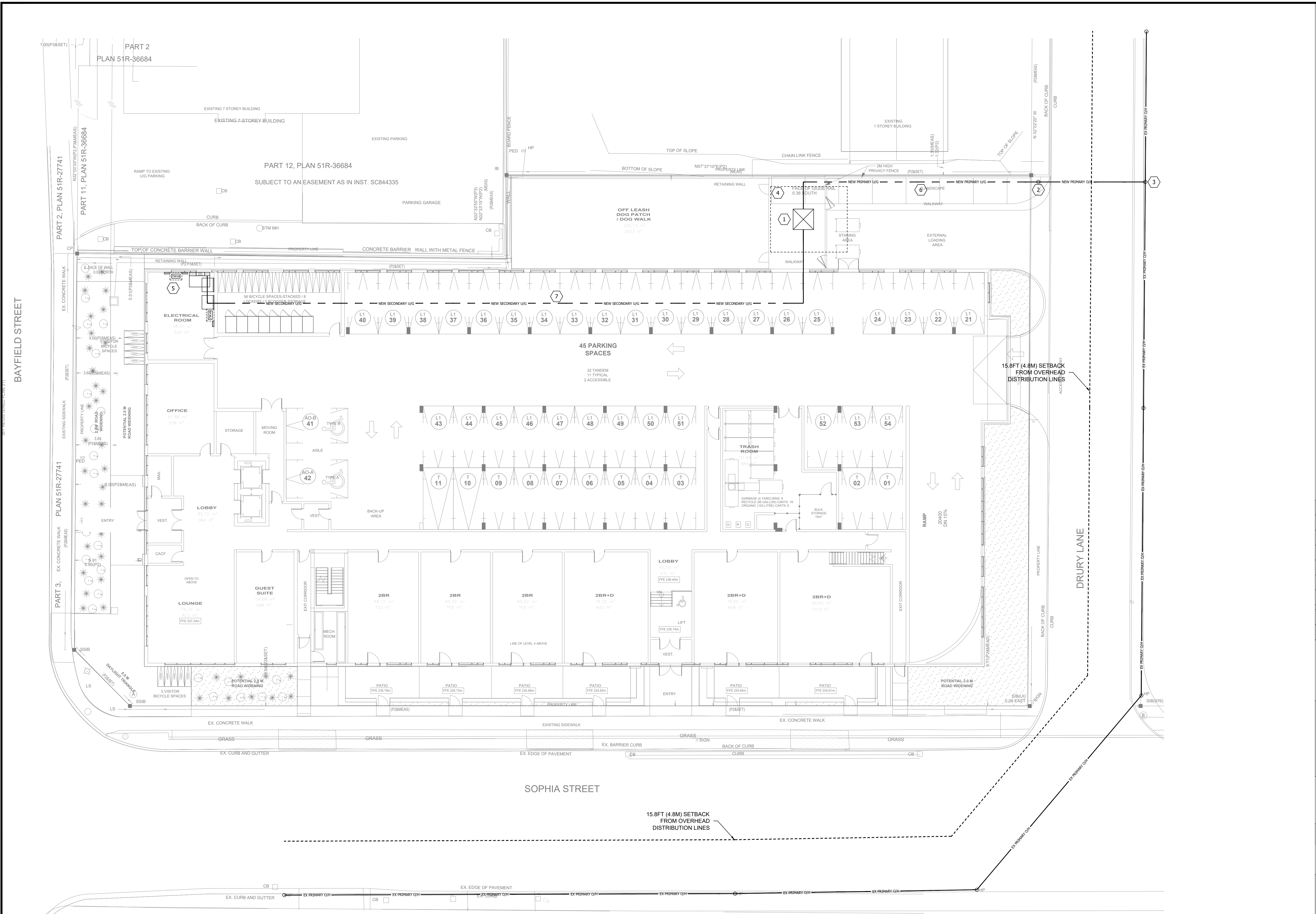




| POWER KEYNOTES |                                                                                                                                                                                                                    |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1              | PROPOSED LOCATION FOR NEW SERVICE TRANSFORMER, ALECTRA OWNED.                                                                                                                                                      |
| 2              | PROPOSED LOCATION FOR NEW ROAD CROSSING POLE COMPLETE WITH FUSING AND DIP TO UNDERGROUND                                                                                                                           |
| 3              | PROPOSED LOCATION FOR NEW MID SPAN POLE ALONG DRURY LANE. FINAL LOCATION SHALL BE CONFIRMED BY ALECTRA                                                                                                             |
| 4              | ALECTRA REQUIRED TRANSFORMER CLARENCE 118" (3m) IN FRONT OF DOORS, 79" (2m) ON THE REAMING SIDES.                                                                                                                  |
| 5              | PROPOSED LOCATION FOR MAIN ELECTRICAL ROOM. 24/7 ACCESS SHALL BE PROVIDED FOR ALECTRA CREWS.                                                                                                                       |
| 6              | UNDERGROUND PRIMARY DUCT SHALL BE CONCRETE ENCASED AS PER ALECTRA REQUIREMENTS. COMMUNICATION CONDUITS SHALL BE RAN ON TOP OF THE CONCRETE AS PER TELECOM PROVIDED REQUIREMENTS (CONDUIT SIZE ASSUMED TO BE 4").   |
| 7              | UNDERGROUND SECONDARY DUCT SHALL BE CONCRETE ENCASED AS PER ALECTRA REQUIREMENTS. COMMUNICATION CONDUITS SHALL BE RAN ON TOP OF THE CONCRETE AS PER TELECOM PROVIDED REQUIREMENTS (CONDUIT SIZE ASSUMED TO BE 4"). |

| DATE      | NO. | DESCRIPTION        | BY |
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| REVISIONS                                               |  |  |  |
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BARRIE, ON L4N 1W5  
TEL: (705) 735-1133

PROJECT:  
**115 BAYFIELD**  
115 BAYFIELD  
BARRIE, ON

DRAWING TITLE:  
**ELECTRICAL SITE PLAN**

|                          |                                  |                                 |
|--------------------------|----------------------------------|---------------------------------|
| DRAWN BY:<br><b>JG</b>   | CHECKED BY:<br><b>CL</b>         | SCALE:<br><b>1:150</b>          |
| DATE:<br><b>NOV/2020</b> | PROJECT NUMBER:<br><b>9-5570</b> | DRAWING NUMBER:<br><b>E-101</b> |



| Drawing Notes                                              |
|------------------------------------------------------------|
| ALL PHOTOMETRIC VALUES IN FOOTCANDLES (FC)                 |
| FIXTURE TYPE AND MOUNTING HEIGHT SHOWN<br>ADJACENT FIXTURE |
| ALL FIXTURES ARE DARK SKY COMPLIANT                        |

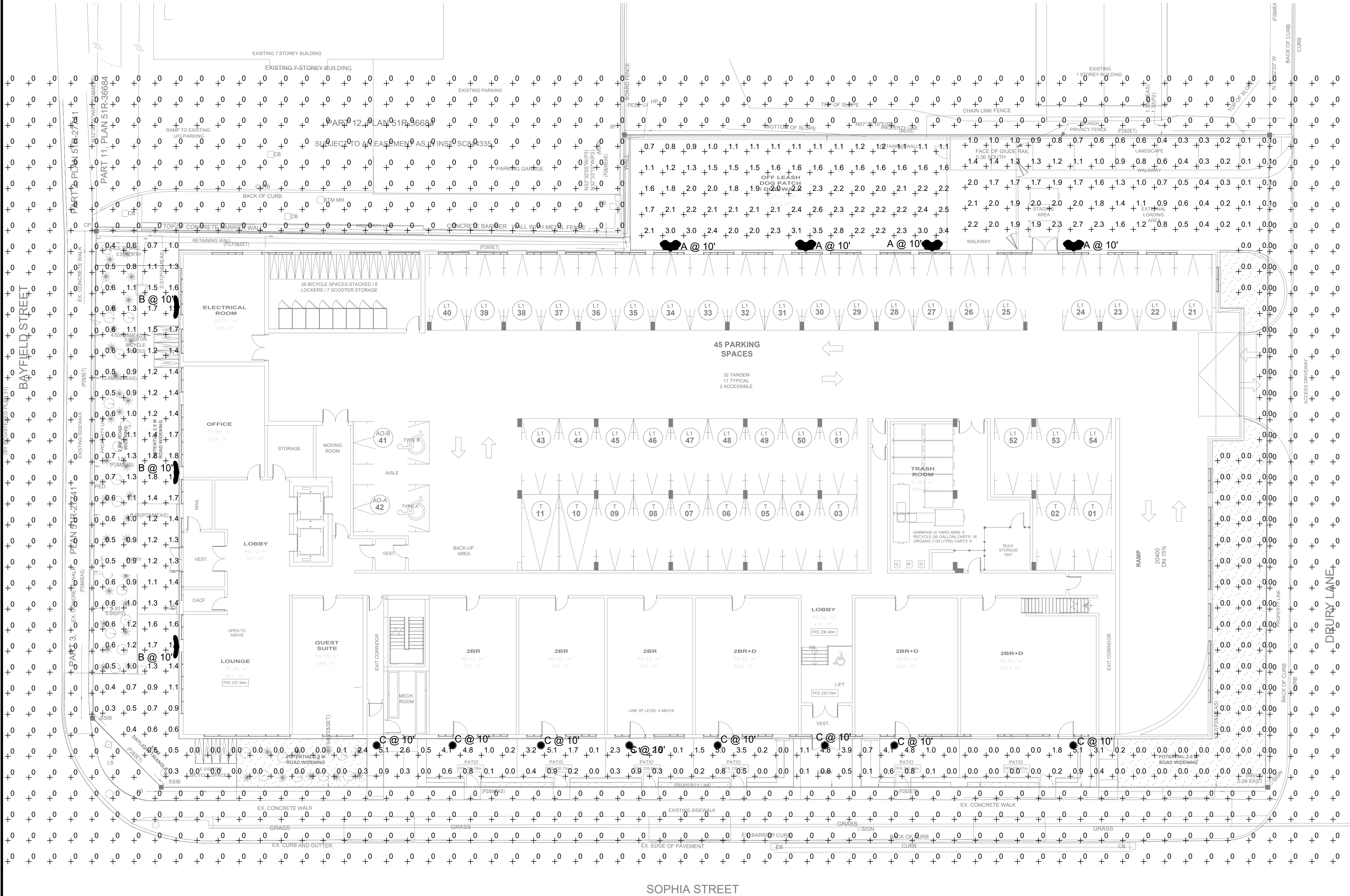
| Light Fixture Schedule |          |                   |                                                 |      |         |
|------------------------|----------|-------------------|-------------------------------------------------|------|---------|
| Label                  | Quantity | Manufacturer      | Catalog Number                                  | Lamp | Wattage |
| A                      | 4        | Lithonia Lighting | DSXW1 LED 10C 700 40K T4M                       | LED  | 26.2    |
| B                      | 3        | Lithonia Lighting | DSXW1 LED 10C 350 40K T2M                       | LED  | 13.3    |
| C                      | 8        | Lithonia Lighting | LBR4 ALO1 (500LM) SWW1 (4000K) AR LSS MWD 80CRI | LED  | 5.8     |
| D                      | 22       | Lithonia Lighting | LIL LED 40K MVOLT PE DDBTXD                     | LED  | 8.4     |

| Photometric Data |           |    |
|------------------|-----------|----|
| Location         | Dog Patch |    |
| Average          | 1.9       | fc |
| Maximum          | 3.5       | fc |
| Minimum          | 0.7       | fc |
| Max/Min          | 5.0:1     |    |
| Average/Min      | 2.7:1     |    |

| Photometric Data |      |    |
|------------------|------|----|
| Location         | Site |    |
| Average          | 0.5  | fc |
| Maximum          | 2.7  | fc |
| Minimum          | 0    | fc |
| Max/Min          | N/A  |    |
| Average/Min      | N/A  |    |

| Photometric Data |       |    |
|------------------|-------|----|
| Location         | Spill |    |
| Average          | 0.5   | fc |
| Maximum          | 2.7   | fc |
| Minimum          | 0     | fc |
| Max/Min          | N/A   |    |
| Average/Min      | N/A   |    |

| Photometric Data |                           |    |
|------------------|---------------------------|----|
| Location         | 3rd Floor<br>Amenity Area |    |
| Average          | 1.1                       | fc |
| Maximum          | 4                         | fc |
| Minimum          | 0                         | fc |
| Max/Min          | N/A                       |    |
| Average/Min      | N/A                       |    |



1 SITE LIGHTING PLAN  
Scale: 1:150

| DATE      | NO. | DESCRIPTION        | BY |
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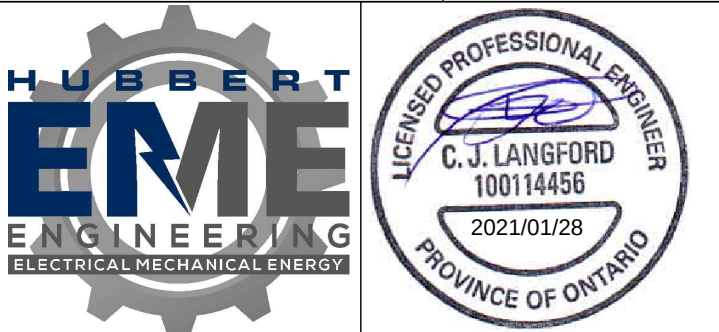
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PROJECT:  
**115 BAYFIELD**  
115 BAYFIELD  
BARRIE, ON

DRAWING TITLE:  
**SITE LIGHTING PLAN**

| DRAWN BY: | CHECKED BY:     | SCALE:          |
|-----------|-----------------|-----------------|
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| DATE:     | PROJECT NUMBER: | DRAWING NUMBER: |
| NOV/2020  | 9-5570          | E-102           |



| Drawing Notes                                              |
|------------------------------------------------------------|
| ALL PHOTOMETRIC VALUES IN FOOTCANDLES (FC)                 |
| FIXTURE TYPE AND MOUNTING HEIGHT SHOWN<br>ADJACENT FIXTURE |
| ALL FIXTURES ARE DARK SKY COMPLIANT                        |

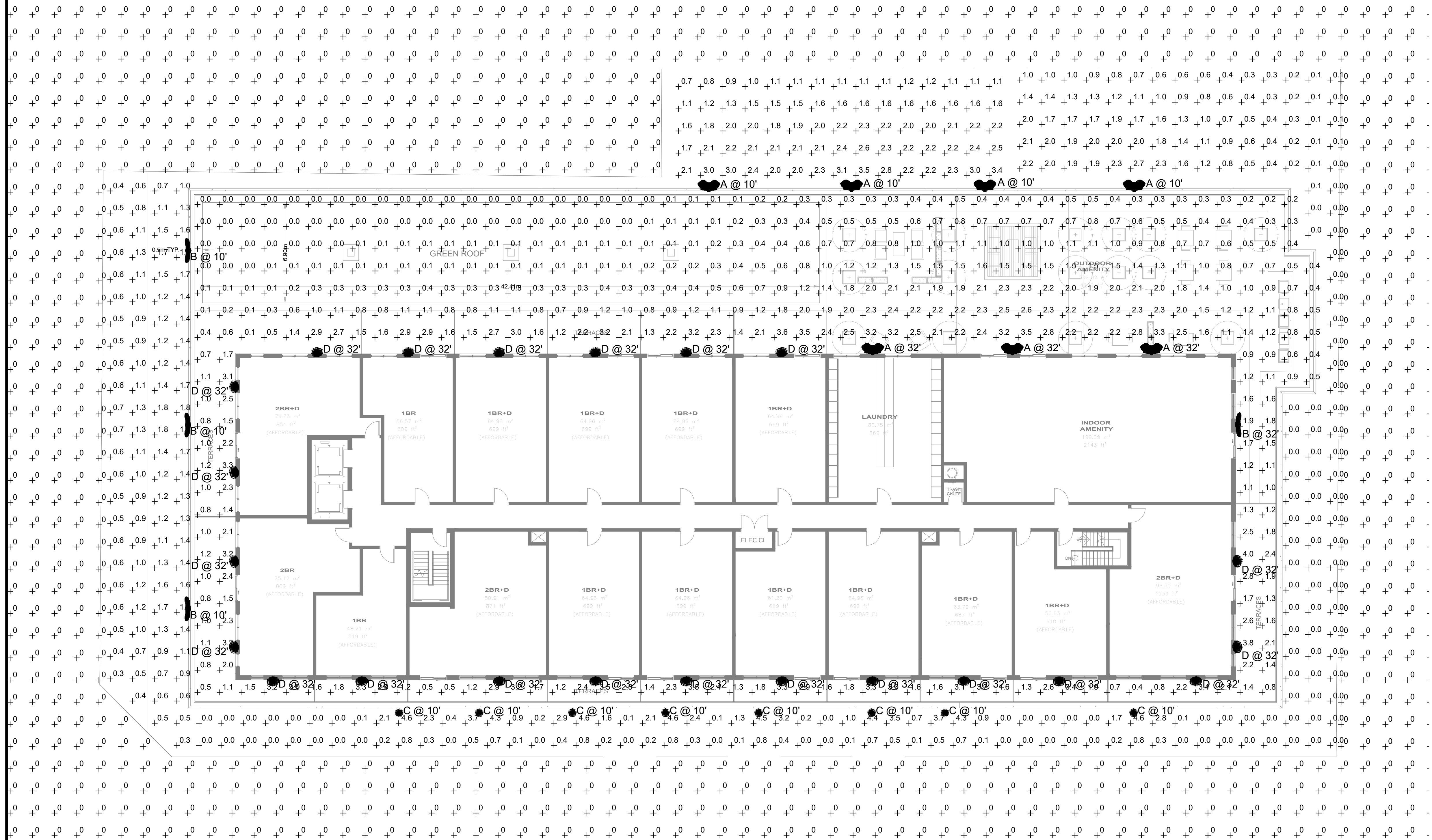
| Light Fixture Schedule |          |                   |                                                |      |         |
|------------------------|----------|-------------------|------------------------------------------------|------|---------|
| Label                  | Quantity | Manufacturer      | Catalog Number                                 | Lamp | Wattage |
| A                      | 4        | Lithonia Lighting | DSXW1 LED 10C 700 40K T4M                      | LED  | 26.2    |
| B                      | 3        | Lithonia Lighting | DSXW1 LED 10C 350 40K T2M                      | LED  | 13.3    |
| C                      | 8        | Lithonia Lighting | LB4 AL01 (500LM) SWW1 (4000K) AR LSS MWD 80CRI | LED  | 5.8     |
| D                      | 22       | Lithonia Lighting | LIL LED 40K MVOLT PE DBDXTD                    | LED  | 8.4     |

| Photometric Data |           |    |
|------------------|-----------|----|
| Location         | Dog Patch |    |
| Average          | 1.9       | fc |
| Maximum          | 3.5       | fc |
| Minimum          | 0.7       | fc |
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| Photometric Data |      |    |
|------------------|------|----|
| Location         | Site |    |
| Average          | 0.5  | fc |
| Maximum          | 2.7  | fc |
| Minimum          | 0    | fc |
| Max/Min          | N/A  |    |
| Average/Min      | N/A  |    |

| Photometric Data |       |    |
|------------------|-------|----|
| Location         | Spill |    |
| Average          | 0.5   | fc |
| Maximum          | 2.7   | fc |
| Minimum          | 0     | fc |
| Max/Min          | N/A   |    |
| Average/Min      | N/A   |    |

| Photometric Data |                        |    |
|------------------|------------------------|----|
| Location         | 3rd Floor Amenity Area |    |
| Average          | 1.1                    | fc |
| Maximum          | 4                      | fc |
| Minimum          | 0                      | fc |
| Max/Min          | N/A                    |    |
| Average/Min      | N/A                    |    |



|           |   |                    |    |
|-----------|---|--------------------|----|
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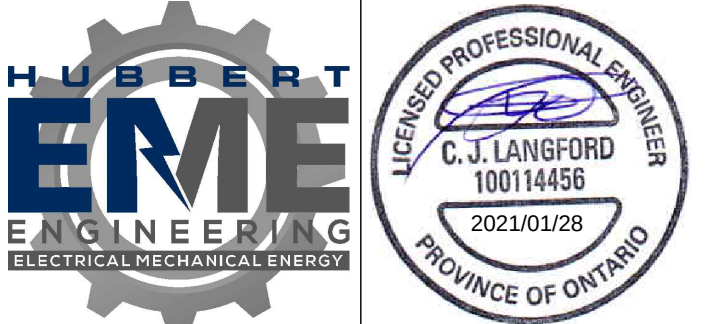
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115 BAYFIELD  
115 BAYFIELD  
BARRIE, ON

DRAWING TITLE:

|                       |                               |                              |
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# PowerStream Inc. Construction Standard

17-201

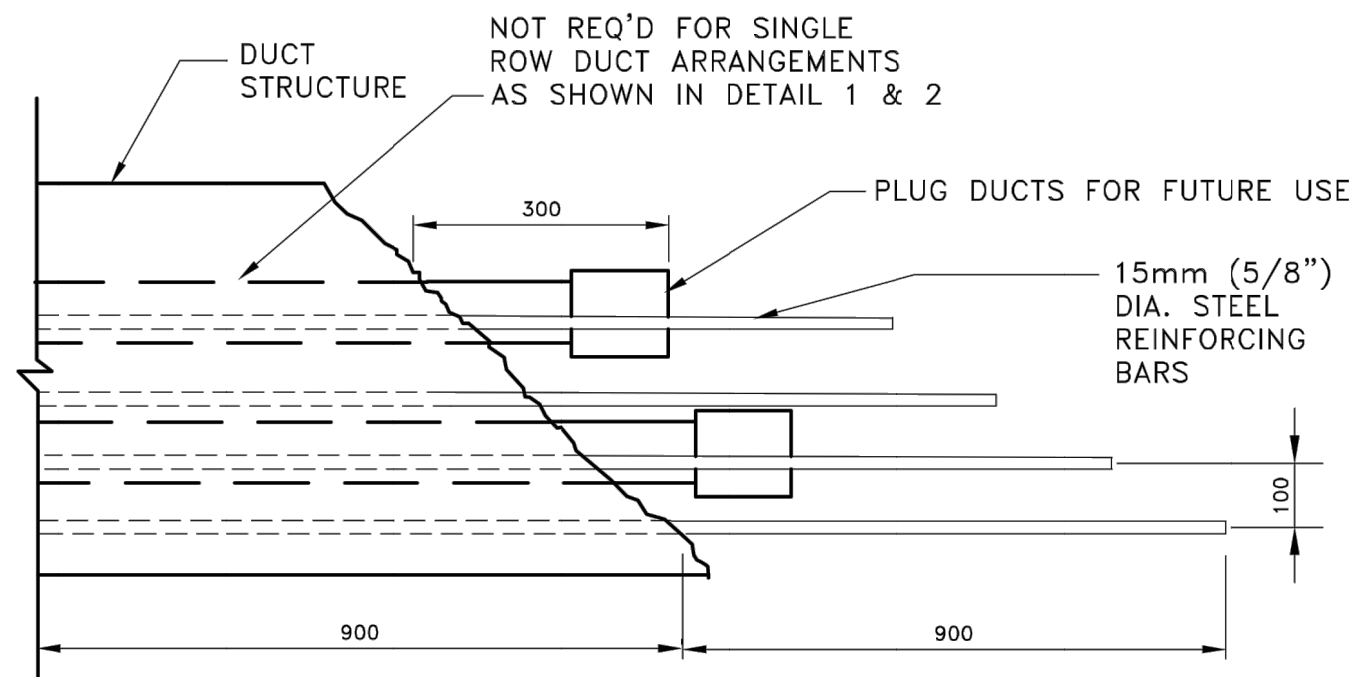
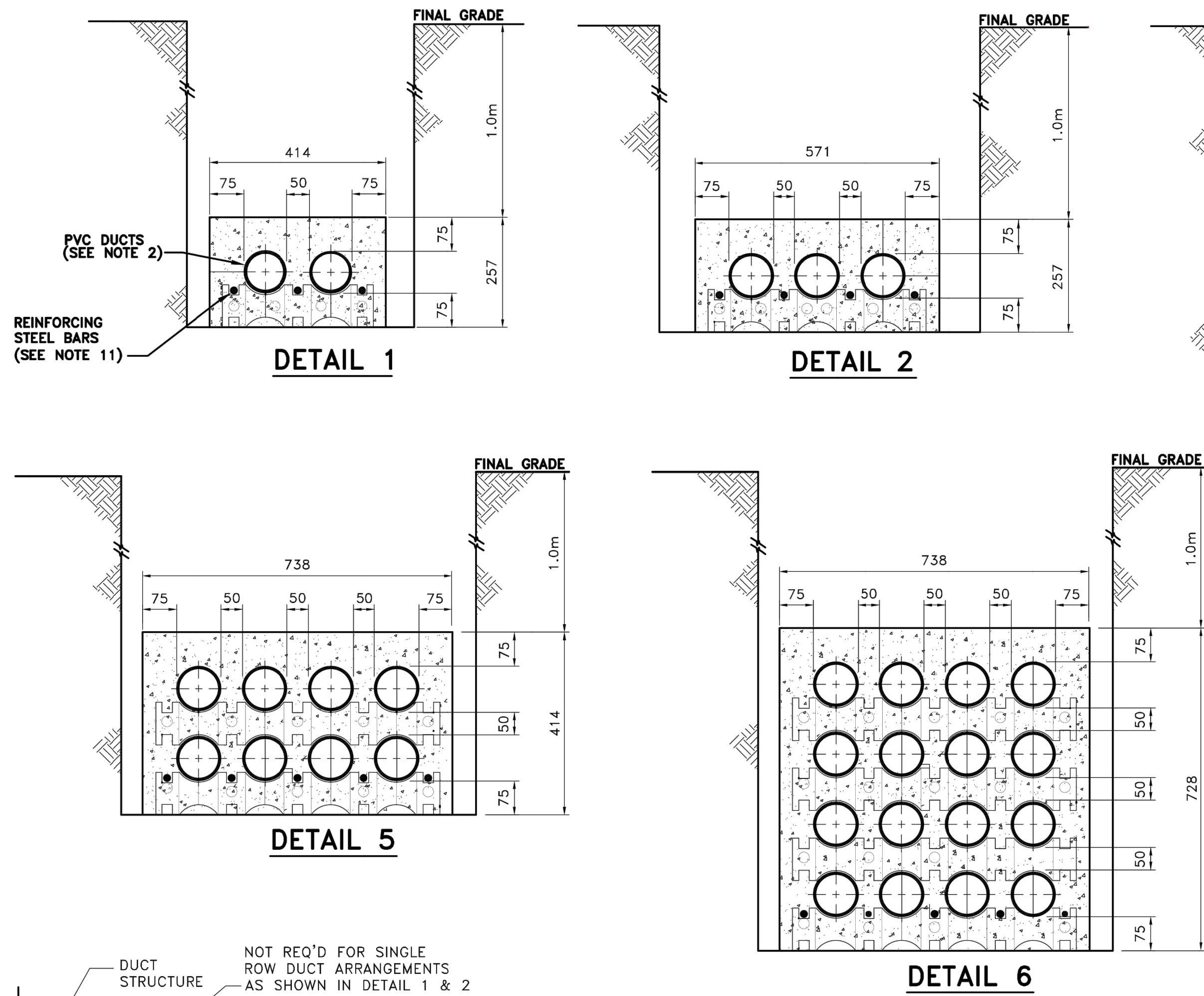


FIGURE 1  
TYPICAL STUB FOR FUTURE EXTENSION SEE (NOTE 14)

## STANDARD ARRANGEMENT FOR CONCRETE ENCASED DUCTS IN AN UNDISTURBED AREA

ORIGINAL ISSUE DATE: 2006-MAR-30

REVISION NO.: R2

REVISION DATE: 2012-MAR-15

DETAIL 3  
(SEE NOTE 15)

DETAIL 4

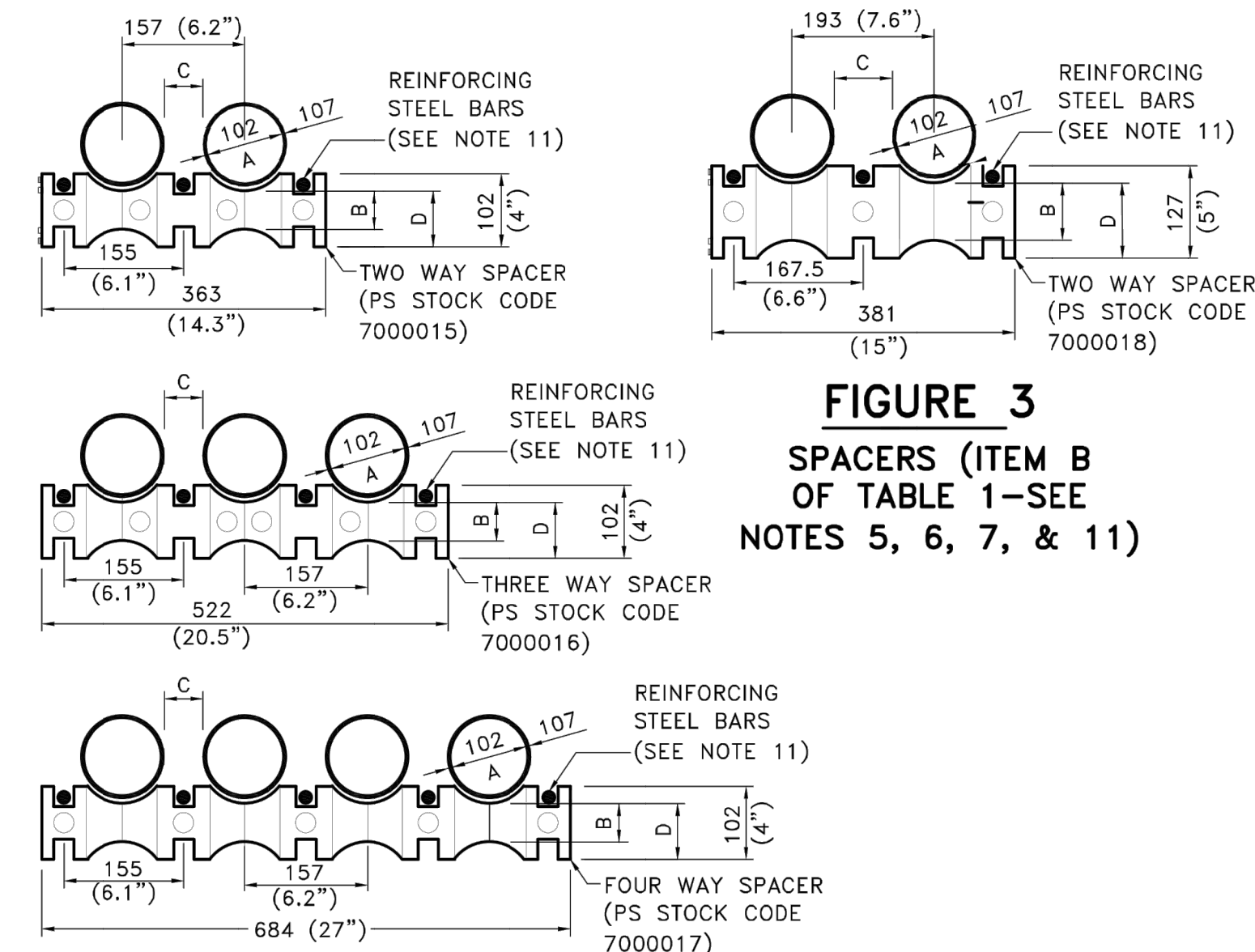


FIGURE 2  
SPACERS (ITEM A OF TABLE 1)  
(SEE NOTES 5, 6, 7, & 11)

| ITEM NO.     | NOMINAL PIPE SIZE (A)<br>mm (inch) | VERTICAL SPACING<br>mm (inch) |                         | HORIZONTAL SPACING<br>mm (inch) |                         | GROUND CLEARANCE (D)<br>mm (inch) | NUMBER OF WAYS |
|--------------|------------------------------------|-------------------------------|-------------------------|---------------------------------|-------------------------|-----------------------------------|----------------|
|              |                                    | BETWEEN END OF DUCTS (B)      | BETWEEN CENTRE OF DUCTS | BETWEEN END OF DUCTS (C)        | BETWEEN CENTRE OF DUCTS |                                   |                |
| A (FIGURE 2) | 102 (4")                           | 51 (2")                       | 157 (6.2")              | 51 (2")                         | 157 (6.2")              | 76 (3")                           | 2, 3 or 4      |
| B (FIGURE 3) | 102 (4")                           | 76 (3")                       | 182 (7.2")              | 86 (3.4")                       | 193 (7.5")              | 102 (4")                          | 2              |

TABLE 1  
ROYAL PIPE MONOBLOC  
SPACERS OR EQUIVALENT  
APPROVED BY POWERSTREAM  
(SEE NOTES 5, 6, 7, & 11)

**Certificate of Approval**  
This construction Standard meets the safety requirements of Section 4 of Regulation 22/04  
Joe Crozier, P.Eng. 2012-MAR-15  
Name Date  
P.Eng. Approval By: Joe Crozier

### NOTES:

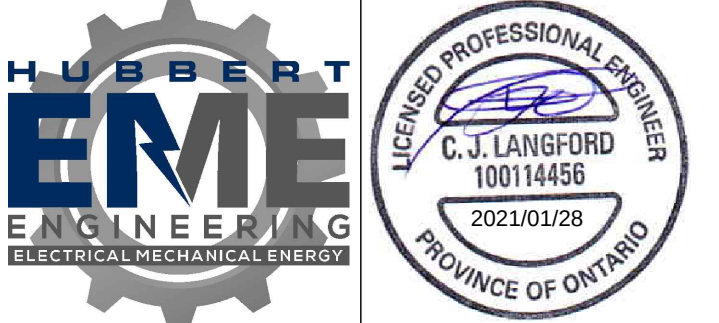
- THE CUSTOMER SHALL SUPPLY AND MAINTAIN APPROVED DUCTS TO PERMIT THE INSTALLATION OF THE CABLES BY POWERSTREAM.
- ALL DUCTS SHALL BE CSA TYPE DB2/ES2 POLYVINYL CHLORIDE (PVC) WITH AN INTERNAL DIAMETER OF 102mm AND OUTER DIAMETER 107mm (POWERSTREAM STOCK CODE 17000202). THESE DUCTS SHALL COMPLY WITH C.S.A STANDARD C22.2 NO. 211.1 (CURRENT EDITION). ALL DUCTS SHALL BE TERMINATED WITH BELL FITTINGS AT EACH END UNLESS OTHERWISE SPECIFIED.
- THE TOP SURFACE OF THE DUCT BANK SHALL BE AT LEAST 1.0m BELOW THE FINISHED GRADE.
- THE DUCT RUN SHALL CONSIST OF PARALLEL DUCTS; THE NUMBER AND POWERSTREAM ARRANGEMENT OF DUCTS TO BE SPECIFIED BY
- DUCTS TO BE SUPPORTED WITH POWERSTREAM APPROVED SPACERS (STOCK CODES 7000015, 7000016, 7000017, 7000018) AS SHOWN IN FIGURE 2 AND 3. THE SPACERS SHALL BE INSTALLED WITHIN 600mm ON BOTH SIDES OF EACH COUPLING USED. TWO SPACERS FOR 3.0m OF DUCT LENGTH SHALL BE USED.
- THE SPACING BETWEEN EXTERIOR WALLS OF DUCTS SHALL BE 51 mm BOTH HORIZONTALLY AND VERTICALLY (ITEM A OF TABLE 1) OR AS SPECIFIED IN NOTE 7.
- USE SPACER BLOCKS WITH 86mm HORIZONTAL AND 76mm VERTICAL SPACING BETWEEN EXTERIOR WALLS (ITEM B OF TABLE 1) FOR CONCRETE ENCASED DUCT BANKS AT TRANSFORMER STATIONS FEEDER EGRESS OR FOR HIGHER CABLE AMPACITY REQUIREMENTS.
- THE DUCT LENGTHS SHALL BE JOINED TOGETHER WITH AN APPROVED COUPLING TO PROVIDE A SOUND AND WATERTIGHT JOINT. THE JOINTS IN ADJACENT DUCTS SHALL BE STAGGERED BY AT LEAST 200mm.
- THE DUCTS SHALL HAVE AN EVEN SLOPE IN ONE DIRECTION OF NOT LESS THAN 75mm IN 30 METERS TO PROVIDE DRAINAGE. THE SLOPE SHOULD BE TOWARD THE STREET WHERE POSSIBLE.
- THE DUCTS SHALL BE ENCASED WITH 20MPA GRADE CONCRETE WITH A MINIMUM COVER OF 75mm FROM EXTERIOR WALLS OF DUCTS ON ALL SIDES. THE CONCRETE SHALL BE WORKED BELOW AND BETWEEN PIPES TO PRODUCE A HOMOGENEOUS MASS. THE CONCRETE SHALL BE IN ACCORDANCE WITH CSA STANDARDS CAN3-A23.2, CAN3-A23.1, AND CAN3-A23.4 (CURRENT EDITIONS).
- THE DUCT RUN SHALL BE REINFORCED. REINFORCING STEEL BARS 15mm (5/8") DIAMETER SHALL BE LAID LONGITUDINALLY ALONG THE TRENCH WITH 155mm (FIGURE 2) OR 167.5mm (FIGURE 3) LATERAL SPACING AND 75mm ABOVE THE BASE OF THE CONCRETE. AN OVERLAP OF 600mm OF THE REINFORCING BARS SHALL BE PROVIDED WHERE NECESSARY. THE REINFORCING BARS SHALL BE TIED TOGETHER WHERE THEY OVERLAP. THE DUCT RUNS SHALL ALSO BE REINFORCED AT ALL BUILDING AND MANHOLE ENTRIES WITH THE BARS BEING EMBEDDED IN THE WALLS.
- WHEN COMPLETE, THE DUCTS SHALL BE CLEAN, WATERPROOF AND FREE FROM OBSTRUCTIONS AND THE ENDS PLUGGED WITH STANDARD PLASTIC DUCT PLUGS TO PREVENT THE INGRESS OF MOISTURE AND DIRT. THE DUCTS SHALL BE TESTED FOR CLEARANCE WITH 5mm MANDREL IN THE PRESENCE OF A REPRESENTATIVE. A NON-METALLIC, NON-DETERIORATING 10mm POWERSTREAM DIAMETER ROPE WITH MINIMUM FIVE HUNDRED POUNDS BREAKING STRENGTH SHALL BE INSTALLED IN EACH DUCT.
- DUCTS LOCATED IN THE PRIMARY DUCT BANK, REQUIRED TO PROVIDE ELECTRICAL SERVICE TO THE CUSTOMER, THAT ARE CONSTRUCTED, OWNED AND MAINTAINED BY THE CUSTOMER, ARE FOR THE EXCLUSIVE USE OF FOR THE PROVISION OF DISTRIBUTION SERVICES. NO OTHER POWERSTREAM SERVICE PROVIDERS SHALL BE PERMITTED TO USE ANY DUCTS IN THE DUCT BANK.
- WHERE IT IS REQUIRED THAT THE CUSTOMER'S DUCTS SHALL JOIN DIRECTLY DUCTS, THE CUSTOMER'S DUCTS SHALL BE LEFT POWERSTREAM WITH THE PROJECTING (MINIMUM 300mm) FROM THEIR CONCRETE ENVELOPE IN A STAGGERED PATTERN. THEY SHALL BE EQUIPPED WITH SUITABLE COUPLINGS AND PLUGGED UNTIL THE JOINTS ARE MADE. THE FACE OF THE CONCRETE ENVELOPE SHALL BE LEFT ROUGH TO KEY WITH THE EXTENSION ENVELOPE AND 15mm (5/8") DIAMETER STEEL REINFORCING BARS 1.8M IN LENGTH SHALL BE ENCASED LONGITUDINALLY IN THE ENVELOPE, 50mm INSIDE THE PERIMETER OF THE BANK AT 100mm CENTRES ALONG THE SIDES AND BOTTOM OF THE BANK. THE RODS SHALL PROJECT 900mm FROM THE CENTRE TO ANCHOR FIRMLY INTO THE CONCRETE OF THE EXTENSION WHEN THE LATTER IS POURED. (SEE FIGURE 1)
- POWERSTREAM REPRESENTATIVE MUST APPROVE THE REQUIREMENT OF ALTERNATE FLAT CONFIGURATION USING FOUR WAY SPACERS FOR DETAIL 3.
- CONCRETE ENCASED DUCT BANKS UNDER ROAD CROSSINGS MUST BE EXTENDED 1.0m OUTSIDE THE CURB ON BOTH SIDES OF THE ROAD.
- THE CONTRACTOR SHALL APPLY TO POWERSTREAM CONSTRUCTION
- DEPARTMENT 48 HOURS BEFORE DIGGING THE TRENCH. THE CONTRACTOR WILL THEN SCHEDULE CONSTRUCTION AND CONCRETE POURING INSPECTIONS WITH THE CONSTRUCTION DEPARTMENT.
- ALL DIMENSIONS IN mm UNLESS OTHERWISE SPECIFIED.
- BACKFILL AND COMPACTION WITH MATERIALS AS PER MUNICIPAL, REGIONAL, AND/OR PROVINCIAL STANDARDS FOR ROAD CONSTRUCTION.
- FOR CONSTRUCTION OF DUCT BANKS & JOINT-USE TRENCH (I.E. SUPPLY, COMMUNICATION, CIVIL, GAS ETC.) REFER TO UNDERGROUND SYSTEM STANDARD CSA 22.3.

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TEL: (705) 735-1133

PROJECT: 115 BAYFIELD  
115 BAYFIELD  
BARRIE, ON

DRAWING TITLE: DUCT DETAILS

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| DATE:     | PROJECT NUMBER: | DRAWING NUMBER: |
| NOV/2020  | 9-5570          | E-104           |



