

SUPPLEMENTARY LEGEND

ducts and/or cables, underground

ducts and/or cables, surface mounted

ducts and/or cables embedded, Exp indicates expansion joint

cables, installed in existing ducts

cables, aerial

underpavement crossing identification code

reference point with identification code

existing cables and/or ducts to remain in place

existing cables and/or ducts to be removed

existing cables and/or ducts to be abandoned

identification codes

identification codes for existing duct or cable usage

BC Bell cable
CC communications cable
DC extra-low voltage detector cable
FO fiber optic cable
GC guy cable
HC hydro cable
LC lighting cable
PC power cable
TS traffic signal cable
TV television cable

ground electrodes

cable protection bricks, concrete cap, or marker tape in trench

identification code for removal equipment

electrical maintenance hole with identification code

junction box, embedded or surface mounted with identification code

electrical handhole, underground with identification code

pole with identification code

existing pole to remain with identification code

existing pole to be removed with identification code

power supply equipment identification code, other applicable description may be used for supply cabinet, distribution assembly, etc.

identification code for traffic signal controller cabinet

traffic count station, type 2 MTOD 2901.022

identification code for traffic signal count station

highway signal head, 300mm red, 200mm amber and green lenses, with backboard

highway signal head, all 300mm lenses, with backboard

special signal head with backboard, number indicates type of signal head

pedestrian signal head, two section or bimodal type

pedestrian signal head, two section type c/w pedestrian countdown

span wire mounting, highway signal head with backboard

mast arm mounting, highway signal head with backboard shown

controller cabinet, front door opens on side indicated

controller cabinet, pad and/or footing mounted

uninterruptible power supply cabinet

controller cabinet with uninterruptible power supply cabinet

simple loop detector with identification code

duplex loop detector with identification code

non-intrusive detection zone with identification code

diamond loop detector with identification code

emergency vehicle pre-emption with identification code

non-intrusive sensor with identification code

accessible pedestrian push button and direction arrow with identification code

video camera or video camera detector with identification code

single phase 2 wire system:

BLK black, line
WHT white, neutral
GRN green, ground

single phase 3 wire system:

RED red, line 1
BLK black, line 2
WHT white, neutral
GRN green, ground

three phase 4 wire system:

RED red, line 1, phase a
BLK black, line 2, phase b
BLU blue, line 3, phase c
WHT white, neutral
GRN green, ground

circuit identification code:
A denotes supply location A
RED denotes red, line 1
7 denotes breaker or switching device no. 7

single guy with single anchor

double guy with single anchor

double guy with sidewalk strut and single anchor

power supply equipment, pole mounted

transformer

power supply equipment, pad and/or footing mounted

photoelectric controller

underpass or surface mounted luminaire

luminaire, number shown indicates luminaire location on high mast ring with respect to pole handhole

luminaire with bracket

existing luminaire to be removed, bracket to remain

existing luminaire and bracket to be removed

high mast pole with LED Luminaires, number as indicated in layout drawings

existing high mast pole and Luminaires, number as indicated in layout drawings

existing high mast pole with new L.E.D. high mast Luminaires, number as indicated in layout drawings

cables to be installed in the same duct

spare duct for future use

conductors, single or multiple, identified by note

wiring identification note

duct size, aerial or direct buried

type of cable:

TS traffic signal
HV high voltage
LV low voltage
ELV extra-low voltage
IGRD insulated ground (green)

AWG size of conductor

number of conductors in cable, not required for single conductor

number of cables

wiring enclosure and electrical chambers identification code matches layout drawings

equipment item, (e.g., poles and cabinets) identification code matches layout drawings

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MMW_KARMJIT_GILL\DWG03729\ DRAWING NAME: 427E-ELE-LEG-DWG-SEG L-7 ELECTRICAL LEGEND.DWG REVISION BY: GILL
DRAWN BY: K. GILL
MODIFIED: 18/02/15 08:47:58 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

SCALE :

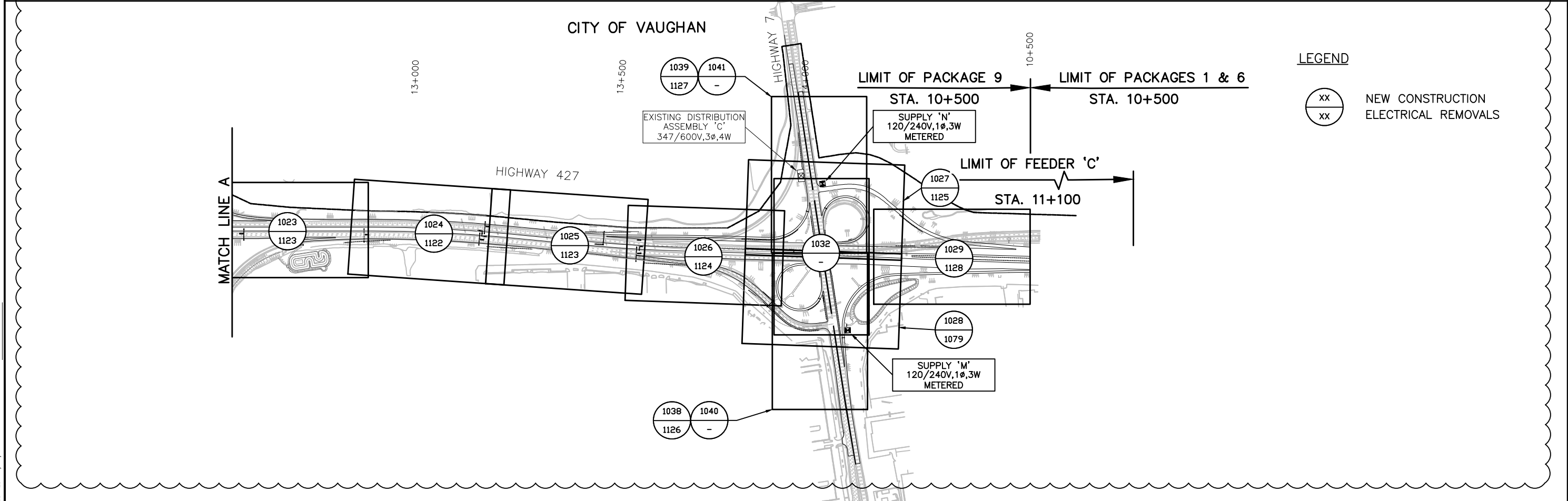
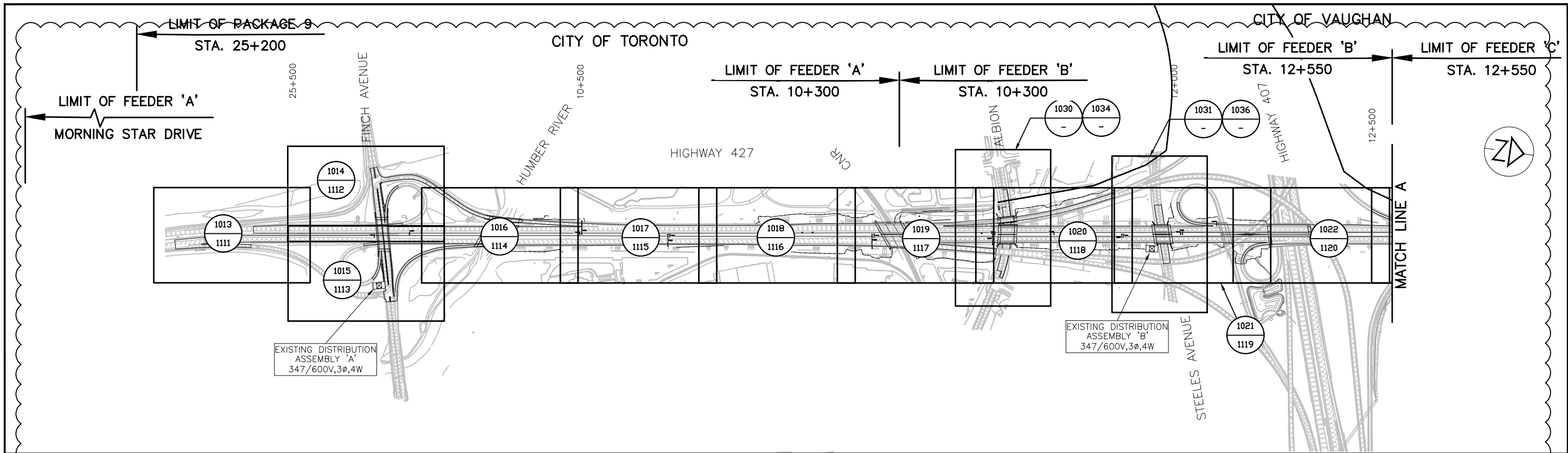
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

NAME (PRINT)	INT.	DATE



TITLE							
HWY 427 EXPANSION							
ELECTRICAL SUPPLEMENTARY LEGEND							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1000	B



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\MS03728\ DRAWING NAME: 427E-ELE-KEY-DWG-SEQ L-2 PERMANENT KEY PLAN REVISED BY: GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/21 10:46:35 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

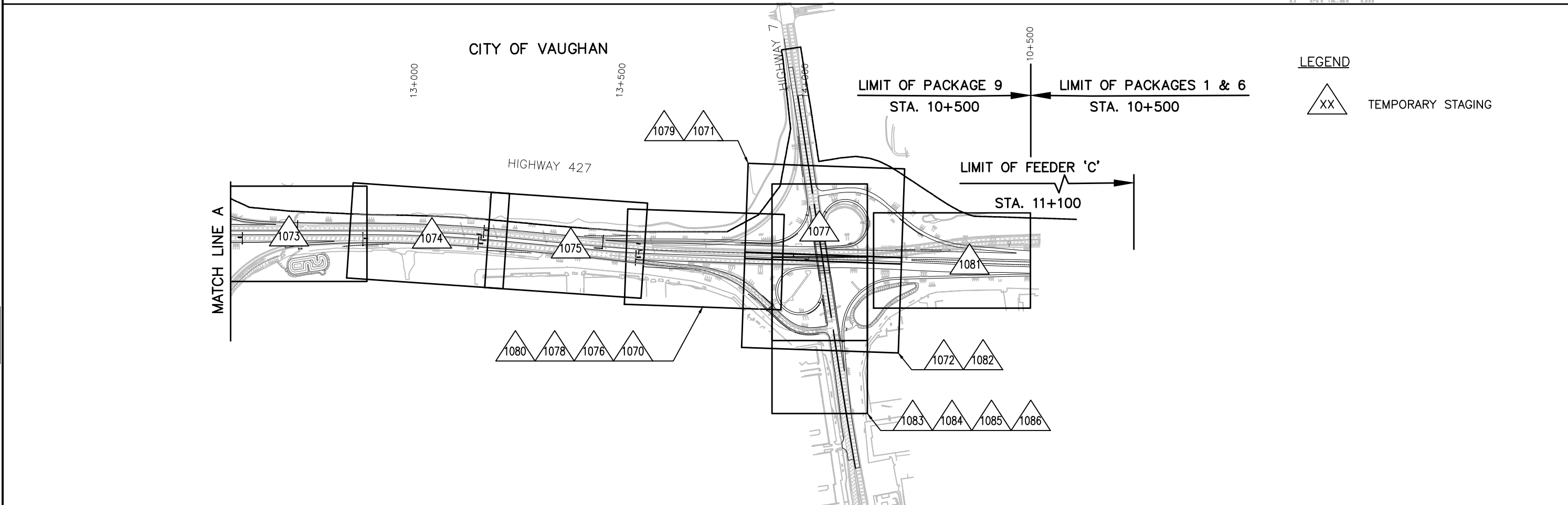
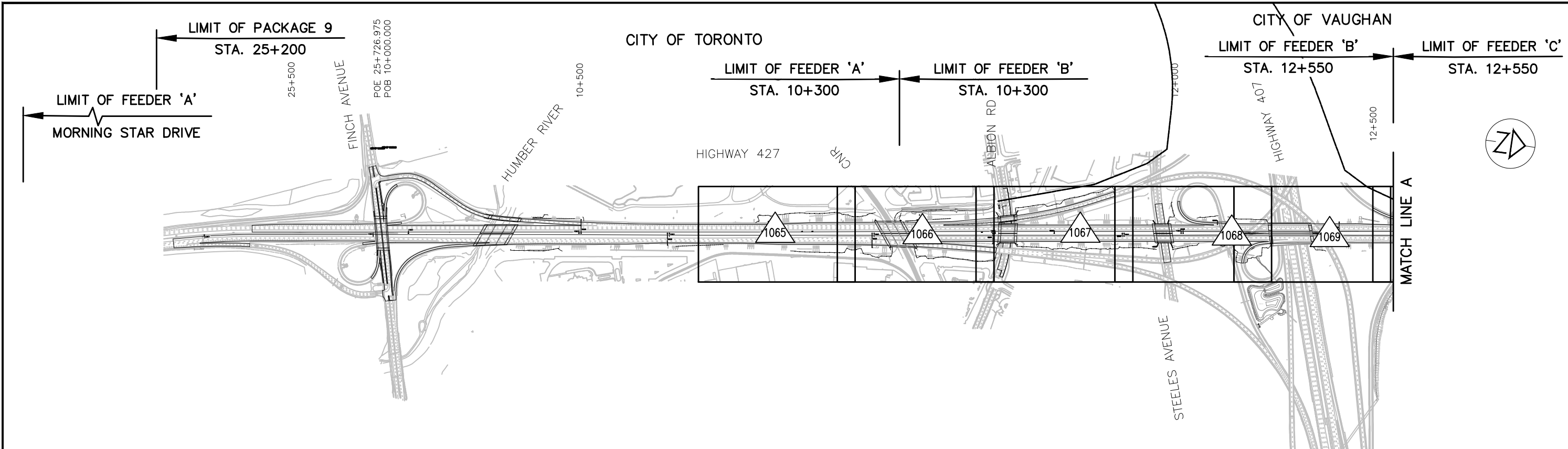
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APPROVED PROJ. MANAGER	

NAME (PRINT)	INIT.	DATE



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H427-D							N							9							ELE							000							DWG							1001							B						



LEGEND
 XX TEMPORARY STAGING

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MMML_KARMJIT_GILL\DWG\REVISED_BY-GILL
 DRAWING NAME: 427E-ELE-KEY-DWG-SEG L-2, TEMPORARY KEY PLANNING, REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/21 10:47:08 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MGR.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :
 N.T.S.

DESIGNED	NATALIA MAHABIR		
DRAWN	KARMJIT GILL		
CHECKED	LENNOX LUE		
APPROVED LEAD ENGINEER	MARIO TEDESCO		
APPROVED PROJ. MANAGER			
NAME (PRINT)	INIT.	DATE	



TITLE							
HWY 427 EXPANSION							
ELECTRICAL KEY PLAN - 2							
TEMPORARY							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1002	B

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\DWG\03729\
 DRAWING NAME: 427E-ELE-GEN-DWG-SEQ L-2 OPSD-MTOD- CHARTS.DWG
 DRAWN BY: GILL
 MODIFIED: 18/02/21 10:55:43
 REVISIONS

OPSD	TITLE	DRAWING REV.	IMPLEMENTATION DATE
2440.05	SUPPLY CONTROL CABINET ASSEMBLY TYPE 1 AND 2 - DEAD FRONT PANELS	1	26-FEB-15
2440.051	SUPPLY CONTROL CABINET ASSEMBLY TYPE 1 AND TYPE 2, BARRIER DETAILS	0	12-JAN-17
2440.06	SUPPLY CONTROL CABINET ASSEMBLY TYPE 1 AND 2 - 3-POINT DOOR LATCH	1	26-FEB-15
2440.061	SUPPLY CONTROL CABINET ASSEMBLY TYPE 1, 2, AND 3 - 3-POINT STAINLESS STEEL DOOR HANDLE	0	26-FEB-15
2450.011	HIGH MAST LIGHTING POLE 25, 30 AND 35M 8-SIDED POLE	1	12-JAN-17
2450.021	HIGH MAST LIGHTING POLE 40 AND 45M 12-SIDED POLE	1	12-JAN-17
2453.000	HIGH MAST LIGHTING POLE, LUMINAIRE AND HANDHOLE ORIENTATION	1	12-JAN-17
2453.001	HIGH MAST LIGHTING POLE, LUMINAIRE AND HANDHOLE ORIENTATION FOR MEDIAN MOUNTED POLES	0	12-JAN-17
2453.01	HIGH MAST LIGHTING POLE, CABLE HOLDER AND STORAGE HOOK DETAILS	1	12-JAN-17
2453.02	HIGH MAST LIGHTING POLE, HANDHOLE COVER HINGES, LATCHES, AND PADLOCK	1	12-JAN-17
2453.05	HIGH MAST LIGHTING POLE, NAMEPLATE DETAILS	1	12-JAN-17
2453.07	HIGH MAST LIGHTING POLE, LUMINAIRE SUPPORT RING	2	12-JAN-17
2453.08	HIGH MAST LIGHTING POLE, HEAD FRAME AND RING ASSEMBLY	2	12-JAN-17
2453.09	HIGH MAST LIGHTING POLE, SHROUD	1	12-JAN-17
2453.091	HIGH MAST LIGHTING POLE, SHROUD DETAILS	1	12-JAN-17
2453.14	HIGH MAST LIGHTING POLE, INTERNAL DRIVE RAISING AND LOWERING EQUIPMENT - LIST OF COMPONENTS	1	12-JAN-17
2453.15	HIGH MAST LIGHTING POLE, INTERNAL DRIVE RAISING AND LOWERING EQUIPMENT - LAYOUT	1	12-JAN-17
2453.17	HIGH MAST LIGHTING POLE, INTERNAL DRIVE WIRING DIAGRAM, 347/600V, 3-PHASE	1	12-JAN-17
2453.19	HIGH MAST LIGHTING POLE, EXTERNAL DRIVE RAISING AND LOWERING EQUIPMENT - LIST OF COMPONENTS	1	12-JAN-17
2453.20	HIGH MAST LIGHTING POLE, EXTERNAL DRIVE RAISING AND LOWERING EQUIPMENT - LAYOUT	1	12-JAN-17
2453.21	HIGH MAST LIGHTING POLE, EXTERNAL DRIVE RAISING AND LOWERING EQUIPMENT, 347/600V, 3-PHASE WIRING DIAGRAM	1	12-JAN-17
2456.011	HIGH MAST LIGHTING POLE, ANCHORAGE ASSEMBLY DETAILS	1	12-JAN-17
2500.010	600MM SIGNAL ARM AND SIGNAL HEAD	0	15-MAR-12
2500.020	600MM SIGNAL ARM, ATTACHED TO POLES	1	11-MAR-10
2501.01	SINGLE MEMBER ARM AND SIGNAL HEAD	2	15-MAR-12
2501.02	ALUMINUM SINGLE MEMBER ARM ATTACHMENT DETAILS	2	15-MAR-12
2502.01	TRAFFIC SIGNAL - ADJUSTABLE MID-SECTION HANGER	0	20-DEC-07
2502.011	TRAFFIC HANGER - DUAL-END HANGER	0	20-DEC-07
2510.01	POLE MOUNTED CONTROLLER CABINET	0	07-MAR-13
2510.02	MOUNTING BRACKET FOR POLE MOUNTED CONTROLLER CABINET	0	15-MAR-12
2514.01	CONTROLLER CABINET ON PAD	0	07-MAR-13
2514.02	CONCRETE PAD FOR CONTROLLER CABINET	0	07-MAR-13
2520.01	LOOP DETECTOR INSTALLATION DETAILS I	0	07-MAR-13
2520.02	LOOP DETECTOR INSTALLATION DETAILS II	4	07-MAR-13
2524.01	TRAFFIC SIGNAL, DOUBLE ARM BRACKET	1	11-MAR-10
2528.01	TRAFFIC SIGNAL EQUIPMENT - POLE WIRING DIAGRAM	2	02-JUN-11
2529.03	SIGNAL WIRING USING 12/C CABLE TAPPED, 2 TO 8 PHASE	0	07-MAR-13
2530.01	SPLICES FOR TRAFFIC SIGNAL CABLE AND EXTRA LOW VOLTAGE CABLE	1	27-MAR-14
2540.01	AERIAL TRAFFIC SIGNAL INSTALLATION	4	10-JUL-14
2540.03	AERIAL SUSPENSION MOUNTING BRACKET SIGNAL HEADS AND FLASHING BEACONS	0	10-JUL-14
2540.1	AERIAL SUSPENSION MOUNTING BRACKET, EMERGENCY PRE-EMPTION UNIT	0	11-MAR-10
2545.01	PVC JUNCTION BOX - FOR SIGNAL CABLE SPLICING	1	07-MAR-13
2547.01	TRAFFIC SIGNAL AND ILLUMINATION GROUNDING SYSTEM	1	26-FEB-15

MTOD	TITLE	DRAWING REV.	IMPLEMENTATION DATE
2552.01	TRAFFIC SIGNAL SYSTEM EQUIPMENT ON WOODEN OR CONCRETE POLES, OVERHEAD WIRING INSTALLATION	2	15-MAR-12
2554.01	TRAFFIC SIGNAL SYSTEM EQUIPMENT ON WOODEN OR CONCRETE POLES, UNDERGROUND WIRING INSTALLATION	0	15-MAR-12
2200.05	CONCRETE FOOTING IN EARTH FOR HEAVY CLASS STEEL POLE AND SECTIONAL STEEL POLE	3	17-DEC-15
2200.090	RE-INFORCING STEEL FOR CONCRETE FOOTING FOR HEAVY CLASS STEEL POLE AND SECTIONAL STEEL POLE IN EARTH	2	19-DEC-15
2433.011	BASE PLATE FOR HEAVY CLASS SECTIONAL STEEL POLE	1	17-DEC-15
2435.020	HEAVY CLASS SECTIONAL STEEL POLE	2	15-MAR-07
2514.011	TRAFFIC SIGNAL CABINET AND UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET ON CONCRETE PAD	0	03-MAR-16
2514.021	CONCRETE PAD FOR TRAFFIC SIGNAL CONTROL CABINET AND UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET	0	03-MAR-16
2901.022	TRAFFIC DATA COLLECTION, TRAFFIC COUNTING STATION TYPE 2	0	07-MAR-13
2901.401	TRAFFIC DATA COLLECTION DETECTOR LOOPS, GENERAL INSTALLATION 1	2	12-MAR-09
2901.402	TRAFFIC DATA COLLECTION DETECTOR LOOPS, GENERAL INSTALLATION 2	1	07-MAR-13
2901.403	TRAFFIC DATA COLLECTION DETECTOR LOOPS, GENERAL, SPLICES FOR CABLES	0	12-MAR-09
2901.503	TRAFFIC DATA COLLECTION, TRAFFIC COUNT STATION VEHICLE VOLUME DETECTOR LOOP LAYOUT - 2-LANE/1-WAY RAMP	1	07-MAR-13
2901.504	TRAFFIC DATA COLLECTION, TRAFFIC COUNT STATION VEHICLE VOLUME DETECTOR LOOP LAYOUT - 1-LANE RAMP	0	07-MAR-13
2901.507	TRAFFIC DATA COLLECTION - TRAFFIC COUNT STATION VEHICLE CLASSIFICATION DETECTOR LOOP LAYOUT, 10 LANE/2-WAY DIVIDED HIGH CONGESTION HIGHWAY	0	07-MAR-13

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA				
A	18/01/12	90% SUBMISSION TO CA				

SCALE :

N.T.S.

DESIGNED	MANPREET PANESAR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	



HWY 427 EXPANSION							
STANDARDS DRAWINGS LIST - 2							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1004	B

HIGH MAST LIGHTING POLE SUMMARY

POLE NO.	POLE LENGTH	LOCATION	STATION NO.	OFFSET (m) (NOTE 1)	LUMINAIRE NUMBER	LUMINAIRE TYPE AND DISTRIBUTION	HORIZONTAL ANGLE OF LUMINAIRE (MAGNETIC NORTH)
P6	35m	HIGHWAY 427 MEDIAN	10+925	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
P7	35m	HIGHWAY 427 MEDIAN	11+073	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
P8	40m	HIGHWAY 427 MEDIAN	11+216	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A
P9	40m	HIGHWAY 427 MEDIAN	11+380	0	1	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5MQ	N/A
P10	45m	HIGHWAY 427 MEDIAN	11+530	0	1	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5MQ	N/A
P11	45m	HIGHWAY 427 MEDIAN	11+704.5	0	1	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					9	EATON GLEON-AE-10-LED-EI-5MQ	N/A

NOTE(S):

1. WHEN SHOWN WITHOUT *, OFFSET IS FROM CENTRE OR CONTROL LINE OF ROADWAY. WHEN SHOWN WITH *, OFFSET IS FROM EDGE OF TRAVELED PAVEMENT (EP).

FILE LOCATION: C:\PROJECTS\WSP-CA\MM-KARJIT.GILL\0603729\
DRAWING NAME: 427E-ELE-CEN-DWG-SEQ. L-2 PERMANENT CHARTS.DWG
DRAWN BY: GILL
MODIFIED: 18/03/15 08:38:07 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DES.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INT. DATE



TITLE							
HWY 427 EXPANSION							
PERMANENT CHARTS - 2							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1006	B

HIGH MAST LIGHTING POLE SUMMARY

POLE NO.	POLE LENGTH	LOCATION	STATION NO.	OFFSET (m) (NOTE 1)	LUMINAIRE NUMBER	LUMINAIRE TYPE AND DISTRIBUTION	HORIZONTAL ANGLE OF LUMINAIRE (MAGNETIC NORTH)
EP6	40m	EXISTING	EXISTING	EXISTING	1	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					9	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					10	EATON GLEON-AE-10-LED-EI-5WQ	N/A
EP8	40m	EXISTING	EXISTING	EXISTING	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A
					7	EATON GLEON-AE-10-LED-EI-RW	N/A
					8	EATON GLEON-AE-10-LED-EI-RW	N/A
EP11	45m	EXISTING	EXISTING	EXISTING	1	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					9	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					10	EATON GLEON-AE-10-LED-EI-5WQ	N/A
P12	40m	HIGHWAY 427 MEDIAN	12+590	0	1	HOLOPHANE HMLED2_12_4K_AW	0
					2	HOLOPHANE HMLED2_12_4K_AW	0
					3	HOLOPHANE HMLED2_12_4K_AW	0
					4	HOLOPHANE HMLED2_12_4K_AW	0
					5	HOLOPHANE HMLED2_12_4K_AW	0
					6	HOLOPHANE HMLED2_12_4K_AW	0
					7	HOLOPHANE HMLED2_12_4K_AW	0
					8	HOLOPHANE HMLED2_12_4K_AW	0
					9	HOLOPHANE HMLED2_12_4K_AW	0

NOTE(S):
1. WHEN SHOWN WITHOUT *, OFFSET IS FROM CENTRE OR CONTROL LINE OF ROADWAY. WHEN SHOWN WITH *, OFFSET IS FROM EDGE OF TRAVELED PAVEMENT (EP).

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DRAWN BY: KARMJIT GILL
MODIFIED: 18/03/15 08:38:07
REVISIONS

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SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INT. DATE



TITLE							
HWY 427 EXPANSION							
PERMANENT CHARTS - 3							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1007	B

HIGH MAST LIGHTING POLE SUMMARY							
POLE NO.	POLE LENGTH	LOCATION	STATION NO.	OFFSET (m) (NOTE 1)	LUMINAIRE NUMBER	LUMINAIRE TYPE AND DISTRIBUTION	HORIZONTAL ANGLE OF LUMINAIRE (MAGNETIC NORTH)
P18	35m	HIGHWAY 427 MEDIAN	13+594	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A
P19	35m	HIGHWAY 427 MEDIAN	13+731	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A
					7	EATON GLEON-AE-10-LED-EI-RW	N/A
					8	EATON GLEON-AE-10-LED-EI-RW	N/A
P20	40m	HIGHWAY 427 MEDIAN	13+865.5	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A
					7	EATON GLEON-AE-10-LED-EI-RW	N/A
					8	EATON GLEON-AE-10-LED-EI-RW	N/A
P21	35m	HIGHWAY 7 W-S RAMP	9+731	26.5m LT	1	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5WQ	N/A
P24	40m	HIGHWAY 7 E-N RAMP	9+619.5	37.0m LT	1	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5WQ	N/A

HIGH MAST LIGHTING POLE SUMMARY							
POLE NO.	POLE LENGTH	LOCATION	STATION NO.	OFFSET (m) (NOTE 1)	LUMINAIRE NUMBER	LUMINAIRE TYPE AND DISTRIBUTION	HORIZONTAL ANGLE OF LUMINAIRE (MAGNETIC NORTH)
P25	45m	HIGHWAY 7 E-S RAMP	9+898	16.5m RT	1	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					9	EATON GLEON-AE-10-LED-EI-5MQ	N/A
					10	EATON GLEON-AE-10-LED-EI-5MQ	N/A
P28	35m	HIGHWAY 7 W-N RAMP	9+846.5	28.5 RT	1	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					2	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					3	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					4	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					5	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					6	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					7	EATON GLEON-AE-10-LED-EI-5WQ	N/A
					8	EATON GLEON-AE-10-LED-EI-5WQ	N/A
P30	40m	HIGHWAY 427 MEDIAN	10+219	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A
					7	EATON GLEON-AE-10-LED-EI-RW	N/A
					8	EATON GLEON-AE-10-LED-EI-RW	N/A
					9	EATON GLEON-AE-10-LED-EI-RW	N/A
P31	35m	HIGHWAY 427 MEDIAN	10+381	0	1	EATON GLEON-AE-10-LED-EI-RW	N/A
					2	EATON GLEON-AE-10-LED-EI-RW	N/A
					3	EATON GLEON-AE-10-LED-EI-RW	N/A
					4	EATON GLEON-AE-10-LED-EI-RW	N/A
					5	EATON GLEON-AE-10-LED-EI-RW	N/A
					6	EATON GLEON-AE-10-LED-EI-RW	N/A

NOTE(S):

- WHEN SHOWN WITHOUT *, OFFSET IS FROM CENTRE OR CONTROL LINE OF ROADWAY. WHEN SHOWN WITH *, OFFSET IS FROM EDGE OF TRAVELED PAVEMENT (EP).

FILE LOCATION: C:\PROJECTS\HWY427\CA\MM\KARJIT.GILL\DWG037293
 DRAWING NAME: 427E-ELE-CEN-DWG-SEO L-2 PERMANENT CHARTS DIMENSIONED BY-GILL
 DRAWN BY: B 18/03/20
 MODIFIED: 18/03/15 08:38:07
 REVISIONED BY: GILL

NO.	DATE	REVISIONS	BY	CHK	LEAD	PROJ.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	



TITLE							
HWY 427 EXPANSION							
PERMANENT CHARTS - 5							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1009	B

ROADWAY LIGHTING CHAMBER SUMMARY						
CHAMBER NO.	LOCATION	STATION	OFFSET (m) (NOTE 1)	STANDARD	CHAMBER COVER	REMARKS
EMH5	HWY 407 W - 427 N RAMP	10+019	EXISTING	EXISTING	-	GROUND ROD (2)
EHH95	HIGHWAY 427 MEDIAN	10+095	EXISTING	EXISTING	-	GROUND ROD (2)
EHH98	HIGHWAY 427 MEDIAN	10+348	EXISTING	EXISTING	-	GROUND ROD (2)
EHH99	HIGHWAY 427 MEDIAN	10+500	EXISTING	EXISTING	-	GROUND ROD (2)
EHH100	HIGHWAY 427 MEDIAN	10+649.5	EXISTING	EXISTING	-	GROUND ROD (2)
HH101	FINCH AVE. W-S RAMP	9+829	4.9*	OPSD 2112.020	-	
HH102	FINCH AVE. S-E/W RAMP	10+062	4.8*	OPSD 2112.020	-	
HH103	FINCH AVE. E-S RAMP	9+980	1.0*	OPSD 2112.020	-	
HH104	FINCH AVE. W-N RAMP	9+982	0.5*	OPSD 2112.020	-	
HH105	FINCH AVE. N-E/W RAMP	10+178.5	3.1*	OPSD 2112.020	-	
HH106	FINCH AVE. E-N RAMP	9+977.5	5.3*	OPSD 2112.020	-	
HH107	HIGHWAY 427 MEDIAN	10+242.5	2.1 RT	OPSD 2112.040	OPSD 401.030	
HH108	HIGHWAY 427 MEDIAN	10+335	2.1 RT	OPSD 2112.040	OPSD 401.030	
HH109	HIGHWAY 427 MEDIAN	10+425	2.3 RT	OPSD 2112.040	OPSD 401.030	
HH110	HIGHWAY 427 MEDIAN	10+569	2.8 RT	OPSD 2112.040	OPSD 401.030	
HH111	HIGHWAY 427 MEDIAN	10+713	3.3 RT	OPSD 2112.040	OPSD 401.030	
HH112	HIGHWAY 427 MEDIAN	10+785	3.6 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH113	HIGHWAY 427 SB	10+797.5	4.5*	OPSD 2112.020	-	
HH114	HIGHWAY 427 NB	10+749	9.1*	OPSD 2112.020	-	
HH115	HIGHWAY 427 MEDIAN	10+857	3.6 RT	OPSD 2112.040	OPSD 401.030	
HH116	HIGHWAY 427 MEDIAN	10+925	3.7 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH117	HIGHWAY 427 MEDIAN	11+004	3.6 RT	OPSD 2112.040	OPSD 401.030	
HH118	HIGHWAY 427 MEDIAN	11+073	3.6 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH119	HIGHWAY 427 MEDIAN	11+144.5	3.6 RT	OPSD 2112.040	OPSD 401.030	
HH120	HIGHWAY 427 MEDIAN	11+216	3.6 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH121	HIGHWAY 427 MEDIAN	11+257.5	3.7 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH122	HIGHWAY 427 MEDIAN	11+385.5	3.7 RT	OPSD 2112.040	OPSD 401.030	
HH123	HIGHWAY 427 MEDIAN	11+380	3.6 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH124	HIGHWAY 427 MEDIAN	11+463	3.7 RT	OPSD 2112.040	OPSD 401.030	
HH125	HIGHWAY 427 MEDIAN	11+530	3.8 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH126	HIGHWAY 427 MEDIAN	11+605	3.6 RT	OPSD 2112.040	OPSD 401.030	
HH127	HIGHWAY 427 MEDIAN	11+705	3.6 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH128	HIGHWAY 427 MEDIAN	11+805	3.6 RT	OPSD 2112.040	OPSD 401.030	
MH150	HIGHWAY 427 SB	11+902.5	4.6*	OPSD 2111.050	OPSD 401.010	GROUND ROD (2)
MH151	HIGHWAY 427 NB	11+910	4.6*	OPSD 2111.050	OPSD 401.010	GROUND ROD (2)
MH152	HIGHWAY 427 NB	11+939	7.4*	OPSD 2111.050	OPSD 401.010	
MH153	HIGHWAY 427 NB	12+026	5.7*	OPSD 2111.050	OPSD 401.010	
MH154	HIGHWAY 427 SB	12+027	4.7*	OPSD 2111.050	OPSD 401.010	
MH158	HWY 407 W - 427 N RAMP	9+988	4.1*	OPSD 2111.050	OPSD 401.010	
MH160	HIGHWAY 427 NB	12+486	3.2*	OPSD 2111.050	OPSD 401.010	
MH161	HIGHWAY 427 SB	12+483	4.6*	OPSD 2111.050	OPSD 401.010	GROUND ROD (2)

ROADWAY LIGHTING CHAMBER SUMMARY						
CHAMBER NO.	LOCATION	STATION	OFFSET (m) (NOTE 1)	STANDARD	CHAMBER COVER	REMARKS
HH129	HIGHWAY 427 MEDIAN	12+590	2.0 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH130	HIGHWAY 427 MEDIAN	12+690	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH131	HIGHWAY 427 MEDIAN	12+785	2.0 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH132	HIGHWAY 427 MEDIAN	12+871	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH133	HIGHWAY 427 MEDIAN	12+960	2.0 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH134	HIGHWAY 427 MEDIAN	13+059	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH135	HIGHWAY 427 MEDIAN	13+158	1.9 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH136	HIGHWAY 427 MEDIAN	13+241	2.2 RT	OPSD 2112.040	OPSD 401.030	
HH137	HIGHWAY 427 SB	12+915	4.1*	OPSD 2112.020	-	
HH138	HIGHWAY 427 NB	12+915	5.6*	OPSD 2112.020	-	
HH139	HIGHWAY 427 MEDIAN	13+316	3.4 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH140	HIGHWAY 427 MEDIAN	13+386	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH141	HIGHWAY 427 MEDIAN	13+456	2.0 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH142	HIGHWAY 427 MEDIAN	13+526	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH143	HIGHWAY 427 MEDIAN	13+594	1.9 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH144	HIGHWAY 427 MEDIAN	13+656	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH145	HIGHWAY 427 MEDIAN	13+731	2.0 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH146	HIGHWAY 427 MEDIAN	13+799	2.0 RT	OPSD 2112.040	OPSD 401.030	
HH147	HIGHWAY 427 MEDIAN	13+865	2.0 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH148	HWY 7 S-E/W RAMP	10+025	4.1*	OPSD 2112.020	-	
HH149	HWY 7 W-S RAMP	9+806	3.5*	OPSD 2112.020	-	
HH150	HIGHWAY 427 MEDIAN	14+026	3.2 RT	OPSD 2112.040	OPSD 401.030	
HH151	HWY 7 E-S RAMP	9+985	4.1*	OPSD 2112.020	-	
HH152	HWY 7 E-S RAMP	9+910	3.5*	OPSD 2112.040	OPSD 401.010	GROUND ROD (2)
HH153	HIGHWAY 427 MEDIAN	10+135	3.8 RT	OPSD 2112.040	OPSD 401.030	
HH154	HWY 7 W-N RAMP	9+993	4.3*	OPSD 2112.020	-	
HH155	HWY 7 W-N RAMP	9+877	3.3*	OPSD 2112.040	OPSD 401.010	GROUND ROD (2)
HH156	HWY 7 S-E/W RAMP	10+270	3.3*	OPSD 2112.040	OPSD 401.010	
HH157	HWY 7 E-N RAMP	9+617.5	3.0*	OPSD 2112.040	OPSD 401.010	
HH158	HIGHWAY 427 MEDIAN	10+215.5	1.5 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH159	HIGHWAY 427 MEDIAN	10+300	2.4 RT	OPSD 2112.040	OPSD 401.030	
HH160	HIGHWAY 427 MEDIAN	10+381	2.7 RT	OPSD 2112.040	OPSD 401.030	GROUND ROD (2)
HH161	HIGHWAY 427 MEDIAN	10+471	2.6 RT	OPSD 2112.040	OPSD 401.010	
MH162	HIGHWAY 427 SB	13+976	4.5*	OPSD 2111.050	OPSD 401.010	GROUND ROD (2)
HH162	HWY 7 N-E/W RAMP	9+984	3.5*	OPSD 2112.020	-	
MH163	HIGHWAY 427 SB MEDIAN	13+976	2.0 RT	OPSD 2111.050	OPSD 401.030	
HH163	HWY 7 E-N RAMP	9+904.5	3.5*	OPSD 2112.020	-	
MH165	HIGHWAY 427	10+051	2.1 RT	OPSD 2111.050	OPSD 401.030	
MH166	W-S RAMP	9+603.5	5.7*	OPSD 2111.050	OPSD 401.010	
MH167	W-S RAMP	9+762	5.0*	OPSD 2111.050	OPSD 401.010	
MH170	HIGHWAY 427 NB	13+976	4.5*	OPSD 2111.050	OPSD 401.010	

NOTE(S):
1. WHEN SHOWN WITHOUT *, OFFSET IS FROM CENTRE OR CONTROL LINE OF ROADWAY. WHEN SHOWN WITH *, OFFSET IS FROM EDGE OF TRAVELED PAVEMENT (EP).

FILE LOCATION: C:\PROJECTS\HWY 427 EXPANSION\DRAWINGS\PERMANENT CHARTS\DWG\REVISED BY-GILL
DRAWING NAME: 427E-ELE-CEN-DWG-SEQ. L-2 PERMANENT CHARTS DWG REVISED BY-GILL
DRAWN BY: B 18/03/20
MODIFIED: 18/03/15 08:38:07

NO.	DATE	REVISIONS	BY	CHK	LEAD. DES.	PROJ. MGR.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

SCALE :
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

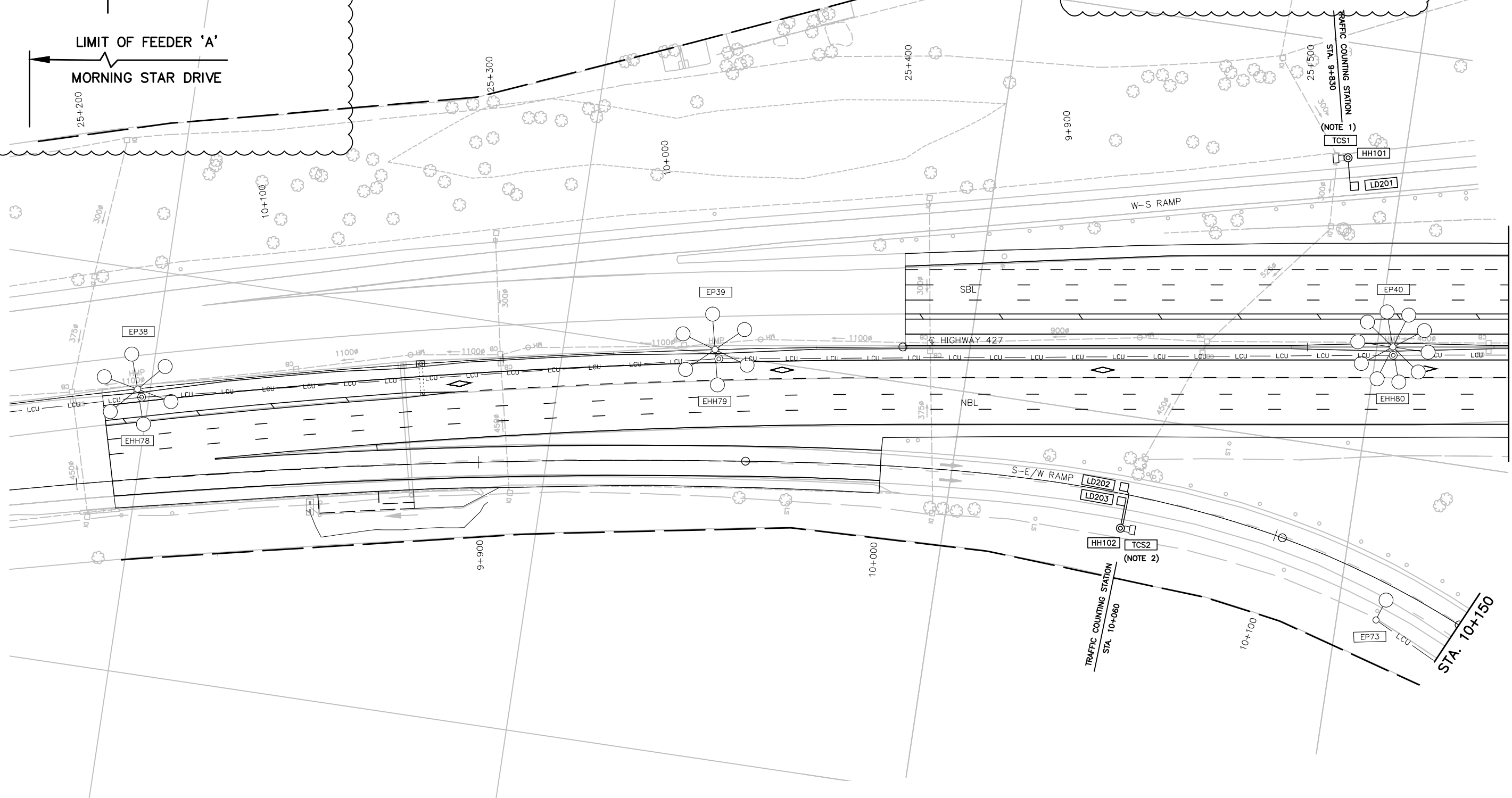
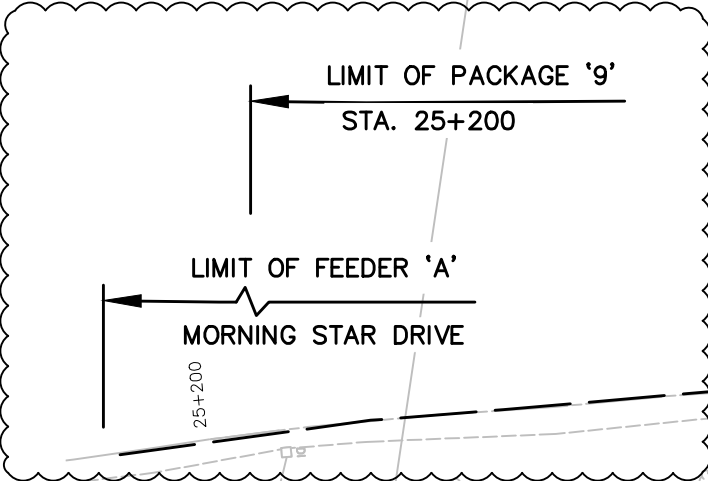


TITLE							
HWY 427 EXPANSION							
PERMANENT CHARTS - 7							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1011	B

CITY OF TORONTO

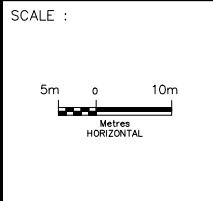
NOTE(S):

1. REFER TO MTOD 2901.022 AND MTOD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
2. REFER TO MTOD 2901.022 AND MTOD 2901.503 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - R0158KBY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INIT.	DATE

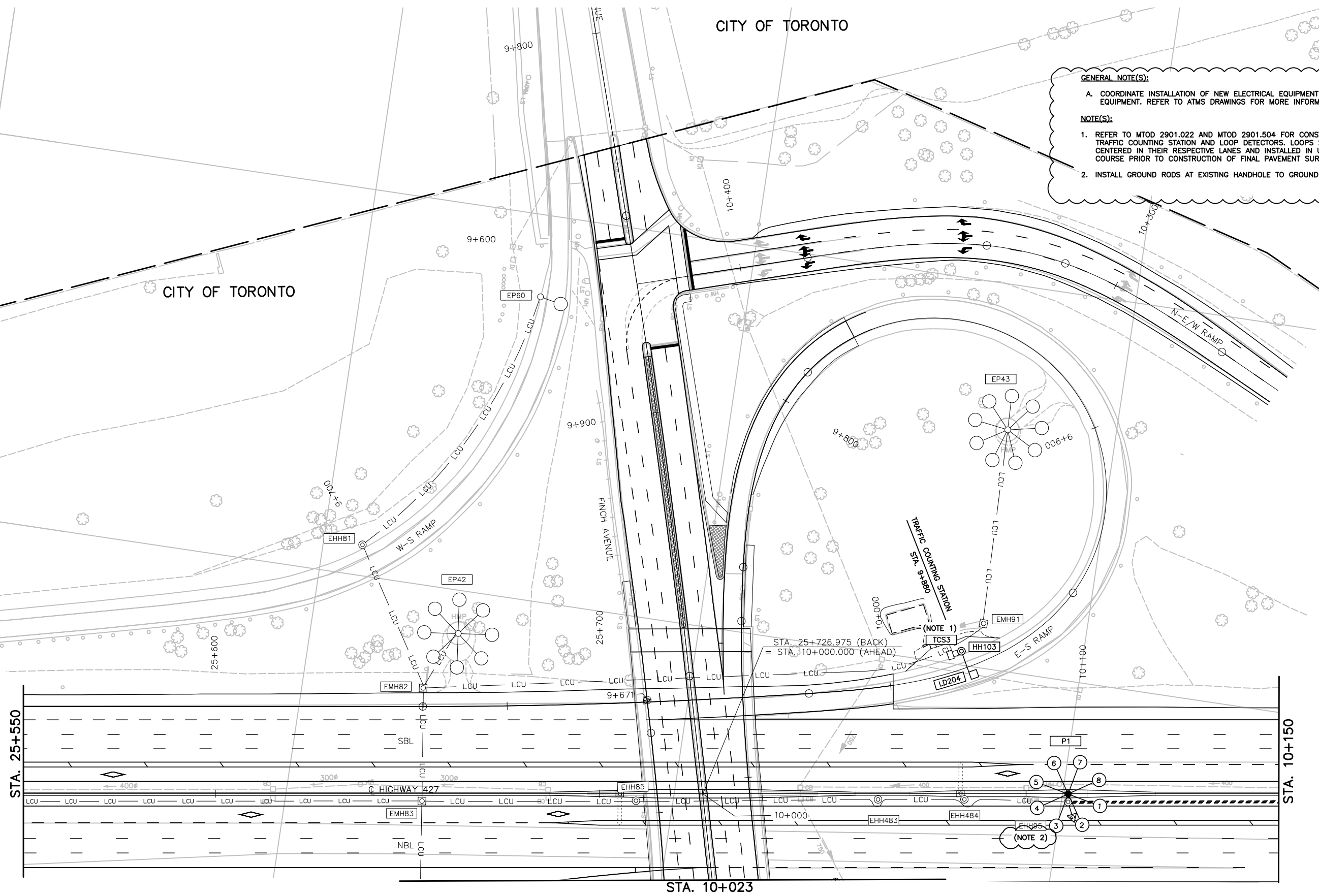


TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 1 STA. 25+175 TO STA. 25+550							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1013	B



GENERAL NOTE(S):
 A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

NOTE(S):
 1. REFER TO MTOD 2901.022 AND MTOD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
 2. INSTALL GROUND RODS AT EXISTING HANDHOLE TO GROUND HIGHMAST POLE.



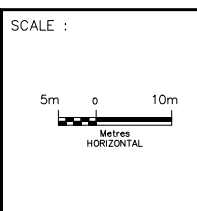
STA. 25+550

STA. 10+150

STA. 10+023

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISED BY GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



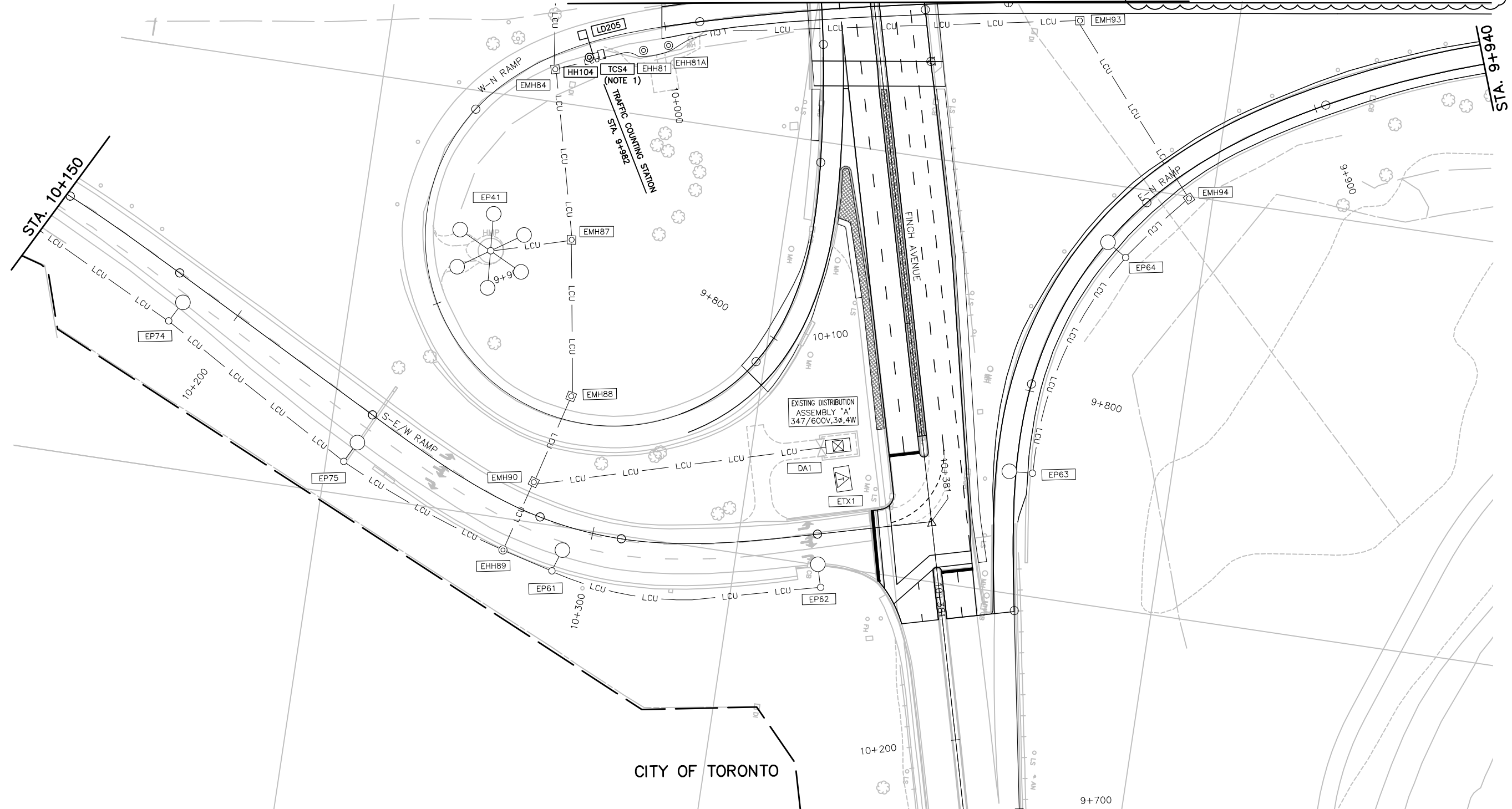
TITLE						
HWY 427 EXPANSION ELECTRICAL LAYOUT - 2 STA. 25+550 TO STA. 10+150						
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER
H427-D	N	9	ELE	000	DWG	1014
						REVISION NUMBER
						B



GENERAL NOTE(S):
 A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

NOTE(S):
 1. REFER TO MTOD 2901.022 AND MTOD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.

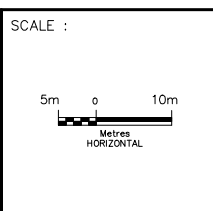
STA. 10+023



CITY OF TORONTO

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION ELECTRICAL LAYOUT - 3 STA. 10+023 TO STA. 10+220							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1015	B

CITY OF TORONTO

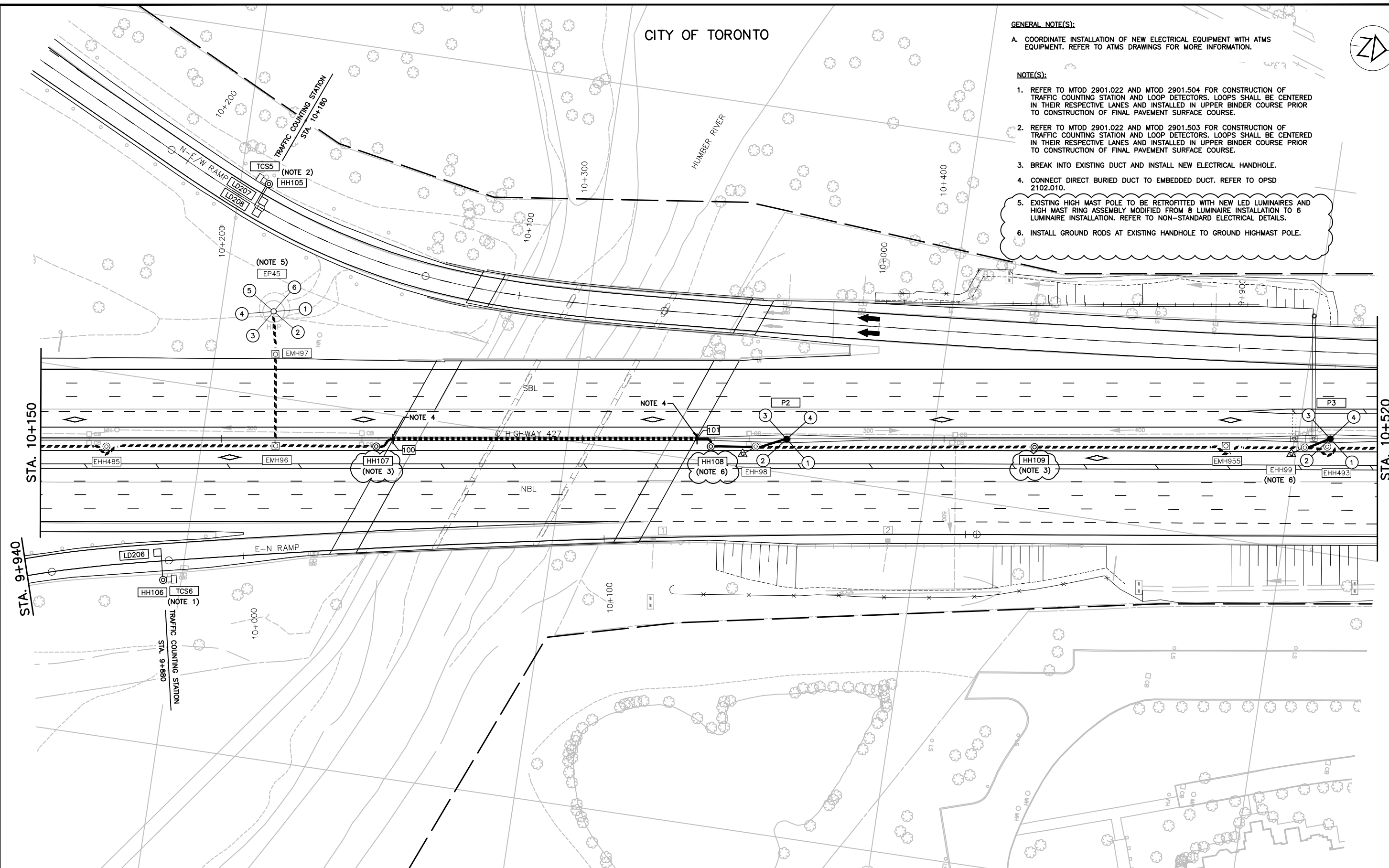


GENERAL NOTE(S):

- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

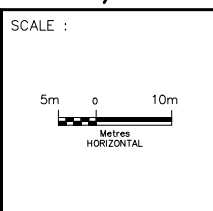
NOTE(S):

1. REFER TO MTD 2901.022 AND MTD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
2. REFER TO MTD 2901.022 AND MTD 2901.503 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
3. BREAK INTO EXISTING DUCT AND INSTALL NEW ELECTRICAL HANDHOLE.
4. CONNECT DIRECT BURIED DUCT TO EMBEDDED DUCT. REFER TO OPSD 2102.010.
5. EXISTING HIGH MAST POLE TO BE RETROFITTED WITH NEW LED LUMINAIRES AND HIGH MAST RING ASSEMBLY MODIFIED FROM 8 LUMINAIRE INSTALLATION TO 6 LUMINAIRE INSTALLATION. REFER TO NON-STANDARD ELECTRICAL DETAILS.
6. INSTALL GROUND RODS AT EXISTING HANDHOLE TO GROUND HIGHMAST POLE.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - RFP058KBY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 08:16:51
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



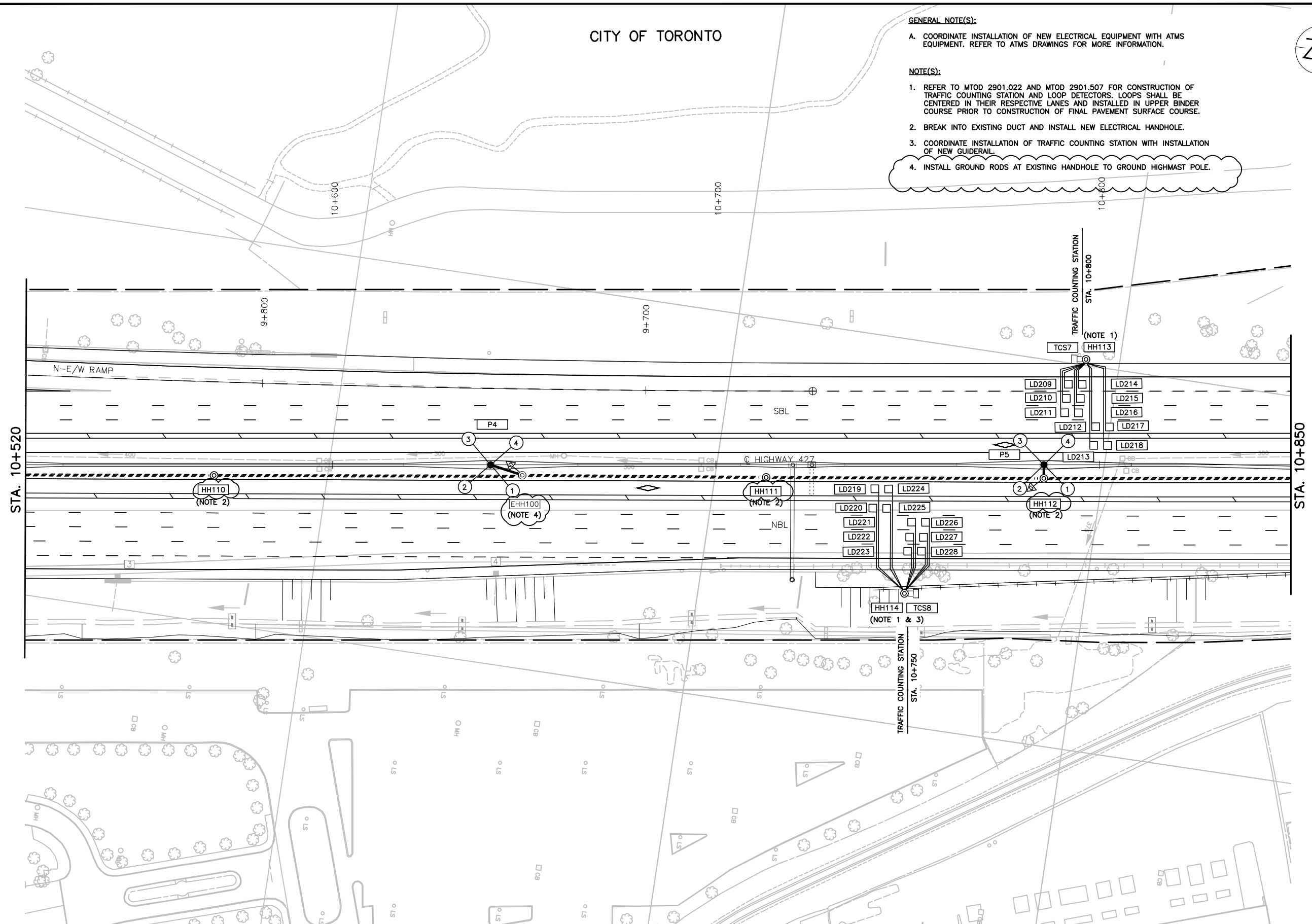
TITLE HWY 427 EXPANSION ELECTRICAL LAYOUT - 4 STA. 10+150 TO STA. 10+520							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1016	B

GENERAL NOTE(S):

- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

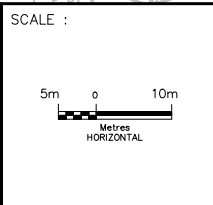
NOTE(S):

1. REFER TO MTOD 2901.022 AND MTOD 2901.507 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
2. BREAK INTO EXISTING DUCT AND INSTALL NEW ELECTRICAL HANDHOLE.
3. COORDINATE INSTALLATION OF TRAFFIC COUNTING STATION WITH INSTALLATION OF NEW GUIDERAIL.
4. INSTALL GROUND RODS AT EXISTING HANDHOLE TO GROUND HIGHMAST POLE.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA				N.M. L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA				N.M. L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 5 STA. 10+520 TO STA. 10+850							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1017	B

GENERAL NOTE(S):

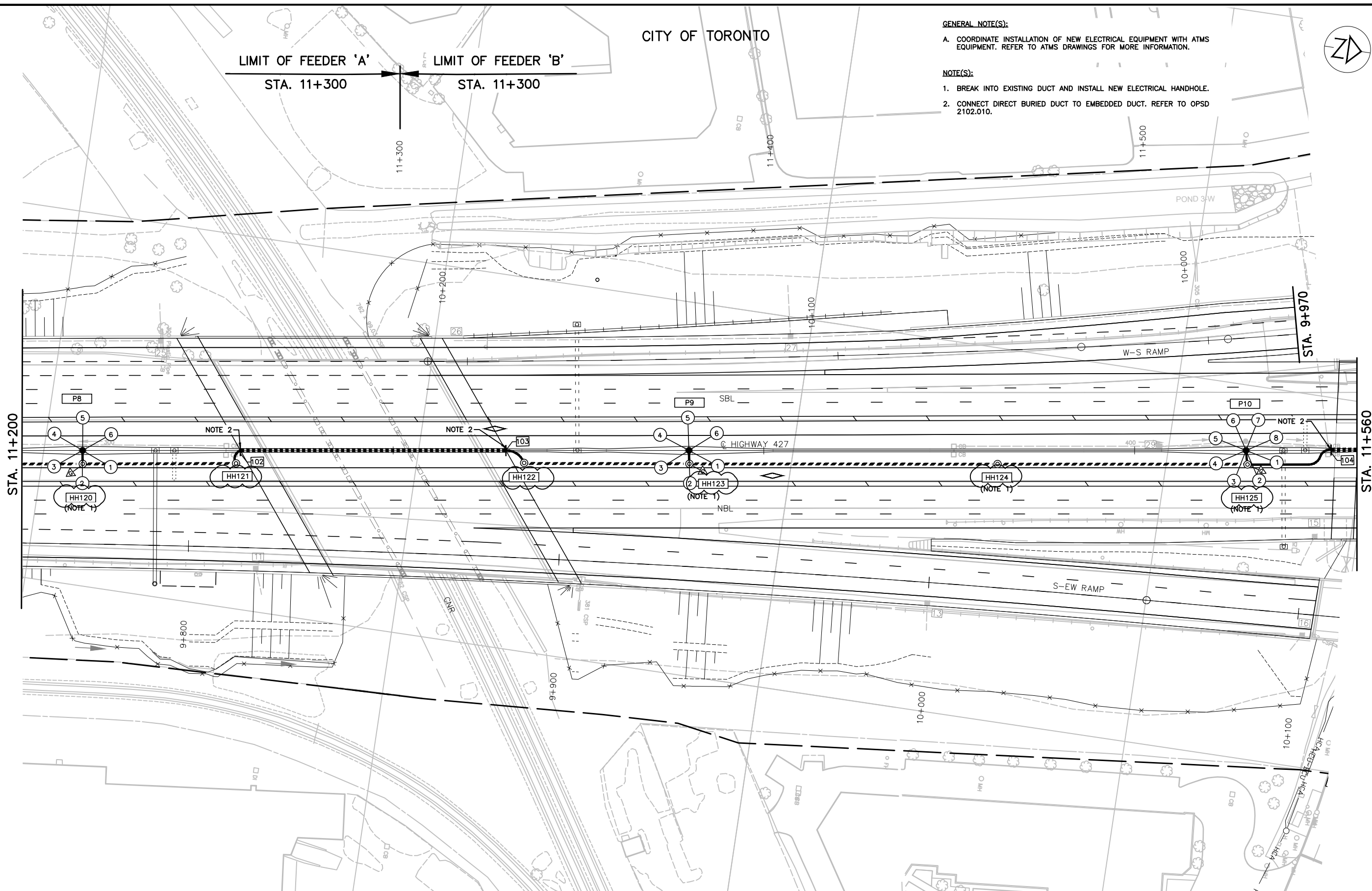
- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

NOTE(S):

- 1. BREAK INTO EXISTING DUCT AND INSTALL NEW ELECTRICAL HANDHOLE.
- 2. CONNECT DIRECT BURIED DUCT TO EMBEDDED DUCT. REFER TO OPSD 2102.010.

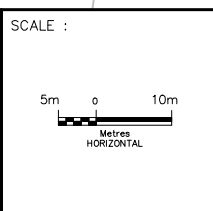


LIMIT OF FEEDER 'A' STA. 11+300 LIMIT OF FEEDER 'B' STA. 11+300



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51
 Revised

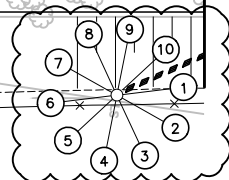
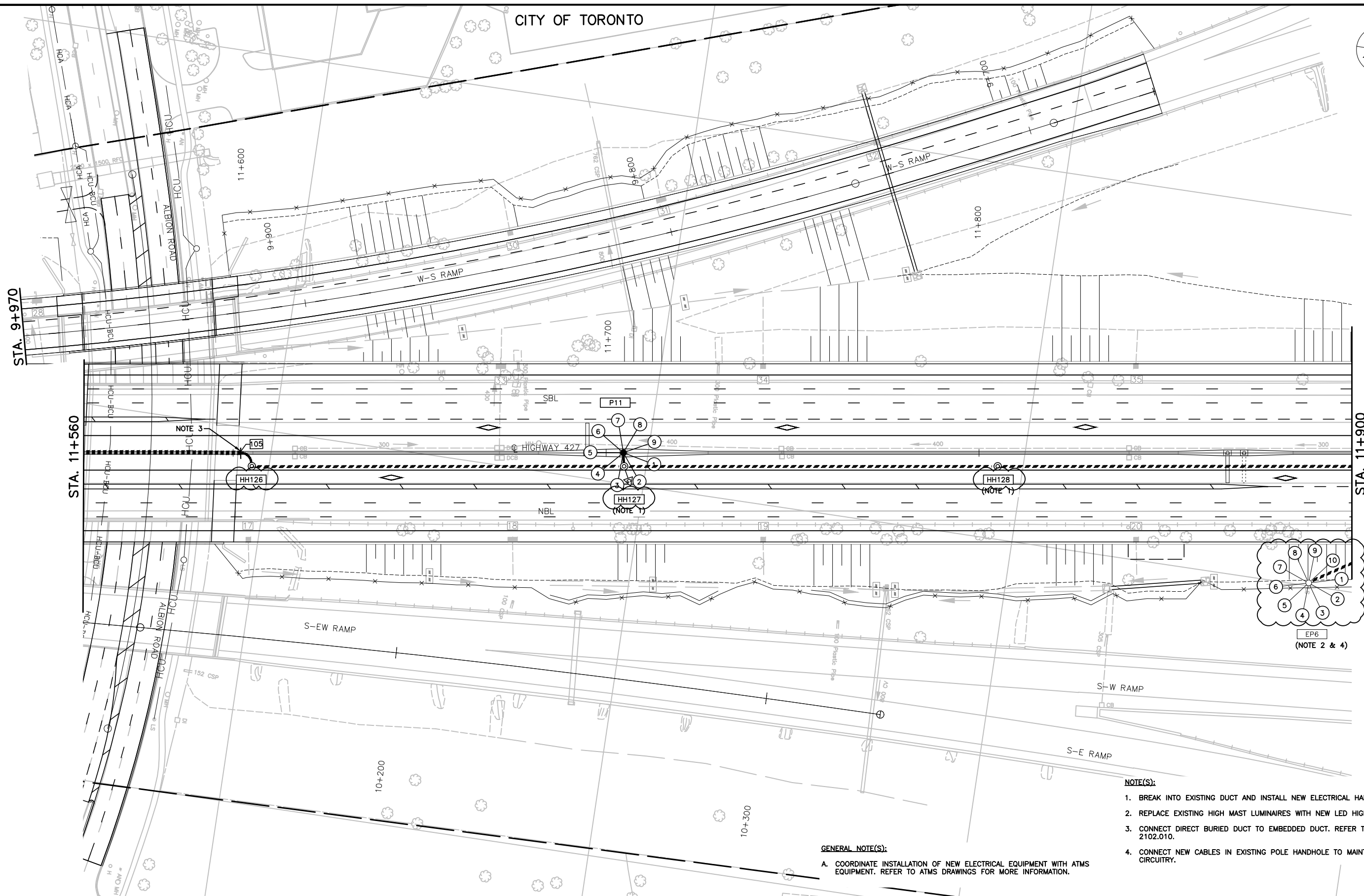
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA				N.M. L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA				N.M. L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 7 STA. 11+200 TO STA. 11+560							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1019	B



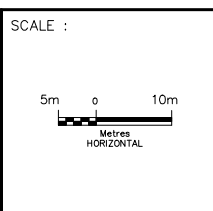
EP6
(NOTE 2 & 4)

- NOTE(S):**
1. BREAK INTO EXISTING DUCT AND INSTALL NEW ELECTRICAL HANDHOLE.
 2. REPLACE EXISTING HIGH MAST LUMINAIRES WITH NEW LED HIGH LUMINAIRES.
 3. CONNECT DIRECT BURIED DUCT TO EMBEDDED DUCT. REFER TO OPSD 2102.010.
 4. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.

GENERAL NOTE(S):
 A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 08:16:51
 Revised

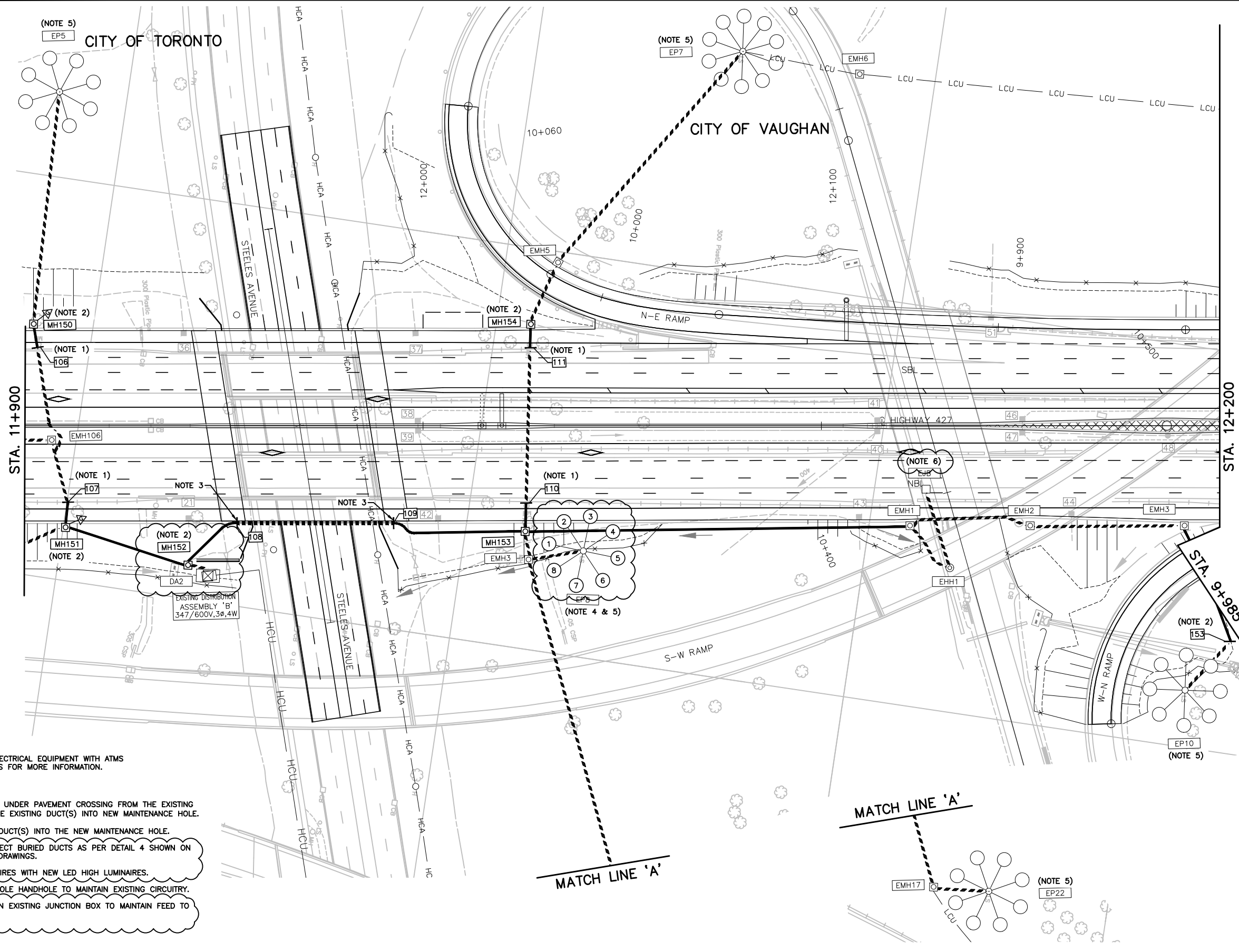
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD. MAN.
B	18/03/20	90% SUBMISSION TO CA				N.M. L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA				N.M. L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



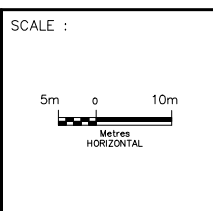
TITLE		HWY 427 EXPANSION ELECTRICAL LAYOUT - 8 STA. 11+560 TO STA. 11+900							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER		
H427-D	N	9	ELE	000	DWG	1020	B		



- GENERAL NOTE(S):**
- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.
- NOTE(S):**
1. LOCATE AND TERMINATE THE EXISTING UNDER PAVEMENT CROSSING FROM THE EXISTING MAINTENANCE HOLE. THEN EXTEND THE EXISTING DUCT(S) INTO NEW MAINTENANCE HOLE.
 2. LOCATE AND REROUTE THE EXISTING DUCT(S) INTO THE NEW MAINTENANCE HOLE.
 3. TRANSITION EMBEDDED DUCTS TO DIRECT BURIED DUCTS AS PER DETAIL 4 SHOWN ON ELECTRICAL NON-STANDARD DETAILS DRAWINGS.
 4. REPLACE EXISTING HIGH MAST LUMINAIRES WITH NEW LED HIGH LUMINAIRES.
 5. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.
 6. CONNECT NEW CABLES TO EXISTING IN EXISTING JUNCTION BOX TO MAINTAIN FEED TO EXISTING UNDERPASS.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - REVISION BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51
 REVISION:

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

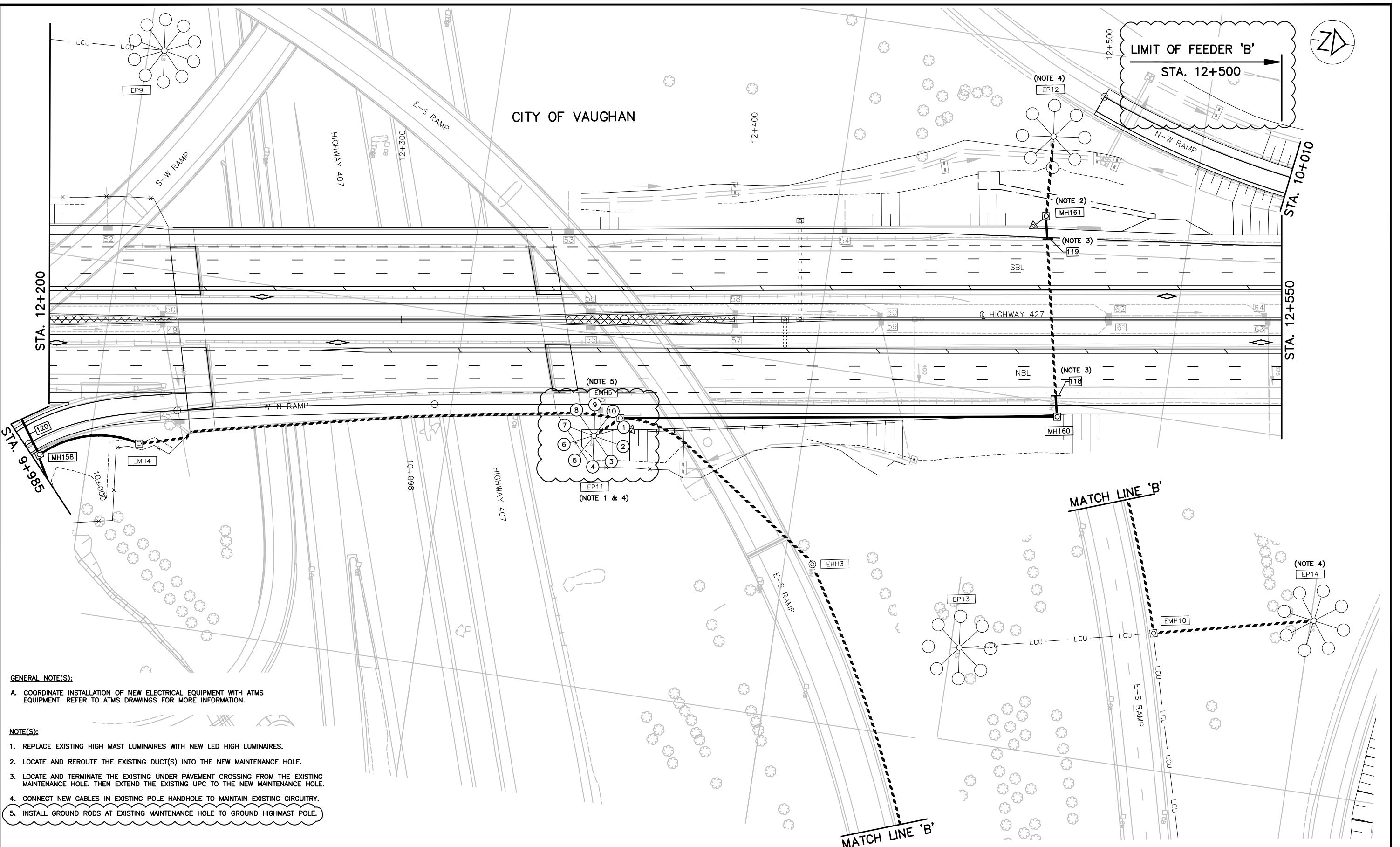


DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



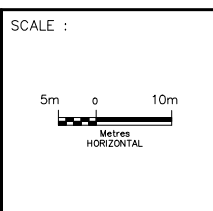
TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 9 STA. 11+900 TO STA. 12+200							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1021	B

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - R9038KBY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15



- GENERAL NOTE(S):**
- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.
- NOTE(S):**
1. REPLACE EXISTING HIGH MAST LUMINAIRES WITH NEW LED HIGH LUMINAIRES.
 2. LOCATE AND REROUTE THE EXISTING DUCT(S) INTO THE NEW MAINTENANCE HOLE.
 3. LOCATE AND TERMINATE THE EXISTING UNDER PAVEMENT CROSSING FROM THE EXISTING MAINTENANCE HOLE. THEN EXTEND THE EXISTING UPC TO THE NEW MAINTENANCE HOLE.
 4. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.
 5. INSTALL GROUND RODS AT EXISTING MAINTENANCE HOLE TO GROUND HIGHMAST POLE.

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	

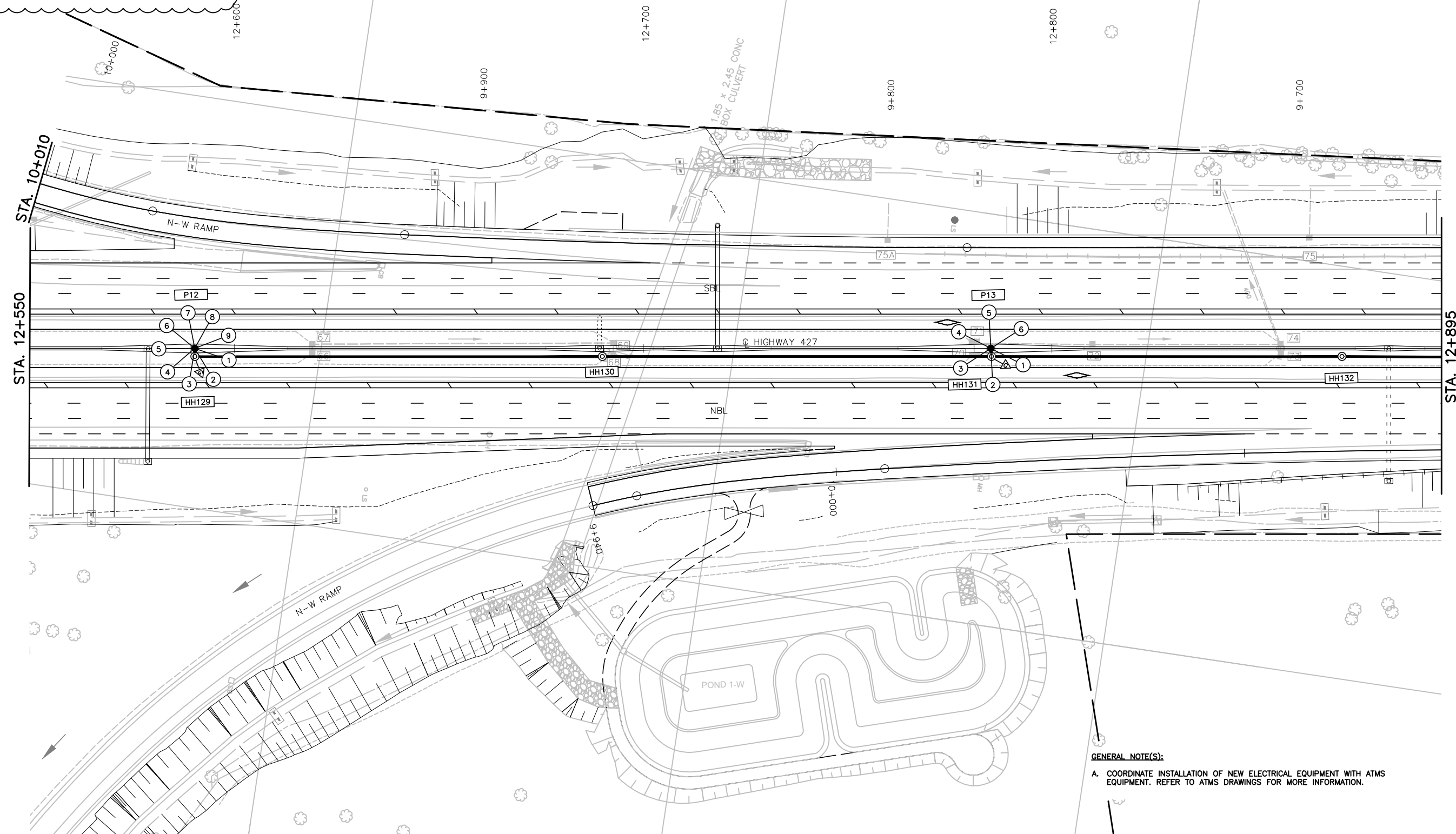


TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 10 STA. 12+200 TO STA. 12+550							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1022	B



CITY OF VAUGHAN

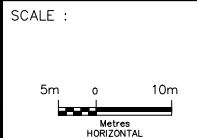
LIMIT OF FEEDER 'C'
STA. 12+550



GENERAL NOTE(S):
A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
DRAWING NAME: 427E-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - REVISION BY-GILL
DRAWN BY: K. GILL
MODIFIED: 18/02/15 08:16:51 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 11 STA. 12+550 TO STA. 12+895							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1023	B



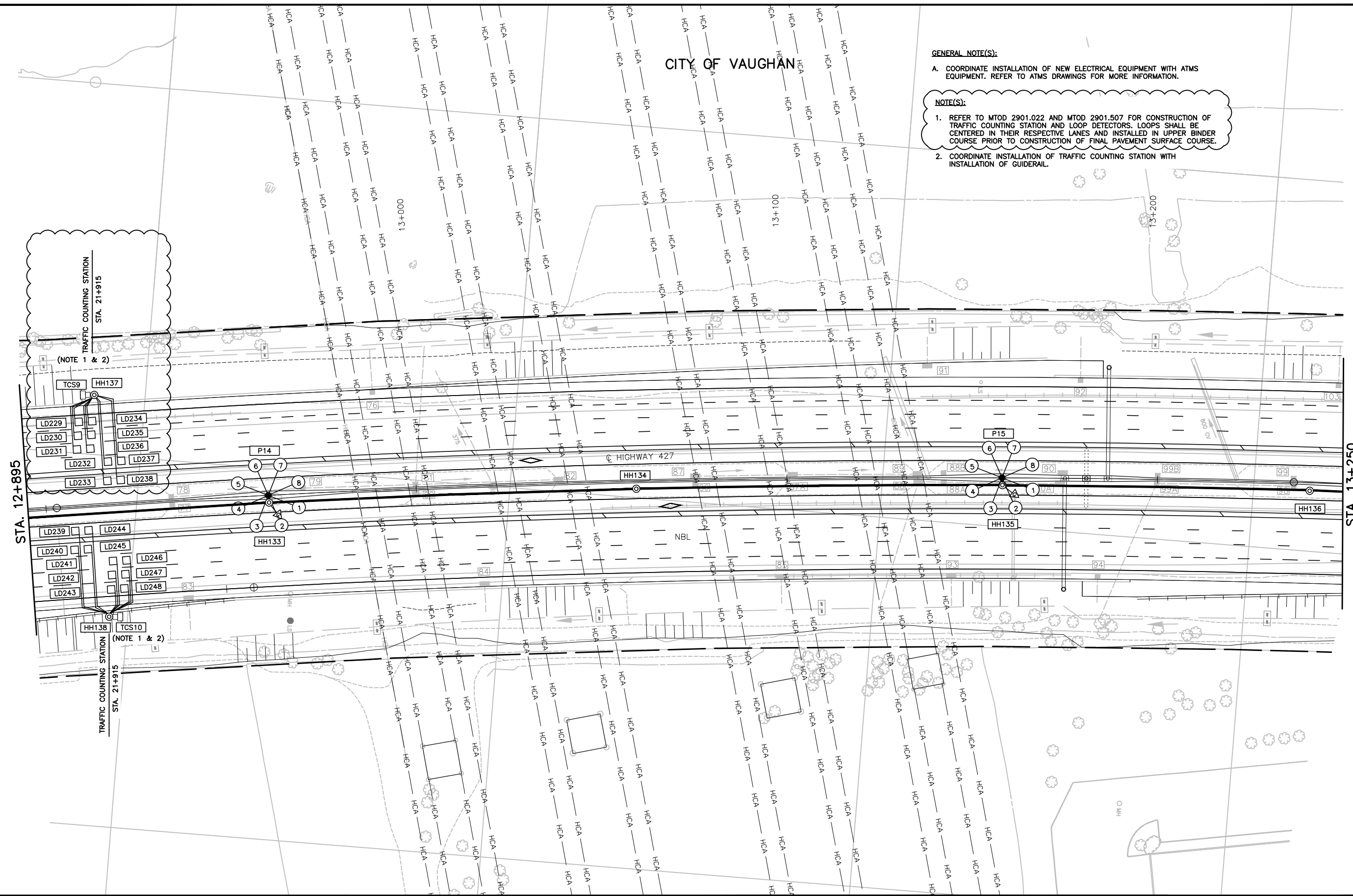
CITY OF VAUGHAN

GENERAL NOTE(S):

A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

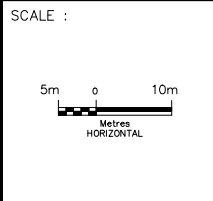
NOTE(S):

1. REFER TO MTD 2901.022 AND MTD 2901.507 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
2. COORDINATE INSTALLATION OF TRAFFIC COUNTING STATION WITH INSTALLATION OF GUIDERAIL.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - R0103806BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.



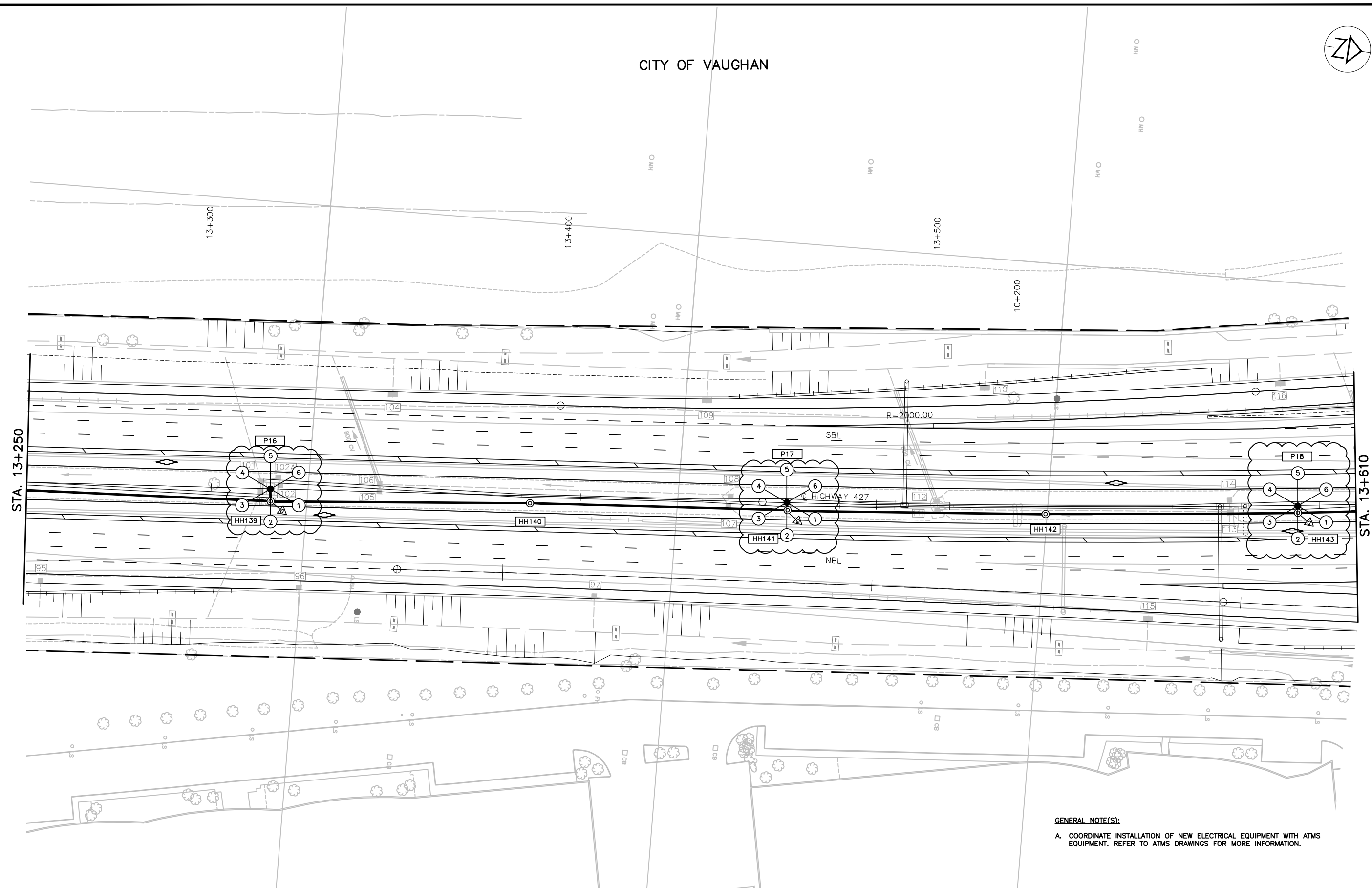
DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INT.	
DATE	



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 12 STA. 12+895 TO STA. 13+250							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1024	B



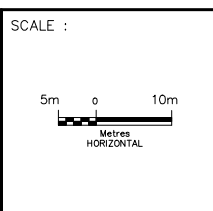
CITY OF VAUGHAN



GENERAL NOTE(S):
 A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51

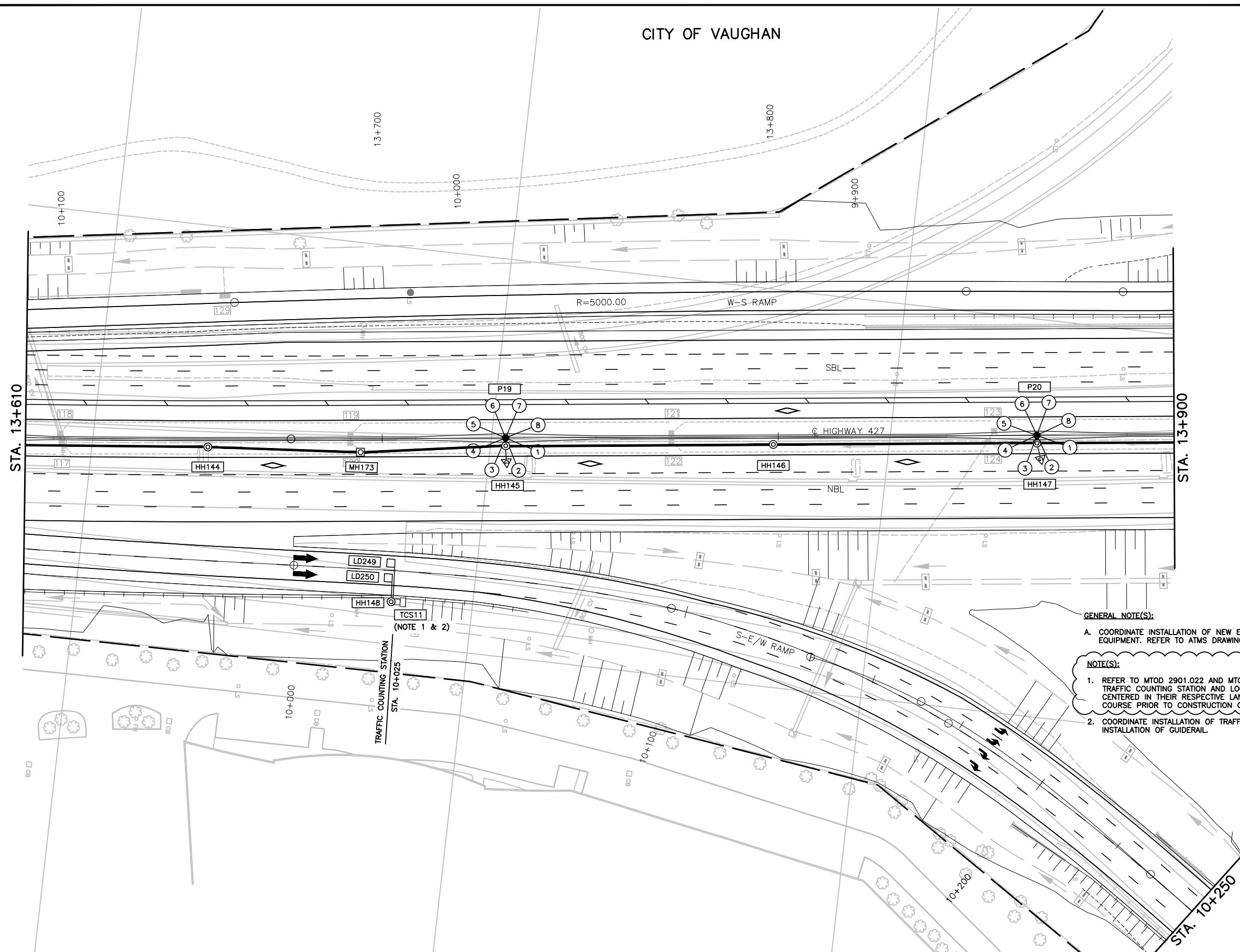
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA				
A	18/01/12	90% SUBMISSION TO CA				



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



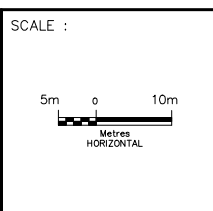
TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 13 STA. 13+250 TO STA. 13+610							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1025	B



- GENERAL NOTE(S):**
- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.
- NOTE(S):**
1. REFER TO MTD 2901.022 AND MTD 2901.503 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
 2. COORDINATE INSTALLATION OF TRAFFIC COUNTING STATION WITH INSTALLATION OF GUIDERAIL.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729\
 DRAWING NAME: 427E-ELE-DES-DWG-SEQ L-2 ELECTRICAL LAYOUT - REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

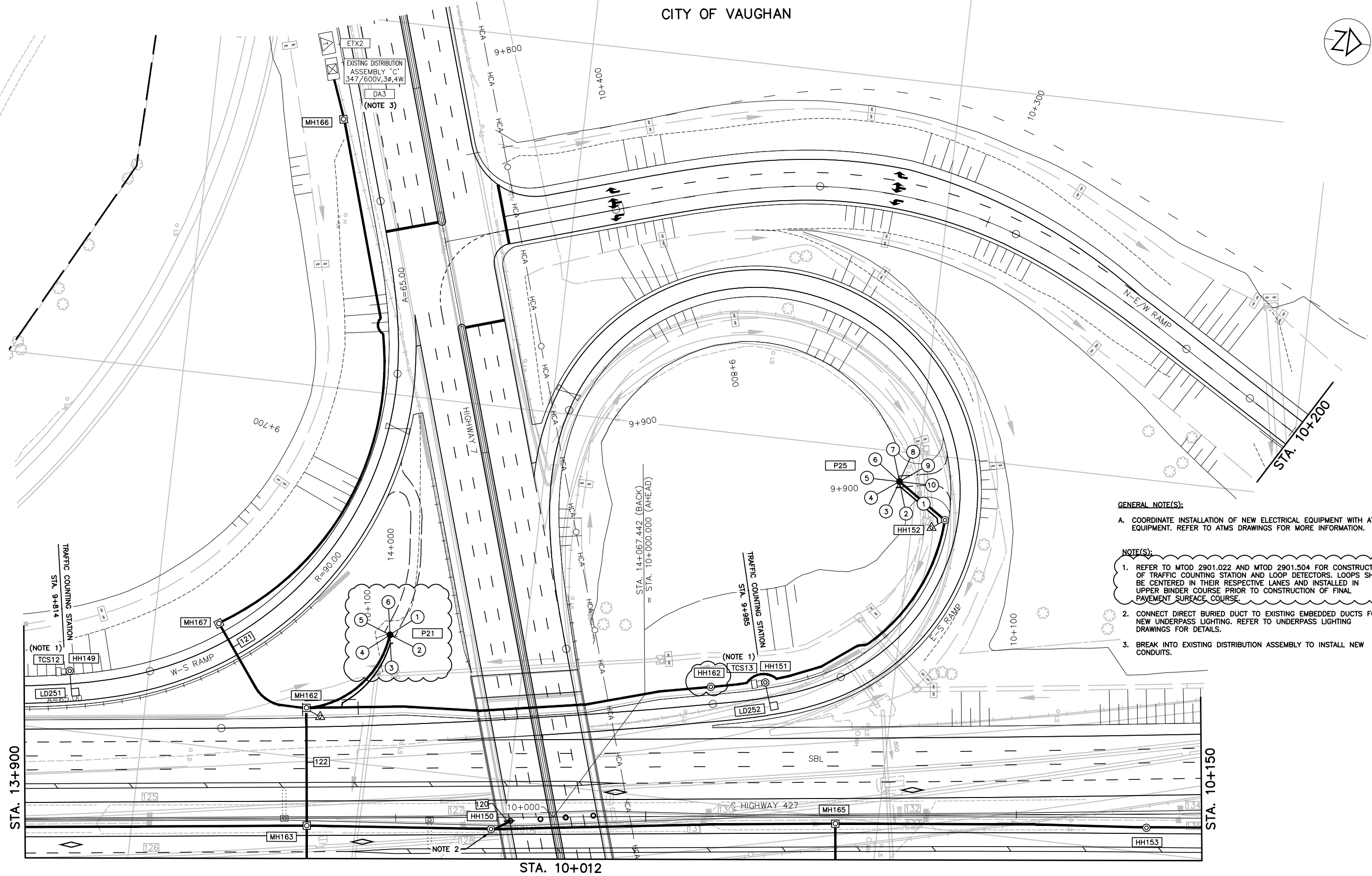


DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



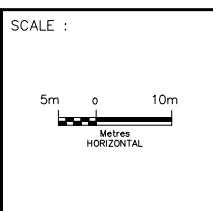
TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 14 STA. 13+610 TO STA. 13+900							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1026	B



- GENERAL NOTE(S):**
- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.
- NOTE(S):**
1. REFER TO MTD 2901.022 AND MTD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
 2. CONNECT DIRECT BURIED DUCT TO EXISTING EMBEDDED DUCTS FOR NEW UNDERPASS LIGHTING. REFER TO UNDERPASS LIGHTING DRAWINGS FOR DETAILS.
 3. BREAK INTO EXISTING DISTRIBUTION ASSEMBLY TO INSTALL NEW CONDUITS.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISIONS BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51
 Revised

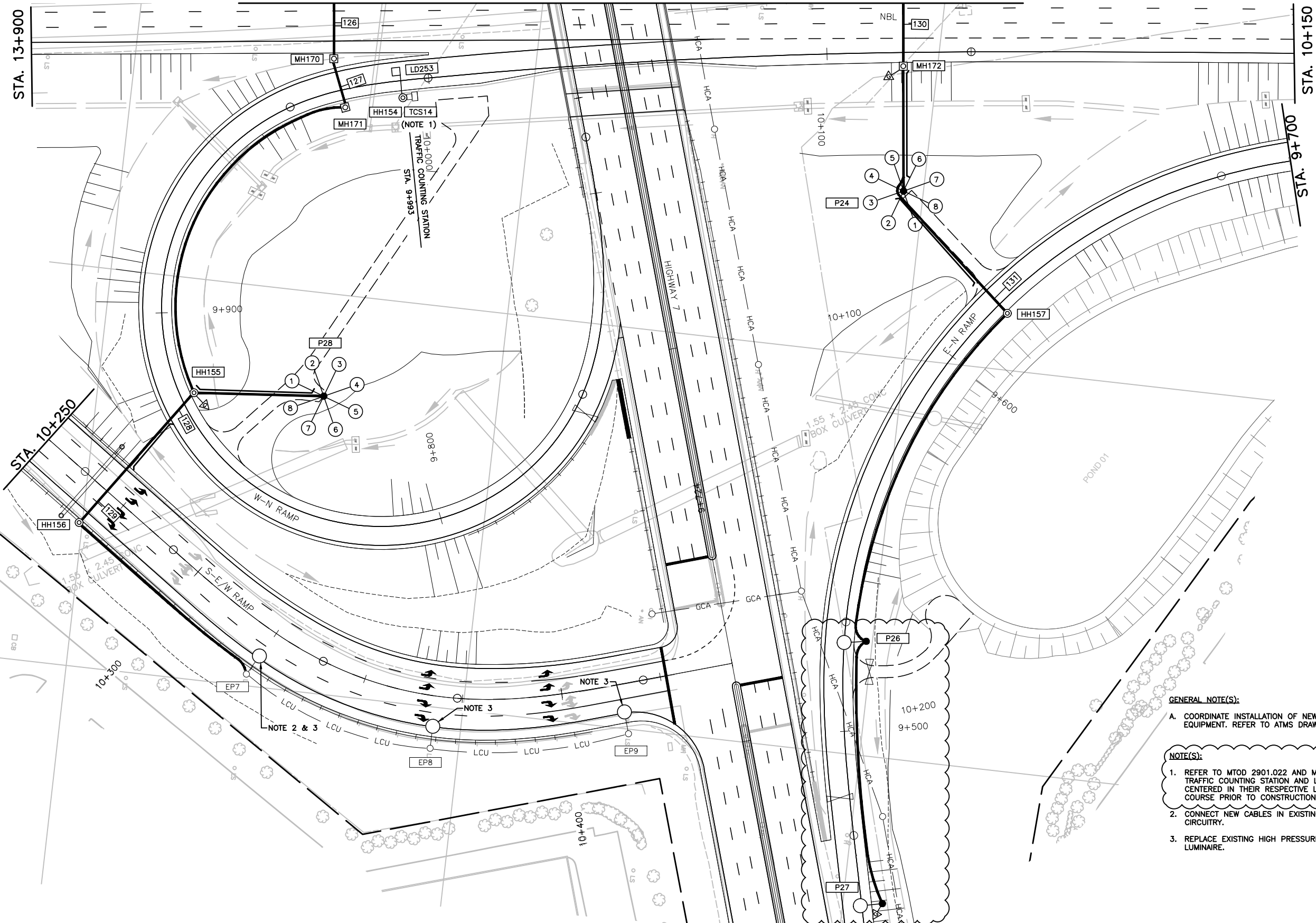
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA				N.M. L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA				N.M. L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION ELECTRICAL LAYOUT - 15 STA. 13+900 TO STA. 10+150							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1027	B



GENERAL NOTE(S):

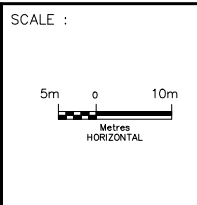
- A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

NOTE(S):

1. REFER TO MTD 2901.022 AND MTD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
2. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.
3. REPLACE EXISTING HIGH PRESSURE SODIUM LUMINAIRE WITH NEW LED LUMINAIRE.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISIONS BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

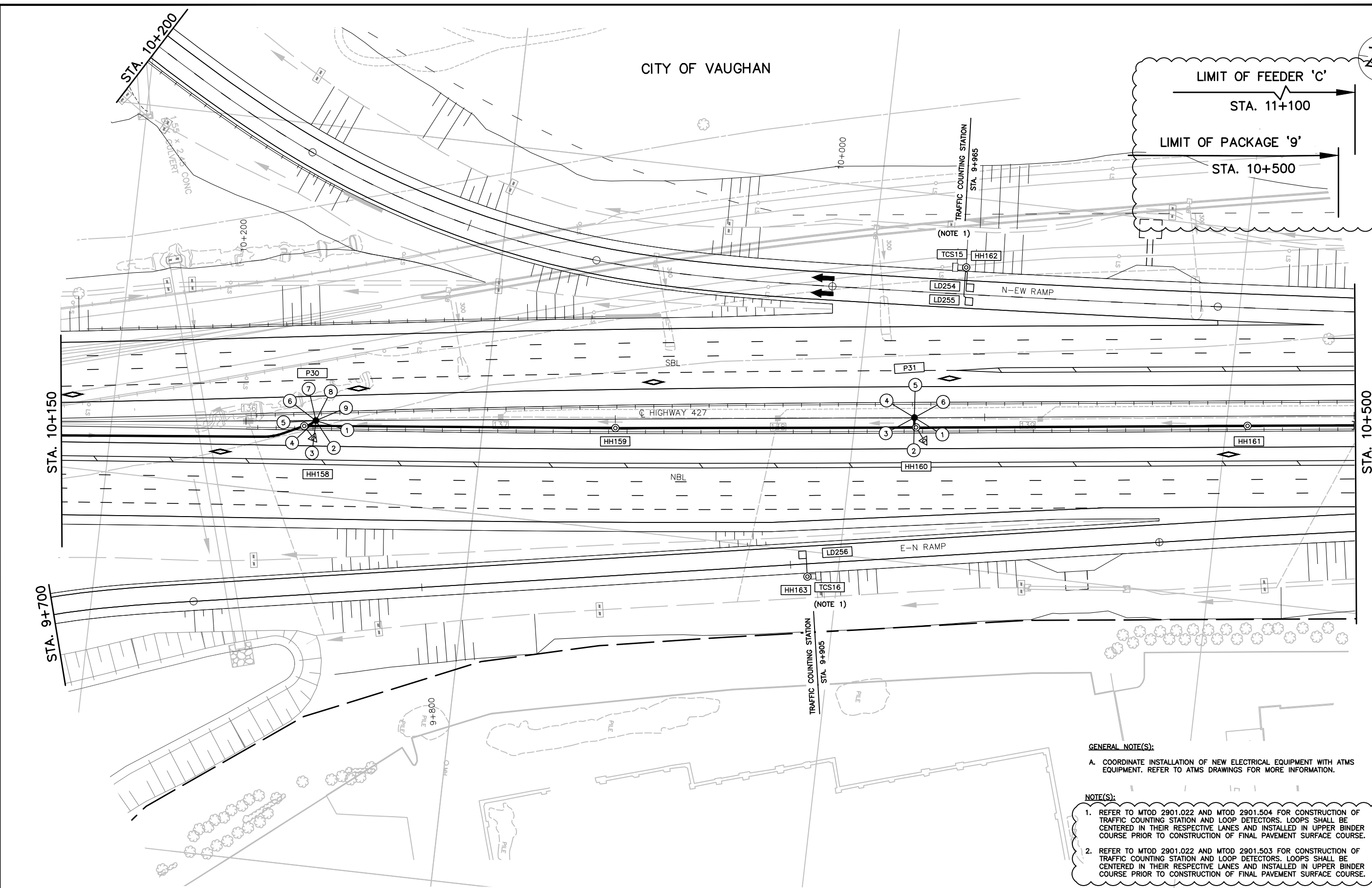


DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION ELECTRICAL LAYOUT - 16 STA. 10+012 TO STA. 10+250							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1028	B

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - REVISION BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:16:51

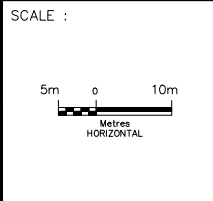


SEE PACKAGE 6 FOR CONTINUATION

GENERAL NOTE(S):
 A. COORDINATE INSTALLATION OF NEW ELECTRICAL EQUIPMENT WITH ATMS EQUIPMENT. REFER TO ATMS DRAWINGS FOR MORE INFORMATION.

NOTE(S):
 1. REFER TO MTD 2901.022 AND MTD 2901.504 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.
 2. REFER TO MTD 2901.022 AND MTD 2901.503 FOR CONSTRUCTION OF TRAFFIC COUNTING STATION AND LOOP DETECTORS. LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT SURFACE COURSE.

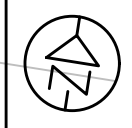
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA				N.M. L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA				N.M. L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 17 STA. 10+150 TO STA. 10+500							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1029	B



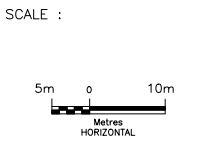
NOT IN CONTRACT



- NOTE(S):**
1. CONNECT NEW EMBEDDED DUCT AT EXISTING JUNCTION BOX AND SPLICE CABLES IN JUNCTION BOX TO MAINTAIN UNDERPASS LIGHTING.
 2. LEAVE DUCT CAPPED AND BURIED. REFER TO UNDERPASS LAYOUTS FOR MORE INFORMATION.
 3. COORDINATE FINAL DUCT AND CABLE CONNECTIONS AT EXISTING TORONTO HYDRO POLES WITH ENTERA.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJITGILL\DM6503729
 DRAWING NAME: 427E-ELE-DES-DMG-SEQ L-2 ELECTRICAL LAYOUT - 18
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:22:45 Revised

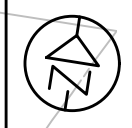
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA				
A	18/01/12	90% SUBMISSION TO CA				



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 18 ALBION ROAD							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1030	B



CITY OF VAUGHN

CITY OF TORONTO

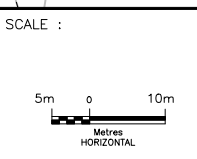
NOT IN CONTRACT

NOTE(S):

1. CONNECT NEW DUCT TO EXISTING DUCT AND INSTALL NEW CABLES TO MAINTAIN EXISTING LIGHTING.
2. CONNECT NEW EMBEDDED DUCT AT EXISTING JUNCTION BOX AND SPLICE CABLES IN JUNCTION BOX TO MAINTAIN UNDERPASS LIGHTING. REFER TO UNDERPASS LAYOUTS FOR MORE INFORMATION.
3. CONNECT SURFACE MOUNTED JUNCTION BOX TO EXISTING EMBEDDED JUNCTION BOX AND SPLICE CABLES IN JUNCTION BOX TO MAINTAIN UNDERPASS LIGHTING. REFER TO UNDERPASS LAYOUTS FOR MORE INFORMATION.
4. LEAVE DUCT CAPPED AND BURIED. REFER TO UNDERPASS LAYOUTS FOR MORE INFORMATION.
5. COORDINATE FINAL DUCT AND CABLE CONNECTIONS AT EXISTING TORONTO HYDRO POLES WITH ENTERA.

FILE LOCATION: C:\PROJECTS\WSP-CA\MMU_KARMIJT GILL\DM503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 ELECTRICAL LAYOUT - INCONSISTENT
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 06:22:45 Revised

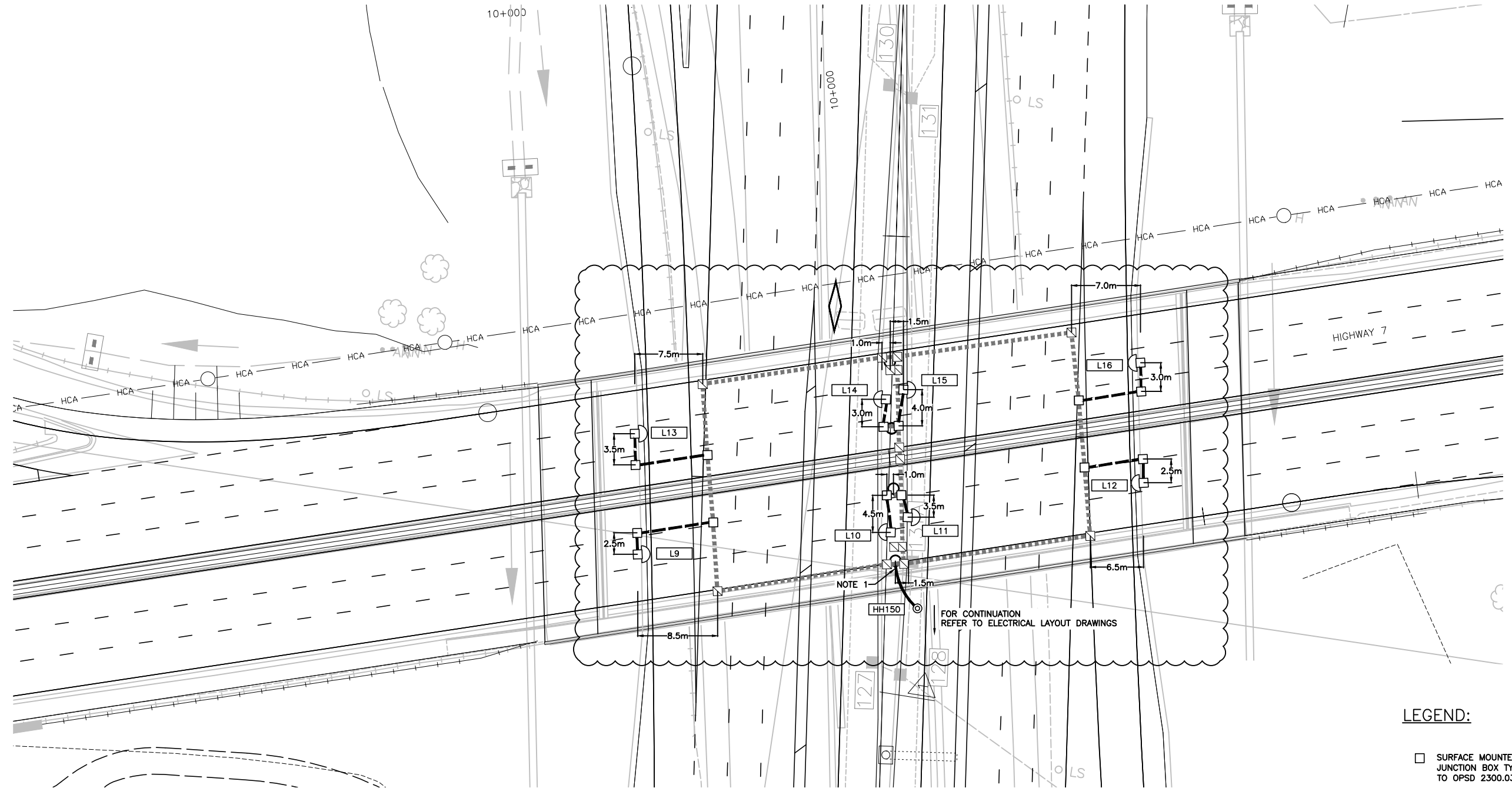
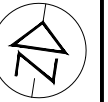
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMIJT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION ELECTRICAL LAYOUT - 19 STEELES AVENUE							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1031	B



LEGEND:

- SURFACE MOUNTED RIGID PVC JUNCTION BOX TYPE P4-4 (REFER TO OPSD 2300.036)
- EXISTING EMBEDDED RIGID PVC JUNCTION BOX TYPE P2-4 (REFER TO OPSD 2300.020)
- 70W HPS UNDERPASS LUMINAIRE MOUNTED ON T-BRACKET (REFER TO OPSD 2310.020)

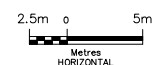
NOTE(S):

1. CONNECT DIRECT BURIED DUCT TO EXISTING EMBEDDED DUCTS.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 UNDERPASS - MTO.DRWREVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/21 15:34:42 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

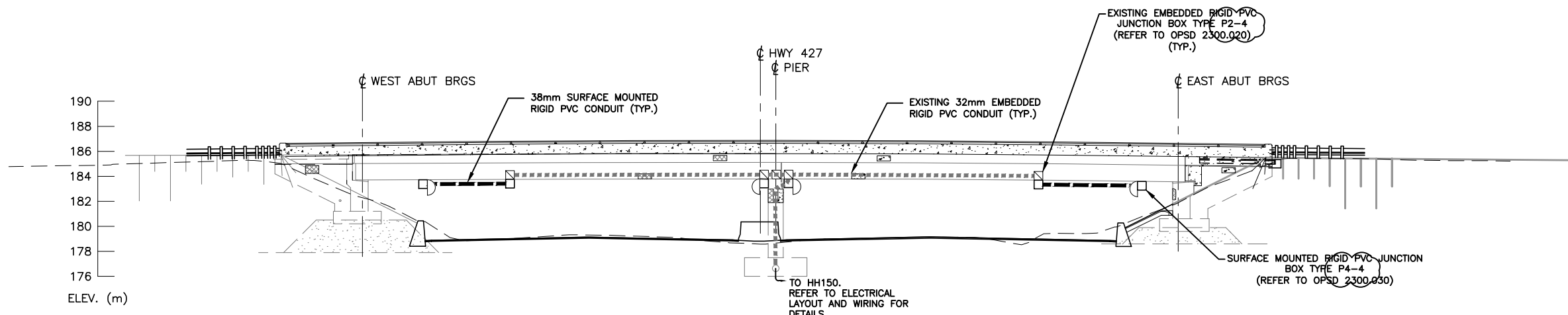
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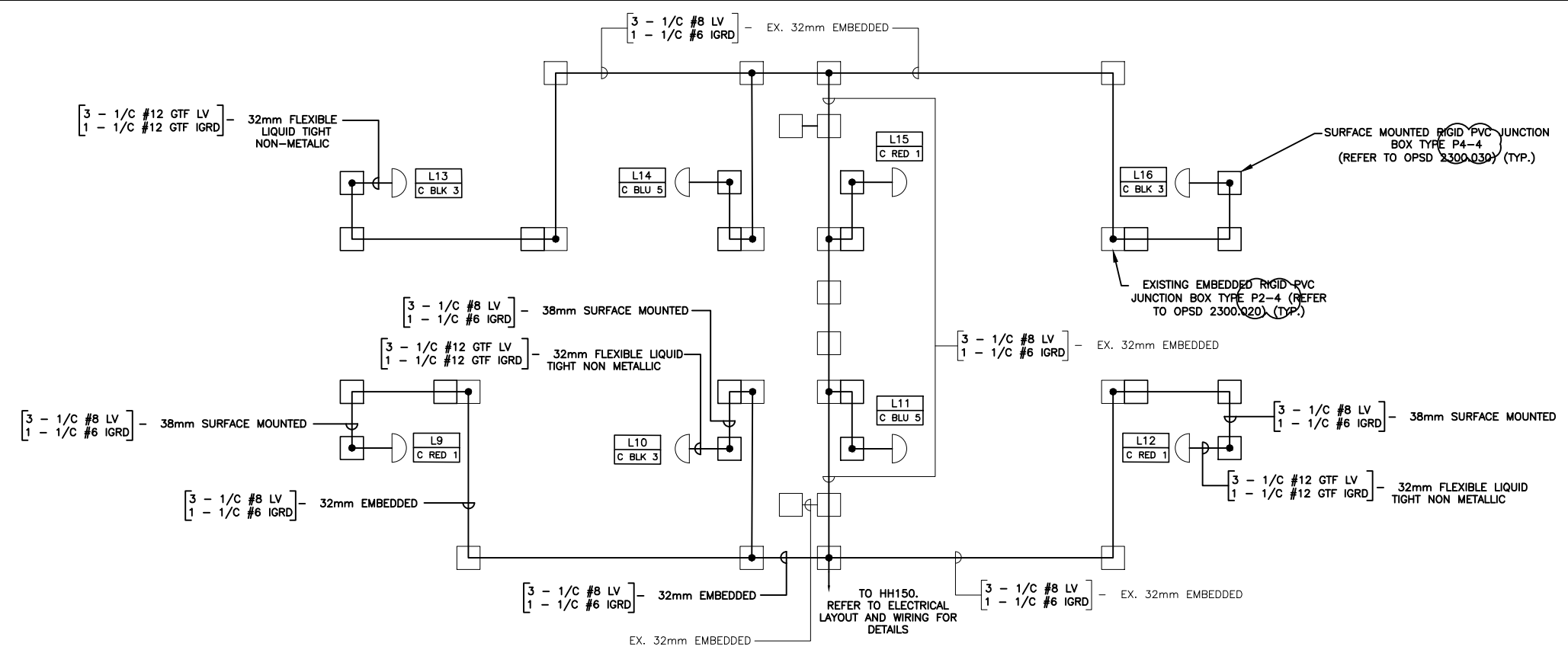
DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION UNDERPASS LAYOUT - 1 HWY 7 OVERPASS AT HIGHWAY 427							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1032	B



2 ELEVATION
N.T.S. N.T.S.



WIRING DIAGRAM
N.T.S.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 UNDERPASS - MTO.DWREMOVED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/21 15:34:42
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION UNDERPASS LAYOUT - 2 HWY 7 OVERPASS AT HIGHWAY 427							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1033	B

NOT IN CONTRACT



NOTE(S):

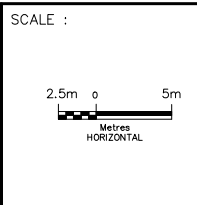
1. TO EXISTING TORONTO HYDRO POLE. COORDINATE WORK WITH ENTERA. REFER TO ELECTRICAL LAYOUT DRAWINGS.
2. LEAVE DUCT CAPPED AND BURIED.
3. CONNECT EXISTING EMBEDDED DUCT WITH NEW EMBEDDED DUCT WITH EXPANSION JOINT. CAREFULLY REMOVE SUFFICIENT CONCRETE TO INSTALL EXPANSION AND DEFLECTION FITTING ASSEMBLY.

LEGEND:

- EMBEDDED RIGID PVC JUNCTION BOX TYPE P2-4. (REFER TO OPSD 2300.020)
- SURFACE MOUNTED RIGID PVC JUNCTION BOX TYPE P4-4. (REFER TO OPSD 2300.030)
- EXPANSION AND DEFLECTION FITTING ASSEMBLY. (REFER TO OPSD 2302.020)
- WOBBLE JOINT. (REFER TO OPSD 2102.010)

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 UNDERPASS - MUN.DWREVISIONED BY: GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:30:55 Revised

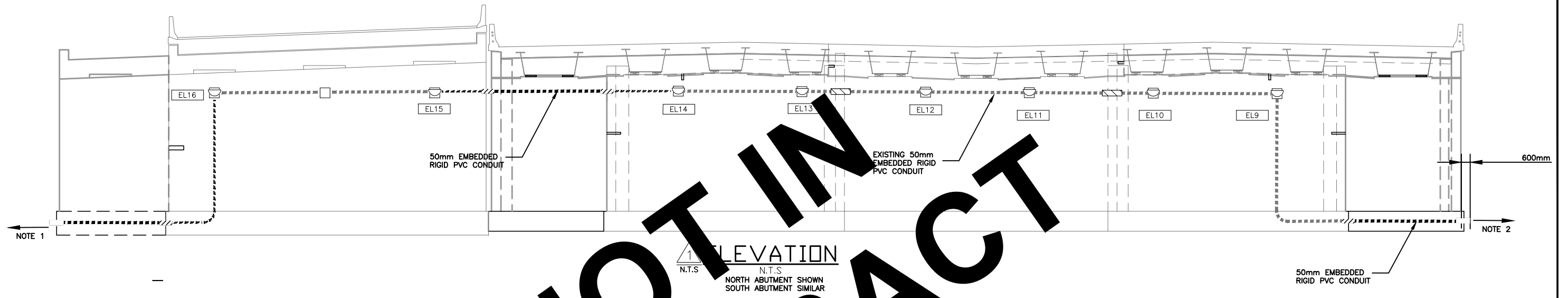
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.



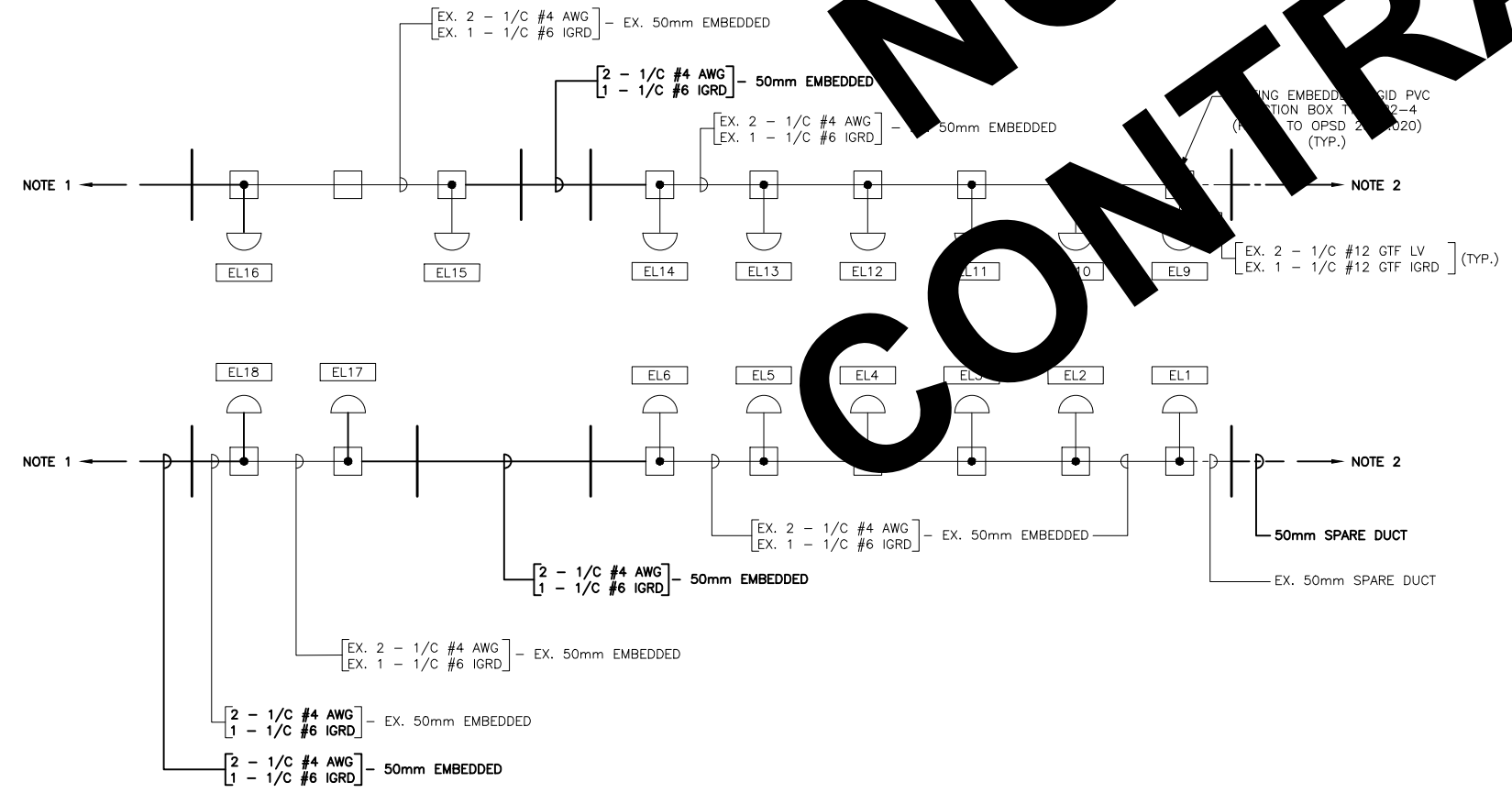
DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION UNDERPASS LAYOUT - 3 HWY 427 & HWY 407 W-S RAMP OVERPASS AT ALBION ROAD							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1034	B



ELEVATION
N.T.S.
NORTH ABUTMENT SHOWN
SOUTH ABUTMENT SIMILAR



WIRING DIAGRAM
N.T.S.

- LEGEND:**
- EMBEDDED RIGID PVC JUNCTION BOX TYPE P2-4. (REFER TO OPSD 2300.020)
 - SURFACE MOUNTED RIGID PVC JUNCTION BOX TYPE P4-4. (REFER TO OPSD 2300.030)
 - EXPANSION AND DEFLECTION FITTING ASSEMBLY. (REFER TO OPSD 2302.020)
 - WOBBLE JOINT. (REFER TO OPSD 2102.010)

- NOTE(S):**
1. TO EXISTING TORONTO HYDRO POLE. COORDINATE WORK WITH ENTERA. REFER TO ELECTRICAL LAYOUT DRAWINGS.
 2. LEAVE DUCT CAPPED AND BURIED.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 UNDERPASS - MUN.DWREVIEWED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:30:55 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION UNDERPASS LAYOUT - 4 HWY 427 & HWY 407 W-S RAMP OVERPASS AT ALBION ROAD							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1035	B

CITY OF VAUGHAN

12+000

50mm EMBEDDED RIGID PVC CONDUIT

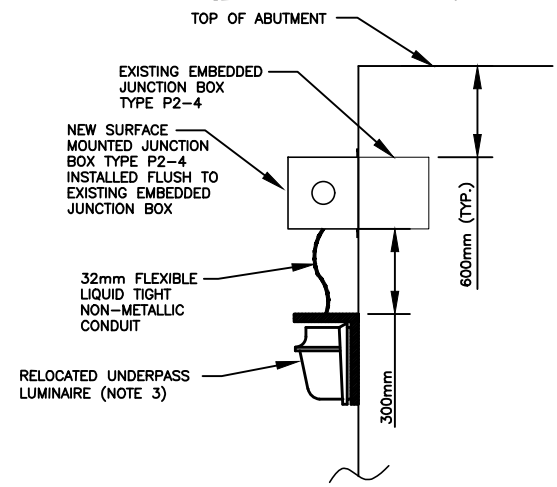
EXISTING 50mm EMBEDDED RIGID PVC CONDUIT

STEELES AVENUE

STEELES AVENUE

CITY OF TORONTO

NOT IN CONTRACT



DETAIL 'A'
N.T.S.

NOTE(S):

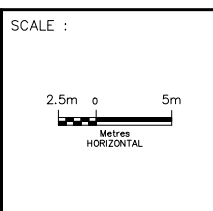
1. TO ELECTRICAL CHAMBER. REFER TO ELECTRICAL LAYOUT DRAWINGS.
2. CONTRACTOR TO CAREFULLY REMOVE SUFFICIENT CONCRETE TO INSTALL EXPANSION AND DEFLECTION FITTING ASSEMBLY ONTO EXISTING EMBEDDED DUCT.
3. CONTRACTOR TO RELOCATE EXISTING UNDERPASS LUMINAIRE AS SHOWN IN DETAIL 'A' TO INSTALL NEW SURFACE MOUNTED JUNCTION BOX.
4. LEAVE DUCT CAPPED AND BURIED.

LEGEND:

- EMBEDDED RIGID PVC JUNCTION BOX TYPE P2-4. (REFER TO OPSD 2300.020)
- SURFACE MOUNTED RIGID PVC JUNCTION BOX TYPE P4-4. (REFER TO OPSD 2300.030)
- EXPANSION AND DEFLECTION FITTING ASSEMBLY. (REFER TO OPSD 2302.020)

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729\
 DRAWING NAME: 427E-ELE-DES-DWG-SEC L-2 UNDERPASS - MUN. DOWNGRADES BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:30:55 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRJ. MAN.
B	18/03/20	90% SUBMISSION TO CA				
A	18/01/12	90% SUBMISSION TO CA				



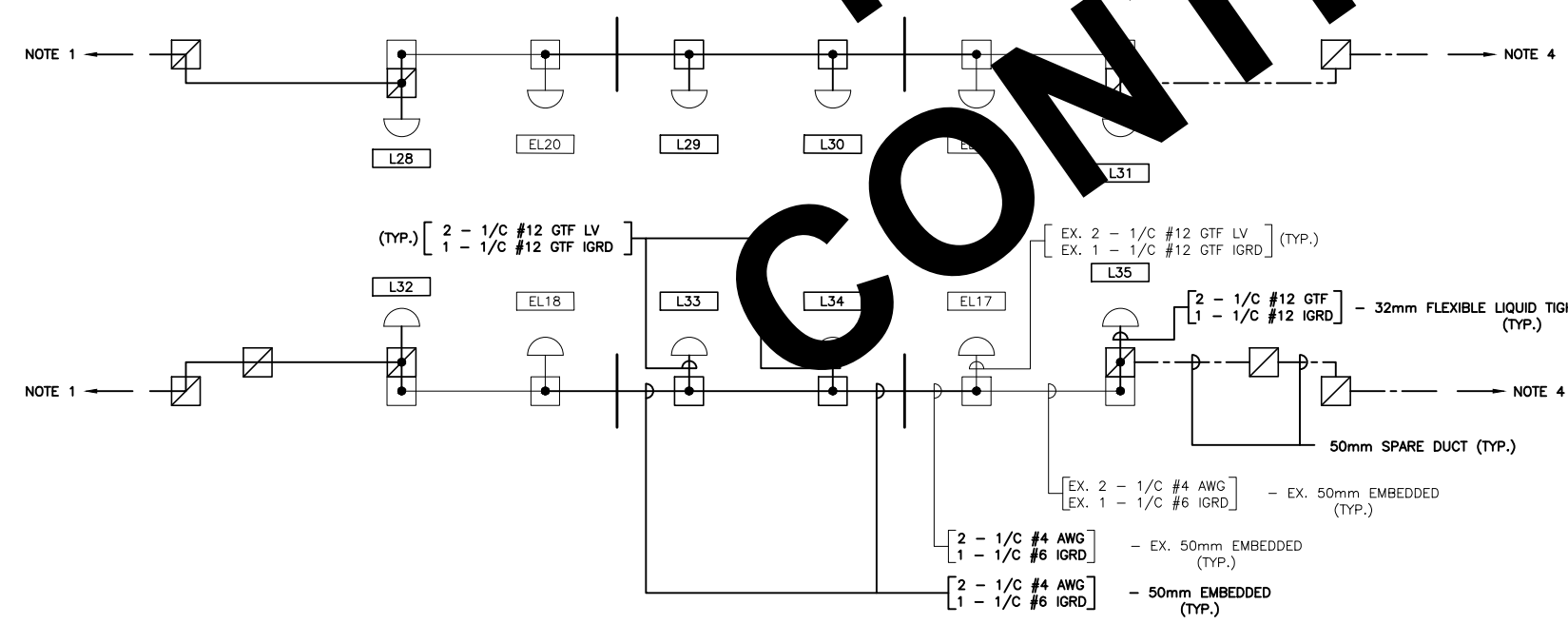
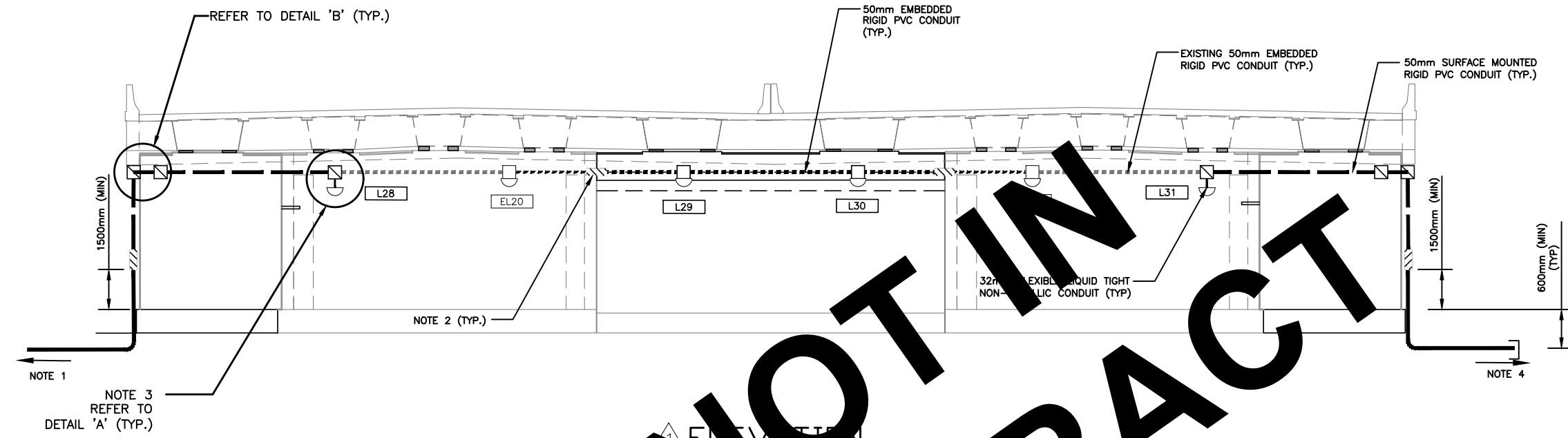
DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INIT. DATE



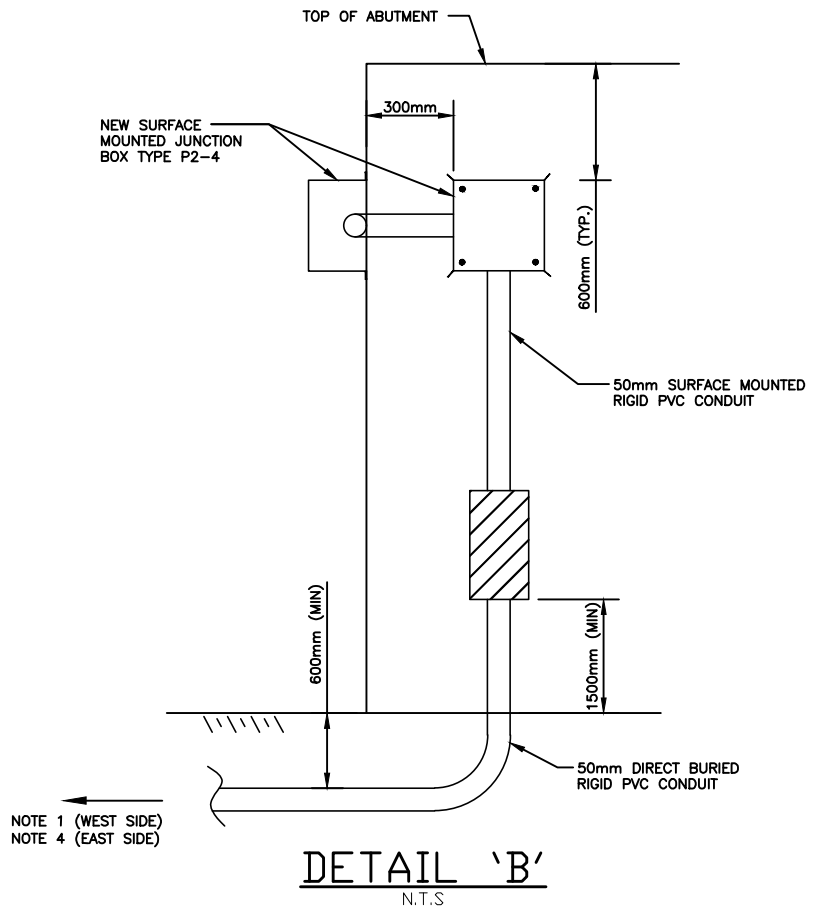
TITLE							
HWY 427 EXPANSION UNDERPASS LAYOUT - 5 HWY 427 OVERPASS AT STEELES AVENUE							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1036	B

- LEGEND:**
- EMBEDDED RIGID PVC JUNCTION BOX TYPE P2-4. (REFER TO OPSD 2300.020)
 - ▣ SURFACE MOUNTED RIGID PVC JUNCTION BOX TYPE P4-4. (REFER TO OPSD 2300.030)
 - ≡ EXPANSION AND DEFLECTION FITTING ASSEMBLY. (REFER TO OPSD 2302.020)

- NOTE(S):**
1. TO ELECTRICAL CHAMBER. REFER TO ELECTRICAL LAYOUT DRAWINGS.
 2. CONTRACTOR TO CAREFULLY REMOVE SUFFICIENT CONCRETE TO INSTALL EXPANSION AND DEFLECTION FITTING ASSEMBLY ONTO EXISTING EMBEDDED DUCT.
 3. CONTRACTOR TO RELOCATE EXISTING UNDERPASS LUMINAIRE AS SHOWN IN DETAIL 'A' TO INSTALL NEW SURFACE MOUNTED JUNCTION BOX.
 4. LEAVE DUCT CAPPED AND BURIED.



WIRING DIAGRAM
N.T.S.



DETAIL 'B'
N.T.S.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\
 DRAWING NAME: 427-ELE-DES-DWG-SEC L-2 UNDERPASS - MUN.DWBREWISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:30:55 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

SCALE :

N.T.S.

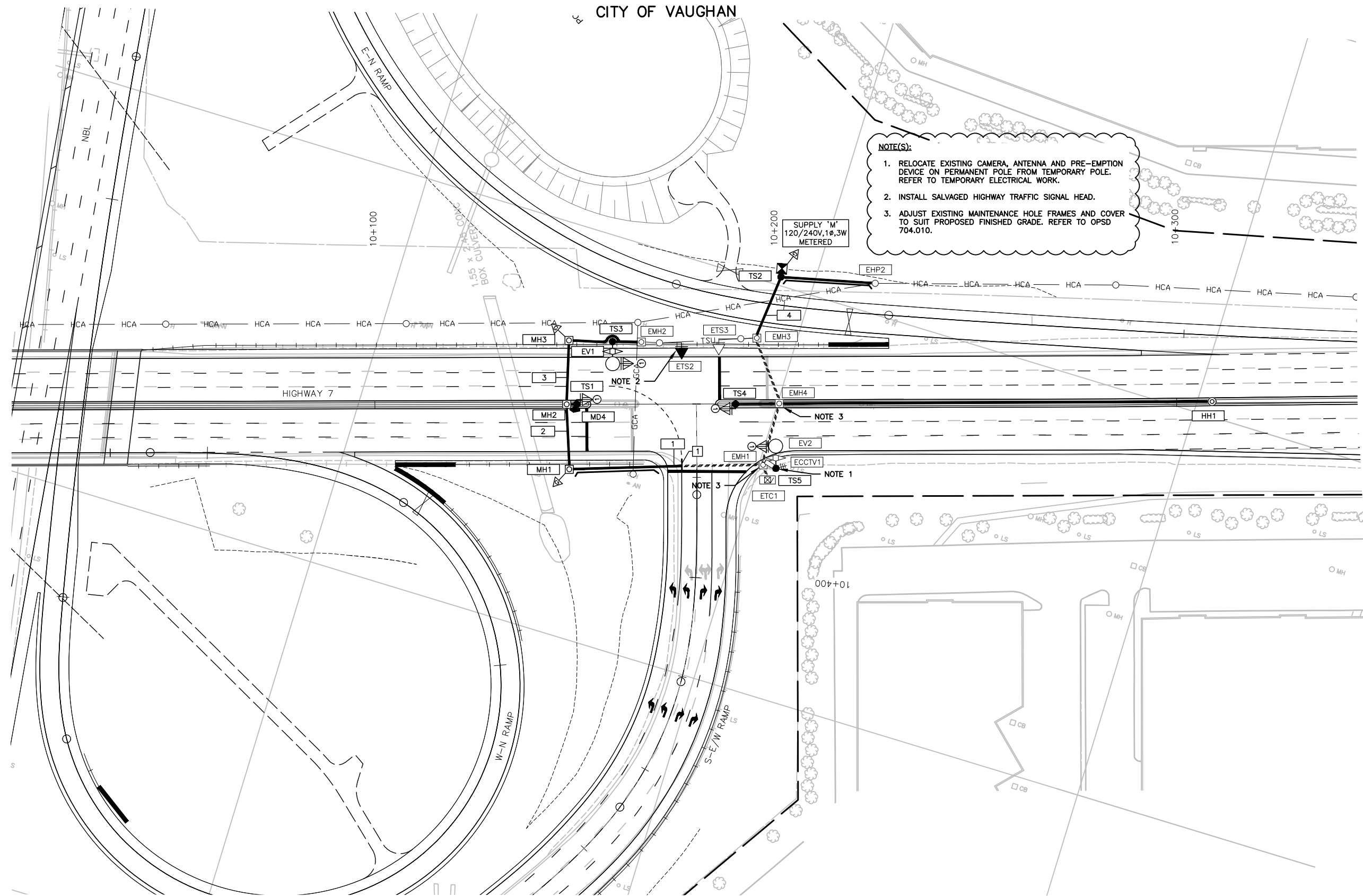
DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
CONSULTANT		
NAME (PRINT)	INIT.	DATE



TITLE HWY 427 EXPANSION UNDERPASS LAYOUT - 6 HWY 427 OVERPASS AT STEELES AVENUE							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1037	B



CITY OF VAUGHAN



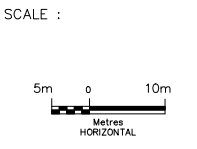
NOTE(S):

1. RELOCATE EXISTING CAMERA, ANTENNA AND PRE-EMPTION DEVICE ON PERMANENT POLE FROM TEMPORARY POLE. REFER TO TEMPORARY ELECTRICAL WORK.
2. INSTALL SALVAGED HIGHWAY TRAFFIC SIGNAL HEAD.
3. ADJUST EXISTING MAINTENANCE HOLE FRAMES AND COVER TO SUIT PROPOSED FINISHED GRADE. REFER TO OPSD 704.010.

SUPPLY 'M'
120/240V, 1Ø, 3W
METERED

FILE LOCATION: C:\PROJECTS\WSP-CA\MML_KARMIJT_GILL\DM504217\
DRAWING NAME: 427E-ELE-DES-TS-DWG-SEQ L-2 - PKG 9.DWG REVISION BY: GILL
DRAWN BY: B.J.M. MODIFIED: 17/12/18 13:46:40 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



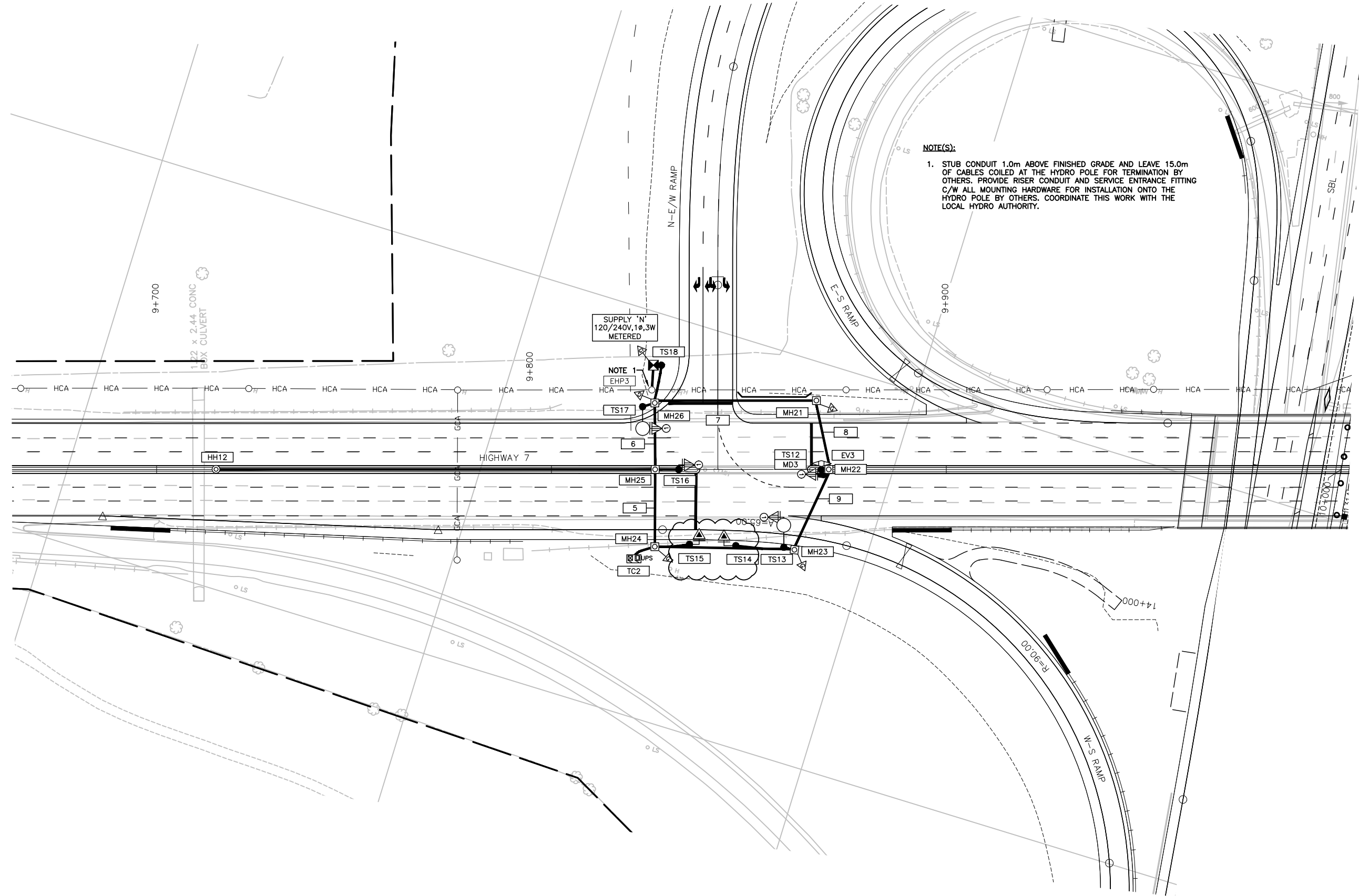
DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMIJT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED LEAD ENGINEER	MARIO TEDESCO	M.T.
APPROVED PROJ. MANAGER		
CONSULTANT		
	NAME (PRINT)	INIT. DATE



PROJECT ID.								STAGE IDENTIFIER								DESIGN PACKAGE NUMBER								DISCIPLINE								STRUCTURE NUMBER								DOCUMENT TYPE								DRAWING NUMBER								REVISION NUMBER							
H427-D								N								9								ELE								000								DWG								1038								B							

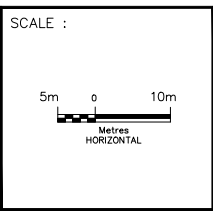
HWY 427 EXPANSION
TRAFFIC SIGNAL LAYOUT - 1
HWY 7 & HWY 427 S-E/W RAMP

CITY OF VAUGHAN



FILE LOCATION: C:\PROJECTS\WSP-CA\MM\KARMJIT GILL\DM504217
 DRAWING NAME: 427E-ELE-DES-TS-DWG-SEC L-2 - PKG 9.DWG REVISION BY: GILL
 DRAWN BY: B.J.M. MODIFIED: 17/12/18 13:46:40 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

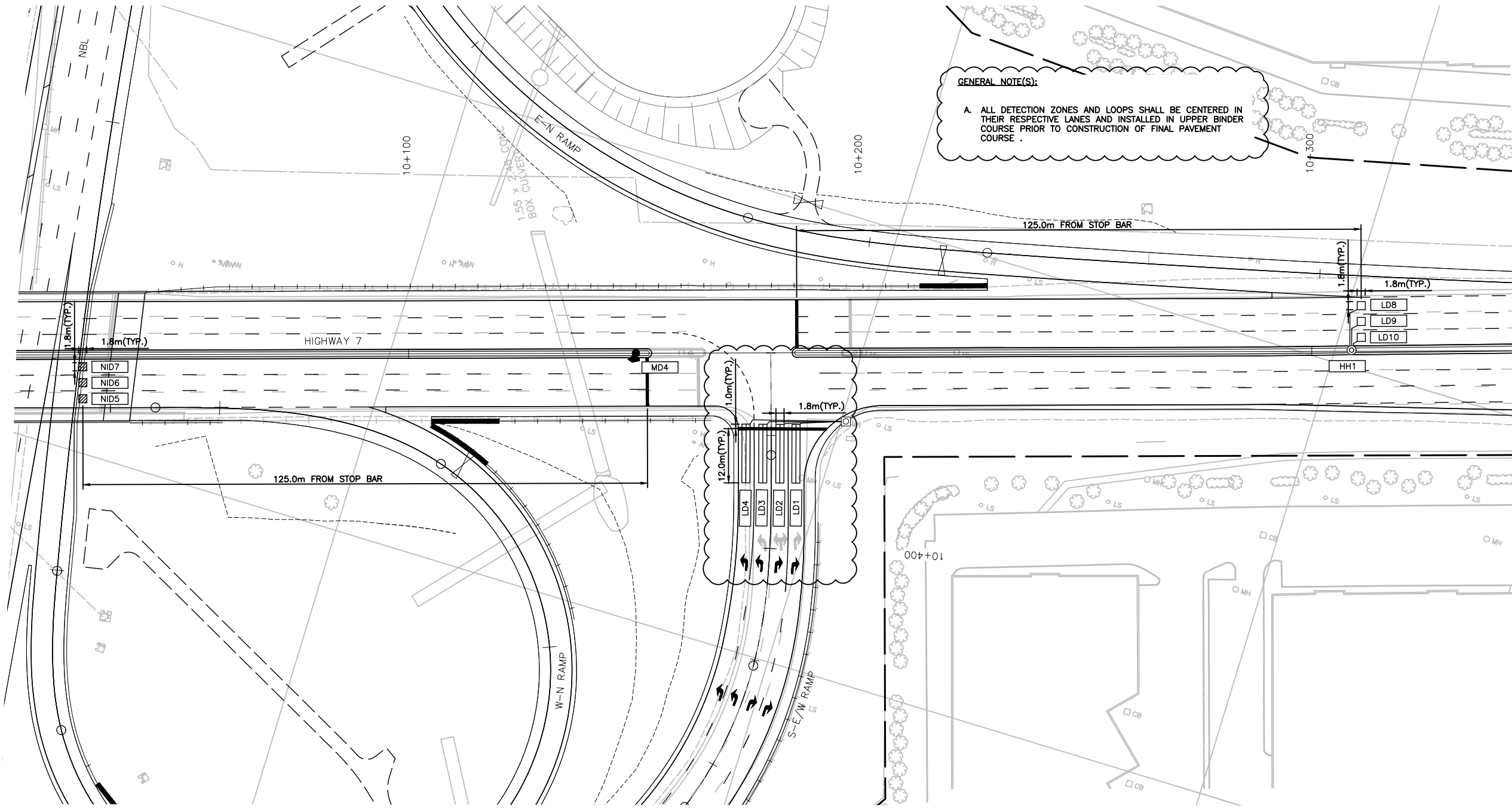


DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMJIT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED LEAD ENGINEER	MARIO TEDESCO	M.T.
APPROVED PROJ. MANAGER		
CONSULTANT		
BY	NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION							
TRAFFIC SIGNAL LAYOUT - 2							
HWY 7 & HWY 427 N-E/W RAMP							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1039	B

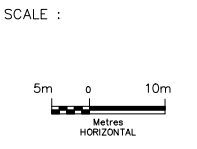
CITY OF VAUGHAN



GENERAL NOTE(S):
 A. ALL DETECTION ZONES AND LOOPS SHALL BE CENTERED IN THEIR RESPECTIVE LANES AND INSTALLED IN UPPER BINDER COURSE PRIOR TO CONSTRUCTION OF FINAL PAVEMENT COURSE .

FILE LOCATION - C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\DWG54217\ DRAWING NAME: 427E-ELE-DET-TS-DWG-SEQ L-2 - PKG 9.DWG REVISIONS BY: B.J.M. DATE: 17/09/25 16:38:09

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	
A	18/01/12	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	

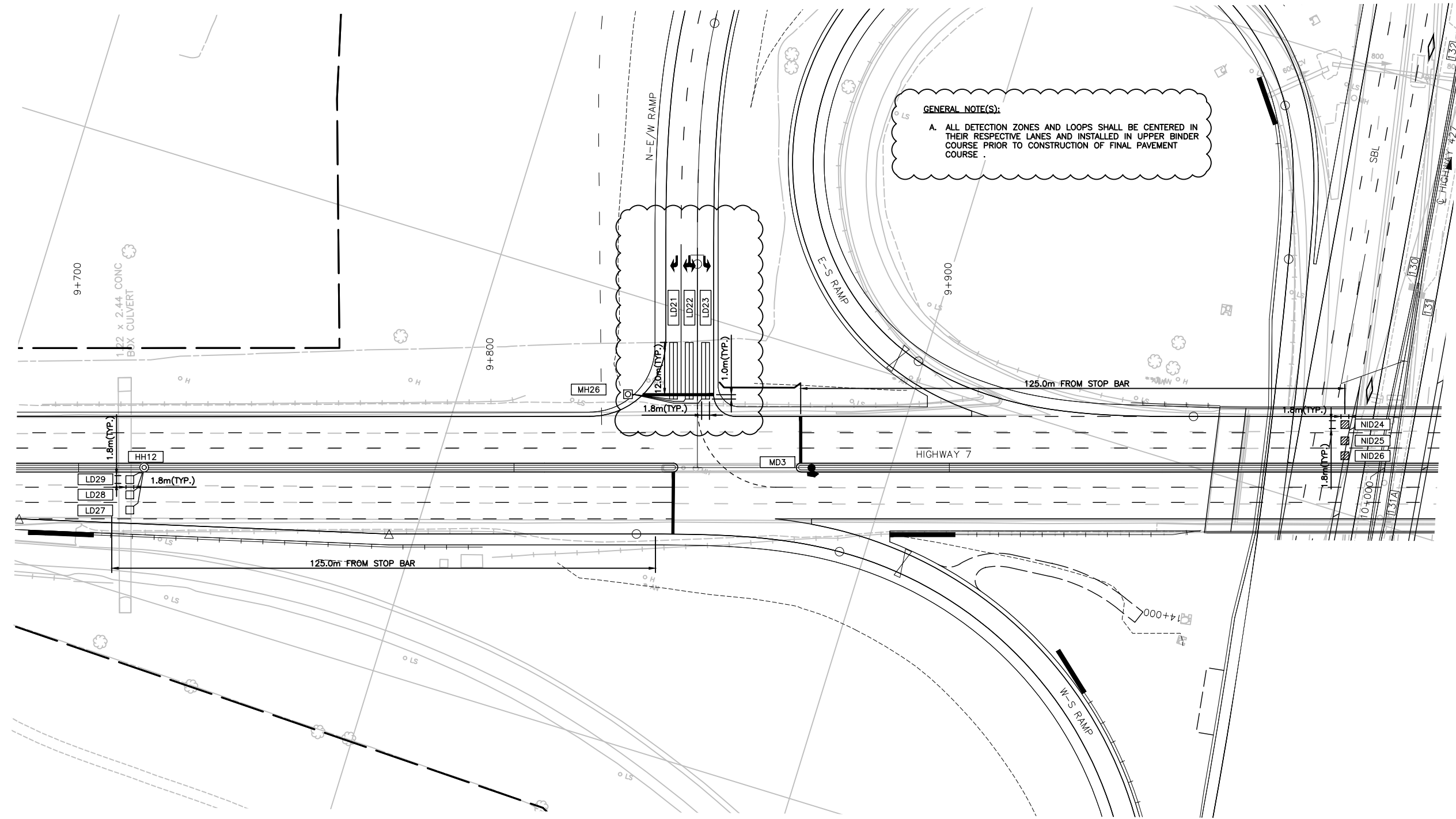
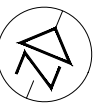


DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMJIT GILL	K.G.
CHECKED	LENOX LUE	L.L.
APPROVED LEAD ENGINEER	MARIO TEDESCO	M.T.
APPROVED PROJ. MANAGER		



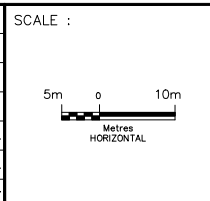
TITLE							
HWY 427 EXPANSION							
DETECTOR LAYOUT - 1							
HWY 7 & HWY 427 S-E/W RAMP							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1040	B

CITY OF VAUGHAN



FILE LOCATION: C:\PROJECTS\WSP-CA\MML_KARMIJT_GILL\DWG\427\180320_90%_SUBMISSION_TO_CA.dwg
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 DRAWN BY: B.J.M.
 MODIFIED: 17/09/25 16:38:09
 REVISIONS: Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	
A	18/01/12	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	

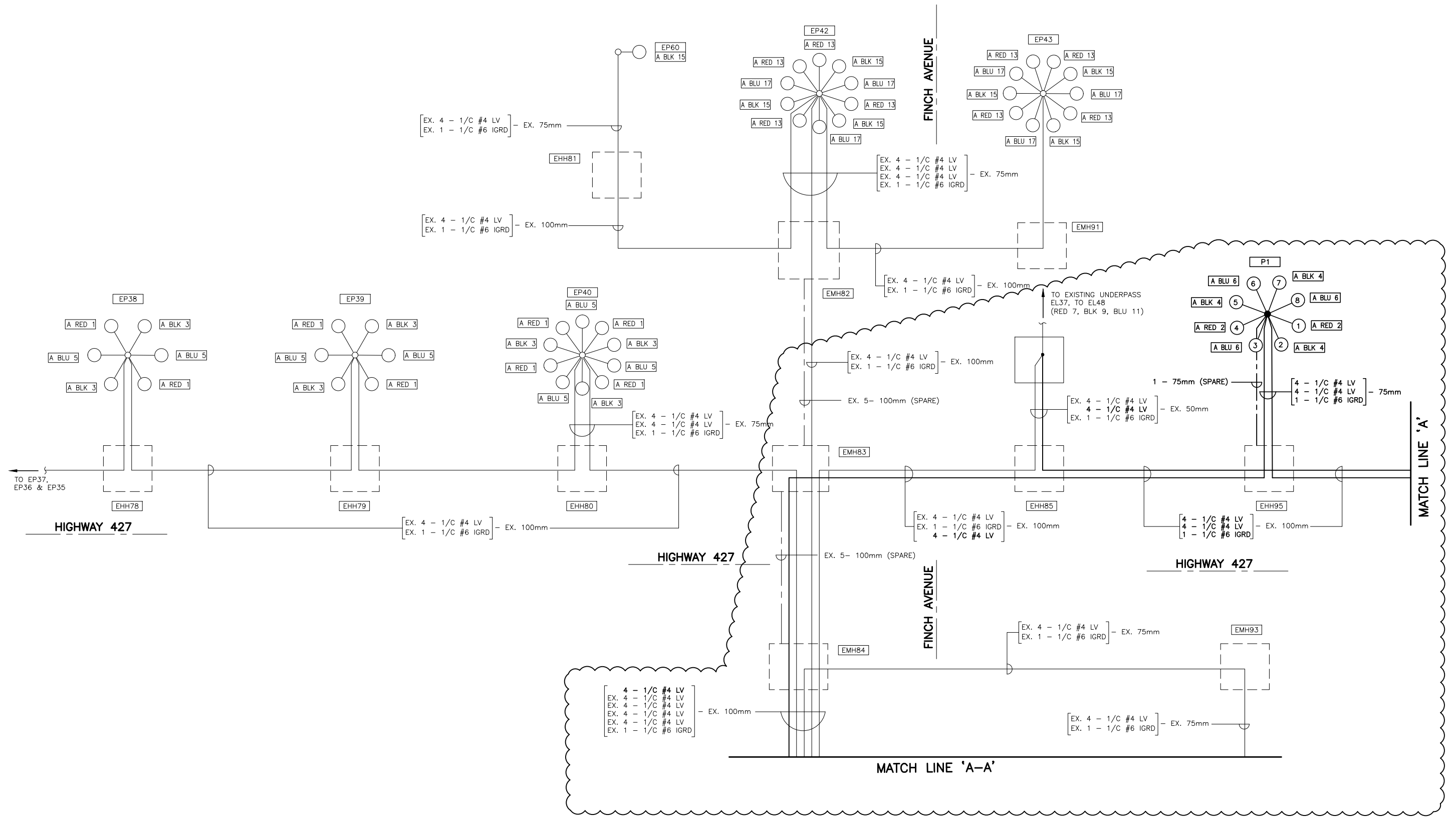


DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMIJT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED LEAD ENGINEER	MARIO TEDESCO	M.T.
APPROVED PROJ. MANAGER		
CONSULTANT		
	NAME (PRINT)	INIT. DATE



TITLE							
HWY 427 EXPANSION							
DETECTOR LAYOUT - 2							
HWY 7 & HWY 427 N-E/W RAMP							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1041	B

FILE LOCATION: C:\PROJECTS\WSP-CALMM-KARJIT.GILL\DWG03793\
 DRAWING NAME: 427E-ELE-PLW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:23:19
 REVISION: 18/03/15 09:23:19
 REVISED BY: GILL



NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

SCALE :

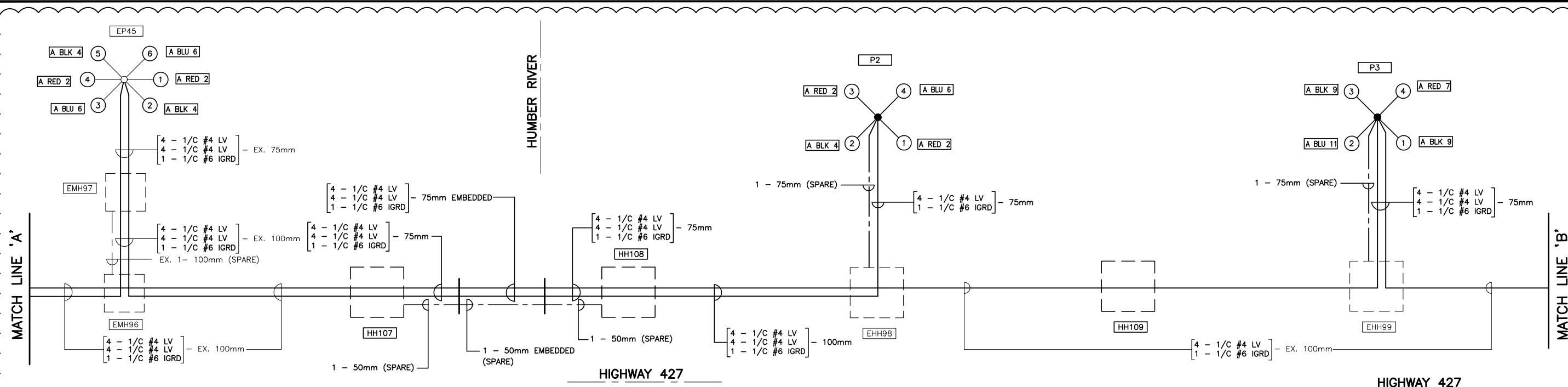
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	NAME (PRINT)	INT.	DATE



TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 1							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1042	B



LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'A'
347/600 V, 3Ø, 4W METERED

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
6790	(14 X 485*)	EP40, EP39, EP38, EP37, EP36 & EP35	A RED 1	30	30	A RED 2	EP41, EP63, EP45, P1, P2	(1 X 485*) + (6 X 560) + (1 X 310*)	4155
6790	(14 X 485*)	EP40, EP39, EP38, EP37, EP36 & EP35	A BLK 3	30	30	A BLK 4	EP41, EP45, P1, P2	(3 X 485*) + (6 X 560)	4815
6790	(14 X 485*)	EP40, EP39, EP38, EP37, EP36 & EP35	A BLU 5	30	30	A BLU 6	EP41, EP64, EP45, P1, P2	(2 X 485*) + (6 X 560) + (1 X 310*)	4640
4860	(4 X 95*) + (8 X 560)	UNDERPASS LIGHTING P3, P4, P5, P6, P7, P8	A RED 7	30	30	A RED 8	EP61, EP73	(2 X 310*)	620
5420	(4 X 95*) + (9 X 560)	UNDERPASS LIGHTING P3, P4, P5, P6, P7, P8	A BLK 9	30	30	A BLK 10	EP62, EP74	(2 X 310*)	620
5420	(4 X 95*) + (9 X 560)	UNDERPASS LIGHTING P3, P4, P5, P6, P7, P8	A BLU 11	30	30	A BLU 12	EP75	(1 X 310*)	310
3880	(8 X 485*)	EP42, EP43	A RED 13	30	30	A RED 14	SPARE	-	-
3220	(6 X 485*) + (1 X 310*)	EP42, EP60, EP43	A BLK 15	30	30	A BLK 16	SPARE	-	-
2910	(6 X 485*)	EP42, EP43	A BLU 17	30	30	A BLU 18	SPARE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SURGE PROTECTOR	-	15	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-

SUB TOTAL RED PHASE = 20305W
 SUB TOTAL BLACK PHASE = 20865W
 SUB TOTAL BLUE PHASE = 20070W
 TOTAL LOAD = 61240W

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
 400W HPS LUMINAIRE - 85W
 250W HPS LUMINAIRE - 60W
 100W HPS LUMINAIRE - 25W
 70W HPS LUMINAIRE - 25W

FILE LOCATION: C:\PROJECTS\WSP-CAL\MM-KARJIT.GILL\0503793\ DRAWING NAME: 427E-ELE-PLW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/03/15 09:23:19
 REVISIONS

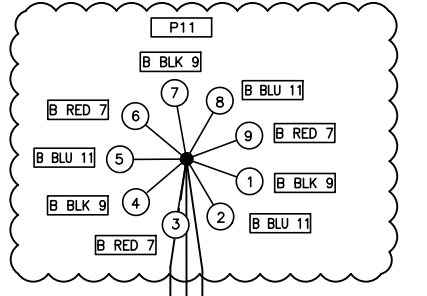
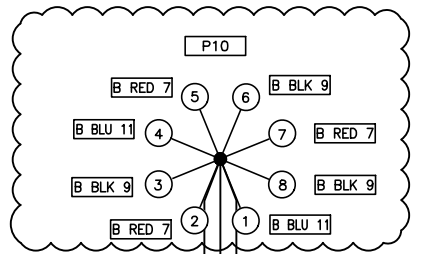
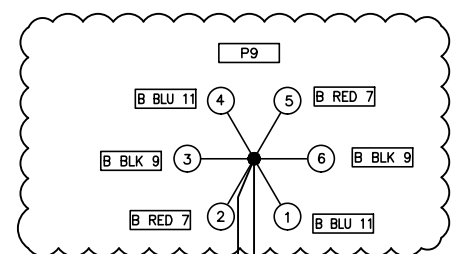
NO.	DATE	REVISIONS	BY	CHK	LEAD. DES.	PROJ. MGR.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :
 N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INT.
	DATE

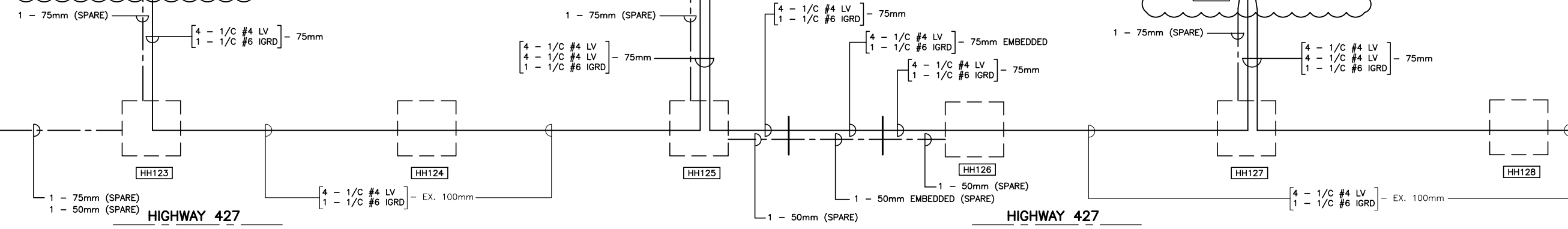


TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 3							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1044	B



MATCH LINE 'D'

MATCH LINE 'E'



LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'B'
347/600 V, 3Ø, 4W METERED

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
3135	(3 X 560) + (3 X 485*)	EP6, EP5	B RED 1	30	30	B RED 2	EP22, EP23, EP24, EP25, N-E UNDERPASS LIGHTING	(11 X 485*) + (2 X 95*)	5525
3135	(3 X 560) + (3 X 485*)	EP6, EP5	B BLK 3	30	30	B BLK 4	EP22, EP23, EP24, EP25, N-E UNDERPASS LIGHTING	(10 X 485*)	4850
3210	(4 X 560) + (2 X 485*)	EP6, EP5	B BLU 5	30	30	B BLU 6	EP22, EP23, EP24, EP25, N-E UNDERPASS LIGHTING	(11 X 485*) + (2 X 95*)	5525
4480	(8 X 560)	P11, P10, P9	B RED 7	30	30	B RED 8	EP10, EP12	(4 X 485*)	1940
4480	(8 X 560)	P11, P10, P9	B BLK 9	30	30	B BLK 10	EP10, EP12	(6 X 485*)	2910
3920	(7 X 560)	P11, P10, P9	B BLU 11	30	30	B BLU 12	EP10, EP12	(6 X 485*)	2910
6330	(3 X 560) + (10 X 485*)	EP11, EP13, EP14, EP26	B RED 13	30	30	B RED 14	EP8, EP7, EP9	(3 X 560) + (7 X 485*)	5075
6120	(4 X 560) + (8 X 485*)	EP11, EP13, EP14, EP26	B BLK 15	30	30	B BLK 16	EP8, EP7, EP9	(3 X 560) + (6 X 485*)	4590
5560	(3 X 560) + (8 X 485*)	EP11, EP13, EP14, EP26	B BLU 17	30	30	B BLU 18	EP8, EP7, EP9	(2 X 560) + (7 X 485*)	4515
380	(4 X 95*)	N-E UNDERPASS LIGHTING	B RED 19	30	30	B RED 20	SPARE	-	-
-	-	SPARE	B BLK 21	30	30	B BLK 22	SPARE	-	-
380	(4 X 95*)	N-E UNDERPASS LIGHTING	B BLU 23	30	30	B BLU 24	SPARE	-	-
-	-	SPARE	B RED 25	30	30	B RED 26	SPARE	-	-
-	-	SPARE	B BLK 27	30	30	B BLK 28	SPARE	-	-
-	-	SPARE	B BLU 23	30	30	B BLU 30	SPARE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-

SUB TOTAL RED PHASE = 27065W
 SUB TOTAL BLACK PHASE = 26085W
 SUB TOTAL BLUE PHASE = 26020W
 TOTAL LOAD = 79170W

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
 400W HPS LUMINAIRE - 85W
 250W HPS LUMINAIRE - 60W
 100W HPS LUMINAIRE - 25W
 20W HPS LUMINAIRE - 25W

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CAL\MW-KARMJIT.GILL\DWG03729\
 DRAWING NAME: 427E-ELE-PLW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:23:19 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. ENG.	PROJ. MGR.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

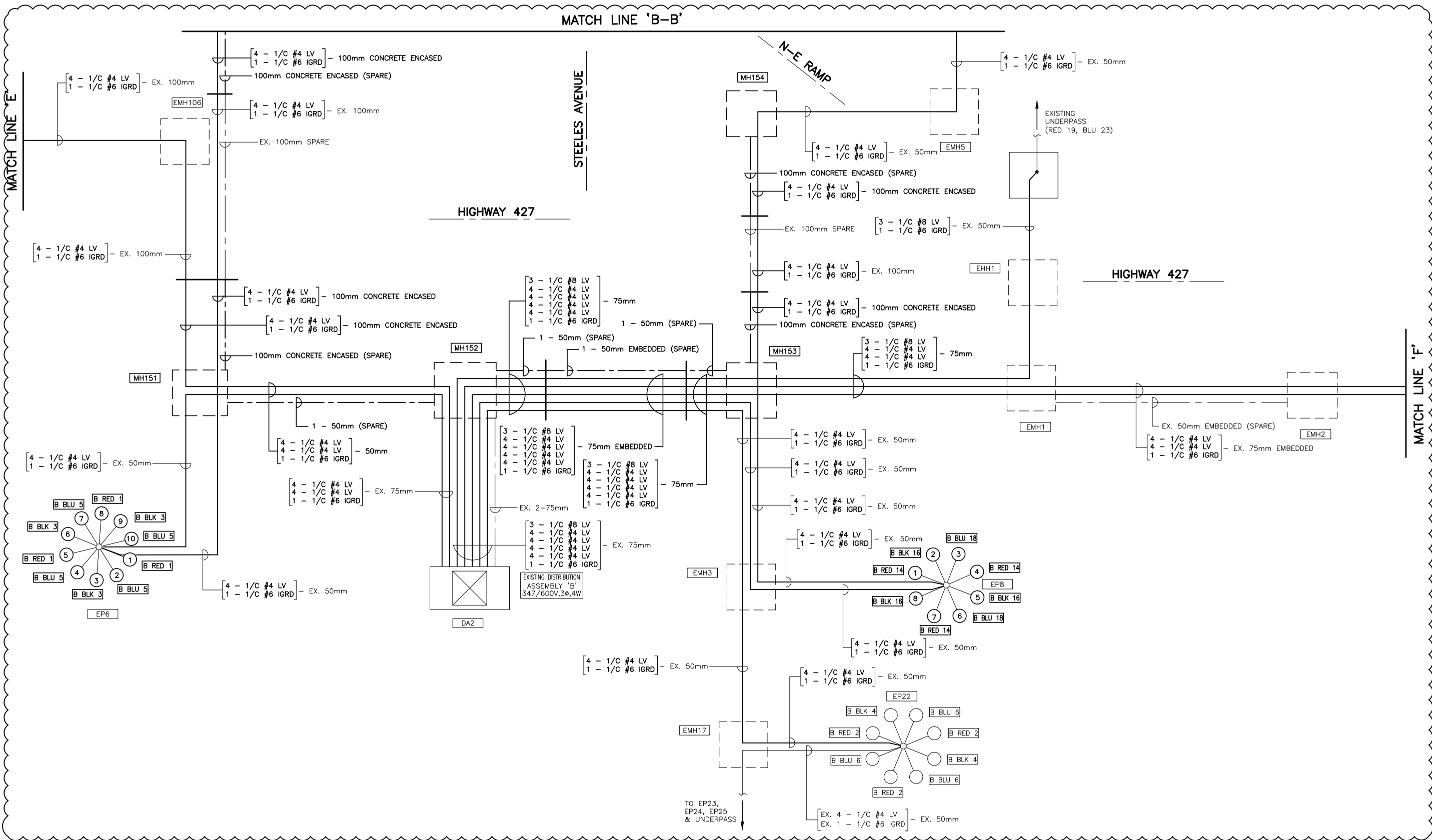
SCALE :
N.T.S.

CONSULTANT	DESIGNED	DRAWN	CHECKED	APPROVED LEAD ENGINEER	APPROVED PROJ. MANAGER
	NATALIA MAHABIR	KARMJIT GILL	LENNOX LUE	MARIO TEDESCO	



TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 6							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1047	B

MATCH LINE 'B-B'



FILE LOCATION: C:\PROJECTS\NEWSP-CAL\MW-KARMJIT.GILL\DWG03729\
 DRAWING NAME: 427E-ELE-PLW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/03/15 09:23:19
 REVISION: 18/03/15
 REVISOR: BY-GILL

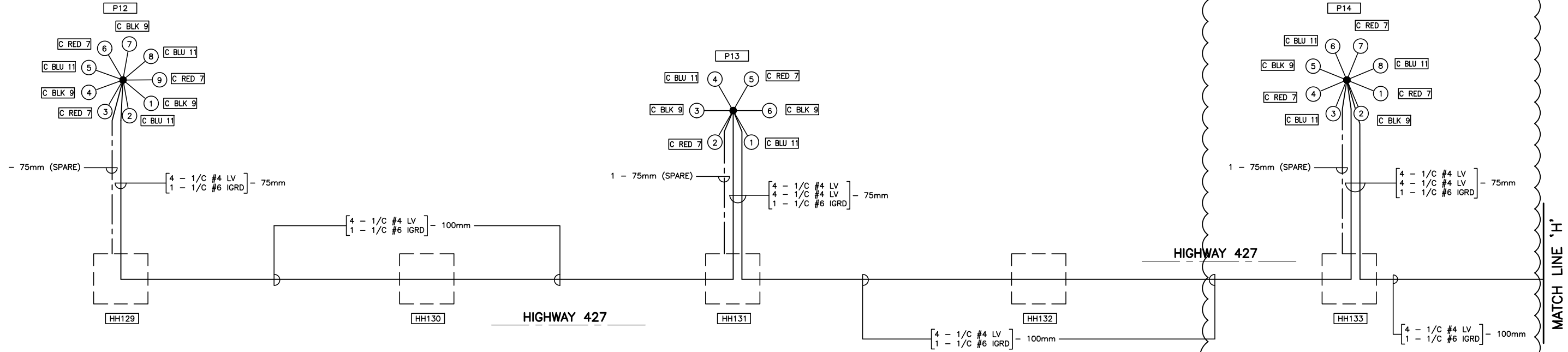
NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

SCALE :
 N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INT.	DATE



TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 7							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1048	B



LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'C'
347/600 V, 3Ø, 4W METERED

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
8398	(11 X 560)+(3 X 95*) + (1 X 273)	P21, P25, UNDERPASS LIGHTING, P24, P28, EP7	C RED 1	30	30	C RED 2	P20, P19, P18, P17, P16, P15	(14 X 560)	7840
8111	(10 X 560)+(3 X 95*) + (2 X 273)	P21, P25, UNDERPASS LIGHTING, P24, P26, P28, EP9	C BLK 3	30	30	C BLK 4	P20, P19, P18, P17, P16, P15	(14 X 560)	7840
8016	(11 X 560)+(2 X 95*) + (2 X 273)	P21, P25, UNDERPASS LIGHTING, P24, P27, P28, EP8	C BLU 5	30	30	C BLU 6	P20, P19, P18, P17, P16, P15	(14 X 560)	7840
4480	(8 X 560)	P14, P13, P12	C RED 7	30	30	C RED 8	P30, P31, P32, UNDERPASS LIGHTING, P33	(9 X 560) + (2 X 95*)	5230
3920	(7 X 560)	P14, P13, P12	C BLK 9	30	30	C BLK 10	P30, P31, P32, UNDERPASS LIGHTING, P33	(9 X 560) + (3 X 95*)	5325
4480	(8 X 560)	P14, P13, P12	C BLU 11	30	30	C BLU 12	P30, P31, P32, UNDERPASS LIGHTING, P33	(8 X 560) + (3 X 95*)	4765
1680	(3 X 560)	P34, P35	C RED 13	30	30	C RED 14	SPARE	-	-
1680	(3 X 560)	P34, P35	C BLK 15	30	30	C BLK 16	SPARE	-	-
1120	(2 X 560)	P34, P35	C BLU 17	30	30	C BLU 18	SPARE	-	-
-	-	SPARE	C RED 19	30	30	C RED 20	SPARE	-	-
-	-	SPARE	C BLK 21	30	30	C BLK 22	SPARE	-	-
-	-	SPARE	C BLU 23	30	30	C BLU 24	SPARE	-	-
-	-	SPARE	C RED 25	30	30	C RED 26	SPARE	-	-
-	-	SPARE	C BLK 27	30	30	C BLK 28	SPARE	-	-
-	-	SPARE	C BLU 29	30	30	C BLU 30	SPARE	-	-

SUB TOTAL RED PHASE = 27068W
 SUB TOTAL BLACK PHASE = 27996W
 SUB TOTAL BLUE PHASE = 26221W
 TOTAL LOAD = 81285W

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
 400W HPS LUMINAIRE - 85W
 250W HPS LUMINAIRE - 60W
 100W HPS LUMINAIRE - 25W
 70W HPS LUMINAIRE - 25W

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 DRAWING NAME: 427E-ELE-PLW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:23:19
 REVISIONS

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MGR.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

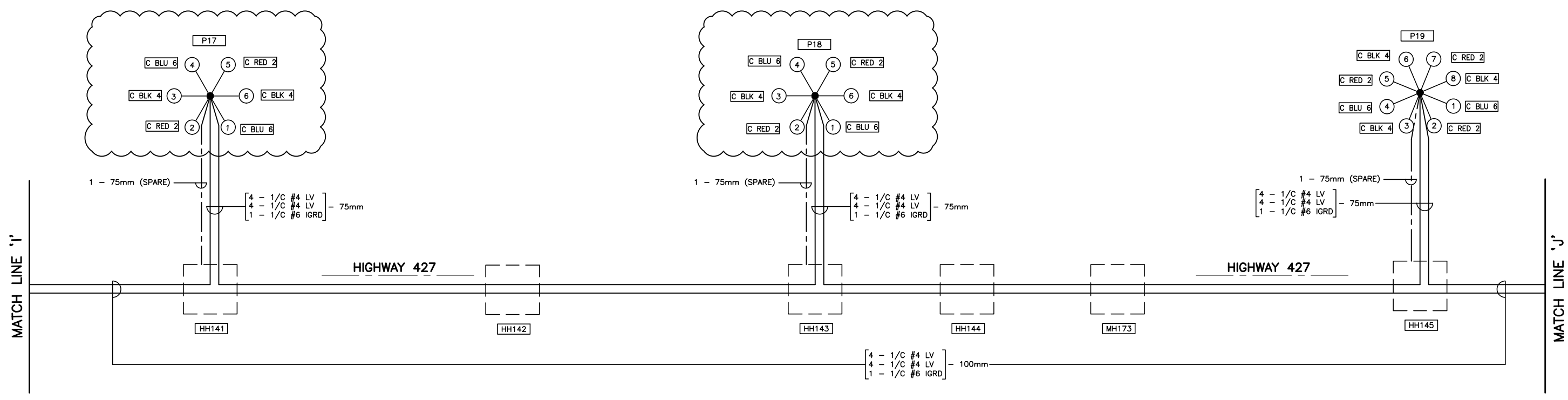
SCALE :
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INT. DATE



TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 10							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1051	B

FILE LOCATION: C:\PROJECTS\WSP-CA\MM-KARMIJ.GILL\DWG03729\
 DRAWING NAME: 427E-ELE-PIW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 REVISION: Revised



NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

SCALE :

N.T.S.

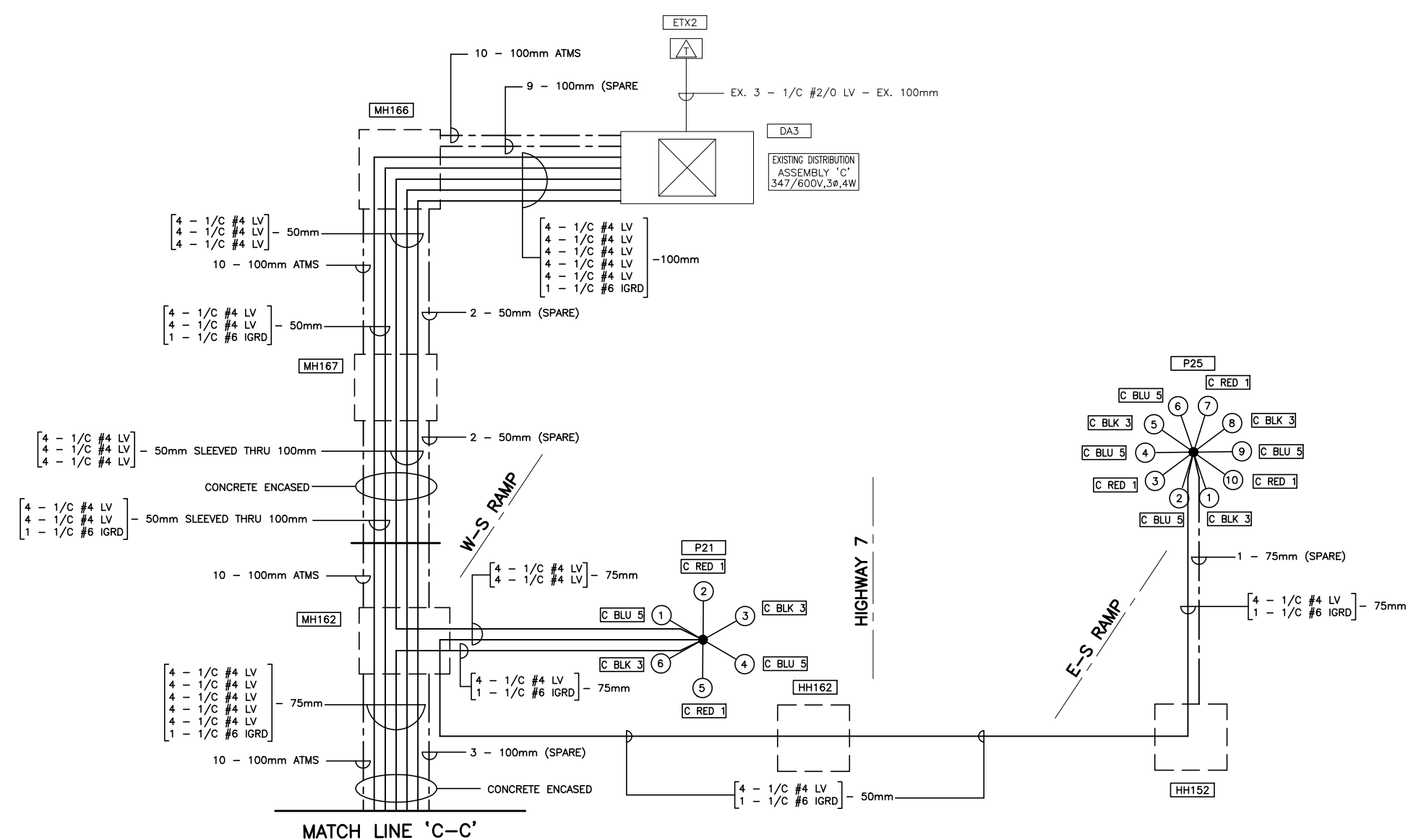
DESIGNED	NATALIA MAHABIR	
DRAWN	KARMIJ GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INT.	DATE



PROJECT ID.	H427-D
STAGE IDENTIFIER	N
DESIGN PACKAGE NUMBER	9
DISCIPLINE	ELE
STRUCTURE NUMBER	000
DOCUMENT TYPE	DWG
DRAWING NUMBER	1053
REVISION NUMBER	B

TITLE
HWY 427 EXPANSION
WIRING DIAGRAM - 12

FILE LOCATION: C:\PROJECTS\WSP-CA\MM-KARJIT.GILL\DWG03793\ DRAWING NAME: 427E-ELE-PLW-DWG-SEQ L-2 PERMANENT WIRING DIAGRAMS.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 REVISION: 09/23/19



NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

SCALE :

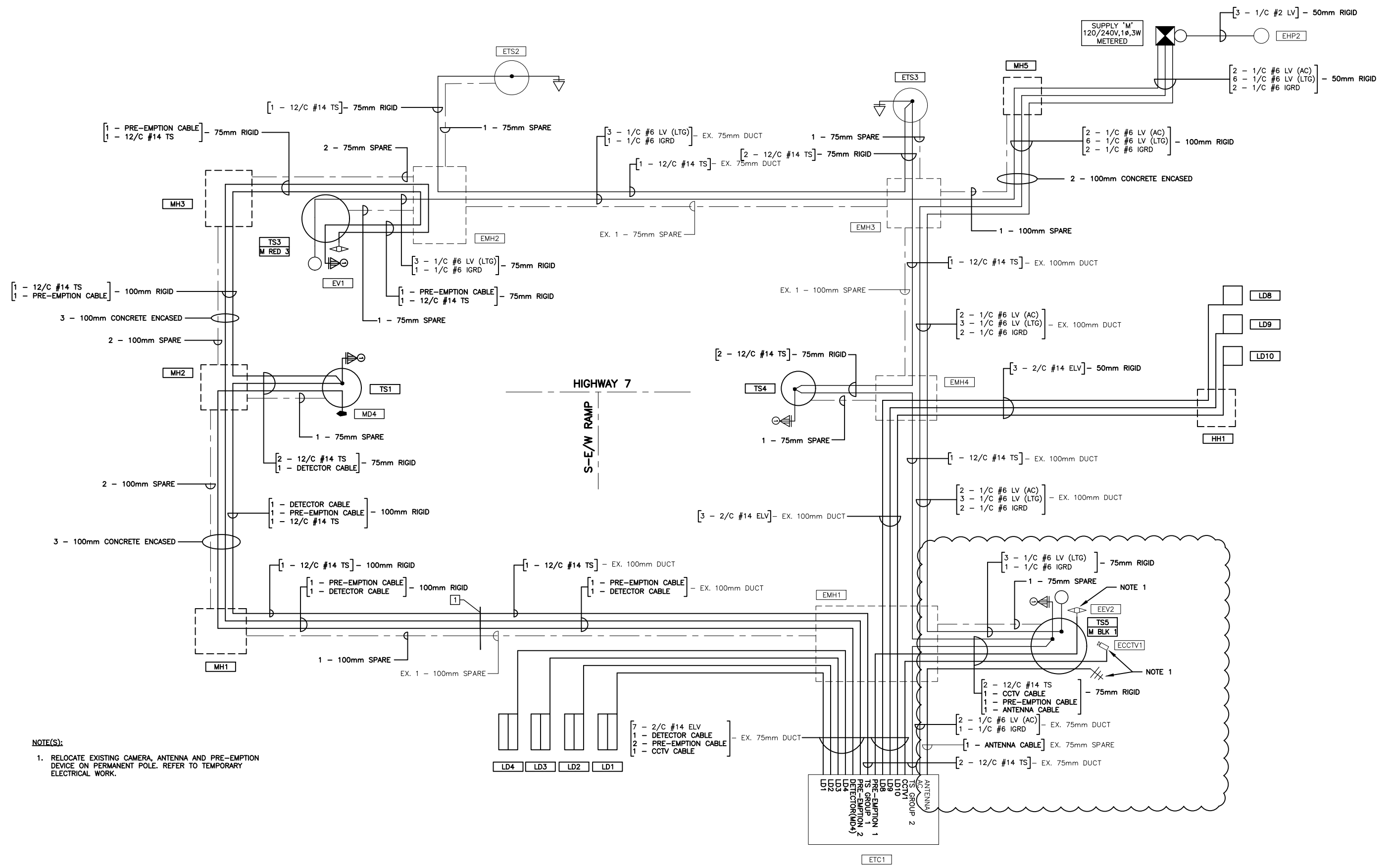
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	NAME (PRINT)	INT.	DATE



TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 14							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1055	B



NOTE(S):
 1. RELOCATE EXISTING CAMERA, ANTENNA AND PRE-EMPTION DEVICE ON PERMANENT POLE. REFER TO TEMPORARY ELECTRICAL WORK.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMAIT.GILL\04157\ REVISED BY: GILL
 DRAWING NAME: 427E-ELE-DES-TS-DWG-SEQ L-2.DWG
 DRAWN BY: J. SIMMONS
 MODIFIED: 17/08/28 15:40:57

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	
A	18/01/12	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	

SCALE :
N.T.S.

DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMAIT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED	MARIO TEDESCO	M.T.
APPROVED		
PROJ. MANAGER		

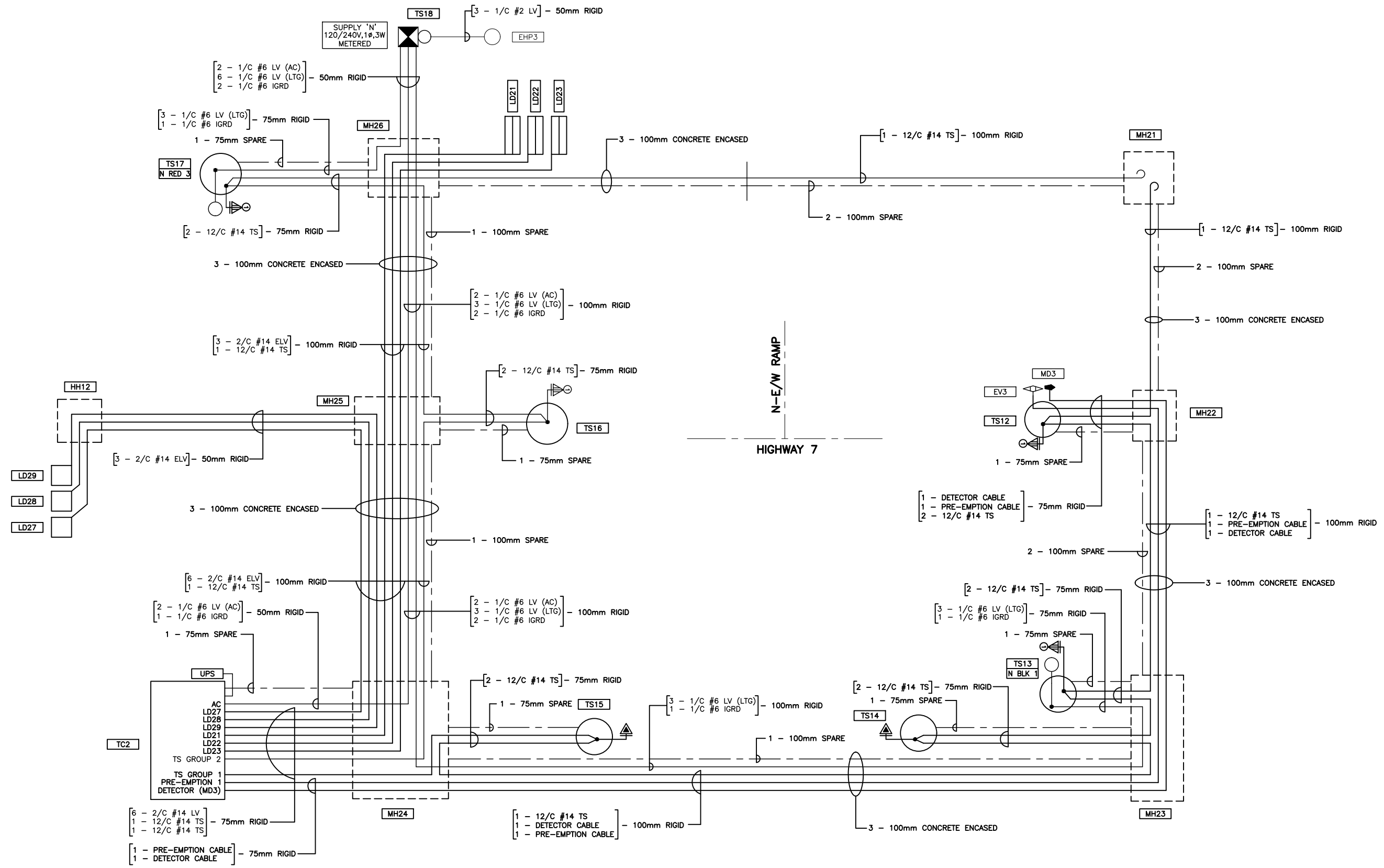
CONSULTANT	NAME (PRINT)	INIT.	DATE



PROJECT ID.		STAGE IDENTIFIER		DESIGN PACKAGE NUMBER		DISCIPLINE		STRUCTURE NUMBER		DOCUMENT TYPE		DRAWING NUMBER		REVISION NUMBER	
H427-D		N		9		ELE		000		DWG		1057		B	

TITLE
HWY 427 EXPANSION
WIRING DIAGRAM - 16
HWY 7 & S-E/W RAMP

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMAIT_GILL\MS04157\ REVISED BY: GILL
 DRAWING NAME: 427-ELE-DES-TS-DWG-SEQ L-2.DWG
 DRAWN BY: J. SIMMONS
 MODIFIED: 17/08/28 15:40:57



NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	
A	18/01/12	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	

SCALE :
N.T.S.

DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMAIT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED	MARIO TEDESCO	M.T.
APPROVED		
PROJ. MANAGER		

CONSULTANT	NAME (PRINT)	INIT.	DATE



TITLE							
HWY 427 EXPANSION							
WIRING DIAGRAM - 18							
HWY 7 & N-E/W RAMP							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1059	B

TEMPORARY ROADWAY LIGHTING POLE SUMMARY

STAGE	POLE ID	LOCATION	STATION	OFFSET (m) (NOTE 1)	POLE TYPE	LENGTH (m)	LUMINAIRE PHOTOMETRIC	WATTAGE	ARM LENGTH (m)	REMARKS
STAGE 1A & 1B	TP20	HIGHWAY 427	10+873	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD, SINGLE GUY SINGLE ANCHOR
	TP21	HIGHWAY 427	10+932	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP22	HIGHWAY 427	11+959	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP23	HIGHWAY 427	11+002	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP24	HIGHWAY 427	11+045	32.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP25	HIGHWAY 427	11+087	32.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD
	TP26	HIGHWAY 427	11+126	33.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP27	427 S - 407 E/W RAMP	9+720	10.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP28	427 S - 407 E/W RAMP	9+759.5	11.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP29	427 S - 407 E/W RAMP	9+798.5	11.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP30	427 S - 407 E/W RAMP	9+837.5	12	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400 (2)	4.6 MAST ARM (2)	GROUND ROD
	TP31	427 S - 407 E/W RAMP	9+903.5	10.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP32	427 S - 407 E/W RAMP	9+948	10.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP33	427 S - 407 E/W RAMP	9+991.5	11	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP34	427 S - 407 E/W RAMP	10+047	10	WOOD CLASS 4	14.0	AMERICAN ELECTRIC AE3853i	250	2.4	
	TP35	427 S - 407 E/W RAMP	10+102.5	9.5	WOOD CLASS 4	14.0	AMERICAN ELECTRIC AE3853i	250	2.4	GROUND ROD
	TP36	HIGHWAY 427	11+464.5	26	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD, SINGLE GUY SINGLE ANCHOR
	TP37	HIGHWAY 427	11+505.5	26	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP38	HIGHWAY 427	11+547	26	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP39	HIGHWAY 427	11+606.5	26	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP40	HIGHWAY 427	11+666.5	26	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP41	HIGHWAY 427	11+726.5	26	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD
	TP42	HIGHWAY 427	11+786.5	28.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	SINGLE GUY SINGLE ANCHOR
	TP43	HIGHWAY 427	11+859	26	WOOD CLASS 4	15.5	-	-	-	
	TP44	HIGHWAY 427	11+913.5	27.5	WOOD CLASS 4	15.5	-	-	-	SINGLE GUY SINGLE ANCHOR
	TP45	HIGHWAY 427	11+665	25.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP46	HIGHWAY 427	11+725	25.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	
	TP47	HIGHWAY 427	11+785	28.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	SINGLE GUY SINGLE ANCHOR
	TP48	HIGHWAY 427	11+852	27	WOOD CLASS 4	15.5	-	-	-	
	TP49	HIGHWAY 427	11+904.5	26.5	WOOD CLASS 4	15.5	-	-	-	GROUND ROD (2), SINGLE GUY SINGLE ANCHOR
TP63	407 W - 427 S RAMP	9+764.5	10	WOOD CLASS 4	14.0	AMERICAN ELECTRIC AE3853i	250	2.4		
TP64	HIGHWAY 427	11+608.5	25.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD, SINGLE GUY SINGLE ANCHOR	
TP65	HIGHWAY 427	10+834	33.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD, SINGLE GUY SINGLE ANCHOR	
TP66	HIGHWAY 427	10+877	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP67	HIGHWAY 427	10+920	33.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP68	HIGHWAY 427	10+963	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP69	HIGHWAY 427	11+006	32.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP70	HIGHWAY 427	11+049	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD	
TP71	HIGHWAY 427	11+088	33	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP72	HIGHWAY 427	11+127	34	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP73	HIGHWAY 427	11+166	34	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP74	HIGHWAY 427	11+205	33.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM		
TP75	HIGHWAY 427	11+244	33.5	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	GROUND ROD	
TP76	HIGHWAY 427	11+308	32.6	WOOD CLASS 4	18.5	AMERICAN ELECTRIC AE3853i	400 (2)	4.6 MAST ARMS (2)		

NOTE(S):

1. WHEN SHOWN WITHOUT *, OFFSET IS FROM CENTRE OR CONTROL LINE OF ROADWAY. WHEN SHOWN WITH *, OFFSET IS FROM EDGE OF TRAVELED PAVEMENT (EP).

FILE LOCATION: C:\PROJECTS\HWY427\CA\MM_KARJIT_GILL.DWG
 DRAWING NAME: 427E-ELE-CEN-DWG-SEQ L-2 TEMPORARY CHARTS (REVISED BY-GILL)
 DRAWN BY: OB-4355
 MODIFIED: 18/02/15

NO.	DATE	REVISIONS	BY	CHK	LEAD PISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	



TITLE							
HWY 427 EXPANSION							
TEMPORARY CHARTS - 1							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1062	B

TEMPORARY ROADWAY LIGHTING POLE SUMMARY										
STAGE	POLE ID	LOCATION	STATION	OFFSET (m) (NOTE 1)	POLE TYPE	LENGTH (m)	LUMINAIRE PHOTOMETRIC	WATTAGE	ARM LENGTH (m)	REMARKS
STAGE 2A & 2B	TP108	HIGHWAY 427	10+072.5	7.5	WOOD CLASS 4	14.0	AMERICAN ELECTRIC S0103222	250	2.4	
	TP109	HIGHWAY 427	10+076.5	30	WOOD CLASS 4	14.0	AMERICAN ELECTRIC S0103222	250	2.4	
	TP130	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EX.	EX.	EX.	SINGLE GUY SINGLE ANCHOR ADDED
	TP131	HIGHWAY 427	10+012	14.5	WOOD CLASS 4	14.0	AMERICAN ELECTRIC S0103222	250	2.4	
	EP4	HIGHWAY 427	-	EXISTING	EXISTING	EXISTING	EX.	EX.	EX.	SINGLE GUY SINGLE ANCHOR ADDED
	EP5	HIGHWAY 427	-	EXISTING	EXISTING	EXISTING	EX.	EX.	EX.	SINGLE GUY SINGLE ANCHOR ADDED
	TP120	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	AMERICAN ELECTRIC AE3853i	400	4.6 MAST ARM	LUMINAIRE ADDED
STAGE 2C	TP100	HWY 7 RAMP	10+016.5	18	WOOD CLASS 4	15.5	-	-	-	SINGLE GUY SINGLE ANCHOR
	TP121	HWY 7 RAMP	10+075.5	23	WOOD CLASS 4	15.5	-	-	-	
	TP122	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	AMERICAN ELECTRIC S0103222	250	2.4	LUMINAIRE ADDED
	TP123	HWY 7 RAMP	10+185	21	WOOD CLASS 4	14.0	AMERICAN ELECTRIC S0103222	250	2.4	SINGLE GUY SINGLE ANCHOR
	TP124	HWY 7 RAMP	10+235.5	22	WOOD CLASS 4	14.0	AMERICAN ELECTRIC S0103222	250	2.4	GROUND ROD, SINGLE GUY SINGLE ANCHOR
	TP137	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	-	-	SINGLE GUY SINGLE ANCHOR ADDED
	TP175	HWY 7 RAMP	10+086.5	4	WOOD CLASS 4	15.5	-	-	-	SINGLE GUY SINGLE ANCHOR
	TP176	HIGHWAY 427	10+099	28.5	WOOD CLASS 4	15.5	-	-	-	SINGLE GUY SINGLE ANCHOR
	TP177	HIGHWAY 427	10+178	4	WOOD CLASS 4	15.5	-	-	-	SINGLE GUY SINGLE ANCHOR
	TP178	HWY 7 RAMP	9+909.5	31	WOOD CLASS 4	15.5	-	-	-	SINGLE GUY SINGLE ANCHOR

DETECTOR LOOP SUMMARY							
STAGE	ID	LOCATION	TYPE	SIZE (m)	TURNS	INDUCTANCE (µH)	REMARKS
STAGE 2	NID3	HIGHWAY 7	RADAR	1.8 x 1.8	-	-	
	NID4	HIGHWAY 7	RADAR	1.8 x 1.8	-	-	

NOTE(S):

1. WHEN SHOWN WITHOUT *, OFFSET IS FROM CENTRE OR CONTROL LINE OF ROADWAY. WHEN SHOWN WITH *, OFFSET IS FROM EDGE OF TRAVELED PAVEMENT (EP).

TEMPORARY TRAFFIC SIGNAL POLE SUMMARY													
STAGE	POLE ID	LOCATION	STATION	OFFSET (m) (NOTE 1)	POLE TYPE	HEIGHT (m)	TRAFFIC SIGNAL HEADS			ROADWAY LUMINAIRES			REMARKS
							TYPE	MOUNTING HEIGHT (m)	MAST ARM LENGTH (m)	LUMINAIRE PHOTOMETRIC	WATTAGE	ARM LENGTH (M)	
STAGE 1	TTS1	HIGHWAY 7	10+208	18.4	WOOD CLASS 4	14	-	-	-	-	-	-	SINGLE GUY SINGLE ANCHOR
	TTS2	HIGHWAY 7	10+160	19.5	WOOD CLASS 4	14	-	-	-	-	-	-	GROUND ROD, DOUBLE GUY SINGLE ANCHOR, SINGLE GUY SINGLE ANCHOR
	TTS3	HIGHWAY 7	10+177.5	16	WOOD CLASS 4	14	HWY	5.0	0.5	-	-	-	TRIPLE GUY SINGLE ANCHOR, PRE-EMPTION (EV1)
							TYPE 1	5.8	ON SPAN WIRE	-	-	-	
						TYPE 1	5.8	ON SPAN WIRE	-	-	-		
STAGE 2	TTS4	HIGHWAY 7	10+209	15.5	WOOD CLASS 4	14	-	-	-	AMERICAN ELECTRIC AE3853i	250	2.4	
STAGE 4	TTS1	HIGHWAY 7	10+208	18.5	WOOD CLASS 4	14	TYPE 1	5.8	ON SPAN WIRE	AMERICAN ELECTRIC AE3853i	250	2.4	DOUBLE GUY SINGLE ANCHOR, SINGLE GUY SINGLE ANCHOR, SALVAGED CAMERA & PRE-EMPTION
	TTS4	HIGHWAY 7	10+209	15.5	WOOD CLASS 4	14	-	-	-	AMERICAN ELECTRIC AE3853i	250	2.4	DOUBLE GUY SINGLE ANCHOR

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARJIT_GILL\DWG\03729\
 DRAWING NAME: 427E-ELE-CEN-DWG-SEQ L-2 TEMPORARY CHARTS.DWG
 DRAWN BY: B
 MODIFIED: 18/03/15 08:43:55
 REVISIONED BY: GILL

NO.	DATE	REVISIONS	BY	CHK	LEAD.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

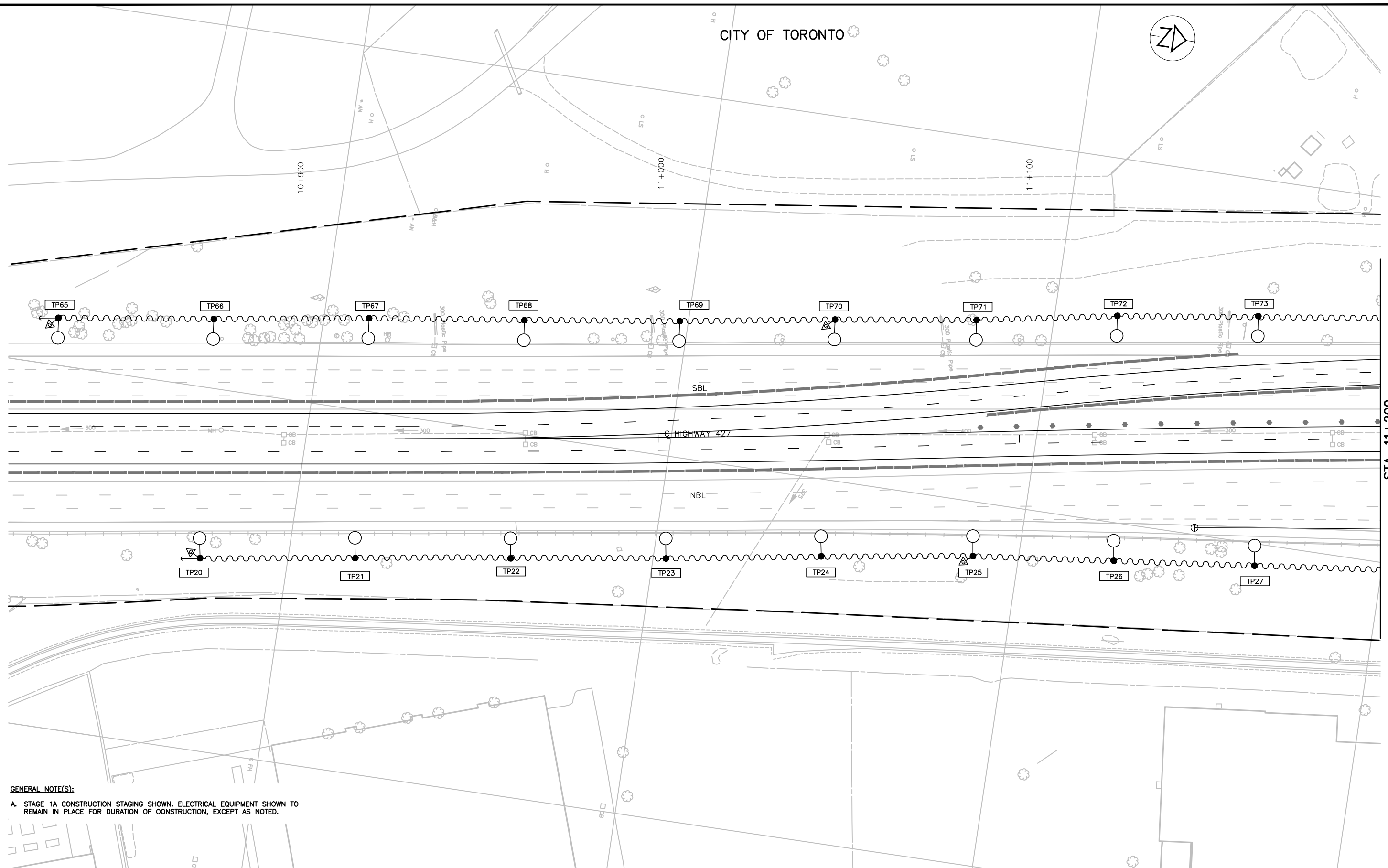
N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INT.	DATE



HWY 427 EXPANSION TEMPORARY CHARTS - 3							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1064	B

CITY OF TORONTO

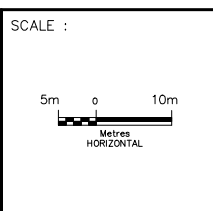


STA. 11+200

GENERAL NOTE(S):
 A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1A&1B.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 08:55:41
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

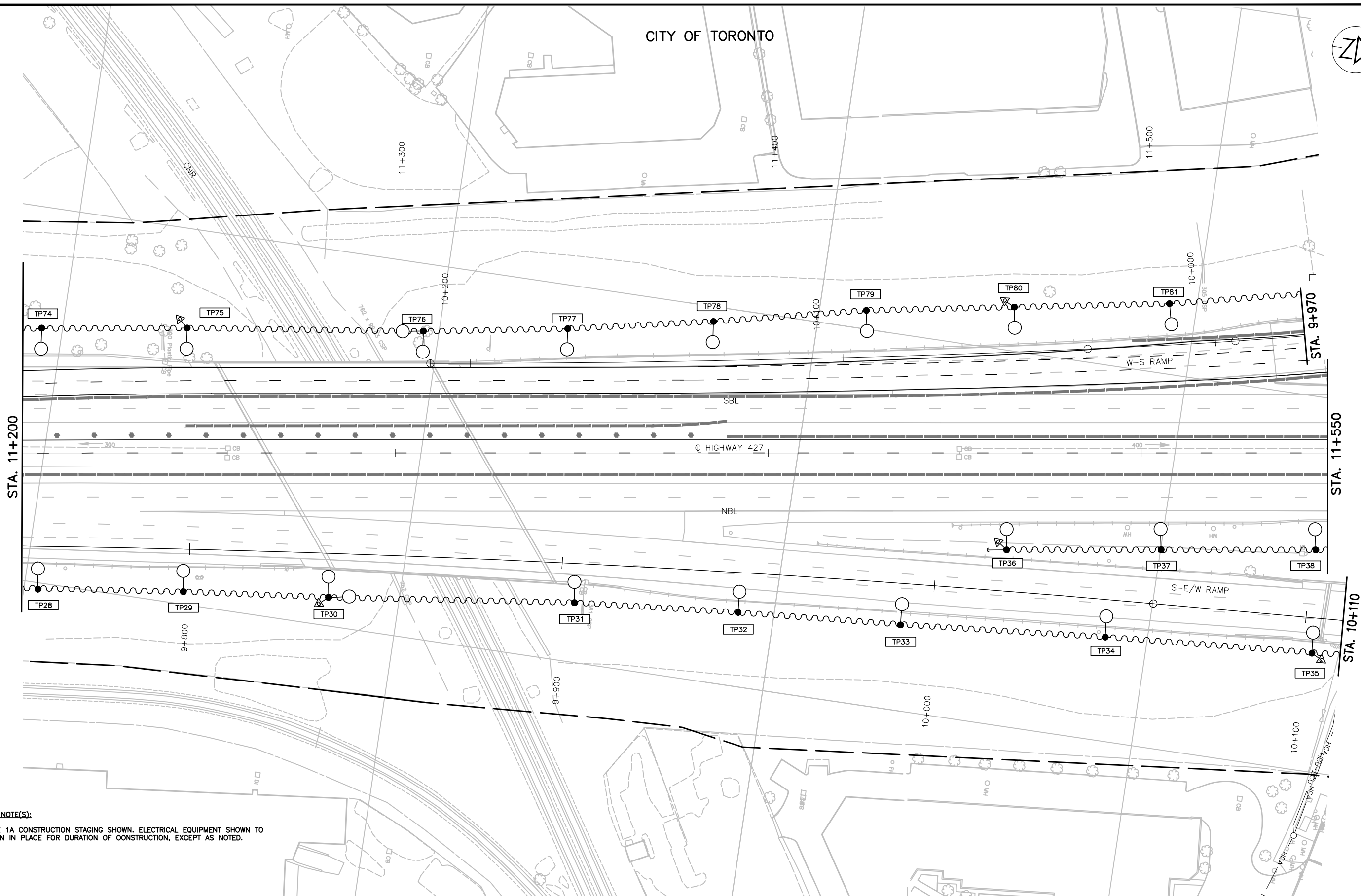


DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 1 STA. 10+820 TO STA. 11+200 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1065	B

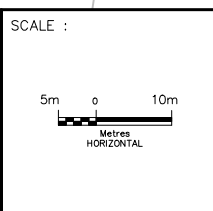
CITY OF TORONTO



GENERAL NOTE(S):
 A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.

FILE LOCATION: C:\PROJECTS\WSP-CA\MMM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1A&1B.DWG
 DRAWN BY: K. GILL
 CHECKED BY: M. LUE
 APPROVED BY: M. TEDESCO
 DATE: 18/03/20
 MODIFIED: 18/02/15
 08:55:41
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

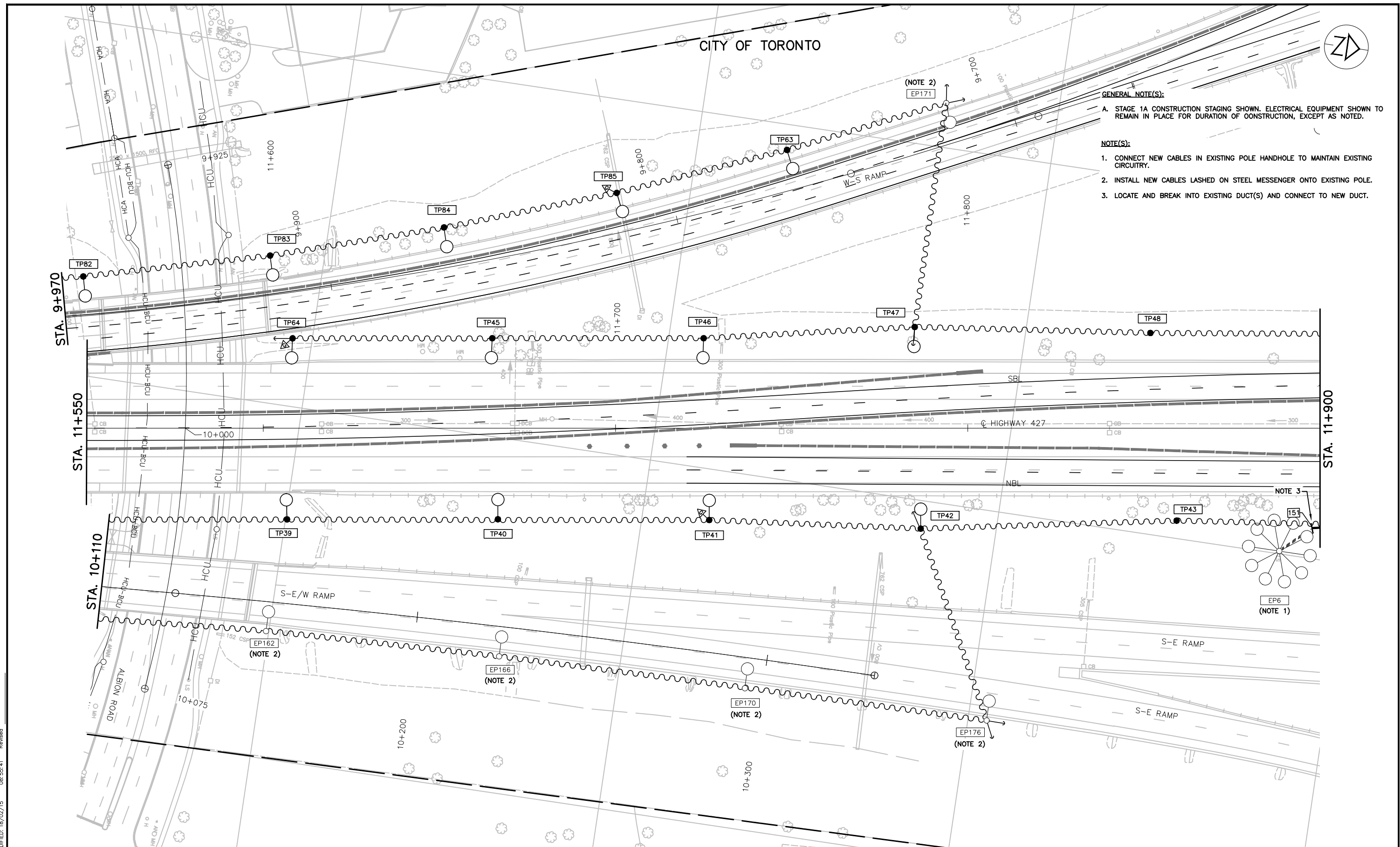


DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 2 STA. 11+200 TO STA. 11+550 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1066	B

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-LT-STG-DWG-SEQ L-2 STAGES 1A&B.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:55:41
 REVISIONS

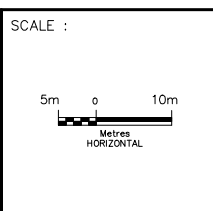


GENERAL NOTE(S):
 A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.

NOTE(S):
 1. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.
 2. INSTALL NEW CABLES LASHED ON STEEL MESSENGER ONTO EXISTING POLE.
 3. LOCATE AND BREAK INTO EXISTING DUCT(S) AND CONNECT TO NEW DUCT.



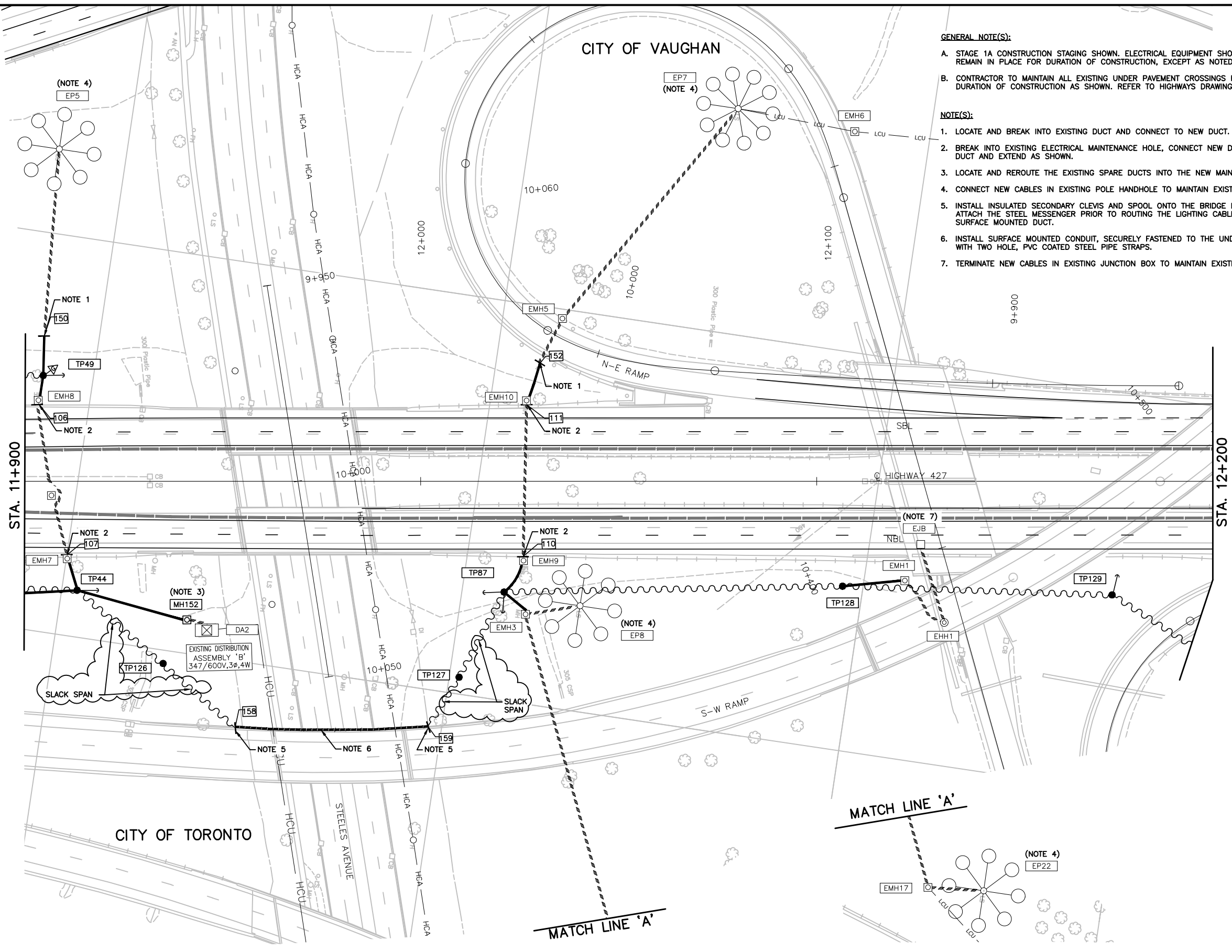
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA				
A	18/01/12	90% SUBMISSION TO CA				



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



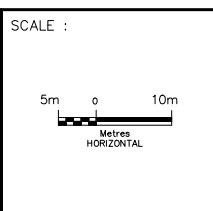
TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 3 STA. 11+550 TO STA. 11+900 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1067	B



- GENERAL NOTE(S):**
- A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
 - B. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
- NOTE(S):**
- 1. LOCATE AND BREAK INTO EXISTING DUCT AND CONNECT TO NEW DUCT.
 - 2. BREAK INTO EXISTING ELECTRICAL MAINTENANCE HOLE, CONNECT NEW DUCT TO EXISTING SPARE DUCT AND EXTEND AS SHOWN.
 - 3. LOCATE AND REROUTE THE EXISTING SPARE DUCTS INTO THE NEW MAINTENANCE HOLE.
 - 4. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.
 - 5. INSTALL INSULATED SECONDARY CLEVIS AND SPOOL ONTO THE BRIDGE DECK TO SECURELY ATTACH THE STEEL MESSENGER PRIOR TO ROUTING THE LIGHTING CABLES THROUGH THE SURFACE MOUNTED DUCT.
 - 6. INSTALL SURFACE MOUNTED CONDUIT, SECURELY FASTENED TO THE UNDERSIDE OF THE DECK WITH TWO HOLE, PVC COATED STEEL PIPE STRAPS.
 - 7. TERMINATE NEW CABLES IN EXISTING JUNCTION BOX TO MAINTAIN EXISTING UNDERPASS LIGHTING.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\
 DRAWING NAME: 427-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1&2.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 08:55:41
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	

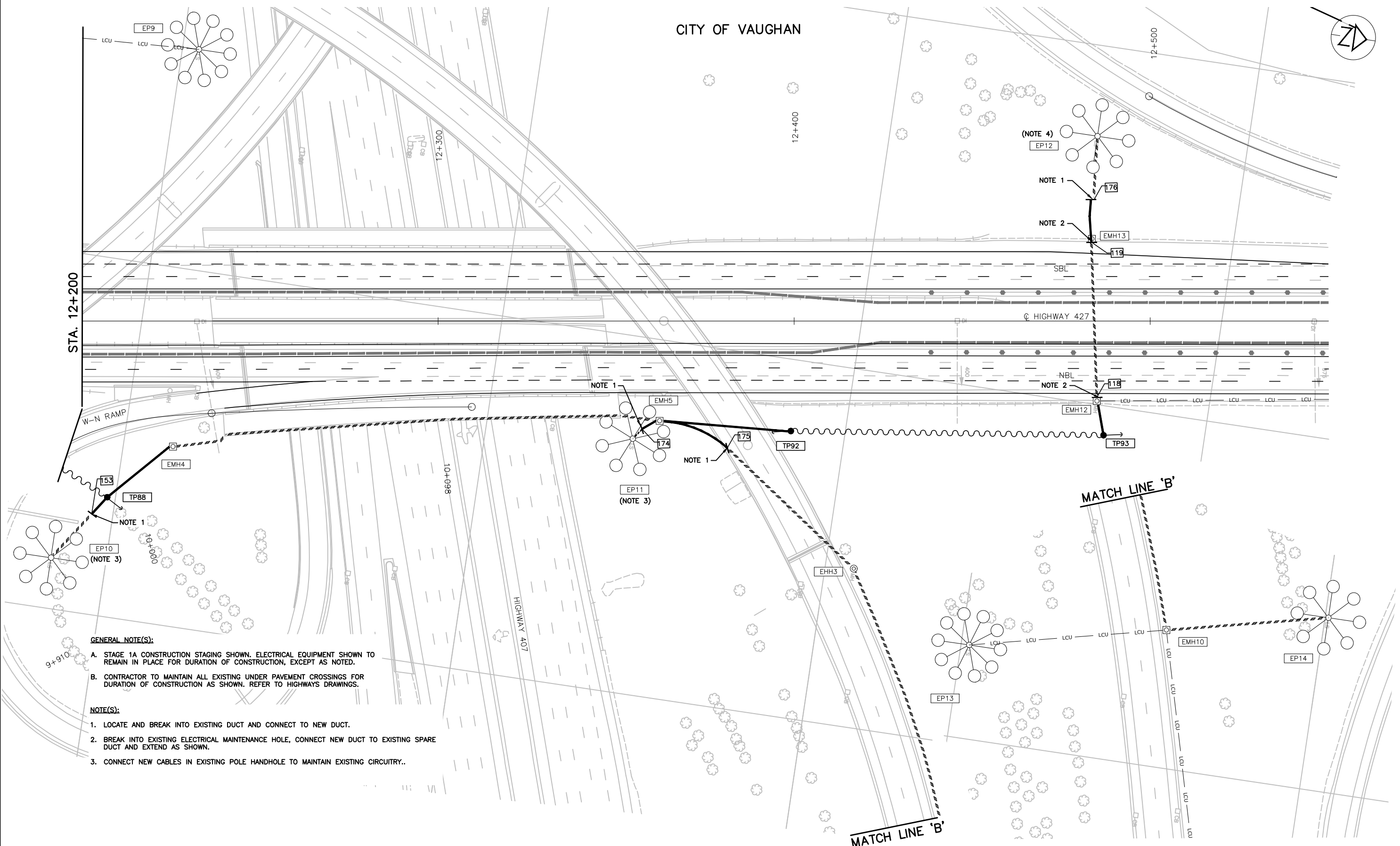


TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 4 STA. 11+900 TO STA. 12+200 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1068	B

CITY OF VAUGHAN



STA. 12+200



GENERAL NOTE(S):

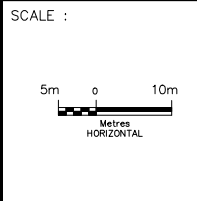
- A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.

NOTE(S):

- 1. LOCATE AND BREAK INTO EXISTING DUCT AND CONNECT TO NEW DUCT.
- 2. BREAK INTO EXISTING ELECTRICAL MAINTENANCE HOLE, CONNECT NEW DUCT TO EXISTING SPARE DUCT AND EXTEND AS SHOWN.
- 3. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY..

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729\DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1&2.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:55:41
 REVISIONS BY: GILL

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

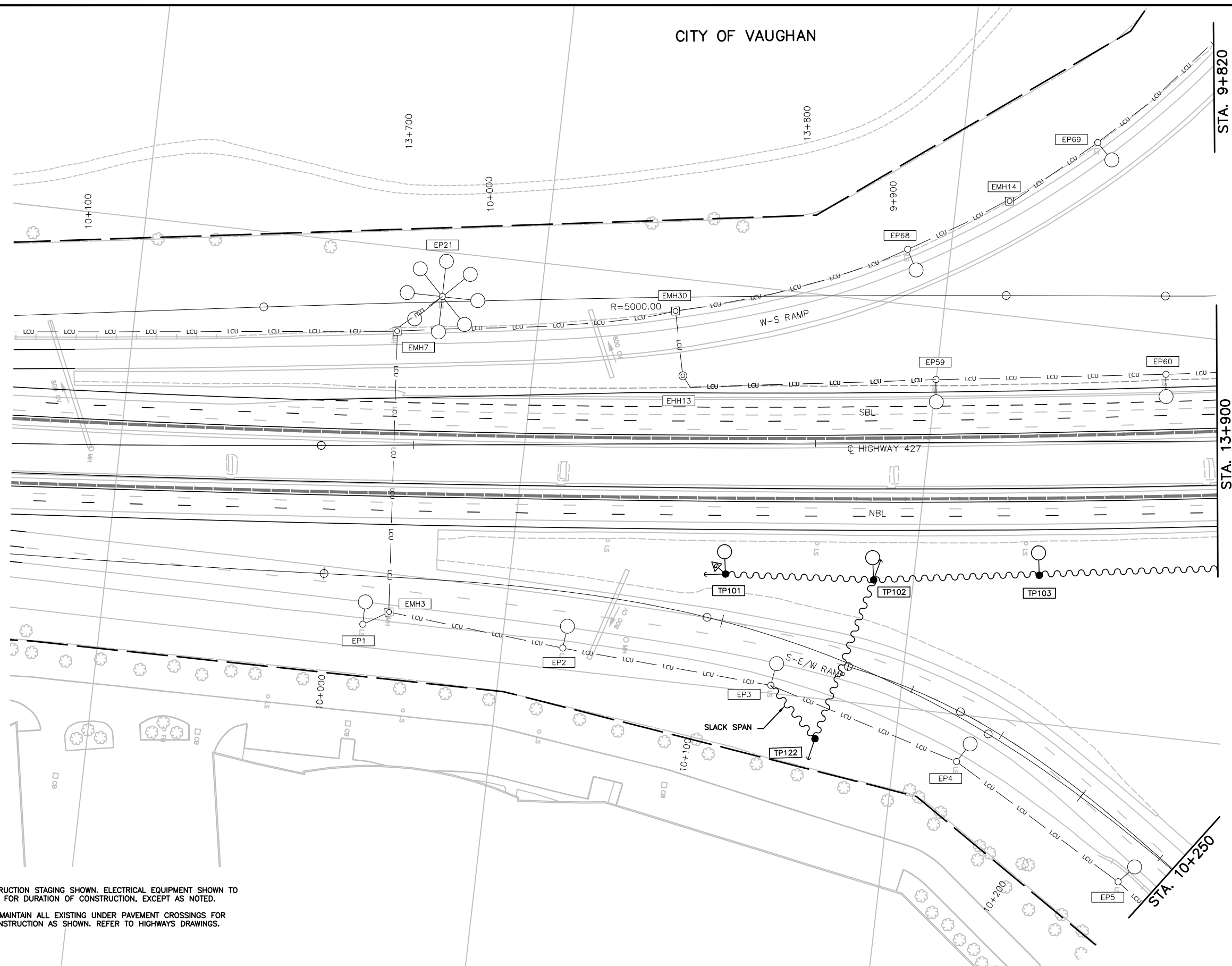


DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 5 STA. 12+200 TO STA. 12+550 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1069	B

CITY OF VAUGHAN

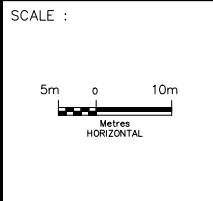


GENERAL NOTE(S):

- A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.

FILE LOCATION: C:\PROJECTS\WSP-CA\MMM_KARMJIT_GILL\0503729\
 DRAWING NAME: 427-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1A&B.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:55:41
 REVISIONS:

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 6 STA. 13+600 TO STA. 13+900 STAGE 1-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1070	B

CITY OF VAUGHAN

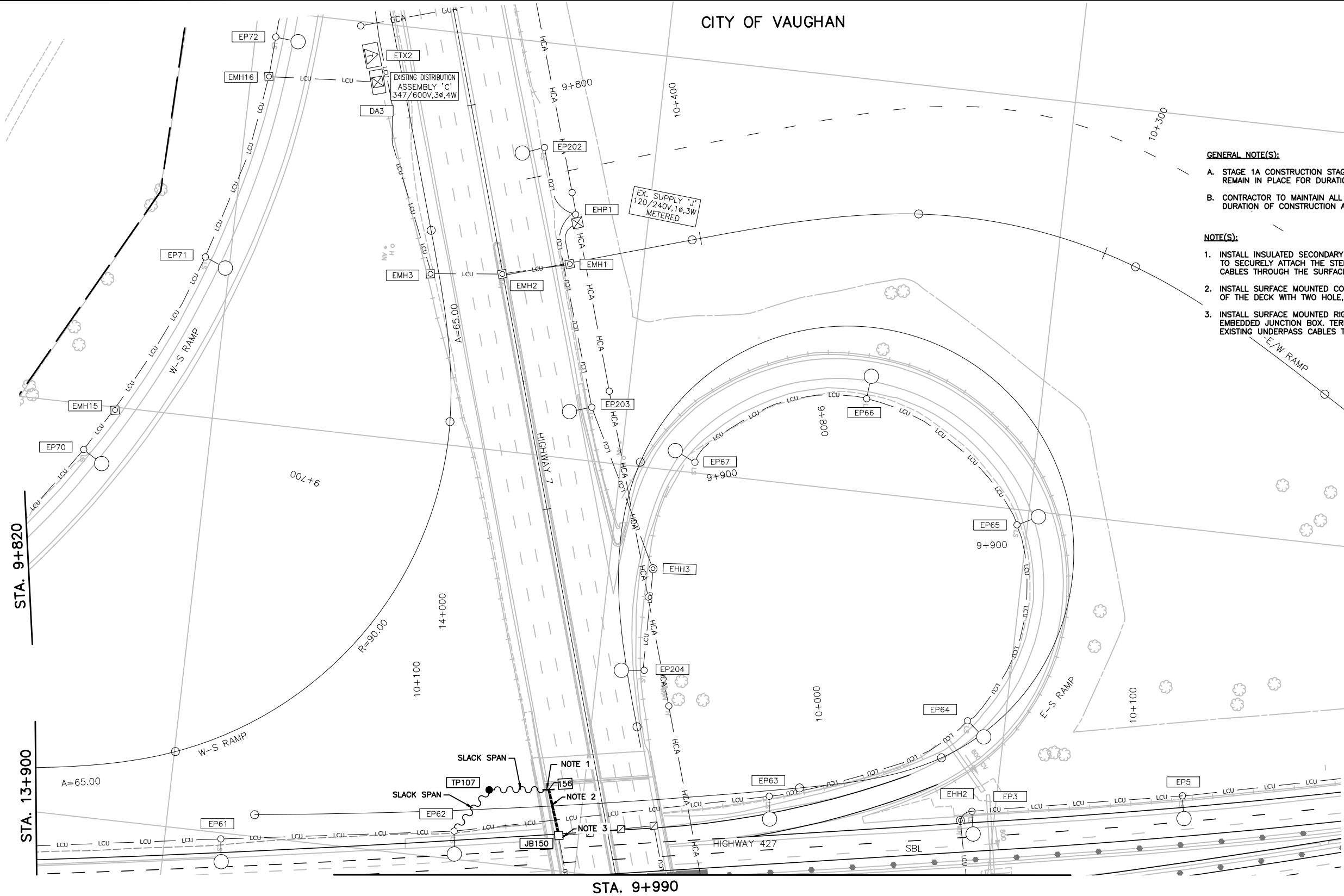


GENERAL NOTE(S):

- A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.

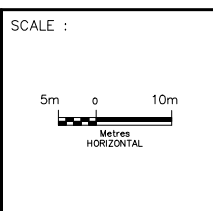
NOTE(S):

- 1. INSTALL INSULATED SECONDARY CLEVIS AND SPOOL ONTO THE BRIDGE DECK TO SECURELY ATTACH THE STEEL MESSENGER PRIOR TO ROUTING THE LIGHTING CABLES THROUGH THE SURFACE MOUNTED DUCT.
- 2. INSTALL SURFACE MOUNTED CONDUIT, SECURELY FASTENED TO THE UNDERSIDE OF THE DECK WITH TWO HOLE, PVC COATED STEEL PIPE STRAPS.
- 3. INSTALL SURFACE MOUNTED RIGID PVC JUNCTION BOX FLUSH WITH EXISTING EMBEDDED JUNCTION BOX. TERMINATE TEMPORARY LIGHTING CABLES WITH EXISTING UNDERPASS CABLES TO MAINTAIN FEED TO UNDERPASS LUMINAIRES.



FILE LOCATION: C:\PROJECTS\WSP-CA\MMM_KARMJIT_GILL\08503729
 DRAWING NAME: 427-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1A&B.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 08:55:41
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.



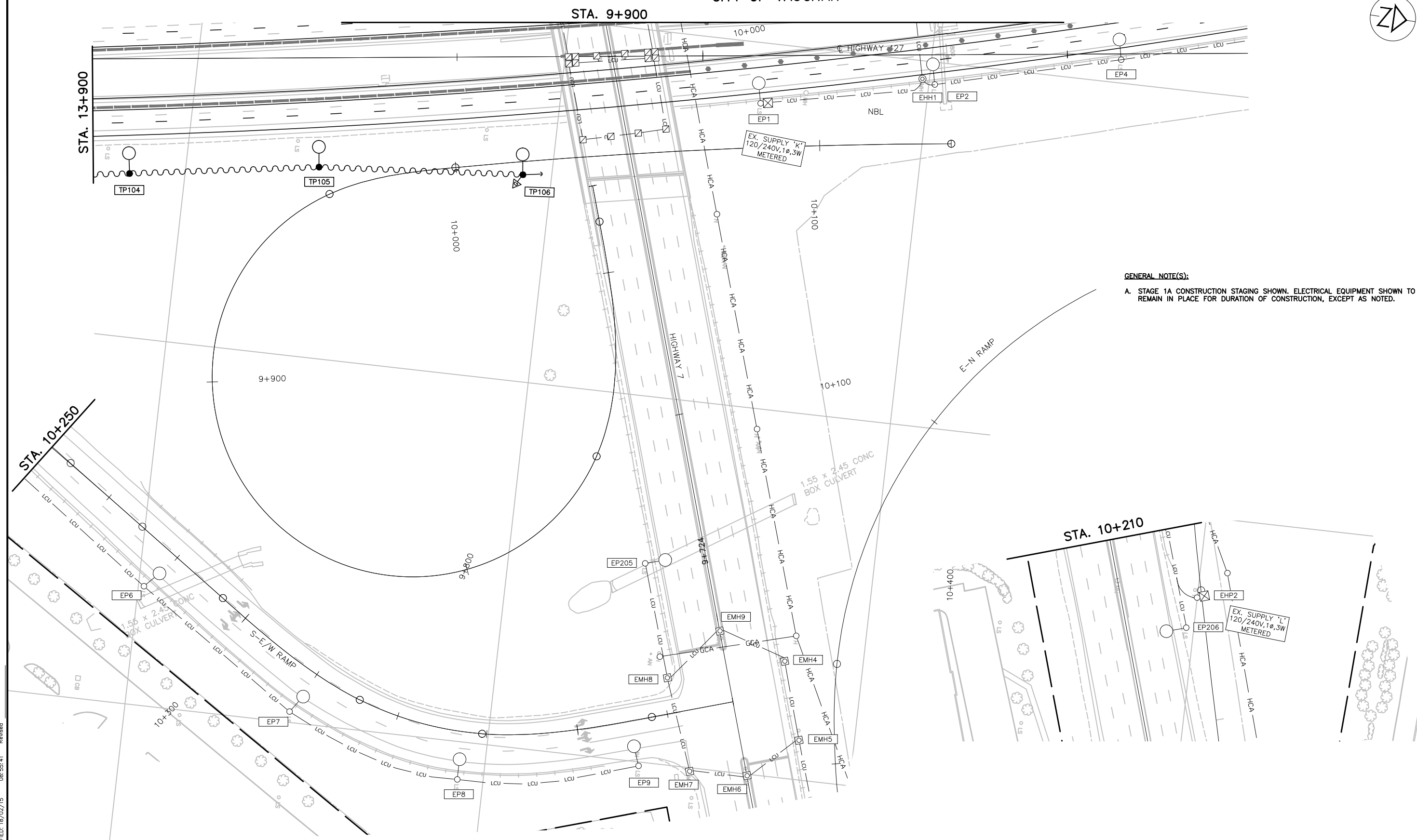
DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 7 STA. 13+950 TO STA. 10+150 STAGE 1-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1071	B

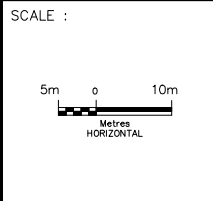
CITY OF VAUGHAN



GENERAL NOTE(S):
 A. STAGE 1A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMAT_GILL\08030729
 DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1A&1B.DWG
 DRAWN BY: K. GILL
 CHECKED BY: L. LUE
 APPROVED BY: M. TEDESCO
 DATE: 18/01/12
 MODIFIED: 18/02/15

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



<p>TITLE</p> <p>HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 8 STA. 13+900 TO STA. 10+150 STAGE 1-A,B</p>							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1072	A

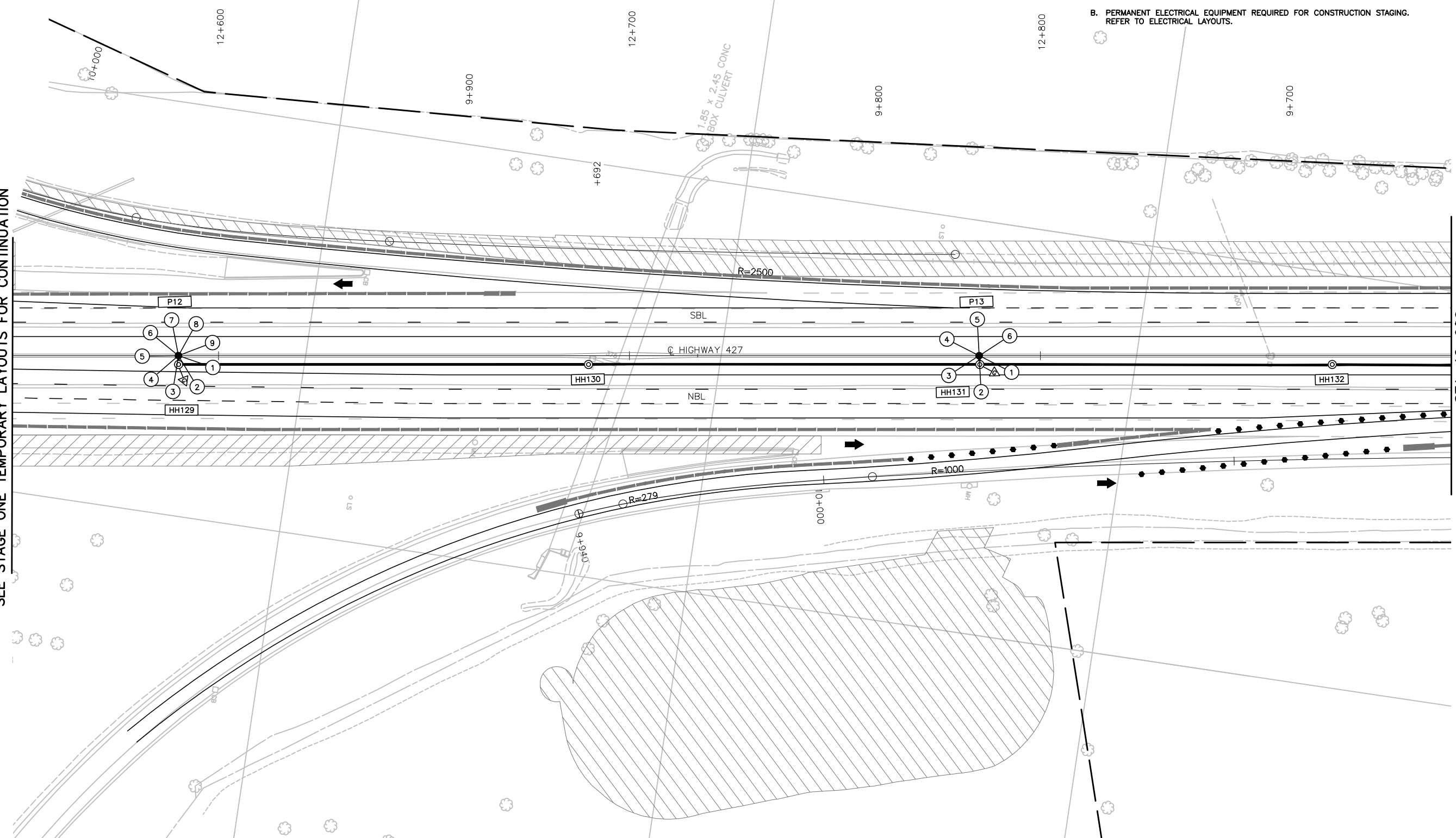


GENERAL NOTE(S):

- A. STAGE 1C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.

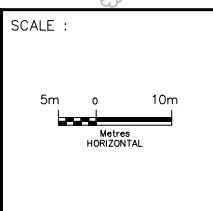
SEE STAGE ONE TEMPORARY LAYOUTS FOR CONTINUATION

STA. 12+900



FILE LOCATION: C:\PROJECTS\WSP-CA\MMM_KARMJIT_GILL\0503729
DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1C.DWG REVISION BY: GILL
DRAWN BY: K. GILL
MODIFIED: 18/02/15 08:59:45 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	

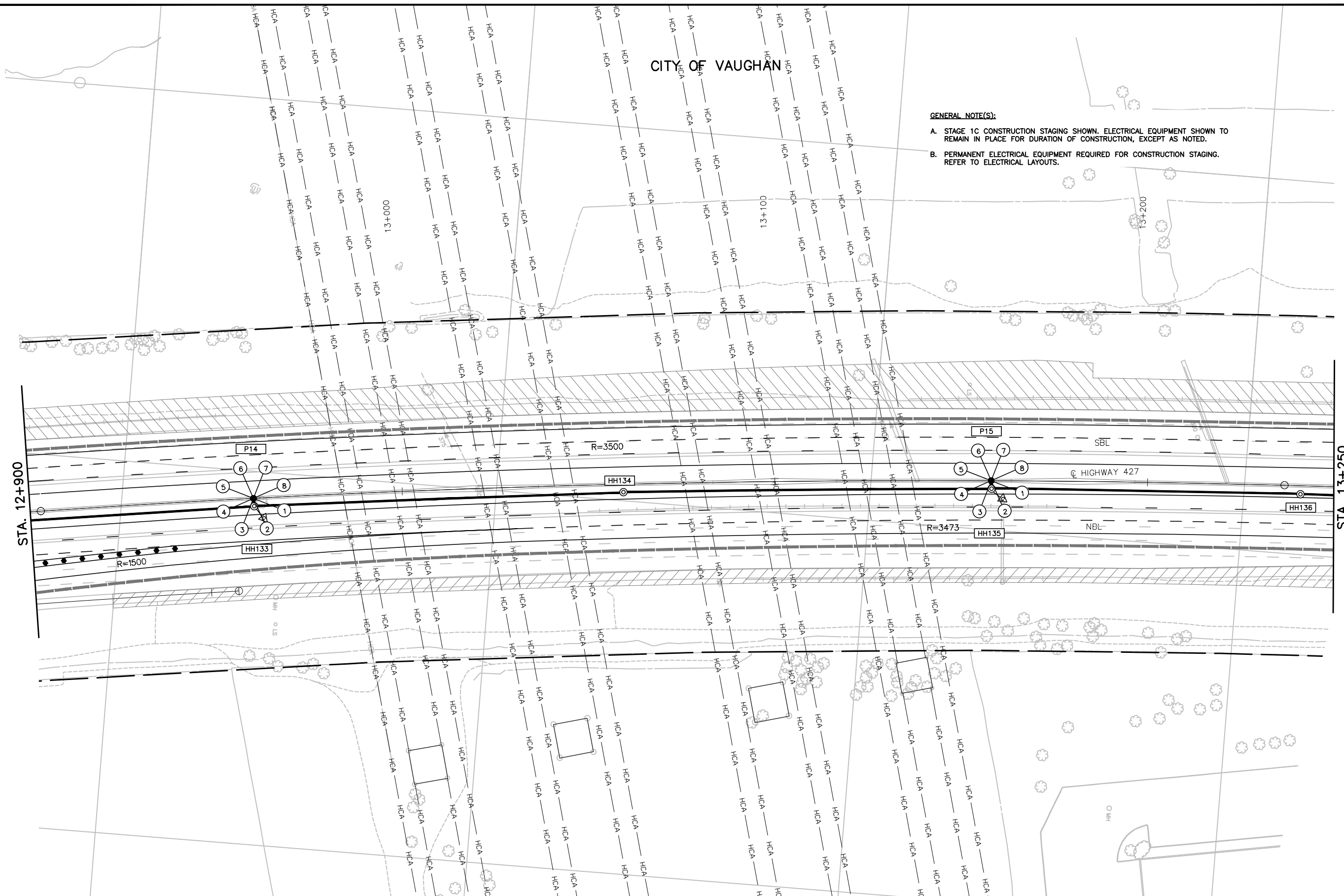


TITLE							
HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 9 STA. 12+550 TO STA. 12+900 STAGE 1-C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1073	B

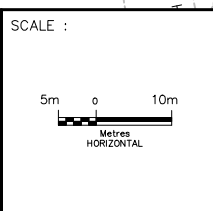


CITY OF VAUGHAN

- GENERAL NOTE(S):**
- A. STAGE 1C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
 - B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.



NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INT.	
DATE	



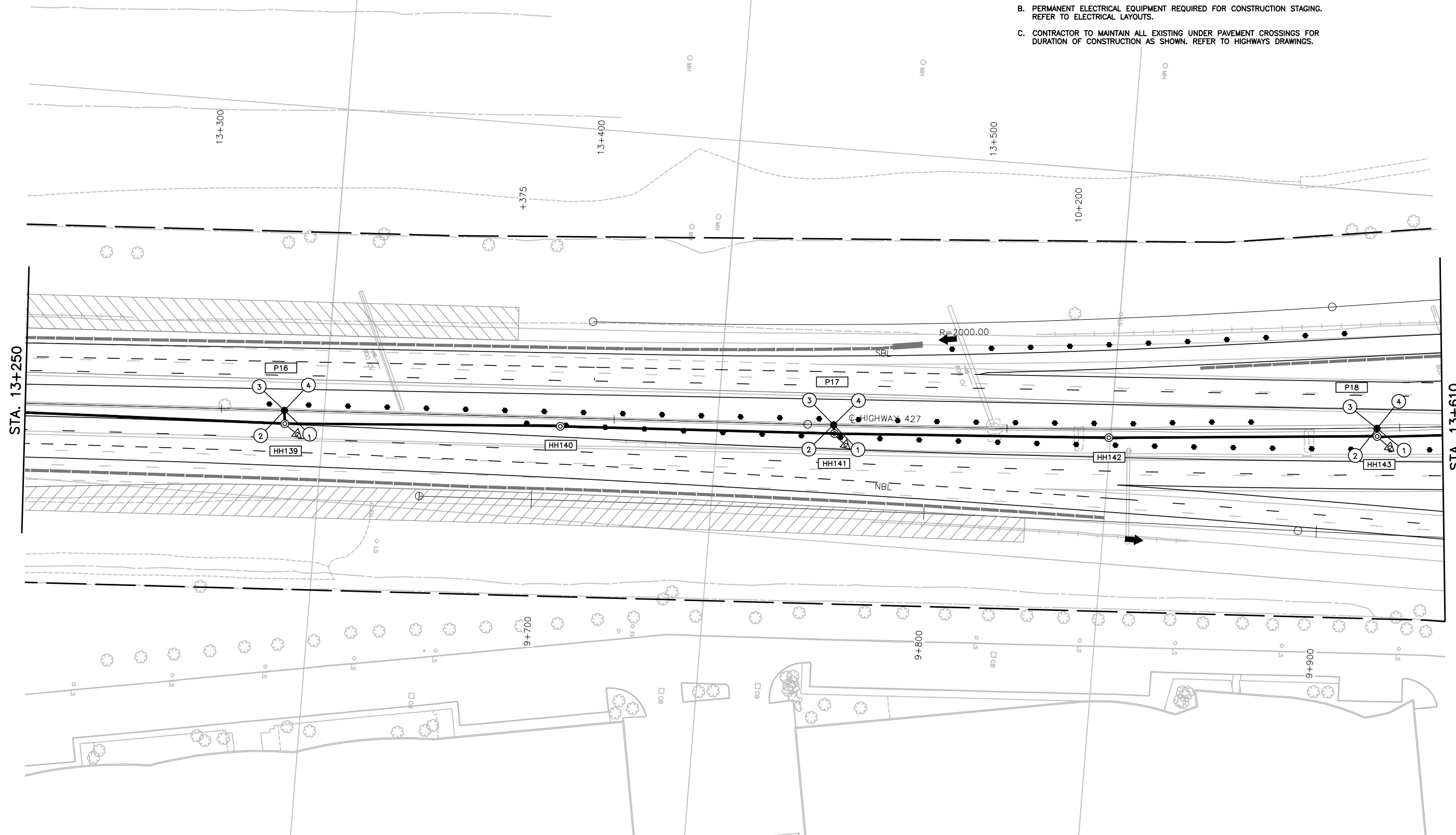
TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 10 STA. 12+900 TO STA. 13+250 STAGE 1- 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1074	B

CITY OF VAUGHAN



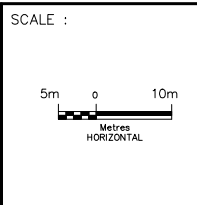
GENERAL NOTE(S):

- A. STAGE 1C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1C.DWG REVISION BY: GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:59:45 Revised

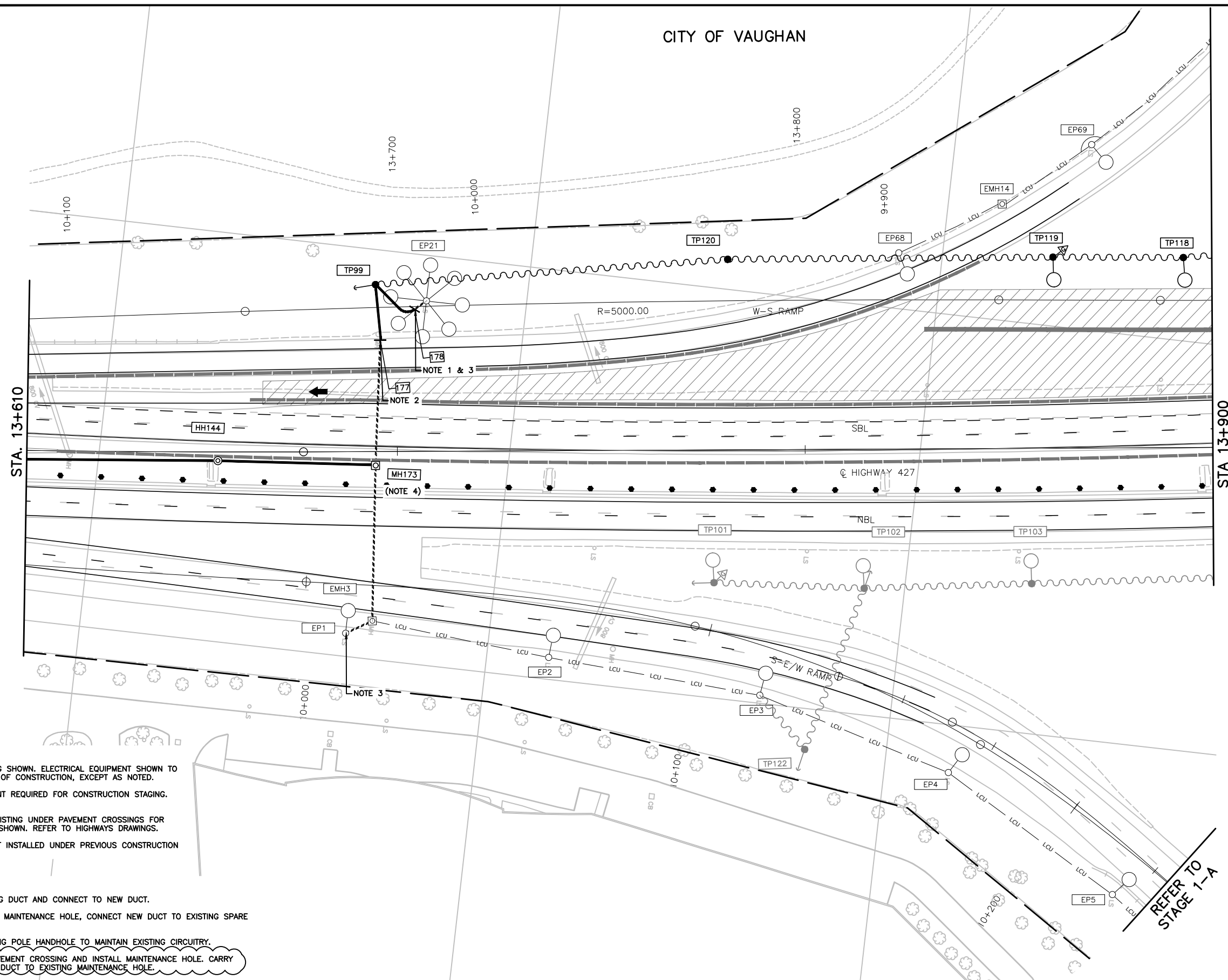
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 11 STA. 13+250 TO STA. 13+610 STAGE 1-C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1075	B



GENERAL NOTE(S):

- A. STAGE 1C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
- D. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

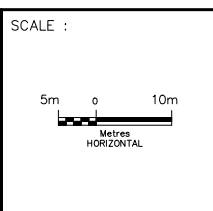
NOTE(S):

1. LOCATE AND BREAK INTO EXISTING DUCT AND CONNECT TO NEW DUCT.
2. BREAK INTO EXISTING ELECTRICAL MAINTENANCE HOLE, CONNECT NEW DUCT TO EXISTING SPARE DUCT AND EXTEND AS SHOWN.
3. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.
4. BREAK INTO EXISTING UNDER PAVEMENT CROSSING AND INSTALL MAINTENANCE HOLE. CARRY NEW CABLES IN EXISTING SPARE DUCT TO EXISTING MAINTENANCE HOLE.

REFER TO STAGE 1-A

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-LT-STG-DWG-SEQ L-2 STAGES 1C.DWG REVISION BY: GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:59:45 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 12 STA. 13+610 TO STA. 13+900 STAGE 1-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1076	B

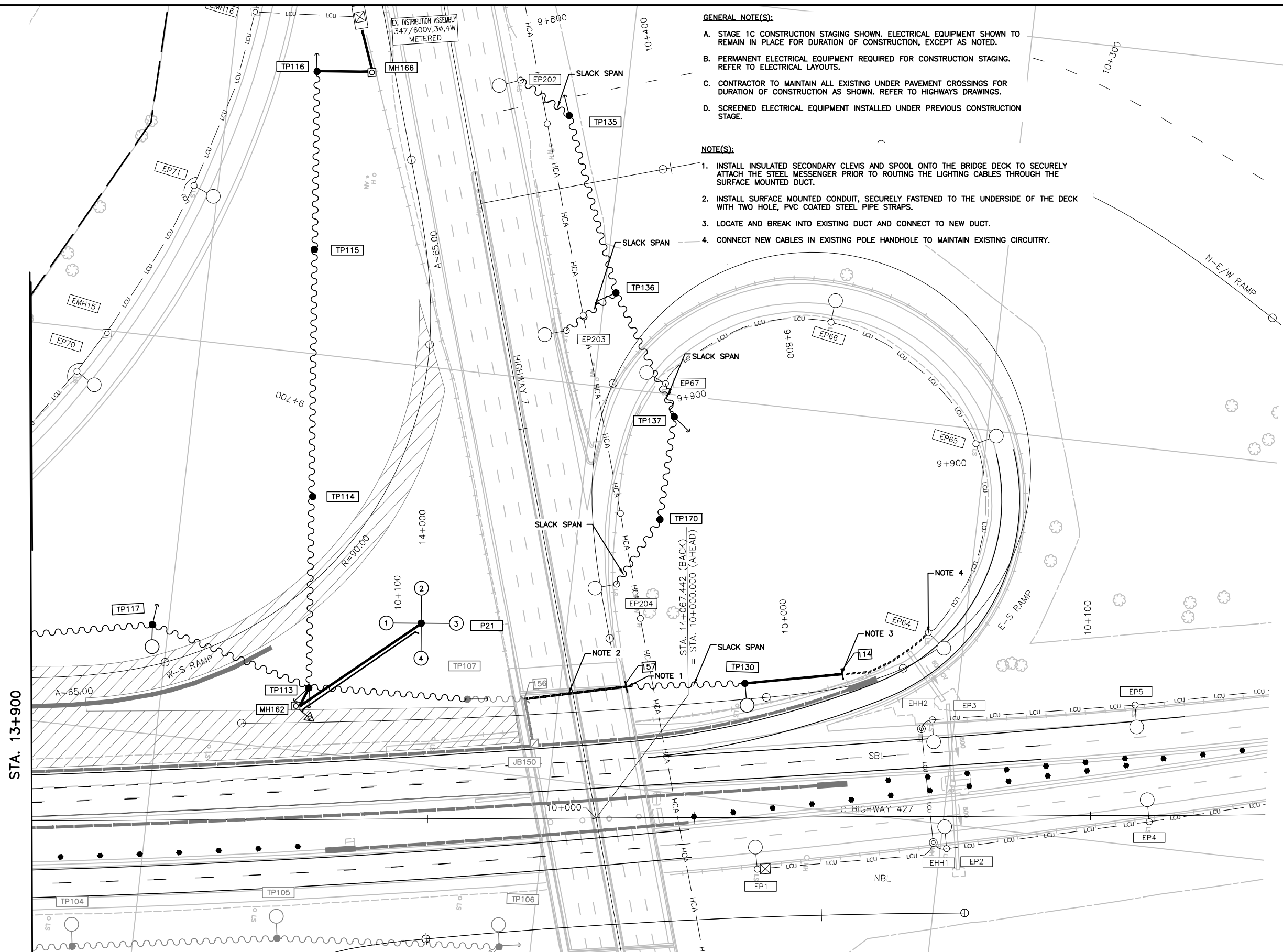


GENERAL NOTE(S):

- A. STAGE 1C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
- D. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

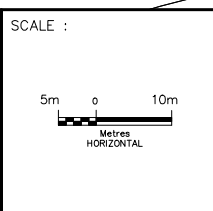
NOTE(S):

- 1. INSTALL INSULATED SECONDARY CLEVIS AND SPOOL ONTO THE BRIDGE DECK TO SECURELY ATTACH THE STEEL MESSENGER PRIOR TO ROUTING THE LIGHTING CABLES THROUGH THE SURFACE MOUNTED DUCT.
- 2. INSTALL SURFACE MOUNTED CONDUIT, SECURELY FASTENED TO THE UNDERSIDE OF THE DECK WITH TWO HOLE, PVC COATED STEEL PIPE STRAPS.
- 3. LOCATE AND BREAK INTO EXISTING DUCT AND CONNECT TO NEW DUCT.
- 4. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-LTG-STG-DWG-SEQ L-2 STAGES 1C.DWG REVISION BY: GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 08:59:45 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRD. MAN.
B	18/03/20	90% SUBMISSION TO CA				
A	18/01/12	90% SUBMISSION TO CA				



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 13 STA. 13+900 TO STA. 10+145 STAGE 1-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1077	B

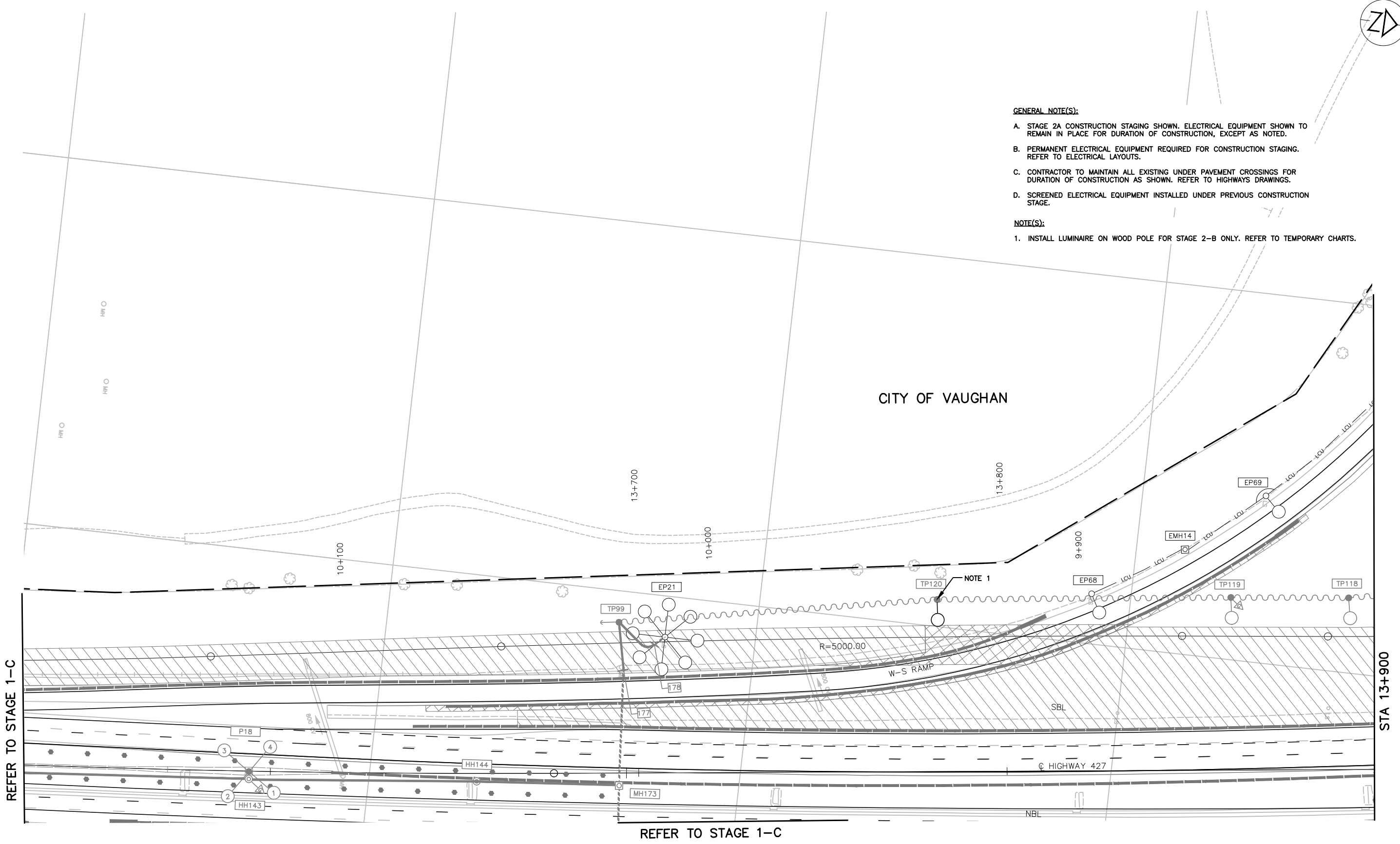


GENERAL NOTE(S):

- A. STAGE 2A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
- D. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

NOTE(S):

- 1. INSTALL LUMINAIRE ON WOOD POLE FOR STAGE 2-B ONLY. REFER TO TEMPORARY CHARTS.



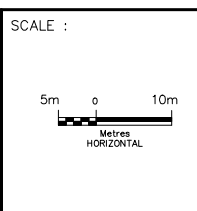
FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729
 DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 2A&2B DRAWING BY: GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:11:32 Revised

REFER TO STAGE 1-C

STA 13+900

REFER TO STAGE 1-C

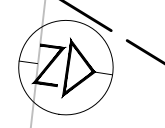
NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 15 STA. 13+950 TO STA. 10+150 STAGE 2-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1078	A

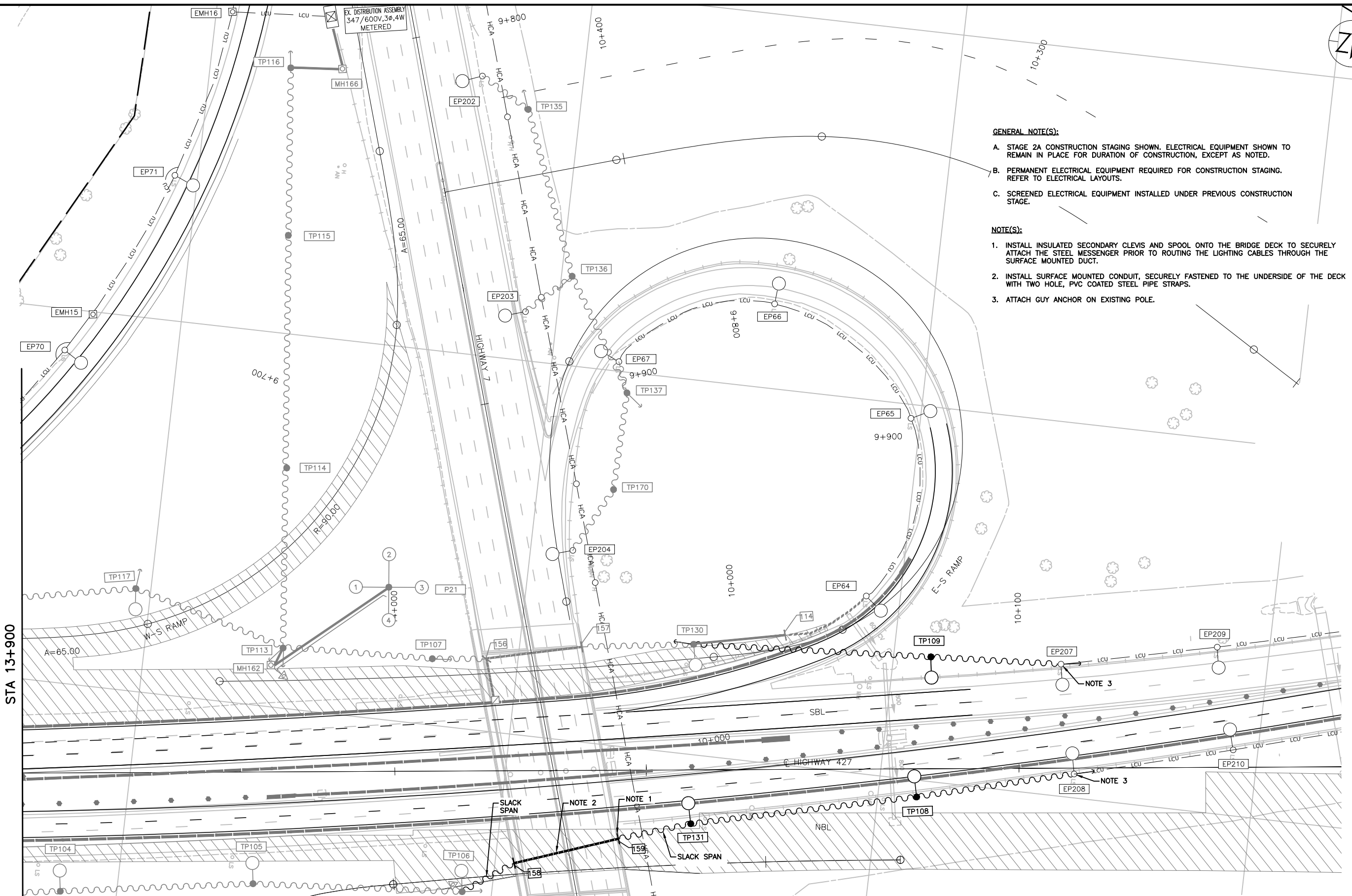


GENERAL NOTE(S):

- A. STAGE 2A CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

NOTE(S):

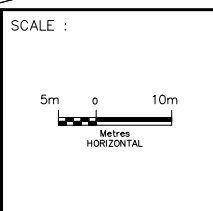
- 1. INSTALL INSULATED SECONDARY CLEVIS AND SPOOL ONTO THE BRIDGE DECK TO SECURELY ATTACH THE STEEL MESSENGER PRIOR TO ROUTING THE LIGHTING CABLES THROUGH THE SURFACE MOUNTED DUCT.
- 2. INSTALL SURFACE MOUNTED CONDUIT, SECURELY FASTENED TO THE UNDERSIDE OF THE DECK WITH TWO HOLE, PVC COATED STEEL PIPE STRAPS.
- 3. ATTACH GUY ANCHOR ON EXISTING POLE.



STA 13+900

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 2A&2B.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:11:32
 REVISIONS:

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

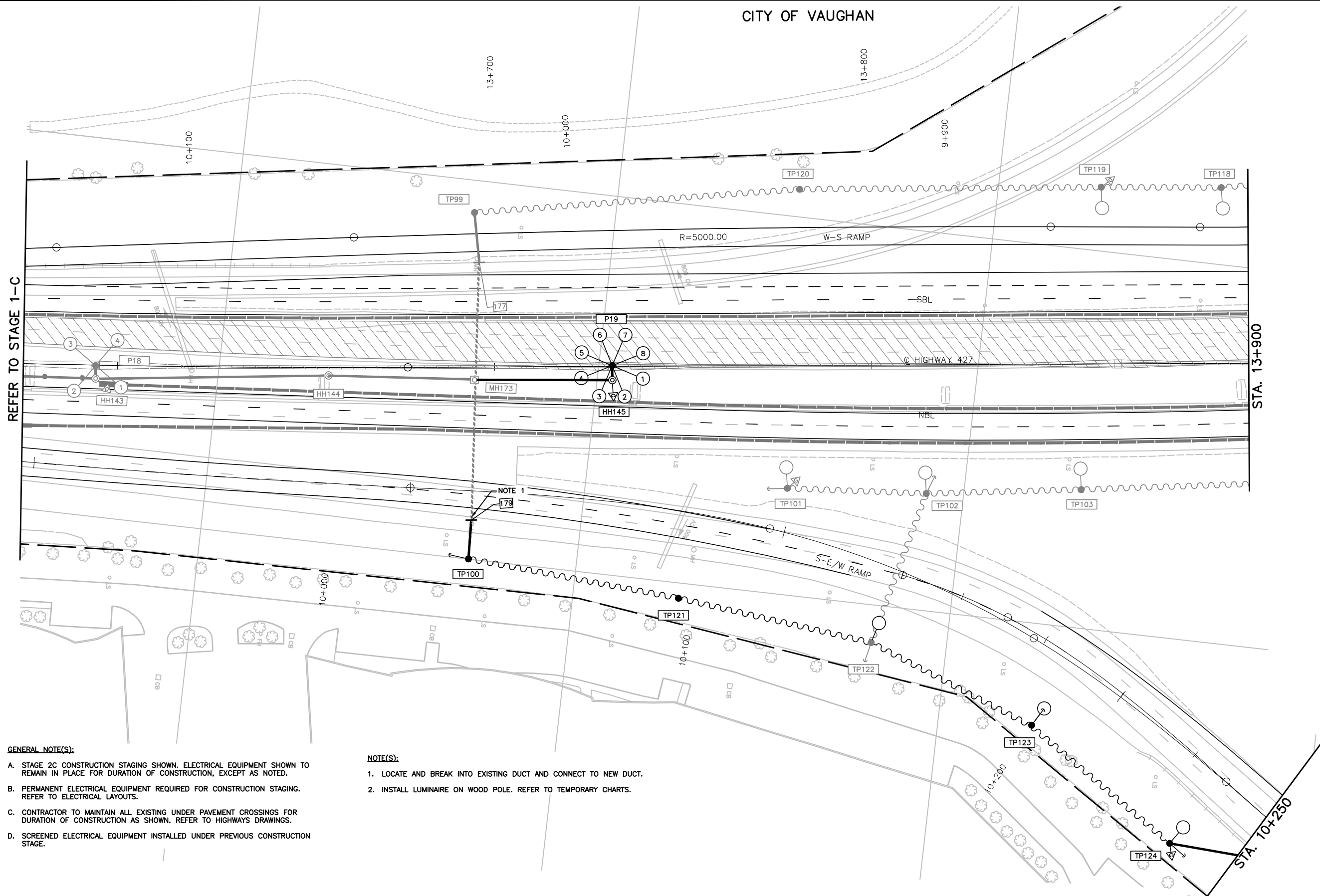


DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 16 STA. 13+900 TO STA. 10+150 STAGE 2-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1079	B



REFER TO STAGE 1-C

STA. 13+900

STA. 10+250

GENERAL NOTE(S):

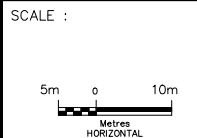
- A. STAGE 2C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
- D. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

NOTE(S):

- 1. LOCATE AND BREAK INTO EXISTING DUCT AND CONNECT TO NEW DUCT.
- 2. INSTALL LUMINAIRE ON WOOD POLE. REFER TO TEMPORARY CHARTS.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729\DRAWING NAME: 427E-ELE-LTG-STG-DWG-SEQ L-2 STAGES 2C.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:17:46
 REVISIONED BY: GILL

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC.	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.



DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE

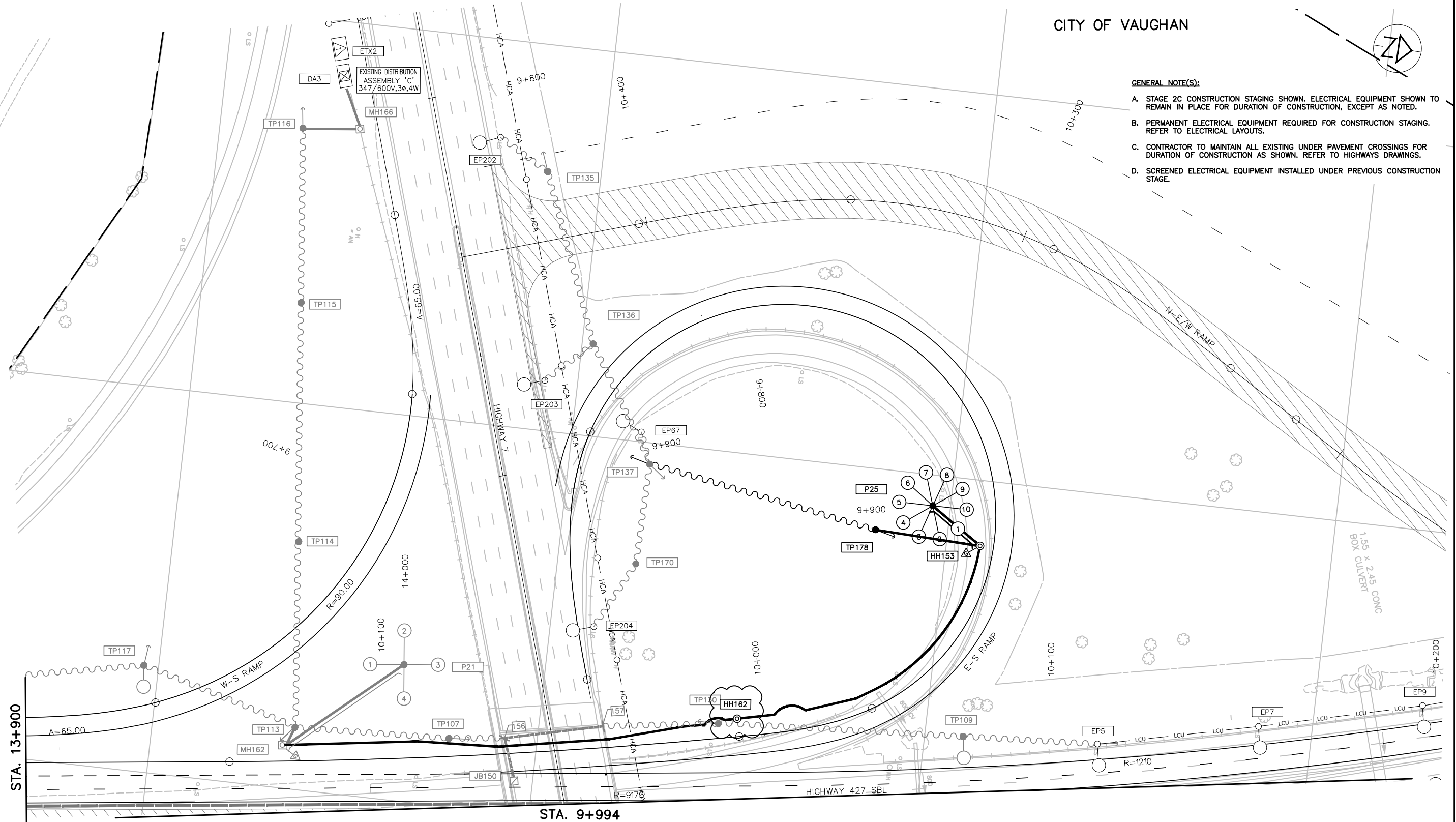


TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 17 STA. 13+575 TO STA. 13+900 STAGE 2-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1080	B



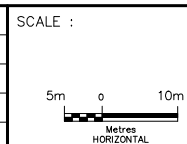
GENERAL NOTE(S):

- A. STAGE 2C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
- B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
- D. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.



FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMJIT_GILL\0503729
 DRAWING NAME: 427-ELE-LTG-STG-DWG-SEQ L-2 STAGES 2C.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:17:46
 REVISIONED BY: GILL

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRD MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	



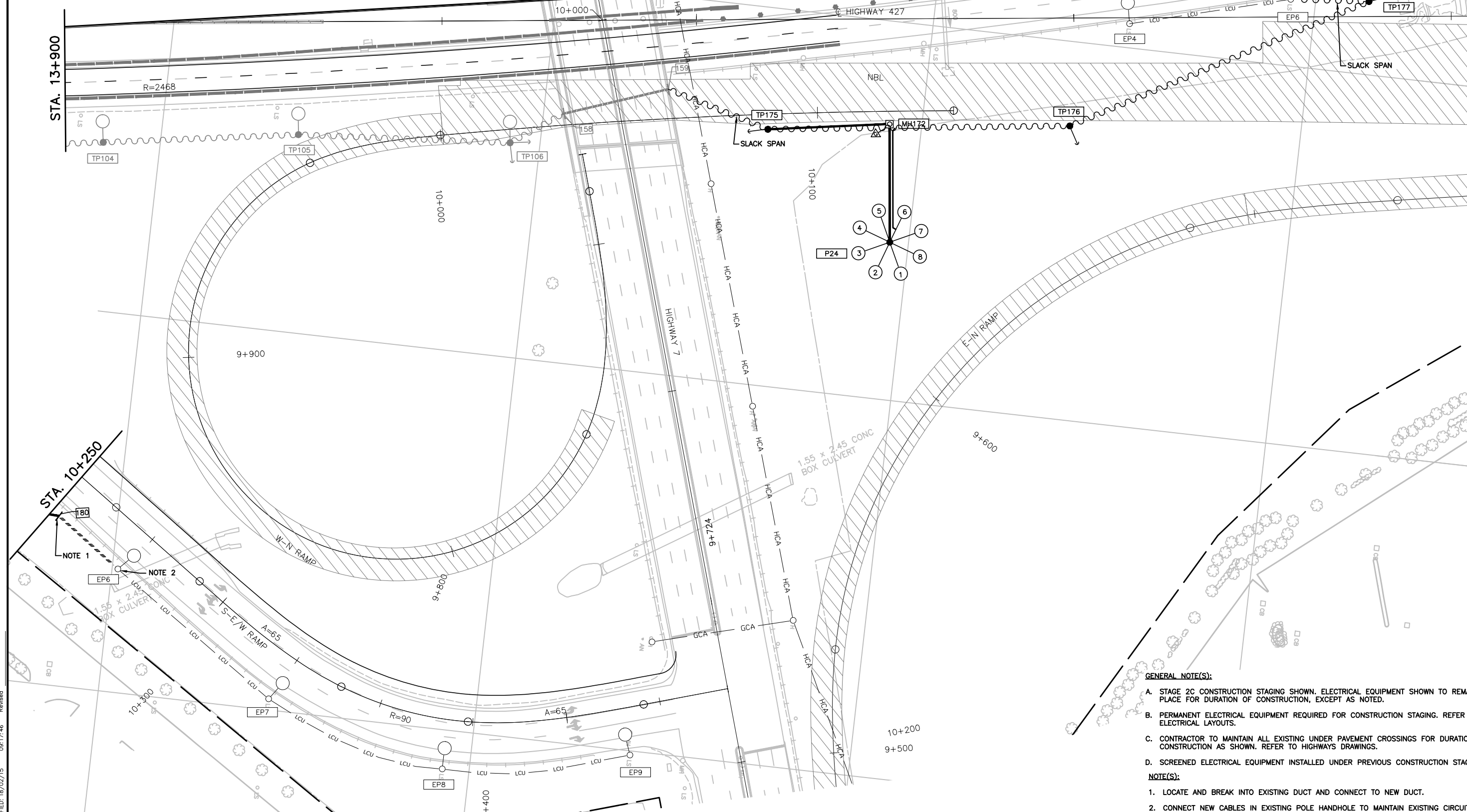
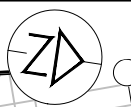
DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 18 STA. 13+900 TO STA. 10+150 STAGE 2-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1081	B

CITY OF VAUGHAN

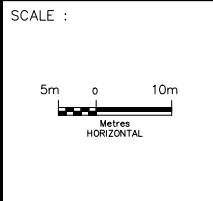
STA. 9+994



- GENERAL NOTE(S):**
- A. STAGE 2C CONSTRUCTION STAGING SHOWN. ELECTRICAL EQUIPMENT SHOWN TO REMAIN IN PLACE FOR DURATION OF CONSTRUCTION, EXCEPT AS NOTED.
 - B. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
 - C. CONTRACTOR TO MAINTAIN ALL EXISTING UNDER PAVEMENT CROSSINGS FOR DURATION OF CONSTRUCTION AS SHOWN. REFER TO HIGHWAYS DRAWINGS.
 - D. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.
- NOTE(S):**
- 1. LOCATE AND BREAK INTO EXISTING DUCT AND CONNECT TO NEW DUCT.
 - 2. CONNECT NEW CABLES IN EXISTING POLE HANDHOLE TO MAINTAIN EXISTING CIRCUITRY.

FILE LOCATION: C:\PROJECTS\WSP-CA\MM_KARMIT_GILL\0503729
 DRAWING NAME: 427-ELE-LTG-STG-DWG-SEQ L-2 STAGES 2C.DWG
 DRAWN BY: K. GILL
 CHECKED BY: K. GILL
 MODIFIED: 18/02/15 09:17:46
 REVISIONS: Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PRJL MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

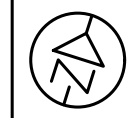


DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	
INIT.	
DATE	



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 19 STA. 13+900 TO STA. 10+150 STAGE 2-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1082	B

CITY OF VAUGHAN

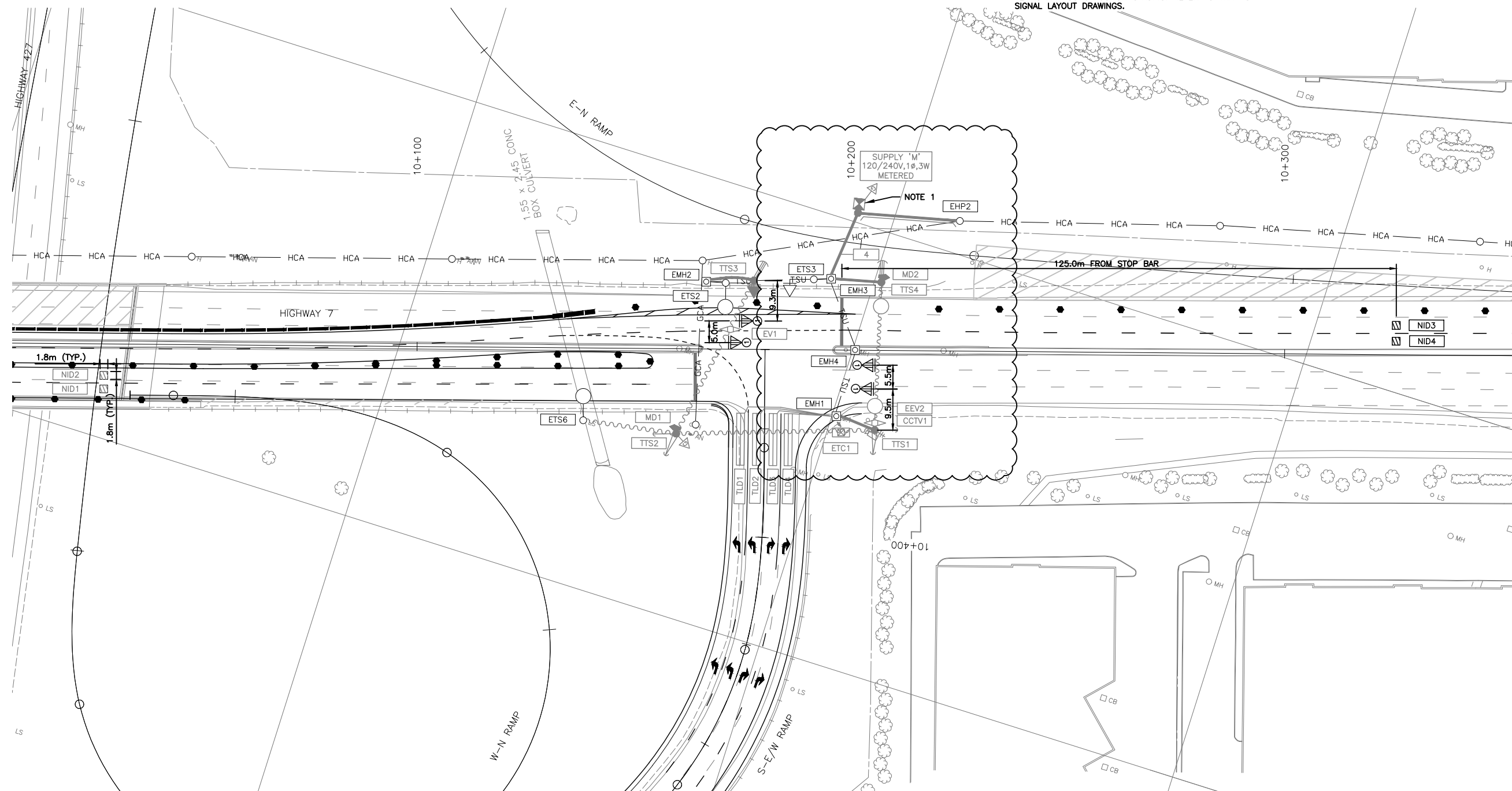


GENERAL NOTE(S):

- A. ALL DETECTOR LOOPS/DETECTOR ZONES SHALL BE CENTERED IN THEIR RESPECTIVE LANES.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

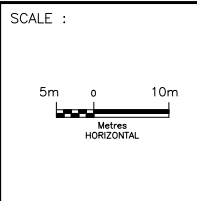
NOTE(S):

- 1. PERMANENT ELECTRICAL EQUIPMENT TO BE USED DURING TEMPORARY CONSTRUCTION STAGING. REFER TO TRAFFIC SIGNAL LAYOUT DRAWINGS.



FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MML\KARMJIT.GILL\DWG\04217\...
 DRAWING NAME: 427E-ELE-STG-TS-DWG-SEQ_L-2-STAGE_2 - PKG 9 REVISIONED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 17/09/22 13:21:01
 REVISIONED BY: GILL

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	
A	18/01/12	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	

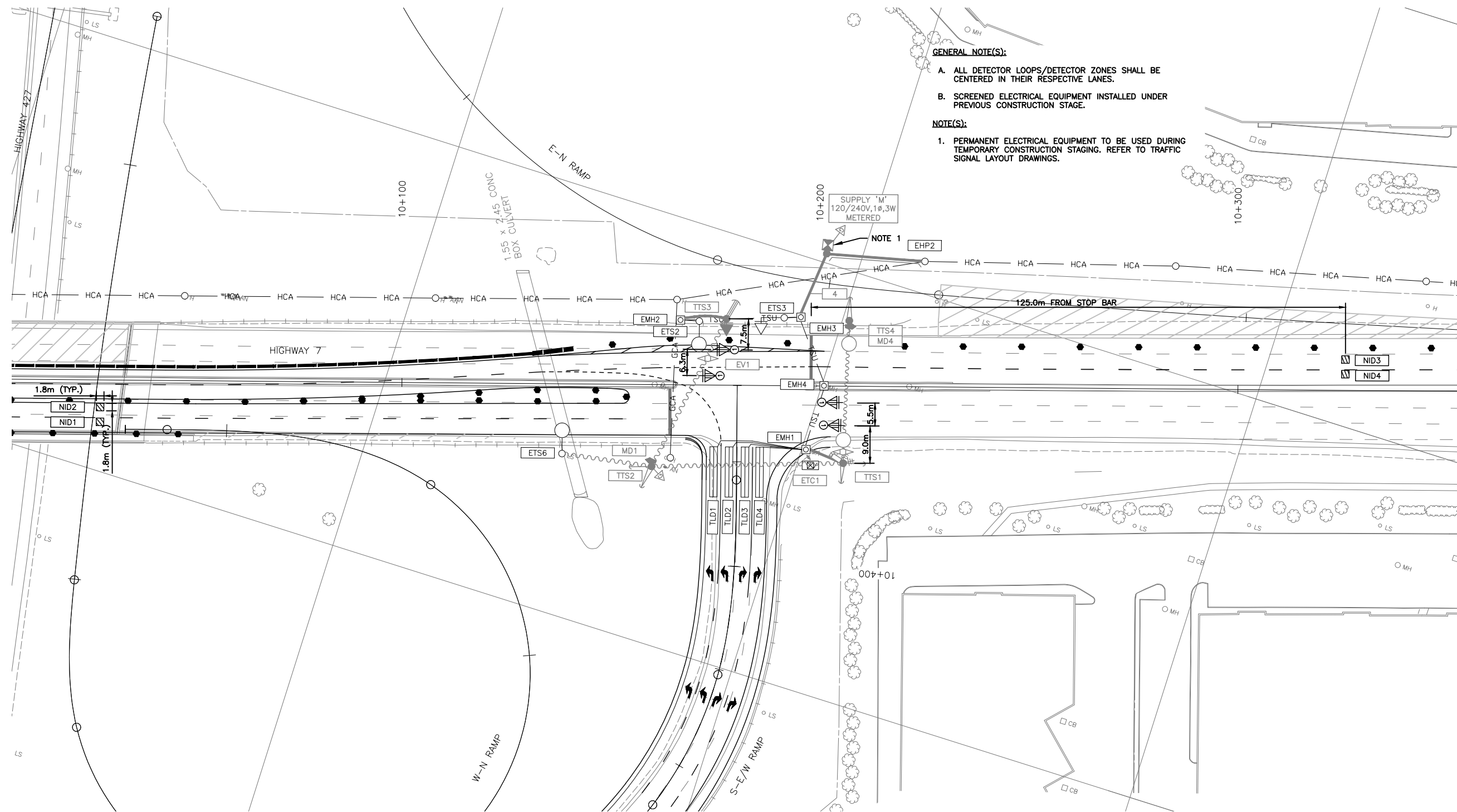
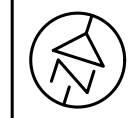


DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMJIT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED LEAD ENGINEER	MARIO TEDESCO	M.T.
APPROVED PROJ. MANAGER		
CONSULTANT		
	NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 21 STAGE 2 HWY 7 & S-E RAMP							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1084	B

CITY OF VAUGHAN



GENERAL NOTE(S):

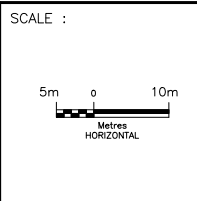
- A. ALL DETECTOR LOOPS/DETECTOR ZONES SHALL BE CENTERED IN THEIR RESPECTIVE LANES.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

NOTE(S):

- 1. PERMANENT ELECTRICAL EQUIPMENT TO BE USED DURING TEMPORARY CONSTRUCTION STAGING. REFER TO TRAFFIC SIGNAL LAYOUT DRAWINGS.

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MML\KARMJIT.GILL\DWG\04217\...
 DRAWING NAME: 427E-ELE-STG-TS-DWG-SEQ_L-2-STAGE_4 - PKG_9 REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 17/12/18 13:59:17 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD DISC	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	
A	18/01/12	90% SUBMISSION TO CA	M.P.	M.T.	P.B.	



DESIGNED	MANPREET PANESAR	M.P.
DRAWN	KARMJIT GILL	K.G.
CHECKED	LENNOX LUE	L.L.
APPROVED LEAD ENGINEER	MARIO TEDESCO	M.T.
APPROVED PROJ. MANAGER		
CONSULTANT		
	NAME (PRINT)	INIT. DATE



TITLE HWY 427 EXPANSION TEMPORARY ELECTRICAL WORK - 23 STAGE 4 HWY 7 & S-E RAMP							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1086	B

**LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'B'
347/600 V, 3Ø, 4W METERED**

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
7760	(7 X 485*) + (9 X 485*)	EP5, EP6, TP63, TP47, TP65, TP68, TP71, TP74, TP77, TP80, TP83	B RED 1	30	30	B RED 2	EP170, TP20, TP23, TP26, TP29, TP32, TP38, TP41	(1 X 310*) + (6 X 485*) + (1 X 310*)	3530
7585	(6 X 485*) + (1 X 310*) + (9 X 485*)	EP5, EP6, EP171, TP46, TP66, TP69, TP72, TP75, TP78, TP81, TP84, TP64	B BLK 3	30	30	B BLK 4	EP162, EP176, TP21, TP24, TP27, TP30, TP33, TP37, TP40	(2 X 310*) + (7 X 485*) + (1 X 310*)	4325
6615	(5 X 485*) + (8 X 485*) + (1 X 310*)	EP5, EP6, TP45, TP67, TP70, TP73, TP76, TP79, TP82, TP85	B BLU 5	30	30	B BLU 6	EP166, TP22, TP25, TP28, TP31, TP34, TP35, TP36, TP39, TP42	(1 X 310*) + (7 X 485*) + (2 X 310*)	4325
5525	(11 X 485*) + (2 X 95*)	EP22, EP23, EP24, EP25, UNDERPASS LIGHTING	B RED 7	30	30	B RED 8	EP10, EP12, EP15, EP16	(10 X 485*)	4850
4850	(10 X 485*)	EP22, EP23, EP24, EP25, UNDERPASS LIGHTING	B BLK 9	30	30	B BLK 10	EP10, EP12, EP15, EP16	(11 X 485*)	5335
5525	(11 X 485*) + (2 X 95*)	EP22, EP23, EP24, EP25, UNDERPASS LIGHTING	B BLU 11	30	30	B BLU 12	EP10, EP12, EP15, EP16	(11 X 485*)	5335
7760	(16 X 485*)	EP11, EP13, EP14, EP26	B RED 13	30	30	B RED 14	EP8, EP7, EP9	(10 X 485*)	4850
5335	(11 X 485*)	EP11, EP13, EP14, EP26	B BLK 15	30	30	B BLK 16	EP8, EP7, EP9	(9 X 485*)	4365
5820	(12 X 485*)	EP11, EP13, EP14, EP26	B BLU 17	30	30	B BLU 18	EP8, EP7, EP9	(9 X 485*)	4365
-	-	SPARE	B RED 19	30	30	B RED 20	SPARE	-	-
-	-	SPARE	B BLK 21	30	30	B BLK 22	SPARE	-	-
-	-	SPARE	B BLU 23	30	30	B BLU 24	SPARE	-	-
-	-	SPARE	B RED 25	30	30	B RED 26	SPARE	-	-
-	-	SPARE	B BLK 27	30	30	B BLK 28	SPARE	-	-
-	-	SPARE	B BLU 23	30	30	B BLU 30	SPARE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-
-	-	SPACE	-	-	-	-	SPACE	-	-

SUB TOTAL RED PHASE = 34275W
 SUB TOTAL BLACK PHASE = 31795W
 SUB TOTAL BLUE PHASE = 31985W
 TOTAL LOAD = 98055W

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
 400W HPS LUMINAIRE - 85W
 250W HPS LUMINAIRE - 60W
 70W AND 100W HPS LUMINAIRE - 25W

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\WML-KARMIT.GILL\DWG03779\
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ L-7 TEMPORARY WIRING DIAGRAMS STA&BRIDGE BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:50:32 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	LL.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	LL.	M.T.	

SCALE :

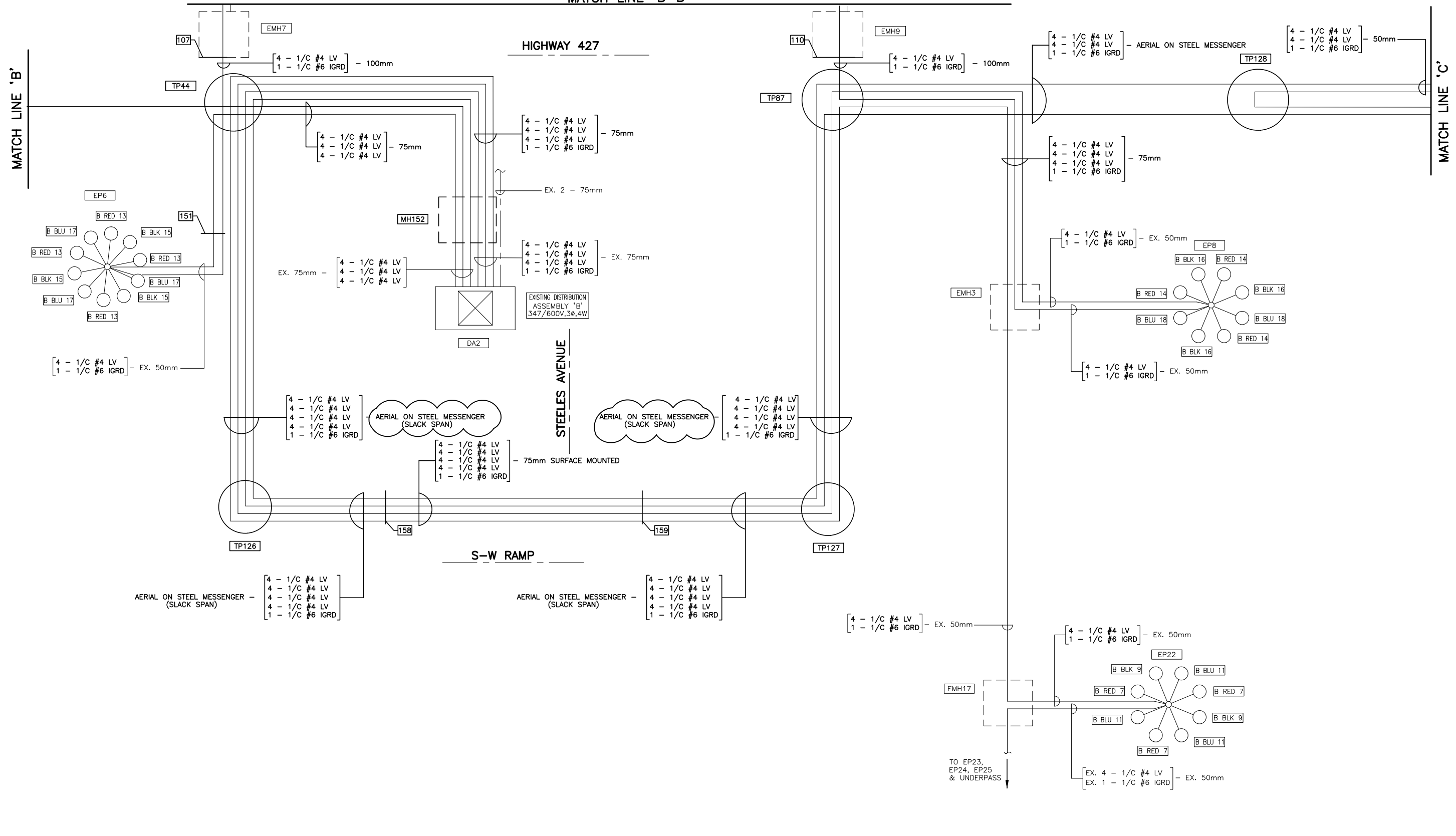
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
NAME (PRINT)	INIT.
	DATE



HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 1 STAGE 1-A,B,C, AND 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1087	B

MATCH LINE 'B-B'



FILE LOCATION: C:\PROJECTS\HWY427\WSP-CAL\MWML_KARMJIT_GILL\DWG037793
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ L-7 TEMPORARY WIRING DIAGRAMS STA&RBRWGSED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:50:32 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

SCALE :

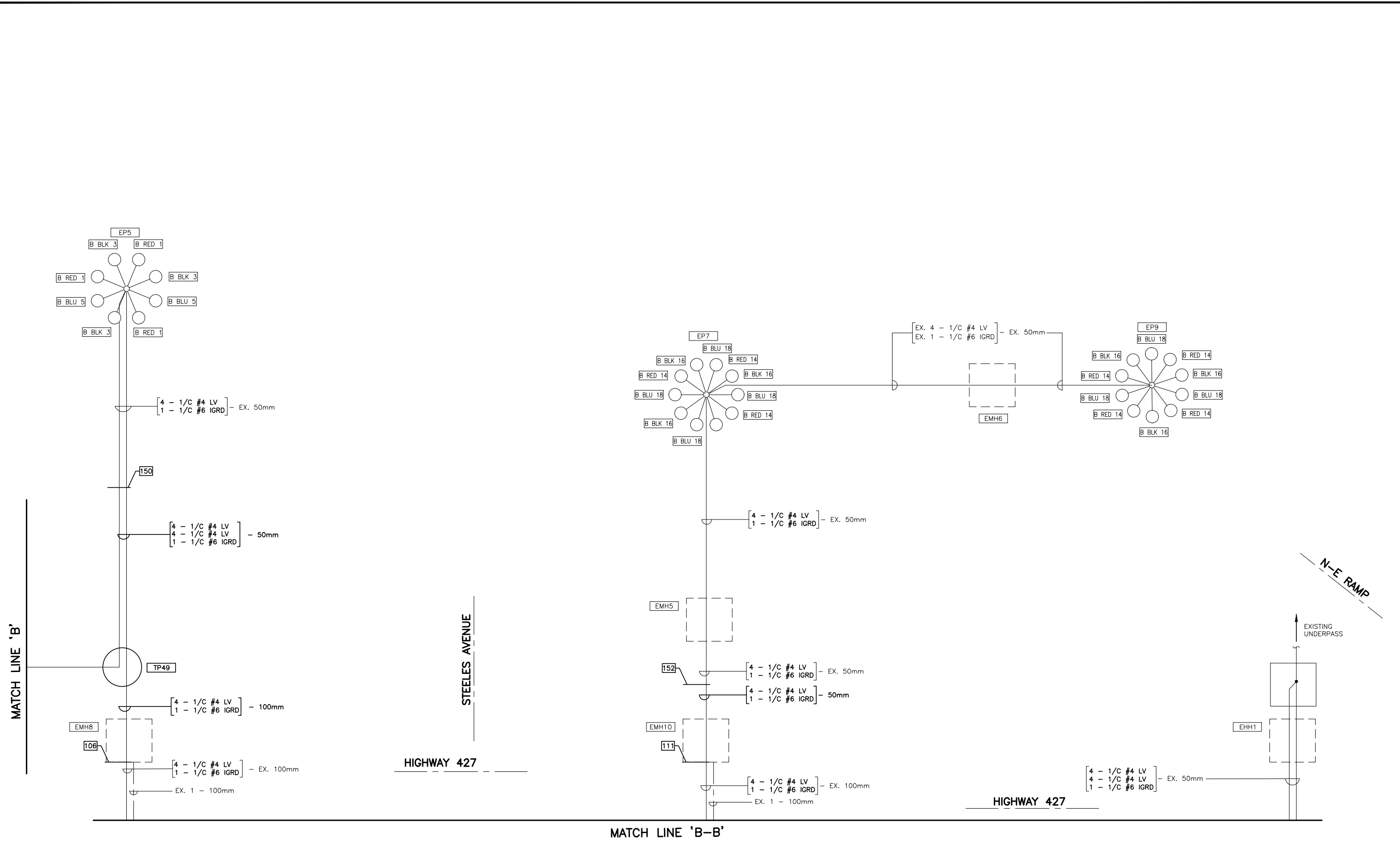
N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
CONSULTANT		
NAME (PRINT)	INT.	DATE



TITLE							
HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 4 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1090	A

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\WML_KARMJIT_GILL\DWG037793
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEC 1-7 TEMPORARY WIRING DIAGRAMS STAGED/REVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 09:50:32
 Revised



NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

SCALE :

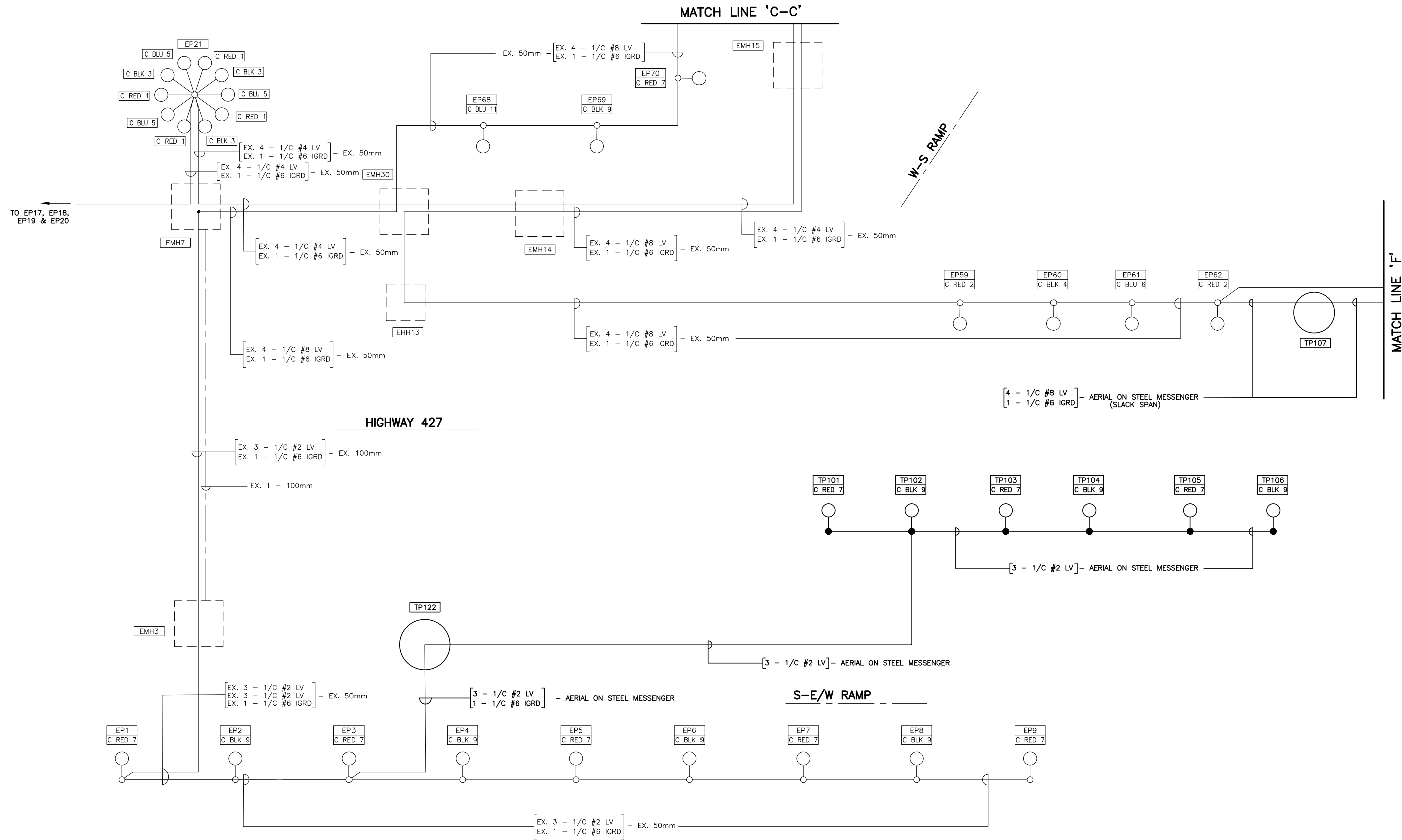
N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT	NAME (PRINT)	INT.	DATE



TITLE							
HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 5 STAGE 1-A,B,C, 2-A,B,C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1091	B



FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MMW_KARMJIT_GILL\DWG\037793
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ L-7 TEMPORARY WIRING DIAGRAMS STA&RBRWSED BY:GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:50:32 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

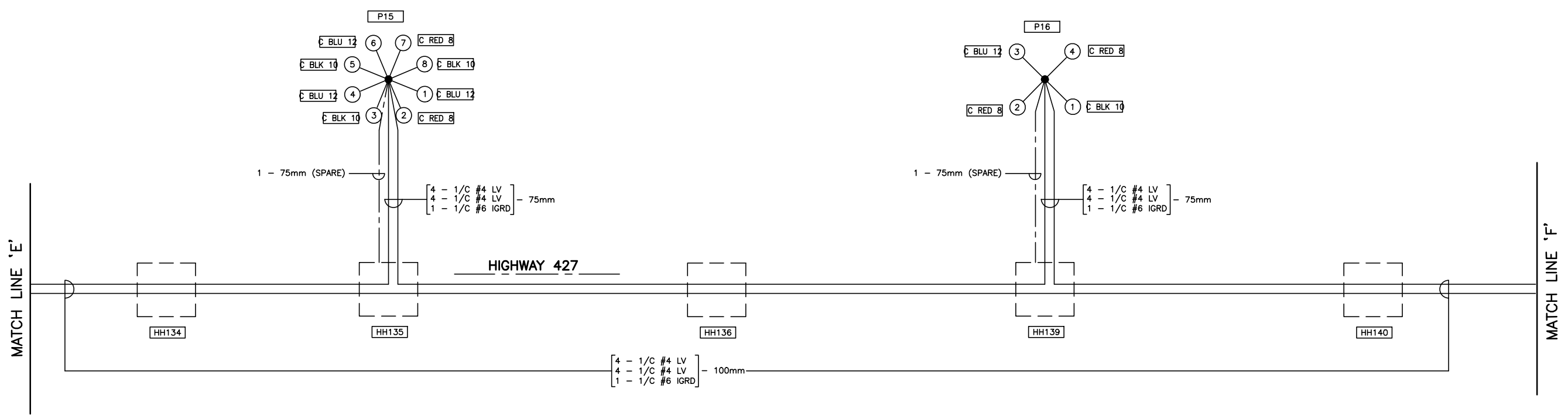
DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT			
NAME (PRINT)		INT.	DATE



TITLE HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 8 STAGE 1-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1094	B

GENERAL NOTE(S):
 A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUT.



FILE LOCATION: C:\PROJECTS\REVISED\WSP-CA\MMW_KARMIT_GILL\DWG\037793\
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ 1-7 TEMPORARY WIRING DIAGRAMS S1.C.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:54:09 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	L.L.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	L.L.	M.T.

SCALE :

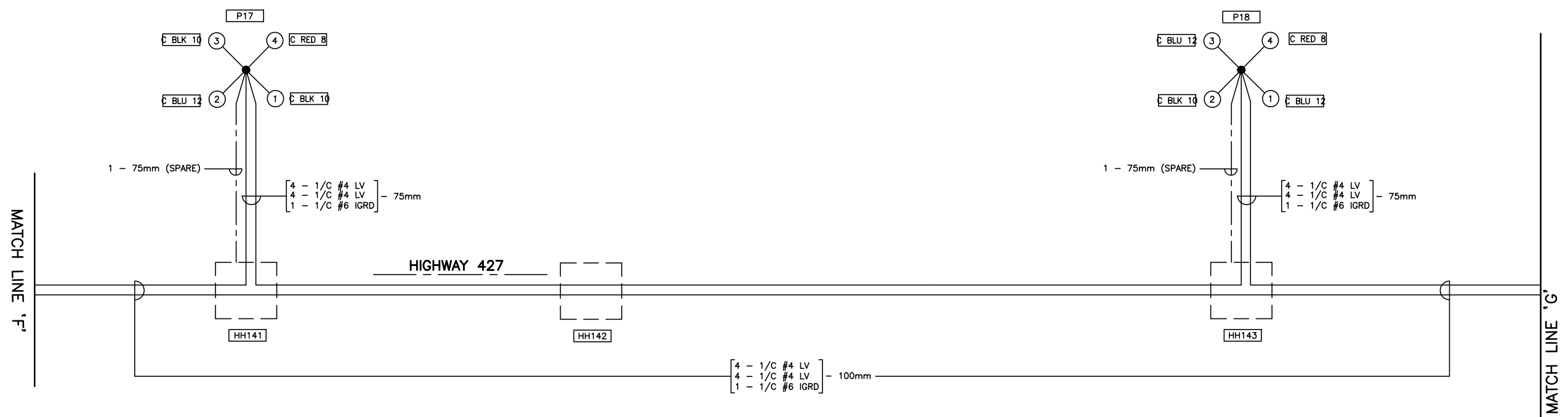
N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INT.	DATE



TITLE HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 12 STAGE 1-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1098	B

GENERAL NOTE(S):
 A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUT.



FILE LOCATION: C:\PROJECTS\REVISED\CA\MM\KARMIT.GILL\DWG\03779\ DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ 1-7 TEMPORARY WIRING DIAGRAMS S1C.DWG (REVISED BY: GILL) DRAWN BY: K. GILL MODIFIED: 18/02/15 09:54:09 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

SCALE :
 N.T.S.

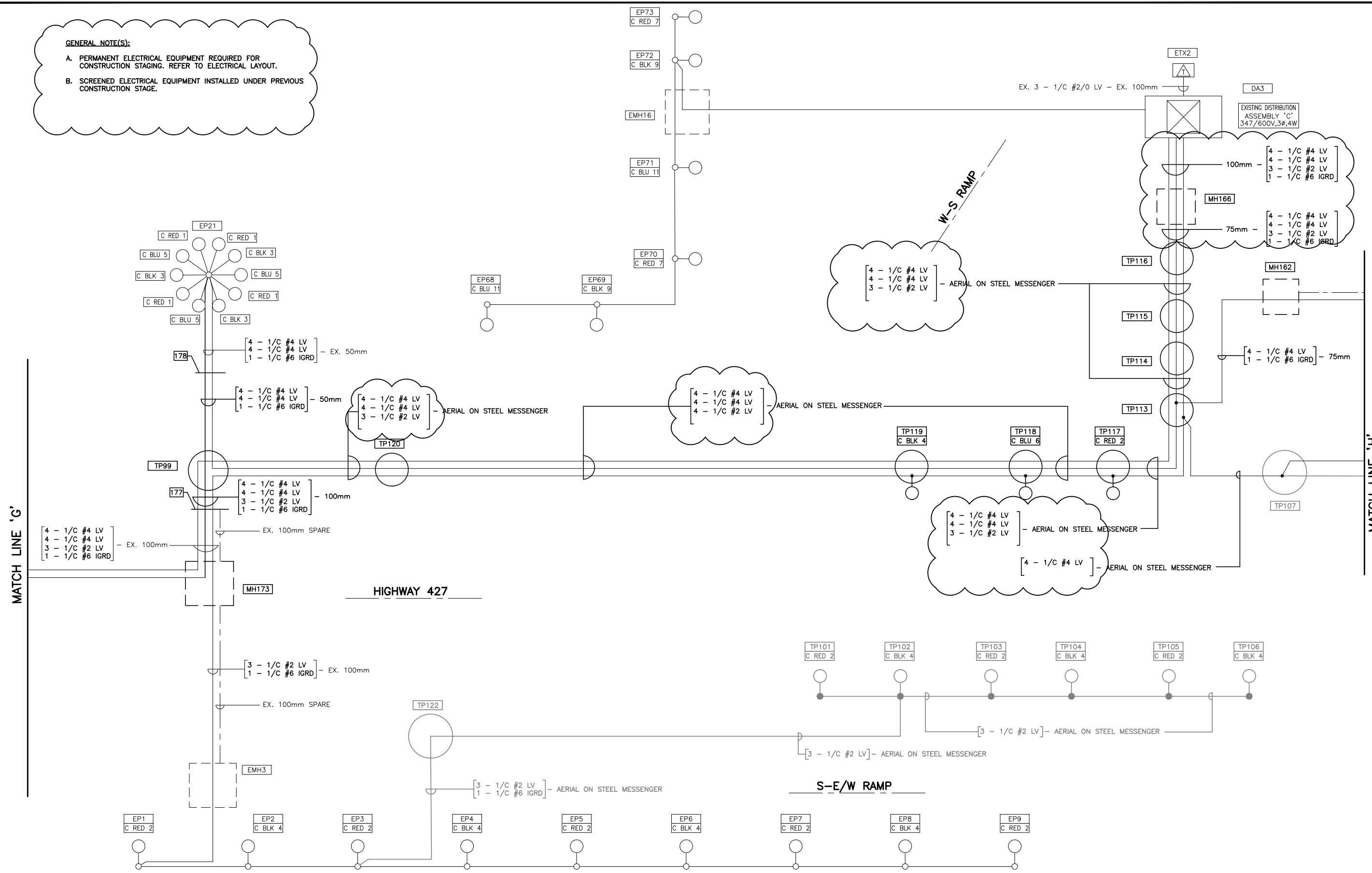
DESIGNED	NATALIA MAHABIR	
DRAWN	KARMIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INT.	DATE



TITLE HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 13 STAGE 1-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1099	B

GENERAL NOTE(S):

- A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUT.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.



FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MMW_KARMJIT_GILL\DWG\037793
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ 1-7 TEMPORARY WIRING DIAGRAMS S1C.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:54:09
 REVISIONS:

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
CONSULTANT		
	NAME (PRINT)	INT. DATE



TITLE HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 14 STAGE 1-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1100	B

GENERAL NOTE(S):

- A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUT.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

**LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'C'
347/600 V, 3Ø, 4W METERED**

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
4940	(4 X 485*) + (6 X 500)	EP21, P12, P13, P21	C RED 1	30	30	C RED 2	EP65, EP204, EP1, EP3, EP5, EP7, EP9, TP101, TP103, TP105, TP117, EX UNDERPASS LIGHTING	(7 X 310*) + (4 X 485*)	4490
4955	(3 X 485*) + (7 X 500)	EP21, P12, P13, P21	C BLK 3	30	30	C BLK 4	EP2, EP4, EP6, EP8, EP66, EP203, TP102, TP104, TP106, TP119, EX UNDERPASS LIGHTING, TP130	(6 X 310*) + (4 X 485*) + (1 X 310*)	4490
4455	(3 X 485*) + (5 X 500)	EP21, P12, P13, P21	C BLU 5	30	30	C BLU 6	EP64, EP67, EP202, TP118, EX UNDERPASS LIGHTING	(3 X 310*) + (1 X 485) + (4 X 95*)	1795
620	(2 X 310*)	EP70, EP73	C RED 7	30	30	C RED 8	P14, P15, P16, P17, P18	(9 X 500)	4500
620	(2 X 310*)	EP69, EP72	C BLK 9	30	30	C BLK 10	P14, P15, P16, P17, P18	(9 X 500)	4500
620	(2 X 310*)	EP68, EP71	C BLU 11	30	30	C BLU 12	P14, P15, P16, P17, P18	(10 X 500)	5000
-	-	SPARE	C RED 13	30	30	C RED 14	SPARE	-	-
-	-	SPARE	C BLK 15	30	30	C BLK 16	SPARE	-	-
-	-	SPARE	C BLU 17	30	30	C BLU 18	SPARE	-	-
-	-	SPARE	C RED 19	30	30	C RED 20	SPARE	-	-
-	-	SPARE	C BLK 21	30	30	C BLK 22	SPARE	-	-
-	-	SPARE	C BLU 23	30	30	C BLU 24	SPARE	-	-
-	-	SPARE	C RED 25	30	30	C RED 26	SPARE	-	-
-	-	SPARE	C BLK 27	30	30	C BLK 28	SPARE	-	-
-	-	SPARE	C BLU 29	30	30	C BLU 30	SPARE	-	-

SUB TOTAL RED PHASE = 14550W
 SUB TOTAL BLACK PHASE = 14565W
 SUB TOTAL BLUE PHASE = 11870W
 TOTAL LOAD = 40985W

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
 400W HPS LUMINAIRE - 85W
 250W HPS LUMINAIRE - 60W
 70W AND 100W HPS LUMINAIRE - 25W

FILE LOCATION: C:\PROJECTS\WSP-CA\MM-KARMIJ GILL\DWG\03779\
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ 1-7 TEMPORARY WIRING DIAGRAMS S1C.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15 09:54:09 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. PISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA		N.M.	LL.	M.T.
A	18/01/12	90% SUBMISSION TO CA		N.M.	LL.	M.T.

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMIJ GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INIT.	DATE

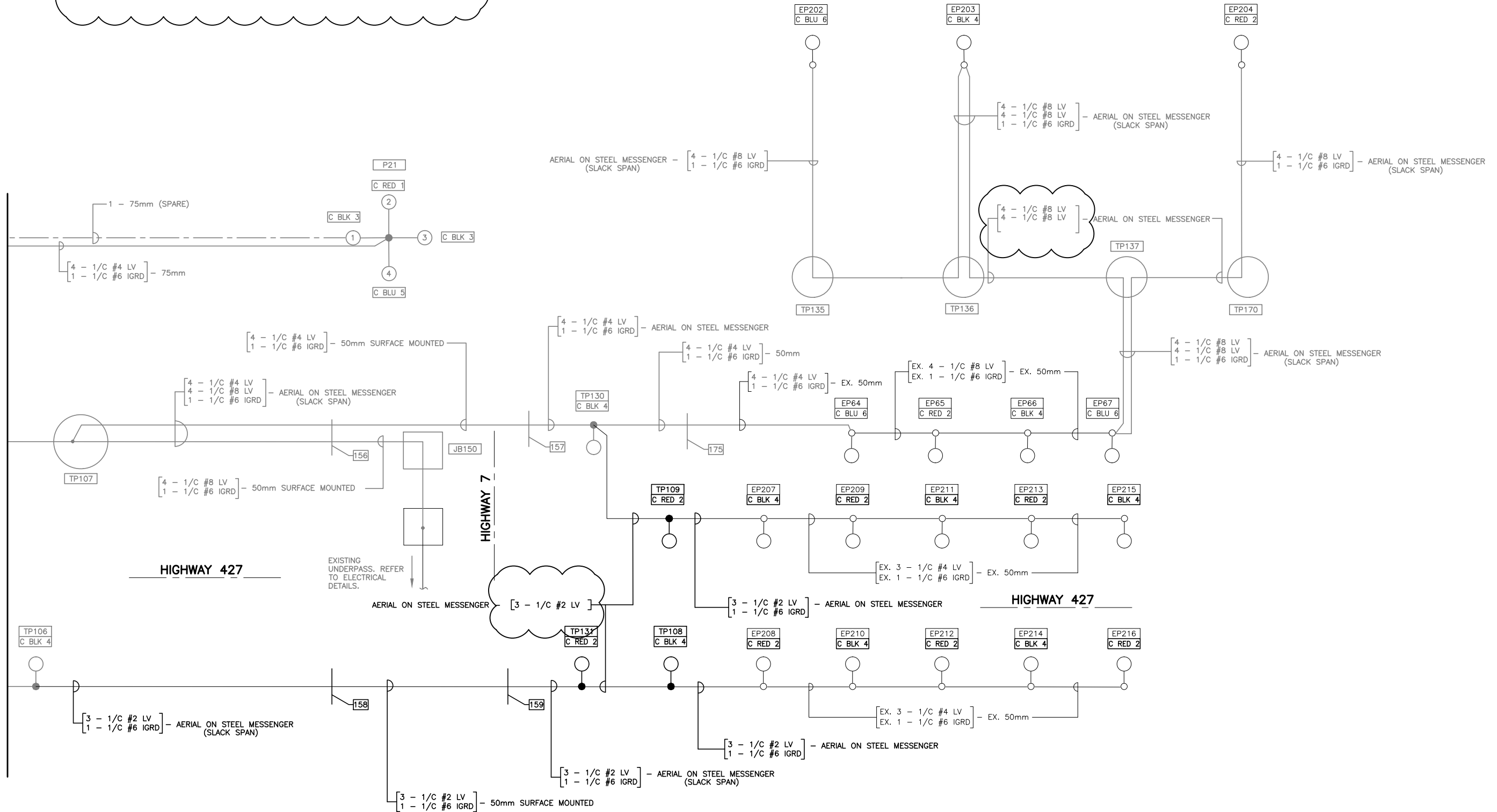


HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 16 STAGE 1-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1102	B

GENERAL NOTE(S):

- A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

REFER TO STAGES 1-C TEMPORARY WIRING DIAGRAMS



NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	
CONSULTANT	
NAME (PRINT)	INT.
	DATE



TITLE							
HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 17 STAGE 2-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1103	B

GENERAL NOTE(S):

- A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

**LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'C'
347/600 V, 3Ø, 4W METERED**

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
4940	(4 X 485*) + (6 X 500)	EP21, P12, P13, P21	C RED 1	30	30	C RED 2	EP1, EP3, EP5, EP7, EP9, EP65, EP204, EP208, EP209, EP212, EP213, EP216, TP101, TP103, TP105, TP109, TP117, TP131, EX UNDERPASS LIGHTING	(12 X 310*) + (6 X 485*) + (4 X 95)	7010
4955	(3 X 485*) + (7 X 500)	EP21, P12, P13, P21	C BLK 3	30	30	C BLK 4	EP2, EP4, EP6, EP8, EP203, EP207, EP210, EP211, EP214, EP215, TP102, TP104, TP106, TP108, TP119, EX UNDERPASS LIGHTING, TP130	(11 X 310*) + (4 X 485) + (4 X 95*) + (1 X 310*)	6040
4455	(3 X 485*) + (6 X 500)	EP21, P12, P13, P21	C BLU 5	30	30	C BLU 6	EP64, EP67, EP202, TP118, EX UNDERPASS LIGHTING	(3 X 310*) + (1 X 485) + (4 X 95*)	1795
620	(2 X 310*)	EP70, EP73	C RED 7	30	30	C RED 8	P14, P15, P16, P17, P18	(9 X 500)	4500
620	(2 X 310*)	EP69, EP72	C BLK 9	30	30	C BLK 10	P14, P15, P16, P17, P18	(9 X 500)	4500
620	(2 X 310*)	EP68, EP71	C BLU 11	30	30	C BLU 12	P14, P15, P16, P17, P18	(10 X 500)	5000
-	-	SPARE	C RED 13	30	30	C RED 14	SPARE	-	-
-	-	SPARE	C BLK 15	30	30	C BLK 16	SPARE	-	-
-	-	SPARE	C BLU 17	30	30	C BLU 18	SPARE	-	-
-	-	SPARE	C RED 19	30	30	C RED 20	SPARE	-	-
-	-	SPARE	C BLK 21	30	30	C BLK 22	SPARE	-	-
-	-	SPARE	C BLU 23	30	30	C BLU 24	SPARE	-	-
-	-	SPARE	C RED 25	30	30	C RED 26	SPARE	-	-
-	-	SPARE	C BLK 27	30	30	C BLK 28	SPARE	-	-
-	-	SPARE	C BLU 29	30	30	C BLU 30	SPARE	-	-

SUB TOTAL RED PHASE = 17070W
 SUB TOTAL BLACK PHASE = 16115W
 SUB TOTAL BLUE PHASE = 11870W
 TOTAL LOAD = 45055W

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
 400W HPS LUMINAIRE - 85W
 250W HPS LUMINAIRE - 60W
 70W AND 100W HPS LUMINAIRE - 25W

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\WML-KARMJIT.GILL\DWG037793
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ 1-7 TEMPORARY WIRING DIAGRAMS SZ&BREVISED BY-GILL
 DRAWN BY: K. GILL
 MODIFIED: 18/02/15
 10:25:02
 Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
NAME (PRINT)	INT.	DATE



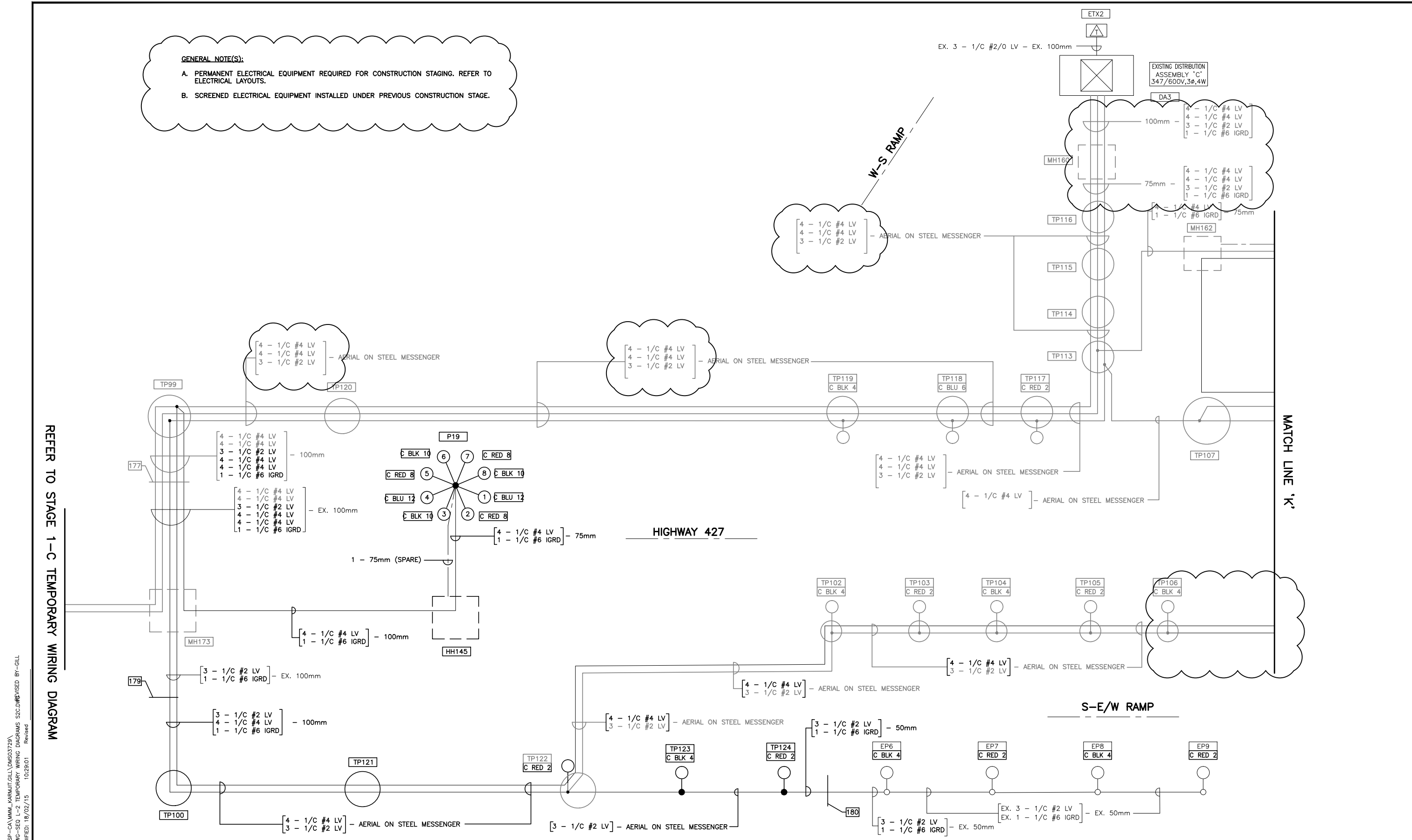
HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 18 STAGE 2-A,B							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1104	B

GENERAL NOTE(S):

- A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

REFER TO STAGE 1-C TEMPORARY WIRING DIAGRAM

MATCH LINE 'K'



FILE LOCATION: C:\PROJECTS\HWY427\CA\MM_KARMJIT_GILL\DWG\037793.DWG
 DRAWING NAME: 427E-ELE-TL-W-DWG-SEC L-2 TEMPORARY WIRING DIAGRAMS SZC.DWG
 DRAWN BY: K. GILL
 MODIFIED: 18/03/15 10:29:01
 REVISIONS:

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA			N.M.	L.L. M.T.
A	18/01/12	90% SUBMISSION TO CA			N.M.	L.L. M.T.

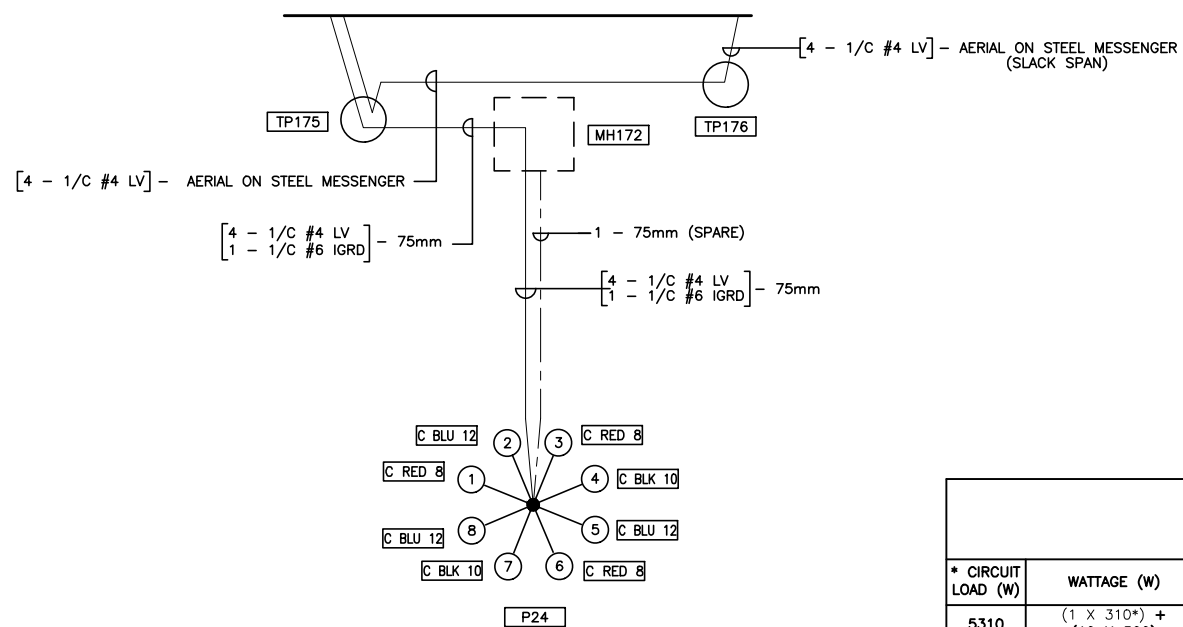
SCALE :
N.T.S.

DESIGNED	NATALIA MAHABIR	
DRAWN	KARMJIT GILL	
CHECKED	LENNOX LUE	
APPROVED LEAD ENGINEER	MARIO TEDESCO	
APPROVED PROJ. MANAGER		
CONSULTANT		
NAME (PRINT)	INT.	DATE



TITLE HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 19 STAGE 2-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
H427-D	N	9	ELE	000	DWG	1105	B

MATCH LINE 'G-G'



GENERAL NOTE(S):

- A. PERMANENT ELECTRICAL EQUIPMENT REQUIRED FOR CONSTRUCTION STAGING. REFER TO ELECTRICAL LAYOUTS.
- B. SCREENED ELECTRICAL EQUIPMENT INSTALLED UNDER PREVIOUS CONSTRUCTION STAGE.

LOAD SUMMARY TABLE EXISTING SUPPLY LOCATION 'C'
347/600 V, 3Ø, 4W METERED

* CIRCUIT LOAD (W)	WATTAGE (W)	DESCRIPTION	CIRCUIT NUMBER	BREAKER SIZE (A)	BREAKER SIZE (A)	CIRCUIT NUMBER	DESCRIPTION	WATTAGE (W)	* CIRCUIT LOAD (W)
5310	(1 X 310*) + (10 X 500)	EP204, P12, P13, P21, P25	C RED 1	30	30	C RED 2	EP6, EP8, EP207, EP211, EP215, TP102, TP104, TP106, TP119, TP123, EX UNDERPASS LIGHTING	(6 X 485*) + (4 X 310*) + (4 X 95*)	4530
5310	(1 X 310*) + (10 X 500)	EP203, P12, P13, P21, P25	C BLK 3	30	30	C BLK 4	EP7, EP9, EP209, EP213, TP103, TP105, TP109, TP117, TP122, TP124, EX UNDERPASS LIGHTING, TP130	(5 X 485*) + (5 X 310*) + (4 X 95*) + (1 X 310*)	4665
5120	(2 X 310*) + (9 X 500)	EP67, EP202, P12, P13, P21, P25	C BLU 5	30	30	C BLU 6	TP118, EX UNDERPASS LIGHTING	(1 X 485*) + (4 X 95*)	865
-	-	SPARE	C RED 7	30	30	C RED 8	P14, P15, P16, P17, P18, EP208, EP212, EP216, P24	(12 X 500) + (3 X 310*)	6930
-	-	SPARE	C BLK 9	30	30	C BLK 10	P14, P15, P16, P17, P18, EP210, EP214, P24	(11 X 500) + (2 X 310*)	6120
-	-	SPARE	C BLU 11	30	30	C BLU 12	P14, P15, P16, P17, P18, P24	(13 X 500)	6500
-	-	SPARE	C RED 13	30	30	C RED 14	SPARE	-	-
-	-	SPARE	C BLK 15	30	30	C BLK 16	SPARE	-	-
-	-	SPARE	C BLU 17	30	30	C BLU 18	SPARE	-	-
-	-	SPARE	C RED 19	30	30	C RED 20	SPARE	-	-
-	-	SPARE	C BLK 21	30	30	C BLK 22	SPARE	-	-
-	-	SPARE	C BLU 23	30	30	C BLU 24	SPARE	-	-
-	-	SPARE	C RED 25	30	30	C RED 26	SPARE	-	-
-	-	SPARE	C BLK 27	30	30	C BLK 28	SPARE	-	-
-	-	SPARE	C BLU 29	30	30	C BLU 30	SPARE	-	-
		SUB TOTAL RED PHASE = 16770W							
		SUB TOTAL BLACK PHASE = 16095W							
		SUB TOTAL BLUE PHASE = 12485W							
		TOTAL LOAD = 45350W							

* BALLAST LOSSES ARE INCLUDED IN THE LOAD TABLE AS FOLLOWS:
400W HPS LUMINAIRE - 85W
250W HPS LUMINAIRE - 60W
70W AND 100W HPS LUMINAIRE - 25W

FILE LOCATION: C:\PROJECTS\HWY427\WSP-CA\MM-KARMJIT GILL\DWG03729\ DRAWING NAME: 427E-ELE-TL-W-DWG-SEQ L-2 TEMPORARY WIRING DIAGRAMS SZIC.DWG REVISION BY: GILL
DRAWN BY: K. GILL
MODIFIED: 18/02/15
10:29:01
Revised

NO.	DATE	REVISIONS	BY	CHK	LEAD. DISC.	PROJ. MAN.
B	18/03/20	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	
A	18/01/12	90% SUBMISSION TO CA	N.M.	L.L.	M.T.	

SCALE :

N.T.S.

DESIGNED	NATALIA MAHABIR
DRAWN	KARMJIT GILL
CHECKED	LENNOX LUE
APPROVED LEAD ENGINEER	MARIO TEDESCO
APPROVED PROJ. MANAGER	

CONSULTANT			
NAME (PRINT)		INT.	DATE



TITLE HWY 427 EXPANSION TEMPORARY WIRING DIAGRAM - 21 STAGE 2-C							
PROJECT ID.	STAGE IDENTIFIER	DESIGN PACKAGE NUMBER	DISCIPLINE	STRUCTURE NUMBER	DOCUMENT TYPE	DRAWING NUMBER	REVISION NUMBER
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