

Appendix A-1:
Soil Sheets

GEOTECHNICAL INDEX

SHEET NAME SHEET NO.

GEOTECHNICAL INDEX.....G1

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Pre-Advertisement
Info Only

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G1

DEFINITION OF EARTHWORK TERMS

THE TERMS AND DEFINITIONS BELOW SHALL CHARACTERIZE THE MATERIAL TYPE THAT WILL BE ENCOUNTERED DURING EXCAVATION AND GRADING. SEE TYPE MATERIAL REFERENCE IN TYPICAL SECTIONS LEGEND.

A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, WATER OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT END EXCAVATORS/LOADERS.

B. SOLID ROCK MATERIAL

SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E. BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE-SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCK CUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE A PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP, OR OTHER ROCK AGGREGATE CONSTRUCTION PRODUCTS.

C. SOFT ROCK OR DEGRADABLE ROCK

THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH MODERATE TO HEAVY CRUSHING FORCES. FOR CONSTRUCTION PURPOSES THIS MATERIAL WOULD HAVE TO BE SUBJECTED TO RIPPING TYPE EQUIPMENT, HOE RAMS, OR RUGGED USE OF A LARGE BULLDOZER IN ORDER TO SEPARATE THE MATERIAL SUCH THAT IT CAN BE READILY LOADED INTO EARTH MOVING TRUCKS. THESE MATERIALS WOULD TYPICALLY BE SHALES, CLAYSTONES, SILTSTONES, WEATHERED SANDSTONES, WEATHERED SCHIST AND WEATHERED GNEISS.

D. TRANSITIONAL MATERIALS

THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C) OCCURRING IN EITHER NON-UNIFORM INTERBEDDED LAYERS OF THE ABOVE MATERIALS (I.E. SHALE MATERIAL WITH RELATIVELY THIN LAYERS OF SOLID ROCK SUCH AS HARD LIMESTONE) OR ERRATIC LOCALIZED CHANGES OF MATERIAL TYPES BOTH Laterally AND WITH DEPTH (SUCH AS A GEOLOGIC FORMATION RESULTING IN PINNACLED ROCK COLUMNS, FLOATING BOULDERS OR LENSES INTERCALATED WITH CLAY SOIL, A COMMON OCCURRENCE IN CERTAIN REGIONS OF TENNESSEE). FOR CONSTRUCTION PURPOSES, THIS MATERIAL MAY HAVE TO BE EXCAVATED USING A COMBINATION OF EXCAVATION METHODS SUCH AS BLASTING OF ROCK PINNACLES, LAYERS OR BOULDERS ALONG WITH A RIPPING OF WEATHERED ROCK AND EXCAVATING OF SOIL WITH TRACK HOES OR LOADERS ALL WITHIN A LOCALIZED AREA. THIS MATERIAL WOULD NOT BE SUITABLE FOR THE USE OF EXCAVATING PAN TYPE EQUIPMENT.

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① ②
① ②

ESTIMATED SOILS QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	335,100
740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	129,800

FOOTNOTES:

① THIS ITEM TO BE USED BETWEEN THE STATIONS LISTED IN THE NOTES BELOW OR OTHERWISE DIRECTED AS DIRECTED BY ENGINEER FOR THE STABILIZATION OF SUBGRADE.

② QUANTITIES ESTIMATED FOR SINKHOLE REPAIR(S) AT THE FOLLOWING LOCATIONS:

SINKHOLE	STATION	GSR (TON)	GEOTEXTILE (S.Y.)
SNK-1	749+96 - 24' (RT)	3	24
SNK-2	616+49 - 30' (RT)	25	113

NOTES

NO GEOTECHNICAL SOIL SAMPLES WERE OBTAINED AT ALIGNMENTS MNAA MAINTENACE ROAD, EAST WEST ROAD AND OLD DONELSON SB & NB

GRADED SOLID ROCK BUTTRESSES WILL BE REQUIRED:
SR-255

- * 759+00 TO 760+50 (LT)
- * 760+50 TO 760+61.92 (RT)
- * 769+00 TO 769+70.23 (RT)

CD ROAD
* 2045+27.02 TO 2045+50 (RT)

RAMP B
* 219+00 TO 219+84.48 (RT)

RAMP BB
* 253+50 TO 254+00 (LT)

RAMP C
* 300+00 TO 304+50 (LT)
* 304+50.59 TO 310+50.15 (RT)

RAMP CC
* 350+00 TO 354+50 (RT)

RAMP E
* 516+76 TO 518+85.05 (LT)
* 516+76 TO 526+00 (RT)

RAMP EE
* 550+00 TO 555+50 (LT)

GRADED SOLID ROCK PADS WILL BE REQUIRED:
S.R. 255
* 760+61.92 TO 764+00

CD ROAD
* 2009+00.00 TO 2010+50.00 (RT)
* 2045+27.02 TO 2047+50 (RT)

RAMP B
* 213+00.00 TO 219+00 (RT)

RAMP C
* 304+50.59 TO 310+50.15 (RT)

RAMP CC
* 350+00 TO 354+50 (RT)

RAMP E
* 516+76 TO 518+50 (LT)

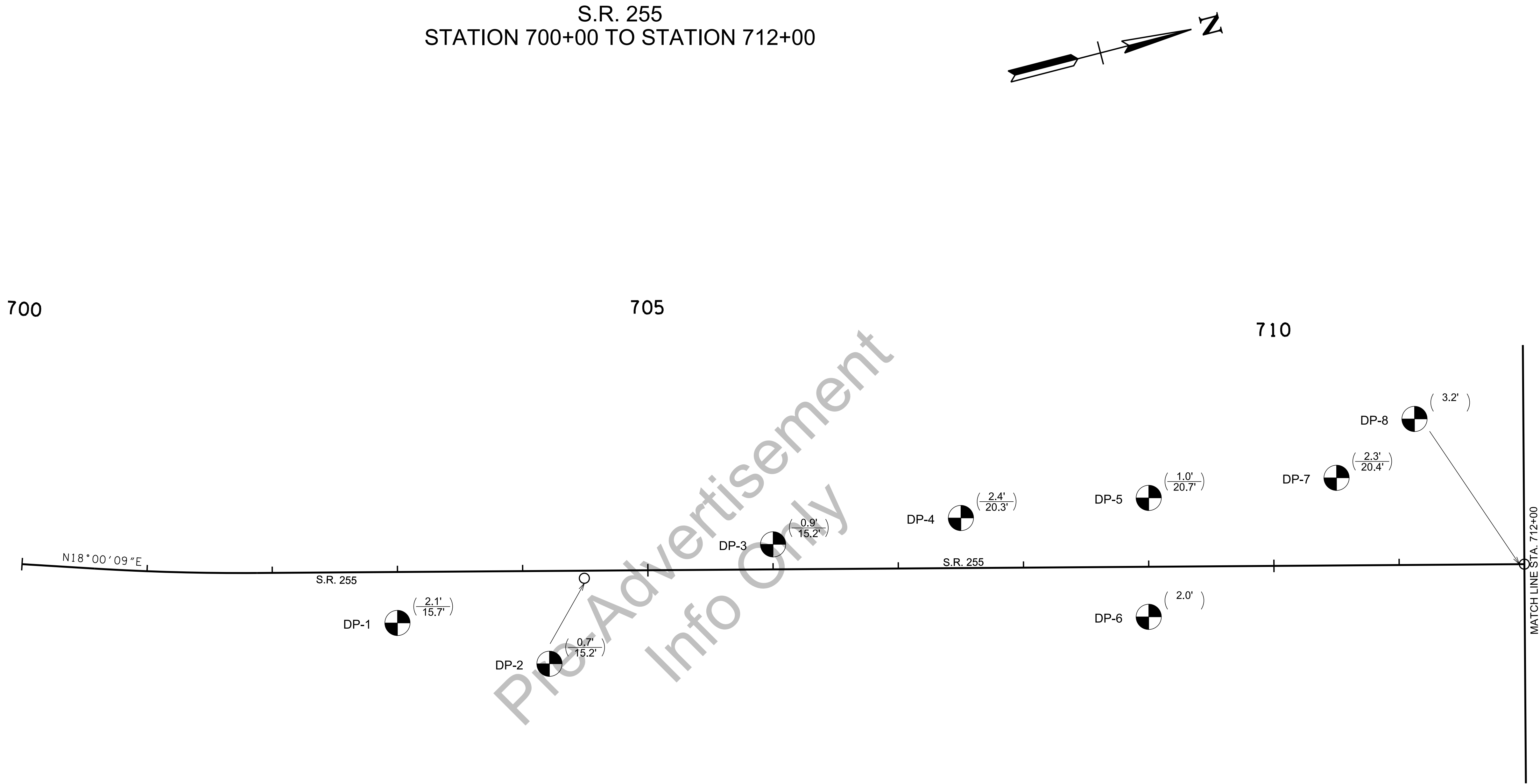
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GEOTECHNICAL
NOTES &
TAB. QTYS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G3



LEGEND

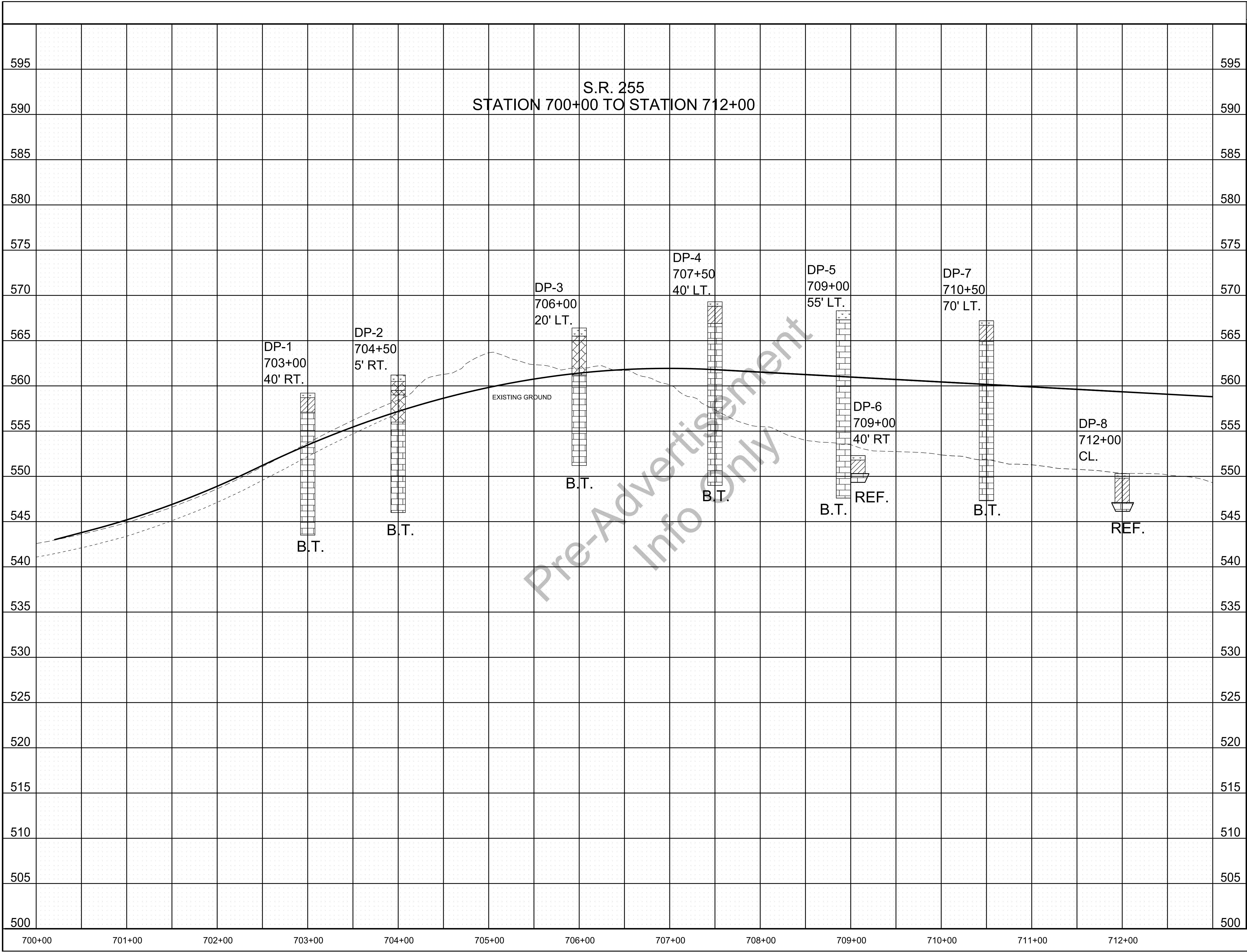
- B-1 (24.5' / 70.3') BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE),
BOTTOM OF HOLE (BELOW LINE)
- B-1 (24.5') BORING LOCATION WITH DEPTH TO REFUSAL
- B-1 (24.5') BORING LOCATION TERMINATION DEPTH (NO REFUSAL)

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LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)
- TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON GEOTECHNICAL NOTES AND EST. QTYS. SHEET.
- B.T.= BORING TERMINATED
- REF.= AUGER REFUSAL

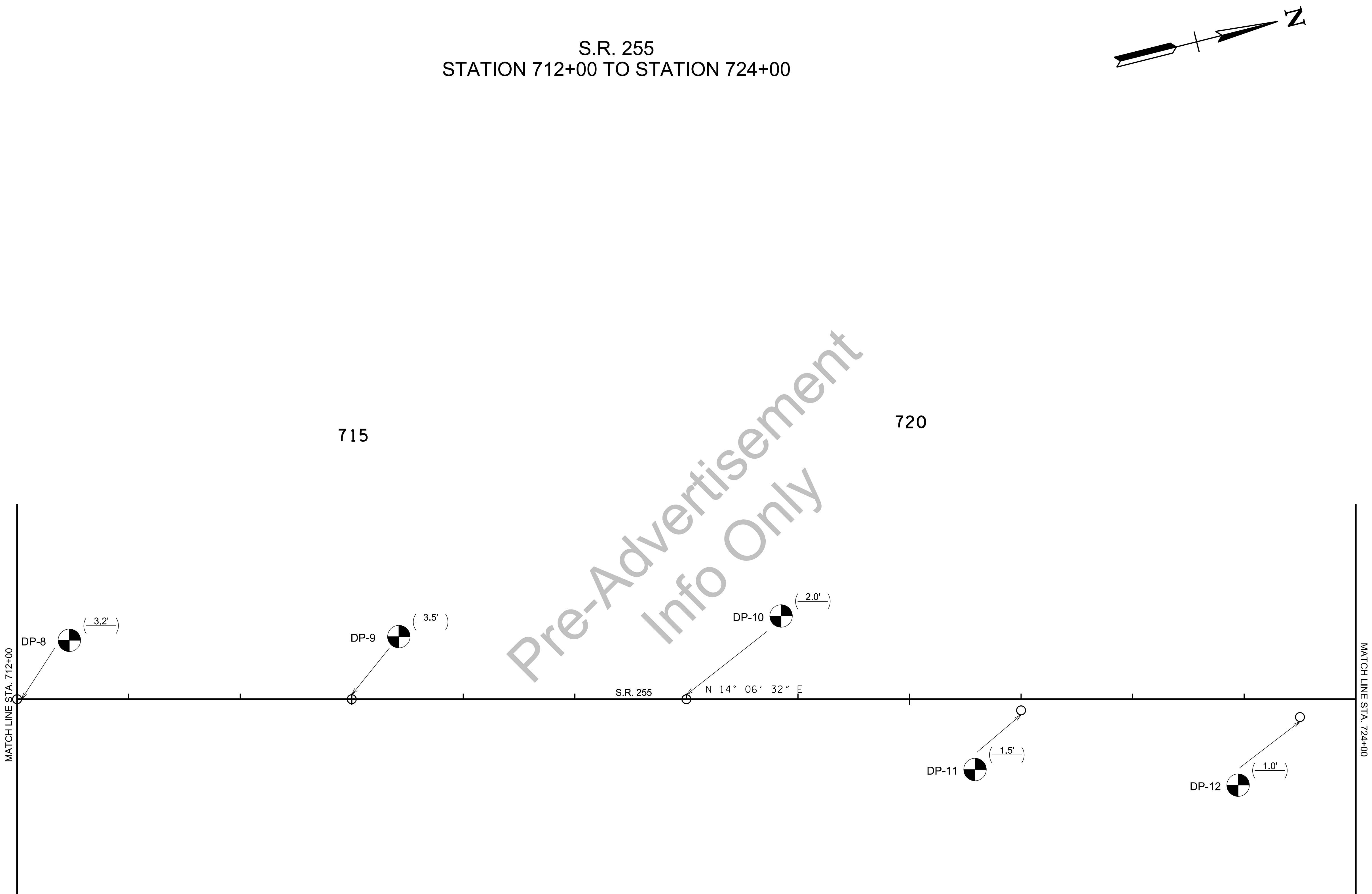
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PROFILE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G5



LEGEND

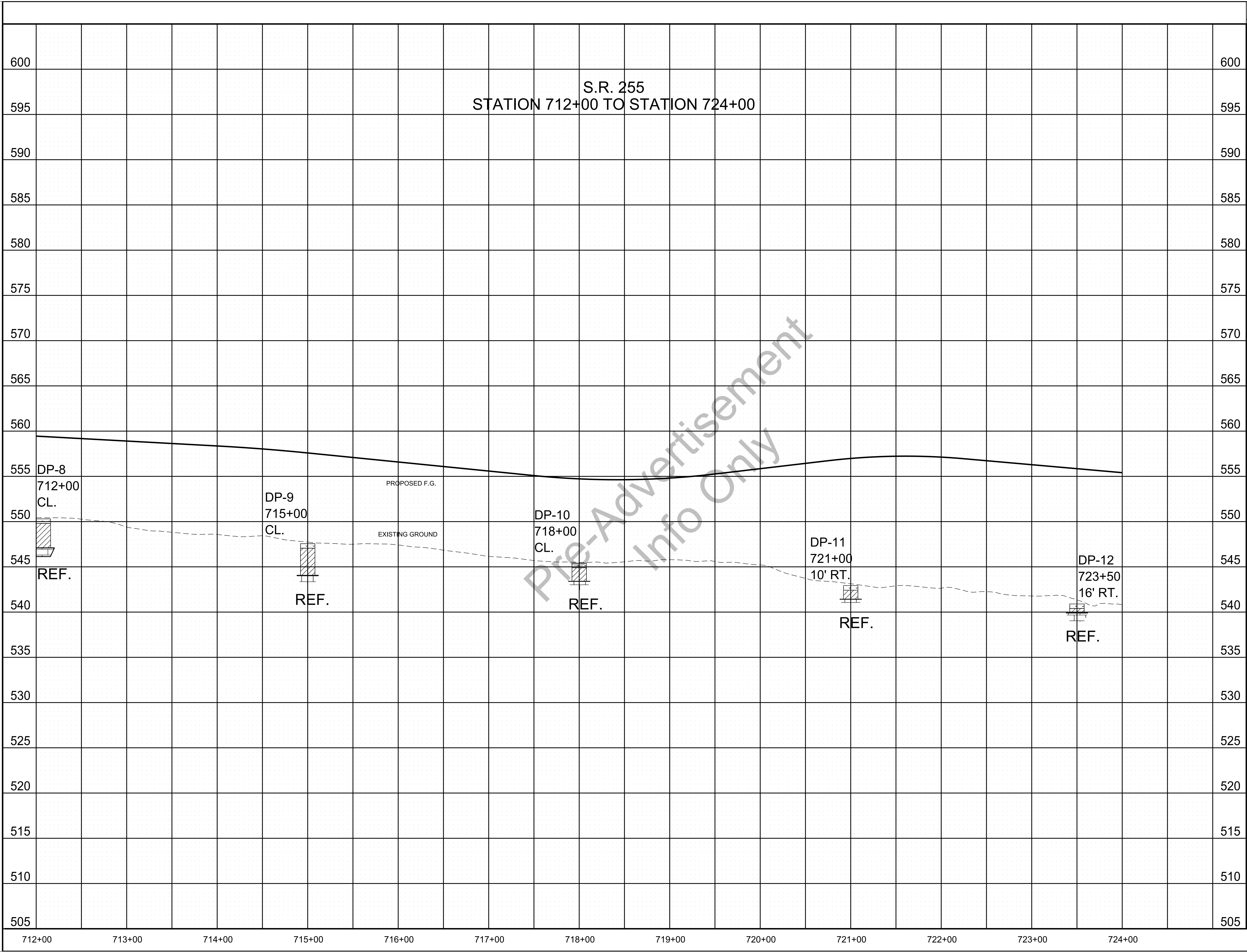


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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G6

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

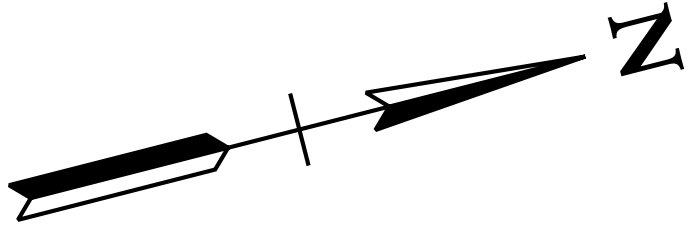
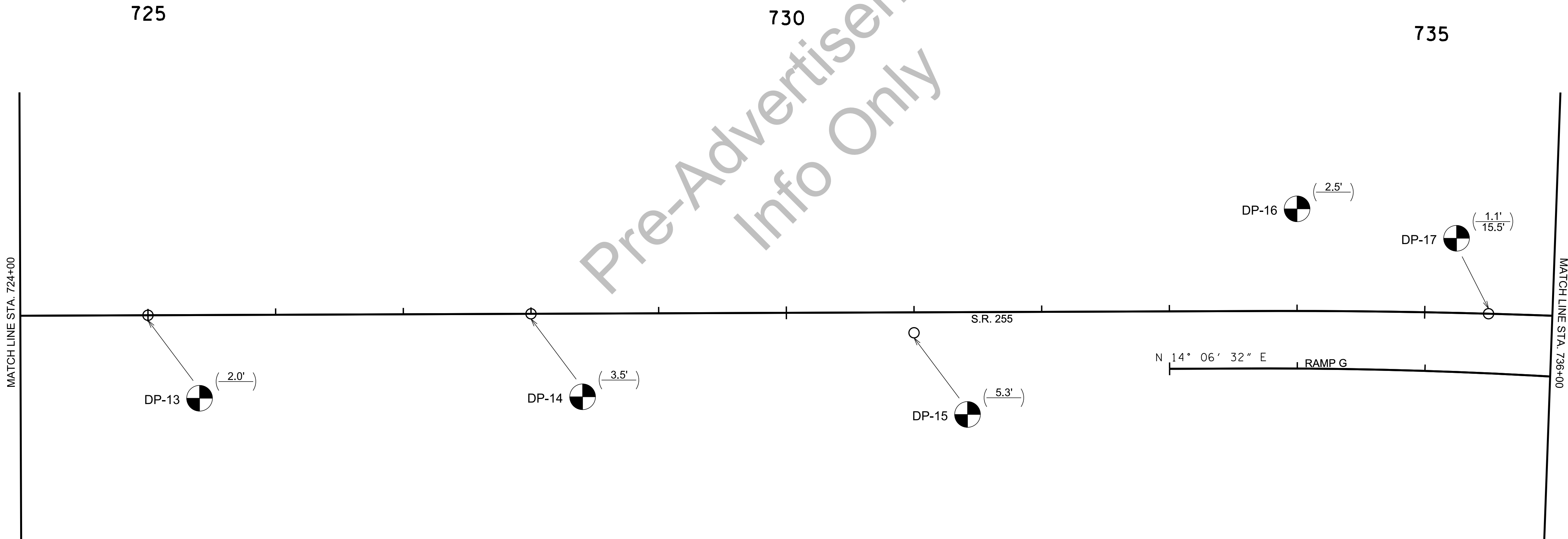
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
REF.= AUGER REFUSAL

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CONST.	2020	NH-I-40-5(146)	G7

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LEGEND

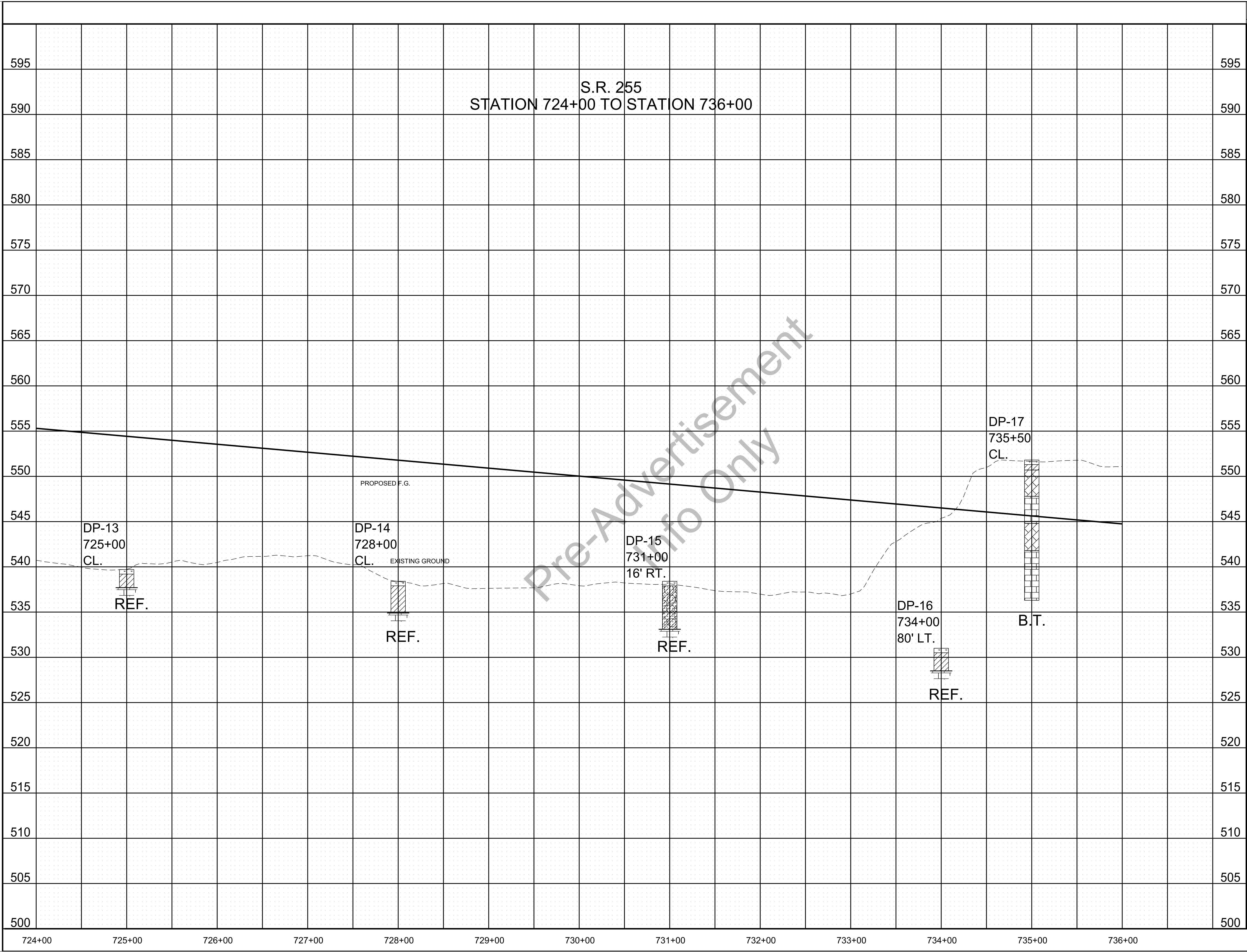
- B-1

(24.5'
70.3')

BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE),
BOTTOM OF HOLE (BELOW LINE)
- B-1

(24.5')

BORING LOCATION WITH DEPTH TO REFUSAL



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G8

LEGEND

- TOPSOIL
- CLAYEY GRAVEL WITH SAND (TYPE A MATERIAL)
- CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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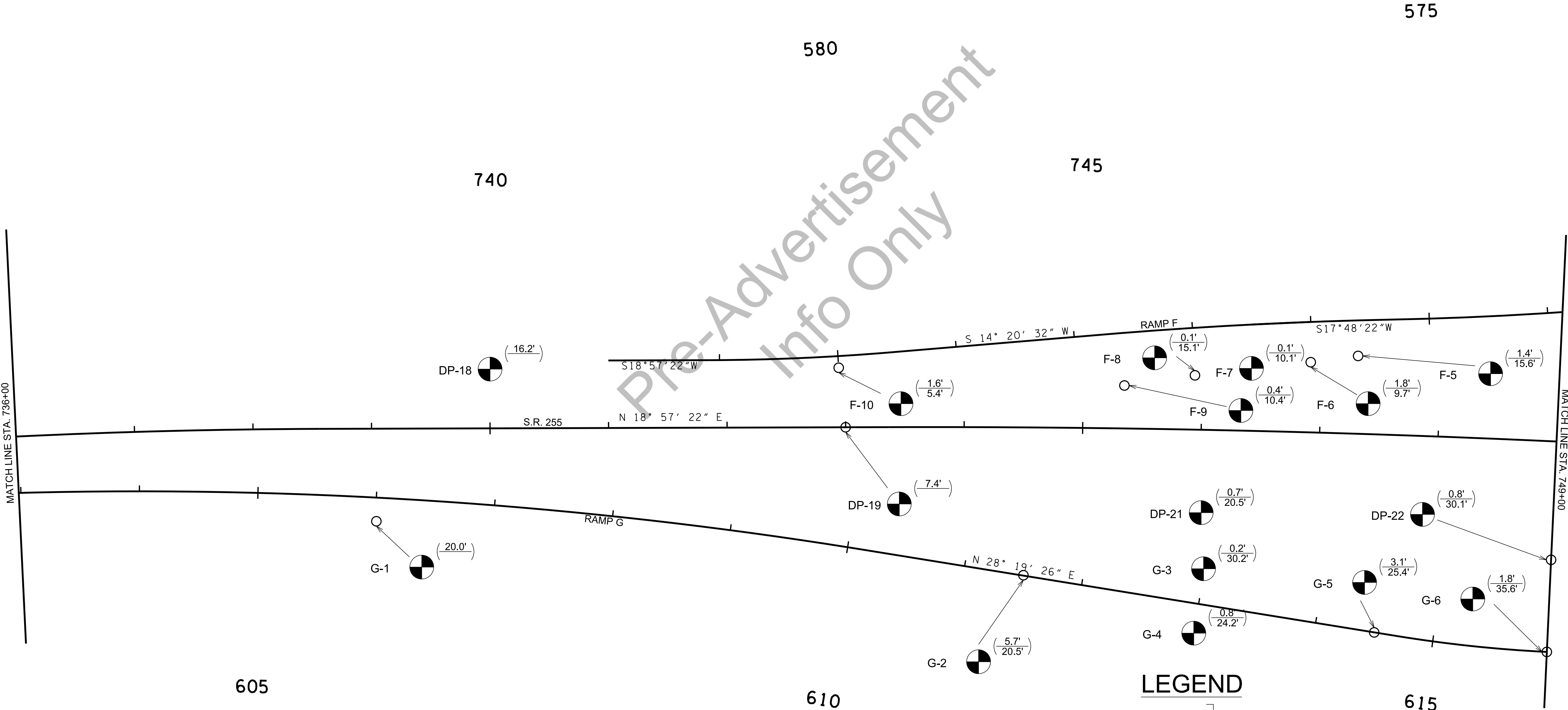
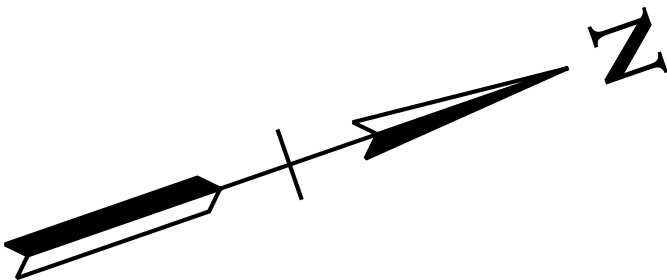
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G9

S.R. 255
STATION 736+00 TO STATION 749+00

RAMP F
STATION 582+00 TO STATION 574+00

RAMP G
STATION 603+00 TO STATION 616+00



LEGEND

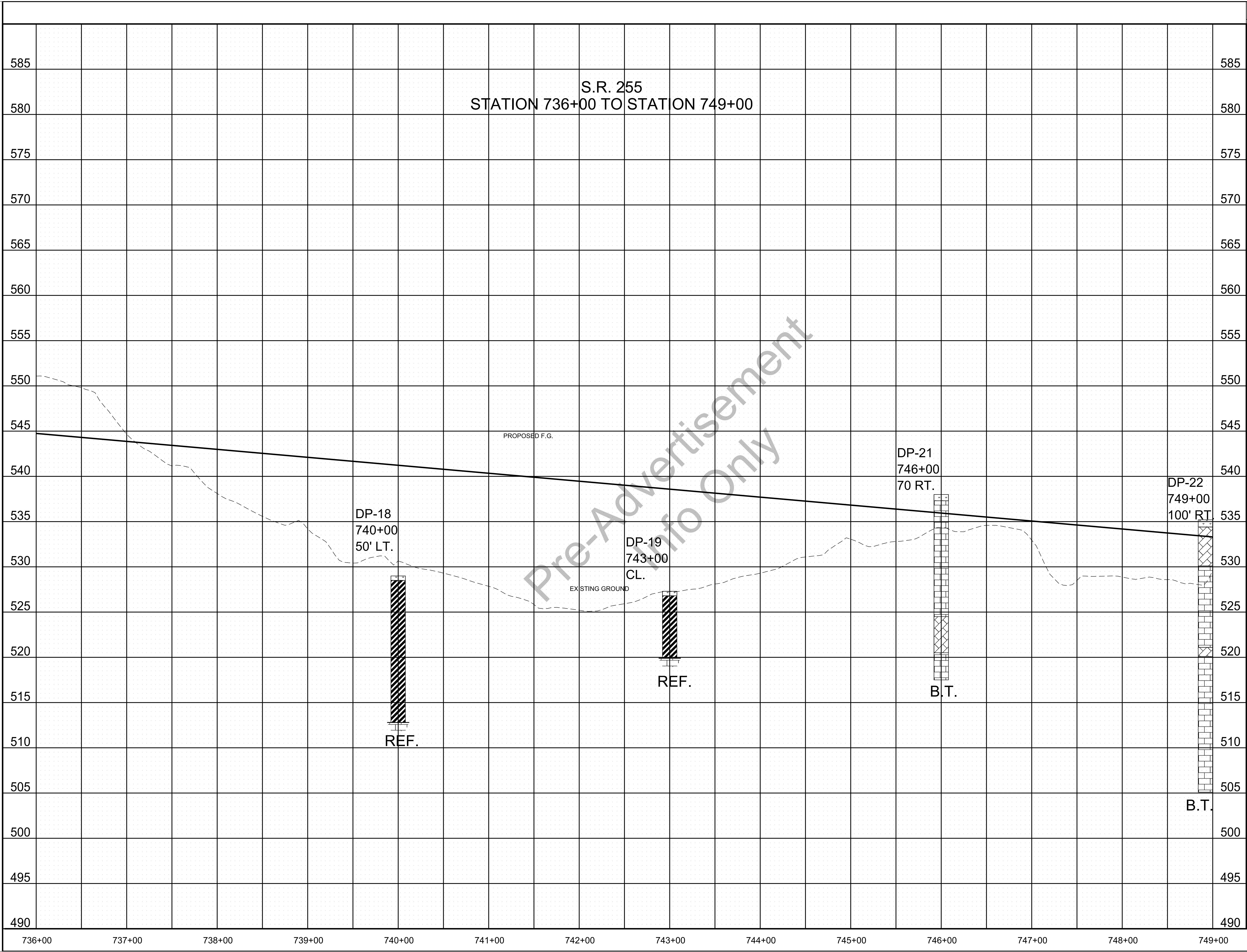
- B-1 (24.5') (70.3') BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)
- B-1 (24.5') BORING LOCATION WITH DEPTH TO REFUSAL

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G10

LEGEND

- TOPSOIL
- FAT CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

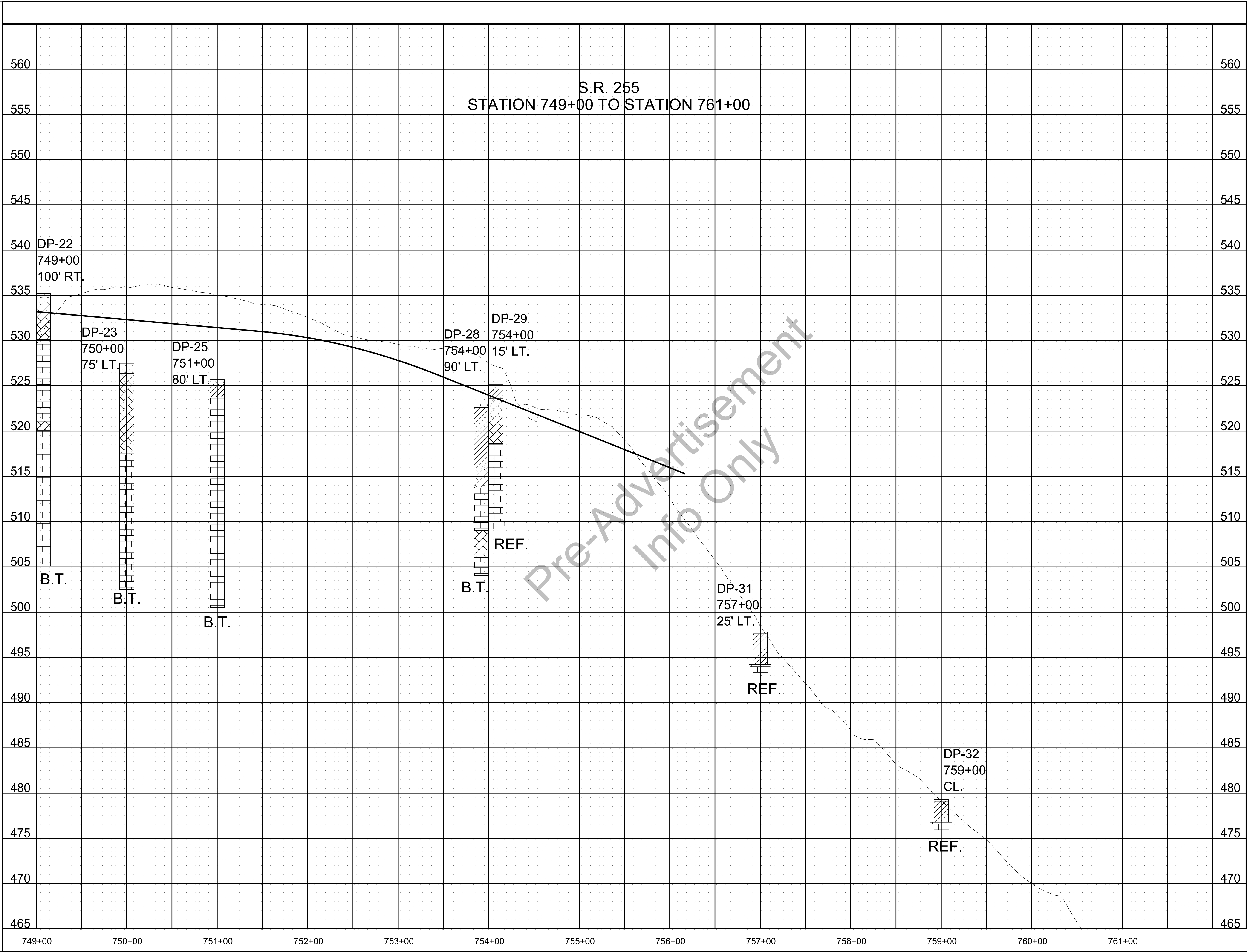
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B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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LEGEND

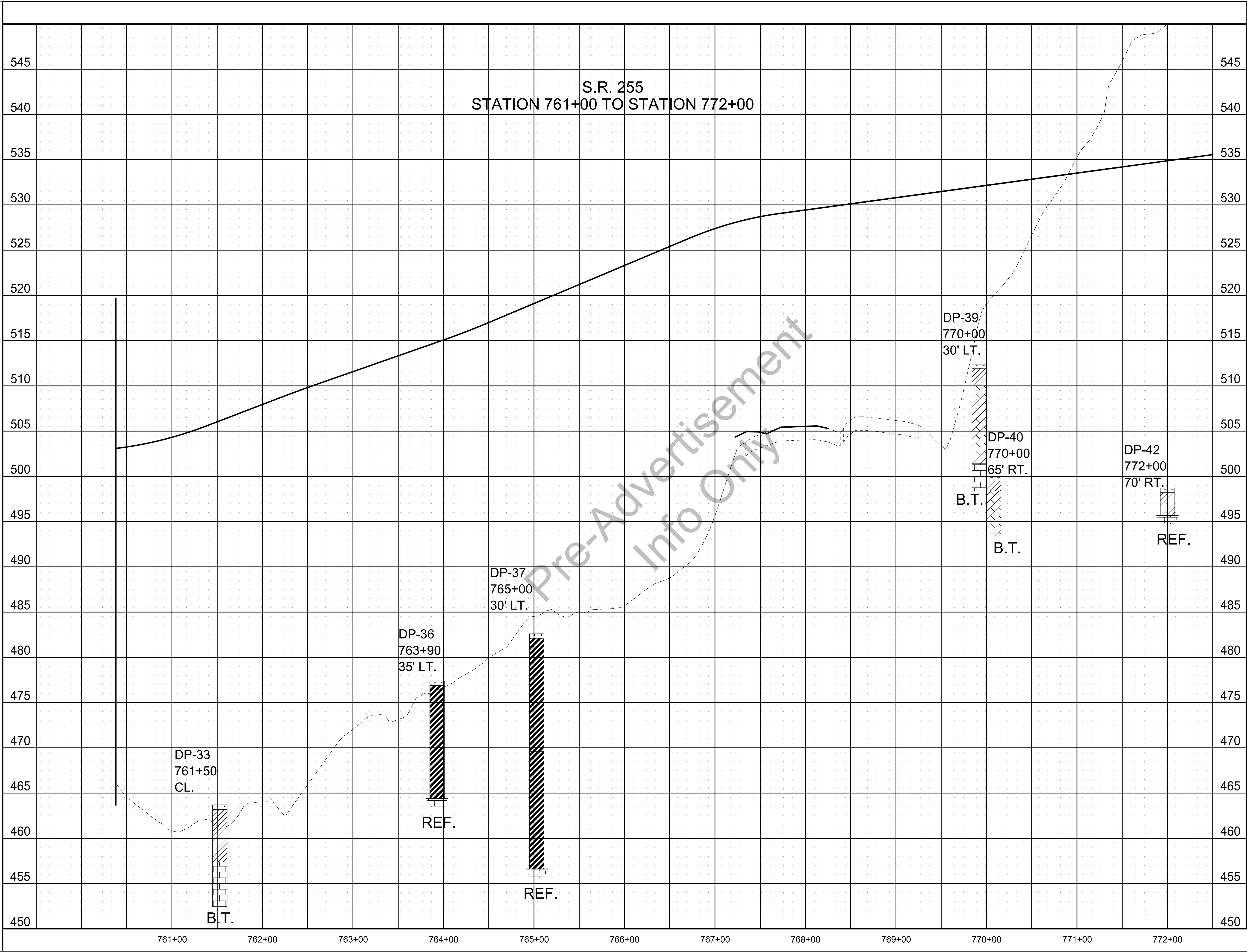
- TOPSOIL
 - CLAY (TYPE A MATERIAL)
 - SILTY CLAY (TYPE A MATERIAL)
 - WEATHERED LIMESTONE (TYPE D MATERIAL)
 - LIMESTONE (TYPE B MATERIAL)
- TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G14

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

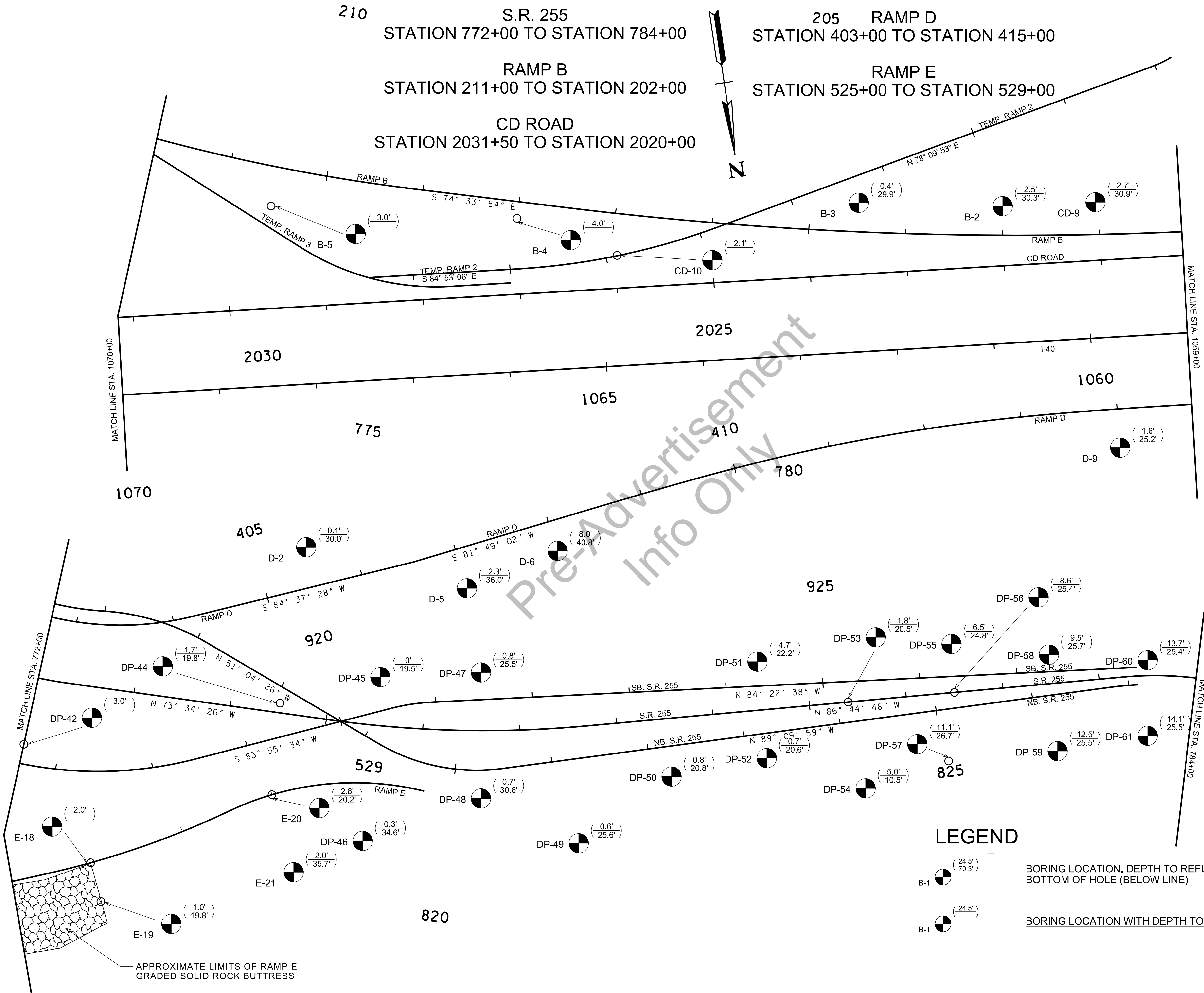
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G15

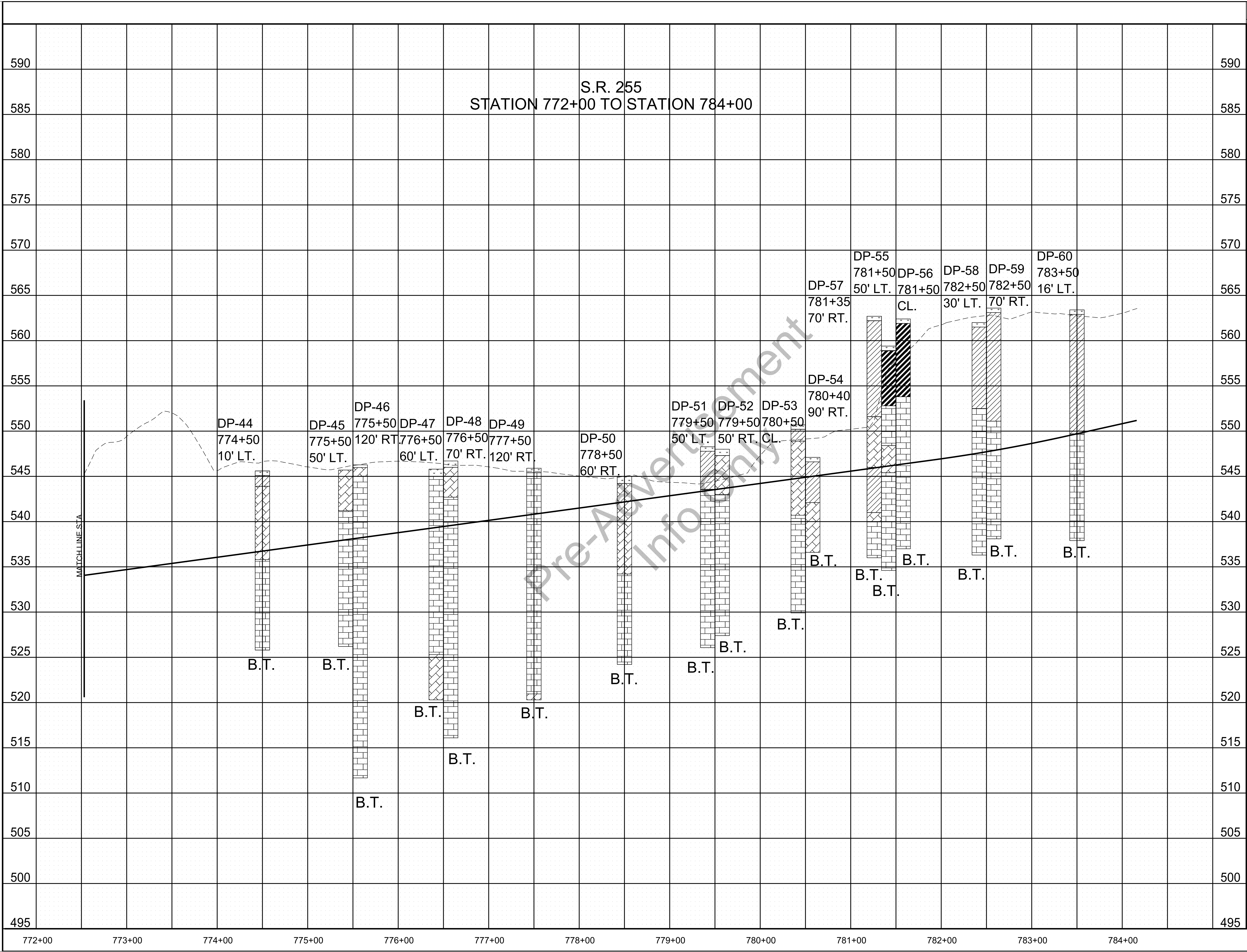


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LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

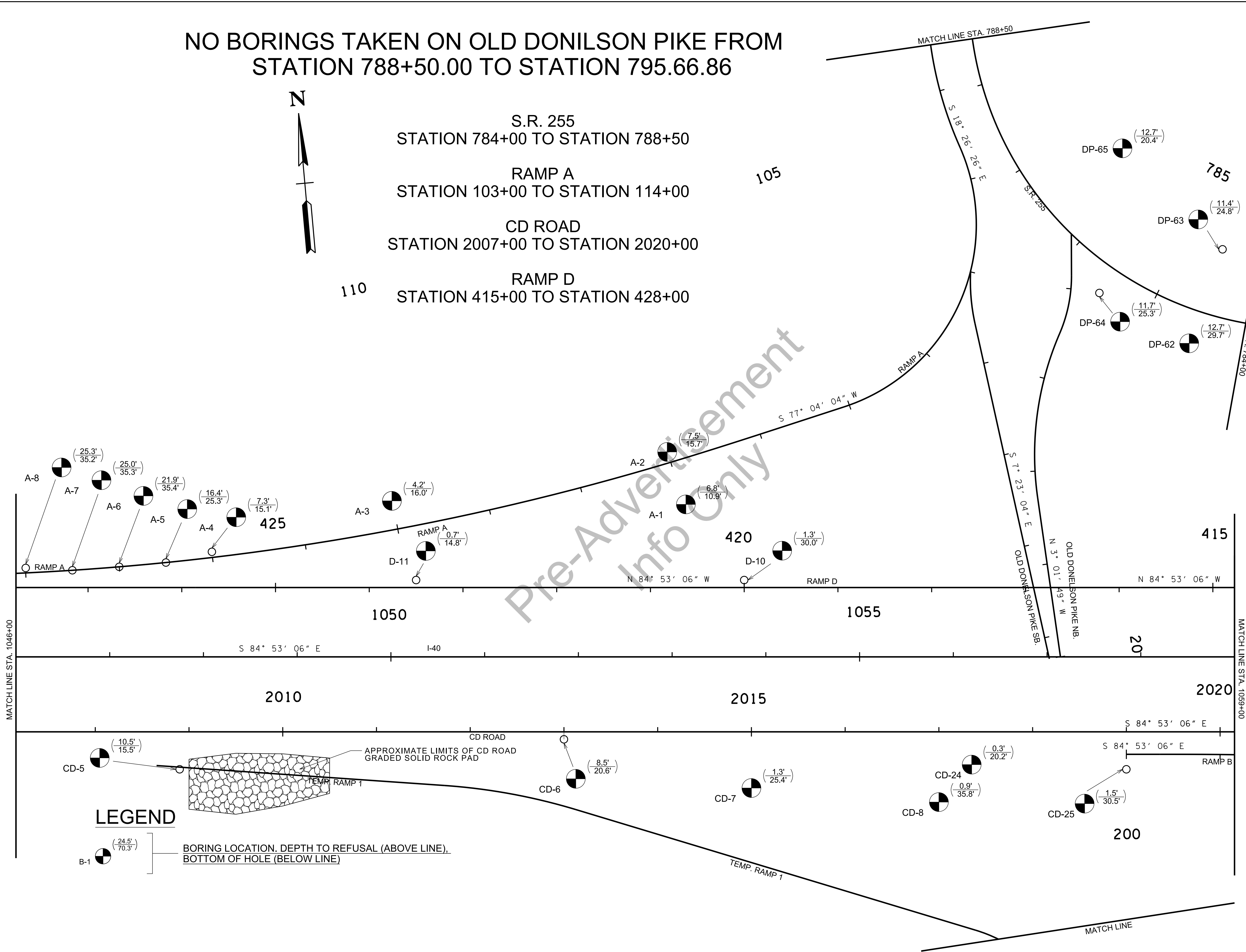
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G17

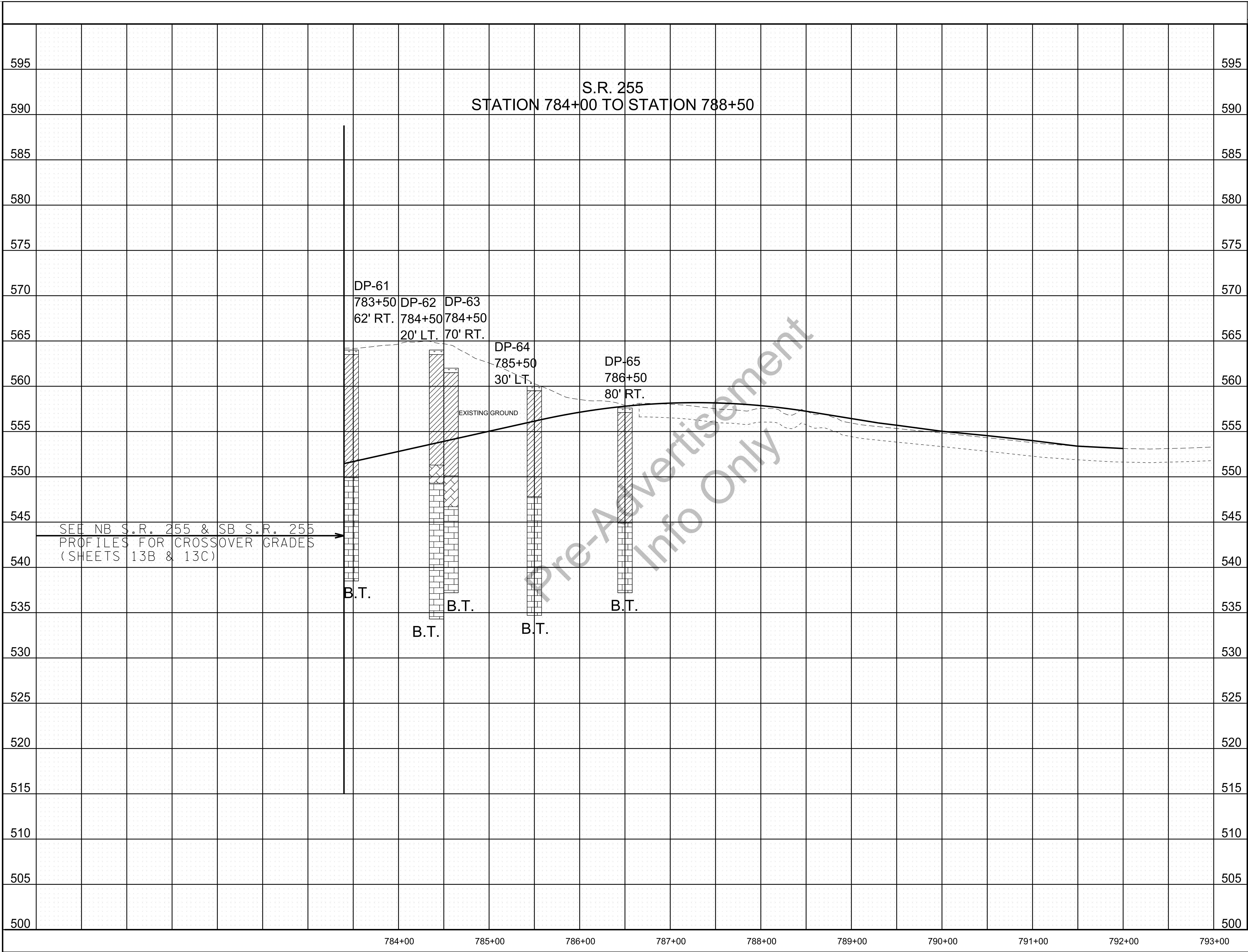
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COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF 1.00006, AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G18

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED

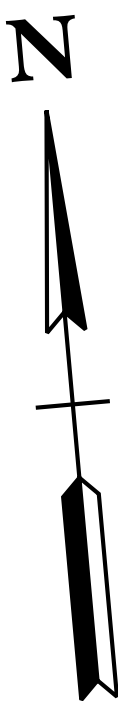
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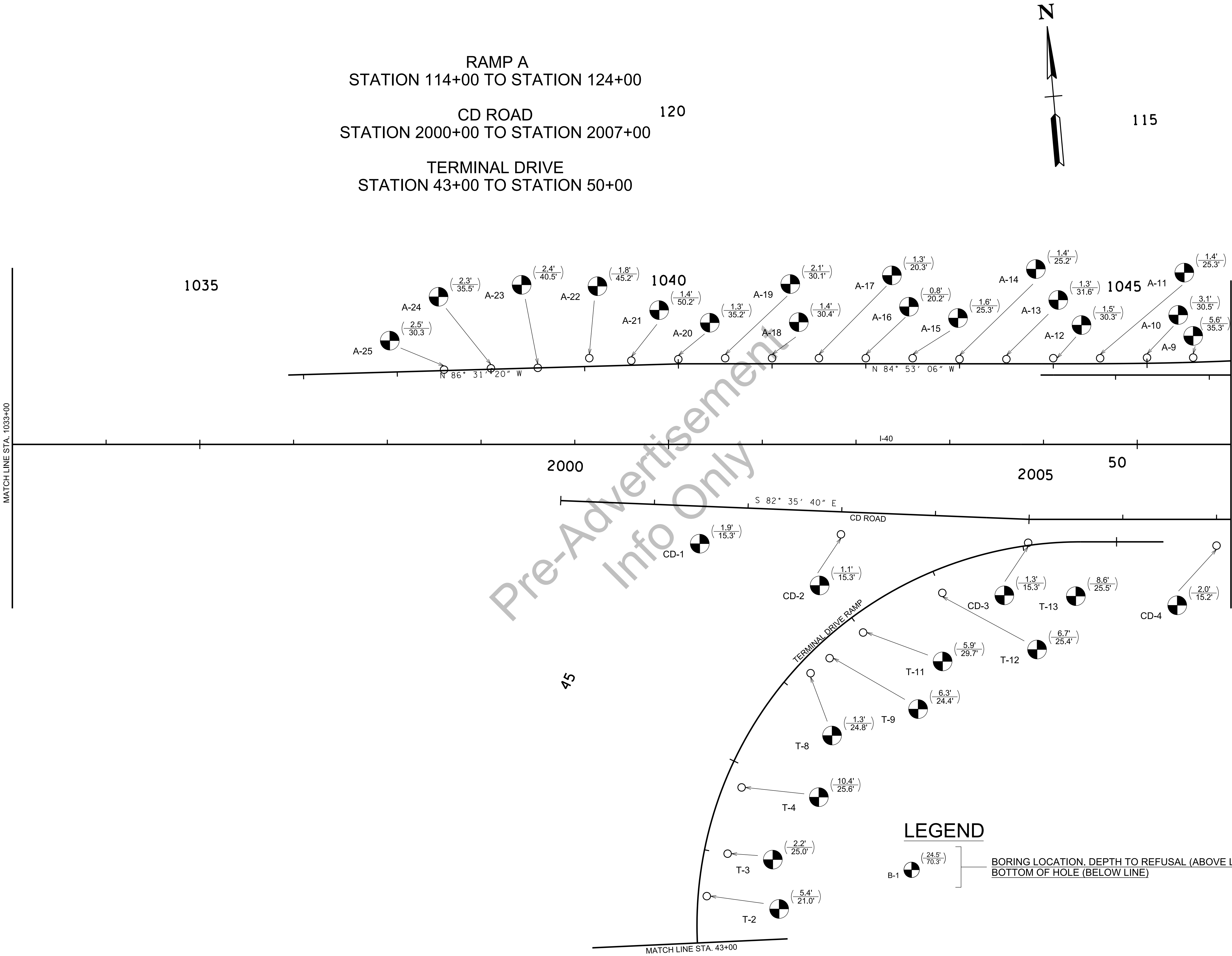
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G19



RAMP A
STATION 114+00 TO STATION 124+00

CD ROAD
STATION 2000+00 TO STATION 2007+00

TERMINAL DRIVE
STATION 43+00 TO STATION 50+00



LEGEND

B-1 (24.5' / 70.3') BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE),
BOTTOM OF HOLE (BELOW LINE)

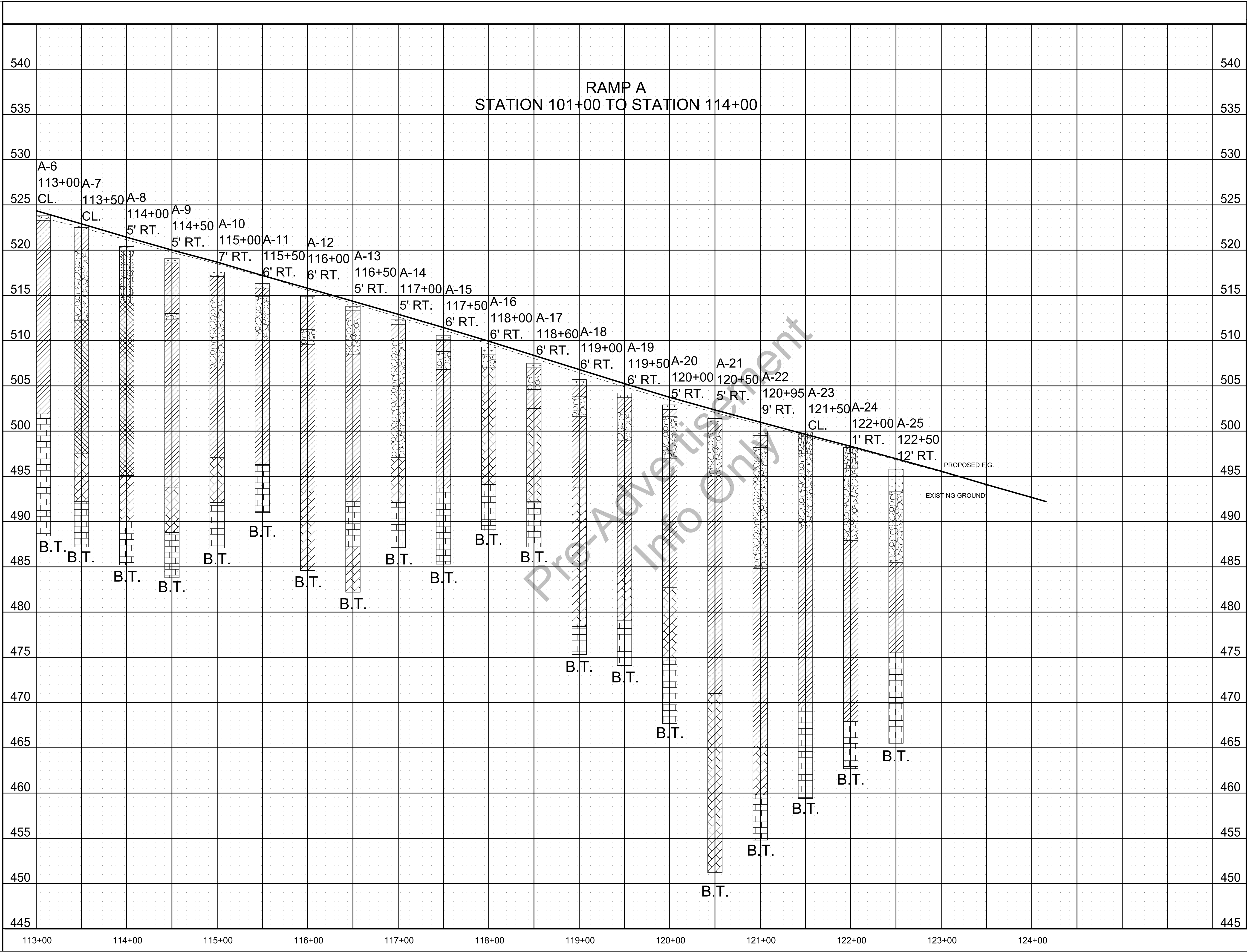
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LEGEND

- TOPSOIL
 - ASHALT
 - BOULDER / COBBLE
 - SILTY GRAVEL WITH SAND (TYPE A MATERIAL)
 - CAVITY FILLED WITH CLAY (TYPE A MATERIAL)
 - CLAY (TYPE A MATERIAL)
 - SILT (TYPE A MATERIAL)
 - WEATHERED LIMESTONE (TYPE D MATERIAL)
 - LIMESTONE (TYPE B MATERIAL)
- TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED

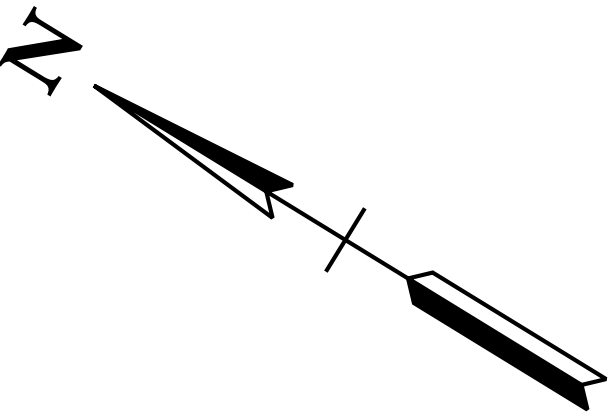
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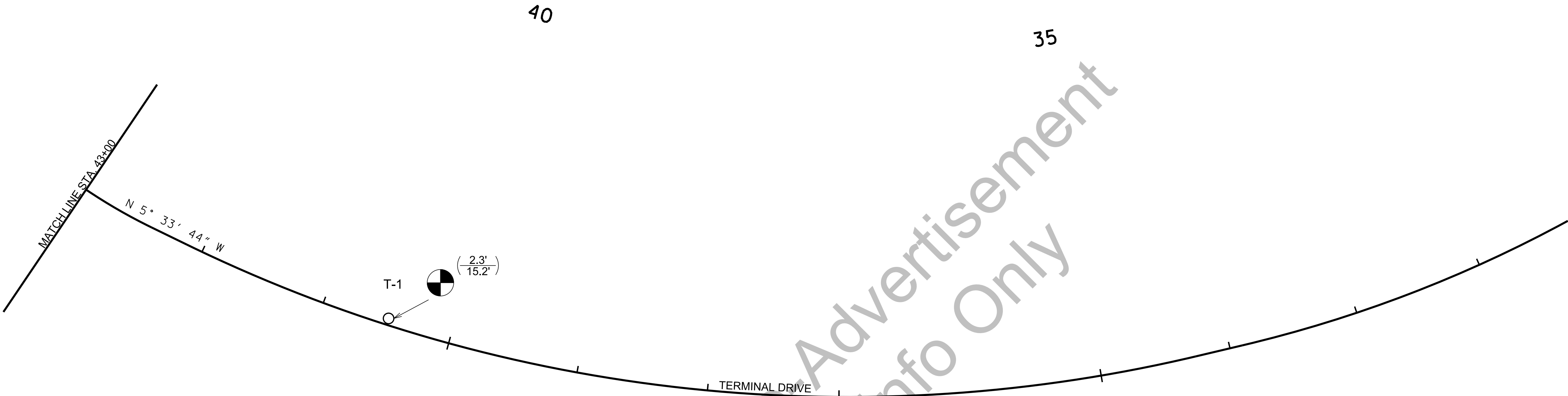
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**GEOTECHNICAL
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TYPE	YEAR	PROJECT NO.	SHEET NO.
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TERMINAL DRIVE
STATION 43+00 TO STATION 31+00



LEGEND

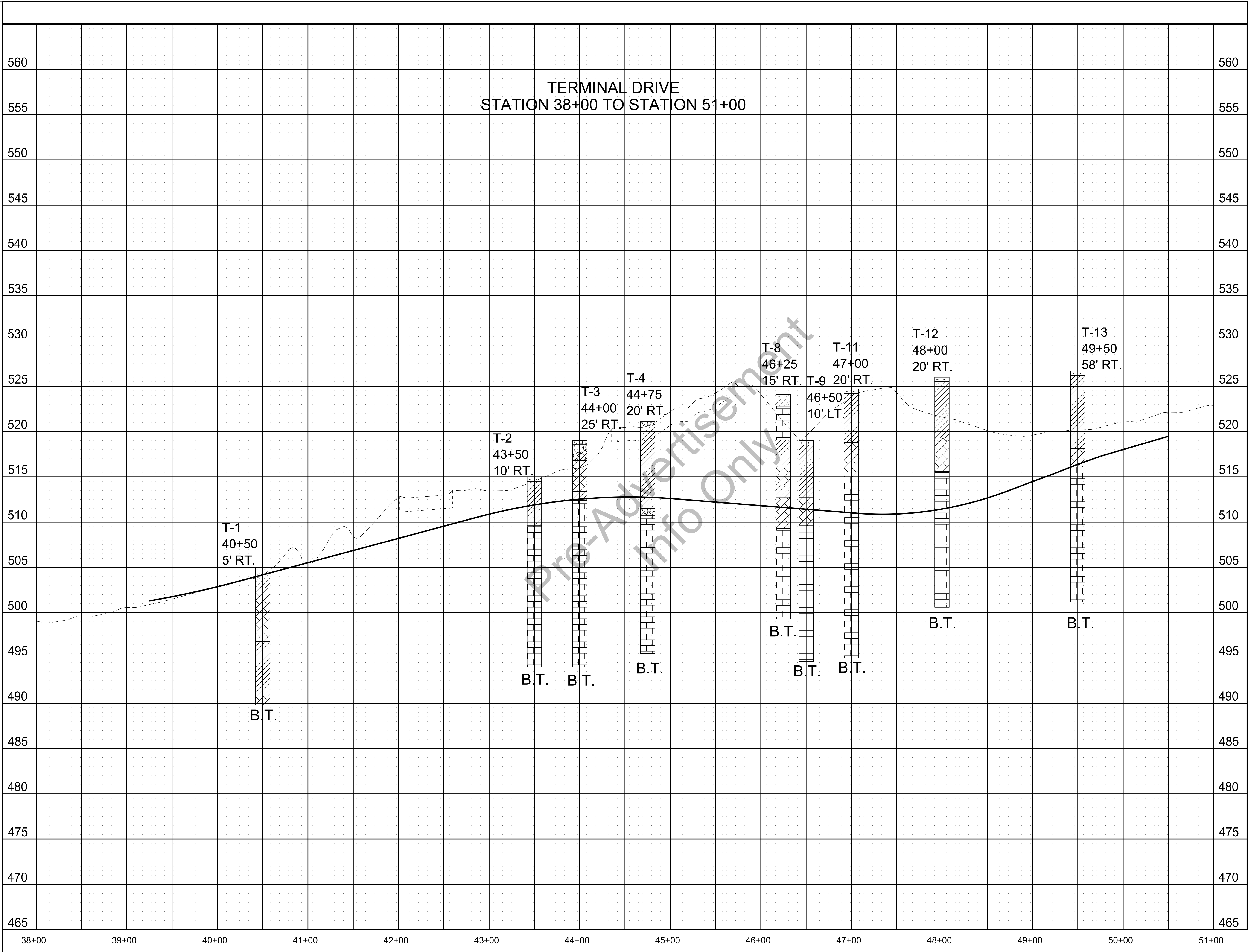


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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G22

LEGEND

TOPSOIL

ASHALT

GRAVEL CLAY
(TYPE A MATERIAL)

CLAY (TYPE
A MATERIAL)

WEATHERED LIMESTONE
(TYPE D MATERIAL)

LIMESTONE (TYPE
B MATERIAL)

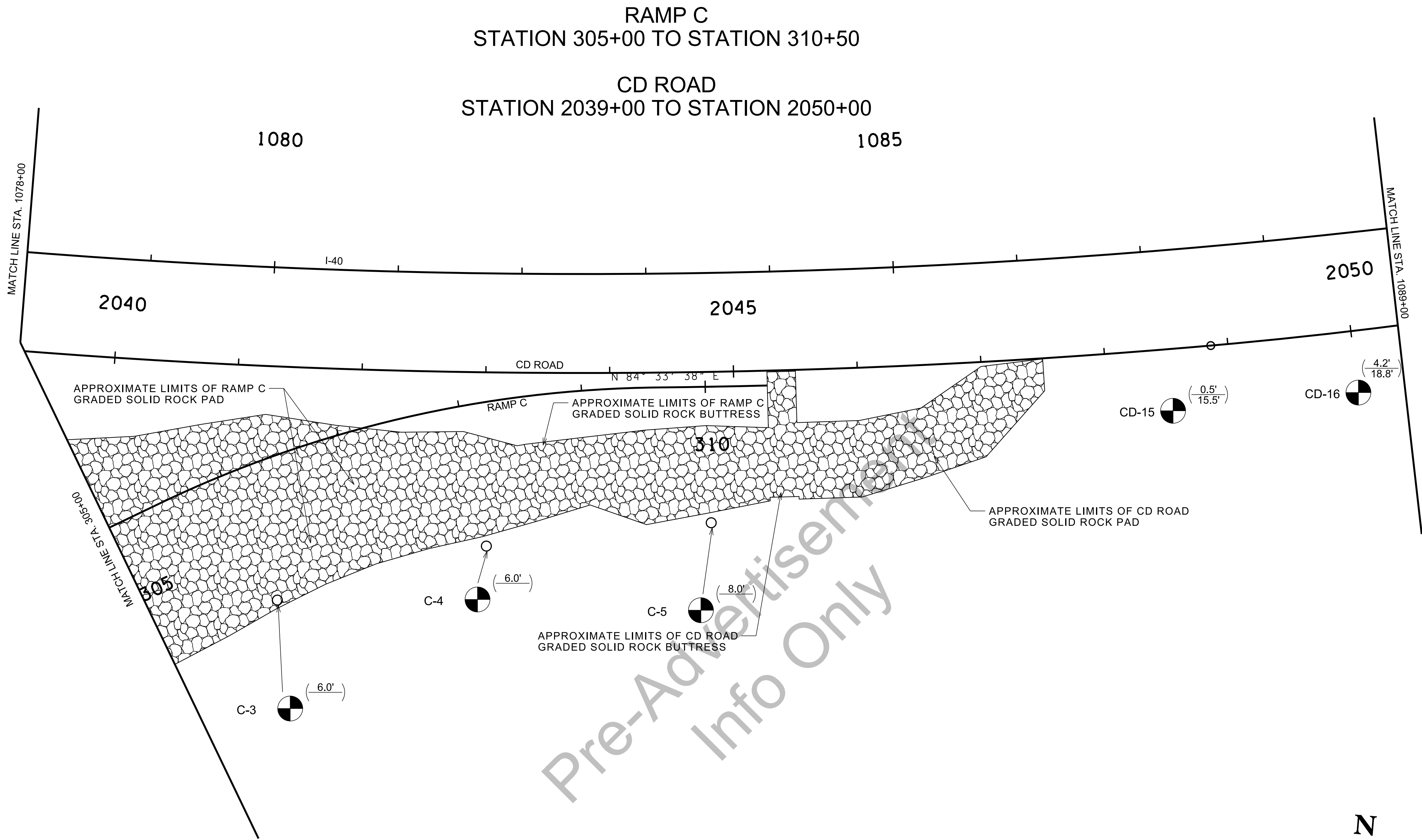
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BORING
PROFILE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G23



LEGEND

- B-1

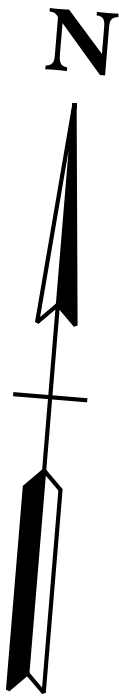
(24.5')

(70.3')

— BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE),
BOTTOM OF HOLE (BELOW LINE)
- B-1

(24.5')

— BORING LOCATION WITH DEPTH TO REFUSAL



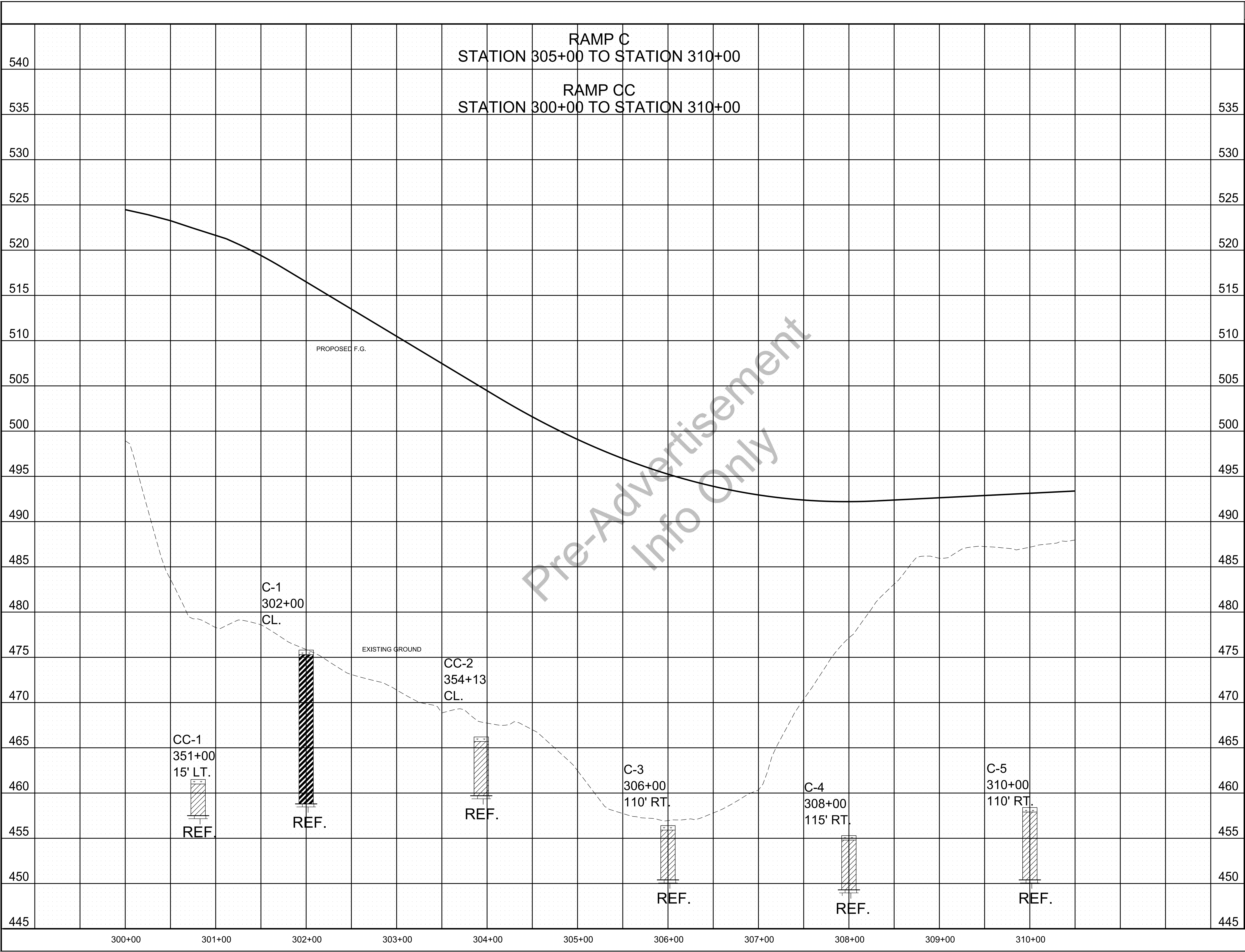
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GEOTECHNICAL
BORING
LAYOUT

CELL GRDSHT
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C:\Users\J09166\Desktop\Shortcut for work\Working on cadd files - ShortCuts -\1-40 Donelson Pike Davidson Colback up Working-ONLY\4-21-2020\116896-00-ROW-Rev-02-14-20\116896-00-GeoShls-G24-C-plus-CC-Prco-029.sht



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G24

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
REF.= AUGER REFUSAL

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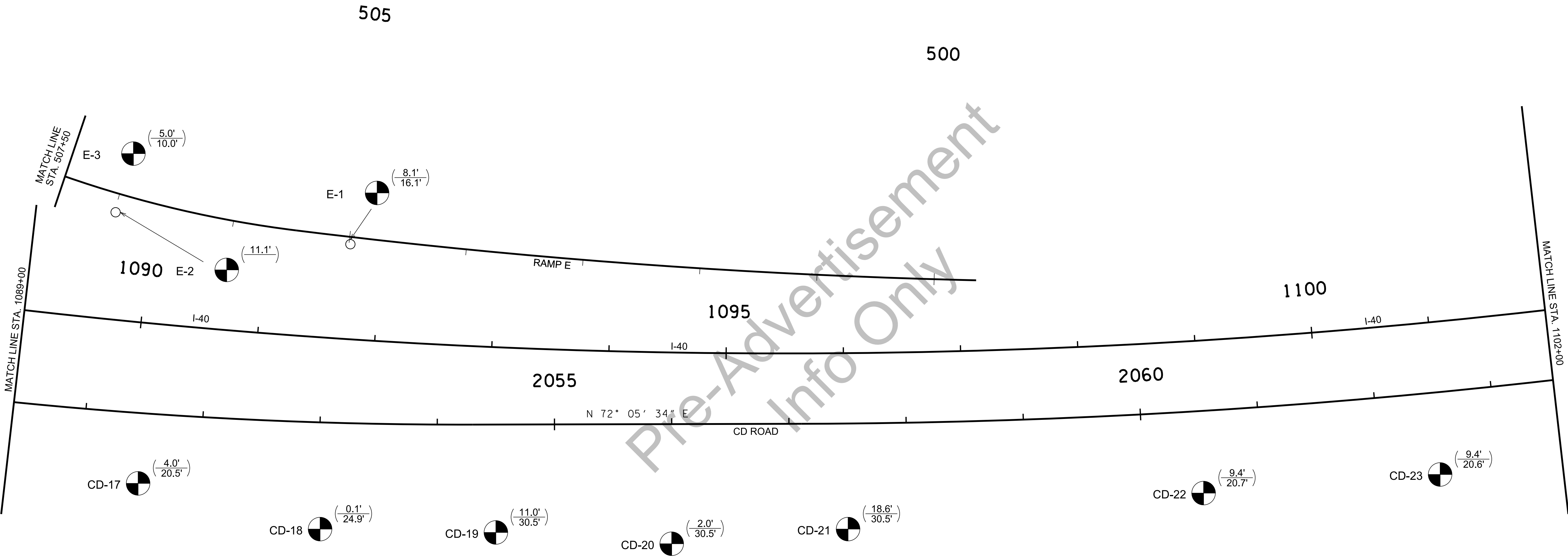
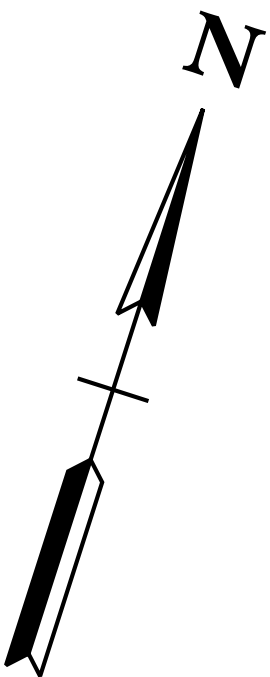
GEOTECHNICAL BORING PROFILE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G25

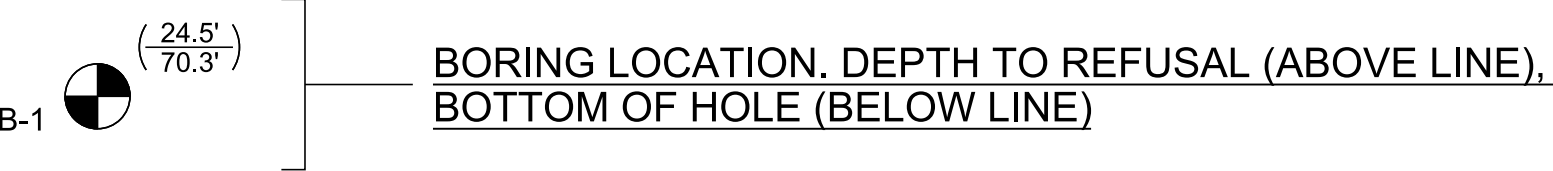
NO BORINGS TAKEN FROM STATION 2063+53.27
TO STATION 2064+39.16

CD ROAD
STATION 2051+00 TO STATION 2063+00

RAMP E
STATION 500+00 TO STATION 507+50



LEGEND

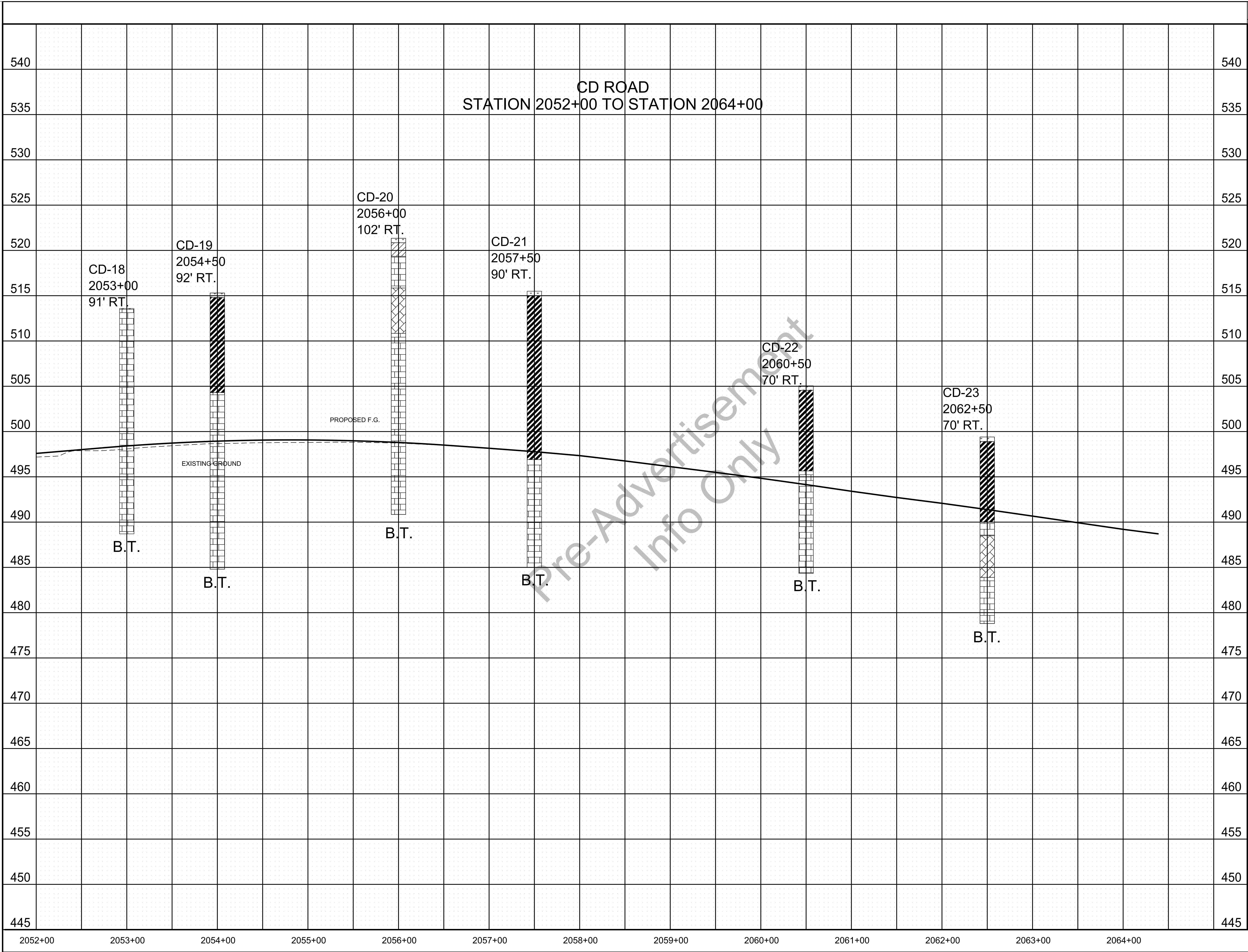


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DEPARTMENT OF
TRANSPORTATION

GEOTECHNICAL
BORING
LAYOUT



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G26

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED

SEALED BY

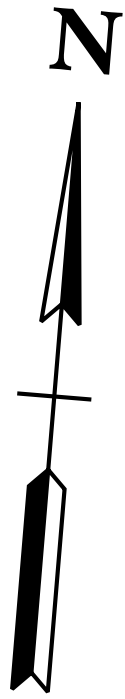
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TRANSPORTATION

GEOTECHNICAL
BORING
PROFILE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G27

RAMP E
STATION 507+50 TO STATION 521+25

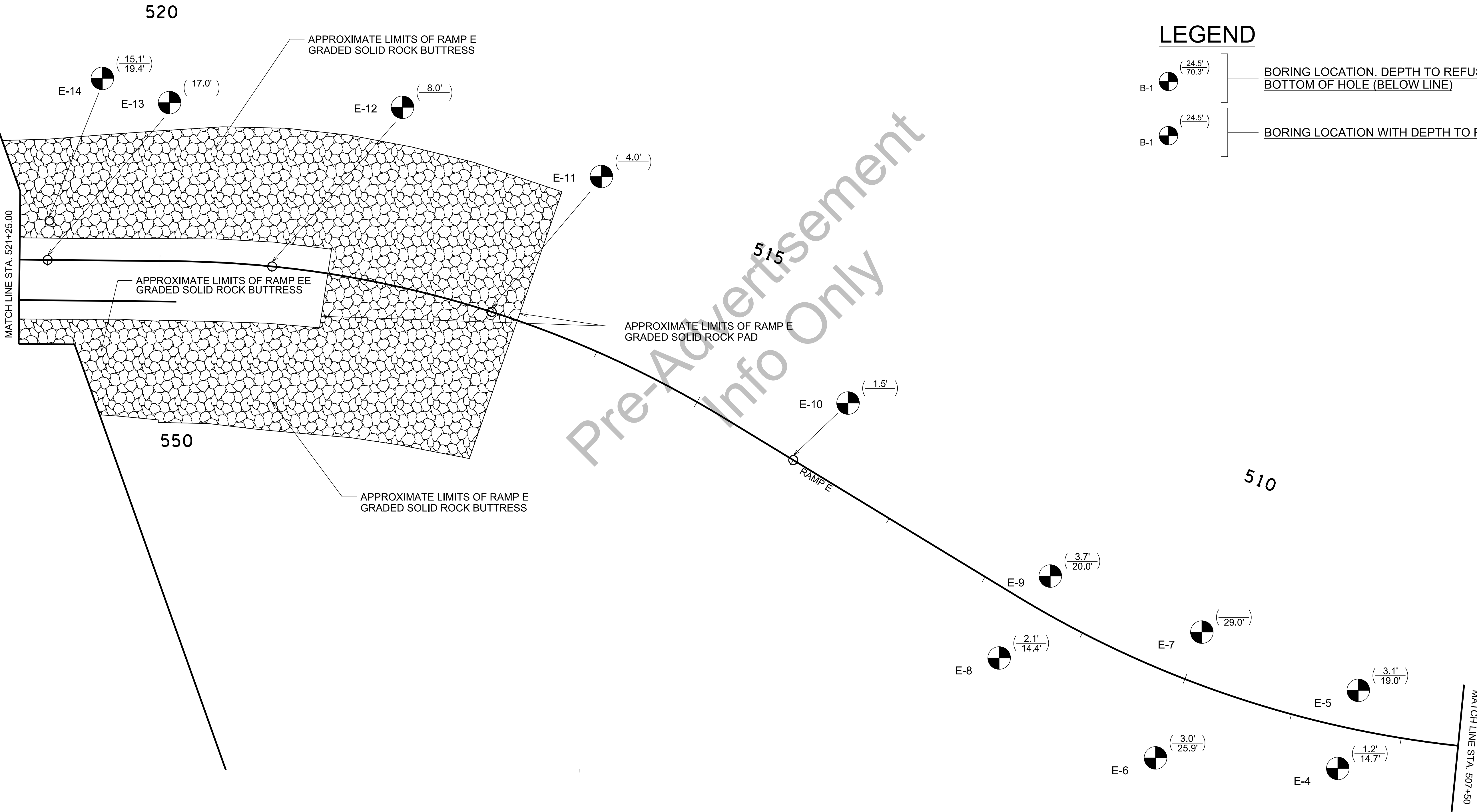


LEGEND

- (24.5')

(70.3')

BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE),
BOTTOM OF HOLE (BELOW LINE)
- (24.5')
- BORING LOCATION WITH DEPTH TO REFUSAL

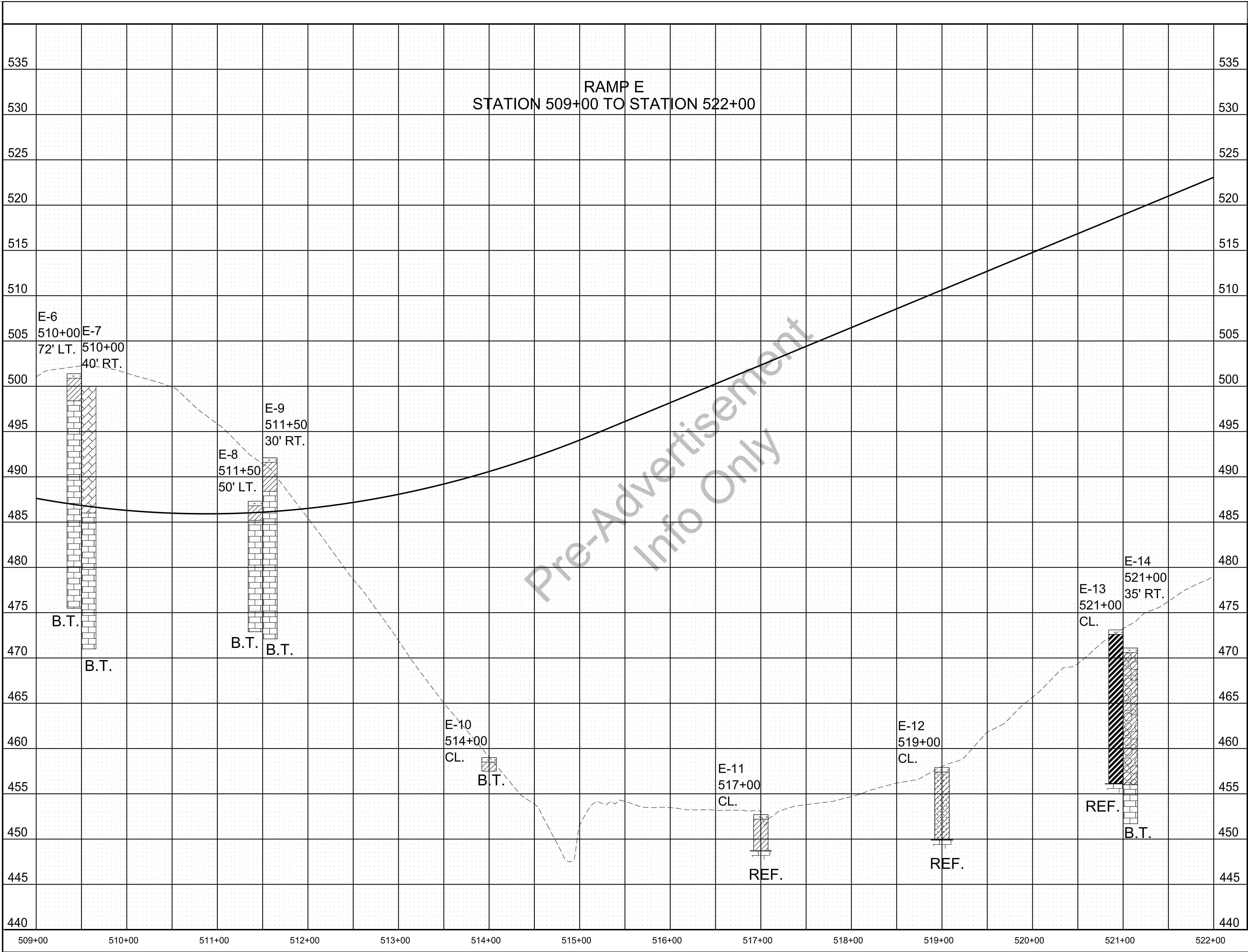


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GEOTECHNICAL
BORING
LAYOUT



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G28

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- GRAVEL CLAY (TYPE A MATERIAL)
- SANDY LEAN CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

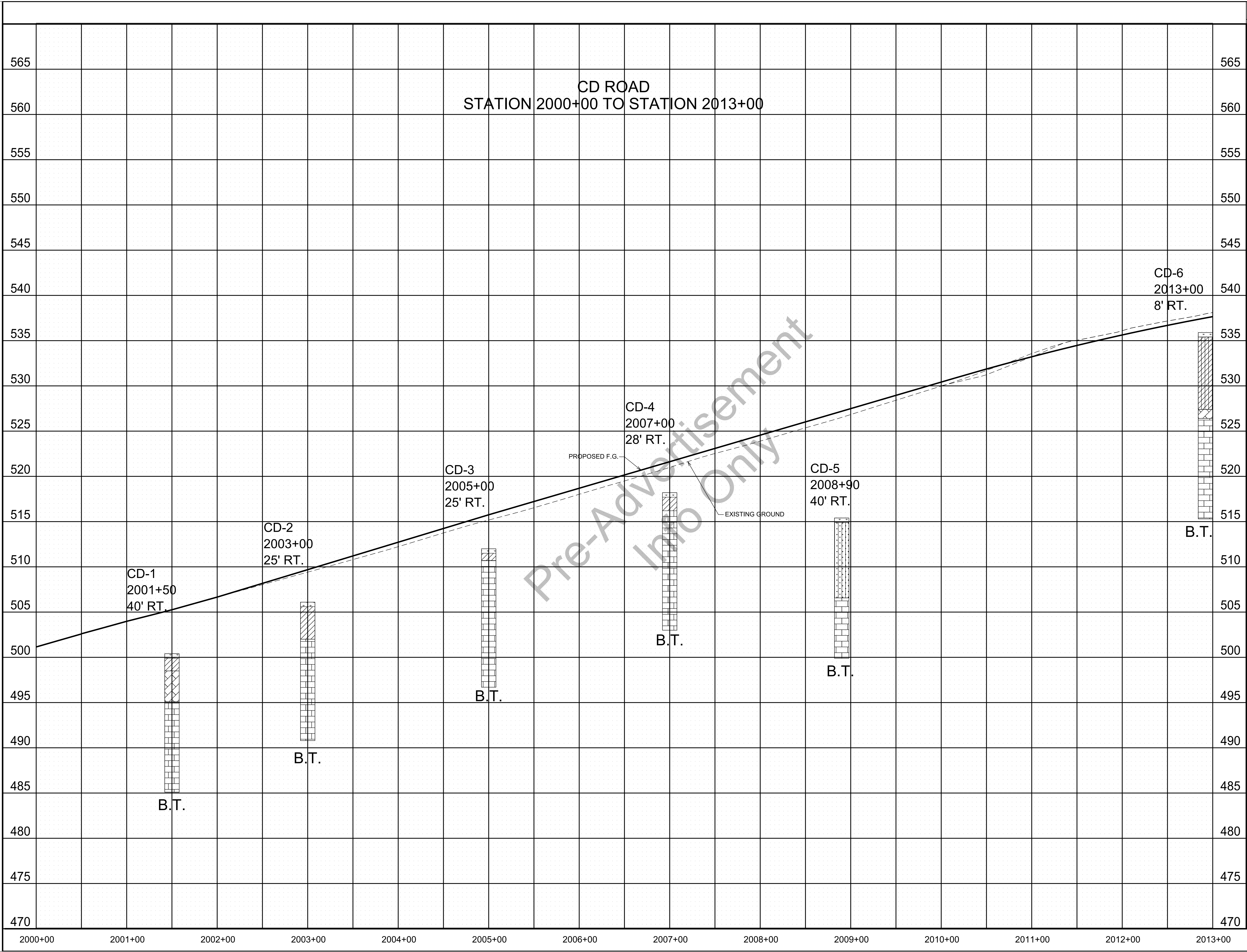
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TRANSPORTATION

GEOTECHNICAL
BORING
PROFILE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G29

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- SILT WITH SAND (TYPE A MATERIAL)
- SILTY LEAN CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

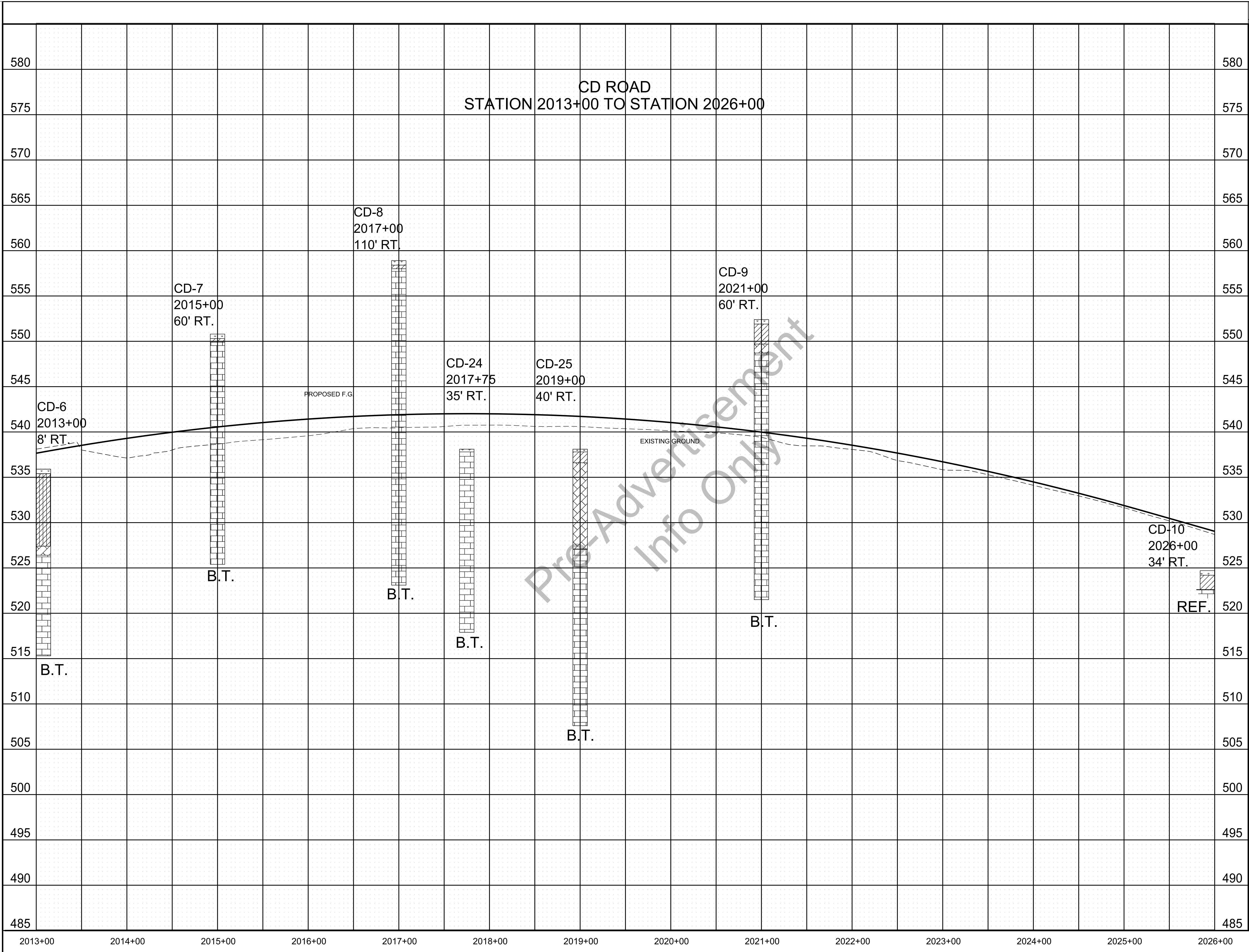
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED

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GEOTECHNICAL BORING PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G30

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- SILT (TYPE A MATERIAL)
- SILTY LEAN CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

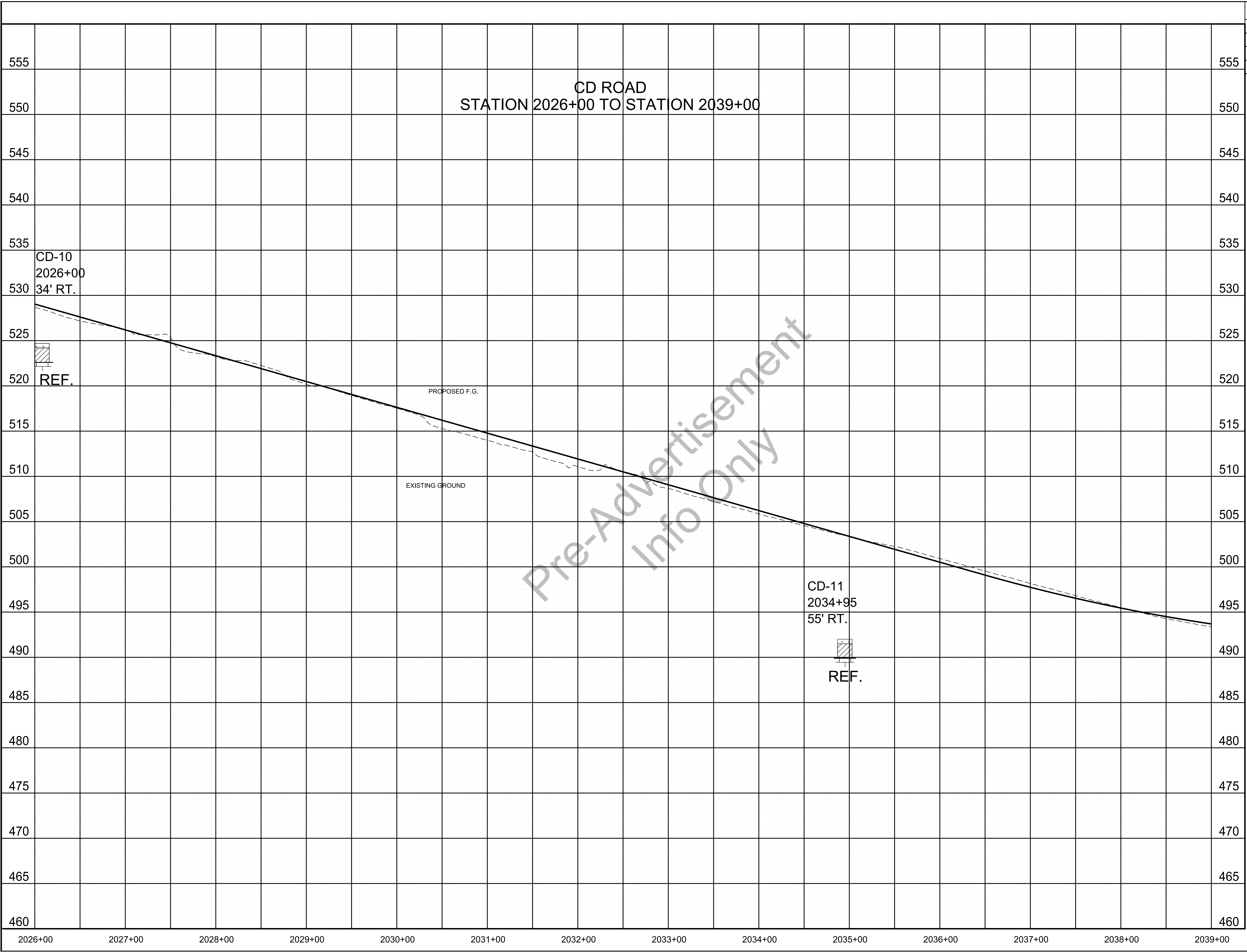
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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BIDDING

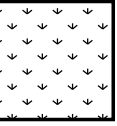
STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION

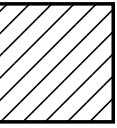
GEOTECHNICAL
BORING
PROFILE

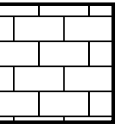


TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G31

LEGEND

 TOPSOIL

 CLAY (TYPE A MATERIAL)

 LIMESTONE (TYPE B MATERIAL)

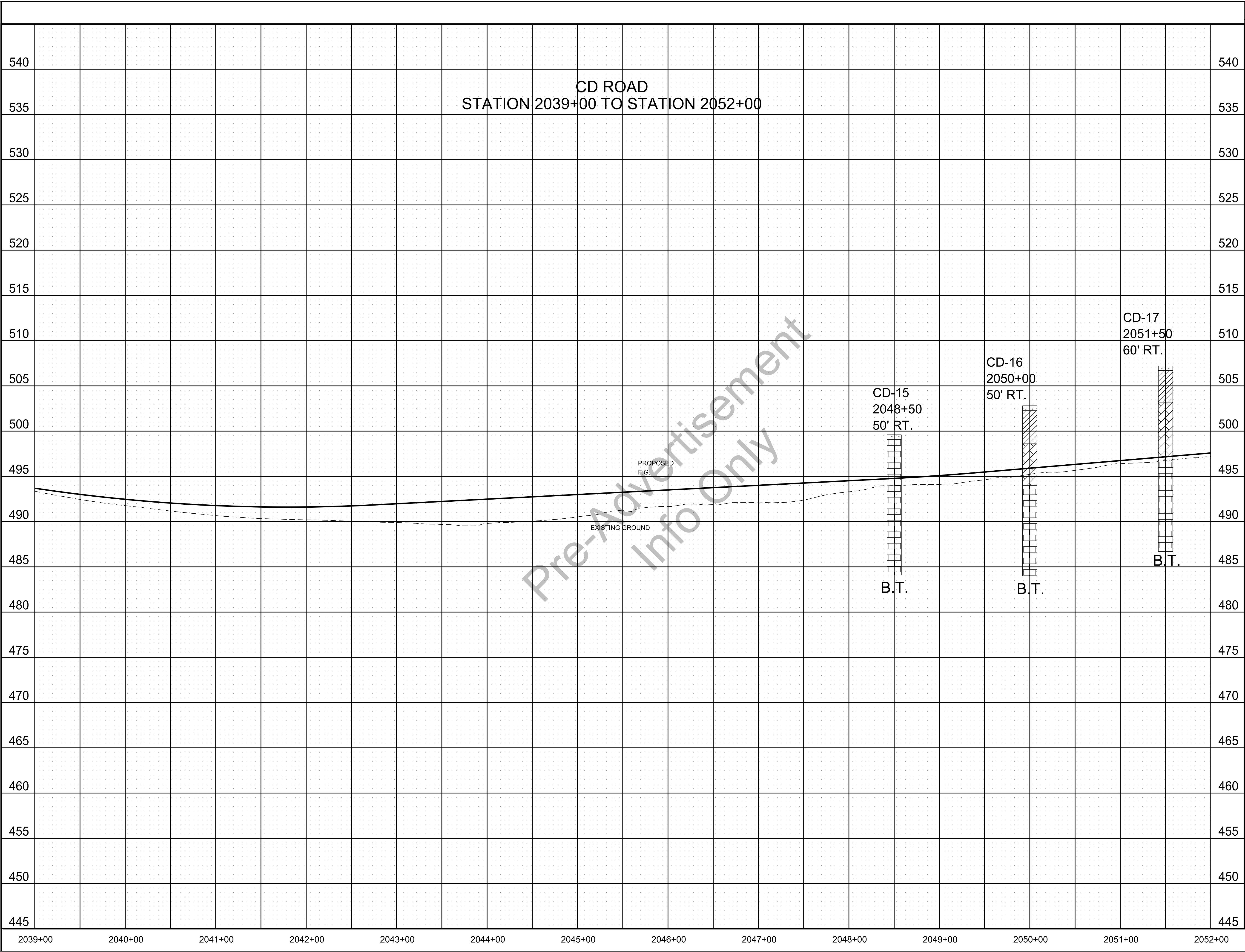
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
REF.= AUGER REFUSAL

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TRANSPORTATION

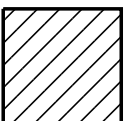
GEOTECHNICAL BORING PROFILE

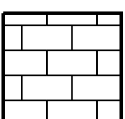


TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G32

LEGEND

 TOPSOIL

 CLAY (TYPE A MATERIAL)

 LIMESTONE (TYPE B MATERIAL)

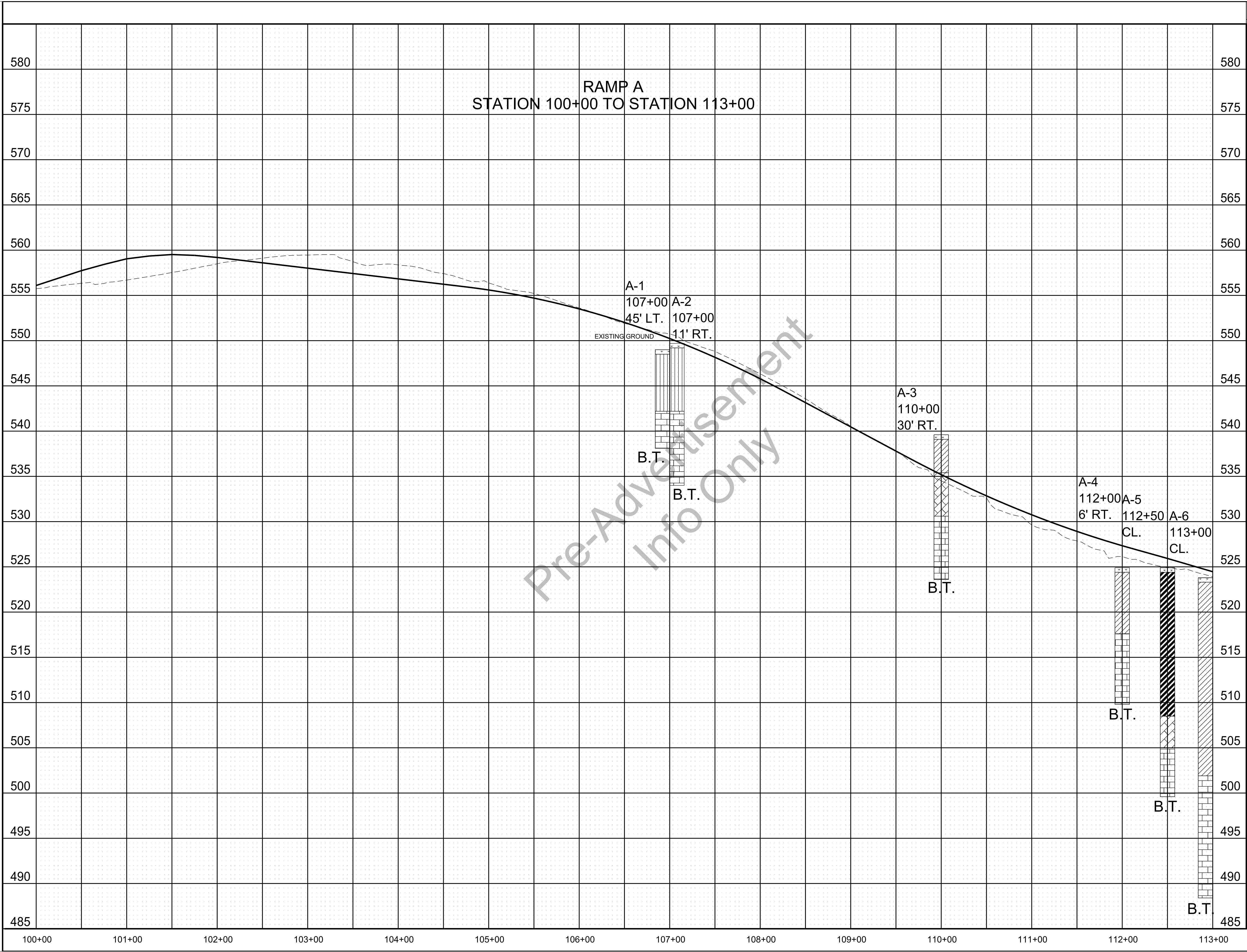
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED

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BORING
PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G33

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- SILT (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

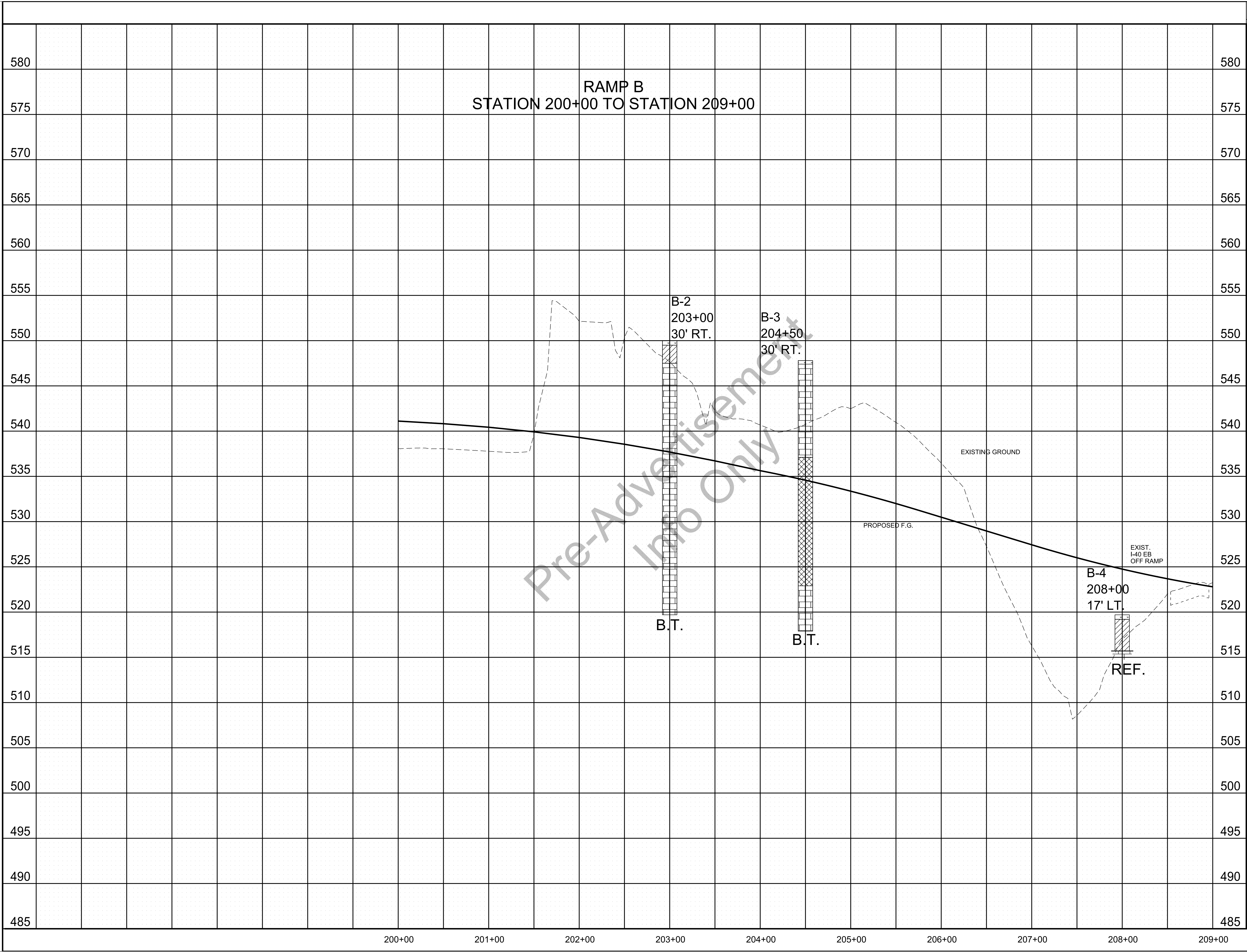
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PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G34

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- CAVITY FILLED WITH CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

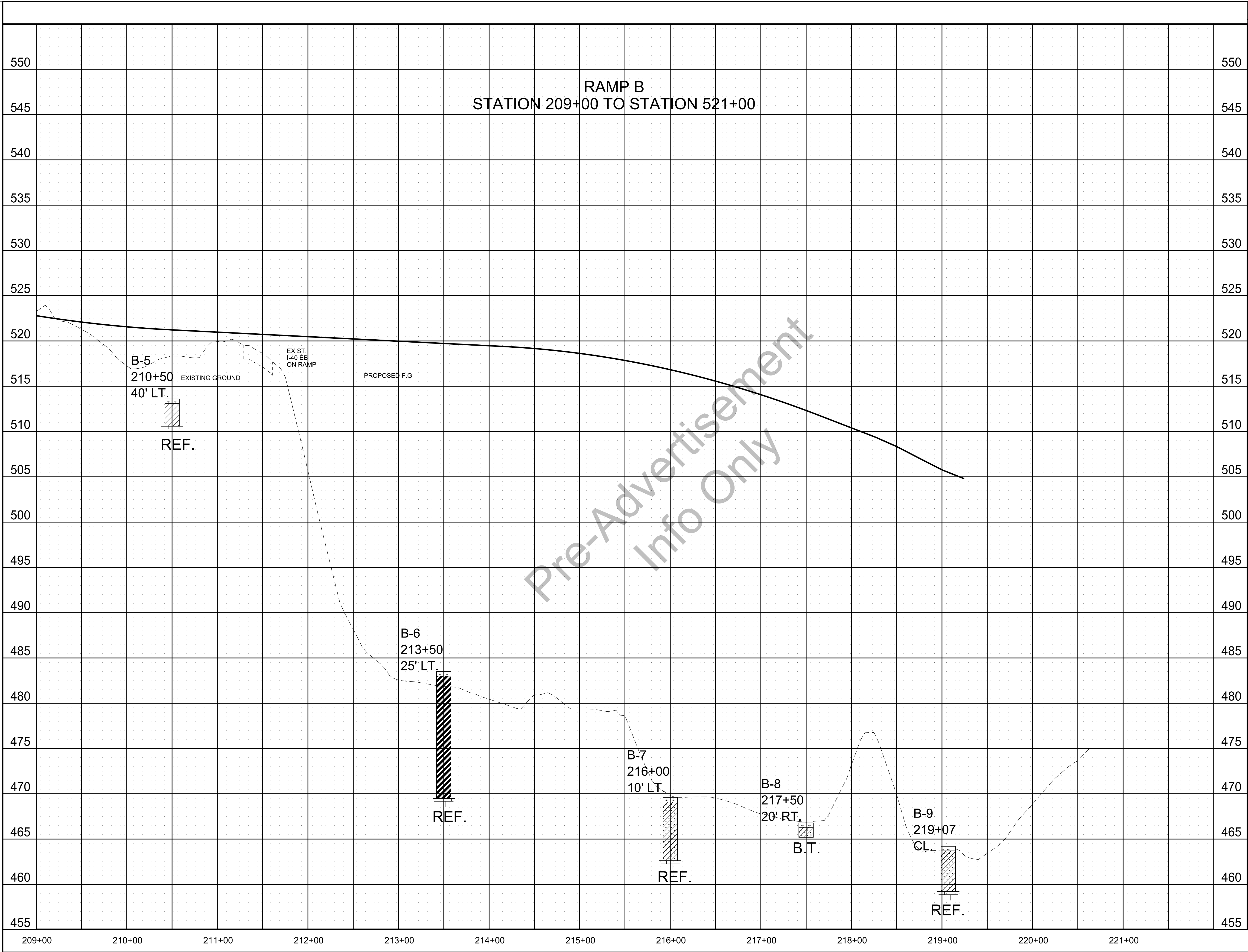
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B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G35

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- SANDY LEAN CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

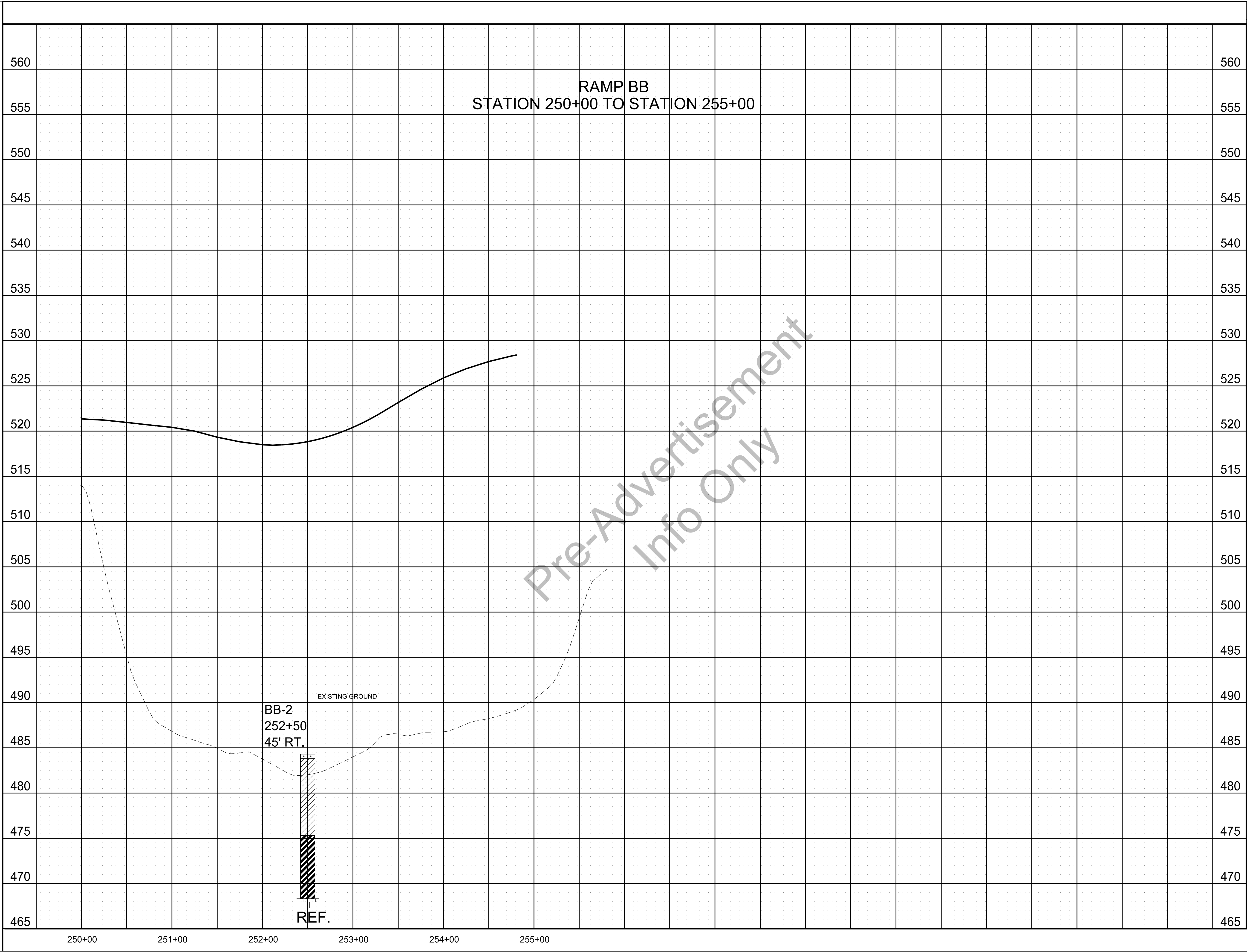
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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BORING
PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G36

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)

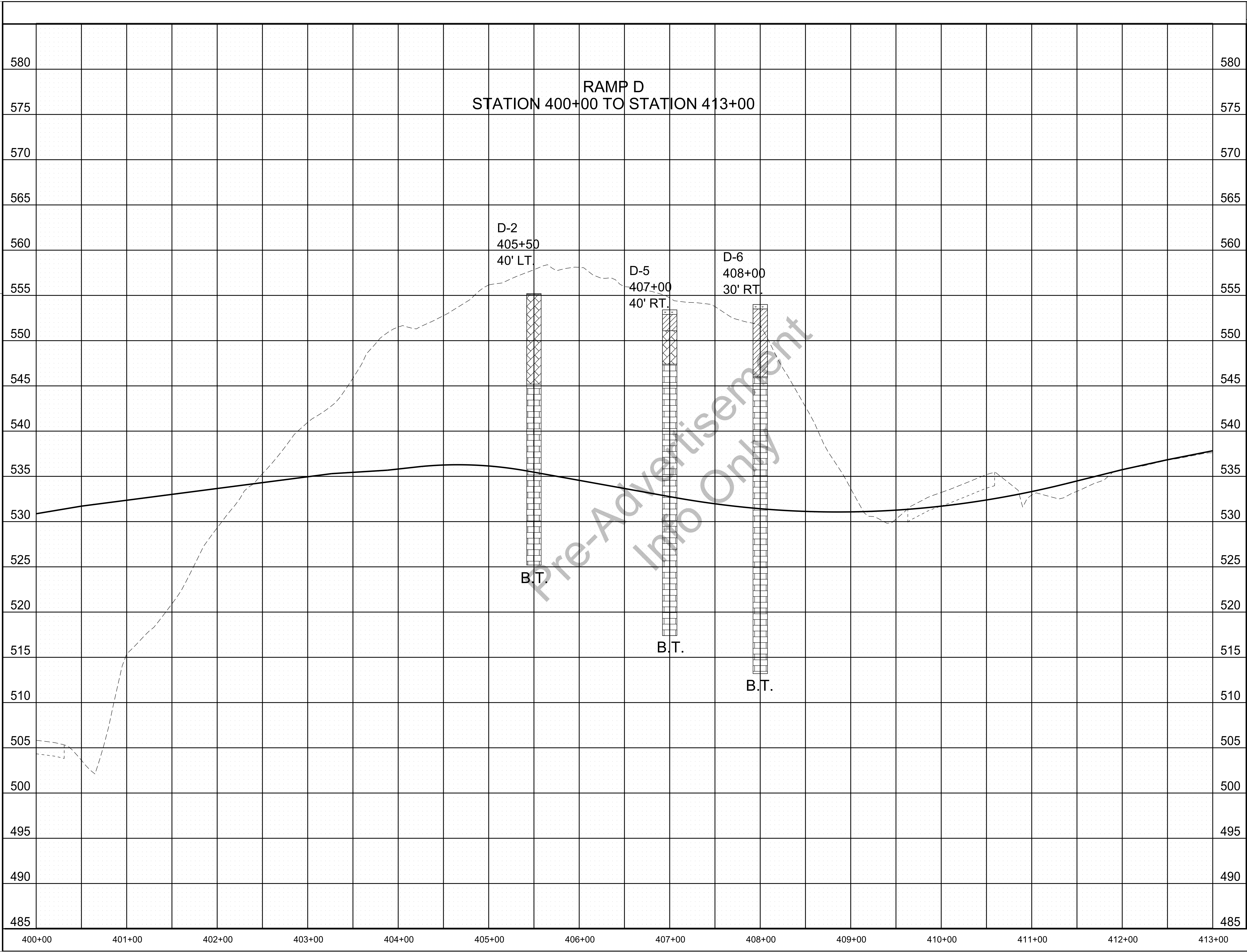
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
REF.= AUGER REFUSAL

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PROFILE**



LEGEND

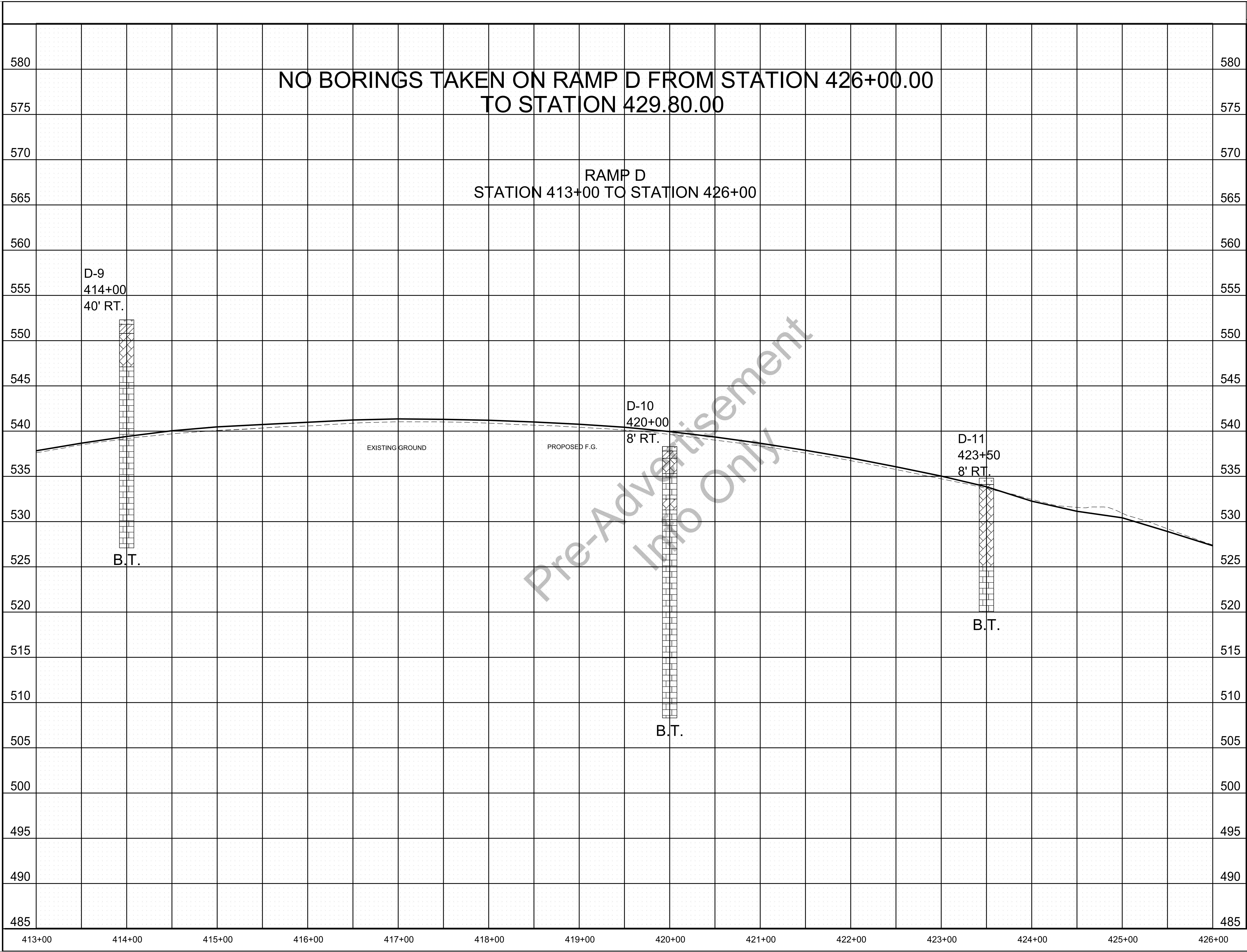
- TOPSOIL
- CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)
- TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
- B.T.= BORING TERMINATED

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BORING
PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G38

LEGEND

- TOPSOIL
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

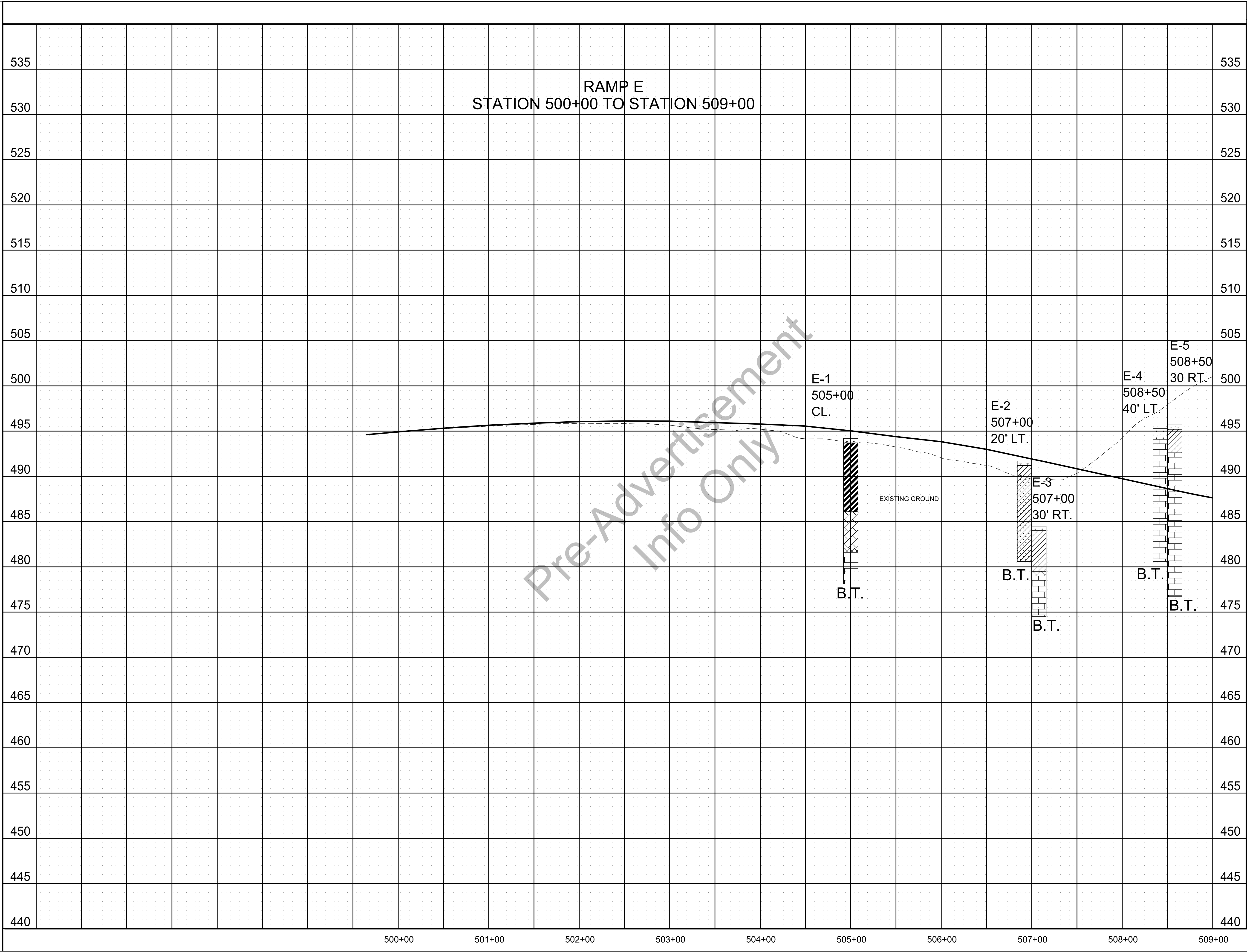
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
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BORING
PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G39

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- CAVITY FILLED WITH CLAY (TYPE A MATERIAL)
- SANDY LEAN CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

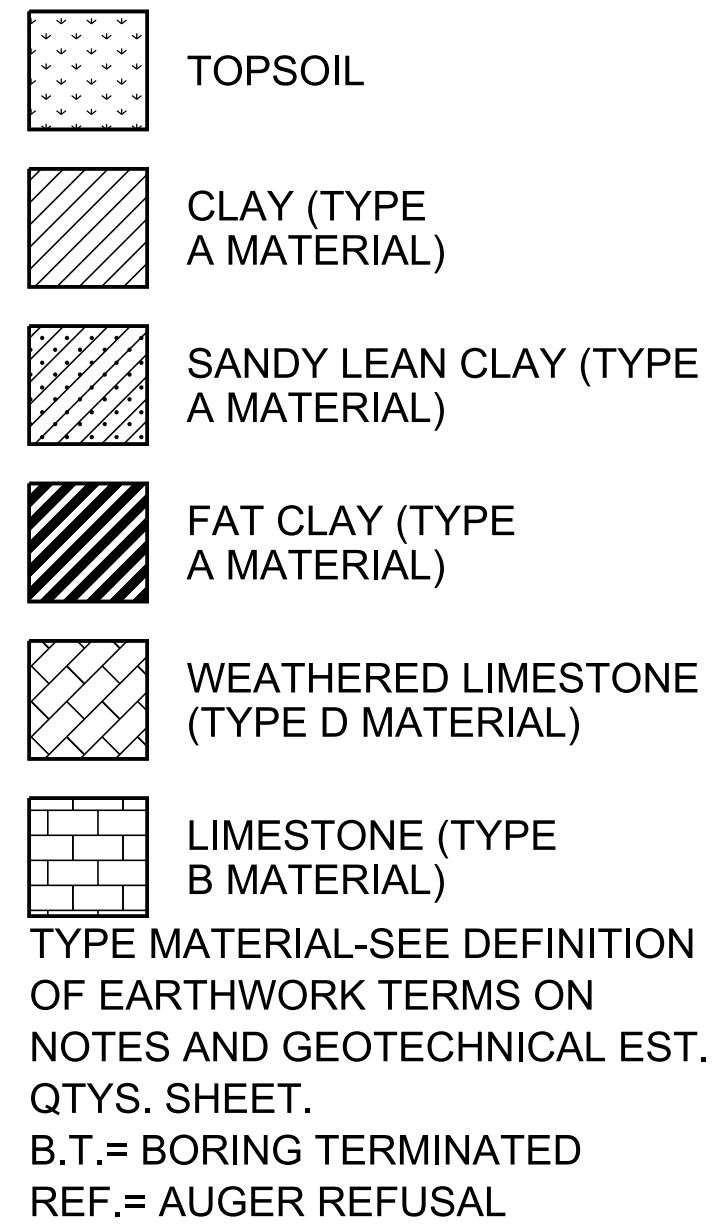
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED

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DEPARTMENT OF
TRANSPORTATION

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BORING
PROFILE

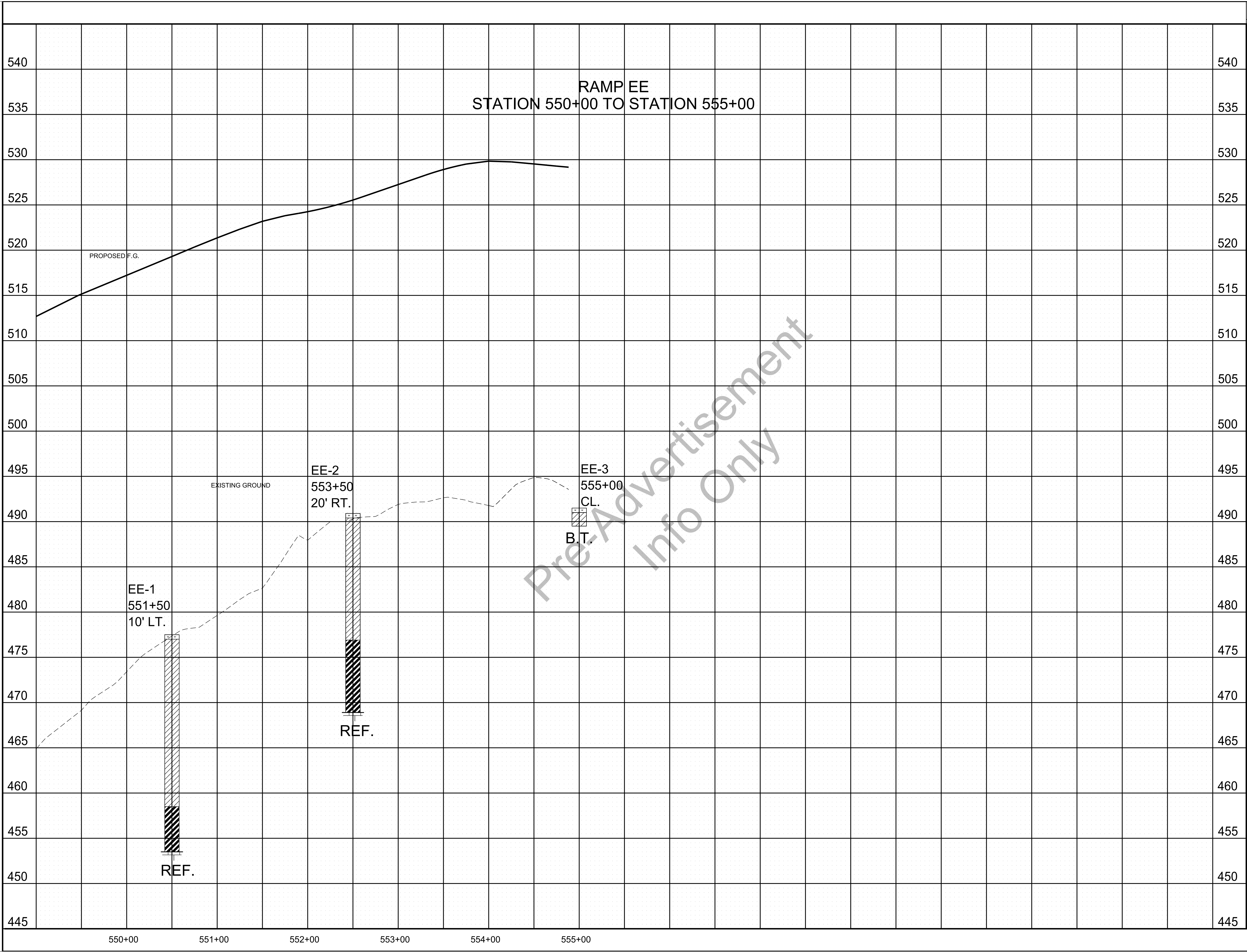


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TRANSPORTATION**

GEOTECHNICAL BORING PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G41

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)

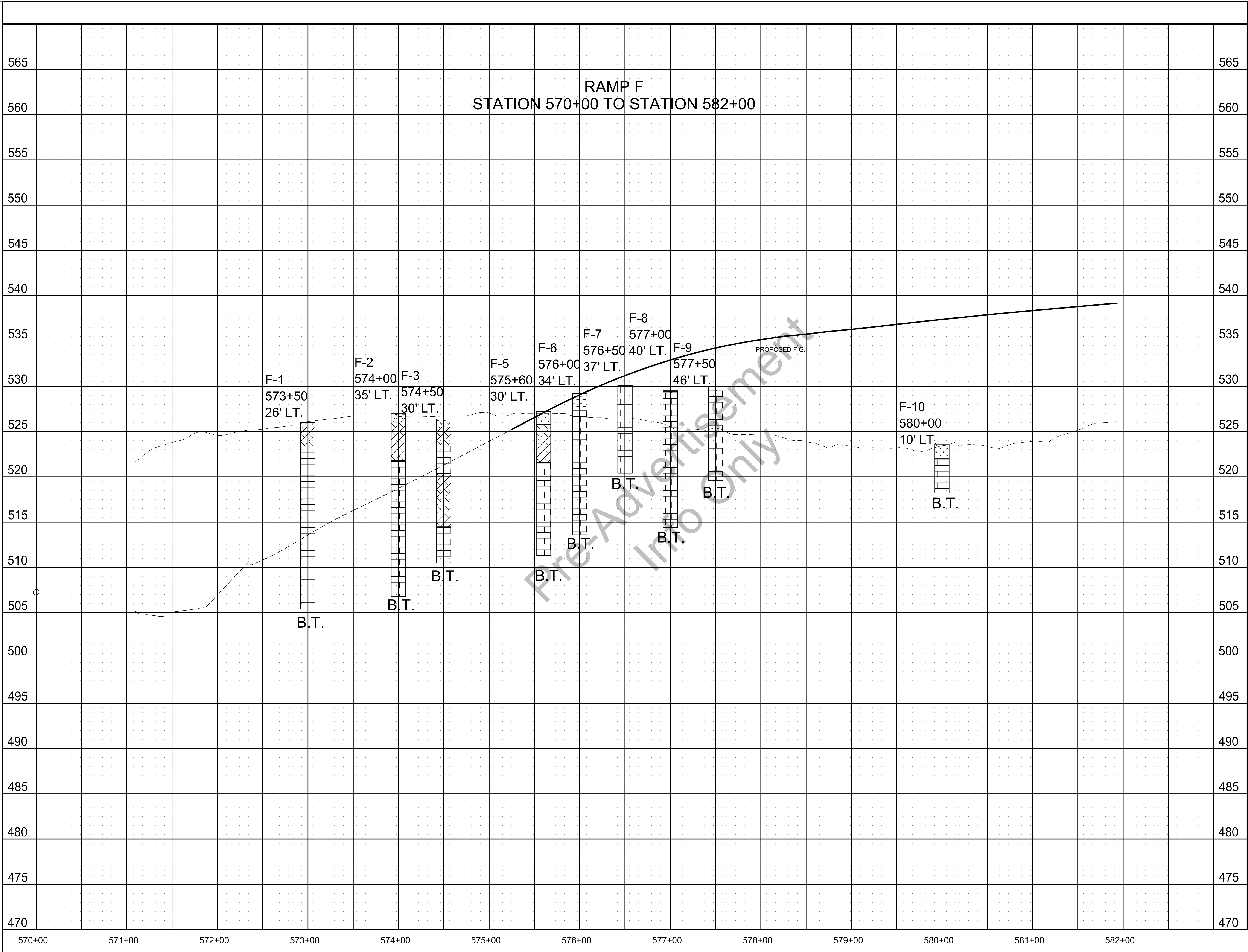
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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BORING
PROFILE**



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G42

LEGEND

TOPSOIL

WEATHERED LIMESTONE (TYPE D MATERIAL)

LIMESTONE (TYPE B MATERIAL)

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.

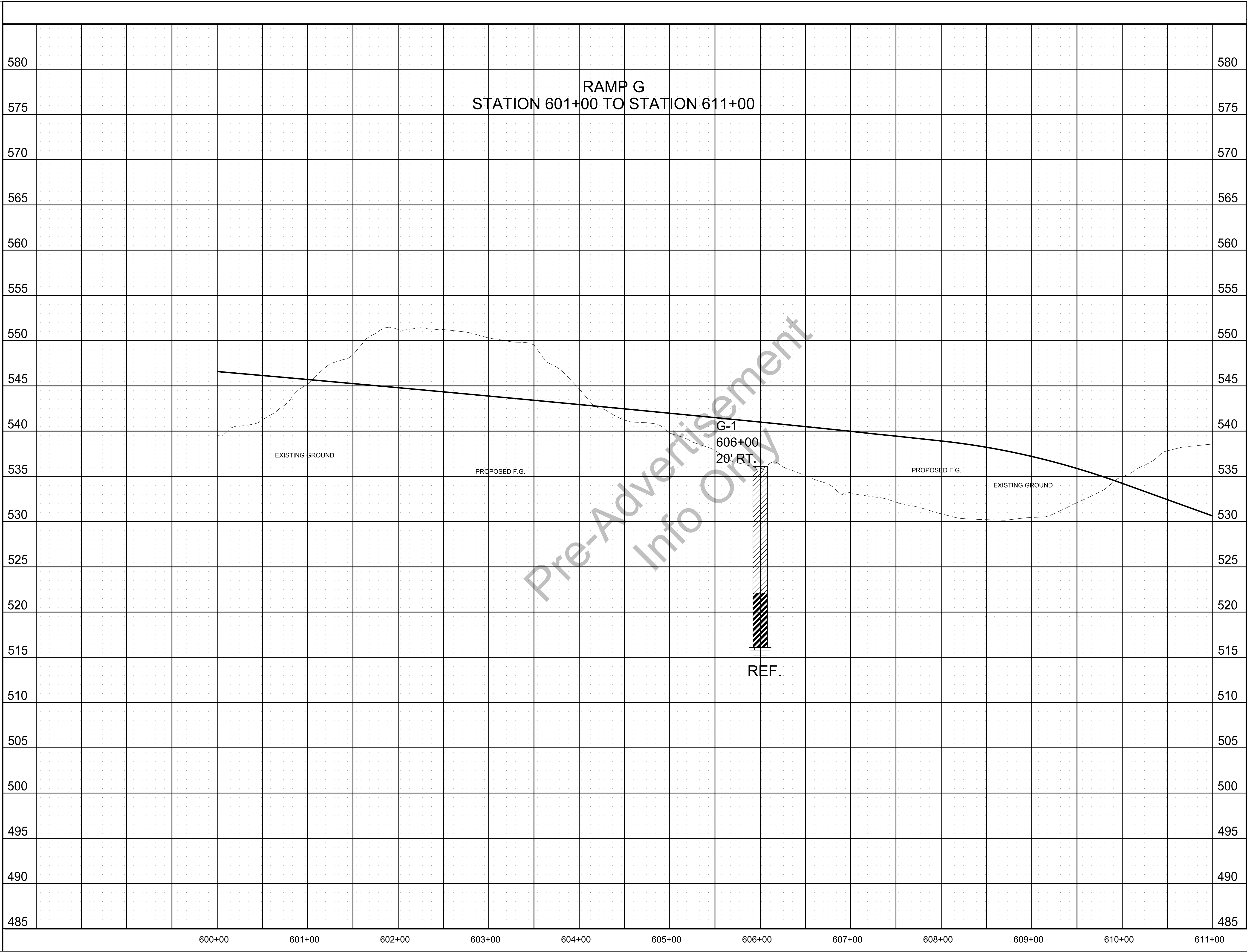
B.T.= BORING TERMINATED

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BORING
PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G43

LEGEND

- TOPSOIL
- CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

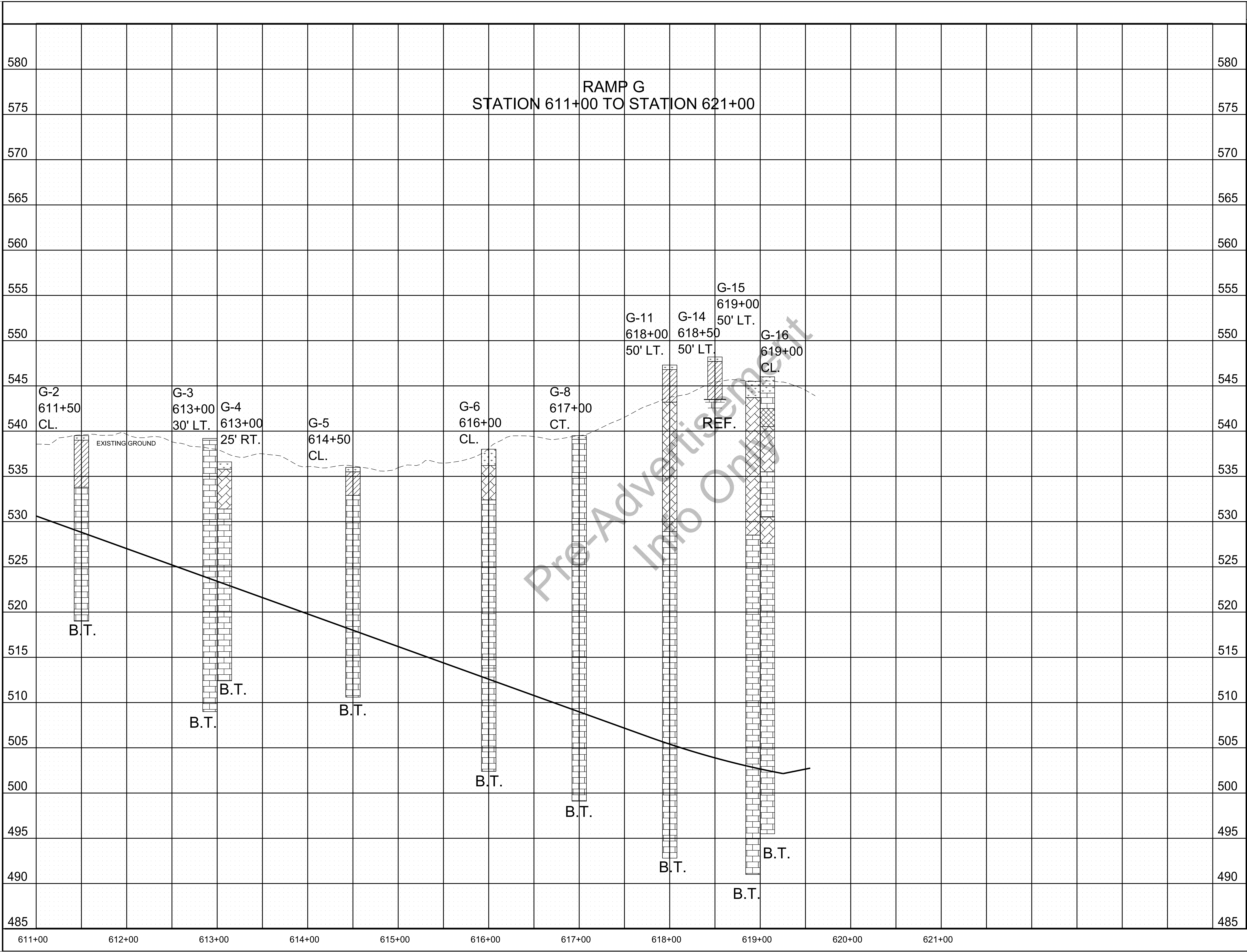
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
REF.= AUGER REFUSAL

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BORING
PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G44

LEGEND

- TOPSOIL
- CAVITY FILLED WITH CLAY (TYPE A MATERIAL)
- CLAY (TYPE A MATERIAL)
- WEATHERED LIMESTONE (TYPE D MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

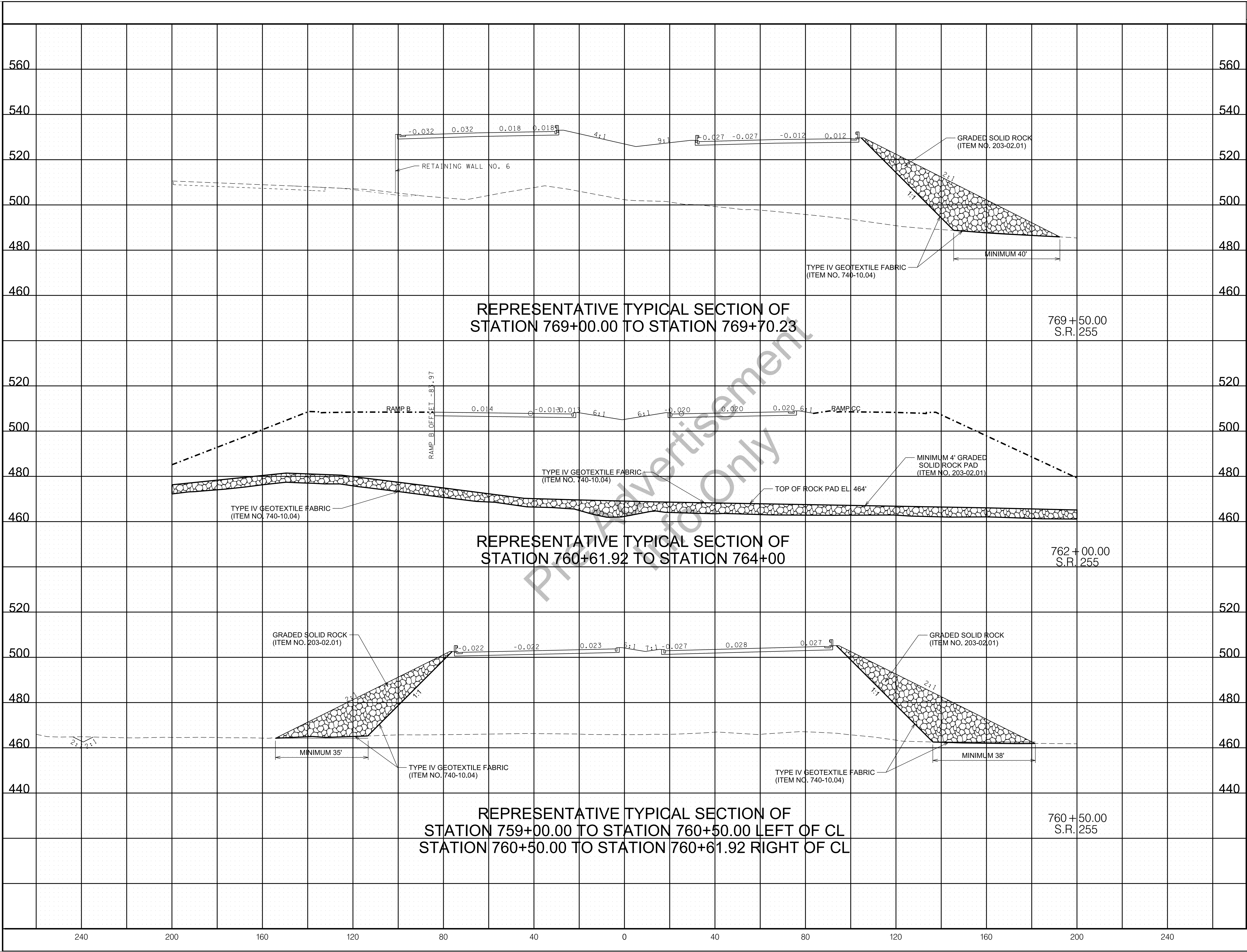
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON NOTES AND GEOTECHNICAL EST. QTYS. SHEET.
B.T.= BORING TERMINATED
REF.= AUGER REFUSAL

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GEOTECHNICAL BORING PROFILE



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G45

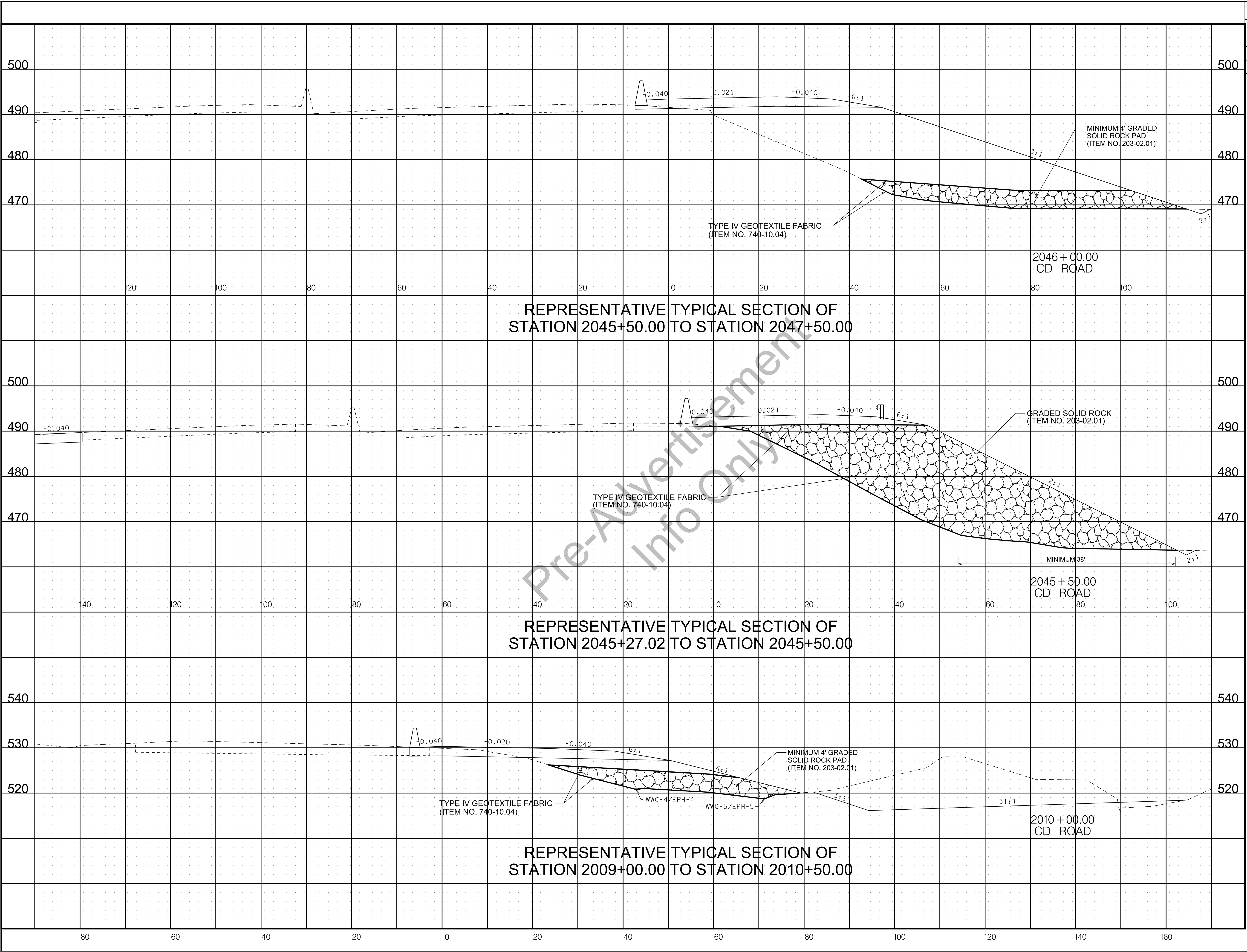
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COORDINATES ARE NAD/83(1995),
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FACTOR OF . AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

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GEOTECHNICAL
TYPICAL SECTIONS



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G46

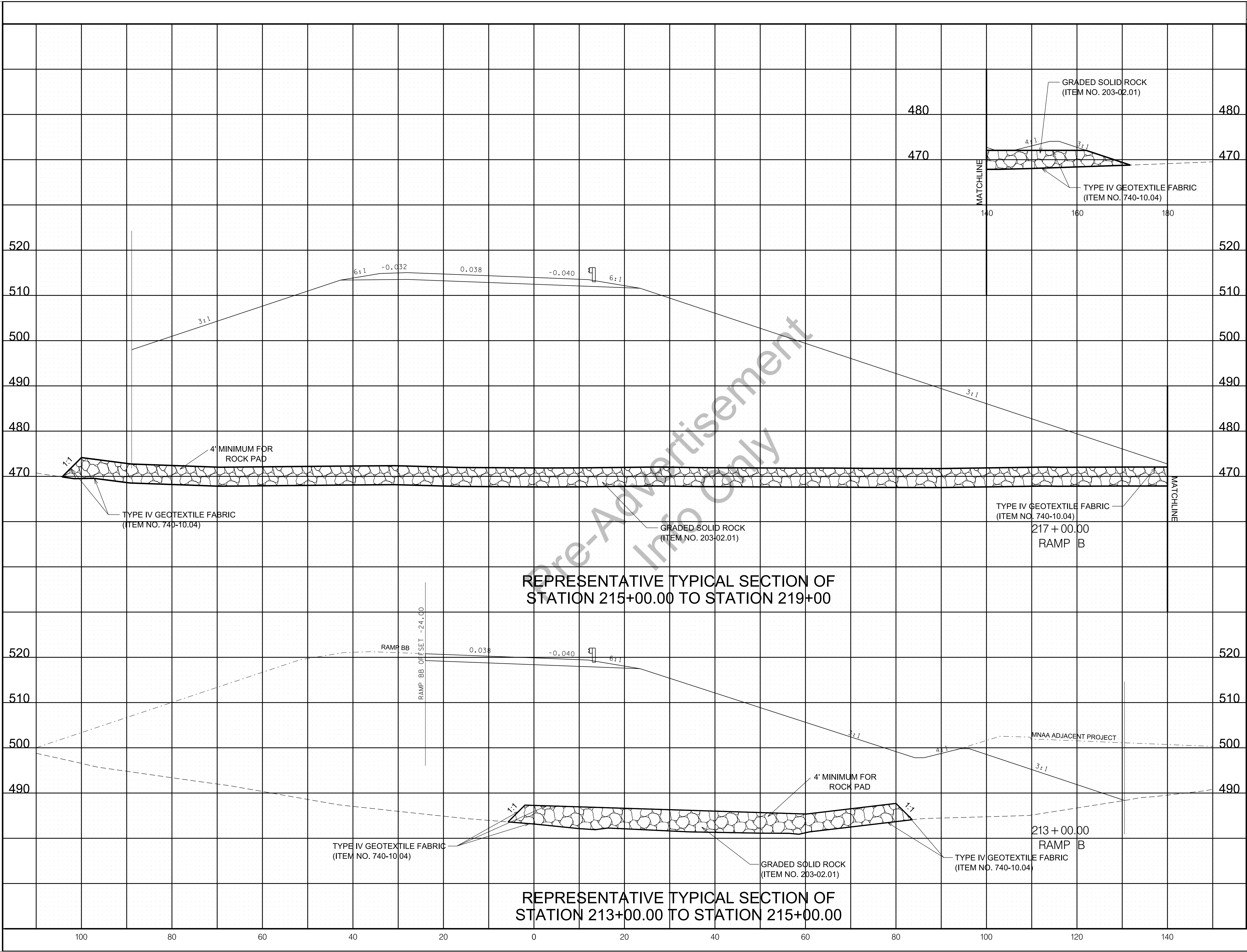
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COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF . AND TIED TO
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STATE OF TENNESSEE
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TRANSPORTATION

GEOTECHNICAL
TYPICAL SECTIONS



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-1-40-5(146)	G47

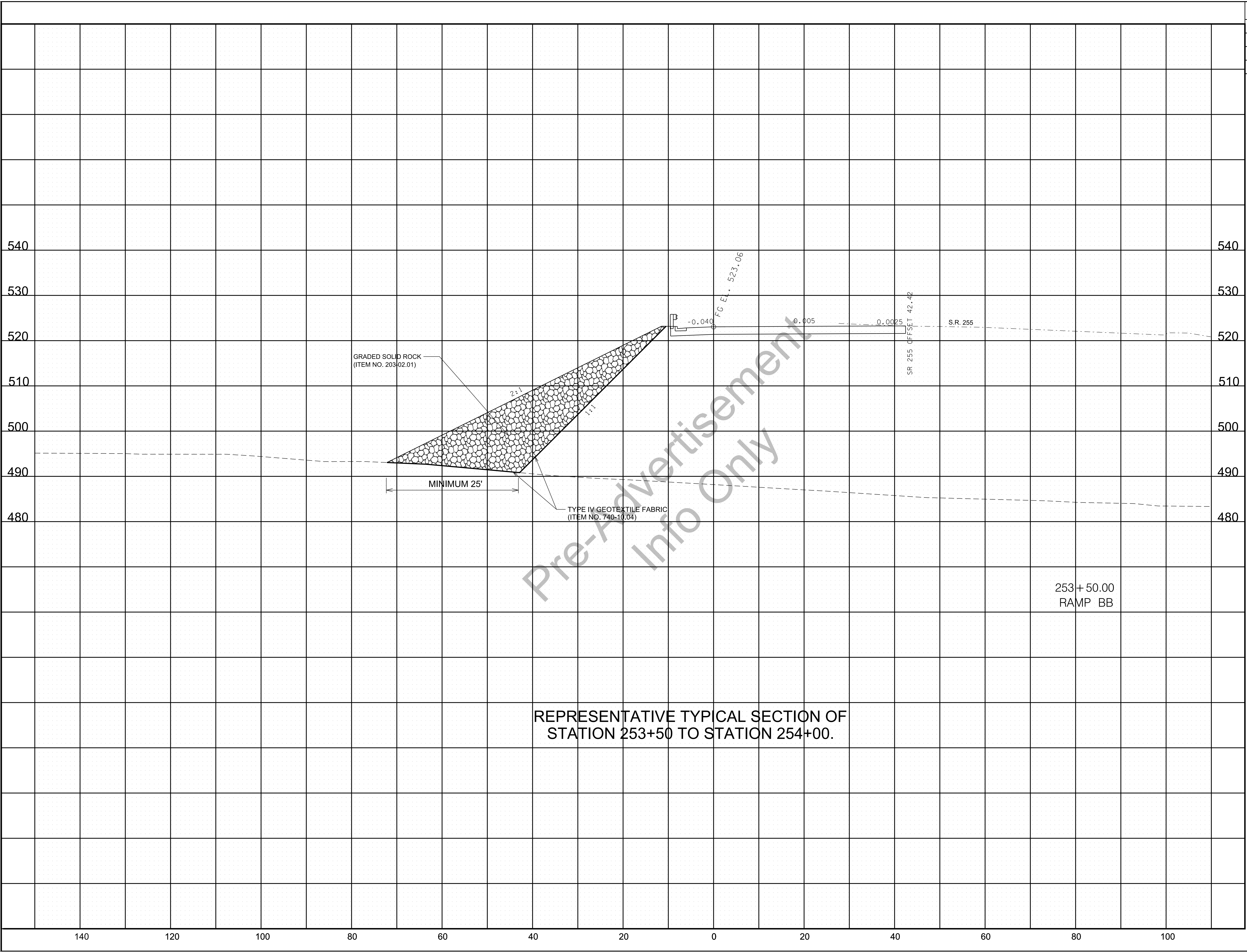
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SET
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BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF . AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
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GEOTECHNICAL
TYPICAL SECTIONS



REPRESENTATIVE TYPICAL SECTION OF
STATION 253+50 TO STATION 254+00.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G49

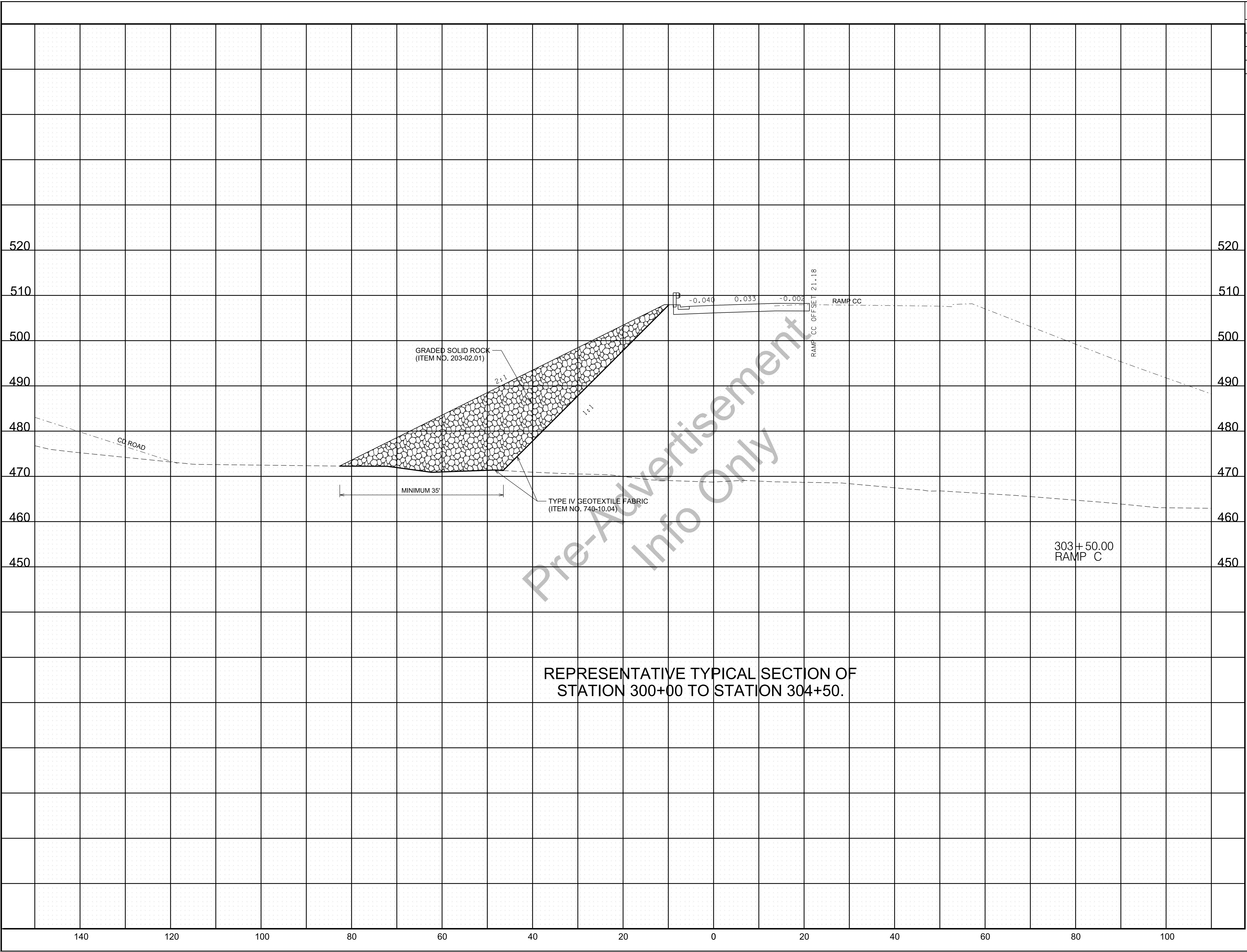
SEALED BY

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SET
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BIDDING

COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF . AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
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STATE OF TENNESSEE
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GEOTECHNICAL
TYPICAL SECTIONS



REPRESENTATIVE TYPICAL SECTION OF
STATION 300+00 TO STATION 304+50.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G50

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BIDDING

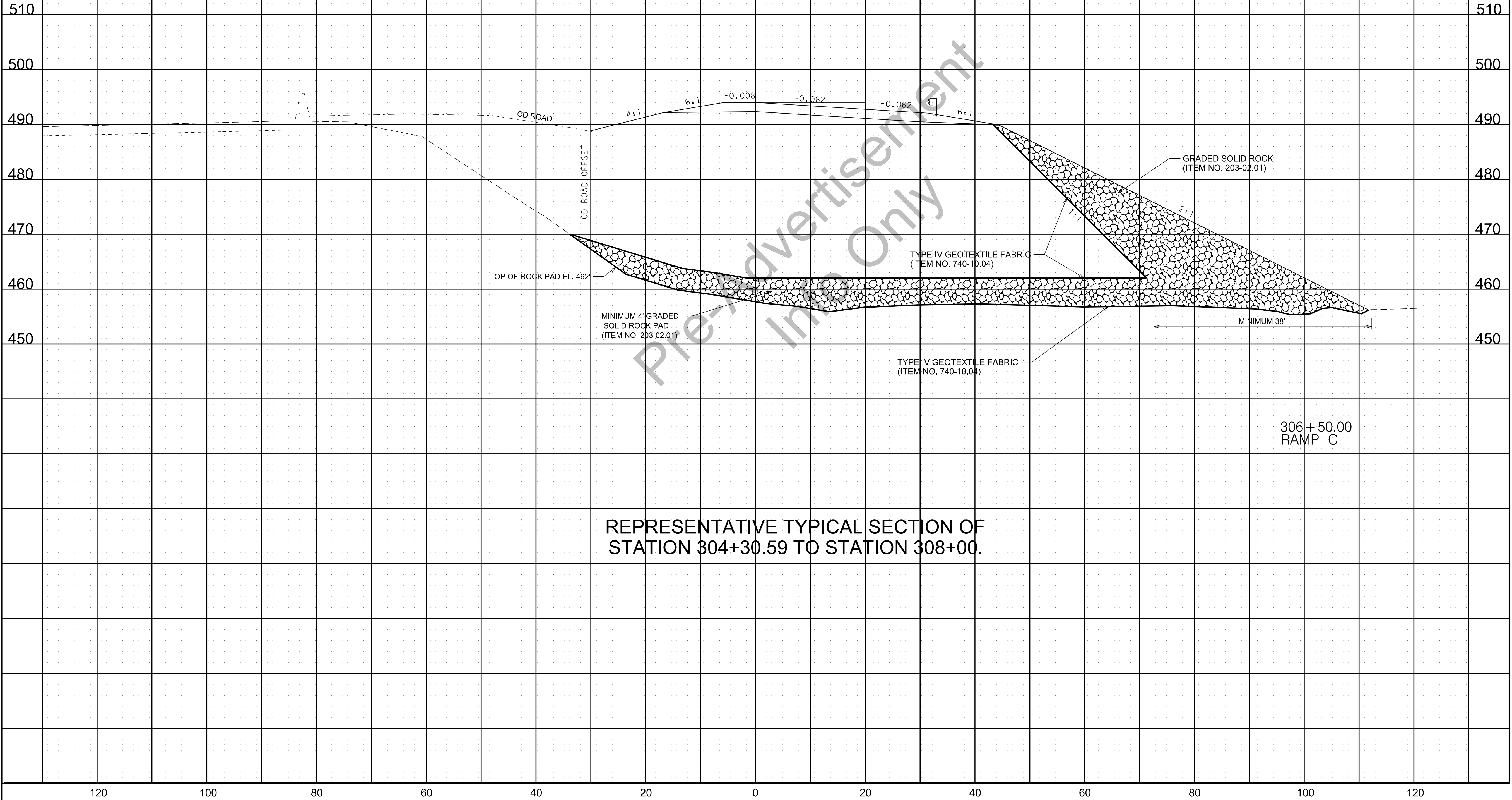
COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
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REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
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GEOTECHNICAL
TYPICAL SECTIONS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G51



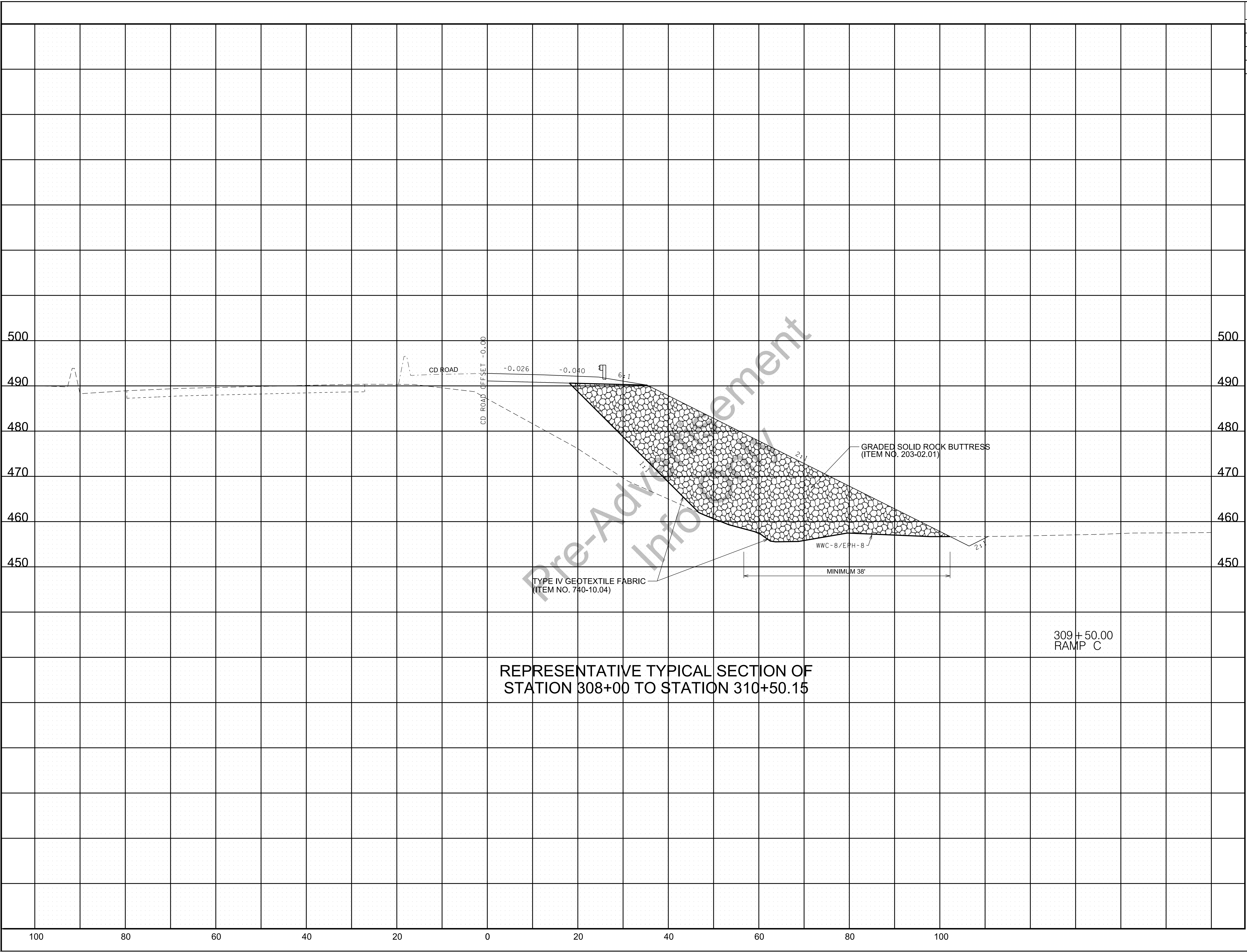
SEALED BY

UNOFFICIAL
SET
NOT FOR
BIDDING

COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF . AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
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GEOTECHNICAL
TYPICAL SECTIONS



REPRESENTATIVE TYPICAL SECTION OF
STATION 308+00 TO STATION 310+50.15

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G52

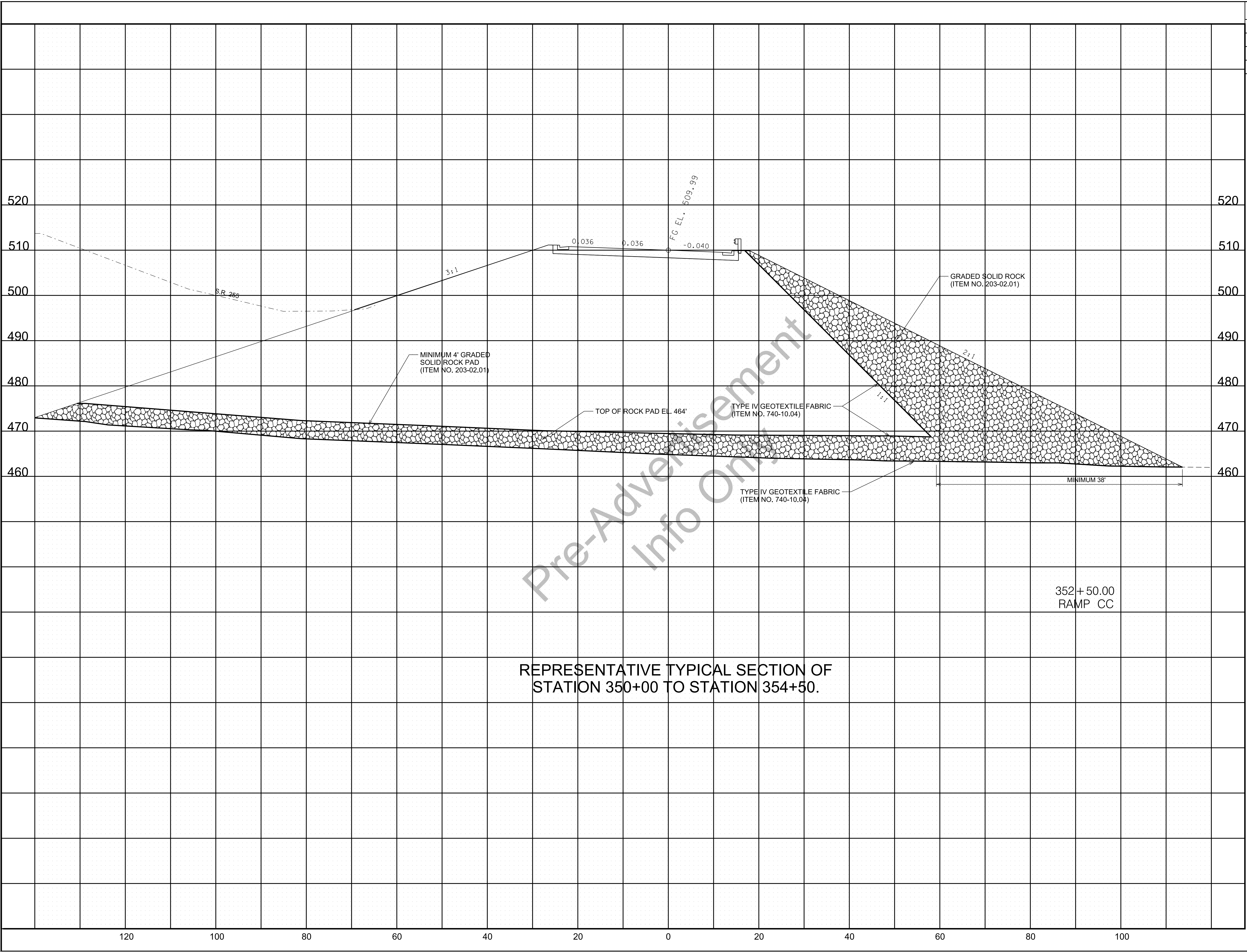
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SET
NOT FOR
BIDDING

COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF . AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION

GEOTECHNICAL
TYPICAL SECTIONS



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G53

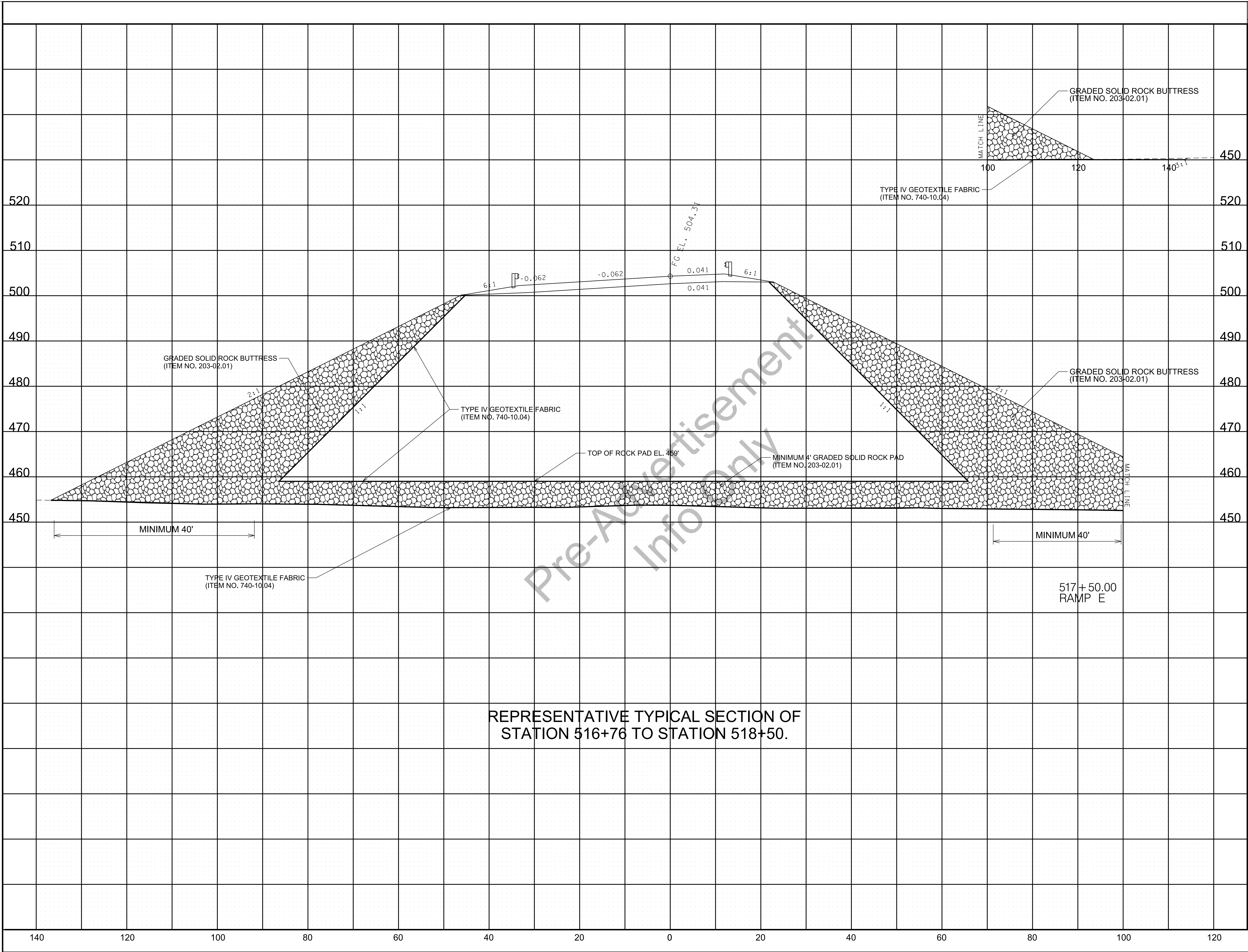
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COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF . AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF
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GEOTECHNICAL
TYPICAL SECTIONS



REPRESENTATIVE TYPICAL SECTION OF
STATION 516+76 TO STATION 518+50.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G54

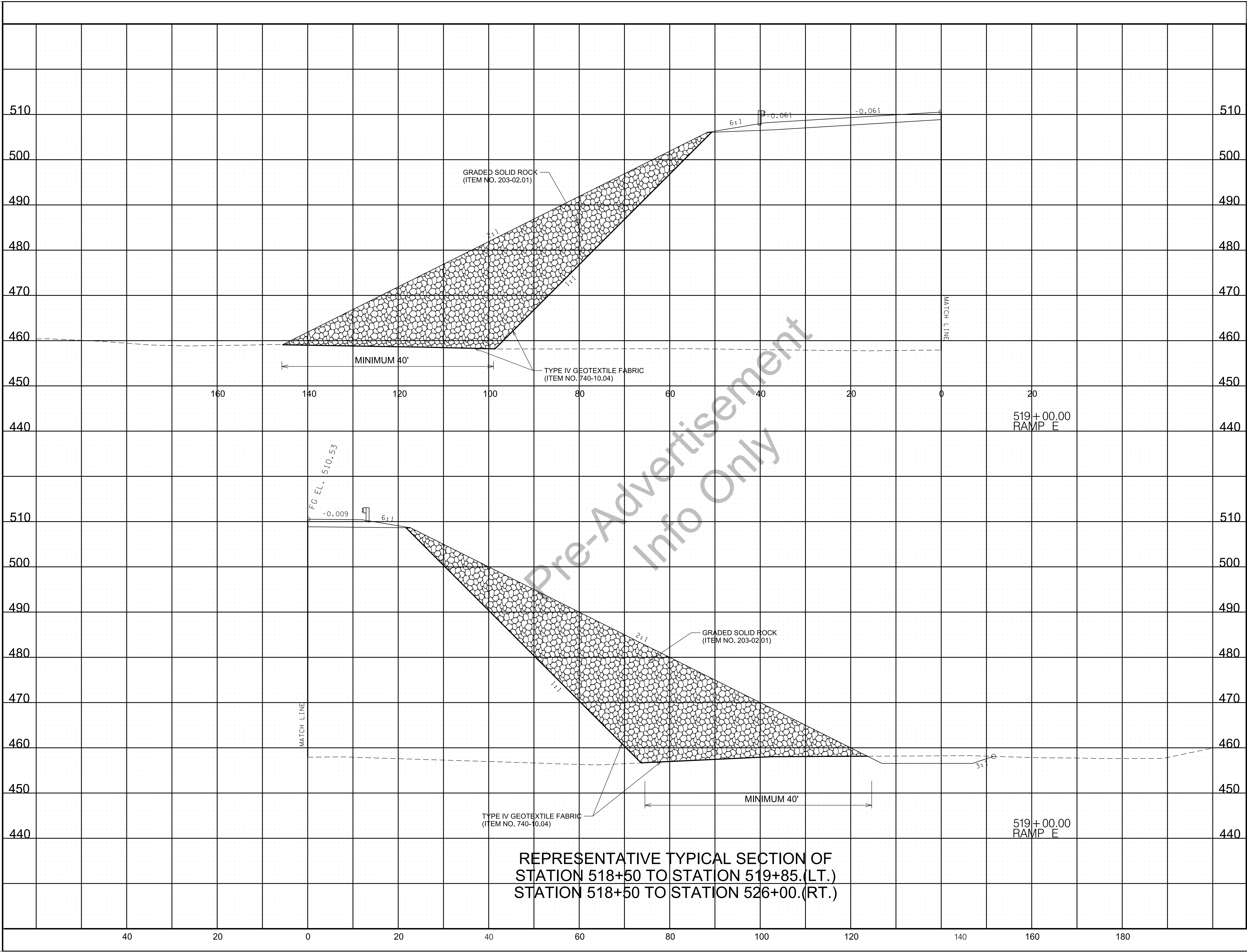
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COORDINATES ARE NAD/83(1995),
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STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION

GEOTECHNICAL
TYPICAL SECTIONS



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G55

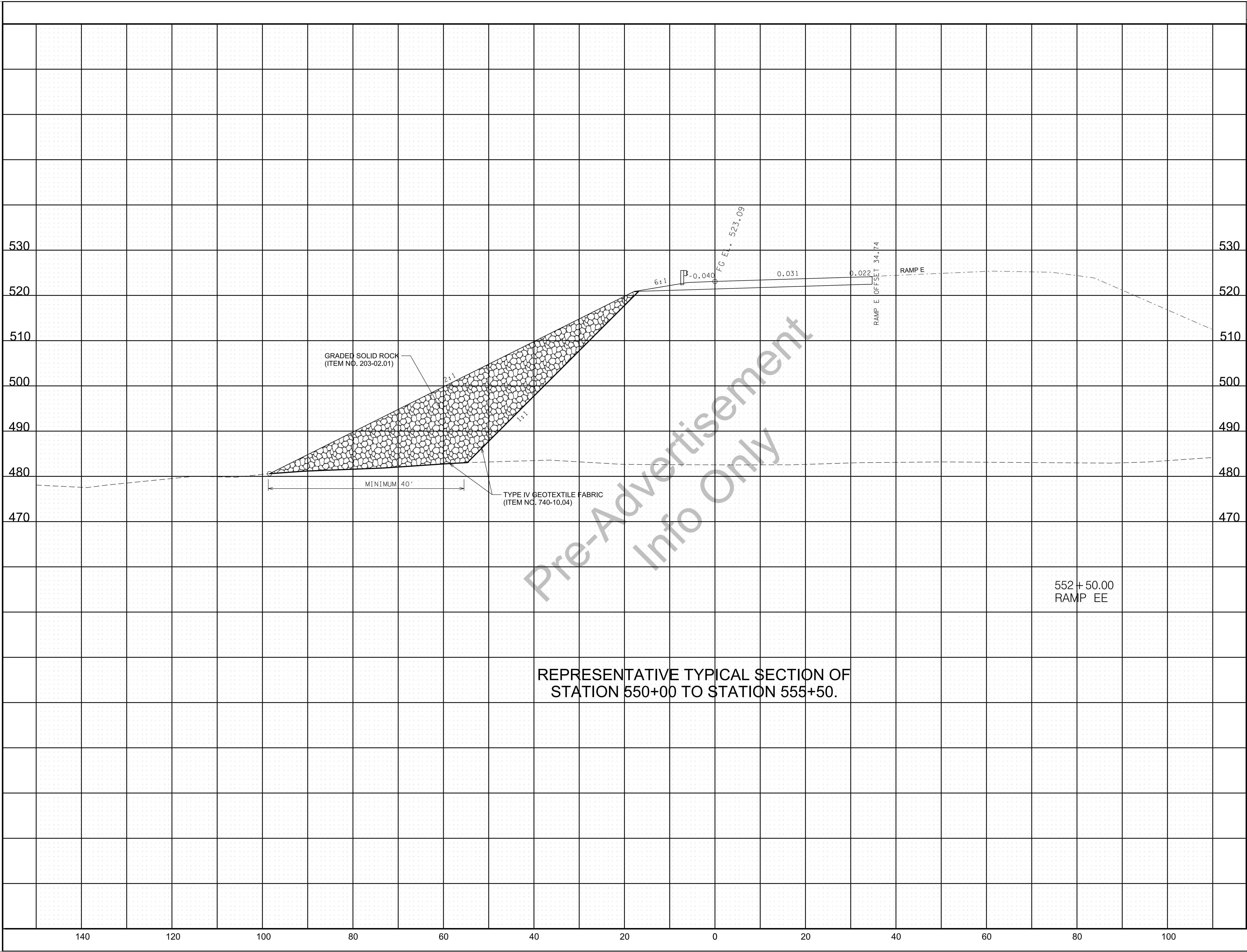
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BIDDING

COORDINATES ARE NAD/83(1995),
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STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION

GEOTECHNICAL
TYPICAL SECTIONS



REPRESENTATIVE TYPICAL SECTION OF
STATION 550+00 TO STATION 555+50.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G56

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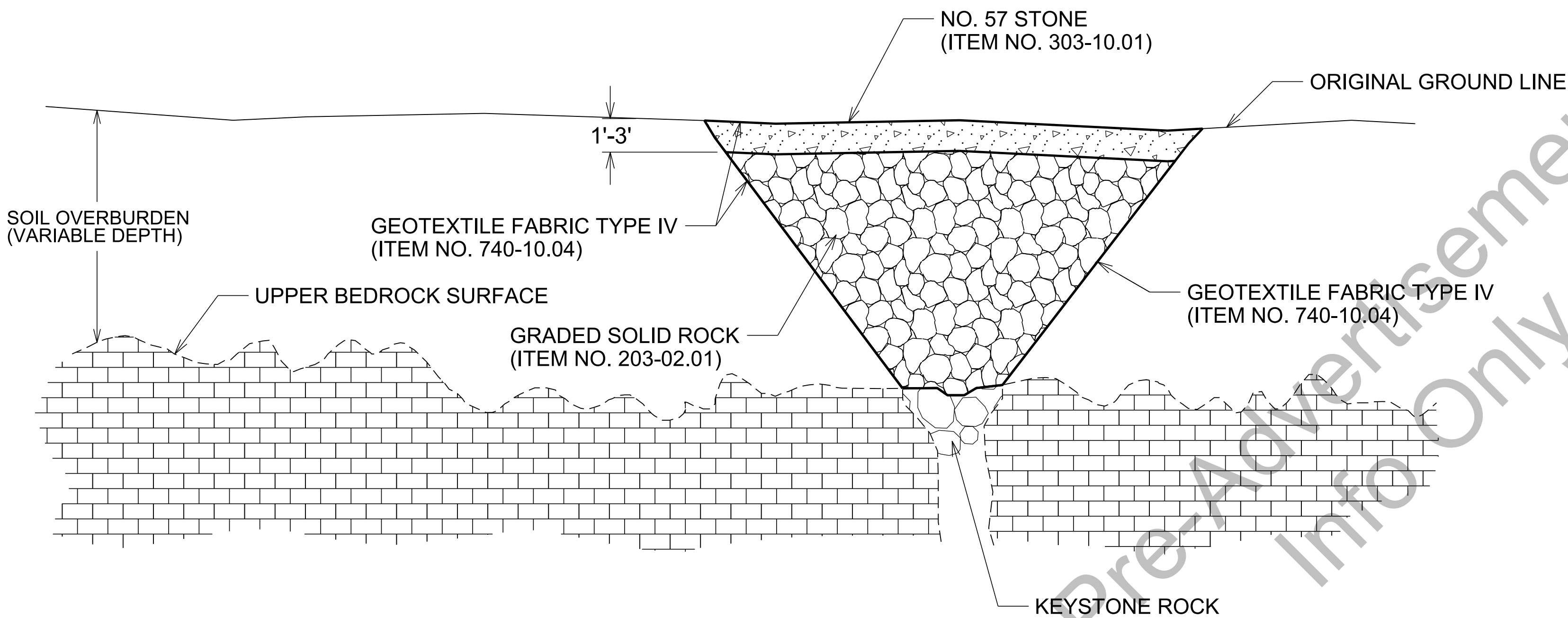
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SET
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BIDDING

COORDINATES ARE NAD/83(1995),
ARE DATUM ADJUSTED BY THE
FACTOR OF . AND TIED TO
THE TGRN. ALL ELEVATIONS ARE
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STATE OF TENNESSEE
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GEOTECHNICAL
TYPICAL SECTIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2020	NH-I-40-5(146)	G57



SINKHOLE TREATMENT 1
VARIABLE

SINKHOLE TREATMENT 1, ACTIVE

NOTE:
AFTER EXCAVATION IS COMPLETE AND ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. THE TOP 1-3 FT. OF MATERIAL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

1. EXCAVATE SINKHOLE TO DEFINE OPENING IN BEDROCK MAKING SURE TO REMOVE ALL SOILS AND DEBRIS.
2. FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINANGE.
3. PLACE THE GEOTEXTILE FABRIC TYPE IV ON EXCAVATED SLOPES AND BASE OF SINKHOLE.
4. BACKFILL TO A MAXIMUM OF 1 FT. OF THE SPECIFIED GRADE WITH GRADED SOLID ROCK (CLASSIFICATION 203-02.01 BORROW EXCAVATION).
5. BACKFILL TO GRADE WITH A MINIMUM OF 1FT. OF NO. 57 STONE ON TOP OF THE GRADED SOLID ROCK AND GEOTEXTILE FABRIC TYPE IV.

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SINKHOLE STANDARD
DRAWINGS
SINKHOLE TREATMENT
ILLUSTRATIONS