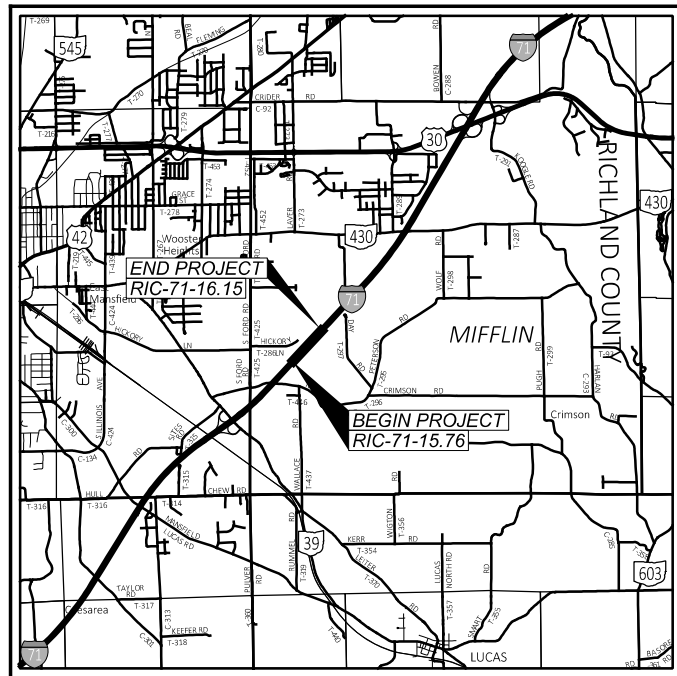


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

RIC-71-15.76

MIFFLIN TOWNSHIP
RICHLAND COUNTY



LOCATION MAP

LATITUDE: 40°44'50" N LONGITUDE: 82°26'47" W



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	-----

DESIGN DESIGNATION	RIC-71-15.76
CURRENT ADT (2025)	52000
DESIGN YEAR ADT (2045)	65500
DESIGN HOURLY VOLUME (2045)	9000
DIRECTIONAL DISTRIBUTION	60%
TRUCKS (24 HOUR B&C)	35%
DESIGN SPEED (MPH)	70
LEGAL SPEED (MPH)	70
DESIGN FUNCTION CLASSIFICATION:	FREEWAY/ EXPRESSWAY
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811.org
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3
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BARRIER TRANSITION DETAILS	15
GEOTECHNICAL PROFILE - ROCKFALL	GP.1 - GP.6

FEDERAL PROJECT NUMBER

E240511

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

ROCKFALL MITIGATION BY REMOVING LOOSE AND OVERHANGING ROCK BY HAND SCALING WITH INSTALLATION OF PROTECTION BARRIER.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A*
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A*

*MAINTENANCE PROJECT

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

PLANS PREPARED BY:



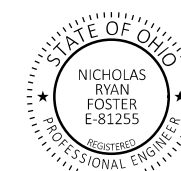
MAINTENANCE OF TRAFFIC ENDORSEMENT

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Robert Weaver
ROBERT WEAVER, PE, PS
DISTRICT DEPUTY DIRECTOR

Pamela Boratyn
PAMELA BORATYN
DIRECTOR, DEPARTMENT OF TRANSPORTATION

ENGINEER'S SEAL



STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/19/24	MT-95.30	7/19/19	800-2023 7/19/24	
		MT-95.40	7/21/23	821 4/20/12	
DM-4.3	1/15/16	MT-95.45	7/21/23	832 7/19/24	
DM-4.4	1/15/16	MT-95.50	7/21/17	862 1/17/25	
		MT-101.70	7/19/24	921 7/19/24	
MGS-1.1	7/16/21	MT-101.75	7/21/23		
MGS-2.1	1/19/18	MT-101.90	7/17/20		
MGS-3.1	1/19/18	MT-105.10	1/17/20		
MGS-4.3	1/18/13				
MGS-6.1	1/19/18	TC-41.20	10/18/13		
		TC-42.10	10/18/13		
RM-4.2	7/19/24	TC-42.20	10/18/13		
RM-4.4	7/21/23				
RM-4.5	7/19/24				
RM-4.6	7/19/24				

RIC-71-15.76

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TITLE SHEET

DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM FOUR	
DESIGNER	NRF
REVIEWER	JLB 9-15-24
PROJECT ID	119727
SHEET TOTAL	P.001 15

PROJECT DESCRIPTION

ROCKFALL MITIGATION BY REMOVING LOOSE AND OVERHANGING ROCK BY HAND SCALING WITH INSTALLATION OF PROTECTION BARRIER.

HISTORIC RECORDS

HISTORICAL RECORDS WERE OBTAINED FROM ODOT'S TRANSPORTATION INFORMATION MAPPING SYSTEM (TIMS) FOR RIC-1-12.03, SUB-BATCH 14544, COMPLETED IN 1959 FOR THE PROPOSED CONSTRUCTION OF CURRENT I.R. 71 ALIGNMENT. THREE (3) BORINGS WERE COMPLETED FOR THE EXISTING PROJECT CUT AREA. RESULTS OF THIS EXPLORATION INDICATED THAT SHALLOW OVERBURDEN SOILS WERE UNDERLAIN BY SANDSTONE WHICH WAS DESCRIBED AS FLAT BEDDED, MEDIUM HARD (SOFT NEAR SURFACE), POROUS, FINE GRAINED, IRON OXIDE CEMENTED. ALL THREE (3) BORINGS EXTENDED THROUGH THE DEPTH OF THE CUT AND WERE REPORTED AS DRY AT COMPLETION. DUE TO THE LIMITED INFORMATION PROVIDED WITH THESE BORINGS, THEY ARE NOT PRESENTED FOR CLARITY.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE KILLBUCK GLACIATED PITTSBURGH PLATEAU PHYSIOGRAPHIC REGION WHICH IS CHARACTERIZED BY MODERATE RELIEF. THIN GLACIALLY DEPOSITED SOILS ARE PRESENT EXCEPT WITHIN MAJOR DRAINAGE VALLEYS WHERE THE DEPOSITS BECOME THICKER WITHIN STEEP WALLED, BURIED BEDROCK PRE-GLACIAL DRAINAGE VALLEYS WHICH ARE FOUND IN THE PROJECT AREA. THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) INTERACTIVE GEOLOGIC MAP INDICATES THAT THE PROJECT AREA IS COVERED BY GLACIALLY DEPOSITED GROUND MORAIN DEPOSITS WHICH BECOME HUMMOCKY ON THE OUTSLOPES. BENEATH THE OVERBURDEN SOILS THE AREA CONTAINS SANDSTONE AND SHALE UNITS FROM THE MISSISSIPPIAN-AGED LOGAN AND CUYAHOGA FORMATIONS.

RECONNAISSANCE AND FINDINGS

THE PROJECT AREA CONSISTS OF A THRU CUT FOR THE ROADWAY WITH SINGLE ANGLED, BENCHED CUT FACES ON EITHER SIDE. THE GENERAL CHARACTERISTICS OF THE SLOPES ARE APPROXIMATELY 60° ANGLE SLOPES, FROM HORIZONTAL, WITH A BENCH APPROXIMATELY MID-SLOPE. THE BASE OF THE CUT IS COMPRISED OF INTERBEDDED SANDSTONE AND SHALE. THE SANDSTONE ACCOUNTS FOR APPROXIMATELY 80% OF THE UNIT BEING DESCRIBED AS GRAYISH BROWN WITH LIGHT BROWN, HIGHLY TO MODERATELY WEATHERED, MEDIUM TO COARSE GRAINED, MODERATELY STRONG, THIN BEDDED. THE SHALE WAS DESCRIBED AS BROWNISH GRAY AND BROWN, SEVERELY TO HIGHLY WEATHERED, VERY WEAK TO WEAK, LAMINATED TO VERY THIN BEDDED.

THE REMAINING SLOPES CONSISTED PREDOMINANTLY OF GRAYISH BROWN WITH LIGHT BROWN SANDSTONE WHICH WAS HIGHLY TO MODERATELY WEATHERED, MEDIUM TO COARSE GRAINED, MODERATELY STRONG, THIN TO THICK BEDDED. THE MID-SLOPE BENCH WAS VARIABLE WIDTH, GENERALLY RUNNING BETWEEN 15 AND 18 FEET WIDE. THE SLOPE FACES WERE RAVELING WITH SMALL TO LARGE BLOCKS NOTED AS POTENTIALLY UNSTABLE. SEVERAL BLOCKS WERE NOTED WITHIN THE CATCHMENT AREA BETWEEN THE BASE OF THE CUT AND THE PAVED SHOULDER. WITHIN THE VICINITY OF STATION 841+50 A LARGE OPEN JOINT WAS NOTED RUNNING ALONG THE OUTSIDE OF THE MID-SLOPE BENCH CREATING A LARGE BLOCK WHICH COULD DETACH. THE CATCHMENT AREA WAS WELL VEGETATED WITH GRASS. THE PAVEMENT WAS NOTED AS BEING IN GOOD CONDITION. THE ADJACENT RIDGE LINE WAS NOTED AS BEING WOODED.

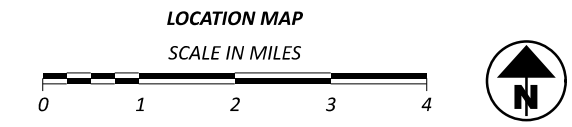
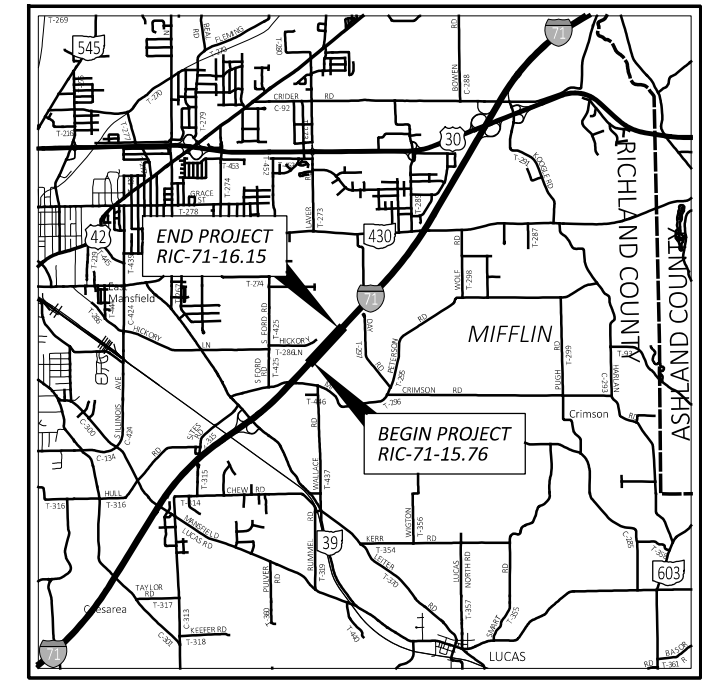
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2024.

AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

LEGEND		ODOT CLASS
DESCRIPTION		
	SANDSTONE	VISUAL
	INTERBEDDED SANDSTONE AND SHALE	VISUAL
	INDICATES EXPOSED BEDROCK.	VISUAL



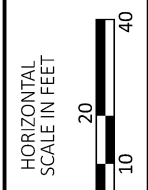
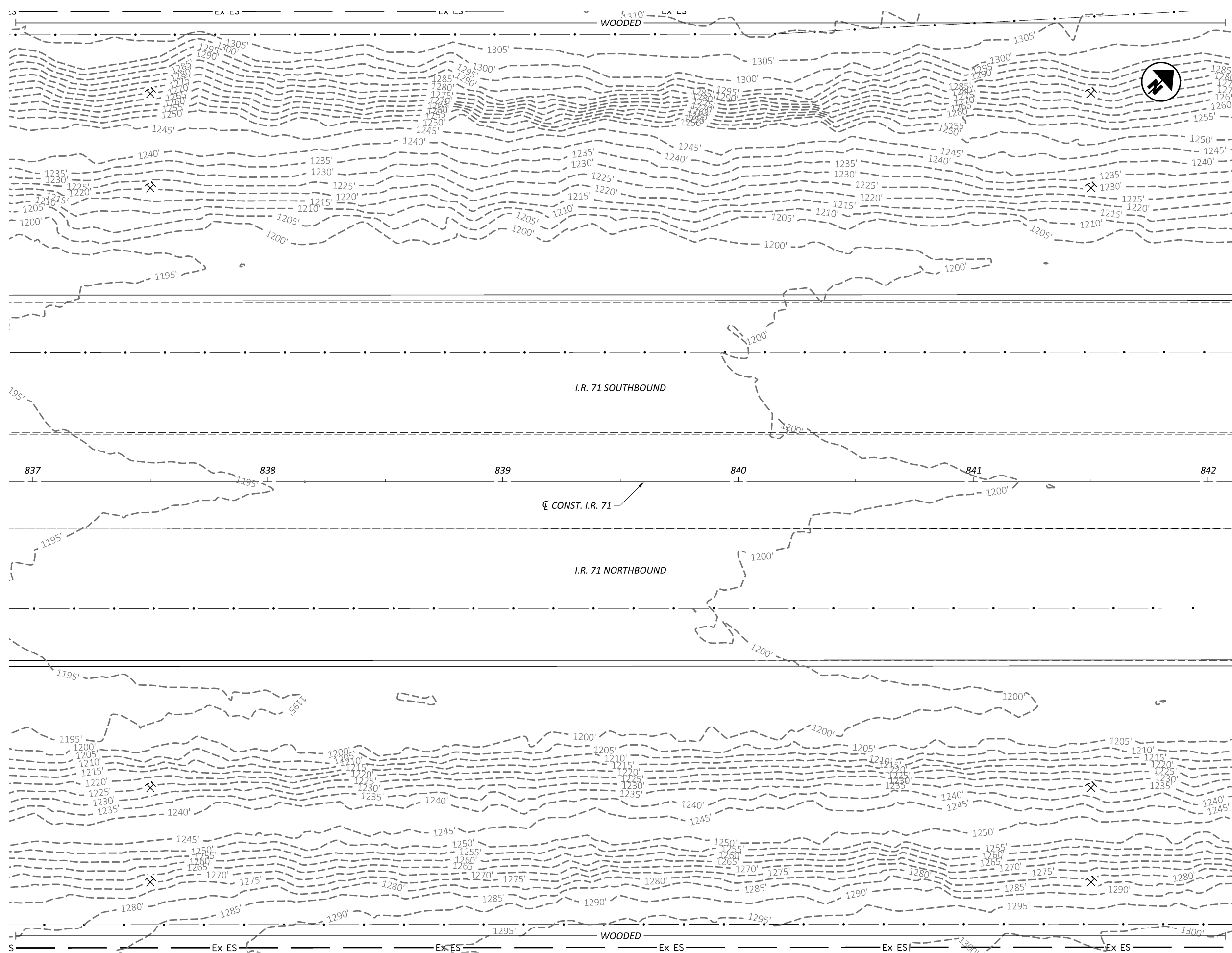
GEOTECHNICAL PROFILE - ROCKFALL

RIC-71-15.76

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RECON. -	PPP	10/23/24
DRAWN -	ARR	11/27/24
REVIEWED -	SAT	11/29/24

DESIGN AGENCY	
DESIGNER	ARR
REVIEWER	SAT 11/29/24
PROJECT ID	119727
SUBSET	TOTAL
1	6
SHEET	TOTAL
GP.1	GP.6



GEOTECHNICAL PROFILE - ROCKFALL
STA. 836+90 TO STA. 842+10 I.R.71

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

SAT 11/29/24

PROJECT ID

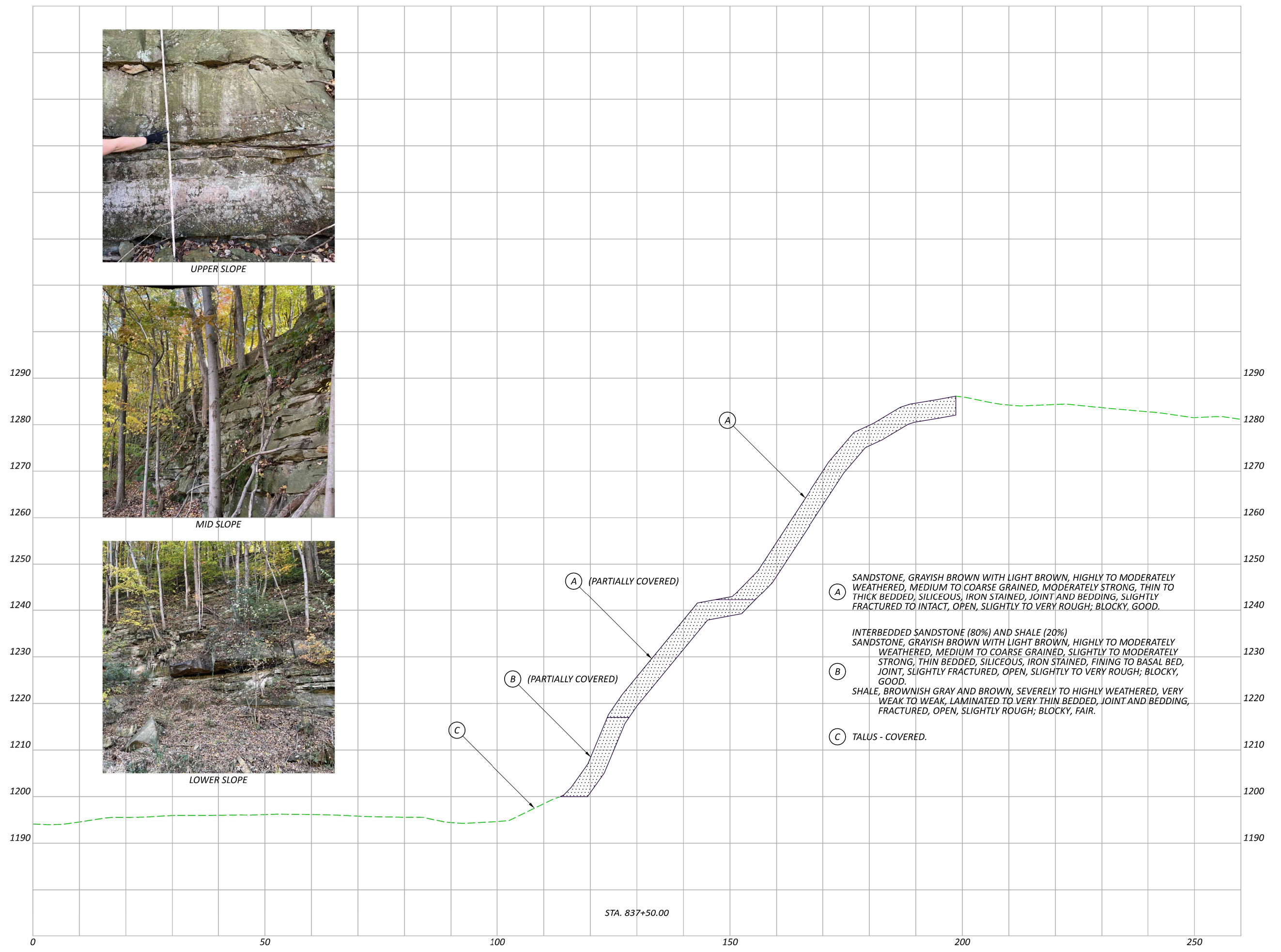
119727

SUBSET TOTAL

2 6

SHEET TOTAL

GP.2 GP.6



DESIGN AGENCY



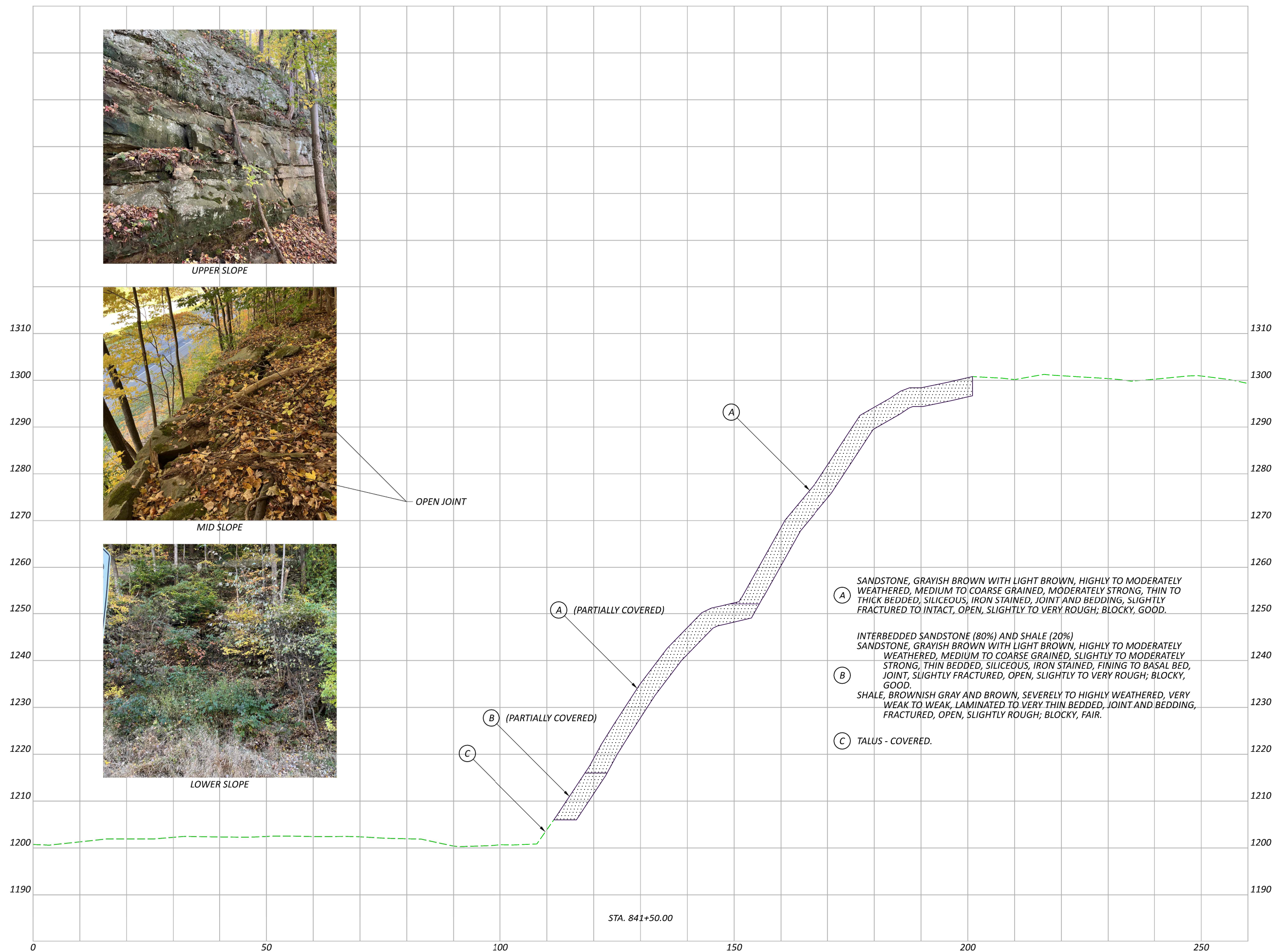
DESIGNER
ARR

REVIEWER
SAT 11/29/24

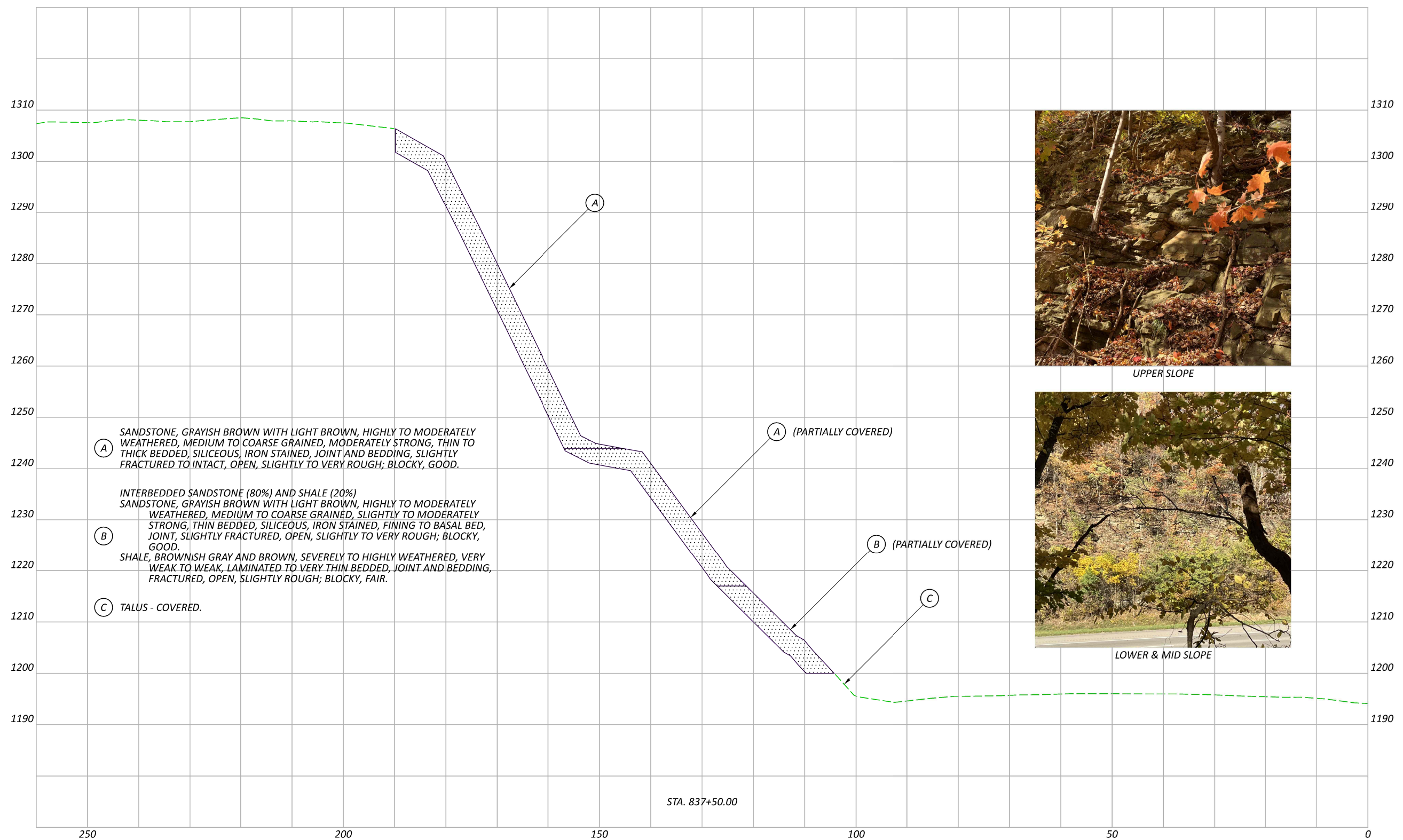
PROJECT ID
119727

SUBSET	TOTAL
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SHEET	TOTAL
GP.3	GP.6

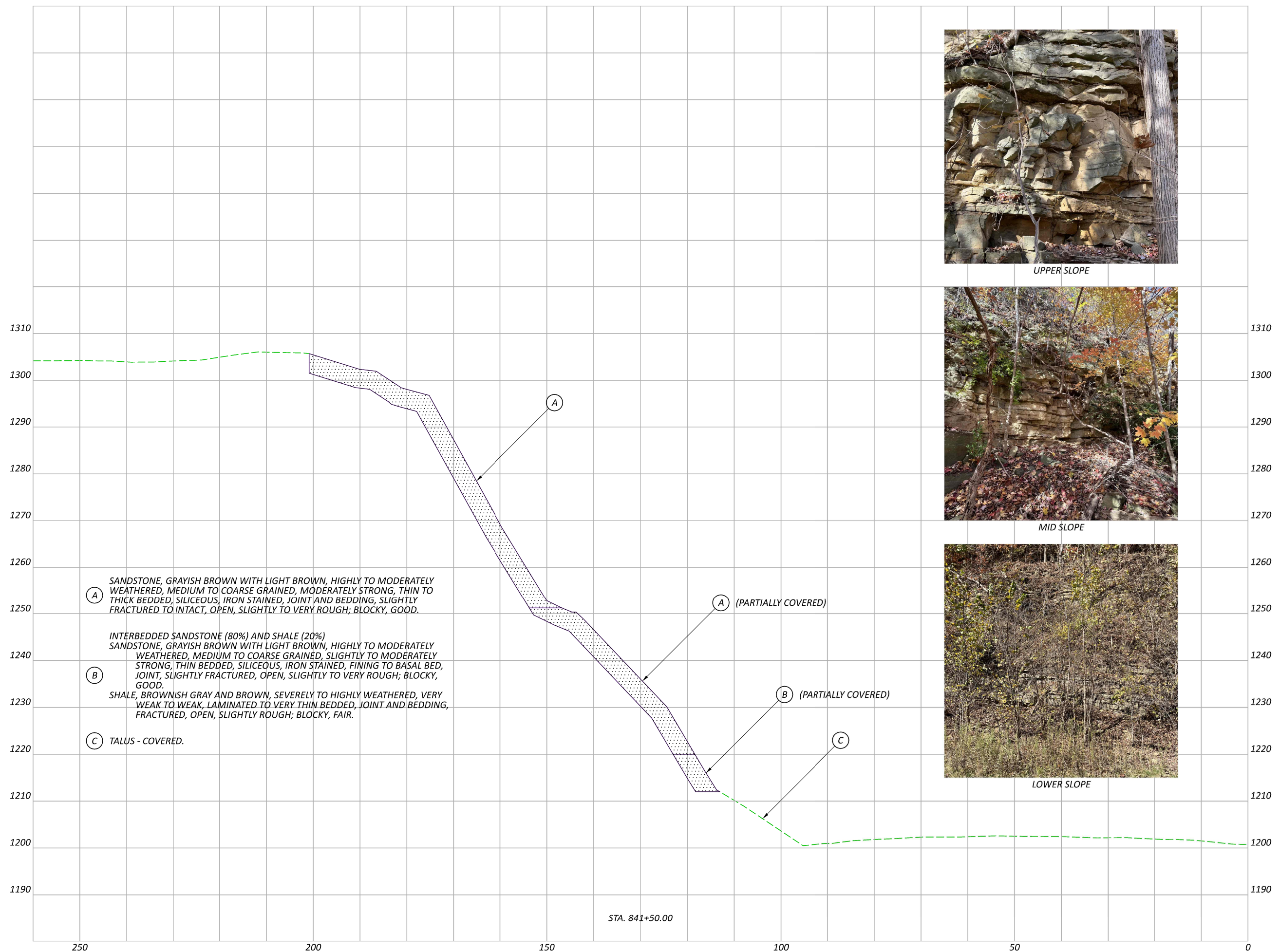


DESIGN AGENCY	
DESIGNER	ARR
REVIEWER	SAT 11/29/24
PROJECT ID	119727
SUBSET	TOTAL
4	6
SHEET	TOTAL
GP.4	GP.6



GEOTECHNICAL PROFILE - ROCKFALL
 CROSS SECTION STA. 837+50 I.R. 71 SOUTHBOUND

DESIGN AGENCY	
DESIGNER	ARR
REVIEWER	SAT 11/29/24
PROJECT ID	119727
SUBSET	TOTAL
5	6
SHEET	TOTAL
GP.5	GP.6



DESIGN AGENCY	
DESIGNER	ARR
REVIEWER	SAT 11/29/24
PROJECT ID	119727
SUBSET	TOTAL
6	6
SHEET	TOTAL
GP.6	GP.6