

FINAL BOREHOLE LOG																			
LOGGED BY AR		BEGIN DATE 4/10/2025		COMPLETION DATE 4/11/2025		BOREHOLE LOCATION (North/East and Datum) 14.673214N, 120.925780E WGS84					HOLE ID BH29								
DRILLING CONTRACTOR PHILGEOTEK ENGINEERING COMPANY						BOREHOLE LOCATION (Offset, Station, Line) N/A					SURFACE ELEVATION (m) -8.28								
DRILLING METHOD (ORIENTATION) ROTARY DRILLING (VERTICAL)						DRILLING RIG TOHO					BOREHOLE DIAMETER 3inches								
SAMPLER TYPE(S) AND SIZE(S) SPT, 2in (outer), 1.375in (inner), 18in (length)						SPT HAMMER TYPE DONUT					HAMMER EFFICIENCY (%) 50.00								
BOREHOLE BACKFILL AND COMPLETION BACKFILL MATERIALS (4/11/2025)						GROUNDWATER AFTER DRILLING (DATE) -8.1meters (4/11/2025)					TOTAL DEPTH OF DRILLING 20.67 meters								
Elevation (m)	Depth (m)	Drilling Method	Sampling				Geomaterial Description	% Recovery	Blows			N-Value	RQD (%)	Lab				N - Value Chart	
			ID	Type	Symbol	Graphic			15cm.	15cm.	15cm.			NMC (%)	LL (%)	PI (%)	% Fines		
-9.78	1.05		WB	X			DARK GRAY SILT with shell; very soft; wet mostly silt and clay; traces of coarse sand	100	1	1	1	2	-	136	48	19	94		
	SS1			ML															
-11.28	2.55		WB	X			DARK GRAY Sandy Lean CLAY with shell; soft; wet mostly silt and clay; traces of fine gravel	100	2	1	2	3	-	75	32	14	66		
	3.00		SS2		CL														
-12.78	4.05		WB	X			DARK GRAY SILT with sand ; soft; wet mostly silt and clay; few fine gravel	100	1	1	2	3	-	84	42	16	71		
	4.50		SS3		ML														
-14.28	5.55		WB	X			DARK GRAY Sandy Lean CLAY ; medium stiff; moist mostly silt and clay; few fine sand	67	2	3	3	6	-	43	41	25	58		
	6.00		SS4		CL														
-15.78	7.05		WB	X			DARK BROWN Clayey SAND with gravel ; very dense; moist some silt and clay; few coarse sand	89	22	24	37	>50	-	15	38	19	29		
	7.50		SS5		SC														
-17.28	8.55		WB	X				42	27	30	50/6	80/21	-	11	28	9	21		
	9.00		SS6		SC														
-18.78	10.05		WB	X			DARK BROWN Silty SAND with gravel ; very dense; moist some fine gravel; little fine sand	33	31	50/9		50/9	-	10	NL	NP	21		
	10.50		SS7		SM														
-20.28	11.55		WB	X				31	29	50/10		50/10	-	10	NL	NP	28		
	12.00		SS8		SM														
-21.78	13.05		WB	X				24	39	50/11		50/11	-	10	NL	NP	32		
	13.50		SS9		SM														
-23.28	14.55		WB	X				27	40	50/7		50/7	-	14	NL	NP	36		
	15.00		SS10		SM														
-24.78	16.05	WB	X				33	20	50/10		50/10	-	14	NL	NP	37			
	16.50	SS11		SM															
-26.28	17.55	WB	X				20	50/9			>50	-	24	NL	NP	38			
	18.00	SS12		SM															
-27.78	19.05	WB	X				18	50/8			>50	-	23	NL	NP	37			
	19.50	SS13		SM															
DRILLING SUPERVISOR MLO						PROJECT TITLE SHORELINE PROTECTION DIKE ROAD PROJECT													































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<b>LOGGED BY</b> AR	<b>BEGIN DATE</b> 4/10/2025	<b>COMPLETION DATE</b> 4/11/2025	<b>BOREHOLE LOCATION (North/East and Datum)</b> 14.673214N, 120.925780E WGS84	<b>HOLE ID</b> BH29
<b>DRILLING CONTRACTOR</b> PHILGEOOTEK ENGINEERING COMPANY			<b>BOREHOLE LOCATION (Offset, Station, Line)</b> N/A	<b>SURFACE ELEVATION (m)</b> -8.28
<b>DRILLING METHOD (ORIENTATION)</b> ROTARY DRILLING (VERTICAL)			<b>DRILLING RIG</b> TOHO	<b>BOREHOLE DIAMETER</b> 3inches
<b>SAMPLER TYPE(S) AND SIZE(S)</b> SPT, 2in (outer), 1.375in (inner), 18in (length)			<b>SPT HAMMER TYPE</b> DONUT	<b>HAMMER EFFICIENCY (%)</b> 50.00
<b>BOREHOLE BACKFILL AND COMPLETION</b> BACKFILL MATERIALS (4/11/2025)			<b>GROUNDWATER AFTER DRILLING (DATE)</b> -8.1meters (4/11/2025)	<b>TOTAL DEPTH OF DRILLING</b> 20.67 meters



### GROUP SYMBOLS AND NAMES

Graphic / Symbol	Group Names	Graphic / Symbol	Group Names
	<b>GW</b> Well-graded GRAVEL Well-graded GRAVEL with SAND		<b>CL</b> Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
	<b>GP</b> Poorly graded GRAVEL Poorly graded GRAVEL with SAND		<b>CL-ML</b> SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
	<b>GW-GM</b> Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND		<b>ML</b> SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
	<b>GW-GC</b> Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		<b>OL</b> ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
	<b>GP-GM</b> Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND		<b>OL</b> ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
	<b>GP-GC</b> Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		<b>CH</b> Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
	<b>GM</b> SILTY GRAVEL SILTY GRAVEL with SAND		<b>MH</b> Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
	<b>GC</b> CLAYEY GRAVEL CLAYEY GRAVEL with SAND		<b>OH</b> ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
	<b>GC-GM</b> SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND		<b>OH</b> ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY elastic ELASTIC SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
	<b>SW</b> Well-graded SAND Well-graded SAND with GRAVEL		<b>OL/OH</b> ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	<b>SP</b> Poorly graded SAND Poorly graded SAND with GRAVEL		
	<b>SW-SM</b> Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
	<b>SW-SC</b> Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		
	<b>SP-SM</b> Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
	<b>SP-SC</b> Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		
	<b>SM</b> SILTY SAND SILTY SAND with GRAVEL		
	<b>SC</b> CLAYEY SAND CLAYEY SAND with GRAVEL		
	<b>SC-SM</b> SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
	<b>PT</b> PEAT		
	<b>COBBLES</b> COBBLES and BOULDERS BOULDERS		




### Sampling Types:

	SS-SPT Sampling
	WB-Wash Boring
	UD-UDS Sampling
	CS-Core Sampling

### Drilling Method Symbols

	Rotary Drilling		Core barrel Drilling
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### WATER LEVEL SYMBOLS

	First Water Level Reading (during drilling)
	Static Water Level Reading (short-term)
	Static Water Level Reading (long-term)

### Consistency of cohesive soils

Nvalue	Decription
0-2	Very soft
2-4	Soft
4-8	Medium
8-15	Stiff
15-30	Very Stiff
>30	Hard

### Apparent density of cohesionless soils

Nvalue	Decription
0-5	Very loose
5-10	Loose
10-30	Medium
30-50	Dense
>50	Very Dense

### Moisture

Description	Criteria
Dry	No discernible moisture
Moist	Moisture present, but no free water
Wet	Visible free water

### Percent or Portion of Soils

Description	Criteria
Trace	Estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

### Soil Particle Size

Description	Size
Boulder	> 12 inches
Cobble	3 to 12 inches
Gravel	Coarse 3/4 inch to 3 inches
	Fine No. 4 Sieve to 3/4 inch
Sand	Coarse No. 10 Sieve to No. 4 Sieve
	Medium No. 40 Sieve to No. 10 Sieve
	Fine No. 200 Sieve to No. 40 Sieve
Silt and Clay	Passing No. 200 Sieve

### Rock Quality

Description	Criteria
Very Poor	RQD less than 25%. Highly fractured or weathered rock.
Poor	RQD from 25% to 50%. Weathered rock.
Fair	RQD from 50% to 75%. Moderately weathered rock.
Good	RQD from 75% to 90%. Hard rock with some fractures.
Excellent	RQD from 90% to 100%. Fresh, sound rock, minimal fracturing.

### References :

- Department of Public Works and Highways Design, Guidelines, Criteria and Standards Volume IIC
- Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
- Coduto, D.P. (2000). Foundation Design: Principles and Practice (2nd Edition). Prentice.
- Peck RB, Hanson WE, Thornburn TH (1974) Foundation Engineering, 2nd edn. Wiley, New York

<b>DRILLING SUPERVISOR</b> MLO	<b>PROJECT TITLE</b> SHORELINE PROTECTION DIKE ROAD PROJECT
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