

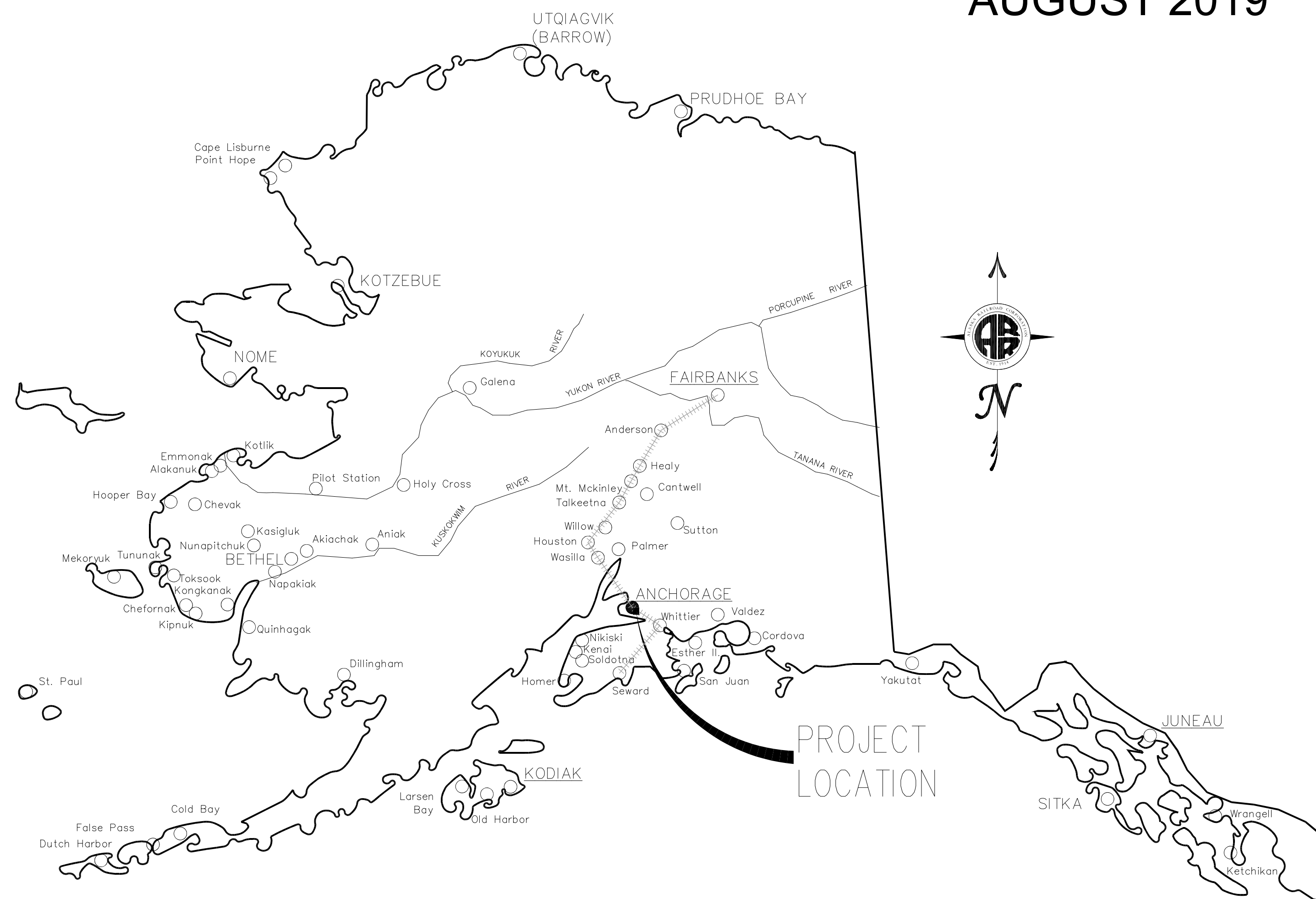


ALASKA RAILROAD CORPORATION
ENGINEERING SERVICES

P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

MP 103 EARTHQUAKE DAMAGE IMPROVEMENT PLANS

AUGUST 2019



ALASKA MAP

NOT TO SCALE

INDEX OF DRAWINGS

SHEET	TITLE
1	COVER SHEET
2	TYPICAL SECTIONS AND QUANTITIES
3-5	SITE PLANS
6-12	TYPICAL SECTIONS

CONSULTANT:



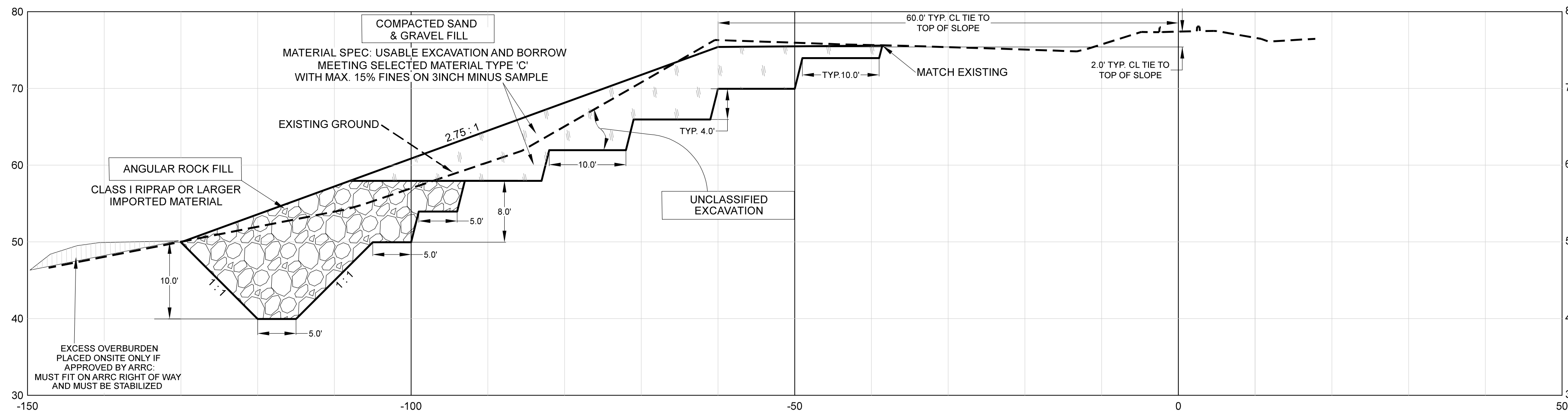
ALL POINTS NORTH LLC
 17600 E. RAMBLING ROAD
 PALMER, AK 99645-4207
 (907) 746-4185
 www.allpointsnorth.us



8-27-2019

REV.	DATE	BY	REVISION

ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
PROJECT : MP103 EARTHQUAKE DAMAGE IMPROVEMENT PLANS		
TITLE: COVER SHEET		
DESIGNED BY: MAS	SCALE : AS NOTED	APP. NO.: -
DRAWN BY: RGJ	DATE : 8-27-2019	ACAD FILE: 19-57
CHECKED BY: GT		DWG NO. 1 OF 12
APPROVED BY: IT		

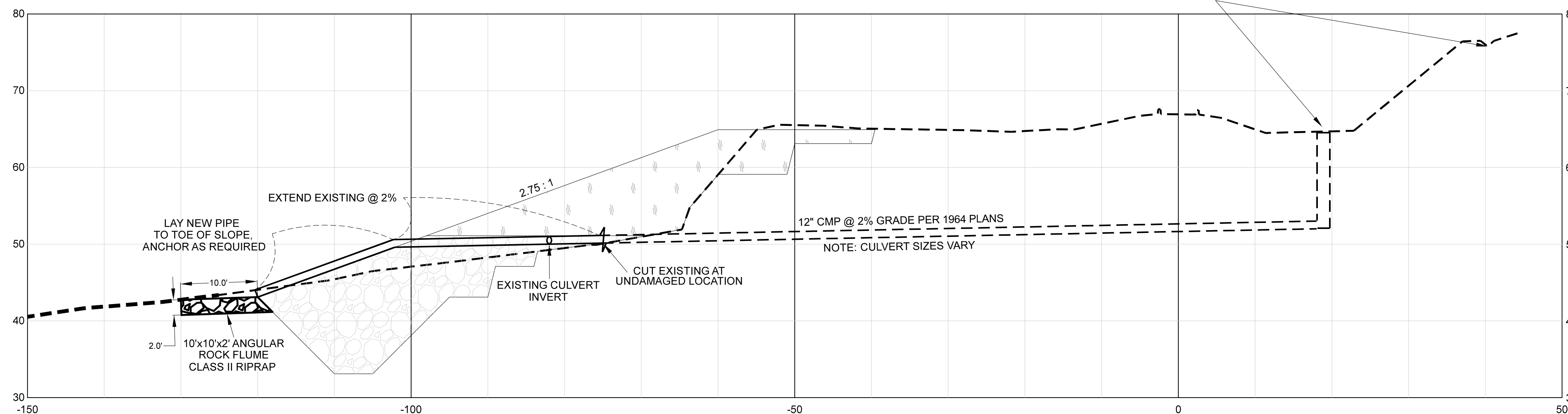


ESTIMATED SLOPE STABILIZATION QUANTITIES

STATION	ANGULAR ROCK FILL	COMPACTED SAND/GRAVEL	EXCAVATION
STA 5217+50 - 5220+00	2545 C.Y.	1918 C.Y.	3379 C.Y.
STA 5226+25 - 5230+25	4596 C.Y.	5571 C.Y.	5238 C.Y.
STA 5232+50 - 5235+25	2750 C.Y.	3482 C.Y.	7743 C.Y.
TOTALS:	9891 C.Y.	10971 C.Y.	16360 C.Y.

A TYPICAL SLOPE STABILIZATION

SCALE: 1" = 10 FEET



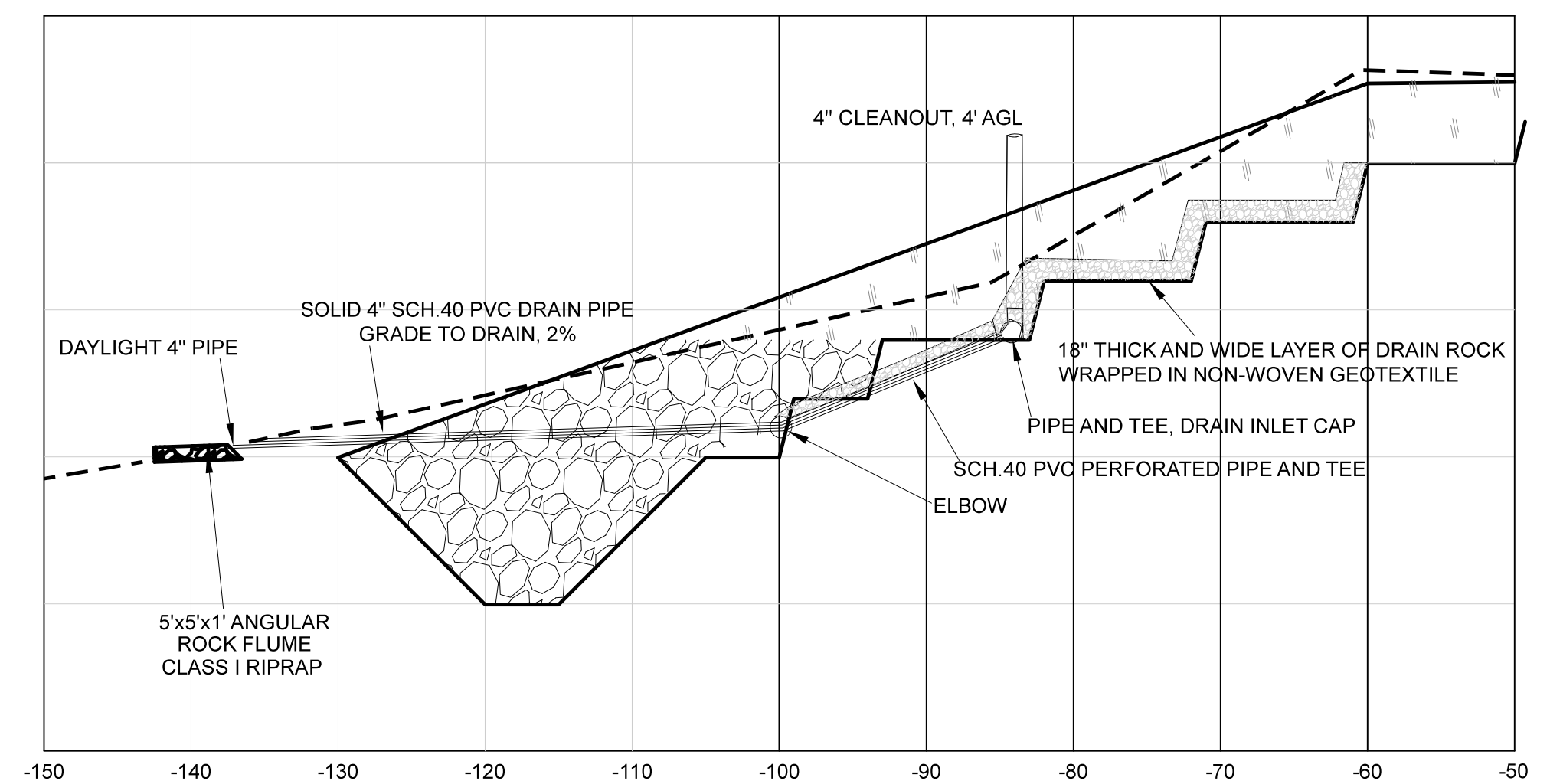
ESTIMATED UNDERDRAIN OUTFALL QUANTITIES

STATION	CMP DIAMETER	NEW PIPE EXTENSION LENGTH	CLASS II RIPRAP
5219+36	12"	80 L.F.	15 C.Y.
5224+36	12"	60 L.F.	15 C.Y.
5226+38	18"	60 L.F.	15 C.Y.
5229+38	12"	80 L.F.	15 C.Y.
5234+40	24"	60 L.F.	15 C.Y.

DRAINAGE INLET AND DITCHLINE REHABILITATION UPHILL OF TRACKS ALL REQUIRED, SEE PLAN

B TYPICAL UNDERDRAIN OUTFALL DETAIL

SCALE: 1" = 10 FEET



C TYPICAL BLANKET/BENCH DRAIN

SCALE: 1" = 10 FEET

INSTALL AS REQUIRED AT SEEPAGES, AS DIRECTED ARRC
 FOUR ESTIMATED: ONE AT EACH OF THE AREAS:
 5218+00 - 5219+50
 5227+00 - 5229+50
 5231+00 - 5232+00
 5232+50 - 5234+50

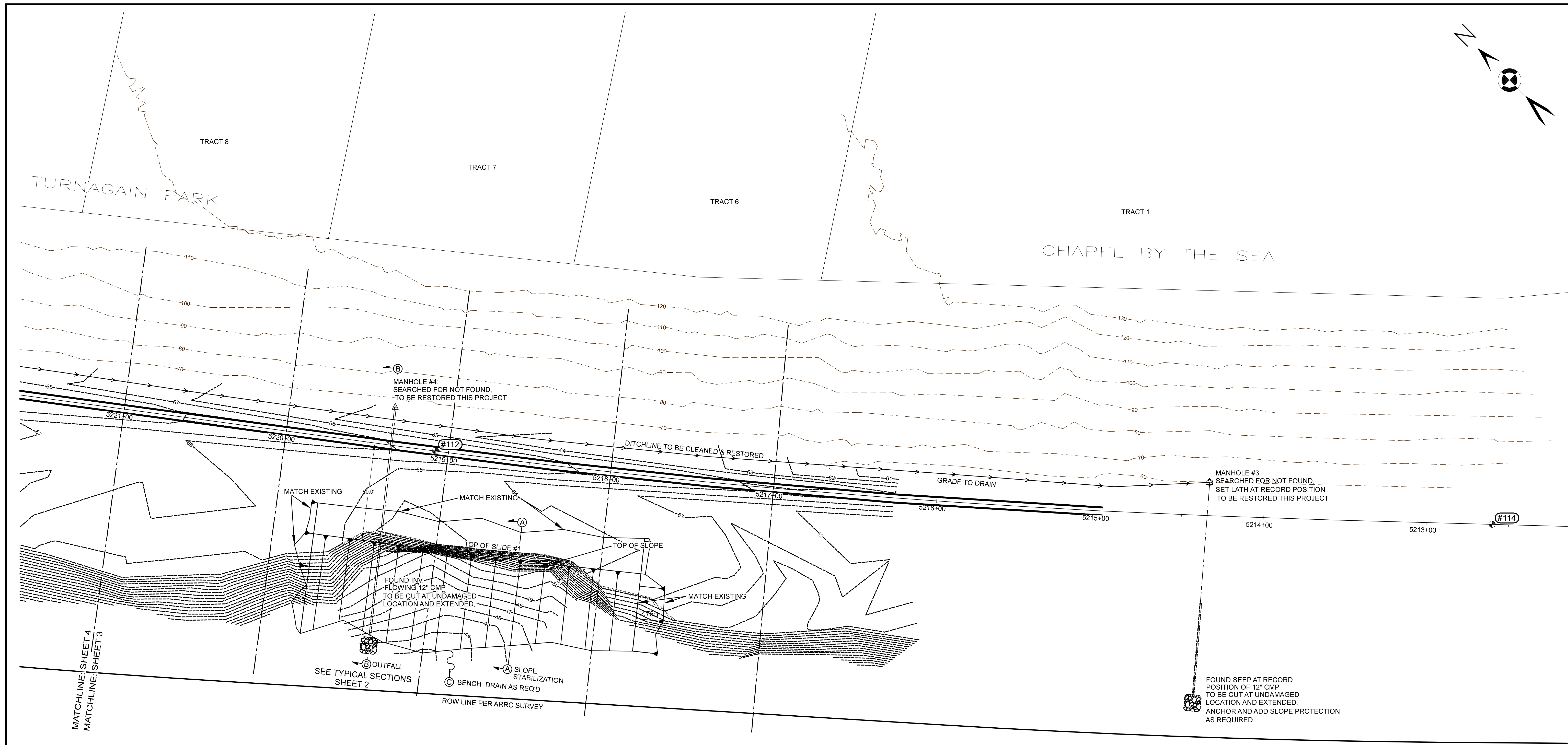
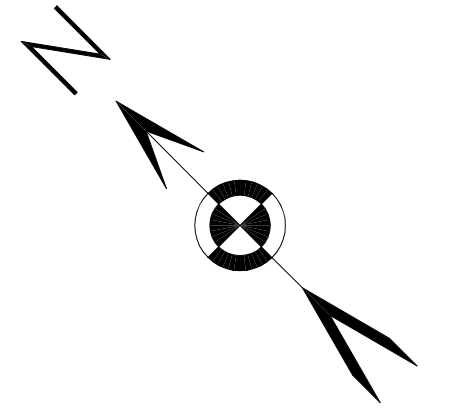
NOTE: THESE SECTIONS WERE BASED UPON THE THE GEOTECHNICAL RECOMMENDATIONS FOUND IN REPORT FROM GOLDER ASSOCIATES, ANCHORAGE AK, DATED JULY 1, 2019, CREATED FOR THIS PROJECT.

SYM.	REVISIONS	DATE	BY



CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57
PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE		
SHEET TITLE	IMPROVEMENT PLANS		

SCALE	1" = 10 FEET
DATE	8/27/2019
SHEET NO	2 OF 12



OWNER: STATE OF ALASKA

SURVEY CONTROL NOTES

- HORIZONTAL DATUM AND VERTICAL DATUM IS ALASKA STATE PLANE COORDINATE SYSTEM ZONE 4, NAD83(2011), GEOID12B BASED ON OPUS PROCESSING OF CONTROL POINT 100.
- TOPOGRAPHIC INFORMATION AND IMAGERY GATHERED USING TRADITIONAL SURVEYING AND JAN. 2019 APN UAV DATA PROCESSED USING AGISOFT PHOTOSCAN PROFESSIONAL.
- CENTERLINE AND STATIONING PER ARRC CAD.
- PROPERTY LINES SHOWN HEREON PER MUNICIPALITY OF ANCHORAGE GIS UNLESS OTHERWISE NOTED. CONSTRUCTION OUTSIDE OF ARRC ROW IS NOT PERMITTED



LEGEND

- CONTROL POINT, SEE POINT LIST
- 1' CONTOURS, APN GROUND SURVEY, JANUARY 2019
- 10' CONTOURS, MUNI LIDAR DATA (BEFORE EARTHQUAKE)
- MANHOLE & CULVERT PER SURVEY IF FOUND. PER SHEET 6, POTTER HILL REALIGNMENT, 1964 PLANS IF SEARCHED FOR AND NOT FOUND.
- PROPOSED IMPROVEMENTS, THIS PLAN

SURVEY CONTROL POINT TABLE

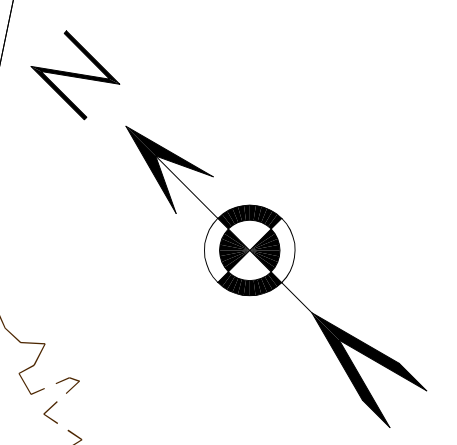
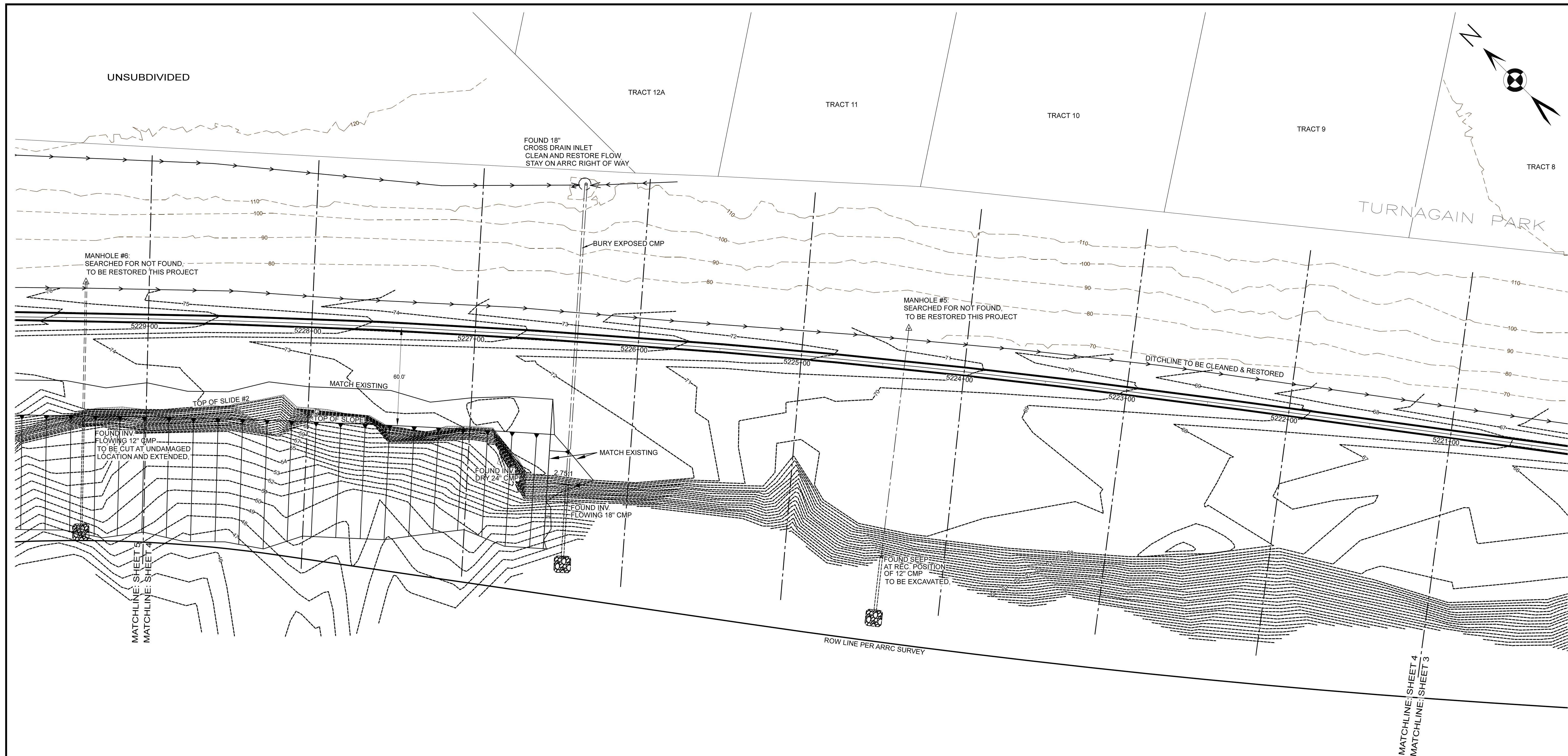
Point	Northing	Easting	Elevation	Description
100	2590993.30	1667683.21	136.81	BASE 5/8" REBAR
103	2590857.43	1667592.56	84.60	SET PK IN TIE
104	2590753.33	1667718.73	82.92	SET PK IN TIE
106	2590549.08	1667954.72	79.87	SET PK IN TIE
108	2590256.22	1668252.19	75.89	SET PK IN TIE
110	2589923.43	1668542.77	71.17	SET PK IN TIE
112	2589528.11	1668847.47	66.76	SET PK IN TIE
114	2589040.00	1669273.13	60.67	SET PK IN TIE

SYM.	REVISIONS	DATE	BY



CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57
PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE		
SHEET TITLE	IMPROVEMENT PLANS		

SCALE	1" = 30 FEET
DATE	8/27/2019
SHEET NO	3 OF 12



UNSUBDIVIDED

TRACT 12A

TRACT 11

TRACT 10

TRACT 9

TRACT 8

TURNAGAIN PARK

FOUND 18" CROSS DRAIN INLET
CLEAN AND RESTORE FLOW
STAY ON ARRC RIGHT OF WAY

BURY EXPOSED CMP

MANHOLE #6:
SEARCHED FOR NOT FOUND.
TO BE RESTORED THIS PROJECT

MANHOLE #5:
SEARCHED FOR NOT FOUND.
TO BE RESTORED THIS PROJECT

DITCHLINE TO BE CLEANED & RESTORED

TOP OF SLIDE #2

MATCH EXISTING

MATCH EXISTING

FOUND INV. FLOWING 12" CMP.
TO BE CUT AT UNDAAGED
LOCATION AND EXTENDED.

FOUND INV. DRY 24" CMP

FOUND INV. FLOWING 18" CMP

FOUND SLEEPER AT REC POSITION
OF 12" CMP
TO BE EXCAVATED

MATCHLINE: SHEET 5
MATCHLINE: SHEET 4

MATCHLINE: SHEET 4
MATCHLINE: SHEET 3

ROW LINE PER ARRC SURVEY

OWNER: STATE OF ALASKA

OWNER: STATE OF ALASKA

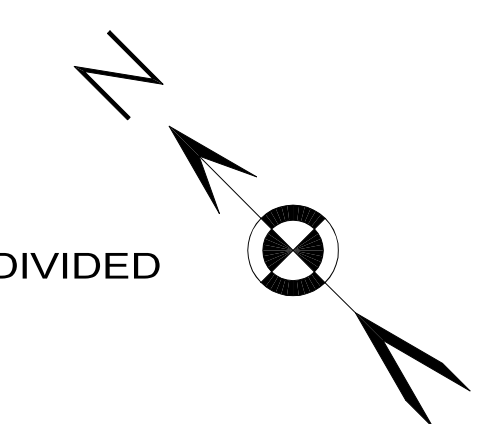
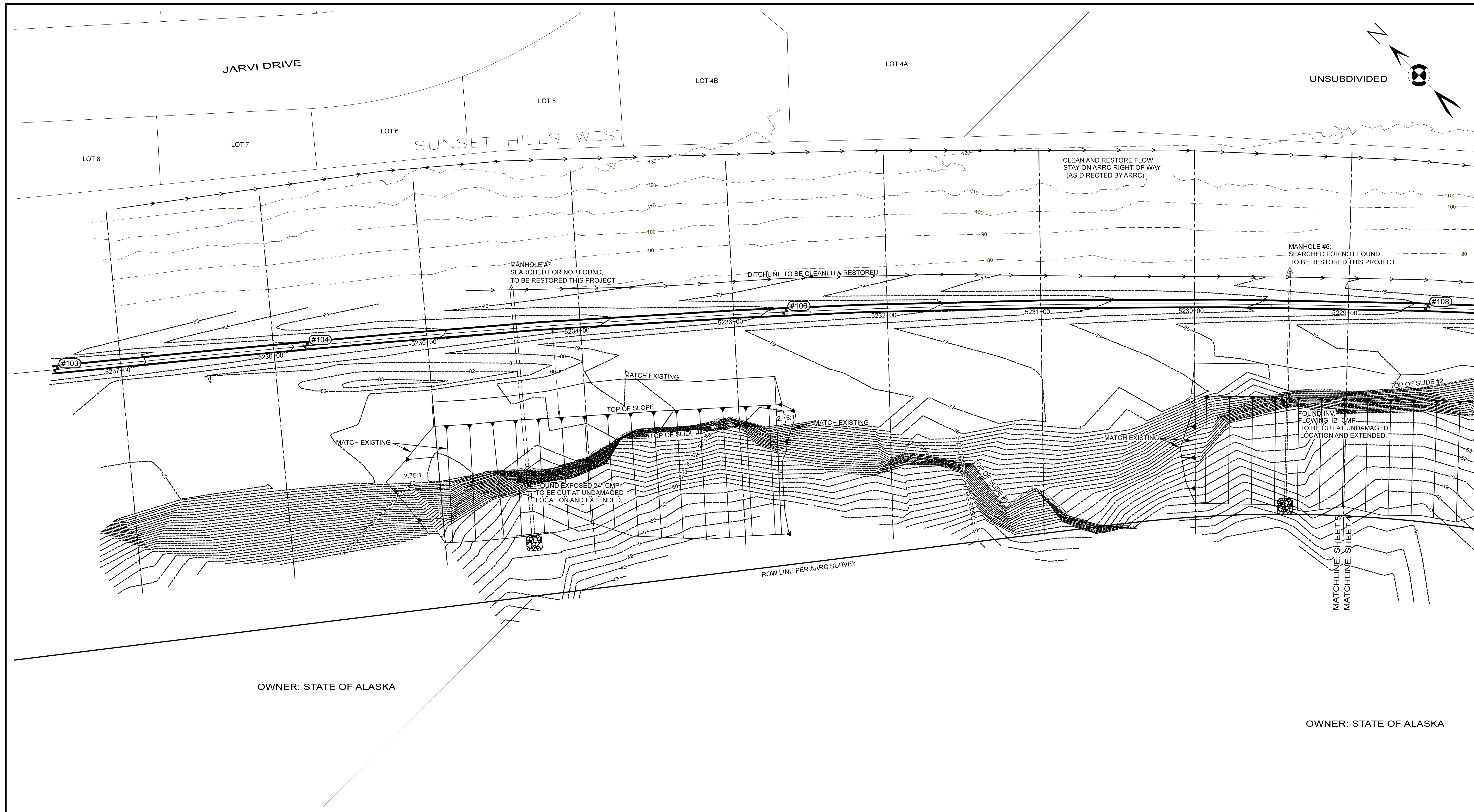


SCALE: 1" = 30 FEET

LEGEND

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					CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57
					PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE		
					SHEET TITLE	IMPROVEMENT PLANS		
SYM.	REVISIONS	DATE	BY					
SCALE: 1" = 30 FEET DATE: 8/27/2019 SHEET NO: 4 OF 12								



OWNER: STATE OF ALASKA

OWNER: STATE OF ALASKA



SCALE: 1" = 30 FEET

LEGEND

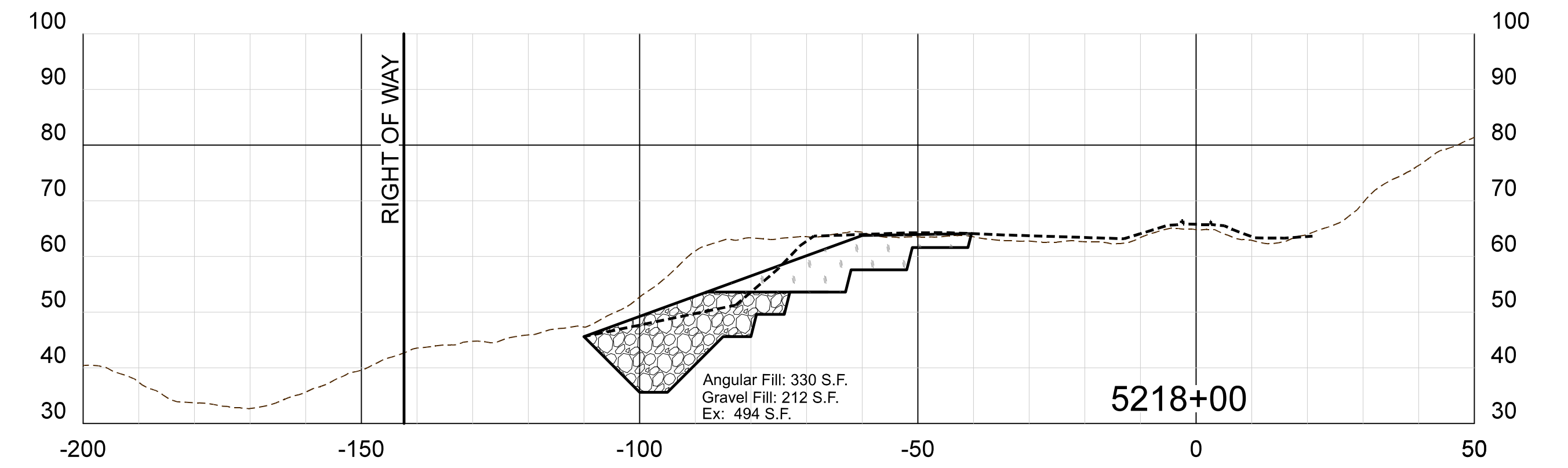
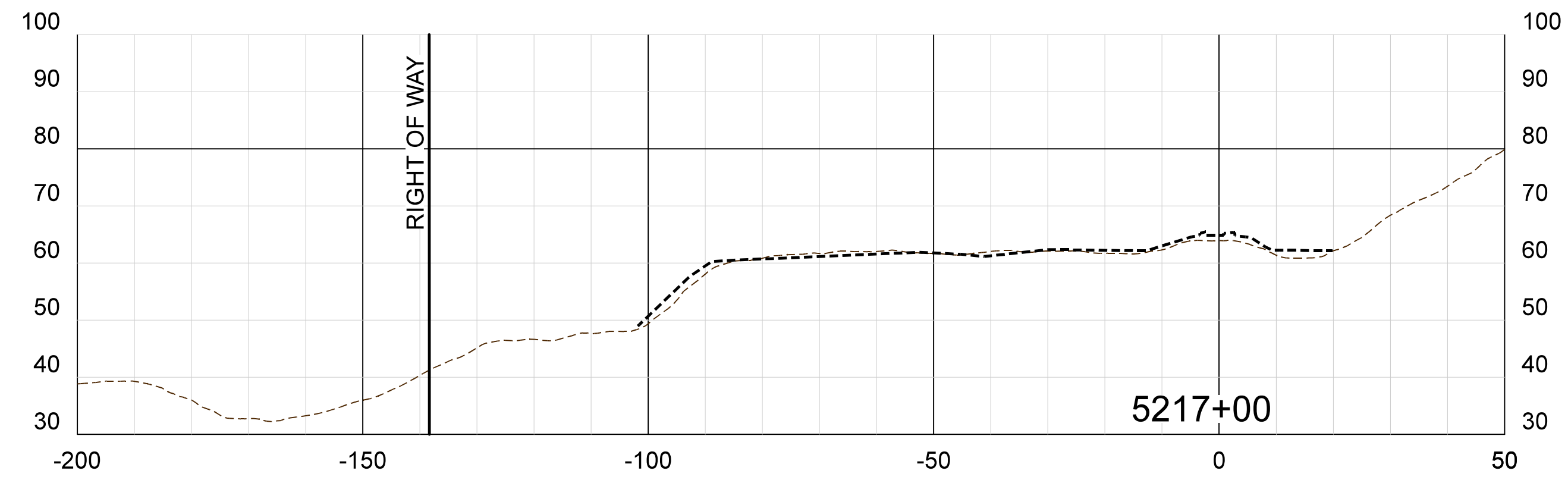
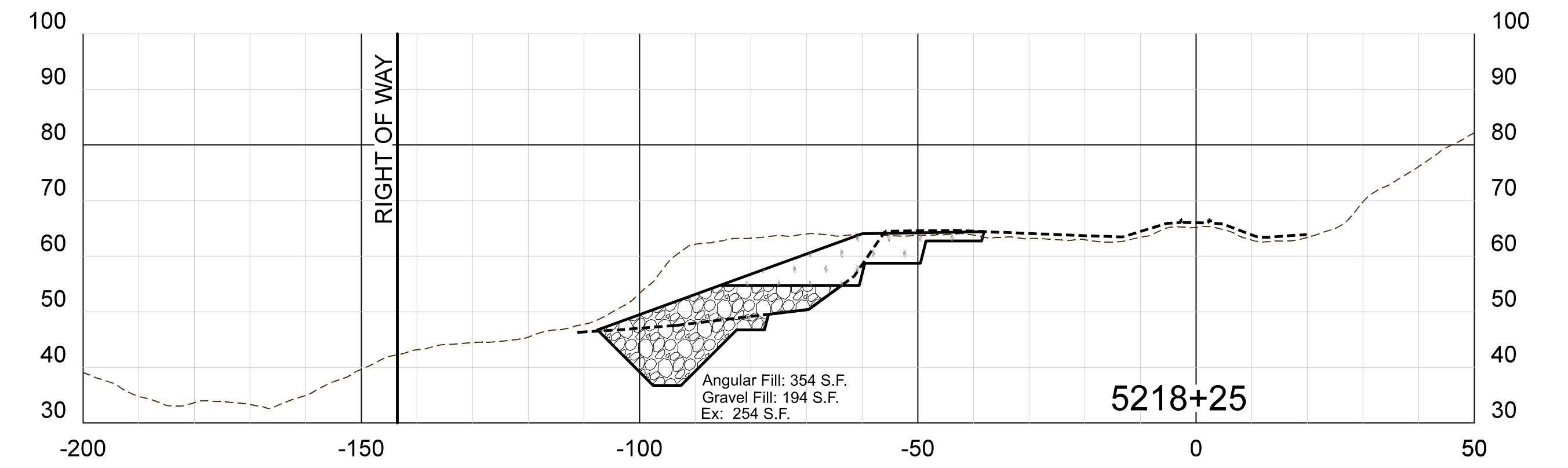
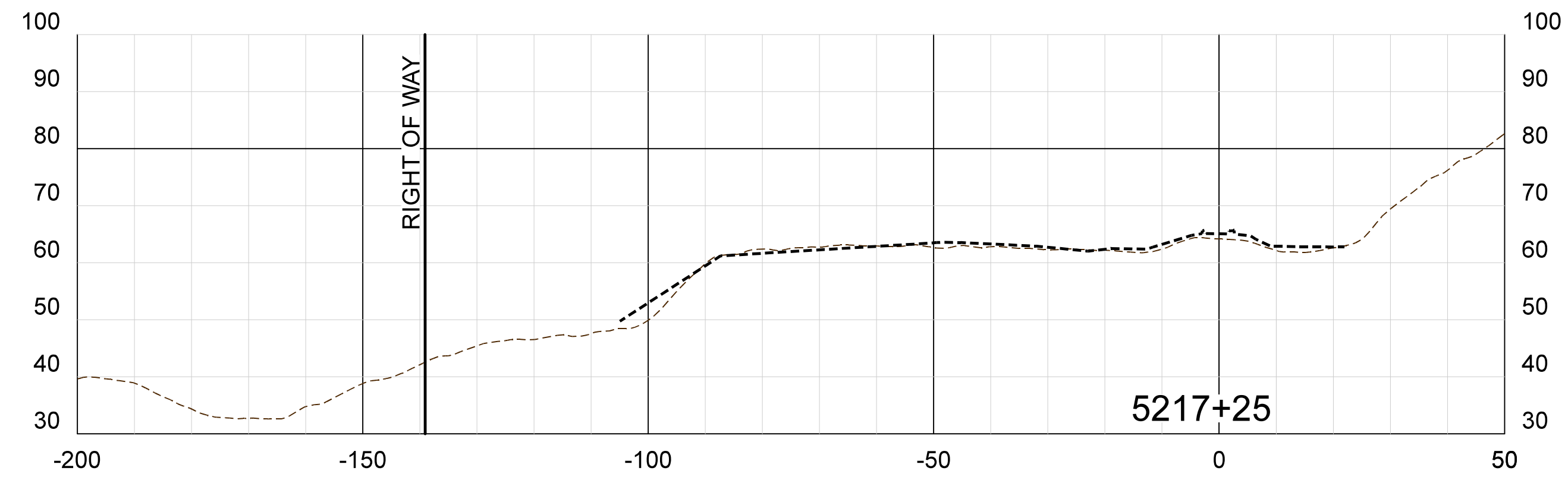
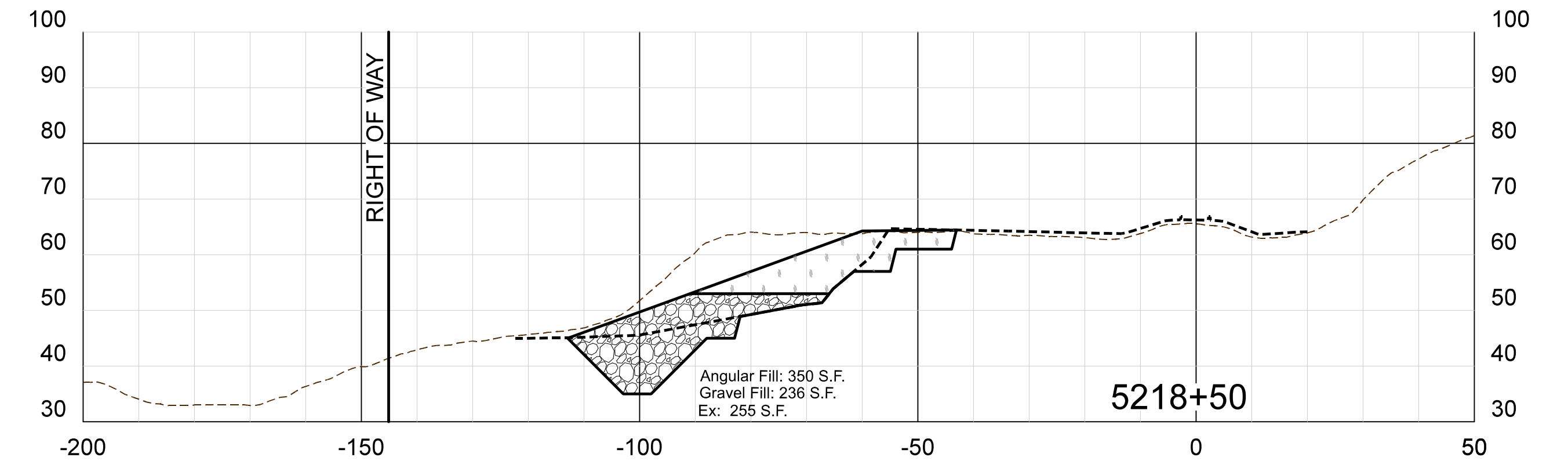
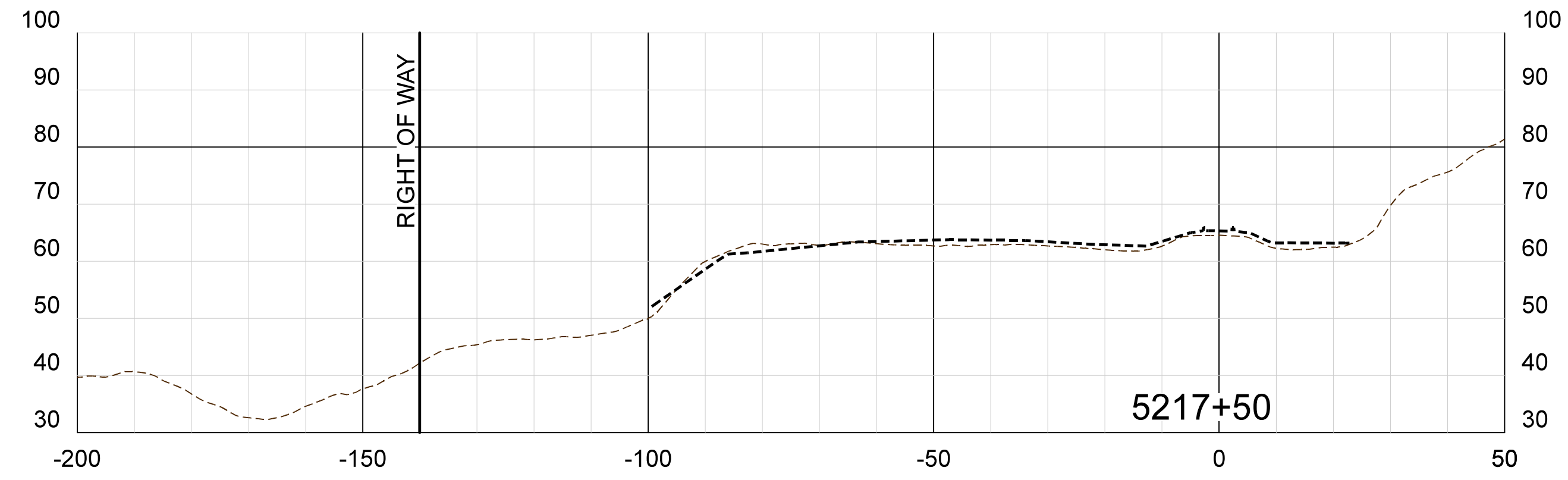
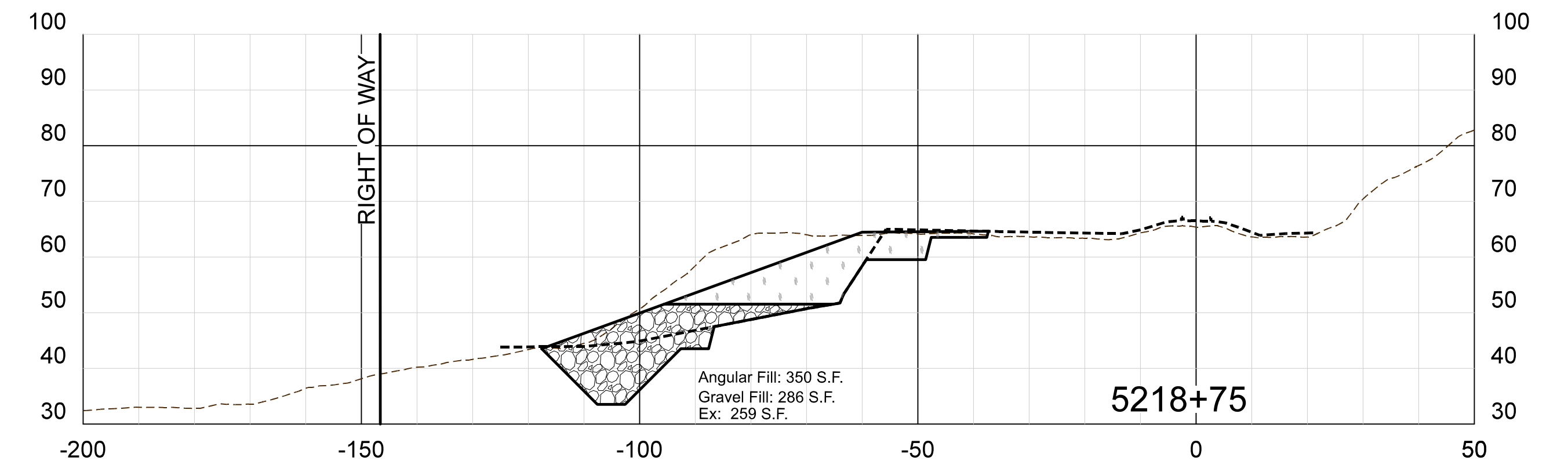
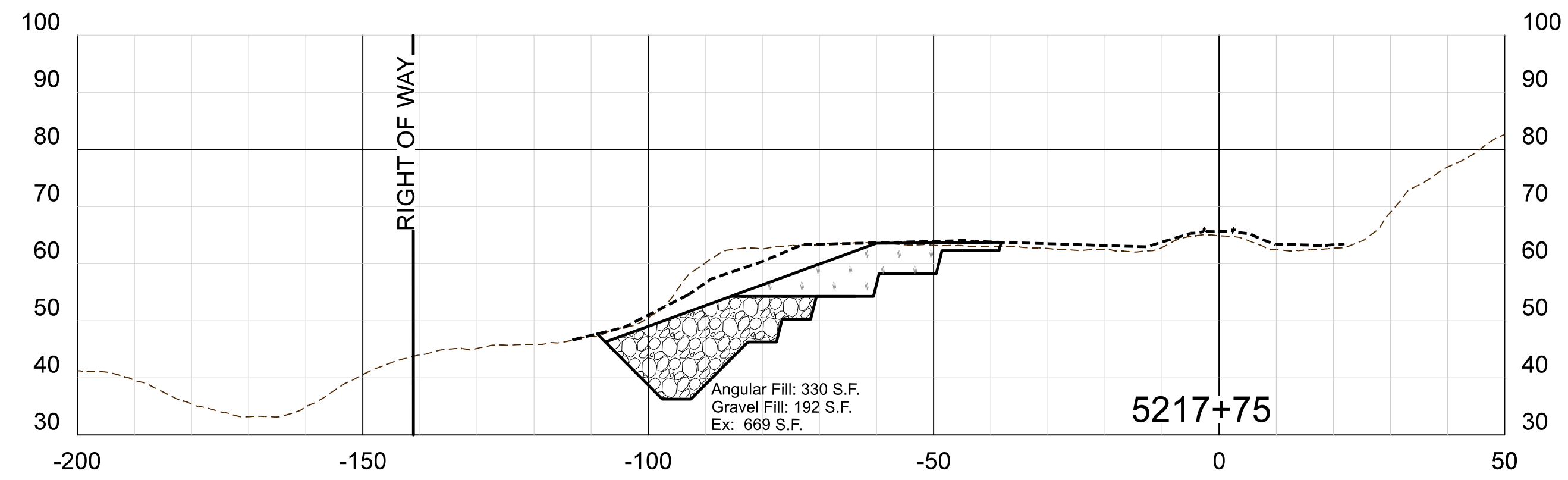
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SYM.	REVISIONS	DATE	BY



CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57
PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE		
SHEET TITLE	IMPROVEMENT PLANS		

SCALE	1" = 30 FEET
DATE	8/27/2019
SHEET NO	5 OF 12

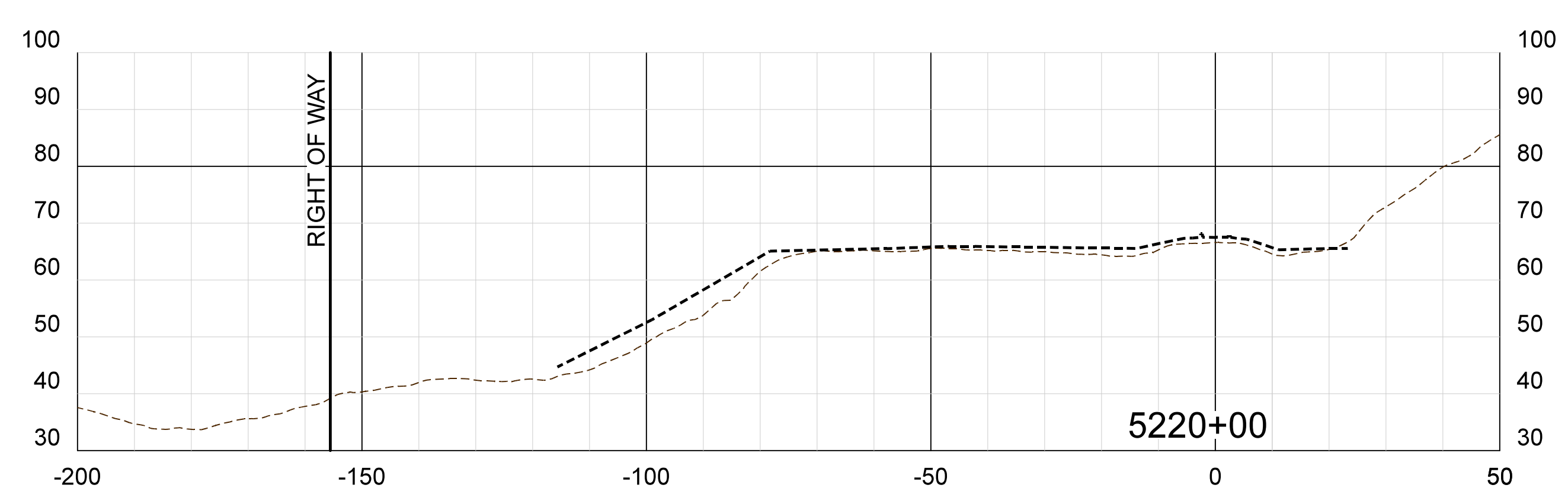
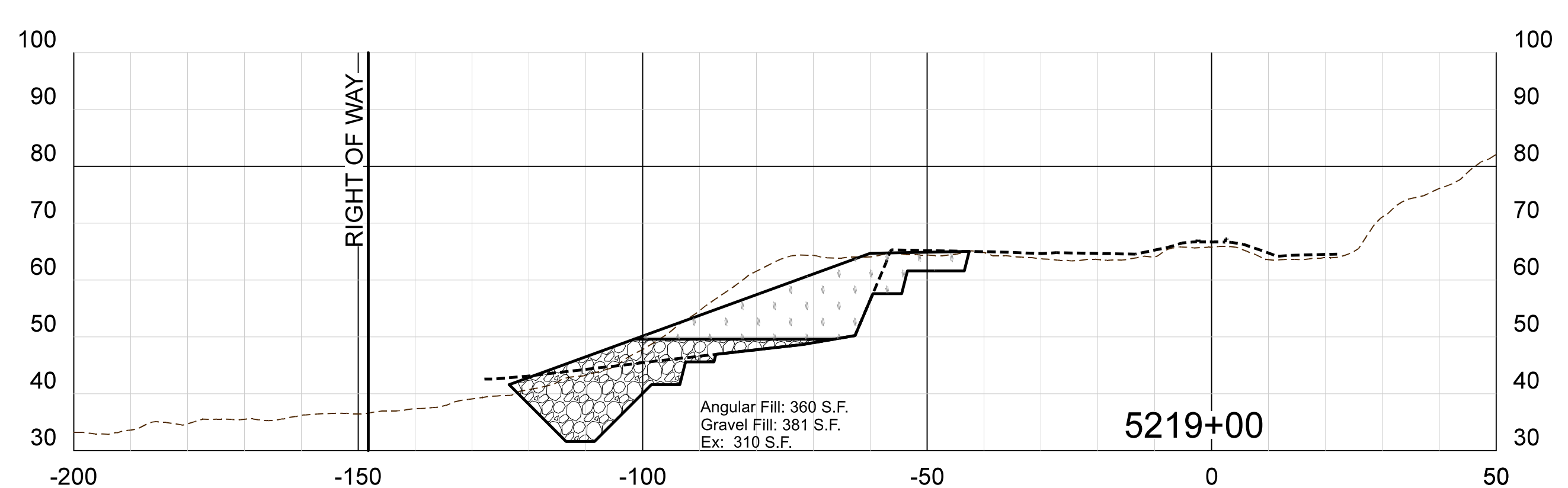
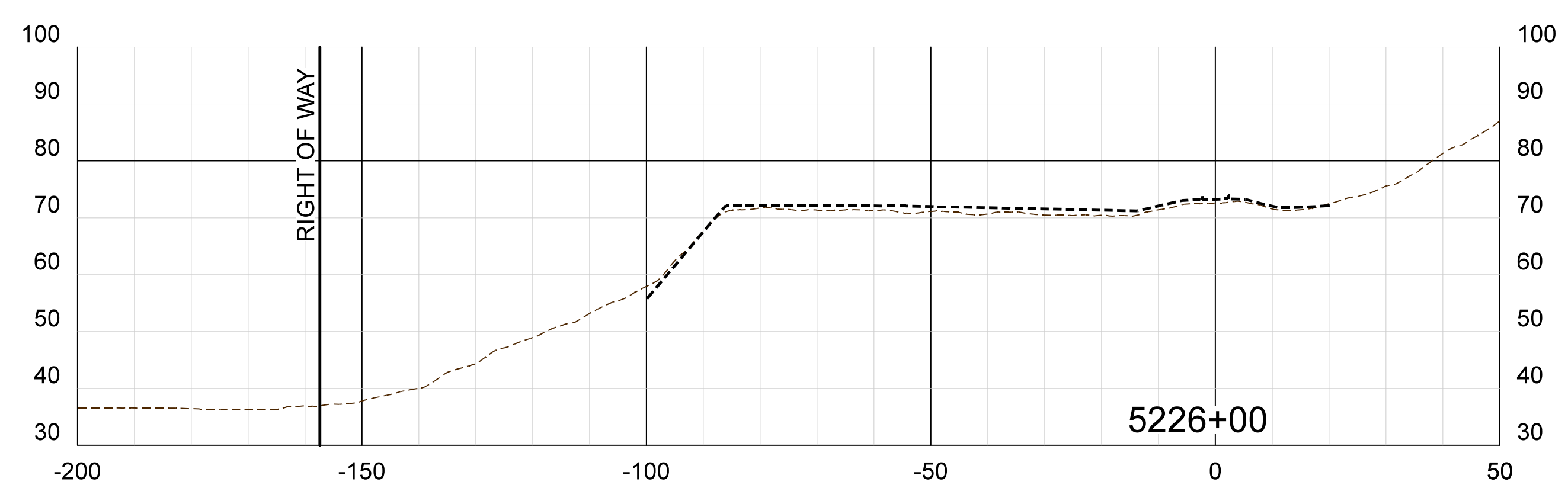
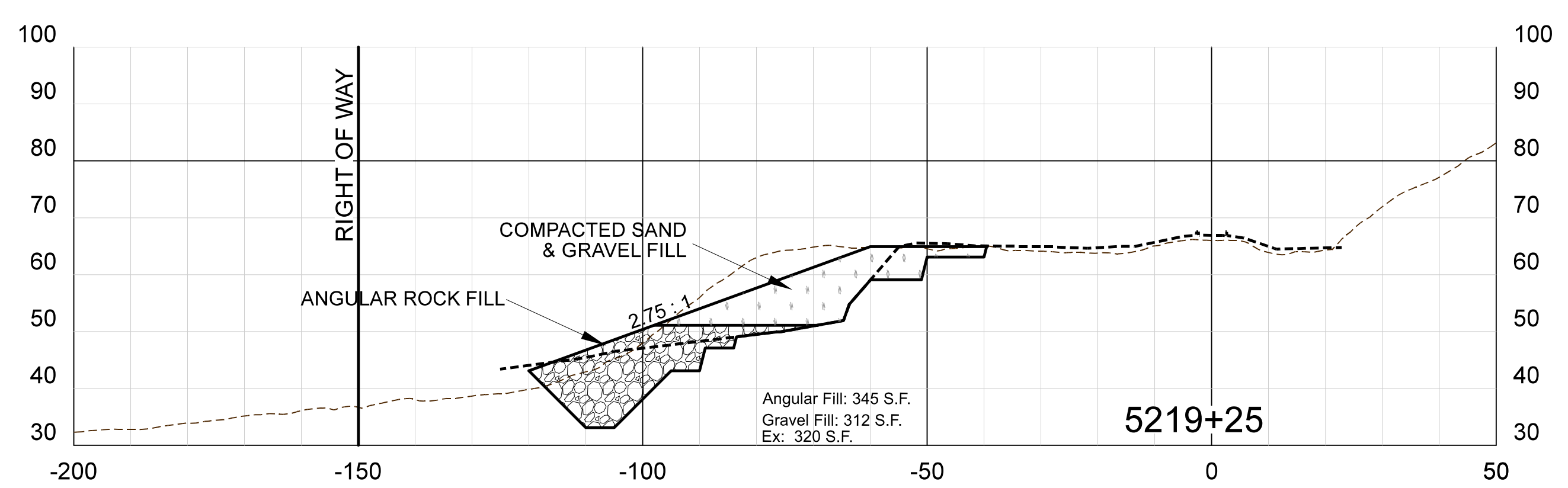
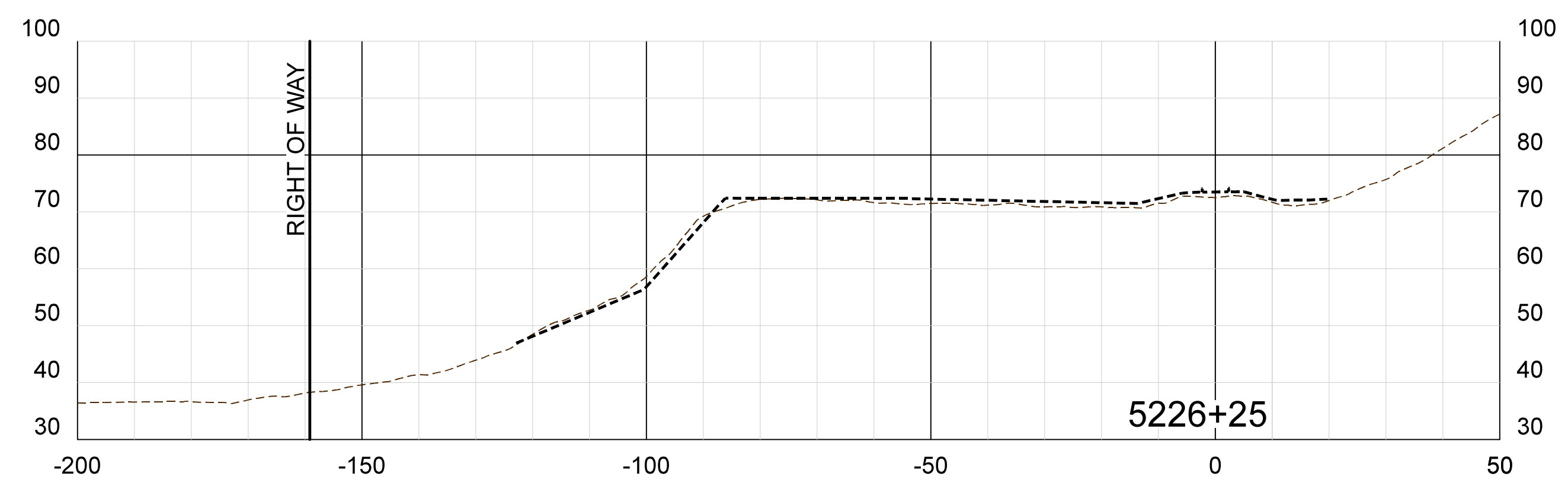
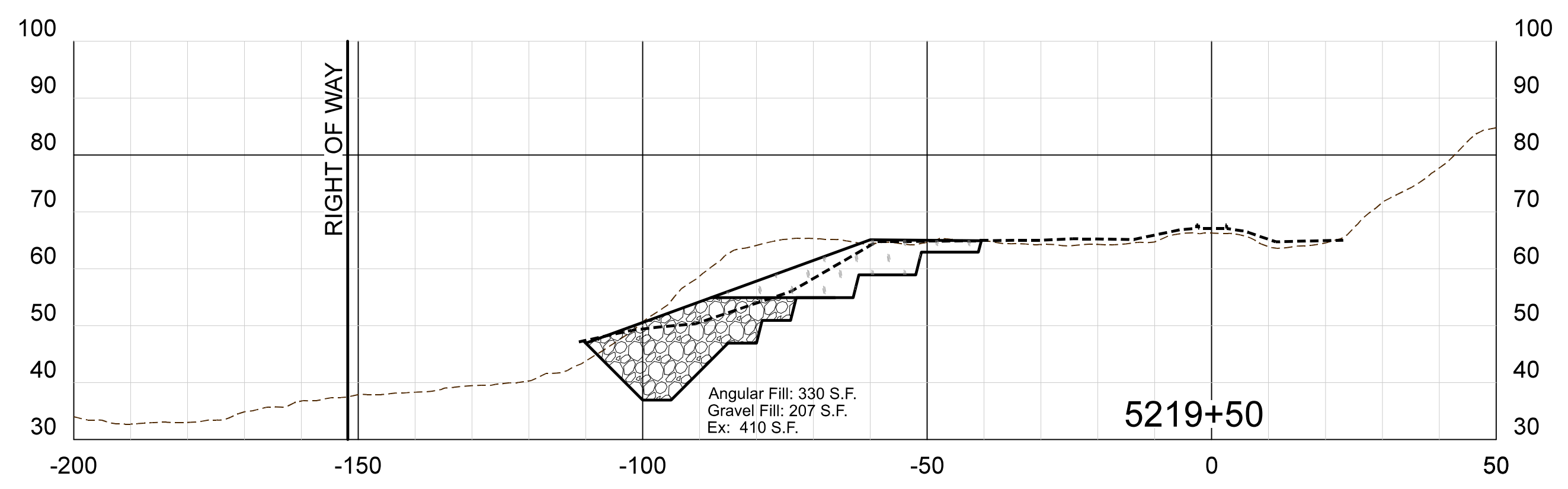
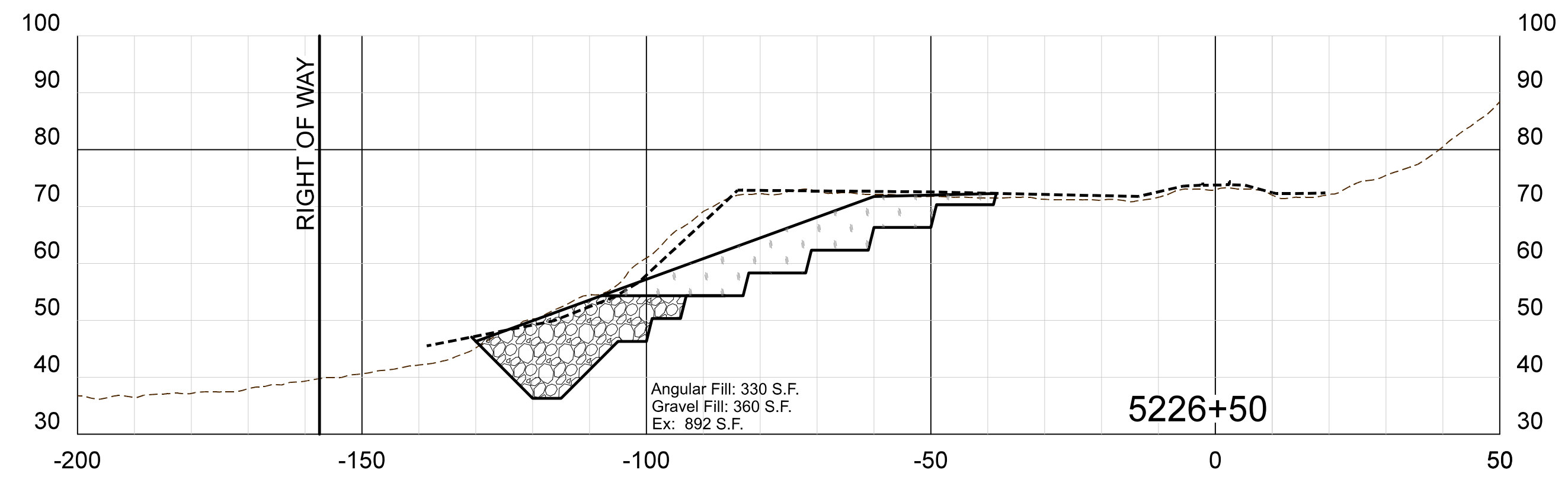
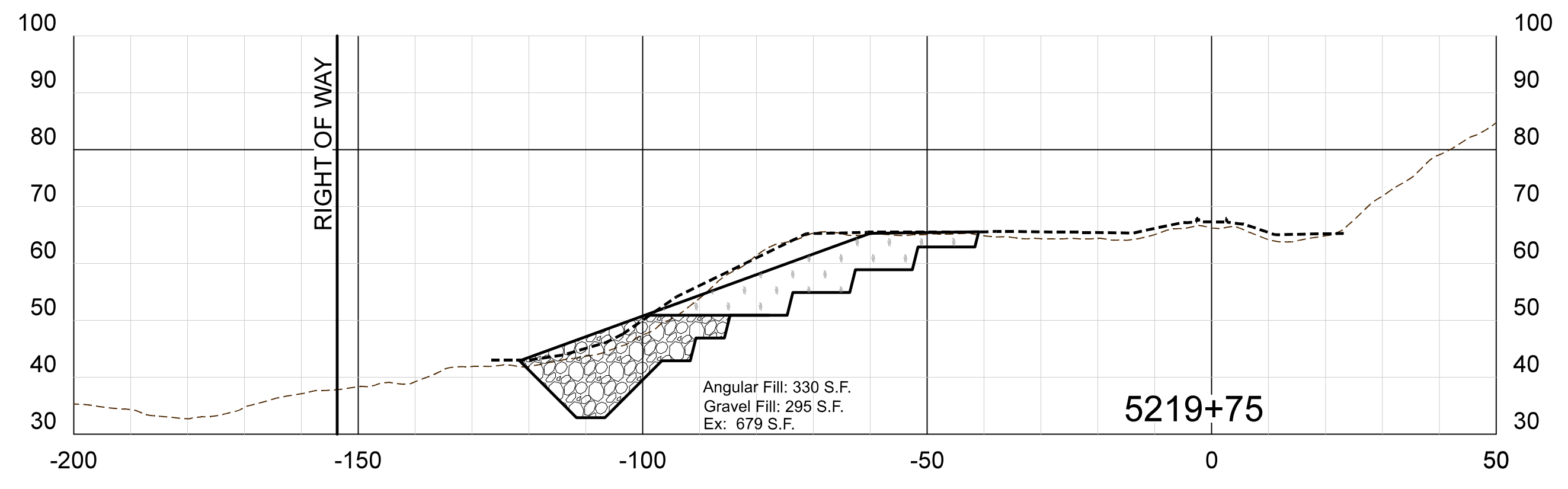


LEGEND

----- AFTER EARTHQUAKE GROUND SURVEY BY APN
- - - - - BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
1" = 20 FEET VERTICAL

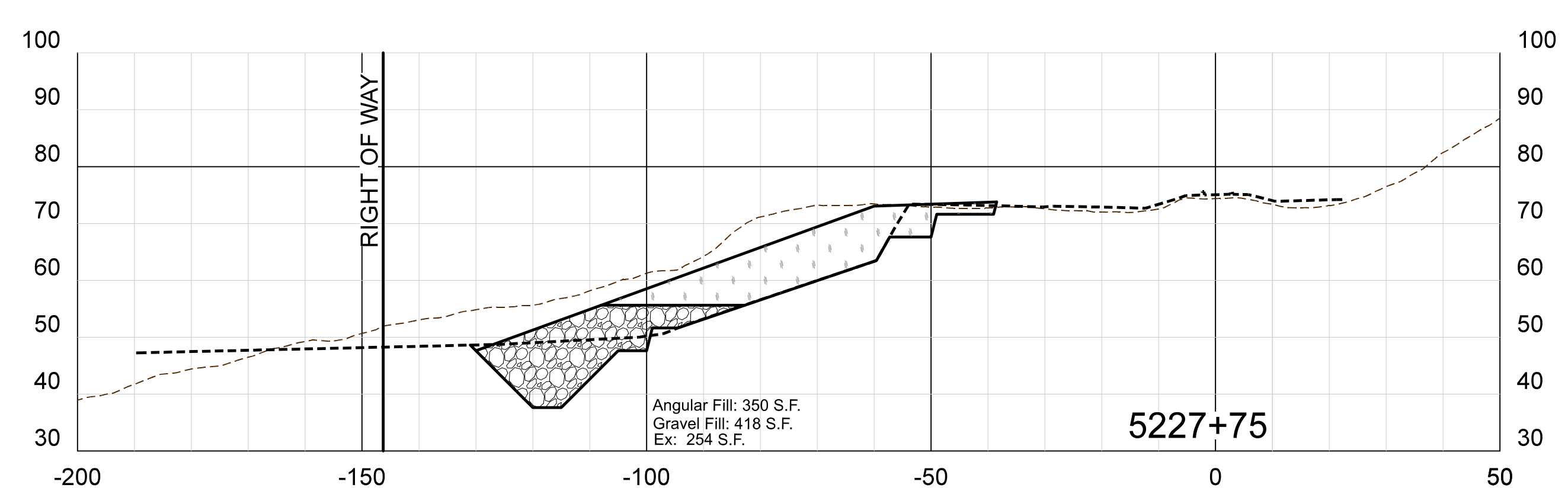
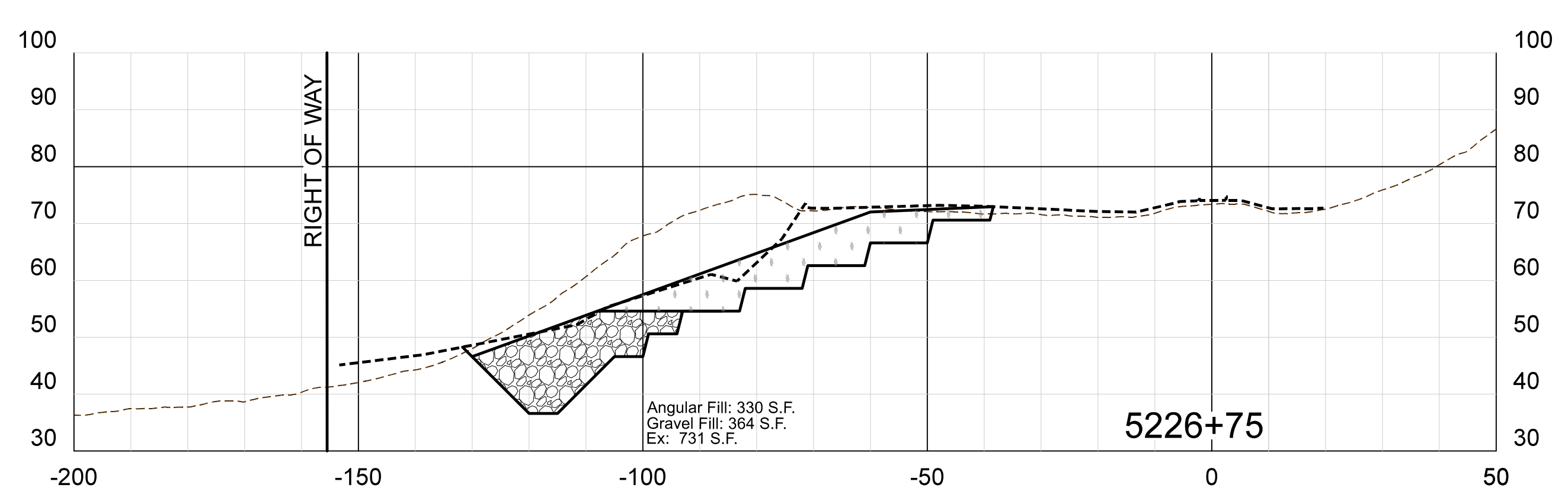
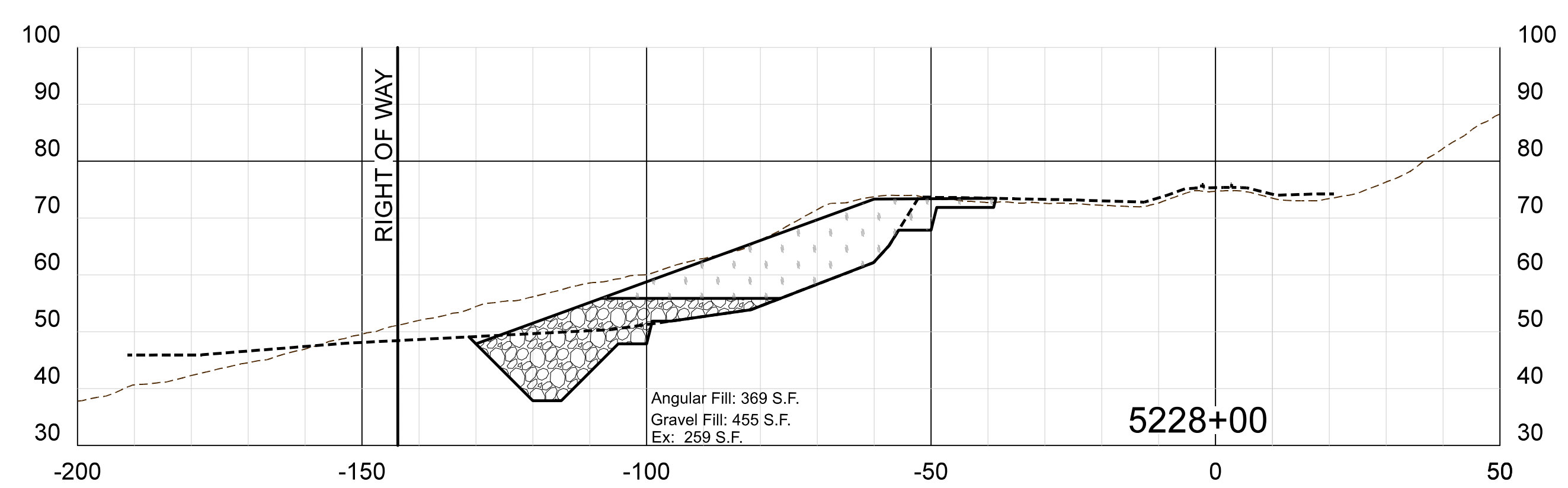
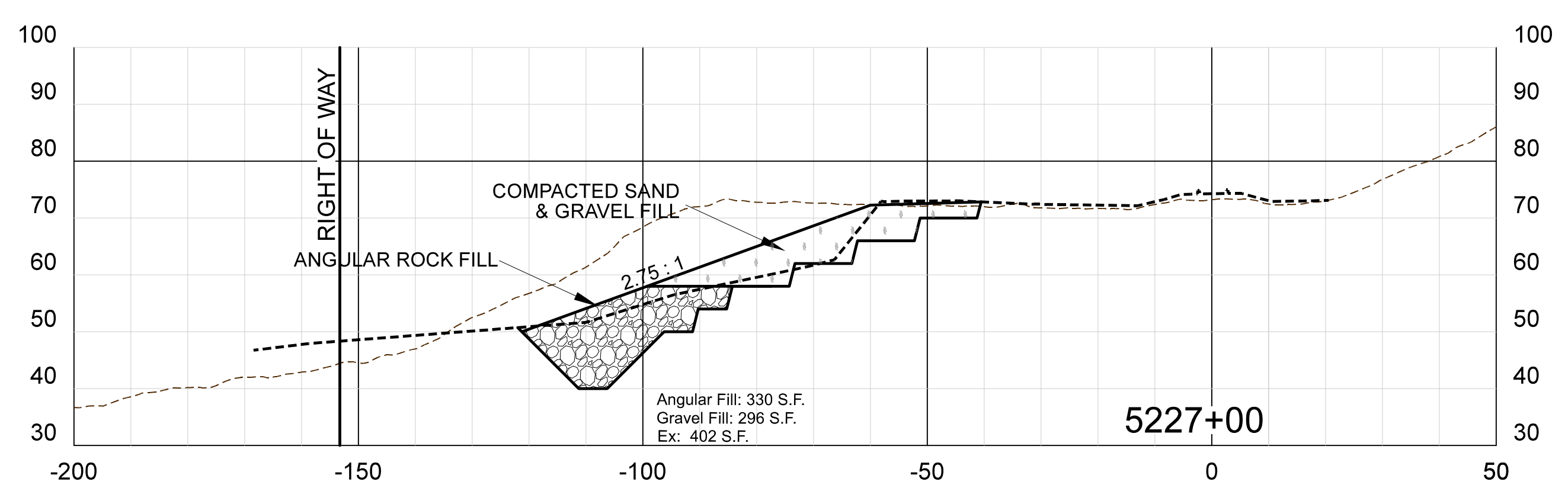
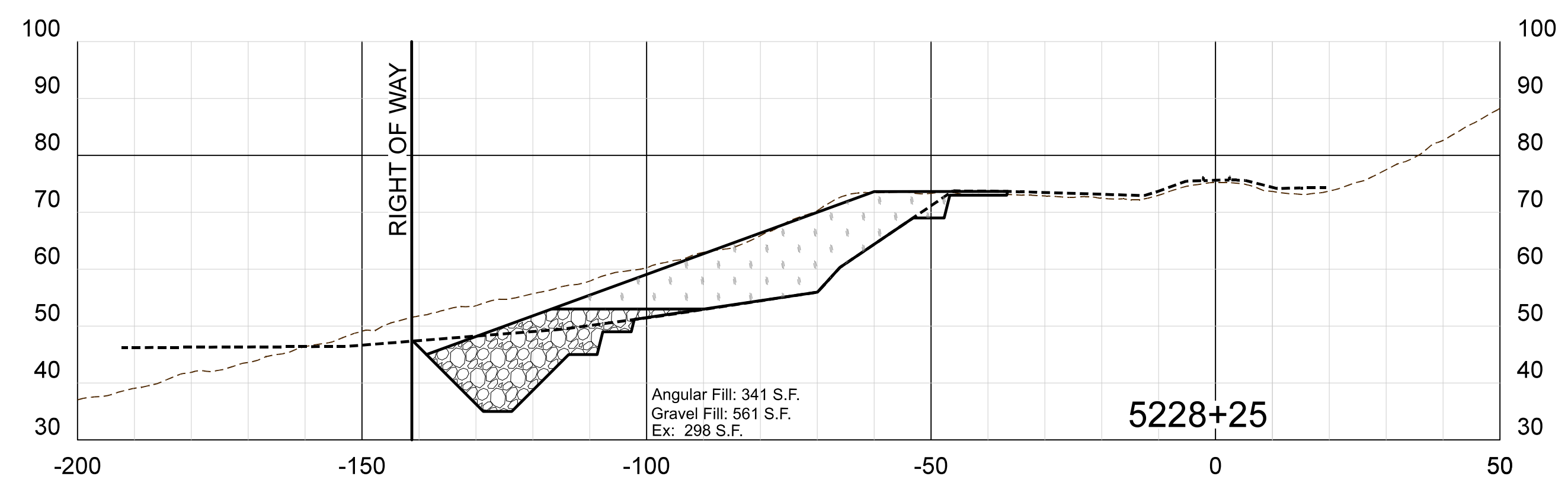
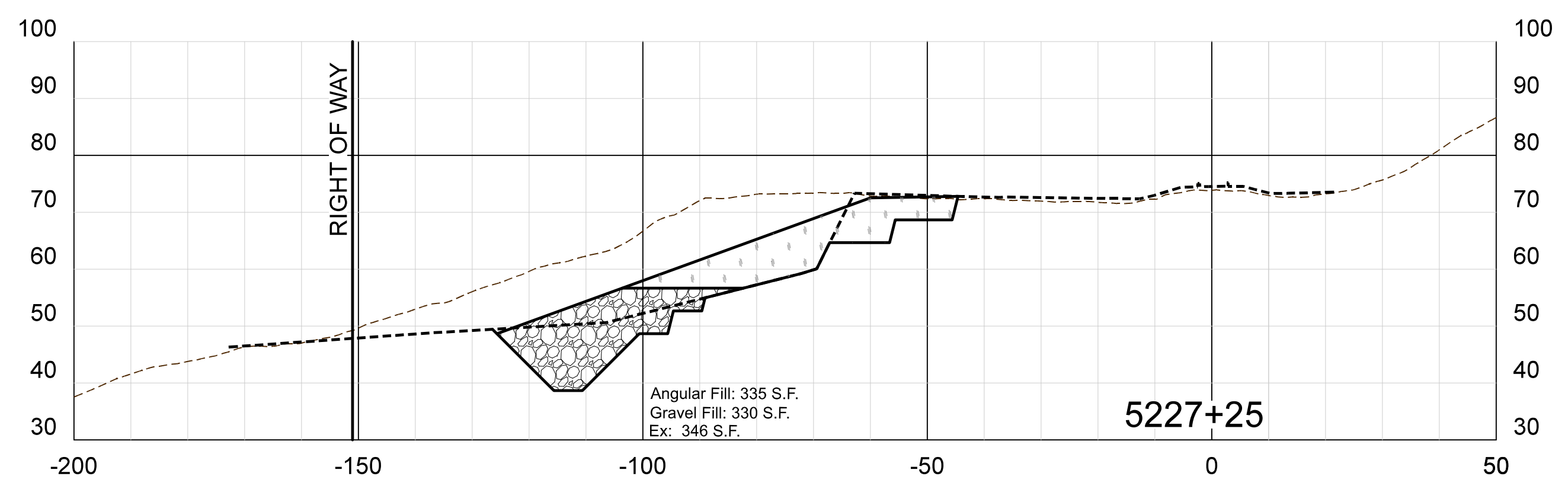
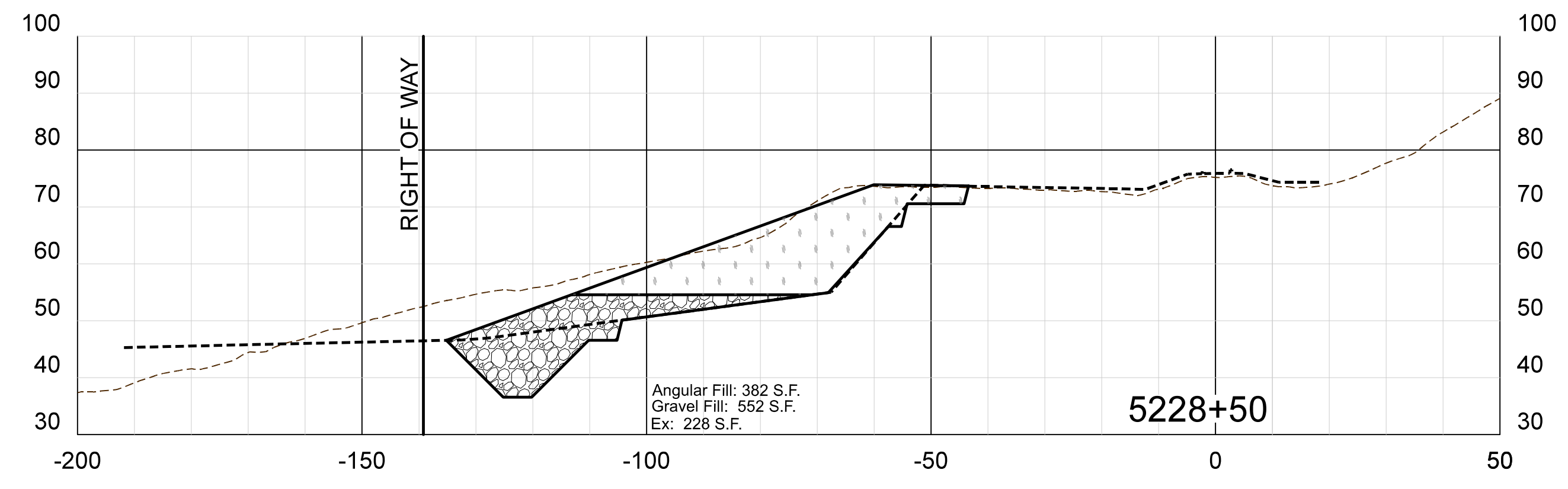
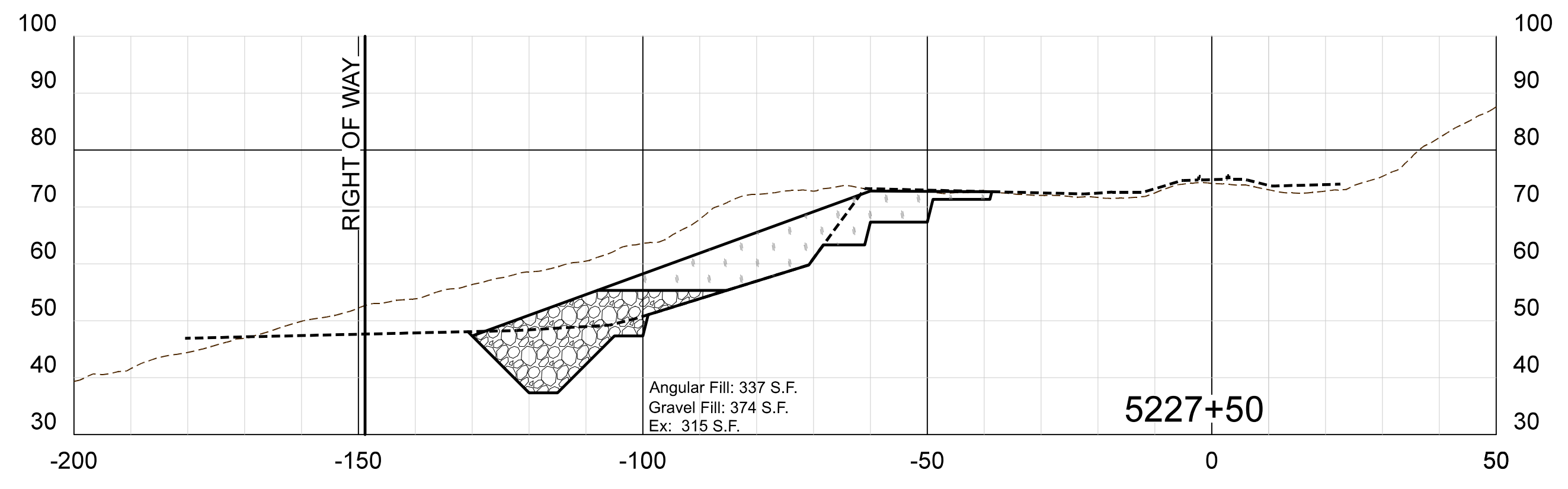
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						PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE				
						SHEET TITLE	IMPROVEMENT PLANS				
SYM.	REVISIONS	DATE	BY								
				SHEET NO. 6 OF 12							



LEGEND
 - - - - - AFTER EARTHQUAKE GROUND SURVEY BY APN
 - - - - - BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
 1" = 20 FEET VERTICAL

				CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57	DATE	8/27/2019
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				SHEET TITLE	IMPROVEMENT PLANS				
SYM.	REVISIONS	DATE	BY						
								SHEET NO	7 OF 12



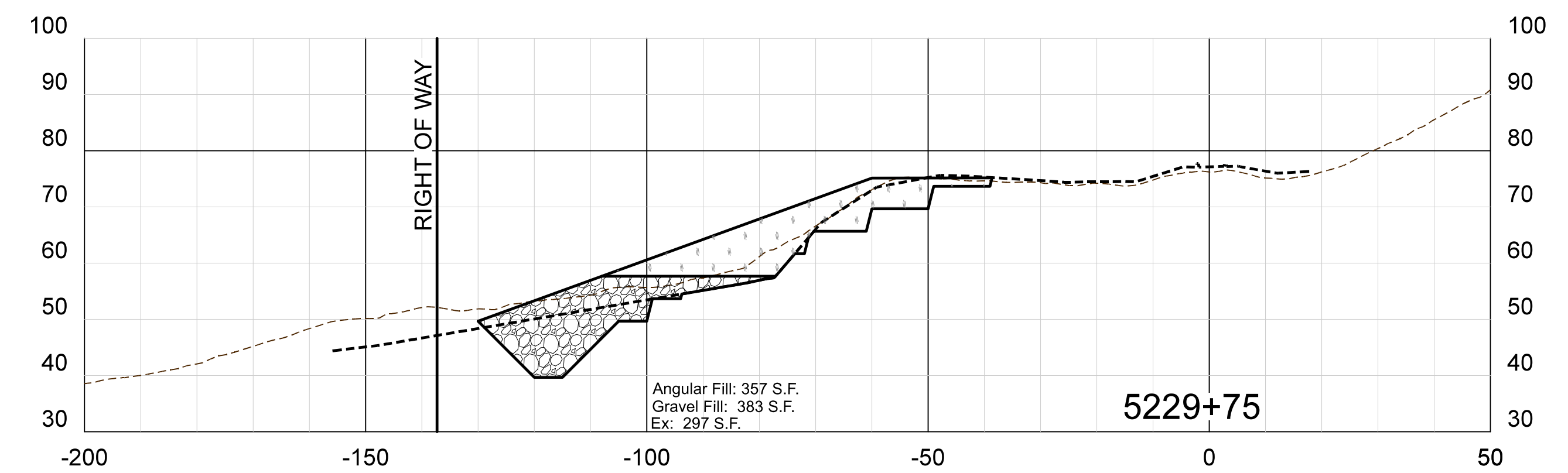
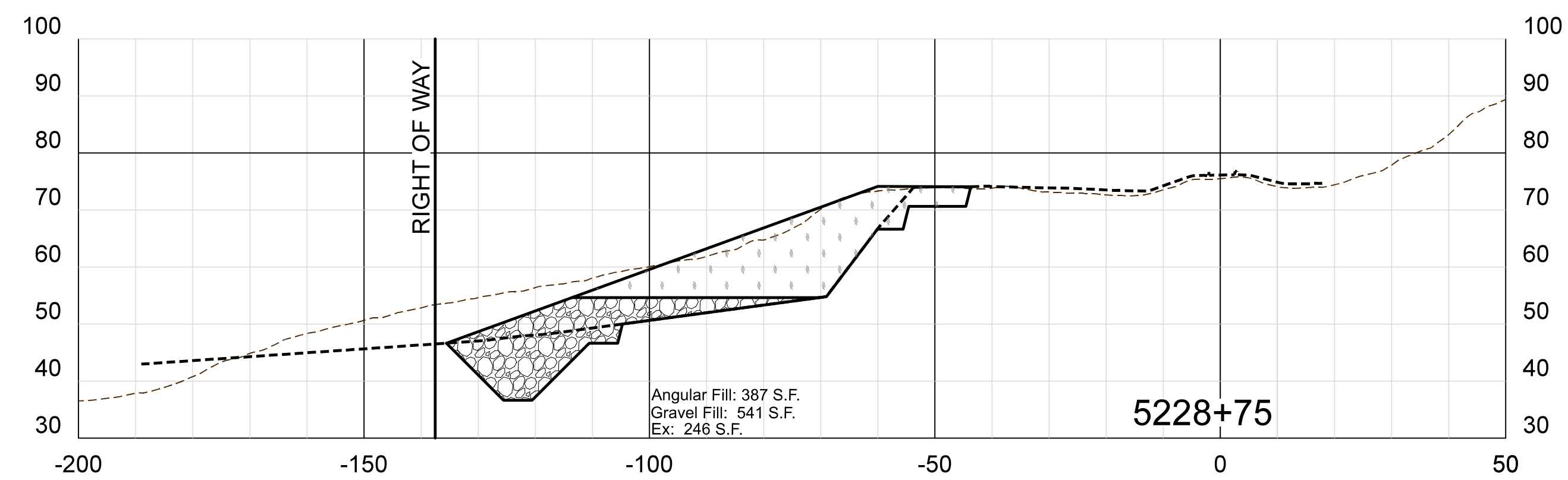
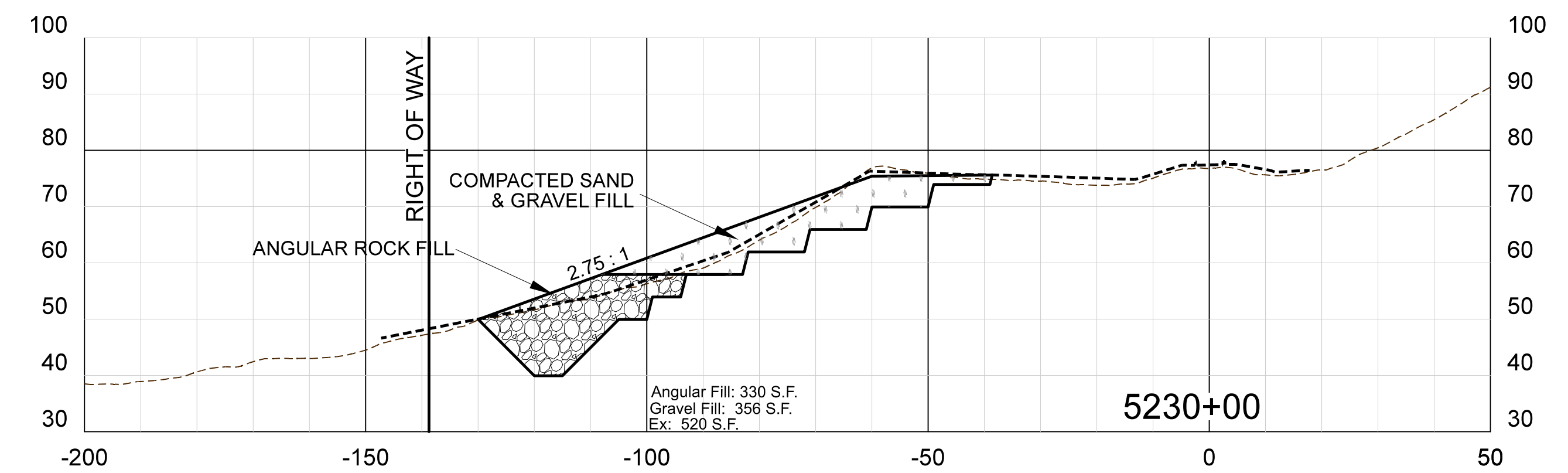
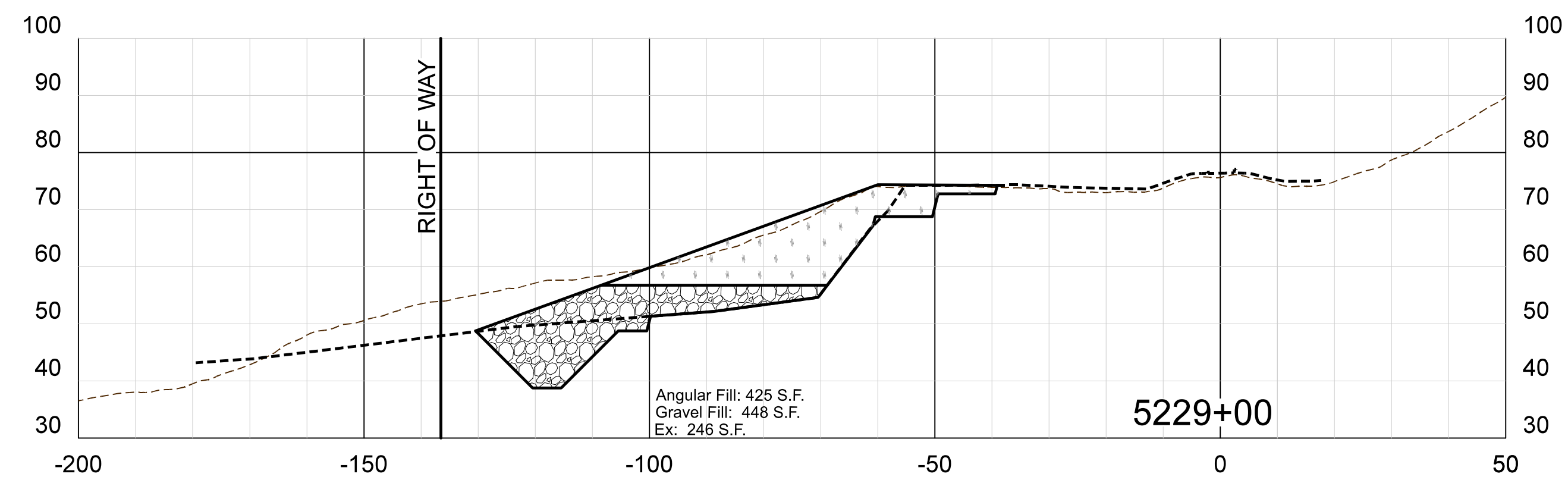
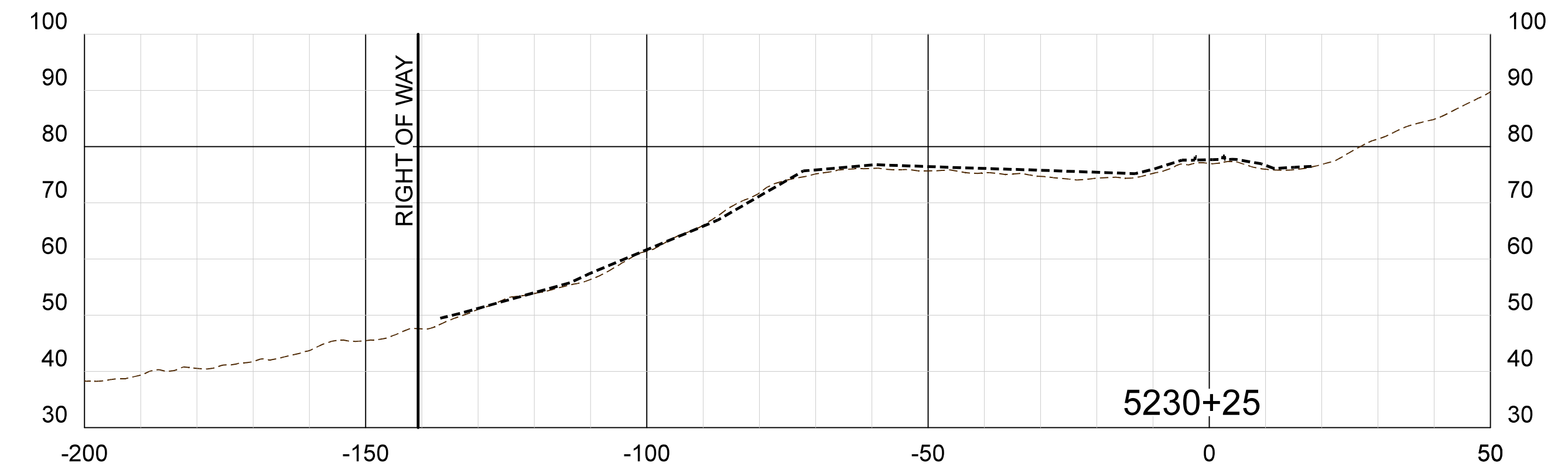
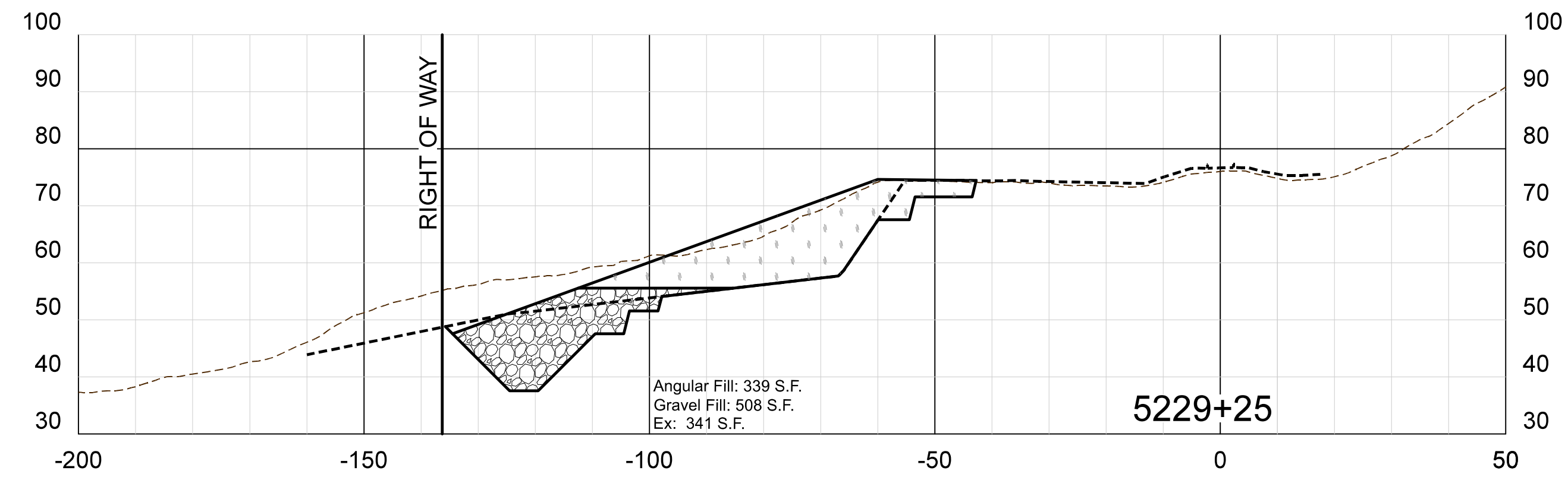
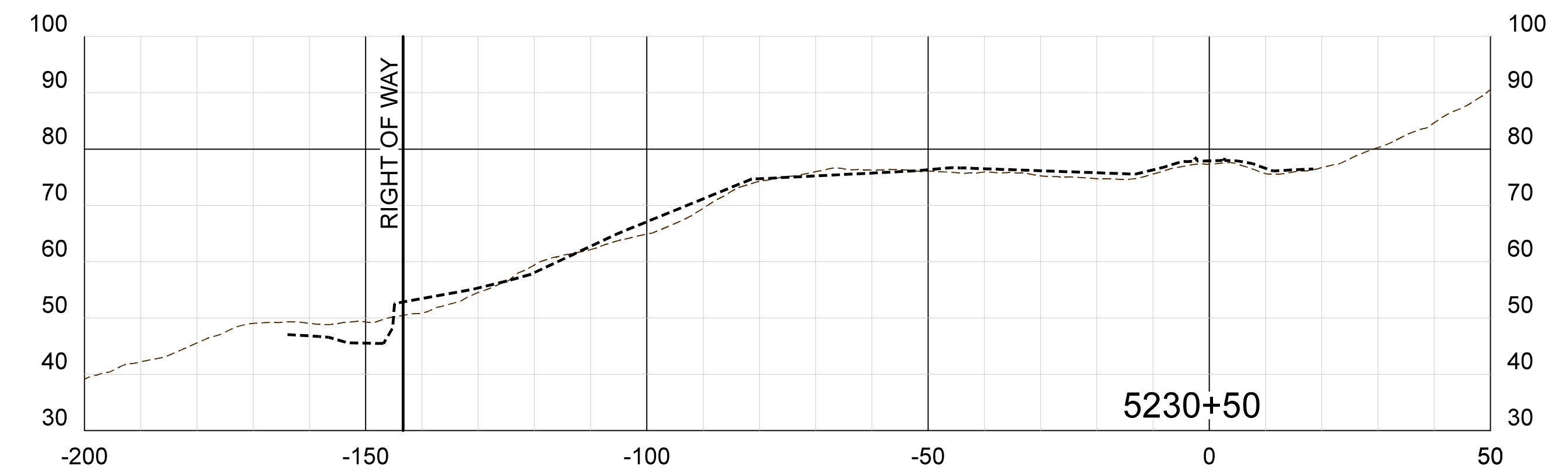
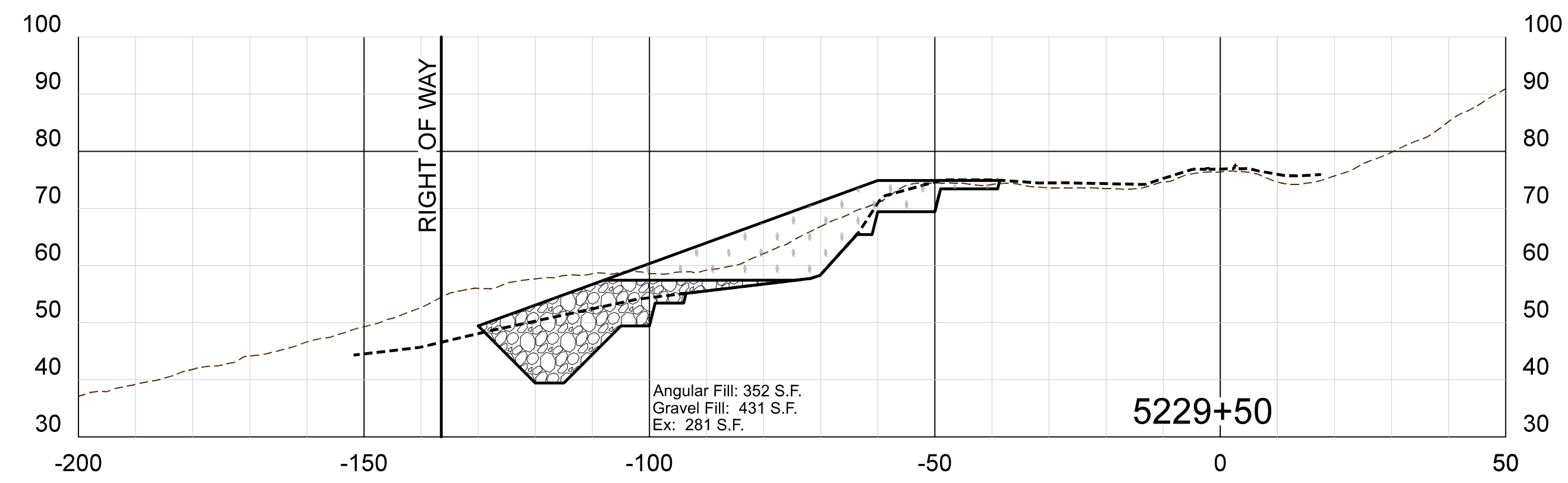
LEGEND

----- AFTER EARTHQUAKE GROUND SURVEY BY APN

----- BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
1" = 20 FEET VERTICAL

				CLIENT	ALASKA RAILROAD		JOB NUMBER	19-57	DATE	8/27/2019
				PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE					
				SHEET TITLE	IMPROVEMENT PLANS					
SYM.	REVISIONS	DATE	BY	ALL POINTS NORTH				SHEET NO	8 OF 12	



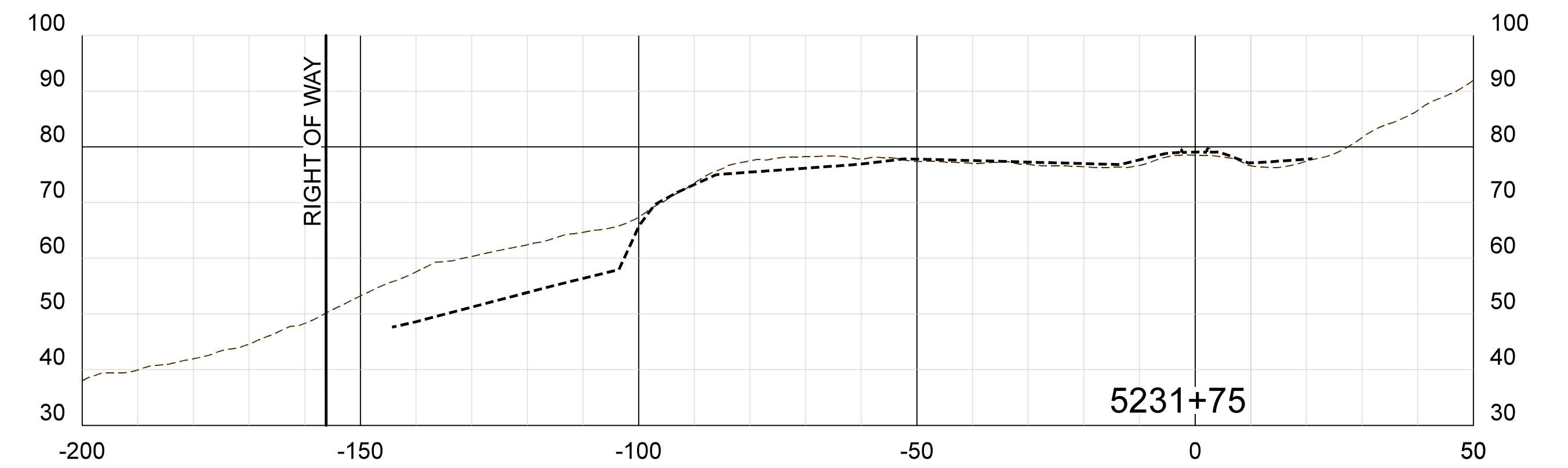
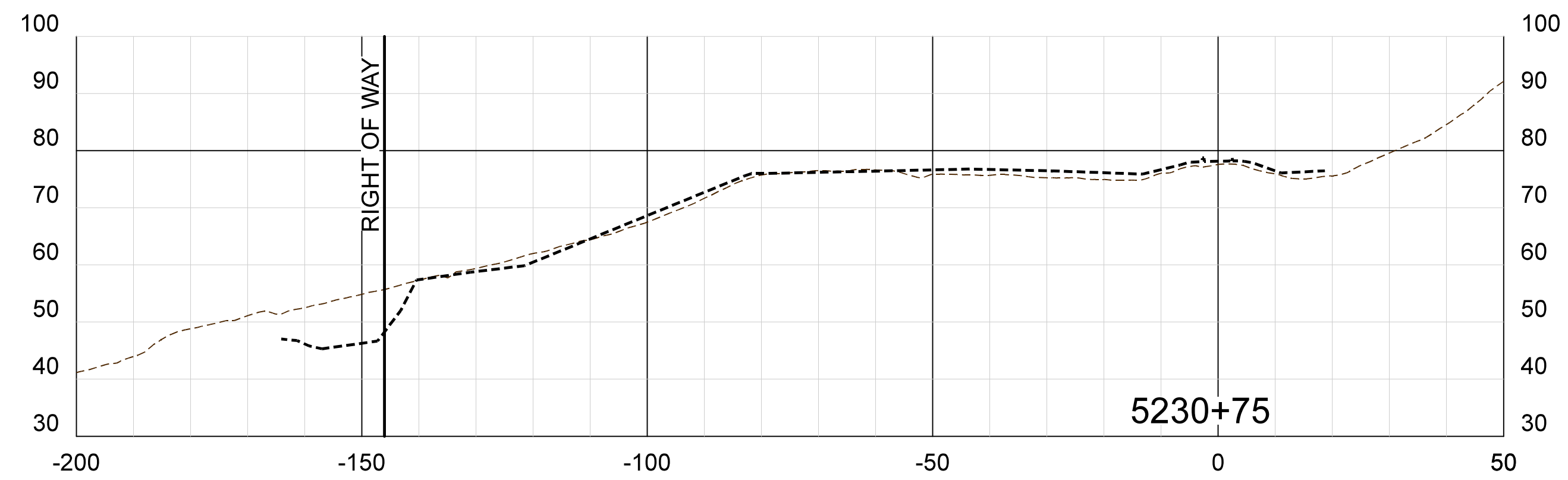
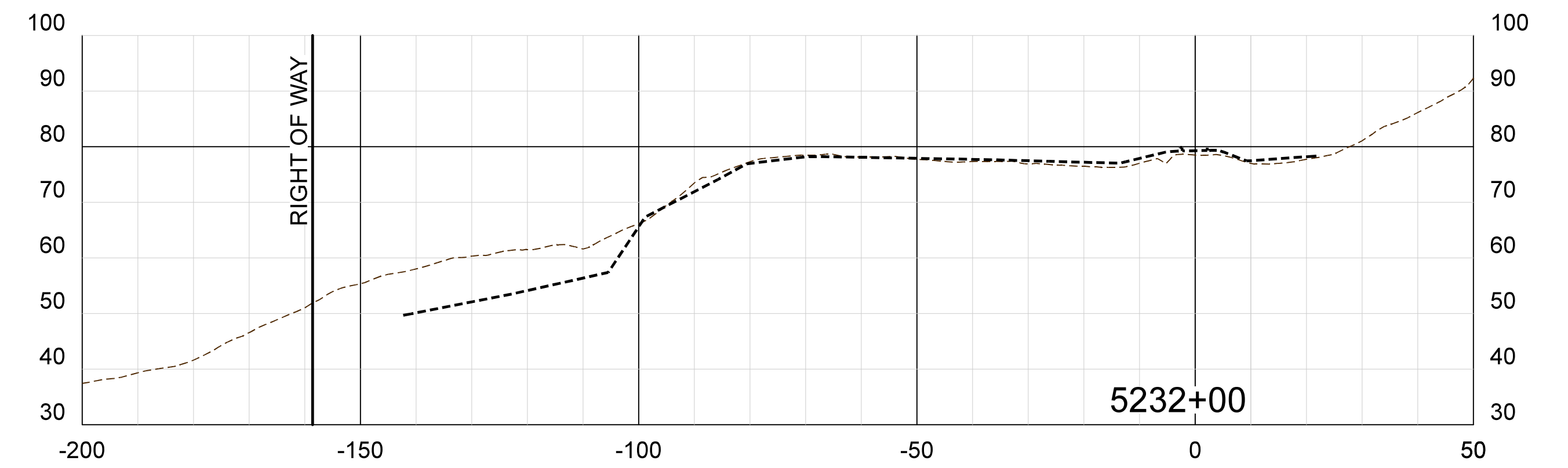
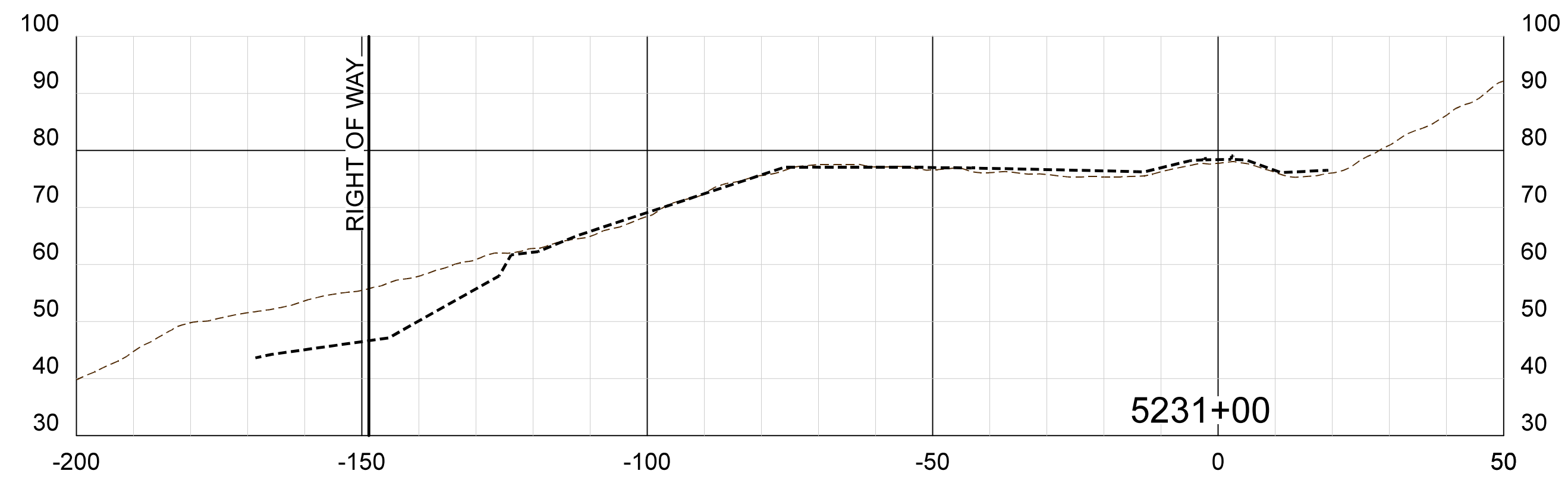
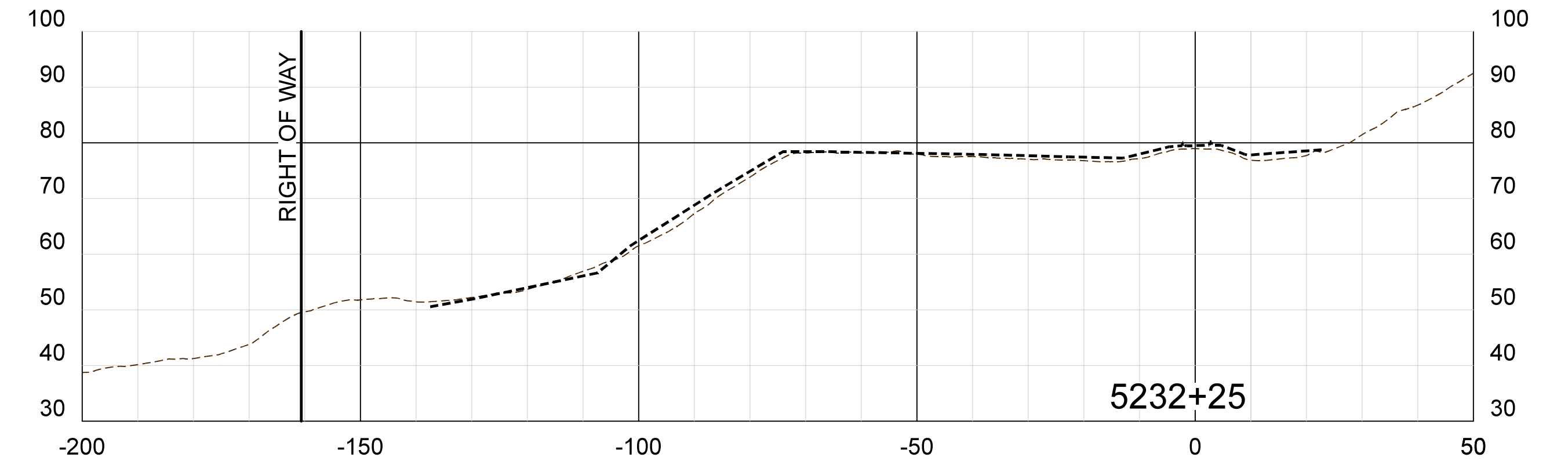
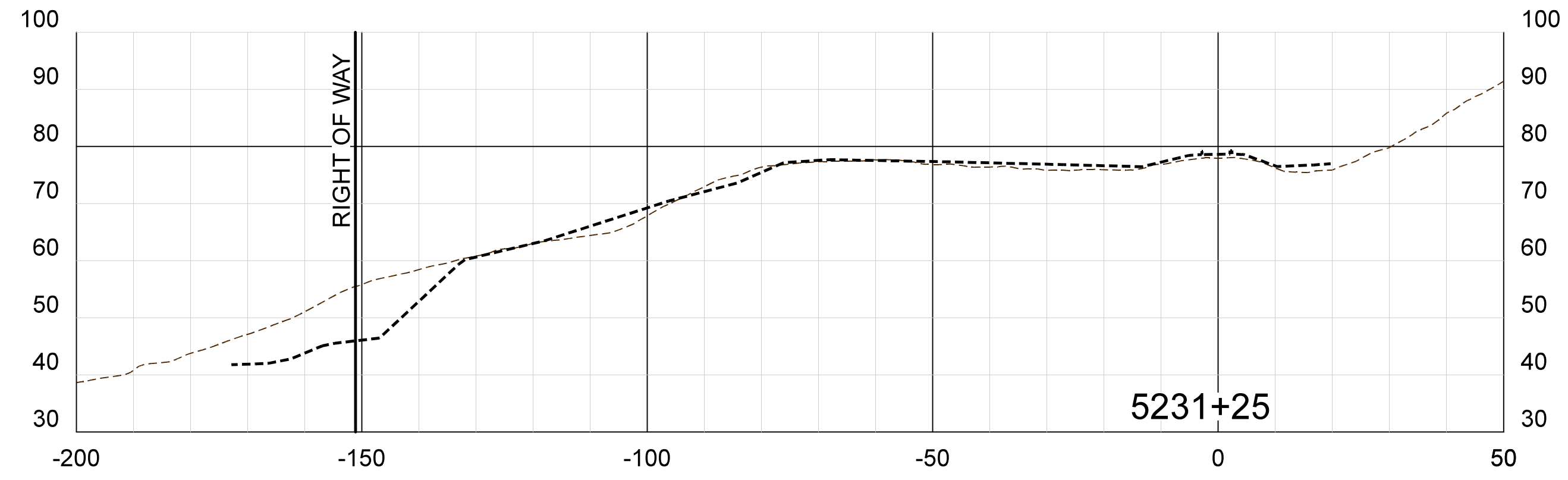
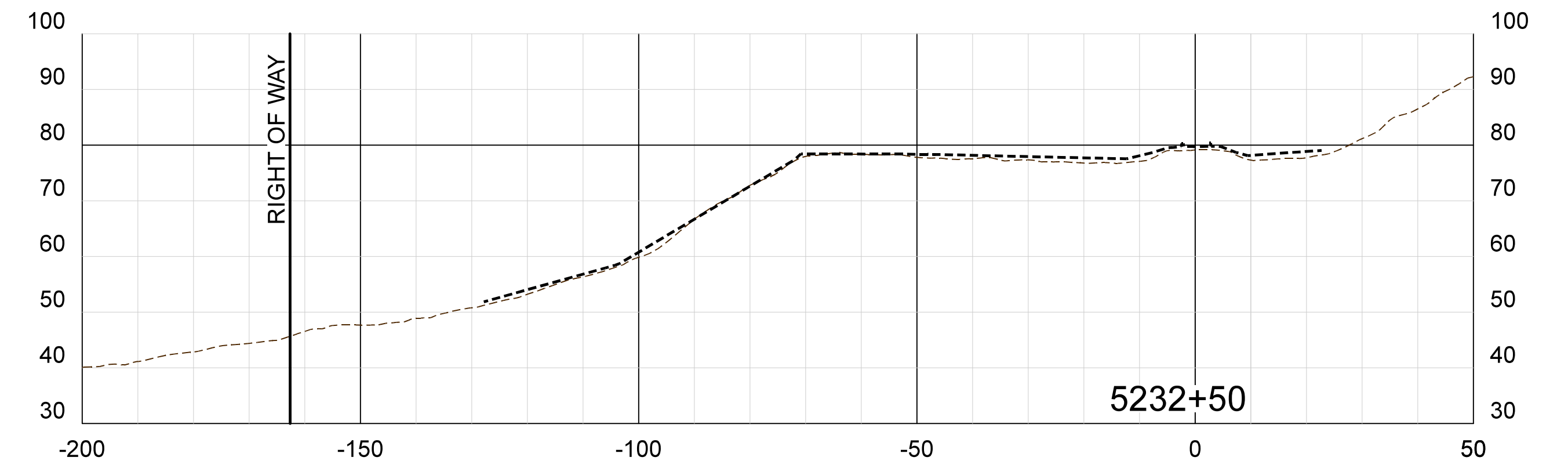
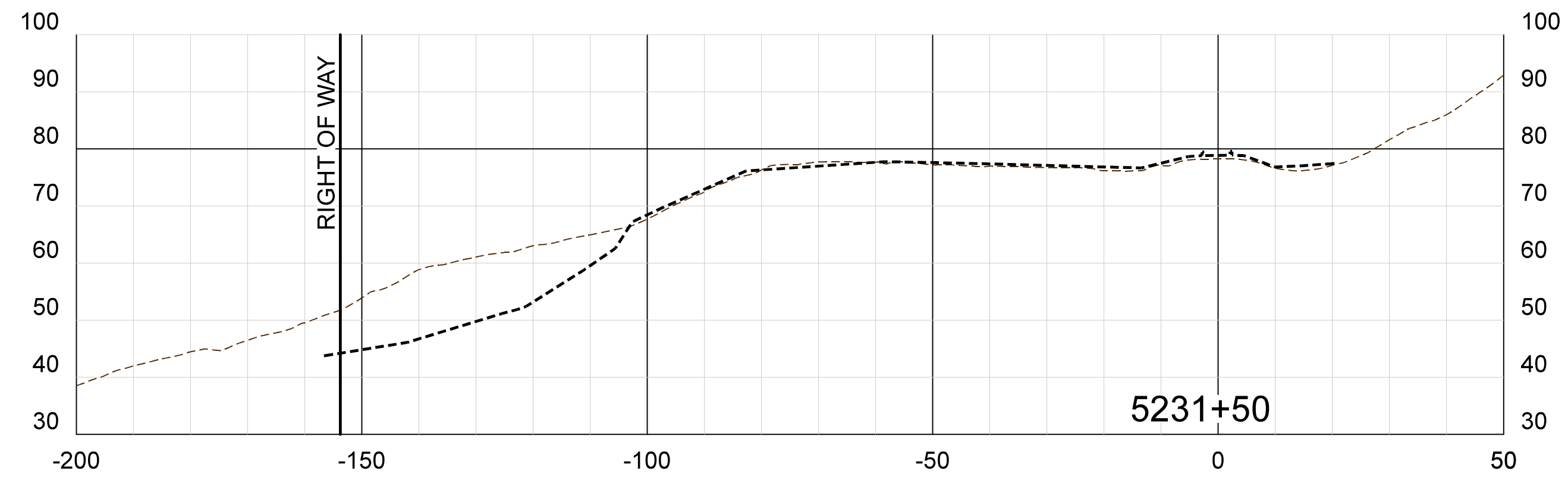
LEGEND

----- AFTER EARTHQUAKE GROUND SURVEY BY APN

----- BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
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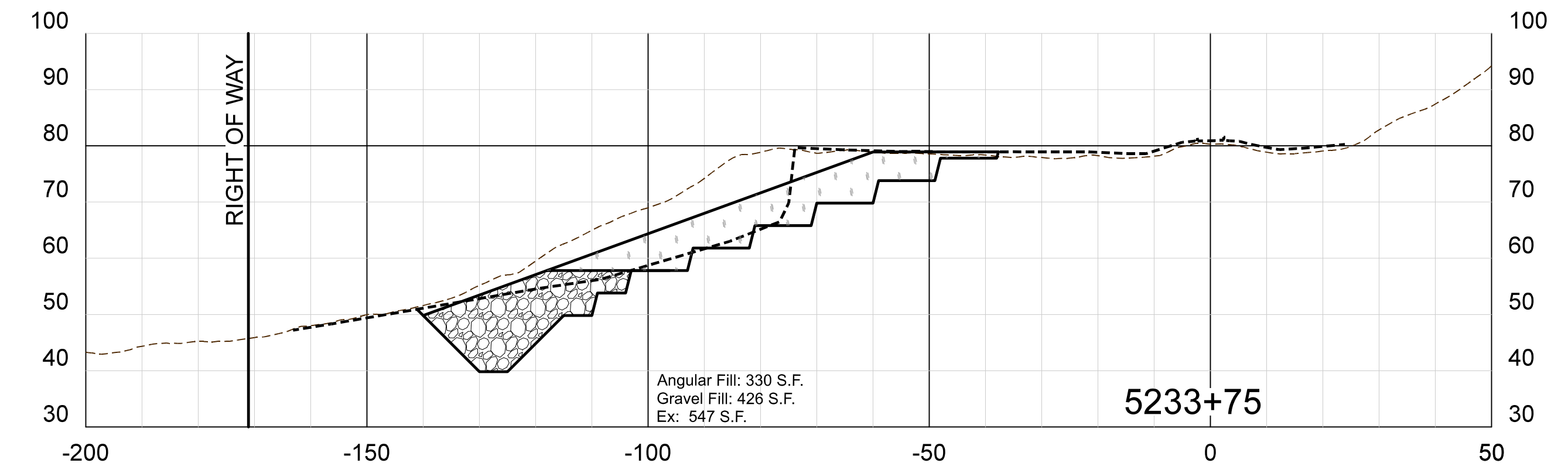
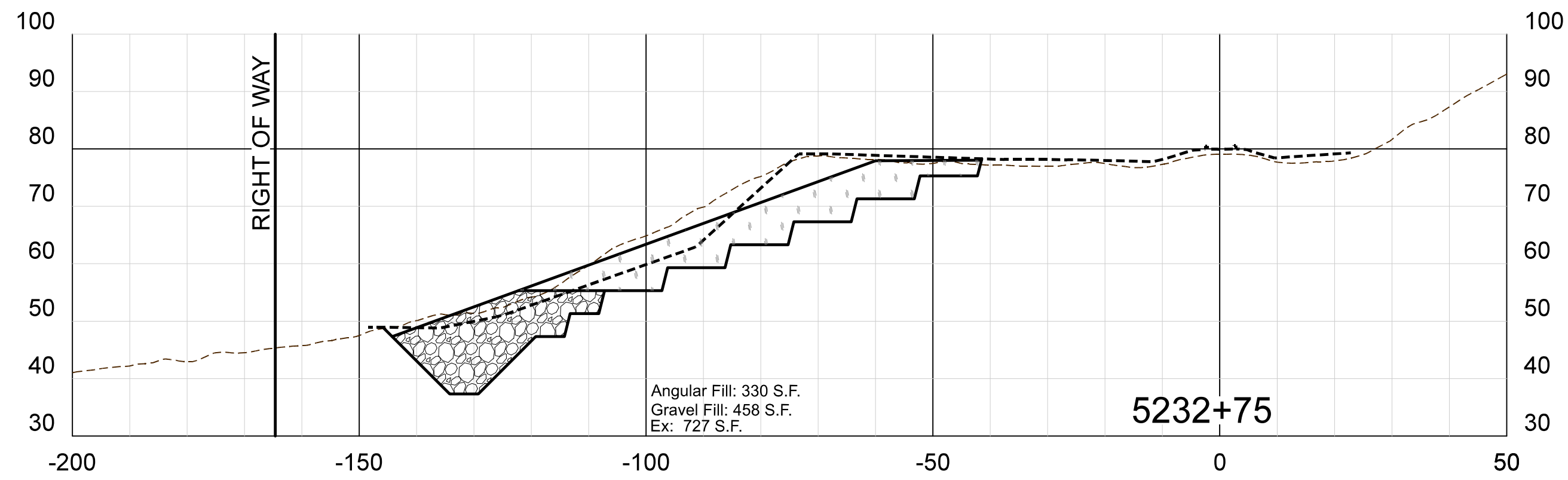
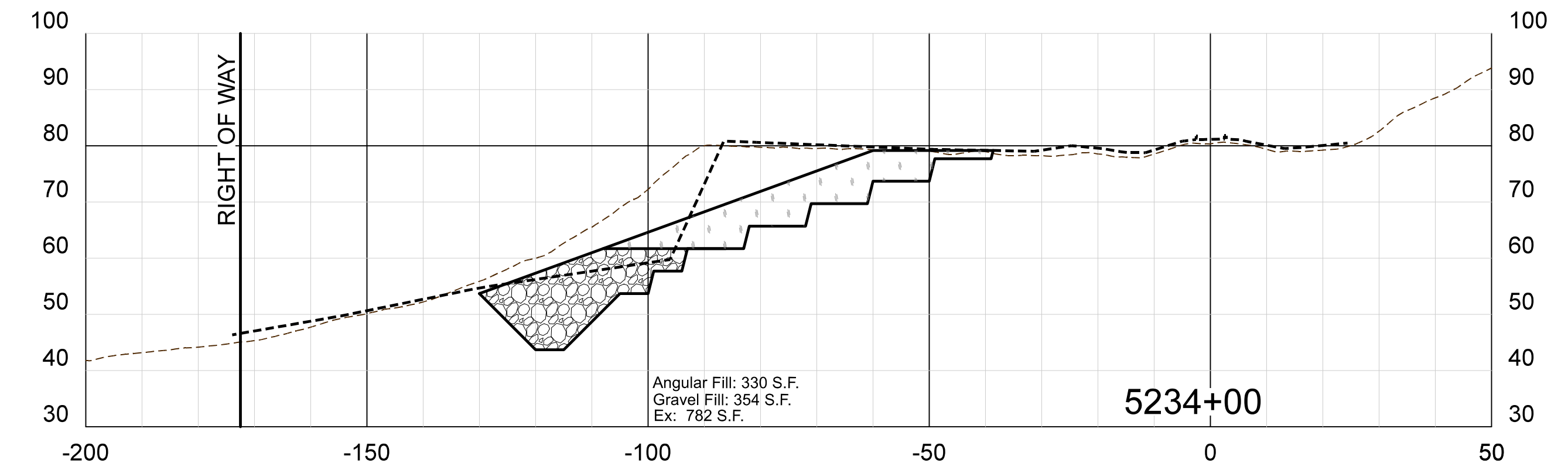
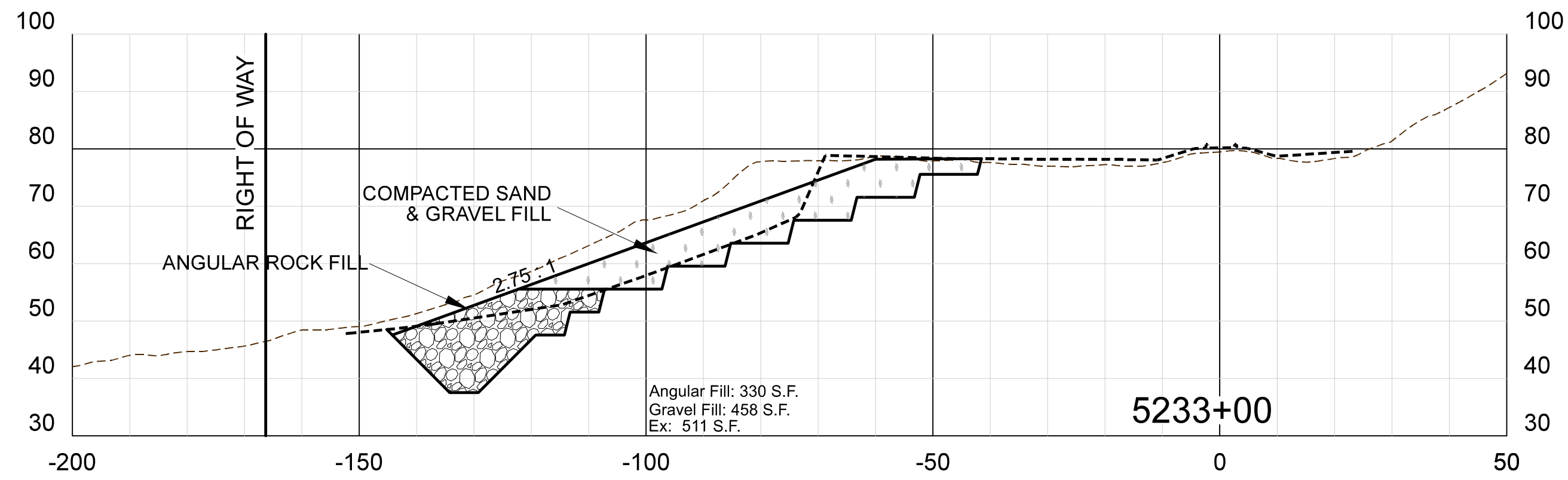
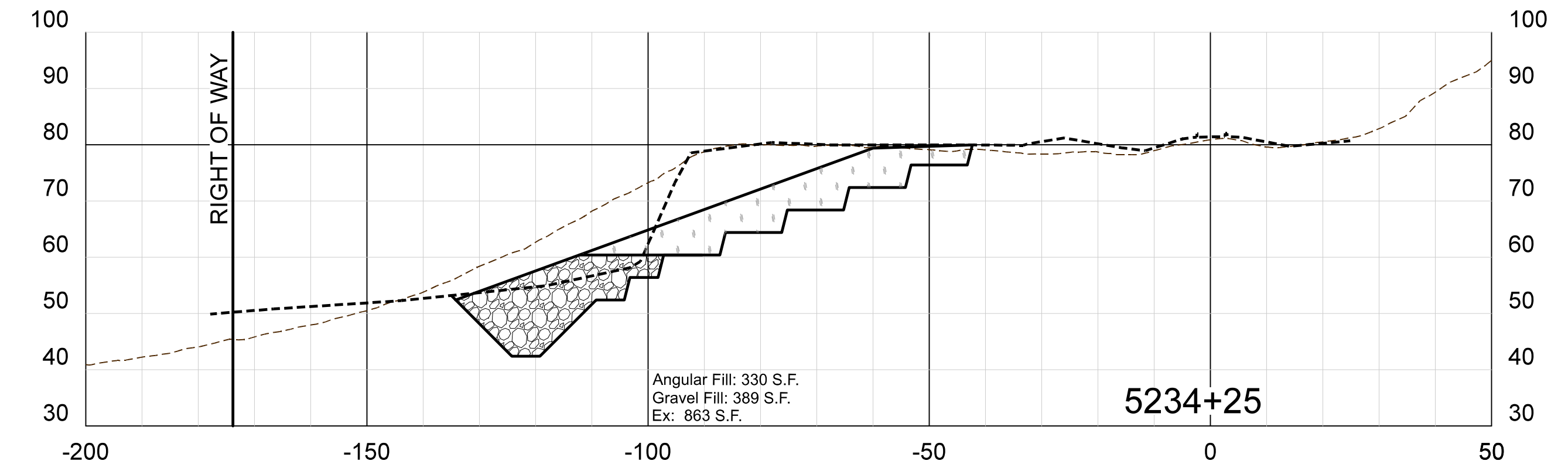
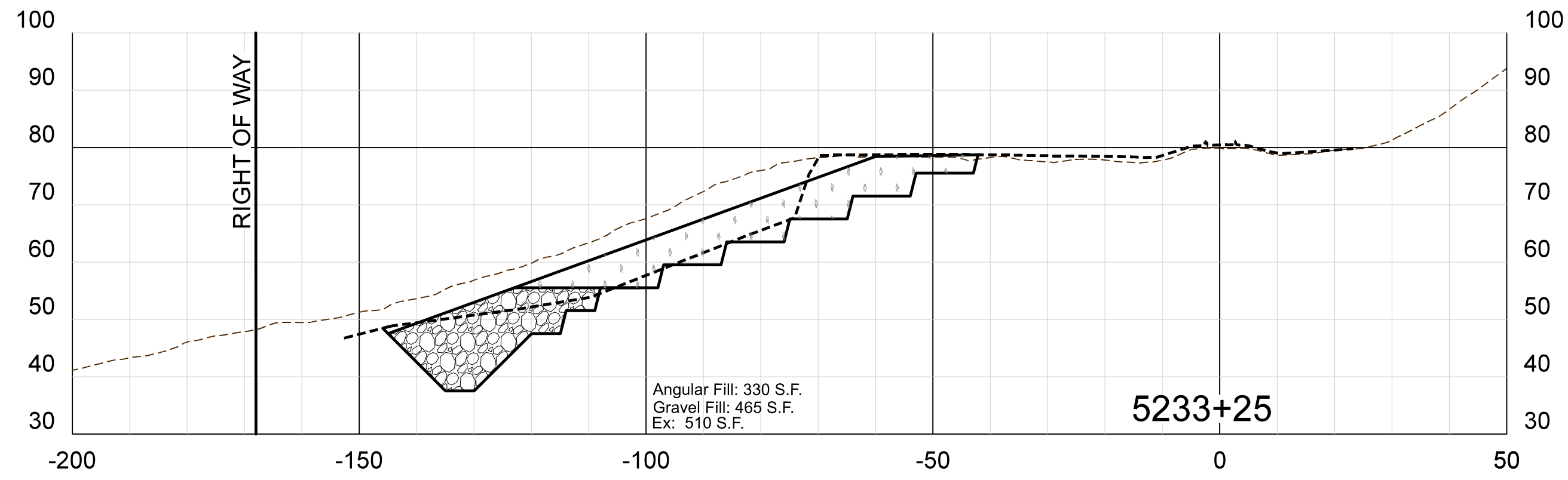
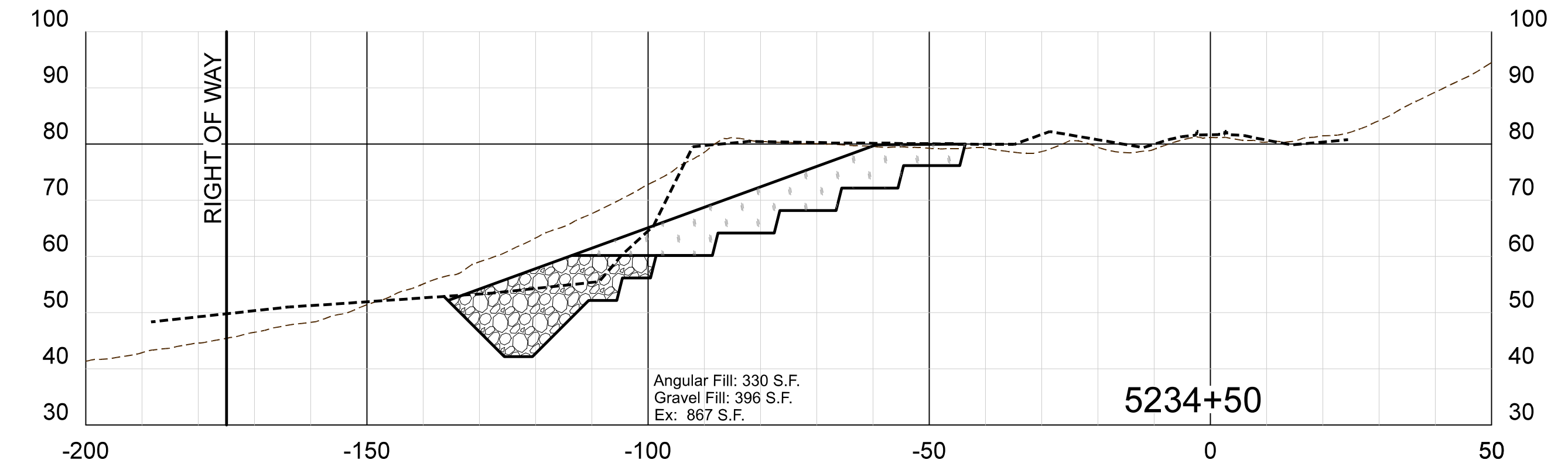
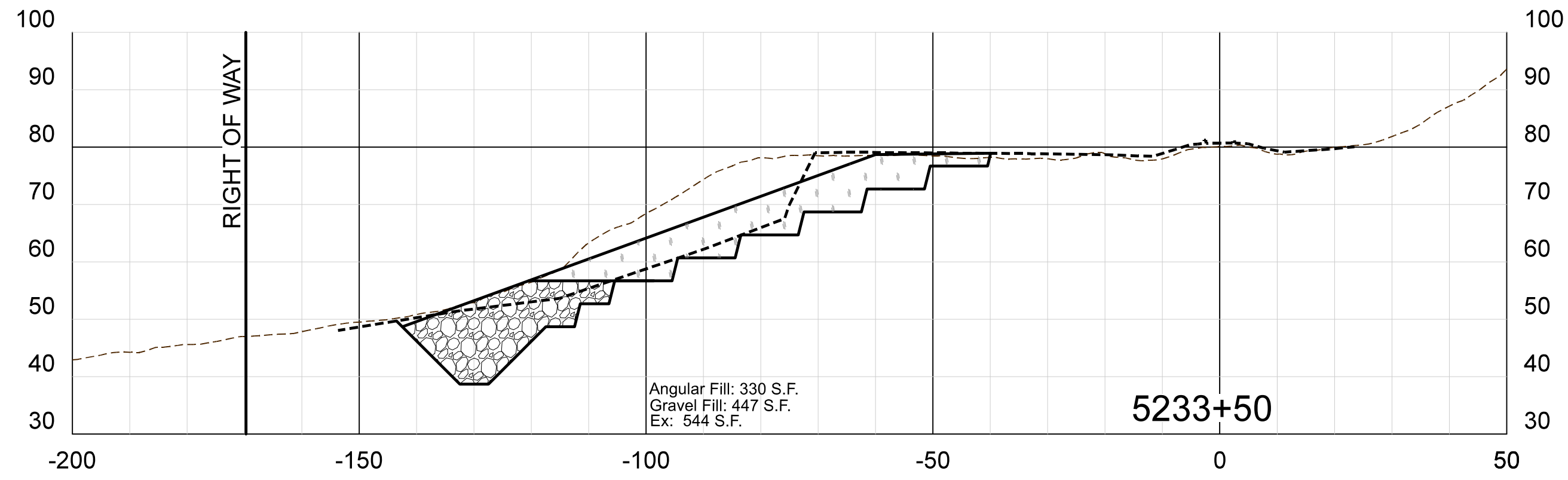
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				PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE				
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SYM.	REVISIONS	DATE	BY						
						SHEET NO.		9 OF 12	



LEGEND
 - - - - - AFTER EARTHQUAKE GROUND SURVEY BY APN
 - - - - - BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
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SYMBOL	REVISIONS	DATE	BY						
						SHEET NO		10 OF 12	



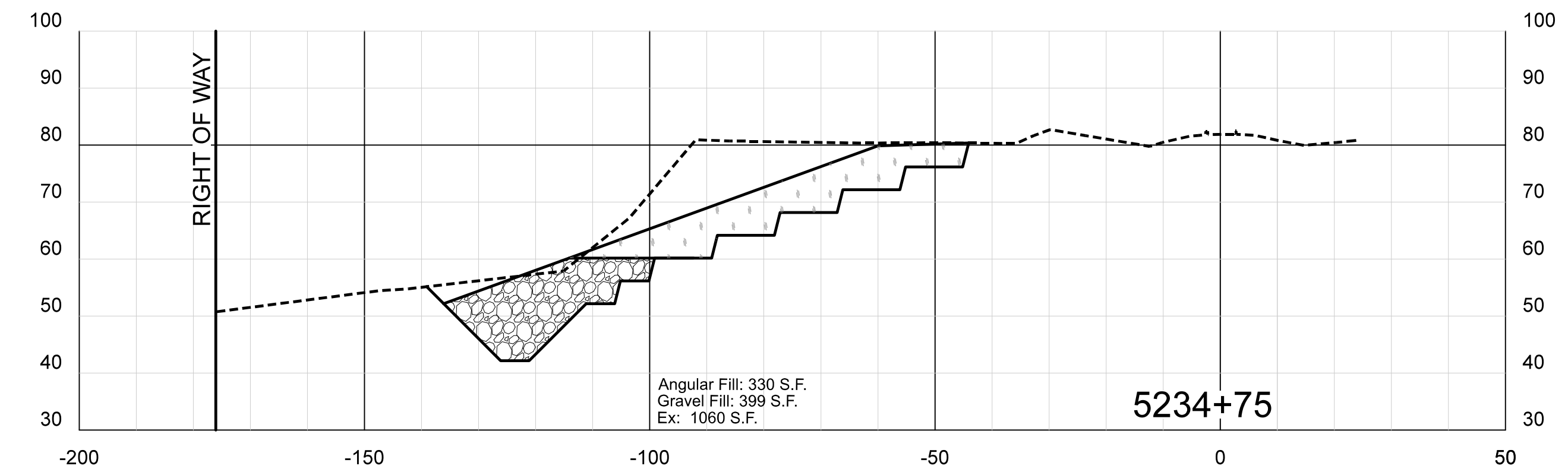
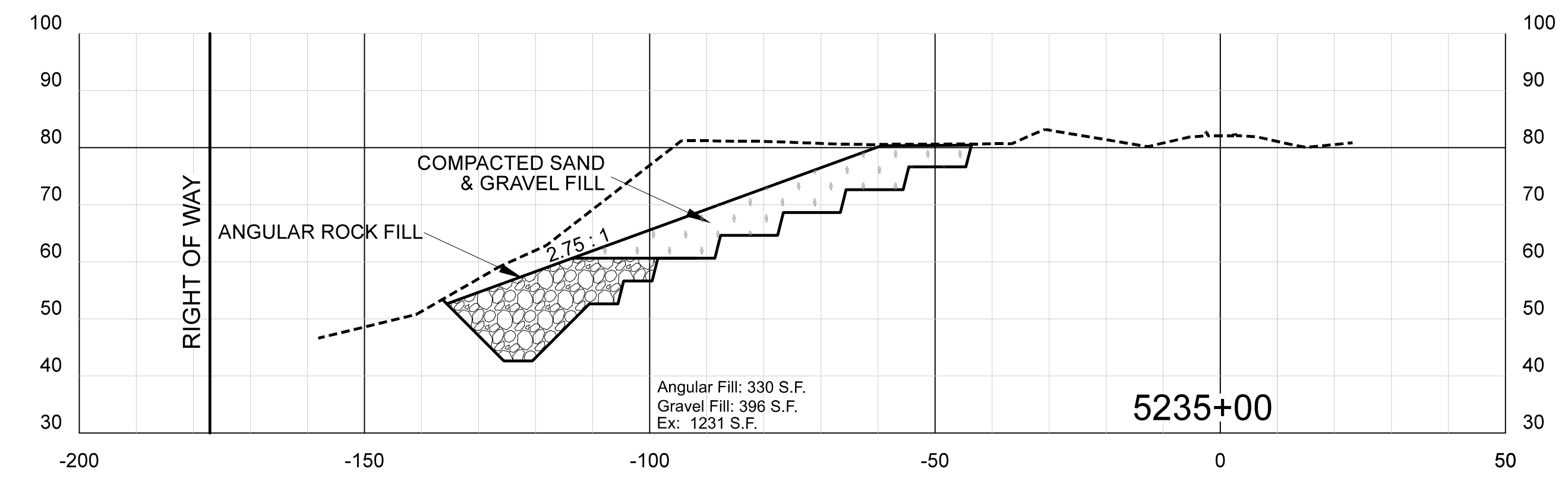
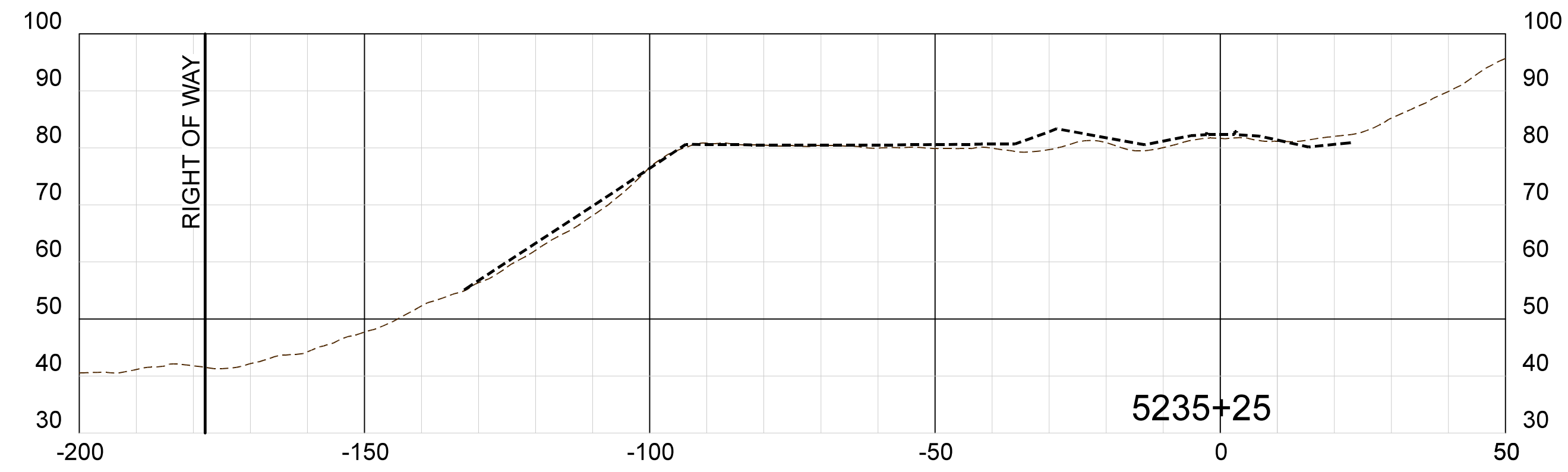
LEGEND

----- AFTER EARTHQUAKE GROUND SURVEY BY APN

----- BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
1" = 20 FEET VERTICAL

				CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57	DATE	8/27/2019
				PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE				
				SHEET TITLE	IMPROVEMENT PLANS				
SYM.	REVISIONS	DATE	BY						
						SHEET NO		11 OF 12	



LEGEND

- AFTER EARTHQUAKE GROUND SURVEY BY APN
- BEFORE EARTHQUAKE ORIGINAL GROUND, MUNI LIDAR

SCALE: 1" = 20 FEET HORIZONTAL
1" = 20 FEET VERTICAL

				CLIENT	ALASKA RAILROAD	JOB NUMBER	19-57	DATE	8/27/2019
				PROJECT	ARRC MP 103 EARTHQUAKE DAMAGE				
				SHEET TITLE	IMPROVEMENT PLANS		SHEET NO	12 OF 12	
SYM.	REVISIONS	DATE	BY						