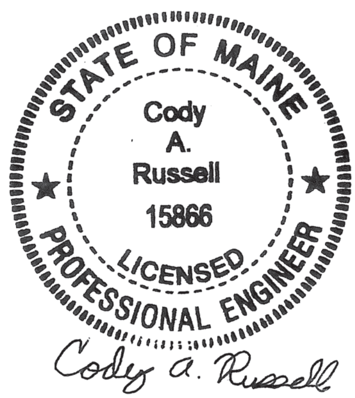
MAINE DEPARTMENT OF TRANSPORTATION
HIGHWAY PROGRAM
GEOTECHNICAL SECTION
AUGUSTA, MAINE

GEOTECHNICAL DATA REPORT

For the Reconstruction of:
U.S. ROUTE 1
SEARSPORT, MAINE

Prepared by:
Cody Russell, P.E.
Geotechnical Engineer



Reviewed by:
Kathleen Maguire, P.E.
Senior Geotechnical Engineer

Waldo County | Soils Report 2022-14
WIN 17281.00 | Federal No. NH-1728(100)E

May 18, 2022

INTRODUCTION

The purpose of this data report is to document subsurface information collected for the reconstruction of a 1.92 portion of U.S. Route 1 in Searsport as shown on the attached Location Map. The project is needed to address poor roadway conditions, ADA compliance, and drainage. This report presents the results of a limited geotechnical investigation performed along the project site and the results of a limited laboratory testing program conducted on soils recovered during the geotechnical investigation. U.S. Route 1 is a Highway Corridor Priority 1 road.

SUBSURFACE INVESTIGATION

Twelve (12) borings and five (5) probes were drilled along the roadway by the MaineDOT drill crew using a trailer mounted drill rig. Boring locations are presented in the attached Boring Location Plans. Details on boring locations, sampling methods used, field data obtained, and soil and groundwater conditions encountered are presented in the attached Boring Logs.

The MaineDOT Geotechnical Team member selected the boring locations, drilling methods, designated type and depth of sampling, reviewed field logs for accuracy and identified field and laboratory testing requirements. An experienced Northeast Transportation Training and Certification Program (NETTCP) certified subsurface inspector logged the subsurface conditions encountered. The borings were located in the field by taping to site features after completion of the drilling program.

LABORATORY TESTING

A laboratory testing program was conducted on select soil samples obtained in the borings to assist in soil classification. Laboratory testing consisted of sixteen (16) standard grain size analyses with natural water content, two (2) standard grain size analyses with natural water content and hydrometer analysis, and one (1) Atterberg Limits test. The results of the laboratory tests are summarized in the attached Laboratory Testing Summary Sheet and Grain Size Distribution Curves. Laboratory test results for the samples obtained in the borings are also summarized on the attached Boring Logs.

CLOSURE

This Geotechnical Data Report has been prepared for the use of the MaineDOT Highway Program for specific application to the proposed U.S. Route 1 reconstruction in Searsport, Maine in accordance with generally accepted geotechnical and foundation engineering practices. No other intended use or warranty is expressed or implied.

MaineDOT conducted a limited number of soil explorations at discrete locations along the project and a limited number of laboratory tests. MaineDOT shall not be responsible for the Bidder's or Contractor's interpretations, estimates, or conclusions derived from the geotechnical information. Data provided may not be representative of the subsurface conditions between boring locations.

In the event that any changes in the nature, design, or location of the proposed project are planned, this report should be reviewed by a geotechnical engineer to assess the appropriateness of the information presented and to modify the information as appropriate to reflect the changes in design. The information presented is based in part upon a limited subsurface investigation at discrete exploratory locations completed at the site. If variations from the conditions encountered during the investigation appear evident during construction, it may also become necessary to re-evaluate the information presented in this report.

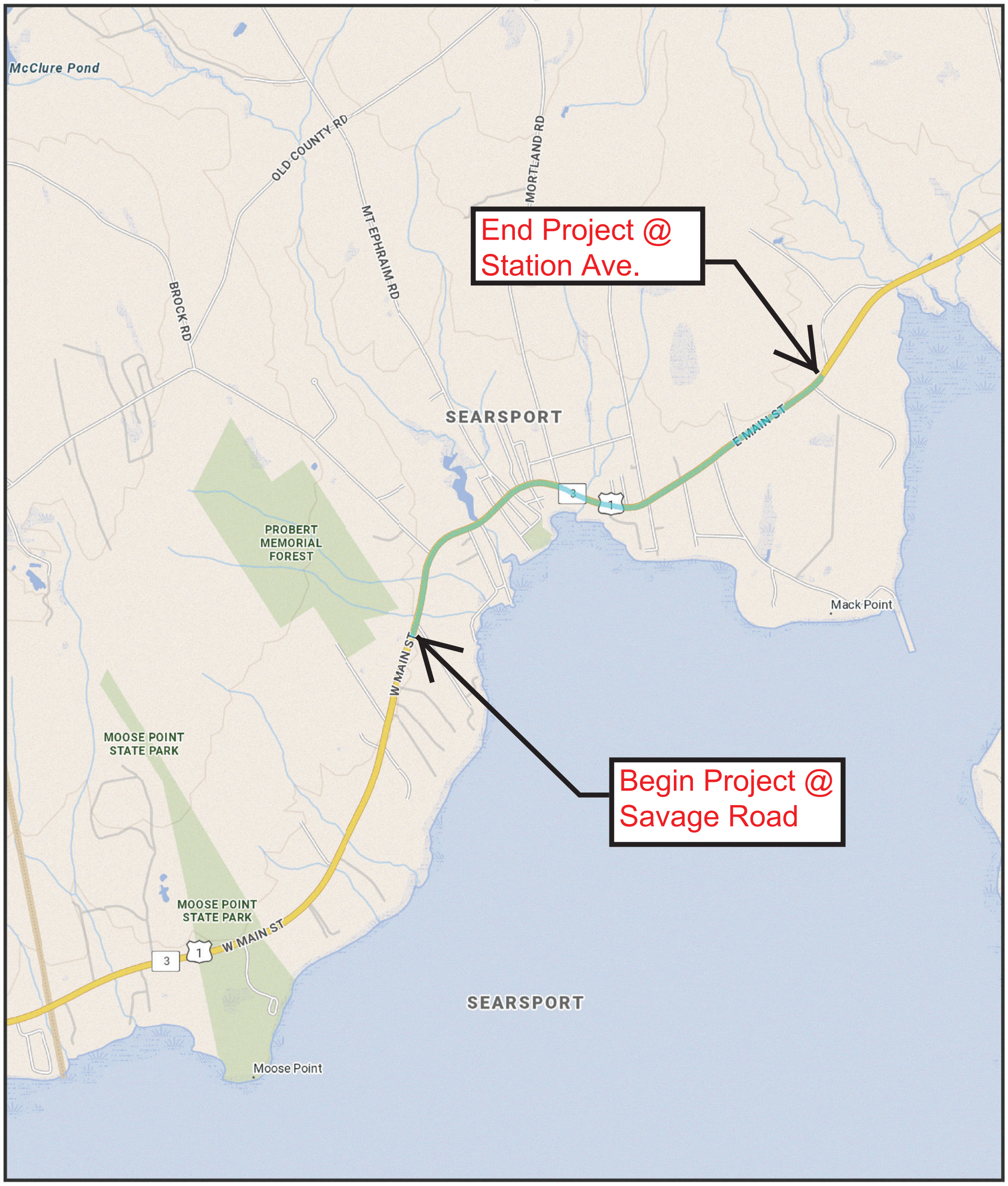
It is recommended that a geotechnical engineer be provided the opportunity for a review of the design and specifications in order that information presented in this report is properly interpreted and implemented in the design and specifications.

Attachments:

Location Map
Boring Location Plans
Key to Soil and Rock Descriptions and Terms
Boring Logs
Laboratory Testing Summary Sheet
Grain Size Distribution Curves
Atterberg Limits Plot

Username: terry.white Division: GEOTECH Date:5/9/2022

SEARSPORT, MAINE



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.55 Miles
1 inch = 0.62 miles

Date: 5/9/2022
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SHEET NUMBER	SEARSPORT	STATE OF MAINE DEPARTMENT OF TRANSPORTATION
1	US ROUTE 1	NH-1728(100)E
OF 17	LOCATION MAP	WIN 017281.00 HIGHWAY PLANS

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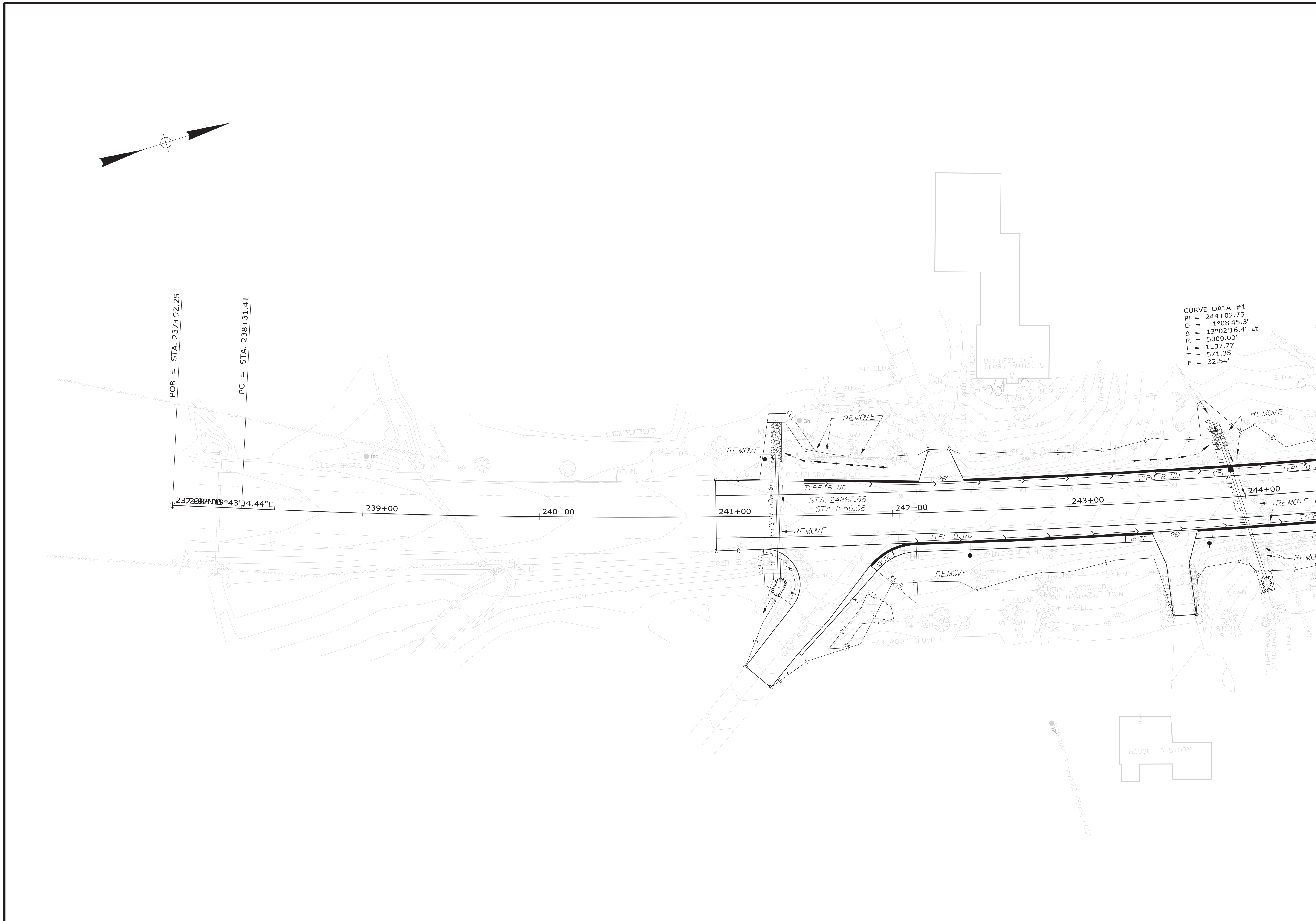

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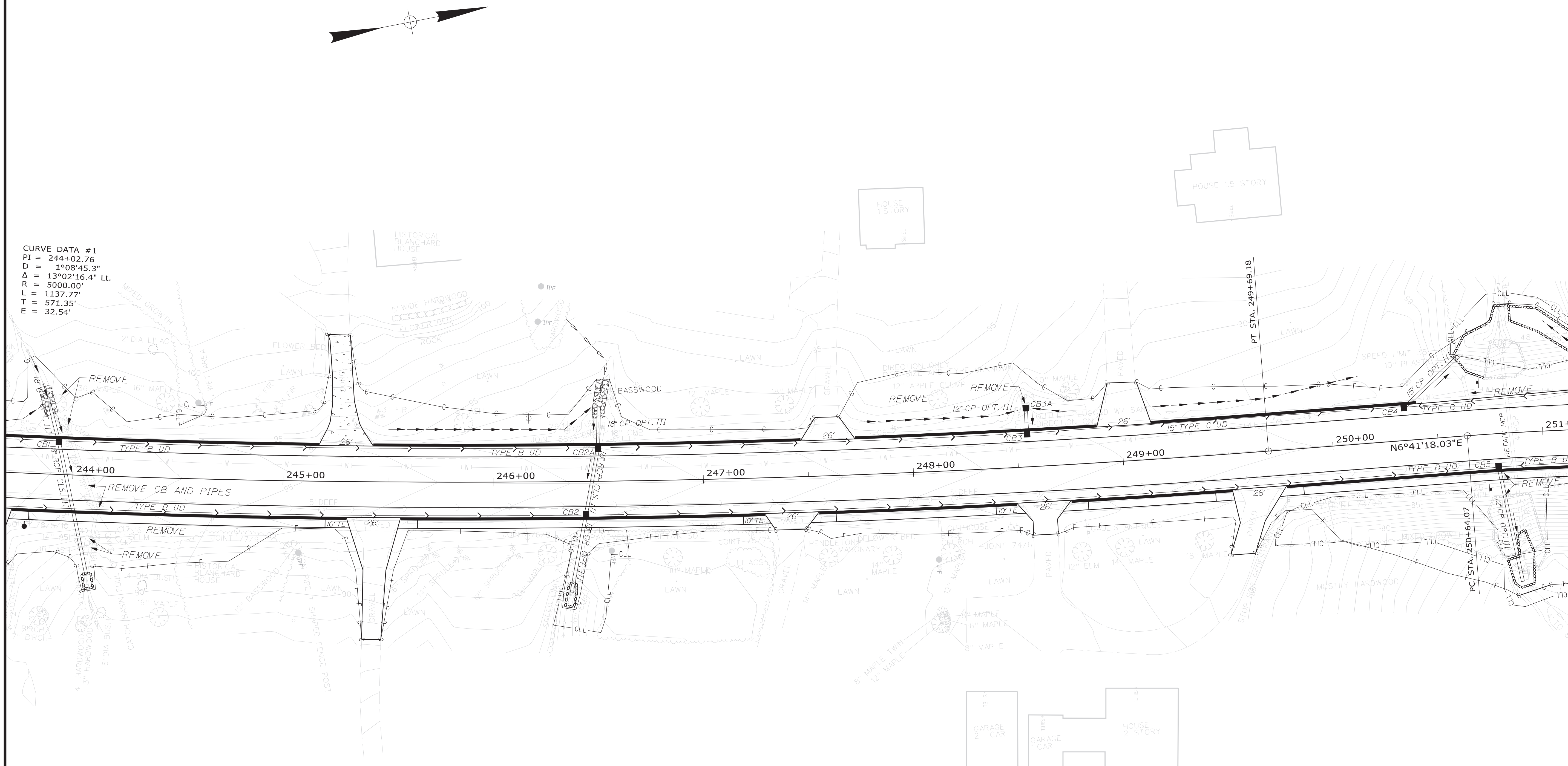

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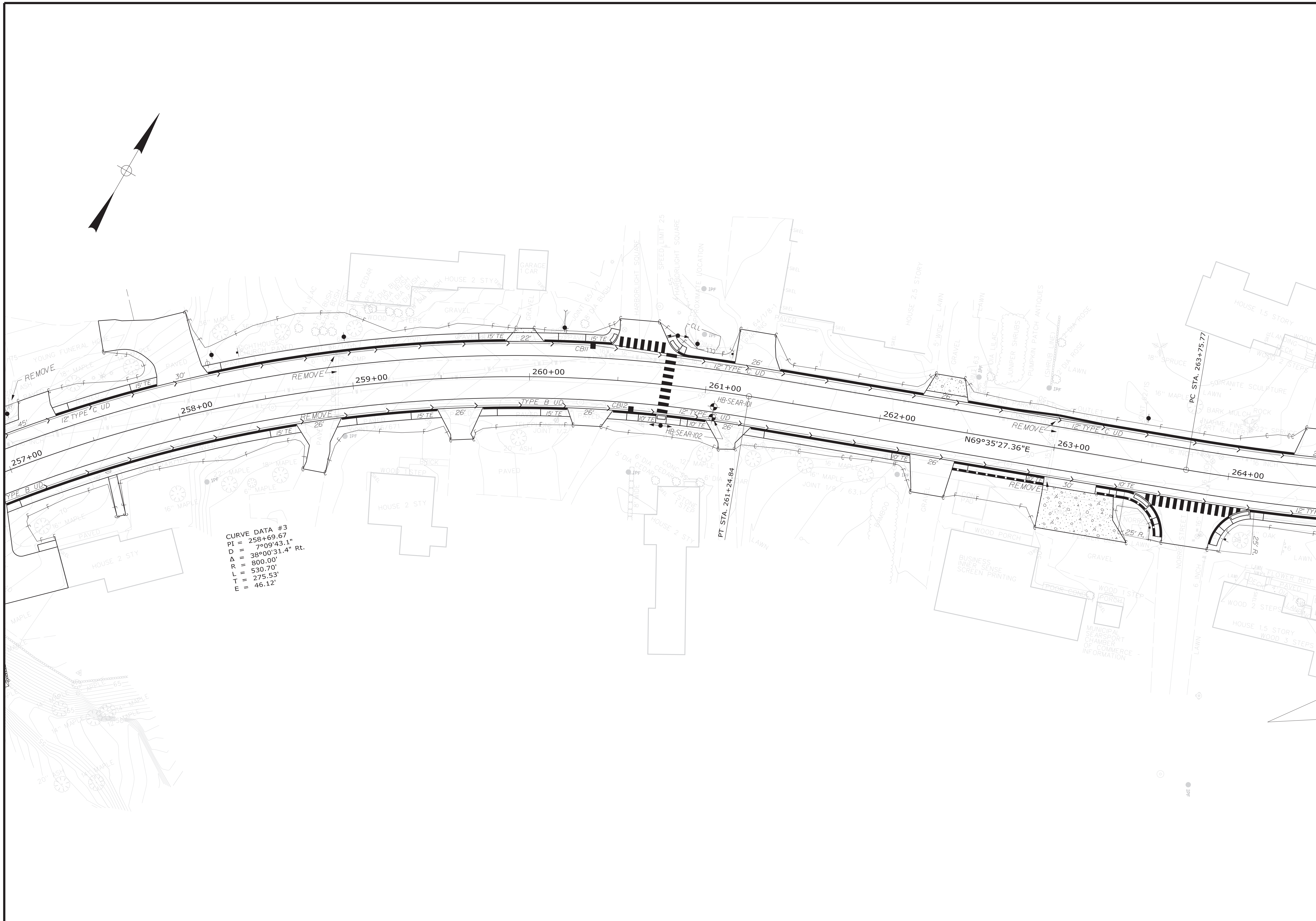

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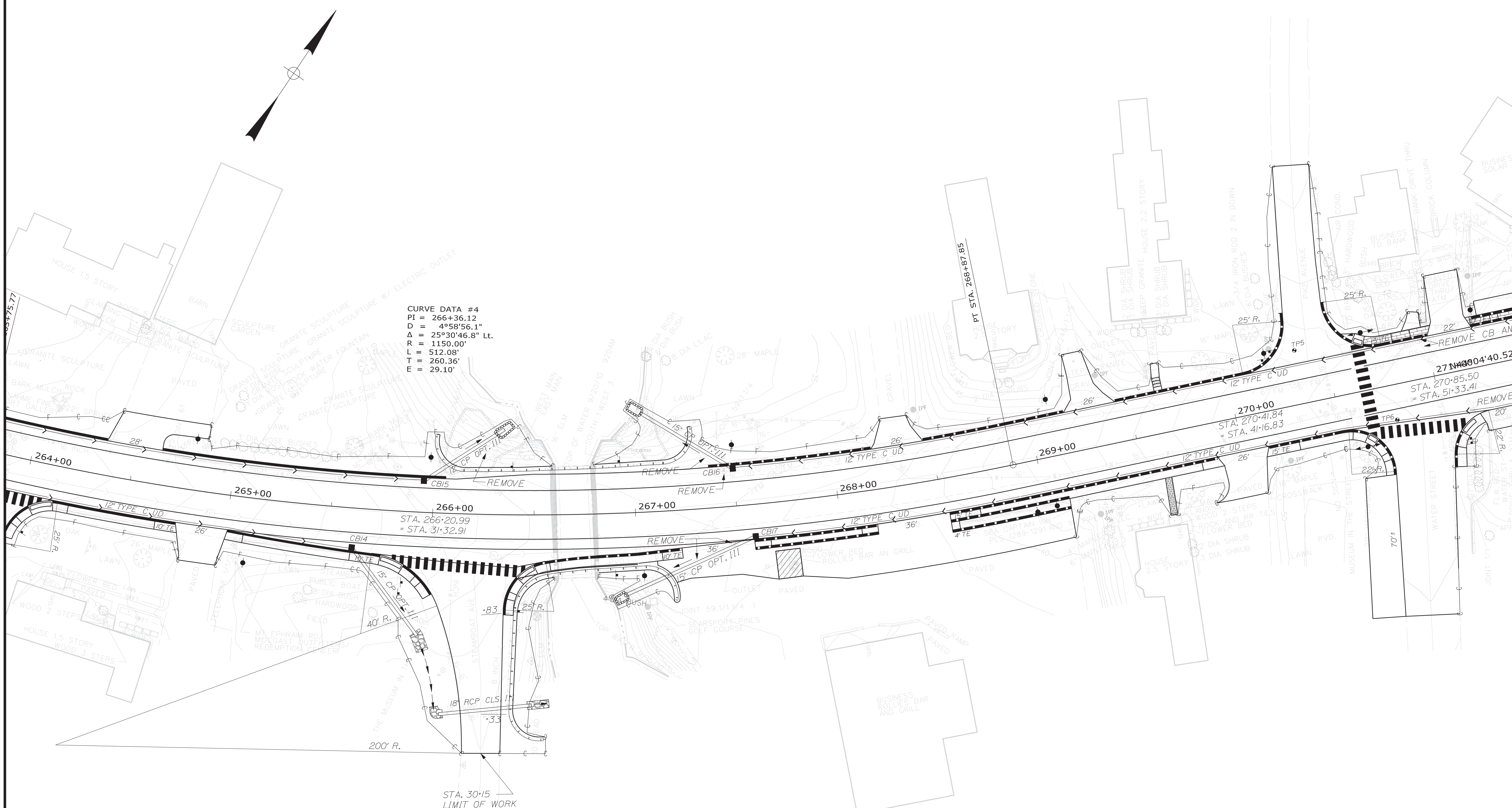

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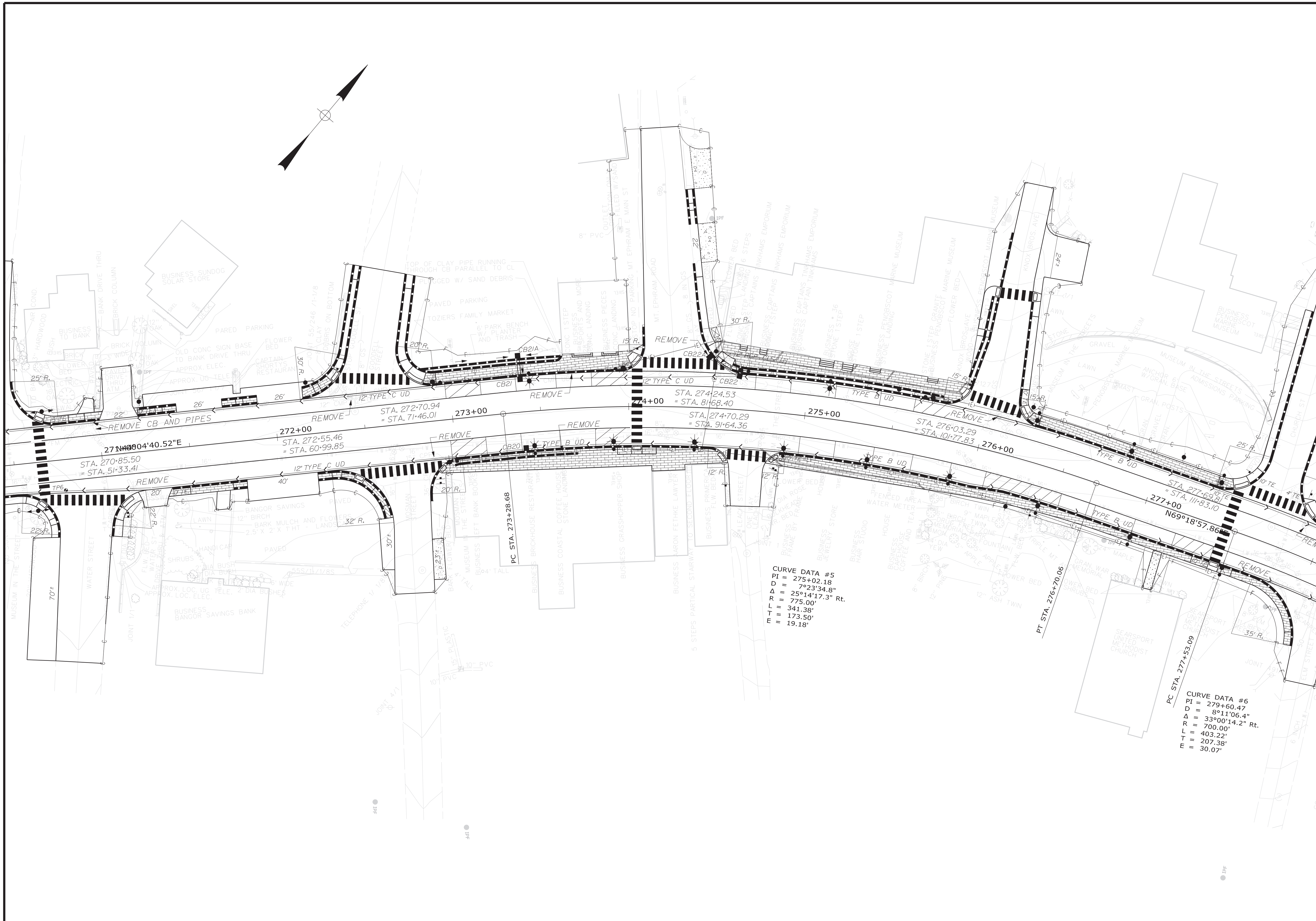

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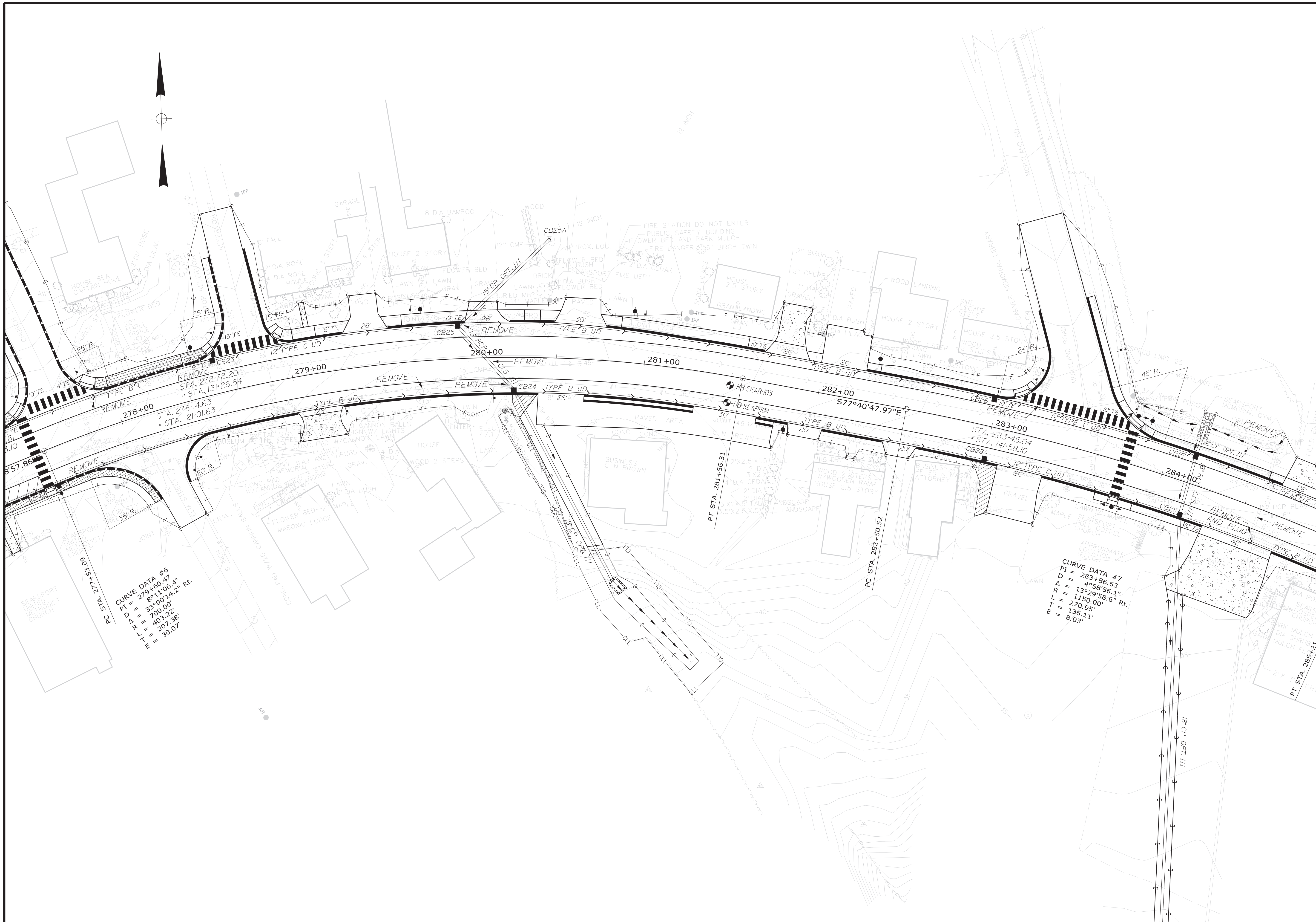

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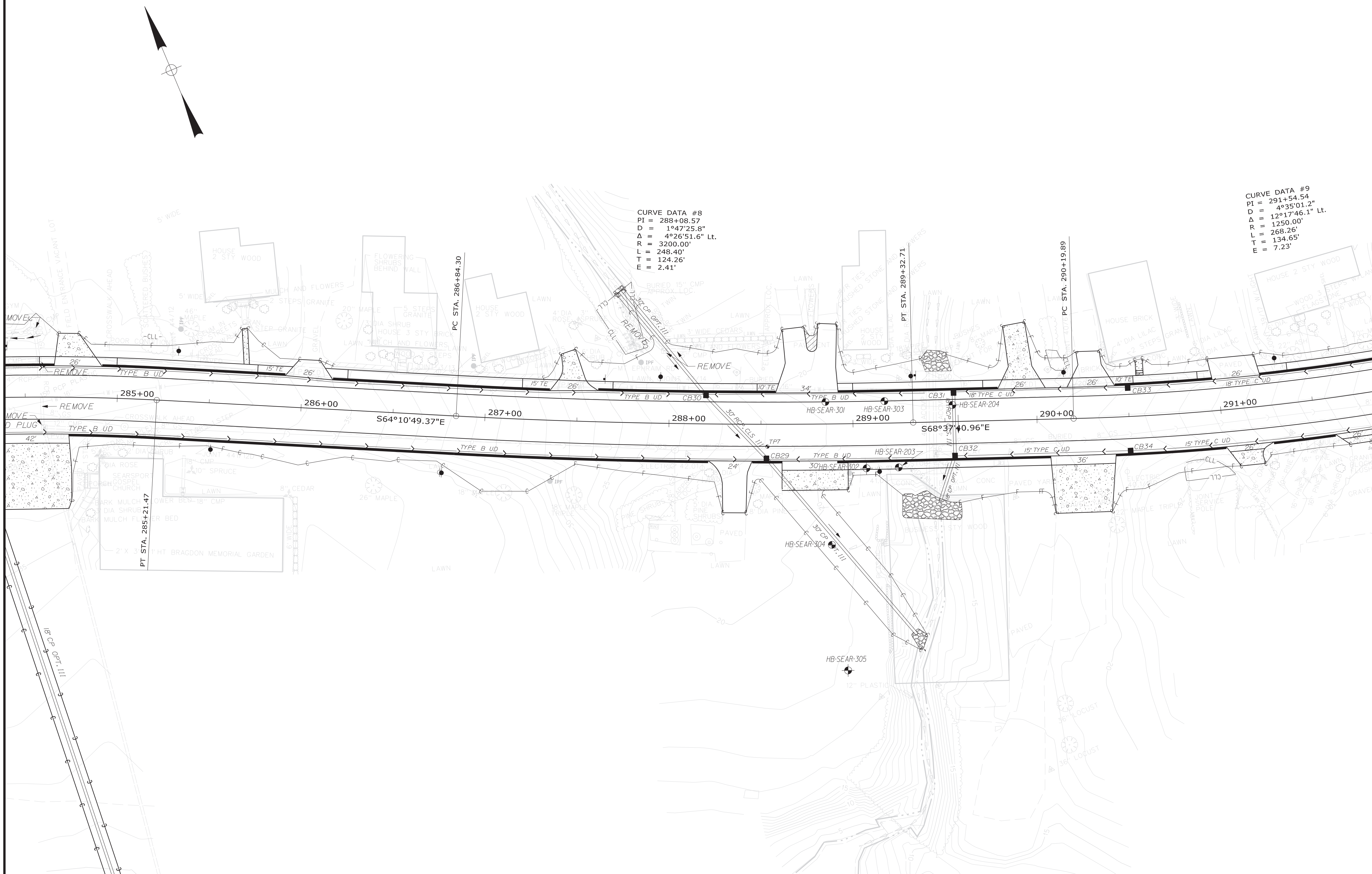

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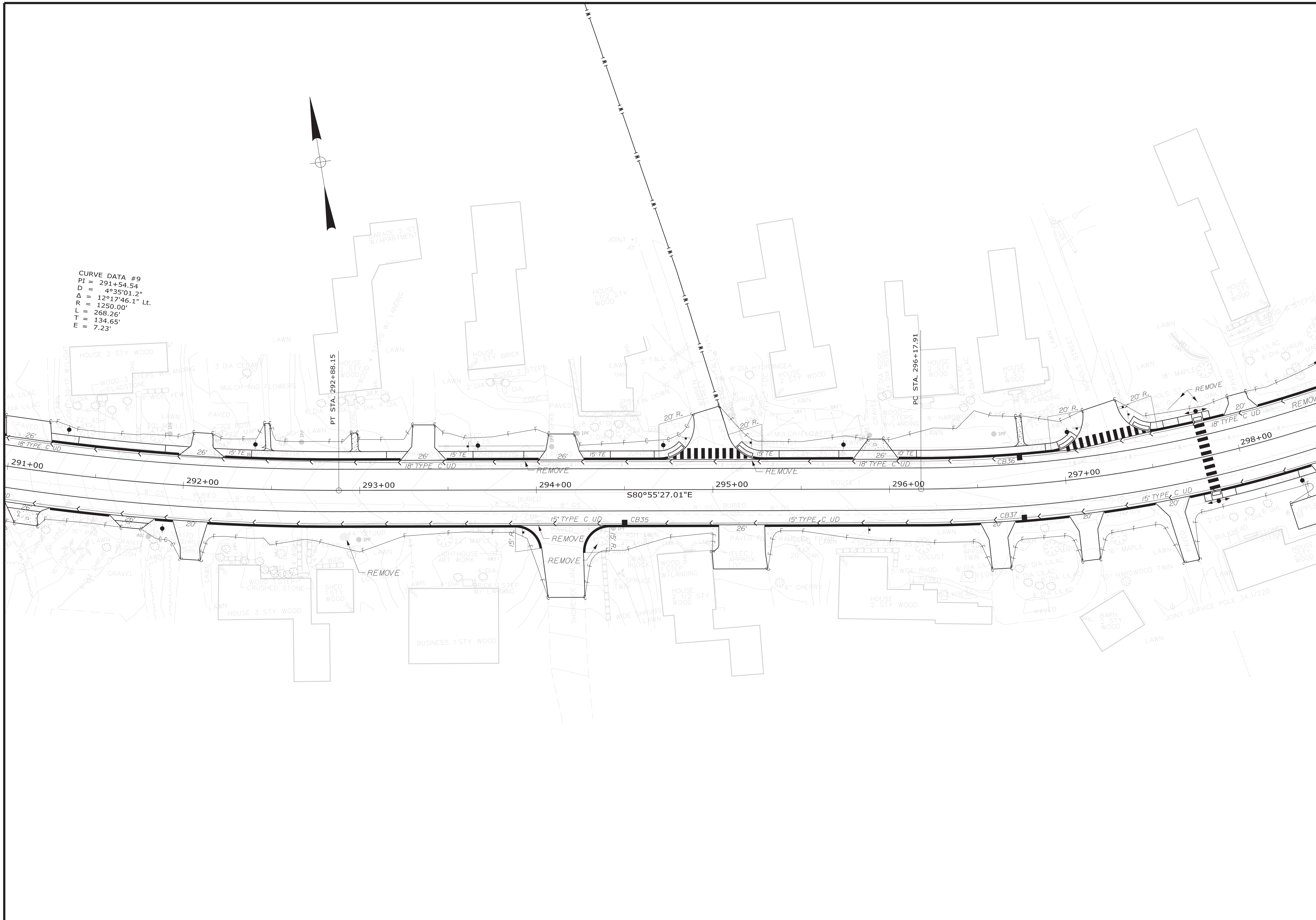

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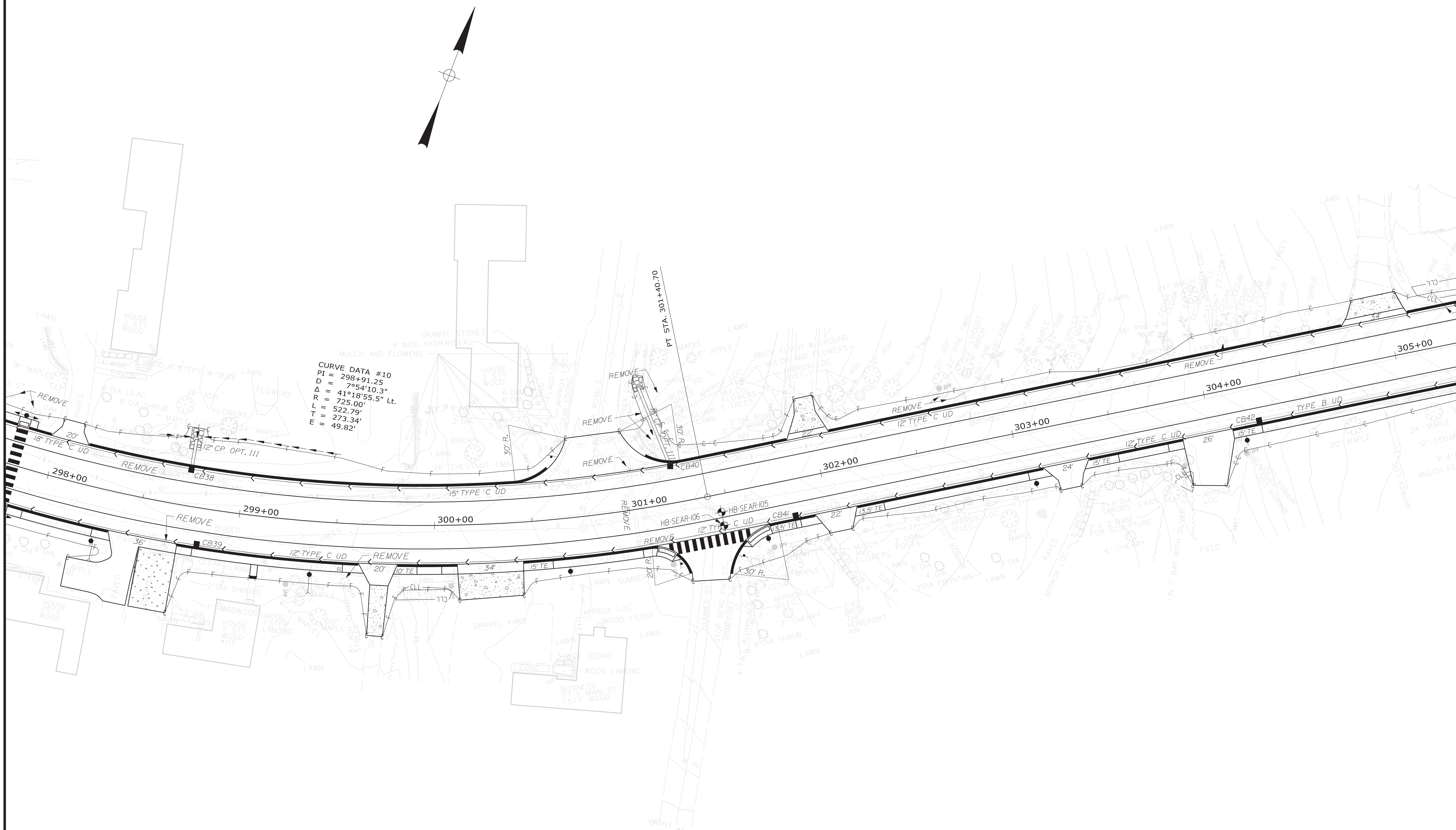

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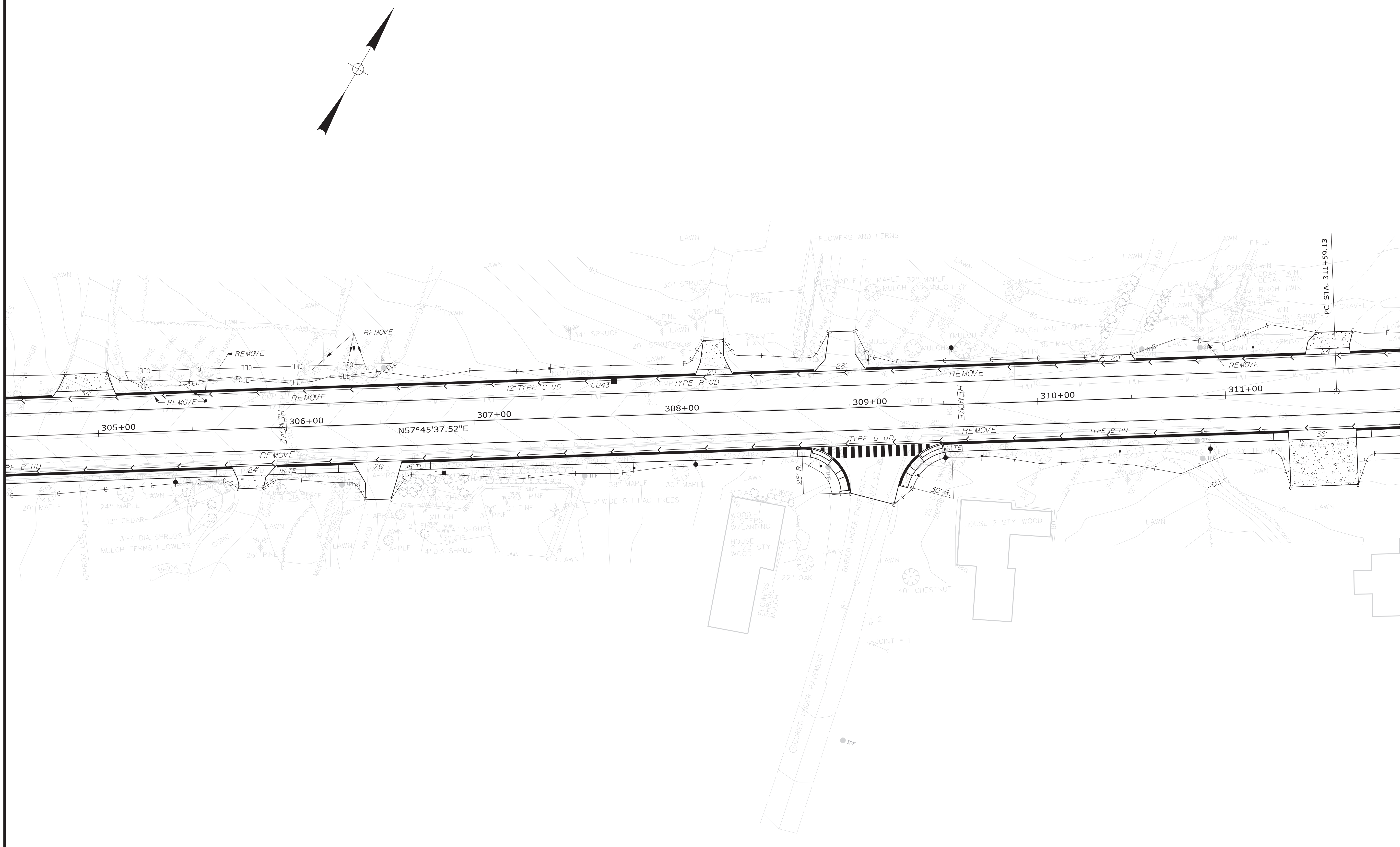

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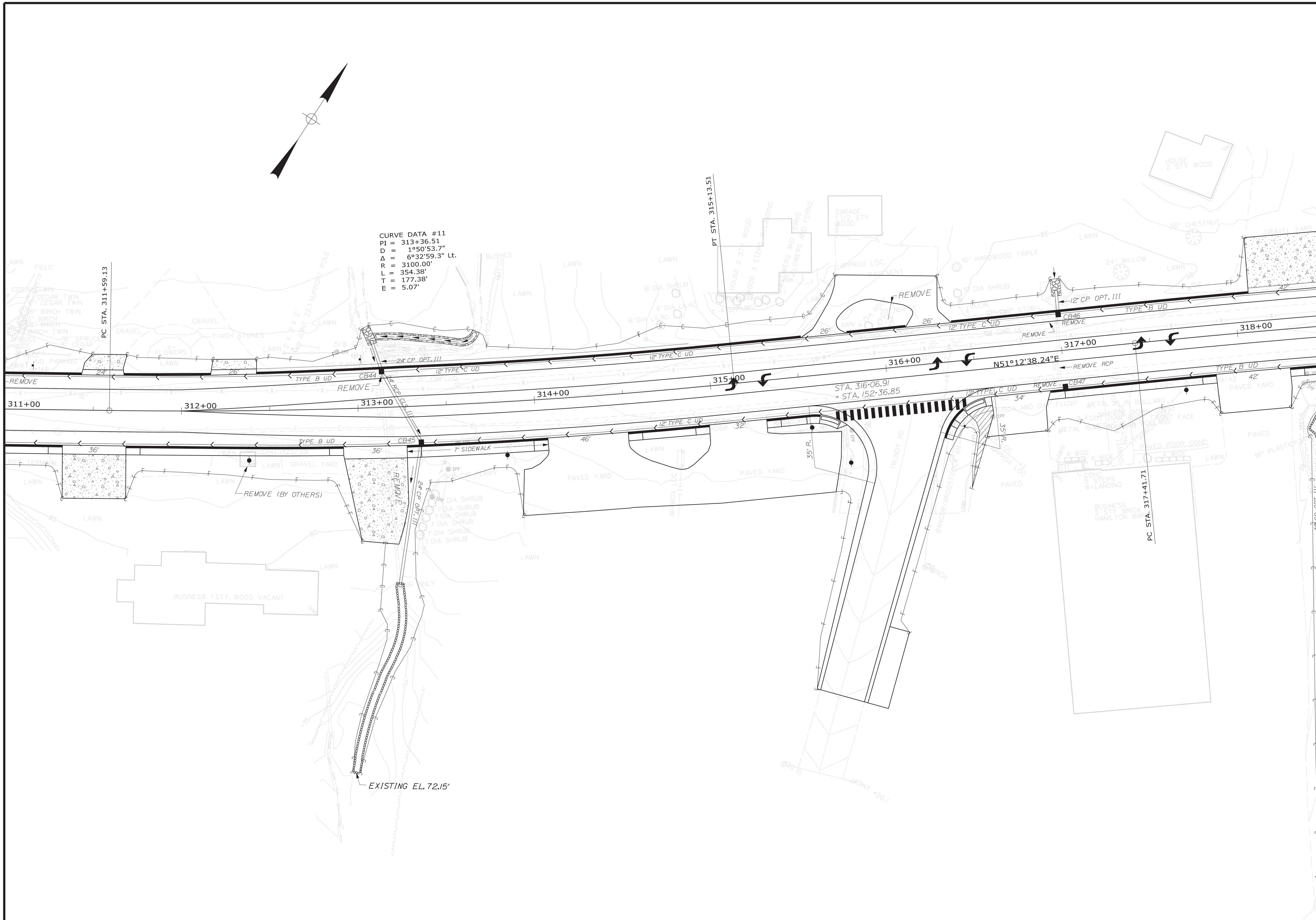

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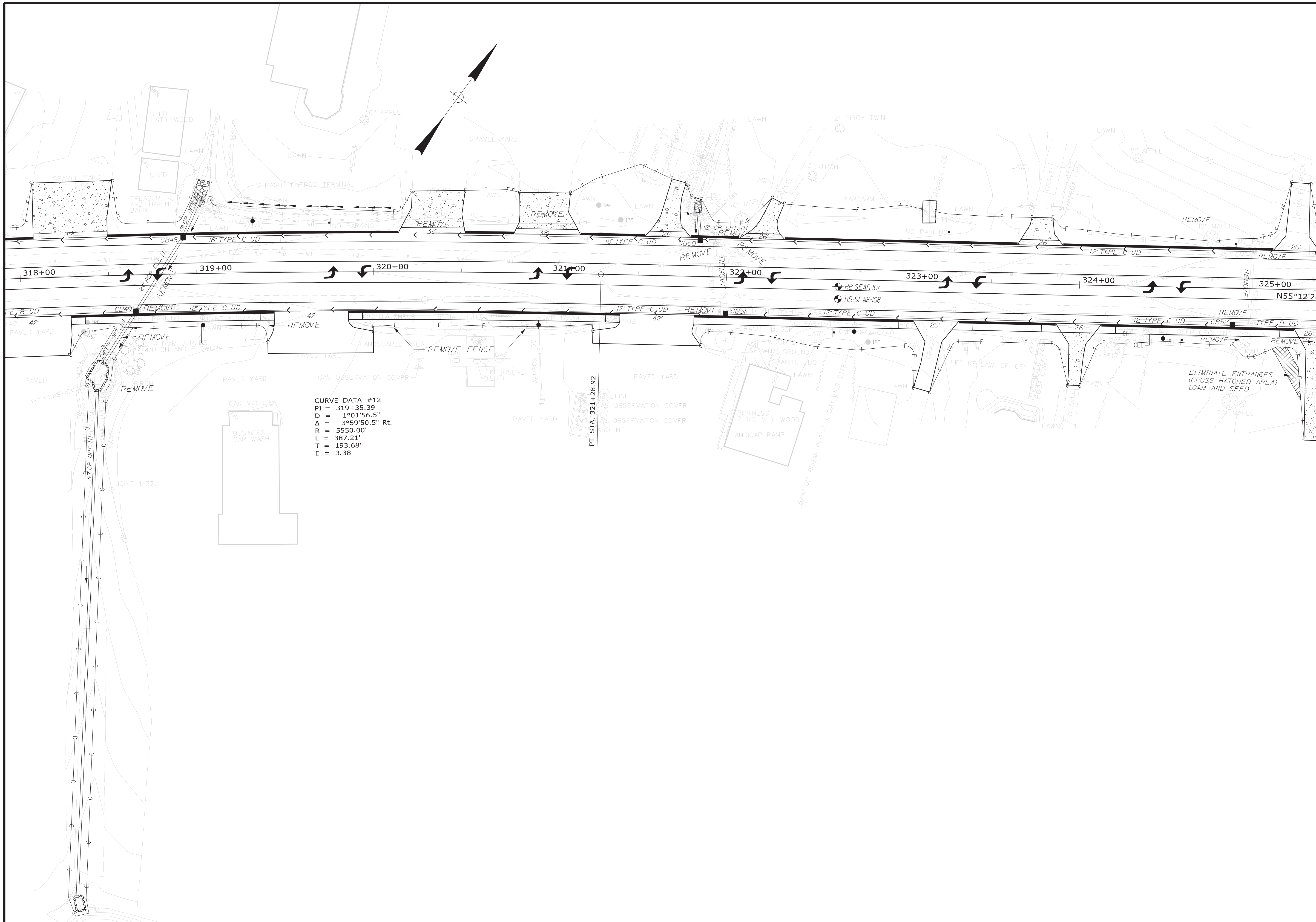

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SEARSPORT
US ROUTE 1

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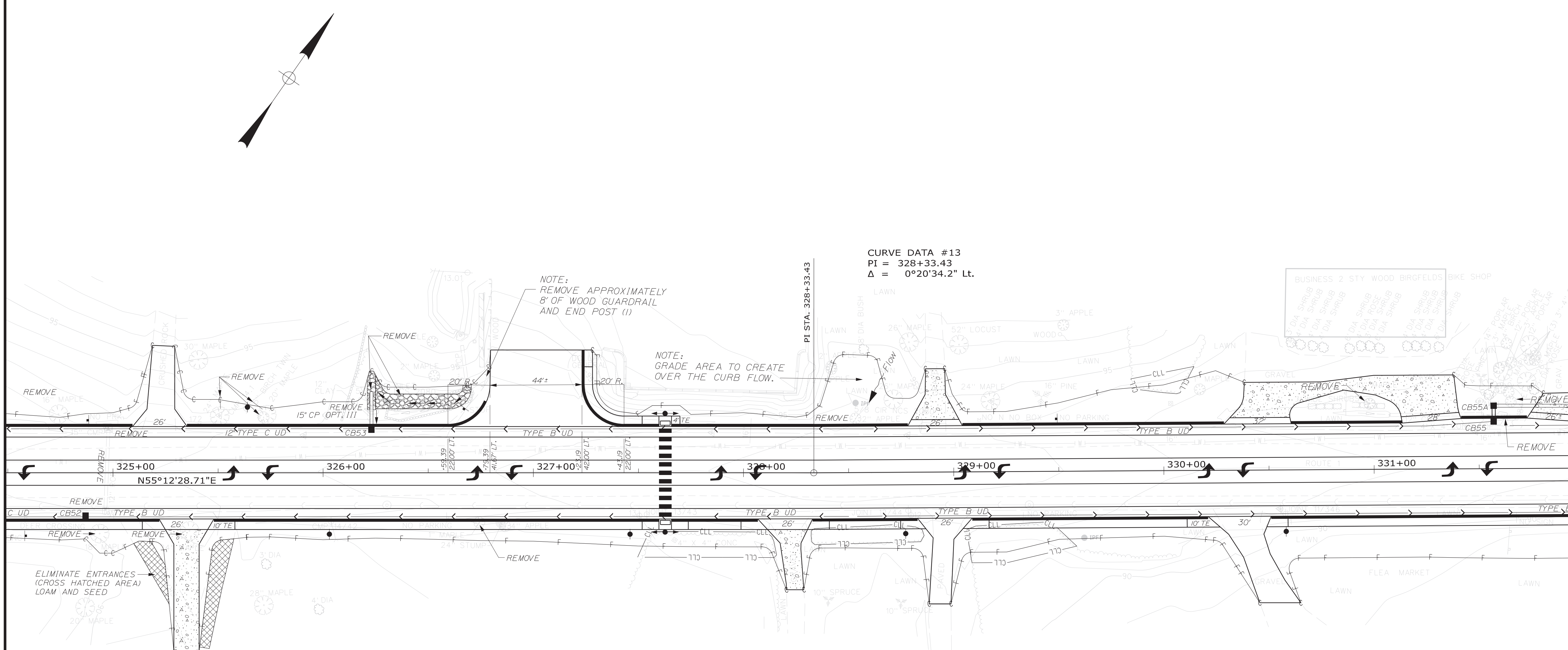

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STATE OF MAINE
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HIGHWAY PLANS

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BORING LOCATION PLAN

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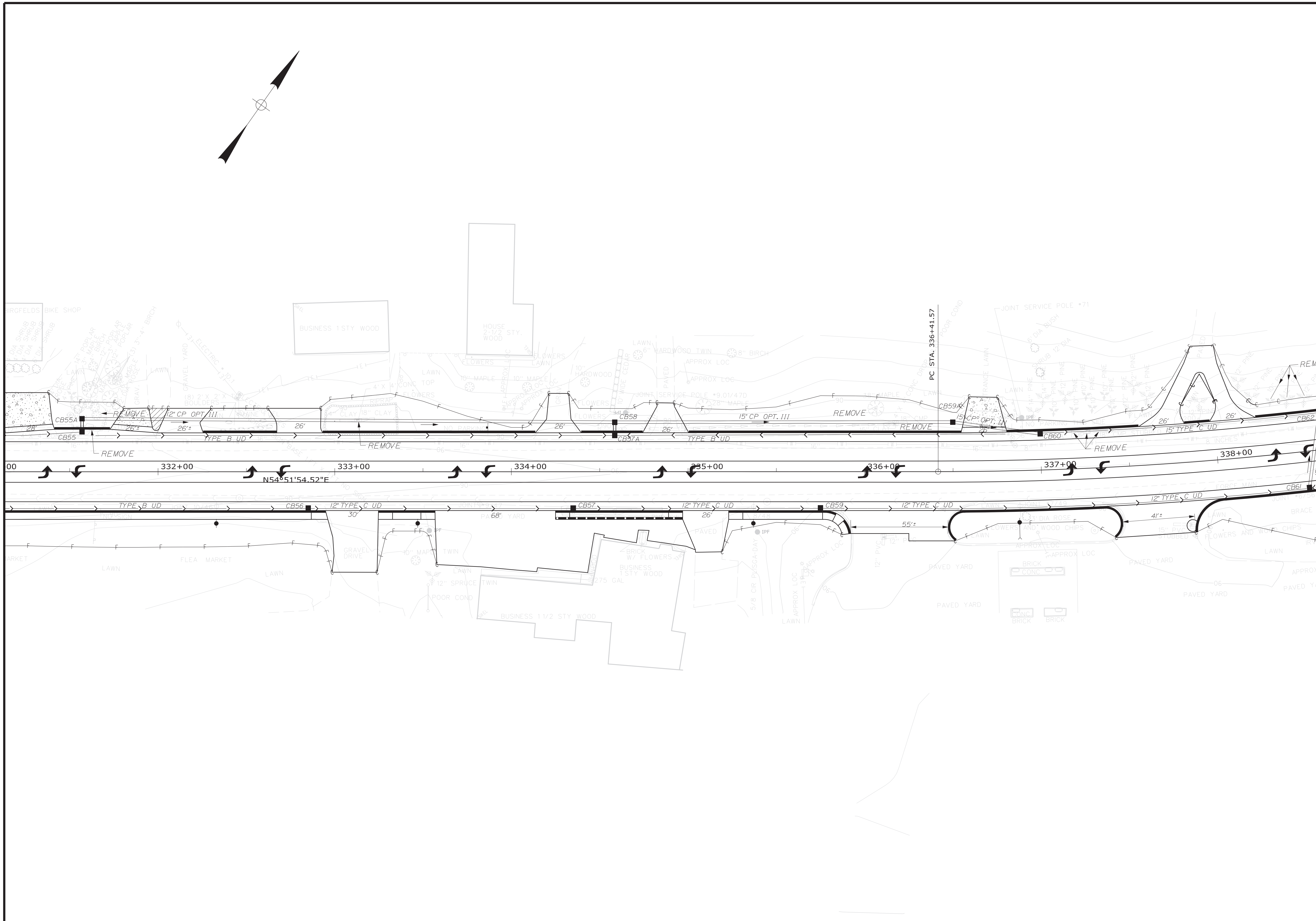

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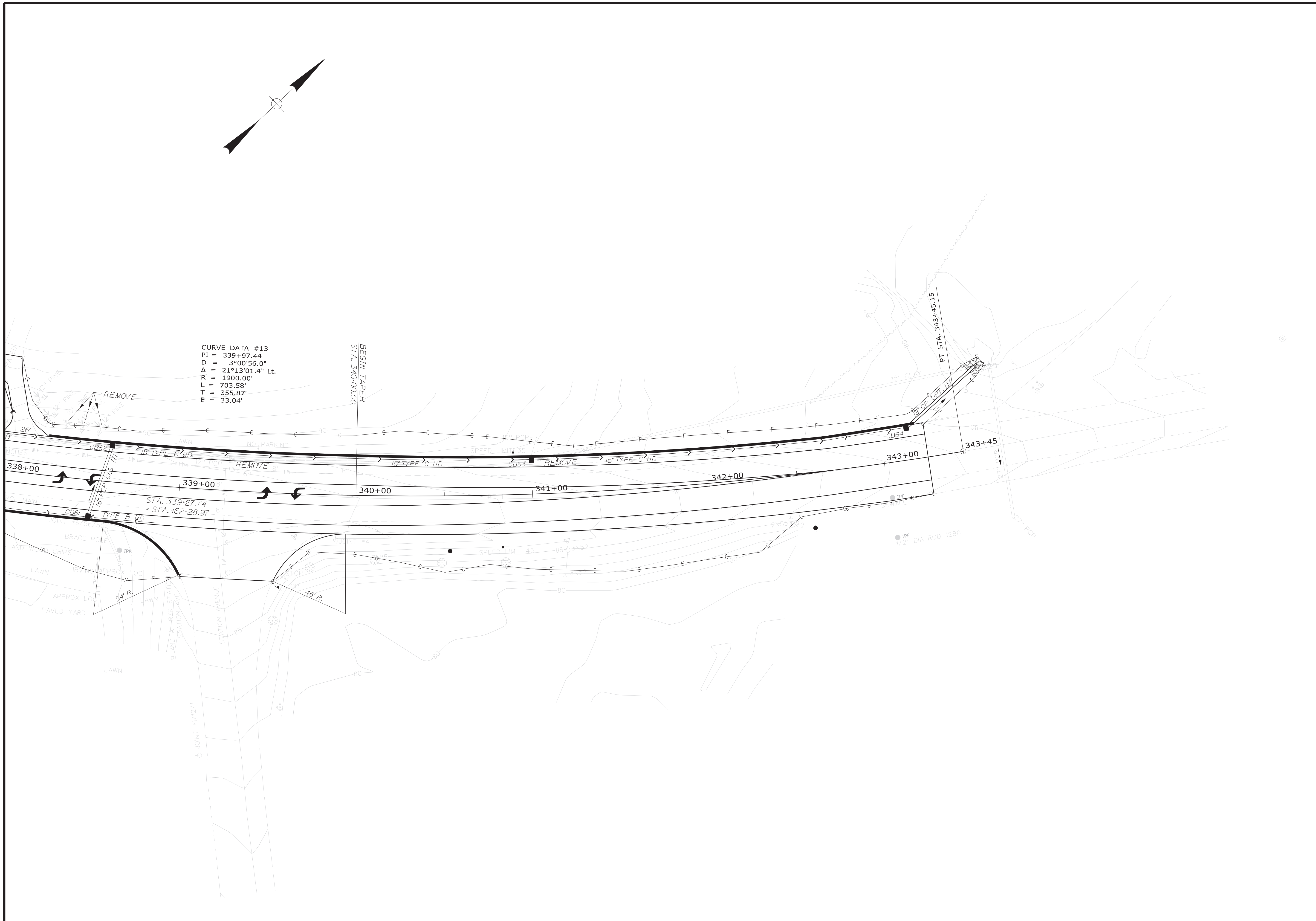

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UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS (more than half of material is larger than No. 200 sieve size)	GRAVELS (more than half of coarse fraction is larger than No. 4 sieve size)	CLEAN GRAVELS (little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel sand mixtures, little or no fines.
		GRAVEL WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (more than half of coarse fraction is smaller than No. 4 sieve size)	CLEAN SANDS (little or no fines)	SW	Well-graded sands, Gravelly sands, little or no fines
			SP	Poorly-graded sands, Gravelly sand, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures.
FINE-GRAINED SOILS (more than half of material is smaller than No. 200 sieve size)	SILTS AND CLAYS (liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, Silty or Clayey fine sands, or Clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, Gravelly clays, Sandy clays, Silty clays, lean clays.
			OL	Organic silts and organic Silty clays of low plasticity.
	SILTS AND CLAYS (liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine Sandy or Silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
	HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils.

Desired Soil Observations (in this order, if applicable):

Color (Munsell color chart)
Moisture (dry, damp, moist, wet)
Density/Consistency (from above right hand side)
Texture (fine, medium, coarse, etc.)
Name (Sand, Silty Sand, Clay, etc., including portions - trace, little, etc.)
Gradation (well-graded, poorly-graded, uniform, etc.)
Plasticity (non-plastic, slightly plastic, moderately plastic, highly plastic)
Structure (layering, fractures, cracks, etc.)
Bonding (well, moderately, loosely, etc.,)
Cementation (weak, moderate, or strong)
Geologic Origin (till, marine clay, alluvium, etc.)
Groundwater level

MODIFIED BURMISTER SYSTEM

Descriptive Term	Portion of Total (%)
trace	0 - 10
little	11 - 20
some	21 - 35
adjective (e.g. Sandy, Clayey)	36 - 50

TERMS DESCRIBING DENSITY/CONSISTENCY

Coarse-grained soils (more than half of material is larger than No. 200 sieve): Includes (1) clean gravels; (2) Silty or Clayey gravels; and (3) Silty, Clayey or Gravelly sands. Density is rated according to standard penetration resistance (N-value).

Density of Cohesionless Soils	Standard Penetration Resistance N-Value (blows per foot)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

Fine-grained soils (more than half of material is smaller than No. 200 sieve): Includes (1) inorganic and organic silts and clays; (2) Gravelly, Sandy or Silty clays; and (3) Clayey silts. Consistency is rated according to undrained shear strength as indicated.

Consistency of Cohesive soils	SPT N-Value (blows per foot)	Approximate Undrained Shear Strength (psf)	Field Guidelines
Very Soft	WOH, WOR, WOP, <2	0 - 250	Fist easily penetrates
Soft	2 - 4	250 - 500	Thumb easily penetrates
Medium Stiff	5 - 8	500 - 1000	Thumb penetrates with moderate effort
Stiff	9 - 15	1000 - 2000	Indented by thumb with great effort
Very Stiff	16 - 30	2000 - 4000	Indented by thumbnail
Hard	>30	over 4000	Indented by thumbnail with difficulty

Rock Quality Designation (RQD):

$$\text{RQD (\%)} = \frac{\text{sum of the lengths of intact pieces of core* > 4 inches}}{\text{length of core advance}}$$

*Minimum NQ rock core (1.88 in. OD of core)

Rock Quality Based on RQD

Rock Quality	RQD (%)
Very Poor	≤25
Poor	26 - 50
Fair	51 - 75
Good	76 - 90
Excellent	91 - 100

Desired Rock Observations (in this order, if applicable):

Color (Munsell color chart)
Texture (aphanitic, fine-grained, etc.)
Rock Type (granite, schist, sandstone, etc.)
Hardness (very hard, hard, mod. hard, etc.)
Weathering (fresh, very slight, slight, moderate, mod. severe, severe, etc.)
Geologic discontinuities/jointing:
- -dip (horiz - 0-5 deg., low angle - 5-35 deg., mod. dipping - 35-55 deg., steep - 55-85 deg., vertical - 85-90 deg.)
- -spacing (very close - <2 inch, close - 2-12 inch, mod. close - 1-3 feet, wide - 3-10 feet, very wide >10 feet)
- -tightness (tight, open, or healed)
- -infilling (grain size, color, etc.)

Formation (Waterville, Ellsworth, Cape Elizabeth, etc.)
RQD and correlation to rock quality (very poor, poor, etc.)
ref: ASTM D6032 and FHWA NHI-16-072 GEC 5 - Geotechnical Site Characterization, Table 4-12
Recovery (inch/inch and percentage)
Rock Core Rate (X.X ft - Y.Y ft (min:sec))

Maine Department of Transportation
Geotechnical Section
Key to Soil and Rock Descriptions and Terms
Field Identification Information

Sample Container Labeling Requirements:

WIN	Blow Counts
Bridge Name / Town	Sample Recovery
Boring Number	Date
Sample Number	Personnel Initials
Sample Depth	

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-101
WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	54.5	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	261+06, 9.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	S1		0.67 - 2.80			SSA			8" PAVEMENT	
							53.8		0.7 Brown, damp, fine to coarse SAND, some gravel, little silt.	G#261951 A-1-b, SM WC=3.2%
	S2		2.80 - 4.00				51.7		2.8 Brown, moist, SILT, some fine to coarse sand, trace gravel.	G#261952 A-4, ML WC=13.2%
							50.5		4.0 **Bottom of Exploration at 4.0 feet below ground surface.** NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-102
WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	54.1	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	261+06, 15.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA	53.8		3½" PAVEMENT 0.3	
							53.1		Brown, damp, fine to coarse SAND, some gravel, trace silt. 1.0	
									Brown, moist, SILT, some sand, trace gravel.	
							51.1		3.0	
									Bottom of Exploration at 3.0 feet below ground surface. NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1		**Boring No.:**	HB-SEAR-103
Location: Searsport, Maine		**WIN:**	17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	44.1	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	281+50, 5.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	S3		0.67 - 3.00			SSA	43.4		8" PAVEMENT 0.7	
									Brown, damp, fine to coarse SAND, some gravel, little silt.	G#261953 A-1-b, SM WC=3.5%
	S4		3.00 - 4.00				41.1		3.0 Brown, moist, fine to coarse SAND, little silt, trace gravel.	G#261954 A-2-4, SM WC=9.3%
							40.1		4.0 **Bottom of Exploration at 4.0 feet below ground surface.** NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1			**Boring No.:**	HB-SEAR-104	
Location: Searsport, Maine			**WIN:**	17281.00	
Drilling Contractor:	MaineDOT	**Elevation (ft.)**	43.8	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	281+50, 15.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA	43.4		5" PAVEMENT — 0.4	
									Brown, damp, fine to coarse SAND, some gravel, little silt.	
							41.3		2.5	
							40.8		Brown, moist, fine to coarse SAND, little silt, trace gravel. — 3.0	
									Bottom of Exploration at 3.0 feet below ground surface. NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: HB-SEAR-104

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-105
WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	50.0	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	301+46, 9.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA	49.3		8" PAVEMENT 0.7	
									Brown, damp, fine to coarse SAND, some gravel, little silt.	
							47.6		2.4	
							47.0		Brown, moist, fine to coarse SAND, little silt, trace gravel. 3.0	
									Bottom of Exploration at 3.0 feet below ground surface. NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS	Project: Route 1 Location: Searsport, Maine	Boring No.: HB-SEAR-106 WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	49.7	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	301+46, 16.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA	49.3		4½" PAVEMENT — 0.4	
							48.2		Brown, damp, fine to coarse SAND, some gravel, little silt. — 1.5	
							46.7		Brown, wet, fine to coarse SAND, little silt, trace gravel. — 3.0	
									Bottom of Exploration at 3.0 feet below ground surface. NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-107
WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	88.6	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	322+63, 4.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	S5		0.71 - 4.00			SSA	87.9		8½" PAVEMENT — 0.7	
									Brown, damp, fine to coarse SAND, some gravel, little silt.	G#261955 A-1-b, SM WC=3.0%
							84.6		— 4.0	
5									**Bottom of Exploration at 4.0 feet below ground surface.** NO REFUSAL	
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Route 1		**Boring No.:**	HB-SEAR-108
Location: Searsport, Maine		**WIN:**	17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	88.4	**Auger ID/OD:**	5" Dia.
Operator:	Giguere/Giles	**Datum:**	NAVD88	**Sampler:**	Off Flights
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	12/13/11-12/13/11	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	322+63, 11.0 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			8" PAVEMENT	
							87.7		0.7	
									Brown, damp, fine to coarse SAND, some gravel, little silt.	
							85.4		3.0	
									Bottom of Exploration at 3.0 feet below ground surface. NO REFUSAL	
5										
10										
15										
20										
25										

Remarks:

Offsets are from Existing Roaday CL.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-201
WIN: 17281.00

Drilling Contractor:	Northern Test Boring	**Elevation (ft.)**	79.9	**Auger ID/OD:**	5" Dia.
Operator:	Mike/Shawn	**Datum:**	NAVD88	**Sampler:**	N/A
Logged By:	B. Wilder	**Rig Type:**	Diedrich D-50	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	6/14/2017-6/14/2017	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	255+89, 8.0 ft Lt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			Probe to refusal with no sampling.	
5										
10										
15										
20										
							58.7		21.2 **Bottom of Exploration at 21.2 feet below ground surface.** REFUSAL	
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-202
WIN: 17281.00

Driller:	Northern Test Boring	**Elevation (ft.)**	77.5	**Auger ID/OD:**	2.75/6.25"
Operator:	Mike/Shawn	**Datum:**	NAVD88	**Sampler:**	Standard Split Spoon
Logged By:	B. Wilder	**Rig Type:**	Diedrich D-50	**Hammer Wt./Fall:**	140#/30"
Date Start/Finish:	6/14/2017; 10:30-14:30	**Drilling Method:**	Hollow Stem Auger	**Core Barrel:**	N/A
Boring Location:	256+11, 12.1 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	16.0 ft bgs.
Hammer Efficiency Factor:	0.977	**Hammer Type:**	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							HSA				
	1D	24/15	1.00 - 3.00	12/17/11/13	28	46				Brown, damp, dense, fine to coarse SAND, some gravel, little silt, (Fill).	G#304420 A-1-a, SM WC=4.6%
5	2D	24/17	5.00 - 7.00	12/15/10/11	25	41				Light brown, moist, hard, SILT, some sand, trace gravel, (Fill).	G#304421 A-4, CL WC=21.3%
								69.0		8.5	
10	3D	24/19	10.00 - 12.00	16/15/14/21	29	47				Olive brown, moist, hard, fine to coarse Sandy SILT, little gravel, (Till).	G#304422 A-4, SM WC=9.7%
								63.0		14.5	
15	4D	24/18	15.00 - 17.00	15/18/32/38	50	81				Grey, wet, very dense, SAND, some silt, some gravel, trace clay, (Till).	G#304423 A-4, SC-SM WC=8.3%
20	5D	14.4/14.4	20.00 - 21.20	13/25/40(2.4")	---					Grey, wet, hard, SILT, some sand, some gravel, (Till). Cobble from 21.2-21.4 ft bgs.	G#304424 A-4, SM WC=8.9%
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: HB-SEAR-202

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-202
WIN: 17281.00

Driller:	Northern Test Boring	**Elevation (ft.)**	77.5	**Auger ID/OD:**	2.75/6.25"
Operator:	Mike/Shawn	**Datum:**	NAVD88	**Sampler:**	Standard Split Spoon
Logged By:	B. Wilder	**Rig Type:**	Diedrich D-50	**Hammer Wt./Fall:**	140#/30"
Date Start/Finish:	6/14/2017; 10:30-14:30	**Drilling Method:**	Hollow Stem Auger	**Core Barrel:**	N/A
Boring Location:	256+11, 12.1 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	16.0 ft bgs.
Hammer Efficiency Factor:	0.977	**Hammer Type:**	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
25	6D	10.8/10.8	25.00 - 25.90	19/50(4.8")	---					Grey, wet, hard, SILT, some sand, little gravel, (Till) Cobble from 25.9-26.1 ft bgs.	G#304425 A-4, CL WC=9.1%
30	7D	24/20	30.00 - 32.00	5/11/18/17	29	47				Grey, wet, hard, SILT, some sand, some gravel, (Till).	G#269976 A-4, SM WC=12.7%
								45.6		31.9	
								45.5		Weathered Rock in Tip of Spoon from 31.6-32.0 ft bgs. 32.0	
										Bottom of Exploration at 32.0 feet below ground surface. NO REFUSAL	
35											
40											
45											
50											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: HB-SEAR-202

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-203
WIN: 17281.00

Drilling Contractor:	Northern Test Boring	**Elevation (ft.)**	19.3	**Auger ID/OD:**	5" Dia.
Operator:	Mike/Shawn	**Datum:**	NAVD88	**Sampler:**	N/A
Logged By:	B. Wilder	**Rig Type:**	Diedrich D-50	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	6/14/2017-6/14/2017	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	289+25, 23.8 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks		Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			Probe to refusal with no sampling.		
5											
							10.0			9.3	
10									**Bottom of Exploration at 9.3 feet below ground surface.** REFUSAL		
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: HB-SEAR-203

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS	Project: Two Large Culverts on US Route 1 Location: Searsport, Maine	Boring No.: HB-SEAR-204 WIN: 17281.00

Driller:	Northern Test Boring	**Elevation (ft.)**	19.0	**Auger ID/OD:**	2.75/6.25"
Operator:	Mike/Shawn	**Datum:**	NAVD88	**Sampler:**	Standard Split Spoon
Logged By:	B. Wilder	**Rig Type:**	Diedrich D-50	**Hammer Wt./Fall:**	140#/30"
Date Start/Finish:	6/14/2017; 07:30-10:30	**Drilling Method:**	Hollow Stem Auger	**Core Barrel:**	NQ-2"
Boring Location:	289+55, 9.4 ft Lt.	**Casing ID/OD:**	HW-4"	**Water Level*:**	8.0 ft bgs.
Hammer Efficiency Factor:	0.977	**Hammer Type:**	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							HSA	18.4		7" HMA — 0.6	
	1D	24/17	1.50 - 3.50	20/15/13/13	28	46				Brown, damp, dense, Gravelly, fine to coarse SAND, little silt, (Fill).	G#269977 A-1-a, SW-SM WC=4.5%
5	2D	24/17	5.00 - 7.00	1/3/4/5	7	11		14.0		5.0 — Olive grey, moist, stiff, fine to coarse Sandy SILT, little gravel, (Till).	G#269978 A-4, SM WC=12.0%
	R1	60/60	8.40 - 13.40	RQD = 57%			NQ-2	10.9 10.6		8.1 — Top of Bedrock at Elev. 10.9 ft. Roller Coned ahead to 8.4 ft bgs. — 8.4 Set in HW Casing to 8.4 ft bgs. R1: Bedrock: Sulfidic/carbonaceous PELITE of the Penobscot Formation. Rock Quality = Fair. R1: Core Times (min:sec) 8.4-9.4 ft (1:29) 9.4-10.4 ft (1:18) 10.4-11.4 ft (1:22) 11.4-12.4 ft (1:50) 12.4-13.4 ft (1:41) 100% Recovery	
10											
								5.6		13.4 — **Bottom of Exploration at 13.4 feet below ground surface.**	
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS	**Project:** Two Large Culverts on US Route 1 **Location:** Searsport, Maine	**Boring No.:** HB-SEAR-301 **WIN:** 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	19.6	**Auger ID/OD:**	5" Dia.
Operator:	Daggett/Niles	**Datum:**	NAVD88	**Sampler:**	N/A
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	5/2/2019-5/2/2019	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	288+85.2, 12.0 Lt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			Probe with no sampling.	
5										
10										
15										
20							-0.9		20.5	
									Bottom of Exploration at 20.5 feet below ground surface. NO REFUSAL	
25										

Remarks:

Auger broke off and could not retrieve 5 ft.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-302
WIN: 17281.00

Driller:	MaineDOT	**Elevation (ft.)**	19.5	**Auger ID/OD:**	5' Solid Stem
Operator:	Daggett/Niles	**Datum:**	NAVD88	**Sampler:**	Standard Split Spoon
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	140#/30"
Date Start/Finish:	5/2/2019; 08:30-10:00	**Drilling Method:**	Cased Wash Boring	**Core Barrel:**	NQ-2"
Boring Location:	289+07, 24.5 ft Rt.	**Casing ID/OD:**	NW-3"	**Water Level*:**	4.5 ft bgs.
Hammer Efficiency Factor:	0.928	**Hammer Type:**	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/14	0.00 - 2.00	8/6/5/5	11	17	SSA			Brown, moist, medium dense, fine to coarse SAND, some gravel, little silt, brick pieces, (Fill).	G#337144 A-1-b, SM WC=9.3%
								15.5		4.0	
5	2D	24/19	5.00 - 7.00	3/3/3/4	6	9	8			Grey, wet, stiff, SILT, some clay, trace sand, trace gravel.	G#337145 A-4, CL-ML WC=22.4% LL=26 PL=19 PI=7
							12				
							7				
							10				
	R1	60/60	9.70 - 14.70	RQD = 45%			a100 NQ-2	9.8		a100 blows for 0.7 ft. 9.7	
10										Top of Bedrock at Elev. 9.8 ft. R1: Bedrock: Sulfidic/carbonaceous PELITE of the Penobscot Formation. Rock Quality = Poor. R1: Core Times (min:sec) 9.7-10.7 ft (1:50) 10.7-11.7 ft (1:32) 11.7-12.7 ft (1:43) 12.7-13.7 ft (1:29) 13.7-14.7 ft (1:38) 100% Recovery	
								4.8		14.7	
15										**Bottom of Exploration at 14.7 feet below ground surface.**	
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-303
WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	19.1	**Auger ID/OD:**	5" Dia.
Operator:	Daggett/Niles	**Datum:**	NAVD88	**Sampler:**	N/A
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	5/2/2019-5/2/2019	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	289+17.3, 12.0 ft Lt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			Probe to refusal with no sampling.	
5										
10										
							6.9		12.2	
									Bottom of Exploration at 12.2 feet below ground surface. REFUSAL	
15										
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-304
WIN: 17281.00

Drilling Contractor:	MaineDOT	**Elevation (ft.)**	19.8	**Auger ID/OD:**	5" Dia.
Operator:	Daggett/Niles	**Datum:**	NAVD88	**Sampler:**	N/A
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	N/A
Date Start/Finish:	5/2/2019-5/2/2019	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	N/A
Boring Location:	288+87.9, 65.7 ft Rt.	**Casing ID/OD:**	N/A	**Water Level*:**	None Observed

Definitions: D = Spilt Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ≅ = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			Probe to refusal with no sampling.	
5										
10										
							8.8		11.0 **Bottom of Exploration at 11.0 feet below ground surface.** REFUSAL	
15										
20										
25										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Two Large Culverts on US Route 1
Location: Searsport, Maine

Boring No.: HB-SEAR-305
WIN: 17281.00

Driller:	MaineDOT	**Elevation (ft.)**	18.8	**Auger ID/OD:**	5' Solid Stem
Operator:	Daggett/Niles	**Datum:**	NAVD88	**Sampler:**	Standard Split Spoon
Logged By:	B. Wilder	**Rig Type:**	CME 45C	**Hammer Wt./Fall:**	140#/30"
Date Start/Finish:	5/2/2019; 10:30-12:30	**Drilling Method:**	Cased Wash Boring	**Core Barrel:**	NQ-2"
Boring Location:	288+95.6, 133.9 ft Rt.	**Casing ID/OD:**	NW-3"	**Water Level*:**	5.0 ft bgs.
Hammer Efficiency Factor:	0.928	**Hammer Type:**	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/18	0.00 - 2.00	2/2/3/7	5	8	SSA	18.6		2" SOD. —0.2— Brown, wet, loose, fine to coarse SAND, some silt, little gravel, (Fill).	G#337146 A-2-4, SM WC=14.3%
								15.3		—3.5—	
5	2D	24/16	5.00 - 7.00	3/5/5/7	10	15	6			Grey, wet, stiff, fine to coarse Sandy SILT, trace gravel.	G#337147 A-4, SM WC=14.4%
							18				
	R1	60/58	7.60 - 12.60	RQD = 50%			a80 NQ-2	11.2		a80 blows for 0.6 ft. —7.6— Top of Bedrock at Elev. 11.2 ft. R1: Bedrock: Sulfidic/carbonaceous PELITE of the Penobscot Formation. Rock Quality = Poor. R1: Core Times (min:sec) 7.6-8.6 ft (2:07) 8.6-9.6 ft (1:59) 9.6-10.6 ft (2:02) 10.6-11.6 ft (1:52) 11.6-12.6 ft (2:01) 97% Recovery	
10											
								6.2		—12.6— **Bottom of Exploration at 12.6 feet below ground surface.**	
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

State of Maine - Department of Transportation

Laboratory Testing Summary Sheet

Town(s): Searsport Work Number: 17281.00

Boring & Sample Identification Number	Station (Feet)	Offset (Feet)	Depth (Feet)	Reference Number	G.S.D.C. Sheet	W.C. %	L.L.	P.I.	Classification		
									Unified	AASHTO	Frost
HB-SEAR-101, S1	19+31	9.0 Rt.	0.67-2.8	261951	1	3.2			SM	A-1-b	II
HB-SEAR-101, S2	19+31	9.0 Rt.	2.8-4.0	261952	1	13.2			ML	A-4	IV
HB-SEAR-103, S3	39+75	5.0 Rt.	0.67-3.0	261953	1	3.5			SM	A-1-b	II
HB-SEAR-103, S4	39+75	5.0 Rt.	3.0-4.0	261954	1	9.3			SM	A-2-4	II
HB-SEAR-107, S5	80+88	4.0 Rt.	0.71-4.0	261955	1	3.0			SM	A-1-b	II
HB-SEAR-202, 1D	256+11	12.1 Rt.	1.0-3.0	304420	2	4.6			SM	A-1-a	II
HB-SEAR-202, 2D	256+11	12.1 Rt.	5.0-7.0	304421	2	21.3			CL	A-4	IV
HB-SEAR-202, 3D	256+11	12.1 Rt.	10.0-12.0	304422	2	9.7			SM	A-4	IV
HB-SEAR-202, 4D	256+11	12.1 Rt.	15.0-17.0	304423	3	8.3			SC-SM	A-4	IV
HB-SEAR-202, 5D	256+11	12.1 Rt.	20.0-21.2	304424	3	8.9			SM	A-4	III
HB-SEAR-202, 6D	256+11	12.1 Rt.	25.0-25.9	304425	3	9.1			CL	A-4	IV
HB-SEAR-202, 7D	256+11	12.1 Rt.	30.0-32.0	269976	3	12.7			SM	A-4	III
HB-SEAR-204, 1D	289+55	9.4 Lt.	1.5-3.5	269977	4	4.5			SW-SM	A-1-a	0
HB-SEAR-204, 2D	289+55	9.4 Lt.	5.0-7.0	269978	4	12.0			SM	A-4	III
HB-SEAR-302, 1D	289+07	24.5 Rt.	0.0-2.0	337144	5	9.3			SM	A-1-b	II
HB-SEAR-302, 2D	289+07	24.5 Rt.	5.0-7.0	337145	5	22.4	26	7	CL-ML	A-4	IV
HB-SEAR-305, 1D	288+95.6	133.9 Rt.	0.2-2.0	337146	5	14.3			SM	A-2-4	II
HB-SEAR-305, 2D	288+95.6	133.9 Rt.	5.0-7.0	337147	5	14.4			SM	A-4	III

Classification of these soil samples is in accordance with AASHTO Classification System M-145-40. This classification is followed by the "Frost Susceptibility Rating" from zero (non-frost susceptible) to Class IV (highly frost susceptible). The "Frost Susceptibility Rating" is based upon the MaineDOT and Corps of Engineers Classification Systems.

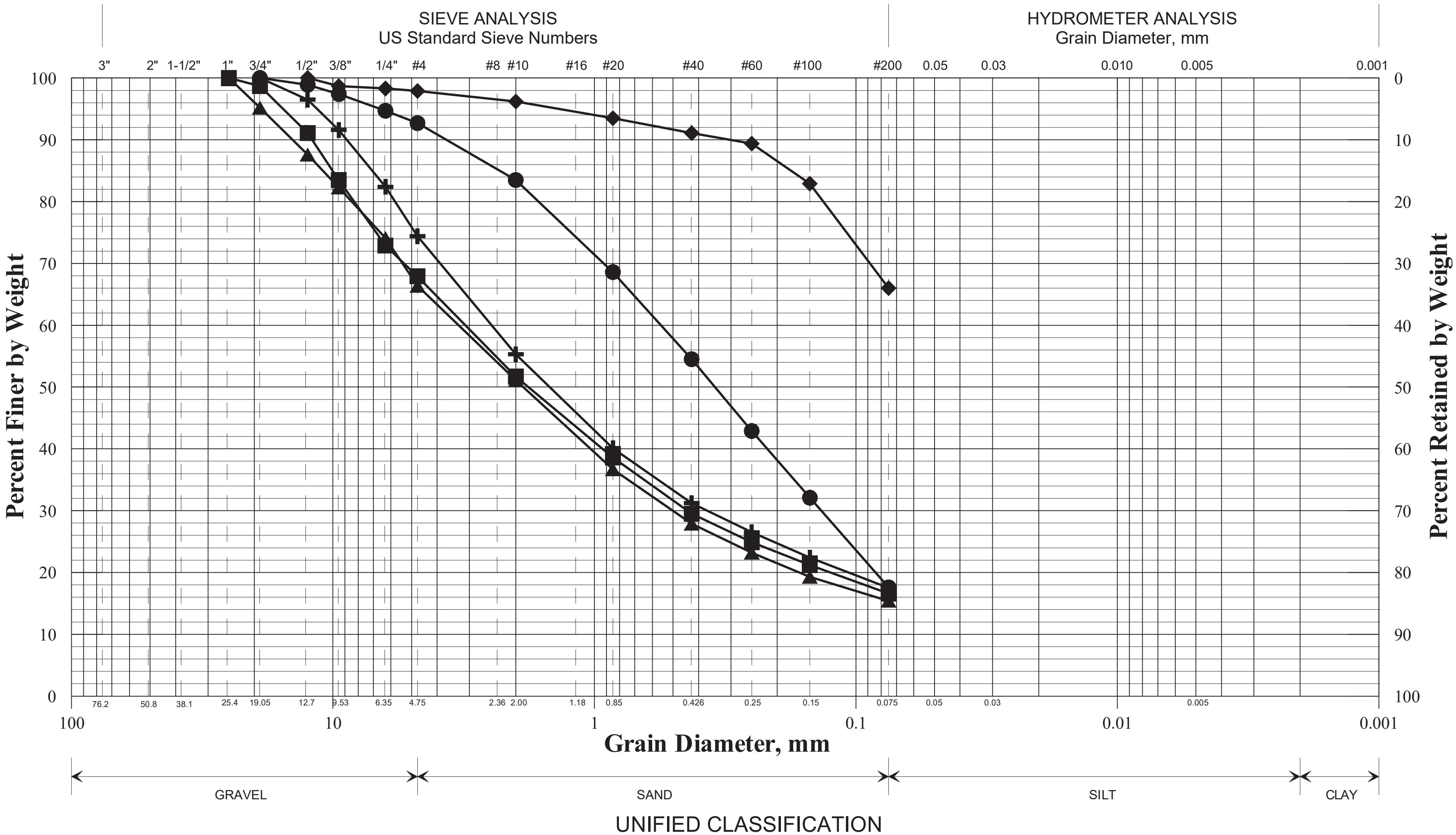
GSDC = Grain Size Distribution Curve as determined by AASHTO T 88-93 (1996) and/or ASTM D 422-63 (Reapproved 1998)

WC = water content as determined by AASHTO T 265-93 and/or ASTM D 2216-98

LL = Liquid limit as determined by AASHTO T 89-96 and/or ASTM D 4318-98 NP = Non Plastic

PI = Plasticity Index as determined by AASHTO 90-96 and/or ASTM D4318-98

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE



	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	W, %	LL	PL	PI
✚	HB-SEAR-101/S1	261+06	9.0 RT	0.67-2.8	SAND, some gravel, little silt.	3.2			
◆	HB-SEAR-101/S2	261+06	9.0 RT	2.8-4.0	SILT, some sand, trace gravel.	13.2			
■	HB-SEAR-103/S3	281+50	5.0 RT	0.67-3.0	SAND, some gravel, little silt.	3.5			
●	HB-SEAR-103/S4	281+50	5.0 RT	3.0-4.0	SAND, little silt, trace gravel.	9.3			
▲	HB-SEAR-107/S5	322+63	4.0 RT	0.71-4.0	SAND, some gravel, little silt.	3.0			
✖									

WIN
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Searsport
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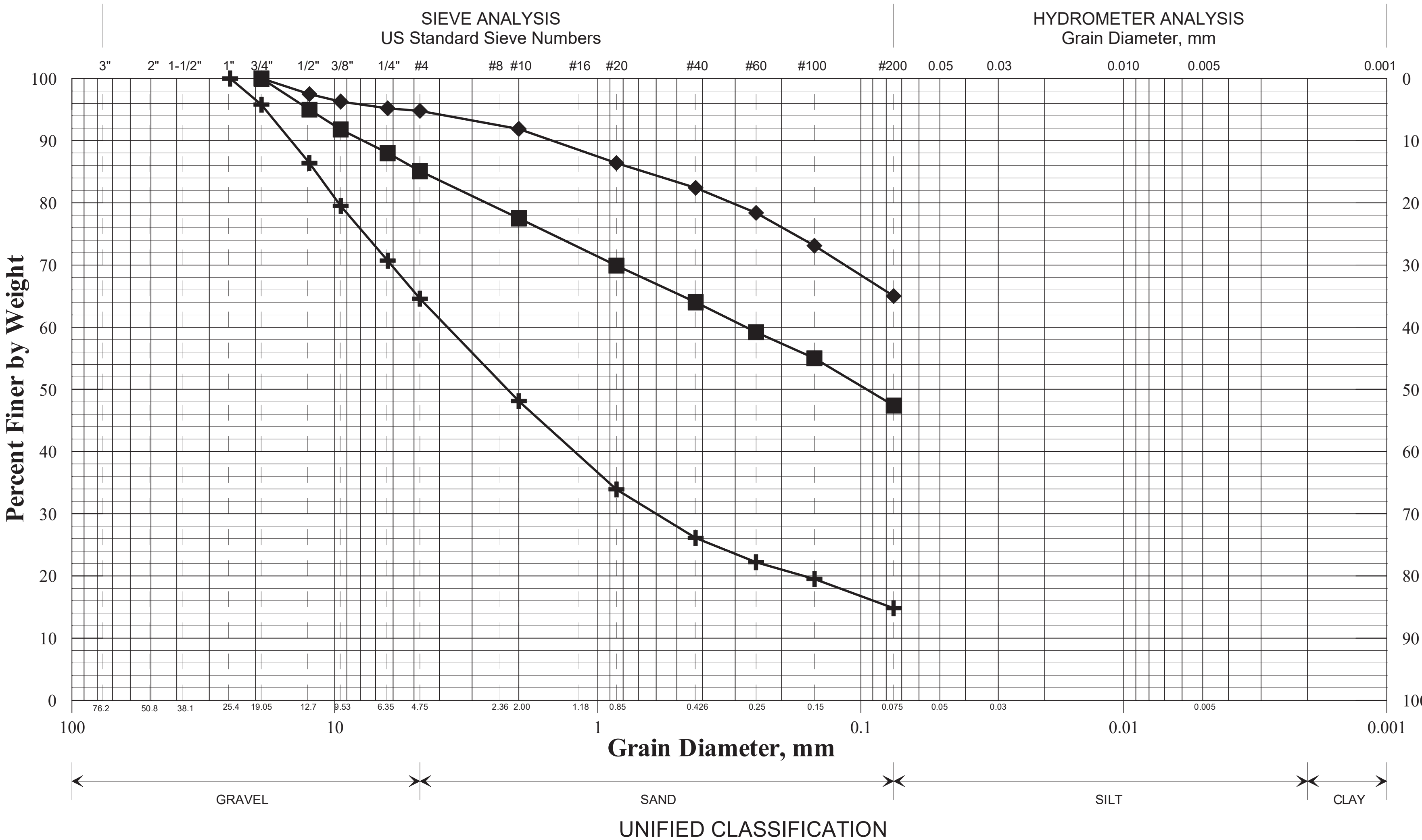
WHITE, TERRY A 2/26/2018

SHEET 1

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE



	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	W, %	LL	PL	PI
✚	HB-SEAR-202/1D	256+11	12.1 RT	1.0-3.0	SAND, some gravel, little silt.	4.6			
◆	HB-SEAR-202/2D	256+11	12.1 RT	5.0-7.0	SILT, some sand, trace gravel.	21.3			
■	HB-SEAR-202/3D	256+11	12.1 RT	10.0-12.0	Sandy SILT, little gravel.	9.7			
●									
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✖									

WIN
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Searsport
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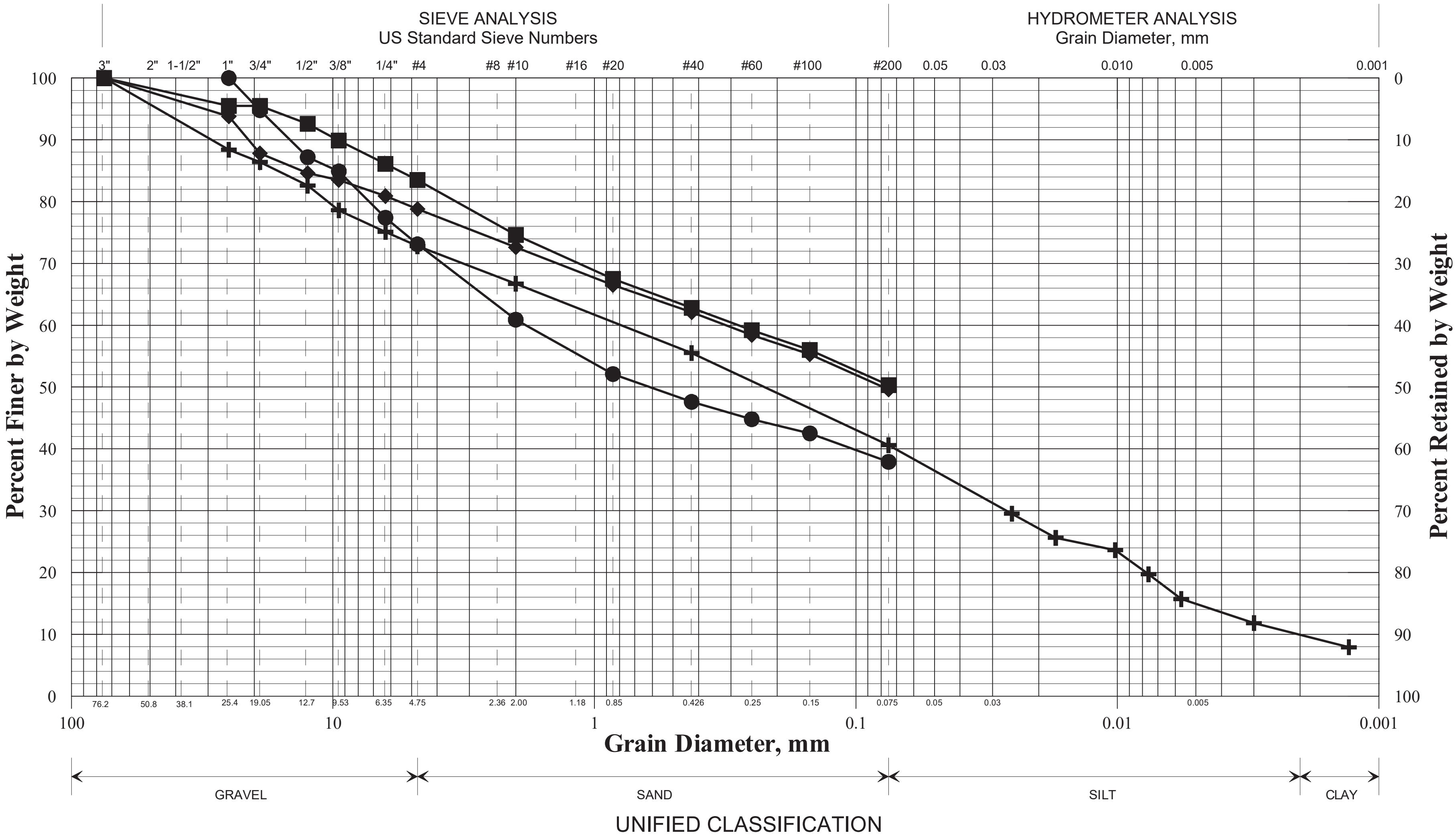
WHITE, TERRY A 7/24/2017

SHEET 2

State of Maine Department of Transportation

GRAIN SIZE DISTRIBUTION CURVE



	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	W, %	LL	PL	PI
✚	HB-SEAR-202/4D	256+11	12.1 RT	15.0-17.0	SAND, some silt, some gravel, trace clay.	8.3			
◆	HB-SEAR-202/5D	256+11	12.1 RT	20.0-21.2	SILT, some sand, some gravel.	8.9			
■	HB-SEAR-202/6D	256+11	12.1 RT	25.0-25.9	SILT, some sand, little gravel.	9.1			
●	HB-SEAR-202/7D	256+11	12.1 RT	30.0-32.0	SILT, some sand, some gravel.	12.7			
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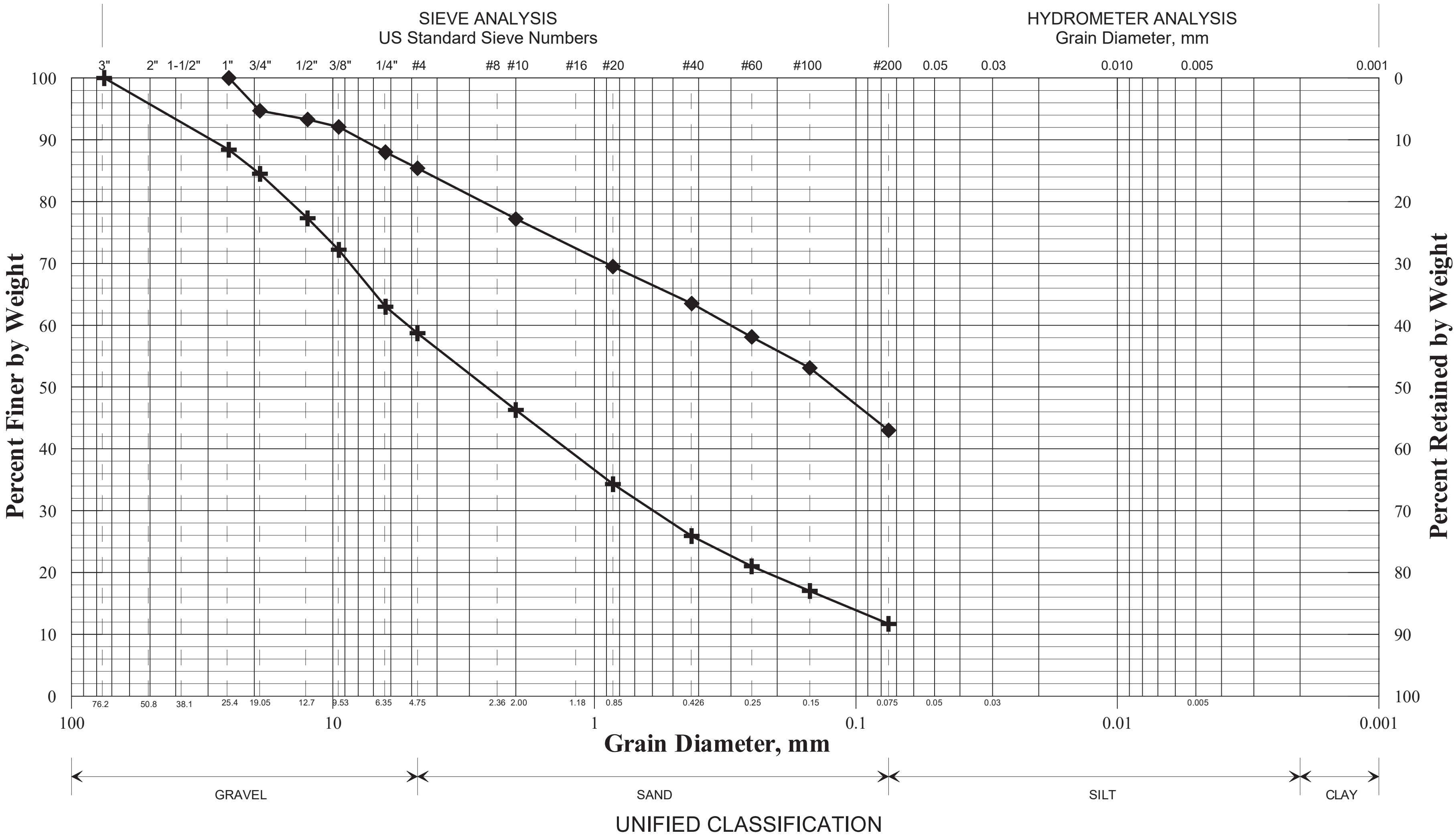
WHITE, TERRY A 7/24/2017

SHEET 3

State of Maine Department of Transportation
GRAIN SIZE DISTRIBUTION CURVE



	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	W, %	LL	PL	PI
✚	HB-SEAR-204/1D	289+55	9.4 LT	1.5-3.5	Gravelly SAND, little silt.	4.5			
◆	HB-SEAR-204/2D	289+55	9.4 LT	5.0-7.0	Sandy SILT, little gravel.	12.0			
■									
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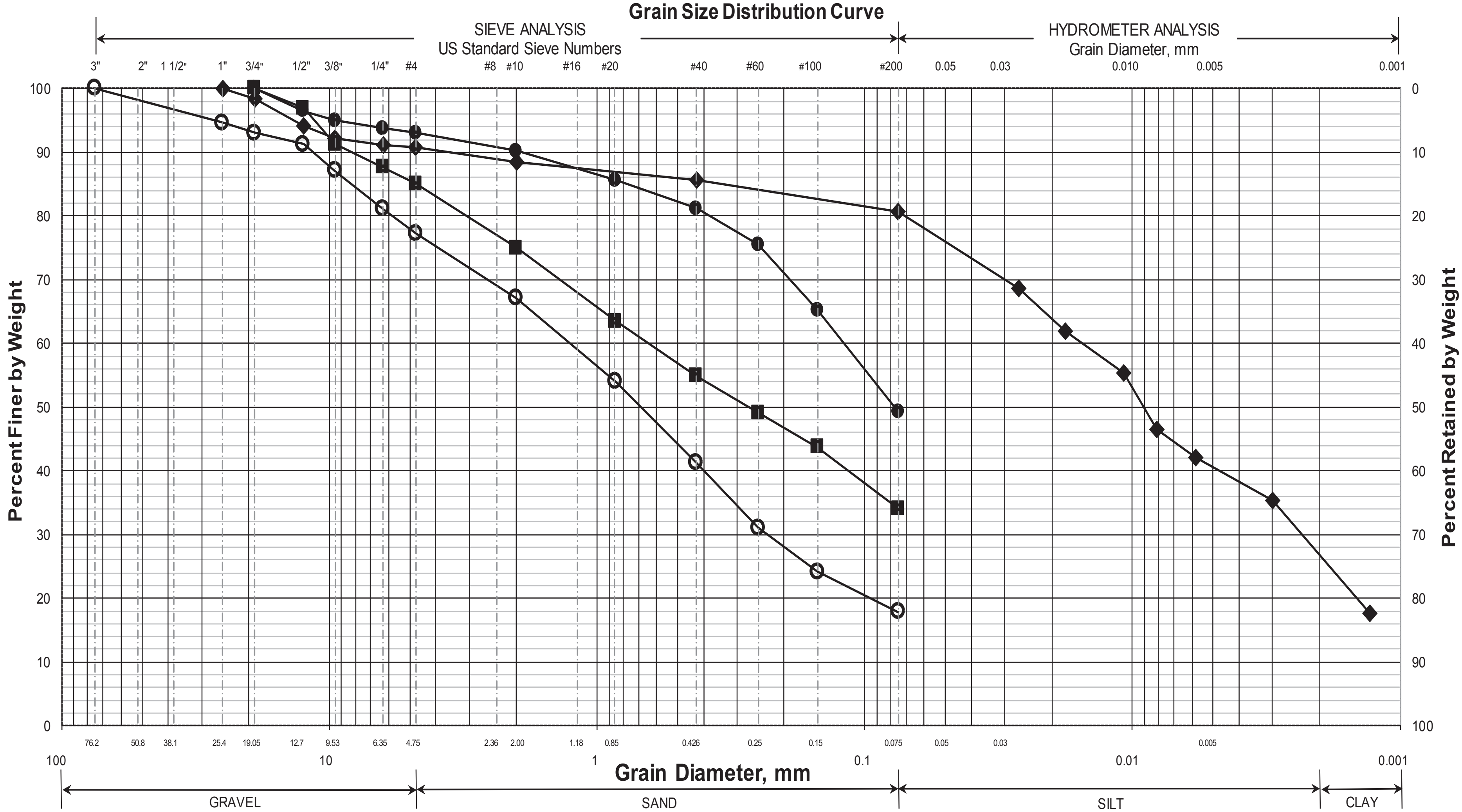
SHEET 4

Maine Department of Transportation
Grain Size Distribution Curve



UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-SEAR-302/1D	289+07	24.5 RT	0.0-2.0	SAND, some gravel, little silt.	9.3			
◆	HB-SEAR-302/2D	289+07	24.5 RT	5.0-7.0	SILT, some clay, trace sand, tarce gravel.	22.4	26	19	7
■	HB-SEAR-305/1D	288+95.6	133.9 RT	0.0-2.0	SAND, some silt, little gravel.	14.3			
●	HB-SEAR-305/2D	288+95.6	133.9 RT	5.0-7.0	Sandy SILT, trace gravel.	14.4			
▲									
×									

WIN	
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Town	
Searsport	
Reported by/Date	
WHITE, TERRY A	6/21/2019

SHEET 5

TOWN	Searsport	Reference No.	337145
WIN	017281.00	Water Content, %	22.4
Sampled	5/2/2019	Liquid Limit @ 25 blows (T 89), %	26
Boring No./Sample No.	HB-SEAR-302/2D	Plastic Limit (T 90), %	19
Station	289+07	Plasticity Index (T 90), %	7
Depth	5.0-7.0	Tested By	BBURR