

APPENDIX C

SUMMARY OF SOILS

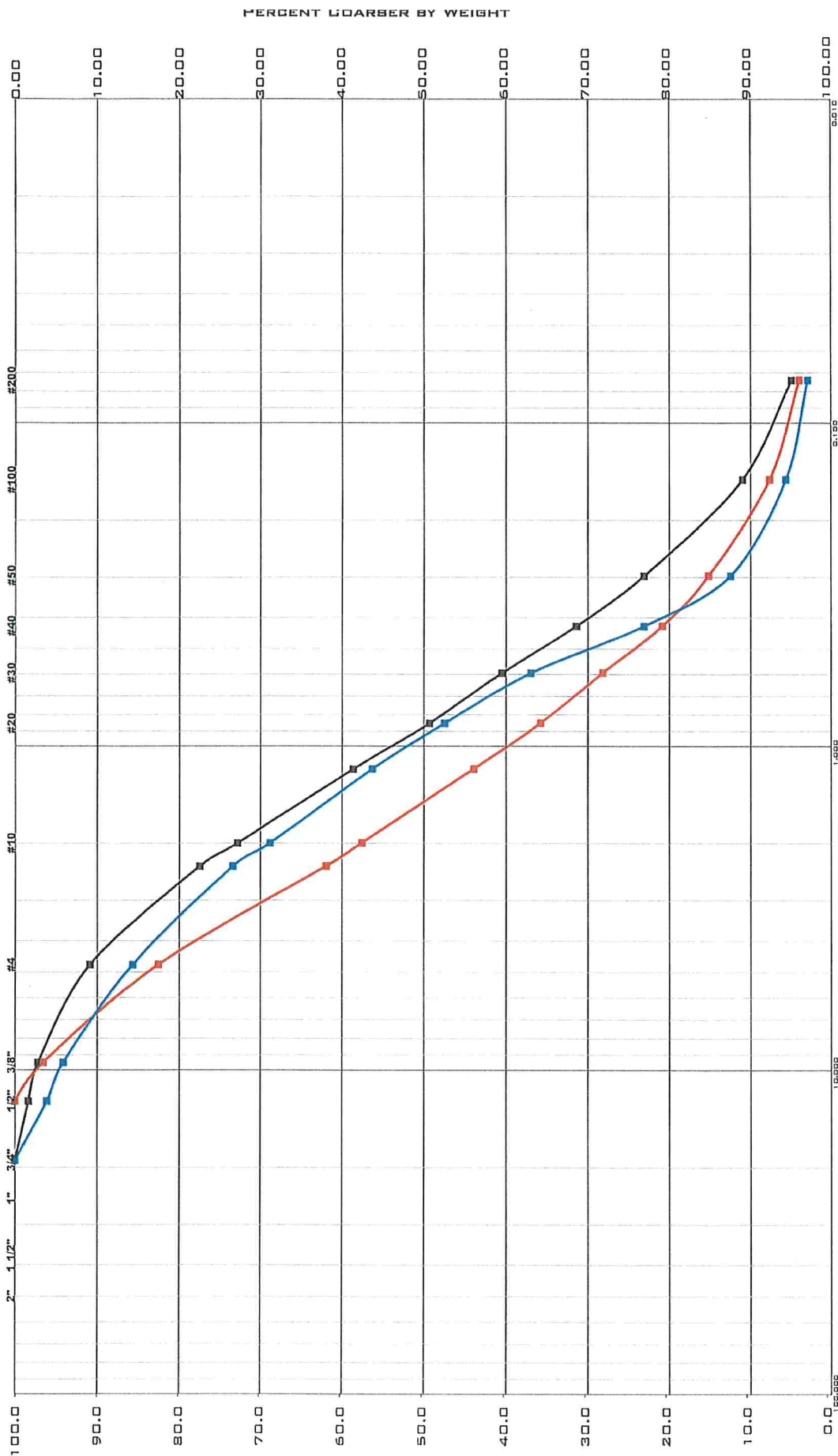
[illegible]

[illegible]

MID-STATE ENGINEERING & TESTING, INC.				SUMMARY OF SOILS TESTING										PROJECT North Platte Rail Park			
														LOCATION North Platte, Nebraska			
														JOB NO. 200-07-27		DATE 11/18/20	
DRILL HOLE NO.	SAMPLE NO.	SAMPLE DEPTH (ft.)	WATER CONTENT %	DENSITY		VOID RATIO (e)	SAT (%)	UNCONFINED COMPRESSION		ATTERBERG LIMITS			%PASS #200 SIEVE	CLASS.	SPT BLOW COUNTS	REMARKS	
				WET (pcf)	DRY (pcf)			QU (tsf)	Strain (%)	LL	PL	PI					
DH-21	U-1	1 1/2' - 2'	11.0														
	S-2	3 1/2 - 5'	1.5										2.9		14		
	S-3	8 1/2 - 10'	9.8										4.5		8		
	S-4	13 1/2 - 15'	10.9												19		
	S-5	18 1/2' - 20'	8.8										7.0		29		
	S-6	23 1/2' - 25'	9.6												21		
DH-22	U-1	1 1/2' - 2'	19.4	111.9	93.7	0.798	66	1.1	2.0	38	23	15		CL			
	S-2	3 1/2 - 5'	2.6												14		
	S-3	8 1/2 - 10'	14.3												9		
	S-4	13 1/2 - 15'	22.4										5.1		6		
	S-5	18 1/2' - 20'	11.4										4.7		20		
DH-23	U-1	1 1/2' - 2'	23.2														
	S-2	3 1/2 - 5'	3.7										1.8		12		
	S-3	8 1/2 - 10'	15.0										1.7		10		
	S-4	13 1/2 - 15'	13.3												3		
	S-5	18 1/2' - 20'	8.6												12		
	S-6	23 1/2' - 25'	12.2										6.5		46		
DH-24	U-1	1 1/2' - 2'	13.1							33	17	16	71.5	CL			
	S-2	3 1/2 - 5'	23.1							NP	NP	NP	66.0	ML	10		
	S-3	8 1/2 - 10'	13.4										19.1	SM	5	Grain Size Analysis	
	S-4	13 1/2 - 15'	15.4										5.1		16		
	S-5	18 1/2' - 20'	12.4										4.8	SP	18	Grain Size Analysis	
	S-6	23 1/2' - 25'	12.8										2.8		15		

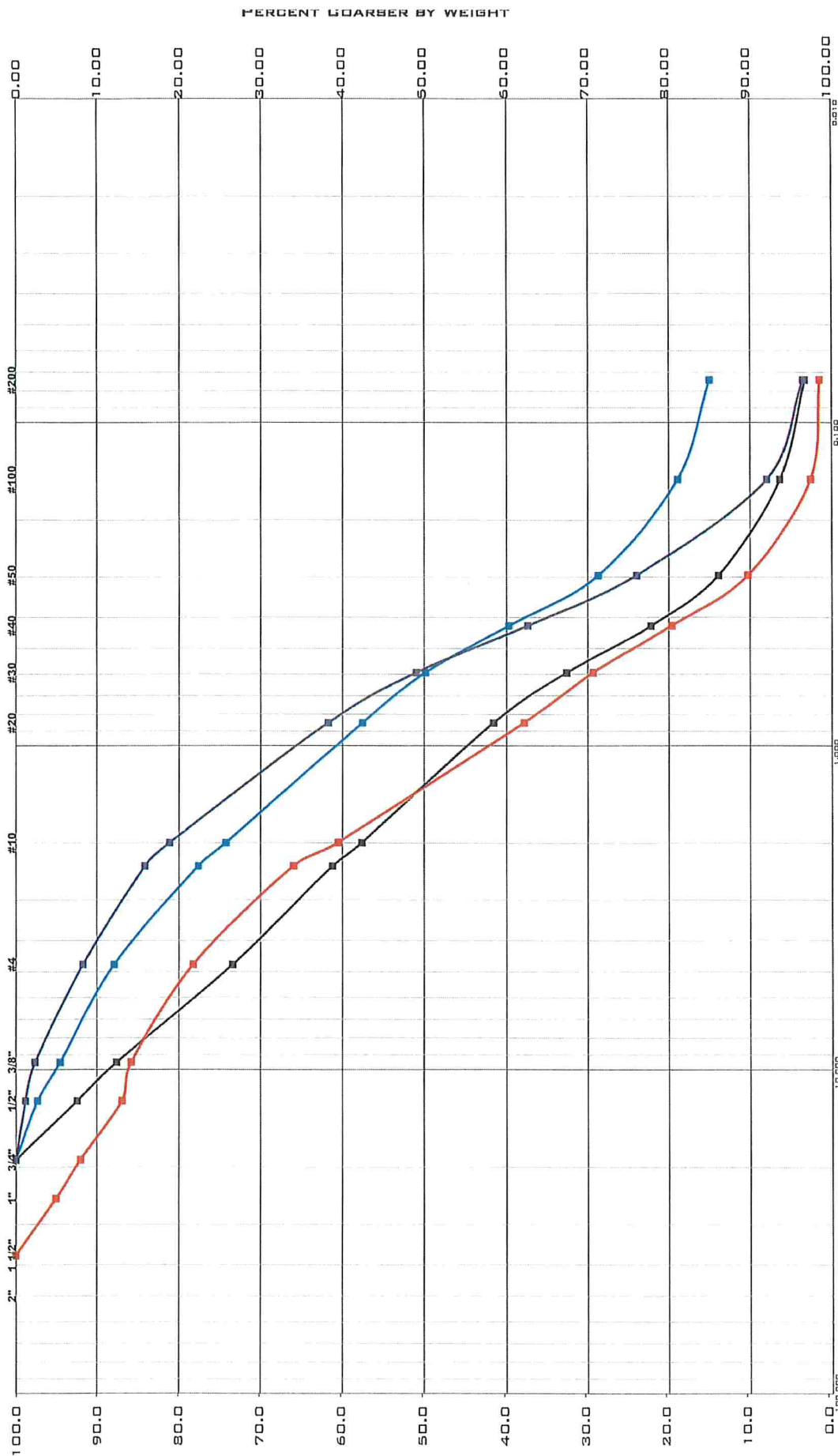
GRAIN SIZE ANALYSIS CURVE

SIEVE



DRILL HOLE	SAMPLE NUMBER	SAMPLE DEPTH	WATER CONTENT %	CLASSIFICATION	PROJECT:
DH-1	S-4	13 1/2' - 15'	11.2%	SP	North Platte Rail Park
DH-2	S-5	18 1/2' - 20'	11.1%	SP	DATE: 11/23/2020
DH-8	S-6	23 1/2' - 25'	11.1%	SP	JOB NO. 200-07-27
					MID-STATE ENGINEERING AND TESTING, INC.

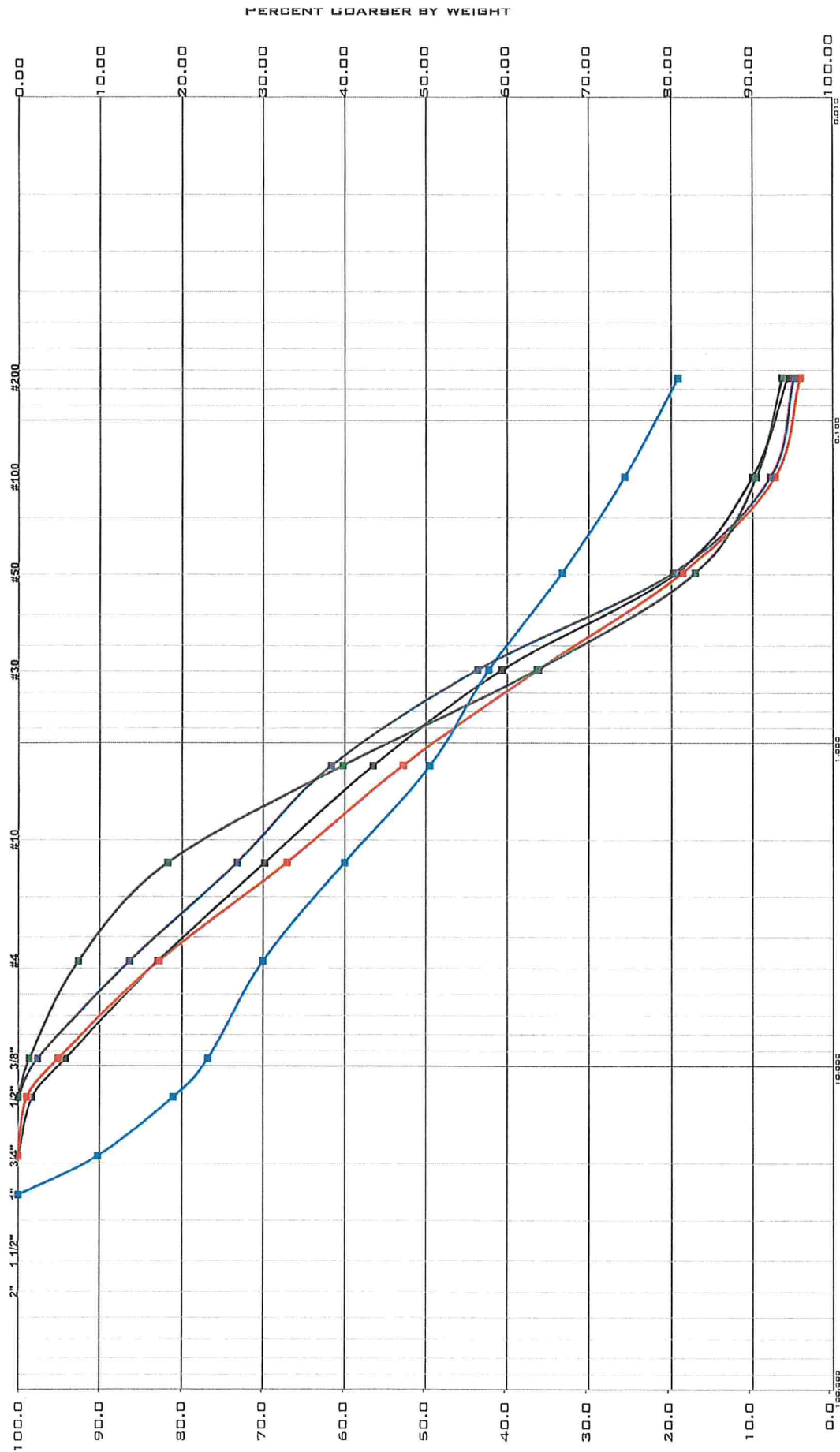
GRAIN SIZE ANALYSIS CURVE



DRILL HOLE	SAMPLE NUMBER	SAMPLE DEPTH	WATER CONTENT %	CLASSIFICATION	PROJECT: North Platte Rail Park	
DH-9	S-4	13 1/2' - 15'	9.9%	SP	DATE: 11/23/2020	JOB NO. 200-07-27
DH-10	S-2	3 1/2' - 5'	11.8%	SP	MID-STATE ENGINEERING AND TESTING, INC.	
DH-11	U-1	1/2' - 2'	6.3%	SC		
DH-12	S-5	18 1/2' - 20'	13.3%	SP		

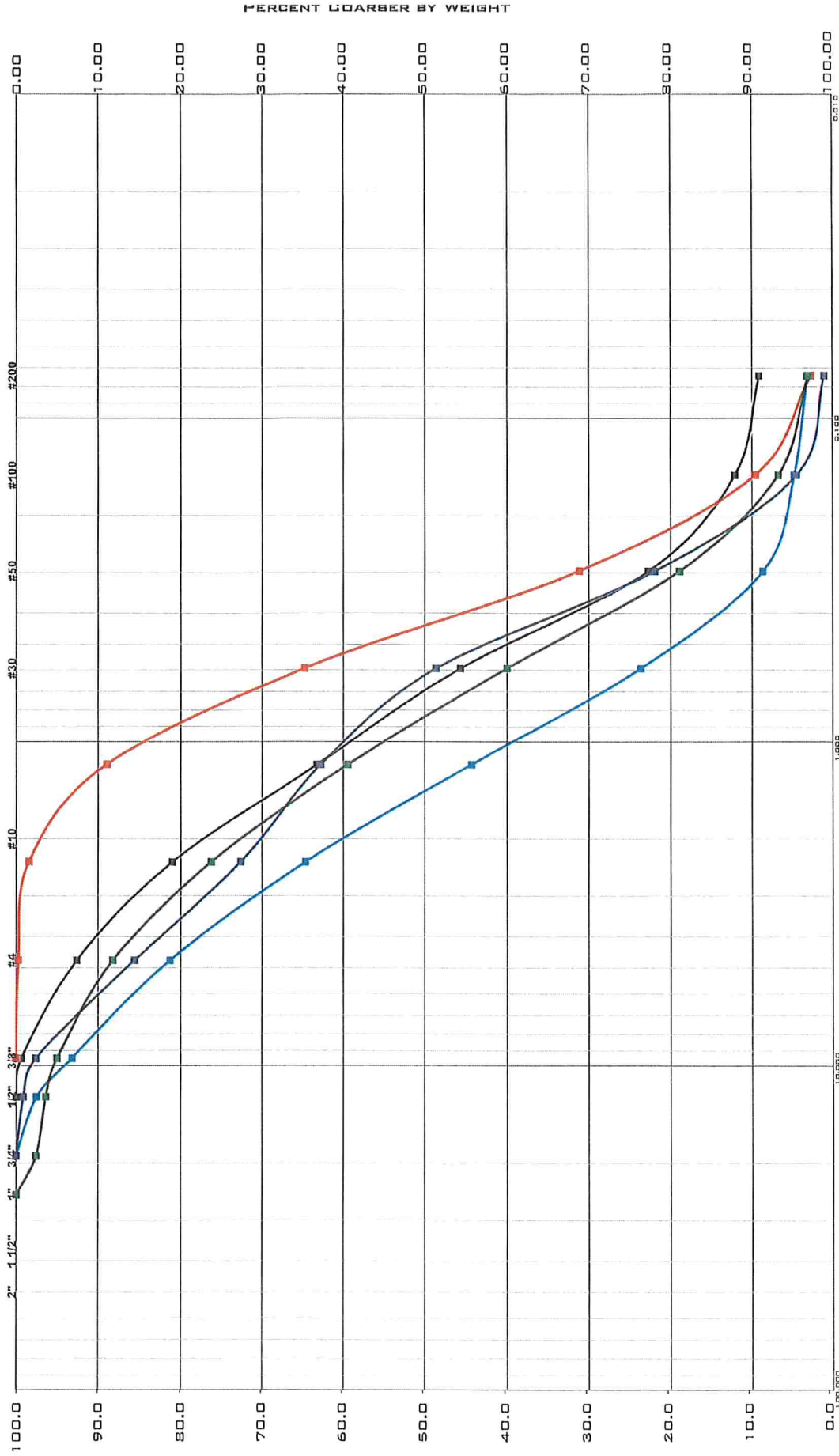
DRILL HOLE	SAMPLE NUMBER	SAMPLE DEPTH	WATER CONTENT %	CLASSIFICATION	PROJECT:	North Platte Rail Park
DH-12	S-3	8 1/2' - 10'	11.4%	SP	DATE:	JOB NO.
DH-13	S-5	18 1/2' - 20'	15.3%	SP		200-07-27
DH-14	S-4	13 1/2' - 15'	13.2%	SP		
DH-16	S-5	18 1/2' - 20'	9.3%	SW		
DH-18	S-4	13 1/2' - 15'	16.3%	SP		
MID-STATE ENGINEERING AND TESTING, INC.						

GRAIN SIZE ANALYSIS CURVE



DRILL HOLE	SAMPLE NUMBER	SAMPLE DEPTH	WATER CONTENT %	CLASSIFICATION	PROJECT:	North Platte Rail Park
DH-19	S-6	23 1/2' - 25'	9.9%	SP/SM	DATE:	11/23/2020
DH-20	S-4	13 1/2' - 15'	15.3%	SP	JOB NO.	200-07-27
DH-24	S-3	8 1/2' - 10'	13.4%	SM	MID-STATE ENGINEERING AND TESTING, INC.	
DH-24	S-5	18 1/2' - 20'	12.4%	SP		
DH-25	S-4	13 1/2' - 15'	12.1%	SP/SM		

GRAIN SIZE ANALYSIS CURVE



DRILL HOLE	SAMPLE NUMBER	SAMPLE DEPTH	WATER CONTENT %	CLASSIFICATION	PROJECT:	DATE:	JOB NO.
DH-26	S-2	3 1/2' - 5'	11.8%	SP/SM	North Platte Rail Park	11/23/2020	200-07-27
DH-26	S-6	23 1/2' - 25'	17.3%	SP	MID-STATE ENGINEERING AND TESTING, INC.		
DH-27	S-4	13 1/2' - 15'	11.7%	SP			
DH-28	S-2	3 1/2' - 5'	9.2%	SP			
DH-28	S-5	18 1/2' - 20'	11.2%	SP			

MID-STATE ENGINEERING & TESTING, INC. 11 East 11th Street, Kearney, NE 68847			SOIL PROPERTIES			UNIFIED SOILS CLASSIFICATION (Including Identification and Description)		
Group Symbols	Typical Names	Value as Subgrade When No Subject to Frost Action	Potential Frost Action	Compressibility and Expansion	Drainage Characteristics	Compaction Equipment	Compacted Dry Unit Weight (pcf) ASTM D-698	Typical Design Values Subgrade Modulus k CBR lb. per cu. in.
GW	Well-graded gravels, gravel-sand mixtures, little or no fines.	Excellent	None to Very Slight	Almost None	Excellent	Crawler-type tractor, rubber-tired roller, steel-wheeled roller	125-140	40-80 300-500
GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.	Good to Excellent	None to Very Slight	Almost None	Excellent	Crawler-type tractor, rubber-tired roller, steel-wheeled roller	110-140	30-60 300-500
GM	Silty gravels, gravel-sand-silt mixtures. < 50% Silts & Clays	Good to Excellent	Slight to Medium	Slight	Fair to Poor	Rubber-tired roller, sheepfoot roller	115-135	20-60 200-500
GC	Clayey gravels, gravel-sand-clay mixtures. < 50% Silts & Clays	Good	Slight to Medium	Slight	Poor to Practically Impervious	Rubber-tired roller, sheepfoot roller	130-145	20-40 200-500
SW	Well-graded sands, gravelly sands, little or no fines.	Good	None to Very Slight	Almost None	Excellent	Crawler-type tractor, rubber-tired roller	110-130	20-40 200-400
SP	Poorly-graded sands, gravelly sands, little or no fines.	Fair to Good	None to Very Slight	Almost None	Excellent	Crawler-type tractor, rubber-tired roller	105-135	10-40 150-400
SM	Silty sands, sand-silt mixtures. < 50% Silts & Clays	Fair to Good	Slight to High	Slight	Fair to Poor	Rubber-tired roller, sheepfoot roller	120-135	15-40 150-400
SC	Clayey Sands, sand-clay mixtures < 50% Silts & Clays	Poor to Fair	Slight to High	Slight to Medium	Poor to Practically Impervious	Rubber-tired roller, sheepfoot roller	100-135	5-20 100-300
ML	Inorganic silts and very fine sands, rock flour, silty fine sands or clayey silts with slight plasticity.	Poor to Fair	Medium to Very High	Slight to Medium	Fair to Poor	Rubber-tired roller, sheepfoot roller, close control of moisture	100-120	15 or Less 100-200
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	Poor to Fair	Medium to High	Medium	Practically Impervious	Rubber-tired roller, sheepfoot roller	90-130	15 or Less 50-150
OL	Organic silts and organic silty clays of low plasticity.	Poor	Medium to High	Medium to High	Poor	Rubber-tired roller, sheepfoot roller	90-105	5 or Less 50-100
MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	Poor	Medium to Very High	High	Fair to Poor	Sheepfoot roller, rubber-tired roller	90-105	10 or Less 50-100
CH	Inorganic clays of high plasticity, fat clays.	Poor to Fair	Medium	High	Practically Impervious	Sheepfoot roller, rubber-tired roller	90-115	15 or Less 50-150
OH	Organic clays of medium to high plasticity, organic silts.	Poor to Very Poor	Medium	High	Practically Impervious	Sheepfoot roller, rubber-tired roller	80-110	5 or Less 25-100
Pt	Peat and other highly organic soils.	Not Suitable	Slight	Very High	Fair to Poor	Compaction Not Practical		