

Trench Logs

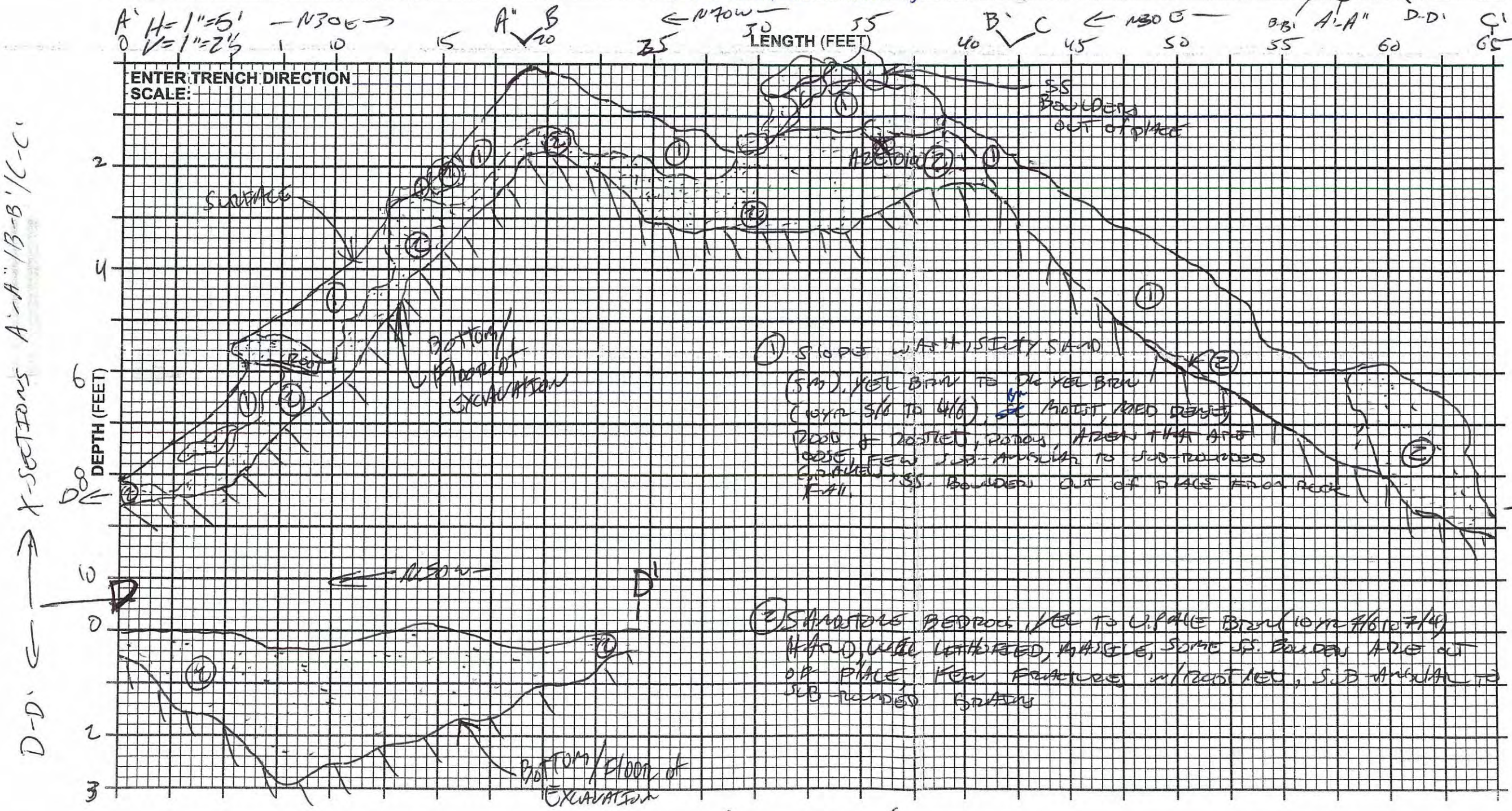
ISRA List of Trench Logs By Object ID

Object ID	Outfall	ISRA Area	Date Sample Collected or Trench Log Created
A2TS0199	009	A2LF-1	11/17/2009
A2TS0299	009	A2LF-1	11/16/09 - 12/22/09
CNTS0199	008	CYN-1	10/8/2009
HZTS0199	008	HVS-1	11/2/2009
HZTS0299	008	HVS-2A	11/3/2009
HZTS0399	008	HVS-2B-1	10/20/2009
HZTS0599	008	HVS-2B-2	10/20/09 - 10/21/09
HZTS0699	008	HVS-2C	10/16/2009
HZTS0799	008	HVS-3	10/28/2009
HZTS0899	008	HVS-4	10/26/2009
HZTS0999	008	DRG-1	10/7/2009
HZTS1199	008	HVS-2D	11/2/2009

A-A" / B-B' / C-C' / D-D'



Project Name ISRA OUTFALL 009 - SSEL		FIELD TRENCH LOGS			
Trench Number A2LF-1	Project Number MA	Elevation and Datum	Location A2LF-1	Sheet 1 of 1	Refusal? (Circle One) Yes <input type="radio"/> No <input checked="" type="radio"/>
Equipment Supplier BC Fall / Mde	Operator MIA N70W	Date and Time Started 11/17/09	Date and Time Completed 11/17/09	Refusal? (Circle One) Yes <input type="radio"/> No <input checked="" type="radio"/>	If Yes Depth =
Equipment Type VAC Truck	Trench Orientation A-A" N30E / B-B' N70W / C-C' N30E / D-D' N50W	Total Depth 3 FT	Total Number of Samples 2 floor / 1 SIDEWALL	Photo? (Circle One) Yes <input checked="" type="radio"/> No <input type="radio"/>	No.
Bucket Width MA	Trench Length	Trench Width EXCAVATION	No. of Samples 3	Bulk <input checked="" type="checkbox"/>	Grab <input checked="" type="checkbox"/>
Geologist or Hydrogeologist/Date A. Goldenberry	Checked by/Date G. Martasin, PG#8756 (11/20/09)		Drive <input checked="" type="checkbox"/>	Hand Auger <input checked="" type="checkbox"/>	% Man-Made Debris 0
			Wall of Trench Shown (Circle One) N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W <input checked="" type="checkbox"/> NE <input type="checkbox"/> NW <input type="checkbox"/> SE <input type="checkbox"/> SW <input type="checkbox"/>		



- EXPLANATION**
- SOIL TYPE CONTACT (SHARP)
 - OTHER CONTACT (AS INDICATED ON LOG)
 - FILL/NATIVE BOUNDARY
 - ANALYTICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
 - GEOTECHNICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
 - SHADING TO DENOTE STAINING
 - BASE OF EXCAVATION
 - SHOW LOCATIONS AND TYPES OF ALL MAJOR DEBRIS
 - ? UNSURE

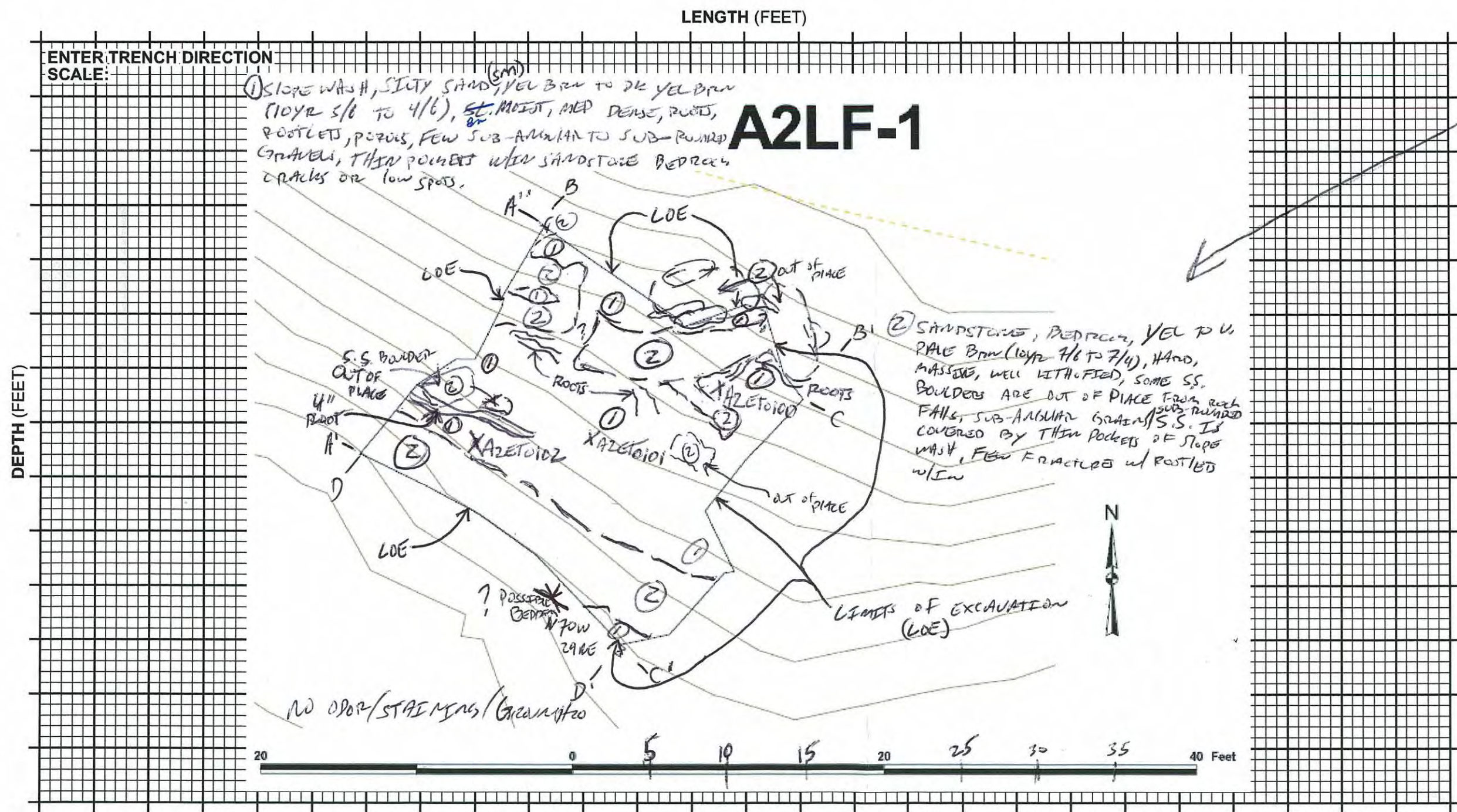
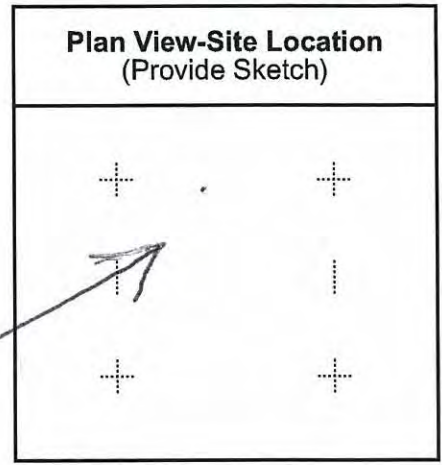
D-D' ← X-SECTIONS A-A" / B-B' / C-C'

NO OROZ / STAINING / (1) RAW H2O

Plot/Plan View



Project Name				FIELD TRENCH LOG			
Trench Number		Project Number		Elevation and Datum		Location	
AZLF-1		N/A		N/A		AZLF-1	
Equipment Supplier		Operator		Date and Time Started		Date and Time Completed	
BLHAI/MP		---		11/17/09		11/17/09	
Equipment Type		Trench Orientation		Total Depth		Total Number of Samples	
Vac Trench		---		3 FT		3	
Bucket Width		Trench Length		Trench Width		No. of Samples	
N/A		---		---		3	
Geologist or Hydrogeologist/Date		Checked by/Date		Drive		Hand Auger	
A. Grossman		---		0		0	
				Refusal? (Circle One)			
				Yes No			
				If Yes Depth =			
				Photo? (Circle One)			
				Yes No			
				% Man-Made Debris			
				0			
				Wall of Trench Shown (Circle One)			
				N S E W NE NW SE SW			



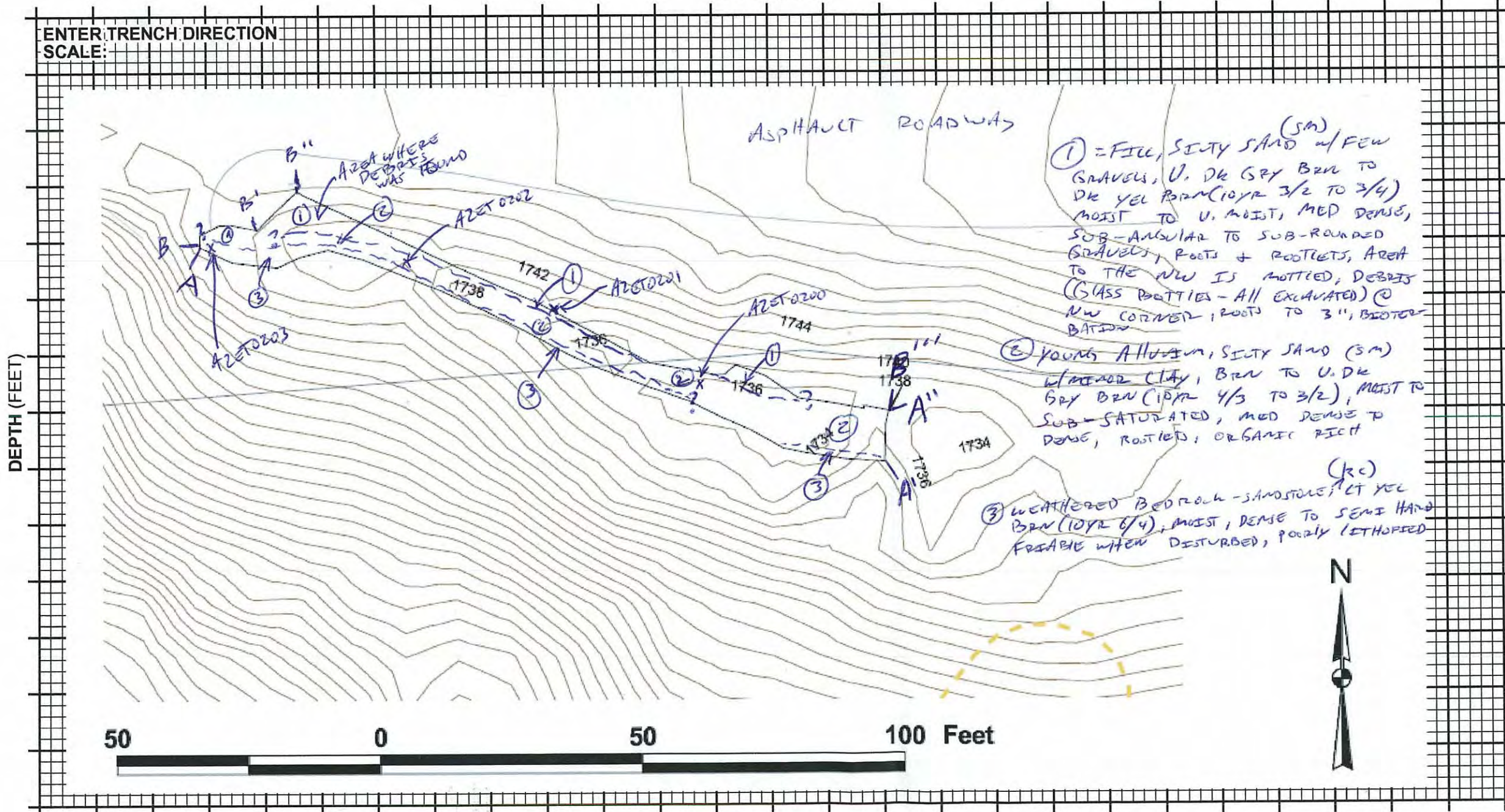
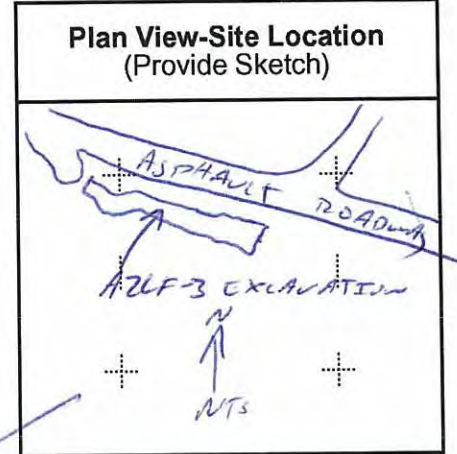
- EXPLANATION**
- SOIL TYPE CONTACT (SHARP)
 - - - OTHER CONTACT (AS INDICATED ON LOG)
 - - - FILL/NATIVE BOUNDARY
 - X ANALYTICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
 - G GEOTECHNICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
 - //// SHADING TO DENOTE STAINING
 - ==== BASE OF EXCAVATION
 - SHOW LOCATIONS AND TYPES OF ALL MAJOR DEBRIS
 - ? UNSURE
 - ⊥ BEDROCK

PLAN VIEW



Project Name				FIELD TRENCH LOG			
ISRA OUTFALL 009 - SSFL		Project Number N/A		Elevation and Datum N/A		Location AZLF-3	
Trench Number AZLF-3		Operator DAN HALL		Date and Time Started 11/16/09 TIME N/A		Date and Time Completed 12/22/09 P.M.	
Equipment Supplier Excavator/BL HALL		Trench Orientation NW-SE / ~N62W		Total Depth 25 FT		Total Number of Samples 4	
Equipment Type CAT EXCAVATOR (TYPE MA)		Trench Width 12 FT		No. of Samples 4		Bulk Grab 4	
Bucket Width 4'		Trench Length 135 FT		Drive 0		Hand Auger 0	
Geologist or Hydrogeologist/Date A. GOLDENBERG 12/22/09				Checked by/Date Shelby Valenzuela 12/22/09		Refusal? (Circle One) Yes No	
						If Yes Depth =	
						Photo? (Circle One) Yes No	
						No.	
						% Man-Made Debris 1-3% @ NW corner	
						Wall of Trench Shown (Circle One) N S E W NE NW SE SW	

LENGTH (FEET)



- ① = Fill, silty sand (SM) GRAVELS, U. DK GRY BRN TO DK YEL BRN (10yr 3/2 TO 3/4) MOIST TO U. MOIST, MED DENSE, SUB-ANGULAR TO SUB-ROUNDED GRAVELS, ROOTS + ROOTLETS, AREA TO THE NW IS MOTTLED, DEBRIS (GLASS BOTTLES - ALL EXCAVATED) @ NW CORNER, ROOTS TO 3", BEETLE BATH
- ② YOUNG ALLUVIUM, SILTY SAND (SM) w/ MED CLAY, BRN TO U. DK GRY BRN (10yr 4/3 TO 3/2), MOIST TO SUB-SATURATED, MED DENSE TO DENSE, ROOTLETS, ORGANIC RICH
- ③ WEATHERED BEDROCK - SANDSTONE, LT YEL BRN (10yr 6/4), MOIST, DENSE TO SEMI HARD FRAKLE WHEN DISTURBED, POORLY LEHOPED

SEE PLAN VIEW

EXPLANATION

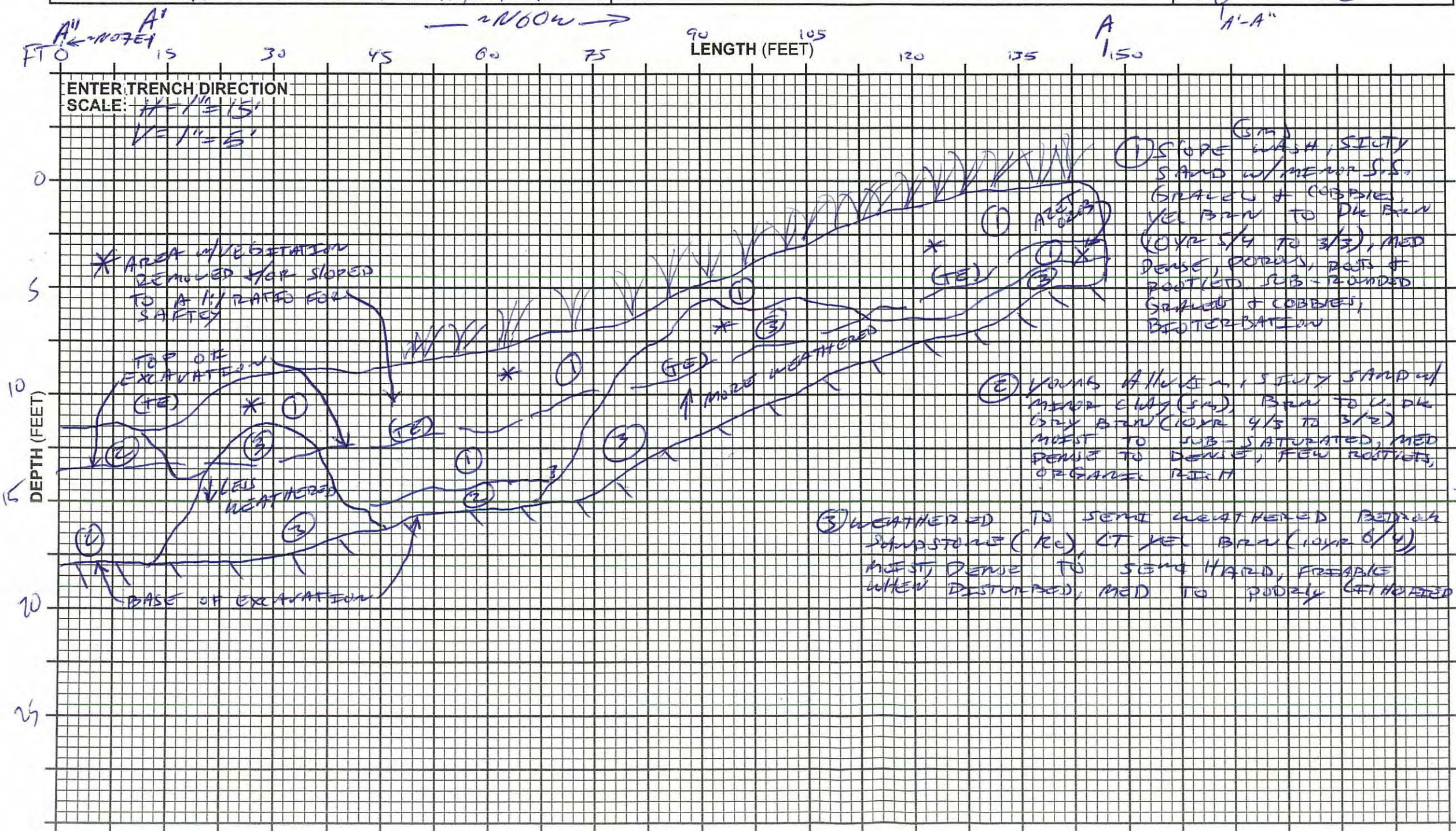
- SOIL TYPE CONTACT (SHARP)
- - - OTHER CONTACT (AS INDICATED ON LOG)
- - - - - FILL/NATIVE BOUNDARY
- X ANALYTICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
- X=ACT LOCATION = N/A
- G GEOTECHNICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
- //// SHADING TO DENOTE STAINING
- //// BASE OF EXCAVATION
- SHOW LOCATIONS AND TYPES OF ALL MAJOR DEBRIS



? = UNSURE / NOT VIS IBA
 A-A' - A'' = CROSS SECTION LOCATION
 B-B' - B'' - B''' = "



Project Name ISRA OUTFALL 009-SSFL			FIELD TRENCH LOG A-A'-A''								
Trench Number A2LF3		Project Number N/A		Elevation and Datum N/A		Location A2LF3		Sheet 1 of 1			
Equipment Supplier EXCAVATOR/BLKALL		Operator DAN HALL		Date and Time Started 12/16/09 TIME N/A		Date and Time Completed 12/22/09 P.M.		Refusal? (Circle One) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes Depth =			
Equipment Type CAT EXCAVATOR (SIZE N/A)		Trench Orientation A-A' ~ N60W A'-A'' ~ N07E		Total Depth ~5'		Total Number of Samples 1 FROM SIDEWALL		Photo? (Circle One) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No.			
Bucket Width 4'	Trench Length A-A' ~ 145 FT	Trench Width ~ 12 FT		No. of Samples 1	Bulk <input checked="" type="checkbox"/>	Grab <input type="checkbox"/>	Drive <input checked="" type="checkbox"/>	Hand Auger <input checked="" type="checkbox"/>	% Man-Made Debris 2		
Geologist or Hydrogeologist/Date A. GOLDENBERG 12/22/09				Checked by/Date				Wall of Trench Shown (Circle One) N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W <input type="checkbox"/> NE <input type="checkbox"/> NW <input type="checkbox"/> SE <input checked="" type="checkbox"/> SW <input type="checkbox"/> A-A'			

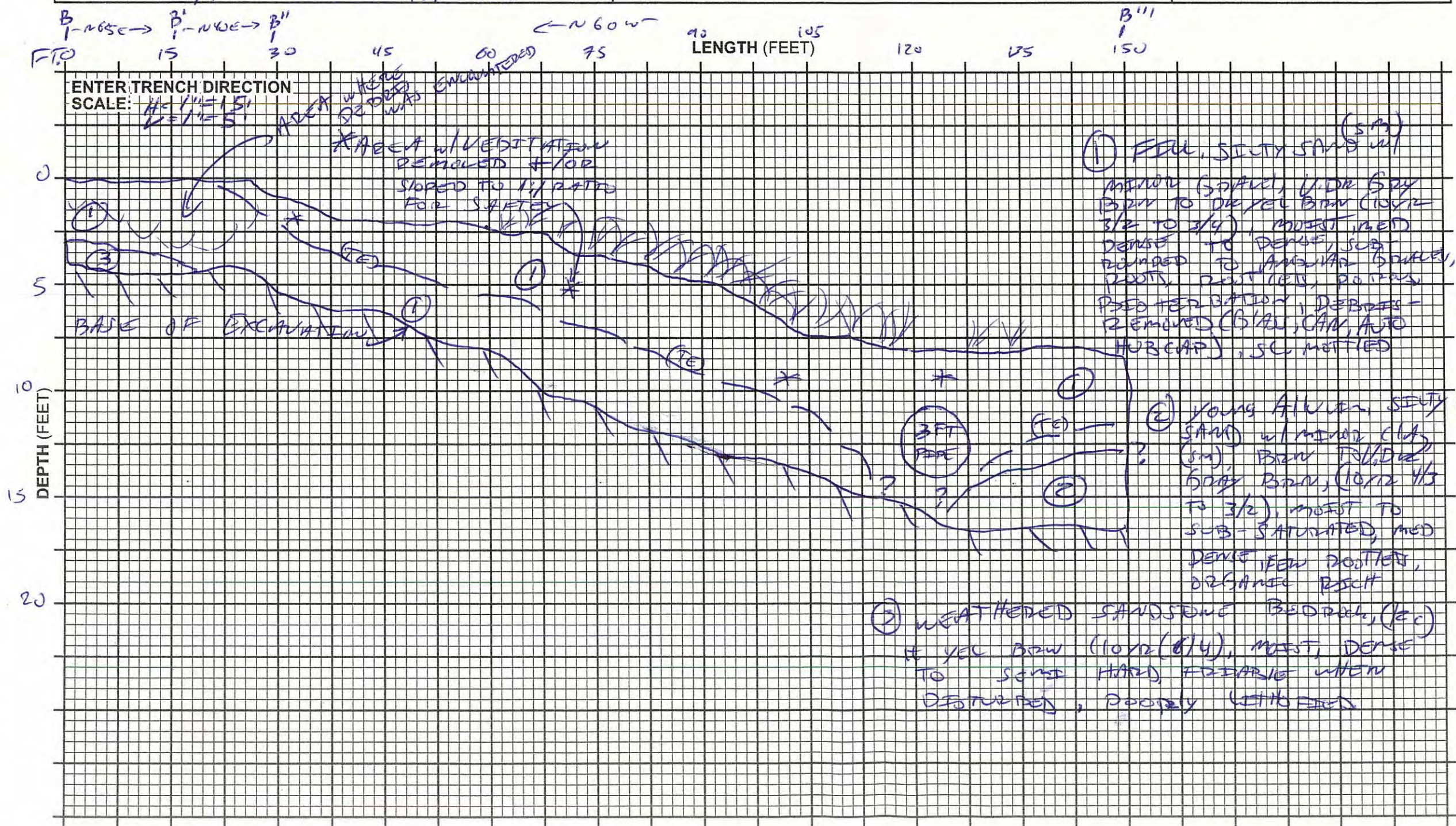
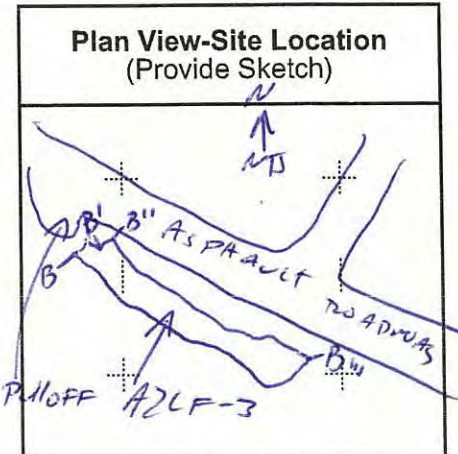


A-A'-A'' = (POSS SECTION LOCATIONS)

- EXPLANATION**
- SOIL TYPE CONTACT (SHARP)
 - OTHER CONTACT (AS INDICATED ON LOG) TOP OF EXCAVATION
 - FILL/NATIVE BOUNDARY
 - ANALYTICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
EXACT LOCATION OF SAMPLE = *not*
 - GEOTECHNICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
 - SHADING TO DENOTE STAINING
 - BASE OF EXCAVATION
 - SHOW LOCATIONS AND TYPES OF ALL MAJOR DEBRIS
- ? = UNSURE / NOT VERIFIED*
V = VEGETATION

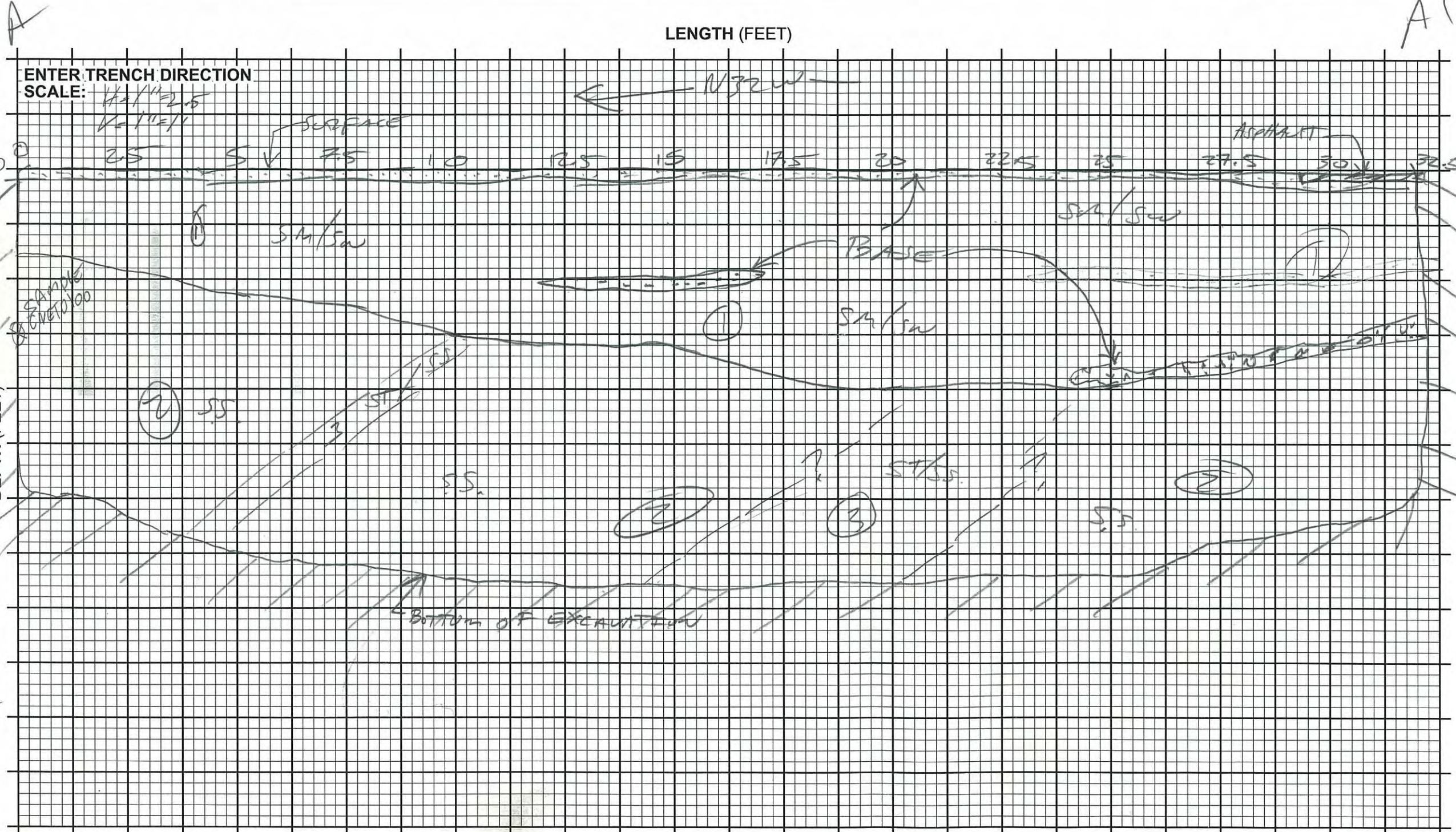
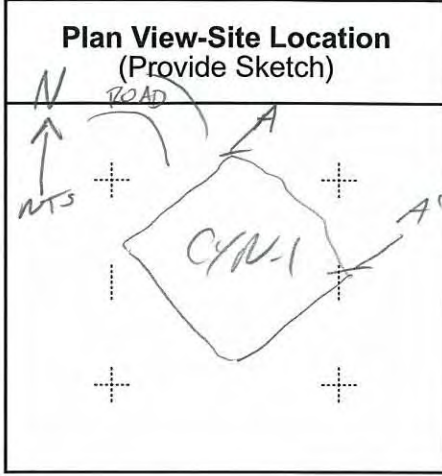


Project Name ISRA OUTFALL 009		FIELD TRENCH LOG B-B'-B''-B'''		
Trench Number A2LF-3	Project Number N/A	Elevation and Datum MA	Location A2LF-3	Sheet 1 of 1
Equipment Supplier EXAVATOR / BL HALL	Operator DAW HALL	Date and Time Started ~11/16/09 TAME MA	Date and Time Completed 12/22/09 p.m.	Refusal? (Circle One) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes Depth =
Equipment Type CAT EXCAVATOR (SIZE MA)	Trench Orientation B-B'-NOSE / B'-B'' N 40E / B''-B''' 200W	Total Depth ~5'	Total Number of Samples 1 @ SIDEWALL	Photo? (Circle One) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Bucket Width 4'	Trench Length N/SO	Trench Width 2 1/2 FT	No. of Samples 1	Bulk <input checked="" type="checkbox"/> Grab <input type="checkbox"/>
Geologist or Hydrogeologist/Date A. BOLDENBERG 12/24/09		Checked by/Date		Drive <input checked="" type="checkbox"/> Hand Auger <input type="checkbox"/>
				% Man-Made Debris 1-3%
				Wall of Trench Shown (Circle One) N S E W NE NW SE SW



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 - EXACT SAMPLE LOCATION
 - GEOTECHNICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
 - SHADING TO DENOTE STAINING
 - BASE OF EXCAVATION
 - SHOW LOCATIONS AND TYPES OF ALL MAJOR DEBRIS
 - ? = NOT VISIBLE
 - V = VEGETATION

Project Name ISRA - OUTFALL 008 - SSRL - CYM-1			FIELD TRENCH LOG A-A'			
Trench Number CYM-1	Project Number NA	Elevation and Datum NA	Location CYM-1	Sheet 1 of 1		
Equipment Supplier MRE	Operator D. A. [unclear]	Date and Time Started 10/8/09	Date and Time Completed 10/8/09	Refusal? (Circle One) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If Yes Depth =	
Equipment Type EXCAVATOR CAT 320	Trench Orientation N32W	Total Depth 3.5	Total Number of Samples 1	Photo? (Circle One) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		
Bucket Width 4"	Trench Length 32	Trench Width EXCAVATION	No. of Samples 1	Bulk <input checked="" type="checkbox"/>	Grab <input type="checkbox"/>	
Geologist or Hydrogeologist/Date A. Goldenberg			Checked by/Date	Drive <input checked="" type="checkbox"/>	Hand Auger <input checked="" type="checkbox"/>	
					% Man-Made Debris 5-8%	
					Wall of Trench Shown (Circle One) N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W <input checked="" type="checkbox"/> NE <input type="checkbox"/> NW <input type="checkbox"/> SE <input type="checkbox"/> SW <input type="checkbox"/>	



EXPLANATION

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- X** ANALYTICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
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SS PL 10/8/04
ISPA - OUT FALL 000 -

CN-1

A-A'

① FINE-SIETY SAND w/ GRAVEL + COBBLES (BASE), SUB-ANGULAR TO ANGULAR GRAVEL + COBBLES, FEW POROUS, FEW ROOTS + ROOTETS. TO GRAVELLY SAND w/ SEIT (SM-SW)

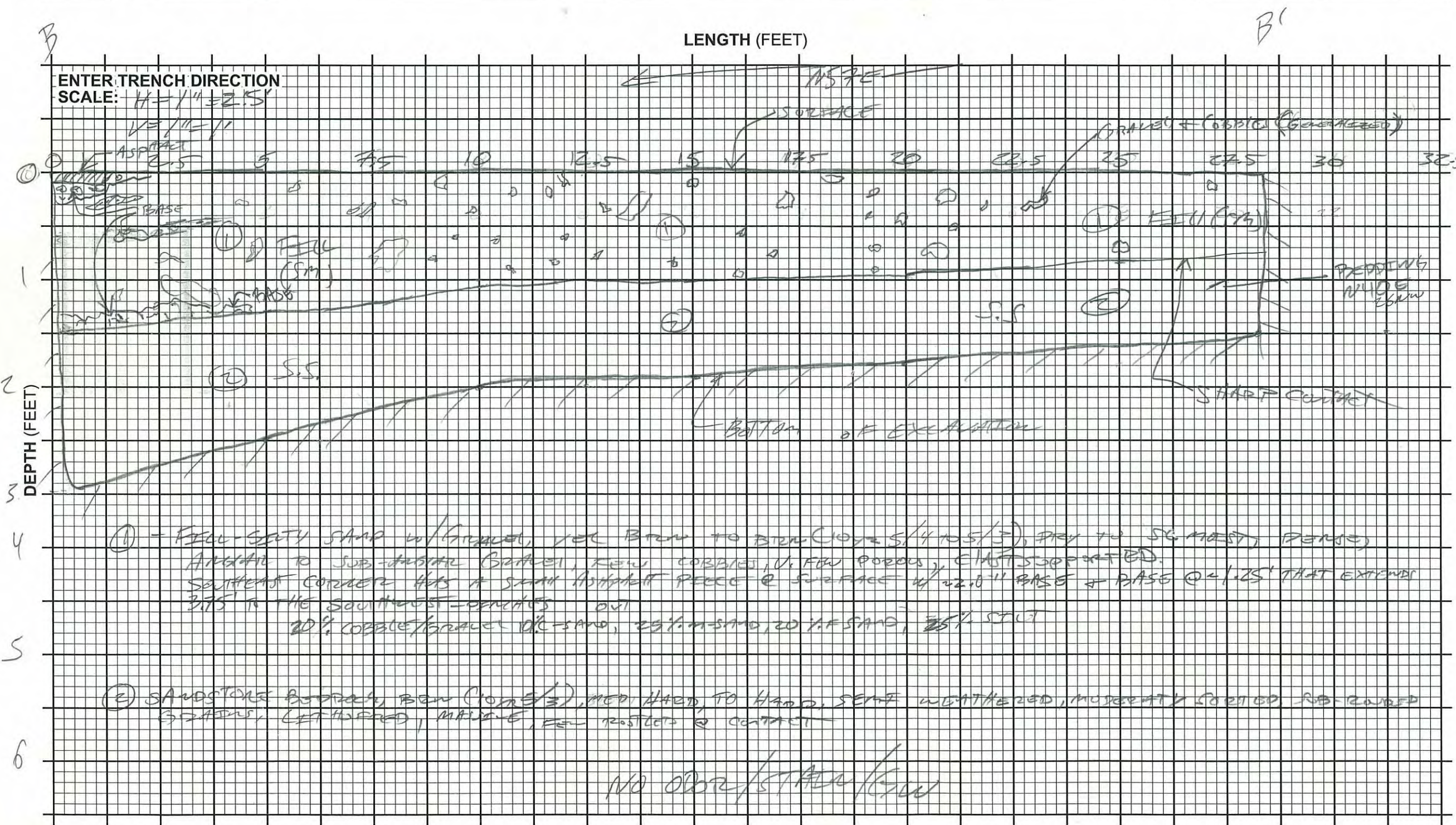
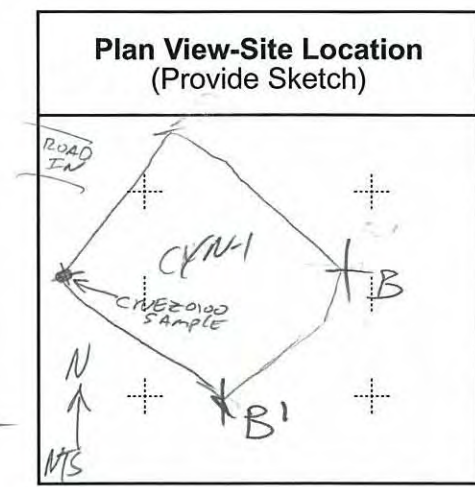
② SANDSTONE - BEDRALYEL BRN (10yr 5/4), HARD, FRACTURED, SEMI TO UNWEATHERED, MODERATELY SORTED, MASSIVE
30% GRAVEL + COBBLES 10% C-SAND 20% M-SAND 10% F-SAND 30% SEIT - CLAST SUPPORTED
(SS.)

③ SILTSTONE TO U. FINE SANDSTONE, YEL BRN (10yr 5/4) TO (10yr 5/8), DRY, HARD, INTENSIVELY FRACTURED, THINLY BEDDED

(ST/SS)

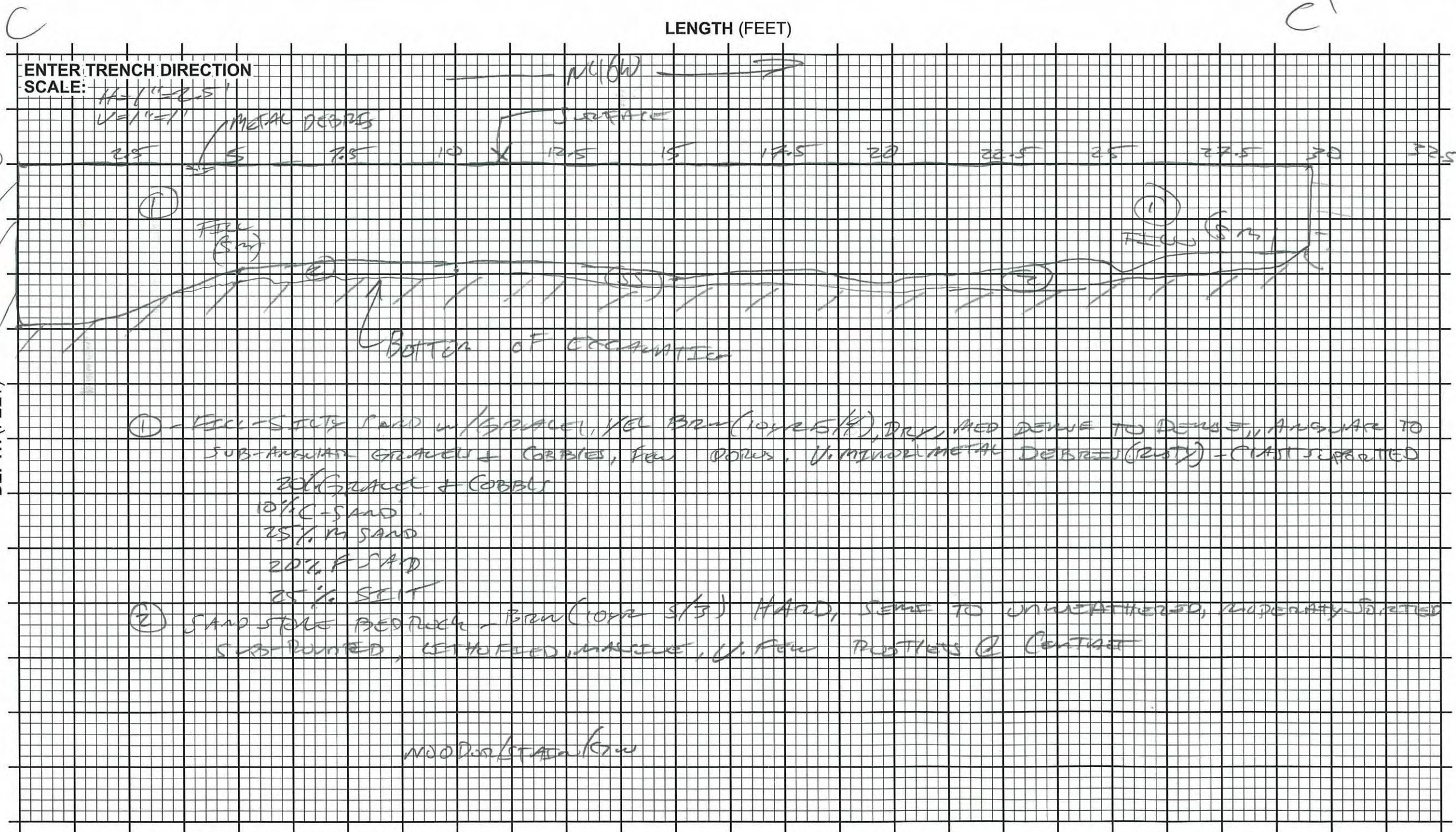
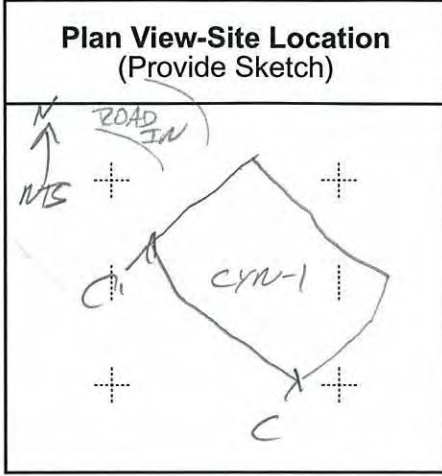
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Project Name <i>ISRA - OUTFALL 008 - SSFL - CYN-1</i>				FIELD TRENCH LOG <i>B-B'</i>			
Trench Number <i>CYN-1</i>		Project Number <i>NA</i>		Elevation and Datum <i>NA</i>		Location <i>CYN-1</i>	
Equipment Supplier <i>MR</i>		Operator <i>DAVE WORMER</i>		Date and Time Started <i>10/9/09</i>		Date and Time Completed <i>10/9/09</i>	
Equipment Type <i>EXCAVATOR CAT 320</i>		Trench Orientation <i>N04E</i>		Total Depth <i>3'</i>		Total Number of Samples <i>0</i>	
Bucket Width <i>4'</i>	Trench Length <i>24'</i>	Trench Width <i>EXCAVATION</i>		No. of Samples <i>0</i>	Bulk <i>0</i>	Grab <i>0</i>	Drive <i>0</i>
Geologist or Hydrogeologist/Date <i>H. ROEDERBERG</i>				Checked by/Date		Wall of Trench Shown (Circle One) N S E W NE NW SE SW	
						% Man-Made Debris <i>2%</i>	



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 - BASE OF EXCAVATION
 - SHOW LOCATIONS AND TYPES OF ALL MAJOR DEBRIS

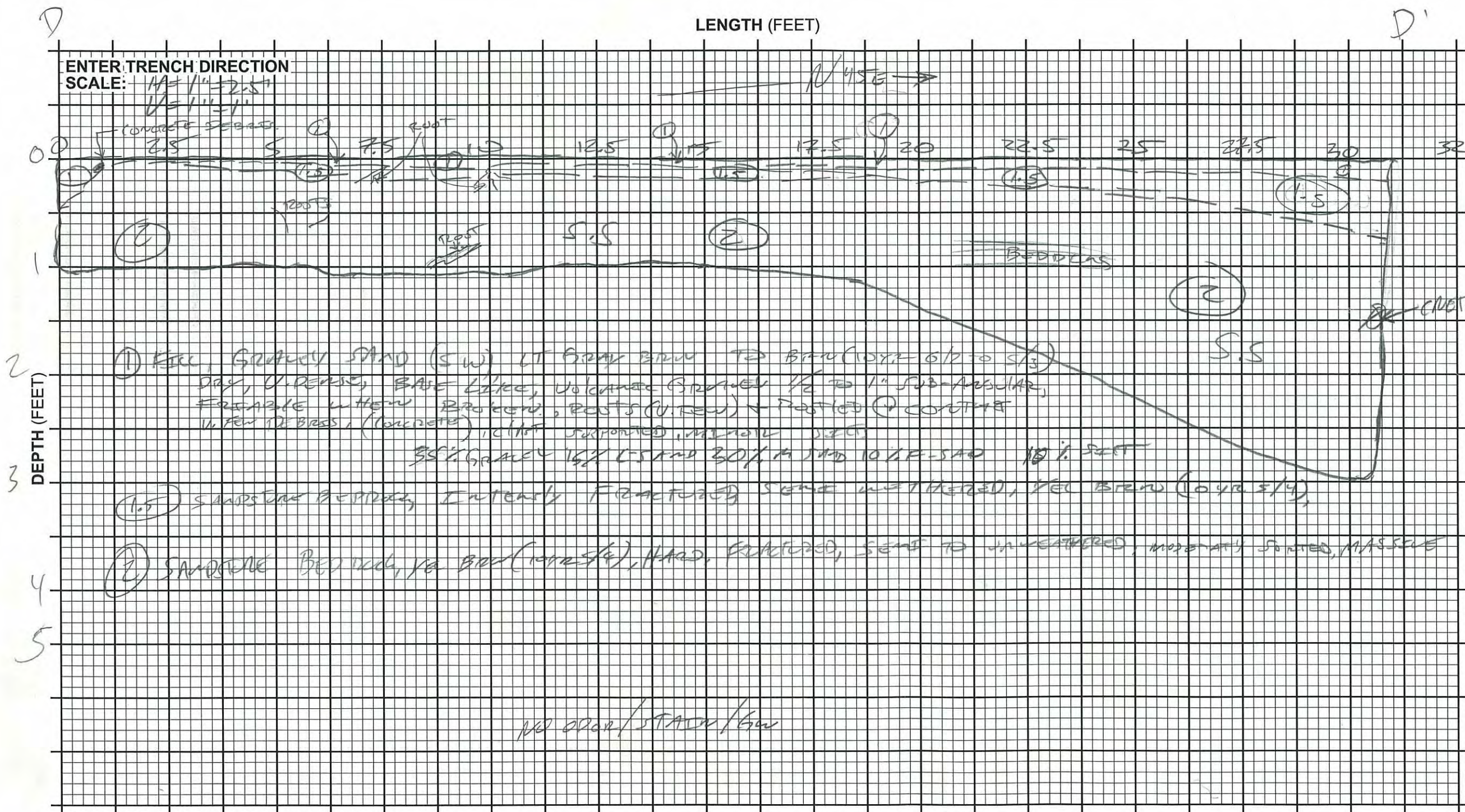
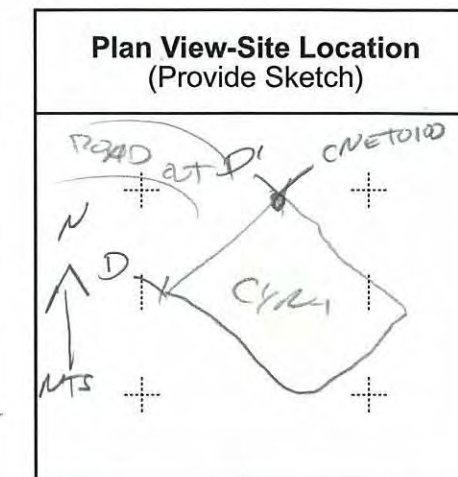
Project Name ISRA - OUTFALL 008 - SSFL - CYN - 1				FIELD TRENCH LOG C-C'			
Trench Number CYN-1		Project Number N/A		Elevation and Datum N/A		Location CYN-1	
Equipment Supplier M&E		Operator DAVID S. M...		Date and Time Started 10/8/09		Date and Time Completed 10/8/09	
Equipment Type EXCAVATOR CAT 320		Trench Orientation N46W		Total Depth 18"		Total Number of Samples 0	
Bucket Width 4'		Trench Length 29'		Trench Width EXCAVATION		No. of Samples 0	
Geologist or Hydrogeologist/Date A. FOLBERGERS		Checked by/Date		Drive 0		Hand Auger 0	
				Grab 0		Photo? (Circle One) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
				% Man-Made Debris 2%		Refusal? (Circle One) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes Depth =	
				Wall of Trench Shown (Circle One) N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W <input type="checkbox"/> NE <input type="checkbox"/> NW <input type="checkbox"/> SE <input checked="" type="checkbox"/> SW			



EXPLANATION

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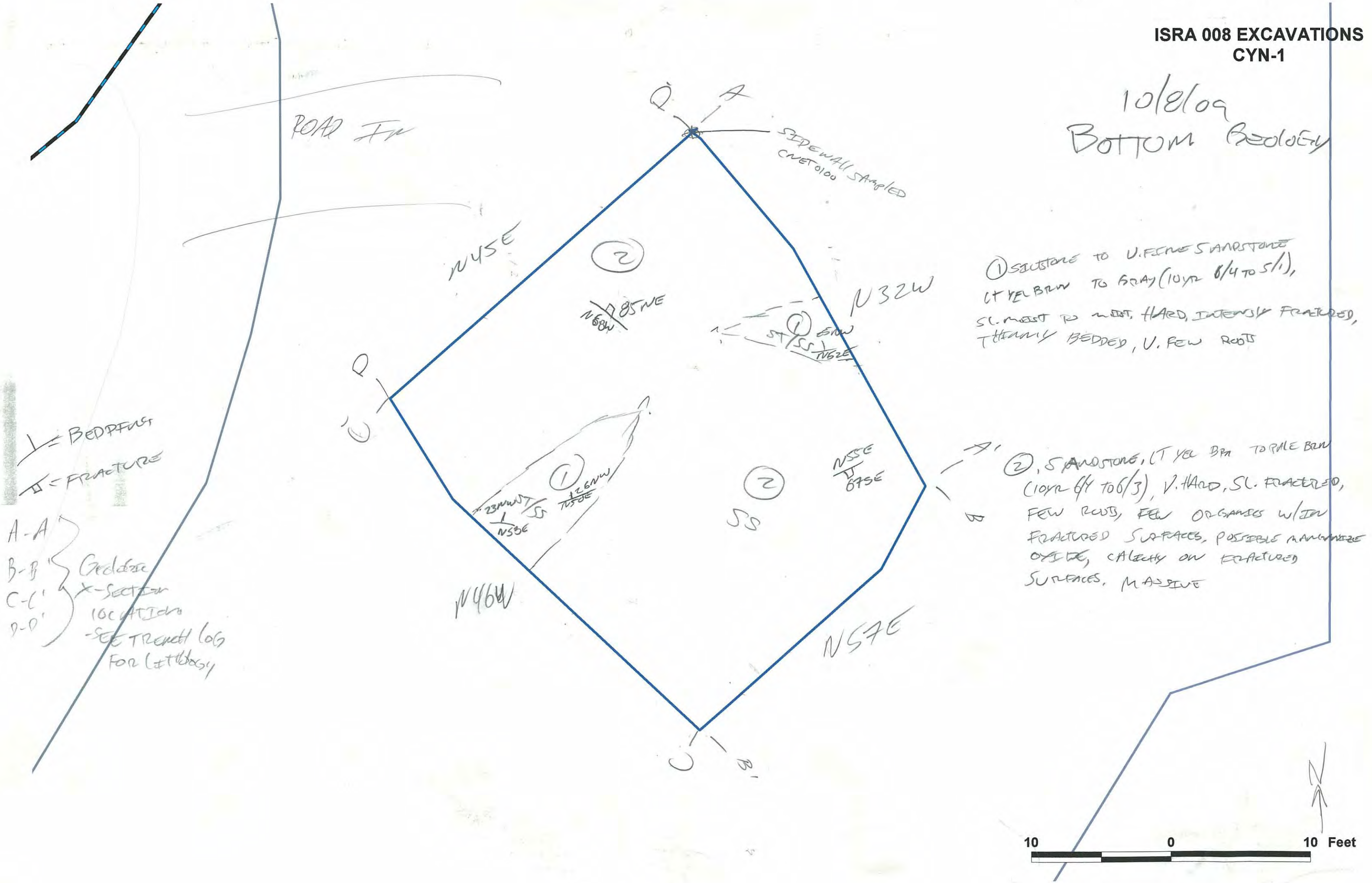
Project Name ISRA OUTFALL ODB - SSAL - CYN-1				FIELD TRENCH LOG D-D'			
Trench Number CYN-1	Project Number WA	Elevation and Datum MA	Location CYN-1		Sheet 1 of 1		
Equipment Supplier MPe	Operator DAVE WILSON	Date and Time Started 10/2/07	Date and Time Completed 10/2/07	Refusal? (Circle One) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If Yes Depth =		
Equipment Type EXCAVATOR CAT 320	Trench Orientation WUSE	Total Depth 3	Total Number of Samples 1		Photo? (Circle One) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Bucket Width 4'	Trench Length 31'	Trench Width EXPLANATION	No. of Samples 1	Bulk 0	Grab 1	Drive 0	
Geologist or Hydrogeologist/Date A. Goldberger			Checked by/Date	Hand Auger 0	% Man-Made Debris 2%		
				Wall of Trench Shown (Circle One) N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W <input type="checkbox"/> NE <input type="checkbox"/> NW <input checked="" type="checkbox"/> SE <input type="checkbox"/> SW <input type="checkbox"/>			



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- SOIL TYPE CONTACT (SHARP)
- OTHER CONTACT (AS INDICATED ON LOG)
- FILL/NATIVE BOUNDARY
- X** ANALYTICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
- G** GEOTECHNICAL SAMPLE LOCATION (WRITE SAMPLE NUMBER OUT TO SIDE)
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10/8/09
BOTTOM BEDROCK



① SANDSTONE TO V. FINE SANDSTONE
LT YEL BRN TO GRAY (10yr 8/4 TO 5/1),
SL. MOST TO WEST, HARD, INTENSIVELY FRACTURED,
THINLY BEDDED, V. FEW ROOTS

② SANDSTONE, LT YEL BRN TO PALE BRN
(10yr 6/4 TO 6/3), V. HARD, SL. FRACTURED,
FEW ROOTS, FEW ORGANISMS W/IN
FRACTURED SURFACES, POSSIBLE MANGANESE
OXIDE, CALICHE ON FRACTURED
SURFACES, MASSIVE

┆ = BEDDING
┆ = FRACTURE

A-A }
B-B } Core Area
C-C } X-SECTION
P-P } LOCATION
- SEE TRENCH LOGS
FOR LITHOLOGY

