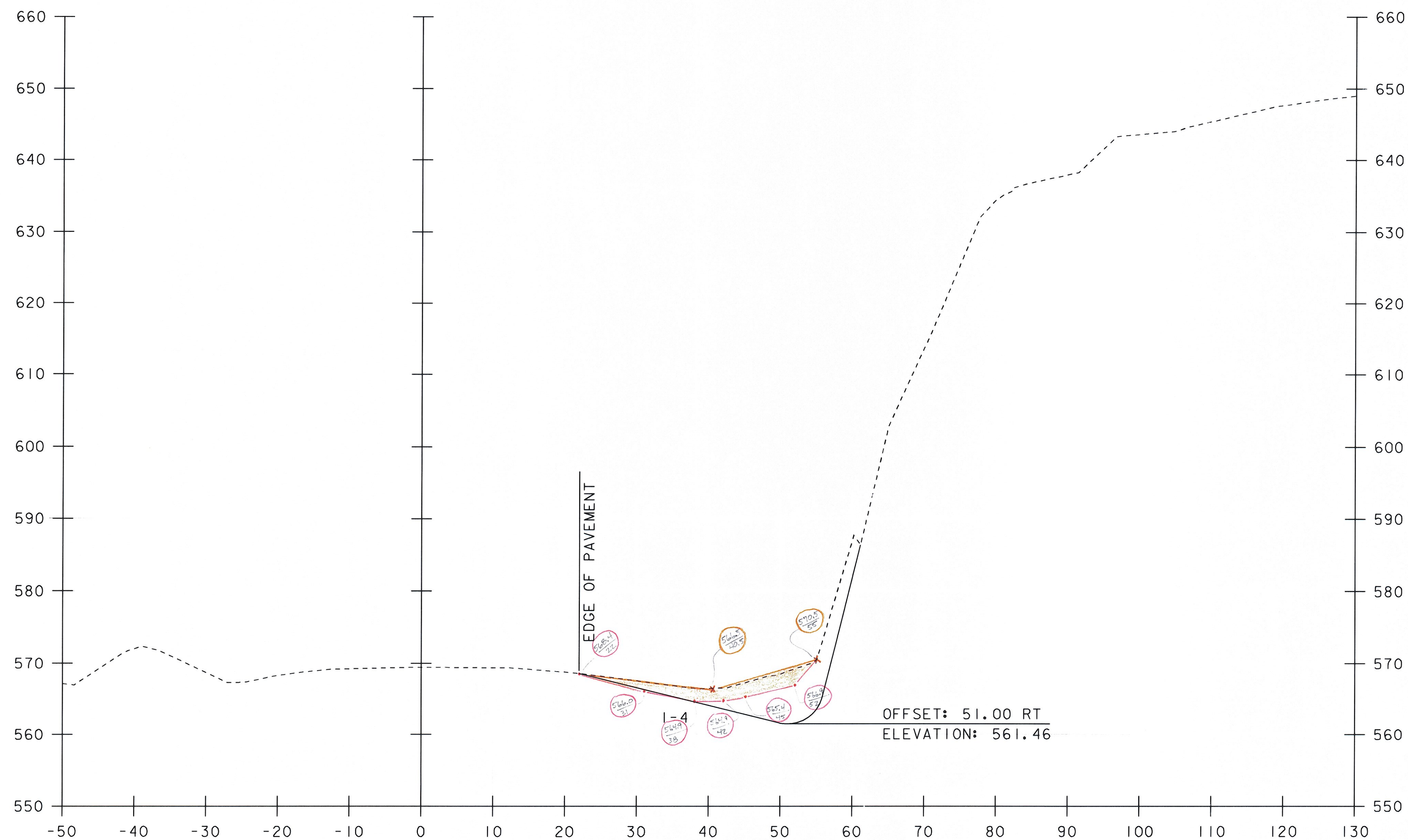


1852+50 ✓

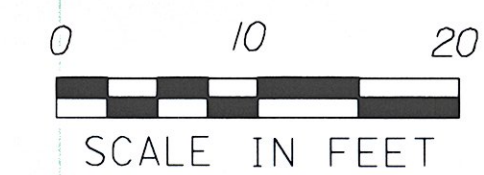


STA. 1852+50 TO STA. 1852+50

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 23	SHEET 49 OF 78



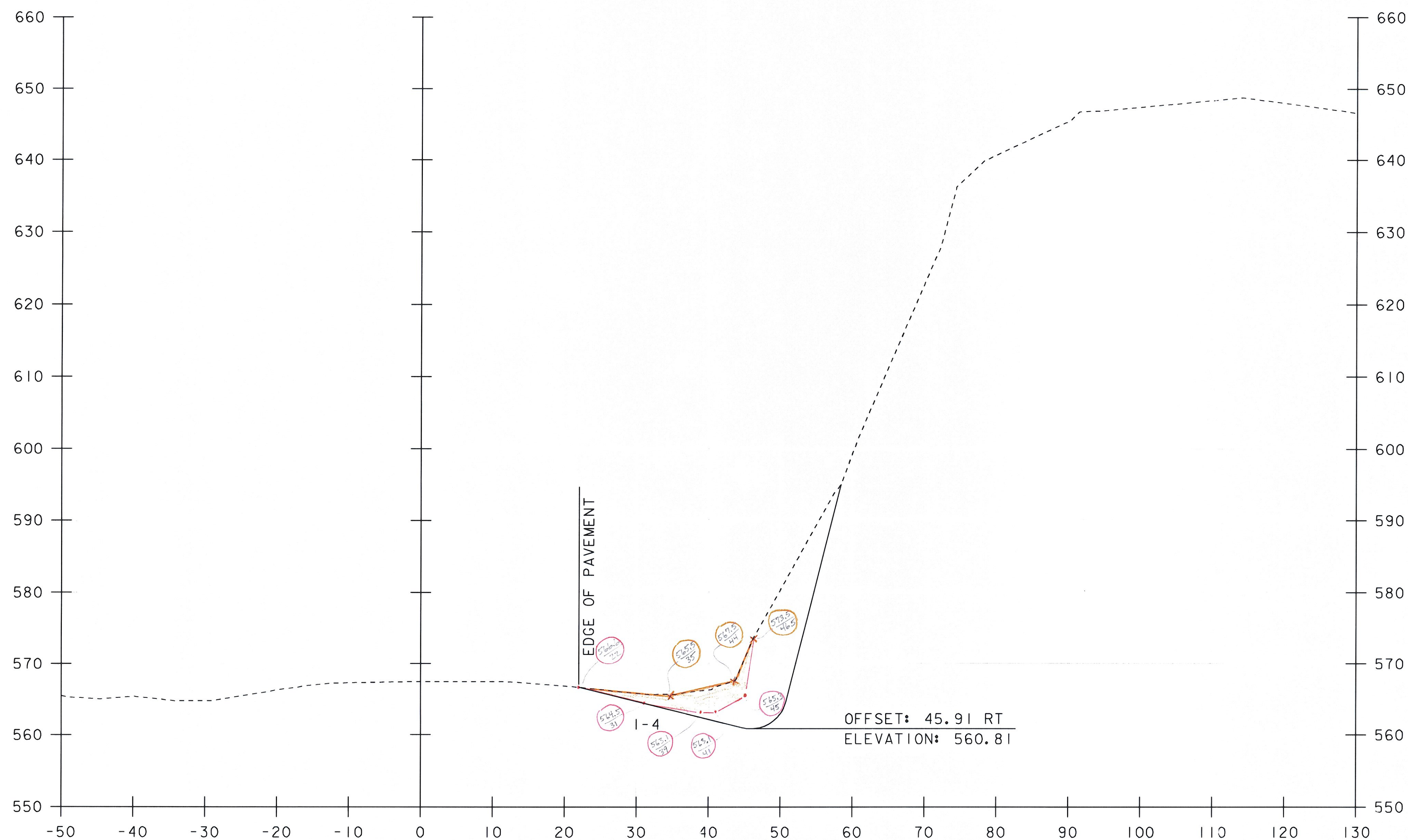
1853+00 ✓



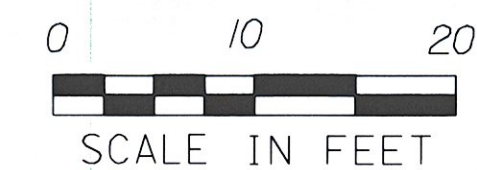
STA. 1853+00 TO STA. 1853+00

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 24	SHEET 50 OF 78

MP 2-8-11 RCD 3/16/11

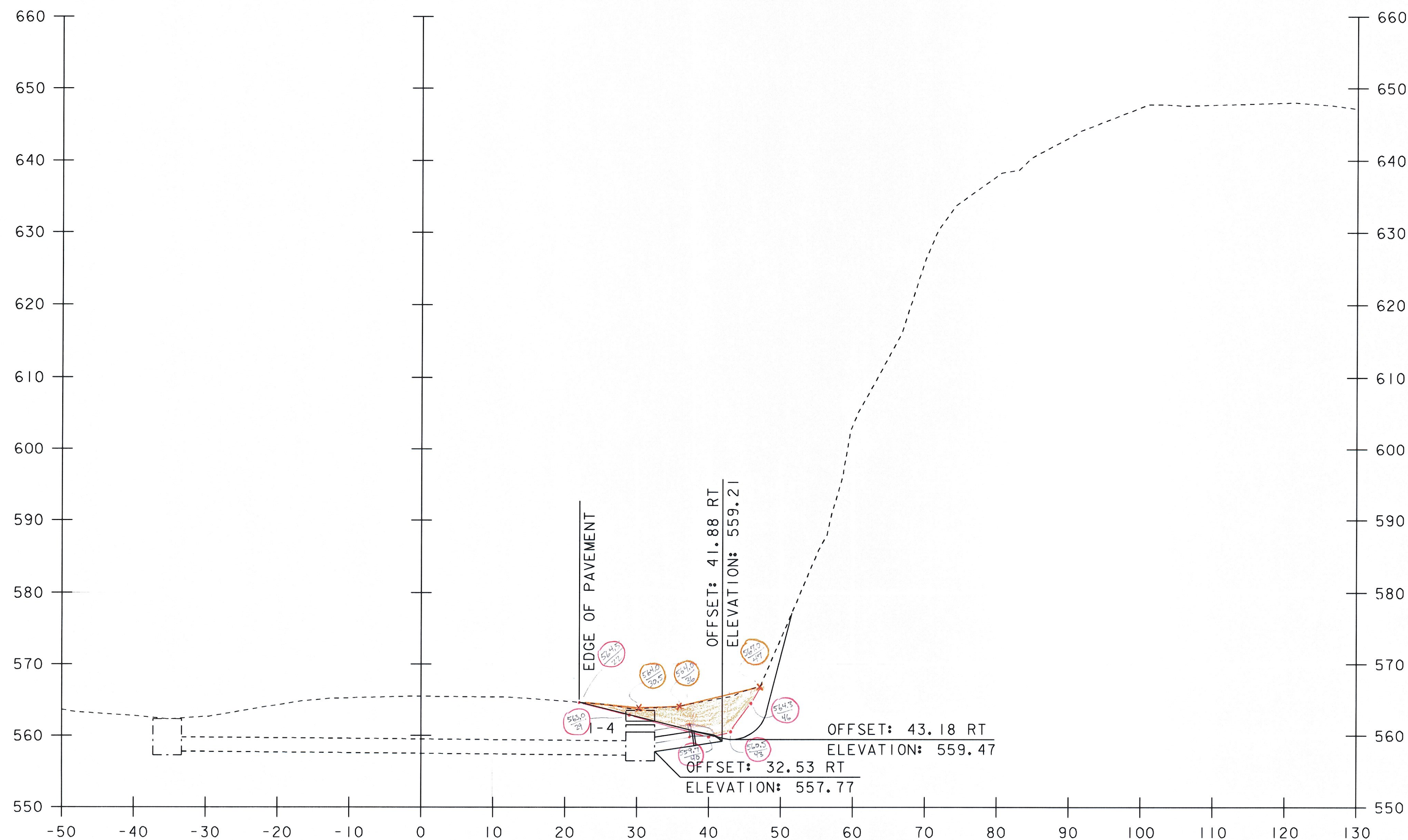


1853+50 ✓

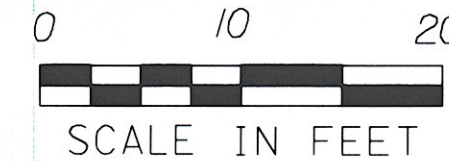


STA. 1853+50 TO STA. 1853+50

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 25	SHEET 51 OF 78

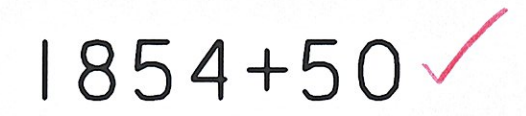


1854+00 ✓
EXISTING 24' X 62' CSP
NEW 24' X 4' CPEP WITH END SECTION



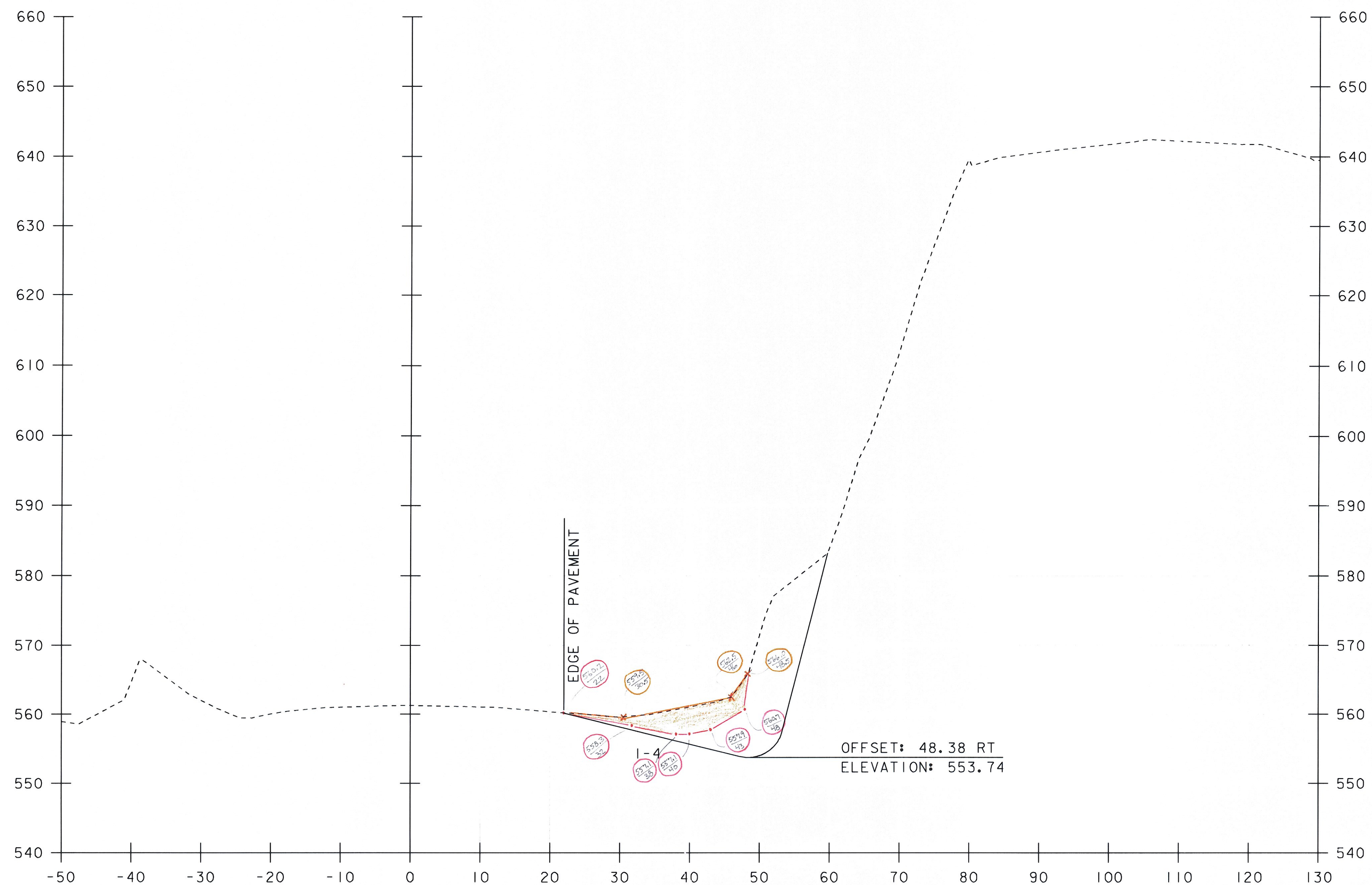
STA. 1854+00 TO STA. 1854+00

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 26	SHEET 52 OF 78



STA. 1854+50 TO STA. 1854+50

FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 27	SHEET 53 OF 78



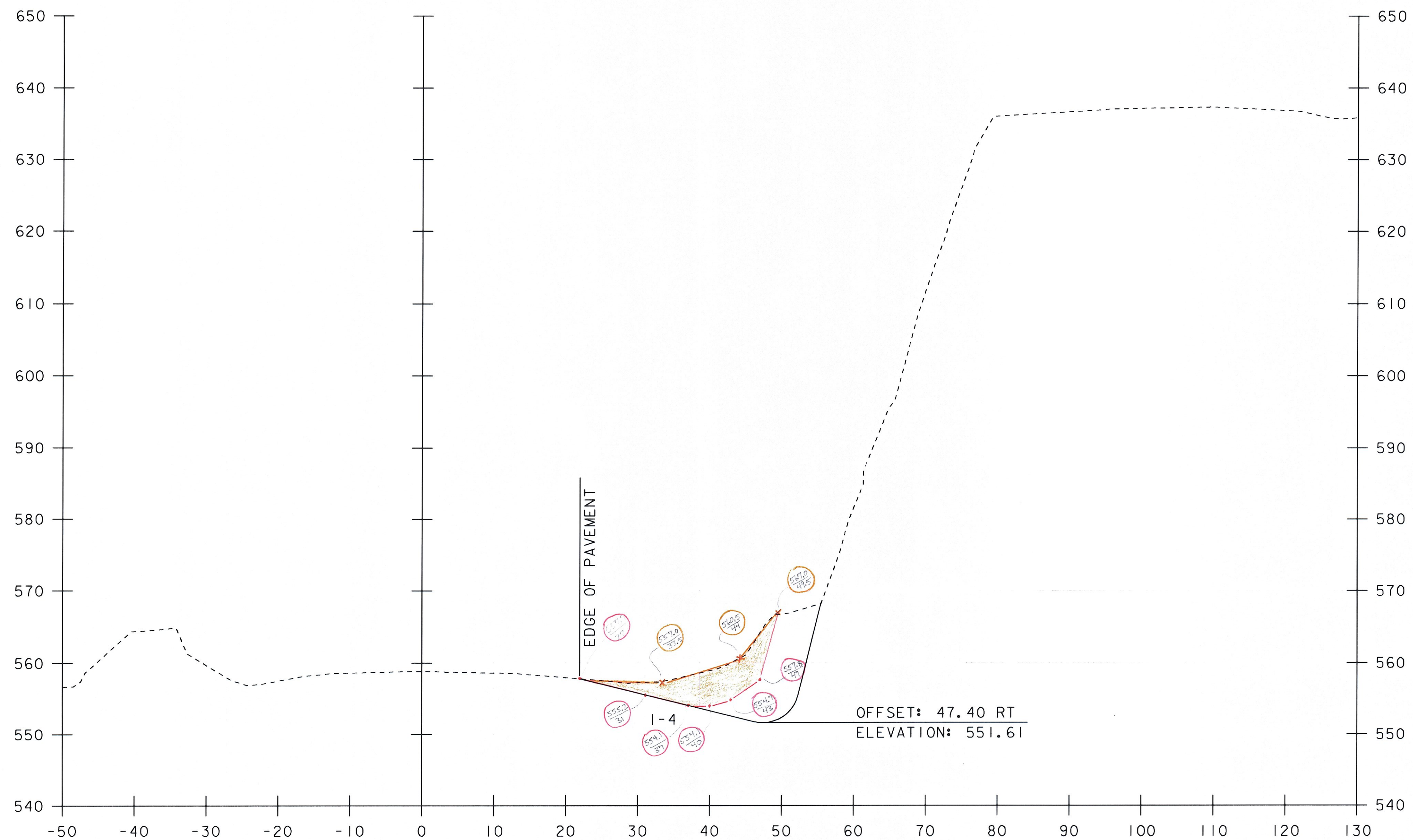
1855+00 ✓



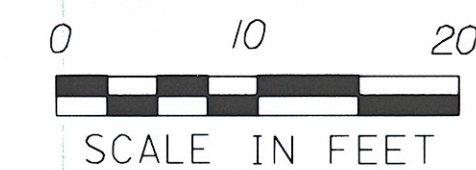
STA. 1855+00 TO STA. 1855+00

PLP
2-8-11
RCD
3/16/11

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 28	SHEET 54 OF 78



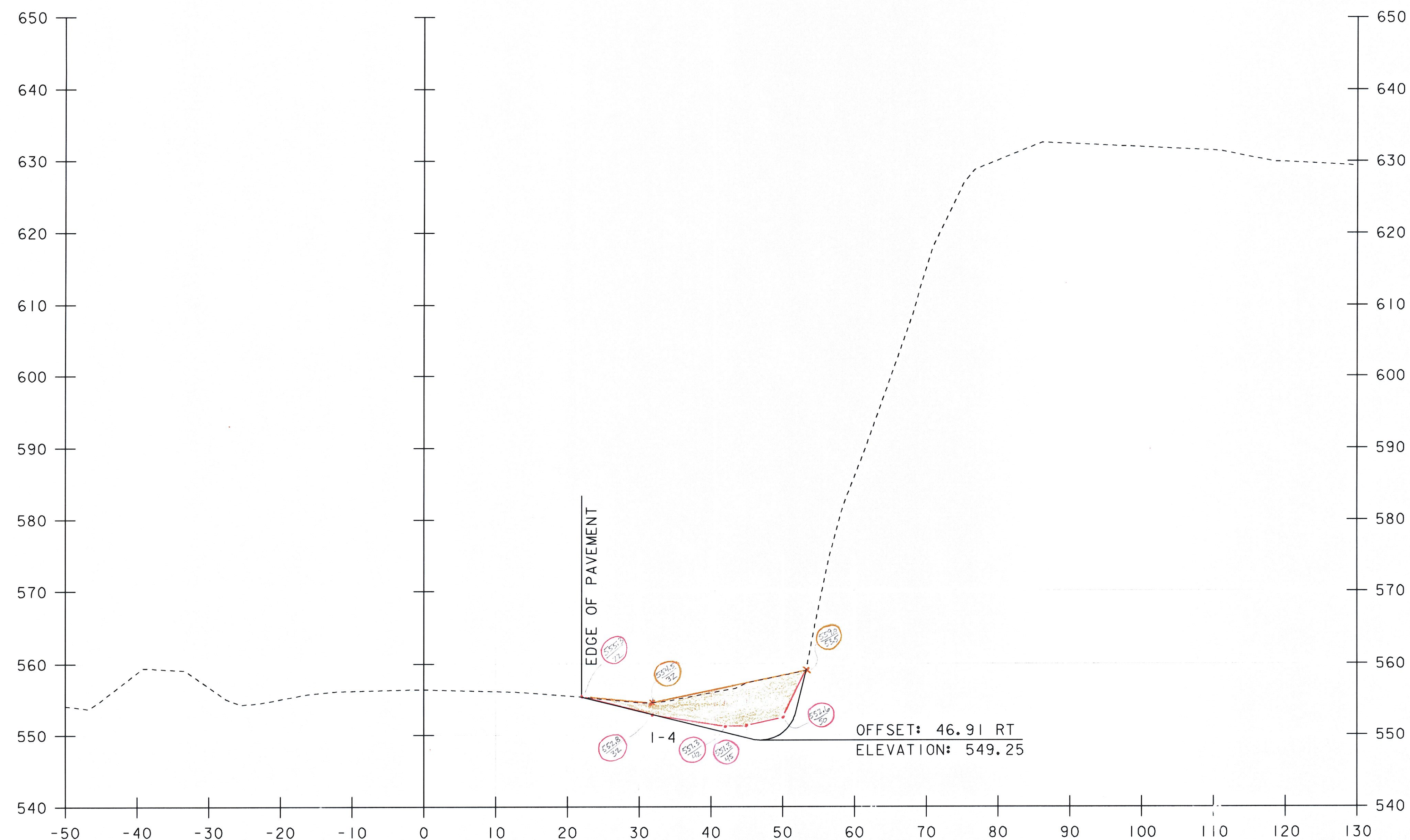
1855+50 ✓



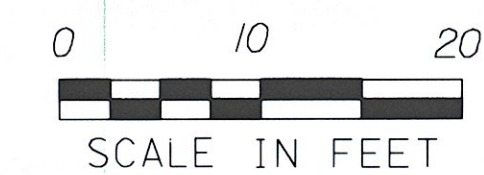
STA. 1855+50 TO STA. 1855+50

MP 2-B-11 RCD 3/16/11

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 29	SHEET 55 OF 78

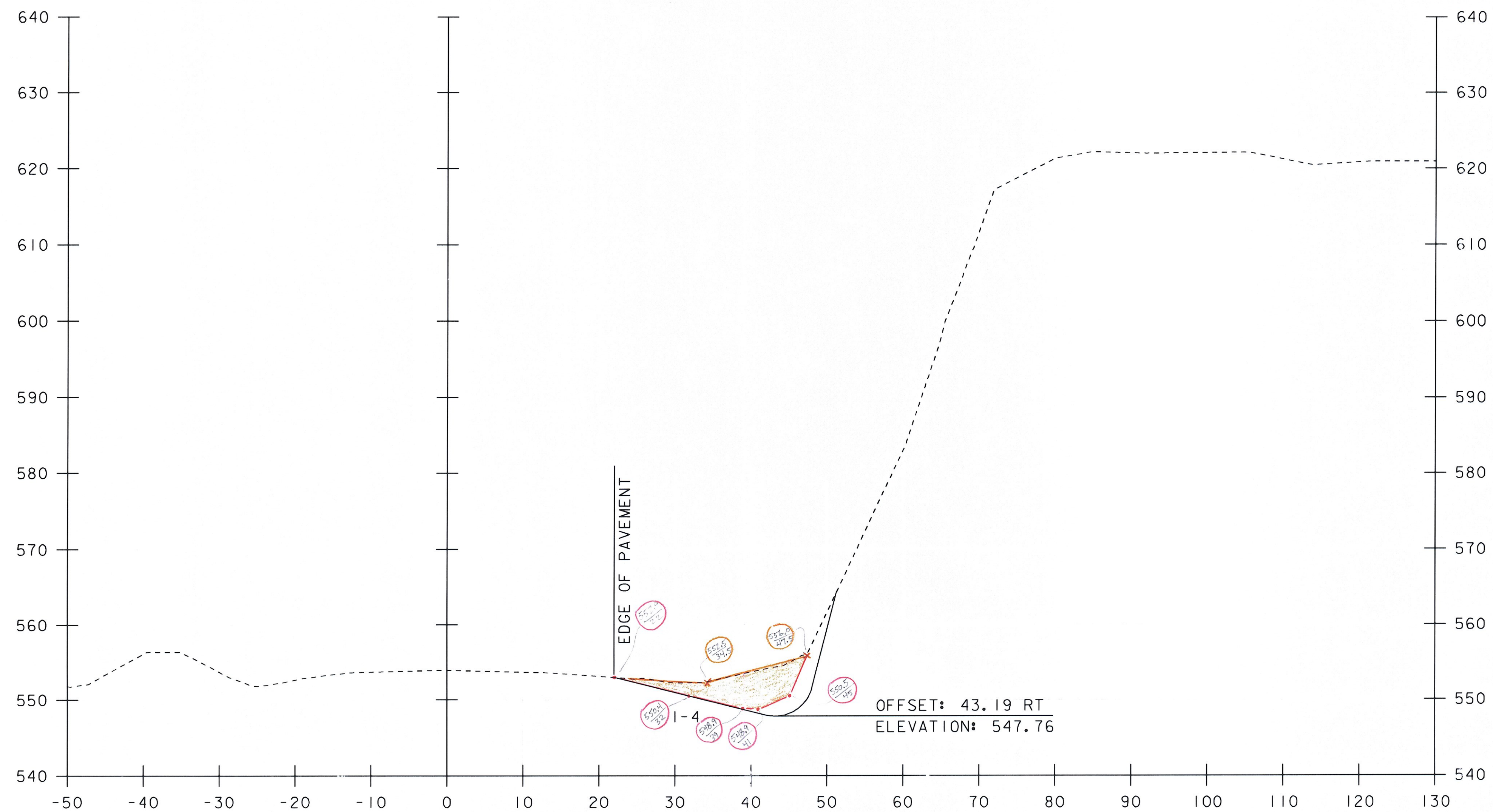


1856+00 ✓

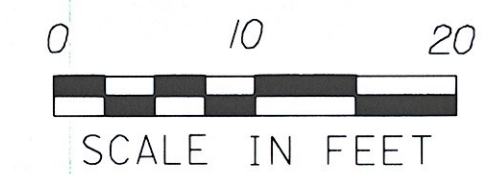


STA. 1856+00 TO STA. 1856+00

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 30	SHEET 56 OF 78

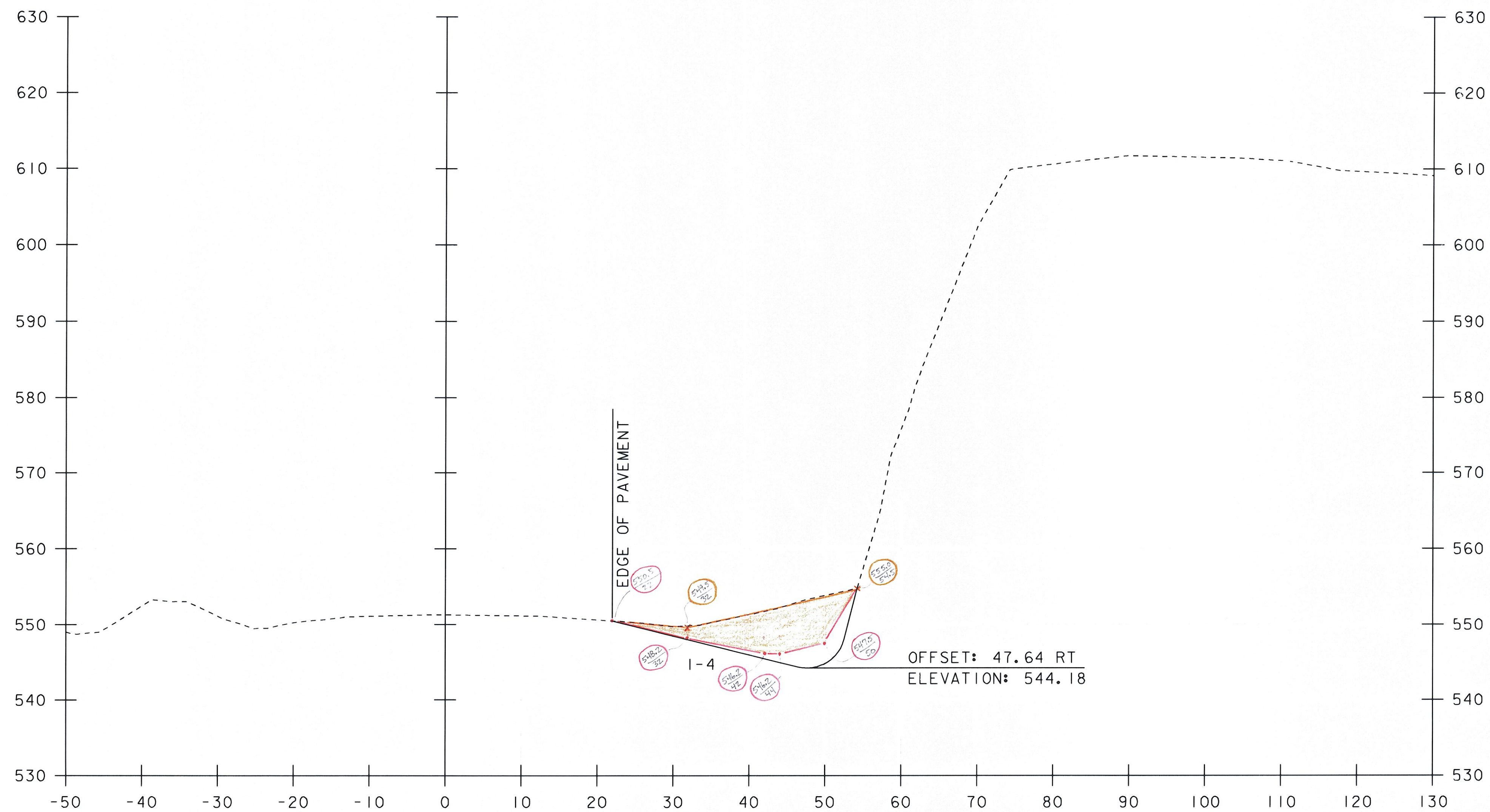


1856+50 ✓

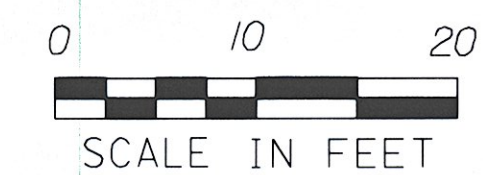


STA. 1856+50 TO STA. 1856+50

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 31	SHEET 57 OF 78



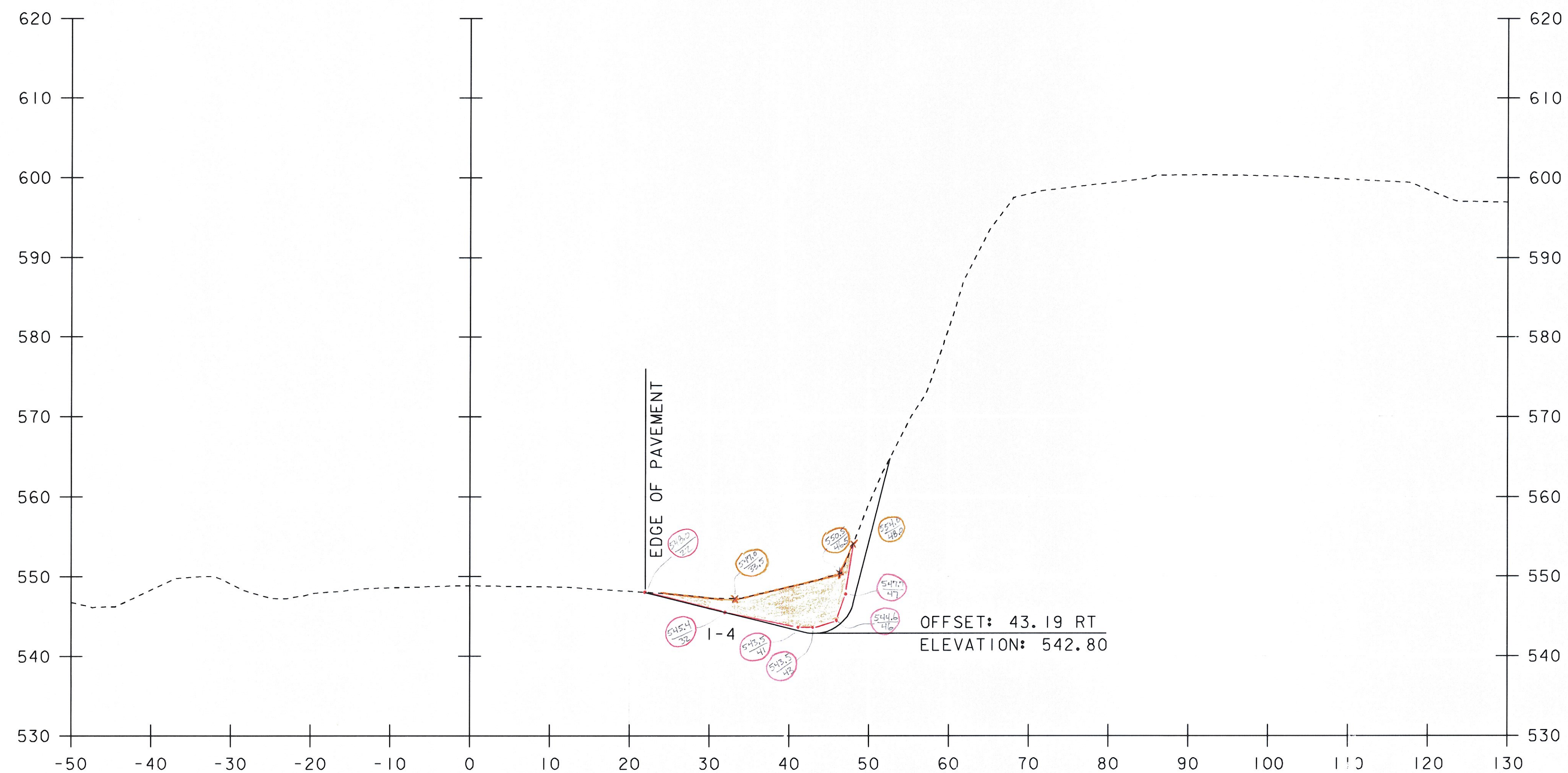
1857+00 ✓



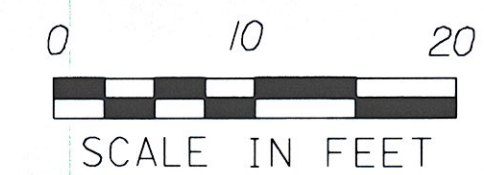
STA. 1857+00 TO STA. 1857+00

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 32	SHEET 58 OF 78

Handwritten notes:
2-8-11
RCD
3116/11

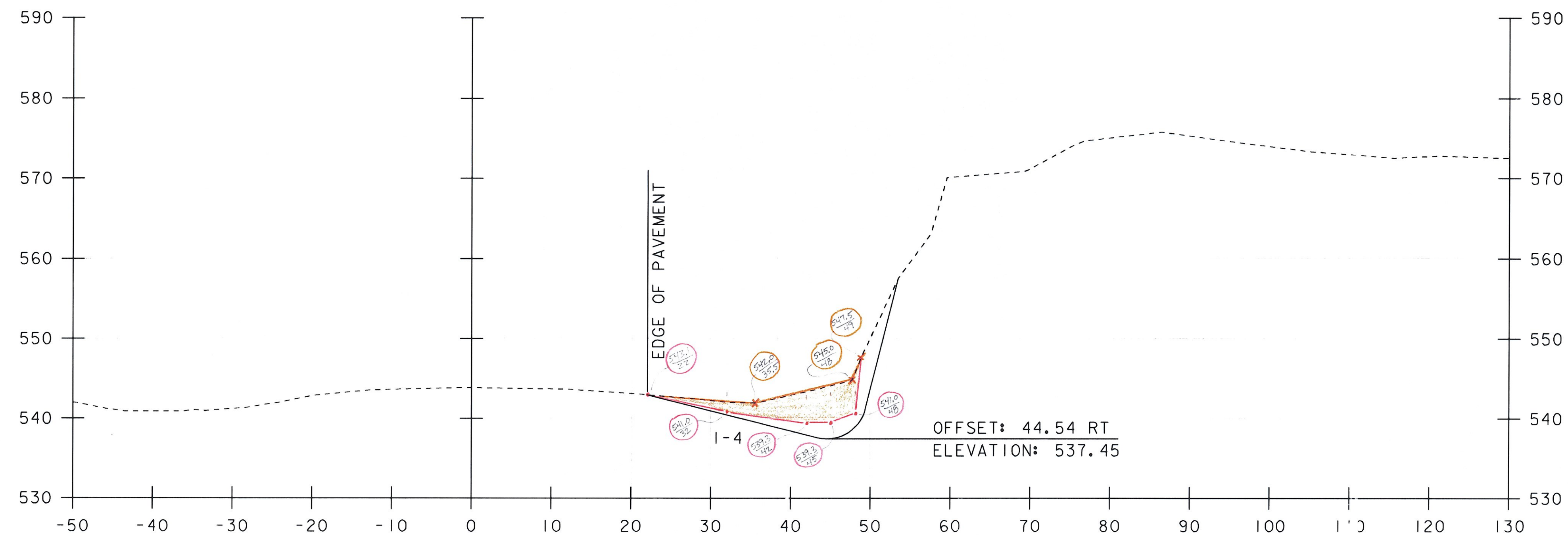


1857+50 ✓

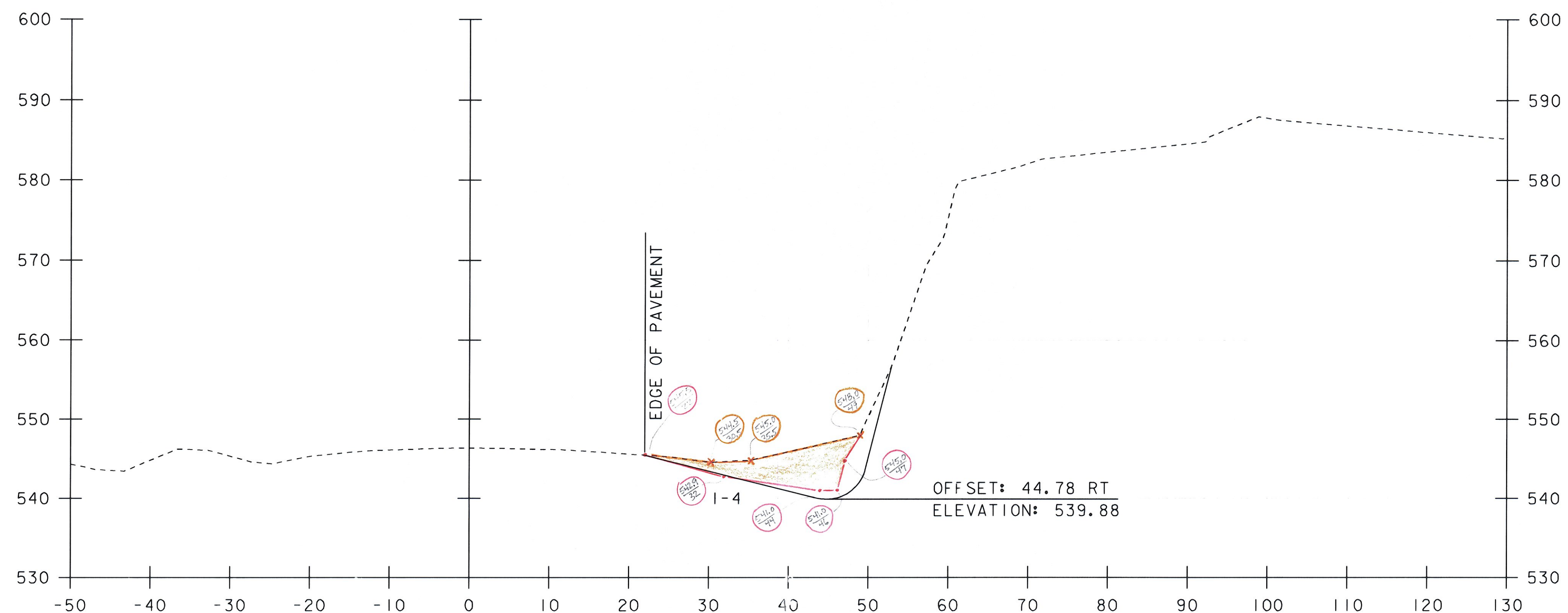


STA. 1857+50 TO STA. 1857+50

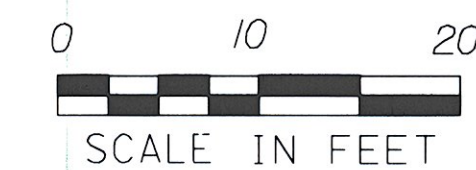
PROJECT NAME: ROCKINGHAM	FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT NUMBER: IM 091-1(57)	PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
	DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
	CROSS SECTION SHEET 33	SHEET 59 OF 78



1858+50 ✓



1858+00 ✓

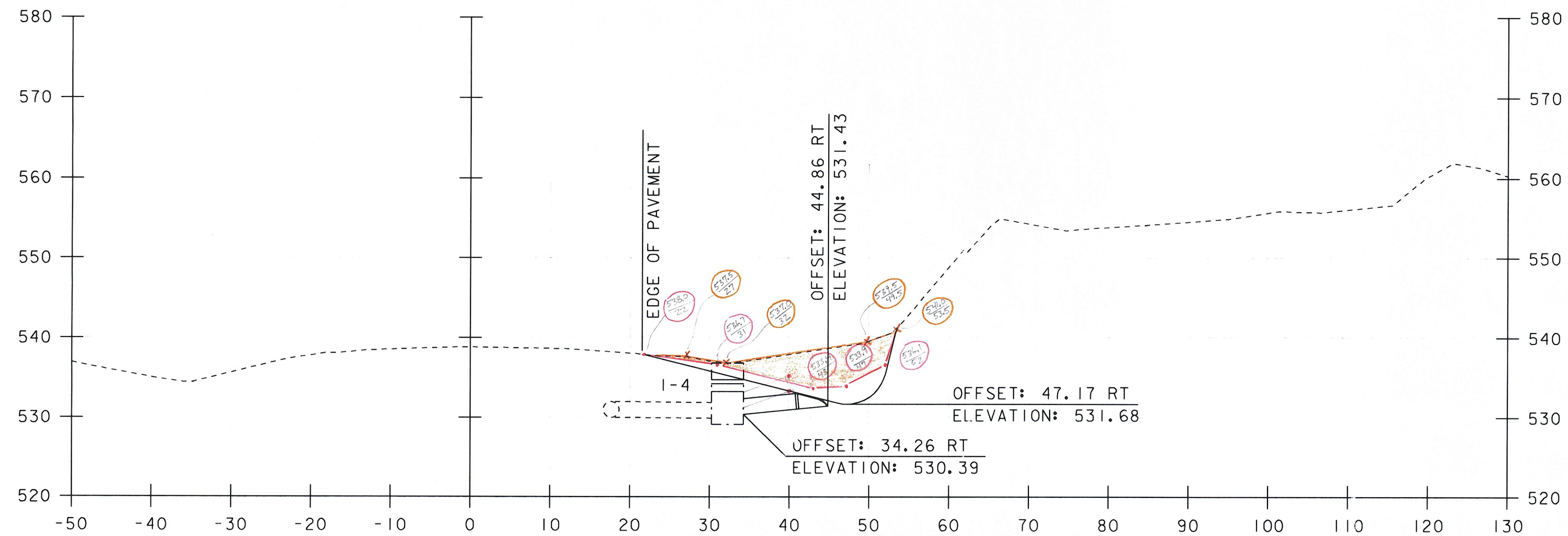


STA. 1858+00 TO STA. 1858+50

PROJECT NAME: ROCKINGHAM	FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT NUMBER: IM 091-1(57)	PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
	DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
	CROSS SECTION SHEET 34	SHEET 60 OF 78

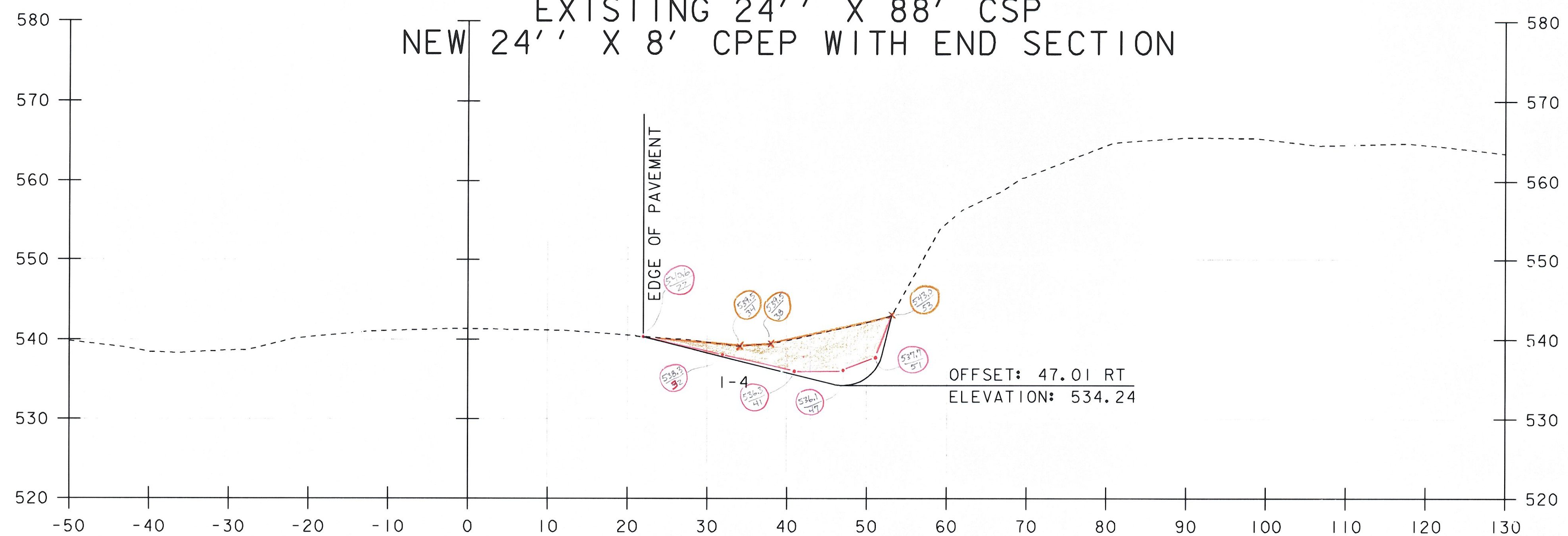
MLP
2-8-11

RCD
3/16/11

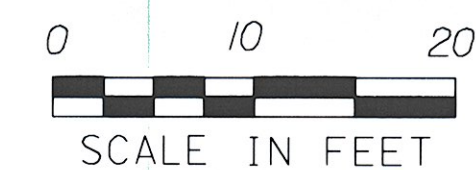


1859+50 ✓

EXISTING 24' X 88' CSP
NEW 24' X 8' CPEP WITH END SECTION

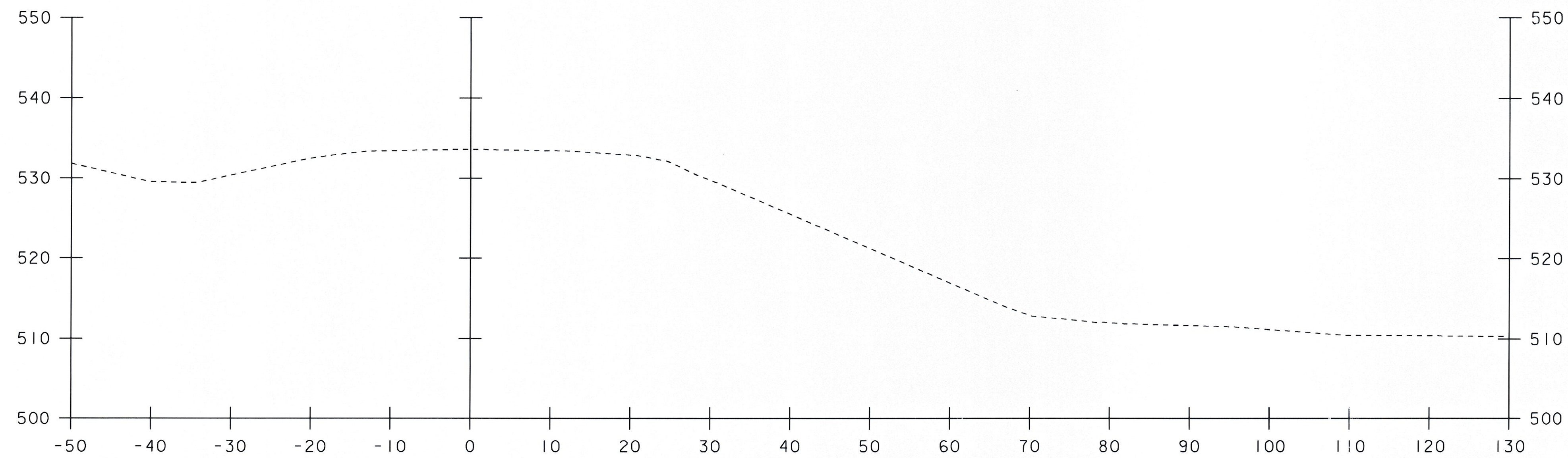


1859+00 ✓

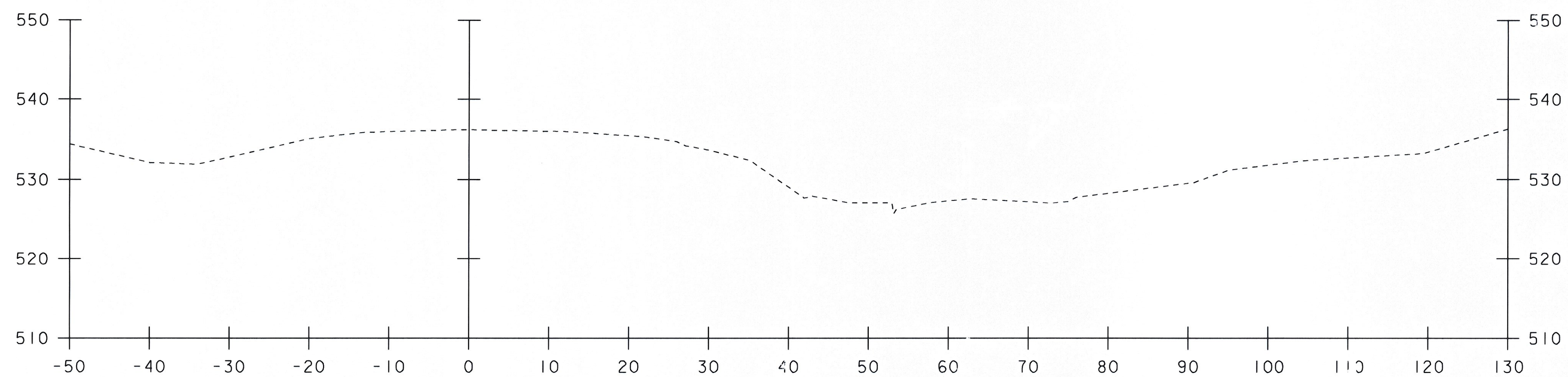


STA. 1859+00 TO STA. 1859+50

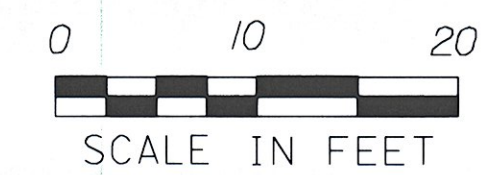
PROJECT NAME:	ROCKINGHAM	FILE NAME:	07a158/Design/d07a158xs.dgn	PLOT DATE:	26-MAY-2010
PROJECT NUMBER:	IM 091-I(57)	PROJECT LEADER:	K. ROBIE	DRAWN BY:	P. PELOQUIN
		DESIGNED BY:	P. PELOQUIN	CHECKED BY:	S. MENARD
		CROSS SECTION SHEET	35	SHEET	61 OF 78



1860+50

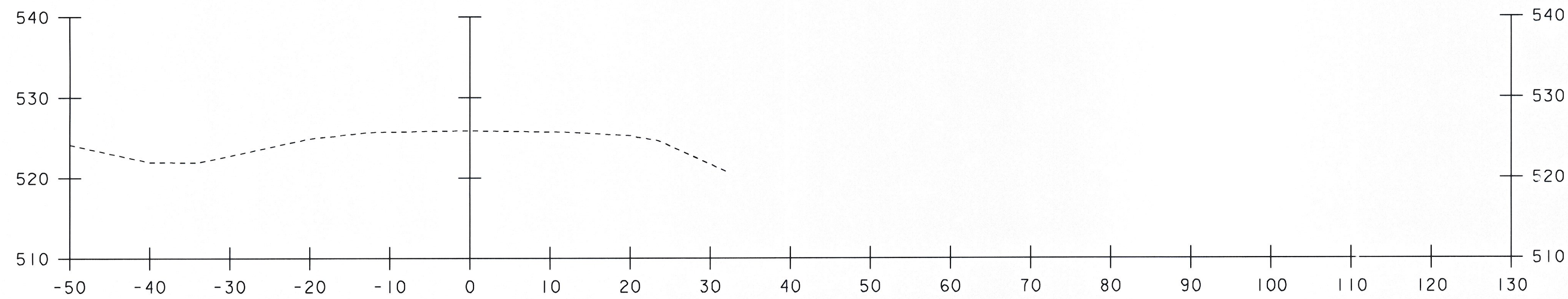


1860+00
END PROJECT

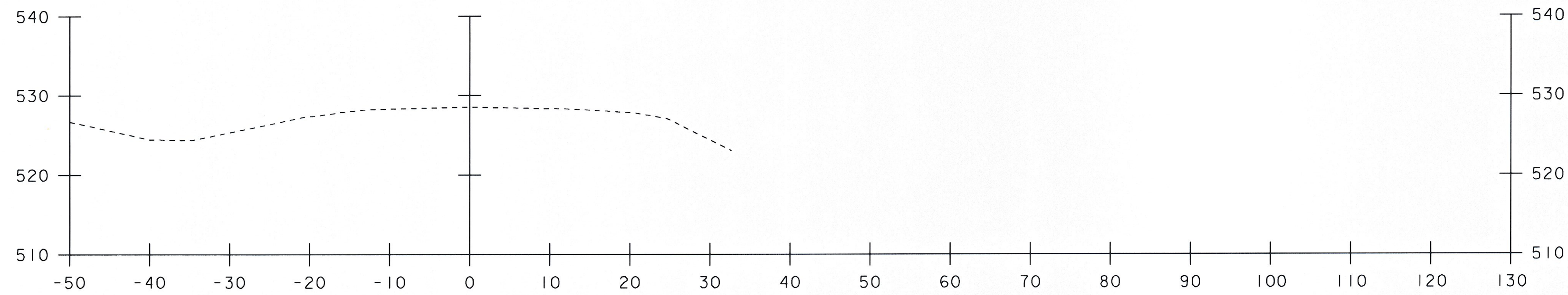


STA. 1860+00 TO STA. 1860+50

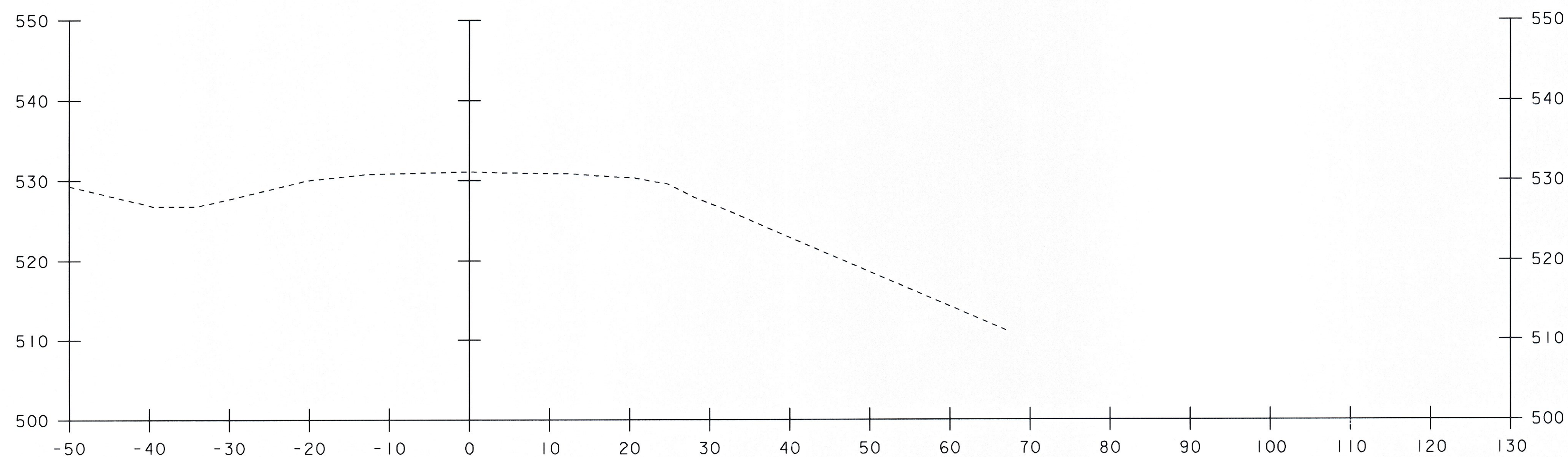
PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 36	SHEET 62 OF 78



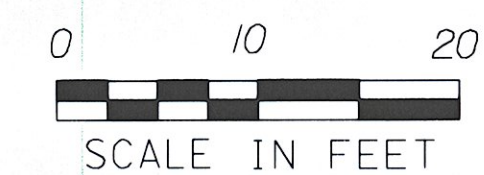
1862+00



1861+50

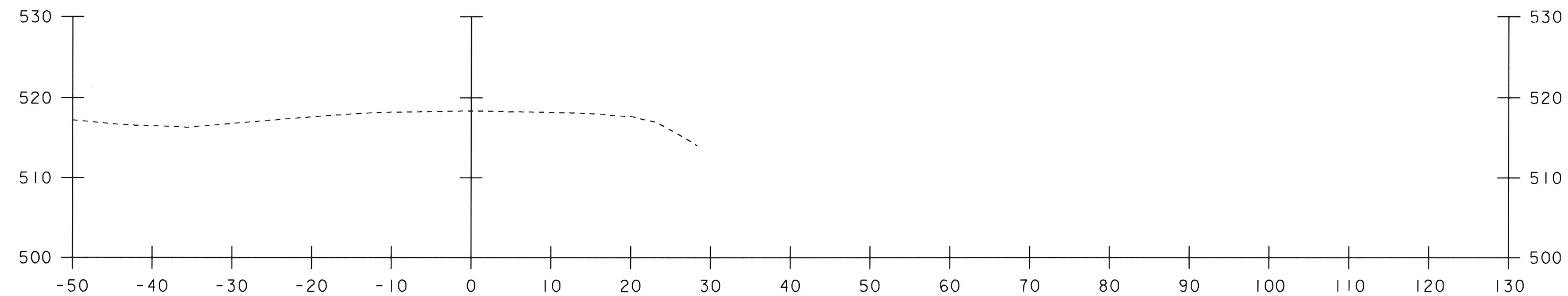


1861+00

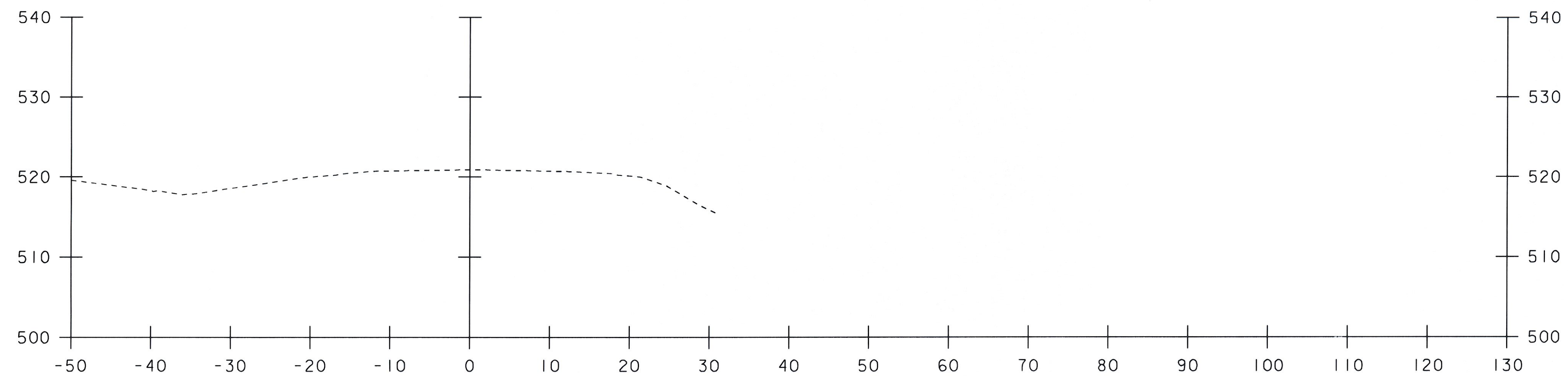


STA. 1861+00 TO STA. 1862+00

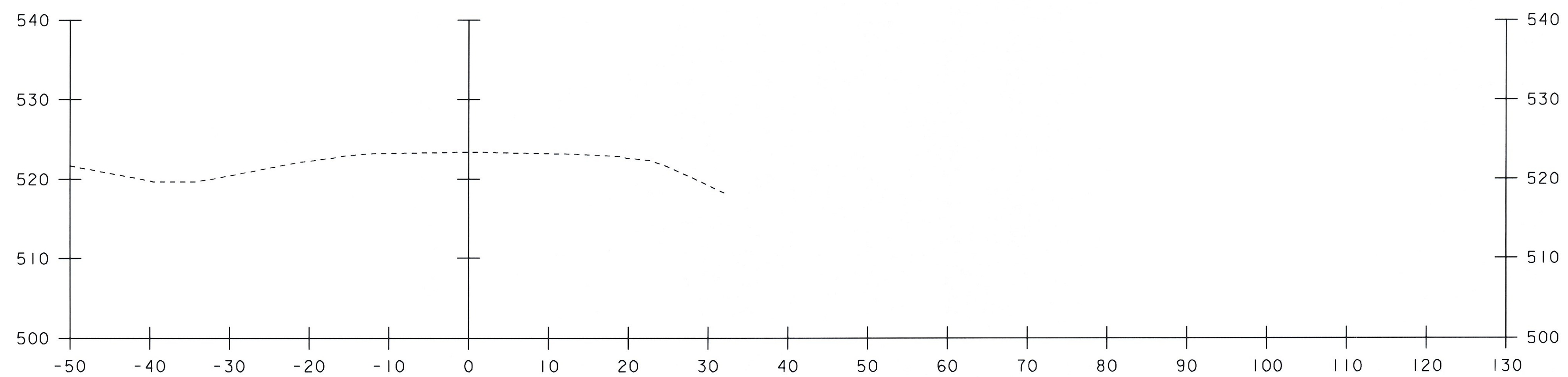
PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-I(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 37	SHEET 63 OF 78



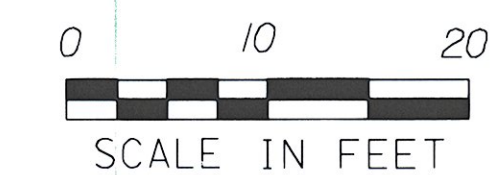
1863+50



1863+00



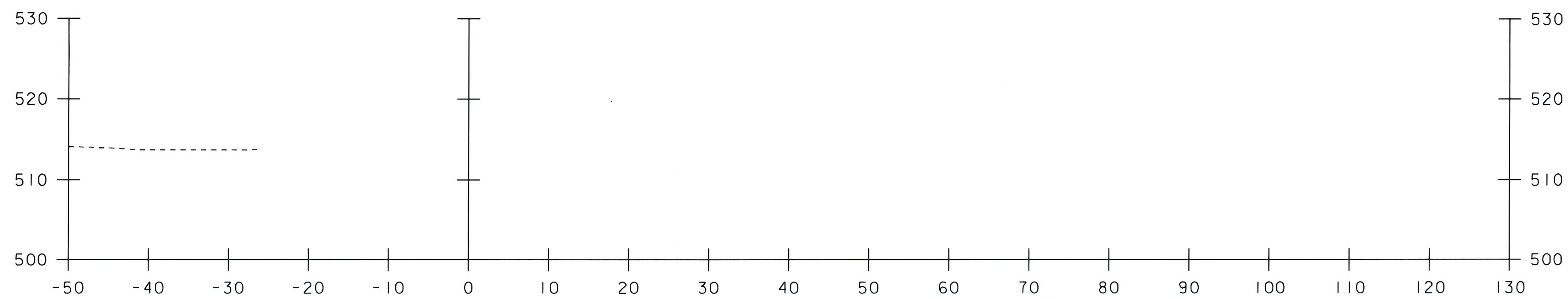
1862+50



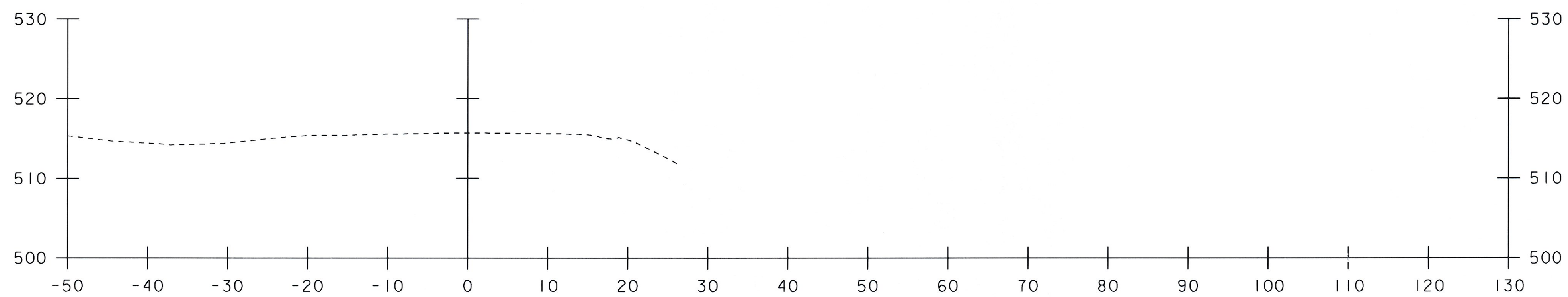
STA. 1862+50 TO STA. 1863+50

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 38	SHEET 64 OF 78

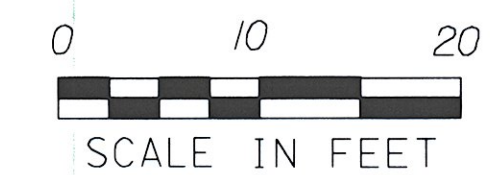
MP
2-8-11



1864+24



1864+00



STA. 1864+00 TO STA. 1864+24

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07d158/Design/d07d158xs.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
CROSS SECTION SHEET 39	SHEET 65 OF 78

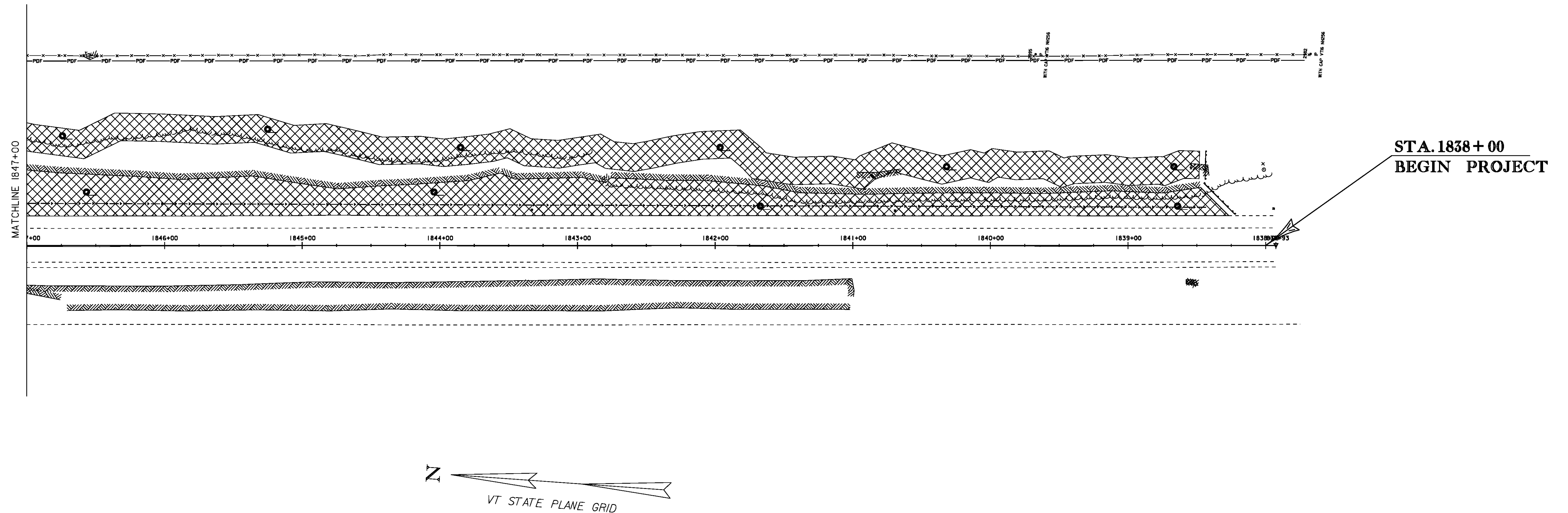
PLP
2-8-11

653.20 - TEMPORARY EROSION MATTING
STA. 1838+22 RT TO STA. 1847+00 RT (DITCH) △

653.55 - PROJECT DEMARCATION FENCE
STA. 1837+93 RT TO STA. 1847+00 RT

653.25 - TEMPORARY STONE CHECK DAM, TYPE I
STA. 1838+43 RT TO STA. 1847+00 RT (3 CHECK DAMS)

649.51 - GEOTEXTILE FOR SILT FENCE
STA. 1838+45 RT TO STA. 1838+45 RT (CREST OF LEDGE)
STA. 1838+24 RT TO STA. 1838+46 RT (DITCH)



LEGEND	
	CHECK DAMS
	SILT FENCE
	EROSION MATTING/LIMITS OF DISTURBANCE
	PROJECT DEMARCATION FENCE

AREA OF DISTURBANCE:
CREST OF LEDGE: 17,572 SF; 0.403 ACRES
DITCH: 19,647 SF; 0.451 ACRES
SHEET TOTAL: 37,219 SF; 0.854 ACRES
PROJECT TOTAL: 98,187 SF; 2.253 ACRES

△ REVISED ITEM, EROSION MATTING
FOR CREST OF LEDGE REMOVED 7/8/10

0 40 80
SCALE IN FEET

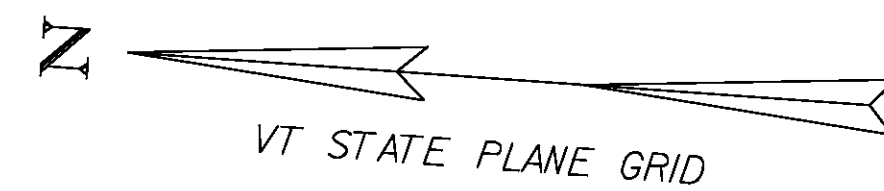
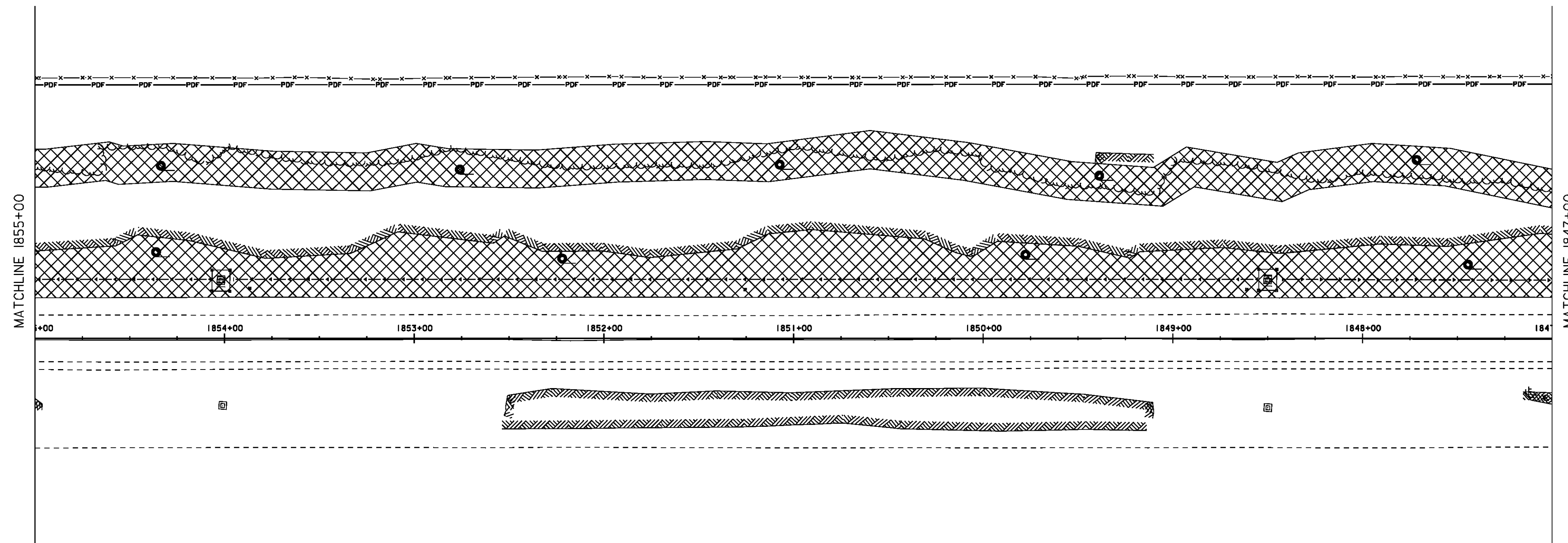
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PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158bdr.dgn	PLOT DATE: 08-JUL-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
EPSC LAYOUT SHEET 1	SHEET 66 OF 78

653.20 - TEMPORARY EROSION MATTING
STA. 1847+00 RT TO STA. 1855+00 RT (DITCH) 

653.40 - INLET PROTECTION DEVICE, TYPE I
STA. 1848+50 RT
STA. 1854+02 RT

653.55 - PROJECT DEMARCATION FENCE
STA. 1847+00 RT TO STA. 1855+00 RT

653.25 - TEMPORARY STONE CHECK DAM, TYPE I
STA. 1847+00 RT TO STA. 1855+00 RT (12 CHECK DAMS)



LEGEND

----- CHECK DAMS

 EROSION MATTING/LIMITS OF DISTURBANCE

----- PROJECT DEMARCATION FENCE

 INLET PROTECTION

AREA OF DISTURBANCE:
CREST OF LEDGE: 16,194 SF; 0.372 ACRES
DITCH: 21,865 SF; 0.501 ACRES
SHEET TOTAL: 38,059 SF; 0.873 ACRES
PROJECT TOTAL: 98,187 SF; 2.253 ACRES

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158bdr.dgn PLOT DATE: 08-JUL-2010
PROJECT LEADER: K. ROBIE DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
EPSC LAYOUT SHEET 2 SHEET 67 OF 78

 REVISED ITEM, EROSION MATTING
FOR CREST OF LEDGE REMOVED 7/8/10

0 40 80
SCALE IN FEET

653.20 - TEMPORARY EROSION MATTING
STA.1855+00 RT TO STA.1859+89 RT (DITCH) △

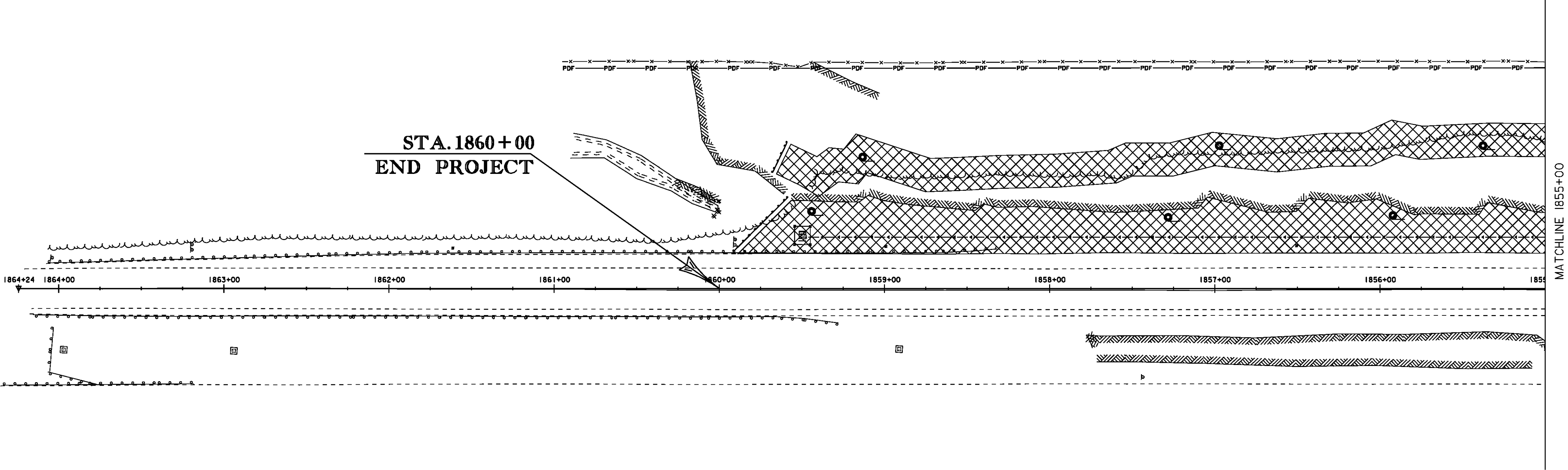
653.40 - INLET PROTECTION DEVICE, TYPE I
STA.1859+50 RT

653.55 - PROJECT DEMARCATION FENCE
STA.1855+00 RT TO STA.1860+95 RT

653.25 - TEMPORARY STONE CHECK DAM, TYPE I
STA.1855+00 RT TO STA.1859+47 RT (II CHECK DAMS)

649.51- GEOTEXTILE FOR SILT FENCE
STA.1859+58 RT TO STA.1859+67 RT (CREST OF LEDGE)
STA.1859+57 RT TO STA.1859+90 RT (DITCH)

653.35 - VEHICLE TRACKING PAD
STA.1858+80 RT TO STA.1859+30 RT



LEGEND

- CHECK DAMS
- SILT FENCE
- EROSION MATTING/LIMITS OF DISTURBANCE
- PDF PDF PDF PROJECT DEMARCATION FENCE
- INLET PROTECTION

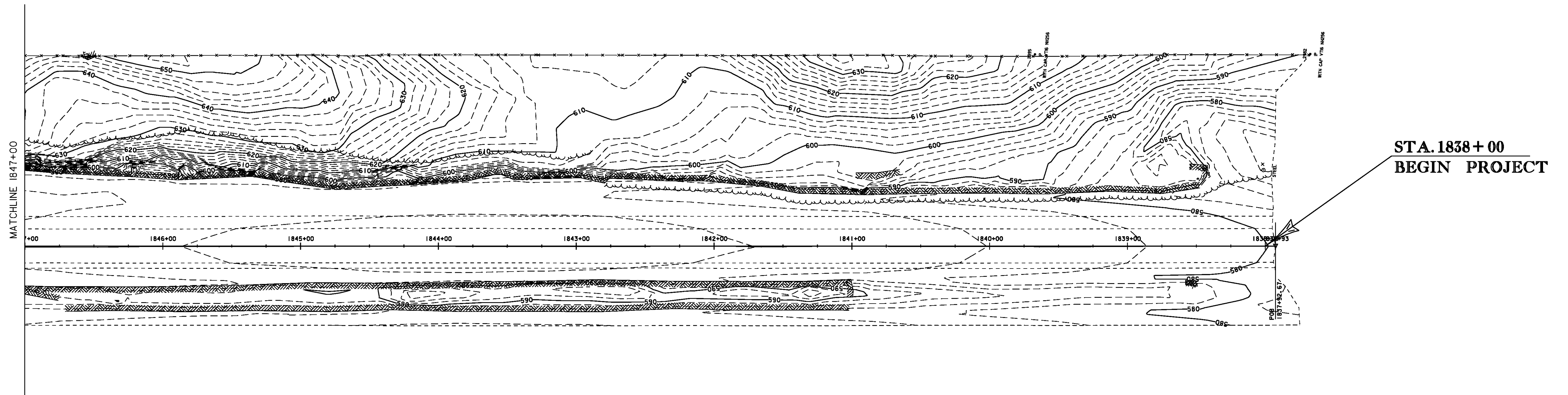
AREA OF DISTURBANCE:
CREST OF LEDGE: 9,524 SF; 0.219 ACRES
DITCH: 13,385 SF; 0.307 ACRES
SHEET TOTAL: 22,909 SF; 0.526 ACRES
PROJECT TOTAL: 98,187 SF; 2.253 ACRES

△ REVISED ITEM, EROSION MATTING
FOR CREST OF LEDGE REMOVED 7/8/10

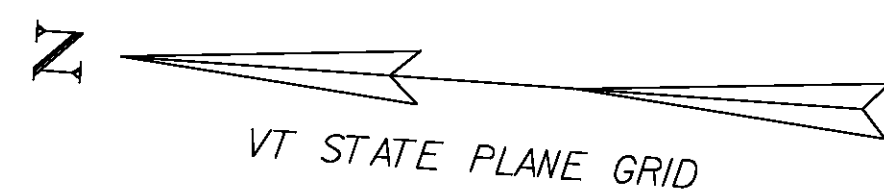
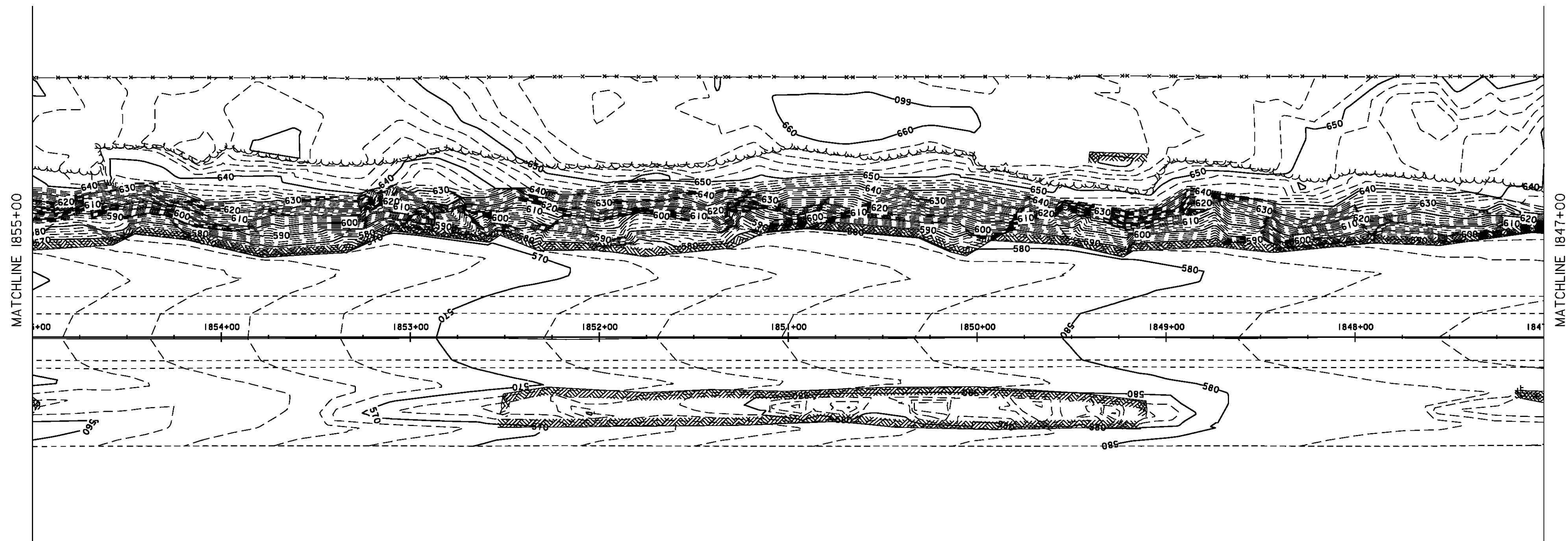


PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

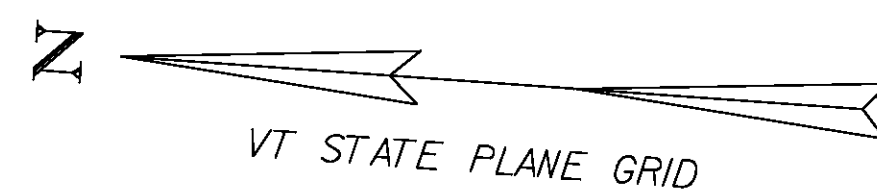
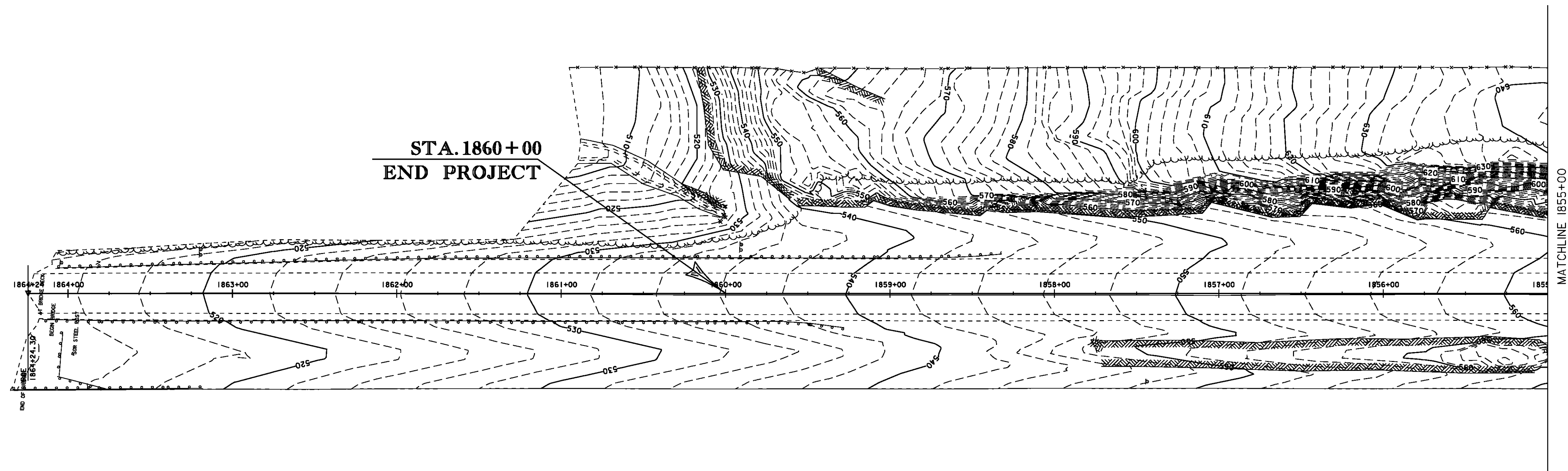
FILE NAME: 07a158/Design/d07a158bdr.dgn PLOT DATE: 08-JUL-2010
PROJECT LEADER: K. ROBIE DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
EPSC LAYOUT SHEET 3 SHEET 68 OF 78



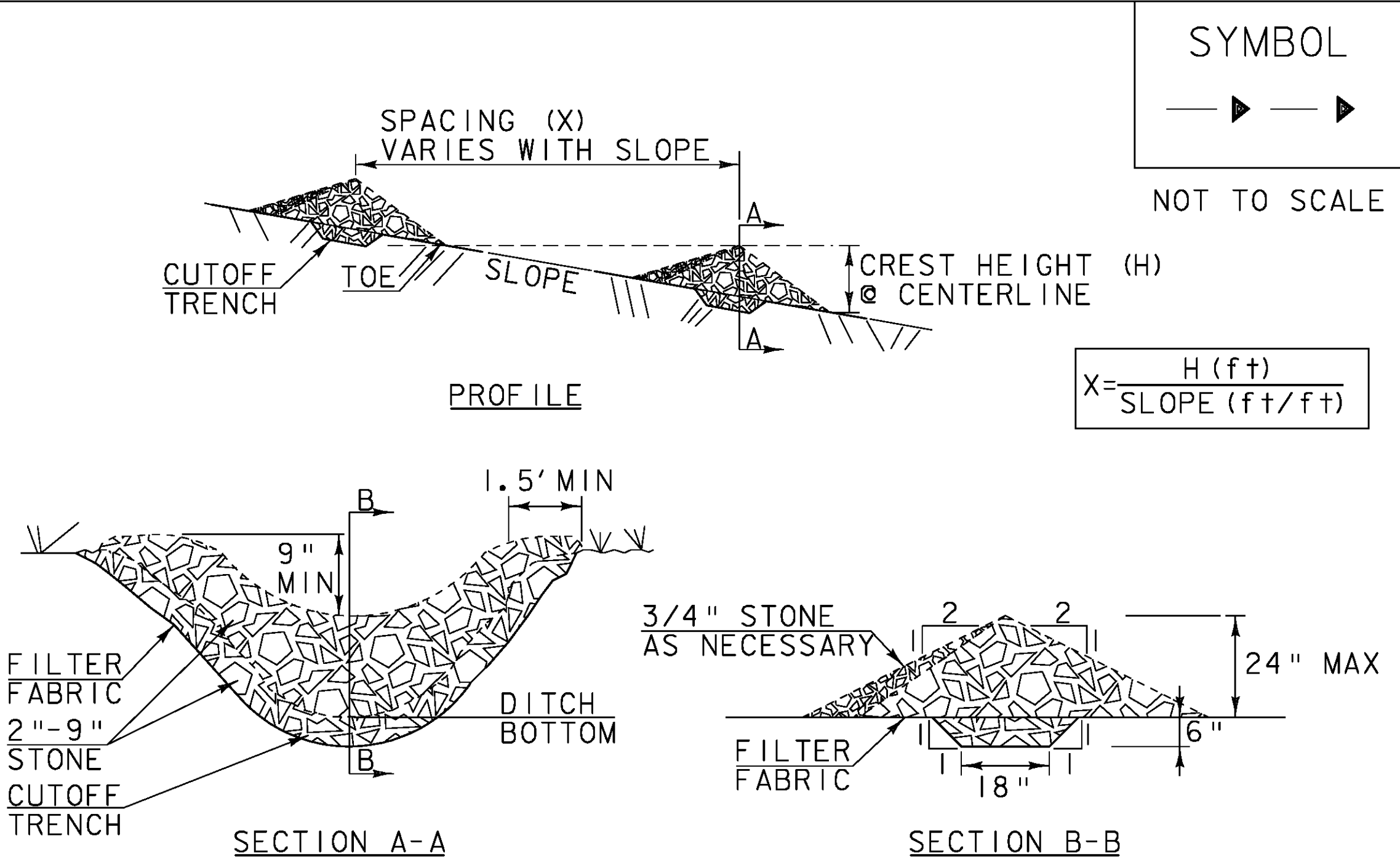
PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158bdr.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
EXISTING CONDITIONS LAYOUT SHEET 1	SHEET 69 OF 78



PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-(57)	
FILE NAME: 07a158/Design/d07a158bdr.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
EXISTING CONDITIONS LAYOUT SHEET 2	SHEET 70 OF 78



PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-(57)	
FILE NAME: 07a158/Design/d07a158bdr.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
EXISTING CONDITIONS LAYOUT SHEET 3	SHEET 71 OF 78



CONSTRUCTION SPECIFICATIONS

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

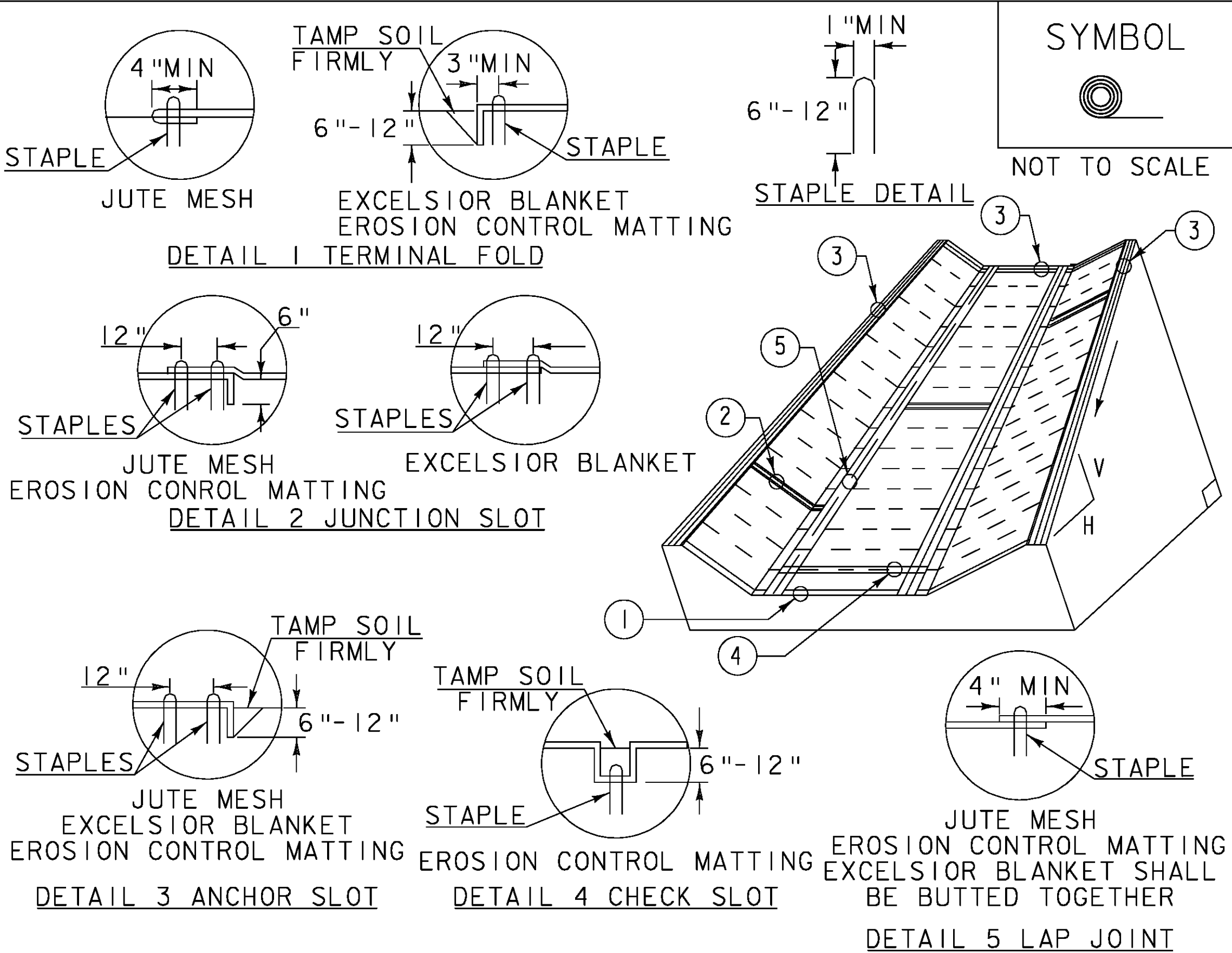
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

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

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

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION
CONTROL PRODUCT
(RECP) DITCH

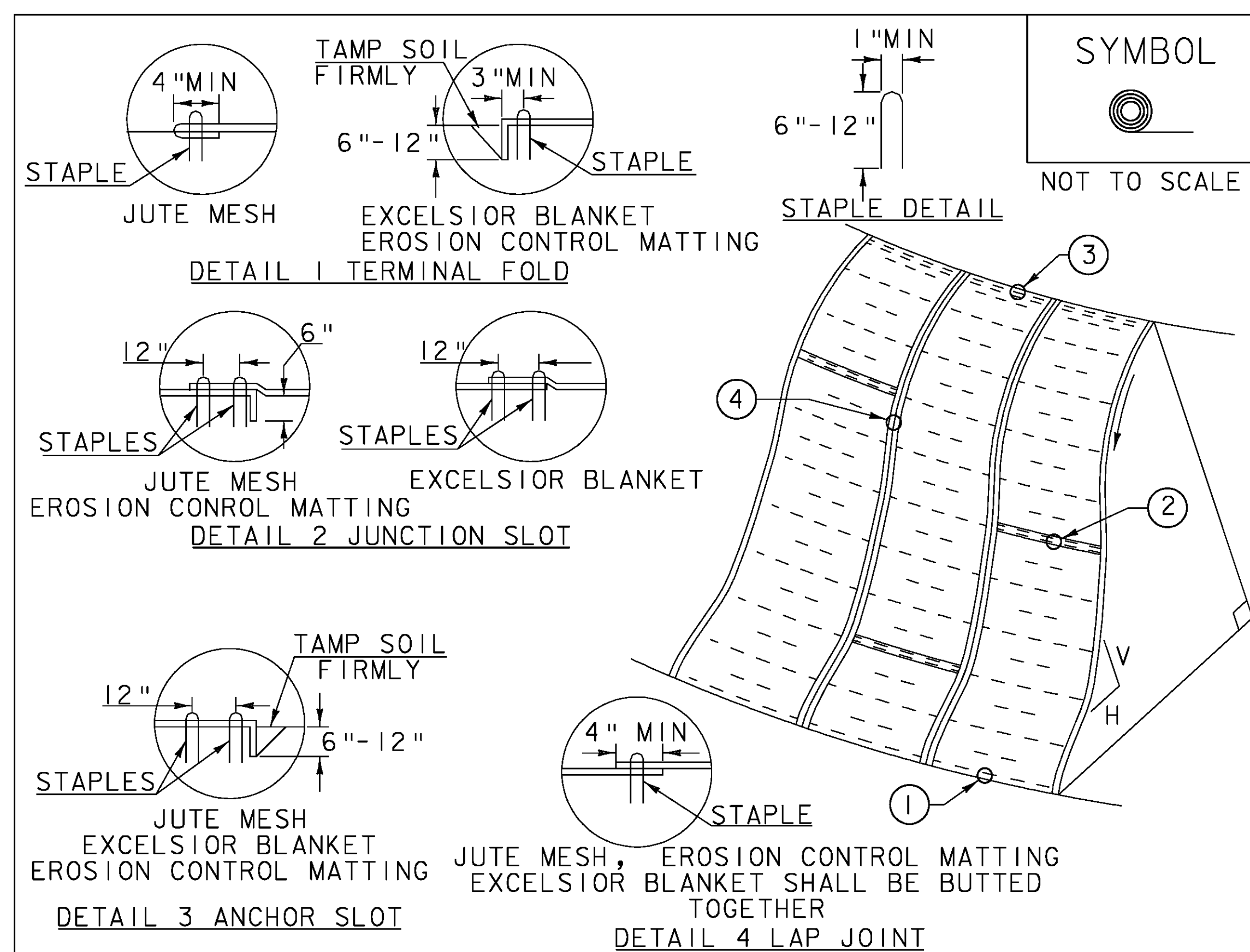
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20)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

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158ero.dgn
PROJECT LEADER: K. ROBBIE
DESIGNED BY: P. PELOQUIN
EPSC DETAIL SHEET 1

PLOT DATE: 01-JUN-2010
DRAWN BY: P. PELOQUIN
CHECKED BY: S. MENARD
SHEET 72 OF 78



CONSTRUCTION SPECIFICATIONS

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

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

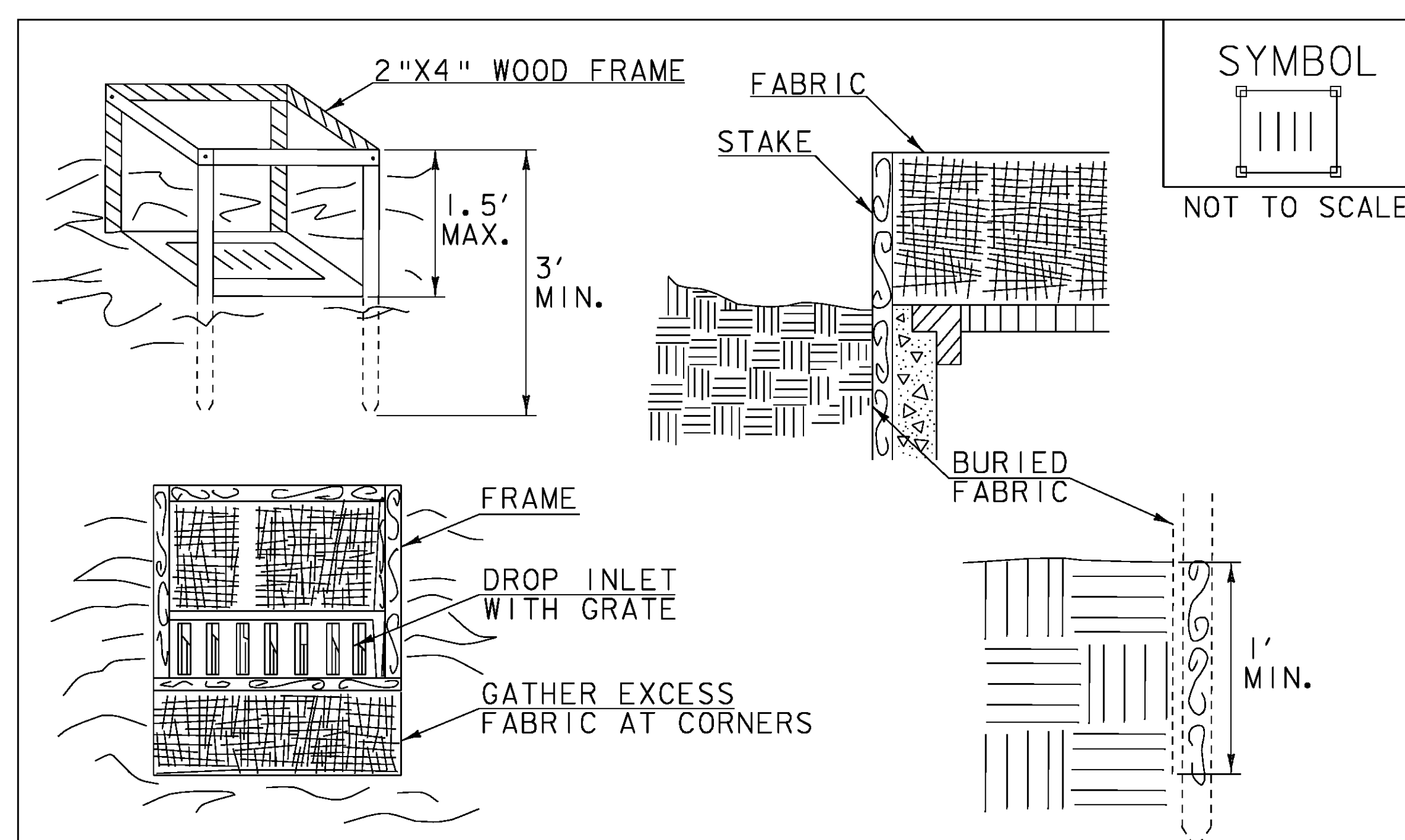
ROLLED EROSION
CONTROL PRODUCT
(RECP) SIDE SLOPE

NOTES:

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

REVISIONS

APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

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

FILTER FABRIC
DROP INLET
PROTECTION

NOTES:

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

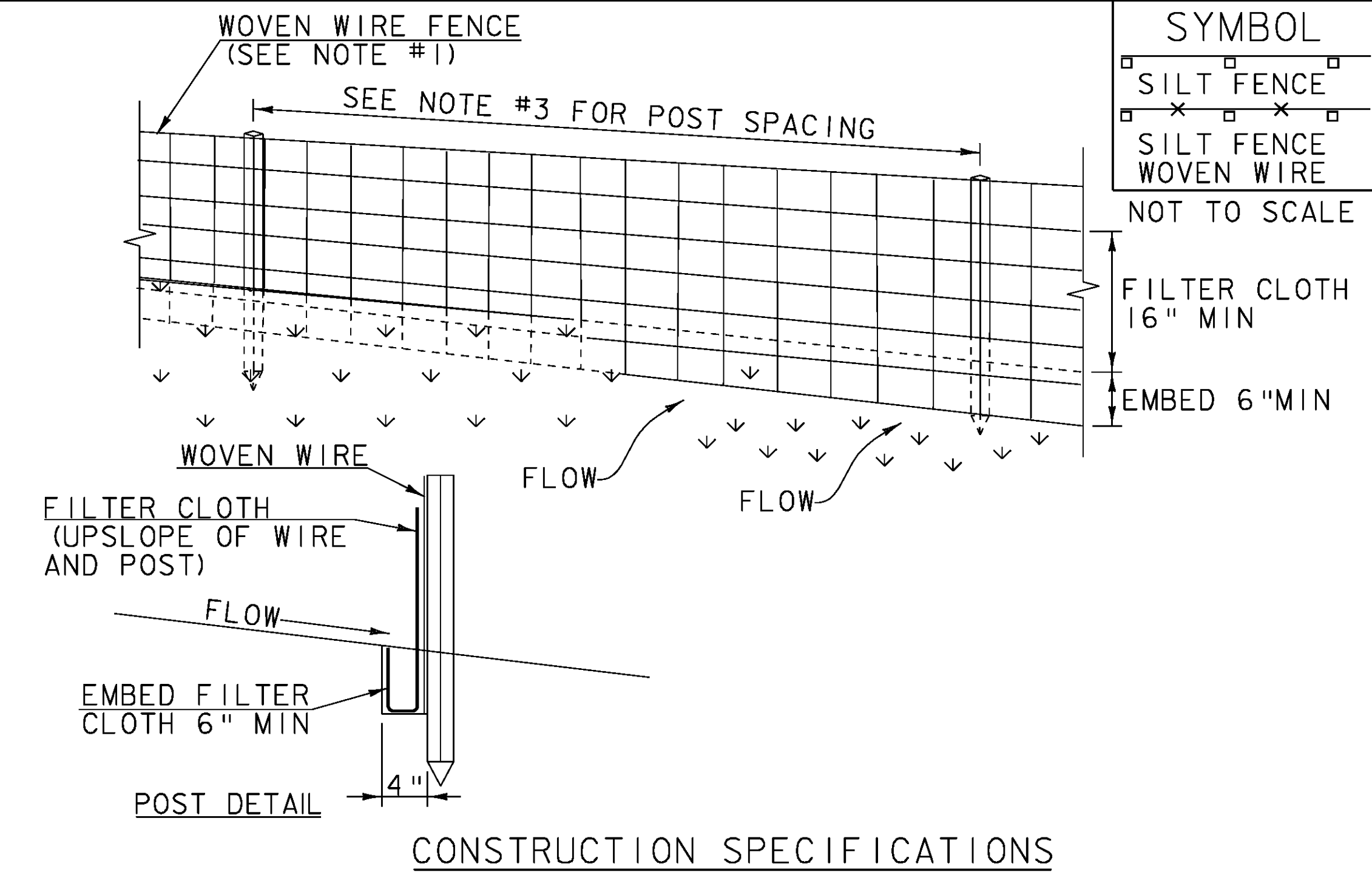
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS

MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158ero.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
EPSC DETAIL SHEET 2	SHEET 73 OF 78



1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFIL100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

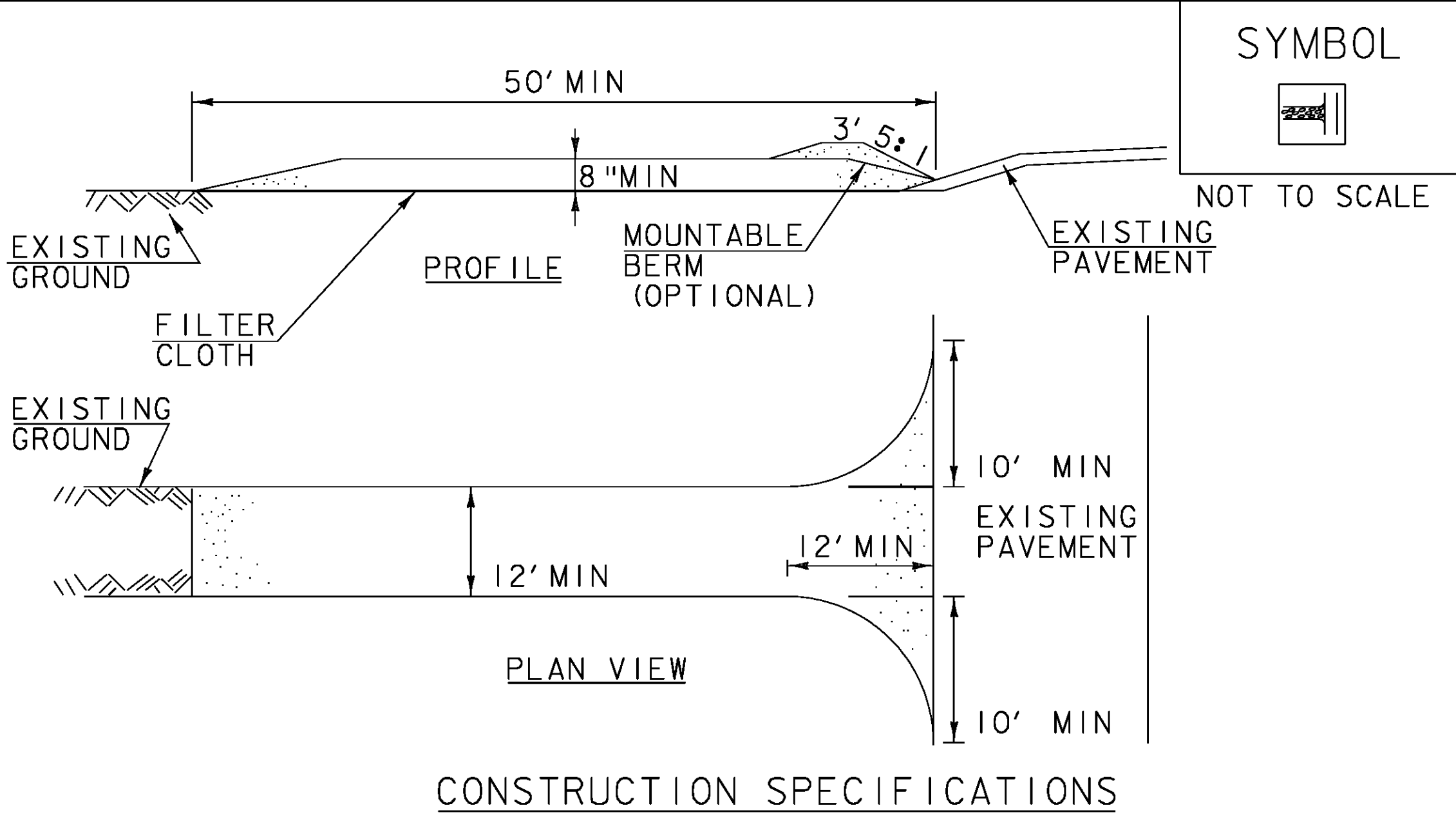
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

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

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

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



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

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

STABILIZED
CONSTRUCTION
ENTRANCE

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

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

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: IM 091-1(57)

FILE NAME: 07a158/Design/d07a158ero.dgn
PROJECT LEADER: K. ROBIE
DESIGNED BY: P. PELOQUIN
EPSC DETAIL SHEET 3

PLOT DATE: 26-MAY-2010
DRAWN BY: P. PELOQUIN
CHECKED BY: S. MENARD
SHEET 74 OF 78

- 1.RURAL SEED MIX: USE AS INDICATED IN THE PLAN
ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED
- 2.URBAN SEED MIX: USE AS INDICATED IN THE PLAN
ESTABLISHED LAWN AREAS DISTURBED BY THE CONSTRUCTION
- 3.ALL SEED MIXTURES: SHALL NOT HAVE A WEED COMPONENT
WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEEDS
- 4.FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES
DIRECTED BY THE ENGINEER
- 5.HAY MULCH: TO BE PLACED ON EARTH SLOPES AT A RATE
ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER
- 6.TOPSOIL: TO BE USED WITH SEED AS INDICATED
DIRECTED BY THE ENGINEER.
- 7.HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE
AND THE TYPE OF HYDROSEED WILL ULTIMATELY DEPEND ON
TYPES OF SOIL AMENDMENTS TO BE APPLIED
- 8.TURF ESTABLISHMENT: PLACING SEED, FERTILIZER AND
TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER PROMOTE
GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR
ROADWAYS AND TRANSPORTATION FACILITIES

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL OF EXPOSED LEDGE AT IDENTIFIED LOCATIONS FOR SAFETY ENHANCEMENTS.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 2.25 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE AREA IS MODERATELY MOUNTAINOUS THAT IS MOSTLY WOODED WITH OCCASIONAL OPEN AREAS. THERE IS A RESIDENCE ON THE EAST SIDE OF THE PROJECT, AND A FEW HOUSES AND COMMERCIAL BUILDINGS DOWN SLOPE TO THE EAST ON US ROUTE 5.

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

THERE ARE NO IDENTIFIABLE WATER SOURCES ON THE PROJECT SITE. THE CONNECTICUT RIVER IS APPROXIMATELY 2500' TO THE EAST.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOOD TREES ALONG WITH UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT DIRECTLY ALONG THE TOP OF THE LEDGE PLANNED TO BE REMOVED, AND THE DITCH LINE BETWEEN THE LEDGE AND PAVEMENT. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDHAM, VERMONT. SOILS ON THE PROJECT SITE ARE MACOMBER-TACONIC COMPLEX, VERY ROCKY, 25% TO 70% SLOPES, "K FACTOR" = 0.24. THE SOIL IS CONSIDERED MODERATELY ERODIBLE DUE TO SIGNIFICANT SLOPES.

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: NO
WETLANDS: NO

1.2.6 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED FOREST WITH STEEP SLOPES AT THE PROJECT SITE. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES. IF THIS IS THE CASE, IT SHOULD BE MINIMAL.

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

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

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES
PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA
EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

1.4.3 STABILIZE CONSTRUCTION EXIT
STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED AS NECESSARY.

1.4.4 INSTALL SILT FENCE
SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF
SWALE (STORM WATER FROM STREET COLLECTIONS DRAINAGE SYSTEM)

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK DAMS SHALL BE UTILIZED AS NECESSARY.

1.4.7 CONSTRUCT PERMANENT CONTROLS
TYPE I STONE FOR SLOPE LINING AND CHANNEL PROTECTION
SEED AND MULCH
DRAINAGE INLETS AND PIPING

1.4.8 STABILIZE EXPOSED SOILS
SEED AND MULCH
EROSION MATTING

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

1.4.10 STABILIZE SOIL AT FINAL GRADE
SEED AND MULCH
EROSION MATTING

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

1.4.11 DE-WATERING ACTIVITIES
NOT APPLICABLE.

1.4.12 INSPECT YOUR SITE
INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

1.5 SEQUENCE AND STAGING

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

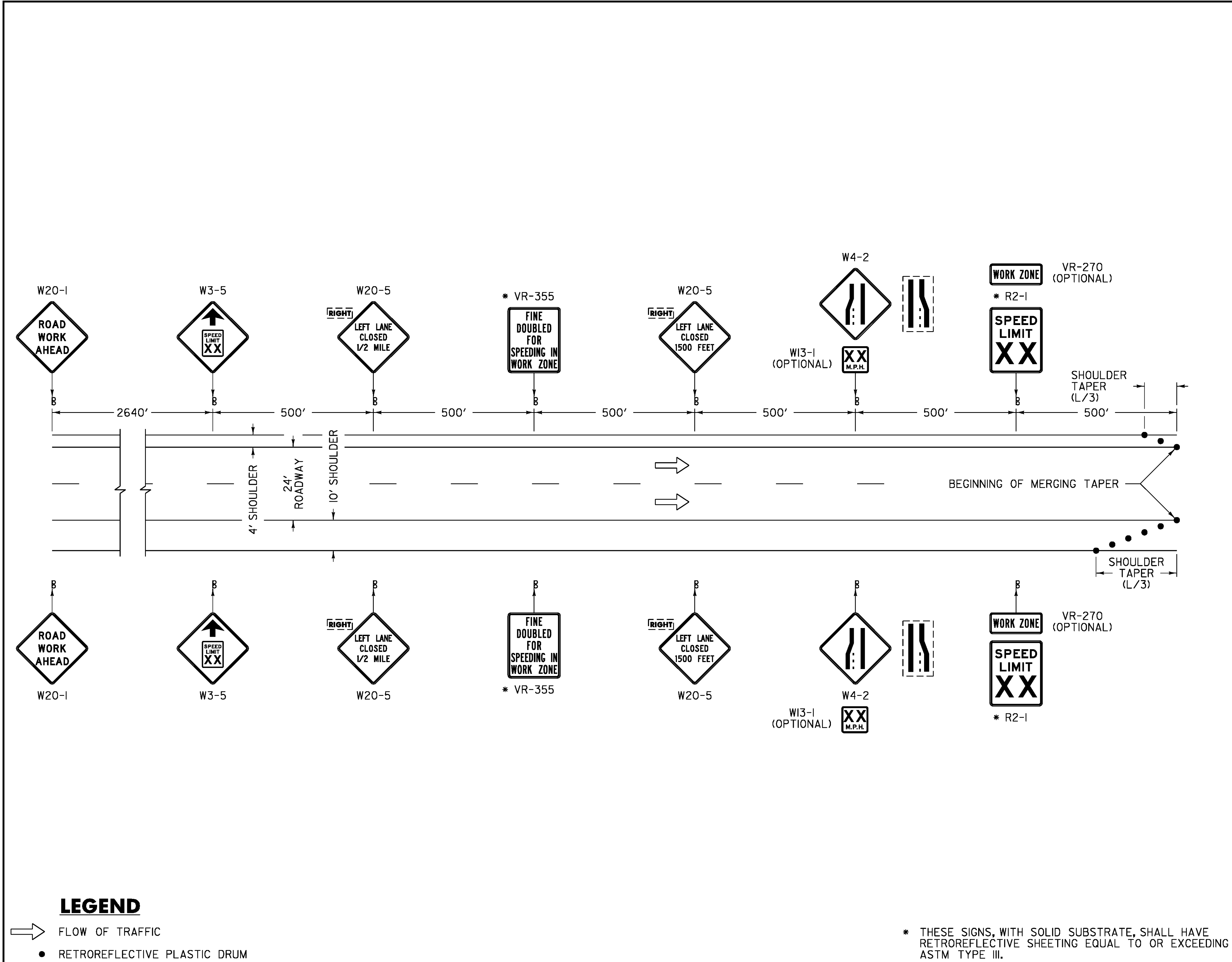
1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

1.5.3 UPDATES

PROJECT NAME:	ROCKINGHAM
PROJECT NUMBER:	IM 091-(157)
FILE NAME: 07a158/Design/d07a158ero.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBE	DRAWN BY: P. PELOUIN
DESIGNED BY: P. PELOUIN	CHECKED BY: S. MENARD
EPSC NARRATIVE	SHEET 76 OF 78



GENERAL NOTES:

- ALL SIGNS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" (SHS) BOOK PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
- SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
- ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM TYPE VI.
- SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
- POST MOUNTED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT, THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET BEHIND GUARDRAIL.
- PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
- WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
- THE CONTRACTOR SHALL HAVE SIGNS FOR CLOSURE OF RIGHT AND LEFT LANES ON PROJECT BEFORE WORK COMMENCES.
- THE "SPEED LIMIT XX" (R2-1) SIGN SHALL ONLY BE USED IF A TEMPORARY SPEED LIMIT CERTIFICATE HAS BEEN APPROVED. THE "SPEED LIMIT XX" (R2-1) AND OTHER RELATED SIGNS SHALL BE REMOVED OR COVERED WHEN WORK IS NOT IN PROGRESS AND ROADWAY IS NOT RESTRICTED.
- "FINE DOUBLE FOR SPEEDING IN WORK ZONE" (VR-355) SHALL ONLY BE USED IF TEMPORARY SPEED LIMIT CERTIFICATE HAS BEEN APPROVED.
- EXISTING SPEED LIMIT SIGNS SHALL BE COVERED WHEN REDUCED SPEED SIGNS ARE POSTED.
- FOR SHORT TERM PROJECTS (THREE DAYS OR LESS) WITH NO OFFICIAL TEMPORARY SPEED LIMIT, THE "SPEED LIMIT XX" (R2-1) AND "REDUCED SPEED LIMIT AHEAD" (W3-5) SIGNS MAY BE SUBSTITUTED WITH ADVISORY SPEED PLAQUES (W13-1) MOUNTED AS SUPPLEMENTAL SIGNS BELOW THE LANE ENDS MERGE (W4-2) SIGNS.
- FOR A LONG TERM CLOSURE (GREATER THAN THREE DAYS) WITH A NON-MOVING OPERATION, ALL SIGNS SHALL BE POST MOUNTED.
- FOR A LONG TERM CLOSURE WITH A MOVING OPERATION, THE "ROAD WORK AHEAD" (W20-1) SIGN SHALL BE POST MOUNTED. THE REMAINING SIGNS MAY BE PORTABLE AND SHALL MOVE AS THE WORK AREA CHANGES.
- FOR A SHORT TERM PROJECT (THREE DAYS OR LESS), SIGNS MAY BE POST MOUNTED OR PORTABLE.

PROJECT NAME: ROCKINGHAM	
PROJECT NUMBER: IM 091-1(57)	
FILE NAME: 07a158/Design/d07a158frm.dgn	PLOT DATE: 26-MAY-2010
PROJECT LEADER: K. ROBIE	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
TRAFFIC CONTROL SHEET 1	SHEET 77 OF 78



1. THE EXISTING TRAVEL LANE WIDTH SHOULD BE MAINTAINED IF POSSIBLE.
2. TEMPORARY TAPE EDGELINES SHALL BE APPLIED AND SHALL MAINTAIN A ONE FOOT MINIMUM DISTANCE FROM THE BARRIER WITH TWO FEET BEING DESIRABLE.
3. LINE STRIPING TARGETS (LST'S) SHALL BE PLACED TO THE OUTSIDE OF THE TEMPORARY TAPE AT 20 FOOT SPACING.
4. IF THE BARRIER IS PLACED SUCH THAT THE EXISTING LANE NEEDS TO BE MOVED ONTO THE SHOULDER THEN THE EDGELINE SHALL BE REMOVED AND TEMPORARY TAPE SHALL BE USED TO PROVIDE A 12 FOOT LANE.
5. THE END OF THE BARRIER FACING APPROACHING TRAFFIC SHALL MEET THE FOLLOWING REQUIREMENTS:
 - A. WHEN NO GUARDRAIL IS PRESENT THEN A 30 FOOT OFFSET FROM THE EDGE OF TRAVELED WAY SHOULD BE USED.
 - B. WHEN NO GUARDRAIL IS PRESENT AND A 30 FOOT OFFSET CANNOT BE ATTAINED THEN AN ENERGY ABSORPTION ATTENUATOR SHALL BE USED.
 - C. IF GUARDRAIL IS PRESENT THEN THE GUARDRAIL SHALL BE BROKEN AND THE BARRIER TAPERED TO A POINT OUTSIDE THE DEFLECTION DISTANCE OF THE GUARDRAIL.

3. FOR LONG TERM CLOSURES, DASHED LANE LINE REMOVAL SHALL BEGIN 750 FEET IN ADVANCE OF THE BEGINNING OF THE SHOULDER TAPER.
4. CHANNELIZING DEVICES OTHER THAN RETROREFLECTIVE PLASTIC DRUMS SHALL BE ALLOWED ALONG TANGENT SECTIONS AS LONG AS THEY CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ARE APPROVED BY THE ENGINEER. THE TYPE OF DEVICE SHALL BE CONSISTENT THROUGHOUT THE TANGENT SECTION.
5. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADE AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
6. PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY OR 50 FEET BEYOND THE END OF BARRIER WHICHEVER APPLIES.
7. THE ARROW PANEL SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, AS CLOSE AS PRACTICAL TO THE BEGINNING OF THE MERGING TAPER.
8. THE "ROAD WORK NEXT XX MILES" SIGN (G20-1) SHALL BE INSTALLED IN ADVANCE OF TEMPORARY TRAFFIC CONTROL ZONES THAT ARE MORE THAN TWO MILES IN LENGTH, OR AS DIRECTED BY THE ENGINEER. DISTANCES SHALL BE STATED TO THE NEAREST WHOLE MILE.
9. TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
$$L = WS \text{ FOR POSTED SPEEDS OF 45 MPH OR GREATER.}$$
$$L = WS^2/60 \text{ FOR POSTED SPEEDS OF 40 MPH OR LESS.}$$

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET (TYPICAL)
S = POSTED SPEED IN MPH

POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤ 40	90	320	160	1: 9	305	40	80
45	150	540	270	1: 9	360	45	90
50	170	600	300	1: 11	425	50	100
55	185	660	330	1: 13	495	55	110
60	200	720	360	1: 13	570	60	120
65	215	780	390	1: 13	645	65	130



* WHEN FLAGGER IS USED; TO BE REMOVED IF
FLAGGING STOPS FOR 15 MINUTES OR MORE.

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DESIGNED BY: P. PELOQUIN	CHECKED BY: S. MENARD
TRAFFIC CONTROL SHEET 2	SHEET 78 OF 78