04 11

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

GRAND VALLEY INSTITUTION FOR WOMEN - EXTERIOR SITE SERVICES PROJECT (ELECTRICAL/COMMUNICATIONS)

1575 HOMER WATSON BLVD., KITCHENER, ON

ELECTRICAL

POWER & SYSTEMS LEGEND

SYMBOL	DESCRIPTION
	SECURITY CAMERA
	15A, 120V WALL MOUNTED DUPLEX RECEPTACLE
	JUNCTION BOX
	FLEXIBLE CONDUIT CONNECTION
	DISCONNECT SWITCH
	SURFACE MOUNTED ELECTRICAL PANEL

LINETYPE LEGEND

SYMBOL	DESCRIPTION
———	NEW WORK
———	EXISTING
- - - - - -	DEMOLITION
——— - ———	UNDERGROUND CONDUIT

DRAWING LIST

DWG No.	DESCRIPTION
E1	ELECTRICAL LEGENDS & DRAWING LIST
E2	ELECTRICAL SITE PLAN
T-100	SECURITY CAMERAS – CAMERA LOCATIONS AND INSTALLATION DETAILS

DEMOLITION NOTES:

1. UNLESS OTHERWISE NOTED, MATERIALS FOR REMOVAL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE TAKEN FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.
2. DISCONNECT AND MAKE SAFE ALL SYSTEMS TO BE DEMOLISHED INCLUDING PANELS, FEEDERS, BRANCH CIRCUITS AND EQUIPMENT BY OTHER DIVISIONS. COORDINATE WITH OTHER DIVISIONS.
3. MAINTAIN EXISTING REMAINING CIRCUITS, SYSTEMS, ETC., WHICH PASS THROUGH AREA OF CONSTRUCTION AND IN CLOSE PROXIMITY. PROVIDE NECESSARY COMPONENTS TO MAINTAIN SYSTEMS. ENSURE COMPONENTS WILL BE CONCEALED WHEN CONSTRUCTION IS COMPLETE.
4. REINSTATE IMMEDIATELY ANY REMAINING EXISTING SYSTEMS IN-ADVERTENTLY INTERRUPTED DURING CONSTRUCTION.
5. THE DRAWINGS INDICATE KNOWN CONDITIONS AND MAY NOT INDICATE ALL DEMOLITION REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO TENDER SUBMISSION AND VERIFY REQUIREMENTS AND INCLUDE ALL COSTS IN TENDER.
6. REMOVE REDUNDANT CONDUIT AND WIRING BACK TO SOURCE UNLESS OTHERWISE NOTED, AND MAKE SAFE.
7. DEVICES FROM DEMOLITION ARE NOT TO BE REUSED UNLESS NOTED OTHERWISE. NEW DEVICES SHALL BE SUPPLIED WHERE NECESSARY.
8. ALL FIRE ALARM DEVICES TO REMAIN IN OPERATION. PROTECT SMOKE DETECTORS FROM DUST EXPOSURE DURING CONSTRUCTION.
9. ENSURE FIRE ALARM SYSTEM IS OPERATIONAL AT THE END OF EACH SHIFT.
10. AFTER DEMOLITION WORK IS COMPLETE AND MINIMUM THREE (3) WORKING DAYS PRIOR TO PROCEEDING WITH NEW WORK, NOTIFY ENGINEER FOR INSPECTION.

GENERAL NOTES:

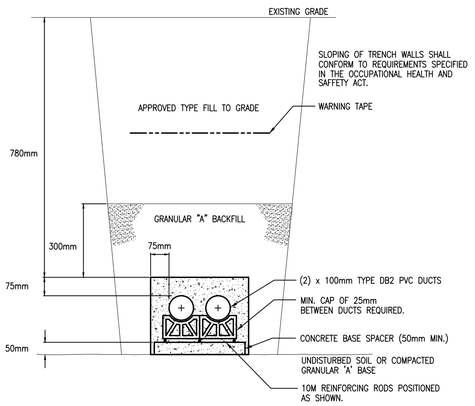
1. ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE ELECTRICAL SAFETY CODE OF ONTARIO, AND WITH NEW ARCHITECTURAL/INTERIOR DESIGNER'S LAYOUT (LOCATION/MOUNTING HEIGHTS). CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS, PAY ALL APPLICABLE FEES AND INSPECTION COSTS.
2. COORDINATE WORK WITH ALL OTHER TRADES TO AVOID INTERFERENCE.
3. ENSURE ELECTRICAL COMPONENTS (IE. WIRING, CONDUIT, ETC.) RELATING TO THE AREA OF WORK ARE INDEPENDENTLY SECURED TO COMPLY WITH CODE REQUIREMENTS. IT IS NOT ACCEPTABLE TO SECURE THE COMPONENTS TO DUCTWORK, DUCT WORK TO CONDUIT, OR ANY OTHER SYSTEMS.
4. ENSURE ALL EXISTING CEILING MOUNTED BOXES ARE CLOSED PRIOR TO COMPLETION OF PROJECT. PROVIDE LABELLED AND COLOUR CODED COVER PLATES (IE. PANEL NAME AND CIRCUIT NUMBER) AS REQUIRED.
5. MINIMUM THREE (3) WORKING DAYS PRIOR TO CLOSING CEILING, NOTIFY THE ENGINEER FOR CEILING INSPECTION.

COLOR CODING:

APPLICABLE TO NEW OR RELOCATED WORK UNLESS OTHERWISE NOTED.

1. TO CONFORM TO CLIENT'S BUILDING CODING SYSTEM.
2. COLOUR CODE CONDUITS AND BOXES.
3. CODE WITH PLASTIC TAPE OR PAINT WHERE CONDUITS ENTER WALLS, CEILING, OR FLOOR AND AT 15 METER INTERVALS.
4. COLOURS: 25mm WIDE PRIME COLOUR AND 20mm WIDE AUXILIARY COLOUR.

SERVICE	PRIME COLOUR	AUXILIARY COLOUR
UP TO 250V	BLUE	
UP TO 600V	YELLOW	
TELECOMMUNICATION	GREEN	
FIRE ALARM	RED	
EMERGENCY VOICE	RED	BLUE
SECURITY SYSTEM	RED	YELLOW



NOTES:

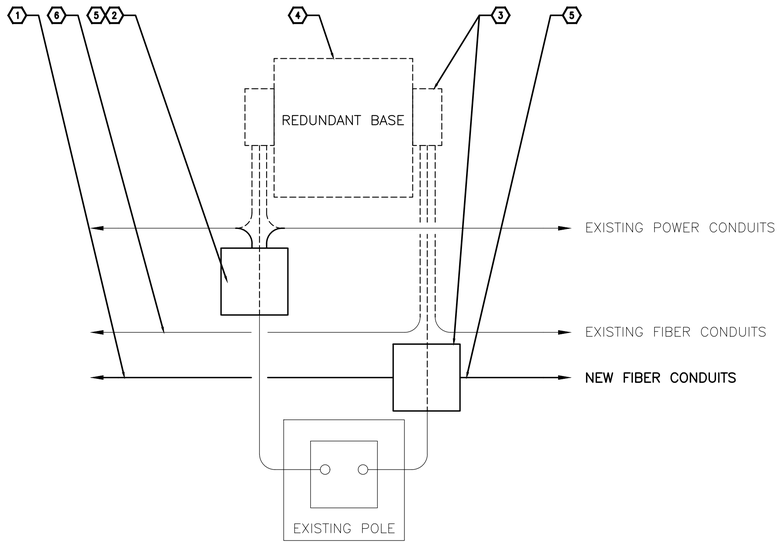
1. CSA C222 No. 211.1 APPLIES TO ALL PVC DUCTING.
2. DUCT JOINTS TO BE GLUED USDING AN APPROVED "PVC" SOLVENT, WHEN APPLICABLE.
3. REINFORCING RODS FULL LENGTH OF CONCRETE ENCASED DUCTS. OVERLAP JOINTS AND TIE AT BOTH ENDS. DRILL AND DOWEL RODS TO CONCRETE STRUCTURE.
4. DUCT SPACERS TO BE PLACED AT A MAXIMUM OF 1500mm AND WITHIN 150mm OF COUPLING. PLASTIC DUCT SPACERS TO BE USED ONLY IF CONCRETE DUCT SPACERS ARE UNAVAILABLE.
5. FORMS REQUIRED FOR FULL LENGTH OF CONCRETE ENCASED DUCT STRUCTURE.
6. DUCTS AND TRENCHES MUST BE INSPECTED BEFORE ANY CONCRETE IS POURED.
7. ALL UNDERGROUND UTILITIES MUST BE CONTACTED AND ALL NECESSARY PERMITS MUST BE OBTAINED BY CONTRACTOR.
8. CONTRACTOR MUST ENSURE THAT ALL DUCTS ARE CLEANED, RODDED AND THAT A 6mm POLYPROPYLENE ROPE IS LEFT IN EACH DUCT.
9. PROVIDE TRACER CABLE IN ALL NEW CONDUITS.
10. CONCRETE MIX, PLACING AND CURING TO CSA A23.1-14/A23.2-14, EXPOSURE CLASS F-2, MINIMUM COMPRESSIVE STRENGTH 25 MPA.

1 / E1 TYPICAL DUCT BANK DETAIL

N.T.S.

DRAWING NOTES

1. PROVIDE 2x103mm CONDUIT. REFER TO DRAWING E2 FOR APPROXIMATE LOCATIONS.
2. A. PROVIDE TEMPORARY POWER CONNECTION FROM THE NEAREST POLE OR BUILDING.
   B. PULL THE POWER WIRING OUT OF THE EXISTING POLE, BACK TO THE REDUNDANT CONCRETE BASE.
   C. CUT INTO THE EXISTING BURIED POWER CONDUIT RUNNING INTO THE EXISTING POLE AND PROVIDE A NEW BURIED JUNCTION BOX.
   D. RE-ROUTE THE EXISTING POWER WIRING INTO THE NEW JUNCTION BOX AND RE-CONNECT THE EXISTING GFI RECEPTACLE IN THE POLE.
3. A. PULL THE EXISTING FIBRE OUT OF THE EXISTING POLE, BACK TO THE REDUNDANT CONCRETE BASE.
   B. REWORK THE EXISTING BURIED CONDUIT FROM THE EXISTING POLE INTO THE NEW BURIED PULL BOX.
   C. PULL THE NEW FIBRE UP INTO THE EXISTING POLE.
   D. INSTALL THE NEW SWITCHES AND CONNECT THE NEW FIBRE AT THE POLE AND AT THE PATCH PANEL IN THE CER OR ROOM 210 AS APPLICABLE.
4. DEMOLISH EXISTING CONCRETE BASE AND MAKE SAFE. REPAIR LANDSCAPE AS REQUIRED.
5. PROVIDE NEW IN-GROUND JUNCTION/PULL BOX WITH HEAVY DUTY DRIVE-OVER COVER.
6. TYPICAL:
   REMOVE EXISTING FIBERS AND ABANDON EXISTING CONDUITS.

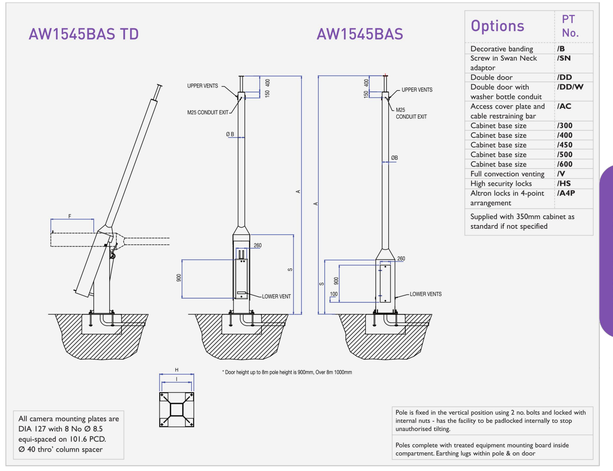


2 / E1 TYPICAL POLE DETAIL PLAN VIEW

N.T.S.

AW1545/BAS Cabinet Based Pole Technical Specification ←

Cabinet Based Poles



Options	PT No.
Decorative banding	/B
Screw in Swan Neck adaptor	/SN
Double door	/DD
Double door with washer bottle conduit	/DD/W
Access cover plate and cable restraining bar	/AC
Cabinet base size	/300
Cabinet base size	/400
Cabinet base size	/450
Cabinet base size	/500
Cabinet base size	/600
Full convection venting	/V
High security locks	/HS
Altron locks in 4-point arrangement	/A4P

Supplied with 350mm cabinet as standard if not specified

All camera mounting plates are DIA 127 with 8 No Ø 8.5 equi-spaced on 101.6 PCD. Ø 40 thro' column spacer

Pole is fixed in the vertical position using 2 no. bolts and locked with internal nuts - has the facility to be padlocked internally to stop unauthorised siting.

Poles complete with treated equipment mounting board inside compartment. Earthing lugs within pole & on door

Model No.	Height In metres A	Pole Ø B	Payload eqpt capacity	Recom. max eqpt windload[1]	Cabinet height above ground S	Base plate size H		Holding down bolt centres I		Holding down bolt size		Winch
				m²		300 CAB	400 CAB	300 CAB	400 CAB	300 CAB	400 CAB	
AW1545/4	4	168	75kgs	0.75m²	1000	510	630	450	550	M20 x 300	M24 x 300	N/A
AW1545/5	5	168	75kgs	0.75m²	1000	510	630	450	550	M20 x 300	M24 x 300	N/A
AW1545/6	6	168	75kgs	0.75m²	1000	510	630	450	550	M20 x 300	M24 x 300	N/A
AW1545/7	7	168	60kgs	0.60m²	1000	510	630	450	550	M20 x 300	M24 x 300	N/A
AW1545/8	8	168	75kgs	0.50m²	1000	630	630	450	550	M24 x 300	M24 x 300	N/A
AW1545/8HD	8	193	75kgs	0.75m²	1000	630	630	450	550	M24 x 400	M24 x 400	N/A
AW1545/9	9	193	56kgs	0.60m²	1300	630	630	550	550	M24 x 400	M24 x 400	N/A
AW1545/10	10	193	50kgs	0.50m²	1300	630	630	550	550	M24 x 400	M24 x 400	N/A
AW1545/12	12	193	75kgs	0.75m²	1300	-	800	-	700	M27 x 600	M27 x 600	N/A

350 Cabinet supplied as standard on both static and tilt down units

AW1545BAS Tilt Down						350 CAB	400-450 CAB	350 CAB	400-450 CAB	350 CAB	400-450 CAB	Pole rear clearance when tilting F	
AW1545/4 TD	4	168	75kgs	0.75m²	1700	510	630	450	550	M20 x 300	M24 x 300	1100	DW1000/45
AW1545/6 TD	6	168	60kgs	0.75m²	1700	510	630	450	550	M20 x 300	M24 x 300	1100	DW1000/45
AW1545/8 TD	8	168	50kgs	0.75m²	1700	630	630	550	550	M24 x 300	M24 x 300	1100	DW1500/45
AW1545/10 TD	10	193	30kgs	0.50m²	2850	630	630	550	550	M24 x 400	M24 x400	2150	DW2500/45
AW1545/12 TD	12	193	20kgs	0.50m²	2850	630	630	550	550	M24 x 400	M24 x 400	2150	DW2500/45

3 / E1 CABINET BASE CUT SHEET

N.T.S.

Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

LICENSED PROFESSIONAL ENGINEER — MAY 31 2018 — R. M. BOIVIN 100122674 — PROVINCE OF ONTARIO

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02	ISSUED FOR 99% REVIEW	2017-12-20
01	ISSUED FOR 66% REVIEW	2017-12-01

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A / B / C — A Detail No. No. du détail; B drawing no. – where detail required dessin no. – où détail exigé; C drawing no. – where detailed dessin no. – où détaillé

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1575 HOMER WATSON BLVD.
KITCHENER, ON
GRAND VALLEY INSTITUTION FOR WOMEN
EXTERIOR SITE SERVICES PROJECT

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drawn by / dessine par: E. DROUIN

designed by / conc par: E. DROUIN

approved by / approuve par: R. BOIVIN

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