

**MATERIALS ENGINEERING AND
RESEARCH OFFICE
FOUNDATION GROUP**

GWP 2274-02-00

HWY QEW 401

**REGION Central
SITE**

Overhead Sign Structure Replacement

**Subsurface Information
for
Overhead Sign Structure Replacement
Hwy 401
WP 2274-02-00 Central Region**

The following borehole data defines subsurface conditions at the proposed overhead sign structure locations for contract purposes. The attached table lists the reference boreholes applicable to each of the overhead sign structures. The closest borehole shall be assumed to represent subsurface conditions at the respective overhead sign location. The approximate borehole locations are plotted on the attached plans.

In some cases, imperial units of measure are used on the Record of Borehole sheets. The contractor is advised that original ground elevations shown on the borehole logs may differ from present day elevation as a result of construction.



D. Dundas, P.Eng.
Sr. Foundation Engineer

WP 2274-02-00 Hwy 401 from Hwy 400 to Yonge Street

Overhead Sign	Approximate Location	Borehole
1	Hwy 401 EB Collector to Express east of Avenue Rd	Geocres 30M11-76 BH1
2	Hwy 401 EB Collector Exit to Avenue Rd.	Geocres 30M11-75 BH5
3	Hwy 401 EB Collector exit to Allen Rd.	Geocres 30M11-81 BH1A
4	Hwy 401 E/B Collector Advance (Allen Rd.)	Geocres 30M11-81 BH1A
5	Hwy 401 E/B Collector Advance (Dufferin Ave)	Geocres 30M11-81 BH4A
6	Hwy 401 E/B collector (Exit to Keele St + Dufferin Ave)	Geocres 30M11-85 BH7
7	Hwy 400 NB Exit To Hwy 401	Geocres 30M11-142 BH1

GEOTECHNICAL DATA SHEET FOR BOREHOLE . 1 . .

FORM REFERENCE NO. 2-11-2

CLIENT: ONTARIO DEPARTMENT OF HIGHWAYS

METHOD OF BORING: AUGERING

ENCLOSURE NO. 3

PROJECT: AVENUE ROAD - HWY 401 - RETAINING WALL

DIAMETER OF BOREHOLE: 6"

LOCATION: SEE ENCL. 2.

DATE: NOVEMBER 19, 1962.

DATUM ELEVATION: 592.2

ELEVATION ft.	DEPTH ft.	STRATIFICATION DESCRIPTION	STRATIFICATION SYMBOL	SAMPLES			PENETRATION RESISTANCE blows per foot		CONSISTENCY water content % PI W LI	REMARKS
				NUMBER	TYPE	No. or Advantage of Sample	0	100		
592.2	0	TOPSOIL								
590	5	DAMP HARD SANDY CLAYEY SILT TILL		1	SS	40				HAMMER BOUNCING
588	10	<i>-- brown gray</i>		2	SS	75				
580	15	GREY DAMP VERY DENSE SILT <i>slightly cemented</i>		3	SS	450				
575	20	GREY HARD CLAYEY SILT TILL		4	SS	150				
570	25			5	SS	110				
565	30									DETAILS OF EXTRAPOLATED PENETRATION RESISTANCES:
										SA # : BLOWS :
										1 15/6" 25/6"
										2 20/6" 30/6" 15/2"
										3 75/2"
										4 38/6" 65/5"
										5 36/6" 50/6" 20/2"

VERTICAL SCALE: 1 IN. TO 5 FT.

DOMINION SOIL INVESTIGATION LIMITED

MADE: MB

CH'D: *Roch*

GEORES 30M11-76

GEOTECHNICAL DATA SHEET FOR BOREHOLE 5

DATE REFERENCE NO. 2-10-6

CLIENT: ONTARIO DEPARTMENT OF HIGHWAYS
 PROJECT: RETAINING WALL (RAMP "D")
 LOCATION: AVENUE ROAD, TORONTO
 TYPICAL ELEVATION: 561.3

METHOD OF BORING: AUGERING
 DIAMETER OF BOREHOLE: 6"
 DATE: OCT. 6, 1962

ENCLOSURE NO. 7

ELEVATION ft.	DEPTH ft.	STRATIFICATION DESCRIPTION	STRATIFICATION SYMBOL	SAMPLING			SPT DATA						CONSISTENCY Water content %	REMARKS
				NUMBER	TYPE	DEPTH ft.	0	20	40	60	80	100		
561.3	0	TOPSOIL												
560.0														
	5			1	SS	36								
555.0														
	10	HARD CLAYEY SILT TILL <i>brown</i> <i>grey</i> WITH SAND LAYERS		2	SS	69								
550.0														
	15			3	SS	36								
545.0														
	20	GREY DAMP VERY DENSE SANDY SILT TILL		4	SS	200								
540.0														
	25			5	SS	108								
535.0														

DETAILS OF
 EXTRAPOLATED
 -N- VALUES:
 SA. # BLOWS:
 4 100/6"
 5 46/6" - 54/6"

VERTICAL SCALE: 1 IN 10 5 FT.

DOMINION SOIL INVESTIGATION LIMITED

MADE: V.H. CH'D: L.S.R.

GEOCRE3 30M11-75

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & RESEARCH DIVISION

RECORD OF BOREHOLE NO. 1A

FOUNDATION SECTION

JOB 63-F-24 LOCATION 218/20 98' Rt. ORIGINATED BY B.M.G.
W.P. 229-60 BORING DATE March 14, 1963. COMPILED BY B.M.G.
DATUM Geodetic BOREHOLE TYPE Pennsylvania Auger - 4 1/2" Ø CHECKED BY K.G.S.

ELEV DEPTH	SOIL PROFILE DESCRIPTION	STRAT PLOT	SAMPLES		BLOWS / FOOT	ELEV SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT ——— % PLASTIC LIMIT ——— % WATER CONTENT ——— % W.P. ——— % W.L. ——— % WATER CONTENT %	BULK DENSITY P.C.F.	REMARKS
			NUMBER	TYPE			20	40	60	80	100			
623.3	Groundlevel													
619.3	Topsoil and fill material. Firm brown and black.		1	SS	6	620								El. 620.3
4.0			2	SS	14									
	Silty clay and clayey silt with trace of sand and gravel. (Glacial Till)		3	SS	25	615								
	Stiff to hard.					610								
	Brown changing to grey at El. 616		4	SS	20									
						605								
			5	SS	24									
						600								
			6	SS	68									
						595								
591.8			7	SS	66									
31.6	End of borehole.					590								

GEOCRE 30M11-81

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & RESEARCH DIVISION

RECORD OF BOREHOLE NO. 4A

FOUNDATION SECTION

JOB 63-F-24

LOCATION 213rd 302nd Rt.

ORIGINATED BY B.M.G.

W F 233-61-2-1

BORING DATE March 18, 1963.

COMPILED BY

DATUM Geodetic

BOREHOLE TYPE Pennsylvania Auger - 4 1/2" Ø

CHECKED BY

SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE					LIQUID LIMIT ——— WL		BULK DENSITY P.C.F.	REMARKS				
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER TYPE	BLOWS / FOOT	ELEV SCALE	BLOWS / FOOT							PLASTIC LIMIT ——— WP			
													WATER CONTENT ——— W			
													WD ——— WL			
						WATER CONTENT %										
626.5		Groundlevel														
0'-9"		Topsoil														
		Clayey silt and silty clay with trace of sand and fine gravel. (Glacial Till)				1 SS 23		625								
						2 SS 24		620								
	Very stiff to hard.		3 SS 43		615											
	Brown changing to grey at El. 611.		4 SS 57		610											
			5 SS 42		605											
			6 SS 62		600											
			7 SS 59		595											
			8 SS 50		590											
586.5			9 SS >100		585											
40.0	Silt, clayey silt with trace of fine gravel. V. dense Grey		10 SS >100		580											
581.2																
45.4	End of borehole.															

GEOCRE 30M11-81

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & RESEARCH DIVISION

RECORD OF BOREHOLE NO. 7

FOUNDATION SECTION

JOB 64-F-42 LOCATION Sta. 245+00 (400' Lt.) ORIGINATED BY H.S.
W.P. BORING DATE June 8, 1964. COMPILED BY H.S.
DATUM G.S.C. BOREHOLE TYPE 4" Auger CHECKED BY K.S.

SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT ——— WL PLASTIC LIMIT ——— WP WATER CONTENT ——— W			BULK DENSITY P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT	ELEV. SCALE	SHEAR STRENGTH P.S.F. + Field Vane Test o Unconfined Shear Strength 400 800 1200 1600 2000					wp ——— w ——— WL WATER CONTENT % 10 20 30			
536.6	Groundlevel														
0.0	Clayey silt with some sand and traces of gravel. Hard to stiff.		1	SS	22	530									
			2	SS	36										
			3	SS	40										
			4	SS	38										
			5	SS	32	520									
			6	SS	36										
			7	SS	24										
			8	TW	PH										
			9	SS	11	510									
			10	TW	PM										
342.6	End of borehole.														
33.0															

Geocres 30M11-85

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS & RESEARCH DIVISION

RECORD OF BOREHOLE NO. 1

FOUNDATION SECTION

JOB 62-F-85 LOCATION Hwy 401, Sta. 108+55, 180' Lt. of E DESIGNED BY I.H.
W.P. 105-62 BORING DATE July 5, 1962 COMPILED BY H.S.
DATUM 468' BOREHOLE TYPE 4" Auger borehole CHECKED BY I.H.

ELEV. DEPTH	SOIL PROFILE DESCRIPTION	STRAT. PLOT	SAMPLES		BLOWS / FOOT	ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT — % PLASTIC LIMIT — % WATER CONTENT — %			BULK DENSITY P.C.F.	REMARKS
			NUMBER	TYPE			20	40	60	80	100	W _L	W _P	W		
							SHEAR STRENGTH P.S.F.					+ Field Vane				
							○ Unconfined compressive strength					WATER CONTENT %				
							500	1000	1500	2000	2500	10	20	30		
468.0	Groundlevel					470										
0.0	Clayey silt with some fine to coarse sand and traces of fine gravel. Compact to very dense. (Glacial Till)		1	SS	37											
			2	SS	74	460										
			3	SS	60											
454.0			4	SS	26											
14.0			5	SS	18	450										
	Clayey silt to silty clay.		6	SS	7											
	Very stiff to firm.		7	Tw	PH	440										
			8	Tw	PH											
			9	Tw	PH	430										
428.0			10	Tw	26 for 6"											
40.0	Fine sandy silt with traces of med. to coarse sand. Very dense to hard. (Glacial Till)		11	SS	26	420										
416.5			12	SS	46											
51.5	End of borehole.					410										

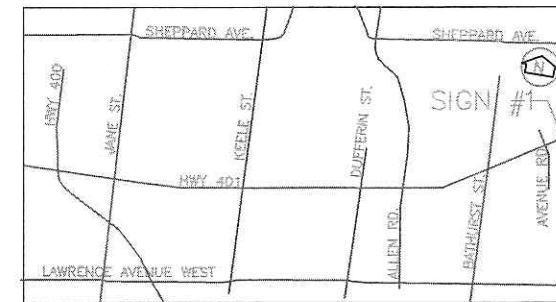
Geocres 30M11-86

ORIGINATED BY R.M.

COMPILED BY R.M.

CHECKED BY M.D.

GEOCRES 30M 11-142



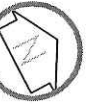
KEY MAP
N.T.S.

METRIC

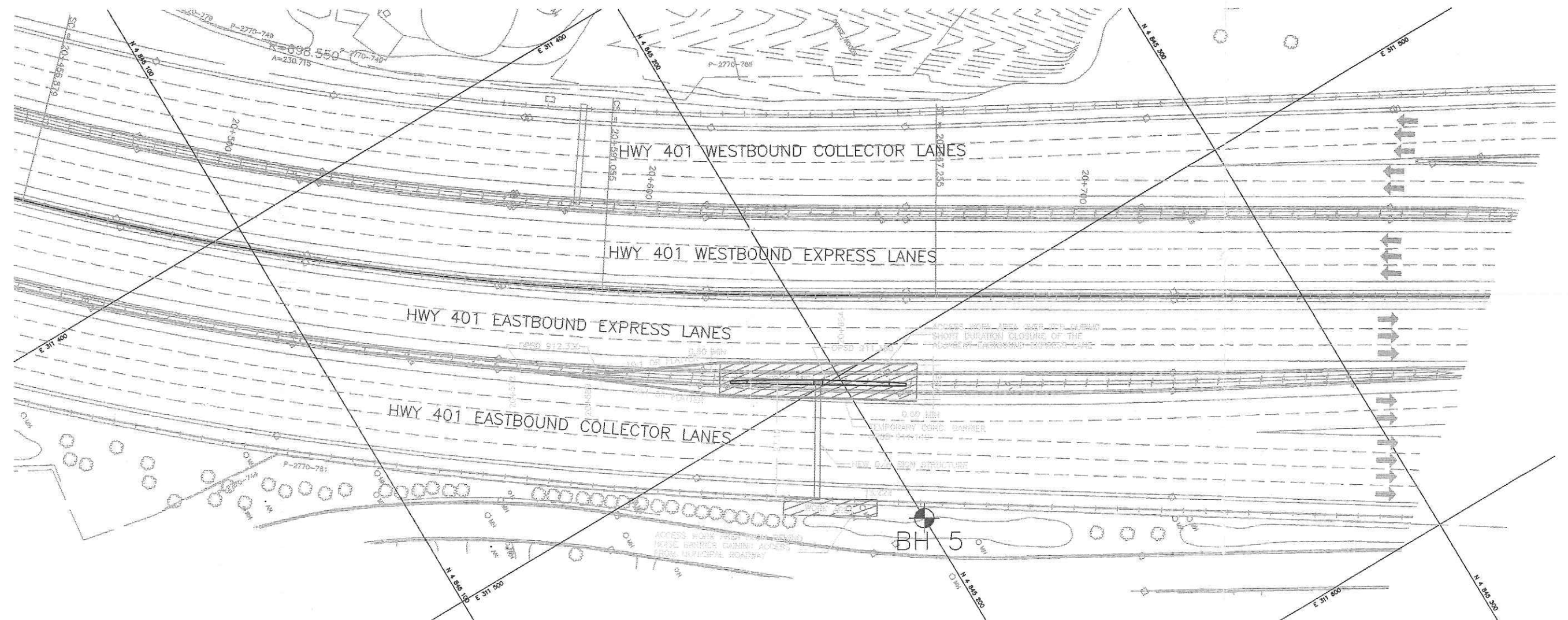
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STAGING
OVERHEAD SIGN # 1

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SHEET



SCALE



METRIC


CONT No
WP No 2274-02-00



SHEET

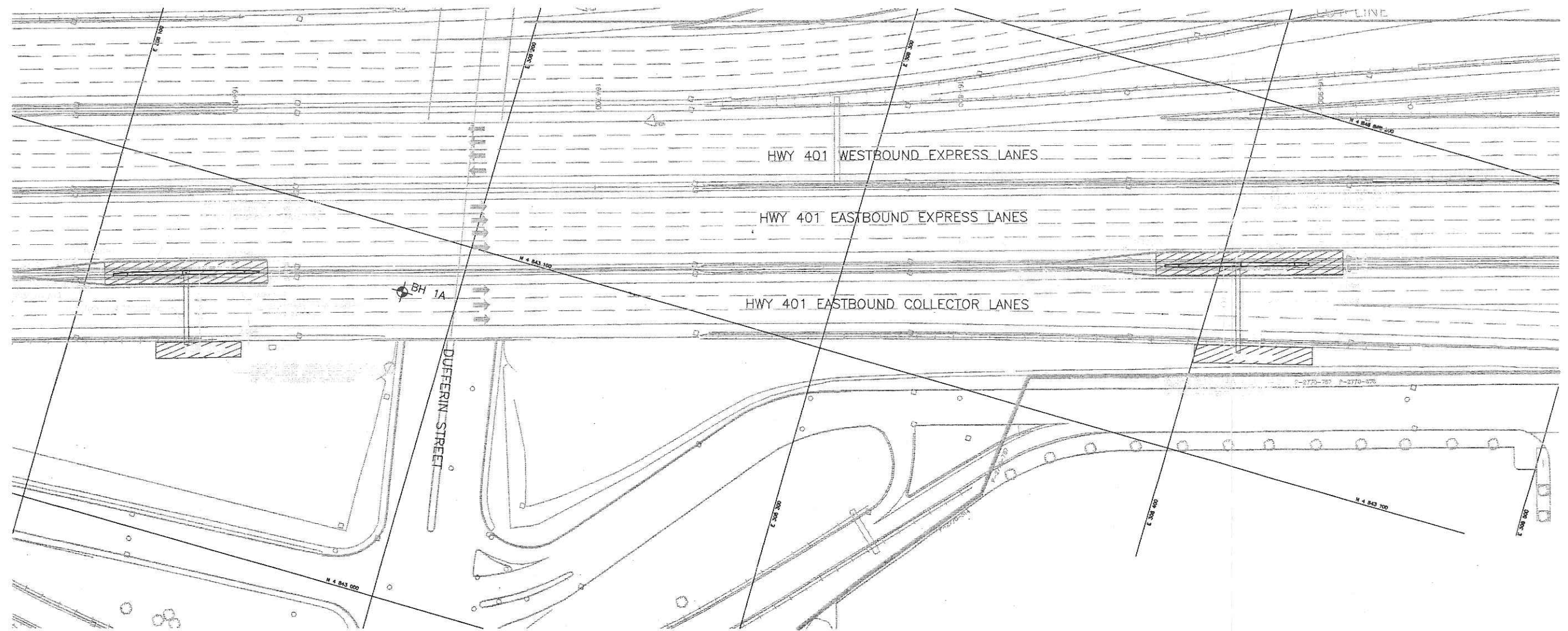
STAGING
OVERHEAD SIGN # 3

Survey Plan

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KEY MAP
N.T.S.

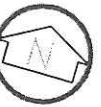


SCALE



METRIC

CONT No
WP No 2274-02-00



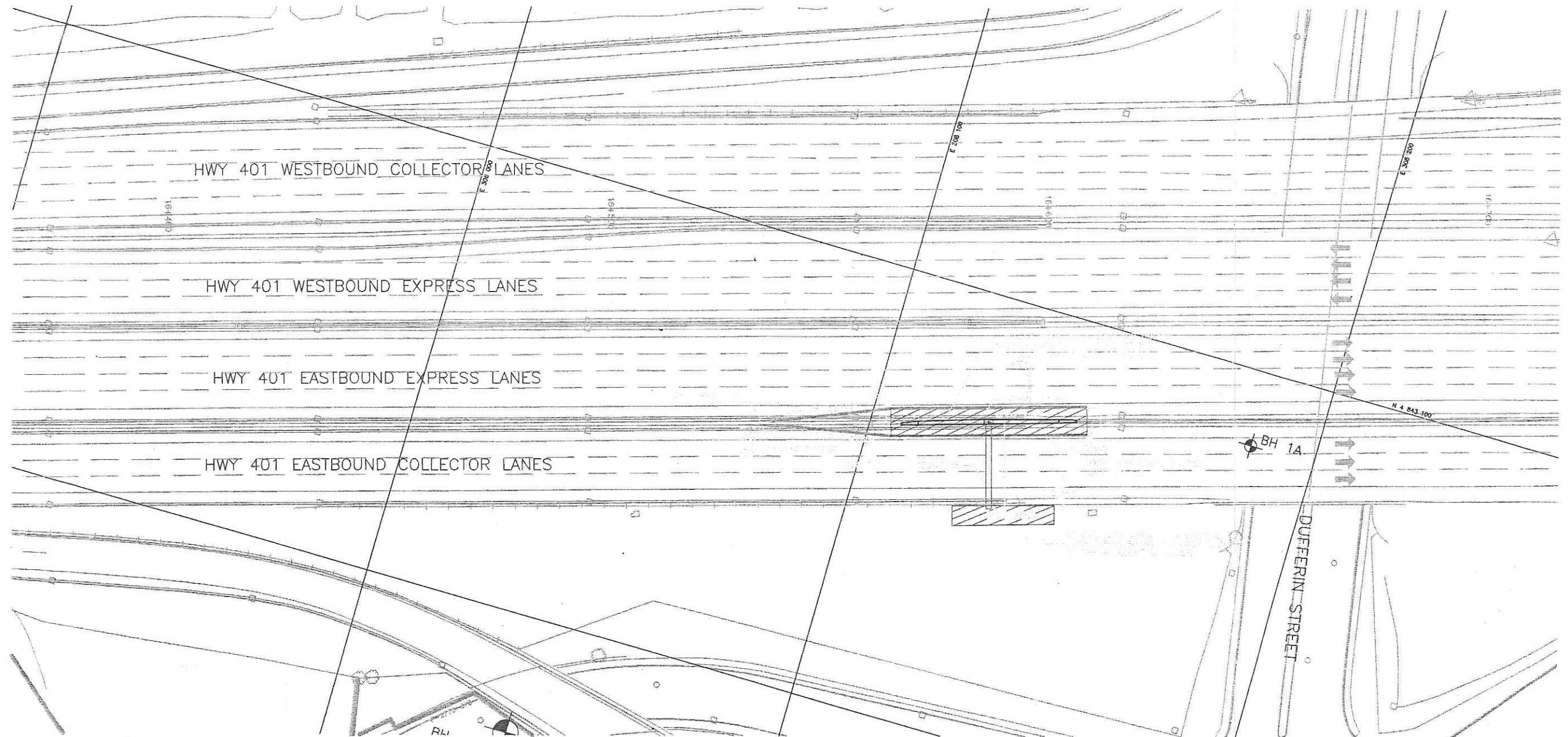
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KEY MAP
N.T.S.



SCALE



METRIC



KEY MAP
N.T.S.

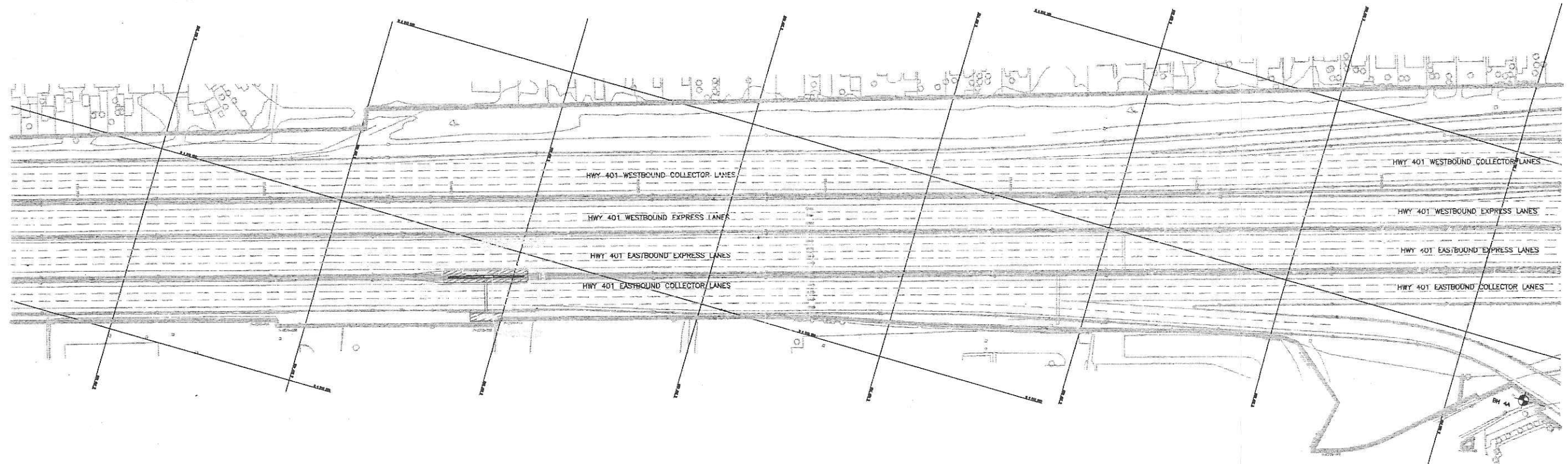
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SHEET



LOT

9

CONCESSION

3 W.Y.S.

SCALE



METRIC

CONT No
WP No 2274-02-00

STAGING
OVERHEAD SIGN # 6
Survey Revised

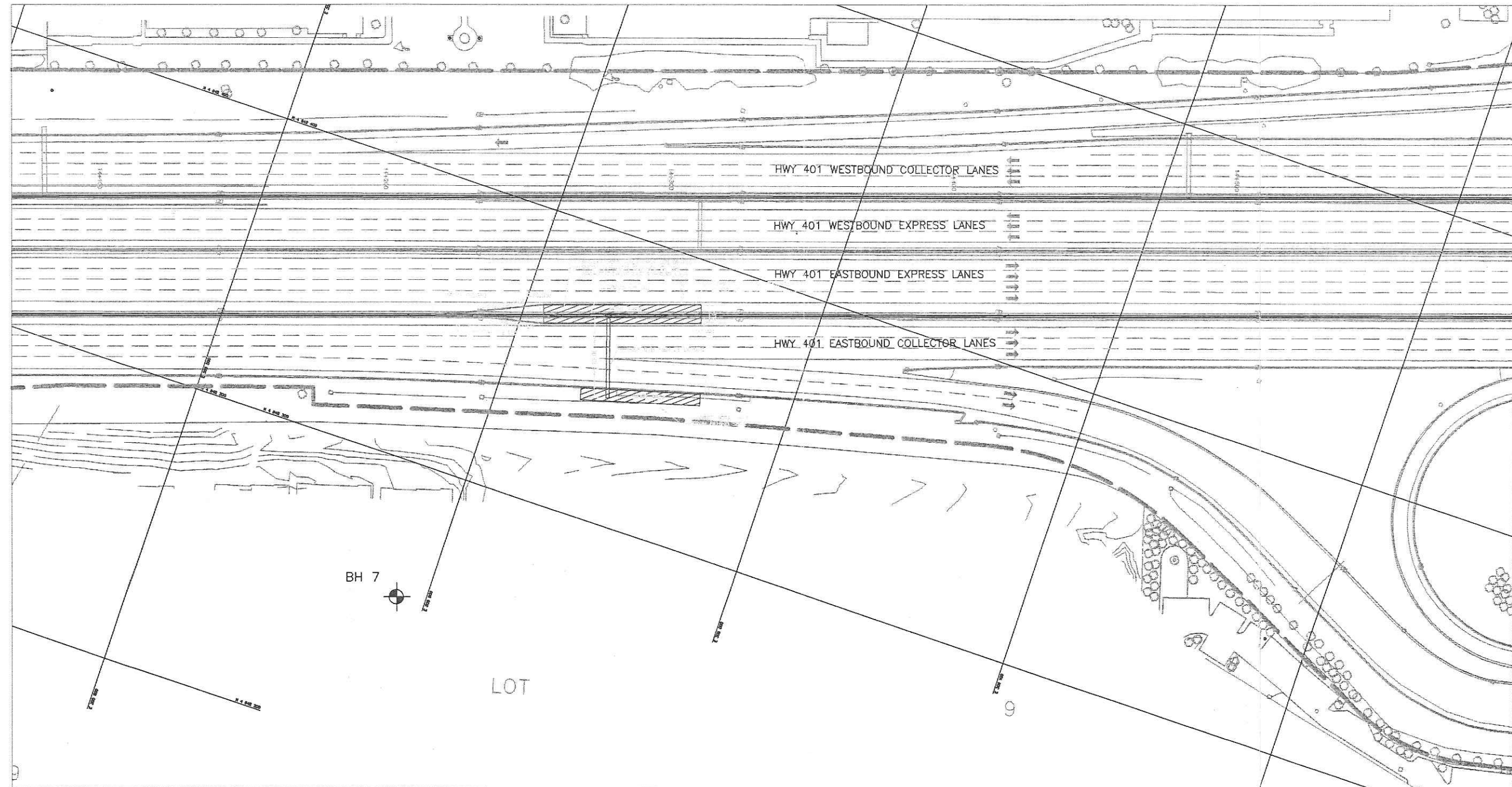
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SHEET



KEY MAP
N.T.S.



SCALE
1" = 100'



KEY MAP
N.T.S.

METRIC

CONT No
WP No 2274-02-00

STAGING
OVERHEAD SIGN # 7

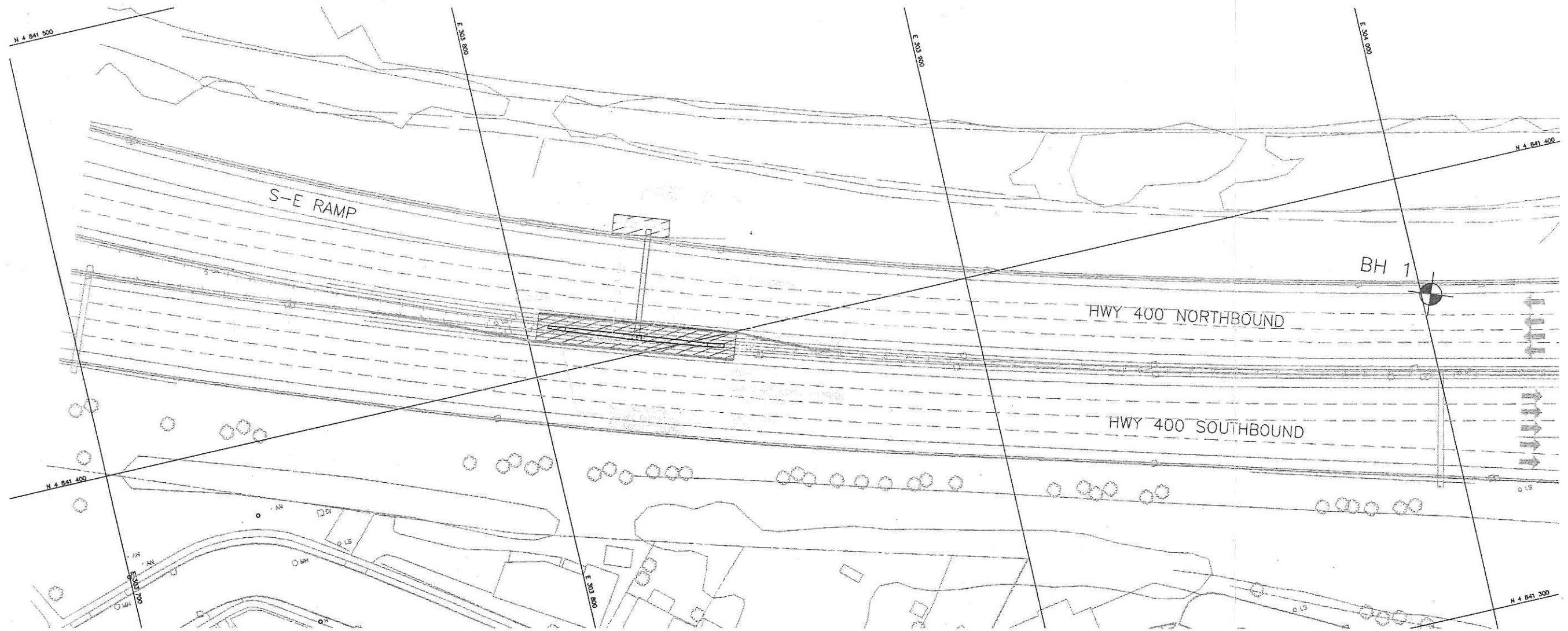


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SHEET



SCALE

