LYDIA TRULL PUBLIC SCHOOL
ELEVATOR REPLACEMENT

Kawartha Pine Ridge
District School Board

80 Avondale Dr.
Courtice, Ontario

LIST OF DRAWINGS

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M2	LEGENDS & NOTES

ELECTRICAL

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E2	LEGENDS & NOTES
E3	SCHEDULES & DETAILS

NAME OF PROJECT : BARRY BRYAN ASSOCIATES
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NAME OF PROJECT :
LYDIA TRUSS PUBLIC SCHOOL
ELEVATOR REPLACEMENT

LOCATION OF PROJECT :
80 AVONDALE DR, COURTICE, ONTARIO

DATE :
FEB. 6, 2018

ONTARIO ASSOCIATION of ARCHITECTS
JOHN DAVID MOSES
LICENCE
4703

4,670 SM. including 19 SM reno

Ontario Building Code Data Matrix
Part 11 - Renovation of Existing Building

			OBC Reference
11.00	Building Code Version:	O. Reg. 332/12 Last Amendment: O. Reg. 191/14	
11.01	Project Type:	☐ Addition ☑ Renovation ☐ Addition and Renovation ☐ Change of use Description -	[A] 1.1.2.
11.02	Major Occupancy Classification:	Occupancy: Group A, Division 2 / - / - — Use: School / - / -	3.1.2.1.(1)
11.03	Superimposed Major Occupancies:	☐ Yes ☐ No Description -	3.2.2.7
11.04	Building Area (m²)	Ground Floor including 11 m² reno: Existing 2,902 m², New -, Total 2,902 m² Second Floor including 8 m² reno: Existing 1,768 m², New -, Total 1,768 m² -: Existing -, New -, Total - Total= Existing 4,670 m², New -, Total 4,670 m²	[A] 1.4.1.2.
11.05	Building Height	2 Storeys above grade - (m) Above grade 0 Storeys below grade	[A] 1.4.1.2 & 3.2.1.1
11.06	Number of streets/ fire fighter access:	1 street(s)	3.2.2.10 & 3.2.5
11.07	Building Size:	☐ Small ☐ Medium ☑ Large ☐ > Large	T.11.2.1.1.B.-N.
11.08	Existing Building Classification:	Change in Major Occupancy: ☐ Yes ☑ Not Applicable (no change of major occupancy) Construction Index: 5 Hazard Index: 6 Importance Category: ☐ Low ☐ Normal ☑ High ☐ Post-disaster	11.2.1 T11.2.1.1A T11.2.1.1B to N, 4.1.2.1(3) & 5.2.2.1.(2)
11.09	Renovation Type:	☑ Basic Renovation ☐ Extensive Renovation	11.3.3.1 & 11.3.3.2
11.10	Occupant Load:	Floor Level/ Area: - / - — Occupancy Type: - / - — Based On: - / - — Occup. Load: - / -	3.1.17
11.11	Plumbing Fixture Requipments:	Ratio: Male/Female = 50:50 Except as noted otherwise Floor level/ Area — Occupant Load — OBC Reference — Fixtures Required — Fixtures Provided	3.7.4
11.12	Barrier-free Design:	☑ Yes Explanation ☐ No	11.3.3.2.(2)
11.13	Reduction In Performance Level:	Structural ☑ No ☐ Yes By Increase in occupant load: ☑ No ☐ Yes By change of major occupancy: ☑ No ☐ Yes Plumbing ☑ No ☐ Yes Sewage - system: ☑ No ☐ Yes	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5
11.14	Compensating Construction:	☐ Yes ☑ No Structural ☑ No ☐ Yes By Increase in occupant load: ☑ No ☐ Yes By change of major occupancy: ☑ No ☐ Yes Plumbing ☑ No ☐ Yes Sewage - system: ☑ No ☐ Yes Extension of Combustible Construction: ☑ No ☐ Yes	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5 11.4.2.6 11.4.2.7
11.15	Compliance Alternatives Proposed:	☑ No ☐ Yes	11.5.1.
11.16	Notes:		11.5.1

ARCHITECTURAL :

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106-209 DUNDAS STREET EAST, WHITBY, ONTARIO
info@durhamenergy.com / www.durhamenergy.com

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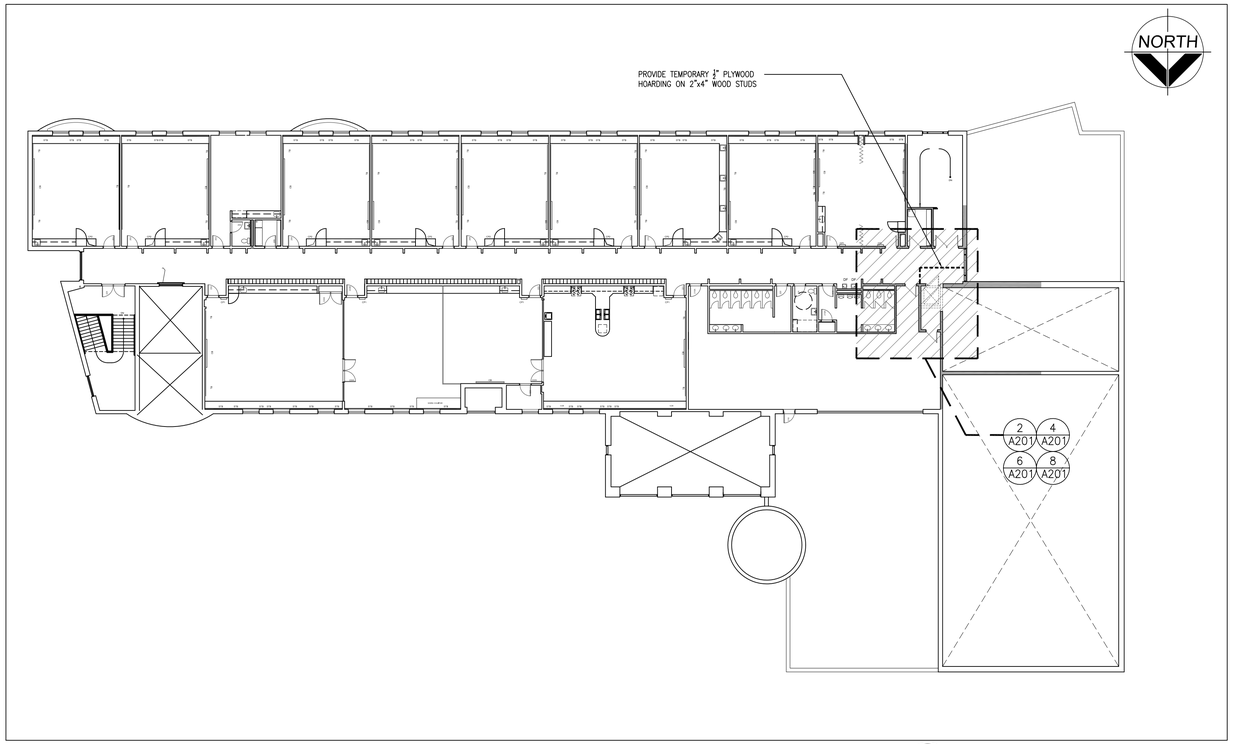
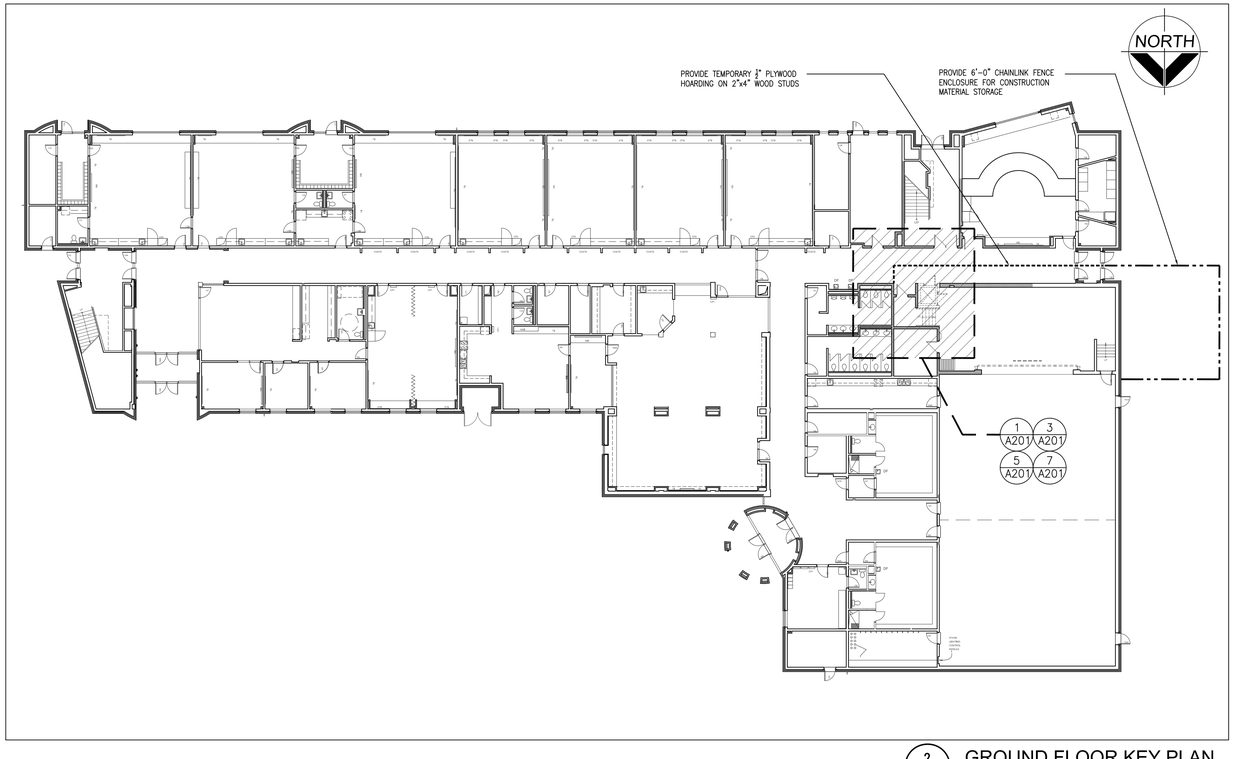
PROJECT NO. 18010

A000



3 A100 SECOND FLOOR KEY PLAN
1" = 20'-0"



2 A100 GROUND FLOOR KEY PLAN
1" = 20'-0"

1 A100 LOCATION PLAN
NTS

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

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DRAWING:

LOCATION PLAN AND KEY PLANS

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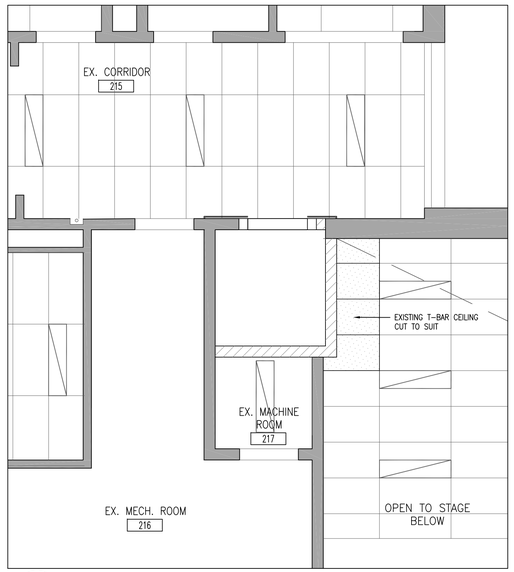
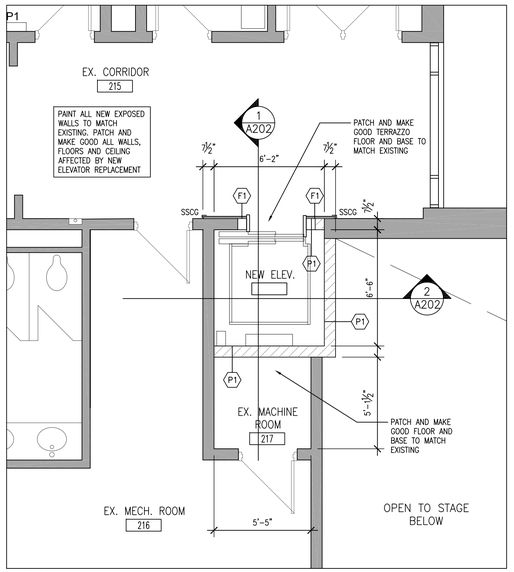
DRAWING NO: **A100**

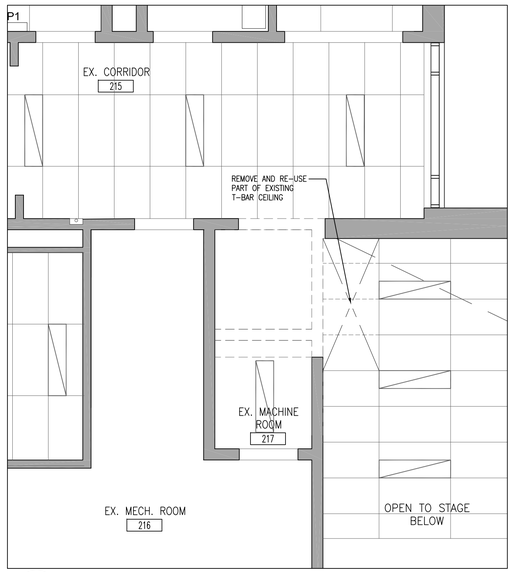
PARTITION TYPE SCHEDULE	FLOOR PLAN NOTATION LEGEND
P1 — 7 ⅝" CONCRETE BLOCK WALL	CORRIDOR / 100 — ROOM NAME & NUMBER
F1 — 7" FURRING CHANNELS @ 16" c/c. ⅝" ABUSE RESISTANCE GYPSUM BOARD WALL TO TERMINATE TO U/S OF EXIST. CEILING	P1 — INTERIOR PARTITION OR FURRING TYPE
NOTE: PAINT ALL NEW EXPOSED WALLS TO MATCH EXISTING. PROVIDE BASE TO MATCH EXISTING.	4 / A201 — SECTION REFERENCE NUMBER
	4 / A201 — DETAIL REFERENCE NUMBER
	EXISTING DOOR
	EXISTING WALL
	⌐ SSCG — STAINLESS STEEL CORNER GUARD



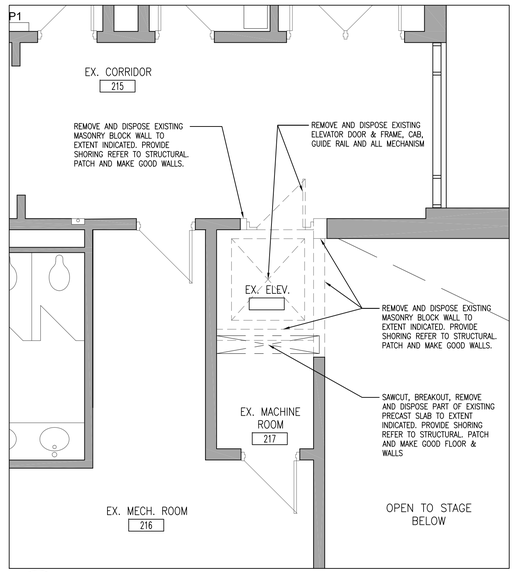
8 / A201 PART SECOND FLOOR CEILING PLAN
1/4" = 1'-0"



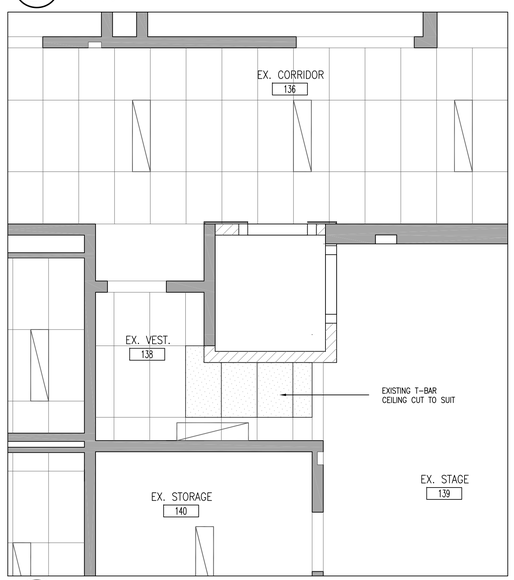
6 / A201 SECOND FLOOR NEW ELEVATOR PLAN
1/4" = 1'-0"



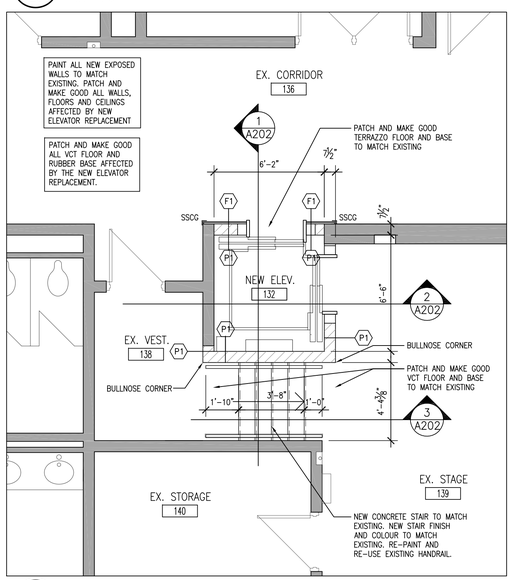
4 / A201 SECOND FLOOR CEILING DEMO PLAN
1/4" = 1'-0"



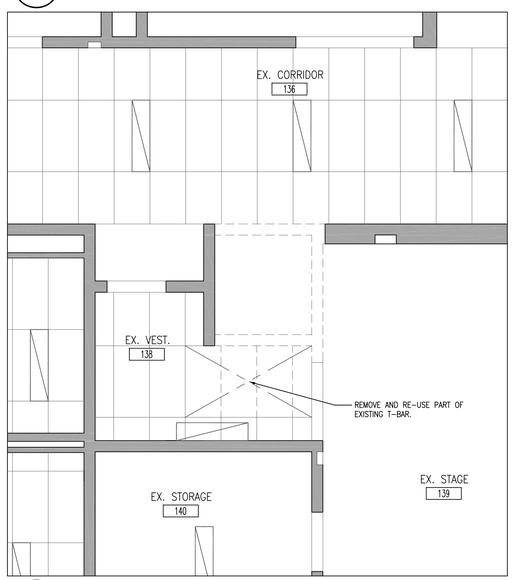
2 / A201 PART SECOND FLOOR ELEVATOR DEMO PLAN
1/4" = 1'-0"



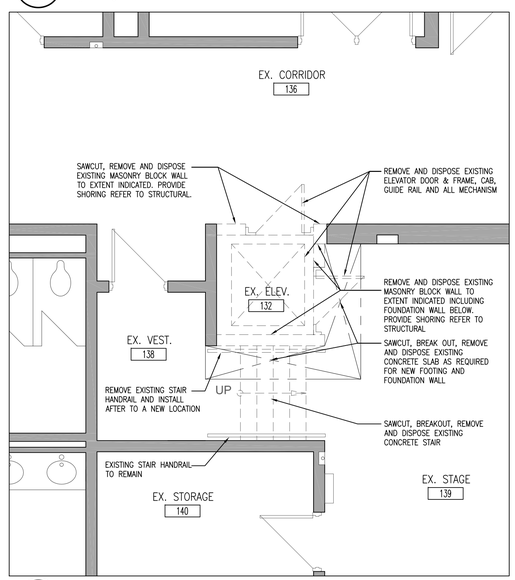
7 / A201 PART GROUND FLOOR CEILING PLAN
1/4" = 1'-0"



5 / A201 GROUND FLOOR NEW ELEVATOR PLAN
1/4" = 1'-0"



3 / A201 GROUND FLOOR CEILING DEMO PLAN
1/4" = 1'-0"



1 / A201 PART GROUND FLOOR ELEVATOR DEMO PLAN
1/4" = 1'-0"

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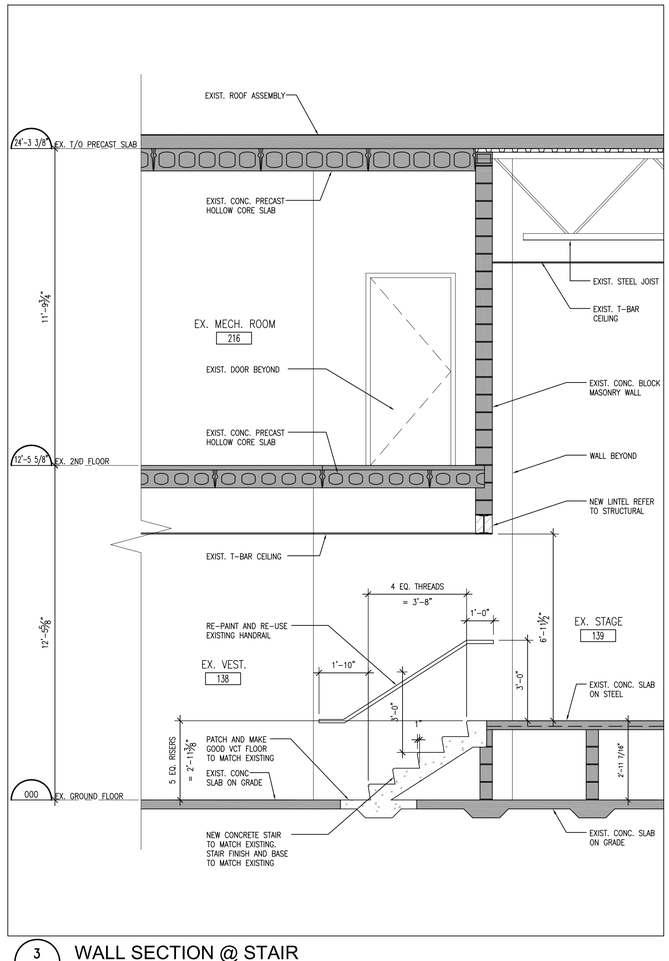
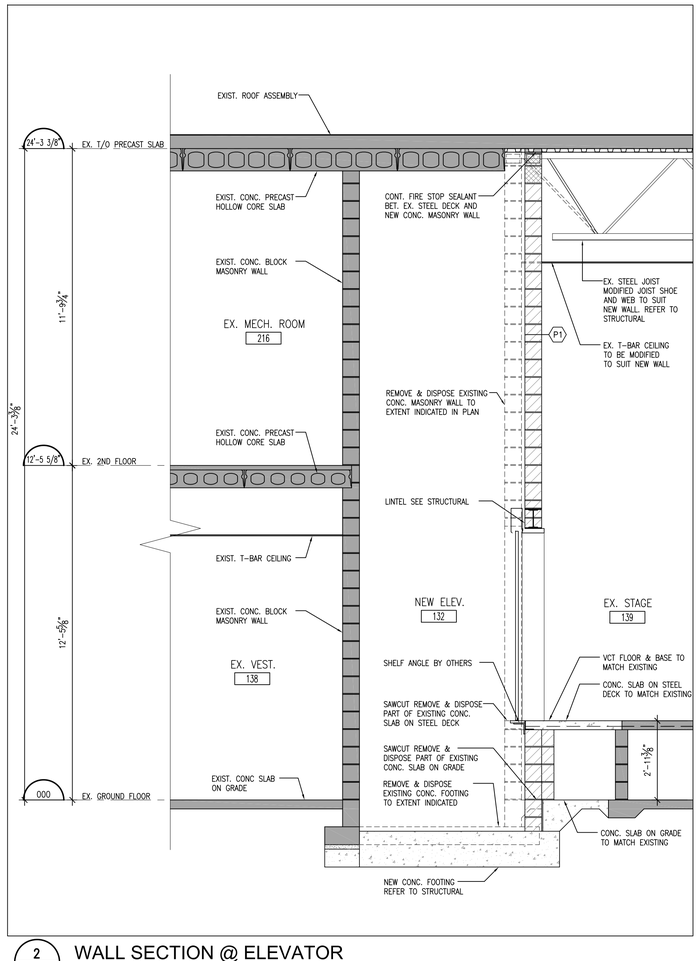


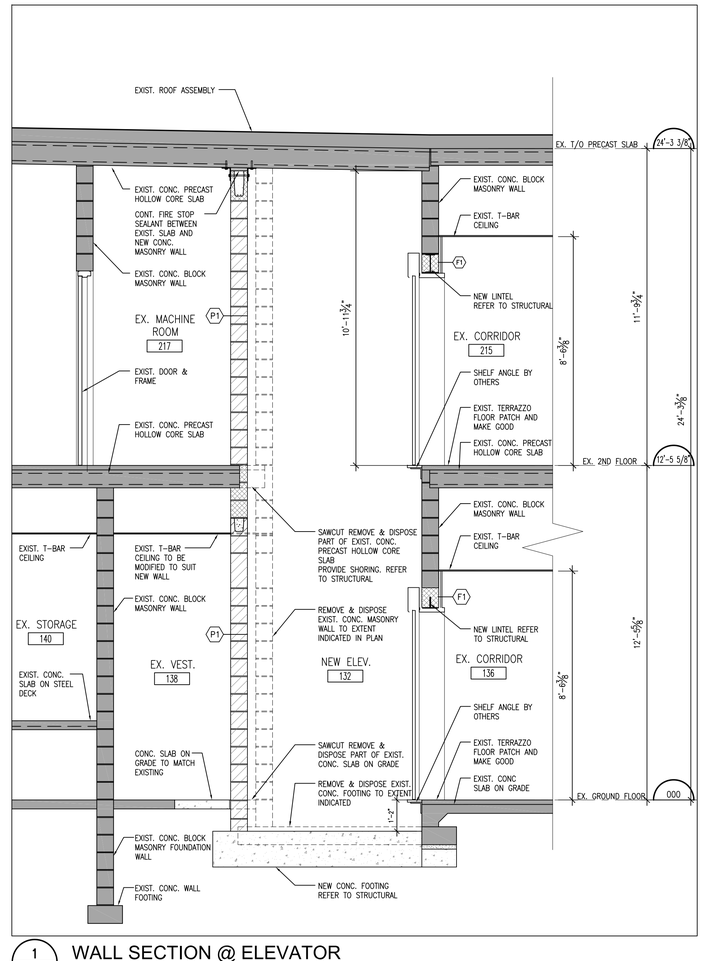
3 / A202 WALL SECTION @ STAIR

3/8" = 1'-0"



2 / A202 WALL SECTION @ ELEVATOR

3/8" = 1'-0"



1 / A202 WALL SECTION @ ELEVATOR

3/8" = 1'-0"

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WALL SECTIONS

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DRAWING NO: **A202**

GENERAL NOTES

1. SITE VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE DESIGN ENGINEER.
2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, LATEST EDITION AND THE OCCUPATIONAL HEALTH AND SAFETY ACT/REGULATIONS FOR CONSTRUCTION PROJECTS.
3. CONFORM TO OWNER'S GENERAL SPECIFICATIONS INCLUDING ALL SAFETY REQUIREMENTS.
4. KEEP THE SITE THROUGHOUT THE WORK AREA IN A CLEAN AND ORDERLY CONDITION AT ALL TIMES TO THE SATISFACTION OF THE OWNER.
5. THE LATEST EDITION OF ALL CODES AND STANDARDS SHALL BE USED.
6. ALL STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER CONSULTANTS DRAWINGS.

CONCRETE

1. CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF CAN/CSA-A23.1 AND CAN/CSA-A23.3 WITH THE FOLLOWING PROVISION:

LOCATION	COMPRESSIVE STRENGTH (28 DAYS)	SLUMP	EXPOSURE CLASS
INTERIOR FOOTINGS/ FOUNDATION WALLS AND BEAMS	25 MPa	80± 30	N
GROUND AND SECOND FLOOR SLAB	25 MPa	80± 30	N

2. NO ADDITIONAL WATER SHALL BE ADDED AT THE JOB SITE. CONCRETE WHICH HAS BEEN WATERED OR DOES NOT MEET SPECIFICATIONS SHALL BE REJECTED.
3. DURING WINTER WEATHER BELOW 5 °C PROVIDE TEMPORARY HEATING OF CONCRETE IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1.
4. ALL EPOXY SHALL BE HILTI HIT-HY 200 OR APPROVED EQUIVALENT, U.N.O.

CONCRETE REINFORCEMENT

1. THE CLEAR DISTANCE BETWEEN REINFORCING STEEL AND SURFACE OF CONCRETE SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

LOCATION	CLEAR COVER
FOOTINGS	3" UNDERSIDE 2" TOP AND ENDS
WALLS	2" AGAINST EARTH (20M BAR OR GREATER) 1½" AGAINST EARTH (15M BAR) 1½" AGAINST FORM (20M BAR OR GREATER) 1" AGAINST FORM (15M BAR)
SLABS	1" TOP BARS 1" BOTTOM BARS
BEAMS	1 ½"
SURFACE IN CONTACT WITH GROUND	3"

2. STRUCTURAL GROUT SHALL BE NON-SHRINK, NON METALLIC M-BED STANDARD PREMIX BY SIKA OR APPROVED EQUAL.
3. DETAIL REINFORCING STEEL IN ACCORDANCE WITH "REINFORCING STEEL MANUAL OF STANDARD PRACTICE" BY THE REINFORCING STEEL INSTITUTE OF CANADA LATEST EDITION.
4. REINFORCING BAR SPLICES FOR DEFORMED BARS:
   COLUMNS – COMPRESSION LAP UNLESS NOTED
   WALLS – CLASS 'B' TENSION SPLICE UNLESS NOTED
   ALL OTHERS – CLASS 'B' TENSION LAP UNLESS NOTED
5. ALL REINFORCING STEEL SHALL BE DEFORMED HARD GRADE BILLET STEEL CONFORMING TO CSA G30.18 GRADE 400.
6. WELDED STEEL WIRE FABRIC, PLAIN TYPE CONFORMING TO CSA G30.5M IN FLAT SHEETS NOT ROLLED.
7. ALL CONCRETE REINFORCEMENT MUST BE PROPERLY CHAIRED WITH APPROVED BAR SUPPORTS.
8. PROVIDE CHAIRS, SPACER BARS, SUPPORT BARS AND OTHER ACCESSORIES TO SUPPORT REINFORCING IN ACCORDANCE WITH THE LATEST EDITIONS OF CSA A23.1 AND CSA A23.3 CHAIRS TO BE PLASTIC, PLASTIC TIPPED OR CONCRETE. ALL TIE WIRE, CHAIRS AND BAR SUPPORTS USED FOR COATED REINFORCING SHALL BE NON-METALLIC OR PROTECTED WITH ACCEPTABLE COATING.
9. CHAIRS SHALL BE SPACED AT 4'-0" O.C. MAXIMUM.

STRUCTURAL STEEL

1. STRUCTURAL STEEL W SECTIONS SHALL BE G40.21M-350W. ALL OTHERS SHALL BE G40.21M-300W.
2. ALL CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR UNLESS NOTED OTHERWISE.
3. PROVIDE SHOP DRAWINGS OF COMPONENTS AND CONNECTIONS DESIGNED BY THE FABRICATOR'S ENGINEER. DRAWINGS SHALL BE SIGNED AND SEALED BY THAT ENGINEER.
4. BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH CONNECTED PIECE.
5. FABRICATION, ERECTION AND WORKMANSHIP SHALL CONFORM TO CSA S16.1, LATEST EDITION.
6. ALL WELDING SHALL CONFORM TO CSA W59 AND SHALL BE PERFORMED BY A WELDER QUALIFIED UNDER CSA W47.
7. ALL CONNECTIONS SHALL BE WELDED USING E49XX ELECTRODES OR BOLTED USING ASTM A325 HIGH STRENGTH BOLTS.
8. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP APPLIED COAT OF PRIMER. SPOT PRIME ALL WELDED AREAS. SPOT PRIME AS REQUIRED.
9. REMOVE PAINT FILM FROM ALL STEEL SURFACES TO BE WELDED.
10. DO NOT CUT OR CORE ANY OPENINGS IN ANY STRUCTURAL STEEL MEMBERS WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER
11. WHERE A STRUCTURAL STEEL SHAPE SHOWN ON THE DRAWINGS IS UNAVAILABLE, A SHAPE OF EQUAL OR GREATER SECTION PROPERTIES AND STRUCTURAL CAPACITY SHALL BE SUBSTITUTED UPON APPROVAL BY OWNER AND CONSULTANT AT NO EXTRA COST.

MASONRY

1. PERFORM MASONRY WORK IN ACCORDANCE WITH CAN/CSA A370 AND CAN/CSA A371 LATEST EDITIONS UNLESS NOTED OTHERWISE.
2. ONLY TYPE 'S' MORTAR SHALL BE USED, MINIMUM STRENGTH SHALL BE 12.4 MPa AT 28 DAYS.
3. PROVIDE VERTICAL WALL REINFORCING FOR FULL HEIGHT OF LIFT, CONTINUOUS FROM FLOOR TO FLOOR/ROOF, WITH CLASS B LAPS. WELD REINFORCING TO ALL BEARING PLATES AND STEEL BEAMS WHICH INTERSECT THE CONTINUOUS REINFORCING STEEL.
4. MASONRY WORK SHALL CONFORM TO CAN3-S304 LATEST EDITION AND ITS REFERENCED DOCUMENTS.
5. SUBMIT EVIDENCE OF MORTAR AND GROUT STRENGTH. FIELD CONTROL AND TESTING SHALL COMPLY WITH REQUIREMENTS OF CAN3-S304.
6. PROVIDE TEMPORARY BRACING OF MASONRY WORK UNTIL PERMANENT LATERAL SUPPORT IS IN PLACE.
7. PROVIDE LINTELS OVER ALL OPENINGS IN MASONRY WALLS. SEE LINTEL SCHEDULE FOR REQUIREMENTS.
8. REFER TO TYPICAL DETAILS FOR BOND BEAM AND BEARING REQUIREMENTS AT FLOORS AND ROOFS.
9. MINIMUM STANDARD LAP LENGTH:
   WIRE REINF. – 8"
   10M BARS – 16"
   15M BARS – 24"
   20M BARS – 32"
10. UNLESS NOTED OTHERWISE, PROVIDE 2-15M VERTICAL BARS FULL HEIGHT AT THE UNSUPPORTED ENDS OF WALLS AND ON EACH SIDE OF CONTROL JOINTS. UNLESS OTHERWISE NOTED.
11. FILL CELLS CONTAINING VERTICAL REINFORCING AND BOLTS WITH GROUT VIBRATE OR PUDDLE TO FILL CELLS COMPLETELY.
12. FILL CELLS IN 60" LIFTS MAXIMUM OR BETWEEN BOND BEAMS, WHICHEVER IS LESS, UNLESS SPECIAL PROVISIONS ARE MADE TO ENSURE FULL GROUT COLUMNS HAVE BEEN MADE TO THE SATISFACTION OF THE ENGINEER.
13. CONTROL JOINTS SHALL BE INSTALLED AT MAXIMUM SPACING OF 20'-0", IF NOT OTHERWISE SHOWN ON ARCHITECTURAL DRAWINGS.
14. FILL BLOCK CORES UNDER ALL BEAMS, JOISTS AND OTHER CONCENTRATED POINT LOADS WITH CONCRETE GROUT. GROUT SHALL EXTEND A MINIMUM OF 24" BELOW BEARING.
15. CONTROL JOINTS AND EXPANSION JOINTS SHALL BE CONTINUED THROUGH BOND BEAMS IF NOT OTHERWISE SHOWN.
16. NO MASONRY WORK SHALL BE PERMITTED WITH TEMPERATURE BELOW 5°C UNLESS PROVISIONS ARE MADE FOR HEATING THE MATERIALS AND PROTECTING THE WORK.
17. SET BASE PLATES ON MASONRY ON MIN. 25 MPa NON-SHRINK GROUT FOR LEVELLING.
18. FIRST COURSE OF MASONRY SHALL BE LAID IN A FULL BED OF MORTAR. ALL OTHER COURSES TO BE LAID WITH MORTAR AT FACE SHELL BED AND HEAD JOINTS.
19. POCKETS FOR STEEL BEAMS AND JOISTS SHALL BE GROUTED SOLID AND THE WALL MADE GOOD AFTER PLACEMENT OF BEAMS AND JOISTS.
20. BLOCK STRENGTHS SHALL BE AS FOLLOWS:

CONCRETE BLOCK MASONRY COMPRESSIVE STRENGTH (MPa)			
LOCATION	NET	GROSS (fm) FOR HOLLOW BLOCK	GROSS (fm) FOR SOLID OR GROUTED BLOCK
LOAD BEARING CONCRETE BLOCK	20	13	10
NON-LOAD BEARING CONCRETE BLOCK	15	9.8	7.5

TEMPORARY WORKS AND SHORING

1. ALL EXISTING LOADS MUST BE SHORED AND SECURED BEFORE SECOND FLOOR AND ROOF OPENING DEMOLITION/REMOVALS COMMENCE. FULLY INSTALL AND BRACE TEMPORARY SUPPORTS BEFORE PROCEEDING WITH DEMOLITION.
2. ALL SHORING FRAMES AND BRACES SHALL BE SUPPLIED WITH A SAFE LOAD RATING WHICH MUST NOT BE EXCEEDED. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES AND SAFETY GUIDELINES. ENSURE THE SAFE LOAD CONDITIONS OF THE SHORING ARE NOT EXCEEDED BY THE DEAD, LIVE OR CONSTRUCTIONS LOADS AS APPROPRIATE.
3. ALL SHORING WILL BE SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL PRIOR TO COMMENCING DEMOLITION WORK.
4. COMPLETELY REMOVE ALL SHORING AFTER NEW BEAMS AND MASONRY WALLS ARE INSTALLED AND MORTAR IS SET.
5. THE CONTRACTOR SHALL SUBMIT SHORING DRAWINGS AND A PROPOSED INSTALLATION PROCEDURE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE PROVINCE OF ONTARIO. PROCEDURES SHALL FOLLOW THE INFORMATION PROVIDED ON THESE DRAWINGS. REMOVING ANY EXISTING MATERIALS WITHOUT PROPER IS A SAFETY ISSUE AND WILL NOT BE ACCEPTED.

SLAB ON GRADE

1. CAST SLAB ON GRADE ON 6" MINIMUM GRANULAR 'A' COMPACTED SUB GRADE TO 98% SPMDD
2. CONTRACTOR SHALL REMOVE ALL TOPSOIL, LOOSE AND WET SOILS AND ORGANICS TO APPROVED NATIVE BEARING SOIL. BUILD UP SUBGRADE WITH GRANULAR 'B' FILL WHICH SHALL BE PLACED IN 6" TO 8" THICK LOOSE LIFTS COMPACTED TO 98% SPMDD TO UNDERSIDE OF 6" GRANULAR 'A' BASE.
3. MAINTAIN MINIMUM SPECIFIED THICKNESS AT ALL SLAB DEPRESSIONS AND CHANGES IN ELEVATIONS.
4. WELDED WIRE MESH REINFORCING IN SLABS ON GRADE MUST BE PROPERLY CHAIRED. LIFTING OF THE WIRE MESH DURING POURS WILL NOT BE ACCEPTABLE.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT AND LOCATION OF ALL FINISHES, DEPRESSIONS AND SLOPES.
6. PROVIDE SAWCUTS WITHIN 6 TO 18 HOURS. REFER TO TYPICAL SAWCUT DETAIL FOR ADDITIONAL REQUIREMENTS.

FOUNDATIONS

1. ALL FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOIL APPROVED BY THE GEOTECHNICAL CONSULTANTS. REPORT ANY DOUBTFUL BEARING CONDITIONS TO THE STRUCTURAL ENGINEER BEFORE PLACING FOOTINGS.
2. FOUNDATION DESIGN BASED ON ASSUMED BEARING CAPACITY OF 100 kPa (SLS) /150 kPa (ULS). GEOTECHNICAL CONSULTANT TO APPROVE BEARING CONDITIONS PRIOR TO PLACING FOOTINGS.
3. MATERIALS FOR BACKFILL SHALL BE GRANULAR 'A' AND GRANULAR 'B' CONFORMING TO OPSS STANDARDS COMPACTED TO 100% STANDARD PROCTOR MAX. DRY DENSITY.

ZONE REINFORCEMENT SCHEDULE

MARK	REINFORCING	DETAIL	REMARKS
Z1	3-15M VERT		GROUT SOLID REINFORCED CELLS
Z2	4-15M VERT		GROUT SOLID REINFORCED CELLS
Z3	2-15M VERT		GROUT SOLID REINFORCED CELLS

1. REINFORCED ZONES SHALL BE GROUTED SOLID.

FOOTING SCHEDULE

MARK	SIZE	DEPTH	REINFORCING	REMARKS
F1	7'-6" x 7'-10"	16"	15M @ 16" C/C TOP & BOTTOM E.W.	

MASONRY WALL SCHEDULE

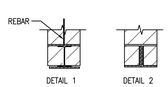
MARK	THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING	REMARKS
MW1	8"	15M @ 32" C/C	HEAVY DUTY HORIZONTAL LADDER REINFORCING @ 16" C/C	GROUT SOLID @ REINFORCED CORES AND AS NOTED
NOTE: REFER TO GENERAL MASONRY NOTES FOR ADDITIONAL REINFORCING REQUIREMENTS				

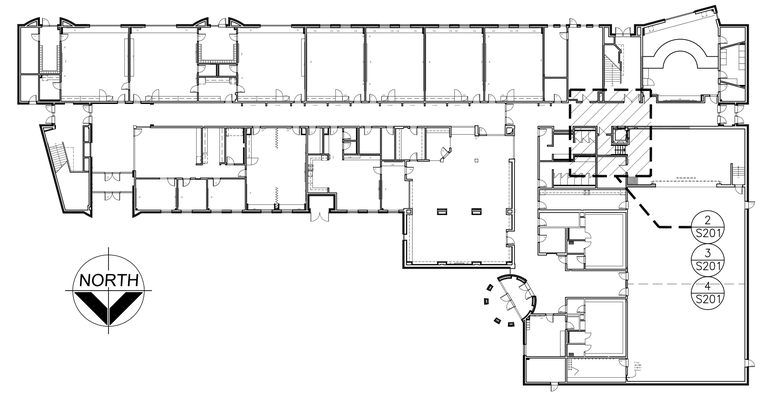
BEARING PLATE SCHEDULE

MARK	SIZE	ANCHORAGE	REMARKS
BP1	⅜"x6"x8"	1- ¾"ø x 12 LG + 2 ½" HOOK	
NOTES:			

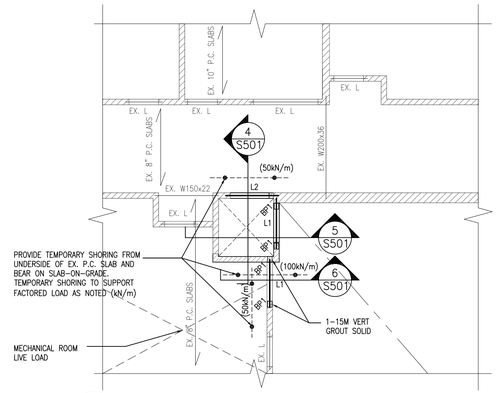
LINTEL SCHEDULE

MARK	SIZE	DETAIL	REMARKS
L1	W200x19 + PL ⅜" x 7" TOP & BOT c/w WELDABLE DOWEL @ 32" c/c	DETAIL 1	MIN. 6" BEARING
L2	2-L127x89x7.9 (LLV)	DETAIL 2	MIN. 6" BEARING
NOTES			





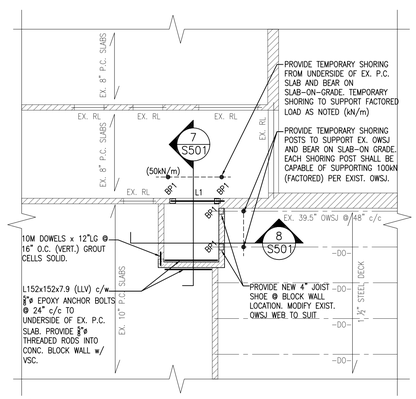
1 / S201 KEY PLAN
NTS



3 / S201 PART 2ND FLOOR FRAMING PLAN
1/8" = 1'-0"

DESIGN LOADS:

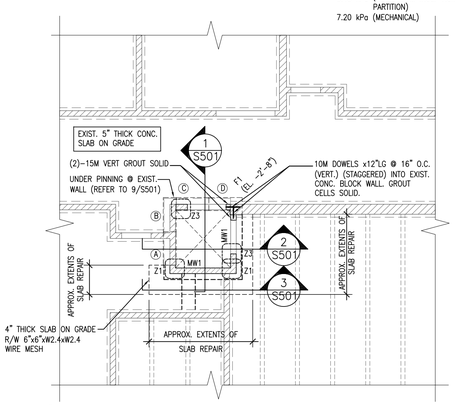
ORIGINAL DESIGN DEAD LOAD:	4.37 kPa
ORIGINAL DESING LIVE LOAD:	4.80 kPa (CORRIDOR/STAIRS/ LOBBIES/STORAGE AREAS) 3.40 kPa (CLASSROOM INCL. 1.0kPa PARTITION) 7.20 kPa (MECHANICAL)



4 / S201 PART ROOF FRAMING PLAN
1/8" = 1'-0"

DESIGN LOADS:

DEAD (8" P.C. SLAB)	3.17 kPa
(10" P.C. SLAB)	3.55 kPa
(STEEL DECK)	3.00 kPa
ORIGINAL DESING LIVE LOAD:	1.44 kPa
SNOW LOAD:	1.52 kPa (CLARINGTON ZONE 1)
Is = 1.15	



2 / S201 PART FOUNDATION PLAN
1/8" = 1'-0"

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR PERMIT & TENDER	FEB. 6 2018	BBA

NO.	REVISIONS	DATE	BY

PROJECT:
LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT
80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING:
KEY PLAN, FOUNDATION PLAN, 2ND FLOOR & ROOF FRAMING PLAN AND GENERAL NOTES

BBA
BARRY BRYAN ASSOCIATES
Architects
Engineers
Project Managers
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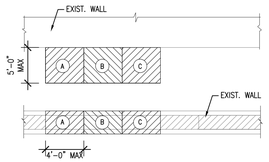
LICENSED PROFESSIONAL ENGINEER
Feb 6 2018
D. J. BOVILL
100155472
PROVINCE OF ONTARIO

DESIGN BY:	EE	DOC. CONTROL DATE:	
DRAWN BY:	NV	% COMPLETE:	
CHECKED BY:	DB	INITIAL:	
DATE:	JAN. 2018		
SCALE:	AS NOTED		
FILE:	18010 S201.DWG		

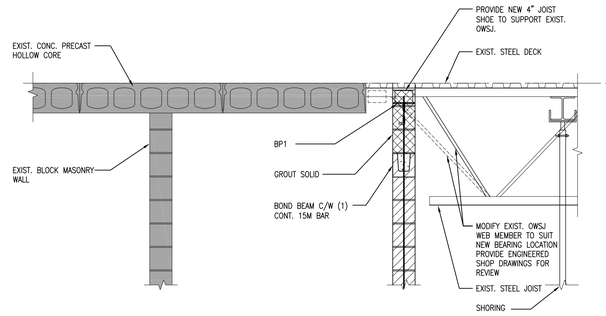
PROJECT NO: **18010**
DRAWING NO: **S201**



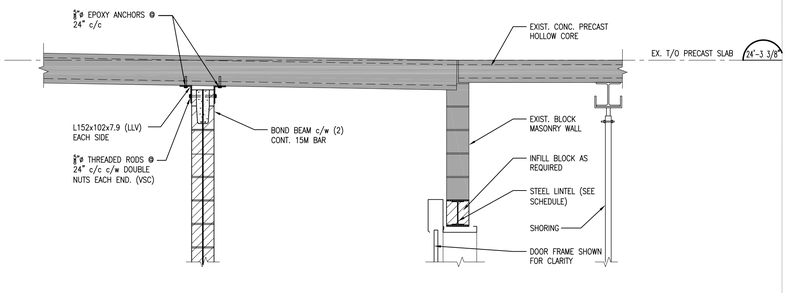
UNDERPINNING NOTES:

1. VERTICAL HEIGHT OF UNDERPINNING LIFT NOT TO EXCEED 20". DO MULTIPLE LIFTS AS REQUIRED.
2. LETTERS ON ELEVATION INDICATE ORDER IN WHICH UNDERPINNING IS TO PROCEED.
   a) INSTALL ALL SECTIONS TO 3" BELOW UNDERSIDE OF EXISTING FOOTING.
   b) ONCE CONCRETE HAS ATTAINED 70% OF ITS 7 DAYS STRENGTH PACK NON-SHRINKABLE DRY PACK GROUT TIGHT TO UNDERSIDE OF EXISTING FOOTING/SLAB.
   c) PROCEED WITH SUBSEQUENT NUMBERED SEGMENTS FOLLOWING PROCEDURES a) AND b) ABOVE.
3. ENSURE THAT NEW UNDERPINNED FOOTING IS BEARING ON UNDISTURBED NATIVE SOIL APPROVED BY THE GEO-TECHNICAL ENGINEER.

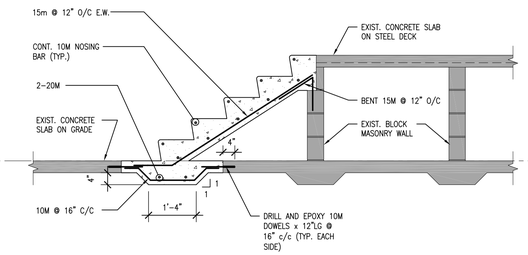
9 / S501 UNDERPINNING DETAIL
N.T.S.



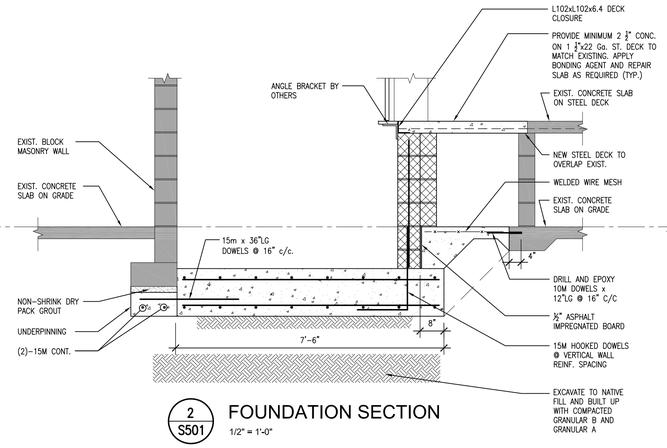
8 / S501 ROOF FRAMING SECTION
1/2" = 1'-0"



7 / S501 ROOF FRAMING SECTION
1/2" = 1'-0"

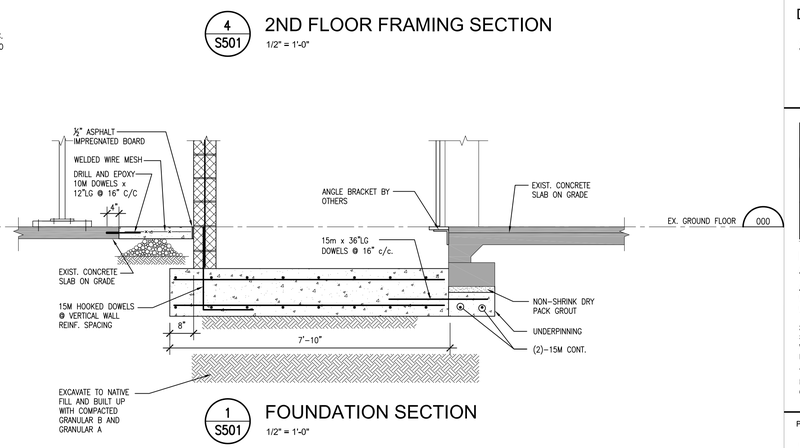


3 / S501 FOUNDATION SECTION
1/2" = 1'-0"



6 / S501 2ND FLOOR FRAMING SECTION
1/2" = 1'-0"

5 / S501 2ND FLOOR FRAMING SECTION
1/2" = 1'-0"



4 / S501 2ND FLOOR FRAMING SECTION
1/2" = 1'-0"

2 / S501 FOUNDATION SECTION
1/2" = 1'-0"

1 / S501 FOUNDATION SECTION
1/2" = 1'-0"

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR PERMIT & TENDER	FEB. 6 2018	BBA

NO.	REVISIONS	DATE	BY

PROJECT:
LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT
80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING:
SECTIONS & TYPICAL DETAILS

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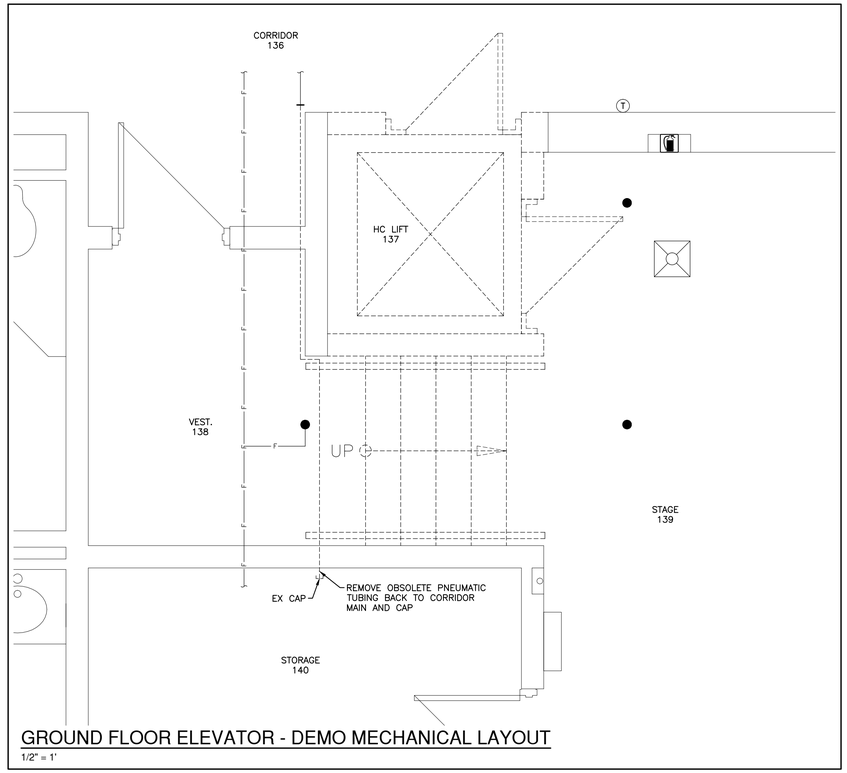
LICENSED PROFESSIONAL ENGINEER
Feb 6, 2018
D. J. BOVILL
100156472
PROVINCE OF ONTARIO

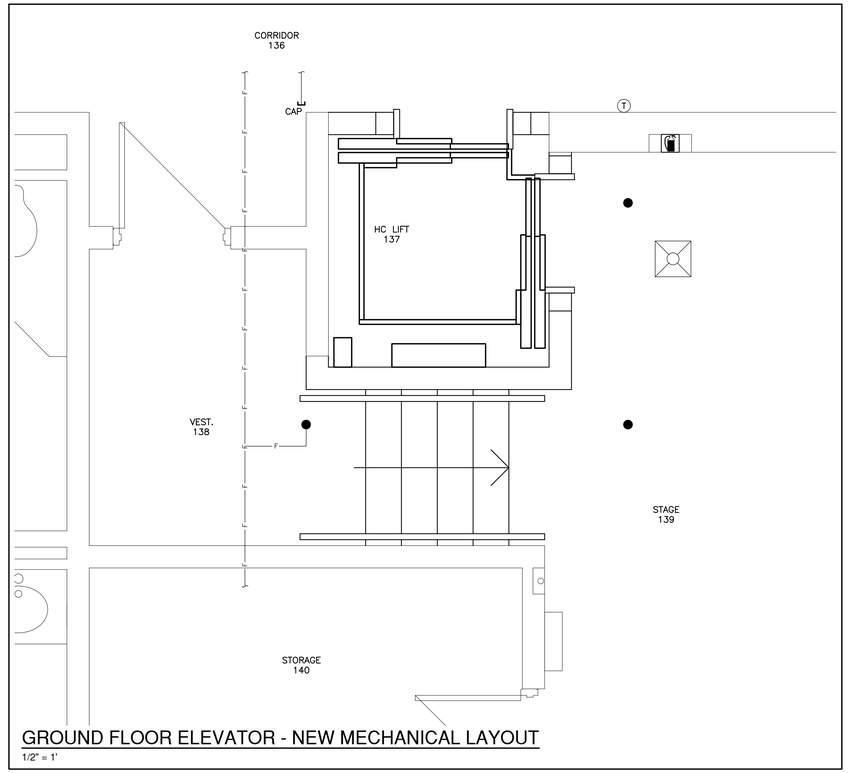
DESIGN BY: BK	DOC. CONTROL DATE:
DRAWN BY: NV	% COMPLETE:
CHECKED BY: DB	INITIAL:
DATE: JAN. 2018	
SCALE: AS NOTED	
FILE: 18010 S501	

PROJECT NO: **18010**
DRAWING NO: **S501**



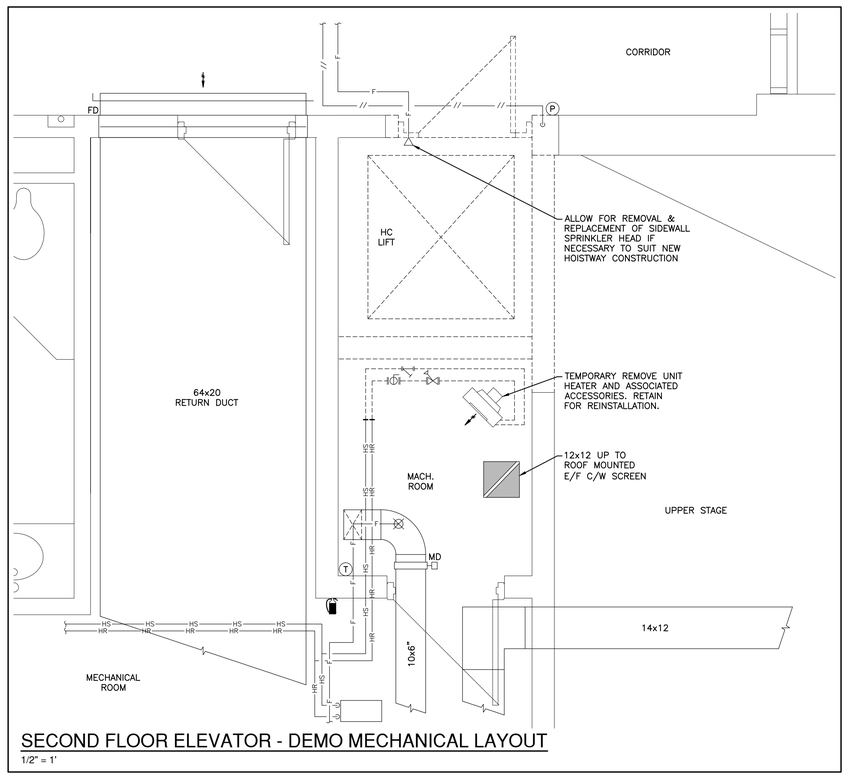
GROUND FLOOR ELEVATOR - DEMO MECHANICAL LAYOUT

1/2" = 1'



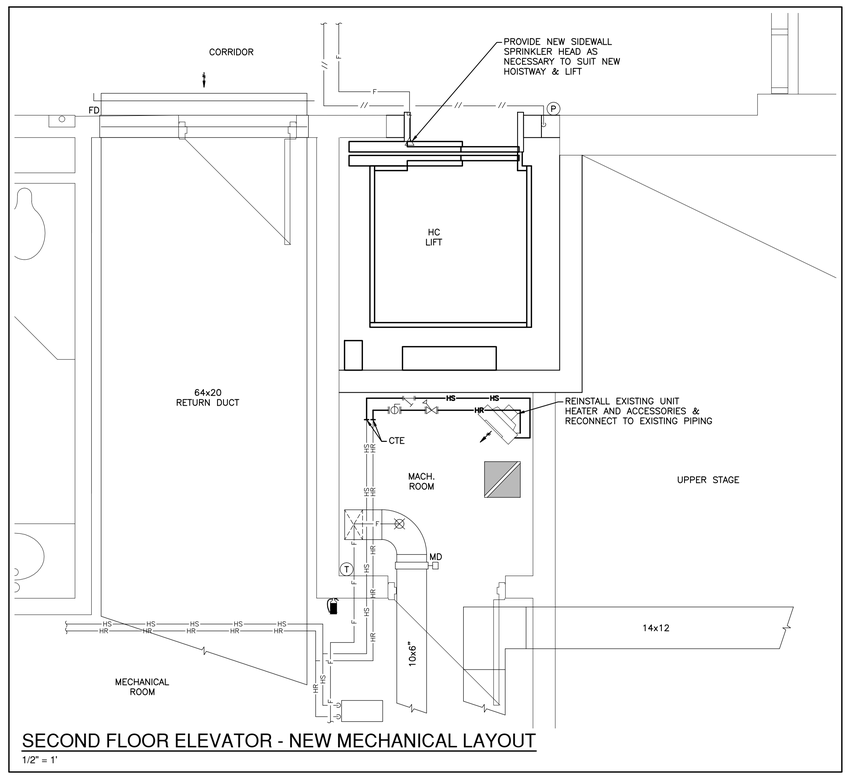
GROUND FLOOR ELEVATOR - NEW MECHANICAL LAYOUT

1/2" = 1'



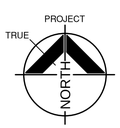
SECOND FLOOR ELEVATOR - DEMO MECHANICAL LAYOUT

1/2" = 1'



SECOND FLOOR ELEVATOR - NEW MECHANICAL LAYOUT

1/2" = 1'

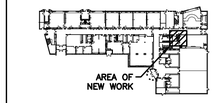


CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.

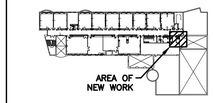
DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	FEB 1 2018	DES
2	ISSUED FOR PERMIT & TENDER	FEB 6 2018	DES



GROUND FLOOR - KEY PLAN



SECOND FLOOR - KEY PLAN

-	-	-	-

NO.	REVISIONS	DATE	BY

DES DURHAM ENERGY SPECIALIST LIMITED

CONSULTING ENGINEERS

PH:(905)430-7151 FAX:(905)430-7154
106-209 DUNDAS STREET EAST, WHITBY ONTARIO
info@durhamenergy.com / www.durhamenergy.com

PROJECT:

LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT

80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE
DISTRICT SCHOOL BOARD

DRAWING:

GROUND & SECOND FLOOR DEMO & NEW MECHANICAL LAYOUTS

BBA

BARRY BRYAN ASSOCIATES
Architects
Engineers
Project Managers
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e-mail bba@bba-archeng.com

LICENSED PROFESSIONAL ENGINEER
J. S. GREER
100158235
FEB 6/18
PROVINCE OF ONTARIO

DESIGN BY: JSG	DOC CONTROL DATE:
DRAWN BY: GLW	% COMPLETE:
CHECKED BY: JSG	INITIAL:
DATE: FEBRUARY 2018	
SCALE: AS NOTED	
FILE: 18-111	

PROJECT NO: **18010**

DRAWING NO: **M1**

SPRINKLER NOTES:

1. CONFIRM EXISTING CONDITIONS AND SYSTEM LAYOUT PRIOR TO PRICING AND INSTALLATION. EXISTING LAYOUT IS BASED ON ORIGINAL CONTRACT DRAWINGS AND MAY NOT BE ACCURATE.
2. ANY SPRINKLER WORK REQUIRING SHUT DOWN OF SPRINKLER OR FIRE ALARM SYSTEMS SHALL BE DONE OUTSIDE OF SCHOOL HOURS. NOTIFY FIRE ALARM MONITORING COMPANY WHEN WORK IS BEING DONE. COORDINATE WITH OWNER AS REQUIRED.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING SYSTEM LAYOUT AND SYSTEM TYPE. ANY UPGRADES SHALL MATCH EXISTING DESIGN INTENT. ANY DESIGN REQUIRED IS THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE WITH ALL OTHER TRADES PRIOR TO PRICING AND INSTALLATION.
4. PROVIDE NEW SPRINKLER HEADS AS REQUIRED TO REPLACE THOSE REMOVED AND/OR ADDED TO SUIT NEW LIFT HOISTWAY CONSTRUCTION.
5. THE CONTRACTOR SHALL DETERMINE BEST ROUTING OF SPRINKLER PIPING BY COORDINATING WITH ALL DRAWINGS. COORDINATE WITH ALL OTHER TRADES ON SITE PRIOR TO DESIGN OR INSTALLATION.
6. CONCEAL ALL NEW PIPING IN CEILING SPACE. EXPOSED PIPING IS ACCEPTABLE IN OPEN CEILING AREAS ONLY.
7. PROVIDE FIRE STOPPING AROUND ALL PIPING THROUGH FIRE SEPARATIONS.
8. ANY REQUIRED CUTTING AND CORING IS BY SPRINKLER CONTRACTOR. COORDINATE ALL PATCHING WITH GENERAL CONTRACTOR.
9. SYSTEM SHALL BE TESTED AS PER NFPA REQUIREMENTS. PROVIDE MATERIAL AND TEST CERTIFICATES SIGNED BY TECHNICIAN WHO PERFORMED THE TESTS UPON COMPLETION OF INSTALLATION AND TESTING. SUBMIT TO ENGINEER AND AUTHORITIES HAVING JURISDICTION.
10. PROVIDE SPARE HEADS AND BOX. PROVIDE ANY NEW HEAD TYPE IN SPARE SPRINKLER HEAD BOX.
11. THE CONTRACTOR SHALL PROVIDE A LETTER STATING THE INSTALLATION WAS PERFORMED BY QUALIFIED SPRINKLER CONTRACTORS IN CONFORMANCE WITH NFPA.

SPRINKLER MATERIAL SPECIFICATIONS:

1. NEW SPRINKLER HEADS SHALL MATCH EXISTING.
2. PIPING (2" AND UNDER): STEEL SCHEDULE 40 WITH THREADED MALLEABLE STEEL FITTINGS.
   PIPING (2-1/2" AND OVER): STEEL SCHEDULE 10 WITH FIRELOCK OR OTHER ULC APPROVED GROOVED FITTINGS TO ASTM A47 AND ASTM A536.
3. PROVIDE HANGERS, SHALL BE ULC LISTED IN CONFORMANCE WITH NFPA 13 AND 14. USE ADJUSTABLE GALVANIZED CLEVIS PIPE SUPPORTS AND HANGERS WITH THREADED HANGER RODS.
4. PROVIDE ALL OTHER MATERIALS IN CONFORMANCE WITH NFPA 13.

HVAC NOTES:

1. CONCEAL ALL SERVICES IN CEILING SPACES AND FURRED CONSTRUCTION UNLESS INSTALLED IN UNFINISHED OR EXPOSED AREAS OR IF SPECIFICALLY NOTED TO BE EXPOSED.
2. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
3. TEMPORARILY SEAL ALL OPEN DUCTS THROUGHOUT CONSTRUCTION TO PROTECT DUST AND DIRT FROM ENTERING THE SYSTEM. WHERE THE CONTRACTOR DOES NOT CONFORM THEY ARE RESPONSIBLE FOR CLEANING OF THE SYSTEMS IN A MANNER APPROVED BY THE CONSULTANT.
4. CONFIRM EXACT LOCATIONS OF THERMOSTATS/SENSORS WITH ENGINEER AND OWNER. MOUNT THERMOSTATS/SENSORS AT 47" (1200mm) AFF. ENSURE THAT THERMOSTAT/SENSOR LOCATIONS WILL NOT BE AFFECTED BY DIRECT SUNLIGHT, COLD WALLS OR MILLWORK.
5. ANY NEW INDOOR CONTROL WIRING SHALL BE RUN IN EMT CONDUIT OR FT6 (EMT SHALL BE USED IN EXPOSED AREAS). LAST 3' SHALL BE BX WHEN USING CONDUIT. ALL CONTROL WIRING SHALL RUN PARALLEL TO BUILDING LINES AND TIGHT TO ROOF DECK OR WALLS. ALL CONTROL WIRING PASSING THROUGH WALLS SHALL BE RUN IN EMT CONDUIT C/W BUSHINGS AT EACH END.
6. PROVIDE FIRE DAMPERS AT ALL FIRE SEPARATIONS. FIRE DAMPERS SHALL BE C/W LINKAGE OUT OF THE AIR STREAM. FIRE DAMPER RATING TO MATCH THE RATING OF THE SEPARATION CROSSED. INSTALLATION MUST CONFORM TO LATEST NFPA/CUA 90A SPECIFICATIONS. ONLY USE ULC APPROVED EQUIPMENT. PROVIDE DUCT ACCESS DOORS AND BREAK AWAY FLANGES FOR ALL FIRE DAMPERS IN CONFORMANCE WITH CODE AND INSTALLATION INSTRUCTIONS. ACCESS DOORS SHALL BE TWIST LOCK TYPE – SCREWED PANELS ARE NOT ACCEPTABLE.
7. PROVIDE SLEEVES FOR PIPES THROUGH ALL NEW BLOCK WALLS. FILL VOIDS AROUND PIPES. ENSURE NO CONTACT BETWEEN DISSIMILAR METALS.
8. DRAIN HEATING SYSTEMS AS REQUIRED FOR NEW WORK. FILL, FLUSH, TEST AND TREAT (CHEMICAL TREATMENT) AFTER WORK IS COMPLETE. PROVIDE ALL PORTS, VALVES AND GAUGES AS REQUIRED. SUBMIT CHEMICAL TREATMENT REPORT TO ENGINEER. FREEZING OF PIPING TO ALLOW ISOLATION OF WORK AREA IS ACCEPTABLE IN LIEU OF DRAINING.
9. ALL CBVs SHALL BE MOUNTED WITH PORTS IN HORIZONTAL (90°) POSITION.
10. PROVIDE EXTERNAL INSULATION ON ANY NEW HEATING PIPING.
11. PROVIDE FIRE STOPPING AROUND ALL EXISTING AND NEW PIPING THROUGH FIRE SEPARATIONS.
12. LABEL ALL EXISTING AND NEW HEATING PIPING IN AREAS OF WORK COMPLETE WITH FLOW ARROWS. LABELS SHALL BE MAX 3m(10') SPACING AND ON EITHER SIDE OF WALLS. LABELING MUST BE COMPLETE PRIOR TO NEW CEILING BEING INSTALLED OTHERWISE IT IS THE CONTRACTORS RESPONSIBILITY TO REMOVE CEILING TILES FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
13. PROVIDE TESTING AND STARTUP OF ANY NEW EQUIPMENT AND PROVIDE REPORTS TO THE ENGINEER FOR REVIEW.

HVAC MATERIAL SPECIFICATIONS:

1. HOT WATER HEATING PIPING:
   - .1 PIPING UP TO INCLUDING 2"(50mm): PIPING SHALL BE BLACK STEEL SCHEDULE 40 WITH MALLEABLE STEEL THREADED SCREW FITTINGS OR COPPER WITH SOLDER JOINTS.
   - .2 PIPING 2-1/2"(63mm) AND OVER: PIPING SHALL BE BLACK STEEL SCHEDULE 40 WITH WELDED FITTINGS.
   - .3 BRASS ADAPTERS SHALL BE PROVIDED AT ALL CONNECTIONS BETWEEN COPPER TUBING AND FERROUS PIPING.
   - .4 PROVIDE AUTOMATIC AIR VENTS C/W BALL VALVE AT ALL HIGH POINTS. REFER TO SPECIFICATIONS BELOW.
   - .5 ALLOW FOR ANY CHEMICAL TREATMENT OR GLYCOL FILL TO BRING SYSTEM TO ACCEPTABLE LEVELS AND SUBMIT REPORTS.
2. PIPE HANGERS:
   - .1 ADJUSTABLE WROUGHT IRON CLEVIS TYPE AND/OR ADJUSTABLE RING WITH THREADED SUSPENSION RODS.
   - .2 FOR COPPER PIPING (INCLUDING PIPING WITHIN WALLFIN (BASEBOARD HEATERS) ENCLOSURE) PROVIDE COPPER PLATED OR EPOXY TYPE HANGERS OR PROVIDE SEPARATION OF DISSIMILAR METALS WITH APPROVED DIELECTIC MATERIALS. INSULATING TAPE IS NOT ACCEPTABLE.
   - .3 HANGERS SHALL WRAP AROUND OUTSIDE OF PIPE INSULATION. PROVIDE SADDLES TO PREVENT CRUSHING OF INSULATION.
   - .4 PIPE HANGER SPACING
     - –SIZES UP TO 1–1/4"(32mm) = 8'(2.5m) SPACING
     - –SIZES 1–1/2"(38mm) TO 2"(50mm) = 10'(3m) SPACING
     - –SIZES 2–1/2"(63mm) AND OVER = 12'(3.5m) SPACING
   - .5 PROVIDE HANGER WITHIN 12"(300mm) OF EVERY ELBOW
3. VALVES AND ACCESSORIES:
   - .1 ALL VALVES SHALL BE LINE SIZED UNLESS OTHERWISE NOTED. (CBVs GENERALLY NOT LINE SIZE).
   - .2 CIRCUIT BALANCING VALVES SHALL BE IMI HYDRONICS STAS/STAD/STAF SERIES (NO ALTERNATES ACCEPTABLE). MOUNT WITH PORTS UPRIGHT OR AT LEAST 90° UP FROM BOTTOM. SUBMIT SHOP DRAWINGS COMPLETE WITH VALVE SIZING SCHEDULE.
   - .3 BALL VALVES SHALL BE EQUAL TO KITZ 58 & 59.
   - .4 AUTOMATIC AIR VENTS SHALL BE EQUAL TO:
     - –WALLFINS, CONVECTORS, RADS: "MAID–O–MIST" #67 COMPLETE WITH BALL VALVE
     - –PIPE MAINS & LINES, MECHANICAL ROOMS, EQUIPMENT, COILS, CEILING SPACES AND ALL OTHER SPACES EXCEPT NOTED ABOVE: "MAID–O–MIST" #71 COMPLETE WITH BALL VALVE
4. PIPE INSULATION:
   - .1 PROVIDE 1–1/2"(38mm) PIPE INSULATION ON ALL HEATING PIPING SIZES UP TO AND INCLUDING 1–1/4"(32mm)
   - .2 PROVIDE 2"(50mm) PIPE INSULATION ON ALL HEATING PIPING SIZES 1–1/2"(38mm) AND OVER
   - .3 PROVIDE 1"(25mm) PIPE INSULATION ON ALL VENT PIPING 10'(3m) BACK FROM ROOF
   - .4 EXTERNAL PIPE INSULATION SHALL BE RIGID, SECTIONAL FIBERGLASS TYPE AND BE COMPLETE WITH FACTORY SUPPLIED ALL PURPOSE VAPOUR BARRIER. PRE–FORMED INSULATION SHALL BE USED AT PIPE FITTINGS, VALVES, ETC. PROVIDE NON–CRUSHING INSULATION AT ALL PIPE HANGERS AND PROVIDE SADDLES.
   - .5 PROVIDE CANVAS WRAP ON ALL INSULATION IN EXPOSED AREAS.

GENERAL NOTES:

1. OBTAIN, ARRANGE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
2. THE CONTRACTOR AND ITS SUB–TRADES SHALL ATTEND BI–WEEKLY SITE MEETINGS OR AS ARRANGED BY CONSULTANT OR OWNER.
3. PROVIDE SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT TO CONSULTANT FOR REVIEW. ALL SHOP DRAWINGS MUST BE REVIEWED, STAMPED AND SIGNED BY THE MECHANICAL CONTRACTOR PRIOR TO SUBMITTING TO THE CONSULTANT. REVIEW SHALL INCLUDE BUT NOT BE LIMITED TO: VERIFYING UNIT VOLTAGE WITH ELECTRICIAN AND/OR SITE, EQUIPMENT PERFORMANCE, DIMENSIONS AND CLEARANCES.
4. THOROUGHLY REVIEW AND COORDINATE WITH SITE CONDITIONS AND COMPLETE DRAWING SET PRIOR TO PRICING AND INSTALLATION.
5. INSTALL ALL WORK IN CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
6. DO NOT USE ANY NEW PERMANENT EQUIPMENT FOR TEMPORARY USE DURING CONSTRUCTION WITHOUT WRITTEN APPROVAL. WHERE SYSTEMS ARE USED AND ARE CONTAMINATED BY DUST OR DIRT, THE CONTRACTOR SHALL CLEAN IN A MANNER ACCEPTABLE TO THE CONSULTANT.
7. MAINTAIN RECORD DRAWINGS ON AN ON–GOING BASIS. DRAWINGS SHALL BE AVAILABLE FOR PERIODIC REVIEW BY THE CONSULTANT DURING CONSTRUCTION.
8. ALL WORK SHALL COMPLY WITH APPLICABLE CODES.
9. REMOVE ALL REDUNDANT EQUIPMENT, MATERIALS AND GARBAGE FROM SITE AND DISPOSE OF IN AN APPROVED MANNER. REDUNDANT EQUIPMENT AND MATERIALS SHALL NOT BE ABANDONED IN PLACE.
10. ALL CUTTING AND CORING SHALL BE BY THIS CONTRACTOR. COORDINATE PATCHING WITH GENERAL CONTRACTOR. ALL SAW CUTTING AND RESTORATION OF CONCRETE FLOOR BY GENERAL CONTRACTOR. COORDINATE WITH SAME.
11. COORDINATE ROOFING FOR ANY DUCT AND PIPE ROOF PENETRATIONS WITH GENERAL CONTRACTOR.
12. MAINTAIN REQUIRED ACCESS AND CLEARANCE TO ALL EQUIPMENT AND SYSTEMS AS REQUIRED BY CODE AND AS PER MANUFACTURER'S REQUIREMENTS.
13. EXISTING MECHANICAL ITEMS NOT SHOWN, INCLUDING HYDRONIC PIPING AND STORM DRAINAGE, SHALL REMAIN UNLESS OTHERWISE NOTED.
14. LABEL ALL EXISTING AND NEW PIPING IN AREA OF WORK WITH SERVICE AND FLOW ARROWS EVERY 10'(3m) AND ON EITHER SIDE OF WALLS.
15. THE CONTRACTOR SHALL ARRANGE FOR INSPECTIONS BY THE ENGINEER PRIOR TO CEILINGS AND WALLS BEING CLOSED IN. WHERE THIS HAS NOT BEEN ARRANGED IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE CEILING TILES OR ACCESS DOORS FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
16. PERFORM TESTING AND START UP OF ALL SYSTEMS AS REQUIRED BY CODE, THE CONSULTANT, MANUFACTURER'S REQUIREMENTS, AND AUTHORITIES HAVING JURISDICTION. SUBMIT REPORTS TO THE CONSULTANT.
17. UPON COMPLETION OF THE PROJECT THE CONSULTANT WILL DO A FINAL REVIEW. UPON RECEIVING THE FINAL INSPECTION REPORT, THE CONTRACTOR MUST CORRECT AND SIGN BACK THE INSPECTION REPORT INDICATING ALL DEFICIENCIES ARE COMPLETED. A RE–INSPECTION WILL ONLY BE DONE ONCE THE CONSULTANT RECEIVES THIS IN WRITING. WHERE THE CONSULTANT PERFORMS THE RE–INSPECTION AND THE WORK IS NOT COMPLETE, THE CONTRACTOR IS RESPONSIBLE FOR REIMBURSING THE CONSULTANT FOR THE FIELD REVIEW. THE FEE FOR ADDITIONAL REVIEWS WILL BE AT THE CONSULTANT'S HOURLY RATES PLUS MILEAGE AND APPLICABLE TAXES TO BE PAID DIRECTLY TO THE CONSULTANT PRIOR TO PERFORMING THE NEXT FIELD REVIEW.
18. PROVIDE ONE (1) YEAR WARRANTY ON ALL MATERIAL AND LABOUR FROM THE DATE OF SUBSTANTIAL COMPLETION.
19. PROGRESS DRAWS SHALL INCLUDE MINIMUM $500.00 FOR MANUALS AND AS–BUILT DRAWINGS. TOTAL AMOUNT SHALL REMAIN UNBILLED UNTIL MANUALS AND AS–BUILT DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
20. PROVIDE OF ONE(1) ELECTRONIC COPY MAINTENANCE MANUALS ON USB. MANUAL SHALL INCLUDE TABLE OF CONTENTS, CONTRACTOR INFORMATION, WARRANTY LETTER, SHOP DRAWINGS, O&Ms, INSPECTION & TEST REPORTS, AND AS–BUILT DRAWINGS. AS–BUILT DRAWINGS SHALL INCLUDE COMPLETE MECHANICAL DRAWING SET WITH ANY CHANGES MARKED CLEARLY AND NEATLY IN COLOUR. AS–BUILTS SHALL BE STAMPED ACCORDINGLY BY THE CONTRACTOR (ALL DRAWINGS). DRAWINGS SHALL BE SUBMITTED HARD COPY IN FULL SIZE. SUBSTANTIAL COMPLETION WILL NOT BE AWARDED UNTIL THE MANUALS AND AS–BUILTS HAVE BEEN SUBMITTED TO THE CONSULTANT AND THE CONSULTANT HAS APPROVED.

MECHANICAL LEGEND

———	NEW
———	EXISTING
- - - - - - - - - - - -	DEMOLITION
	SUPPLY DUCTS (UP / DOWN)
	RETURN DUCTS (UP / DOWN)
	EXHAUST DUCTS (UP / DOWN)
	BALANCE DAMPER
FD	FIRE DAMPER
	SUPPLY DIFFUSER (SQUARE)
	SUPPLY SIDE WALL/DUCT GRILLE
	RETURN/EXHAUST SIDE WALL/DUCT GRILLE
HS HS	HOT WATER HEATING SUPPLY (HS)
HR HR	HOT WATER HEATING RETURN (HR)
	ELBOW RISING
	ELBOW DROPPING
	BRANCH RISING FROM TEE
	BRANCH DROPPING FROM TEE
	SHUT–OFF BALL VALVE
	CIRCUIT BALANCING VALVE (CBV)
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	UNION
AAV	AUTOMATIC AIR VENT C/W 1/4" BALL VALVE AND NIPPLE/COUPLING (MINI BALL VALVES NOT ACCEPTABLE)
	STRAINER
	PNUEMATIC TUBING
T P	EX. THERMOSTAT (LINE/PNEUMATIC)

FIRE PROTECTION LEGEND

- - - - - - - - - - - - - -	DEMO WET SPRINKLER LINE
—— F —— F ——	EXISTING WET SPRINKLER LINE
—— F —— F ——	NEW WET SPRINKLER LINE
	FIRE EXTINGUISHER IN CABINET (5LB OR 10LB AS INDICATED)
	FIRE EXTINGUISHER C/W WALL BRACKET (5LB OR 10LB AS INDICATED)
	BRASS UPRIGHT SPRINKLER HEAD, HIGH TEMPERATURE K=5.60, 1/2" ORIFICE, 1/2" NPT,
	WHITE RECESSED PENDENT SPRINKLER HEAD C/W ESCUTCHEON K=5.60, 1/2" ORIFICE, 1/2" NPT, 155°F
	SIDEWALL SPRINKLER HEAD C/W ESCUTCHEON K=5.60, 1/2" ORIFICE, 1/2" NPT, 155°F

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	FEB 1 2018	DES
2	ISSUED FOR PERMIT & TENDER	FEB 6 2018	DES

NO.	REVISIONS	DATE	BY
-	-	-	-

DURHAM ENERGY SPECIALIST LIMITED
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PROJECT:

LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT

80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE
DISTRICT SCHOOL BOARD

DRAWING:

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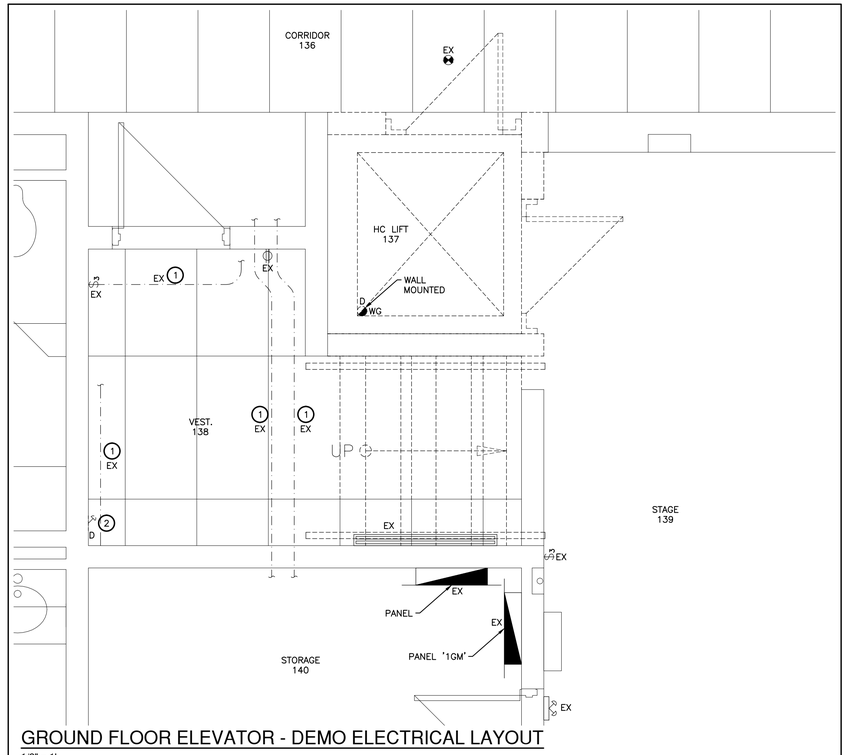
LICENSED PROFESSIONAL ENGINEER J. S. GREER 100158235 FEB 6/18 PROVINCE OF ONTARIO

DESIGN BY: JSG	DOC CONTROL: DATE:
DRAWN BY: MRC	% COMPLETE:
CHECKED BY: JSG	INITIAL:
DATE: FEBRUARY 2018	
SCALE: NTS	
FILE: 18-111	

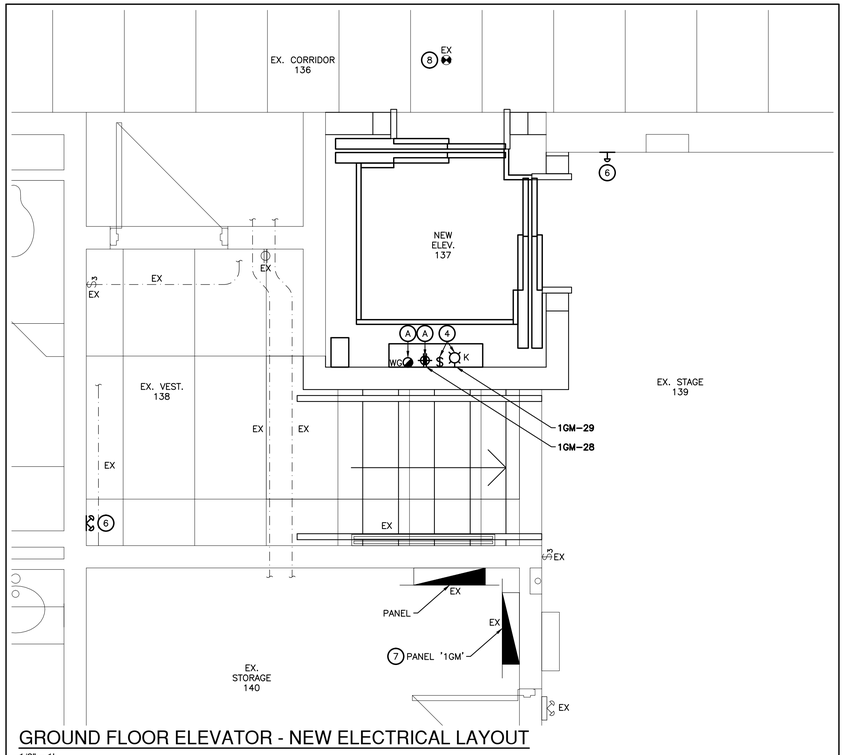
PROJECT NO: **18010**

DRAWING NO: **M2**



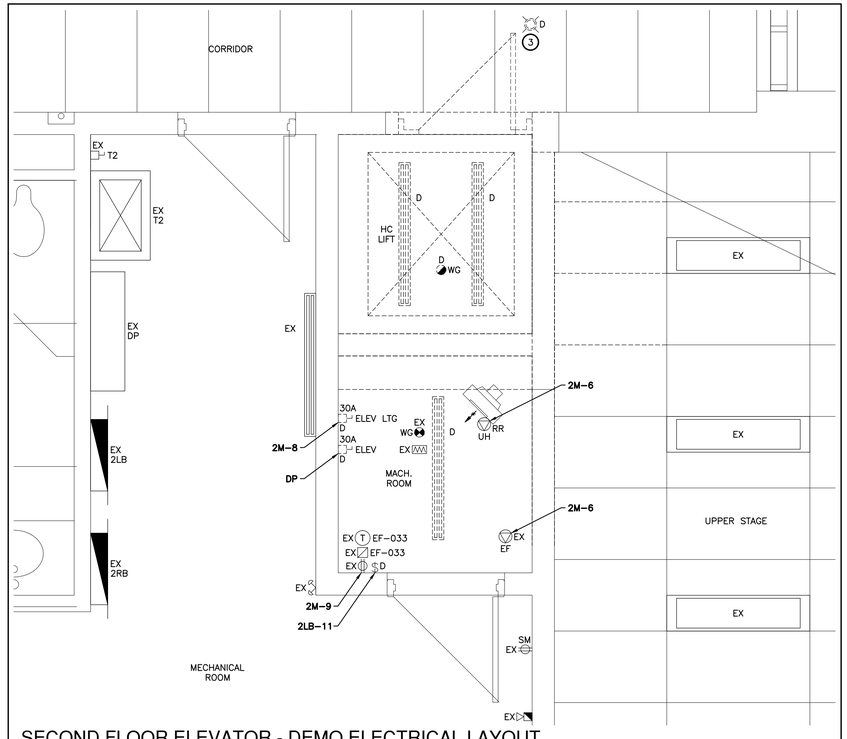
GROUND FLOOR ELEVATOR - DEMO ELECTRICAL LAYOUT

1/2" = 1'



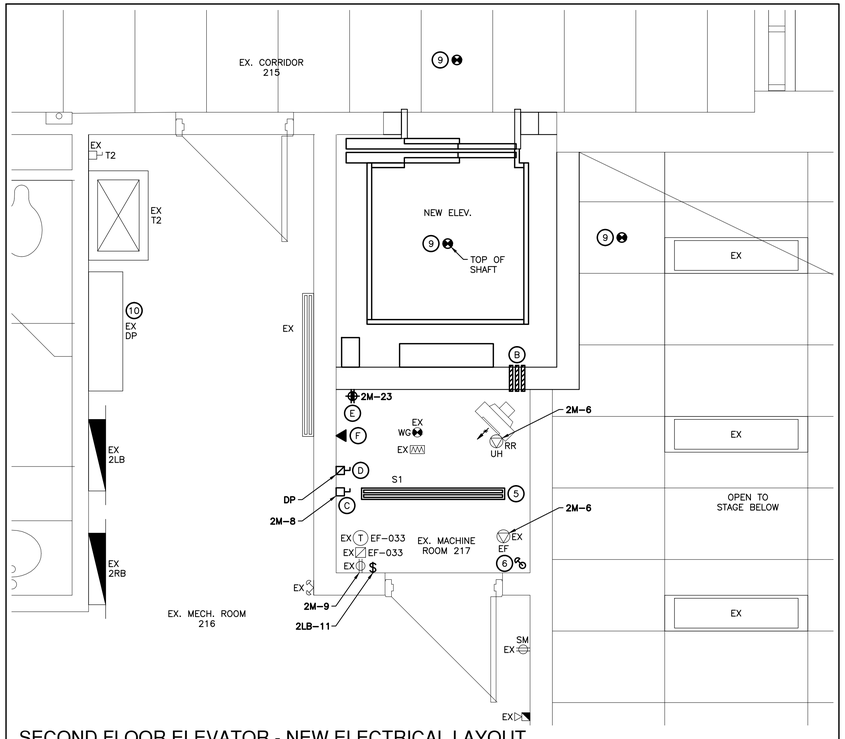
GROUND FLOOR ELEVATOR - NEW ELECTRICAL LAYOUT

1/2" = 1'



SECOND FLOOR ELEVATOR - DEMO ELECTRICAL LAYOUT

1/2" = 1'



SECOND FLOOR ELEVATOR - NEW ELECTRICAL LAYOUT

1/2" = 1'

ELEVATOR FIRE ALARM NOTES:

1. PROVIDE SMOKE DETECTORS IN EACH LOBBY/LANDING OUTSIDE ELEVATOR WITH WIRING FROM THE SENSING DEVICES TO THE CONTROLLER(S) DESIGNATED RETURN LANDING.
2. PROVIDE NORMALLY CLOSED CONTACT REPRESENTING THE SMOKE DETECTOR AT THE DESIGNATED RETURN LANDING AND FROM THE SENSING DEVICE IN THE PIT TO ELEVATOR CONTROLLER.
3. PROVIDE NORMALLY CLOSED CONTACT REPRESENTING ALL SMOKE DETECTORS LOCATED IN ELEVATOR LOBBIES, BUT NOT THE SMOKE DETECTOR AT THE DESIGNATED RETURN LANDING (SEE ABOVE) AND FROM THE SENSING DEVICE AT THE TOP OF THE HOISTWAY TO ELEVATOR CONTROLLER.
4. PROVIDE A NORMALLY CLOSED CONTACT REPRESENTING THE SMOKE DETECTOR IN THE ELEVATOR MACHINE ROOM.
5. THE SMOKE DETECTOR LOCATED IN THE ELEVATOR MACHINE ROOM SHALL BE WIRED TO ACTIVATE SAME NORMALLY CLOSED CONTACT AS THE SMOKE DETECTOR AT THE DESIGNATED LANDINGS.
6. COORDINATE ALL REQUIREMENTS WITH ELEVATOR CONTRACTOR AND FIRE ALARM MANUFACTURER.
7. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL ELEVATOR POWER AND FIRE ALARM REQUIREMENTS WITH ELEVATOR SHOP DRAWINGS AND ELEVATOR MANUFACTURER.

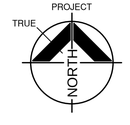
ELEVATOR AND MACHINE ROOM WORKING NOTES:

- (A) SUPPLY AND INSTALL HEAT DETECTOR AND 20A GFI RECEPTACLE IN PIT OF ELEVATOR. GFI RECEPTACLE SHALL BE MOUNTED 100mm (4") BELOW ELEVATOR GROUND FLOOR LANDING OR AS OTHERWISE DIRECTED BY ELEVATOR INSTALLER. TIE HEAT DETECTOR AND SMOKE DETECTOR AT THE TOP OF SHAFT INTO EXISTING FIRE ALARM ZONE. FEED RECEPTACLE FROM NEW BREAKER IN EXISTING PANEL '1GM'.
- (B) SUPPLY AND INSTALL THREE (3) SLEEVES POSITIONED AS PER ELEVATOR INSTALLERS INSTRUCTIONS. THEY SHALL BE PROVIDED BELOW THE MACHINE ROOM FLOOR FOR ELEVATOR OIL AND ELECTRICAL WIRING.
- (C) SUPPLY AND INSTALL A 30A 1PSN 125V EEMAC 1 LOCKABLE SAFETY SWITCH WITH ONE (1) 15A PLUG FUSE. TIE INTO EXISTING CIRCUIT NOTED.
- (D) SUPPLY AND INSTALL 208V 30A LOCKABLE FUSED DISCONNECT SWITCH WITH AUXILIARY CONTACT TO BRAKE BATTERY FEED. PROVIDE THREE(3) TYPE D FUSES. POSITION DISCONNECT AS PER ELEVATOR MANUFACTURER RECOMMENDATIONS. FEED FROM EXISTING 60A BUCKET IN PANEL 'DP'.
- (E) PROVIDE NEW 20A RECEPTACLE IN ELEVATOR MACHINE ROOM COMPLETE WITH NEW DEDICATED FEED FROM PANEL '2M'.
- (F) PROVIDE NEW PHONE LINE FOR ELEVATOR. COORDINATE WITH ELEVATOR MANUFACTURER.

NOTE:
CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL ELEVATOR POWER AND FIRE ALARM REQUIREMENTS WITH ELEVATOR SHOP DRAWINGS AND ELEVATOR MANUFACTURER.

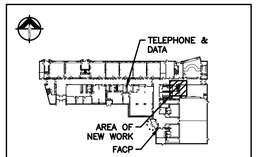
WORKING NOTES:

1. EXISTING 1/2" CONDUIT (2x POWER, 1x FA, 1x PA, 1x UNKNOWN) ABOVE CEILING TO REMAIN. CONTRACTOR TO PROTECT DURING CONSTRUCTION. CONTRACTOR TO ADVISE CONSULTANT IF CONDUIT NEEDS TO BE RELOCATED TO SUIT ELEVATOR WORK PRIOR TO ANY RELOCATING BEING COMPLETED.
2. DISCONNECT AND REMOVE DEVICE. PROVIDE NEW IN SAME LOCATION.
3. LUMINAIRE ASSUMED TO BE INTERLOCKED WITH ELEVATOR. CONTRACTOR TO VERIFY AND REMOVE COMPLETE WITH WIRING BACK TO SOURCE.
4. PROVIDE LIGHT & SWITCH IN PIT OF ELEVATOR.
5. PROVIDE NEW LUMINAIRE AND TIE INTO EXISTING CIRCUIT C/W NEW SWITCH.
6. PROVIDE NEW EMERGENCY LIGHT AND TIE INTO EXISTING EMERGENCY CIRCUIT.
7. REFER TO PANEL SCHEDULE FOR REVISIONS.
8. PROVIDE NEW AUXILIARY BASE FOR EXISTING SMOKE DETECTOR FOR ELEVATOR RECALL AS PER NOTES.
9. PROVIDE NEW SMOKE DETECTOR AND TIE INTO EXISTING ZONE AND ELEVATOR RECALL AS PER NOTES.
10. RE-USE EXISTING BUCKET FOR ELEVATOR FEED. PROVIDE NEW TYPE D FUSES. CONTRACTOR TO ALLOW RE-FEEDING NEW ELEVATOR DISCONNECT. CONTRACTOR TO MEGGER EXISTING FEED AND PROVIDE RESULTS TO CONSULTANT FOR REVIEW PRIOR TO REMOVAL/RE-USE OF EXISTING FEED.

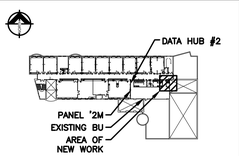


KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	FEB 1 2018	DES
2	ISSUED FOR PERMIT & TENDER	FEB 6 2018	DES



GROUND FLOOR - KEY PLAN



SECOND FLOOR - KEY PLAN

NO.	REVISIONS	DATE	BY
-	-	-	-

DES DURHAM ENERGY SPECIALIST LIMITED
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info@durhamenergy.com / www.durhamenergy.com

PROJECT:
LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT
80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING:
GROUND & SECOND FLOOR DEMO & NEW ELECTRICAL LAYOUTS

BBA
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Architects
Engineers
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LICENSED PROFESSIONAL ENGINEER
L. CONFORTI
100178622
FEB 6/18
PROVINCE OF ONTARIO

DESIGN BY: REA/LC	DOC CONTROL DATE:
DRAWN BY: BJH	% COMPLETE:
CHECKED BY: REA/LC	INITIAL:
DATE: FEBRUARY 2018	
SCALE: AS NOTED	
FILE: 18-111	

PROJECT NO: **18010**

DRAWING NO: **E1**

EMERGENCY LIGHTING SCHEDULE

TAG	DESCRIPTION	MAKE / MODEL
BU–1	EXISTING	N/A
##	WALL MOUNTED REMOTE SINGLE HEAD 4W LED EMERGENCY LIGHT, INJECTION MOLDED IMPACT RESISTANT FLAME RETARDANT THERMOPLASTIC, ADJUSTABLE LENSES, SUITABLE FOR INSTALLATION ON 4" OCTAGON BOX.	EQUAL TO LUMACELL MQM–LD7
##	WALL MOUNTED REMOTE DUAL HEAD 4W LED EMERGENCY LIGHT, INJECTION MOLDED IMPACT RESISTANT FLAME RETARDANT THERMOPLASTIC, ADJUSTABLE LENSES, SUITABLE FOR INSTALLATION ON 4" OCTAGON BOX.	EQUAL TO LUMACELL MQM2–LD7
##	CEILING MOUNTED REMOTE SINGLE HEAD 4W LED EMERGENCY LIGHT, INJECTION MOLDED IMPACT RESISTANT FLAME RETARDANT THERMOPLASTIC, ADJUSTABLE LENSES, SUITABLE FOR INSTALLATION ON 4" OCTAGON BOX.	EQUAL TO LUMACELL MQM–LD7
APPROVED ALTERNATES: BEGHELLI, EMERGI–LITE, AIMLITE		

NOTE:
1. ## DENOTES BATTERY UNIT.
2. ALLOW 20% SAFETY ON BACK–UP BATTERY PACK SIZING.
3. ALL UNITS TO BE CSA CERTIFIED.
4. EMERGENCY LIGHTING LIGHT LEVELS ARE TO BE TAKEN BY A LIGHTING SPECIALIST AFTER PROJECT COMPLETION. ADVISE CONSULTANT OF TEST DATE FOR WITNESS AND OWN READINGS.

LIGHT FIXTURE SCHEDULE

TAG	DESCRIPTION	MAKE / MODEL	ALTERNATE
S1	SUSPENDED 4' LED STRIP LIGHT, FROSTED LENS, DIMMABLE DRIVER, 3000 LUMENS, 4000K, 120V, 0–10V DIMMING DRIVER	PHILIPS FSS430L840–UNV–DIM C/W LF4WGW	LITHONIA PEERLESS–ELECTRIC VISIONEERING
K	VANDAL PROOF GLOBE STYLE ELEVATOR LIGHT WITH LED BULB. LIGHT OUTPUT TO BE EQUIVALENT TO 100W INCANDESCENT	STONCO VCLX	EQUAL
$ $3	LIGHT SWITCH – '3' DENOTES 3–WAY	HUBBELL 1200 SERIES (120V)	

ELECTRICAL LEGEND

TAG	DESCRIPTION	MAKE/MODEL
	15A 120V 1PH GROUNDED DUPLEX RECEPTACLE C/W STAINLESS STEEL COVER PLATE	HUBBELL BR15WHI OR EQUAL
	20A 120V 1PH GROUNDED DUPLEX RECEPTACLE C/W STAINLESS STEEL COVER PLATE	HUBBELL BR20WHI OR EQUAL
	20A 120V 1PH GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE C/W STAINLESS STEEL COVER PLATE	HUBBELL GF20WLA OR EQUAL
	120V 1PH GROUNDED DIRECT EQUIPMENT CONNECTION	
1	LINE VOLTAGE THERMOSTAT (SUPPLIED BY MECHANICAL AND INSTALLED BY ELECTRICAL)	EXISTING
	ELEVATOR DISCONNECT C/W AUXILIARY CONTACT	EQUAL TO EATON 1HD221N C/W DS16CP
	DISCONNECT SWITCH	
	MANUAL MOTOR STARTER. RATED TO SUIT LOAD.	EXISTING
	COMMERCIAL POWER PANEL	EXISTING
	TRANSFORMER	EXISTING
	VOICE ONLY OUTLET BOX – WALL BOX, OUTLET & 3/4" CONDUIT C/W WIRING	
	HEAT DETECTOR FIXED TEMPERATURE 135°	
	SMOKE DETECTOR C/W INDICATION LIGHT	
	END–OF–LINE RESISTOR (EOL)	

ELECTRICAL ABBREVIATIONS

EX	EXISTING TO REMAIN
D	EXISTING TO BE REMOVED C/W CONDUIT/WIRING BACK TO SOURCE
RR	EXISTING TO BE REMOVED & REINSTALLED
WG	PROVIDE WIRE GUARD OR VANDAL COVER

FIRE ALARM SPECIFICATIONS:

1. THE CONTRACTOR SHALL RELOCATE OR FURNISH NEW LABOUR, SERVICES AND MATERIALS NECESSARY TO PROVIDE A COMPLETE, FUNCTIONAL LIFE SAFETY FIRE SYSTEM. THE SYSTEM SHALL COMPLY IN ALL RESPECTS WITH ALL PERTINENT CODES, RULES, REGULATIONS AND LAWS OF THE LOCAL JURISDICTION. THE SYSTEM SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF THE SPECIFICATIONS, MANUFACTURER'S RECOMMENDATIONS AND UNDERWRITERS LABORATORIES OF CANADA (ULC) LISTINGS. ALL COMPONENTS SHALL BE ULC LISTED.
2. THE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CURRENT PROVISIONS OF THE FOLLOWING CODES AND STANDARDS:
   .1 LOCAL AND PROVINCIAL BUILDING CODES
   .2 LOCAL AND PROVINCIAL FIRE CODES
   .3 LOCAL, PROVINCIAL AND CANADIAN ELECTRICAL CODES
   .4 NFPA 72 – NATIONAL FIRE ALARM CODE
   .5 NFPA 101 – LIFE SAFETY CODE
   .6 CAN/ULC–S524 AND OTHER APPLICABLE ULC STANDARDS
   .7 AUTHORITY HAVING JURISDICTION
3. DEVICE MOUNTING HEIGHT:
   .1 PULL STATION(S) TO BE MOUNTED 47" (1200mm) A.F.F. TO CENTER OF DEVICE
   .2 WALL MOUNTED AUDIBLE SIGNAL TO BE MOUNTED MINIMUM 6" (150mm) BELOW CEILING AND NO LESS THAN 90"(2300mm) A.F.F. TO THE TOP OF THE DEVICE
   .3 STROBE(S) TO BE MOUNTED SO THAT ENTIRE LENS IS 78"–94" (2000–2400mm) A.F.F.
   .4 COMBINATION HORN/STROBE(S) SHALL CONFORM TO BOTH 3.1 AND 3.2
   .5 END OF LINE RESISTORS TO BE MOUNTED LESS THAN 70" (1800mm) A.F.F.
4. CONDUIT AND WIRE:
   .1 WIRING SHALL BE IN ACCORDANCE WITH LOCAL, PROVINCIAL AND NATIONAL CODES, AND AS RECOMMENDED BY THE MANUFACTURER OF THE FIRE ALARM SYSTEM.
   .2 NUMBER AND SIZE OF CONDUCTORS SHALL BE AS RECOMMENDED BY THE FIRE ALARM SYSTEM MANUFACTURER, BUT NOT LESS THAN 18 AWG (1.02 MM) FOR INITIATING DEVICE CIRCUITS AND SIGNALING LINE CIRCUITS, AND 14 AWG (1.63 MM) FOR NOTIFICATION APPLIANCE CIRCUITS.
   .3 ALL WIRE AND CABLE SHALL BE LISTED AND/OR APPROVED BY A RECOGNIZED TESTING AGENCY FOR USE WITH A PROTECTIVE SIGNALING SYSTEM.
   .4 ALL FIELD WIRING SHALL BE ELECTRICALLY SUPERVISED FOR OPEN CIRCUIT AND GROUND FAULT.
   .5 ALL WIRE SHALL BE INSTALLED IN CONDUIT. PROVIDE WIREMOLD FOR ALL WIRING IN EXPOSED AREAS: ALL SURFACE MOUNTED CONDUIT MUST BE APPROVED BY OWNER OR CONSULTANT PRIOR TO INSTALLATION.
   .6 WIRE AND CABLE NOT INSTALLED IN CONDUIT SHALL HAVE A FIRE RESISTANCE RATING SUITABLE FOR THE INSTALLATION AS INDICATED IN NFPA 70 (E.G., FPLR) AND AS PER OBC.

FIRE ALARM SCOPE OF WORK:

1. EXISTING FIRE ALARM CONTROL PANEL IS SIMPLEX 4100.
2. FIRE ALARM MANUFACTURER TO ATTEND SITE PRIOR TO PRICING TO REVIEW EXISTING SYSTEM FOR CONFORMANCE WITH NEW PROPOSED PANEL. FIRE ALARM MANUFACTURER TO INCLUDE FOR ALL LABOUR AND COMPONENTS REQUIRED TO CONNECT EXISTING DEVICES TO NEW FIRE ALARM CONTROL PANEL IN CONFORMANCE WITH ALL APPLICABLE CODES.
3. PROVIDE NEW ADDRESSABLE DEVICES AS NOTED.
4. ALL DEVICE AND SIGNAL CIRCUITS TO BE WIRED TO MATCH EXISTING.
5. CONFIRM SIGNAL TO FIRE ALARM DEPARTMENT WITH MONITORING COMPANY.
6. TEST AND VERIFY THE FIRE ALARM SYSTEM IN CONFORMANCE WITH CAN/ULC–S537–M "STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS" TO ENSURE SATISFACTORY OPERATION.
7. PERFORM AUDIBILITY TESTS AS PER ONTARIO FIRE CODE (MINIMUM 65DBA, MAXIMUM 100DBA THROUGHOUT) AND PROVIDE REPORT TO THE CONSULTANT. ALL SPACES WITHIN THE PROJECT AREA MUST BE TESTED. DOORS SHALL BE CLOSED DURING TESTING.
8. PROVIDE VERIFICATION REPORT AND AUDIBILITY TESTS TO THE CONSULTANT FOR REVIEW. SUBMIT FINAL COPY OF REPORT TO THE BUILDING DEPARTMENT/FIRE PREVENTION.
9. ARRANGE FOR A SITE INSPECTION BY THE BUILDING DEPARTMENT/FIRE PREVENTION, CONSULTANT AND ESA AT COMPLETION OF THE PROJECT FOR FINAL ACCEPTANCE. PERFORM ADDITIONAL AUDIBILITY TESTS AS REQUESTED.

ELECTRICAL NOTES:

1. ALL WORK SHALL CONFORM TO ESA REQUIREMENTS.
2. PROVIDE CHAINS FOR ALL LIGHT FIXTURES. CHAINS SHALL BE PROVIDED AT ALL FOUR CORNERS.
3. BOND ALL METALLIC WATER, DRAIN AND GAS PIPING AS PER ESA REQUIREMENTS.
4. PROVIDE JUNCTION BOXES C/W COVERPLATES AS REQUIRED.
5. PROVIDE LAMACOID LABELS ON ALL EQUIPMENT WITH PANEL AND CIRCUIT NUMBER INCLUDING DISCONNECT SWITCHES AND HVAC EQUIPMENT.
6. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
7. ALL DISTRIBUTION EQUIPMENT SHALL HAVE COPPER BUS UNLESS OTHERWISE NOTED. ALUMINUM BUS WILL NOT BE ACCEPTED.
8. REFER TO "EMT (ELECTRICAL METALLIC TUBING) vs. LIQUIDTIGHT vs. FLEXIBLE CABLE" FOR ACCEPTABLE USE OF EACH.
9. EMT AND BOXES SHALL BE SIZED ACCORDING TO CODE REQUIREMENT BASED ON THE NUMBER OF CONDUCTORS.
10. FOR EMT AND/OR CONDUITS BENDS GREATER THAN OR EQUAL TO 270°, A PULL BOX MUST BE PROVIDED.
11. ALL EMT (ELECTRICAL METALLIC TUBING) SHALL BE FIRMLY FASTENED IN PLACE SO AS TO SUPPORT THE WEIGHT OF CONDUIT AND TO PREVENT ANY STRAIN OR STRESS AT TERMINATIONS ACCORDING TO ELECTRICAL CODE 12–1010.
12. CONTRACTORS SHALL ATTEMPT TO FISH NEW FEEDS DOWN EXISTING WALLS WHERE THIS IS NOT POSSIBLE (ONLY), SURFACE INSTALLATION IS ACCEPTABLE ON EXISTING BLOCK WALLS IN FINISHED AREAS AS FOLLOWS:
    .1 BOXES SHALL BE SHALLOW WIRE MOLD BOX WITH NO KNOCKOUTS.
    .2 CONDUIT SHALL BE WIRE MOLD.
13. CONCEAL ALL EMT (ELECTRICAL METALLIC TUBING) AND COMPONENTS IN CEILING SPACE OR WALLS. RUN TIGHT TO ROOF DECK OR FLOOR ABOVE WHERE CEILING IS EXPOSED. RUN TIGHT TO WALL OR COLUMN WHERE WALLS ARE EXPOSED.
14. WHERE EMT RUNS HORIZONTALLY ACROSS WALL STUDS, NOTCHES SHOULD BE CUT AND PROTECTED BY STEEL PLATES.
15. MOUNTING HEIGHTS
    .1 MOUNT NEW CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO, P.A. CALL SWITCHES, OPERATORS, LIGHT SWITCHES OR SWITCH PLATE, OCCUPANCY SENSORS NO LESS THAN 36" (900mm) A.F.F TO BOTTOM OF BOX AND 43"(1100mm) MAXIMUM A.F.F TO TOP OF BOX. UNLESS OTHERWISE NOTED.
    .2 MOUNT NEW RECEPTACLES 16" (400mm) A.F.F. UNLESS OTHERWISE NOTED.
    .3 CONTROL SENSORS AND/OR THERMOSTATS TO BE MOUNTED 47"(1200mm).
16. RECEPTACLES LOCATED WITHIN 5'(1.5m) OF A DAMP OR WET LOCATION SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE.
17. CONTRACTOR TO ALLOW FOR THE RELOCATION OF ANY RECEPTACLE OR DEVICE/EQUIPMENT CONNECTION WITHIN 10' OF LOCATION SHOWN AT NO EXTRA COST.
18. DEVICE COVER PLATES SHALL BE STAINLESS STEEL IN ALL AREAS.
19. BRANCH CIRCUIT BREAKER AMPERE INTERRUPTING CAPACITY TO MATCH BUS RATING. PROVIDE 10% SPARE FOR FUTURE.
20. MAXIMUM VOLTAGE DROP IN BRANCH CIRCUITS TO BE 3%. CONDUCTORS SHALL BE OVERSIZED TO SUIT VOLTAGE DROP WHERE APPLICABLE.
21. CONDUCTORS TO BE COPPER UNLESS OTHERWISE NOTED. CONDUCTORS IN RACEWAYS SHALL BE 175 NYLON (190 ACCEPTABLE IF DERATED AS PER OESC). ALL CONDUCTORS SHALL BE MINIMUM #10AWG FOR EMERGENCY BATTERY CIRCUITS AND EXTERIOR LIGHTING, #14AWG FOR CONTROL WIRING AND MINIMUM #12AWG FOR ALL OTHER APPLICATIONS.
22. ALL WIRE SIZES INDICATED ON DRAWINGS ARE BASED ON A 75°C TERMINATION TEMPERATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE TERMINATION TEMPERATURE OF EACH DEVICE AND MODIFY THE WIRE SIZE TO SUIT OR NOTIFY ENGINEER FOR DIRECTION.
23. IDENTIFY EACH WIRE AND CABLE AT EVERY TERMINATION POINT. IDENTIFY ALL EMT AND/OR CONDUITS WITH "NEAT" COLOUR BANDS AT NO MORE THAN 25'(7.5m) INTERVALS AND ON BOTH SIDES OF WALLS & FLOOR.
24. NON–CURRENT CARRYING METAL PARTS FOR FIXED EQUIPMENT SHALL BE BONDED TO GROUND. INSTALL SEPARATE BONDING IN LIQUIDTIGHT CONDUITS.
25. WHERE CEILING SPACE IS USED AS A RETURN AIR PLENUM, ALL WIRING SHALL CONFORM TO CODES FOR THIS APPLICATION.
26. FIRE STOP ALL EXISTING AND NEW CONDUIT THROUGH FIRE SEPARATIONS.
27. ARRANGE FOR ESA INSTALLATION PERMIT AND INSPECTION AND FORWARD A COPY OF THE ESA CERTIFICATE TO THE ENGINEER UPON ACCEPTANCE. ARRANGE AND PAY FOR OCCUPANCY PERMIT IF FINAL INSPECTION CANNOT BE SCHEDULED BY COMPLETION DATE SET FORTH IN TENDER DOCUMENTS.
28. OBTAIN COPY OF TSSA PERMIT AND INSPECTION FOR NEW ELEVATOR AND FORWARD A COPY TO ENGINEER.

EMT vs. LIQUIDTIGHT vs. FLEXIBLE CABLE

EMT (ELECTRICAL METALLIC TUBING) MUST BE USED IN THE FOLLOWING INDOOR APPLICATIONS:

1. ALL EXPOSED AREAS (USE WIREMOLD ON EXPOSED WALLS IN FINISHED AREAS WHERE EXPOSED WIRING HAS BEEN APPROVED).
2. T–BAR CEILING SPACES.
3. VERTICAL DROPS TO DEVICES (I.E. SWITCHES RECEPTACLES, DATA/VOICE.)

LIQUIDTIGHT MUST BE USED IN THE FOLLOWING INDOOR AND OUTDOOR APPLICATIONS:

1. LAST 5' (1.5m) FOR FINAL CONNECTION TO INDOOR MECHANICAL EQUIPMENT.
2. ALL OUTDOOR WIRING.

FLEXIBLE CABLE IS ONLY ACCEPTABLE IN THE FOLLOWING INDOOR APPLICATIONS:

1. LAST 5' (1.5m) FOR FINAL CONNECTION TO LIGHTING AND SMALL EQUIPMENT/COMPONENTS IN CEILING SPACES. DAISY CHAIN OF LUMINAIRES IS NOT ALLOWED.

GENERAL NOTES:

1. THOROUGHLY REVIEW AND COORDINATE WITH SITE CONDITIONS AND COMPLETE DRAWING SET PRIOR TO PRICING AND INSTALLATION.
2. OBTAIN, ARRANGE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
3. THE ELECTRICAL CONTRACTOR AND SUB–TRADES SHALL ATTEND ALL SITE MEETINGS UNLESS OTHERWISE APPROVED.
4. PROVIDE ELECTRONIC SHOP DRAWINGS IN PDF FORMAT TO CONSULTANT FOR REVIEW. ALL SHOP DRAWINGS MUST BE REVIEWED, STAMPED AND SIGNED BY THE ELECTRICAL CONTRACTOR PRIOR TO SUBMITTING TO THE CONSULTANT. REVIEW SHALL INCLUDE, BUT NOT LIMITED TO, VERIFYING VOLTAGE, RATING, DIMENSIONS AND CLEARANCES. SUBMIT SHOP DRAWINGS ELECTRONICALLY TO INFO@DURHAMENERGY.COM.
5. INSTALL ALL WORK IN CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
6. MAINTAIN RECORD DRAWINGS ON AN ON–GOING BASIS. DRAWINGS SHALL BE AVAILABLE FOR PERIODIC REVIEW BY THE CONSULTANT DURING CONSTRUCTION.
7. ALL WORK SHALL COMPLY WITH APPLICABLE CODES.
8. REMOVE ALL REDUNDANT EQUIPMENT AND MATERIALS FROM SITE AND DISPOSE OF IN AN APPROVED MANNER. REDUNDANT EQUIPMENT AND MATERIALS SHALL NOT BE ABANDONED IN PLACE.
9. ALL CUTTING, CORING AND PATCHING SHALL BE BY THIS CONTRACTOR. COORDINATE PATCHING WITH GENERAL CONTRACTOR.
10. ALL CONDUIT SHALL BE CONCEALED AND ALL DEVICES RECESSED. ANY SURFACE MOUNTED CONDUIT MUST BE APPROVED BY OWNER OR CONSULTANT PRIOR TO INSTALLATION.
11. MAINTAIN REQUIRED ACCESS AND CLEARANCE TO ALL EQUIPMENT AND SYSTEMS AS REQUIRED BY CODE AND AS PER MANUFACTURER'S REQUIREMENTS.
12. LABEL ALL RECEPTACLES AND JUNCTION BOXES WITH PANEL AND CIRCUIT NUMBER USE BLACK MARKER ON CONCEALED JUNCTION BOXES AND CLEAR ADHESIVE LABELS WITH BLACK WRITING ON RECEPTACLES. PAINT ALL JUNCTION BOXES RED FOR FIRE ALARM.
13. THE CONTRACTOR SHALL ARRANGE FOR INSPECTIONS BY THE CONSULTANT PRIOR TO CEILINGS AND WALLS BEING CLOSED IN. WHERE THIS HAS NOT BEEN ARRANGED IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE CEILING TILES OR ACCESS DOORS FOR INSPECTION AT THE DIRECTION OF THE CONSULTANT.
14. PERFORM TESTING OF ALL SYSTEMS AS REQUIRED BY CODE AND THE CONSULTANT.
15. ASSIST WITH START–UP AND COMMISSIONING OF ALL SYSTEMS AS REQUIRED.
16. INSTRUCT AND TRAIN THE OWNER ON PROPER OPERATION OF THE SYSTEM.
17. UPON COMPLETION OF THE PROJECT THE CONSULTANT WILL DO A FINAL REVIEW. UPON RECEIVING THE FINAL INSPECTION REPORT, THE CONTRACTOR MUST CORRECT AND SIGN BACK THE INSPECTION REPORT INDICATED ALL DEFICIENCIES ARE COMPLETED. A RE–INSPECTION WILL ONLY BE DONE ONCE THE CONSULTANT RECEIVES THIS IN WRITING. WHERE THE CONSULTANT PERFORMS THE RE–INSPECTION AND THE WORK IS NOT COMPLETE, THE CONTRACTOR IS RESPONSIBLE FOR REIMBURSING THE CONSULTANT FOR THE FIELD REVIEW. THE FEE FOR ADDITIONAL REVIEWS WILL BE AT THE CONSULTANT'S HOURLY RATES PLUS MILEAGE AND APPLICABLE TAXES TO BE PAID DIRECTLY TO THE CONSULTANT PRIOR TO PERFORMING THE NEXT FIELD REVIEW.
18. PROVIDE ONE (1) YEAR WARRANTY ON ALL MATERIAL AND LABOUR FROM THE DATE OF SUBSTANTIAL COMPLETION.
19. PROGRESS DRAWS SHALL INCLUDE MINIMUM $2,500.00 FOR MANUALS AND AS–BUILT DRAWINGS AND MINIMUM $1,000 FOR DEFICIENCIES. TOTAL AMOUNT SHALL REMAIN UNBILLED UNTIL MANUALS AND AS–BUILT DRAWINGS HAVE BEEN SUBMITTED AND APPROVED AND UNTIL ALL DES FIELD REVIEW REPORTS HAVE BEEN SIGNED AND RETURNED TO DES ALONG WITH PICTURES AS REQUESTED BY CONSULTANT.
20. PROVIDE TWO(2) HARD COPIES OF MAINTENANCE MANUALS IN A 3–RING BINDER LABELED ON SPINE AND FRONT AND ONE(1) ELECTRONIC COPY ON USB. MANUAL SHALL INCLUDE CONTRACTOR INFORMATION, WARRANTY LETTER, ESA CERTIFICATE, FIRE ALARM VERIFICATION REPORT, EMERGENCY LIGHTING TEST REPORT, SHOP DRAWINGS, O&Ms, ANY OTHER REQUIRED REPORTS AND AS–BUILT DRAWINGS INCLUDING ALL PANEL SCHEDULES. AS–BUILT DRAWINGS SHALL INCLUDE COMPLETE ELECTRICAL DRAWING SET WITH ANY CHANGES MARKED CLEARLY AND NEATLY IN COLOUR. SUBSTANTIAL COMPLETION WILL NOT BE AWARDED UNTIL THIS INFORMATION IS SUBMITTED TO THE CONSULTANT AND THE CONSULTANT HAS APPROVED.

TELEPHONE AND DATA SYSTEMS

1. ELECTRICAL CONTRACTOR TO CARRY OUT ALL WORK ASSOCIATED WITH TELEPHONE AND DATA SYSTEMS INCLUDING BUT NOT LIMITED TO DEVICES, BACKBOXES, CONDUIT, WIRING, TESTING AND VERIFICATION.
2. ALL COMMUNICATION CABLING SHALL BE RUN WITHIN EXISTING COMMUNICATIONS CONDUIT/RACEWAYS WHERE POSSIBLE. ALL CABLING SHALL BE RUN IN CONDUIT FROM COMMUNICATION DROPS TO CORRIDOR CABLE MANAGEMENT SYSTEM. EXISTING SYSTEM SHOULD BE BASED ON PANDUIT STRUCTURED CABLING SYSTEM. MAXIMUM HORIZONTAL CABLE RUN LENGTH TO NOT EXCEED 300'.
3. ALL CABLE MUST BE 24AWG CAT6 4 PAIR FT6 RATED. CATEGORY MARKING SHALL BE PRINTED EVERY FOOT. JACKET SHALL BE PRINTED WITH TRU–MARK 1000' TO 0' MARKING SYSTEM WITH YELLOW OUTER SHEATH FOR DATA AND WHITE OUTER SHEATH FOR VOICE.
4. FACEPLATES SHALL BE ABLE TO MOUNT ONE/TWO/THREE/FOUR OR SIX JACKS IN A SINGLE GANG AND SIX OR NINE JACKS IN A DOUBLE GANG.
5. JACKS SHALL BE 8–POSITIONED UN–KEYED WITH 94 V0 RATING. ALL DROPS MUST BE CLEARLY LABELED ON THE PATCH PANEL AND CABLE BOX. PROVIDE YELLOW FOR VOICE AND GREEN FOR DATA.
6. PROVIDE 4' AND 6' CAT6 PATCH CABLES AT WORK STATION END AS REQUIRED TO SUIT INSTALLATION. COORDINATE WITH KPRDSB.
7. ANY HORIZONTAL EXPOSED CABLE SHALL BE RUN IN WIREMOLD 500/700 SERIES.
8. INSTALL ALL TELEPHONE AND COMPUTER/DATA SYSTEM DEVICES I.E. JACKS, STAINLESS STEEL COVER PLATES AND WIRING TO KPRDSB STANDARDS.
9. ALLOW FOR NEW HOME RUN CABLE BACK TO MAIN HUB FOR EACH ACCESS POINT TO ALLOW FOR RELOCATION BY OWNER.
10. CONTRACTOR TO TEST ALL DATA DROPS AND SUBMIT REPORT TO CONSULTANT AND INCLUDE IN MANUAL.
11. APPROVED SUB–CONTRACTORS:
    DBP SYSTEMS INC. CONTACT: KEN DARLISON
    PHONE: (905)–943–0219 CELL: (416)–570–7439

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	FEB 1 2018	DES
2	ISSUED FOR PERMIT & TENDER	FEB 6 2018	DES

NO.	REVISIONS	DATE	BY
-	-	-	-

DURHAM ENERGY SPECIALIST LIMITED
CONSULTING ENGINEERS
PH:(905)430–7151 FAX:(905)430–7154
106–209 DUNDAS STREET EAST, WHITBY ONTARIO
info@durhamenergy.com / www.durhamenergy.com

PROJECT:
LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT
80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING:
LEGENDS & NOTES

BARRY BRYAN ASSOCIATES
Architects
Engineers
Project Managers
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e-mail bba@bba-archeng.com

LICENSED PROFESSIONAL ENGINEER
L CONFORTI
100178622
FEB 6/18
PROVINCE OF ONTARIO

DESIGN BY: REA/LC	DOC CONTROL: DATE:
DRAWN BY: BJH	% COMPLETE:
CHECKED BY: REA/LC	INITIAL:
DATE: FEBRUARY 2018	
SCALE: NTS	
FILE: 18-111	

PROJECT NO: **18010**

DRAWING NO: **E2**

REVISED PANEL "1GM"

FEDERAL PIONEER NBLP

225A, 42 CIRCUIT, 3ϕ, 4W, 120/208 VOLT SURFACE MOUNTED BOLT-ON CIRCUIT BREAKER PANEL BOARD WITH MAIN LUGS ONLY & COPPER BUS

++ DENOTES NEW BREAKER REQUIRED

DESCRIPTION	BKR	CCT	S/N	CCT	BKR	DESCRIPTION
REC138/STR140/CP/CLOCK139	15A	1		2	15A	REC W GYM 151 & 152
REC SOUTH STAGE/W RM 139	15A	3		4	15A	BACKSTOP N GYM 152
REC SOUTH STAGE/NW RM 139	15A	5		6	15A	PROJECTION SCREEN
REC NW STAGE/E RM 139	15A	7		8	20A	REC SOUTH GYM 151
REC STAGE FLOOR	15A	9		10	15A	REC EAST INCL CLOCKS GYM
REC STAGE FLOOR	15A	11		12	15A	REC EAST GYM 151 & 152
REC STAGE FRONT	15A	13		14	15A	BACKSTOP SOUTH GYM 151
CEILING FANS GYM 151	15A	15		16	15A	REC NORTH GYM 152
SPARE	15A	17		18	15A	REC NE GYM 152 (P.A.)
CURTAIN/PARTITION GYM	15A 3P	19		20	15A	REC WEST RM 153
		21		22	15A	FANS
		23		24	15A	FANS
SPARE	15A	25		26	15A	SPARE
UF/EF-22 RM 153	15A	27		28	**20A++**	**REC ELEVATOR PIT**
LTG ELEVATOR PIT	15A	29		30		
SPARE	15A	31		32		
SPARE	15A	33		34		
SPARE	15A	35		36		
		37		38		
		39		40		
		41		42		

REVISED PANEL "2M"

FEDERAL PIONEER NBLP

225A, 24 CIRCUIT, 3ϕ, 4W, 120/208 VOLT SURFACE MOUNTED BOLT-ON CIRCUIT BREAKER PANEL BOARD WITH MAIN LUGS ONLY & COPPER BUS

++ DENOTES NEW BREAKER REQUIRED

DESCRIPTION	BKR	CCT	S/N	CCT	BKR	DESCRIPTION
REC EAST RM 216 (x3)	15A	1		2	15A	EF-05/UH-03 RM 216
REC NORTH RM 216 (x3)	15A	3		4	15A	UH-02 RM 216
WP REC DOOR 216	15A	5		6	15A	UH/EF-033 RM 217
REC RM 216 (x1)	15A	7		8	15A	DISC ELEVATOR LTG RM 217
REC MACHINE RM 217 (x1)	15A	9		10	15A	AD-01 RM 216
REC WEST RM 216 (x1)	15A	11		12	15A	REC WEST RM 216 (x2)
REC SOUTH RM 216 (x1)	15A	13		14	15A	I.G. REC RM 216 (PATCH PNL 2)
EMS PANEL RM 216	15A	15		16	15A	HRU-01 RM 216
SPARE	15A	17		18	15A	I.G. REC RM 216
SPARE	15A	19		20	20A	**GFI REC RM 217 (ELEV.MACH RM)**
SPARK DETECTION RM 223	15A	21		22		
		23		24		

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.

DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	FEB 1 2018	DES
2	ISSUED FOR PERMIT & TENDER	FEB 6 2018	DES

NO.	REVISIONS	DATE	BY
-	-	-	-

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PROJECT:

LYDIA TRULL PUBLIC SCHOOL ELEVATOR REPLACEMENT

80 AVONDALE DR,
COURTICE, ONTARIO

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

DRAWING:

SCHEDULES & DETAILS

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LICENSED PROFESSIONAL ENGINEER
L. CONFORTI
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FEB 6/18
PROVINCE OF ONTARIO

DESIGN BY: REA/LC	DOC CONTROL: DATE:
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PROJECT NO: **18010**

DRAWING NO: **E3**