

ELECTRICAL SPECIFICATION

Electrical installation shall be in accordance with the current edition of The Canadian Electrical Code, Provincial, Municipal and other codes, rules and regulations.

The Contractor shall include the furnishing of labor, new material, equipment and services necessary and reasonably implied and/or incidental to the complete installation of the electrical Work as shown on the plans and as specified. Supply and install all devices required for the complete approved system, operating to the complete satisfaction of the Contract Administrator.

Prepare and submit to the proper authorities all necessary permits and pay all fees.

Upon completion and before final payment is made, present to Contract Administrator a Certificate of Approval for all electrical Work from the inspection department having jurisdiction.

Electrical installation including electrical equipment supplied, installed or connected shall be tested in the presence of the Contract Administrator on completion of the Work.

The Contractor shall visit the site and ascertain that all Work indicated can be carried out without additional cost to the Contract Administrator.

The Contractor shall guarantee the satisfactory operation of all Work and apparatus included and installed under this section of the specification for a period of twelve (12) calendar months after the final acceptance of the complete building.

The Contractor shall be responsible for any damage caused the Contract Administrator or their Subcontractors by improperly carrying out this Contract.

The Contractor shall carefully examine all drawings and specifications relating to the Work to be certain that the Work under this Contract can be satisfactorily carried out and prior to the submission of his Bid, report at once to the Contract Administrator any defect, discrepancy, omission or interference affecting the Work of this section or the guarantee of same.

Submit one set of corrected "as-built" sepias and one electronic copy 100% AutoCAD 2007 compatible to the Contract Administrator.

Grounding shall be in accordance with the latest edition of The Canadian Electrical Code.

Panelboards, motor starters, disconnect switches, etc., shall be properly identified by means of engraved lamacoid nameplates.

Conduits shall be rigid PVC unless otherwise noted on drawings or unless prohibited by regulations. Conduits shall not be exposed in any area where concealed Work is required without prior written approval.

Outlet, Junction and switch boxes shall be galvanized pressed steel of size and type to suit the requirements of each outlet. Outlet boxes shall be accessible.

All wiring shall be in conduit.

Wire and cable shall be copper of standard AWG sizes with 600V (90 Degree C) insulation. Insulation shall be X-Link Polyethylene unless otherwise noted on drawings or prohibited by regulations. Aluminum conductors will not be accepted. Minimum wire size shall be # 12 AWG.

Panelboards shall be factory-assembled custom made of size, type and arrangement as shown on drawing. Circuit breakers shall be bolt-in, moulded-case, thermal and magnetic trip, and shall match existing. Trip values as shown on drawing. Two or three pole breakers shall have common trip units. Mount a typewritten directory behind a plastic shield on the inside of panelboard doors. All distribution equipment to be sprinkler-proof. Minimum fault rating of circuit breakers shall be 22KA, S.C.I.C.

Wall-mounted flush switches shall be specification grade 15A,125VAC. White handle, side or back wiring. Mount receptacles 305mm above finished floor unless otherwise noted on the drawings.

Duplex receptacles shall be specification grade 15A,125VAC, parallel slot, U-ground, white, side and back wiring. Mount receptacles 305mm above finished floor or 150mm above counter tops unless otherwise noted on the drawings.

Cover plates for flush-mounted receptacles and switches on concealed conduit system shall be stainless steel.

Mount surface-mounted equipment such as panelboards, telephone cabinets and other electrical equipment on plywood mounting boards, c/w gray enamel finish.

Any cutting and patching in existing walls or floors required for the addition or relocation of electrical equipment shall be the responsibility of the Contractor.

Existing Work:
The Contractor shall take into account items which he is responsible for due to the changes and alterations to the existing building and allow for such items that may occur in his tendered price.

The Contractor is to notify the supply utility of all load increases to existing service.

Existing conduits, wire and outlets which are in good repair and sized to meet all code requirements, may be reused. All equipment to be reused must be approved by the local inspection department and the Contract Administrator.

The electrical contractor shall relocate outlets at no additional charge if requested prior to roughing in. The electrical contractor shall relocate outlets at no additional charge if requested by the local authority having jurisdiction.

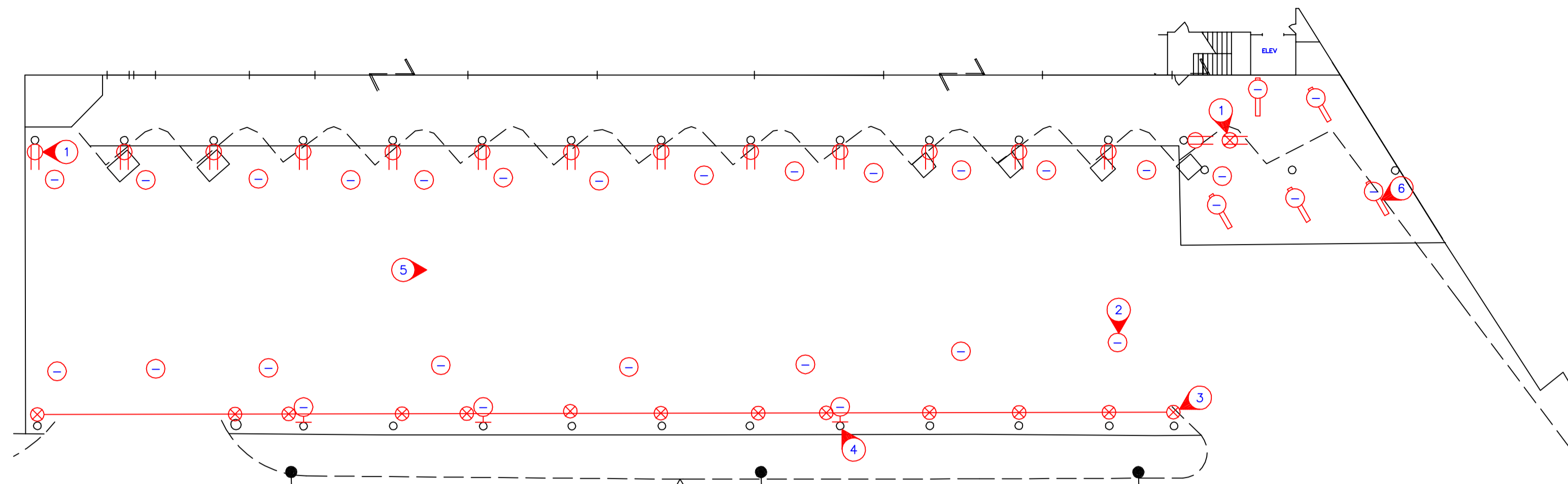
Electrical installation shall be installed in conformance with the barrier free requirements applicable in the Building Code.

Equipment and material shall be installed as specified. Requests for equal status shall be submitted to Contract Administrator in accordance with B6.

Contractor shall submit shop drawings to Contract Administrator for review prior to ordering equipment.

Supply and install, wire and connect all luminaires (to be complete with lamps) as indicated. All luminaires exceeding 150V shall be complete with an integral disconnecting means that will simultaneously open all circuit conductors and conductors supplying the ballast(s). All luminaires exceeding 150V shall be marked in a conspicuous, legible, and permanent manner adjacent to the disconnecting means, identifying the specific purpose. Refer to Canadian Electrical Code rule 30-308(4).

Pay all utility contribution charges for associated power service. Coordinate with utility to ensure availability of service.



DEMOLITION - MAIN FLOOR PLAN
SCALE: 1:250

SYMBOL SCHEDULE

- Fluorescent luminaire, B1-A - denotes panel circuit No. and switch.
- Night light fluorescent luminaire.
- Ceiling mounted luminaire.
- Wall mounted luminaire. 'A' denotes type.
- Junction box.
- Duplex receptacle.
- 208V receptacle.

GENERAL ELECTRICAL NOTES

1. PROVIDE ELECTRICAL DEMOLITION TO ACCOMMODATE NEW CONSTRUCTION/RENOVATIONS. EXAMINE THE SITE AND LOCAL CONDITIONS TO ESTABLISH ALL INFORMATION PERTAINING TO THE ELECTRICAL DEMOLITION SCOPE OF WORK. NO EXTRA COMPENSATION WILL BE ALLOWED DUE TO FAILURE TO MAKE THIS EXAMINATION.
2. ALL ITEMS REQUIRED TO BE DEMOLISHED ARE NOT NECESSARILY SHOWN. THOSE INDICATED ARE FOR REFERENCE ONLY. ALL ITEMS INTERFERING WITH NEW CONSTRUCTION SHALL BE REMOVED AT NO ADDITIONAL COST.

SPECIFIC ELECTRICAL NOTES

- 1 REMOVE EXISTING RECEPTACLES. CAP WIRING AND BLANK OFF, MAKE SAFE. (TYPICAL)
- 2 EXISTING CEILING MOUNTED HID, DISCONNECT AND REMOVE ALL INCLUDING ALL ASSOCIATED WIRING AND CONDUIT. (TYPICAL)
- 3 EXISTING CEILING CONDUIT AND J.B. TO BE REMOVED. (TYPICAL)
- 4 EXISTING LUMINAIRE TO BE REMOVED. (TYPICAL)
- 5 ALL EXISTING UNUSED ELECTRICAL ON UNDERSIDE OF PARKING GARAGE FLOOR ABOVE TO BE REMOVED BACK TO BUILDING ENVELOPE, MAKE SAFE.
- 6 8' FLUORESCENT LUMINAIRE TO BE REMOVED. (TYPICAL)

PANEL MOUNTING LOCATION	'T' SURFACE SEE DRAWING	VOLTAGE MAIN BUS	120/208V-3PH-4W 200A	REMARKS
	DESCRIPTION	CIRCUIT		DESCRIPTION
	NIGHT LIGHTING (#8 WIRE)	1	22	SIGN
	NIGHT LIGHTING (#10 WIRE)	2	23	EXISTING LIGHTS
	NIGHT LIGHTING (#8 WIRE)	3	24	EXISTING LIGHTS
	NIGHT LIGHTING (#10 WIRE)	4	25	EXISTING LIGHTS
	LIGHTING (#8 WIRE)	5	26	CONTACTORS
	LIGHTING (#8 WIRE)	6	27	PANEL RECEPTACLE
	LIGHTING (#8 WIRE)	7	28	SPACE
	LIGHTING (#8 WIRE)	8	29	SPACE
	LIGHTING (#10 WIRE)	9	30	SPACE
	LIGHTING (#10 WIRE)	10	31	SPACE
	LIGHTING (#10 WIRE)	11	32	SPACE
	LIGHTING (#10 WIRE)	12	33	SPACE
	LIGHTING (#10 WIRE)	13	34	SPACE
	LIGHTING (#10 WIRE)	14	35	SPACE
	LIGHTING (#10 WIRE)	15	36	SPACE
	LIGHTING (#10 WIRE)	16	37	SPACE
	LIGHTING (#10 WIRE)	17	38	SPACE
	LIGHTING (#8 WIRE)	18	39	EXISTING LIGHTS
	LIGHTING (#8 WIRE)	19	40	EXISTING LIGHTS
	LIGHTING (# 10 WIRE)	20	41	SPACE
	SIGN	21	42	SPACE

PANEL MOUNTING LOCATION	'T2' SURFACE SEE DRAWING	VOLTAGE MAIN BUS	120/208V-3PH-4W 100A	REMARKS
	DESCRIPTION	CIRCUIT		DESCRIPTION
	SPACE	1	22	SPACE
	SPACE	2	23	SPACE
	SPACE	3	24	SPACE
	SPACE	4	25	SPACE
	SPACE	5	26	SIGN/CONTACTOR
	SPACE	6	27	30 - HEATER
	SPACE	7	28	30 - HEATER
	SPACE	8	29	15 - HEATER
	SPACE	9	30	15 - HEATER
	SPACE	10	31	LIGHTING
	SPACE	11	32	SIGN
	SPACE	12	33	30 - HEATER
	SPACE	13	34	30 - HEATER
	SPACE	14	35	15 - HEATER
	SPACE	15	36	25 - HEATER
	SPACE	16	37	LIGHTING
	SPACE	17	38	SPACE
	SPACE	18	39	SPACE
	SPACE	19	40	SPACE
	SPACE	20	41	SPACE
	SPACE	21	42	SPACE

AS-BUILT DRAWINGS
CAUTIONARY NOTE: AS-BUILT DRAWINGS ARE BASED ON ACCURACY OF SITE PROVIDED INFORMATION. FINAL RELIANCE ON AS-BUILT DRAWING ACCURACY SHOULD BE BASED ON A SITE REVIEW ONLY.

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF NOVA 3 ENGINEERING LTD. AND MAY ONLY BE REPRODUCED WITH THE WRITTEN PERMISSION OF NOVA 3 ENGINEERING LTD. THE CONCEPT AND DESIGN INCORPORATED INTO THIS DRAWING ARE BASED ON INFORMATION PROVIDED BY THE CLIENT AND OTHER RELATED SOURCES. PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR DRAWING AND DESIGN UNLESS DRAWING IS ACCOMPANIED BY ORIGINAL SEALED AND SIGNED LETTER OF INTENT AND CERTIFICATE OF INSPECTION. REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.

UNDERGROUND STRUCTURES
SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.	BENCHMARK INFO HERE	DESIGNED BY	DZ
		DRAWN BY	DF
		CHECKED BY	VJT / DZ
		APPROVED BY	
		HOR. SCALE	AS SHOWN
		VERTICAL	
NO.	REVISIONS	DATE	JULY 31, 2009

NOVA 3
NOVA 3 ENGINEERING LTD.
CONSULTING ENGINEERS
201-120 FORT STREET
WINNIPEG, MANITOBA R3C 1C7
TEL: (204) 943-6142
FAX: (204) 942-1276
RELEASED FOR CONSTRUCTION

ENGINEER'S SEAL
CONSULTANT PROJECT NO.
29-016

THE CITY OF WINNIPEG
TRANSIT DEPARTMENT
BALMORAL TRANSIT TERMINAL
ELECTRICAL SCHEDULES & DEMOLITION
CITY DRAWING NUMBER P-3313-09
SHEET 9 OF 10
540-2009

BUS DETECTION AND WARNING SYSTEM

Provide a complete and operational bus detection and warning system to the complete satisfaction of the Contract Administrator. Electrical provisions include, but are not necessarily limited to the following:

- Provision of the supply and install of directional probe system to detect inbound vehicles only. Probes to be located in the roadway 200m from the entrance to the station. All wiring to be in minimum 1.5" conduit. Provide 18"x24" splice pit at curb to CoW standards. For connection to probe. Wiring to be 14/4 shielded buried cable. One probe will be required west of the station (in east-bound lane) and one will be required east of the station (in west-bound lane). Coordinate conduit routing with Contract Administrator prior to road work or rough-in.
- Each probe is to be connected to a processor c/w power supply in heated electrical room. Upon detection of vehicle, processor is to signal a timed relay which will activate the following after a programmable delay:
 - signal devices at east end of station are to operate upon activation of west-bound (inbound) vehicles only. Devices at west end of station to operate similarly.
 - audible chime at north and south pedestrian gates.
 - illuminate flashing LED lights mounted on top of pedestrian gates (both sides of pedestrian crossing). Lights are to continue flashing for a programmable duration. Initial setting to be 30 seconds from activation. LED signals to be Edwards 103 series, NEMA 4X rated weather-proof and vandal-resistant.
 - chime is to sound every time a vehicle passes the detector and lights to flash for full duration after each vehicle.
- Manufacturers: Probes to be Sure Action Incorporated P8000 c/w 212 Processor or approved equal.
- Equipment is to be supplied by local manufacturer's rep, such as National Industrial Communications Inc. Final connections to be performed by manufacturer's representative.
- Provide complete commissioning and training of system to Contract Administrator's satisfaction.

GENERAL ELECTRICAL NOTES

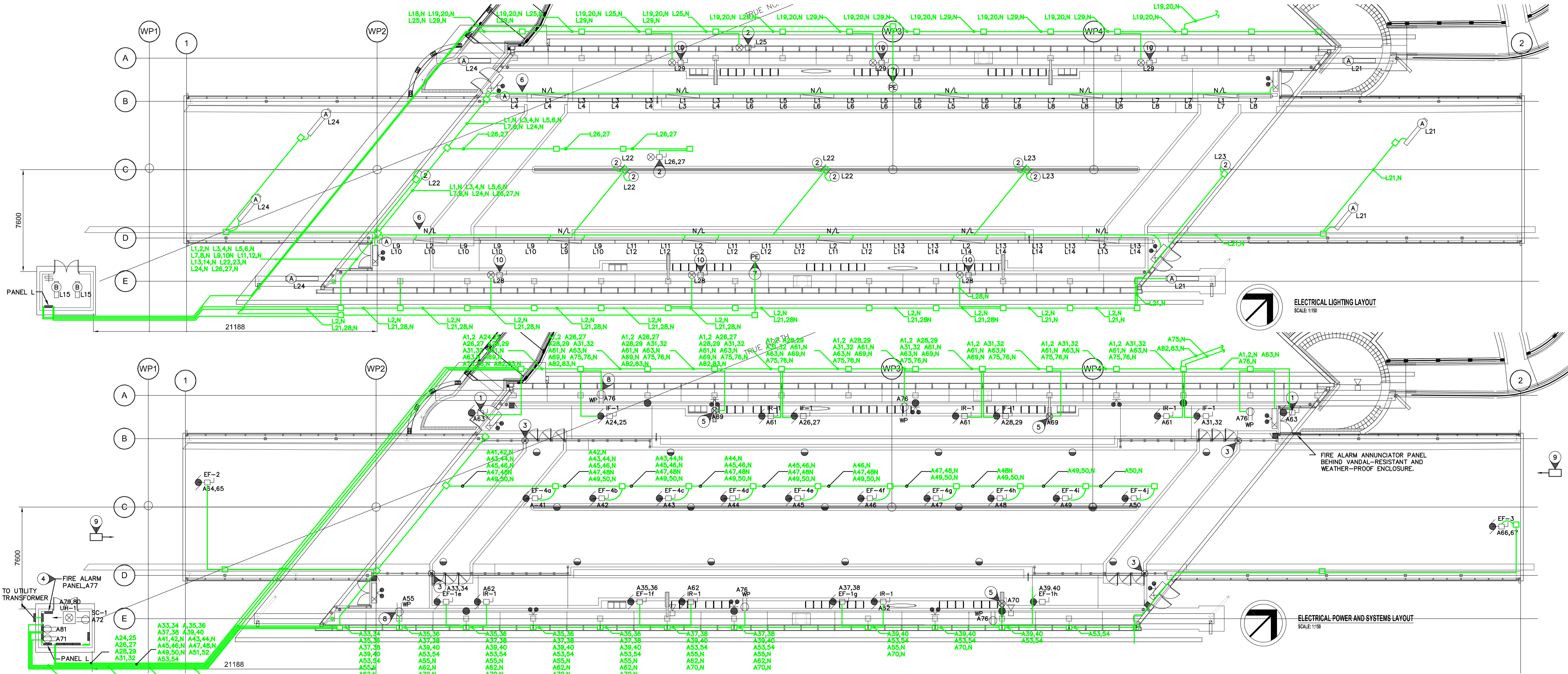
- ALL WIRING AND ELECTRICAL WITHIN STATION TO BE IP65 RATED DUST TIGHT AND WATER TIGHT CONSTRUCTION.
- ELECTRICAL CONDUIT THROUGHOUT THE BUILDING IS TO BE CONCEALED BY STRUCTURE WHERE POSSIBLE. EXPOSED CONDUIT IS ONLY TO BE RUN WHERE ABSOLUTELY NECESSARY AND ONLY AFTER RECEIVING WRITTEN APPROVAL FROM CONTRACT ADMINISTRATOR. CONDUIT IS NOT TO BE RUN IN ROADBED, EXCEPT FOR CONDUIT REQUIRED FOR BUS DETECTION AND WARNING SYSTEM AND FOR CONDUIT FROM THE ELECTRICAL ROOM ARE TO BE RUN UNDERGROUND BETWEEN WP1 AND WP2. E.C. TO CONFIRM PIPE LAYOUT PRIOR TO POURING OF ROADWAY SLAB OR PLATFORMS.

SPECIFIC ELECTRICAL NOTES

- WIRE AND CONNECT AUTOMATIC DOOR OPERATOR AND ALL RELATED CONTROLS.
- WIRE AND CONNECT EXTERIOR SIGNAGE AS REQUIRED.
- PROVIDE BUS WARNING FLASHING LIGHTS AT TOP OF POSTS OF CROSSING GATES. WIRE AND CONNECT TO BUS DETECTION AND WARNING SYSTEM. PROVIDE AUDIBLE CHIME AT NEAREST COLUMN.
- TIE ALL SPRINKLER FLOW, TAMPER, PRESSURE AND LOW TEMP SWITCHES TO FIRE ALARM PANEL.
- PROVIDE POWER TO TRANSIT EBBD.
- EACH TYPE A LUMINAIRE WITHIN BUILDING TO HAVE BALLASTS WIRING TO DIFFERENT CIRCUITS AS INDICATED. FOR DAYLIGHT HARVESTING, FIXTURES TO BE REDUCED TO SINGLE BALLAST OPERATION AND OFF AS DICTATED BY LIGHTING CONTROL SYSTEM.
- INTERIOR MOUNTED PHOTOCELL FOR DAYLIGHT HARVESTING. TIE TO LIGHTING CONTROL PANEL.
- MOUNTED ON COLUMN IN MECHANICAL SERVICE CHASE. (TYPICAL 3 PER SIDE.)
- BUS DETECTION PROBE. LOCATE 200m FROM STATION. REFER TO CIVIL DRAWINGS. TIE TO BUS DETECTION AND WARNING SYSTEM.
- WIRE AND CONNECT SIGNAGE AS REQUIRED. CONFIRM EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN.
- FUTURE CCTV MONITOR C/W HEATED VANDAL-RESISTANT ENCLOSURE (BY E.C.) CONFIRM EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN.

SYMBOL SCHEDULE

- B1-0 Fluorescent luminaire, B1-a - denotes panel circuit No. and switch.
- N/L Night light fluorescent luminaire. Wire one ballast to night lighting circuit, and the remainder to regular lighting circuit shown.
- Ceiling mounted luminaire.
- Wall mounted luminaire. 'A' denotes type.
- Post light
- Single pole switch.
- Duplex receptacle.
- Duplex receptacle - weather proof.
- Ground fault duplex receptacle.
- Fireguard backboard c/w power supply and #6 AWG green ground wire to building ground and c/w 1-4" entrance conduit as required by the telephone utility and 1-4" entrance conduit as required by CATV utility.
- Fire alarm pull station c/w polycarbonate cover.
- Fire alarm audible device, c/w strobe light.
- Fire alarm fixed temperature thermal detector.
- CCTV camera c/w power supply and empty conduit as required by CCTV supplier. Verify location before installation.
- Panic alarm interactive communication station.
- Panic alarm / public address system wall mounted weather-proof speaker.
- UH-1 Electric unit heater c/w built in thermostat unless otherwise indicated. 'UH-1' denotes type. See heating schedule for details.
- Junction box.
- Motor. Refer to mechanical for exact location.
- Disconnect switch to suit application. By div. 16.
- Emergency double head fixture. Wire to battery bank. Weather-proof and vandal-resistant.
- Universal LED exit sign. Wire to emergency battery bank. Weather-proof and vandal-resistant.
- Photo-cell.



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AS-BUILT DRAWING
 Completed By: Bob Wilson
 Date: March 2012
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 WINNIPEG, MANITOBA
 TEL: 786-3384
 FAX: 783-2750
 www.wescan-services.com

NOVA 3 JOB NUMBER: 29-187
 REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.



LOCATION	APPROVED	B.M. ELEV.
UNDERGROUND	STRUCTURES	
SUPPLY U/G STRUCTURES COMMITTEE	DATE	

NOTE:
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NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	2010-05-14	DZ

DESIGNED BY	NOVA 3 ENGINEERING LTD. CONSULTING ENGINEERS
DRAWN BY	
CHECKED BY	
APPROVED BY	
HOR. SCALE	RELEASED FOR CONSTRUCTION
VERTICAL	DATE 2010.04.12

NOVA 3 ENGINEERING LTD. CONSULTING ENGINEERS

DILLON CONSULTING

ENGINEER'S SEAL

CONSULTANT PROJECT NO. 088813

THE CITY OF WINNIPEG TRANSIT DEPARTMENT

Winnipeg

SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1
 OSBORNE STATION & ASSOCIATED WORKS

CITY DRAWING NUMBER B237-10-91-AC
 SHEET 91 OF 121

CONSULTANT DRAWING NUMBER C5-E2200-T

ELECTRICAL STATION LAYOUT

BUS DETECTION AND WARNING SYSTEM

Provide a complete and operational bus detection and warning system to the complete satisfaction of the Contract Administrator. Electrical provisions include, but are not necessarily limited to the following:

- Provision of the supply and install of directional probe system to detect inbound vehicles only. Probes to be located in the roadway 200m from the entrance to the station. All wiring to be in minimum 1.5" conduit. Provide 18"x24" splice pit at curb to CoW standards, for connection to probe. Wiring to be 14/4 shielded buried cable. One probe will be required west of the station (in east-bound lane) and one will be required east of the station (in west-bound lane). Coordinate conduit routing with Contract Administrator prior to road work or rough-in.
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- Manufacturers: Probes to be Sure Action Incorporated P8000 c/w 212 Processor or approved equal.
- Equipment is to be supplied by local manufacturer's rep, such as National Industrial Communications Inc. Final connections to be performed by manufacturer's representative.
- Provide complete commissioning and training of system to Contract Administrator's satisfaction.

GENERAL ELECTRICAL NOTES

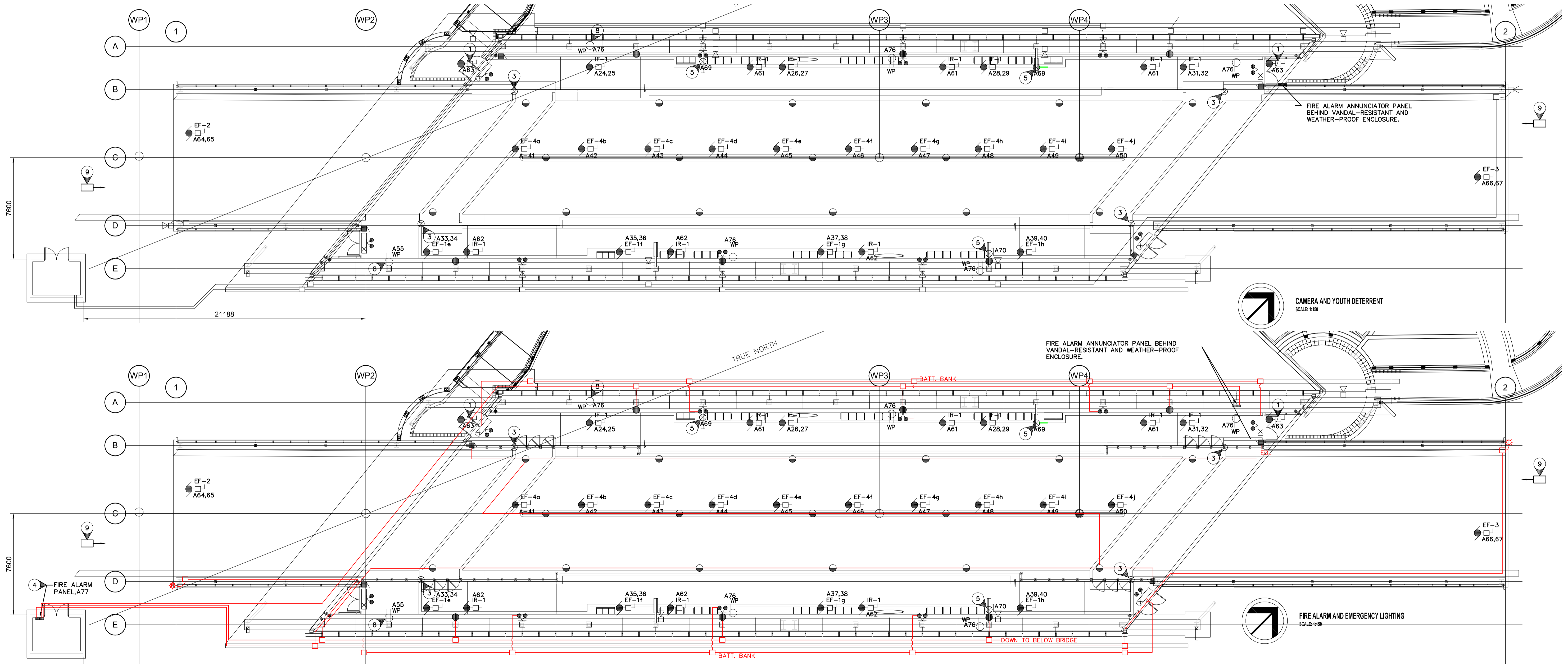
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SPECIFIC ELECTRICAL NOTES

- WIRE AND CONNECT AUTOMATIC DOOR OPERATOR AND ALL RELATED CONTROLS.
- WIRE AND CONNECT EXTERIOR SIGNAGE AS REQUIRED.
- PROVIDE BUS WARNING FLASHING LIGHTS AT TOP OF POSTS OF CROSSING GATES. WIRE AND CONNECT TO BUS DETECTION AND WARNING SYSTEM. PROVIDE AUDIBLE CHIME AT NEAREST COLUMN.
- TIE ALL SPRINKLER FLOW, TAMPER, PRESSURE AND LOW TEMP SWITCHES TO FIRE ALARM PANEL.
- PROVIDE POWER TO TRANSIT EBBD.
- EACH TYPE A LUMINAIRE WITHIN BUILDING TO HAVE BALLASTS Wired TO DIFFERENT CIRCUITS AS INDICATED. FOR DAYLIGHT HARVESTING, FIXTURES TO BE REDUCED TO SINGLE BALLAST OPERATION AND OFF AS DICTATED BY LIGHTING CONTROL SYSTEM.
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SYMBOL SCHEDULE

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- Post light
- Single pole switch.
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- Duplex receptacle - weather proof.
- Ground fault duplex receptacle.
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- Fire alarm pull station c/w polycarbonate cover.
- Fire alarm audible device, c/w strobe light.
- Fire alarm fixed temperature thermal detector.
- CCTV camera c/w power supply and empty conduit as required by CCTV supplier. Verify location before installation.
- Panic alarm interactive communication station.
- Panic alarm / public address system wall mounted weather-proof speaker.
- Electric unit heater c/w built in thermostat unless otherwise indicated. 'UH-1' denotes type. See heating schedule for details.
- Junction box.
- Motor. Refer to mechanical for exact location.
- Disconnect switch to suit application. By div. 16.
- Emergency double head fixture. Wire to battery bank. Weather-proof and vandal-resistant.
- Universal LED exit sign. Wire to emergency battery bank. Weather-proof and vandal-resistant.
- Photo-cell.



AS-BUILT DRAWING
 Completed By: Bob Wilson
 Date: March 2012
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 www.wescan-services.com

NOVA 3 JOB NUMBER: 29-187
 REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.



LOCATION UNDERGROUND	APPROVED STRUCTURES	B.M. ELEV.
SUPPLY U/G STRUCTURES COMMITTEE	DATE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		
1	ISSUED FOR TENDER	2010-05-14 DZ
NO.	REVISIONS	DATE BY

DESIGNED BY	NOVA 3 ENGINEERING LTD. CONSULTING ENGINEERS
DRAWN BY	
CHECKED BY	
APPROVED BY	
HOR. SCALE	RELEASED FOR CONSTRUCTION
VERTICAL	
DATE	2010.04.12

ENGINEER'S SEAL	
CONSULTANT PROJECT NO.	088813

THE CITY OF WINNIPEG TRANSIT DEPARTMENT

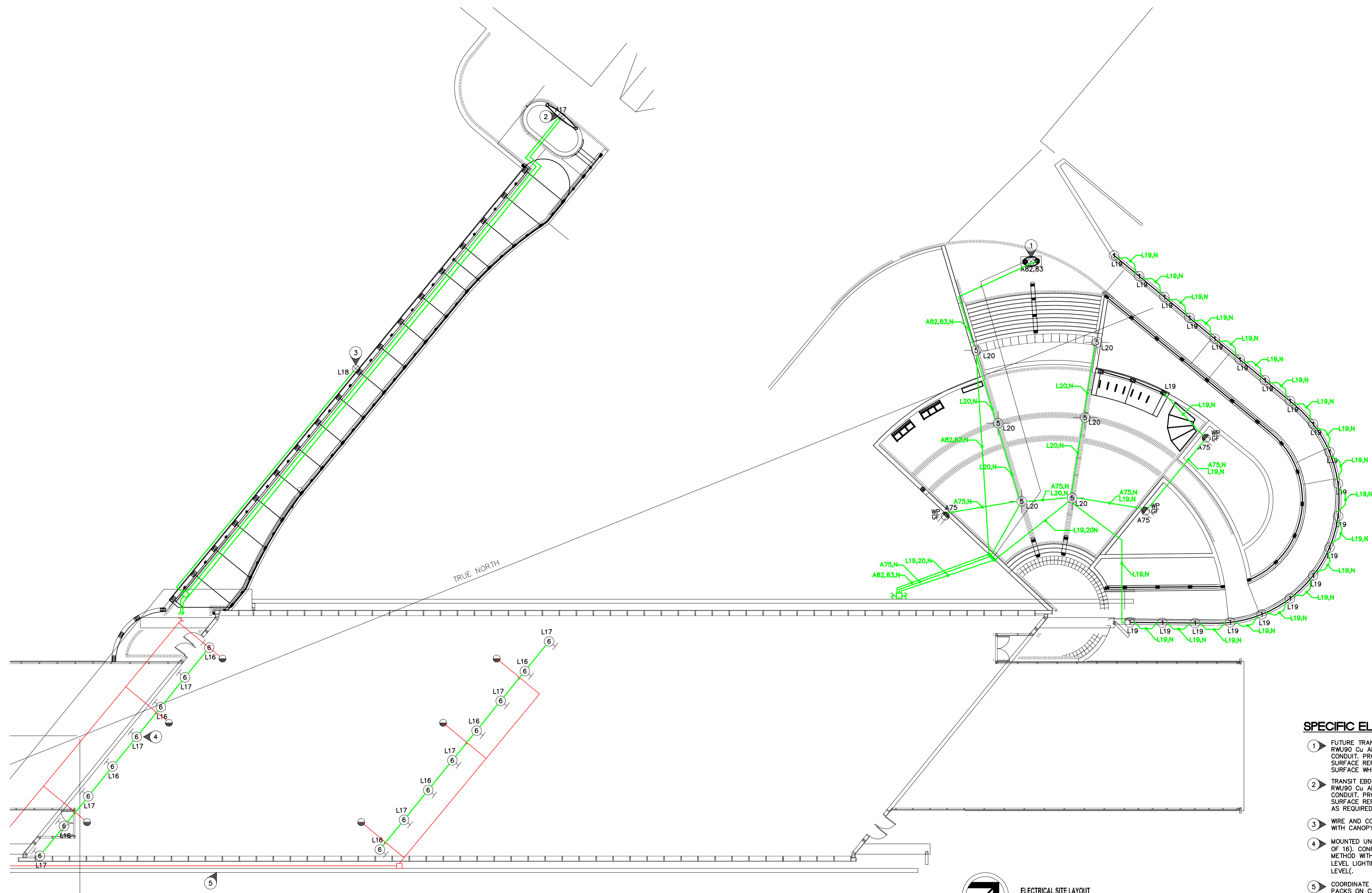
SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1
 OSBORNE STATION & ASSOCIATED WORKS

CITY DRAWING NUMBER: B237-10-91A-AC
 SHEET 91A OF 121

CONSULTANT DRAWING NUMBER: C5-E2200A-T

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SPECIFIC ELECTRICAL NOTES

- 1 FUTURE TRANSIT SIGN. PROVIDE BURIED 2 #12 RWU90 Cu AND GROUND IN A 25mm RIGID PVC CONDUIT. PROVIDE TRENCHING, BACKFILLING AND SURFACE REPAIR AS REQUIRED. PUSH BELOW SURFACE WHERE PRACTICAL.
- 2 TRANSIT EBDD AND TOTEM. PROVIDE BURIED 2 #12 RWU90 Cu AND GROUND IN A 25mm RIGID PVC CONDUIT. PROVIDE TRENCHING, BACKFILLING AND SURFACE REPAIR AS REQUIRED. WIRE & CONNECT AS REQUIRED.
- 3 WIRE AND CONNECT CANOPY LIGHTING SUPPLIED WITH CANOPY TO CIRCUIT A18.
- 4 MOUNTED UNDERNEATH NEW OVERPASS (TYPICAL OF 16). CONFIRM MOUNTING LOCATIONS AND METHOD WITH CONTRACT ADMINISTRATOR. NIGHT LEVEL LIGHTING TO BE ONE CIRCUIT ONLY (HALF LEVEL).
- 5 COORDINATE REMOVAL OF SIX (6) EXISTING WALL PACKS ON CN UNDERPASS WITH MANITOBA HYDRO. PAY ALL CHARGES. PROVIDE (B) NEW TYPE 6 LUMINAIRES AT CN UNDERPASS. COORDINATE INSTALLATION WITH MB HYDRO AND CONTRACT ADMINISTRATOR. WIRE & CONNECT TO EXISTING LIGHTING CIRCUITS.

ELECTRICAL SITE LAYOUT
SCALE: 1:150

WESCAN
AS-BUILT DRAWING
Completed By: Bob Wilson
Date: March 2012
1049 LOGAN AVE
WINNIPEG, MANITOBA
TEL: 786-3384
FAX: 783-2750
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NOVA 3 JOB NUMBER: 29-187
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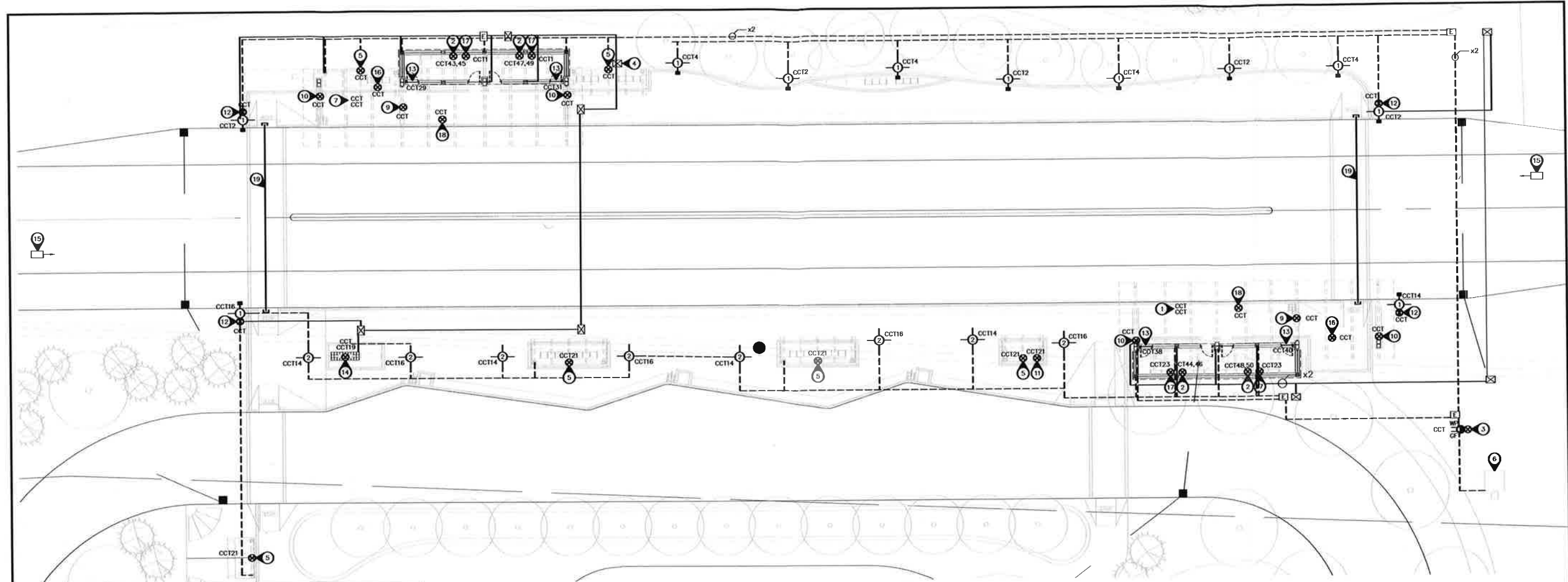


LOCATION UNDERGROUND	APPROVED STRUCTURES	B.M. ELEV.
SUPPLY, U/G STRUCTURES COMMITTEE	DATE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		
1	ISSUED FOR TENDER	2010-05-14 DZ
NO.	REVISIONS	DATE BY

DESIGNED BY	NOVA 3 ENGINEERING LTD. CONSULTING ENGINEERS
DRAWN BY	
CHECKED BY	
APPROVED BY	
HOR. SCALE	RELEASED FOR CONSTRUCTION
VERTICAL	DATE

ENGINEER'S SEAL	
CONSULTANT PROJECT NO.	088813

THE CITY OF WINNIPEG TRANSIT DEPARTMENT	
SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1 OSBORNE STATION & ASSOCIATED WORKS	
ELECTRICAL SITE LAYOUT	CITY DRAWING NUMBER B237-10-92-AC SHEET 92 OF 121 CONSULTANT DRAWING NUMBER C5-E2201-T



POWER PEDESTAL 'A'		VOLTAGE		120/240V-1PH-3W	
MOUNTING		MAIN BUS		200A	
LOCATION		REMARKS		C/W GROUNDING AS PER C.E.C.	
DESCRIPTION	BKR	CIRCUIT	BKR	DESCRIPTION	
WEST SHELTER LIGHTS	15	1	2	15	LIGHT STANDARDS WEST
WEST INFO KIOSK LIGHTS	15	3	4	15	LIGHT STANDARDS WEST
N/W CANOPY LIGHTS & SIGNS	15	5	6	15	LIGHT STANDARDS WEST
CTR W CANOPY & SIGNS	15	7	8	15	CANOPY LIGHTS N/E
S/W CANOPY LIGHTS & SIGNS	15	9	10	15	CANOPY LIGHTS S/E
N/W CANOPY LIGHTS & SIGNS	15	11	12	15	CANOPY LIGHTS CENTER
SPACE	-	13	14	15	LIGHT STANDARDS EAST
SPACE	-	15	16	15	LIGHT STANDARDS EAST
SPACE	-	17	18	-	SPARE
SPACE	-	19	20	-	SPARE
PYLON SIGN	15	19	20	-	SPARE
2&3 POST CANOPY LIGHTS	15	21	22	15	N/W CANOPY SIGN
EAST SHELTER LIGHTS	15	23	24	15	CENTER CANOPY
SPACE	-	25	26	15	WEST EBDD
SPACE	-	27	28	-	SPARE
DOOR HOLDERS WEST	15	29	30	-	SPARE
DOOR HOLDERS WEST	15	31	32	15	VIDEO WEST SIDE
SPACE	-	33	34	15	VIDEO WEST SIDE
SPACE	-	35	36	15	EBDD
SPACE	-	37	38	15	DOORHOLDER EAST
SPACE	-	39	40	15	DOORHOLDER EAST
SPACE	-	41	42	-	SPARE
BASEBOARDS W/SHELTER	20	43	44	20	BASEBOARDS E/SHELTER
BASEBOARDS W/SHELTER	20	47	48	20	BASEBOARDS E/SHELTER
SPACE	-	49	50	-	SPARE
SPACE	-	51	52	-	SPARE
SPACE	-	53	54	-	SPARE
SPACE	-	55	56	-	SPARE
SPACE	-	57	58	-	SPARE
SPACE	-	59	60	-	SPARE

ELECTRICAL LAYOUT
SCALE: 1/50

SPECIFIC ELECTRICAL NOTES

- WIRE AND CONNECT 2 CIRCUITS OF 120V CANOPY LED LIGHTING AS REQUIRED. COORDINATE WITH CANOPY SUPPLIER. LIGHTING IS SUPPLIED AND INSTALLED BY OTHERS.
- WIRE AND CONNECT NEW HEATED SHELTER AS REQUIRED. COORDINATE POWER ACCESS WITH SUPPLIER. ELECTRICAL INCLUDES 2x 2W ELECTRIC BASEBOARD HEATERS AND SHELTER LIGHTING.
- APPROXIMATE LOCATION OF POWER PEDESTAL 'A' C/W RECEPTACLE. COORDINATE LOCATION WITH UTILITY AND LANDSCAPE ARCHITECT.
- FUTURE PEDESTAL.
- WIRE AND CONNECT NEW UNHEATED SHELTER AS REQUIRED. COORDINATE POWER ACCESS WITH SUPPLIER. ELECTRICAL INCLUDES SHELTER LIGHTING.
- APPROXIMATE LOCATION OF UTILITY TRANSFORMER.
- WIRE AND CONNECT 2 CIRCUITS OF 120V CANOPY LED LIGHTING AS REQUIRED. COORDINATE WITH CANOPY SUPPLIER. LIGHTING IS SUPPLIED AND INSTALLED BY OTHERS.
- WIRE AND CONNECT ILLUMINATED SIGN ARM AS REQUIRED.
- WIRE AND CONNECT EBDD AS REQUIRED.
- WIRE AND CONNECT STATION IDENTIFICATION SIGNAGE AS REQUIRED.
- WIRE AND CONNECT INFO KIOSK AS REQUIRED.
- PROVIDE BUS WARNING FLASHING LIGHTS AND AUDIBLE CHIME MOUNTED ON LUMINAIRE POLE @ 2150mm A.F.G. WIRE AND CONNECT TO BUS DETECTION AND WARNING SYSTEM.TBA
- WIRE AND CONNECT POWER DOOR ASSIST AS REQUIRED.
- WIRE AND CONNECT PILLAR ILLUMINATED SIGN AS REQUIRED. PROVIDE 2 CIRCUITS OF 120V POWER.

- BUS DETECTION LOOPS. LOCATE 200m FROM STATION. REFER TO CIVIL DRAWINGS. TIE TO BUS DETECTION AND WARNING SYSTEM.
- WIRE AND CONNECT SIGN BAND AS REQUIRED.
- WIRE AND CONNECT SHELTER LIGHTING AS REQUIRED.
- WIRE AND CONNECT T.V.'s AS REQUIRED. CONFIRM LOCATION. PROVIDE ONE 3/4" CONDUIT BACK TO PEDESTAL A FOR FUTURE COMMUNICATION WIRING.
- ONE EXISTING EMPTY 2" CONDUIT IS AVAILABLE FOR POWER CABLING CROSSING THE TRANSITWAY.

GENERAL ELECTRICAL NOTES

- COORDINATE ROUTING OF ALL UNDERGROUND CONDUITS WITH LANDSCAPE ARCHITECT.

SYMBOL SCHEDULE

- Post light
- Ground fault duplex receptacle. "WP" indicates weatherproof.
- Junction box.
- Pullup electrical
- Pullup communications
- Underground live voltage wiring
- Underground low voltage wiring

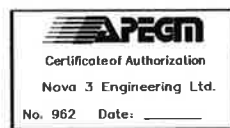
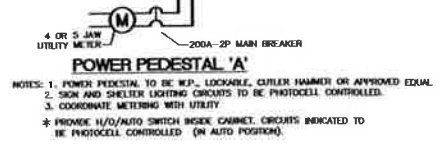
AS-BUILT DRAWINGS

CAUTIONARY NOTE: AS-BUILT DRAWINGS ARE BASED ON ACCURACY OF SITE PROVIDED INFORMATION. FINAL RELIANCE ON AS-BUILT DRAWING ACCURACY SHOULD BE BASED ON A SITE REVIEW ONLY.

LUMINAIRE SCHEDULE			
TYPE	DESCRIPTION	MANUFACTURER	LAMPS
1	ASYMMETRIC INDIRECT LUMINAIRE MOUNTED ON 15' POLE	REBELLE	1-150W MH
2	SYMMETRIC INDIRECT LUMINAIRE MOUNTED ON 18' POLE	REBELLE	1-150W MH

NOTE: REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RECORD DRAWING
ORIGINAL SIGNED BY: TARAN J. PETERS 08/23/2012
APPROVED BY: DATE:



NOVA 3 JOB NUMBER: 31-036
REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.

NO.	REVISIONS	DATE	BY
1	ISSUED AS RECORD DWGS	2013-04-15	TJP
0	ISSUED FOR TENDER	2011.04.20	DZ

DESIGNED BY	DZ
DRAWN BY	DF
CHECKED BY	VJT
APPROVED BY	
HOR. SCALE	1:150
VERTICAL	
DATE	2011.04.15

NOVA 3 ENGINEERING LTD.
CONSULTING ENGINEERS
DILLON CONSULTING
RELEASED FOR CONSTRUCTION
ORIGINAL SIGNED BY RANDY FINGAS
DATE: April 20, 2011

THE CITY OF WINNIPEG TRANSIT DEPARTMENT

SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1
STATION CONSTRUCTION, WARSAW RECONSTRUCTION & ASSOCIATED WORKS

FORT ROUGE STATION ELECTRICAL LAYOUT

CITY DRAWING NUMBER: P-3325-28
SHEET 28 OF 28
CONSULTANT DRAWING NUMBER: C7-B2201-R

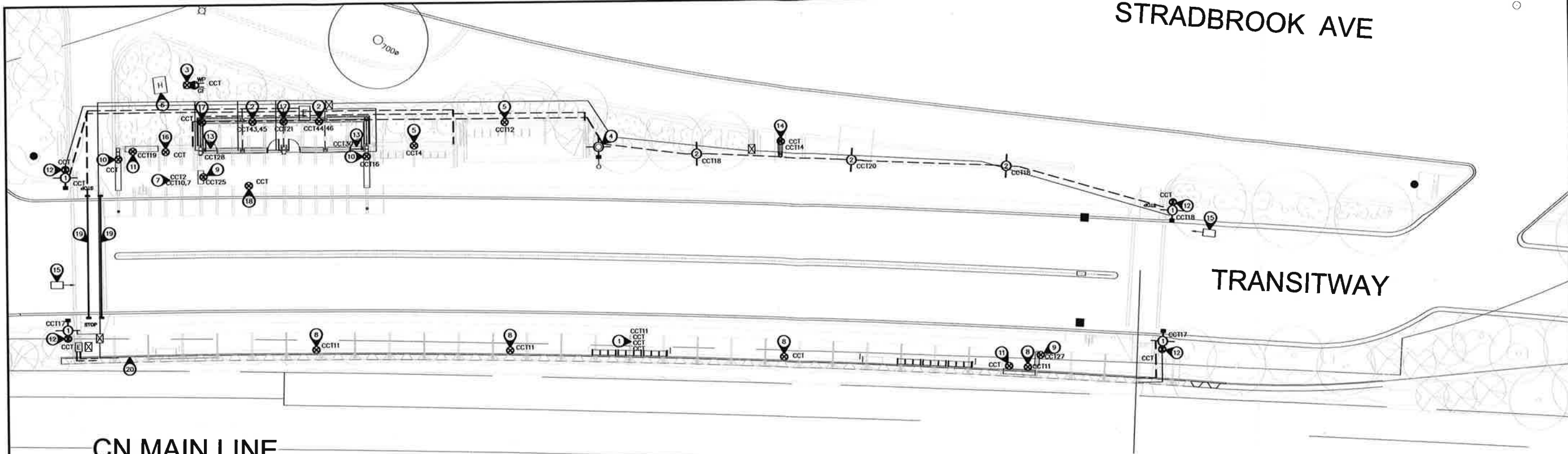
ENGINEER'S SEAL
CONSULTANT PROJECT NO. 08-028

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STRADBROOK AVE

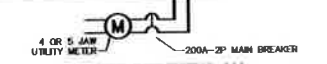
TRANSITWAY

CN MAIN LINE



ELECTRICAL LAYOUT
SCALE: 1/50

POWER PEDESTAL 'A'	VOLTAGE	120/240V-1PH-3W
MOUNTING	MAIN BUS	200A
LOCATION	REMARKS	C/W GROUNDING AS PER C.E.C.
DESCRIPTION	BKR	CIRCUIT
SPARE	1	2
SPARE	3	4
SPARE	5	6
SPARE	7	8
SHEETPILE CANOPY LTS	15	9
SHEETPILE CANOPY SIGN	15	11
SPARE	15	13
SHEETPILE KIOSK	15	15
LIGHT STANDARDS	15	17
KIOSK AND CANOPY LTS	15	19
HEATED SHELTER LTS	15	21
SPACE	23	24
EBDD	15	25
EBDD	15	27
T.V.S	15	29
T.V.S	15	31
SPACE	33	34
SPACE	35	36
SPACE	37	38
SPACE	39	40
SPACE	41	42
HEATERS	20	43
	45	46
SPACE	47	48
SPACE	49	50
SPACE	51	52
SPACE	53	54
SPACE	55	56
SPACE	57	58
SPACE	59	60



NOTE: 1. POWER PEDESTAL TO BE W.P., LOCKABLE, CUTLER HAMMER OR APPROVED EQUAL.
2. SIGN AND SHELTER LIGHTING CIRCUITS TO BE PHOTOCELL CONTROLLED.
3. COORDINATE METERING WITH UTILITY.
* PROVIDE HOUR/DATE SWITCH INSIDE CABINET, CIRCUITS INDICATED TO BE PHOTOCELL CONTROLLED (IN AUTO POSITION).

SPECIFIC ELECTRICAL NOTES

- WIRE AND CONNECT 4 CIRCUITS OF 120V CANOPY LED LIGHTING AS REQUIRED. COORDINATE WITH CANOPY SUPPLIER. LIGHTING IS SUPPLIED AND INSTALLED BY OTHERS.
- WIRE AND CONNECT NEW HEATED SHELTER AS REQUIRED. COORDINATE POWER ACCESS WITH SUPPLIER. ELECTRICAL INCLUDES 2x 2kW ELECTRIC BASEBOARD HEATERS AND SHELTER LIGHTING.
- APPROXIMATE LOCATION OF POWER PEDESTAL 'A' C/W RECEPTACLE. COORDINATE LOCATION WITH UTILITY AND LANDSCAPE ARCHITECT.
- RELOCATED STREET LIGHT (BY HYDRO. N.I.C.).
- WIRE AND CONNECT NEW UNHEATED SHELTER AS REQUIRED. COORDINATE POWER ACCESS WITH SUPPLIER. ELECTRICAL INCLUDES SHELTER LIGHTING.
- APPROXIMATE LOCATION OF UTILITY TRANSFORMER.
- WIRE AND CONNECT 2 CIRCUITS OF 120V CANOPY LED LIGHTING AS REQUIRED. COORDINATE WITH CANOPY SUPPLIER. LIGHTING IS SUPPLIED AND INSTALLED BY OTHERS.
- WIRE AND CONNECT ILLUMINATED SIGN ARM AS REQUIRED.
- WIRE AND CONNECT EBDD AS REQUIRED.
- WIRE AND CONNECT STATION IDENTIFICATION SIGNAGE AS REQUIRED.
- WIRE AND CONNECT INFO KIOSK AS REQUIRED.
- PROVIDE BUS WARNING FLASHING LIGHTS AND AUDIBLE CHIME MOUNTED ON LUMINAIRE POLE @ 2150mm A.T.G. WIRE AND CONNECT TO BUS DETECTION AND WARNING SYSTEM TBA.
- WIRE AND CONNECT POWER DOOR ASSIST AS REQUIRED.
- WIRE AND CONNECT PILLAR ILLUMINATED SIGN AS REQUIRED. PROVIDE 2 CIRCUITS OF 120V POWER.
- BUS DETECTION LOOPS. LOCATE 200m FROM STATION. REFER TO CIVIL DRAWINGS. TIE TO BUS DETECTION AND WARNING SYSTEM.

SPECIFIC ELECTRICAL NOTES CONT'D

- WIRE AND CONNECT SIGN BAND AS REQUIRED.
- WIRE AND CONNECT SHELTER LIGHTING AS REQUIRED.
- WIRE AND CONNECT T.V.'s AS REQUIRED. CONFIRM LOCATION. PROVIDE ONE 3/4" CONDUIT BACK TO PEDESTAL A FOR FUTURE COMMUNICATION WIRING.
- ONE EXISTING EMPTY 2" CONDUIT IS AVAILABLE FOR POWER CABLING CROSSING THE TRANSITWAY.
- ALL CONDUITS RUN ON WALL UNDER FLASHING.

GENERAL ELECTRICAL NOTES

- COORDINATE ROUTING OF ALL UNDERGROUND CONDUITS WITH LANDSCAPE ARCHITECT.

SYMBOL SCHEDULE

- Post light
- Ground fault duplex receptacle. "WP" indicates weatherproof.
- Junction box.
- Pullup electrical
- Pullup communications
- Underground line voltage wiring
- Underground low voltage wiring

AS-BUILT DRAWINGS

CAUTIONARY NOTE: AS-BUILT DRAWINGS ARE BASED ON ACCURACY OF SITE PROVIDED INFORMATION. FINAL RELIANCE ON AS-BUILT DRAWING ACCURACY SHOULD BE BASED ON A SITE REVIEW ONLY.

LUMINAIRE SCHEDULE			
TYPE	DESCRIPTION	MANUFACTURER	LAMPS
1	ASYMMETRIC INDIRECT LUMINAIRE MOUNTED ON 15' POLE	REBELLE	1-150W MH
2	SYMMETRIC INDIRECT LUMINAIRE MOUNTED ON 18' POLE	REBELLE	1-150W MH

NOTE: REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RECORD DRAWING

ORIGINAL SIGNED BY: IARAN J. PETERS
DATE: 08/23/2012
APPROVED BY: _____



NOVA 3 JOB NUMBER: 31-036
REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.

NO.	REVISIONS	DATE	BY
1	ISSUED AS RECORD DWG	2012.08.23	IJP
0	ISSUED FOR TENDER	2011.04.20	DZ

DESIGNED BY	DZ
DRAWN BY	DF
CHECKED BY	VJT
APPROVED BY	

NOVA 3
NOVA 3 ENGINEERING LTD.
CONSULTING ENGINEERS

DILLON
CONSULTING

RELEASED FOR CONSTRUCTION
ORIGINAL SIGNED BY RANDY FINGAS
DATE: April 20, 2011

ENGINEER'S SEAL
CONSULTANT PROJECT NO. 08-028

THE CITY OF WINNIPEG
TRANSIT DEPARTMENT

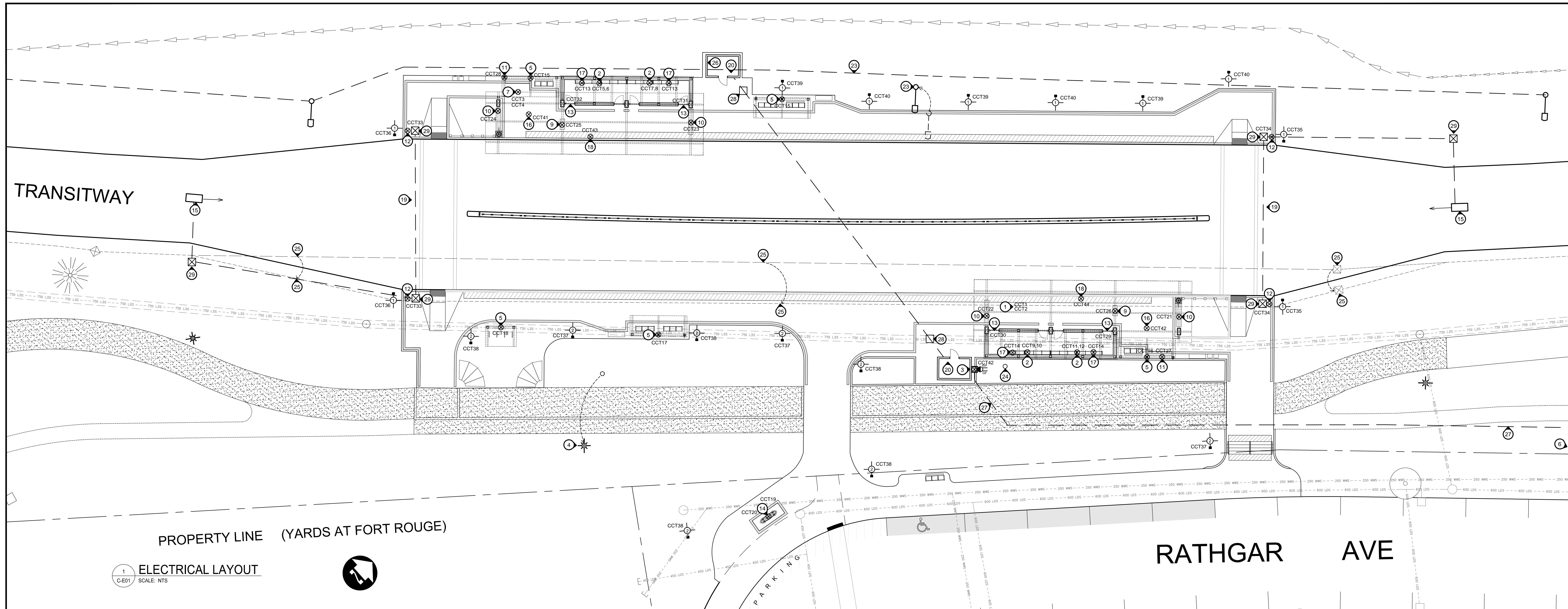
Winnipeg

SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1
STATION CONSTRUCTION, WARSAW RECONSTRUCTION & ASSOCIATED WORKS

HARKNESS STATION
ELECTRICAL LAYOUT

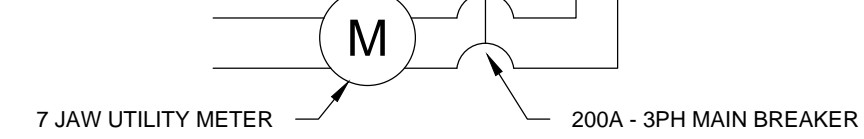
CITY DRAWING NUMBER: P-3325-27
SHEET 27 OF 28
CONSULTANT DRAWING NUMBER: C7-B2200-R

G:\CAD\08813\Contract\Contract 7\Current\Roadway\Electrical\Harkness Station AS Built\ 2011-01-18.dwg



1 ELECTRICAL LAYOUT
C-E01 SCALE: NTS

POWER PEDESTAL 'A'		VOLTAGE MAIN BUS		120 / 208V - 3PH-4W 200A C/W GROUNDING AS PER C.E.C.	
MOUNTING LOCATION	PEDESTAL OUTSIDE	DESCRIPTION	BKR	CIRCUIT	DESCRIPTION
		SOUTH CANOPY LIGHTING	15 1	31 15	POWER DOOR ASSIST
		SOUTH CANOPY LIGHTING	15 2	32 15	POWER DOOR ASSIST
		NORTH CANOPY LIGHTING (#10 WIRE)	15 3	33 15	BUS DETECTION AND WARNING SYSTEM
		NORTH CANOPY LIGHTING (#10 WIRE)	15 4	34 15	BUS DETECTION AND WARNING SYSTEM
		HEAT PUMP AND PUMPS	20 5	35 15	POST LIGHTS
		SPACE	- 6	36 15	POST LIGHTS
		SPACE	- 7	37 15	POST LIGHTS
		SPACE	- 8	38 15	POST LIGHTS
		SPACE	- 9	39 15	POST LIGHTS
		SPACE	- 10	40 15	POST LIGHTS
		SPACE	- 11	41 15	SIGN BAND
		SPACE	- 12	42 15	SIGN BAND
		SHELTER LIGHTING	15 13	43 15	T.V.'S
		SHELTER LIGHTING	15 14	44 15	T.V.'S
		SHELTER LIGHTING	15 15	45 -	SPACE
		SHELTER LIGHTING	15 16	46 50	
		SHELTER LIGHTING	15 17	47	HP1 - MECHANICAL RM
		SHELTER LIGHTING	15 18	48	
		PILLAR SIGNAGE (FUTURE)	15 19	49 15	
		PILLAR SIGNAGE	15 20	50	P1 - SOURCE PUMP MECHANICAL RM
		STATION IDENTIFICATION SIGNAGE	15 21	51	
		STATION IDENTIFICATION SIGNAGE	15 22	52 15	
		STATION IDENTIFICATION SIGNAGE	15 23	53	P2 - LOAD PUMP MECHANICAL RM
		STATION IDENTIFICATION SIGNAGE	15 24	54	
		EBDD	15 25	55 15	P3 - GLYCOL PUMP MECHANICAL RM
		EBDD	15 26	56 15	P4 - SECONDARY PUMP MECHANICAL RM
		INFO KIOSK	15 27	57 20	3kW UNIT HEATER MECHANICAL RM
		INFO KIOSK	15 28	58	
		POWER DOOR ASSIST	15 29	59 15	SPARE
		POWER DOOR ASSIST	15 30	60 15	PANEL RECEPTACLE



POWER PEDESTAL 'A'

- NOTES:
- POWER PEDESTAL TO BE W.P., LOCKABLE, CUTLER HAMMER OR APPROVED EQUAL.
 - SIGN AND SHELTER LIGHTING CIRCUITS TO BE PHOTOCELL CONTROLLED.
 - COORDINATE METERING WITH UTILITY.
 - PROVIDE 1/2" AUTO SWITCH INSIDE CABINET. CIRCUITS INDICATED TO BE PHOTOCELL CONTROLLED (IN AUTO POSITION).

AS-BUILT DRAWINGS
GEM EQUITIES INC.
JUNE 15, 2015

BUS DETECTION AND WARNING SYSTEM

Provide a complete and operational bus detection and warning system to the complete satisfaction of the Contract Administrator. System is to match existing Rapid Transitway system. Electrical provisions include, but are not necessarily limited to the following:

- Provision of the supply and install of a directional probe system to detect inbound vehicles only. Probes to be located in the roadbed 200m from the entrance to the station. All wiring to be in minimum 1.5" conduit. Provide 18"x24" splice pit at curb to Co/W standards, for connection to probe. Wiring to be 14/4 shielded buried cable. One probe will be required west of the station (in east-bound lane) and one will be required east of the station (in west-bound lane). Coordinate conduit routing with Contract Administrator prior to road work or rough-in.
- Each probe is to be connected to a processor c/w power supply in heated electrical enclosure. Upon detection of vehicle, processor is to signal a timed relay which will activate the following after a programmable delay.
 - signal devices at west end of station are to operate upon activation of west-bound (inbound) vehicles only. Devices at west end of station to operate similarly.
 - audible sound pattern at north and south pedestrian crossings (to match existing).
 - illuminate flashing LED lights mounted on poles (both sides of pedestrian crossing). Lights are to continue flashing for a programmable duration. Initial setting to be 30 seconds from activation. LED signals to match existing, NEMA 4X rated weather-proof and vandal resistant.
 - system is to sound every time a vehicle passes the detector and lights to flash for full duration after each vehicle.
- Manufacturers to match existing.
- Equipment is to be supplied by local manufacturer's rep, such as IPT Integrated Solutions. Final connections to be performed by manufacturer's representative.
- Provide complete commissioning and training of system to Contract Administrator's satisfaction.

GENERAL ELECTRICAL NOTES

- COORDINATE ROUTING OF ALL UNDERGROUND CONDUIT WITH LANDSCAPE ARCHITECT.
- ALL WIRE TO BE MIN. #12 COPPER R90 OR AS LOAD REQUIRES.

SPECIFIC ELECTRICAL NOTES

- WIRE AND CONNECT 2 CIRCUITS OF 120V CANOPY LED LIGHTING AS REQUIRED. COORDINATE WITH CANOPY SUPPLIER. LIGHTING IS SUPPLIED AND INSTALLED BY OTHERS
- WIRE AND CONNECT NEW HEATED SHELTER AS REQ'D. COORDINATE POWER ACCESS WITH SUPPLIER. ELECTRICAL INCLUDES GEOTHERMAL HEAT PUMPS, CONTROLS & SHELTER LIGHTING. PROVIDE CONDUIT IN CONCRETE CURB FOR POTENTIAL FUTURE BASEBOARDS
- APPROXIMATE LOCATION OF POWER PEDESTAL 'A' C/W RECEPTACLE. COORDINATE LOCATION WITH UTILITY AND ELEC.
- EXISTING ORNAMENTAL STREET LIGHT TO BE RELOCATED - REMOVE TOP OF EXIST. PILE AS NECESSARY AND PROVIDE NEW PILE. MAKE GOOD EXISTING WIRE CONNECTION.
- WIRE AND CONNECT NEW UNHEATED SHELTER AS REQUIRED. COORDINATE POWER ACCESS WITH SUPPLIER. ELECTRICAL INCLUDES SHELTER LIGHTING
- LOCATION OF UTILITY TRANSFORMER AND TEMPORARY SERVICE TO THE NORTH (WESTERN EDGE OF GEM PROPERTY, LOT 4)
- WIRE AND CONNECT 2 CIRCUITS OF 120V CANOPY LED LIGHTING AS REQUIRED. COORDINATE WITH CANOPY SUPPLIER. LIGHTING IS SUPPLIED AND INSTALLED BY OTHERS

LUMINAIRE SCHEDULE

TYPE	QTY	DESCRIPTION	MANUFACTURER	LAMPS
1	10	ASYMMETRIC INDIRECT LUMINAIRE MOUNTED ON 15' POLE	REBELLE	1-150W MH
2	8	SYMMETRIC INDIRECT LUMINAIRE MOUNTED ON 15' POLE	REBELLE	1-150W MH

NOTE: REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SYMBOL SCHEDULE

- EXISTING CITY COBRA LIGHT
- EXISTING CITY ORNAMENTAL LIGHT
- NEW POST LIGHT (SEE LUMINAIRE SCHEDULE)
- GROUND FAULT DUPLEX RECEPTACLE. 'WP' INDICATES WEATHERPROOF
- JUNCTION BOX
- PULL BOX
- BURIED ELECTRICAL CABLE RUN BETWEEN CSTE AT WESTERN EDGE OF GEM EQUITIES LOT 4 (CLOSE TO PROPERTY LINE) AND POWER PEDESTAL 'A' - CONNECT TO TEMP POLE SINGLE PHASE SERVICE @ YARDS SITE UNTIL FINAL HYDRO TRANSFORMER IS INSTALLED ON LOT 4.
- INSTALL PHASE CONVERTER AT POWER PEDESTAL 'A' TO TEMPORARILY CONVERT SINGLE PHASE TO 3 PHASE POWER AS PER LOAD CALCULATIONS
- TERMINATE CONDUIT FOR PEDESTAL 'A' IN WEST MECHANICAL ROOM FOR LIGHTING AND CIRCUITS FOR SOUTHBOUND STATION. PROVIDE FLUSH MOUNT PULL BOX ACCESS ON NORTH AND SOUTH PLATFORMS
- PULL BOX AND CONDUIT LINE FOR BUS DETECTION SYSTEM
- PROVIDE EMPTY 2" CONDUIT FOR POWER CABLING CROSSING THE TRANSITWAY.
- PROVIDE 3 KW UNIT HEATER FOR MECHANICAL ROOM HUNG FROM CEILING AS PER MANUFACTURER (WITH BUILT IN THERMOSTAT)
- FUTURE NOTE FOR GEOTHERMAL
- FUTURE NOTE FOR GEOTHERMAL
- EXISTING COBRA STREET LIGHT, PILE AND CONDUIT TO BE RELOCATED BY MANITOBA HYDRO SO AS NOT TO INTERFERE WITH STATION FOUNDATIONS AND PLATFORM.
- REMOVE EXISTING ORNAMENTAL STREETLIGHT AND PILE AND MAKE GOOD EXISTING WIRING CONNECTION - TURN OVER LIGHT TO CITY
- EXISTING PULL BOX AND CONDUIT LINE FOR COMMUNICATION LINES TO BE RELOCATED AS NECESSARY
- LOCATE BUS DETECTION SYSTEM PANEL IN MECHANICAL ROOM. COORDINATE LOCATION WITH MECHANICAL & BUS DETECTION SYSTEM SUPPLIER.

NOVA 3 ENGINEERING LTD.
CONSULTING ENGINEERS
201-120 FORT STREET TEL.: (204) 943-6142
WINNIPEG, MANITOBA R3C 1C7 FAX.: (204) 942-1276
WWW.NOVA3.CA J.N.L.: 34-129

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THE CONCEPT AND DESIGN INCORPORATED INTO THIS DRAWING ARE BASED ON INFORMATION PROVIDED BY THE CLIENT AND OTHER RELATED SOURCES. PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR DRAWING AND DESIGN UNLESS DRAWING IS ACCOMPANIED BY ORIGINAL SEALED LETTER OF INTENT OR EQUIVALENT ACCEPTABLE FACSIMILE. PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR FINAL INSTALLATION CONFORMANCE WITHOUT ORIGINAL SEALED CERTIFICATE OF INSPECTION OR EQUIVALENT ACCEPTABLE FACSIMILE.

LOCATION UNDERGROUND	APPROVED STRUCTURES	DESIGNED BY	CONSULTANT	CONSULTANT'S SEAL	OWNERS
ORIGINAL SIGNED BY	MH/00/XXXX	JT, VT	NOVA 3 ENGINEERING LTD.		THE CITY OF WINNIPEG TRANSIT DEPARTMENT
SUPV. U/S STRUCTURES COMMITTEE	/ / 2014	CH	NOVA 3 ENGINEERING LTD. CONSULTING ENGINEERS 2010 FORT STREET 1ST FLOOR WINNIPEG, MANITOBA R3C 1C7 CANADA		GEM EQUITIES INC.
NOTE		CHECKED BY	ARCHITECT		
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		APPROVED BY	ALLAN COPPINGER, ARCHITECT 219 BATHURST AVE., WINNIPEG MB R2M 2K1, (431) 536 6622		
DISCLAIMER		SCALE	RELEASED FOR CONSTRUCTION		
THIS DRAWING MUST NOT BE SCALED.		NTS			
VARIOUS AND MODIFICATIONS TO WORK SHOWN ON THESE DRAWINGS SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION OF GEM EQUITIES INC.		DATE	DATE		
		01/20/2014	01/28/2014		
		NO. REVISIONS			
		DATE			
		BY			
		DATE			
		01/20/2014			

NO.	REVISIONS	DATE	BY
6	AS-BUILT UPDATE	06/15/15	GZ
5	ISSUED FOR CONSTRUCTION	09/17/14	GZ
4	ISSUED FOR 99% REVIEW	09/10/14	GZ
3	ISSUED FOR 95% REVIEW	07/10/14	GZ
2	ISSUED FOR 90% REVIEW	04/15/14	CJH
1	ISSUED FOR REVIEW	01/03/14	CJH

CONSULTANT PROJECT NO. 009 02 2014

DATE 01/28/2014

CONSULTANT SHEET TITLE: JUBILEE STATION - ELECTRICAL LAYOUT

CONSULTANT DRAWING NUMBER: C-E01

SHEET 1 OF 2

