

REFERENCE: R-5809A

PROJECT: 46976

SEE SHEET 3 FOR PLAN SHEET LAYOUT
AT TIME OF INVESTIGATION

CONTENTS

LINE	STATION	PLAN	PROFILE
-L-	65+00 TO 403+00	4 TO 16*	(NA)

(* = SELECT PLANS
SEE SHEET 3 FOR LAYOUT)

CROSS SECTIONS

LINE	STATION	SHEETS
-L-	58+00 TO 437+50	38 TO 247**

(** = SHEET NUMBERING FROM ROADWAY FILES
SHEETS LIMITED TO BORING LOCATIONS)

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

ROADWAY

SUBSURFACE INVESTIGATION

COUNTY BERTIE
PROJECT DESCRIPTION NC 45 FROM THREE
SISTERS BRIDGE TO US ROUTE 17

INVENTORY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5809A	1	83

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1919 T07-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

THOMAS PARK

JACK BURKE

M. D. MASON

INVESTIGATED BY CATLIN

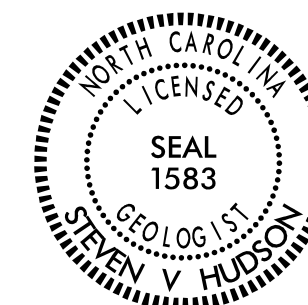
DRAWN BY S. V. HUDSON, LG

CHECKED BY J. LEE STONE, LG

SUBMITTED BY S. V. HUDSON, LG

DATE JANUARY 2023

CATLIN
Engineers and Scientists



SIGNATURE

DATE

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 208, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, *VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6*

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)							ORGANIC MATERIALS		
	A-1	A-3	A-2		A-2		A-4	A-5	A-6	A-7	A-1, A-2	A-3	A-4, A-5	A-6, A-7			
GROUP CLASS.	A-1-a	A-1-b	A-2-4	A-2-5	A-2-6	A-2-7				A-7-5	A-7-6						
SYMBOL																	
% PASSING #10 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX	51 MN 35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	36 MN	36 MN	36 MN				
MATERIAL PASSING #40 LL PI	-	-	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN							
GROUP INDEX	0	0	0	4 MX	8 MX	12 MX	16 MX	NO MX									
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND	FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND	SILTY SOILS	CLAYEY SOILS												
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD			FAIR TO POOR			FAIR TO POOR	POOR	UNSATURABLE								

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	< 4 4 TO 10 10 TO 30 30 TO 50 > 50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30	< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE OPENING (MM)	4	10	40	60	200	270
	4.75	2.00	0.42	0.25	0.075	0.053
Boulder (BLDR.)						
Cobble (COB.)						
Gravel (GR.)						
Coarse Sand (CSE. SD.)						
Fine Sand (F SD.)						
Silt (SL.)						
Clay (CL.)						
GRAIN SIZE	305	75	2.0	0.25	0.05	0.005
MM						
IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
LL - LIQUID LIMIT	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL - PLASTIC LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
OM - OPTIMUM MOISTURE SHRINKAGE LIMIT	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-BROWN). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE LL < 31
MODERATELY COMPRESSIBLE LL = 31 - 50
HIGHLY COMPRESSIBLE LL > 50

PERCENTAGE OF MATERIAL

	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE 1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE 10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME 20 - 35%
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY 35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- DIP & DIP DIRECTION OF ROCK STRUCTURES
- TEST BORING
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING WITH CORE
- SPT N-VALUE

RECOMMENDATION SYMBOLS

- UNDERCUT
- SHALLOW UNDERCUT
- UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
- UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK
- UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

ABBREVIATIONS

- AR - AUGER REFUSAL
- BT - BORING TERMINATED
- CL - CLAY
- CPT - CONE PENETRATION TEST
- CSE - COARSE
- DMT - DILATOMETER TEST
- DPT - DYNAMIC PENETRATION TEST
- e - VOID RATIO
- F - FINE
- FOSS. - FOSSILIFEROUS
- FRAC. - FRACTURED, FRACTURES
- FRAGS. - FRAGMENTS
- HI. - HIGHLY
- MED. - MEDIUM
- MICA. - MICACEOUS
- MOD. - MODERATELY
- NP - NON PLASTIC
- ORG. - ORGANIC
- PMT - PRESSUREMETER TEST
- SAP. - SAPROLITIC
- SD. - SAND, SANDY
- SL. - SILT, SILTY
- SLI. - SLIGHTLY
- TCR - TRICONE REFUSAL
- w - MOISTURE CONTENT
- V - VERY
- VST - VANE SHEAR TEST
- WEA. - WEATHERED
- UW - UNIT WEIGHT
- UWG - DRY UNIT WEIGHT
- SAMPLE ABBREVIATIONS
- S - BULK
- SS - SPLIT SPOON
- ST - SHELBY TUBE
- RS - ROCK
- RT - RECOMPACTED TRIAXIAL
- CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

- DRILL UNITS:
 - CME-45C
 - CME-55
 - CME-550
 - VANE SHEAR TEST
 - PORTABLE HOIST
- ADVANCING TOOLS:
 - CLAY BITS
 - 6" CONTINUOUS FLIGHT AUGER
 - 8" HOLLOW AUGERS
 - HARD FACED FINGER BITS
 - TUNG-CARBIDE INSERTS
 - CASING W/ ADVANCER
 - TRICONE * STEEL TEETH
 - TRICONE * TUNG-CARB.
 - CORE BIT
- HAMMER TYPE:
 - AUTOMATIC MANUAL
- CORE SIZE:
 - B -H
 - N
- HAND TOOLS:
 - POST HOLE DIGGER
 - HAND AUGER
 - SOUNDING ROD
 - VANE SHEAR TEST

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

- WEATHERED ROCK (WR)
NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
- CRYSTALLINE ROCK (CR)
FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
- NON-CRYSTALLINE ROCK (NCR)
FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
- COASTAL PLAIN SEDIMENTARY ROCK (CP)
COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

- FRESH** ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
- VERY SLIGHT (IV SLI.)** ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
- SLIGHT (SLI.)** ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
- MODERATE (MOD.)** SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
- MODERATELY SEVERE (MOD. SEV.)** ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
- SEVERE (SEV.)** ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF*
- VERY SEVERE (IV SEV.)** ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF*
- COMPLETE** ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

- VERY HARD** CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
- HARD** CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
- MODERATELY HARD** CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
- MEDIUM HARD** CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
- SOFT** CAN BE GROOVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
- VERY SOFT** CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGER NAIL.

FRACTURE SPACING

TERM	SPACING	TERM	THICKNESS
VERY WIDE	MORE THAN 10 FEET	VERY THICKLY BEDDED	4 FEET
WIDE	3 TO 10 FEET	THICKLY BEDDED	1.5 - 4 FEET
MODERATELY CLOSE	1 TO 3 FEET	THINLY BEDDED	0.16 - 1.5 FEET
CLOSE	0.16 TO 1 FOOT	VERY THINLY BEDDED	0.03 - 0.16 FEET
VERY CLOSE	LESS THAN 0.16 FEET	THICKLY LAMINATED	0.008 - 0.03 FEET
		THINLY LAMINATED	< 0.008 FEET

INDURATION

- FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.**
- FRIABLE** RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
- MODERATELY INDURATED** GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
- INDURATED** GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
- EXTREMELY INDURATED** SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

- ALLUVIUM (ALLUV.)** - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.
- AQUIFER** - A WATER BEARING FORMATION OR STRATA.
- ARENACEOUS** - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.
- ARGILLACEOUS** - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.
- ARTESIAN** - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.
- CALCAREOUS (CALC.)** - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
- COLLUVIUM** - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.
- CORE RECOVERY (REC.)** - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
- DIKE** - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.
- DIP** - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.
- DIP DIRECTION (DIP AZIMUTH)** - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.
- FAULT** - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.
- FISSILE** - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
- FLOAT** - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLOADED FROM PARENT MATERIAL.
- FLOOD PLAIN (FP)** - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.
- FORMATION (FM)** - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.
- JOINT** - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.
- LEDGE** - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.
- LENS** - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.
- MOTTLED (MOT.)** - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.
- PERCHED WATER** - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.
- RESIDUAL (RES.) SOIL** - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.
- ROCK QUALITY DESIGNATION (ROD)** - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
- SAPROLITE (SAP.)** - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.
- SILL** - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.
- SLICKENSIDE** - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.
- STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)** - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.
- STRATA CORE RECOVERY (SREC.)** - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.
- STRATA ROCK QUALITY DESIGNATION (SROD)** - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.
- TOPSOIL (TS.)** - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK:

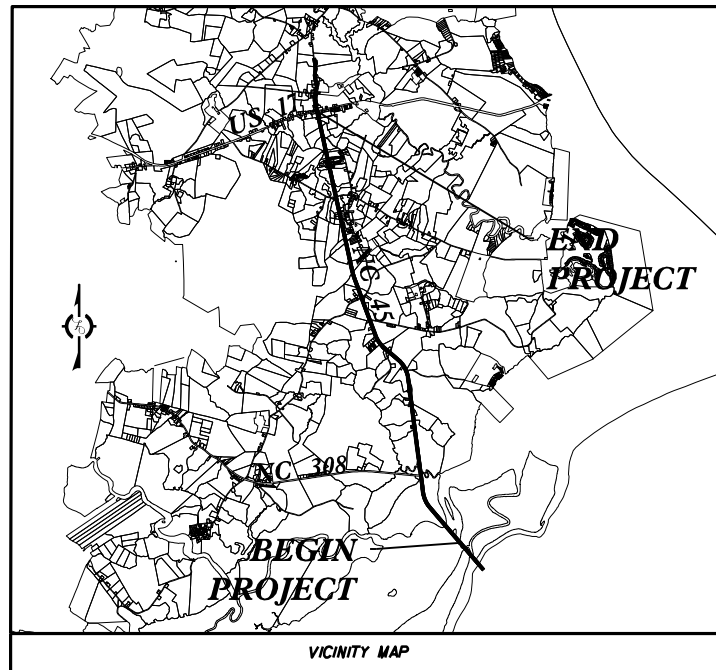
ELEVATION: FEET

NOTES:

FIAD = FILLED IMMEDIATELY AFTER DRILLING
U.C.P. = UNDIVIDED COASTAL PLAIN

09/08/22

TIP PROJECT: R-5809A



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

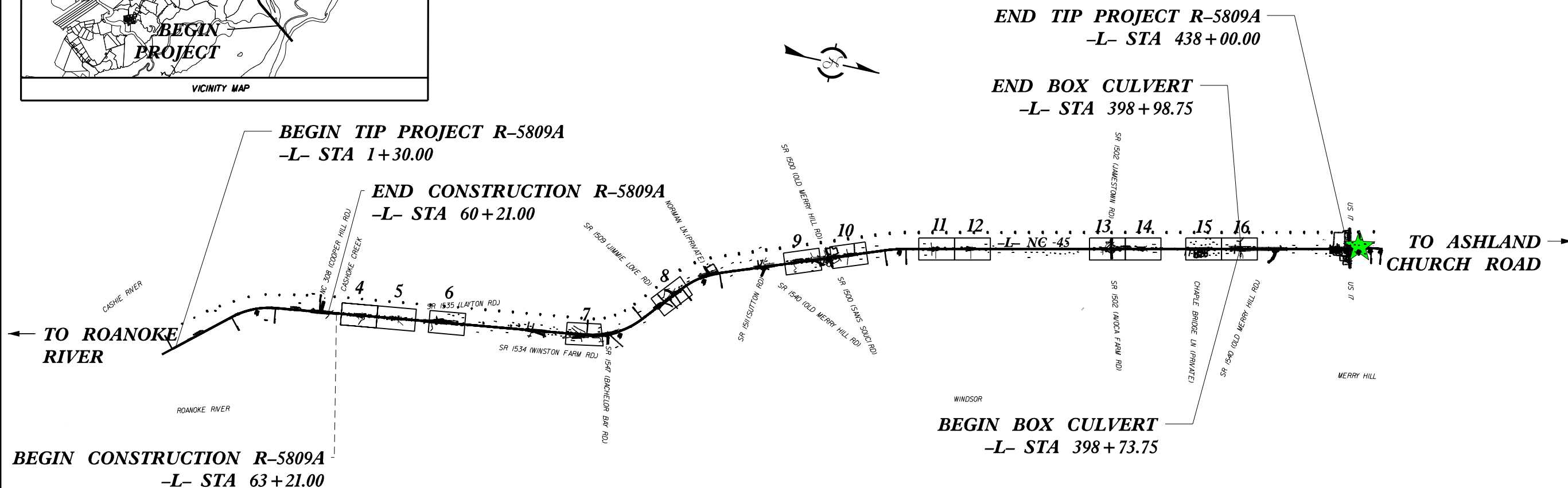
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5809A	3	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
46976.12		PE	

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

65% PLANS

LOCATION: NC 45 FROM THREE SISTERS BRIDGE TO US ROUTE 17

TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, AND CULVERT REPLACEMENT



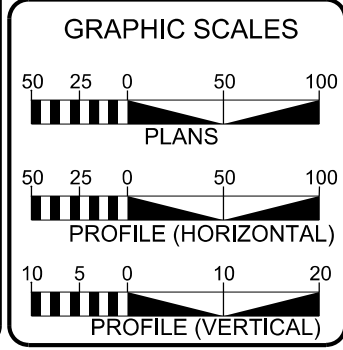
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SUBMITTAL:
DATE: September, 2022

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

CONTRACT:



DESIGN DATA

ADT 2022 =	3,200
ADT 2044 =	4,100
K =	8%
D =	52%
T =	22%
V =	60 MPH

CLASSIFICATION:
MAJOR COLLECTOR
* 17% TTST 5% DUAL REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5809A	= 8.203 MILES
LENGTH OF STRUCTURE TIP PROJECT R-5809A	= .005 MILES
TOTAL LENGTH TIP PROJECT R-5809A	= 8.198 MILES

Prepared in the Office of:

Kimley Horn

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 15, 2022

LETTING DATE:
JUNE 20, 2023

VINCENT RICCIO, PE
PROJECT ENGINEER

KEVIN PUNINSKE, PE
PROJECT DESIGN ENGINEER

ROHAM LAHIJI
PROJECT MANAGER
NCDOT HIGHWAY DIVISION

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



\$DATE\$

January 11, 2023

WBS Number: 46976.1.2
TIP Number: R-5809A
County: Bertie
Description: NC 45 from Three Sisters Bridge to US Route 17
CATLIN Number: 222278

SUBJECT: Geotechnical Inventory Report

Project Description

Based on the 65% plan submittal dated September, 2020, this project begins approximately 5,800 feet south of the intersection of NC 308 (Cooper Hill Road) and NC 45 and continues north for approximately 8.2 miles to the intersection of NC 45 and US 17. This investigation focused on the area of construction beginning at -L- Station 58+00 near the intersection of NC 308 and extended north to -L- Station 438+00 near the intersection with US 17. The proposed construction will consist primarily of pavement replacement and symmetrical widening of the existing embankment along NC 45. This geotechnical investigation was conducted by Richard Catlin and Associates (DBA Catlin Engineers and Scientists – CATLIN) and was confined to the areas of proposed construction.

Fieldwork was conducted by CATLIN personnel in June 2022. Hand auger borings were advanced along the project corridor to six (6) feet below land surface (BLS) at an average spacing of 600 linear feet between borings. Representative soil samples were collected for visual classification in the field and for laboratory analysis.

The following alignment was investigated. No subsurface profiles were generated for this report. Cross sections at or near the location of the borings have been included.

<u>Line</u>	<u>Station(±)</u>
-L-	58+00 to 438+00

Areas of Special Geotechnical Interest

1) Seasonal high groundwater was encountered at the following locations:

<u>Line</u>	<u>Station(±)</u>
-L-	96+00 to 120+00
-L-	161+00 to 169+00
-L-	259+00 to 265+00
-L-	283+00 to 301+00
-L-	337+00 to 355+00
-L-	399+00 to 416+00

2) Cohesive soils that may have the potential to cause embankment/subgrade and or slope stability problems during construction were identified along the following locations:

<u>Line</u>	<u>Station(±)</u>
-L-	58+00 to 61+00
-L-	78+00 to 84+00
-L-	96+00 to 247+00
-L-	265+00 to 277+00
-L-	283+00 to 307+00
-L-	313+00 to 337+00
-L-	349+00 to 367+00
-L-	373+00 to 404+25
-L-	416+00 to 438+00

Physiography and Geology

This project corridor is located within the Coastal Plain physiographic province. Topography along the project is nearly flat to gently sloping. Ground elevations average approximately 31± feet above sea level with ground elevations ranging from 13.3 feet near the start of the project increasing to the north to an elevation of 41.2 feet at the end of the project.

Surficial soils in this area are generally classified as undivided coastal plain sediments.

Ground Water

Ground water data was collected in June 2022. Ground water was encountered within 0.3 to greater than six (6) feet (deepest soil borings) of the ground surface throughout the project area.

Soils

Soils encountered along the project site include Roadway Embankment and Undivided Coastal Plain sediments.

- Roadway Embankment soils were identified adjacent to existing roadways and consist of approximately less than one (1) to four (4) feet of loose to medium dense silty and clayey, fine sand (A-2-4 and A-2-6) fine, sandy silt (A-4), and fine, sandy clay (A-6).
- Undivided coastal plain sediments were encountered across most of the project from land surface where borings were advanced beyond the limits of existing roadway embankment or under the existing embankment to a depth of at least six (6) feet. The sediments consisted primarily of medium stiff to stiff, sandy clay and clay (A-6 and A-7), loose to medium dense, sand, silty sand, and clayey sand (A-1, A-2-4, and A-2-6) and to a lesser extent, medium stiff to stiff, fine sandy silt (A-4).

Culvert at -L- Station 399+00(±)

Natural ground elevations range from approximately 0.04 feet at the bottom of the ditch to seven (7) feet along the adjacent floodplain. Borings completed in the vicinity show approximately 0.3 feet of Roadway Embankment consisting of soft, sandy silt (A-4) and loose, silty sand (A-2-4) underlain by U.C.P., soft to medium dense, sandy clay (A-6 with PI of 16) to a depth of at least six (6) feet.

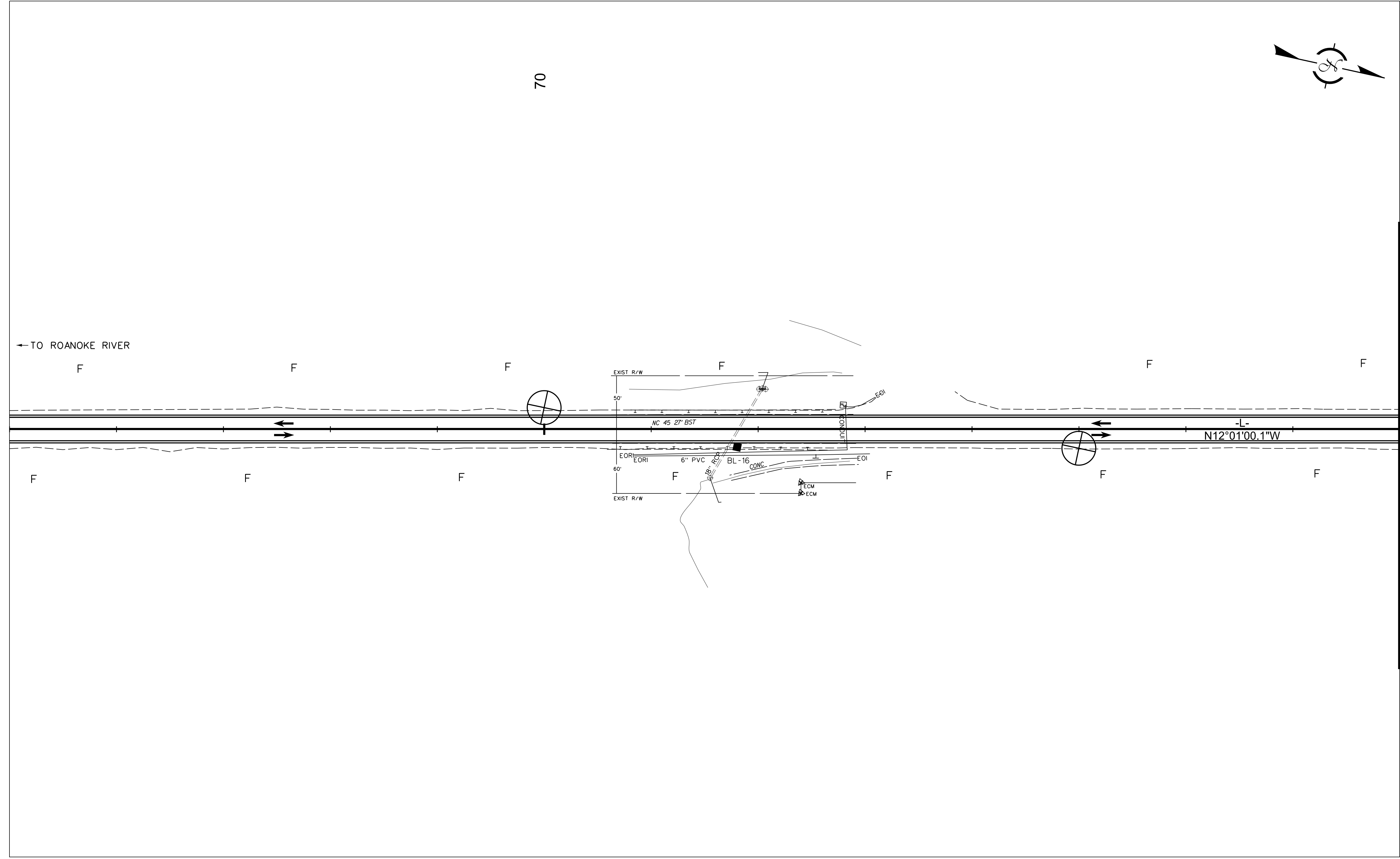
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R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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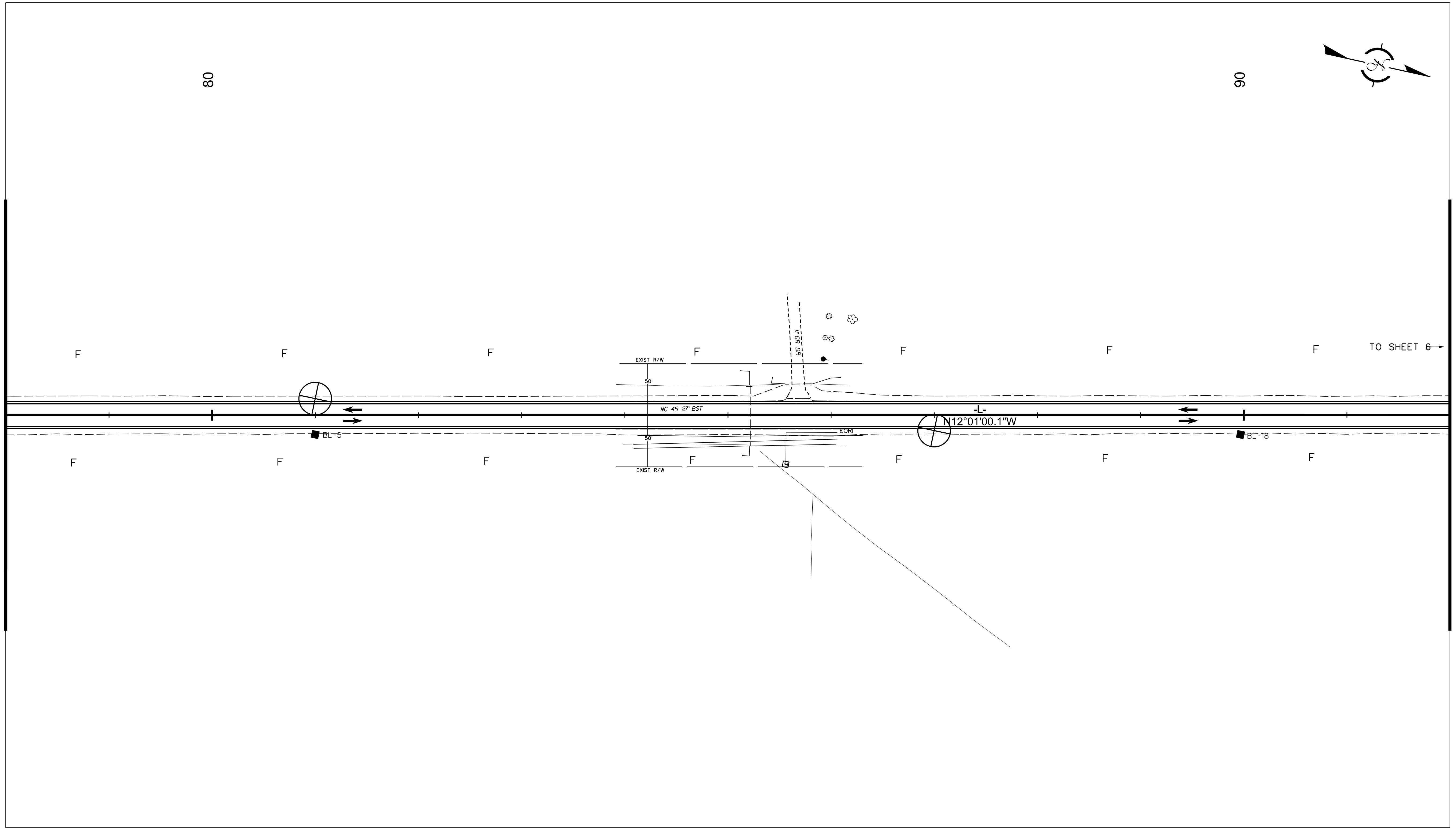
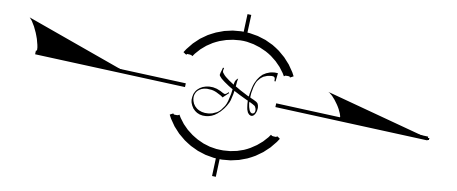
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MATCHLINE -L- STA 78+00.00
SEE PLAN SHEET 5

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PROJECT REFERENCE NO. <i>R-5809 A</i>	SHEET NO. 5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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MATCHLINE -L- STA 78+00.00
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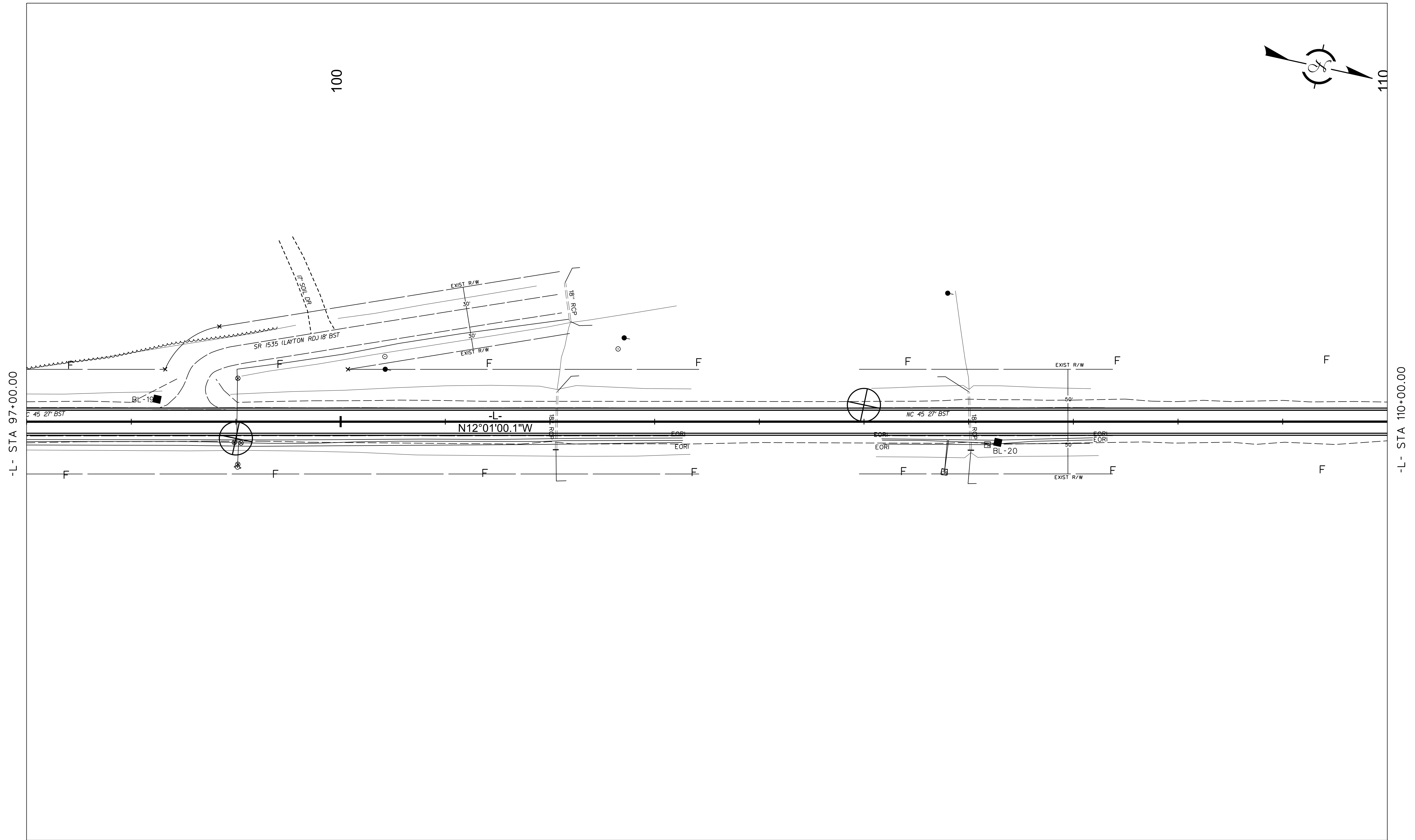
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TO SHEET 6 →

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PROJECT REFERENCE NO. <i>R-5809 A</i>	SHEET NO. 6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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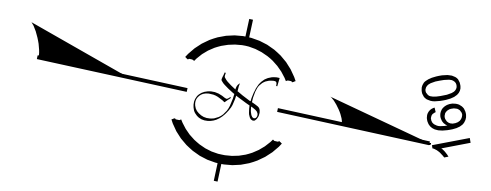


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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

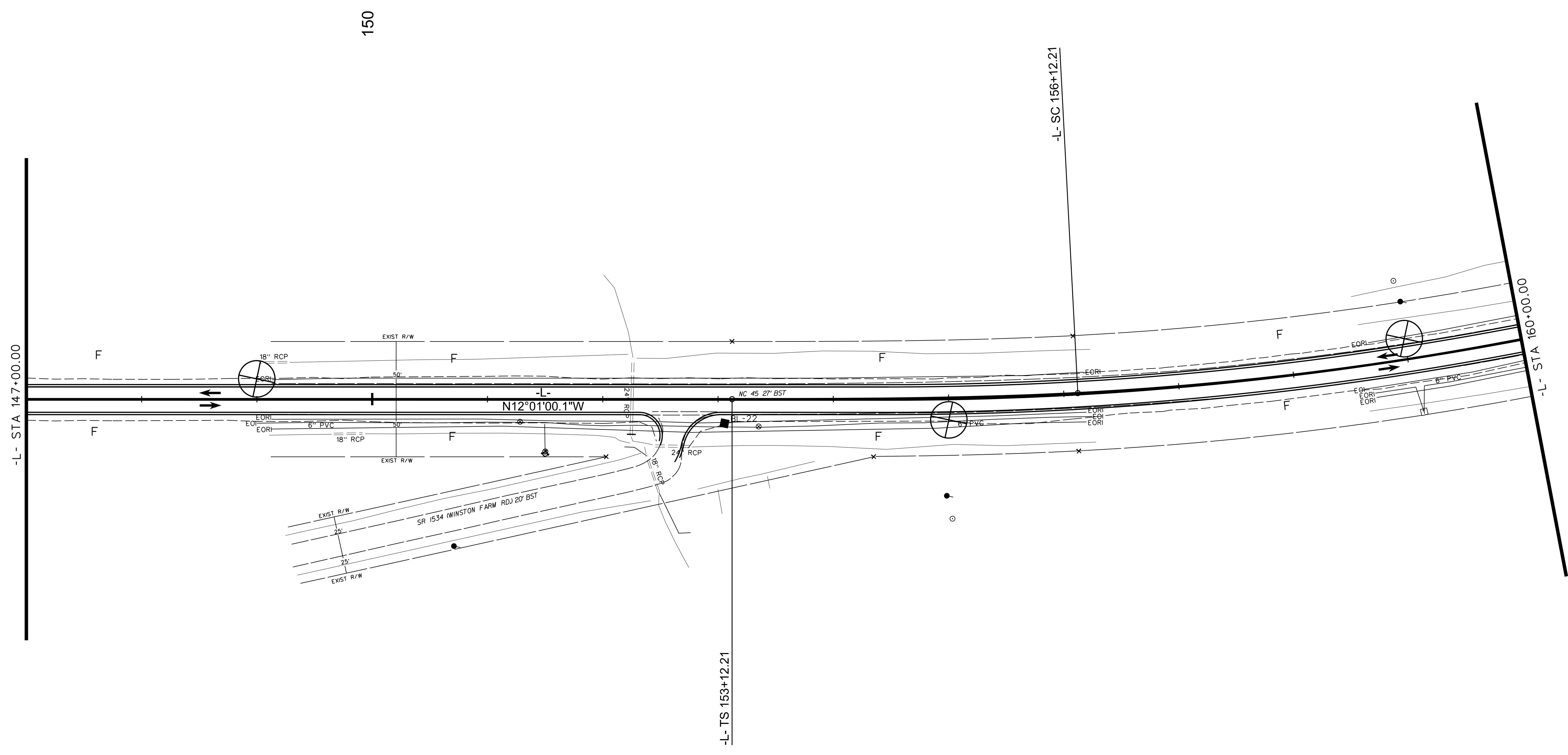
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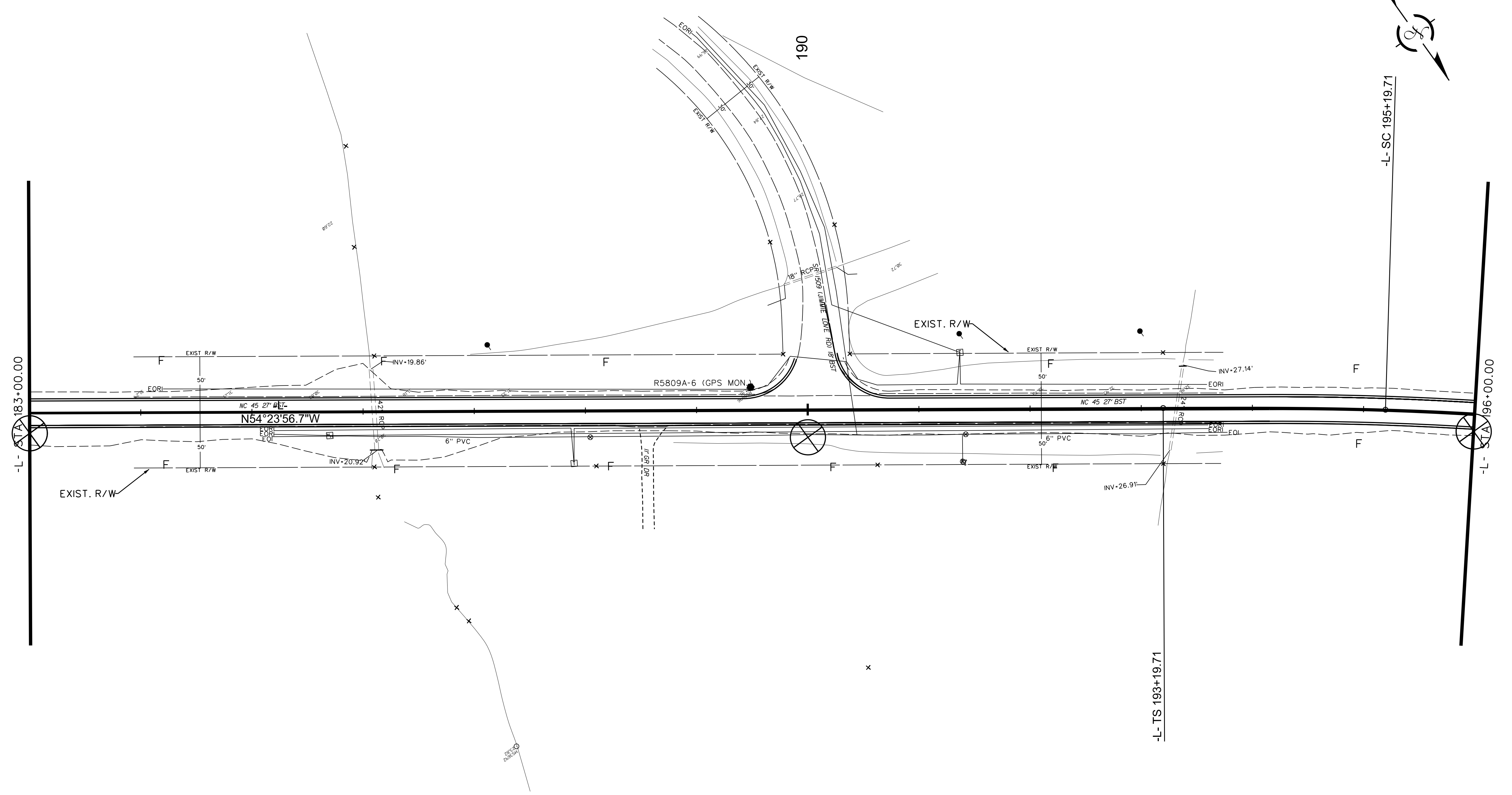
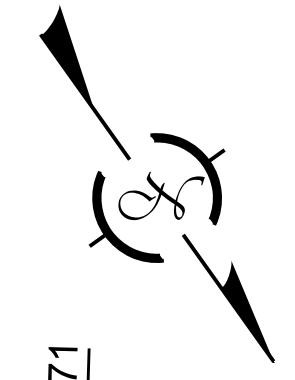
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INCOMPLETE PLANS
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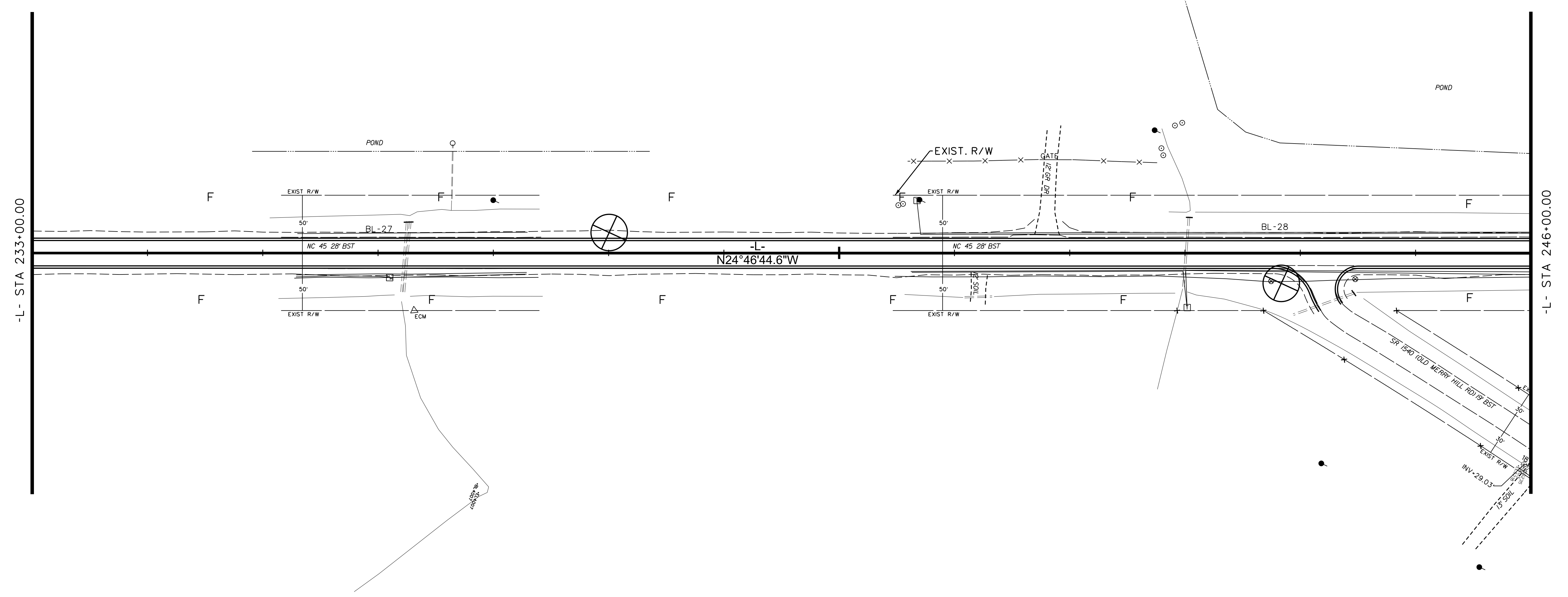
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DO NOT USE FOR R/W ACQUISITION

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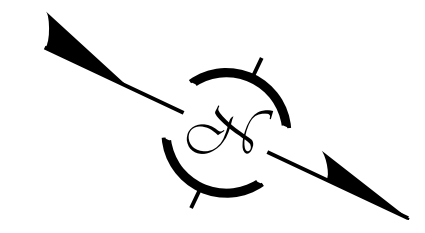
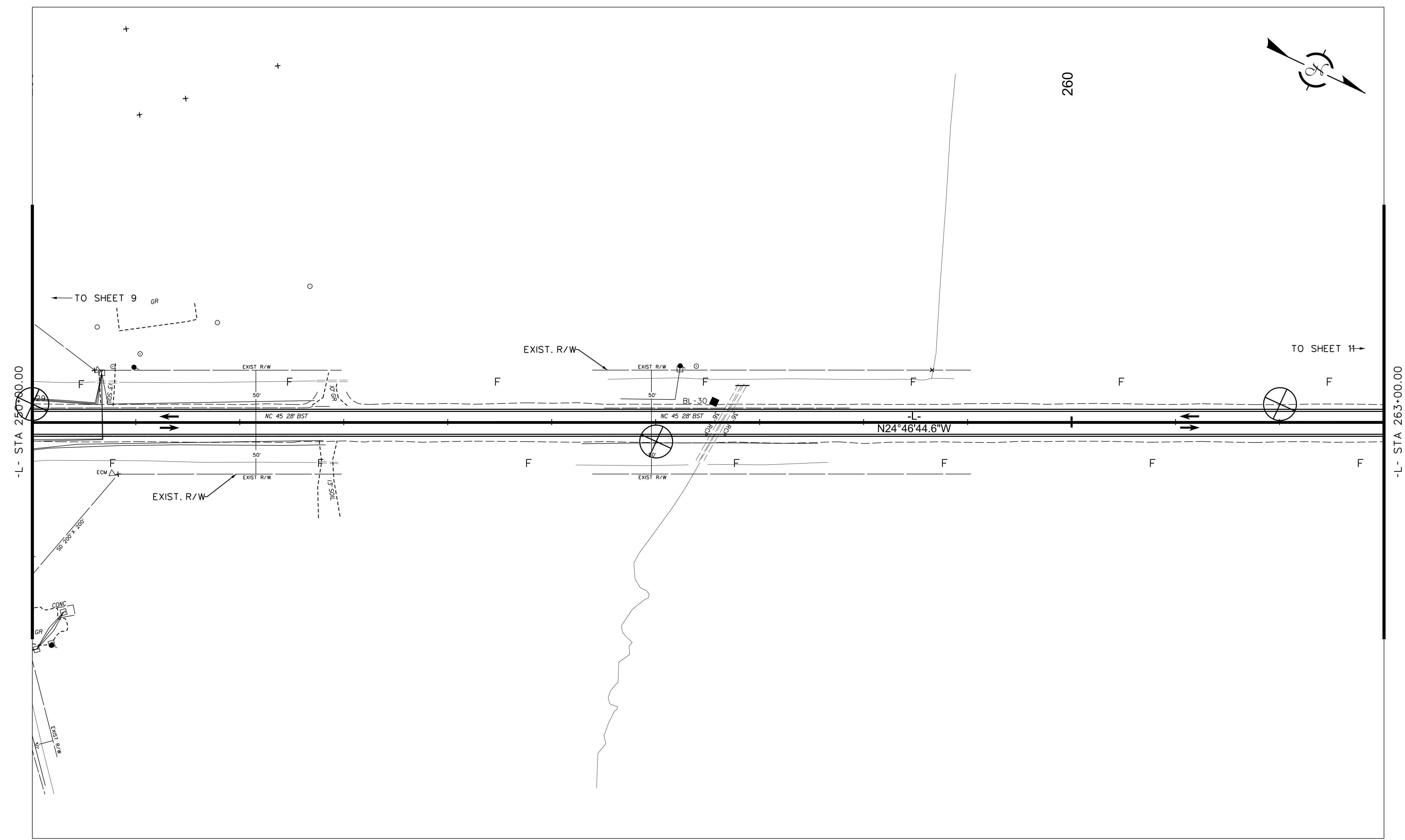
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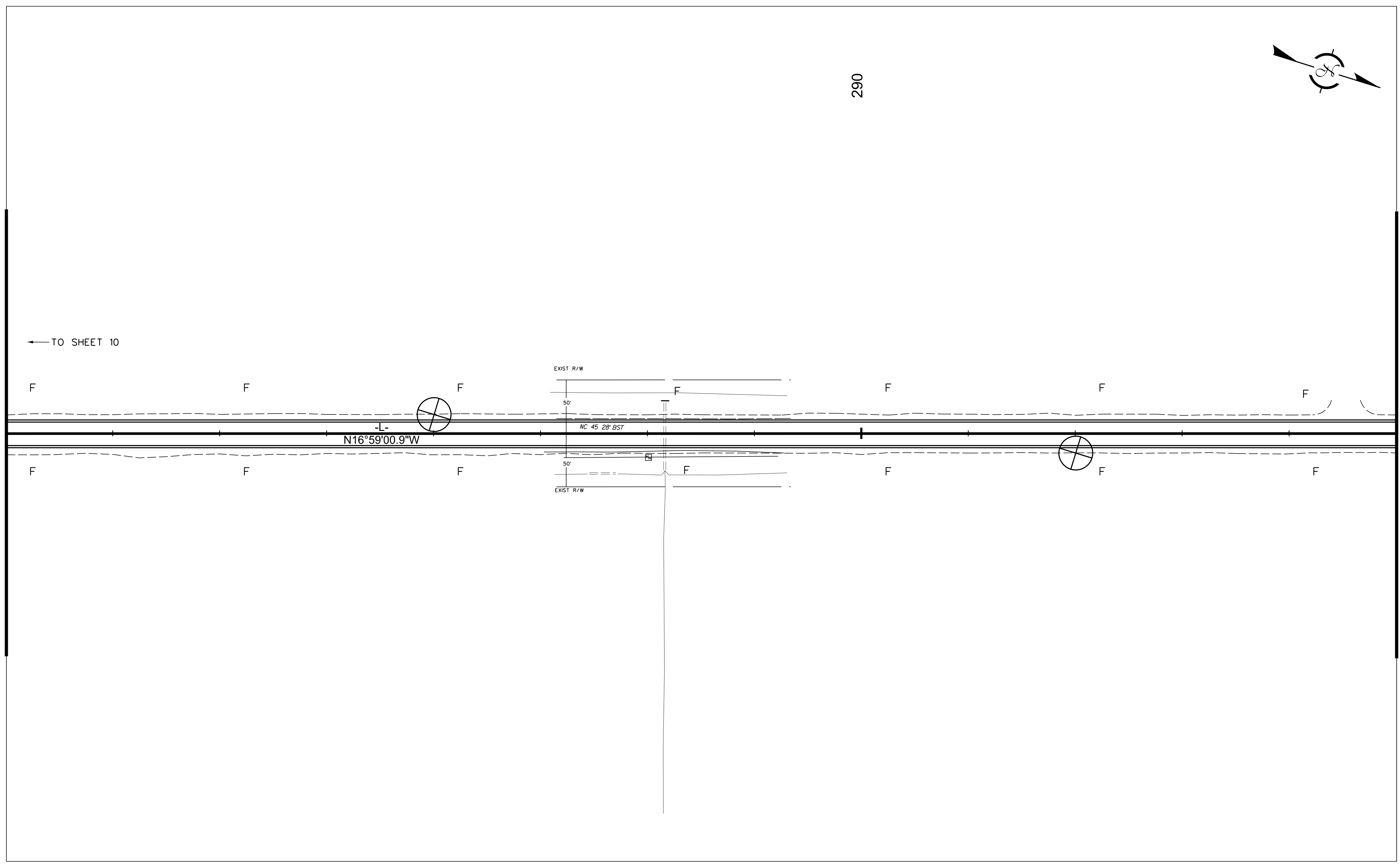


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← TO SHEET 10

-L- STA 282+00.00

MATCHLINE -L- STA 295+00.00
SEE PLAN SHEET 12

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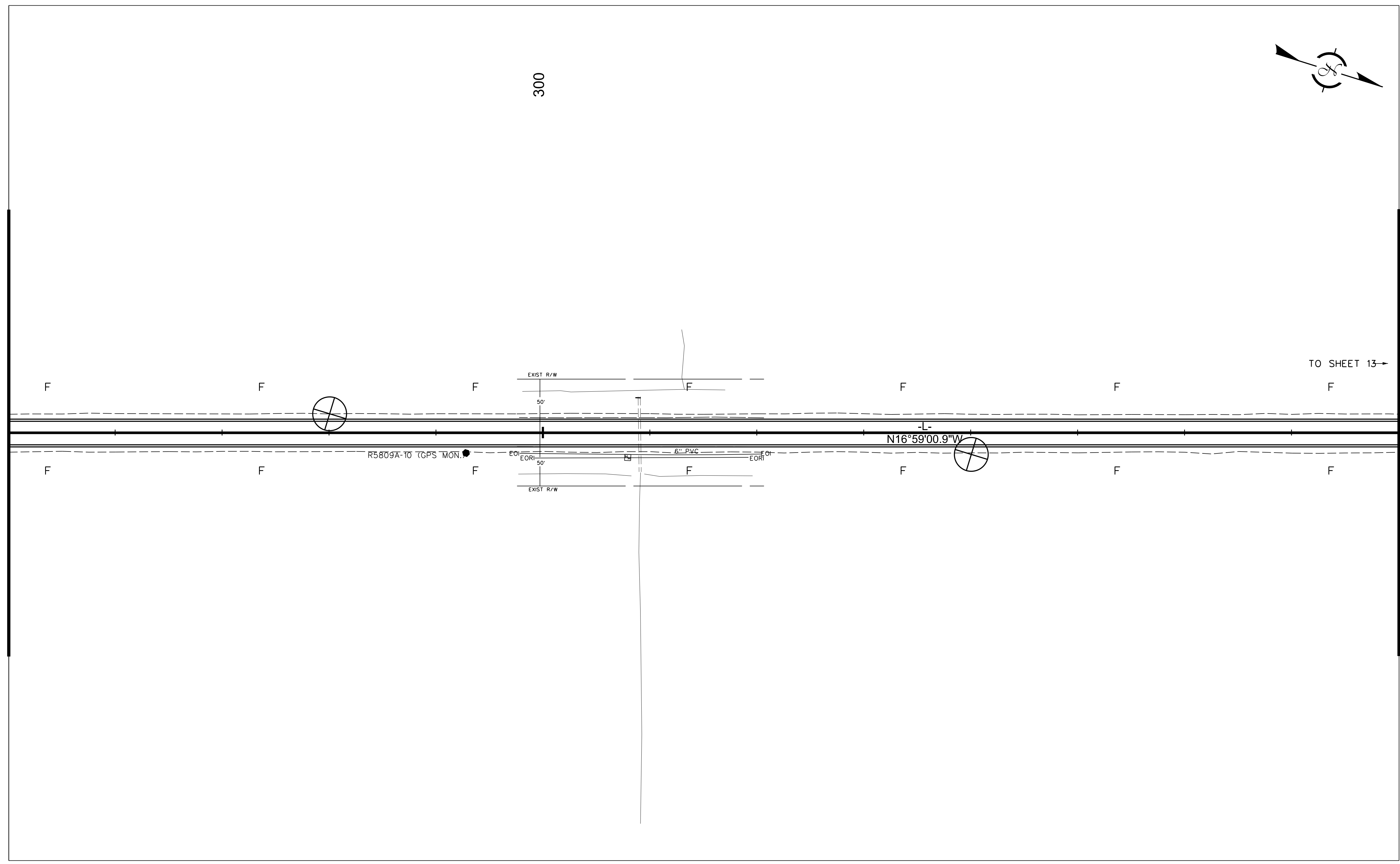
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MATCHLINE -L- STA 295+00.00
SEE PLAN SHEET 11

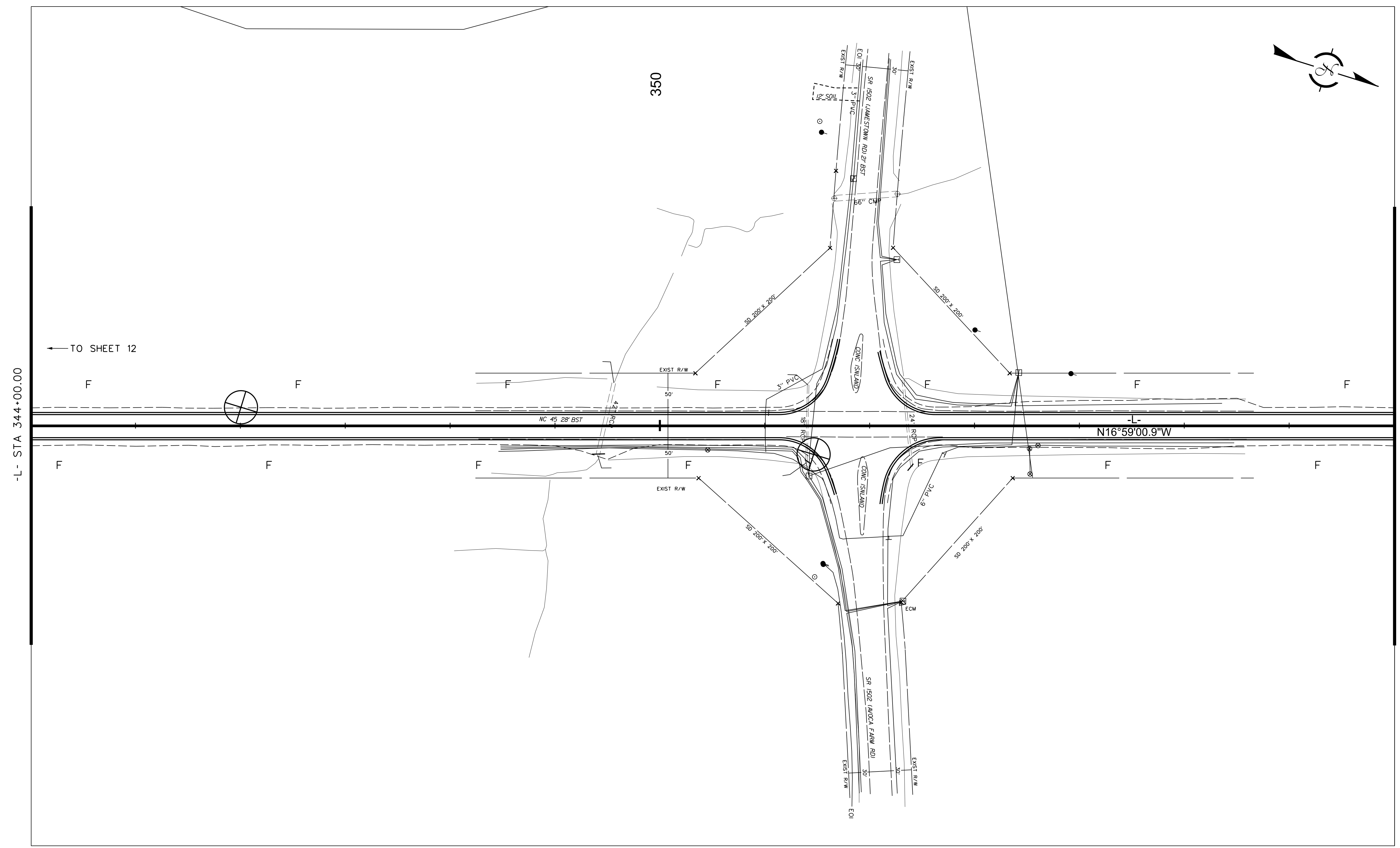


TO SHEET 13 →

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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PROJECT REFERENCE NO. <i>R-5809 A</i>	SHEET NO. 13
R/W SHEET NO.	
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SEE PLAN SHEET 14

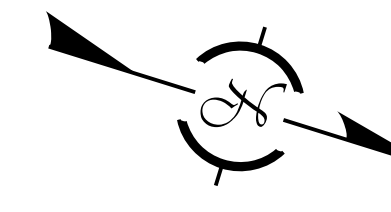
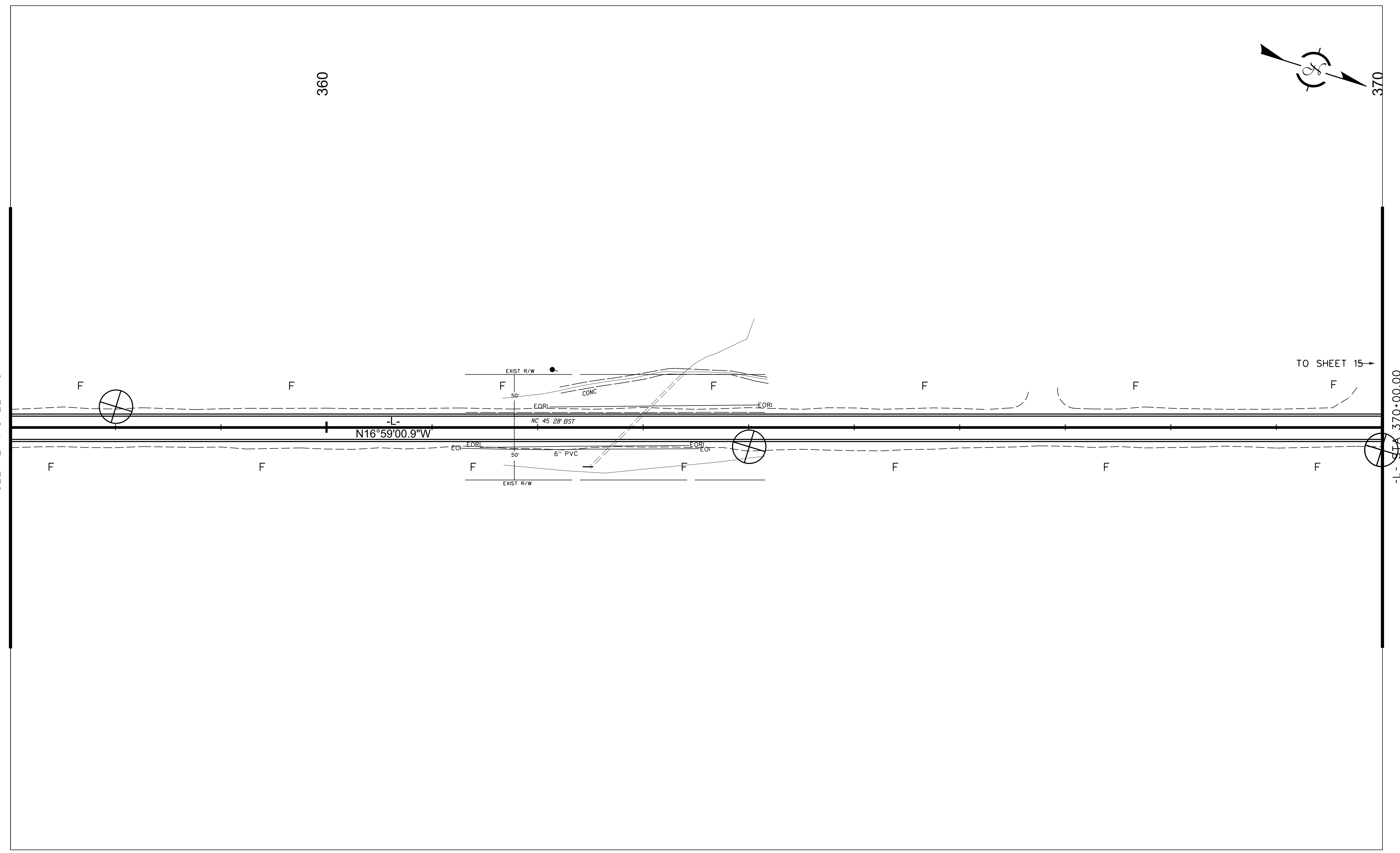
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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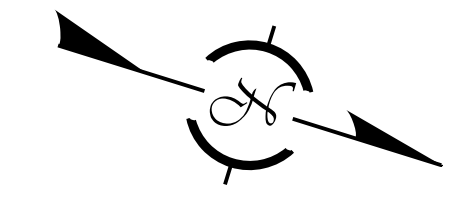
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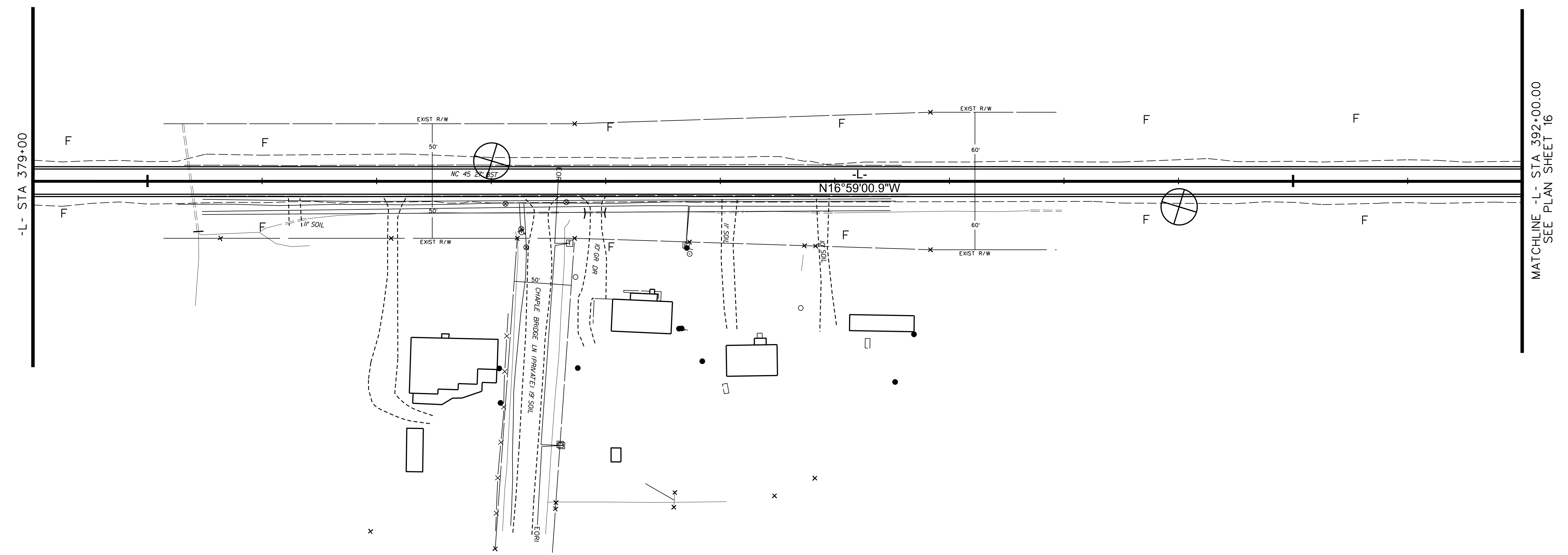
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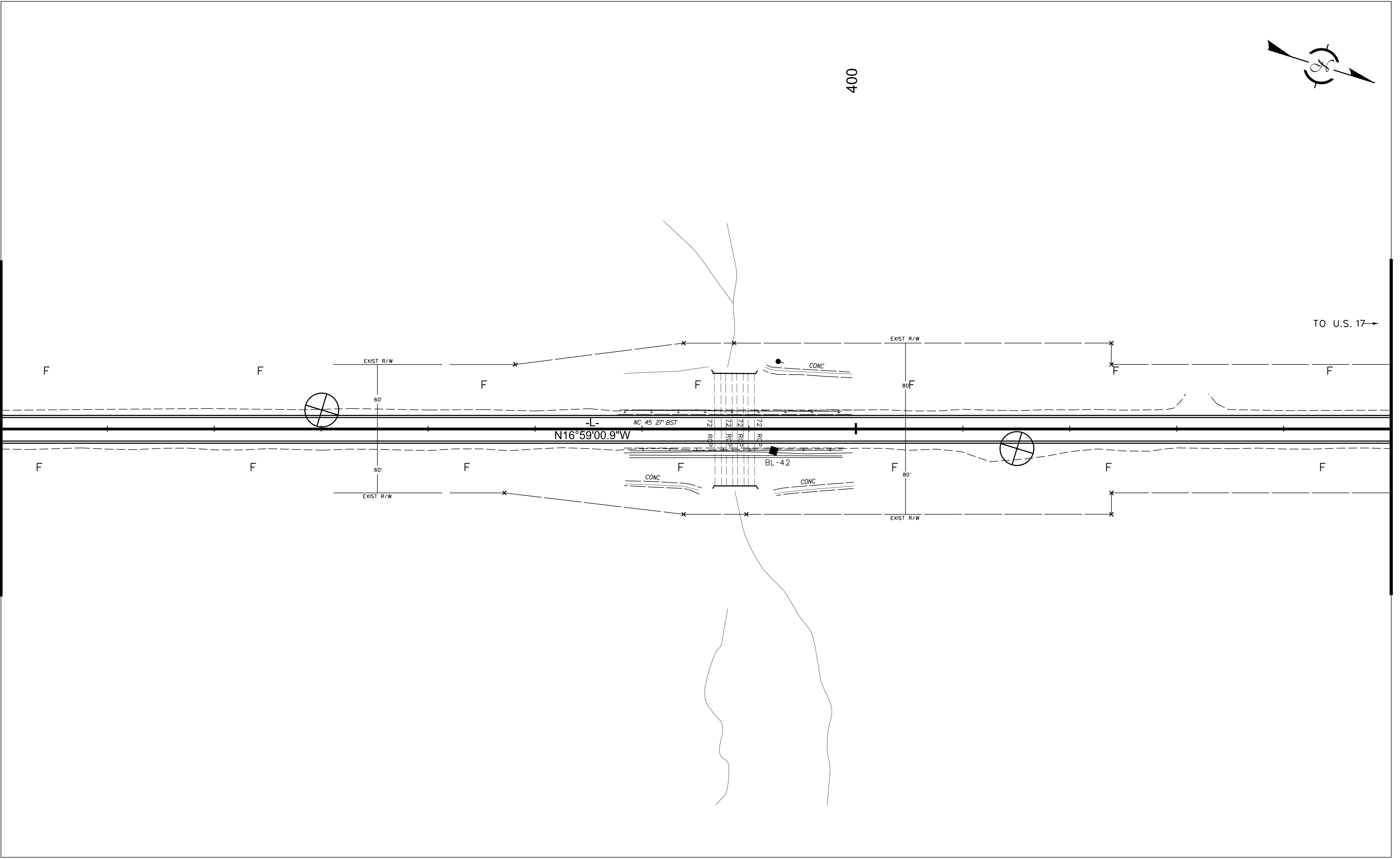
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MATCHLINE -L- STA 392+00
SEE PLAN SHEET 15

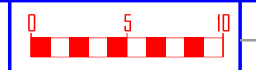


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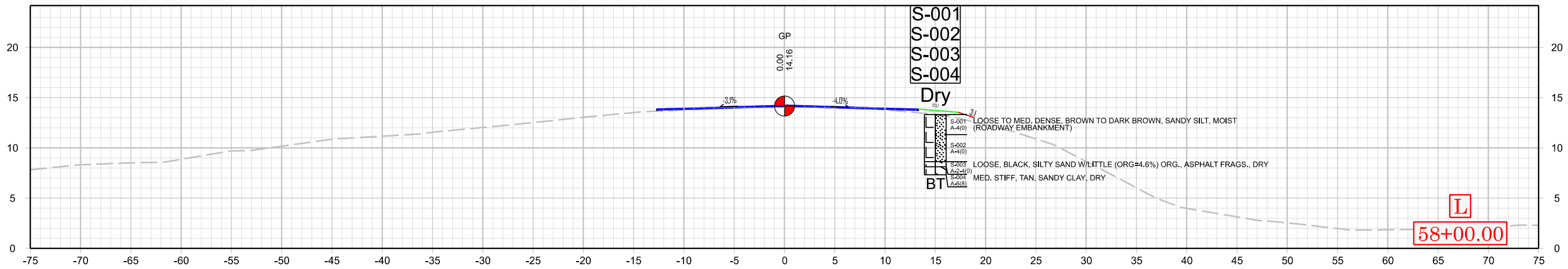
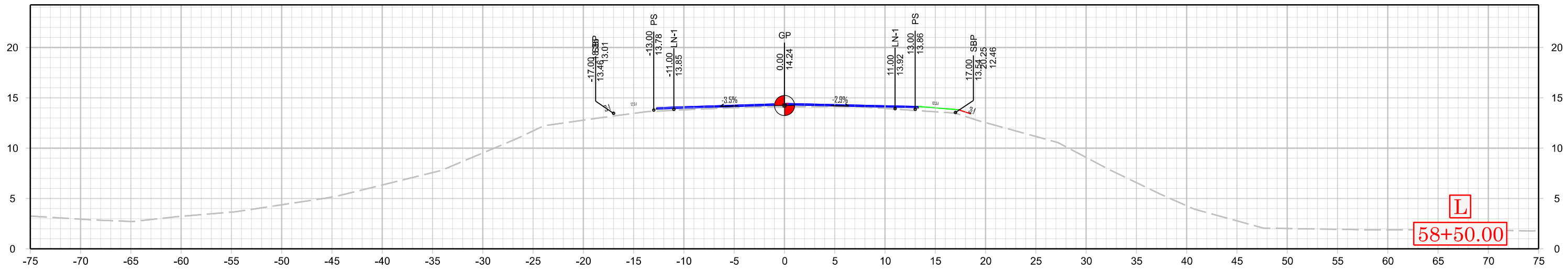
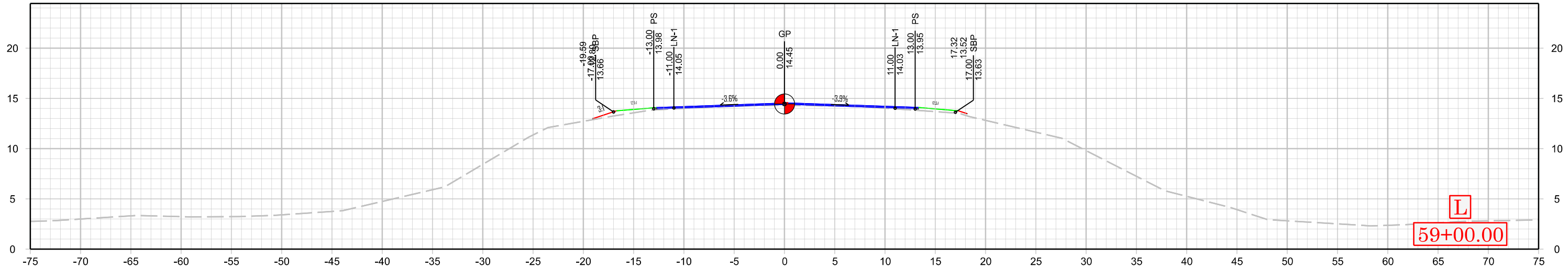
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-001	15 ft RT	58+00	0.0 - 2.0	A-4(0)	22	5	22.9	33.7	23.4	20.0	95.6	90	49	-	-
S-002	15 ft RT	58+00	2.0 - 4.7	A-4(0)	20	5	18.4	34.1	26.2	21.4	97.5	93	53	17	-
S-003	15 ft RT	58+00	4.7 - 5.2	A-2-4(0)	NP	NP	50.8	34.8	9.7	4.7	97.7	82	16	-	4.6
S-004	15 ft RT	58+00	5.2 - 6.0	A-6(8)	32	18	11.4	33.3	21.3	34.0	99	96	61	-	-

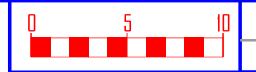


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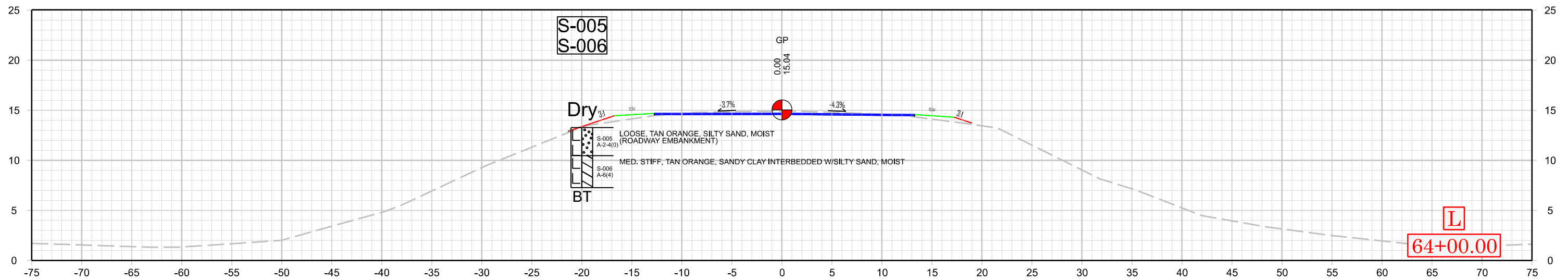
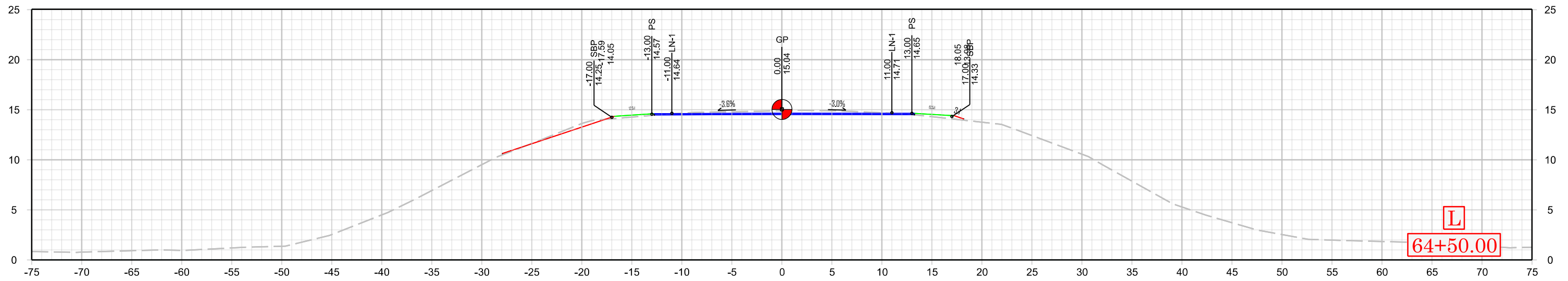
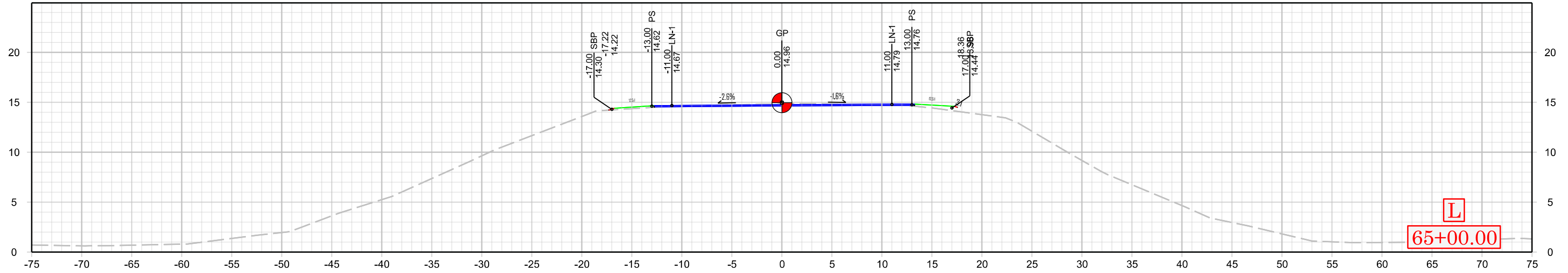


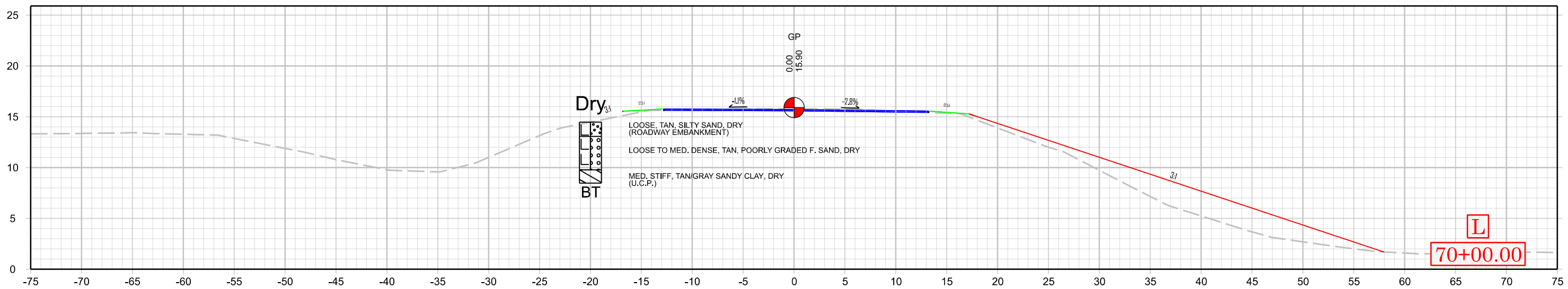
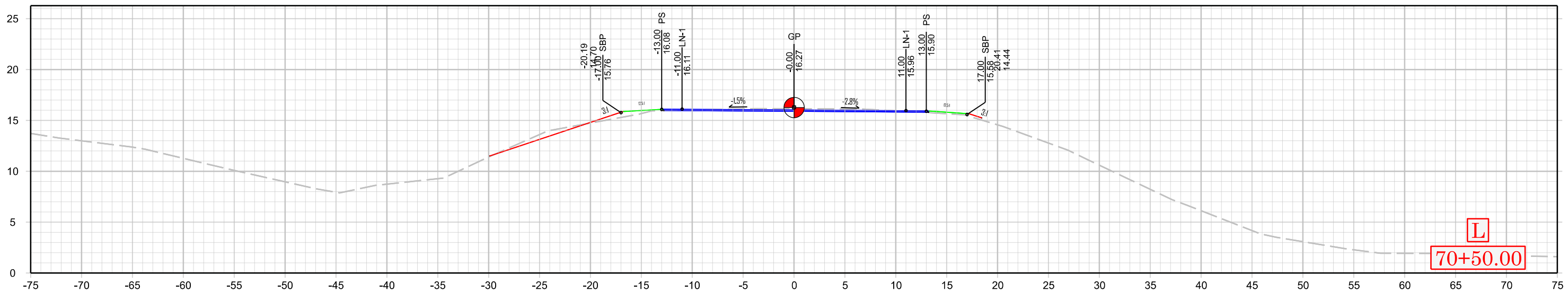
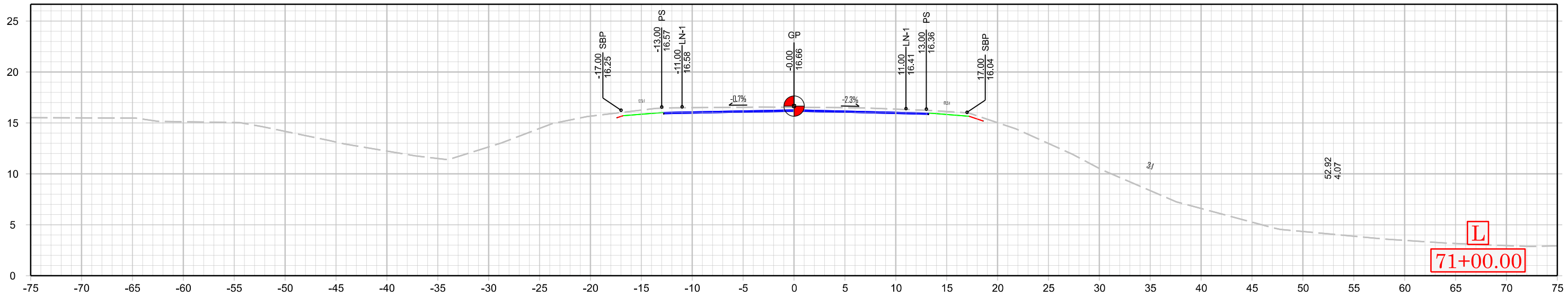
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-005	20 ft LT	64+00	0.0 - 2.8	A-2-4(0)	NP	NP	41.2	36.7	7.3	14.8	99.4	85	24	9	-
S-006	20 ft LT	64+00	2.8 - 6.0	A-6(4)	32	15	15.9	38.5	12.3	33.2	99.7	94	48	-	-



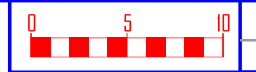
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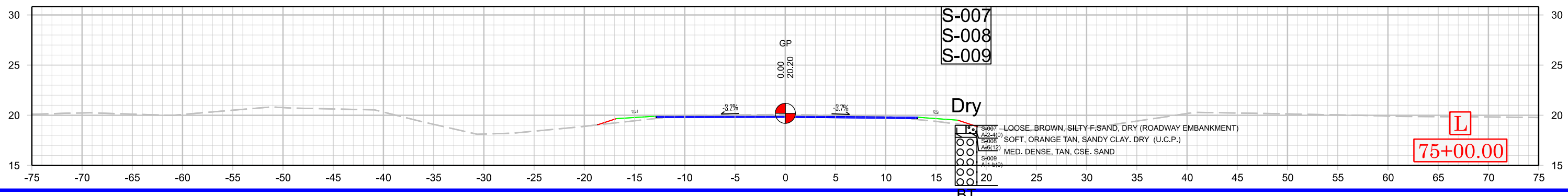
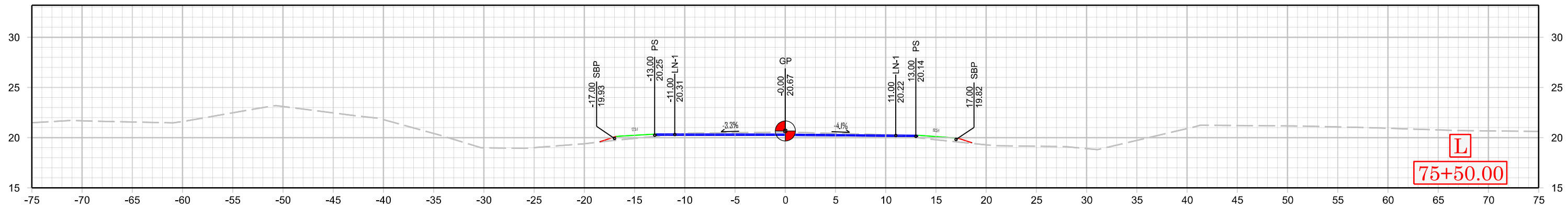
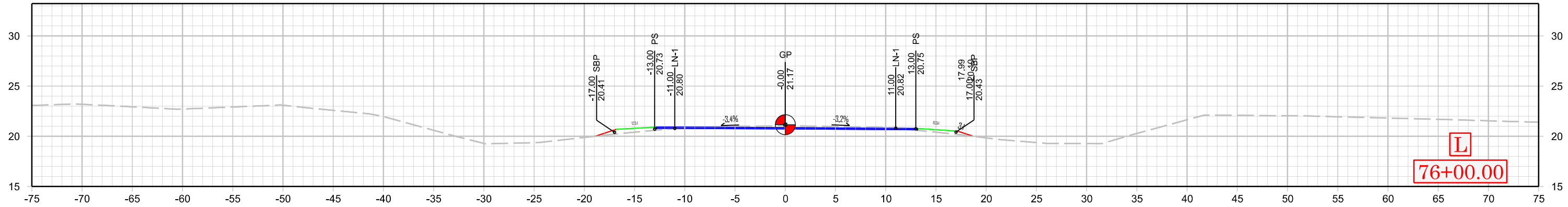
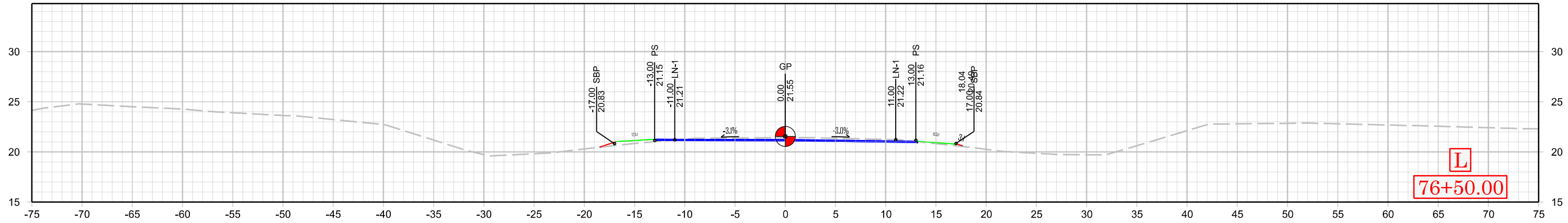


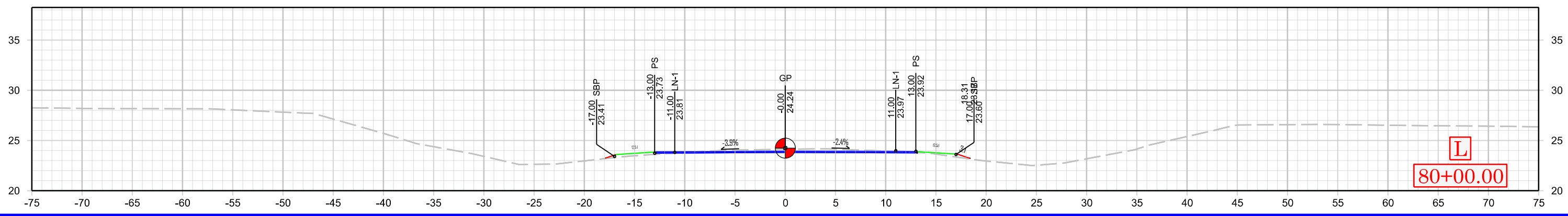
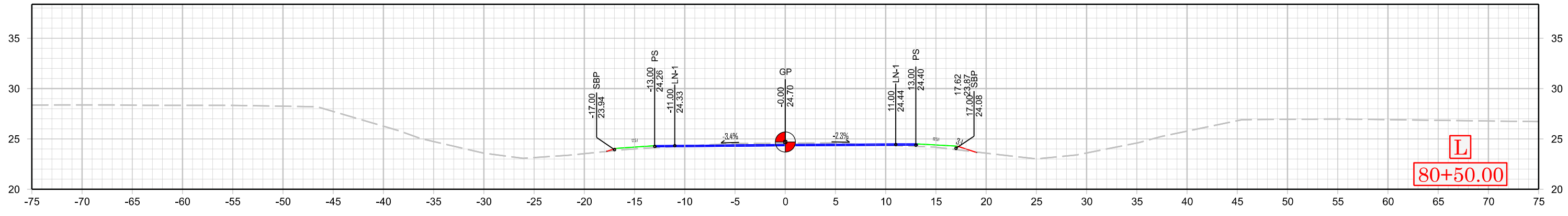
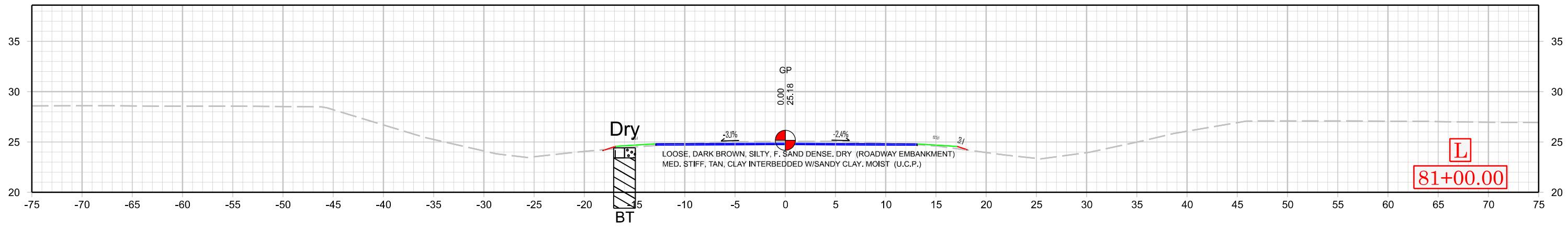
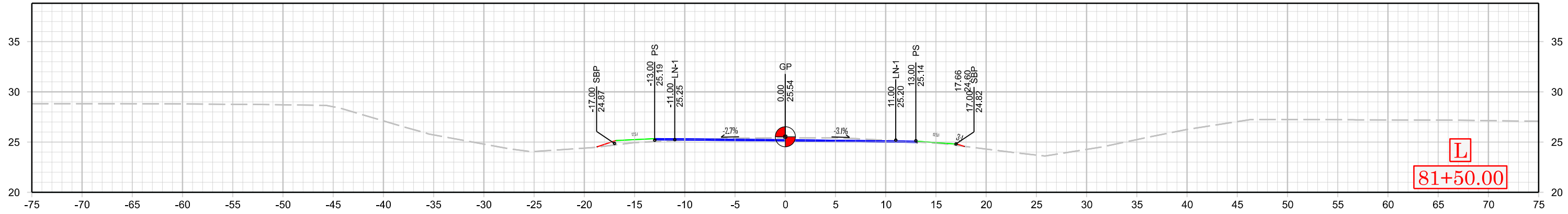
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-007	18 ft RT	75+00	0.0 - 0.8	A-2-4(0)	23	5	23.9	44.7	10.5	20.9	98.4	88	34	-	-
S-008	18 ft RT	75+00	0.8 - 1.2	A-6(12)	39	21	12.3	29.0	22.3	36.4	99.3	93	67	14	-
S-009	18 ft RT	75+00	1.2 - 6.0	A-1-b(0)	NP	NP	89.0	8.2	1.9	0.9	87.5	32	3	-	-

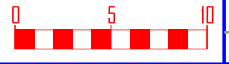


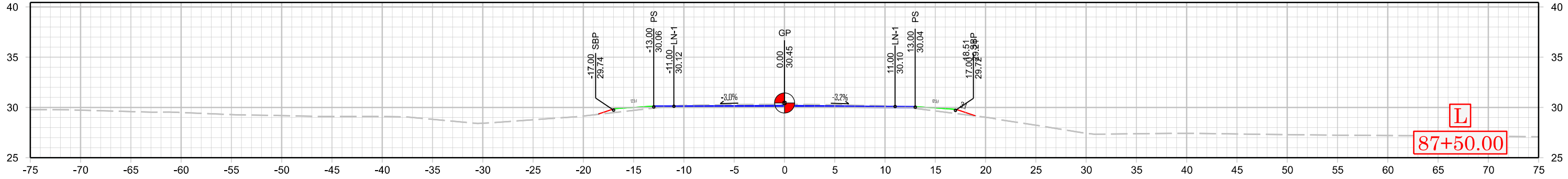
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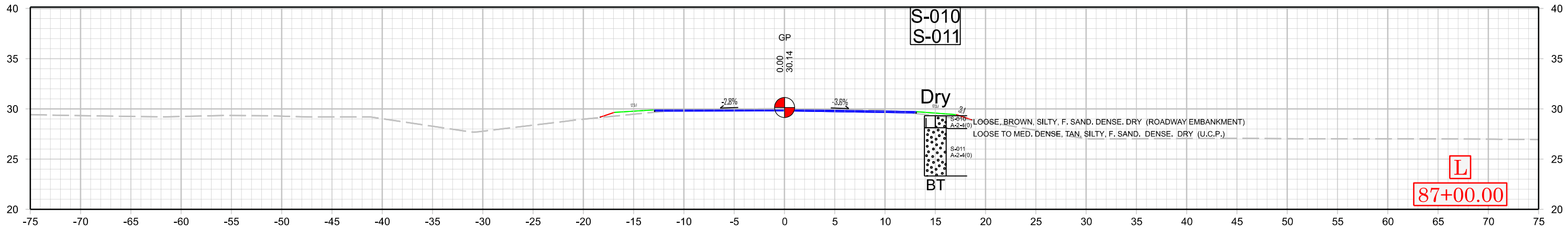


SOIL TEST RESULTS															
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-010	15 ft RT	87+00	0.0 - 1.2	A-2-4(0)	25	4	34.8	35.8	13.5	15.9	98.2	83	31	-	-
S-011	15 ft RT	87+00	1.2 - 6.0	A-2-4(0)	23	8	34.8	34.7	9.3	21.1	99.3	83	32	14	-

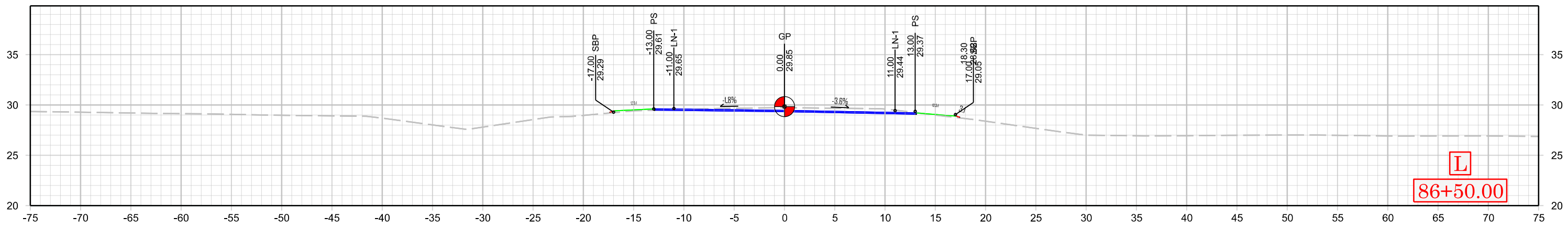
0 5 10

R-5809A
X 54



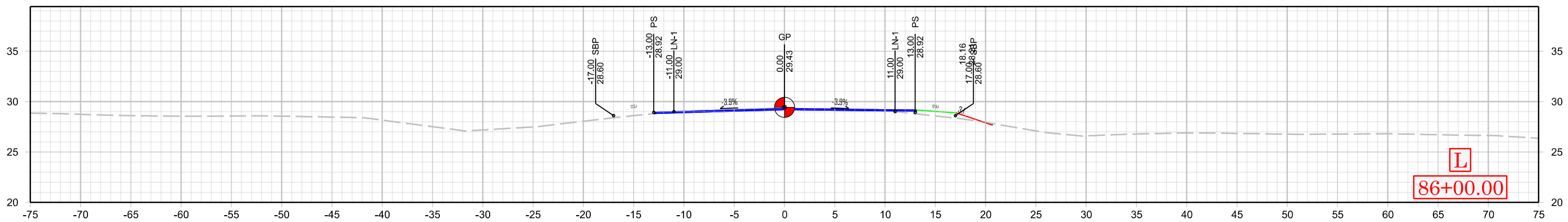
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87+50.00



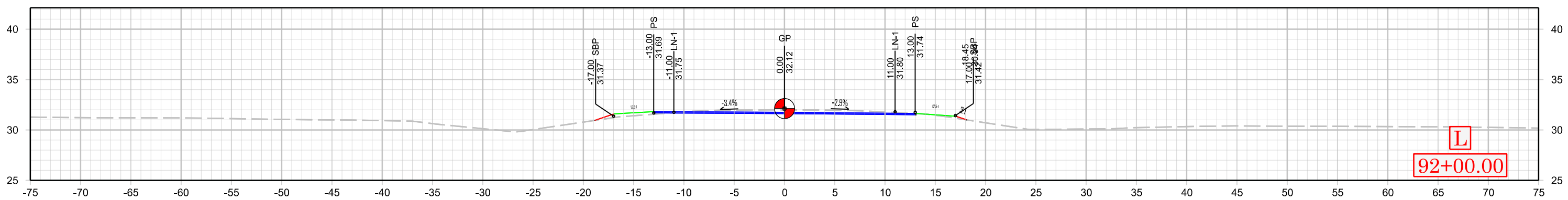
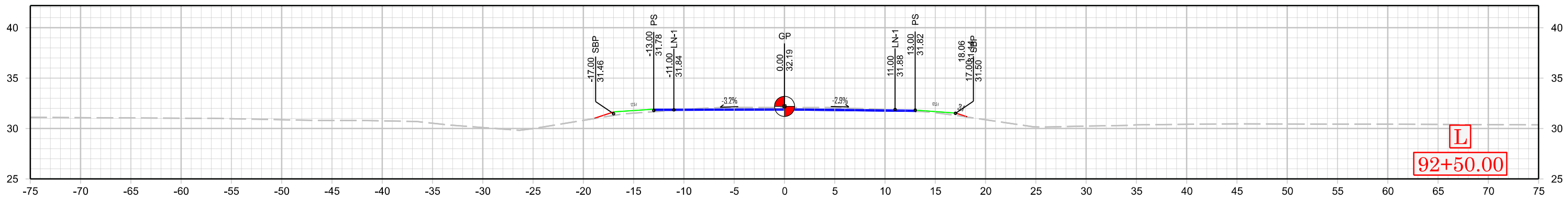
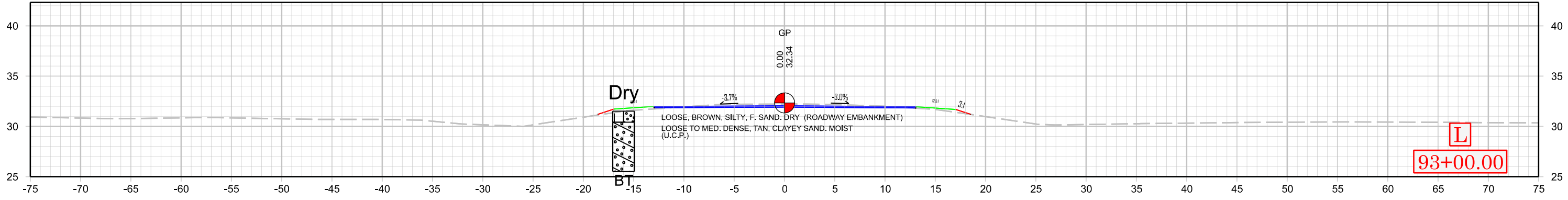
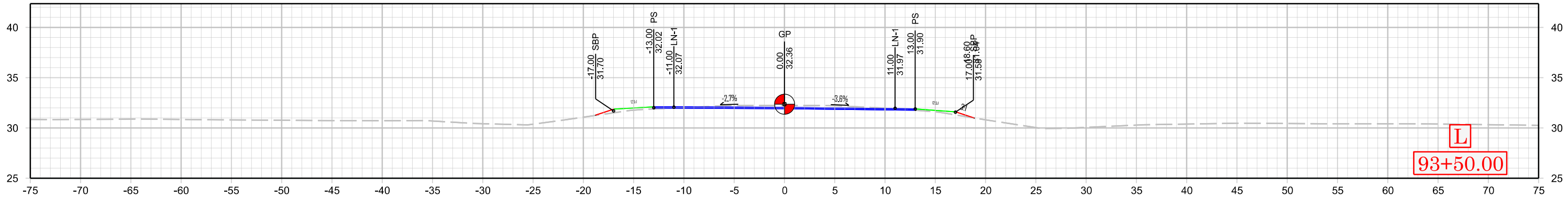
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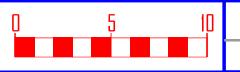
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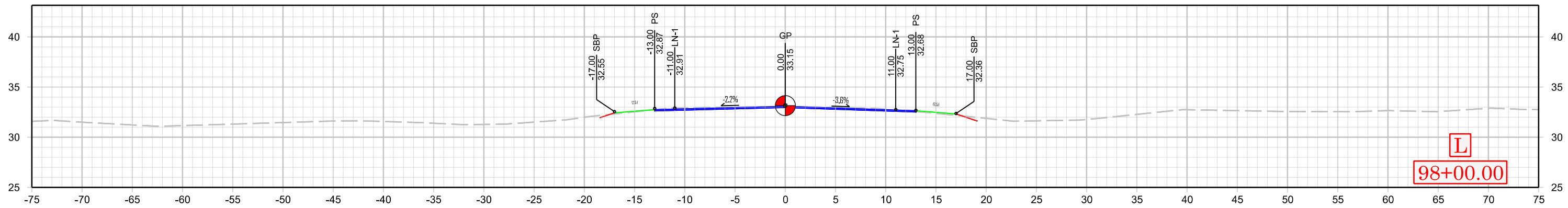
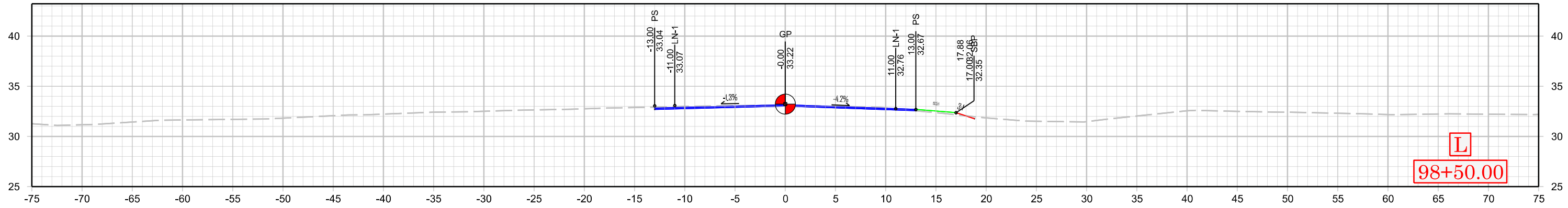
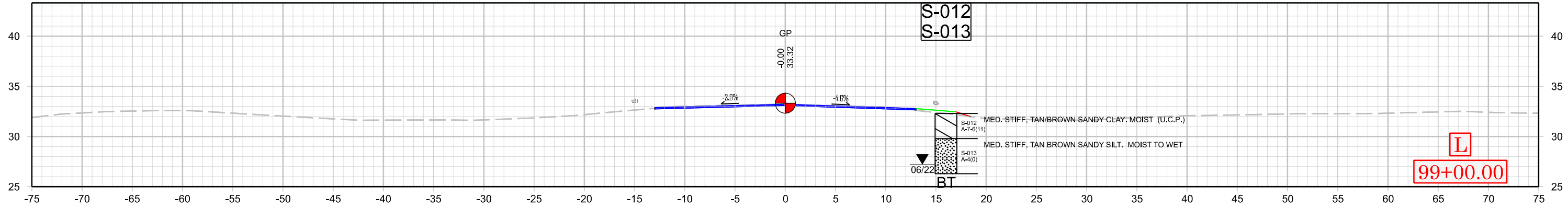
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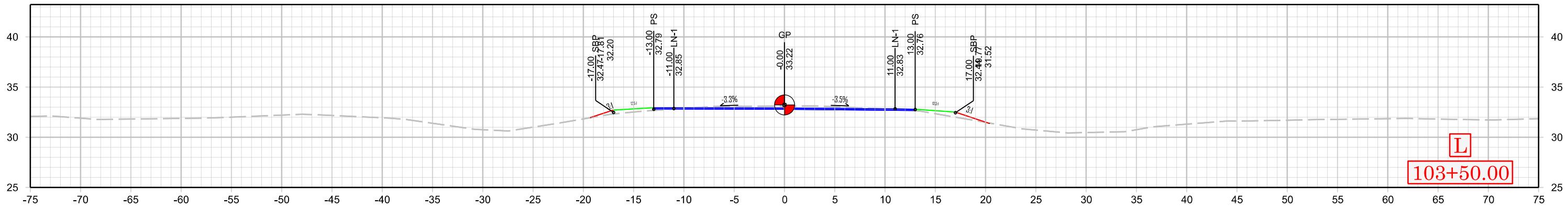
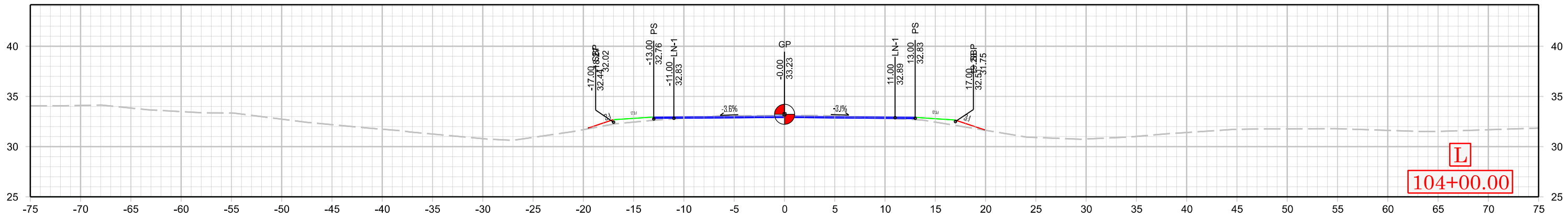
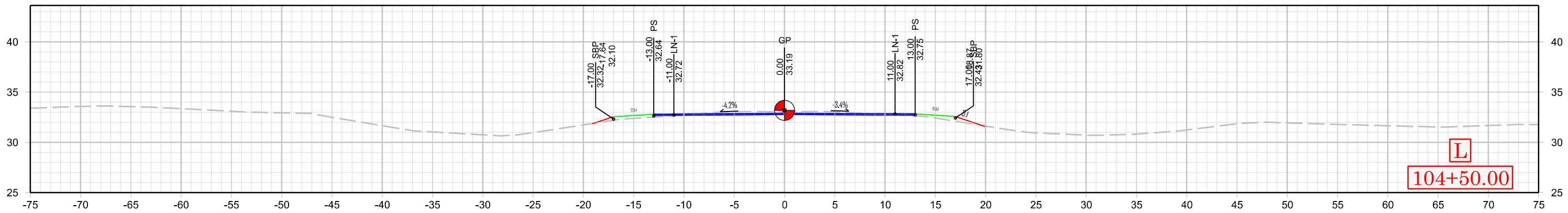
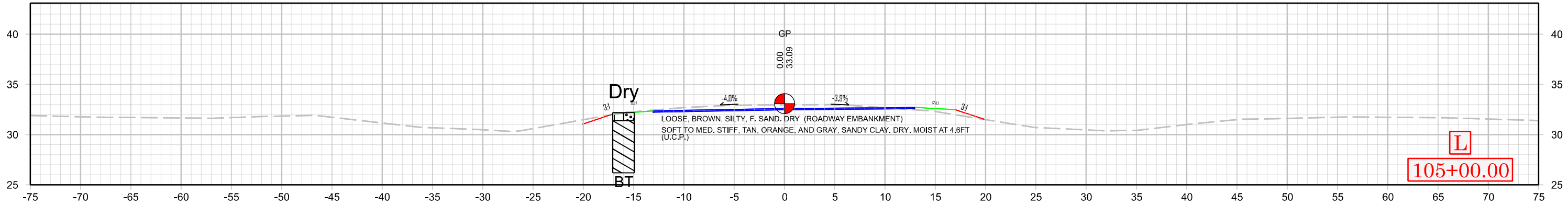


SOIL TEST RESULTS															
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-012	16 ft RT	99+00	0.0 - 2.5	A-7-6(11)	43	23	12.6	29.7	16.2	41.5	99.8	96	59	17	-
S-013	16 ft RT	99+00	2.5 - 6.0	A-4(0)	NP	NP	7.8	34.9	43.5	13.8	100	98	59	-	-



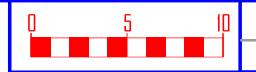
R-5809A
X 60



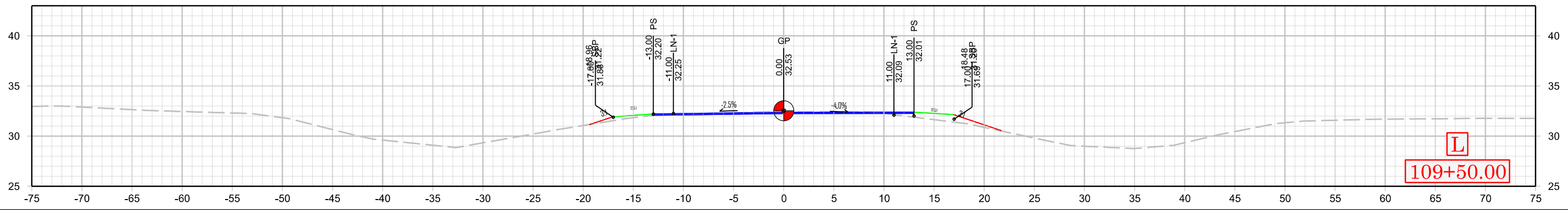
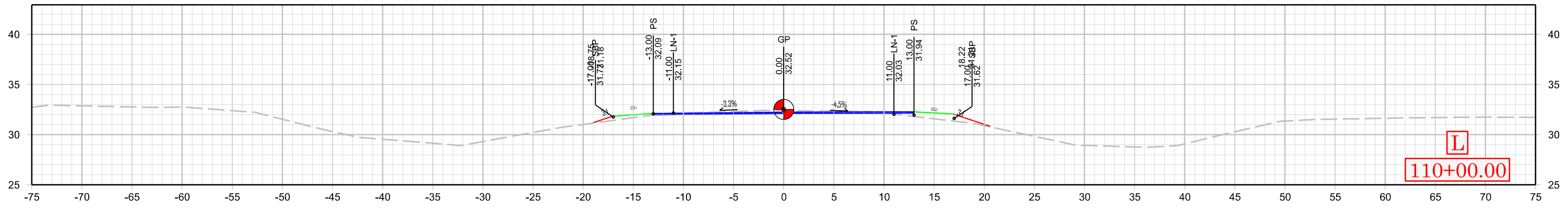
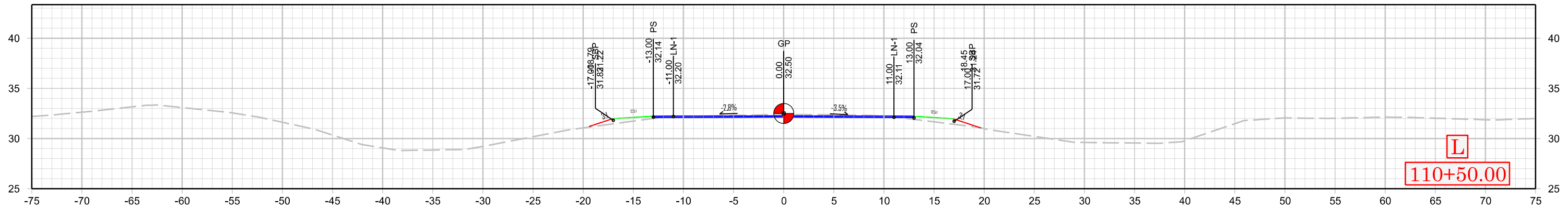
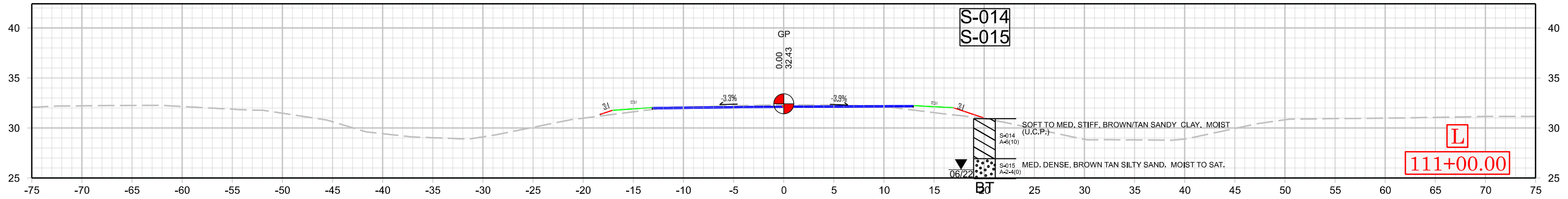


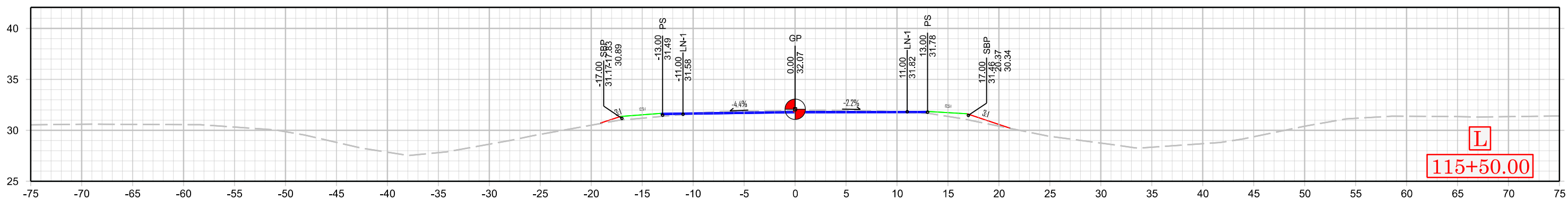
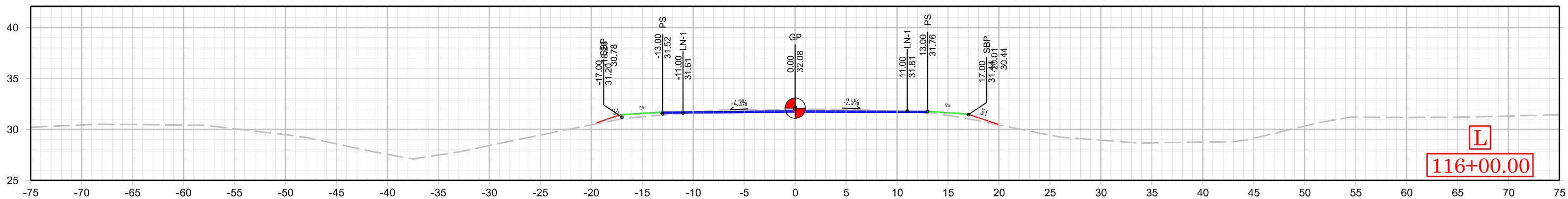
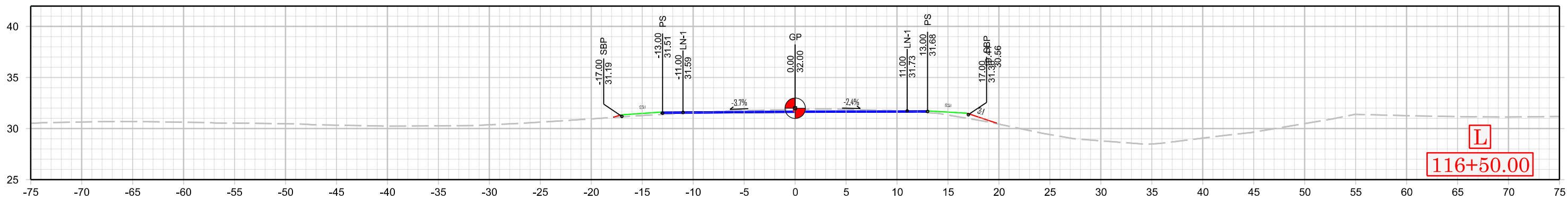
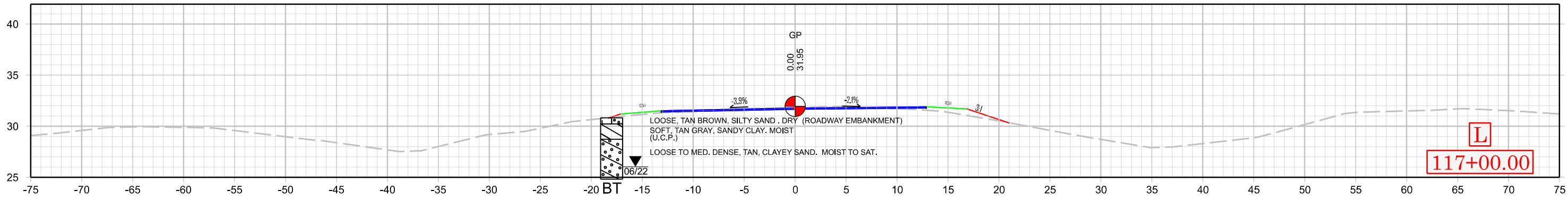
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-014	20 ft RT	111+00	0.0 - 4.0	A-6(10)	37	18	21.9	10.8	23.6	43.7	100	95	68		NA
S-015	20 ft RT	111+00	4.0 - 6.0	A-2-4(0)	NP	NP	6.5	81.5	4.5	7.4	100	99	14		NA



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X 66



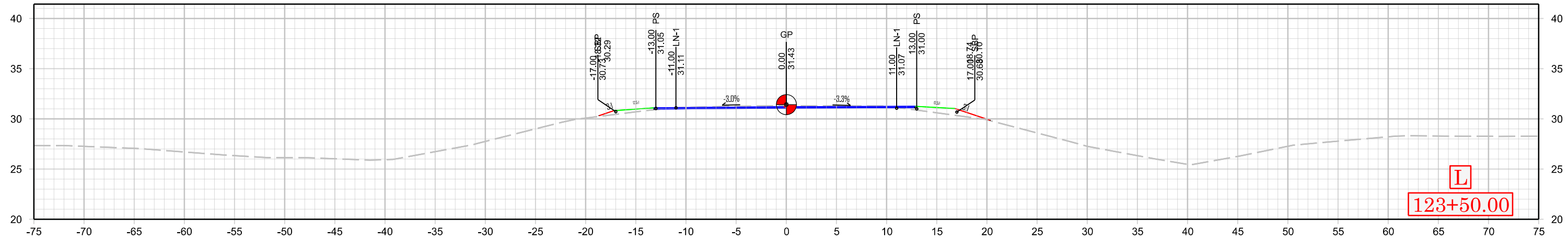


SOIL TEST RESULTS

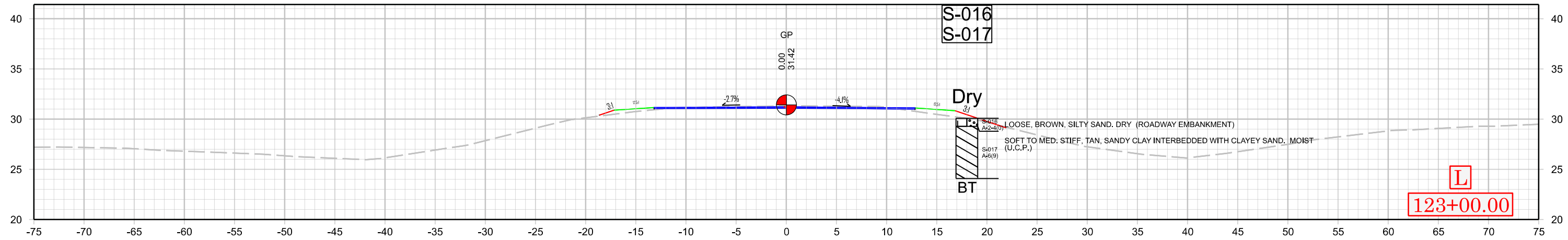
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-016	18 ft RT	123+00	0.0 - 0.8	A-2-4(0)	21	2	21.9	48.7	10.4	18.9	99.9	93	32	20	NA
S-017	18 ft RT	123+00	0.8 - 6.0	A-6(9)	40	22	3.0	43.4	15.0	38.6	100	100	57		NA



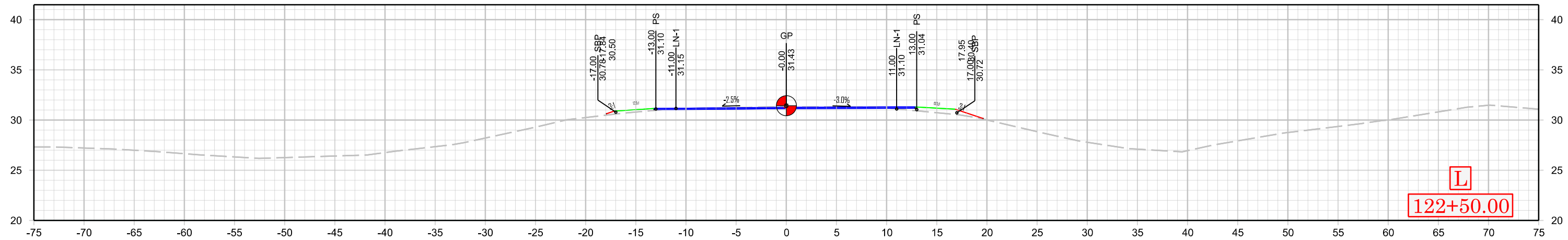
R-5809A
X 73



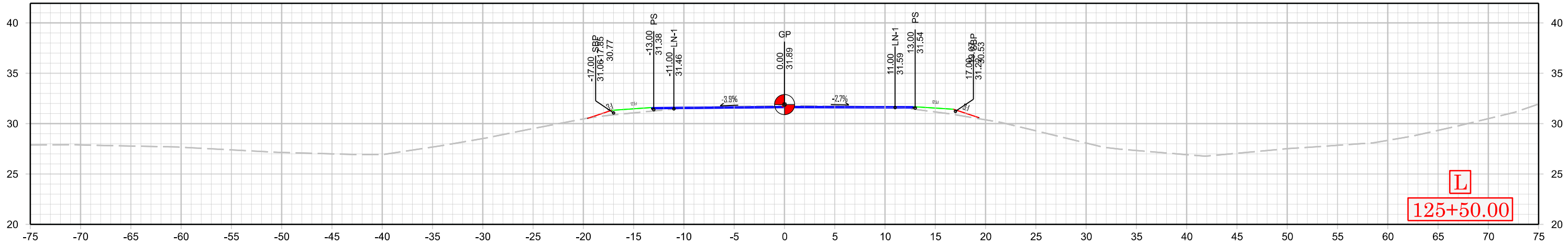
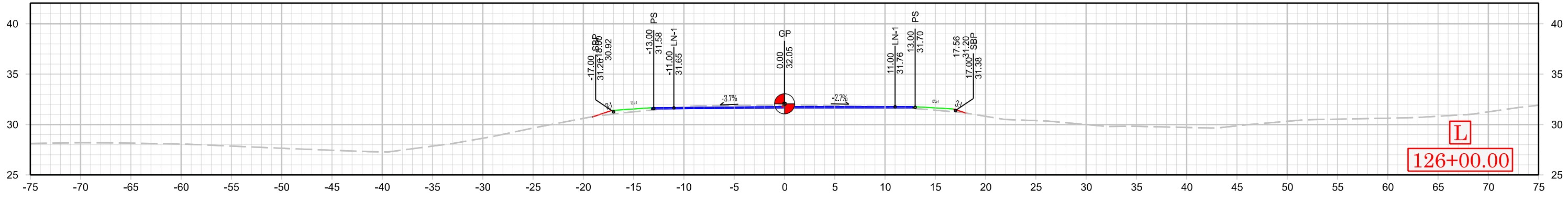
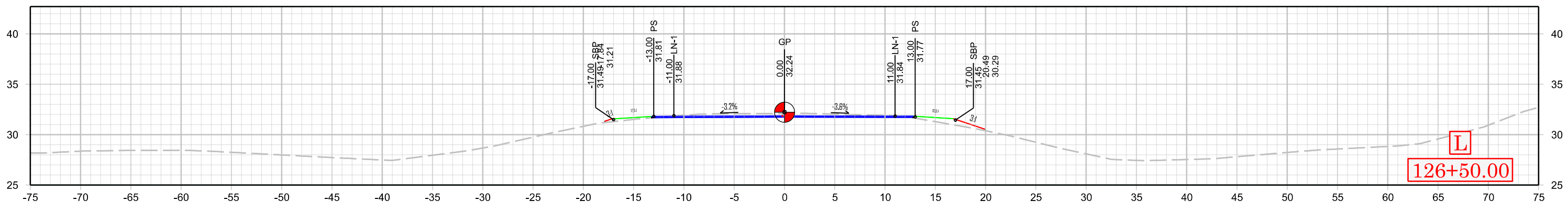
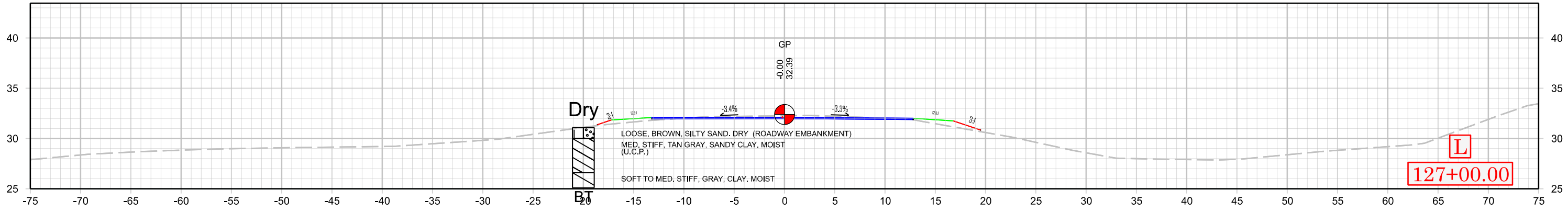
L
123+50.00



L
123+00.00



L
122+50.00

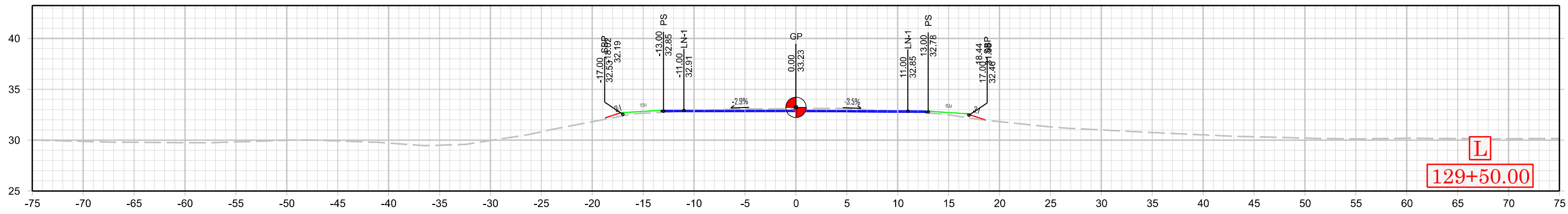
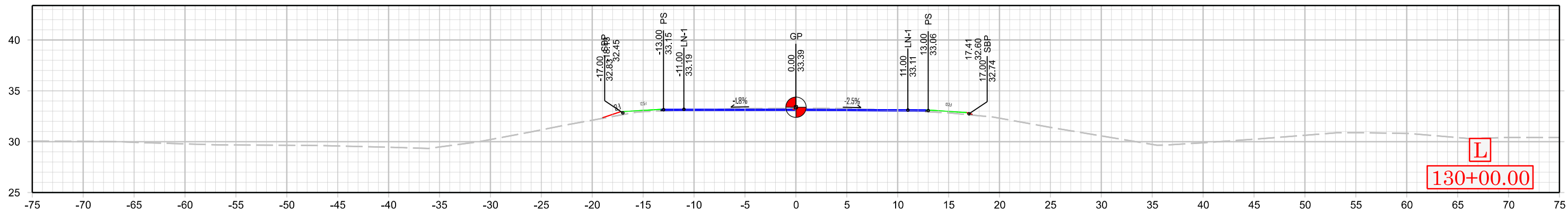
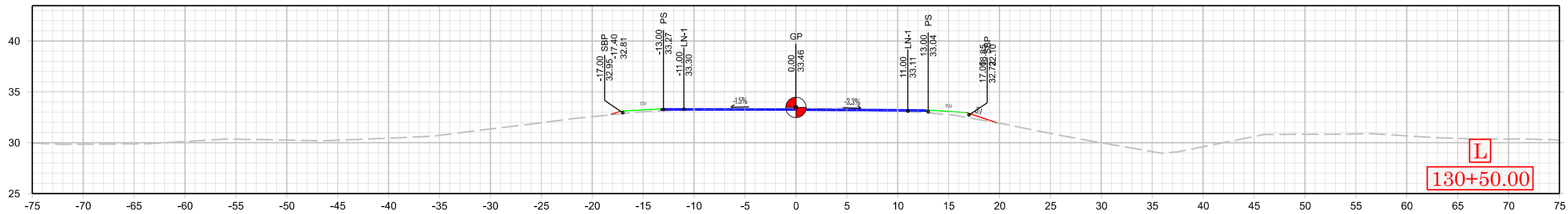
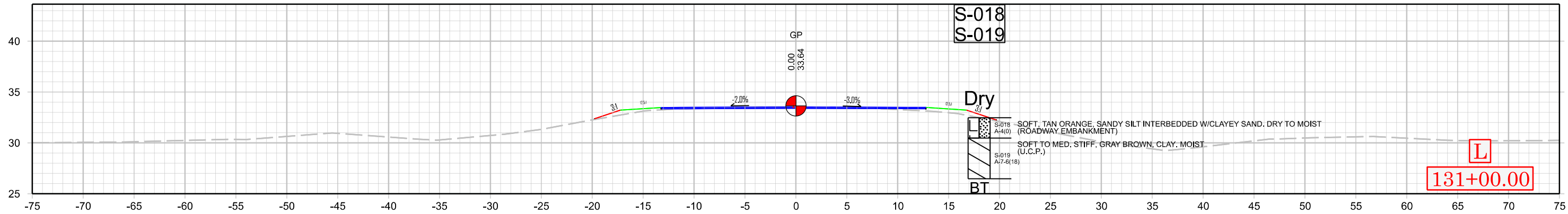


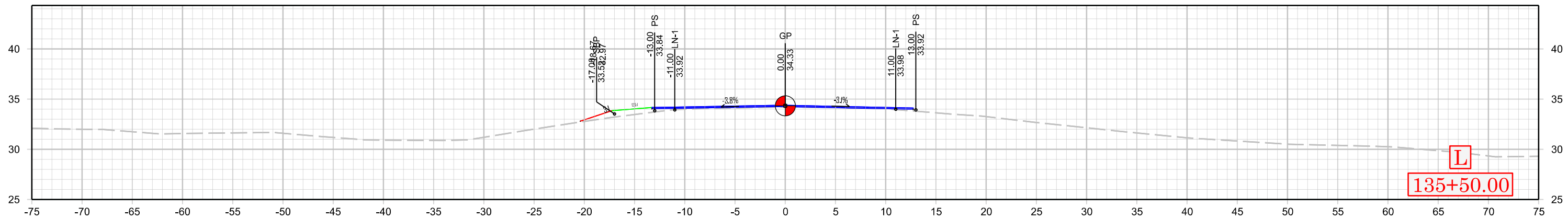
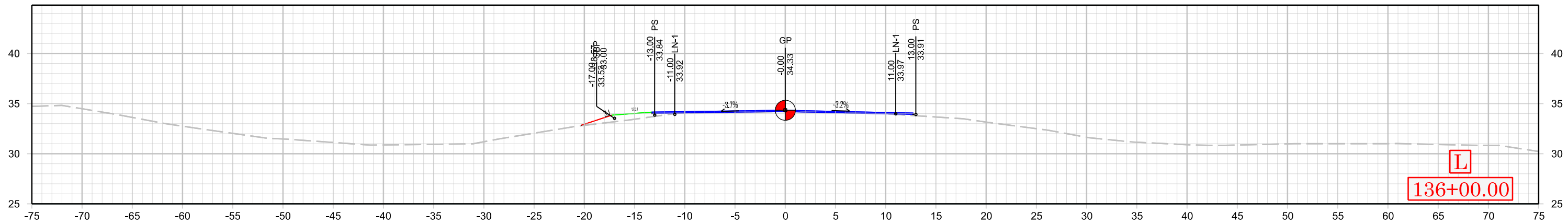
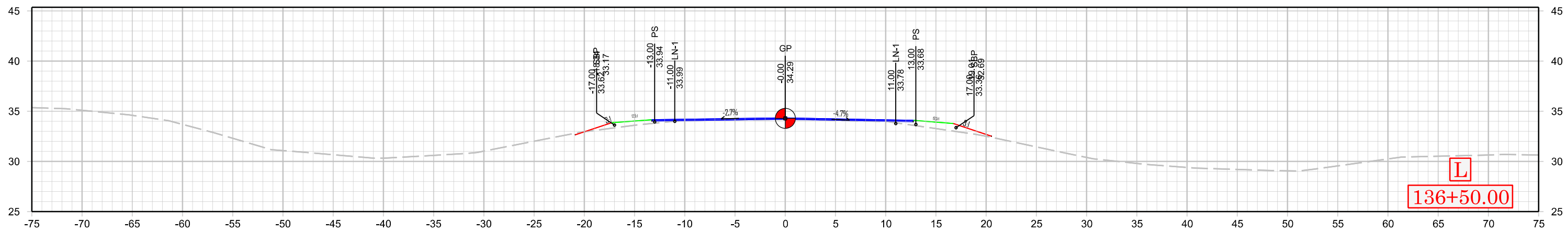
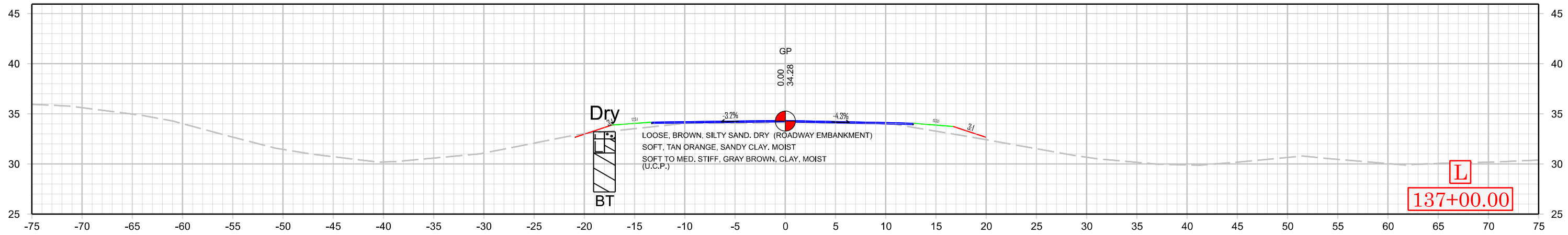
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-018	18 ft RT	131+00	0.0 - 2.0	A-4(0)	26	9	12.4	51.3	10.5	25.8	100	97	39		NA
S-019	18 ft RT	131+00	2.0 - 6.0	A-7-6(18)	42	21	1.4	16.3	29.4	52.9	100	99	85		NA



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X 77

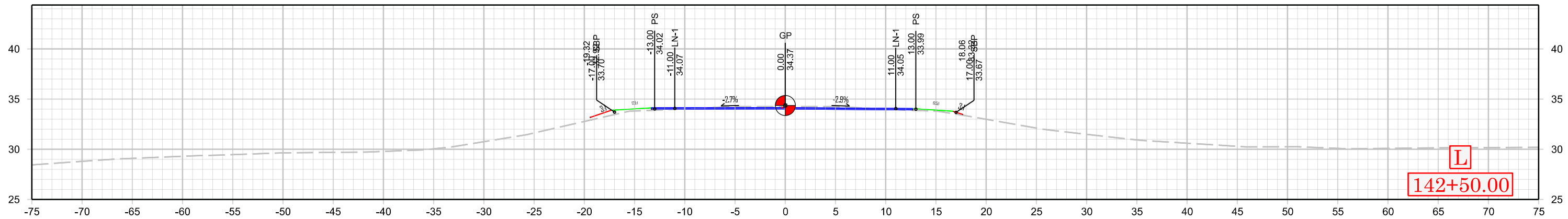
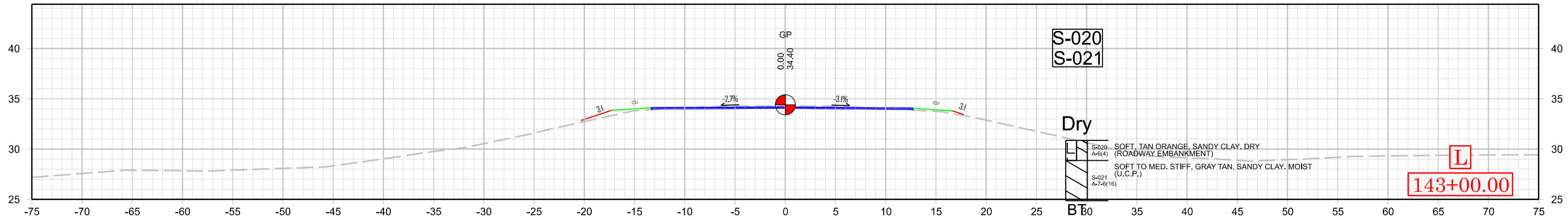
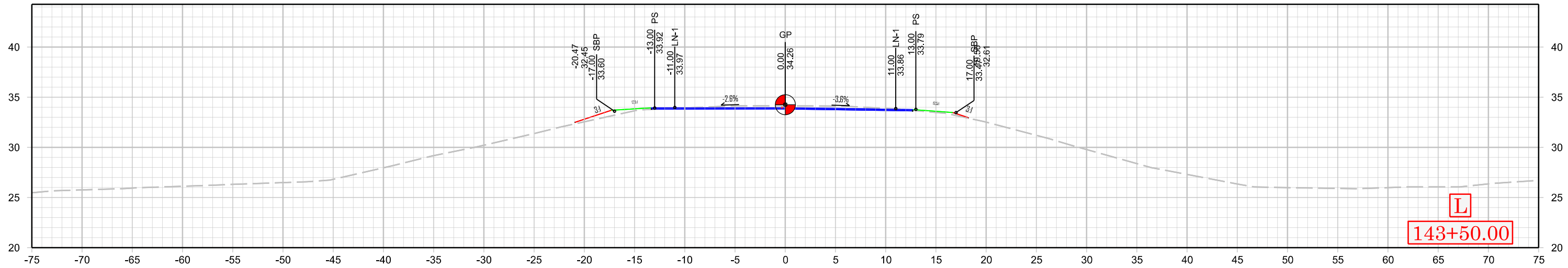


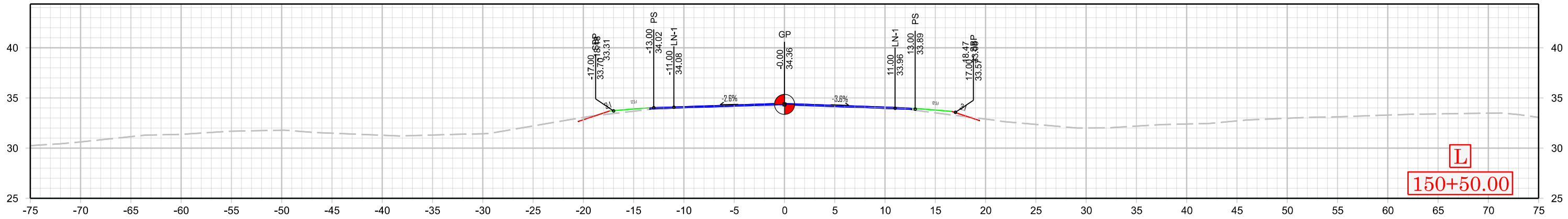


SOIL TEST RESULTS

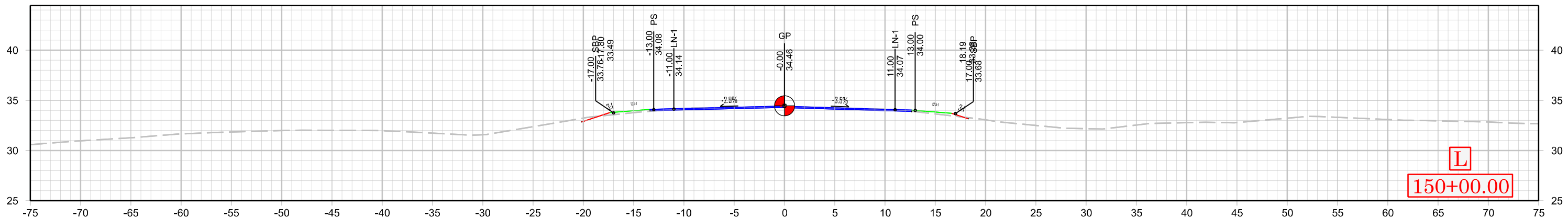
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-020	29 ft RT	143+00	0.0 - 2.0	A-6(4)	33	15	3.7	50.5	13.6	32.2	99.9	99	50		NA
S-021	29 ft RT	143+00	2.0 - 6.0	A-7-6(16)	46	26	0.6	33.0	15.4	50.9	100	100	69	28	NA

0 5 10 R-5809A
X 84

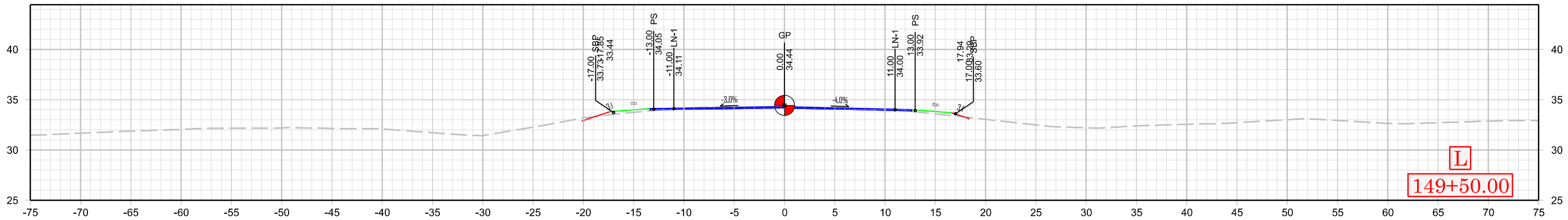




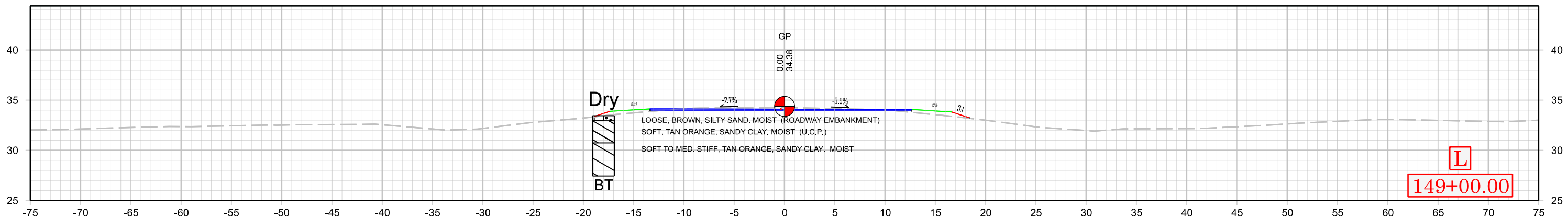
L
 150+50.00



L
 150+00.00



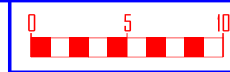
L
 149+50.00



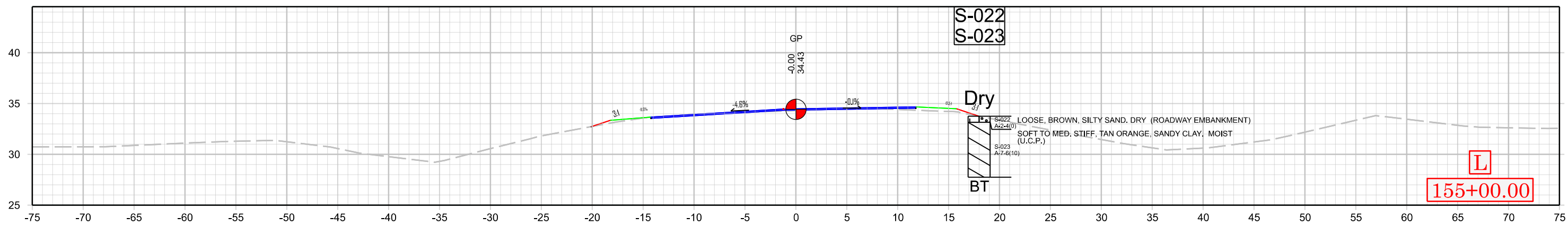
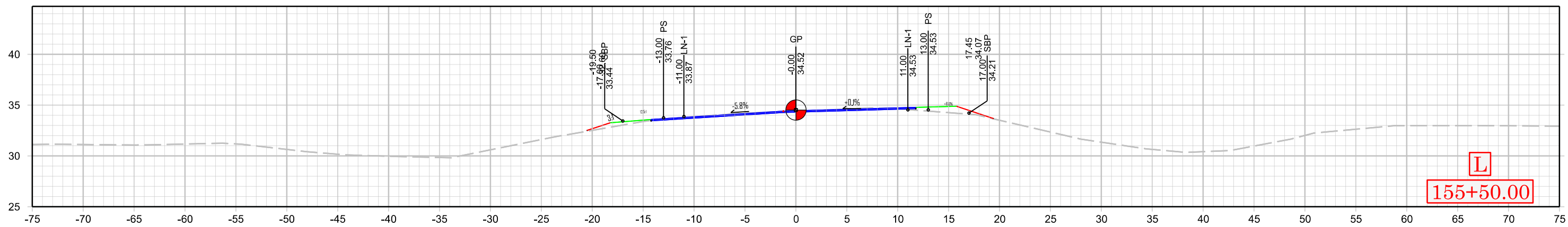
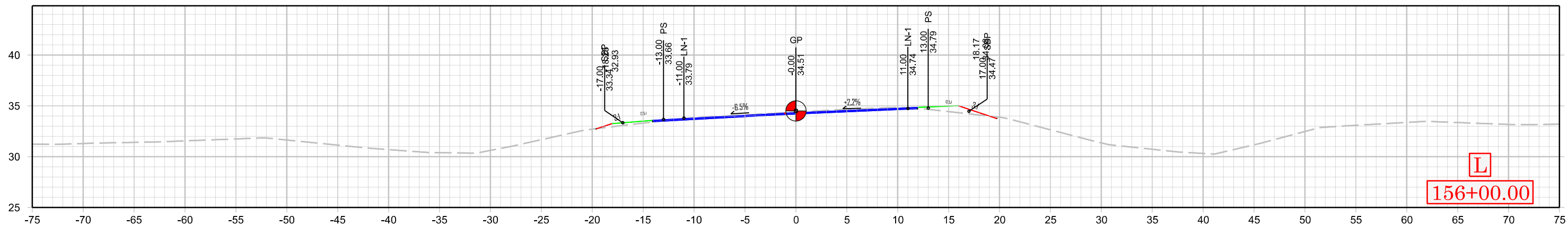
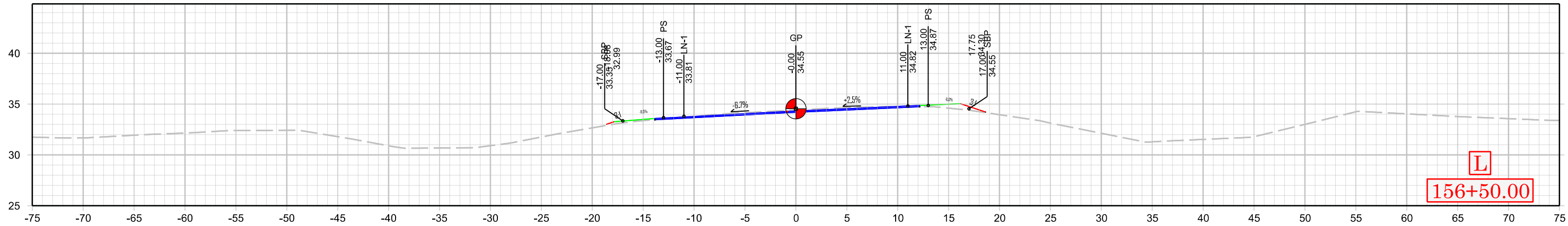
L
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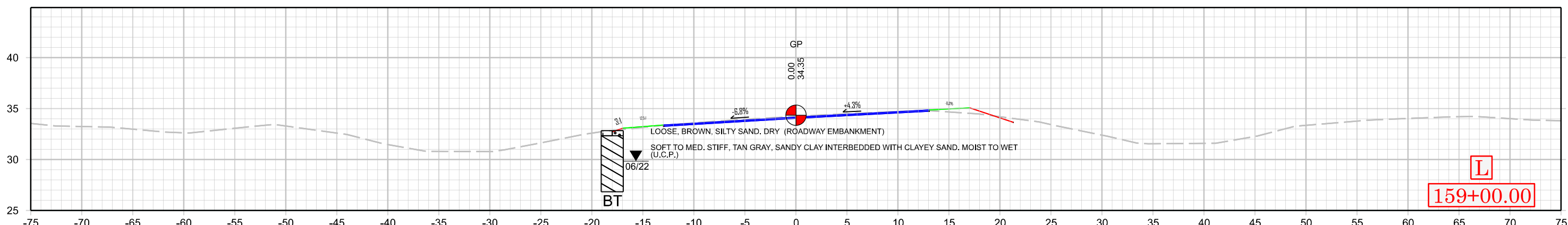
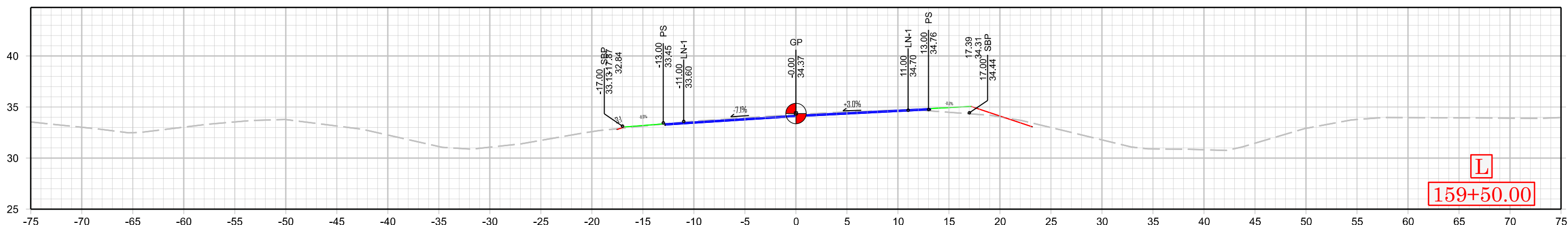
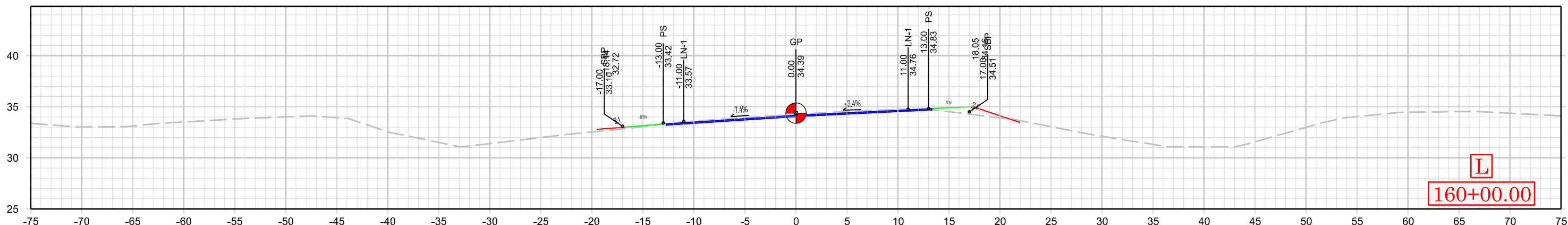
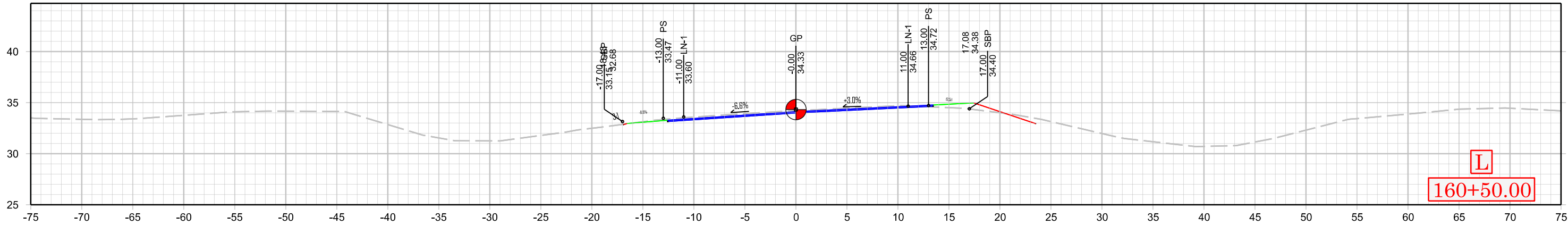
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-022	18 ft RT	155+00	0.0 - 0.6	A-2-4(0)	NP	NP	32.6	47.7	10.9	8.8	99.9	91	22		NA
S-023	18 ft RT	155+00	0.6 - 6.0	A-7-6(10)	41	22	3.4	40.6	12.4	43.6	100	99	58	25	NA



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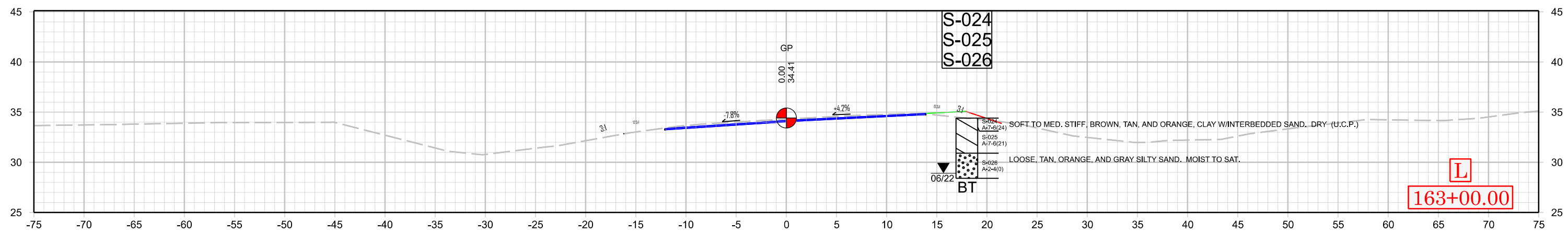
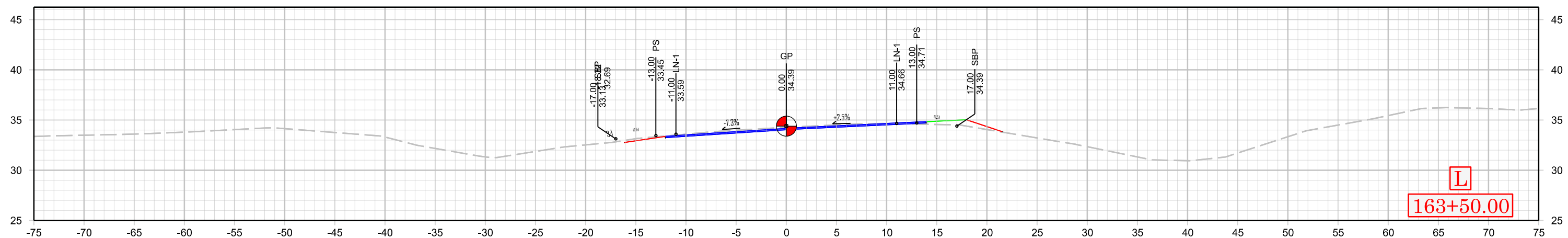
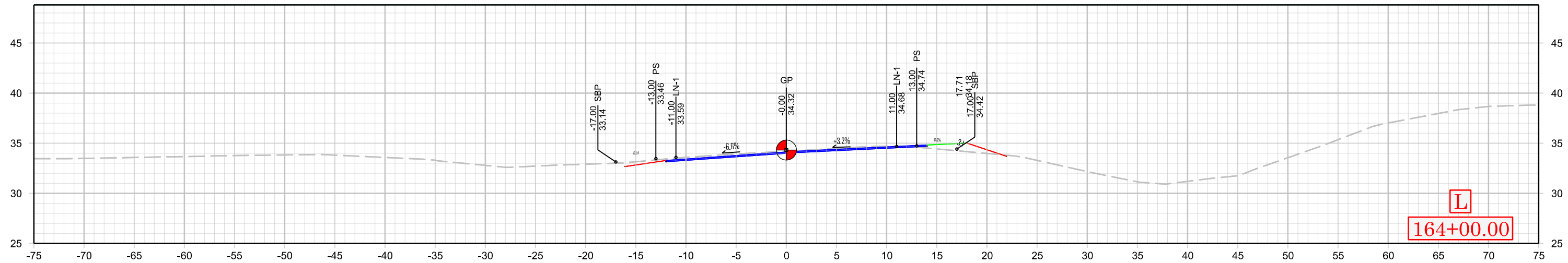


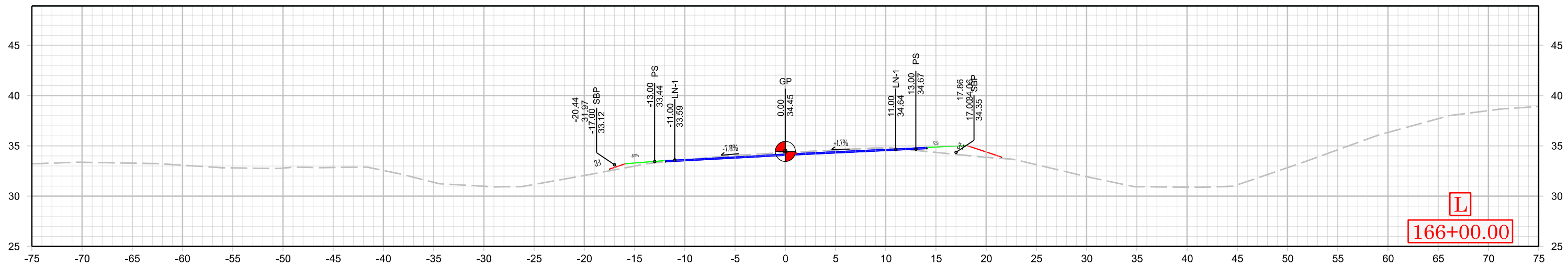
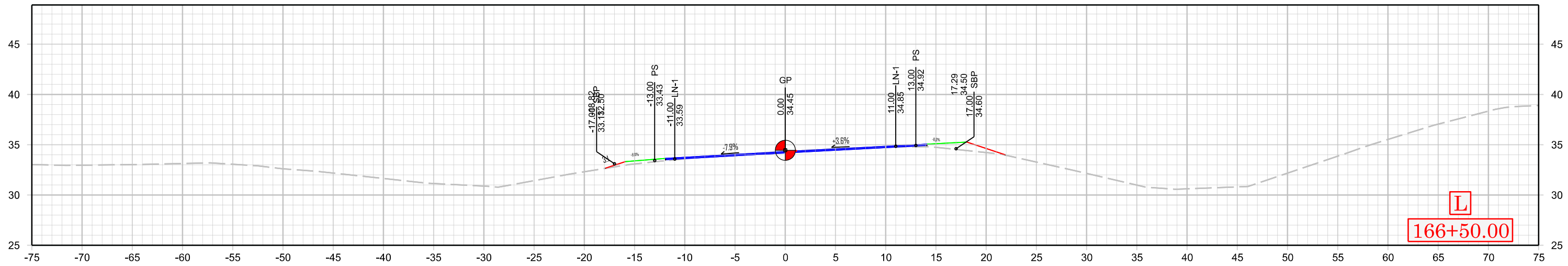
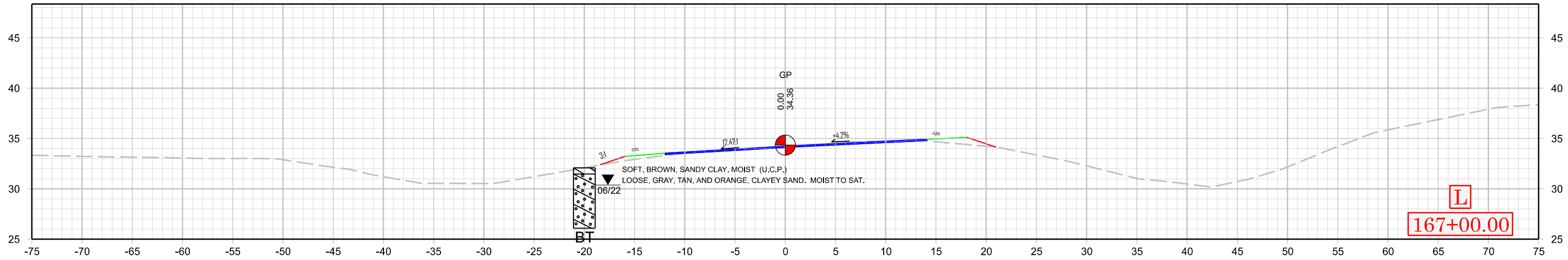
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-024	18 ft RT	163+00	0.0 - 0.9	A-7-6(24)	44	25	2.7	9.3	37.8	50.2	100	99	91		NA
S-025	18 ft RT	163+00	0.9 - 3.5	A-7-6(21)	50	30	2.8	27.8	16.5	52.9	100	99	72	23	NA
S-026	18 ft RT	163+00	3.5 - 6.0	A-2-4(0)	20	4	5.1	77.4	4.7	12.8	100	100	19		NA



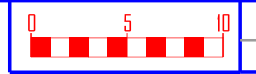
R-5809A
X 95



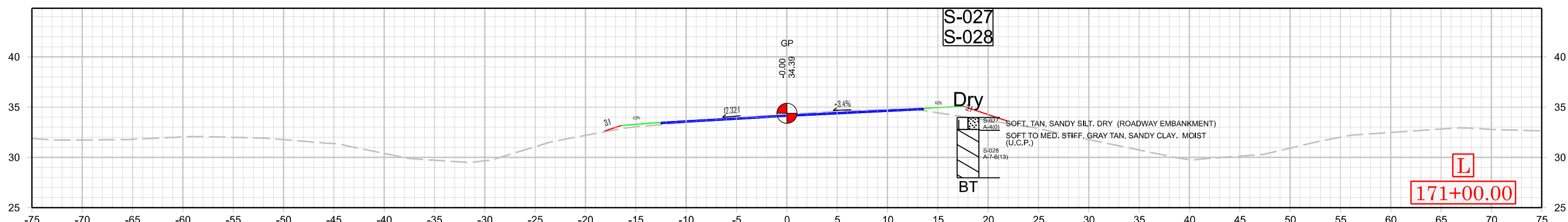
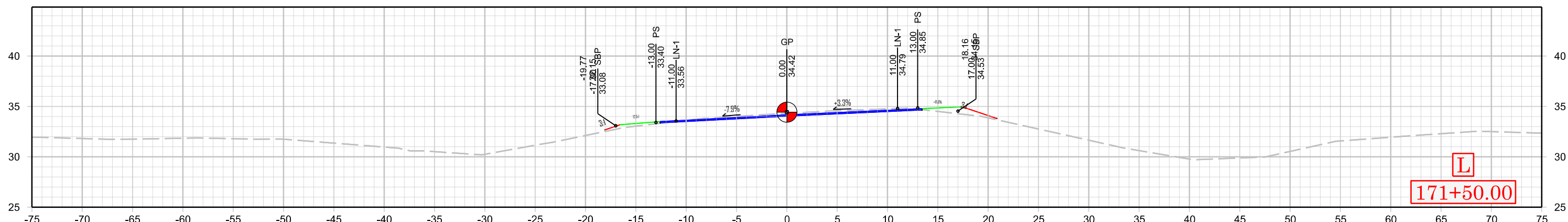
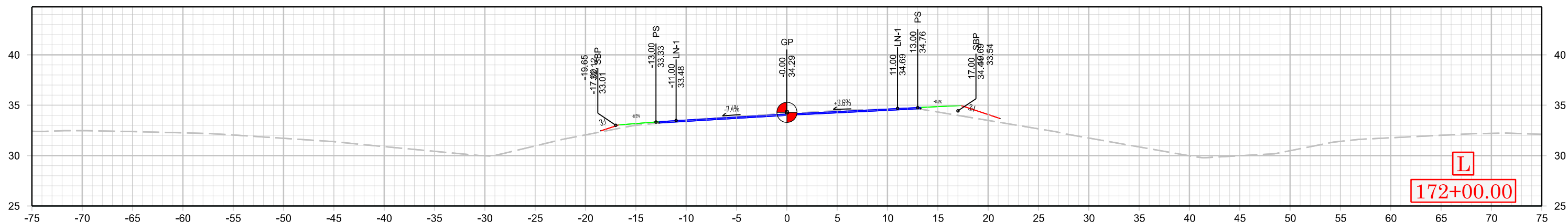
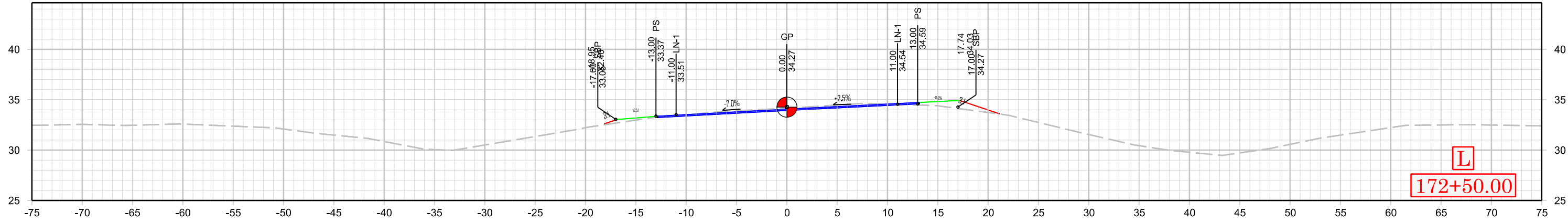


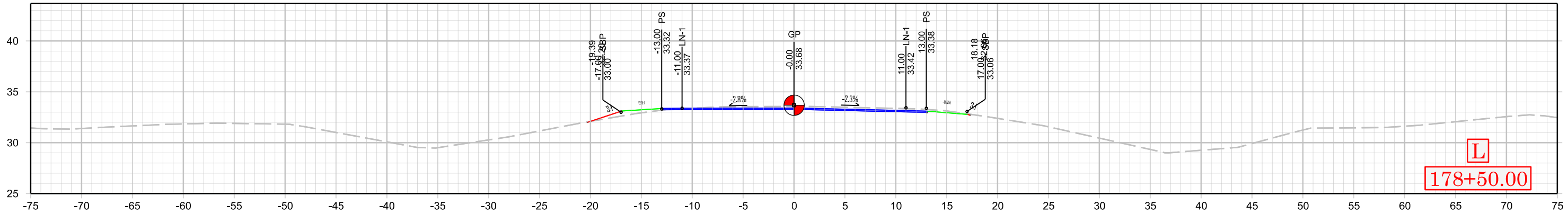
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-027	18 ft RT	171+00	0.0 - 1.2	A-4(0)	19	2	8.1	37.2	35.2	19.5	99.9	97	60		NA
S-028	18 ft RT	171+00	1.2 - 6.0	A-7-6(13)	42	22	5.7	32.6	16.7	45.0	100	98	65	25	NA

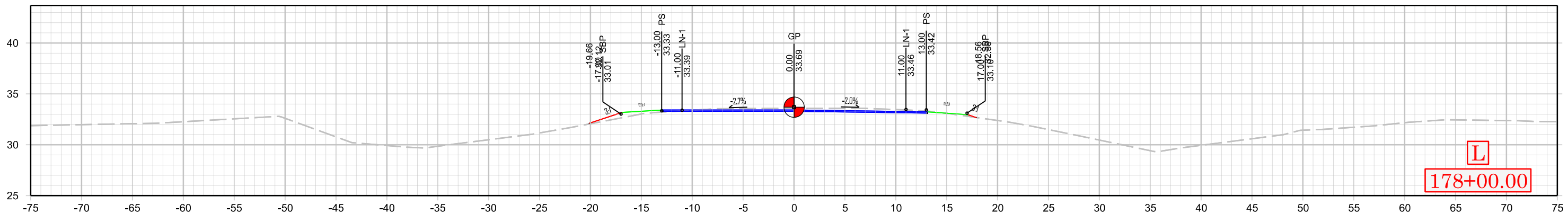


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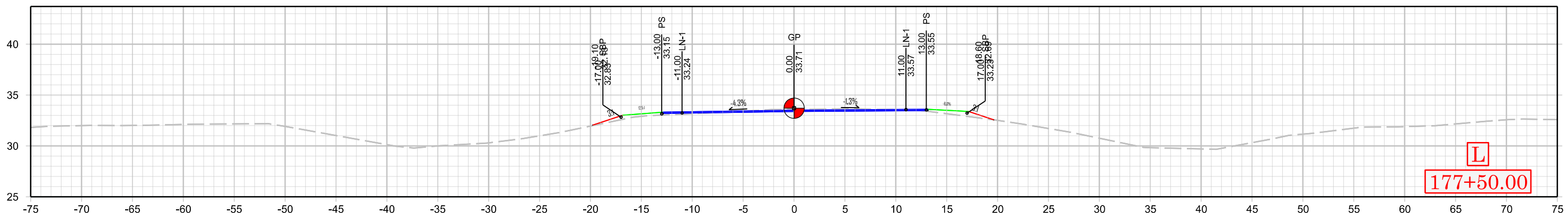




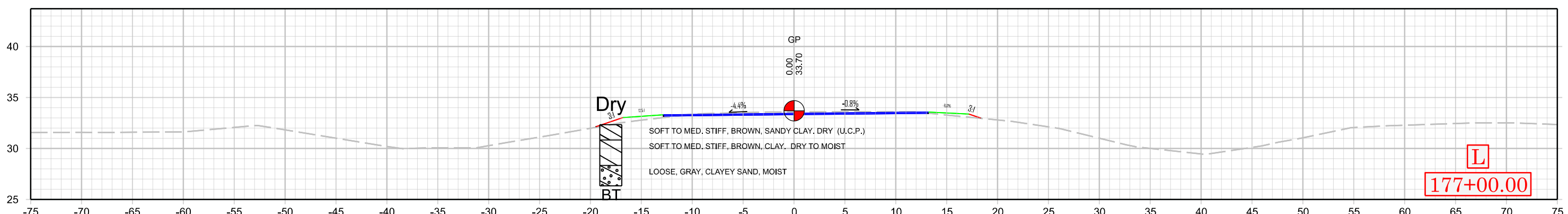
L
178+50.00



L
178+00.00



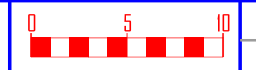
L
177+50.00



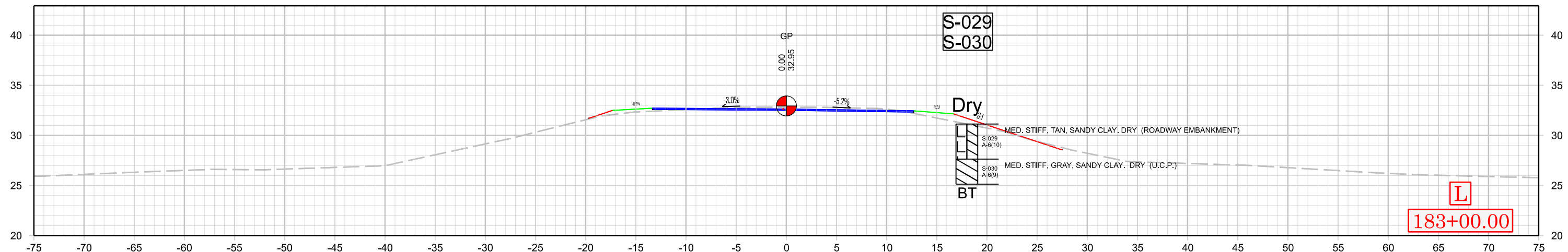
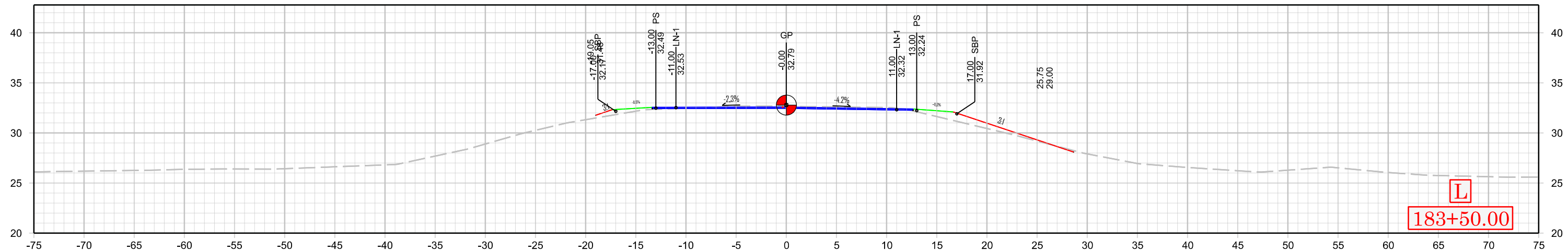
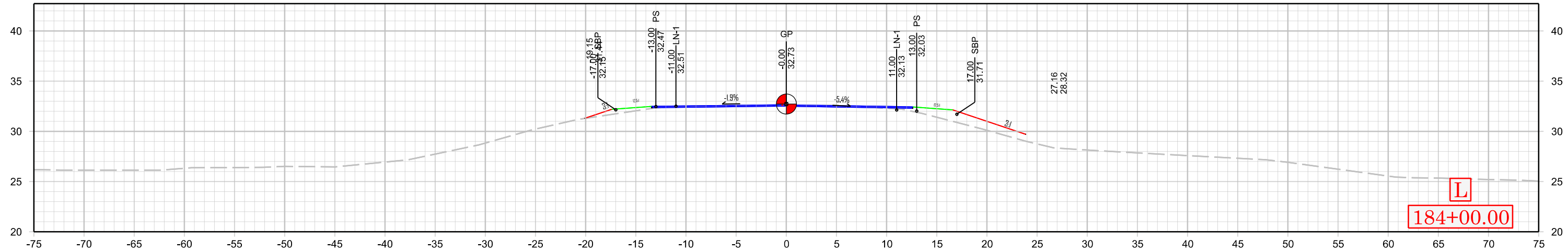
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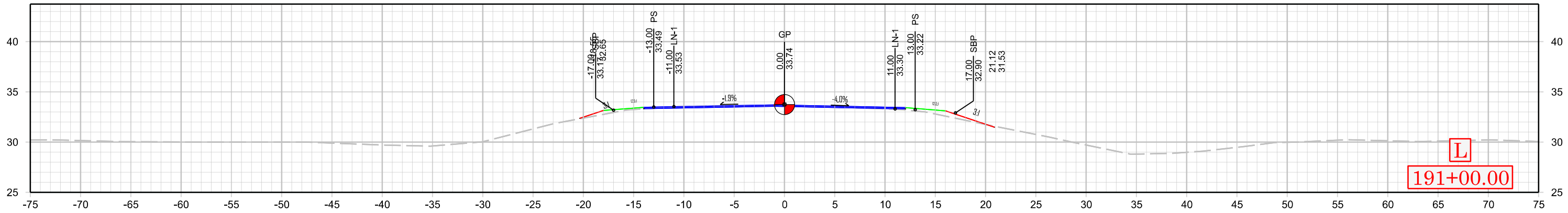
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-029	18 ft RT	183+00	0.0 - 3.5	A-6(10)	37	19	16.8	27.3	17.2	38.7	100	100	63	24	NA
S-030	18 ft RT	183+00	3.5 - 6.0	A-6(9)	30	13	2.3	18.8	38.5	40.4	99.5	99	81		NA

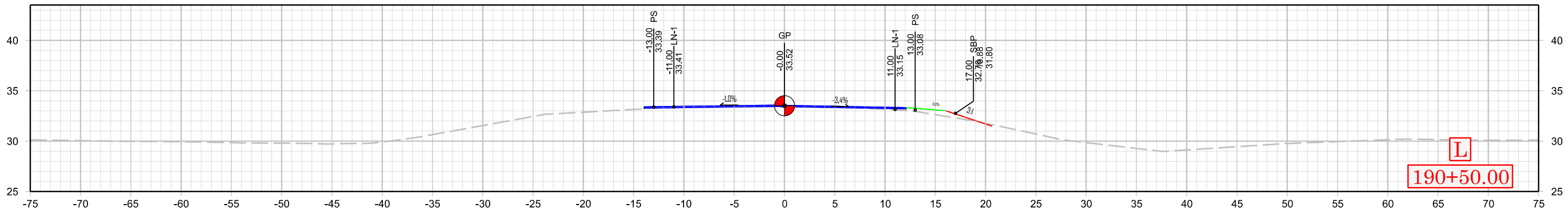


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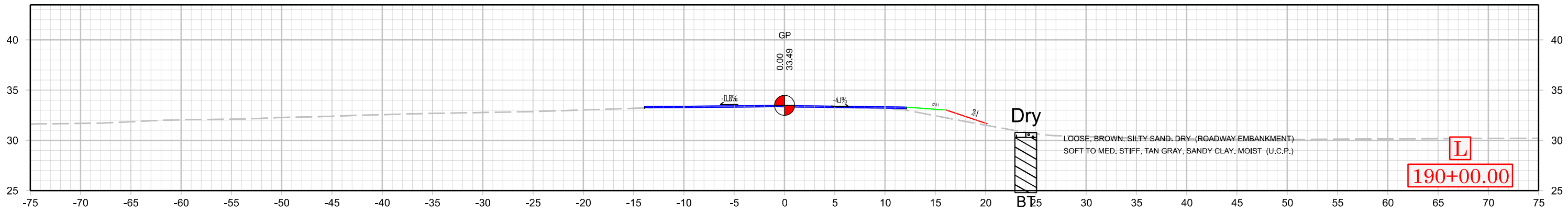




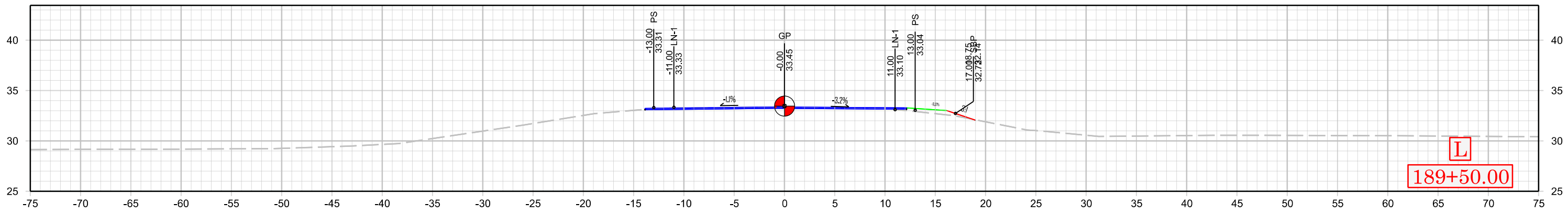
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L
190+50.00



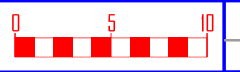
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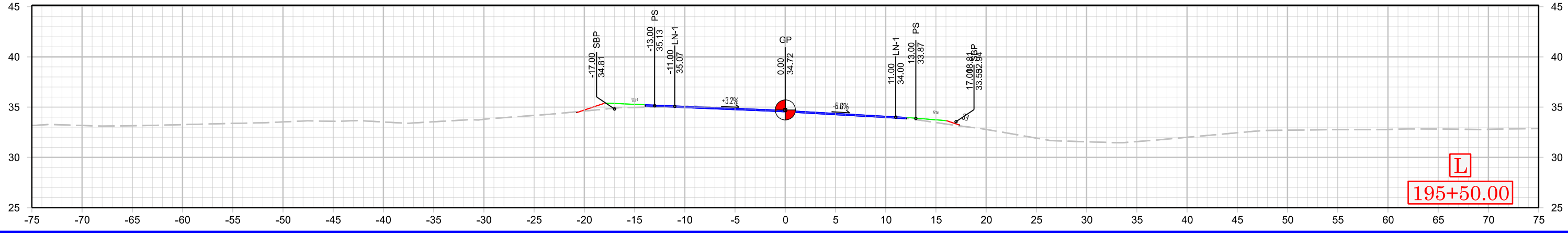
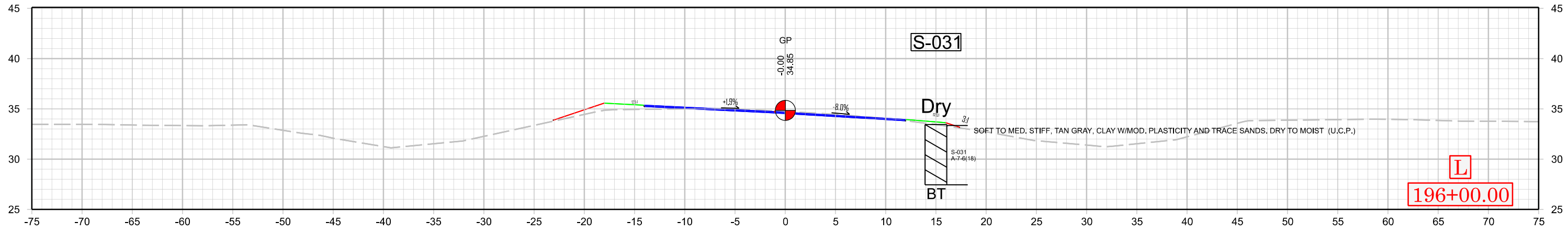
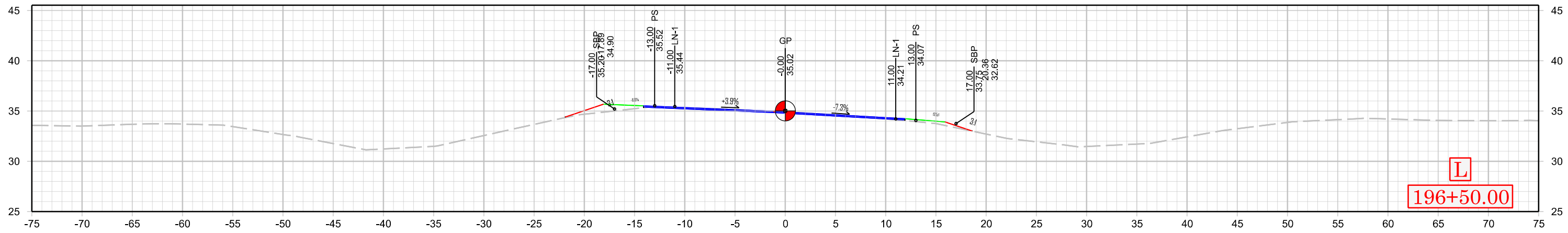
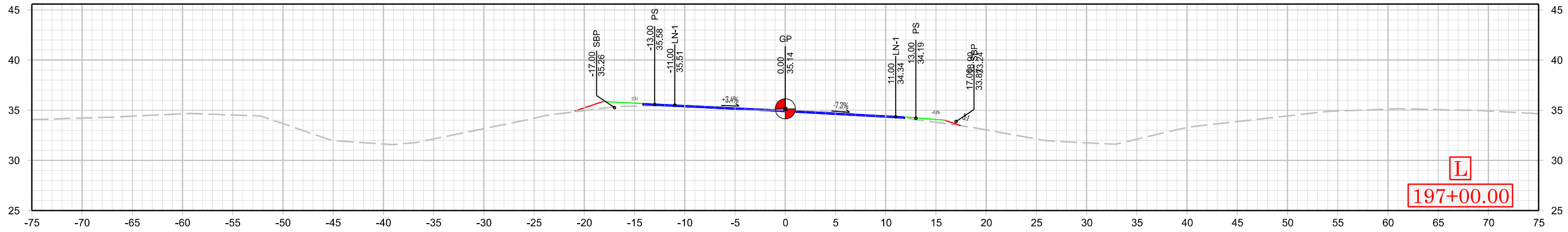
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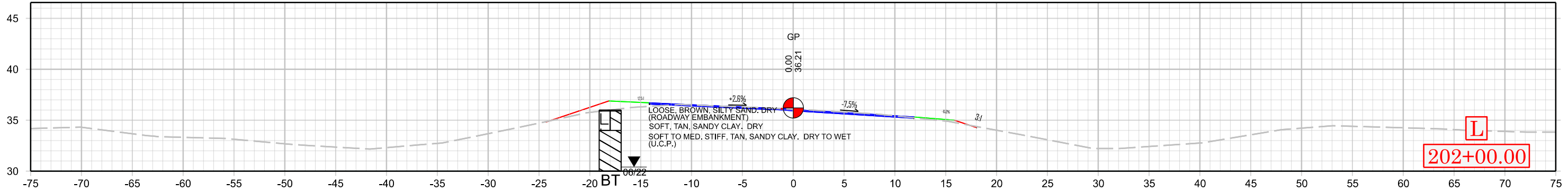
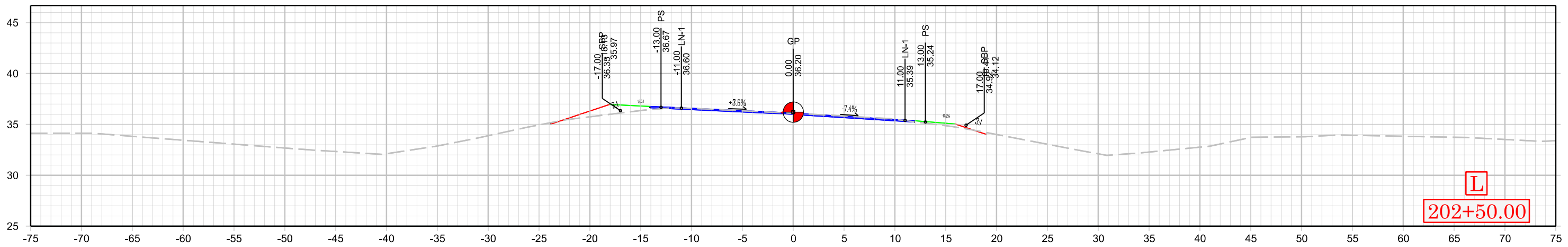
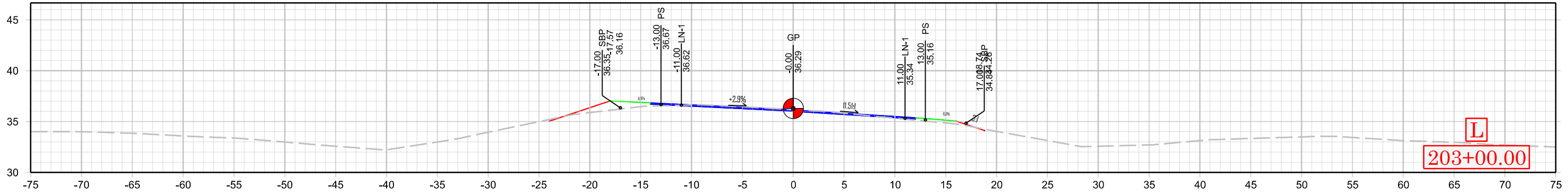
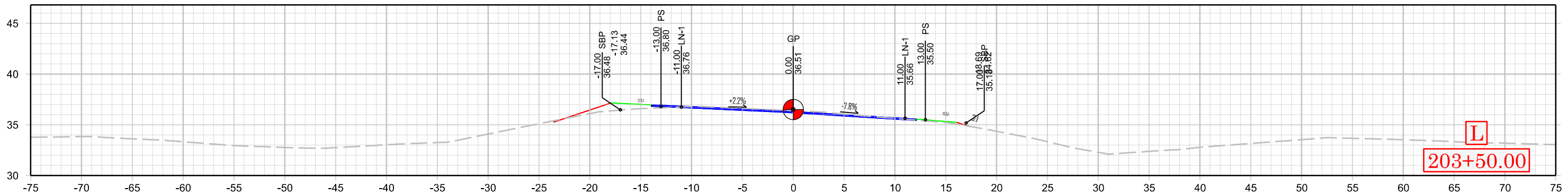
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-031	15 ft RT	196+00	0.1 - 6.0	A-7-6(18)	44	22	2.2	19.1	20.8	57.9	99.9	99	81	29	NA



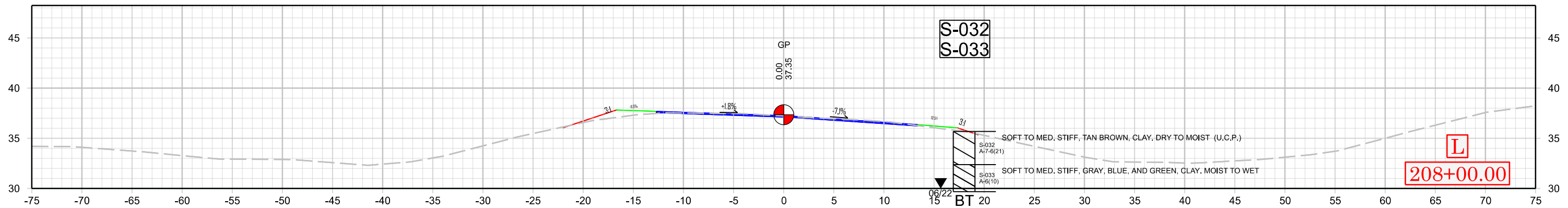
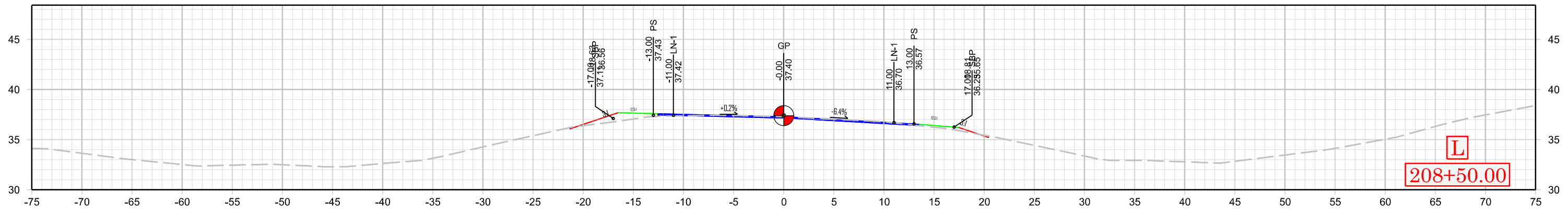
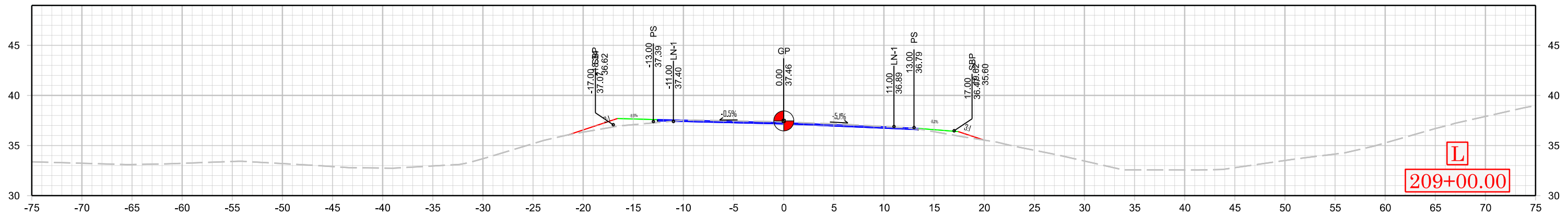
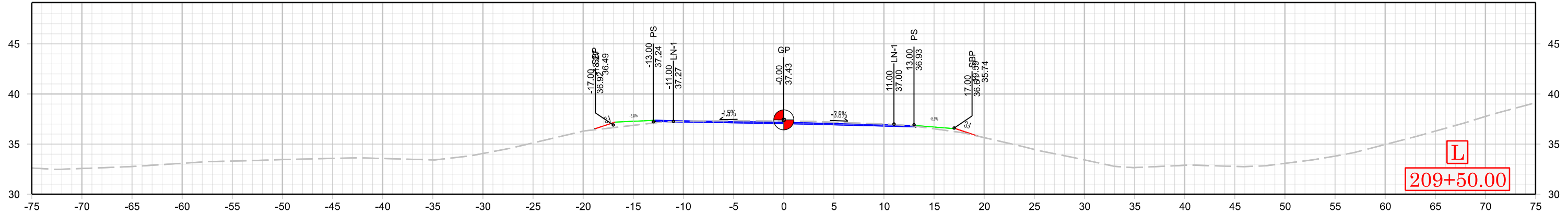
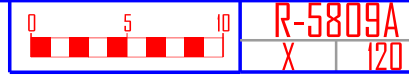
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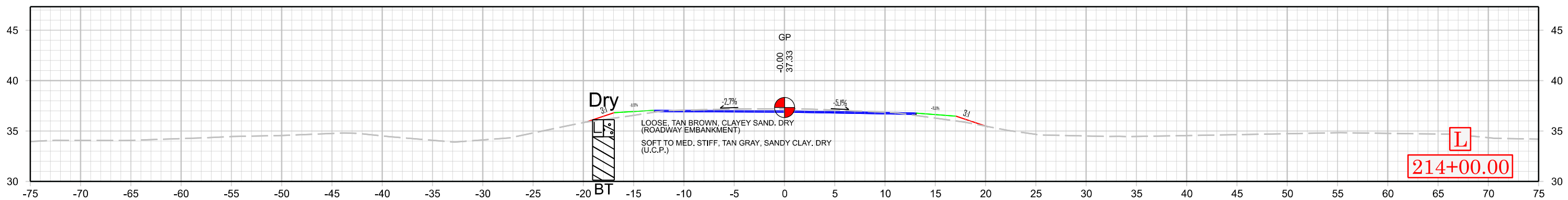
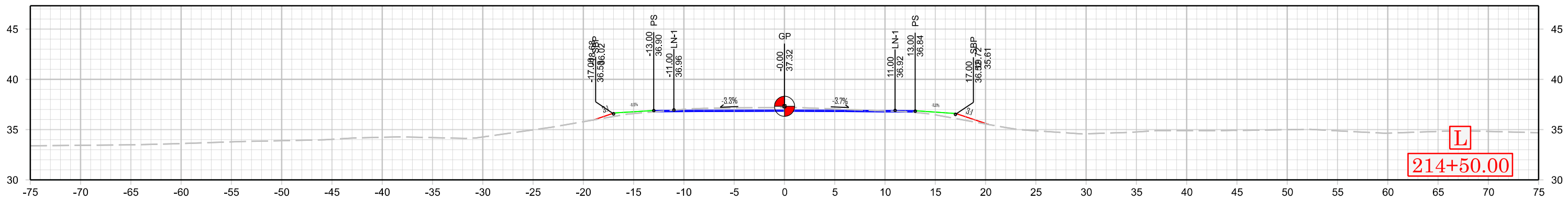
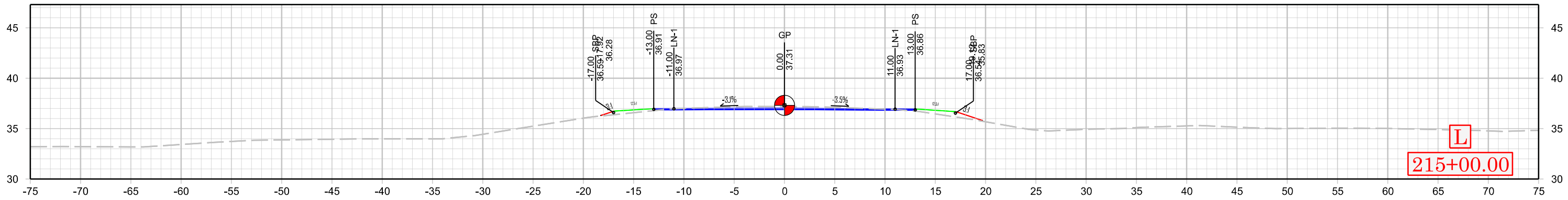
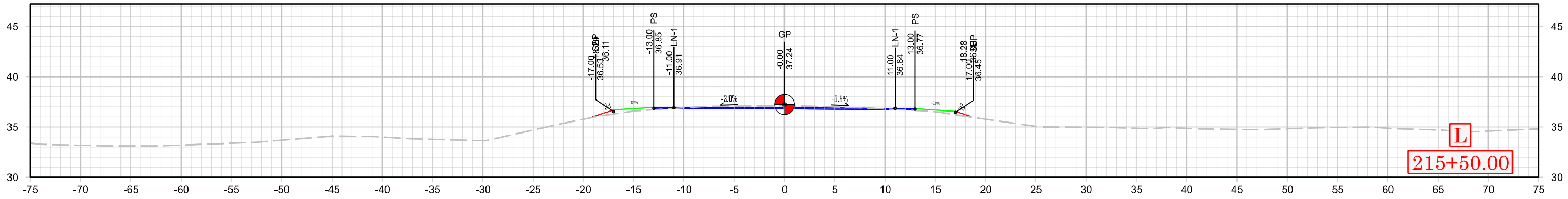




SOIL TEST RESULTS

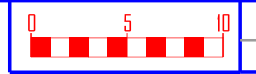
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-032	18 ft RT	208+00	0.0 - 3.3	A-7-6(21)	45	24	1.7	15.3	29.7	53.3	100	100	86	36	NA
S-033	18 ft RT	208+00	3.3 - 6.0	A-6(10)	38	19	0.2	40.9	17.1	41.8	100	100	65		NA



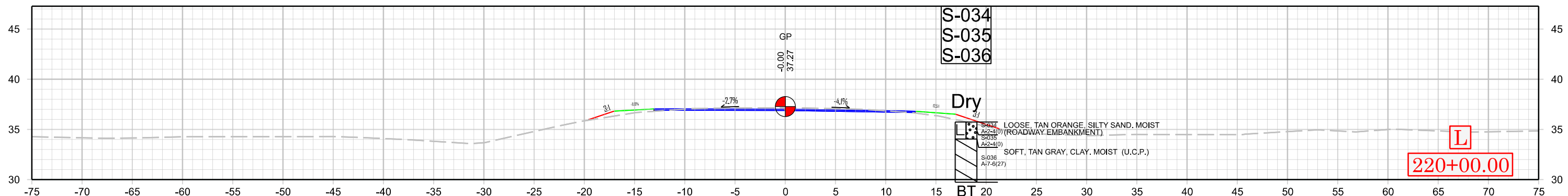
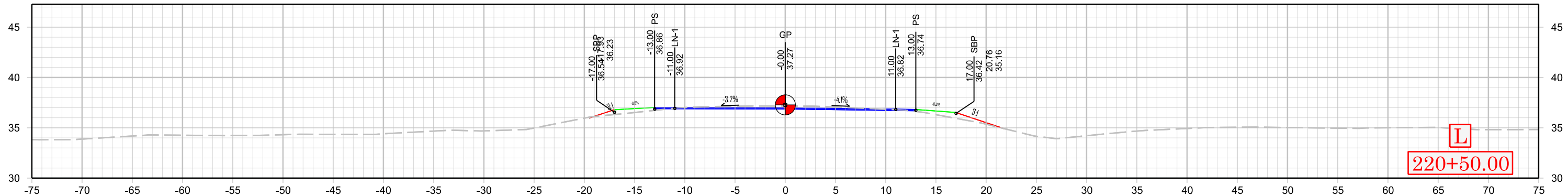
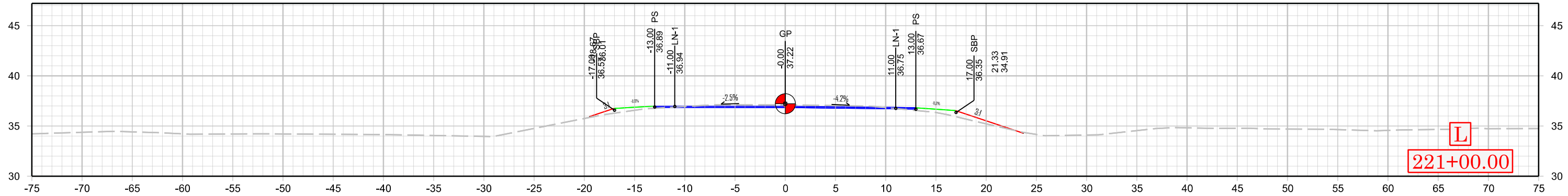
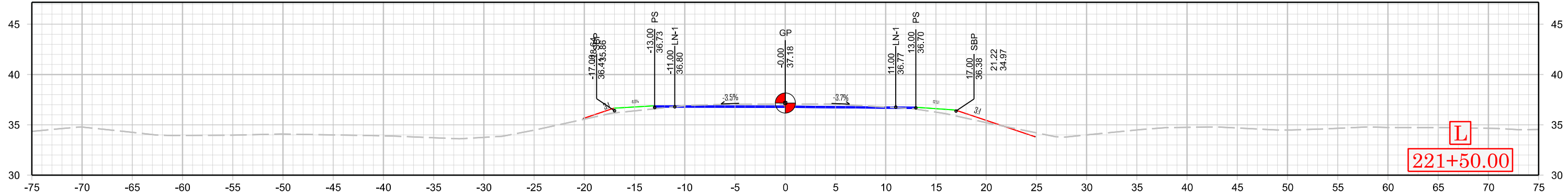


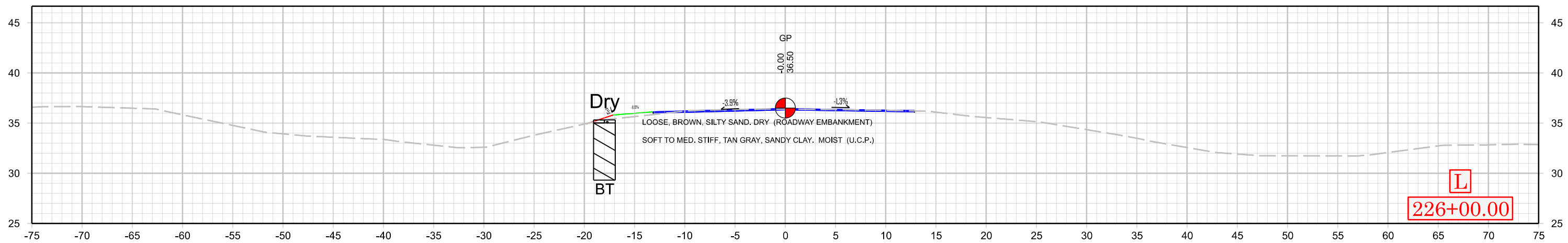
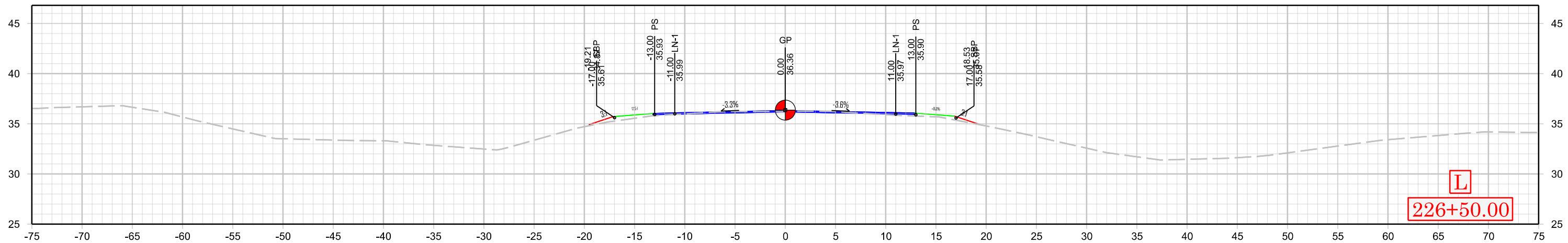
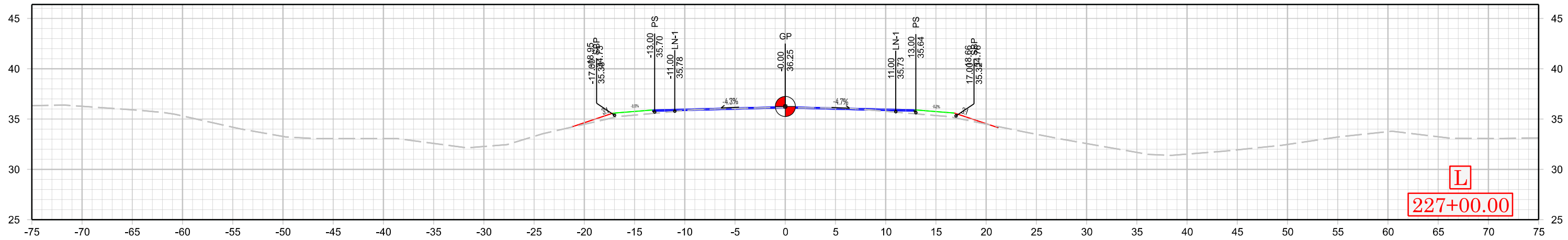
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-034	18 ft RT	220+00	0.0 - 0.9	A-2-4(0)	NP	NP	26.4	53.5	10.9	9.2	98.4	93	23		NA
S-035	18 ft RT	220+00	0.9 - 1.7	A-2-4(0)	21	1	22.3	55.1	7.2	15.4	99.6	94	25		NA
S-036	18 ft RT	220+00	1.7 - 6.0	A-7-6(27)	47	26	1.3	9.2	38.4	51.1	100	99	94	25	NA



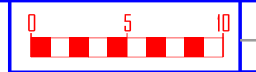
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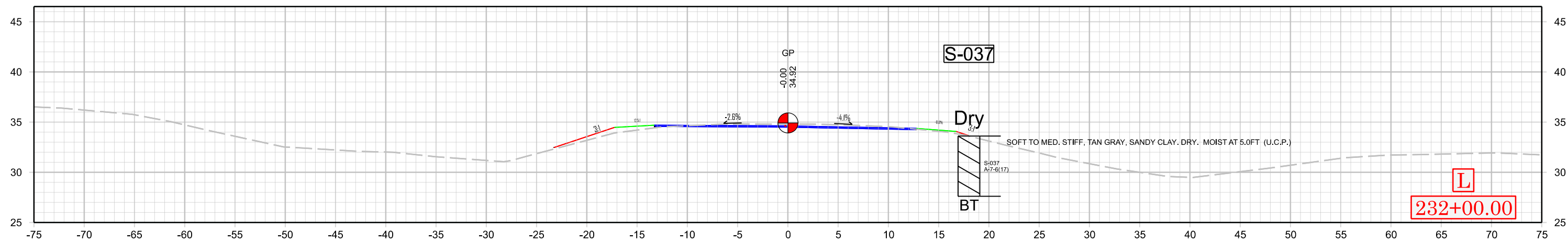
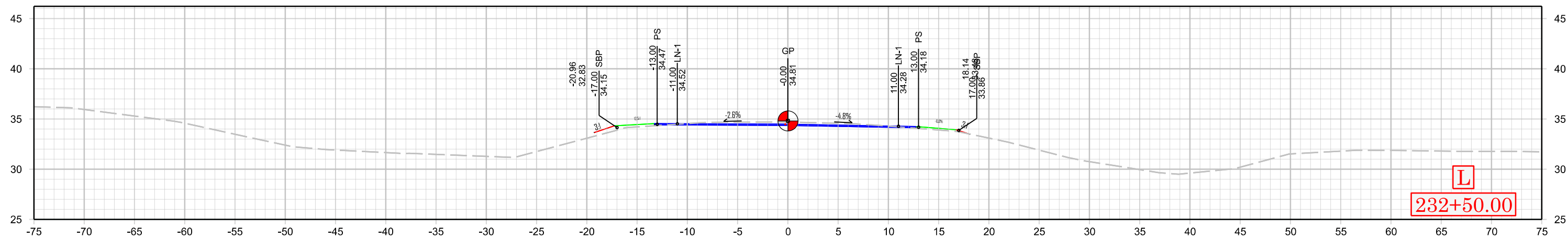
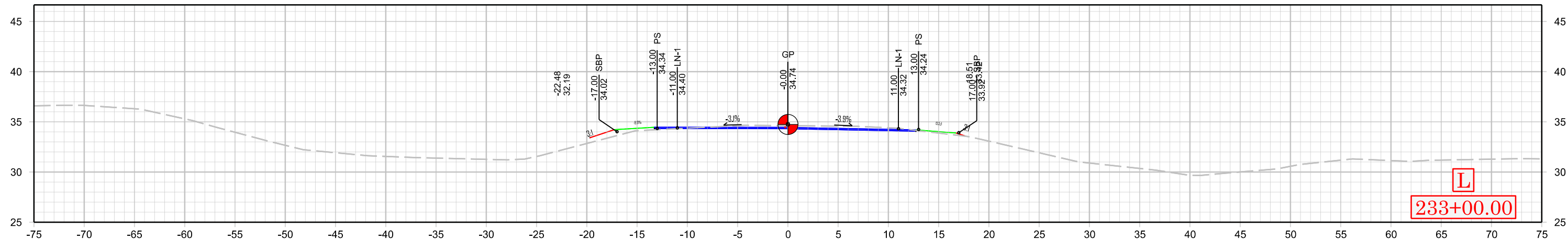


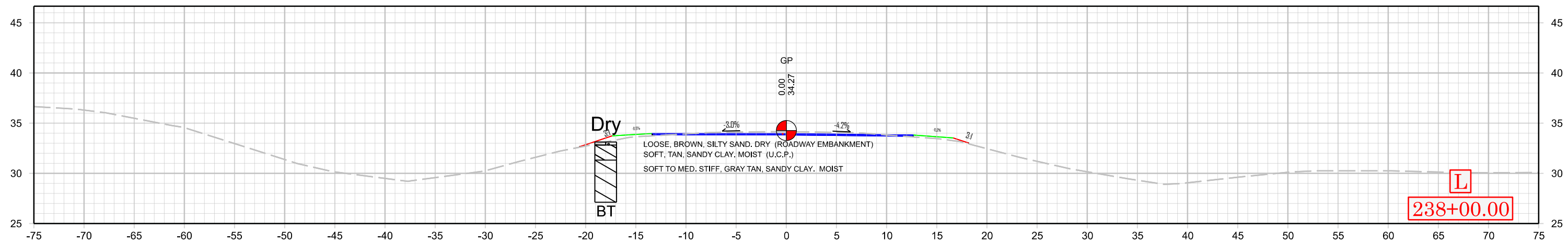
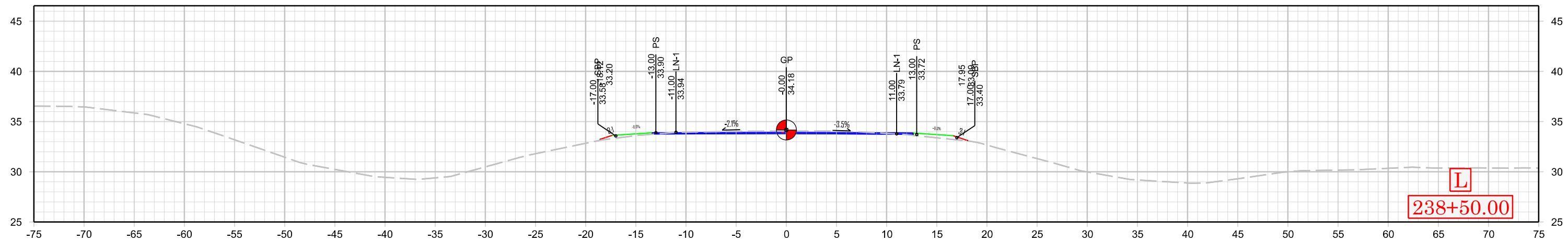
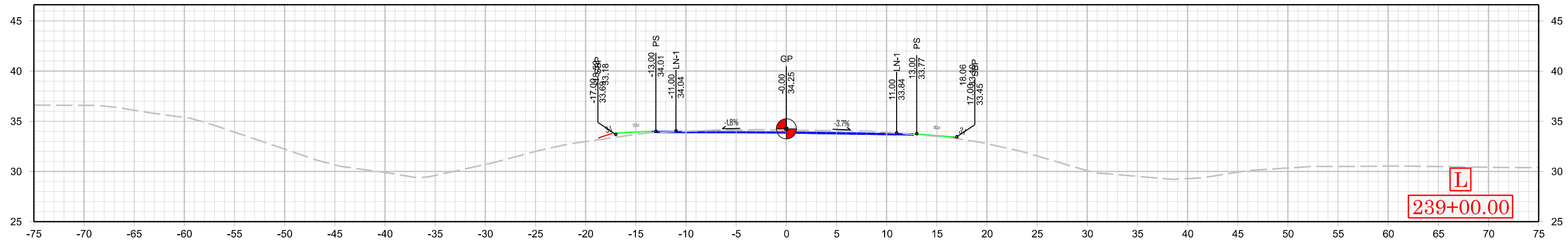
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-037	18 ft RT	232+00	0.0 - 6.0	A-7-6(17)	41	24	1.5	27.2	24.3	47.0	100	100	77	21	NA



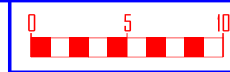
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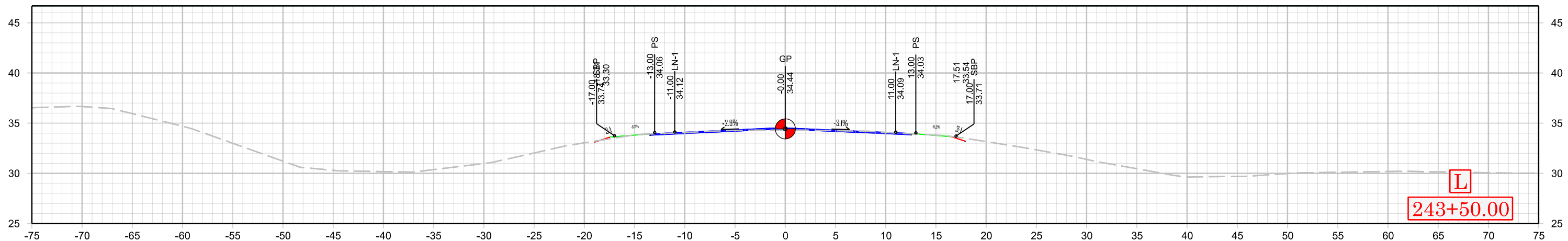
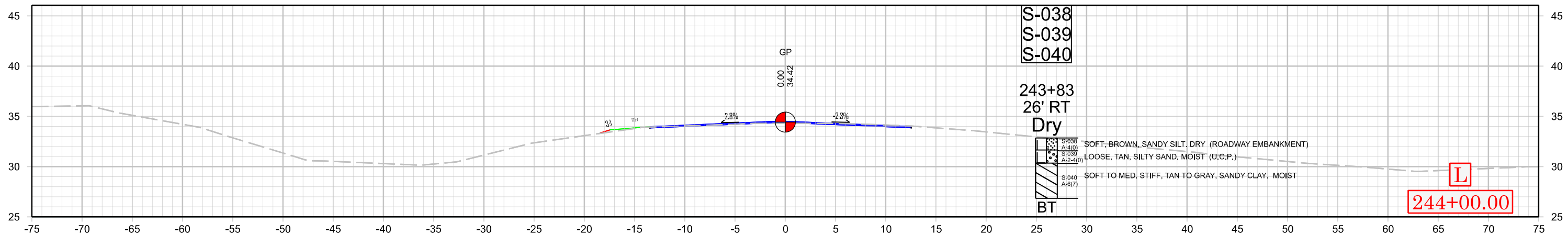
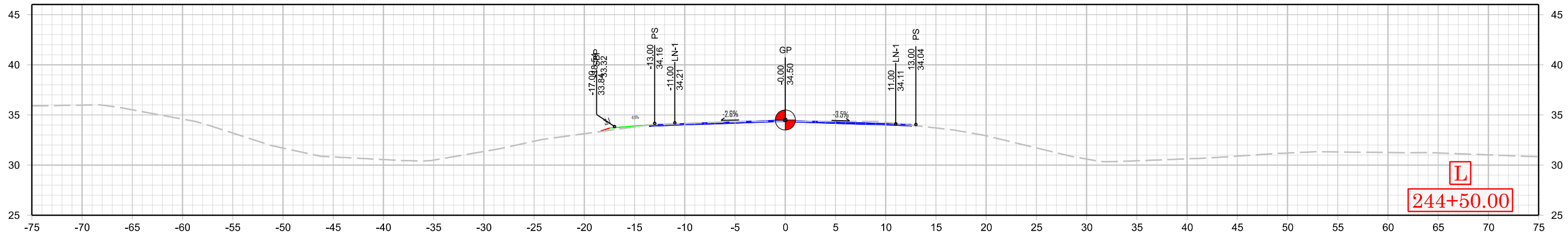


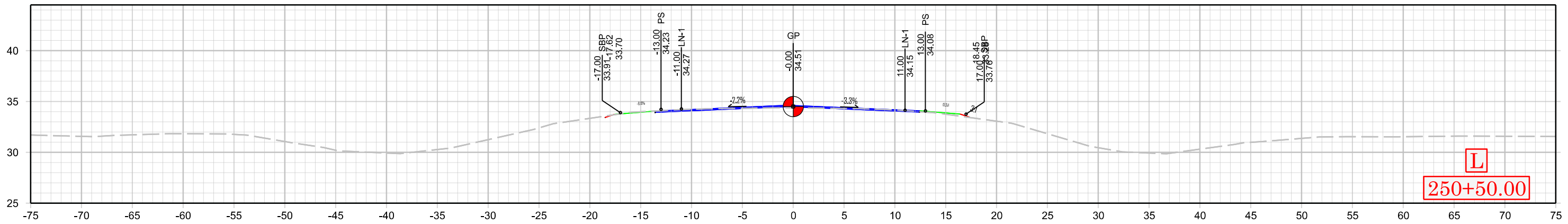
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-038	27 ft RT	243+83	0.0 - 1.2	A-4(0)	23	8	32.2	33.3	19.5	15.0	92.9	83	39		NA
S-039	27 ft RT	243+83	1.2 - 2.5	A-2-4(0)	20	4	14.8	63.3	5.9	16.0	99.1	97	25		NA
S-040	27 ft RT	243+83	2.5 - 6.0	A-6(7)	32	14	5.2	33.6	21.7	39.5	100	99	66		NA

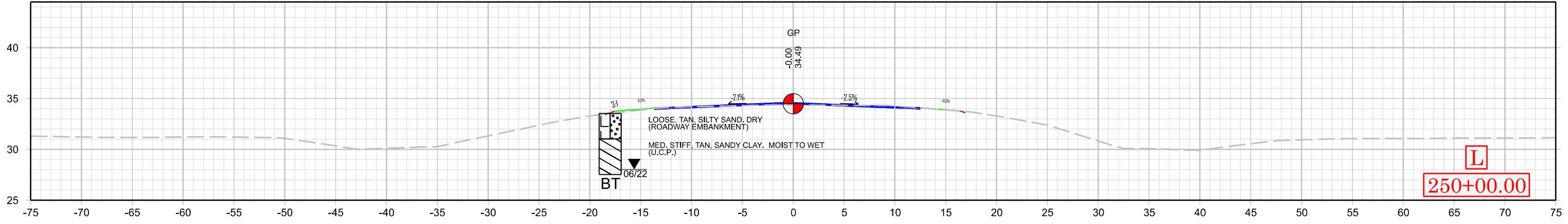


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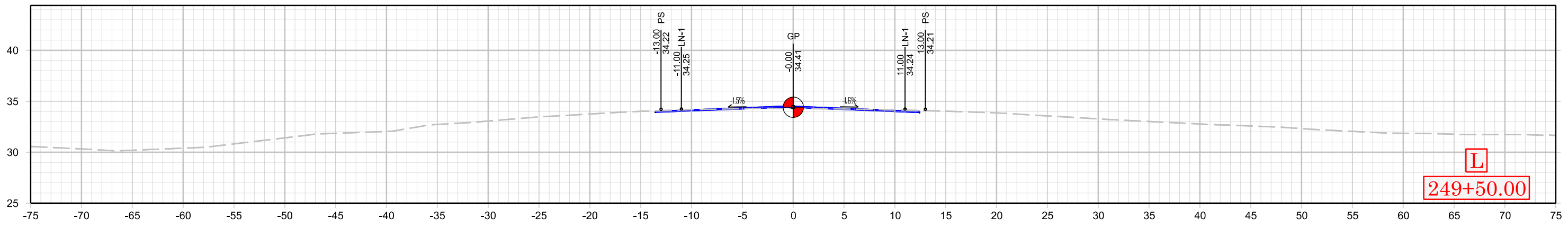




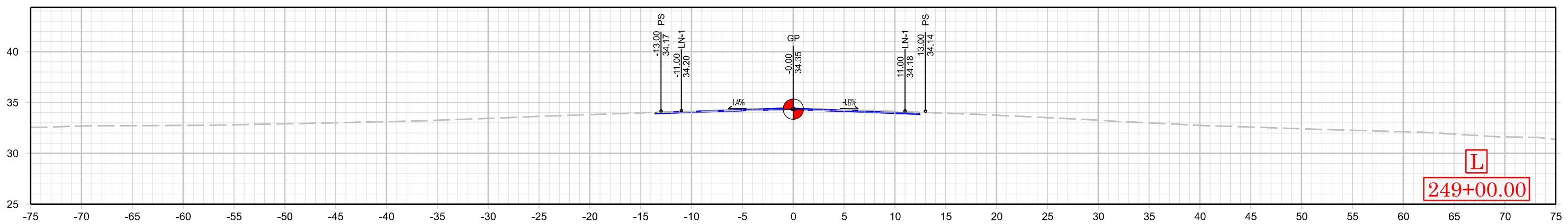
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 250+50.00



L
 250+00.00



L
 249+50.00



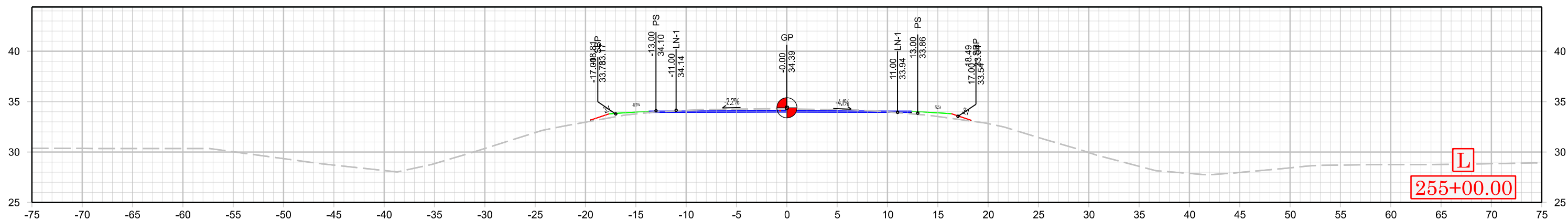
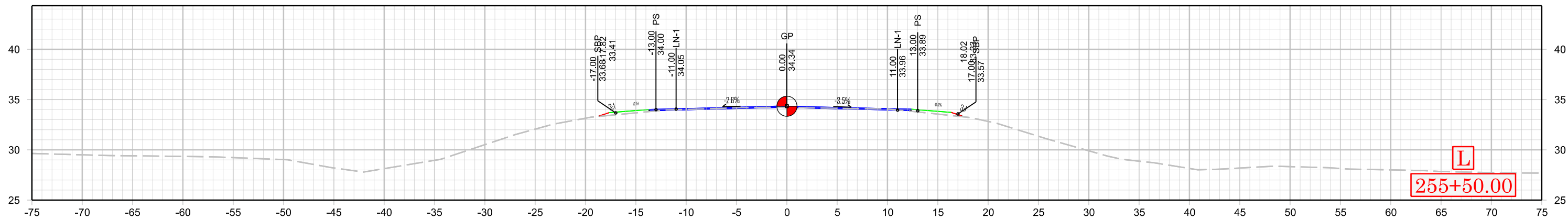
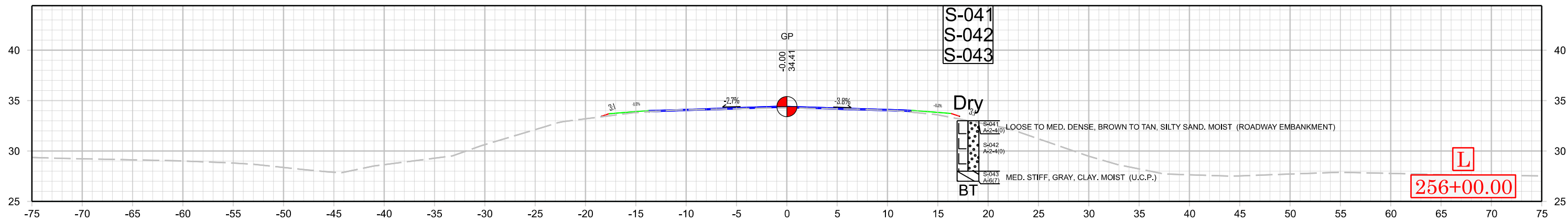
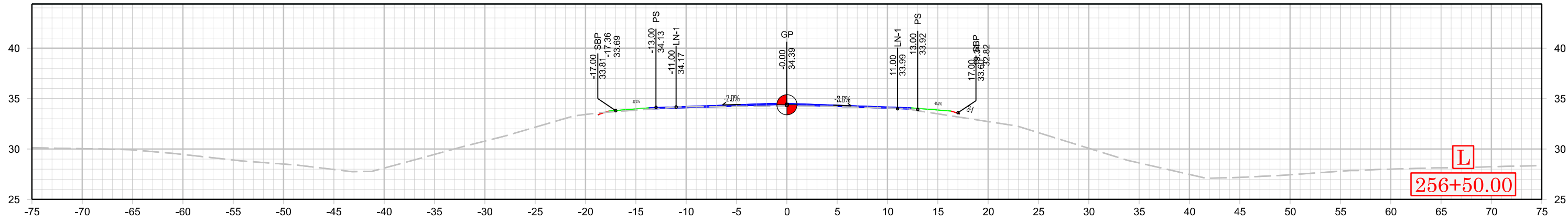
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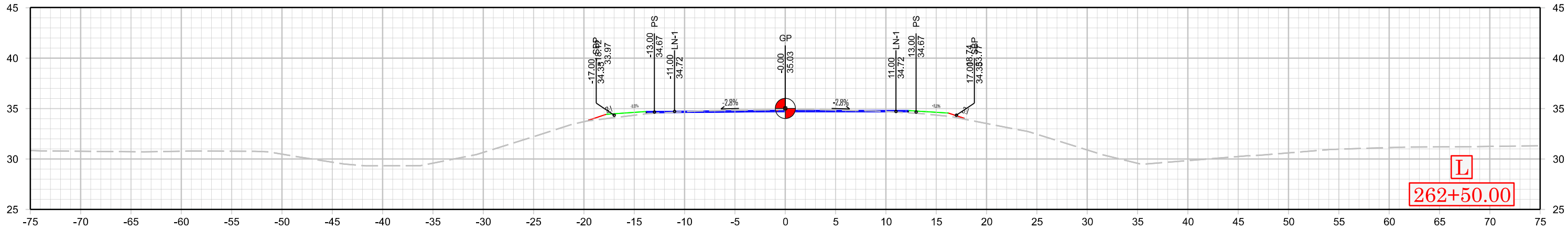
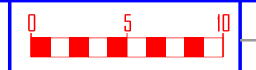
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-041	18 ft RT	256+00	0.0 - 0.4	A-2-4(0)	18	3	23.5	57.6	10.9	8.0	99.3	93	22		NA
S-042	18 ft RT	256+00	0.4 - 5.0	A-2-4(0)	20	2	38.8	44.9	6.3	10.0	99.5	87	18	13	NA
S-043	18 ft RT	256+00	5.0 - 6.0	A-6(7)	29	12	4.7	26.7	34.3	34.4	99.9	98	78		NA

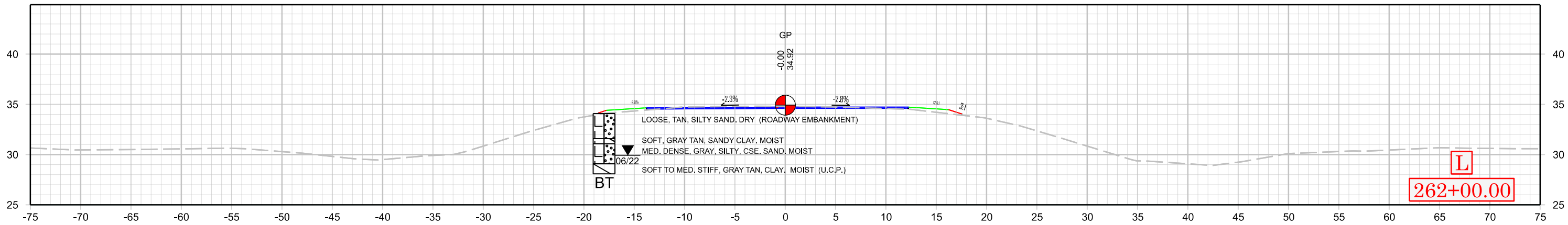


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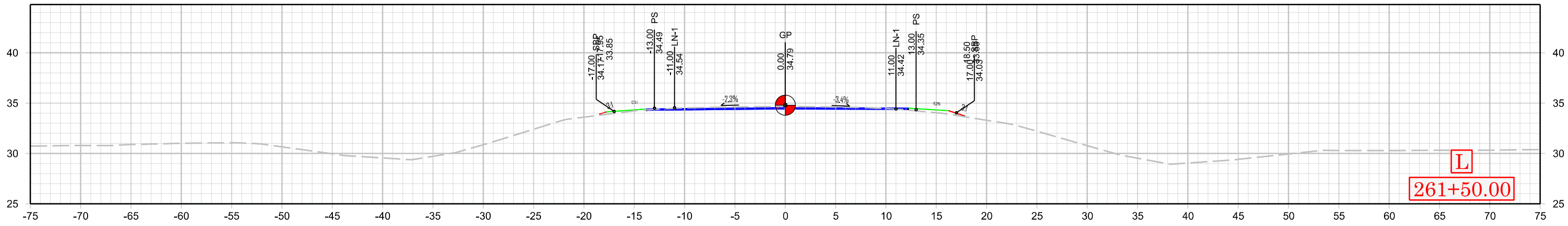




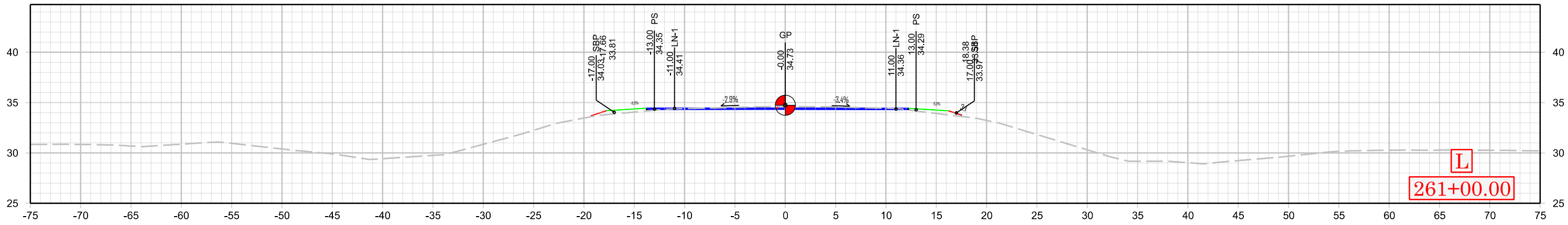
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262+50.00



L
262+00.00



L
261+50.00



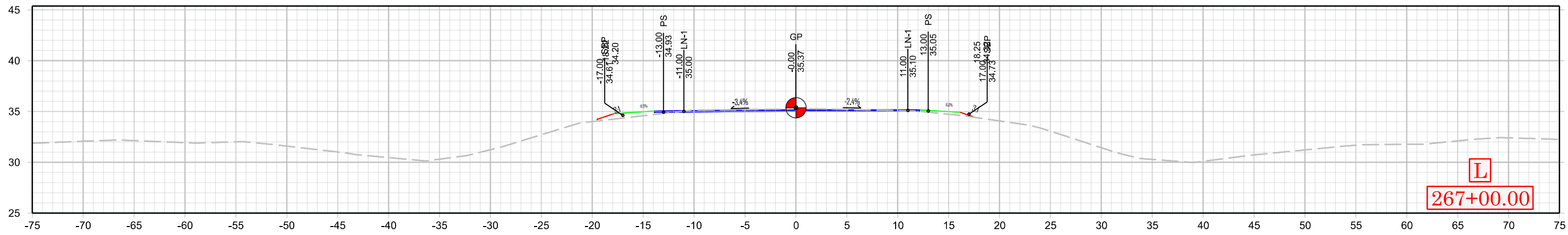
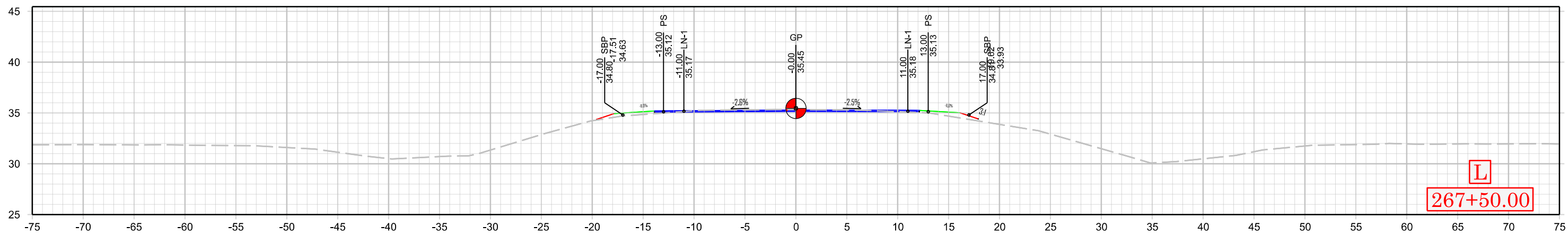
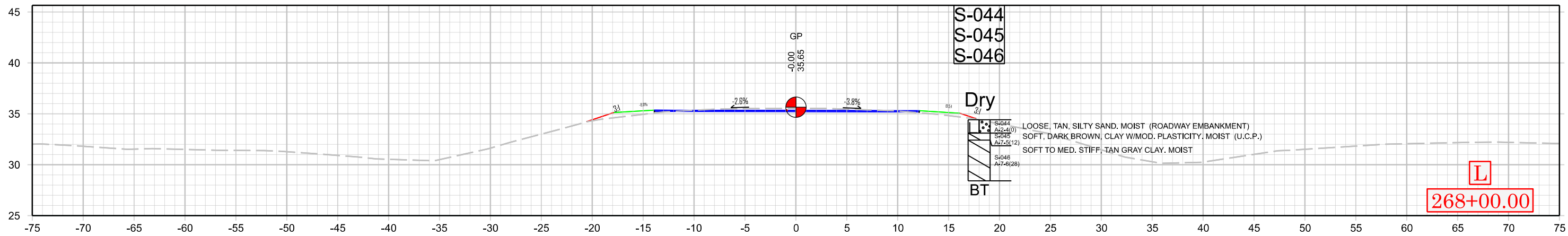
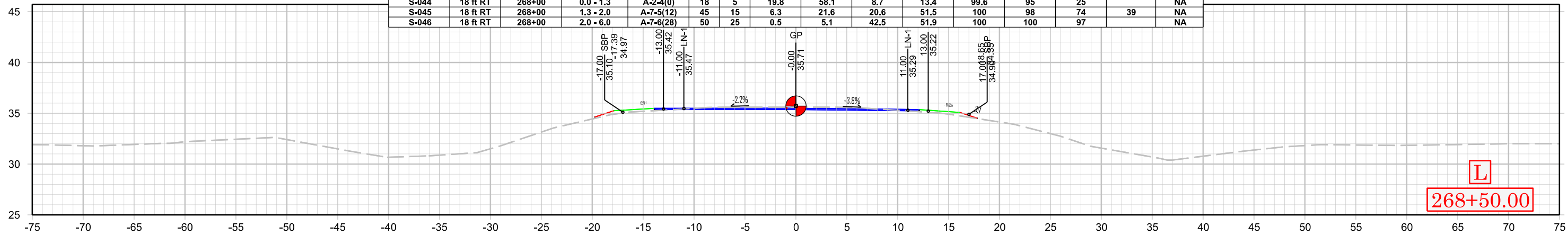
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261+00.00

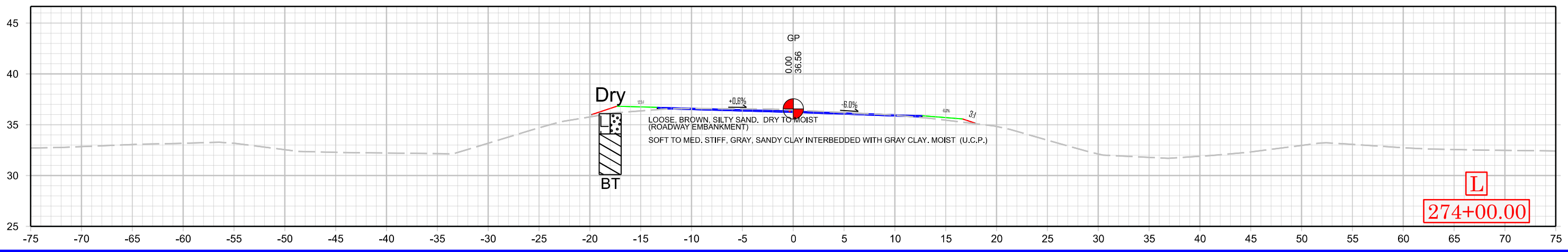
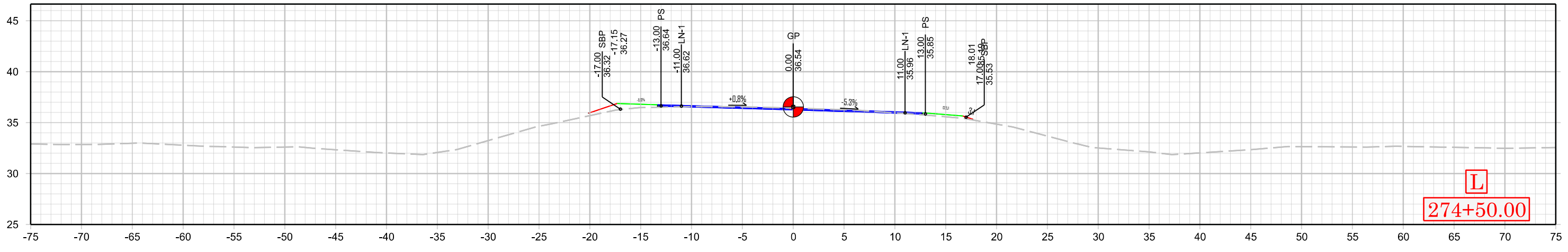
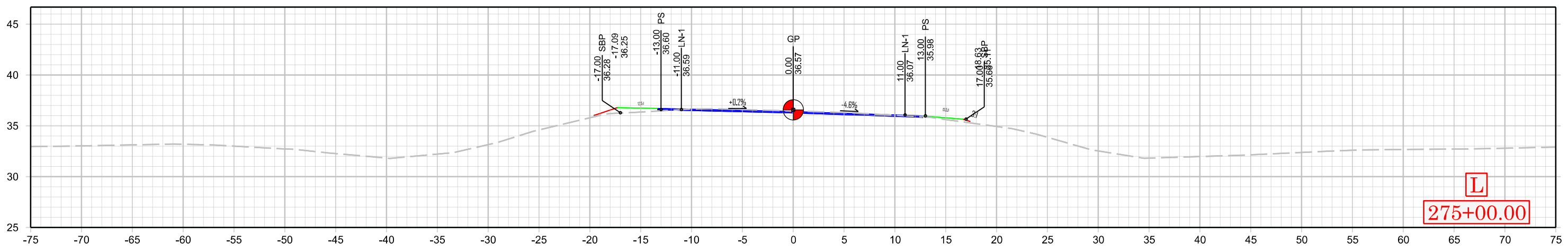
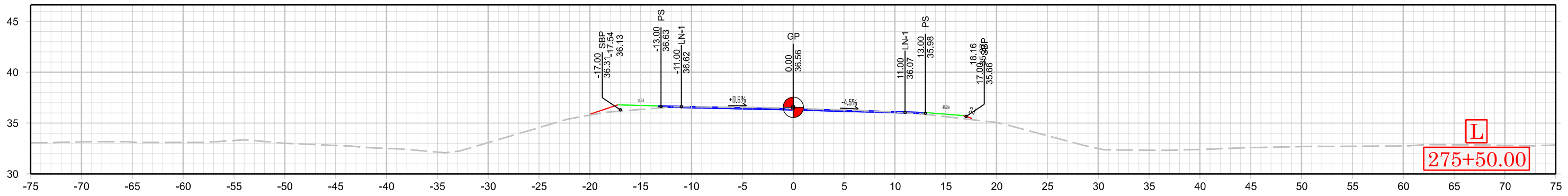
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-044	18 ft RT	268+00	0.0 - 1.3	A-2-4(0)	18	5	19.8	58.1	8.7	13.4	99.6	95	25		NA
S-045	18 ft RT	268+00	1.3 - 2.0	A-7-5(12)	45	15	6.3	21.6	20.6	51.5	100	98	74	39	NA
S-046	18 ft RT	268+00	2.0 - 6.0	A-7-6(28)	50	25	0.5	5.1	42.5	51.9	100	100	97		NA

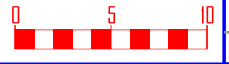


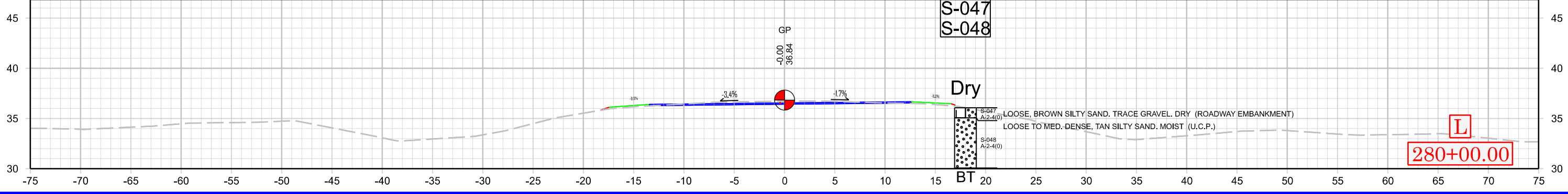
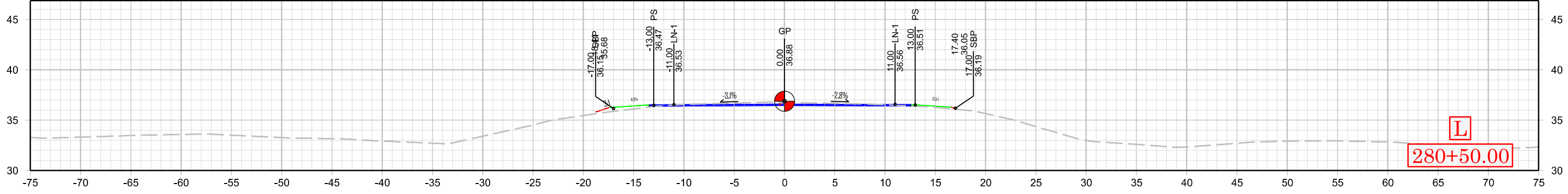
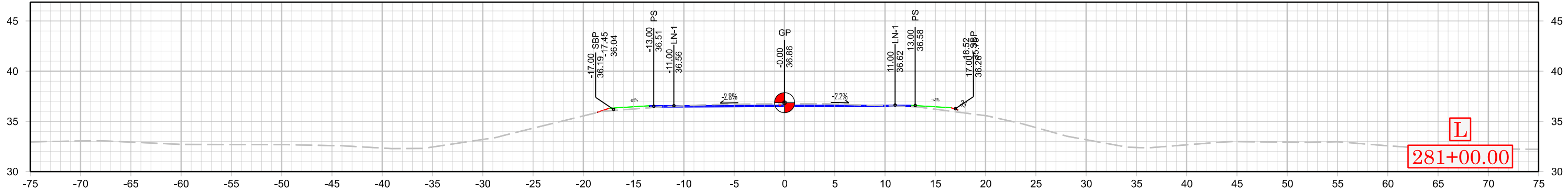
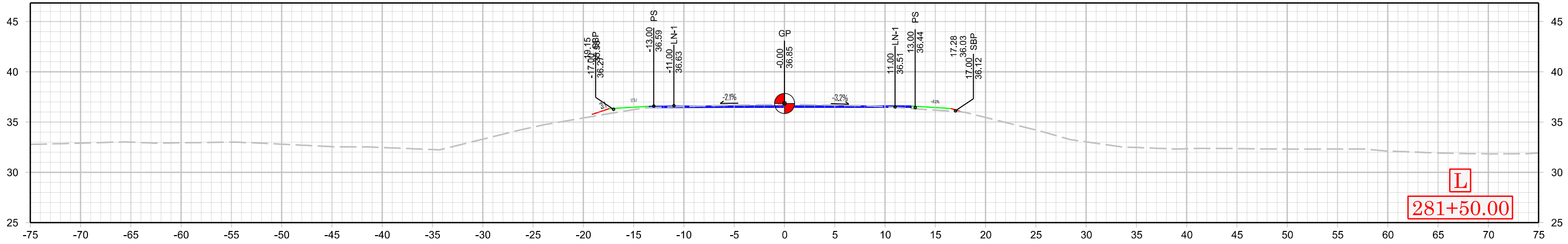
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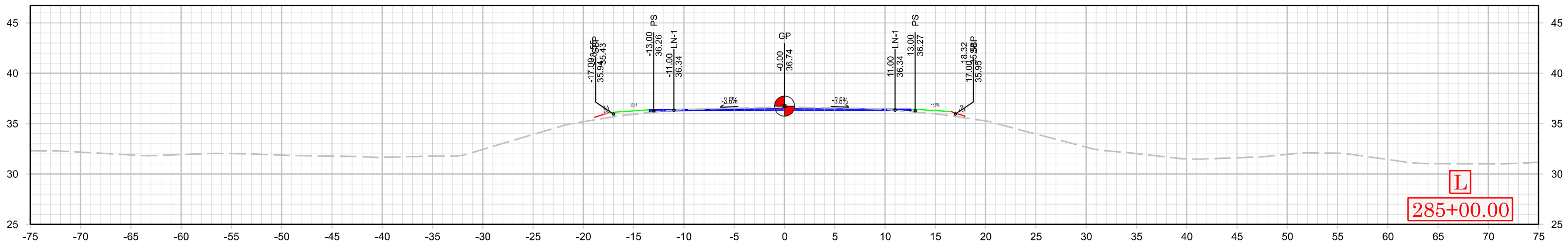
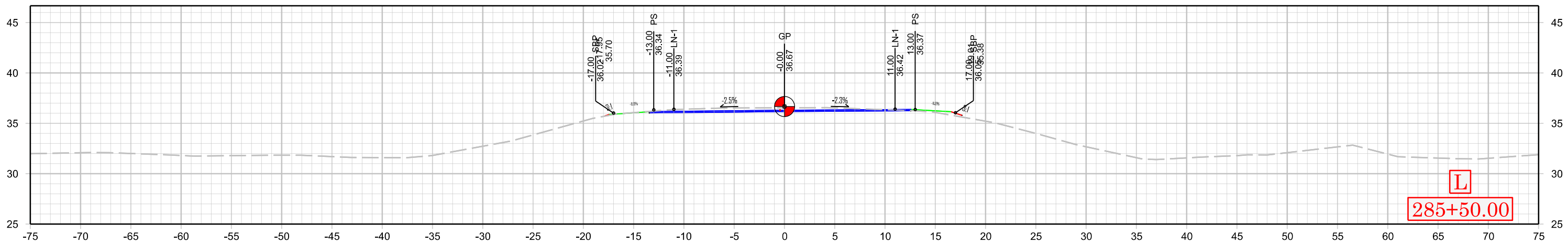
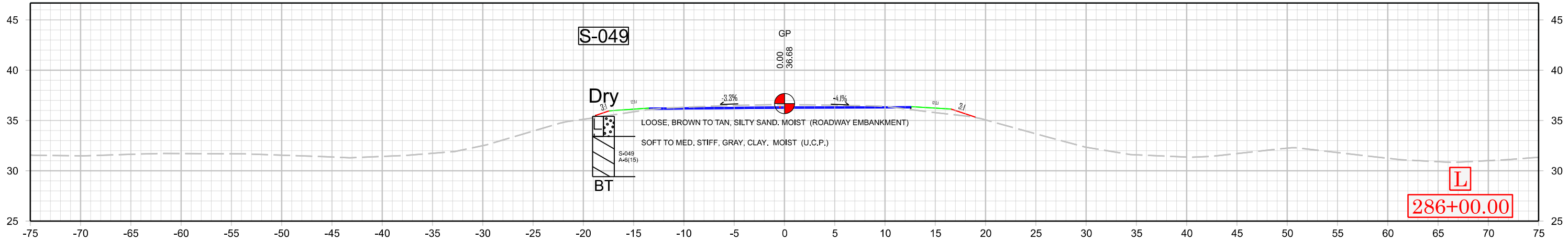
SOIL TEST RESULTS															
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-047	18 ft RT	280+00	0.0 - 1.0	A-2-4(0)	NP	NP	27.0	47.5	16.4	9.1	74.7	89	29		NA
S-048	18 ft RT	280+00	1.0 - 6.0	A-2-4(0)	NP	NP	22.1	61.3	6.6	10.0	99.0	94	19		NA

0 5 10

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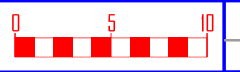
SOIL TEST RESULTS															
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-049	18 ft LT	286+00	2.0 - 6.0	A-6(15)	40	15	2.8	7.5	38.5	51.2	99.4	99	92	39	NA

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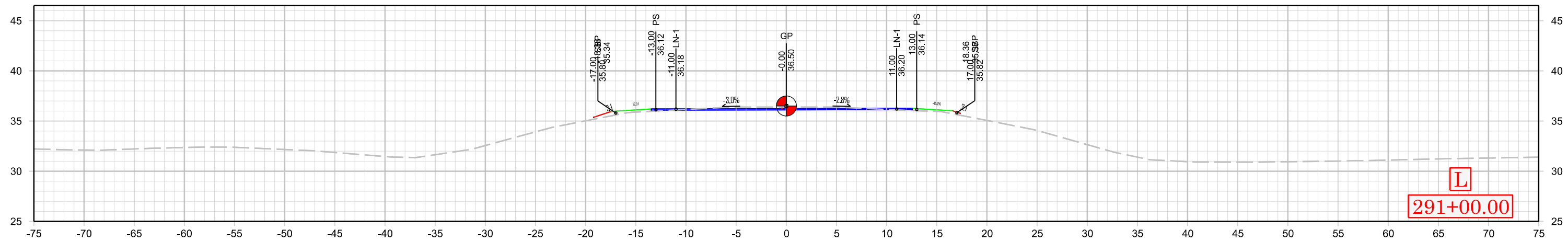
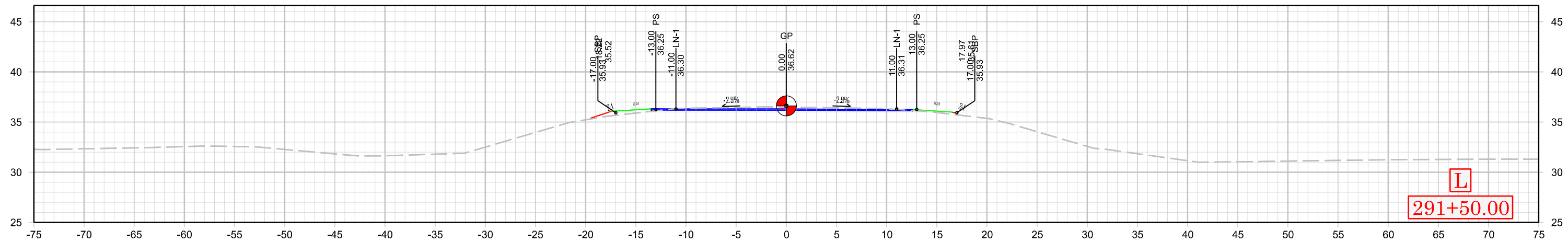
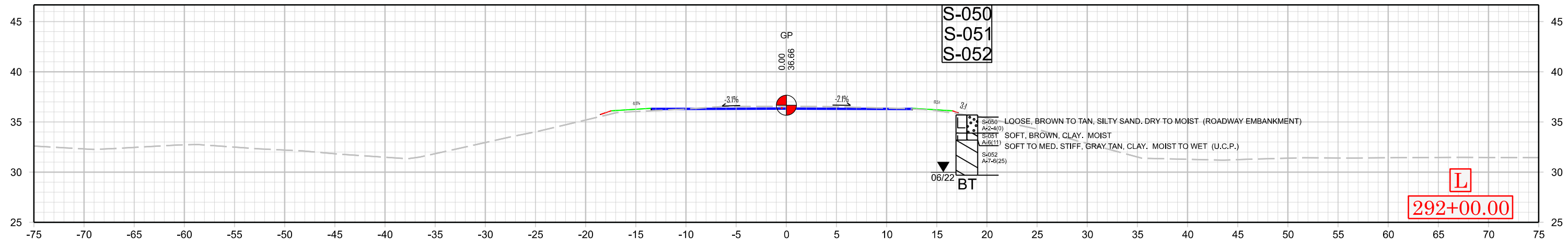


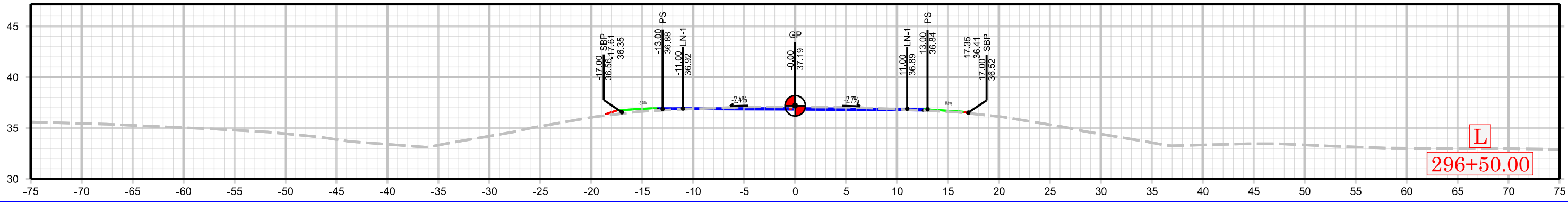
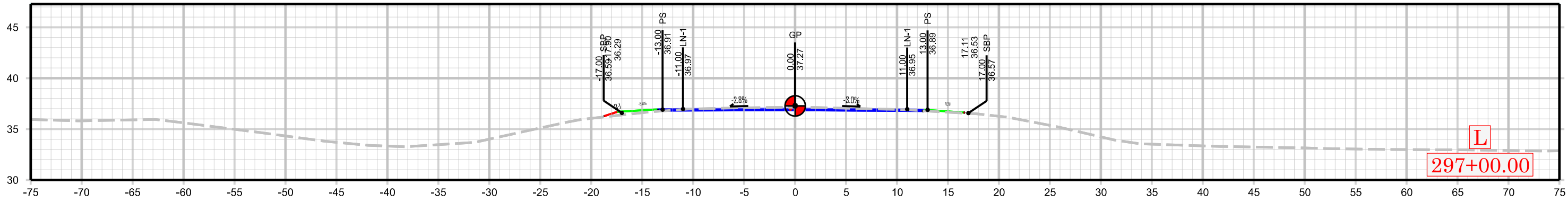
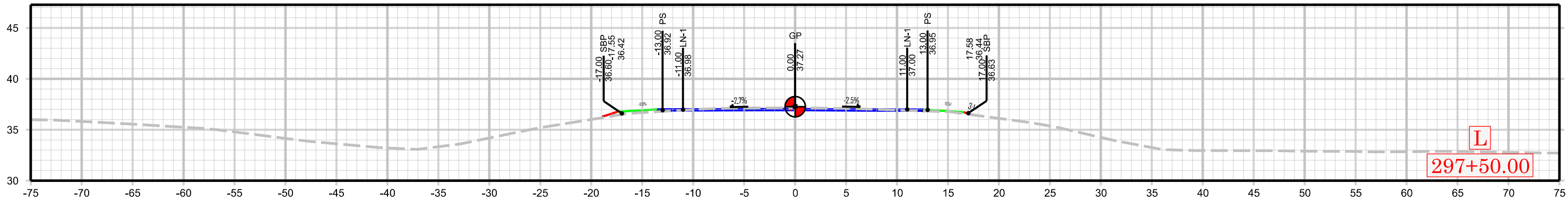
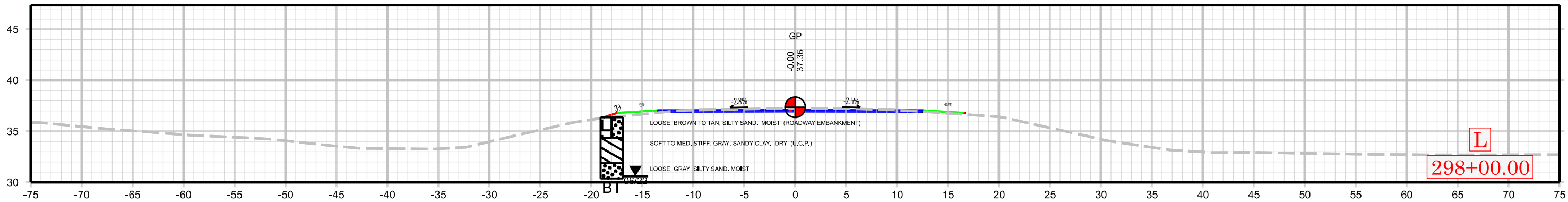
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-050	18 ft RT	292+00	0.2 - 1.8	A-2-4(0)	17	2	31.6	49.0	7.4	12.0	99.5	89	22		NA
S-051	18 ft RT	292+00	1.8 - 2.5	A-6(11)	38	14	5.8	19.9	35.6	38.7	100	98	79	33	NA
S-052	18 ft RT	292+00	2.5 - 6.0	A-7-6(25)	50	24	1.1	11.1	30.3	57.6	100	100	92		NA



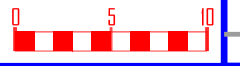
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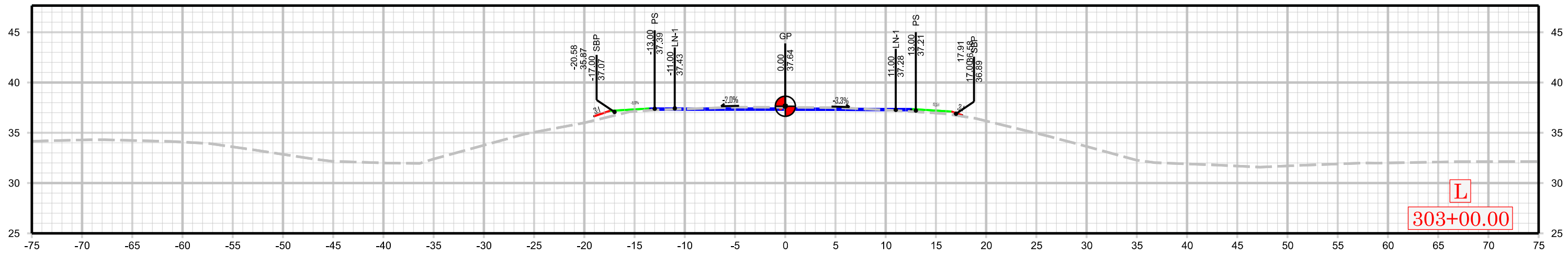
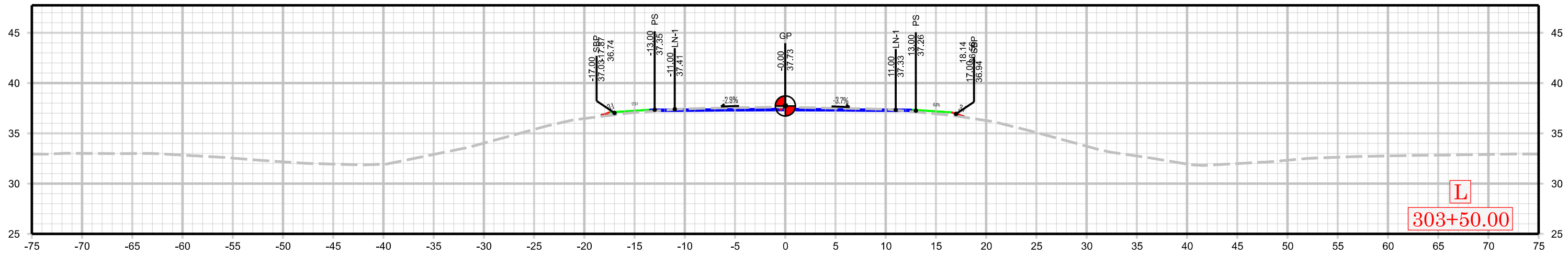
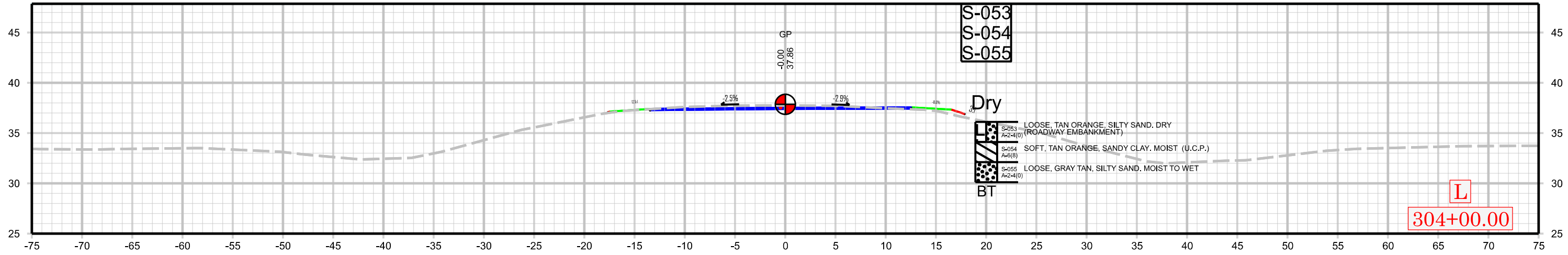


SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-053	20 ft RT	304+00	0.0 - 2.0	A-2-4(0)	21	4	31.0	42.7	7.3	19.0	99.3	89	28		NA
S-054	20 ft RT	304+00	2.0 - 4.0	A-6(8)	34	19	17.0	27.5	19.1	36.4	100	94	59	17	NA
S-055	20 ft RT	304+00	4.0 - 6.0	A-2-4(0)	NP	NP	41.7	39.1	8.3	11.0	99.2	81	22		NA

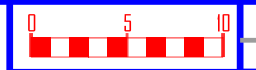


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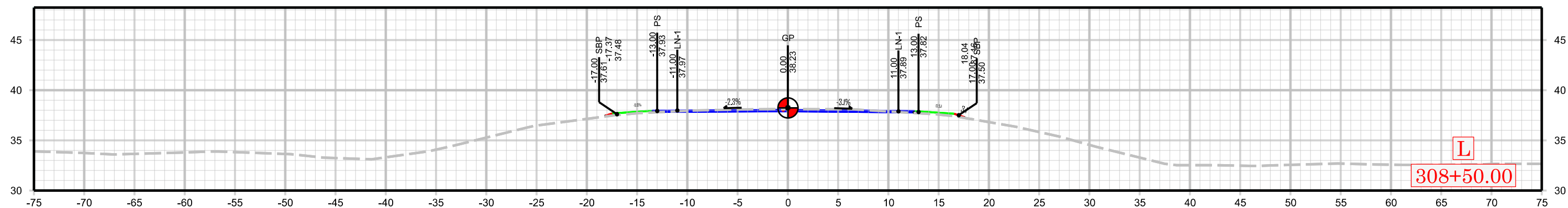
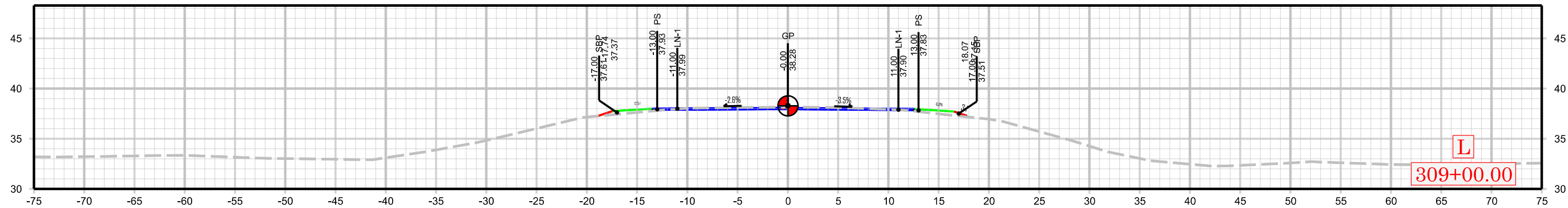
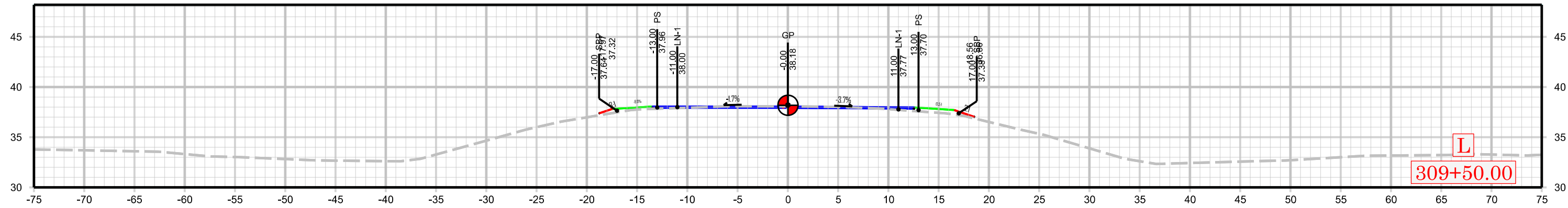
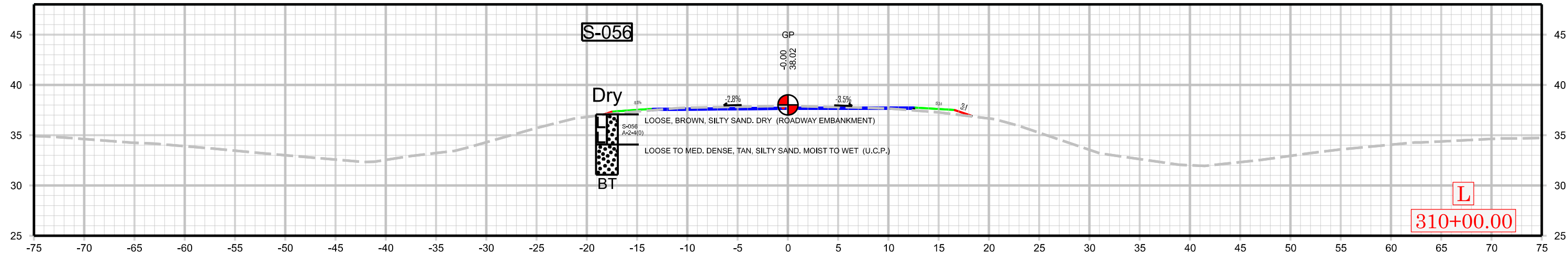


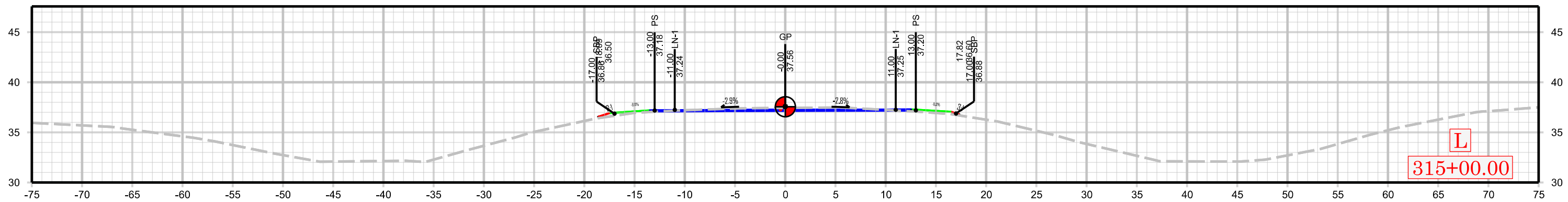
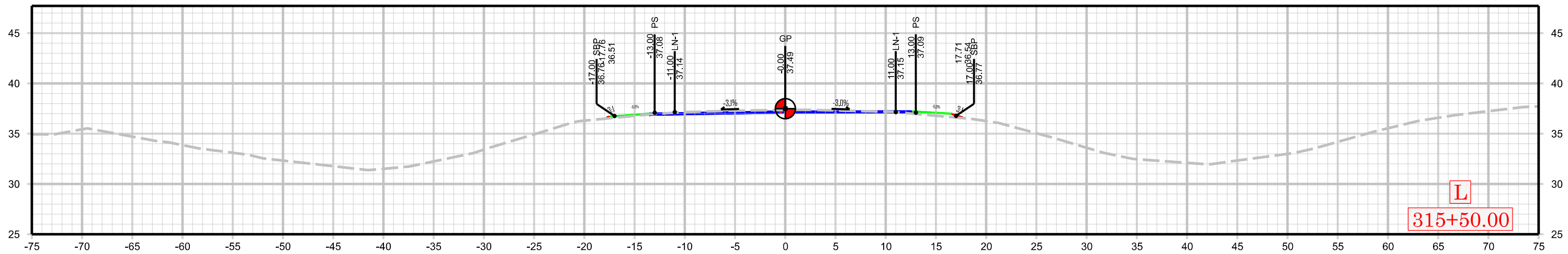
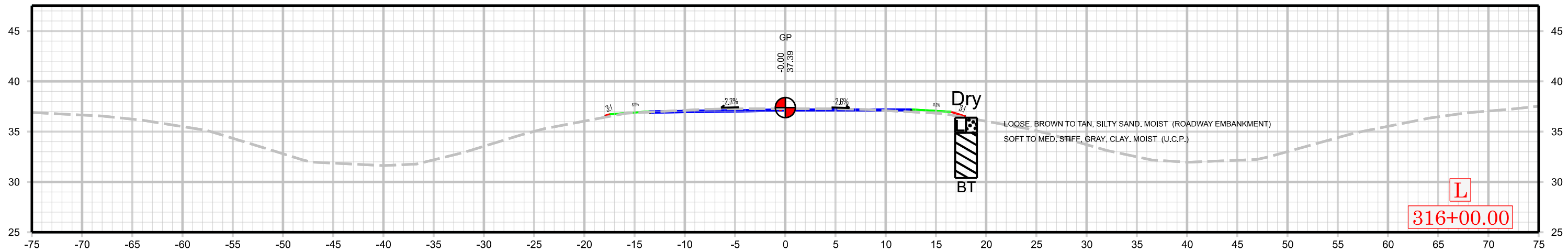
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-056	18 ft LT	310+00	0.0 - 3.0	A-2-4(0)	20	3	38.4	38.8	7.0	15.8	99.1	87	25		NA



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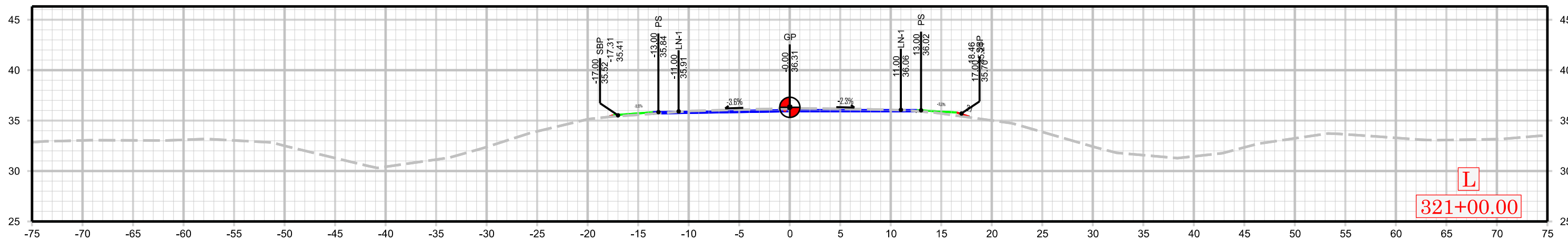
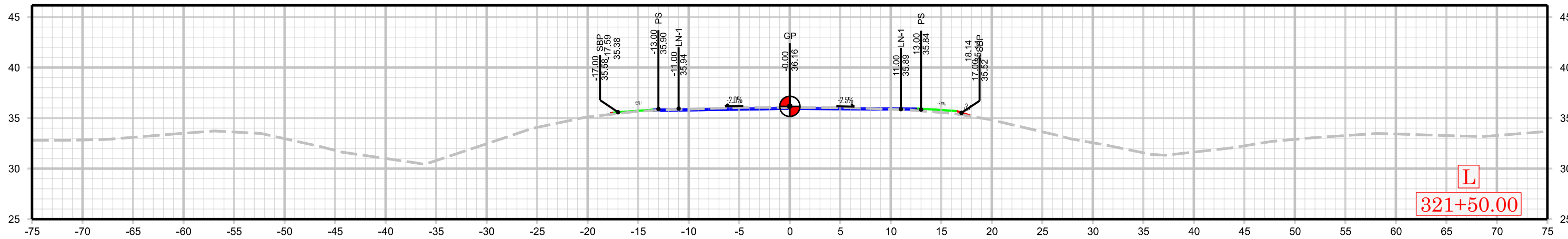
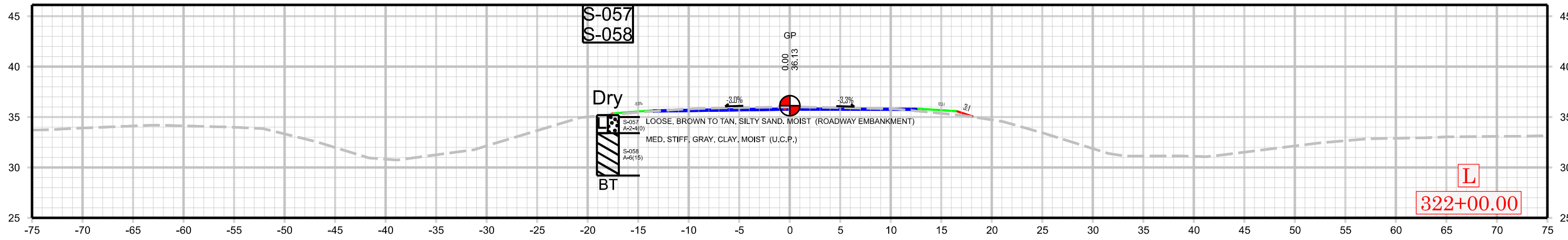
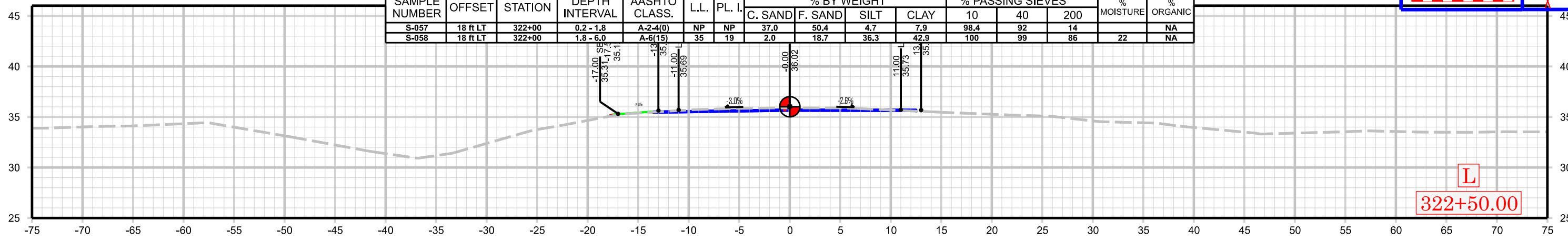


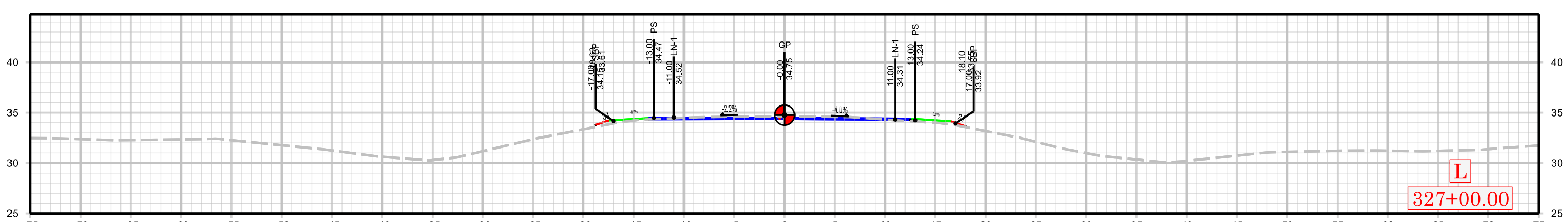
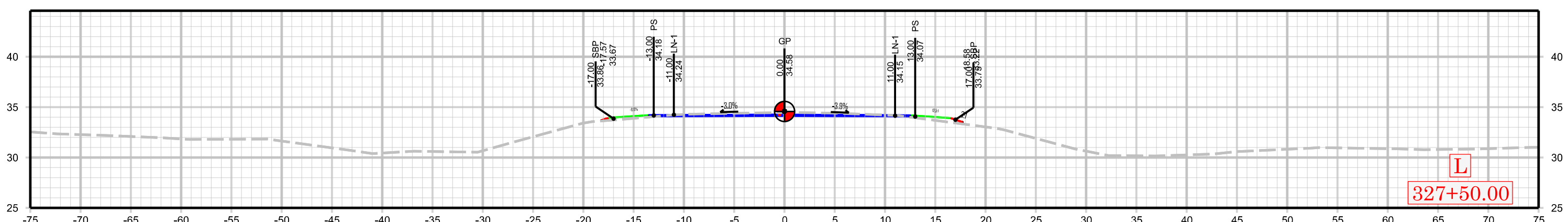
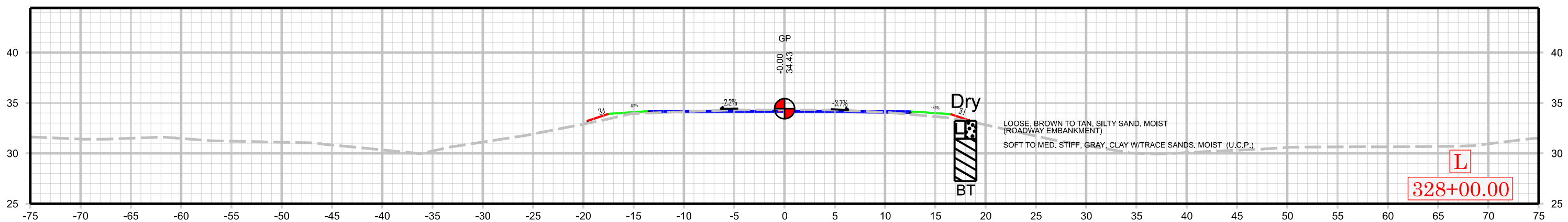
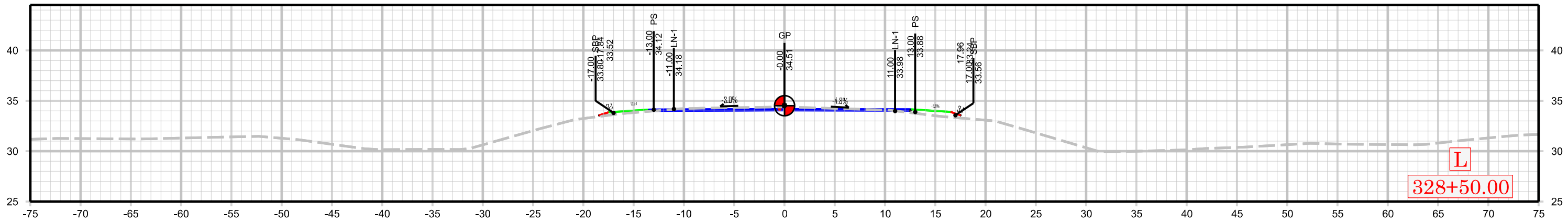
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-057	18 ft LT	322+00	0.2 - 1.8	A-2-4(0)	NP	NP	37.0	50.4	4.7	7.9	98.4	92	14		NA
S-058	18 ft LT	322+00	1.8 - 6.0	A-6(15)	35	19	2.0	18.7	36.3	42.9	100	99	86	22	NA



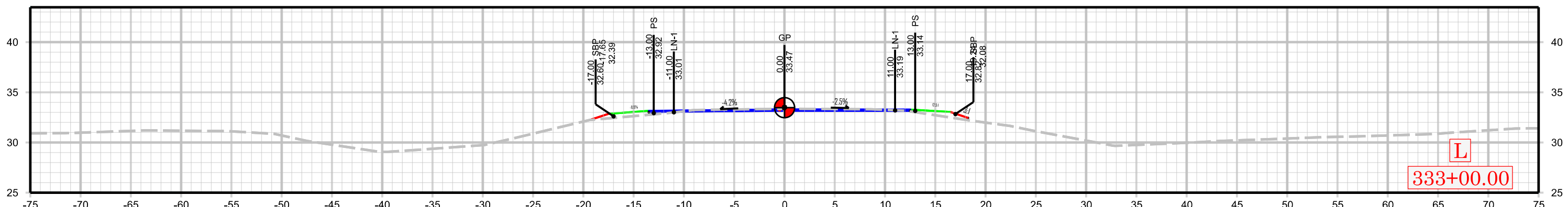
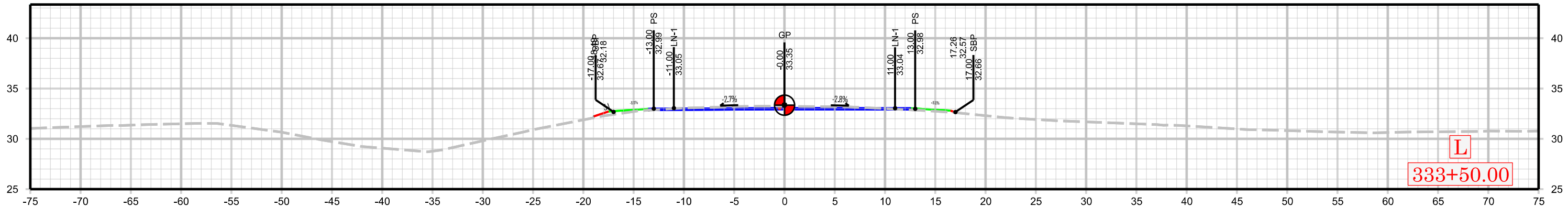
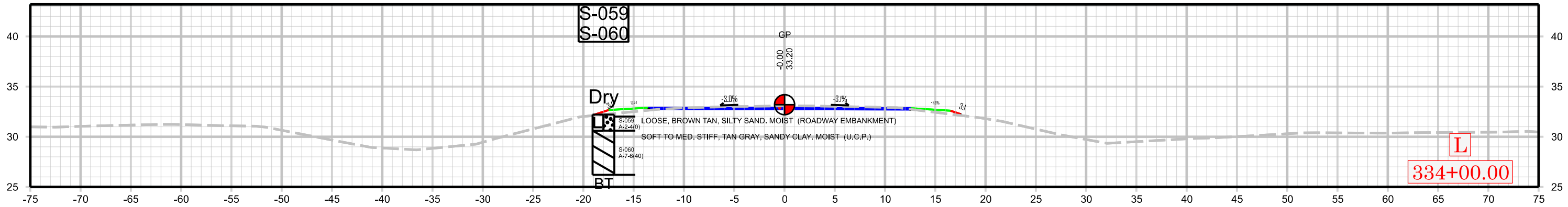
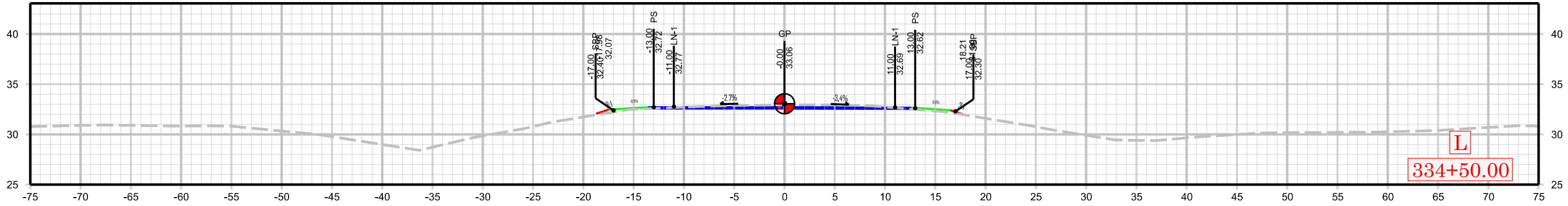
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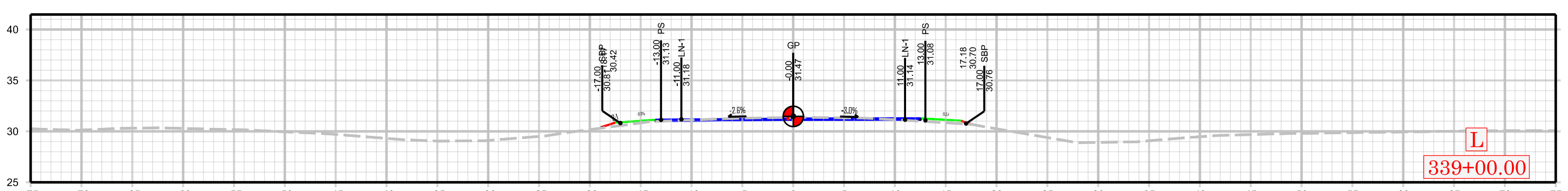
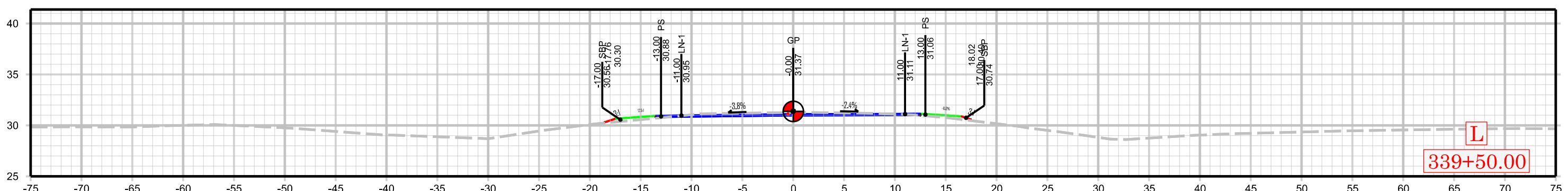
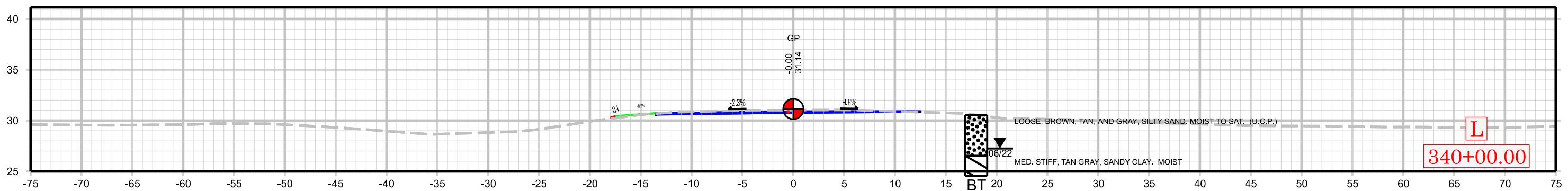
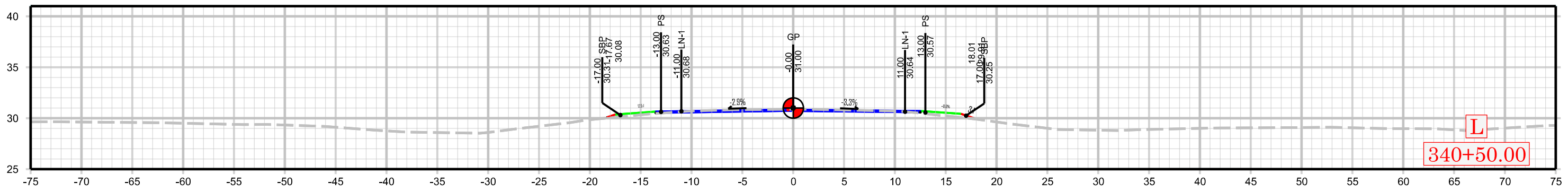




SOIL TEST RESULTS															
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-059	18 ft LT	334+00	0.2 - 1.6	A-2-4(0)	17	1	30.2	49.2	6.7	13.9	98.5	90	23		NA
S-060	18 ft LT	334+00	1.6 - 6.0	A-7-6(40)	60	37	0.6	5.7	36.8	56.9	100	100	96	26	NA

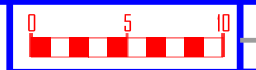
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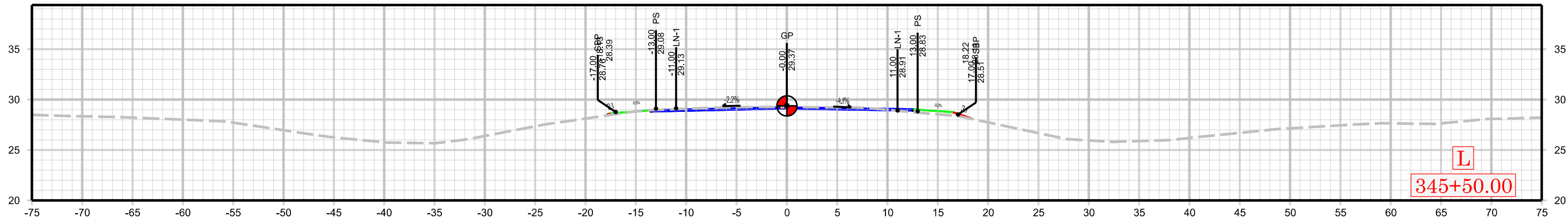
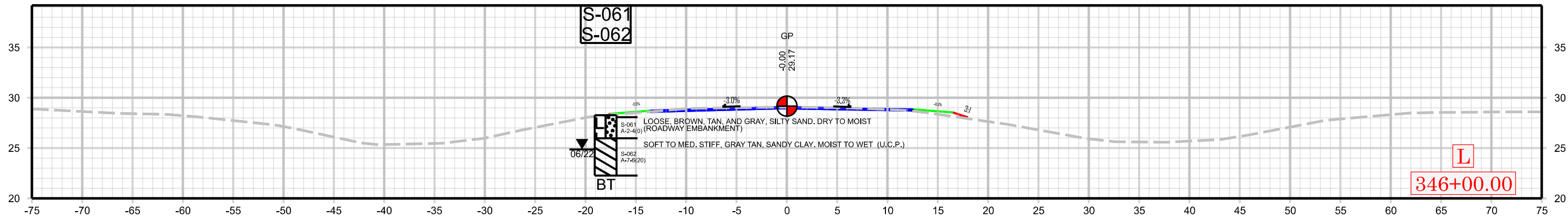
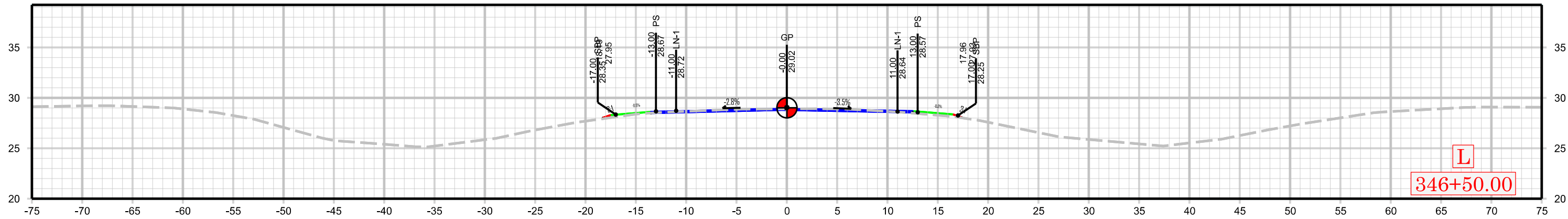
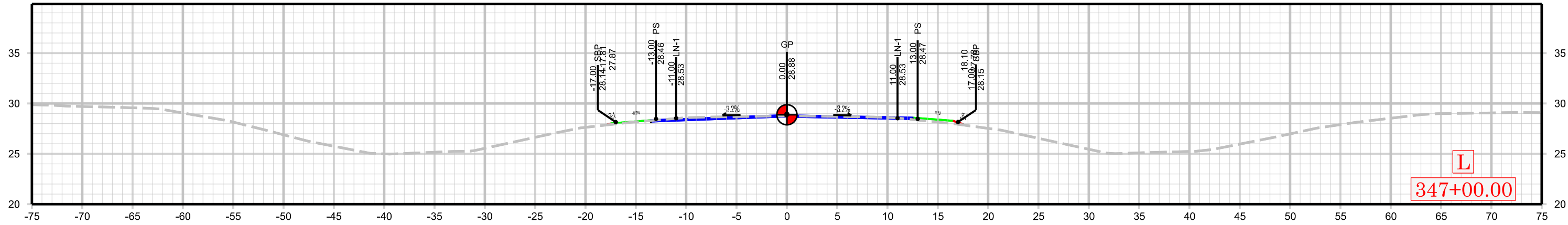


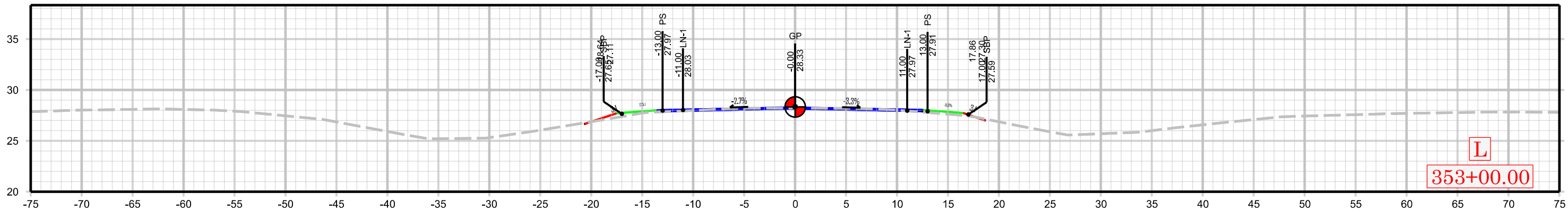
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-061	18 ft LT	346+00	0.2 - 2.3	A-2-4(0)	20	4	33.7	41.6	9.8	14.9	99.7	88	27		NA
S-062	18 ft LT	346+00	2.3 - 6.0	A-7-6(20)	44	22	2.6	18.7	31.1	47.5	100	99	86	31	NA

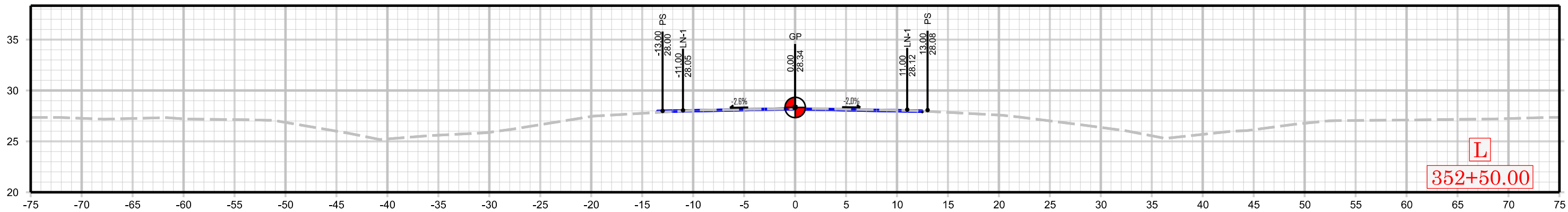


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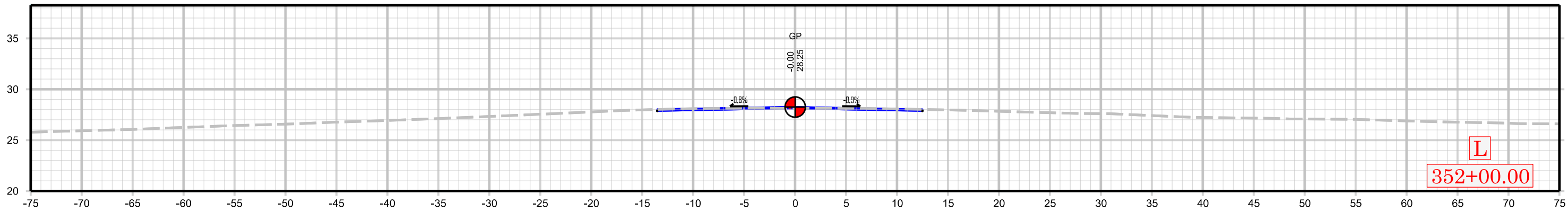




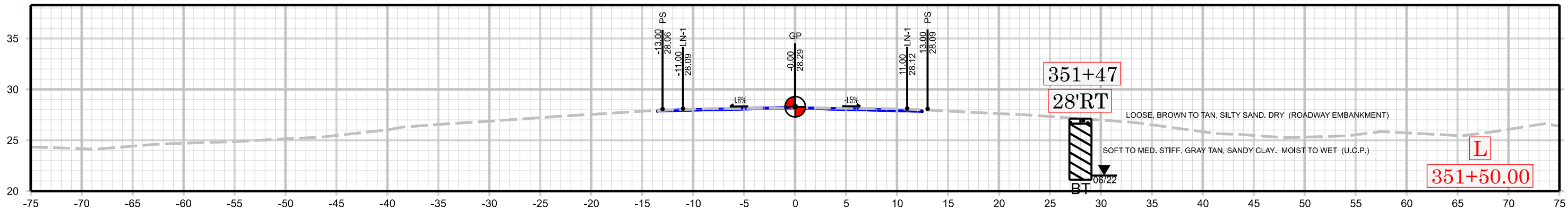
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353+00.00



L
352+50.00



L
352+00.00

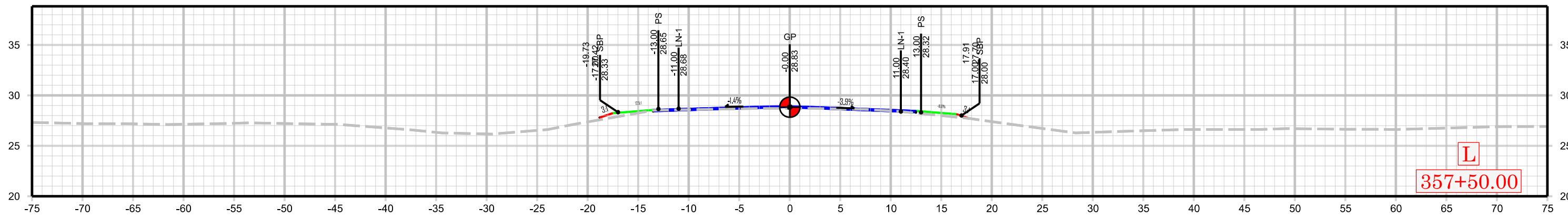
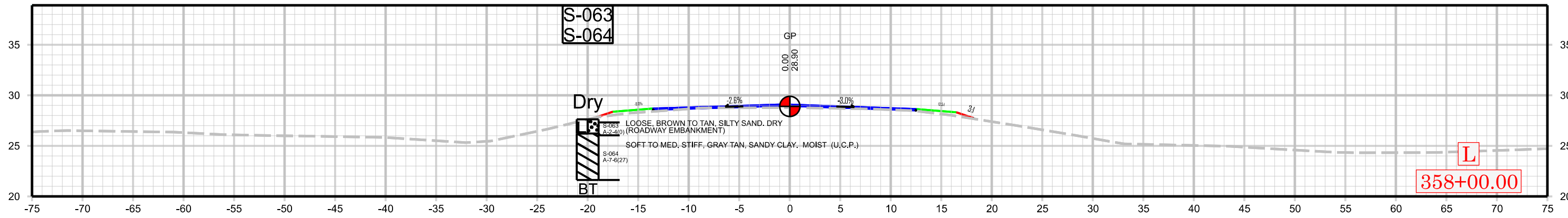
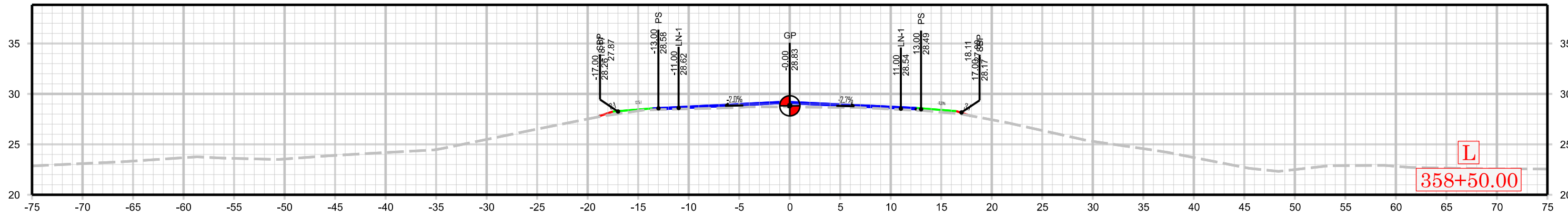
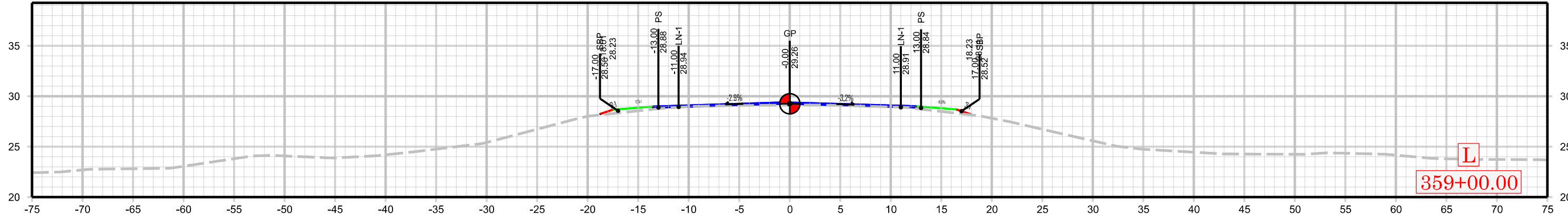
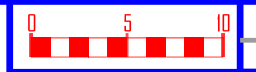


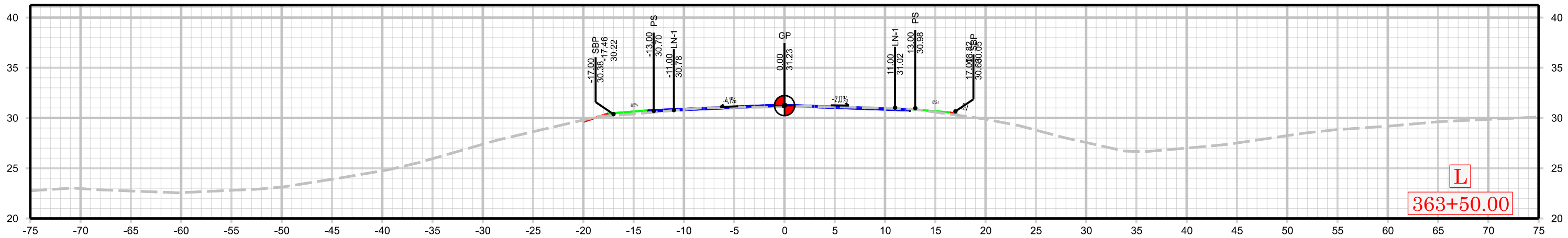
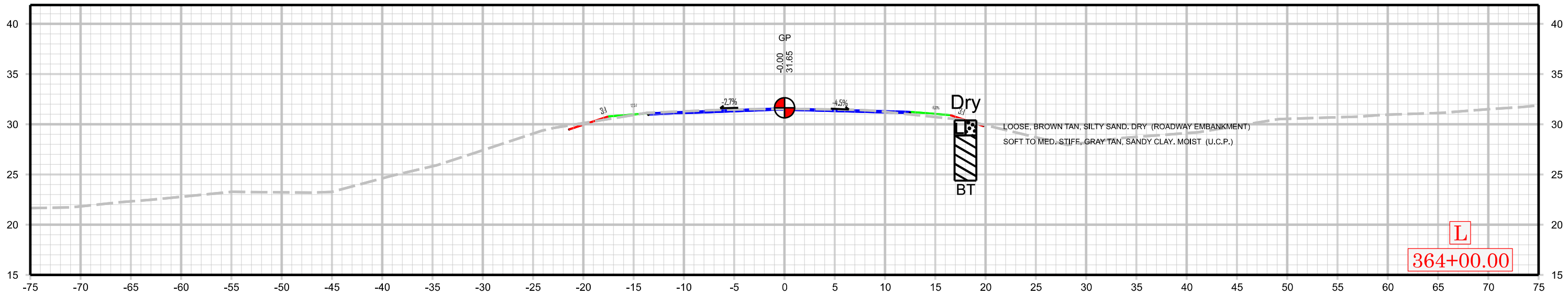
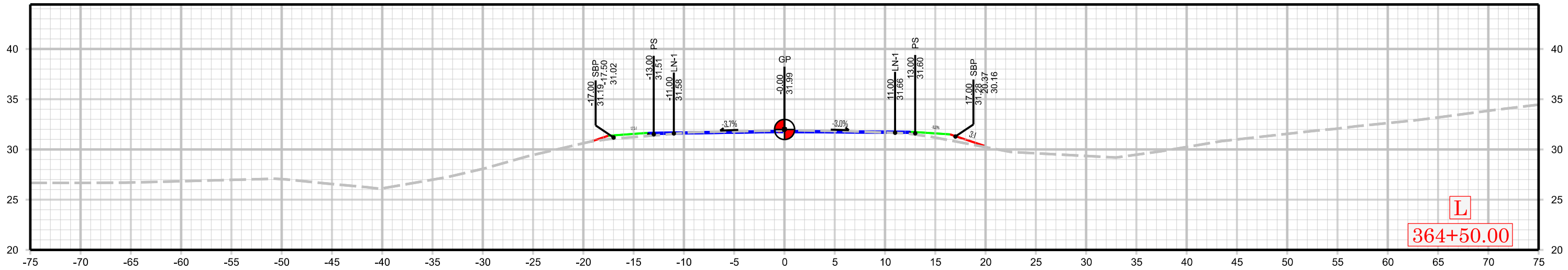
351+47
28'RT

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351+50.00

SOIL TEST RESULTS

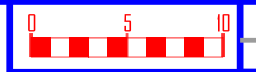
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-063	20 ft LT	358+00	0.3 - 1.4	A-2-4(0)	17	1	30.7	43.6	10.8	14.8	99.5	89	29		NA
S-064	20 ft LT	358+00	1.4 - 6.0	A-7-6(27)	49	28	1.0	13.5	32.2	53.3	100	100	91	27	NA



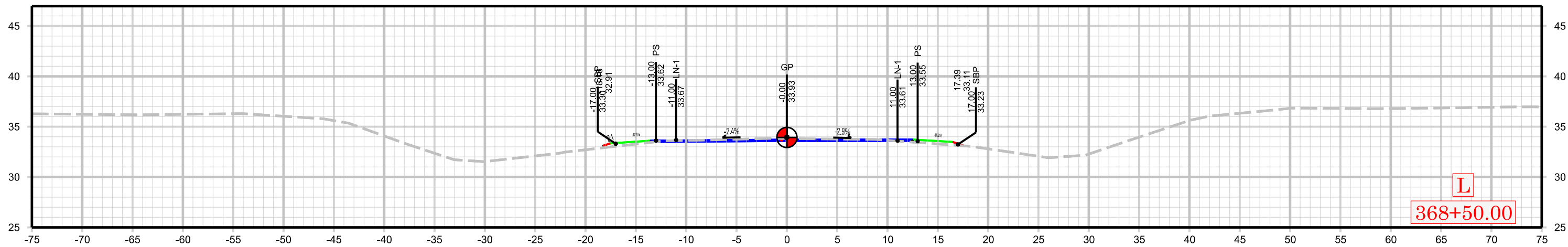
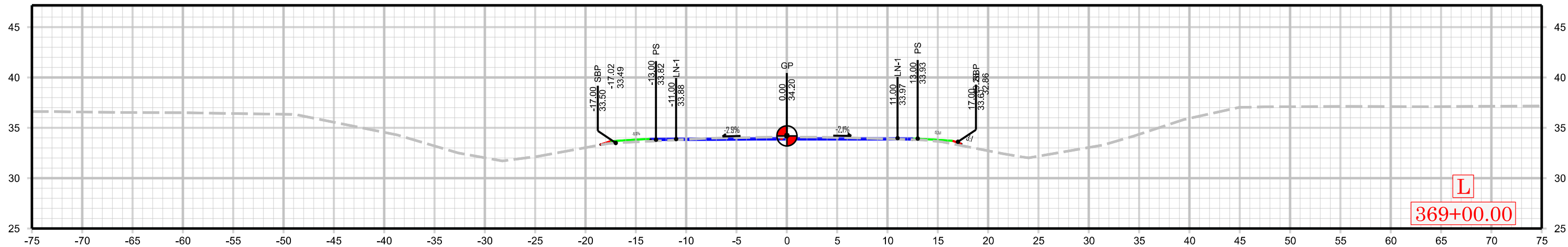
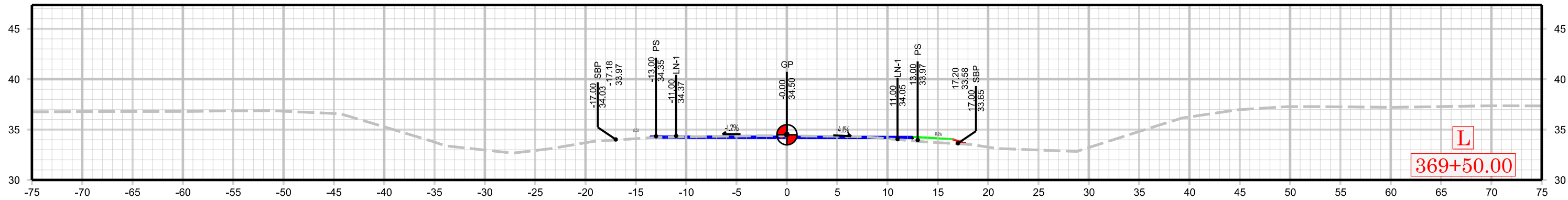
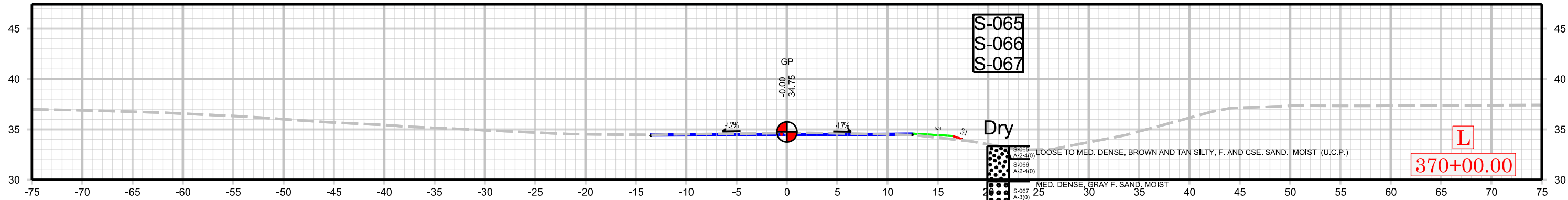


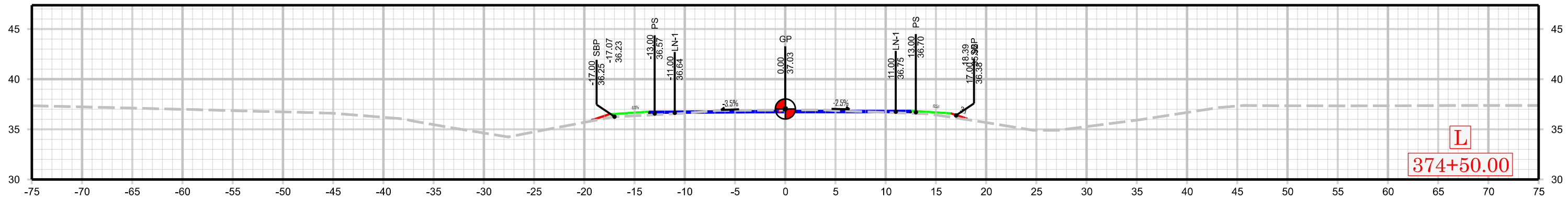
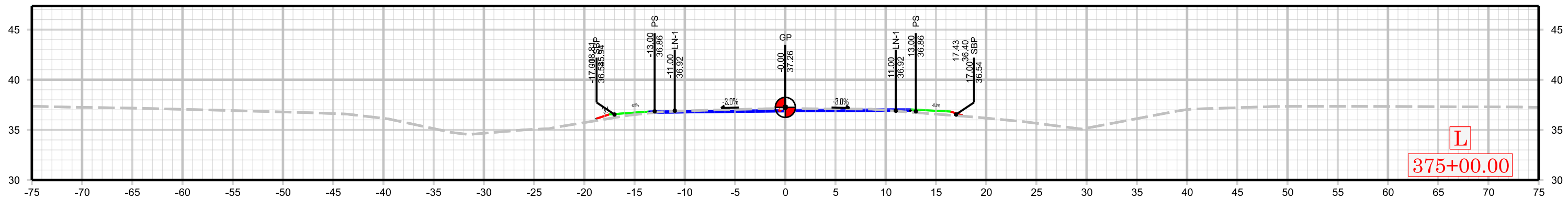
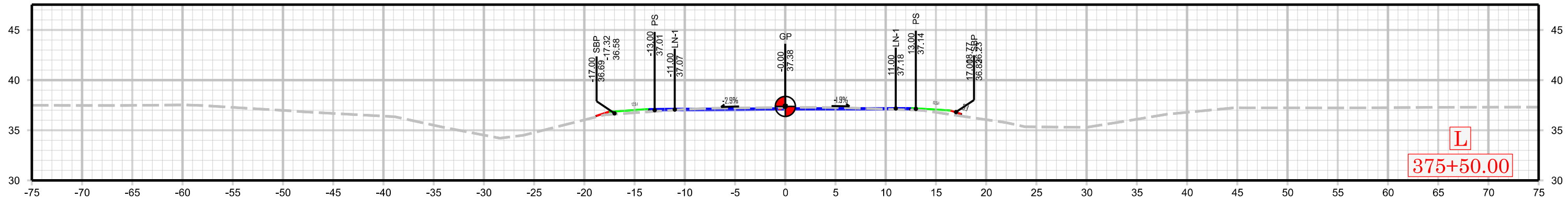
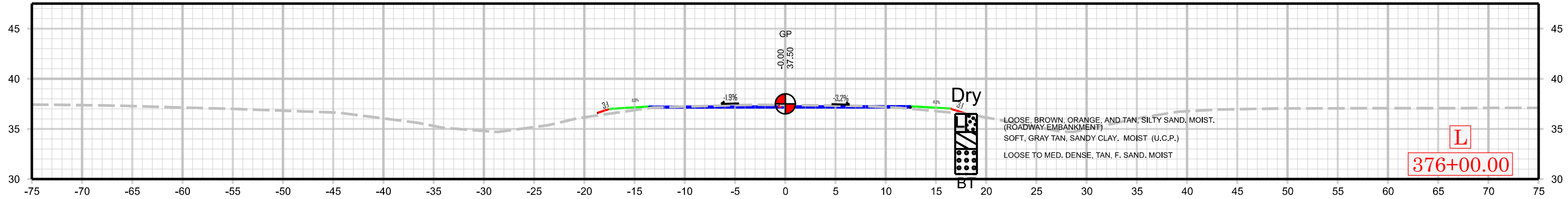
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-065	21 ft RT	370+00	0.0 - 0.8	A-2-4(0)	21	2	32.5	46.3	17.7	3.5	97.2	85	25		NA
S-066	21 ft RT	370+00	0.8 - 3.5	A-2-4(0)	16	2	31.3	52.9	2.9	12.9	100	94	17		NA
S-067	21 ft RT	370+00	3.5 - 6.0	A-3(0)	NP	NP	47.8	44.0	3.2	5.0	99.8	85	9		NA



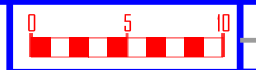
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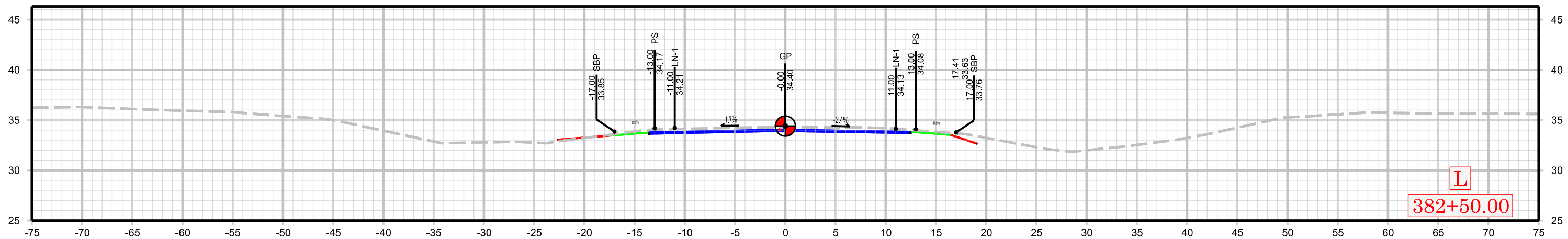
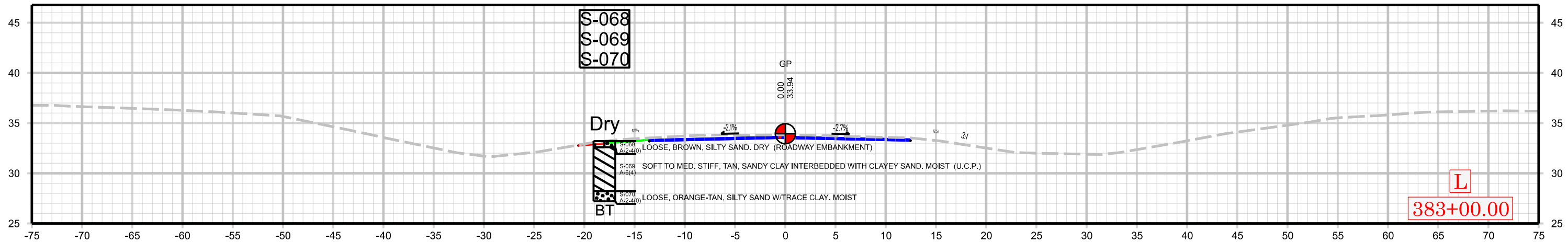
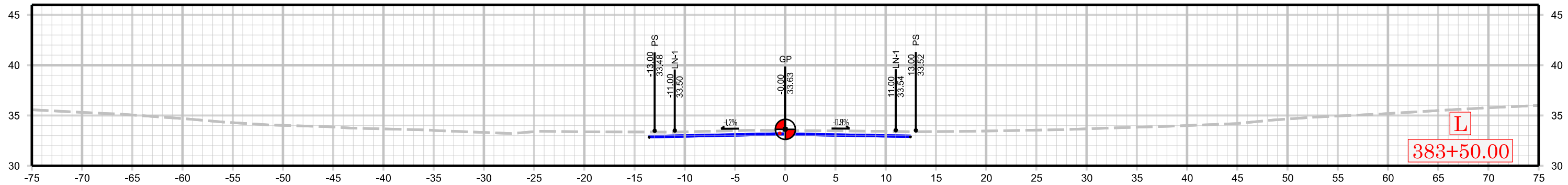
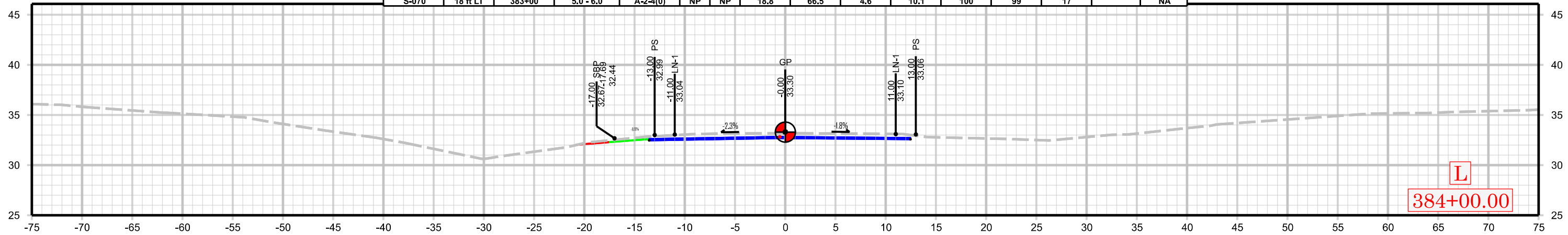


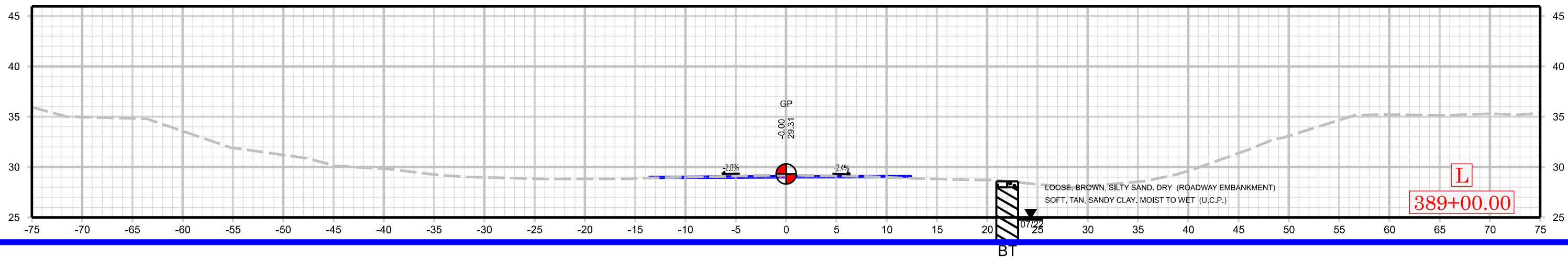
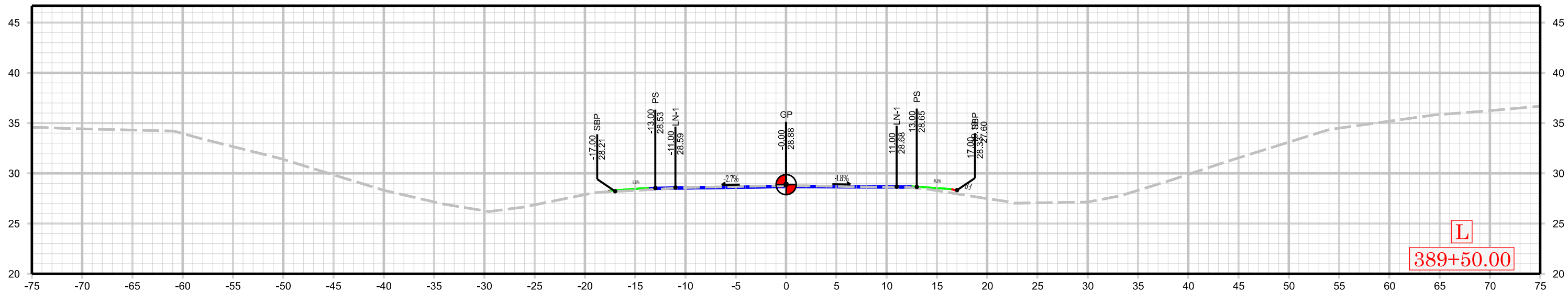
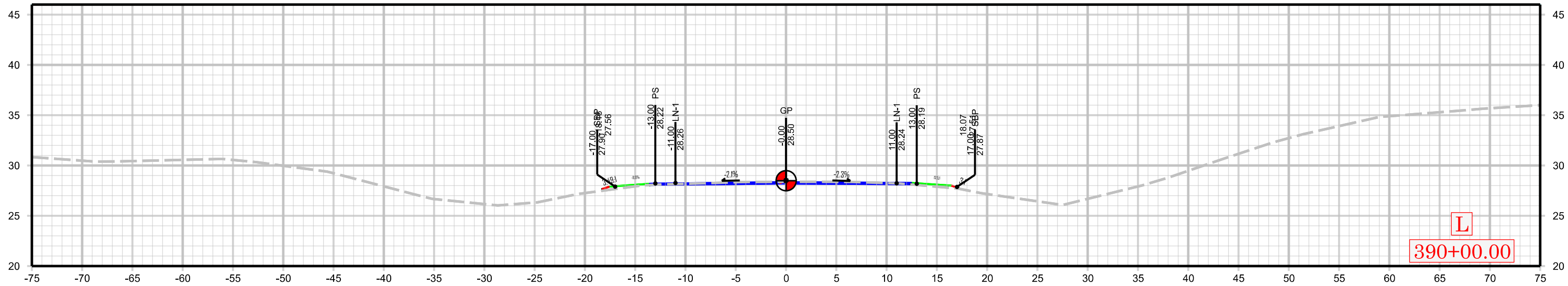
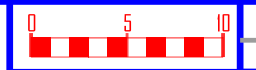
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-068	18 ft LT	383+00	0.0 - 0.6	A-2-4(0)	24	7	22.6	47.4	9.8	20.2	99.6	91	33		NA
S-069	18 ft LT	383+00	0.6 - 5.0	A-6(4)	32	15	3.6	49.5	10.1	36.8	100	99	51	21	NA
S-070	18 ft LT	383+00	5.0 - 6.0	A-2-4(0)	NP	NP	18.8	66.5	4.6	10.1	100	99	17		NA



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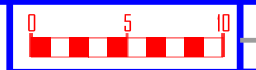




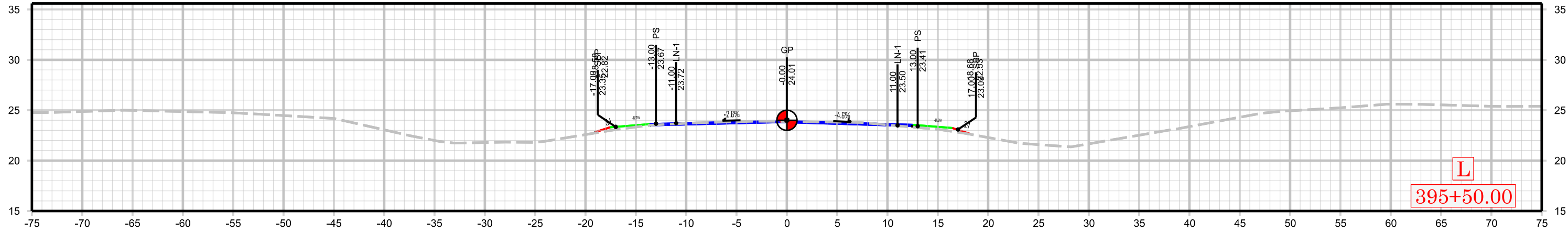
BT

SOIL TEST RESULTS

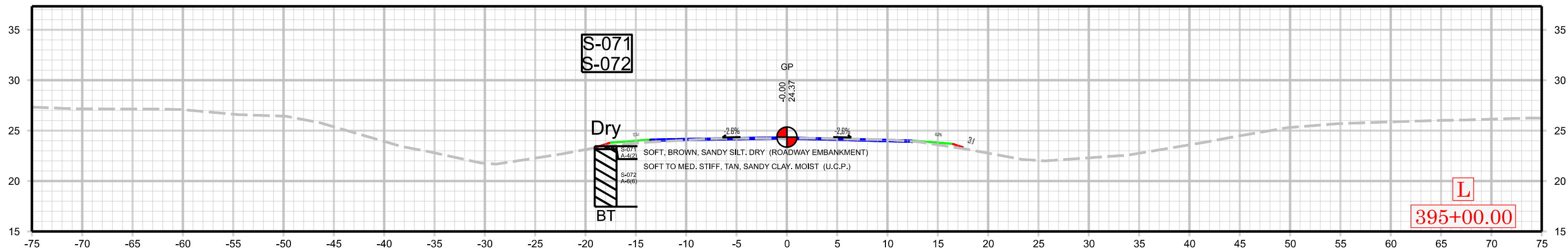
SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-071	18 ft LT	395+00	0.0 - 0.3	A-4(2)	28	10	12.2	46.6	13.7	27.4	99.6	95	48		NA
S-072	18 ft LT	395+00	0.3 - 6.0	A-6(6)	34	16	4.9	47.3	17.3	30.6	99.9	98	54	14	NA



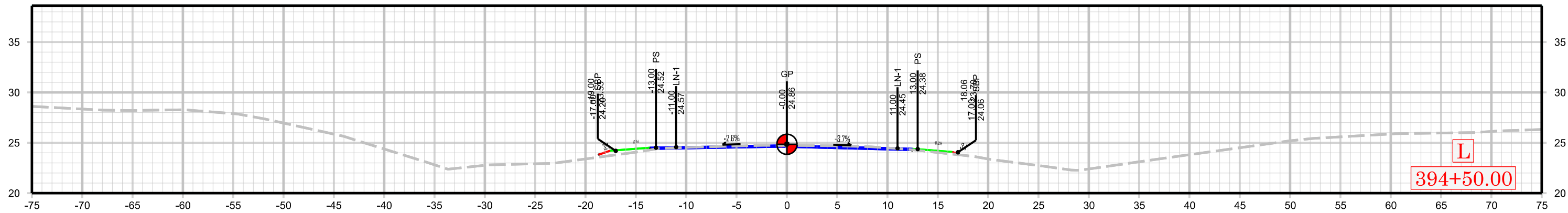
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X 222



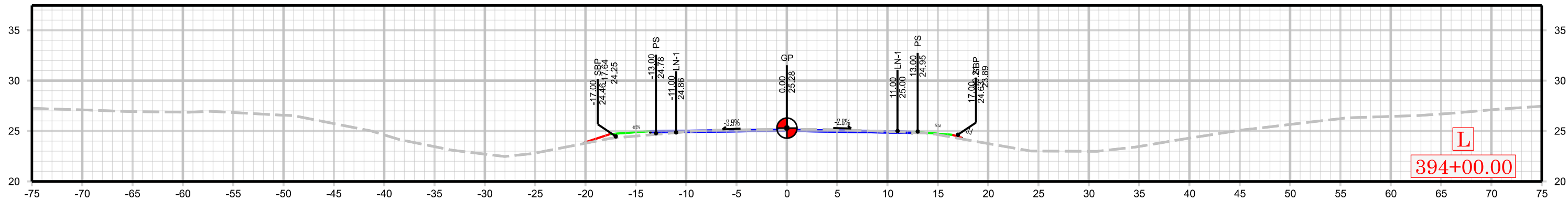
L
395+50.00



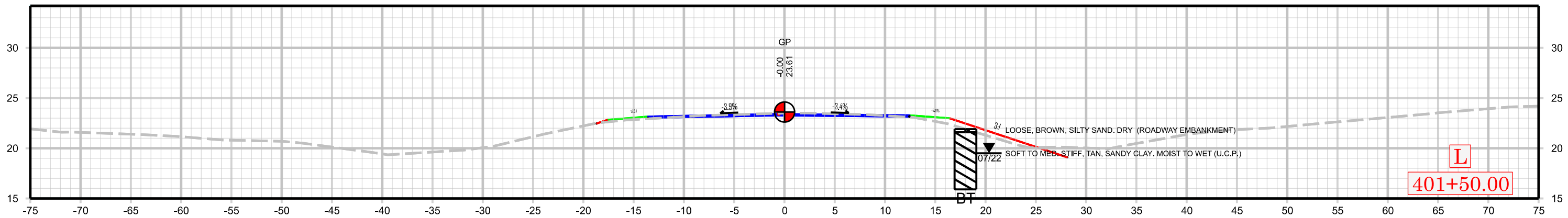
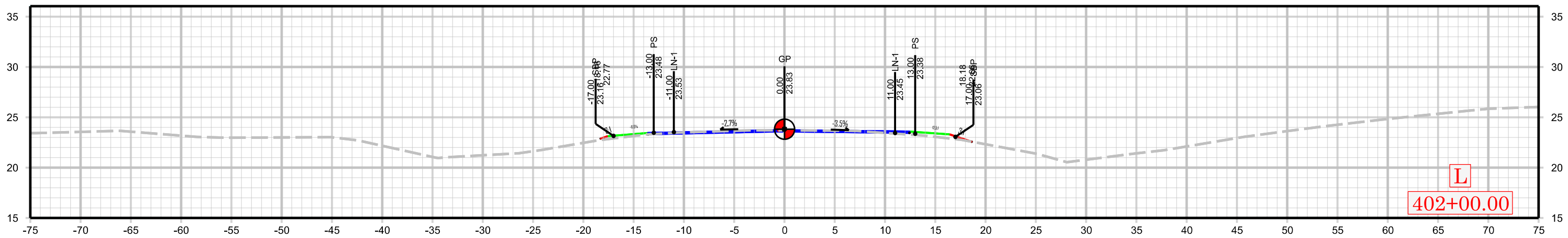
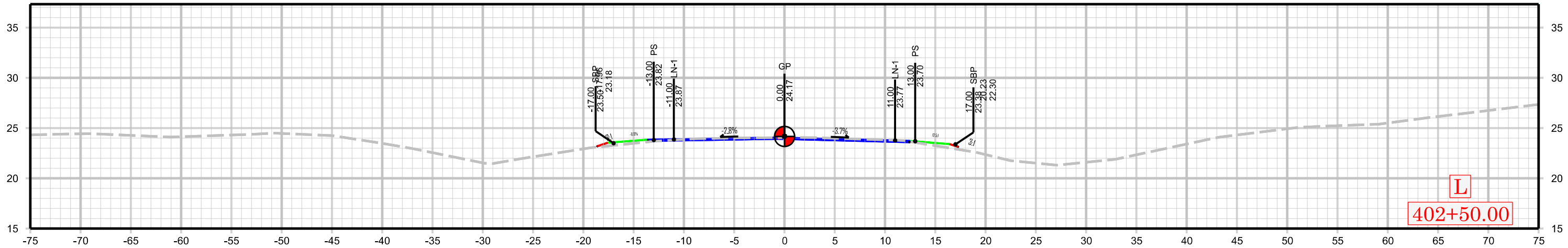
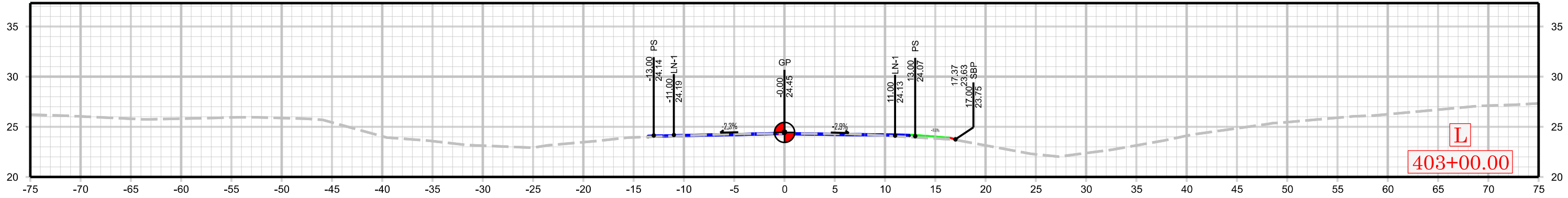
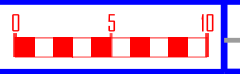
L
395+00.00



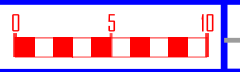
L
394+50.00



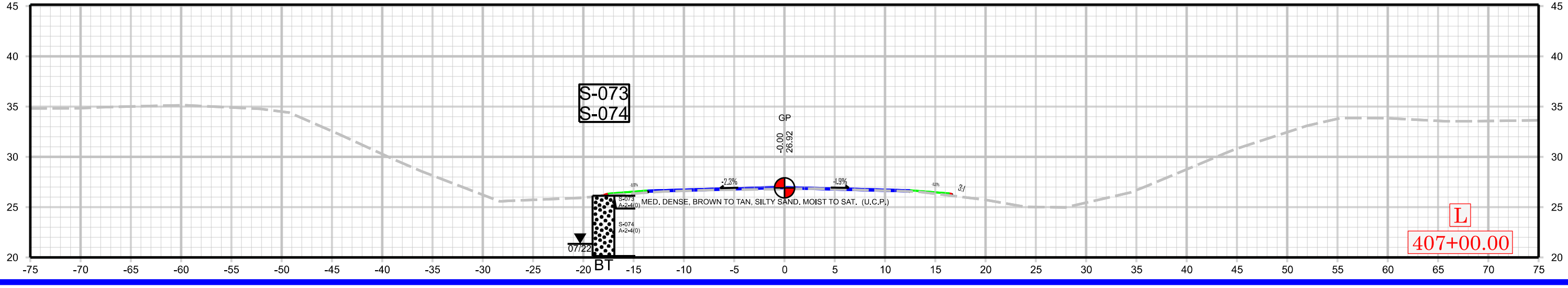
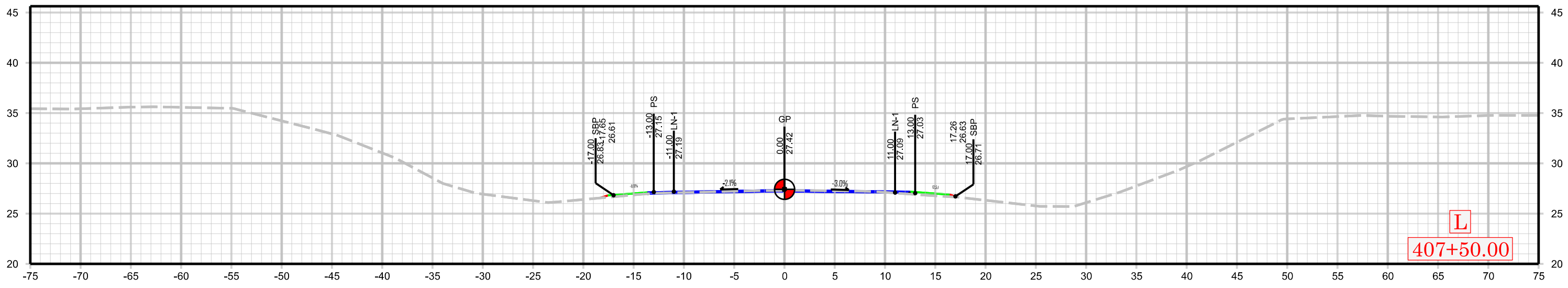
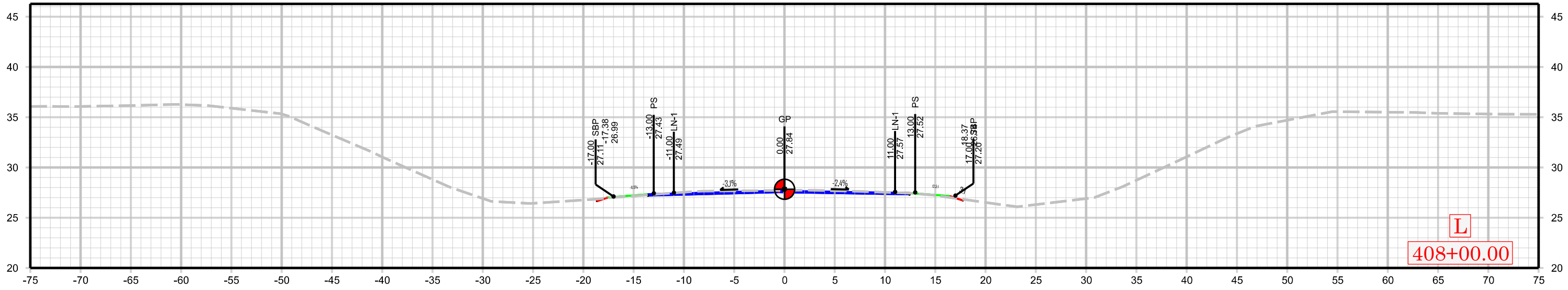
L
394+00.00

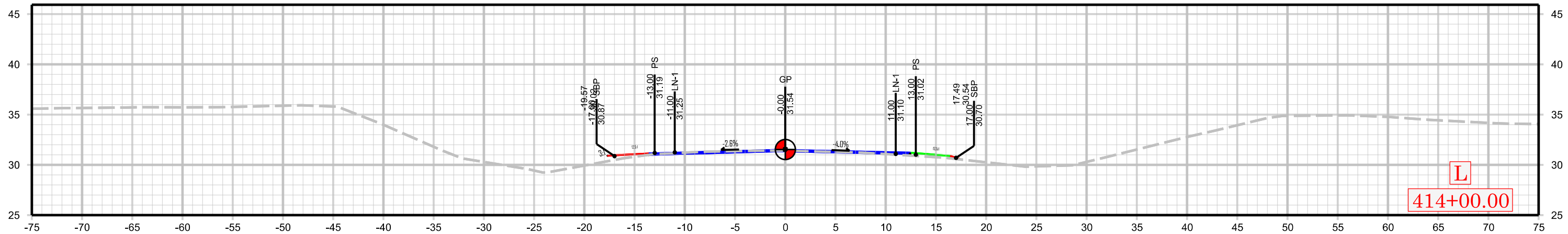


SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
							S-073	18 ft LT	407+00	0.0 - 0.3	A-2-4(0)	NP	NP		
S-074	18 ft LT	407+00	0.3 - 6.0	A-2-4(0)	NP	NP	14.1	58.3	7.3	20.3	100	100	30	NA	

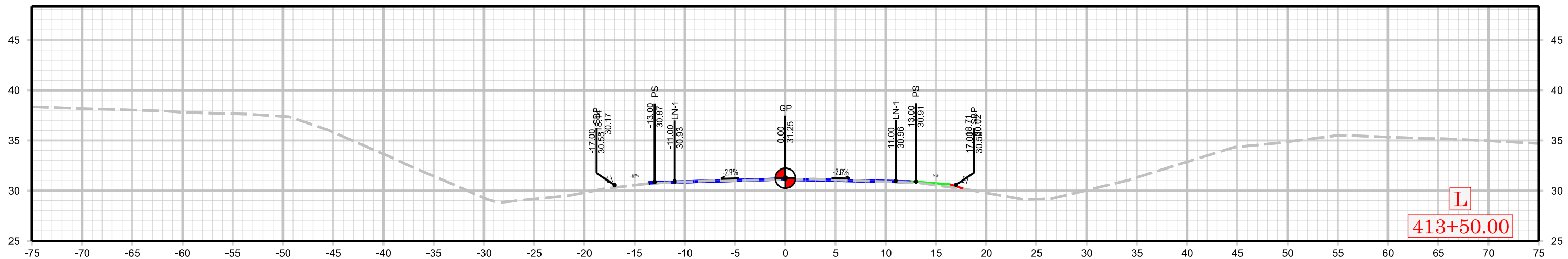


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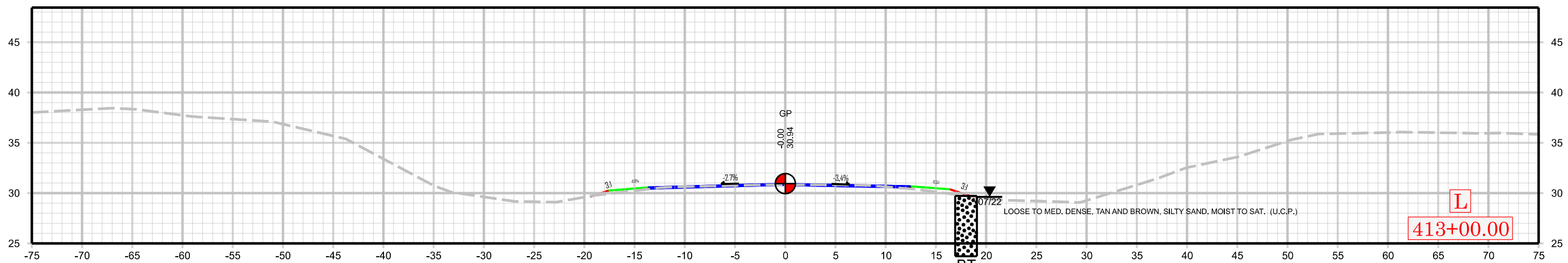




L
414+00.00



L
413+50.00

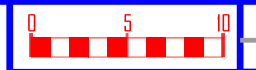


L
413+00.00

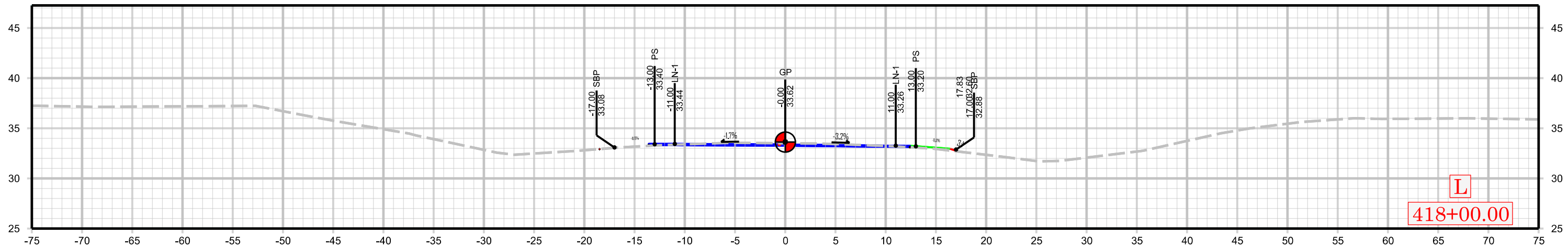
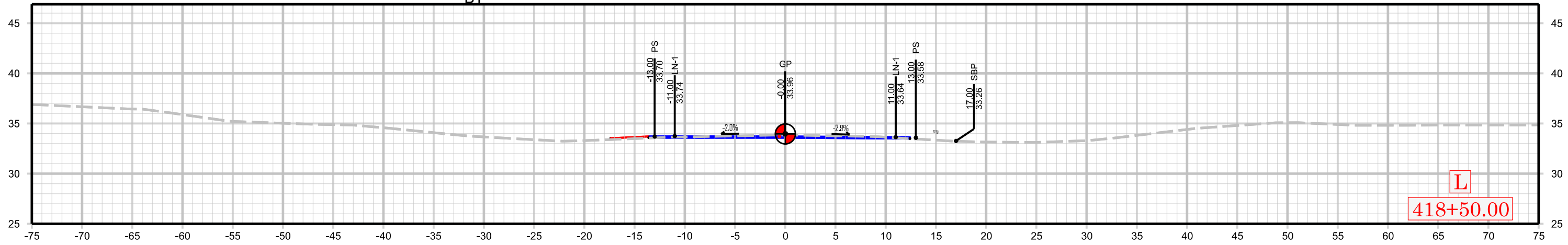
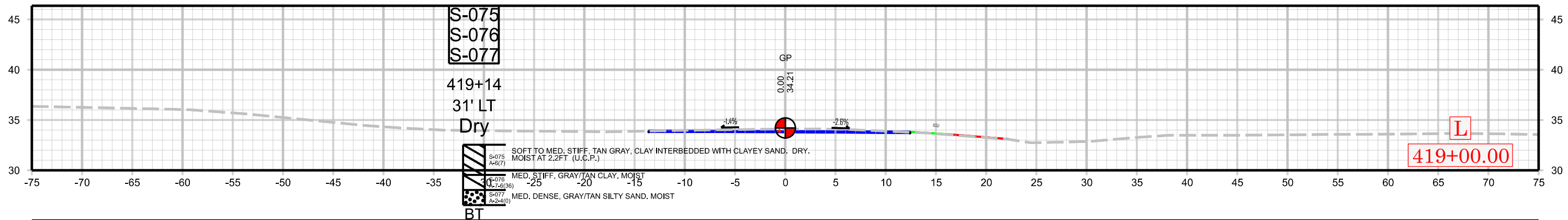
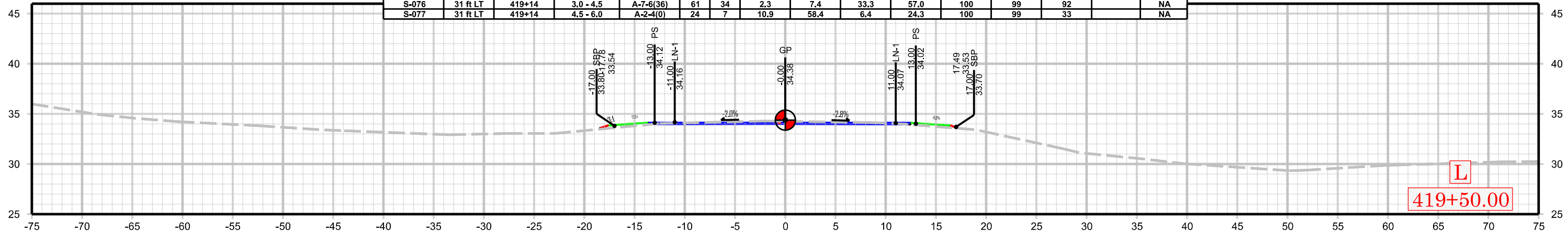
LOOSE TO MED. DENSE, TAN AND BROWN, SILTY SAND, MOIST TO SAT. (U.C.P.)

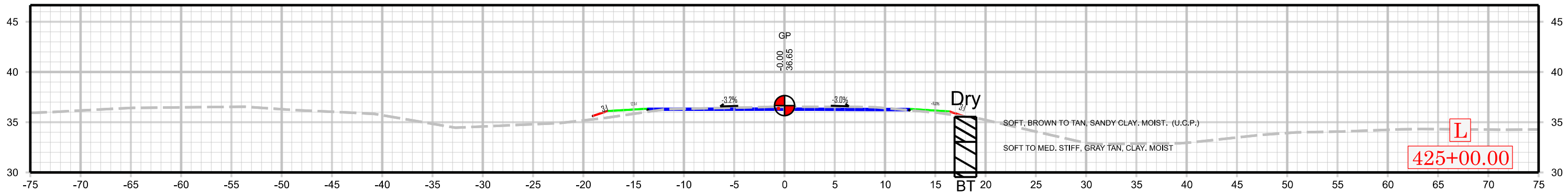
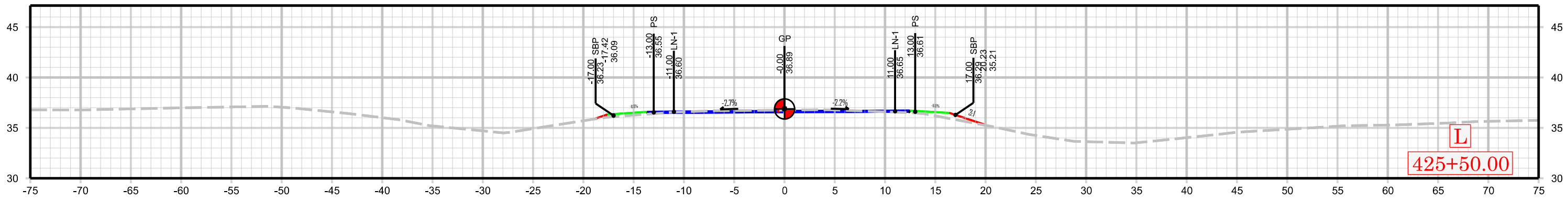
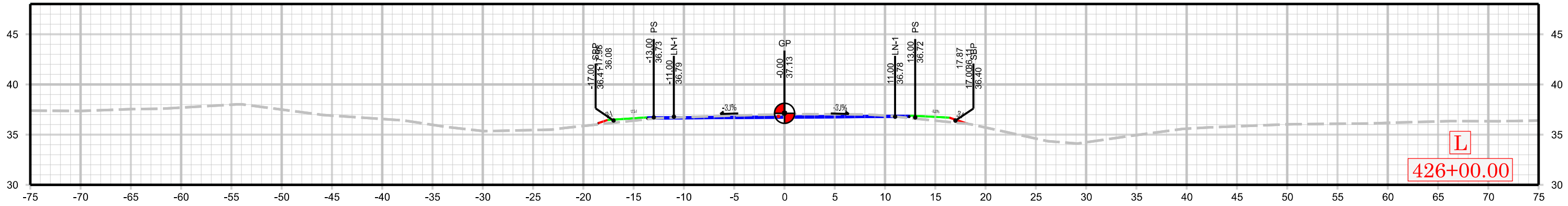
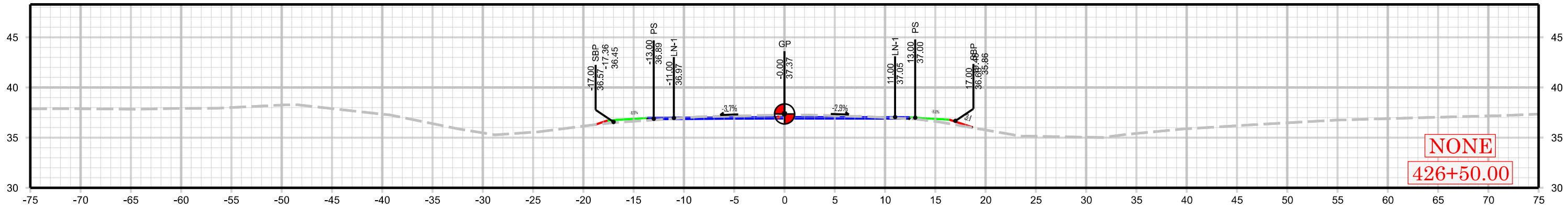
SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-075	31 ft LT	419+14	0.0 - 3.0	A-6(7)	34	19	14.5	32.4	14.3	38.8	99.9	96	56		NA
S-076	31 ft LT	419+14	3.0 - 4.5	A-7-6(36)	61	34	2.3	7.4	33.3	57.0	100	99	92		NA
S-077	31 ft LT	419+14	4.5 - 6.0	A-2-4(0)	24	7	10.9	58.4	6.4	24.3	100	99	33		NA



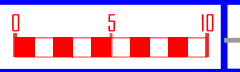
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SOIL TEST RESULTS

SAMPLE NUMBER	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-078	18 ft LT	431+00	0.0 - 1.5	A-6(11)	35	15	7.8	23.7	38.3	30.2	98.8	96	78		NA
S-079	18 ft LT	431+00	1.5 - 3.0	A-7-6(24)	44	24	1.5	15.2	38.3	45.0	100	99	93		NA
S-080	18 ft LT	431+00	3.0 - 6.0	A-2-4(0)	24	8	27.9	41.4	8.4	22.3	100	99	33		NA



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